

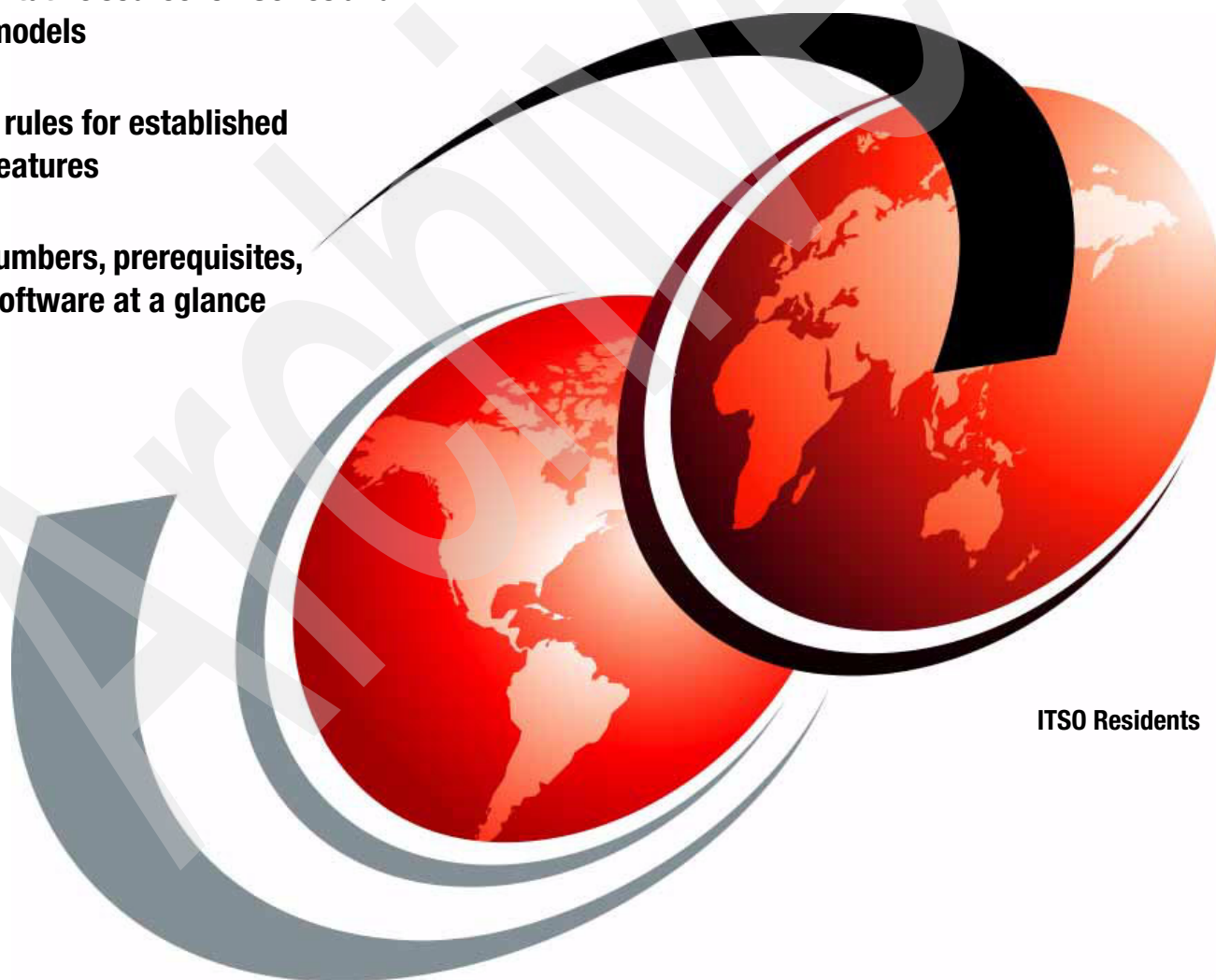
# IBM eServer iSeries and AS/400e System Builder:

IBM OS/400 Version 4 Release 3 - Version 5 Release 2

The authoritative source for iSeries and AS/400e models

Facts and rules for established AS/400e features

Product numbers, prerequisites, storage, software at a glance



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International Technical Support Organization

**IBM eServer iSeries and AS/400e System Builder:**

IBM OS/400 Version 4 Release 3 - Version 5 Release 2

March 2007

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**Note:** Before using this information and the product it supports, read the information in “Notices” on page ix.

### **First Edition (March 2007)**

This edition applies to Version 5 Releases 1 and 2 of OS/400 (product number 5722-SS1), and Version 4 Releases 3, 4, and 5 of OS/400 (product number 5769-SS1).

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# Preface

This *IBM eServer iSeries and AS/400e System Builder: IBM OS/400 Version 4 Release 3 - Version 5 Release 2* IBM® Redpaper offers a comprehensive guide to IBM eServer® iSeries™ and AS/400e™ hardware and associated IBM software. This document offers detailed information about the IBM iSeries Models 250, 270, 820, 830, 840, SB2 and SB3, as well as the IBM AS/400e Models 170, 250 package, 720, 730, and 740.

The *IBM eServer iSeries and AS/400e System Builder: IBM OS/400 Version 4 Release 3 - Version 5 Release 2* is written for use by IBM System Specialists, Marketing Representatives, Business Partners, and IBM clients.

**Note:** In the interest of maintaining the size of the IBM Redbook *IBM eServer iSeries and AS/400e System Builder*, SG24-2155, the iSeries and AS/400e information was extracted into this IBM Redpaper after the January 2006 edition of the *Builder* was produced.

For CISC and RISC models, only summary tables are included in this document. Readers who require CISC information need to refer to *AS/400 CISC System Builder*, REDP-0042. Readers who require RISC information need to refer to *IBM eServer AS/400e RISC System Builder*, REDP-0342.

Readers who require the latest iSeries information need to refer to the parent IBM Redbook: *IBM eServer iSeries and AS/400e System Builder*, SG24-2155.

This paper is organized into chapters on IBM eServer iSeries and AS/400e processors and associated towers. The chapters about processors include summary charts that show the capacity and schematics of each model. Feature descriptions and rules for the processors are in a chapter common to the supporting model. Features for the Models 820, 830, and 840 are in a stand-alone chapter.

Within each model chapter, the feature section is divided into these categories: power and packaging, main storage, Peripheral Component Interconnect (PCI) input/output processor (IOP) controllers, workstation controllers, communications, local area network (LAN) and asynchronous transfer mode (ATM) adapters, disk units, internal tape and CD-ROM units, and magnetic media controllers. Features are listed in numerical sequence within each category.

External storage components (storage devices and VXA-2 formats), CCIN and feature tables, software, and cables are organized in stand-alone chapters. They serve to complement the hardware content described in the mainstay of this paper.

## The team that wrote this IBM Redpaper



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Each edition of the *System Builder* IBM Redbook is the result of close cooperation of the IBM Rochester engineering and development teams with the ITSO. The teams of iSeries and AS/400e specialists who contributed to the editions of the *System Builder* upon which this IBM Redpaper are based are:

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## IBM AS/400e 170 models

This chapter identifies the features that are associated with each IBM AS/400e 170 server, such as the processor features, power and packaging, main storage, and workstation controllers. It also identifies the related communications—including wide area network (WAN), local area network (LAN), and asynchronous transfer mode (ATM), disk units, internal tape units, and magnetic media controllers.

Model and processor	Announce date	General availability date	Withdrawn from marketing
170 #2159	10 February 1998	27 February 1998	31 May 1999
170 #2160, #2164, #2176, #2183	10 February 1998	27 February 1998	28 December 2001
170 #2289	09 February 1999	27 February 1998	31 May 2001
170 #2290, #2291, #2292, #2385, #2386, #2388	01 September 1998	27 February 1998	28 December 2001
<b>Dedicated Server for Domino®</b>			
#2407	03 August 1999	27 February 1998	31 May 2001
#2408 and #2409	03 August 1999	27 February 1998	28 December 2001

**Note:** The darker shaded areas in the following tables and graphics indicate the base features.

## 1.1 AS/400e Model 170 overview

The following tables provide the minimum and maximum capacities for the Model 170.

	Model 170 (February 1998)				
Processor feature	#2159	#2160	#2164	#2176	#2183
Relative system performance (CPW) <sup>1</sup>					
Client/server environment	75.0	114.0	210.0	319.0	319.0
Interactive environment	16.0	23.0	29.0	39.0	65.0
Number/type/speed of processor	1/Apache /125 MHz	1/Apache /125 MHz	1/Apache /125 MHz	1/Apache /125 MHz	1/Apache /125 MHz
Main storage (MB min to max)	64 to 832	64 to 832	256 to 1024	256 to 1024	256 to 1024
Minimum OS/400® level	V4R3	V4R3	V4R3	V4R3	V4R3

	Model 170 (September 1998/February 1999)						
Processor feature	#2289	#2290	#2291	#2292	#2385	#2386	#2388
Relative system performance (CPW) <sup>2</sup>							
Processor performance	50	73	115	220	460	460	1090
Interactive performance	15	20	25	30	50	70	70
Number/type/speed of processor	1/Northstar /262 MHz	1/Northstar /262 MHz	1/Northstar /262 MHz	1/Northstar /262 MHz	1/Northstar /262 MHz	1/Northstar /262 MHz	2/Northstar /262 MHz
Main storage (MB min to max)	64 to 832	64 to 832	64 to 832	256 to	256 to	256 to	256 to
Minimum OS/400 level	V4R3	V4R3	V4R3	V4R3	V4R3	V4R3	V4R3

	Base system for all processors <sup>5</sup>	#7102 System Expansion Unit <sup>5</sup>	Total maximum <sup>5</sup>
Disk storage (GB)			
Minimum internal	4.19	0	4.19
Maximum internal (V4R2)	34.32	51.48	85.80
Maximum internal (V4R3 and later)	70.16	105.24	175.40
System I/O card slots			
Low-speed PCI	2	4	6
Low-speed IPCS PCI	2	2	4
High-speed DASD IOA PCI	1	0	1
High-speed tape IOA PCI	0	1	1
High-speed Ethernet or ATM <sup>3</sup>	1	2	3
Maximum communication lines <sup>4</sup>	1-12	0-18	30
ATM adapters <sup>6</sup>	0-1	0-2	3
Maximum LAN/ATM adapters <sup>6</sup>	3	4	7
Non-Integrated Server LAN Low-Speed TR/Ethernet	1	4	5
Non-Integrated Server LAN 100/10 Ethernet	1	2	3
Integrated Server LAN Low-Speed TR/Ethernet	2	2	4
Integrated Server LAN 100/10 Ethernet	1	1	2
Maximum workstation controllers			
Twinaxial (only)	3	5	6
Maximum workstations			
Twinaxial (only)	28/108	200	228
Cryptographic processors	0	2	2
Cryptographic accelerator			
¼-inch cartridge tape (internal)	0-1	0	1
½-inch tape (external)			
Reel 9348	0	0-2	2
Reel 2440, 9347	0	0	0
Cartridge 34xx, 35xx	0	0-2	2
8 mm ½-inch cartridge (external)	0	0-2	2
CD-ROM	1	0	1
Optical libraries	0	0-2	2

<b>Note 1</b>	<p>Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable. With the introduction of the Dedicated Servers for Domino, Simple Mail Users has been added as a performance measurement.</p> <p>The constrained figures are for the 9406 Model 170 with its maximum configuration. The unconstrained figures show what the performance would be if the processor was not limited by the maximum main storage and direct access storage device (DASD) of the Model 170.</p>
<b>Note 2</b>	Processor performance represents the relative performance (maximum capacity) of a processor feature running CPW in a client/server environment. Processor capacity is achievable when the commercial workload is not constrained by main storage and DASD. Interactive performance represents the relative performance available to perform host-centric workloads. The amount of interactive capacity consumed reduces the available processor capacity by the same amount.
<b>Note 3</b>	The Integrated Server is mutually exclusive with the high-speed slot C03 for LAN, ATM or communications in the base system unit.
<b>Note 4</b>	One line is used by the Operations Console or Client Access Console if selected. The total is reduced by one if a Twinaxial Console is selected. To reach the maximum of 18 communication lines using the #2745/#9745 in slot C03, remove the base LAN adapter.
<b>Note 5</b>	Base system totals are the maximum for the #2289 processor. The #2289 processor does not support attachment of the #7101 or #7102 System Expansion Unit.
<b>Note 6</b>	Integrated Server can refer to either Integrated PC Server (IPCS) or #2790 PCI Integrated Netfinity Server.

## 1.2 AS/400e Dedicated Server for Domino overview

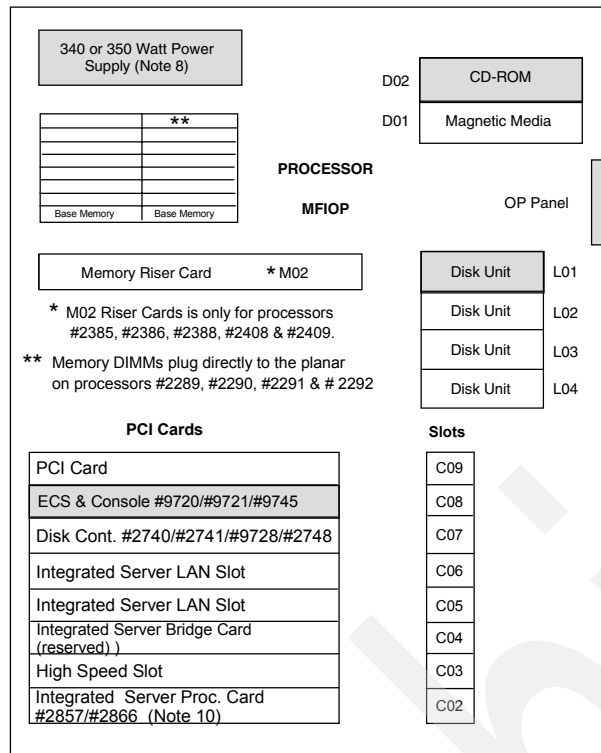
The following table provides the Model 170 Dedicated Server for Domino minimum and maximum capacities.

Model	Dedicated Server for Domino (August 1999)		
Processor feature	#2407	#2408	#2409
Relative system performance (CPW) <sup>1</sup>			
Client/server environment	30	60	120
Interactive environment	10	15	20
Simple Mail Users	1300	2300	4300
Number/type/speed of processor	1/Northstar/262 MHz	1/Northstar/262 MHz	2/Northstar/262 MHz
Main storage (MB min to max)	256 to 1024	512 to 4096	512 to 4096
Minimum OS/400 level	V4R4	V4R4	V4R4

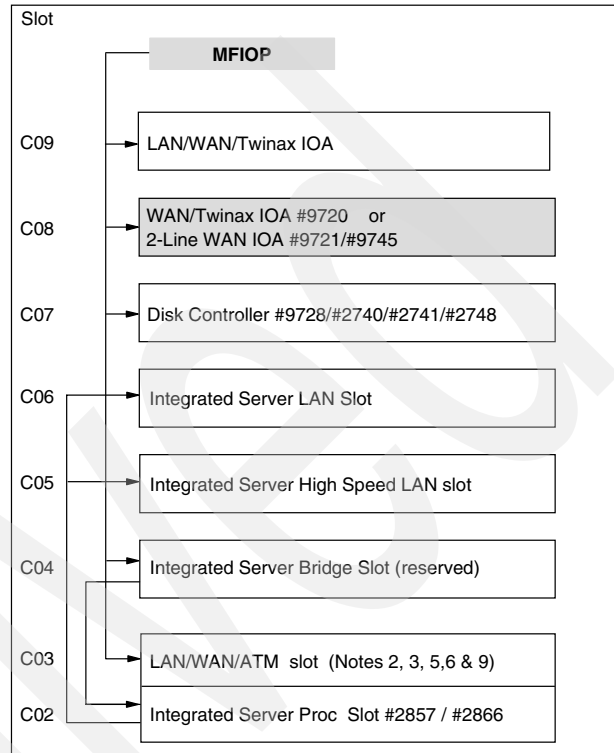
	Base system for all processors <sup>5</sup>	#7102 System Expansion Unit <sup>5</sup>	Total maximum <sup>5</sup>
Disk storage (GB)			
Minimum internal	4.19	0	4.19
Maximum internal (V4R2)	34.32	51.48	85.80
Maximum internal (V4R3 and later)	70.16	105.24	175.40
System I/O card slots			
Low-speed PCI	2	4	6
Low-speed IPCS PCI	2	2	4
High-speed DASD IOA PCI	1	0	1
High-speed tape IOA PCI	0	1	1
High-speed Ethernet or ATM <sup>3</sup>	1	2	3
Maximum communication lines <sup>4</sup>	1-12	0-18	30
ATM adapters <sup>6</sup>	0-1	0-2	3
Maximum LAN/ATM adapters <sup>6</sup>	3	4	7
Non-Integrated Server LAN Low-Speed	1	5	5
Non-Integrated Server LAN 100/10 Ethernet	1	2	3
Integrated Server LAN Low-Speed TR/Ethernet	2	2	4
Integrated Server LAN 100/10 Ethernet	1	1	2
Maximum workstation controllers			
Twinaxial (only)	3	5	6
Maximum workstations			
Twinaxial (only)	28/108	200	228
Cryptographic processors	0	2	2
Cryptographic accelerator			
¼-inch cartridge tape (internal)	0-1	0	1
½-inch tape (external)			
Reel 9348	0	0-2	2
Reel 2440, 9347	0	0	0
Cartridge 34xx, 35xx	0	0-2	2
8 mm ½-inch cartridge (external)	0	0-2	2
CD-ROM	1	0	1
Optical libraries	0	0-2	2

## 1.3 9406 Model 170 system and expansion unit schematics

**9406 Model 170 System Unit**



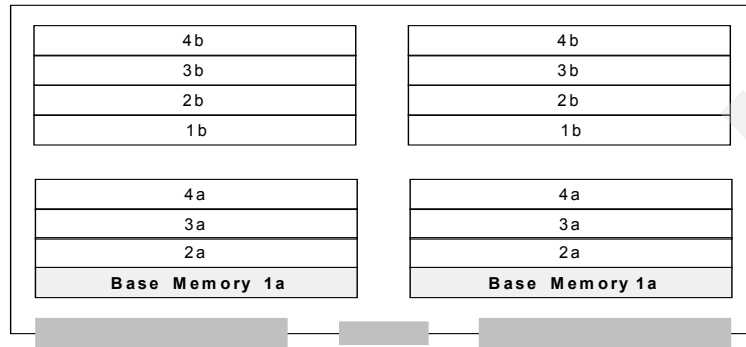
**9406 Model 170 System Unit  
PCI Card Placement**



### Notes:

1. No high-speed LAN is allowed in slot C09.
2. If any card is in slot C03, then no LAN card is allowed in slot C09.
3. Communications cards #2750, #2751, and #2761 are only allowed in high-speed slot C03.
4. The #2289, #2290, #2291, and #2292 processors include embedded #9728 Base Disk Unit Controller. A separate #9728 is not needed.
5. If any IPCS is in slots C02/C04, C03 must remain empty.
6. In C03, the #2811, #2812, #2819, #2745, #2750, #2751, #2761, #2746, #2723, #2724, and #2838 are supported.
7. Integrated Server can refer to either Integrated PC Server or Integrated Netfinity® Server.
8. The 340W is in the #2289, #2290, #2291, and #2292, and the 350W is in the #2385 and #2386.
9. ATM is not supported after OS/400 V5R2. Upgrade to Ethernet.
10. The #2857 is not supported because Windows® NT is no longer supported. Upgrade to #2866. Upgrade Windows NT® to Windows 2000.

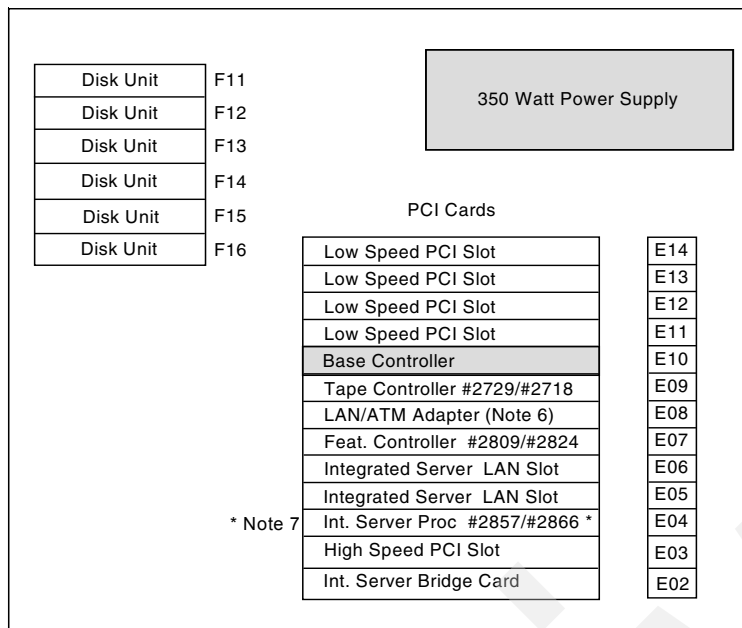
**Model 170 Main Storage Riser Card (M02)  
for Processors #2385, #2386, #2388, #2408, #2409**



**Notes:**

1. DIMMS should be plugged in pairs in a sequential order, without leaving a gap.
2. Base memory cannot be upgraded.
3. When the upper half of the riser card is used (slot b), all DIMMS in those slots must match the corresponding bottom (a) slots (that is, quad).

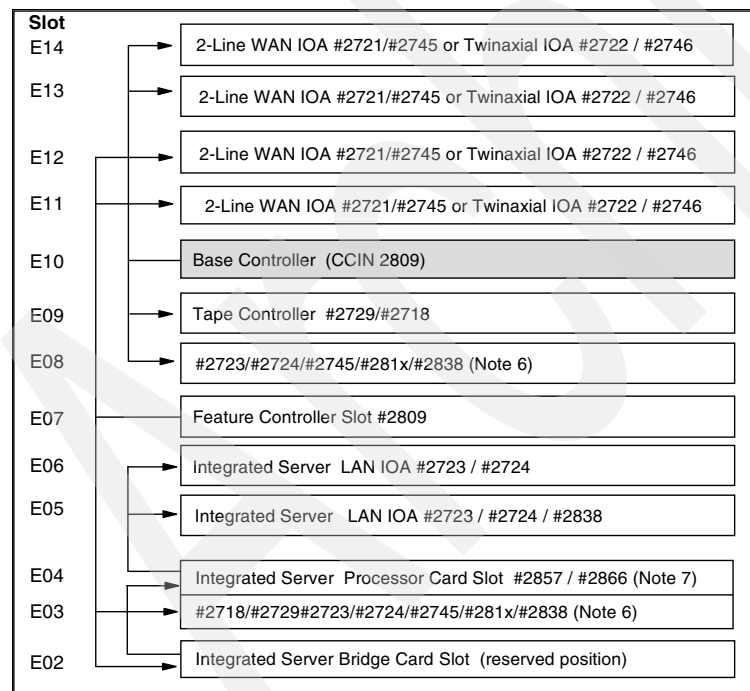
## 9406 Model 170 #7101/#7102 System Expansion Unit



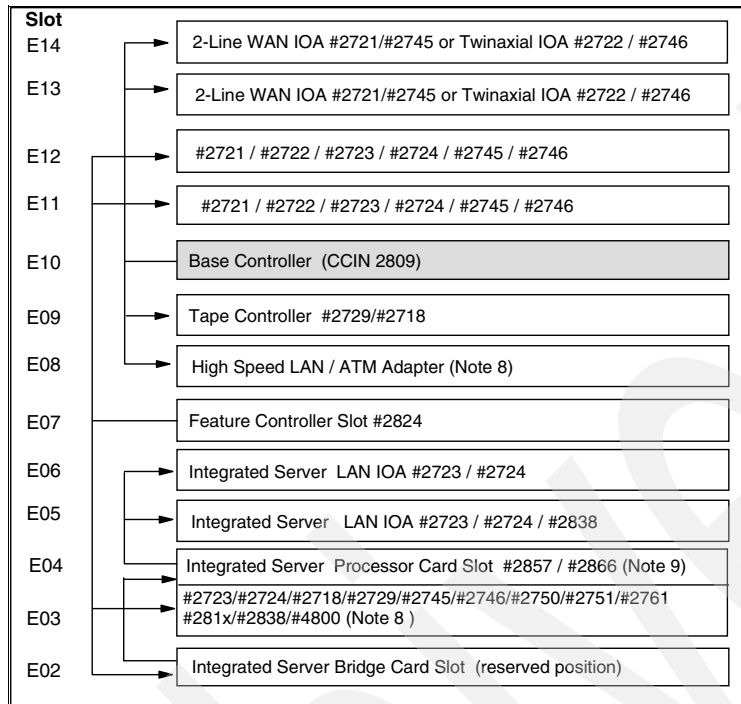
### Notes:

1. If any ATM is in slot E08, slot E13 must remain empty. Base memory cannot be upgraded.
2. If an Integrated Server is in slots E02/E04, E03 must remain empty.
3. Both high-speed and low-speed ATMs are supported in the system expansion unit.
4. The disk units in the expansion unit are covered by the #2740, #2741, #2748, or #9740 PCI RAID Disk Unit Controller in the system unit.
5. Integrated Server can refer to Integrated PC Server or Integrated Netfinity Server.
6. The #281x ATM is not supported after OS/400 V5R2. Upgrade to Ethernet.
7. The #2857 is not supported because Windows NT is no longer supported. Upgrade to #2866. Upgrade Windows NT to Windows 2000.

## PCI Card Cage for the #7101 System Expansion Unit Base #2809/CCIN 2809



**PCI Card Cage For #7101 System Expansion Unit  
#2824/Base CCIN 2824**

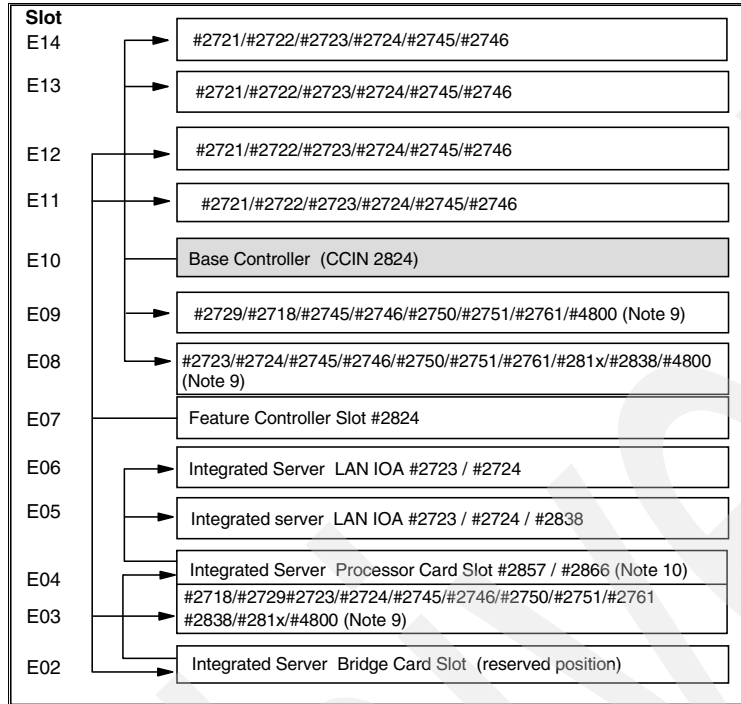


**Notes:**

1. If any ATM is in slot E08, slot E13 must remain empty. Base memory cannot be upgraded.
2. If an Integrated Server is in slot E02/E04, slot E03 must remain empty.
3. Both high-speed and low-speed ATMs are supported in the system expansion unit.
4. The disk units in the expansion unit are covered by the #2740, #9740, #2741, or #2748 PCI RAID Disk Unit Controller in the system unit.
5. Communications cards #2750, #2751, and #2761 are allowed in slot E03.
6. The #4800 PCI Cryptographic Processor is only allowed in high-speed slot E03.
7. Integrated Server can refer to Integrated PC Server or Integrated Netfinity Server.
8. The #2750 PCI ISDN BRI U Adapter, #2751 PCI ISDN BRI S/T IOA (Integrated Services Digital Network (ISDN)), and #2761 Integrated Analog Modem are not supported. The #281x ATM is not supported after V5R2. Upgrade to Ethernet.
9. The #2857 Integrated PC Server not supported because Windows NT is no longer supported. Upgrade to #2866 PCI Integrated Netfinity Server. Upgrade Windows NT to Windows 2000.



**PCI Card Cage for the #7102 System Expansion Unit  
#2824/Base CCIN 2824**



**Notes:**

1. If any ATM is in slot E08, slot E13 must remain empty. Base memory cannot be upgraded.
2. If either 100/10 Ethernet or any ATM card is in slot E03 or E08, no other LAN is allowed in slots E11/E12 or E13/E14.
3. If an Integrated Server is in slots E02 or E04, slot E03 must remain empty.
4. Both high-speed and low-speed ATMs are supported in the system expansion unit.
5. The disk units in the expansion unit are covered by the #2740, #9740, #2741, or #2748 PCI RAID Disk Unit Controller in the system unit.
6. Communications cards #2750, #2751, and #2761 are allowed in slots E03, E08, and E09 (maximum one per input/output processor (IOP)).
7. The #4800 PCI Cryptographic Processor is allowed in high-speed slots E03, E08, or E09 (maximum one per IOP).
8. Integrated Server can refer to Integrated PC Server or Integrated Netfinity Server.
9. The #281x ATM is not supported after OS/400 V5R2. Upgrade to Ethernet. The #2750 PCI ISDN BRI U Adapter, #2751 PCI ISDN BRI S/T IOA (ISDN), and #2761 Integrated Analog Modem are not supported.
10. The #2857 Integrated PC Server is not supported because Windows NT is no longer supported. Upgrade to #2866 PCI Integrated Netfinity Server. Upgrade Windows NT to Windows 2000.

## 1.4 AS/400e Model 170 processors

The AS/400e Model 170 systems are Customer Setup (CSU).

170 Processors	
#2159	75.0 RSP CPW Processor in Client/Server Environment (Unconstrained), 16.0 RSP CPW Processor in Interactive Environment (Constrained and Unconstrained). Base Memory 64 MB.
#2160	114.0 RSP CPW Processor in Client/Server Environment (Unconstrained), 23.0 RSP CPW Processor in Interactive Environment (Constrained and Unconstrained). Base Memory 64 MB.
#2164	210.0 RSP CPW Processor in Client/Server Environment (Unconstrained), 29.0 RSP CPW Processor in Interactive Environment (Constrained and Unconstrained). Base Memory 256 MB.
#2176	319.0 RSP CPW Processor in Client/Server Environment (Unconstrained), 39.0 RSP CPW Processor in Interactive Environment (Unconstrained). Base Memory 256 MB.
#2183	319.0 RSP CPW Processor in Client/Server Environment (Unconstrained), 65.0 RSP CPW Processor in Interactive Environment (Unconstrained). Base Memory 256 MB.
#2289	50 RSP CPW Processor in Client/Server Environment (Unconstrained), 15 RSP CPW Processor in Interactive Environment (Unconstrained). Base Memory 64 MB.
#2290	73 RSP CPW Processor in Client/Server Environment (Unconstrained), 20 RSP CPW Processor in Interactive Environment (Unconstrained). Base Memory 64 MB.
#2291	115 RSP CPW Processor in Client/Server Environment (Unconstrained), 25 RSP CPW Processor in Interactive Environment (Unconstrained). Base Memory 64 MB.
#2292	220 RSP CPW Processor in Client/Server Environment (Unconstrained), 30 RSP CPW Processor in Interactive Environment (Unconstrained). Base Memory 256 MB.
#2385	460 RSP CPW Processor in Client/Server Environment (Unconstrained), 50 RSP CPW Processor in Interactive Environment (Unconstrained). Base Memory 256 MB.
#2386	460 RSP CPW Processor in Client/Server Environment (Unconstrained), 70 RSP CPW Processor in Interactive Environment (Unconstrained). Base Memory 256 MB.
#2388	1090 RSP CPW 2-way Processor in Client/Server Environment (Unconstrained), 70 RSP CPW Processor in Interactive Environment (Unconstrained). Base Memory 256 MB.
#2407	Dedicated Domino Processor, 1300 Simple Mail Users, 30 RSP CPW Processor in Client/Server Environment, 10 RSP CPW in Interactive Environment. Base Memory 256 MB.
#2408	Dedicated Domino Processor, 2300 Simple Mail Users, 60 RSP CPW Processor in Client/Server Environment, 15 RSP CPW in Interactive Environment. Base Memory 512 MB.
#2409	Dedicated Domino Processor, 4300 Simple Mail Users, 120 RSP CPW Processor in Client/Server Environment, 20 RSP CPW in Interactive Environment. Base Memory 512 MB.

## 1.5 AS/400e Model 170 features

This section identifies the supported features for the AS/400e Model 170.

PCI cards are subject to plugging rules. See *PCI Card Placement Rules for the IBM eServer iSeries Server*, REDP-3638 for details.

Power and packaging	
#1402	<b>Line cord 9-ft 120 volt</b> Feature #1402 specifies 9 ft (2.8 m), 15 Amp, and 120 volt (U.S. default). The #1402 specify feature provides up to two line cords: one for the system and one for the expansion unit. One line cord is provided for the system unit.
#1403	<b>Line cord 9-ft 240 volt</b> Feature #1402 specifies 9 ft (2.8 m), 15 Amp, and 240 volt. This specify provides up to two line cords: one for the system and one for the expansion unit. One line cord is provided for the system unit.
#7101	<b>#7101 System Expansion Unit</b> The #7101 System Expansion Unit allows the addition of up to nine Peripheral Component Interconnect (PCI) cards. It includes a base controller (CCIN 2809) as standard and can have another added by installing a #2809. The #7101 can also support one #2857 Integrated PC Server or one #2866 PCI Integrated Netfinity Server. The #7101 supports up to six disks (driven by the same disk controller located in the system unit). The #7101 is mutually exclusive with a #7102 System Expansion Unit. Maximum: One per system; requires one #1402 or #1403 line cord Not available on the #2289, #2407, #2408, or #2409 processors
#7102	<b>#7102 System Expansion Unit</b> The #7102 System Expansion Unit allows the addition of up to nine PCI cards. It includes a base controller (CCIN 2824) with 32 MB of memory as standard and can have another added by installing a #2824 PCI Feature Controller. The #7102 can also support one #2857 Integrated PC Server or one #2866 PCI Integrated Netfinity Server. The #7102 additionally supports up to six disks (driven by the same disk controller located in the system unit). The #7102 is mutually exclusive with a #7101 System Expansion Unit. Maximum: One per system; requires one #1402 or #1403 line cord Minimum operating system level: OS/400 V4R4 Not available on the #2289 processor
Main storage	
Base	There are no features to specify the base memory of 64 MB on the Model 170 #2159, #2160, #2289, #2290, and #2291 processors. There are also no features to specify for 256 MB on the Model 170 #2164, #2176, #2183, #2292, #2385, #2386, and #2388 processors, for 256 MB on the #2407 Dedicated Domino Processor, or for 512 MB on the #2408 and #2409 Dedicated Domino Processors.
#3001	<b>32 MB Main Storage (DIMM)</b> The #3001 plugs directly into the CPU or memory riser card depending on the processor feature. Must be added in pairs.  Maximum: Six on all processors, except the #2385, #2386 and #2388 processors, which support a maximum of 12, and #2408, #2409, which support a maximum of 12. The #3001 is a Customer Install Feature (CIF) for an Miscellaneous Equipment Specification (MES) that only includes CIF features.
#3002	<b>128 MB Main Storage (DIMM)</b> The #3002 plugs directly into the CPU or memory riser card depending on the processor feature. Must be added in pairs.  Maximum: Six on all processors except the #2385, #2386, and #2388, which support a maximum of 14 and Dedicated Domino processors #2408 and #2409, which support a maximum of 12. The #3002 is a Customer Install Feature for an MES that only includes CIF features.
#3003	<b>256 MB Main Storage (DIMM)</b> The #3003 plugs directly into the CPU or memory riser card depending on the processor feature. Must be added in pairs. Mixing #3003 and #3004 within pairs (or quads on the #2385, #2386, and #2388 processors when more than eight memory features are installed) is not allowed.  Maximum: 12. Minimum operating system level: OS/400 V4R3 Supported on processors #2385, #2386, and #2388 only The #3003 is a Customer Install Feature for an MES that only includes CIF features.

#3004	<p><b>256 MB Main Storage (DIMM)</b></p> <p>The #3004 plugs directly into the CPU board or memory riser card depending on the processor feature. Must be added in pairs.</p> <p>Mixing of #3003 and #3004 within pairs (or quads on the #2385, #2386 and #2388 processors when more than eight memory features are installed) is <i>not</i> allowed.</p> <p>Maximum: Two on the #2289, #2290, #2291, #2292, and #2407 processors; 12 on the #2385, #2386, and #2388 processors; 14 on the #2408 and #2409 processors</p> <p>The #3004 is a Customer Install Feature for an MES that only includes CIF features.</p>
<b>Workstation controllers</b>	
Base MFIOP	<p><b>Base Multifunction IOP (for processors #2159, #2160, #2164, #2176, #2183, #2385, #2386, #2388, #2408, and #2409)</b></p> <p>The base system includes this MFIOP (CCIN 6757), which plugs on the processor card, and supports two high-speed PCI card slots C07, C03 and two low-speed PCI card slots C08, C09. The #2408 and #2409 processors include a #9740 Base RAID Disk Unit Controller in slot C07.</p> <p>Slot C07 has a #9728 Base Disk Unit Controller, a #9740 Base RAID Disk Unit Controller, a #2740, #2741, or #2748 PCI RAID Disk Unit Controller.</p> <p>Slots C02/C04 are reserved for one #2857 Integrated PC Server or #2866 PCI Integrated Netfinity Server, and can only be used if there is no card in C03.</p> <p>Slot C03 supports one #2723/#9723/#2724/#9724/#2838/#9738 PCI LAN input/ output adapter (IOA), or low-speed #2811/#2812/#2819 ATM, or #2745/#2750/#2751/#2761 PCI WAN IOA, or #2746 PCI Twinaxial Workstation IOA.</p> <p>C08 is reserved for one base #9720/#9721 or #9745 Base PCI 2-Line WAN IOA.</p> <p>C09 is limited to #2721/#2722/#2745/#2746 PCI IOAs if any card is in C03. If C03 is empty, it also supports one #2723/#9723/#2724/#9724 PCI LAN IOA, or #9720 Base PCI WAN/Twinaxial IOA, or #2746 PCI Twinaxial Workstation IOA.</p>
Base MFIOP	<p><b>Base Multifunction IOP (for #2289, #2290, #2291, #2292, and #2407)</b></p> <p>The MFIOP (CCIN 675A) and the processor are combined together on the planar board. It also includes embedded base disk unit controller. A separate #9728 is not required. The #2407 includes a #9740 Base RAID Disk Unit Controller. The MFIOP drives two low-speed slots C08, C09, and two high-speed PCI slots C03 and C07. It supports #2740/#9740, #2741 or #2748 PCI RAID Disk Unit Controllers only, if there are more than four disk drives, and RAID-5 is required.</p> <p>Slots C02/C04 are reserved for one #2857 Integrated PC Server or #2866 PCI Integrated Netfinity Server, and can only be used if there is no card in slot C03.</p> <p>Slot C03 supports one #2723/#9723/#2724/#9724/#2838/#9738 PCI LAN IOAs, or low-speed #2811/#2812/#2819 ATMs, or #2745, #2750, #2751 and #2761 PCI WAN IOAs or #2746 PCI Twinaxial Workstation IOA.</p> <p>Slot C08 is reserved for one #9720/#9721 or #9745 Base PCI 2-Line WAN IOA.</p> <p>Slot C09 is limited to #2721/#2722/#2745/#2746 PCI IOAs if any card is in C03. If C03 is empty, it also supports one #2723/#9723/#2724/#9724 PCI LAN IOA or #9720 Base PCI WAN/Twinaxial IOA or #2746 PCI Twinaxial Workstation IOA.</p> <p>The #2745 can be in either a low-speed or a high-speed slot.</p>
Base IOP	<p><b>Base Controller for #7101 System Expansion Unit</b></p> <p>One LAN/WAN/Workstation IOP (CCIN 2809) is supplied as standard within the #7101 and is installed in slot E10. It provides support for two high-speed PCI card slots E08 and E09, and two low-speed PCI card slots E13 and E14.</p> <ul style="list-style-type: none"> <li>▶ Slot E08 supports one of the following LAN cards: #2838, #2723, #2724 or #281x ATM cards, or #2745 PCI 2-Line WAN IOA.</li> <li>▶ Slot E09 supports the #2718 or #2729 PCI Magnetic Media Controller.</li> <li>▶ The low-speed slots E13 and E14 support cards #2721/#2745 PCI 2-Line WAN IOA and #2722/#2746 PCI Twinaxial Workstation IOA. If any ATM card is in E08, then slot E13 must be empty.</li> </ul>

Base IOP	<p><b>Base Controller for #7102 System Expansion Unit</b></p> <p>One LAN/WAN/Workstation IOP (CCIN 2824) is supplied as standard within the #7102, and is installed in slot E10. It provides support for two high-speed PCI card slots E08 and E09, and two low-speed PCI card slots E13 and E14.</p> <ul style="list-style-type: none"> <li>▶ Slot E08 supports one of the following LAN cards: The #2838, #2723, #2724, or #281x ATM cards or the #2745 PCI 2-Line WAN IOA or the #2746 PCI Twinaxial Workstation IOA or the #2750/#2751 PCI ISDN BRI S/T IOA, the #2761 Integrated Analog Modem, or the #4800 PCI Cryptographic Processor.</li> <li>▶ Slot E09 supports the #2718/#2729 PCI Magnetic Media Controller the #2745 PCI 2-Line WAN IOA, the #2746 PCI Twinaxial Workstation IOA, the #2750/#2751 PCI ISDN BRI S/T IOA, the #2761 Integrated Analog Modem, or the #4800 PCI Cryptographic Processor.</li> <li>▶ The low-speed slots E13 and E14 support cards #2721, #2722, #2723, #2724, #2745, or #2746. If any ATM card is in E08, E13 must be empty.</li> </ul>
#2720 #9720	<p><b>#2720 Base PCI WAN/Twinaxial IOA</b></p> <p>The #2720 is a combined twinaxial/communications adapter. It can be included as base in the Model 170. The #2720 provides four ports supporting a maximum of 28 twinaxial devices. It also provides a single communications line to support ECS. See “#2720” on page 14.</p> <p>PCI slots required: One Maximum: One</p>
#2722	<p><b>#2722 Twinaxial Workstation IOA</b></p> <p>One eight-port attachment is provided to support 40 twinaxial devices.</p> <p>PCI slots required: One Maximum: Five The #2722 is a Customer Install Feature for an MES that only includes CIF features.</p>
#2746	<p><b>#2746 PCI Twinaxial Workstation IOA</b></p> <p>One eight-port attachment is provided to support 40 twinaxial devices. The #2746 can be attached both to high- and low-speed slots.</p> <p>PCI slots required: One Maximum: Five Minimum operating system level: OS/400 V4R4 The #2746 is a Customer Install Feature for an MES that only includes CIF features.</p>
#2809	<p><b>#2809 PCI LAN/WAN/Workstation IOP</b></p> <p>The #2809 provides support for two low-speed PCI card slots E11 and E12, also one high-speed PCI card slot E03. It is a feature controller for LAN/WAN/Workstation in the #7101 System Expansion Unit. It can be installed in E07 in the #7101 System Expansion Unit only. One #2809 PCI LAN/WAN/Workstation IOP is supplied as standard within the #7101 with no feature required. See “Base IOP” on page 12.</p> <ul style="list-style-type: none"> <li>▶ Slot E03 can only be used if no #2857 Integrated PC Server or #2866 PCI Integrated Netfinity Server card is installed in slots E02/E04.</li> <li>▶ Slot E03 supports one #2718, #2729, #2723, #2724, #2745, #2838, or #281x.</li> <li>▶ Slots E11 and E12 support #2721/#2745 PCI 2-Line WAN IOA and #2722/#2746 PCI Twinaxial Workstation IOA.</li> </ul> <p>Maximum: One in #7101 System Expansion Unit The #2809 does not attach to the #7102 System Expansion Unit. The #2809 is a Customer Install Feature for an MES that only includes CIF features. The #2809 was withdrawn from marketing on 31 May 2001.</p>

#2824	<p><b>#2824 PCI Feature Controller</b>  The #2824 PCI Feature Controller for LAN/WAN/Workstation has 32 MB of memory.</p> <p>In the #7101 System Expansion Unit, one #2809 PCI LAN/WAN/Workstation IOP is supplied as standard with no feature required. In the #7102 System Expansion Unit, one #2824 PCI Feature Controller is supplied as standard with no feature required. See "Base IOP" on page 12. It can be installed in slot E07 in the #7101 and #7102 System Expansion Unit.</p> <p>The #2824 PCI Feature Controller provides support for two low-speed PCI card slots E11 and E12, and one high-speed PCI card slot E03.</p> <ul style="list-style-type: none"> <li>▶ Slot E03 can only be used if no #2857 Integrated PC Server or #2866 PCI Integrated Netfinity Server card is installed in slots E02/E04.</li> <li>▶ Slot E03 supports one #2718, #2729, #2723, #2724, #2745, #2746, #2750, #2751, #2761, #281x, #2838, or #4800.</li> <li>▶ Slots E11 and E12 supports #2721, #2722, #2723, #2724, #2745, and #2746.</li> </ul> <p>Maximum: One in the #7101/#7102 System Expansion Unit.  One #2750, #2751, or #2761 per #2824 PCI Feature Controller.  Minimum operating system level: OS/400 V4R4  The #2824 is a Customer Install Feature for an MES that only includes CIF features.  The #2824 was withdrawn from marketing on 21 November 2003.</p>
<b>Communications</b>	
Comm. Restrictions	See "Comm. Restrictions" on page 103, for communications rules and restrictions.
#2720 #9720	<p><b>#2720 Base PCI WAN/Twinaxial IOA</b>  The #2720 is a combined twinaxial/communication adapter. It is provided on the base system and supports a single communications line intended for ECS. One #0348 V.24/EIA232 20-ft. (6 m) PCI cable must be specified. The #2720/#9720 also supports twinaxial workstations. See "Workstation controllers" on page 12.  The #2720/#9720 is mutually exclusive with the #9721 and #9745.</p>
#2721	<p><b>#2721 PCI Two-Line WAN IOA</b>  The #2721 supports up to two multiple protocol communications ports when one or two of the following cables are attached:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft. (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft. (15 m) PCI cable</li> <li>▶ #0353 V.35 20ft/6 m PCI cable</li> <li>▶ #0354 V.35 50ft/6 m PCI cable</li> <li>▶ #0355 V.35 80ft/6 m PCI cable</li> <li>▶ #0356 V.36 20ft/6 m PCI cable</li> <li>▶ #0358 V.36 150ft/45 m PCI cable</li> <li>▶ #0359 X.21 20ft/6 m PCI cable</li> <li>▶ #0360 X.21 50ft/15 m PCI cable</li> <li>▶ #0365 V.24/EIA 232 80ft/24 m PCI cable</li> </ul> <p>Restrictions apply using the #2721. See "Comm. Restrictions" on page 103, for communications rules and restrictions.  PCI slots required: One (low-speed only)  The #2721 is a Customer Install Feature for an MES that only includes CIF features.</p>

#2745	<p><b>#2745 PCI 2-Line WAN IOA</b></p> <p>The #2745 supports up to two multiple protocol communications ports when one or two of the following cables are attached:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft. (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft. (15 m) PCI cable</li> <li>▶ #0353 V.35 20ft/6 m PCI cable</li> <li>▶ #0354 V.35 50ft/6 m PCI cable</li> <li>▶ #0355 V.35 80ft/6 m PCI cable</li> <li>▶ #0356 V.36 20ft/6 m PCI cable</li> <li>▶ #0358 V.36 150ft/45 m PCI cable</li> <li>▶ #0359 X.21 20ft/6 m PCI cable</li> <li>▶ #0360 X.21 50ft/15 m PCI cable</li> <li>▶ #0365 V.24/EIA 232 80ft/24 m PCI cable</li> </ul> <p>Restrictions apply using the #2745. See "Comm. Restrictions" on page 103 for communications rules and restrictions.  PCI slots required: One (low or high-speed).  Minimum operating system level: OS/400 V4R3  The #2745 is a Customer Install Feature for an MES that only includes CIF features.  The #2745 was withdrawn from marketing on 01 October 2004. The recommended replacement is the #2742 2-Line WAN IOA.</p>
#2750	<p><b>#2750 PCI ISDN BRI U Adapter</b> (available in the United States and Canada only)</p> <p>The #2750 PCI ISDN BRI U Adapter is a 4-port (8-channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #2750 is the "U"-bus (2 wire) version of the ISDN BRI PCI card.  The #2750 PCI ISDN BRI U Adapter supports the following protocols:</p> <ul style="list-style-type: none"> <li>▶ PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices)</li> <li>▶ IDLC</li> <li>▶ Fax</li> </ul> <p>Four 30-ft (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #2750 feature. For configuration purposes, each #2750 counts as eight lines (two lines per port) towards the system communication maximums. Allowed in high-speed slots C03 (base unit), E03, E08, or E09 (system expansion unit). Supports full duplex.</p> <p>Prerequisite: The #2824 PCI Feature Controller is required for attachment to a system expansion unit,  Requirements: The #2750 requires country (region) certification or homologation.  Full sized PCI card slot.  Maximum: One per IOP.  Minimum operating system level: OS/400 V4R4 with PTF MF22528 or Cumulative PTF Package C9313440.  The #2750 is a Customer Install Feature for an MES that only includes CIF features.</p>
#2751	<p><b>#2751 PCI ISDN BRI S/T IOA</b></p> <p>The #2751 PCI ISDN BRI S/T IOA is a four-port (eight channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #2751 is the "S/T"-bus (four wire) version of the ISDN BRI PCI card.  This requires a network terminating device in the circuit. In the United States and Canada, this must be provided by the customer. In other countries or regions, it is most likely provided by the telephone company.</p> <p>The #2751 supports the following protocols:</p> <ul style="list-style-type: none"> <li>▶ PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices)</li> <li>▶ IDLC</li> <li>▶ Fax</li> </ul> <p>Four 30-ft (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #2751 feature. For configuration purposes, each #2751 counts as eight lines (two lines per port) towards the system communication maximums. Allowed in high-speed slots C03 (base unit), E03, E08, or E09 (system expansion unit). Supports full duplex.</p> <p>Prerequisite: The #2824 PCI Feature Controller is required for attachment to a system expansion unit,  Requirements: The #2751 requires country (region) certification or homologation.  Full sized PCI card slot.  Maximum: One per IOP.  Minimum operating system level: OS/400 V4R4 with PTF MF22528 or Cumulative PTF Package C9313440.  The #2751 is a Customer Install Feature for an MES that only includes CIF features.</p>

#2761	<p><b>#2761 Integrated Analog Modem</b></p> <p>The #2761 Integrated Analog Modem allows the modem function to be integrated into the IOA and supports multiple analog modem ports (eight phone lines). The #2761 runs the following protocols without the need for an external modem:</p> <ul style="list-style-type: none"> <li>▶ SLIP/PPP uses V.90, so maximum line speed is 56 Kbps.</li> <li>▶ SDLC uses V.34, so maximum line speed is 33.6 Kbps.</li> <li>▶ Fax uses V.17 to achieve a 14.4 Kbps maximum line speed.</li> </ul> <p>An asynchronous line description is required for Fax and can only be used for Fax. An ECS line is not supported. Eight 30-ft (8 m) phone cables are shipped with each #2761. To the iSeries or AS/400e server, the #2761 appears as a single IOA with eight individual resources available. For configuration purposes, each #2761 counts as eight communications lines. Allowed in high-speed slots C03 (base unit), E03, E08, or E09 (system expansion unit). Supports full duplex.</p> <p>Prerequisite: The #2824 PCI Feature Controller is required for attachment to a system expansion unit. Supports full duplex.</p> <p>Requirements: The #2761 requires country (region) certification or homologation. Full sized PCI card slot.</p> <p>Maximum: One per IOP. Minimum operating system level: OS/400 V4R4 with PTF MF22528 or Cumulative PTF Package C9313440. Not supported with OS/400 V5R2. The #2761 is a Customer Install Feature for an MES that only includes CIF features.</p>
#2809	<p><b>#2809 PCI LAN/WAN/Workstation IOP</b></p> <p>The #2809 can also be used in the #7101 System Expansion Unit to attach LAN, WAN, and Workstation IOAs to the system. Refer to the #2809 description in "Workstation controllers" on page 12 for full information about this controller.</p>
#2824	<p><b>#2824 PCI Feature Controller</b></p> <p>The #2824 can be used for attaching LAN, WAN, and Workstation IOAs to the system. Refer to the #2824 description within "Workstation controllers" on page 12 for full information about this controller.</p>
#4800	<p><b>#4800 PCI Cryptographic Processor</b></p> <p>The #4800 coupled with OS/400 Option 35 and Cryptographic Service Provider APIs, provides rich cryptography function and secure storage of cryptographic keys. The level of cryptographic function is determined by the Cryptographic Access Provider Licensed Program, which is downloaded to the adapter.</p> <p>Due to temperature requirements, the #4800 is shipped separately from the system in a special package.</p> <p>Prerequisite: #7101 System Expansion Unit with #2824 PCI Feature Controller or #7102 System Expansion Unit PCI card slot required: One Maximum: One per IOP. Minimum operating system level: OS/400 V4R4</p>
#9721	<p><b>#9721 Base PCI 2-Line WAN IOA</b></p> <p>The #9721 two-line communications adapter supports ECS and Operations Console or Client Access Console. This cable must be specified for ECS:</p> <ul style="list-style-type: none"> <li>#0348 V.24/EIA232 20-ft. (6 m) PCI cable</li> </ul> <p>This additional cable must be specified for Client Access Console:</p> <ul style="list-style-type: none"> <li>▶ #0362 20-ft (6 m) Client Access Console PCI Cable (optional)</li> <li>▶ Features #0362 and #0367 are mutually exclusive.</li> </ul> <p>A #9721 is used to support the Operations Console function on OS/400 V4R3:</p> <ul style="list-style-type: none"> <li>#0367 Operations Console PCI Cable is required.</li> </ul> <p>The #0381 Remote Control Panel Cable can be used to support the Remote Control Panel function. The #0381 cable does not attach to a communication port. PCI card slots required: One (low-speed only) Maximum: One The #9721 is mutually exclusive with the #9720 and #9745.</p>



#9745	<p><b>#9745 Base PCI 2-Line WAN IOA</b></p> <p>The #9745 two-line communications adapter supports ECS and Client Access Console or Client Access Console. One of the following cables must be specified for ECS:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft. (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft. (15 m) PCI cable</li> <li>▶ #0353 V.35 20-ft/6 m PCI cable</li> <li>▶ #0354 V.35 50-ft/6 m PCI cable</li> <li>▶ #0355 V.35 80-ft/6 m PCI cable</li> <li>▶ #0356 V.36 20-ft/6 m PCI cable</li> <li>▶ #0358 V.36 150-ft/45 m PCI cable</li> <li>▶ #0359 X.21 20-ft/6 m PCI cable</li> <li>▶ #0360 X.21 50-ft/15 m PCI cable</li> <li>▶ #0365 V.24/EIA 232 80-ft/24 m PCI cable</li> <li>▶ #0367 Operations Console PCI Cable 20 ft (6 m) *</li> </ul> <p>A #9745 must be used for Client Access Console:</p> <ul style="list-style-type: none"> <li>#0362 20-ft (6 m) Client Access Console Cable (support only with OS/400 V4R4)</li> </ul> <p>* The #0367 is used to support the Operations Console function (default):</p> <ul style="list-style-type: none"> <li>#0367 Operations Console PCI Cable 20-ft (6 m). Required unless #2746 PCI Twinaxial Workstation IOA is used.</li> </ul> <p>#0362 and #0367 are mutually exclusive.</p> <p>The #0381 Remote Control Panel Cable can be used to support the Remote Control Panel function. The #0381 cable does not attach to a communication port.</p> <p>PCI card slots required: One (low or high-speed)</p> <p>When the #9745 is installed in slot C03, the #9724 PCI Token Ring IOA must be removed from the base system unit and moved into a #7101 System Expansion Unit, except for the #2289 processor.</p> <p>The #9745 is mutually exclusive with the #9720 and #9721.</p> <p>Minimum operating system level: OS/400 V4R3</p>
<b>LANs and ATM</b>	
Comm. Restrictions	See "Comm. Restrictions" on page 103, for communications rules and restrictions.
#2723 #9723	<p><b>#2723 PCI Ethernet IOA</b></p> <p>The #2723/#9723 provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. Has a RJ45 connector and a 15 pin D-shell connector for attachment of customer supplied cabling. The Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. AUI Ethernet or RJ45 twisted pair cable must be ordered separately. Cabling must meet or exceed Industry Standard EIA/TIA T568B.</p> <p>The #9723 is a base LAN.</p> <p>If #9723/#2723 PCI Ethernet IOA is selected to run on #2857 Integrated PC Server/#2866 PCI Integrated Netfinity Server, then one #0221 Ethernet on Integrated PC Server or Integrated Netfinity Server is required for each #2723/#9723 installed.</p> <p>PCI slots required: One</p> <p>The #2723 is a Customer Install Feature for an MES that only includes CIF features.</p>
#2724 #9724	<p><b>#2724 PCI 16/4 Mbps Token Ring IOA</b></p> <p>The #2724/#9724 provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code that supplies IEEE 802.5 MAC and IEEE 802.2 LLC functions and an external 8-ft (2.4 m) cable. Alternatively a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. The #9724 is a base LAN. If the #2724/#9724 PCI Token Ring IOA is selected to be run on a #2857 Integrated PC Server/#2866 PCI Integrated Netfinity Server, then one #0220 Token Ring on Integrated PC Server or Integrated Netfinity Server is required for each #2724/#9724. The IOA is capable of operating in half or full duplex mode.</p> <p>PCI slots required: One</p> <p>The #2724 is a Customer Install Feature for an MES that only includes CIF features.</p>
#2809	<p><b>#2809 PCI LAN/WAN/Workstation IOP</b></p> <p>The #2809 can also be used in the #7101 System Expansion Unit to attach LAN, WAN, and Workstation IOAs to the system.</p> <p>Refer to the #2809 description in "Workstation controllers" on page 12 for full information about this controller.</p>

#2811	<p><b>#2811 PCI 25 Mbps UTP ATM IOA</b></p> <p>The #2811 PCI 25 Mbps UTP ATM IOA provides attachment into an ATM network using Unshielded Twisted Pair (UTP) cabling. The #2811 is typically used where 25 Mbps speeds are required over distances of less than 100 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site at:  <a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>High-speed PCI slots required: One  The #2811 is a Customer Install Feature for an MES that only includes CIF features.</p>
#2812	<p><b>#2812 PCI 45 Mbps Coax T3/DS3 ATM IOA</b></p> <p>The #2812 PCI 45 Mbps Coax T3/DS3 ATM IOA provides attachment into an ATM network using coax cabling and the T3/DS3 interface. The #2812 is typically used where 45 Mbps speeds are required over distances of less than 1000 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site at:  <a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>High-speed PCI slots required: One  The #2812 is a Customer Install Feature for an MES that only includes CIF features.</p>
#2815	<p><b>#2815 PCI 155 Mbps UTP OC3 ATM IOA</b></p> <p>The #2815 PCI 155 Mbps UTP OC3 ATM IOA provides attachment into an ATM network using the UTP-5 interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. Technical specifications and industry standards supported are available at the ATM Forum Web site at:  <a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>The #2815 is typically used where 155 Mbps speeds are required over distances of less than 100 meters.  Prerequisite: #7101 or #7102 System Expansion Unit.  High-speed PCI slots required: One  The #2815 is a Customer Install Feature for an MES that only includes CIF features.</p>
#2816	<p><b>#2816 PCI 155 Mbps MMF ATM IOA</b></p> <p>The #2816 PCI 155 Mbps MMF ATM IOA provides attachment into an ATM network using the Multi-Mode Fiber (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. Technical specifications and industry standards supported are available at the ATM Forum Web site at:  <a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>The #2816 is typically used where 155 Mbps speeds are required over distances of less than 2 kilometers.  Prerequisite: #7101 or #7102 System Expansion Unit.  High-speed PCI slots required: One  The #2816 is a Customer Install Feature for an MES that only includes CIF features.</p>
#2818	<p><b>#2818 PCI 155 Mbps SMF OC3 ATM IOA</b></p> <p>The #2818 PCI 155 Mbps SMF OC3 ATM IOA provides attachment into an ATM network using the Single Mode Fibre (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provider equipment, but can be used for local area switches. Technical specifications and industry standards supported are available at the ATM Forum Web site at:  <a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>The #2818 is typically used where 155 Mbps speed is required over distances of 16 to 40 kilometers.  Prerequisite: #7101 or #7102 System Expansion Unit.  High-speed PCI slots required: One  The #2818 is a Customer Install Feature for an MES that only includes CIF features.</p>
#2819	<p><b>#2819 PCI 34 Mbps Coax E3 ATM IOA</b></p> <p>The #2819 PCI 34 Mbps Coax E3 ATM IOA provides attachment into an ATM network using coax cabling and the E3 interface. The #2819 is typically used where 34 Mbps speed is required over distances of less than 1000 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site at:  <a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>High-speed PCI slots required: One  The #2819 is a Customer Install Feature for an MES that only includes CIF features.</p>
#2824	<p><b>#2824 PCI Feature Controller (LAN/WAN/Workstation)</b></p> <p>The #2824 can be used for attaching LAN, WAN, and Workstation IOAs to the system. Refer to the #2824 description within "Workstation controllers" on page 12 for full information about this controller.</p>

#2838 #9738	<p><b>#2838/#9738 PCI 100/10 Mbps Ethernet IOA</b></p> <p>The #2838/#9738 provides attachment to standard 100 Mbps high-speed Ethernet LANs and allows attachment to existing 10 Mbps Ethernet LANs. The #9738 is a base LAN. If a #2838/#9738 PCI 100/10 Mbps Ethernet IOA is selected to run on a #2857 Integrated PC Server or #2866 PCI Integrated Netfinity Server, then one specify #0222 100/10 Mbps Ethernet on IPCS/Integrated Netfinity Server is required. The IOA is capable of operating in half or full duplex mode. The adapter comes standard with an RJ45 connector for attachment to UTP-5 media #9738 is a base LAN. Cabling for 10 Mbps must be CAT-3 or CAT-5, cabling for 100 Mbps must be CAT-5 that meets or exceeds Industry Standard EIA/TIA T568A or T568B. Maximum cable length is 100 meters.</p> <p>High-speed PCI slots required: One The #2838 is a Customer Install Feature for an MES that only includes CIF features.</p>
#2857	<p><b>#2857 Integrated PC Server</b></p> <p>The #2857 contains a 200 MHz Pentium® Processor, four main storage slots and two LAN IOA slots for high performance serving to LAN attached PCs. Between one and four of the following main storage features must also be installed:</p> <ul style="list-style-type: none"> <li>▶ #2861 32 MB Integrated PC Server Memory</li> <li>▶ #2862 128 MB Integrated PC Server Memory</li> </ul> <p>Minimum one and maximum two of any of the following LAN IOAs are supported. Only one of the IOAs can be #2838/#9738:</p> <ul style="list-style-type: none"> <li>▶ #2723 PCI Ethernet IOA Specify #0221 is required for each IOA installed.</li> <li>▶ #2724 PCI 16/4 Mbps Token Ring IOA Specify #0220 is required for each IOA installed</li> <li>▶ #2838 PCI 100/10 Mbps Ethernet IOA Specify #0222 is required for each IOA installed</li> </ul> <p>Only one of the following base LAN IOAs is supported:</p> <ul style="list-style-type: none"> <li>▶ #9723 PCI Ethernet IOA Specify #0221 is required for each IOA installed</li> <li>▶ #9724 PCI Token Ring IOA Specify #0220 is required for each IOA installed</li> <li>▶ #9738 PCI 100/10 Mbps Ethernet IOA Specify #0222 is required for each IOA installed</li> </ul> <p>The #2857 also comes with an external attach cable which provides industry standard keyboard, mouse. This also allows for optional use of serial and parallel ports.</p> <p>If running Windows NT on the #2857, then:</p> <ul style="list-style-type: none"> <li>▶ #0325 Integrated PC Server Extension Cable for Windows NT is required.</li> <li>▶ #1700 Integrated PC Server Keyboard/Mouse for Windows NT is default in the U.S.A.</li> <li>▶ A display must be connected to the IPCS to support Windows NT.</li> </ul> <p>For country- or region-specific keyboard, mouse and display support, access the site at: <a href="http://www.ibm.com/eserver/iseries/integratedxseries/">http://www.ibm.com/eserver/iseries/integratedxseries/</a></p> <p>If running OS/2® on the #2857, then: #0325 and #1700 are not allowed.</p> <p>If running Novell NetWare on the #2857, then:</p> <ul style="list-style-type: none"> <li>▶ #0325 and #1700 are not allowed.</li> <li>▶ A maximum of 256 MB IOP memory is supported.</li> </ul> <p>Last supported release for OS/2 and Novell NetWare is OS/400 V4R5 PCI slots required: Two in reserved positions in the base system unit or in the #7101 System Expansion Unit. The #2857 is a Customer Install Feature for an MES that only includes CIF features.</p>

#2866	<p><b>#2866 PCI Integrated Netfinity Server</b></p> <p>The #2866 PCI Integrated Netfinity Server contains a 333 MHz Pentium II Processor, two LAN IOA slots for high performance serving to LAN-attached PCs, and four main storage slots.</p> <p>The four main storage slots can each contain one of the following features, giving a maximum of 1024 MB. No base main store memory is supplied. A minimum of one main storage feature is required:</p> <ul style="list-style-type: none"> <li>▶ #2861 32 MB Integrated PC Server Memory</li> <li>▶ #2862 128 MB Integrated PC Server Memory</li> <li>▶ #2867 256 MB Integrated PC Server Memory</li> </ul> <p>Minimum one and maximum two of any of the following LAN IOAs are supported. Only one of the IOAs can be a #2838/#9738:</p> <ul style="list-style-type: none"> <li>▶ #2723 PCI Ethernet IOA</li> <li>▶ #2724 PCI 16/4 Mbps Token Ring IOA</li> <li>▶ #2838 PCI 100/10 Mbps Ethernet IOA</li> </ul> <p>Only one of the following base LAN IOAs is supported:</p> <ul style="list-style-type: none"> <li>▶ #9723 PCI Ethernet IOA</li> <li>▶ #9724 PCI Token Ring IOA</li> <li>▶ #9738 PCI 100/10 Mbps Ethernet IOA</li> </ul> <p>If running Windows NT on the #2866, then:</p> <ul style="list-style-type: none"> <li>▶ A minimum of 64 MB IOP memory is required.</li> <li>▶ #0325 PCI Integrated Netfinity Server Extension Cable for Windows NT is required.</li> <li>▶ #1700 PCI Integrated Netfinity Server Keyboard/Mouse for Windows NT is the default in the U.S.A.</li> <li>▶ A display unit is required to support Windows NT.</li> </ul> <p>For country- or region-specific keyboard, mouse and display support, go to:  <a href="http://www.ibm.com/eserver/iseries/integratedxseries/">http://www.ibm.com/eserver/iseries/integratedxseries/</a></p> <p>If running OS/2 on the #2866, then:</p> <ul style="list-style-type: none"> <li>▶ #0325 and #1700 are not allowed.</li> <li>▶ A maximum of 512 MB IOP Memory is supported on OS/2.</li> </ul> <p>If running Novell NetWare on the #2866, then:</p> <ul style="list-style-type: none"> <li>▶ #0325 and #1700 are not allowed.</li> <li>▶ A maximum of 256 MB IOP memory is supported on Novell NetWare.</li> </ul> <p>Last supported release for OS/2 and Novell NetWare is OS/400 V4R5  Minimum operating system level: OS/400 V4R2 with Cumulative PTF Package C8342420 or OS/400 V4R3 with Cumulative PTF Package C8349430  The #2866 is a Customer Install Feature for an MES that only includes CIF features.</p>
<b>Disk units</b>	
#6807	<p><b>#6807 4.19 GB Additional Two byte Disk Unit</b></p> <p>The #6807 provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk unit.</p> <p>The #6807 is a Customer Install Feature for an MES that only includes CIF features.</p>
#6813	<p><b>#6813 8.58 GB Additional Two-byte Disk Unit (Ultra™ SCSI)</b></p> <p>The #6813 provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk unit.</p> <p>The #6813 is a Customer Install Feature for an MES that only includes CIF features.</p>
#6817	<p><b>#6817 8.58 GB 10k RPM Disk Unit (2-byte) (Ultra SCSI)</b></p> <p>The #6817 provides a 3 ½-inch single disk unit with 8.58 GB of high-performance (10k RPM) capacity</p> <p>Minimum operating system level: OS/400 V4R3</p> <p>The #6817 is a Customer Install Feature for an MES that only includes CIF features.</p>
#6818	<p><b>#6818 17.54 GB 10k RPM Disk Unit (2-byte) (Ultra SCSI)</b></p> <p>The #6818 provides a 3 ½-inch single disk unit with 17.54 GB of high-performance (10k RPM) capacity.</p> <p>Minimum operating system level: OS/400 V4R4</p> <p>The #6818 is a Customer Install Feature for an MES that only includes CIF features.</p> <p>The #6818 was withdrawn from marketing on 01 June 2004.</p>
#6824	<p><b>#6824 17.54 GB Disk Unit (Two-Byte) (Ultra SCSI)</b></p> <p>The #6824 provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage.</p> <p>The #6824 supports integrated hardware disk compression.</p> <p>Minimum operating system level: OS/400 V4R4</p> <p>The #6824 is a Customer Install Feature for an MES that only includes CIF features.</p>

#6831	<p><b>#6831 1.6 GB Read Cache Device</b></p> <p>The #6831 provides 1.6 Gb of capacity for large read cache function. It is mutually exclusive with DASD compression. The system arrives in performance mode with the compression function turned off on the disk controller. Mirroring is not supported on the #6831.</p> <p>Prerequisites: #2748 PCI RAID Disk Unit Controller</p> <p>One DASD slot</p> <p>Maximum: One per #2748 PCI RAID Disk Unit Controller</p> <p>Minimum operating system level: OS/400 V4R4</p>
#8813	<p><b>8.58 GB Optional Base Two-byte Disk Unit (Ultra SCSI)</b></p> <p>The #8813 provides a 3 ½-inch single disk unit with 8.58 GB capacity as the optional base disk unit in place of #9707.</p>
#8817	<p><b>#8817 8.58 GB Optional Base Two-byte Disk Unit 10k RPM (Ultra SCSI)</b></p> <p>The #8817 provides a 3 ½-inch single disk unit with 8.58 GB of high-performance (10k RPM) capacity</p> <p>Minimum operating system level: OS/400 V4R3</p>
#8818	<p><b>#8818 17.54 GB Optional Base Two-byte Disk Unit 10k RPM (Ultra SCSI)</b></p> <p>The #8818 provides a 3 ½-inch single disk unit with 17.54 GB of high-performance (10k RPM) capacity.</p> <p>Minimum operating system level: OS/400 V4R4</p>
#8824	<p><b>17.54 GB Optional Base Two-byte Disk Unit (Ultra SCSI)</b></p> <p>The #8824 provides a 3 ½-inch single disk unit with 17.54 GB capacity as the optional base disk unit in place of a #9707 4.19 GB Base Two-byte Disk Unit (Ultra SCSI).</p> <p>The #8824 supports integrated hardware disk compression.</p> <p>Minimum operating system level: OS/400 V4R2</p> <p>The #8824 was withdrawn from marketing on 31 January 2001.</p>
#9707	<p><b>#9707 4.19 GB Base Two-byte Disk Unit (Ultra SCSI)</b></p> <p>The #9707 provides a 3 ½-inch single disk unit with 4.19 GB capacity as the base disk unit.</p>
<b>Internal tape units</b>	
Supported media	See 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for the supported media for each tape device.
#6381	<p><b>#6381 2.5 GB ¼-inch Cartridge Tape</b></p> <p>The #6381 can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. It should be used when compatibility with System/36™ ¼-inch cartridge tape unit is required.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #6381 is a Customer Install Feature for an MES that only includes CIF features.</p>
#6382	<p><b>#6382 4 GB ¼-inch Cartridge Tape Unit</b></p> <p>The #6382 can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #6382 is a Customer Install Feature for an MES that only includes CIF features.</p>

#6383	<p><b>#6383 16 GB ¼-inch Cartridge Tape Unit</b></p> <p>The #6383 is mounted in the system unit. With a data rate of 1.5 Mbps and capacity of 16 GB per cartridge (3 Mbps and 32 GB per cartridge with data compaction), the #6383 provides a growth path for the large number of iSeries and AS/400e servers that use QIC tape technology for save/restore. The #6383 is controlled by the MFIOP.</p> <p>The #6383 provides read/write compatibility with the following formats:</p> <ul style="list-style-type: none"> <li>▶ 16 GB (up to 32 GB with compression in QIC5010 format) with IBM MLR-116 GB Data Cartridge</li> <li>▶ 13 GB (up to 26 GB with compression in QIC5010 format) with IBM DC5010 Data Cartridge</li> </ul> <p>The #6383 provides read compatibility with the following formats:</p> <ul style="list-style-type: none"> <li>▶ 8 GB (QIC4DC compressed format) with SLR5-4 GB Data Cartridge</li> <li>▶ 5 GB (QIC2DC compressed format) with IBM DC9250 Data Cartridge</li> <li>▶ 4 GB (QIC 4 GB format) with SLR5-4 GB Data Cartridge</li> <li>▶ 2.5 GB (QIC 2 GB format) with IBM DC9250 Data Cartridge</li> </ul> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Minimum operating system level: OS/400 V4R2</p> <p>The #6383 is a Customer Install Feature for an MES that only includes CIF features.</p>
#6384	<p><b>30 GB ¼-inch Cartridge Tape Unit</b></p> <p>The #6384 is a 30 GB ¼-inch cartridge tape unit that can be mounted in a removable media device slot of a system unit or an expansion tower. The #6384 can be used for save/restore, alternate IPL, program distribution, migration, and ¼-inch cartridge tape exchange.</p> <p>The #6384 can be mounted in the system unit of the Model 170.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #6384 is a Customer Install Feature.</p>
#6385	<p><b>#6385 13 GB ¼-inch Cartridge Tape Unit</b></p> <p>The #6385 can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>The #6385 can be converted to a #6383 or #6386 for a fee.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Not supported with OS/400 V5R2.</p> <p>The #6385 is a Customer Install Feature for an MES that only includes CIF features.</p>
#6386	<p><b>#6386 25 GB ¼-inch Cartridge Tape Unit</b></p> <p>The #6386 can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #6386 is a Customer Install Feature for an MES that only includes CIF features.</p>

Magnetic media controllers	
#2718	<p><b>#2718 PCI Magnetic Media Controller</b>  The #2718 is an Ultra SCSI Tape IOA that provides attachment capability for the IBM 7207-122 QIC-SLR Tape Bridge Box. The #2718 can attach one tape drive.</p> <p>Prerequisite: #7101/#7102 System Expansion Unit.  Minimum operating system level: OS/400 V4R2  The #2718 is a Customer Install Feature for an MES that only includes CIF features.</p>
#2729	<p><b>#2729 PCI Magnetic Media Controller</b>  The #2729 provides SCSI attachment for one 3490E C11/C22/C1A/C2A with feature #5040, 3490E Exx, 3490E Fxx, 3494 D1x or L1x, 3570, 3590, 7208, 9348 or 9427 Tape Subsystem Models or 3995 Optical Library Dataserver - Model C43x.</p> <p>Prerequisite: #7101/ #7102 System Expansion Unit  High-speed PCI slots required: One  Maximum: Two  The #2729 is a Customer Install Feature for an MES that only includes CIF features.</p>
#2740	<p><b>#2740 PCI RAID Disk Unit Controller — 4 MB Cache (RAID/Mirrored/Unprotected)</b>  The #2740 is an Ultra SCSI controller that provides RAID protection and a 4 MB write-cache for up to 10 disks installed in the base system unit and the #7101 System Expansion Unit. A minimum of four drives and a maximum of 10 drives are supported in each array. A maximum of two arrays are supported on the #2740. The #2740 also supports one CD-ROM drive (comes as standard) and one internal tape drive. Supports #6381, #6382, #6384, or #6385 tape units. Mutually exclusive with #2741 PCI RAID Disk Unit Controller and #9728 Base Disk Unit Controller. The #2740 does not support integrated hardware disk compression.</p> <p>High-speed PCI slots required: One  Maximum: One</p>
#2741	<p><b>#2741 PCI RAID Disk Unit Controller — 4 MB Cache (RAID/Mirrored/Unprotected)</b>  The #2741 is an Ultra SCSI controller that provides RAID protection and a four MB write-cache for up to 10 disks installed in the base system unit and #7101 System Expansion Unit. A minimum of four drives and a maximum of 10 drives are supported in each array. A maximum of two arrays are supported on the #2741. The #2741 also supports one CD-ROM drive (comes as standard) and one internal tape drive. The #2741 supports the #6381 2.5 GB ¼-inch Cartridge Tape, #6382 4 GB ¼-inch Cartridge Tape Unit, #6384 30 GB ¼-inch Cartridge Tape Unit, and #6385 13 GB ¼-inch Cartridge Tape Unit. Mutually exclusive with #2740 PCI RAID Disk Unit Controller and #9728 Base Disk Unit Controller.</p> <p>High-speed PCI slots required: One  Maximum: One  Minimum operating system to support integrated hardware disk compression: OS/400 V4R3  Minimum operating system level: OS/400 V4R4.</p>
#2748	<p><b>#2748 PCI RAID Disk Unit Controller — 26 MB Cache (RAID/Mirrored/Unprotected)</b>  The #2748 SCSI controller with 26 MB write-cache provides RAID-5 protection and DASD compression capability for internal disk units, and supports internal tape and CD-ROM units. The #2748 controls Ultra and Fast Wide SCSI disk units installed in the base system and the #7101/#7102 System Expansion Unit. In addition to providing RAID-5 and compression, the #2748 also works as a high-performance controller for disks protected by system mirroring or disks with no protection. In a RAID-5 configuration, disk unit protection is provided at less cost than mirroring, and with better performance than checksum.</p> <p>The #2748 also supports the #6831 1.6 GB Read Cache Device, which is mutually exclusive with DASD compression. The #2748 supports a maximum of 10 disk units. A minimum of four disk units of the same capacity are needed for a valid RAID-5 configuration. A maximum of two arrays are allowed per controller, with a maximum of 10 disk units per array. All disk units in an array must be of the same capacity. Parity is spread across four disk units for arrays of four to seven disk units. For systems started with eight disk units in an array, the parity for that array is spread across eight disk units. The RAID function must be stopped and then started to spread the parity across eight disk units if RAID is initially started with less than eight disk units in an array.</p> <p>The #2748 supports one CD-ROM and one internal tape unit, and concurrent DASD maintenance.  One disk controller PCI card slot is required.  Maximum: One  Minimum operating system level: OS/400 V4R4</p>

#9728	<p><b>#9728 Base Disk Unit Controller CCIN 2728</b></p> <p>The #9728 is the base IOA for the system unit. Provides Ultra SCSI attachment for up to four disk units, one CD-ROM drive (standard), and one internal tape drive. Does not support RAID. Supports #6381, #6382, #6384, or #6385 tape units. Mutually exclusive with #2740 and #2741. The #9728 does not support integrated hardware disk compression. The #9728 is not required for the #2289, #2290, #2291 and #2292 processors for up to four disk drives.</p> <p>High-speed PCI slots required: One. Maximum: One</p>
#9740	<p><b>#9740 Base RAID Disk Unit Controller</b></p> <p>The #9740 Base RAID Disk Unit Controller supports up to 10 internal disk units, one internal tape, and one internal CD-ROM. The #9740 is designed to control Ultra, Fast Wide, and Fast Narrow SCSI disk and tape units that are installed in the base system unit and the #7102 System Expansion Unit. #2740 PCI RAID Disk Unit Controller is not supported on any Domino Server Processor. #2748 PCI RAID Disk Unit Controller is a high performance controller with compression which can be substituted (without credit) for the #9740 Base RAID Disk Unit Controller. The #9740 is included with, and only available on all #2407, #2408, and #2409 Domino Server processors.</p> <p>The #9740 supports Concurrent DASD add/maintenance. Maximum: One Minimum operating system to support #2748: OS/400 V4R4.</p>

## 1.6 Supported upgrades for the Model 170

All upgrades to, from, and within the 170 systems are withdrawn from marketing. Refer to the Upgrade topic in the Find and Compare Tool (FACT) at the following Web site to determine the supported upgrade paths for a given processor:

<http://www-919.ibm.com/servers/eserver/fact/>

See "RPQ 843978" on page 178 for disk unit migration.



## IBM iSeries SB2 and SB3 models

This chapter identifies the features that are associated with each SB2 and SB3 system, such as the processor features, power and packaging, main storage, workstation controllers, and communications. This includes local area networks (LANs) and asynchronous transfer mode (ATM), disk units, internal tape units, CD-ROM, DVD technology, and magnetic media controllers.

Model	Announce/availability date	Withdrawn from marketing
SB2 #2315	Announced 12 June 2000 Available August 2000	03 December 2002
SB3 #2316 and #2318	Announced 12 June 2000 Available August 2000	03 December 2002

**Note:** The darker shaded cells in the following tables indicate the base features.

## 2.1 iSeries Model SB2 and SB3 overview

The following tables provide Model SB2 and SB3 minimum and maximum capacities.

	Model SB2	Model SB3	
Processor feature	#2315	#2316	#2318
Relative system performance <sup>1</sup>			
Processor CPW	7350	10000	16500
Interactive CPW	N/A	N/A	N/A
Number/type/speed of processor	8/IStar/540 MHz	12/IStar/500 MHz	24/IStar/500 MHz
L2 Cache (MB)	8	8	8
Main storage (GB)	12	16	24
Main storage DIMMs (minimum/maximum)	48/48	8/8	12/12
Minimum OS/400 level	V4R5	V4R5	V4R5
Software group	P30	P40	P40
DASD storage			
DASD arms maximum	4	6	8
Physical minimum (GB)	34.3	34.3	34.3
Physical maximum (GB)	70.1	105.2	140.3
Logical maximum (RAID-5 protection)	52.6	87.7	122.7

	SB2 Base #9074	SB3 Base #9079	Migration Tower II #5077	SB2 total	SB3 total
Diskette (8 or 5 ¼-inch)	-	-	-	-	-
Communication lines <sup>3</sup>	32	32	6	32	32
Twinaxial workstation controllers	1	1	1	1	1
Twinaxial devices	28	28	28	28	28
Internal CD-ROM/DVD-RAM <sup>4, 6</sup>	1	1	1	2	2
Internal tape	1	1	2	2	2
External tape	5	7	2	5	7
Tape libraries maximum <sup>2</sup>	4	4	2	4	4
Optical libraries	2	2	1	2	2
Physical packaging					
External HSL ports <sup>5</sup>	4	8	-	4	8
External HSL loops <sup>5</sup>	2	4	-	2	4
#5077 Migration Tower II	1	1	-	1	1
External xSeries® Servers	-	-	-	-	-
Maximum SPD cards/PCI IOPs	3	3	2 <sup>7</sup>	3	3
PCI adapter card slots (usable)	14	14	-	14	14
Maximum PCI IOA cards (usable)	11	11		11	11
LAN ports	4	4	3	4	4
Integrated xSeries Server	2	2	1	2	2
Cryptographic processor	3	3	1	3	3
Cryptographic accelerator					

<b>Note 1</b>	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application running determine what performance is achievable.
<b>Note 2</b>	The total number of tape drives does not increase.
<b>Note 3</b>	One line is used if the #5544 System Console on Operations Console is used on a #9771 WAN adapter. One line might be used if the #5546 or #5548 System Console on LAN is selected and the #0367 Operations Console PCI Cable is connected.
<b>Note 4</b>	There must be one CD-ROM, DVD-ROM, or DVD-RAM per system.
<b>Note 5</b>	Because only three controllers and two towers are allowed on the SB3, a maximum of four high-speed link (HSL) ports and two HSL loops are usable to attach towers. Other ports and loops are usable for clustering only.
<b>Note 6</b>	Includes a base CD-ROM in the migration tower (no feature code).
<b>Note 7</b>	The Base MFIOP (multifunction input/output processor) (CCIN 671A) is included in this total.

## 2.2 9406 Model SB2 and SB3 system unit schematics

The SB2 system tower is packaged in a Model 830. For the system diagrams, see 6.6, “9406 Model 830 system unit schematic” on page 205.

The SB3 system tower is packaged in a Model 840. For the system diagrams, see and 6.7, “9406 Model 840 system unit schematic” on page 207.

You can find the schematics for towers that are supported by Models SB2 and SB3 in Chapter 8, “IBM iSeries towers schematics” on page 293.

## 2.3 iSeries Model SB2 and SB3 processors

IBM Service Representatives perform iSeries Models SB2 and SB3 initial installation and model upgrades.

SB2 and SB3 processors	
#2315	<b>SB2 7350 CPW 8-way Processor in Client/Server Environment</b> Base features include: <ul style="list-style-type: none"><li>▶ Main Storage Expansion Card (2X) (CCIN 2881)</li><li>▶ 48 main storage DIMMs (CCIN 300F)</li><li>▶ #9733 Bus Expansion/Clock Card — Eight HSL Ports (CCIN 25AD)</li><li>▶ PCI and Common Service Processor Card (CCIN 28AA)</li><li>▶ Bus Adapter (CCIN 2681)</li><li>▶ Processor Capacity Card (CCIN 2315)</li><li>▶ Processor 0 (CCIN 245D)</li><li>▶ Processor 1 (CCIN 245D)</li></ul>
#2316	<b>SB3 10000 CPW 12-way Processor in Client/Server Environment</b> Base features include: <ul style="list-style-type: none"><li>▶ Terminator/Filler Card (CCIN 246C) (2X)</li><li>▶ 8X 2048 MB main storage cards (CCIN 3198) installed (16384 MB total)</li><li>▶ PCI and Common Service Processor Card (CCIN 28AA)</li><li>▶ Bus Adapter (CCIN 2681)</li><li>▶ Processor Regulators (CCIN 2714) (2X)</li><li>▶ SPCN Card (CCIN 285B) (1X)</li><li>▶ Processor Capacity Card (CCIN 2316)</li><li>▶ Processor 0 (CCIN 245F)</li><li>▶ Processor 1 (CCIN 245E)</li></ul>
#2318	<b>SB3 16500 CPW 24-way Processor in Client/Server Environment</b> Base features include: <ul style="list-style-type: none"><li>▶ 12X 2048 MB main storage cards (CCIN 3198) installed (24576 MB total)</li><li>▶ PCI and Common Service Processor Card (CCIN 28AA)</li><li>▶ Bus Adapter (CCIN 2681)</li><li>▶ Processor Regulators (CCIN 2714) (2X)</li><li>▶ SPCN Card (CCIN 285B) (1X)</li><li>▶ Processor Capacity Card (CCIN 2318)</li><li>▶ Processor 0 (CCIN 245F)</li><li>▶ Processor 1 (CCIN 245E)</li><li>▶ Processor 2 (CCIN 245E)</li><li>▶ Processor 3 (CCIN 245E)</li></ul>

## 2.4 iSeries Model SB2 and SB3 features

This section identifies the supported features for the iSeries Model SB2 and SB3.

PCI cards are subject to plugging rules. See *PCI Card Placement Rules for the IBM eServer iSeries Server*, REDP-3638 for details.

Power and packaging	
#0141	<p><b>#0141 HSL OptiConnect Specify</b></p> <p>The #0141 is used to specify that this system is to be part of a cluster using HSL OptiConnect. This feature is used to allow the ordering of additional HSL cables to connect the systems that have OptiConnect.</p> <p>Prerequisite: HSL OptiConnect capable system (#2754/#9752 on the SB2 and #2755/#9755 on the SB3)</p> <p>Maximum: One</p> <p>Minimum operating system level: OS/400 V5R1</p> <p>Supported on specific Models SB2 and SB3. See prerequisites.</p>
#0382	<p><b>#0382 Remote Control Panel Cable</b></p> <p>To connect the remote control panel cable to iSeries servers SB2 and SB3, an available parallel port (LPT) is needed on the PC instead of a COM port. The parallel port must be configured to use Enhanced Parallel Port 1.9 (EPP) support, which might require a change in the PCs Basic Input/Output Services (BIOS). Check with your PC manufacturer for any assistance. Some PCs might not support this function due to BIOS or hardware incompatibilities.</p> <p>The #0382 is a Customer Install Feature (CIF).</p> <p>Supported on Models SB2 and SB3.</p>
#0551	<p><b>#0551 iSeries Rack</b></p> <p>The #0551 iSeries Rack provides an empty 1.8 m rack which contains 36 EIA units of space. For complete placement information, refer to “#0551 iSeries Rack” on page 228.</p> <p>Optional features for the #0551 rack are:</p> <ul style="list-style-type: none"><li>▶ #6068 Optional Front Door (black/flat)</li><li>▶ #6580 Optional Rack Security Kit</li><li>▶ #7840 Side-by-Side for 1.8 m Racks</li><li>▶ #7841 Ruggedize Rack Kit</li></ul> <p>The IBM marketing configurator does not manage rack space in the #0551 iSeries Rack. Use the following list to determine the number of EIA units required in the #0551 for each iSeries system unit or expansion tower:</p> <ul style="list-style-type: none"><li>▶ #0595 PCI-X Expansion Unit in Rack - 5 EIA units</li><li>▶ #0578 PCI Expansion Unit in Rack - 8 EIA units</li><li>▶ #0588 PCI-X Expansion Unit in Rack - 8 EIA units</li><li>▶ #5074 PCI Expansion Tower - 18 EIA units</li><li>▶ #9079 Base I/O Tower - 18 EIA units</li></ul> <p>One to four Power Distribution Units (PDUs) can be ordered with the #0551. The PDUs can be on initial orders, model upgrades, or on Miscellaneous Equipment Specification (MES) orders. Each PDU has six power sockets that can be used to provide power for devices rack mounted in the #0551 iSeries Rack using the #1422 PDU Line Cord.</p>

<p>#0551 (cont.)</p>	<p><b>#0551 iSeries Rack</b> The following PDUs are available:</p> <ul style="list-style-type: none"> <li>▶ #5160 Power Distribution Unit 1 Phase NEMA The following line cords are supported on the #5160 for connection to utility power: <ul style="list-style-type: none"> <li>– #1424 - 200V 6-ft Locking Line Cord</li> <li>– #1425 - 200V 6-ft Watertight Line Cord</li> <li>– #1426 - 200V 14-ft Locking Line Cord</li> <li>– #1427 - 200V 14-ft Watertight Line Cord</li> <li>– #1446 - 4.3 m 200V/30A Power Cord Korea</li> <li>– #1447 - 4.3 m 200V/30A Power Cord AU</li> <li>– #1448 - 4.3 m 200V/30A Power Cord NZ</li> </ul> The #6654 14-ft 1PH/24-30 Power cord is the recommended replacement for the #1426  The #6655 14-ft 1PH/24-30 WR Power cord is the recommended replacement for the #1427 </li> <li>▶ #5161 Power Distribution Unit - 1 Phase IEC <ul style="list-style-type: none"> <li>– #1477 - 4.3 m 200V/ 16A IEC309/46 Power Cord</li> <li>– #1449 - 4.3 m 200V/ 32A Power Cord EU 1-Phase for connection to utility power</li> </ul> </li> <li>▶ #5162 Power Distribution Unit - 2 of 3 Phase <ul style="list-style-type: none"> <li>– #1450 - 4.3 m 200V/ 16A Power Cord EU 2-Phase for connection to utility power</li> </ul> </li> <li>▶ #5163 Power Distribution Unit - 3 Phase <ul style="list-style-type: none"> <li>– #1477 - 4.3 m 200V/ 16A IEC309/46 Power Cord</li> <li>– #1449 - 4.3 m 200V/ 32A Power Cord EU 1-Phase for connection to utility power</li> </ul> </li> </ul> <p>Prerequisite: None Supported on Models SB2 and SB3. The #5160 Power Distribution Unit, #5161 Power Distribution Unit, and #5163 Power Distribution Unit were withdrawn from marketing on 12 April 2005. The #7188 Power Distribution Unit is the recommended replacement.</p>
<p>#2754</p>	<p><b>#2754 HSL Ports - 8 Copper</b> The #2754 has eight copper HSL ports and a 540 MHz oscillator, and supports clustering (HSL OptiConnect). The #2754 is used in the 4-way and 8-way SB2 models.</p> <p>Minimum operating system level: OS/400 V5R1 The #2754 was withdrawn from marketing on 01 January 2004.</p>
<p>#2755</p>	<p><b>#2755 HSL Ports - 16 Copper</b> The #2755 has 16 copper HSL ports, a 540 MHz oscillator and supports clustering (HSL OptiConnect). The #2755 is used in the SB3 models.</p> <p>Minimum operating system level: OS/400 V5R1 The #2755 was withdrawn from marketing on 01 January 2004.</p>

#5077	<p><b>#5077 Migration Tower II</b></p> <p>The #5077 is an I/O tower that supports two SPD I/O cards. The #5077 can be ordered to support clustering on the Models SB2 and SB3. In this case, the #5077 is shipped as a new tower and is supplied with a base optical link card (CCIN 2696) and base CD-ROM. One or two #2695 Optical Bus Adapters can be ordered for the #5077. Up to two SPD cards can be ordered. The #5077 supports up to three internal tape or CD devices.</p> <p>Select one of the following HSL cables if the #5077 has just the base optical link card installed. Select two (any combination) of the following HSL cables if the #5077 has one or two #2695 Optical Bus Adapters installed:</p> <ul style="list-style-type: none"> <li>▶ #1460 - 3m Copper HSL Cable</li> <li>▶ #1461 - 6m Copper HSL Cable</li> <li>▶ #1462 - 15m Copper HSL Cable</li> </ul> <p>Select one of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> <li>▶ #1463 - 2m SPCN Cable</li> <li>▶ #1464 - 6m SPCN Cable</li> <li>▶ #1465 - 15m SPCN Cable</li> <li>▶ #1466 - 30m SPCN Cable</li> </ul> <p>One JTAG-C cable (6 m) is included with the #5077. One #14xx power cord must be specified (geography dependent).</p> <p>Disks cannot be installed in the #5077 when attached to a Model SB2 or SB3. Maximum: One The #5077 was withdrawn from marketing on 01 January 2004.</p>
#5103	<p><b>#5103 Dual Line Cords - 830 CEC</b></p> <p>The #5103 Dual Line Cords - 830 CEC provides dual line cord capability for the Model SB2 system unit and attached #9074 Base I/O Tower. Two 14xx line cords must be ordered for the SB2 when a #5103 is ordered on an initial order. When ordering a #5103 as an MES, one additional #14xx line cord is required to be ordered (for a total of two line cords for the system unit).</p> <p>If the #9074 has feature #5101 installed, the #5101 must be converted to a #5111 (no parts shipped).</p> <p>Supported on Model SB2 Minimum operating system level: OS/400 V5R1</p>
#5104	<p><b>#5104 Dual Line Cords - 840 CEC</b></p> <p>The #5104 provides dual line cord capability for the #9079 Base I/O Tower. Two #14xx line cords must be ordered for the #9079 Base I/O Tower when the #5104 is ordered on an initial order. When installing a #5104 as an MES, one additional #14xx line cord is required to be ordered for the #9079 Base I/O Tower.</p> <p>Minimum operating system level: OS/400 V5R1 The #5104 has country- or region-specific usage.</p> <p>Supported on Model SB3 If any feature #5101s are installed, the #5101s must be converted to a #5111s (no parts shipped).</p>
#5150	<p><b>#5150 Battery Backup (external)</b></p> <p>The #5150 is an external battery backup that, when used in conjunction with the internal battery backup, is capable of extending the battery backup time. Model SB3 only</p>

#9074	<p><b>#9074 Base I/O Tower</b></p> <p>The #9074 is the "base" I/O tower shipped on the Model SB2. The #9074 supports up to four disk units, when installed in the SB2, up to two removable media units, one battery backup, and redundant or hot swap power supplies. The #9074 has a #9943 Base PCI IOP and a #9748 Base PCI RAID Disk Unit Controller. The 11 PCI input/output adapters (IOAs) are supported (driven) by the base #9943 Base PCI IOP and by #2843 PCI IOPs. The #2790 PCI Integrated Netfinity Servers and #2791/#2799 PCI Integrated xSeries Server can also support selected LAN cards.</p> <p>Select two (any combination) of the following HSL cables:</p> <ul style="list-style-type: none"> <li>▶ #1460 - 3m Copper HSL Cable</li> <li>▶ #1461 - 6m Copper HSL Cable</li> <li>▶ #1462 - 15m Copper HSL Cable</li> </ul> <p>Select one of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> <li>▶ #1463 - 2m SPCN Cable</li> <li>▶ #1464 - 6m SPCN Cable</li> <li>▶ #1465 - 15m SPCN Cable</li> <li>▶ #1466 - 30m SPCN Cable</li> </ul> <p>One JTAG-C cable (6 m) is included with the #5077. One #14xx power cord must be specified (geography dependant). The #9074 is capable of controlling Ultra2 SCSI disk units. The two removable media devices (internal tape or CD-ROM) are supported by the #9748.</p> <p>The #9074 was withdrawn from marketing on 01 January 2004.</p>
#9079	<p><b>#9079 Base I/O Tower</b></p> <p>The #9079 is the "base" I/O tower shipped on SB3 models. The #9079 supports up to six disk units when installed in the #2316 SB3 processor and eight on the #2318 SB3 processor, up to two removable media units, one battery backup, and redundant or hot swap power supplies. The #9079 has a #9943 Base PCI IOP and a #9748 Base PCI RAID Disk Unit Controller. The 11 PCI IOAs are supported (driven) by the #9943 Base PCI IOP and by #2843 PCI IOPs. The #2790 PCI Integrated Netfinity Servers and or #2791/#2799 PCI Integrated xSeries Server can also support selected LAN cards.</p> <p>Select two (any combination) of the following HSL cables:</p> <ul style="list-style-type: none"> <li>▶ #1460 - 3m Copper HSL Cable</li> <li>▶ #1461 - 6m Copper HSL Cable</li> <li>▶ #1462 - 15m Copper HSL Cable</li> </ul> <p>Select one of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> <li>▶ #1463 - 2m SPCN Cable</li> <li>▶ #1464 - 6m SPCN Cable</li> <li>▶ #1465 - 15m SPCN Cable</li> <li>▶ #1466 - 30m SPCN Cable</li> </ul> <p>One #14xx power cord must be specified (geography dependent). The #9079 is capable of controlling Ultra2 SCSI disk units. The two removable media devices (internal tape or CD-ROM) are supported by the #9748.</p> <p>The #9079 was withdrawn from marketing on 01 October 2004.</p>
#9733	<p><b>#9733 Base HSL Ports - 8 Copper</b></p> <p>The #9733 is a base bus expansion card which installs in the SB2 system unit. The #9733 has eight HSL ports.</p> <p>The #9733 was withdrawn from marketing on 21 November 2003.</p>
#9737	<p><b>#9737 Base HSL Ports - 16 Copper</b></p> <p>The #9737 is a base bus expansion card which installs in the SB3 system unit. The #9737 has 16 HSL ports.</p> <p>The #9737 was withdrawn from marketing on 21 November 2003.</p>
#9752	<p><b>#9752 Base HSL Ports - 8 Copper</b></p> <p>The #9752 is a base bus expansion card that installs in the system unit of the Model SB2. The #9752 has eight copper ports and an 540 MHz oscillator, and supports clustering (HSL OptiConnect).</p> <p>Minimum operating system level: OS/400 V5R1</p> <p>The #9752 was withdrawn from marketing on 21 November 2003 for new orders. Conversions to feature #9752 remain available.</p>
#9755	<p><b>#9755 Base HSL Ports - 16 Copper</b></p> <p>The #9755 is a base bus expansion card that installs in the system unit of the Model SB3. The #9755 has 16 copper ports and supports clustering (HSL OptiConnect).</p> <p>Minimum operating system level: OS/400 V5R1</p> <p>The #9755 was withdrawn from marketing on 21 November 2003 for new orders. Conversions to feature #9755 remain available.</p>



Main storage	
	There are no memory features on Models SB2 and SB3.
PCI IOP controllers	
PCI Rules	PCI cards are subject to plugging rules. <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i> , REDP-3638 describes the configuration and card placement rules that you must understand and follow to develop valid configurations. Use these IBM Redpapers as guides when configuring IOAs and input/output processors (IOPs) so that the system is sized to meet client expectations. Refer to 7.1, "PCI card placement for iSeries servers" on page 224, for an introduction to PCI.
#9943 Base IOP	<b>#9943 Base PCI IOP</b> The #9943 (CCIN 2843) is included as the base IOP for Models SB2 and SB3. See the #2843 description for details and cards supported.
#2790 #2791 #2799	<p><b>#2790 PCI Integrated Netfinity Server or #2791/#2799 PCI Integrated xSeries Server</b> The #2790 PCI Integrated Netfinity Server contains a 700 MHz processor. The #2791 PCI Integrated xSeries Server contains an 850 MHz processor. The #2799 PCI Integrated xSeries Server contains a 1.0 GHz Intel® Pentium III processor. Each processor contains four memory slots in the xSeries IOP.</p> <p>The #2790, #2791, or #2799 is supported in the system tower of the Model SB2 and SB3.</p> <p>Each main storage slot of the #2790, #2791, or #2799 server can contain either a 128 MB, 256 MB, or 1024 MB xSeries server main storage card, providing a total server main storage capacity ranging from 128 MB to 4096 MB (4 GB). A minimum of one main storage card is required on the xSeries IOP. A maximum of 3712 MB of memory is addressable.</p> <p>The following main storage cards provide memory for the #2790, #2791, or #2799 when installed in a Model SBx system unit or attachable HSL towers:</p> <ul style="list-style-type: none"> <li>▶ #2795 - 128 MB server memory</li> <li>▶ #2796 - 256 MB server memory</li> <li>▶ #2797 - 1 GB server memory</li> </ul> <p>The #2790, #2791, or #2799 can support PCI 100/16/4 Mbps Token Ring IOAs, PCI 100/10 Mbps Ethernet IOAs, or PCI 1 Gbps Ethernet IOAs in any combination. A minimum of one LAN IOA is required. The supported LAN IOA features are:</p> <ul style="list-style-type: none"> <li>▶ #2743 1 Gbps PCI Ethernet IOA</li> <li>▶ #2744 PCI 100 Mbps Token Ring IOA</li> <li>▶ #2760 PCI 1 Gbps Ethernet UTP Adapter</li> <li>▶ #4838 PCI 100/10 Mbps Ethernet IOA</li> </ul> <p>An #0223 100 Mbps Token-Ring specify code is required on the Integrated xSeries Server for each #2744 selected to run on the #2790, #2791, or #2799.</p> <p>An #0224 100/10 Mbps Ethernet specify code is required on the Integrated xSeries Server for each #4838 selected to run on the #2790, #2791, or #2799.</p> <p>One #0225 1 Gbps Ethernet specify code is required on the Integrated xSeries Server for each 1 Gbps Ethernet adapter selected to run on the 2790, #2791, or #2799.</p> <p>Up to three IOA LAN features are supported by the #2790, #2791, or #2799, depending on which system or expansion tower position the #2790, #2791, or #2799 is placed. The #2790, #2791, and #2799 require three PCI card slots. One slot is consumed. The second slot is unusable. The third slot is reduced to a short card slot which is then used by the first attached LAN IOA card.</p>

<p>#2790 #2791 #2799 (cont.)</p>	<p><b>#2790 PCI Integrated Netfinity Server or #2791/#2799 PCI Integrated xSeries Server</b></p> <p>The #2790, #2791, and #2799 do not require a #2843 or #9943. However, placement is limited to specific slots within the specific system tower and expansion tower.</p> <p>The #2790, #2791, and #2799 support only the Windows NT, Windows 2000 and Windows Server® 2003 operating systems. The Windows 2003 Server operating system is supported at OS/400 V5R2 with PTFs. These rules apply:</p> <ul style="list-style-type: none"> <li>▶ #0325 IPCS Extension Cable for Windows is the default but can be removed.</li> <li>▶ #1700 IPCS Keyboard or Mouse for Windows is the default in those countries or regions offering it.</li> <li>▶ A display must be connected to the #2790 PCI Integrated xSeries Server to support Windows.</li> </ul> <p>For a non-U.S. keyboard, mouse and display, see:  <a href="http://www.ibm.com/eserver/iseries/integratedxseries/">http://www.ibm.com/eserver/iseries/integratedxseries/</a></p> <p>Native OS/400 functions are not supported.  The #2790, #2791, and #2799 do not support an external host LAN.</p> <p>Minimum operating system to support #2743 or #2760 on the #2790, #2791, or #2799: OS/400 V5R1  Minimum operating system level:  #2790/#2791 - OS/400 V4R5 with Cumulative Package C1005450  #2799 - OS/400 V5R1 with PTFs identified in Information APAR II13105 at:  <a href="http://www.ibm.com/eserver/iseries/support">http://www.ibm.com/eserver/iseries/support</a></p> <p>The #2790, #2791, or #2799 are Customer Install Features or an IBM Service Representative install features depending upon card placement.  The #2799 was withdrawn from marketing on 21 November 2003.</p>
<p>#2792</p>	<p><b>#2792 PCI Integrated xSeries Server</b></p> <p>The #2792 PCI Integrated xSeries Server contains a 1.6 GHz processor and four memory slots. The #2792 is supported in the system tower of the Models SB2 and SB3. Each server memory slot of the #2792 can contain either a 512 MB server memory card or a 1024 MB server memory card, providing allowable main storage options of 1024 MB, 2048 MB, 3072 MB, and 4096 MB. A minimum of two server memory cards are required and must be installed in identical pairs.</p> <p>The following server memory cards provide memory for the #2792 PCI Integrated xSeries Server:</p> <ul style="list-style-type: none"> <li>▶ #0426 - 512 MB Server Memory</li> <li>▶ #0427 - 1024 MB Server Memory</li> </ul> <p>The #2792 PCI Integrated xSeries Server includes one embedded 100/10 Mbps Ethernet LAN controller. The #2792 can be ordered without any further LAN cards but supports up to three LAN IOAs in any combination, depending on which slot the #2792 card is placed. The features for the LAN IOAs are:</p> <ul style="list-style-type: none"> <li>▶ #2744 PCI 100 Mbps Token Ring IOA</li> <li>▶ #5700 PCI 1 Gbps Ethernet IOA</li> <li>▶ #5701 PCI 1 Gbps Ethernet UTP IOA</li> </ul> <p>An #0223 100 Mbps Token-Ring Specify is required for each #2744 on the Integrated xSeries Server. If the #5700 or #5701 is ordered, then #0226 1 Gbps Ethernet Specify is required for each #5700 or #5701 selected to run on the #2792.  The #2792 does not require a #2843, #2844, or #9943 IOP. Placement is limited to specific slots within the system tower.  The #2792 requires two PCI slots and does not extend into a third slot.  The #2792 ships with a standard keyboard/mouse splitter cable, and can support either a standard or USB 1.1 keyboard or mouse. Windows 2000 Server and Windows 2003 Server operating systems are supported.</p> <p>The following rules apply:</p> <ul style="list-style-type: none"> <li>▶ #0325 (IPCS Extension Cable for Windows) is the default (but can be removed).</li> <li>▶ #1700 (IPCS Keyboard/Mouse for Windows) is the default (in those countries or regions offering it).</li> <li>▶ A display must be connected to the #2790 PCI Integrated Netfinity Server to support Windows.</li> </ul> <p>For a non-U.S. keyboard, mouse and display, see:  <a href="http://www.ibm.com/eserver/iseries/integratedxseries/">http://www.ibm.com/eserver/iseries/integratedxseries/</a></p> <p>Native OS/400 functions are not supported.  The #2792 does not support external host LAN.  The #2849 is not supported on a #2792.</p> <p>Minimum operating system level: OS/400 V5R2  The #2792 is a Customer Install Feature.  The #2792 was withdrawn from marketing on 01 January 2004.</p>

#2843	<b>#2843 PCI IOP</b>
#9943	The #2843/#9943 is a PCI I/O processor with 64 MB of memory that drives PCI IOA adapters on Models SB2 and SB3.
#2843	The #2843 can drive up to four IOAs. The following IOAs are supported (driven) by the #2843/#9943 PCI IOP:
#9943	<ul style="list-style-type: none"> <li>▶ #2742 2-line WAN IOA</li> <li>▶ #2743 1 Gbps PCI Ethernet IOA</li> <li>▶ #2744 PCI 100 Mbps Token Ring IOA</li> <li>▶ #2749 PCI Ultra Magnetic Media Controller</li> <li>▶ #2757 PCI-X Ultra RAID Disk Controller</li> <li>▶ #2760 PCI 1 Gbps Ethernet UTP Adapter</li> <li>▶ #2763 PCI RAID Disk Unit Controller</li> <li>▶ #2765 PCI Fibre Channel Tape Controller</li> <li>▶ #2766 PCI Fibre Channel Disk Controller</li> <li>▶ #2768 PCI Magnetic Media Controller</li> <li>▶ #2772 PCI Dual WAN/Modem IOA</li> <li>▶ #2773 PCI Dual WAN/Modem IOA (ANSI)</li> <li>▶ #2780 PCI-X Ultra4 RAID Disk Controller</li> <li>▶ #2787 PCI-X Fibre Channel Disk Controller</li> <li>▶ #2793 2-line WAN IOA with Modem</li> <li>▶ #2794 2-line WAN IOA with Modem</li> <li>▶ #2805 PCI Quad Modem IOA</li> <li>▶ #2806 PCI Quad Modem (CIM) (ANSI)</li> <li>▶ #2817 PCI 155 Mbps MMF ATM IOA</li> <li>▶ #2849 10/100 Mbps Ethernet Adapter</li> <li>▶ #4723 PCI 10 Mbps Ethernet Adapter</li> <li>▶ #4745 PCI 2-line WAN IOA</li> <li>▶ #4746 PCI Twinaxial IOA</li> <li>▶ #4748 PCI RAID Disk Unit Controller</li> <li>▶ #4750 PCI ISDN BRI U IOA</li> <li>▶ #4751 PCI ISDN BRI S/T IOA</li> <li>▶ #4761 PCI Integrated Analog Modem</li> <li>▶ #4778 PCI RAID Disk Unit Controller</li> <li>▶ #4801 PCI Cryptographic Coprocessor</li> <li>▶ #4805 PCI Cryptographic Accelerator</li> <li>▶ #4815 PCI ATM 155 Mbps UTP OC3</li> <li>▶ #4816 PCI ATM 155 Mbps MMF</li> <li>▶ #4818 PCI ATM 155 Mbps SMF OC3</li> <li>▶ #4838 PCI 100/10 Mbps Ethernet IOA</li> <li>▶ #5700 PCI 1 Gbps Ethernet IOA</li> <li>▶ #5701 PCI 1 Gbps Ethernet UTP IOA</li> <li>▶ #5702 PCI-X Ultra Tape Controller</li> <li>▶ #5703 PCI-X RAID Disk Unit Controller</li> <li>▶ #5704 PCI-X Fibre Channel Tape Controller</li> <li>▶ #5705 PCI-X Tape/DASD Controller</li> <li>▶ #5712 PCI-X Tape/DASD Controller</li> <li>▶ #5715 PCI-X Tape/DASD Controller</li> <li>▶ #9771 Base PCI 2-line WAN with integrated modem</li> <li>▶ #9778 Base PCI RAID Disk Unit Controller</li> <li>▶ #9793 Two-Line WAN IOA with Modem</li> <li>▶ #9794 Two-Line IOA with Modem</li> <li>▶ #9767 Base PCI Disk Unit Controller</li> </ul>
	Refer to “#2843 PCI IOP” on page 251 for further restrictions.
	The #2843 is a Customer Install Feature.
	The #2843 was withdrawn from marketing on 01 October 2004. The recommended replacement is the #2844 PCI IOP.

#2844	<p><b>#2844 PCI IOP</b></p> <p>The #2844 PCI IOP is a PCI I/O processor, which drives PCI IOA adapters in the iSeries system units and their expansion towers, #0578/#5078 PCI Expansion Unit, #0588/#5088 PCI Expansion Unit, #0595/#5095 PCI-X Expansion Tower, #5074/#5079 PCI Expansion Tower, #5075 PCI Expansion Tower, #5078 PCI Expansion Unit, #5094 PCI-X Expansion Tower, #5294 1.8m I/O Tower, #8079 Optional Base 1.8 M I/O Rack, and #8094 Optional 1.8 M I/O Rack.</p> <p>The following IOAs are supported (driven) by the #2844/#9944 PCI IOP:</p> <ul style="list-style-type: none"> <li>▶ #2742 2-line WAN IOA</li> <li>▶ #2743 1 Gbps PCI Ethernet IOA</li> <li>▶ #2744 PCI 100 Mbps Token Ring IOA</li> <li>▶ #2749 PCI Ultra Magnetic Media Controller</li> <li>▶ #2757 PCI-X Ultra RAID Disk Controller</li> <li>▶ #2760 PCI 1 Gbps Ethernet UTP Adapter</li> <li>▶ #2765 PCI Fibre Channel Tape Controller</li> <li>▶ #2766 PCI Fibre Channel Disk Controller</li> <li>▶ #2768 PCI Magnetic Media Controller</li> <li>▶ #2772 PCI Dual WAN/Modem IOA</li> <li>▶ #2773 PCI Dual WAN/Modem IOA</li> <li>▶ #2793 2-line WAN IOA with Modem</li> <li>▶ #2794 2-line WAN IOA with Modem</li> <li>▶ #2805 PCI Quad Modem IOA</li> <li>▶ #2806 PCI Quad Modem (CIM)</li> <li>▶ #2817 PCI 155 Mbps MMF ATM IOA</li> <li>▶ #2849 10/100 Mbps Ethernet Adapter</li> <li>▶ #4723 PCI 10 Mbps Ethernet Adapter</li> <li>▶ #4745 PCI 2-line WAN IOA</li> <li>▶ #4746 PCI Twinaxial IOA</li> <li>▶ #4748 PCI RAID Disk Unit Controller</li> <li>▶ #4778 PCI RAID Disk Unit Controller</li> <li>▶ #4801 PCI Cryptographic Coprocessor</li> <li>▶ #4805 PCI Cryptographic Accelerator</li> <li>▶ #4815 PCI ATM 155 Mbps UTP OC3</li> <li>▶ #4816 PCI ATM 155 Mbps MMF</li> <li>▶ #4818 PCI ATM 155 Mbps SMF OC3</li> <li>▶ #4838 PCI 100/10 Mbps Ethernet IOA</li> <li>▶ #5700 PCI 1 Gbps Ethernet IOA</li> <li>▶ #5701 PCI 1 Gbps Ethernet UTP IOA</li> <li>▶ #5702 PCI-X Ultra Tape Controller</li> <li>▶ #5704 PCI-X Fibre Channel Tape Controller</li> <li>▶ #9748 Base PCI RAID Disk Unit Controller</li> <li>▶ #9767 Base PCI Disk Unit Controller</li> <li>▶ #9771 Base PCI 2-line WAN with integrated modem</li> <li>▶ #9778 Base PCI RAID Disk Unit Controller</li> <li>▶ #9793/#9794 Two-Line IOA with Modem</li> </ul> <p>Maximum: Two in a #9074 Base I/O Tower  Minimum operating system level: OS/400 V5R2  The #2844 is a Customer Install Feature.</p>
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#4710	<p><b>#4710 PCI Integrated xSeries Server</b></p> <p>The #4710 PCI Integrated xSeries Server has a 2 GHz processor and four memory slots. Each server memory slot can contain one of the following features, providing a total main storage capacity from 1024 MB to 4096 MB. The feature numbers of the server memory cards are:</p> <ul style="list-style-type: none"> <li>▶ #0426 - 512 MB Server Memory</li> <li>▶ #0427 - 1 GB Server Memory</li> </ul> <p>A minimum of two server memory cards are required and must be installed in identical capacity pairs. On model upgrades or MES orders, a #4710 can be ordered without memory features if usable supported memory features already exist on the installed system. The #4710 includes one embedded 100/10 Mbps Ethernet LAN controller, and can support the following LAN IOAs in combination:</p> <ul style="list-style-type: none"> <li>▶ #2744 PCI 100 Mbps Token Ring IOA</li> <li>▶ #5700 PCI 1 Gbps Ethernet IOA</li> <li>▶ #5701 PCI 1 Gbps Ethernet UTP IOA</li> </ul> <p>The #4710 can be ordered without any LAN IOA features. When a LAN feature is used in conjunction with a #4710, the following ordering rules apply:</p> <ul style="list-style-type: none"> <li>▶ If a #2744 is driven, then one #0223 100 Mbps Token-Ring Specify is required for each #2744 driven.</li> <li>▶ If a #5700/#5701 is driven, then one #0226 1 Gbps Ethernet Specify is required for each #5700/#5701 driven.</li> <li>▶ Up to three IOA LAN features can be supported by the #4710, depending on the system unit/tower position into which the #4710 is placed.</li> </ul> <p>Native OS/400 functions are not supported.</p> <p>The #4710 does not support external host LAN. It does not require a #2843, #2844 or #9943 but placement is limited to specific slots within the system units.</p> <p>The #4710 requires two PCI card slots, and does not hang over a third slot. It ships with a standard keyboard/mouse splitter cable and can support either standard or USB 1.1 keyboard, mouse, or both. Windows 2000 Server and Windows 2003 Server operating systems are supported. The following apply:</p> <ul style="list-style-type: none"> <li>▶ #0325 (IPCS Extension Cable for Windows) is the default (but can be removed).</li> <li>▶ A minimum of 1 GB server memory is required.</li> <li>▶ #1700 (IPCS Keyboard/Mouse for Windows) is default (in countries or regions offering it).</li> <li>▶ A display must be connected to the Integrated Server to support Windows.</li> </ul> <p>For a non-US keyboard/mouse and display, see:  <a href="http://www.ibm.com/eserver/iseries/integratedxseries/">http://www.ibm.com/eserver/iseries/integratedxseries/</a></p> <p>The #4710 is supported in the system unit of Models SB2 and SB3  Minimum operating system level: OS/400 V5R2 with PTFs identified in Informational APAR II13609 at:  <a href="http://www.ibm.com/eserver/iseries/support">http://www.ibm.com/eserver/iseries/support</a></p> <p>The #4710 was withdrawn from marketing on 01 June 2006. The #4812 PCI Integrated xSeries Server is the recommended replacement.</p>
<b>Workstation controllers</b>	
#4746	<p><b>#4746 PCI Twinaxial IOA</b></p> <p>The #4746 PCI Twinaxial IOA provides support for up to 40 twinaxial displays and printers. A 20-ft (6.2 m) cable with an eight-port expansion (breakout) box is included with this adapter. Each port supports seven attached devices, allowing for 56 total attached devices, of which only 40 can be active.</p> <p>Maximum: One.  The #4746 is a Customer Install Feature.</p>
#5540	<p><b>#5540 System Console on Twinaxial Workstation IOA</b></p> <p>A system console specify code had to be selected on each new order.  When #5540 is on the order, the system console device is attached to a #4746 PCI Twinaxial IOA.</p>
#5544	<p><b>#5544 System Console on Operations Console</b></p> <p>A system console specify code had to be selected on each new order. When #5544 is on the order, the system console is connected to a #0367 Operations Console PCI Cable attached to a #4745 PCI 2-line WAN IOA or a #9771 Base PCI 2-line WAN with integrated modem.</p>

#5546	<p><b>#5546 System Console on 100 Mbps Token Ring</b></p> <p>A system console specify code had to be selected on each order. When the #5546 is on the order, the system console is LAN attached to a #2744 PCI 100 Mbps Token Ring IOA. The #2744 must be dedicated to the LAN console and cannot be used for any other purpose.</p> <p>Corequisite: One #0367 Operations Console PCI Cable on the order or present on the system. Only one #0367 is required, regardless of the number of LAN consoles (with logical partition (LPAR)) defined to the system.</p> <p>Minimum operating system level: OS/400 V5R1</p>
#5548	<p><b>#5548 System Console on 100 Mbps Ethernet</b></p> <p>A system console specify code had to be elected on each order. When the #5548 is on the order, the system console is LAN attached to a #4838 PCI 100/10 Mbps Ethernet IOA. The #4838 must be dedicated to the LAN console and cannot be used for any other purpose.</p> <p>Corequisite: One #0367 Operations Console PCI Cable on the order or present on the system. Only one #0367 is required, regardless of the number of LAN consoles (with LPAR) defined to the system.</p> <p>Minimum operating system level: OS/400 V5R1</p>
<b>LAN and WAN adapters</b>	
Comm. Restrictions	See "Comm. Restrictions" on page 103, for communications rules and restrictions.
#2742	<p><b>#2742 2-line WAN IOA</b></p> <p>The #2742 2-line WAN IOA is a WAN IOA that supports up to two multiple protocol communications (RVX) ports when one or two (in any combination) of the following cables are attached. Select one of the following cables to attach to port 1 or 2 (RVX port):</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft (15 m) PCI cable</li> <li>▶ #0353 V.35 20-ft PCI cable</li> <li>▶ #0354 V.35 50-ft PCI cable</li> <li>▶ #0356 V.36 20-ft PCI cable</li> <li>▶ #0359 X.21 20-ft PCI cable</li> <li>▶ #0360 X.21 50-ft PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> <li>▶ #0367 Operations Console PCI Cable</li> </ul> <p>The #0367 cable ships with a 25-pin to 9-pin adapter. Multiple #0367 cables can be ordered (but only one per #2742) to serve as consoles for secondary partitions when #0140 Logical Partitioning Specify is ordered.</p> <p>When the #2742 is selected to support ECS, one of following cables must be specified:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft (15 m) PCI cable</li> <li>▶ #0367 Operations Console PCI Cable</li> </ul> <p>The #2742 does not support Remote Power On.</p> <p>Minimum operating system level: OS/400 V5R2</p> <p>The #2742 is a Customer Install Feature.</p>

#2743	<p><b>#2743 1 Gbps PCI Ethernet IOA</b></p> <p>The #2743 PCI 1 Gbps Ethernet IOA feature allows the iSeries server to attach to IEEE standard 802.3Z high speed Ethernet LANs (1 Gbps). It can also be used to connect to existing 100 Mbps Ethernet LANs using switches with 10/100/1000 Mbps ports.</p> <p>The adapter supports multi-mode fiber media attachment to client-supplied cabling. If #2743 is selected as a LAN adapter for the #2790 PCI Integrated Netfinity Server or #2791/#2799 PCI Integrated xSeries Server specify code #0225 is required for each #2743 selected to run on the #2790, #2791, or #2799.</p> <p>The #2743 can be attached directly to a Linux® partition. When ordered as a #0601 - Direct Attach - #2743 PCI 1 Gbps Ethernet IOA, an IOP is not required. When direct attached to a Linux partition, the #2743 cannot be accessed by OS/400 partitions.</p> <p>The #2743 requires a gigabit-capable switch with at least one port that supports a 1000Base-SX interface with IEEE 802.3z and 802.3u compliance. It supports only a multi-mode fiber optic cable connection from the adapter to the switch. The #2743 supports 1000 Mbps (1 Gbps) full duplex interface only and cannot negotiate down to a lower speed. Stations on the 10 Mb and 1000 Mb switched LANs can communicate with the #2743 with a switch that is capable of handling all these speeds. In this case, the switch handles the speeds.</p> <p>Protocols supported: TCP/IP only. SNA and IPX™ connections are not supported.</p> <p>Prerequisite: 64-bit card slot</p> <p>Maximum: One per Multi-adapter Bridge Boundary except when installed with and controlled by a #2790, #2791, or #2799.</p> <p>The #2743 does not support LAN console at OS/400 V5R2.</p> <p>Minimum operating system: OS/400 V5R1</p> <p>The #2743 is a Customer Install Feature.</p> <p>The #2743 was withdrawn from marketing on 01 October 2004. The recommended replacement is the #5700 PCI 1 Gbps PCI Ethernet IOA.</p>
#2744	<p><b>#2744 PCI 100 Mbps Token Ring IOA</b></p> <p>The #2744 PCI 100 Mbps Token Ring IOA provides a single attachment to a 100 Mbps, 16 Mbps, or 4 Mbps IBM Token Ring Network. The feature consists of an IOA card, internal code, which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions. The 100/16/4 Token Ring IOA is capable of operating in half or full duplex mode. A 2.44 m (8 ft) token ring cable is included with the #2744. As an alternative, the client can attach a separately priced twisted pair cable to the RJ45 connection on the IOA. IBM Cabling System patch cables, included with the #2744, can increase the length as required. If the #2744 is selected to run on the #2790 PCI Integrated Netfinity Server or #2791/#2799 PCI Integrated xSeries Server, specify code #0223 is required for each #2744 selected to run on the #2790, #2791, or #2799.</p> <p>Minimum operating system level: OS/400 V4R5</p> <p>The #2744 is a Customer Install Feature.</p> <p>The #2744 was withdrawn from marketing on 01 June 2006.</p>
#2760	<p><b>#2760 PCI 1 Gbps Ethernet UTP Adapter</b></p> <p>The #2760 PCI 1 Gbps Ethernet UTP Adapter feature allows the iSeries server to attach to IEEE standard 802.3Z high-speed Ethernet LANs (1 Gbps) using a UTP CAT 5 media interface. The #2760 can directly attach to 10 Mbps or 100 Mbps networks.</p> <p>The #2760 is supported as a LAN adapter for the #2790, #2791, or #2799. If #2760 is selected to run on the #2790 PCI Integrated Netfinity Server or #2791/#2799 PCI Integrated xSeries Server specify code #0225 is required for each #2760 selected to run on the #2790, #2791, or #2799.</p> <p>Protocols supported: TCP/IP only. SNA and IPX connections are not supported.</p> <p>The #2760 can be attached directly to a Linux partition. When ordered as a #0602 Linux Direct Attach - #2760, an IOP is not required. When direct attached to a Linux partition, the #2760 cannot be accessed by OS/400 partitions.</p> <p>A 64-bit card slot is required.</p> <p>Maximum: One per Multi-adapter Bridge Boundary except when installed with and controlled by a #2790, #2791, or #2799</p> <p>The #2760 does not support LAN console at OS/400 V5R2.</p> <p>Minimum operating system level: OS/400 V5R1</p> <p>The #2760 is a Customer Install Feature.</p> <p>The #2760 was withdrawn from marketing on 01 October 2004. The recommended replacement is the #5701 PCI 1 Gbps Ethernet UTP IOA.</p>

#2772	<p><b>#2772 PCI Dual WAN/Modem IOA</b></p> <p>The #2772 is a 2-line WAN adapter with two ports (RJ11) with internal modems. Telephone cable is used to connect to the ports. This is the non-Complex Impedance Matching (CIM) version of the IOA. Supported protocols are:</p> <ul style="list-style-type: none"> <li>▶ V.90 56K Async PPP</li> <li>▶ Fax applications at data rates up to 14.4K</li> </ul> <p>Corequisite: Country- or region-specific telephone cables must be ordered. A minimum of one modem cable and a maximum of two must be selected for each #2772. All modem cables on a system must be the same feature number. The supported modem cables are:</p> <ul style="list-style-type: none"> <li>▶ #1010 Modem Cable- Austria</li> <li>▶ #1011 Modem Cable- Belgium</li> <li>▶ #1012 Modem Cable- Africa</li> <li>▶ #1013 Modem Cable- Israel</li> <li>▶ #1014 Modem Cable- Italy</li> <li>▶ #1015 Modem Cable- France</li> <li>▶ #1016 Modem Cable- Germany</li> <li>▶ #1017 Modem Cable- United Kingdom</li> <li>▶ #1018 Modem Cable- Iceland/ Sweden</li> <li>▶ #1021 Modem Cable- Fin/ Nor</li> <li>▶ #1022 Modem Cable- Netherlands</li> <li>▶ #1023 Modem Cable- Swiss</li> <li>▶ #1024 Modem Cable- Denmark</li> <li>▶ #1025 Modem Cable- U.S./Canada</li> </ul> <p>The feature is country- or region-specific. Contact your IBM representative or Business Partner for details on availability.</p> <p>Remote ring indicate is not supported.  PCI card slots required: One  Minimum operating system level: OS/400 V5R1  The #2772 is a Customer Install Feature.  The #2772 was withdrawn from marketing on 01 June 2006.</p>
#2773	<p><b>#2773 PCI Dual WAN/Modem IOA</b></p> <p>The #2773 is a 2-line WAN adapter with two ports (RJ11) with internal modems version of the IOA.</p> <p>Supported protocols are:</p> <ul style="list-style-type: none"> <li>▶ V.90 56K Async PPP</li> <li>▶ Fax applications at data rates up to 14.4K</li> </ul> <p>Corequisite: Country- or region-specific telephone cables must be ordered. A minimum of one modem cable and a maximum of two must be selected for each #2773. All modem cables on a system must be the same feature number. The supported modem cables are:</p> <ul style="list-style-type: none"> <li>▶ #1019 Modem Cable- Australia</li> <li>▶ #1020 Modem Cable-China (Hong Kong S.A.R.)/New Zealand</li> </ul> <p>The #2773 is country- or region-specific. Contact your IBM representative or Business Partner for details on availability.</p> <p>Remote ring indicate is not supported.  PCI card slots required: One  Minimum operating system level: OS/400 V5R1  The #2773 is a Customer Install Feature.</p>



#2793 #9793	<p><b>#2793 2-line WAN IOA with Modem</b></p> <p>The #2793/#9793 is a 2-line WAN with Modem adapter and is the non-CIM version that is offered in all countries or regions except Australia and New Zealand. Port 0 is the modem port and supports V.92 56K Async PPP, V.92 data modem, V.44 data compression, and V.34 Fax modem and Fax functions such as ECM and 2D/1D conversion. Port 0 does not provide sync modem capabilities (SDLC and Sync PPP). Port 1 is the RVX port and supports multiple communications protocols.</p> <p>Select one of the following cables to attach to port 0 (modem port):</p> <ul style="list-style-type: none"> <li>▶ #1010 Modem Cable-Austria</li> <li>▶ #1011 Modem Cable-Belgium</li> <li>▶ #1012 Modem Cable-Africa</li> <li>▶ #1013 Modem Cable-Israel</li> <li>▶ #1014 Modem Cable-Italy</li> <li>▶ #1015 Modem Cable-France</li> <li>▶ #1016 Modem Cable-Germany</li> <li>▶ #1017 Modem Cable-United Kingdom</li> <li>▶ #1018 Modem Cable-Iceland/Sweden</li> <li>▶ #1021 Modem Cable-Finland/Norway</li> <li>▶ #1022 Modem Cable-Netherlands</li> <li>▶ #1023 Modem Cable-Swiss</li> <li>▶ #1024 Modem Cable-Denmark</li> <li>▶ #1025 Modem Cable-U.S./Canada</li> </ul> <p>Select one of the following cables to attach to port 1 (RVX port):</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft (15 m) PCI cable</li> <li>▶ #0353 V.35 20-ft PCI cable</li> <li>▶ #0354 V.35 50-ft PCI cable</li> <li>▶ #0356 V.36 20-ft PCI cable</li> <li>▶ #0359 X.21 20-ft PCI cable</li> <li>▶ #0360 X.21 50-ft PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> <li>▶ #0367 Operations Console PCI Cable</li> </ul> <p>The #0367 cable ships with a 25-pin to 9-pin adapter.</p> <p>Multiple #0367 cables can be ordered (but only one per #2793) to serve as consoles for secondary partitions when logical partitioning (#0140) is specified.</p> <p>ECS is supported from the RVX port and one of the following cables is required to support ECS: #0348, #0349 or #0365. ECS is supported from the Modem port (OS/400 V5R1 or later)</p> <p>The #2793 does not support the remote ring indicate function. For further configuration information, see:  <a href="http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm">http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm</a></p> <p>See the "Soft rules: iSeries IOA requirements" topic in <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i>, REDP-3638 for additional restrictions.</p> <p>Minimum operating system level: OS/400 V5R2</p>
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#2794 #9794	<p><b>#2794 2-line WAN IOA with Modem</b></p> <p>The #2794/#9794 is a 2-line WAN with Modem adapter and is the CIM version, which is offered only in Australia and New Zealand. Port 0 is the modem port and supports V.92 56K Async PPP, V.92 data modem, V.44 data compression, and V.34 Fax modem and Fax functions such as ECM and 2D/1D conversion. Port 0 does not provide sync modem capabilities (SDLC and Sync PPP). Port 1 is the RVX port and supports multiple communications protocols.</p> <p>Select one of the following cables to attach to port 0 (modem port):</p> <ul style="list-style-type: none"> <li>▶ #1019 Modem Cable-Australia</li> <li>▶ #1020 Modem Cable-China (Hong Kong S.A.R.)/New Zealand</li> </ul> <p>Select one of the following cables to attach to port 1 (RVX port); #0348, #0349, #0353, #0354, #0356, #0359, #0360, #0365 or #0367. Select one of the following cables to attach to port 1 (RVX port):</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft (15 m) PCI cable</li> <li>▶ #0353 V.35 20-ft PCI cable</li> <li>▶ #0354 V.35 50-ft PCI cable</li> <li>▶ #0355 V.35 80-ft/24 m PCI cable</li> <li>▶ #0356 V.36 20-ft PCI cable</li> <li>▶ #0358 V.36 150-ft/45 m PCI cable</li> <li>▶ #0359 X.21 20-ft PCI cable</li> <li>▶ #0360 X.21 50-ft PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> <li>▶ #0367 Operations Console PCI Cable</li> </ul> <p>The #0367 cable ships with a 25-pin to 9-pin adapter. Multiple #0367 cables can be ordered (but only one per #2794) to serve as consoles for secondary partitions when logical partitioning (#0140) is specified.</p> <p>ECS is supported from the RVX port and one of the following cables is required to support ECS; #0348, #0349 or #0365. ECS is supported from the Modem port (OS/400 V5R1 or later)</p> <p>The #2794 does not support the remote ring indicate function. For further configuration information, see:  <a href="http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm">http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm</a></p> <p>See the "Soft rules: iSeries IOA requirements" topic in <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i>, REDP-3638 for additional restrictions.</p> <p>Minimum operating system level: OS/400 V5R2</p>
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#2805	<p><b>#2805 PCI Quad Modem IOA</b></p> <p>The #2805 is a 4-line WAN adapter with four WAN ports with internal modems. Telephone cable (RJ-11) is used to connect to the ports. This is the non-CIM version of the IOA.</p> <p>The supported protocols are:</p> <ul style="list-style-type: none"> <li>▶ V.92 56K Async PPP</li> <li>▶ Fax applications at data rates up to 33.6K</li> </ul> <p>The V.92 functions offer increased upload throughput, improved V.44 data compression, and shortened modem synchronization periods.</p> <p>Corequisite: Country- or region specific telephone cables must be ordered. A minimum of one modem cable and a maximum of four must be selected for each #2805. All modem cables on a system must be the same feature number. The supported modem cables are:</p> <ul style="list-style-type: none"> <li>▶ #1010 Modem Cable-Austria</li> <li>▶ #1011 Modem Cable-Belgium</li> <li>▶ #1012 Modem Cable-Africa</li> <li>▶ #1013 Modem Cable-Israel</li> <li>▶ #1014 Modem Cable-Italy</li> <li>▶ #1015 Modem Cable-France</li> <li>▶ #1016 Modem Cable-Germany</li> <li>▶ #1017 Modem Cable-United Kingdom</li> <li>▶ #1018 Modem Cable-Iceland/Sweden</li> <li>▶ #1021 Modem Cable-Finland/Norway</li> <li>▶ #1022 Modem Cable-Netherlands</li> <li>▶ #1023 Modem Cable-Swiss</li> <li>▶ #1024 Modem Cable-Denmark</li> <li>▶ #1025 Modem Cable-U.S./Canada</li> </ul> <p>The #2805 is country- or region-specific. Contact your IBM representative or Business Partner for details on availability. The call waiting and modem on hold functions associated with V.92 are not supported. Remote Power On through ring-indicator, SDLC, and synchronous PPP are not supported.</p> <p>PCI card slots required: One.</p> <p>Minimum operating system level: OS/400 V5R1 with PTFs identified in Information APAR II13079 at:  <a href="http://www-912.ibm.com/supporthome.nsf/document/10000035">http://www-912.ibm.com/supporthome.nsf/document/10000035</a></p> <p>The #2805 is a Customer Install Feature.</p>
#2806	<p><b>#2806 PCI Quad Modem (CIM)</b></p> <p>The #2806 is a 4-line WAN adapter with four WAN ports with internal modems. Telephone cable (RJ-11) is used to connect to the ports. This is the CIM version of the IOA.</p> <p>The supported protocols are:</p> <ul style="list-style-type: none"> <li>▶ V.92 56K Async PPP</li> <li>▶ Fax applications at data rates up to 33.6K</li> </ul> <p>The V.92 functions offer increased upload throughput, improved V.44 data compression, and shortened modem synchronization periods.</p> <p>Corequisite: Country- or region-specific telephone cables must be ordered. A minimum of one modem cable and a maximum of two must be selected for each #2806. All modem cables on a system must be the same feature number.</p> <p>The supported modem cables are:</p> <ul style="list-style-type: none"> <li>▶ #1019 Modem Cable- Australia</li> <li>▶ #1020 Modem Cable- China (Hong Kong S.A.R.)/New Zealand</li> </ul> <p>The #2806 is country- or region-specific. Contact your IBM representative or Business Partner for details on availability.</p> <p>The call waiting and modem on hold functions associated with V.92 are not supported. Remote Power On through ring-indicator, SDLC, and synchronous PPP is not supported.</p> <p>PCI card slots required: One</p> <p>Minimum operating system level: OS/400 V5R1 with PTFs identified in Information APAR II13079 at:  <a href="http://www-912.ibm.com/supporthome.nsf/document/10000035">http://www-912.ibm.com/supporthome.nsf/document/10000035</a></p> <p>The #2806 is a Customer Install Feature.</p>

#2817	<p><b>#2817 PCI 155 Mbps MMF ATM IOA</b></p> <p>The #2817 is a 155 Mbps ATM PCI card that allows the server to be attached to an ATM network using the Multi- Mode Fiber (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2817 is used typically where 155 Mbps speeds are required over distances of less than 2 km. The #2817 is capable of supporting both multiple emulated LAN environments and enhanced TCP/IP performance with OS/400 V5R1.</p> <p>Technical specifications and industry standards supported are available at the ATM Forum Web site at:  <a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>This card is a 64-bit card but is allowed to plug into any 32-bit or 64-bit slot.  Minimum operating system level: OS/400 V5R1  The #2817 is a Customer Install Feature.</p>
#2849	<p><b>#2849 10/100 Mbps Ethernet Adapter</b></p> <p>The #2849 allows an iSeries server to attach to standardized 100 Mbps high-speed Ethernet LANs and allows attachment to existing 10 Mbps Ethernet LANs. The adapter comes standard with an RJ45 connector for attachment to UTP-5 media. Cabling for 10 Mbps must be CAT-3 or CAT-5, cabling for 100 Mbps must be CAT-5 that meets or exceeds Industry Standard EIA/TIA T568A or T568B. Maximum cable length is 100 meters.</p> <p>Supports LAN console.  The #2849 is not supported on any Integrated Netfinity Server/Integrated xSeries Server.  Minimum operating system level: OS/400 V5R2  The #2849 is a Customer Install Feature.  The #2849 was withdrawn from marketing on 01 June 2006. The #5700 PCI 1 Gbps Ethernet IOA is the recommended replacement.</p>
#4723	<p><b>#4723 PCI 10 Mbps Ethernet Adapter</b></p> <p>The #4723 PCI 10 Mbps Ethernet Adapter provides single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. The feature consists of an adapter card and internal code which supplies Ethernet version 2 and IEEE 802.3 MAC plus IEEE 802.2 LLC functions. The Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. The #4723 has an RJ45 connector and a 15-pin D-Shell connector for attachment to client-supplied cabling. A vendor AUI Ethernet cable or RJ45 twisted pair cable must be ordered separately.</p> <p>The #4723 is not supported by #2790 PCI Integrated Netfinity Server or #2791/#2799 PCI Integrated xSeries Server.  Minimum operating system level: OS/400 V4R5  The #4723 is a Customer Install Feature.</p>
#4745	<p><b>#4745 PCI 2-line WAN IOA</b></p> <p>The #4745 supports up to two multiple protocol communications ports when one or two of the following cables are attached:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft (15 m) PCI cable</li> <li>▶ #0353 V.35 20-ft PCI cable</li> <li>▶ #0354 V.35 50-ft PCI cable</li> <li>▶ #0355 V.35 80-ft PCI cable</li> <li>▶ #0356 V.36 20-ft PCI cable</li> <li>▶ #0358 V.36 150-ft PCI cable</li> <li>▶ #0359 X.21 20-ft PCI cable</li> <li>▶ #0360 X.21 50-ft PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> <li>▶ #0367 Operations Console PCI Cable</li> </ul> <p>Multiple #0367s can be ordered (but only one allowed per #4745) to serve as consoles for secondary partitions when logical partitioning (#0140) is specified. When the #4745 is selected to support ECS, one of the following cables must be specified:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft (6 m) PCI cable (default)</li> <li>▶ #0349 V.24/EIA232 50-ft (15 m) PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> </ul> <p>Minimum operating system level: OS/400 V4R5  The #4745 is a Customer Install Feature.  The #4745 was withdrawn from marketing on 01 June 2006.</p>

#4750	<p><b>#4750 PCI ISDN BRI U IOA</b></p> <p>The #4750 is a four-port (eight channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #4750 is the "U"-bus (2-wire) version of the ISDN BRI PCI card. The #4750 supports the following protocols:</p> <ul style="list-style-type: none"> <li>▶ SLIP/PPP</li> <li>▶ IDLC</li> <li>▶ Fax</li> </ul> <p>Four 30-ft (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #4750. This counts as eight lines toward the system communication maximums.</p> <p>Requires long PCI card slot.</p> <p>Minimum operating system level: OS/400 V4R5. Not supported with OS/400 V5R2.</p> <p>The #4750 is a Customer Install Feature.</p>
#4751	<p><b>#4751 PCI ISDN BRI S/T IOA</b></p> <p>The #4751 is a four-port (eight channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #4751 is the "S/T"-bus (four wire) version of the #4750 PCI ISDN BRI U IOA .</p> <p>The #4751 requires a network terminating device in the circuit. In the United States and Canada, this must be provided by the client. In other countries or regions, it is most likely provided by the telephone company.</p> <p>The #4751 supports the following protocols:</p> <ul style="list-style-type: none"> <li>▶ PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices)</li> <li>▶ IDLC</li> <li>▶ Fax</li> </ul> <p>Four 30-ft (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #4751. For configuration purposes, each #4751 counts as eight lines (two lines per port) towards the system communication maximums. Supports full duplex.</p> <p>Requirements: The #4751 requires country or region certification or homologation.</p> <p>Requires a full sized PCI card slot.</p> <p>Maximum: One per IOP.</p> <p>Minimum operating system level: OS/400 V4R5. Not supported with OS/400 V5R2.</p> <p>The #4751 is a Customer Install Feature.</p>
#4761	<p><b>#4761 PCI Integrated Analog Modem</b></p> <p>The #4761 is based on the latest Digital Signal Processor (DSP) technology. The #4761 allows the modem function to be integrated into the IOA and supports multiple analog modem ports (eight phone lines). The #4761 supports the following protocols without the need for an external modem:</p> <ul style="list-style-type: none"> <li>▶ SLIP/PPP (uses V.90, so the maximum line speed is 56 Kbps)</li> <li>▶ SDLC (uses V.34, so the maximum line speed is 33.6 Kbps)</li> <li>▶ Fax (uses V.17 to achieve a 14.4 Kbps maximum line speed)</li> </ul> <p>An ASYNC line description is required for Fax and can only be used for Fax. The ECS line is not supported. To the iSeries or AS/400e server, the #4761 appears like a single IOA with eight individual line resources available. Eight 30-ft (8 m) phone cables are shipped with each #4761. For configuration purposes, each #4761 counts as eight communications lines toward the system communication maximums.</p> <p>Supports full duplex.</p> <p>The #4761 requires country or region certification or homologation.</p> <p>Requires full sized PCI card slot.</p> <p>Supported in the SB2 and SB3</p> <p>OS/400 V5R1 is the last release to support non-Fax functions on the #4761.</p> <p>Minimum operating system level: OS/400 V4R5</p> <p>The #4761 is a Customer Install Feature.</p>

#4801	<p><b>#4801 PCI Cryptographic Coprocessor</b></p> <p>The #4801 is a hardware cryptography solution. The #4801 is a half-length PC form-factor PCI card that offers a rich cryptography function, secure storage of cryptographic keys, and 12 Mbps performance (at the card level) for bulk data encryption and triple DES capability.</p> <p>Select the #4801 PCI Cryptographic Coprocessor for applications requiring a FIPS 140-1 certified, tamper-resistant module for storing cryptographic keys or for financial PIN processing.</p> <p>Federal Information Processing Standard (FIPS) 140-1 is a U.S. Government National Institute of Standards and Technology (NIST) administered standard and certification program for cryptographic modules.</p> <p>The #4801 is available worldwide. The level of cryptographic function is determined by the Cryptographic Access Provider licensed program that is downloaded to the adapter. Due to temperature requirements (card temperature must not drop below 5 degrees F (-15 degrees C)), the #4801 is shipped separately from the system in special packing.</p> <p>Minimum operating system level: OS/400 V4R5  The #4801 is a Customer Install Feature.  The #4801 was withdrawn from marketing on 01 June 2006. The #4806 PCI-X Cryptographic Coprocessor is the recommended replacement.</p>
#4805	<p><b>#4805 PCI Cryptographic Accelerator</b></p> <p>The #4805 provides improved performance for high transaction rate secure Web applications that use the Secure Sockets Layer (SSL) or Transport Layer Security (TLS) protocols. The process of using SSL/TLS secure Web connections is compute intensive. The Cryptographic Accelerator can be used to off load cryptographic processing from the main CPU.</p> <p>SSL/TLS secure Web connections are used to protect information (for example, credit card number) as it is transferred over the Internet, for example between a Web browser and a server. The Cryptographic Accelerator is targeted to high transaction rate secure Web applications using SSL/TLS.</p> <p>There is a maximum of two per IOP.  Prerequisites: Available PCI card slot under a feature IOP (not under a base or embedded IOP in the system unit).  Minimum operating system level: OS/400 V5R2  The #4805 is a Customer Install Feature.  The #4805 was withdrawn from marketing on 01 June 2006</p>
#4815	<p><b>#4815 PCI ATM 155 Mbps UTP OC3</b></p> <p>The #4815 is a 155 Mbps Asynchronous Transfer Mode PCI card that allows the iSeries or AS/400e server to be attached to an ATM network using the Unshielded Twisted Pair (UTP-5) interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #4815 is used typically where 155 Mbps speeds are required over distances of less than 100 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site at:  <a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>ATM not supported; upgrade to Ethernet  Minimum operating system level: OS/400 V4R5  The #4815 is a Customer Install Feature.</p>
#4816	<p><b>#4816 PCI ATM 155 Mbps MMF</b></p> <p>The #4816 is a 155 Mbps ATM PCI card that allows the iSeries or AS/400e server to be attached to an ATM network using the Multi-Mode Fiber 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #4816 is used typically where 155 Mbps speeds are required over distances of less than 2 km. Technical specifications and industry standards supported are available at the ATM Forum Web site at:  <a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>The #4816 can be ordered for use in OS/400 V4R5 secondary partitions. Order the #2817 PCI 155 Mbps MMF ATM IOA for OS/400 V5R1 systems or partitions.</p> <p>ATM not supported; upgrade to Ethernet  Minimum operating system level: OS/400 V4R5  The #4816 is a Customer Install Feature.</p>

#4818	<p><b>#4818 PCI ATM 155 Mbps SMF OC3</b></p> <p>The #4818 is a 155 Mbps ATM PCI card that allows the iSeries or AS/400e server to be attached into an ATM network using the Single-Mode Fiber (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provider equipment. The #4818 is used typically where 155 Mbps speeds are required over distances of from 16 to 40 km. Technical specifications and industry standards supported are available at the ATM Forum Web site at:  <a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>ATM not supported; upgrade to Ethernet  Minimum operating system level: OS/400 V4R5  The #4818 is a Customer Install Feature.</p>
#4838	<p><b>#4838 PCI 100/10 Mbps Ethernet IOA</b></p> <p>The #4838 PCI 100/10 Mbps Ethernet IOA feature allows the iSeries or AS/400e server to attach to standardized 100 Mbps high-speed Ethernet LANs and allows attachment to existing 10 Mbps Ethernet LANs. The adapter comes standard with an RJ45 connector for attachment to UTP-5 media. Cabling for 10 Mbps must be CAT-3 or CAT-5, and cabling for 100 Mbps must be CAT-5 that meets or exceeds Industry Standard EIA/TIA T568A or T568B. Maximum cable length is 100 meters. This Ethernet IEEE 802.3 IOA is capable of operating in half or duplex mode. If the #4838 is selected to run on the #2790 PCI Integrated Netfinity Server or #2791/#2799 PCI Integrated xSeries Server, then specify code #0224 is required for each #4838 selected to run on the #2790, #2791, or #2799.</p> <p>Supports LAN console  Minimum operating system level: OS/400 V4R5  The #4838 is a Customer Install Feature.  The #4838 was withdrawn from marketing on 01 October 2004. The recommended replacement is the #2849 10/100 Mbps Ethernet Adapter.</p>
#5700	<p><b>#5700 PCI 1 Gbps Ethernet IOA</b></p> <p>The #5700 PCI 1 Gbps Ethernet IOA allows an iSeries server to attach to IEEE standard 802.3Z high-speed (1 Gbps) Ethernet LANs. It can also be used to connect to existing 10 Mbps or 100 Mbps Ethernet LANs by using switches with 10/100/1000 Mbps ports. It cannot directly attach to 10 Mbps or 100 Mbps LANs. Crossover cables are not supported.</p> <p>The #5700 adapter supports a multi-mode fiber interface with a 62.5 micron or 50.0 micron cable requirement. The #5700 adapter has a duplex LC fiber optic connector for attachment to client-supplied cabling. The #5700 uses short wave technology (around 500 m maximum). The #5700 adapter only supports TCP/IP.</p> <p>The #5700 PCI 1 Gbps Ethernet IOA can be run under a #2792 PCI Integrated xSeries Server. If a #5700 is controlled by a #2792 Integrated xSeries Server, then #0226 1 Gbps Ethernet Specify must be ordered. Order one #0226 for each #5700 PCI 1 Gbps Ethernet IOA controlled by an Integrated xSeries Server.</p> <p>When the #5700 is not installed in an Integrated xSeries Server, there is a maximum of one #5700 per Multi-adapter Bridge Boundary. Combinations of #5700s controlled by Integrated xSeries Server-controlled and controlled by PCI IOPs are allowed within a Multi-adapter Bridge Boundary.</p> <p>The #5700 can be attached directly to a Linux partition. When ordered as a #0620 - Direct Attach - #5700 PCI 1 Gbps Ethernet IOA, an IOP is not required. When attached directly to a Linux partition, the #5700 cannot be accessed by OS/400 partitions.</p> <p>Requires one 32-bit PCI card slot in the Model SB2 or SB3 system units, or in the #0578, #5074, #0574, #5075, #5078, #5079, #8079, #9074, #9079 PCI Expansion Towers.</p> <p>For best performance, spread high-speed IOAs, such as #5700, across the system I/O buses, first by HSL loop, then by I/O tower, and then by Multi-Adapter Bridge.</p> <p>Limit the quantity of one #5700 adapter per Multi-adapter Bridge boundary.</p> <p>Can be combined with a maximum of one other IOA on an IOP.</p> <p>Minimum operating system level: OS/400 V5R2 and PTF MF33086.</p> <p>Does not support LAN console on OS/400 V5R2.</p> <p>Does not support IPX protocol</p> <p>The #5700 is a Customer Install Feature.</p>

#5701	<p><b>#5701 PCI 1 Gbps Ethernet UTP IOA</b></p> <p>The #5701 PCI 1 Gbps Ethernet UTP IOA allows an iSeries server to attach to IEEE standard 802.3Z high-speed (1 Gbps) Ethernet LANs. It can also be used to connect to existing 10 Mbps or 100 Mbps Ethernet LANs by using switches with 10, 100, or 1000 Mbps ports. It cannot directly attach to 10 Mbps or 100 Mbps LANs. The adapter supports a UTP CAT 5 media interface. Cross over cables are not supported.</p> <p>The #5701 can be run under a #2792 PCI Integrated xSeries Server. If a #5701 is controlled by a #2792, then specify code #0226 1 Gbps Ethernet Specify must be ordered. Order one #0226 for each #5701 controlled by an Integrated xSeries Server. When not installed in an Integrated xSeries Server, there is a maximum of one #5701 per Multi-adapter Bridge boundary. Combinations of Integrated xSeries Server controlled and PCI IOP controlled #5701s within an Multi-adapter Bridge boundary are allowed.</p> <p>PCI card slots required: One 32-bit slot in the Model SB2 or SB3 system units, or in the #0578, #5074, #0574, #5075, #5078, #5079, #8079, #9074, #9079 PCI Expansion Towers.</p> <p>For best performance, spread high-speed IOAs, such as #5701, across the system I/O buses, first by HSL loop, then by I/O tower, and then by Multi-Adapter Bridge.</p> <p>Limit the quantity of one #5701 adapter per Multi-Adapter Bridge boundary.</p> <p>Can be combined with a maximum of one other IOA on an IOP.</p> <p>Minimum operating system level: OS/400 V5R2 and PTF MF33086.</p> <p>Does not support LAN console on OS/400 V5R2.</p> <p>Supports TCP/IP only. Does not support IPX or SNA protocol.</p> <p>The #5701 is a Customer Install Feature.</p>
#6618	<p><b>#6618 Integrated Netfinity Server (SPD)</b></p> <p>The #6618 Integrated Netfinity Server contains an Intel 333 MHz Pentium II Processor, four main storage slots, and three LAN IOA slots for high performance LAN serving to LAN-attached PCs. All three PCI slots can be used for Integrated PC Server functions. Two of the three PCI slots can support native iSeries functions. The #6618 requires three IOP slots. The slots must be adjacent. An external cable is included to enable connectivity to IPCS hardware (keyboard or mouse), which also allows for optional use of parallel and serial ports.</p> <p>SPD slots required: Three contiguous slots</p> <p>OS/2 and Novell NetWare are not supported with OS/400 V5R1.</p> <p>Supported on Models SB2 and SB3.</p> <p>Minimum operating system level: OS/400 V4R3 and Cumulative PTF Package C8349430</p> <p>The #6618 was withdrawn from marketing on 28 December 2001.</p>



#9771	<p><b>#9771 Base PCI 2-line WAN with integrated modem</b></p> <p>The #9771 is a 2-line WAN adapter. One port supports V.90 56K async data on PPP by way of an internal modem. The second port supports multiple protocol communications (WAN).</p> <p>Connection to the V.90 port uses a telephone cable. Connection to the WAN communication port is with one of the following cables:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft (15 m) PCI cable</li> <li>▶ #0353 V.35 20-ft PCI cable</li> <li>▶ #0354 V.35 50-ft PCI cable</li> <li>▶ #0356 V.36 20-ft PCI cable</li> <li>▶ #0359 X.21 20-ft PCI cable</li> <li>▶ #0360 X.21 50-ft PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> <li>▶ #0367 Operations Console PCI Cable</li> </ul> <p>The #9771 supports the #0367 Operations Console PCI Cable on the WAN (RVX) port to directly connect the Operations Console for OS/400 V5R1 or later or with OS/400 V4R5 and PTF MF25397 (not in cumulative PTF). Direct connection of the Operations Console is mutually exclusive with V.90 support of the dial-in Operations Console.</p> <p>The #9771 supports the #5544 System Console on Operations Console on the V.90 port for <i>dial-in</i> Operations Console with OS/400 V5R1. An additional #4745 is required on OS/400 V4R5 systems for <i>dial-in</i> Operations Console support. The #9771 ships with a country- or region-specific telephone cable. No modem cable feature is required on the order.</p> <p>ECS is supported over TCP/IP on the V.90 telephone cable port with OS/400 V5R1, or with OS/400 V4R5 and PTF SF64124. Fax is supported on the V.90 port with OS/400 V5R1, or with OS/400 V4R5 and PTFS MF25290 and SF64604. To support ECS on the WAN port of the #9771, specify one of the following cables:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft (6 m) PCI cable (default)</li> <li>▶ #0349 V.24/EIA232 50-ft (15 m) PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> </ul> <p>ECS operates on the WAN port of the #9771 by changing the *RSRCNAME parameter of the QESLINE and QTILINE line descriptions to that of the WAN port on the #9771 card.</p> <p>Remote Power On is not supported. The #9771 does not support the remote ring indicate function. For further configuration information, see:  <a href="http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm">http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm</a></p> <p>Minimum operating system level: OS/400 V4R5 with supporting PTFS  The #9771 was withdrawn from marketing on 01 October 2005.</p>
<b>Disk units</b>	
#08xx	<p><b>Load Source Specify</b></p> <p>Starting with the OS/400 V5R1 announcement, one of the following specify codes is required on all initial orders of a Model SB2 or SB3:</p> <ul style="list-style-type: none"> <li>▶ #0826 - #4314 Load Source specify</li> <li>▶ #0827 - #4324 Load Source specify</li> <li>▶ #0828 - #4317 Load Source specify</li> <li>▶ #0829 - #4318 Load Source specify</li> </ul> <p>Manufacturing uses this specify to place a corresponding disk unit feature in the load source position. The #0826, #0827, #0828, and #0829 were withdrawn from marketing on 01 June 2006.</p>
#4314	<p><b>#4314 8.58 GB Disk Unit (Ultra SCSI)</b></p> <p>The #4314 provides an additional 3 ½-inch two-byte single disk unit with 8.58 GB capacity (7200 RPM).</p> <p>Maximum: Four on SB2. Six on SB3 #2316. Eight on SB3 #2618.  Minimum operating system level: OS/400 V4R4  The #4314 is a Customer Install Feature.  The #4314 was withdrawn from marketing on 31 January 2001.</p>

#4317	<p><b>#4317 8.58 GB 10k RPM Disk Unit (Ultra2 SCSI)</b>  The #4317 provides an additional 3 ½-inch single disk unit with 8.58 GB capacity.</p> <p>Maximum: Four on SB2; six on SB3 #2316; eight on SB3 #2618  Minimum operating system level: OS/400 V4R4  The #4317 is a Customer Install Feature.  The #4317 was withdrawn from marketing on 03 December 2002 for new orders. Feature conversions to #4317 remain available.</p>
#4318	<p><b>#4318 17.54 GB 10k RPM Disk Unit (Ultra2 SCSI)</b>  The #4318 provides an additional 3 ½-inch single disk unit with 17.54 GB capacity.</p> <p>Maximum: Four on SB2; six on SB3 #2316; eight on SB3 #2618  Minimum operating system level: OS/400 V4R4  The #4318 is a Customer Install Feature.  The #4318 was withdrawn from marketing on 01 June 2004 for new orders. Conversions to feature #4318 remain available.</p>
#4324	<p><b>#4324 17.54 GB Disk Unit (Ultra SCSI)</b>  The #4324 provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage.</p> <p>Maximum: Four on SB2; six on SB3 #2316; eight on SB3 #2618  Minimum operating system level: OS/400 V4R4  The #4324 is a Customer Install Feature.</p>
#4331	<p><b>#4331 1.6 GB Read Cache Device</b>  The #4331 provides 1.6 GB of capacity for large read cache function. It is mutually exclusive with DASD compression. The system arrives in performance mode with compression function turned off on the #4748/#4778 PCI RAID Disk Unit Controller.</p> <p>For placement rules, see “#4331” on page 277.  Maximum: One per #4748/#4778 PCI RAID Disk Unit Controller  Supported in Model SB2 and SB3, and in the #5065, and #5066  Requires the #2748 when the #4331 is installed in a #5065/#5066  Minimum operating system level: OS/400 V4R4  The #4331 is a Customer Install Feature.  The #4331 was withdrawn from marketing on 01 March 2002.</p>
<b>Internal tape units and CD-ROM</b>	
Supported media	See 9.8, “QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems” on page 378, for the supported media for each tape device.
#4425	<p><b>#4425 CD-ROM</b>  The #4425 CD-ROMs can be mounted in the system unit. The #4425 can be used for alternate IPL (IBM distributed CD-ROM media only) and program distribution. A minimum of one CD-ROM or DVD-RAM is required per iSeries server.  Minimum operating system level: OS/400 V4R4  The #4425 is a Customer Install Feature.  The #4425 was withdrawn from marketing on 21 November 2003 for new orders. Conversion to feature #4425 remains available. The #4625 CD-ROM is the recommended replacement.</p>
#4430	<p><b>#4430 DVD-RAM</b>  The #4430 is a feature DVD-RAM device that can be mounted in the system unit of Model SB2 or SB3. It is a 5.25-inch half-high device which installs in a removable media slot. The #4430 is capable of writing and reading 4.7 GB on a single disk (single side). For double sided media, the media must be flipped manually. It is also capable of reading 650 MB CD-ROM disks. The #4430 can be used for alternate IPL, program distribution, and data interchange. It cannot be used as an Alternate Load Device with OS/ 400 V5R1.</p> <p>Prerequisites: Disk unit controller in system unit or tower where the device is mounted.  A minimum of one DVD-RAM or CD-ROM is required per iSeries server.  Minimum operating system level: OS/400 V4R5 with PTFs or OS/400 V5R1  The #4430 is a Customer Install Feature.  The #4430 was withdrawn from marketing on 01 January 2004.</p>

#4482	<p><b>#4482 4 GB ¼-inch Cartridge Tape Device</b></p> <p>The #4482 4 GB ¼-inch Cartridge Tape Device is a 4 GB ¼-inch cartridge tape unit that can be mounted in the system unit. The #4482 can be used for save/restore, alternate IPL, program distribution, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Minimum operating system level: OS/400 V4R4 The #4482 is a Customer Install Feature. The #4482 was withdrawn from marketing on 01 January 2004.</p>
#4483	<p><b>#4483 16 GB ¼-inch Cartridge Tape Device</b></p> <p>The #4483 16 GB ¼-inch Cartridge Tape Device is a 4 GB ¼-inch cartridge tape unit that can be mounted in the system unit. It can be used for save/restore, alternate IPL, program distribution, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Minimum operating system level: OS/400 V4R4 The #4483 is a Customer Install Feature.</p>
#4486	<p><b>#4486 25 GB ¼-inch Cartridge Tape Device</b></p> <p>The #4486 25 GB ¼-inch Cartridge Tape Device is a 25 GB ¼-inch cartridge tape unit that can be mounted in the system unit. It can be used for save/restore, alternate IPL, program distribution, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Minimum operating system level: OS/400 V4R4 The #4486 is a Customer Install Feature.</p>
#4487	<p><b>#4487 50 GB ¼-inch Cartridge Tape Device</b></p> <p>The #4487 50 GB ¼-inch Cartridge Tape Device can be used for save/restore, alternate IPL, program distribution, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. The #4487 tape units is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #4487 can be mounted in the system unit of Models SB2 and SB3 and in the #5074/#5079 PCI Expansion Towers.</p> <p>Prerequisite: A disk unit controller in system unit or tower where device is mounted. The #4487 is supported in the Models SB2 and SB3. Minimum operating system level: OS/400 V5R1 The #4487 is a Customer Install Feature. The #4487 was withdrawn from marketing on 01 January 2004.</p>
#4631	<p><b>#4631 DVD-ROM</b></p> <p>The #4631 DVD-ROM is a 5 ¼-inch device which is mounted in a removable media device slot. The #4631 is capable of reading 640 MB CD-ROM media and 4.7 GB DVD-RAM media. It is an alternate IPL (IDE bus attach) device, so a SCSI/ATAPI converter card is required and is included with the device. The converter card requires its own power source, so a power flex cable is included.</p> <p>The #4631 can be used for Alternate IPL (IBM distributed CD-ROM media only) and program distribution.</p> <p>Prerequisites: A disk unit controller in the system unit or tower where the device is mounted. A CD-ROM, DVD-RAM or DVD-ROM is required for each system. Supported in the Models SB2 and SB3. Minimum operating system level: OS/400 V5R2 The #4631 is a Customer Install Features. The #4631 was withdrawn from marketing for new orders only on 01 December 2005</p>

#4684	<p><b>#4684 30 GB ¼-inch Cartridge Tape Device</b></p> <p>The #4684 30 GB ¼-inch Cartridge Tape Device can be mounted in a removable media device slot of a system unit or an expansion tower. The #4684 can be used for save/restore, alternate IPL, program distribution, migration, and ¼-inch cartridge tape exchange.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #4684 can be mounted in the system unit of Models SB2, SB3, in the #5074/#5079 PCI Expansion Towers. and #9094 Base PCI-X I/O Enclosure.</p> <p>The #4684 is supported on the Models SB2 and SB3. Minimum operating system level: OS/400 V4R5 The #4684 is a Customer Install Feature.</p>
#4687	<p><b>#4687 50 GB ¼-inch Cartridge Tape Device</b></p> <p>The #4687 50 GB ¼-inch Cartridge Tape Device can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. The #4687 tape units is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #4687 is supported in the Models SB2 and SB3.</p> <p>Prerequisite: A disk unit controller in system unit or tower where device is mounted. Minimum operating system level: OS/400 V5R1 The #4687 is a Customer Install Feature. The #4487 was withdrawn from marketing on 01 January 2004.</p>
<b>Magnetic media controllers</b>	
#0165	<p><b>VHDCI attachment</b></p> <p>The #0165 VHDCI attachment is used to indicate that an external CD, DVD, or tape device is to be attached to a #5702 PCI-X Ultra Tape Controller, #5705 PCI-X Tape/DASD Controller, #5712 PCI-X Tape/DASD Controller, or #5715 PCI-X Tape/DASD Controller.</p> <p>Supported on Models SB2 and SB3.</p>
#0208	<p><b>#0208 No Alternate Install Device Use Required</b></p> <p>The #0208 No Alternate Install Device Use Required specify feature instructs manufacturing to place the external tape adapter on the Multi-adapter Bridge of the system unit. With this configuration, a client is not required to select or use the Alternative Installation Device option in conjunction with a D-mode IPL (using Boot Manager in DST). A higher cost system configuration can result due to the need of additional PCI controller cards. If placement on the first Multi-adapter Bridge is not possible due to other system constraints, the IBM marketing configurator flags the order as invalid.</p> <p>Adding the #0208 specify feature on an order forces manufacturing to place the external tape adapter on the first system bus. Having the external tape adapter on the first system bus does not require a client to use the Alternative Installation Device option of DST in conjunction with a D-mode IPL.</p> <p>Forcing the external tape adapter on the first system bus can result in a higher cost system configuration due to the need of additional PCI IOPs. When selected in the IBM marketing configurator, the external alternate IPL tape controller must be placed on the first system bus. If due to other system constraints such placement of the alternate IPL tape controller is not possible, then the order is not valid and flagged as such. An external tape adapter is placed in the first system bus.</p> <p>Supported on Models SB2 and SB3. Minimum operating system level: OS/400 V4R5 The #0208 was withdrawn from marketing on 01 December 2005.</p>

#2749	<p><b>#2749 PCI Ultra Magnetic Media Controller</b></p> <p>The #2749 is an Ultra SCSI IOA that provides attachment capability for external tape devices and external optical devices. The #2749 can attach one tape drive <i>or</i> one optical drive.</p> <p>The following tape devices can be attached:</p> <ul style="list-style-type: none"> <li>▶ 3490E E01/E11 ½-inch cartridge tape subsystem</li> <li>▶ 3490 F00/F01/F11/F1A ½-inch cartridge tape subsystem</li> <li>▶ 3490E C11/C22/C1A/C2A with feature #5040</li> <li>▶ 3494 Tape Library Dataserver <ul style="list-style-type: none"> <li>– L10 Library Control Unit Frame 1 3490E C1A/C2A with #5040 or 1-2 3490E F1A</li> <li>– L12 Library Control Unit Frame 1-2 3590 B1A</li> <li>– D10 Device Frame 1 3490E C1A/C2A with #5040 or 1-2 3490E F1A, 300 cartridges</li> <li>– D12 Device Frame 1-6 3590 B1A, 300 cartridges</li> <li>– HA1 (High Availability) — 2 L1X and 2 D1X for redundancy</li> </ul> </li> <li>▶ 3570 0.31-inch Cartridge Tape Subsystem <ul style="list-style-type: none"> <li>– Model B0x (stand-alone)</li> <li>– Model B1x (rack mount)</li> <li>– Model B1A (mounts in 3575)</li> <li>– Model C0x (stand-alone)</li> <li>– Model C1x (rack mount)</li> <li>– Model C1A (mounts in 3575)</li> </ul> </li> <li>▶ 3575 0.31-inch Cartridge Tape Subsystem <ul style="list-style-type: none"> <li>– Model Lxx</li> </ul> </li> <li>▶ 358X-Hxx/Lxx/Dxx Tape Cartridge Subsystem</li> <li>▶ 3590 ½-inch Cartridge Tape Subsystem <ul style="list-style-type: none"> <li>– Model B11 (mounts into 9309 rack)</li> <li>– Model B1A (mounts into 3494 library)</li> <li>– Model E11 (mounts into 9309 rack)</li> <li>– Model E1A (mounts into 3494 library)</li> </ul> </li> <li>▶ 3995-Cxx Optical Library Data server</li> <li>▶ 7208-012 5.0 GB 8 mm cartridge tape unit</li> <li>▶ 7208-222 7.0 GB 8 mm cartridge tape unit</li> <li>▶ 7208-232 8 mm Dual 5.0 GB cartridge tape subsystem <ul style="list-style-type: none"> <li>– #0501 counts as one 7208</li> <li>– #0502 counts as two 7208s</li> </ul> </li> <li>▶ 7208-234 8 mm Dual 7.0 GB cartridge tape subsystem <ul style="list-style-type: none"> <li>– Counts as two 7208s</li> </ul> </li> <li>▶ 7208-342 20.0 GB 8 mm Cartridge Tape Bridge Box</li> <li>▶ 9348-00x ½-inch Reel Tape Unit — Rack Mount</li> <li>▶ 9427-2108 8 mm Library Attach</li> </ul> <p>To attach tape devices with LVD connections, use the #5702 PCI-X Ultra Tape Controller. Supported on Models SB2 and SB3. Minimum operating system level: OS/400 V4R5 The #2749 is a Customer Install Feature. The #2749 was withdrawn from marketing on 03 March 2005.</p>
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#2765	<p><b>#2765 PCI Fibre Channel Tape Controller</b></p> <p>The #2765 provides Fibre Channel attachment capability for external tape devices. The #2765 supports point-to-point and arbitrated loop topologies and has an LC type cable connector. Each #2765 is shipped with a wrap connector (P/N 05N6767). The devices supported for Fibre Channel attachment are:</p> <ul style="list-style-type: none"> <li>▶ 3534-1RU SAN Fibre Channel Managed Hub</li> <li>▶ 3584-L32 or D32 Ultrascable Tape Library</li> <li>▶ 3590 ½-inch Cartridge Tape Subsystem Models E11 and E1A</li> </ul> <p>The #0163 Fibre Channel Attach Specify is required for each device attaching to an iSeries server with a #2765. The following adapter kits are required when connecting SC type cables to the #2765:</p> <ul style="list-style-type: none"> <li>▶ #0371 - LC-SC Adapter Kit (50 micron) is an optional kit used to attach SC-type fibre (50 micron) cables to a #2765. The kit contains a 2 m LC-ST cable and ST-SC adapter for 50 micron fiber.</li> <li>▶ #0372 - LC-SC Adapter Kit (62.5 micron) is an optional kit used to attach SC-type fibre (62.5 micron) cables to a #2765. The kit contains a 2 m LC-ST cable and ST- SC adapter for 62.5 micron fiber.</li> </ul> <p>An optics cleaning kit (P/N 46G6844) and instruction sheet instruction sheet (P/N 21P6238, form number SY27-2604) is supplied, one per system with the #2765/#2766 order.</p> <p>A maximum of one tape unit can be connected per #2765. Clients must supply all Fibre Channel cables for this controller. The #2765 does not support the Alternate IPL device function. A D-mode IPL is required using CD-ROM, DVD-ROM, or another alternate IPL tape device. Then select a #2765 to complete the installation or recovery process.</p> <p>Minimum operating system level: OS/400 V5R1  The #2765 is a Customer Install Feature.  The #2765 was withdrawn from marketing on 01 October 2004. The recommended replacement is the #5704 PCI-X Fibre Channel Tape Controller.</p>
#2768	<p><b>#2768 PCI Magnetic Media Controller</b></p> <p>The #2768 provides Ultra SCSI attachment capability for an external tape, an external CD-ROM device, or an external DVD-RAM device that has a Single Ended SCSI interface. The #2768 supports the following devices:</p> <ul style="list-style-type: none"> <li>▶ 7207-122 QIC-SLR Tape Bridge Box (4 GB External ¼-inch Cartridge Tape Drive)</li> <li>▶ 7208-345 60 GB External 8mm Tape Drive</li> <li>▶ 7210-020 External CD-ROM</li> <li>▶ 7210-025 External DVD-RAM</li> <li>▶ 7329-308 SLR100 ¼-inch Tape Autoloader</li> </ul> <p>See 9.5.4, “#5712, #5715, #5702, #5705, #2718, and #2768 PCI Magnetic Media Controller: Device cabling rules” on page 370, for information about connecting devices to the #2768.</p> <p>Minimum operating system level: OS/400 V4R5  The #2768 is a Customer Install Feature.  The #2768 was withdrawn from marketing on 01 October 2004. The recommended replacement is the #5702 PCI-X Ultra Tape Controller.</p>

#5702	<p><b>#5702 PCI-X Ultra Tape Controller</b></p> <p>The #5702 PCI-X Ultra Tape Controller provides a SCSI Ultra PCI attachment capability for external tape devices, and removable media devices.</p> <p>The #5702 has two ports that can attach two external tape devices. Each port can support at a minimum one of the following devices:</p> <ul style="list-style-type: none"> <li>▶ 3580-L23 IBM TotalStorage® Ultrium 2 Tape Drive</li> <li>▶ 3582-L23 IBM Ultrium Tape Library</li> <li>▶ 3583-LXX IBM Ultrium Scalable Tape Library</li> <li>▶ 3584-L23 or D32 Ultra scalable Tape Library</li> <li>▶ 7206-VX2 80 GB VXA-2 External Tape Drive</li> <li>▶ 7207-122 QIC-SLR Tape Bridge Box (4 GB External ¼-inch Cartridge Tape Drive)</li> <li>▶ 7208-345 60 GB External 8mm Tape Drive</li> <li>▶ 7210-020 External CD-ROM</li> <li>▶ 7210-025 External DVD-RAM</li> <li>▶ 7329-308 SLR100 ¼-inch Tape Autoloader</li> </ul> <p>See 9.5.4, “#5712, #5715, #5702, #5705, #2718, and #2768 PCI Magnetic Media Controller: Device cabling rules” on page 370, for information about connecting devices to the #5702 including daisy-chaining options.</p> <p>A #5702 running in an i5OS or OS/400 partition cannot drive internal disk units in any expansion tower, base I/O tower or system unit enclosure.</p> <p>Minimum operating system level: OS/400 V5R2</p> <p>The #5702 is a Customer Install Feature.</p> <p>The #5702 was withdrawn from marketing on 01 June 2006. The #5712 PCI-X Tape Controller is the recommended replacement.</p>
#5704	<p><b>#5704 PCI-X Fibre Channel Tape Controller</b></p> <p>The #5704 PCI-X Fibre Channel Tape Controller provides Fibre Channel attachment capability for external tape devices. The #5704 supports point-to-point and arbitrated loop topologies and has an LC-type cable connector. Each #5704 is shipped with a wrap connector (part number 05N6767). The #5704 supports 64-bit, 133 MHz PCI-X bus speeds.</p> <p>All Fibre Channel cables required for the #5704 PCI-X Fibre Channel Tape Controller are supplied by the client.</p> <p>The #5704 does not support the Alternate IPL device function. A D-mode IPL is required using CD-ROM, DVD-ROM, or another alternate IPL tape device. Then select a #5704 to complete the installation or recovery process.</p> <p>Minimum operating system level: OS/400 V5R2</p> <p>The #5704 is a Customer Install Feature.</p> <p>The #5704 is the PCI-X card replacement for the #2765 PCI Fibre Channel Tape Controller.</p>
#9748	<p><b>#9748 Base PCI RAID Disk Unit Controller</b></p> <p>The #4748/#9748 is an Ultra2 SCSI controller with a 26 MB write-cache that provides RAID-5 protection and compression for internal disk units and supports internal tape units and CD-ROM units. The #4748/#9748 supports both compression and non-compression modes. The mode of operation is determined by a hardware jumper. The #4748/#9748 is shipped in non-compression mode. By moving the hardware jumper, the controller functions in compression mode. In addition to providing RAID-5 protection for disks, the #4748/#9748 is also designed to work as a high performance controller for disks protected by system mirroring or disks with no protection. The #4748 also supports the #4331 1.6 GB Read Cache Device which provides increased performance. The #4331 1.6 GB Read Cache Device is supported only when the #4748/#9748 is <i>not</i> in compression mode.</p> <p>The #9748 does not support data compression on 35 GB disk units.</p> <p>The #4748 PCI RAID Disk Unit Controller supports a maximum of eight disk units on the SB3 and four on the SB2. The #9748 is the base disk controller for SB2 and SB3.</p> <p>A minimum of four disk units of the same capacity are needed for a valid RAID-5 configuration. All disk units in an array must be of the same capacity. Parity is spread across four disk units for arrays of four to seven disk units. Parity can be spread across either four or eight disk units. For systems started with eight to 10 disk units in an array the parity, for that array, is spread across eight disk units. For systems that are started with less than eight disk units in an array and later upgraded to eight, the RAID function must be stopped and then started before the parity is spread across eight disk units. The #4748/#9748 controls up to two removable media devices (internal tape or CD-ROM).</p> <p>Minimum operating system level: OS/400 V4R5</p> <p>The #9748 is a Customer Install Feature.</p> <p>The #4748/#9748 was withdrawn from marketing 02 July 2002 for new orders. Feature conversions to #4748/#9748 are still available.</p>

#9778	<p><b>#9778 Base PCI RAID Disk Unit Controller–104 MB Cache</b></p> <p>The #9778 is an Ultra2 SCSI controller with a 104 MB write-cache that provides RAID-5 protection and compression for internal disk units and supports internal tape units and CD-ROM units. The #9778 supports both compression and non-compression modes. The mode of operation is determined by a hardware jumper. The #9778 is shipped in non-compression mode. By moving the hardware jumper, the controller functions in compression mode. In addition to providing RAID-5 protection for disks, the #9778 is also designed to work as a high performance controller for disks protected by system mirroring or disks with no protection. The #9778 also supports #4331 1.6 GB Read Cache Device, which provides increased performance. The #4331 1.6 GB Read Cache Device is supported only when the #4748/#9748 is <i>not</i> in compression mode.</p> <p>A minimum of four disk units of the same capacity are needed for a valid RAID-5 configuration. A maximum of four arrays are allowed per controller, with a maximum of 10 disk units allowed per array. All disk units in an array must be of the same capacity. Parity is spread across four disk units for arrays of four to seven disk units. Parity can be spread across either four or eight disk units for arrays of eight to 10 disk units. For systems started with eight to 10 disk units in an array, the parity for that array is spread across eight disk units. For systems that are started with less than eight disk units in an array and later upgraded to eight, nine, or 10 disk units, the RAID function must be stopped and then started before the parity is spread across eight disk units.</p> <p>The #9778 controls up to two removable media devices (internal tape, CD-ROM, or DVD-RAM).  Requires long PCI card slot. Only one allowed in system unit and is mutually exclusive with #9748.  Minimum operating system level: OS/400 V5R1  The #9778 is a Customer Install Feature.  The #9778 was withdrawn from marketing on 21 November 2003.</p>
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## 2.5 Supported upgrades for Models SB2 and SB3

All upgrades to, from, and within the SB2 and SB3 systems are withdrawn from marketing. Refer to the Upgrade topic in the Find and Compare Tool (FACT) at the following Web site to determine the supported upgrade paths for a given processor:

<http://www-919.ibm.com/servers/eserver/fact/>



## IBM iSeries and AS/400e 250 models and packages

This chapter identifies the features that are associated with each IBM iSeries and IBM AS/400 250 server, such as the processor features, power and packaging, main storage, and workstation controllers. It also identifies the related communications—including wide area network (WAN), local area network (LAN), and asynchronous transfer mode (ATM), disk units, internal tape units and CD-ROM, and magnetic media controllers.

Model and processor	Announce date	General availability date	Withdrawn from marketing
250 #2295, #2296	12 June 2000	28 July 2000	02 July 2002
250 #0297, #0298	11 February 2002	28 July 2002	01 October 2004

**Note:** The darker shaded areas in the following tables and graphics indicate the base features.

### 3.1 AS/400e Model 250 overview

The following table provides the minimum and maximum capacities for the Model 250.

Processor feature	Model 250	
	#2295	#2296
Relative system performance (CPW) <sup>1, 2</sup>		
Processor performance	50	75
Interactive performance	15	20
Number/type/speed of processor	1/Northstar/262 MHz	1/Northstar/262 MHz
L2 Cache (MB)	0	0
Main storage (MB minimum to maximum)	256 to 1024	256 to 1024
Main storage or DIMMS minimum/maximum	2/8	2/8
Minimum OS/400 level	V4R5	V4R5
Software group	PPS/P05	PPS/P05

	Base system for all processors	#7102 System Expansion Unit	Total maximum
Disk storage (GB)			
Minimum internal	8.58	0	8.58
Maximum internal	70.16	105.24	175.40
System I/O card slots	6	9	15
Maximum communication lines <sup>4</sup>	1 to 12	0 to 26	30
ATM adapters <sup>6</sup>	0	0 to 2	2
Maximum LAN/ATM adapters <sup>6</sup>	2	4	6
Non-Integrated Server LAN Low-Speed TR/Ethernet	1	4	5
Non-Integrated Server LAN 100/10 Ethernet	1	2	3
Integrated Server LAN Low-Speed TR/Ethernet <sup>3</sup>	2	2	4
Integrated Server LAN 100/10 Ethernet <sup>3</sup>	1	1	2
Maximum workstation controllers: Twinaxial	2	5	6
Maximum workstations: Twinaxial	28 to 80	200	240
Cryptographic processors	0	2	2
Cryptographic accelerator			
¼-inch cartridge tape (internal)	0 to 1	0	1
8 mm ½-inch cartridge (external)	0	0 to 2	2
Tape libraries <sup>5</sup>	0	0 to 2	2
CD-ROM	1	0	1
Optical libraries	0	0 to 2	2

<b>Note 1</b>	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
<b>Note 2</b>	Processor performance represents the relative performance (maximum capacity) of a processor feature running CPW in a client/server environment. Processor capacity is achievable when the commercial workload is not constrained by main storage and direct access storage device (DASD). Interactive performance represents the relative performance available to perform host-centric workloads. The amount of interactive capacity consumed reduces the available processor capacity by the same amount.
<b>Note 3</b>	The Integrated Server is mutually exclusive with the high-speed slot C03 for LAN, ATM, or communication in the base system unit.
<b>Note 4</b>	One line is used by the Operations Console if selected.
<b>Note 5</b>	The total number of external tape drives does not increase.
<b>Note 6</b>	Integrated Server refers to the #2890 PCI Integrated Netfinity Server.

## 3.2 iSeries Model 250 package overview

The following table provides the minimum and maximum capacities for the Model 250 Package configurations.

	Model 250	
Processor feature	#0297 Entry	#0298 Growth
Relative system performance - CPW <sup>1, 2</sup>		
Processor performance	50	75
Interactive performance	15	20
Number/type/speed of processor	1/Northstar/262 MHz	1/Northstar/262 MHz
L2 Cache (MB)	0	0
Minimum OS/400 level	V4R5	V4R5
Software group <sup>3</sup>	PPS/P05	PPS/P05

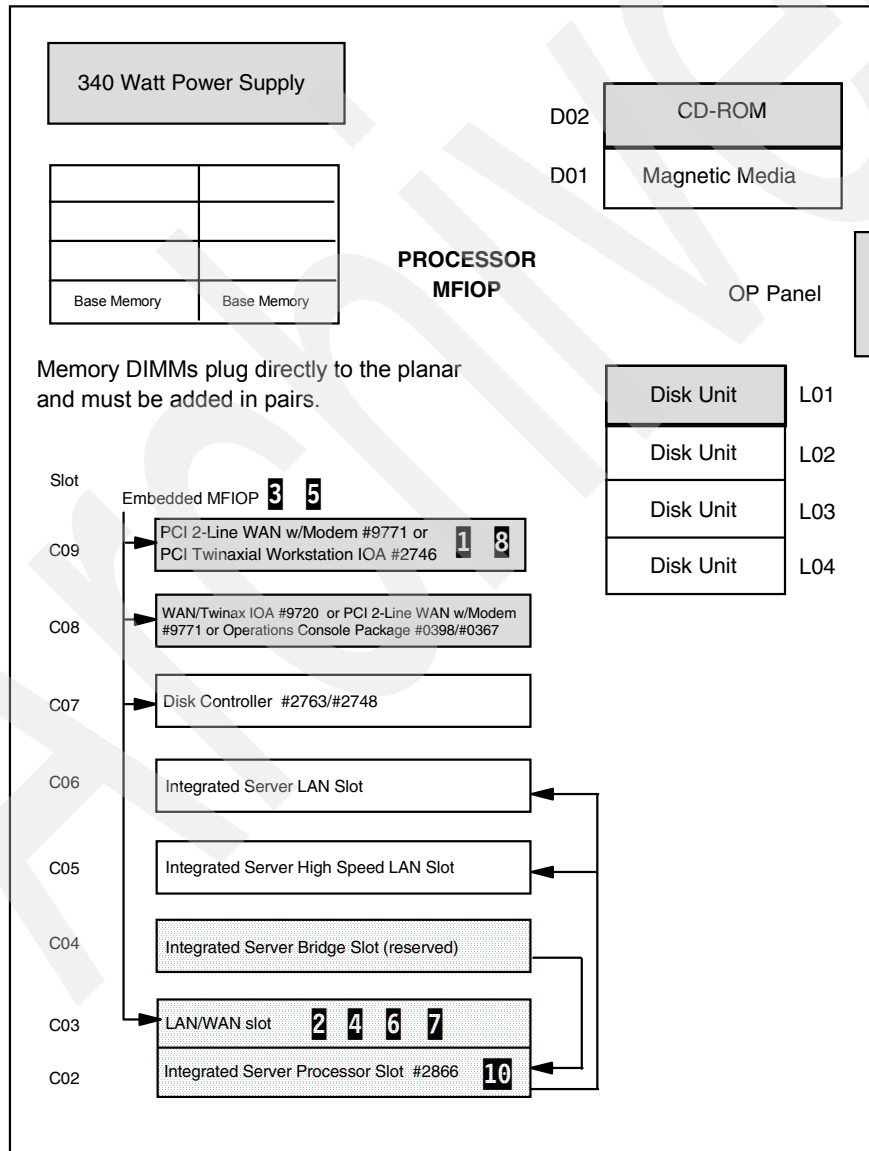
Model 250 capacities	#0297/#0298 package configuration <sup>4</sup>	Configuration maximum
Main storage (MB minimum/maximum)	256	1024
Main storage or DIMMs (minimum/maximum)	2	8
Disk storage (GB) <sup>5</sup>		
Minimum internal	17.54	35.08
Maximum internal	35.08	70.16
System I/O card slots	6	6
Communication lines <sup>6</sup>	1	12
ATM adapters	0	0
Maximum LAN/ATM adapters <sup>7</sup>	1	2
Non-Integrated Server LAN Low-Speed TR/Ethernet	0	1
Non-Integrated Server LAN 100/10 Ethernet	1	1
Integrated Server LAN Low-Speed TR/Ethernet	0	2
Integrated Server LAN 100/10 Ethernet	0	1
Maximum workstation controllers: Twinaxial	1	2
Maximum workstations: Twinaxial	28	80
Cryptographic processors	0	0
Cryptographic accelerator		
¼-inch cartridge tape (internal) <sup>8</sup>	1	1
8 mm ½-inch cartridge (external)	0	0
Tape libraries	0	0
CD-ROM	1	1
Optical libraries	0	0

<b>Note 1</b>	CPW is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application running determine what performance is achievable.
<b>Note 2</b>	Processor performance represents the relative performance (maximum capacity) of a processor feature running CPW in a client/server environment. Processor capacity is achievable when the commercial workload is not constrained by main storage and DASD. Interactive performance represents the relative performance available to perform host-centric workloads. The amount of interactive capacity consumed reduces the available processor capacity by the same amount.
<b>Note 3</b>	Package includes: ▶ OS/400 (5722-SS1) ▶ iSeries Client Access Family (5722-XW1) ▶ IBM Query for AS/400 (5722-QU1) ▶ IBM DB2® Query Manager and SQL Development Kit for AS/400 (5722-ST1) Other Licensed Programs can be added to the package when ordered.

<b>Note 4</b>	Package configuration reflects system as shipped from IBM. No modification of the hardware configuration is allowed on a new order. Optional features can be added through IBM Business Partners after system installation.
<b>Note 5</b>	Package configuration includes two drives shipped with Disk Level Mirroring active. <i>Minimum internal disk storage</i> refers to available disk with mirroring active. <i>Maximum internal disk storage</i> refers to unprotected disk capacity.
<b>Note 6</b>	Package configuration includes the #9771 Base PCI Two-Line WAN with integrated modem to provide for Electronic Customer Support by way of the integrated modem on port 1. If the use of port 2 is required, the appropriate communications cable must be obtained through an IBM Business Partner.
<b>Note 7</b>	Integrated Server is mutually exclusive with the high-speed slot for LAN.
<b>Note 8</b>	Package configuration includes the #6382 4 GB ¼-inch Cartridge Tape Unit.

### 3.3 9406 Model 250 system and expansion unit schematics

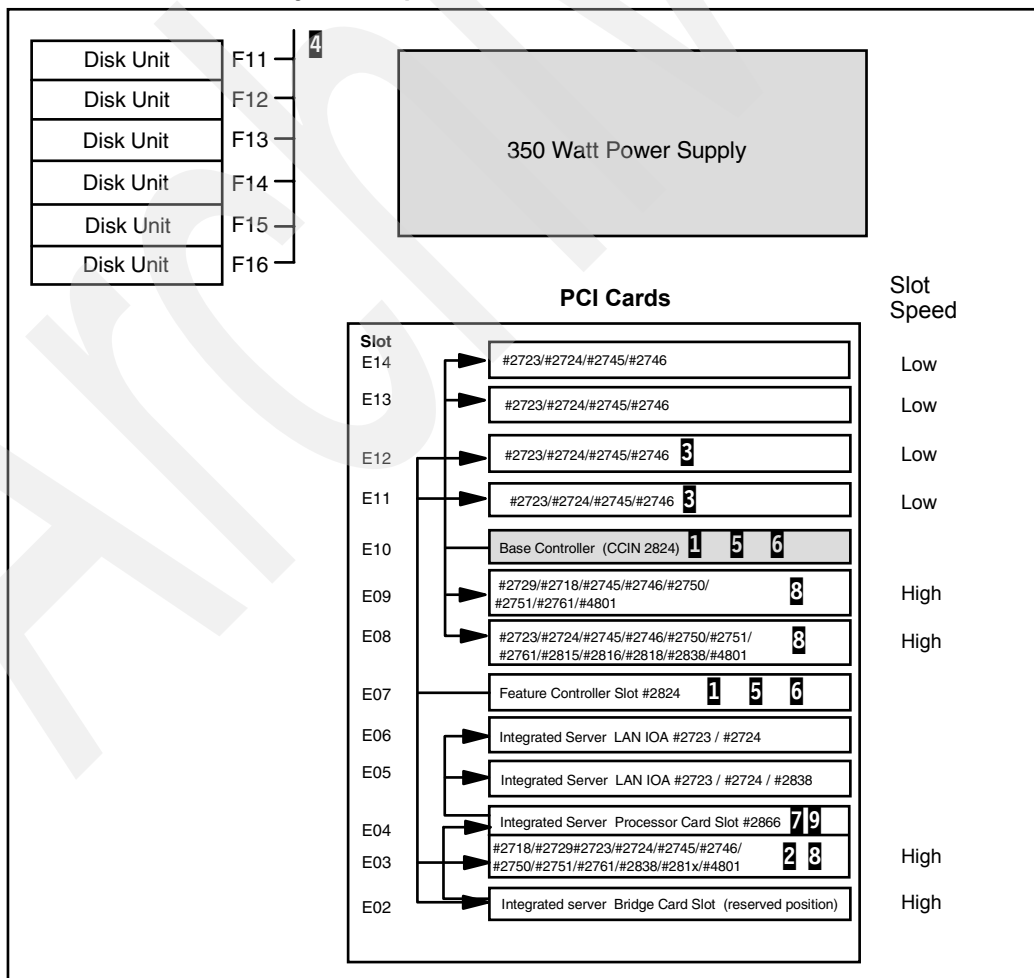
9406 Model 250 System Unit - PCI Card Placement



## Notes:

1. No high-speed LAN is allowed in slot C09.
2. If any LAN is in slot C03, no LAN card is allowed in slot C09.
3. A maximum of three LAN cards is allowed on the MFIOP (including Integrated Server slots C05 and C06).
4. Communications cards #2750, #2751, and #2761 are *only* allowed in high-speed slot C03. The #2750, #2751, and #2761 are not supported after OS/400 V5R2.
5. The processors include an embedded #9728 Base Disk Unit Controller (CCIN 9728). A separate #9728 is not needed.
6. If any IPCS is in slots C02/C04, C03 must remain empty.
7. The #2723, #2724, #2745, #2746, #2750, #2751, #2761, and #2838 are supported in C03. The #2750, #2751, and #2761 are not supported after OS/400 V5R2.
8. C09 supports the #2720, #2723/#9723, #2724/#9724, #2745/#9745, and #2746. When the system is ordered with a base LAN, a #2746, and no #0398, the #2746 goes into C09, and the #9771 goes into C08.
9. The #0398 Operations Console Package is required with the LAN option and includes both the CCIN 2745 and CCIN 0367 Operations Console Cable.
10. For #2866, Windows NT is not supported after OS/400 V5R2. Upgrade to Windows 2000.

## 9406 Model 250 #7102 System Expansion Unit



**Notes:**

1. A maximum of one high-speed LAN or ATM or a maximum of two low-speed LANs is allowed per controller.
2. If an Integrated Server is in slots E02/E04, E03 must remain empty.
3. A maximum of one LAN in E11 or E12 with Integrated Server in E02/E04 is allowed.
4. The disk units in the expansion unit are controlled by the #2763 or #2748 PCI RAID Disk Unit Controller in the system unit.
5. The #2750, #2751, and #2761 communications cards are allowed in slots E03, E08, and E09 (maximum one per IOP). The #2750, #2751, and #2761 are not supported after OS/400 V5R2.
6. The #4801 PCI Cryptographic Coprocessor is allowed in high-speed slots E03, E08, or E09 (maximum one per IOP).
7. Integrated Server refers to the #2890 PCI Integrated Netfinity Server.
8. The #2811, #2812, #2819, #2750, #2751, and #2761 are not supported after OS/400 V5R2.
9. For #2866, Windows NT is not supported after OS/400 V5R2. Upgrade to Windows 2000.

### 3.4 iSeries and AS/400e Model 250 processors

The AS/400e Model 250 systems are Customer Setup (CSU).

250 Processors	
#0297	<b>Entry Package</b> The #0297 is a 50.0 CPW Processor in Client/Server Environment, 15.0 Relative System Performance CPW Processor in an interactive environment. A prepackaged system configuration
#0298	<b>Growth Package</b> The #0298 is a 75.0 CPW Processor in Client/Server Environment, 20.0 Relative System Performance CPW Processor in an interactive environment. A prepackaged system configuration
#2295	<b>50.0 CPW Processor in Client/Server Environment, 15.0 Relative System Performance (RSP) CPW Processor in Interactive Environment. Base Memory 256 MB</b> Replaced by the #0297 Entry Package
#2296	<b>75.0 CPW Processor in Client/Server Environment, 20.0 Relative System Performance (RSP) CPW Processor in Interactive Environment. Base Memory 256 MB</b> Replaced by the #0298 Growth Package

### 3.5 iSeries and AS/400e Model 250 overview

The following table provides the minimum and maximum capacities for the Model 250 Package configurations.

PCI cards are subject to plugging rules. See *PCI Card Placement Rules for the IBM eServer iSeries Server*, REDP-3638 for details.

Power and packaging	
#1402	<b>Line cord 9-ft 120 volt</b> The #1402 specifies a 9-ft (2.8 m), 15 Amp, and 120 volt (U.S. default). The #1402 specify feature provides one line cord. One #1402 must be ordered for the system unit and one for the expansion unit. If only the system unit is ordered, only one line cord is required.
#1403	<b>Line cord 9-ft 240 volt</b> The #1403 specifies a 9-ft (2.8 m), 15 Amp, and 240 volt. The #1403 specify feature provides one line cord. One #1403 must be ordered for the system unit and one for the expansion unit. If only the system unit is ordered, only one line cord is required.
#143x	<b>Line cord 2.8 m 200 volt/10 amp Power Cord</b> The #143x specifies a 2.8 m, 10 Amp, and 200 volt. The #143x specify feature provides one line cord. One #143x must be ordered for the system unit and one for the expansion unit. If only the system unit is ordered, only one line cord is required. <ul style="list-style-type: none"> <li>▶ #1430 Australia/New Zealand</li> <li>▶ #1431 EU/Asia</li> <li>▶ #1432 Denmark</li> <li>▶ #1433 South Africa</li> <li>▶ #1434 United Kingdom</li> <li>▶ #1435 Swiss</li> <li>▶ #1436 Italy</li> <li>▶ #1437 Israel</li> </ul>
#7102	<b>#7102 System Expansion Unit</b> The #7102 System Expansion Unit allows the addition of up to nine PCI cards. It includes a base controller (CCIN 2824) with 32 MB of memory as standard and can have another added by installing a #2824 PCI Feature Controller. The #7102 can also support one #2857 Integrated PC Server or one #2866 PCI Integrated Netfinity Server. The #7102 additionally supports up to six disks (driven by the same disk controller located in the system unit). Maximum: One per system; requires one #1402 or #1403 line cord Minimum operating system level: OS/400 V4R4
Main storage	
Base	There are no features to specify the base memory of 256 MB on the Model 250 #2295 and #2296 Processors. The base memory positions contain two 128 MB DIMMs (CCIN 3022). Main storage cards must be added in pairs on a Model 250 to a total maximum of six storage cards. There are no feature exchanges when swapping memory DIMMs.
#3022	<b>128 MB Main Storage Card</b> Plugs directly into the processor. Must be added in pairs.  Maximum: Six The #3022 is a Customer Install Feature. The #3022 was withdrawn from marketing on 01 June 2006.
#3024	<b>256 MB Main Storage Card</b> Plugs directly into the processor. Must be added in pairs.  Maximum: Two The #3024 is a Customer Install Feature. The #3024 was withdrawn from marketing on 01 June 2006.

Workstation controllers	
Base MFIOF	<p><b>Base Multifunction IOP</b> The MFIOF (CCIN 6757) and the processor are combined together on the planar board. It also includes the embedded Base Disk Unit Controller CCIN 9728. A separate #9728 Base Disk Unit Controller is not required. The MFIOF drives two low-speed slots C08 and C09 and two high-speed PCI slots C03 and C07.</p> <ul style="list-style-type: none"> <li>▶ Slot C07 supports disk drive controllers #2763 or #2748 when there are more than four disk drives, or RAID-5 is required.</li> <li>▶ Slots C02 and C04 are reserved for one #2866 PCI Integrated Netfinity Server and can only be used if there is no card in slot C03.</li> <li>▶ Slot C03 supports one of #2723, #9723, #2724, #9724, #2838, or #9738 PCI LAN IOAs or #2745, #2750, #2751, and #2761 Integrated Analog Modem or #2746 PCI Twinaxial Workstation IOA.</li> <li>▶ Slot C08 is reserved for one #9720 Base PCI WAN/Twinaxial IOA, or #0398 Operations Console Package or #9771 Base PCI Two-Line WAN with integrated modem if the #2746 is on order.</li> <li>▶ Slot C09 supports the base #9771. It also supports the #2720, #2723/#9723, #2724/#9724, #2745/#9745, and #2746.</li> </ul>
Base IOP	<p><b>Base Controller for #7102 System Expansion Unit</b> One LAN/WAN/Workstation I/O processor (CCIN 2824) is supplied as standard within the #7102 and is installed in slot E10. It provides support for two high-speed PCI card slots E08 and E09, and two low-speed PCI card slots E13 and E14.</p> <ul style="list-style-type: none"> <li>▶ Slot E08 supports one of the following LAN cards: The #2838, #2723, #2724 or #281x ATM cards or the #2745 PCI 2-Line WAN IOA or the #2746 PCI Twinaxial Workstation IOA or the #2750/#2751 PCI ISDN IOA, the #2761 Integrated Analog Modem, or the #4801 PCI Cryptographic Coprocessor. Slot E09 supports the #2718/#2729 PCI Magnetic Media Controller, the #2745 PCI 2-Line WAN IOA, the #2746 PCI Twinaxial Workstation IOA, the #2750/#2751 PCI ISDN BRI S/T IOA, the #2761 Integrated Analog Modem, or the #4801 PCI Cryptographic Coprocessor.</li> <li>▶ The low-speed slots E13 and E14 support cards #2723, #2724, #2745, or #2746.</li> </ul> <p>There is a maximum of one high-speed LAN/ATM with no additional LAN per controller, or there is a maximum of two low-speed LAN with no high-speed LAN/ATM per controller. Maximum: One #2750, #2751, or #2761 per base I/O processor</p>
#2720 #9720	<p><b>#2720 Base PCI WAN/Twinaxial IOA</b> The #2720/#9720 combined twinaxial/communications adapter can be included as base in the Model 250. It provides four ports supporting a maximum of 28 twinaxial devices. It also provides a single communications line to support ECS. It is mutually exclusive with #0398.</p> <p>The #2720 is not supported by the IBM marketing configurator. It is for Record Purposes Only (RPO). The #2720 is provided for clients who want to change to a twinaxial console.</p> <p>The #9720 is supported for upgrades only.</p> <p>The #0348 V.24/EIA232 20-ft. (6m) PCI cable is required for ECS. Communication rules apply. See "Comm. Restrictions" on page 103.</p> <p>PCI slots required: One Maximum: One The #2720 was withdrawn from marketing on 02 July 2002, except as part of the Model 250 packages.</p>
#2746	<p><b>#2746 PCI Twinaxial Workstation IOA</b> The #2746 PCI Twinaxial Workstation IOA provides support for up to 40 active twinaxial displays and printers addresses or up to 120 active shared sessions. A 20-ft (6.2 m) cable with an eight port expansion (breakout) box is included with this adapter. Each port supports seven attached devices, allowing for 56 total attached devices, of which only 40 can be active. The #2746 can be attached both to high- and low-speed slots.</p> <p>PCI slots required: One Maximum: Six The #2746 is a Customer Install Feature.</p>



#2824	<p><b>#2824 PCI Feature Controller</b></p> <p>The #2824 PCI Feature Controller for LAN/WAN/Workstation has 32 MB of memory. In the #7102 System Expansion Unit, one Base Controller (CCIN 2824) is supplied as standard with no feature required. See "Base IOP" on page 64. It can be installed in slot E07 in the #7102 System Expansion Unit.</p> <p>The #2824 PCI Feature Controller provides support for two low-speed PCI card slots E11 and E12, and one high-speed PCI card slot E03.</p> <ul style="list-style-type: none"> <li>▶ Slot E03 can only be used if no #2866 PCI Integrated Netfinity Server card is installed in slots E02/E04.</li> <li>▶ Slot E03 supports one of #2718, #2723, #2724, #2745, #2729, #2746, #2750, #2751, #2761, #281x, #2838, or #4801.</li> <li>▶ Slots E11 and E12 support #2723, #2724, #2745, and #2746.</li> <li>▶ There is a maximum of one high-speed LAN/ATM with no additional LAN per controller, or there is a maximum of two low-speed LANs with no high-speed LAN/ATM per controller.</li> <li>▶ There is a maximum of one low-speed LAN supported in E11/E12 if a #2866 PCI Integrated Netfinity Server is installed in E02/E04.</li> </ul> <p>Maximum: One in the #7102 System Expansion Unit  Minimum operating system level: OS/400 V4R4  The #2824 is a Customer Install Feature for an MES that only includes CIF features.  The #2824 was withdrawn from marketing on 21 November 2003.</p>
<b>Communications</b>	
Comm. Restrictions	See "Comm. Restrictions" on page 103, for communications rules and restrictions.
#2720 #9720	<p><b>#2720 Base PCI WAN/Twinaxial IOA</b></p> <p>The #2720 is a combined twinaxial/communications adapter that can be included as a base in the Model 250. It provides four ports that support a maximum of 28 twinaxial devices. It also provides a single communications line. It is mutually exclusive with #0398. The #2720 is not supported by the IBM marketing configurator. It is for RPO. The #2720 is provided for clients who want to change to a twinaxial console. The #9720 is supported for upgrades only. The #0348 V.24/EIA232 20-ft. (6m) PCI cable is required for ECS.</p> <p>PCI slots required: One  Maximum: One  The #2720 was withdrawn from marketing on 02 July 2002, except as part of the Model 250 packages.</p>
#2745	<p><b>#2745 PCI 2-Line WAN IOA</b></p> <p>The #2745 supports up to two multiple protocol communications ports when one or two of the following cables are attached:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft. (6m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft. (15 m) PCI cable</li> <li>▶ #0353 V.35 20-ft/6 m PCI cable</li> <li>▶ #0354 V.35 50-ft/6 m PCI cable</li> <li>▶ #0355 V.35 80-ft/24 m PCI cable</li> <li>▶ #0356 V.36 20-ft/6 m PCI cable</li> <li>▶ #0358 V.36 150-ft/45 m PCI cable</li> <li>▶ #0359 X.21 20-ft/6 m PCI cable</li> <li>▶ #0360 X.21 50-ft/15 m PCI cable</li> <li>▶ #0365 V.24/EIA 232 80-ft/24 m PCI cable</li> <li>▶ #0367 Operations Console PCI Cable (not supported by the IBM marketing configurator)</li> </ul> <p>Communication rules apply. See "Comm. Restrictions" on page 103.  PCI slots required: One (low or high-speed)  The #2745 is a Customer Install Feature.  The #2745 was withdrawn from marketing on 01 October 2004. The recommended replacement is a #2742 2-Line WAN IOA.</p>

#2750	<p><b>#2750 PCI ISDN BRI U Adapter</b> (available in the United States and Canada only)  The #2750 PCI ISDN BRI U Adapter is a 4-port (8-channel) ISDN BRI (basic rate) full-sized PCI card. Each port consists of 2B+D configuration. The #2750 is the "U"-bus (2-wire) version of the ISDN BRI PCI card.</p> <p>The #2750 feature supports the following protocols:</p> <ul style="list-style-type: none"> <li>▶ PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices)</li> <li>▶ IDLC</li> <li>▶ Fax</li> </ul> <p>Four 30-ft (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #2750 feature. For configuration purposes, each #2750 counts as eight lines (two lines per port) toward the system communication maximums. Allowed in high-speed slots C03 (base unit), E03, E08, or E09 (system expansion unit). Supports full duplex.</p> <p>Requirements: The #2750 requires country (region) certification or homologation.  Full-sized PCI card slot.</p> <p>Maximum: One per IOP  The #2750 is a Customer Install Feature.</p>
#2751	<p><b>#2751 PCI ISDN BRI S/T IOA</b>  The #2751 PCI ISDN BRI S/T IOA is a four-port (eight channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #2751 is the "S/T"-bus (four wire) version of the ISDN BRI PCI card. This requires a network terminating device in the circuit. In the United States and Canada, this must be provided by the client. In other countries or regions, it is most likely provided by the telephone company.</p> <p>The #2751 feature supports the following protocols:</p> <ul style="list-style-type: none"> <li>▶ PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices)</li> <li>▶ IDLC</li> <li>▶ Fax</li> </ul> <p>Four 30-ft (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #2751 feature. For configuration purposes, each #2751 counts as eight lines (two lines per port) towards the system communication maximums. Allowed in high-speed slots C03 (base unit), E03, E08, or E09 (system expansion unit).</p> <p>Supports full duplex.</p> <p>Requirements: The #2751 requires country (region) certification or homologation.  Full sized PCI card slot.</p> <p>Maximum: One per IOP  The #2751 is a Customer Install Feature.</p>
#2761	<p><b>#2761 Integrated Analog Modem</b>  The #2761 Integrated Analog Modem allows the modem function to be integrated into the IOA and supports multiple analog modem ports (eight phone lines). It runs the following protocols without the need for an external modem:</p> <ul style="list-style-type: none"> <li>▶ SLIP/PPP uses V.90, so the maximum line speed is 56 Kbps.</li> <li>▶ SDLC uses V.34 or a 33.6 Kbps maximum line speed.</li> <li>▶ Fax uses V.17 to achieve a 14.4 Kbps maximum line speed.</li> </ul> <p>An asynchronous line description is required for FAX and can only be used for Fax. An ECS line is not supported. Eight 30-ft (8 m) phone cables are shipped with each #2761. To the iSeries or AS/400e server, the #2761 appears as a single IOA with eight individual resources available. For configuration purposes, each #2761 counts as eight communications lines. Allowed in high-speed slot C03 of the base unit, and E03, E08, or E09 of the system expansion unit.</p> <p>Supports full duplex.</p> <p>Requirements: The #2761 requires country (region) certification or homologation.  Full sized PCI card slot.</p> <p>Maximum: One per IOP  The #2761 is a Customer Install Feature.</p>

#4801	<p><b>#4801 PCI Cryptographic Coprocessor</b></p> <p>The #4801 is a hardware cryptography solution. The #4801 is a half-length PC form-factor PCI card that offers rich cryptography function, secure storage of cryptographic keys, and 12 Mbps performance (at the card level) for bulk data encryption. The level of cryptographic function is determined by the Cryptographic Access Provider Licensed Program, which is downloaded to the adapter.</p> <p>Due to temperature requirements — card temperature must not drop below 5 degrees F (-15 degrees C) — the #4801 is shipped separately from the system in a special package.</p> <p>Prerequisite: #7102 System Expansion Unit.  PCI Card slot required: One; only allowed in high-speed slots E03, E08, or E09  Maximum: One per IOP  Minimum operating system level: OS/400 V4R5  The #4801 is a Customer Install Feature.  The #4801 was withdrawn from marketing on 01 June 2006. The #4806 PCI-X Cryptographic Coprocessor is the recommended replacement.</p>
#9771	<p><b>#9771 Base PCI Two-Line WAN with integrated modem</b></p> <p>The #9771 is a 2-line WAN adapter. One port supports V.90 56K asynchronous data on PPP by way of an internal modem. The second port supports multiple protocol communications (WAN). Connection to the V.90 port uses a telephone cable. Connection to the WAN communication port is with one of the following cables:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft. (6m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft. (15 m) PCI cable</li> <li>▶ #0353 V.35 20-ft PCI cable</li> <li>▶ #0354 V.35 50-ft PCI cable</li> <li>▶ #0355 V.35 80-ft/24 m PCI cable</li> <li>▶ #0356 V.36 20-ft PCI cable</li> <li>▶ #0358 V.36 150-ft/45 m PCI cable</li> <li>▶ #0359 X.21 20-ft PCI cable</li> <li>▶ #0360 X.21 50-ft PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> <li>▶ #0367 Operations Console PCI Cable</li> </ul> <p>The #9771 supports the #0367 Operations Console PCI Cable on the WAN (RVX) port to directly connect the Operations Console for OS/400 V5R1 or later or with OS/400 V4R5 and PTF MF25397 (not in cumulative PTF). Direct connection of the Operations Console is mutually exclusive with V.90 support of the dial-in Operations Console.</p> <p>The #9771 supports the #5544 System Console on Operations Console on the V.90 port for <i>dial-in</i> Operations Console with OS/400 V5R1. An additional #4745 is required on OS/400 V4R5 systems for <i>dial-in</i> Operations Console support.</p> <p>The #9771 ships with a country- or region-specific telephone cable. No modem cable feature is required on the order. ECS is supported over TCP/IP on the V.90 telephone cable port with OS/400 V5R1 or with OS/400 V4R5 and PTF SF64124. Fax is supported on the V.90 port with OS/400 V5R1 or with OS/400 V4R5 and PTFS MF25290 and SF64604.</p> <p>To support ECS on the WAN port of the #9771, specify one of the following cables:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft. (6 m) PCI cable (default)</li> <li>▶ #0349 V.24/EIA232 50-ft. (15 m) PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> </ul> <p>ECS operates on the WAN port of the #9771 by changing the *RSRCNAME parameter of the QESLINE and QTILINE line descriptions to that of the WAN port on the #9771 card.</p> <p>Remote power-on is not supported. The #9771 does not support the remote ring indicate function. For further configuration information, see:  <a href="http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm">http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm</a></p> <p>See the “Soft rules: iSeries IOA requirements” topic in <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i>, REDP-3638 for additional restrictions.  Minimum operating system level: OS/400 V4R5 with supporting PTFS  The #9771 was withdrawn from marketing on 01 October 2005.</p>

LANs and ATM	
Comm. Restrictions	See "Comm. Restrictions" on page 103, for communications rules and restrictions.
#2723 #9723	<p><b>#2723 PCI Ethernet IOA</b> The #2723 provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code that supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC), plus IEEE 802.2 Logical Link Control (LLC) functions. It has an RJ-45 connector and a 15-pin D-shell connector for attachment of client-supplied cabling. The Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. AUI Ethernet or RJ-45 twisted pair cable must be ordered separately. Cabling must meet or exceed Industry Standard EIA/TIA T568B. The #9723 is a base LAN.</p> <p>For each #2723/#9723 PCI Ethernet IOA that is selected to run on the #2866 PCI Integrated Netfinity Server, one #0221 Ethernet on IPCS must be selected to indicate this placement.</p> <p>PCI slots required: One The #2723 is a Customer Install Feature.</p>
#2724 #9724	<p><b>#2724 PCI 16/4 Mbps Token Ring IOA</b> The #2724 provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code that supplies IEEE 802.5 MAC and IEEE 802.2 LLC functions, and an external 8-ft (2.4 m) cable. Alternatively a twisted pair cable for attachment to the RJ-45 connector on the IOA can be ordered separately. The #9724 is a base LAN.</p> <p>For each #2724/#9724 PCI Token Ring IOA that is selected to run on a #2866 PCI Integrated Netfinity Server, one #0220 must be selected to indicate this placement. The IOA is capable of operating in half or full duplex mode.</p> <p>PCI slots required: One The #2724 is a Customer Install Feature.</p>
#2815	<p><b>#2815 PCI 155 Mbps UTP OC3 ATM IOA</b> The #2815 PCI 155 Mbps UTP OC3 ATM IOA provides attachment into an ATM network using the Unshielded Twisted Pair (UTP-5) interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. You can find technical specifications and industry standards supported on the ATM Forum Web site at: <a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>The #2815 is used typically where 155 Mbps speeds are required over distances of less than 100 m.</p> <p>Prerequisite: #7102 System Expansion Unit High-speed PCI slots required: One The #2815 is a Customer Install Feature.</p>
#2816	<p><b>#2816 PCI 155 Mbps MMF ATM IOA</b> The #2816 PCI 155 Mbps MMF ATM IOA provides attachment into an ATM network using the Multi-Mode Fiber (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. You can find technical specifications and industry standards supported on the ATM Forum Web site at: <a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>The #2816 is used typically where 155 Mbps speeds are required over distances of less than 2 km.</p> <p>Prerequisite: #7102 System Expansion Unit High-speed PCI slots required: One The #2816 is a Customer Install Feature.</p>

#2818	<p><b>#2818 PCI 155 Mbps SMF OC3 ATM IOA</b></p> <p>The #2818 PCI 155 Mbps SMF OC3 ATM IOA provides attachment into an ATM network using the Single Mode Fibre (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provider equipment, but can be used for local area switches. You can find technical specifications and industry standards supported on the ATM Forum Web site at:  <a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>The #2818 is used typically where 155 Mbps speed is required over distances of 16 to 40 km.</p> <p>Prerequisite: #7102 System Expansion Unit.  High-speed PCI slots required: One  The #2818 is a Customer Install Feature.</p>
#2838 #9738	<p><b>#2838 PCI 100/10 Mbps Ethernet IOA</b></p> <p>The #2838 provides attachment to standard 100 Mbps high-speed Ethernet LANs and allows attachment to existing 10 Mbps Ethernet LANs. The #9738 is a base LAN. If #2838/#9738 PCI 100/10 Mbps Ethernet IOA is selected to be run on a #2866 PCI Integrated Netfinity Server, then one #0222 100/10 Mbps Ethernet on IPCS/#2890 PCI Integrated Netfinity Server specify feature is required. The IOA is capable of operating in half or full duplex mode. The adapter comes standard with an RJ-45 connector for attachment to UTP-5 media.</p> <p>Cabling for 10 Mbps must be CAT-3 or CAT-5. Cabling for 100 Mbps must be CAT-5 that meets or exceeds Industry Standard EIA/TIA T568A or T568B. The maximum cable length is 100 m.</p> <p>High-speed PCI slots required: One  Maximum: One per #2890 PCI Integrated Netfinity Server  The #2838 is a Customer Install Feature.  The #2838 was withdrawn from marketing on 21 November 2003.</p>
#2866	<p><b>#2866 PCI Integrated Netfinity Server</b></p> <p>The #2866 PCI Integrated Netfinity Server contains a 333 MHz Pentium II Processor, two LAN IOA slots for high performance serving to LAN-attached PCs, and four main storage slots. No base main store memory is supplied. A minimum of one main storage feature is required. The four main storage slots can each contain one of the following features, for a maximum of 1024 MB:</p> <ul style="list-style-type: none"> <li>▶ #2861 32 MB Integrated PC Server Memory</li> <li>▶ #2862 128 MB Integrated PC Server Memory</li> <li>▶ #2867 256 MB Integrated PC Server Memory</li> </ul> <p>A minimum of one and a maximum of two of any of the following LAN IOAs are supported:</p> <ul style="list-style-type: none"> <li>▶ Only one IOA can be a #2838/#9738.</li> <li>▶ #2723/#9723 PCI Ethernet IOA</li> <li>▶ Specify #0221 is required for each IOA ordered.</li> <li>▶ #2724/#9724 PCI Token Ring IOA</li> <li>▶ Specify #0220 is required for each IOA ordered.</li> <li>▶ #2838/#9738 PCI 100/10 Mbps Ethernet IOA</li> <li>▶ Specify #0222 is required for each IOA ordered.</li> <li>▶ A minimum of 64 MB IOP memory is required for Windows NT.</li> <li>▶ #0325 PCI Integrated Netfinity Server Extension Cable for Windows NT or Windows 2000 is required.</li> <li>▶ #1700 PCI Integrated Netfinity Server Keyboard/Mouse for Windows NT or Windows 2000. It is the default in the U.S.A.</li> <li>▶ Windows NT is not supported after OS/400 V5R2. Upgrade to Windows 2000.</li> <li>▶ A display unit is required to support Windows NT and Windows 2000.</li> <li>▶ If running OS/2, the #0325 is not allowed.</li> </ul> <p>For country- or region-specific keyboard, mouse, and display support, go to:  <a href="http://www.ibm.com/eserver/iseries/integratedxseries/">http://www.ibm.com/eserver/iseries/integratedxseries/</a></p> <p>The #2866 is a Customer Install Feature.</p>

Disk units	
#6813	<b>#6813 8.58 GB Additional Two-byte Disk Unit (Ultra SCSI)</b> The #6813 provides a 3 ½-inch single disk unit with 8.58 GB capacity for an additional disk unit (7200 RPM). The #6813 is a Customer Install Feature.
#6817	<b>#6817 8.58 GB 10k RPM Disk Unit (2-byte) (Ultra SCSI)</b> The #6817 provides a 3 ½-inch single disk unit with 8.58 GB of high-performance (10k RPM) capacity. The #6817 is a Customer Install Feature.
#6818	<b>#6818 17.54 GB 10k RPM Disk Unit (2-byte) (Ultra SCSI)</b> The #6818 provides a 3 ½-inch single disk unit with 17.54 GB of high-performance (10k RPM) capacity. The #6818 is a Customer Install Feature. The #6818 was withdrawn from marketing on 01 June 2004.
#6824	<b>#6824 17.54 GB Disk Unit (2-Byte) (Ultra SCSI)</b> The #6824 provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage (7200 RPM). The #6824 is a Customer Install Feature.
#6831	<b>#6831 1.6 GB Read Cache Device</b> The #6831 provides 1.6 GB of capacity for large read cache function. It is mutually exclusive with DASD compression. The system arrives in performance mode with the compression function turned off on the disk controller. Mirroring is not supported on the #6831.  Prerequisites: #2748 PCI RAID Disk Unit Controller One DASD slot Maximum: One per #2748 PCI RAID Disk Unit Controller
#8917	<b>#8917 8.58 GB Optional Base 10 k RPM Disk Unit (Ultra SCSI)</b> The #8917 provides an optional 3 ½-inch single disk unit with 8.58 GB of high-performance (10k RPM) capacity.
#8918	<b>#8918 17.54 GB Optional Base 10 k RPM Disk Unit (Ultra SCSI)</b> The #8918 provides an optional 3 ½-inch single disk unit with 17.54 GB of high-performance (10k RPM) capacity.
#8924	<b>#8924 17.54 GB Optional Base Two-byte Disk Unit (Ultra SCSI)</b> The #8924 provides an optional 3 ½-inch single disk unit with 17.54 GB capacity as the optional base disk unit (7200 RPM).
#9313	<b>#9313 8.58 GB Base Two-byte Disk Unit (Ultra SCSI)</b> The #9313 provides a 3 ½-inch single disk unit with 8.58 GB capacity as the base disk unit. It is the IBM marketing configurator default (7200 RPM).
Internal tape units	
Supported media	See 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for the supported media for each tape device.
#6381	<b>#6381 2.5 GB ¼-inch Cartridge Tape</b> The #6381 can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. It should be ordered when compatibility with the System/36 ¼-inch cartridge tape unit is required.  Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics. The #6381 is a Customer Install Feature.
#6382	<b>#6382 4 GB ¼-inch Cartridge Tape Unit</b> The #6382 can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.  Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics. The #6382 is a Customer Install Feature.

#6383	<p><b>#6383 16 GB ¼-inch Cartridge Tape Unit</b></p> <p>The #6383 is mounted in the system unit. With a data rate of 1.5 Mbps and capacity of 16 GB per cartridge (3 Mbps and 32 GB per cartridge with data compaction), the #6383 provides a growth path for iSeries or AS/400e models that use QIC tape technology for save/restore. The #6383 is controlled by the MFIOP.</p> <p>The #6383 provides read/write compatibility with the following formats:</p> <ul style="list-style-type: none"> <li>▶ 16 GB (up to 32 GB with compression in QIC5010 format) with IBM MLR-116 GB Data Cartridge</li> <li>▶ 13 GB (up to 26 GB with compression in QIC5010 format) with IBM DC5010 Data Cartridge</li> </ul> <p>The #6383 provides read compatibility with the following formats:</p> <ul style="list-style-type: none"> <li>▶ 8 GB (QIC4DC compressed format) with SLR5-4 GB Data Cartridge</li> <li>▶ 5 GB (QIC2DC compressed format) with IBM DC9250 Data Cartridge</li> <li>▶ 4 GB (QIC4GB format) with SLR5-4 GB Data Cartridge</li> <li>▶ 2.5 GB (QIC2GB format) with IBM DC9250 Data Cartridge</li> </ul> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #6383 is a Customer Install Feature.</p>
#6384	<p><b>30 GB ¼-inch Cartridge Tape Unit</b></p> <p>The #6384 is a 30 GB ¼-inch cartridge tape unit that can be mounted in a removable media device slot of a system unit or an expansion tower. The #6384 can be used for save/restore, alternate IPL, program distribution, migration, and ¼-inch cartridge tape exchange.</p> <p>The #6384 can be mounted in the system unit of the Model 250.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #6384 is a Customer Install Feature.</p> <p>The #6384 was withdrawn from marketing on 21 November 2003 for new orders.</p>
#6386	<p><b>#6386 25 GB ¼-inch Cartridge Tape Unit</b></p> <p>The #6386 is mounted in the system unit. With a data rate of 2 Mbps and capacity of 25 GB per cartridge (4 Mbps and 50 GB per cartridge with data compaction), the #6386 provides a growth path for iSeries or AS/400e models that use QIC tape technology for save/restore. Can be used for alternate IPL. The #6386 is controlled by the MFIOP.</p> <p>The #6386 provides read/write compatibility with the following formats:</p> <ul style="list-style-type: none"> <li>▶ 25 GB (up to 50 GB with compression in MLR3 format) with MLR3-25 GB Data Cartridge</li> <li>▶ 16 GB (up to 32 GB with compression in QIC5010 format) with IBM MLR1-16 GB Data Cartridge</li> <li>▶ 13 GB (up to 26 GB with compression in QIC5010 format) with IBM DC5010 Data Cartridge</li> <li>▶ 2 GB (up to 4 GB with compression in QIC5010 format) with IBM MLR1-2 GB Data Cartridge</li> </ul> <p>The #6386 provides read compatibility with the following formats:</p> <ul style="list-style-type: none"> <li>▶ 8 GB (QIC4DC compressed format) with SLR5-4 GB Data Cartridge</li> <li>▶ 5 GB (QIC2DC compressed format) with IBM DC9250 Data Cartridge</li> <li>▶ 4 GB (QIC4GB format) with SLR5-4 GB Data Cartridge</li> <li>▶ 2.5 GB (QIC2GB format) with IBM DC9250 Data Cartridge</li> </ul> <p>This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #6386 is a Customer Install Feature.</p>
<b>Magnetic media controllers</b>	
#2718	<p><b>#2718 PCI Magnetic Media Controller</b></p> <p>The #2718 is an Ultra SCSI Tape IOA that provides attachment capability for the 7207-122 QIC-SLR Tape Bridge Box (4 GB External ¼-inch Cartridge Tape Drive). The #2718 can attach one 7207.</p> <p>Prerequisite: #7102 System Expansion Unit</p> <p>The #2718 is a Customer Install Feature.</p>

#2729	<p><b>#2729 PCI Magnetic Media Controller</b>  The #2729 provides SCSI attachment for one 3490E C11/C22/C1A/C2A with feature #5040, 3590 Exx/Bxx, 3490E Exx, 3490E Fxx, 3494 D1x or L1x, 3570, 3590, 7208, 9348 or 9427 Tape Subsystem models or 3995 Optical Library Dataserver (C4x).</p> <p>Prerequisite: #7102 System Expansion Unit  High-speed PCI slots required: One  Maximum: Two  The #2729 is a Customer Install Feature.</p>
#2748	<p><b>#2748 PCI RAID Disk Unit Controller — 26 MB Cache (RAID/Mirrored/Unprotected)</b>  The #2748 SCSI disk and tape controller with a 26 MB write-cache provides RAID-5 protection and DASD compression capability for internal disk units, and supports internal tape and CD-ROM units. The #2748 controls Ultra and Fast Wide SCSI disk units installed in the base system and the #7102 System Expansion Unit. In addition to providing RAID-5 and compression, the #2748 works as a high-performance controller for disks protected by system mirroring or disks with no protection.</p> <p>The #2748 supports a maximum of 10 disk units. A minimum of four disk units of the same capacity is needed for a valid RAID-5 configuration. A maximum of two arrays is allowed per controller, with a maximum of 10 disk units per array. All disk units in an array must be of the same capacity. Parity is spread across four disk units for arrays of four to seven disk units. For systems started with eight disk units in an array, the parity for that array is spread across eight disk units. For systems started with less than eight disk units in an array and later upgraded to eight, nine or 10 disk units, the RAID function must be stopped and then started before the parity is spread across eight disk units.</p> <p>The #2748 supports one CD-ROM and one internal tape unit, and concurrent DASD add/maintenance.  The #2748 also supports the #6831 1.6 GB Read Cache Device, which is mutually exclusive with DASD compression.  Required: Disk controller PCI card slot C07  Maximum: One</p>
#2763	<p><b>#2763 PCI RAID Disk Unit Controller — 10 MB Cache (RAID/Mirrored/Unprotected)</b>  The #2763 is an Ultra2 SCSI controller with a 10 MB write-cache that provides RAID-5 protection for internal disk units and supports up to two removable media devices (internal tape units and CD-ROM units). The #2763 is designed to control Ultra, Fast Wide, and Fast Narrow SCSI disk and tape units that are installed in the base system unit and the #7102 System Expansion Unit. In addition to providing RAID-5 protection for disks, the #2763 is also designed to work as a high performance controller for disks protected by system mirroring or disks with no protection. In a RAID-5 configuration, disk unit protection is provided at less cost than mirroring, and with better performance than system checksum.</p> <p>The #2763 controller supports a maximum of 10 drives. A minimum of four drives of the same capacity are needed for a valid RAID-5 configuration. A maximum of two arrays is allowed with a maximum of a 10 drives allowed per array. All drives in an array must be of the same capacity. Parity is spread across four drives for arrays of four to seven drives. Parity can be spread across either four or eight drives for arrays of eight to 10 drives. For systems started with eight to 10 drives in an array, the parity for that array is spread across eight drives. For systems that are started with less than eight drives in an array and are later upgraded to eight, nine, or 10 drives, the RAID function must be stopped and then re-started before the parity is spread across all eight drives.</p> <p>Parts are included with the #2763 that are installed in the base system unit to support Concurrent DASD Add/Maintenance. The #2763 does not support integrated hardware disk compression. It does not support the #6831 1.6 GB Read Cache Device.</p> <p>The #2763 is selected automatically as the default PCI Disk Unit Controller when five or more DASD files are ordered.</p> <p>Required: Disk controller PCI card slot C07  Minimum operating system level: OS/400 V4R5  The #2763 is a Customer Install Feature.  The #2763 was withdrawn from marketing on 21 November 2003 for new orders. Conversions to feature #2763 remain available. The #5703 PCI-X RAID Disk Unit Controller is the recommended replacement.</p>



## 3.6 Supported upgrades for the Model 250

All upgrades to, from, and within the 250 systems are withdrawn from marketing. Refer to the Upgrade topic in the Find and Compare Tool (FACT) at the following Web site to determine the supported upgrade paths for a given processor:

<http://www-919.ibm.com/servers/eserver/fact/>

Archived

## IBM iSeries 270 models

This chapter identifies the features that are associated with each IBM iSeries 270 server, such as the processor features, power and packaging, main storage, workstation controllers, and communications—including wide area network (WAN), local area network (LAN), and asynchronous transfer mode (ATM), disk units, internal tape units and CD-ROM, and magnetic media controllers.

Model and processor	Announce date	General availability date	Withdrawn from marketing
270 #2248	12 June 2000	28 July 2000	21 November 2003
270 #2250, #2252, #2253, #2422, #2423, #2424	12 June 2000	28 July 2000	03 December 2002
270 #2431, #2432, #2434, #2452, #2454	23 April 2001	25 May 2001	21 November 2003

**Note:** The darker shaded areas in the following tables and figures indicate the base features. Also, the capacities shown might require prerequisites. Some combinations of features might not be valid.

## 4.1 iSeries Model 270 overview

The following tables provide the minimum and maximum capacities for the Model 270.

	Model 270			
Processor feature	#2248	#2250	#2252	#2253
Relative system performance <sup>1, 2</sup>				
Processor CPW	150	370	950	2000
5250 Interactive CPW <sup>5</sup>				
Base #1516 <sup>5</sup>	-	0	0	0
#1517	25	-	-	-
#1518	-	30	-	-
#1519	-	-	50	-
#1520	-	-	-	70
Number/type/speed of processor	1/Pulsar/400 MHz	1/Pulsar/400 MHz	1/Pulsar/450 MHz	2/Pulsar/450 MHz
L2 Cache (MB)/processor	0	0	2	4
Main storage (MB minimum to maximum)	256 to 4096	256 to 4096	256 to 8192	256 to 8192
Main storage DIMMs (minimum/maximum)	2/8	2/8	2/16	2/16
Minimum OS/400 level	V4R5	V4R5	V4R5	V4R5
Software group <sup>8</sup>	P05	P10	P10	P20

	Model 270		
Processor feature	#2431	#2432	#2434
Relative system performance <sup>1, 2</sup>			
Processor CPW	465	1070	2350
5250 Interactive CPW			
Base #1516 <sup>5</sup>	-	0	0
#1518	30	-	-
#1519	-	50	-
#1520	-	-	70
Number/type/speed of processor	1/SStar/540 MHz	1/SStar/540 MHz	2/SStar/600 MHz
L2 Cache (MB)	0	2	4
Main storage (MB minimum to maximum)	256 to 8192	256 to 8192	256 to 16384
Main storage DIMMs (minimum/maximum)	1/8	1/8	2/16
Minimum OS/400 level	V5R1	V5R1	V5R1
Software group <sup>8</sup>	P10	P10	P20

The following tables provide the minimum and maximum capacities for Model 270 Dedicated Server for Domino.

	Model 270 Dedicated Server for Domino		
Processor feature	#2422	#2423	#2424
Relative system performance <sup>1, 2</sup>			
Processor CPW	50	100	200
5250 Interactive CPW <sup>5, 5a</sup>	0	0	0
Simple Mail Users <sup>1a</sup>	2400	3860	7580
Mail and Calendar Users <sup>2a</sup>	1600	2570	5050
Number/type/speed of processor	1/Pulsar/400 MHz	1/Pulsar/450 MHz	2/Pulsar/450 MHz
L2 Cache (MB)/processor	0	2	4
Main storage (MB minimum to maximum)	256 to 4096	256 to 8192	256 to 8192
Main storage DIMMs (minimum/maximum)	2/8	2/16	2/16
Minimum OS/400 level	V4R5	V4R5	V4R5
Software group <sup>8</sup>	P05	P05	P10

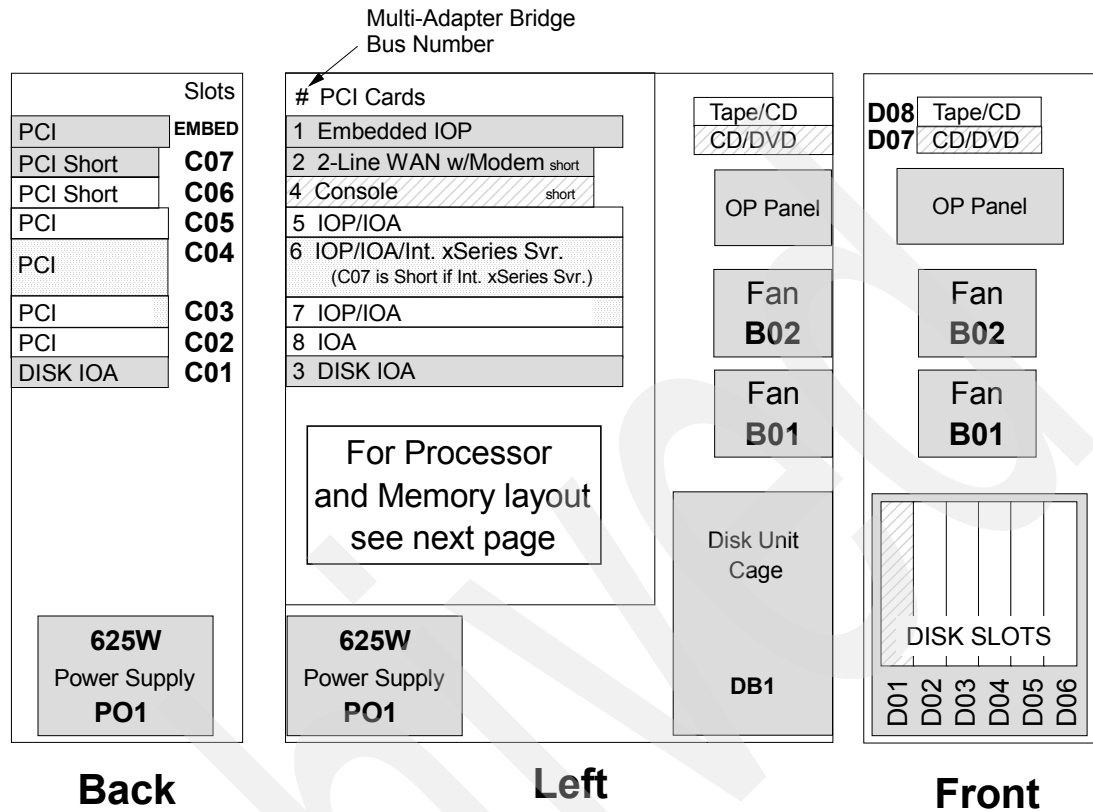
	Model 270 Dedicated Server for Domino	
Processor feature	#2452	#2454
Relative system performance <sup>1, 2</sup>		
Processor CPW	100	240
5250 Interactive CPW	0	0
Mail and Calendar Users <sup>1,2a</sup>	3070	6660
Number/type/speed of processor	1/SSStar/540 MHz	2/SSStar/600 MHz
L2 Cache (MB)	2	4
Main storage (MB minimum to maximum)	256 to 8192	256 to 16384
Main storage DIMMs (minimum/maximum)	1/8	2/16
Minimum OS/400 level	V5R1	V5R1
Software group <sup>8</sup>	P05	P10

Summary	Base system	System Expansion Unit #7104	PCI Expansion Tower #5075/#5095	Total maximum	LPAR maximum
Disk storage (GB)					
Integrated minimum	8.58/17.56	-	-	-	-
Integrated maximum	210.9	421.9	210.9	843.9	843.9
External maximum	808.7	-	808.7	808.7	808.7
Total maximum	843.9	421.9	843.9	843.9	843.9
DASD arms maximum	6	12	6	24	24
Internal arms	6	12	6	24	24
External LUNs	23	-	23	23	23
Physical packaging					
External HSL ports	2	-	-	2	2
External HSL loops	1	-	-	1	1
#5075 PCI Expansion Tower	1	-	-	1	1
#5095 PCI-X Expansion Tower	1	-	-	1	1
#5074 PCI Expansion Tower	-	-	-	-	-
External IBM eServer xSeries Servers	2	-	-	2	2
Embedded IOP	1	-	1	2	2
PCI card slots	7	-	8	15	15
Maximum PCI IOA cards	6	-	7	13	13
Communication lines <sup>4</sup>	20	-	34	50	50
LAN ports	3	-	5	8	8
Integrated xSeries Servers <sup>7</sup>	1	-	2	3	3
Twinaxial workstation controllers	4	-	6	6	6
Twinaxial workstations	160	-	240	240	240
Internal CD-ROM/DVD-RAM/tape <sup>6</sup>	2	-	-	2	2
External tape	3	-	3	3	6
External CD-ROM/DVD-RAM	3	-	3	3	6
Tape libraries <sup>3</sup>	3	-	3	3	6
Optical libraries	3	-	4	4	8
Diskettes (5 ¼-inch or 8-inch)	-	-	-	-	-
Cryptographic processor	3	-	3	3	3
Cryptographic accelerator					

<b>Note 1</b>	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application running determine what performance is achievable.
<b>Note 1a</b>	Simple Mail Users (SMU) is a performance measurement introduction with the Dedicated Servers for Domino.
<b>Note 2</b>	<p>Processor performance represents the relative performance (maximum capacity) of a processor feature running CPW in a client/server environment. Processor capacity is achievable when the commercial workload is not constrained by main storage and direct access storage device (DASD). Interactive performance represents the relative performance available to perform host-centric workloads. The amount of interactive capacity consumed reduces the available processor capacity by the same amount.</p> <p>On the Dedicated Servers for Domino, the Processor CPW is an approximate value reflecting the maximum amount of non-Domino workload (10 to 15% of CPU) that is supported.</p>
<b>Note 2a</b>	Mail and Calendar Users (MCU) is a relative performance measurement derived by performing mail and calendar functions using Domino and Notes clients. The MCU workload represents users on a Notes client who are reading, updating or deleting documents in an e-mail database. It also represents users who are performing lookups in the Domino directory and scheduling calendar appointments and invitations. Reported values reflect 70% processor utilization to allow for growth and peak loads in excess of client workload estimates.
<b>Note 3</b>	The total number of tape drives does not increase.
<b>Note 4</b>	One line is used if #5544 System Console on Operations Console is used. One line might be used if #5546 System Console on token-ring or #5548 System Console on 100 Mbps Ethernet is selected and the #0367 Operations Console PCI Cable is connected.

<b>Note 5</b>	<p>5250 CPW (Interactive) is an approximate value that reflects the amount of Processor CPW that can be used for workloads performing 5250-based tasks.</p> <ul style="list-style-type: none"> <li>▶ Task that use a 5250 data stream are considered 5250 online transaction processing (OLTP) work and require some amount of 5250 CPW to process regardless of how the task was started.</li> <li>▶ Tasks submitted through a 5250 session (5250 device, 5250 emulation) that do display or printer I/O require 5250 CPW.</li> <li>▶ Tasks submitted through a 5250 session (5250 device or 5250 emulation) as a "batch" jobs are not considered 5250 OLTP work and do not require any 5250 CPW unless the task does display or printer I/O.</li> <li>▶ Limited 5250 CPW is available when 5250 Interactive CPW = 0, for a system administrator who wants to use 5250 display device I/O to manage various aspects of the server. Multiple administrative jobs exceed this capability.</li> </ul>																																																																					
<b>Note 5a</b>	There is no Interactive Feature Code card for the base interactive #1516. Interactive performance is included in the base.																																																																					
<b>Note 6</b>	There must be one CD-ROM, DVD-RAM, or DVD-ROM per system.																																																																					
<b>Note 7</b>	Refers to #289x PCI Integrated Netfinity Servers and Integrated xSeries Servers.																																																																					
<b>Note 8</b>	<p>Software group is determined by the combination of processor feature and edition feature. Display the QPRCFEAT system value or DSPHWRSC TYPE(*AHW) to display the processor feature code value. This value is also shown for the Capacity Card CCIN value when using SST to perform a Capacity Upgrade on Demand.</p> <table> <tr> <th>Processor feature</th><th>Interactive feature</th><th>Software group</th><th>Processor feature code or QPRCFEAT</th></tr> <tr> <td>#2248</td><td>#1517</td><td>P05</td><td>22A2</td></tr> <tr> <td rowspan="2">#2250</td><td>#1516</td><td>P10</td><td>22A4</td></tr> <tr> <td>#1518</td><td>P10</td><td>22A5</td></tr> <tr> <td rowspan="2">#2252</td><td>#1516</td><td>P10</td><td>22A7</td></tr> <tr> <td>#1519</td><td>P10</td><td>22A8</td></tr> <tr> <td rowspan="2">#2253</td><td>#1516</td><td>P20</td><td>22AA</td></tr> <tr> <td>#1520</td><td>P20</td><td>22AB</td></tr> <tr> <td>#2422</td><td>none</td><td>P05</td><td>2422</td></tr> <tr> <td>#2423</td><td>none</td><td>P05</td><td>2423</td></tr> <tr> <td>#2424</td><td>none</td><td>P10</td><td>2424</td></tr> <tr> <td>#2431</td><td>#1518</td><td>P10</td><td>23E7</td></tr> <tr> <td rowspan="2">#2432</td><td>#1516</td><td>P10</td><td>23F0</td></tr> <tr> <td>#1519</td><td>P10</td><td>23F1</td></tr> <tr> <td rowspan="2">#2434</td><td>#1516</td><td>P20</td><td>23F0</td></tr> <tr> <td>#1520</td><td>P20</td><td>23F1</td></tr> <tr> <td>#2452</td><td>N/A</td><td>P05</td><td>2452</td></tr> <tr> <td>#2454</td><td>N/A</td><td>P10</td><td>2454</td></tr> </table>			Processor feature	Interactive feature	Software group	Processor feature code or QPRCFEAT	#2248	#1517	P05	22A2	#2250	#1516	P10	22A4	#1518	P10	22A5	#2252	#1516	P10	22A7	#1519	P10	22A8	#2253	#1516	P20	22AA	#1520	P20	22AB	#2422	none	P05	2422	#2423	none	P05	2423	#2424	none	P10	2424	#2431	#1518	P10	23E7	#2432	#1516	P10	23F0	#1519	P10	23F1	#2434	#1516	P20	23F0	#1520	P20	23F1	#2452	N/A	P05	2452	#2454	N/A	P10	2454
Processor feature	Interactive feature	Software group	Processor feature code or QPRCFEAT																																																																			
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#2452	N/A	P05	2452																																																																			
#2454	N/A	P10	2454																																																																			

## 4.2 9406 Model 270 system unit schematic



**Note 1:** Cards can be reversed, depending on your choice of console.

### Legend

Base Feature

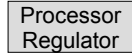
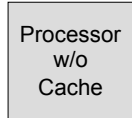
Required Feature

Unavailable if Integrated xSeries Server is installed



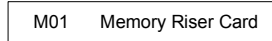
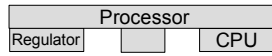
# Model 270 Processor and Memory

#2248, #2250, #2422



DIMM CONN - J0A	A
DIMM CONN - J0B	C
DIMM CONN - J0C	E
DIMM CONN - J0D	G
SMI	
SMI	
DIMM CONN - J1D	H
DIMM CONN - J1C	F
DIMM CONN - J1B	D
DIMM CONN - J1A	B

#2252, #2423



or

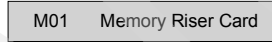
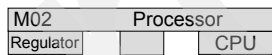
DIMM CONN - J0A	A
DIMM CONN - J0B	C
DIMM CONN - J0C	E
DIMM CONN - J0D	G
SMI	
SMI	
DIMM CONN - J1D	H
DIMM CONN - J1C	F
DIMM CONN - J1B	D
DIMM CONN - J1A	B

Memory Riser Card

DIMM CONN - J2A	A
DIMM CONN - J2B	E
DIMM CONN - J2C	J
DIMM CONN - J2D	N
SMI	
SMI	
Regulator	
SMI	
SMI	
DIMM CONN - J3D	P
DIMM CONN - J3C	K
DIMM CONN - J3B	F
DIMM CONN - J3A	B
DIMM CONN - J0A	C
DIMM CONN - J0B	G
DIMM CONN - J0C	L
DIMM CONN - J0D	Q
DIMM CONN - J1D	R
DIMM CONN - J1C	M
DIMM CONN - J1B	H
DIMM CONN - J1A	D

**Note:** All memory on the processor board after a riser card is installed is moved to the riser card.

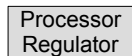
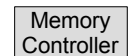
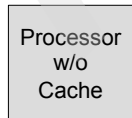
#2253, #2424, #2434, #2454



Memory Riser Card

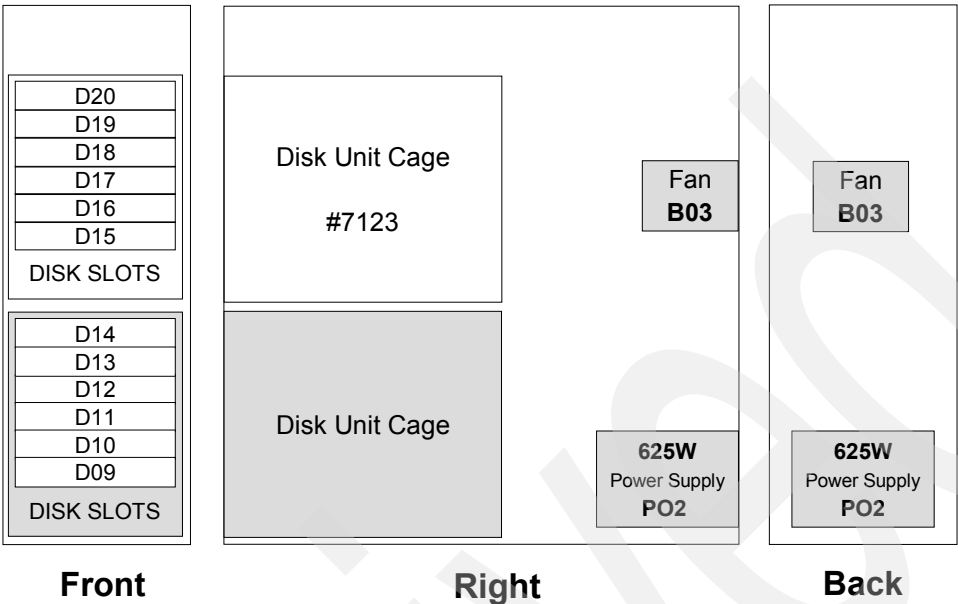
DIMM CONN - J2A	A
DIMM CONN - J2B	E
DIMM CONN - J2C	J
DIMM CONN - J2D	N
SMI	
SMI	
Regulator	
SMI	
SMI	
DIMM CONN - J3D	P
DIMM CONN - J3C	K
DIMM CONN - J3B	F
DIMM CONN - J3A	B
DIMM CONN - J0A	C
DIMM CONN - J0B	G
DIMM CONN - J0C	L
DIMM CONN - J0D	Q
DIMM CONN - J1D	R
DIMM CONN - J1C	M
DIMM CONN - J1B	H
DIMM CONN - J1A	D

#2431, #2432, #2452

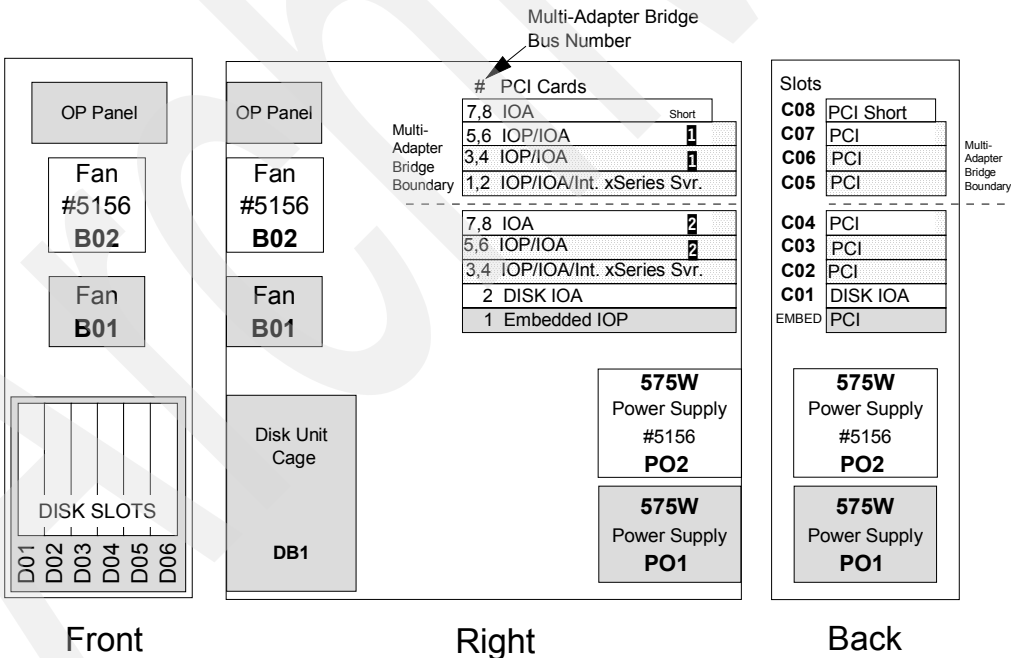


DIMM CONN - J3H	H
DIMM CONN - J0L	A
DIMM CONN - J2H	F
DIMM CONN - J1L	C
DIMM CONN - J1H	D
DIMM CONN - J2L	E
DIMM CONN - J0H	B
DIMM CONN - J3L	G

# Model 270 #7104 System Unit Expansion DASD Sidecar



## #5075 PCI Expansion Tower



### Legend

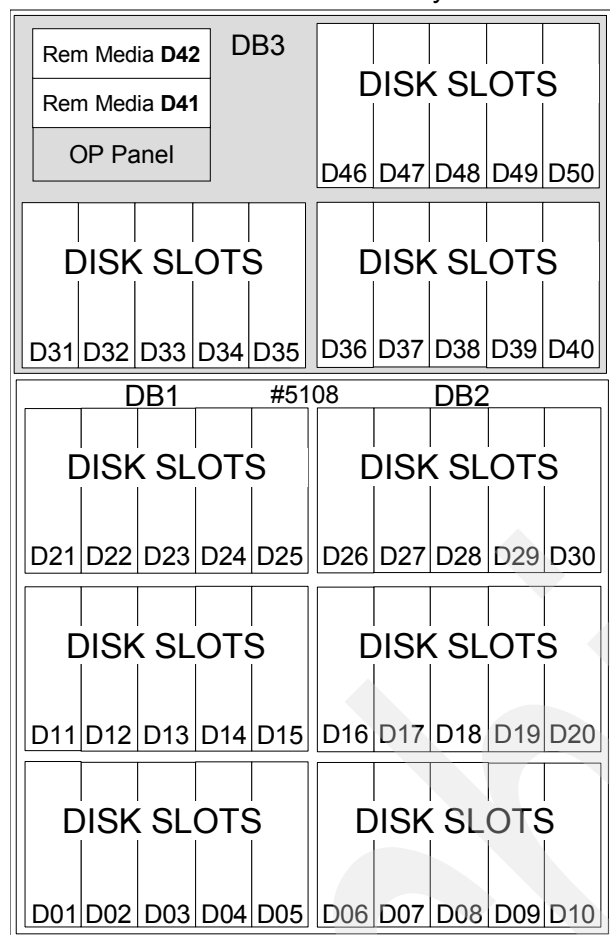
Base Feature	Required Feature	Unavailable if Integrated xSeries Server is installed
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**Note 1:** If C05 has an Integrated xSeries Server, slot C06 is unavailable, and slot C07 is available only as a short slot.

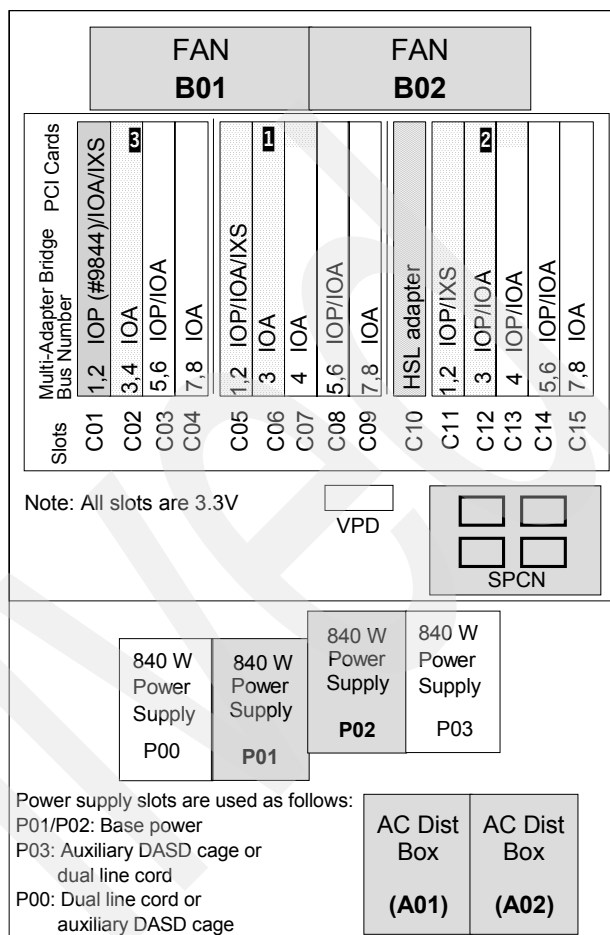
**Note 2:** If C02 has an Integrated xSeries Server, slot C03 is not available and slot C04 is available only as a short slot.

## #5094 PCI Expansion Tower

**Note:** The total number of disk bays is 45.



Front



Back

### Legend

Base Feature

Required Feature

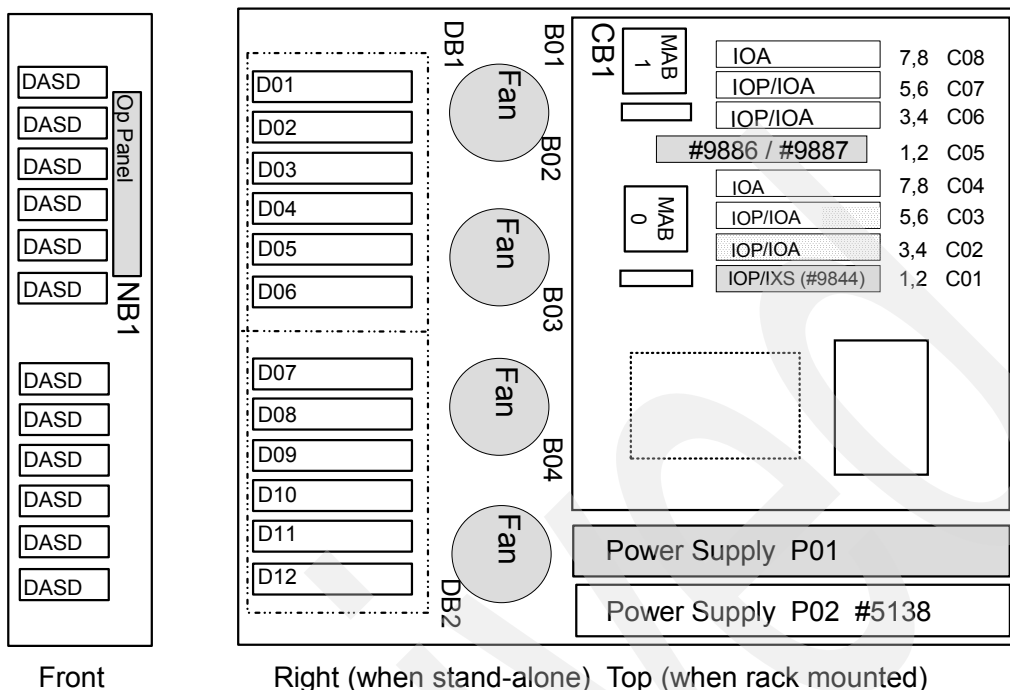
Unavailable if  
Integrated xSeries  
Server is installed

**Note 1:** If C05 has an Integrated xSeries Server, slot C06 is unavailable, and slot C07 is available only as a short slot. A #2792 does not reduce a third slot to a short slot.

**Note 2:** If C11 has an Integrated xSeries Server, slot C12 is unavailable, and slot C13 is available only as a short slot. A #2792 does not reduce a third slot to a short slot.

**Note 3:** IXS placement is not supported from plant. Only a #2792 is allowed in this position.

## #5095/#0595 PCI-X Expansion Tower



## 4.3 iSeries Model 270 processors

The iSeries Model 270 systems are Customer Setup (CSU).

Processor	Interactive feature	270 processors
#2248		<b>150 CPW Uni-Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>Includes eight Dual Inline Memory Module (DIMM) memory positions (plug directly into the backplane – direct attach)</li> <li>Includes 32 MB embedded base input/output processor (IOP) (CCIN 284D)</li> <li>Includes Common Service Processor (CSP) (CCIN 2249)</li> </ul> Minimum operating system level: OS/400 V4R5 The #2248 was withdrawn from marketing on 21 November 2003.
	#1517	<b>Optional 25 CPW in Interactive Environment</b> The #2248-1517 is represented by Processor Feature Code 22A2.
#2250		<b>370 CPW Uni-Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>Includes eight DIMM memory positions (plug directly into the backplane – direct attach)</li> <li>Includes 32 MB embedded base IOP (CCIN 284D)</li> <li>Includes Common Service Processor (CSP) (CCIN 2249)</li> </ul> Minimum operating system level: OS/400 V4R5
	#1516	<b>Base 0 CPW in Interactive Environment</b> The #2250-1516 is represented by Processor Feature Code 22A4.
	#1518	<b>Optional 30 CPW in Interactive Environment</b> The #2250-1518 is represented by Processor Feature Code 22A5.

#2252		<b>950 CPW Uni-Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>Includes eight DIMM memory positions (plug directly into the processor – direct attach). Optional priced #2884 Main Storage Expansion Riser Card is available that supports 16 DIMM memory positions. The client can select direct attach <i>or</i> purchase a memory riser feature, but <i>cannot use both</i>.</li> <li>Includes base I/O backplane (CCIN 282F)</li> <li>Includes 32 MB embedded base IOP (CCIN 284E)</li> <li>Includes Common Service Processor (CSP) (CCIN 2249)</li> <li>Includes internal flex cable for high-speed link (HSL) enablement (tower attachment)</li> </ul> Minimum operating system level: OS/400 V4R5
	#1516	<b>Base 0 CPW in Interactive Environment</b> The #2252-1516 is represented by Processor Feature Code 22A7.
	#1519	<b>Optional 50 CPW in Interactive Environment</b> The #2252-1519 is represented by Processor Feature Code 22A8.
#2253		<b>2000 CPW 2-way Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>Includes 16 DIMM memory positions with the main storage expansion card (CCIN 2884)</li> <li>Includes base I/O backplane (CCIN 282F)</li> <li>Includes 32 MB embedded base IOP (CCIN 284E)</li> <li>Includes Common Service Processor (CSP) (CCIN 2249)</li> <li>Includes internal flex cable for HSL enablement (tower attachment)</li> </ul> Minimum operating system level: OS/400 V4R5
	#1516	<b>Base 0 CPW in Interactive Environment</b> The #2253-1516 is represented by Processor Feature Code 22AA.
	#1520	<b>Optional 70 CPW in Interactive Environment</b> The #2253-1520 is represented by Processor Feature Code 22AB.
#2422		<b>Dedicated Domino Processor 1-way, 2200 Simple Mail Users, 1380 Mail and Calendar Users 50 CPW (Non-Domino Workload), 0 CPW (Interactive Environment)</b> <ul style="list-style-type: none"> <li>Includes eight DIMM memory positions (plug directly into the backplane – direct attach)</li> <li>Includes 32 MB embedded base IOP (CCIN 284D)</li> <li>Includes Common Service Processor (CCIN 2249)</li> </ul> The #2422 is represented by Processor Feature Code 2422. Minimum operating system level: OS/400 V4R5
#2423		<b>Dedicated Domino Processor 1-way, 4250 Simple Mail Users, 2620 Mail and Calendar Users 100 CPW (Non-Domino Workload), 0 CPW (Interactive Environment)</b> <ul style="list-style-type: none"> <li>Includes eight DIMM memory positions (plug directly into the backplane – direct attach)</li> <li>Includes base I/O backplane (CCIN 282F)</li> <li>Includes 32 MB embedded base IOP (CCIN 284E)</li> <li>Includes Common Service Processor (CCIN 2249)</li> <li>Includes internal flex cable for HSL enablement</li> </ul> The #2423 is represented by Processor Feature Code 2423. Minimum operating system level: OS/400 V4R5
#2424		<b>Dedicated Domino Processor 2-way, 8000 Simple Mail Users, 4950 Mail and Calendar Users 200 CPW (Non-Domino Workload), 0 CPW (Interactive Environment)</b> <ul style="list-style-type: none"> <li>Includes 16 DIMM memory positions with the main storage expansion card (CCIN 2884)</li> <li>Includes base I/O backplane (CCIN 282F)</li> <li>Includes 32 MB embedded base IOP (CCIN 284E)</li> <li>Includes Common Service Processor (CCIN 2249)</li> <li>Includes internal flex cable for HSL enablement</li> </ul> The #2424 is represented by Processor Feature Code 2424. Minimum operating system level: OS/400 V4R5
#2431		<b>465 CPW Uni-Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>Includes eight DIMM memory positions (plug directly into the backplane – direct attach)</li> <li>Includes 32 MB embedded base IOP (CCIN 286C)</li> <li>Includes Common Service Processor (CSP) (CCIN 25B9)</li> </ul> Minimum operating system level: OS/400 V5R1
	#1518	<b>Required 30 CPW in Interactive Environment</b> The #2431-1518 is represented by Processor Feature Code 23E7.

#2432		<b>1070 CPW Uni-Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>▶ Includes 2 MB L2 Cache</li> <li>▶ Includes eight DIMM memory positions (plug directly into the backplane – direct attach)</li> <li>▶ Includes 32 MB embedded base IOP (CCIN 286C)</li> <li>▶ Includes Common Service Processor (CSP) (CCIN 25B9)</li> </ul> Minimum operating system level: OS/400 V5R1
	#1516	<b>Optional 0 CPW in Interactive Environment</b> The #2432-1516 is represented by Processor Feature Code 23F0.
	#1519	<b>Optional 50 CPW in Interactive Environment</b> The #2432-1519 is represented by Processor Feature Code 23F1.
#2434		<b>2350 CPW 2-way Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>▶ Includes 4 MB L2 Cache</li> <li>▶ Includes 16 DIMM memory positions with the main storage expansion card (CCIN 2884)</li> <li>▶ Includes base I/O backplane (CCIN 282F)</li> <li>▶ Includes 32 MB embedded base IOP (CCIN 284E)</li> <li>▶ Includes Common Service Processor (CSP) (CCIN 282F)</li> <li>▶ Includes internal flex cable for HSL enablement (tower attachment)</li> </ul> Minimum operating system level: OS/400 V5R1
	#1516	<b>Optional 0 CPW in Interactive Environment.</b> The #2434-1516 is represented by Processor Feature Code 23F4.
	#1520	<b>Optional 70 CPW in Interactive Environment.</b> The #2434-1520 is represented by Processor Feature Code 23F5.
#2452		<b>Dedicated Domino Uni-Processor, 3070 Mail and Calendar Users 100 CPW (Non-Domino Workload), 0 CPW (Interactive Environment)</b> <ul style="list-style-type: none"> <li>▶ Includes 2 MB L2 cache</li> <li>▶ Includes eight DIMM memory positions (plug directly into the backplane – direct attach)</li> <li>▶ Includes 32 MB embedded base IOP (CCIN 286C)</li> <li>▶ Includes Common Service Processor (CCIN 25B9)</li> </ul> The #2452 is represented by Processor Feature Code 2452. Minimum operating system level: OS/400 V5R1
#2454		<b>Dedicated Domino Uni-Processor, 6660 Mail and Calendar Users 240 CPW (Non-Domino Workload), 0 CPW (Interactive Environment)</b> <ul style="list-style-type: none"> <li>▶ Includes 4 MB L2 cache</li> <li>▶ Includes 16 DIMM memory positions with the base main storage expansion card (CCIN 2884)</li> <li>▶ Includes base I/O backplane (CCIN 282F)</li> <li>▶ Includes 32 MB embedded base IOP (CCIN 284E)</li> <li>▶ Includes Common Service Processor (CCIN 282F)</li> <li>▶ Includes internal flex cable for HSL enablement</li> </ul> The #2454 is represented by Processor Feature Code 2454. Minimum operating system level: OS/400 V5R1

## 4.4 iSeries Model 270 features

This section identifies the supported features for the iSeries Model 270.

PCI cards are subject to plugging rules. See *PCI Card Placement Rules for the IBM eServer iSeries Server*, REDP-3638 for details.

Power and packaging	
#0006	<p><b>#0006 LPAR Restrict Build Process</b></p> <p>The #0006 is added to an initial order where #0140 Logical Partitioning Specify is requested. This #0006 instructs manufacturing to only load SLIC on the minimum number of disk drives.</p> <p>This #0006 is mutually exclusive with #5000 SW Preload and with #0205 RISC- to RISC migration.</p>
#0092	<p><b>External xSeries Attach Specify</b></p> <p>The #0092 is used to specify the number of External xSeries Servers connected to the system. The IBM marketing configurator uses this specify code to determine the number of HSL and SPCN cables required and to ensure that the number of External xSeries Servers does not exceed the system limit. Each External xSeries Server is connected using HSL cables and attached to the SPCN string like all other HSL attached I/O towers.</p> <p>Corequisite: A 1519-100 Integrated xSeries Adapter for iSeries must be installed in each External xSeries Server attached. Minimum operating system level: OS/400 V5R1 for 1519-100 Integrated xSeries Adapter for iSeries</p>
#0121	<p><b>#0121 Lower Unit in Rack Specify</b></p> <p>The #0121 identifies that the 270 server is to be installed in the lower position of a #0551 iSeries Rack. The Model 270 requires 15 EIA units, which leaves 21 EIA units available in the rack for other devices. The #0121 provides the appropriate mounting rails and tray for installing the Model 270 server.</p> <p>If a Power Distribution Unit (PDU) is installed in the #0551 iSeries Rack, two #1422 PDU Line Cords can be ordered for the Model 270 instead of the standard country- or region-specific line cords.</p> <p>Valid on initial orders only Prerequisite: #0551 iSeries Rack Corequisite: #7104 System Unit Expansion The #0121 was withdrawn from marketing on 21 November 2003.</p>
#0122	<p><b>#0122 Upper Unit in Rack Specify</b></p> <p>The #0122 identifies that the 270 server is to be installed the upper position of a #0551 iSeries Rack above another Model 270. The two Model 270s require 30 EIA units, which leaves six EIA units available in the rack for other devices. The #0122 provides the appropriate mounting rails and tray for installing the second 270 system unit in the rack.</p> <p>If a PDU is installed in the #0551 iSeries Rack, two #1422 PDU Line Cords can be ordered for the Model 270 instead of the standard country- or region-specific line cords.</p> <p>Valid on initial orders only Corequisite: Separate order is required for a Model 270 with a #0551 iSeries Rack and a #0121 Lower Unit in Rack Specify. The other system must have the same Scheduling Entry Number (SEN) and Customer Requested Arrival Date (CRAD). A #7104 System Unit Expansion must be included for each Model 270. The #0122 was withdrawn from marketing on 21 November 2003.</p>
#0127	<p><b>270 Field Install in Rack</b></p> <p>The #0127 indicates that a Model 270 is mounted in the #0551 iSeries Rack (either top or bottom). It is supported on initial order systems and on MES orders and ship a set of "sliders" and a tray.</p> <p>Prerequisite: #0551 iSeries Rack, #7104 System Unit Expansion Corequisite: If a system is installed in the upper rack position and is not cabled to a PDU, then a 14-ft line cord is required. The #0127 was withdrawn from marketing on 07 May 2003.</p>

#0133	<p><b>#0133 Plant Install in Rack</b></p> <p>The #0133 Plant Install in Rack feature is used to mount a Model 270 system unit in a #0551 iSeries Rack either in the plant or in the field.</p> <p>If the system order received at the plant contains (all four of the following) a system unit, #7104 System Unit Expansion, #0551 rack and #0133, the system is mounted in the #0551 at the plant. If any of those four components are missing from the order, the system <i>is not</i> mounted in the #0551 at the plant.</p> <p>If the system is not installed in a #0551 in the plant, the #0133 feature provides hardware components, which include a set of slides, cable management arm, a heavy duty tray, a 270 adapter plate and a pair of 270 lift covers.</p> <p>The #0133 can be ordered on initial orders or MES orders.</p> <p>A line cord is required for both the system unit and the system unit expansion. The line cord (and SPCN cable, if present) must be of sufficient length for system units mounted in the upper portions of a rack and <i>not</i> using the #1422 PDU Line Cord.</p> <p>Prerequisite: For Model 270, a #7104 System Unit Expansion must be present or ordered. An #0551 iSeries Rack is required for mounting a Model 270, but the #0551 is not required on the order, or on the inventory records for the system for which the #0133 Plant Install in Rack is ordered.</p> <p>The #0133 is a Customer Install Feature if installed in the field. The #0133 was withdrawn from marketing on 01 June 2006.</p>
#0137	<p><b>#0137 Field Install in Rack</b></p> <p>The #0137 Field Install in Rack feature is used to mount a Model 270 system unit (#7104 sidecar feature must be present) in a #0551 iSeries Rack in the field. The #0137 provides a set of slides, cable management arm, a heavy duty ray, a 270 adapter plate and a pair of 270 lift covers.</p> <p>The #0137 can be ordered on initial orders or MES orders.</p> <p>A line cord is required for both the system unit and the system unit expansion. The line cord (and SPCN cable, if present) must be of sufficient length for system units mounted in the upper portions of a rack and <i>not</i> using the #1422 PDU Line Cord.</p> <p>The #0137 is an IBM Service Representative installed feature. The #0137 was withdrawn from marketing on 01 June 2006.</p>
#0140	<p><b>Logical Partition Specify</b></p> <p>The #0140 is used to specify that this system is to be logically partitioned with an OS/400 partition. Specify one #0140 for each OS/400 logical partition required. When logical partitioning is specified, the IBM marketing configurator verifies or validates:</p> <ul style="list-style-type: none"> <li>▶ The number of load source IOPs is equal to or greater than the number of partitions. Load source IOP features are the #2757, #2780, #2763, #2782, #4748, #4778, #9748, and #9767.</li> <li>▶ There are input/output adapters (IOAs) that are capable of being a console, equal or greater in number to the total number of partitions. This can be a combination of #0367 Operations Console PCI Cables, #4746 PCI Twinaxial IOAs or LAN features supported by Console-on-LAN.</li> <li>▶ A default of one #2757, #2780, #2763, #2782, #4748, or #4778 for each #4525 CD-ROM, #4530 DVD-RAM or #4531 DVD-ROM and a default of one #2768/#5702 for each 7210-020 External CD-ROM or each 7210-025 External DVD-RAM. The defaulted controllers can be removed.</li> </ul> <p>Prerequisite: Processors #2431, #2432, #2434, #2452, or #2454 Minimum (when partitioning is required): One with #0142 present or two with no #0142 Maximum: Three on processors #2431, #2432, #2434, #2452, and #2454 Minimum operating system level: OS/400 V5R1</p>
#0141	<p><b>#0141 HSL OptiConnect Specify</b></p> <p>The #0141 is used to specify that this system is to be part of a cluster using HSL OptiConnect. This feature is used to allow the ordering of additional HSL cables to connect the systems that have OptiConnect.</p> <p>Prerequisite: HSL OptiConnect capable system Maximum: One Minimum operating system level: OS/400 V5R1</p>



#0142	<p><b>Linux Partition Specify</b></p> <p>The #0142 is used to specify that this system is to be logically partitioned with a Linux partition. Specify one #0142 for each Linux partition required. Only Linux direct attached features are allowed within a Linux partition.</p> <p>There are no minimum number of Linux direct attached features required per Linux partition. A Linux partition can exist without any Linux direct attached features in it (in this case, all I/O is virtualized by way of the iSeries server).</p> <p>Linux Direct Attach Features: The following features can be attached directly to a Linux partition.</p> <ul style="list-style-type: none"> <li>▶ #0601 - Direct Attach - #2743 PCI 1 Gbps Ethernet IOA</li> <li>▶ #0602 - Direct Attach - #2760 PCI 1 Gbps Ethernet UTP IOA</li> <li>▶ #0603 - Direct Attach - #2744 PCI 100 Mbps Token-Ring IOA (withdrawn from marketing on 01 June 2006)</li> <li>▶ #0604 - Direct Attach - #2763 PCI RAID Disk Unit Controller</li> <li>▶ #0605 - Direct Attach - #4748 PCI RAID Disk Unit Controller</li> <li>▶ #0606 - Direct Attach - #4778 PCI RAID Disk Unit Controller (withdrawn from marketing on 19 November 2004)</li> <li>▶ #0607 - Direct Attach - #4838 PCI 100/10 Mbps Ethernet IOA</li> <li>▶ #0608 - Direct Attach - #4745 PCI WAN IOA (withdrawn from marketing on 01 June 2006)</li> <li>▶ #0609 - Direct Attach - #2772 PCI Dual WAN/Modem IOA (withdrawn from marketing on 01 June 2006)</li> <li>▶ #0610 - Direct Attach - #2773 PCI Dual WAN/ModemIOA (AP only)</li> <li>▶ #0612 - Direct Attach - #2766 PCI Fibre Channel Disk Controller (withdrawn from marketing for new orders only on 01 April, 2005)</li> <li>▶ #0613 - Direct Attach - #2742 PCI 2-Line WAN IOA</li> <li>▶ #0614 - Direct Attach - #2793 PCI 2-Line WAN w/Modem</li> <li>▶ #0615 - Direct Attach - #2794 PCI 2-Line WAN w/Modem</li> <li>▶ #0616 - Direct Attach - #2805 PCI Quad Modem IOA</li> <li>▶ #0617 - Direct Attach - #2806 PCI Quad Modem (CIM) (AP only)</li> <li>▶ #0618 - Direct Attach - #2757 PCI-X Ultra RAID Disk Controller (withdrawn from marketing on 01 June 2006)</li> <li>▶ #0619 - Direct Attach - #2782 PCI-X RAID Disk Unit Controller</li> <li>▶ #0620 - Direct Attach - #5700 PCI 1 Gbps Ethernet IOA</li> <li>▶ #0621 - Direct Attach - #5701 PCI 1 Gbps Ethernet UTP IOA</li> <li>▶ #0623 - Direct Attach - #2849 PCI 100/10 Mbps Ethernet IOA (withdrawn from marketing on 01 June 2006)</li> <li>▶ #0624 - Direct Attach - #5702 PCI-X Ultra Tape Controller (withdrawn from marketing on 01 June 2006)</li> <li>▶ #0626 - Direct Attach - #2787 PCI-X Fibre Channel Disk Controller</li> <li>▶ #0627 - Direct Attach - #2780 PCI-X Ultra4 RAID Disk Controller</li> <li>▶ #0628 - Direct Attach - #5703 PCI-X RAID Disk Unit Controller</li> </ul> <p>See the descriptions of the individual features to understand the capabilities and PCI slot limitations of the features attached directly to Linux partitions. Linux direct attach features do not use or require PCI IOPs. Linux direct attach features are only supported in a secondary LPAR partition and require OS/400 V5R1 running in the primary partition. Linux direct attach features cannot be accessed by OS/400 partitions. The supported and minimum Linux operating system is SUSE LINUX Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3.</p> <p>Prerequisite: Processors #2431, #2432, #2434, #2452, or #2454  Corequisite: The #0140 Logical Partition Specify  Maximum with OS/400 V5R1: Three on processors #2431, #2432, and #2452; seven on processors #2434 and #2454  Maximum with OS/400 V5R2: Nine on processors #2431, #2432, and #2452; 19 on processors #2434 and #2454  Minimum operating system level: OS/400 V5R2</p>
#0205	<p><b>#0205 RISC-to-RISC Data Migration</b></p> <p>Specify code is used when a client orders a new (RISC) iSeries server to replace an existing AS/400e RISC-based system.</p> <p>The #0205 is ordered on the initial order of a Model 270.</p> <p>Manufacturing loads only the System Licensed Internal Code (SLIC) up through QSYS of OS/400 when the #0205 is ordered. Because of this limited loading of OS/400 by manufacturing, #5000 Software Preload Required is not allowed with the #0205. The #0205 RISC-to-RISC Data Migration and #5000 Software Preload Required are mutually exclusive.</p>
#0272	<p><b>Renovated by IBM</b></p> <p>The #0272 Renovated by IBM feature is a specify code used to indicate that the system is to be built from new or refurbished parts.</p>

#0299	<p><b>#0299 MES Conversion Analysis for #5580/5581 MES</b></p> <p>The #0299 provides additional ordering/scheduling steps for Customers adding Auxiliary Write Cache IOA to existing large cache disk controllers (converting #2757, #2780, to #5580, #5581).</p> <p>The marketing configurator adds no-charge #0299 feature to order to indicate a conversion.</p> <p>Automated tool analyzes current MRPD configuration to determine if simple MES or potentially more complex MES.</p> <p>The order is scheduled if simple MES or upon confirmation the sales team has done planning for complex MES.</p> <p>Minimum operating system level: OS/400 V5R2 with CUM C5123520 and prerequisites; MF 35176, MF35006, MF34997, M34993, MF34888,</p>
#0382	<p><b>#0382 Remote Control Panel Cable</b></p> <p>To connect the #0382 Remote Control Panel Cable to the Model 270, an available parallel port (LPT) is needed on the PC instead of a COM port. The parallel port must be configured to use Enhanced Parallel Port 1.9 (EPP) support, which might require a change in the PC's Basic Input/Output Services (BIOS). Check with your PC manufacturer for any assistance. Remote Control Panel is installed and used from PCs running the Windows NT 4.0 or Windows 2000 Professional PC operating system.</p> <p>Some PCs might not support this function due to BIOS or hardware incompatibilities.</p> <p>The #0382 is a Customer Install Feature.</p> <p>The #0382 Remote Control Panel Cable was withdrawn from marketing on 12 February 2002.</p>
#0383	<p><b>#0383 Remote Control Panel Cable</b></p> <p>To connect the #0383 Remote Control Panel Cable to the Model 270, an available parallel port (LPT) is needed on the PC instead of a COM port. The parallel port must be configured to use EPP 1.9 support, which might require a change in the PC's BIOS. Check with your PC manufacturer for any assistance. Remote Control Panel is installed and used from PCs running the Windows NT 4.0 or Windows 2000 Professional PC operating system.</p> <p>Some PCs might not support this function due to BIOS or hardware incompatibilities.</p> <p>The #0383 is a Customer Install Feature.</p> <p>The #0383 was withdrawn from marketing on 01 June 2006.</p>

#0551	<p><b>#0551 iSeries Rack</b></p> <p>The #0551 iSeries Rack provides an empty 1.8 m rack which contains 36 EIA units of space. The following features specify the means of populating the #0551:</p> <ul style="list-style-type: none"> <li>▶ #0121 Lower Unit in Rack Specify</li> <li>▶ #0122 Upper Unit in Rack Specify</li> <li>▶ #0127 - 270 Field Install in Rack</li> <li>▶ #0133 Plant Install in Rack</li> <li>▶ #0137 Field Install in Rack</li> <li>▶ #0595 PCI-X Expansion Unit in Rack</li> </ul> <p>For complete placement information, refer to “#0551 iSeries Rack” on page 228.</p> <p>The #0578/#0588 can be installed in the same rack as a Model 270 but cannot be connected to the Model 270. The #0595 can be attached to a Model 270.</p> <p>Optional features for the #0551 rack:</p> <ul style="list-style-type: none"> <li>▶ #6068 Optional Front Door (black/flat)</li> <li>▶ #6580 Optional Rack Security Kit</li> <li>▶ #7840 Side-by-Side for 1.8 m Racks</li> <li>▶ #7841 Ruggedize Rack Kit</li> </ul> <p>The IBM marketing configurator does not manage rack space in the #0551 iSeries Rack. Use the following list to determine the number of EIA units required in the #0551 for each iSeries system unit or expansion tower:</p> <ul style="list-style-type: none"> <li>▶ Model 270 System Unit - 16 EIA units (includes 2 EIA for the #0133 and #0137)</li> <li>▶ #0578 PCI Expansion Unit in Rack - 8 EIA units</li> <li>▶ #0588 PCI-X Expansion Unit in Rack - 8 EIA units</li> <li>▶ #0595 PCI-X Expansion Unit in Rack - 5 EIA units</li> <li>▶ #5074 PCI Expansion Tower - 18 EIA units</li> <li>▶ #9079 Base I/O Tower - 18 EIA units</li> </ul> <p>One to four PDUs can be ordered with the #0551. The PDUs can be on initial orders, model upgrades, or on MES orders. Each PDU has six power sockets that can be used to provide power for devices rack mounted in the #0551 iSeries Rack using the #1422 PDU Line Cord. The following PDUs are available:</p> <ul style="list-style-type: none"> <li>▶ #5160 Power Distribution Unit 1 Phase NEMA <ul style="list-style-type: none"> <li>The following line cords are supported on the #5160 for connection to utility power:</li> <li>– #1424 - 200V 6-ft Locking Line Cord</li> <li>– #1425 - 200V 6-ft Watertight Line Cord</li> <li>– #1426 - 200V 14-ft Locking Line Cord</li> <li>– #1427 - 200V 14-ft Watertight Line Cord</li> <li>– #1446 - 4.3 m 200V/30A Power Cord Korea</li> <li>– #1447 - 4.3 m 200V/30A Power Cord AU</li> <li>– #1448 - 4.3 m 200V/30A Power Cord NZ</li> </ul> </li> <li>▶ #5161 Power Distribution Unit - 1 Phase IEC <ul style="list-style-type: none"> <li>– #1477 - 4.3 m 200V/ 16A IEC309/46 Power Cord</li> <li>– #1449 - 4.3 m 200V/ 32A Power Cord EU 1-Phase for connection to utility power</li> </ul> </li> <li>▶ #5162 Power Distribution Unit - 2 of 3 Phase <ul style="list-style-type: none"> <li>– #1450 - 4.3 m 200V/ 16A Power Cord EU 2-Phase for connection to utility power</li> </ul> </li> <li>▶ #5163 Power Distribution Unit - 3 Phase <ul style="list-style-type: none"> <li>– #1477 - 4.3 m 200V/ 16A IEC309/46 Power Cord</li> <li>– #1449 - 4.3 m 200V/ 32A Power Cord EU 1-Phase for connection to utility power</li> </ul> </li> </ul> <p>Prerequisite: None</p>
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#5094	<p><b>#5094 PCI-X Expansion Tower</b></p> <p>The #5094 PCI-X Expansion Tower is a PCI expansion tower which provides I/O capability for iSeries servers. The #5094 has 15 disk unit slots, with an additional 30 slots available with the #5108 30-Disk Expansion Feature. The #5094 has two removable media slots and 14 PCI-X IOP/IOA card slots.</p> <p>A #9844 Base PCI IOP is included as base and needs to be listed on an initial order for a #5094 PCI-X Expansion Tower.</p> <p>The #5094 PCI-X Expansion Tower includes a bus adapter to provide the HSL interface to the system. The IBM marketing configurator adds one of the following to the order:</p> <ul style="list-style-type: none"> <li>▶ #6417 HSL-2/RIO-G Bus Adapter</li> <li>▶ #9876 Base Optical Bus Adapter</li> <li>▶ #9877 - Base HSL-2 Bus Adapter <ul style="list-style-type: none"> <li>A #9877 - Base HSL-2 Bus Adapter is shipped with new orders of a #5094 for Models 820, 830, 840.</li> </ul> </li> <li>▶ #9886 Base Optical Bus Adapter <ul style="list-style-type: none"> <li>Specify when attaching to optical HSL-2 ports.</li> </ul> </li> <li>▶ #9887 Base HSL-2 Bus Adapter (default) <ul style="list-style-type: none"> <li>Specify when attaching to copper HSL ports.</li> </ul> </li> </ul> <p>Up to 18 disk units per #2757 are supported in the system unit with System Unit Expansion disk cages of the Model 270.</p> <p>For further placement rules and cabling information, refer to “#5094 PCI-X Expansion Tower” on page 238.</p> <p>Minimum operating system level: OS/400 V5R2</p>
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#0595	<p><b>PCI-X Tower Unit in Rack</b></p> <p>The #0595 PCI-X Tower Unit in Rack is a 5 EIA high racked version of the #5095 PCI-X Expansion Tower which provides I/O capability for iSeries systems. The #0595 has identical functional capabilities to the #5095. The #0595 has seven PCI-X IOP/IOA slots. The #0595 also supports up to 12 disk units.</p> <p>A #9844 Base PCI IOP is included as "base" and should be on an initial order #0595.</p> <p>The #0595 includes a bus adapter to provide the HSL-2 interface to the system. The IBM marketing configurator adds the following to the order:</p> <p>#9887 Base HSL-2 Bus Adapter - specify when attaching to copper HSL-2 ports</p> <p>For the Model 270, if the #0595 is attaching to Port A1 of the system unit HSL, the HSL cable connection to port A1 cannot exceed 6 m. Select an appropriate number of the following HSL/HSL-2 cables:</p> <ul style="list-style-type: none"> <li>▶ #1474 - 6m HSL to HSL-2 Cable</li> <li>▶ #1475 - 10m HSL to HSL-2 Cable</li> <li>▶ #1482 - 3.5m HSL-2 Cable</li> <li>▶ #1483 - 10m HSL-2 Cable</li> <li>▶ #1485 - 15m HSL-2 Cable</li> </ul> <p>Select one of the following line cords (select two if the #5138 is selected):</p> <ul style="list-style-type: none"> <li>▶ #1410 - 200V 6-ft Line Cord</li> <li>▶ #1411 - 200V 14-ft Line Cord</li> <li>▶ #1412 - 125V 6-ft Line Cord</li> <li>▶ #1413 - 125V 14-ft Line Cord (US default)</li> <li>▶ #1414 - 200V 6-ft Locking Line Cord</li> <li>▶ #1415 - 200V 6-ft Watertight Line Cord</li> <li>▶ #1416 - 200V 14-ft Locking Line Cord</li> <li>▶ #1417 - 200V 14-ft Watertight Line Cord</li> <li>▶ #1422 - 3 m IEC 320 C13/14 PDU Cord (requires the existence of a #5160, #5161, or #5162)</li> <li>▶ #1438 - 4.3 m 200V/10A Power Cord AU/NZ</li> <li>▶ #1439 - 4.3 m 200V/10A Power Cord EU/Asia</li> <li>▶ #1440 - 4.3 m 200V/10A Power Cord Denmark</li> </ul> <p>Select one of the following SPCN cables:</p> <ul style="list-style-type: none"> <li>▶ #1463 - 2m SPCN Cable</li> <li>▶ #1464 - 6m SPCN Cable</li> <li>▶ #1465 - 15m SPCN Cable</li> <li>▶ #1466 - 30m SPCN Cable</li> <li>▶ #0369 100m Optical SPCN Cable</li> <li>▶ #1468 - 250m Optical SPCN Cable</li> </ul> <p>One Integrated xSeries Server is supported in slots C1 and C2.</p> <p>The #0595 has redundant power when feature #5138 is specified. The #5138 includes a second 435W power supply and a second line cord must also be ordered or installed. With the #5138 and second line cord installed, the #0595 has dual line cord capability.</p> <p>Minimum operating system level: OS/400 V5R2</p>
#5075	<p><b>#5075 PCI Expansion Tower</b></p> <p>The #5075 PCI Expansion Tower is attached to a Model 270 for adding up to six disk units and up to seven PCI IOAs. The #5075 includes a 32 MB PCI IOP (CCIN 284B) embedded on its backplane. When the #5075 is attached to the Model 270, the seven PCI IOAs are supported (driven) by the embedded 32 MB PCI IOP. A #2842 PCI IOPs or #2890, #2891, or #2892 PCI Integrated xSeries Servers can also support selected LAN cards.</p> <p>The #5075 is capable of controlling Ultra2 SCSI disk units. A #5156 Redundant Power and Cooling can be added to provide a redundant power supply and a cooling fan.</p> <p>Select two of the following HSL cables for attachment to the Model 270:</p> <ul style="list-style-type: none"> <li>▶ #1460 - 3m Copper HSL Cable</li> <li>▶ #1461 - 6m Copper HSL Cable</li> <li>▶ #1462 - 15m Copper HSL Cable</li> </ul> <p>Because the #1462 is not allowed to attach the #5075 directly to system port A1 on the Model 270, select one #1460 or #1461 when a #5075 is attached.</p>

#5075 (cont.)	<p><b>#5075 PCI Expansion Tower</b>  Select one of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> <li>▶ #1463 - 2m SPCN Cable</li> <li>▶ #1464 - 6m SPCN Cable</li> <li>▶ #1465 - 15m SPCN Cable</li> <li>▶ #1466 - 30m SPCN Cable</li> </ul> <p>One #14xx power cord must be specified (geography dependent).  Maximum: One #5075 PCI Expansion Tower or one #5095 PCI-X Expansion Tower  The #5075 is a Customer Install Feature.  The #5075 was withdrawn from marketing on 21 November 2003.</p>
#5095	<p><b>#5095 PCI-X Expansion Tower</b>  The #5095 is a PCI Expansion Tower which provides I/O capability for iSeries systems. The #5095 has 7 PCI-X IOP/IOA slots. The #5095 also supports up to 12 disk units.</p> <p>A #9844 Base PCI IOP is included as “base” and should be on an initial order #5095.</p> <p>The #5095 includes a bus adapter to provide the HSL-2 interface to the system. The IBM marketing configurator adds the following to the order:  #9887 Base HSL-2 Bus Adapter (specify when attaching to copper HSL or HSL-2 loops)</p> <p>For the Model 270, if this unit is attaching to HSL port A1 of the system unit HSL, the HSL cable connection to port A1 cannot exceed 6 m:</p> <ul style="list-style-type: none"> <li>▶ #1474 - 6m HSL to HSL-2 Cable</li> <li>▶ #1475 - 10m HSL to HSL-2 Cable</li> <li>▶ #1482 - 3.5m HSL-2 Cable</li> <li>▶ #1483 - 10m HSL-2 Cable</li> <li>▶ #1485 - 15m HSL-2 Cable</li> </ul> <p>Select one of the following line cords (select two if #5138 is selected):</p> <ul style="list-style-type: none"> <li>▶ #1410 - 200V 6-ft Line Cord</li> <li>▶ #1411 - 200V 14-ft Line Cord</li> <li>▶ #1412 - 125V 6-ft Line Cord (US default)</li> <li>▶ #1414 - 200V 6-ft Locking Line Cord</li> <li>▶ #1415 - 200V 6-ft Watertight Line Cord</li> <li>▶ #1438 - 4.3 m 200V/10A Power Cord AU/NZ</li> <li>▶ #1439 - 4.3 m 200V/10A Power Cord EU/Asia</li> <li>▶ #1440 - 4.3 m 200V/10A Power Cord Denmark</li> <li>▶ #1441 - 4.3 m 200V/10A Power Cord S Africa</li> <li>▶ #1442 - 4.3 m 200V/10A Power Cord Swiss</li> <li>▶ #1443 - 4.3 m 200V/10A Power Cord UK</li> <li>▶ #1444 - 4.3 m 200V/10A Power Cord Italy</li> </ul> <p>Select one of the following SPCN cables:</p> <ul style="list-style-type: none"> <li>▶ #0369 - 100 m Optical SPCN Cable</li> <li>▶ #1463 - 2 m SPCN Cable</li> <li>▶ #1464 - 6 m SPCN Cable</li> <li>▶ #1465 - 15 m SPCN Cable</li> <li>▶ #1466 - 30 m SPCN Cable</li> <li>▶ #1468 - 250 m Optical SPCN Cable</li> </ul> <p>The #5095 supports seven PCI-X IOA/IOP card slots. One Integrated xSeries Server is supported in slots C1 and C2. The #5095 has redundant power when feature #5138 is ordered or present. The #5138 includes a second 435W power supply. A second line cord is required with the #5138 to provide redundant power support in this tower with dual-line cord capability.</p> <p>If an Integrated xSeries Server is ordered as part of an MES, the #9844 Base PCI IOP (in slot C1) and any associated IOAs must be repositioned within the system.  Maximum: One #5075 PCI Expansion Tower or one #5095 PCI-X Expansion Tower  Minimum operating system level: OS/400 V5R2</p>
#5156	<p><b>Redundant Power and Cooling</b>  The #5156 adds an additional 575-watt power supply for redundancy and an additional cooling fan to the #5075 PCI Expansion Tower, which attaches to Models 270.  The #5156 is a Customer Install Feature.  The #5156 was withdrawn from marketing on 01 June 2006.</p>

#5294	<p><b>#5294 1.8 m I/O Tower</b></p> <p>The #5294 1.8 m I/O Tower has space for 90 disk units, has 28 PCI-X IOP/IOA slots, and has four removable media bays. The #5294 is equivalent to two #5094 PCI-X Expansion Towers, with covers and casters removed and positioned in a 1.8 m rack. It includes two bus adapters to provide the HSL interface to the system.</p> <p>The IBM marketing configurator adds two, in any combination, of the following to the order:</p> <ul style="list-style-type: none"> <li>▶ #6417 HSL-2/RIO-G Bus Adapter</li> <li>▶ #9876 Base Optical Bus Adapter</li> <li>▶ #9877 - Base HSL-2 Bus Adapter</li> </ul> <p>A #9877 - Base HSL-2 Bus Adapter is shipped with new orders of a #5294 for Models 820, 830, 840.</p> <ul style="list-style-type: none"> <li>▶ #9886 Base Optical Bus Adapter (optical HSL-2) Specify when attaching to optical HSL-2 ports.</li> <li>▶ #9887 Base HSL-2 Bus Adapter (default) Specify when attaching to copper HSL ports.</li> </ul> <p>Up to 18 disk units per #2757 are supported in the system unit with System Unit Expansion disk cages of the Model 270.</p> <p>For further placement rules and cabling information, see “#5294 1.8 m I/O Tower” on page 242.</p> <p>Minimum operating system level: OS/400 V5R2</p>
#7002	<p><b>#7002 HSL Enabler - Internal Flex cable</b></p> <p>The #7002 is a feature HSL internal flex cable, which enables connection to a #5075 PCI Expansion Tower. It can be ordered only on the #2248, #2250, #2422, and #2431 processors of the Model 270. This cable connects the processor using a right-angle bus connector to the back of the machine. Two #14xx HSL cables are required to connect the system unit to the expansion tower.</p> <p>The marketing configurator removes for Record Purpose Only (RPO) the #7102 from the inventory records on processor upgrades from #2248, #2250, #2422, or #2431 to other processor features.</p> <p>The #7002 is an HSL internal flex cable. It enables connection to a #5075 PCI Expansion Tower.</p> <p>The #7002 is a required feature on a Model 270 processor when attaching an external Integrated xSeries Server.</p> <p>The #7002 is a Customer Install Feature.</p> <p>The #7002 was withdrawn from marketing on 01 June 2006.</p>
#7104	<p><b>#7104 System Unit Expansion</b></p> <p>The #7104 is a feature system expansion unit that allows up to an additional 12 disk units to be added to the Model 270. The #7104 comes with support for six disk units standard and requires a #7123 when installing over six disk units. The #7104 disk units are driven by a disk unit controller located in the card enclosure. The #7104 requires a separate line cord from the system unit. One #14xx power cord must be specified (geography dependent). When the Model 270 and attached #7104 are mounted in a #0551 iSeries Rack, #1422 PDU Line Cord might be specified if a PDU is installed in the #0551 iSeries Rack.</p> <p>Maximum: One</p> <p>Prerequisite: #7133 DASD Concurrent Maintenance Cage for the #2248, #2250, #2422, or #2431 Processor</p> <p>The #7104 is a Customer Install Feature.</p>
#7123	<p><b>#7123 DASD Expansion Unit</b></p> <p>The #7123 is a concurrent maintenance DASD six position expansion feature, which can be ordered to support an additional six disk units (for a total of 12) in the #7104 on the Model 270.</p> <p>Prerequisite: The #7104 on Model 270</p> <p>The #7123 is a Customer Install Feature.</p>
#7133	<p><b>#7133 DASD Concurrent Maintenance Cage</b></p> <p>The #7133 is a DASD six disk cage for the Model 270. The #7133 enables disk unit concurrent maintenance and replaces the standard base non-concurrent maintenance DASD six disk cage.</p> <p>Prerequisite: Processor #2248, #2250, #2422, or #2431</p> <p>The #7133 was withdrawn from marketing on 01 December 2005.</p>

Main storage	
Base	There is no base memory on the 270 models.
Model 270 Main Memory Rules	<p><b>Processors #2248, #2250, #2252, #2253, #2422, #2423, and #2424</b>  All main storage cards must be added in <i>pairs</i> when attached directly to the Processor or <i>quads</i> when attached to the #2884 Main Storage Expansion Riser Card. The pair or quad set must be of the same feature code.</p> <p>Eight slots are available in the base system (except #2253 and #2424) for main storage cards, which plug directly on to the processor (direct attach) and do not require a Main Storage Expansion Riser Card. Processors #2253 and #2424 have 16 base memory slots using a "base" Main Storage Expansion Riser Card.</p> <p>For Processors #2252/#2423, when more than eight total cards are required, a #2884 Main Storage Expansion Riser Card must be ordered as a separate priced feature and <i>all</i> memory cards must plug into the #2884 card. When #2884 is used, direct attach of DIMMs to the processor is not allowed.</p> <p>Processors #2252, #2253, #2423, or #2424 using the #2884 Main Storage Expansion Riser Card must install DIMMs, in sets of four (quads). A single PAIR of DIMMs is allowed on the initial order if they are the only two on the system. Any memory DIMMs added beyond the initial pair must be placed in quads, and the initial DIMM pair must be completed to a quad. There are 16 slots available in the system using the #2884 Main Storage Expansion Riser Card for placement of main storage DIMMs.</p> <p><b>Processors #2431, #2432, and #2452</b>  A single main storage DIMM is allowed on these processors. When additional DIMMs are required, a second DIMM of the same capacity must be added the pair with the existing DIMM. Any additional DIMMs must then be added in pairs of the same capacity. The DIMM memory features used on these processors are unique to this processor set and do not work on any other Model 270 processor. Eight slots are available in the base system for main storage DIMMs, which plug directly into the processor (direct attach).</p> <p><b>Processors #2434 and #2454</b>  A minimum of four main storage DIMMs of the same capacity and technology must be selected. This processor includes a base CCIN 2884 Memory Expansion Card. All main storage DIMM features plug into this card. There are 16 slots available on this processor and all main storage DIMMs must be added in sets of four (quads). Each DIMM in the set of four must be of the same capacity and technology. All DIMMs must be plugged in quads starting from the outer four corners going toward the center (A, B, C, D, then E, F, G, H, and so on). Using the same feature code number within a quad is required. Mixing quad "groups" on the same riser card is also allowed (including mixing stacked (#3025) and unstacked (#3024) memory technology).</p> <p>See the tower diagrams in Chapter 8, "IBM iSeries towers schematics" on page 293, for placement of memory.</p>
#2884	<p><b>#2884 Main Storage Expansion Riser Card</b>  The #2884 mounts additional main storage cards. It contains 16 slots for placement of 128 MB, 256 MB, 512 MB, or 1 GB memory cards. For placement, an initial pair of memory cards is allowed (in slot A and slot B) without quads except on the #2434 and #2454, which must always have memory installed in quads. After that, all cards must be plugged in quads. Starting from the outer four corners going toward the center (A, B, C, D, then E, F, G, H, and so forth). Using the same feature code number within a quad is required. See the tower diagrams in Chapter 8, "IBM iSeries towers schematics" on page 293, for placement of memory.</p> <p>Mixing quad "groups" on the same riser card is allowed.  Refer to "Model 270 Main Memory Rules" on page 96 for memory restrictions.  Maximum: One on the #2252, #2423 Processor. One as "base" on the #2253, #2424, #2434, or #2454  The #2884 is not supported on the #2248, #2250, #2422, #2431, #2432, or #2452 processor  The #2884 is a Customer Install Feature.</p>
#3022	<p><b>128 MB Main Storage (DIMM, 64 Mb technology)</b>  Supported on the #2248, #2250, #2252, #2253, #2422, #2423, #2424, #2434, and #2454 processors.  On the #2434, and #2454 processors, the #3022 is supported only; it cannot be ordered new except to meet the pair or quad system memory requirement. When new 128 MB DIMMs are required, order the #3029.</p> <p>The #3022 cannot be mixed with #3029 in pairs or quads.  Refer to "Model 270 Main Memory Rules" on page 96 for memory restrictions.  The #3022 is a Customer Install Feature.  The #3022 was withdrawn from marketing on 01 June 2006.</p>



#3024	<p><b>256 MB Main Storage (DIMM, 128 Mb technology, unstacked)</b>  Supported on the #2248, #2250, #2252, #2253, #2422, #2423, #2424, #2434, and #2454 processors  Refer to "Model 270 Main Memory Rules" on page 96 for memory restrictions.  The #3024 is a Customer Install Feature.  The #3024 was withdrawn from marketing on 01 June 2006.</p>
#3025	<p><b>512 MB Main Storage (DIMM, 128 Mb technology, stacked)</b>  Supported on the #2248, #2250, #2252, #2253, #2422, #2423, #2424, #2434, and #2454 processors  The #3025 cannot be mixed with the #3026 in pairs or quads.  Refer to "Model 270 Main Memory Rules" on page 96 for memory restrictions.  The #3025 is a Customer Install Feature.</p>
#3026	<p><b>512 MB Main Storage (DIMM, 256 Mb technology, unstacked)</b>  Supported on the #2248, #2250, #2252, #2253, #2422, #2423, #2424, #2434, and #2454 processors  Replaces the #3025 512 MB main storage card  The #3026 cannot be mixed with #3025 in pairs or quads.  Refer to "Model 270 Main Memory Rules" on page 96 for memory restrictions.  The #3026 is a Customer Install Feature.  The #3026 was withdrawn from marketing on 01 June 2006.</p>
#3027	<p><b>1 GB Main Storage (DIMM, 256 Mb technology, stacked)</b>  Supported on the #2434 and #2454 processors  Refer to "Model 270 Main Memory Rules" on page 96 for memory restrictions.  Minimum operating system level: OS/400 V5R1  The #3027 is a Customer Install Feature.  The #3027 was withdrawn from marketing on 01 June 2006.</p>
#3029	<p><b>128 MB Main Storage (DIMM, 128 Mb technology, unstacked)</b>  Supported on the #2434 and #2454 processors  Replaces the #3022 128 MB main storage card  The #3022 cannot be mixed with the #3029 in pairs or quads. Maximum of eight allowed on any given processor.  Refer to "Model 270 Main Memory Rules" on page 96 for memory restrictions.  Minimum operating system level: OS/400 V5R1  The #3029 is a Customer Install Feature.</p>
#3032	<p><b>256 MB Main Storage (DIMM, DDR technology, unstacked)</b>  Supported on the #2431 and #2432 processors  Refer to "Model 270 Main Memory Rules" on page 96 for memory restrictions.  Minimum operating system level: OS/400 V5R1  The #3032 is a Customer Install Feature.</p>
#3033	<p><b>512 MB Main Storage (DIMM, DDR technology, unstacked)</b>  Supported on the #2431 and #2432 processors  Refer to "Model 270 Main Memory Rules" on page 96 for memory restrictions.  Minimum operating system level: OS/400 V5R1  The #3033 is a Customer Install Feature.</p>
#3034	<p><b>1 GB Main Storage (DIMM, DDR technology, stacked)</b>  Supported on the #2431 and #2432 processors  Refer to "Model 270 Main Memory Rules" on page 96 for memory restrictions.  Minimum operating system level: OS/400 V5R1  The #3034 is a Customer Install Feature.</p>

PCI IOP controllers	
PCI Rules	<p>PCI cards are subject to plugging rules. <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i>, REDP-3638 describes the configuration and card placement rules that you must understand and follow to develop valid configurations. Use these IBM Redpapers as guides when configuring IOAs and input/output processors (IOPs) so that the system is sized to meet client expectations. Refer to Chapter 7.1, "PCI card placement for iSeries servers" on page 224, for an introduction to PCI.</p>
Embedded IOP	<p><b>Embedded 32 MB Base PCI IOP</b></p> <p>The embedded I/O processor is standard on every 270 system tower and the #5075 PCI Expansion Tower. This IOP is embedded and, therefore, does not require a PCI card slot. Provides support for maximum of up to four IOAs, including the SCSI IOA #9767 Base PCI Disk Unit Controller, the #9771 Base PCI Two-Line WAN with integrated modem, and system console options. See the #2842 PCI IOP description for a list of other cards supported. See <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i>, REDP-3638 for plugging rules.</p>
#2842	<p><b>#2842 PCI IOP</b></p> <p>The #2842 is a PCI I/O processor with 32 MB of memory which drives PCI IOA adapters on the Model 270 and on the #5075 PCI Expansion Tower. The #2842 can drive up to four IOAs.</p> <p>The following IOAs are supported (driven) by the embedded PCI IOP and the #2842 PCI IOP:</p> <ul style="list-style-type: none"> <li>▶ #2742 2-Line WAN IOA</li> <li>▶ #2743 1 Gbps PCI Ethernet IOA</li> <li>▶ #2744 PCI 100 Mbps Token Ring IOA</li> <li>▶ #2749 PCI Ultra Magnetic Media Controller</li> <li>▶ #2760 PCI 1 Gbps Ethernet UTP Adapter</li> <li>▶ #2763 PCI RAID Disk Unit Controller</li> <li>▶ #2765 PCI Fibre Channel Tape Controller</li> <li>▶ #2766 PCI Fibre Channel Disk Controller</li> <li>▶ #2768 PCI Magnetic Media Controller</li> <li>▶ #2772 PCI Dual WAN/Modem IOA</li> <li>▶ #2773 PCI Dual WAN/Modem IOA</li> <li>▶ #2793 2-Line WAN IOA with Modem</li> <li>▶ #2794 2-Line WAN IOA with Modem</li> <li>▶ #2817 PCI 155 Mbps MMF ATM IOA</li> <li>▶ #2849 10/100 Mbps Ethernet Adapter</li> <li>▶ #4723 PCI 10 Mbps Ethernet Adapter</li> <li>▶ #4745 PCI 2-line WAN IOA</li> <li>▶ #4746 PCI Twinaxial IOA</li> <li>▶ #4748 PCI RAID Disk Unit Controller</li> <li>▶ #4750 PCI ISDN BRI U IOA</li> <li>▶ #4751 PCI ISDN BRI S/T IOA</li> <li>▶ #4761 PCI Integrated Analog Modem</li> <li>▶ #4778 PCI RAID Disk Unit Controller</li> <li>▶ #4801 PCI Cryptographic Coprocessor</li> <li>▶ #4805 PCI Cryptographic Accelerator</li> <li>▶ #4815 PCI ATM 155 Mbps UTP OC3</li> <li>▶ #4816 PCI ATM 155 Mbps MMF</li> <li>▶ #4818 PCI ATM 155 Mbps SMF OC3</li> <li>▶ #4838 PCI 100/10 Mbps Ethernet IOA</li> <li>▶ #9767 Base PCI Disk Unit Controller</li> </ul> <p>Maximum: Two in the 270 system unit; three in a #5075 PCI Expansion Tower  The #2842 is a Customer Install Feature.  The #2842 was withdrawn from marketing on 21 November 2003.</p>

#2844	<p><b>#2844 PCI IOP</b></p> <p>The #2844 PCI IOP is a PCI I/O processor which drives PCI IOA adapters in the Model 270 system unit, and the #5075 and #0595/#5095 PCI-X Expansion Tower.</p> <p>The following IOAs are supported (driven) by the #2844/#9944 PCI IOP:</p> <ul style="list-style-type: none"> <li>▶ #2742 2-Line WAN IOA</li> <li>▶ #2743/#2760 PCI 1 Gbps Ethernet UTP Adapter</li> <li>▶ #2744 PCI 100 Mbps Token Ring IOA</li> <li>▶ #2749 PCI Ultra Magnetic Media Controller</li> <li>▶ #2757 PCI-X Ultra RAID Disk Controller</li> <li>▶ #2763 PCI RAID Disk Unit Controller</li> <li>▶ #2765 PCI Fibre Channel Tape Controller</li> <li>▶ #2766 PCI Fibre Channel Disk Controller</li> <li>▶ #2768 PCI Magnetic Media Controller</li> <li>▶ #2772/#2773 PCI Dual WAN/Modem IOA</li> <li>▶ #2782 PCI-X RAID Disk Unit Controller</li> <li>▶ #2787 PCI-X Fibre Channel Disk Controller</li> <li>▶ #2793/#9793 Two-Line WAN IOA with Modem</li> <li>▶ #2794/#9794 Two-Line IOA with Modem</li> <li>▶ #2805 PCI Quad Modem IOA</li> <li>▶ #2806 PCI Quad Modem (CIM)</li> <li>▶ #2817 PCI 155 Mbps MMF ATM IOA</li> <li>▶ #2849 10/100 Mbps Ethernet Adapter</li> <li>▶ #4723 PCI 10 Mbps Ethernet Adapter</li> <li>▶ #4745 PCI 2-line WAN IOA</li> <li>▶ #4746 PCI Twinaxial IOA</li> <li>▶ #4748 PCI RAID Disk Unit Controller</li> <li>▶ #4778/#9778 Base PCI RAID Disk Unit Controller</li> <li>▶ #4801 PCI Cryptographic Coprocessor</li> <li>▶ #4805 PCI Cryptographic Accelerator</li> <li>▶ #4815 PCI ATM 155 Mbps UTP OC3</li> <li>▶ #4816 PCI ATM 155 Mbps MMF</li> <li>▶ #4818 PCI ATM 155 Mbps SMF OC3</li> <li>▶ #4838 PCI 100/10 Mbps Ethernet IOA</li> <li>▶ #5700 PCI 1 Gbps Ethernet IOA</li> <li>▶ #5701 PCI 1 Gbps Ethernet UTP IOA</li> <li>▶ #5702 PCI-X Ultra Tape Controller</li> <li>▶ #5703 PCI-X RAID Disk Unit Controller</li> <li>▶ #5704 PCI-X Fibre Channel Tape Controller</li> <li>▶ #9748 Base PCI RAID Disk Unit Controller</li> </ul> <p>Maximum: Two each in the system unit and #0595/#5095 PCI-X Expansion Tower, three in a #5075 PCI Expansion Tower  For further placement rules, refer to “#2844 PCI IOP” on page 252.  Minimum operating system level: OS/400 V5R2  The #281x ATM, #2750, #2751, #2761, and #4761 are not supported after OS/400 V5R2.  The #2844 is a Customer Install Feature.</p>
#2890 #2891 #2899	<p><b>#2890 PCI Integrated Netfinity Server, #2891 PCI Integrated xSeries Server, #2899 PCI Integrated xSeries Server</b></p> <p>The #2890 PCI Integrated Netfinity Server contains a 700 MHz processor. The #2891 PCI Integrated xSeries Server contains an 850 MHz processor. The #2899 PCI Integrated xSeries Server contains a 1 GHz Pentium III processor. Each processor contains four memory slots in the xSeries IOP.</p> <p>Each main storage slot of the #2890, #2891, or #2899 can contain either a 128 MB, 256 MB, or 1024 MB xSeries server main storage card, providing a total main storage capacity ranging from 128 MB to 4096 MB (4 GB). Allowable main storage increments in MB are: 128, 256, 384, 512, 640, 768, 896, 1024, 1152, 1280, 1408, 1536, 1664, 1792, 2048, 2176, 2304, 2432, 2560, 3072, 3200, 3328, and 4096. A minimum of 128 MB xSeries IOP memory is required. When the maximum memory is installed, only 3712 MB is addressable.</p> <p>The following main storage cards provide server memory for the #2890, #2891, and #2899:</p> <ul style="list-style-type: none"> <li>▶ #2895 - 128 MB Server Memory (withdrawn from marketing on 19 November 2004)</li> <li>▶ #2896 - 256 MB Server Memory (withdrawn from marketing on 19 November 2004)</li> <li>▶ #2897 - 1 GB Server Memory</li> </ul>

#2890 #2891 #2899 (cont.)	<p><b>#2890 PCI Integrated Netfinity Server, #2891 PCI Integrated xSeries Server, #2899 PCI Integrated xSeries Server</b></p> <p>The #2890, #2891, or #2899 can support PCI 100/16/4 Mbps Token Ring IOAs, PCI 100/10 Mbps Ethernet IOAs, or PCI 1 Gbps Ethernet IOAs in any combination. A minimum of one LAN IOA is required. The features for the LAN IOA are:</p> <ul style="list-style-type: none"> <li>▶ #2743 1 Gbps PCI Ethernet IOA</li> <li>▶ #2744 PCI 100 Mbps Token Ring IOA</li> <li>▶ #2760 PCI 1 Gbps Ethernet UTP Adapter</li> <li>▶ #4838 PCI 100/10 Mbps Ethernet IOA</li> </ul> <p>A #0223 100 Mbps Token-Ring Specify is required on the #2890/#2891/#2899 PCI Integrated xSeries Server for each #2744 selected to run on the #2890/#2891/#2899.</p> <p>A #0224 100/10 Mbps Ethernet Specify is required on the #2890/#2891/#2899 PCI Integrated xSeries Server for each #4838 selected to run on the #2890/#2891/#2899.</p> <p>A #0225 1 Gbps Ethernet Specify is required on the #2890/#2891/#2899 PCI Integrated xSeries Server for each #2743 or #2760 selected to run on the #2890/#2891/#2899.</p> <p>Up to three IOA LAN features can be supported by the #2890, #2891, or #2899, depending on which system or expansion tower position the #2890, #2891, or #2899 is placed. The #2890, #2891, or #2899 requires three PCI slots. One slot is consumed. The second slot is unusable. The third slot is reduced to a short card slot, which is then used by the first attached LAN IOA card.</p> <p>The #2899 requires two PCI card slots on the Model 270 system unit. One slot is consumed. The second slot is reduced to a short card slot, which is then used by the first attached LAN IOA card.</p> <p>The #2890, #2891, or #2899 does not require a #2843 or #9943, but placement is limited to specific slots within the various system towers and expansion towers. The #2890, #2891, or #2899 supports only the Windows NT, Windows 2000, and Windows 2003 operating systems. Ships with a keyboard or mouse splitter cable. The following considerations apply:</p> <ul style="list-style-type: none"> <li>▶ #0325 IPCS Extension Cable for Windows is the default (but can be removed).</li> <li>▶ #1700 IPCS Keyboard/Mouse for Windows is the default (in those countries or regions that offer it).</li> <li>▶ A display must be connected to the Integrated xSeries Server to support Windows.</li> </ul> <p>For a non-U.S. keyboard, mouse and display, see:  <a href="http://www.ibm.com/eserver/iseries/integratedxseries/">http://www.ibm.com/eserver/iseries/integratedxseries/</a></p> <p>Native OS/400 functions are not supported.</p> <p>The #2890, #2891, or #2899 does not support external host LAN.</p> <p>The #2849 is not supported on any Integrated Netfinity Server/Integrated xSeries Server.</p> <p>Windows NT is not supported after OS/400 V5R2. Upgrade to Windows 2000.</p> <p>The #2890/#2891/#2899 is supported in the Model 270 system unit and in the #5075 PCI Expansion Tower when it is attached to the Model 270.</p> <p>Minimum operating system level: #2890/#2891 - OS/400 V4R5 with Cumulative Package C1005450  #2899 - OS/400 V5R1 with PTFs identified in Information APAR II13105 at:  <a href="http://www.ibm.com/eserver/iseries/support">http://www.ibm.com/eserver/iseries/support</a></p> <p>Minimum operating system to support #2743 or #2760 on the #2890, #2891, or #2899: OS/400 V5R1</p> <p>The #2890/#2891/#2899 are Customer Install Features.</p> <p>The #2899 was withdrawn from marketing on 21 November 2003 for new orders. Conversion to feature #2899 remains available.</p>
#2892	<p><b>#2892 PCI Integrated xSeries</b></p> <p>The #2892 PCI Integrated xSeries Server contains a 1.6 GHz processor and four memory slots.</p> <p>Each server memory slot of the #2892 PCI Integrated xSeries Server can contain either a 512 MB server memory card or 1024 MB server memory card, providing allowable main storage options of 1024 MB, 2048 MB, 3072 MB and 4096 MB. All server memory cards must be installed in identical pairs.</p> <p>The following server memory cards provide memory for the #2892 PCI Integrated xSeries Server:</p> <ul style="list-style-type: none"> <li>▶ #0446 - 512 MB Server Memory</li> <li>▶ #0447 - 1024 MB Server Memory</li> </ul> <p>The #2892 PCI Integrated xSeries Server includes one embedded 100/10 Mbps Ethernet LAN controller. The #2892 PCI Integrated xSeries can be ordered without any further LAN cards, but supports up to two further LAN IOAs in any combination, depending upon the slot into which the #2892 PCI Integrated xSeries Server is placed. The features for the LAN IOAs are:</p> <ul style="list-style-type: none"> <li>▶ #2744 PCI 100 Mbps Token Ring IOA</li> <li>▶ #5700 PCI 1 Gbps Ethernet IOA</li> <li>▶ #5701 PCI 1 Gbps Ethernet UTP IOA</li> </ul>

<p>#2892 (cont.)</p>	<p><b>#2892 PCI Integrated xSeries</b>  One #0223 100 Mbps Token-Ring Specify is required for each #2744 selected to run on the #2892.  One #0226 1 Gbps Ethernet Specify is required for each #5700 or #5701 selected to run on the #2892.</p> <p>The #2892 PCI Integrated xSeries Server does not require a #2843, #2844, #9943 or #9944 IOP, but placement is limited to specific slots within the various system towers and expansion towers. The #2892 PCI Integrated xSeries Server requires two PCI slots and does not extend into a third slot. The #2892 PCI Integrated xSeries Server supports only the Windows 2000 Server and Windows 2003 Server operating systems. The #2892 ships with a standard keyboard/mouse splitter cable, and can support either a standard or USB 1.1 keyboard, mouse, or both.</p> <p>The following rules apply:</p> <ul style="list-style-type: none"> <li>▶ The #0325 (IPCS Extension Cable for Windows) is the default (but can be removed).</li> <li>▶ The #1700 (IPCS Keyboard/Mouse for Windows) is the default (in those countries or regions offering it).</li> <li>▶ A display must be connected to the #2790 PCI Integrated Netfinity Server to support Windows.</li> </ul> <p>For non-U.S. keyboard, mouse and display, see:  <a href="http://www.ibm.com/eserver/iseries/integratedxseries/">http://www.ibm.com/eserver/iseries/integratedxseries/</a></p> <p>The #2892 PCI Integrated xSeries Server is supported in the system tower of the Model 270.</p> <p>Native OS/400 functions are not supported.  The #2892 does not support external host LAN.  The #2849 10/100 Mbps Ethernet Adapter is not supported on the #2892 Integrated xSeries Server.</p> <p>Minimum operating system level: OS/400 V5R2  The #2892 is a Customer Install Feature.  The #2892 was withdrawn from marketing on 01 January 2004.</p>
<p>#4810</p>	<p><b>#4810 PCI Integrated xSeries Server</b>  The #4810 PCI Integrated xSeries Server contains a 2.0 GHz processor and four memory slots. Each server memory slot can contain one of the following features, providing a total main storage capacity from 1024 MB to 4096 MB:</p> <ul style="list-style-type: none"> <li>▶ #0446 - 512 MB Server Memory</li> <li>▶ #0447 - 1 GB Server Memory</li> </ul> <p>A minimum of two server memory cards are required with each #4810. Server memory cards must be installed in identical capacity pairs. On model upgrades or MES orders, a #4810 can be ordered without memory features if usable supported memory features already exist on the installed system.</p> <p>The #4810 includes one embedded 100/10 Mbps Ethernet LAN controller. The #4810 can support the following LAN IOAs in combination:</p> <ul style="list-style-type: none"> <li>▶ #2744 PCI 100 Mbps Token Ring IOA</li> <li>▶ #5700 PCI 1 Gbps Ethernet IOA</li> <li>▶ #5701 PCI 1 Gbps Ethernet UTP IOA</li> </ul> <p>The #4810 can be ordered <i>without</i> any LAN IOA features.</p> <p>When a LAN feature is used in conjunction with a #4810, the following ordering rules apply:</p> <ul style="list-style-type: none"> <li>▶ One #0223 100 Mbps Token-Ring Specify is required for each #2744 driven.</li> <li>▶ One #0226 1 Gbps Ethernet Specify is required for each #5700/#5701 driven.</li> <li>▶ Up to three IOA LAN features can be supported by the #4810, depending on the system unit/tower position into which the #4810 is placed.</li> <li>▶ Native OS/400 functions are not supported.</li> </ul> <p>The #4810 does not support external host LAN.  The #4810 is supported in the system unit of Model 270. It is also supported in the #5075 and #0595/#5095 when these towers are attached to a Model 270.  The #4810 does not require a #2843, #2844, #9943 or #9844. Placement is limited to specific slots within the various system units and expansion towers.</p>

#4810 (cont.)	<p><b>#4810 PCI Integrated xSeries Server</b></p> <p>The #4810 requires two PCI card slots. Does <i>not</i> hang over a third slot. The #4810 ships with a standard keyboard/mouse splitter cable and can support either standard or USB 1.1 keyboard, mouse, or both.</p> <p>The #4810 supports only Windows 2000 Server and Windows 2003 Server operating systems. The following rules apply:</p> <ul style="list-style-type: none"> <li>▶ #0325 (IPCS Extension Cable for Windows) is the default (but can be removed).</li> <li>▶ A minimum of 1 GB Server memory is required</li> <li>▶ #1700 (IPCS Keyboard/Mouse for Windows) is default (in those countries or regions offering it)</li> <li>▶ A display must be connected to the Integrated Server to support Windows</li> </ul> <p>The #4810 is supported in Model 270 system unit. It is also supported in the following towers when attached to the #5075, #0578/#5078, #0588/#5088, and #0595/#5095 Expansion Towers.</p> <p>The #4810 was withdrawn from marketing on 01 June 2006. The #4812 PCI Integrated xSeries Server is the recommended replacement.</p>
<b>Workstation controllers</b>	
#4746	<p><b>#4746 PCI Twinaxial IOA</b></p> <p>The #4746 Twinaxial Workstation IOA provides support for up to 40 active twinaxial displays and printers addresses or up to 120 active shared sessions. A 20-ft (6.2 m) cable with an eight port expansion (breakout) box is included with this adapter. Each port supports seven attached devices, allowing for 56 total attached devices, of which only 40 can be active. The #4746 is a Customer Install Feature.</p>
#5540	<p><b>#5540 System Console on Twinaxial Workstation IOA</b></p> <p>A system console specify code had to be selected on each new order. When the #5540 is on the order, the system console is a device attached to a #4746 PCI Twinaxial IOA.</p>
#5544	<p><b>#5544 System Console on Operations Console</b></p> <p>A system console specify code had to be selected on each new order. When the #5544 is on the order, the system console can be connected to a #0367 Operations Console PCI Cable attached to a #4745 PCI 2-line WAN IOA or a #9771 Base PCI Two-Line WAN with integrated modem.</p>
#5546	<p><b>#5546 System Console on 100 Mbps Token Ring</b></p> <p>A system console specify code had to be selected on each order. When the #5546 is on the order, the system console is LAN attached to a #2744 PCI 100 Mbps Token Ring IOA. The #2744 must be dedicated to the LAN console and cannot be used for any other purpose.</p> <p>Minimum operating system level: OS/400 V5R1 Corequisite: One #0367 Operations Console PCI Cable on the order or present on the system. Only one #0367 is required, regardless of the number of "LAN consoles" (with LPAR) defined to the system.</p>
#5548	<p><b>#5548 System Console on 100 Mbps Ethernet</b></p> <p>A system console specify code had to be selected on each order. When the #5548 is on the order, the system console is LAN attached to a #4838 PCI 100/10 Mbps Ethernet IOA. The #4838 must be dedicated to the LAN console and cannot be used for any other purpose.</p> <p>Minimum operating system level: OS/400 V5R1 Corequisite: One #0367 Operations Console PCI Cable on the order or present on the system. Only one #0367 is required, regardless of the number of "LAN consoles" (with LPAR) defined to the system.</p>

LAN and WAN adapters	
Comm. Restrictions	<p>Restrictions apply when using specific adapters and I/O processors. Basic communications restrictions when using the MFIOIP, #2629, #2699, #2720, #2721, #2745, #2809, #2824, and other communications functions are identified here. This information is a brief summary.</p> <ul style="list-style-type: none"> <li>▶ Maximum protocol speeds on the EIA-232/ITU V.24 electrical interfaces: <ul style="list-style-type: none"> <li>– 64 Kbps for Synchronous PPP, BSC, SDLC, and X.25</li> <li>– 115.2 Kbps for Asynchronous protocols (including Asynchronous PPP)</li> </ul> </li> <li>▶ Maximum protocol speeds on the ITU V.35: <ul style="list-style-type: none"> <li>– Permitted only on 20-ft (6.2 m) cable</li> <li>– 2.048 Mbps for Synchronous PPP, SDLC, and frame relay</li> <li>– 230.4 Kbps for Asynchronous PPP</li> <li>– 640 Kbps for X.25</li> <li>– 64 Kbps for BSC</li> </ul> <p>Speeds faster than 512 Kbps might require either the <i>looped</i> or <i>inverted</i> clocking to be configured.</p> </li> <li>▶ Maximum protocol speeds on the EIA-449/ITU V.36: <ul style="list-style-type: none"> <li>– 2.048 Mbps for Synchronous PPP, SDLC, and frame relay</li> <li>– 230.4 Kbps for Asynchronous PPP</li> <li>– 640 Kbps for X.25</li> <li>– 64 Kbps for BSC</li> </ul> <p>“Looped” clocking is required on cables longer than 20 ft (6 m). Speeds faster than 512 Kbps might require either the <i>looped</i> or <i>inverted</i> clocking to be configured.</p> </li> <li>▶ Maximum protocol speeds on the ITU X.21 electrical interfaces: <ul style="list-style-type: none"> <li>– Permitted only on 20-ft (6.2 m) cable</li> <li>– 2.048 Mbps for Synchronous PPP, SDLC, and frame relay</li> <li>– 640 Kbps for X.25</li> </ul> <p>Speeds faster than 512 Kbps might require either the <i>looped</i> or <i>inverted</i> clocking to be configured.</p> </li> <li>▶ Only one Frame Relay or one X.25 communication line is allowed per IOP.</li> <li>▶ One high-speed line is permitted per IOP. ASYNC and ASYNC PPP above 115.2 Kbps is a high-speed line. Frame relay, SDLC, SYNC PPP, and X.25 above 64 Kbps is a high-speed line. High-speed lines are supported on ITU X.21, ITU V.35 20-ft (6 m) cables, or EIA-449/ITU V.36 electrical interfaces.</li> <li>▶ No high-speed communication line is allowed when a #2750, #2751, or #2761 is installed under the same I/O processor.</li> <li>▶ If it is desired to run multiple emulated LAN lines on an #281x ATM IOA, then the following restrictions must be satisfied: <ul style="list-style-type: none"> <li>– The 281x ATM IOA must be running under a dedicated #2824 PCI Feature Controller (no other IOAs of any type).</li> <li>– The number of emulated LANs running on the #281x ATM IOA is limited to a maximum of two, one token ring and one Ethernet.</li> </ul> </li> <li>▶ Frame relay restrictions: <ul style="list-style-type: none"> <li>– Minimum line speed 56 Kbps</li> <li>– Frame relay is not allowed on EIA-232/V.24 electrical interface</li> </ul> </li> <li>▶ Other IOAs allowed under same #2809 PCI LAN/WAN/Workstation IOP or #2824 PCI Feature Controller, one of two restrictions: <ul style="list-style-type: none"> <li>– Either a #281x or #2838</li> <li>– A #2718 or #2729 and maximum of one #2721, #2722, #2723, #2724, #2729, #2745, or #2746</li> </ul> </li> <li>▶ IPX is supported on frame relay, LAN, and ATM. <ul style="list-style-type: none"> <li>– IPX is supported only on OS/400 V5R1 and earlier, not on OS/400 V5R2.</li> <li>– Devices running IPX over the Integrated xSeries Server is limited to 2400 routes and 2400 services.</li> <li>– Devices running IPX are limited to 1400 routes and 1400 services when: <ul style="list-style-type: none"> <li>• #2723, #2724, or #2838 IOAs are not controlled by the Integrated xSeries Server.</li> <li>• Frame relay running over a #2721, #2745, or #2699 IOA.</li> </ul> </li> </ul> </li> <li>▶ SDLC restrictions: <ul style="list-style-type: none"> <li>– Maximum of 64 remote locations per #2809, #2824, or #2629 IOP.</li> </ul> </li> <li>▶ X.25 restrictions: <ul style="list-style-type: none"> <li>– Limit of 16 virtual circuits (16 remote locations).</li> <li>– Limit of 64 virtual circuits (64 remote locations) in the #5065 Storage/PCI Expansion Tower.</li> <li>– Speeds faster than 512 Kbps might require either <i>looped</i> or <i>inverted</i> clocking to be configured.</li> <li>– The other port of the #2721 or #2745 can be used as a low-speed communications line.</li> </ul> </li> </ul>

Comm. Restrictions (cont.)	<ul style="list-style-type: none"><li>▶ Not allowed on the #2720/#9720 if this combination of adapters is installed on the base MFIOF:<ul style="list-style-type: none"><li>– #2722 or #2746 plus one #2723 or #2724</li></ul></li><li>▶ No more than seven #2629s can be placed into each #5072 1063 Mbps System Unit Expansion Tower.</li><li>▶ Bisync is always limited to a maximum of 64 Kbps.</li></ul>																																																																									
	Additional restrictions include:																																																																									
	<ul style="list-style-type: none"><li>▶ V.25 autocall cable is not supported.</li><li>▶ Select standby mode is not supported.</li><li>▶ #2750, #2751, #2761, #4750, #4751, #4761 are not supported after OS/400 V5R2.</li><li>▶ #2817, #481x #28x ATM not supported. Upgrade to Ethernet.</li></ul>																																																																									
	<b>Notes:</b>																																																																									
	<ul style="list-style-type: none"><li>▶ It is imperative that these restrictions be understood and followed. If they are not followed, it is possible that a hardware configuration could be built that marginally works, and later quits working when the machine is upgraded to future software releases.</li><li>▶ For best performance, we recommend that no other features be intermixed with a #2838 PCI 100/10 Mbps Ethernet IOA or a #2811, #2812, #2815, #2816, #2818, or #2819 ATM IOA on a #2809 PCI LAN/WAN/Workstation IOP.</li></ul>																																																																									
	The quantity and speed of each communications line must be known. Complete this table to determine the total communications CPW required. The #2750, #2751, and #2761 count as eight low-speed communications lines.																																																																									
	<b>Maximum High-Speed Communication lines Calculation Table</b>																																																																									
	<table><tr><th></th><th></th><th>Quantity</th><th></th><th></th><th>Factor</th><th></th><th>CPW</th></tr><tr><td>Number of lines operating at</td><td>64 Kbps</td><td>or less</td><td></td><td>_____</td><td>x</td><td>0.92</td><td>= _____</td></tr><tr><td>Number of lines operating above</td><td>64 Kbps</td><td>up to 128 Kbps</td><td></td><td>_____</td><td>x</td><td>1.84</td><td>= _____</td></tr><tr><td>Number of lines operating above</td><td>128 Kbps</td><td>up to 256 Kbps</td><td></td><td>_____</td><td>x</td><td>3.68</td><td>= _____</td></tr><tr><td>Number of lines operating above</td><td>256 Kbps</td><td>up to 512 Kbps</td><td></td><td>_____</td><td>x</td><td>7.36</td><td>= _____</td></tr><tr><td>Number of lines operating above</td><td>512 Kbps</td><td>up to 1024 Kbps</td><td></td><td>_____</td><td>x</td><td>14.72</td><td>= _____</td></tr><tr><td>Number of lines operating above</td><td>1024 Kbps</td><td>up to 2048 Kbps</td><td></td><td>_____</td><td>x</td><td>29.44</td><td>= _____</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>Total</td><td>_____</td></tr></table>												Quantity			Factor		CPW	Number of lines operating at	64 Kbps	or less		_____	x	0.92	= _____	Number of lines operating above	64 Kbps	up to 128 Kbps		_____	x	1.84	= _____	Number of lines operating above	128 Kbps	up to 256 Kbps		_____	x	3.68	= _____	Number of lines operating above	256 Kbps	up to 512 Kbps		_____	x	7.36	= _____	Number of lines operating above	512 Kbps	up to 1024 Kbps		_____	x	14.72	= _____	Number of lines operating above	1024 Kbps	up to 2048 Kbps		_____	x	29.44	= _____							Total	_____
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Number of lines operating above	512 Kbps	up to 1024 Kbps		_____	x	14.72	= _____																																																																			
Number of lines operating above	1024 Kbps	up to 2048 Kbps		_____	x	29.44	= _____																																																																			
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For more information, refer to <i>iSeries Performance Capabilities Reference</i> , SC41-0607.																																																																										
#2742	<p><b>#2742 2-Line WAN IOA</b></p> <p>The #2742 2-Line WAN IOA is a WAN IOA that supports up to two multiple protocol communications (RVX) ports when one or two (in any combination) of the following cables are attached. Select one of the following cables to attach to port 1 or 2 (RVX port):</p> <ul style="list-style-type: none"><li>▶ #0348 V.24/EIA232 20-ft. (6 m) PCI cable</li><li>▶ #0349 V.24/EIA232 50-ft. (15 m) PCI cable</li><li>▶ #0353 V.35 20-ft PCI cable</li><li>▶ #0354 V.35 50-ft PCI cable</li><li>▶ #0355 V.35 80-ft/24 m PCI cable</li><li>▶ #0356 V.36 20-ft PCI cable</li><li>▶ #0358 V.36 150-ft/45 m PCI cable</li><li>▶ #0359 X.21 20-ft PCI cable</li><li>▶ #0360 X.21 50-ft PCI cable</li><li>▶ #0365 V.24/EIA232 80-ft PCI cable</li><li>▶ #0367 Operations Console PCI Cable</li></ul> <p>The #0367 cable ships with a 25-pin to 9-pin adapter. Multiple #0367 cables can be ordered (but only one per #2742) to serve as consoles for secondary partitions when #0140 Logical Partitioning Specify is ordered.</p> <p>When the #2742 is selected to support ECS, one of following cables must be specified:</p> <ul style="list-style-type: none"><li>▶ #0348 V.24/EIA232 20-ft. (6 m) PCI cable</li><li>▶ #0349 V.24/EIA232 50-ft. (15 m) PCI cable</li><li>▶ #0367 Operations Console PCI Cable</li></ul> <p>The #2742 does not support Remote Power On. Minimum operating system level: OS/400 V5R2 The #2742 is a Customer Install Feature.</p>																																																																									



#2743	<p><b>#2743 1 Gbps PCI Ethernet IOA</b></p> <p>The #2743 PCI 1 Gbps Ethernet IOA feature allows the iSeries server to attach to IEEE standard 802.3Z high speed Ethernet LANs (1 Gbps). It can also be used to connect to existing 100 Mbps Ethernet LANs using switches with 10/100/1000 Mbps ports.</p> <p>The adapter supports multimode fiber media attachment to client-supplied cabling. The multi-mode interface has a 62.5/125 micron or 50.0/125 micron cable requirement with an SC connector.</p> <p>If the #2743 is selected as a LAN adapter for the #2890 PCI Integrated Netfinity Server or #2891 PCI Integrated xSeries Server, specify code #0225 is required for each #2743 selected to run on the #2890, #2891, or #2899. The #2743 can be attached directly to a Linux partition. When ordered as #0601 Linux Direct Attach - #2743, an IOP is not required. When direct attached to a Linux partition, the #2743 cannot be accessed by OS/400 partitions. In the 270 system unit, the #0601 can only be installed in slots C02 or C05.</p> <p>The #2743 requires a gigabit-capable switch with at least one port that supports a 1000 Base-SX interface with IEEE 802.3z and 802.3u compliance. It supports only a multimode fiber optic cable connection from the adapter to the switch. The #2743 supports 1000 Mbps (1 Gbps) full duplex interface only and cannot negotiate down to a lower speed. Stations on the 10 Mb and 1000 Mb switched LANs can communicate with the #2743 with a switch that is capable of handling all these speeds. In this case, the switch handles the speeds.</p> <p>Protocols supported: TCP/IP only; SNA and IPX connections not supported</p> <p>Prerequisite: 64-bit card slot except on the Model 270 where it is supported in a 32-bit slot</p> <p>Maximum: One per Multi-adapter Bridge Boundary except when installed with and controlled by a #2890, #2891, or #2899.</p> <p>Minimum operating system level for the #2890 PCI Integrated Netfinity Server or #2891 PCI Integrated xSeries Server to support the #2743/#2899: OS/400 V5R1</p> <p>The #2743 is a Customer Install Feature.</p> <p>The #2743 was withdrawn from marketing on 01 October 2004. The recommended replacement is a #5700 PCI 1 Gbps PCI Ethernet IOA.</p>
#2744	<p><b>#2744 PCI 100 Mbps Token Ring IOA</b></p> <p>The #2744 PCI 100 Mbps Token Ring IOA provides a single attachment to a 100 Mbps, 16 Mbps, or 4 Mbps IBM Token Ring Network. The #2744 consists of an IOA card, internal code that supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions. The 100, 16, and 4 Mbps Token Ring IOAs are capable of operating in half or full duplex mode.</p> <p>A 2.44 m (8-ft) token-ring cable is included with the #2744. As an alternative, the client can attach a separately priced twisted pair cable to the R-J45 connection on the IOA. IBM Cabling System patch cables, included with the #2744, can increase the length as required.</p> <p>If the #2744 is selected to run on the #2890 PCI Integrated Netfinity Server or #2891 PCI Integrated xSeries Server, specify code #0223 is required for each #2744 selected to run on the #2890, #2891, or #2899. The #2744 can be attached directly to a Linux partition. When ordered as #0603 Linux Direct Attach - #2744, an IOP is not required. When direct attached to a Linux partition, the #2744 cannot be accessed by OS/400 partitions. In the 270 system unit, the #0603 can only be installed in slots C02 or C05.</p> <p>Minimum operating system level: OS/400 V4R5</p> <p>The #2744 is a Customer Install Feature.</p> <p>The #2744 was withdrawn from marketing on 01 June 2006.</p>

#2760	<p><b>#2760 PCI 1 Gbps Ethernet UTP Adapter</b></p> <p>The #2760 PCI 1 Gbps Ethernet UTP Adapter feature allows the iSeries server to attach to IEEE standard 802.3Z high-speed Ethernet LANs (1 Gbps) using a UTP CAT 5 media interface. The #2760 can directly attach to 10 Mbps or 100 Mbps networks.</p> <p>The #2760 is supported as a LAN adapter for the #2890/#2891. If the #2760 is selected to run on the #2890 PCI Integrated Netfinity Server, #2891 PCI Integrated xSeries Server, or #2899 PCI Integrated xSeries Server, specify code #0225 is required for each #2760 selected to run on the #2890, #2891, or #2899.</p> <p>The #2760 can be attached directly to a Linux partition. When ordered as #0602 Linux Direct Attach - #2760, an IOP is not required. When direct attached to a Linux partition, the #2760 cannot be accessed by OS/400 partitions. In the 270 system unit, the #0602 can only be installed in slots C02 or C05.</p> <p>Supports TCP/IP only. SNA and IPX connections are not supported. Does not support LAN console.</p> <p>One 32-bit PCI slot is required. There are exceptions for 32-bit slot placement in the Model 270 system unit.</p> <p>Maximum: One per Multi-adapter Bridge Boundary except when installed with and controlled by a #2890, #2891, or #2899. Minimum operating system level: OS/400 V5R1 The #2760 is a Customer Install Feature. The #2760 was withdrawn from marketing on 01 October 2004. The recommended replacement is a #5701 PCI 1 Gbps Ethernet UTP IOA.</p>
#2772	<p><b>#2772 PCI Dual WAN/Modem IOA</b></p> <p>The #2772 is a 2-line WAN adapter with two ports (RJ11) with internal modems. Telephone cable is used to connect to the ports. This is the non-Complex Impedence Matching (CIM) version of the IOA.</p> <p>Supported protocols are:</p> <ul style="list-style-type: none"> <li>▶ V.90 56K Async PPP</li> <li>▶ Fax applications at data rates up to 14.4K</li> </ul> <p>Corequisite: Country- or region-specific telephone cables must be ordered. A minimum of one modem cable and a maximum of two must be selected for each #2772. All modem cables on a system must be the same feature number.</p> <p>The supported modem cables are:</p> <ul style="list-style-type: none"> <li>▶ #1010 Modem Cable-Austria</li> <li>▶ #1011 Modem Cable-Belgium</li> <li>▶ #1012 Modem Cable-Africa</li> <li>▶ #1013 Modem Cable-Israel</li> <li>▶ #1014 Modem Cable-Italy</li> <li>▶ #1015 Modem Cable-France</li> <li>▶ #1016 Modem Cable-Germany</li> <li>▶ #1017 Modem Cable-United Kingdom</li> <li>▶ #1018 Modem Cable-Iceland/ Sweden</li> <li>▶ #1020 Modem Cable-China (Hong Kong S.A.R.)/New Zealand</li> <li>▶ #1021 Modem Cable-Finland/Norway</li> <li>▶ #1022 Modem Cable-Netherlands</li> <li>▶ #1023 Modem Cable-Swiss</li> <li>▶ #1024 Modem Cable-Denmark</li> <li>▶ #1025 Modem Cable-U.S./Canada</li> </ul> <p>The #2772 is country- or region-specific. Contact your IBM representative or Business Partner for details on availability.</p> <p>Remote ring indicate is not supported. Minimum operating system level: OS/400 V5R1 The #2772 is a Customer Install Feature. The #2772 was withdrawn from marketing on 01 June 2006.</p>

#2773	<p><b>#2773 PCI Dual WAN/Modem IOA</b></p> <p>The #2773 is a 2-line WAN adapter with two ports (RJ11) with internal modems. Telephone cable is used to connect to the ports. This is the CIM version of the IOA.</p> <p>Supported protocols are:</p> <ul style="list-style-type: none"> <li>▶ V.90 56K Async PPP</li> <li>▶ Fax applications at data rates up to 14.4K</li> </ul> <p>Corequisite: Country- or region-specific telephone cables must be ordered. A minimum of one modem cable and a maximum of two must be selected for each #2773. All modem cables on a system must be the same feature number. The supported modem cables are:</p> <ul style="list-style-type: none"> <li>▶ #1019 Modem Cable - Australia</li> <li>▶ #1020 Modem Cable - China (Hong Kong S.A.R.)/New Zealand</li> </ul> <p>The #2773 is country- or region-specific. Contact your IBM representative or Business Partner for details on availability.</p> <p>Remote ring indicate is not supported. Minimum operating system level: OS/400 V5R1 The #2773 is a Customer Install Feature.</p>
#2793 #9793	<p><b>#2793 2-Line WAN IOA with Modem</b></p> <p>The #2793/#9793 is a 2-line WAN with modem adapter and is the non-CIM version that is offered in all countries or regions, except Australia and New Zealand. Port 0 is the modem port and supports V.92 56K Async PPP, V.92 data modem, V.44 data compression, and V.34 Fax modem and Fax functions such as ECM and 2D/1D conversion. Port 0 does not provide sync modem capabilities (SDLC and Sync PPP). Port 1 is the RVX port and supports multiple communications protocols.</p> <p>Select one of the following cables to attach to port 0 (modem port):</p> <ul style="list-style-type: none"> <li>▶ #1010 Modem Cable-Austria</li> <li>▶ #1011 Modem Cable-Belgium</li> <li>▶ #1012 Modem Cable-Africa</li> <li>▶ #1013 Modem Cable-Israel</li> <li>▶ #1014 Modem Cable-Italy</li> <li>▶ #1015 Modem Cable-France</li> <li>▶ #1016 Modem Cable-Germany</li> <li>▶ #1017 Modem Cable-United Kingdom</li> <li>▶ #1018 Modem Cable-Iceland/Sweden</li> <li>▶ #1021 Modem Cable-Finland/Norway</li> <li>▶ #1022 Modem Cable-Netherlands</li> <li>▶ #1023 Modem Cable-Swiss</li> <li>▶ #1024 Modem Cable-Denmark</li> <li>▶ #1025 Modem Cable-U.S./Canada</li> </ul> <p>Select one of the following cables to attach to port 1 (RVX port):</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft. (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft. (15 m) PCI cable</li> <li>▶ #0353 V.35 20-ft PCI cable</li> <li>▶ #0354 V.35 50-ft PCI cable</li> <li>▶ #0356 V.36 20-ft PCI cable</li> <li>▶ #0359 X.21 20-ft PCI cable</li> <li>▶ #0360 X.21 50-ft PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> <li>▶ #0367 Operations Console PCI Cable</li> </ul>

#2793 #9793 (cont.)	<p><b>#2793 2-Line WAN IOA with Modem</b></p> <p>The #0367 cable ships with a 25-pin to 9-pin adapter. Multiple #0367 cables can be ordered (but only one per #2793) to serve as consoles for secondary partitions when logical partitioning (#0140) is specified.</p> <p>ECS is supported from the RVX port and one of the following cables is required to support ECS: #0348, #0349, or #0365. ECS is supported from the Modem (V.92) port.</p> <p>The #9793 supports the #5544 System Console on Operations Console on the V.92 port for dial-in Operations Console with OS/400 V5R2. The #9793 supports the #0367 Operations Console PCI Cable on the RVX port to directly connect the Operations Console.</p> <p>Direct connection of the Operations Console is mutually exclusive with V.92 support of the dial-in Operations Console.</p> <p>The #2793 does not support the remote ring indicate function. For further configuration information, see: <a href="http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm">http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm</a></p> <p>See "Soft rules: iSeries IOA requirements" in <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i>, REDP-3638 for additional restrictions. Minimum operating system level: OS/400 V5R2</p>
#2794 #9794	<p><b>#2794 2-Line WAN IOA with Modem</b></p> <p>The #2794/#9794 is a 2-line WAN with Modem adapter and is the CIM version that is offered only in Australia and New Zealand. Port 0 is the modem port and supports V.92 56K Async PPP, V.92 data modem, V.44 data compression, and V.34 Fax modem and Fax functions such as ECM and 2D/1D conversion. Port 0 does not provide sync modem capabilities (SDLC and Sync PPP). Port 1 is the RVX port and supports multiple communications protocols.</p> <p>Select one of the following cables to attach to port 0 (modem port):</p> <ul style="list-style-type: none"> <li>▶ #1019 Modem Cable-Australia</li> <li>▶ #1020 Modem Cable-China (Hong Kong S.A.R.)/New Zealand</li> </ul> <p>Select one of the following cables to attach to port 1 (RVX port):</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft. (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft. (15 m) PCI cable</li> <li>▶ #0353 V.35 20-ft PCI cable</li> <li>▶ #0354 V.35 50-ft PCI cable</li> <li>▶ #0356 V.36 20-ft PCI cable</li> <li>▶ #0359 X.21 20-ft PCI cable</li> <li>▶ #0360 X.21 50-ft PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> <li>▶ #0367 Operations Console PCI Cable</li> </ul> <p>The #0367 cable ships with a 25-pin to 9-pin adapter. Multiple #0367 cables can be ordered (but only one per #2794) to serve as consoles for secondary partitions when logical partitioning (#0140) is specified.</p> <p>ECS is supported from the RVX port and one of the following cables is required to support ECS; #0348, #0349 or #0365. ECS is supported from the Modem (V.92) port.</p> <p>The #9794 supports the #5544 System Console on Operations Console on the V.90 port for dial-in Operations Console with OS/400 V5R2. The #9794 supports the #0367 Operations Console PCI Cable on the RVX port to directly connect the Operations Console.</p> <p>Direct connection of the Operations Console is mutually exclusive with V.92 support of the dial-in Operations Console. The #2793 does not support the remote ring indicate function. For further configuration information, see: <a href="http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm">http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm</a></p> <p>See "Soft rules: iSeries IOA requirements" in <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i>, REDP-3638 for additional restrictions. Minimum operating system level: OS/400 V5R2</p>

<p>#2805 #2806</p>	<p><b>#2806/#2805 PCI Quad Modem IOA</b> The #2805/#2806 is a WAN modem adapter with four ports (RJ11). Telephone cable is used to connect to the ports. The #2806 is the CIM version of the IOA, while the #2805 is non-CIM.</p> <p>The supported protocols are:</p> <ul style="list-style-type: none"> <li>▶ V.92 56 K Async SLIP/PPP</li> <li>▶ V.34 Fax applications at data rates up to 33.6K</li> </ul> <p>A minimum of one modem cable must be ordered for each #2805/#2806 and are country- or region-specific. All modem cables on a system must be the same feature number.</p> <p>The supported modem cables are:</p> <ul style="list-style-type: none"> <li>▶ #1010 Modem Cable-Austria</li> <li>▶ #1011 Modem Cable-Belgium</li> <li>▶ #1012 Modem Cable-Africa</li> <li>▶ #1013 Modem Cable-Israel</li> <li>▶ #1014 Modem Cable-Italy</li> <li>▶ #1015 Modem Cable-France</li> <li>▶ #1016 Modem Cable-Germany</li> <li>▶ #1017 Modem Cable-United Kingdom</li> <li>▶ #1018 Modem Cable-Iceland/Sweden</li> <li>▶ #1019 Modem Cable-Australia</li> <li>▶ #1020 Modem Cable-China (Hong Kong S.A.R.)/New Zealand</li> <li>▶ #1021 Modem Cable-Finland/Norway</li> <li>▶ #1022 Modem Cable-Netherlands</li> <li>▶ #1023 Modem Cable-Switzerland</li> <li>▶ #1024 Modem Cable-Denmark</li> <li>▶ #1025 Modem Cable-U.S./Canada/Japan</li> </ul> <p>Remote Power On through ring indicator, SDLC, and synchronous PPP are not supported. Minimum operating system level: OS/400 V5R1 with PTFs identified in Information APAR II13079.</p>
<p>#2817</p>	<p><b>#2817 PCI 155 Mbps MMF ATM IOA</b> The #2817 PCI 155 Mbps MMF ATM IOA is a 155 Mbps ATM PCI card that allows the server to be attached to an ATM network using the multi-mode fiber (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2817 is used typically where 155 Mbps speed is required over distances of less than 2 km. The #2817 is capable of supporting both multiple emulated LAN environments and enhanced TCP/IP performance with OS/400 V5R1.</p> <p>Technical specifications and industry standards supported are available at the ATM Forum Web site at: <a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>This card is a 64-bit card that is allowed to plug into any 32-bit or 64-bit slot.</p> <p>Minimum operating system level: OS/400 V5R1. Not supported after OS/400 V5R2. Upgrade to Ethernet. The #2817 is a Customer Install Feature.</p>
<p>#2849</p>	<p><b>#2849 10/100 Mbps Ethernet Adapter</b> The #2849 allows an iSeries server to attach to standardized 100 Mbps high-speed Ethernet LANs and allows attachment to existing 10 Mbps Ethernet LANs. The adapter comes standard with an RJ45 connector for attachment to UTP-5 media. Cabling for 10 Mbps must be CAT-3 or CAT-5. Cabling for 100 Mbps must be CAT-5 that meets or exceeds Industry Standard EIA/TIA T568A or T568B. Maximum cable length is 100 meters.</p> <p>Minimum operating system level: OS/400 V5R2 Not supported on an Integrated Netfinity Server/Integrated xSeries Server. The #2849 is a Customer Install Feature. The #2849 was withdrawn from marketing on 01 June 2006. #5700 PCI 1 Gbps Ethernet IOA is the recommended replacement.</p>

#4723	<p><b>#4723 PCI 10 Mbps Ethernet Adapter</b></p> <p>The #4723 PCI 10 Mbps Ethernet Adapter provides single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. The #4723 consists of an adapter card and internal code, which supplies Ethernet version 2 and IEEE 802.3 MAC plus IEEE 802.2 LLC functions. The Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. The #4723 has an RJ-45 connector and a 15-pin D-Shell connector for attachment to client-supplied cabling. A vendor AUI Ethernet cable or RJ-45 twisted pair cable must be ordered separately.</p> <p>The #4723 is not supported by any PCI Integrated Server.  Minimum operating system level: OS/400 V4R5  The #4723 is a Customer Install Feature.</p>
#4745	<p><b>#4745 PCI 2-line WAN IOA</b></p> <p>The #4745 supports up to two multiple protocol communications ports when one or two of the following cables are attached:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft. (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft. (15 m) PCI cable</li> <li>▶ #0353 V.35 20-ft PCI cable</li> <li>▶ #0354 V.35 50-ft PCI cable</li> <li>▶ #0356 V.36 20-ft PCI cable</li> <li>▶ #0359 X.21 20-ft PCI cable</li> <li>▶ #0360 X.21 50-ft PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> <li>▶ #0367 Operations Console PCI Cable</li> </ul> <p>When the #4745 is selected to support ECS, one of the following cables must be specified:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft. (6 m) PCI cable (Default)</li> <li>▶ #0349 V.24/EIA232 50-ft. (15 m) PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> </ul> <p>For communication restrictions, see "Soft Rules for iSeries IOAs" in <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i>, REDP-3638 for additional restrictions.</p> <p>Minimum operating system level: OS/400 V4R5  The #4745 is a Customer Install Feature.  The #4745 was withdrawn from marketing on 01 June 2006.</p>
#4750	<p><b>#4750 PCI ISDN BRI U IOA</b> (available in the United States and Canada only)</p> <p>The #4750 is a four-port (8-channel) ISDN BRI (basic rate) full-sized PCI card. Each port consists of 2B+D configuration. The #4750 is the "U"-bus (2-wire) version of the ISDN BRI PCI card.</p> <p>The #4750 supports the following protocols:</p> <ul style="list-style-type: none"> <li>▶ PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices)</li> <li>▶ IDLC</li> <li>▶ Fax</li> </ul> <p>Four 30-ft (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #4750. For configuration purposes, each #4750 counts as eight lines (two lines per port) towards the system communication maximums. Supports full duplex.</p> <p>Requirements: The #4750 requires country (region) certification or homologation.  Requires a full sized PCI card slot.  Supported in the Model 270 and the #5075 PCI Expansion Tower.  Maximum: One per IOP  Minimum operating system level: OS/400 V4R5; not supported with OS/400 V5R2  The #4750 is a Customer Install Feature.</p>

#4751	<p><b>#4751 PCI ISDN BRI S/T IOA</b></p> <p>The #4751 is a four-port (eight channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #4751 is the "S/T"-bus (four wire) version of the #4750 PCI ISDN BRI U IOA .</p> <p>The #4751 requires a network terminating device in the circuit. In the United States and Canada, this must be provided by the client. In other countries or regions, it is most likely provided by the telephone company.</p> <p>The #4751 supports the following protocols:</p> <ul style="list-style-type: none"> <li>▶ PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices)</li> <li>▶ IDLC</li> <li>▶ Fax</li> </ul> <p>Four 30-ft (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #4751. For configuration purposes, each #4751 counts as eight lines (two lines per port) towards the system communication maximums. Supports full duplex.</p> <p>The #4751 requires country or region certification or homologation. Requires a full-sized PCI card slot. Supported in the Model 270 and the #5075 PCI Expansion Tower Maximum: One per IOP Minimum operating system level: OS/400 V4R5; not supported with OS/400 V5R2 The #4751 is a Customer Install Feature.</p>
#4761	<p><b>#4761 PCI Integrated Analog Modem</b></p> <p>The #4761 is based on the latest Digital Signal Processor (DSP) technology. The #4761 allows the modem function to be integrated into the IOA and supports multiple analog modem ports (eight phone lines). The #4761 supports the following protocols without the need for an external modem:</p> <ul style="list-style-type: none"> <li>▶ SLIP/PPP (uses V.90, so the maximum line speed is 56 Kbps)</li> <li>▶ SDLC (uses V.34, so the maximum line speed is 33.6 Kbps)</li> <li>▶ Fax (uses V.17 to achieve a 14.4 Kbps maximum line speed)</li> </ul> <p>OS/400 V5R1 is the last release to support non-Fax functions on the #4761. An ASYNC line description is required for Fax and can only be used for Fax. The ECS line is not supported. To the iSeries or AS/400e server, the #4761 appears like a single IOA with eight individual line resources available. Eight 30-ft (8 m) phone cables are shipped with each #4761. For configuration purposes, each #4761 counts as eight communications lines toward the system communication maximums. Supports full duplex.</p> <p>The #4761 requires country or region certification or homologation. Requires full sized PCI card slot. Supported in the Model 270 and the #5075 PCI Expansion Tower. Minimum operating system level: OS/400 V4R5 The #4761 is a Customer Install Feature.</p>
#4801	<p><b>#4801 PCI Cryptographic Coprocessor</b></p> <p>The #4801 is a hardware cryptography solution. The #4801 is a half-length PC form-factor PCI card, which offers rich cryptography function, secure storage of cryptographic keys, and 12 Mbps performance (at the card level) for bulk data encryption and triple DES capability. The #4801 is available worldwide. The level of cryptographic function is determined by the Cryptographic Access Provider licensed program, which is downloaded to the adapter.</p> <p>Due to temperature requirements (card temperature must not drop below 5 degrees F (-15 degrees C)), the #4801 is shipped separately from the system in special packing.</p> <p>Minimum operating system level: OS/400 V4R5 The #4801 is a Customer Install Feature. The #4801 was withdrawn from marketing on 01 June 2006. The #4806 PCI-X Cryptographic Coprocessor is the recommended replacement.</p>

#4805	<p><b>#4805 PCI Cryptographic Accelerator</b></p> <p>The #4805 provides improved performance for high transaction rate secure Web applications, which use the Secure Sockets Layer (SSL) or Transport Layer Security (TLS) protocols. The process of using SSL/TLS secure Web connections, is very compute intensive. The Cryptographic Accelerator can be used to off-load cryptographic processing from main CPU. SSL/TLS secure Web connections are used to protect information (for example, credit card number) as it is transferred over the Internet, for example between a Web browser and a server.</p> <p>The Cryptographic Accelerator is targeted to high transaction rate secure Web applications using SSL/TLS. If your application requires a FIPS 140-1 certified, tamper-resistant module for storing cryptographic keys, financial PIN processing, or both, then the #4801 PCI Cryptographic Coprocessor should be your choice.</p> <p>Federal Information Processing Standard (FIPS) 140-1 is a U.S. Government National Institute of Standards and Technology (NIST) administered standard and certification program for cryptographic modules. There is a maximum of two per IOP.</p> <p>Prerequisites: Available PCI card slot under a feature IOP (not under a base or embedded IOP in the system unit)  Minimum operating system level: OS/400 V5R2  The #4805 is a Customer Install Feature.  The #4805 was withdrawn from marketing on 01 June 2006.</p>
#4815	<p><b>#4815 PCI ATM 155 Mbps UTP OC3</b></p> <p>The #4815 is a 155 Mbps ATM PCI card that allows the iSeries or AS/400e server to be attached to an ATM network using the Unshielded Twisted Pair (UTP-5) interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #4815 is used typically where 155 Mbps speeds are required over distances of less than 100 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site at:  <a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>ATM is not supported after OS/400 V5R2. Upgrade to Ethernet.  Minimum operating system level: OS/400 V4R5  The #4815 is a Customer Install Feature.</p>
#4816	<p><b>#4816 PCI ATM 155 Mbps MMF</b></p> <p>The #4816 is a 155 Mbps ATM PCI card that allows the iSeries or AS/400e to be attached into an ATM network using the MMF 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #4816 is used typically where 155 Mbps speeds are required over distances of less than 2 km. Technical specifications and industry standards supported are available at the ATM Forum Web site at:  <a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>The #4816 is ordered for use in OS/400 V4R5 secondary partitions. For OS/400 V5R1 systems or partitions, the #2817 PCI 155 Mbps MMF ATM IOA should be ordered.</p> <p>Minimum operating system level: OS/400 V4R5  The #4816 is a Customer Install Feature.  ATM is not supported after OS/400 V5R2. Upgrade to Ethernet.</p>
#4818	<p><b>#4818 PCI ATM 155 Mbps SMF OC3</b></p> <p>The #4818 is a 155 Mbps ATM PCI card that allows the iSeries or AS/400e to be attached into an ATM network using the Single-Mode Fiber (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provider equipment. The #4818 is used typically where 155 Mbps speeds are required over distances of from 16 to 40 km. Technical specifications and industry standards supported are available at the ATM Forum Web site at:  <a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>ATM is not supported after OS/400 V5R2. Upgrade to Ethernet.  Minimum operating system level: OS/400 V4R5  The #4818 is a Customer Install Feature.</p>



#4838	<p><b>#4838 PCI 100/10 Mbps Ethernet IOA</b></p> <p>The #4838 PCI 100/10 Mbps Ethernet IOA feature allows the iSeries or AS/400e server to attach to standardized 100 Mbps high-speed Ethernet LANs and allows attachment to existing 10 Mbps Ethernet LANs. The adapter comes standard with an RJ45 connector for attachment to UTP-5 media. Cabling for 10 Mbps must be CAT-3 or CAT-5, and cabling for 100 Mbps must be CAT-5 that meets or exceeds Industry Standard EIA/TIA T568A or T568B. Maximum cable length is 100 meters. This Ethernet IEEE 802.3 IOA is capable of operating in half or duplex mode. If the #4838 is selected to run on the #2890 PCI Integrated Netfinity Server/#2891 PCI Integrated xSeries Server, then specify code #0224 is required for each #4838 selected to run on the #2890/#2891.</p> <p>The #4838 can be attached directly to a Linux partition. When ordered as #0607 Linux Direct Attach - #4838, an IOP is not required. When direct attached to a Linux partition, the #4838 cannot be accessed by OS/400 partitions. In the 270 system unit, the #0607 can only be installed in slots C02 or C05</p> <p>Minimum operating system level: OS/400 V4R5</p> <p>The #4838 is a Customer Install Feature.</p> <p>The #4838 was withdrawn from marketing on 01 October 2004. The recommended replacement is the #2849 10/100 Mbps Ethernet Adapter.</p>
#5700	<p><b>#5700 PCI 1 Gbps Ethernet IOA</b></p> <p>The #5700 PCI 1 Gbps Ethernet IOA allows an iSeries server to attach to IEEE standard 802.3Z high-speed (1 Gbps) Ethernet LANs. It might also be used to connect to existing 10 Mbps or 100 Mbps Ethernet LANs by using switches with 10/100/1000 Mbps ports. It cannot directly attach to 10 Mbps or 100 Mbps LANs. Crossover cables are not supported.</p> <p>The #5700 adapter supports a multimode fiber interface with a 62.5 micron or 50.0 micron cable requirement. The #5700 adapter has a duplex LC fiber optic connector for attachment to client-supplied cabling. The #5700 uses short wave technology (around 500 m maximum).</p> <p>The #5700 PCI 1 Gbps Ethernet IOA can be run under a #2892 PCI Integrated xSeries Server. If a #5700 is controlled by a #2792 Integrated xSeries Server, then #0226 1 Gbps Ethernet Specify must be ordered. Order one #0226 for each #5700 PCI 1 Gbps Ethernet IOA controlled by an Integrated xSeries Server.</p> <p>When the #5700 is not installed in an Integrated xSeries Server, there is a maximum of one #5700 per Multi-adapter Bridge Boundary. Combinations of #5700s controlled by Integrated xSeries Server-controlled and controlled by PCI IOPs are allowed within a Multi-adapter Bridge Boundary.</p> <p>The #5700 can be attached directly to a Linux partition. When ordered as #0620 - Direct Attach - #5700 PCI 1 Gbps Ethernet IOA, an IOP is not required. When attached directly to a Linux partition, the #5700 cannot be accessed by OS/400 partitions.</p> <p>There are exceptions for 32-bit slot placement in the Model 270 system units. See the system unit schematics or <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i>, REDP-3638, for backplane layout, PCI slot positions, and allowable #5700 slot plugging rules by model.</p> <p>PCI card slots required: One 64-bit slot. A 32-bit slot is recommended in the Model 270.</p> <p>Maximum of two IOA under an IOP of which only one can be a Gbps Ethernet Adapter</p> <p>Does not support LAN console at OS/400 V5R2.</p> <p>Supports TCP/IP only. SNA and IPX connections are not supported.</p> <p>Minimum operating system level: OS/400 V5R2 with PTF MF33086.</p> <p>The #5700 is a Customer Install Feature.</p>

#5701	<p><b>#5701 PCI 1 Gbps Ethernet UTP IOA</b></p> <p>The #5701 PCI 1 Gbps Ethernet UTP IOA allows an iSeries server to attach to IEEE standard 802.3Z high-speed (1 Gbps) Ethernet LANs. It can also be used to connect to existing 10 Mbps or 100 Mbps Ethernet LANs by using switches with 10/100/1000 Mbps ports. It cannot directly attach to 10 Mbps or 100 Mbps LANs. The adapter supports a UTP CAT 5 media interface. Cross over cables are not supported.</p> <p>The #5701 can be run under a #2892 PCI Integrated xSeries Server. If a #5701 is controlled by a #2892 PCI Integrated xSeries Server, then specify code #0226 - 1 Gbps Ethernet Specify must be ordered. Order one #0226 for each #5701 controlled by an Integrated xSeries Server.</p> <p>When the #5701 is not installed in an Integrated xSeries Server, there is a maximum of one #5701 per Multi-adapter Bridge boundary. Combinations of Integrated xSeries Server controlled and PCI IOP controlled #5701s within an Multi-adapter Bridge boundary are allowed.</p> <p>The #5701 can be attached directly to a Linux partition. When ordered as #0621 - Direct Attach - #5701 PCI 1 Gbps Ethernet UTP IOA, an IOP is not required. When attached directly to a Linux partition, the #5701 cannot be accessed by OS/400 partitions.</p> <p>PCI card slots required: One 64-bit slot (32-bit slot is recommended for the Model 270).</p> <p>There are exceptions for 32-bit slot placement in the Model 270 system unit. See the system unit schematics and <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i>, REDP-3638, for backplane layout, PCI slot positions, and allowable #5701 slot plugging rules by model.</p> <p>Maximum of two IOA under an IOP of which only one can be a Gbps Ethernet Adapter Supports TCP/IP only. SNA and IPX connections are not supported. Minimum operating system level: OS/400 V5R2 with PTF MF33086. The #5701 is a Customer Install Feature.</p>
#6618	<p><b>#6618 Integrated Netfinity Server (SPD)</b></p> <p>The #6618 Integrated Netfinity Server contains an Intel 333 MHz Pentium II Processor, four main storage slots, and three LAN IOA slots for high performance LAN serving to LAN-attached PCs. All three PCI slots can be used for Integrated PC Server functions. Two of the three PCI slots can support native iSeries functions. The #6618 requires three IOP slots. The slots must be adjacent. An external cable is included to enable connectivity to IPCS hardware (keyboard or mouse), which also allows for optional use of parallel and serial ports.</p> <p>SPD slots required: Three contiguous slots</p> <p>OS/2 and Novell NetWare are not supported with OS/400 V5R1. Minimum operating system level: OS/400 V4R3 and Cumulative PTF Package C8349430 The #6618 was withdrawn from marketing on 28 December 2001.</p>

#9771	<p><b>#9771 Base PCI Two-Line WAN with integrated modem</b></p> <p>The #9771 is a 2-line WAN adapter. One port supports V.90 56K async data on PPP with an internal modem. The second port supports multiple protocol communications (WAN).</p> <p>Connection to the V.90 port uses a telephone cable. Use one of the following cables to connect to the WAN communication port:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft. (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft. (15 m) PCI cable</li> <li>▶ #0353 V.35 20-ft PCI cable</li> <li>▶ #0354 V.35 50-ft PCI cable</li> <li>▶ #0355 V.35 80-ft/24 m PCI cable</li> <li>▶ #0356 V.36 20-ft PCI cable</li> <li>▶ #0358 V.36 150-ft/45 m PCI cable</li> <li>▶ #0359 X.21 20-ft PCI cable</li> <li>▶ #0360 X.21 50-ft PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> <li>▶ #0367 Operations Console PCI Cable</li> </ul> <p>The #9771 supports the #0367 Operations Console PCI Cable on the WAN (RVX) port to directly connect the Operations Console for OS/400 V5R1 or later or with OS/400 V4R5 and PTF MF25397 (not in cumulative PTF). Direct connection of the Operations Console is mutually exclusive with V.90 support of the dial-in Operations Console.</p> <p>The #9771 supports the #5544 System Console on Operations Console on the V.90 port for <i>dial-in</i> Operations Console with OS/400 V5R1. An additional #4745 is required on OS/400 V4R5 systems for <i>dial-in</i> Operations Console support. The #9771 ships with a country- or region-specific telephone cable. No modem cable feature is required on the order. ECS is supported over TCP/IP on the V.90 telephone cable port with OS/400 V5R1, or with OS/400 V4R5 and PTF SF64124. Fax is supported on the V.90 port with OS/400 V5R1, or with OS/400 V4R5 and PTFs MF25290 and SF64604. To support ECS on the WAN port of the #9771, specify one of the following cables:</p> <ul style="list-style-type: none"> <li>▶ #9771 Base PCI Two-Line WAN with integrated modem</li> <li>▶ #0348 V.24/EIA232 20-ft. (6 m) PCI cable (default)</li> <li>▶ #0349 V.24/EIA232 50-ft. (15 m) PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> </ul> <p>ECS operates on the WAN port of the #9771 by changing the *RSRCNAME parameter of the QESLINE and QTILINE line descriptions to that of the WAN port on the #9771 card.</p> <p>Remote Power On is not supported. The #9771 does not support the remote ring indicate function.</p> <p>For further configuration information, see:  <a href="http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm">http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm</a></p> <p>See "Soft rules: iSeries IOA requirements" in <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i>, REDP-3638 for additional restrictions.</p> <p>Minimum operating system level: OS/400 V4R5 and supporting PTFs  The #9771 was withdrawn from marketing on 01 October 2005.</p>
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#9793 #9794	<p><b>#9793 Two-Line WAN IOA with Modem</b></p> <p>The #9793 feature is a base 2-line WAN with Modem adapter and is the non-CIM version which is offered in all countries or regions except Australia and New Zealand. The #9794 feature is a base 2-line WAN with Modem adapter and is the CIM version, which is offered only in Australia and New Zealand. Port 0 is the modem port and supports V.92 56K Async PPP, V.92 data modem, V.44 data compression, V.34 Fax modem, and Fax functions such as ECM and 2D/1D conversion. Port 0 does not provide Sync modem capabilities (SDLC and Sync PPP). Port 1 is the WAN port and supports multiple communications protocols.</p> <p>The IBM marketing configurator defaults one of the following country- or region-specific cables to attach to port 0 (modem port):</p> <ul style="list-style-type: none"> <li>▶ #1010 Modem Cable-Austria</li> <li>▶ #1011 Modem Cable-Belgium</li> <li>▶ #1012 Modem Cable-Africa</li> <li>▶ #1013 Modem Cable-Israel</li> <li>▶ #1014 Modem Cable-Italy</li> <li>▶ #1015 Modem Cable-France</li> <li>▶ #1016 Modem Cable-Germany</li> <li>▶ #1017 Modem Cable-United Kingdom</li> <li>▶ #1018 Modem Cable-Iceland/Sweden</li> <li>▶ #1021 Modem Cable-Finland/Norway</li> <li>▶ #1022 Modem Cable-Netherlands</li> <li>▶ #1023 Modem Cable-Swiss</li> <li>▶ #1024 Modem Cable-Denmark</li> <li>▶ #1025 Modem Cable-U.S./Canada</li> </ul> <p>Select one of the following cables to attach to port 1 (WAN port):</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft. (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft. (15 m) PCI cable</li> <li>▶ #0353 V.35 20-ft PCI cable</li> <li>▶ #0354 V.35 50-ft PCI cable</li> <li>▶ #0355 V.35 80-ft/24 m PCI cable</li> <li>▶ #0356 V.36 20-ft PCI cable</li> <li>▶ #0358 V.36 150-ft/45 m PCI cable</li> <li>▶ #0359 X.21 20-ft PCI cable</li> <li>▶ #0360 X.21 50-ft PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> <li>▶ #0367 Operations Console PCI Cable</li> </ul> <p>The #0367 cable ships with a 25-pin to 9-pin adapter.</p> <p>Multiple #0367 cables can be ordered (but only one per #9793) to serve as consoles for secondary partitions when logical partitioning (#0140) is specified.</p> <p>The #9793 does not support the remote ring indicate function.</p> <p>ECS is supported from the WAN port and one of the following cables is required to support ECS #0348, #0349, or #0365. ECS is supported from the Modem port (OS/400 V5R1 or later).</p>
<b>Disk units</b>	
#08xx	<p><b>Load Source Specify</b></p> <p>One of the following specify codes is required on all initial orders of a Model 270 from OS/400 V5R1 onward:</p> <ul style="list-style-type: none"> <li>▶ #0826 - #4314 Load Source specify</li> <li>▶ #0827 - #4324 Load Source specify</li> <li>▶ #0828 - #4317 Load Source specify</li> <li>▶ #0829 - #4318 Load Source specify</li> <li>▶ #0830 - #4319 Load Source specify</li> </ul> <p>The #0826 and #0827 features are supported for upgrades only.</p> <p>Manufacturing uses this specify to place the corresponding disk unit feature in the load source position. The specify codes can be changed on model upgrades or on MES orders.</p> <p>The #0826, #0827, #0828, #0829 were withdrawn from marketing on 01 June 2006.</p>
#4314	<p><b>#4314 8.58 GB Disk Unit Ultra SCSI</b></p> <p>The #4314 provides an additional 3 ½-inch two-byte single disk unit with 8.58 GB capacity (7200 RPM).</p> <p>Minimum operating system level: OS/400 V4R4</p> <p>The #4314 is a Customer Install Feature.</p> <p>The #4314 was withdrawn from marketing on 31 January 2001.</p>

#4317	<p><b>#4317 8.58 GB 10k RPM Disk Unit (Ultra2 SCSI)</b>  The #4317 provides an additional 3 ½-inch single disk unit with 8.58 GB capacity.</p> <p>Minimum operating system level: OS/400 V4R4  The #4317 is a Customer Install Feature.  The #4317 was withdrawn from marketing on for new orders on 03 December 2002. Feature conversion to #4317 remain available.</p>
#4318	<p><b>#4318 17.54 GB 10k RPM Disk Unit (Ultra2 SCSI)</b>  The #4318 provides an additional 3 ½-inch single disk unit with 17.54 GB capacity.</p> <p>Minimum operating system level: OS/400 V4R4  The #4318 is a Customer Install Feature.  The #4318 was withdrawn from marketing on 01 June 2004 for new orders. Conversions to feature #4318 remain available.</p>
#4319	<p><b>#4319 35.16 GB 10k RPM Disk Unit (Ultra2 SCSI)</b>  The #4319 provides an additional 3 ½-inch single disk unit with 35.16 GB capacity.</p> <p>Minimum operating system level: OS/400 V5R1 with PTFs identified in Information APAR II13102.  The #4319 is a Customer Install Feature.  The #4319 was withdrawn from marketing on 15 July 2005</p>
#4324	<p><b>#4324 17.54 GB Disk Unit (Ultra SCSI)</b>  The #4324 provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage (7200 RPM).</p> <p>Minimum operating system level: OS/400 V4R4  The #4324 is a Customer Install Feature.  The #4324 was withdrawn from marketing on 31 January 2001.</p>
#4326	<p><b>#4326 35.16 GB 15k RPM Disk Unit (Ultra3 SCSI)</b>  The #4326 provides a single 3 ½-inch disk unit for additional disk storage with 35.16 GB capacity (15000 RPM).</p> <p>Only supported in #0595 and #5095 towers; not supported in the 270 system unit, #7104 System Unit Expansion or any other expansion tower  Minimum operating system level: OS/400 V5R2  The #4326 is a Customer Install Feature.</p>
#4327	<p><b>#4327 70.56 GB 15k RPM Disk Unit (Ultra3 SCSI)</b>  The #4327 provides a 3 ½-inch single disk unit for additional disk storage with 70.56 GB capacity (15000 RPM).</p> <p>Only supported in #0595 and #5095 towers. Not supported in the 270 system unit, #7104 System Unit Expansion or any other expansion tower.  Minimum operating system level: OS/400 V5R2  The #4327 is a Customer Install Feature.</p>
#4331	<p><b>#4331 1.6 GB Read Cache Device</b>  The #4331 provides 1.6 GB of capacity for large read cache function. It is mutually exclusive with DASD compression. The system arrives in performance mode with compression function turned off on the #4748/#4778 PCI RAID Disk Unit Controller.</p> <p>Because the #4331 is 1.6 inches wide, the following placement rules apply:</p> <ul style="list-style-type: none"> <li>▶ The #4331 cannot be placed in disk unit slot D01 of the Model 270 and the #5075 PCI Expansion Tower.</li> <li>▶ It cannot be placed in disk unit slots D14 or D20 of the #7104 System Unit Expansion.</li> <li>▶ The #4331 can be placed in disk unit slots D02 through D06 of the Model 270 and the #5075 PCI Expansion Tower and in disk unit slots D02 through D07 and D08 through D12 of Model 820. However, the #4331 takes up the disk unit slot in which it is installed and takes up the adjacent disk unit slot to its left For example, if the #4331 is installed in disk unit slot D02, it takes up disk unit slot D02 and disk unit slot D01.</li> <li>▶ For HSL attached towers on the iSeries servers, the #4331 is installed in the left-most slot of each five-pack and only takes up one disk unit position.</li> </ul> <p>Maximum: One per #4748/#4778 PCI RAID Disk Unit Controller; one per #2748/#2778 PCI RAID Disk Unit Controller in the Model 270  Minimum operating system level: OS/400 V4R4  Supported in Model 270 and in the #5065, and #5066; requires #2748 when the #4331 is installed in a #5065/#5066  Minimum operating system level: OS/400 V4R4  The #4331 is a Customer Install Feature.  The #4331 was withdrawn from marketing on 1 March 2002.</p>

RPQ 847102	<p><b>RPQ 847102</b> ships the disk mounting hardware and instructions required to convert a #6717/#6817 to a #4317, and a #6718/#6818 to a #4318. One RPQ is required for each disk unit to be converted.</p> <p>See "RPQ 847102" on page 277 for a full description.</p>
<b>Internal tape units and CD-ROM</b>	
Supported media	See 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for the supported media for each tape device.
#4525	<p><b>#4525 CD-ROM</b></p> <p>The #4525 is a feature CD-ROM device that can be mounted in the system unit of the iSeries 270 models. The #4525 can be used for alternate IPL (IBM distributed CD-ROM media only) and program distribution.</p> <p>A minimum of one CD-ROM or DVD-RAM is required on every iSeries server.</p> <p>The #4525 is a Customer Install Feature.</p> <p>The #4525 was withdrawn from marketing on 21 November 2003 for new orders. Conversion to feature #4525 remain available.</p>
#4530	<p><b>#4530 DVD-RAM</b></p> <p>The #4530 is a feature DVD-RAM device that can be mounted in the system unit of Model 270. It is a 5 ¼-inch device that installs in a removable media slot. The #4530 is capable of writing and reading 4.7 GB on a single disk (single side). For double-sided media, the media must be manually flipped. It is also capable of reading 650 MB CD-ROM disks. The #4530 can be used for alternate IPL, program distribution and data interchange.</p> <p>The #4530 is not supported as an Alternate Installation Device (by selection with DST Boot Manager) with OS/400 V5R1.</p> <p>Prerequisites: Disk unit controller in system unit or tower where the device is mounted.</p> <p>A minimum of one DVD-RAM or CD-ROM is required on every iSeries server.</p> <p>Minimum operating system level: OS/400 V4R5 with PTFs or OS/400 V5R1</p> <p>The #4530 is a Customer Install Feature.</p> <p>The #4530 was withdrawn from marketing on 01 October 2004. The recommended replacement is a #4533.</p>
#4531	<p><b>#4531 DVD-ROM</b></p> <p>The #4531 DVD-ROM is a 5 ¼-inch device which is mounted in a removable media device slot. The #4531/#4631 is capable of reading 640 MB CD-ROM media and 4.7 GB DVD-RAM media. It is an alternate IPL (IDE bus attach) device, so a SCSI/ATAPI converter card is required and is included with the device. The converter card requires its own power source, so a power flex cable is included.</p> <p>The #4531 can be used for Alternate IPL (IBM distributed CD-ROM media only) and program distribution.</p> <p>The #4531 can be mounted in the system unit of a Model 270.</p> <p>Prerequisites: A disk unit controller in the system unit or tower where the device is mounted.</p> <p>A CD-ROM, DVD-RAM or DVD-ROM is required for each system.</p> <p>Minimum operating system level: OS/400 V5R2</p> <p>The #4531 is a Customer Install Feature.</p> <p>The #4531 was withdrawn from marketing on 01 December, 2005</p>
#4582	<p><b>#4582 4 GB ¼-inch Cartridge Tape Device</b></p> <p>The #4582 can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. The #4582 can be mounted in the system unit of Models 270. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #4582 is a Customer Install Feature.</p> <p>The #4582 was withdrawn from marketing for new orders only on 1 October 2005. The #4584 30 GB 1/4 inch Cartridge Tape is the recommended replacement.</p>

#4583	<p><b>#4583 16 GB ¼-inch Cartridge Tape Device</b></p> <p>The #4583 16 GB ¼-inch Cartridge Tape Device can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>The #4583 can be mounted in the system unit of the Model 270.</p> <p>Minimum operating system level: OS/400 V4R5 (OS/400 V4R4 for the #4483)</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #4583 is a Customer Install Feature.</p> <p>The #4583 was withdrawn from marketing on 3 December 2002.</p>
#4584	<p><b>#4584 30 GB ¼-inch Cartridge Tape Device</b></p> <p>The #4584 is a 30 GB ¼-inch cartridge tape unit that can be mounted in a removable media device slot of a system unit or an expansion tower. The #4584 can be used for save/restore, alternate IPL, program distribution, migration, and ¼-inch cartridge tape exchange.</p> <p>The #4584 can be mounted in the system unit of the Model 270.</p> <p>Minimum operating system level for the #4584: OS/400 V4R5</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #4584 is a Customer Install Feature.</p> <p>The #4584 was withdrawn from marketing on 01 June 2006.</p>
#4585	<p><b>#4585 80 GB VXA-2 Tape Device</b></p> <p>The #4585 80 GB VXA-2 Tape Device can be used for save and restore, alternate IPL, program distribution, and migration. The tape format is not compatible with other tape units currently offered on iSeries systems.</p> <p>The #4585 can be mounted in a removable media device slot of a Model 270 system unit.</p> <p>Prerequisites: A removable media device slot and disk unit controller in the system unit.</p> <p>The #4585 is supported by the #2757, #2763, #2780, #2782, #4748, #4778, and #9767.</p> <p>Minimum operating system level: OS/400 V5R1</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #4585 is a Customer Install Feature.</p> <p>The #4585 was withdrawn from marketing on 01 June 2006.</p>
#4586	<p><b>#4586 25 GB ¼-inch Cartridge Tape Device</b></p> <p>The #4586 25 GB ¼-inch Cartridge Tape Device is a 25 GB ¼-inch cartridge tape unit that mounts in a removable media device slot of a system unit or an expansion drawer/tower. The #4586 can be used for save/restore, alternate IPL, program distribution, migration and ¼-inch cartridge tape exchange. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>The #4586 can be mounted in the system unit of the Model 270.</p> <p>Minimum operating system level: OS/400 V4R5</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #4586 is a Customer Install Feature.</p> <p>The #4586 was withdrawn from marketing on 3 December 2002.</p>

#4587	<p><b>#4587 50 GB ¼-inch Cartridge Tape Device</b></p> <p>The #4587 50 GB ¼-inch Cartridge Tape Device can be used for save/restore, alternate IPL, program distribution, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. The #4587 is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>The #4587 can be mounted in the system unit of the Model 270.</p> <p>Prerequisite: A disk unit controller in system unit or tower where device is mounted. Minimum operating system level: OS/400 V5R1</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #4587 is a Customer Install Feature. The #4587 was withdrawn from marketing on 01 June 2006.</p>
<b>Magnetic media controllers</b>	
#0165	<p><b>VHDCI attachment</b></p> <p>The #0165 VHDCI attachment is used to indicate that an external CD/DVD/tape device is to be attached to a #5702 PCI-X Ultra Tape Controller, #5705 PCI-X Tape/DASD Controller, #5712 PCI-X Tape/DASD Controller, or #5715 PCI-X Tape/DASD Controller.</p>
#0208	<p><b>#0208 No Alternate Install Device Use Required</b></p> <p>The #0208 No Alternate Install Device Use Required specify feature instructs manufacturing to place the external tape adapter on the Multi-adapter Bridge of the system unit. With this configuration, a client is not required to select or use the Alternative Installation Device option in conjunction with a D-mode IPL (using Boot Manager in DST). A higher cost system configuration can result due to the need of additional PCI controller cards. If placement on the first Multi-adapter Bridge is not possible due to other system constraints, the IBM marketing configurator flags the order as invalid.</p> <p>Adding the #0208 specify feature on an order forces manufacturing to place the external tape adapter on the first system bus. Having the external tape adapter on the first system bus does not require a client to use the Alternative Installation Device option of DST in conjunction with a D-mode IPL.</p> <p>Forcing the external tape adapter on the first system bus can result in a higher cost system configuration due to the need of additional PCI IOPs. When selected in the IBM marketing configurator, the external alternate IPL tape controller must be placed on the first system bus. If due to other system constraints such placement of the alternate IPL tape controller is not possible, then the order is not valid and flagged as such.</p> <p>An external tape adapter is placed in the first system bus. The #0208 is valid on initial and MES orders for Model 270s. OS/400 V4R5 The #0208 was withdrawn from marketing on 01 December 2005.</p>
#0618	<p><b>#0618 - Direct Attach - #2757 PCI-X Ultra RAID Disk Controller</b></p> <p>Linux direct attach feature for #2757 PCI-X Ultra RAID Disk Controller.</p> <p>Minimum operating system level: SUSE LINUX Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3 Minimum operating system level: OS/400 V5R2 The #0618 was withdrawn from marketing on 01 June 2006. The #0627 Direct Attach-2780 is the recommended replacement</p>



#2749	<p><b>#2749 PCI Ultra Magnetic Media Controller</b></p> <p>The #2749 is an Ultra SCSI IOA that provides attachment capability for external tape devices and external optical devices. The #2749 can attach one tape drive or one optical drive. The following tape devices can be attached:</p> <ul style="list-style-type: none"> <li>▶ 3490E E01/E11 ½-inch cartridge tape subsystem</li> <li>▶ 3490 F00/F01/F11/F1A ½-inch cartridge tape subsystem</li> <li>▶ 3490E C11/C22/C1A/C2A with feature #5040</li> <li>▶ 3494 Tape Library Dataserver <ul style="list-style-type: none"> <li>– L10 Library Control Unit Frame 1 3490E C1A/C2A with #5040 or 1-2 3490E F1A</li> <li>– L12 Library Control Unit Frame 1-2 3590 B1A</li> <li>– D10 Device Frame 1 3490E C1A/C2A with #5040 or 1-2 3490E F1A, 300 cartridges</li> <li>– D12 Device Frame 1-6 3590 B1A, 300 cartridges</li> <li>– HA1 (High Availability)—2 L1X and 2 D1X for redundancy</li> </ul> </li> <li>▶ 3570 0.31-inch Cartridge Tape Subsystem <ul style="list-style-type: none"> <li>– Model B0x (stand-alone)</li> <li>– Model B1x (rack mount)</li> <li>– Model B1A(mounts in 3575)</li> <li>– Model C0x (stand-alone)</li> <li>– Model C1x (rack mount)</li> <li>– Model C1A(mounts in 3575)</li> </ul> </li> <li>▶ 3575 0.31-inch Cartridge Tape Subsystem <ul style="list-style-type: none"> <li>– Model Lxx</li> </ul> </li> <li>▶ 3580-H11 Ultrium Tape Drive</li> <li>▶ 3580-H23 Ultrium Tape Drive</li> <li>▶ 3581-H17 Ultrium Tape Autoloader</li> <li>▶ 3583-Lxx Ultrium Scalable Tape Library</li> <li>▶ 3584-L32 or D32 Ultrascapable Tape Library</li> <li>▶ 3590 ½-inch Cartridge Tape Subsystem <ul style="list-style-type: none"> <li>– Model E11/B11 (mounts into 9309 rack)</li> <li>– Model E1A/B1A (mounts into 3494 library)</li> </ul> </li> <li>▶ 3995 Optical Library Dataserver - Model Cxx</li> <li>▶ 7208-012 5.0 GB 8 mm cartridge tape unit</li> <li>▶ 7208-222 7.0 GB 8 mm cartridge tape unit</li> <li>▶ 7208-232 8 mm Dual 5.0 GB cartridge tape subsystem <ul style="list-style-type: none"> <li>– #0501 counts as one 7208</li> <li>– #0502 counts as two 7208s</li> </ul> </li> <li>▶ 7208-234 8 mm Dual 7.0 GB cartridge tape subsystem <ul style="list-style-type: none"> <li>– Counts as two 7208s</li> </ul> </li> <li>▶ 7208-342 20.0 GB 8 mm Cartridge Tape Bridge Box</li> <li>▶ 9348-00x ½-inch Reel Tape Unit—Rack Mount</li> <li>▶ 9427-2108 8 mm Library Attach</li> </ul> <p>To attach tape devices with LVD connections, use the #5702 PCI-X Ultra Tape Controller.</p> <p>Minimum operating system level: OS/400 V4R5</p> <p>The #2749 is a Customer Install Feature.</p> <p>The #2749 was withdrawn from marketing on 03 March 2005.</p>
#2757	<p><b>#2757 PCI-X Ultra RAID Disk Controller</b></p> <p>The #2757 PCI-X Ultra RAID Disk Controller is a PCI-X SCSI controller with a maximum compressed write cache of 757 MB. The #2757 provides RAID-5 protection for internal disks and also supports internal tape units, CD-ROM and DVD-RAM. The #2757 has four SCSI buses that support up to 18 disk units. Hardware data compression is not supported. In addition to providing RAID-5 protection for disks, #2757 is designed to work as a high performance controller for disks protected by system mirroring or disks with no protection.</p> <p>The #2757 controller supports a maximum of 20 disk units. A minimum of three disk units of the same capacity are needed for a valid RAID-5 configuration. A maximum of six arrays are allowed per controller, with a maximum of 18 disk units allowed per array. All disk units in an array must be of the same capacity.</p> <p>Parity is spread across either 2, 4, 8, or 16 disk units in an array. If an array of three disk units is started, parity is spread across two disk units. If an array of four to seven disk units is started, parity is spread across four disk units. If an array of eight to 15 disk units is started, parity is spread across eight disk units. If an array of 16 to 18 disk units is started, parity is spread across 16 disk units.</p>

#2757 (cont.)	<p><b>#2757 PCI-X Ultra RAID Disk Controller</b></p> <p>The number of arrays and size of each array can be influenced by specifying an optimization of either <i>Balance</i>, <i>Performance</i>, or <i>Capacity</i> in iSeries Navigator when starting arrays. An optimization of <i>Balance</i> is used by default when starting arrays from DST or SST options. If disk units are included in an existing array, parity might be spread across less than the preferred number of disk units. In this case, the RAID function must be stopped and then started to redistribute the parity.</p> <p>The #2757 controls up to two removable media devices (internal tape, CD-ROM and DVD). The #2757 does not support DASD compression. Minimum operating system level: OS/400 V5R2 The #2757 is a Customer Install Feature.</p>
#2763	<p><b>#2763 PCI RAID Disk Unit Controller</b></p> <p>The #2763 is an Ultra2 SCSI controller with a 10 MB write-cache that provides RAID-5 protection for internal disk units and supports up to two removable media devices (internal tape units and CD-ROM units). In addition to providing RAID-5 protection for disks, the #2763 is also designed to work as a high performance controller for disks protected by system mirroring or disks with no protection. The #2763 controller supports a maximum of 12 disk units.</p> <p>A minimum of four disk units of the same capacity are needed for a valid RAID-5 configuration. A maximum of three arrays are allowed per controller, with a maximum of 10 disk units allowed per one array. All disk units in an array must be of the same capacity. Parity is spread across four disk units for arrays of four to 10. The #2763 does not support hardware disk compression. The #2763 does not support the #4331 1.6 GB Read Cache Device. One #9767 and one #2763 are allowed in the system unit if the #0041 is not selected. Two #2763s and the #9767 are not allowed.</p> <p>Requires a long PCI card slot Minimum operating system level: OS/400 V4R5 The #2763 is a Customer Install Feature. The #2763 was withdrawn from marketing on 21 November 2003 for new orders. Conversions to feature #2763 remain available. The #5703 PCI-X RAID Disk Unit Controller is the recommended replacement.</p>
#2765	<p><b>#2765 PCI Fibre Channel Tape Controller</b></p> <p>The #2765 provides Fibre Channel attachment capability for external tape devices. The #2765 supports point-to-point and arbitrated loop topologies and has an LC type cable connector. Each #2765 is shipped with a wrap connector (P/N 05N6767).</p> <p>The devices supported for Fibre Channel attachment are:</p> <ul style="list-style-type: none"> <li>▶ 3534-1RU SAN Fibre Channel Managed Hub (1 Gbps)</li> <li>▶ Fibre Channel Switches: <ul style="list-style-type: none"> <li>– 2109 S08/S16 (1 Gbps)</li> <li>– 2109 F16 (2 Gbps)</li> <li>– 3534 F08 (2 Gbps)</li> </ul> </li> <li>▶ 3583-Lxx Ultrium Scalable Tape Library with an #8005 SAN Data Gateway Module</li> <li>▶ 3584-L32 or D32 Ultrascapable Tape Library</li> <li>▶ 3590 ½-inch Cartridge Tape Subsystem Models E11 and E1A</li> </ul> <p>The #0163 Fibre Channel Attach Specify is required for each device attaching to an iSeries server with a #2765. The following adapter kits are required when connecting SC type cables to the #2765:</p> <ul style="list-style-type: none"> <li>▶ #0371 - LC-SC Adapter Kit (50 um) can be ordered on initial, model upgrade, and MES orders. This optional kit is used to attach SC- type fibre (50 micron) cables to a #2765. This kit contains a 2 m LC-ST cable and ST-SC adapter for 50 micron fiber.</li> <li>▶ #0372 - LC-SC Adapter Kit (62.5 um) can be ordered on initial, model upgrade, and MES orders. This optional kit is used to attach SC-type fibre (62.5 micron) cables to a #2765. This kit contains a 2 m LC-ST cable and ST- SC adapter for 62.5 micron fiber.</li> </ul> <p>An optics cleaning kit (P/N 46G6844) and instruction sheet (P/N 21P6238, form number SY27-2604) is supplied, one per system, when a #2765/#2766 is ordered.</p> <p>Multi-target support with maximum of 16 targets with V5R2 The #2765 does not support the Alternate IPL device function. A D-mode IPL is required using CD-ROM, DVD-ROM, or another alternate IPL tape device. Then select a #2765 to complete the installation or recovery process. Minimum operating system level: OS/400 V5R1 The #2765 is a Customer Install Feature. The #2765 was withdrawn from marketing on 01 October 2004. The recommended replacement is a #5704 PCI-X Fibre Channel Tape Controller.</p>

#2766	<p><b>#2766 PCI Fibre Channel Disk Controller</b></p> <p>The #2766 provides Fibre Channel attachment capability for external disk devices. The #2766 supports point-to-point and arbitrated loop topologies and has an LC type cable connector. Each #2766 is shipped with a wrap connector (P/N 05N6767).</p> <p>The devices supported for Fibre Channel attachment are:</p> <ul style="list-style-type: none"> <li>▶ 2105-F10/F20 IBM TotalStorage Enterprise Storage Server®</li> <li>▶ 3534-1RU SAN Fibre Channel Managed Hub (1 Gbps)</li> <li>▶ Fibre Channel Switches: <ul style="list-style-type: none"> <li>– 2109 S08/S16 (1 Gbps)</li> <li>– 2109 F16 (2 Gbps)</li> <li>– 3534 F08 (2 Gbps)</li> </ul> </li> </ul> <p>The following adapter kits are required when connecting SC type cables to the #2766:</p> <ul style="list-style-type: none"> <li>▶ #0371 - LC-SC Adapter Kit (50 um) can be ordered on initial, model upgrade, and MES orders. This optional kit is used to attach SC-type fibre (50 micron) cables to a #2766. This kit contains a 2 m LC-ST cable and ST-SC adapter for 50 micron fiber.</li> <li>▶ #0372 - LC-SC Adapter Kit (62.5 um) can be ordered on initial, model upgrade, and MES orders. This optional kit is used to attach SC-type fiber (62.5 micron) cables to a #2766. This kit contains a 2 m LC-ST cable and ST-SC adapter for 62.5 micron fiber.</li> <li>▶ An optics cleaning kit (P/N 46G6844) and instruction sheet (P/N 21P6238, form number SY27-2604) is supplied, one per system, when a #2765/#2766 is present or ordered.</li> <li>▶ The #2766 requires a dedicated IOP. No other IOA is allowed on an IOP with the #2766.</li> </ul> <p>Clients must supply all Fibre Channel cables for this controller. See "Hard rules: iSeries IOA capabilities" in <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i>, REDP-3638 for additional restrictions.</p> <p>Corequisite: The #2766 requires RPQ 847126. Read and understand RPQ 847126 before ordering the #2766. Any order for a #2766 must be manually modified to add RPQ 847126. Multi-target support with maximum of 32 targets with OS/400 V5R2 Minimum operating system level: OS/400 V5R1 The #2766 is a Customer Install Feature.</p>
#2768	<p><b>#2768 PCI Magnetic Media Controller</b></p> <p>The #2768 provides Ultra SCSI attachment capability for an external tape, an external CD-ROM device, or an external DVD-RAM device that has a Single Ended SCSI interface. The #2768 supports the following devices:</p> <ul style="list-style-type: none"> <li>▶ 7207-122 QIC-SLR Tape Bridge Box (4 GB External ¼-inch Cartridge Tape Drive) (4 GB External QIC Tape Drive)</li> <li>▶ 7208-345 60 GB External 8mm Tape Drive</li> <li>▶ 7210-020 External CD-ROM Drive</li> <li>▶ 7210-025 External DVD-RAM Drive</li> <li>▶ 7329-308 SLR100 ¼-inch Tape Autoloader</li> </ul> <p>See 9.5.4, "#5712, #5715, #5702, #5705, #2718, and #2768 PCI Magnetic Media Controller: Device cabling rules" on page 370, for information about connecting devices to the #2768 including daisy-chaining options. Minimum operating system level: OS/400 V4R5</p> <p>The #2768 is a Customer Install Feature. The #2768 was withdrawn from marketing on 01 October 2004. The recommended replacement is a #5702 PCI-X Ultra Tape Controller.</p>

#2780	<p><b>#2780 PCI-X Ultra4 RAID Disk Controller</b></p> <p>The #2780 PCI-X Ultra4 RAID Disk Controller is an Ultra4 (u320) SCSI controller with a maximum compressed write cache size of 757 MB and maximum compressed read cache of one GB. The #2780 provides RAID-5 protection for internal disks and also supports internal tape units, CD-ROM, and DVD units. The #2780 has four Ultra4 SCSI buses. In addition to providing RAID-5 protection for disks, the #2780 PCI-X Ultra4 RAID Disk Controller is designed to work as a high performance controller for disks protected by system mirroring or disks with no protection.</p> <p>The #2780 PCI-X Ultra4 RAID Disk Controller supports a maximum of 20 disk units. A minimum of three disk units of the same capacity are needed for a valid RAID-5 configuration. A maximum of six arrays are allowed per controller, with a maximum of 18 disk units allowed per array.</p> <p>All disk units in an array must be of the same capacity. Parity is spread across either two, four, eight, or 16 disk units in an array. If an array of three disk units is started, parity is spread across two disk units. If an array of four to seven disk units is started, parity is spread across four disk units. If an array of 8 to 15 disk units is started, parity is spread across eight disk units. If an array of 16 to 18 disk units is started, parity is spread across 16 disk units.</p> <p>The number of arrays and size of each array can be influenced by specifying an optimization of either <i>Balance</i>, <i>Performance</i>, or <i>Capacity</i> when starting arrays in iSeries Navigator. An optimization of <i>Balance</i> is used by default when starting arrays from DST or SST options. If disk units are included into an existing array, the number of parity drives does not increase, so parity can be spread across less than the preferred number of disk units. In this case, the RAID function must be stopped and then started in order to redistribute the parity.</p> <p>The #2780 controls up to two removable media devices (internal tape, CD-ROM, and DVD).  The #2780 does not support DASD compression.  The #2780 has a battery that provides concurrent maintenance and improved resiliency.</p> <p>The #2780 can be attached directly to a Linux or AIX® partition. When ordered as #0627 - Direct Attach - #2780 PCI-X Ultra4 RAID Disk Controller, an IOP is not required. When attached directly to a Linux or AIX partition, the #2780 cannot be accessed by OS/400 partitions.</p> <p>Prerequisite: One 3V long PCI slot is required</p> <p>Not supported in Slot 1 of #5074, #5079, #5094, and #5294.  Due to system unit and external tower disk unit cage SCSI bus designs, only the Model 270 has a suitable system configuration to allow 18 disk units to attach to a single #2780. All other system unit or tower disk configurations restrict the number of attaching disk units to 15 or less.  SCSI port 1 can support LVD or single-ended devices.  SCSI ports 0, 2 and 3 are LVD only.</p> <p>Minimum operating system level: OS/400 V5R2  The #2780 is a Customer Install Feature</p>
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#2782	<p><b>#2782 PCI-X RAID Disk Unit Controller-40 MB cache</b></p> <p>The #2782 is a PCI-X SCSI controller with a 40 MB cache that provides RAID-5 protection for internal disks and also supports internal tape units, CD-ROM and DVD devices. #2782 has two SCSI buses that support up to 12 disk units. Hardware data compression is not supported.</p> <p>In addition to providing RAID-5 protection for disks, #2782 also works as a high-performance controller for disks protected by system mirroring, or disks with no protection. In the RAID-5 configuration, disk unit protection is provided at less cost than mirroring, and with better performance than system checksums.</p> <p>A minimum of three disk units of the same capacity are needed for a valid RAID-5 configuration. A maximum of four arrays are allowed per controller, with a maximum of 12 disk units allowed per array. All disk units in an array must be of the same capacity.</p> <p>Parity is spread across either two, four, or eight disk units in an array. If an array of three disk units is started, parity is spread across two disk units. If an array of four to seven disk units is started, parity is spread across four disk units. If an array of eight to 12 disk units is started, parity is spread across eight disk units.</p> <p>The number of arrays and size of each array can be influenced by specifying an optimization of either <i>Balance</i>, <i>Performance</i>, or <i>Capacity</i> when starting arrays in iSeries Navigator. An optimization of <i>Balance</i> is used by default when starting arrays from the DST or SST options. If disk units are included into an existing array, parity can be spread across less than the preferred number of disk units. In this case the RAID function must be stopped and then started in order to redistribute the parity.</p> <p>The #2782 controls up to two removable media devices (internal tape, CD-ROM and DVD).  The #2782 PCI-X RAID Disk Unit Controller does not support hardware data compression.  The #2782 does not support the attachment of external devices.</p> <p>Minimum operating system level: OS/400 V5R2  The #2782 is a Customer Install Feature.  The #2782 was withdrawn from marketing on 01 January 2004. The recommended replacement is the #5703 PCI-X RAID Disk Unit Controller.</p>
#2787	<p><b>#2787 PCI-X Fibre Channel Disk Controller</b></p> <p>The #2787 PCI-X Fibre Channel Disk Controller provides Fibre Channel attachment capability for external disk devices. The #2787 supports point-to-point and arbitrated loop topologies and has an LC-type cable connector. Each #2787 is shipped with a wrap connector (P/N 05N6767). The #2787 supports 64-bit, 133 MHz PCI-X bus speeds. The #2787 is the PCI-X replacement card for the #2766 PCI Fibre Channel Disk Controller.</p> <p>The following adapter kits are required when connecting SC-type cables to the #2787:</p> <ul style="list-style-type: none"> <li>▶ #0371 - LC-SC Adapter Kit (50 micron) can be ordered, both on initial, model upgrades, and simple MES orders. This optional kit is used to attach SC-type fibre (50 micron) cables to a #2787. The #0371 kit contains a 2 m LC-ST cable and ST-SC adapter for 50 micron fiber cable.</li> <li>▶ #0372 - LC-SC Adapter Kit (62.5 micron) can be ordered, both on initial, model upgrades, and simple MES orders. This optional kit is used to attach SC-type fiber (62.5 micron) cables to a #2787. The #0372 kit contains a 2 m LC-ST cable and ST-SC adapter for 62.5 micron fiber cable.</li> </ul> <p>An optics cleaning kit (part number 46G6844) and instruction sheet (part number 21P6238, form number SY27-2604) is supplied, one per system, when a #2787 is ordered.</p> <p>When used as a Direct Attached Adapter for Linux, the #0626 should be ordered in place of the #2787.  Maximum physical quantities are determined by requiring a dedicated IOP and limited to two per Multi-adapter Bridge boundary.</p> <p>All Fibre Channel cables required for the #2787 PCI-X Fibre Channel Disk Controller are supplied by the client.  Minimum operating system level: OS/400 V5R2  The #2787 is a Customer Install Feature</p>

#4748	<p><b>#4748 PCI RAID Disk Unit Controller–26 MB Cache</b></p> <p>The #4748 is an Ultra2 SCSI controller with a 26 MB write-cache that provides RAID-5 protection and compression for internal disk units and supports internal tape units and CD-ROM units. The #4748 supports both compression and non-compression modes. The mode of operation is determined by a hardware jumper. The #4748 is shipped in non-compression mode. By moving the hardware jumper, the controller functions in compression mode. In addition to providing RAID-5 protection for disks, the #4748 can work as a high performance controller for disks protected by system mirroring or disks with no protection. The #4748 also supports #4331 1.6 GB Read Cache Device, which provides increased performance. The #4331 1.6 GB Read Cache Device is supported only when the #4748/#9748 is <i>not</i> in compression mode.</p> <p>The #4748 does not support data compression on 35 GB disk units. The #4748 controller supports a maximum of 18 disk units in the Model 270.</p> <p>A minimum of four disk units of the same capacity are needed for a valid RAID-5 configuration. A maximum of four arrays are allowed per controller, with a maximum of 10 disk units allowed per array. All disk units in an array must be of the same capacity. Parity is spread across four disk units for arrays of four to seven disk units. Parity can be spread across either four or eight disk units for arrays of eight to 10 disk units. For systems started with eight to 10 disk units in an array, the parity for that array is spread across eight disk units. For systems that are started with less than eight disk units in an array and later MES upgraded to eight, nine, or 10 disk units, the RAID function must be stopped and then started before the parity is spread across eight disk units.</p> <p>The #4748 controls up to two removable media devices (internal tape, CD-ROM, or DVD-RAM).</p> <p>Requires a long PCI card slot. Only one is allowed in system unit and is mutually exclusive with #9767 and #4778. The #4748 is a Customer Install Feature.</p> <p>The #4748 was withdrawn from marketing on for new orders on 02 July 2002. The #4748 remains available as the target of feature conversions.</p> <p>The #4748 was withdrawn from marketing on 21 November 2003. The recommended replacement is a #4778 PCI RAID Disk Unit Controller.</p>
#4778	<p><b>#4778 PCI RAID Disk Unit Controller–104 MB Cache</b></p> <p>The #4778 is an Ultra2 SCSI controller with a 104 MB write-cache that provides RAID-5 protection and compression for internal disk units and supports internal tape units and CD-ROM units. The #4778 supports both compression and non-compression modes. The mode of operation is determined by a hardware jumper. The #4778 is shipped in non-compression mode. By moving the hardware jumper, the controller functions in compression mode. In addition to providing RAID-5 protection for disks, the #4778 is also designed to work as a high performance controller for disks protected by system mirroring or disks with no protection. The #4778 also supports the #4331 1.6 GB Read Cache Device, which provides increased performance. The #4331 1.6 GB Read Cache Device is supported only when the #4748/#9748 is <i>not</i> in compression mode.</p> <p>The #4778 controller supports a maximum of 18 disk units in the Model 270. A minimum of four disk units of the same capacity are needed for a valid RAID-5 configuration. A maximum of four arrays are allowed per controller, with a maximum of 10 disk units allowed per array. All disk units in an array must be of the same capacity. Parity is spread across four disk units for arrays of four to seven disk units. Parity can be spread across either four or eight disk units for arrays of eight to 10 disk units. For systems started with eight to 10 disk units in an array, the parity for that array is spread across eight disk units. For systems that are started with less than eight disk units in an array and later MES upgraded to eight, nine, or 10 disk units, the RAID function must be stopped and then started before the parity is spread across eight disk units.</p> <p>The #4778 controls up to two removable media devices (internal tape, CD-ROM, or DVD-RAM).</p> <p>Requires long PCI card slot. Only one allowed in the system unit and is mutually exclusive with the #9767 and #4748. Minimum operating system level: OS/400 V5R1</p> <p>The #4778 is a Customer Install Feature.</p> <p>The #4778 was withdrawn from marketing on 19 November 2004. Conversions to the #4778 remain available.</p>

#5580	<p><b>#5580 - 2780 Controller with Auxiliary Write Cache</b></p> <p>The #5580 provides a disk controller with auxiliary write cache to improve cache data redundancy. The #5580 includes a #2780 PCI-X Ultra4 RAID Disk Controller and a secondary IOA with 757MB of auxiliary maximum compressed write cache.</p> <p>The #2780 and the secondary IOA each require one PCI-X slot and must be installed together in the same system unit or I/O unit/drawer/tower. The #2780 and the auxiliary write cache IOA are connected by a SCSI cable (provided). Feature #2780 does not appear on IBM ordering, shipping, or inventory documentation.</p> <p>The connecting SCSI cable is attached to port four of the #2780, reducing the number of SCSI buses that support disk drives from four to three. The reduction of SCSI buses can also reduce the number of disk drives supported by the #2780, depending on the system unit or I/O unit/drawer/tower in which the #2780 is installed. No disk drives are driven by the auxiliary write cache IOA.</p> <p>For more details regarding auxiliary write cache, refer to <i>Planning for eServer i5 Data Protection with Auxiliary Cache Solutions</i>, REDP-4003 at:  <a href="http://w3.itso.ibm.com/redpieces/abstracts/redp4003.html?0pen">http://w3.itso.ibm.com/redpieces/abstracts/redp4003.html?0pen</a></p> <p>Minimum operating system level: OS/400 V5R2 with CUM C5123520 and prerequisite PTFs.</p>
#5581	<p><b>#5581 - 2757 Ctlr with Aux Write Cache</b></p> <p>The #5581 provides a disk controller with auxiliary write cache to improve cache data redundancy. The #5581 includes a #2757 PCI-X Ultra4 RAID Disk Controller and a secondary IOA with 757MB of auxiliary maximum compressed write cache. The #2757 and the secondary IOA each require one PCI-X slot and must be installed together in the same system unit or I/O unit/drawer/tower. The #2757 and the auxiliary write cache IOA are connected by a SCSI cable (provided). Feature #2757 will not appear on IBM ordering, shipping, or inventory documentation.</p> <p>The connecting SCSI cable is attached to port four of the #2757, reducing the number of SCSI buses that support disk drives from four to three. The reduction of SCSI buses can also reduce the number of disk drives supported by the #2757, depending on the system unit or I/O unit/drawer/tower in which the #2757 is installed. No disk drives are driven by the auxiliary write cache IOA.</p> <p>For more details regarding auxiliary write cache, refer to <i>Planning for eServer i5 Data Protection with Auxiliary Cache Solutions</i>, REDP-4003 at:  <a href="http://w3.itso.ibm.com/redpieces/abstracts/redp4003.html?0pen">http://w3.itso.ibm.com/redpieces/abstracts/redp4003.html?0pen</a></p> <p>Minimum operating system level: OS/400 V5R2 with cumulative PTF package C5123520 and prerequisite PTFs .</p>
#5702	<p><b>#5702 PCI-X Ultra Tape Controller</b></p> <p>The #5702 PCI-X Ultra Tape Controller provides a SCSI Ultra PCI attachment capability for external tape devices, and removable media devices. The #5702 has two ports that can attach two external tape devices. Each port can support at a minimum one of the following devices:</p> <ul style="list-style-type: none"> <li>▶ 3580-L23 IBM TotalStorage Ultrium 2 Tape Drive</li> <li>▶ 3583-LXX IBM Ultrium Scalable Tape Library</li> <li>▶ 3584-L32 or D32 Ultrascalable Tape Library</li> <li>▶ 7206-VX2 80 GB VXA-2 External Tape Drive</li> <li>▶ 7207-122 QIC-SLR Tape Bridge Box (4 GB External ¼-inch Cartridge Tape Drive)</li> <li>▶ 7208-345 60 GB External 8mm Tape Drive</li> <li>▶ 7210-020 External CD-ROM</li> <li>▶ 7210-025 External DVD-RAM</li> <li>▶ 7329-308 SLR100 ¼-inch Tape Autoloader</li> </ul> <p>See 9.5.4, “#5712, #5715, #5702, #5705, #2718, and #2768 PCI Magnetic Media Controller: Device cabling rules” on page 370, for information about connecting devices to the #5702 including daisy-chaining options.</p> <p>A #5702 or #5712 running in an i5OS or OS/400 partition cannot drive internal disk units in any expansion tower, base I/O tower or system unit enclosure.</p> <p>Minimum operating system level: OS/400 V5R2</p> <p>The #5702 is a Customer Install Feature.</p> <p>The #5702 was withdrawn from marketing on 01 June 2006. The #5712 PCI-X Tape Controller is the recommended replacement.</p>

#5703	<p><b>#5703 PCI-X RAID Disk Unit Controller</b></p> <p>The #5703 PCI-X RAID Disk Unit Controller is an Ultra3 SCSI controller with a cache size of 40 MB that provides RAID-5 protection for internal disks and internal tape units, CD-ROM, DVD-RAM and DVD-ROM units. The #5703 has two Ultra3 SCSI buses.</p> <p>In addition to providing RAID-5 protection for disks, the #5703 is designed to work as a high performance controller for disks protected by system mirroring or disks with no protection. In the RAID-5 configuration, disk unit protection is provided at less cost than mirroring, and with better performance than system checksums. The #5703 controller supports a maximum of 12 disk units.</p> <p>Due to a system unit and external tower disk unit cage SCSI bus designs, only the 270 Models, and the #0595/#5095 PCI-X Expansion Tower have a suitable system configuration to allow 12 disk units to attach to a single #5703. All other system unit tower disk configurations restrict the number of attaching disk units to 10 or less.</p> <p>A minimum of three disk units of the same capacity are needed for a valid RAID-5 configuration. A maximum of four arrays are allowed per controller, with a maximum of 12 disk units allowed per array. All disk units in an array must be of the same capacity. Parity is spread across either two, four, or eight disk units in an array. If an array of three disk units is started, parity is spread across two disk units. If an array of four to seven disk units is started, parity is spread across four disk units. If an array of 8-12 disk units is started, parity is spread across eight disk units.</p> <p>The number of arrays and size of each array can be influenced by specifying an optimization of <i>Balance</i>, <i>Performance</i>, or <i>Capacity</i> when starting arrays in iSeries Navigator. An optimization of <i>Balance</i> is used by default when starting arrays from the green screens. If disk units are included in an existing array, parity can be spread across less than the preferred number of disk units. In this case, RAID function must be stopped and then started to redistribute the parity.</p> <p>The #5703 controls up to two removable media devices (internal tape, CD-ROM, DVD-RAM, DVD-ROM). The #5703 does not support the attachment of external devices.</p> <p>When used as a Direct Attached Adapter for Linux, the #0628 should be ordered in place of the #5703.  Minimum operating system level: OS/400 V5R2  The #5703 is a Customer Install Feature.  A #5703 is the recommended replacement for the #2782 PCI-X RAID Disk Unit Controller.</p>
#5704	<p><b>#5704 PCI-X Fibre Channel Tape Controller</b></p> <p>The #5704 PCI-X Fibre Channel Tape Controller provides Fibre Channel attachment capability for external tape devices. The #5704 supports point-to-point and arbitrated loop topologies and has an LC-type cable connector. Each #5704 is shipped with a wrap connector (part number 05N6767). The #5704 supports 64-bit, 133 MHz PCI-X bus speeds.</p> <p>All Fibre Channel cables required for the #5704 PCI-X Fibre Channel Tape Controller are supplied by the client. The #5704 does not support the Alternate IPL device function. A D-mode IPL is required using CD-ROM, DVD-ROM, or another alternate IPL tape device. Then select a #5704 to complete the installation or recovery process.  Minimum operating system level: OS/400 V5R2  The #5704 is a Customer Install Feature.  The #5704 is the PCI-X card replacement for the #2765 PCI Fibre Channel Tape Controller.</p>
#9767	<p><b>#9767 Base PCI Disk Unit Controller</b></p> <p>The #9767 is disk unit and removable media device controller that provides Ultra2 SCSI attachment capability. The #9767 does not support RAID. The #9767 is the default controller in the Model 270 and controls up to six disk units and up to two removable media devices (internal tape, CD-ROM, DVD, or all three) in the system unit. The #9767 can control up to four disk units when installed in a #5075 PCI Expansion Tower.</p> <p>If RAID-5 is required or there are more than six drives, the #2763, #4748, or #4778 disk controller is required.</p> <p>The #9767 was withdrawn from marketing on 21 November 2003.</p>

## 4.5 Supported upgrades for the Model 270

All upgrades to, from, and within the 270 systems are withdrawn from marketing. Refer to the Upgrade topic in the Find and Compare Tool (FACT) at the following Web site to determine the supported upgrade paths for a given processor:

<http://www-919.ibm.com/servers/eserver/fact/>



## IBM AS/400e 720, 730, and 740 models

This chapter identifies the capacities that are associated with each IBM AS/400e Model 720, 730, and 740 system. It also describes the features, such as the processor, power and packaging, main storage, workstation controllers, and communications—including local area networks (LAN) and asynchronous transfer mode (ATM), disk units, internal tape units, CD-ROM, and magnetic media controller features.

Model and processor	Announce date	General availability date	Withdrawn from marketing
720 #2061	09 February 1999	26 February 1999	28 December 2001
720 #2062, #2063, #2064	09 February 1999	26 February 1999	02 July 2002
730 2065	09 February 1999	26 February 1999	28 December 2001
730 #2066, #2067, #2068	09 February 1999	26 February 1999	02 July 2002
740 #2069	09 February 1999	26 February 1999	28 December 2001
740 #2070	09 February 1999	26 February 1999	02 July 2002

**Note:** The darker shaded areas in the following tables and figures indicate the base features.

## 5.1 AS/400e Model 720 overview

The following tables provide the minimum and maximum capacities for the Model 720.

	Model 720			
Processor feature	#2061	#2062	#2063	#2064
Processor CPW <sup>1</sup>	240	420	810	1600
Interactive CPW				
#1500 (base)	35	35	35	35
#1501	70	70	-	-
#1502	120	120	120	120
#1503	-	240	240	240
#1504	-	-	560	560
#1505	-	-	-	1050
Number/type/speed of processor	1/Northstar/200 MHz	1/Northstar/200 MHz	2/Northstar/200 MHz	4/Northstar/255 MHz
Main storage (MB min to max)	256 to 2048	256 to 4096	256 to 8192	256 to 8192
Minimum OS/400 level	V4R3	V4R3	V4R3	V4R3
Software group <sup>6</sup>	P10/P20	P10/P20	P20/P30	P20/P30

Numbers are for all processor features	Base system	SUE #9364 PCI (#9329) PCI (#9330)	SUE #9364 SPD (#9331)	#5065 Storage/PCI Expansion Tower	Expansion tower	System maximum
Disk storage base (GB)	4.194	(Note 4)	(Note 4)			
Maximum internal (GB)	263.2	263.2	263.2	386.5	561.5	1625.9
Maximum internal (GB) (V5R1)	263.2	263.2	263.2	733.0	561.5	1625.9
Maximum external (GB)	(Note 5)		(Note 2)		(Note 2)	1595.3
Total maximum (GB)						1625.9
External SPD bus		4	4		0	4
Maximum card slots-SPD	0	0	6	0	13	58
Maximum card slots-PCI	8	14	0	12	0	70
Communication lines <sup>3</sup>	18	0-40	0-36	0-42	0-78	128
LAN/ATM adapters	1-3	0-6	0-6	0-6	0-13	24
Maximum workstation controllers						
Twinaxial <sup>6</sup>	5	11	18	12	39	66
ASCII <sup>6</sup>	0	0	6	0	13	58
Maximum workstations						
Twinaxial	188	440	720	480	1560	2628
ASCII	0	0	108	0	234	1044
¼-inch 8 mm cartridge tape (int)	1	3	3	3	4	17
CD-ROM	1	0-1	0	0-1	0-1	6
½-inch tape <sup>8</sup>	1	2	8	3	8	8
Reel 9348	1	2	4	3	4	4
Reel 2440	0	0	4	0	4	4
Reel 9347	0	0	2	0	2	2
Cartridge 34xx, 35xx	1	2	8	3	8	8
Tape libraries maximum						
½-inch cartridge	1	2	8	3	8	8
8 mm	1	2	4	3	4	4
8 mm cartridge (external)	1	2	4	3	4	4
Optical libraries	1	2	12	3	14	14
Diskettes (5 ¼-inch or 8-inch)	0	0	2	0	2	2
LAN ports maximum	3	6	12	6	24	24
Wireless IOP maximum	0	0	3	0	3	3
FSIOP maximum	0	0	3	0	6	16
FSIOA (IPCS) maximum	1	1	0	0	0	2
PCI LAN maximum	3	6	0	6	0	9
Cryptographic processors	1	3	1	3	1	6
Cryptographic accelerator						
Fax adapters	0	0	6	0	13	32

## 5.2 AS/400e Model 730 overview

The following tables provide the minimum and maximum capacities for the Model 730.

	Model 730			
Processor feature	#2065	#2066	#2067	#2068
Processor CPW <sup>1</sup>	560	1050	2000	2890
Interactive CPW				
#1506 (base)	70	70	70	70
#1507	120	120	-	-
#1508	240	240	240	240
#1509	560	560	560	560
#1510	-	1050	1050	1050
#1511	-	-	2000	2000
Number/type/speed of processor	1/Northstar/262 MHz	2/Northstar/262 MHz	4/Northstar/262 MHz	8/Northstar/262 MHz
Main storage (MB min to max)	512 to 24576	512 to 24576	512 to 24576	1024 to 24576
Minimum OS/400 level	V4R3	V4R3	V4R3	V4R3
Software group	P20/P30	P20/P30	P30/P40	P30/P40

Numbers are for all processor features	System maximum
Disk storage base (GB)	4.19
Maximum internal (GB)	1683.6/2499.6 (V4R3/V4R4)
Maximum external (GB)	1649.2/2473.9 (V4R3/V4R4)
Total maximum (GB)	1683.6/2499.6 (V4R3/V4R4)
Disk unit IOPs <sup>7</sup>	1-37
SPD I/O bus	1-19
SPD I/O card slots	3-235
PCI storage/expansion towers	0-18
PCI card slots	0-216
Communication lines	1-250
Maximum workstation controllers	1-175
Maximum workstations	
Twinaxial	7000
ASCII	3150
¼-inch/8 mm cartridge tape and CD-ROM (internal)	1 - 18 (Base CD-ROM)
½-inch tape <sup>8</sup>	
Reel 9348	4
Reel 2440	4
Reel 9347	2
Cartridge 34xx, 35xx	8
Tape libraries maximum	10
½-inch cartridge	4
8 mm	4
8 mm cartridge (external)	4
Optical libraries	22
Diskettes (5 ¼-inch or 8-inch)	2
LAN/ATM ports maximum	1-48
Wireless IOP maximum	3
Integrated xSeries Server	16
Cryptographic processors	6
Cryptographic accelerator	
Fax IOPs (two lines/IOP)	32

## 5.3 AS/400e Model 740 overview

The following tables provide the minimum and maximum capacities of the Model 740.

	Model 740	
Processor feature	#2069	#2070
Performance CPW <sup>1</sup>	3660	4550
Interactive CPW		
#1514 (Base)	120	120
#1510	1050	1050
#1511	2000	2000
#1512	3660	3660
#1513	-	4550
Number/type/speed of processor	8/Northstar/262 MHz	12/Northstar/262 MHz
Main storage (MB min to max)	1024 to 40960	1024 to 40960
Minimum OS/400 level	V4R3	V4R3
Software group	P40/P50	P40/P50

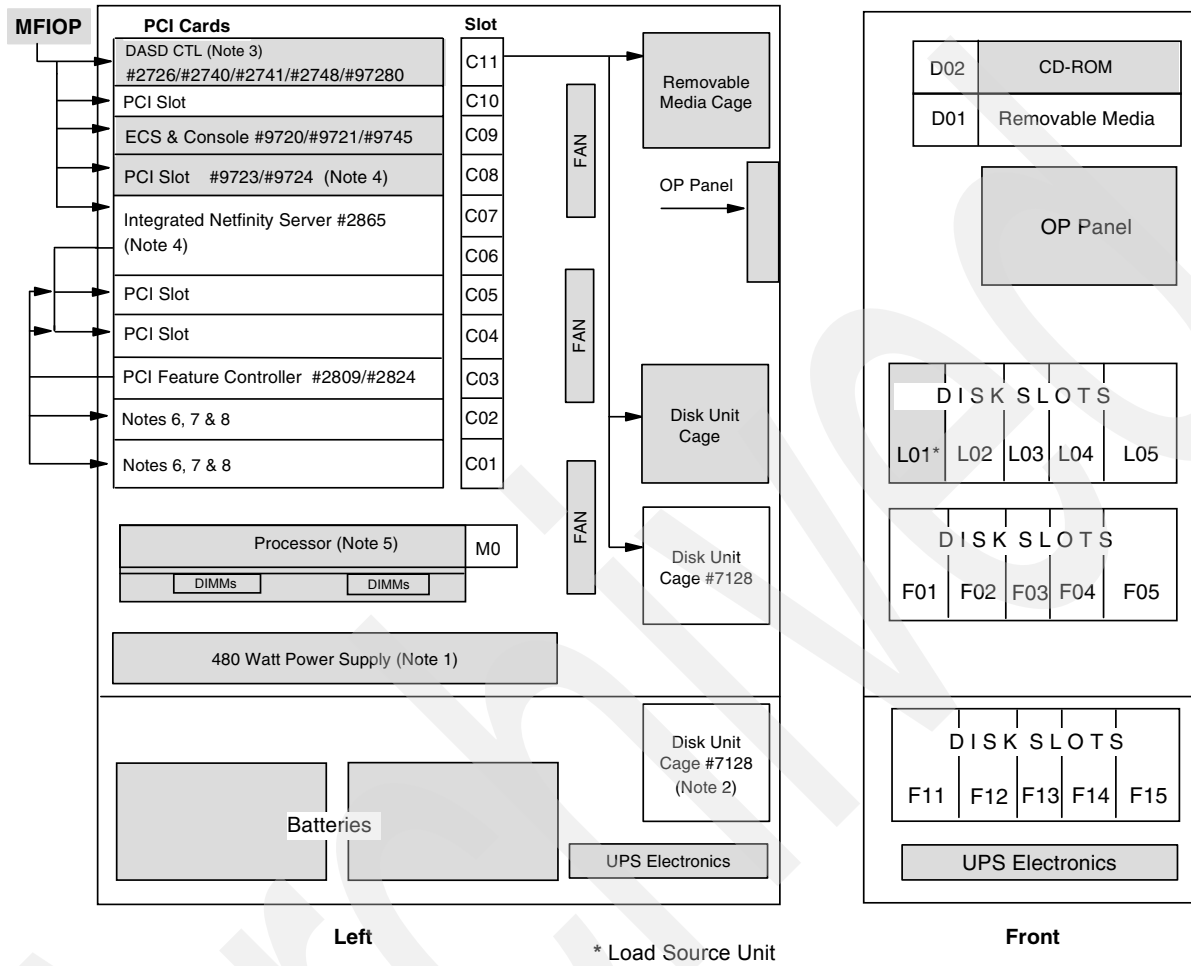
Numbers are for all processor features	System maximum
Disk storage base (GB)	4.19
Maximum internal (GB)	2095.9/4294.9 (V4R3/V4R4)
Maximum external (GB)	2061.3/4260.6 (V4R3/V4R4)
Total maximum (GB)	2095.9/4294.9 (V4R3/V4R4)
Disk unit IOPs <sup>7</sup>	1 to 37
SPD I/O bus	1 to 19
I/O card slots	3 to 237
PCI storage/expansion towers	0 to 18
PCI card slots	0 to 216
Communication lines	1 to 300
Maximum workstation controllers	1 to 175
Maximum workstations	7000
Twinaxial	3150
ASCII	1 to 30
1/4-inch/8 mm cartridge tape and CD-ROM (internal)	1 to 29 (Base CD-ROM) feature tape or CD-ROM
1/2-inch tape <sup>8</sup>	
Reel 9348	4
Reel 2440	4
Reel 9347	2
Cartridge 34xx, 35xx	8
Tape libraries maximum	14
1/2-inch cartridge	4
8 mm	4
8 mm cartridge (external)	4
Optical libraries	22
Diskettes (5 1/4-inch or 8-inch)	2
LAN/ATM ports maximum	1 to 72
Wireless IOP maximum	3
Integrated xSeries Server	16
Cryptographic processors	6
Cryptographic accelerator	
Fax IOPs (two lines/IOP)	32

## 5.4 Notes for AS/400e Models 720, 730, and 740 overview

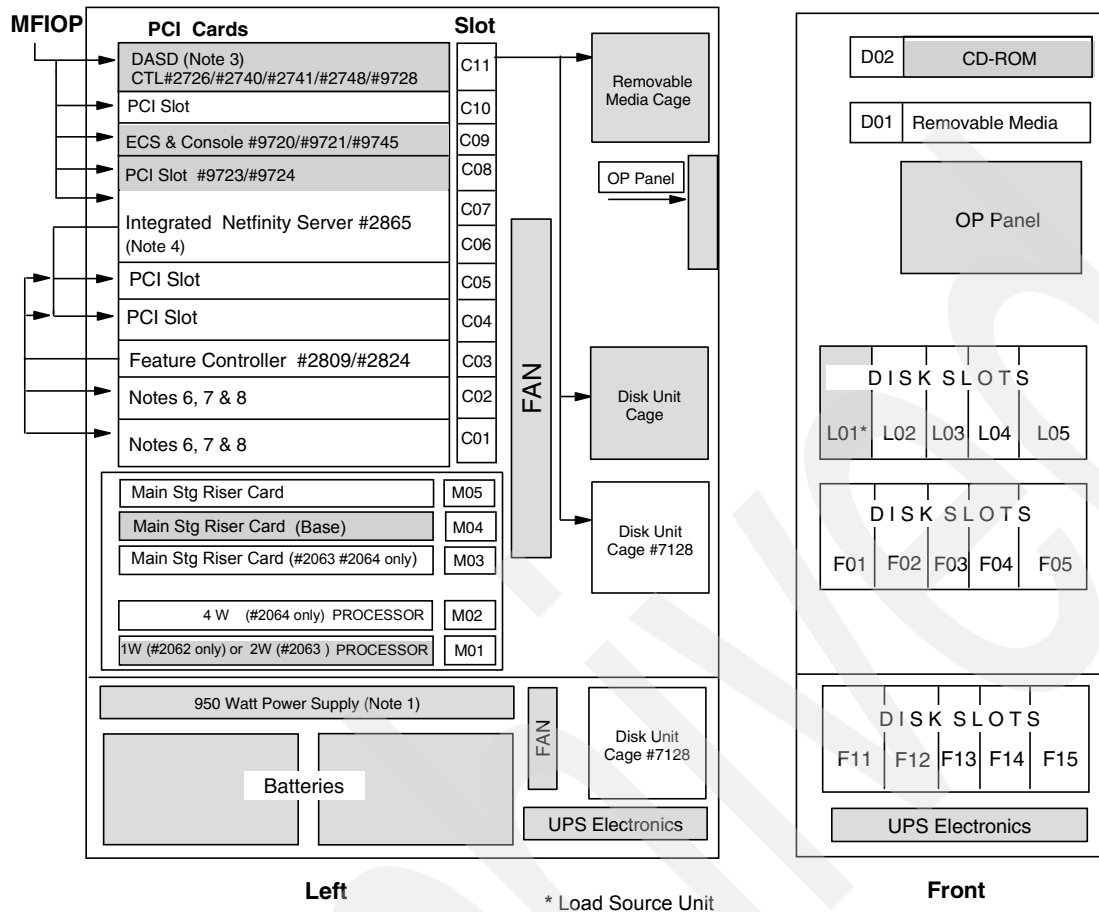
<b>Note 1</b>	The Commercial Processing Workload (CPW) is now used to measure the performance of all iSeries and AS/400e processors. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine the performance that is achievable. All iSeries and AS/400e processors announced from September 1996 onward have only CPW performance measurements.
<b>Note 2</b>	External direct access storage device (DASD) can be attached using an SPD card in the expansion unit.
<b>Note 3</b>	One line is used for Client Access Console or Operations Console if selected. Maximum is 17 if Twinaxial Console is selected.
<b>Note 4</b>	The #9364 must be configured with #9329/#9330 (Peripheral Component Interconnect (PCI)) or #9331 (System Products Division (SPD)). Therefore, these columns are mutually exclusive.
<b>Note 5</b>	The maximum is 175.4 GB on the #2061 Processor.
<b>Note 6</b>	Any combination of twinaxial or ASCII workstation controllers up to either maximum shown is allowed. Maximums are not additive.
<b>Note 7</b>	This total includes the multifunction input/output processor (MFIOP). The combination of internal and external input/output processors (IOPs) cannot exceed this number.
<b>Note 8</b>	The maximum combination of the 2440, 7208, or 9348 and tape libraries cannot exceed four.

## 5.5 9406 Model 720 system unit schematics

### 5.5.1 Model 720 #2061 processor



## 5.5.2 Model 720 #2062, #2063, #2064 processors



### Notes:

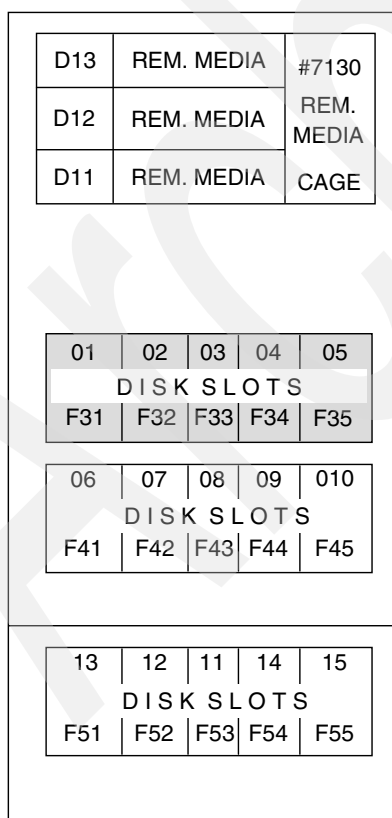
1. Processor #2061 has a 480-watt power supply. All other 720 models use the 950-watt power supply.
2. For the #2061 Processor, the third (lower) disk unit cage is not available on the #2061 Model 720. For the #2062, #2063, and #2064 Processors, the Dual Inline Memory Modules (DIMMs) plug onto the main storage riser card #2830.
3. The #9728 Base Disk Unit Controller does not support RAID-5 or integrated hardware disk compression and only supports five disks. If there is intention to install more than five disks in the base system unit or implement RAID-5 later, the #9728 should be changed for a #2741 PCI RAID Disk Unit Controller/#2748 PCI RAID Disk Unit Controller.
4. When a #2854 PCI Integrated PC Server or #2865 PCI Integrated Netfinity Server is installed:
  - Slot C04 (port 1) supports the #2723, #2724, or #2838 PCI 100/10 Mbps Ethernet IOA/#9738.
  - Slot C05 (port 2) supports the #2723 or #2724.
  - The #2851 and #2854, along with Windows NT, are not supported with after OS/400 V5R2. Upgrade to #2865 with Windows 2000.
5. The DIMMs plug directly on the processor planar.

6. For the #2809 in C03:
  - Slot C01 supports #2838/#9738 PCI 100/10 Mbps Ethernet IOA or #281x ATM.
  - Slot C02 supports the #2718 or #2729 PCI Magnetic Media Controller.
  - Slots C04/C05 support #2721, #2722, #2723, #2724, #2745, or #2746.
7. For the #2824 PCI Feature Controller in C03:
  - Slot C01 supports the #281x ATMs or #2838/#9738 PCI 100/10 Mbps Ethernet IOA.
  - Slot C02 supports the #2718, #2729, #2750, #2751, #2761, #2838, #281x, or #4800.
  - Slots C04/C05 support the #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, #2761, or #4800.
8. If a #2838 or #281x is installed on the #2824 PCI Feature Controller/#2809 PCI LAN/WAN/Workstation IOP in C03, only features #2721 or #2745 can be installed in C04/C05.
9. There is a maximum of one #2838 or #281x per #2824 PCI Feature Controller.
10. There is a maximum of one #2750, #2751, or #2761 per #2824 PCI Feature Controller.
11. There is a maximum of one #4800 per #2824 PCI Feature Controller.
12. The #281x ATM, #2750, #2751, and #2761 are not supported after OS/400 V5R2.

## 5.6 9406 Model 720 expansion unit schematics

### 5.6.1 #5064/#9364 system unit expansion

#### Front of #5064 or #9364

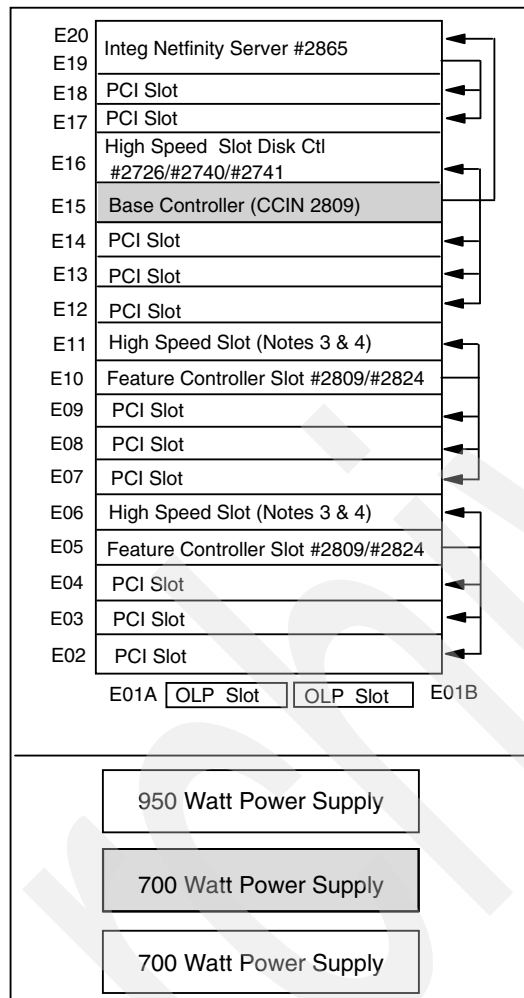


**Note:** The #5064/#9364 system unit expansion can either have a #9331 expansion unit for SPD cards or a #9329/#9330 PCI integrated expansion unit planar.

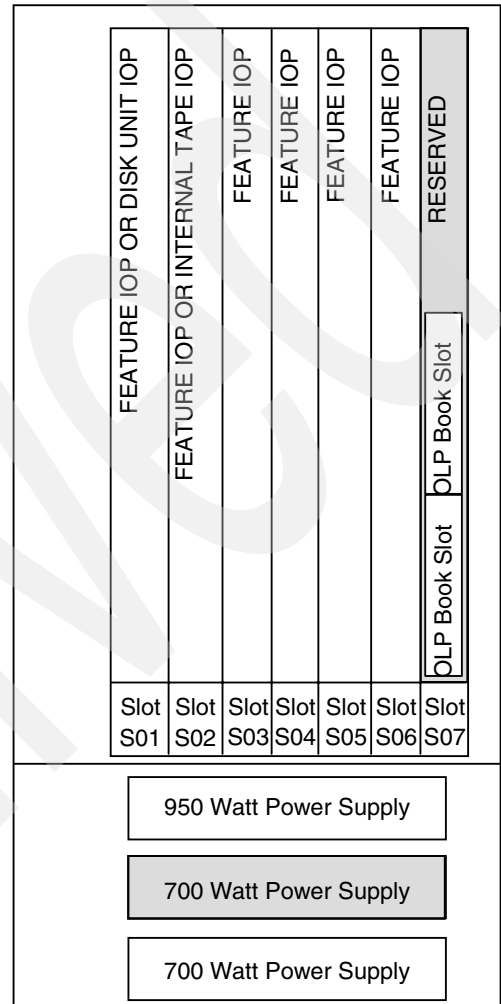


## 5.6.2 #9329 and #9330 PCI integrated expansion unit and #9331 expansion unit for SPD cards

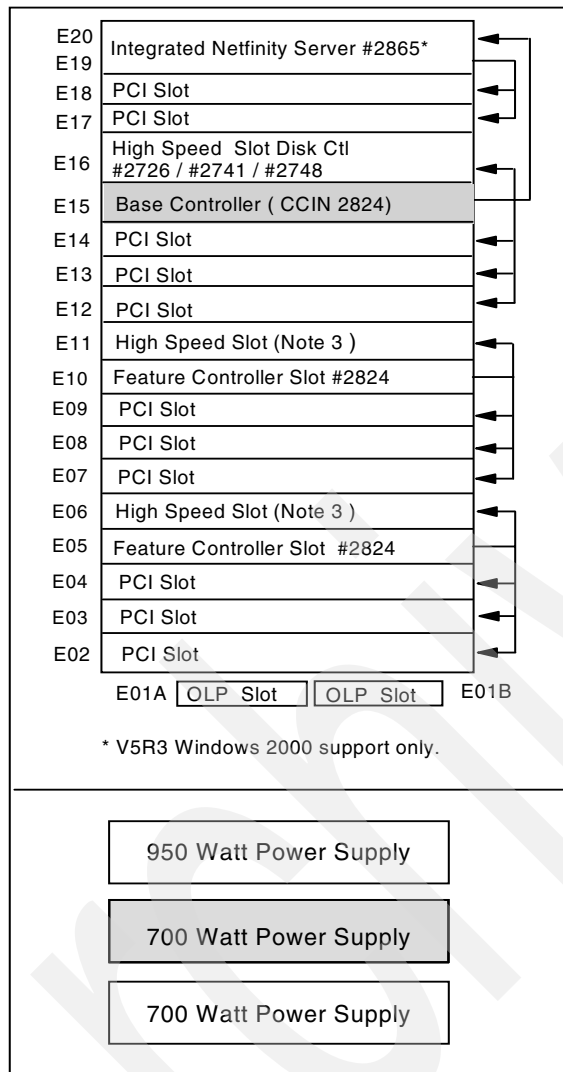
**#9364 or #5064 with  
#9329 PCI Card Cage**



**#9364 or #5064 with  
#9331 SPD Card Cage**



### 5.6.3 #5064/#9364 system unit expansion with #9330 PCI integrated expansion unit



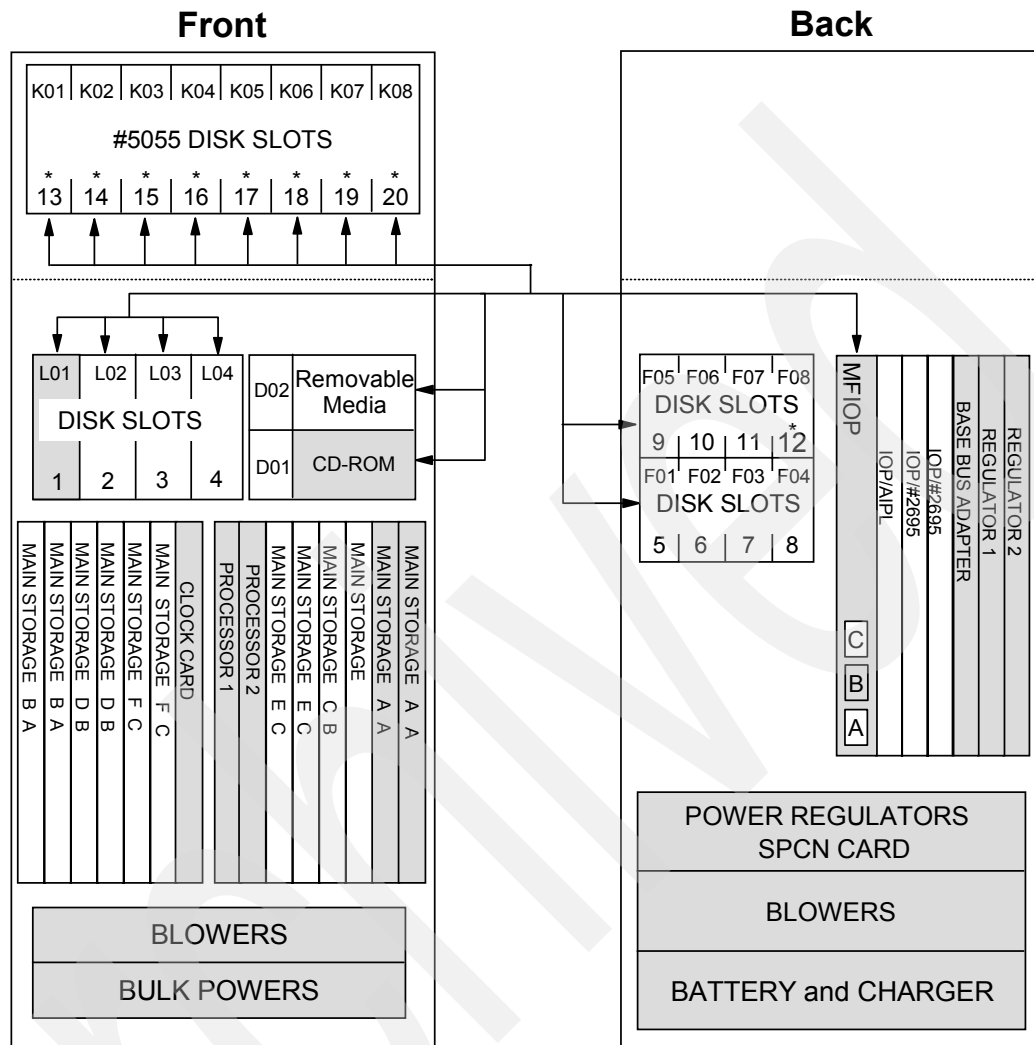
#### Notes:

- Optical link processors are used to connect expansion towers and racks.
- A base PCI LAN/WAN/workstation IOP (CCIN 2809) in the #9329 slot E15 supports:
  - In slot E16 (high-speed slot):
    - It supports #2726, #2740, or #2741.
  - In slots E12, E13, E14 (low-speed slots):
    - It supports the #2721, #2722, #2723, #2724, #2745, or #2746.
    - There can be three cards in any combination with a maximum of one LAN card.
    - When a #2851, #2854, or #2865 PCI Integrated Netfinity Server or Integrated xSeries Server is installed in the system expansion unit slots E19/E20, no LANs are allowed in slots E12, E13, and E14.

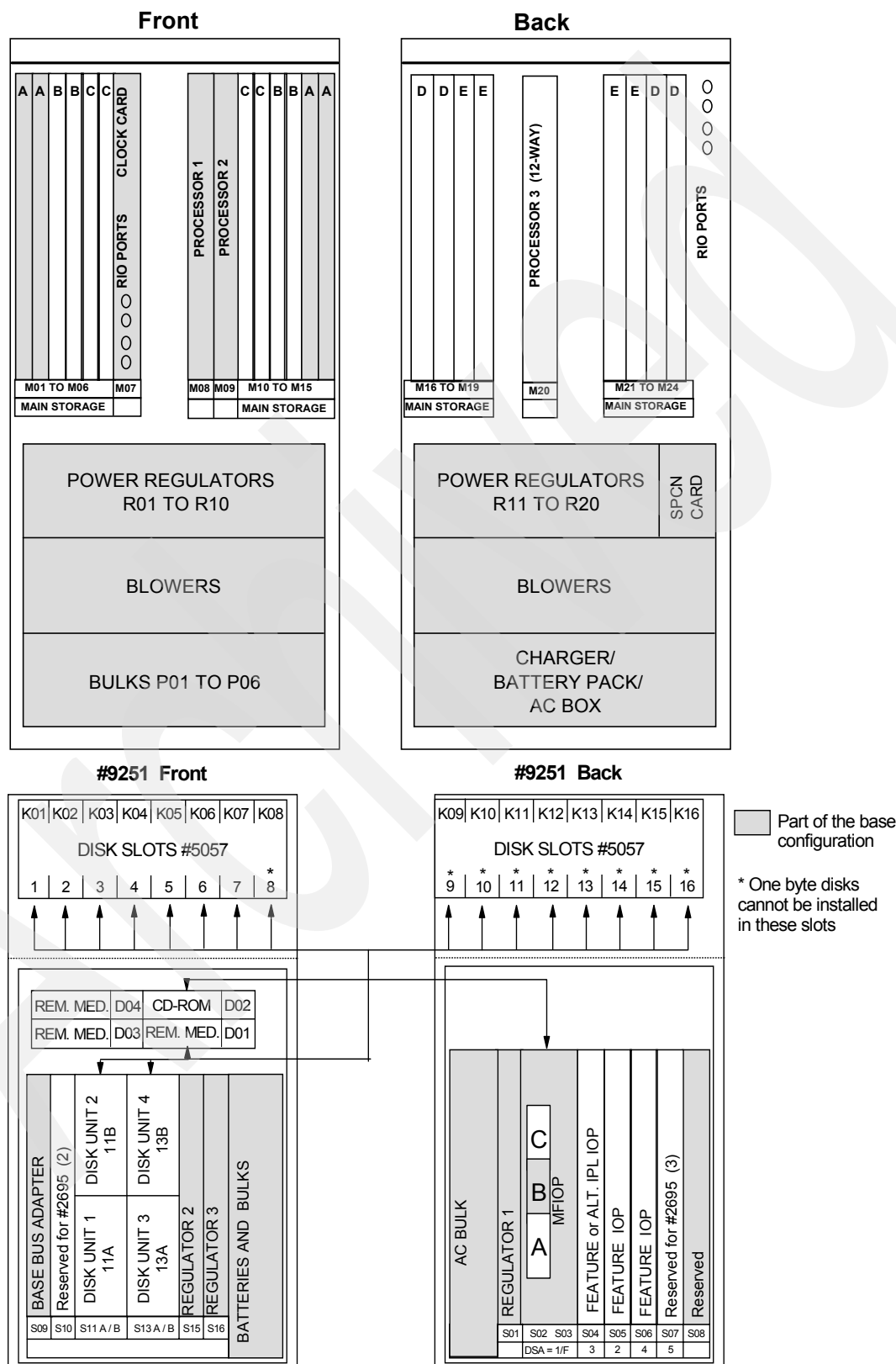
3. The #2838/#9738 PCI 100/10 Mbps Ethernet IOA is normally located in slot E06 or E11. However, if it is driven by the #2865 PCI Integrated Netfinity Server, one #2838/#9738 PCI 100/10 Mbps Ethernet IOA is located in slot E17.
4. Base PCI LAN/WAN/workstation IOP (CCIN 2824) in #9330 PCI integrated expansion unit slot E15 supports:
  - In slots E16 (high-speed slot):
    - It supports the #2726, #2741 PCI RAID Disk Unit Controller, or #2748 PCI RAID Disk Unit Controller.
  - In slot E12, E13, E14 (low-speed slots):
    - It supports the #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, or #2761.
    - It supports a maximum of two #2723, #2724 LAN adapters, or both.
    - It supports a maximum of one #2750, #2751, or #2761 remote access card.
    - It supports a any combination of WAN and twinaxial adapters.
    - When a #2851, #2854, or #2865 PCI Integrated Netfinity Server is installed in the system expansion unit slots E19/E20, no LAN features are allowed in slots E12, E13, and E14. Two LAN adapters are allowed on the Integrated PC Server (IPCS) or Integrated xSeries Server, one of which might be high speed.
    - The #2851 and #2854, along with Windows NT, are not supported after OS/400 V5R2. Upgrade to the #2865 with Windows 2000.
5. The #2824 PCI Feature Controller in #9329 slots E05 or E10 supports:
  - In slots E06 or E11 (high-speed slots):
    - It supports the #2718, #2729, #2838, #2750, #2751, #2761, #281x, or #4800.
  - In slots E02, E03, E04 or E07, E08, and E09 (low-speed slots):
    - It supports the #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, or #2761.
    - Three cards in any combination are allowed.
    - When a #2838 PCI 100/10 Mbps Ethernet IOA or any ATM feature is installed in E11, only #2721/#2745 PCI 2-Line WAN IOAs are allowed in slots E08 and E09. Slot E07 cannot be used.
    - When a #2838 PCI 100/10 Mbps Ethernet IOA or any ATM feature is installed in E06, only #2721/#2745 PCI 2-Line WAN IOAs are allowed in slots E03 and E04. Slot E02 cannot be used.
    - When a #2729 PCI Magnetic Media Controller is installed in E11, only one LAN is allowed in slots E08 and E09.
    - When a #2729 PCI Magnetic Media Controller is installed in E06, only one LAN is allowed in slots E03 and E04.
    - A maximum of one #2750, #2751, or #2761 remote access card is allowed per #2824 PCI Feature Controller.
    - A maximum of two #2723 or #2724 low-speed LANs is allowed per #2824 PCI Feature Controller.
    - The #281x ATM, #2750, #2751, and #2761 are not supported after OS/400 V5R2.

6. The #2824 PCI Feature Controller in the #9330 PCI integrated expansion unit slots E05 or E10 supports:
- In slots E06 or E11 (high-speed slots):
    - It supports the #2718, #2729, #2745, #2746, #2750, #2751, #2761, #281x, #2838, or #4800.
  - In slots E02, E03, E04 or E07, E08, and E09 (low-speed slots):
    - It supports the #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, or #2761.
    - It supports three cards in any combination.
    - A maximum of one #2838 PCI 100/10 Mbps Ethernet IOA or one #281x ATM is allowed per #2824 PCI Feature Controller.
    - If a high-speed LAN or ATM feature is present, the #2723/#2724 is not allowed on this #2824 PCI Feature Controller.
    - A maximum of one #2750, #2751, #2761 remote access card is allowed per #2824 PCI Feature Controller.
    - A maximum of two #2723, #2724 low-speed LANs, or both is allowed per #2824 PCI Feature Controller.
    - The #281x ATM, #2750, #2751, and #2761 are not supported after OS/400 V5R2.
7. The #2809 is not supported in the #9330 PCI integrated expansion unit.

## 5.7 9406 Model 730 system unit schematics

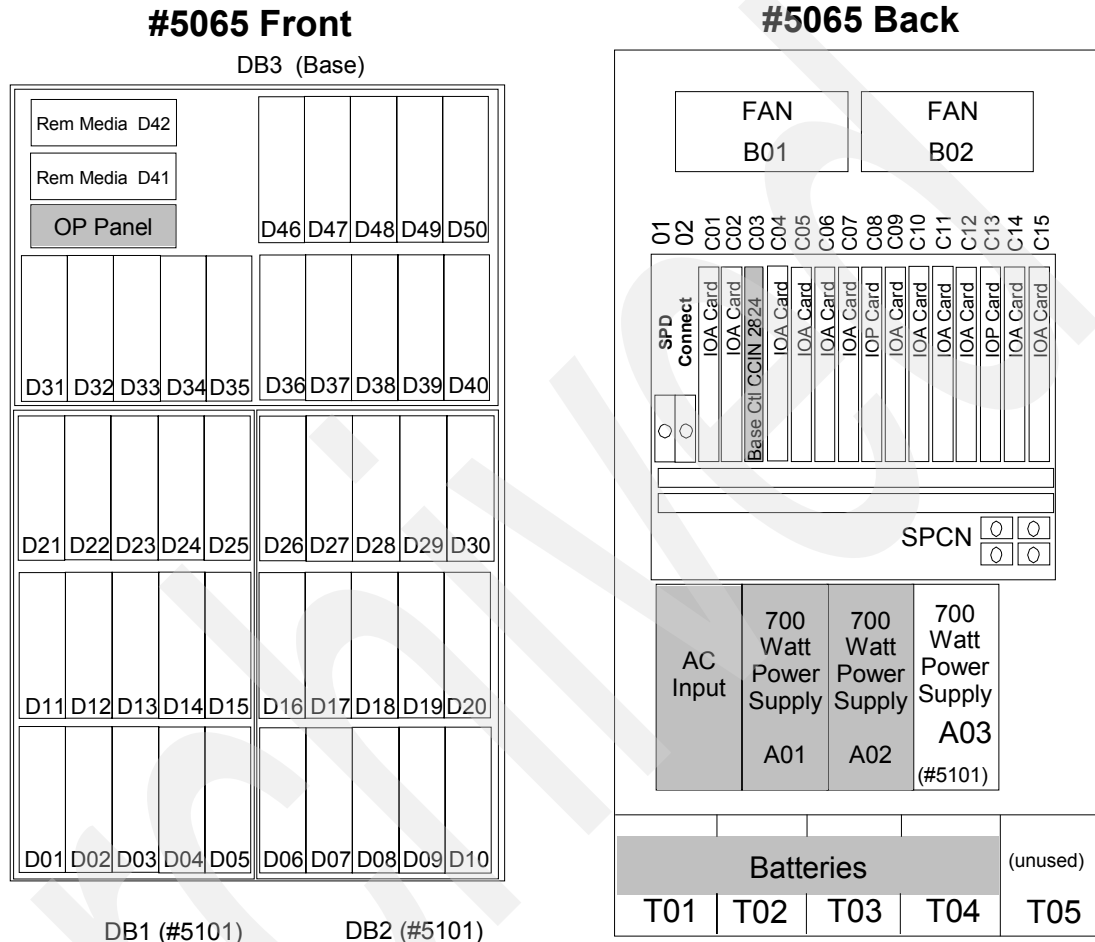


5.8 9406 Model 740 system unit with #9251 Base I/O Tower schematic



## 5.9 9406 System Unit Expansion Towers for Models 720, 730, and 740 schematics

### 5.9.1 #5065 Storage/PCI Expansion Tower

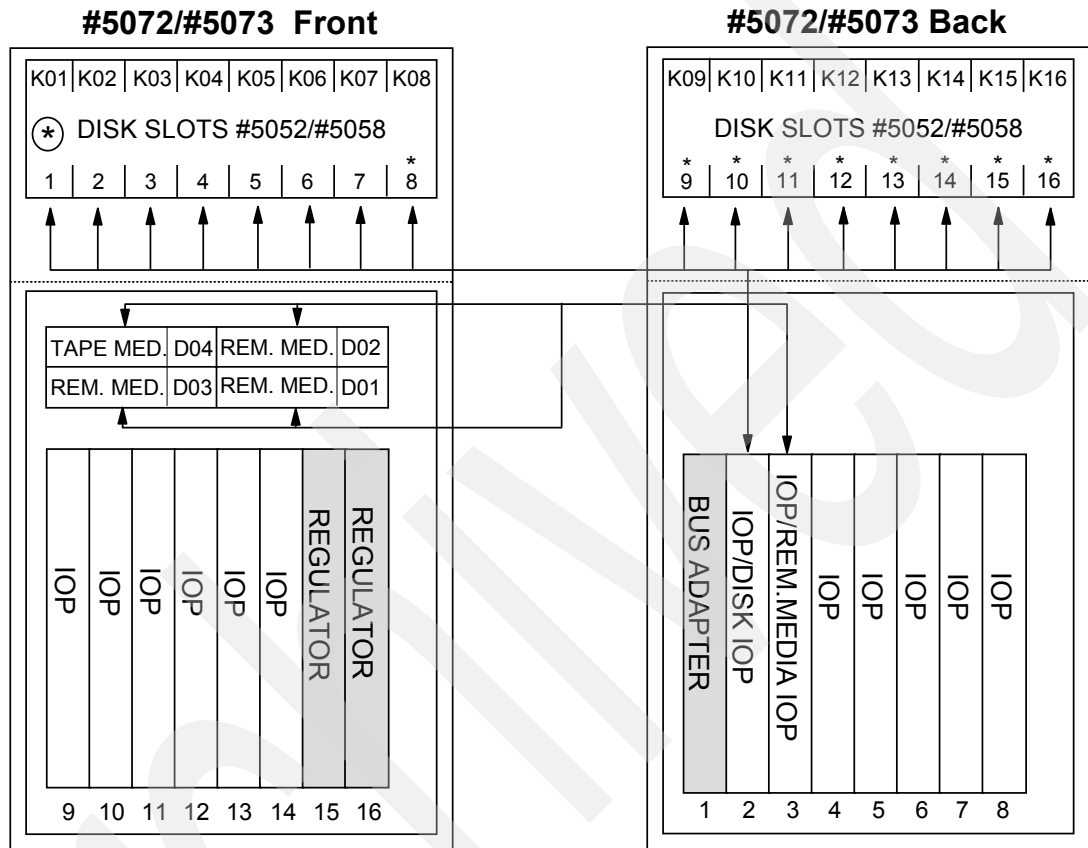


#### Notes:

1. The base IOP (CCIN 2824) in slot C03 supports two high-speed slots and two low-speed slots.
2. The base IOP supports only the #2718, #2729, or #2748 PCI RAID Disk Unit Controller in C04.
3. The base IOP supports, in C04 or C05, the #2723/#9723, #2724/#9724, #2745, #2746, #2750, #2751, #2761, or #4800.
4. The base IOP supports, in C05, only the #2815, #2816, #2818, or #2838/#9738 PCI 100/10 Mbps Ethernet IOA.
5. The base IOP supports, in C01 or C02, the #2723/#9723, #2724/#9724, #2745, #2746, #2750, #2751, or #2761.
6. There is a maximum of one #2838/#9738 PCI 100/10 Mbps Ethernet IOA or one #281x per CCIN 2824. If a #2838/#9738 or #281x is present, no other LAN features are allowed.
7. A maximum of two #2723/#9723 or #2724/#9724 is allowed per CCIN 2824.
8. A maximum of one #2750, #2751, #2761, or #4800 is allowed per CCIN 2824.
9. The #281x ATM, #2750, #2751, and #2761 are not supported after OS/400 V5R2.

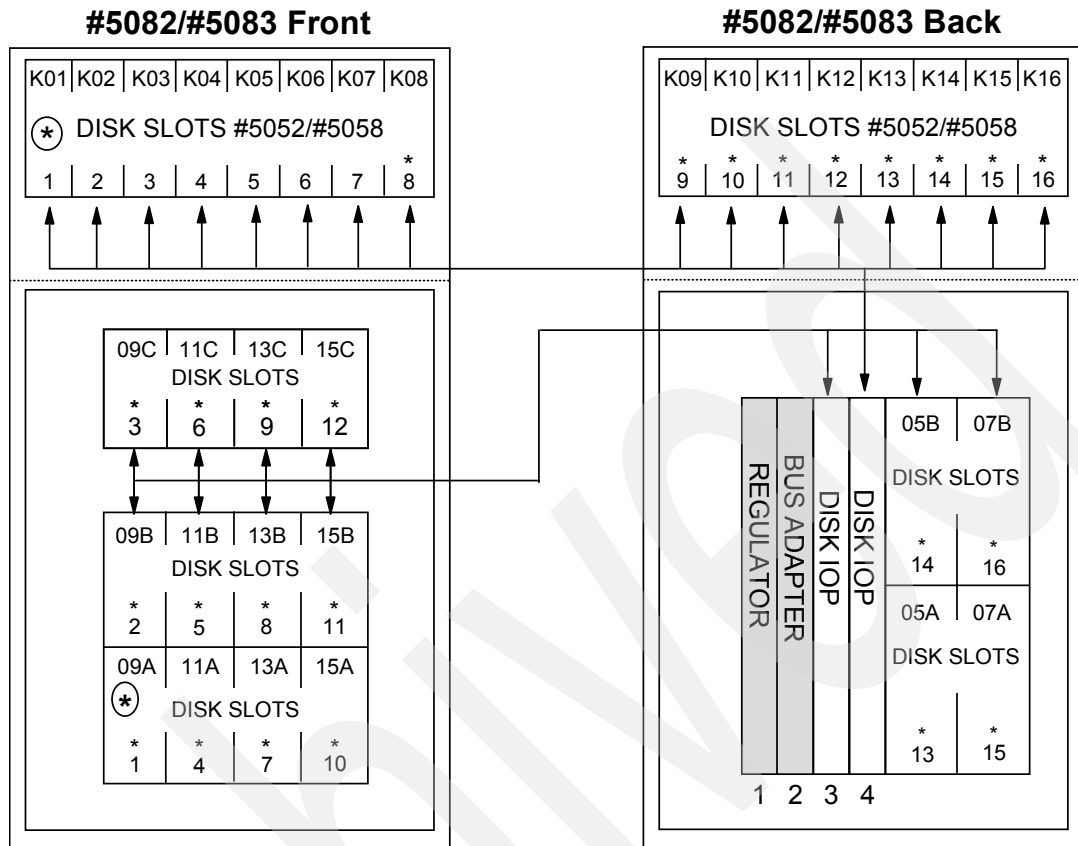
## 5.9.2 #5072 and #5073 1063 Mbps System Unit Expansion Tower

The #5072 1063 Mbps System Unit Expansion Tower and #5073 1063 Mbps System Unit Expansion Tower have the ability to control up to four tape devices or three tape devices and one CD-ROM (in positions D01, D02, and D03 only). There is a maximum of one CD-ROM device per #5072 or #5073 tower.





### 5.9.3 #5082 Storage Expansion Tower and #5083 Storage Expansion Tower



## 5.10 AS/400e Models 720, 730, and 740 processors

The AS/400e Models 720, 730, and 740 initial installation and model upgrades are performed by IBM Service Representatives.

720 processors		
#2061	Interactive feature	<b>240 RSP CPW 1-way Processor in Client/Server Environment</b> <b>Base Memory 256 MB</b>
	1500	<b>Base 35 RSP CPW in Interactive Environment</b> The #2061-1500 is represented by Processor Feature Code 206A.
	1501	<b>Optional 70 RSP CPW in Interactive Environment</b> The #2061-1501 is represented by Processor Feature Code 206B.
	1502	<b>Optional 120 RSP CPW in Interactive Environment</b> The #2061-1502 is represented by Processor Feature Code 206C.
#2062	Interactive feature	<b>420 RSP CPW 1-way Processor in Client/Server Environment</b> <b>Base Memory 256 MB</b>
	1500	<b>Base 35 RSP CPW in Interactive Environment</b> The #2062-1500 is represented by Processor Feature Code 206D.
	1501	<b>Optional 70 RSP CPW in Interactive Environment</b> The #2062-1501 is represented by Processor Feature Code 206E.
	1502	<b>Optional 120 RSP CPW in Interactive Environment</b> The #2062-1502 is represented by Processor Feature Code 206F.
	1503	<b>Optional 240 RSP CPW in Interactive Environment</b> The #2062-1503 is represented by Processor Feature Code 207A.
#2063	Interactive feature	<b>810 RSP CPW 2-way Processor in Client/Server Environment</b> <b>Base Memory 256 MB</b>
	1500	<b>Base 35 RSP CPW in Interactive Environment</b> The #2063-1500 is represented by Processor Feature Code 207B.
	1502	<b>Optional 120 RSP CPW in Interactive Environment</b> The #2063-1502 is represented by Processor Feature Code 207C.
	1503	<b>Optional 240 RSP CPW in Interactive Environment</b> The #2063-1503 is represented by Processor Feature Code 207D.
	1504	<b>Optional 560 RSP CPW in Interactive Environment</b> The #2063-1504 is represented by Processor Feature Code 207E.
#2064	Interactive feature	<b>1600 RSP CPW 4-way Processor in Client/Server Environment</b> <b>Base Memory 256 MB</b>
	1500	<b>Base 35 RSP CPW in Interactive Environment</b> The #2064-1500 is represented by Processor Feature Code 207F.
	1502	<b>Optional 120 RSP CPW in Interactive Environment</b> The #2064-1502 is represented by Processor Feature Code 208A.
	1503	<b>Optional 240 RSP CPW in Interactive Environment</b> The #2064-1503 is represented by Processor Feature Code 208B.
	1504	<b>Optional 560 RSP CPW in Interactive Environment</b> The #2064-1504 is represented by Processor Feature Code 208C.
	1505	<b>Optional 1050 RSP CPW in Interactive Environment</b> The #2064-1505 is represented by Processor Feature Code 208D.

730 processors		
#2065	Interactive feature	<b>560 RSP CPW 1-way Processor in Client/Server Environment</b> <b>Base Memory 512 MB</b>
	1506	<b>Base 70 RSP CPW in Interactive Environment</b> The #2065-1506 is represented by Processor Feature Code 2A6A.
	1507	<b>Optional 120 RSP CPW in Interactive Environment</b> The #2065-1507 is represented by Processor Feature Code 2A6B.
	1508	<b>Optional 240 RSP CPW in Interactive Environment</b> The #2065-1508 is represented by Processor Feature Code 2A6C.
	1509	<b>Optional 560 RSP CPW in Interactive Environment</b> The #2065-1509 is represented by Processor Feature Code 2A6D.
#2066	Interactive feature	<b>1050 RSP CPW 2-way Processor in Client/Server Environment</b> <b>Base Memory 512 MB. 512 MB to 24576 MB. DASD 4.19 GB to 1683.6 GB (2499.6 GB OS/400 V4R4).</b> Maximum twinaxial/ASCII devices 7000/3150.
	1506	<b>Base 70 RSP CPW in Interactive Environment</b> The #2066-1506 is represented by Processor Feature Code 2A6E.
	1507	<b>Optional 120 RSP CPW in Interactive Environment</b> The #2066-1507 is represented by Processor Feature Code 2A6F.
	1508	<b>Optional 240 RSP CPW in Interactive Environment</b> The #2066-1508 is represented by Processor Feature Code 2B6A.
	1509	<b>Optional 560 RSP CPW in Interactive Environment</b> The #2066-1509 is represented by Processor Feature Code 2B6B.
	1510	<b>Optional 1050 RSP CPW in Interactive Environment</b> The #2066-1510 is represented by Processor Feature Code 2B6C.
#2067	Interactive feature	<b>2000 RSP CPW 4-way Processor in Client/Server Environment</b> <b>Base Memory 512 MB</b>
	1506	<b>Base 70 RSP CPW in Interactive Environment</b> The #2067-1506 is represented by Processor Feature Code 2B6D.
	1508	<b>Optional 240 RSP CPW in Interactive Environment</b> The #2067-1508 is represented by Processor Feature Code 2B6E.
	1509	<b>Optional 560 RSP CPW in Interactive Environment</b> The #2067-1509 is represented by Processor Feature Code 2B6F.
	1510	<b>Optional 1050 RSP CPW in Interactive Environment</b> The #2067-1510 is represented by Processor Feature Code 2C6A.
	1511	<b>Optional 2000 RSP CPW in Interactive Environment</b> The #2067-1511 is represented by Processor Feature Code 2C6B.
#2068	Interactive feature	<b>2890 RSP CPW 8-way Processor in Client/Server Environment</b> <b>Base Memory 1024 MB</b>
	1506	<b>Base 70 RSP CPW in Interactive Environment</b> The #2068-1506 is represented by Processor Feature Code 2C6C.
	1508	<b>Optional 240 RSP CPW in Interactive Environment</b> The #2068-1508 is represented by Processor Feature Code 2C6D.
	1509	<b>Optional 560 RSP CPW in Interactive Environment</b> The #2068-1509 is represented by Processor Feature Code 2C6E.
	1510	<b>Optional 1050 RSP CPW in Interactive Environment</b> The #2068-1510 is represented by Processor Feature Code 2C6F.
	1511	<b>Optional 2000 RSP CPW in Interactive Environment</b> The #2068-1511 is represented by Processor Feature Code 2D6A.

740 processors		
#2069	Interactive feature	<b>3660 RSP CPW 8-way Processor in Client/Server Environment</b> <b>Base Memory 1024 MB</b>
	1514	<b>Base 120 RSP CPW in Interactive Environment</b> The #2069-1514 is represented by Processor Feature Code 2D6B.
	1510	<b>Optional 1050 RSP CPW in Interactive Environment</b> The #2069-1510 is represented by Processor Feature Code 2D6C.
	1511	<b>Optional 2000 RSP CPW in Interactive Environment</b> The #2069-1511 is represented by Processor Feature Code 2D6D.
	1512	<b>Optional 3660 RSP CPW in Interactive Environment</b> The #2069-1512 is represented by Processor Feature Code 2D6E.
#2070	Interactive feature	<b>4550 RSP CPW 12-way Processor in Client/Server Environment</b> <b>Base Memory 1024 MB</b>
	1514	<b>Base 120 RSP CPW in Interactive Environment</b> The #2070-1514 is represented by Processor Feature Code 2E6A.
	1510	<b>Optional 1050 RSP CPW in Interactive Environment</b> The #2070-1510 is represented by Processor Feature Code 2E6B.
	1511	<b>Optional 2000 RSP CPW in Interactive Environment</b> The #2070-1511 is represented by Processor Feature Code 2E6C.
	1512	<b>Optional 3660 RSP CPW in Interactive Environment</b> The #2070-1512 is represented by Processor Feature Code 2E6D.
	1513	<b>Optional 4550 RSP CPW in Interactive Environment</b> The #2070-1513 is represented by Processor Feature Code 2E6E.

## 5.11 AS/400e Models 720, 730, and 740 features

This section identifies the supported features for the AS/400e Model 720, 730, and 740.

PCI cards are subject to plugging rules. See *PCI Card Placement Rules for the IBM eServer iSeries Server*, REDP-3638 for additional restrictions.

Power and packaging	
Base Optical Bus Adapter	<b>Base Optical Bus Adapter</b> The Base Optical Bus Adapter is identified as CCIN 2696. No feature code is required. Supported in Model 730 and 740.
#2686	<b>#2686 Optical Link Processor (266 Mbps)</b> The #2686 is a card that is used for attaching a #5044 System Unit Expansion Rack. Each #2686 supports a maximum of one #5044. It can be placed in the #9364 System Unit Expansion with either #9331 expansion unit for SPD cards or #9329 PCI Card Expansion Unit on the Model 720.  Maximum: Two on the Model 720; nine on Model 730 and 740 Card slots used: One open slot on the optical bus adapter
#2688	<b>#2688 Optical Link Processor (1063 Mbps)</b> The #2688 is a card that is used for attaching #5065, #5072, #5073, #5082, and #5083 Expansion Towers on the Model 720, 730, and 740. Each #2688 supports a maximum of two #50xx towers. It can be placed in the #9364 System Unit Expansion with either #9329, #9330 PCI integrated expansion unit, or #9331 expansion unit for SPD cards on the Model 720.  Maximum: Two on the Model 720; nine on the Model 730 and 740 Card slots used: One open slot on the optical bus adapter

#2695	<p><b>#2695 Optical Bus Adapter</b> The #2695 allows for the addition of up to three #2686 or #2688 Optical Link Processors in any combination.</p> <p>Card slots used: One Maximum: Two</p>
#2730	<p><b>#2730 Programmable Regulator</b> The #2730 is required when five or more main storage cards are installed. Uses slot R12. Supported on Model 730.</p>
#5043	<p><b>#5043 Primary to Secondary Rack Conversion</b> The #5043 is used for the conversion of a 9406 F Model system unit rack to a #9171 type rack. It is also available on feature conversion from #5040. This converted rack retains the #5043 feature. Supported on Models 720, 730, and 740</p>
#5044	<p><b>#5044 System Unit Expansion Rack</b> The #5044 is a 12 SPD I/O card slot cage in a rack enclosure. Each unit provides two buses with six I/O card slots per bus. The #5044 is a conversion of a #5040 or #5042 rack.</p> <p>Prerequisite: #2686 Optical Link Processor and an open slot on the Optical Bus Adapter Maximum: Two on Model 720; nine on Model 730 and 740</p>
#5052	<p><b>#5052 Storage Expansion Unit</b> The #5052 provides space for up to 16 disk units. It attaches to the top of the #5072 1063 Mbps System Unit Expansion Tower and the #5082 Storage Expansion Tower. Only one #5052 per tower is supported, and the #5143 Power Supply might be required.</p>
#5055	<p><b>#5055 Storage Expansion Unit (Ultra SCSI)</b> The #5055 provides space for up to eight disk units. It attaches to the top of the Model 730 system unit.</p> <p>Prerequisite: #5151 Power Supply Supported on Model 730</p>
#5057	<p><b>#5057 Storage Expansion Unit (Ultra SCSI)</b> The #5057 provides space for up to 16 disk units. It attaches to the top of the #9251 Base I/O Tower. Supported on Model 740</p>
#5058	<p><b>#5058 Storage Expansion Unit (Ultra SCSI)</b> The #5058 provides space for up to 16 disk units. It attaches to the top of the #5073 1063 Mbps System Unit Expansion Tower and the #5083 Storage Expansion Tower. Only one #5058 per tower is supported.</p>
#5064	<p><b>#5064 System Unit Expansion</b> The #5064 allows the addition of either a #9331 expansion unit for SPD cards or #9329 PCI Card Expansion Unit. It also supports one #7130 Expansion Unit Tape Cage to support up to three additional tape/CD-ROM units. The #5064 supports five disks and allows two additional #7128 DASD Expansion Units to be added.</p> <p>Maximum: One Supported on Model 720</p>
#5065	<p><b>#5065 Storage/PCI Expansion Tower</b> The #5065 provides an additional bus. It includes a 1063 Mbps optical bus card. The #5065 has redundant, hot swappable power supplies. It supports three LAN, WAN, or workstation controllers; 12 PCI IOA cards; two removable media; and up to 45 disk units. Three specific disk slots can be used for #4331 1.6 GB Read Cache Device features. The #5065 supports Ultra2 SCSI.</p> <p>The #4319 35.16 GB 10k RPM Disk Unit is not supported. Prerequisite: #2688 Optical Link Processor Maximum: Four on the Model 720; 18 on the Model 730 and 740 The #5065 is a Customer Install Feature. The #5065 was withdrawn from marketing on 21 November 2003.</p>

#5066	<p><b>#5066 1.8 M I/O Tower</b></p> <p>The #5066 provides two additional buses. The #5066 is actually two #5065 Storage/PCI Expansion Towers installed in a 1.8M I/O Tower. The #5066 reports to the system as two #5065s. The #5066 1.8 M I/O Tower includes two 1063 Mbps optical bus cards, various cables (including optical cables) and the 1.8M I/O Tower. The #5066 includes 24 PCI IOA slots, space for 90 disk units, space for four removable media devices, battery backup, redundant or hot swap power supplies, and two base PCI LAN, WAN, or Workstation IOPs (CCIN 2824). The #5066 is capable of controlling Ultra2 SCSI disk units. Two line cords must be specified.</p> <p>Prerequisite: #2688 Optical Link Processor  Maximum: Two on the Model 720; nine on the Model 730 and 740  Minimum operating system level: OS/400 V4R4  The #5066 was withdrawn from marketing on 21 November 2003.</p>
#5072	<p><b>#5072 1063 Mbps System Unit Expansion Tower</b></p> <p>The #5072 provides an additional bus. It includes a 1063 Mbps optical bus card, 13 SPD I/O card slots, space for up to four internal tape units, and battery and power supplies. It can support one #5052 Storage Expansion Unit. Due to power restrictions, some combinations of high power consumption cards might mean that an additional #5072 is required.</p> <p>Prerequisite: #2688 Optical Link Processor  Maximum: Four on the Model 720; 18 on the Model 730 and 740</p>
#5073	<p><b>#5073 1063 Mbps System Unit Expansion Tower</b></p> <p>The #5073 provides additional buses. It includes a 1063 Mbps optical bus card, 13 SPD I/O card slots, space for up to four internal tape units, and battery and power supplies. It can support one #5058 Storage Expansion Unit. Due to power restrictions, some combinations of high power consumption cards might mean that an additional #5073 is required.</p> <p>Prerequisite: #2688 Optical Link Processor  Maximum: Four on the Model 720; 18 on the Model 730 and 740</p>
#5082	<p><b>#5082 Storage Expansion Tower (1063 Mbps)</b></p> <p>The #5082 provides a DASD tower for adding up to 16 disk units. A total of 32 disk units are supported with the addition of a #5052 Storage Expansion Unit. The #5082 includes a 1063 Mbps optical bus card, two SPD I/O card slots for the #6502, #6512, #6530, #6532, and #6533 disk IOPs, and battery and power supplies.</p> <p>Prerequisite: #2688 Optical Link Processor  Maximum: Four on the Model 720; 18 on the Model 730 and 740</p>
#5083	<p><b>#5083 Storage Expansion Tower (1063 Mbps Ultra SCSI)</b></p> <p>The #5083 provides a DASD tower for adding up to 16 disk units. A total of 32 disk units are supported with the addition of #5058 Storage Expansion Unit. The #5083 includes a 1063 Mbps optical bus card, two SPD I/O card slots for the #6502, #6512, #6530, #6532, or #6533 disk IOPs, and battery and power supplies.</p> <p>Prerequisite: #2688 Optical Link Processor  Maximum: Four on the Model 720; 18 on the Model 730 and 740</p>
#5101	<p><b>#5101 30 Disk Unit Expansion</b></p> <p>The #5101 provides two 15 unit disk enclosures, a 700-watt power supply, backplanes, and internal cables.</p> <p>Maximum: One per #5065 Storage/PCI Expansion Tower</p>
#5143	<p><b>#5143 Power Supply</b></p> <p>The #5143 is a 400-watt power supply that is usually a prerequisite for a #5052 Storage Expansion Unit installed on a #5072 1063 Mbps System Unit Expansion Tower or #5082 Storage Expansion Tower.</p> <p>Maximum: One per #5072 or #5082</p>
#5150	<p><b>#5150 Battery Backup (External)</b></p> <p>The #5150 is an external battery backup that when used in conjunction with internal battery backup is capable of extending the Continuously Power Main Storage (CPM) time to a minimum of 48 hours. On Model 730 and 740, a standard internal battery backup is capable of maintaining CPM on 16 GB of main storage for a minimum of 24 hours. The #5150 is required when main storage exceeds 16 GB on a Model 730 or 740. It can also be purchased for increasing the CPM time over that of the internal battery.</p>
#5151	<p><b>#5151 Power Supply (650 watts)</b></p> <p>The #5151 is a 650-watt feature power supply that is a prerequisite for #5055 Storage Expansion Unit. It is also required when five or more main storage cards are installed.</p> <p>Maximum: One  Supported on Model 730</p>

#5153	<p><b>#5153 Redundant Power Supplies</b></p> <p>The #5153 consists of two power supplies: a 950 watt (re-rated to 970 at OS/400 V4R3) and a 650 watt (re-rated to 700 at OS/400 V4R3). The #5153 provides redundancy for the power supplies in the system unit and system unit expansion. The #5153 physically resides in the #5064/#9364 system unit expansion.</p> <p>Maximum: One Supported on the #2062, #2063, and #2064 Model 720 Processors only</p>
#7128	<p><b>#7128 DASD Expansion Unit</b></p> <p>The #7128 allows the addition of five disk units to either the system unit or the #5064/#9364 system unit expansion.</p> <p>Maximum: Three in the Model 720 Processor #2061; four in the Model 720 Processors #2062, #2063, and #2064 Supported on Model 720</p>
#7130	<p><b>#7130 Expansion Unit Tape Cage</b></p> <p>The #7130 allows the addition of three tape units or CD-ROMs to the #5064/#9364 system unit expansion. Tape Units #1349, #1350™, #1355, #1360, #6480, #6481, #6482, #6483, #6485, #6486, or #6490 are supported in the first two tape positions. Only the #1355, #6485, and #6586 tape units are supported in the third position. A tape controller is required to support these tape devices.</p> <p>Maximum: One Supported on Model 720</p>
#9251	<p><b>#9251 Base I/O Tower</b></p> <p>The #9251 is the base tower on a Model 740. It includes four feature SPD IOP slots, space for three removable media devices, one CD-ROM drive, one MFIO, the ability to add up to 20 feature disk units (with #5057 Storage Expansion Unit), and battery and power supplies.</p> <p>Supported on Model 740</p>
#9329	<p><b>#9329 PCI Card Expansion Unit</b></p> <p>The #9329 contains 11 low-speed PCI card slots and three high-speed PCI card slots. These are driven by one Base Controller (CCIN 2809) and two feature controllers. One IPCS or Integrated xSeries Server optional. It also has space for one or two #2686 or #2688 Optical Link Processor cards to support up to four external towers.</p> <p>Maximum: One Supported on Model 720</p>
#9330	<p><b>#9330 PCI integrated expansion unit</b></p> <p>The #9330 PCI integrated expansion unit contains 11 low-speed PCI card slots and three high-speed PCI card slots. These are driven by one Base Controller (CCIN 2824) and two feature controllers. One IPCS or Integrated xSeries Server is optional. It also has space for one or two #2686 or #2688 Optical Link Processor cards to support up to four external towers.</p> <p>Maximum: One Supported on Model 720</p>
#9331	<p><b>#9331 expansion unit for SPD cards</b></p> <p>The #9331 expansion unit for SPD cards allows the addition of up to six SPD cards and one or two #2686 or #2688 Optical Link Processors to support up to four external towers. The #9331 includes an SPD Controller Card. CD-ROM is not supported.</p> <p>Maximum: One Supported on Model 720</p>
#9364	<p><b>#9364 System Unit Expansion</b></p> <p>The #9364 allows addition of either an #9331 expansion unit for SPD cards or a #9329/#9330 PCI integrated expansion unit. It also supports one #7130 Expansion Unit Tape Cage for up to three tapes or CD-ROMs, base DASD cage supporting five disks, up to two additional #7128 DASD Expansion Units can be supported. CD-ROM is not supported with the #9331 expansion unit for SPD cards.</p> <p>Maximum: One Supported on Model 720</p>

Main storage	
Base	There are no features to specify the base memory 256 MB on all of the Model 720 processors. For main storage must be added in pairs, and feature codes must be installed in pairs. The same rules apply to quads.
#2830	<b>Main Storage Expansion Riser Card</b> The #2830 mounts additional main storage DIMMs. It contains 16 sockets for placement of 32 MB DIMMs or 128 MB DIMMs.  Maximum: One on Processor #2062; two on Processors #2063 and #2064; none on the Processor #2061 Supported on Model 720
#3001	<b>32 MB Main Storage (DIMM)</b> Plugs directly into the CPU or #2830. Must be added in pairs.  Maximum: 14 DIMMs (physically) on Processors #2061; 28 DIMMS for Processor #2062; 44 DIMMs for Processors #2063 and #2064 Supported on Model 720
#3002	<b>128 MB Main Storage (DIMM)</b> Plugs directly into the CPU or #2830. Must be added in pairs.  Maximum: 14 DIMMs (physically) on Processor #2061; 30 DIMMS on Processor #2062; 46 DIMMs on Processors #2063 and #2064 Supported on Model 720
#3004	<b>256 MB Main Storage (DIMM)</b> Plugs directly into the CPU or #2830. Must be added in pairs.  Maximum: Six DIMMs (physically) on Processors #2061; 14 DIMMS on Processor #2062; 30 DIMMS on Processors #2063 and #2064 Supported on Model 720
#3179	<b>256 MB Main Storage Card</b> Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740.  Requires one dedicated memory card slot Maximum: Five pairs on Model 730 #2065, #2066, and #2067; three quads on Model 730 #2068; four quads on Model 740 Supported on Models 730 and 740
#3180	<b>512 MB Main Storage Card</b> Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740.  Requires one dedicated memory card slot Maximum: Five pairs on Model 730 #2065, #2066, and #2067; three quads on Model 730 #2068; four quads on Model 740 Supported on Models 730 and 740
#3189	<b>128 MB Main Storage Card</b> Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740. Requires one dedicated memory card slot.  Maximum: Five pairs on Model 730 #2065, #2066, and #2067; three quads on Model 730 #2068; four quads on Model 740 Supported on Models 730 and 740
#3190	<b>256 MB Main Storage Card</b> Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740. Requires one dedicated memory card slot.  Maximum: Five pairs on Model 730 #2065, #2066, and #2067; three quads on Model 730 #2068; four quads on Model 740 Supported on Models 730 and 740
#3191	<b>512 MB Main Storage Card</b> Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740. Requires one dedicated memory card slot.  Maximum: Five pairs on Model 730 #2065, #2066, and #2067; three quads on Model 730 #2068; four quads on Model 740 Supported on Models 730 and 740



#3192	<p><b>1024 MB Main Storage Card</b> Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740. Requires one dedicated memory card slot.</p> <p>Maximum: Five pairs on Model 730 #2065, #2066, and #2067; three quads on Model 730 #2068; four quads on Model 740 Supported on Models 730 and 740</p>
#3193	<p><b>2048 MB Main Storage Card</b> Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740. Requires one dedicated memory card slot.</p> <p>Maximum: Five pairs on Model 730 #2065, #2066, and #2067; three quads on Model 730 #2068; four quads on 740 Supported on Models 730 and 740</p>
#8180	<p><b>Optional Base 512 MB Main Storage Card</b> The #8180 is an optional 512 MB main storage card in place of a base 256 MB card. Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740.</p> <p>Requires one dedicated memory card slot Supported on Models 730 and 740</p>
#8191	<p><b>Optional Base 512 MB Main Storage Card</b> The #8191 provides an optional 512 MB main storage card in place of a base 256 MB card. Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740.</p> <p>Requires one dedicated memory card slot Supported on Models 730 and 740</p>
#8192	<p><b>Optional Base 1024 MB Main Storage Card</b> The #8192 provides an optional 1024 MB main storage card in place of a base 256 MB card. Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740.</p> <p>Requires one dedicated memory card slot Supported on Models 730 and 740</p>
#8193	<p><b>Optional Base 2048 MB Main Storage Card</b> The #8193 provides an optional 2048 MB main storage card in place of a base 256 MB card. Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor #2068 and on the Model 740.</p> <p>Requires one dedicated memory card slot Supported on Models 730 and 740</p>
#9179	<p><b>Base 256 MB Main Storage Card</b> Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor #2068 and on the Model 740.</p> <p>Requires one dedicated memory card slot Supported on Models 730 and 740</p>
#9190	<p><b>Base 256 MB Main Storage Card</b> Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor #2068 and on the Model 740.</p> <p>Requires one dedicated memory card slot Supported on Models 730 and 740</p>

Workstation controllers	
Base MFIOP	<p><b>Base Multifunction IOP (PCI)</b></p> <p>The MFIOP on the 720 is part of the planar and does not occupy a PCI card slot. The base system includes this MFIOP, which has three low-speed slots (C08, C09, C10) and one high-speed PCI card slot C11 used for the base system disk controller #2726, #2740, #2741 PCI RAID Disk Unit Controller, #2748 PCI RAID Disk Unit Controller, or #9728. The MFIOP also drives one Integrated PC Server or a PCI Integrated xSeries Server. One PCI card slot supports the #9720 Base PCI WAN/Twinaxial IOA or the #9721/#9745 Base PCI 2-Line WAN IOA. The remaining two PCI card slots support #2721, #2722, #2723, #2724, #2745, or #2746 PCI IOAs. Only one of these can be a #2723 or #2724 LAN IOA. Also, if a #2851, #2854 PCI Integrated PC Server or #2865 PCI Integrated Netfinity Server is installed in slots C06 and C07, the #2722 or #2746 PCI Twinaxial Workstation IOA is not allowed in slot C08, and LAN IOAs are not allowed in slots C08 or C10. Supported on Model 720.</p>
Base IOP	<p><b>Base Controller for PCI Integrated Expansion Unit (#9329/#9330)</b></p> <p>The Base IOP is standard with #9329 and #9330 PCI integrated expansion unit. No feature is required. The Base IOP is identified as CCIN 2809 in the #9329. In the #9330, it is identified as CCIN 2824. The Base IOP is used for attaching LAN, WAN, and workstation IOAs to the system and supports one slot reserved for a PCI disk controller and three low-speed slots. It also supports one PCI Integrated PC Server or Integrated xSeries Server. The Base controller is located in slot E15.</p> <p><b>CCIN 2809.</b> In the high-speed slot E16, only the #2726 or #2741 PCI RAID Disk Unit Controller is supported. In slots E12, E13 and E14, it supports any three (with a maximum of one LAN) of #2721, #2722, #2723/#9723, #2724/#9724, #2745, or #2746. When a #2865 PCI Integrated Netfinity Server is installed in E19/E20, no LAN cards are allowed in E12, E13, and E14.</p> <p><b>CCIN 2824.</b> In the high-speed slot E16, only the #2726, #2741 or #2748 PCI RAID Disk Unit Controller is supported. In slots E12, E13 and E14, it supports any three (with a maximum of two LAN cards) of #2721, #2722, #2723/#9723, #2724/#9724, #2745, #2746, #2750, #2751, or #2761. There is a maximum of one #2750, #2751 or #2761. There can be any combination of WAN and twinaxial. When a #2865 PCI Integrated Netfinity Server is installed in E19/E20, no LAN cards are allowed in E12, E13, and E14.</p> <p>Maximum: One Supported on Model 720</p>
Base IOP	<p><b>Base Controller for Storage/#5065 Storage/PCI Expansion Tower</b></p> <p>The Base IOP is identified as CCIN 2824. It is standard with #5065 Storage/PCI Expansion Tower No feature is required. It is used for attaching LAN, WAN, and workstation IOAs with two high-speed slots and two low-speed slots. Installs in slot C03.</p> <p>The #2718, #2729, or #2748 PCI RAID Disk Unit Controller are supported in C04 only. The #2723/#9723, #2724/#9724, #2645, #2746, #2750, #2751, #2761, or #4800 are supported in C04 or C05. The #281x or #2838/#9738 PCI 100/10 Mbps Ethernet IOA are supported on C05 only. The #2723/#9723, #2724/#9724, #2745, #2746 #2750, #2751, or #2761 are supported in C01 or C02.</p> <p>Maximum: One</p>
#2629	<p><b>#2629 LAN/WAN/Workstation IOP (SPD)</b></p> <p>The #2629 LAN/WAN/Workstation IOP supports up to three of the following LAN/WAN/ Workstation IOAs, with a maximum of two LAN IOAs:</p> <ul style="list-style-type: none"> <li>▶ #2699 Two-Line WAN IOA</li> <li>▶ #6149 16/4 Mbps Token Ring IOA</li> <li>▶ #6180 Twinaxial Workstation IOA</li> <li>▶ #6181 ASCII Workstation Controller</li> </ul> <p>The #6149 and #6181 cannot occupy all three positions of the #2629.</p> <p>Prerequisite: One SPD slot required per #2629</p> <p>Up to seven #2629s can be placed into each #5072 1063 Mbps System Unit Expansion Tower. The #2629 is not allowed in slot 14 of the #5072 1063 Mbps System Unit Expansion Tower. No restrictions apply when using the #2629 with a #5073 1063 Mbps System Unit Expansion Tower.</p> <p>The #2629 was withdrawn from marketing on 31 May 2001.</p>
#2720 #9720	<p><b>#2720 Base PCI WAN/Twinaxial IOA</b></p> <p>The #2720 is a combined twinaxial/communications adapter. It can be included as base in the 720 model. It provides four ports supporting a maximum of 28 twinaxial devices. It also provides a single communications line to support ECS. The #9720 is mutually exclusive with the #9721/#9745 Base PCI 2-Line WAN IOA.</p> <p>PCI slots required: One Maximum: One #9720 or #2720 per system Supported on Model 720</p>

#2722	<p><b>#2722 Twinaxial Workstation IOA (PCI)</b> The #2722 is an 8-port attachment provided to support 40 active twinaxial devices.</p> <p>PCI slots required: One (low-speed only)</p>
#2746	<p><b>#2746 PCI Twinaxial Workstation IOA (PCI)</b> The #2746 is an 8-port attachment provided to support 40 active twinaxial devices.</p> <p>PCI slots required: One (low speed in the system unit or #9329 PCI Card Expansion Unit, high or low speed in #9330 PCI integrated expansion unit or #5065 Storage/PCI Expansion Tower) Minimum operating system level: OS/400 V4R4</p>
#2809	<p><b>#2809 PCI LAN/WAN/Workstation IOP</b> The #2809 can be used for attaching PCI LAN, WAN, and workstation IOAs to the system.</p> <p>In system unit slot C03, the #2809 supports PCI feature IOAs in slots C01, C02, C04, and C05. If an Integrated xSeries Server is installed, the server controls slots C04 and C05. In slot C01, the #2809 supports #2838/#9738 PCI 100/10 Mbps Ethernet IOA or #281x. In the C02 high-speed slot, it supports a #2718 or #2729 PCI Magnetic Media Controller. In slot C04 and C05, it supports one or two #2721 or #2722 or #2723 or #2724 or #2745 or #2746. If the #2838/#9738 PCI 100/10 Mbps Ethernet IOA is in C01, only the #2721 or #2745 can be installed in slots C04 and C05.</p> <p>In the #9329 PCI Card Expansion Unit slots E05 or E10, the #2809 supports low-speed slots E02, E03, E04 or E07, E08, E09 and high-speed slots E06 or E11. In slots E06 or E11, the #2718 PCI Magnetic Media Controller, #2729 PCI Magnetic Media Controller, #2738/#9738 PCI 100/10 Mbps Ethernet IOA, or #281x are supported. In the low-speed slots, it supports #2721, #2722, #2723/#9723, #2724/#9724, #2745, or #2746.</p> <p>The #2809 supports different combinations of cards depending on where it is installed on the #503x Migration Tower.</p> <p>Maximum of one in the system unit and two in the #9329 PCI Card Expansion Unit Supported on Model 720. It is supported for migration only on the #503x Migration Tower The #2809 was withdrawn from marketing on 31 May 2001.</p>
#2824	<p><b>#2824 PCI Feature Controller</b> The #2824 can be used for attaching additional LAN, WAN, and Workstation IOAs to the system. The #2824 is a feature I/O processor with 32 MB of memory installed.</p> <p>In system unit slot C03, the #2824 supports PCI feature IOAs in slots C01, C02, C04, and C05 (if an Integrated xSeries Server is installed, the server controls slots C04 and C05). C01 supports the #2838/#9738 PCI 100/10 Mbps Ethernet IOA, #281x. C02 high-speed slot supports #2718, #2729 PCI Magnetic Media Controller, #2750, #2751, #2761 or #4800. C04 and C05 supports #2721/#9721, #2722, #2723/#9723, #2724/#9724, #2745/#9745, #2746, #2750, #2751, or #2761. If the #2838/#9738 PCI 100/10 Mbps Ethernet IOA is in C01, only the #2721/#9721 or #2745/#9745 can be installed in C04 and C05.</p> <p>In #9329 PCI Card Expansion Unit slots E05 or E10, the #2824 supports high-speed slots E06 or E11 and low-speed slots E02, E03, E04 or E07, E08, and E09. In E06 and E11, it supports #2718 or #2729 PCI Magnetic Media Controller, #2838/#9738 PCI 100/10 Mbps Ethernet IOA, #2750, #2751, #2761, #281x, or #4800. In the low-speed slots, it supports #2721, #2722, #2723/#9723, #2724/#9724, #2746, #2745, #2750, #2751, or #2761.</p> <p>In #9330 PCI integrated expansion unit slots E05 or E10, the #2824 supports high-speed slots E06 or E11 and low-speed slots E02, E03, E04 or E07, E08, E09. In E06 and E11, it supports #2718, #2729, #2838/#9738, #2745, #2746, #2750, #2751, #2761, #281x, or #4800. In the low-speed slots, it supports #2721, #2722, #2723/#9723, #2724/#9724, #2746, #2745, #2750, #2751, or #2761.</p> <p>In #5065 Storage/PCI Expansion Tower slots C08 or C13, the #2824 supports two high-speed and two low-speed slots:</p> <ul style="list-style-type: none"> <li>▶ The #2718, #2729 or #2748 PCI RAID Disk Unit Controller are supported in C09 and C14 only.</li> <li>▶ The #2838/#9738 PCI 100/10 Mbps Ethernet IOA and #281x are supported in C05, C10, and C15 only.</li> <li>▶ The #2838/#9738 PCI 100/10 Mbps Ethernet IOA, #2724/#9724, #2745, #2746, #2750, #2751, #2761, or #4800 are supported in C09, C10, C14, or C15.</li> <li>▶ The #2723/#9723, #2724/#9724, #2745, #2746, #2750, #2751, or #2761 are supported in C06, C07, C11, or C12.</li> </ul>

#2824 (cont.)	<p><b>#2824 PCI Feature Controller</b> Maximum: One in the system unit, two in the #9329/#9330 PCI integrated expansion unit, two in the #5065 Storage/PCI Expansion Tower</p> <p>See <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i>, REDP-3638 for additional restrictions. Also supported on the #5034 and #5035 Migration Tower I, the #5055 Storage Expansion Unit and the #5066 1.8 M I/O Tower. It is supported for migration only on the #503x Migration Tower.</p> <p>Minimum operating system level: OS/400 V4R4 The #2824 is a Customer Install Feature for an MES that only includes CIF features. The #2824 was withdrawn from marketing on 21 November 2003.</p>
#6050 #9050	<p><b>#6050 Enhanced Twinaxial Workstation Controller (SPD)</b> One 8-port attachment is provided to support up to 40 twinaxial devices.</p> <p>SPD slots required: One The #9050 is supported as the base twinaxial workstation adapter/controller on the Model 730 and 740.</p>
#6140 #9140	<p><b>#6140 Twinaxial Workstation Controller</b> The #6140 provides one 8-port attachment to support up to 40 twinaxial devices.</p> <p>SPD slots required: One The #9140 is the base twinaxial workstation adapter/controller on the Model 730 and 740. Maximum #9140: One Maximum #6140: 58 on Model 720, 175 on Model 730 and 740</p>
#6141 #9141	<p><b>#6141 ASCII Workstation Controller (SPD)</b> The #6141 supports up to six ASCII devices.</p> <p>SPD slots required: One Maximum: 58 on Model 720; 175 on Model 730 and 740 The #9141 is the base ASCII workstation adapter/controller when there are no other Workstation Controllers specified for the Model 730 and 740.</p>
#6142	<p><b>#6142 ASCII 12-Port Workstation Attachment (SPD)</b> The #6142 plugs into the #6141 ASCII Workstation Controller providing an additional 12 ports.</p> <p>18 ASCII devices are supported. One #6142 can be attached per #6141. SPD slots required: None</p>
#6180 #9280	<p><b>#6180 Twinaxial Workstation IOA (SPD)</b> The #6180 provides one 8-port attachment to support up to 40 active twinaxial devices. Prerequisite: #2629 LAN/WAN/Workstation IOP on the Model 720.</p> <p>IOA slots required: One in #2629 The #9280 is the base twinaxial workstation IOA residing in slot C of the MFIOP on Model 730 and 740. Maximum: One</p>
#9751	<p><b>#9751 MFIOP with RAID (Ultra SCSI) CCIN 6751</b> The #9751 contains function for controlling 20 disk units, one removable media unit and one CD-ROM unit. It has three IOA slots for controlling LANs, twinaxial workstations, and communications. IOA slot A is reserved for attaching one #2699 2-Line WAN IOA or one #6149 or #6181 LAN IOA. IOA slot B is reserved for attaching the #9699 Base 2-Line WAN IOA slot C is reserved for attaching one #2699 Two-Line WAN IOA or one #6180 or #9280 twinaxial IOA. It occupies two card slots.</p> <p>The #9751 does not support integrated hardware disk compression. Supported on Models 730 and 740</p>

#9754	<p><b>#9754 MFIOIP with RAID (Ultra SCSI) CCIN 6754</b></p> <p>The #9754 is an Ultra SCSI controller that provides unprotected, mirrored, or RAID-5 protection for internal disk units. It includes a 4M write cache for better performance and improved device utilization. The #9754 controls the internal CD-ROM drive and one internal tape unit. It contains three IOA slots for communications, LAN, and twinaxial I/O adapters. IOA slot A is reserved for attaching one #2699 Two-Line WAN IOA, or one #6149 16/4 Mbps Token Ring IOA or #6181 ASCII Workstation Controller. IOA slot B is reserved for attaching the #9699 Base 2-Line WAN IOA. IOA slot C is reserved for attaching one #2699 Two-Line WAN IOA or one #6180 Twinaxial Workstation IOA or #9280 twinaxial IOA. It occupies two card slots.</p> <p>The #9754 controls Ultra, Fast Wide, and Fast Narrow SCSI disk units located in the 730 or 740 system unit, and the #5055 Storage Expansion Unit or the #5057 Storage Expansion Unit. The Ultra SCSI disks give the best performance when attached to the #9751. The #9754 also controls disks that are not Ultra SCSI. However, in that case, the disks do not perform at Ultra SCSI speeds.</p> <p>The #9754 supports a maximum of 20 disk units, one removable tape unit, and one CD-ROM unit. A maximum of 10 disk units per RAID-5 array is supported. Parity information can be spread across four or eight disk units. A maximum of four RAID-5 arrays is supported on one #9754. Disk units that are not supported in a RAID-5 array can be attached to the #9754 in either an unprotected or a mirrored environment.</p> <p>The #5544 System Console on Operations Console is the default for the initial 720, 730, and 740 installation. The #0328 Operations Console Cable is used unless another console controller is specified. The #0380 Remote Control Panel Cable can be used to support the Remote Control Panel function. The #0380 cable does not attach to a communication port.</p> <p>Supported on Models 730 and 740  Minimum operating system level: OS/400 V4R2  Minimum operating system level to support integrated hardware disk compression: OS/400 V4R3</p>
<b>Communications</b>	
Comm. Restrictions	See "Comm. Restrictions" on page 103, for communications rules and restrictions.
#2605	<p><b>#2605 ISDN Basic Rate Interface Adapter (SPD)</b></p> <p>The #2605 connects to #2623 to support one communications line connecting to an ISDN network. The ISDN Basic Rate Interface supported by #2605 contains two high-speed ISDN user channels. One or two #2605s can be attached to one #2623 with no other IOAs allowed on the #2623.</p> <p>SPD slots required: None  Prerequisite: #2623 6-line Communications Controller</p>
#2609	<p><b>#2609 EIA 232/V.24 Two-Line Adapter (SPD)</b></p> <p>The #2609 connects to #2623 to support two communications lines using Async, BSC, SDLC, or X.25 protocols. Two cables must be specified:</p> <ul style="list-style-type: none"> <li>▶ #9023 EIA 232/V.24 20-ft (6 m) enhanced cable</li> <li>▶ #9835 EIA 232/V.24 50-ft (15 m) enhanced cable</li> <li>▶ #9022 EIA 232/V.24 20-ft (6 m) cable</li> <li>▶ #9836 EIA 232/V.24 50-ft (15 m) cable</li> </ul> <p>SPD slots required: None  Prerequisite: #2623 6-line Communications Controller</p>
#2610	<p><b>#2610 EIA 232/V.24 Two-Line Adapter (SPD)</b></p> <p>The #2610 connects to #2623 to support two communications lines using X.21 or X.25 networks. Two cables must be specified:</p> <ul style="list-style-type: none"> <li>▶ #9021 X.21 20-ft (6 m) cable</li> <li>▶ #9839 X.21 50-ft (15 m) cable</li> </ul> <p>SPD slots required: None  Prerequisite: #2623 6-line Communications Controller</p>

#2612	<p><b>#2612 EIA 232/V.24 One-Line Adapter (SPD)</b>  The #2612 connects to #2623 to support one communication line using Async, BSC, SDLC, or X.25 protocols. One cable must be specified:</p> <ul style="list-style-type: none"> <li>▶ #9023 EIA 232/V.24 20-ft (6 m) enhanced cable</li> <li>▶ #9835 EIA 232/V.24 50-ft (15 m) enhanced cable</li> <li>▶ #9022 EIA 232/V.24 20-ft (6 m) cable</li> <li>▶ #9836 EIA 232/V.24 50-ft (15 m) cable</li> </ul> <p>SPD slots required: None  Prerequisite: #2623 6-line Communications Controller</p>
#2613	<p><b>#2613 V.35 One-Line Adapter (SPD)</b>  The #2613 connects to #2623 to support one V.35 communications line using either BSC, SDLC, or X.25 protocols. Each #2623 supports one V.35 line at speeds up to 640 Kbps, or two V.35 lines at speeds up to 512 Kbps, or three V.35 lines at speeds up to 384 Kbps. No other adapters are allowed on the #2623 when running T1/E1/J1. One cable must be specified:</p> <ul style="list-style-type: none"> <li>▶ #9020 V.35 20-ft (6 m) cable</li> <li>▶ #9838 V.35 50-ft (15 m) cable</li> </ul> <p>SPD slots required: None  Prerequisite: #2623 6-line Communications Controller</p>
#2614	<p><b>#2614 X.21 One-Line Interface Adapter (SPD)</b>  The #2614 connects to #2623 to support one communications line using X.21 or X.25 networks. One cable must be specified:</p> <ul style="list-style-type: none"> <li>▶ #9021 X.21 20-ft (6 m) cable</li> <li>▶ #9839 X.21 50-ft (15 m) cable</li> </ul> <p>SPD slots required: None  Prerequisite: #2623 6-line Communications Controller</p>
#2620	<p><b>#2620 Full Cryptographic Processor (SPD)</b>  The #2620 provides full cryptographic support for encrypting and decrypting data. Distribution of the #2620 is restricted by U.S. Government Export Regulations. In countries (regions) outside the U.S.A and Canada, it can only be marketed to financial institutions and subsidiaries of U.S. companies. If a #2620 cannot be installed, a #2628 should be used in its place.</p> <p>SPD slots required: One  Maximum: One for the Model 720; three for the Model 730 and 740</p>
#2623	<p><b>#2623 Six-Line Communications Controller (SPD)</b>  The #2623 provides for attachment of a wide range of iSeries or AS/400e communications adapters. The following IOA adapters are supported by the #2623: #2605, #2609, #2610, #2612, #2613, #2614, #2654, #2655, #2656, #2657, #2658, #2659, #6153, and #6173. The #2623 supports two #2605 ISDN adapters or up to three EIA 232/V.24, X.21, and V.35 adapters. It is available for 720, 730, and 740 systems to work with the #2605 ISDN Basic Rate Interface Adapter.</p> <p>SPD slots required: One</p>
#2629	<p><b>#2629 LAN/WAN/Workstation IOP (SPD)</b>  The #2629 supports up to three LAN/WAN/ Workstation IOAs. See the full description of #2629 in "Workstation controllers" on page 154.</p> <p>The #2629 was withdrawn from marketing on 31 May 2001.</p>
#2628	<p><b>#2628 Limited Cryptographic Processor (SPD)</b>  The #2628 provides the same function as #2620 except that it does not include data encryption and decryption using commercial Data Masking Facility for data scrambling. Can be marketed to any non-U.S. company.</p> <p>SPD slots required: One  Maximum: One for the Model 720; three for the Models 730 and 740</p>
#2654	<p><b>#2654 EIA 232/V.24 Two-Line IOA</b>  The #2654 connects to #2623 to support two communications lines supporting Async, BSC, SDLC, or X.25 protocols using two EIA 232/V.24 20-ft (6.2 m) enhanced cables.</p> <p>SPD slots required: None  Prerequisite: #2623 6-Line Communications Controller</p>

#2655	<p><b>#2655 EIA 232/V.24 2-Line Adapter with 20-foot Cable</b>  The #2655 connects to #2623 to support two communications lines supporting Async, BSC, SDLC, or X.25 protocols using two EIA 232/V.24 20-ft (6.2 m) cables.</p> <p>SPD slots required: None  Prerequisite: #2623 6-Line Communications Controller</p>
#2656	<p><b>#2656 X.21 2-Line Adapter with 20-foot Cable</b>  The #2656 connects to #2623 to support two communications lines to attach to a X.21 or X.25 network using 20-ft (6.2 m) cables.</p> <p>SPD slots required: None  Prerequisite: #2623 6-Line Communications Controller</p>
#2657	<p><b>#2657 EIA 232/V.24 2-Line Adapter 50-foot Enhanced Cable</b>  The #2657 connects to #2623 to support two communications lines supporting Async, BSC, SDLC, or X.25 protocols using two EIA 232/V.24 50-ft (15 m) enhanced cables.</p> <p>SPD slots required: None  Prerequisite: #2623 6-line Communications Controller</p>
#2658	<p><b>#2658 EIA 232/V.24 2-Line Adapter 50-foot Cable</b>  The #2658 connects to a #2623 to support two communications lines to supporting Async, BSC, SDLC, or X.25 protocols using two EIA 232/V.24 50-ft (15 m) cables.</p> <p>SPD slots required: None  Prerequisite: #2623 6-line Communications Controller</p>
#2659	<p><b>X.21 2-Line Adapter 50-ft Cable</b>  The #2659 connects to #2623 to support two communications lines to attach to a X.21 or X.25 network using 50-ft (15 m) cables.</p> <p>SPD slots required: None  Prerequisite: #2623 6-Line Communications Controller</p>
#2664	<p><b>#2664 Integrated Fax Adapter (SPD)</b>  The #2664 provides two ports capable of transmission and receipt of facsimile data to or from a Group 3 capable fax machine, another AS/400e or iSeries with the #2664, or PCs with appropriately programmed Fax adapters.</p> <p>SPD slots required: One  Not supported with OS/400 V5R1  Maximum: 32</p>
#2666	<p><b>#2666 High-Speed Communications Adapter (SPD)</b>  The #2666 provides one communications line capable of T1/E1 (1.544/2.048 Mbps) speeds. One of the following cables must be specified:</p> <ul style="list-style-type: none"> <li>▶ #9879 20-ft (6 m) V.35 CCITT cable</li> <li>▶ #9880 80-ft (24 m) V.35 CCITT cable</li> <li>▶ #9882 20-ft (6 m) RS449/V.36 CCITT cable</li> <li>▶ #9883 80-ft (24 m) RS449/V.36 CCITT cable</li> <li>▶ #9884 150-ft (45 m) RS449/V.36 CCITT cable</li> <li>▶ #9885 20-ft (6 m) X.21 CCITT cable</li> </ul> <p>The #9883 and #9884 cables are only allowed when the client's modem supports Looped Clocking Mode.  SPD slots required: One  Maximum: 12 on the Model 720, 20 on the Model 730, and 30 on the Model 740</p>

#2699	<p><b>#2699 Two-Line WAN IOA (SPD)</b></p> <p>The #2699 supports up to two multiple protocol communications ports when one or two of the following cables are attached:</p> <ul style="list-style-type: none"> <li>▶ #0328 Operations Console 20-ft (6 m) cable</li> <li>▶ #0329 V.24/EIA232 80-ft (24 m) cable</li> <li>▶ #0330 V.24/EIA232 20-ft (6 m) cable</li> <li>▶ #0331 V.24/EIA232 50-ft (15 m) cable</li> <li>▶ #0332 V.24/EIA232 20-ft (6 m) enhanced cable</li> <li>▶ #0333 V.24/EIA232 50-ft (15 m) enhanced cable</li> <li>▶ #0334 V.24/EIA232 80-ft (24 m) enhanced cable</li> <li>▶ #0335 V.36/EIA449 20-ft (6 m) cable</li> <li>▶ #0336 V.36/EIA449 50-ft (15 m) cable</li> <li>▶ #0337 V.36/EIA449 150-ft (45 m) cable</li> <li>▶ #0338 V.35 20-ft (6 m) cable</li> <li>▶ #0339 V.35 50-ft (15 m) cable</li> <li>▶ #0340 V.35 80-ft (24 m) cable</li> <li>▶ #0341 X.21 20-ft (6 m) cable</li> <li>▶ #0342 X.21 50-ft (15 m) cable</li> </ul> <p>The #0328 is used to support the Operations Console function on CPU Models supporting logical partitioning (LPAR) for secondary partitions (OS/400 V4R4 and later). A maximum of one #0328 cable is allowed per #2699.</p> <p>Prerequisite: #2629 LAN/WAN/Workstation IOP IOA slots required: One on the #2629 LAN/WAN/Workstation IOP</p>
#2720 #9720	<p><b>#2720 Base PCI WAN/Twinaxial IOA</b></p> <p>The #2720 is a combined twinaxial/communication adapter can be provided on the base system and supports a single communications line intended for ECS. One cable must be specified.</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft (15 m) PCI cable</li> <li>▶ #0350 V.24/EIA232 20-ft (6 m) Enhanced PCI cable</li> <li>▶ #0351 V.24/EIA232 50-ft (15 m) Enhanced PCI cable</li> <li>▶ #0352 V.24/EIA232 80-ft (24 m) Enhanced PCI cable</li> </ul> <p>The #2720 also supports twinaxial workstations. See "Workstation controllers" on page 154.</p> <p>PCI card slots required: One Maximum: One #9720 Base PCI WAN/Twinaxial IOA or one #2720 Base PCI WAN/Twinaxial IOA per system The #9720 is mutually exclusive with the #9721, #9745, and #2720. Supported on Model 720</p>
#2721	<p><b>#2721 PCI Two-Line WAN IOA</b></p> <p>The #2721 supports up to two multiple protocol communications ports when one or two of the following cables are attached:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft. (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft. (15 m) PCI cable</li> <li>▶ #0350 V.24/EIA232 20-ft (6 m) enhanced PCI cable</li> <li>▶ #0351 V.24/EIA232 50-ft (15 m) enhanced PCI cable</li> <li>▶ #0352 V.24/EIA232 80-ft (24 m) enhanced PCI cable</li> <li>▶ #0353 V.35 20-ft (6 m) PCI cable</li> <li>▶ #0354 V.35 50-ft (15 m) PCI cable</li> <li>▶ #0355 V.35 80-ft (24 m) PCI cable</li> <li>▶ #0356 V.36 20-ft (6 m) PCI cable</li> <li>▶ #0357 V.36 50-ft (15 m) PCI cable</li> <li>▶ #0358 V.36 150-ft (45 m) PCI cable</li> <li>▶ #0359 X.21 20-ft (6 m) PCI cable</li> <li>▶ #0360 X.21 50-ft (15 m) PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft (24 m) PCI cable</li> <li>▶ #0367 Operations Console PCI Cable 20-ft (6 m)</li> </ul> <p>The #0367 is used to support the Operations Console function on CPU Models supporting LPAR (OS/400 V4R4 and later).</p> <p>A maximum of one #0367 Operations Console PCI Cable is allowed per #2721. PCI slots required: One (low speed only) Supported on Model 720</p>



#2745	<p><b>#2745 PCI 2-Line WAN IOA</b></p> <p>The #2745 supports up to two multiple protocol communications ports when one or two of the following cables are attached:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft. (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft. (15 m) PCI cable</li> <li>▶ #0350 V.24/EIA232 20-ft (6 m) enhanced PCI cable</li> <li>▶ #0351 V.24/EIA232 50-ft (15 m) enhanced PCI cable</li> <li>▶ #0352 V.24/EIA232 80-ft (24 m) enhanced PCI cable</li> <li>▶ #0353 V.35 20-ft (6 m) PCI cable</li> <li>▶ #0354 V.35 50-ft (15 m) PCI cable</li> <li>▶ #0355 V.35 80-ft (24 m) PCI cable</li> <li>▶ #0356 V.36 20-ft (6 m) PCI cable</li> <li>▶ #0357 V.36 50-ft (15 m) PCI cable</li> <li>▶ #0358 V.36 150-ft (45 m) PCI cable</li> <li>▶ #0359 X.21 20-ft (6 m) PCI cable</li> <li>▶ #0360 X.21 50-ft (15 m) PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft (24 m) PCI cable</li> <li>▶ #0367 Operations Console PCI Cable 20-ft (6 m)</li> </ul> <p>The #0367 is used to support the Operations Console function on CPU Models supporting LPAR (OS/400 V4R4 and later). A maximum of one #0367 Operations Console PCI Cable is allowed per #2745.</p> <p>PCI card slots required: One (low speed only with OS/400 V4R3) Supported on Model 720.</p>
#2750	<p><b>#2750 PCI ISDN BRI U Adapter</b> (available in the United States and Canada only)</p> <p>The #275 is a 4-port (8-channel) ISDN BRI (basic rate) full-sized PCI card. Each port consists of 2B+D configuration. The #2750 is the "U"-bus (2-wire) version of the ISDN BRI PCI card. The #2750 feature supports the following protocols:</p> <ul style="list-style-type: none"> <li>▶ PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices)</li> <li>▶ IDLC</li> <li>▶ Fax</li> </ul> <p>Four 30-ft (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #2750 feature. For configuration purposes, each #2750 counts as eight lines (two lines per port) toward the system communication maximums. Supports full duplex.</p> <p>Prerequisite: #2824 PCI Feature Controller Requirements: The #2750 requires country (region) certification or homologation. Full-sized PCI card slot Maximum: One per IOP Minimum operating system level: OS/400 V4R4 and PTF MF22528, or Cumulative PTF Package C9313440</p>
#2751	<p><b>#2751 PCI ISDN BRI S/T IOA</b></p> <p>The #2751 is a 4-port (eight channel) ISDN BRI (basic rate) full-sized PCI card. Each port consists of 2B+D configuration. The #2751 is the "S/T"-bus (four wire) version of the ISDN BRI PCI card.</p> <p>This requires a network terminating device in the circuit. In the United States and Canada, this must be provided by the client. In other countries (regions), it is most likely provided by the telephone company.</p> <p>The #2751 supports the following protocols:</p> <ul style="list-style-type: none"> <li>▶ PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices)</li> <li>▶ IDLC</li> <li>▶ Fax</li> </ul> <p>Four 30-ft (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #2751 feature. For configuration purposes, each #2751 counts as eight lines (two lines per port) towards the system communication maximums. Supports full duplex. The #2751 requires country (region) certification or homologation.</p> <p>Prerequisite: #2824 PCI Feature Controller Requirements: A full-sized PCI card slot Maximum: One per IOP Minimum operating system level: OS/400 V4R4 and PTF MF22528, or Cumulative PTF Package C9313440</p>

#2761	<p><b>#2761 Integrated Analog Modem</b></p> <p>The #2761 allows the modem function to be integrated into the IOA and supports multiple analog modem ports (eight phone lines). The #2761 runs the following protocols without the need for an external modem:</p> <ul style="list-style-type: none"> <li>▶ SLIP/PPP uses V.90, so the maximum line speed is 56 Kbps.</li> <li>▶ SDLC uses V.34, so the maximum line speed is 33.6 Kbps.</li> <li>▶ Fax uses V.17 to achieve a 14.4 Kbps maximum line speed.</li> </ul> <p>An asynchronous line description is required for Fax and can only be used for Fax. ECS line not supported. Eight 30-ft (8 m) phone cables are shipped with each #2761. To the iSeries or AS/400e server, the #2761 appears like a single IOA with eight individual resources available. For configuration purposes, each #2761 counts as eight communications lines.</p> <p>Prerequisite: #2824 PCI Feature Controller</p> <p>Requirements: The #2761 requires country (region) certification or homologation. Full-sized PCI card slot</p> <p>Maximum: One per IOP</p> <p>Minimum operating system level: OS/400 V4R4 and PTF MF22528, or Cumulative PTF Package C9313440</p>
#2809	<p><b>#2809 PCI LAN/WAN/Workstation IOP</b></p> <p>The #2809 can be used for attaching PCI LAN, WAN, and workstation IOAs to the system. Refer to the #2809 description within "Workstation controllers" on page 154 for full information about this controller.</p> <p>Supported on Model 720</p> <p>Supported for migration only on the #503x Migration Tower</p>
#2824	<p><b>#2824 PCI Feature Controller</b></p> <p>The #2824 can be used to attach PCI LAN, WAN, and workstation IOAs to the system. Refer to the #2824 description in "Workstation controllers" on page 154 for full information about this controller.</p>
#4800	<p><b>#4800 PCI Cryptographic Processor</b></p> <p>The #4800 is a hardware cryptography solution based on the IBM #4758 card. The #4800 is a half length PCI card. Since the feature is temperature sensitive, it is shipped separately in specially designed, insulated packaging.</p> <p>Maximum: Three per system</p> <p>Prerequisite: #2824 PCI Feature Controller</p> <p>Minimum operating system level: OS/400 V4R4</p>
#4802	<p><b>#4802 PCI Cryptographic Processor</b></p> <p>The #4802 is a hardware cryptography solution based on the IBM #4758 card. The #4802 is a half-length PC form-factor PCI card which offers rich cryptography function, secure storage of cryptographic keys, and 12 Mbps performance (at the card level) for bulk data encryption. The #4802 provides greater security by use of 168-bit key (versus the 56-bit key on the #4800).</p> <p>The #4802 is available worldwide. The level of cryptographic function is determined by the Cryptographic Access Provider licensed program, which is downloaded to the adapter. Due to temperature requirements (card temperature must not drop below 5 degrees F (-15 degrees C)), the #4802 is shipped separately from the system in special packing.</p> <p>Prerequisite: An available high-speed slot under a #2824 PCI Feature Controller in a #5065/#5066 PCI Expansion Tower</p> <p>Maximum: Three per system</p> <p>Minimum operating system level: OS/400 V4R5</p> <p>The #4802 was withdrawn from marketing on 21 November 2003.</p>
#6153	<p><b>V.35 1-line Adapter 20-ft Cable</b></p> <p>The #6153 connects to #2623 to support one communications line supporting V.35 protocol using a 20-ft (6.2 m) cable.</p> <p>SPD slots required: None</p> <p>Prerequisite: #2623 6-Line Communications Controller</p>
#6173	<p><b>V.35 1-line Adapter 50-ft Cable</b></p> <p>The #6173 connects to #2623 to support one communications line supporting V.35 protocol using a 50-ft (15 m) cable.</p> <p>SPD slots required: None</p> <p>Prerequisite: #2623 6-Line Communications Controller</p>

#9699	<p><b>#9699 Base 2-Line WAN IOA</b></p> <p>The #9699 supports up to two multiple protocol communications ports when any one or two of the following cables are attached:</p> <ul style="list-style-type: none"> <li>▶ #0328 20-ft (6 m) Operations Console Cable (OS/400 V4R3 required)</li> <li>▶ #0329 V.24/EIA 232 80-ft (24 m) cable</li> <li>▶ #0330 V.24/EIA232 20-ft (6 m) cable)</li> <li>▶ #0331 V.24/EIA232 50-ft (15 m) cable)</li> <li>▶ #0332 V.24/EIA232 20-ft (6 m) enhanced cable</li> <li>▶ #0333 V.24/EIA232 50-ft (15 m) enhanced cable</li> <li>▶ #0334 V.24/EIA232 80-ft (24 m) enhanced cable</li> <li>▶ #0335 V.36/EIA449 20-ft (6 m) cable</li> <li>▶ #0336 V.36/EIA449 50-ft (15 m) cable</li> <li>▶ #0337 V.36/EIA449 150-ft (45 m) cable</li> <li>▶ #0338 V.35 20-ft (6 m) cable</li> <li>▶ #0339 V.35 50-ft (15 m) cable</li> <li>▶ #0340 V.35 80-ft (24 m) cable</li> <li>▶ #0341 X.21 20-ft (6 m) cable</li> <li>▶ #0342 X.21 50-ft (15 m) cable</li> <li>▶ #0344 20-ft (6 m) Comms Console Cable (Must be installed for Client Access Console)</li> </ul> <p>The #0328 is used to support the Operations Console function (default). It is required and defaulted by the IBM marketing configurator.</p> <p>The #0328 and #0344 are mutually exclusive.</p> <p>The #0380 Remote Control Panel Cable can be used to support the Remote Control Panel function. The #0380 cable does not attach to a communication port.</p> <p>The #9699 is the base communications adapter card and is placed in slot B of the MFIOF.</p> <p>IOA slots required for the #9699: One on the #9751 or #9754 Supported on Models 730 and 740</p>
#9721	<p><b>#9721 Base PCI 2-Line WAN IOA</b></p> <p>The #9721 supports ECS and Client Access Console. Select one of the following cables for ECS:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft (15 m) PCI cable</li> <li>▶ #0350 V.24/EIA232 20-ft (6 m) enhanced PCI cable</li> <li>▶ #0351 V.24/EIA232 50-ft (15 m) enhanced PCI cable</li> <li>▶ #0352 V.24/EIA232 80-ft (24 m) enhanced PCI cable</li> <li>▶ #0353 V.35 20-ft (6 m) PCI cable</li> <li>▶ #0354 V.35 50-ft (15 m) PCI cable</li> <li>▶ #0355 V.35 80-ft (24 m) PCI cable</li> <li>▶ #0356 V.36 20-ft (6 m) PCI cable</li> <li>▶ #0357 V.36 50-ft (15 m) PCI cable</li> <li>▶ #0358 V.36 150-ft (45 m) PCI cable</li> <li>▶ #0359 X.21 20-ft (6 m) PCI cable</li> <li>▶ #0360 X.21 50-ft (15 m) PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft (24 m) PCI cable</li> </ul> <p>Must be installed for Client Access Console: #0362 20-ft (6 m) Client Access Console Cable.</p> <p>Used to support the Operations Console function (default): #0367 Operations Console PCI Cable 20-ft (6 m). Required unless #2720, #2722, or #2746 is used.</p> <p>The #0381 Remote Control Panel Cable can be used to support the Remote Control Panel function. The #0381 cable does not attach to a communication port.</p> <p>PCI card slots required: One Maximum: One The #9721 is mutually exclusive with the #9720 and #9745. Supported on Model 720</p>

#9745	<p><b>#9745 Base PCI 2-Line WAN IOA</b></p> <p>The #9745 is a two line communications adapter which supports ECS and Client Access Console. Select one of the following cables for ECS:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft (15 m) PCI cable</li> <li>▶ #0350 V.24/EIA232 20-ft (6 m) Enhanced PCI cable</li> <li>▶ #0351 V.24/EIA232 50-ft (15 m) Enhanced PCI cable</li> <li>▶ #0352 V.24/EIA232 80-ft (24 m) Enhanced PCI cable</li> <li>▶ #0353 V.35 20-ft (6 m) PCI cable</li> <li>▶ #0354 V.35 50-ft (15 m) PCI cable</li> <li>▶ #0355 V.35 80-ft (24 m) PCI cable</li> <li>▶ #0356 V.36 20-ft (6 m) PCI cable</li> <li>▶ #0357 V.36 50-ft (15 m) PCI cable</li> <li>▶ #0358 V.36 150-ft (45 m) PCI cable</li> <li>▶ #0359 X.21 20-ft (6 m) PCI cable</li> <li>▶ #0360 X.21 50-ft (15 m) PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft (24 m) PCI cable</li> <li>▶ #0367 Operations Console PCI Cable 20-ft (6 m)</li> </ul> <p>Install this feature for Client Access Console: #0362 20-ft (6 m) Client Access Console Cable</p> <p>The #0367 is used to support the Operations Console function (default): #0367 Operations Console PCI Cable 20-ft (6 m). Required unless #2720, #2722 or #2746 is used.</p> <p>The #0381 Remote Control Panel Cable can be used to support the Remote Control Panel function. The #0381 cable does not attach to a communication port.</p> <p>PCI card slots required: One Maximum: One Mutually exclusive with #9720 and #9721 Supported on Model 720</p>
#9751	<p><b>MFIO with RAID (Ultra SCSI) CCIN 6751</b></p> <p>The #9751 contains function for controlling 20 disk units, one removable media unit, and one CD-ROM unit. It has three IOA slots for controlling LANs, twinaxial workstations, and communications. IOA slot A is reserved for attaching one #2699 2-Line WAN IOA or one #6149 or #6181 LAN IOAs. IOA slot B is reserved for attaching the #9699 Base 2-Line WAN IOA. IOA slot C is reserved for attaching one #2699 2-Line WAN IOA or one #6180 or #9280 twinaxial IOA.</p> <p>Occupies two card slots The #9751 does not support integrated hardware disk compression. Supported on Models 730 and 740</p>

#9754	<p><b>#9754 MFIOIP with RAID (Ultra SCSI) CCIN 6754</b></p> <p>The #9754 is an Ultra SCSI controller that provides unprotected, mirrored, or RAID-5 protection for internal disk units. It includes a 4M write cache for better performance and improved device utilization. The #9754 controls the internal CD-ROM drive and one internal tape unit. It contains three IOA slots for communications, LAN, and twinaxial I/O adapters. IOA slot A is reserved for attaching one #2699 2-Line WAN IOA or one #6149 or #6181 LAN IOA. IOA slot B is reserved for attaching the #9699 Base 2-Line WAN IOA. IOA slot C is reserved for attaching one #2699 2-Line WAN IOA or one #6180 or #9280 twinaxial IOA. It occupies two card slots.</p> <p>The #9754 controls Ultra, Fast Wide, and Fast Narrow SCSI disk units located in the 730 or 740 system unit, and the #5055 Storage Expansion Unit or the #5057 Storage Expansion Unit. The Ultra SCSI disks give the best performance when attached to the #9751. The #9754 also controls disks that are not Ultra SCSI. However, in that case, the disks do not perform at Ultra SCSI speeds.</p> <p>The #9754 supports a maximum of 20 disk units, one removable tape unit, and one CD-ROM unit. A maximum of 10 disk units per RAID-5 array is supported. Parity information can be spread across four or eight disk units. A maximum of four RAID-5 arrays is supported on one #9754. Disk units that are not supported in a RAID-5 array can be attached to the #9754 in either an unprotected or a mirrored environment.</p> <p>The #5544 System Console on Operations Console is the default for 720, 730, and 740 models. The #0328 Operations Console Cable is used unless another console controller is specified. The #0380 Remote Control Panel Cable can be used to support the Remote Control Panel function. The #0380 cable does not attach to a communication port.</p> <p>Supported on Models 730 and 740  Minimum operating system level: OS/400 V4R2  Minimum operating system level to support integrated hardware disk compression: OS/400 V4R3</p>
<b>LANs and ATM</b>	
Comm. Restrictions	See "Comm. Restrictions" on page 103, for communications rules and restrictions.
#2617	<p><b>#2617 Ethernet/IEEE 802.3 Adapter/HP (SPD)</b></p> <p>The #2617 provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. It consists of an adapter card and internal code, which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. An AUI Ethernet cable must be ordered separately.</p> <p>Supports 10 Mbps half-duplex only  SPD slots required: One</p>
#2618	<p><b>#2618 Fiber Distributed Data Interface Adapterrr (SPD)</b></p> <p>The #2618 provides one interface to connect an iSeries or AS/400e to an FDDI LAN which complies with ANSI X3T9.5 and ISO 9314 standards. It consists of a card, a wrap connector, and Licensed Internal Code, which supplies IEEE 802.2 LLC, ANSI X3T9.5/ISO 9314 MAC functions, and ANSI X3T9.5 Station Management (SMT) functions. A multi-node (62.5/125 micron) FDDI optical fiber jumper cable to connect the adapter to the FDDI ring must be ordered separately.</p> <p>SPD slots required: One</p>
#2619	<p><b>#2619 LAN/WAN/Workstation IOA (SPD)</b></p> <p>The #2619 provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code (supplies IEEE 802.5 MAC and IEEE 802.2 LLC functions), and an external 8-ft (2.4 m) cable.</p> <p>SPD slots required: One</p>
#2626	<p><b>#2626 16/4 Mbps Token Ring Adapter/A (SPD)</b></p> <p>The #2626 provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code (supplies IEEE 802.5 MAC and IEEE 802.2 LLC functions), and an external 8-ft (2.4 m) cable.</p> <p>SPD slots required: One</p>
#2629	<p><b>#2629 LAN/WAN/Workstation IOP (SPD)</b></p> <p>The #2629 supports up to three LAN/WAN/ Workstation IOAs. See the full description of the #2629 in "Workstation controllers" on page 154.</p> <p>The #2629 was withdrawn from marketing on 31 May 2001.</p>

#2663	<p><b>#2663 I/O Attachment Processor (SPD)</b>  The #2663 is an I/O processor required when attaching the #2668 Wireless LAN Adapter. The #2663 and #2668 are integrated in a single hardware package to operate as a unit.</p> <p>SPD slots required: One (with #2668 Wireless LAN Adapter)</p>
#2665	<p><b>Shielded Twisted-Pair Distributed Data Interface Adapter (SPD)</b>  The #2665 provides one interface to connect to an FDDI LAN, which is constructed of IBM Cabling System Type 1, 2, 6, or 9 shielded twisted-pair wiring. It consists of a card, a wrap connector, and Licensed Internal Code, which supplies IEEE 802.2 LLC, ANSI X3T9.5/ISO 9314 MAC functions and ANSI X3T9.5 SMT functions. IBM FDDI copper jumper cables to connect the adapter to the FDDI ring must be ordered separately.</p> <p>SPD slots required: One</p>
#2668	<p><b>#2668 Wireless LAN Adapter (SPD)</b>  The #2668 Wireless LAN Adapter provides wireless connectivity to workstations or other systems connected to a wireless LAN network. One of the following antenna cables must be specified:</p> <ul style="list-style-type: none"> <li>▶ #9814 20-ft (6 m) antenna cable</li> <li>▶ #9815 50-ft (15 m) antenna cable</li> </ul> <p>One of the following antenna must be specified:</p> <ul style="list-style-type: none"> <li>▶ #9889 YAGI Directional Antenna</li> <li>▶ #9890 Omni Directional Antenna (360 degrees)</li> <li>▶ #9891 Hemispherical Antenna (180 degrees)</li> <li>▶ #9892 Directional Antenna (90 degrees)</li> </ul> <p>SPD slots required: One (with #2663 I/O Attachment Processor)  Prerequisite: #2623 6-Line Communications Controller</p>
#2723 #9723	<p><b>#2723 PCI Ethernet IOA</b>  The #2723 provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. It consists of an adapter card and internal code, which supplies Ethernet Version 2 and IEEE 802.3 MAC plus IEEE 802.2 LLC functions. It has a RJ45 connector and a 15-pin D-shell connector for attachment of client-supplied cabling. Cabling must meet or exceed Industry Standard EIA/TIA T568B. AUI Ethernet or RJ45 twisted pair cable must be ordered separately.</p> <p>The #9723 is a base LAN adapter.  The Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode.  PCI slots required: One</p>
#2724 #9724	<p><b>#2724 PCI 16/4 Mbps Token Ring IOA</b>  The #2724 provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code, which supplies IEEE 802.5 MAC and IEEE 802.2 LLC functions, and an external 8-ft (2.4 m) cable. Alternatively, a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. The #9724 is a base LAN adapter. The IOA is capable of operating in half or full duplex mode.</p> <p>PCI slots required: One</p>
#2809	<p><b>#2809 PCI LAN/WAN/Workstation IOP</b>  The #2809 can be used for attaching PCI LAN, WAN, and workstation IOAs to the system. Refer to the #2809 description within "Workstation controllers" on page 154 for full information about this controller.</p> <p>Supported on Model 720  Supported for migration only on the #503x Migration Tower</p>
#2824	<p><b>#2824 PCI Feature Controller</b>  The #2824 can be used for attaching PCI LAN, WAN, and workstation IOAs to the system. Refer to the #2824 description within "Workstation controllers" on page 154 for full information about this controller.</p>
#2810	<p><b>#2810 LAN/WAN IOP (SPD)</b>  The #2810 is required to attach one #2838 PCI 100/10 Mbps Ethernet IOA or the #2811, #2812, #2815, #2816, #2818, or #2819 PCI ATM IOA on an SPD Bus. The #2810 is a high workload IOP and has configuration limitations.</p> <p>Prerequisite: They can alternatively be located directly in an appropriate PCI slot.  SPD slots required: One  The #2810 was withdrawn from marketing on 31 May 2001.</p>

#2811	<p><b>#2811 PCI 25 Mbps UTP ATM IOA</b> (PCI or SPD)  The #2811 provides attachment into an ATM network using Unshielded Twisted Pair (UTP) cabling. The #2811 is used typically where 25 Mbps speed is required over distances of less than 100 meters.</p> <p>Prerequisite: #2809 PCI LAN/WAN/Workstation IOP (when located in PCI slot); #2810 LAN/WAN IOP (when located in an SPD slot)  SPD slots required: One (with #2810)  High-speed PCI slots required: One</p>
#2812	<p><b>#2812 PCI 45 Mbps Coax T3/DS3 ATM IOA</b> (PCI or SPD)  The #2812 provides attachment into an ATM network using coax cabling and the T3/DS-3 interface. The #2812 is used typically where 45 Mbps speed is required over distances of less than 1000 meters.</p> <p>Prerequisite: #2809 PCI LAN/WAN/Workstation IOP (when located in PCI slot); #2810 LAN/WAN IOP (when located in an SPD slot)  SPD slots required: One (with #2810)  High-speed PCI slots required: One</p>
#2815	<p><b>#2815 PCI 155 Mbps UTP OC3 ATM IOA</b> (PCI or SPD)  The #2815 provides attachment into an ATM network using the UTP-5 interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2815 is used typically where 155 Mbps speed is required over distances of less than 100 meters.</p> <p>Prerequisite: #2809 PCI LAN/WAN/Workstation IOP (when located in PCI slot); #2810 LAN/WAN IOP (when located in an SPD slot)  SPD slots required: One (with #2810)  High-speed PCI slots required: One</p>
#2816	<p><b>#2816 PCI 155 Mbps MMF ATM IOA</b> (PCI or SPD)  The #2816 provides attachment into an ATM network using the Multi-Mode Fiber (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2816 is used typically where 155 Mbps speed is required over distances of less than 2 kilometers.</p> <p>Prerequisite: #2809 PCI LAN/WAN/Workstation IOP (when located in PCI slot); #2810 LAN/WAN IOP (when located in an SPD slot)  SPD slots required: One (with #2810)  High-speed PCI slots required: One</p>
#2818	<p><b>#2818 PCI 155 Mbps SMF OC3 ATM IOA</b> (PCI or SPD)  The #2818 provides attachment into an ATM network using the Single Mode Fibre (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provider equipment, but can be used for local area switches. The #2818 is used typically where 155 Mbps speed is required over distances of from 16 to 40 kilometers.</p> <p>Prerequisite: #2809 PCI LAN/WAN/Workstation IOP (when located in PCI slot); #2810 LAN/WAN IOP (when located in an SPD slot)  SPD slots required: One (with #2810)  High-speed PCI slots required: One</p>
#2819	<p><b>#2819 PCI 34 Mbps Coax E3 ATM IOA</b> (PCI or SPD)  The #2819 provides attachment into an ATM network using coax cabling and the E3 interface. The #2819 is used typically where 34 Mbps speed is required over distances of less than 1000 meters.</p> <p>Prerequisite: #2809 PCI LAN/WAN/Workstation IOP (when located in PCI slot); #2810 LAN/WAN IOP (when located in an SPD slot)  SPD slots required: One (with #2810)  High-speed PCI slots required: One</p>

#2838 #9738	<p><b>#2838 PCI 100/10 Mbps Ethernet IOA (PCI or SPD)</b>  The #2838/#9738 PCI 100/10 Mbps Ethernet IOA provides attachment to standard 100 Mbps high-speed Ethernet LANs and allows attachment to existing 10 Mbps Ethernet LANs. The Ethernet/IEEE 802.3 IOA is capable of operating in half or further duplex mode. The adapter comes standard with an RJ45 connector for attachment to UTP-5 media #9738 is a base LAN adapter. Cabling for 10 Mbps must be CAT-3 or CAT-5, cabling for 100 Mbps must be CAT-5 that meets or exceeds Industry Standard EIA/TIA T568A or T568B. The maximum cable length is 100 meters.</p> <p>Prerequisite: #2809 PCI LAN/WAN/Workstation IOP, #2824 PCI Feature Controller, #2854 PCI Integrated PC Server or #2865 PCI Integrated Netfinity Server (when located in PCI slot); #2810 LAN/WAN IOP, #6617 Integrated PC Server or #6618 Integrated Netfinity Server (when located in an SPD slot)  SPD slots required: One with #2810; three with #6617 or #6618  High-speed PCI slots required: One  The #2838 was withdrawn from marketing on 21 November 2003.</p>
#2851	<p><b>#2851 Integrated PC Server</b>  The #2851 contains a 166 MHz Pentium Processor, four main storage slots, and two LAN IOA slots for high performance serving to LAN attached PCs. It comes with 32 MB of main storage and supports up to three of the following main storage features:</p> <ul style="list-style-type: none"> <li>▶ #2860 16 MB Integrated PC Server Memory</li> <li>▶ #2861 32 MB Integrated PC Server Memory</li> </ul> <p>Either one or two LAN IOAs are supported:</p> <ul style="list-style-type: none"> <li>▶ #2723 PCI Ethernet IOA</li> <li>▶ #2724 PCI 16/4 Mbps Token Ring IOA</li> </ul> <p>PCI slots required: Two in reserved positions in the base system unit or in the #9329 PCI Card Expansion Unit  Supported on Model 720</p>
#2854	<p><b>#2854 PCI Integrated PC Server</b>  The #2854 contains a 200 MHz Pentium Processor, four main storage slots, and two LAN IOA slots for high performance serving to LAN attached PCs. Between one and four of the main storage features must also be installed:</p> <ul style="list-style-type: none"> <li>▶ #2861 32 MB Integrated PC Server Memory</li> <li>▶ #2862 128 MB Integrated PC Server Memory</li> </ul> <p>Up to two of LAN IOAs are supported. A minimum of one LAN IOA is required. A maximum of one LAN IOA can be a #2838 PCI 100/10 Mbps Ethernet IOA or a #9738 PCI 100/10 Mbps Ethernet IOA.</p> <ul style="list-style-type: none"> <li>▶ #2723 PCI Ethernet IOA</li> <li>▶ #2724 PCI 16/4 Mbps Token Ring IOA</li> <li>▶ #2838 PCI 100/10 Mbps Ethernet IOA</li> </ul> <p>Only one of the following base LAN IOAs is supported:</p> <ul style="list-style-type: none"> <li>▶ #9723 PCI Ethernet IOA</li> <li>▶ #9724 PCI Token Ring IOA</li> <li>▶ #9738 PCI 100/10 Mbps Ethernet IOA</li> </ul> <p>Only one of the IOAs can be a #2838 or a #9738.</p> <p>When running Windows NT on the #2854, then:</p> <ul style="list-style-type: none"> <li>▶ A minimum of 64 MB IOP memory is required.</li> <li>▶ The #0325 Integrated PC Server Extension Cable for Windows NT is required.</li> <li>▶ The #1700 Integrated PC Server Keyboard/Mouse for Windows NT is the default in the U.S.A.</li> <li>▶ A display must be connected to the IPCS to support Windows NT.</li> <li>▶ Windows NT is not supported after OS/400 V5R2. Upgrade to Windows 2000.</li> </ul> <p>For country- or region-specific keyboard, mouse and display support, access the site at: When running OS/2 on the #2854, then:</p> <ul style="list-style-type: none"> <li>▶ The #0325 and #1700 are not allowed.</li> <li>▶ A maximum of 512 MB IOP memory is allowed.</li> </ul> <p>When running Novell NetWare on the #2854, then:</p> <ul style="list-style-type: none"> <li>▶ The #0325 and #1700 are not allowed.</li> <li>▶ A maximum of 256 MB IOP memory is supported.</li> </ul> <p>PCI slots required: Two in reserved positions in the system unit or in the #9329 PCI Card Expansion Unit  Supported on Model 720</p>



#2865	<p><b>#2865 PCI Integrated Netfinity Server</b></p> <p>The #2865 contains an Intel 333 MHz Pentium II Processor, four main storage slots, and two LAN IOA slots. The #2865 provides high performance serving to LAN attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 1024 MB. A minimum of one main storage feature is required:</p> <ul style="list-style-type: none"> <li>▶ #2861 32 MB Integrated PC Server Memory (withdrawn from marketing 28 December 2001)</li> <li>▶ #2862 128 MB Integrated PC Server Memory (withdrawn from marketing 28 December 2001)</li> <li>▶ #2867 256 MB Integrated PC Server Memory (withdrawn from marketing 02 July 2002)</li> </ul> <p>The #2865 requires two (reserved) PCI card positions: one for the processor card and one for a bridge card that acts as the interface to the system. The #2865 comes with a special cable that allows for a connection on the back of the bridge card to industry-standard keyboard, mouse, serial, and parallel connectors.</p> <p>Up to two of the following LAN IOAs are supported. A minimum of one LAN IOA is required. Only one of the LAN IOAs can be a #2838 PCI 100/10 Mbps Ethernet IOA or a #9738 PCI 100/10 Mbps Ethernet IOA.</p> <ul style="list-style-type: none"> <li>▶ #2723 PCI Ethernet IOA (withdrawn from marketing 28 December 2001)</li> <li>▶ #2724 PCI 16/4 Mbps Token Ring IOA (withdrawn from marketing 31 July 2001)</li> <li>▶ #2838 PCI 100/10 Mbps Ethernet IOA</li> </ul> <p>If the #2838 is run on the #2865, the #0222 100/10 Mbps Ethernet on IPCS is required.</p> <p>Only one of the following base LAN IOAs is supported:</p> <ul style="list-style-type: none"> <li>▶ #9723 PCI Ethernet IOA</li> <li>▶ #9724 PCI Token Ring IOA</li> <li>▶ #9738 PCI 100/10 Mbps Ethernet IOA</li> </ul> <p>When running Windows NT on the #2865, then:</p> <ul style="list-style-type: none"> <li>▶ A minimum of 64 MB IOP memory is required on the Integrated Netfinity Server.</li> <li>▶ The #0325 Integrated PC Server Extension Cable for Windows NT is required.</li> <li>▶ The #1700 Integrated PC Server Keyboard/Mouse for Windows NT is the default in the U.S.A.</li> <li>▶ A display is required to support Windows NT on the IPCS.</li> <li>▶ Windows NT is not supported after OS/400 V5R2. Upgrade to Windows 2000.</li> </ul> <p>For keyboard or mouse and display support in countries (regions) outside of the U.S.A., see the Web site at:  <a href="http://www.ibm.com/eserver/iseries/integratedxseries/">http://www.ibm.com/eserver/iseries/integratedxseries/</a></p> <p>When running OS/2 on the #2865 PCI Integrated Netfinity Server, then:</p> <ul style="list-style-type: none"> <li>▶ The #0325 and #1700 are not allowed.</li> <li>▶ A maximum of 512 MB IOP memory is supported.</li> </ul> <p>When running Novell NetWare on the #2865, then:</p> <ul style="list-style-type: none"> <li>▶ The #0325 and #1700 are not allowed.</li> <li>▶ A maximum of 256 MB IOP memory is supported.</li> </ul> <p>PCI slots required: Two in reserved positions in the base system unit or in the #9329/#9330 PCI integrated expansion unit Supported on Model 720  OS/2 and Novell NetWare are not supported with OS/400 V5R1.  Minimum operating system level: OS/400 V4R3 and Cumulative PTF Package C8349430  The #2865 was withdrawn from marketing on 02 July 2002.</p>
#6149 #9249	<p><b>#6149 16/4 Mbps Token Ring IOA (SPD)</b></p> <p>The #6149 provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an IOA card, internal code, which supplies IEEE 802.5 MAC and IEEE 802.2 LLC, and an external 8-ft (2.4 m) cable. Alternatively, a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. Can operate in half or full duplex mode. The #9249 is a base LAN adapter specify.</p> <p>Prerequisite: A free slot in #2629 LAN/WAN/Workstation IOP or #6616 Integrated PC Server  SPD slots required: None</p>

#6181 #9381	<p><b>#6181 ASCII Workstation Controller (SPD)</b></p> <p>The #6181 provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. It consists of an adapter card and internal code, which supplies Ethernet Version 2 and IEEE 802.3 MAC plus 802.2 LLC functions. It has a RJ45 connector and a 15-pin D-shell connector for attachment of client-supplied cabling. Cabling must meet or exceed Industry Standard EIA/TIA T568B.</p> <p>The #9381 is a base LAN adapter specify. The Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. This cable can be used if the client is choosing IBM AUI cabling:  #9025 Ethernet Cable (3 m AUI) (withdrawn from marketing on 21 November 2003)</p> <p>If the client is not choosing IBM AUI cabling, AUI Ethernet or RJ45 twisted pair cable must be ordered separately.</p> <p>Prerequisite: A free slot in #2629 LAN/WAN/Workstation IOP or #6616 Integrated PC Server  SPD slots required: None</p>
IPCS  #6516 #6517 #6518 #6519 #6526 #6527 #6528 #6529   #6509  #6520	<p><b>Integrated PC Server (IPCS) (formerly known as FSIOP) (SPD)</b></p> <p>Contains a 66 MHz 486 Processor, main storage, and ability to attach to one or two LANs for high performance serving to LAN attached PCs.</p> <ul style="list-style-type: none"> <li>▶ 16 MB 1-Port Integrated PC Server</li> <li>▶ 32 MB 1-Port Integrated PC Server</li> <li>▶ 48 MB 1-Port Integrated PC Server</li> <li>▶ 64 MB 1-Port Integrated PC Server</li> <li>▶ 16 MB 2-Port Integrated PC Server</li> <li>▶ 32 MB 2-Port Integrated PC Server</li> <li>▶ 48 MB 2-Port Integrated PC Server</li> <li>▶ 64 MB 2-Port Integrated PC Server</li> </ul> <p>The following cables need to be specified, depending on the LAN being attached to:</p> <ul style="list-style-type: none"> <li>▶ #9024 Token ring cable (2.4 m)</li> <li>▶ #9025 Ethernet Cable (3 m AUI) (withdrawn from marketing on 21 November 2003)</li> </ul> <p>SPD slots required: Two contiguous slots</p> <p><b>Additional 16 MB for Integrated PC Server</b></p> <p>The #6509 is used to increase the memory on an installed Integrated PC Server up to the maximum of 64 MB.</p> <p><b>Upgrade 1-Port Integrated PC Server to 2-Port Integrated PC Server</b></p> <p>The #6620 cannot be used with a 2-Port Integrated PC Server.  The #9024 or #9025 cables can be used with the #6520 depending on the LAN to be attached.</p>
#6616	<p><b>#6616 Integrated PC Server (SPD)</b></p> <p>The #6616 contains a 166 MHz Pentium Processor, two main storage slots, and two LAN IOA slots for high performance serving to LAN attached PCs. The two main storage slots can each contain one of the following features, giving a maximum of 256 MB. A minimum of one main storage feature is required:</p> <ul style="list-style-type: none"> <li>▶ #2861 32 MB Integrated PC Server Memory</li> <li>▶ #2862 128 MB Integrated PC Server Memory</li> </ul> <p>Either one or two of the following LAN IOAs are supported:</p> <ul style="list-style-type: none"> <li>▶ #6149 16/4 Mbps Token Ring IOA</li> <li>▶ #6181 ASCII Workstation Controller</li> </ul> <p>SPD slots required: Two contiguous slots</p>

#6617	<p><b>#6617 Integrated PC Server (SPD)</b></p> <p>The #6617 contains a 200 MHz Pentium Processor, four main storage slots, and three LAN IOA slots for high performance serving to LAN-attached PCs. The four main storage slots can each contain one of the following features, for a maximum of 512 MB. A minimum of one main storage feature is required:</p> <ul style="list-style-type: none"> <li>▶ #2861 32 MB Integrated PC Server Memory</li> <li>▶ #2862 128 MB Integrated PC Server Memory</li> </ul> <p>Up to three of the following LAN IOAs are supported. A minimum of one LAN IOA is required. A maximum of two of the LAN IOAs can be #2838 PCI 100/10 Mbps Ethernet IOA/#9738.</p> <ul style="list-style-type: none"> <li>▶ #2723 PCI Ethernet IOA</li> <li>▶ #2724 PCI 16/4 Mbps Token Ring IOA</li> <li>▶ #2838 PCI 100/10 Mbps Ethernet IOA</li> </ul> <p>Only one of the following base LAN IOAs is supported:</p> <ul style="list-style-type: none"> <li>▶ #9723 PCI Ethernet IOA</li> <li>▶ #9724 PCI Token Ring IOA</li> <li>▶ #9738 PCI 100/10 Mbps Ethernet IOA</li> </ul> <p>The third LAN and the second #2838 can only be used if running Windows NT on the #6617. When running Windows NT on the #6617, then:</p> <ul style="list-style-type: none"> <li>▶ A minimum of 64 MB IOP memory is required.</li> <li>▶ #0325 Integrated PC Server Extension Cable for Windows NT is required.</li> <li>▶ #1700 Integrated PC Server Keyboard or Mouse for Windows NT. Default in the U.S.A.</li> <li>▶ A display unit is required to support Windows NT on the IPCS or Integrated xSeries Server.</li> <li>▶ Windows NT is not supported after OS/400 V5R2. Upgrade to Windows 2000.</li> </ul> <p>For country- or region-specific keyboard, mouse and display support, see:  <a href="http://www.ibm.com/eserver/iseries/integratedxseries/">http://www.ibm.com/eserver/iseries/integratedxseries/</a></p> <p>When running OS/2 on the #6617, then:</p> <ul style="list-style-type: none"> <li>▶ The #0325 and #1700 are not allowed.</li> <li>▶ Only two of the LAN IOA slots can be used and only one can contain a #2838 PCI 100/10 Mbps Ethernet IOA/#9738.</li> <li>▶ A maximum of 512 MB IOP memory is supported.</li> </ul> <p>When running Novell NetWare on the #6617, then:</p> <ul style="list-style-type: none"> <li>▶ The #0325 and #1700 are not allowed.</li> <li>▶ Only two of the LAN IOA slots can be used and only one can contain a #2838/#9738 PCI 100/10 Mbps Ethernet IOA.</li> <li>▶ A maximum of 256 MB IOP memory is supported.</li> </ul> <p>SPD slots required: Three contiguous slots; cannot be placed in the #5044 System Unit Expansion Rack  OS/2 and Novell NetWare are not supported with OS/400 V5R1.</p>
#6618	<p><b>#6618 Integrated Netfinity Server (SPD)</b></p> <p>The #6618 contains an Intel 333 MHz Pentium II Processor, four main storage slots, and three LAN IOA slots for high performance LAN serving to LAN-attached PCs. All three PCI slots can be used for Integrated PC Server functions. Two of the three PCI slots can support native iSeries functions. The #6618 requires three IOP slots. The slots must be adjacent. An external cable is included to enable connectivity to IPCS hardware (keyboard or mouse), which also allows for optional use of parallel and system ports.</p> <p>The #6618 comes with no base main memory. A minimum of one main storage feature is required. Up to four of the following memory features are supported to allow between 32 MB and 1024 MB of memory:</p> <ul style="list-style-type: none"> <li>▶ #2861 32 MB Integrated PC Server Memory</li> <li>▶ #2862 128 MB Integrated PC Server Memory</li> <li>▶ #2867 256 MB Integrated PC Server Memory</li> </ul> <p>Up to three of the following LAN IOAs are supported. A minimum of one LAN IOA is required. A maximum of two of the LAN IOAs can be #2838/#9738 PCI 100/10 Mbps Ethernet IOA.</p> <ul style="list-style-type: none"> <li>▶ #2723 PCI Ethernet IOA (10 Mbps)</li> <li>▶ #2724 PCI 16/4 Mbps Token Ring IOA</li> <li>▶ #2838 PCI 100/10 Mbps Ethernet IOA</li> </ul> <p>Only one of the following base LAN IOAs is supported:</p> <ul style="list-style-type: none"> <li>▶ #9723 PCI Ethernet IOA (10 Mbps)</li> <li>▶ #9724 PCI Token Ring IOA</li> <li>▶ #9738 PCI 100/10 Mbps Ethernet IOA</li> </ul>

<p>#6618 (cont.)</p>	<p><b>#6618 Integrated Netfinity Server (SPD)</b>  A #0221 Ethernet on IPCS is required for each #2723/#9723 selected to run on the #6618.  A #0220 Token-ring on IPCS is required for each #2724/#9724 selected to run on the #6618.  A #0222 100/10 Mbps Ethernet on IPCS is required for each #2838/#9738 selected to run on the #6618.</p> <p>When running Windows NT on the #6618, then:</p> <ul style="list-style-type: none"> <li>▶ A minimum of 64 MB IOP memory is required. The maximum total memory is 1024 MB.</li> <li>▶ The #0325 Integrated PC Server Extension Cable for Windows NT is required.</li> <li>▶ The #1700 Integrated PC Server Keyboard or Mouse for Windows NT is the default in the U.S.A.</li> <li>▶ There is a maximum of one 100/10 Mbps Ethernet IOA in the two native iSeries slots.</li> <li>▶ There is a maximum of two 100/10 Mbps Ethernet IOAs.</li> <li>▶ A display is required to support Windows NT on the IPCS.</li> <li>▶ Windows NT is not supported with after OS/400 V5R2. Upgrade to Windows 2000.</li> </ul> <p>For keyboard or mouse and display support in countries (regions) outside the U.S., see:  <a href="http://www.ibm.com/eserver/iseries/integratedxseries/">http://www.ibm.com/eserver/iseries/integratedxseries/</a></p> <p>When running OS/2 on the #6618, then:</p> <ul style="list-style-type: none"> <li>▶ The #0325 and #1700 are not allowed.</li> <li>▶ Only two of the LAN IOA slots can be used and only one can contain a #2838/#9738 PCI 100/10 Mbps Ethernet IOA.</li> <li>▶ A maximum of one 100/10 Mbps Ethernet IOA can be in the two native iSeries slots.</li> <li>▶ A maximum of 512 MB IOP memory is supported.</li> </ul> <p>When running Novell NetWare on the #6618, then:</p> <ul style="list-style-type: none"> <li>▶ The #0325 and #1700 are not allowed.</li> <li>▶ Only two of the LAN IOA slots can be used and only one can contain a #2838/#9738 PCI 100/10 Mbps Ethernet IOA. Both can support native iSeries functions.</li> <li>▶ A maximum of 256 MB IOP memory is supported.</li> </ul> <p>SPD slots required: Three contiguous slots</p> <p>The #6618 cannot be placed in #5044 System Unit Expansion Rack.  The third LAN and the second #2838 can only be used if running Windows NT on the #6618.  All three PCI slots can be used for the Integrated Netfinity Server with only two of the three slots supporting native iSeries functions.</p> <p>A maximum of two #2838/#9738 can be used on each Integrated Netfinity Server: one native and one Windows NT dedicated.</p> <p>OS/2 and Novell NetWare are not supported with OS/400 V5R1.  Minimum operating system level: OS/400 V4R3 and Cumulative PTF Package C8349430  The #6618 was withdrawn from marketing on 28 December 2001.</p>
<p>#8664</p>	<p><b>Base Fiber Distributed Data Interface Adapter (SPD)</b>  The #8664 provides one interface to connect an iSeries or AS/400e to an FDDI LAN, which complies with ANSI X3T9.5 and ISO 9314 standards. It consists of a card, a wrap connector, and Licensed Internal Code, which supplies IEEE 802.2 LLC, ANSI X3T9.5/ISO 9314 MAC functions, and ANSI X3T9.5 SMT functions. A multi-node (62.5/125 micron) FDDI optical fiber jumper cable to connect the adapter to the FDDI ring must be ordered separately.</p> <p>SPD slots required: One  Supported on Models 730 and 740</p>
<p>#8665</p>	<p><b>Base Shielded Twisted-Pair Distributed Data Interface Adapter (SPD)</b>  The #8665 provides one interface to connect to an FDDI LAN, which is constructed of IBM Cabling System Type 1, 2, 6, or 9 shielded twisted-pair wiring. It consists of a card, a wrap connector, and Licensed Internal Code, which supplies IEEE 802.2 LLC, ANSI X3T9.5/ISO 9314 MAC functions, and ANSI X3T9.5 SMT functions. IBM FDDI copper jumper cables to connect the adapter to the FDDI ring must be ordered separately.</p> <p>SPD slots required: One  Supported on Models 730 and 740</p>

Disk units	
#1312	<p><b>1-byte 1.03 GB Disk Unit Conversion Kit</b>  The #1312 provides the hardware for migrating one 1.03 GB one-byte SCSI disk unit. It is supported only in the system unit or the #5064/#9364 system unit expansion. One #1312 migrates the #6601, #6602, #6701, #6802, #9601, or #9602 disk.</p> <p>Supported on Model 720</p>
#1313	<p><b>1-byte 1.96 GB Disk Unit Conversion Kit</b>  The #1313 provides the hardware for migrating one 1.96 GB one-byte SCSI disk unit. It is supported only in the system unit or the #5064/#9364 system unit expansion. One #1313 migrates one #6603 disk.</p> <p>Supported on Model 720</p>
#1322	<p><b>2-byte 1.03 GB Disk Unit Conversion Kit</b>  The #1322 provides the hardware for migrating one 1.03 GB 2-byte SCSI disk unit. It is supported only in the system unit or the #5064/#9364 system unit expansion. One #1322 migrates one #6652 or #9652 disk.</p> <p>Supported on Model 720</p>
#1323	<p><b>2-byte 1.96 GB Disk Unit Conversion Kit</b>  The #1323 provides the hardware for migrating one 1.96 GB 2-byte SCSI disk unit. It is supported only in the system unit or the #5064/#9364 system unit expansion. One #1323 migrates a #4650, #6650, or #8650 disk.</p> <p>Supported on Model 720</p>
#1325	<p><b>2-byte 1.03 GB Disk Unit Conversion Kit</b>  The #1325 provides the hardware for migrating one 1.03 GB 2-byte SCSI disk unit. It is supported only in the system unit or #5064/#9364 system unit expansion. One #1325 migrates one #4605, #6605, #9605, or #9705 disk.</p> <p>Supported on Model 720</p>
#1326	<p><b>2-byte 1.96 GB Disk Unit Conversion Kit</b>  The #1326 provides the hardware for migrating one 1.96 GB 2-byte SCSI disk unit. One #1326 migrates one #4606, #6606, #8606, #8706, or #9606 disk. It is supported only in the system unit or #5064/#9364 system unit expansion.</p> <p>Supported on Model 720  The #1326 was withdrawn from marketing on 31 October 2000.</p>
#1327	<p><b>2-byte 4.19 GB Disk Unit Conversion Kit</b>  The #1327 provides the hardware for migrating one 4.19 GB 2-byte SCSI disk unit. One #1327 migrates one #4607, #6607, #7607, #8607, or #8707 disk. If located in a 3xx/5xx Model #1327 is used, in a 2xx/4xx Model #1337 is used. It is supported only in the system unit or #5064/#9364 system unit expansion.</p> <p>Supported on Model 720  The #1327 was withdrawn from marketing on 31 October 2000.</p>
#1333	<p><b>2-byte 8.58 GB Disk Unit Conversion Kit (Ultra SCSI)</b>  The #1333 provides the hardware for migrating one 8.58 GB 2-byte SCSI disk unit. It is supported only in the system unit or #5064/#9364 system unit expansion. One #1333 migrates one #6713, #7713, or #8713 disk.</p> <p>Supported on Model 720  The #1333 was withdrawn from marketing on 31 October 2000.</p>
#1334	<p><b>2-byte 17.54 GB Disk Unit Conversion Kit (Ultra SCSI)</b>  The #1334 provides the hardware for migrating one 17.54 GB 2-byte SCSI disk unit. It is supported only in the system unit or #5064/#9364 system unit expansion. One #1334 migrates one #6714 disk.</p> <p>Supported on Model 720  The #1334 was withdrawn from marketing on 31 October 2000.</p>
#1336	<p><b>2-byte 1.96 GB Disk Unit Conversion Kit (Ultra SCSI)</b>  The #1336 provides the hardware for migrating one 1.96 GB 2-byte SCSI disk unit. It is supported only in the system unit or #5064/#9364 system unit expansion. One #1336 migrates one #6906 disk.</p> <p>Supported on Model 720  The #1336 was withdrawn from marketing on 31 October 2000.</p>

#1337	<p><b>2-byte 4.19 GB Disk Unit Conversion Kit (Ultra SCSI)</b>  The #1337 provides the hardware for migrating one 4.19 GB 2-byte SCSI disk unit.</p> <p>Supported on Model 720  The #1337 was withdrawn from marketing on 31 October 2000.</p>
#1602	<p><b>1-byte 1.03 GB Disk Unit Conversion Kit</b>  The #1602 provides the hardware for migrating one 1.03 GB one-byte SCSI disk unit. It is supported only in #5052, #5057, or #5058 Storage Expansion Unit positions 1 through 7.</p> <p>The #1602 was withdrawn from marketing on 31 March 1999.</p>
#1603	<p><b>#1603 1.96 GB Single Disk Unit Conversion Kit 1-byte</b>  The #1603 provides the hardware for migrating one 1.96 GB one-byte SCSI disk unit. It is supported only in #5052, #5057, or #5058 Storage Expansion Unit positions 1 through 7.</p> <p>The #1603 was withdrawn from marketing on 23 February 1996.</p>
#4308	<p><b>#4308 4.19 GB Disk Unit (Ultra SCSI)</b>  The #4308 provides a 3 ½-inch single disk unit with 4.19 GB capacity for a additional disk storage.</p> <p>Prerequisite: #5065/#5066 PCI Expansion Tower with #2748 PCI RAID Disk Unit Controller  Supported in the #5065/#5066 only  Minimum operating system level: OS/400 V4R4  The #4308 is a Customer Install Feature.  The #4308 was withdrawn from marketing on 29 December 2000.</p>
#4314	<p><b>#4314 8.58 GB Disk Unit (Ultra SCSI)</b>  The #4314 provides an additional 3 ½-inch 2-byte single disk unit with 8.58 GB capacity (7200 RPM).</p> <p>Prerequisite: #5065/#5066 PCI Expansion Tower with #2748 PCI RAID Disk Unit Controller  Minimum operating system level: OS/400 V4R4  The #4314 is a Customer Install Feature.  The #4314 was withdrawn from marketing on 31 January 2001.</p>
#4317	<p><b>#4317 8.58 GB 10k RPM Disk Unit (Ultra2 SCSI)</b>  The #4317 provides an additional 3 ½-inch single disk unit with 8.58 GB capacity.</p> <p>Prerequisite: #5065/#5066 PCI Expansion Tower with #2748 PCI RAID Disk Unit Controller  Supported in the #5065/#5066 only  Minimum operating system level: OS/400 V4R4  The #4317 is a Customer Install Feature.  The #4317 was withdrawn from marketing on 3 December 2002.</p>
#4318	<p><b>#4318 17.54 GB 10k RPM Disk Unit (Ultra2 SCSI)</b>  The #4318 provides an additional 3 ½-inch single disk unit with 17.54 GB capacity.</p> <p>Prerequisite: #5065/#5066 PCI Expansion Tower with #2748 PCI RAID Disk Unit Controller  Supported in the #5065/#5066 only  Minimum operating system level: OS/400 V4R4  The #4318 is a Customer Install Feature.  The #4318 was withdrawn from marketing on 01 June 2004 for new orders. Conversions to feature #4318 remain available.</p>
#4324	<p><b>#4324 17.54 GB Disk Unit (Ultra SCSI)</b>  The #4324 2-byte disk unit provides a 3 ½-inch single disk unit with 17.54 GB capacity for a additional disk storage (7200 RPM).</p> <p>Prerequisite: #5065/#5066 PCI Expansion Tower with #2748 PCI RAID Disk Unit Controller  Supported in the #5065/#5066 only  Minimum operating system level: OS/400 V4R4  The #4324 is a Customer Install Feature.  The #4324 was withdrawn from marketing on 31 January 2001.</p>

#4331	<p><b>#4331 1.6 GB Read Cache Device</b></p> <p>The #4331 provides 1.6 GB of capacity for large read cache function. It is mutually exclusive with DASD compression. The system arrives in performance mode with compression function turned off on the #4748/#4778 PCI RAID Disk Unit Controller. For placement rules, see the full description of “#4331” on page 277.</p> <p>Prerequisite for the Models 720, 730, and 740: #2748/#2778 PCI RAID Disk Unit Controller  Maximum: One per #4748/#4778 PCI RAID Disk Unit Controller  Supported in the Model 720, 730, 740, and the #5065/#5066 PCI Expansion Tower  Minimum operating system level: OS/400 V4R4  The #4331 is a Customer Install Feature.  The #4331 was withdrawn from marketing on 1 March 2002.</p>
#6605	<p><b>1.03 GB Additional 2-byte Disk Unit</b></p> <p>The #6605 provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage. It is supported only in the #5052, #5055, #5057, #5058 Storage Expansion Unit, or #5082 Storage Expansion Tower, #5083 Storage Expansion Towers.</p>
#6606	<p><b>1.96 GB Additional 2-byte Disk Unit</b></p> <p>The #6606 provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. It is supported in the #5052, #5055, #5057, #5058 Storage Expansion Unit, or #5082 Storage Expansion Tower, #5083 Storage Expansion Towers, and in a #9251 Base I/O Tower or Model 730 system tower.</p>
#6607	<p><b>4.19 GB Additional 2-byte Disk Unit</b></p> <p>The #6607 provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. The #6607 is supported in the #5052, #5055, #5057, #5058 Storage Expansion Unit, #5082 Storage Expansion Tower, #5083 Storage Expansion Towers, and in #9251 Base I/O Tower, or Model 730 system tower.</p> <p>RPQ 843977 and RPQ 843978 can be used for migration to 720, 730, and 740 system units and the #5064, #5072, #5073, #5082, #5083, and #9364 System Unit Expansion unit and towers.</p> <p>Refer to “RPQ 843977” on page 178 and “RPQ 843978” on page 178 for more information.</p> <p>The #6607 was withdrawn from marketing on 29 December 2000.</p>
#6650	<p><b>1.96 GB Additional 2-byte Disk Unit</b></p> <p>The #6650 provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. It is supported in the #5052, #5055, #5057, #5058 Storage Expansion Units, #5082 Storage Expansion Tower, #5083 Storage Expansion Towers, and in a #9251 Base I/O Tower, or Model 730 system tower.</p>
#6652	<p><b>1.03 GB Additional 2-byte Disk Unit</b></p> <p>The #6652 provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage. It is supported in the #5052, #5055, #5057, #5058 Storage Expansion Unit, #5082 Storage Expansion Tower, #5083 Storage Expansion Tower, and in a #9251 Base I/O Tower or Model 730 system tower.</p>
#6713	<p><b>#6713 8.58 GB Disk Unit (Ultra SCSI)</b></p> <p>The #6713 2-byte disk unit provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. The #6713 is supported in the #5052, #5055, #5057, or #5058 Storage Expansion Unit, #5082 Storage Expansion Tower, #5083 Storage Expansion Towers, and in the #9251 Base I/O Tower, or Model 730 system tower.</p> <p>RPQ 843977 and RPQ 843978 can be used for migration to 720, 730, or 740 system units and the #5064, #5072, #5073, and #9364 System Unit Expansion tower.</p> <p>Refer to “RPQ 843977” on page 178 and “RPQ 843978” on page 178 for more information.</p> <p>The #6713 was withdrawn from marketing on 31 January 2001.</p>
#6714	<p><b>#6714 17.54 GB Disk Unit (Ultra SCSI)</b></p> <p>The #6714 2-byte disk unit provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. The #6714 is supported in the #5052, #5055, #5057, or #5058 Storage Expansion Unit, or the #5082 Storage Expansion Tower, #5083 Storage Expansion Towers, and in the #9251 Base I/O Tower or Model 730 system tower.</p> <p>RPQ 843977 and RPQ 843978 can be used for migration to 720, 730, or 740 system units and the #5072 and #5073 1063 Mbps System Unit Expansion Tower.</p> <p>Refer to “RPQ 843977” on page 178 and “RPQ 843978” on page 178 for more information.</p> <p>The #6714 was withdrawn from marketing on 31 January 2001.</p>

#6717	<p><b>#6717 8.58 GB 10k RPM Disk Unit</b> (Ultra SCSI)</p> <p>The #6717 2-byte disk unit provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Supported in the #5052 Storage Expansion Unit, #5055 Storage Expansion Unit, #5057 Storage Expansion Unit, #5058 Storage Expansion Unit, #5082 Storage Expansion Tower, or #5083 Storage Expansion Tower, and in #9251 Base I/O Tower or Model 730 system tower. For best performance when installed in Storage Expansion or Storage Expansion Tower, use the #6532 RAID Disk Unit Controller or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5083.</p> <p>The #6717 is supported in the #5065/#5066 PCI Expansion Tower with RPQ 847102. It is not supported on the #6502, #6512, or #6530.</p> <p>Minimum operating system level: OS/400 V4R3</p>
#6718	<p><b>#6718 17.54 GB 10k RPM Disk Unit</b> (Ultra SCSI)</p> <p>The #6718 2-byte disk unit provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. It is supported in the #5052 Storage Expansion Unit, #5055 Storage Expansion Unit, #5057 Storage Expansion Unit, #5058 Storage Expansion Unit, #5082 Storage Expansion Tower, or #5083 Storage Expansion Tower, and in #9251 Base I/O Tower or Model 730 system tower. For best performance when installed in Storage Expansion or Storage Expansion Tower, use the #6532 RAID Disk Unit Controller or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5083.</p> <p>The #6718 is supported in the #5065/#5066 PCI Expansion Tower with RPQ 847102. It is not supported on the #6502, #6512, or #6530.</p> <p>Minimum operating system level: OS/400 V4R4</p>
#6806	<p><b>1.96 GB Additional 2-byte Disk Unit</b> (Ultra SCSI)</p> <p>The #6806 provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage.</p> <p>Supported only in the system unit or the #5064/#9364 system unit expansion Supported on Model 720</p>
#6807	<p><b>#6807 4.19 GB Additional Two byte Disk Unit</b> (Ultra SCSI)</p> <p>The #6807 provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage.</p> <p>Supported only in the system unit or the #5064/#9364 system unit expansion Supported on Model 720 The #6807 was withdrawn from marketing on 29 December 2000.</p>
#6813	<p><b>#6813 8.58 GB Additional Two-byte Disk Unit</b> (Ultra SCSI)</p> <p>The #6813 provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage.</p> <p>Supported only in the system unit or the #5064/#9364 system unit expansion Supported on Model 720 The #6813 was withdrawn from marketing on 31 January 2001</p>
#6817	<p><b>#6817 8.58 GB 10k RPM Disk Unit</b> (Ultra SCSI)</p> <p>The #6817 2-byte disk unit provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Supported only in the system unit or #5064/#9364 system unit expansion. It is not supported on the #9364 with the #6502, #6512, or #6530. It is supported in the #5065/#5066 PCI Expansion Tower with RPQ 847102.</p> <p>Supported on Model 720 Minimum operating system level: OS/400 V4R3 The #6817 was withdrawn from marketing on 03 December 2002.</p>
#6818	<p><b>#6818 17.54 GB 10k RPM Disk Unit</b> (Ultra SCSI)</p> <p>The #6818 2-byte disk unit provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Supported only in the system unit or the #5064/#9364 system unit expansion. It is not supported on the #9364 with the #6502, #6512, or #6530. It is supported in the #5065/#5066 PCI Expansion Tower with RPQ 847102.</p> <p>Supported on Model 720 Minimum operating system level: OS/400 V4R4 The #6818 was withdrawn from marketing on 01 June 2004.</p>
#6824	<p><b>#6824 17.54 GB Disk Unit</b> (Ultra SCSI)</p> <p>The #6824 provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage.</p> <p>Supported only in the system unit or the #5064/#9364 system unit expansion Supported on Model 720 The #6824 was withdrawn from marketing on 31 January 2001.</p>



#6831	<p><b>#6831 1.6 GB Read Cache Device</b>  The #6831 provides 1.6 GB of capacity for large read cache function. Is mutually exclusive with DASD compression. The system arrives in performance mode with compression function turned off on the #2748 PCI RAID Disk Unit Controller. Mirroring is not supported on the #6831.</p> <p>Prerequisite: #2748 PCI RAID Disk Unit Controller  One DASD slot 1.6-inch in the system unit or in the #9364 System Unit Expansion</p> <p>Maximum: One per #2748 PCI RAID Disk Unit Controller</p> <p>Supported on Model 720</p> <p>Minimum operating system level: OS/400 V4R4</p> <p>The #6831 was withdrawn from marketing on 1 March 2002.</p>
#6906	<p><b>1.96 GB Additional 2-byte Disk Unit (Ultra SCSI)</b>  The #6906 provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. Supported in the #5052, #5055, #5057, or #5058 Storage Expansion Unit or the #5082 Storage Expansion Tower or #5083 Storage Expansion Towers and in the #9251 Base I/O Tower or Model 730 system tower. For best performance when installed in Storage Expansion or Storage Expansion Tower, use the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5083.</p>
#6907	<p><b>4.19 GB Additional 2-byte Disk Unit (Ultra SCSI)</b>  The #6907 provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. Supported in the #5052, #5055, #5057, or #5058 Storage Expansion Unit, or #5082 Storage Expansion Tower or #5083 Storage Expansion Towers and in the #9251 Base I/O Tower or Model 730 system tower. For best performance when installed in Storage Expansion or Storage Expansion Tower, use the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 Storage Expansion Unit or #5083.</p> <p>The #6907 was withdrawn from marketing on 29 December 2000.</p>
#8617	<p><b>8.58 GB Optional Base 2-byte Disk Unit 10k RPM (Ultra SCSI)</b>  The #8617 provides a 3 ½-inch single disk unit with 8.58 GB capacity as the base disk unit in place of the #9907. It is not supported on the #6502, #6512, or #6530.</p> <p>Supported on Models 730 and 740</p> <p>Minimum operating system level: OS/400 V4R3</p>
#8618	<p><b>17.54 GB Optional Base 2-byte Disk Unit 10k RPM (Ultra SCSI)</b>  The #8618 provides a 3 ½-inch single disk unit with 8.58 GB capacity as the base disk unit in place of the #9907. It is not supported on the #6502, #6512, or #6530.</p> <p>Supported on Models 730 and 740</p> <p>Minimum operating system level: OS/400 V4R4</p>
#8713	<p><b>8.58 GB Optional Base 2-byte Disk Unit (Ultra SCSI)</b>  The #8713 provides a 3 ½-inch single disk unit with 8.58 GB capacity as the base disk unit in place of the #9907.</p> <p>Supported on Models 730 and 740</p>
#8714	<p><b>17.54 GB Optional Base 2-Byte Disk Unit (Ultra SCSI)</b>  The #8714 provides a 3 ½-inch single disk unit with 17.54 GB capacity as the base disk unit in place of the #9907.</p> <p>The #8714 was withdrawn from marketing on 31 January 2001.</p>
#8813	<p><b>8.58 GB Optional Base 2-byte Disk Unit (Ultra SCSI)</b>  The #8813 provides a 3 ½-inch single disk unit with 8.58 GB capacity as the base disk unit in place of the #9707.</p> <p>Supported on Models 720</p> <p>The #8813 was withdrawn from marketing on 31 January 2001.</p>
#8817	<p><b>#8817 8.58 GB Optional Base Two-byte Disk Unit 10k RPM (Ultra SCSI)</b>  The #8817 provides a 3 ½-inch single disk unit with 8.58 GB capacity as the base disk unit in place of the #9707. Supported only in the system unit or #5064/#9364 system unit expansion. It is not supported on the #9364 with the #6502, #6512, or #6530.</p> <p>Supported on Model 720</p> <p>Minimum operating system level: OS/400 V4R3</p> <p>The #8817 was withdrawn from marketing on 28 December 2001.</p>

#8818	<p><b>#8818 17.54 GB Optional Base Two-byte Disk Unit 10k RPM (Ultra SCSI)</b>  The #8818 provides a 3 ½-inch single disk unit with 17.54 GB capacity as the base disk unit in place of the #9707. It is supported only in the system unit or #5064/#9364 system unit expansion. It is not supported on the #9364 with the #6502, #6512, or #6530.</p> <p>Supported on Model 720  Minimum operating system level: OS/400 V4R4  The #8818 was withdrawn from marketing on 28 December 2001.</p>
#8824	<p><b>17.54 GB Optional Base 2-Byte Disk Unit (Ultra SCSI)</b>  The #8824 provides a 3 ½-inch single disk unit with 17.54 GB capacity as the base disk unit in place of the #9707.</p> <p>Supported on Model 720  Minimum operating system level: OS/400 V4R2  The #8824 was withdrawn from marketing on 31 January 2001.</p>
#9606	<p><b>1.967 GB Base Disk Unit</b>  The #9606 provides a 3 ½-inch single disk unit with 1.967 GB capacity as base disk unit.</p> <p>Supported on Models 730 and 740</p>
#9707	<p><b>#9707 4.19 GB Base 2-byte Disk Unit (Ultra SCSI)</b>  The #9707 provides a 3 ½-inch single disk unit with 4.19 GB capacity as the default base disk unit.</p> <p>Supported on Model 720  The #9707 was withdrawn from marketing on 29 January 2000.</p>
#9907	<p><b>4.19 GB Base 2-byte Disk Unit (Ultra SCSI)</b>  The #9907 provides a 3 ½-inch single disk unit with 4.19 GB capacity as the default base disk unit.</p> <p>Supported on Models 730 and 740</p>
RPQ 843977	<p><b>RPQ 843977</b> is for clients who want to move 4/8/17 GB disk units from one AS/400 to another AS/400. The RPQ provides hardware for mounting one disk unit. The hardware in this RPQ allows for mounting #6607/#6907 (4.194 GB unit), #6713 (8.58 GB unit), and #6714 (17.54 GB unit) in the system unit of a Model 640/650/S30/S40/730/740 and in the #5052, #5055, #5057, #5058, #5070, #5071, #5072, #5073, #5080, #5081, #5082, or #5083 disk expansion units and tower. These target enclosures use SPD technology. After the disk drives are installed, process a Record Purposes Only (RPO) to add a #6607/#6907 for each #6607/#6907 added, a #6713 for each #6713 added, and a #6714 for each #6714 added.</p>
RPQ 843978	<p><b>RPQ 843978</b> is for clients who want to move 4/8/17 GB disk units from one AS/400 to another AS/400. The RPQ provides hardware for mounting one disk unit. The hardware in this RPQ allows for mounting device types #6607/#6907 (4.194 GB unit), #6713 (8.58 GB unit), and #6417 (17.54 GB unit) in the system unit of a Model 170, 600, S10, 620, S20 or 720 and the #7101, #7102, #5064, or #9364 System Unit Expansion units and towers. After the disk drives are installed, process an RPO to add a #6807 for each #6607/#6907 added, add a #6813 for each device #6713 added, and add a #6824 for each #6417 added.</p>
RPQ 847102	<p><b>RPQ 847102</b> ships the disk mounting hardware and instructions required to convert a #6717/#6817 to a #4317, and a #6718/#6818 to a #4318. One RPQ is required for each disk unit to be converted.</p> <p>See "RPQ 847102" on page 277 for a full description.</p>
<b>Internal tape units and CD-ROM</b>	
Supported media	See 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for the supported media for each tape device.
#1349	<p><b>1.2 GB ¼-inch Cartridge Tape Unit Conversion Kit</b>  The #1349 provides the hardware for migrating a #6368 1.2 GB ¼-inch cartridge tape unit. It is supported only in the system unit or #5064/#9364 system unit expansion.</p> <p>Supported on Model 720</p>
#1350	<p><b>2.5 GB ¼-inch Cartridge Tape Unit Conversion Kit</b>  The #1350 provides the hardware for migrating #6369 and #6380 2.5 GB ¼-inch Cartridge Tape Unit. It is supported only in the system unit or the #5064/#9364 system unit expansion.</p> <p>Supported on Model 720</p>

#1355	<p><b>13 GB ¼-inch Cartridge Tape Unit Conversion Kit</b>  The #1355 provides the hardware for migrating #6385 13 GB ¼-inch cartridge tape unit. It is supported only in the system unit or the #5064/#9364 system unit expansion.</p> <p>Supported on Model 720</p>
#1360	<p><b>7 GB 8 mm Cartridge Tape Unit Conversion Kit</b>  The #1360 provides the hardware for migrating a #6390 7 GB 8 mm cartridge tape unit. It is supported only in the system unit or the #5064/#9364 system unit expansion.</p> <p>Supported on Model 720</p>
#1379	<p><b>1.2 GB ¼-inch Cartridge Tape Unit Conversion Kit</b>  The #1379 provides the hardware for migrating 1.2 GB ¼-inch cartridge tape units. It is supported only in the #5082 Storage Expansion Tower or #5073 1063 Mbps System Unit Expansion Towers.</p> <p>Supported on Model 720</p>
#1380	<p><b>2.5 GB ¼-inch Cartridge Tape Unit Conversion Kit</b>  The #1380 provides the hardware for migrating 2.5 GB ¼-inch cartridge tape units. It is supported only in the #5072 1063 Mbps System Unit Expansion Tower or #5073 1063 Mbps System Unit Expansion Towers.</p> <p>Supported on Model 720</p>
#4425	<p><b>#4425 CD-ROM</b>  The #4425 can be used for alternate IPL (IBM distributed CD-ROM media only) and program distribution.</p> <p>Prerequisite: #2748 PCI RAID Disk Unit Controller  Supported only in the #5065 Storage/PCI Expansion Tower  Minimum operating system level: OS/400 V4R4  The #4425 is a Customer Install Feature.  The #4425 was withdrawn from marketing on 21 November 2003 for new orders. Conversion to feature #4425 remains available. The #4625 CD-ROM is the recommended replacement.</p>
#4482	<p><b>#4482 4 GB ¼-inch Cartridge Tape Device</b>  The #4482 can be used for save/restore, alternate IPL, program distribution, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Supported only in the #5065 Storage/PCI Expansion Tower  Minimum operating system level: OS/400 V4R4</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #4482 is a Customer Install Feature.  The #4482 was withdrawn from marketing on 01 January 2004.</p>
#4483	<p><b>#4483 16 GB ¼-inch Cartridge Tape Device</b>  The #4483 can be used for save/restore, alternate IPL, program distribution, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Supported only in the #5065 Storage/PCI Expansion Tower  Minimum operating system level: OS/400 V4R4</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #4483 is a Customer Install Feature.</p>

#4486	<p><b>#4486 25 GB ¼-inch Cartridge Tape Device</b>  The #4486 can be used for save/restore, alternate IPL, migration and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Supported only in the #5065 Storage/PCI Expansion Tower  Minimum operating system level: OS/400 V4R4</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #4486 is a Customer Install Feature.</p>
#4487	<p><b>#4487 50 GB ¼-inch Cartridge Tape Device</b>  The #4487 can be used for save/restore, alternate IPL, migration and ¼-inch cartridge tape exchange using the appropriate media and density. The #4487 tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Prerequisite: #2748/#2778 PCI RAID Disk Unit Controller  Supported only in the #5065 Storage/PCI Expansion Tower  Minimum operating system level: OS/400 V5R1</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #4487 is a Customer Install Feature.  The #4487 was withdrawn from marketing on 01 January 2004.</p>
#4684	<p><b>#4684 30 GB ¼-inch Cartridge Tape Device</b>  The #4684 is a 30 GB ¼-inch cartridge tape unit that can be mounted in a removable media device slot of a system unit or an expansion tower. The #4684 can be used for save/restore, alternate IPL, program distribution, migration, and ¼-inch cartridge tape exchange.</p> <p>Supported only in the #5065 Storage/PCI Expansion Tower  Minimum operating system level: OS/400 V4R5</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>The #4684 is a Customer Install Feature.</p>
#5032	<p><b>Removable Media Device Cluster Box</b>  The #5032 is a rack-mounted box that allows the attachment between one and four #6368 or #6369 1.2 GB or 2.5 GB ¼-inch cartridge tape units. It attaches to the #2621 Storage Device Controller.</p>
#6325	<p><b>#6325 Optional CD-ROM</b>  Limits the use of tape in the same tower to #6380 and #6390 on #5072 1063 Mbps System Unit Expansion Tower or #5073 1063 Mbps System Unit Expansion Towers.</p> <p>Maximum one per I/O tower and Model 740 system unit; one per Model 730 system unit  Prerequisite: #2624 Storage Device Controller  Supported on the Model 730 and 740 system unit and #5072 1063 Mbps System Unit Expansion Tower and #5073 1063 Mbps System Unit Expansion Towers  Minimum operating system level: OS/400 V4R4</p>
#6368	<p><b>1.2 GB ¼-inch Cartridge Tape Unit</b>  The #6368 can be used for save/restore, alternate IPL, migration and ¼-inch cartridge tape exchange using the appropriate media and density. The #6368 is installed in a #5032.</p>
#6369	<p><b>#6369 2.5 GB ¼-inch Cartridge Tape Unit</b>  The #6369 can be used for save/restore, alternate IPL, migration and ¼-inch cartridge tape exchange using the appropriate media and density. The #6369 is installed in a #5032.</p>
#6380	<p><b>#6380 2.5 GB ¼-inch Cartridge Tape Unit</b>  The #6380 can be used for save/restore, alternate IPL, migration and ¼-inch cartridge tape exchange using the appropriate media and density.  Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Supported only in the #5072, #5073, or #9251 Base I/O Towers and in the Model 730 system tower.</p>

#6381	<p><b>#6381 2.5 GB ¼-inch Cartridge Tape</b> The #6381 can be used for save/restore, alternate IPL, migration and ¼-inch cartridge tape exchange using the appropriate media and density.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Supported only in the #5072, #5073, or #9251 Base I/O Towers and in the Model 730 system tower.</p>
#6382	<p><b>#6382 4 GB ¼-inch Cartridge Tape Unit</b> The #6382 can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Supported only in the #5072, #5073, or #9251 Base I/O Towers and in the Model 730 system tower.</p>
#6383	<p><b>#6383 16 GB ¼-inch Cartridge Tape Unit</b> The #6383 can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. One can be controlled by the MFIOF. An extra #6383 must be controlled by the #6513.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Supported only in the #5072, #5073, or #9251 Base I/O Towers and in the Model 730 system tower.</p>
#6384	<p><b>#6384 30 GB ¼-inch Cartridge Tape Unit</b> The #6384 is a 30 GB ¼-inch cartridge tape unit that can be mounted in a removable media device slot of a system unit or an expansion tower. The #6384 can be used for save/restore, alternate IPL, program distribution, migration, and ¼-inch cartridge tape exchange.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Supported only in the #5072, #5073, or #9251 Base I/O Towers and in the Model 730 system tower. The #6384 is a Customer Install Feature. The #6384 was withdrawn from marketing on 21 November 2003 for new orders.</p>
#6385	<p><b>#6385 13 GB ¼-inch Cartridge Tape Unit</b> The #6385 can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Supported only in the #5072, #5073, or #9251 Base I/O Towers and in the Model 730 system tower. Not supported with OS/400 V5R2 The #6385 was withdrawn from marketing on 31 May 2000.</p>
#6386	<p><b>#6386 25 GB ¼-inch Cartridge Tape Unit</b> The #6386 can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Supported only in the #5072, #5073, or #9251 Base I/O Towers and in the Model 730 system tower. The #6386 was withdrawn from marketing on 3 December 2002.</p>
#6390	<p><b>7 GB 8 mm Cartridge Tape Unit</b> The #6390 can be used for save/restore, alternate IPL, migration, and 8 mm cartridge tape exchange using the appropriate media and density. It is supported in the #5072, #5073, or #9251 Base I/O Towers and in the Model 730 system tower.</p>

#6425	<p><b>#6425 Optional CD-ROM Feature</b></p> <p>Prerequisite: #2626 16/4 Mbps Token Ring Adapter/A, #2740 PCI RAID Disk Unit Controller, #2741 PCI RAID Disk Unit Controller, #2748 PCI RAID Disk Unit Controller, or #9728 Base Disk Unit Controller with the #9329 PCI Card Expansion Unit/#9330 PCI integrated expansion unit.</p> <p>Maximum: One CD-ROM is allowed in the base system unit and one optional in the integrated expansion unit.</p> <p>Supported in the system unit of the Model 720 system unit or in the #9364 System Unit Expansion with the #9329/#9330 PCI integrated expansion unit</p> <p>Not supported in the #9331 expansion unit for SPD cards.</p> <p>Minimum operating system level: OS/400 V4R4</p>
#6480	<p><b>#6480 2.5 GB ¼-inch Cartridge Tape Unit</b></p> <p>The #6480 can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using the appropriate media and density.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Supported in the system unit of the Model 720 and in the #5064/#9364 system unit expansion</p>
#6481	<p><b>#6481 2.5 GB ¼-inch Cartridge Tape Unit</b></p> <p>The #6481 can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using the appropriate media and density.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Supported in the system unit of the Model 720 and in the #5064/#9364 system unit expansion</p> <p>The #6481 was withdrawn from marketing on 29 December 2000.</p>
#6482	<p><b>4 GB ¼-inch Cartridge Tape Unit</b></p> <p>The #6482 can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Supported in the system unit of the Model 720 and in the #5064/#9364 system unit expansion</p> <p>The #6482 was withdrawn from marketing on 3 December 2002.</p>
#6483	<p><b>16 GB ¼-inch Cartridge Tape Unit</b></p> <p>The #6483 can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Supported in the system unit of the Model 720 and in the #5064/#9364 system unit expansion</p> <p>The #6483 was withdrawn from marketing on 3 December 2002.</p>
#6484	<p><b>#6484 30 GB ¼-inch Cartridge Tape Unit</b></p> <p>The #6484 is a 30 GB ¼-inch cartridge tape unit that can be mounted in a removable media device slot of a system unit or system unit expansion. The #6384 can be used for save/restore, alternate IPL, program distribution, migration, and ¼-inch cartridge tape exchange.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Supported in the system unit of the Model 720 and in the #5064/#9364 system unit expansion</p> <p>The #6484 is a Customer Install Feature.</p> <p>The #6484 was withdrawn from marketing on 21 November 2003 for new orders. Conversions to feature #6484 remain available.</p>

#6485	<p><b>13 GB ¼-inch Cartridge Tape Unit</b></p> <p>The #6485 can be used for save/restore, alternate IPL, migration and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Supported in the system unit of the Model 720 and in the #5064/#9364 system unit expansion.</p>
#6486	<p><b>25 GB ¼-inch Cartridge Tape Unit</b></p> <p>The #6486 can be used for save/restore, alternate IPL, migration and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Supported in the system unit of the Model 720 and in the #5064/#9364 system unit expansion.</p>
#6490	<p><b>7 GB 8 mm Cartridge Tape Unit</b></p> <p>The #6490 can be used for save/restore, alternate IPL, migration, and 8 mm cartridge tape exchange using the appropriate media and density. It is supported in the system unit or the #5064/#9364 system unit expansion.</p> <p>Supported on Model 720</p>
<b>Magnetic media controllers</b>	
#2621	<p><b>#2621 Storage Device Controller (SPD)</b></p> <p>The #2621 provides attachment for one or two of the following devices with hardware data compression: 2440, 9348, 7208, 3995, 9427, and #5032. Dual drive 7208s count as two devices. If #2621 supports a 3995 Optical Library Data server or #5032, it must be dedicated to it. If the #2621 supports a 9427, attach the 9427 to both ports of the #2621.</p> <p>Prerequisite: #9364 System Unit Expansion with #9331 expansion unit for SPD cards or #5072/#5073 1063 Mbps System Unit Expansion Tower on the Model 720 SPD slots required: One</p>
#2624	<p><b>#2624 Storage Device Controller (SPD)</b></p> <p>The #2624 Storage Device Controller provides support for up to three internal tape drives. With the addition of the #6146, it also supports one external diskette drive. Can be used to support tape drives only in #5072/#5073 1063 Mbps System Unit Expansion Towers. The #2624 is used to support the #6325 Optional CD-ROM in #5072 or #5073 1063 Mbps System Unit Expansion Towers.</p> <p>SPD slots required: One It is not supported to drive #6425 CD-ROM in the Model 720 with the #9331 expansion unit for SPD cards in the integrated #5064/#9364 system unit expansion.</p>
#2644	<p><b>#2644 Magnetic Tape Attachment Card/HP (SPD)</b></p> <p>The #2644 provides attachment for 3422, 3430, 3480, 3490 Axx, 3490 Bxx, 3490 Dxx, 3490E Axx, 3490E Bxx, 3490E Dxx, 3490E Cxx, and 3494 Tape Library Dataserver X10 models. Also requires the #9980 Serpentine Cable except for 3490E Cxx when used with internal cables.</p> <p>SPD slots required: One</p>
#2718	<p><b>#2718 PCI Magnetic Media Controller</b></p> <p>The #2718 PCI Magnetic Media Controller provides SCSI attachment for one 7206-VX2 80 GB VX-2 External Tape Drive, 7207-122 QIC-SLR Tape Bridge Box (4 GB External ¼-inch Cartridge Tape Drive), 7208-345 60 GB External 8 mm Tape Drive, 7210-020 External CD-ROM, or 7210-025 External DVD-RAM. See 9.5.4, "#5712, #5715, #5702, #5705, #2718, and #2768 PCI Magnetic Media Controller: Device cabling rules" on page 370, for information about connecting devices to the #2718.</p> <p>Prerequisite: #2809 PCI LAN/WAN/Workstation IOP or #2824 PCI Feature Controller High-speed PCI slots required: One Maximum: One in the system unit, two in the #9364 System Unit Expansion with #9329/#9330 PCI integrated expansion unit, and three in the #5065 Storage/PCI Expansion Tower Supported on Model 720 Minimum operating system level to support 7210-020 and 7208-345: OS/400 V4R5 Minimum operating system level to support 7210-025: OS/400 V5R1 The #2718 was withdrawn from marketing on 2 July 2002.</p>

#2726	<p><b>PCI RAID Disk Unit Controller — 4 MB Cache (RAID/Mirrored/Unprotected) (Ultra SCSI)</b></p> <p>The #2726 is an Ultra SCSI controller which provides RAID protection and a 4 MB write-cache for up to 15 disks installed in the system unit or #5064/#9364 system unit expansion. A minimum of four drives and a maximum of 10 drives are supported in each array. A maximum of three arrays is allowed for each #2726. The #2726 also supports one CD-ROM drive (which comes as standard) and one internal tape drive when placed in the system unit. When placed in the #5064/#9364 system unit expansion, it supports up to three internal tape drives or two internal tape drives and a CD-ROM #6325. Supports the #1349, #1350, #1355, #1360, #6481, #6482, #6485, #6484, or #6490 tape units. Mutually exclusive with #2740 PCI RAID Disk Unit Controller, #2741 PCI RAID Disk Unit Controller, or #9728 in the same system unit or #9364. The #2726 does not support integrated hardware disk compression.</p> <p>High-speed PCI slots required: One Maximum: One per system unit or #9364 Supported on Model 720</p>
#2729	<p><b>#2729 PCI Magnetic Media Controllerr</b></p> <p>The #2729 PCI Magnetic Media Controller provides SCSI attachment for one 3490E Exx, 3490E Fxx, 3490E Cxx with #5040, 3494 D1x or L1x. 3570, 3575, 3580, 3581, 3582, 3583, 3584, 3590, 7208, 9348, 9427 Tape Drive, or 3995 Optical Library Dataserver - Model C4X.</p> <p>High-speed PCI slots required: One Prerequisite: The #2809 PCI LAN/WAN/Workstation IOP or #2824 PCI Feature Controller Maximum: One in the system unit, two in the #9364 System Unit Expansion, with #9329 PCI Card Expansion Unit or #9330 PCI integrated expansion unit and three in the #5065 Storage/PCI Expansion Tower Supported on Model 720 The #2729 was withdrawn from marketing on 2 July 2002.</p>
#2740	<p><b>#2740 PCI RAID Disk Unit Controller — 4 MB Cache (RAID/Mirrored/Unprotected) (Ultra SCSI)</b></p> <p>The #2740 PCI RAID Disk Unit Controller is an Ultra SCSI controller that provides RAID protection and a 4 MB write-cache for up to 10 disks installed in the system unit. A minimum of four drives and a maximum of 10 drives are supported in each array. A maximum of two arrays is allowed for each #2740. The #2740 also supports one CD-ROM drive (comes as standard) and one internal tape drive. The #2740 supports the #1349, #1350, #1355, #1360, #6481, #6482, #6484, #6485, or #6490 tape units. Mutually exclusive with the #9728, #2726, or #2741 PCI RAID Disk Unit Controller in the same system unit. The #2740 does not support integrated hardware disk compression. Supports concurrent maintenance when RAID-5 or mirroring disk protection is enabled.</p> <p>High-speed PCI slots required: One Maximum: One The #2740 is not supported in the #5064/#9364 system unit expansion. Supported on Model 720</p>
#2741	<p><b>#2741 PCI RAID Disk Unit Controller — 4 MB Cache (RAID Mirrored/Unprotected) (Ultra SCSI)</b></p> <p>The #2741 PCI RAID Disk Unit Controller is an Ultra SCSI controller that provides RAID protection and a 4 MB write-cache for up to 15 disks installed in the system unit or #5064/#9364 system unit expansion. A minimum of four drives and a maximum of 10 drives are supported in each array. A maximum of three arrays is allowed for each #2741. The #2741 also supports one CD-ROM drive (comes as standard) and one internal tape drive when placed in the system unit. When placed in the #5064/#9364 system unit expansion, it supports up to three internal tape drives or #6425 CD-ROMs. Supports the #1349, #1350, #1355, #1360, #6481, #6482, #6484, #6485, or #6490 tape units. Mutually exclusive with #2726, #2740 PCI RAID Disk Unit Controller, or #9728 in the same system unit or #9329 PCI Card Expansion Unit.</p> <p>Supports integrated hardware disk compression. Supports concurrent maintenance when RAID-5 or mirroring disk protection is enabled. High-speed PCI slots required: One Prerequisite: System unit or #9364 System Unit Expansion with #9329 PCI Card Expansion Unit Maximum: One per system unit or #9364 Supported on Model 720</p>



#2748	<p><b>#2748 PCI RAID Disk Unit Controller — 26 MB Cache (RAID Mirrored/Unprotected) (Ultra2 SCSI)</b></p> <p>The #2748 PCI RAID Disk Unit Controller is Ultra2 SCSI capable when installed in the #5065 Storage/PCI Expansion Tower is Ultra SCSI capable when installed in the Model 720 system unit or a #5064/#9364 system unit expansion. The #2748 has a 26 MB write-cache and provides RAID-5 protection and compression for internal disk units. It supports up to 15 disks. A minimum of four drives and a maximum of 10 drives are supported in each array. A maximum of three arrays is allowed for each #2748. The #2748 supports both compression and non-compression modes. The mode is determined by a hardware jumper on the card. The #2748 also supports #6831/#4331 1.6 GB Read Cache Device. When placed in the system unit, it supports one internal tape and one CD-ROM. In the #5064/#9364 system unit expansion, it supports up to three internal tape and CD-ROM. In the #5065 Storage/PCI Expansion Tower, it supports up to two internal tapes and CD-ROM.</p> <p>It supports the #1349, #1350, #1355, #1360, #4482, #4483, #4486, #4684, #6480, #6481, #6482, #6483, #6384, #6485, #6486, or #6490 tape units. Mutually exclusive of #2726, #2740 PCI RAID Disk Unit Controller, #2741 PCI RAID Disk Unit Controller, or #9728 in the same system unit or #9330 PCI integrated expansion unit.</p> <p>High-speed PCI slots required: One  Prerequisite: System unit or #5064/#9364 system unit expansion with #9330 PCI integrated expansion unit or #5065 Storage/PCI Expansion Tower  Maximum: One per system unit or #9364, three per #5065 Storage/PCI Expansion Tower  Minimum operating system level: OS/400 V4R4</p>
#2778	<p><b>#2778 PCI RAID Disk Unit Controller — 104 MB Cache (RAID Mirrored/Unprotected) (Ultra2 SCSI)</b></p> <p>The #2778 PCI RAID Disk Unit Controller is an Ultra2 SCSI controller with a maximum compressed write cache size of 104 MB that provides RAID-5 protection and compression for internal disk units and supports internal tape units and CD-ROMs. The #2778 supports both disk compression and enhanced modes. The mode of operation is determined by a hardware jumper and disk compression mode should only be used when disk compression is desired. In addition to providing RAID-5 protection for disks, the #2778 is also designed to work as a high performance controller for disks protected by system mirroring or disks with no protection. A minimum of four disk units of the same capacity is needed for a valid RAID-5 configuration. A maximum of four arrays is allowed per controller, with a maximum of 10 disk units allowed per array. All disk units in an array must be of the same capacity.</p> <p>The #2778 supports the #4331 1.6 GB Read Cache Device, which is used by Extended Adaptive Cache to provide increased performance. The #4331 1.6 GB Read Cache Device is supported only when #2778 is in enhanced mode. The #2778 controller supports a maximum of 15 disk units and up to two removable media devices (internal tape or CD-ROM). The #2778 is the only disk unit controller that supports compression on 36 GB disk units.</p> <p>Prerequisite: An available high-speed SCSI slot in #5065/#5066 PCI Expansion Tower  Maximums: Three (in combination with #2748 PCI RAID Disk Unit Controller) per #5065 Storage/PCI Expansion Tower; six (in combination with #2748 PCI RAID Disk Unit Controller) per #5066 1.8 M I/O Tower  Minimum operating system level: OS/400 V5R1  The #2778 was withdrawn from marketing on 01 October 2004. The recommended replacement is a #2757 PCI-X Ultra RAID Disk Controller.</p>
#6112	<p><b>#6112 Magnetic Storage Device Controller (SPD)</b></p> <p>The #6112 provides attachment for up to two 9331-001 or 002 Diskette Units and up to two 9347 Tape Units.</p> <p>SPD slots required: One  Maximum: Two for 9331, two for 9347; limit of two #6112s in #9331 expansion unit for SPD cards on Model 720</p>
#6146	<p><b>#6146 Diskette Adapter (SPD)</b></p> <p>The #6146 provides attachment for one 9331 011, 012 Diskette Unit, and the #6135 5 ¼-inch diskette.</p> <p>SPD slots required: None  Prerequisite: #2624 Storage Device Controller  Maximum: Two</p>
#6500	<p><b>Direct Access Storage Device Controller (SPD)</b></p> <p>The #6500 provides attachment for one 9337 0xx or 1xx.</p> <p>SPD slots required: One</p>

#6501	<p><b>#6501 Tape/Disk Device Controller (SPD)</b>  The #6501 provides attachment for the 2105 Versatile Storage Server™. The #9728 provides attachment for up to two 9337 2xx, 4xx or 5xx Models. Also supports up to two 3490E Cxx, 3490E Exx, 3490E Fxx, 3494 Lxx or Dxx, 3570, 3575, 3580, 3581, 3582, 3583, 3584 or 3590-Bxx/Exx drives, and attachment for the 2105 Versatile Storage Server. DASD and tape units cannot be mixed on the same #6501.</p> <p>SPD slots required: One  Maximum: Four for tape; for disk, see the 720, 730, and 740 model capacity charts in 5.1, "AS/400e Model 720 overview" on page 130, through 5.3, "AS/400e Model 740 overview" on page 132.</p>
#6502	<p><b>#6502 High Performance Controller RAID Disk Unit Controller — 2 MB Cache (RAID/Mirrored/Unprotected) (SPD)</b>  The #6502 provides RAID protection and a 2 MB write-cache for up to 16 disks located in #5052 or #5058 Storage Expansion Unit, #5082 Storage Expansion Tower, or #5083 Storage Expansion Tower, or #5064/#9364 system unit expansion. A minimum of four drives and a maximum of 10 drives are supported in each array. A maximum of two arrays is allowed for each #6502. The #6502 does not support integrated hardware disk compression.</p> <p>SPD slots required: One</p>
#6512	<p><b>#6512 High Performance Controller RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (SPD)</b>  The #6512 provides RAID protection and a 4 MB write-cache for up to 16 disks located in #5052 or #5058 Storage Expansion Unit, #5082 Storage Expansion Tower, or #5083 Storage Expansion Tower, or #5064/#9364 system unit expansion. A minimum of four drives and a maximum of 10 drives are supported in each array. A maximum of two arrays is allowed for each #6512. The #6512 does not support integrated hardware disk compression.</p> <p>SPD slots required: One  The #6512 was withdrawn from marketing on 30 June 2000.</p>
#6513	<p><b>#6513 Internal Tape Device Controller (SPD)</b>  The #6513 provides support for up to three internal tape drives when located in #9331 expansion unit for SPD cards or four internal tape drives when located in a #5072/#5073 1063 Mbps System Unit Expansion Tower. The #6513 is the default controller, unless a #2624 Storage Device Controller is installed.  The #6513 supports #1379, #1380, #6380, #6381, #6382, #6383, #6384, #6385, #6386, and #6390 in the #5072 or #5073 1063 Mbps System Unit Expansion Tower; and #1349, #1350, #1355, #1360, #6481, #6482, #6483, #6484, #6485, and #6490 in a #5064/#9364 system unit expansion with #9331 expansion unit for SPD cards.</p> <p>SPD slots required: One  The #6513 was withdrawn from marketing on 31 July 2001.</p>
#6530	<p><b>#6530 Disk Unit Controller No Cache (Mirrored/Unprotected) (SPD)</b>  The #6530 is a controller for up to 16 disks located in #5052 or #5058 Storage Expansion Unit, #5082 Storage Expansion Tower, or #5083 Storage Expansion Tower, or #5064/#9364 system unit expansion. The #6530 does not support integrated hardware disk compression.</p> <p>SPD slots required: One</p>
#6532	<p><b>#6532 RAID Disk Unit Controller — 4 MB Cache (RAID/Mirrored/Unprotected) (Ultra SCSI) (SPD)</b>  The #6532 is an Ultra SCSI Controller for up to 16 disks installed in #5058 Storage Expansion Unit, #5083 Storage Expansion Tower, or #5064/#9364 system unit expansion. Also supports disks located in #5052 Storage Expansion Unit or #5082 Storage Expansion Tower, but not at Ultra SCSI speeds. Offers performance improvements over #6502, #6512, and #6530. A minimum of four drives and a maximum of 10 drives are supported in a RAID-5 array. A maximum of four arrays is allowed for each #6532 RAID Disk Unit Controller. The #6532 does not support integrated hardware disk compression.</p> <p>SPD slots required: One</p>
#6533	<p><b>#6533 RAID Disk Unit Controller — 4 MB Cache (RAID/Mirrored/Unprotected) (Ultra SCSI) (SPD)</b>  The #6533 is an Ultra SCSI controller for up to 16 disks installed in #5058 Storage Expansion Unit, #5083 Storage Expansion Tower, or #5064/#9364 system unit expansion. Also supports disks located in #5052 Storage Expansion Unit or #5082 Storage Expansion Tower, but not at Ultra SCSI speeds. Offers performance improvements over #6502, #6512, and #6530. A minimum of four drives and a maximum of 10 drives are supported in a RAID-5 array. A maximum of four arrays is allowed for each #6533. The #6533 supports integrated hardware disk compression.</p> <p>SPD slots required: One</p>

#6534	<p><b>#6534 Magnetic Media Controller (Ultra SCSI) (SPD)</b></p> <p>The #6534 provides attachment for one 3490E Cxx with #5040, 3490E Exx, 3490E Fxx, 3494 D1x or L1x, 3570, 3575, 3580, 3581, 3582, 3583, 3584, 3590, 7208, 9348, and 9427 tape drives or 3995 Optical Library Dataserver - Model C4x.</p> <p>SPD slots required: One Minimum operating system to support 3995: OS/400 V4R2</p>
#9728	<p><b>#9728 Base Disk Unit Controller (Ultra SCSI) CCIN 2728</b></p> <p>The #9728 is the Base IOA for the system unit. It provides Ultra SCSI attachment for up to five internal disk units, one internal CD-ROM (standard) and one internal tape drive. Does not support RAID. Supports the #1349, #1350, #1355, #1360, #6481, #6482, #6485, or #6490 tape units. Mutually exclusive with #2726, #2740, #2741 PCI RAID Disk Unit Controller, or #2748 PCI RAID Disk Unit Controller, in the same system unit. The #9728 does not support integrated hardware disk compression.</p> <p>High-speed PCI slots required: One Maximum: One per system unit Supported on Model 720</p>
#9751	<p><b>MFIOP with RAID (Ultra SCSI) CCIN 6751</b></p> <p>The #9751 contains function for controlling 20 disk units, one removable media unit and one CD-ROM unit. It has three IOA slots for controlling LANs, twinaxial workstations, and communications. IOA slot A is reserved for attaching one #2699 2-Line WAN IOA or one #6149 or #6181 LAN IOAs. IOA slot B is reserved for attaching the #9699 Base 2-Line WAN IOA. IOA slot C is reserved for attaching one #2699 2-Line WAN IOA or one #6180 or #9280 twinaxial IOA. It occupies two card slots. The #9751 does not support integrated hardware disk compression.</p> <p>Supported on Models 730 and 740</p>
#9754	<p><b>#9754 MFIOP with RAID (Ultra SCSI) CCIN 6754</b></p> <p>The #9754 is an Ultra SCSI interface for controlling 20 disk units, one removable media unit, and one CD-ROM unit. It has three IOA slots for controlling LANs, twinaxial workstations, and communications. IOA slot A is reserved for attaching one #2699 2-Line WAN IOA or one #6149 or #6181 LAN IOA. IOA slot B is reserved for attaching the #9699 Base 2-Line WAN IOA. IOA slot C is reserved for attaching one #2699 2-Line WAN IOA or one #6180 or #9280 twinaxial IOA. It occupies two card slots. The #9754 supports integrated hardware disk compression.</p> <p>Supported on Models 730 and 740</p>

## 5.12 Supported upgrades for Models 720, 730, and 740

Upgrades to, from, and within the AS/400e 720, 730, and 740 servers are not supported. Refer to the Upgrade topic in the Find and Compare Tool (FACT) at the following Web site to determine the supported upgrade paths for a given processor:

<http://www-919.ibm.com/servers/eserver/fact/>

Archived

## IBM iSeries 820, 830, and 840 models

This chapter provides the summary charts and diagrams and identifies the processor features that are associated with each IBM iSeries 820, 830, and 840 server. You can find the feature descriptions, including details about power and packaging and main memory, in Chapter 7, “IBM iSeries 820, 830, and 840 features and placement” on page 223.

Model and processor	Announce date	General availability date	Withdrawn from marketing
820 #0150, #0151, #0152, #2435, #2436, #2437, #2438, #2456, #2457, #2458	23 April 2001	25 May 2001	21 November 2003
820 #2395	12 June 2000	28 July 2000	21 November 2003
820 #2396, #2397, #2398, #2425, #2426, #2427	12 June 2000	28 July 2000	03 December 2002
830 #0153, #2349	14 May 2002	14 June 2002	21 November 2003
830 #2400	12 June 2000	28 July 2000	21 November 2003
830 #2402, #2403	12 June 2000	28 July 2000	03 December 2002
840 #0158, #0159	14 May 2002	22 June 2002	21 November 2003
840 #2352, #2353, #2354	23 April 2001	25 May 2001	21 November 2003
840 #2416, #2417, #2419	03 October 2000	01 December 2000	03 December 2002
840 #2418, #2420	12 June 2000	28 July 2000	03 December 2002
840 #2461	23 April 2001	25 May 2001	03 December 2002

**Note:** The darker shaded areas in the following tables and figures represents the base configuration of the system. The capacities shown might require prerequisites. Some combinations of features are not valid.

## 6.1 iSeries Model 820 overview

The following tables provide the system minimum and maximum capacities in the Model 820.

	Model 820						
Processor feature	#0150	#0151	#0152	#2395	#2396	#2397	#2398
Relative system performance <sup>1</sup>							
Processor CPW	1100	2350	3700	370	950	2000	3200
5250 CPW <sup>8</sup>							
None	0	0	0				
#1521	-	-	-	35	35	35	35
#1522	-	-	-	70	70	70	70
#1523	-	-	-	120	120	120	120
#1524	-	-	-	240	240	240	240
#1525	-	-	-	-	560	560	560
#1526	-	-	-	-	-	1050	1050
#1527	-	-	-	-	-	-	2000
Number/type/speed of processors	1/SStar/ 600 MHz	2/SStar/ 600 MHz	4/SStar/ 600 MHz	1/Pulsar/ 400 MHz	1/Pulsar/ 400 MHz	2/IStar/ 500 MHz	4/IStar/ 500 MHz
L2 Cache (MB)	2	4	4	0	2	4	4
Main storage (MB minimum to maximum)	256 to 8192	256 to 32768	256 to 32768	256 to 4096	256 to 8192	256 to 16384	256 to 16384
Main storage DIMMs (minimum/maximum)	2/16	2/32	2/32	2/8	2/16	2/32	2/32
Minimum OS/400 level	V5R1	V5R1	V5R1	V4R5	V4R5	V4R5	V4R5
Software group <sup>11a</sup>	P20	P20	P30	P10 or P20	P20 or P30	P20 or P30	P30 or P40

	Model 820			
Processor feature	#2435	#2436	#2437	#2438
Relative system performance <sup>1</sup>				
Processor CPW	600	1100	2350	3700
5250 CPW <sup>8</sup>				
None	-	-	-	-
#1521	35	35	35	35
#1522	70	70	70	70
#1523	120	120	120	120
#1524	240	240	240	240
#1525	-	560	560	560
#1526	-	-	1050	1050
#1527	-	-	-	2000
Number/type/speed of processors	1/SStar/600 MHz	1/SStar/600 MHz	2/SStar/600 MHz	4/SStar/600 MHz
L2 Cache (MB)	2	2	4	4
Main storage (MB min to max)	256 to 8192	256 to 16384	256 to 32768	256 to 32768
Main storage DIMMs (min/max)	2/8	2/16	2/32	2/32
Minimum OS/400 level	V5R1	V5R1	V5R1	V5R1
Software group <sup>11a</sup>	P10 or P20	P20 or P30	P20 or P30	P30 or P40

The following tables provide system minimum and maximum capacities in the Model 820 Dedicated Server for Domino.

	Model 820 Dedicated Server for Domino		
Processor feature	#2425	#2426	#2427
Relative system performance <sup>1</sup>			
Processor CPW	100	200	300
5250 CPW <sup>8</sup>	0	0	0
Simple Mail Users	3860	8420	14840
Mail and Calendar Users <sup>1a</sup>	2570	5610	9890
Number/type/speed of processors	1/Pulsar/450 MHz	2/IStar/500 MHz	4/IStar/500 MHz
L2 Cache (MB)/processor	2	4	4
Main storage (MB min to max)	256 to 8192	256 to 16384	256 to 16384
Main storage DIMMs (min/max)	2/16	2/32	2/32
Minimum operating system level	V4R5	V4R5	V4R5
Software group	P05	P10	P10

	Model 820 Dedicated Server for Domino		
Processor feature	#2456	#2457	#2458
Relative system performance <sup>1</sup>			
Processor CPW	120	240	380
5250 CPW <sup>8</sup>	Limited	Limited	Limited
Mail and Calendar Users <sup>1a</sup>	3110	6660	11810
Number/type/speed of processors	1/SStar/600 MHz	2/SStar/600 MHz	4/SStar/600 MHz
L2 Cache (MB)	2	4	4
Main storage (MB min to max)	256 to 16384	256 to 32768	256 to 32768
Main storage DIMMs (min/max)	2/16	2/32	2/32
Minimum OS/400 level	V5R1	V5R1	V5R1
Software group	P05	P10	P10

Numbers are for all 820 processor features	Base system	#5075, #5095, #0595 PCI Expansion Tower	#5074, #5079, #5094, #5294, #5078, #0578, #5088, #0588 PCI Expansion Tower <sup>13</sup>	Migrated total with #503x <sup>5a, 5c</sup>	New system maximum <sup>6</sup>
Disk storage (GB) <sup>12</sup>					
Internal minimum	8.58				
Internal maximum	421.9	210.9	1582.4/3175.2	1625.9	8334.1
External maximum <sup>10</sup>	4501.1	4501.1	6751.6	1595.3	8298.9
Total maximum	4923.1	4712.1	8298.9	1625.9	8334.1
DASD arms maximum	140	134	236	210	237
Internal arms	12	6/12	45	210	237
External LUNs <sup>10</sup>	128	128/96	192	209	236
Diskette (8 or 5 ¼-inch)	-	-	-	-	-
Communication lines <sup>4</sup>	44	34	52	128	160
Twinaxial workstation controllers	7	7	11	66	62
Twinaxial devices	280	280	440	2628	2480
Internal CD-ROM/DVD-RAM/tape <sup>3</sup>	2	-	2	18 <sup>9</sup>	12
External CD-ROM/DVD-RAM <sup>3</sup>	7	7	8	8	11
External tape	7	7	8	8	8
Tape libraries maximum <sup>2</sup>	7	7	8	8	8
Optical libraries	7	7	14	14	14
Physical packaging					
External HSL ports	2	-	-	-	2
External HSL loops	1	-	-	-	1
#5074/#5075 Towers	5	-	-	-	5
Integrated xSeries Adapters	8	-	-	-	8
SPD towers	-	-	-	4	-
Embedded IOPs	1	1	-	1	6
PCI adapter card slots	12	8	14	86	82
Maximum PCI IOA cards	9	7	11	70	63
LAN ports maximum	7	7	8	24	30
Integrated xSeries Servers	2	2	2	16	12
Cryptographic processor	7	7	8	3	8
Cryptographic accelerator	0	0	0	4	4



## 6.2 iSeries Model 830 overview

The following tables provide the system minimum and maximum capacities for the Model 830.

	Model 830				
Processor feature	#0153	#2349	#2400	#2402	#2403
Relative system performance <sup>1</sup>					
Processor CPW	7350	4200/7350	1850	4200	7350
5250 CPW <sup>8</sup>					
None	0				
#1531 (Base)		70	70	70	70
#1532		120	120	120	120
#1533		240	240	240	240
#1534		560	560	560	560
#1535		1050	1050	1050	1050
#1536		2000		2000	2000
#1537		4550			4550
Number/type/speed of processors	8/IStar/540 MHz	4/8/IStar/540 MHz	2/IStar/400 MHz	4/IStar/540 MHz	8/IStar/540 MHz
L2 Cache (MB)	4	4	2	4	4
Main storage (GB min to max)	1 to 64	1 to 64	1 to 64	1 to 64	1 to 64
Main storage DIMMs (min/max)	8/64	8/64	8/64	8/64	8/64
Minimum OS/400 level	V5R1	V5R1	V4R5	V4R5	V4R5
Software group <sup>11b</sup>	P30	P30 or P40	P20 or P30	P30 or P40	P40 or P50

Numbers are for all 830 processor features	#9074 Base system	#5095, #0595 PCI Expansion Tower	#5074, #5079, #5094, #5294, #5078, #0578, #5088, #0588 PCI Expansion Tower <sup>13</sup>	Migrated total with #5034, #5035 <sup>5a</sup>	Migrated total with #5077 <sup>5b</sup>	New system max <sup>6</sup>
Disk storage (GB) <sup>12</sup>						
Internal minimum	8.58	-	-	-	-	-
Internal maximum	1582.4	210.9	1582.4/3175.2	1625.9	4294.9	22153.9
External maximum	5626.4	4501.1	6751.6	1595.3	4260.9	22118.7
Total maximum <sup>10</sup>	7208.8	4712.1	8298.9	1625.9	4294.9	22153.9
DASD arms maximum <sup>10</sup>	205	134	205	596	596	630
Internal arms	45	6/12	45	210	596	630
External LUNs <sup>10</sup>	160	96	192	595	595	629
Diskette (8 or 5 ¼-inch)	-	-	-	-	-	-
Communication lines <sup>4</sup>	40	34	52	128	300	300
Twinaxial workstation controllers	9	7	11	66	175	152
Twinaxial devices	360	280	440	2628	7000	6080
Internal CD-ROM/DVD-RAM <sup>3</sup>	2	-	2	18 <sup>8</sup>	18 <sup>8</sup>	18
Internal tape	1	-	2	17	17	18
External CD-ROM/DVD-RAM <sup>3</sup>	9	7	10	8	14	17
External tape (max/system)	9	7	10	8	14	10
Tape libraries maximum <sup>2</sup>	9	7	10	8	14	10
Optical libraries	9	7	11	14	22	22
Physical packaging						
External HSL ports	8	-	-	-	-	8
External HSL loops	4	-	-	-	-	4
#5074 Towers	13	-	-	-	18	13
Integrated xSeries Adapters	16	-	-	-	-	16
SPD towers	-	-	-	4	18	-
Embedded IOPs	-	1	-	2	-	-
PCI adapter card slots	14	8	14	86	270	196
Maximum PCI IOA cards	11	7	11	70	216	154
LAN ports maximum	7	7	8	24	72	72
Integrated xSeries Servers	2	2	2	16	16	28
Cryptographic processors	8	7	8	3	3	8
Cryptographic accelerator	0	0	0	0	4	4

## 6.3 iSeries Model 840 overview

The following tables provide the system minimum and maximum capacities for the Model 840.

	Model 840					
Processor feature	#0158	#0159	#2352	#2353	#2354	#2416
Relative system performance <sup>1</sup>						
Processor CPW	12000	20200	9000/12000	12000/16500	16500/20200	7800/10000
5250 CPW <sup>8</sup>	0	0				
#1540 (Base)			120	120	120	120
#1541			240	240	240	240
#1542			560	560	560	560
#1543			1050	1050	1050	1050
#1544			2000	2000	2000	2000
#1545			4550	4550	4550	4550
#1546			10000	10000	10000	10000
#1547			-	16500	16500	-
#1548			-	-	20200	-
Number/type/speed of processor	12/SSStar/ 600 MHz	24/SSStar/ 600 MHz	8 to 12/SSStar/ 600 MHz	12 to 18/SSStar/ 600 MHz	18 to 24/SSStar/ 600 MHz	8 to 12/IStar/ 500 MHz
L2 Cache (MB)	16 x 4	16 x 4	16 x 4	16 x 4	16 x 4	8
Main storage (GB min/max)	4/128	4/128	4/128	4/128	4/128	4/128
Main storage cards (min/max)	4/16	4/16	4/16	4/16	4/16	4/16
Minimum OS/400 level	V5R1	V5R1	V5R1	V5R1	V5R1	V4R5
Software group <sup>11c</sup>	P40	P40	P40 or P50	P40 or P50	P40 or P50	P40 or P50

	Model 840				
Processor feature	#2417	#2418	#2419	#2420	#2461
Relative system performance <sup>1</sup>					
Processor CPW	10000/13200	10000	13200/16500	16500	20200
5250 CPW <sup>8</sup>					
#1540 (Base)	120	120	120	120	120
#1541	240	240	240	240	240
#1542	560	560	560	560	560
#1543	1050	1050	1050	1050	1050
#1544	2000	2000	2000	2000	2000
#1545	4550	4550	4550	4550	4550
#1546	10000	10000	10000	10000	10000
#1547	-	-	16500	16500	16500
#1548	-	-	-	-	20200
Number/type/speed of processor	12 to 18/IStar/ 500 MHz	12/IStar/ 500 MHz	18 to 24/IStar/ 500 MHz	24/IStar/ 500 MHz	24/SSStar/ 600 MHz
L2 Cache (MB)	8	8	8	8	16
Main storage (GB min/max)	4/128	4/128	4/128	4/128	4/128
Main storage cards (min/max)	4/16	4/16	4/16	4/16	4/16
Minimum OS/400 level	V4R5	V4R5	V4R5	V4R5	V5R1
Software group <sup>11c</sup>	P40 or P50	P40 or P50	P40 or P50	P40 or P50	P40 or P50

Numbers are for all 840 processor features	#9079 Base system	#5095, #0595 PCI Expansion Tower	#5074, #5079, #5094, #5294, #5078, #0578, #5088, #0588 PCI Expansion Tower <sup>12</sup>	Migrated total with #5077 <sup>5b</sup>	New system max <sup>6</sup>
Disk storage (GB) <sup>13</sup>					
Internal minimum	8.58		-	-	
Internal maximum	1582.4	210.9	1582.4/3175.2	4294.9	37978.2
External maximum	5626.4	4501.1	6751.6	4260.6	37943.0
Total maximum <sup>10</sup>	7208.8	4712.1	8298.9	4294.9	37978.2
DASD arms maximum <sup>10</sup>	205	134	205	596	1080
Internal arms	45	6/12	45	596	1080
External LUNs	160	96	192	595	1079
Diskette (8 or 5 ¼-inch)	-	-	-	-	-
Communication lines <sup>4</sup>	40	34	52	300	400
Twinaxial workstation controllers	9	7	11	175	175
Twinaxial devices	360	280	440	7000	7000
Internal CD-ROM/DVD-RAM <sup>3</sup>	2		2	18 <sup>7</sup>	24
Internal tape	1	-	2	17	26
External CD-ROM/DVD-RAM <sup>3</sup>	9	7	11	14	23
External tape (max/system)	9	7	11	14	26
Tape libraries maximum <sup>2</sup>	9	7	11	14	26
Optical libraries	9	7	11	22	26
Physical packaging					
External HSL ports	16	-	-	-	16
External HSL loops	8	-	-	-	8
#5074 Towers	23	-	-	-	23
Integrated xSeries Adapters	32	-	-	-	60
SPD towers	-	-	-	18	-
PCI adapter card slots	14	1	14	270	336
Maximum PCI IOA cards	11	8	11	216	264
LAN ports maximum	7	7	8	72	96
Integrated xSeries Servers	2	7	2	16	32
Cryptographic processor	3	2	3	3	32
Cryptographic accelerator	4	7	4	4	8

## 6.4 Notes for iSeries Models 820, 830, and 840 overview

<b>Note 1</b>	<p>Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application running determine what performance is achievable.</p> <p>Processor performance represents the relative performance (maximum capacity) of a processor feature running CPW in a client/server environment. Processor capacity is achievable when the commercial workload is not constrained by main storage and direct access storage device (DASD). Performance of the 5250 CPW represents the relative performance available to perform host-centric workloads. The amount of 5250 CPW capacity consumed reduces the available processor capacity by the same amount.</p>
<b>Note 1a</b>	<p>Mail and Calendar Users (MCU) is a relative performance measurement derived by performing mail and calendar functions using Domino and Notes clients. The MCU workload represents users on a Notes client who are reading, updating or deleting documents in an e-mail database. It also represents users who are performing lookups in the Domino directory and scheduling calendar appointments and invitations. Reported values reflect 70% processor utilization to allow for growth and peak loads in excess of client workload estimates.</p> <p>On the Dedicated Servers for Domino, the Processor CPW is an approximate value reflecting the maximum amount of non-Domino workload (10% to 15% of CPU) that is supported.</p>
<b>Note 2</b>	The total number of tape drives does not increase.
<b>Note 3</b>	There must be one CD-ROM, DVD-ROM, or DVD-RAM per system.
<b>Note 4</b>	One line is used if the #5544 System Console on Operations Console is used. One line might be used if the #5546 System Console on 100 Mbps Token Ring or #5548 System Console on 100 Mbps Ethernet is selected and the #0367 Operations Console PCI Cable is connected.
<b>Note 5a</b>	Includes the #5034 or #5035 Migration Tower I and all the SPD bus towers attached to the #5034 or #5035.
<b>Note 5b</b>	Includes the #5077 Migration Tower II and all the SPD bus towers attached to the #5077 Migration Tower II.
<b>Note 5c</b>	This column does not apply to Dedicated Domino Servers.
<b>Note 6</b>	New systems only. Does not apply to migrated systems.
<b>Note 8</b>	<p>5250 CPW (Interactive) is an approximate value that reflects the amount of Processor CPW that can be used for workloads performing 5250-based tasks. Remember that:</p> <ul style="list-style-type: none"> <li>▶ Any task that uses a 5250 data stream is considered 5250 online transaction processing (OLTP) work and requires some amount of 5250 CPW to process no matter how the task was started.</li> <li>▶ A task submitted through a 5250 session (5250 device or 5250 emulation) that does display or printer I/O requires 5250 CPW.</li> <li>▶ A task submitted through a 5250 session (5250 device or 5250 emulation) as a "batch" job is not considered 5250 OLTP work and does not require any 5250 CPW unless the task does display or printer I/O.</li> <li>▶ Limited 5250 CPW is available when 5250 Interactive CPW = 0, for a system administrator who wants to use 5250 display device I/O to manage various aspects of the server. Multiple administrative jobs exceed this capability.</li> </ul>
<b>Note 9</b>	Includes a base CD-ROM in the migration tower (no feature code).
<b>Note 10</b>	External DASD maximum assumes 35.16 GB LUNs. External DASD cannot exceed the maximum system capacity or the maximum number of disk arms.

Note 11a  
Model  
820

Software group is determined by the combination of processor feature and edition feature. Display the QPRCFEAT system value or DSPHDWRSC TYPE(\*AHW) to display the processor feature code value. This value is also shown for the Capacity Card CCIN value when using SST to perform a Capacity Upgrade on Demand.

Processor feature	Interactive feature	Software group	Processor feature code or QPRCFEAT value
#0150	N/A	P20	0150
#0151	N/A	P20	0151
#0152	N/A	P30	0152
#2395	#1521	P10	23A1
	#1522	P20	23A2
	#1523	P20	23A3
	#1524	P20	23A4
#2396	#1521	P20	23A9
	#1522	P30	23AA
	#1523	P30	23AB
	#1524	P30	23AC
	#1525	P30	23AD
#2397	#1521	P20	23B1
	#1522	P30	23B2
	#1523	P30	23B3
	#1524	P30	23B4
	#1525	P30	23B5
	#1526	P30	23B6
#2398	#1521	P30	23B8
	#1522	P40	23B9
	#1523	P40	23BA
	#1524	P40	23BB
	#1525	P40	23BC
	#1526	P40	23BD
	#1527	P40	23BE
#2425	N/A	P05	2425
#2426	N/A	P10	2426
#2427	N/A	P10	2427
#2435	#1521	P10	249B
	#1522	P20	249C
	#1523	P20	249D
	#1524	P20	249E
#2436	#1521	P20	24A8
	#1522	P30	24A9
	#1523	P30	24AA
	#1524	P30	24AB
	#1525	P30	24AC

<b>Note 11a</b> <b>Model 820</b> <b>(cont.)</b>	Processor feature	Interactive feature	Software group	Processor feature code or QPRCFEAT value
	#2437	#1521	P20	24B0
		#1522	P30	24B1
		#1523	P30	24B2
		#1524	P30	24B3
		#1525	P30	24B4
		#1526	P30	24B5
	#2438	#1521	P30	24B8
		#1522	P40	24B9
		#1523	P40	24BA
		#1524	P40	24BB
		#1525	P40	24BC
		#1526	P40	24BD
		#1527	P40	24BE
	#2456	N/A	P05	2456
	#2457	N/A	P10	2457
	#2458	N/A	P10	2458
<b>Note 11b</b> <b>Model 830</b>	Software group is determined by the combination of processor feature and edition feature. Display the QPRCFEAT system value or DSPHDWRSC TYPE(*AHW) to display the processor feature code value. This value is also shown for the Capacity Card CCIN value when using SST to perform a Capacity Upgrade on Demand.			
	Processor feature	Interactive feature	Software group	Processor feature code or QPRCFEAT value
	#0153	N/A	P30	254D
	#2349	#1531	P30	24D8
		#1532	P40	24D9
		#1533	P40	24DA
		#1534	P40	24DB
		#1535	P40	24DC
		#1536	P40	24DD
		#1537	P40	24DE
	#2400	#1531	P20	23C1
		#1532	P30	23C2
		#1533	P30	23C3
		#1534	P30	23C4
		#1535	P30	23C5
	#2402	#1531	P30	23D1
		#1532	P40	23D2
		#1533	P40	23D3
		#1534	P40	23D4
		#1535	P40	23D5
		#1536	P40	23D6

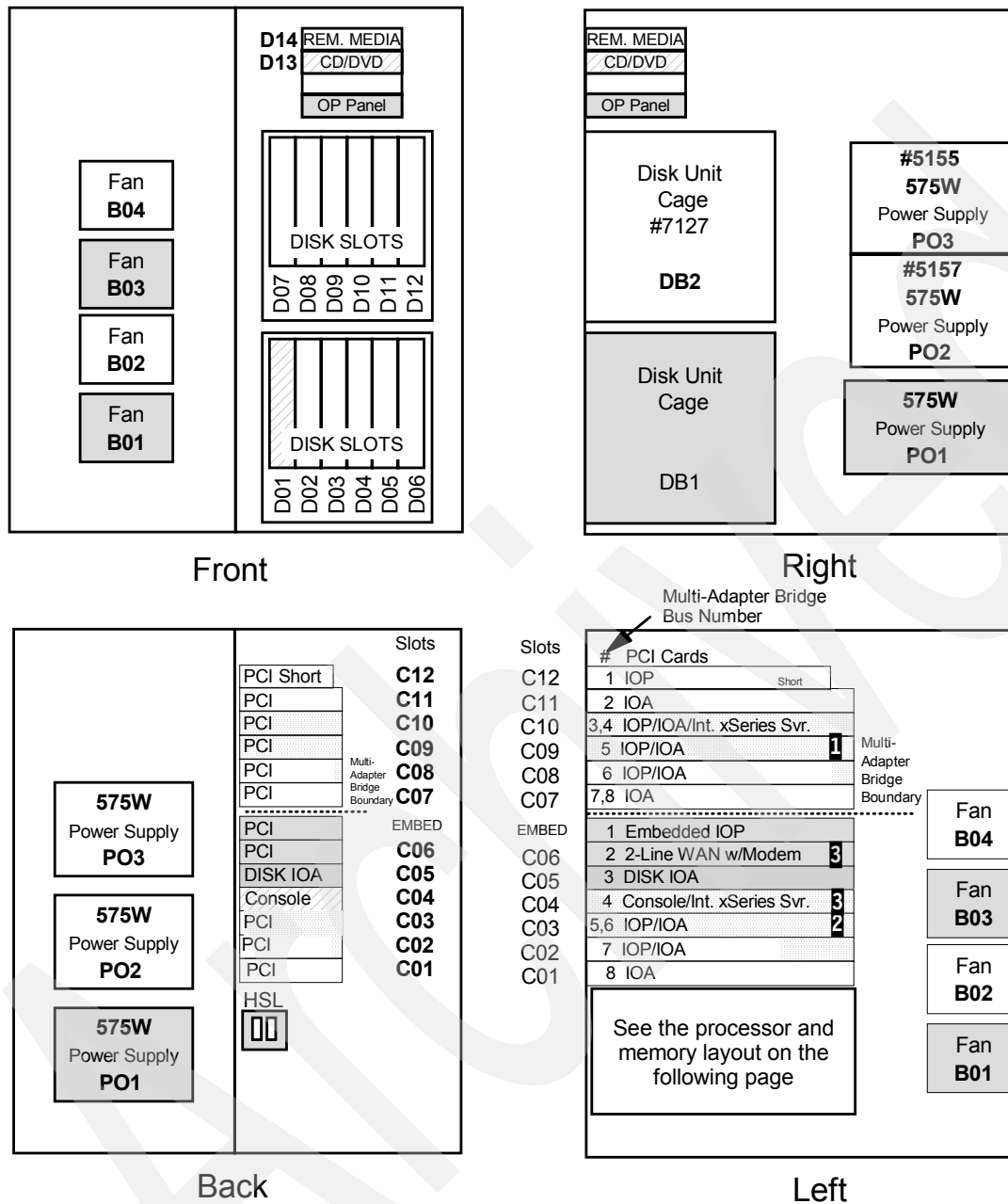
<b>Note 11b</b> <b>Model 830</b> <b>(cont.)</b>	Processor feature	Interactive feature	Software group	Processor feature code or QPRCFEAT value
	#2403	#1531	P40	23D8
		#1532	P50	23D9
		#1533	P50	23DA
		#1534	P50	23DB
		#1535	P50	23DC
		#1536	P50	23DD
		#1537	P50	23DE
<b>Note 11c</b> <b>Model 840</b>	Software group is determined by the combination of processor feature and edition feature. Display the QPRCFEAT system value or DSPHDWRSC TYPE (*AHW) to display the processor feature code value. This value is also shown for the Capacity Card CCIN value when using SST to perform a Capacity Upgrade on Demand.			
	Processor feature	Interactive feature	Software group	Processor feature code or QPRCFEAT value
	#0158	N/A	P40	0158
	#0159	N/A	P40	0159
	#2352	#1540	P40	26B0
		#1541	P50	26B1
		#1542	P50	26B2
		#1543	P50	26B3
		#1544	P50	26B4
		#1545	P50	26B5
		#1546	P50	26B6
	#2353	#1540	P40	26B8
		#1541	P50	26B9
		#1542	P50	26BA
		#1543	P50	26BB
		#1544	P50	26BC
		#1545	P50	26BD
		#1546	P50	26BE
		#1547	P50	26BF
	#2354	#1540	P40	26C0
		#1541	P50	26C1
		#1542	P50	26C2
		#1543	P50	26C3
		#1544	P50	26C4
		#1545	P50	26C5
		#1546	P50	26C6
		#1547	P50	26C7
		#1548	P50	26C8



Note 11c Model 840 (cont.)	Processor feature	Interactive feature	Software group	Processor feature code or QPRCFEAT value
	#2416	#1540	P40	24C0
		#1541	P50	24C1
		#1542	P50	24C2
		#1543	P50	24C3
		#1544	P50	24C4
		#1545	P50	24C5
		#1546	P50	24C6
	#2417	#1540	P40	24C8
		#1541	P50	24C9
		#1542	P50	24CA
		#1543	P50	24CB
		#1544	P50	24CC
		#1545	P50	24CD
		#1546	P50	24CE
	#2418	#1540	P40	23E8
		#1541	P50	23E9
		#1542	P50	23EA
		#1543	P50	23EB
		#1544	P50	23EC
		#1545	P50	23ED
		#1546	P50	23EE
	#2419	#1540	P40	24D0
		#1541	P50	24D1
		#1542	P50	24D2
		#1543	P50	24D3
		#1544	P50	24D4
		#1545	P50	24D5
		#1546	P50	24D6
		#1547	P50	24D7
	#2420	#1540	P40	23F8
		#1541	P50	23F9
		#1542	P50	23FA
		#1543	P50	23FB
		#1544	P50	23FC
		#1545	P50	23FD
		#1546	P50	23FE
		#1547	P50	23FF

<b>Note 11c</b> <b>Model 840</b> <b>(cont.)</b>	Software group is determined by a combination of the processor and interactive feature. The following table provides a cross reference.			
	<b>Processor feature</b>	<b>Interactive feature</b>	<b>Software group</b>	<b>Processor feature</b>
	#2461	#1540	P40	26D0
		#1541	P50	26D1
		#1542	P50	26D2
		#1543	P50	26D3
		#1544	P50	26D4
		#1545	P50	26D5
		#1546	P50	26D6
		#1547	P50	26D7
		#1548	P50	26D8
<b>Note 12</b>	The #5078, #0578, #5088, and #0588 expansion units contain PCI slots only. Disk is not supported.			
<b>Note 13</b>	Quantities listed represent those for the #5074 and #5094. For the #5079 and #5294 quantities, double the #5074 and #5094 values, respectively.			

## 6.5 9406 Model 820 system unit schematic



### Legend

Base Feature
Required Feature
Unavailable if Integrated xSeries Server is installed

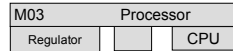
**Note 1:** If C10 has an Integrated xSeries Server, slot C09 is unavailable, and slot C08 is available only as a short slot.

**Note 2:** If C04 has an Integrated xSeries Server, slot C03 is unavailable, and slot C02 is available only as a short slot.

**Note 3:** Position of the cards may change depending on the console and other features selected. A console is a required feature.

## Model 820 Processor and Memory

### #2395 and #2435

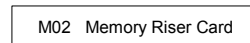


DIMM CONN - J0A	A
DIMM CONN - J0B	E
DIMM CONN - J0C	I
DIMM CONN - J0D	M
SMI	SMI
DIMM CONN - J1D	N
DIMM CONN - J1C	J
DIMM CONN - J1B	F
DIMM CONN - J1A	B

### #2396, #2425, #0150, #2436, #2456



DIMM CONN - J0A	A
DIMM CONN - J0B	E
DIMM CONN - J0C	I
DIMM CONN - J0D	M
SMI	SMI
DIMM CONN - J1D	N
DIMM CONN - J1C	J
DIMM CONN - J1B	F
DIMM CONN - J1A	B



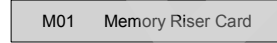
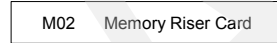
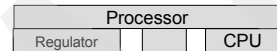
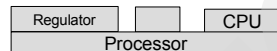
**Note:** All memory on the processor board, once a riser card is installed, is moved to the riser card.

Memory Riser Card

DIMM CONN - J0A	C
DIMM CONN - J0B	G
DIMM CONN - J0C	K
DIMM CONN - J0D	O
SMI	SMI
DIMM CONN - J3D	P
DIMM CONN - J3C	L
DIMM CONN - J3B	H
DIMM CONN - J3A	D
DIMM CONN - J2A	A
DIMM CONN - J2B	E
DIMM CONN - J2C	I
DIMM CONN - J2D	M
Regulator	SMI
SMI	SMI
DIMM CONN - J1D	N
DIMM CONN - J1C	J
DIMM CONN - J1B	F
DIMM CONN - J1A	B

or

### #2397, #2398, #2426, #2427, #0151, #0152, #2437, #2438, #2457, #2458



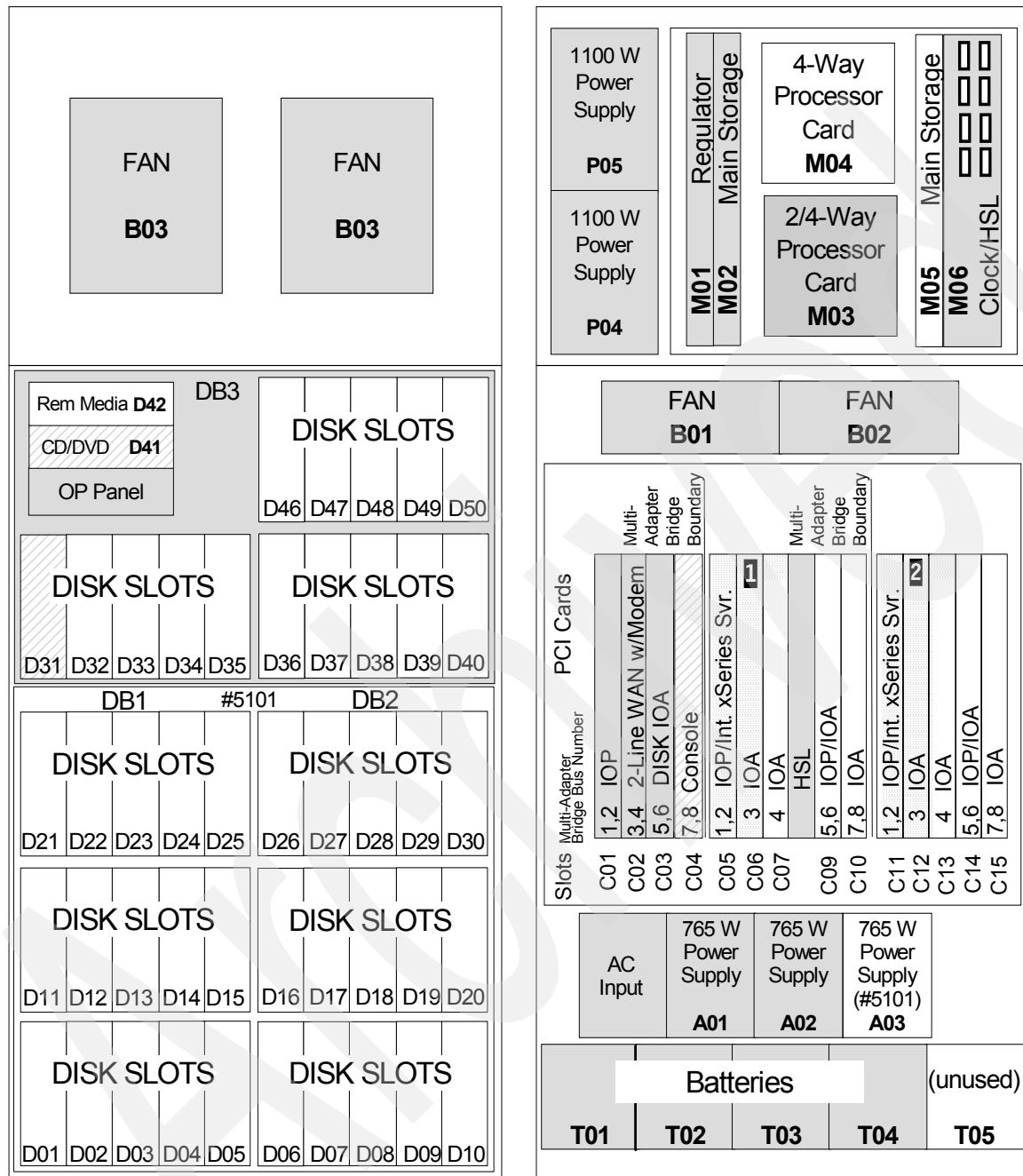
Memory Riser Card

DIMM CONN - J0A	C
DIMM CONN - J0B	G
DIMM CONN - J0C	K
DIMM CONN - J0D	O
SMI	SMI
DIMM CONN - J3D	P
DIMM CONN - J3C	L
DIMM CONN - J3B	H
DIMM CONN - J3A	D
DIMM CONN - J2A	A
DIMM CONN - J2B	E
DIMM CONN - J2C	I
DIMM CONN - J2D	M
Regulator	SMI
SMI	SMI
DIMM CONN - J1D	N
DIMM CONN - J1C	J
DIMM CONN - J1B	F
DIMM CONN - J1A	B

Memory Riser Card

DIMM CONN - J0A	C
DIMM CONN - J0B	G
DIMM CONN - J0C	K
DIMM CONN - J0D	O
SMI	SMI
DIMM CONN - J3D	P
DIMM CONN - J3C	L
DIMM CONN - J3B	H
DIMM CONN - J3A	D
DIMM CONN - J2A	A
DIMM CONN - J2B	E
DIMM CONN - J2C	I
DIMM CONN - J2D	M
Regulator	SMI
SMI	SMI
DIMM CONN - J1D	N
DIMM CONN - J1C	J
DIMM CONN - J1B	F
DIMM CONN - J1A	B

## 6.6 9406 Model 830 system unit schematic




Front

Back

## Model 830 Main Storage Card (CCIN 2881)

7	8
Y	Z
Q	R
G	H
5	6
W	X
N	P
E	F
3	4
U	V
L	M
C	D
1	2
S	T
J	K
A	B



### Legend

Base Feature

Required Feature

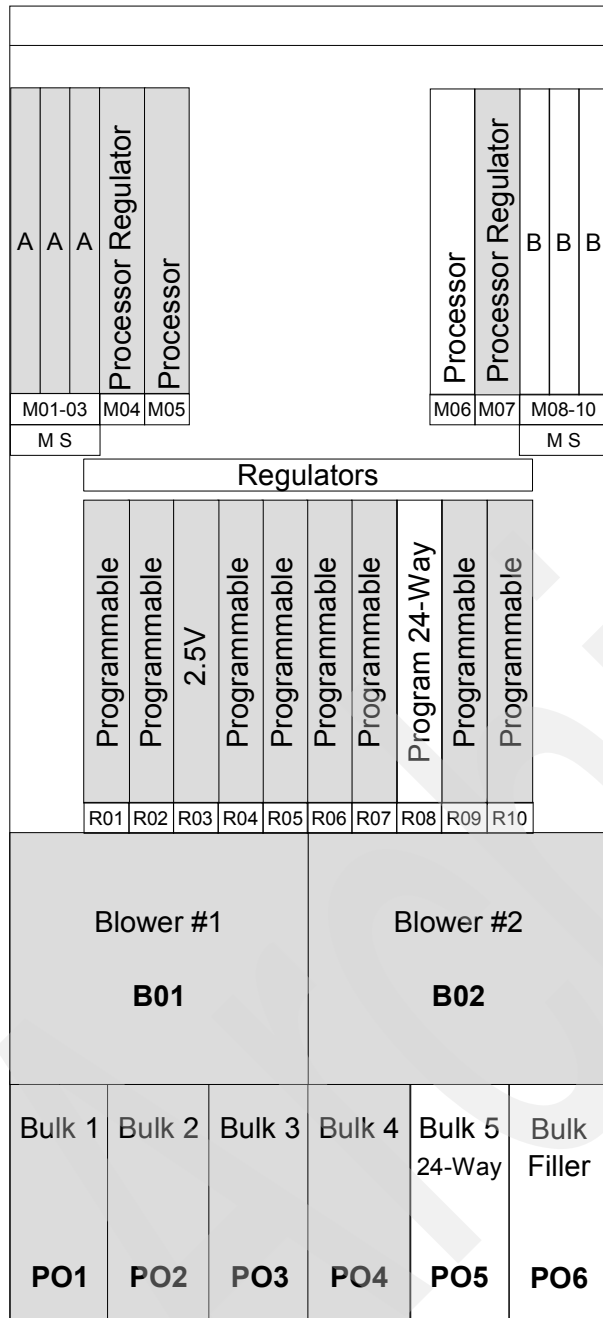
Unavailable if  
Integrated xSeries  
Server is installed

**Note 1:** If C05 has an Integrated xSeries Server, slot C06 is unavailable, and slot C07 is available only as a short slot.

**Note 2:** If C11 has an Integrated xSeries Server, slot C12 is unavailable, and slot C13 is available only as a short slot.

**Note 3:** The position of the cards may change depending on the console and other features selected.

## 6.7 9406 Model 840 system unit schematic

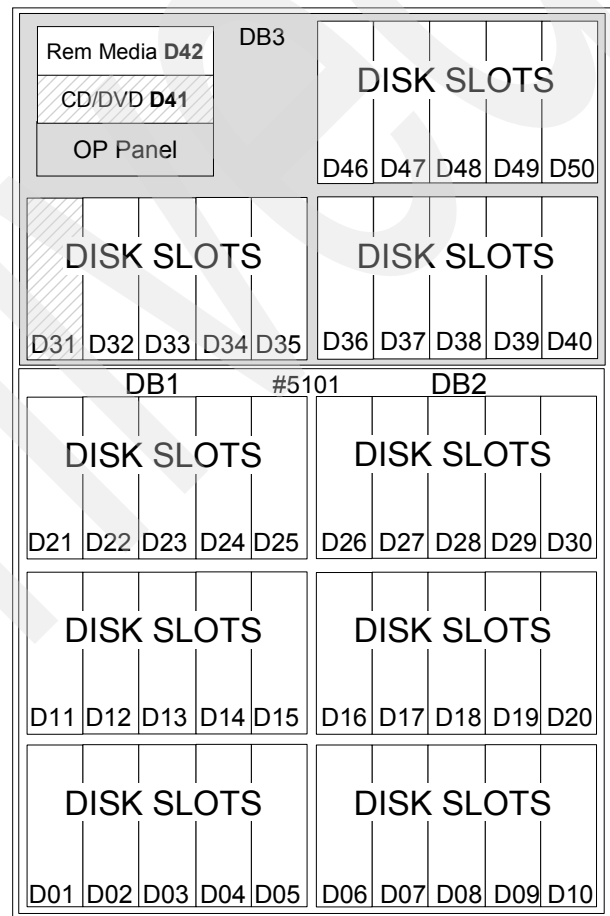


### Legend

Base Feature

Required Feature

Unavailable if  
Integrated xSeries  
Server is installed



Front

Legend

Base Feature

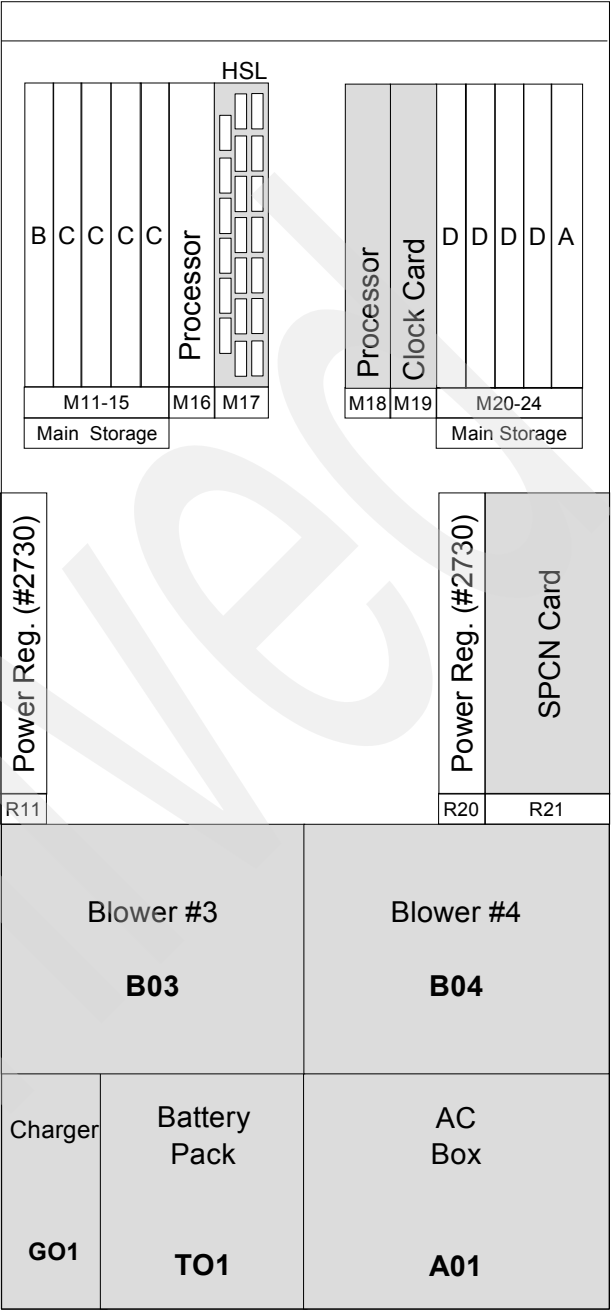
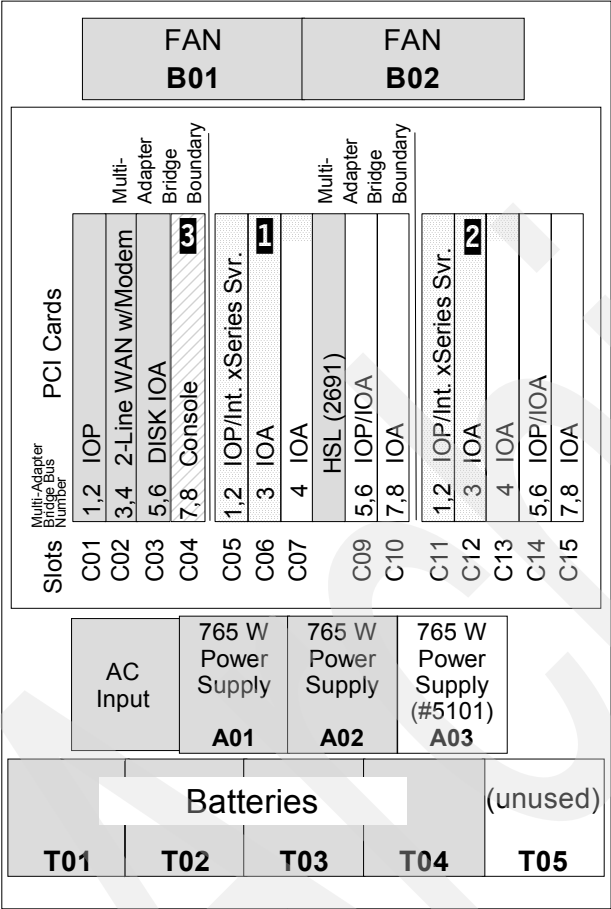
Required Feature

Unavailable if Integrated xSeries Server is installed

**Note 1:** If C05 has an Integrated xSeries Server, slot C06 is unavailable, and slot C07 is available only as a short slot.

**Note 2:** If C11 has an Integrated xSeries Server, slot C12 is unavailable, and slot C13 is available only as a short slot.

**Note 3:** The position of the cards may change depending on the console and other features selected.



Back

6.8 9406 System Unit Expansion Towers for Models 820, 830, and 840 schematics

You can find the schematics for the expansion units and towers that are supported by Models 820, 830, and 840 in Chapter 8, “IBM iSeries towers schematics” on page 293.



## 6.9 iSeries Models 820, 830, and 840 processors

The iSeries Model 820 initial installation is Customer Setup (CSU). Model upgrades are performed by IBM Service Representatives. The iSeries Model 830 and 840 initial installation and model upgrades are performed by IBM Service Representatives.

820 processors		
#0150	none	<b>370 CPW Uni-Processor in Client/Server Environment; 0 CPW 5250 Environment</b> <ul style="list-style-type: none"> <li>Includes eight slots for main storage Dual Inline Memory Module (DIMMs) that plug directly into the processor</li> <li>Includes base I/O backplane with Common Service Processor (CSP) (CCIN 282D)</li> <li>Provides support for the Service Processor, nine 32-bit and three 32- or 64-bit PCI slots</li> <li>Processor CCIN 25BC</li> </ul> <p>The #0150 was withdrawn from marketing on 21 November 2003.</p>
#0151	none	<b>2400 CPW 2-way Processor in Client/Server Environment; 0 CPW 5250 Environment</b> <ul style="list-style-type: none"> <li>Includes 16 DIMM memory positions by way of the base main storage expansion card (CCIN 2884)</li> <li>Includes base I/O backplane with CSP (CCIN 282D)</li> <li>Provides support for the Service Processor, nine 32-bit and three 32- or 64-bit PCI slots</li> <li>Processor CCIN 25BD</li> </ul> <p>The #0151 was withdrawn from marketing on 21 November 2003.</p>
#0152	none	<b>3840 CPW 4-way Processor in Client/Server Environment; 0 CPW 5250 Environment</b> <ul style="list-style-type: none"> <li>Includes 16 DIMM memory positions by way of the base main storage expansion card (CCIN 2884)</li> <li>Includes base I/O backplane with CSP (CCIN 282D)</li> <li>Provides support for the Service Processor, nine 32-bit and three 32- or 64-bit PCI slots</li> <li>Processor CCIN 25BE</li> <li>Processor CCIN 25BD</li> </ul> <p>The #0152 was withdrawn from marketing on 21 November 2003.</p>
#2395	5250 features	<b>370 CPW Uni-Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>Includes eight DIMM memory positions (plug directly into the backplane – direct attach)</li> <li>Includes base I/O backplane and 32 MB embedded base IOP (CCIN 284C) with CSP (CCIN 282D)</li> <li>Provides support for the Service Processor, nine 32-bit and three 32- or 64-bit PCI slots</li> <li>Processor CCIN 244A</li> </ul> <p>The #2395 was withdrawn from marketing on 21 November 2003.</p>
	#1521	<b>Base 35 CPW in 5250 Environment</b> The #2395-#1521 is represented by Processor Feature Code 23A1.
	#1522	<b>Optional 70 CPW in 5250 Environment</b> The #2395-#1522 is represented by Processor Feature Code 23A2.
	#1523	<b>Optional 120 CPW in 5250 Environment</b> The #2395-#1523 is represented by Processor Feature Code 23A3.
	#1524	<b>Optional 240 CPW in 5250 Environment</b> The #2395-#1524 is represented by Processor Feature Code 23A4.

#2396	5250 features	<b>950 CPW Uni-Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>► Includes eight DIMM memory positions (plug directly into the backplane – direct attach). If more than eight DIMMs total are required, a #2884 Main Storage Expansion Riser Card must be used and all DIMMs must then reside on the #2884.</li> <li>► Includes base I/O backplane and 32 MB embedded base IOP (CCIN 284C) with CSP (CCIN 282D)</li> <li>► Provides support for the Service Processor, nine 32-bit and three 32- or 64-bit PCI slots</li> <li>► Processor CCIN 245A</li> </ul> <p>The #2396 was withdrawn from marketing 03 December 2002.</p>
	#1521	<b>Base 35 CPW in 5250 Environment</b> The #2396-#1521 is represented by Processor Feature Code 23A9.
	#1522	<b>Optional 70 CPW in 5250 Environment</b> The #2396-#1522 is represented by Processor Feature Code 23AA.
	#1523	<b>Optional 120 CPW in 5250 Environment</b> The #2396-#1523 is represented by Processor Feature Code 23AB.
	#1524	<b>Optional 240 CPW in 5250 Environment</b> The #2062-#1524 is represented by Processor Feature Code 23AC.
	#1525	<b>Optional 560 CPW in 5250 Environment</b> The #2062-#1525 is represented by Processor Feature Code 23AD.
#2397	5250 features	<b>2000 CPW 2-way Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>► Includes 16 DIMM memory positions with the base main storage expansion card (CCIN 2884)</li> <li>► Includes base I/O backplane and 32 MB embedded base IOP (CCIN 284C) with CSP (CCIN 282D)</li> <li>► Provides support for the Service Processor, nine 32-bit and three 32- or 64-bit PCI slots</li> <li>► Processor CCIN 244D</li> </ul> <p>The #2397 was withdrawn from marketing 03 December 2002.</p>
	#1521	<b>Base 35 CPW in 5250 Environment</b> The #2397-#1521 is represented by Processor Feature Code 23B1.
	#1522	<b>Optional 70 CPW in 5250 Environment</b> The #2397-#1522 is represented by Processor Feature Code 23B2.
	#1523	<b>Optional 120 CPW in 5250 Environment</b> The #2397-#1523 is represented by Processor Feature Code 23B3.
	#1524	<b>Optional 240 CPW in 5250 Environment</b> The #2397-#1524 is represented by Processor Feature Code 23B4.
	#1525	<b>Optional 560 CPW in 5250 Environment</b> The #2397-#1525 is represented by Processor Feature Code 23B5.
	#1526	<b>Optional 1050 CPW in 5250 Environment</b> The #2397-#1526 is represented by Processor Feature Code 23B6.

#2398	5250 features	<b>3200 CPW 4-way Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>Includes 16 DIMM memory positions by way of the base main storage expansion card (CCIN 2884)</li> <li>Includes base I/O backplane and 32 MB embedded base IOP (CCIN 284C) with CSP (CCIN 282D)</li> <li>Provides support for the Service Processor, nine 32-bit and three 32- or 64-bit PCI slots</li> <li>Processor CCIN 244E</li> </ul> The #2398 was withdrawn from marketing 03 December 2002.
	#1521	<b>Base 35 CPW in 5250 Environment</b> The #2398-#1521 is represented by Processor Feature Code 23B8.
	#1522	<b>Optional 70 CPW in 5250 Environment</b> The #2398-#1522 is represented by Processor Feature Code 23B9.
	#1523	<b>Optional 120 CPW in 5250 Environment</b> The #2398-#1523 is represented by Processor Feature Code 23BA.
	#1524	<b>Optional 240 CPW in 5250 Environment</b> The #2398-#1524 is represented by Processor Feature Code 23BB.
	#1525	<b>Optional 560 CPW in 5250 Environment</b> The #2398-#1525 is represented by Processor Feature Code 23BC.
	#1526	<b>Optional 1050 CPW in 5250 Environment</b> The #2398-#1526 is represented by Processor Feature Code 23BD.
	#1527	<b>Optional 2000 CPW in 5250 Environment</b> The #2398-#1527 is represented by Processor Feature Code 23BE.
#2425	Dedicated Domino Processor	<b>Dedicated Domino Uni-Processor, 4250 Simple Mail Users, 2570 Mail and Calendar Users; 100 CPW (Non-Domino Workload), 0 CPW (5250 Environment)</b> <ul style="list-style-type: none"> <li>Includes eight DIMM memory positions (plug directly into the processor – direct attach)</li> <li>Includes base I/O backplane (CCIN 282D) and embedded 32 MB base PCI IOP (CCIN 284C)</li> <li>Includes Common Service Processor</li> <li>The #2425 is represented by Processor Feature Code 2425.</li> <li>Processor CCIN 245A</li> </ul> The #2425 was withdrawn from marketing 03 December 2002.
#2426	Dedicated Domino Processor	<b>Dedicated Domino 2-way Processor, 8000 Simple Mail Users, 5610 Mail and Calendar Users; 200 CPW (Non-Domino Workload), 0 CPW (5250 Environment)</b> <ul style="list-style-type: none"> <li>Includes 16 DIMM memory positions by way of the base main storage expansion card (CCIN 2884)</li> <li>Includes base I/O backplane (CCIN 282D) and embedded 32 MB base PCI IOP (CCIN 284C)</li> <li>Includes Common Service Processor</li> <li>The #2426 is represented by Processor Feature Code 2426.</li> <li>Processor CCIN 244D</li> </ul> The #2426 was withdrawn from marketing 03 December 2002.
#2427	Dedicated Domino Processor	<b>Dedicated Domino 4-way Processor, 14400 Simple Mail Users, 9890 Mail and Calendar Users; 300CPW (Non-Domino Workload), 0 CPW (5250 Environment)</b> <ul style="list-style-type: none"> <li>Includes 16 DIMM memory positions by way of the base main storage expansion card (CCIN 2884)</li> <li>Includes base I/O backplane (CCIN 282D) and embedded 32 MB base PCI IOP (CCIN 284C)</li> <li>Includes Common Service Processor</li> <li>The #2427 is represented by Processor Feature Code 2427.</li> <li>Processor CCIN 244E</li> </ul> The #2427 was withdrawn from marketing 03 December 2002.

#2435	5250 features	<b>600 CPW Uni-Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>Includes eight slots for main storage DIMMs that plug directly into the processor</li> <li>Includes base I/O backplane with CSP (CCIN 282D)</li> <li>Provides support for the Service Processor, nine 32-bit and three 32- or 64-bit PCI slots</li> <li>Processor CCIN 25BC</li> </ul> The #2435 was withdrawn from marketing 21 November 2003.
	#1521	<b>Base 35 CPW in 5250 Environment</b> The #2435-#1521 is represented by Processor Feature Code 249B.
	#1522	<b>Optional 70 CPW in 5250 Environment</b> The #2435-#1522 is represented by Processor Feature Code 249C.
	#1523	<b>Optional 120 CPW in 5250 Environment</b> The #2435-#1523 is represented by Processor Feature Code 249D.
	#1524	<b>Optional 240 CPW in 5250 Environment</b> The #2435-#1524 is represented by Processor Feature Code 249E.
#2436	5250 features	<b>1100 CPW Uni-Processor in Client/Server Environment; required minimum memory 256 MB</b> <ul style="list-style-type: none"> <li>Includes eight slots for main storage DIMMs that plug directly into the processor</li> <li>Includes base I/O backplane with CSP (CCIN 282D)</li> <li>Provides support for the Service Processor, nine 32-bit and three 32- or 64-bit PCI slots</li> <li>Processor CCIN 25BC</li> </ul> The #2436 was withdrawn from marketing 21 November 2003.
	#1521	<b>#1521 Base 35 CPW in 5250 Environment</b> The #2436-#1521 is represented by Processor Feature Code 24A8.
	#1522	<b>#1522 Optional 70 CPW in 5250 Environment</b> The #2436-#1522 is represented by Processor Feature Code 24A9.
	#1523	<b>Optional 120 CPW in 5250 Environment</b> The #2436-#1523 is represented by Processor Feature Code 24AA.
	#1524	<b>Optional 240 CPW in 5250 Environment</b> The #2436-#1524 is represented by Processor Feature Code 24AB.
	#1525	<b>Optional 560 CPW in 5250 Environment</b> The #2436-#1525 is represented by Processor Feature Code 24AC.
#2437	5250 features	<b>2350 CPW 2-way Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>Includes 16 DIMM memory positions by way of the base main storage expansion card (CCIN 2884)</li> <li>Includes base I/O backplane with CSP (CCIN 282D)</li> <li>Provides support for the Service Processor, nine 32-bit and three 32- or 64-bit PCI slots</li> <li>Processor CCIN 25BD</li> </ul> The #2437 was withdrawn from marketing 21 November 2003.
	#1521	<b>Base 35 CPW in 5250 Environment</b> The #2437-#1521 is represented by Processor Feature Code 24B0.
	#1522	<b>Optional 70 CPW in 5250 Environment</b> The #2437-#1522 is represented by Processor Feature Code 24B1.
	#1523	<b>Optional 120 CPW in 5250 Environment</b> The #2437-#1523 is represented by Processor Feature Code 24B2.
	#1524	<b>Optional 240 CPW in 5250 Environment</b> The #2437-#1524 is represented by Processor Feature Code 24B3.
	#1525	<b>Optional 560 CPW in 5250 Environment</b> The #2437-#1525 is represented by Processor Feature Code 24B4.
	#1526	<b>Optional 1050 CPW in 5250 Environment</b> The #2437-#1526 is represented by Processor Feature Code 24B5.

#2438	5250 features	<b>3700 CPW 4-way Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>Includes 16 DIMM memory positions by way of the base main storage expansion card (CCIN 2884)</li> <li>Includes base I/O backplane with CSP (CCIN 282D)</li> <li>Provides support for the Service Processor, nine 32-bit and three 32- or 64-bit PCI slots</li> <li>Processor CCIN 25BE</li> </ul> The #2438 was withdrawn from marketing 21 November 2003.
	#1521	<b>Base 35 CPW in 5250 Environment</b> The #2438-#1521 is represented by Processor Feature Code 24B8.
	#1522	<b>Optional 70 CPW in 5250 Environment</b> The #2438-#1522 is represented by Processor Feature Code 24B9.
	#1523	<b>Optional 120 CPW in 5250 Environment</b> The #2438-#1523 is represented by Processor Feature Code 24BA.
	#1524	<b>Optional 240 CPW in 5250 Environment</b> The #2438-#1524 is represented by Processor Feature Code 24BB.
	#1525	<b>Optional 560 CPW in 5250 Environment</b> The #2438-#1525 is represented by Processor Feature Code 24BC.
	#1526	<b>Optional 1050 CPW in 5250 Environment</b> The #2438-#1526 is represented by Processor Feature Code 24BD.
	#1527	<b>Optional 2000 CPW in 5250 Environment</b> The #2438-#1527 is represented by Processor Feature Code 24BE.
#2456	Dedicated Domino Processor	<b>Dedicated Domino Uni-Processor, 3110 Mail and Calendar Users; 120 CPW (Non-Domino Workload), 0 CPW (5250 Environment)</b> <ul style="list-style-type: none"> <li>Includes eight slots for main storage DIMMs that plug directly into the processor</li> <li>Includes base I/O backplane with CSP (CCIN 282D)</li> <li>Provides support for the Service Processor, nine 32-bit and three 32- or 64-bit PCI slots</li> <li>The #2456 is represented by Processor Feature Code 2456.</li> <li>Processor CCIN 25BC</li> </ul> The #2456 was withdrawn from marketing on 21 November 2003.
#2457	Dedicated Domino Processor	<b>Dedicated Domino 2-way Processor, 6600 Mail and Calendar Users; 240 CPW (Non-Domino Workload), 0 CPW (5250 Environment)</b> <ul style="list-style-type: none"> <li>Includes 16 DIMM memory positions by way of the base main storage expansion card (CCIN 2884)</li> <li>Includes base I/O backplane with CSP (CCIN 282D)</li> <li>Provides support for the Service Processor, nine 32-bit and three 32- or 64-bit PCI slots</li> <li>The #2457 is represented by Processor Feature Code 2457.</li> <li>Processor CCIN 25BD</li> </ul> The #2457 was withdrawn from marketing 21 November 2003.
#2458	Dedicated Domino Processor	<b>Dedicated Domino 4-way Processor, 11810 Mail and Calendar Users; 380 CPW (Non-Domino Workload), 0 CPW (5250 Environment)</b> <ul style="list-style-type: none"> <li>Includes 16 DIMM memory positions by way of the base main storage expansion card (CCIN 2884)</li> <li>Includes base I/O backplane (CCIN 282D) and embedded 32 MB base PCI IOP (CCIN 284C)</li> <li>Includes Common Service Processor</li> <li>The #2458 is represented by Processor Feature Code 2458.</li> <li>Processor CCIN 25BE</li> </ul> The #2458 was withdrawn from marketing 21 November 2003.
<b>830 processors</b>		
#0153	5250 features	<b>7350 CPW 8-way Processor in Client/Server Environment; required minimum memory 1 GB</b> Base features include: <ul style="list-style-type: none"> <li>Main Storage Expansion Card (Slot M02) (CCIN 2881)</li> <li>#9754 Bus Expansion Clock Card—Eight HSL Ports Cluster Enabled (CCIN 2754) Specify with processor #0153</li> <li>PCI and CSP Card (CCIN 28AA)</li> <li>Bus Adapter (CCIN 2681)</li> <li>Operator Panel (CCIN 247A)</li> <li>Processor Capacity Card (CCIN 0153)</li> <li>Processor 0 (CCIN 245D)</li> <li>Processor 1 (CCIN 245D)</li> </ul> The #0153 was withdrawn from marketing on 21 November 2003.

#2349	5250 features	<b>4200/7350 CPW 4/8-way Processor in Client/Server Environment; required minimum memory 1 GB</b> Base features include: <ul style="list-style-type: none"> <li>▶ Main Storage Expansion Card (Slot M02) (CCIN 2881)</li> <li>▶ #9754 Bus Expansion Clock Card—Eight HSL Ports Cluster Enabled (CCIN 2754) Specify with processor #2349</li> <li>▶ Processor Capacity Card (CCIN 2349) 8-way</li> <li>▶ Processor 0 (CCIN 245D)</li> <li>▶ Processor 1 (CCIN 245D)</li> </ul> #1605 is the IBM eServer Capacity Upgrade on Demand (CUoD) activation code (up to four on the #2349) Minimum operating system level: OS/400 V5R1 must be refreshed with feature code #2690 The #2349 was withdrawn from marketing 21 November 2003.
	#1531	<b>Base 70 CPW in 5250 Environment</b> The #2349-#1531 is represented by Processor Feature Code 24D8.
	#1532	<b>Optional 120 CPW in 5250 Environment</b> The #2349-#1532 is represented by Processor Feature Code 24D9.
	#1533	<b>Optional 240 CPW in 5250 Environment</b> The #2349-#1533 is represented by Processor Feature Code 24DA.
	#1534	<b>Optional 560 CPW in 5250 Environment</b> The #2349-#1534 is represented by Processor Feature Code 24DB.
	#1535	<b>Optional 1050 CPW in 5250 Environment</b> The #2349-#1535 is represented by Processor Feature Code 24DC.
	#1536	<b>Optional 2000 CPW in 5250 Environment</b> The #2349-#1536 is represented by Processor Feature Code 24DD.
#2400	5250 features	<b>1850 CPW 2-way Processor in Client/Server Environment</b> Base features include: <ul style="list-style-type: none"> <li>▶ Main Storage Expansion Card (Slot M02) (CCIN 2881)</li> <li>▶ #9732 Bus Expansion/Clock Card—Eight HSL Ports (CCIN 25AB) Specify with processor #2400 for OS/400 V4R5</li> <li>▶ #9777 Bus Expansion Clock Card—Eight HSL Ports Cluster Enabled (CCIN 2754) Specify with processor #2400 for OS/400 V5R1 and later</li> <li>▶ Processor Capacity Card (CCIN 2400)</li> <li>▶ Processor 0 (CCIN 245C)</li> </ul> The #2400 was withdrawn from marketing on 21 November 2003.
	#1531	<b>Base 70 CPW in 5250 Environment</b> The #2400-#1531 is represented by Processor Feature Code 23C1.
	#1532	<b>Optional 120 CPW in 5250 Environment</b> The #2400-#1532 is represented by Processor Feature Code 23C2.
	#1533	<b>Optional 240 CPW in 5250 Environment</b> The #2400-#1533 is represented by Processor Feature Code 23C3.
	#1534	<b>Optional 560 CPW in 5250 Environment</b> The #2400-#1534 is represented by Processor Feature Code 23C4.
	#1535	<b>Optional 1050 CPW in 5250 Environment</b> The #2400-#1535 is represented by Processor Feature Code 23C5.

#2402	5250 features	<b>4200 CPW 4-way Processor in Client/Server Environment</b> Base features include: <ul style="list-style-type: none"> <li>▶ Main Storage Expansion Card (Slot M02) (CCIN 2881)</li> <li>▶ #9733 Bus Expansion/Clock Card—Eight HSL Ports (CCIN 25AD) Specify with processors #2402 for OS/400 V4R5</li> <li>▶ #9754 Bus Expansion Clock Card—Eight HSL Ports Cluster Enabled (CCIN 2754) Specify with processor #2402 for OS/400 V5R1 and later</li> <li>▶ Processor Capacity Card (CCIN 2402)</li> <li>▶ Processor 0 (CCIN 245D)</li> </ul> The #2402 was withdrawn from marketing on 03 December 2002.
	#1531	<b>Base 70 CPW in 5250 Environment</b> The #2402-#1531 is represented by Processor Feature Code 23D1.
	#1532	<b>Optional 120 CPW in 5250 Environment</b> The #2402-#1532 is represented by Processor Feature Code 23D2.
	#1533	<b>Optional 240 CPW in 5250 Environment</b> The #2402-#1533 is represented by Processor Feature Code 23D3.
	#1534	<b>Optional 560 CPW in 5250 Environment</b> The #2402-#1534 is represented by Processor Feature Code 23D4.
	#1535	<b>Optional 1050 CPW in 5250 Environment</b> The #2402-#1535 is represented by Processor Feature Code 23D5.
	#1536	<b>Optional 2000 CPW in 5250 Environment</b> The #2402-#1536 is represented by Processor Feature Code 23D6.
#2403	5250 features	<b>7350 CPW 8-way Processor in Client/Server Environment; required minimum memory 1 GB</b> Base features include: <ul style="list-style-type: none"> <li>▶ Main Storage Expansion Card (Slot M02) (CCIN 2881)</li> <li>▶ #9733 Bus Expansion/Clock Card—Eight HSL Ports (CCIN 25AD) Specify with processors #2403 for OS/400 V4R5</li> <li>▶ #9754 Bus Expansion Clock Card—Eight HSL Ports Cluster Enabled (CCIN 2754) Specify with processor #2403 for OS/400 V5R1 and later</li> <li>▶ Processor Capacity Card (CCIN 2403)</li> <li>▶ Processor 0 (CCIN 245D)</li> <li>▶ Processor 1 (CCIN 245D)</li> </ul> The #2403 was withdrawn from marketing on 03 December 2002.
	#1531	<b>Base 70 CPW in 5250 Environment</b> The #2403-#1531 is represented by Processor Feature Code 23D8.
	#1532	<b>Optional 120 CPW in 5250 Environment</b> The #2403-#1532 is represented by Processor Feature Code 23D9.
	#1533	<b>Optional 240 CPW in 5250 Environment</b> The #2403-#1533 is represented by Processor Feature Code 23DA.
	#1534	<b>Optional 560 CPW in 5250 Environment</b> The #2403-#1534 is represented by Processor Feature Code 23DB.
	#1535	<b>Optional 1050 CPW in 5250 Environment</b> The #2403-#1535 is represented by Processor Feature Code 23DC.
	#1536	<b>Optional 2000 CPW in 5250 Environment</b> The #2403-#1536 is represented by Processor Feature Code 23DD.
	#1537	<b>Optional 4550 CPW in 5250 Environment</b> The #2403-#1537 is represented by Processor Feature Code 23DE.

840 processors		
#0158	5250 features	<b>12000 CPW 12-way Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>▶ Processor Capacity Card (CCIN 0158)</li> <li>▶ Processor 0 (CCIN 245F)</li> <li>▶ Processor 1 (CCIN 245E)</li> <li>▶ Processor 2 (CCIN 245E)</li> <li>▶ Processor 3 (CCIN 245E)</li> </ul> The #0158 was withdrawn from marketing on 21 November 2003.
#0159	5250 features	<b>20200 CPW 24-way Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>▶ Processor Capacity Card (CCIN 0159)</li> <li>▶ Processor 0 (CCIN 245F)</li> <li>▶ Processor 1 (CCIN 245E)</li> <li>▶ Processor 2 (CCIN 245E)</li> <li>▶ Processor 3 (CCIN 245E)</li> </ul> The #0159 was withdrawn from marketing on 21 November 2003.
#2352	5250 features	<b>9000/12000 CPW 8/12-way Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>▶ Processor Capacity Card (CCIN 2352)</li> <li>▶ Processor 0 (CCIN 245F)</li> <li>▶ Processor 1 (CCIN 245E)</li> </ul> The #1604 is the CUoD activation code (up to four on the #2352) The #2352 was withdrawn from marketing on 21 November 2003.
	#1540	<b>Optional 120 CPW in 5250 Environment</b> The #2352-#1540 is represented by Processor Feature Code 26B0.
	#1541	<b>Optional 240 CPW in 5250 Environment</b> The #2352-#1541 is represented by Processor Feature Code 26B1.
	#1542	<b>Optional 560 CPW in 5250 Environment</b> The #2352-#1542 is represented by Processor Feature Code 26B2.
	#1543	<b>Optional 1050 CPW in 5250 Environment</b> The #2352-#1543 is represented by Processor Feature Code 26B3.
	#1544	<b>Optional 2000 CPW in 5250 Environment</b> The #2352-#1544 is represented by Processor Feature Code 26B4.
	#1545	<b>Optional 4550 CPW in 5250 Environment</b> The #2352-#1545 is represented by Processor Feature Code 26B5.
	#1546	<b>Optional 10000 CPW in 5250 Environment</b> The #2352-#1546 is represented by Processor Feature Code 26B6.



#2353	5250 features	<b>12000/16500 CPW 12/18-way Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>▶ Processor Capacity Card (CCIN 2353)</li> <li>▶ Processor 0 (CCIN 245F)</li> <li>▶ Processor 1 (CCIN 245E)</li> <li>▶ Processor 2 (CCIN 245E)</li> </ul> <p>The #1604 is the CUoD activation code (up to six on the #2353) The #2353 was withdrawn from marketing on 21 November 2003.</p>
	#1540	<b>Optional 120 CPW in 5250 Environment</b> The #2353-#1540 is represented by Processor Feature Code 26B8.
	#1541	<b>Optional 240 CPW in 5250 Environment</b> The #2353-#1541 is represented by Processor Feature Code 26B9.
	#1542	<b>Optional 560 CPW in 5250 Environment</b> The #2353-#1542 is represented by Processor Feature Code 26BA.
	#1543	<b>Optional 1050 CPW in 5250 Environment</b> The #2353-#1543 is represented by Processor Feature Code 26BB.
	#1544	<b>Optional 2000 CPW in 5250 Environment</b> The #2353-#1544 is represented by Processor Feature Code 26BC.
	#1545	<b>Optional 4550 CPW in 5250 Environment</b> The #2353-#1545 is represented by Processor Feature Code 26BD.
	#1546	<b>Optional 10000 CPW in 5250 Environment</b> The #2353-#1546 is represented by Processor Feature Code 26BE.
	#1547	<b>Optional 16500 CPW in 5250 Environment</b> The #2353-#1547 is represented by Processor Feature Code 26BF.
#2354	5250 features	<b>16500/20400 CPW 18/24-way Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>▶ Processor Capacity Card (CCIN 2354)</li> <li>▶ Processor 0 (CCIN 245F)</li> <li>▶ Processor 1 (CCIN 245E)</li> <li>▶ Processor 2 (CCIN 245E)</li> <li>▶ Processor 3 (CCIN 245E)</li> </ul> <p>The #1604 is the CUoD activation code (up to six on the #2354) The #2354 was withdrawn from marketing on 21 November 2003.</p>
	#1540	<b>Optional 120 CPW in 5250 Environment</b> The #2354-#1540 is represented by Processor Feature Code 26C0.
	#1541	<b>Optional 240 CPW in 5250 Environment</b> The #2354-#1541 is represented by Processor Feature Code 26C1.
	#1542	<b>Optional 560 CPW in 5250 Environment</b> The #2354-#1542 is represented by Processor Feature Code 26C2.
	#1543	<b>Optional 1050 CPW in 5250 Environment</b> The #2354-#1543 is represented by Processor Feature Code 26C3.
	#1544	<b>Optional 2000 CPW in 5250 Environment</b> The #2354-#1544 is represented by Processor Feature Code 26C4.
	#1545	<b>Optional 4550 CPW in 5250 Environment</b> The #2354-#1545 is represented by Processor Feature Code 26C5.
	#1546	<b>Optional 10000 CPW in 5250 Environment</b> The #2354-#1546 is represented by Processor Feature Code 26C6.
	#1547	<b>Optional 16500 CPW in 5250 Environment</b> The #2354-#1547 is represented by Processor Feature Code 26C7.
	#1548	<b>Optional 20400 CPW in 5250 Environment</b> The #2354-#1548 is represented by Processor Feature Code 26C8.

#2416	5250 features	<b>7800/10000 CPW 8/12-way Processor in Client/Server Environment</b> The standard features include: <ul style="list-style-type: none"> <li>▶ Processor Capacity Card (CCIN 2416)</li> <li>▶ Processor 0 (CCIN 245F)</li> <li>▶ Processor 1 (CCIN 245E)</li> </ul> The #1604 is the CUoD activation code (up to four on the #2416) The #2416 was withdrawn from marketing on 03 December 2002.
	#1540	<b>Optional 120 CPW in 5250 Environment</b> The #2416-#1540 is represented by Processor Feature Code 24C0.
	#1541	<b>Optional 240 CPW in 5250 Environment</b> The #2416-#1541 is represented by Processor Feature Code 24C1.
	#1542	<b>Optional 560 CPW in 5250 Environment</b> The #2416-#1542 is represented by Processor Feature Code 24C2.
	#1543	<b>Optional 1050 CPW in 5250 Environment</b> The #2416-#1543 is represented by Processor Feature Code 24C3.
	#1544	<b>Optional 2000 CPW in 5250 Environment</b> The #2416-#1544 is represented by Processor Feature Code 24C4.
	#1545	<b>Optional 4550 CPW in 5250 Environment</b> The #2416-#1545 is represented by Processor Feature Code 24C5.
	#1546	<b>Optional 10000 CPW in 5250 Environment</b> The #2416-#1546 is represented by Processor Feature Code 24C6. Cannot be fully used on the #2416 unless all processors are activated.
#2417	5250 features	<b>10000/13200 CPW 12/18-way Processor in Client/Server Environment</b> The standard features include: <ul style="list-style-type: none"> <li>▶ Processor Capacity Card (CCIN 2417)</li> <li>▶ Processor 0 (CCIN 245F)</li> <li>▶ Processor 1 (CCIN 245E)</li> <li>▶ Processor 2 (CCIN 245E)</li> </ul> #1604 is the CUoD activation code (up to six on the #2417) The #2417 was withdrawn from marketing on 03 December 2002
	#1540	<b>Optional 120 CPW in 5250 Environment</b> The #2417-#1540 is represented by Processor Feature Code 24C8.
	#1541	<b>Optional 240 CPW in 5250 Environment</b> The #2417-#1541 is represented by Processor Feature Code 24C9.
	#1542	<b>Optional 560 CPW in 5250 Environment</b> The #2417-#1542 is represented by Processor Feature Code 24CA.
	#1543	<b>Optional 1050 CPW in 5250 Environment</b> The #2417-#1543 is represented by Processor Feature Code 24CB.
	#1544	<b>Optional 2000 CPW in 5250 Environment</b> The #2417-#1544 is represented by Processor Feature Code 24CC.
	#1545	<b>Optional 4550 CPW in 5250 Environment</b> The #2417-#1545 is represented by Processor Feature Code 24CD.
	#1546	<b>Optional 10000 CPW in 5250 Environment</b> The #2417-#1546 is represented by Processor Feature Code 24CE.

#2418	5250 features	<b>10000 CPW 12-way Processor in Client/Server Environment</b> Standard features include: <ul style="list-style-type: none"> <li>▶ Processor Capacity Card (CCIN 2418)</li> <li>▶ Processor 0 (CCIN 245F)</li> <li>▶ Processor 1 (CCIN 245E)</li> </ul> The #2418 was withdrawn from marketing on 03 December 2002.
	#1540	<b>Optional 120 CPW in 5250 Environment</b> The #2418-#1540 is represented by Processor Feature Code 23E8.
	#1541	<b>Optional 240 CPW in 5250 Environment</b> The #2418-#1541 is represented by Processor Feature Code 23E9.
	#1542	<b>Optional 560 CPW in 5250 Environment</b> The #2418-#1542 is represented by Processor Feature Code 23EA.
	#1543	<b>Optional 1050 CPW in 5250 Environment</b> The #2418-#1543 is represented by Processor Feature Code 23EB.
	#1544	<b>Optional 2000 CPW in 5250 Environment</b> The #2418-#1544 is represented by Processor Feature Code 23EC.
	#1545	<b>Optional 4550 CPW in 5250 Environment</b> The #2418-#1545 is represented by Processor Feature Code 23ED.
	#1546	<b>Optional 10000 CPW in 5250 Environment</b> The #2418-#1546 is represented by Processor Feature Code 23EE.
#2419	5250 features	<b>13200/16500 CPW 18/24-way Processor in Client/Server Environment</b> The standard features include: <ul style="list-style-type: none"> <li>▶ Processor Capacity Card (CCIN 2419)</li> <li>▶ Processor 0 (CCIN 245F)</li> <li>▶ Processor 1 (CCIN 245E)</li> <li>▶ Processor 2 (CCIN 245E)</li> <li>▶ Processor 3 (CCIN 245E)</li> </ul> The #1604 is the CUoD activation code (up to six on the #2419) The #2419 was withdrawn from marketing on 03 December 2002.
	#1540	<b>Optional 120 CPW in 5250 Environment</b> The #2418-#1540 is represented by Processor Feature Code 24D0.
	#1541	<b>Optional 240 CPW in 5250 Environment</b> The #2418-#1541 is represented by Processor Feature Code 24D1.
	#1542	<b>Optional 560 CPW in 5250 Environment</b> The #2418-#1542 is represented by Processor Feature Code 24D2.
	#1543	<b>Optional 1050 CPW in 5250 Environment</b> The #2418-#1543 is represented by Processor Feature Code 24D3.
	#1544	<b>Optional 2000 CPW in 5250 Environment</b> The #2418-#1544 is represented by Processor Feature Code 24D4.
	#1545	<b>Optional 4550 CPW in 5250 Environment</b> The #2418-#1545 is represented by Processor Feature Code 24D5.
	#1546	<b>Optional 10000 CPW in 5250 Environment</b> The #2418-#1546 is represented by Processor Feature Code 24D6.
	#1547	<b>Optional 16500 CPW in 5250 Environment</b> The #2420-#1547 is represented by Processor Feature Code 24D7. Cannot be used fully on the #2419 unless all processors are activated.

#2420	5250 feature	<b>16500 CPW 24-way Processor in Client/Server Environment</b> The standard features include: <ul style="list-style-type: none"> <li>▶ Processor Capacity Card (CCIN 2420)</li> <li>▶ Processor 0 (CCIN 245F)</li> <li>▶ Processor 1 (CCIN 245E)</li> <li>▶ Processor 2 (CCIN 245E)</li> <li>▶ Processor 3 (CCIN 245E)</li> </ul> The #2420 was withdrawn from marketing on 03 December 2002.
	#1540	<b>Optional 120 CPW in 5250 Environment</b> The #2420-#1540 is represented by Processor Feature Code 23F8.
	#1541	<b>Optional 240 CPW in 5250 Environment</b> The #2420-#1541 is represented by Processor Feature Code 23F9.
	#1542	<b>Optional 560 CPW in 5250 Environment</b> The #2420-#1542 is represented by Processor Feature Code 23FA.
	#1543	<b>Optional 1050 CPW in 5250 Environment</b> The #2420-#1543 is represented by Processor Feature Code 23FB.
	#1544	<b>Optional 2000 CPW in 5250 Environment</b> The #2420-#1544 is represented by Processor Feature Code 23FC.
	#1545	<b>Optional 4550 CPW in 5250 Environment</b> The #2420-#1545 is represented by Processor Feature Code 23FD.
	#1546	<b>Optional 10000 CPW in 5250 Environment</b> The #2420-#1546 is represented by Processor Feature Code 23FE.
	#1547	<b>Optional 16500 CPW in 5250 Environment</b> The #2420-#1547 is represented by Processor Feature Code 23FF.
#2461	5250 feature	<b>20200 CPW 24-way Processor in Client/Server Environment</b> <ul style="list-style-type: none"> <li>▶ Processor Capacity Card (CCIN 2461)</li> <li>▶ Processor 0 (CCIN 245F)</li> <li>▶ Processor 1 (CCIN 245E)</li> <li>▶ Processor 2 (CCIN 245E)</li> <li>▶ Processor 3 (CCIN 245E)</li> </ul> Minimum operating system level: OS/400 V5R1 The #2461 was withdrawn from marketing on 03 December 2002.
	#1540	<b>Optional 120 CPW in 5250 Environment</b> The #2461-#1540 is represented by Processor Feature Code 26D0.
	#1541	<b>Optional 240 CPW in 5250 Environment</b> The #2461-#1541 is represented by Processor Feature Code 26D1.
	#1542	<b>Optional 560 CPW in 5250 Environment</b> The #2461-#1542 is represented by Processor Feature Code 26D2.
	#1543	<b>Optional 1050 CPW in 5250 Environment</b> The #2461-#1543 is represented by Processor Feature Code 26D3.
	#1544	<b>Optional 2000 CPW in 5250 Environment</b> The #2461-#1544 is represented by Processor Feature Code 26D4.
	#1545	<b>Optional 4550 CPW in 5250 Environment</b> The #2461-#1545 is represented by Processor Feature Code 26D5.
	#1546	<b>Optional 10000 CPW in 5250 Environment</b> The #2461-#1546 is represented by Processor Feature Code 26D6.
	#1547	<b>Optional 16500 CPW in 5250 Environment</b> The #2461-#1547 is represented by Processor Feature Code 26D7.
	#1548	<b>Optional 20200 CPW in 5250 Environment</b> The #2461-#1548 is represented by Processor Feature Code 26D8.

## 6.10 iSeries Models 820, 830, and 840 features

You can find feature descriptions, including details about power and packaging and main memory, in Chapter 7, “IBM iSeries 820, 830, and 840 features and placement” on page 223.

## 6.11 Supported upgrades for Models 820, 830, and 840

Upgrades to, from, and within the iSeries 820, 830, and 840 servers are not supported. Refer to the Upgrade topic in the Find and Compare Tool (FACT) at the following Web site to determine the supported upgrade paths for a given processor:

<http://www-919.ibm.com/servers/eserver/fact/>

Archived

## IBM iSeries 820, 830, and 840 features and placement

This chapter describes the features that are supported in the IBM iSeries 820, 830, and 840 system units and towers, such as the power and packaging, main storage, workstation controllers, and communications features. This includes local area networks (LANs), disk units, internal tape units, CD-ROM, DVD-RAM, DVD-ROM, and magnetic media controllers.

The feature codes that are described in this chapter are not supported in every IBM eServer i5 and iSeries server model that is available today. The descriptions, therefore, specifically state in which models they are supported. The feature code descriptions indicate the required minimum operating system level and, in some cases, the PTF level.

Refer to *IBM @server i5 and iSeries System Handbook*, GA19-5486, for a table of features that are supported in each server. Refer also to the iSeries Prerequisite tool for up-to-date information about the software level that is required for iSeries features. You can find information about this tool at:

[http://www-912.ibm.com/e\\_dir/eserverPrereq.nsf](http://www-912.ibm.com/e_dir/eserverPrereq.nsf)

For details about hardware that is supported in migration towers, see Chapter 5, “IBM AS/400e 720, 730, and 740 models” on page 129. You can find the HSL, SPCN, and Dual Line Cord feature codes and descriptions in Chapter 13, “Cable part numbers for IBM iSeries and AS/400e systems” on page 461.

**Note:** The darker shaded areas in the following tables indicate the base features.

## 7.1 PCI card placement for iSeries servers

The implementation of Peripheral Component Interconnect (PCI) architecture in iSeries servers provides flexibility in the placement of input/output processors (IOPs) and input/output adapters (IOAs). This can result in a more efficient use of card slots, which in turn can lower the cost of implementation. For example, a specific PCI IOP can support two high-performance IOAs, or four slower IOAs. However, it might not have the capacity to support one high-performance IOA and two slower IOAs.

PCI architecture changes the configuration rules associated with card placement in IBM iSeries Models 270, 820, 830, and 840 servers. Earlier models required IOPs to be in specific slots in the system and expansion towers. However, increased configuration flexibility reinforces a requirement to understand the detailed configuration rules.

**Important:** If the configuration rules and restrictions are not fully understood and followed, it is possible to create a hardware configuration that does not work, marginally works, or quits working when a system is upgraded to future software releases.

The *PCI Card Placement Rules for the IBM eServer iSeries Server Version 5 Release 3*, REDP-4011, and *PCI Card Placement Rules for the IBM eServer iSeries Server*, REDP-3638 describes the configuration and card placement rules that you must understand and follow to develop valid configurations. Use these IBM Redpapers as a guide when configuring IOAs and IOPs to size the system to meet client expectations.

For rules related to the #5033, #5034, #5035, and #5077 Migration Towers that can attach to Model 820, 830, and 840 servers, see the description of the affected features to be migrated in Chapter 8, "IBM iSeries towers schematics" on page 293 or in the iSeries Information Center at:

<http://publib.boulder.ibm.com/pubs/html/as400/infocenter.htm>

## 7.2 Power and packaging

Power and packaging	
#0006	<p><b>#0006 LPAR Restrict Build Process</b></p> <p>The #0006 is added to an initial order where #0140 Logical Partitioning Specify is requested. This #0006 instructs manufacturing to only load SLIC on the minimum number of disk drives.</p> <p>This #0006 is mutually exclusive with #5000 SW Preload and with #0205 RISC- to RISC migration. Supported on Models 820, 830, 840.</p>
#0092	<p><b>External xSeries Attach Specify</b></p> <p>The #0092 is used to specify the number of External xSeries Servers connected to the system. The IBM marketing configurator uses this specify code to determine the number of high-speed link (HSL) and System Power Control Network (SPCN) cables required and to ensure that the number of External xSeries Servers does not exceed the system limit. Each External xSeries Server is connected using HSL cables and attached to the SPCN string like all other HSL attached I/O towers.</p> <p>Prerequisite: A 1519-100 Integrated xSeries Adapter for iSeries or 1519-200 Integrated xSeries Adapter for i5 is required in each External xSeries Server attached.</p> <p>Supported on Models 820, 830, 840</p> <p>Minimum operating system level: OS/400 V5R1 for 1519-100 Integrated xSeries Adapter for iSeries</p>



#0123	<p><b>#5074 Lower Unit in Rack</b></p> <p>The #0123 feature specifies that one #5074 PCI Expansion Tower is to be mounted in the bottom of a #0551 iSeries Rack. The #0123 can be specified on initial orders and on Miscellaneous Equipment Specification (MES) orders, but support for field merging a #5074 into a #0551 iSeries Rack is not offered (due to the weight of the #5074). A line cord for the #5074 must be ordered with the #5074.</p> <p>Corequisites:</p> <ul style="list-style-type: none"> <li>▶ #0551 iSeries Rack</li> <li>▶ #5074 PCI Expansion Tower</li> <li>▶ #5101/#5111 30 Disk Expansion with Dual Line Cord</li> </ul> <p>Supported on Models 820, 830, 840. The #0123 was withdrawn from marketing on 03 December 2002.</p>
#0125	<p><b>#9079 Lower Unit in Rack</b></p> <p>The #0125 feature specifies that one #9079 Base I/O Tower for a Model 840 is to be mounted in the bottom of a #0551 iSeries Rack. The #0125 can be specified on initial orders and on MES orders, but support for field merging a #9079 into a #0551 is not offered (due to the weight of the #9079). A line cord for the #9079 must be ordered with the Model 840 system unit.</p> <p>Corequisites:</p> <ul style="list-style-type: none"> <li>▶ #0551 iSeries Rack</li> <li>▶ #9079 Base I/O Tower</li> <li>▶ #5101/#5111 30 Disk Expansion with Dual Line Cord</li> </ul> <p>Supported on Model 840. The #0125 was withdrawn from marketing on 21 November 2003.</p>
#0140	<p><b>#0140 Logical Partitioning Specify</b></p> <p>The #0140 is used to specify that this system is to be logically partitioned. The #0140 is only valid on n-way processors with OS/400 V4R5 or later. The #0140 is valid on select OS/400 V5R1 supported uni-processors (IStar and SStar processors only). The IBM marketing configurator adds a quantity of one #0140 to the order for each logical partition (LPAR) required.</p> <p>Supported on Models 820, 830, 840.</p>
#0141	<p><b>#0141 HSL OptiConnect Specify</b></p> <p>The #0141 is used to specify that this system is to be part of a cluster using HSL OptiConnect. This feature is used to allow the ordering of additional HSL cables to connect the systems that have OptiConnect.</p> <p>Prerequisite: HSL OptiConnect capable system Maximum: One Supported on Models 820, 830, 840 Minimum operating system level: OS/400 V5R1</p>

#0142	<p><b>#0142 Linux Partition Specify</b></p> <p>The #0142 is used to specify that this system is to be logically partitioned with a Linux partition. Specify one #0142 for each Linux partition required. There are no minimum number of Linux direct attached features required per Linux partition. A Linux partition can exist without any Linux direct attached features in it (in this case, virtual storage, virtual LAN and virtual console is virtualized by way of the iSeries server).</p> <p>The following Linux direct attach features can be attached directly to a Linux partition. Linux direct attached features cannot be accessed by OS/400 partitions:</p> <ul style="list-style-type: none"> <li>▶ #0601 - Direct Attach - #2743 PCI 1 Gbps Ethernet IOA (withdrawn from marketing on 01 October 2004. Recommended replacement is the #0620)</li> <li>▶ #0602 - Direct Attach - #2760 PCI 1 Gbps Ethernet UTP IOA (withdrawn from marketing on 01 October 2004. Recommended replacement is the #0621)</li> <li>▶ #0603 - Direct Attach - #2744 PCI 100 Mbps Token-Ring IOA (withdrawn from marketing on 01 June 2006)</li> <li>▶ #0604 - Direct Attach - #2763 PCI RAID Disk Unit Controller</li> <li>▶ #0605 - Direct Attach - #4748 PCI RAID Disk Unit Controller (withdrawn from marketing for new orders only)</li> <li>▶ #0606 - Direct Attach - #4778 PCI RAID Disk Unit Controller (withdrawn from marketing 19 November 2004. Recommended replacement is the #0618)</li> <li>▶ #0607 - Direct Attach - #4838 PCI 100/10 Mbps Ethernet IOA</li> <li>▶ #0608 - Direct Attach - #4745 PCI WAN IOA (withdrawn from marketing on 01 June 2006)</li> <li>▶ #0609 - Direct Attach - #2772 PCI Dual WAN/Modem IOA (withdrawn from marketing on 01 June 2006)</li> <li>▶ #0610 - Direct Attach - #2773 PCI Dual WAN/ModemIOA</li> <li>▶ #0611 - Direct Attach - #2765 PCI Fibre Channel Tape Controller (withdrawn from marketing for new orders only on 01 April 2005)</li> <li>▶ #0612 - Direct Attach - #2766 PCI Fibre Channel Disk Controller (withdrawn from marketing for new orders only on 01 April 2005)</li> <li>▶ #0613 - Direct Attach - #2742 PCI 2-Line WAN IOA</li> <li>▶ #0614 - Direct Attach - #2793 PCI 2-Line WAN w/Modem</li> <li>▶ #0615 - Direct Attach - #2794 PCI 2-Line WAN w/Modem</li> <li>▶ #0616 - Direct Attach - #2805 PCI Quad Modem IOA</li> <li>▶ #0617 - Direct Attach - #2806 PCI Quad Modem (CIM)</li> <li>▶ #0618 - Direct Attach - #2757 PCI-X Ultra RAID Disk Controller (Withdrawn from marketing on 01 June 2006. Recommended replacement is the #0627)</li> <li>▶ #0619 - Direct Attach - #2782 PCI-X RAID Disk Unit Controller</li> <li>▶ #0620 - Direct Attach - #5700 PCI 1 Gbps Ethernet IOA</li> <li>▶ #0621 - Direct Attach - #5701 PCI 1 Gbps Ethernet UTP IOA</li> <li>▶ #0623 - Direct Attach - #2849 PCI 100/10 Mbps Ethernet IOA (Withdrawn from marketing on 01 June 2006. Recommended replacement is the #0620)</li> <li>▶ #0624 - Direct Attach - #5702 PCI-X Ultra Tape Controller (Withdrawn from marketing on 1 June 2006. Recommended replacement is the #0645)</li> <li>▶ #0625 - Direct Attach - #5704 PCI-X Fibre Channel Tape Controller</li> <li>▶ #0626 - Direct Attach - #2787 PCI-X Fibre Channel Disk Controller</li> <li>▶ #0627 - Direct Attach - #2780 PCI-X Ultra4 RAID Disk Controller</li> <li>▶ #0628 - Direct Attach - #5703 PCI-X RAID Disk Unit Controller</li> <li>▶ #0632 - PCI USB 2.0 Adapter</li> <li>▶ #0633 - Graphics Adapter</li> <li>▶ #0634 - 128-port Asynchronous Adapter</li> <li>▶ #0635 - SDLC/X.25 - 2-port Adapter</li> <li>▶ #0643 - Direct Attach - #5706 PCI-X Gbps Ethernet-TX IOA</li> <li>▶ #0644 - Direct Attach - #5707 PCI-X 1 Gbps Ethernet-SX IOA</li> <li>▶ #0645 - Direct Attach - #5712 PCI-X Tape/DASD Controller</li> <li>▶ #0646 Direct Attach - #5716 2 Gb Fibre Channel PCI-X Adapter</li> </ul>
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#0142 (cont.)	<p><b>#0142 Linux Partition Specify</b> See the descriptions of the individual feature to understand the capabilities and PCI slot limitations of the features attached directly to Linux partitions.</p> <p>Linux direct attach features do not use or require PCI IOPs. They are only supported in a secondary LPAR partition and require OS/400 V5R1 or later running in the primary partition.</p> <p>Corequisite: #0140 Logical Partition Specify. Maximum: Up to one less than the total number of partitions allowed on system/processor.</p> <p>Linux partitions are supported with SUSE Linux Enterprise Server 9 for POWER™ or Red Hat Enterprise Linux AS for POWER Version 3. AIX partitions are supported with AIX 5L™ for POWER V5.2.</p> <p>Minimum operating system level: OS/400 V5R1 Supported on Models 820, 830, 840</p>
#0205	<p><b>#0205 RISC-to-RISC Data Migration</b> Specify code is used when a client orders a new (RISC) iSeries server to replace an existing AS/400e RISC-based system.</p> <p>The #0205 is ordered on the initial order of a Model 820, 830, 840. Manufacturing loads only the System Licensed Internal Code (SLIC) up through QSYS of OS/400 when the #0205 is ordered. Because of this limited loading of OS/400 by manufacturing, #5000 Software Preload Required is not allowed with the #0205. The #0205 RISC-to-RISC Data Migration and #5000 Software Preload Required are mutually exclusive.</p>
#0272	<p><b>#0272 Renovated by IBM</b> The #0272 Renovated by IBM feature is a specify code used to indicate that the system is to be built from new or refurbished parts. Supported on Models 820, 830, 840</p>
#0299	<p><b>#0299 MES Conversion Analysis for #5580/5581 MES</b> The #0299 provides additional ordering/scheduling steps for Customers adding Auxiliary Write Cache IOA to existing large cache disk controllers (converting #2757, #2780, to #5580, #5581). The marketing configurator adds no-charge #0299 feature to order to indicate a conversion. Automated tool analyzes current MRPD configuration to determine if simple MES or potentially more complex MES. The order is scheduled if simple MES or upon confirmation the sales team has done planning for complex MES.</p> <p>Minimum operating system level: OS/400 V5R2 with CUM C5123520 and prerequisites; MF 35176, MF35006, MF34997, M34993, MF34888, Supported on Models 820, 830, 840.</p>
#0382	<p><b>#0382 Remote Control Panel Cable</b> The #0382 ships a cable to enable remote control on an Model 820, 830, or 840. This cable attaches to a PC parallel port.</p> <p>An available parallel port (LPT) is needed on the PC instead of a COM port. The parallel port must be configured to use Enhanced Parallel Port 1.9 (EPP) support, which might require a change in the PC's Basic Input/Output Services (BIOS). Check with your PC manufacturer for any assistance.</p> <p>The Remote Control Panel is installed and used from PCs running the Windows NT 4.0 or Windows 2000 Professional PC operating system. Some PCs might not support this function due to BIOS or hardware incompatibilities.</p> <p>Supported on Models 820, 830 and 840 The #0382 is a Customer Install Feature (CIF). The #0382 Remote Control Panel Cable was withdrawn from marketing on 12 February 2002.</p>
#0383	<p><b>#0383 Remote Control Panel Cable</b> The #0383 Remote Control Panel Cable provides a remote control panel parallel port cable. An available parallel port (LPT) is needed on the PC instead of a communications port. This port must be configured to use Enhanced Parallel Port 1.9 (EPP) support, which might require a change in the PC's BIOS. It is only supported on PCs running Windows NT 4.0 or Windows 2000 Professional, and V5R2 iSeries Access for Windows running on the Operations Console PC. iSeries Access clients at OS/400 V5R1 can receive this by ordering the refresh of iSeries Access Family #2645. OS/400 V5R1 clients without an iSeries Access license need to purchase one.</p> <p>Supported on Models 820, 830, and 840 Minimum operating system level: OS/400 V5R1 The #0383 is a Customer Install Feature. The #0383 was withdrawn from marketing on 01 June 2006.</p>

#0550	<p><b>#0550 iSeries Rack - 830 Rack</b></p> <p>The #0550 iSeries Rack provides a 1.8 m rack for housing the Model 830 system unit. The #5101 30 Disk Unit Expansion is included in the system unit (no #5101 is required on the order). 10 EIA units of space remains. This space is filled with one 5-EIA unit filler panel, one 3-EIA unit filler panel and two 1-EIA unit filler panels. The IBM marketing configurator does not manage space in the #0550.</p> <p>One to two PDUs can be ordered with the #0550. The PDUs can be on initial orders, model upgrades or on MES orders. Each PDU has six power sockets that can be used to provide power for rack mounted devices installed in the #0550 iSeries Rack using #1422 PDU Line Cords.</p> <p>The following PDUs are available:</p> <ul style="list-style-type: none"> <li>▶ #5160 Power Distribution Unit 1 Phase NEMA (withdrawn from marketing on 12 April 2005. #7188 Power Distribution Unit Side Mount is the recommended replacement.)</li> </ul> <p>The following line cords are supported on the #5160:</p> <ul style="list-style-type: none"> <li>– #1424 - 200V 6-ft Locking Line Cord</li> <li>– #1425 - 200V 6-ft Water Tight Line Cord</li> <li>– #1426 - 200V 14-ft Locking Line Cord</li> <li>– #1427 - 200V 14-ft Water Tight Line Cord</li> <li>– #1446 - 4.3 m 200V/30A Power Cord Korea</li> <li>– #1447 - 4.3 m 200V/30A Power Cord AU</li> <li>– #1448 - 4.3 m 200V/30A Power Cord NZ</li> </ul> <ul style="list-style-type: none"> <li>▶ #5161 Power Distribution Unit 1 Phase IEC (withdrawn from marketing on 12 April 2005. #7188 Power Distribution Unit Side Mount is the recommended replacement.)</li> </ul> <p>The following line cords are available on the #5161:</p> <ul style="list-style-type: none"> <li>– #1449 - 4.3 m 200V/32A Power Cord EU 1-PH</li> </ul> <ul style="list-style-type: none"> <li>▶ #5162 Power Distribution Unit 2 of 3 Phase</li> </ul> <p>The following line cords are available on the #5162:</p> <ul style="list-style-type: none"> <li>– #1450 - 4.3 m 200V/16A Power Cord EU 2-PH</li> </ul> <p>The Model 830 system unit cannot connect to a PDU and, therefore, requires a Model 830 line cord. Supported on Model 830 The #0550 was withdrawn from marketing on 21 November 2003.</p>
#0551	<p><b>#0551 iSeries Rack</b></p> <p>The #0551 iSeries Rack provides an empty 1.8 m rack which contains 36 EIA units of space. The following features specify the means of populating the #0551:</p> <ul style="list-style-type: none"> <li>▶ #0121 Lower Unit in Rack Specify</li> <li>▶ #0122 Upper Unit in Rack Specify</li> <li>▶ #0123 - #5074 Lower Unit in Rack</li> <li>▶ #0125 - #9079 Lower Unit in Rack</li> <li>▶ #0127 - 270 Field Install in Rack</li> <li>▶ #0133 Plant Install in Rack</li> <li>▶ #0134 Field Install in Rack (HD)</li> <li>▶ #0137 Field Install in Rack</li> <li>▶ #0138 Field Install in Rack</li> <li>▶ #0578 PCI Expansion Unit in Rack</li> <li>▶ #0588 PCI-X Expansion Unit in Rack</li> <li>▶ #0595 PCI-X Expansion Unit in Rack</li> </ul> <p>Optional features for the #0551 rack are:</p> <ul style="list-style-type: none"> <li>▶ #6068 Optional Front Door (black/flat)</li> <li>▶ #6580 Optional Rack Security Kit</li> <li>▶ #7840 Side-by-Side for 1.8 m Racks</li> <li>▶ #7841 Ruggedize Rack Kit</li> </ul>

#0551 (cont.)	<p><b>#0551 iSeries Rack</b></p> <p>The IBM marketing configurator does not manage rack space in the #0551 iSeries Rack. Use the following list to determine the number of EIA units required in the #0551 for each iSeries system unit or expansion tower:</p> <ul style="list-style-type: none"> <li>▶ Model 270 System Unit - 16 EIA units (includes 2 EIA for the #0133 and #0137)</li> <li>▶ #0595 PCI-X Expansion Unit in Rack - 5 EIA units</li> <li>▶ #0578 PCI Expansion Unit in Rack - 8 EIA units</li> <li>▶ #0588 PCI-X Expansion Unit in Rack - 8 EIA units</li> <li>▶ #5074 PCI Expansion Tower - 18 EIA units</li> <li>▶ #9079 Base I/O Tower - 18 EIA units</li> </ul> <p>One to four PDUs can be ordered with the #0551. The PDUs can be on initial orders, model upgrades, or on MES orders. Each PDU has six power sockets that can be used to provide power for devices rack mounted in the #0551 iSeries Rack using the #1422 PDU Line Cord.</p> <p>The following PDUs are available:</p> <ul style="list-style-type: none"> <li>▶ #5160 Power Distribution Unit 1 Phase NEMA <ul style="list-style-type: none"> <li>The following line cords are supported on the #5160 for connection to utility power: <ul style="list-style-type: none"> <li>– #1424 - 200V 6-ft Locking Line Cord</li> <li>– #1425 - 200V 6-ft Watertight Line Cord</li> <li>– #1426 - 200V 14-ft Locking Line Cord</li> <li>– #1427 - 200V 14-ft Watertight Line Cord</li> <li>– #1446 - 4.3 m 200V/30A Power Cord Korea</li> <li>– #1447 - 4.3 m 200V/30A Power Cord AU</li> <li>– #1448 - 4.3 m 200V/30A Power Cord NZ</li> </ul> </li> <li>The #6654 14- foot1PH/24-30 Power cord is the recommended replacement for the #1426</li> <li>The #6655 14- foot1PH/24-30 WR Power cord is the recommended replacement for the #1427</li> </ul> </li> <li>▶ #5161 Power Distribution Unit - 1 Phase IEC <ul style="list-style-type: none"> <li>– #1477 - 4.3 m 200V/ 16A IEC309/46 Power Cord</li> <li>– #1449 - 4.3 m 200V/ 32A Power Cord EU 1-Phase for connection to utility power.</li> </ul> </li> <li>▶ #5162 Power Distribution Unit - 2 of 3 Phase <ul style="list-style-type: none"> <li>– #1450 - 4.3 m 200V/ 16A Power Cord EU 2-Phase for connection to utility power.</li> </ul> </li> <li>▶ #5163 Power Distribution Unit - 3 Phase <ul style="list-style-type: none"> <li>– #1477 - 4.3 m 200V/ 16A IEC309/46 Power Cord</li> </ul> </li> <li>▶ #7188 Power Distribution Unit 1 Phase NEMA <ul style="list-style-type: none"> <li>The following line cords are supported on the #7188 to connect to utility power: <ul style="list-style-type: none"> <li>– #6489 - 14-ft 3PH/24A Power Cord</li> <li>– #6491 - 14-ft 1PH/63A Power Cord</li> <li>– #6492 - 14-ft 1PH/48-60A Power Cord</li> <li>– #6653 - 14-ft 3PH/16A Power Cord</li> <li>– #6654 - 14-ft 1PH/24-30A Power Cord</li> <li>– #6655 - 14-ft 1PH/24-30A Watertight Power Cord</li> <li>– #6656 - 14-ft 1PH/24A Power Cord</li> <li>– #6657 - 14-ft 3PH/24A Power Cord</li> <li>– #6658 - 14-ft 3PH/16A Power Cord Korea</li> </ul> </li> </ul> </li> </ul> <p>Prerequisite: None Supported on Models 820, 830, 840. The #5160 Power Distribution Unit, #5161 Power Distribution Unit, and #5163 Power Distribution Unit were withdrawn from marketing on 12 April 2005. The #7188 Power Distribution Unit is the recommended replacement.</p>
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#0574	<p><b>#0574 - #5074 Equivalent</b>  The #0574 PCI Expansion Unit in Rack is the equivalent of a #5074 PCI Expansion Unit, but the #0574 is installed in an #5079 1.8 M I/O Tower.</p> <p>For each #5079 ordered, a default quantity of two #0574 specify codes appear on the order. One #0574 can be removed from the #5079 order. #0574s can be RPQ added/removed to/from system inventory records, but a minimum of one #0574 must exist for each #5079 on the inventory records. If an existing #5079 is to be shared between two systems, one #0574 must be RPQ removed from that system the #5079 was ordered against and one #0574 must be RPQ added to the other sharing system.</p> <p>The #0574 indicates a #5074 installed in a #5079 rack. A #5079 is required.  The #5160 Power Distribution Unit, #5161 Power Distribution Unit, and #5163 Power Distribution Unit were withdrawn from marketing on 12 April 2005. The #7188 Power Distribution Unit is the recommended replacement.</p>
#0578	<p><b>#0578 PCI Expansion Unit in Rack</b>  The #0578 PCI Expansion Unit in Rack is the equivalent of a #5078 PCI Expansion Unit, but the #0578 is mounted in an #0550/#0551/#0553/#0554/#0555 iSeries Rack. An #0578 is eight EIA units high. Conversions between an #0578 and a #5078 are not allowed.</p> <p>Up to five #0578s are mounted in a #0551/#0553/#0554/#0555 iSeries Rack depending on the amount of existing empty space in the #0551/#0553/#0554/#0555. One #0578 can be mounted in an #0550. The #0578 can be ordered on initial, upgrade, and MES orders. The #0578 comes with two PDU-compatible power cords.</p> <p>A minimum of one PDU is required if one, two, or three #0578s are ordered to be installed in the same #0551/#0553/#0554/#0555. A minimum of two PDUs are required if four #0578s are ordered for the same #0551. One PDU is required for an #0578 in an #0550. Each PDU has six power sockets for connecting rack mounted devices with #1422 PDU Line Cords. Each #0578 comes with two integrated PDU compatible line cords. The #1422 PDU Line Cords are <i>not</i> usable with this expansion unit.</p> <p>See #0551/#0553/#0554/#0555 for a description of available PDUs.  See “#5078 PCI Expansion Unit” on page 235 for a description of #0578 and #5078 common features.</p> <p>Supported on Models 820, 830, 840  The #0578 was withdrawn from marketing on 01 October 2004. The recommended replacement is #0588.</p>
#0588	<p><b>#0588 PCI-X Expansion Unit in Rack</b>  The #0588 PCI-X Expansion Unit in Rack is the equivalent of a #5088 PCI-X Expansion Unit, but the #0588 is mounted in an #0550/#0551/#0553/#0554/#0555 iSeries Rack. An #0588 is 8 EIA units high. Conversions between an #0588 and a #5088 are not allowed.</p> <p>The #0588 PCI-X Expansion Unit in Rack has two redundant 575W power supplies and two integrated PDU compatible line cords. The line cords can be connected to the same PDU or separate PDUs in the #0550/#0551/#0553/#0554/#0555 iSeries Rack. If the line cords are connected to separate PDUs, and these PDUs are connected to two different power sources, then the #0588 has dual-line cord capability. A minimum of one PDU is required if one, two or three #0588s are ordered to be installed in the same #0551/#0553/#0554/#0555. A minimum of two PDUs are required if four #0588s are ordered for the same #0551/#0553/#0554/#0555. One PDU is required for an #0588 in an #0550. The #1422 PDU Line Cords are not usable with the #0588. See #0551/#0553/#0554/#0555, for a description of available PDUs.</p> <p>Up to five #0588s can be mounted in a #0551/#0553/#0554/#0555 iSeries Rack (depending on the amount of existing empty space in the #0551/#0553/#0554/#0555), and one #0588 can be mounted in a #0550 iSeries Rack. The #0588 can be ordered on initial, model upgrade, or MES orders.</p> <p>A #9943/#9844 Base PCI IOP can be used in a #0588 PCI-X Expansion Unit in Rack, but cannot be ordered with or for the #0588. See “#5088 PCI-X Expansion Unit” on page 237 for a description of #0588 PCI-X Expansion Unit in Rack and #5088 PCI-X Expansion Unit common features.</p> <p>The #0588 is also supported in Linux partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3.  Supported on Models 820, 830, 840  Minimum operating system level: OS/400 V5R2  The #0588 was withdrawn from marketing on 01 June 2006.</p>

#0595	<p><b>#0595 PCI-X Expansion Unit in Rack</b></p> <p>The #0595 PCI-X Expansion Unit in Rack is a five EIA high rack-mounted version of the #5095 PCI-X Expansion Tower, which provides I/O capability for iSeries servers. The #0595 has identical functional capabilities to the #5095. A #9844 Base PCI IOP is included as base for the #0595 PCI-X Expansion Unit in Rack.</p> <p>A #9877 - Base HSL-2 Bus Adapter is shipped with new orders of a #5094 for Models 820, 830, 840.</p> <p>The #0595 PCI-X Expansion Unit in Rack has redundant power when #5138 Redundant Power and Cooling is specified. The #5138 includes a second 435W power supply. A second line cord must be ordered and installed. With the #5138 and second line cord installed, the #0595 has dual-line cord capability. If the #0595 is to be connected to a PDU, then one or two #1422 line cords must be ordered.</p> <p>Up to eight #0595s can be installed in a #0551/#0553/#0554/#0555 iSeries Rack, depending on the amount of existing empty space in the #0551/#0553/#0554/#0555. See “#5095 PCI-X Expansion Tower” on page 240 for a description of #0595 and #5095 common features.</p> <p>The #0595 is also supported in Linux and AIX partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3; and AIX 5L for POWER V5.2.</p> <p>Supported on Models 820, 830, 840. Minimum operating system level: OS/400 V5R2</p>
#0599	<p><b>#0599 Rack Filler Kit</b></p> <p>The #0599 Rack Filler Kit provides four spare filler Panels 3x 1U and 1x 3U height. They should be used if equipment is removed from racks to improve the appearance of the Rack and to ensure and maintain proper air flow.</p> <p>Supported on IBM 19” Racks including the #0551/#0553/#0554/#0555. The #0599 is a Customer Install Feature</p>
#2739	<p><b>#2739 Optical Bus Adapter</b></p> <p>The #2739 Optical Bus Adapter is used in the #5074 PCI Expansion Tower, #5079 1.8 M I/O Tower, and the #5078/#0578 PCI Expansion Unit in Rack to connect with optical HSL. The #2739 supports clustering (HSL OptiConnect).</p> <p>Supported on Models 830 and 840. Minimum operating system level: OS/400 V5R1</p>
#5033	<p><b>#5033 Migration Tower I</b></p> <p>The #5033 is a converted Model 600/S10 system tower used for migration of PCI cards, disk units, and removable media devices. See the Model 600 and S10 sections of <i>AS/400e RISC System Builder</i>, REDP-0342, for supported cards and devices. Additional features can be ordered to use vacant card or device slots in this tower.</p> <p>Select two (any combination) of the following HSL cable features for this tower:</p> <ul style="list-style-type: none"> <li>▶ #1460 - 3 m Copper HSL Cable</li> <li>▶ #1461 - 6 m Copper HSL Cable</li> <li>▶ #1462 - 15 m Copper HSL Cable</li> </ul> <p>Select one of the following SPCN cables:</p> <ul style="list-style-type: none"> <li>▶ #1463 - 2 m SPCN Cable</li> <li>▶ #1464 - 6 m SPCN Cable</li> <li>▶ #1465 - 15 m SPCN Cable</li> <li>▶ #1466 - 30 m SPCN Cable</li> </ul> <p>One JTAG-E cable (6 m) is included with the #5033. One #14xx power cord must be specified (geography dependent).</p> <p>Maximum: One #5033 on a Model 820 or 830 The #5033 is mutually exclusive with the #5034, #5035, and #5077. Supported by attachment to Models 820 and 830.</p>

#5034	<p><b>#5034 Migration Tower I</b></p> <p>The #5034 Migration Tower I is a converted Model 620/S20/720 system tower with 10 possible disk positions and any #5064/#9364 System Unit Expansion. It is used for migration of PCI and SPD cards, disk units, and removable media devices along with any attached PCI/SPD towers.</p> <p>See the Model 620 and S20 section of <i>AS/400e RISC System Builder</i>, REDP-0342, and 5.11, “AS/400e Models 720, 730, and 740 features” on page 148, for supported cards and devices. Additional features can be ordered to use vacant card or device slots in the #5034.</p> <p>Select two (any combination) of the following HSL cable features for this tower:</p> <ul style="list-style-type: none"> <li>▶ #1460 - 3 m Copper HSL Cable</li> <li>▶ #1461 - 6 m Copper HSL Cable</li> <li>▶ #1462 - 15 m Copper HSL Cable</li> </ul> <p>Select one of the following SPCN cables:</p> <ul style="list-style-type: none"> <li>▶ #1463 - 2 m SPCN Cable</li> <li>▶ #1464 - 6 m SPCN Cable</li> <li>▶ #1465 - 15 m SPCN Cable</li> <li>▶ #1466 - 30 m SPCN Cable</li> </ul> <p>One JTAG-E cable (6 m) is included with the #5034.  One #14xx power cord must be specified (geography dependent).  Maximum: One  The #5034 is mutually exclusive with #5033, #5035, and #5077.  Supported by attachment to Models 820 and 830  The #5034 was withdrawn from marketing on 21 November 2003.</p>
#5035	<p><b>#5035 Migration Tower I</b></p> <p>The #5035 Migration Tower I is a converted Model 620, S20, or 720 system tower with 15 possible disk positions and any #5064/#9364 System Unit Expansion. It is used for migration of PCI and SPD cards, disk units, and removable media devices along with any attached PCI/SPD towers.</p> <p>See the Model 620 and S20 section of <i>AS/400e RISC System Builder</i>, REDP-0342, and 5.11, “AS/400e Models 720, 730, and 740 features” on page 148, for supported cards and devices. Additional features can be ordered to use vacant card or device slots in this tower.</p> <p>Select two (any combination) of the following HSL cable features for this tower:</p> <ul style="list-style-type: none"> <li>▶ #1460 - 3 m Copper HSL Cable</li> <li>▶ #1461 - 6 m Copper HSL Cable</li> <li>▶ #1462 - 15 m Copper HSL Cable</li> </ul> <p>Select one of the following SPCN cables:</p> <ul style="list-style-type: none"> <li>▶ #1463 - 2 m SPCN Cable</li> <li>▶ #1464 - 6 m SPCN Cable</li> <li>▶ #1465 - 15 m SPCN Cable</li> <li>▶ #1466 - 30 m SPCN Cable</li> </ul> <p>One JTAG-E cable (6 m) is included with the #5035.  One #14xx power cord must be specified (geography dependent).  Maximum: One  The #5035 is mutually exclusive with #5033, #5034, and #5077.  Supported by attachment to Models 820 and 830  The #5035 was withdrawn from marketing on 21 November 2003.</p>
#5057	<p><b>#5057 Storage Expansion Unit (Ultra SCSI)</b></p> <p>The #5057 Storage Expansion Unit provides space for up to 16 disk units on the #5077 Migration Tower II. The #5057 is shipped on new order #5077s when migrating from a Model 640, S30, or 730 that does not have a #5055. When migrating from a Model 640, S30, and 730 that has a #5055, the #5055 is converted to a #5057.</p> <p>Feature conversions to #5057 remain available.</p>



#5074	<p><b>#5074 PCI Expansion Tower</b></p> <p>The #5074 PCI Expansion Tower is attached to Models 820, 830, and 840 for adding up to 45 disk units (15 are “base”, 30 additional with #5101 or #5111), up to 11 PCI IOAs and up to two removable media units. The #5074 includes #9691 or #2739/#9739 bus adapter to provide the HSL interface to the system, a #9943 Base PCI IOP, space for two removable media devices, one battery backup, and redundant or hot swap power supplies. The #5074 is capable of controlling Ultra2 Small Computer System Interface (SCSI) disk units.</p> <p>Select two (any combination) of the following HSL cables for the first tower on an HSL loop. For additional towers on an HSL loop, select one HSL cable per tower:</p> <ul style="list-style-type: none"> <li>▶ #1460 - 3 m Copper HSL Cable</li> <li>▶ #1461 - 6 m Copper HSL Cable</li> <li>▶ #1462 - 15 m Copper HSL Cable</li> <li>▶ #1470 - 6 m Optical HSL Cable</li> <li>▶ #1471 - 30 m Optical HSL Cable</li> <li>▶ #1472 - 100 m Optical HSL Cable</li> <li>▶ #1473 - 250 m Optical HSL Cable</li> <li>▶ #1474 - 6 m HSL to HSL-2 Cable</li> <li>▶ #1475 - 10 m HSL to HSL-2 Cable</li> </ul> <p>For the Model 820, if the #5074 attaches to HSL port A1 of the system unit, the HSL connection to port A1 cannot exceed 6 m. When a #5074 is present, one #1460 or #1461 must be selected.</p> <p>Select one of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> <li>▶ #0369 100 m Optical SPCN Cable</li> <li>▶ #1463 - 2 m SPCN Cable</li> <li>▶ #1464 - 6 m SPCN Cable</li> <li>▶ #1465 - 15 m SPCN Cable</li> <li>▶ #1466 - 30 m SPCN Cable</li> <li>▶ #1468 - 250 m Optical SPCN Cable</li> </ul> <p>One #14xx power cord must be specified (geography dependent). Maximum: Five on the Model 820, 13 on Model 830, and 23 on Model 840</p> <p>The #5074 is also supported in Linux partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3. Supported on the Model 820, 830, 840 The #5074 is a Customer Install Feature. The #5074 was withdrawn from marketing on 01 October 2005. The #5094 PCI-X Expansion Tower is the recommended replacement.</p>
#5075	<p><b>#5075 PCI Expansion Tower</b></p> <p>The #5075 PCI Expansion Tower is attached to a Model 820 for adding up to six disk units and up to seven PCI IOAs. The #5075 includes a 32 MB PCI IOP (CCIN 284B) embedded on its backplane. In a Model 820, the seven PCI IOAs are supported (driven) by the embedded 32 MB PCI IOP and by #2843 PCI IOPs, #2790 PCI Integrated Netfinity Server, or #2791/#2792/#2799 PCI Integrated xSeries Servers.</p> <p>The #5075 is capable of controlling Ultra2 SCSI disk units. A #5156 Redundant Power and Cooling feature can be added to provide a redundant power supply and a cooling fan.</p> <p>Select two (any combination) of the following HSL cables for the first tower on the Model 820. For additional towers, select one HSL cable per tower:</p> <ul style="list-style-type: none"> <li>▶ #1460 - 3 m Copper HSL Cable</li> <li>▶ #1461 - 6 m Copper HSL Cable</li> <li>▶ #1462 - 15 m Copper HSL Cable</li> </ul> <p>The #1462 is not allowed to attach the #5075 PCI Expansion Tower directly to system port A1 on the Model 820. When a #5075 is present, one #1460 or #1461 must be selected. For the Model 820, if the #5075 attaches to HSL ports A0 or A1, the HSL cable cannot exceed 6 m.</p>

<p>#5075 (cont.)</p>	<p><b>#5075 PCI Expansion Tower</b></p> <ul style="list-style-type: none"> <li>▶ #1474 - 6 m HSL to HSL-2 Cable</li> <li>▶ #1475 - 10 m HSL to HSL-2 Cable</li> </ul> <p>Select one of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> <li>▶ #1463 - 2 m SPCN Cable</li> <li>▶ #1464 - 6 m SPCN Cable</li> <li>▶ #1465 - 15 m SPCN Cable</li> <li>▶ #1466 - 30 m SPCN Cable</li> </ul> <p>One #14xx power cord must be specified (geography dependent).</p> <p>Maximum: Five Supported on Model 820</p> <p>The #5075 is a Customer Install Feature. The #5075 was withdrawn from marketing on 21 November 2003.</p>
<p>#5077</p>	<p><b>#5077 Migration Tower II</b></p> <p>The #5077 Migration Tower II is a feature I/O tower that supports SPD I/O cards and attaches SPD Expansion Towers and #5065/#5066 PCI Expansion Tower.</p> <p>When upgrading from a Model 640, S30, or 730 to a Model 830 or 840, the #5077 is a manufactured unit, and is shipped without a “base” CD-ROM and without a base optical link card (CCIN 2696). The CD-ROM and optical link cards are migrated. If upgrading from a Model 640, S30 or 730 without a #5055 Storage Expansion Unit installed, by default, the #5077 is shipped with a #5057 Storage Expansion Unit (for 16 disk units). The #5057 can be removed from the order. If upgrading from a Model 640, S30, or 730 with #5055 installed, a #5055 to #5057 conversion is performed.</p> <p>When upgrading from a Model 650, S40, or 740, the #9251 Base I/O Tower on these models is converted to the #5077. When upgrading from a Model 820 or 830 with #503X Migration Tower I, which has SPD cards or SPD towers attached, the #5077 is a manufactured unit and is shipped with a “base” CD-ROM and with a base optical link card (CCIN 2696). The #5077 can also be ordered to support clustering on the Models 830, 840. In this case, the #5077 is shipped as a manufactured unit shipped with a “base” CD-ROM and with a base optical link card (CCIN 2696).</p> <p>See the Model 640, 650, S30, and S40 sections of <i>AS/400e RISC System Builder</i>, REDP-0342, and 5.11, “AS/400e Models 720, 730, and 740 features” on page 148, for supported cards and devices.</p> <p>One or two feature #2695 Optical Bus Adapters can be ordered for the #5077. Select one of the following HSL cables if the #5077 has just the base optical link card installed. Select one or two (any combination) of the following HSL cables if the #5077 has one or two #2695 Optical Bus Adapters installed:</p> <ul style="list-style-type: none"> <li>▶ #1460 - 3 m Copper HSL Cable</li> <li>▶ #1461 - 6 m Copper HSL Cable</li> <li>▶ #1462 - 15 m Copper HSL Cable</li> </ul> <p>Select one of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> <li>▶ #1463 - 2 m SPCN Cable</li> <li>▶ #1464 - 6 m SPCN Cable</li> <li>▶ #1465 - 15 m SPCN Cable</li> <li>▶ #1466 - 30 m SPCN Cable</li> </ul> <p>One JTAG-E cable (6 m) is included with the #5077. One #14xx power cord must be specified (geography dependent). Maximum: One</p> <p>The #5077 is mutually exclusive with #5033, #5034, and #5035. Supported on Models 830 and 840 The #5077 was withdrawn from marketing on 01 January 2004.</p>

#5078	<p><b>#5078 PCI Expansion Unit</b></p> <p>The #5078 PCI Expansion Unit is a “top hat” that installs on top of the #9079 Base I/O Tower and on top of the #5074 PCI Expansion Tower. The #5078 has 14 PCI slots, which allows up to 11 PCI IOAs to be added. The PCI IOAs are supported (driven) by #2843 PCI IOPs, #2790 PCI Integrated Netfinity Server, and #2791/#2792/#2799 PCI Integrated xSeries Servers.</p> <p>Disk units and removable media devices are not supported and cannot be installed in the #5078 PCI Expansion Unit. The #5078 includes a bus adapter to provide the HSL interface to the system. The IBM marketing configurator adds to the order and defaults to copper HSL:</p> <ul style="list-style-type: none"> <li>▶ #9691 Base Bus Adapter (copper HSL)</li> <li>▶ #9739 Base Optical Bus Adapter (HSL)</li> </ul> <p>The two electrical cables of the #5078 connect to the power source in the #5074/#9079. The #5078 can be ordered with a #5074/#9079 on initial orders and the #5074/#9079 ships with the #5078 installed. The #5078 can also be ordered as an MES install on an existing #5074/#9079.</p> <p>The #5078 can be on the same HSL loop as the #5074/#9079, or it can be on a separate HSL loop from the #5074/#9079. If the #5078 and the #5074/#9079 are on the same HSL loop, then a #1460 - 3 m Copper HSL Cable should be included in the order (for both initial orders and for MES orders) to connect the #5078 and the #5074/#9079.</p> <p>If the #5074/#9079 and the #5078 are on separate HSL loops, then one or two of the following HSL cables must be on the order. Select two HSL cables if the #5078 is the first or only expansion tower/unit on an HSL loop. Select one HSL cable if the #5078 coexists with other expansion towers or units on an HSL loop:</p> <ul style="list-style-type: none"> <li>▶ #1460 - 3 m Copper HSL Cable</li> <li>▶ #1461 - 6 m Copper HSL Cable</li> <li>▶ #1462 - 15 m Copper HSL Cable</li> <li>▶ #1470 - 6 m Optical HSL Cable</li> <li>▶ #1471 - 30 m Optical HSL Cable</li> <li>▶ #1472 - 100 m Optical HSL Cable</li> <li>▶ #1473 - 250 m Optical HSL Cable</li> <li>▶ #1474 - 6 m HSL to HSL-2 Cable</li> <li>▶ #1475 - 10 m HSL to HSL-2 Cable</li> </ul> <p>Select one of the following SPCN cables per expansion unit:</p> <ul style="list-style-type: none"> <li>▶ #0369 100 m Optical SPCN Cable</li> <li>▶ #1463 - 2 m SPCN Cable</li> <li>▶ #1464 - 6 m SPCN Cable</li> <li>▶ #1465 - 15 m SPCN Cable</li> <li>▶ #1466 - 30 m SPCN Cable</li> <li>▶ #1468 - 250 m Optical SPCN Cable</li> </ul> <p>The #1462 cannot be used to connect to HSL port A1 on the Model 820.  Prerequisite: #5074 PCI Expansion Tower (1.8 m) or #9079 Base I/O Tower  The #5078 is supported for migration on a #5094 PCI-X Expansion Tower.  Supported on Models 820, 830, 840  Not supported on the #5079, #8079  Maximum: One per #5074 PCI Expansion Tower, one per #9079 Base I/O Tower  The #5078 was withdrawn from marketing on 01 October 2004. The recommended replacement is a #5088 PCI-X Expansion Unit.</p>
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#5079	<p><b>#5079 1.8 M I/O Tower (PCI I/O Expansion Tower)</b></p> <p>The #5079 1.8 M I/O Tower is attached to Models 820, 830, and 840 for adding up to 90 disk units, up to 22 PCI IOAs, and up to four removable media units. The #5079 includes two (in any combination) #9691 or #9739 optical HSL bus adapters to provide the HSL interface to the system. The #5079 is essentially two #5074 PCI Expansion Towers, stacked in a single 1.8 m tower. Each ordered #5079 counts as two #5074s toward the system model maximums. For each #5079 ordered, a quantity of two #5074 equivalent specify codes are added to the order. The #5079 is capable of controlling Ultra2 SCSI disk units.</p> <p>Select two, three, or four (any combination) of the following HSL cables for each tower:</p> <ul style="list-style-type: none"> <li>▶ #1460 - 3 m Copper HSL Cable</li> <li>▶ #1461 - 6 m Copper HSL Cable</li> <li>▶ #1462 - 15 m Copper HSL Cable</li> <li>▶ #1470 - 6 m Optical HSL Cable</li> <li>▶ #1471 - 30 m Optical HSL Cable</li> <li>▶ #1472 - 100 m Optical HSL Cable</li> <li>▶ #1473 - 250 m Optical HSL Cable</li> <li>▶ #1474 - 6 m HSL to HSL-2 Cable</li> <li>▶ #1475 - 10 m HSL to HSL-2 Cable</li> </ul> <p>When a #5079 is present, one #1460 or #1461 must be selected.</p> <p>Select two of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> <li>▶ #0369 100 m Optical SPCN Cable</li> <li>▶ #1463 - 2 m SPCN Cable</li> <li>▶ #1464 - 6 m SPCN Cable</li> <li>▶ #1465 - 15 m SPCN Cable</li> <li>▶ #1466 - 30 m SPCN Cable</li> <li>▶ #1468 - 250 m Optical SPCN Cable</li> </ul> <p>Two #14xx power cords must be specified (geography dependent). Maximum: Two on the Model 820, six on the Model 830, 11 on the Model 840.</p> <p>The #5079 is also supported in Linux partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3.</p> <p>The #5079 is a Customer Install Feature. The #5079 was withdrawn from marketing on 01 October 2005. The #5294 1.8m I/O Tower is the recommended replacement.</p>
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#5088	<p><b>#5088 PCI-X Expansion Unit</b></p> <p>The #5088 PCI-X Expansion Unit is an 8 EIA high “top hat”, which can be installed on top of a #5074/#5094 PCI-X Expansion Tower or on top of a #9079 Base PCI I/O Enclosure. The #5088 has 14 PCI-X slots for installation of PCI IOPs and IOAs. Disk units and removable media are not supported by the #5088 and cannot be installed.</p> <p>The #5088 PCI-X Expansion Unit has two redundant 575W power supplies and two power connector cables that attach internally to the AC box of the tower on which it resides. The #5088 has dual-line cord capability, but to achieve it, the tower on which it resides must have dual-line cord capability.</p> <p>The #5088 PCI-X Expansion Unit includes a bus adapter to provide the HSL interface to the system. The IBM marketing configurator adds one of the following to the order:</p> <ul style="list-style-type: none"> <li>▶ #9876 Base Optical Bus Adapter</li> <li>▶ #9877 - Base HSL-2 Bus Adapter</li> <li>▶ #9886 Base Optical Bus Adapter Specify when attaching to optical HSL-2 ports.</li> <li>▶ #9887 Base HSL-2 Bus Adapter (default) Specify when attaching to copper HSL ports.</li> </ul> <p>For Model 820, if the #5088 attaches to HSL ports A0 or A1, the HSL cable cannot exceed 6 m. Select an appropriate number of the following HSL/HSL-2 cables:</p> <ul style="list-style-type: none"> <li>▶ #1307 -1.75 m Copper HSL-2 Cable</li> <li>▶ #1470 - 6 m Optical HSL Cable</li> <li>▶ #1471 - 30 m Optical HSL Cable</li> <li>▶ #1472 - 100 m Optical HSL Cable</li> <li>▶ #1473 - 250 m Optical HSL Cable</li> <li>▶ #1474 - 6 m HSL to HSL-2 Cable</li> <li>▶ #1475 - 10 m HSL to HSL-2 Cable</li> <li>▶ #1482 - 3.5 m HSL-2 Cable</li> <li>▶ #1483 - 10 m HSL-2 Cable</li> <li>▶ #1485 - 15 m HSL-2 Cable</li> </ul> <p>Select one of the following SPCN cables per expansion unit:</p> <ul style="list-style-type: none"> <li>▶ #0369 100 m Optical SPCN Cable</li> <li>▶ #1463 - 2 m SPCN Cable</li> <li>▶ #1464 - 6 m SPCN Cable</li> <li>▶ #1465 - 15 m SPCN Cable</li> <li>▶ #1466 - 30 m SPCN Cable</li> <li>▶ #1468 - 250 m Optical SPCN Cable</li> <li>▶ #6001 Power Control Cable - 2 M</li> <li>▶ #6006 Power Control Cable - 3 M</li> <li>▶ #6007 Power Control Cable - 15 M</li> <li>▶ #6008 Power Control Cable - 6 M</li> <li>▶ #6029 Power Control Cable - 30 M</li> </ul> <p>The #5088 PCI-X Expansion Unit can be ordered with a #5074 PCI Expansion Tower, #5094 PCI-X Expansion Tower, #9079 Base I/O Tower on initial orders. The #5074, #5094, and #9079 ship with the #5088 installed. The #5088 can also be ordered as an MES install on an existing #5074, #5094, and #9079.</p> <p>A #5088 cannot be installed on a #5294 1.8 m I/O Tower. Maximum: One per #5074, #5094, #9079</p> <p>The #5088 is also supported in Linux partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3. Minimum operating system level: OS/400 V5R2 The #5088 was withdrawn from marketing on 01 June 2006.</p>
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#5094	<p><b>#5094 PCI-X Expansion Tower</b></p> <p>The #5094 PCI-X Expansion Tower is a PCI expansion tower which provides I/O capability for iSeries servers. The #5094 has 15 disk unit slots, with an additional 30 slots available with the #5108 30-Disk Expansion Feature. The #5094 has two removable media slots and 14 PCI-X IOP/IOA card slots.</p> <p>A #9844 Base PCI IOP is included as base and needs to be listed on an initial order for a #5094 PCI-X Expansion Tower.</p> <p>The #5094 PCI-X Expansion Tower includes a bus adapter to provide the HSL interface to the system. The IBM marketing configurator adds one of the following to the order:</p> <ul style="list-style-type: none"> <li>▶ #6417 HSL-2/RIO-G Bus Adapter</li> <li>▶ #9876 Base Optical Bus Adapter</li> <li>▶ #9877 - Base HSL-2 Bus Adapter</li> </ul> <p>A #9877 - Base HSL-2 Bus Adapter is shipped with new orders of a #5094 for Models 820, 830, 840.</p> <ul style="list-style-type: none"> <li>▶ #9886 Base Optical Bus Adapter Specify when attaching to optical HSL-2 ports.</li> <li>▶ #9887 Base HSL-2 Bus Adapter (default) Specify when attaching to copper HSL ports.</li> </ul> <p>For Model 820, if the #5094 attaches to HSL ports A0 or A1, the HSL cannot exceed 6 m.</p> <p>Select an appropriate number of the following HSL/HSL-2 cables:</p> <ul style="list-style-type: none"> <li>▶ #1307 -1.75 m Copper HSL-2 Cable</li> <li>▶ #1470 - 6 m Optical HSL Cable</li> <li>▶ #1471 - 30 m Optical HSL Cable</li> <li>▶ #1472 - 100 m Optical HSL Cable</li> <li>▶ #1473 - 250 m Optical HSL Cable</li> <li>▶ #1474 - 6 m HSL to HSL-2 Cable</li> <li>▶ #1475 - 10 m HSL to HSL-2 Cable</li> <li>▶ #1482 - 3.5 m HSL-2 Cable</li> <li>▶ #1483 - 10 m HSL-2 Cable</li> <li>▶ #1485 - 15 m HSL-2 Cable</li> </ul> <p>Select one of the following SPCN cables per expansion unit:</p> <ul style="list-style-type: none"> <li>▶ #0369 100 m Optical SPCN Cable</li> <li>▶ #1463 - 2 m SPCN Cable</li> <li>▶ #1464 - 6 m SPCN Cable</li> <li>▶ #1465 - 15 m SPCN Cable</li> <li>▶ #1466 - 30 m SPCN Cable</li> <li>▶ #1468 - 250 m Optical SPCN Cable</li> <li>▶ #6001 Power Control Cable - 2 M</li> <li>▶ #6006 Power Control Cable - 3 M</li> <li>▶ #6007 Power Control Cable - 15 M</li> <li>▶ #6008 Power Control Cable - 6 M</li> <li>▶ #6029 Power Control Cable - 30 M</li> </ul> <p>Order #5115 Dual Line Cords - Tower on each #5094 PCI-X Expansion Tower required to have dual-line cord support. When a #5094 is ordered without #5115, select one line cord from the following list. When a #5094 is ordered with the #5115, select two line cords from the following list:</p> <ul style="list-style-type: none"> <li>▶ #1408 - 4.3 m 200V/16A Power Cord Italy</li> <li>▶ #1409 - 4.3 m 200V/16A Power Cord AU/NZ</li> <li>▶ #1418 - 4.3 m 200V/16A Power Cord S Africa</li> <li>▶ #1419 - 4.3 m 200V/16A Power Cord Israel</li> <li>▶ #1420 - 4.3 m 200V/16A Power Cord EU/Asia</li> <li>▶ #1421 - 4.3 m 200V/16A Power Cord CH/DK</li> <li>▶ #1451 - 200V 6-ft Line Cord</li> <li>▶ #1452 - 200V 14-ft Line Cord</li> <li>▶ #1453 - 200V 6-ft Locking Line Cord</li> <li>▶ #1454 - 200V 12A 14-ft TL Line Cord (U.S. default)</li> <li>▶ #1455 - 200V 6-ft Watertight Line Cord</li> <li>▶ #1456 - 200V 14-ft Watertight Line Cord</li> <li>▶ #1476 - 4.3 m 200V/12A Power Cord UK</li> </ul>
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<p>#5094 (cont.)</p>	<p><b>#5094 PCI-X Expansion Tower</b>            PCI IOAs are supported (driven) by the #9844/#9943 Base PCI IOP, #2843/#2844/#2847 PCI IOPs, #2790 PCI Integrated Netfinity Server, #2791/#2792/#2799 PCI Integrated xSeries Servers or #4710/#9710 Integrated xSeries Servers.</p> <p>The 45 disk unit positions are in groups of 15. Each group of 15 disk units is further divided into three groups of five disk units. Each group of five disk units is supported on a separate SCSI (LVD-SCSI) bus from a #2757, #2780, #4748, or #4778 PCI RAID Disk Unit Controller. Each group of 15 disk units requires one #2757, #4748, or #4778 PCI RAID Disk Unit Controller.</p> <p>The mounting for the first 15 disk units is included in the #5094 (part of the base tower). The mounting for the next 30 disk units is optional by ordering feature code #5108 30-Disk Expansion Feature.</p> <p>The #5094 expansion tower offers additional LPAR configuration flexibility. Instead of the previous maximum number of three disk controllers supported in a #5094, now up to nine total disk controllers are supported. These can be either OS/400 controlled (maximum of six OS/400 partitions) or Linux controlled. The #5294 is enhanced and now supports a maximum of 18 disk controllers. The #5703/#0628 disk controller can be used to go beyond the maximum of three, already supported #2757, #2780, #4748, and #4778 disk controllers.</p> <p>Each tower must have a minimum of one #2748, #2757, #2780, #4748, or #4778 for each group of 15 disk units in the tower. Only the #5703/#0628 can be ordered as an extra controller (up to two #5703/#0628s per group of 15 disk units in the same tower) if #0143 Disk Controller Placement Exception is also ordered. Disk controllers #2748, #2757, #2780, #4748, or #4778 cannot be ordered as extra controllers if #0143 is also ordered. A maximum of six #5703/#0628s per #5094 tower are supported</p> <p>The number of disk units per #2757 and #2780 varies by configuration.</p> <p>The #5094 PCI-X Expansion Tower supports up to two removable media devices (internal tape or internal CD-ROM or DVD). These removable media devices are supported by the same #2757, #2780, #4748, or #4778 PCI RAID Disk Unit Controller which supports the 15 base disk units.</p> <p>The #5094 is also supported in Linux and AIX partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3, and AIX 5L for POWER V5.2.            Minimum operating system level: OS/400 V5R2</p>
<p>#5095</p>	<p><b>#5095 PCI-X Expansion Tower</b>            The #5095 PCI-X Expansion Tower provides I/O capability for iSeries systems. The #5095 has seven PCI-X IOP/IOA slots. The #5095 also supports up to 12 disk units.            A #9844 Base PCI IOP is included as base and should be on an initial order for the #5095 PCI-X Expansion Tower.</p> <p>The #5095 includes a bus adapter to provide the HSL-2 interface to the system. The IBM marketing configurator adds one of the following to the order:</p> <ul style="list-style-type: none"> <li>▶ #6417 HSL-2/RIO-G Bus Adapter</li> <li>▶ #9876 Base Optical Bus Adapter</li> <li>▶ #9877 - Base HSL-2 Bus Adapter                A #9877 - Base HSL-2 Bus Adapter is shipped with new orders of a #5094 for Models 820, 830, 840.</li> <li>▶ #9886 Base Optical Bus Adapter (optical HSL-2)                Specify when attaching to optical HSL-2 ports.</li> <li>▶ #9887 Base HSL-2 Bus Adapter (default)                Specify when attaching to copper HSL ports.</li> </ul>

<p>#5095 (cont.)</p>	<p><b>#5095 PCI-X Expansion Tower</b></p> <p>Select an appropriate number of the following HSL/HSL-2 cables:</p> <ul style="list-style-type: none"> <li>▶ #1307 - 1.75 m Copper HSL-2 Cable</li> <li>▶ #1470 - 6 m Optical HSL Cable</li> <li>▶ #1472 - 100 m Optical HSL Cable</li> <li>▶ #1473 - 250 m Optical HSL Cable</li> <li>▶ #1474 - 6 m HSL to HSL-2 Cable</li> <li>▶ #1475 - 10 m HSL to HSL-2 Cable</li> <li>▶ #1482 - 3.5 m HSL-2 Cable</li> <li>▶ #1483 - 10 m HSL-2 Cable</li> <li>▶ #1485 - 15 m HSL-2 Cable</li> </ul> <p>Select one of the following line cords (select two if #5138 Redundant Power and Cooling is selected):</p> <ul style="list-style-type: none"> <li>▶ #1410 - 200V 6-ft Line Cord</li> <li>▶ #1411 - 200V 14-ft Line Cord</li> <li>▶ #1412 - 125V 6-ft Line Cord (US default)</li> <li>▶ #1414 - 200V 6-ft Locking Line Cord</li> <li>▶ #1415 - 200V 6-ft Watertight Line Cord</li> <li>▶ #1438 - 4.3 m 200V/10A Power Cord AU/NZ</li> <li>▶ #1439 - 4.3 m 200V/10A Power Cord EU/Asia</li> <li>▶ #1440 - 4.3 m 200V/10A Power Cord Denmark</li> <li>▶ #1441 - 4.3 m 200V/10A Power Cord S Africa</li> <li>▶ #1442 - 4.3 m 200V/10A Power Cord Swiss</li> <li>▶ #1443 - 4.3 m 200V/10A Power Cord UK</li> <li>▶ #1444 - 4.3 m 200V/10A Power Cord Italy</li> </ul> <p>Select one of the following SPCN cables:</p> <ul style="list-style-type: none"> <li>▶ #0369 100 m Optical SPCN Cable</li> <li>▶ #1463 - 2 m SPCN Cable</li> <li>▶ #1464 - 6 m SPCN Cable</li> <li>▶ #1465 - 15 m SPCN Cable</li> <li>▶ #1466 - 30 m SPCN Cable</li> <li>▶ #1468 - 250 m Optical SPCN Cable</li> <li>▶ #6001 Power Control Cable - 2 M</li> <li>▶ #6006 Power Control Cable - 3 M</li> <li>▶ #6007 Power Control Cable - 15 M</li> <li>▶ #6008 Power Control Cable - 6 M</li> <li>▶ #6029 Power Control Cable - 30 M</li> </ul> <p>The #5095 PCI-X Expansion Tower supports seven PCI-X IOA/IOP card slots. One Integrated xSeries Server is supported in slots C1 and C2.</p> <p>The #5095 PCI-X Expansion Tower has redundant power when #5138 Redundant Power and Cooling is present or ordered. The #5138 includes a second 435W power supply. A second line cord is required with #5138 to provide redundant power support in this tower and also enables dual-line cord capability.</p> <p>If an Integrated xSeries Server is ordered as part of an MES, the #9844 Base PCI IOP (in slot C1) and any associated IOAs must be repositioned within the system.</p> <p>The #5095 is also supported in Linux and AIX partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3, and AIX 5L for POWER V5.2.</p> <p>Minimum operating system level: OS/400 V5R2</p>
<p>#5101</p>	<p><b>#5101 30 Disk Unit Expansion</b></p> <p>The #5101 30 Disk Unit Expansion is a disk unit expansion enclosure feature for the #5074 PCI Expansion Tower, the #9074 Base I/O Tower, and the #9074/#9079 Base I/O Tower. The #5101 includes two 15-disk unit enclosures, one 765-watt power supply, backplanes, and cables. One #2757, #2780, #4748, or #4778 PCI RAID Disk Unit Controller is required to support one 15-disk unit enclosure.</p> <p>Supported on Models 820, 830, 840</p>



#5103	<p><b>#5103 Dual Line Cords - 830 CEC</b></p> <p>The #5103 Dual Line Cords - 830 CEC provides dual line cord capability for the system unit and attached #9074 Base I/O Tower. Two 14xx line cords must be ordered when a #5103 is ordered on an initial order. When ordering a #5103 as an MES, one additional #14xx line cord is required to be ordered (for a total of two line cords for the system unit). If the #9074 has feature #5101 installed, the #5101 must be converted to a #5111 (no parts shipped).</p> <p>Supported on Model 830 Minimum operating system level: OS/400 V5R1</p>
#5104	<p><b>#5104 Dual Line Cords - 840 CEC</b></p> <p>The #5104 provides dual line cord capability for the #9079 Base I/O Tower. Two #14xx line cords must be ordered for the #9079 Base I/O Tower when the #5104 is ordered on an initial order. When installing a #5104 as an MES, one additional #14xx line cord is required to be ordered for the #9079 Base I/O Tower.</p> <p>Minimum operating system level: OS/400 V5R1 The #5104 has country- or region-specific usage.</p> <p>Supported on Model 840 If any feature #5101s are installed, the #5101s must be converted to a #5111s (no parts shipped).</p>
#5108	<p><b>#5108 30-Disk Expansion Feature</b></p> <p>The #5108 30-Disk Expansion Feature is a disk unit expansion enclosure feature for a #5094 PCI-X Expansion Tower. The #5108 includes two 15-disk unit enclosures, one power supply, backplanes and cables. One #2757, #2780, #4748, or #4778 PCI RAID Disk Unit Controller is required to support each 15-disk unit enclosure.</p> <p>Minimum operating system level: OS/400 V5R2</p>
#5111	<p><b>#5111 30 Disk Expansion with Dual Line Cord</b></p> <p>The #5111 30 Disk Expansion with Dual Line Cord is a disk unit expansion enclosure feature for systems and towers that are dual-line cord enabled. (Model 830 system units have #5103, Model 840 system units have #5104 and #5074 PCI Expansion Towers which have #5105.) The #5111 includes two 15-disk unit enclosures, backplanes and cables. One #4748/#4778 PCI RAID Disk Unit Controller is required to support one 15-disk unit enclosure.</p> <p>Prerequisite: A #5103 when ordered for an 830 system unit, a #5104 when ordered for an 840 system unit, a #5105 when ordered for a stand-alone #5074 PCI Expansion Tower or top unit in an #8079 Optional Base 1.8 M I/O Rack.</p>
#5138	<p><b>#5138 Redundant Power and Cooling</b></p> <p>The #5138 Redundant Power and Cooling provides redundant power for the #0595/#5095 PCI-X Expansion Tower. A #5138 consists of a 435W power supply and additional cooling fans. A second line cord is required on each #0595/#5095 with a #5138 installed. The #5138, together with the second line cord, enables dual-line cord capability for an #0595/#5095.</p> <p>Maximum: One per #0595/#5095 PCI-X Expansion Tower Minimum operating system level: OS/400 V5R2</p>
#5150	<p><b>#5150 Battery Backup (external)</b></p> <p>The #5150 is an external battery backup that when used in conjunction with the internal battery backup is capable of extending the battery backup time.</p> <p>Supported on Model 840.</p>
#5153	<p><b>#5153 Redundant Power Supplies</b></p> <p>The #5153 consists of two power supplies, a 970 watt and a 700 watt. The #5153 provides redundancy for the power supplies in the #5035 Migration Tower I and the #5064/#9364 System Unit Expansion. The #5153 physically resides in the #5064/#9364.</p> <p>Prerequisite: The #5035 with #5064/#9364 System Unit Expansion.</p>
#5155	<p><b>#5155 Redundant Power and Cooling</b></p> <p>The #5155 adds an additional 575-watt power supply for redundancy and additional cooling fans.</p> <p>Prerequisite: The #5157 Feature Power Supply</p> <p>Supported on Model 820 The #5155 is a Customer Install Feature.</p>
#5156	<p><b>#5156 Redundant Power and Cooling</b></p> <p>The #5156 adds an additional 575-watt power supply for redundancy and additional cooling fan to the #5075 PCI Expansion Tower.</p> <p>Marketing configurator defaults, on a Model 820, to a #5156 for any added #5075 when the system unit contains a #5155 575-watt power supply. If a #5155 is ordered as an MES to an existing Model 820, default one #5156 for each #5075 present or ordered. The #5156's are not mandatory and can be removed from an order.</p> <p>Supported in Models 820. The #5156 is a Customer Install Feature. The #5156 was withdrawn from marketing on 01 June 2006.</p>

#5157	<p><b>#5157 Feature Power Supply</b></p> <p>The #5157 adds an additional 575-watt power supply to the Model 820. The #5157 is required when a #7127 DASD Expansion Unit is added to a Model 820 and is required when a #5155 Redundant Power and Cooling feature is added to a Model 820. For Model 820 processors #2397, #2398, #2426, and #2427, a #5157 Feature Power Supply must be present or ordered when a feature #2884 Main Storage Expansion Riser Card is added or ordered.</p> <p>Supported on Model 820. The #5157 is a Customer Install Feature.</p>
#5294	<p><b>#5294 1.8 m I/O Tower</b></p> <p>The #5294 1.8 m I/O Tower has space for 90 disk units, has 28 PCI-X IOP/IOA slots, and has four removable media bays. The #5294 is equivalent to two #5094 PCI-X Expansion Towers, with covers and casters removed and positioned in a 1.8 m rack. It includes two bus adapters to provide the HSL interface to the system.</p> <p>The IBM marketing configurator adds two, in any combination, of the following to the order:</p> <ul style="list-style-type: none"> <li>▶ #6417 HSL-2/RIO-G Bus Adapter</li> <li>▶ #9876 Base Optical Bus Adapter</li> <li>▶ #9877 - Base HSL-2 Bus Adapter A #9877 - Base HSL-2 Bus Adapter is shipped with new orders of a #5294 for Models 820, 830, 840.</li> <li>▶ #9886 Base Optical Bus Adapter (optical HSL-2) Specify when attaching to optical HSL-2 ports.</li> <li>▶ #9887 Base HSL-2 Bus Adapter (default) Specify when attaching to copper HSL ports.</li> </ul> <p>The #5094 PCI-X Expansion Tower is the default when a PCI IOP or IOA is ordered that requires a PCI expansion unit. The #5294 can be specified on the IBM marketing configurator's extra controllers window. For each #5294 ordered, two #0694 - #5094 Equivalent specify codes are added to the order. If a #5294 is to be shared between two systems, process an RPO to remove one #0694 from the original ordering system and add it to the sharing system.</p> <p>The upper and lower enclosures (#5094 PCI-X Expansion Tower) in the #5294 are not connected internally by an HSL cable. Two to four of the following HSL/HSL-2 cables are required:</p> <ul style="list-style-type: none"> <li>▶ #1307 - 1.75 m Copper HSL-2 Cable</li> <li>▶ #1470 - 6 m Optical HSL Cable</li> <li>▶ #1471 - 30 m Optical HSL Cable</li> <li>▶ #1472 - 100 m Optical HSL Cable</li> <li>▶ #1473 - 250 m Optical HSL Cable</li> <li>▶ #1474 - 6 m HSL to HSL-2 Cable</li> <li>▶ #1475 - 10 m HSL to HSL-2 Cable</li> <li>▶ #1482 - 3.5 m HSL-2 Cable</li> <li>▶ #1483 - 10 m HSL-2 Cable</li> <li>▶ #1485 - 15 m HSL-2 Cable</li> </ul> <p>For the Model 820, the HSL cable connection to port A1 cannot exceed 6 m.</p> <p>Two #9844 Base PCI IOPs are included with each #5294 1.8 m I/O Tower. The IBM marketing configurator allows a #5294 to exist in the field without any #9844s present, but all ordered #5294s ship with two #9844s. The #5294 1.8 m I/O Tower is capable of controlling Ultra4 (u320) SCSI disk units.</p> <p>If no #5116 Dual Line Cords - #5294 is installed, select two line cords from the following list. If one #5116 Dual Line Cords - #5294 is installed, select three line cords from the following list. If two #5116 Dual Line Cords - #5294 are installed, select four line cords from the following list:</p> <ul style="list-style-type: none"> <li>▶ #1451 - 200V 6-ft Line Cord</li> <li>▶ #1452 - 200V 14-ft Line Cord</li> <li>▶ #1453 - 200V 6-ft Locking Line Cord</li> <li>▶ #1454 - 200V 12A 14-ft TL Line Cord (default)</li> <li>▶ #1455 - 200V 6-ft Watertight Line Cord</li> <li>▶ #1456 - 200V 14-ft Watertight Line Cord</li> <li>▶ #1457 - 200V 6-ft Upper Line Cord</li> <li>▶ #1458 - 200V 6-ft Upper Locking Cord</li> <li>▶ #1459 - 200V 6-ft Upper Watertight Cord</li> </ul>

<p>#5294 (cont.)</p>	<p><b>#5294 1.8 m I/O Tower</b></p> <p>Select two of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> <li>▶ #0369 - 100 m Optical SPCN Cable (830, 840)</li> <li>▶ #1463 - 2 m SPCN Cable (270, 820, 830, 840)</li> <li>▶ #1464 - 6 m SPCN Cable (270, 820, 830, 840)</li> <li>▶ #1465 - 15 m SPCN Cable (270, 820, 830, 840)</li> <li>▶ #1466 - 30 m SPCN Cable (270, 820, 830, 840)</li> <li>▶ #1468 - 250 m Optical SPCN Cable (830, 840)</li> <li>▶ #6001 Power Control Cable - 2 M</li> <li>▶ #6006 Power Control Cable - 3 M</li> <li>▶ #6007 Power Control Cable - 15 M</li> <li>▶ #6008 Power Control Cable - 6 M</li> <li>▶ #6029 Power Control Cable - 30 M</li> </ul> <p>The 90 disk unit positions are in groups of 15. Each group of 15 disk units is further divided into three groups of five disk units. Each group of five disk units is supported on a separate SCSI bus from a #2757, #2780, #4748, or #4778 PCI RAID Disk Unit Controller. Each group of 15 disk units requires one #2757, #2780, #4748, or #4778 PCI RAID Disk Unit Controller.</p> <p>The #5294 1.8 m I/O Tower supports up to four removable media devices (internal tape or CD-ROM or DVD). These removable media devices are supported by the two #2757, #2780, #4748, or #4778 PCI RAID Disk Unit Controllers which support the first two groups of 15 disk units.</p> <p>The #5294 expansion tower offers additional LPAR configuration flexibility. Instead of the previous maximum number of six disk controllers supported in a #5294, now up to 18 total disk controllers are supported. These can be either OS/400 controlled (maximum of six OS/400 partitions) or Linux controlled. The #5703/#0628 disk controller can be used to go beyond the maximum of three, already supported #2757, #2780, #4748, and #4778 disk controllers per top or bottom unit of the #5294.</p> <p>Each tower must have a minimum of one #2748, #2757, #2780, #4748, or #4778 for each group of 15 disk units in the tower. Only the #5703/#0628 can be ordered as an extra controller (up to two #5703/#0628s per group of 15 disk units in the same tower) if #0143 Disk Controller Placement Exception is also ordered. The #2748, #2757, #2780, #4748, or #4778 disk controllers cannot be ordered as extra controllers if #0143 is also ordered.</p> <p>The number of disk units per #2757 and #2780 varies by configuration.</p> <p>The #5294 1.8 m I/O Tower reports to the system as two CCIN 5094. Each ordered #5294 counts as two #5094s toward the system model maximums.</p> <p>The #5294 is also supported in Linux and AIX partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3, and AIX 5L for POWER V5.2. Minimum operating system level: OS/400 V5R2</p>
<p>#5554</p>	<p><b>#5554 Mirror 35 GB Disk/Controller Package</b></p> <p>The #5554 provides a disk unit controller (#2780 PCI-X Ultra4 RAID Disk Controller equivalent) and 12 15k rpm 35 GB disk units (#4326 35.16 GB 15k RPM Disk Unit equivalent) for servers doing mirroring. Either #0042 Mirrored System IOP Level or #0043 Mirrored System Bus Level is a prerequisite. Initial order or MES</p> <p>Supported on Models 820, 830, 840 Minimum operating system level: i5/OS® V5R3, SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3, AIX 5L for POWER V5.2 The #5554 is a Customer Install Feature.</p> <p>The #5554 was withdrawn from marketing on 25 October 2005. The #5555 Mirror 70GB Disk/Controller Package or #2780 PCI-X Ultra4 RAID Disk Controller plus a quantity of 12 of #4326 35.16GB 15k rpm Disk Unit are the recommended replacements.</p>
<p>#5555</p>	<p><b>#5555 Mirror 70 GB Disk/Controller Package</b></p> <p>The #5555 provides a disk unit controller (#2780 PCI-X Ultra4 RAID Disk Controller equivalent) and 12 15k rpm 70 GB disk units (#4327 70.56 GB 15k RPM Disk Unit equivalent) for servers doing mirroring. Either #0042 Mirrored System IOP Level or #0043 Mirrored System Bus Level is a prerequisite. Supported on Models 820, 830 Minimum operating system level: i5/OS V5R3, SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3, AIX 5L for POWER, V5.2 for iSeries The #5555 is a Customer Install Feature.</p>

#5723	<p><b>#5723 2-Port Async EIA -232 PCI IOA</b></p> <p>The #5723 provides connection for two asynchronous EIA-232 devices. Ports are programmable to support EIA-232 protocols at a line speed of 128 Kbps.</p> <p>Provides two asynchronous ports. Occupies one PCI slot.</p> <p>Minimum Operating System level required: AIX 5L for POWER, OS/400 V5R2 for iSeries</p>
#6069	<p><b>#6069 Optional Front Door for 2.0 m Rack</b></p> <p>The #6069 provides an black full height rack door on the #0553 iSeries 2.0 m Rack. The door is steel, with a perforated flat front surface.</p> <p>Optional feature is a #6580 Optional Rack Security Kit.</p> <p>Prerequisite: #0553 2.0 m Rack</p> <p>Initial order or MES</p> <p>The #6069 is a Customer Install Feature.</p>
#6247	<p><b>#6247 2.0 m Rack Trim Kit</b></p> <p>The #6247 provides a trim kit for the front of a #0553 2.0 m Rack.</p> <p>Initial order or MES</p> <p>The #6247 is a Customer Install Feature.</p>
#6248	<p><b>#6248 1.8 m Rack Acoustic Doors</b></p> <p>The #6248 provides front and rear doors for use with the #0551 iSeries 1.8 m Rack. This door kit provides additional acoustic dampening for use where a quieter environment is desired. The #6248 results in a larger footprint and requires additional space.</p> <p>Initial order or MES</p> <p>The #6248 is a Customer Install Feature.</p>
#6249	<p><b>#6249 2.0 m Rack Acoustic Doors</b></p> <p>The #6249 provides front and rear doors for use with the #0553 iSeries 2.0 m Rack. This door kit provides additional acoustic dampening for use where a quieter environment is desired. The #6249 results in a larger footprint and requires additional space.</p> <p>Initial order or MES</p> <p>The #6249 is a Customer Install Feature.</p>
#6584	<p><b>#6584 4 Disk Slot Exp - PCI-X Controller</b></p> <p>The #6584 - 4-Disk Slot Expansion is a disk backplane feature for the system unit, which enables the second four disk slots for use by a separate disk controller plugged into a system unit PCI slot. Disk units plugged into the #6584 are controlled by either a #5703 PCI-X RAID Disk Unit Controller or #5715 PCI-X Tape/DASD Controller.</p> <p>A #6584 can be used for obtaining disk mirroring protection with other drives in the system or for enabling these drives in another system partition.</p> <p>The #6584 is not usable by either the embedded system unit disk controller or by a #5709 RAID Enabler Card</p> <p>The #6584 was withdrawn from marketing on 19 November 2004.</p>
#6592	<p><b>#6592 - 4 - Disk Slot Exp. - Base Ctlr</b></p> <p>The #6592 is a disk backplane feature that enables the second set of four disk unit slots in the system to be used. Disk units plugged into the #6592 are controlled by the integrated base controller or by the #5709 (if present).</p>
#7127	<p><b>#7127 DASD Expansion Unit</b></p> <p>The #7127 DASD Expansion Unit is a concurrent maintenance DASD six position expansion feature that can be ordered to support an additional six disk units (for a total of 12) in the Model 820 system unit.</p> <p>Prerequisite: #5157 Feature Power Supply</p> <p>The #7127 is a Customer Install Feature.</p>
#7780	<p><b>#7780 2.0 m Rack Side Attach Kit</b></p> <p>This feature allows a row of racks without side panels to be bolted together in a continuous suite, using the provided side-to-side rack connecting hardware. When multiple racks are joined in this way, cables can be easily run between racks without exiting the continuous rack enclosure. A small gap is maintained between the two adjacent racks, which is filled by three matching steel trim pieces that snap into place on the front, top, and rear, between each rack. Side panels are needed only for the two end racks of the suite.</p> <p>Prerequisites required: #0553 2.0 m Rack</p> <p>Initial order or MES</p> <p>The #7780 is a Customer Install Feature.</p>

#7840	<p><b>#7840 Side-by-Side for 1.8 m Racks</b></p> <p>The #7840 allows a row of racks without side panels to be bolted together in a continuous suite, using the provided side-to-side rack connecting hardware. When multiple racks are joined in this way, cables can be easily run between racks without having to exit the continuous rack enclosure. A small gap is maintained between the two adjacent racks, which is filled by three matching steel trim pieces that snap into place on the front, top, and rear, between each rack. The trim pieces cover the space between each rack for an enhanced appearance and for additional protection of the equipment inside the racks. Side panels are needed only for the two end racks of the suite.</p> <p>The #7840 is a Customer Install Feature.</p>
#8079	<p><b>#8079 Optional Base 1.8 M I/O Rack</b></p> <p>The #8079 is an optional base I/O rack shipped to support additional I/O for the Model 840 instead of the #9079 Base I/O Tower. The #8079 supports up to 90 disk units, up to 28 PCI slots, and up to four removable media units. An #8079 is a #9079 Base I/O Tower with a #5074 (#0574 specify code) tower packaged in a rack. A #9691/#9739 HSL bus adapter is required for the upper unit.</p> <p>Select three (if only three are on the order, only copper can be specified) or four of the following HSL cables depending on the requirements of optical and copper HSL:</p> <ul style="list-style-type: none"> <li>▶ #1460 - 3 m Copper HSL Cable</li> <li>▶ #1461 - 6 m Copper HSL Cable</li> <li>▶ #1462 - 15 m Copper HSL Cable</li> <li>▶ #1470 - 6 m Optical HSL Cable (top enclosure only)</li> <li>▶ #1471 - 30 m Optical HSL Cable (top enclosure only)</li> <li>▶ #1472 - 100 m Optical HSL Cable (top enclosure only)</li> <li>▶ #1473 - 250 m Optical HSL Cable (top enclosure only)</li> </ul> <p>The #1462 - 15 m Copper HSL Cable can be used on any HSL port of the Model 840. If a #5077 Migration Tower II is included in the configuration, then four copper HSL cables must be ordered for the #8079 Optional Base 1.8 M I/O Rack.</p> <p>Select two of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> <li>▶ #0369 100 m Optical SPCN Cable</li> <li>▶ #1463 - 2 m SPCN Cable</li> <li>▶ #1464 - 6 m SPCN Cable</li> <li>▶ #1465 - 15 m SPCN Cable</li> <li>▶ #1466 - 30 m SPCN Cable</li> <li>▶ #1468 - 250 m Optical SPCN Cable</li> </ul> <p>Specify two-line cords for the #8079 Optional Base 1.8 M I/O Rack. Some countries or regions offer fewer choices of line cords and some countries or regions are shipped a default line cord type.</p> <p>The #8079 has two #9943 Base PCI IOPs and a #2757, #9778, or #9748 Base PCI RAID Disk Unit Controller. It has PCI slots for up to 22 PCI IOAs, space for up to 90 disk units (#5101/#5111 is installed in both the bottom and top unit), space for four removable media devices, two battery backup, and redundant or hot swap power supplies.</p> <p>The #8079 is capable of controlling Ultra2 SCSI disk units.</p> <p>The PCI IOAs are supported (driven) by two #9943 Base PCI IOPs and #2843/#2844/#2847 PCI IOPs, #2790 PCI Integrated Netfinity Server, or #2791/#2792/#2799 PCI Integrated xSeries Servers.</p> <p>The #8079 supports up to four removable media devices (internal tape or CD-ROM). These removable media devices are supported by one #9778/#9748 and a #2757, #2780, #4748, or #4778 PCI RAID Disk Unit Controller.</p> <p>If the top enclosure is to be attached to a different system than initially ordered, process an RPO to remove the #0574 specify code from the initially ordered machine and add it to the target machine.</p> <p>The #8079 was withdrawn from marketing on 21 November 2003.</p>

#9074	<p><b>#9074 Base I/O Tower</b></p> <p>The #9074 Base I/O Tower is the base I/O tower shipped on the Model 830. The #9074 supports up to 45 disk units (15 units are "base", with an additional 30 provided with #5101 or #5111), up to 11 PCI IOAs, up to two removable media units, one battery backup, and redundant or hot swap power supplies. The #9074 has a #9943 Base PCI IOP and a #9748 Base PCI RAID Disk Unit Controller. The 14 PCI slots are used and supported (driven) by the #9943 Base PCI IOP and by #2843/#2844/#2847 PCI IOPs.</p> <p>The #2790 PCI Integrated Netfinity Server or the #2791/#2792/#2799 PCI Integrated xSeries Server can also support selected LAN cards.</p> <p>The #1460 - 3 m Copper HSL Cable is included automatically on the order.</p> <p>One #14xx power cord must be specified (geography dependent).</p> <p>The #9074 is capable of controlling Ultra2 SCSI disk units.</p> <p>The two removable media devices (internal tape, CD-ROM or DVD) are supported by the #9748/#9778.</p> <p>The #9074 was withdrawn from marketing on 01 January 2004.</p>
#9079	<p><b>#9079 Base I/O Tower</b></p> <p>The #9079 Base I/O Tower is the base I/O tower shipped on the Model 840. The #9079 supports up to 45 disk units (15 are "base", with an additional 30 provided with #5101 or #5111), up to 11 PCI IOAs, up to two removable media units, one battery backup, and redundant or hot swap power supplies. The #9079 has a #9943 Base PCI IOP and a #9748 Base PCI RAID Disk Unit Controller. The 14 PCI slots are used and supported (driven) by the #9943 Base PCI IOP and by #2843/#2844/#2847 PCI IOPs. The #2790 PCI Integrated Netfinity Server or the #2791/#2792/#2799 PCI Integrated xSeries Server can also support selected LAN cards.</p> <p>Select two (any combination) of the following HSL cables:</p> <ul style="list-style-type: none"> <li>▶ #1460 - 3 m Copper HSL Cable</li> <li>▶ #1461 - 6 m Copper HSL Cable</li> <li>▶ #1462 - 15 m Copper HSL Cable</li> </ul> <p>Select one of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> <li>▶ #1463 - 2 m SPCN Cable</li> <li>▶ #1464 - 6 m SPCN Cable</li> <li>▶ #1465 - 15 m SPCN Cable</li> <li>▶ #1466 - 30 m SPCN Cable</li> </ul> <p>One #14xx power cord (two when dual-line cord feature #5104 is ordered for the 840 system unit) feature must be specified (geography dependent).</p> <p>The #9079 is capable of controlling Ultra2 SCSI disk units.</p> <p>The two removable media devices (internal tape, CD-ROM, and DVD) are supported by the #9748/#9778 PCI RAID Disk Unit Controller.</p> <p>The #9079 was withdrawn from marketing on 01 October 2004.</p>
#9301	<p><b>#9301 Upgraded 30-Disk Expansion</b></p> <p>The #9301 is equivalent to a #5101 30 Disk Unit Expansion. It is ordered when doing a Model 830 to 840 upgrade, and the Model 830 has a #0550 iSeries Rack installed. A #0550 iSeries Rack to #0551 iSeries Rack conversion is performed and an #0125 - #9079 Lower Unit in Rack and #9301 are added to the install record.</p> <p>The #9301 was withdrawn from marketing on 21 November 2003.</p>
#9691	<p><b>#9691 Base Bus Adapter (Copper HSL)</b></p> <p>The #9691 is a base bus adapter card that installs in the #5074 PCI Expansion Tower and #5079 1.8 M I/O Tower, the #9079 Base I/O Tower or the #8079 Optional Base 1.8 M I/O Rack on a Model 840 system unit, and in the #0578/#5078 PCI Expansion Unit. The #9691 supports HSL Copper.</p> <p>Minimum operating system level: OS/400 V4R5</p> <p>The #9691 was withdrawn from marketing on 01 December 2005.</p>
#9886	<p><b>#9886 Base Optical Bus Adapter</b></p> <p>The #9886 Base Optical Bus Adapter provides optical HSL connectivity for the #5094, #0595/#5095, #0588/#5088 PCI, #5294 expansion units. The #9886 can only be ordered with a new expansion tower or unit. If the expansion unit is already installed, order a #2886 for this function.</p> <p>Recommended replacement is the #9876 Base Optical Bus Adapter.</p> <p>Supported on Models 830 and 840</p> <p>Minimum operating system level: OS/400 V5R2</p> <p>The #9886 was withdrawn from marketing on 01 June 2006.</p>

## 7.3 Models 830 and 840 Capacity on Demand

8xx Capacity On Demand	
#1604	<b>#1604 CUoD Activation</b> The #1604 CUoD Activation is used to order a password to activate one additional processor on the Model 840 with a Capacity Upgrade on Demand (CUoD) processor feature. One or more #1604s can be ordered on initial orders or with MES to activate additional processors. Supported on Model 840 Minimum operating system level: OS/400 V5R2
#1605	<b>#1605 CUoD Activation</b> The #1605 CUoD Activation is used to order a password to activate one additional processor on the Model 830 with a CUoD processor feature. One or more #1605s can be ordered on initial orders or with MES to activate additional processors. Supported on Model 830 Minimum operating system level: OS/400 V5R2

## 7.4 Main storage

Main storage	
Base	There is no base memory on Models 820, 830, and 840.
Model 820 Main Memory Rules	<p><b>Memory features for the for the Model 820 #2395 and #2435 processors:</b></p> <ul style="list-style-type: none"> <li>▶ #3004 - 256 MB Main Storage (128 Mb technology)</li> <li>▶ #3005 - 512 MB Main Storage (128 Mb technology)</li> <li>▶ #3006 - 512 MB Main Storage (256 Mb technology)</li> <li>▶ #3007 - 1 GB Main Storage (256 Mb technology)</li> <li>▶ #3009 - 128 MB Main Storage (default, maximum of eight Dual Inline Memory Modules (DIMMs) of this type per system)</li> </ul> <p>Main storage DIMMs must be in pairs of the same capacity and technology. The DIMMs plug directly into the 820 processor and do not use #2884 Main Storage Expansion Riser Cards.</p> <p><b>For the Model 820 #0150, #2396, #2425, #2436, and #2456 processors</b>, the DIMMs can be plugged directly into the processor. If more than eight DIMMs total are required, a #2884 Main Storage Expansion Riser Card must be used and <i>all</i> DIMMs must then reside on the #2884. Without the #2884, the DIMMS must be paired. With the #2884, the DIMMs must be in sets of four (quads) of the same capacity and technology</p> <p>A single pair of DIMMs is not supported on a #2884. In addition, the #2884 can be ordered and installed at any time, even with eight or fewer DIMMs present. If a #2884 is installed, all DIMMs must be placed on it.</p> <p><b>For the #0151, #0152, #2397, #2398, #2426, #2427, #2437, #2438, #2457, and #2458 processors</b>, main storage DIMMs must be plugged into a main storage expansion card (CCIN 2884 and #2884), and must be added in sets of four (quads) of the same capacity and technology. There is an exception that allows a single set of two main storage DIMMs if these are the only two on the system.</p> <p>A single pair of DIMMs is not allowed on Model 820 systems with a #2884 ordered or present. If any additional DIMMs are added above the initial two, the initial two must be paired up to make a quad and then only DIMM quads can subsequently be added. A #2884 can be ordered and installed at any time, even if the base main storage expansion card is not full. For 820 processors, if a #2884 is ordered, a #5157 Feature Power Supply must be either present or ordered.</p> <p>When a #2884 is present (for a total of two memory expansion cards on the system), manufacturing spreads the DIMMS across both memory expansion cards.</p> <p>See the tower diagrams in Chapter 8, "IBM iSeries towers schematics" on page 293, for placement of memory.</p>

Model 830 and 840 Main Memory Rules	<p><b>Memory features for the Model 830 and 840:</b> All main storage cards must be added in sets of eight on the Model 830 (octals) and sets of four (quads) on the Model 840. All memory sets must be of the same feature code.</p> <p>Model 830:</p> <ul style="list-style-type: none"> <li>▶ #3062 - 128 MB Main Storage Card</li> <li>▶ #3064 - 256 MB Main Storage Card</li> <li>▶ #3065 - 512 MB Main Storage Card (128 Mb technology)</li> <li>▶ #3066 - 512 MB Main Storage Card (256 Mb technology)</li> <li>▶ #3067 - 1 GB Main Storage Dual Inline Memory Modules (DIMM)</li> </ul> <p>Model 840:</p> <ul style="list-style-type: none"> <li>▶ #3196 - 8192 MB Main Storage Card (256 Mb technology)</li> <li>▶ #3612 - 1024 MB Main Storage Card (256 Mb technology)</li> <li>▶ #3613 - 2048 MB Main Storage Card (256 Mb technology)</li> <li>▶ #3614 - 4096 MB Main Storage Card (256 Mb technology)</li> </ul> <p>There is a total of 64 slots on the Model 830, 32 in the base and an additional 32 when the #2884 Main Storage Expansion Riser Card is installed. There is a total of 16 slots available on the 840. For memory increments of 65536 MB and greater, all main storage slots (16) must be filled.</p> <p>See the tower diagrams in Chapter 8, "IBM iSeries towers schematics" on page 293, for placement of memory.</p>
#2881	<p><b>#2881 Main Storage Expansion</b> The #2881 Main Storage Expansion provides an additional 32 slots on the Model 830. Required for the minimum functional server on the #0153, #2403, and #2349 processors. Maximum: One on processors #2400 and #2402 Supported on Model 830</p>
#2884	<p><b>#2884 Main Storage Expansion Riser Card</b> The #2884 Main Storage Expansion Riser Card mounts additional main storage cards on the Model 820. It contains 16 sockets for placement of 128 MB, 256 MB, or 512 MB cards. For placement, an initial pair of memory cards is allowed (in slot A and slot B) without quads. Before any further memory upgrade, this pair must be completed to a quad. After that, all cards must be plugged in quads starting from the outer four corners going toward the center (A, B, C, D, then E, F, G, H, and so forth). Use of the same feature code number within a quad is required.</p> <p>See the tower diagrams in Chapter 8, "IBM iSeries towers schematics" on page 293, for placement of memory. Mixing of quad groups on the same riser card is also allowed.</p> <p>Maximum: One on the #0150, #2396, #2425, #2436, and #2456 processors. Maximum: Two on the #0151, #0152, #2397, #2398, #2426, #2427, #2437, #2438, #2457, and #2458 processors (one shipped as base). For these processors, if a #2884 is ordered, a #5157 Feature Power Supply must be present or ordered.</p> <p>Supported on the Model 820; not supported on the #2395 and #2435 processors The #2884 is a Customer Install Feature.</p>
#3000	<p><b>128 MB Main Storage DIMM</b> The #3000 represents the base memory for Models 620, S20, and 720 migrated to the 820 and 830. No associated feature number on source system. Supported for migration only Plugs directly into the CPU or #2884 Supported in quads with #3002 on the Model 820. Supported in octals with #3062 on the Model 830. Reports as CCIN 3002. See "Model 830 and 840 Main Memory Rules" on page 248. Maximum: Two</p>
#3002	<p><b>128 MB Main Storage DIMM</b> 64 Mb technology. The #3002 cannot be mixed with #3009 in pairs or quads. Supported on Model 820, all processors The #3002 is a Customer Install Feature.</p>
#3004	<p><b>256 MB Main Storage DIMM</b> 128 Mb technology. Plugs directly into the CPU or #2884 See "Model 820 Main Memory Rules" on page 247 for memory rules. Supported on Model 820, all processors The #3004 is a Customer Install Feature.</p>



#3005	<b>512 MB Main Storage DIMM</b> 128 Mb technology Plugs directly into the CPU or #2884 See “Model 820 Main Memory Rules” on page 247 for memory rules. The #3006 cannot be mixed with #3005 in pairs or quads. Supported on Model 820, all processors The #3005 is a Customer Install Feature.
#3006	<b>512 MB Main Storage DIMM</b> 256 Mb technology Plugs directly into the CPU or #2884 See “Model 820 Main Memory Rules” on page 247 for memory rules. The #3006 cannot be mixed with #3005 in pairs or quads. Supported on Model 820, all processors. The #3006 is a Customer Install Feature.
#3007	<b>1 GB Main Storage DIMM</b> 256 Mb technology Plugs directly into the CPU or #2884 See “Model 820 Main Memory Rules” on page 247 for memory rules. Supported on Model 820 #0150, #0151, #0152, #2435, #2436, #2437, #2438, #2456, #2457, #2458 processors The #3007 is a Customer Install Feature.
#3009	<b>128 MB Main Storage DIMM</b> 128 Mb technology. Plugs directly into the CPU or #2884 See “Model 820 Main Memory Rules” on page 247 for memory rules. The #3009 cannot be mixed with #3002 in pairs or quads. Model 820 for the #0150, #0151, #0152, #2435, #2436, #2437, #2438, #2456, #2457, #2458 processors The #3009 is a Customer Install Feature.
#3062	<b>128 MB Main Storage DIMM</b> 64 Mb technology. See “Model 830 and 840 Main Memory Rules” on page 248 for memory rules. Maximum: 64 Supported on Model 830
#3064	<b>256 MB Main Storage DIMM</b> 128 Mb technology. See “Model 830 and 840 Main Memory Rules” on page 248 for memory rules. Maximum: 64 Supported on Model 830
#3065	<b>512 MB Main Storage DIMM</b> 128 Mb technology. See “Model 830 and 840 Main Memory Rules” on page 248 for memory rules. Maximum: 64 Supported on Model 830
#3066	<b>512 MB Main Storage DIMM</b> 256 Mb technology. See “Model 830 and 840 Main Memory Rules” on page 248 for memory rules. Replaces the #3065 512 MB main storage DIMM Maximum: 64 Supported on Model 830
#3067	<b>1 GB Main Storage DIMM</b> 256 Mb technology. See “Model 830 and 840 Main Memory Rules” on page 248 for memory rules. Maximum: 64 Supported on Model 830
#3195	<b>4096 MB Main Storage Card</b> 64 Mb technology See “Model 830 and 840 Main Memory Rules” on page 248. Maximum: 16 Supported on Model 840

#3196	<b>8192 MB Main Storage Card</b> 256 Mb technology Can be selected only to achieve 81920 MB and 98304 MB main storage increments See “Model 830 and 840 Main Memory Rules” on page 248. Prerequisite: #2730 Programmable Regulator Maximum: 16 Supported on Model 840
#3197	<b>1024 MB Main Storage Card</b> 64 Mb technology See “Model 830 and 840 Main Memory Rules” on page 248. Maximum: 16 Supported on Model 840
#3198	<b>2048 MB Main Storage Card</b> 64 Mb technology See “Model 830 and 840 Main Memory Rules” on page 248. Maximum: 16 Supported on Model 840
#3612	<b>1024 MB Main Storage Card</b> 256 Mb technology See “Model 830 and 840 Main Memory Rules” on page 248. Replaces the #3197 1024 MB main storage card Maximum: 16 Supported on Model 840
#3613	<b>2048 MB Main Storage Card</b> 256 Mb technology See “Model 830 and 840 Main Memory Rules” on page 248. Replaces the #3198 2048 MB main storage card Maximum: 16 Supported on Model 840
#3614	<b>4096 MB Main Storage Card</b> 256 Mb technology See “Model 830 and 840 Main Memory Rules” on page 248. Replaces the #3195 4096 MB main storage card Maximum: 16 Supported on Model 840
#7049	<b>#7049 - 8/16GB DDR1 Main Storage</b> The #7049 - 8/16GB DDR-1 Main Storage provides 8 GB of activated memory and an additional 8 GB of memory available for activation. The 8 GB of additional memory can be activated in increments of one GB. The #7049 must be installed on a processor card either by itself or with another #7049 or with features #4492 or #4494.
#8195	<b>#8195 - 256 GB Main Storage (32X8)</b> The #8195 provides 32 #7835 4/8 GB fully activated memory features for a total of 256 GB of active DDR1 system memory. Only the #8195 feature is shown on the order or in the install records, not the 32 #7835 features. No #7970 memory activations are required. Requires 32 empty system memory slots on any of processor boards Initial order or MES The #8195 is a Customer Install Feature.
#8197	<b>#8197 512 GB Main Storage (32X16)</b> The #8197 provides 32 #7828 16 GB fully activated memory features for a total of 512 GB of active DDR1 system memory. Only the #8197 feature is shown on the order or in the install records, not the 32 #7828 features. Requires 32 empty system memory slots on any of processor boards The #8197 is a Customer Install Feature.
#8198	<b>#8198 - 512 GB Main Storage (16X32)</b> The #8198 provides 16 #7829 32 GB fully activated memory features for a total of 512 GB of active DDR1 system memory. Only the #8198 feature is shown on the order or in the install records, not the 16 #7829 features. Requires 16 empty system memory slots on any of processor boards Initial order or MES The #8198 is a Customer Install Feature.

## 7.5 PCI IOP controllers

PCI IOP controllers	
PCI Rules	PCI cards are subject to plugging rules. <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i> , REDP-3638 describes the configuration and card placement rules that you must understand and follow to develop valid configurations. Use these IBM Redpapers as guides when configuring IOAs and input/output processors (IOPs) so that the system is sized to meet client expectations. Refer to 7.1, "PCI card placement for iSeries servers" on page 224, for an introduction to PCI.
Embedded IOP	<b>Embedded 32 MB Base PCI IOP (CCIN 284C)</b> The embedded IOP is standard on every Model 820 system tower, and the #5075 PCI Expansion Tower. This IOP is embedded and, therefore, does not require a PCI card slot. Provides support for maximum of up to four IOAs, including the #5702 PCI-X Ultra Tape Controller or #9767 Base PCI Disk Unit Controller SCSI IOA, the #9771, #9773, or #9774 PCI 2-Line WAN with integrated modem and the System Console IOA. See "#2843 PCI IOP" on page 251, for a list of other supported cards.
#9943 Base IOP	<b>#9943 Base PCI IOP</b> The #9943 Base PCI IOP (CCIN 2843) is included as the base IOP for Model 830 (in the #9074 Base I/O Tower), Model 840 (in either the #9079 Base I/O Tower or the #8079 Optional Base 1.8 M I/O Rack), and in the #5074 PCI Expansion Tower and #5079 1.8 M I/O Tower. The #5079, #8079, and #5097 include two base IOPs. See "#2843 PCI IOP" on page 251, for a list of other supported cards.
#2843 #9943	<b>#2843 PCI IOP</b> The #2843/#9943 is a PCI I/O processor with 64 MB of memory that drives up to four PCI IOA adapters on the Models 820, 830, 840, #5074 PCI Expansion Tower, #5075 PCI Expansion Tower when attached to the Model 820, and on the #0578/#5078 PCI Expansion Unit, #0588/#5088 PCI-X Expansion Unit, #5094 PCI-X Expansion Tower, #0595/#5095 PCI-X Expansion Tower, #5294 1.8 m I/O Tower, and the #5079 1.8 M I/O Tower.  The following IOAs are supported (driven) by the embedded PCI IOP on the Model 820 and the #2843/#9943 PCI IOP: <ul style="list-style-type: none"> <li>▶ #2742 2-Line WAN IOA</li> <li>▶ #2743 1 Gbps PCI Ethernet IOA</li> <li>▶ #2744 PCI 100 Mbps Token Ring IOA</li> <li>▶ #2749 PCI Ultra Magnetic Media Controller</li> <li>▶ #2757 PCI-X Ultra RAID Disk Controller</li> <li>▶ #2760 PCI 1 Gbps Ethernet UTP Adapter</li> <li>▶ #2763 PCI RAID Disk Unit Controller</li> <li>▶ #2765 PCI Fibre Channel Tape Controller</li> <li>▶ #2766 PCI Fibre Channel Disk Controller</li> <li>▶ #2768 PCI Magnetic Media Controller</li> <li>▶ #2772 PCI Dual WAN/Modem IOA</li> <li>▶ #2773 PCI Dual WAN/Modem IOA</li> <li>▶ #2780 PCI-X Ultra4 RAID Disk Controller</li> <li>▶ #2787 PCI-X Fibre Channel Disk Controller</li> <li>▶ #2793 2-Line WAN IOA with Modem</li> <li>▶ #2794 2-Line WAN IOA with Modem</li> <li>▶ #2805 PCI Quad Modem IOA</li> <li>▶ #2806 PCI Quad Modem (CIM)</li> <li>▶ #2817 PCI 155 Mbps MMF ATM IOA</li> <li>▶ #2849 10/100 Mbps Ethernet Adapter</li> <li>▶ #4723 PCI 10 Mbps Ethernet Adapter</li> <li>▶ #4745 PCI 2-line WAN IOA</li> <li>▶ #4746 PCI Twinaxial IOA</li> <li>▶ #4748 PCI RAID Disk Unit Controller</li> <li>▶ #4750 PCI ISDN BRI U IOA</li> <li>▶ #4751 PCI ISDN BRI S/T IOA</li> <li>▶ #4761 PCI Integrated Analog Modem</li> <li>▶ #4778 PCI RAID Disk Unit Controller</li> <li>▶ #4801 PCI Cryptographic Coprocessor</li> <li>▶ #4805 PCI Cryptographic Accelerator</li> <li>▶ #4815 PCI ATM 155 Mbps UTP OC3</li> <li>▶ #4816 PCI ATM 155 Mbps MMF</li> <li>▶ #4818 PCI ATM 155 Mbps SMF OC3</li> <li>▶ #4838 PCI 100/10 Mbps Ethernet IOA</li> <li>▶ #5700 PCI 1 Gbps Ethernet IOA</li> </ul>

#2843 #9943 (cont.)	<p><b>#2843 PCI IOP</b></p> <ul style="list-style-type: none"> <li>▶ #5701 PCI 1 Gbps Ethernet UTP IOA</li> <li>▶ #5702 PCI-X Ultra Tape Controller</li> <li>▶ #5703 PCI-X RAID Disk Unit Controller</li> <li>▶ #5704 PCI-X Fibre Channel Tape Controller</li> <li>▶ #5705 PCI-X Tape/DASD Controller</li> <li>▶ #5712 PCI-X Tape/DASD Controller</li> <li>▶ #5715 PCI-X Tape/DASD Controller</li> <li>▶ #9767 Base PCI Disk Unit Controller</li> <li>▶ #9771 Base PCI 2-Line WAN with integrated modem</li> <li>▶ #9778 Base PCI RAID Disk Unit Controller</li> <li>▶ #9793 2-Line WAN IOA with Modem</li> <li>▶ #9794 2-Line IOA with Modem</li> </ul> <p>Up to five #2843 PCI IOPs can be added to the Model 820 system unit. When attached to a Model 820, the #5075 can contain or support up to three #2843 PCI IOP features.</p> <p>On the #5074 PCI Expansion Tower, a PCI IOP is not embedded, but a #9943 Base PCI IOP is included. Up to five #2843 PCI IOPs can be added to a #5074. Up to six #2843 PCI IOPs can be added to a #5078.</p> <p>On the #5079 1.8 M I/O Tower, a PCI IOP is not embedded, but two #9943 Base PCI IOP are included. Up to 10 #2843 PCI IOPs can be added to the #5079.</p> <p>The #9943 can only be on initial system orders or on MES orders that add #5074, #5078, or #5079 towers to an installed system. The maximum number of #9943s installed on a system is one in the system unit, plus one in each #5074 and two in each #5079. Refer to <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i>, REDP-3638 for further restrictions.</p> <p>The #281x ATM, #2750, #2751, and #2761 are not supported after OS/400 V5R2.</p> <p>The #2843 is a Customer Install Feature.</p> <p>The #2843 was withdrawn from marketing on 01 October 2004. The recommended replacement is #2844.</p>
#2844 #9844	<p><b>#2844 PCI IOP</b></p> <p>The #2844 PCI IOP is a PCI I/O processor which drives PCI IOA adapters in the Model 820, 830, and 840 system units and the following expansion towers and units:</p> <ul style="list-style-type: none"> <li>▶ #0578 PCI Expansion Unit in Rack</li> <li>▶ #0588 PCI-X Expansion Unit in Rack</li> <li>▶ #0595 PCI-X Expansion Unit in Rack</li> <li>▶ #5074 PCI Expansion Tower</li> <li>▶ #5075 PCI Expansion Tower</li> <li>▶ #5078 PCI Expansion Unit</li> <li>▶ #5079 1.8 M I/O Tower</li> <li>▶ #5088 PCI-X Expansion Unit</li> <li>▶ #5094 PCI-X Expansion Tower</li> <li>▶ #5095 PCI-X Expansion Tower</li> <li>▶ #5294 1.8 m I/O Tower</li> <li>▶ #8079 Optional Base 1.8 M I/O Rack</li> <li>▶ #8294 Optional Base 1.8M Rack</li> <li>▶ #9079 Base I/O Tower (PCI)</li> <li>▶ #9194 Base PCI-X Expansion Tower</li> </ul> <p>The following IOAs are supported (driven) by the #2844/#9944 PCI IOP:</p> <ul style="list-style-type: none"> <li>▶ #2742 2-Line WAN IOA</li> <li>▶ #2743 1 Gbps PCI Ethernet IOA</li> <li>▶ #2744 PCI 100 Mbps Token Ring IOA</li> <li>▶ #2749 PCI Ultra Magnetic Media Controller</li> <li>▶ #2757 PCI-X Ultra RAID Disk Controller</li> <li>▶ #2760 PCI 1 Gbps Ethernet UTP Adapter</li> <li>▶ #2763 PCI RAID Disk Unit Controller</li> <li>▶ #2765 PCI Fibre Channel Tape Controller</li> <li>▶ #2766 PCI Fibre Channel Disk Controller</li> <li>▶ #2768 PCI Magnetic Media Controller</li> <li>▶ #2772 PCI Dual WAN/Modem IOA</li> <li>▶ #2773 PCI Dual WAN/Modem IOA</li> <li>▶ #2780 PCI-X Ultra4 RAID Disk Controller</li> <li>▶ #2782 PCI-X RAID Disk Unit Controller</li> <li>▶ #2787 PCI-X Fibre Channel Disk Controller</li> </ul>

#2844 #9844 (cont.)	<p><b>#2844 PCI IOP</b></p> <ul style="list-style-type: none"> <li>▶ #2793 2-Line WAN IOA with Modem</li> <li>▶ #2794 2-Line WAN IOA with Modem</li> <li>▶ #2805 PCI Quad Modem IOA</li> <li>▶ #2806 PCI Quad Modem (CIM)</li> <li>▶ #2817 PCI 155 Mbps MMF ATM IOA</li> <li>▶ #2849 10/100 Mbps Ethernet Adapter</li> <li>▶ #4723 PCI 10 Mbps Ethernet Adapter</li> <li>▶ #4745 PCI 2-line WAN IOA</li> <li>▶ #4746 PCI Twinaxial IOA</li> <li>▶ #4750 PCI ISDN BRI U IOA</li> <li>▶ #4751 PCI ISDN BRI S/T IOA</li> <li>▶ #4748 PCI RAID Disk Unit Controller</li> <li>▶ #4761 PCI Integrated Analog Modem</li> <li>▶ #4778 PCI RAID Disk Unit Controller</li> <li>▶ #4801 PCI Cryptographic Coprocessor (not supported by embedded IOP)</li> <li>▶ #4805 PCI Cryptographic Accelerator (not supported by embedded IOP)</li> <li>▶ #4811 PCI Integrated xSeries Server</li> <li>▶ #4812 PCI Integrated xSeries Server</li> <li>▶ #4813 PCI Integrated xSeries Server</li> <li>▶ #4815 PCI ATM 155 Mbps UTP OC3</li> <li>▶ #4816 PCI ATM 155 Mbps MMF</li> <li>▶ #4818 PCI ATM 155 Mbps SMF OC3</li> <li>▶ #4838 PCI 100/10 Mbps Ethernet IOA</li> <li>▶ #5700 PCI 1 Gbps Ethernet IOA</li> <li>▶ #5701 PCI 1 Gbps Ethernet UTP IOA</li> <li>▶ #5702 PCI-X Ultra Tape Controller</li> <li>▶ #5703 PCI-X RAID Disk Unit Controller</li> <li>▶ #5704 PCI-X Fibre Channel Tape Controller</li> <li>▶ #5705 PCI-X Tape/DASD Controller</li> <li>▶ #5712 PCI-X Tape/DASD Controller</li> <li>▶ #5715 PCI-X Tape/DASD Controller</li> <li>▶ #9748 Base PCI RAID Disk Unit Controller</li> <li>▶ #9767 Base PCI Disk Unit Controller</li> <li>▶ #9771 Base PCI 2-Line WAN with integrated modem</li> <li>▶ #9778 Base PCI RAID Disk Unit Controller</li> <li>▶ #9793 2-Line WAN IOA with Modem</li> <li>▶ #9794 2-Line IOA with Modem</li> <li>▶ #9812 Base PCI Integrated xSeries Server</li> <li>▶ #9813 PCI Integrated xSeries Server</li> </ul> <p>Placement considerations (maximums) for the #2844 include:</p> <ul style="list-style-type: none"> <li>▶ Up to two in the Model 270 system units</li> <li>▶ Five in the 820 system tower</li> <li>▶ Up to five in the Model 820 system unit</li> <li>▶ Four in the base I/O tower of the Model 830 and 840</li> <li>▶ Up to four in the Model 830, 840 system units</li> <li>▶ Three in a #5075 PCI Expansion Tower</li> <li>▶ Two in an #0595/#5095 PCI-X Expansion Tower</li> <li>▶ Two can be added to the base #9844 PCI IOP in the #0595/#5095 PCI-X Expansion Tower</li> <li>▶ Five in a #5074 PCI Expansion Tower and #5094 PCI-X Expansion Tower</li> <li>▶ Up to five can be added to the base #9844 PCI IOP in a #5074/#5094</li> <li>▶ Six in an #0578, #0588, #5078, or #5088 PCI-X Expansion Unit</li> <li>▶ Up to six can be added in the #0578/#5078 and #0588/#5088</li> <li>▶ 10 in a #5079 1.8 M I/O Tower and #5294 1.8 m I/O Tower</li> <li>▶ Up to 10 can be added to a #5079/#5294</li> </ul> <p>Minimum operating system level: OS/400 V5R2</p> <p>The #281x ATM, #2750, #2751, #2761, and #4761 are not supported after OS/400 V5R2.</p> <p>The #2844 is a Customer Install Feature</p>
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#2790 #2791 #2799	<p><b>#2790 PCI Integrated Netfinity Server, #2791 PCI Integrated xSeries Server and #2799 PCI Integrated xSeries Server</b></p> <p>The #2790 PCI Integrated Netfinity Server contains a 700 MHz processor. The #2791 PCI Integrated xSeries Server contains an 850 MHz processor. The #2799 PCI Integrated xSeries Server contains a 1.0 GHz Intel Pentium III processor. Each processor contains four memory slots in the xSeries IOP.</p> <p>The #2790, #2791, or #2799 is supported in the system unit of the Models 820, 830, and 840, and #5074 PCI Expansion Tower, #5075 PCI Expansion Tower, #5078 PCI Expansion Unit, #0588/#5088 PCI-X Expansion Unit, and #5079 1.8 M I/O Towers.</p> <p>Each main storage slot of the #2790, #2791, or #2799 server can contain either a 128 MB, 256 MB, or 1024 MB xSeries server main storage card, providing a total server main storage capacity ranging from 128 MB to 4096 MB (4 GB). A minimum of one main storage card is required on the xSeries IOP. A maximum of 3712 MB of memory is addressable.</p> <p>Allowable main storage increments in MB are 128, 256, 384, 512, 640, 768, 896, 1024, 1152, 1280, 1408, 1536, 1664, 1792, 2048, 2176, 2304, 2432, 2560, 3072, 3200, 3328, and 4096.</p> <p>The following main storage cards provide server memory for the #2790, #2791, or #2799 when installed in a Model 820, 830, and 840 system unit or attachable HSL towers:</p> <ul style="list-style-type: none"> <li>▶ #2795 - 128 MB server memory (withdrawn from marketing on 19 November 2004)</li> <li>▶ #2796 - 256 MB server memory (withdrawn from marketing on 19 November 2004)</li> <li>▶ #2797 - 1 GB server memory (withdrawn from marketing on 01 June 2006)</li> <li>▶ #2895 - 128 MB server memory (Withdrawn from marketing on 19 November 2004 for new orders only. Conversions to feature remain.)</li> <li>▶ #2896 - 256 MB server memory (Withdrawn from marketing on 19 November 2004 for new orders only. Conversions to feature remain.)</li> </ul> <p>The #2790, #2791, and #2799 can support PCI 100/16/4 Mbps Token Ring IOAs, PCI 100/10 Mbps Ethernet IOAs, or PCI 1 Gbps Ethernet IOAs in any combination. A minimum of one LAN IOA is required. The supported LAN IOA features are:</p> <ul style="list-style-type: none"> <li>▶ #2743 1 Gbps PCI Ethernet IOA</li> <li>▶ #2744 PCI 100 Mbps Token Ring IOA</li> <li>▶ #2760 PCI 1 Gbps Ethernet UTP Adapter</li> <li>▶ #4838 PCI 100/10 Mbps Ethernet IOA</li> </ul> <p>A #0223 100 Mbps Token-Ring specify code is required on the Integrated xSeries Server for each #2744 selected to run on the #2790, #2791, or #2799.</p> <p>A #0224 100/10 Mbps Ethernet specify code is required on the Integrated xSeries Server for each #4838 selected to run on the #2790, #2791, or #2799.</p> <p>A #0225 1 Gbps Ethernet specify code is required on the Integrated xSeries Server for each #2743/#2760 selected to run on the #2790, #2791, or #2799.</p> <p>Up to three IOA LAN features are supported by the #2790, #2791, or #2799, depending on which system or expansion tower position the #2790, #2791, or #2799 is placed. The #2790, #2791, and #2799 require three PCI card slots on the Model 820, 830, or 840 system unit backplane. One slot is consumed. The second slot is unusable. The third slot is reduced to a short card slot which is then used by the first attached LAN IOA card.</p> <p>The #2790, #2791, and #2799 do not require a #2843 or #9943. However, placement is limited to specific slots within the specific system tower and expansion tower.</p> <p>The #2790, #2791, and #2799 support only the Windows NT, Windows 2000 and Windows Server 2003 operating systems. The Windows 2003 Server operating system is supported at OS/400 V5R2 with PTFs.</p> <p>The following rules apply:</p> <ul style="list-style-type: none"> <li>▶ #0325 IPCS Extension Cable for Windows is the default but can be removed.</li> <li>▶ #1700 IPCS Keyboard or Mouse for Windows is the default in those countries or regions offering it.</li> <li>▶ A display must be connected to the #2790 PCI Integrated Netfinity Server to support Windows.</li> <li>▶ Windows NT is not supported after OS/400 V5R2. Upgrade to Windows 2000.</li> </ul> <p>For a non-U.S. keyboard, mouse and display, see:  <a href="http://www.ibm.com/eserver/iseries/integratedxseries/">http://www.ibm.com/eserver/iseries/integratedxseries/</a></p>
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#2790 #2791 #2799 (cont.)	<p><b>#2790 PCI Integrated Netfinity Server, #2791 PCI Integrated xSeries Server and #2799 PCI Integrated xSeries Server</b></p> <p>Native OS/400 functions are not supported.  The #2790, #2791, and #2799 do not support an external host LAN.  The #2849 is not supported on any Integrated Netfinity Server/Integrated xSeries Server.</p> <p>Refer to <i>PCI Card Placement Rules for the IBM @server iSeries Server Version 5 Release 2</i>, REDP-3638 for additional restrictions.</p> <p>Windows NT is not supported after OS/400 V5R2. Upgrade to Windows 2000.  Minimum operating system to support #2743 or #2760 on the #2790, #2791, or #2799: OS/400 V5R1  Minimum operating system level:    #2790/#2791 - V4R5 with Cumulative Package C1005450    #2799 - V5R1 with PTFs identified in Information APAR II13105 at:    <a href="http://www.ibm.com/eserver/iseries/support">http://www.ibm.com/eserver/iseries/support</a></p> <p>The #2790, #2791, or #2799 are Customer Install Features or an IBM Service Representative install features depending upon card placement.</p> <p>The #2799 was withdrawn from marketing on 21 November 2003.</p>
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<p>#2792 #9792</p>	<p><b>#2792 PCI Integrated xSeries Server</b></p> <p>The #2792 PCI Integrated xSeries Server contains a 1.6 GHz processor and four memory slots in the xSeries IOP. The #9792 includes two #9726 server memory features (must be ordered as a pair). The #9792 is allowed only on new systems that have sufficient PCI slots for manufacturing to place the feature within the system.</p> <p>Each server memory slot of the #2792 PCI Integrated xSeries Server can contain either a 512 MB server memory card or 1024 MB server memory card. A minimum of two server memory cards are required in the xSeries IOP and must be installed in identical pairs. Allowable main storage increments in MB are 1024, 2048, 3072, and 4096. A minimum of 1 GB xSeries IOP memory is required.</p> <p>The following server memory cards provide memory for the #2792 PCI Integrated xSeries Server:</p> <ul style="list-style-type: none"> <li>▶ #0426 - 512 MB Server Memory (withdrawn from marketing on 01 June 2006)</li> <li>▶ #0427 - 1 GB Server Memory (withdrawn from marketing on 01 June 2006)</li> <li>▶ #9726 - Base 512 MB server memory (available only on the #9792 Base PCI Integrated xSeries Server)</li> </ul> <p>The #2792 PCI Integrated xSeries Server includes one embedded 100/10 Mbps Ethernet LAN controller. The #2792 PCI Integrated xSeries Server can be ordered without any further LAN cards, but supports up to three LAN IOAs in any combination depending on which slot the #2792 is placed. The features for the LAN IOAs are:</p> <ul style="list-style-type: none"> <li>▶ #2744 PCI 100 Mbps Token Ring IOA</li> <li>▶ #5700 PCI 1 Gbps Ethernet IOA</li> <li>▶ #5701 PCI 1 Gbps Ethernet UTP IOA</li> </ul> <p>One #0223 100 Mbps Token-Ring Specify is required for each #2744 selected to run on the #2792. One #0226 1 Gbps Ethernet Specify code is required for each #5700 or #5701 selected to run on the #2792.</p> <p>The #2792 does not require a #2843, #2844, #9943, or #9844 IOP. Placement is limited to specific slots within the system towers and expansion towers. The #2792 requires two PCI slots and does not extend into a third slot. The #2792 ships with a keyboard or mouse splitter cable and can support either a standard or USB 1.1 keyboard or mouse. The #2792 PCI Integrated xSeries Server supports only the Windows 2000 Server and Windows 2003 Server operating systems. Windows 2003 Server operating system is supported with PTFs V5R2 and higher.</p> <p>The following rules apply:</p> <ul style="list-style-type: none"> <li>▶ #0325 IPCS Extension Cable for Windows is the default (but can be removed).</li> <li>▶ #1700 IPCS Keyboard/Mouse for Windows is the default (in those countries or regions offering it).</li> <li>▶ A display must be connected to the Integrated xSeries Server to support Windows.</li> </ul> <p>For a non-U.S. keyboard or mouse and display, see: <a href="http://www.ibm.com/eserver/iseries/integratedxseries/">http://www.ibm.com/eserver/iseries/integratedxseries/</a></p> <p>Native OS/400 functions are not supported. The #2792 does not support external host LAN. The #2849 10/100 Mbps Ethernet Adapter is not supported on the #2792/#9792 Base PCI Integrated xSeries Server.</p> <p>Supported in the system unit of Models 820, 830, and 840, and in the following towers: #5074 PCI Expansion Tower, #5075 PCI Expansion Tower, #0578/#5078 PCI Expansion Unit, #5079 1.8 M I/O Tower, #0588/#5088 PCI-X Expansion Unit, #5094 PCI-X Expansion Tower, #0595/#5095 PCI-X Expansion Tower, and #5294 1.8 m I/O Tower. Minimum operating system level: OS/400 V5R2</p> <p>Card placement determines whether #2792 is a Customer Install Feature or an IBM Service Representative install feature. The #2792 and #9792 are withdrawn from marketing on 01 January 2004.</p>
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#2892	<p><b>#2892 PCI Integrated xSeries Server</b></p> <p>The #2892 PCI Integrated xSeries Server contains a 1.6 GHz processor and four memory slots in the xSeries IOP.</p> <p>Each server memory slot of the #2892 PCI Integrated xSeries Server can contain either a 512 MB server memory card or a 1024 MB server memory card, providing allowable main storage options of 1024 MB, 2048 MB, 3072 MB, and 4096 MB. All server memory cards must be installed in identical pairs.</p> <p>The following main storage cards provide memory for the #2892 PCI Integrated xSeries Server:</p> <ul style="list-style-type: none"> <li>▶ #0446 - 512 MB Server Memory</li> <li>▶ #0447 - 1 GB Server Memory</li> </ul> <p>The #2892 PCI Integrated xSeries Server includes one embedded 100/10 Mbps Ethernet LAN controller. The #2892 can be ordered without any further LAN cards. The #2892 supports up to three, in any combination (depending into which system or expansion tower position the #2892 is placed), of the following LAN IOA features:</p> <ul style="list-style-type: none"> <li>▶ #2744 PCI 100 Mbps Token Ring IOA</li> <li>▶ #5700 PCI 1 Gbps Ethernet IOA</li> <li>▶ #5701 PCI 1 Gbps Ethernet UTP IOA</li> </ul> <p>One #0223 100 Mbps Token-Ring Specify is required for each #2744 selected to run on the #2892. One #0226 1 Gbps Ethernet Specify is required for each #5700 or #5701 selected to run on the #2892.</p> <p>The #2892 PCI Integrated xSeries Server does not require a #2843, #2844, #9943 or #9944 IOP, but placement is limited to specific slots within the various system towers and expansion towers. The #2892 requires two PCI slots and does not extend into a third slot. The #2892 supports only the Windows 2000 Server and the Windows.NET Server operating systems. The #2892 ships with a standard keyboard/mouse splitter cable, and can support either a standard or USB 1.1 keyboard, mouse, or both.</p> <p>The following rules apply:</p> <ul style="list-style-type: none"> <li>▶ #0325 (IPCS Extension Cable for Windows) is the default (but can be removed).</li> <li>▶ #1700 (IPCS Keyboard/Mouse for Windows) is the default (in those countries or regions offering it).</li> <li>▶ A display must be connected to the #2790 PCI Integrated Netfinity Server to support Windows.</li> </ul> <p>For a non-U.S. keyboard, mouse and display, see: <a href="http://www.ibm.com/eserver/iseries/integratedxseries/">http://www.ibm.com/eserver/iseries/integratedxseries/</a></p> <p>Native OS/400 functions are not supported. The #2892 PCI Integrated xSeries Server does not support external host LAN. The #2849 10/100 Mbps Ethernet Adapter is not supported on the #2892. Minimum operating system level: OS/400 V5R2 Card placement determines whether the #2892 is a Customer Install Feature or an IBM Service Representative install feature.</p> <p>The #2892 was withdrawn from marketing on 01 January 2004.</p>
#4710 #4810 #9710	<p><b>#4710/#4810/#9710 PCI Integrated xSeries Server</b></p> <p>The #4710, #4810, or #9710 PCI Integrated xSeries Servers have 2 GHz processor and four memory slots. Each server memory slot can contain one of the following features, providing a total main storage capacity from 1024 MB to 4096 MB. The feature numbers of the server memory cards are:</p> <ul style="list-style-type: none"> <li>▶ #0426/#9726 - 512 MB Server Memory (withdrawn from marketing on 01 June 2006)</li> <li>▶ #0427 - 1 GB Server Memory (withdrawn from marketing on 01 June 2006)</li> </ul> <p>A minimum of two server memory cards are required and must be installed in identical capacity pairs. On model upgrades or MES orders, a #4710/#4810 can be ordered without memory features if usable supported memory features already exist on the installed system.</p> <p>The #4710, #4810, or #9710 includes one embedded 100/10 Mbps Ethernet LAN controller. The following LAN IOAs are supported in combination:</p> <ul style="list-style-type: none"> <li>▶ #2744 PCI 100 Mbps Token Ring IOA</li> <li>▶ #5700 PCI 1 Gbps Ethernet IOA</li> <li>▶ #5701 PCI 1 Gbps Ethernet UTP IOA</li> </ul> <p>The #4710/#4810 can be ordered without any LAN IOA features.</p>

#4710 #4810 #9710 (cont.)	<p><b>#4710/#4810/#9710 PCI Integrated xSeries Server</b></p> <p>When a LAN feature is used in conjunction with a #4710, the following ordering rules apply:</p> <ul style="list-style-type: none"> <li>▶ One #0223 100 Mbps Token-Ring Specify is required for each #2744 driven.</li> <li>▶ One #0226 1 Gbps Ethernet Specify is required for each #5700/#5701 driven.</li> <li>▶ Up to three IOA LAN features can be supported by the #4710/#4810, depending on the system unit or tower position into which the #4710, #4810, or #9710 is placed.</li> <li>▶ Native OS/400 functions are not supported.</li> </ul> <p>The #4710, #4810, or #9710 do not support external host LAN.</p> <p>The #4710, #4810, or #9710 do not require a #2843, #2844, #9943 or #9844. Placement is limited to specific slots within the selected system unit and expansion tower. The #4710, #4810, or #9710 require two PCI card slots, and do not hang over a third slot. The #4710, #4810, or #9710 ship with a standard keyboard and mouse splitter cable and can support either standard or USB 1.1 keyboard, mouse, or both. Windows 2000 Server with PTFs and Windows 2003 Server operating systems are supported.</p> <p>The following apply:</p> <ul style="list-style-type: none"> <li>▶ #0325 (IPCS Extension Cable for Windows) is the default (but can be removed).</li> <li>▶ A minimum of 1 GB server memory is required.</li> <li>▶ #1700 (IPCS keyboard or mouse for Windows) is default (in countries offering it).</li> <li>▶ A display must be connected to the Integrated Server to support Windows.</li> </ul> <p>For a non-US keyboard/mouse and display, see:  <a href="http://www.ibm.com/eserver/iseries/integratedxseries/">http://www.ibm.com/eserver/iseries/integratedxseries/</a></p> <p>The #4710/#9710 is supported in the system unit of Models 820, 830, and 840. It is also supported in the following expansion towers when attached to these models: #0578, #0588, #0595, #5074, #5075, #5078, #5079, #5088, #5094, #5095, and #5294, #8079, and #9079.</p> <p>The #9710 is supported in the following expansion towers when attached to the #0578, #0588, #0595, #5074, #5075, #5078, #5079, #5088, #5094, #5095, and #5294 Expansion Towers.</p> <p>Minimum operating system level: OS/400 V5R2 with PTFs identified in Information APAR II13609 at:  <a href="http://www.ibm.com/eserver/iseries/support">http://www.ibm.com/eserver/iseries/support</a></p> <p>The #4710 is the recommended replacement for the #2792 PCI Integrated xSeries Server.  The #4810 is the recommended replacement for the #2892 PCI Integrated xSeries Server.  The #4710, #4810 and #9710 were withdrawn from marketing on 01 June 2006. The #4812 PCI Integrated xSeries Server is the recommended replacement.</p>
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## 7.6 Workstation controllers and console features

Workstation controllers and console features	
#4746 #9746	<p><b>#4746 PCI Twinaxial IOA</b></p> <p>The #4746 PCI Twinaxial IOA provides support for up to 40 active twinaxial displays and printers addresses or up to 120 active shared sessions. A 20-ft (6.2 m) cable with an eight-port expansion (breakout) box is included with this adapter. Each port supports seven attached devices, allowing for 56 total attached devices, of which only 40 can be active.</p> <p>The #9746 Base PCI Twinaxial IOA is allowed only on new systems. If the client does not select the feature on the initial order, they are not entitled to receive the feature in the future. The #9746 has a prerequisite of an #0864 and #7400.</p> <p>Supported in Models 820, 830, and 840  The #4746 is a Customer Install Feature.  The #9746 was withdrawn from marketing on 01 October 2005.</p>
#5540	<p><b>#5540 System Console on Twinaxial Workstation IOA</b></p> <p>A system console specify code must be selected on each new order. When the #5540 is on the order, the system console is driven by a #4746 PCI Twinaxial IOA.</p> <p>Supported on Models 820, 830, 840</p>

#5544	<p><b>#5544 System Console on Operations Console</b></p> <p>A system console specify code must be selected on each new order. When a #5544 is on the order, the system console can be connected to a #0367 Operations Console PCI Cable attached to a #4745 PCI 2-line WAN IOA or a #9771/#9793/#9794 Base PCI 2-Line WAN with integrated modem.</p> <p>Supported on Models 820, 830, 840</p>
#5546	<p><b>#5546 System Console on 100 Mbps Token Ring</b></p> <p>A system console specify code must be selected on each new order. When the #5546 is on the order, the system console is LAN attached to a #2744 PCI 100 Mbps Token Ring IOA. This LAN adapter must be dedicated to console functions and cannot be used for any other purpose.</p> <p>Corequisite: One #0367 Operations Console PCI Cable on the order or present on the system. One #0367 per system is sufficient, regardless of the number of "LAN consoles" (with LPAR) defined per system.</p> <p>Supported on Models 820, 830, 840</p> <p>Minimum operating system level: OS/400 V5R1</p>
#5548	<p><b>#5548 System Console on 100 Mbps Ethernet</b></p> <p>A system console specify code must be selected on each new order. When the #5548 is on the order, the system console is LAN attached to a #4838 PCI 100/10 Mbps Ethernet IOA or a #2849 10/100 Mbps Ethernet Adapter. This LAN adapter must be dedicated to console functions and cannot be used for any other purpose.</p> <p>Corequisite: One #0367 Operations Console PCI Cable on the order or present on the system. One #0367 per system is sufficient, regardless of the number of "LAN consoles" (with LPAR) defined per system.</p> <p>Supported on Models 820, 830, 840</p> <p>Minimum operating system level: OS/400 V5R1</p>

## 7.7 LAN and WAN adapters

LAN and WAN adapters	
Comm. Restrictions	See "Comm. Restrictions" on page 103, for communications rules and restrictions. See <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i> , REDP-3638 for further placement rules.
#2742	<p><b>#2742 2-Line WAN IOA</b></p> <p>The #2742 2-Line WAN IOA is a WAN IOA that supports up to two multiple protocol communications (RVX) ports when one or two (in any combination) of the following cables are attached. Select one of the following cables to attach to port 1 or 2 (RVX port):</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft (15 m) PCI cable</li> <li>▶ #0353 V.35 20-ft PCI cable</li> <li>▶ #0354 V.35 50-ft PCI cable</li> <li>▶ #0355 V.35 80-ft/24 m PCI cable</li> <li>▶ #0356 V.36 20-ft PCI cable</li> <li>▶ #0358 V.36 150-ft/45 m PCI cable</li> <li>▶ #0359 X.21 20-ft PCI cable</li> <li>▶ #0360 X.21 50-ft PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> <li>▶ #0367 Operations Console PCI Cable</li> </ul> <p>The #0367 cable ships with a 25-pin to 9-pin adapter. When #0140 Logical Partitioning Specify is ordered, multiple #0367 cables can be ordered to connect the operations console in each partition. One #0367 cable per #2742.</p> <p>When #2742 is selected to support ECS, one of following cables must be specified:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft (15 m) PCI cable</li> <li>▶ #0367 Operations Console PCI Cable</li> </ul> <p>The #2742 can be attached directly to a Linux partition. When ordered as #0613 - Direct Attach - #2742 PCI 2-Line WAN IOA, an IOP is not required. When attached directly to a Linux partition, the #2742 cannot be accessed by OS/400 partitions.</p> <p>The #2742 does not support Remote Power On.  Minimum operating system level: OS/400 V5R2  The #2742 is a Customer Install Feature.</p>

#2743	<p><b>#2743 1 Gbps PCI Ethernet IOA</b></p> <p>The #2743 PCI 1 Gbps Ethernet IOA feature allows the iSeries server to attach to IEEE standard 802.3Z high speed Ethernet LANs (1 Gbps). It can also be used to connect to existing 100 Mbps Ethernet LANs using switches with 10/100/1000 Mbps ports.</p> <p>The adapter supports multi-mode fiber media attachment to client-supplied cabling. The multi-mode interface has a 62.5/125 micron or 50.0/125 micron cable requirement with an SC connector.</p> <p>The #2743 requires a gigabit-capable switch with at least one port that supports a 1000BASE-SX interface with IEEE 802.3z and 802.3u compliance. It supports only a multi-mode fiber optic cable connection from the adapter to the switch. The #2743 supports 1000 Mbps (1 Gbps) full duplex interface only. Cannot negotiate down to a lower speed. Stations on the 10 Mb and 100 Mb switched LANs can communicate with the #2743 with a switch that is capable of handling all these speeds. In this case, the switch handles the speeds.</p> <p>If a #2743 is controlled by a #2790, #2791, or #2799, then one specify code #0225 1 Gbps Ethernet Specify must be ordered for each #2743 controlled by an Integrated Server. It can be attached directly to a Linux partition. When ordered as #0601 - Direct Attach - #2743 PCI 1 Gbps Ethernet IOA, an IOP is not required. When attached directly to a Linux partition, the #2743 cannot be accessed by OS/400 partitions.</p> <p>Requires a 64-bit card slot.          Protocols supported: TCP/IP only; SNA and IPX connections are not supported          Maximum: One per Multi-adapter Bridge Boundary          Minimum operating system level: OS/400 V4R5          Minimum operating system level when used with the #2790/#2791: OS/400 V4R5 with Cumulative PTF Package C1005450          Minimum operating system level when used with the #2799: OS/400 V5R1 with PTFs identified in Information APAR II13105 at:  <a href="http://www.ibm.com/eserver/iseries/support">http://www.ibm.com/eserver/iseries/support</a></p> <p>The #2743 is a Customer Install Feature.          The #2743 was withdrawn from marketing on 01 October 2004. The recommended replacement is #5700</p>
#2744	<p><b>#2744 PCI 100 Mbps Token Ring IOA</b></p> <p>The #2744 PCI 100 Mbps Token Ring IOA provides a single attachment to a 100 Mbps, 16 Mbps, or 4 Mbps IBM Token Ring Network. The feature consists of an IOA card, with internal code that supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions. The 100/16/4 Token Ring IOA is capable of operating in half or full duplex mode. A 2.44 m (8 ft) Token Ring Type 1 cable is included with the #2744. As an alternative, the client can attach a separately priced twisted pair cable to the RJ45 connection on the IOA. IBM Cabling System patch cables, included with the #2744, can increase the length as required. If the #2744 is selected to run on the #2790 PCI Integrated Netfinity Server or the #2791/#2799 PCI Integrated xSeries Server, a #0223 100 Mbps Token-Ring Specify is required for each #2744 selected to run on the #2790, #2791, or #2799.</p> <p>The #2744 can be attached directly to a Linux partition. When ordered as #0603 - Direct Attach - #2744 PCI 100 Mbps Token-Ring IOA, an IOP is not required. When attached directly to a Linux partition, the #2744 cannot be accessed by OS/400 partitions.          Minimum operating system level: OS/400 V4R5          The #2744 is a Customer Install Feature.          The #2744 was withdrawn from marketing on 01 June 2006.</p>

#2760	<p><b>#2760 PCI 1 Gbps Ethernet UTP Adapter</b></p> <p>The #2760 PCI 1 Gbps Ethernet UTP Adapter feature allows the iSeries server to attach to IEEE standard 802.3Z high-speed Ethernet LANs (1 Gbps) to provide a significant performance improvement over other LAN solutions. The adapter supports a UTP CAT 5 media interface. When driven by a #2843 PCI IOP, this adapter only supports TCP/IP. This adapter can directly attach to 10 Mbps or 100 Mbps networks. The #2760 is supported by a #2790/#2791/#2799 PCI Integrated xSeries Server. If a #2760 is controlled by a #2790, #2791, or #2799, then one specify code #0225 1 Gbps Ethernet Specify must be ordered for each #2760 controlled by an Integrated Server.</p> <p>Maximum: One per Multi-adapter Bridge Boundary. Ignore this maximum for any #2760 controlled (driven) by an Integrated xSeries Server. Combinations of Integrated Server controlled and PCI IOP controlled #2760s within Multi-adapter Bridge boundaries are permitted.</p> <p>The #2760 can be attached directly to a Linux partition. When ordered as #0602 - Direct Attach - #2760 PCI 1 Gbps Ethernet UTP IOA, an IOP is not required. When attached directly to a Linux partition, the #2760 cannot be accessed by OS/400 partitions.</p> <p>PCI slots required: One 64-bit.  There are exceptions for 32-bit slot placement in the Model 820 system unit.  Supports TCP/IP only. SNA and IPX connections are not supported.  Minimum operating system level: OS/400 V5R1  The #2760 is a Customer Install Feature.  The #2760 was withdrawn from marketing on 01 October 2004. The recommended replacement is a #5701 PCI 1 Gbps Ethernet UTP IOA.</p>
#2772	<p><b>#2772 PCI Dual WAN/Modem IOA</b></p> <p>The #2772 PCI Dual WAN/Modem IOA is a 2-line WAN adapter, with two ports (RJ11) supporting V.90 56K Async PPP and Fax applications at data rates up to 14.4K with internal modems. Telephone cable is used to connect to the V.90 port. This is the non-Complex Impedence Matching (CIM) version of the #2772/#2773 card.</p> <p>The #2772 can be attached directly to a Linux partition. When ordered as #0609 - Direct Attach - #2772 PCI Dual WAN/Modem IOA, an IOP is not required. When attached directly to a Linux partition, the #2772 cannot be accessed by OS/400 partitions.</p> <p>The #2772 does <i>not</i> ship with country- or region-specific telephone cables. A minimum of one modem cable, or a maximum of two, must be selected/ordered for each #2772. All modem cables ordered or present on a system must be the same feature number.</p> <ul style="list-style-type: none"> <li>▶ #1010 Modem Cable-Austria</li> <li>▶ #1011 Modem Cable-Belgium</li> <li>▶ #1012 Modem Cable-Africa</li> <li>▶ #1013 Modem Cable-Israel</li> <li>▶ #1014 Modem Cable-Italy</li> <li>▶ #1015 Modem Cable-France</li> <li>▶ #1016 Modem Cable-Germany</li> <li>▶ #1017 Modem Cable-United Kingdom</li> <li>▶ #1018 Modem Cable-Iceland/Sweden</li> <li>▶ #1021 Modem Cable-Finland/Norway</li> <li>▶ #1022 Modem Cable-Netherlands</li> <li>▶ #1023 Modem Cable-Swiss</li> <li>▶ #1024 Modem Cable-Denmark</li> <li>▶ #1025 Modem Cable-U.S./Canada</li> </ul> <p>The feature is country- or region-specific.  Remote ring indicate is not supported.  PCI card slots required: One  Minimum operating system level: OS/400 V5R1  The #2772 is a Customer Install Feature.</p> <p>The #2772 was withdrawn from marketing on 01 June 2006.</p>

#2773	<p><b>#2773 PCI Dual WAN/Modem IOA</b></p> <p>The #2773 is a 2-line WAN adapter, with two ports (RJ11) supporting V.90 56K Async PPP and Fax applications at data rates up to 14.4K with internal modems. Telephone cable is used to connect to the V.90 ports. This is the CIM version of this #2772/#2773 card.</p> <p>The #2773 can be attached directly to a Linux partition. When ordered as #0610 - Direct Attach - #2773 PCI Dual WAN/Modem IOA, an IOP is not required. When attached directly to a Linux partition, the #2773 cannot be accessed by OS/400 partitions.</p> <p>The #2773 does <i>not</i> ship with country- or region-specific telephone cables. A minimum of one modem cable, or maximum of two, must be selected or ordered for each #2773. All modem cables ordered or present on a system must be the same feature number.</p> <ul style="list-style-type: none"> <li>▶ #1019 Modem Cable-Australia</li> <li>▶ #1020 Modem Cable-China (Hong Kong S.A.R.)/New Zealand</li> </ul> <p>The feature is country- or region-specific. Remote ring indicate is not supported. PCI card slots required: One Minimum operating system level: OS/400 V5R1 The #2773 is a Customer Install Feature.</p>
#2793 #9793	<p><b>#2793 2-Line WAN IOA with Modem</b></p> <p>The #2793/#9793 is a 2-line WAN with modem adapter and is the non-CIM version that is offered in all countries or regions except Australia and New Zealand. Port 0 is the modem port and supports V.92 56K Async PPP, V.92 data modem, V.44 data compression, and V.34 Fax modem and Fax functions such as ECM and 2D/1D conversion. Port 0 does not provide sync modem capabilities (SDLC and Sync PPP). Port 1 is the RVX port and supports multiple communications protocols.</p> <p>The #2793 can be attached directly to a Linux partition. When ordered as #0614 - Direct Attach - #2793 PCI 2-Line WAN with Modem, an IOP is not required. When attached directly to a Linux partition, the #2793 cannot be accessed by OS/400 partitions.</p> <p>Select one of the following cables to attach to port 0 (modem port):</p> <ul style="list-style-type: none"> <li>▶ #1010 Modem Cable-Austria</li> <li>▶ #1011 Modem Cable-Belgium</li> <li>▶ #1012 Modem Cable-Africa</li> <li>▶ #1013 Modem Cable-Israel</li> <li>▶ #1014 Modem Cable-Italy</li> <li>▶ #1015 Modem Cable-France</li> <li>▶ #1016 Modem Cable-Germany</li> <li>▶ #1017 Modem Cable-United Kingdom</li> <li>▶ #1018 Modem Cable-Iceland/Sweden</li> <li>▶ #1021 Modem Cable-Finland/Norway</li> <li>▶ #1022 Modem Cable-Netherlands</li> <li>▶ #1023 Modem Cable-Swiss</li> <li>▶ #1024 Modem Cable-Denmark</li> <li>▶ #1025 Modem Cable-U.S./Canada</li> </ul> <p>Select one of the following cables to attach to port 1 (RVX port):</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft (15 m) PCI cable</li> <li>▶ #0353 V.35 20-ft PCI cable</li> <li>▶ #0354 V.35 50-ft PCI cable</li> <li>▶ #0355 V.35 80-ft/24 m PCI cable</li> <li>▶ #0356 V.36 20-ft PCI cable</li> <li>▶ #0358 V.36 150-ft/45 m PCI cable</li> <li>▶ #0359 X.21 20-ft PCI cable</li> <li>▶ #0360 X.21 50-ft PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> <li>▶ #0367 Operations Console PCI Cable</li> </ul>



#2793 #9793 (cont.)	<p><b>#2793 2-Line WAN IOA with Modem</b></p> <p>The #0367 cable ships with a 25-pin to 9-pin adapter.</p> <p>When #0140 logical partitioning is specified, multiple #0367 cables can be ordered to connect the operations console in each partition.</p> <p>ECS is supported from the RVX port and one of the following cables is required to support ECS: #0348, #0349, or #0365. ECS is supported from the Modem port (OS/400 V5R1 or later).</p> <p>#2793 2-Line WAN IOA with Modem</p> <p>The #2793 does not support the remote ring indicate function.</p> <p>For further configuration information, see:  <a href="http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm">http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm</a></p> <p>See the "Soft rules: iSeries IOA requirements" topic in <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i>, REDP-3638 for additional restrictions.</p> <p>Minimum operating system level: OS/400 V5R2</p> <p>The #2793 is a Customer Install Feature.</p>
#2794 #9794	<p><b>#2794 2-Line WAN IOA with Modem</b></p> <p>The #2794/#9794 is a 2-line WAN with modem adapter and is the CIM version that is offered only in Australia and New Zealand. Port 0 is the modem port and supports V.92 56K Async PPP, V.92 data modem, V.44 data compression, and V.34 Fax modem and Fax functions such as ECM and 2D/1D conversion. Port 0 does not provide sync modem capabilities (SDLC and Sync PPP). Port 1 is the RVX port and supports multiple communications protocols</p> <p>The #2794 can be attached directly to a Linux partition. When ordered as #0615 - Direct Attach - #2794 PCI 2-Line WAN with Modem, an IOP is not required. When attached directly to a Linux partition, the #2794 cannot be accessed by OS/400 partitions.</p> <p>Select one of the following cables to attach to port 0 (modem port):</p> <ul style="list-style-type: none"> <li>▶ #1019 Modem Cable-Australia</li> <li>▶ #1020 Modem Cable-China (Hong Kong S.A.R.)/New Zealand</li> </ul> <p>Select one of the following cables to attach to port 1 (RVX port): #0348, #0349, #0353, #0354, #0356, #0359, #0360, #0365 or #0367. Select one of the following cables to attach to port 1 (RVX port):</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft (15 m) PCI cable</li> <li>▶ #0353 V.35 20-ft PCI cable</li> <li>▶ #0354 V.35 50-ft PCI cable</li> <li>▶ #0355 V.35 80-ft/24 m PCI cable</li> <li>▶ #0356 V.36 20-ft PCI cable</li> <li>▶ #0358 V.36 150-ft/45 m PCI cable</li> <li>▶ #0359 X.21 20-ft PCI cable</li> <li>▶ #0360 X.21 50-ft PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> <li>▶ #0367 Operations Console PCI Cable</li> </ul> <p>The #0367 cable ships with a 25-pin to 9-pin adapter.</p> <p>When #0140 logical partitioning is specified, multiple #0367 cables can be ordered to connect the operations console in each partition.</p> <p>ECS is supported from the RVX port and one of the following cables is required to support ECS; #0348, #0349 or #0365. ECS is supported from the Modem port (OS/400 V5R1 or later).</p> <p>The #2794 does not support the remote ring indicate function.</p> <p>For further configuration information, see:  <a href="http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm">http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm</a></p> <p>See the "Soft rules: iSeries IOA requirements" topic in <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i>, REDP-3638 for additional restrictions.</p> <p>Minimum operating system level: OS/400 V5R2</p> <p>The #2794 is a Customer Install Feature.</p>

#2805	<p><b>#2805 PCI Quad Modem IOA</b></p> <p>The #2805 is a 4-line WAN adapter with four WAN ports with internal modems. Telephone cable (RJ-11) is used to connect to the ports. This is the non-CIM version of the IOA.</p> <p>Supported protocols are:</p> <ul style="list-style-type: none"> <li>▶ V.92 56 K Async PPP</li> <li>▶ Fax applications at data rates up to 33.6 K</li> </ul> <p>The V.92 functions offer increased upload throughput, improved V.44 data compression, and shortened modem synchronization periods.</p> <p>The #2805 can be attached directly to a Linux partition. When ordered as #0616 - Direct Attach - #2805 PCI Quad Modem IOA, an IOP is not required. When attached directly to a Linux partition, the #2805 cannot be accessed by OS/400 partitions.</p> <p>Corequisite: Country- or region-specific telephone cables must be ordered. A minimum of one modem cable and a maximum of four must be selected for each #2805. All modem cables on a system must be the same feature number. The supported modem cables are:</p> <ul style="list-style-type: none"> <li>▶ #1010 Modem Cable-Austria</li> <li>▶ #1011 Modem Cable-Belgium</li> <li>▶ #1012 Modem Cable-Africa</li> <li>▶ #1013 Modem Cable-Israel</li> <li>▶ #1014 Modem Cable-Italy</li> <li>▶ #1015 Modem Cable-France</li> <li>▶ #1016 Modem Cable-Germany</li> <li>▶ #1017 Modem Cable-United Kingdom</li> <li>▶ #1018 Modem Cable-Iceland/ Sweden</li> <li>▶ #1021 Modem Cable-Fin/ Nor</li> <li>▶ #1022 Modem Cable-Netherlands</li> <li>▶ #1023 Modem Cable-Swiss</li> <li>▶ #1024 Modem Cable-Denmark</li> <li>▶ #1025 Modem Cable-U.S./Canada</li> </ul> <p>The feature is country- or region-specific. Contact your IBM representative or Business Partner for details on availability.</p> <p>The call waiting and modem on hold functions associated with V.92 are not supported. Remote Power On through ring-indicator, SDLC, and synchronous PPP are not supported.</p> <p>PCI card slots required: One.</p> <p>Minimum operating system level: OS/400 V5R1 with PTFs identified in Information APAR II30079 at:  <a href="http://www-912.ibm.com/supporthome.nsf/document/1000035">http://www-912.ibm.com/supporthome.nsf/document/1000035</a></p> <p>The #2805 is a Customer Install Feature.</p>
#2806	<p><b>#2806 PCI Quad Modem (CIM)</b></p> <p>The #2806 is a 4-line WAN adapter with four WAN ports with internal modems. Telephone cable (RJ-11) is used to connect to the ports. This is the CIM version of the IOA.</p> <p>Supported protocols are:</p> <ul style="list-style-type: none"> <li>▶ V. 92 56K Async PPP</li> <li>▶ Fax applications at data rates up to 33.6K</li> </ul> <p>The V.92 functions offer increased upload throughput, improved V.44 data compression, and shortened modem synchronization periods.</p> <p>The #2806 can be attached directly to a Linux partition. When ordered as #0617 - Direct Attach - #2806 PCI Quad Modem (CIM), an IOP is not required. When attached directly to a Linux partition, the #2806 cannot be accessed by OS/400 partitions.</p> <p>Corequisite: Country- or region-specific telephone cables must be ordered. A minimum of one modem cable and a maximum of two must be selected for each #2806. All modem cables on a system must be the same feature number. The supported modem cables are:</p> <ul style="list-style-type: none"> <li>▶ #1019 Modem Cable- Australia</li> <li>▶ #1020 Modem Cable- China (Hong Kong S.A.R.)/New Zealand</li> </ul> <p>The #2806 is country- or region-specific. Contact your IBM representative or Business Partner for details on availability.</p>

#2806 (cont.)	<p><b>#2806 PCI Quad Modem (CIM)</b></p> <p>The call waiting and modem on hold functions associated with V.92 are not supported. Remote Power On through ring-indicator, SDLC, and synchronous PPP are not supported.</p> <p>PCI card slots required: One</p> <p>Minimum operating system level: OS/400 V5R1 with PTFs identified in Information APAR II13079 at: <a href="http://www-912.ibm.com/supporthome.nsf/document/10000035">http://www-912.ibm.com/supporthome.nsf/document/10000035</a></p> <p>The #2806 is a Customer Install Feature.</p>
#2817	<p><b>#2817 PCI 155 Mbps MMF ATM IOA</b></p> <p>The #2817 is a 155 Mbps Asynchronous Transfer Mode (ATM) PCI card that allows the server to be attached to an ATM network using the Multi-Mode Fiber (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2817 is used typically where 155 Mbps speeds are required over distances of less than 2km.</p> <p>The #2817 is capable of supporting both multiple emulated LAN environments and enhanced TCP/IP performance with OS/400 V5R1. The #2817 is a 64-bit card, but is allowed to plug into any 32-bit or 64-bit slot. Feature maximums can be limited when used in combination with other LAN/ATM IOPs.</p> <p>PCI card slots required: One</p> <p>Supported on Models 820, 830, 840</p> <p>Minimum operating system level: OS/400 V5R1.</p> <p>The #2817 is a Customer Install Feature.</p>
#2849 #9749	<p><b>#2849 10/100 Mbps Ethernet Adapter</b></p> <p>The #2849 10/100 Mbps Ethernet Adapter allows an iSeries server to attach to standardized 100 Mbps high-speed Ethernet LANs and allows attachment to existing 10 Mbps Ethernet LANs. The adapter comes standard with an RJ45 connector for attachment to UTP-5 media. Cabling for 10 Mbps must be CAT-3 or CAT-5, cabling for 100 Mbps must be CAT-5 that meets or exceeds Industry Standard EIA/TIA T568A or T568B. Maximum cable length is 100 meters.</p> <p>The #2849 can be attached directly to a Linux partition. When ordered as #0623 - Linux Direct Attach #2849, an IOP is not required. When attached directly to a Linux partition, the #2849 cannot be accessed by OS/400 partitions.</p> <p>Supports LAN console</p> <p>The #2849 is not supported on any Integrated Netfinity Server or Integrated xSeries Server.</p> <p>Minimum operating system level: OS/400 V5R2</p> <p>The #2849 is a Customer Install Feature.</p> <p>The #9749 was withdrawn from marketing on 01 October 2005.</p> <p>The #2849 was withdrawn from marketing on 01 June 2006. The #5700 PCI 1 Gbps Ethernet IOA is the recommended replacement.</p>
#4723	<p><b>#4723 PCI 10 Mbps Ethernet Adapter</b></p> <p>The #4723 PCI Ethernet IOA provides single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. The feature consists of an adapter card and internal code which supplies Ethernet version 2 and IEEE 802.3 MAC plus IEEE 802.2 LLC functions. The Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. The #4723 has an RJ45 connector and a 15-pin D-Shell connector for attachment to client-supplied cabling. A vendor AUI Ethernet cable or RJ45 twisted pair cable must be ordered separately.</p> <p>The #4723 is not supported by the #2790 PCI Integrated Netfinity Server or the #2791/#2799 PCI Integrated xSeries Server.</p> <p>Minimum operating system level: OS/400 V4R5</p> <p>The #4723 is a Customer Install Feature.</p>

#4745	<p><b>#4745 PCI 2-line WAN IOA</b></p> <p>The #4745 supports up to two multiple protocol communications ports when one or two of the following cables are attached:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft (15 m) PCI cable</li> <li>▶ #0353 V.35 20-ft PCI cable</li> <li>▶ #0354 V.35 50-ft PCI cable</li> <li>▶ #0355 V.35 80-ft PCI cable</li> <li>▶ #0356 V.36 20-ft PCI cable</li> <li>▶ #0358 V.36 150-ft PCI cable</li> <li>▶ #0359 X.21 20-ft PCI cable</li> <li>▶ #0360 X.21 50-ft PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> <li>▶ #0367 Operations Console PCI Cable</li> </ul> <p>The #4745 can be attached directly to a Linux partition. When ordered as #0608 - Linux Direct Attach #4745, an IOP is not required. When attached directly to a Linux partition, the #4745 cannot be accessed by OS/400 partitions.</p> <p>When #0140 Logical Partitioning Specify is ordered, multiple #0367 cables can be ordered to connect the operations console in each partition. One #0367 cable per #4745.</p> <p>When the #4745 is selected to support ECS, one of the following cables must be specified:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft (6 m) PCI cable (Default)</li> <li>▶ #0349 V.24/EIA232 50-ft (15 m) PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> </ul> <p>Minimum operating system level: OS/400 V4R5  The #4745 is a Customer Install Feature.  The #4745 was withdrawn from marketing on 01 June 2006.</p>
#4750	<p><b>#4750 PCI ISDN BRI U IOA</b></p> <p>The #4750 is a four-port (8 channel) ISDN BRI (basic rate) full-sized PCI card. Each port consists of 2B+D configuration. The #4750 is the "U"-bus (2 wire) version of the ISDN BRI PCI card. The #4750 supports the following protocols:</p> <ul style="list-style-type: none"> <li>▶ PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices)</li> <li>▶ IDLC</li> <li>▶ Fax</li> </ul> <p>Four 30-ft (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #4750. For configuration purposes, each #4750 counts as eight lines (two lines per port) toward the system communication maximums. Supports full duplex.</p> <p>Requirements: The #4750 requires country (region) certification or homologation.  Requires a full-sized PCI card slot.</p> <p>Supported in Models 820, 830, 840, #5075, #0578, #5078, #5074, #5079, #8079, #5097, #9074, #9079  Maximum: One per IOP  Minimum operating system level: OS/400 V4R5; OS/400 V5R1 is the last release to support the #4750.  The #4750 is a Customer Install Feature.</p>

#4751	<p><b>#4751 PCI ISDN BRI S/T IOA</b></p> <p>The #4751 is a four-port (eight channel) ISDN BRI (basic rate) full-sized PCI card. Each port consists of 2B+D configuration. The #4751 is the "S/T"-bus (four wire) version of the #4750 PCI ISDN BRI U IOA.</p> <p>The #4751 requires a network terminating device in the circuit. In the United States and Canada, this must be provided by the client. In other countries or regions, it is most likely provided by the telephone company.</p> <p>The #4751 supports the following protocols:</p> <ul style="list-style-type: none"> <li>▶ PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices)</li> <li>▶ IDLC</li> <li>▶ Fax</li> </ul> <p>Four 30-ft (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #4751. For configuration purposes, each #4751 counts as eight lines (two lines per port) towards the system communication maximums. Supports full duplex. Maximum: One per IOP.</p> <p>The #4751 requires country or region certification or homologation. Requires a full-sized PCI card slot. Supported in Models 820, 830, 840, #5075, #0578, #5078, #5074, #5079, #8079, #5097, #9074, and #9079 Minimum operating system level: OS/400 V4R5; OS/400 V5R1 is the last release to support the #4751. The #4751 is a Customer Install Feature.</p>
#4761	<p><b>#4761 PCI Integrated Analog Modem</b></p> <p>The #4761 is based on the latest Digital Signal Processor (DSP) technology. The #4761 allows the modem function to be integrated into the IOA and supports multiple analog modem ports (eight phone lines). The #4761 supports the following protocols without the need for an external modem:</p> <ul style="list-style-type: none"> <li>▶ SLIP/PPP (uses V.90, so the maximum line speed is 56 Kbps)</li> <li>▶ SDLC (uses V.34, so the maximum line speed is 33.6 Kbps)</li> <li>▶ Fax (uses V.17 to achieve a 14.4 Kbps maximum line speed)</li> </ul> <p>V5R1 is the last release to support non-Fax functions on the #4761. An ASYNC line description is required for Fax and can only be used for Fax. The ECS line is not supported. To the iSeries or AS/400e server, the #4761 appears like a single IOA with eight individual line resources available. Eight 30-ft (8 m) phone cables are shipped with each #4761. For configuration purposes, each #4761 counts as eight communications lines toward the system communication maximums. Supports full duplex.</p> <p>The #4761 requires country or region certification or homologation. Requires a full-sized PCI card slot.</p> <p>Supported in Models 820, 830, 840, #5075, #0578, #5078, #5074, #5079, #8079, #5097, #9074, #9079. Minimum operating system level: OS/400 V4R5. The #4761 is a Customer Install Feature.</p>
#4801	<p><b>#4801 PCI Cryptographic Coprocessor</b></p> <p>The #4801 is a hardware cryptography solution. The #4801 is a half-length PC form-factor PCI card that offers rich cryptography function, secure storage of cryptographic keys, and 12 Mbps performance (at the card level) for bulk data encryption and triple DES capability. The #4801 is available worldwide. The level of cryptographic function is determined by the Cryptographic Access Provider licensed program that is downloaded to the adapter.</p> <p>Due to temperature requirements (card temperature must not drop below 5 degrees F or -15 degrees C), the #4801 is shipped separately from the system in special packing. Minimum operating system level: OS/400 V4R5 The #4801 is a Customer Install Feature. The #4801 was withdrawn from marketing on 01 June 2006. The #4806 PCI-X Cryptographic Coprocessor is the recommended replacement.</p>

#4805	<p><b>#4805 PCI Cryptographic Accelerator</b></p> <p>The #4805 provides improved performance for high transaction rate secure Web applications that use the Secure Sockets Layer (SSL) or Transport Layer Security (TLS) protocols. The process of using SSL/TLS secure Web connections, is compute intensive. The Cryptographic Accelerator can be used to off-load cryptographic processing from main CPU. SSL/TLS secure Web connections are used to protect information (for example, credit card number) as it is transferred over the Internet, such as between a Web browser and a server.</p> <p>The Cryptographic Accelerator is targeted to high transaction rate secure Web applications using SSL/TLS. If your application requires a FIPS 140-1 certified, tamper-resistant module for storing cryptographic keys, financial PIN processing, or both, then the #4801 PCI Cryptographic Coprocessor should be your choice.</p> <p>Federal Information Processing Standard (FIPS) 140-1 is a U.S. Government National Institute of Standards and Technology (NIST) administered standard and certification program for cryptographic modules.</p> <p>There is a maximum of two per IOP.</p> <p>Prerequisite: Available PCI card slot under a feature IOP (not under a base or embedded IOP in the system unit).</p> <p>Minimum operating system level: OS/400 V5R2</p> <p>The #4805 is a Customer Install Feature.</p> <p>The #4805 was withdrawn from marketing on 01 June 2006.</p>
#4815	<p><b>#4815 PCI ATM 155 Mbps UTP OC3</b></p> <p>The #4815 is a 155 Mbps ATM PCI card that allows the iSeries or AS/400e server to be attached to an ATM network using the Unshielded Twisted Pair (UTP-5) interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #4815 is used typically where 155 Mbps speeds are required over distances of less than 100 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site at:</p> <p><a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>Supported on Models 820, 830, 840</p> <p>Minimum operating system level: OS/400 V4R5.</p> <p>The #4815 is a Customer Install Feature.</p>
#4816	<p><b>#4816 PCI ATM 155 Mbps MMF</b></p> <p>The #4816 is a 155 Mbps ATM PCI card that allows the iSeries or AS/400e server to be attached into an ATM network using the MMF 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #4816 is used typically where 155 Mbps speeds are required over distances of less than 2 km. Technical specifications and industry standards supported are available at the ATM Forum Web site at:</p> <p><a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>The #4816 is orderable for use in OS/400 V4R5 secondary partitions. For V5R1 systems or partitions, the #2817 PCI 155 Mbps MMF ATM IOA should be ordered.</p> <p>Supported on Models 820, 830, 840</p> <p>Minimum operating system level: OS/400 V4R5.</p> <p>The #4816 is a Customer Install Feature.</p>
#4818	<p><b>#4818 PCI ATM 155 Mbps SMF OC3</b></p> <p>The #4818 is a 155 Mbps ATM PCI card that allows the iSeries or AS/400e server to be attached to an ATM network using the Single-Mode Fiber (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provider equipment. The #4818 is used typically where 155 Mbps speeds are required over distances of from 16 to 40 km. Technical specifications and industry standards supported are available at the ATM Forum Web site at:</p> <p><a href="http://www.atmforum.com">http://www.atmforum.com</a></p> <p>Supported on Models 820, 830, 840</p> <p>Minimum operating system level: OS/400 V4R5.</p> <p>The #4818 is a Customer Install Feature.</p>

#4838	<p><b>#4838 PCI 100/10 Mbps Ethernet IOA</b></p> <p>The #4838 PCI 100/10 Mbps Ethernet IOA feature allows the iSeries or AS/400e server to attach to standardized 100 Mbps high-speed Ethernet LANs and allows attachment to existing 10 Mbps Ethernet LANs. The adapter comes standard with an RJ45 connector for attachment to UTP-5 media. Cabling for 10 Mbps must be CAT-3 or CAT-5, and cabling for 100 Mbps must be CAT-5 that meets or exceeds Industry Standard EIA/TIA T568A or T568B. The maximum cable length is 100 meters.</p> <p>This Ethernet IEEE 802.3 IOA is capable of operating in half or duplex mode. If the #4838 is selected to run on the #2790 PCI Integrated Netfinity Server or #2791/#2799 PCI Integrated xSeries Server, then specify code #0224 is required for each #4838 selected to run on the #2790/ #2791/#2799.</p> <p>The #4838 can be attached directly to a Linux partition. When ordered as #0607 - Direct Attach - #4838 PCI 100/10 Mbps Ethernet IOA, an IOP is not required. When attached directly to a Linux partition, the #4838 cannot be accessed by OS/400 partitions.</p> <p>Minimum operating system level: OS/400 V4R5</p> <p>Supports LAN console</p> <p>The #4838 is a Customer Install Feature.</p> <p>The #4838 was withdrawn from marketing on 01 October 2004. The recommended replacement is #2849.</p>
#5700	<p><b>#5700 PCI 1 Gbps Ethernet IOA</b></p> <p>The #5700 PCI 1 Gbps Ethernet IOA allows an iSeries server to attach to IEEE standard 802.3Z high-speed (1 Gbps) Ethernet LANs. It can also be used to connect to existing 10 Mbps or 100 Mbps Ethernet LANs by using switches with 10, 100, or 1000 Mbps ports. It cannot directly attach to 10 Mbps or 100 Mbps LANs. Crossover cables are not supported.</p> <p>The #5700 adapter supports a multi-mode fiber interface with a 62.5 micron or 50.0 micron cable requirement. The #5700 adapter has a duplex LC fiber optic connector for attachment to client-supplied cabling. The #5700 uses short wave technology (around 500 m maximum).</p> <p>The #5700 PCI 1 Gbps Ethernet IOA can be run under a #2792 PCI Integrated xSeries Server or #2892 PCI Integrated xSeries Server. If a #5700 is controlled by a #2x92 Integrated xSeries Server, then #0226 1 Gbps Ethernet Specify must be ordered. Order one #0226 for each #5700 PCI 1 Gbps Ethernet IOA controlled by an Integrated xSeries Server.</p> <p>When the #5700 is not installed in an Integrated xSeries Server, there is a maximum of one #5700 per Multi-adapter Bridge Boundary. Combinations of #5700s controlled by Integrated xSeries Server-controlled and controlled by PCI IOPs are allowed within a Multi-adapter Bridge Boundary.</p> <p>The #5700 can be attached directly to a Linux or AIX partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3, and AIX 5L for POWER V5.2. When ordered as #0620 - Direct Attach - #5700 PCI 1 Gbps Ethernet IOA, an IOP is not required. When attached directly to a Linux partition, the #5700 cannot be accessed by OS/400 partitions.</p> <p>See <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i>, REDP-3638 for backplane layout, PCI slot positions, and allowable #5700 slot plugging rules by model.</p> <p>PCI card slots required: One 32-bit slot in the Model 830 or 840 system units, or in the #0578, #5074, #0574, #5075, #5078, #5079, #8079, #9074, #9079 PCI Expansion Towers.</p> <p>The following rules do not apply when the #5700 is controlled by a #2790/#2890 PCI Integrated Netfinity Server or by a #2791/#2891, #2792/#2892, #4710/#4810, or #2799/#2899 PCI Integrated xSeries Server:</p> <ul style="list-style-type: none"> <li>▶ Must be placed in a 64-bit slot in the #0588, #0595, #5094/#0694, #5088, #5095, #5294 towers.</li> <li>▶ Limit the quantity of one #5700 adapter per Multi-adapter Bridge boundary.</li> <li>▶ Can be combined with a maximum of one other IOA on an IOP.</li> </ul> <p>Does not support LAN console OS/400 V5R2.</p> <p>Supports TCP/IP only. Does not support IPX protocol.</p> <p>Minimum operating system level: OS/400 V5R2 with PTF MF33086.</p> <p>The #5700 is a Customer Install Feature.</p>

#5701	<p><b>#5701 PCI 1 Gbps Ethernet UTP IOA</b></p> <p>The #5701 PCI 1 Gbps Ethernet UTP IOA allows an iSeries server to attach to IEEE standard 802.3Z high-speed (1 Gbps) Ethernet LANs. It can also be used to connect to existing 10 Mbps or 100 Mbps Ethernet LANs by using switches with 10/100/1000 Mbps ports. It cannot directly attach to 10 Mbps or 100 Mbps LANs. Crossover cables are not supported. The #5701 adapter supports a UTP CAT 5 media interface.</p> <p>A #5701 PCI 1 Gbps Ethernet UTP IOA can be run under a #2792 PCI Integrated xSeries Server or #2892 PCI Integrated xSeries Server. If a #5701 is controlled driven by a #27x2 Integrated xSeries Server, then #0226 1 Gbps Ethernet Specify must be ordered. Order one #0226 for each #5701 controlled by an Integrated xSeries Server. When the #5701 is not installed in an Integrated xSeries Server, there is a maximum of one #5701 per Multi-adapter Bridge Boundary. Combinations of Integrated xSeries Server controlled and PCI IOP controlled #5701s within an Multi-adapter Bridge Boundary are allowed.</p> <p>The #5701 can be attached directly to a Linux partition. When ordered as #0621 - Direct Attach - #5701 PCI 1 Gbps Ethernet UTP IOA, an IOP is not required. When attached directly to a Linux partition, the #5701 cannot be accessed by OS/400 partitions.</p> <p>One 32-bit PCI card slots required in the Model 830 or 840 system units, or in the #0578, #5074, #0574, #5075, #5078, #5079, #8079, #9074, #9079 PCI Expansion Towers</p> <p>The following rules do not apply when the #5701 is controlled by a #2790/#2890 PCI Integrated Netfinity Server or by a #2791/#2891, #2792/#2892, #4710/#4810, or #2799/#2899 PCI Integrated xSeries Server.</p> <ul style="list-style-type: none"> <li>▶ Must be placed in a 64-bit slot in the #0588, #0595, #5094/#0694, #5088, #5095, #5294 towers.</li> <li>▶ Limit the quantity of one #5701 adapter per Multi-adapter Bridge boundary.</li> <li>▶ Can be combined with a maximum of one other IOA on an IOP.</li> </ul> <p>Does not support LAN console OS/400 V5R2.  Supports TCP/IP only. SNA and IPX connections are not supported.  Minimum operating system level: OS/400 V5R2 with PTF MF33086.  The #5701 is a Customer Install Feature.</p>
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#6618	<p><b>#6618 Integrated Netfinity Server (SPD)</b></p> <p>The #6618 Integrated Netfinity Server contains an Intel 333 MHz Pentium II Processor, four main storage slots, and three LAN IOA slots for high performance LAN serving to LAN-attached PCs. All three PCI slots can be used for Integrated PC Server functions. Two of the three PCI slots can support native iSeries functions. The #6618 requires three IOP slots. The slots must be adjacent. An external cable is included to enable connectivity to IPCS hardware (keyboard or mouse), which also allows for optional use of parallel and serial ports.</p> <p>The #6618 comes with no base main memory. A minimum of one main storage feature is required. Up to four of the following memory features are supported, to allow between 32 MB and 1024 MB of memory:</p> <ul style="list-style-type: none"> <li>▶ #2861 32 MB Integrated PC Server Memory</li> <li>▶ #2862 128 MB Integrated PC Server Memory</li> <li>▶ #2867 256 MB Integrated PC Server Memory</li> </ul> <p>Up to three of the following LAN IOAs are supported. A minimum of one LAN IOA is required. A maximum of two of the LAN IOAs can be #2838/#9738 PCI 100/10 Mbps Ethernet IOA.</p> <ul style="list-style-type: none"> <li>▶ #2723 PCI Ethernet IOA (10 Mbps)</li> <li>▶ #2724 PCI 16/4 Mbps Token Ring IOA</li> <li>▶ #2838 PCI 100/10 Mbps Ethernet IOA</li> </ul> <p>Only one of the following base LAN IOAs is supported:</p> <ul style="list-style-type: none"> <li>▶ #9723 PCI Ethernet IOA (10 Mbps)</li> <li>▶ #9724 PCI Token Ring IOA</li> <li>▶ #9738 PCI 100/10 Mbps Ethernet IOA</li> </ul> <p>An #0221 Ethernet on IPCS is required for each #2723/#9723 selected to run on the #6618.  An #0220 Token-ring on IPCS is required for each #2724/#9724 selected to run on the #6618.  An #0222 100/10 Mbps Ethernet on IPCS is required for each #2838/#9738 selected to run on the #6618.</p> <p>When running Windows NT on the #6618, then:</p> <ul style="list-style-type: none"> <li>▶ A minimum of 64 MB IOP memory is required. Maximum total memory is 1024 MB.</li> <li>▶ The #0325 Integrated PC Server Extension Cable for Windows NT is required.</li> <li>▶ The #1700 Integrated PC Server Keyboard or Mouse for Windows NT is the default in the U.S.</li> <li>▶ There is a maximum of one 100/10 Mbps Ethernet IOA in the two native iSeries slots.</li> <li>▶ There is a maximum of two 100/10 Mbps Ethernet IOAs.</li> <li>▶ A display is required to support Windows NT on the IPCS.</li> <li>▶ Windows NT is not supported after OS/400 V5R2. Upgrade to Windows 2000.</li> </ul> <p>For keyboard or mouse and display support in countries (regions) outside the U.S., see the Web site at:  <a href="http://www.ibm.com/eserver/iseries/integratedxseries/">http://www.ibm.com/eserver/iseries/integratedxseries/</a></p> <p>When running OS/2 on the #6618, then:</p> <ul style="list-style-type: none"> <li>▶ The #0325 and #1700 are not allowed.</li> <li>▶ Only two of the LAN IOA slots can be used and only one can contain a #2838/#9738 PCI 100/10 Mbps Ethernet IOA.</li> <li>▶ A maximum of one 100/10 Mbps Ethernet IOA can be in the two native iSeries slots.</li> <li>▶ A maximum of 512 MB IOP memory is supported.</li> </ul> <p>When running Novell NetWare on the #6618, then:</p> <ul style="list-style-type: none"> <li>▶ The #0325 and #1700 are not allowed.</li> <li>▶ Only two of the LAN IOA slots can be used and only one can contain a #2838/#9738 PCI 100/10 Mbps Ethernet IOA. Both can Support native iSeries functions.</li> <li>▶ A maximum of 256 MB IOP memory is supported.</li> </ul> <p>SPD slots required: Three contiguous slots</p> <p>The #6618 cannot be placed in #5044 System Unit Expansion Rack.  The third LAN and the second #2838 can only be used if running Windows NT on the #6618.  All three PCI slots can be used for the Integrated Netfinity Server with only two of the three slots supporting native iSeries functions.  A maximum of two #2838/#9738 can be used on each Integrated Netfinity Server: one native and one Windows NT dedicated.</p> <p>OS/2 and Novell NetWare are not supported with OS/400 V5R1.  Supported on Models 820, 830, and 840.  Minimum operating system level: OS/400 V4R3 and Cumulative PTF Package C8349430  The #6618 was withdrawn from marketing on 28 December 2001.</p>
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#9771	<p><b>#9771 Base PCI 2-Line WAN with integrated modem</b></p> <p>The #9771 is a 2-line WAN adapter. One port supports V.90 56K async data on PPP with an internal modem. The second port supports multiple protocol communications (WAN). Connection to the V.90 port uses a telephone cable. Use one of the following cables to connect to the WAN communication port:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft (6 m) PCI cable</li> <li>▶ #0349 V.24/EIA232 50-ft (15 m) PCI cable</li> <li>▶ #0353 V.35 20-ft PCI cable</li> <li>▶ #0354 V.35 50-ft PCI cable</li> <li>▶ #0356 V.36 20-ft PCI cable</li> <li>▶ #0359 X.21 20-ft PCI cable</li> <li>▶ #0360 X.21 50-ft PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> <li>▶ #0367 Operations Console PCI Cable</li> </ul> <p>The #9771 supports the #0367 Operations Console PCI Cable on the WAN (RVX) port to directly connect the Operations Console for V5R1 or later or with OS/400 V4R5 and PTF MF25397 (not in cumulative PTF). Direct connection of the Operations Console is mutually exclusive with V.90 support of the <i>dial-in</i> Operations Console.</p> <p>The #9771 supports the #5544 System Console on Operations Console on the V.90 port for <i>dial-in</i> Operations Console with V5R1. An additional #4745 is required on OS/400 V4R5 systems for <i>dial-in</i> Operations Console support. The #9771 ships with a country- or region-specific telephone cable. No modem cable feature is required on the order. ECS is supported over TCP/IP on the V.90 telephone cable port with V5R1, or with OS/400 V4R5 and PTF SF64124. Fax is supported on the V.90 port with V5R1, or with OS/400 V4R5 and PTFs MF25290 and SF64604.</p> <p>To support ECS on the WAN port of the #9771, specify one of the following cables:</p> <ul style="list-style-type: none"> <li>▶ #0348 V.24/EIA232 20-ft (6 m) PCI cable (default)</li> <li>▶ #0349 V.24/EIA232 50-ft (15 m) PCI cable</li> <li>▶ #0365 V.24/EIA232 80-ft PCI cable</li> </ul> <p>ECS operates on the WAN port of the #9771 by changing the *RSRCNAME parameter of the QESLINE and QTILINE line descriptions to that of the WAN port on the #9771 card.</p> <p>Remote Power On is not supported. The #9771 does not support the remote ring indicate function.</p> <p>For further configuration information, see: <a href="http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm">http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm</a></p> <p>See the "Soft rules: iSeries IOA requirements" topic in <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i>, REDP-3638 for additional restrictions.</p> <p>Minimum operating system level: OS/400 V4R5 with supporting PTFs</p> <p>The #9771 was withdrawn from marketing on 01 October 2005.</p>
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## 7.8 Disk units

Disk units	
#0040	<p><b>#0040 Mirrored System Disk Level Protection Capability</b></p> <p>This code indicates the level of disk protection desired and helps ensure that adequate hardware is in the final configuration.</p> <p><b>For new systems:</b> Causes the order to fail if sufficient disk units are not ordered to support device-level mirrored protection. The #0040 causes all disk units to be placed into configurations capable of implementing mirrored pairs.</p> <p><b>For upgrade orders:</b> The #0040 causes a warning message to be generated during implementation of mirroring if sufficient disk units are unavailable to provide mirror capability. The customer is responsible for starting mirroring on their system. Mirrored system disk level protection requires all disk units to be placed into mirrored pairs and mirroring be started. The load source must be controlled by the first disk controller on the first system bus and must be mirrored to a like disk unit also attached to the first disk controller on the first system bus. Refer to:  <a href="http://publib.boulder.ibm.com/pubs/html/as400/infocenter.htm">http://publib.boulder.ibm.com/pubs/html/as400/infocenter.htm</a></p> <p>Logically partitioned systems require additional planning.</p> <p>The minimum number of disks allowed on a system is two.</p>

#0041	<p><b>#0041 Device Parity Protection Capability</b>  The #0041 Device Parity Protection Capability indicates the level of disk protection desired and helps ensure that adequate hardware is in the final configuration. The #0041 is the default specify code for data protection capability.</p> <p>For new systems, the #0041 causes the order to fail if a disk unit or adapter is ordered that is not capable of implementing RAID protection. The #0041 causes all internal disk units to be placed into configurations capable of implementing RAID arrays using a RAID-capable disk controller.</p> <p>For upgrade orders, the #0041 causes the order to replace adapters that are not RAID-capable with RAID-capable adapters. A warning message is generated during RAID enablement if there are not enough disk units to support a minimum RAID configuration.</p> <p>It is the customer's responsibility to start RAID on their system.  Device parity protection requires all disk units to be placed in sets large enough to turn on RAID protection, as well as be connected to a RAID-capable adapter. The rules for RAID can be found in the disk controller descriptions.</p>
#0042	<p><b>#0042 Mirrored System IOP Level Protection Capability</b>  The #0042 Mirrored System IOP Level Protection Capability indicates the level of disk protection desired and helps ensure that adequate hardware is in the final configuration.</p> <p>For new systems, the #0042 causes the order to fail if sufficient disk units and IOPs are not included on the order to support IOP-level mirrored protection. The #0042 causes all disk units to be placed into configurations capable of IOP-level mirroring. Each disk unit and its mirrored pair must be on a different disk unit IOP.</p> <p>For upgrade orders, the #0042 causes a warning message to be generated during implementation of the upgrade if sufficient disk units, adapters, and IOPs are not available to provide the capability to enable IOP-level mirrored protection for all DASD. It is the customer's responsibility to start mirroring on their system.</p> <p>The load source disk unit in a new, preloaded system is device-level mirrored. (The same protection as provided with #0040.) This means that the load source is controlled by the first disk unit controller on the first system bus, and is mirrored with a like disk unit, which is also attached to the same first disk controller on the first system bus.  The minimum number of disks allowed on a system is four.</p>
#0043	<p><b>#0043 Mirrored System Bus Level Protection Capability</b>  The #0043 Mirrored System Bus Level Protection Capability indicates the level of disk protection desired and helps ensure that adequate hardware is in the final configuration.</p> <p>For new systems, the #0043 causes the order to fail if sufficient disk units, IOPs and expansion units are not included on the order to support bus-level mirrored protection for all disk units.</p> <p>The load source disk unit in a new, preloaded system is device-level mirrored. This means that the load source is controlled by the first disk controller on the first system bus, and is mirrored with a like disk unit which is also attached to the same first disk controller on the first system bus. Bus level mirroring of the Load Source disk unit can be achieved only by enabling Remote Load Source Mirroring before starting Mirrored Protection. For details about implementing Remote Load Source Mirroring, refer to the iSeries Information Center at:  <a href="http://publib.boulder.ibm.com/pubs/html/as400/infocenter.htm">http://publib.boulder.ibm.com/pubs/html/as400/infocenter.htm</a></p> <p>For upgrade orders, a warning message is generated during installation of the upgrade if sufficient disk units, IOPs, and expansion units are not available to provide the capability to enable bus-level mirrored protection for all disk units. It is the customer's responsibility to start mirroring on their system.</p> <p>Bus-level mirroring requires all disk units to be placed into mirrored pairs on separate busses. Refer to the iSeries Information Center for important Mirrored Protection and Remote Load Source Mirroring implementation details. Logically partitioned systems require additional planning.  The minimum number of disks allowed on a system is four.</p>

#08xx	<p><b>#08xx Load Source Specify Codes</b></p> <p>Beginning with the OS/400 V5R1 announcement, one of the following specify codes is required on all initial order for Models 820, 830, 840. In addition, one of the following specify codes is required on all upgrades into this model range from previous models:</p> <ul style="list-style-type: none"> <li>▶ #0826 - #4314 Load Source specify</li> <li>▶ #0827 - #4324 Load Source specify</li> <li>▶ #0828 - #4317 Load Source specify</li> <li>▶ #0829 - #4318 Load Source specify</li> <li>▶ #0830 - #4319 Load Source specify</li> <li>▶ #0834 - #4326 Load Source specify</li> <li>▶ #0835 - #4327 Load Source specify</li> <li>▶ #0836 - #4328 Load Source specify</li> </ul> <p>Manufacturing uses the #08xx specify to place a corresponding disk unit feature in the load source position. Initial orders and model upgrade orders into the Model 820,830, and 840 from previous models that contain a load source specify, but no corresponding disk unit feature, are invalid orders. The following specify codes can be changed on model upgrades or on MES orders.</p> <p>These specifies can be changed at any time. The #0826, #0827, #0828 and #0829 were withdrawn from marketing on 01 June 2006.</p>
#4308	<p><b>#4308 4.19 GB Disk Unit</b></p> <p>The #4308 provides an additional 4.19 GB single disk unit with 4.19 GB capacity (7200 RPM).</p> <p>Supported on Models 820, 830, 840 The #4308 is a Customer Install Feature. The #4308 was withdrawn from marketing on December 2000.</p>
#4314	<p><b>#4314 8.58 GB Disk Unit (Ultra SCSI)</b></p> <p>The #4314 provides an additional 3 ½-inch 2-byte single disk unit with 8.58 GB capacity (7200 RPM).</p> <p>Supported on Models 820, 830, 840 Minimum operating system level: OS/400 V4R4 The #4314 is a Customer Install Feature. The #4314 was withdrawn from marketing on 31 January 2001.</p>
#4317	<p><b>#4317 8.58 GB 10k RPM Disk Unit (Ultra2 SCSI)</b></p> <p>The #4317 provides an additional 3 ½-inch single disk unit with 8.58 GB capacity. During MES upgrades, #6717, #6817, #8617, and #8817 8.58 GB disk units can be converted to #4317s. The #4317 is also supported in Linux partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3, and AIX 5L for POWER V5.2. Supported on Models 820, 830, 840 Minimum operating system level: OS/400 V4R4 The #4317 is a Customer Install Feature. The #4317 was withdrawn from marketing for new orders on 03 December 2002. Feature conversions to #4317 remain available.</p>
#4318	<p><b>#4318 17.54 GB 10k RPM Disk Unit (Ultra2 SCSI)</b></p> <p>The #4318 provides an additional 3 ½-inch single disk unit with 17.54 GB capacity. During MES upgrades, #6718, #6818, #8618, and #8818 8.58 GB disk units can be converted to #4318s.</p> <p>The #4318 is also supported in Linux partitions. Minimum operating system level: OS/400 V4R4 The #4318 is a Customer Install Feature. The #4318 was withdrawn from marketing on 01 June 2004 for new orders. Conversions to feature #4318 remain available.</p>
#4319	<p><b>#4319 35.16 GB 10k RPM Disk Unit (Ultra2 SCSI)</b></p> <p>The #4319 provides an additional 3 ½-inch single disk unit with 35.16 GB capacity. The #4319 is also supported in Linux and AIX partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3, and AIX 5L for POWER V5.2. Minimum operating system level: OS/400 V5R1 with PTFs identified in Information APAR II13102 at: <a href="http://www.ibm.com/eserver/iseries/support">http://www.ibm.com/eserver/iseries/support</a></p> <p>The #4319 cannot be mounted in a #5065 Storage/PCI Expansion Tower. The #4319 is a Customer Install Feature. The #4319 was withdrawn from marketing on 12 April 2005.</p>

#4324	<p><b>#4324 17.54 GB Disk Unit (Ultra SCSI)</b>  The #4324 provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage (7200 RPM). Supported on Models 820, 830, 840  Minimum operating system level: OS/400 V4R4  The #4324 is a Customer Install Feature.</p>
#4326	<p><b>#4326 35.16 GB 15k RPM Disk Unit (SCSI)</b>  The #4326 provides a single 3 ½-inch disk unit for additional disk storage with 35.16 GB capacity (15000 RPM). Supported in the #5094 PCI-X Expansion Tower, the #0595/#5095 PCI-X Expansion Tower, and the #5294 1.8 m I/O Tower.</p> <p>Quantities of 150 of this feature can be ordered in the IBM marketing configurator as #7508 Quantity 150 of Feature #4326. Supported on base I/O towers, and in the #5094, #0595/#5095, #5294 towers  The #4326 is also supported in Linux and AIX partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3, and AIX 5L for POWER V5.2.  Minimum operating system level: OS/400 V5R2  The #4326 is a Customer Install Feature.</p>
#4327	<p><b>#4327 70.56 GB 15k RPM Disk Unit (SCSI)</b>  The #4327 provides a 3 ½-inch single disk unit for additional disk storage with 70.56 GB capacity (15000 RPM). Supported in the #5094 PCI-X Expansion Tower, the #0595/#5095 PCI-X Expansion Tower, and the #5294 1.8 m I/O Tower.</p> <p>Quantities of 150 of this feature can be ordered in the IBM marketing configurator as #7509 Quantity 150 of Feature #4327. Supported on #5094, #0595/#5095, #5294 towers.  The #4327 is also supported in Linux and AIX partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3, and AIX 5L for POWER V5.2.  Minimum operating system level: OS/400 V5R2  The #4327 is a Customer Install Feature.</p>
#4331	<p><b>#4331 1.6 GB Read Cache Device</b>  The #4331 provides 1.6 GB of capacity for large read cache function. It is mutually exclusive with DASD compression. The system arrives in performance mode with compression function turned off on the #4748/#4778 PCI RAID Disk Unit Controller.</p> <p>Because the #4331 is 1.6 inches wide, the following placement rules apply:</p> <ul style="list-style-type: none"> <li>▶ The #4331 cannot be placed in disk unit slot D01 of the #5075 PCI Expansion Tower.</li> <li>▶ It cannot be placed in disk unit slots D01 or D07 of the Model 820.</li> <li>▶ The #4331 can be placed in disk unit slots D02 through D06 of the #5075 PCI Expansion Tower and in disk unit slots D02 through D07 and D08 through D12 of Model 820. However, the #4331 takes up the disk unit slot in which it is installed and takes up the adjacent disk unit slot to its left. For example, if the #4331 is installed in disk unit slot D02, it takes up disk unit slot D02 and disk unit slot D01.</li> <li>▶ For HSL attached towers on the iSeries servers, the #4331 is installed in the left-most slot of each five-pack and takes up one disk unit position.</li> </ul> <p>Maximum: One per #4748/#4778 PCI RAID Disk Unit Controller.  Supported in Models 820, 830, and 840, and in the #5065, and #5066. Requires #2748 when the #4331 is installed in a #5065/#5066  Minimum operating system level: OS/400 V4R4  The #4331 is a Customer Install Feature.  The #4331 was withdrawn from marketing on 1 March 2002.</p>
RPQ 847102	<p><b>RPQ 847102</b> ships the disk mounting hardware and instructions required to convert a #6717/#6817 to a #4317, and a #6718/#6818 to a #4318. One RPQ is required for each disk unit to be converted.</p> <p>This conversion allows the customer to move 8.5 GB 10K RPM and 17GB 10K rpm files from current towers to the #5065, #5066, #5074/#9074, #5075, #5079/#9079 PCI Expansion Towers, the #5094, #5095, #5294 PCI-X Expansion Towers, iSeries Models 270, 820, 830, 840.</p> <p>Confirm and that there is available space in the existing or on order system or tower for the converted disk units and that the required number of #2748 PCI RAID Disk Unit Controllers are available. After the conversion, process an RPO to add the appropriate number of #4317/#4318 and remove the appropriate number of #6717/#6818 features.</p> <p>RPQ 847102 is installed by an IBM Customer Service Representative.</p>

## 7.9 Internal tape units and CD-ROM

Internal tape units and CD-ROM	
Supported media	See 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for the supported media for each tape device.
#4425 #4525 #4625	<p><b>#4425/#4525/#4625 CD-ROM</b></p> <p>The #4425, #4525, or #4625 can be used for alternate IPL (IBM distributed CD-ROM media only) and program distribution. A CD-ROM, DVD-RAM or DVD-ROM is required for each system.</p> <p>The #4425 CD-ROM device can be mounted in the base PCI enclosure of Models 830 and 840, in the #5074/#5079 PCI Expansion Towers, and in the #5094/#5294 Expansion Towers.</p> <p>The #4525 CD-ROM device can be mounted in the system unit of the Model 820.</p> <p>The #4625 CD-ROM replaces the #4425. The difference between the #4625 and the #4425 is in the mounting hardware. A #4625 can be placed everywhere that a #4425 can be placed. The #4425 is not supported in a Model 820 system unit.</p> <p>Supported for migration in Linux and AIX partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3, and AIX 5L for POWER V5.2 Minimum operating system level for the #4525: OS/400 V4R5 Minimum operating system level for the #4425: OS/400 V4R4 The #4425, #4525, and #4625 are Customer Install Features. The #4425 was withdrawn from marketing on 21 November 2003 for new orders. Conversion to feature #4425 remains available. The #4625 is the recommended replacement. The #4625 was withdrawn from marketing on July 15 2005.</p>
#4430 #4530 #4630	<p><b>#4430/#4530/#4630 DVD-RAM</b></p> <p>The #4430, #4530, or #4630 is capable of reading 640 MB CD-ROM disks. It can read CD-R, DVD-ROM and DVD-R media. The #4430, #4530, or #4630 can be used for alternate IPL, program distribution, and data interchange. It is not supported as an Alternate Installation Device (by selection with DST Boot Manager) with OS/400 V5R1. The #4430/#4530/#4630 reads and writes 4.7 GB on a single-sided media. For double sided media, the media must be manually flipped.</p> <p>The #4430 DVD-RAM device can be mounted in the base PCI enclosure of Models 830 and 840, and in the #5074/#5079 PCI Expansion Towers.</p> <p>The #4530 DVD-RAM device can be mounted in the system unit of Model 820.</p> <p>The #4630 CD-ROM replaces the #4430. The difference between the #4630 and the #4430 is in the mounting hardware. A #4630 can be placed everywhere a #4430 can be placed. The #4430, #4530, and #4630 DVD-RAM are 5 ¼-inch devices which install in a removable media device slot. The Prerequisites: A disk unit controller in the system unit or tower where the device is mounted</p> <p>Supported for migration in Linux and AIX partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3, and AIX 5L V5.2 Minimum operating system level: OS/400 V4R5 with PTFs or OS/400 V5R1 The #4430, #4530, and #4630 are Customer Install Features. The #4430 was withdrawn from marketing on 01 January 2004. The recommended replacement is the #4630 DVD-RAM The #4530 was withdrawn from marketing on 01 October 2004. The recommended replacement is #4533. The #4630 was withdrawn from marketing on 01 October 2004. The recommended replacement is #4633.</p>

#4482 #4582 #4682	<p><b>#4482/#4582/#4682 4 GB ¼-inch Cartridge Tape Device</b></p> <p>The #4482, #4582, or #4682 4 GB ¼-inch Cartridge Tape Device can be used for save/restore, alternate IPL, program distribution, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>Prerequisite: Available removable media device slot and disk unit controller in the system unit or expansion tower in which the device is mounted.</p> <p>The #4482 can be mounted in the base PCI enclosure of Models 820, 830 and 840. It is supported in the #5074/#5079 PCI Expansion Towers and the #5094/#5294 Expansion Towers.</p> <p>The #4682 can be mounted in the system unit of Models 820, 830, 840, in the #5074/#5079 PCI Expansion Towers, and in the #5094/#5294 Expansion Towers.</p> <p>Refer to 9.8, “QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems” on page 378, for additional characteristics.</p> <p>Supported for migration in Linux and AIX partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3, and AIX 5L for POWER V5.2</p> <p>Minimum operating system level for the #4582 and #4682: OS/400 V4R5</p> <p>Minimum operating system level for the #4482: OS/400 V4R4</p> <p>The #4482, #4582, and #4682 are Customer Install Features.</p> <p>The #4482 was withdrawn from marketing on 01 January 2004.</p> <p>The #4582 was withdrawn from marketing on 01 October 2005. The recommended replacement is a #4584.</p> <p>The #4682 was withdrawn from marketing on 01 October 2005. The recommended replacement is a #4684</p>
#4483 #4583 #4683	<p><b>#4483/#4583/#4683 16 GB ¼-inch Cartridge Tape Device</b></p> <p>The #4483, #4583, and #4683 16 GB ¼-inch Cartridge Tape Device are 25GB ¼-inch cartridge tape units that mount in a removable media device slot of a system unit or an expansion drawer or tower. The #4483, #4583, and #4683 16 GB ¼-inch Cartridge Tape Device can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>The #4483 can be mounted in the base PCI enclosure of Models 820, 830 and 840, and in the #5074/#5079 PCI Expansion Towers.</p> <p>The #4583 can be mounted in the system unit of the Model 820.</p> <p>The #4683 is supported in the Model 820, 830, 840 for upgrades only.</p> <p>Refer to 9.8, “QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems” on page 378, for additional characteristics.</p> <p>Supported for migration in Linux partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3</p> <p>Minimum operating system level for the #4483: OS/400 V4R4</p> <p>Minimum operating system level for the #4583 and #4683: OS/400 V4R5</p> <p>The #4483/#4583/#4683 are Customer Install Features.</p> <p>The #4583 was withdrawn from marketing on 3 December 2002.</p>

#4486 #4586 #4686	<p><b>#4486/#4586/#4686 25 GB ¼-inch Cartridge Tape Device</b></p> <p>The #4486, #4586, and #4686 25 GB ¼-inch Cartridge Tape Device is a 25GB ¼-inch cartridge tape unit that mounts in a removable media device slot of a system unit or an expansion drawer/tower. The #4486, #4586, and #4686 25 GB ¼-inch Cartridge Tape Device can be used for save/restore, alternate IPL, program distribution, migration and ¼-inch cartridge tape exchange. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>The #4486 is supported by the Models 820, 830, 840. The #4486 can be mounted in the base PCI enclosure of Models 830, 840, and in the #5074/#5079 PCI Expansion Towers.</p> <p>The #4586 can be mounted in the system unit of Model 820.</p> <p>The #4686 can be mounted in the base PCI enclosure of Models 830 and 840, in the #5074/#5079 PCI Expansion Towers, in the #5094/#5294 Expansion Towers. The #4686 is supported for upgrades only in the Model 820, 830, and 840.</p> <p>Refer to 9.8, “QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems” on page 378, for additional characteristics.</p> <p>Supported for migration in Linux partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3</p> <p>Minimum operating system level for the #4486: OS/400 V4R4  Minimum operating system level for the #4586: OS/400 V4R5</p> <p>The #4486, #4586, and #4686 are Customer Install Features.  The #4586 was withdrawn from marketing on 3 December 2002.</p>
#4487 #4587 #4687	<p><b>#4487/#4587/#4687 50 GB ¼-inch Cartridge Tape Device</b></p> <p>The #4487/#4587/#4687 50 GB ¼-inch Cartridge Tape Device can be used for save/restore, alternate IPL, program distribution, migration, and ¼-inch cartridge tape exchange using the appropriate media and density. These tape units are not compatible with System/36 ¼-inch cartridge tape units.</p> <p>The #4487 can be mounted in the base PCI enclosure of the Models 830 and 840, and in the #5074/#5079 PCI Expansion Towers</p> <p>The #4587 can be mounted in the system unit of a Model 820.</p> <p>The #4687 can be mounted in the #5074/#5079 PCI Expansion Towers, and in the #5094/#5294 Expansion Towers.</p> <p>The #4487 is supported in the Models 820, 830, and 840  The #4587 is supported in the Model 820  The #4687 is supported in the Models 820, 830, and 840</p> <p>Prerequisite: A disk unit controller in system unit or tower where device is mounted.</p> <p>Refer to 9.8, “QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems” on page 378, for additional characteristics.</p> <p>Supported for migration in Linux and AIX partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3, and AIX 5L for POWER V5.2</p> <p>Minimum operating system level: OS/400 V5R1</p> <p>The #4487, #4587, or #4687 are Customer Install Features.  The #4487 was withdrawn from marketing on 01 January 2004  The #8287 was withdrawn from marketing on 01 October 2005.  The #4587 was withdrawn from marketing on 01 June 2006.</p>



<p>#4531 #4631</p>	<p><b>#4531 DVD-ROM/#4631 DVD-ROM</b></p> <p>The #4531/#4631 DVD-ROM is a 5 ¼-inch device which is mounted in a removable media device slot. The #4531/#4631 is capable of reading 640 MB CD-ROM media and 4.7 GB DVD-RAM media. It is an alternate IPL (IDE bus attach) device, so a SCSI/ATAPI converter card is required and is included with the device. The converter card requires its own power source, so a power flex cable is included.</p> <p>The #4531/#4631 can be used for Alternate IPL (IBM distributed CD-ROM media only) and program distribution.</p> <p>The #4531 can be mounted in the system unit of Model 820.</p> <p>The #4631 can be mounted in the system unit of Models 820, 830, and 840, in the #5074/#5079 PCI Expansion Tower, and in the #5094/#5294 Expansion Towers.</p> <p>Prerequisites: A disk unit controller in the system unit or tower where the device is mounted. A CD-ROM, DVD-RAM or DVD-ROM is required for each system. The #4531 is supported on the Model 820. The #4631 is supported on the Models 820, 830, and 840.</p> <p>Supported in Linux and AIX partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3, and AIX 5L for POWER V5.2 Minimum operating system level: OS/400 V5R2 The #4531 and #4631 are Customer Install Features. The #4531 was withdrawn from marketing on 01 December 2005. The #4631 was withdrawn from marketing for new orders only on 01 December 2005.</p>
<p>#4584 #4684</p>	<p><b>#4584 30 GB ¼-inch Cartridge Tape Device/#4684 30 GB ¼-inch Cartridge Tape Device</b></p> <p>The #4584/#4684 30 GB ¼-inch Cartridge Tape Device can be mounted in a removable media device slot of a system unit or an expansion tower. The #4584 and #4684 can be used for save/restore, alternate IPL, program distribution, migration, and ¼-inch cartridge tape exchange.</p> <p>The #4584 can be mounted in the system unit of Model 820.</p> <p>The #4684 can be mounted in the base PCI enclosure of Models 830, 840, and in the #5074/#5079 PCI Expansion Towers, in the #5094/#5294 Expansion Towers.</p> <p>The #4584 is supported on the Models 820.</p> <p>The #4684 is supported on the Models 820, 830, and 840.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Supported for migration in Linux and AIX partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3, and AIX 5L for POWER V5.2 Minimum operating system level: OS/400 V5R1 Minimum operating system level for the #4584 and #4684: OS/400 V4R5 Minimum operating system level for the #9284: OS/400 V5R2 The #4584 and #4684 are Customer Install Features. The #4584 was withdrawn from marketing on 01 June 2006.</p>
<p>#4585 #4685</p>	<p><b>#4585 80 GB VXA-2 Tape Device/#4685 80 GB VXA-2 Tape Device</b></p> <p>The #4585 and 4685 can be used for save and restore, alternate IPL, program distribution, and migration. The tape format is not compatible with other tape units currently offered on iSeries systems.</p> <p>The #4585 80 GB VXA-2 Tape Device can be mounted in a removable media device slot of a Model 820 system unit.</p> <p>The #4685 80 GB VXA-2 Tape Device can be mounted in a removable media device slot of a Model 830 or 840 system unit, or a #5065, #5066, #5074, #5079, #5094, #5294 expansion tower.</p> <p>Refer to 9.8, "QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems" on page 378, for additional characteristics.</p> <p>Supported in Linux and AIX partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3, and AIX 5L for POWER V5.2 The #4585 is supported by the #2757, #2763, #2780, #2782, #4748, #4778, #5705, and #9767. The #4685 is supported by the #2757, #2763, #2780, #2782, #4748, and #4778. The #4585 is supported in the Model 820. The #4685 is supported in Models 820, 830, and 840. The #4585 and #4685 are Customer Install Features. The #4585 was withdrawn from marketing on 01 June 2006.</p>

#4633	<p><b>#4633 DVD-RAM</b></p> <p>The #4633 DVD-RAM is a half high optical media device. The #4633 uses cartridgeless media only. This is different from the #4630 DVD-RAM which can use cartridge media. The media can be removed from the cartridge to be used in the #4633. Media support is limited to writing DVD-RAM only and reading of CD-ROM, CD-R, DVD-ROM and DVD-RAM.</p> <p>Supported in Model 820, 830, 840 system units and in #5074, #5079, #5094, and #5294 towers</p> <p>Supported in Linux and AIX partitions with SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3, and AIX 5L for POWER V5.2</p> <p>Supported in Models 820, 830, and 840</p> <p>Minimum operating system level: OS/400 V5R2</p> <p>The #4633 is a Customer Install Feature.</p>
RPQ 847184	RPQ 847184 provides the mounting hardware to convert selected iSeries #63xx/#64xx tape features into #45xx equivalents for installation in iSeries systems. See the RPQ description for a complete list of applicable conversions.

## 7.10 Magnetic media controllers

Magnetic media controllers	
#0165	<p><b>#0165 VHDCI attachment</b></p> <p>The #0165 VHDCI attachment is used to indicate that an external CD/DVD/tape device is to be attached to a #5702 PCI-X Ultra Tape Controller, #5705 PCI-X Tape/DASD Controller, #5712 PCI-X Tape/DASD Controller, or #5715 PCI-X Tape/DASD Controller.</p> <p>Supported on Models 820, 830, and 840</p>
#0208	<p><b>#0208 No Alternate Install Device Use Required</b></p> <p>The #0208 No Alternate Install Device Use Required specify feature instructs manufacturing to place the external tape adapter on the Multi-adapter Bridge of the system unit. With this configuration, a client is not required to select or use the Alternative Installation Device option in conjunction with a D-mode IPL (using Boot Manager in DST). A higher cost system configuration can result due to the need of additional PCI controller cards. If placement on the first Multi-adapter Bridge is not possible due to other system constraints, the IBM marketing configurator flags the order as invalid.</p> <p>Adding the #0208 specify feature on an order forces manufacturing to place the external tape adapter on the first system bus. Having the external tape adapter on the first system bus does not require a client to use the Alternative Installation Device option of DST in conjunction with a D-mode IPL.</p> <p>Forcing the external tape adapter on the first system bus can result in a higher cost system configuration due to the need of additional PCI IOPs. When selected in the IBM marketing configurator, the external alternate IPL tape controller must be placed on the first system bus. If due to other system constraints such placement of the alternate IPL tape controller is not possible, then the order is not valid and flagged as such.</p> <p>An external tape adapter is placed in the first system bus.</p> <p>Supported on Models 820, 830, and 840</p> <p>Minimum operating system level: OS/400 V4R5</p> <p>The #0208 was withdrawn from marketing on 01 December 2005.</p>
#0618	<p><b>#0618 - Direct Attach - #2757 PCI-X Ultra RAID Disk Controller</b></p> <p>Linux direct attach feature for the #2757 PCI-X Ultra RAID Disk Controller</p> <p>Supported on Models 820, 830, 840</p> <p>Minimum operating system level: OS/400 V5R2</p> <p>The #0618 was withdrawn from marketing on 01 June 2006. The #0627 Direct Attach-2780 is the recommended replacement.</p>

#2749	<p><b>#2749 PCI Ultra Magnetic Media Controller</b></p> <p>The #2749 is an Ultra SCSI IOA that provides attachment capability for external tape devices and external optical devices. The #2749 can attach one tape drive or one optical drive. The following tape devices can be attached:</p> <ul style="list-style-type: none"> <li>▶ 3490E E01/E11 ½-inch cartridge tape subsystem</li> <li>▶ 3490 F00/F01/F11/F1A ½-inch cartridge tape subsystem</li> <li>▶ 3490E C11/C22/C1A/C2A with feature #5040</li> <li>▶ 3494 Tape Library Data server <ul style="list-style-type: none"> <li>– L10 Library Control Unit Frame 1 3490E C1A/C2A with #5040 or 1-2 3490E F1A</li> <li>– L12 Library Control Unit Frame 1-2 3590 B1A</li> <li>– D10 Device Frame 1 3490E C1A/C2A with #5040 or 1-2 3490E F1A, 300 cartridges</li> <li>– D12 Device Frame 1-6 3590 B1A, 300 cartridges</li> <li>– HA1 (High Availability): Two L1X and two D1X for redundancy</li> </ul> </li> <li>▶ 3570 0.31-inch Cartridge Tape Subsystem <ul style="list-style-type: none"> <li>– Model B0x, C0x (stand-alone)</li> <li>– Model B1x, C1x (rack mount)</li> <li>– Model B1A, C1A (mounts in 3575)</li> </ul> </li> <li>▶ 3575 0.31-inch Cartridge Tape Subsystem <ul style="list-style-type: none"> <li>– Model Lxx</li> </ul> </li> <li>▶ 3580-Hxx Ultrium Tape Drive</li> <li>▶ 3581-H17 Ultrium Tape Autoloader</li> <li>▶ 3582-L23 Ultrium Tape Library, HVD drive feature</li> <li>▶ 3583-Lxx Ultrium Scalable Tape Library, HVD drive feature</li> <li>▶ 3584-L32 or D32 Ultra scalable Tape Library, HVD drive feature</li> <li>▶ 3590 ½-inch Cartridge Tape Subsystem <ul style="list-style-type: none"> <li>– Models B11, E11, and H11 (mounts into 9309 rack)</li> <li>– Models B1A, E1A, and H1A (mounts into 3494 library)</li> </ul> </li> <li>▶ 3995 Optical Library Data server - Model Cxx</li> <li>▶ 7208-012 5.0 GB 8 mm cartridge tape unit</li> <li>▶ 7208-222 7.0 GB 8 mm cartridge tape unit</li> <li>▶ 7208-232 8 mm Dual 5.0 GB cartridge tape subsystem <ul style="list-style-type: none"> <li>– #0501 counts as one 7208</li> <li>– #0502 counts as two 7208</li> <li>– Counts as two 7208s</li> </ul> </li> <li>▶ 7208-342 20.0 GB 8 mm Cartridge Tape Bridge Box</li> <li>▶ 9348-00x ½-inch Reel Tape Unit - Rack Mount</li> <li>▶ 9427-2108 8 mm Library Attach</li> </ul> <p>Use the #5702 PCI-X Ultra Tape Controller to attach tape devices with LVD connections.</p> <p>Supported on Models 820, 830, and 840.</p> <p>Minimum operating system level: OS/400 V4R5</p> <p>The #2749 is a Customer Install Feature.</p> <p>The #2749 was withdrawn from marketing on 03 March 2005.</p>
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#2757	<p><b>#2757 PCI-X Ultra RAID Disk Controller</b></p> <p>The #2757 PCI-X Ultra RAID Disk Controller is an Ultra SCSI controller with a maximum write cache size of 235 MB (757MB compressed) that provides RAID-5 protection for internal disks and also supports internal tape units, CD-ROM, and DVD units. The #2757 has four Ultra4 SCSI buses.</p> <p>In addition to providing RAID-5 protection for disks, the #2757 PCI-X Ultra RAID Disk Controller is designed to work as a high performance controller for disks protected by system mirroring or disks with no protection.</p> <p>The #2757 PCI-X Ultra RAID Disk Controller supports a maximum of 20 disk units. A minimum of three disk units of the same capacity are needed for a valid RAID-5 configuration. A maximum of six arrays are allowed per controller, with a maximum of 18 disk units allowed per array. All disk units in an array must be of the same capacity. Parity is spread across either 2, 4, 8, or 16 disk units in an array. If an array of three disk units is started, parity is spread across two disk units. If an array of four to seven disk units is started, parity is spread across four disk units. If an array of 8-15 disk units is started, parity is spread across eight disk units. If an array of 16-18 disk units is started, parity is spread across 16 disk units.</p> <p><i>Availability</i> is the number of arrays and size of each array can be influenced by specifying an optimization of either <i>Balance</i>, <i>Performance</i>, or <i>Capacity</i> in iSeries Navigator when starting arrays. An optimization of <i>Balance</i> is used by default when starting arrays from DST or SST options. If disk units are included into an existing array, parity can be spread across less than the preferred number of disk units. In this case, the RAID function must be stopped and then started to redistribute the parity.</p> <p>The #2757 controls up to two removable media devices (internal tape, CD-ROM, and DVD). The #2757 does not support DASD compression.</p> <p>System unit or tower disk configurations restrict the number of attaching disk units to 15 or less. Minimum operating system level: OS/400 V5R2 The #2757 is a Customer Install Feature</p>
#2763	<p><b>#2763 PCI RAID Disk Unit Controller</b></p> <p>The #2763 is an Ultra2 SCSI controller with a 10 MB write-cache that provides RAID-5 protection for internal disk units and supports up to two removable media devices (internal tape units and CD-ROM units). In addition to providing RAID-5 protection for disks, the #2763 is also designed to work as a high performance controller for disks protected by system mirroring or disks with no protection. The #2763 controller supports a maximum of 12 disk units and is only supported on the Model 820, #5075 PCI Expansion Tower, and supported on the #0595/#5095.</p> <p>A minimum of four disk units of the same capacity are needed for a valid RAID-5 configuration. A maximum of three arrays are allowed per controller, with a maximum of 10 disk units allowed per one array. All disk units in an array must be of the same capacity. Parity is spread across four disk units for arrays of four to 10. The #2763 does not support hardware disk compression. The #2763 does not support the #4331 1.6 GB Read Cache Device.</p> <p>The #2763 can be attached directly to a Linux partition. When ordered as #0604 - Direct Attach - #2763 PCI RAID Disk Unit Controller, an IOP is not required. When attached directly to a Linux partition, the #2763 cannot be accessed by OS/400 partitions. When attached directly to a Linux partition, the #2763 does not support RAID or hardware disk compression.</p> <p>Requires long PCI card slot. Minimum operating system level: OS/400 V4R5 The #2763 is a Customer Install Feature. The #2763 was withdrawn from marketing on 21 November 2003 for new orders. Conversions to feature #2763 remain available. The #5703 PCI-X RAID Disk Unit Controller is the recommended replacement.</p>
#2765	<p><b>#2765 PCI Fibre Channel Tape Controller</b></p> <p>The #2765 provides Fibre Channel attachment capability for external tape devices. The #2765 supports point-to-point and arbitrated loop topologies and has an LC type cable connector. Each #2765 is shipped with a wrap connector (P/N 05N6767).</p> <p>The devices supported for Fibre Channel attachment are:</p> <ul style="list-style-type: none"> <li>▶ 3534-1RU SAN Fibre Channel Managed Hub (1 Gbps)</li> <li>▶ Fibre Channel Switches: <ul style="list-style-type: none"> <li>– 2031-224 McDATA Sphereon 4500 Fabric Switch</li> <li>– 2031-232 McDATA Sphereon 3232 Fabric Switch</li> <li>– 2109 S08/S16 (1 Gbps)</li> <li>– 2109 F16 (2 Gbps)</li> <li>– 3534 F08 (2 Gbps)</li> </ul> </li> </ul>

<p>#2765 (cont.)</p>	<p><b>#2765 PCI Fibre Channel Tape Controller</b></p> <ul style="list-style-type: none"> <li>▶ SAN Fabric Directors: <ul style="list-style-type: none"> <li>– 2032-064 McDATA Intrepid 6064 Enterprise Fibre Channel Director</li> <li>– 2032-140 McDATA Intrepid 6140 Director</li> </ul> </li> <li>▶ 3582-L23 Ultrium Tape Library</li> <li>▶ 3583-Lxx Ultrium Scalable Tape Library</li> <li>▶ 3584-L32 or D32 Ultra scalable Tape Library</li> <li>▶ 3590 ½-inch Cartridge Tape Subsystem Models E11, E1A, H11, and H1A</li> <li>▶ 3592 Enterprise Tape Drive</li> </ul> <p>The #0163 Fibre Channel Attach Specify is required for each device attaching to an iSeries server with a #2765. The following adapter kits are required when connecting SC-type cables to the #2765:</p> <ul style="list-style-type: none"> <li>▶ #0371 - LC-SC Adapter Kit (50um) can be ordered on initial, model upgrade, and simple MES orders. This optional kit is used to attach SC- type Fibre (50 micron) cables to a #2765. This kit contains a 2 m LC-ST cable and ST-SC adapter for 50 micron Fibre.</li> <li>▶ #0372 - LC-SC Adapter Kit (62.5um) can be ordered on initial, model upgrade, and simple MES orders. This optional kit is used to attach SC-type Fibre (62.5 micron) cables to a #2765. This kit contains a 2 m LC-ST cable and ST- SC adapter for 62.5 micron Fibre.</li> </ul> <p>The #2765 can be attached directly to a Linux or AIX partition. When ordered as #0611 - Direct Attach - #2765 PCI Fibre Channel Tape Controller, an IOP is not required. When attached directly to a Linux/AIX partition, the #2765 cannot be accessed by OS/400 partitions.</p> <p>An optics cleaning kit (P/N 46G6844) and instruction sheet (P/N 21P6238, form number SY27-2604) are supplied, one per system, when a #2765/#2766 is ordered.</p> <p>Multi-target support with a maximum of 16 targets with V5R2.</p> <p>The #2765 does not support the Alternate IPL device function. A D-mode IPL is required using CD-ROM, DVD-ROM, or another alternate IPL tape device. Then select a #2765 to complete the installation or recovery process.</p> <p>Minimum operating system level: OS/400 V5R1</p> <p>The #2765 is a Customer Install Feature.</p> <p>The #2765 was withdrawn from marketing on 01 October 2004. The recommended replacement is #5704</p>
<p>#2766</p>	<p><b>#2766 PCI Fibre Channel Disk Controller</b></p> <p>The #2766 provides Fibre Channel attachment capability for external disk devices. The #2766 supports point-to-point and arbitrated loop topologies and has an LC type cable connector. Each #2766 is shipped with a wrap connector (P/N 05N6767).</p> <p>The following devices are supported by the #2766:</p> <ul style="list-style-type: none"> <li>▶ 2105-F10/F20/800 IBM TotalStorage Enterprise Storage Server</li> <li>▶ 3534-1RU SAN Fibre Channel Managed Hub (1 Gbps)</li> <li>▶ Fibre Channel Switches: <ul style="list-style-type: none"> <li>– 2031-224 McDATA Sphereon 4500 Fabric Switch</li> <li>– 2031-232 McDATA Sphereon 3232 Fabric Switch</li> <li>– 2109 S08/S16 (1 Gbps)</li> <li>– 2109 F16 (2 Gbps)</li> <li>– 3534 F08 (2 Gbps)</li> </ul> </li> <li>▶ SAN Fabric Directors: <ul style="list-style-type: none"> <li>– 2032-064 McDATA Intrepid 6064 Enterprise Fibre Channel Director</li> <li>– 2032-140 McDATA Intrepid 6140 Director</li> </ul> </li> </ul> <p>The following adapter kits are required when connecting SC type cables to the #2766:</p> <ul style="list-style-type: none"> <li>▶ #0371 - LC-SC Adapter Kit (50 micron) optional kit is used to attach SC-type Fibre (50 micron) cables to a #2766. The #0371 kit contains a 2 m LC-ST cable and ST-SC adapter for 50 micron Fibre.</li> <li>▶ #0372 - LC-SC Adapter Kit (62.5 micron) optional kit is used to attach SC-type Fibre (62.5 micron) cables to a #2766. The #0372 kit contains a 2 m LC-ST cable and ST-SC adapter for 62.5 micron Fibre.</li> </ul> <p>An optics cleaning kit (P/N 46G6844) and instruction sheet (P/N 21P6238, form number SY27-2604) are supplied, one per system, when a #2765/#2766 is present or ordered.</p> <p>The #2766 requires a dedicated IOP. No other IOA is allowed on an IOP with the #2766.</p> <p>The #2766 can be attached directly to a Linux partition. When ordered as #0612 - Linux Direct Attach #2766, an IOP is not required. When attached directly to a Linux partition, the #2766 cannot be accessed by OS/400 partitions.</p>

#2766 (cont.)	<p><b>#2766 PCI Fibre Channel Disk Controller</b></p> <p>Clients must supply all Fibre Channel cables for the #2766. See the "Hard rules: iSeries IOA capabilities" topic in <i>PCI Card Placement Rules for the IBM eServer iSeries Server</i>, REDP-3638 for additional restrictions.</p> <p>Multi target support with a maximum of 32 targets is supported with OS/400 V5R2. Minimum operating system level: OS/400 V5R1 The #2766 is a Customer Install Feature.</p>
#2780	<p><b>#2780 PCI-X Ultra4 RAID Disk Controller</b></p> <p>The #2780 PCI-X Ultra4 RAID Disk Controller is an Ultra4 (u320) SCSI controller with a maximum compressed write cache size of 757MB and maximum compressed read cache of one GB. The #2780 provides RAID-5 protection for internal disks and also supports internal tape units, CD-ROM, and DVD units. The #2780 has four Ultra4 SCSI buses. In addition to providing RAID-5 protection for disks, the #2780 PCI-X Ultra4 RAID Disk Controller is designed to work as a high performance controller for disks protected by system mirroring or disks with no protection.</p> <p>The #2780 PCI-X Ultra4 RAID Disk Controller supports a maximum of 20 disk units. A minimum of three disk units of the same capacity are needed for a valid RAID-5 configuration. A maximum of six arrays are allowed per controller, with a maximum of 18 disk units allowed per array.</p> <p>All disk units in an array must be of the same capacity. Parity is spread across either two, four, eight, or 16 disk units in an array. If an array of three disk units is started, parity is spread across two disk units. If an array of four to seven disk units is started, parity is spread across four disk units. If an array of 8-15 disk units is started, parity is spread across eight disk units. If an array of 16-18 disk units is started, parity is spread across 16 disk units.</p> <p>The number of arrays and size of each array can be influenced by specifying an optimization of either <i>Balance</i>, <i>Performance</i>, or <i>Capacity</i> when starting arrays in iSeries Navigator. An optimization of <i>Balance</i> is used by default when starting arrays from DST or SST options. If disk units are included into an existing array, the number of parity drives does not increase, so parity can be spread across less than the preferred number of disk units. In this case, the RAID function must be stopped and then started in order to redistribute the parity.</p> <p>The #2780 controls up to two removable media devices (internal tape, CD-ROM, and DVD). The #2780 does not support DASD compression. The #2780 has a battery that provides concurrent maintenance and improved resiliency.</p> <p>The #2780 can be attached directly to a Linux or AIX partition. When ordered as #0627 - Direct Attach - #2780 PCI-X Ultra4 RAID Disk Controller, an IOP is not required. When attached directly to a Linux or AIX partition, the #2780 cannot be accessed by OS/400 partitions.</p> <p>Prerequisite: One 3V long PCI slot is required</p> <p>Not supported in Slot 1 of #5074, #5079, #5094, and #5294. Due to system unit and external tower disk unit cage SCSI bus designs, only the Models 270 has a suitable system configuration to allow 18 disk units to attach to a single #2780. All other system unit or tower disk configurations restrict the number of attaching disk units to 15 or less. Further restrictions apply when a MES Conversion #0299 to add an Auxiliary Write Cache is made. The card providing the write Cache will attach to a #2780 on one of the Ultra4 SCSI buses, thus reducing the available SCSI busses to attach Disk drives by one. SCSI port 1 can support LVD or single-ended devices. SCSI ports 0, 2 and 3 are LVD only.</p> <p>Supported in Models 820, 830, 840 Minimum operating system level: SUSE Linux Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 3 Minimum operating system level: OS/400 V5R2 The #2780 is a Customer Install Feature. Since July 2005, the #2780 can only be ordered if the system has #0040 mirrored protection. An #0299 MES Conversion is available to improve cache data redundancy when the system has RAID protection.</p>

#2782	<p><b>#2782 PCI-X RAID Disk Unit Controller</b></p> <p>The #2782 is a PCI-X SCSI controller with a 40 MB cache that provides RAID-5 protection for internal disks and also supports internal tape units, CD-ROM and DVD devices. #2782 has two SCSI buses that support up to 12 disk units. Hardware data compression is not supported.</p> <p>In addition to providing RAID-5 protection for disks, #2782 also works as a high-performance controller for disks protected by system mirroring, or disks with no protection. In the RAID-5 configuration, disk unit protection is provided at less cost than mirroring, and with better performance than system checksums.</p> <p>A minimum of three disk units of the same capacity are needed for a valid RAID-5 configuration. A maximum of four arrays are allowed per controller, with a maximum of 12 disk units allowed per array. All disk units in an array must be of the same capacity.</p> <p>Parity is spread across either two, four, or eight disk units in an array. If an array of three disk units is started, parity is spread across two disk units. If an array of four to seven disk units is started, parity is spread across four disk units. If an array of eight to 12 disk units is started, parity is spread across eight disk units.</p> <p>The number of arrays and size of each array can be influenced by specifying an optimization of either Balance, Performance, or Capacity when starting arrays in iSeries Navigator. An optimization of Balance is used by default when starting arrays from the DST or SST options. If disk units are included into an existing array, parity can be spread across less than the preferred number of disk units. In this case the RAID function must be stopped and then started in order to redistribute the parity.</p> <p>The #2782 controls up to two removable media devices (internal tape, CD-ROM and DVD).  The #2782 PCI-X RAID Disk Unit Controller does not support hardware data compression.  The #2782 does not support the attachment of external devices.</p> <p>Minimum operating system level: OS/400 V5R2  The #2782 is a Customer Install Feature.  The #2782 was withdrawn from marketing on 01 January 2004. The recommended replacement is a #5703 PCI-X RAID Disk Unit Controller.</p>
#2787	<p><b>#2787 PCI-X Fibre Channel Disk Controller</b></p> <p>The #2787 PCI-X Fibre Channel Disk Controller provides Fibre Channel attachment capability for external disk devices. The #2787 supports point-to-point and arbitrated loop topologies and has an LC-type cable connector. Each #2787 is shipped with a wrap connector (part number 05N6767). It supports 64-bit, 133MHz PCI-X bus speeds. It is the PCI-X replacement card for the #2766 PCI Fibre Channel Disk Controller.</p> <p>The following adapter kits are required when connecting SC-type cables to the #2787:</p> <ul style="list-style-type: none"> <li>▶ #0371 - LC-SC Adapter Kit (50um) can be ordered, both on initial, model upgrades, and simple MES orders. This optional kit is used to attach SC-type fibre (50 micron) cables to a #2787. The #0371 kit contains a 2 m LC-ST cable and ST-SC adapter for 50 micron fiber cable.</li> <li>▶ #0372 - LC-SC Adapter Kit (62.5um) can be ordered, both on initial, model upgrades, and simple MES orders. This optional kit is used to attach SC-type fiber (62.5 micron) cables to a #2787. The #0372 kit contains a 2 m LC-ST cable and ST-SC adapter for 62.5 micron fiber cable.</li> </ul> <p>An optics cleaning kit (part number 46G6844) and instruction sheet (part number 21P6238, form number SY27-2604) is supplied, one per system, when a #2787 is ordered.</p> <p>When used as a Direct Attached Adapter for Linux, the #0626 should be ordered in place of the #2787.  Maximum physical quantities are determined by requiring a dedicated IOP and limited to two per Multi-adapter Bridge boundary.</p> <p>All Fibre Channel cables required for the #2787 PCI-X Fibre Channel Disk Controller are supplied by the client.  Minimum operating system level: OS/400 V5R2  The #2787 is a Customer Install Feature</p>

<p>#4748 #9748</p>	<p><b>#4748 PCI RAID Disk Unit Controller</b></p> <p>The #4748/#9748 is an Ultra2 SCSI controller with a 26 MB write-cache that provides RAID-5 protection and compression for internal disk units and supports internal tape units and CD-ROM units. The #4748/#9748 supports both compression and non-compression modes. The mode of operation is determined by a hardware jumper. The #4748/#9748 is shipped in non-compression mode. By moving the hardware jumper, the controller functions in compression mode. In addition to providing RAID-5 protection for disks, the #4748/#9748 is also designed to work as a high performance controller for disks protected by system mirroring or disks with no protection. The #4748 also supports #4331 1.6 GB Read Cache Device, which provides increased performance. The #4331 1.6 GB Read Cache Device is supported only when #4748/#9748 is <i>not</i> in compression mode.</p> <p>The #4748 does not support data compression on 35 GB disk units. The #4748 controller supports a maximum of 15 disk units. The #9748 is the base disk controller for Models 830 and 840.</p> <p>A minimum of four disk units of the same capacity are needed for a valid RAID-5 configuration. A maximum of four arrays are allowed per controller, with a maximum of 10 disk units allowed per array. All disk units in an array must be of the same capacity. Parity is spread across four disk units for arrays of four to seven disk units. Parity can be spread across either four or eight disk units for arrays of 8 to 10 disk units. For systems started with 8 to 10 disk units in an array, the parity for that array is spread across eight disk units. For systems that are started with less than eight disk units in an array and later MES upgraded to 8, 9, or 10 disk units, the RAID function must be stopped and then started before the parity is spread across eight disk units.</p> <p>The #4748/#9748 controls up to two removable media devices (internal tape or CD-ROM). The #4748 can be attached directly to a Linux partition. When installed as #0605 - Direct Attach - #4748 PCI RAID Disk Unit Controller, an IOP is not required. When attached directly to a Linux partition, the #4748 cannot be accessed by OS/400 partitions. When attached directly to a Linux partition, the #4748 does not support RAID or hardware disk compression.</p> <p>Requires long PCI card slot. Minimum operating system level: OS/400 V4R5 The #4748 and #9748 are Customer Install Features. The #4748 and #9748 are withdrawn from marketing on 02 July 2002. The recommended replacement is #2757 PCI-X Ultra RAID Disk Controller</p>
<p>#4778 #9778</p>	<p><b>#4778 PCI RAID Disk Unit Controller</b></p> <p>The #4778/#9778 is an Ultra2 SCSI controller with a maximum compressed write cache size of 104 MB that provides RAID-5 protection and compression for internal disk units and supports internal tape units, CD-ROM and DVD-RAM units. The #4778/#9778 supports both disk compression and enhanced modes. The mode of operation is determined by a hardware jumper. The #4778/#9778 is shipped in enhanced mode, which enables compression of the write cache and Extended Adaptive Cache (a Read Cache Device is needed for Extended Adaptive Cache). By moving the hardware jumper, the controller functions in disk compression mode. Disk compression mode should only be used when disk compression is desired. In addition to providing RAID-5 protection for disks, #4778/#9778 is also designed to work as a high performance controller for disks protected by system mirroring or disks with no protection. In the RAID-5 configuration, disk unit protection is provided at less cost than mirroring, and with better performance than system checksum.</p> <p>The #4778/#9778 also supports the #4331 1.6 GB Read Cache Device, which is used by Extended Adaptive Cache to provide increased performance. The #4331 1.6 GB Read Cache Device is supported only when the #4778/#9778 is in enhanced mode. The #4778/#9778 controller supports a maximum of 18 disk units.</p> <p>A minimum of four disk units of the same capacity are needed for a valid RAID-5 configuration. A maximum of four arrays are allowed per controller, with a maximum of 10 disk units allowed per array. All disk units in an array must be of the same capacity. Parity is spread across 4 disk units for arrays of 4 to 7 disk units. Parity can be spread across either 4 or 8 disk units for arrays of 8 to 10 disk units. For systems started with 8 to 10 disk units in an array the parity, for that array, is spread across eight disk units. For systems that are started with less than eight disk units in an array and later MES upgraded to 8, 9, or 10 disk units, the RAID function must be stopped and then started before the parity is spread across eight disk units. The #4778/#9778 controls up to two removable media devices (internal tape, CD-ROM or DVD-RAM). The #4778/#9778 is the only disk unit controller that supports compression on 35.16 GB disk units.</p> <p>System unit and tower disk unit configurations restrict the number of attaching disk units to 15 or less.</p> <p>The #4778 can be attached directly to a Linux partition. When ordered as #0606 - Direct Attach - #4778 PCI RAID Disk Unit Controller, an IOP is not required. When attached directly to a Linux partition, the #4778 cannot be accessed by OS/400 partitions. When attached directly to a Linux partition, the #4778 does not support RAID or hardware disk compression.</p>



#4778 #9778 (cont.)	<b>#4778 PCI RAID Disk Unit Controller</b> Minimum operating system level: OS/400 V5R1 The #4778 is a Customer Install Feature. The #4778 was withdrawn from marketing on 19 November 2004. Conversions to the #4778 remain available.
#5580	<b>#5580 - 2780 Controller with Auxiliary Write Cache</b> The #5580 provides a disk controller with auxiliary write cache to improve cache data redundancy. The #5580 includes a #2780 PCI-X Ultra4 RAID Disk Controller and a secondary IOA with 757MB of auxiliary maximum compressed write cache.  The #2780 and the secondary IOA each require one PCI-X slot and must be installed together in the same system unit or I/O unit/drawer/tower. The #2780 and the auxiliary write cache IOA are connected by a SCSI cable (provided). Feature #2780 does not appear on IBM ordering, shipping, or inventory documentation.  The connecting SCSI cable is attached to port four of the #2780, reducing the number of SCSI buses that support disk drives from four to three. The reduction of SCSI buses can also reduce the number of disk drives supported by the #2780, depending on the system unit or I/O unit/drawer/tower in which the #2780 is installed. No disk drives are driven by the auxiliary write cache IOA.  For more details regarding auxiliary write cache, refer to <i>Planning for eServer i5 Data Protection with Auxiliary Cache Solutions</i> , REDP-4003 at: <a href="http://w3.itso.ibm.com/redpieces/abstracts/redp4003.html?Open">http://w3.itso.ibm.com/redpieces/abstracts/redp4003.html?Open</a>  Supported on Models 820, 830, and 840 Minimum operating system level: OS/400 V5R2 with CUM C5123520 and prerequisite PTFs.
#5581	<b>#5581 - 2757 Ctrlr with Aux Write Cache</b> The #5581 provides a disk controller with auxiliary write cache to improve cache data redundancy. The #5581 includes a #2757 PCI-X Ultra4 RAID Disk Controller and a secondary IOA with 757MB of auxiliary maximum compressed write cache. The #2757 and the secondary IOA each require one PCI-X slot and must be installed together in the same system unit or I/O unit/drawer/tower. The #2757 and the auxiliary write cache IOA are connected by a SCSI cable (provided). Feature #2757 will not appear on IBM ordering, shipping, or inventory documentation.  The connecting SCSI cable is attached to port four of the #2757, reducing the number of SCSI buses that support disk drives from four to three. The reduction of SCSI buses can also reduce the number of disk drives supported by the #2757, depending on the system unit or I/O unit/drawer/tower in which the #2757 is installed. No disk drives are driven by the auxiliary write cache IOA.  For more details regarding auxiliary write cache, refer to <i>Planning for eServer i5 Data Protection with Auxiliary Cache Solutions</i> , REDP-4003 at: <a href="http://w3.itso.ibm.com/redpieces/abstracts/redp4003.html?Open">http://w3.itso.ibm.com/redpieces/abstracts/redp4003.html?Open</a>  Supported on Models 820, 830, and 840 Minimum operating system level: OS/400 V5R2 with cumulative PTF package C5123520 and prerequisite PTFs .

#5703	<p><b>#5703 PCI-X RAID Disk Unit Controller</b></p> <p>The #5703 PCI-X RAID Disk Unit Controller is an Ultra3 SCSI controller with a cache size of 40 MB that provides RAID-5 protection for internal disks and internal tape units, CD-ROM, DVD-RAM and DVD-ROM units. The #5703 has two Ultra3 SCSI buses. In addition to providing RAID-5 protection for disks, the #5703 is designed to work as a high performance controller for disks protected by system mirroring or disks with no protection. In the RAID-5 configuration, disk unit protection is provided at less cost than mirroring, and with better performance than system checksum.</p> <p>The #5703 controller supports a maximum of 12 disk units.</p> <p>Due to a system unit and external tower disk unit cage SCSI bus designs, only the 270 Models, and the #0595/#5095 PCI-X Expansion Tower have a suitable system configuration to allow 12 disk units to attach to a single #5703. All other system unit and tower disk configurations restrict the number of attaching disk units to 10 or less.</p> <p>A minimum of three disk units of the same capacity are needed for a valid RAID-5 configuration. A maximum of four arrays are allowed per controller, with a maximum of 12 disk units allowed per array. All disk units in an array must be of the same capacity. Parity is spread across either two, four, or eight disk units in an array. If an array of three disk units is started, parity is spread across two disk units. If an array of four to seven disk units is started, parity is spread across four disk units. If an array of 8-12 disk units is started, parity is spread across eight disk units.</p> <p>The number of arrays and size of each array can be influenced by specifying an optimization of either <i>Balance</i>, <i>Performance</i>, or <i>Capacity</i> in iSeries Navigator when starting arrays. An optimization of <i>Balance</i> is used by default when starting arrays from the green screens. If disk units are included into an existing array, parity can be spread across fewer than the preferred number of disk units. In this case the RAID function must be stopped and then started to redistribute the parity.</p> <p>The #5703 controls up to two removable media devices (internal tape, CD-ROM, DVD-RAM, DVD-ROM).  The #5703 does not support the attachment of external devices.  The #5703 is the recommended replacement for the #2782 PCI-X RAID Disk Unit Controller.  When ordered as #0628 - Direct Attach - #5703 PCI-X RAID Disk Unit Controller, an IOP is not required. When attached directly to a Linux/AIX partition, the #5703 cannot be accessed by OS/400 partitions.  Minimum operating system level: OS/400 V5R2  The #5703 is a Customer Install Feature  The #5703 is the recommended replacement for the #2782 PCI-X RAID Disk Unit Controller.</p>
#5704	<p><b>#5704 PCI-X Fibre Channel Tape Controller</b></p> <p>The #5704 PCI-X Fibre Channel Tape Controller provides Fibre Channel attachment capability for external tape devices. The #5704 supports point-to-point and arbitrated loop topologies and has an LC-type cable connector. Each #5704 is shipped with a wrap connector (part number 05N6767). The #5704 supports 64-bit, 133MHz PCI-X bus speeds. It is the PCI-X card replacement for the #2765 PCI Fibre Channel Tape Controller.</p> <p>All Fibre Channel cables required for the #5704 PCI-X Fibre Channel Tape Controller are supplied by the client.</p> <p>Supported devices include:</p> <ul style="list-style-type: none"> <li>▶ 3582-L23 Ultrium Tape Library</li> <li>▶ 3583-Lxx Ultrium Scalable Tape Library</li> <li>▶ 3584-L32 or D32 Ultra scalable Tape Library</li> <li>▶ 3590 ½-inch Cartridge Tape Subsystem Models E11, E1A, H11, and H1A</li> <li>▶ 3592 Enterprise Tape Drive</li> </ul> <p>The #5704 does not support the Alternate IPL device function. A D-mode IPL is required using CD-ROM, DVD-ROM, or another alternate IPL tape device. Then select a #5704 to complete the installation or recovery process.  Minimum operating system level: OS/400 V5R2  The #5704 is a Customer Install Feature.  A #5703 is the recommended replacement for the #2782.</p>

#5705	<p><b>#5705 PCI-X Tape/DASD Controller</b></p> <p>The #5705 PCI-X Tape/DASD Controller provides SCSI Ultra4 PCI attachment capability for external tape devices, external removable media devices, and internal DASD devices. There are two SCSI buses on each #5705. Each SCSI bus has both an internal port and an external port for a total of four ports on the card. Each SCSI bus can have only one attachment, either internal or external. Attaching internal and external devices to the same SCSI bus causes the internal device to become disabled.</p> <p>The internal SCSI port supports up to six disk units, but does not support RAID. If two external SCSI ports are required, a #5702 should be ordered.</p> <p>The external port can support the following devices:</p> <ul style="list-style-type: none"> <li>▶ 3580-L23 IBM TotalStorage Ultrium 2 Tape Drive</li> <li>▶ 3582-L23 IBM Ultrium Tape Library, LVD Ultrium 2 drive feature</li> <li>▶ 3583-Lxx IBM Ultrium Scalable Tape Library, LVD Ultrium 2 drive feature</li> <li>▶ 3584 Ultra Scalable Tape Library, LVD Ultrium 2 drive feature</li> <li>▶ 7206-VX2 80 GB VXA-2 External Tape Drive</li> <li>▶ 7207-122 QIC-SLR Tape Bridge Box (4 GB External ¼-inch Cartridge Tape Drive)</li> <li>▶ 7208-345 60 GB External 8 mm Tape Drive</li> <li>▶ 7210-020 External CD-ROM</li> <li>▶ 7210-025 External DVD-RAM</li> <li>▶ 7329-308 SLR100 ¼-inch Tape Autoloader</li> </ul> <p>See 9.5.4, “#5712, #5715, #5702, #5705, #2718, and #2768 PCI Magnetic Media Controller: Device cabling rules” on page 370, for information about connecting devices to the #5705 including daisy-chaining options.</p> <p>Minimum operating system level: OS/400 V5R2</p> <p>The #5705 is a Customer Install Feature.</p> <p>The #5705 was withdrawn from marketing on 01 June 2006.</p>
#9767	<p><b>#9767 Base PCI Disk Unit Controller</b></p> <p>The #9767 is disk unit and removable media device controller that provides Ultra2 SCSI attachment capability. The #9767 does not support RAID. The #9767 is the default controller in the Model 820 when RAID is not selected, and controls up to six disk units and up to two removable media devices (internal tape, CD-ROM, and DVD-RAM).</p> <p>Limitations:</p> <ul style="list-style-type: none"> <li>▶ For OS/400 V4R5 processors (regardless of operating system level): <ul style="list-style-type: none"> <li>– The #9767 can drive up to six disk units when placed in the system unit.</li> <li>– The #9767 can drive up to four disk units when placed in a #5075 PCI Expansion Tower.</li> </ul> </li> <li>▶ For V5R1 processors, the #9767 can drive up to four disk units when placed in the system unit or in a #5075 PCI Expansion Tower.</li> </ul> <p>Supported in Model 820.</p> <p>The #9767 was withdrawn from marketing on 21 November 2003.</p>

Archived

## IBM iSeries towers schematics

This chapter identifies the system diagrams for the towers that are supported by the IBM iSeries servers and the power and packaging features for those towers.

Migration towers are the result of an upgrade from an AS/400e 600, 620, 640, 650, 720, 730, 740, or Sxx model to an iSeries 820, 830, or 840 model. All the I/O and disk units in the former system unit and any attached towers remain accessible to the upgraded system with the connection of the migration tower to the high-speed link (HSL) loop. iSeries Models 820, 830, and 840 support upgrades of existing system units and expansion towers from Models 720, 730, and 740 by converting the system tower of those systems into either a #5033, #5034, or #5035 Migration Tower I or a #5077 Migration Tower II. Migration towers are not supported by the IBM eServer iSeries 270 models.

Refer to 13.1, "HSL cables" on page 462 for information about HSL cables.

Model	General availability	Withdrawn from marketing
#0578 PCI Expansion Unit in Rack	23 April 2001	01 October 2004
#0588 PCI-X Expansion Unit in Rack	28 February 2003	01 June 2006
#0595 PCI-X Expansion Unit in Rack	28 February 2003	---
#5033 Migration Tower I	28 July 2000	07 May 2003
#5034 Migration Tower I	28 July 2000	21 November 2003
#5035 Migration Tower I	28 July 2000	21 November 2003
#5074 PCI Expansion Tower	12 June 2000	01 October 2005
#5075 PCI Expansion Tower	12 June 2000	21 November 2003
#5077 Migration Tower II	12 June 2000	01 January 2004
#5078 PCI Expansion Unit	23 April 2001	01 October 2004
#5079 1.8 M I/O Tower	12 June 2000	01 October 2005
#5088 PCI-X Expansion Unit	28 February 2003	01 June 2006
#5094 PCI-X Expansion Tower	28 February 2003	---
#5095 PCI-X Expansion Tower	28 February 2003	---

Model	General availability	Withdrawn from marketing
#5294 1.8m I/O Tower	28 February 2003	---
#8079 Optional Base 1.8 M I/O Rack	3 October 2000	21 November 2003
#8093 Optional 1.8 M I/O Rack	14 May 2002	07 May 2003
#9057 Storage Expansion Unit	19 August 1997	01 January 2004
#9094 Base PCI-X I/O Enclosure	14 May 2002	01 October 2005
#9194 Base PCI-X Expansion Tower	15 October 2004	---

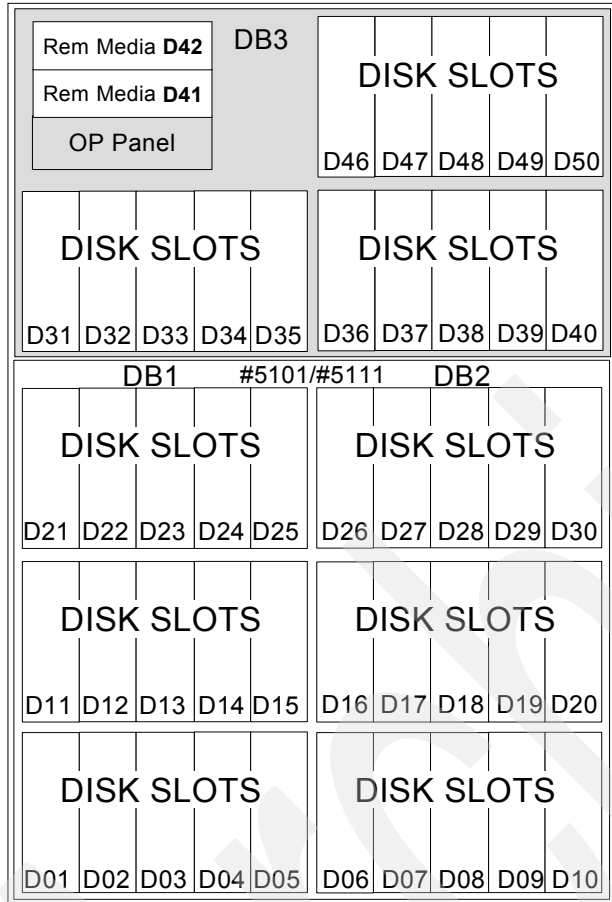
**Note:** The darker shaded areas in the following graphics follow indicate the base features.

## 8.1 9406 iSeries towers, racks, and expansion unit schematics

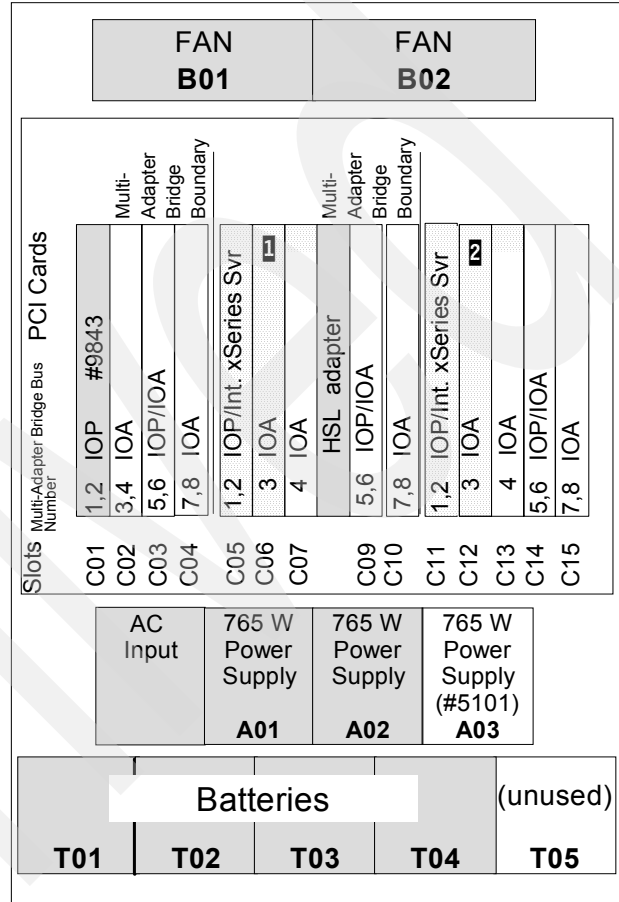
### 8.1.1 #5074 PCI Expansion Tower

The #5074 PCI Expansion Tower is supported by Models 820, 830, 840, SB2, and SB3.

**Note:** The total number of disk bays is 45.



Front



Back

#### Legend

Base Feature

Required Feature

Unavailable if  
Integrated xSeries  
Server is installed

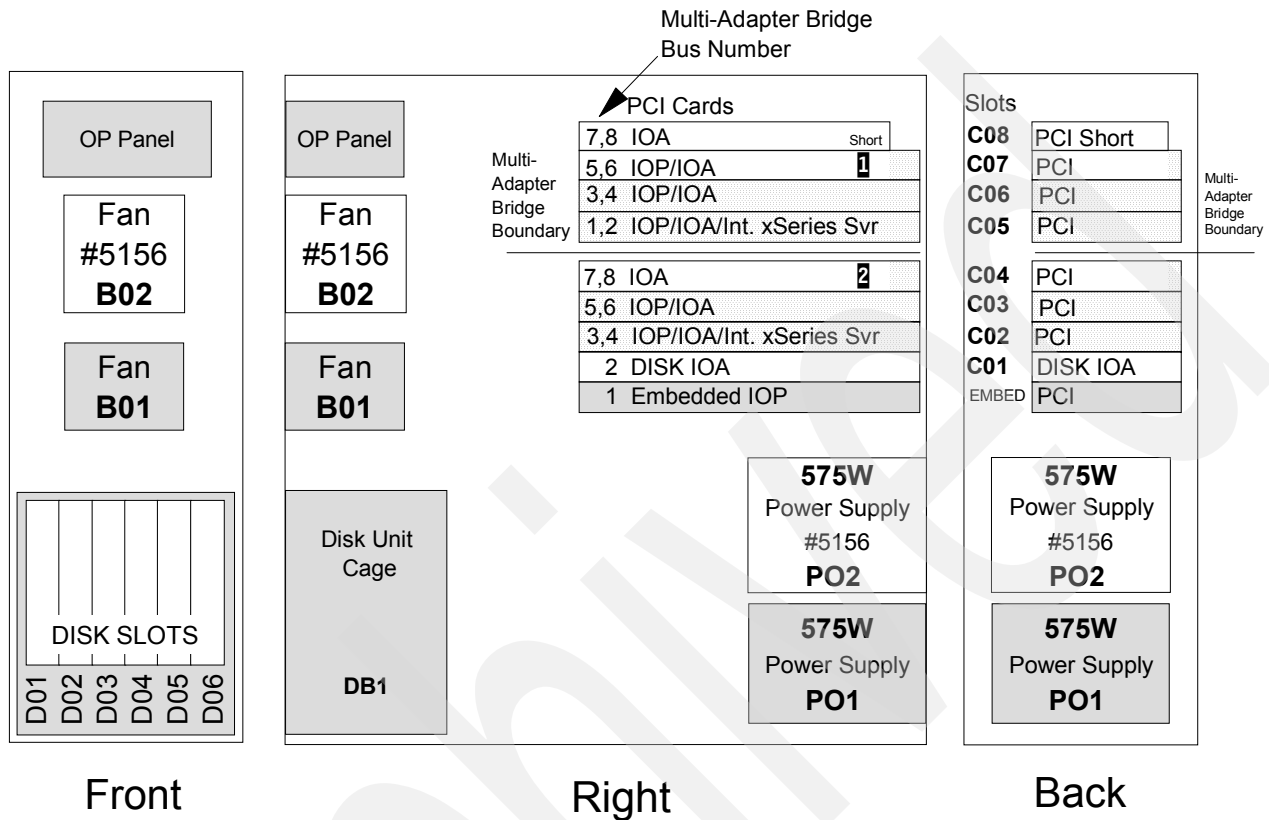
**Note 1:** If C05 has an Integrated xSeries Server, slot C06 is unavailable, and slot C07 is available only as a short slot.

**Note 2:** If C11 has an Integrated xSeries Server, slot C12 is unavailable, and slot C13 is available only as a short slot.

**Note 3:** #5700/#5701 must be placed in a 32-bit slot.

## 8.1.2 #5075 PCI Expansion Tower

The #5075 PCI Expansion Tower includes a 32 MB Peripheral Component Interconnect (PCI) IOP (CCIN 284B) embedded on its backplane. The #5075 is supported by the Model 820.



### Legend

Base Feature

Required Feature

Unavailable if  
Integrated xSeries  
Server is installed

**Note 1:** If C05 has an Integrated xSeries Server, slot C06 is unavailable, and slot C07 is available only as a short slot.

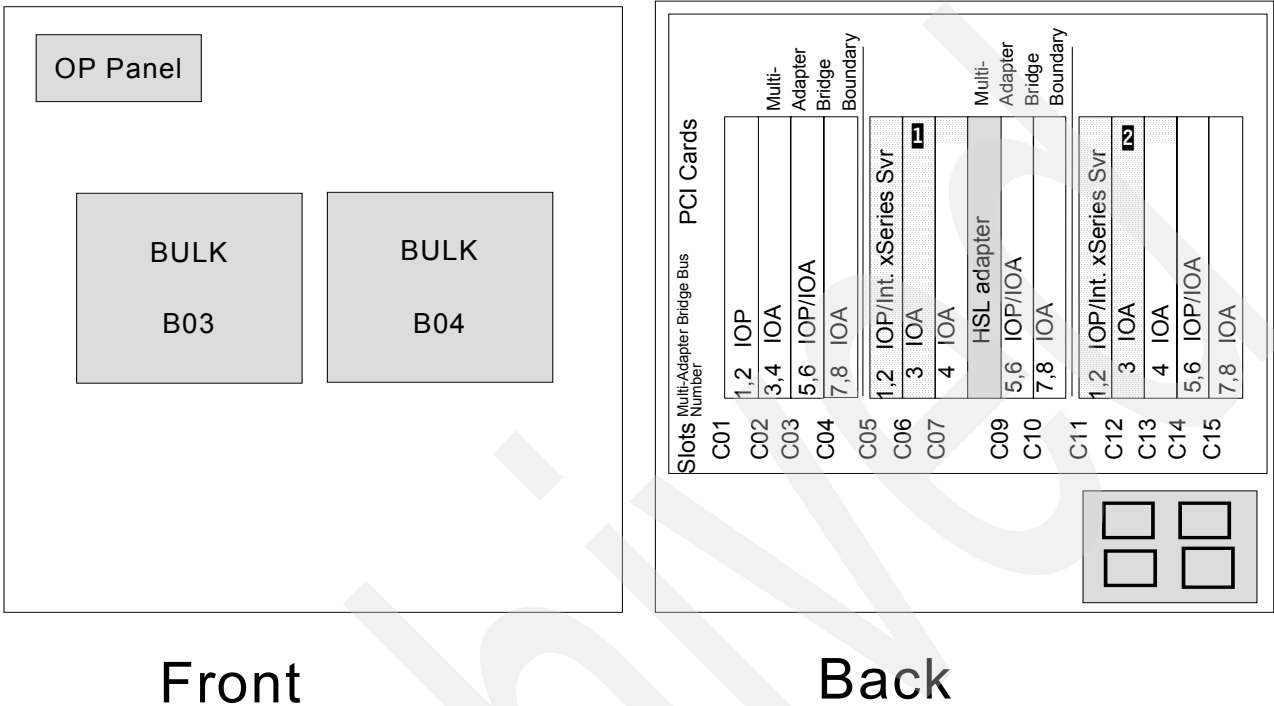
**Note 2:** If C02 has an Integrated xSeries Server, slot C03 is unavailable, and slot C04 is available only as a short slot.

**Note 3:** #5700/#5701 must be placed in a 32-bit slot. If #5700/#5701 is installed in C01 then move Disk IOA to next available slot.



8.1.3 #5078/#0578 PCI Expansion Unit

The #5078 PCI Expansion Unit or #0578 PCI Expansion Unit in Rack is attached to the top of a #5074 PCI Expansion Tower or #9079 Base I/O Tower. It can also be mounted in an #0551 iSeries Rack.



**Legend**

Base Feature

Required Feature

Unavailable if Integrated xSeries Server is installed

**Note 1:** If C05 has an Integrated xSeries Server, slot C06 is unavailable, and slot C07 is available only as a short slot.

**Note 2:** If C11 has an Integrated xSeries Server, slot C12 is unavailable, and slot C13 is available only as a short slot.

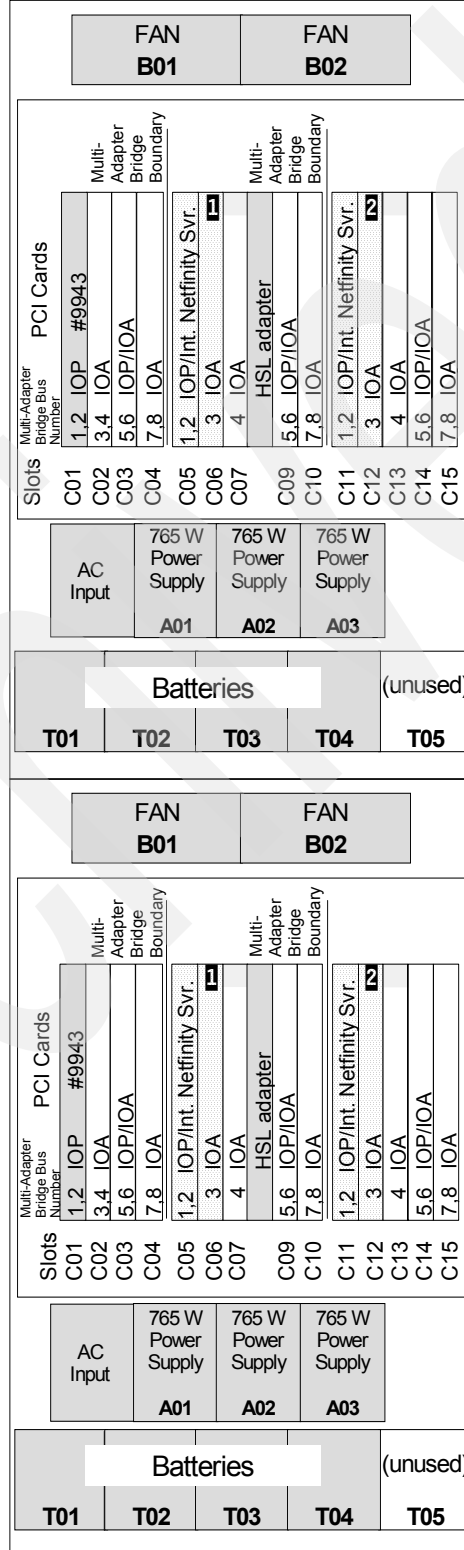
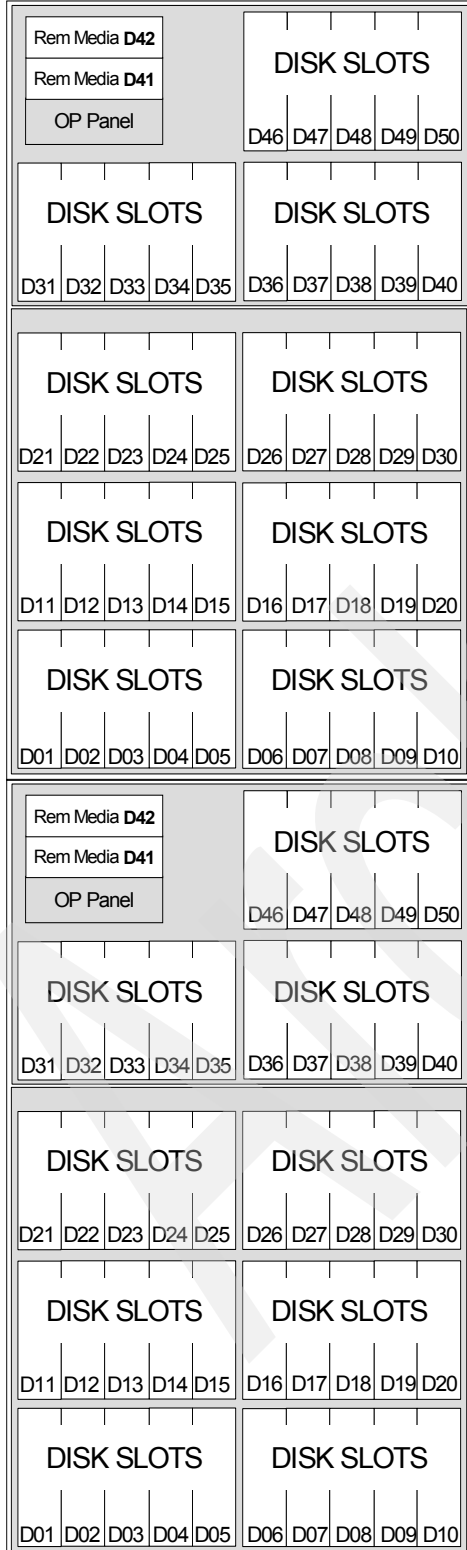
**Note 3:** If #5700/#5701 is installed in C01 then move Disk IOA to next available slot.

**Restriction:** #5700/#5701 must be placed in a 32-bit slot

## 8.1.4 #5079 1.8 M I/O Tower

The #5079 1.8 M I/O Tower is supported by Models 820, 830, and 840. The #5079 consists of two #5074 PCI Expansion Towers with side covers and casters removed.

**Note:** Total number of disk bays is 2 x 45



### Legend

Base Feature

Required Feature

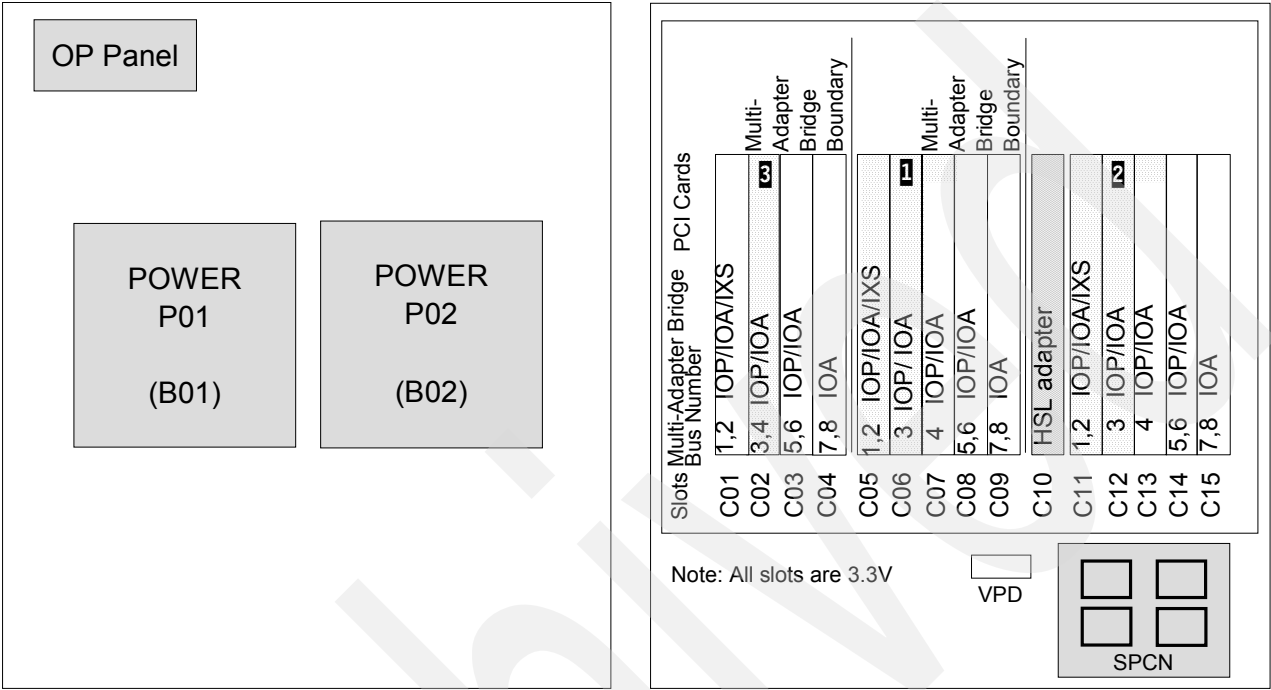
Unavailable if Integrated Netfinity Server is installed

**Note 1:** If C05 has an Integrated Netfinity Server, slot C06 is unavailable, and slot C07 is available only as a short slot.

**Note 2:** If C11 has an Integrated Netfinity Server, slot C12 is unavailable, and slot C13 is available only as a short slot.

8.1.5 #5088/#0588 PCI-X Expansion Unit

The #5088 PCI-X Expansion Unit is attached to the top of a #5074 PCI Expansion Tower, #5094 PCI-X Expansion Tower, or #9094 Base PCI-X I/O Enclosure. The #0588 is mounted in an #0551 iSeries Rack.



Legend

Base Feature	Required Feature	Unavailable if Integrated xSeries Server is installed
--------------	------------------	---

Note 1: If C05 has an Integrated xSeries Server, slot C06 is unavailable, and slot C07 is available only as a short slot. A #2792 does not reduce a third slot to a short slot.

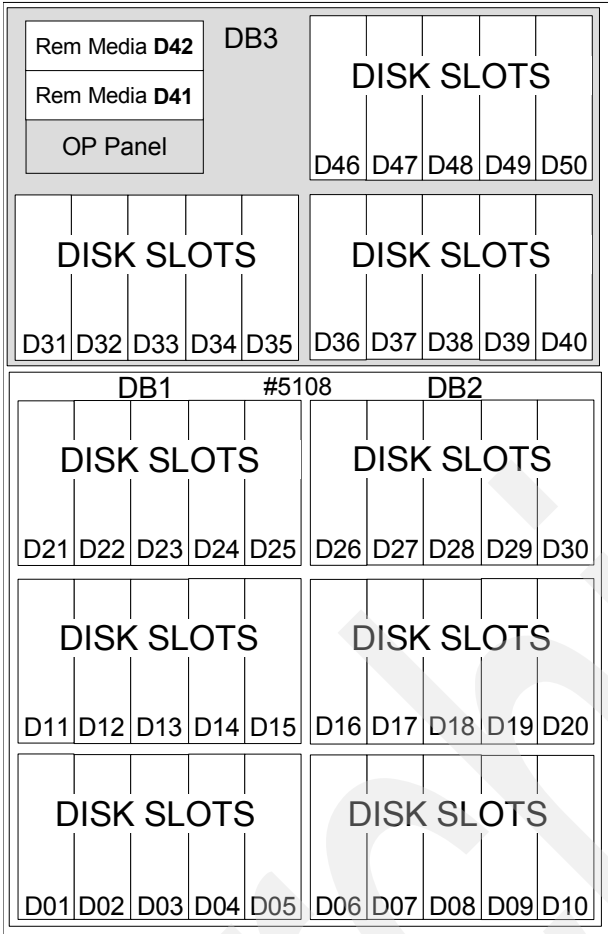
Note 2: If C11 has an Integrated xSeries Server, slot C12 is unavailable, and slot C13 is available only as a short slot. A #2792 does not reduce a third slot to a short slot.

Note 3: IXS placement is not supported from plant. Only a #2792 is allowed in this position.

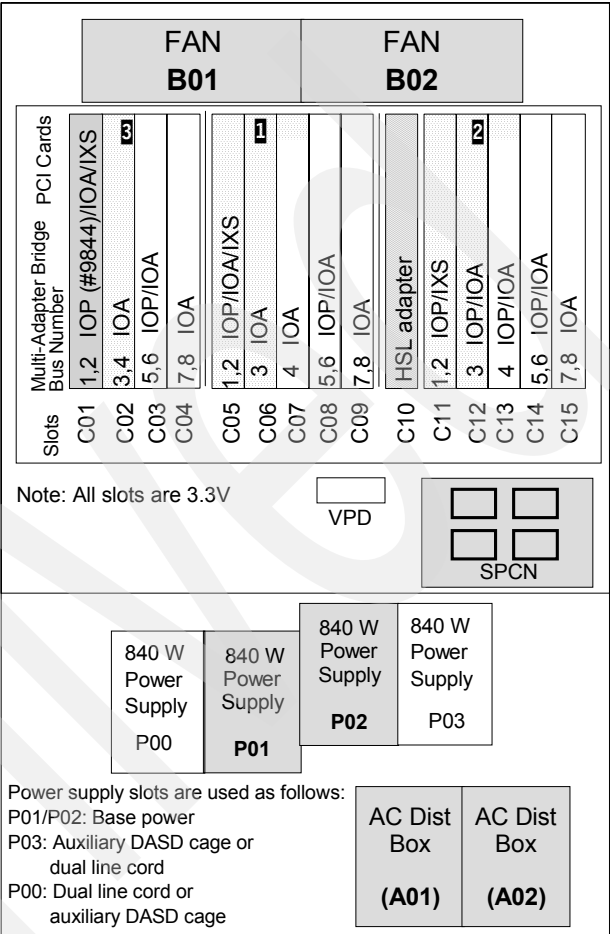
8.1.6 #5094 PCI Expansion Tower

The #5094 PCI-X Expansion Tower is supported by Models 820, 830, and 840.

**Note:** The total number of disk bays is 45.



Front



Back

Legend

Base Feature

Required Feature

Unavailable if Integrated xSeries Server is installed

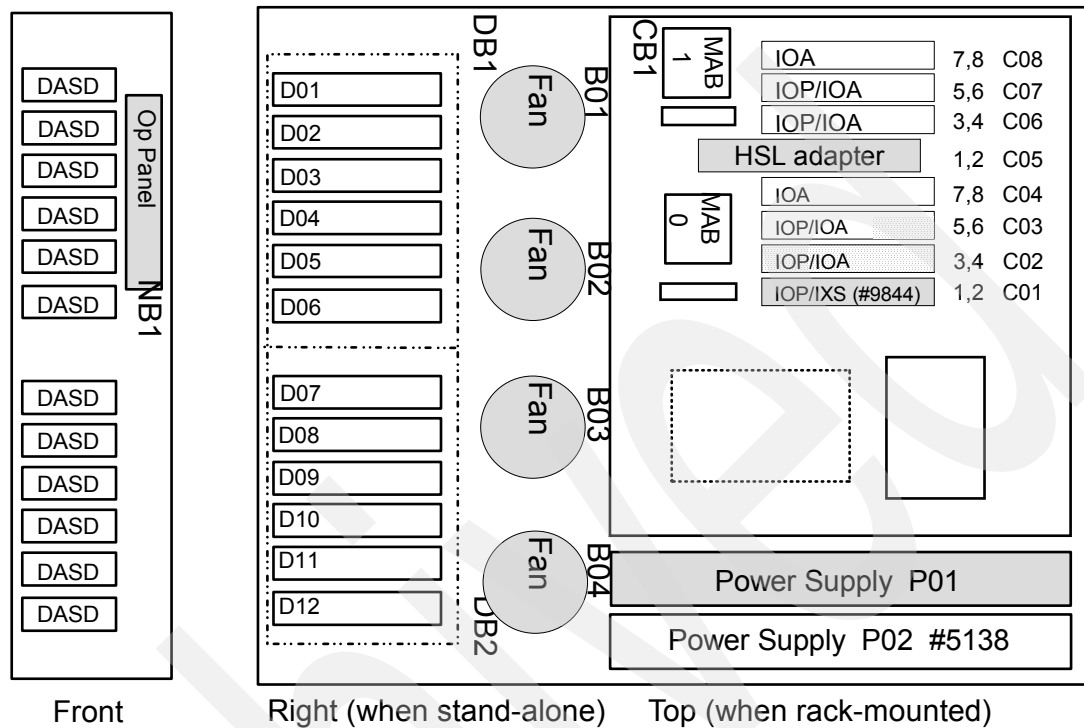
**Note 1:** If C05 has an Integrated xSeries Server, slot C06 is unavailable, and slot C07 is available only as a short slot. A #2792 does not reduce a third slot to a short slot.

**Note 2:** If C11 has an Integrated xSeries Server, slot C12 is unavailable, and slot C13 is available only as a short slot. A #2792 does not reduce a third slot to a short slot.

**Note 3:** IXS placement is not supported from plant. Only a #2792 is allowed in this position.

### 8.1.7 #5095/#0595 PCI-X Expansion Tower

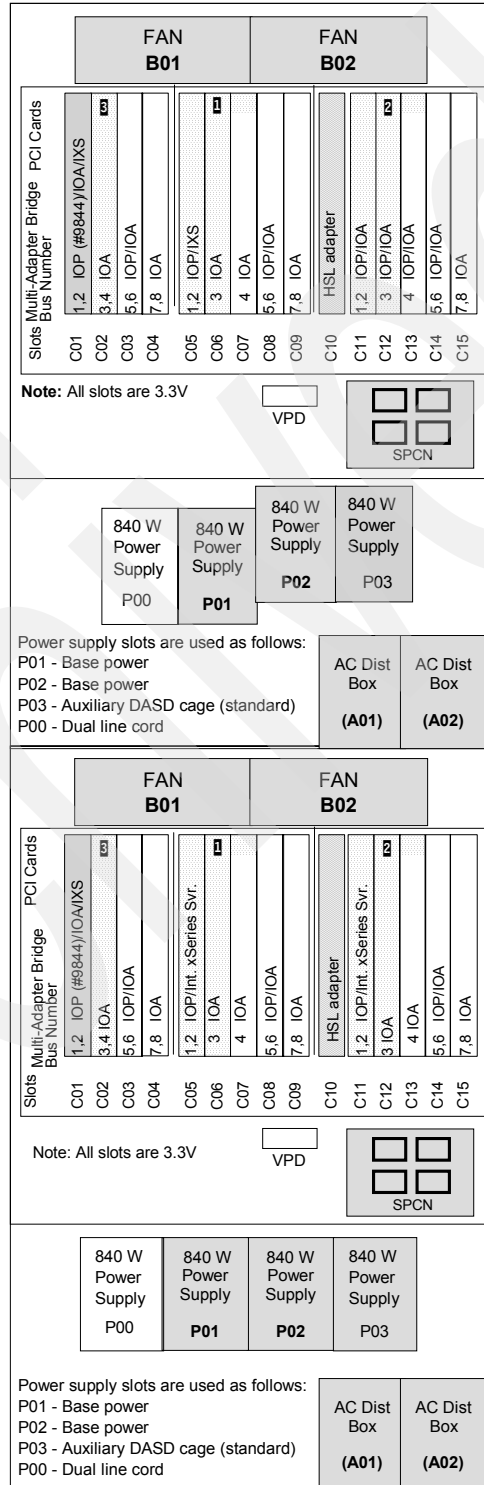
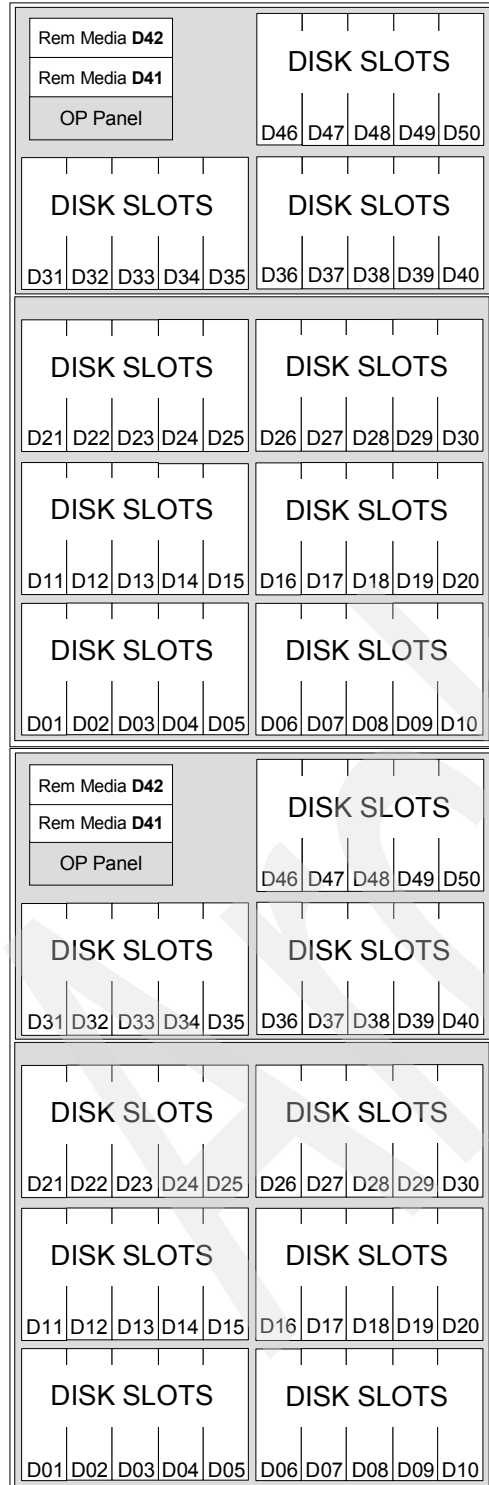
The #5095 PCI-X Expansion Tower and #0595 PCI-X Expansion Unit in Rack are supported by the Models 820, 830, and 840.



## 8.1.8 #5294 PCI-X Expansion Tower

The #5294 1.8m I/O Tower is supported by Models 820, 830, and 840. The #5294 consists of two #5094 PCI-X Expansion Towers with side covers and casters removed.

**Note:** The total number of disk bays is 2 x 45.



### Legend

Base Feature

Required Feature

Unavailable if Integrated Netfinity Server is installed

**Note 1:** If C05 has an Integrated xSeries Server, slot C06 is unavailable, and slot C07 is available only as a short slot. A #2792 does not reduce a third slot to a short slot.

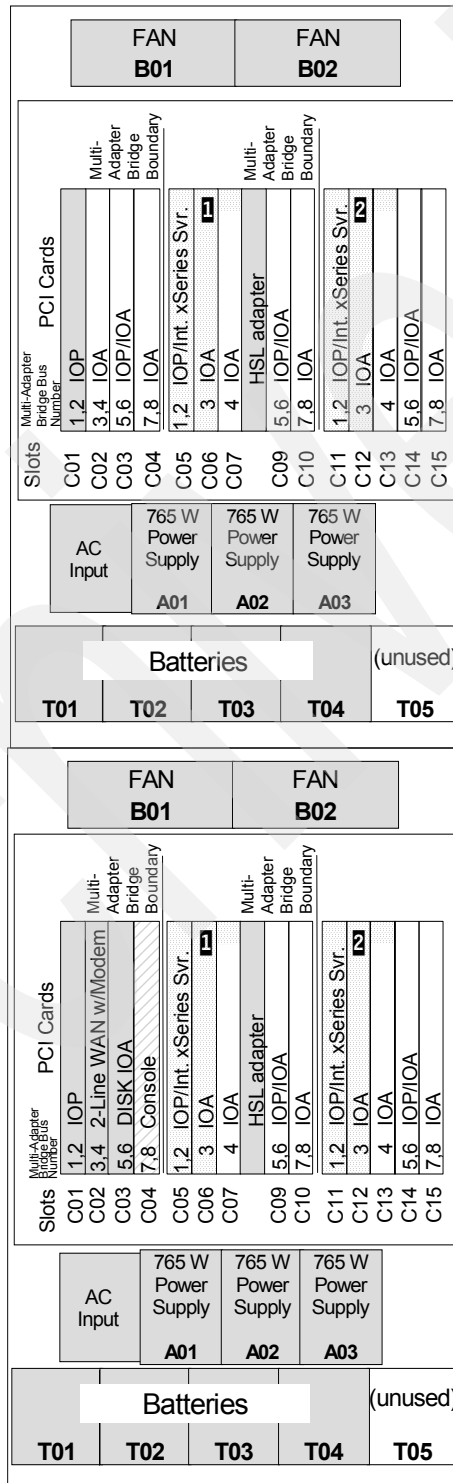
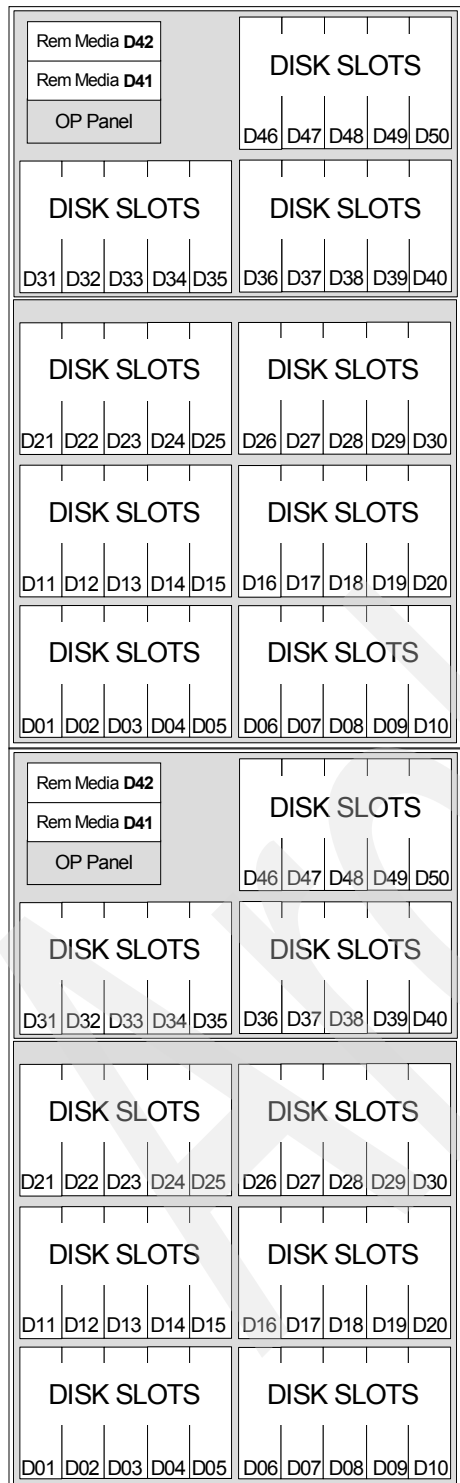
**Note 2:** If C11 has an Integrated xSeries Server, slot C12 is unavailable, and slot C13 is available only as a short slot. A #2792 does not reduce a third slot to a short slot.

**Note 3:** IXS placement is not supported from plant. Only a #2792 is allowed in this position.

## 8.2 #8079 Optional Base Rack

The #8079 Optional Base 1.8 M I/O Rack is the 1.8 meter optional base I/O rack for the Model 840.

**Note:** The total number of disk bays is 2 x 45.



### Legend

Base Feature

Required Feature

Unavailable if Integrated xSeries Server is installed

**Note 1:** If C05 has an Integrated xSeries Server, slot C06 is unavailable, and slot C07 is available only as a short slot.

**Note 2:** If C11 has an Integrated xSeries Server, slot C12 is unavailable, and slot C13 is available only as a short slot.

**Note 3:** The position of the cards may change depending on the console and other features selected.

## 8.3 Migration towers schematics

Migration towers are used to migrate existing PCI and SPD cards, existing disk units, and existing removable media devices. Migration towers are HSL attached but contain SPD buses only. The I/O and disk units in the former system unit and any attached towers remain accessible to the upgraded system with the connection of a migration tower to the HSL loop.

For details about hardware supported in migration towers, see Chapter 5, “IBM AS/400e 720, 730, and 740 models” on page 129, or *AS/400e RISC System Builder*, REDP-0342.

### 8.3.1 #5033, #5034, and #5035 Migration Tower I

The #5033 is a converted AS/400e 600/S10 system unit/CEC tower.

The #5034 is a converted AS/400e 620, S20, or 720 system unit tower (with 10 possible internal system unit disk unit positions) and any existing #5064 or #9364 System Unit Expansions.

The #5035 is a converted 620, S20, or 720 system unit/CEC tower (with 15 possible internal system unit disk unit positions), and any existing #5064 or #9364 System Unit Expansions. With OS/400 V5R1 and later, a #5035 Migration Tower I can be obtained by way of RPQ 847120. RPQ 847120 was withdrawn from marketing on 17 September 2002.

The #5033 Migration Tower I, #5034 Migration Tower I, and #5035 Migration Tower I schematics are not shown in this publication. The layout of the #5033 is equivalent to the Model 600 system unit without processor cards. Refer to *AS/400e RISC System Builder*, REDP-0342, for Model 600 system unit schematics that are equivalent to the #5033 Migration Tower I.

The layouts of the #5034 and #5035 are equivalent to the Model 720 system unit without processor cards. Refer to 5.5.1, “Model 720 #2061 processor” on page 134, and 5.5.2, “Model 720 #2062, #2063, #2064 processors” on page 135, for equivalent #5034 Migration Tower I and #5035 Migration Tower I drawings.

### 8.3.2 #5077 Migration Tower II

The #5077 Migration Tower II is HSL attached but contains SPD buses only. The #5077 is a feature I/O tower that supports SPD I/O cards and attaches SPD expansion towers and #5065/#5066 PCI Expansion Towers.

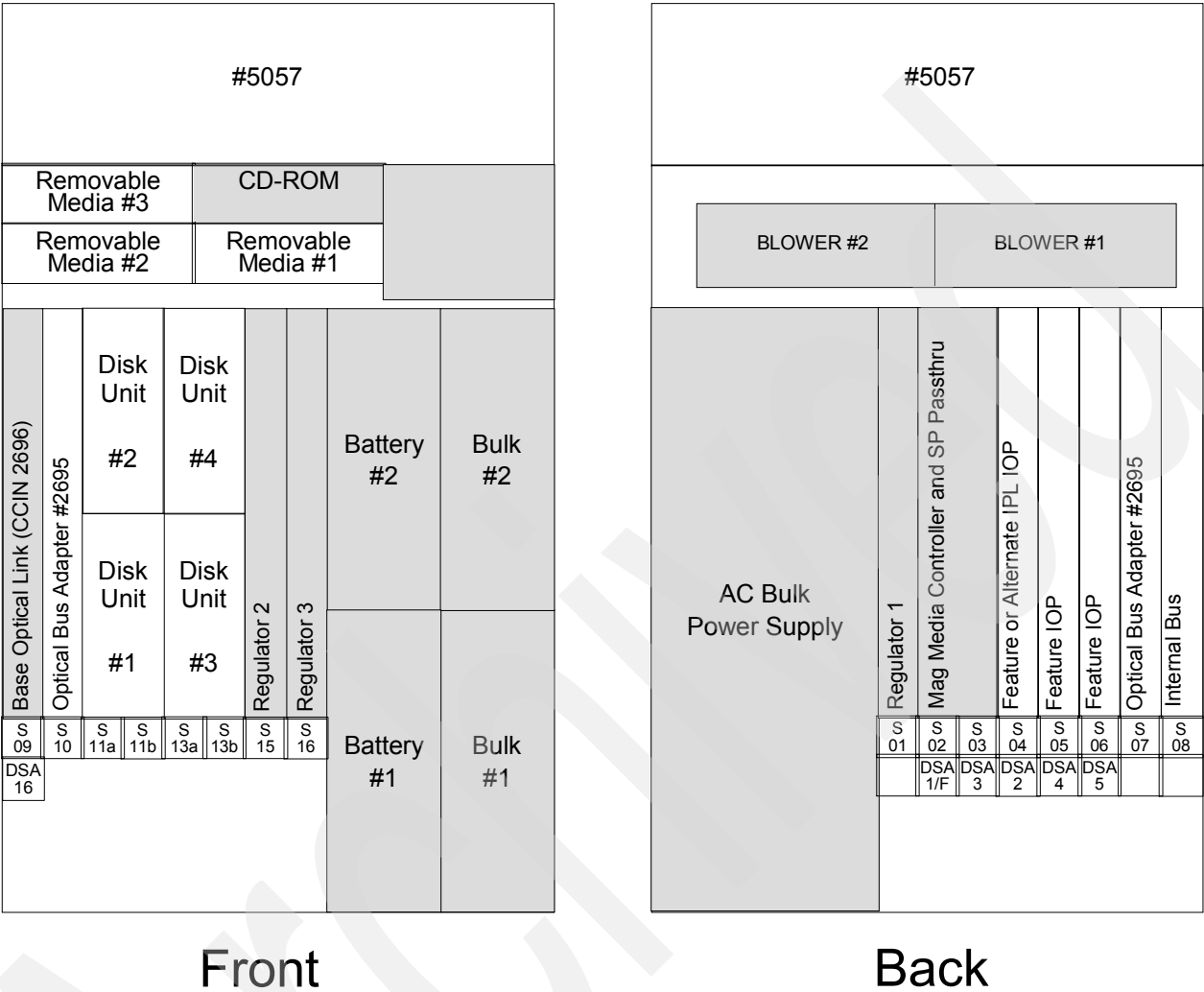
When upgrading to a Model 830 or 840 from a Model 640, S30, or 730, the #5077 is a manufactured unit. It is shipped without a base CD-ROM and without a base optical link card (CCIN 2696). If upgrading to a Model 830 or 840 from a Model 640, S30, or 730 without a #5055 Storage Expansion Unit installed, by default, the #5077 is shipped with a #9057 Storage Expansion Unit. The #9057 can be removed from the order. If upgrading from a Model 640, S30, or 730 with the #5055 installed, a #5055 to #9057 conversion is performed.

When upgrading to a Model 840 from a Model 650, S40, or 740, the #9251 Base I/O Tower on these models is converted to a #5077. When upgrading to a Model 840 from a Model 820 or 830 with the #5034 or #5035 Migration Tower I with SPD cards or SPD towers attached, the #5077 is a manufactured unit. It is shipped without a base CD-ROM and with a base optical link card (CCIN 2696).



8.3.3 #5077 Migration Tower II

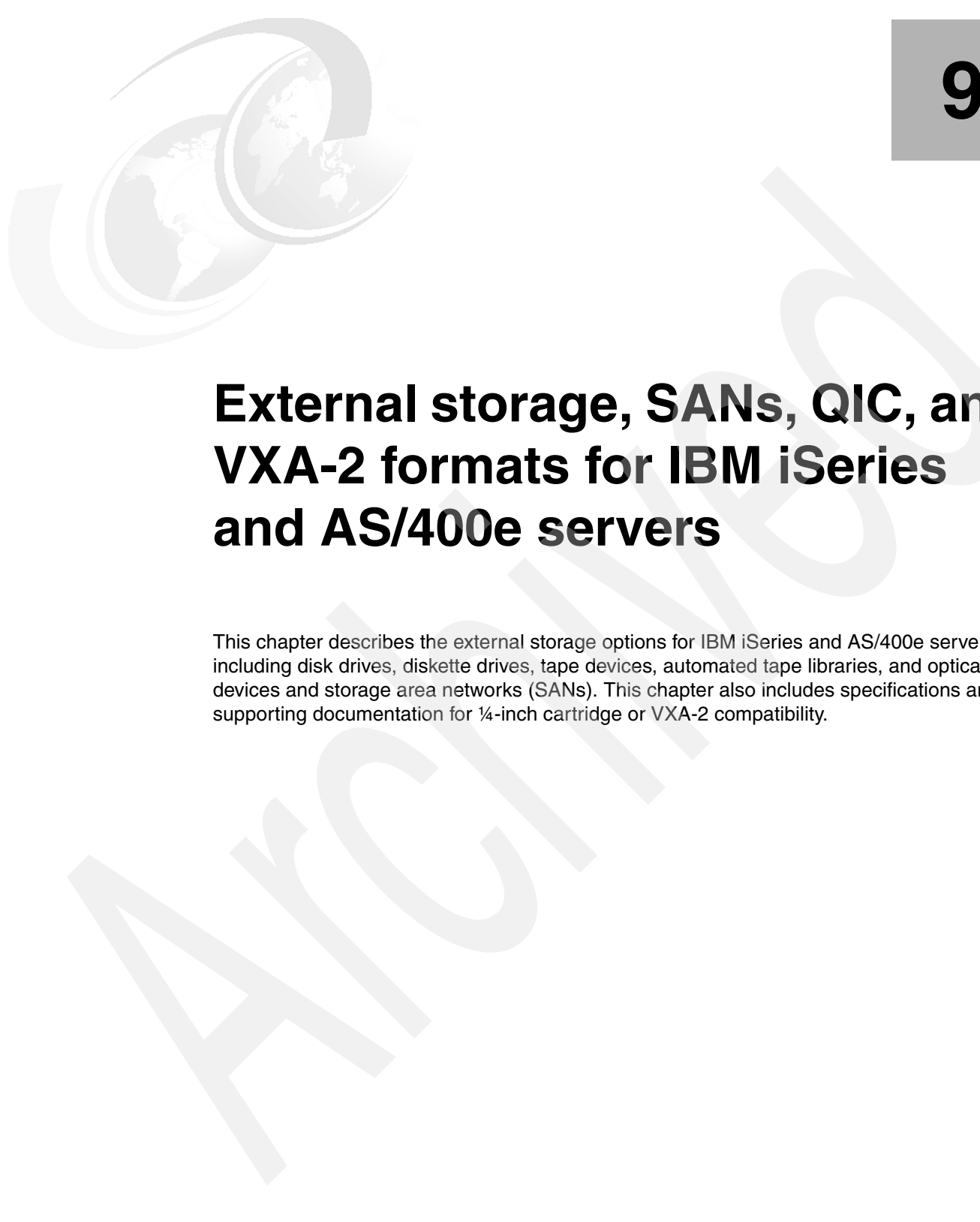
The #5077 Migration Tower II is supported on the Models 830, 840, SB2 and SB3.



Legend

Base Feature

Archived



## **External storage, SANs, QIC, and VXA-2 formats for IBM iSeries and AS/400e servers**

This chapter describes the external storage options for IBM iSeries and AS/400e servers, including disk drives, diskette drives, tape devices, automated tape libraries, and optical devices and storage area networks (SANs). This chapter also includes specifications and supporting documentation for ¼-inch cartridge or VXA-2 compatibility.

## 9.1 External disk storage for iSeries and AS/400e systems

External disk drives and subsystems offer an optional configuration for IBM iSeries and AS/400e servers to extend disk storage capacity. This section describes the external disk storage configurations supported on these servers.

### 9.1.1 9336 and 9337 DASD

Machine	Model	Description	9406 models
9336	010	<b>Direct Access Storage Device</b> Provides 942 MB of DASD with two disk drives (471 MB each) with one actuator.	B, D, E, F 3x0, 50S,
9336	020	<b>Direct Access Storage Device</b> Provides 1714 MB of DASD with two disk drives (857 MB each) with one actuator. These devices are housed in 9309 racks. Four optional features are offered with the 9336: <ul style="list-style-type: none"> <li>► #1201 adds a single 471 MB disk drive</li> <li>► #1202 adds two 471 MB disk drives (942 MB)</li> <li>► #1203 adds a single 857 MB disk drive</li> <li>► #1204 adds two 857 MB disk drives (1714 MB)</li> </ul> A maximum of two additional disk drives per model can be installed.	53S, 500, 510, 530
9336	025	<b>Direct Access Storage Device</b> Provides 3428 MB of DASD with four disk drives (857 MB each) as standard. 9336 attaches to the iSeries using the #6112 Magnetic Storage Device Controller.	

Type-model <sup>1</sup>	RAID <sup>2</sup>	MB per disk	No. of disks min/max	Maximum capacity			9406 models	Upgrade from
				Feature	Base	HA		
9337-010	N	542	2/7	#1206	3.79		B, D, E, F, 3x0, 50S, 53S, 500, 510, 530, 6x0, Sx0, 720, 730, 740, 820, 830, 840	None 010
9337-110	Y	542	4/7	#1206		3.25		None 010
9337-020	N	970	2/7	#1212	6.79			None 020
9337-120	Y	970	4/7	#1212		5.82		None 020
9337-040	N	1967	4/7	#1220	13.76			None 040
9337-140	Y	1967	4/7	#1220		11.80		
9337-015	N	542	2/7	#1207	3.79		B, D, E, F, 3x0, 50S, 53S, 500, 510, 530, 6x0, Sx0, 720, 730, 740, 820, 830, 840	None 015
9337-115	Y	542	4/7	#1207		3.25		None 015
9337-025	N	970	2/7	#1213	6.79			None 020
9337-125	Y	970	4/7	#1213		5.82		None 020
9337-210	S	542	2/8	#1206	4.33	3.79	D, E, F, 3x0, 50S, 53S, 500, 510, 530, 6x0, Sx0, 720, 730, 740, 820, 830, 840	010, 110
9337-220	S	970	2/8	#1212	7.76	6.79		020, 120
9337-215	S	542	2/8	#1207	4.33	3.79	D, E, F, 3x0, 50S, 53S, 500, 510, 530, 6x0, Sx0, 720, 730, 740	015, 115
9337-225	S	970	2/8	#1213	7.76	6.79		025, 125
9337-240	S	1967	4/8	#1220	15.73	13.76		040, 140
9337-420	S	970	4/8	#1228	7.76	6.79	D, E, F, 3x0, 50S, 53S, 500, 510, 530, 6x0, Sx0, 720, 730, 740, 820, 830, 840	(note 3)
9337-440	S	1967	4/8	#1248	15.73	13.76		
9337-480	S	4194	4/8	#1288	33.55	29.35		

9337-540	S	1967	4/8	#1249	15.73	13.76	D, E, F, 3x0, 50S, 53S,	None
9337-545	S	1967	4/8	#1249	15.73	13.76	500, 510, 530, 6x0, Sx0,	
9337-580	S	4194	4/8	#1289	33.55	29.35	720, 730, 740, 820, 830,	
9337-585	S	4194	4/8	#1289	33.55	29.35	840	
9337-590	S	8589	4/8	#1290	68.71	60.12		
9337-595		8589	4/8	#1290	68.71	60.12		

<b>Note 1</b>	Models 0xx and 1xx	Attach to 9406 D, E, F, 3x0, 50S, 53S, 500, 510, 530, 620, 640, 650, S20, S30, S40, 720, 730, 740 models using input/output processor (IOP) #6500
		Attach to 9406 B using IOP #2611
	Models 2xx/4xx	Attach to 9406 D, E, F, 3x0, 50S, 53S, 500, 510, 530, 620, 640, 650, S20, S30, S40 and 720, 730, 740 models using #6501 Tape/Disk Device Controller
	Models 4xx	Available as stand-alone towers by specifying #2400 for black covers or #2410 for white covers. Attach using #6501 Tape/Disk Device Controller.
	Models 545/585/595 Models 5xx	Stand-alone towers. Specify #2405 for black covers or #2410 for white covers. Can be converted to attach to other supported open systems (RS/6000®, Hewlett Packard (HP), SUN, and NCR) with specify feature #5001. Includes a controller card, operator panel, and installation support disk drive.
<b>Note 2</b>	N=No Y=Yes S=Switchable	
<b>Note 3</b>	The #1400 4xx controller card with a 4 MB write cache can be installed on any 9337-2xx model to boost performance by up to 20%.	

### 9.1.2 Disk model identifier

The system configuration list (rack configuration) shows the disk type and model in the format XXXX-YYY, where the XXXX identifies the CCIN number of the disk and YYY identifies the potential or actual disk protection and compression. Refer to Chapter 10, “Customer Card Identification Numbers cross reference” on page 381, for a listing of the CCIN numbers. The YYY identifiers are:

- ▶ **030:** Unprotected or mirrored unit attached to a non-RAID capable controller.
- ▶ **050:** Unprotected or mirrored unit attached to a RAID capable controller.
- ▶ **060:** Unprotected or mirrored unit attached to a RAID capable controller. Data compression is active.
- ▶ **070:** Non-parity member of a parity (RAID) set. Full capacity. Data compression is inactive.
- ▶ **071:** Parity member of a parity (RAID) set with 16 parity members. Fifteen-sixteenths capacity. Data compression is inactive.
- ▶ **072:** Parity member of a parity (RAID) set with eight parity members. Seven-eighths capacity. Data compression is inactive.
- ▶ **074:** Parity member of a parity (RAID) set with four parity members. Three-fourths capacity. Data compression is inactive.
- ▶ **078:** Parity member of a parity (RAID) set with two parity members. Half capacity. Data compression is inactive.
- ▶ **080:** Non-parity member of a parity (RAID) set. Full capacity. Data compression is active.
- ▶ **082:** Parity member of a parity (RAID) set with eight parity members. Seven-eighths capacity. Data compression is active.
- ▶ **084:** Parity member of a parity (RAID) set with four parity members. Three-fourths capacity. Compression is active.

## 9.1.3 Versatile Storage Server

Machine	Description	9406 models
B09	<p><b>2105 Versatile Storage Server</b></p> <p>The 2105 is the primary enclosure of the Versatile Storage Server (VSS). It includes the storage server, two 7133 drawers, and the power control system. There is space for two additional 7133 disk drawers. The primary enclosure can be combined with up to two 2105-100 expansion enclosures. The 2105 attaches to the AS/400e system using a #6501 Tape/Disk Device Controller (System Products Division (SPD)). When attached to the #6501, the VSS emulates the 9337-580 or 9337-590 based on the size of the disk unit installed.</p> <p>Each connection to an iSeries or AS/400e server using a #6501 supports a maximum of 16 disk units. There can be a maximum of eight #3001 Host Interface Adapters per 2105 VSS. If eight #6501s are attached to eight #3001s, this dedicates the 2105 VSS to the iSeries or AS/400e server and gives a maximum capacity of 536.3 GB when emulating 9337-580s and 1099.5 when emulating 9337-580s and 1099.5 when emulating 9337-590s.</p> <p>In most cases, the minimum cache memory of 512 MB is better for use with the iSeries and AS/400e system. OS/400 expert cache normally provides better performance.</p>	D, E, F, 3x0, 50S, 53S, 500, 510, 530, 6x0, Sx0, (excluding 600, S10 and SB2, SB3), 720, 730, 740, 820, 830, 840
2105 100	<p><b>2105 Versatile Storage Server Expansion Enclosure</b></p> <p>Expansion Enclosure includes space for seven 7133 drawers and a power control system. Prerequisite: 2105-B09</p> <p>#1000 Battery Backup System</p> <p>#2111 Additional Storage Capacity Upgrade Base to 456 GB</p> <p>#2713 Remote Support Switch. 2105-B09 only</p> <p>#2714 Remote Support Attachment. 2105-B09 only</p> <p>#3001 Host Interface Adapter</p> <p>#3201 SSA Disk Adapter</p> <p>#4001 Read/Write Cache (per 512 m)</p> <p>#9701 10 m Ultra SCSI Cable</p> <p>#9702 20 m Ultra SCSI Cable</p> <p>#9703 10 m Ultra SCSI-2 FW Cable</p> <p>#9704 20 m Ultra SCSI-2 FW Cable</p> <p>#9705 10 m AS/400 SCSI-2 Cable</p> <p>#9706 20 m AS/400 SCSI-2 Cable</p> <p>#9801 Single phase 50/60 Hz 50 amp</p> <p>#9851 Three phase 50/60 Hz 50 amp</p> <p>#9854 Three phase 50/60 Hz 60 amp</p> <p>#9901 Designate 7133-020 Drawers</p> <p>#9986 Single phase 50/60 Hz 50 amp</p> <p>#9987 Three phase 50/60 Hz 50 amp</p> <p>#9988 Three phase 50/60 Hz 60 amp</p> <p>Minimum operating system level: OS/400 V3R1</p> <p>The 2105-B09 was withdrawn from marketing on 24 November 1999.</p>	
7133 010 020 D40	<p><b>Serial Storage Architecture Disk Subsystem</b></p> <p>The IBM 7133 SSA Disk Subsystem is a second-generation serial storage subsystem that uses the industry-standard Serial Storage Architecture (SSA). The 7133 can be attached to the AS/400e server only by way of a 2105 Versatile Storage Server. When installed in a 2105, disk drives must be added in multiples of eight.</p> <p>Prerequisite: 2105-B09 or 2105-100.</p> <p>#0987 RDS Rochester Manufacturing Integration</p> <p>#2105 Plant install in Versatile Storage Server</p> <p>#2106 Field install in Versatile Storage Server</p> <p>#3401 One 4.5 GB Disk Drive Module</p> <p>#3901 One 9.1 GB Disk Drive Module</p> <p>#9850 100/200V 50/60 Hz 300V DC Power</p> <p>IBM 7133 Model 10 and Model 20 are for upgrades only.</p>	D, E, F, 3x0, 50S, 53S, 500, 510, 530, 6x0, Sx0, (excluding 600, S10, and SB2, SB3), 720, 730, 740, 820, 830, 840

## 9.1.4 IBM TotalStorage Enterprise Storage Server

Machine	Description	9406 models						
2105	<p><b>2105 Enterprise Storage Server</b></p> <p>The 2105 is the enclosure of the IBM TotalStorage Enterprise Storage Server (ESS). Each 2105 incorporates dual RISC 4-way SMP processors, read/write cache up to 64 GB, up to 384 MB non-volatile storage (NVS) (write cache), four device adapter pairs, and 8-packs of disks in the optimum serial loop configuration.</p> <p>The ESS offers excellent scalability. The Model 800 supports up to 55.9 TB of physical capacity that can be configured as RAID 5, RAID 10, or a combination of both. The E10, E20, F10, and F20 ESS models range from 420 GB to over 1.6 TB (E10), 11.2 TB (E20), 3.3 TB (F10), and 22.4 TB (F20) of RAID-5 effective capacity.</p> <p>Enterprise Storage Server supports platforms including RS/6000 and pSeries® running AIX and many leading UNIX® variants, Netfinity, xSeries, other PC servers running Windows NT or Novell NetWare, and Compaq AlphaServers running OpenVMS. In addition, the ESS supports IBM S/390® and IBM eServer zSeries® servers with selected host operating systems.</p> <p>Storage capacity is partitioned among the attached servers using the Web-based StorWatch ESS Specialist management tool.</p> <p>For the latest on server and operating support, check the ESS Interoperability Matrix at: <a href="http://www.storage.ibm.com/disk/ess/pdf/interop.pdf">http://www.storage.ibm.com/disk/ess/pdf/interop.pdf</a> <a href="http://knowledge.storage.ibm.com/HBA/HBASearchTool">http://knowledge.storage.ibm.com/HBA/HBASearchTool</a></p> <p>Minimum operating system level to support 4 GB and 8 GB arms: OS/400 V3R1 Minimum operating system level to support 17 GB and 36 GB arms: OS/400 V4R2 Minimum operating system level to support ESS Models F10, F20, and 800 with a #2766 PCI Fibre Channel Disk Controller or #2787 PCI-X Fibre Channel Disk Controller: OS/400 V5R1 Minimum operating system level to support the Model 800: OS/400 V4R5 Minimum operating system level to support FlashCopy® and PPRC: OS/400 V4R5 Minimum operating system level to support LUN sizes 70.56 and greater (must be fibre attached): OS/400 V5R1. Install PTF MF27545 to improve the time to add 2105 disk units to an auxiliary storage pool. Minimum operating system level to support FlashCopy V2 and PPRC V2: OS/400 V5R2 Minimum operating system level to support Linux: SUSE LINUX Enterprise Server 9 for POWER or Red Hat Enterprise Linux AS for POWER Version 32. Linux and SUSE Linux Enterprise Server 7 for iSeries support requires #0612 - Direct Attach - #2766 PCI Fibre Channel Disk Controller or #0626 - #2787 PCI-X Fibre Channel Disk Controller. The Model F20 was withdrawn from marketing on 31 December 2003. The recommended replacements are the ESS Model 800, 750 or the IBM TotalStorage DS6000™ or D8000 series.</p>	<p>#6501 Attach: 3x0, 50S, 53S, 500, 510, 530, 6x0, Sx0, (not 600, S10) 720, 730, 740, SB2, SB3, 820, 830, 840</p> <p>#2766 Attach: 270, 820, 830, 840</p> <p>#2787 Attach: 270, 820, 830, 840</p>						
<b>ESS model summary matrix</b>								
<b>Model number</b>	<b>Physical capacity</b>	<b>9.1 GB<sup>3</sup> drives</b>	<b>18.2 GB drives</b>	<b>36.4 GB drives</b>	<b>72.8 GB drives</b>	<b>145.6 GB drives</b>	<b>Cache</b>	<b>Power</b>
E10	420 GB - 1.6 TB <sup>1</sup>	Yes	Yes	Yes	No	No	6 GB	Single phase
E20	420 GB - 11.2 TB <sup>1</sup>	Yes	Yes	Yes	No	No	6 GB	Three phase
F10	420 GB - 3.3 TB <sup>1</sup>	Yes	Yes	Yes	Yes	No	8 to 32 GB	Single phase
F20	420 GB - 22.4 TB <sup>1</sup>	Yes	Yes	Yes	Yes	No	8 to 32 GB	Three phase
750	1.1 TB - 4.6 TB <sup>2</sup>	No	No	No	Yes	Yes	8 GB	Three phase
800	582 GB - 55.9 TB <sup>2</sup>	No	Yes	Yes	Yes	Yes	8 to 64 GB	Three phase

2105 (cont.)	<p><b>Notes for ESS Model Summary Matrix:</b></p> <ol style="list-style-type: none"> <li>1. Capacity quoted is RAID 5 effective capacity.</li> <li>2. Capacity quoted is raw physical capacity and can be RAID 5, RAID 10, or a combination of both.</li> <li>3. 9.1 GB drives are withdrawn from marketing.</li> </ol> <p><b>ESS Copy Service Functions</b></p> <p>The following ESS Copy Service Functions are supported with the iSeries:</p> <ul style="list-style-type: none"> <li>▶ FlashCopy</li> <li>▶ Peer-to-Peer Remote Copy (PPRC)</li> <li>▶ PPRC Extended Distance (PPRC-XD)</li> </ul> <p>Use of these copy services on the iSeries or AS/400e requires creating a copy of the iSeries load source unit (LSU) on the ESS.</p> <p><b>#6501 Tape/Disk Device Controller attachment:</b></p> <p>AS/400e and some iSeries servers attach to the ESS using the #6501 Tape/Disk Device Controller (SPD) adapter. In this configuration, the ESS emulates a 9337-5xx drive, based on the size of the disk unit installed. 16 disk drives (LUNs) are supported per #6501, with up to a maximum of 16 #6501s for 32 ports on the ESS.</p> <p><b>#2766 PCI Fibre Channel Disk Controller and #2787 PCI-X Fibre Channel Disk Controller attachment:</b></p> <p>Fibre attachment to the iSeries server is either directly to an ESS (point-to-point) or by way of a 3534-1RU Fibre Channel Managed Hub using Fibre Channel Arbitrated Loop (FC-AL) connectivity. Connection through a 3534-1RU is not supported for the 2105 Model 800.</p> <p>Each #2766 or #2787 supports 32 LUNs. Each LUN can be 8.58 GB, 17.54 GB, 35.16 GB, 36.00 GB, or 70.56 GB. 70 GB ESS LUNs are supported by all levels of OS/400 since V5R1.</p> <p>The 2109 SAN Fibre Channel Switch Models S08, S16, F16 and 3534-F08 can be used in QuickLoop mode to attach iSeries servers to the ESS, with a minimum operating system level of OS/400 V5R1. QuickLoop is ordered as RPQ 8S0521 for the 2109.</p> <p>Appropriate fibre cables must be provided to connect the iSeries to the ESS or to the SAN. Model F10 and F20 fibre adapters have SC connectors. Model 800 fibre adapters have LC connectors. The #2766 and #2787 adapter have an LC connector.</p> <p><b>SAN support:</b></p> <p>With OS/400 V5R2 full switched fabric support is available. Up to five iSeries servers can be on a single loop. Performance considerations apply.</p> <p>Further details are available in <i>IBM eServer iSeries in Storage Area Networks: Implementing Fibre Channel Disk and Tape with iSeries</i>, SG24-6220.</p> <p>Supported support SAN switches and directors are supported. Refer to the following Web sites for the latest information about switch and SAN device support for the iSeries:</p> <p><a href="http://www.ibm.com/servers/eserver/iseries/hardware/storage/sansupport.html">http://www.ibm.com/servers/eserver/iseries/hardware/storage/sansupport.html</a>  <a href="http://www-1.ibm.com/servers/storage/san/index.html">http://www-1.ibm.com/servers/storage/san/index.html</a></p>
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## 9.1.5 IBM TotalStorage DS6000

Machine	Description	9406 models
1750 411 511 EX1	<p><b>TotalStorage DS6000</b></p> <p>The IBM TotalStorage DS6000 Family (a DS6800 with expansion enclosure) provides an intelligent disk system that delivers enterprise-class storage capabilities in a space-efficient, 2 Gbps Fibre architecture, modular design. The IBM TotalStorage DS6800 consists of compact, 3U, 19-inch rack-mount enclosures (511, EX1), redundant, hot-swappable power supplies and cooling fan assemblies, redundant RAID controllers, supporting RAID 5, RAID 10 and optional Advanced Software features, IBM TotalStorage FlashCopy, Metro Mirror, Global Mirror, Metro/Global Copy.</p> <p>The 1750-511 DS6800 uses the PowerPC® 750GX 1 GHz processor, 4 GB of cache, and two to eight 2 Gb Fibre Channel/FICON® host ports. It supports from 4 to 16 internal disk drive modules, offering up to 4.8 TB of physical storage capacity. The 2 Gbps Fibre Channel disk drive set drives are available in 73 GB 15,000 rpm, 146 GB 10,000 rpm, and 300 GB 10,000 rpm capacities. The 1750-511 Model DS6800 also allows up to 13 1750-EX1 DS6000 Expansion Enclosures to be attached, supporting up to 224 disk drives for a total of up to 67.2 TB of storage.</p> <p>IBM TotalStorage DS6000 Expansion Enclosure (1750-EX1) attaches to the Model DS6800. Disk drives providing storage capacity for the are installed in the DS6000 Expansion Enclosure in increments of four drives of the same type (capacity and rpm). Each 1750-EX1 DS6000 Expansion Enclosure model supports up to 16 drives and up to 4.8 TB of physical capacity. The 2 Gbps Fibre Channel disk drive set drives are available in 73 GB 15,000 rpm, 146 GB 10,000 rpm, and 300 GB 10,000 rpm capacities. Effective immediately, the ability to increase the capacity with up to 13 DS6000 Expansion Enclosures attached to a DS6800 is withdrawn from the DS6000 series. Support is limited to seven DS6000 Expansion Enclosures (1750-EX1) that can be attached to a DS6800 (1750-511).</p> <p>Additionally, reconfiguration activity with the Offline Configuration tool is withdrawn from the DS6000 series. The ability to import and apply functions with the Offline Configuration tool continues to be supported.</p> <p>The DS6000 models must be populated with either #20xx Disk Drive Set features or #2990 Disk Drive Filler Sets. Different disk drive sets can be intermixed within the same model.</p> <p>The DS6000 is designed to support a broad range of operating environments including zSeries, iSeries, and pSeries servers, as well as servers from Sun™, HP, and other Intel-based providers. SCSI attachment is not supported on the DS6000.</p> <p>For the latest on server and operating support, see the DS6000 Interoperability Matrix at:  <a href="http://www-1.ibm.com/servers/storage/disk/ds6000/pdf/ds6000-interop.pdf">http://www-1.ibm.com/servers/storage/disk/ds6000/pdf/ds6000-interop.pdf</a>  <a href="http://knowledge.storage.ibm.com/HBA/HBASearchTool">http://knowledge.storage.ibm.com/HBA/HBASearchTool</a></p> <p>Storage capacity is among the attached servers using the IBM TotalStorage DS Storage Manager Browser.</p> <p>Minimum operating system level to support DS6000 with a #2766 PCI Fibre Channel Disk Controller or #2787 PCI-X Fibre Channel Disk Controller: OS/400 V5R2 with PTFs.  Minimum operating system level: To support FlashCopy and Metro Mirror, Global Mirror, Metro/Global Copy: OS/400 V5R2 with PTFs.  For Linux on iSeries support details, see:  <a href="http://www-1.ibm.com/servers/storage/disk/ds6000/pdf/ds6000-interop.pdf">http://www-1.ibm.com/servers/storage/disk/ds6000/pdf/ds6000-interop.pdf</a></p>	<p>#2766 Attach: 270, 820, 830, 840,</p> <p>#2787 Attach: 270, 820, 830, 840</p>

1750 (cont.)	DS6000 model summary matrix					
	Model number	Raw physical capacity	73 GB (15, 000 rpm) drives	146 GB (10, 000 rpm) drives	300 GB (10, 000 rpm) drives	Cache Power
	DS6400 (411)	292 GB - 33.6 TB <sup>1</sup>	Yes	Yes	Yes	2 GB Single phase
	DS6400 (511)	292 GB - 67.2 TB <sup>2</sup>	Yes	Yes	Yes	4 GB Single phase
	DS6000 Expansion Enclosure (EX1)	292 GB - 4.8 TB per enclosure	Yes	Yes	Yes	N/A Single phase
	<b>Notes:</b> 1. Using 6 fully populated DS6000 Expansion Enclosures (1750-EX1) with 300 GB disks 2. Using 13 fully populated DS6000 Expansion Enclosures (1750-EX1) with 300 GB disks					
	<b>DS6000 Copy Service Functions</b> The following Copy Service Functions are supported with the iSeries: IBM TotalStorage FlashCopy, Metro Mirror, Global Mirror, Metro/Global Copy Use of these copy services on the iSeries requires creating a copy of the iSeries load source unit (LSU) on the DS6000. Refer to <i>IBM eServer iSeries in Storage Area Networks: Implementing Fibre Channel Disk and Tape with iSeries</i> , SG24-6220, for additional copy services support details.  <b>#2766 PCI Fibre Channel Disk Controller and #2787 PCI-X Fibre Channel Disk Controller attachment:</b> Fibre attachment to the iSeries server is either directly to a TotalStorage DS6000 (point-to-point) or through a supported SAN switch. Appropriate fibre cables must be provided to connect the iSeries to the DS6000 or to a SAN. The TotalStorage DS6000 attaches with LC connectors. The #2766 and #2787 adapters have an LC connector.  Each #2766 or #2787 supports 32 LUNs. Each LUN can be 8.58 GB, 17.54 GB, 35.16 GB, 36.00 GB, or 70.56 GB.  <b>SAN support:</b> Refer to the following Web sites for the latest information about switch and SAN device support for the iSeries servers: <a href="http://www.ibm.com/servers/eserver/iseries/hardware/storage/sansupport.html">http://www.ibm.com/servers/eserver/iseries/hardware/storage/sansupport.html</a> <a href="http://www-1.ibm.com/servers/storage/support/san/index.html">http://www-1.ibm.com/servers/storage/support/san/index.html</a>					

## 9.1.6 IBM TotalStorage DS8000

Machine	Description	9406
2107	<b>TotalStorage DS8000™</b> The IBM TotalStorage DS8000 series incorporates IBM POWER5™ processor technology in a dual 2-way processor-complex offering the DS8100 (2107-921), or a dual four-way processor-complex offering, the DS8300 (2107-922 and 2107-9A2). The Model 9A2 enables the creation of multiple storage system LPARs (logical partitions). The DS8000 offers up to 32 host adapters. This can be an intermix of ESCON® and Fibre Channel/FICON adapters, further increasing your ability to share your disk storage. The DS8000 is designed and implemented with component redundancy to help eliminate single points of failure. For data protection the DS8000 supports RAID 5, RAID 10 and optional Advanced Software features, IBM TotalStorage FlashCopy, Metro Mirror, Global Mirror, Metro/Global Copy.	#2766 Attach: 270, 820, 830, 840
Expansion Units		#2787 Attach: 270, 820, 830, 840
92E	The DS8100 (2107-921) offers a dual 2-way processor complex and holds up to 128 disk drives for a maximum capacity up to 38.4 TB. Fibre Channel disk drives are available in 73 GB (15,000 rpm), 146 GB (10,000 rpm), and 300 GB (10,000 rpm) capacities. The DS8100 also supports up to 128 GB of processor memory and up to 16 Fibre Channel (or ESCON/FICON for zSeries Servers) adapters for host or SAN attachment. With an optional expansion unit (2107-92E), a single Model 921 solution supports up to 384 disk drives, for a total capacity of up to 115.2 TB.	
9AE	The DS8300 (2107-922) offers a dual four-way processor complex and holds up to 128 disk drives for a maximum capacity of up to 38.4 TB. Fibre Channel disk drives are available in 73 GB (15,000 rpm), 146 GB (10,000 rpm), and 300 GB (10,000 rpm) capacities. The DS8300 (2107-922) also supports up to 256 GB of processor memory and up to 16 Fibre Channel (or ESCON/FICON for zSeries Servers) adapters for host or SAN attachment. With one or two optional expansion units, the 8300 supports these configurations: <ul style="list-style-type: none"> <li>▶ With one Model 2107-92E expansion unit, the Model 922 supports up to 384 disk drives, for a maximum capacity of up to 115.2 TB, and up to 32 Fibre Channel (or ESCON/FICON for zSeries Servers) adapters for host or SAN attachment.</li> <li>▶ With two Model 2107-92E expansion units, the Model 922 supports up to 640 disk drives, for a maximum capacity of up to 192 TB, and up to 32 Fibre Channel (or ESCON/FICON for zSeries Servers) adapters for host or SAN attachment.</li> </ul> The DS8300 (2107-9A2) offers a dual four-way processor complex and holds up to 128 disk drives for a maximum capacity of up to 38.4 TB. Fibre Channel disk drives are available in 73 GB (15,000 rpm), 146 GB (10,000 rpm), and 300 GB (10,000 rpm) capacities. The DS8300 (2107-9A2) also supports up to 256 GB of processor memory and up to 16 Fibre Channel (or ESCON/FICON for zSeries Servers) adapters for host or SAN attachment. With one or two optional expansion units, it scales as explained here: <ul style="list-style-type: none"> <li>▶ With one Model 2107-9AE expansion unit, the Model 9A2 supports up to 384 disk drives, for a maximum capacity of up to 115.2 TB, and up to 32 Fibre Channel (or ESCON/FICON for zSeries Servers) adapters for host or SAN attachment.</li> <li>▶ With two Model 2107-9AE expansion units, the Model 9A2 supports up to 640 disk drives, for a maximum capacity of up to 192 TB, and up to 32 Fibre Channel (or ESCON/FICON for zSeries Servers) adapters for host or SAN attachment.</li> </ul> The DS8000 models are populated with Disk Drive Sets (#2xx6 features) with 16 disk drives per set. Different Disk Drive Sets can be intermixed within the same model. The DS8000 offers extensive connectivity support, including Fibre Channel, FICON, or ESCON across a broad range of server environments including zSeries, pSeries, IBM eServer p5, iSeries, and xSeries servers, servers from Sun and HP, and non-IBM Intel-based servers. For the latest on server and operating support, see the DS8000 Interoperability Matrix at: <a href="http://www-1.ibm.com/servers/storage/disk/ds8000/pdf/ds8000-matrix.pdf">http://www-1.ibm.com/servers/storage/disk/ds8000/pdf/ds8000-matrix.pdf</a> <a href="http://knowledge.storage.ibm.com/HBA/HBASearchTool">http://knowledge.storage.ibm.com/HBA/HBASearchTool</a>	
	Storage capacity is among the attached servers using the browser-based Management GUI, IBM TotalStorage DS Storage Manager.	
	Minimum operating system level to support DS6000 with a #2766 PCI Fibre Channel Disk Controller or #2787 PCI-X Fibre Channel Disk Controller: OS/400 V5R2 with PTFs. Minimum operating system level to support FlashCopy and Metro Mirror, Global Mirror, Metro/Global Copy: OS/400 V5R2 with PTFs. For Linux on iSeries support details, see: <a href="http://www-1.ibm.com/servers/storage/disk/ds8000/pdf/ds8000-matrix.pdf">http://www-1.ibm.com/servers/storage/disk/ds8000/pdf/ds8000-matrix.pdf</a>	

2107 (cont.)

DS8000 model summary matrix								
Model number	Raw physical capacity	Expnsn enclsrs spprtd	Processor	73 GB (15 000 rpm) Drives	146 GB (10 000 rpm) drives	300 GB (10 000 rpm) drives	Cache	Power
DS8100 (921)	1.1 TB-115.2 TB <sup>1</sup>	1	2-way	Yes	Yes	Yes	16 to 128 GB	Three phase
DS8300 (922)	1.1 GB - 192 TB <sup>2</sup>	2	4-way	Yes	Yes	Yes	32 to 256 GB	Three phase
DS8300 (9A2)	1.1 GB - 192 TB <sup>3</sup>	2	4-way	Yes	Yes	Yes	32 to 256 GB	Three phase
Notes: 1. Using one fully populated DS8000 Expansion Unit (2107-92E) with 300 GB disks 2. Using two fully populated DS8000 Expansion Units (2107-92E) with 300 GB disks 3. Using two fully populated DS8000 Expansion Units (2107-9AE) with 300 GB disks								

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**IBM TotalStorage DS8000 Resiliency Family Functions**  
The following Copy Service Functions are supported with the iSeries: IBM TotalStorage FlashCopy, Metro Mirror, Global Mirror, Metro/Global Copy. Use of these copy services on the iSeries requires creating a copy of the iSeries load source unit (LSU) on the DS8000. Refer to *IBM eServer iSeries in Storage Area Networks: Implementing Fibre Channel Disk and Tape with iSeries*, SG24-6220, for additional copy services support details.

**#2766 PCI Fibre Channel Disk Controller and #2787 PCI-X Fibre Channel Disk Controller attachment:**  
Fibre attachment to the iSeries server is either directly to IBM TotalStorage DS8000 (point-to-point) or through a supported SAN switch. Appropriate fibre cables must be provided to connect the iSeries to the DS8000 or to a SAN. IBM TotalStorage DS8000 attaches with LC connectors. The #2766 and #2787 adapters have an LC connector.

Each #2766 or #2787 supports 32 LUNs. Each LUN can be 8.58 GB, 17.54 GB, 35.16 GB, 36.00 GB, or 70.56 GB.

**SAN support:**  
Refer to the following Web sites for the latest information about switch and SAN device support for the iSeries:  
<http://www.ibm.com/servers/eserver/iseries/hardware/storage/sansupport.html>  
<http://www-1.ibm.com/servers/storage/support/san/index.html>

## 9.2 SAN components for iSeries systems

This section lists SAN switches, hubs, and directors supported by the iSeries server. For the latest SAN support information, refer to the following Web sites:

<http://www-1.ibm.com/servers/storage/san/index.html>

<http://www-1.ibm.com/servers/storage/support/san/index.html>

<http://knowledge.storage.ibm.com/HBA/HBASearchTool>

### 9.2.1 Entry and midrange Fibre Channel switches

Machine	Description	9406 models
2005	<b>Family 2005 IBM TotalStorage SAN Switch Models H08 and H16</b> The IBM TotalStorage SAN Switch H08 is designed for entry-level SAN applications with eight Fibre Channel ports, four shortwave fiber optic transceivers, a single fixed power supply, rack-mounted Power Distribution Unit (PDU) jumper cord, and fans in 1U rack height. The base H08 switch function supports one connection to one other IBM SAN Switch in a 2-switch fabric, as well as support for optional full-fabric activation.  The IBM TotalStorage SAN Switch H16 is designed for mid-range and small to medium business (SMB) SAN applications with 16 Fibre Channel ports, eight shortwave fiber optic transceivers, dual fixed power supplies, two rack-mounted PDU jumper cords, and fans in 1U rack height. The base H16 SAN Switch includes Fabric Watch, an intelligent fabric monitor, to help improve performance, identify, and isolate potential faults to optimize fabric-wide performance. The base H16 switch function supports connection to other IBM TotalStorage SAN switches in a four-switch fabric plus support for optional full-fabric.  Highlights: <ul style="list-style-type: none"> <li>▶ 2 Gb Fibre Channel, auto-sense for connection to 1 Gb</li> <li>▶ Universal ports designed to self-configure as F-ports, FL-ports, or E-ports.</li> <li>▶ Hardware zoning</li> <li>▶ Extensive diagnostics and system-monitoring capabilities</li> <li>▶ Four (H08) or Eight (H16) shortwave ports standard, Four (H08) or Eight (H16) optional, shortwave or longwave, SFP</li> <li>▶ LC connections</li> <li>▶ For use with the iSeries #2765, #2766, #2787 and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> </ul>	270, 820, 830, 840
H08		
H16		
#2210	SW SFP Transceiver	
#2214	SW SFP Transceiver - 4 Pack	
#2220	LW SFP Transceiver	
#2224	LW SFP Transceiver - 4 Pack	
#2235	35 km Ext Distance LW SFP Transceiver	
#2280	80 km Ext Distance LW SFP Transceiver	
#5601	Fiber Cable LC/LC 1 m multi-mode	
#5605	Fiber Cable LC/LC 5 m multi-mode	
#5625	Fiber Cable LC/LC 25 m multi-mode	
#5701	LC/SC Coupling Cable 1 m	
#5702	LC/SC Coupling Cable 2 m	
#7701	Fabric Manager V4 Max Domains for H08/H16	
#7702	H08 Remote Switch Activation	
#7703	H08 Extended Fabric Activation	
#7720	H08 Full Fabric Activation	
#7721	H08 Performance Bundle Activation	
#7723	H08 Advanced Security Activation	
	Minimum operating system level: OS/400 V5R2, PTFs might be required For detailed device and server support details, see: <a href="ftp://service.boulder.ibm.com/storage/san/brcd/sm2005hxx.pdf">ftp://service.boulder.ibm.com/storage/san/brcd/sm2005hxx.pdf</a>	

Machine	Description	9406 models
2026 E12 224	<p><b>Family 2026 IBM TotalStorage SAN12 m-1 Entry and SAN24M-1 Mid-range</b></p> <p>The IBM 2026 SAN12 m-1 entry switch Model E12 is designed to meet the needs of entry level SAN applications, first-time SAN deployments, departmental SANs, and application specific deployments. The SAN12 m-1 entry switch offers 4, 8, or 12 non-blocking ports, providing 1 and 2 Gbps Fibre Channel ports utilizing industry standards-based auto-sensing and auto-rate-negotiating operation with Fabric and Public Loop attached devices. The optional Full Fabric Activation feature enables support for Inter-Switch Link (ISL) and full bandwidth extended distance operation up to 10 km at 2 Gbps (when configured with longwave transceivers), to help disaster tolerance solutions.</p> <p>The IBM 2026 SAN24M-1 mid-range switch Model 224 is designed to provide storage consolidation, high availability, and high-port density in a 1-U rack mount chassis. The SAN24M-1 supports both long-wave and shortwave transceivers, offers up to twenty-four non-blocking ports, in eight-port increments, with support for auto-sensing, auto-rate-negotiation 1 and 2 Gbps Fibre Channel, Arbitrated Loop (FC-AL), and Fabric (FC-SW). The SAN24M-1 is designed to provide integrated support for full Fabric and FC-AL tape attachment to SAN m-type family of enterprise directors and switches.</p> <p>Highlights:</p> <ul style="list-style-type: none"> <li>▶ 2 Gb Fibre Channel, auto-sense for connection to 1 Gb</li> <li>▶ Four (E12) or eight (224) shortwave ports standard, eight (E12) or 16 (224) optional, shortwave or longwave available, SFP</li> <li>▶ LC connections</li> <li>▶ For use with the iSeries #2765, #2766, #2787 and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> </ul> <p>#1800 Cable Coupler 50u SC/SC  #1801 Cable Coupler 9u SC/SC  #1805 Fiber Cable 9u 3 m LC/SC  #1810 Fiber Cable 50u 10 m LC/SC  #1811 Fiber Cable 50u 10 m LC/LC  #4301 SAN12 m1 Full Fabric Capable  #4304 SAN12 m1 4pt FlexPort Exp Kt  #4501 SAN24M1 Open Sys Mgmt Svr  #4503 SAN24M1 SANtegrity Activat  #4508 SAN24M1 8pt FlexPort  #4510 SAN24M1 Element Manager  #4520 SAN24M1 Open Trunking  #4522 SAN24M1 Preferred Path  #4550 SAN24M1 Full Volatility  #4620 LW SFP Transceiver</p> <p>Minimum operating system level: OS/400 V5R2, PTFs might be required.  For detailed device and server support details, see:  <a href="ftp://service.boulder.ibm.com/storage/san/mtype/SMSAN12M1.pdf">ftp://service.boulder.ibm.com/storage/san/mtype/SMSAN12M1.pdf</a>  <a href="ftp://service.boulder.ibm.com/storage/san/mtype/SMSAN24M1.pdf">ftp://service.boulder.ibm.com/storage/san/mtype/SMSAN24M1.pdf</a></p>	270, 820, 830, 840

Machine	Description	9406 models
2061 020 040	<p><b>The 2061 Cisco MDS 9120 Multilayer Fabric Switch Models 020 and 040</b></p> <p>The 2061 Cisco MDS 9120 Multilayer Fabric Switch Model 020 is a 20-port Fibre Channel switch packaged in a one RU enclosure, designed with four full-rate ports, 16 oversubscribed ports, and redundant hot-swappable power supplies and fans.</p> <p>The 2061 Cisco MDS 9140 Multilayer Fabric Switch Model 040 is the 40-port version, providing 8 full-rate ports and 32 oversubscribed ports.</p> <p>Highlights:</p> <ul style="list-style-type: none"> <li>▶ Designed to provide 1 Gbps and 2 Gbps Fibre Channel switch connectivity and intelligent network services</li> <li>▶ Hardware-enabled Virtual SANs (VSANs)</li> <li>▶ Fabric-wide monitoring with intelligent diagnostics and troubleshooting tools</li> <li>▶ Port Channels promote high performance and resilience of ISLs</li> <li>▶ Fabric switch availability, with redundant hot-swappable power supplies and fans, software process restart ability.</li> <li>▶ Comprehensive security framework includes VSANs, hardware-based zoning, role based access control, SSH, SNMPv3, Radius support</li> <li>▶ LC connections</li> <li>▶ For use with the iSeries #2765, #2766, #2787 and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> </ul>	270, 820, 830, 840
#5210	Tri-Rate SW SFP Transceiver (1 and 2 Gbps FC and Gb Ethernet)	
#5220	Tri-Rate LW SFP Transceiver (1 and 2 Gbps FC and Gb Ethernet)	
#5230	FC Port SW SFP Transceiver	
#5240	FC Port LW SFP Transceiver	
#5601	1 m LC/LC Fiber Cable (multi-mode)	
#5605	5 m LC/LC Fiber Cable (multi-mode)	
#5625	25 m LC/LC Fiber Cable (multi-mode)	
#5701	SC/LC Coupling Cable (8-inch)	
#5702	LC/SC Coupling Cable (2 m)	
	<p>Minimum operating system level: OS/400 V5R2, PTFs might be required.</p> <p>For detailed device and server support details, see:</p> <p><a href="ftp://service.boulder.ibm.com/storage/san/cisco/mds91x0.pdf">ftp://service.boulder.ibm.com/storage/san/cisco/mds91x0.pdf</a></p>	



Machine	Description	9406 models
2062-D01	<p><b>2062 Cisco Systems MDS 9216</b></p> <p>The 2062 Cisco Systems MDS 9216 (2062-D01) is a three-rack-unit fabric switch with dual redundant power supplies, fan assembly, 16 or 32 port switching module, the ability to be configured to accept either Short Wave SFP or Long Wave SFP optic transceivers, 16 to 48 auto-sensing Fibre Channel ports, and language support.</p> <p>Highlights:</p> <ul style="list-style-type: none"> <li>▶ Designed to provide a multiprotocol-capable, one to two Gbps Fibre Channel SAN infrastructure with performance and advanced intelligence</li> <li>▶ VSAN hardware for SAN environments with added scalability and resilience</li> <li>▶ Security for large enterprise Storage Area Networks</li> <li>▶ Advanced intelligence for simplified SAN management and reduced TCO</li> <li>▶ LC connections</li> <li>▶ For use with the iSeries #2765, #2766, #2787 and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> </ul> <p>#2116 16-Port Fibre Channel Line Card  #2132 32-Port Fibre Channel Line Card  #5210 Tri-Rate SW SFP Transceiver (1 and 1 Gbps FC and Gb Ethernet)  #5220 Tri-Rate LW SFP Transceiver (1 and 2 Gbps FC and Gb Ethernet)  #5230 FC Port SW SFP Transceiver  #5240 FC Port LW SFP Transceiver  #5601 1 m LC/LC Fiber Cable (multi-mode)  #5605 5 m LC/LC Fiber Cable (multi-mode)  #5625 25 m LC/LC Fiber Cable (multi-mode)  #5701 SC/LC Coupling Cable (8-inch)  #5702 LC/SC Coupling Cable (2 m)</p> <p>Minimum operating system level: OS/400 V5R2, PTFs might be required.  For detailed device and server support details, see:  <a href="ftp://service.boulder.ibm.com/storage/san/cisco/mds9216.pdf">ftp://service.boulder.ibm.com/storage/san/cisco/mds9216.pdf</a></p>	270, 820, 830, 840



Machine	Description	9406 models
2031 224	<p><b>McDATA Sphereon Fibre Channel Switch Model 4500</b></p> <p>The IBM 2031 McDATA Sphereon "Core to Edge" 4500 Fibre Channel Switch Model 224 provides storage consolidation using a high availability and high-port density 1-U high design. The McDATA Sphereon 4500 offers up to 24 non-blocking ports (longwave or shortwave transceivers), providing 1 Gbps and 2 Gbps FC-AL and Fabric (FC-SW) operation. The ports are auto-sensing and auto-negotiating, and can be purchased in 8-port increments. The McDATA Sphereon 4500 provides integrated support for full Fabric and FC-AL tape attachment to McDATA core fabric switches and directors. The McDATA Sphereon 4500 is a 1U unit that can be mounted in the McDATA Fabricenter FC-512 Cabinet (IBM 2032-C40), IBM racks (IBM 7014), or industry standard 19-inch racks.</p> <p>Highlights:</p> <ul style="list-style-type: none"> <li>▶ 2 Gb Fibre Channel, auto-sense for connection to 1 Gb</li> <li>▶ Eight-, 16-, or 24-port, Small Form-Factor Pluggable (SFP)</li> <li>▶ LC connections</li> <li>▶ For use with the iSeries #2765, #2766, #2787 and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> </ul> <p>Open trunking, a feature of McDATA, is currently not supported on iSeries servers.</p> <p>#3230 Longwave SFP transceivers</p> <p>#4508 Flex-port additional 8-port enablement</p> <p>#4516 Base unit with 16 SW SFP ports enabled</p> <p>#4524 Base unit with 24 SW SFP ports enabled</p> <p>#4510 Sphereon Product Manager</p> <p>#1800 50 micron SC/SC cable coupler</p> <p>#1810 10 m 50 micron LC/SC fibre cable</p> <p>#1811 10 m 50 micron LC/LC fibre cable</p> <p>Minimum operating system level: OS/400 V5R2</p> <p>For detailed device and server support details, see:  <a href="ftp://service.boulder.ibm.com/storage/san/mcdata4500/SM4500.pdf">ftp://service.boulder.ibm.com/storage/san/mcdata4500/SM4500.pdf</a></p> <p>Withdrawn from IBM Marketing on 28 October 2004; replaced by 2026-224.</p>	270, 820, 830, 840

Machine	Description	9406 models
2031 232	<p><b>McDATA ES-3232 Fibre Channel Switch</b></p> <p>The IBM 2031 McDATA ES-3232 Enterprise to Edge Fabric Switch Model 232 is designed to provide workgroup and departmental Fibre Channel SAN capability. The 2 Gbps McDATA ES-3232 offers up to 32 non-blocking ports. The minimum configuration contains 16 shortwave ports, and the remaining 16 ports can be configured with either shortwave or longwave transceivers. The McDATA ES-3232 is a 1.5U unit that can be mounted in the McDATA Fabriccenter FC-512 Cabinet (IBM 2032-C40 or 2032-C36), an IBM 2101 or 7014 rack, an industry standard 19-inch rack, or used in a stand-alone table-top configuration. The McDATA ES-3232 is fully compatible with the McDATA ES-3016 (IBM 2031-016) and the McDATA ES-3032 (IBM 2031-032) 1 Gbps models, as well as the Enterprise Directors, the McDATA ED-6064, and the McDATA ED-5000.</p> <p>Highlights:</p> <ul style="list-style-type: none"> <li>▶ 2 Gb Fibre Channel, auto-sense for connection to 1 Gb</li> <li>▶ 16 shortwave ports standard, 16 optional, shortwave or longwave, SFP</li> <li>▶ LC connections</li> <li>▶ Use with iSeries #2765, #2766, #2787 and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> </ul> <p>Open trunking, a feature of McDATA, is currently not supported on iSeries servers</p> <p>#3779 ES-3232 Product Manager  #3230 Longwave SPF transceiver  #3231 Shortwave SPF transceiver  #1800 50 micron SC/SC cable coupler  #1810 10 m 50 micron LC/SC fibre cable  #1811 10 m 50 micron LC/LC fibre cable</p> <p>Minimum operating system level: OS/400 V5R2  For detailed device and server support details please see the following URL:  <a href="ftp://service.boulder.ibm.com/storage/san/es3232/SMES3232.pdf">ftp://service.boulder.ibm.com/storage/san/es3232/SMES3232.pdf</a></p> <p>Withdrawn from marketing on 28 October 2004; replaced by 2027-232.</p>	270, 820, 830, 840

Machine	Description	9406 models
2034 212	<p><b>McDATA Sphereon Fibre Channel Switch Model 4300</b></p> <p>The McDATA Sphereon 4300 Fabric Switch (2034-212) is designed to offer from 4 to 8 to 12 non-blocking ports, providing 1 and 2 Gbps Fibre Channel ports utilizing industry standard-based auto-sensing and auto-negotiating operation with Fabric and Public Loop attached devices. The optional Full Fabric Activation feature enables support for ISL and full bandwidth extended distance operation up to 10 km at 2 Gbps, when configured with optional Longwave (LW) Small Form-factor Pluggable (SFP) Transceiver, which can be placed in any available active port on the McData Sphereon 4300 that has already been enabled for use in the base or through FlexPort activation.</p> <p>The McDATA Sphereon 4300 Fabric Switch (2034-212) base functionality includes zoning support, SANpilot Web-browser based management tool, McData HotCAT non disruptive micro-code firmware update capability, and McData FlexPort support.</p> <p>Highlights:</p> <ul style="list-style-type: none"> <li>▶ 2 Gb Fibre Channel, auto-sense for connection to 1 Gb</li> <li>▶ Four shortwave ports standard, 8 additional optional, shortwave or longwave, SFP</li> <li>▶ LC connections</li> <li>▶ For use with iSeries #2765, #2766, #2787 and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> </ul> <p>#1820 Fiber Cable, 50u, 10 m, LC Male/SC Male  #1821 Fiber Cable, 50u, 10 m, LC Male/LC Male  #1822 Cable Coupler 50u, SC Female/SC Female  #1831 Cable Coupler 9u, SC Female/SC Female  #1835 Fiber Cable, 9u, 3 m, LC/SC  #4301 Full Fabric Capability Activation  #4304 4 Port FlexPort Expansion Kit  #4602 Rack Mount Kit (use with FC-512 &amp; IBM 7014 Cabinets, 18 to 32-inch)  #4630 Longwave SFP Transceiver</p> <p>Open trunking, a feature of McDATA, is currently not supported on iSeries servers  Minimum operating system level: OS/400 V5R2  For detailed device and server support details, see:  <a href="ftp://service.boulder.ibm.com/storage/san/mcdata/SM4300.pdf">ftp://service.boulder.ibm.com/storage/san/mcdata/SM4300.pdf</a></p> <p>Withdrawn from marketing on 28 October 2004; replaced by 2026-E12.</p>	270, 820, 830, 840
2109 F32	<p><b>IBM TotalStorage SAN Switch Model F32</b></p> <p>The IBM 2109 SAN Switch Model F32 supports 32 non-blocking ports, each with full-duplex throughput at either 2 Gbps or 1 Gbps, and auto-sensing ports that self-negotiate to the highest speed supported by the attached server, storage device, or switch. Zoning support is included. Hardware zoning is controlled at the port level. Software zoning is controlled at the worldwide name level.</p> <p>Highlights:</p> <ul style="list-style-type: none"> <li>▶ 2 Gb Fibre Channel, auto-sense for connection to 1 Gb</li> <li>▶ 16 shortwave ports standard, 16 ports optional by adding shortwave or longwave transceivers</li> <li>▶ LC connections</li> <li>▶ For use with iSeries #2765, #2766, #2787 and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> </ul> <p>#2210 Shortwave transceiver  #2214 SW SPF transceiver 4 pack  #2220 Longwave transceiver  #5601 1 m multi-mode LC/LC fibre cable  #5605 5 m multi-mode LC/LC fibre cable  #5607 7 m multi-mode LC/LC fibre cable  #5625 25 m multi-mode LC/LC fibre cable  #5631 31 m multi-mode LC/LC fibre cable  #5702 LC (male)/SC (female) coupling cable</p> <p>Minimum operating system level for switched fabric support: OS/400 V5R2  For detailed device and server support details, see:  <a href="ftp://service.boulder.ibm.com/storage/san/2109f32/SM2109F32.pdf">ftp://service.boulder.ibm.com/storage/san/2109f32/SM2109F32.pdf</a></p>	270, 820, 830, 840

Machine	Description	9406 models
2109 F16	<p><b>IBM TotalStorage SAN Switch Model F16</b></p> <p>The IBM 2109 SAN Switch Model F16 includes 16 non-blocking ports, each with full-duplex throughput at either 2 Gbps or 1 Gbps, and auto-sensing ports that self-negotiate to the highest speed supported by the attached server, storage device, or switch. Zoning support is included. Hardware zoning is controlled at the port level. Software zoning is controlled at the worldwide name level.</p> <p>Highlights:</p> <ul style="list-style-type: none"> <li>▶ 2 Gb Fibre Channel, auto-sense for connection to 1 Gb</li> <li>▶ Eight shortwave ports standard, eight ports optional by adding shortwave or longwave transceivers</li> <li>▶ LC connections</li> <li>▶ For use with iSeries #2765, #2766, #2787 and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> </ul> <p>Open trunking, a feature of McDATA, is currently not supported on iSeries servers.</p> <p>#2210 Shortwave transceiver  #2220 Longwave transceiver  #5601 1 m multi-mode LC/LC fibre cable  #5605 5 m multi-mode LC/LC fibre cable  #5607 7 m multi-mode LC/LC fibre cable  #5625 25 m multi-mode LC/LC fibre cable  #5631 31 m multi-mode LC/LC fibre cable  #5702 LC (male)/SC (female) coupling cable</p> <p>Minimum operating system level: OS/400 V5R1, QuickLoop RPQ required*  Minimum operating system level for switched fabric support: OS/400 V5R2  For detailed device and server support details, see:  <a href="ftp://service.boulder.ibm.com/storage/san/2109f16/SM2109F16.pdf">ftp://service.boulder.ibm.com/storage/san/2109f16/SM2109F16.pdf</a></p>	270, 820, 830, 840
2109 S08	<p><b>SAN Fibre Channel Switch</b></p> <p>The IBM 2109 Model S08 is an 8-port SAN Fibre Channel Switch that is used to interconnect multiple host servers with storage servers and devices, creating a SAN.</p> <p>Highlights:</p> <ul style="list-style-type: none"> <li>▶ 1 Gb Fibre Channel</li> <li>▶ Four shortwave ports standard, four ports optional by adding shortwave or longwave GBICs</li> <li>▶ SC connections</li> <li>▶ For use with iSeries #2765, #2766, #2787 and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> <li>▶ 9406 feature #0371, LC-SC Adapter Kit (50 micron) required to connect SC cable</li> </ul> <p>#2010 Shortwave GBIC  #2020 Longwave GBIC  #5805 5 m multi-mode 50 micron cable (SC-SC)  #5825 25 m multi-mode 50 micron cable (SC-SC)</p> <p>Minimum operating system level: OS/400 V5R1, QuickLoop RPQ required*  For detailed device and server support details, go to:  <a href="ftp://service.boulder.ibm.com/storage/san/2109s16/SM2109S16.pdf">ftp://service.boulder.ibm.com/storage/san/2109s16/SM2109S16.pdf</a></p>	270, 820, 830, 840

Machine	Description	9406 models
2109 S16      #2010 #2020 #5805 #5825	<p><b>SAN Fibre Channel Switch</b></p> <p>The IBM 2109 Model S16 is a 16-port SAN Fibre Channel Switch that is used to interconnect multiple host servers with storage servers and devices, creating a SAN.</p> <p>Highlights:</p> <ul style="list-style-type: none"> <li>▶ 1 Gb Fibre Channel</li> <li>▶ Four shortwave ports standard, 12 ports optional by adding shortwave or longwave GBICs</li> <li>▶ SC connections</li> <li>▶ For use with iSeries #2765, #2766, #2787 and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> <li>▶ 9406 feature #0371, LC-SC Adapter Kit (50 micron) required to connect SC cable</li> </ul> <p>Shortwave GBIC</p> <p>Longwave GBIC</p> <p>5 m multi-mode 50 micron cable (SC-SC)</p> <p>25 m multi-mode 50 micron cable (SC-SC)</p> <p>Minimum operating system level: OS/400 V5R1, QuickLoop RPQ required*</p> <p>For detailed device and server support details, go to:</p> <p><a href="ftp://service.boulder.ibm.com/storage/san/2109s16/SM2109S16.pdf">ftp://service.boulder.ibm.com/storage/san/2109s16/SM2109S16.pdf</a></p>	270, 820, 830, 840
3534 F08      #2210 #2220 #5601 #5605 #5625 #5701 #5702 #7320	<p><b>IBM TotalStorage SAN Model F08</b></p> <p>The IBM 3434 SAN Switch Model F08 is an 8-port Fibre Channel switch. It is designed to provide 2 Gbps Fibre Channel port-to-port throughput with auto-sensing capability for connection to existing 1 Gbps host servers, storage and switches in a 1U form factor. The F08 is fully interoperable with the IBM TotalStorage 2109 Models S08, S16, and F16 SAN Switches.</p> <p>Highlights:</p> <ul style="list-style-type: none"> <li>▶ 2 Gb Fibre Channel, auto-sense for connection to 1 Gb</li> <li>▶ Four shortwave ports standard, four ports optional by adding shortwave or longwave transceivers</li> <li>▶ LC connections</li> <li>▶ For use with the iSeries #2765, #2766, #2787, and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> </ul> <p>Shortwave transceiver</p> <p>Longwave transceiver</p> <p>1 m multi-mode LC/LC fibre cable</p> <p>5 m multi-mode LC/LC fibre cable</p> <p>25 m multi-mode LC/LC fibre cable</p> <p>SC (male)/LC (female) coupling cable</p> <p>LC (male)/SC (female) coupling cable</p> <p>Full Fabric Activation</p> <p>Minimum operating system level: OS/400 V5R1, QuickLoop RPQ required*</p> <p>Minimum operating system level for switched fabric support: OS/400 V5R2</p> <p>For detailed device and server support details, go to:</p> <p><a href="ftp://service.boulder.ibm.com/storage/san/3534f08/SM3534F08.pdf">ftp://service.boulder.ibm.com/storage/san/3534f08/SM3534F08.pdf</a></p>	270, 820, 830, 840

Machine	Description	9406 models
3534 1RU	<p><b>SAN Fibre Channel Managed Hub</b></p> <p>The 3534-1RU Managed Hub is used to attach network devices to fiber-based transmission systems such as Fibre Channel and gigabit Ethernet. It converts the serial electrical signals to serial optical signals and serial optical signals to serial electrical signals. The managed hub is designed for implementing multi-node server clusters and storage systems for high availability and disaster recovery solutions.</p> <p>Highlights:</p> <ul style="list-style-type: none"> <li>▶ 1 Gb Fibre Channel</li> <li>▶ Seven shortwave ports standard, one port optional by adding shortwave or longwave GBIC</li> <li>▶ SC connections</li> <li>▶ For use with iSeries #2765, #2766, #2787, and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> <li>▶ 9406 feature #0371, LC-SC Adapter Kit (50 micron) required to connect SC cable</li> </ul> <p>#2010 Shortwave GBIC  #2020 Longwave GBIC  #5805 5 m multi-mode 50 micron cable (SC-SC)  #5825 25 m multi-mode 50 micron cable (SC-SC)</p> <p>Minimum operating system level: OS/400 V5R1  For detailed device and server support details, go to:  <a href="ftp://service.boulder.ibm.com/storage/san/35341ru/SM35341RU.pdf">ftp://service.boulder.ibm.com/storage/san/35341ru/SM35341RU.pdf</a></p>	270, 820, 830, 840
<p><b>Note:</b></p> <p>* The QuickLoop RPQ (8S0521) provides the firmware that enables devices connected to ports of the switch to be handled as private loop devices. QuickLoop creates a unique Fibre Channel topology that allows host bus adapters (such as the #2765 and #2766 with OS/400 V5R1) that use FC-AL without knowledge of SAN fabric, to communicate with FC-AL storage devices. QuickLoop allows individual switch ports to be designated as arbitrated loop ports, allowing a private host initiator to communicate with arbitrated loop storage devices as though they were all contained in one logical loop.</p>		

## 9.2.2 Enterprise Fibre Channel switches and directors

Machine	Description	9406 models
2027	<p><b>Family 2027 IBM Total Storage SAN140M Director and SAN32 m-1 Switch</b></p> <p>The IBM 2027 TotalStorage SAN140M director Model 140 supports up to 140 Fibre Channel ports for open system and FICON attachment. From an initial configuration size of 16 ports, it can scale in four-port increments to 140 ports, all within 12-unit height chassis to support high-density SAN connectivity solutions. It enables Fibre Channel connectivity for large enterprise-class SANs.</p> <p>The IBM 2027 TotalStorage SAN32 m-1 switch Model 232 is designed to provide workgroup and departmental Fibre Channel SAN capability. The 2 Gbps SAN32 m-1 offers up to 32 non-blocking ports, which can be configured with either shortwave or longwave optics, and support for FCP and FICON environments.</p> <p>Highlights:</p> <ul style="list-style-type: none"> <li>▶ 2 Gb Fibre Channel, high-availability connectivity technology</li> <li>▶ SAN140M director (2027-140): From 16 to 140 non-blocking Fibre Channels ports, in 12 U rack space, and support for FCP and FICON environments</li> <li>▶ SAN32 m-1 switch (2027-232): From 8 to 32-port non-blocking Fibre Channel ports, in 1.5 U rack space, and support for FCP and FICON environments</li> <li>▶ LC connections</li> <li>▶ Enterprise Fabric Connectivity (EFC) Management that includes “call-home” and simple network management protocol (SNMP) alerts, e-mail notification, and support for up to 48 SAN m-type directors and switches across a private LAN</li> <li>▶ In-band management with Open Systems Management Server features</li> <li>▶ For use with the iSeries #2765, #2766, #2787 and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> </ul>	270, 820, 830, 840
140		
232		
#1800	Cable Coupler 50u SC/SC	
#1810	Fiber Cable 50u 10 m LC/SC	
#1811	Fiber Cable 50u 10 m LC/LC	
#3402	2G SW SFP Transceiver 4-Pk	
#3205	2G LW SFP Transceiver 4-Pk	
#3220	Extended LW 20km Transceiver	
#3230	LW SFP Transceiver	
#3231	SW SFP Transceiver	
#3235	Extended LW 35km Transceiver	
#6210	UPM 2 Gb 4-pt with 4 SW Trans	
#6211	UPM 2 Gb 4-pt with 4 LW Trans	
#3002	SAN32 m1 Open System Mgmt Server	
#3007	SAN32 m1 SANtegrity Activation	
#3050	SAN32 m1 Full Volatility	
#3779	SAN32 m1 Element Manager	
#6002	SAN140M Open Sys Mgmt Server	
#6007	SAN140M SANtegrity	
#6140	SAN140M 140-pt Element Mgr	
#6150	SAN140M Full Volatility	
	<p>The IBM TotalStorage SAN24M-1 switch is required for attachment of IBM 3590 and 358x Ultrium-1 (with FC-AL) tape drives.</p> <p>Minimum operating system level: OS/400 V5R2.</p> <p>For detailed device and server support details, go to:</p> <p><a href="ftp://service.boulder.ibm.com/storage/san/mtype/SMSAN140M.pdf">ftp://service.boulder.ibm.com/storage/san/mtype/SMSAN140M.pdf</a></p> <p><a href="ftp://service.boulder.ibm.com/storage/san/mtype/SMSAN32M1.pdf">ftp://service.boulder.ibm.com/storage/san/mtype/SMSAN32M1.pdf</a></p>	

Machine	Description	9406 models
2032 064	<p><b>McDATA ED-6064 Enterprise Fibre Channel Director</b></p> <p>The McDATA ED-6064 Enterprise Fibre Channel Director provides enterprise-class availability, scalable connectivity, and management capabilities for a SAN fabric. It offers high performance, full duplex, 100 Mbps, non-blocking switch performance. The Enterprise Director supports up to 64 port Fibre Channel ports for open systems and FICON attachments. Up to 16 4-port cards can be configured in the Model 064. Three types of port cards are available: shortwave, longwave, and a combination card with three shortwave ports and one longwave port.</p> <p>The McDATA ED-6064 installs in the McDATA Fabriccenter FC-512 Cabinet (IBM 2032-C40). Two ED-6064s or an ED-6064 and ED-5000 can be physically within the same cabinet.</p> <p>Highlights:</p> <ul style="list-style-type: none"> <li>▶ 2 Gb Fibre Channel (1 Gb support is offered with McDATA ES3016, ES3032, and ED6064 with a 1 Gb interface card)</li> <li>▶ 16-64 ports configured as 4-16 4-port cards</li> <li>▶ LC connections</li> <li>▶ For use with iSeries #2765, #2766, #2787 and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> </ul> <p>Open trunking, a feature of McDATA, is currently not supported on iSeries servers.</p> <p>#1703 5 m multi-mode 50 micron fibre cable, SC/SC  #1704 30 m multi-mode 50 micron fibre cable, SC/SC  #1800 Multi-mode 50 micron coupler, SC/SC  #1810 10 m multi-mode 50 micron fibre cable, LC/SC  #1811 10 m multi-mode 50 micron fibre cable, LC/LC  #3220 Extended longwave 20 km transceiver  #3235 Extended longwave 35 km transceiver  #6210 2 Gb Fibre 4-port module with four shortwave transceivers  #6211 2 Gb Fibre 4-port module with four longwave transceivers  #6212 2 Gb Fibre 4-port module with four shortwave78 and one longwave transceiver</p> <p>Minimum operating system level: OS/400 V5R2  For detailed device and server support details, go to:  <a href="ftp://service.boulder.ibm.com/storage/san/ed6064/SMED6064.pdf">ftp://service.boulder.ibm.com/storage/san/ed6064/SMED6064.pdf</a></p> <p>Withdrawn from marketing on 31 December 2004.</p>	270, 820, 830, 840
2042	<p><b>Family 2042 CNT FC/9000 Fibre Channel Director</b></p> <p>001 The Model 001 is the CNT FC/9000 64 Port Director, two of which can be installed in the FC/9000 40U Cabinet (2042-C40). The Model 001 is available in configurations from 16 to 64 ports. With the Model 001 Interconnect Kit (#4128 or 4129), two 64 port Directors within the same FC/9000 Cabinet can be upgraded to 128 port Director capability. Scalability from an initial installation of 16 ports with the Model 001, all the way to 128 ports is available by adding a second Model 001 with the Interconnection Kit.</p> <p>128 The Model 128 is the CNT FC/9000 128 Port Director and supplies a fully integrated CNT FC/9000 40U Cabinet containing the CNT FC/9000 128 Port Director with a minimum for 24 ports to 128 ports. Optionally, the High Availability Option (#5022) can be included. With the Model 128 Interconnect Kit (# 4256), two 128 port Directors with adjacent FC/9000 Cabinets, can be upgraded to 256 port Director capability.</p> <p>256 C40 The 2042 Model 256 is the CNT FC/9000 Fibre Channel 256 Port Director. The FC/9000 Director is designed to provide enterprise-class availability and Fibre Channel fabric connectivity for IBM and third-party servers, and storage products supporting the FICON protocol. Each FC/9000 Director can be configured from 32 to 256 ports and with the High Availability (HA) option, it is designed to provide a fully redundant Fibre Channel fabric switch.</p> <p>Highlights:</p> <ul style="list-style-type: none"> <li>▶ 2 Gb Fibre Channel</li> <li>▶ LC connections</li> <li>▶ For use with iSeries #2765, #2766, #2787 and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> </ul>	270, 820, 830, 840



Machine	Description	9406 models
2042 (cont.)	<b>Family 2042 CNT FC/9000 Fibre Channel Director</b> #2010 Shortwave GBIC #2020 Longwave GBIC #2030 Ext. Longwave GBIC (80 km) #2210 Shortwave SFP Transceiver #2220 Longwave SFP Transceiver #2235 LW 35 km SFP Transceiver #2280 LW 80 km 2 Gbps SFP Transceiver #4001 Upgrade Model 001 to 256 capable #4002 Upgrade Model 001 HA to 256 capable #4008 Upgrade Model 128 to 256 capable #4009 Upgrade Model 128 HA to 256 capable #4128 Interconnect Kit for 128 port capability #4129 Advanced Interconnect Kit for 128-port capability #4256 Interconnect Kit for 256-port capability #5010 1 Gb FIO Module (eight ports) #5020 High Availability Option #5022 HA Option/128 Port #5210 2 Gb XFIO2 Module (eight ports) #5220 FCME Upper (Replacement for 1 Gbps Directors) #5221 FCME Lower (Replacement for 1 Gbps Directors) #5224 HA Option/256-Port #5605 5 m, LC/LC multi-mode 50u Fiber Cable #5625 25 m, LC/LC multi-mode 50u Fiber Cable #5701 SC/LC Coupling Kit, 50u #5704 4 m SC/LC Single Mode, 4 m Fiber Cable #5705 25 m SC/LC Single Mode, 25 m Fiber Cable #5706 4 m SC/LC multi-mode, 4 m Fiber #5707 25 m SC/LC multi-mode, 25 m Fiber Cable #5910 FIO Slot Filler Modules #5920 Non-High Availability Filler Modules #5924 Non-HA Filler Mods/256-Port #7201 Additional IN-VSN Enterprise Manager Client #7202 FICON Management Server #7203 FICON Cascading Activation #7600 IN-VSN Enterprise Manager Server Bundle #7603 Ethernet Hub, eight ports #7604 24-Port Hub #7610 PC Replacement Upgrade for EM Server #7621 512 MB Memory Card #7625 Advanced Remote Serviceability Kit #7800 C40 Cabinet North America #7801 C40 Cabinet International  Minimum operating system level: OS/400 V5R2. For detailed device and server support details, go to: <a href="ftp://service.boulder.ibm.com/storage/san/fc9000/SMFC9000.pdf">ftp://service.boulder.ibm.com/storage/san/fc9000/SMFC9000.pdf</a>	

Machine	Description	9406 models
2042	<p><b>Family 2042 CNT UltraNet Multi-service Director and Cabinet</b></p> <p>The IBM 2042 Model N16 is the CNT UltraNet Multi-service Director Model 16, the initial model offering in the UMD family, and is designed to provide fabric level hard and soft zoning, and scalability up to 16 I/O blades in an 18U rack mount director chassis.</p> <p>The CNT UMD Model 16 switching core is designed to provide up to 5 Terabits per second throughput, as well as protocol agnostic and link speed agnostic support. The UMD Model 16 is initially available in configurations starting with two 16 port Fibre Channel/FICON I/O blades, providing growth from 32 to 256 ports. The UMD Model 16 comes standard with CNT Enterprise Manager software.</p> <p>The 2042 Model C80 is the UMD 40U Cabinet, which is designed to accept up to two UMD Model 16 directors.</p> <p>Highlights:</p> <ul style="list-style-type: none"> <li>▶ Any-to-any non-blocking connectivity at 2 Gbps, fabric level hard and soft zoning, and standards based security (FC-SP).</li> <li>▶ 16 I/O blade slot director chassis, two power supplies, two control modules, and three switching modules.</li> <li>▶ UMD enterprise RAS architecture is designed to provide Active-Active resiliency, no single point of failure, redundant hot-swappable components, auto load/update software, redundant control processes, error correlation engine, and embedded fault detection and isolation agent.</li> <li>▶ 2 Gb Fibre Channel</li> <li>▶ LC connections</li> <li>▶ For use with the iSeries #2765, #2766, #2787 and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> </ul> <p>#2214 Shortwave 2 Gbps SFP Transceiver - 4 Pack</p> <p>#2224 Longwave 2 Gbps SFP Transceiver - 4 Pack</p> <p>#2235 LW 35 km SFP Transceiver</p> <p>#2280 LW 80 km 2 Gbps SFP Transceiver</p> <p>#5316 UMD 16 Port 2 Gbps Fibre Channel I/O Blade</p> <p>#5605 5 m, LC/LC multi-mode 50u Fiber Cable</p> <p>#5625 25 m, LC/LC multi-mode 50u Fiber Cable</p> <p>#7303 UMD N16 SAN Services Bundle</p> <p>#7600 Enterprise Manager Server Bundle</p> <p>#7603 Ethernet Hub, eight ports</p> <p>#7604 Ethernet Hub, 24 ports</p> <p>#7640 Vertical Fibre Cable Management Set</p> <p>#7810 C80 Cabinet North America</p> <p>#7811 C80 Cabinet International</p> <p>Minimum operating system level: OS/400 V5R2I</p> <p>For detailed device and server support details, see:  <a href="http://service.boulder.ibm.com/storage/san/fc9000/SM_UMD.pdf">http://service.boulder.ibm.com/storage/san/fc9000/SM_UMD.pdf</a></p>	270, 820, 830, 840

Machine	Description	9406 models
2062	<p><b>Family 2062 Cisco Systems Fabric Switch MDS 9216, 9216i, 9216A and Director MDS 9509</b></p> <p>The Cisco MDS 9506 (2062-D04) is a seven-rack-unit chassis with redundant power supplies, and requires selection of two Supervisor modules with at least one 16-Port or 32-Port Fibre Channel Line Card. The Model D04 is a multiprotocol-capable storage area network Director designed for the IT Data Center (with AC power supplies). The Model D04 supports up to a total of four Fibre Channel, IP Services Line Cards, or both. A minimum of one Fibre Channel port card is required.</p> <p>The 2062 Cisco Systems MDS 9509 (2062-D07) is a 14-rack-unit chassis, which requires a minimum of one and supports up to a maximum of seven optional switch modules supporting 16 to 224 Fibre Channel ports per chassis, optional switching modules consisting of 16-Port Fibre Channel switching modules, 32-port Fibre Channel switching modules, AC power supplies in the base, and language support.</p> <p>Highlights:</p> <ul style="list-style-type: none"> <li>▶ Cisco MDS 9506 (2062-D04) Multilayer Director with 16 to 128 ½ Gbps auto-sensing Fibre Channel ports, and IP Ports supporting iSCSI and FCIP</li> <li>▶ Cisco MDS 9509 (2062-D07) Multilayer Director with 16 to 224 ½ Gbps auto-sensing Fibre Channel ports, and IP Ports supporting iSCSI and FCIP</li> <li>▶ VSAN hardware for SAN environments with added scalability and resilience</li> <li>▶ Security for large enterprise Storage Area Networks</li> <li>▶ Advanced intelligence for simplified SAN management and reduced TCO</li> <li>▶ 2 Gb Fibre Channel</li> <li>▶ LC connections</li> <li>▶ For use with the iSeries #2765, #2766, #2787 and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> </ul> <p>#2010 Supervisor Line Card</p> <p>#2116 16-Port Fibre Channel Line Card</p> <p>#2132 32-Port Fibre Channel Line Card</p> <p>#5210 Tri-Rate SW SFP Transceiver</p> <p>#5220 Tri-Rate LW SFP Transceiver</p> <p>#5230 FC Port SW SFP Transceiver</p> <p>#5240 FC Port LW SFP Transceiver</p> <p>#5601 1 m LC/LC Fiber Cable (multi-mode)</p> <p>#5605 5 m LC/LC Fiber Cable (multi-mode)</p> <p>#5625 25 m LC/LC Fiber Cable (multi-mode)</p> <p>#5701 SC/LC Coupling Cable (8-inch)</p> <p>#5702 LC/SC Coupling Cable (2 m)</p> <p>#5810 Cisco Flash Memory Card</p> <p>#5811 Cisco Spare Flash Memory Card</p> <p>#7020 MDS 9000 Enterprise Package</p> <p>#7021 MDS 9000 Enterprise Package</p> <p>#7025 MDS 9500 Fabric Manager Server Package</p> <p>#7026 MDS 9000 Fabric Manager Server Pkg 7</p> <p>Minimum operating system level: OS/400 V5R2</p> <p>For detailed device and server support details, go to:  <a href="http://service.boulder.ibm.com/storage/san/cisco/mds9506.pdf">http://service.boulder.ibm.com/storage/san/cisco/mds9506.pdf</a></p>	270, 820, 830, 840

Machine	Description	9406 models
2109 M12	<p><b>IBM TotalStorage SAN Switch Model M12</b></p> <p>The M12 switch supports both 1 Gbps and 2 Gbps auto-sensing ports as well as advanced fabric services that can simplify the design, administration, and management of enterprise SANs. High availability features include redundant power supplies, hot-pluggable components, and automatic path rerouting. The IBM TotalStorage SAN Switch M12 includes two 16-port switch blades, with 32 universal ports standard in a single, 14U enclosure. An optional 16-port blade (#3216) is available for incremental growth to one or two 64-port switches, each with four blades. Thirty-two ports provided standard, upgradable to 128-ports as two 64-port switches, each with full-duplex throughput at either 2 Gbps or 1 Gbps auto-sensing. Distances up to 10 km are supported using longwave laser transceivers with 9.0u fiber cables. Shortwave laser transceivers support distances up to 500 m at 1 Gbps and up to 300 m at 2 Gbps with 50.0u fiber cables.</p> <p>Highlights:</p> <ul style="list-style-type: none"> <li>▶ Brocade Web Tools for fabric management</li> <li>▶ Redundant, hot-pluggable components: Dual-redundant control processors (active/standby), redundant power (four power supplies, two redundant), redundant cooling (three fans, one redundant), automatic path rerouting</li> <li>▶ Advanced fabric services provided by Fabric OS Version 4.0, Brocade Web Tools, Advanced Zoning and Fabric Watch</li> <li>▶ 2 Gb Fibre Channel</li> <li>▶ LC connections</li> <li>▶ For use with iSeries #2765, #2766, #2787 and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> </ul> <p>#2310 M12 Shortwave SPF Transceiver</p> <p>#2314 SW SFP Transceiver 4 Pack</p> <p>#2320 M12 Longwave SPF Transceiver</p> <p>#2324 LW SFP Transceiver 4 Pack</p> <p>#2335 35 km Ext Distance LW SFP Transceiver</p> <p>#2380 80 km Ext Distance LW SFP Transceiver</p> <p>#3126 M14 Control Processor Blade Upgrade Kit</p> <p>#3216 16 Port 2 Gb Switch Blade</p> <p>#3226 16 Port 2 Gb M14 Switch Blade</p> <p>#5301 M12 Fiber Cable LC/LC 1 m multi-mode</p> <p>#5305 M12 Fiber Cable LC/LC 5 m multi-mode</p> <p>#5325 M12 Fiber Cable LC/LC 25 m multi-mode</p> <p>#5371 M12 SC/LC Coupling Cable</p> <p>#5372 M12 LC/SC Coupling Cable 2 m</p> <p>#7201 Fabric Manager</p> <p>#7250 Fabric Manager V4.1 10 Domains</p> <p>#7251 Fabric Manager V4.1 Max Domains</p> <p>#7252 Fabric Manager V4.1 Upgrade to Max Domains</p> <p>#7253 Fabric Manager V3 to V4.1 Upgrade Max Domains</p> <p>#7602 M12 Remote Switch Activation</p> <p>#7603 M12 Extended Fabric Activation</p> <p>Minimum operating system level: OS/400 V5R2</p> <p>For detailed device and server support details, see:  <a href="ftp://service.boulder.ibm.com/storage/san/2109m12/SM2109M12.pdf">ftp://service.boulder.ibm.com/storage/san/2109m12/SM2109M12.pdf</a></p>	270, 820, 830, 840

Machine	Description	9406 models
2109-M14	<p><b>IBM TotalStorage SAN Switch Model M14</b></p> <p>The IBM 2109 TotalStorage SAN Switch Model M14 is designed to support up to eight 16-port Fibre Channel switch blades enabling a single domain director with up to 128 universal (E, F, and FL), full duplex, auto-sensing ports in a single 14U enclosure. Each port is capable of self-negotiation to the highest speed supported by the attached SAN infrastructure, operating at either 1 or 2 Gbps throughput. Distances up to 10 km, 35 km, or 70 km are supported using the appropriate optional longwave laser transceiver and 9.0u fiber cables. Shortwave laser transceivers support distances up to 500 m at 1 Gbps and up to 300 m at 2 Gbps with 50.0u fiber cables.</p> <p>Highlights:</p> <ul style="list-style-type: none"> <li>▶ Full Fabric operation and Universal Port operation on all M14 ports (F_Port, FL_Port, and E_Port)</li> <li>▶ Advanced Zoning</li> <li>▶ Web tools, Fabric Watch, Performance Monitor</li> <li>▶ Fabric OS 4.2, Hot Code Activation</li> <li>▶ 2 Gb Fibre Channel</li> <li>▶ LC connections</li> <li>▶ For use with the iSeries #2765, #2766, #2787 and #5704 PCI-X Fibre Channel Tape Controller (LC Duplex)</li> </ul> <p>#2310 Shortwave SPF Transceiver  #2314 SW SFP Transceiver 4 Pack  #2320 Longwave SPF Transceiver  #2324 LW SFP Transceiver 4 Pack  #2335 35 km Ext Distance LW SFP Transceiver  #2380 80 km Ext Distance LW SFP Transceiver  #3226 16 Port 2 Gb M14 Switch Blade  #5301 Fiber Cable LC/LC 1 m multi-mode  #5305 Fiber Cable LC/LC 5 m multi-mode  #5325 Fiber Cable LC/LC 25 m multi-mode  #5371 SC/LC Coupling Cable  #5372 LC/SC Coupling Cable 2 m  #7250 Fabric Manager V4.1 10 Domains  #7252 Fabric Manager V4.1 Upgrade to Max Domains  #7603 M12 Extended Fabric Activation  #7623 M14 Advanced Security Activation</p> <p>Minimum operating system level: OS/400 V5R2  For detailed device and server support details, see:  <a href="ftp://service.boulder.ibm.com/storage/san/brcd/sm2109m14.pdf">ftp://service.boulder.ibm.com/storage/san/brcd/sm2109m14.pdf</a></p>	270, 820, 830, 840
<p>* The QuickLoop RPQ (8S0521) provides the firmware that enables devices connected to ports of the switch to be handled as private loop devices. QuickLoop creates a unique Fibre Channel topology that allows host bus adapters (such as the #2765 and #2766 with OS/400 V5R1) that use FC-AL without knowledge of SAN fabric, to communicate with FC-AL storage devices. QuickLoop allows individual switch ports to be designated as arbitrated loop ports, allowing a private host initiator to communicate with arbitrated loop storage devices as though they were all contained in one logical loop.</p>		

## 9.3 External tape storage for iSeries and AS/400e systems

The minimum operating system level for external tape storage depends on the operating system level required for the adapter. For the 3480 and 3490 Cartridge Tape Subsystems, see 9.4, “Automated tape libraries for iSeries and AS/400e systems” on page 347 for information about the associated cartridge library.

**Note:** The update device microcode application programming interface (API) (QTAUPDDV) allows the tape device microcode to be updated using an image copied from the Web. This function is supported with OS/400 Version 5 systems.

See 9.7, “External SCSI and Fibre Channel tape and optical cable part numbers for iSeries and AS/400e systems” on page 374 for part numbers of the cables required on the external tape devices listed in this section.

Refer to *IBM TotalStorage Tape Selection and Differentiation Guide*, SG24-6946, to determine the best tape product solution for the designated backup environment. The latest edition of this IBM Redbook covers the 3494, 3580, 3581, 3582, 3583, 3584, 3590, 3592, and other tape products.

Machine	Description	9406 models
2440 - A12  #3903 #3904 #3905 #3906 #3907 #3908	<b>Tape I/O Subsystem</b> The 2440 is a ½-inch reel tape drive that records at 1600/6250 bpi and can be used for save/restore, program distribution and alternate initial program load (IPL). It attaches to the iSeries using the #2621 Storage Device Controller (SPD)—#2602 for 9406 B models. The tape drive and controller are packaged in a stand-alone 1.6 m high rack. 2440 high-speed feature (field installation) 2440 high-speed feature (factory installation) Allows up to four 9332 disks to be placed in the 2440 rack Allows one 9335-A01 and up to two 9335-B01 drives to be placed in the 2440 rack Allows up to three 9336 drawers to be placed in the 2440 rack Allows up to three 9337 drawers to be placed in the 2440 rack Not supported with OS/400 V5R1.	B, D, E, F, 3x0, 50S, 53S, 500, 510, 530, 6x0, Sx0, (not 600, S10), 720, 730, 740, 820, 830, 840
3480 - A22 B22	<b>Cartridge Tape Subsystem</b> The Model A22 and B22 are ½-inch cartridge drives that can be used for data interchange, save/restore, program distribution, and alternate IPL. The 3480 Subsystem consists of a stand-alone controller (Model A22) and up to eight tape drives (Model B22), which has two drives. The Model A22 and B22 attach to the iSeries using #2621 Storage Device Controller or #2644 Magnetic Tape Attachment Card/HP (SPD)—#2604 on 9406 B models. Attachment of 3480 Models A11 and B11 is also supported.  Not supported with OS/400 V5R1.	B, D, E, F, 2x0, 3x0, 4x0, 50S, 53S, 500, 510, 530, 6x0, Sx0, (not 600, S10), 720, 730, 740, 820, 830, 840

Machine	Description	9406 models
3490E	<p><b>Rack Mounted 3490 tape drives</b></p> <p>The 3490E is a ½-inch cartridge tape drive, which can be used for data interchange, save/restore, program distribution and alternate IPL.</p> <p>C10 C10 Control Unit and tape drive (1 x 2.4 GB), attach using #2644 Magnetic Tape Attachment Card/HP only.</p> <p>C11 C11 Control Unit, tape drive, and Automatic Cartridge Loader for six tape cartridge (6 x 2.4 GB)</p> <p>C22 C22 Control Unit, two tape drives and Automatic Cartridge Loader for 12 cartridges (12 x 2.4 GB)</p> <p>C1A C1A Control Unit, tape drive for 3494 Tape Library Dataserver</p> <p>C2A C2A Control Unit, two tape drives for 3494 Tape Library Dataserver</p> <p>The 3490E can be used as an automated tape library.</p> <p>Attaches to iSeries using #2644 Magnetic Tape Attachment Card/HP (SPD), #2604 on 9406 B models, #6501/#6534 Magnetic Media Controller (SPD), #2729 PCI Magnetic Media Controller, or #2749 PCI Ultra Magnetic Media Controller.</p> <p>Requires a 9309 rack if not C1A or C2A.</p> <p>A #5037 channel attach and a #5040 SCSI attach are supported together on the same 3490-Cxx unit.</p> <p><b>The 3490-C1A and C2A attach:</b></p> <p><b>(i) Channel Attach</b></p> <p><b>#2644 Magnetic Tape Attachment Card/HP</b> (SPD) on AS/400e (or optionally #2622 on D/E models).</p> <p>The following features are required on the 3490-CxA:</p> <ul style="list-style-type: none"> <li>▶ <b>#5037</b> Channel Attach</li> <li>▶ <b>#9931 or #9932</b> Internal cable 6 m or 24 m</li> </ul> <p>A second #5037 can be added to the 3490-CxA to allow attachment of a second AS/400 system.</p> <p><b>(ii) SCSI Attach</b></p> <p>#6501 Tape/Disk Device Controller (SPD), #6534 Magnetic Media Controller (SPD), or #2729/#2749 PCI Ultra Magnetic Media Controller on the AS/400 or iSeries server.</p> <p>3490-CxA features:</p> <ul style="list-style-type: none"> <li><b>#5040</b> Magnetic Tape Subsystem SCSI Attachment</li> <li><b>#5045</b> Performance Enhancement Feature</li> </ul> <p>A second #5040 and #5045 can be added to the 3490-CxA to allow attachment to a second iSeries or AS/400e server, and one of the following features per #5040:</p> <ul style="list-style-type: none"> <li><b>#6045</b> 4.5 m (15-ft) SCSI cable</li> <li><b>#6120</b> 12 m SCSI cable</li> <li><b>#6140</b> 14 m SCSI cable</li> <li><b>#6180</b> 18 m SCSI cable</li> <li><b>#9410</b> Interposer for the AS/400</li> </ul> <p>Both Channel Attach and SCSI Attach are supported together on the same 3490-CxA unit.</p> <p><b>3490-F1A</b> attaches to all iSeries or AS/400e models that support: #6501 Tape/Disk Device Controller, #6534 Magnetic Media Controller, or #2729 on AS/400e models, or #2749 on iSeries servers.</p> <p>The following features are required for each AS/400 attached:</p> <ul style="list-style-type: none"> <li><b>#2895</b> Interposer for #6501</li> <li><b>#5212</b> 12 m SCSI cable</li> <li><b>#5218</b> 18 m SCSI cable</li> <li><b>#5245</b> 4.5 m SCSI cable</li> <li><b>#9400</b> Attached to AS/400</li> </ul> <p>Minimum operating system level to support #2644 attachment: OS/400 V3R1  Minimum operating system level to support #2749 attachment: OS/400 V4R5  Minimum operating system level to support #6501 attachment: OS/400 V3R1  Minimum operating system level to support #6534 or #2729 attachment: OS/400 V4R1  Not supported with OS/400 V5R1.</p>	<p>9404 and 9406 B, D, E, F, 170, 2x0, 3x0, 4x0, 50S, 53S, 500, 510, 530, 6x0, Sx0, (not 600,610), 720, 730, 740, 820, 830, 840</p>

Machine	Description	9406 models
3490E D41 D42	<p><b>Cartridge Tape Subsystem</b></p> <p>The Model D41 and D42 are ½-inch cartridge drives which can be used for data interchange, save/restore, program distribution, and alternate IPL. IDRC is standard. The Model D41 and D42 attach using the #2644 Magnetic Tape Attachment Card/HP or the #2604 on 9406 B models.</p> <p>The 3490E can be used as an automated tape library.</p> <p>Not supported with OS/400 V5R1.</p>	B, D, E, F, 2x0, 3x0, 4x0, 5x0, 6x0, Sx0, (not 600, S10), 720, 730, 740 820, 830, 840
3580 H11 H13 H23 L23	<p><b>3580 IBM TotalStorage Ultrium Tape Drive</b></p> <p>The 3580-H11 and 3580-H13 Ultrium Tape Drives are stand-alone, SCSI-attached IBM Linear Tape Option (LTO) Ultrium tape drives. They provides a media capacity of up to 100 GB (200 GB with two to one (2:1) compression) per cartridge and a sustained data rate of up to 15 MB per second (uncompressed). The H11 has a one year CE assisted warranty and the H13 has a three year element exchange warranty.</p> <p>The 3580-H23 and 3580-L23 Ultrium 2 Tape Drives are stand-alone or rack mountable SCSI-attached tape drives. Using the Ultrium 2 data cartridge, a capacity of up to 200 GB (400 GB with 2:1 compression) per cartridge can be achieved, and a native data transfer rate of 35 MB per second. Aggregate sustained data rates of up to 252 GB per hour (with 2:1 compression) are achievable. They both come with a three year element exchange warranty. They will read and write Ultrium 1 media with Ultrium 1 capabilities and performance.</p> <p>The 3580-L23 comes with a SCSI Ultra160 Low Voltage Differential (LVD) interface (HD68) for attachment using the #5702 PCI-X Ultra Tape Controller (VHDCI interface) or #5705 PCI-X Tape/DASD Controller. The 3580-H23 has an Ultra SCSI High Voltage Differential (HVD) interface and for attachment by way of a #2729 PCI Magnetic Media Controller, #2749 PCI Ultra Magnetic Media Controller, or #6534 Magnetic Media Controller.</p>	4x0, 5x0, 6x0, Sx0, 720, 730, 740, 170, 250, 270, 820, 830, 840
3581 H13 H17 H23 L23 L28 F28	<p><b>IBM TotalStorage Ultrium Tape Autoloader 3581</b></p> <p>The 3581-H13 and 3581-L17 Ultrium Tape Autoloaders are external, stand-alone or rack mounted SCSI-attached autoloaders that incorporate IBM Ultrium tape drives. The capacity is up to seven tape cartridges, providing a media capacity of up to 700 GB (1.4 TB with 2:1 compression), and a sustained data rate of up to 15 MB per second (uncompressed). The H13 has a one-year CE assisted warranty and the H17 has a three-year element exchange warranty. The 3581-H13 and H17 have a HVD Ultra SCSI interface. A #2895 is required for a #6501 attachment.</p> <p>The 3581-H23 and 3581-L23 Ultrium 2 Tape Autoloaders are external, stand-alone or rack mounted SCSI-attached autoloaders that incorporate IBM Ultrium2 tape drives. The capacity is up to seven tape cartridges, providing a media capacity of up to 1.4 TB (2.8 TB with 2:1 compression), and a sustained data rate of up to 35 MB per second (uncompressed). The 3581-H23 has an HVD Ultra SCSI interface. A #5099 is required for LVD attachment.</p> <p>The 3581-L28 and 3581-F28 Ultrium 2U Tape Autoloaders are external, stand-alone or rack mounted SCSI-attached (L28) and Fibre Channel-attached (F28) autoloaders that incorporate IBM Ultrium tape drives. The capacity is up to eight tape cartridges, providing a media capacity of up to 1.6 TB (3.2 TB with 2:1 compression), and a sustained data rate of up to 35 MB per second (uncompressed). The 3581-L28 has a LVD Ultra 160 SCSI interface, but can be converted to a High Voltage Differential (HV-) Ultra SCSI interface with HVD Converter Kit feature #3104. The 3581-F28 comes with an LC Duplex connector. An interposer #5096 might be required to connect a fibre cable with LC-Duplex to another SC-Duplex connector.</p> <p>The 3581 appears as two drives on the SCSI bus and can be operated in sequential or random-access modes. The 3581 can be used as an automated tape library.</p>	4x0, 5x0, 6x0, Sx0, 720, 730, 740, 170, 250, 270, 820, 830, 840



Machine	Description	9406 models
3580 and 3581 cable features	<p><b>Cable features:</b> SCSI or Fibre cables and appropriate interposers, as required, should be ordered.</p> <p>SCSI:</p> <p>#5099 Interposer VHDCI to HD68</p> <p>#5301 0.4 m HD68/HD68 SCSI cable (use to daisy-chain two tape drives on the same SCSI bus)</p> <p>#5302 2.5 m (8-ft) HD68/HD68 SCSI cable</p> <p>#5305 5.0 m (16-ft) HD68/HD68 SCSI cable</p> <p>#5310 10.0 m (33-ft) HD68/HD68 SCSI cable</p> <p>#5318 18.0 m (59-ft) HD68/HD68 SCSI cable</p> <p>#5325 25.0 m (82-ft) HD68/HD68 SCSI cable</p> <p>#5602 2.5 m (8-ft) VHDCI/HD68 SCSI cable</p> <p>#5604 4.5 m (14.5 ft) VHDCI/HD68 SCSI cable</p> <p>#5610 10.0 m (33-ft) VHDCI/HD68 SCSI cable</p> <p>#5620 20.0 m (66-ft) VHDCI/HD68 SCSI cable</p> <p>#5625 25.0 m (82-ft) VHDCI/HD68 SCSI cable</p> <p>#9702 2.5 m (8-ft) HD68/HD68 SCSI cable</p> <p>#9703 2.5 m (8-ft) VHDCI/HD68 SCSI cable</p> <p>#9705 5.0 m (16-ft) HD68/HD68 SCSI cable</p> <p>Fibre:</p> <p>#5096 Interposer SC - LC Fibre</p> <p>#5907 7 m SC - LC Fibre cable</p> <p>#5922 22 m SC - LC Fibre cable</p> <p>#5961 61 m SC - LC Fibre cable</p> <p>#6005 5 m LC - LC Fibre cable</p> <p>#6025 25 m LC - LC Fibre cable</p> <p>#6061 61 m LC - LC Fibre cable</p> <p><b>Cartridge/supply features:</b> IBM Ultrium data and cleaning cartridges available only with the initial order.</p> <p>#8001 1 Ultrium data cartridge (100 GB)</p> <p>#8002 1 Cleaning cartridge</p> <p>#8101 1 Ultrium 2 data cartridge (200 GB)</p> <p>#8723 Rack mount kit</p> <p>3589 Additional media is ordered against machine type 3589. IBM LTO Ultrium Data Cartridge (100 GB) - IBM P/N 08L9120 IBM LTO Ultrium 2 Data Cartridge (200 GB) - IBM P/N 08L9870 IBM LTO Ultrium Universal Cleaning Cartridge - IBM P/N 35L2086 Leader Pin attachment Kit - IBM P/N 08L9129 Manual Rewind Tool - IBM P/N 08L9130 Magazine with cover - IBM P/N 35L1088</p> <p>For detailed operating system and server support, see:  <a href="http://www-1.ibm.com/servers/storage/tape/compatibility/pdf/3580opn.pdf">http://www-1.ibm.com/servers/storage/tape/compatibility/pdf/3580opn.pdf</a>  <a href="http://www-1.ibm.com/servers/storage/tape/compatibility/pdf/3581opn.pdf">http://www-1.ibm.com/servers/storage/tape/compatibility/pdf/3581opn.pdf</a>  <a href="http://knowledge.storage.ibm.com/HBA/HBASearch">http://knowledge.storage.ibm.com/HBA/HBASearch</a></p> <p>Minimum operating system level to support #2729, #6534, or #6501 attachment: OS/400 V4R2  Minimum operating system level to support #2749 attachment: OS/400 V4R5  Minimum operating system level to support #2765 attachment: OS/400 V5R1  Minimum operating system level to support #5702, #5704, #5705 attachment: OS/400 V5R2</p>	

Machine	Description	9406 models
3590 B11 B1A	<p><b>IBM TotalStorage Enterprise Tape Drive</b></p> <p>Also known as the 3590 High Performance Tape Subsystem, the IBM TotalStorage Enterprise Tape Drive Models B11 and B12 are ½-inch cartridge rack mountable tape units that provide up to 17 MB per second sustained data rate and up to 10 GB capacity per cartridge (up to 30 GB when compressed). With Extended Media Support and Extended High Performance Media, capacity is up to 20 GB per cartridge (up to 60 GB when compressed).</p> <p>A 10 cartridge random access Automatic Cartridge Facility (ACF) gives data capacity of up to 300 GB in unattended mode (not on the B1A model). The 3590-B11 or B1A can simultaneously attach to a combination of two iSeries, AS/400e, and RS/6000 systems. It attaches to the iSeries using #2749 PCI Ultra Magnetic Media Controller, and AS/400e models using #6501 Tape/Disk Device Controller (SPD), #6534 Magnetic Media Controller (SPD), #2729 PCI Magnetic Media Controller. The B1A is supported in the 3494 Tape Library Dataserver. The B11 can upgrade to the B1A, the E11 or the H11.</p> <p>3590 Ultra SCSI feature is available as standard with #9790 or as an MES with #5790.</p> <p><b>Cable features:</b></p> <p>#5106 0.6 m (2-ft) SCSI cable used to connect 3590-B11s when they are side-by-side in a rack and connected to the same SCSI port - Maximum: Two</p> <p>#5128 2.8 m (9-ft) SCSI cable used to connect a 3590-B11 when it is in the same rack as the iSeries or AS/400e. Maximum: Two</p> <p>#5145 4.5 m (15-ft) SCSI cable</p> <p>#5112 12.0 m (39-ft) SCSI cable</p> <p>#5118 18.0 m (59-ft) SCSI cable</p> <p>#5125 25.0 m (82-ft) SCSI cable</p> <p>#9240 Interposer for AS/400</p> <p><b>Other features:</b></p> <p>#2200 Deskside Enclosure</p> <p>#5780 Extended Media Support - Bxx</p> <p>#5790 Field installation of Ultra SCSI feature for 3590</p> <p>#9221 First 3590 drive in rack</p> <p>#9222 Second or fourth 3590 drive in rack</p> <p>#9223 Third 3590 drive in rack</p> <p>#9400 Attached to AS/400</p> <p>#9410 Interposer for AS/400 adapter #6501</p> <p>#9790 Plant installation of Ultra SCSI attachment feature for 3590</p> <p>Minimum operating system level: OS/400 V4R1</p> <p>PTFs are required to attach the 3590 with the Ultra SCSI interface to iSeries and AS/400e models with a #6534 Magnetic Media Controller (SPD), #2729 PCI Magnetic Media Controller, or #2749 PCI Ultra Magnetic Media Controller. Refer to AS/400 Information APAR II11472 for required PTFs. No PTFs required for attachment to the #6501 Tape/Disk Device Controller.</p>	D, E, F (except D02, E02), 2x0, 3x0, 4x0, 5x0, 6x0, Sx0, 720, 730, 740, 170, 250, 270, SB2, SB3, 820, 830, 840

Machine	Description	9406 models
3590 B11 B1A (cont.)	<p><b>3590 11 and B1A TotalStorage Enterprise Tape Drive, continued</b></p> <p>Minimum operating system level to support #2749 attachment: OS/400 V4R5  Minimum operating system level to support #6501 attachment: OS/400 V3R1  Minimum operating system level to support #6534 or #2729 attachment: OS/400 V4R1</p> <p><b>3590-B1A</b> attaches to all iSeries or AS/400e models that support #6501 Tape/Disk Device Controller, #6534 Magnetic Media Controller or #2729 on AS/400e models, or #2749 on iSeries servers.</p> <p>The following features are required for each iSeries or AS/400 attached:</p> <p>#5112 12.0 m (39-ft) SCSI Cable  #5118 18.0 m (59-ft) SCSI Cable  #5125 25.0 m (82-ft) SCSI Cable  #5145 45.0 m (150-ft) SCSI Cable  #9400 AS/400 Attach Specify  #9410 Interposer for #6501</p> <p>Minimum operating system level to support #2749 attachment: OS/400 V4R5  Minimum operating system level to support #6501 attachment: OS/400 V3R1  Minimum operating system level to support #6534 or #2729 attachment: OS/400 V4R1  For detailed operating system and server support, see:  <a href="http://www-1.ibm.com/servers/storage/tape/compatibility/pdf/3590opn.pdf">http://www-1.ibm.com/servers/storage/tape/compatibility/pdf/3590opn.pdf</a></p>	
3590 E11 E1A	<p><b>IBM TotalStorage Enterprise Tape Drive</b></p> <p>Also known as the 3590 High Performance Tape Subsystem, the IBM TotalStorage Enterprise Tape Drive Models E11 and E1A are ½-inch cartridge rack mountable tape drives that provide up to 34 MB per second sustained data rate on Ultra SCSI interface or 42 fibre, and up to 20 GB capacity per cartridge (up to 60 GB when compressed). With Extended Media Support and Extended High Performance Media capacity is up to 40 GB per cartridge (up to 120 GB when compressed).</p> <p>A 10-cartridge random access ACF provides data capacity up to 1.8 TB unattended (not on the E1A models). With SCSI, the 3590-E11 or E1A can simultaneously attach to any combination of two iSeries, AS/400e, pSeries, and RS/6000 systems. The E1A is supported in the 3494 Tape Library Dataserver and the E11 can upgrade to the E1A or the H11.</p> <p>Supported iSeries and AS/400e adapters:</p> <ul style="list-style-type: none"> <li>▶ #2729 PCI Magnetic Media Controller</li> <li>▶ #2749 PCI Ultra Magnetic Media Controller</li> <li>▶ #2765 PCI Fibre Channel Tape Controller, either direct attach or to SAN with a 3534-1RU SAN Fibre Channel Managed Hub or 2109 or 3534-F08 switches in QuickLoop mode. Full switch support is available with OS/400 V5R2.</li> <li>▶ #5704 PCI-X Fibre Channel Tape Controller</li> <li>▶ #6501 Tape/Disk Device Controller (#9410 Interposer is required)</li> <li>▶ #6534 Magnetic Media Controller</li> </ul> <p>The 3590 fibre drive port requires an SC connection. The #2765 and #5704 require an LC connection. Connections on the switches and SAN components between the drive and the iSeries can be either SC or LC.</p> <p><b>Cable features:</b></p> <p>#5145 4.5 m (15-ft) SCSI cable Maximum: Two. This is the minimum length SCSI cable required to connect a 3590 Model E11 or an E1A to a SCSI port on a host system.</p> <p>#5112 12.0 m (39-ft) SCSI cable Maximum: Two  #5118 18.0 m (59-ft) SCSI cable Maximum: Two  #5125 25.0 m (82-ft) SCSI cable Maximum: Two  #9410 Interposer for AS/400 (#6501 attachment only)  #5805 5 m SC/SC Fibre Cable Maximum: Two  #5813 13 m SC/SC Fibre Cable Maximum: Two  #5825 25 m SC/SC Fibre Cable Maximum: Two  #5861 61 m SC/SC Fibre Cable Maximum: Two  #5907 7 m LC/SC Fibre Cable Maximum: Two  #5913 13 m LC/SC Fibre Cable Maximum: Two  #5922 22 m LC/SC Fibre Cable Maximum: Two  #5961 61 m LC/SC Fibre Cable Maximum: Two</p>	4x0, 5x0, 6x0, Sx0, 720, 730, 740, 170, 250, 270, SB2, SB3, 820, 830, 840

Machine	Description	9406 models
3590 E11 E1A (cont.)	<p><b>Other features:</b></p> <p>#2200 Deskside Enclosure</p> <p>#3510 Fibre Attachment - Field (#2765 or #5704 attachment only)</p> <p>#5781 Extended Media Support - Exx</p> <p>#9221 First 3590 drive in rack</p> <p>#9222 Second or fourth 3590 drive in rack</p> <p>#9223 Third 3590 drive in rack</p> <p>#9400 Attached to AS/400</p> <p>#9510 Fibre attachment - Plant (#2765 or #5704 attachment only)</p> <p>The following features are required for each iSeries or AS/400 attached:</p> <p>#3510 Fibre Channel Attachment (Field)</p> <p>#5112 12.0 m (39-ft) SCSI Cable</p> <p>#5118 18.0 m (59-ft) SCSI Cable</p> <p>#5125 25.0 m (82-ft) SCSI Cable</p> <p>#5145 45.0 m (150-ft) SCSI Cable</p> <p>#5805 5 m SC/SC Fibre Cable</p> <p>#5813 13 m SC/SC Fibre Cable</p> <p>#5825 25 m SC/SC Fibre Cable</p> <p>#5861 61 m SC/SC Fibre Cable</p> <p>#5907 7 m LC/SC Fibre Cable</p> <p>#5913 13 m LC/SC Fibre Cable</p> <p>#5922 22 m LC/SC Fibre Cable</p> <p>#5961 61 m LC/SC Fibre Cable</p> <p>#9400 AS/400 Attach Specify</p> <p>#9410 Interposer for the #6501</p> <p>#9510 Fibre Channel Attachment (Plant)</p> <p>PTFs are required to support the IBM TotalStorage 3590 E11 and E1A when attached to an iSeries or AS/400e server. Functional PTFs are required on certain releases. Refer to AS/400 Information APAR II11472 for details.</p> <p>Minimum operating system level: OS/400 V4R1</p> <p>Minimum operating system level to support #2749 attachment: OS/400 V4R5</p> <p>Minimum operating system level to support #2765 attachment: OS/400 V5R1</p> <p>Minimum operating system level to support #5704 attachment: OS/400 V5R2</p> <p>For detailed operating system and server support, see:</p> <p><a href="http://www-1.ibm.com/servers/storage/tape/compatibility/pdf/3590opn.pdf">http://www-1.ibm.com/servers/storage/tape/compatibility/pdf/3590opn.pdf</a></p> <p><a href="http://knowledge.storage.ibm.com/HBA/HBASearch">http://knowledge.storage.ibm.com/HBA/HBASearch</a></p>	
3590 H11 H1A	<p><b>IBM TotalStorage Enterprise Tape Drive</b></p> <p>Also known as the 3590 High Performance Tape Subsystem, the IBM TotalStorage Enterprise Tape Drive Models H11 and H1A are ½-inch cartridge rack mountable tape drives that provide up to 34 MB per second sustained data rate on Ultra SCSI interface or up to 42 MB per second using fibre, and up to 60 GB capacity per cartridge (up to 180 GB when compressed). A 10-cartridge random access ACF provides data capacity up to 1.8 TB unattended (not on the H1A model). With Ultra SCSI the 3590-H11 or H1A can simultaneously attach to any combination of two iSeries, AS/400e, pSeries, and RS/6000 systems. The H1A is supported in the 3494 Tape Library Dataserver and the H11 can upgrade to the H1A or the H11.</p> <p>Supported iSeries and AS/400 adapters:</p> <ul style="list-style-type: none"> <li>▶ #2729 PCI Magnetic Media Controller</li> <li>▶ #2749 PCI Ultra Magnetic Media Controller</li> <li>▶ #2765 PCI Fibre Channel Tape Controller, either direct attach or to SAN with a 3534-1RU SAN Fibre Channel Managed Hub or 2109 or 3534-F08 switches in QuickLoop mode. Full switch support is available with OS/400 V5R2.</li> <li>▶ #5704 PCI-X Fibre Channel Tape Controller</li> <li>▶ #6534 Magnetic Media Controller</li> </ul>	4x0, 5x0, 6x0, Sx0, 720, 730, 740, 170, 250, 270, SB2, SB3, 820, 830, 840

Machine	Description	9406 models
3590 H11 H1A (cont.)	<p><b>IBM TotalStorage Enterprise Tape Drive</b></p> <p>The 3590 fibre drive port requires an SC connection. The #2765 and #5704 require an LC connection. Connections on the switches and SAN components between the drive and the iSeries can be either SC or LC.</p> <p><b>Cable features:</b></p> <p>#5145 4.5 m (15-ft) SCSI cable Maximum: Two. This is the minimum length SCSI cable required to connect a 3590 Model E11 or an E1A to a SCSI port on a host system.</p> <p>#5112 12.0 m (39-ft) SCSI cable Maximum: Two</p> <p>#5118 18.0 m (59-ft) SCSI cable Maximum: Two</p> <p>#5125 25.0 m (82-ft) SCSI cable Maximum: Two</p> <p>#5805 5 m SC/SC Fibre Cable Maximum: Two</p> <p>#5813 13 m SC/SC Fibre Cable Maximum: Two</p> <p>#5825 25 m SC/SC Fibre Cable Maximum: Two</p> <p>#5861 61 m SC/SC Fibre Cable Maximum: Two</p> <p>#5907 7 m LC/SC Fibre Cable Maximum: Two</p> <p>#5913 13 m LC/SC Fibre Cable Maximum: Two</p> <p>#5922 22 m LC/SC Fibre Cable Maximum: Two</p> <p>#5961 61 m LC/SC Fibre Cable Maximum: Two</p> <p><b>Other features:</b></p> <p>#2200 Deskside Enclosure</p> <p>#3510 Fibre Attachment - Field (#2765 PCI Fibre Channel Tape Controller and #5704 PCI-X Fibre Channel Tape Controller attachment only)</p> <p>#9221 First 3590 drive in rack</p> <p>#9222 Second or fourth 3590 drive in rack</p> <p>#9223 Third 3590 drive in rack</p> <p>#9400 Attached to AS/400</p> <p>#9510 Fibre attachment - Plant (#2765 and #5704 attachment only)</p> <p>The following features are required for each iSeries or AS/400 attached:</p> <p>#3510 Fibre Channel Attachment (Field)</p> <p>#5112 12.0 m (39-ft) SCSI Cable</p> <p>#5118 18.0 m (59-ft) SCSI Cable</p> <p>#5125 25.0 m (82-ft) SCSI Cable</p> <p>#5145 45.0 m (150-ft) SCSI Cable</p> <p>#5805 5 m SC/SC Fibre Cable</p> <p>#5813 13 m SC/SC Fibre Cable</p> <p>#5825 25 m SC/SC Fibre Cable</p> <p>#5861 61 m SC/SC Fibre Cable</p> <p>#5907 7 m LC/SC Fibre Cable</p> <p>#5913 13 m LC/SC Fibre Cable</p> <p>#5922 22 m LC/SC Fibre Cable</p> <p>#5961 61 m LC/SC Fibre Cable</p> <p>#9400 AS/400 Attach Specify</p> <p>#9510 Fibre Channel Attachment (Plant attachment only)</p> <p>PTFs are required to support the Magstar® 3590 H11 and H1A when attached to an iSeries or AS/400e server. Functional PTFs are required on certain releases. Refer to Information AS/400 APAR II11472 for details.</p> <p>Minimum operating system level: OS/400 V4R5</p> <p>Minimum operating system level to support #2765 attachment: OS/400 V5R1</p> <p>Minimum operating system level to support #5704 attachment: OS/400 V5R2</p> <p>For detailed operating system and server support, see:</p> <p><a href="http://www-1.ibm.com/servers/storage/tape/compatibility/pdf/3590opn.pdf">http://www-1.ibm.com/servers/storage/tape/compatibility/pdf/3590opn.pdf</a></p> <p><a href="http://knowledge.storage.ibm.com/HBA/HBASearch">http://knowledge.storage.ibm.com/HBA/HBASearch</a></p>	

Machine	Description	9406 models
3592-J1A	<p><b>IBM TotalStorage 3592 Tape Drive</b></p> <p>The 3592-J1A is the follow on to the highly successful Enterprise Tape Drive 3590. The 3592 Model J1A is designed for high-performance computing environments where high reliability, capacity and performance are necessary.</p> <p>The 3592-J1A has a native data transfer rate of up to 40 Mbps (80 Mbps assuming 2:1 compression). It uses both 60 GB and 300 GB capacity cartridges available in both rewritable and write once read many (WORM) formats. The 300 GB cartridges can store up to 900GB when using three to one (3:1) compression.</p> <p>The 3592 WORM media and cartridge scaling are currently not supported in iSeries environments. There is no compatibility between 3592 and 3590 tape media or drives.</p> <p>The 3592 Model J1A comes with dual-ported switched fabric 2-Gbps Fibre Channel attachments for attachment to multiple servers or a single server with redundancy. When attached to an iSeries or AS/400e server, it can be placed in an Enterprise Tape Library 3494, 3584 or stand-alone rack. In a 3494 frame or stand-alone rack, each drive comes in a canister and up to two tape drive canisters can be installed in a cradle. A cradle includes dual redundant hot-swappable power supplies for both tape drives.</p> <p>Up to four 3592-J1A drives can be installed in a 3494-L22 and up to 12 in a 3494-D22, 3584-L22 or 3584-D22. For installation in a rack, up to two Model J1A drives can be installed in each cradle feature. The cradle requires 10 EIA units of rack space. Two cradles can be mounted on a shelf, for a total of four tape drives on a shelf.</p> <p>When a 3592-J1A drive is installed in a rack, it can only be configured as a single slot drive unit. That is, no ACF is provided.</p> <p>The 3592 Model J1A Tape Drive can be attached to iSeries and AS/400e servers that support the following Fibre Channel adapters. There is no SCSI attachment for 3592 drives.</p> <p>#2765 PCI Fibre Channel Tape Controller  #5704 PCI-X Fibre Channel Tape Controller</p> <p>These iSeries controllers have a Lucent Connector (LC) Duplex connector, so an LC/LC Fibre Cable should be ordered for this tape drive.</p> <p><b>Cable features:</b></p> <p>#5907 7 m Fibre Channel cable with an LC connector on one end and an SC connector on the other end  #5913 13 m Fibre Channel cable with an LC connector on one end and an SC connector on the other end  #5922 22 m Fibre Channel cable with an LC connector on one end and an SC connector on the other end  #5961 61 m Fibre Channel cable with an LC connector on one end and an SC connector on the other end  #6005 5 m Fibre Channel cable with LC connectors on both ends  #6013 13 m Fibre Channel cable with LC connectors on both ends  #6025 25 m Fibre Channel cable with LC connectors on both ends  #6061 61 m Fibre Channel cable with LC connectors on both ends</p> <p>All cables listed are 50.00/125 micrometer fibre-optic cables and are field or plant installation.</p> <p><b>Other features:</b></p> <p>#0500 Drive Microcode Update  #4674 Install J1A in Rack/Field Install J1A Drive  \$4772 Remove J1A Drive  #4802 Left Drive Cradle in Rack  #4812 Right Drive Cradle in Rack  #8820 3592 Data Cartridge (20-pack)  #8802 Cleaning Cartridge  #9200 Open Systems Device Drivers  #9400 iSeries OS/400 Attachment  #9590 No Data Cartridges  #9673 Plant Install J1A in 3494  #9674 Field Merge J1A Drive</p>	270, 6xx, Sxx, 720, 730, 740, 820, 830, 840

Machine	Description	9406 models
3592 J1A (cont.)	<b>Media</b> Additional media is ordered against machine type 3599. <ul style="list-style-type: none"> <li>▶ 3599-011 - The IBM 3599 Model 011 is the IBM TotalStorage Enterprise Tape Cartridge 3592 with Labeling and Initialization</li> <li>▶ 3599-012 - The IBM 3599 Model 012 is the IBM TotalStorage Enterprise Tape Cartridge 3592 with labeling only.</li> <li>▶ 3599-013 - The IBM 3599 Model 013 is to provide bulk-packaged quantities of the IBM TotalStorage Enterprise Tape Cartridge 3592 with no labeling or initialization.</li> <li>▶ 3599-017 - The IBM 3599 Model 017 is the IBM TotalStorage Enterprise Tape Cleaning Cartridge 3592.</li> </ul>	
P/N 18P7534 P/N 18P7535	IBM TotalStorage Enterprise Tape Cartridge 3592 (Data) IBM TotalStorage Enterprise Tape Cartridge 3592 (Cleaning)  Minimum operating system level: OS/400 V5R1 (PTFs can be required) Minimum operating system level to support #2765 attachment: OS/400 V5R1 Minimum operating system level to support #5704 attachment: OS/400 V5R2 plus PTFs  For required PTF information, refer to information APAR II13609 at: <a href="http://www.ibm.com/eserver/series/support">http://www.ibm.com/eserver/series/support</a>  For detailed operating system and server support, see: <a href="http://www.storage.ibm.com/tape/drives/3592/3592opn.pdf">http://www.storage.ibm.com/tape/drives/3592/3592opn.pdf</a> <a href="http://knowledge.storage.ibm.com/HBA/HBASearchTool">http://knowledge.storage.ibm.com/HBA/HBASearchTool</a>	
7206 VX2	<b>80 GB External VXA-2 Tape Drive</b> The 7206-VX2 is a stand-alone, SCSI, VXA-2 streaming tape drive that can be used for save and restore and archiving functions. The 7206-VX2 writes data to tape using a Discrete Packet Format (VXA technology based on 8 mm format). The VX2 tape drive provides a media capacity of up to 80 GB (160 GB with 2:1 compression) data storage per cartridge. It has a sustained data transfer rate of up to 6.0 MB per second. VXA-2 is not compatible with previous 8 mm format tape drives.  Supported iSeries and AS/400 adapters: #2718 PCI Magnetic Media Controller #2768 PCI Magnetic Media Controller #5702 PCI-X Ultra Tape Controller, #5705 PCI-X Tape/DASD Controller, #5712 PCI-X Tape Controller, #5715 PCI-X Tape/DASD Controller  <b>Cable features:</b> One SCSI cable is shipped with the device. Terminator, LVD/SE #5097 1.5 m SCSI cable for the #2718, #2768 #5300 2.5 m SCSI cable for the #2718, #2768 #5302 1.5 m SCSI cable for the #5702, #5705, #5712, #5715 #5601 2.5 m SCSI cable for the #5702, #5705, #5712, #5715 #5602 4.5 m SCSI cable for the #5702, #5705, #5712, #5715 #5604 10 m SCSI cable for the #5702, #5705, #5712, #5715 #5610 1.5 m SCSI cable for the #2718, #2768 #9750 2.5 m SCSI cable for the #2718, #2768 #9752 1.5 m SCSI cable for the #5702, #5705, #5712, #5715 #9761 2.5 m SCSI cable for the #5702, #5705, #5712, #5715 #9762 4.5 m SCSI cable for the #5702, #5705, #5712, #5715 #9764 10 m SCSI cable for the #5702, #5705, #5712, #5715 #9760  Other features: #8723 Rack Mount Kit	6x0, Sx0, 720, 730, 740, 170, 250, 270, SB2, SB3, 820, 830, 840

Machine	Description	9406 models
7206 VX2 (cont.)  #2505 #2506 #2507 #2508 #2509	<b>80 GB External VXA-2 Tape Drive</b>  Cartridge features: 1 20 GB VXA2 Cartridge 1 59 GB VXA2 Cartridge 1 80 GB VXA2 Cartridge 1 VXA2 Test Cartridge 1 VXA2 Cleaning Cartridge  Minimum operating system level: OS/400 V5R1 Minimum operating system level for the #5702, #5705 attachment: OS/400 V5R2	
7207 122	<b>4 GB External QIC Tape Drive</b> The 7207 Model 122 is a QIC ¼-inch streaming linear tape drive that can be used for save and restore, program distribution, and alternate IPL. It incorporates Single Channel Linear Recoding (SLR5) QIC technology and has an effective data transfer rate of 380 KB per second (760 KB per second with 2:1 compression). Provides up to 4 GB (8 GB with 2:1 compression) storage capacity.  The Model 122 attaches using #2718, #2768, #5702, #5705, #5712, #5715. See 9.5.4, "#5712, #5715, #5702, #5705, #2718, and #2768 PCI Magnetic Media Controller: Device cabling rules" on page 370, for a description of the supported attachment configurations.  Minimum operating system level: OS/400 V4R2 with PTFs identified in AS/400 Information APAR II11671.	6x0, Sx0, 720, 730, 740, 170, 250, 270, SB2, SB3, 820, 830, 840
7207 330	<b>7207 Model 330 External SLR60 Tape Drive</b> The 7207 Model 122 is an entry-level save and restore device for medium-capacity fixed disk drive data and applications. The Model 330 is a standalone streaming tape drive in a single, externally attached enclosure, incorporating 4-Channel Scalable Linear Recording (SLR) technology for attachment to the iSeries server. The Model 330 has an effective data transfer rate up to 4 MB per second (8 MB per second with 2:1 compression). Provides up to 30 GB (60 GB with 2:1 compression) storage capacity.  The Model 330 attaches using #2718, #2768, #5702, #5705, #5712, #5715. See 9.5.4, "#5712, #5715, #5702, #5705, #2718, and #2768 PCI Magnetic Media Controller: Device cabling rules" on page 370, for a description of the supported attachment configurations.  Minimum operating system level: OS/400 V5R1	6x0, Sx0, 720, 730, 740, 170, 250, 270, SB2, SB3, 820, 830, 840
7208 002 012	<b>8 mm Cartridge Tape Drive</b> The 7208 is an 8 mm Helical scan tape drive that can be used for save and restore, program distribution, and alternate IPL.  <b>Model 002 8 mm Cartridge Tape Drive 2.3 GB (withdrawn from marketing 31 March 1994)</b> The Model 002 has an effective data transfer rate of 245 KB per second. Provides up to 5 GB storage capacity. 7208-002 attaches using #2621 Storage Device Controller (SPD). Not supported on AS/400 600/S10 models.  <b>Model 012 8 mm Cartridge Tape Drive 5 GB</b> The Model 012 has an effective data transfer rate of 1 MB per second when compressed (500 KB per second in native mode). Provides up to 10 GB storage capacity with compression. It attaches using #2621 Storage Device Controller (SPD), #6543 (SPD) or #2729 /#2749 PCI Ultra Magnetic Media Controller or #2511 for 9406 B models.  Minimum operating system level to support #2749 attachment: OS/400 V4R5 Minimum operating system level to support #2621 attachment: OS/400 V3R1 Minimum operating system level to support #6534 or #2629 attachment: OS/400 V4R1 Model 002 not supported with OS/400 V5R2	B, D, E, F (except D02, E02), 2x0, 3x0, 4x0, 5x0, 6x0, Sx0, 720, 730, 740, 170 (012 only), 250, 270, SB2, SB3, 820, 830, 840



Machine	Description	9406 models
7208 222	<p><b>8 mm Cartridge Tape Drive 7 GB</b></p> <p>The 7208 Model 222 is a stand-alone 8 mm Cartridge tape drive providing capacity of up to 7 GB per cartridge, or 14 GB with compression, and has an effective data transfer rate of 1 Mbps when compressed (500 KB per second in native mode). It can be used for save and restore, program distribution, and alternate IPL. The 7208-222 supports the 160 m data cartridge and read/write compatible with all IBM 8 mm cartridge tape units.</p> <p>Attaches using #2621 Storage Device Controller, #6534 Magnetic Media Controller, or #2729/#2749 PCI Ultra Magnetic Media Controller.</p> <p>Available in black (#9100) or white (#9200)</p> <p>Minimum operating system level to support #2749 attachment: OS/400 V4R5  Minimum operating system level to support #2621 attachment: OS/400 V3R1  Minimum operating system level to support #6534 or #2629 attachment: OS/400 V4R1</p>	D, E, F (except D02, E02), 2x0, 3x0, 4x0, 5x0, 6x0, Sx0, 720, 730, 740, 170, 250, 270, 820, 830, 840
7208 232	<p><b>Dual Drive 8 mm Cartridge Tape Unit (10 GB)</b></p> <p>The 7208 Model 232 provides two 5 GB 8 mm drives in a single tape unit. Each unit emulates the 7208 Model 012, which can be used for save and restore, program distribution, and alternate IPL (except 9402 D04, and D06; 9404 B, C, D10, and D20; and 9406 B models). Each drive can provide up to 10 GB of storage capacity or up to 20 GB of unattended capacity if both drives are used in cascade mode with compression (5 GB per drive in native).</p> <p>The Model 232 attaches using #2621 Storage Device Controller, #6534 Magnetic Media Controller, or #2729/#2749 PCI Ultra Magnetic Media Controller or #2611 for 9406 B models and supports dual host attachment. It has a data transfer rate of 500 KB per second in native mode per drive or 1 Mbps when compressed. It is read/write compatible with all IBM 8 mm cartridge tape units and has an integrated label-printer port.</p>	B, D, E, F (except D02, E02), 2x0, 3x0, 4x0, 5x0, 6x0, Sx0, 7x0, 170, 250, 270, 820, 830, 840
7208 234	<p><b>Dual Drive 8 mm Cartridge Tape Unit (28 GB)</b></p> <p>The 7208 Model 234 provides two 7 GB 8 mm drives in a single tape unit that can be used for save and restore, program distribution, and alternate IPL (except 9402 D04 and D06; 9404 B, C, D10, and D20; and 9406 B models). 7208-234 only available in black. Each drive can provide up to 14 GB of storage capacity, or up to 28 GB of unattended capacity if both drives are used in cascade mode with compression (7 GB per drive in native).</p> <p>The Model 234 attaches using the #2621 Storage Device Controller, #6534 Magnetic Media Controller, or #2729/#2749 PCI Ultra Magnetic Media Controller or #2611 for 9406 B models, and supports dual host attachment. It has a data transfer rate of 500 KB per second in native mode per drive or 1 Mbps when compressed. It is read/write compatible with all IBM 8 mm cartridge tape units and has an integrated label-printer port.</p>	B, D, E, F (except D02, E02), 2x0, 3x0, 4x0, 5x0, 6x0, Sx0, 720, 730, 740, 170, 250, 270, 820, 830, 840
#0501	<p>The #0501 provides a single 8 mm drive unit than can only be used to attach to an existing 7208 Model 012 using a #9612 Device-to-Device cable to provide the functions of the 7208-232 Dual Drive Unit #0502.</p>	

Machine	Description	9406 models
7208 342	<p><b>8 mm Tape Drive (20 GB)</b></p> <p>The 7208 Model 342 is a stand-alone 8 mm cartridge tape drive providing capacity of up to 20 GB per cartridge or 40 GB with compression. It has an effective data transfer rate of 6 MB per second when compressed (3 MB per second in native mode).</p> <p>The Model 342 is intended for save and restore and archiving purposes. It uses the 8 mm advanced metal-evaporated (AME) data cartridges and can only read previous IBM 8 mm tape formats. The Model 342 attaches using #6534 Magnetic Media Controller or #2729/#2749 PCI Ultra Magnetic Media Controller. Available in black only. Attachment cable length and media option must be specified.</p> <p>#7019 Five data cartridges, cleaning cartridge, and test cartridge (plant)  #2019 Five data cartridges (MES)  #9019 One data cartridges, cleaning cartridge, and test cartridge (plant)  #2016 Five cleaning cartridges (MES)  #9245 4.5 m (15-ft) cable  #9212 12.0 m (39-ft) cable  #9218 18.0 m (59-ft) cable</p> <p>Minimum operating system level: OS/400 V4R1  Minimum operating system level to support #2749 attachment: OS/400 V4R5</p>	4x0, 5x0, 6x0, Sx0, 720, 730, 740, 170, 250, 270, SB2, SB3, 820, 830, 840
7208 345	<p><b>60 GB External 8 mm Tape Drive</b></p> <p>The 7208 Model 345 is a stand-alone 8 mm cartridge tape drive provides capacity of up to 60 GB per cartridge or 150 GB with compression and has an effective data transfer rate of 12 MB per second when compressed (20 MB per second in native mode).</p> <p>The Model 345 is intended for save and restore and archiving purposes. It uses the 8 mm AME data cartridges and can read (but not write) 20 GB 8 mm AME tape cartridges. It attaches using the #2718, #2768, #5702, #5705, #5712, #5715. Attachment cable length and power cable option must be specified. Ships with one 60 GB AME Tape and one cleaning cartridge.</p> <p>#5224 2.4 m (8-ft) SCSI cable  #9224 2.4 m (8-ft) SCSI cable (Plant)  #98xx 2.7 m (9-ft) Country- or region-specific power cord</p> <p>Minimum operating system level: OS/400 V4R5</p>	270, 6x0, Sx0, 720, 730, 740, 170, 250, 270, SB2, SB3, 820, 830, 840
7212-102	<p><b>IBM TotalStorage Storage Device Enclosure</b></p> <p>The 7212 Model 102 occupies 1 EIA in a standard 19-inch rack using an optional rack-mount hardware feature kit. It can also be ordered as a desk-top model. The 7212-102 is to be considered in situations where server bays for storage devices is limited or not available and when it is important to consolidate storage devices in a single, convenient location to minimize space and cabling impacts.</p> <p>The two bays of the 7212 Model 102 can accommodate any two of the following feature codes specific to the 7212 to support iSeries servers:</p> <p>#1103 DVD-RAM 2 Drive  #1104 VXA-2 Tape Drive  #1106 DVD-ROM Drive  #1107 SLR60 Tape Drive  #1108 SLR100 Tape Drive</p> <p>The 7212 Model 102 can attach to the iSeries using one of the following adapters:  #2718 PCI Magnetic Media Controller  #2768 PCI Magnetic Media Controller  #5702 PCI-X Ultra Tape Controller  #5705 PCI-X Tape/DASD Controller  #5712 PCI-X Tape/DASD Controller</p> <p>Minimum operating system level: OS/400 V5R2  Minimum operating system level to support #2718, #2768, #5702 and #5705: OS/400 V5R2</p>	170, 250, 270, 6x0, Sx0, 720, 730, 740, 820, 830, 840

Machine	Description	9406 models
9347 - 001	<p><b>Tape Drive</b></p> <p>The 9347 is a ½-inch cartridge tape drive that records at 1600/3200 bpi. At 1600 bpi, it can be used for data interchange, save/restore, program distribution, and alternate IPL. At 3200 bpi, the capacity of a reel can approximately double for system backup/restore functions.</p> <p>Attaches to iSeries using the #6112 Magnetic Storage Device Controller (#6110 for 9406 B models). Maximum: Two per system Not supported with OS/400 V5R1.</p>	B, D, E, F, 3x0, 4x0, 50S, 53S, 500, 510, 530, 6x0, Sx0 (not 600, S10), 720, 730, 740, 820, 830, 840
9348 - 001 002 011 012	<p><b>IBM Magnetic Tape Unit</b></p> <p>The 9348 is a ½-inch reel tape drive that records at 1600/6250 bpi and can be used for restore, program distribution, and alternate IPL. it attaches to iSeries using the #2621 Storage Device Controller, #6534 Magnetic Media Controller, #2729 PCI Magnetic Media Controller, #2749 PCI Ultra Magnetic Media Controller, #2607, or #2608 for 9406 B models.</p> <p>Each 2440 or 9347 attached reduces by one the number of 9348s which can be attached.</p>	B, D, E, F (except D02, E02), 2x0, 3x0, 4x0, 50S, 53S, 500, 510, 520, 530, 540, 6x0, Sx0, 720, 730, 740, 170, 250, 270, 820, 830, 840

## 9.4 Automated tape libraries for iSeries and AS/400e systems

The tape devices described in this section offer an Automated Tape Library (ATL) capability.

Existing ½-inch cartridges can be used after applying 3M barcode labels on CxA drives. 3590-B1A requires high capacity ½-inch cartridges. The ACL on the 3490-C11 and 3490-C22 and ACF on the 3590-B11 are not used in the Library.

The maximum number of automated tape library drives depends on the adapter that is used to attach to the iSeries server:

- ▶ #6501: Three drives, media changers, or both per adapter with a maximum of 10 devices in the library, excluding the 3494
- ▶ #2729, #6534, #2765, #5702, #5712: 16 drives, media changers, or both per adapter with a maximum of 96 devices in the library partition
- ▶ OS/400 is limited to 32 drives pooled per library, regardless of how the drives are attached (one versus multiple). For environments where greater than 32 drives are attaching to a single host a separate library definition and library partition is required.

**Note:** The update device microcode API (QTAUPDDV) allows tape device microcode to be updated using an image copied from the Web. This function is supported with OS/400 Version 5 systems.

3490 Cartridge Tape Subsystems		
Machine	Description	9406 models
3490 - A01 A02 D31 D32	<b>Cartridge Tape Subsystem</b> The Model A01, A02, D31, and D32 are ½-inch cartridge drives that can be used for data interchange, save/restore, program distribution, and alternate IPL. They attach to the iSeries with the #2621 Storage Device Controller or #2644 Magnetic Tape Attachment Card/HP, #2604 for 9406 B models. The attachment of 3490 Models B02 and B04 is also supported. Cannot use enhanced capacity cartridge.	B, D, E, F, 2x0, 3x0, 4x0, 50S, 53S, 500, 510, 530, 6x0, Sx0, (not 600/S10), 720, 730, 740, 820, 830, 840
3490 - A10 A20	<b>Cartridge Tape Subsystem</b> The Model A10 and A20 are ½-inch cartridge drives that can be used for data interchange, save/restore, program distribution, and alternate IPL. They attach to the #9406 with feature #2621 Storage Device Controller or #2644 Magnetic Tape Attachment Card/HP, #2604 for 9406 B models. The attachment of 3490 Models B02 and B04 is also supported. Cannot use enhanced capacity cartridge.	B, D, E, F, 2x0, 3x0, 4x0, 50S, 53S, 500, 510, 530, 6x0, Sx0, (not 600/S10), 720, 730, 740,820, 830, 840
3490E - E01 E11	<b>Cartridge Tape Subsystem</b> The Model E01 and E11 are ½-inch cartridge tape drives. The E01/E11 tapes have IDRC as standard, both include a seven Cartridge Stack Loader. Attachment is to a single iSeries or AS/400e system. <ul style="list-style-type: none"> <li>▶ E01 Table Top Version (7x2.4 GB)</li> <li>▶ E11 Rack Mounted Version (7x2.4 GB)</li> </ul> It attaches using #6501 Tape/Disk Device Controller or #6534 Magnetic Media Controller (SPD), or #2729/#2749 PCI Ultra Magnetic Media Controller. Minimum operating system level to support #2749 attachment: OS/400 V4R5 Minimum operating system level to support #6501 attachment: OS/400 V3R1 Minimum operating system level to support #6534 or #2729 attachment: OS/400 V4R1	D, E, F, 2x0, 3x0, 4x0, 50S, 53S, 500, 510, 530, 6x0, Sx0, 720, 730, 740,170, 250, 270, SB2, SB3, 820, 830, 840
3490E - F00 F01 F11 F1A	<b>Cartridge Tape Subsystem</b> The Models F00, F01, F11, and F1A are ½-inch cartridge tape drives. These tapes have DRC as standard. The F01 and F11 have a 10 cartridge stack loader. Attachment is only available to a single iSeries or AS/400e system. <ul style="list-style-type: none"> <li>▶ F00 Table Top (1 x 2.4 GB)</li> <li>▶ F01 Stand-alone (10 x 2.4 GB)</li> <li>▶ F11 Rack Mounted Version (10 x 2.4 GB)</li> <li>▶ F1A Tape Unit for 3494 Tape Library Dataserver</li> </ul> It attaches using #6501 Tape/Disk Device Controller, or #6534 Magnetic Media Controller, or #2729/#2749 PCI Ultra Magnetic Media Controller. Minimum operating system for the #2749 attachment: OS/400 V4R5 Minimum operating system for the #6501 attachment: OS/400 V3R1 Minimum operating system for the #6534 or #2729 attachment: OS/400 V4R1	D, E, F, 2x0, 3x0, 4x0, 50S, 53S, 500, 510, 520, 530, 6x0, Sx0, 720, 730, 740, 170, 250, 270, SB2, SB3, 820, 830, 840

3570 Cartridge Tape Subsystems		
Machine	Description	9406 models
3570 - B00 B01 B11 B12 C00 C01 C02 C11 C12	<p><b>3570 0.31-inch Cartridge Tape Subsystem</b></p> <p>The 3570 is a cartridge tape unit with table-top and library units based on 3590 technology. Up to 5 GB capacity per cassette (up to 15 GB when compressed) or 7 GB capacity per cassette (up to 21 GB when compressed). Attach to the AS/400 system using the #6501 Tape/Disk Device Controller, #6534 Magnetic Media Controller (SPD), #2729 PCI Magnetic Media Controller, or #2749 PCI Ultra Magnetic Media Controller. One drive can attach to one iSeries or AS/400e system only. With models B02/C02 and B12/C12, each one of the two drives can be connected to a different system. The 3570 is supported as an alternate IPL device. CISC models require RPQ 843945. It is not supported on 9404 Models D10 and D20. Specify a non-3570 tape drive as a valid alternate IPL device.</p> <p><b>Bxx models</b> Data transfer rate of 2.2 Mbps (uncompressed) up to 6.6 Mbps (average compressed) data transfer rate.</p> <p><b>Cxx models</b> Data transfer rate of 7 Mbps (uncompressed) up to 15 Mbps (average compressed) data transfer rate using C-format cartridges.</p> <p>Data transfer rate of 3.5 Mbps (uncompressed) up to 10.5 Mbps (average compressed) data transfer rate using B-format cartridges.</p> <p><b>B00/C00</b> Table Top Unit (1 x 15 GB)  <b>B01/B02/C01/C2</b> Stand-Alone Library with 20 cassette slots (20 x 15 GB) and one drive.  <b>B11/B12/C11/C12</b> Rack Mounted Library with 20 cassette slots (20 x 15 GB) and one drive.  Requires the 9309 Rack.</p> <p><b>Cable features:</b>  #5205 0.5 m (2-ft) SCSI cable  #5212 12.0 m (39-ft) SCSI cable  #5218 18.0 m (59-ft) SCSI cable  #5225 25.0 m (82-ft) SCSI cable (Models C00, C01, C02, C11, C12)  #5245 4.5 m (15-ft) SCSI cable  #2895 AS/400 Interposer</p> <p><b>Other features:</b>  #8701 10-Pack Data Cartridges and one cleaning cassette  #8702 20-Pack Data Cartridges and one cleaning cassette  #8703 20-Pack Data Cartridges and one cleaning cassette. All Cxx models  #8705 10-Pack C-format Data Cartridges and one cleaning cassette  #8750 One Cleaning Cassette  #8751 One Data Cassette  #8752 10-pack Data Cassette. All Bxx models  #8753 Two 10-cassette Magazine  #8758 10-Pack Data Cassettes and one cleaning cassette. All Cxx models.  #9066 White Covers (B01, B02)  #9068 Black Covers (B01, B02)  #9076 Attached to SP2  #9080 Watertight Power Plug  #9200 Open System Device Driver; not Bxx models  #9210 Attached to HP-UNIX; not Bxx models  #9211 Attached to SUN; not Bxx models  #9212 Attached to Windows NT; not Bxx models  #9400 Attached to AS/400; not Bxx models  #9570 One data cassette; one cleaning cassette</p>	D, E, F, (except D02, E02, F02), 2x0, 3x0, 4x0, 50S, 53S, 500, 510, 520, 530, 6x0, Sx0, 720, 730, 740, 170, 250, 270, SB2, SB3, 820, 830, 840

3570 Cartridge Tape Subsystems		
3570 (cont.) #9600 #9603 #9710	<p>Attached to AS/400; not Bxx models AIX Device Driver; not Cxx models SUN Device Driver; not Cxx models</p> <p>Minimum operating system level to support #2749 attachment: OS/400 V4R5 Minimum operating system level to support #6501 attachment: OS/400 V3R1 Minimum operating system level to support #6534 or #2729 attachment: OS/400 V4R1</p>	

7329-308 SLR100 ¼-inch Tape Autoloader		
Machine	Description	9406 models
7329 308	<p><b>7329-308 SLR100 ¼-inch Tape Autoloader</b> The 7329-308 SLR100 ¼-inch Tape Autoloader is a stand-alone SCSI-based device that uses the MLR3 QIC technology.</p> <p>The autoloader, with a magazine capable of holding 8 - SLR100 data cartridges, provides up to 400 GB of uncompressed data (800 GB assuming 2:1 compression) and a transfer rate of 5 Mbps. The autoloader can operate in either random or sequential mode depending on user preference. In random mode, a tape cartridge can be selected from any slot in the magazine and loaded into the tape drive. In sequential mode, tapes are automatically fed into the tape drive beginning with slot one of the magazine.</p> <p>The Model 308 attaches using #2718, #2768, #5702, #5705, #5712, #5715. See 9.5.4, “#5712, #5715, #5702, #5705, #2718, and #2768 PCI Magnetic Media Controller: Device cabling rules” on page 370, for a description of the supported attachment configurations. Minimum operating system level: OS/400 V4R5</p>	60x S0x, 720, 730, 740, 170, 250, 270, SB2, SB3, 820, 830, 840
9427 8 mm Tape Cartridge Library		
Model 210 Model 211	<p>Stand-alone unit. Is not upgradable to the Model 211.</p> <p>Rack mounted unit. Two Model 211s can be put in a rack side by side.</p>	D, E, F (except D02, E02), 2x0, 3x0, 4x0, 50S, 53S, 500, 510, 520, 530, 6x0, Sx0, 720, 730, 740, 170, 250, 270, 820, 830, 840
<p>The 9427 Tape Library consists of a single #0701 7 GB 8 mm tape drive or two #0702 7 GB 8 mm tape drives. The effective data transfer rate is 1 MB per second when compressed (500KB per second in native mode) for each drive. The 9427 is read/write compatible with IBM 8 mm cartridge tape units.</p> <p>Two 10-cartridge magazines (one per drive ordered) provide storage for up to 20 8 mm cartridges, with storage capacity of up to 280 GB.</p> <p><b>Features:</b></p> <ul style="list-style-type: none"> <li>▶ Power cord (#9800 for 125V or #9833 for 250V) <ul style="list-style-type: none"> <li>a. SCSI System-to-Device Cable for the #2621 attach: <ul style="list-style-type: none"> <li>– #9870 - 2 m SCSI cable</li> <li>– #9871 - 4.0 m (13-ft) SCSI cable</li> <li>– #9872 - 12.0 m (39-ft) SCSI cable</li> <li>– #9873 - 20.0 m (65.6-ft) SCSI cable</li> </ul> </li> <li>b. SCSI System-to-Device Cable for the #2729, #2749, #6534 attach - requires interposer <ul style="list-style-type: none"> <li>– #9245 - 4.5 m (15-ft) SCSI cable</li> <li>– #9212 - 12.0 m (39-ft) SCSI cable</li> <li>– #9218 - 18.0 m (59-ft) SCSI cable</li> <li>– #9174 - interposer</li> </ul> </li> </ul> </li> <li>▶ Exterior covers - #9100 black or #9200 white</li> <li>▶ A cleaning cartridge and two 8 mm cartridges are included.</li> </ul> <p>The 9427 attaches to AS/400 models, except B and C and 9401 models using #2621 Storage Device Controller, #6534 Magnetic Media Controller (SPD), or #2729/#2749 PCI Ultra Magnetic Media Controller. Maximum of one 9427 per controller. Minimum operating system level: OS/400 V3R1</p>		

### 9427 8 mm Tape Cartridge Library (continued)

#2007	<b>Additional 10 cartridge magazine</b> Direct attach feature allows option to configure drive 1 to attach to port 1 and drive 2 to attach to port 2 of the #2621 (SPD) adapter card to allow two concurrent data streams. System-to-device cables for additional host attachment or for dual port attachment with #2008.
#2008	
#2656	
#2857	
#2858	
#2859	

### IBM TotalStorage 3494 Enterprise Tape Library

The 3494 is a stand-alone automated tape storage subsystem that provides the solution for automated tape operations such as save/restore, migration of data between DASD and tape, and other large data applications. The 3494 Tape Library consists of:

- ▶ A 3494 L10, L12, or L22 Library Control Unit, which includes the Media Library Manager (a PC that controls the library) and the Media Library Device Driver
- ▶ Base storage for up to 240 ½-inch cartridges (210 if the #5210 convenience I/O station is installed, or 160 if the #5230 is installed)
- ▶ A tape subsystem (either 3592-J1A, 3590-B1A/E1A/H1A, 3490-CxA/F1A)
- ▶ The Accessor (robotic arm that accesses the tape cartridges)
- ▶ iSeries and AS/400e attachment to the Media Library Manager using a RS232 or local area network (LAN) for the library commands
- ▶ The IBM TotalStorage 3494 Automated Tape Library supports up to 64 TCP/IP open system hosts and the attachment of up to 128 3592 or 92 3590 open systems tape drives.

The storage capacity and the number of tape subsystems in the 3494 Library can be increased by adding drive units and storage units (see the following table). The drive units provide additional cartridge slots and space for additional tape subsystems. The storage units provide an additional 400 cartridge slots but no space for tape subsystems.

#### Software requirements

Software support for the 3494 is provided by the following offerings:

- ▶ OS/400 V5R1 plus PTFs, or later, for 3592 Fibre Channel attachment support
- ▶ OS/400 V5R1 plus PTFs, or later, for 3590 Fibre Channel attachment support
- ▶ OS/400 V3R2 plus PTFs, or later, for 3590 SCSI support (OS/400 V4R4 or later for HA1 Frames configurations)
  - 3494 #5211 AS/400 Host Attachment needed for releases prior to OS/400 V3R6
  - BRMS/400 V3R1 or later, optional but recommended
  - R/DARS 1.3.0 or later
- ▶ OS/400 V3R1, or later, for 3490E support
  - 3494 #5211 AS/400 Host Attachment needed for releases prior to OS/400 V3R6
  - BRMS/400 V2R3 or later, optional but recommended
  - R/DARS 1.3.0 or later

See Informational APARs II09772, Index of BRMS and Tape Library, and II11472, Attaching 3590 Exx/Hxx to AS/400, for installation information.

Options for 3494 Models L12, L22, L10	
#2713 #2714 #2715	<p><b>IBM TotalStorage Master Console Features</b></p> <p>The #2713, #2714, and #2715 features provide connection to an IBM TotalStorage Master Console to enable enhanced remote support to improve availability. The IBM TotalStorage Master Console can remotely monitor each attached device to determine if it is working properly and report any error alerts for the early detection of problems. Use of the IBM TotalStorage Master Console can expedite microcode updates, reduce service times, and enhance local service. One of these features must be ordered on any new 3494 Tape Library Model L12, or L22. They are recommended on every installed 3494 Tape Library.</p> <p>To connect a unit to an IBM TotalStorage Master Console, one of the following three features must be selected on the unit based on the number of units attached to that master console facility in the installation.</p> <p><b>#2713 Master Console for Service</b> This feature provides the IBM TotalStorage Master Console, an Ethernet hub and a cable and connectors for connection of one of the above units to an IBM supplied modem to enable remote enhanced service. This feature should be specified on the first unit in an installation connected to a master console facility. The Ethernet hub provides 14 additional connections for cables supplied with feature #2714 or #2715.</p> <p><b>#2714 Console Expansion</b> This feature provides an attachment cable for connection of one of the above units, and an Ethernet hub for expanding the number of units that can be attached to the #2713 Master Console For Service. Up to 14 additional connections are provided by this feature for connection of #2715 or another #2714.</p> <p><b>#2715 Console Attachment</b> This feature provides a cable to attach a unit to the Ethernet hub provided by the #2713 Master Console for Service or the #2714 Console Expansion. A maximum of 40 of feature #2715 can be included in a single master console facility.</p>
#3511	<p><b>Install Fibre Channel Drive</b></p> <p>The #3511 must be added to the 3494 Model L12 or D12 frame when it is to contain any 3590 Model E1A or H1A Tape Drive with the #9510 or #3510 Fibre Channel Attachment and the quantity is equal to the number of installed Fibre Channel drives. The #3511 provides a Fibre Channel patch panel and the Fibre Channel cables from Fibre Channel attached tape drives to the patch panel. The #5805, #5812, #5825, or #5861 Fibre Channel cables can be ordered on the tape drive to connect from the patch panel to Fibre Channel adapters on host server systems or the SAN. Maximum: Two in L12; six in D12. One feature is required for each Fibre Channel attached drive installed in that frame. Plant or Field installation Prerequisite: The 3590 Model E1A or H1A must have feature #9510 or #3510.</p>
#5046 #9046	<p><b>PCI Library Manager - Field/Plant</b></p> <p>This feature provides the field or plant installation of a library manager with PCI architecture including a faster 1.2 GHz processor and a mirrored dual disk drive, for performance and availability improvements in the 3494. If this feature is added to a 3494 that includes Model HA1 Frames, feature #5046 must be ordered for both the Model HA1 Frames and the Model L10, L12, or L14. Maximum: One Corequisite: The #5046 or #9046 is required when adding the #9040 High Availability Attachment feature to any installed Model L1x that does not already have the #9020 Model B20, B10, or B18 Attachment feature.</p>
#5047 #9047	<p><b>LAN PCI Library Manager Field/Plant Install</b></p> <p>This feature provides the field installation of a library manager that supports EASH attachment of tape drives attached to open systems and up to 64 LAN attached open system TCP/IP hosts. The Library Manager has a PCI architecture and includes a 1.2 GHz processor and a mirrored dual disk drive, to help improve performance and availability in the 3494. If this feature is added to a 3494 that includes Model HA1 Frames, the other Library Manager must be feature #5046, #9046, or #9047. This Library Manager does not come with four RS232 host connections and four tape control unit serial connections. If it is required, the Base Tape Control Unit Attachment feature (#5225) must be ordered with this feature. Feature #5225 is also required if the other Library Manager in the 3494 Tape Library that includes Model HA1 Frames is not feature #5047 or #9047. Maximum: One. Required: Feature #5047 (or #9047) is required when adding feature #9040 (High Availability Attachment) to any installed Model Lxx that has a library manager shipped prior to 15 May 2000, and the Model Lxx does not contain feature #5046 or #9046 (PCI Library Manager) or feature #9020 (Model B20, B18, or B10 VTS Attachment). Corequisite: Feature #5225, if RS232 host connection or base tape control unit serial connection to the Library Manager is required (such as when replacing an older Library Manager with that connection requirement).</p>



#5050	<b>Dual Active Accessor</b> This feature must be specified to enable both accessors in attached Model HA1 Frames to be active at the same time. Maximum: One Prerequisite: Model HA1 Frames must be installed, and at least four frames (not counting the Model HA1 Frames service bays or the Model B10, B18, B20 VTS) must be installed in the 3494.
#5184	<b>Ethernet Attached Serial Hub</b> This feature provides two Ethernet Attached Serial Hubs (EASH) for Ethernet connection of open system attached tape drives in this frame to the Library Manager in the 3494 Model Lxx Frame. Up to 96 tape drives in the 3494 can communicate through an EASH connection to the Library Manager. This feature allows increases the total number of drives supported in the 3494 for open systems attachment to 128. Each EASH can be attached to separate power supplies for improved availability. Required feature: No Maximum number of features: One Corequisites: Feature #9184 (EASH Enablement) must be installed on the 3494 Model Lxx.
#5210	<b>Convenience I/O Station (10 cartridges)</b> The #5210 allows either input or output of up to 10 ½-inch cartridges into the 3494 Tape Library Dataserver without interruption of normal operations. See the #5230 if a 30 cartridge I/O station required. Maximum: One
#5211 #5213	<b>RS-232 Host Attachment</b> The #5211 and #5213 support attachment of iSeries or AS/400 processors and provide communications between the iSeries and AS/400 system and the tape library using the Media Library Device Driver. The RS232 attached distance for the #5211 is 50 ft and for the #5213 is 400 ft The #5211 or #5213 is required for AS/400 Host Attachment for releases prior to OS/400 V3R6. Maximum: Four RS-232 connections without #5229, eight RS-232 connections with #5229 Withdrawn from IBM Marketing on 28 February 2003
#5214	<b>Second Disk Drive for Library Manager</b> The #5214 allows mirroring of the 3494 Tape Library Dataserver database and provides the capability to recover the Library Manager database in case of the failure of the primary disk drive. A mirrored disk drive is standard for Model Lxx shipped after 1 November 1999. Maximum: One Withdrawn from IBM Marketing on 2 July 2004
#5215	<b>Dual Gripper</b> The #5212 provides a second cartridge picker on the accessor for enhanced tape library performance. Recommended for longer configurations (three or more frames). Installing a dual gripper reduces quantity of available storage cells by 10%. Maximum: One
#5216	<b>Remote Power Sequence</b> The #5216 allows power on and off sequencing by attached host processors. Maximum: One
#5217	<b>50-ft RS-232 Cable</b> The #5217 supports attachment of iSeries or AS/400 processors and provides communications between the iSeries and AS/400 system and the tape library using the Media Library Device Driver. Maximum: Four RS-232 connections without #5229, eight RS-232 connections with #5229 Minimum operating system level: OS/400 V3R6
#5219	<b>Token Ring Adapter</b> The #5219 allows the 3494 Tape Library Dataserver to attach to a token ring LAN, and provides communications between the host and the tape library. Maximum: One
#5220	<b>Ethernet Adapter</b> The #5220 allows the 3494 Tape Library Dataserver to attach to an Ethernet LAN, and provides communications between the host and the tape library. Maximum: One

#5222	<b>Additional 32 LAN Host Attachments</b> This feature provides an update to the microcode firmware of an installed #5046 or #9046 PCI Library Manager to support up to 64 LAN attached open system hosts. This is double the 32 LAN attached open system hosts previously available. This capability is included in the #5047 or #9047 LAN PCI Library Manager. The LAN interface can be through either the #5220 Ethernet LAN Adapter or the #5219 Token Ring Adapter. Support is provided for up to 32 APPC hosts or 64 TCP/IP hosts, or combinations of those attachments. Maximum: One Prerequisite: #5046 or #9046																								
#5225	<b>Base Tape Control Unit Attachment</b> This feature includes an attachment card that provides four RS232 open system host connections and four tape control unit serial attachments to the 3494 Library Manager. This feature is not required if all open system attached tape drives are connected to the Library Manager with an EASH attachment, or if LAN attachment to open system hosts is used instead of an RS232 attachment. If this feature is added to a 3494 that includes Model HA1 Frames, the other Library Manager must also have this capability. Maximum: One Required: If feature #5047 or #9047 is installed and any feature #53xx or #55xx frame is installed on the 3494 Model Lxx or if the 3494 includes Model HA1 Frames and the other Library Manager has feature #5225, or does not have a #5047 or #9047. Prerequisite: #5047 or #9047																								
#5226	<b>Remote Console</b> The #5226 provides the capability of controlling and monitoring the status of up to eight 3494 Tape Library Dataservers from a remote location using a LAN connection. One #5226 is required per 3494 connected in the LAN. Maximum: One																								
#5227	<b>32 Port Attachment</b> The #5227 provides 16 additional tape control unit connections. Use of this feature along with the #5229 Expansion Attachment Card provides a total of 24 tape control unit connections and eight RS-232 host processor connections. When the #5227 is installed with one or two #5228 Tape Control Unit Expansion or with the 3494-HA1 High Availability frame, the number of available tape control unit connections is increased by 16 over the numbers shown in the following table for the #5228. This allows up to 32 SCSI or Fibre-Channel attached tape drives to be installed in the library. Prerequisite: #5229																								
#5228	<b>Tape Control Unit Expansion</b> The #5228 expands the number of tape drive controllers that can be attached to the 3494 Library Manager. One feature converts four RS-232 host processor connections into four tape control unit connections in either the base Library Manager or the #5229 Expansion Attachment. Up to 128 tape control units can be supported on the Library Manager with features #5227 and #5184. <table><tr><th>Number of #5228 (for direct attach to host)</th><th>Available RS-232 port connections</th><th>Available tape control unit required</th><th>Additional features</th></tr><tr><td>0</td><td>4</td><td>4</td><td>None</td></tr><tr><td>0</td><td>8</td><td>8</td><td>#5229</td></tr><tr><td>1</td><td>0</td><td>8</td><td>#5219 or #5220</td></tr><tr><td>1</td><td>4</td><td>12</td><td>#5229</td></tr><tr><td>2</td><td>0</td><td>16</td><td>#5229 and #5219 or #5220</td></tr></table> Maximum: Two	Number of #5228 (for direct attach to host)	Available RS-232 port connections	Available tape control unit required	Additional features	0	4	4	None	0	8	8	#5229	1	0	8	#5219 or #5220	1	4	12	#5229	2	0	16	#5229 and #5219 or #5220
Number of #5228 (for direct attach to host)	Available RS-232 port connections	Available tape control unit required	Additional features																						
0	4	4	None																						
0	8	8	#5229																						
1	0	8	#5219 or #5220																						
1	4	12	#5229																						
2	0	16	#5229 and #5219 or #5220																						
#5229	<b>Expansion Attachment Card</b> The #5229 applies to the Library Manager of the 3494 and is required to support the fifth through eighth tape control units or the fifth through eighth RS232 connection. Maximum: One																								
#5230	<b>Convenience I/O Station (30 Cartridges)</b> The #5230 allows I/O of up to 30 ½-inch cartridges into the 3494 library without interruption of normal operations. See the #5210 if 10 cartridge I/O stations are required. Maximum: One																								
#5300	<b>Drive Unit</b> The #5300 provides an expansion unit for an additional CxA tape subsystem and additional 300 cartridge storage capacity. Attachment to 3494-L10 is supported but attachment to 3494-L12 requires an RPQ. The #5300 is replaced by 3494 Model D10.																								
#5302	<b>Upgrade #5300 for 3590-B1A/E1A</b> The #5302 upgrades #5300 Drive Unit to accept two 3590-B1A or E1A tape drives. RPQ 8B3166 allows a #5300 to accept a third and fourth drive. RPQ 8B3167 allows #5300 to accept a fifth and sixth drive tape subsystem. Maximum: One per #5300																								

#5400	<b>Storage Unit</b> The #5400 provides an expansion unit for 400 additional cartridges. Attachment to the 3494-L10 is supported but attachment to the 3494-L12 requires a RPQ. Replaced by 3494 Model S10.
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3494 model matrix summary			
Library control unit model	Cartridge capacity (max)	Flexible growth	Tape drive supported
3494 - L10	210 (if #5210 installed) 160 (if #5320 installed)	1-8 CxA tape units (16 drives) <sup>1</sup> 1-8 frames Supports D10, D12, S10, #5300 <sup>2</sup> , #5400 <sup>2</sup> , #5302 <sup>3</sup>	3490E-CxA 3490E-F1A
3494 - L12	210 (if #5210 installed) 160 (if #5230 installed)	1-128 3590 B1A, E1A H1A tape units <sup>1</sup> or 3592 J1A units, 1-16 Frames <sup>4</sup> Supports D10, D12, D22, S10, #5300 <sup>2</sup> , #5400 <sup>2</sup> , #5302 <sup>3</sup>	3590-B1A 3590-E1A 3590-H1A
3494-L22	210 (if #5210 installed) 160 (if #5230 installed)	1-128 3590 B1A, E1A H1A tape units <sup>1</sup> or 3592 J1A units, 1-16 Frames <sup>4</sup> Supports D10, D12, D22, S10, #5300 <sup>2</sup> , #5400 <sup>2</sup> , #5302 <sup>3</sup>	3592-J1A
Drive unit model	Cartridge capacity (max)	Number of tape drives	Tape drive supported
3494 - D10	400	0	3490E-CxA 3490E-F1A
	300	1-2	
3494 - D12	400	0	3590-B1A 3590-E1A 3590-H1A
	335	1-2	
	290	3-4	
	250	5-6	
3494-D22	400	0	3592-J1A
	335	1-4	
	290	5-8	
	250	9-12	
Storage unit model	Cartridge capacity (max)	Number of tape drives	Tape drive supported
3494 - S10	400	0	None
High availability model			
3494 - HA1	Includes a second Library Manager and accessor, two service bays, and required hardware for concurrent maintenance. The Model HA1 operates in stand-by mode to provide a redundant Library Manager and accessor for improved availability. The Model HA1 frame includes no storage cells for tape cartridges and no drives.		
<b>Notes:</b>			
1. The 3490E, 3590, and 3592 tape drives are supported by the L10, L12 and L22 Library Control Units provided that the appropriate drive units are installed (3494-D10 for 3490E, 3494-D12 for 3590, 3494-D22 for 3592).			
2. The #5300 is the specify feature for a drive unit, and the #5400 is the specify feature for a storage unit. These are each replaced by the 3494 Models D10 and S10 respectively. Both the #5300 and #5400 are supported by the 3494 Tape Library Dataserver Models L10 and L12.			
3. The #5302 is the specify feature for upgrading a #5300 to support 3590-B1A tape transports in place of 3490-CxA tape transports.			
4. The maximum combined total of D10, D12, D22, S10, #5300, #5302, and #5400 is 15.			

3490, 3590, 3494 upgrades			
Supported field upgrades are:	<b>From</b>	<b>To</b>	
	3490-C10	3490-C11	withdrawn
	3490-C10	3490-C1A	withdrawn
	3490-C11	3490-C1A	withdrawn
	3490-C1A	3490-C2A	withdrawn
	3490-C22	3490-C2A	withdrawn
	3590-B11	3490-B1A	
	3590-B1A	3590-B11	
	3590-B11	3590-E11	
	3590-B1A	3590-E1A	
	3590-B11	3590-H11	
	3590-B1A	3590-H1A	
	3590-E11	3490-E1A	
	3590-E1A	3590-E11	
	3590-E11	3590-H11	
	3590-E1A	3590-H1A	
	3590-H11	3590-H1A	
	3590-H1A	3590-H11	
	3494-D10	3494-D12	
	3494-D10	3494-D22	
	3494-D12	3494-D22	
	3494-L10	3494-L12	
	3494-L10	3494-L22	
	3494-L12	3494-L22	

3575 Magstar MP Tape Library Dataserver
<p>The 3575 0.31-inch Cartridge Tape Subsystem is a stand-alone automated tape storage subsystem that provides the solution for automated tape operations such as save/restore, migration of data between DASD and tape, and other mass data applications. All models of the 3575, except the L06, can be partitioned into two or three logical libraries with separate and distinct drives and storage slots. This allows multiple heterogeneous hosts to share the library easily.</p> <p>The 3575 consists of:</p> <ul style="list-style-type: none"> <li>▶ A Media Mover robotic assembly</li> <li>▶ Two to six 3570 B1A or C model tape devices</li> <li>▶ Attachment for up to six host systems using SCSI. Attached to iSeries or AS/400e with the #2729/#2749 PCI Ultra Magnetic Media Controller, #6534 Magnetic Media Controller, #6501 Tape/Disk Device Controller. These adapters only support an HVD interface.</li> </ul> <p>The 3575-Lxx was withdrawn from marketing on 28 June 2002 and has been replaced by the IBM LTO 358X.</p>

3575 features	
Feature	Description
1400	<b>Multipath Feature with Two Magstar MP Model C Tape Drives</b> Provides plant installation of the multipath feature and two Magstar MP Model C tape drives. Required Feature: Yes Maximum: One
1450	<b>Multipath Feature</b> Provides field installation of the multipath feature for 3575s manufactured, shipped, and installed prior to the availability of the #1400. Required Feature: No Maximum: One
1451	<b>Field Installation of Magstar MP 3570 Tape Drive Model B1A</b> Adds Magstar MP 3570 Model B1A tape drives into a currently installed 3575. Not available on Model L06.
1453	<b>Magstar MP Model C Tape Drive</b> Adds a Magstar MP Model C tape drive into a currently installed 3575 Tape Library. Not available on Model L06. Prerequisite: #1400 or #1450 Multipath Feature
2895	<b>Interposer for AS/400 Feature #6501</b> Allows attachments of tape drives installed in the 3575 Tape Library to #6501 Tape/Disk Device Controller. One is required for each tape drive that attaches to a #6501. The IBM marketing configurator allows only one drive per IOP port for maximum performance. Installing more than one Magstar MP Model C tape drive on an IOP part can impact system performance. When using a #6501 to attach the 3575 tape drives, one port on the #6501 must remain unused. Prerequisite: #1400 or #1450 Multipath Feature
5212	<b>12 m SCSI Cable</b> 12 m (39-ft) cable with an industry-standard high-density 68-pin (HD68) cable connector on each end
5218	<b>18 m SCSI Cable</b> 18 m (59-ft) cable with an industry-standard high-density 68-pin (HD68) cable connector on each end
5225	<b>25 m SCSI Cable</b> 25 m (82-ft) cable with an industry-standard high-density 68-pin (HD68) cable connector on each end
5245	<b>4.5 m SCSI Cable</b> 4.5 m (15-ft) cable with an industry-standard high-density 68-pin (HD68) cable connector on each end
8750	<b>One Cleaner Cartridge</b> One cleaner cartridge is used to clean the Magstar MP Model C tape drives or 3570 Model B1A tape drives. Maximum: 3
8754	<b>30-Pack of Magstar MP B-format Data Cartridges</b>
8755	<b>30-Pack of Magstar MP C-format Data Cartridges</b>
8756	<b>120-Pack of Magstar MP B-format Data Cartridges</b>
8757	<b>120-Pack of Magstar MP C-format Data Cartridges</b>
9400	<b>Attached to the AS/400 system</b>
9907	<b>Power Cord</b> 4.3 m (14-ft) 125V
9908	4.3 m (14-ft) 250V
9909	4.3 m (14-ft) 250V, Watertight
9985	1.8 m (6-ft) 125V
9986	1.8 m (6-ft) 250V
9987	1.8 m (6-ft) 250V, Watertight

3575 model matrix summary				
Model	Capacity	Capacity	Cartridges	Drives
L06	300 GB	900 GB	60	2
L12	600 GB	1.8 TB	120	2 to 4
L18	900 GB	2.7 TB	180	2 to 6
L24	1.2 TB	3.6 TB	240	2 to 6
L32	1.6 TB	4.8 TB	324	2-6
<b>Notes:</b> <ul style="list-style-type: none"> <li>▶ 14 cartridge slots can be configured for bulk I/O within the library. This reduces the maximum cartridges per library by 14 and reduces the maximum capacity of the library.</li> <li>▶ Model L12 can be upgraded to Model L18 to increase the capacity of the library.</li> <li>▶ Model L24 can be upgraded to Model L32 to increase the capacity of the library.</li> <li>▶ All drives installed at the plant are 3570 Model C tape drives.</li> <li>▶ The IBM marketing configurator allows only one drive per IOP port to enable maximum performance. Installing more than one 3570 Magstar MP Model C tape drive on an IOP port might impact system performance. When using the #6501 Tape/Disk Device Controller to attach the 3575, one port on the #6501 must remain unused.</li> </ul>				

IBM TotalStorage 3582 Ultrium Tape Library	
3582 L23	<p><b>3582 Ultrium Tape Library</b></p> <p>The IBM 3582 Ultrium Tape Library is designed for desktop operation, but an optional rack mounting kit allows installation into an ANSI/EIA standard 19-inch rack with four EIA units of space. The 3582 tape library can have one or two IBM LTO Ultrium 2 tape drives. Ultrium 2 drives have a native data transfer rate of 35 Mbps and cartridge capacity of 200 MB. Data compression (LTO-DC) provides an effective data rate of 70 Mbps and up to 400 MB cartridge capacity. The 3582 has two 7-cartridge removable magazines, nine rear fixed slots, and one I/O slot for a total of 24 tape cartridge slots, providing a maximum capacity of 9.6 TB. Multipath architecture allows the 3582 to be partitioned into two logical libraries.</p> <p><b>Tape drive features:</b></p> <p>#8103 LTO Ultrium 2 LVD Drive Sled (HD68 connection)</p> <p>#8104 LTO Ultrium 2 HVD Drive Sled (HD68 connection)</p> <p>#8105 LTO Ultrium 2 Fibre Drive Sled with a LC Fibre Channel interface</p> <p>These are plant only features and cannot be intermixed. Each feature can be ordered by specifying quantity one or two.</p> <p>#8203 LTO Ultrium 2 LVD Drive Sled (HD68 connection)</p> <p>#8204 LTO Ultrium 2 HVD Drive Sled (HD68 connection)</p> <p>#8205 LTO Ultrium 2 Fibre Drive Sled with a LC Fibre Channel interface</p> <p>These features provide a second drive that is <i>client installed</i>. They can be specified with the initial order or ordered as an MES. One of these features can be intermixed with one #8103, #8104, or #8105 in any combination.</p> <p><b>Adapters supported:</b></p> <p><b>LVD Drive Sled (#8103 or #8203)</b></p> <p>#5702 PCI-X Ultra Tape Controller, #5705 PCI-X Tape/DASD Controller,</p> <p>#5712 PCI-X Tape/DASD Controller (LVD, VHDCI), #5715 PCI-X Tape/DASD Controller (LVD, VHDCI)</p> <p><b>HVD Drive Sled (#8104 or #8204)</b></p> <p>#2729 PCI Magnetic Media Controller (HVD, HD68)</p> <p>#2749 PCI Ultra Magnetic Media Controller (HVD, HD68)</p> <p>#6534 Magnetic Media Controller (HVD, HD68)</p> <p><b>Fibre Drive Sled (#8105 or #8205)</b></p> <p>#2765 PCI Fibre Channel Tape Controller (LC)</p> <p>#5704 PCI-X Fibre Channel Tape Controller (LC)</p> <p><b>Cable features:</b></p> <p>#5096 Interposer SC-LC</p> <p>#5099 VHDCI/HD68 Cable/Interposer</p> <p>#5301 0.4 m HD68/HD68 SCSI cable (use to daisy-chain two tape drives on the same SCSI bus)</p> <p>#5302 2.5 m (8-ft) HD68/HD68 SCSI cable</p>

3582 L23 (cont.)	<p><b>Cable features (cont.):</b></p> <p>#5305 5.0 m (16-ft) HD68/HD68 SCSI cable</p> <p>#5310 10.0 m (33-ft) HD68/HD68 SCSI cable</p> <p>#5318 18.0 m (59-ft) HD68/HD68 SCSI cable</p> <p>#5325 25.0 m (82-ft) HD68/HD68 SCSI cable</p> <p>#5602 2.5 m (8-ft) VHDCI/HD68 SCSI cable</p> <p>#5605 5.0 m (16-ft) VHDCI/HD68 SCSI cable</p> <p>#5610 10.0 m (33-ft) VHDCI/HD68 SCSI cable</p> <p>#5620 20.0 m (66-ft) VHDCI/HD68 SCSI cable</p> <p>#5625 25.0 m (82-ft) VHDCI/HD68 SCSI cable</p> <p>#5907 7 m SC-LC Fibre Channel Cable</p> <p>#5913 13 m SC-LC Fibre Channel Cable</p> <p>#5922 22 m SC-LC Fibre Channel Cable</p> <p>#5961 61 m SC-LC Fibre Channel Cable</p> <p>#6005 5 m LC-LC Fibre Channel Cable</p> <p>#6013 13 m LC-LC Fibre Channel Cable</p> <p>#6025 22 m LC-LC Fibre Channel Cable</p> <p>#6061 61 m LC-LC Fibre Channel Cable</p> <p><b>Cartridge/supply features:</b></p> <p>Available only with initial order</p> <p>#8002 One cleaning cartridge</p> <p>#8101 5-pack Ultrium 2 data cartridges</p> <p>#8103 Magazine kit with dust cover</p> <p>#8110 20-pack Ultrium 2 data cartridges</p> <p>3589 Additional media is ordered against machine type 3589.</p> <p>P/N 08L9120 IBM LTO Ultrium Data Cartridge (100 GB)</p> <p>P/N 08L9870 IBM LTO Ultrium 2 Data Cartridge (200 GB)</p> <p>P/N 35L2086 IBM LTO Ultrium Universal Cleaning Cartridge</p> <p>P/N 18P7219 Magazine with Dust Cover</p> <p>Minimum operating system level: OS/400 V5R1</p> <p>Minimum operating system level to support #5702, #5704 and #5705 attachment: OS/400 V5R2</p> <p>For detailed operating system and server support, see:  <a href="http://www-1.ibm.com/servers/storage/tape/compatibility/pdf/3582opn.pdf">http://www-1.ibm.com/servers/storage/tape/compatibility/pdf/3582opn.pdf</a>  <a href="http://knowledge.storage.ibm.com/HBA/HBASearchTool">http://knowledge.storage.ibm.com/HBA/HBASearchTool</a></p>
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IBM TotalStorage 3583 Ultrium Scalable Tape Library	
3583 Lxx	<p><b>3583-Lxx Ultrium Scalable Tape Library</b></p> <p>The IBM 3583 Ultrium Scalable Tape Library is designed for stand-alone operation. An optional rack mounting kit allows installation into an ANSI/EIA standard 19-inch rack with 14 EIA units of space. The 3583 tape library contains from one to six tape drives, IBM LTO Ultrium or Ultrium 2.</p> <p>IBM LTO Ultrium drives have a native data transfer rate of 15 Mbps and cartridge capacity of 100 MB (with 2:1 data compression, 30 Mbps and up to 200 MB). IBM LTO Ultrium 2 drives have a native data transfer rate of 35 Mbps and cartridge capacity of 200 MB (with 2:1 data compression, 70 Mbps and up to 400 MB). The 3583 Models L18, L36 and L72 have cartridge slots of 18, 36, and 72, respectively, providing total data capacities of 1.8 TB, 3.6 TB, and 7.2 TB (3.6 TB, 7.2 TB, and 14.4 TB with compression) using LTO Ultrium (100 GB) data cartridges or capacities of 3.6 TB, 7.2 TB, and 14.4 TB (7.2 TB, 14.4 TB and 28.8 TB with compression) using LTO Ultrium 2 (200 GB) data cartridges. The L18 and L36 models can be field upgraded to increase their capacities to 72 cartridges.</p> <p>Multipath architecture allows the 3583 to be partitioned into up to three logical libraries. Logical libraries allow the 3583 library robotics to be shared between homogeneous or heterogeneous applications with each logical library having its own separate and distinct drives, storage slots, and control paths. Logical libraries can also be used for separating Ultrium 1 Tape Drives and cartridges from Ultrium 2 Tape Drives and cartridges, for applications that do not support mixing drives in the same logical library. Multipath is standard on all libraries shipped after 13 June 2003</p>

3583 Lxx (cont.)	<p><b>3583-Lxx Ultrium Scalable Tape Library</b> and might be added to existing libraries as an MES. It is a required feature for all libraries containing an Ultrium 2 Tape Drive. The RMU/Specialist must be installed to add multipath support. The RMU/Specialist function is included on every 3583 shipped since 27 July 2001. Machines shipped prior to 27 July 2001 must have #1660 RMU/Specialist installed.</p> <p>If a customer intends to partition a 3583 library, more than one 18-slot storage column (#8007) is required. This is due to that fact that cartridge slot partitioning is done at the granularity of 18-slot columns. For example, if two partitions are required, then a total of two 18-slot storage columns are required. In this scenario, a 3583-L18 with an additional 18-slot storage column or a 3583-L36 is required.</p> <p>Adapters supported:</p> <p><b>LVD Drive Sled (#8103)</b> #5702 PCI-X Ultra Tape Controller, #5705 PCI-X Tape/DASD Controller, #5712 PCI-X Tape Controller ((LVD, VHDCI), #5715 PCI-X Tape/DASD Controller (LVD, VHDCI)</p> <p><b>HVD Drive Sled (#8004 or #8104)</b> #2729 PCI Magnetic Media Controller (HVD, HD68) #2749 PCI Ultra Magnetic Media Controller (HVD, HD68) #6501 Tape/Disk Device Controller (HVD, requires 2895 Interposer) #6534 Magnetic Media Controller (HVD, HD68)</p> <p><b>Fibre Drive Sled (#8105)</b> #2765 PCI Fibre Channel Tape Controller (LC) #5704 PCI-X Fibre Channel Tape Controller (LC)</p> <p>The 3583 library requires one tape drive sled and can have up to six installed. With Ultrium 1, the iSeries support one HVD SCSI drive. Up to 6 LVD SCSI drives are supported if using the #8005 SAN Data Gateway Module for attaching to the #2765 or #5704.</p> <p>We recommend that the #8105 LTO Ultrium 2 Fibre Drive Sled is <i>not</i> installed in the same 3583 library with the #8005 SAN Data Gateway Module.</p> <p><b>Drive features:</b></p> <p>#8003 LTO Ultrium LVD Drive Sled (for iSeries, only valid when using #8005 SAN Data Gateway Module) #8004 LTO Ultrium HVD Drive Sled (HD68 connection) #8103 LTO Ultrium 2 LVD Drive Sled (HD68 connection) #8104 LTO Ultrium 2 HVD Drive Sled (HD68 connection) #8105 LTO Ultrium 2 Fibre Drive Sled (LC connection)</p> <p><b>Library features:</b></p> <p>#1450 Multipath field #1660 RMU/Specialist #8005 SAN Data Gateway Module #8006 Rack mount option #8007 18 slot tape storage column #8008 Redundant power module #8012 12-cartridge I/O station #9450 Multipath plant</p> <p><b>Cable features:</b></p> <p>#2895 Interposer for AS/400 #6501 #5096 Interposer SC-LC Fibre #5099 VHDCI/HD68 Cable/Interposer #5301 0.4 m HD68/HD68 SCSI cable (use to daisy-chain two tape drives on the same SCSI bus) #5302 2.5 m (8-ft) HD68/HD68 SCSI cable #5305 5.0 m (16-ft) HD68/HD68 SCSI cable #5310 10.0 m (33-ft) HD68/HD68 SCSI cable #5318 18.0 m (59-ft) HD68/HD68 SCSI cable #5325 25.0 m (82-ft) HD68/HD68 SCSI cable #5602 2.5 m (8-ft) VHDCI/HD68 SCSI cable #5605 5.0 m (16-ft) VHDCI/HD68 SCSI cable #5610 10.0 m (33-ft) VHDCI/HD68 SCSI cable #5620 20.0 m (66-ft) VHDCI/HD68 SCSI cable #5625 25.0 m (82-ft) VHDCI/HD68 SCSI cable #5907 7 m SC-LC Fibre Channel Cable #5913 13 m SC-LC Fibre Channel Cable #5922 22 m SC-LC Fibre Channel Cable</p>
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3583 Lxx (cont.)	<b>3583-Lxx Ultrium Scalable Tape Library</b>  <b>Cable features (cont.):</b> #5961 61 m SC-LC Fibre Channel Cable #6005 5 m LC-LC Fibre Channel Cable #6013 13 m LC-LC Fibre Channel Cable #6025 22 m LC-LC Fibre Channel Cable #6061 61 m LC-LC Fibre Channel Cable  <b>Cartridge/supply features:</b> Available only with initial order. #8001 1 IBM LTO Ultrium data cartridge (100 GB) #8002 1 cleaning cartridge #8101 1 IBM LTO Ultrium 2 data cartridge (200 GB) #8010 20-pack IBM LTO Ultrium data cartridges (100 GB) #8013 6-cartridge magazine #8110 20-pack IBM LTO Ultrium 2 data cartridges (200 GB)  3589 Additional media is ordered against machine type 3589.  P/N 08L9120 IBM LTO Ultrium data cartridge (100 GB) P/N 08L9870 IBM LTO Ultrium 2 data cartridge (200 GB) P/N 35L2086 IBM LTO Ultrium universal cleaning cartridge P/N 08L9129 Leader pin attachment kit P/N 08L9130 Manual rewind tool P/N 35L1088 Magazine with cover  Minimum operating system level: OS/400 V4R3 Minimum operating system level to support #2749 attachment: OS/400 V4R5 Minimum operating system level to support #2765 attachment: OS/400 V5R1 Minimum operating system level to support #5702, #5704 and #5705 attachment: OS/400 V5R2 Minimum operating system level to support #8103, #8104, #8105 LTO Ultrium 2 drive sleds: OS/400 V5R2  For detailed operating system and server support, see: <a href="http://www-1.ibm.com/servers/storage/tape/compatibility/pdf/3583opn.pdf">http://www-1.ibm.com/servers/storage/tape/compatibility/pdf/3583opn.pdf</a> <a href="http://knowledge.storage.ibm.com/HBA/HBASearchTool">http://knowledge.storage.ibm.com/HBA/HBASearchTool</a>
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IBM TotalStorage 3584 Ultra Scalable Tape Library	
3584 L22/D22	<p>The 3584 Ultra Scalable Tape Library Model L22 offers 58 to 260 slots and support for up to 12 3592-J1A tape drives with an incremental reduction of storage slots beyond four drives or with additional I/O slots. This model has the same footprint as the Model L52, which is a smaller footprint than the Model L32. Data capacity for the Model L22 using 3592 data cartridges is 17 to 78 TB native and 52 to 234 TB using 3:1 compression.</p> <p>The 3584 Ultra Scalable Tape Library Model D22 Expansion Frame can be added to L22, L32 or L52 base frames in order to add storage or drive capacity. Up to 15 Model D22 frames can be added to each base frame. Each 3584 Model D22 frame has a 3592 cartridge capacity of up to 400 slots and support for up to 12 3592-J1A Tape Drives with an incremental reduction of storage slots for each set of four drives. Data capacity for each D22 using 3592 data cartridges is 108 to 120 TB native and 324 to 360 TB using 3:1 compression.</p> <p>Multipath architecture allows the 3584-L22 to be partitioned into up to 192 logical libraries. Logical libraries allow the 3584 library robotics to be shared between homogeneous or heterogeneous applications with each logical library having its own separate and distinct drives, storage slots, and control paths. Logical libraries can also be used for separating different type of tape drives and cartridges, for applications that do not support mixing drives in the same logical library. Multipath is standard on the 3584 library.</p> <p>The Advanced Library Management System (ALMS) provides the next generation IBM Multipath Architecture. ALMS provides a license key to enable dynamic management of cartridges, cartridge storage slots, tape drives, and logical libraries. Tape drives can be assigned to any logical library using a Web user interface. Logical libraries can be added, deleted, or easily changed non disruptively. Storage capacity can typically be changed without any impact to host applications. The assignment of inserted cartridges to a logical library can be set manually, by the software application, or by user defined policies.</p>

3584 L22/D22 (cont.)	<b>3584-L22/D22, continued</b> <b>Library features</b> Library and Drive Microcode Update Fibre Channel Patch Panel 16 additional LTO I/O slots 16 additional 3592 I/O slots 10/100 Ethernet support Advanced Library Management System 1-2 Frame X-Track Cable 3-6 Frame X-Track Cable 7-14 Frame X-Track Cable 8-16 Frame X-Track Cable Dual AC Power Remote support facility Remote support switch Remote support attachment Driveless Frame First Expansion Frame Attachment Drive Frame Attachment 8-16 Frame X-Track Cable from Plant  For the first Model D22, D32 or D52 frame added to the library, one #9002 First Expansion Frame Attachment must be added to the Model L22. For each subsequent Model D22, D32 or D52 frame added, a #9003 Drive Frame Attachment must be added to the Model L22. This is to ensure that the proper cables are shipped and the configuration records are correct.  <b>Capacity expansion features</b> <b>Intermediate Capacity</b> This feature, when ordered with a 3584 Model L22 coming from the plant, enables additional storage elements within the 3584 Model L22 to increase the available 3592 cartridge capacity from 58 to 117.  <b>Full Capacity</b> This feature enables additional storage elements within the 3584 Model L22 to increase the available 3592 cartridge capacity to a maximum of 199-260 cartridges (depending on features ordered). The maximum 3592 cartridge capacity of 260 is reduced by 12 cartridges when five to eight 3592 Fibre Drive Mounting Kits are installed and by 11 cartridges when nine to 12 drive mounting kits are installed. The installation of a 16 additional I/O slot feature reduces the maximum cartridge capacity by 38 cartridges.  <b>Intermediate Capacity on Demand</b> This feature provides on demand activation of additional storage elements within the 3584 Model L22 to increase the available 3592 cartridge slot capacity from 58 to 117.  <b>Full Capacity on Demand</b> This feature provides on-demand activation of additional storage elements within the 3584 Model L22 to increase the available 3592 cartridge capacity to a maximum of 199-260 cartridges (depending on features ordered). The maximum 3592 cartridge capacity of 260 is reduced by 12 cartridges when five to eight 3592 Fibre Drive Mounting Kits are installed and by 11 cartridges when nine to 12 drive mounting kits are installed. The installation of a 16 Additional I/O Slots feature reduces the maximum cartridge capacity by 38 cartridges.  The 3584-L22 or D22 Ultrascable Tape Library contains a maximum of 12 3592-J1A Tape Drives per frame (library total of 192 tape drives).  <b>Drive install features</b> 3592 Fibre Drive Mounting Kit 3592 Drive Field Install Drive Removal Plant Install 3592 J1A in 3584  <b>Cable features</b> Additional LC-LC Patch Panel Cable Interposer SC-LC Fibre 7 m SC-LC Fibre Channel Cable 13 m SC-LC Fibre Channel Cable 22 m SC-LC Fibre Channel Cable
#0500	Library and Drive Microcode Update
#1462	Fibre Channel Patch Panel
#1658	16 additional LTO I/O slots
#1659	16 additional 3592 I/O slots
#1660	10/100 Ethernet support
#1690	Advanced Library Management System
#1802	1-2 Frame X-Track Cable
#1806	3-6 Frame X-Track Cable
#1814	7-14 Frame X-Track Cable
#1816	8-16 Frame X-Track Cable
#1901	Dual AC Power
#2710	Remote support facility
#2711	Remote support switch
#2712	Remote support attachment
#9001	Driveless Frame
#9002	First Expansion Frame Attachment
#9003	Drive Frame Attachment
#9316	8-16 Frame X-Track Cable from Plant
#1641	<b>Intermediate Capacity</b> This feature, when ordered with a 3584 Model L22 coming from the plant, enables additional storage elements within the 3584 Model L22 to increase the available 3592 cartridge capacity from 58 to 117.
#1642	<b>Full Capacity</b> This feature enables additional storage elements within the 3584 Model L22 to increase the available 3592 cartridge capacity to a maximum of 199-260 cartridges (depending on features ordered). The maximum 3592 cartridge capacity of 260 is reduced by 12 cartridges when five to eight 3592 Fibre Drive Mounting Kits are installed and by 11 cartridges when nine to 12 drive mounting kits are installed. The installation of a 16 additional I/O slot feature reduces the maximum cartridge capacity by 38 cartridges.
#1643	<b>Intermediate Capacity on Demand</b> This feature provides on demand activation of additional storage elements within the 3584 Model L22 to increase the available 3592 cartridge slot capacity from 58 to 117.
#1644	<b>Full Capacity on Demand</b> This feature provides on-demand activation of additional storage elements within the 3584 Model L22 to increase the available 3592 cartridge capacity to a maximum of 199-260 cartridges (depending on features ordered). The maximum 3592 cartridge capacity of 260 is reduced by 12 cartridges when five to eight 3592 Fibre Drive Mounting Kits are installed and by 11 cartridges when nine to 12 drive mounting kits are installed. The installation of a 16 Additional I/O Slots feature reduces the maximum cartridge capacity by 38 cartridges.  The 3584-L22 or D22 Ultrascable Tape Library contains a maximum of 12 3592-J1A Tape Drives per frame (library total of 192 tape drives).
#1503	3592 Fibre Drive Mounting Kit
#1674	3592 Drive Field Install
#1663	Drive Removal
#9677	Plant Install 3592 J1A in 3584
#1461	Additional LC-LC Patch Panel Cable
#5096	Interposer SC-LC Fibre
#5907	7 m SC-LC Fibre Channel Cable
#5913	13 m SC-LC Fibre Channel Cable
#5922	22 m SC-LC Fibre Channel Cable



3584 L52/D52 L32/D32 (cont.)	<p><b>3584-L52/D52/L32/D32 Ultrium Scalable Tape Library, continued</b></p> <p>The ALMS provides the next generation IBM Multipath Architecture. It provides a license key to enable dynamic management of cartridges, cartridge storage slots, tape drives, and logical libraries. Tape drives can be assigned to any logical library using a Web user interface. Logical libraries can be added, deleted, or easily changed non disruptively. Storage capacity can typically be changed without any impact to host applications. The assignment of inserted cartridges to a logical library can be set manually, by the software application, or by user defined policies.</p> <p><b>3584-L52 Library features</b></p> <p>#0500 Library and Drive Code Update</p> <p>#1462 Fibre Channel patch panel</p> <p>#1658 16 additional LTO I/O slots</p> <p>#1659 16 additional 3592 I/O slots</p> <p>#1663 Drive removal</p> <p>#1665 LTO Ultrium drive reinstall</p> <p>#1690 Advanced Library Management System</p> <p>#1802 1-2 Frame X-Track Cable</p> <p>#1806 3-6 Frame X-Track Cable</p> <p>#1814 7-14 Frame X-Track Cable</p> <p>#1816 8-16 Frame X-Track Cable</p> <p>#1901 Dual AC Power</p> <p>#2710 Remote support facility</p> <p>#2711 Remote support switch</p> <p>#2712 Remote support attachment</p> <p>#9002 First Expansion Frame Attachment</p> <p>#9003 Drive Frame Attachment</p> <p>#9316 8-16 Frame X-Track Cable from Plant</p> <p>#9660 10/100 Ethernet support</p> <p><b>3584-L52 Capacity Expansion Features:</b></p> <p>#1641 <b>Intermediate Capacity</b> This feature, when ordered with a 3584 Model L52 coming from the plant, enables additional storage elements within the 3584 Model L52 to increase the available LTO cartridge capacity from 64 to 129 cartridges at the plant.</p> <p>#1642 <b>Full Capacity</b> This feature, when ordered with a 3584 Model L52 coming from the plant, enables additional storage elements within the 3584 Model L52 to increase the available LTO cartridge slot capacity to a maximum of 219-287 LTO cartridges (depending on features ordered). The maximum LTO capacity of 287 cartridges is reduced by 14 when five to eight drive mounting kits (#1502 or #1504) are installed, and by 26 cartridges when nine to 12 drive mounting kits are installed. The installation of a 16 additional I/O slot feature (#1658 or #1659) reduces the maximum cartridge capacity by 42 cartridges.</p> <p>#1643 <b>Intermediate Capacity on Demand</b> This feature provides on demand activation of additional storage elements within the 3584 Model L52 to increase the available LTO cartridge slot capacity from 64 to 129 cartridges.</p> <p>#1644 <b>Full Capacity on Demand</b> This feature provides on-demand activation of additional storage elements within the 3584 Model L52 to increase the available LTO cartridge slot capacity to a maximum of 219-287 LTO cartridges (depending on features ordered). The maximum LTO capacity of 287 cartridges is reduced by 14 when five to eight drive mounting kits (#1502 or #1504) are installed, and by 26 cartridges when nine to 12 drive mounting kits are installed. The installation of a 16 additional I/O slot feature (#1658 or #1659) reduces the maximum cartridge capacity by 42 cartridges.</p> <p>The 3584-L52 or D52 Ultrascable Tape Library frame contains a maximum of 12 Fibre Channel attached LTO-2 for a total of 192 tape drives in 16 frames.</p> <p><b>3584-L52/D52 Drive features</b></p> <p>#1479 LTO Ultrium 2 Fibre Drive Canister</p> <p>#1504 LTO Fibre Drive Mounting Kit</p> <p><b>3584-L52/D52 Cable features</b></p> <p>#5907 7 m SC-LC Fibre Channel Cable</p> <p>#5913 13 m SC-LC Fibre Channel Cable</p> <p>#5922 22 m SC-LC Fibre Channel Cable</p> <p>#5961 61 m SC-LC Fibre Channel Cable</p>
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3584 L52/D52 (cont.)	<b>3584-L52/D52 Cable features (cont.)</b>
#6005	5 m LC-LC Fibre Channel Cable
#6013	13 m LC-LC Fibre Channel Cable
#6025	22 m LC-LC Fibre Channel Cable
#6061	61 m LC-LC Fibre Channel Cable
	<b>3584-L32 Library features</b>
#1462	Fibre Channel patch panel
#1501	Fibre Drive Move Kit
#1607	Mixed Media/D-frame Support
#1608	Mixed Media Model D22 Support
#1657	20 additional LTO I/O slots
#1660	10/100 Ethernet support
#1662	3584 Specialist
#1663	Drive removal
#1665	LTO Ultrium drive reinstall
#1690	Advanced Library Management System
#1802	1-2 Frame X-Track Cable
#1806	3-6 Frame X-Track Cable
#1814	7-14 Frame X-Track Cable
#1816	8-16 Frame X-Track Cable
#1901	Dual AC Power
#2710	Remote support facility
#2711	Remote support switch
#2712	Remote support attachment
#9002	First Expansion Frame Attachment
#9003	Drive Frame Attachment
#9660	10/100 Ethernet support
	For the first Model D32 frame added to the library, one #9002 First Expansion Frame Attachment must be added to the Model L32. For each subsequent Model D32 frame added, a #9003 Drive Frame Attachment must be added to the Model L32. This is to ensure that the proper cables are shipped and the configuration records are correct.
	<b>3584-L32/D32 Cable features:</b>
#2895	Interposer for AS/400 #6501
#5096	Interposer SC-LC Fibre
#5099	VHDCI/HD68 Cable/Interposer
#5305	5.0 m (16-ft) HD68/HD68 SCSI cable
#5310	10.0 m (33-ft) HD68/HD68 SCSI cable
#5318	18.0 m (59-ft) HD68/HD68 SCSI cable
#5325	25.0 m (82-ft) HD68/HD68 SCSI cable
#5604	4.5 m (15-ft) VHDCI/HD68 SCSI cable
#5610	10.0 m (33-ft) VHDCI/HD68 SCSI cable
#5620	20.0 m (66-ft) VHDCI/HD68 SCSI cable
#5625	25.0 m (82-ft) VHDCI/HD68 SCSI cable
#5704	4.5 m (15 ft) VHDCI/VHDCI SCSI cable
#5710	10.0 m (33 ft) VHDCI/VHDCI SCSI cable
#5720	20.0 m (66 ft) VHDCI/VHDCI SCSI cable
#5725	25.0 m (82 ft) VHDCI/VHDCI SCSI cable
#5907	7 m SC-LC Fibre Channel Cable
#5913	13 m SC-LC Fibre Channel Cable
#5922	22 m SC-LC Fibre Channel Cable
#5961	61 m SC-LC Fibre Channel Cable
#6005	5 m LC-LC Fibre Channel Cable
#6013	13 m LC-LC Fibre Channel Cable
#6025	22 m LC-LC Fibre Channel Cable
#6061	61 m LC-LC Fibre Channel Cable
#1603	<b>3584-L32/D32 Capacity Expansion Feature:</b> The capacity of the base Model L32 can be expanded by enabling an additional four columns in that frame with the addition of #1603 Capacity Expansion. The #1603 is required to enable the use of IBM LTO Ultrium drives and storage elements in the optional Model D32 Expansion Frame.

3584 L52/D52 L32/D32 (cont.)	<p><b>3584-L32/D32 Capacity Expansion Feature (cont.)</b> The 3584-L52 or D52 Ultrascable Tape Library frame contains a maximum of 12 Fibre Channel attached LTO-2 for a total of 192 tape drives in 16 frames. A maximum of 32 drives can be attached to any one AS/400 or iSeries. For drive support greater than 32 drives, the multiple library definitions and library partitions must be configured.</p> <p><b>3584-L32/D32 Drive features:</b>  #1454 LTO Ultrium LVD Drive Sled (VHDCI connection; HD68 connection if shipped prior to 31 August 2001)  #1455 LTO Ultrium HVD Drive Sled (VHDCI connection; HD68 connection if shipped prior to 31 August 2001)  #1456 LTO Ultrium FC-AL Drive Sled (SC connection)  #1464 LTO Ultrium LVD Drive (HD68 connection)  #1465 LTO Ultrium HVD Drive (HD68 connection)  #1466 LTO Ultrium FC-AL Drive (SC connection)  #1474 LTO Ultrium 2 LVD Drive (VHDCI connection)  #1475 LTO Ultrium 2 HVD Drive (VHDCI connection)  #1476 LTO Ultrium 2 Fibre Drive (LC connection)</p> <p><b>3584-L52/L32/D52/D32 cartridge features:</b>  Available only with initial order.  #8750 One cleaning cartridge  #8757 20-pack of Ultrium data cartridges (100 GB)  #8767 20-pack of Ultrium 2 data cartridges (200 GB)</p>
3589	Additional media is ordered against machine type 3589.
P/N 08L9120 P/N 08L9870 P/N 35L2086 P/N 08L9129 P/N 08L9130 P/N 35L1088	IBM LTO Ultrium data cartridge (100 GB) IBM LTO Ultrium 2 data cartridge (200 GB) IBM LTO Ultrium universal cleaning cartridge Leader pin attachment kit Manual rewind tool Magazine with cover
	<p>If a #6501 is attached, only two drives are supported and one control from a library partition containing 10 or less drives.  There is a restriction of 96 drives per iSeries server.  The device limit per adapter (except for the 6501) is 16 devices (drives or media changers) from a library partition with 96 drives. OS/400 is restricted to 32 drives pooled per library regardless of attachment method.  OS/400 has a configuration limit of 32 drives per library device per system or LPAR.</p> <p>Minimum operating system level: OS/400 V4R3  Minimum operating system level to support #2749 attachment: OS/400 V4R5  Minimum operating system level to support #2765 attachment: OS/400 V5R1  Minimum operating system level to support #5702, #5704, #5705 attachment: OS/400 V5R2  Minimum operating system level to support #8103, #8104, #8105 Ultrium 2 drive sleds: OS/400 V5R2</p> <p>For detailed operating system and server support details, see:  <a href="http://www-1.ibm.com/servers/storage/tape/compatibility/pdf/3584opn.pdf">http://www-1.ibm.com/servers/storage/tape/compatibility/pdf/3584opn.pdf</a>  <a href="http://knowledge.storage.ibm.com/HBA/HBASearchTool">http://knowledge.storage.ibm.com/HBA/HBASearchTool</a></p>

3584 model matrix summary			
Library control unit model	Cartridge capacity (max) <sup>1</sup>	Flexible growth	Tape drive supported
3584 - L22	260 (starting minimum 58)	1-192 drives 1-16 frames <sup>1</sup>	3592-J1A
3584 - L52	287 (starting minimum 64)	1-192 drives 1-16 frames <sup>2</sup>	LTO-2 <sup>3</sup>
3584 - L32	281 (starting minimum 141)	1-192 drives 1-16 frames <sup>2</sup>	LTO-1, LTO-2
Drive unit model	Cartridge capacity (max)	Number of tape drives	Tape drive supported
3584 - D22	400	0	3592-J1A
	383	1-4	
	371	5-8	
	360	9-12	
3584 - D52	440	0	LTO-2 <sup>2</sup>
	422	1-4	
	408	5-8	
	396	9-12	
3494-D32	440	0	LTO-1, LTO-2
	423	1-4	
	409	5-8	
	396	9-12	
<b>Notes:</b>			
1. Capacity on Demand features can be required to reach maximum capacities.			
2. LTO and 3592 3584-Dxx frames are supported to provide mixed drive library capability.			
3. Only Fibre Channel drives are supported.			

## 9.5 External tape rules for iSeries and AS/400e systems

### 9.5.1 High workload placement rules for magnetic media IOP

SPD disk unit, tape, and some LAN IOPs are considered high workload IOPs. Therefore, they require special consideration when configuring an iSeries or AS/400e system. In addition, their workload capability IOPs can be streaming or non-streaming. The following table lists the high workload SPD magnetic media IOPs. It identifies the bus capacity as streaming or non-streaming. These guidelines are for all system buses including the first system bus (bus 1). Exceeding these guidelines causes performance degradation.

Subsystem	High workload IOP	Bus capacity
DASD	#6112, #6500	Non-streaming
Tape	#2621, #2624, #2644, #6112	Non-streaming
DASD	#6501 Tape/Disk Device Controller, #6530, #6502, #6512, #6532, #6533	Streaming
Tape	#6501 Tape/Disk Device Controller, #6513, #6534 Magnetic Media Controller	Streaming
Tape IOP with 3590	#6501 Tape/Disk Device Controller, #6534 Magnetic Media Controller	Streaming
Optical	#6534 Magnetic Media Controller	Streaming
LAN	#2810 LAN/WAN IOP	Streaming
IOP combination limitations: <ul style="list-style-type: none"><li>▶ There is a maximum of five high workload IOPs per bus. This includes system bus 1.</li><li>▶ There is a maximum of three non-streaming high workload IOPs per bus.</li><li>▶ In #5044 System Unit Expansion Rack, no DASD controllers are allowed on the same bus with a 3590 tape controller. More than one 3590 tape controller is allowed on the same bus.</li></ul>		

### 9.5.2 3590 and disk IOP restriction

From OS/400 V4R1 onward, the 3590 can be placed on any bus as an alternate installation device. For maximum performance, controllers that drive high-speed tapes must not be installed in bus extension units (#5060, #5040).

### 9.5.3 Alternate IPL or alternate installation device

Throughout this book and the *IBM eServer i5 and iSeries System Handbook*, GA19-5486, the term *alternate IPL* or *ALT-IPL* is used to describe both alternate IPL devices and alternate installation devices. It is important to understand the differences. An alternate IPL device must be attached to the first system bus (bus one), and an alternate installation device can be attached to any bus except bus one.

Alternate installation device support allows you to perform installation and recovery procedures using a combination of devices. Prior to V4R1, these types of activities can only be performed using devices attached to the first system bus. The first system bus connects to the service processor IOP. Typically, this is where the optical device or tape devices used for installations are attached. From OS/400 V4R1 onward, you can use a combination of devices that are attached on the first system bus and on additional buses. The alternate installation device is not attached to the first system bus.



If you use this function, the system uses existing support (a device on the first system bus) to install or recover enough of the Licensed Internal Code (LIC) required to perform an IPL with IPL-type D. Then, using the new alternate installation device support, the system continues the operation using media in the alternate installation device. This new function supports installation and recovery from tape media, such as SAVSYS tapes or distribution tapes that you created, which contains LIC and can contain the operating system, licensed programs, and data.

From OS/400 V4R5 onward, the #0208 No Alternate Install Device Use Required specify code can be used to force an external tape input/output adapter (IOA) into the first Multi-adapter Bridge on Model 270, 820, 830, 840, SB2, and SB3 servers. This eliminates the need to use the alternate installation device function to perform a D-mode IPL. Forcing the external tape IOA on the first Multi-adapter Bridge can result in a higher cost system configuration due to the need for additional PCI IOPs. If the external tape IOA cannot be placed in the first Multi-adapter Bridge due to other system constraints, the order fails validation.

In the past, a #55xx specify feature code has appeared on iSeries configurations indicating which tape device should be the ALT-IPL device. Beginning with the January 2003, the #55xx can no longer be configured. A new feature can be chosen to indicate which external tape IOA should be placed on the first Multi-adapter Bridge, if required. These new features are:

- ▶ #0705 Forced #2749 Placement
- ▶ #0707 Forced #2768 Placement
- ▶ #0708 Forced #5702/#5712 Placement

**Note:** The #2765 PCI Fibre Channel Tape Controller and #5704 PCI-X Fibre Channel Tape Controller do not support the alternate IPL device function. A D-mode IPL is required using CD-ROM, DVD-ROM, or another ALT-IPL tape device. Then select a #2765 or #5704 to complete the installation or recovery process.

See *Backup and Recovery*, SC41-5304, for more information.

#### 9.5.4 #5712, #5715, #5702, #5705, #2718, and #2768 PCI Magnetic Media Controller: Device cabling rules

The #2718, #2768, #5702, #5705, #5712, and #5715 provide Ultra SCSI attachment capability for an external tape, an external CD-ROM device, or an external DVD-RAM device that have a Single Ended SCSI interface. The #5702 PCI-X Ultra Tape Controller and #5712 PCI-X Tape/DASD Controller have two SCSI ports, each port providing the same attachment capability of the #2718, #2768, #5705 and #5715. This doubles the capability.

The supported devices are:

- ▶ 7206-VX2 80 GB External VXA-2 Tape Drive
- ▶ 7207-122 QIC-SLR Tape Bridge Box (4 GB External ¼-inch Cartridge Tape Drive)
- ▶ 7207-330 30GB External SLR60 Tape Drive
- ▶ 7208-345 60 GB External 8mm Tape Drive
- ▶ 7210-020 External CD-ROM
- ▶ 7210-025 External DVD-RAM
- ▶ 7210-030 External DVD-RAM
- ▶ 7212-102 IBM TotalStorage Storage Device Enclosure
- ▶ 7329-308 SLR100 ¼-inch Tape Autoloader

The following combination of devices are supported:

- ▶ One 7206-VX2
- ▶ One 7207-122
- ▶ One 7207-330
- ▶ One 7208-345
- ▶ One 7210-020
- ▶ One 7210-025
- ▶ One 7210-030
- ▶ One 7212-102
- ▶ One 7329-308
- ▶ Two 7210-025s (the two devices are daisy-chained)
- ▶ Two 7210-030s (the two devices are daisy-chained)
- ▶ One 7210-025 and one 7210-020 (the two devices are daisy-chained with the 7210-025 physically connected first; no #0120 attachment specify code is required for the 7210-020)
- ▶ One 7210-030 and one 7207-122 (the two devices are daisy-chained with the 7207-122 physically connected first)
- ▶ One 7210-030 and one 7208-345 (the two devices are daisy-chained with the 7208-345 physically connected first)
- ▶ One 7210-030 and one 7210-025 (the two devices are daisy-chained with the 7210-030 physically connected first)
- ▶ One 7207-122 and one 7210-020 (the two devices are daisy-chained with the 7207-122 physically connected first; no #0120 attachment specify code is required for the 7210-020)
- ▶ One 7207-122 and one 7210-025 (the two devices are daisy-chained with the 7207-122 physically connected first)
- ▶ One 7208-345 and one 7210-020 (the two devices are daisy-chained with the 7208-345 physically connected first; no #0120 attachment specify code is required for the 7210-020)
- ▶ One 7208-345 and one 7210-025 (the two devices are daisy-chained with the 7208-345 physically connected first)

The #0120 7210-020 Attachment Specify is required for each 7210-020 External CD-ROM drive to be connected directly (not daisy-chained) to the system with a #2718, #2768, #5702, or #5705.

**Note:** If the 7210-020 is to be daisy-chained with another external device, this specify code must not be present.

The #0162 Extended Single Ended Attach Specify is required when these devices are attached directly (not second on a daisy-chained string) to an iSeries server with a #2718 PCI Magnetic Media Controller, #2768 PCI Magnetic Media Controller, #5712/#5702 PCI-X Ultra Tape Controller, or #5715/#5705 PCI-X Tape/DASD Controller.

- ▶ 7329-308 SLR100 ¼-inch Tape Autoloader
- ▶ 7210-025 External DVD-RAM
- ▶ 7210-030 External DVD-RAM

**Note:** If any of these devices are daisy-chained off another device, the #0162 specify must not be present.

## 9.6 External optical storage for iSeries and AS/400e systems

Machine	Description	9406 models
3995 #1403 #1413 #1440 #1442 #1443 #1444 #9400/ #7400 #7402 #9401 #7401 #7403	<p><b>Optical Library Dataserver</b></p> <p>OS/400 software is required to support 3995-Cx0 with up to four internal 2.6 GB drives:</p> <ul style="list-style-type: none"> <li>▶ OS/400 V3R6 with Group PTF SF99087 or OS/400 V3R7.</li> <li>▶ OS/400 V3R2 with 5755-AS3 #1979 and PRPQ 5799-XBW specify code #3520</li> </ul> <p>Models C4x with up to four internal 5.2 GB drives:</p> <ul style="list-style-type: none"> <li>▶ OS/400 V4R2 with Group PTF SF99088 or OS/400 V4R3</li> <li>▶ OS/400 V3R2 with 5755-AS3 #1979 and PRPQ 5799-XBW specify code #3520 and Group PTF SF99079</li> </ul> <p>Models C46 and C48 with six drives installed require:</p> <p>OS/400 V4R2 with Group PTF SF99088 or later and #2729 or #6534 Magnetic Media Controller (not supported on the #2621)</p> <p>8X support on direct attach 3995 requires:</p> <ul style="list-style-type: none"> <li>▶ For the #2621 attach: Only OS/400 V3R2 with PRPQ 5799-XBW #3520 and Group PTF SF99079</li> <li>▶ For the #2729/#6534 Magnetic Media Controller attach: OS/400 V4R2 with Group PTF SF99088 or OS/400 V4R3 with Group PTF SF99089 or OS/400 V4R4.</li> <li>▶ For #2749 PCI Ultra Magnetic Media Controller attach: OS/400 V4R5</li> </ul> <p>Media must be formatted as WORM in LAN-attached 3995 libraries to be <i>interchanged</i> with C4X direct-attached 3995 libraries. The 3995 Models 042, 043, 142, 143, and A43 are not supported with OS/400 V5R1.</p> <p>All 3995 Optical Libraries are <i>withdrawn from marketing</i> on 30 July 2004. For additional support information about the 3995 Optical Library, see the following Web site:  <a href="http://www-1.ibm.com/servers/storage/support/tape/3995/">http://www-1.ibm.com/servers/storage/support/tape/3995/</a></p> <p>Additional 2.6 GB Optical Drive for 3995-C20 or C40 model  Two additional 2.6 GB Optical Drives for 3995-C24, C26, C28, C44, C46, or C48 model  Additional 2.6 GB Optical Drive for 3995-C20 or C40 model  Two additional 5.2 GB Optical Drives for 3995-C22, C24, C28, C44, C46, C48 model  Two 5.2 GB Extended Multifunction Optical Drives Upgrade  Four 5.2 GB Extended Multifunction Optical Drives Upgrade  12.0 m (39-ft) SCSI Cable for #2621 Storage Device Controller (SPD)  20.0 m (65-ft) SCSI Cable for #2621 Storage Device Controller (SPD)  12.0 m (39-ft) SCSI Cable for #2729/#2749 PCI Ultra Magnetic Media Controller or #6534 Magnetic Media Controller (SPD)  20.0 m (65-ft) SCSI Cable for #2729/#2749 PCI Ultra Magnetic Media Controller or #6534 Magnetic Media Controller (SPD)</p>	<p>D, E, F (except D02, E02), 2x0, 3x0, 4x0, 50S, 53S, 500, 510, 520, 530, 6x0, Sx0, 720, 730, 740, 170, 250, 270, 820, 830, 840</p>
7210 020	<p><b>7210-020 External CD-ROM</b></p> <p>The 7210-020 External CD-ROM is a 32x CD-ROM device that attaches to the #2718 PCI Magnetic Media Controller or to the #2768 PCI Magnetic Media Controller. The 7210-020 External CD-ROM drive is primarily intended for use with LPAR but is not limited to LPAR.</p> <p>See 9.5.4, “#5712, #5715, #5702, #5705, #2718, and #2768 PCI Magnetic Media Controller: Device cabling rules” on page 370, for a description of the supported attachment configurations.  Minimum operating system level: OS/400 V4R5</p>	<p>6x0, Sx0, 720, 730, 740, 170, 250, 270, SB2, SB3, 820, 830, 840</p>

Machine	Description							9406 models
7210 025	<b>7210-025 External DVD-RAM</b> The 7210-025 External DVD-RAM is a DVD-RAM device that attaches to the #2718 PCI Magnetic Media Controller, #2768 PCI Magnetic Media Controller, #5702 PCI-X Ultra Tape Controller or #5705 PCI-X Tape/DASD Controller. The 7210-025 can be used as an alternate IPL device but is not supported by the Boot Manager.  The media capacity for a DVD-RAM cartridge is 4.7 GB per side versus 650 MB on CD-ROM. Its highest capacity can be as much as 9.4 GB per side. The 7210-025 drive reads CD-ROM, CD-R, CD-RW, DVD-ROM, and DVD-RAM media. It can write only DVD-RAM media. It supports writing of 4.7 GB bare media or 2.6 GB and 4.7 Gb cartridge media. OS/400 V5R2 requires PTF MF32271 to support the writing of 4.7 GB or 9.4 GB bare media. The speed at which it transfers data from the media is roughly equivalent to a 24X speed CD-ROM, or about 3.6 Mbps average sustained. Note that performance values specified are dependent on several variables and cannot be achieved in all environments. When the data is compressed in a 3:1 compression ratio (the average for iSeries servers), a single DVD-RAM cartridge can save about 13 GB of data in an unattended save mode.  See 9.5.4, “#5712, #5715, #5702, #5705, #2718, and #2768 PCI Magnetic Media Controller: Device cabling rules” on page 370, for a description of the supported attachment configurations. Minimum operating system level: OS/400 V5R1							6x0, Sx0, 720, 730, 740, 170, 250, 270, SB2, SB3, 820, 830, 840
7210-030	<b>7210-030 External DVD-RAM</b> The 7210-030 External DVD-RAM is a DVD-RAM device that attaches to the #2768 PCI Magnetic Media Controller, #5702 PCI-X Ultra Tape Controller, #5705 PCI-X Tape/DASD Controller or #5712 PCI-X Tape/DASD Controller. The 7210-030 can be used as an alternate IPL device but is not supported by the Boot Manager.  The media capacity for a DVD-RAM cartridge is 4.7 GB per side versus 650 MB on CD-ROM. Its highest capacity can be as much as 9.4 GB per side. The 7210-030 drive reads multi-session disks, CD-recordable disks and CD-RW disks. For iSeries servers, it can only write to DVD-RAM media. The 7210-030 only supports the writing of 4.7 GB bare media. With iSeries servers it can only write to DVD-RAM media. The speed at which it transfers data from the media is roughly equivalent to a 24X speed CD-ROM, or about 3.6 Mbps average sustained. Note that performance values specified depend on several variables and cannot be achieved in all environments. When the data is compressed in a 3:1 compression ratio (the average for iSeries servers), a single DVD-RAM cartridge can save about 13 GB of data in an unattended save mode. The 7210-030 supports Ultra-3 SCSI LVD attachment to iSeries servers.  See 9.5.4, “#5712, #5715, #5702, #5705, #2718, and #2768 PCI Magnetic Media Controller: Device cabling rules” on page 370, for a description of the supported attachment configurations. Minimum operating system level: OS/400 V5R2							270, 820, 830, 840
Direct attach	Media supported		CCW	Cartridge capacity (GB)	Capacity (per library)			Model upgrades from
	WORM	Rewritable			Optical nerves	Storage slots	Total unformatted (GB)	
A43 043	Yes	Yes	No	.65/1.3	1	16	20	-
143	Yes	Yes	No	.65/1.3	2	32	40	042
C40	Yes	Yes	No	.65/1.3	4	144	188	142
C42	Yes	Yes	Yes	.65/1.3/2.6/5.2	1-2	20	104	-
C44	Yes	Yes	Yes	.65/1.3/2.6/5.2	2	52	270	-
C46	Yes	Yes	Yes	.65/1.3/2.6/5.2	2-4	104-156	540	-
C48	Yes	Yes	Yes	.65/1.3/2.6/5.2	4-6	156	811	C44
	Yes	Yes	Yes	.65/1.3/2.6/5.2	4-6	258	1341	-
023	Yes	Yes	No	.65/1.3	2	144	188	022
123	Yes	Yes	No	.65/1.3	4	32	40	122
C20	Yes	Yes	Yes	.65/1.3/2.6/5.2	1-2	20	104	-
C22	Yes	Yes	Yes	.65/1.3/2.6/5.2	2	52	270	-
C24	Yes	Yes	Yes	.65/1.3/2.6/5.2	2-4	104	540	-
C26	Yes	Yes	Yes	.65/1.3/2.6/5.2	4-6	156	811	C24
C28	Yes	Yes	Yes	.65/1.3/2.6/5.2	4-6	258	1341	-

## 9.7 External SCSI and Fibre Channel tape and optical cable part numbers for iSeries and AS/400e systems

The following tables provide cable part number for SCSI and Fibre Channel attached devices. Part numbers might not be available in all countries or regions.

**Note:** The length in feet is rounded to the nearest whole number.

SCSI cables for #2729 PCI Magnetic Media Controller, #2749 PCI Ultra Magnetic Media Controller, #6534 Magnetic Media Controller, and #6501 Tape/Disk Device Controller			
Tape drive	Length	Part number	Feature code
3490 C10, C11, C22 with #5040 - SCSI attach #6501 attach only	4.5 m (15 ft) 12.0 m (39 ft) 18.0 m (59 ft)	61G8328 61G8329 61G8330	6045 6120 6180
3490 E01, E11 3590 B11, B1A, E11, E1A, H11, H1A	2.8 m (9 ft) (HD68 to HD68) 4.5 m (15 ft) (HD68 to HD68) 12.0 m (39 ft)(HD68 to HD68) 18.0 m (59 ft)(HD68 to HD68) 25.0 m (82 ft)(HD68 to HD68)	05H4647 05H4648 05H4649 05H4650 05H4651	5128 5145 5112 5118 5125
3490 F00, F01, F11 3570 BXX and CXX 7208 - 342 9427 - 210, 211	0.5 m (2 ft) (HD68 to HD68) 4.5 m (15 ft) (HD68 to HD68) 12.0 m (39 ft)(HD68 to HD68) 18.0 m (59 ft)(HD68 to HD68) 25.0 m (82 ft)(HD68 to HD68)	49G6456 49G6457 49G6458 49G6459 08L6201	5205 5245 5212 5218 5225 (3570 Cxx)
3580-H11, H13, H23 3581-H17 3582-L23 3583 HVD drives 3584 HVD drives #1455 if shipped prior to 31 August 2001, and HVD drives #1465 *	0.41 m (1.5 ft)(HD68 to HD68) 0.72 m (2.4 ft) (HD68 to HD68) 2.5 m (8 ft)(HD68 to HD68) 5.0 m (16 ft) (HD68 to HD68) 10.0 m (33 ft)(HD68 to HD68) 18.0 m (59 ft) (HD68 to HD68) 25.0 m (82 ft) (HD68 to HD68) VHDCI to HD68 interposer Interposer for #6501	19P0872 19P0873 35L1307 19P0052 19P0053 19P0097 19P0054 19P0482 05H3834	5302 (9702 - 3580, 3581) 5305 (9705 - 3583) 5310 5318 5325 5099 2895
* 3584 HVD drives #1455 shipped on or after 31 August 2001 and HVD drives #1475 have VHDCI connectors, so these drives can use the VHDCI to HD68 cables shown for adapters #5702 and #5705, or they require the VHDCI to HD68 interposer.			

SCSI cables for #2729 PCI Magnetic Media Controller, #2749 PCI Ultra Magnetic Media Controller, and #6534 Magnetic Media Controller			
Tape drive	Length	Part number	Feature code
3995 - C4x	12.0 m (39 ft) 12.0 m (39 ft) (for #2621 attach only)	05H5543 05H5439	7401/9401 7400/9400
7208 - 012	1.5 m (5 ft) 4.0 m (13 ft) 12.0 m (39 ft)	52G0174 59H3462 59H3463	2871 2903 2904
7208 - 222/ 232/234 9348 - 001/002	1.0 m (3 ft) 4.0 m (13 ft) 12.0 m (39 ft)	06H6037 59H3460 59H3461	2875 2901 2902
7208 - 342	4.5 m (15 ft) 12.0 m (39 ft) 18.0 m (59 ft)	49G6457 49G6458 49G6459	5245/9245 5212/9212 5218/9218

SCSI cables for #2718 PCI Magnetic Media Controller and #2768 PCI Magnetic Media Controller			
Tape drive	Length	Part number	Feature code
7206-VX2	1.5 m (5 ft) (HD68 to HD68) 2.5 m (8 ft) (HD68 to HD68)	19P4506 35L1307	5300/9750 5302/9752
7207 - 122 7207 - 330 7208 - 345	1.5 m (5 ft) (HD68 to HD68) 2.5 m (8 ft) (HD68 to HD68)	19P4506 35L1307	5300/9750 5302/9752
7210 - 020	1.0 m (3 ft) (HD68 to LD50)	06H6037	2872/9148
7210 - 025 <sup>1</sup> 7210 - 030 <sup>2, 3</sup> 7212 - 102 <sup>2, 3</sup>	1.5 m (5 ft) (HD68 to HD68) 2.5 m (8 ft) (HD68 to HD68)	19P4506 35L1307	5300/9750 5302/9752
7329 - 308	2.4 m (8ft) (HD68 to HD68)	67G1260	5224/9224
<b>Notes:</b> 1. Maximum cable length for the 7210-025 is 2.5 m. 2. The Model 7210-030 and 7212-102 do not connect by way of the #2718. 3. The maximum cable length attached to #2768 is 2.5 m.			

SCSI cables for #5715/#5705 PCI-X Tape/DASD Controller (one port) and #5712/#5702 PCI-X Ultra Tape Controller (two ports, VHDCI interface)			
Tape drive	Length	Part number	Feature code
3580-L23 3582 Drives #8103, #8203 3583 Drives #8103	2.5 m (8 ft) (VHDCI to HD68) 4.5 m (14.5 ft) (VHDCI to HD68) 10.0 m (33 ft) (VHDCI to HD68) 20.0 m (66 ft) (VHDCI to HD68) 25.0 m (82 ft) (VHDCI to HD68) Interposer VHDCI to HD68	19P0279 19P0050 19P0048 19P0049 35L1977 19P0872	5602 (9703 - 3580) 5604 (9704 - 3583) 5610 5620 5625 5099
3581-L28	2.5 m (8 ft) (VHDCI to HD68) 4.5 m (14.5 ft) (VHDCI to HD68) 10.0 m (33 ft) (VHDCI to HD68) 25.0 m (82 ft) (VHDCI to HD68)	CRU <sup>1</sup>	5602 (9703) 5604 5610 5625
3584 Drives #1474	4.5 m (14.5 ft) (VHDCI to VHDCI) 10.0 m (33 ft) (VHDCI to VHDCI) 20.0 m (66 ft) (VHDCI to VHDCI) 25.0 m (82 ft) (VHDCI to VHDCI)	19P2499 09L0881 19P1904 19P2500	5704 5710 5702 5725
7206-VX2 7208-345	1.5 m (5 ft) (VHDCI to HD68) 2.5 m (8 ft) (VHDCI to HD68) 4.5 m (14.5 ft) (VHDCI to HD68) <sup>2</sup> 10.0 m (33 ft) (VHDCI to HD68) <sup>2</sup>	19P4508 19P0279 19P0050 19P0048	5601/9761 5602/9762 5604/9764 5610/9760
7207 - 122	1.5 m (5 ft) (VHDCI to HD68) 2.5 m (8 ft) (VHDCI to HD68)	19P4508 19P0279	5601/9761 5602/9762
7207 - 330	1.5 m (4.5 ft) (VHDCI to HD68) 2.5 m (8 ft) (VHDCI to HD68) 4.5 m (14.5 ft) (VHDCI to HD68) <sup>2</sup> 10.0 m (33 ft) (VHDCI to HD68) <sup>2</sup>	19P4508 19P0279 19P0050 19P0048	5601/9761 5602/9762 5604/9764 5610/9760
7210 - 020	1.0 m (3 ft) (HD68 to LD50) also require interposer VHDCI to HD68	06H6037 19P0482	2872/9148 5099
7210 - 025	0.5 m (2 ft) (VHDCI to HD68) 1.5 m (5 ft) (VHDCI to HD68) 2.5 m (8 ft) (VHDCI to HD68)	19P4507 19P4508 19P0279	5600/9765 5601/9761 5602/9762
7210 - 030 <sup>2</sup>	0.5 m (2 ft) (VHDCI to HD68) 1.5 m (4.5 ft) (VHDCI to HD68) 2.5 m (8 ft) (VHDCI to HD68) 4.5 m (14.5 ft) (VHDCI to HD68) <sup>2</sup>	19P4507 19P4508 19P0279 19P0050	5600/9765 5601/9761 5602/9762 5604/9764
7212 - 102 <sup>2</sup>	0.5 m (2 ft) (VHDCI to HD68) 1.5 m (4.5 ft) (VHDCI to HD68) 2.5 m (8 ft) (VHDCI to HD68) 4.5 m (14.5 ft) (VHDCI to HD68) <sup>2</sup> 10.0 m (33 ft) (VHDCI to HD68) <sup>2</sup>	19P4507 19P4508 19P0279 19P0050 19P0048	5600/9765 5601/9761 5602/9762 5604/9764 5610/9760
<b>Notes:</b> 1. Customer Replaceable Unit. Use feature code to order. 2. 4.5 m and 10.0 m cable can be used only if the 7206-VX2, 7207-330, 7212-102 or 7208-345 is the only device on the bus.			



Fibre Channel cables for #5704 PCI-X Fibre Channel Tape Controller (LC) and #2765 PCI Fibre Channel Tape Controller (LC)			
Tape device	Length	Part number	Feature code
3581-F28	5 m (16 ft) Fibre Channel (LC-LC) 25 m (82 ft) Fibre Channel (LC-LC) 61 m (200 ft) Fibre Channel (LC-LC) 7 m (23 ft) Fibre Channel (LC-SC) 22 m (72 ft) Fibre Channel (LC-SC) 61 m (200 ft) Fibre Channel (LC-SC)	CRU*	#6005 #6025 #6061 #5907 #5922 #5961
3582 Drives #8105, #8205	5 m (16 ft) Fibre Channel (LC-LC) 13 m (43 ft) Fibre Channel (LC-LC) 25 m (82 ft) Fibre Channel (LC-LC) 61 m (200 ft) Fibre Channel (LC-LC) 7 m (23 ft) Fibre Channel (LC-SC) 13 m (43 ft) Fibre Channel (LC-SC) 22 m (72 ft) Fibre Channel (LC-SC) 61 m (200 ft) Fibre Channel (LC-SC)	19K1252 11P3880 19K1253 11P3884 11P3895 11P3896 11P3897 11P3900	#6005 #6013 #6025 #6061 #5907 #5913 #5922 #5961
3583 Drives #8105 or SDGM	5 m (16 ft) Fibre Channel (LC-LC) 13 m (43 ft) Fibre Channel (LC-LC) 25 m (82 ft) Fibre Channel (LC-LC) 61 m (200 ft) Fibre Channel (LC-LC) 7 m (23 ft) Fibre Channel (LC-SC) 13 m (43 ft) Fibre Channel (LC-SC) 22 m (72 ft) Fibre Channel (LC-SC) 61 m (200 ft) Fibre Channel (LC-SC) 5 m (16 ft) Fibre Channel (SC-SC) 13 m (43 ft) Fibre Channel (SC-SC) 25 m (82 ft) Fibre Channel (SC-SC) 61 m (200 ft) Fibre Channel (SC-SC)	19K1252 11P3880 19K1253 11P3884 11P3895 11P3896 11P3897 11P3900 03K9202 54G3386 03K9204 54G3390	#6005 #6013 #6025 #6061 #5907 #5913 #5922 #5961 #5805 #5813 #5825 #5861
3584 Fibre Channel Drives #1456, #1466, #1479	5 m (16 ft) Fibre Channel (LC-LC) 13 m (43 ft) Fibre Channel (LC-LC) 25 m (82 ft) Fibre Channel (LC-LC) 61 m (200 ft) Fibre Channel (LC-LC) 7 m (23 ft) Fibre Channel (LC-SC) 13 m (43 ft) Fibre Channel (LC-SC) 22 m (72 ft) Fibre Channel (LC-SC) 61 m (200 ft) Fibre Channel (LC-SC) 5 m (16 ft) Fibre Channel (SC-SC) 13 m (43 ft) Fibre Channel (SC-SC) 25 m (82 ft) Fibre Channel (SC-SC) 61 m (200 ft) Fibre Channel (SC-SC)	19K1252 11P3880 19K1253 11P3884 11P3895 11P3896 11P3897 11P3900 03K9202 54G3386 03K9204 54G3390	#6005 #6013 #6025 #6061 #5907 #5913 #5922 #5961 #5805 #5813 #5825 #5861
3590-E1A, E11, H1A, H11	7 m (23 ft) Fibre Channel (LC-SC) 13 m (43 ft) Fibre Channel (LC-SC) 22 m (72 ft) Fibre Channel (LC-SC) 61 m (200 ft) Fibre Channel (LC-SC) 5 m (16 ft) Fibre Channel (SC-SC) 13 m (43 ft) Fibre Channel (SC-SC) 25 m (82 ft) Fibre Channel (SC-SC) 61 m (200 ft) Fibre Channel (SC-SC)	11P3895 11P3896 11P3897 11P3900 03K9201 54G3386 03K9203 54G3390	#5907 #5913 #5922 #5961 #5805 #5813 #5825 #5861
3592-J1A	5 m (16 ft) Fibre Channel (LC-LC) 13 m (43 ft) Fibre Channel (LC-LC) 25 m (82 ft) Fibre Channel (LC-LC) 61 m (200 ft) Fibre Channel (LC-LC) 7 m (23 ft) Fibre Channel (LC-SC) 13 m (43 ft) Fibre Channel (LC-SC) 22 m (72 ft) Fibre Channel (LC-SC) 61 m (200 ft) Fibre Channel (LC-SC)	19K1252 11P3880 19K1253 11P3884 11P3895 11P3896 11P3897 11P3900	#6005 #6013 #6025 #6061 #5907 #5913 #5922 #5961
* Customer Replaceable Unit, use feature code to order			

## 9.8 QIC and VXA-2 tape specifications and compatibility for iSeries and AS/400e systems

The following table provides device specifications, performance, and compatibility details for internal tape formats (QIC and VXA-2).

IBM tape device					QIC-2 GB	QIC-2 GB DC	4/8 GB SLR5 QIC-4G DC	MLR1 QIC 5010 DC	MLR1 QIC 5010 DC	MLR3	SLR 60	SLR 100	VXA-2
Drive storage capability					2.5 GB <sup>4</sup>	2.5 GB <sup>4</sup>	4 GB	13 GB <sup>4</sup>	16 GB	25 GB	30 GB	50 GB	80 GB
Compaction algorithm						LZ1	LZ1	LZ1	LZ1	LZ1	LZ1	LZ1	ALDC
Minimum OS/400 level					V4R1	V4R1	V4R1	V3R7	V4R1	V4R1	V4R5	V5R1	V5R1
Format	Capacity	Native data transfer rate	Media	Media part number	#6380 #6480	#6381 #6481	#4482 #4582 #6382 #6482 #7207-122	#6385 <sup>7</sup> #6485 <sup>7</sup>	#4483 #4583 #6383 #6483	#4486 #4586 #6386 #6486	#4584 #4684 #5753 <sup>6</sup> #6384 #6484 #9284 #7207-330	#4487 #4587 #8287 #4687 #7329-380	#4585 #4685 #9285
MLR3 <sup>1</sup>	25 GB <sup>8</sup>	2 Mbps	MLR3-25GB	59H4128	--	--	--	--	--	R/W	R/W	R/W	--
QIC5010 <sup>1</sup>	16 GB	1.5 Mbps	MLR1-16GB	59H4175	--	--	--	R/W	R/W	R/W	R/W	R	--
	13 GB	1.5 Mbps	DC5010	16G8574	--	--	--	R/W	R/W	R/W	R/W	R	--
	2 GB	1.5 Mbps	MLR1-2 GB	35L0589	--	--	--	R/W	R/W	R/W	R/W	R	--
QIC4DC <sup>2</sup>	8 GB	760 Kbps	SLR5-4 GB	59H3660	--	--	R/W	--	R	R	R	R	--
QIC4GB	4 GB	380 Kbps	SLR5-4 GB	59H3660	--	--	R/W	--	R	R	R	R	--
QIC2DC <sup>2</sup>	5 GB	600 Kbps	DC9250	16G8436	--	R/W	R/W	--	R	R	R	--	--
QIC2GB	2.5 GB	300 Kbps	DC9250	16G8436	R/W	R/W	R/W	R/W	R	R	R	--	--
QIC1000	1.2 GB	300 Kbps	DC9120	21F8730	R/W	R/W	R/W	R/W	--	--	--	--	--
QIC525	525 MB	200 Kbps	DC6525	21F8597	R/W	R/W	R/W	R/W <sup>5</sup>	--	--	--	--	--
QIC525	320 MB	200 Kbps	DC6320	21F8583	R/W	R/W	R/W	R/W	--	--	--	--	--
QIC120	120 MB	120 Kbps	DC6150	21F8578	R/W	R/W	R/W	R/W <sup>5</sup>	--	--	--	--	--
QIC24 <sup>3</sup>	60 MB		DC6150		R	R	--	--	--	--	--	--	--
SLR100	50 GB	5 Mbps	SLR100-50 GB	35L0968	--	--	--	--	--	--	--	R/W	--
	5 GB	5 Mbps	SLR100-5 GB	35L0961	--	--	--	--	--	--	R/W	R/W	--
SLR60	30 GB	4 Mbps	SLR60-30 GB	19P4209	--	--	--	--	--	--	R/W	R/W	--
VXA 2 <sup>1</sup>	80 GB	6 Mbps	V23-80 GB	19P4876	--	--	--	--	--	--	--	--	R/W
	59 GB	6 Mbps	V17-59 GB	19P4877	--	--	--	--	--	--	--	--	R/W
	20 GB	6 Mbps	V6-20 GB	19P4878	--	--	--	--	--	--	--	--	R/W
LTO 1	200 GB	24 Mbps	LTO Ultrium 1	09L9120	--	--	--	--	--	--	--	--	--
LTO 2	400 GB	24 Mbps	LTO Ultrium 2	08L9870	--	--	--	--	--	--	--	--	--

IBM tape device					QIC-2 GB	QIC-2 GB DC	4/8 GB SLR5 QIC-4G DC	MLR1 QIC 5010 DC	MLR1 QIC 5010 DC	MLR3	SLR 60	SLR 100	VXA-2
Drive storage capability					2.5 GB <sup>4</sup>	2.5 GB <sup>4</sup>	4 GB	13 GB <sup>4</sup>	16 GB	25 GB	30 GB	50 GB	80 GB
Compaction algorithm						LZ1	LZ1	LZ1	LZ1	LZ1	LZ1	LZ1	ALDC
Minimum OS/400 level					V4R1	V4R1	V4R1	V3R7	V4R1	V4R1	V4R5	V5R1	V5R1
Format	Capacity	Native data transfer rate	Media	Media part number	#6380 #6480	#6381 #6481	#4482 #4582 #6382 #6482 #7207-122	#6385 <sup>7</sup> #6485 <sup>7</sup>	#4483 #4583 #6383 #6483	#4486 #4586 #6386 #6486	#4584 #4684 #5753 <sup>6</sup> #6384 #6484 #9284 #7207-330	#4487 #4587 #8287 #4687 #7329-380	#4585 #4685 #9285

**Notes:**

1. Indicates that the capacity can double typically when the compression option is selected.
2. QIC-2DC and QIC-4DC are compression formats. Cartridge capacity is data dependent. Capacities shown are typical.
3. QIC24 format is written by S/36.
4. Available as a migration feature only during an upgrade.
5. Use of DC6150 and DC6525 media can shorten the life of the tape device and require more frequent maintenance.
6. This footnote is not used.
7. The internal 13 GB tape drives with feature code #6385 or #6485 also supports the 16 MB IBM MLR1 tape media. For the correct operation of the #6385 and #6485 tape drives with the MLR1 tape media, the following PTFs are required:  
MF19447 for V3R7  
MF19448 for V4R1  
MF19449 for V4R2  
MF19450 for V4R3  
With V4R4, support is built in.
8. Minimum operating system level to support the 25 GB capacity cartridge drive: OS/400 V4R1

## 9.9 Diskette device storage for iSeries and AS/400e systems

Machine	Model	Description	9406 models
#6135		<b>5 ¼-inch Diskette Drive</b> The #6135 allows interchange of data between the iSeries and other 9404, 9406, 5360, 5362, 5381, and 5382 systems. It attaches using #6146 Diskette Adapter or to the MFIOP using the #6147 Diskette Adapter (3x0 and 50S, 53S, 500, 510, 530 only).	3x0, 50S, 53S, 500, 510, 530, 620, S20, 720, 820, 830
9331	001 011  002 012	<b>8-inch Diskette Drive</b> The 9331 Model 001 and 011 allow data and program transfer between the iSeries and other 9404, 9406, 5360, 5362, 5381, and 5382 systems.  <b>5 ¼-inch Diskette Drive</b> The 9331 Model 002 and 012 allow data and program transfer between the iSeries and other 9404, 9406, 5363, 5364, 5381, and 5382 systems.  The Model 001 and 002 attach to the 9406 using the #6112 Magnetic Storage Device Controller (#6110 for 9406 B Models) or #6146 Diskette Adapter. The #6112 attachment is not available for S10, S30, or S40 servers.  The Model 011 and 012 attach to the 9406 using a #6146 Diskette Adapter or to the MFIOP using the #6147 Diskette Adapter (3x0 and 50S, 53S, 500, 510, 530 only).  Maximum: Two 9331 diskette drives per system The 9331 Models 001 and 002 are not supported with OS/400 V5R1.	B, D, E, F, 2x0, 3x0, 4x0, 50S, 53S, 500, 510, 530, 6x0, Sx0, (not 600, S10), 720, 730, 740, 820, 830, 840

## Customer Card Identification Numbers cross reference

This chapter lists the Customer Card Identification Number (CCIN), feature code, for many iSeries and AS/400e features. It assists IBM Clients and personnel in configuring Miscellaneous Equipment Specifications (MES) and upgrades. It provides a cross reference for the CCIN number that is reported by the Hardware Resources Listing with a feature code used for ordering.

The CCIN number is used when working from a Hardware Resource Listing. The Hardware Resource listing is also known as the *Rack Configuration Listing*. The entries selected are those which are most useful when interpreting Hardware Resource Listings.

See Chapter 11, "Feature code cross reference" on page 393, for a list of CCIN numbers sorted by feature code. Marketing uses the feature code to report configurations and to work with upgrades.

CCIN	Feature code description
0150	0150 820 Base Processor
0151	0151 820 Base Processor
0152	0152 820 Base Processor
0297	0297 Model 250 Package - 2295
0298	0298 Model 250 Package - 2296
0446	0446 512 MB DDR Server Memory
0446	0426 512 MB Server Memory
0446	9726 Base 512 MB Server Memory
0447	0447 1 GB DDR Server Memory
0447	0427 1 GB Server Memory
1500	1500 Interactive Capacity Card
1501	1501 Interactive Capacity Card
1502	1502 Interactive Capacity Card
1503	1503 Interactive Capacity Card
1504	1504 Interactive Capacity Card
1505	1505 Interactive Capacity Card
1506	1506 Interactive Capacity Card
1507	1507 Interactive Capacity Card
1508	1508 Interactive Capacity Card
1509	1509 Interactive Capacity Card
1510	1510 Interactive Capacity Card
1511	1511 Interactive Capacity Card
1512	1512 Interactive Capacity Card
1513	1513 Interactive Capacity Card
1514	1514 Interactive Capacity Card
1516	1516 Interactive Capacity Card
1517	1517 Interactive Capacity Card
1518	1518 Interactive Capacity Card
1519	1519 Interactive Capacity Card
1520	1520 Interactive Capacity Card
1521	1521 Interactive Capacity Card
1522	1522 Interactive Capacity Card
1523	1523 Interactive Capacity Card
1524	1524 Interactive Capacity Card
1525	1525 Interactive Capacity Card
1526	1526 Interactive Capacity Card
1527	1527 Interactive Capacity Card
1531	1531 Interactive Capacity Card
1532	1532 Interactive Capacity Card
1533	1533 Interactive Capacity Card
1534	1534 Interactive Capacity Card
1535	1535 Interactive Capacity Card
1536	1536 Interactive Capacity Card
1537	1537 Interactive Capacity Card
1540	1540 Interactive Capacity Card
1541	1541 Interactive Capacity Card
1542	1542 Interactive Capacity Card
1543	1543 Interactive Capacity Card
1544	1544 Interactive Capacity Card
1545	1545 Interactive Capacity Card
1546	1546 Interactive Capacity Card
1547	1547 Interactive Capacity Card
1548	1548 Interactive Capacity Card
1576	1576 Interactive Capacity Card
1577	1577 Interactive Capacity Card
1578	1578 Interactive Capacity Card
1579	1579 Interactive Capacity Card
1581	1581 Interactive Capacity Card

CCIN	Feature code description
1583	1583 Interactive Capacity Card
1585	1585 Interactive Capacity Card
1587	1587 Interactive Capacity Card
1588	1588 Interactive Capacity Card
1591	1591 Interactive Capacity Card
2058	PCI Cryptographic Accelerator
2066	2066 Model 730 2-way Processor
206A	2061 720 (240 CPW) with #1500 Interactive
206B	2061 720 (240 CPW) with #1501 Interactive
206C	2061 720 (240 CPW) with #1502 Interactive
206D	2062 720 (480 CPW) with #1500 Interactive
206E	2062 720 (480 CPW) with #1501 Interactive
206F	2062 720 (480 CPW) with #1502 Interactive
207A	2062 720 (480 CPW) with #1503 Interactive
207B	2063 720 (810 CPW) with #1500 Interactive
207C	2063 720 (810 CPW) with #1502 Interactive
207D	2063 720 (810 CPW) with #1503 Interactive
207E	2063 720 (810 CPW) with #1504 Interactive
207F	2064 720 (1600 CPW) with #1500 Interactive
208A	2064 720 (1600 CPW) with #1502 Interactive
208B	2064 720 (1600 CPW) with #1503 Interactive
208C	2064 720 (1600 CPW) with #1504 Interactive
208D	2064 720 (1600 CPW) with #1505 Interactive
2248	2248 Model 270 Processor
2250	2250 Model 270 Processor
2252	2252 Model 270 Processor
2253	2253 Model 270 2-way Processor
2289	2289 Model 170 Processor
2290	2298 Model 170 Proc Package 64 MB
2290	2290 Model 170 Processor
2291	2291 Model 170 Processor
2291	2299 Model 170 Proc Package 64 MB
2292	2292 Model 170 Processor
2295	0297 Model 250 Package
2295	2295 Model 250 Processor
2296	0298 Model 250 package
2296	2296 Model 250 Processor
22A2	2248 270 (150 CPW) with #1517 Interactive
22A4	2250 270 (370 CPW) with #1516 Interactive
22A5	2250 270 (370 CPW) with #1518 Interactive
22A7	2252 270 (950 CPW) with #1516 Interactive
22A8	2252 270 (950CPW) with #1519 Interactive
22AA	2253 270 (2000 CPW) with #1516 Interactive
22AB	2253 270 (2000 CPW) with #1520 Interactive
23A1	2395 820 (370 CPW) with #1521 Interactive
23A2	2395 820 (370 CPW) with #1522 Interactive
23A3	2395 820 (370 CPW) with #1523 Interactive
23A4	2395 820 (370 CPW) with #1524 Interactive
23A9	2396 820 (950 CPW) with #1521 Interactive
23AA	2396 820 (950 CPW) with #1522 Interactive
23AB	2396 820 (950 CPW) with #1523 Interactive
23AC	2396 820 (950 CPW) with #1524 Interactive
23AD	2396 820 (950 CPW) with #1525 Interactive
23B1	2397 820 (2000 CPW) with #1521 Interactive
23B2	2397 820 (2000 CPW) with #1522 Interactive
23B3	2397 820 (2000 CPW) with #1523 Interactive
23B4	2397 820 (2000 CPW) with #1524 Interactive
23B5	2397 820 (2000 CPW) with #1525 Interactive
23B6	2397 820 (2000 CPW) with #1526 Interactive

CCIN	Feature code description
23B8	2398 820 (3200 CPW) with #1521 Interactive
23B9	2398 820 (3200 CPW) with #1522 Interactive
23BA	2398 820 (3200 CPW) with #1523 Interactive
23BB	2398 820 (3200 CPW) with #1524 Interactive
23BC	2398 820 (3200 CPW) with #1525 Interactive
23BD	2398 820 (3200 CPW) with #1526 Interactive
23BE	2398 820 (3200 CPW) with #1527 Interactive
23C1	2400 830 (1850 CPW) with #1531 Interactive
23C2	2400 830 (1850 CPW) with #1532 Interactive
23C3	2400 830 (1850 CPW) with #1533 Interactive
23C4	2400 830 (1850 CPW) with #1534 Interactive
23C5	2400 830 (1850 CPW) with #1535 Interactive
23D1	2402 830 (4200 CPW) with #1531 Interactive
23D2	2402 830 (4200 CPW) with #1532 Interactive
23D4	2402 830 (4200 CPW) with #1534 Interactive
23D5	2402 830 (4200 CPW) with #1535 Interactive
23D6	2402 830 (4200 CPW) with #1536 Interactive
23D8	2403 830 (7350 CPW) with #1531 Interactive
23D9	2403 830 (7350 CPW) with #1532 Interactive
23DA	2403 830 (7350 CPW) with #1533 Interactive
23DB	2403 830 (7350 CPW) with #1534 Interactive
23DC	2403 830 (7350 CPW) with #1535 Interactive
23DD	2403 830 (7350 CPW) with #1536 Interactive
23DE	2403 830 (7350 CPW) with #1537 Interactive
23E7	2431 Model 270 Processor with #1518
23E8	2418 840 (10000 CPW) with #1540 Interactive
23E9	2418 840 (10000 CPW) with #1541 Interactive
23EA	2418 840 (10000 CPW) with #1542 Interactive
23EB	2418 840 (10000 CPW) with #1543 Interactive
23EC	2418 840 (10000 CPW) with #1544 Interactive
23ED	2418 840 (10000 CPW) with #1545 Interactive
23EE	2418 840 (10000 CPW) with #1546 Interactive
23FA	2420 840 (16500 CPW) with #1542 Interactive
23FB	2420 840 (16500 CPW) with #1543 Interactive
23FC	2420 840 (16500 CPW) with #1544 Interactive
23FE	2420 840 (16500 CPW) with #1546 Interactive
23FF	2420 840 (16500 CPW) with #1547 Interactive
23FD	2420 840 (16500 CPW) with #1545 Interactive
23F0	2432 Model 270 Processor with #1516
23F1	2432 Model 270 Processor with #1519
23D3	2402 830 (4200 CPW) with #1533 Interactive
23F4	2434 Model 270 Processor with #1516
23F5	2434 Model 270 Processor with #1520
23F8	2420 840 (16500 CPW) with #1540 Interactive
23F9	2420 840 (16500 CPW) with #1541 Interactive
2315	2315 Model SB2 8-way Processor
2316	2316 Model SB3 12-way Processor
2318	2318 Model SB3 24-way Processor
2349	2349 Model 830 4/8-way Processor
2351	2351 Model 830 1/8-way POD
2352	2352 Model 840 8/12-way POD
2353	2353 Model 840 12/18-way POD
2354	2354 Model 840 18/24-way POD
2383	2383 Model 170 Processor
2384	2384 Model 170 Processor
2385	2385 Model 170 Processor
2386	2386 Model 170 Processor
2388	2388 Model 170 2 Way Processor
2395	2395 Model 820 Processor

CCIN	Feature code description
2396	2396 Model 820 Processor
2397	2397 Model 820 2-way Processor
2398	2398 Model 820 4-way Processor
2400	2400 Model 830 2-way Processor
2402	2402 Model 830 4-way Processor
2403	2403 Model 830 8-way Processor
2407	2407 Dedicated Domino Processor
2408	2408 Dedicated Domino Processor
2409	2409 Dedicated Domino Proc (2-way)
2410	2410 100 Client Server Processor
2411	2411 3.0 SPPR Processor
2412	2412 6.1 SPPR Processor
2416	2416 Model 840 8/12-way POD
2417	2417 Model 840 12/18-way POD
2418	2418 Model 840 12-way Processor
2419	2419 Model 840 18/24-way POD
241B	2070 Model 740 12-way Processor
241B	2069 Model 740 8-way Processor
241C	2067 Model 730 4-way Processor
241D	2068 Model 730 8-way Processor
241F	2065 Model 730 Processor
2420	2420 Model 840 24-way Processor
2422	2422 Dedicated Domino Processor
2423	2423 Dedicated Domino Processor
2424	2424 Dedicated Domino 2-way Processor
2425	2425 Dedicated Domino Processor
2426	2426 Dedicated Domino 2-way Processor
2427	2427 Dedicated Domino 4-way Processor
242B	2064 Model 720 4-way Processor
242C	2062 Model 720 Processor
242D	2063 Model 720 2-way Processor
2431	2431 Model 270 Processor
2434	2434 Model 270 2-way Processor
2435	2435 Model 820 Processor
2436	2436 Model 820 Processor
2437	2437 Model 820 2-way Processor
2438	2438 Model 820 4-way Processor
243A	2061 Model 720 Processor
2452	2452 Dedicated Domino Processor
2454	2454 Dedicated Domino 2-way Processor
2456	2456 Dedicated Domino Processor
2457	2457 Dedicated Domino 2-way Processor
2458	2458 Dedicated Domino 4-way Processor
245D	0153 Model 830 8-way Processor
2461	2461 Model 840 24-way Processor
246F	0158 Model 840 12-way Processor
246F	0159 Model 840 24-way Processor
249B	2435 Model 820 Processor with #1521
249C	2435 Model 820 Processor with #1522
249E	2435 Model 820 Processor with #1524
24A8	2436 Model 820 Processor with #1521
24A9	2436 Model 820 Processor with #1522
24AA	2436 Model 820 Processor with #1523
24AB	2436 Model 820 Processor with #1524
24AC	2436 Model 820 Processor with #1525
24B0	2437 Model 820 Processor with #1521
24B1	2437 Model 820 Processor with #1522
24B2	2437 Model 820 Processor with #1523
24B3	2437 Model 820 Processor with #1524

CCIN	Feature code description
24B4	2437 Model 820 Processor with #1525
24B5	2437 Model 820 Processor with #1526
24B8	2438 Model 820 Processor with #1521
24B9	2438 Model 820 Processor with #1522
24BA	2438 Model 820 Processor with #1523
24BB	2438 Model 820 Processor with #1524
24BC	2438 Model 820 Processor with #1525
24BD	2438 Model 820 Processor with #1526
24BE	2438 Model 820 Processor with #1527
24C0	2416 #1540 interactive 8/12-way 840 POD
24C1	2416 #1541 interactive 8/12-way 840 POD
24C2	2416 #1542 interactive 8/12-way 840 POD
24C3	2416 #1543 interactive 8/12-way 840 POD
24C4	2416 #1544 interactive 8/12-way 840 POD
24C5	2416 #1545 interactive 8/12-way 840 POD
24C6	2416 #1546 interactive 8/12-way 840 POD
24C8	2417 #1540 interactive 12/18 way 840 POD
24C9	2417 #1541 interactive 12/18 way 840 POD
24CA	2417 #1542 interactive 12/18 way 840 POD
24CB	2417 #1543 interactive 12/18 way 840 POD
24CC	2417 #1544 interactive 12/18 way 840 POD
24CD	2417 #1545 interactive 12/18 way 840 POD
24CE	2417 #1546 interactive 12/18 way 840 POD
24D0	2419 #1540 interactive 18/24-way 840 POD
24D1	2419 #1541 interactive 18/24-way 840 POD
24D2	2419 #1542 interactive 18/24-way 840 POD
24D3	2419 #1543 interactive 18/24-way 840 POD
24D4	2419 #1544 interactive 18/24-way 840 POD
24D5	2419 #1545 interactive 18/24-way 840 POD
24D6	2419 #1546 interactive 18/24-way 840 POD
24D7	2419 #1547 interactive 18/24-way 840 POD
24D8	2349 #1531 Interactive 4/8-way 830 CUoD
24D9	2349 #1532 Interactive 4/8-way 830 CUoD
24DA	2349 #1533 Interactive 4/8-way 830 CUoD
24DB	2349 #1534 Interactive 4/8-way 830 CUoD
24DC	2349 #1535 Interactive 4/8-way 830 CUoD
24DD	2349 #1536 Interactive 4/8-way 830 CUoD
24DE	2349 #1537 Interactive 4/8-way 830 CUoD
241F	2065 Model 730 Processor
249D	2435 Model 820 Processor with #1523
2515	2515 C10 Floating Pt Processor
2516	2516 C20 Floating Pt Processor
2523	2523 D80 Processor
2525	2525 D02 Processor
2528	2528 16.8 SPPR CPU for Model F97
2530	2530 E04 Processor
2531	2413 E06 Processor
2533	2533 E20 Processor
2534	2534 E25 Processor
2536	2536 E35 Processor
2537	2537 E45 Processor
2539	2539 E02 TWINAXIAL
2540	2540 0.7 SPPR CPU for Model D35
2541	2541 D45 Processor
2542	2542 D50 Processor
2543	2543 D60 Processor
2544	2544 D70 Processor
2552	2552 C06 Processor
2553	2553 D06 Processor

CCIN	Feature code description
2554	2554 D04 Processor
2555	2555 D10 Processor
2556	2556 D20 Processor
2557	2557 D25 Processor
2558	2558 C04 Processor 8 MB
2559	2559 E50 Processor
2560	2560 E60 Processor
2561	2561 E70 Sort Processor
2562	2562 E80 Sort Processor
2563	2563 E90 (2-way) Sort
2568	2568 E95 (2-way) Sort
2582	2582 F06 Processor
2583	2583 F25 Processor
2584	9584 ASCII Workstation Controller
2585	2414 F02 Processor
2585	9585 Twinaxial Workstation Controller
2586	2586 0.7 SPPR for F04
2587	2587 F10 Processor
2588	2588 F20 Processor
2592	2592 F35 Processor
2593	2593 F45 Sort Processor
2594	2594 F50 Processor
2595	2595 F60 Sort Processor
2596	2596 F70 Processor 1-way
2597	2597 F80 Processor 2-way
2598	2598 F90 Processor 2-way
259A	2599 F95 Processor 2-way
25BA	2432 Model 270 Processor
25BA	2452 Dedicated Domino Processor
25BC	0150 Model 820 Base Processor
25BD	0151 Model 820 Base Processor
25BE	0152 Model 820 Base Processor
2600	2600 Magnetic Storage Controller
2601	2601 9346 Mag Tape Unit Controller
2602	2602 Processor Expansion
2602	2607 9348 Mag Tape Unit Attach
2604	2604 3422 3430 Mag Tape Subsys
2605	2605 ISDN Basic Rate Interface Adapter
2608	2608 2440/9348 HCD Mag Tape Atch
2611	2611 DASD Controller
2613	2613 V.35 One-Line Adapter
2614	2614 X.21 One-Line Adapter
2617	2617 Ethernet/IEEE 802.3 CSMA/CD
2617	9617 Base Ethernet IOP
2618	2618 Fiber Distributed Data Interface Adapter
2618	8664 Opt Base Fiber DD Intf.
2619	2619 LAN/WAN/Workstation IOA
2619	9619 Base 16/4 Mbps Token-Ring IOP
2620	2620 Full Cryptographic Processor
2621	2621 Storage Device Controller
2622	2622 3490 Magnetic Tape Attach
2623	9623 Std Six Line Comm Cntrlr
2623	2623 Six-Line Communications Controller
2624	2624 Storage Device Controller
2624	9624 Store Device Control Spec
2625	2625 Ethernet/IEEE 802.3 CSMA/CD
2626	2626 16/4 Mbps Token Ring Adapter/A
2628	2628 Limited Cryptographic Processor
2629	2629 LAN/WAN/Workstation IOP



CCIN	Feature code description
2634	2634 16/4 Mbps Token-Ring Adapter
2636	2636 16/4 Mbps Token-Ring Adapter
2637	9144 ASCII Workstation Controller
2637	9150 Std MFIOF/ASCII WSC
2637	9147 Std MFIOF/ASCII WSC
2638	9146 Std MFIOF/TWINAXIAL WSC
2644	2644 Magnetic Tape Attachment Card/HP
2647	2647 9348 Model 2 Tape Attachment
2651	9651 Storage Device Controller
2654	8609 EIA 232/V.24 2-Line
2654	9609 Std EIA 232/V.24 2-line
2661	9148 Std MFIOF/Twinaxial WSC
2661	9151 Std MFIOF/Twinaxial WSC
2661	9172 TWINAXIAL MFIOF
2663	2663 I/O Attachment Processor
2664	2664 Integrated Fax Adapter
2665	8665 Opt Base Shielded DD Intf
2665	2665 Copper Dist Data Interface
2666	2666 High-Speed Communications Adapter
2668	2668 Wireless LAN Adapter
2669	2669 Shared Bus Interface Card
2670	2670 Sys Unit Exp Tower (optical)
2671	2671 PCI Bus IOP
2672	2672 PCI Bus IOP
2673	2673 Optical Bus Adapter
2673	9673 Std Optical Bus Adapter
2674	2674 Optical Bus Adapter
2680	2680 Optical Bus Receiver- 266 Mbps
2682	2682 Optcl Bus Rcvr (1063 Mbps)
2683	2683 266 Mbps OptiConnect Receiver
2685	2685 1063 Mbps OptiConnect Receive
2686	2686 Optical Link Processor (266 Mbps)
2688	2688 Optical Link Processor(1063 Mbps)
2691	2691 Opt Bus Adapt with Token Ring
2691	9691 Base Bus Adapter (HSL Copper)
2692	2692 Opt Bus Adapt with Ethernet
2693	2693 Opt Bus Adapt with Token Ring
2694	2694 Opt Bus Adapt with Ethernet
2695	2695 Optical Bus Adapter
2696	9696 Base Optical Bus Adapter
2699	9699 Base 2-Line WAN IOA
2699	2699 Two-Line WAN IOA
26A8	2351 Model 830 1/8-way POD with #1531
26A9	2351 Model 830 1/8-way POD with #1532
26AA	2351 Model 830 1/8-way POD with #1533
26AB	2351 Model 830 1/8-way POD with #1534
26AC	2351 Model 830 1/8-way POD with #1535
26AD	2351 Model 830 1/8-way POD with #1536
26AE	2351 Model 830 1/8-way POD with #1537
26B0	2352 Model 840 8/12-way POD with #1540
26B1	2352 Model 840 8/12-way POD with #1541
26B2	2352 Model 840 8/12-way POD with #1542
26B3	2352 Model 840 8/12-way POD with #1543
26B4	2352 Model 840 8/12-way POD with #1544
26B5	2352 Model 840 8/12-way POD with #1545
26B6	2352 Model 840 8/12-way POD with #1546
26B8	2353 Model 840 12/18-way POD with #1540
26B9	2353 Model 840 12/18-way POD with #1541
26BA	2353 Model 840 12/18-way POD with #1542

CCIN	Feature code description
26BB	2353 Model 840 12/18-way POD with #1543
26BC	2353 Model 840 12/18-way POD with #1544
26BD	2353 Model 840 12/18-way POD with #1545
26BE	2353 Model 840 12/18-way POD with #1546
26BF	2353 Model 840 12/18-way POD with #1547
26C0	2354 Model 840 18/24-way POD with #1540
26C1	2354 Model 840 18/24-way POD with #1541
26C2	2354 Model 840 18/24-way POD with #1542
26C3	2354 Model 840 18/24-way POD with #1543
26C4	2354 Model 840 18/24-way POD with #1544
26C5	2354 Model 840 18/24-way POD with #1545
26C6	2354 Model 840 18/24-way POD with #1546
26C7	2354 Model 840 18/24-way POD with #1547
26C8	2354 Model 840 18/24-way POD with #1548
26D0	2461 Model 840 24-way Processor with #1540
26D1	2461 Model 840 24-way Processor with #1541
26D2	2461 Model 840 24-way Processor with #1542
26D4	2461 Model 840 24-way Processor with #1544
26D5	2461 Model 840 24-way Processor with #1545
26D6	2461 Model 840 24-way Processor with #1546
26D7	2461 Model 840 24-way Processor with #1547
26D8	2461 Model 840 24-way Processor with #1548
2715	2715 Processor/Memory Regulator
2718	2718 PCI Magnetic Media Controller
2720	2720 Base PCI WAN/Twinaxial IOA
2720	9720 Base PCI WAN/Twinaxial IOA
2721	2721 PCI Two-Line WAN IOA
2721	9721 Base PCI 2-Line WAN IOA
2722	2722 Twinaxial Workstation IOA
2723	2723 PCI Ethernet IOA
2723	4723 PCI 10 Mbps Ethernet Adapter
2723	9723 PCI Ethernet IOA
2724	2724 PCI 16/4 Mbps Token Ring IOA
2724	9724 PCI Token Ring IOA
2726	2726 PCI RAID Disk Unit Controller
2728	9728 Base Disk Unit Controller
2729	2729 PCI Magnetic Media Controller
2730	2730 Programmable Regulator
2732	9733 Base HSL Ports - 8 Copperr
2732	9732 Base HSL Ports - 8 Copper
2735	2735 Optical Bus Adapter
2736	2736 Optical Bus Adapter
2737	9737 Base HSL Ports - 16 Copper
2738	2738 HSL Ports - 8 Copper
2739	9739 Base Optical Bus Adapter
2739	2739 Optical Bus Adapter
273B	9730 Base HSL-2 Ports - 4 Copper
2740	9740 Base RAID Disk Unit Controller
2740	2740 PCI RAID Disk Unit Controller
2741	2741 PCI RAID Disk Unit Controller
2742	0613 - Direct Attach - #2742 PCI 2-Line WAN IOA
2742	2742 2-Line WAN IOA
2743	0601 - Direct Attach - #2743 PCI 1 Gbps Ethernet IOA
2743	2743 1 Gbps PCI Ethernet IOA
2744	0603 - Direct Attach - #2744 PCI 100 Mbps Token-Ring IOA
2744	2744 PCI 100 Mbps Token Ring IOA
2745	0608 - Direct Attach - #4745 PCI WAN IOA

CCIN	Feature code description
2745	4745 PCI 2-line WAN IOA
2745	2745 PCI 2-Line WAN IOA
2745	9745 Base PCI 2-Line WAN IOA
2745	0398 Operations Console Package
2746	4746 PCI Twinaxial IOA
2746	2746 PCI Twinaxial Workstation IOA
2746	9746 Base PCI Twinaxial IOA
2748	0605 - Direct Attach - #4748 PCI RAID Disk Unit Controller
2748	9748 Base PCI RAID Disk Unit Controller
2748	4748 PCI RAID Disk Unit Controller
2748	2748 PCI RAID Disk Unit Controller
2749	2749 PCI Ultra Magnetic Media Controller
2750	4750 PCI ISDN BRI U IOA
2750	2750 PCI ISDN BRI U Adapter
2751	4751 PCI ISDN BRI S/T IOA
2751	2751 PCI ISDN BRI S/T IOA
2754	2777 HSL Ports - 8 Copper
2754	9777 Base HSL Ports - 8 Copper
2754	9752 Base HSL Ports - 8 Copper
2754	2754 HSL Ports - 8 Copper
2755	9755 Base HSL Ports - 16 Copper
2755	2755 HSL Ports - 16 Copper
2757	0618 - Direct Attach - #2757 PCI-X Ultra RAID Disk Controller
2757	2757 PCI-X Ultra RAID Disk Controller
2758	9774 Base HSL Ports - 2 Optical/6 Copper
2758	2758 HSL Ports - 2 Optical/6 Copper
2758	9758 Base HSL Ports - 2 Optical/6 Copper
2758	2774 HSL Ports - 2 Optical/6 Copper
2759	9759 Base HSL Ports - 4 Optical/12 Copper
2759	2759 HSL Ports - 4 Optical/12 Copper
2760	0602 - Direct Attach - #2760 PCI 1 Gbps Ethernet UTP IOA
2760	2760 PCI 1 Gbps Ethernet UTP Adapter
2761	2761 Integrated Analog Modem
2761	4761 PCI Integrated Analog Modem
2763	2763 PCI RAID Disk Unit Controller
2763	0604 - Direct Attach - #2763 PCI RAID Disk Unit Controller
2765	0611 - Direct Attach - #2765 PCI Fibre Channel Tape Controller
2765	2765 PCI Fibre Channel Tape Controller
2766	0612 - Direct Attach - #2766 PCI Fibre Channel Disk Controller
2766	2766 PCI Fibre Channel Disk Controller
2767	9767 Base PCI Disk Unit Controller
2768	2768 PCI Magnetic Media Controller
2771	9771 Base PCI Two-Line WAN with integrated modem
2773	0610 - Direct Attach - #2773 PCI Dual WAN/ModemIOA
2772	2772 PCI Dual WAN/Modem IOA
2772	2773 PCI Dual WAN/Modem IOA (ANSI)
2772	0609 - Direct Attach - #2772 PCI Dual WAN/Modem IOA
2776	2776 HSL-2 Ports - 8 Copper
2778	2778 PCI RAID Disk Unit Controller
2778	4778 PCI RAID Disk Unit Controller

CCIN	Feature code description
2778	0606 - Direct Attach - #4778 PCI RAID Disk Unit Controller
2778	9778 Base PCI RAID Disk Unit Controller
2780	0627 - Direct Attach - #2780 PCI-X Ultra4 RAID Disk Controller
2780	2780 PCI-X Ultra4 RAID Disk Controller
2782	0619 - Direct Attach - #2782 PCI-X RAID Disk Unit Controller
2785	2785 HSL-2 Ports - 2 Copper
2785	9785 Base HSL-2 Ports - 2 Copper
2786	2786 HSL Ports - 2 Optical
2786	9786 Base HSL Ports - 2 Optical
2787	0626 - Direct Attach - #2787 PCI-X Fibre Channel Disk Controller
2788	2788 HSL Ports - 8 Optical
2789	2789 HSL Ports - 4 Optical
2789	9789 Base HSL Ports - 4 Optical
2793	2793 2-Line WAN IOA with Modem
2793	2794 2-Line WAN IOA with Modem (CIM)
2793	0614 - Direct Attach - #2793 PCI 2-Line WAN w/Modem
2793	9794 Two-Line IOA with Modem
2793	9793 Two-Line WAN IOA with Modem
2793	9794 Two-Line IOA with Modem (CIM)
2793	9793 Two-Line WAN IOA with Modem
2794	0615 - Direct Attach - #2794 PCI 2-Line WAN w/Modem
2799	2799 PCI Integrated xSeries Server
2800	9800 Internal Disk Unit (640 MB)
2801	9801 Internal Disk Unit (1 GB)
2801	2801 1.96 GB Internal Disk Unit
2802	2802 2.0 GB Internal Disk Unit
2802	9802 Std 2.0 GB Internal Disk Unit
2805	0616 - Direct Attach - #2805 PCI Quad Modem IOA
2805	2805 PCI Quad Modem IOA
2806	0617 - Direct Attach - #2806 PCI Quad Modem (CIM)
2806	2806 PCI Quad Modem (CIM)
2809	2809 PCI LAN/WAN/Workstation IOP
2810	2810 LAN/WAN IOP
2811	2811 PCI 25 Mbps UTP ATM IOA
2812	2812 PCI 45 Mbps Coax T3/DS3 ATM IOA
2813	2813 PCI 155 Mbps MMF ATM
2813	2814 PCI 100 Mbps MMF ATM
2815	4815 PCI ATM 155 Mbps UTP OC3
2815	2815 PCI 155 Mbps UTP OC3 ATM IOA
2816	2816 PCI 155 Mbps MMF ATM IOA
2816	4816 PCI ATM 155 Mbps MMF
2817	2817 PCI 155 Mbps MMF ATM IOA
2818	4818 PCI ATM 155 Mbps SMF OC3
2818	2818 PCI 155 Mbps SMF OC3 ATM IOA
2819	2819 PCI 34 Mbps Coax E3 ATM IOA
2824	2824 PCI Feature Controller
2830	2830 Main Storage Expansion
2838	0607 - Direct Attach - #4838 PCI 100/10 Mbps Ethernet IOA
2838	4838 PCI 100/10 Mbps Ethernet IOA
2838	9738 PCI 100/10 Mbps Ethernet IOA
2838	2838 PCI 100/10 Mbps Ethernet IOA
283F	7133 DASD Concurrent Maintenance Cage

CCIN	Feature code description
283F	7123 DASD Expansion Unit
283F	7127 DASD Expansion Unit
2842	2842 PCI IOP
2843	9943 Base PCI IOP
2843	2843 PCI IOP
2844	9844 Base PCI IOP
2844	2844 PCI IOP
2849	9749 Base PCI 100/10 Ethernet IOA
2849	2849 10/100 Mbps Ethernet Adapter
2849	0623 - Direct Attach - #2849 PCI 100/10 Mbps Ethernet IOA
284A	PCI IOP Embedded
284B	PCI IOP Embedded
284C	PCI IOP Embedded
284D	PCI IOP Embedded
284E	PCI IOP Embedded
2850	2868 Integrated Netfinity Server
2850	2850 Integrated PC Server
2850	2857 Integrated PC Server
2850	2851 Integrated PC Server
2850	2866 PCI Integrated Netfinity Server
2850	2865 PCI Integrated Netfinity Server
2850	2852 Integrated PC Server
2850	2854 PCI Integrated PC Server
2850	2858 FSIOA 128 MB mem keyboard mouse
2860	2860 16 MB IOP Memory
2861	2861 32 MB IOP Memory
2862	2862 128 MB IOP Memory
2863	2863 8 MB Addtl Cache Memory
2864	2864 32 MB Addtl Cache Memory
2867	2867 256 MB IOP Memory
286C	PCI IOP Embedded
286D	PCI IOP Embedded
286F	PCI IOP Embedded
2881	2881 Main Storage Expansion
2884	2884 Main Storage Expansion Riser Card
2886	2886 Optical Bus Adapter
2886	9886 Base Optical Bus Adapter
2887	9887 Base HSL-2 Bus Adapter
2887	2887 HSL-2 Bus Adapter
2890	2799 PCI Integrated xSeries Server
2890	2891 PCI Integrated xSeries Server
2890	2890 PCI Integrated Netfinity Server
2890	2899 PCI Integrated xSeries Server
2890	2791 PCI Integrated xSeries Server
2890	2790 PCI Integrated Netfinity Server
2892	2792 PCI Integrated xSeries Server
2892	2892 PCI Integrated xSeries Server
2892	9792 Base PCI Integrated xSeries Server
2892	4710 PCI Integrated xSeries Server
2892	4810 PCI Integrated xSeries Server
2895	2795 128 MB Server Memory
2895	2895 128 MB Server Memory
2896	2896 256 MB Server Memory
2896	2796 256 MB Server Memory
2897	2797 1 GB Server Memory
2897	2897 1 GB Server Memory
28B3	9787 Base HSL-2 Ports - 2 Copper
28BC	7124 DASD Expansion Unit - 5 slot

CCIN	Feature code description
28CD	7136 DASD Expansion Unit - 6 slot
28CD	7137 DASD Concurrent Maintenance Cage
28D8	7818 HSL-2/RIP-G 2-Ports Copper
28DB	9531 Base HSL-2 Bus Adapter
28EB	7819 HSL/RIO 2-Ports Optical
28EF	0632 USB 2.0 PCI Adapter
28F6	6592 - 4-Disk Slot Exp - Base Ctlr
28F7	6584 - 4-Disk Slot Exp - PCI-X Ctlr
292C	4270 - Ctlr to External Port Cable
292D	6594 Addit. 520 4-disk DASD Backplane
292E	6593 - 4-Disk Slot Exp - PCI-X Ctlr
292E	6594 - 4-Disk Slot Exp-PCI-X Ctlr
2A6A	2065 560 CPW Model 730 Processor with #1506 Interactive Feature
2A6B	2065 560 CPW Model 730 Processor with #1507 Interactive Feature
2A6C	2065 560 CPW Model 730 Processor with #1508 Interactive Feature
2A6D	2065 560 CPW Model 730 Processor with #1509 Interactive Feature
2A6E	2066 1050 CPW Model 730 Processor with #1506 Interactive Feature
2A6F	2066 1050 CPW Model 730 Processor with #1507 Interactive Feature
2B6A	2066 1050 CPW Model 730 Processor with #1508 Interactive Feature
2B6B	2066 1050 CPW Model 730 Processor with #1509 Interactive Feature
2B6C	2066 1050 CPW Model 730 Processor with #1510 Interactive Feature
2B6D	2067 2000 CPW Model 730 Processor with #1506 Interactive Feature
2B6E	2067 2000 CPW Model 730 Processor with #1508 Interactive Feature
2B6F	2067 2000 CPW Model 730 Processor with #1509 Interactive Feature
2C6A	2067 2000 CPW Model 730 Processor with #1510 Interactive Feature
2C6B	2067 2000 CPW Model 730 Processor with #1511 Interactive Processor
2C6C	2068 2890 CPW Model 730 Processor with #1506 Interactive Feature
2C6D	2068 2890 CPW Model 730 Processor with #1508 Interactive Feature
2C6E	2068 2890 CPW Model 730 Processor with #1509 Interactive Feature
2C6F	2068 2890 CPW Model 730 Processor with #1510 Interactive Feature
2D6A	2068 2890 CPW Model 730 Processor with #1511 Interactive Processor
2D6B	2069 3660 CPW Model 740 Processor with #1514 Interactive Feature
2D6C	2069 3660 CPW Model 740 Processor with #1510 Interactive Feature
2D6E	2069 3660 CPW Model 740 Processor with #1512 Interactive Feature
2E6A	2070 4550 CPW Model 740 Processor with #1514 Interactive Feature
2E6B	2070 4550 CPW Model 740 Processor with #1510 Interactive Feature

CCIN	Feature code description
2E6C	2070 4550 CPW Model 740 Processor with #1511 Interactive Feature
2E6D	2070 4550 CPW Model 740 Processor with #1512 Interactive Feature
2E6E	2070 4550 CPW Model 740 Processor with #1513 Interactive Feature
2D6D	2069 3660 CPW Model 740 Processor with #1511 Interactive Feature
3001	3001 32 MB Main Storage
3002	3062 128 MB Main Storage
3002	3000 Migrated 128 MB Main Storage
3002	3002 128 MB Main Storage
3003	3003 256 MB Main Storage
3004	3004 256 MB Main Storage
3004	3064 256 MB Main Storage
3005	3005 512 MB Main Storage
3005	3065 512 MB Main Storage
3006	3006 512 MB Main Storage
3006	3066 512 MB Main Storage
3007	3067 1 GB Main Storage
3007	3007 1 GB Main Storage
3009	3009 128 MB Main Storage
3015	3015 8 GB Main Storage
3016	3016 8 GB Main Storage
3017	3017 32 GB Main Storage
3018	3018 32 GB Main Storage
3020	3020 4 GB Main Storage
3021	3021 4 GB Main Storage
3022	3022 128 MB Main Storage
3024	3024 256 MB Main Storage
3025	3025 512 MB Main Storage
3026	3026 512 MB Main Storage
3027	3027 1 GB Main Storage
3029	3029 128 MB Main Storage
3032	3032 256 MB Main Storage
3033	3033 512 MB Main Storage
3034	3034 1 GB Main Storage
3035	3035 16 GB Main Storage
3036	3036 16 GB Main Storage
3042	3042 256 MB Main Storage
3043	3043 512 MB Main Storage
3044	3044 1024 MB Main Storage
3045	3045 1024 MB Main Storage
3046	3046 2048 MB Main Storage
304E	7816 CUoD 2/4 GB(4X1 GB), DDR1
3054	3054 4 MB Additional Main Storage
3055	3055 8 MB Additional Main Storage
3060	3060 16 MB Additional Main Storage
3061	3061 16 MB Additional Main Storage
3092	3092 256 MB Main Storage
3093	3093 512 MB Main Storage
3094	3094 1024 MB Main Storage
3095	3095 1024 MB Main Storage
3096	3096 2048 MB Main Storage
309D	4452 2 GB Memory (4x 512 MB DIMMs)
309E	4490 4 GB Memory (4x1 GB DIMMs)
309F	4453 4 GB Memory (4x1 GB DIMMs)
30AA	4454 8 GB Memory (4x2 GB DIMMs)
30B3	4491 16 GB Memory (4x4 GB DIMMs)

CCIN	Feature code description
30DE	7890 4/8 GB CUoD DDR1 Memory
30F7	4492 32 GB Memory (4x8GB DIMMs)
3100	3100 16 MB Main Storage
3101	3101 32 MB Main Storage
3102	3102 16 MB Main Storage
3103	3103 32 MB Main Storage
3103	4103 32 MB Main Storage
3104	9304 Std 64 MB Main Storage
3104	3104 64 MB Main Storage
3104	4204 64 MB Main Storage
3108	3108 8 MB Main Storage
3109	3109 32 MB Main Storage
3110	3110 64 MB Main Storage
3110	8210 Optional 64 MB Main Storage
3110	9110 Std 64 MB Main Storage
3116	3116 MFIO Storage Expansion
3117	4117 8 MB Main Storage SIMM
3117	3117 8 MB Main Storage
3118	4118 16 MB Main Storage SIMM
3118	3118 16 MB Main Storage
3119	3119 8 MB Main Storage
3120	4120 8 MB Main Storage
3120	3120 8 MB Main Storage
3121	3121 8 MB Main Storage
3121	4121 8 MB Main Storage
3122	3122 32 MB Main Storage
3122	4122 32 MB Main Storage
3130	3130 32 MB Main Storage
3131	9231 Opt Base 64 MB Main Storage
3131	3131 64 MB Main Storage
3132	9232 Opt Base 128 MB Main Storage
3132	3132 128 MB Main Storage
3133	4133 64 MB Main Storage
3133	3133 64 MB Main Storage
3134	3134 128 MB Main Storage
3134	9234 Std 128 MB Main Storage
3134	4134 128 MB Main Storage
3135	4135 256 MB Main Storage
3135	7135 Opt 256 MB Main Storage
3135	8135 Opt Base 256 MB Main Storage
3135	3135 256 MB Main Storage
3136	3136 256 MB Main Storage
3136	4136 256 MB Main Storage
3138	4138 64 MB Main Storage
3138	3138 64 MB Main Storage
3140	3140 8 MB Main Storage
3141	3141 16 MB Main Storage
3142	3142 32 MB Main Storage
3144	3144 8 MB Main Storage
3144	4144 8 MB Main Storage
3145	4145 16 MB Main Storage
3145	3145 16 MB Main Storage
3146	4146 32 MB Main Storage
3146	3146 32 MB Main Storage
3147	4147 32 MB Main Storage
3147	3147 32 MB Main Storage
3149	3149 128 MB Main Storage
3149	4149 128 MB Main Storage
3152	3152 32 MB Main Storage

CCIN	Feature code description
3152	9252 Std 32 MB Main Storage
3153	3153 64 MB Main Storage
3153	8253 Opt Base 64 MB Main Storage
3154	3154 128 MB Main Storage
3154	8254 Opt Base 128 MB Main Storage
3154	9254 Std 128 MB Main Storage
3155	3155 256 MB Main Storage
3155	8255 Opt Base 256 MB Main Storage
3155	7255 Opt Base 256 MB Main Storage
3156	9156 Std 64 MB Main Storage
3156	4156 64 MB Main Storage
3156	3156 64 MB Main Storage
3156	8156 Opt Base 64 MB Main Storage
3157	4157 128 MB Main Storage
3157	7157 Opt Base 128 MB Main Storage
3157	8157 Opt Base 128 MB Main Storage
3157	3157 128 MB Main Storage
3158	8158 Opt Base 256 MB Main Storage
3158	3158 256 MB Main Storage
3158	4158 256 MB Main Storage
3158	7158 Opt Base 256 MB Main Storage
3159	9159 Std 8 MB Main Storage
3159	3159 8 MB Main Storage
3160	3160 16 MB Main Storage
3160	8160 Opt Addtl 16 MB Main Storage
3160	9160 Std 16 MB (2 SIMM)
3161	3161 32 MB Main Storage
3161	9161 Std 32 MB Main Storage
3161	4161 32 MB Main Storage
3162	9262 Std 128 MB Main Storage
3162	3162 128 MB Main Storage
3163	7263 Opt Base 256 MB Main Storage
3163	9263 Std 256 MB Main Storage
3163	3163 256 MB Main Storage
3164	3164 512 MB Main Storage
3164	8264 Opt Base 512 MB Main Storage
3164	7264 Opt Base 512 MB Main Storage
3165	8265 Opt Base 512 MB Main Storage
3165	3165 1024 MB Main Storage
3165	7265 Opt Base 1024 MB MS
3166	7266 Opt Base 256 MB MS
3166	3166 256 MB Main Storage
3166	9266 Std 256 MB Main Storage
3172	3182 32 MB Main Storage
3172	9272 Std 32 MB Main Storage
3172	8172 Delt Price 32 MB
3172	9282 Std 32 MB Main Storage
3172	3172 32 MB Main Storage (2 SIMMs)
3172	4172 32 MB Main Storage
3179	3179 256 MB Main Storage
3179	9179 Base 256 MB Main Storage
3180	8180 Opt Base 512 MB Main Storage
3180	3180 512 MB Main Storage
3184	3184 32 MB Main Storage
3184	9184 Standard 32 MB Main Storage
3185	9185 Standard 64 MB Main Storage
3185	3185 64 MB Main Storage
3185	8185 Opt Base 64 MB Main Storage
3186	7186 Opt Base 128 MB Main Storage

CCIN	Feature code description
3186	3186 128 MB Main Storage
3186	8186 Opt Base 128 MB Main Storage
3187	8187 Opt Base 256 MB Main Storage
3187	7187 Opt Base 256 MB Main Storage
3187	3187 256 MB Main Storage
3189	3189 128 MB Main Storage
3190	9190 Base 256 MB Main Storage
3190	3190 256 MB Main Storage
3191	3191 512 MB Main Storage
3191	8191 Opt Base 512 MB Main Storage
3192	3192 1024 MB Main Storage
3192	8192 Opt Base 1024 MB Main Storage
3193	8193 Opt Base 2048 MB Main Storage
3193	3193 2048 MB Main Storage
3195	3195 4096 MB Main Storage
3196	3196 8192 MB Main Storage
3197	3197 1024 MB Main Storage
3198	3198 2048 MB Main Storage
3612	3612 1024 MB Main Storage
3613	3613 2048 MB Main Storage
3614	3614 4096 MB Main Storage
4010	4010 4 MB Write Cache
4011	4011 8 MB Data Store
4012	4012 32 MB Data Store
4104	9904 4 MB Main Storage - No Charge
4104	4104 4 MB Main Storage
4114	4114 4 MB Main Storage Expansion
4326	4326 35.16 GB 15k RPM Disk Unit
4327	4327 70.56 GB 15k RPM Disk Unit
4758	4801 PCI Cryptographic Coprocessor
4758	4802 PCI Cryptographic Processor
4758	4800 PCI Cryptographic Processor
4812	4811 PCI Integrated xSeries Server
4812	4812 PCI Integrated xSeries Server
4812	4813 PCI Integrated xSeries Server
4812	9812 Base PCI Integrated xSeries Server
5033	5033 Migration Tower I
5034	5034 Migration Tower I
5035	5035 Migration Tower I
5052	8052 Optional Base 16 Disk Storage Expansion Unit
5065	5065 Storage/PCI Expansion Tower
5066	5065 Equivalent
5066	5066 1.8 M I/O Tower
5072	5072 1063 Mbps System Unit Expansion Tower
5073	5073 1063 Mbps System Unit Expansion Tower
5078	5078 PCI Expansion Unit
5078	0578 PCI Expansion Unit in Rack
5079	5079 1.8 M I/O Tower
5088	5088 PCI-X Expansion Unit
5088	0588 PCI-X Expansion Unit in Rack
5094	5094 PCI-X Expansion Tower
5095	0595 PCI-X Expansion Unit in Rack
5700	5700 PCI 1 Gbps Ethernet IOA
5700	0620 - Direct Attach - #5700 PCI 1 Gbps Ethernet IOA
5701	0621 - Direct Attach - #5701 PCI 1 Gbps Ethernet UTP IOA
5701	5701 PCI 1 Gbps Ethernet UTP IOA

CCIN	Feature code description
5702	5705 PCI-X Tape/DASD Controller
5702	0624 - Direct Attach - #5702 PCI-X Ultra Tape Controller
5702	5702 PCI-X Ultra Tape Controller
5702	5712 PCI-X Tape/DASD Controller
5703	0628 - Direct Attach - #5703 PCI-X RAID Disk Unit Controller
5703	5703 PCI-X RAID Disk Unit Controller
5704	0625 - Direct Attach - #5704 PCI-X Fibre Channel Tape Controller
5704	5704 PCI-X Fibre Channel Tape Controller
5706	0643 - Direct Attach - #5706 PCI-X Gbps Ethernet-TX IOA
5706	5706 PCI-X 1 Gbps Ethernet-TX IOA
5707	5707 PCI-X 1 Gbps Ethernet-SX IOA
5708	#5580 - #2780 Controller with Auxiliary Write Cache 2780 Ctlr with Aux Write Cache
5708	5581 - #2757 Controller with Auxiliary Write Cache
5709	5709 RAID Enabler Card
6040	6040 Twinaxial Workstn Controller
6041	6041 ASCII Workstation Controller
6050	9050 Base Twinaxial Workstn Cntl
6050	6050 Enhanced Twinaxial Workstation Controller
6053	9053 Std Twinaxial WSC Specify
6054	9054 Std LocalTalk Controller
6100	6100 Disk Unit (315 MB)
6100	9100 315 MB Disk Unit Relocation
6102	9102 Std 320 MB Disk Unit
6103	6103 Single Disk Unit (400 MB)
6103	9103 Std 400 MB Disk Unit
6104	6126 Base DASD Replace (988 MB)
6104	9104 Standard 988 MB Disk Unit
6105	9106 Standard Dual Disk (640 MB)
6105	6105 Single Disk Unit (320 MB)
6105	6108 Additional Dual Disk (640 MB)
6105	1200 Single Disk Unit (320 MB) Kit
6105	1105 Single Disk Unit (320 MB) Kit
6107	1107 Single Disk Unit (400 MB) Kit
6107	6121 Additional Dual Disk (800 MB)
6107	9120 Standard Dual Disk (800 MB)
6107	6107 Single Disk Unit (400 MB)
6107	6120 Dual Disk Unit (800 MB)
6107	1201 Single Disk Unit (400 MB) Kit
6109	1109 Single Disk Unit (988 MB) Kit
6109	9109 Std 988 MB Disk Unit Spec
6109	6127 Base DASD Replace (1976 MB)
6109	6124 Base DASD Upgrade (1976 MB)
6109	6125 Base DASD Replace (988 MB)
6109	1210 Addtl Disk Unit (988 MB)
6109	6123 Addition Dual Disk (1976 MB)
6109	1202 Single Disk Unit (988 MB) Kit
6109	8123 Dual Disk Unit (1976 MB)
6109	6109 Single Disk Unit (988 MB)
6110	8110 Std Mag Storage Controller
6110	6110 Mag Storage Dev Controller
6111	6111 Mag Storage Dev Controller
6111	8111 Std Mag Storage Controller
6112	6112 Magnetic Storage Device Controller
6122	9122 Std 851 MB Disk Unit (RPQ)
6140	9140 Twinaxial Workstn Control

CCIN	Feature code description
6140	6140 Twinaxial Workstation Controller
6141	6141 ASCII Workstation Controller
6141	9141 ASCII Workstation Control
6146	6146 Diskette Adapter
6147	6147 Diskette Adapter
6148	6148* 8-Port Twinaxial Expansion
6149	6149 16/4 Mbps Token Ring IOA
6149	9249 Base 16/4 Mbps Token-Ring IOA
6150	6150 Three-Line Comm Controller
6151	6171 X.21 One-Line 50
6151	6151 X.21 One-Line 20
6152	9865 EIA 232/V.24 One line 50E
6152	9862 EIA 232/V.24 One line 20E
6152	6152 EIA 232/V.24 Adapter
6152	6175 EIA 232/V.24 One-Line 50
6152	6155 EIA 232/V.24 One-Line 20
6152	6154 EIA 232/V.24 One-Line 20E
6152	6174 EIA 232/V.24 One-Line 50E
6153	6173 V.35 One-Line (50-ft Cable)
6153	6153 V.35 One-Line (20-ft Cable)
6160	6160 Token-Ring Network Adapter
6180	6180 Twinaxial Workstation IOA
6180	9280 Base Twinaxial WSC
6181	9381 Base Ethernet IEEE 802.3 IOA
6181	6181 ASCII Workstation Controller
6183	6183 6 port ASCII IOA
63A0	5753 30 GB ¼-inch Cartridge Tape Device
63A0	5754 50 GB ¼-inch Cartridge Tape Device
6320	9520 Std CD-ROM
6321	6425 CD-ROM
6321	4625 CD-ROM
6321	4525 CD-ROM
6321	4425 CD-ROM
6321	6325 Optional CD-ROM
6330	4630 DVD-RAM
6330	4530 DVD-RAM
6330	4430 DVD-RAM
6331	5751 DVD-RAM
6333	4533 DVD
6333	4633 DVD-RAM
6335	6365 840 MB QIC-mini Tape Extrl
6335	6335 840 MB ¼-inch Cartridge Mini Tape Unit
6335	1335 6335 External Conversion Kit
6335	1262 840 MB QIC-3040-MC
6336	4431 DVD-ROM
6336	4531 DVD-ROM
6336	4631 DVD-ROM
6337	2640 DVD-ROM
6340	6340 13 GB QIC mini Tape Unit
6341	6341 120 MB ¼-in Cart Tape
6341	9341 Std 120 MB ¼-inch Tape
6342	9342 Std 525 MB ¼-inch Tape
6342	6342 525 MB ¼-inch Cart Tape
6342	8342 525 MB ¼-inch Cart Tape
6343	6343 1.2 GB ¼-inch Cart Tape
6343	7343 1.2 GB ¼-inch Cart Tape
6343	5343 Base Tape Replace (1.2 GB)
6343	8343 1.2 GB ¼-inch Cart Tape
6343	9343 Std 1.2 GB ¼-inch Tape

CCIN	Feature code description
6344	6344 2.5 GB ¼-in Cart Tape
6344	8344 2.5 GB ¼-in Cart Tape
6344	7344 2.5 GB ¼-in Cart Tape
6345	6345 13 GB ¼-in Cart Tape
6345	8345 13 GB ¼-in Cartridge Tape
6346	6346 120 MB ¼-in Cart Tape
6347	9347 Std 525 MB ¼-inch Tape
6347	7347 Base Tape Upgrade (525 MB)
6347	8347 525 MB ¼-in Cart Tape
6347	6347 525 MB ¼-in Cart Tape
6348	8348 1.2 GB ¼-in Cart Tape
6348	9348 Std 1.2 GB ¼-inch-inch Tape
6348	7348 1.2 GB ¼-in Cart Tape
6348	5348 Base Tape Replace (1.2 GB)
6348	6348 1.2 GB ¼-in Cart Tape
6349	8349 2.5 GB ¼-in Cart Tape
6349	7349 2.5 GB ¼-in Cart Tape
6349	6349 2.5 GB ¼-in Cart Tape
6349	5349 Base Tape Replace (2.5 GB)
6350	6350 13 GB ¼-in Cart Tape
6366	6367 525 MB ¼-in Cart Tape
6366	6366 120 MB ¼-in Cart Tape
6368	6368 1.2 GB ¼-inch Cart Tape
6369	6369 2.5 GB ¼-inch Cart Tape
6370	6370 13 GB ¼-in Cartridge Tape
6378	1250 525 MB ¼-inch Tape Kit
6378	1378 525 MB ¼-inch Cart Tape Kit
6379	1251 1.2 GB ¼-inch Tape Kit
6379	1379 1.2 GB ¼-inch Cart Tape Kit
6379	1349 1.2 GB ¼-inch Tape Kit
6380	1252 2.5 GB ¼-inch Tape Kit
6380	6480 2.5 GB ¼-inch Cart Tape
6380	9380 2.5 GB ¼-inch Cart Tape
6380	1260 2.5 GB ¼-inch Tape
6380	1350 2.5 GB ¼-inch Tape Kit
6380	6380 2.5 GB ¼-inch Cartridge Tape Unit
6380	1380 2.5 GB ¼-inch Cart Tape Kit
6385	6385 13 GB ¼-inch Cartridge Tape Unit
6385	6485 13 GB ¼-inch Cartridge Tape Unit
6385	1355 13.0 GB ¼-inch Tape Kit
6387	4487 50 GB ¼-inch Cartridge Tape Device
6387	4587 50 GB ¼-inch Cartridge Tape Device
6390	6490 7 GB 8 mm Cartridge Tape
6390	1261 7.0 GB 8 mm Cart Tape
6390	1360 7.0 GB 8 mm Cartridge Tape Kit
6390	6390 7 GB 8 mm Cartridge Tape Unit
63A0	4486 25 GB ¼-inch Cartridge Tape Device
63A0	4487 50 GB ¼-inch Cartridge Tape Device
63A0	4483 16 GB ¼-inch Cartridge Tape Device
63A0	4585 80 GB VXA-2 Tape Device
63A0	4685 80 GB VXA-2 Tape Device
63A0	4582 4 GB ¼-inch Cartridge Tape Device
63A0	4583 16 GB ¼-inch Cartridge Tape Device
63A0	4584 30 GB ¼-inch Cartridge Tape Device
63A0	4482 4 GB ¼-inch Cartridge Tape Device
63A0	4587 50 GB ¼-inch Cartridge Tape Device
63A0	4586 25 GB ¼-inch Cartridge Tape Device
63A0	6384 30 GB ¼-inch Cartridge Tape
63A0	6483 16 GB ¼-inch Cartridge Tape

CCIN	Feature code description
63A0	6484 30 GB ¼-inch Cartridge Tape
63A0	6486 25 GB ¼-inch Cartridge Tape
63A0	6383 16 GB ¼-inch Cartridge Tape Unit
63A0	6382 4 GB ¼-inch Cartridge Tape Unit
63A0	6381 2.5 GB ¼-inch Cartridge Tape
63A0	6482 4 GB ¼-inch Cartridge Tape
63A0	6481 2.5 GB ¼-inch Cart Tape
63A0	4687 50 GB ¼-inch Cartridge Tape Device
63A0	6386 25 GB ¼-inch Cartridge Tape Unit
63A0	4683 16 GB ¼-inch Cartridge Tape Device
63A0	4684 30 GB ¼-inch Cartridge Tape Device
63A0	4686 25 GB ¼-inch Cartridge Tape Device
63A0	4682 4 GB ¼-inch Cartridge Tape Device
6500	6500 Disk Controller
6501	6501 Tape/Disk Device Controller
6502	6502 High Performance Controller
6502	6522 Disk Unit Cntrlr for RAID
6506	6528 48 MB 2-Port FSIOP
6506	8717 Optional 32 mB One-Port FSIOP
6506	6526 16 MB 2-Port FSIOP
6506	6527 32 MB 2-Port FSIOP
6506	8719 Optional 64 MB One-Port FSIOP
6506	8718 Optional 48 MB One-Port FSIOP
6506	8716 Optional 16 MB One-Port FSIOP
6506	8729 Optional 64 MB 2-Port FSIOP
6506	6517 32 MB One-Port FSIOP
6506	6529 64 MB 2-Port FSIOP
6506	8727 Optional 32 mB 2-Port FSIOP
6506	6518 48 MB One-Port FSIOP
6506	8728 Optional 48 MB 2-Port FSIOP
6506	6516 16 MB One-Port FSIOP
6506	6519 64 MB One-Port FSIOP
6506	8726 Optional 16 MB 2-Port FSIOP
6509	6509 Addl 16 MB FSIOP Memory
6512	6512 High Performance Controller
6513	6513 Internal Tape Device Controller
6517	9517 Std File Svr 32 MB 1 Port
6520	6520 Upgrade 1 to 2 Port FSIOP
6529	9529 Std File Svr 64 MB 2 Port
6530	6523 Disk Unit Controller
6530	6530 Disk Unit Controller No Cache
6532	6532 RAID Disk Unit Controller
6533	6533 RAID Disk Unit Controller
6534	6534 Magnetic Media Controller
6535	6536 SSA Disk Unit Cntrlr
6535	6537 SSA RAID Disk Unit Cntrlr
6601	6701 Base Disk Replace (1.0 GB)
6601	6601 Single Disk Unit (1031 MB)
6601	9601 Standard 1.0 GB Disk Unit
6602	1602 Single Disk Unit Kit (1.03 GB)
6602	6652 Addl Disk Unit (1.03 GB)
6602	6612 Dual Disk Unit (2.0 GB)
6602	1322 2-Byte 1.03 GB Disk Unit Kit
6602	1312 1-Byte 1.03 GB Disk Unit Kit
6602	6802 Base Disk Replace (1.0 GB)
6602	1211 Addt Disk Unit (1.031 GB)
6602	9652 Std Disk Unit (1.031 GB, 2 Byte)
6602	6602 Single Disk Unit (1031 MB)
6602	6812 Base Disk Replace (2.0 GB)

CCIN	Feature code description
6602	9602 Standard 1.0 GB Disk Unit
6602	1203 Single Disk Unit (1031 MB) Kit
6602	4211 Addt Disk Unit (1.031 GB)
6602	8612 Base 2.0 GB Dual Disk Unit
6602	4652 Single Disk Unit (1031 MB)
6602	1213 Std Disk Unit (1.031 GB, 2byte)
6603	4212 Addt Disk Unit (1967 MB)
6603	1603 Single Disk Unit Kit (1.96 GB)
6603	1323 2-Byte 1.96 GB Disk Unit Kit
6603	1313 1-Byte 1.96 GB Disk Unit Kit
6603	4650 Addt Disk Unit (1.967 GB, reg)
6603	6650 Addl Disk Unit (1.96 GB)
6603	6613 Dual Disk Unit (4 GB)
6603	6603 Single Disk Unit (1967 MB)
6603	8650 Opt Disk Unit (1.967 GB, 2 byte)
6603	1214 Opt.Bs Disk Unit (1.967 GB, 2b)
6603	1212 Addt Disk Unit (1967 MB)
6603	1204 Single Disk Unit (1967 MB) Kit
6603	8613 Base DASD Upgrade (3934 MB)
6603	7613 Base DASD Replace (3934 MB)
6605	4605 Addt Disk Unit (1.031 GB, reg)
6605	9705 Std 1.031 Disk Unit regulated
6605	6605 1.03 GB Disk Unit
6605	1325 2-Byte 1.03 GB Disk Unit Kit
6605	1205 Additional 1.031 GB Disk Unit
6605	4205 Addt Disk Unit (1.031 GB)
6605	9605 Std 1.031 Disk Unit
6606	4606 Single Disk Unit (1967 MB)
6606	1326 2-Byte 1.96 GB Disk Unit Kit
6606	1206 Additional 1.967 GB Disk Unit
6606	9606 Base 1.96 GB Disk Unit
6606	6806 1.96 GB Disk Unit
6606	8606 Single Disk Unit (1967 MB)
6606	6606 1.96 GB Disk Unit
6606	4206 Addt Disk Unit (1.967 GB)
6606	6906 1.96 GB Disk Unit
6606	8706 Opt Base Disk Unit (1.967 GB)
6607	1327 2-Byte 4.19 GB Disk Unit Kit
6607	1337 2-Byte 4.19 GB Disk Unit Kit
6607	9707 Base 4.19 GB Disk Unit
6607	4607 Additional Disk Unit (4.194 GB, reg)
6607	8607 Optional Base DASD (4.194 GB, reg)
6607	6807 4.19 GB Additional Two byte Disk Unit
6607	1207 Additional 4.194 GB Disk Unit
6607	4308 4.19 GB Disk Unit
6607	9907 Base 4.19 GB Disk Unit
6607	6907 4.19 GB Additional Two-byte Disk unit
6607	8707 Optional Base Disk Unit (4.194 GB)
6607	7607 Optional Base 4.19 GB Disk Unit
6607	6607 4.19 GB Additional Two-byte Disk Unit
6607	4207 Addt Disk Unit (4.194 GB)
6616	6616 Integrated PC Server
6617	6618 Integrated Netfinity Server
6617	6617 Integrated PC Server
6713	8813 Optional Base 8.58 GB Disk Unit
6713	4314 8.58 GB Disk Unit
6713	9313 Base 8.58 GB Disk Unit
6713	8713 Optional Base 8.58 GB Disk Unit
6713	7713 Optional Base 8.58 GB Disk Unit

CCIN	Feature code description
6713	6813 8.58 GB Additional Two-byte Disk Unit
6713	6713 8.58 GB Disk Unit
6714	8714 Optional Base 17.54 GB Disk Unit
6714	4324 17.54 GB Disk Unit
6714	8824 Optional Base 17.54 GB Disk Unit
6714	6714 17.54 GB Disk Unit
6714	6824 17.54 GB Disk Unit
6714	8924 17.54 GB Optional Base Two-byte Disk Unit
6717	8617 Opt Base 8.58 GB 10k rpm Disk
6717	6817 8.58 GB 10k RPM Disk Unit
6717	8917 8.58 GB Optional Base 10 k RPM Disk Unit
6717	8817 Opt Base 8.58 GB 10k rpm Disk
6717	6717 8.58 GB 10k rpm Disk Unit
6717	4317 8.58 GB 10k RPM Disk Unit
6718	8818 Opt Base 17 GB 10k rpm Disk
6718	4318 17.54 GB 10k RPM Disk Unit
6718	6718 17.54 GB 10k RPM Disk Unit
6718	8618 Opt Base 17 GB 10k rpm Disk
6718	8918 Opt Base 17 GB 10k rpm Disk
6718	6818 17.54 GB 10k RPM Disk Unit
6719	4319 35.16 GB 10k RPM Disk Unit
6731	4331 1.6 GB Read Cache Device
6750	6750 MFIOP
6751	9751 Base MFIOP with RAID
6752	6752 MFIOP
6753	6753 MFIOP
6753	9753 Base MFIOP
6754	9754 MFIOP with RAID
6831	6831 1.6 GB Read Cache Device
7104	7104 System Unit Expansion
7116	9116 High Performance CD Enable
7117	9117 Expansion Unit 1
7126	9126 STD Mixed Disk Enabler
7128	7128 DASD Expansion Unit
7130	7130 Expansion Unit Tape Cage
9079	8079 Optional Base 1.8 M I/O Rack
9079	9079 Base I/O Tower for 840 or SB3
917A	9171 Std MFIOP/ASCII WSC
917C	9173 Std MFIOP/LocalTalk WSC
918D	9177 Ethernet MFIOP
918E	9176 Base MFIOP
9739	9739 Base Optical Bus Adapter



## Feature code cross reference

This chapter lists the feature code, Customer Card Identification Number (CCIN), and description for many iSeries and AS/400e features. It assists clients and IBM personnel in configuring Miscellaneous Equipment Specifications (MES) and upgrades. It provides a cross reference for the feature code that is used for ordering with a CCIN number reported by the Hardware Resources Listing.

The listing in this chapter is sorted by feature code. Marketing uses the feature code to report configurations and to work with upgrades. The entries selected are those that are most useful when interpreting Hardware Resource Listings.

Refer to Chapter 10, "Customer Card Identification Numbers cross reference" on page 381, for a listing of the features sorted by CCIN number. The CCIN number is used when working from a Hardware Resource Listing. The Hardware Resource listing is also known as the *Rack Configuration Listing*.

Feat. code	CCIN	Description
0121	0121	Lower Unit in Rack Specify
0122	0122	Upper Unit in Rack Specify
0135	n/a	Rear Cover - CEC only
0136	n/a	Rear Cover - CEC with #7116
0145	n/a	AIX Partition Specify
0150	0150	820 Base Processor
0150	25BC	Model 820 Base Processor
0151	0151	820 Base Processor
0151	25BD	Model 820 Base Processor
0152	0152	820 Base Processor
0152	25BE	Model 820 Base Processor
0153	245D	Model 830 8-way Processor
0158	246F	Model 840 12-way Processor
0159	246F	Model 840 24-way Processor
0165	n/a	VHDCI Attachment
0226	n/a	1 Gbps Ethernet Specify
0272	n/a	Renovated by IBM
0297	2295	Model 250 Package
0297	0297	Model 250 Package - 2295
0298	2296	Model 250 Package
0298	0298	Model 250 Package - 2296
0299	n/a	MES Conv. Analysis for #5580, #5581
0327	032A	Operations Console Cable
0328	032B	Operations Console Cable
0329	0329	V.24/EIA232 80-ft Cable
0330	0330	V.24/EIA232 20-ft Cable
0331	0331	V.24/EIA232 50-ft Cable
0332	0332	V.24/EIA232 20-ft Enh Cable
0333	0333	V.24/EIA232 50-ft Enh Cable
0334	0334	V.24/EIA232 80-ft Enh Cable
0335	0335	V.36/EIA449 20-ft Cable
0336	0336	V.36/EIA449 50-ft Cable
0337	0337	V.36/EIA449 150-ft Cable
0338	0338	V.35 20-ft Cable
0339	0339	V.35 50-ft Cable
0340	0340	V.35 80-ft Cable
0341	0341	X.21 20-ft Cable
0342	0342	X.21 50-ft Cable
0344	0344	20-ft Comm Console Cable
0348	0348	V.24/EIA232 20-ft PCI Cable
0349	0349	V.24/EIA232 50-ft PCI Cable
0350	0350	V.24/EIA232 20-ft E PCI Cable
0351	0351	V.24/EIA232 50-ft E PCI Cable
0352	0352	V.24/EIA232 80-ft E PCI Cable
0353	0353	V.35 20-ft PCI Cable
0354	0354	V.35 50-ft PCI Cable
0355	0355	V.35 80-ft PCI Cable
0356	0356	V.36 20-ft PCI Cable
0357	0357	V.36 50-ft PCI Cable
0358	0358	V.36 150-ft PCI Cable
0359	0359	X.21 20-ft PCI Cable
0360	0360	X.21 50-ft PCI Cable
0362	0362	Comm Console PCI Cable
0364	0364	Parallel Cable
0365	0365	V.24/EIA232 80-ft PCI Cable
0366	9895	Optical Bus Cable (20 m)
0367	032C	Operations Console PCI Cable
0369	9212	100 m Optical SPCN Cable

Feat. code	CCIN	Description
0380	032D	Remote Control Panel Cable
0380	0380	Remote Control Panel Cable
0381	0381	Remote Control Panel Cable
0381	0032	Remote Control Panel Cable
0382	0382	Remote Control Panel Cable
0383	0383	Remote Control Panel Cable
0398	2745	Operations Console Package
0426	0446	512 MB Server Memory
0427	0447	1 GB Server Memory
0428	0448	2 GB Server Memory
0446	0446	512 MB DDR Server Memory
0447	0447	1 GB DDR Server Memory
0448	0448	2 GB DDR Server Memory
0550	0550	iSeries Rack - 830 Rack
0551	0551	iSeries Rack - 270 Rack
0553	0553	iSeries 2.0 m Rack
0565	5066	5065 Equivalent
0574	5079	5074 Equivalent
0578	5078	PCI Expansion Unit in Rack
0588	5088	PCI-X Expansion Unit in Rack
0595	5095	PCI-X Tower Unit in Rack
0599	n/a	Rack filler kit
0601	2743	Linux Dir Attach-2743
0602	2760	Linux Dir Attach-2760
0603	2744	Linux Dir Attach-2744
0604	2763	Linux Dir Attach-2763
0605	2748	Linux Dir Attach-4748
0606	2778	Linux Dir Attach-4778
0607	2838	Linux Dir Attach-4838
0608	2745	Linux Dir Attach-4745
0609	2772	Linux Dir Attach-2772
0610	2772	Linux Dir Attach-2773
0611	2765	Direct Attach 2765
0612	2766	Linux Dir Attach-2766
0613	2742	Linux Dir Attach-2742
0614	2793	Linux Dir Attach-2793
0615	2793	Linux Dir Attach-2794
0616	2805	Linux Dir Attach-2805
0617	2805	Linux Dir Attach-2806
0618	2757	Linux Dir Attach-2757
0619	2782	Linux Dir Attach-2782
0620	5700	Linux Dir Attach-5700
0621	5701	Linux Dir Attach-5701
0623	2849	Linux Dir Attach-2849
0624	5702	Linux Dir Attach-5702
0625	5704	Linux Dir Attach-5704
0626	2787	Linux Dir Attach-2787
0627	2780	Linux Dir Attach-2780
0628	5703	Linux Dir Attach-5703
0632	28EF	USB 2.0 PCI Adapter
0633	n/a	LANA+ (GXT 135P)
0634	n/a	128-port ASYNC Adapter
0635	n/a	SDLC/X.25 - 2-port Adapter
0636	n/a	Graphics Adapter (GXT4500P)
0637	n/a	100/10 Mbps 4-port Ethernet Adapter
0638	n/a	SSA (40 Mbps) Adapter
0639	n/a	128 MB DIMM & CD-ROM
0640	n/a	Fast Write Cache Option

Feat. code	CCIN	Description
0641	n/a	ESCON Controller Unit
0642	n/a	PCI Ultra-3 RAID Adapter
0643	5706	Linux Dir Attach-5706
0644	5707	Linux Dir Attach-5707
0645	5702	Direct Attach 5712
0646	n/a	Direct Attach 5716
0694	5094	5094 Equivalent
0836	n/a	4328 Load Source Specify
0860	n/a	iSeries Server 2463
0861	n/a	iSeries Server 2463
0862	n/a	iSeries Server 2464
0868	n/a	iSeries Server 2465
0889	n/a	iSeries Server 2489
0900	n/a	Solution Package for 8950
0901	n/a	Solution Package for 8951
0902	n/a	Solution Package for 8952
0903	n/a	Solution Package for 8953
0904	n/a	Solution Package for 8954
0905	n/a	Solution package for 8955
0914	n/a	Solution Package for 8958
0915	n/a	Solution Package for 8958
0919	n/a	Solution package for 8961
0920	n/a	Solution Package for 8961
0921	n/a	Solution Package for 8971
0922	n/a	Solution Package for 8971
0923	n/a	Solution Package for 8962
0924	n/a	Solution Package for 8971
0926	n/a	Solution Package for 8971
0928	n/a	Capacity Backup for 8971
0930	n/a	Solution Package for 8971
1105	6105	Sngl Disk Unit (320 MB) Kit
1107	6107	Single Disk Unit (400 MB) Kit
1109	6109	Single Disk Unit (988 MB) Kit
1200	6105	Single Disk Unit (320 MB) Kit
1201	6107	Single Disk Unit (400 MB) Kit
1202	6109	Single Disk Unit (988 MB) Kit
1203	6602	Single Disk Unit (1031 MB) Kit
1204	6603	Single Disk Unit (1967 MB) Kit
1205	6605	Additional 1.031 GB Disk Unit
1206	6606	Additional 1.967 GB Disk Unit
1207	6607	Additional 4.194 GB Disk Unit
1210	6109	Additional Disk Unit (988 MB)
1211	6602	Additional Disk Unit (1.031 GB)
1212	6603	Additional Disk Unit (1967 MB)
1213	6602	Std Disk Unit (1.031 GB, 2 byte)
1214	6603	Optional Base Disk Unit (1.967 GB, 2b)
1250	6378	525 MB ¼-inch Tape Kit
1251	6379	1.2 GB ¼-inch Tape Kit
1252	6380	2.5 GB ¼-inch Tape Kit
1260	6380	2.5 GB ¼-inch Tape
1261	6390	7.0 GB 8 mm Cart Tape
1262	6335	840 MB QIC-3040-MC
1307	1307	1.75 m HSL-2 Cable
1308	1308	2.5 m HSL-2Cable
1312	6602	1-byte 1.03 GB Disk Unit Kit
1313	6603	1-Byte 1.96 GB Disk Unit Kit
1322	6602	2-Byte 1.03 GB Disk Unit Kit
1323	6603	2-Byte 1.96 GB Disk Unit Kit

Feat. code	CCIN	Description
1325	6605	2-Byte 1.03 GB Disk Unit Kit
1326	6606	2-Byte 1.96 GB Disk Unit Kit
1327	6607	2-Byte 4.19 GB Disk Unit Kit
1333	6713	2-Byte 8.58 GB Disk Unit Kit
1334	6714	2-Byte 17.54 GB Disk Unit Kit
1335	6335	6335 External Conversion Kit
1336	6606	2-Byte 1.96 GB Disk Unit Kit
1337	6607	2-Byte 4.19 GB Disk Unit Kit
1349	6379	1.2 GB ¼-inch Tape Kit
1350	6380	2.5 GB ¼-inch Tape Kit
1355	6385	13.0 GB ¼-inch Tape Kit
1360	6390	7.0 GB 8 mm Cartridge Tape Kit
1378	6378	525 MB ¼-inch Cart Tape Kit
1379	6379	1.2 GB ¼-inch Cart Tape Kit
1380	6380	2.5 GB ¼-inch Cart Tape Kit
1394	1394	4.3 m 200V/10A Power Crd Brazil
1395	1395	4.3 200V.10A Power Cd China
1396	1396	4.3 200V/16A Power Cd China
1460	0343	3 m Copper HSL Cable
1461	0361	6 m Copper HSL Cable
1462	0368	15 m Copper HSL Cable
1463	9206	2 m SPCN Cable
1464	9219	6 m SPCN Cable
1465	9213	15 m SPCN Cable
1466	9214	30 m SPCN Cable
1468	1469	4.3 m/200V/25A HD Wired EMEA
1468	1468	250 m Optical SPCN Cable
1470	1470	6 m HSL Optical Cable
1471	1471	30 m HSL Optical Cable
1472	1472	100 m HSL Optical Cable
1473	1473	250 m HSL Optical Cable
1474	1474	6 m HSL to HSL-2 Cable
1475	1475	10 m HSL to HSL-2 Cable
1477	n/a	200V 16A 14-ft PDU Cord
1481	1481	1.2 m HSL-2 Cable
1482	1482	3.5 m HSL-2 Cable
1483	1483	10 m HSL-2 Cable
1485	1485	15 m HSL-2 Cable
1500	1500	Interactive Capacity Card
1501	1501	Interactive Capacity Card
1502	1502	Interactive Capacity Card
1503	1503	Interactive Capacity Card
1504	1504	Interactive Capacity Card
1505	1505	Interactive Capacity Card
1506	1506	Interactive Capacity Card
1507	1507	Interactive Capacity Card
1508	1508	Interactive Capacity Card
1509	1509	Interactive Capacity Card
1510	1510	Interactive Capacity Card
1511	1511	Interactive Capacity Card
1512	1512	Interactive Capacity Card
1513	1513	Interactive Capacity Card
1514	1514	Interactive Capacity Card
1516	1516	Interactive Capacity Card
1517	1517	Interactive Capacity Card
1518	1518	Interactive Capacity Card
1519	1519	Interactive Capacity Card
1520	1520	Interactive Capacity Card

Feat. code	CCIN	Description
1521	1521	Interactive Capacity Card
1522	1522	Interactive Capacity Card
1523	1523	Interactive Capacity Card
1524	1524	Interactive Capacity Card
1525	1525	Interactive Capacity Card
1526	1526	Interactive Capacity Card
1527	1527	Interactive Capacity Card
1531	1531	Interactive Capacity Card
1532	1532	Interactive Capacity Card
1533	1533	Interactive Capacity Card
1534	1534	Interactive Capacity Card
1535	1535	Interactive Capacity Card
1536	1536	Interactive Capacity Card
1537	1537	Interactive Capacity Card
1540	1540	Interactive Capacity Card
1541	1541	Interactive Capacity Card
1542	1542	Interactive Capacity Card
1543	1543	Interactive Capacity Card
1544	1544	Interactive Capacity Card
1545	1545	Interactive Capacity Card
1546	1546	Interactive Capacity Card
1547	1547	Interactive Capacity Card
1548	1548	Interactive Capacity Card
1576	1576	Interactive Capacity Card
1577	1577	Interactive Capacity Card
1578	1578	Interactive Capacity Card
1579	1579	Interactive Capacity Card
1581	1581	Interactive Capacity Card
1583	1583	Interactive Capacity Card
1585	1585	Interactive Capacity Card
1587	1587	Interactive Capacity Card
1588	1588	Interactive Capacity Card
1591	1591	Interactive Capacity Card
1602	6602	Single Disk Unit Kit (1.03 GB)
1603	6603	Single Disk Unit Kit (1.96 GB)
1800	1800	HSL-2 Ports - 2 Copper
1801	1801	HSL-2 Ports - 2 Optical
1802	1802	IBT 2 port
1806	1806	HSL-2 Ports - 2 Copper
1807	1807	HSL-2 Ports - 2 Optical
1850	n/a	VHDCI to P Converter Cable
1851	n/a	0.6 m SCSI P-P Cable
1852	n/a	2.5 m SCSI P-P Cable
1855	n/a	4-port EIA 232 Cable
1857	185D	2 Enclosure SP Flex Cable
1858	185E	3 Enclosure SP Flex Cable
1859	185F	4 Enclosure SP Flex Cable
1873	n/a	Dwr to Dwr Serial Cable
1874	n/a	Rack to Rack Serial Cable
1875	n/a	Serial Port Converter Cable
1876	n/a	L200 Flat Panel Monitor
1889	n/a	80 GB VXA-2 Tape Drive
1893	n/a	36.4 GB 10k rpm Disk Unit
1894	n/a	73.4 GB 10k rpm Disk Unit
1895	n/a	146.8 GB 10k rpm Disk Unit
1896	n/a	36.4 GB 15k rpm Disk Unit
1897	n/a	73.4 GB 15k rpm Disk Unit
2040	2040	1.1 SPPR Processor

Feat. code	CCIN	Description
2041	2041	1.6 SPPR Processor
2042	2042	2.0 SPPR Processor
2043	2043	3.0 SPPR Processor
2044	2044	5.0 SPPR Processor
2050	2050	6.4 SPPR Processor
2051	2051	11.4 SPPR Processor
2052	2052	16.8 SPPR Processor
2061	206C	720 (240 CPW) with #1502 Interactive
2061	206B	720 (240 CPW) with #1501 Interactive
2061	243A	Model 720 Processor
2061	206A	720 (240 CPW) with #1500 Interactive
2062	242C	Model 720 Processor
2062	206D	720 (480 CPW) with #1500 Interactive
2062	206E	720 (480 CPW) with #1501 Interactive
2062	206F	720 (480 CPW) with #1502 Interactive
2062	207A	720 (480 CPW) with #1503 Interactive
2063	207B	720 (810 CPW) with #1500 Interactive
2063	207C	720 (810 CPW) with #1502 Interactive
2063	242D	Model 720 2-way Processor
2063	207D	720 (810 CPW) with #1503 Interactive
2063	207E	720 (810 CPW) with #1504 Interactive
2064	208B	720 (1600 CPW) with #1503 Interactive
2064	208A	720 (1600 CPW) with #1502 Interactive
2064	207F	720 (1600 CPW) with #1500 Interactive
2064	208C	720 (1600 CPW) with #1504 Interactive
2064	208D	720 (1600 CPW) with #1505 Interactive
2064	242B	Model 720 4-way Processor
2065	241F	Model 730 Processor
2065	241F	Model 730 Processor
2065	2A6C	560 CPW Model 730 Processor with #1508 Interactive Feature
2065	2A6D	560 CPW Model 730 Processor with #1509 Interactive Feature
2065	2A6A	560 CPW Model 730 Processor with #1506 Interactive Feature
2065	2A6B	560 CPW Model 730 Processor with #1507 Interactive Feature
2066	2066	Model 730 2-way Processor
2066	2B6A	1050 CPW Model 730 Processor with #1508 Interactive Feature
2066	2A6F	1050 CPW Model 730 Processor with #1507 Interactive Feature
2066	2A6E	1050 CPW Model 730 Processor with #1506 Interactive Feature
2066	2B6B	1050 CPW Model 730 Processor with #1509 Interactive Feature
2066	2B6C	1050 CPW Model 730 Processor with #1510 Interactive Feature
2067	241C	Model 730 4-way Processor
2067	2C6A	2000 CPW Model 730 Processor with #1510 Interactive Feature
2067	2B6D	2000 CPW Model 730 Processor with #1506 Interactive Feature
2067	2C6B	2000 CPW Model 730 Processor with #1511 Interactive Processor
2067	2B6E	2000 CPW Model 730 Processor with #1508 Interactive Feature
2067	2B6F	2000 CPW Model 730 Processor with #1509 Interactive Feature

Feat. code	CCIN	Description
2068	2D6A	2890 CPW Model 730 Processor with #1511 Interactive Processor
2068	2C6F	2890 CPW Model 730 Processor with #1510 Interactive Feature
2068	2C6C	2890 CPW Model 730 Processor with #1506 Interactive Feature
2068	2C6E	2890 CPW Model 730 Processor with #1509 Interactive Feature
2068	241D	Model 730 8-way Processor
2068	2C6D	2890 CPW Model 730 Processor with #1508 Interactive Feature
2069	2D6B	3660 CPW Model 740 Processor with #1514 Interactive Feature
2069	2D6D	3660 CPW Model 740 Processor with #1511 Interactive Feature
2069	2D6E	3660 CPW Model 740 Processor with #1512 Interactive Feature
2069	241B	Model 740 8-way Processor
2069	2D6C	3660 CPW Model 740 Processor with #1510 Interactive Feature
2070	2E6B	4550 CPW Model 740 Processor with #1510 Interactive Feature
2070	2E6A	4550 CPW Model 740 Processor with #1514 Interactive Feature
2070	2E6C	4550 CPW Model 740 Processor with #1511 Interactive Feature
2070	2E6D	4550 CPW Model 740 Processor with #1512 Interactive Feature
2070	2E6E	4550 CPW Model 740 Processor with #1513 Interactive Feature
2070	241B	Model 740 12-way Processor
2159	2159	Model 170 Processor
2160	2160	Model 170 Processor
2164	2164	Model 170 Processor
2176	2176	Model 170 Processor
2183	2183	Model 170 Processor
2207	2207	Model S40 8 Way Processor
2208	2208	Model S40 12 Way Processor
2248	22A2	270 (150 CPW) with #1517 Interactive
2248	2248	Model 270 Processor
2250	22A5	270 (370 CPW) with #1518 Interactive
2250	22A4	270 (370 CPW) with #1516 Interactive
2250	2250	Model 270 Processor
2252	2252	Model 270 Processor
2252	22A8	270 (950CPW) with #1519 Interactive
2252	22A7	270 (950 CPW) with #1516 Interactive
2253	2253	Model 270 2-way Processor
2253	22AB	270 (2000 CPW) with #1520 Interactive
2253	22AA	270 (2000 CPW) with #1516 Interactive
2289	2289	Model 170 Processor
2290	2290	Model 170 Processor
2291	2291	Model 170 Processor
2292	2292	Model 170 Processor
2295	2295	Model 250 Processor
2296	2296	Model 250 Processor
2298	2290	Model 170 Processor Package 64 MB
2299	2291	Model 170 Processor Package 64 MB
2315	2315	Model SB2 8-way Processor
2316	2316	Model SB3 12-way Processor

Feat. code	CCIN	Description
2318	2318	Model SB3 24-way Processor
2341	2341	Model S40 ISV 12-w Processor
2349	24D8	1531 Interactive 4/8-way 830 CUoD
2349	24D9	1532 Interactive 4/8-way 830 CUoD
2349	24DA	1533 Interactive 4/8-way 830 CUoD
2349	24DB	1534 Interactive 4/8-way 830 CUoD
2349	24DC	1535 Interactive 4/8-way 830 CUoD
2349	24DD	1536 Interactive 4/8-way 830 CUoD
2349	24DE	1537 Interactive 4/8-way 830 CUoD
2351	26AD	Model 830 1/8-way POD with #1536
2351	2351	Model 830 1/8-way POD
2351	26AE	Model 830 1/8-way POD with #1537
2351	26AC	Model 830 1/8-way POD with #1535
2351	26AA	Model 830 1/8-way POD with #1533
2351	26A9	Model 830 1/8-way POD with #1532
2351	26A8	Model 830 1/8-way POD with #1531
2351	26AB	Model 830 1/8-way POD with #1534
2352	26B4	Model 840 8/12-way POD with #1544
2352	26B2	Model 840 8/12-way POD with #1542
2352	26B3	Model 840 8/12-way POD with #1543
2352	26B6	Model 840 8/12-way POD with #1546
2352	26B1	Model 840 8/12-way POD with #1541
2352	26B0	Model 840 8/12-way POD with #1540
2352	26B5	Model 840 8/12-way POD with #1545
2352	2352	Model 840 8/12-way POD
2353	26BA	Model 840 12/18-way POD with #1542
2353	26BB	Model 840 12/18-way POD with #1543
2353	26B9	Model 840 12/18-way POD with #1541
2353	26B8	Model 840 12/18-way POD with #1540
2353	26BD	Model 840 12/18-way POD with #1545
2353	26BE	Model 840 12/18-way POD with #1546
2353	26BF	Model 840 12/18-way POD with #1547
2353	26BC	Model 840 12/18-way POD with #1544
2353	2353	Model 840 12/18-way POD
2354	26C5	Model 840 18/24-way POD with #1545
2354	26C8	Model 840 18/24-way POD with #1548
2354	2354	Model 840 18/24-way POD
2354	26C6	Model 840 18/24-way POD with #1546
2354	26C7	Model 840 18/24-way POD with #1547
2354	26C2	Model 840 18/24-way POD with #1542
2354	26C0	Model 840 18/24-way POD with #1540
2354	26C1	Model 840 18/24-way POD with #1541
2354	26C4	Model 840 18/24-way POD with #1544
2354	26C3	Model 840 18/24-way POD with #1543
2383	2383	Model 170 Processor
2384	2384	Model 170 Processor
2385	2385	Model 170 Processor
2386	2386	Model 170 Processor
2388	2388	Model 170 2 Way Processor
2395	23A1	820 (370 CPW) with #1521 Interactive
2395	2395	Model 820 Processor
2395	23A4	820 (370 CPW) with #1524 Interactive
2395	23A2	820 (370 CPW) with #1522 Interactive
2395	23A3	820 (370 CPW) with #1523 Interactive
2396	23A9	820 (950 CPW) with #1521 Interactive
2396	2396	Model 820 Processor
2396	23AA	820 (950 CPW) with #1522 Interactive
2396	23AB	820 (950 CPW) with #1523 Interactive

Feat. code	CCIN	Description
2396	23AC	820 (950 CPW) with #1524 Interactive
2396	23AD	820 (950 CPW) with #1525 Interactive
2397	23B6	820 (2000 CPW) with #1526 Interactive
2397	2397	Model 820 2-way Processor
2397	23B3	820 (2000 CPW) with #1523 Interactive
2397	23B4	820 (2000 CPW) with #1524 Interactive
2397	23B5	820 (2000 CPW) with #1525 Interactive
2397	23B2	820 (2000 CPW) with #1522 Interactive
2397	23B1	820 (2000 CPW) with #1521 Interactive
2398	23B8	820 (3200 CPW) with #1521 Interactive
2398	23B9	820 (3200 CPW) with #1522 Interactive
2398	23BB	820 (3200 CPW) with #1524 Interactive
2398	23BC	820 (3200 CPW) with #1525 Interactive
2398	23BD	820 (3200 CPW) with #1526 Interactive
2398	23BA	820 (3200 CPW) with #1523 Interactive
2398	23BE	820 (3200 CPW) with #1527 Interactive
2398	2398	Model 820 4-way Processor
2400	23C5	830 (1850 CPW) with #1535 Interactive
2400	2400	Model 830 2-way Processor
2400	23C1	830 (1850 CPW) with #1531 Interactive
2400	23C2	830 (1850 CPW) with #1532 Interactive
2400	23C3	830 (1850 CPW) with #1533 Interactive
2400	23C4	830 (1850 CPW) with #1534 Interactive
2402	23D1	830 (4200 CPW) with #1531 Interactive
2402	23D3	830 (4200 CPW) with #1533 Interactive
2402	23D6	830 (4200 CPW) with #1536 Interactive
2402	23D5	830 (4200 CPW) with #1535 Interactive
2402	23D2	830 (4200 CPW) with #1532 Interactive
2402	2402	Model 830 4-way Processor
2402	23D4	830 (4200 CPW) with #1534 Interactive
2403	23DD	830 (7350 CPW) with #1536 Interactive
2403	23D8	830 (7350 CPW) with #1531 Interactive
2403	23DA	830 (7350 CPW) with #1533 Interactive
2403	23D9	830 (7350 CPW) with #1532 Interactive
2403	23DB	830 (7350 CPW) with #1534 Interactive
2403	2403	Model 830 8-way Processor
2403	23DE	830 (7350 CPW) with #1537 Interactive
2403	23DC	830 (7350 CPW) with #1535 Interactive
2407	2407	Dedicated Domino Processor
2408	2408	Dedicated Domino Processor
2409	2409	Dedicated Domino Processor (2-way)
2410	2410	100 Client Server Processor
2411	2411	3.0 SPPR Processor
2412	2412	6.1 SPPR Processor
2413	2531	E06 Processor
2414	2585	F02 Processor
2416	24C4	1544 interactive 8/12-way 840 POD
2416	24C6	1546 interactive 8/12-way 840 POD
2416	24C3	1543 interactive 8/12-way 840 POD
2416	24C2	1542 interactive 8/12-way 840 POD
2416	24C0	1540 interactive 8/12-way 840 POD
2416	2416	Model 840 8/12-way POD
2416	24C5	1545 interactive 8/12-way 840 POD
2416	24C1	1541 interactive 8/12-way 840 POD
2417	24CD	1545 interactive 12/18 way 840 POD
2417	24CE	1546 interactive 12/18 way 840 POD
2417	24CC	1544 interactive 12/18 way 840 POD
2417	2417	Model 840 12/18-way POD

Feat. code	CCIN	Description
2417	24CB	1543 interactive 12/18 way 840 POD
2417	24CA	1542 interactive 12/18 way 840 POD
2417	24C9	1541 interactive 12/18 way 840 POD
2417	24C8	1540 interactive 12/18 way 840 POD
2418	23E9	840 (10000 CPW) with #1541 Interact.
2418	2418	Model 840 12-way Processor
2418	23E8	840 (10000 CPW) with #1540 Interact.
2418	23ED	840 (10000 CPW) with #1545 Interact.
2418	23EC	840 (10000 CPW) with #1544 Interact.
2418	23EB	840 (10000 CPW) with #1543 Interact.
2418	23EA	840 (10000 CPW) with #1542 Interact.
2418	23EE	840 (10000 CPW) with #1546 Interact.
2419	24D5	1545 interactive 18/24-way 840 POD
2419	24D0	1540 interactive 18/24-way 840 POD
2419	24D2	1542 interactive 18/24-way 840 POD
2419	2419	Model 840 18/24-way POD
2419	24D1	1541 interactive 18/24-way 840 POD
2419	24D7	1547 interactive 18/24-way 840 POD
2419	24D6	1546 interactive 18/24-way 840 POD
2419	24D4	1544 interactive 18/24-way 840 POD
2419	24D3	1543 interactive 18/24-way 840 POD
2420	23F8	840 (16500 CPW) with #1540 Interact.
2420	2420	Model 840 24-way Processor
2420	23FD	840 (16500 CPW) with #1545 Interact.
2420	23FF	840 (16500 CPW) with #1547 Interact.
2420	23FE	840 (16500 CPW) with #1546 Interact.
2420	23FA	840 (16500 CPW) with #1542 Interact.
2420	23FC	840 (16500 CPW) with #1544 Interact.
2420	23F9	840 (16500 CPW) with #1541 Interact.
2420	23FB	840 (16500 CPW) with #1543 Interact.
2422	2422	Dedicated Domino Processor
2423	2423	Dedicated Domino Processor
2424	2424	Dedicated Domino 2-way Processor
2425	2425	Dedicated Domino Processor
2426	2426	Dedicated Domino 2-way Processor
2427	2427	Dedicated Domino 4-way Processor
2431	23E7	Model 270 Processor with #1518
2431	2431	Model 270 Processor
2432	23F1	Model 270 Processor with #1519
2432	25BA	Model 270 Processor
2432	23F0	Model 270 Processor with #1516
2434	2434	Model 270 2-way Processor
2434	23F5	Model 270 Processor with #1520
2434	23F4	Model 270 Processor with #1516
2435	249D	Model 820 Processor with #1523
2435	249C	Model 820 Processor with #1522
2435	2435	Model 820 Processor
2435	249B	Model 820 Processor with #1521
2435	249E	Model 820 Processor with #1524
2436	2436	Model 820 Processor
2436	24A8	Model 820 Processor with #1521
2436	24A9	Model 820 Processor with #1522
2436	24AA	Model 820 Processor with #1523
2436	24AB	Model 820 Processor with #1524
2436	24AC	Model 820 Processor with #1525
2437	24B0	Model 820 Processor with #1521
2437	24B1	Model 820 Processor with #1522
2437	24B5	Model 820 Processor with #1526

Feat. code	CCIN	Description
2437	24B2	Model 820 Processor with #1523
2437	24B4	Model 820 Processor with #1525
2437	2437	Model 820 2-way Processor
2437	24B3	Model 820 Processor with #1524
2438	24BD	Model 820 Processor with #1526
2438	24BC	Model 820 Processor with #1525
2438	24BE	Model 820 Processor with #1527
2438	24BB	Model 820 Processor with #1524
2438	24B8	Model 820 Processor with #1521
2438	24B9	Model 820 Processor with #1522
2438	24BA	Model 820 Processor with #1523
2438	2438	Model 820 4-way Processor
2452	25BA	Dedicated Domino Processor
2452	2452	Dedicated Domino Processor
2454	2454	Dedicated Domino 2-way Processor
2456	2456	Dedicated Domino Processor
2457	2457	Dedicated Domino 2-way Processor
2458	2458	Dedicated Domino 4-way Processor
2461	26D6	Model 840 24-way Processor with #1546
2461	26D2	Model 840 24-way Processor with #1542
2461	26D4	Model 840 24-way Processor with #1544
2461	26D5	Model 840 24-way Processor with #1545
2461	26D0	Model 840 24-way Processor with #1540
2461	26D7	Model 840 24-way Processor with #1547
2461	26D8	Model 840 24-way Processor with #1548
2461	2461	Model 840 24-way Processor
2461	26D1	Model 840 24-way Processor with #1541
2515	2515	C10 Floating Pt Processor
2516	2516	C20 Floating Pt Processor
2523	2523	D80 Processor
2525	2525	D02 Processor
2528	2528	16.8 SPPR CPU for Model F97
2530	2530	E04 Processor
2533	2533	E20 Processor
2534	2534	E25 Processor
2536	2536	E35 Processor
2537	2537	E45 Processor
2539	2539	E02 Twinaxial
2540	2540	0.7 SPPR CPU for Model D35
2541	2541	D45 Processor
2542	2542	D50 Processor
2543	2543	D60 Processor
2544	2544	D70 Processor
2552	2552	C06 Processor
2553	2553	D06 Processor
2554	2554	D04 Processor
2555	2555	D10 Processor
2556	2556	D20 Processor
2557	2557	D25 Processor
2558	2558	C04 Processor 8 MB
2559	2559	E50 Processor

Feat. code	CCIN	Description
2560	2560	E60 Processor
2561	2561	E70 Sort Processor
2562	2562	E80 Sort Processor
2563	2563	E90 (2way) Sort
2568	2568	E95 (2way) Sort
2582	2582	F06 Processor
2583	2583	F25 Processor
2586	2586	0.7 SPPR for F04
2587	2587	F10 Processor
2588	2588	F20 Processor
2591	n/a	Ext. 1.44 GB Diskette Drive
2592	2592	F35 Processor
2593	2593	F45 Sort Processor
2594	2594	F50 Processor
2595	2595	F60 Sort Processor
2596	2596	F70 Processor 1-way
2597	2597	F80 Processor 2-way
2598	2598	F90 Processor 2-way
2599	259A	F95 Processor 2-way
2600*	2600	Magnetic Storage Controller
2601	2601	9346 Mag Tape Unit Controller
2602	2602	Processor Expansion
2604	2604	3422 3430 Mag Tape Subsys
2605*	2605	ISDN Basic Rate Adapter
2607	2602	9348 Mag Tape Unit Attach
2608	2608	2440/9348 HCD Mag Tape Att
2609*	2609	EIA 232/V.24 2-Line Adapt
2610*	2610	X.21 2-Line Adapter
2611*	2611	DASD Controller
2612*	2612	EIA 232/V.24 One-Line Adapt
2613*	2613	V.35 One-Line Adapter
2614*	2614	X.21 One-Line Adapter
2617*	2617	Ethernet/IEEE 802.3 CSMA/CD
2618*	2618	Fiber Distributed Data Adapt
2619*	2619	16/4 Mbps Token-Ring Adapter
2620	2620	Cryptographic Processor
2621*	2621	Removable Media Device Attach
2622	2622	3490 Magnetic Tape Attach
2623*	2623	Six-Line Comm Controller
2624*	2624	Storage Device Controller
2625	2625	Ethnet/IEEE 802.3 CSMA/CD
2626*	2626	16/4 Mbps Token-Ring Adapter/A
2628*	2628	Cryptographic Processor-Comm
2629	2629	LAN/WAN/Workstation IOP
2634	2634	16/4 Mbps Token-Ring Adapter
2636	2636	16/4 Mbps Token-Ring Adapter
2640	6337	DVD-ROM Slimline Drive
2644*	2644	34xx Magnetic Tape Attachment
2647	2647	9348 Model 2 Tape Attachment
2654*	2609	EIA 232/V.24 2-Line 20E
2655*	2609	EIA 232/V.24 2-Line 20
2656*	2610	X.21 2-Line 20
2657*	2609	EIA 232/V.24 2-Line 50E
2658*	2609	EIA 232/V.24 2-Line 50
2659*	2610	X.21 2-Line 50
2663*	2663	I/O Attachment Processor
2664*	2664	Integrated Fax Adapter
2665*	2665	Copper Dist Data Interface

Feat. code	CCIN	Description
2666*	2666	Frame Relay Adapter
2668*	2668	AS/400 Wireless LAN Adapter
2669	2669	Shared Bus Interface Card
2670	2670	System Unit Expansion Tower (optical)
2671	2671	PCI Bus IOP
2672	2672	PCI Bus IOP
2673	2673	Optical Bus Adapter
2674	2674	Optical Bus Adapter
2680	2680	Optical Bus Receiver-266 Mbps
2682	2682	Optical Bus Receiver (1063 Mbps)
2683	2683	266 Mbps OptiConnect Receiver
2685	2685	1063 Mbps OptiConnect Receive
2686	2686	Optical Link Processor (266 Mbps)
2688	2688	Optical Link Processor (1063 Mbps)
2691	2691	Optical Bus Adapt with Token Ring
2692	2692	Optional Bus Adapt with Ethernet
2693	2693	Optional Bus Adapt with Token Ring
2694	2694	Optional Bus Adapt with Ethernet
2695	2695	Optical Bus Adapter
2699	2699	2-Line WAN IOA
2705	2705	M1 Filler Tray
2706	2706	M2 Terminator Tray
2713	2713	SPD I/O Regulator
2715	2715	Processor/Memory Regulator
2718	2718	PCI Magnetic Media Controller
2720	2720	PCI WAN/Twinaxial IOA
2721	2721	PCI 2-Line WAN IOA
2722	2722	PCI Twinaxial Workstn IOA
2723	2723	PCI Ethernet IOA
2724	2724	PCI 16/4 Mbps Token-Ring IOA
2726	2726	PCI RAID Disk Unit Controller
2729	2729	PCI Magnetic Media Controller
2730	2730	Programmable Regulator
2732		PCI Serial HIPPI Adapter
2735	2735	Optical Bus Adapter
2736	2736	Optical Bus Adapter
2737		PCI USB 1.1 Adapter
2738	2738	HSL Ports - 8 Copper
2739	2739	Optical Bus Adapter
2740	2740	PCI RAID Disk Unit Controller
2741	2741	PCI RAID Disk Unit Controller
2742	2742	PCI 2-Line WAN IOA
2743	2743	PCI 1 Gbps Ethernet IOA
2744	2744	PCI 100 Mbps Token-Ring IOA
2745	2745	PCI 2-Line WAN IOA
2746	2746	PCI Twinaxial Workstation IOA
2748	2748	PCI RAID Disk Unit Controller
2749	2749	PCI Ultra Mag Media Controller
2750	2750	PCI ISDN BRI U IOA
2751	2751	PCI ISDN BRI S/T IOA
2754	2754	HSL Ports - 8 Copper
2755	2755	HSL Ports -16 Copper
2757	2757	PCI-X Ultra RAID Disk Ctrl
2758	2758	HSL Ports - 2 Optical/ 6 Copper
2759	2759	HSL Ports - 4 Optical/12 Copper
2760	2760	PCI 1 Gbps Ethernet UTP IOA
2761	2761	PCI Integrated Analog Modem
2763	2763	PCI RAID Disk Unit Controller

Feat. code	CCIN	Description
2765	2765	PCI Fibre Channel Tape Controller
2766	2766	PCI Fibre Channel Disk Controller
2768	2768	PCI Magnetic Media Controller
2772	2772	PCI Dual WAN/Modem IOA
2773	2772	PCI Dual WAN/Modem IOA(ANSI)
2774	2758	HSL Ports - 2 Optical/ 6 Copper
2776	2776	HSL-2 Ports - 8 Copper
2777	2754	HSL Ports - 8 Copper
2778	2778	PCI RAID Disk Unit Controller
2780	2780	PCI Ultra 4 SCSI Disk Ctrl
2782	2782	PCI-X RAID Disk Unit Controller
2785	2785	HSL-2 Ports - 2 Copper
2786	2786	HSL Ports - 2 Optical
2788	2788	HSL Ports - 8 Optical
2789	2789	HSL Ports - 4 Optical
2790	2890	PCI Integrated Netfinity Server
2791	2890	PCI Integrated xSeries Server
2792	2892	PCI Integrated xSeries Server
2793	2793	PCI 2-Line WAN with Modem
2794	2793	PCI 2-Line WAN with Modem (CIM)
2795	2895	128 MB Server Memory
2796	2896	256 MB Server Memory
2797	2897	1 GB Server Memory
2799	2890	PCI Integ xSeries Server
2799	2799	PCI Integrated xSeries Server
2801	2801	1.96 GB Internal Disk Unit
2802	2802	2.0 GB Internal Disk Unit
2805	2805	PCI Quad Modem IOA
2806	2805	PCI Quad Modem IOA (CIM)
2809	2809	PCI LAN/WAN/Workstation IOP
2810	2810	LAN/WAN IOP
2811	2811	PCI 25 Mbps UTP ATM
2812	2812	PCI 45 Mbps Coax T3/DS3 ATM
2813	2813	PCI 155 Mbps MMF ATM
2814	2813	PCI 100 Mbps MMF ATM
2815	2815	PCI 155 Mbps UTP OC3 ATM
2816	2816	PCI 155 Mbps MMF ATM
2817	2817	PCI 155 Mbps MMF ATM
2818	2818	PCI 155 Mbps SMF OC3 ATM
2819	2819	PCI 34 Mbps Coax E3 ATM
2824	2824	PCI LAN/WAN/Workstation IOP
2830	2830	Main Storage Expansion
2838	2838	PCI 100/10 Mbps Ethernet IOA
2842	2842	PCI IOP
2843	2843	PCI IOP
2844	2844	PCI IOP
2847	2847	Fibre Channel IOP
2849	2849	PCI 100/10 Mbps Ethernet IOA
2850	2850	Integrated PC Server 32 MB
2851	2850	PCI Integrated PC Server
2852	2850	PCI Integrated PC Server
2853	2853	3450 0.66 m system to device cable
2854	2850	PCI Integrated PC Server
2855	2855	3450 1.2 m system to device cable
2856	2856	3450 1.2 m system to device cable
2857	2850	PCI Integrated PC Server
2858	2850	FSIOA 128 MB Memory Keyboard Mouse



Feat. code	CCIN	Description
2860	2860	16 MB IOP Memory
2861	2861	32 MB IOP Memory
2862	2862	128 MB IOP Memory
2863	2863	8 MB Addtnl Cache Memory
2863	n/a	Cable, Artic960HX
2864	2864	32 MB Addtnl Cache Memory
2864	2864	Cable, Artic960HX
2865	2850	PCI Integ Netfinity Server
2866	2850	PCI Integ Netfinity Server
2867	2867	256 MB IOP Memory
2868	2850	PCI Integ Netfinity Server
2877	n/a	Cable H.100 BUS
2881	2881	Main Storage Expansion
2884	2884	Main Storage Expansion
2886	2886	Optical Bus Adapter
2887	2887	HSL-2 Bus Adapter
2890	2890	PCI Integ Netfinity Server
2891	2890	PCI Integ xSeries Server
2892	2892	PCI Integ xSeries Server
2895	2895	128 MB Server Memory
2896	2896	256 MB Server Memory
2897	2897	1 GB Server Memory
2899	2890	PCI Integ xSeries Server
2934	n/a	Async Term/Printer Cable
2936	n/a	Async Modem Cable-EIA232/188
2943	n/a	8-port EIA232/422 Adapter
2946	n/a	622 MBS ADM Fiber Adpt
2947	n/a	Artic960HX Adpt
2951	n/a	Hermosa cable EIA232
2952	n/a	Hermosa cable V.35
2953	n/a	Hermosa V.36
2954	n/a	Hermosa cable X.21
3000	3002	Migrated 128 MB Main Storage
3001	3001	32 MB Main Storage
3002	3002	128 MB Main Storage
3003	3003	256 MB Main Storage
3004	3004	256 MB Main Storage
3005	3005	512 MB Main Storage
3006	3006	512 MB Main Storage
3007	3007	1 GB Main Storage
3009	3009	128 MB Main Storage
3015	3015	8 GB Main Storage
3016	3016	8 GB Main Storage
3017	3017	32 GB Main Storage
3018	3018	32 GB Main Storage
3020	3020	4 GB Main Storage
3021	3021	4 GB Main Storage
3022	3022	128 MB Main Storage
3024	3024	256 MB Main Storage
3025	3025	512 MB Main Storage
3026	3026	512 MB Main Storage
3027	3027	1 GB Main Storage
3029	3029	128 MB Main Storage
3032	3032	256 MB Main Storage
3033	3033	512 MB Main Storage
3034	3034	1 GB Main Storage
3035	3035	16 GB Main Storage
3036	3036	16 GB Main Storage

Feat. code	CCIN	Description
3037	3037	64 GB Main Storage PDIMM
3038	3038	64 GB Main Storage PDIMM
3042	3042	256 MB Main Storage
3043	3043	512 MB Main Storage
3044	3044	1024 MB Main Storage
3045	3045	1024 MB Main Storage
3046	3046	2048 MB Main Storage
3054	3054	4 MB Additional Main Storage
3055	3055	8 MB Additional Main Storage
3060	3060	16 MB Additional Main Storage
3061	3061	16 MB Additional Main Storage
3062	3002	128 MB Main Storage
3064	3004	256 MB Main Storage
3065	3005	512 MB Main Storage
3066	3006	512 MB Main Storage
3067	3007	1 GB Main Storage
3092	3092	256 MB Main Storage
3093	3093	512 MB Main Storage
3094	3094	1024 MB Main Storage
3095	3095	1024 MB Main Storage
3096	3096	2048 MB Main Storage
3100	3100	16 MB Main Storage
3101	3101	32 MB Main Storage
3102	3102	16 MB Main Storage
3103	3103	32 MB Main Storage
3104	3104	64 MB Main Storage
3108	3108	8 MB Main Storage
3109	3109	32 MB Main Storage
3110	3110	64 MB Main Storage
3116	3116	MFIOIP Storage Expansion
3117	3117	8 MB Main Storage
3118	3118	16 MB Main Storage
3119	3119	8 MB Main Storage
3120	3120	8 MB Main Storage
3121	3121	8 MB Main Storage
3122	3122	32 MB Main Storage
3130	3130	32 MB Main Storage
3131	3131	64 MB Main Storage
3132	3132	128 MB Main Storage
3133	3133	64 MB Main Storage
3134	3134	128 MB Main Storage
3135	3135	256 MB Main Storage
3136	3136	256 MB Main Storage
3138	3138	64 MB Main Storage
3140	3140	8 MB Main Storage
3141	3141	16 MB Main Storage
3142	3142	32 MB Main Storage
3144	3144	8 MB Main Storage
3145	3145	16 MB Main Storage
3146	3146	32 MB Main Storage
3147	3147	32 MB Main Storage
3149	3149	128 MB Main Storage
3152	3152	32 MB Main Storage
3153	3153	64 MB Main Storage
3154	3154	128 MB Main Storage
3155	3155	256 MB Main Storage
3156	3156	64 MB Main Storage
3157	3157	128 MB Main Storage

Feat. code	CCIN	Description
3158	3158	256 MB Main Storage
3159	3159	8 MB Main Storage
3160	3160	16 MB Main Storage
3161	3161	32 MB Main Storage
3162	3162	128 MB Main Storage
3163	3163	256 MB Main Storage
3164	3164	512 MB Main Storage
3165	3165	1024 MB Main Storage
3166	3166	256 MB Main Storage
3172	3172	32 MB Main Storage (2 SIMMs)
3179	3179	256 MB Main Storage
3180	3180	512 MB Main Storage
3182	3172	32 MB Main Storage
3184	3184	32 MB Main Storage
3185	3185	64 MB Main Storage
3186	3186	128 MB Main Storage
3187	3187	256 MB Main Storage
3189	3189	128 MB Main Storage
3190	3190	256 MB Main Storage
3191	3191	512 MB Main Storage
3192	3192	1024 MB Main Storage
3193	3193	2048 MB Main Storage
3195	3195	4096 MB Main Storage
3196	3196	8192 MB Main Storage
3197	3197	1024 MB Main Storage
3198	3198	2048 MB Main Storage
3612	3612	1024 MB Main Storage
3613	3613	2048 MB Main Storage
3614	3614	4096 MB Main Storage
3628	3628	Black P260/P275 Color
3637	n/a	T541H/L150PTFT Color
3638	n/a	Black C220P Color Monitor
3639	n/a	Black L170P TFT Display
4010	4010	4 MB Write Cache
4011	4011	8 MB Data Store
4012	4012	32 MB Data Store
4103	3103	32 MB Main Storage
4104	4104	4 MB Main Storage
4114	4114	4 MB Main Storage Expansion
4117	3117	8 MB Main Storage SIMM
4118	3118	16 MB Main Storage SIMM
4120	3120	8 MB Main Storage
4121	3121	8 MB Main Storage
4122	3122	32 MB Main Storage
4133	3133	64 MB Main Storage
4134	3134	128 MB Main Storage
4135	3135	256 MB Main Storage
4136	3136	256 MB Main Storage
4138	3138	64 MB Main Storage
4144	3144	8 MB Main Storage
4145	3145	16 MB Main Storage
4146	3146	32 MB Main Storage
4147	3147	32 MB Main Storage
4149	3149	128 MB Main Storage
4156	3156	64 MB Main Storage
4157	3157	128 MB Main Storage
4158	3158	256 MB Main Storage
4161	3161	32 MB Main Storage

Feat. code	CCIN	Description
4172	3172	32 MB Main Storage
4204	3104	64 MB Main Storage
4205	6605	Addt Disk Unit (1.031 GB)
4206	6606	Addt Disk Unit (1.967 GB)
4207	6607	Addt Disk Unit (4.194 GB)
4211	6602	Addt Disk Unit (1.031 GB)
4212	6603	Addt Disk Unit (1967 MB)
4263	n/a	Direct Attach Tape Cables
4270	292C	Ctlr to External Port Cable
4308	6607	4.19 GB Disk Unit
4314	6713	8.58 GB Disk Unit
4317	6717	8.58 GB 10k rpm Disk Unit
4318	6718	17.54 GB 10k rpm Disk Unit
4319	6719	35.16 GB 10k rpm Disk Unit
4324	6714	17.54 GB Disk Unit
4326	4326	35.16 GB 15k rpm Disk Unit
4327	4327	70.56 GB 15k rpm Disk Unit
4328	4328	141.12 GB15k rpm Disk Unit
4331	6731	1.6 GB Read Cache Device
4332	4332	Fibre Channel Loop Ctlr
4425	6321	CD-ROM
4430	6330	DVD-RAM
4431	6336	DVD-ROM
4443	309B	512 MB DDR
4444	309B	1 GB DDR DIMMs
4445	30D3	4 GB DDR DIMMs
4447	30D2	2 GB DDR DIMMs
4449	30D5	8 GB DDR DIMMs
4450	30AC	16 GB DDR DIMMs
4452	309D	2 GB Memory (4x512 MB DIMMs)
4452	n/a	2 GB DDR - 1 Main Storage
4453	309F	4 GB Memory (4x1 GB DIMMs)
4453	n/a	4 GB DDR Main Storage
4454	30AA	8 GB Memory (4x2 GB DIMMs)
4454	n/a	8 GB DDR - 1 Main Storage
4482	63A0	4 GB ¼-inch Cartridge Tape
4483	63A0	16 GB ¼-inch Cartridge Tape
4486	63A0	25 GB ¼-inch Cartridge Tape
4487	63A0?	50 GB ¼-inch Cartridge Tape
4490	309E	4 GB Memory (4x1 GB DIMMs)
4490	n/a	4 GB DDR - 1 Main Storage
4491	30B3	16 GB Memory (4x4 GB DIMMs)
4492	30F7	8 GB Main Storage
4492	30F7	32 GB Memory (4x8 GB DIMMs)
4492	30F7	32 GB DDR-1 Main Storage
4525	6321	CD-ROM
4530	6330	DVD-RAM
4531	6336	DVD-ROM
4533	6333	DVD-RAMBO
4582	63A0	4 GB ¼-inch Cartridge Tape
4583	63A0	16 GB ¼-inch Cartridge Tape
4584	63A0	30 GB ¼-inch Cartridge Tape
4585	63A0	80 GB VXA-2 Tape Drive
4685	63A0	80 GB VXA-2 Tape Drive
4586	63A0	25 GB ¼-inch Cartridge Tape
4587	63A0? 6387?	50 GB ¼-inch Cartridge Tape
4605	6605	Addt Disk Unit (1.031 GB, reg)

Feat. code	CCIN	Description
4606	6606	Single Disk Unit (1967 MB)
4607	6607	Addt Disk Unit (4.194 GB, reg)
4625	6321	CD-ROM
4630	6330	DVD-RAM
4631	6336	DVD-ROM
4633	6333	DVD
4650	6603	Additional Disk Unit (1.967 GB, reg)
4652	6602	Single Disk Unit (1031 MB)
4682	63A0	4 GB ¼-inch Cartridge Tape
4683	63A0	16 GB ¼-inch Cartridge Tape
4684	63A0	30 GB ¼-inch Cartridge Tape
4685	63A0	80 GB VXA-2 Tape Drive
4686	63A0	25 GB ¼-inch Cartridge Tape
4687	63A0	50 GB ¼-inch Cartridge Tape
4690	n/a	Rack Status Beacon Assem
4691	n/a	Rack Status Beacon Cable
4692	n/a	Junction Box Cable
4693	n/a	Rack Beacon Junction box
4710	2892	4710 PCI Integrated xSeries Server
4723	2723	PCI 10 Mbps Ethernet IOA
4745	2745	PCI 2-Line WAN IOA
4746	2746	PCI Twinaxial Workstn IOA
4748	2748	PCI RAID Disk Unit Controller
4750	2750	4750 PCI ISDN BRI U IOA
4751	2751	PCI ISDN BRI S/T IOA
4761	2761	PCI Integrated Analog Modem
4778	2778	PCI RAID Disk Unit Controller
4800	4758	PCI Crypto Coprocessor
4801	4758	PCI Crypto Coprocessor
4802	4758	PCI Crypto Coprocessor
4805	2058	PCI Crypto Accelerator
4810	2892	4810 PCI Integrated xSeries Server
4811	4812	4811 PCI Integrated xSeries Server
4812	4812	4812 PCI Integrated xSeries Server
4813	4812	4813 PCI Integrated xSeries Server
4815	2815	PCI 155 Mbps UTP OC3 ATM
4816	2816	PCI 155 Mbps MMF ATM
4818	2818	PCI 155 Mbps SMF OC3 ATM
4838	2838	PCI 100/10 Mbps Ethernet IOA
4953	n/a	155 Mbps ATM UTP Adapter
4957	n/a	155 Mbps ATM Fiber Adapter
4959	n/a	4/16 Token ring adpt/
4960	n/a	Crypto SSL HW Accelerator
4961	4961	240V, 6ft, 30A Line Cord
4962	4962	Ethernet/LAN Encryption
4963	n/a	Cryptographic Coprocessor
5033	5033	5033 Migration Tower I
5034	5034	5034 Migration Tower I
5035	5035	5035 Migration Tower I
5066	5066	1.8 M I/O Tower
5078	5078	PCI Expansion Unit
5079	5079	1.8 M I/O Tower
5088	5088	PCI-X Expansion Unit
5094	5094	PCI-X Expansion Tower
5102	5102	Dual Line Cords - 820 CEC
5103	5103	Dual Line Cords - 830 CEC
5104	5104	Dual Line Cords - 840 CEC
5105	5105	Dual Line Cords - I/O Tower

Feat. code	CCIN	Description
5111	5111	30 Disk Expansion with Dual Line Cord
5121	5121	Power Regulator Card
5130	5130	Tower Attach Power (RISC)
5133	5133	Feature Power Supply
5134	5133	Feature Power Supply
5135	5135	Feature Power Supply
5136	5136	Feature Power Supply
5138	515F	Redundant Power and Cooling
5140	5140	Regulator
5141	5141	3.6V I/O Regulator
5142	5142	Tower Attach Power
5143	5143	Feature Power Supply (400W)
5144	5144	BBU External (Optional)
5145	5145	BBU Internal (Optional)
5146	5146	Redundant Power (Bulk+Reg)
5147	5147	Feature Power -560W
5148	5148	Addtl Battery Backup Internal
5149	5149	Redundant Power (bulk+reg)
5150	5150	Battery Backup (External)
5151	5151	Power Supply (650 Watts)
5152	5152	Feature Power Supply (500W)
5153	5153	Redundant Power Supplies
5156	5156	5156 Redundant Power and Cooling
5157	5157	5157 Feature Power Supply
5158	51B6	850W Power Supply
5160	5160	5160 Power Distribution Unit
5161	5161	5161 Power Distribution Unit
5162	5162	5162 Power Distribution Unit
5163	n/a	Power Dist Unit 3 Phase PDU
5343	6343	Base Tape Replace (1.2 GB)
5348	6348	Base Tape Replace (1.2 GB)
5349	6349	Base Tape Replace (2.5 GB)
5550	n/a	Sys Console on HMC
5554	n/a	Mirror 35 GB Disk/Ctrlr Package
5555	n/a	Mirror 70 GB Disk/Ctrlr Package
5556	n/a	Mirror 141.12 GB Disk/Ctrlr Package
5560	n/a	Mirror 35 GB Drawer Package
5561	n/a	Mirror 70 GB Drawer Package
5562	n/a	Mirror 35 GB Tower Package
5563	n/a	Mirror 70 GB Tower Package
5564	n/a	Mirror 141.12 GB Drawer Package
5580	2780 5708	RAID Disk Unit Controller with auxiliary Write Cache
5581	2757 5708	RAID Disk Unit Controller with auxiliary Write Cache
5700	5700	5700 PCI 1 Gbps Ethernet IOA
5701	5701	PCI 1 Gbps Ethernet UTP IOA
5702	5702	5702 PCI-X Ultra Tape Controller
5703	5703	PCI-X RAID Disk Controller
5705	5702	5705 PCI-X Tape/DASD Controller
5706	5706	10/100/1000 Mbps Ethernet Fiber
5706	5706	Dual Port Gigabit Ethernet
5707	5707	10/100/1000 Mbps Ethernet UTP
5707	5707	PCI 1 Gbps Ethrnt 2- port
5709	5709	Ultra320 SCSI RAID
5712	5702	Ultra320 SCSI
5715	5702	PCI-X Tape/DASD Controller
5718	n/a	10 GB Ethernet (Fiber)

Feat. code	CCIN	Description
5750	6337	DVD-ROM - Slim Line
5751	6331	DVD-RAM
5752	6333	DVD-RAM
5753	63a0	30 GB ¼-inch Cartridge Tape
5754	63a0	50 GB ¼-inch Cartridge Tape
6001	n/a	SPCN Power Cable - 2 m
6006	n/a	SPCN Power Cable - 3 m
6007	n/a	SPCN Power Cable - 15 m
6008	n/a	SPCN Power Cable - 6 m
6029	n/a	SPCN Power Cable - 30 m
6040	6040	Twinaxial Workstn Controller
6041	6041	ASCII Workstation Controller
6050*	6050	Twinaxial Workstation Controller
6054*	6054	Local Talk Controller
6068	n/a	Opt Front Door for 1.8 m Rack
6100	6100	Disk Unit (315 MB)
6103	6103	Single Disk Unit (400 MB)
6105	6105	Single Disk Unit (320 MB)
6107	6107	Single Disk Unit (400 MB)
6108	6105	Additional Dual Disk (640 MB)
6109	6109	Single Disk Unit (988 MB)
6110*	6110	Magnetic Storage Dev Controller
6111*	6111	Magnetic Storage Dev Controller
6112*	6112	Magnetic Storage Device Controller
6120	6107	Dual Disk Unit (800 MB)
6121	6107	Additional Dual Disk (800 MB)
6123	6109	Additional Dual Disk (1976 MB)
6124	6109	Base DASD Upgrade (1976 MB)
6125	6109	Base DASD Replace (988 MB)
6126	6104	Base DASD Replace (988 MB)
6127	6109	Base DASD Replace (1976 MB)
6134	n/a	60 GB 8 mm Tape Unit
6140*	6140	Twinaxial Workstation Controller
6141*	6141	ASCII Workstation Controller
6146*	6146	Diskette Adapter
6147*	6147	Diskette Adapter
6148*	6148	8-Port Twinaxial Expansion
6149	6149	16/4 Mbps Token-Ring IOA
6150*	6150	Three-Line Communication Controller
6151*	6151	X.21 One-Line 20
6152*	6152	EIA 232/V.24 Adapter
6153*	6153	V.35 One-Line (20-ft Cable)
6154	6152	EIA 232/V.24 One-Line 20E
6155	6152	EIA 232/V.24 One-Line 20
6160	6160	Token-Ring Network Adapter
6171	6151	X.21 One-Line 50
6173*	6153	V.35 One-Line (50-ft Cable)
6174	6152	EIA 232/V.24 One-Line 50E
6175	6152	EIA 232/V.24 One-Line 50
6180	6180	Twinaxial Workstation IOA
6181	6181	Ethernet/IEEE 802.3 IOA
6183	6183	6 port ASCII IOA
6203	n/a	PCI Ultra3 SCSI Adapter
6204	n/a	Differential SCSI Adapter
6246	n/a	1.8 m Rack Trim Kit
6258	n/a	36 GB 4 mm Tape Unit
6312	n/a	Quad Digital Trunk Adapter
6325	6321	CD-ROM

Feat. code	CCIN	Description
6335	6335	840 MB QIC-mini Tape Unit
6340	6340	13 GB QIC mini Tape Unit
6341	6341	120 MB ¼-in Cartridge Tape
6342	6342	525 MB ¼-inch Cartridge Tape
6343	6343	1.2 GB ¼-inch Cartridge Tape
6344	6344	2.5 GB ¼-in Cartridge Tape
6345	6345	13 GB ¼-in Cartridge Tape
6346	6346	120 MB ¼-in Cartridge Tape
6347	6347	525 MB ¼-in Cartridge Tape
6348	6348	1.2 GB ¼-in Cartridge Tape
6349	6349	2.5 GB ¼-in Cartridge Tape
6350	6350	13 GB ¼-in Cartridge Tape
6365	6335	840 MB QIC-mini Tape External
6366	6366	120 MB ¼-in Cartridge Tape
6367	6366	525 MB ¼-in Cartridge Tape
6368	6368	1.2 GB ¼-inch Cartridge Tape
6369	6369	2.5 GB ¼-inch Cartridge Tape
6370	6370	13 GB ¼-in Cartridge Tape
6380	6380	2.5 GB ¼-inch Cartridge Tape
6381	63A0	2.5 GB ¼-inch Cartridge Tape
6382	63A0	4 GB ¼-inch Cartridge Tape
6383	63A0	16 GB ¼-inch Cartridge Tape
6384	63A0	30 GB ¼-inch Cartridge Tape
6385	6385	13 GB ¼-inch Cartridge Tape
6386	63A0	25 GB ¼-inch Cartridge Tape
6390	6390	7 GB 8 mm Cartridge Tape Unit
6417	28E7	HSL-2/RIOG Bus Adapter
6425	6321	CD-ROM
6480	6380	2.5 GB ¼-inch Cart Tape
6481	63A0	2.5 GB ¼-inch Cart Tape
6482	63A0	4 GB ¼-inch Cartridge Tape
6483	63A0	16 GB ¼-inch Cartridge Tape
6484	63A0	30 GB ¼-inch Cartridge Tape
6485	6385	13 GB ¼-inch Cartridge Tape
6486	63A0	25 GB ¼-inch Cartridge Tape
6490	6390	7 GB 8 mm Cartridge Tape
6500*	6500	Disk Controller
6501*	6501	Tape/Disk Device Controller
6502*	6502	Disk Unit Controller for RAID
6509	6509	Additional 16 MB FSIOP Memory
6512*	6512	Disk Unit Controller for RAID
6513*	6513	Internal Tape Device Controller
6516	6506	16 MB 1-port FSIOP
6517	6506	32 MB 1-port FSIOP
6518	6506	48 MB 1-port FSIOP
6519	6506	64 MB 1-port FSIOP
6520	6520	Upgrade 1 to 2 Port FSIOP
6522*	6502	Disk Unit Cntrlr for RAID
6523	6530	Disk Unit Controller
6526	6506	16 MB 2-Port FSIOP
6527	6506	32 MB 2-Port FSIOP
6528	6506	48 MB 2-Port FSIOP
6529	6506	64 MB 2-Port FSIOP
6530*	6530	Storage Device Controller
6532	6532	RAID Disk Unit Controller
6533	6533	RAID Disk Unit Controller
6534	6534	Magnetic Media Controller
6536	6535	SSA Disk Unit Controller

Feat. code	CCIN	Description
6537	6535	SSA RAID Disk Unit Controller
6574	28D2	4-Disk Slot Exp - Base Ctlr
6580	n/a	Optional Rack Security Kit
6584	28F7	4-Disk Slot Exp - PCI-X Ctlr
6592	28F6	4-Disk Slot Exp - Base Ctlr
6593	292E	4-Disk Slot Exp - PCI-X Ctlr
6594	292D	4-Disk Slot Exp-PCI-X Ctlr
6601	6601	Single Disk Unit (1031 MB)
6602	6602	Single Disk Unit (1031 MB)
6603	6603	Single Disk Unit (1967 MB)
6605	6605	1.03 GB Disk Unit
6606	6606	1.96 GB Disk Unit
6607	6607	4.19 GB Disk Unit
6612	6602	Dual Disk Unit (2.0 GB)
6613	6603	Dual Disk Unit (4 GB)
6616	6616	Integrated PC Server
6617	6617	Integrated PC Server
6618	6617	Integrated Netfinity Server
6650	6603	Additional Disk Unit (1.96 GB)
6652	6602	Additional Disk Unit (1.03 GB)
6701	6601	Base Disk Replace (1.0 GB)
6713	6713	8.58 GB Disk Unit
6714	6714	17.54 GB Disk Unit
6717	6717	8.58 GB 10k rpm Disk Unit
6718	6718	17.54 GB 10k rpm Disk Unit
6750	6750	MFIOF
6752	6752	MFIOF
6753	6753	MFIOF
6802	6602	Base Disk Replacement (1.0 GB)
6806	6606	1.96 GB Disk Unit
6807	6607	4.19 GB Disk Unit
6812	6602	Base Disk Replacement (2.0 GB)
6813	6713	8.58 GB Disk Unit
6817	6717	8.58 GB 10k rpm Disk Unit
6818	6718	17.54 GB 10k rpm Disk Unit
6824	6714	17.54 GB Disk Unit
6831	6831	1.6 GB Read Cache Device
6906	6606	1.96 GB Disk Unit
6907	6607	4.19 GB Disk Unit
7104	7104	System Unit Expansion
7123	283F	DASD Expansion Unit
7124	28BC	DASD Expansion Unit - 5 slot
7127	283F	DASD Expansion Unit
7128	7128	DASD Expansion Unit
7130	7130	Expansion Unit Tape Cage
7133	283F	DASD Concurrent Maint Cage
7135	3135	Optional 256 MB Main Storage
7136	28CD	DASD Expansion Unit - 6 slot
7137	28CD	DASD Concurrent Maintenance
7157	3157	Optional Base 128 MB Main Storage
7158	3158	Optional Base 256 MB Main Storage
7174*	9174	Ethernet IOA
7175*	9175	Token Ring IOA
7186	3186	Optional Base 128 MB Main Storage
7187	3187	Optional Base 256 MB Main Storage
7188	n/a	Power Disk Unit - Side Mount
7255	3155	Optional Base 256 MB Main Storage
7263	3163	Optional Base 256 MB Main Storage

Feat. code	CCIN	Description
7264	3164	Optional Base 512 MB Main Storage
7265	3165	Optional Base 1024 MB Main Storage
7266	3166	Optional Base 256 MB Main Storage
7343	6343	1.2 GB ¼-inch Cartridge Tape
7344	6344	2.5 GB ¼-in Cartridge Tape
7347	6347	Base Tape Upgrade (525 MB)
7348	6348	1.2 GB ¼-in Cartridge Tape
7349	6349	2.5 GB ¼-in Cartridge Tape
7404	7404	Package Feature
7500	6713	Quantity 150 of #4314
7501	6717	Quantity 150 of #4317
7502	6718	Quantity 150 of #4318
7503	6714	Quantity 150 of #4324
7504	6719	Quantity 150 of #4319
7508	4326	Quantity 150 of #4326
7509	4327	Quantity 150 of #4327
7510	4328	Quantity 150 of #4328
7607	6607	Optional Base 4.19 GB Disk Unit
7613	6603	Base DASD Replace (3934 MB)
7713	6713	Optional Base 8.58 GB Disk Unit
7801	n/a	6 m HMC Attachment Cable
7802	n/a	15 m HMC Attachment Cable
7813	528C	0/8 GR 1.8 GHz CUoD MCM
7814	30DC	4 GB Main Storage
7816	303E	2/4 GB CUoD Main Storage
7817	7817	SNI Fiber Adapter
7818	28D8	HSL-2/RIO-G 2-Ports Copper
7819	28EB	HSL/RIO 2-Ports Optical
7828	304E	CUoD 8/16 GB (4X4 GB)
7840	n/a	Side-by-side for 1.8 m Racks
7841	n/a	Ruggedize Rack Pack
7862	n/a	Blind Swap Cassette (long)
7863	n/a	Blind Swap Cassette (Double)
7864	n/a	Blind Swap Cassette (DTXA)
7866	28DA	I/O PCI Backplane
7869	28DC	Removable Media Backplane
7870	28DD	Power Supply Dist Backplane
7878	25F8	Serial/VPD PCI Card
7879	7879	Headless Enclosure
7881	28EA	Service Processor
7882	180A	SCSI to IDE Converter Card
7890	30DE	4/8 GB CUoD DDR1 Memory
7891	30DF	8/16 GB DDR-1 Main Storage
7892	30F0	512 MB Main Storage DDR2 DIMM
7893	30F2	4 GB Main Storage DDR2 DIMM
7894	30F3	8 GB Main Storage DDR2 DIMM
7935	30F8	16/32 GB DDR-1 Main Storage
8052	5052	Optional 16 Disk Unit Expansion
8054*	6054	LocalTalk Adapter
8079	9079	Optional Base 1.8 M I/O Rack
8110	6110	Std Mag Storage Controller
8111	6111	Std Mag Storage Controller
8123	6109	Dual Disk Unit (1976 MB)
8133	n/a	RJ45 to DB25 Interposer
8135	3135	Optional Base 256 MB Main Storage
8136	n/a	Remote ASYNC Node (Rack)
8137	n/a	Remote ASYNC Node
8152	9152	Optional Base Twinaxial

Feat. code	CCIN	Description
8156	3156	Optional Base 64 MB Main Storage
8157	3157	Optional Base 128 MB Main Storage
8158	3158	Optional Base 256 MB Main Storage
8160	3160	Optional Addtl 16 MB Main Storage
8162	9162	Optional Base MFIOP with Twinaxial
8172	3172	Delt Price 32 MB
8180	3180	Optional Base 512 MB Main Storage
8185	3185	Optional Base 64 MB Main Storage
8186	3186	Optional Base 128 MB Main Storage
8187	3187	Optional Base 256 MB Main Storage
8191	3191	Optional Base 512 MB Main Storage
8192	3192	Optional Base 1024 MB Main Storage
8193	3193	Optional Base 2048 MB Main Storage
8210	3110	Optional 64 MB Main Storage
8244	n/a	PCI WS Audio Adaptor
8253	3153	Optional Base 64 MB Main Storage
8254	3154	Optional Base 128 MB Main Storage
8255	3155	Optional Base 256 MB Main Storage
8264	3164	Optional Base 512 MB Main Storage
8265	3165	Optional Base 512 MB Main Storage
8335	277B	2.3 GHz 0/2-w GS Processor
8342	6342	525 MB ¼-inch Cartridge Tape
8343	6343	1.2 GB ¼-inch Cartridge Tape
8344	6344	2.5 GB ¼-inch Cartridge Tape
8345	6345	13 GB ¼-inch Cartridge Tape
8347	6347	525 MB ¼-inch Cartridge Tape
8348	6348	1.2 GB ¼-inch Cartridge Tape
8349	6349	2.5 GB ¼-in Cartridge Tape
8505	2630	I/O Card Unit Conversion
8606	6606	Single Disk Unit (1967 MB)
8607	6607	Optional Base DASD (4.194 GB, reg)
8609*	2654	EIA 232/V.24 2-Line
8612	6602	Base 2.0 GB Dual Disk Unit
8613	6603	Base DASD Upgrade (3934 MB)
8617	6717	Optional Base 8.58 GB 10k rpm Disk
8618	6718	Optional Base 17 GB 10k rpm Disk
8650	6603	Optional Disk Unit (1.967 GB,2byte)
8664	2618	Optional Base Fiber DD Intf
8665	2665	Optional Base Shielded DD Intf
8706	6606	Optional Base Disk Unit (1.967 GB)
8707	6607	Optional Base Disk Unit (4.194 GB)
8713	6713	Optional Base 8.58 GB Disk Unit
8714	6714	Optional Base 17.54 GB Disk Unit
8716	6506	Optional 16 MB 1-port FSIOP
8717	6506	Optional 32 MB 1-port FSIOP
8718	6506	Optional 48 MB 1-port FSIOP
8719	6506	Optional 64 MB 1-port FSIOP
8726	6506	Optional 16 MB 2-Port FSIOP
8727	6506	Optional 32 mB 2-Port FSIOP
8728	6506	Optional 48 MB 2-Port FSIOP
8729	6506	Optional 64 MB 2-Port FSIOP
8813	6713	Optional Base 8.58 GB Disk Unit
8817	6717	Optional Base 8.58 GB 10k rpm Disk
8818	6718	Optional Base 17 GB 10k rpm Disk
8824	6714	Optional Base 17.54 GB Disk Unit
8863*	2609	EIA 232/V.24 2-line 20E
8866*	2609	EIA 232/V.24 2-line 50E
8917	6717	Optional Base 8.58 GB 10k rpm Disk

Feat. code	CCIN	Description
8918	6718	Optional Base 17 GB 10k rpm Disk
8924	6714	Optional Base 17.54 GB Disk Unit
9000	7000	Panel Keylock Feature
9004	n/a	South Hemisphere Designator
9020	9020	V.35 Cable 20-ft
9021	9021	X.21 Cable 20-ft
9022	9022	EIA232 20-ft Cable
9023	9023	V.24 20-ft Enhanced Cable
9024	9024	Token-Ring Cable (2.44 m)
9025	9025	Ethernet Cable AUI (3 m)
9026	9026	EIA 232 6 m Client Acc cable
9027	9027	EIA 232 2.5 m Clint Acc cable
9050	6050	Base Twinaxial Workstation Controller
9053	6053	Std Twinaxial WSC Specify
9054	6054	Std LocalTalk Controller
9079	9079	Base I/O Tower for 840 or SB3
9100	6100	315 MB Disk Unit Relocation
9102	6102	Std 320 MB Disk Unit
9103	6103	Std 400 MB Disk Unit
9104	6104	Std 988 MB Disk Unit
9106	6105	Standard Dual Disk (640 MB)
9109	6109	Std 988 MB Disk Unit Spec
9110	3110	Std 64 MB Main Storage
9116	7116	High Performance CD Enable
9117	7117	Expansion Unit 1
9120	6107	Standard Dual Disk (800 MB)
9122	6122	Std 851 MB Disk Unit (RPQ)
9126	7126	STD Mixed Disk Enabler
9140	6140	Twinaxial Workstation Control
9141	6141	ASCII Workstation Control
9143*	9143	Twinaxial Workstation Controller
9144*	2637	ASCII Workstation Controller
9145*	9145	Std MFIOP/ASCII WSC
9146	2638	Std MFIOP/Twinaxial WSC
9147	2637	Std MFIOP/ASCII WSC
9148	2661	Std MFIOP/Twinaxial WSC
9149*	9149	Twinaxial passthru adapter
9150	2637	Std MFIOP/ASCII WSC
9151	2661	Std MFIOP/Twinaxial WSC
9152	9152	Std MFIOP/Twinaxial WSC
9153	9153*	Std MFIOP wo/Twinaxial WSC
9156	3156	Std 64 MB Main Storage
9159	3159	Std 8 MB Main Storage
9160	3160	Std 16 MB (2 SIMM)
9161	3161	Std 32 MB Main Storage
9162*	9162	Std MFIOP with Twinaxial WSC
9163*	9163	Std MFIOP
9164	9164	Std MFIOP
9171*	917A	Std MFIOP/ASCII WSC
9172*	2661	Twinaxial MFIOP
9173*	917C	Std MFIOP/LocalTalk WSC
9174*	9174	Base Ethernet IOA
9175*	9175	Base Token Ring IOA
9176*	918E	Base MFIOP
9177*	918D	Ethernet MFIOP
9179	3179	Base 256 MB Main Storage
9184	3184	Standard 32 MB Main Storage
9185	3185	Standard 64 MB Main Storage

Feat. code	CCIN	Description
9190	3190	Base 256 MB Main Storage
9211	9211	60 m SPCN Optical cable
9212	9212	100 m SPCN Optical cable
9215	9215	60 m SPCN Copper Cable
9231	3131	Optional Base 64 MB Main Storage
9232	3132	Optional Base 128 MB Main Storage
9234	3134	Std 128 MB Main Storage
9243	9243	400W Availability Bulk
9249	6149	Base 16/4 Mbps Token-Ring IOA
9252	3152	Standard 32 MB Main Storage
9254	3154	Standard 128 MB Main Storage
9262	3162	Standard 128 MB Main Storage
9263	3163	Standard 256 MB Main Storage
9266	3166	Standard 256 MB Main Storage
9272	3172	Standard 32 MB Main Storage
9280	6180	Base Twinaxial WSC
9282	3172	Standard 32 MB Main Storage
9301	9301	Upgraded 30-Disk Expansion
9304	3104	Standard 64 MB Main Storage
9313	6713	Base 8.58 GB Disk Unit
9341	6341	Standard 120 MB ¼-inch Tape
9342	6342	Standard 525 MB ¼-inch Tape
9343	6343	Standard 1.2 GB ¼-inch Tape
9347	6347	Standard 525 MB ¼-inch Tape
9348	6348	Standard 1.2 GB ¼-inch-inch Tape
9380	6380	2.5 GB ¼-inch Cart Tape
9381	6181	Base Ethernet/IEEE 802.3 IOA
9517	6517	Standard File Server 32 MB 1 Port
9517	28E7	Base HSL-2/RIOG Bus Adapter
9520	6320	Standard CD-ROM
9529	6529	Standard File Server 64 MB 2 Port
9570	n/a	Reserved Rack Space
9584	2584	ASCII Workstation Controller
9585	2585	Twinaxial Workstn Controller
9601	6601	Standard 1.0 GB Disk Unit
9602	6602	Standard 1.0 GB Disk Unit
9605	6605	Standard 1.031 Disk Unit
9606	6606	Base 1.96 GB Disk Unit
9609	2654	Standard EIA 232/V.24 2-line
9612	2612	Standard EIA 232/V.24 1-Line/Ad
9617	2617	Base Ethernet IOP
9619	2619	Base 16/4 Mbps Token-Ring IOP
9623	2623	Standard Six Line Comm Controller
9624	2624	Store Device Control Spec
9651	2651	Storage Device Controller
9652	6602	Std Disk Unit (1.031 GB, 2 Byte)
9653	63A0	Base 30 GB ¼-inch Tape
9673	2673	Std Optical Bus Adapter
9691	2691	Base Bus Adapter HSL Copper
9696	2696	Base Optical Bus Adapter
9699	2699	Base 2-Line WAN IOA
9705	6605	Standard 1.031 Disk Unit regulated
9707	6607	Base 4.19 GB Disk Unit
9720	2720	Base PCI WAN/Twinaxial IOA
9721	2721	Base PCI 2-Line WAN IOA
9723	2723	Base Ethernet IOA
9724	2724	Base 16/4 Mbps Token-Ring IOA
9726	0446	Base 512 MB Server Memory

Feat. code	CCIN	Description
9728	2728	Base PCI Disk Unit Controller
9730	273B	Base HSL-2 Ports - 4 Copper
9732	2732	Base HSL Ports - 8 Copper
9733	2732	Base HSL Ports - 8 Copper
9737	2737	Base HSL Ports - 16 Copper
9738	2838	Base PCI 100/10 Mbps Ethernet
9739	2739	Base Optical Bus Adapter
9739	9739	Base Optical Bus Adapter
9740	2740	Base PCI RAID Disk Unit Controller
9745	2745	Base PCI 2-Line WAN IOA
9746	2746	Base PCI Twinaxial Workstation IOA
9748	2748	Base PCI Disk Unit Controller
9749	2849	Base PCI 100/10 Ethernet IOA
9751	6751	Base MFIOF with RAID
9752	2754	Base HSL Ports - 8 Copper
9753	6753	Base MFIOF
9754	6754	Base MFIOF with RAID
9755	2755	Base HSL Ports -16 Copper
9758	2758	Base HSL Ports - 2 Optical/6 Cop
9759	2759	Base HSL Ports-4 Optical/12 Cop
9767	2767	Base PCI Disk Unit Controller
9771	2771	Base PCI 2-Line WAN with Modem
9774	2758	Base HSL Ports - 2 Optical/6 Cop
9777	2754	Base HSL Ports - 8 Copper
9778	2778	Base PCI RAID Disk Unit Controller
9785	2785	Base HSL-2 Ports - 2 Copper
9786	2786	Base HSL Ports - 2 Optical
9787	28B3	Base HSL-2 Ports - 2 Copper
9789	2789	Base HSL Ports - 4 Optical
9792	2892	Base PCI Integ xSeries Server
9793	2793	Base PCI 2-Line WAN with Modem
9794	2793	Base PCI 2-Line WAN with Modem
9800	2800	Internal Disk Unit (640 MB)
9801	2801	Internal Disk Unit (1 GB)
9802	2802	Std 2.0 GB Int Disk Unit
9803	9803	2.5 m DFCI cable
9814	9814	20-ft Antenna Cable Wireless
9815	9815	50-ft Antenna Cable Wireless
9820	9820	2nd Bus cable for Model 300
9835	9835	V.24 Cable 50-ft Enhanced
9836	9836	EIA232 Cable 50-ft
9838	9838	V.35 Cable 50-ft
9839	9839	X.21 Cable 50-ft
9844	2844	Base PCI IOP
9853	9853	20.0 m optical bus cable
9854	9854	60 m optical bus cable
9855	9865	100.0 m optical bus cable
9862	6152	EIA 232/V.24 One line 20E
9865	6152	EIA 232/V.24 One line 50E
9876	n/a	Base Optical Bus Adapter
9877	n/a	Base HSL-2 Bus Adapter
9879	9879	20-ft/6 m V.35 Cable
9880	9880	80-ft/24.4 m V.35 Cable
9882	9882	20-ft/6 m V.36 Cable
9883	9883	80-ft/24.4 m V.36 Cable
9884	9884	150-ft/45.7 m V.36 Cable
9885	9885	20-ft/6 m X.21 Cable
9886	2886	Base Optical Bus Adapter

Feat. code	CCIN	Description
9887	2887	Base HSL-2 Bus Adapter
9904	4104	4 MB Main Storage
9907	6607	Base 4.19 GB Disk Unit
9927	9927	Channel Box and cable
9928	9928	1.7 m attach cable
9929	9929	6.6 m attach cable
9930	9930	24.0 m attach cable
9943	2843	Base PCI IOP
9980	9980	Serpentine Cable Connector

\* As of January 2000, level 3 microcode fixes for these adapters are no longer provided. There are no further microcode changes for these components. IBM service and maintenance agreements on systems containing these input/output (I/O) adapters can be offered within guidelines. Contact your IBM Service Representative for further information.



## Software for IBM iSeries and AS/400e systems

IBM OS/400 Version 5, Version 4, and some Version 3 releases (specifically OS/400 V3R7 and V3R6) support reduced instruction set computing (RISC)-based processors. OS/400 V5R2 supports all RISC processors except the 5xx and 4xx models. This chapter covers the OS/400 and related software information for all software releases supporting the RISC processors documented in this IBM Redpaper.

**Note:** RISC processor-based models of the iSeries and AS/400e servers are 820, 830, 840, 270, SB2, SB3, 250, 720, 730, 740, 150, 620, 630, 640, 50S, 53S, 500, 510, 530, 4x0, and Sx0.

OS/400 software releases up to and including V3R2 run only on CISC models of the AS/400 system (Bx0, Cx0, Dx0, Exx, Fx0, P0x, 100, 135, 140, 2x0, and 3x0 Models). For information about software supporting these CISC systems, refer to *AS/400 CISC System Builder*, REDP-0042.

OS/400 software releases from V3R6 and V3R7 through V5R2 run on the Model 150, 4xx, 5xx, 6xx AS/400e systems. For information about software supporting these RISC systems, refer to *AS/400e RISC System Builder*, REDP-0342.

## 12.1 Minimum OS/400 software level requirements for iSeries and AS/400e hardware

The following tables identify the minimum operating system software release required for IBM iSeries and AS/400e models. The Model 270, for example, has a minimum release of OS/400 V4R5. Many of the feature codes that are supported in these processors by earlier releases of OS/400 than the processor itself are also represented.

OS/400 V3R7	OS/400 V4R1
#2861 32 MB IPCS Memory #2862 128 MB IPCS Memory #6149 16/4 Mbps Token Ring IOA #6181 ASCII Workstation Controller #6385 13 GB ¼-inch Cartridge Tape Unit #6513 Internal Tape Device Controller #6607 4.19 GB Additional Two-byte Disk Unit #6616 Integrated PC Server (with PTF Package C7029370) #6713 8.58 GB Disk Unit (Two-byte) (Ultra SCSI)	7208-342 8 mm Tape Drive #03xx Communications Cables #2629 LAN/WAN/Workstation IOP #2699 Two-Line WAN IOA #2810 LAN/WAN IOP #2838 PCI 100/10 Mbps Ethernet IOA #6180 Twinaxial Workstation IOA #6532 RAID Disk Unit Controller #6534 Magnetic Media Controller

OS/400 V4R2	OS/400 V4R3	OS/400 V4R4
<b>9406-170 models</b> 7207-122 QIC-SLR Tape Bridge Box (4 GB External ¼-inch Cartridge Tape Drive) #0222 100/10 Mbps Ethernet on IPCS #0295 Performance Enhancement / 28 Workstations #0325 IPCS Extension Cables for NT #1334 2-byte 17.54 GB Disk Unit Kit #1700 IPCS Keyboard/Mouse for NT #2718 PCI Magnetic Media Controller #2740 PCI RAID Disk Unit Controller #2741 PCI RAID Disk Unit Controller #2811 PCI 25 Mbps UTP ATM IOA #2812 PCI 45 Mbps Coax T3/DS3 ATM IOA #2815 PCI 155 Mbps UTP OC3 ATM IOA #2816 PCI 155 Mbps MMF ATM IOA #2818 PCI 155 Mbps SMF OC3 ATM IOA #2819 PCI 34 Mbps Coax E3 ATM IOA #2852 Integrated PC Server #2854 PCI Integrated PC Server #2865 PCI Integrated Netfinity Server #2866 PCI Integrated Netfinity Server #3179 256 MB main storage #3180 512 MB main storage #6381 2.5 GB ¼-inch Cartridge Tape #6714 17.54 GB Disk Unit #6824 17.54 GB Disk Unit #8180 Optional Base 512 MB Main Strg #8714 Optional Base 17.54 GB Disk Unit #8824 Optional Base 17.54 GB Disk Unit #9179 Base 256 MB main storage #9754 MFIOP with RAID	<b>9406-170 #229x Processors</b> <b>9406-170 #238x Processors</b> <b>9406-720 #2061, #2062, #2063, #2064 Processors</b> <b>9406-730 #2065, #2066, #2067, #2068 Processors</b> <b>9406-740 #2069, #2070 Processors</b> #0034 Red Covers #003A Internet Leased Line #0220 Token Ring on IPCS #0221 Ethernet on IPCS #0328 Operations Console Cable #0367 Operations Console PCI Cable #0380 Remote Control Panel Cable #0381 Remote Control Panel Cable #0422 JDE Pkg 1 Ready to go NTIPCS #0423 JDE Pkg 2 Ready to go Netfinity #0445 Preload Acacia #0465 Preload Lilly #149x Interactive Specify codes #15xx Interactive cards #2741 PCI RAID Disk Unit Controller #2745 PCI 2-Line WAN IOA #2867 256 Mb Memory #3003 256 MB main storage #3193 2048 MB main storage #5544 System Console on Operations Console #5536 Alt IPL Specify for 25 GB #6386 25 GB ¼-inch Cartridge Tape Unit #6717 8.58 GB 10k RPM Disk Unit #6817 8.58 GB 10k RPM Disk Unit #6824 17.54 GB Disk Unit #8193 Optional Base 2048 MB main storage #8617 8.58 GB Optional Base 10k RPM Disk Unit #8817 8.58 GB Optional Base Two-byte Disk Unit 10k RPM	<b>9406-170 #240x Processors</b> #2746 PCI Twinaxial Workstation IOA #2748 PCI RAID Disk Unit Controller #2750 PCI ISDN BRI U Adapter #2751 PCI ISDN BRI S/T IOA #2761 Integrated Analog Modem #2824 PCI Feature Controller #4308 4.19 GB Disk Unit #4314 8.58 GB Disk Unit #4317 8.58 GB 10k RPM Disk Unit #4318 17.54 GB 10k RPM Disk Unit #4324 17.54 GB Disk Unit #4331 1.6 GB Read Cache Device #4425 CD-ROM #4482 4 GB ¼-inch Cartridge Tape Device #4483 16 GB ¼-inch Cartridge Tape Device #4486 25 GB ¼-inch Cartridge Tape Device #4800 PCI Cryptographic Processor #5065 Storage/PCI Expansion Tower #5066 1.8 M I/O Tower #6325 Optional CD-ROM #6383 16 GB ¼-inch Cartridge Tape Unit #6425 CD-ROM #6483 16 GB ¼-inch cartridge tape #6718 17.54 GB 10k RPM Disk Unit #6818 17.54 GB 10k RPM Disk Unit #6831 1.6 GB Read Cache Device #7102 System Expansion Unit #8618 17.54 GB Optional Base 10k RPM Disk Unit #8818 17.54 GB Optional Base Two-byte Disk Unit 10k RPM #9330 PCI Integrated Expansion Unit

OS/400 V4R5	OS/400 V5R1	OS/400 V5R2
<b>9406-250</b> #0295, #0296, #0297, #0298 <b>Processors</b> <b>9406-270</b> #2248, #2250, #2252, #2253 <b>Processors</b> <b>9406-270</b> #2422, #2423, #2424 <b>DSD</b> <b>Processors</b> <b>9406-820</b> #2395, #2396, #2397, #2398 <b>Processors</b> <b>9406-820</b> #2425, #2426, #2427 <b>DSD</b> <b>Processors</b> <b>9406-830</b> #2400, #2402, #2403 <b>Processors</b> <b>9406-840</b> #2416, #2417, #2418, #2419, #2420 <b>Processors</b> <b>9406-SB2</b> #2315 <b>Processors</b> <b>9406-SB3</b> #2316, #2318 <b>Processors</b> #146x HSL Cables #146x SPCN Cables #15xx Interactive features for 270 and 8xx #2743 1 Gbps PCI Ethernet IOA #2744 PCI 100 Mbps Token Ring IOA #2749 PCI Ultra Magnetic Media Controller #2763 PCI RAID Disk Unit Controller #2768 PCI Magnetic Media Controller #2790 PCI Integrated Netfinity Server IOP #2795 128 MB IOP Memory #2796 256 MB IOP Memory #2797 1 GB IOP Memory #2842 PCI IOP (Model 270) #2843 PCI IOP (Model 8xx) #2881 Main Storage Expansion #2884 Main Storage Expansion Riser Card #2890 PCI Integrated Netfinity Server #2895 128 MB IOP Memory #2896 256 MB IOP Memory #2897 1 GB IOP Memory #3xxx Memory for 270 and 8xx Models #4430 DVD-RAM #4525 CD-ROM #4530 DVD-RAM #4582 4 GB ¼-inch Cartridge Tape Device #4583 16 GB ¼-inch Cartridge Tape Device #4586 25 GB ¼-inch Cartridge Tape Device #4625 CD-ROM #4630 DVD-RAM #4682 4 GB ¼-inch Cartridge Tape Device #4683 16 GB ¼-inch Cartridge Tape Device #4686 25 GB ¼-inch Cartridge Tape Device #4723 PCI 10 Mbps Ethernet Adapter #4745 PCI 2-line WAN IOA #4746 PCI Twinaxial IOA	<b>9406-270</b> #2431, #2432, #2434 <b>Processors</b> <b>9406-270</b> #2452, #2454 <b>DSD Processors</b> <b>9406-820</b> #0150, #0151, #0152, #2435, #2436, #2437, #2438 <b>Processors</b> <b>9406-820</b> #2456, #2457, #2458 <b>DSD</b> <b>Processors</b> <b>9406-830</b> #0153, #2349, #2351 <b>Processors</b> <b>9406-840</b> #0158, #0159, #2461 <b>Processors</b> 9406-8x0 #235x CUoD #037x LC-SC Adapter Kit #1422 PDU Line Cord #147X Optical HSL Cable #1548 Interactive Capacity Card #2739 Optical Bus Adapter #275x HSL Ports #2760 PCI 1 Gbps Ethernet UTP Adapter #2765 PCI Fibre Channel Tape Controller #2766 PCI Fibre Channel Disk Controller #2772 PCI Dual WAN/Modem IOA #2773 PCI Dual WAN/Modem IOA (ANSI) #2777 HSL Ports - 8 Copper - 8 Copper #2778 PCI RAID Disk Unit Controller #2799 PCI Integrated xSeries Server #2805 PCI Quad Modem IOA #2806 PCI Quad Modem (CIM) #2817 PCI 155 Mbps MMF ATM IOA #2899 PCI Integrated xSeries Server #3007 1 GB main storage #3009 128 MB main storage #3027 1 GB main storage #3029 128 MB main storage #3032 256 MB main storage #3033 512 MB main storage #3034 1 GB main storage #3067 1 GB main storage #4319 35.16 GB 10k RPM Disk Unit #4585 80 GB VXA-2 Tape Device #4487 50 GB ¼-inch Cartridge Tape Device #4587 50 GB ¼-inch Cartridge Tape Device #4685 80 GB VXA-2 Tape Device #4687 50 GB ¼-inch Cartridge Tape Device #4778 PCI RAID Disk Unit Controller #5078 PCI Expansion Unit #510x PCI Disk Expansion Unit #516x Power Dist Unit #9002 Dual Line Cord Enabler #9752 Base HSL Ports - 8 Copper #9755 Base HSL Ports - 16 Copper #9777 Base HSL Ports - 8 Copper #9778 Base PCI RAID Disk Unit Controller 7207-330 External SLR60 Tape Drive	#0595 PCI-X Expansion Unit in Rack #15xx Interactive Card #2742 2-Line WAN IOA #2757 PCI-X Ultra RAID Disk Controller #2776 HSL-2 Ports - 8 Copper #2782 PCI-X RAID Disk Unit Controller #2785 HSL-2 Ports - 2 Copper #2786 HSL Ports - 2 Optical #2787 PCI-X Fibre Channel Disk Controller #2788 HSL Ports - 8 Optical #2792 PCI Integrated xSeries Server #2793/#9793 Two-Line WAN IOA with Modem #2794/#9794 Two-Line IOA with Modem #2844 PCI IOP #2849 10/100 Mbps Ethernet Adapter #2892 PCI Integrated xSeries Server #2886 Optical Bus Adapter #3020 4 GB main storage #3021 4 GB main storage #3015 8 GB main storage #3016 8 GB main storage #3017 32 GB main storage #3018 32 GB main storage #3035 16 GB main storage #3036 16 GB main storage #3042 256 MB main storage #3043 512 MB main storage #3044 1024 MB main storage #3046 2048 MB main storage #3092 256 MB main storage #3093 512 MB main storage #30941024 MB main storage #3096 2048 MB main storage #4326 35.16 GB 15k RPM Disk Unit #4327 70.56 GB 15k RPM Disk Unit #4531 DVD-ROM #4631 DVD-ROM #4710 PCI Integrated xSeries Server #4805 PCI Cryptographic Accelerator #4810 PCI Integrated xSeries Server #5088 PCI-X Expansion Unit #5094 PCI-X Expansion Tower #5095 PCI-X Expansion Tower #5108 PCI-X Expansion Unit #5115 Dual Line Cords - Tower #5116 Dual Line Cords - #5294 #5138 Redundant Power and Cooling #5294 1.8m I/O Tower #5580 - #2780 Ctrl with Aux Write Cache #5581 - #2757 Ctrl with Aux Write Cache #5700 PCI 1 Gbps Ethernet IOAI #5701 PCI 1 Gbps Ethernet UTP IOA

OS/400 V4R5	OS/400 V5R1	OS/400 V5R2
(cont.) #4748 PCI RAID Disk Unit Controller #475x ISDN IOAs #4761 PCI Integrated Analog Modem #4801 PCI Cryptographic Coprocessor #481x 155 Mbps ATM IOAs #4838 PCI 100/10 Mbps Ethernet IOA #503x Migration Tower I #5074 PCI Expansion Tower #5075 PCI Expansion Tower #5077 Migration Tower II #5079 1.8 M I/O Tower #7002 HSL Enabler - Internal Flex Cable #7104 System Unit Expansion #7123 DASD Expansion Unit #7127 DASD Expansion Unit #7133 DASD Concurrent Maintenance Cage 7208-345 60 GB External 8 mm Tape Drive #9074 Base I/O Tower #9079 Base I/O Tower #9691 Base Bus Adapter #973x Base HSL Ports #9748 Base PCI RAID Disk Unit Controller #9767 Base PCI Disk Unit Controller #9771 Base PCI Two-Line WAN with integrated modem #9943 Base PCI IOP		(cont.) #5702 PCI-X Ultra Tape Controller #5703 PCI-X RAID Disk Unit Controller #5704 PCI-X Fibre Channel Tape Controller #5705 PCI-X Tape/DASD Controller #7116 System Unit Expansion #7124 DASD Expansion Unit - 5 slot #7136 DASD Expansion Unit - 6 slot #7137 DASD Concurrent Maintenance #9094 Base PCI-X I/O Enclosure #9492 Base PCI Integrated xSeries Server #9710 Base PCI Integrated xSeries Server #9746 Base PCI Twinaxial IOA #9749 Base PCI 100/10 Ethernet IOA #9792 Base PCI Integrated xSeries Server #9844 Base PCI IOP

**Note:** You can verify this information by using the Offering Information (OITool), IBMLink™, or other online tools. You can find the OITool on the Web at:

<http://w3-3.ibm.com/sales/ssi/>

## 12.2 OS/400 general availability and support

The following table shows the availability, withdrawal, and end of support dates for each release of the operating system. Note that OS/400 V5R2 is the supported level of operating system for the iSeries server. All earlier releases of OS/400 have been withdrawn from IBM marketing and support.

Release	General availability	Withdrawn from marketing	End of program support
R7.5 SSP	08 March 1996	09 February 1999	31 May 2000
V3R0.5	03 June 1994	11 February 1997	31 May 1997
V3R1	30 June 1995	11 February 1997	31 October 1998
V3R2	21 June 1996	10 February 1998	31 May 2000
V3R6	29 September 1995	19 August 1997	31 October 1998
V3R7	09 November 1996	01 September 1998	30 June 1999
V4R1	29 August 1997	09 February 1999	31 May 2000
V4R2	27 February 1998	09 February 1999	31 May 2000
V4R3	11 September 1998	15 February 2000	31 January 2001
V4R4	21 May 1999	31 May 2001	31 May 2001
V4R5	28 July 2000	2 July 2002	31 December 2002
V5R1	25 May 2001	21 November 2003	31 May 2003 31 May 2004
V5R2	30 August 2002	01 October 2005	30 April 2007

## 12.3 OS/400 upgrade paths

The following table shows the valid upgrade paths for OS/400.

To: From:	V4R1 **	V4R2 **	V4R3 **	V4R4 **	V4R5 **	V5R1 **	V5R2 **
V3R2	X	X	X	X	X	-	
V3R6	X	-	-	-	-	-	
V3R7	X	X	X	-	-		
V4R1		X	X	X	X	-	
V4R2			X	X	X	-	
V4R3				X	X	-	
V4R4					X	X	
V4R5						X	X
V5R1							X
V5R2							
* OS/400 V4R5 is the last release to offer single-step CISC-to-RISC upgrade capabilities from V3R2. ** Withdrawn from IBM support.							

Refer to the appropriate software installation manual for instructions to upgrade software. Single step RISC-to-RISC upgrades are supported as normal upgrade procedures.

## 12.4 Current-release to previous-release support for OS/400

The Target Release (TGTRLS) parameter specifies the valid OS/400 release of the operating system on which you intend to restore and use the object.

Values for TGTRLS parameter			
Current iOS/400 release	*CURRENT	*PRV	Other valid values
V5R2	V5R2	V5R1	V4R5
V5R1	V5R1	V4R5	V4R4
V4R5	V4R5	V4R4	V4R3 V4R2 V3R2

## 12.5 Software Inventory Tool

The Software Inventory Tool is available to assist in planning and ordering software upgrades for iSeries servers with OS/400 Version 5 or Version 4 installed. The Software Inventory Tool produces a printed report that identifies the software that is installed on the client system in the following categories:

- ▶ Products ordered at no-charge with a valid Software Subscription contract
- ▶ Products not covered by Software Subscription
- ▶ Keyed products that have an invalid key for the system's software group
- ▶ User licensed products that have exceeded the usage limit
- ▶ Keyed products where no license key was found
- ▶ No charge software or software included at no charge with billed products
- ▶ Other non-categorized software products

The Software Inventory Tool provides information about the software installed on the system. It does not provide a valid Proof of Entitlement (PoE). It is the responsibility of the IBM representative or Business Partner to verify entitlement of any software that the client has installed before an upgrade is ordered.

You can find more information about the Software Inventory Tool on the Web at:

[http://publib.boulder.ibm.com/series/v5r1/ic2924/tstudio/tech\\_ref/invtool/index.htm](http://publib.boulder.ibm.com/series/v5r1/ic2924/tstudio/tech_ref/invtool/index.htm)

## 12.6 OS/400 software ordering terminology

This section explains the standard terminology for software. The terms used for all software versions are:

- ▶ **Product identifier:** Each version of OS/400 has a product identifier. The format is 57xx-yyy. For example, V5R2 is 5722-SS1.
- ▶ **HIPO:** New, preload orders of Version 5 are defined with HIPO numbers associated with the hardware product order. For example, HIPO feature 5372-IS5 is for new orders of Version 5. 5372-IS5 serves as an (administrative) software preload ordering vehicle.
- ▶ **Stack:** Associated with each release of Version 4 is a stack product identifier. The format is 575x-Ayy. For example, the stack product identifier for V4R1 is 5755-AS5.
- ▶ **Stack features:** When ordering iSeries or AS/400e software, a corresponding "stack feature" or Licensed Program Component Supply Feature is inserted into the "stack" or each product ordered.
- ▶ **Additional feature:** Additional features are stack features that relate to an optional feature of the licensed programs. The additional feature provides the delivery mechanism for the licensed programs.
- ▶ **Skip ship:** For Version 5, some products have a "skip ship" from a previous release. They retain their original product identifiers, but can still be ordered.



## 12.7 OS/400 V5R2 software

The following tables show the V5R2 OS/400-based software products that are most commonly installed. It is not a definitive list of all iSeries software products now available. See 12.9, “Notes for Version 5 software tables” on page 428, for Version 5 software group information.

Operating system and base products	Skip ship <sup>2</sup>	Product identifier	HIPO feature (5372-IS5) <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription or maintenance <sup>8</sup>
Operating System/400 <sup>6</sup>	---	5722-SS1	1000	5050	S
Media and Storage Extensions	---	5722-SS1 Option 18	1500	5103	S
OptiConnect for OS/400	---	5722-SS1 Option 23	1515		S
DB2 Symmetric Multiprocessing	---	5722-SS1 Option 26	1517		S
DB2 MultiSystem	---	5722-SS1 Option 27	1518		S
Print Services Facility™ (PSF/400) 1-45 IPM 1-100 IPM Any speed	---	5722-SS1 Option 36 Option 37 Option 38	1501 1502 1503	5112 5113 5114	S
High Availability Switchable Resource	---	5722-SS1 Option 41	1505	5116	S
High Availability Journal Performance	---	5722-SS1 Option 42	1545	5117	S
S/38 Utilities for AS/400 <sup>6</sup>	---	5722-DB1	1021		S
HTTP Server for iSeries	---	5722-DG1	---		S
IBM Toolbox for Java™	---	5722-JC1	---		S
IBM Developer Kit for Java	---	5722-JV1	---		S
DB2 Query Manager and SQL Development Kit for iSeries <sup>6</sup>	---	5722-ST1	1011	5050	S
iSeries Integration for Windows Server	---	5722-WSV	---		S

OS/400 complementary database software	Skip ship <sup>2</sup>	Product identifier	HIPO feature (5372-IS5) <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription or maintenance <sup>8</sup>
Warehouse Manager for iSeries	P	5724-B08			
DCE Base Services	P	5769-DC1	1023		S
DCE DES Library Routines	P	5769-DC3	1024		S
DB2 Universal Database™ Extenders for iSeries V7.2	---	5722-DE1	1004	5050	S
DB2 DataPropagator™ for iSeries Version 8.1	New	5722-DP4	1035	5050	S
DB2 QMF™ Distributed Edition V8.1 for Multiplatforms	New	5724-E86			
QMF for Windows for iSeries Version 7.2	P	5697-G24	---		S

OS/400 complementary database software	Skip ship <sup>2</sup>	Product identifier	HIPO feature (5372-IS5) <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription or maintenance <sup>8</sup>
DB2 Table Editor for iSeries Version 4.3	P	5697-G84	---		S
DB2 Web Query Tool for iSeries Version 1.3	P	5697-G85	---		S
DB2 Intelligent Miner™ for Data V6.1	P	5733-IM3	---		M
iSeries ODBC Driver for Linux	---	5733-LO1	---		S
DB2 OLAP Server™ for iSeries V7.1	---	5686-OLP	---		
Query for iSeries <sup>6, 7</sup>	---	5722-QU1	1009	5050	S
Electronic Service Agent™ for iSeries	---	5798-RZG	---		S
System Openness Includes	---	5722-SS1 Option 13	---		S
NetWare Enhanced Integration	---	5722-SS1 Option 25	---		S
Portable Application Solution Environment	---	5722-SS1 Option 33	---		S
TCP/IP Connectivity Utilities for iSeries	---	5722-TC1	---		S
Client Access Express - Windows/iSeries Access for Windows	---	5722-XE1	---		S
iSeries Access for Web	New	5722-XH2			
iSeries Access for Wireless	New	5722-XP1			S
iSeries Access Family <sup>6,7</sup>	---	5722-XW1	1012 Client Processor - 1013 Client User	5050	S

Networking products	Skip ship <sup>2</sup>	Product identifier	HIPO feature <sup>2</sup> (5372-IS5)	Keyed stamped media <sup>9</sup>	Software subscription or maintenance <sup>8</sup>
Cryptographic Access Provider 128-bit <sup>6</sup>	---	5722-AC3	1017		S
MQSeries® for iSeries Version 5.2 <sup>6</sup>	P	5733-A38	---	-	M
Host On-Demand Version 6.0	P	5733-A59	---		M
iSeries Client Encryption (128-bit) <sup>6</sup>	---	5722-CE3	1019		S
Communications Utilities for iSeries <sup>6</sup>	---	5722-CM1	1003	5050	S
Cryptographic Support for AS/400 <sup>6</sup>	---	5722-CR1	1020		S
DCE Base Services for AS/400 <sup>6</sup>	P	5769-DC1	1023		S
DCE DES Library Routines for AS/400 <sup>6</sup>	P	5769-DC3	1024		S
Communications Server for Windows NT Version 6.1	P	5639-F25	---		---
Personal Communications for Windows Version 5.5	P	5639-I70 5733-A59*			M
iSeries Access for Windows	---	5722-XE1	---		S
iSeries Access for Web	New	5722-XH2 5722-XP1	---		S S
* ordering ID					

WebSphere® and on demand business products	Skip ship <sup>2</sup>	Product identifier	HIPO features <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription or maintenance <sup>8</sup>
WebSphere V4.0.1 for iSeries <sup>6</sup>	P	5722-AS4	---		S
Connect for iSeries V2 <sup>10</sup>		5733-CO2	---		S
WebSphere Application Server - Express for iSeries		5722-IWE	6007		
WebSphere Advanced Edition V4.0.1 <sup>6</sup>	P	5733-WA4	6000		M
WebSphere Advanced Edition Single Server V4.0.1	P	5733-WS4	6005		M
WebSphere Application Server		5733-WS5	6006		M

<b>Systems management products</b>	<b>Skip ship<sup>2</sup></b>	<b>Product identifier</b>	<b>HIPO feature<sup>2</sup></b>	<b>Keyed stamped media<sup>9</sup></b>	<b>Software subscription or maintenance<sup>8</sup></b>
Intelligent Communications Trace Analyzer for iSeries, Version 1.0	New	5733-AZ1			
Backup Recovery and Media Services for iSeries <sup>6</sup> Network Feature Advanced Feature	---	5722-BR1	1002 1507	5050 5101 5102	S
PATROL for iSeries – Predict	New	5620-FIF	---		S
Tivoli® Storage Manager Enterprise Edition V5.1	---	5698-ISE	---		---
Tivoli Storage Manager V5.1	---	5698-ISM	---		---
Advanced Job Scheduler for iSeries <sup>6</sup>	---	5722-JS1	1007	5050	S
Tivoli Management Agent	---	1TME-LCF	---		---
Managed System Services for iSeries <sup>6</sup>	---	5722-MG1	1030		S
Performance Tools for iSeries <sup>6,7</sup> Manager Feature Agent Feature	---	5722-PT1 Option 1 Option 2	1008 1508 1509	5050 5101 5102	S
Content Manager OnDemand for iSeries <sup>6</sup> PDF Indexer Feature Web Enablement Kit Feature	---	5722-RD1 Option 12 Option 11	1010 1510 1511		M
System Manager for iSeries <sup>6</sup>	---	5722-SM1	1032		S
Software Subscription for iSeries 1-year	New	5733-SU1			
Software Subscription for iSeries 3-year	New	5733-SU3			
Software Technical Support for iSeries 1-year, renewable	New	5733-SX1			---
Software Technical Support for iSeries 3-year, renewable	New	5733-SX3			---

<b>Application development products</b>	<b>Skip ship<sup>2</sup></b>	<b>Product identifier</b>	<b>HIPO feature<sup>2</sup></b>	<b>Keyed stamped media<sup>9</sup></b>	<b>Software subscription or maintenance<sup>8</sup></b>
WebSphere Commerce Product V5.5		5724-A18	---		M
Screen Customizer Version 2.0.60	P	5648-D76	---		M
CICS® Transaction Server for iSeries <sup>6</sup>	---	5722-DFH	1025		S
ILC C Compiler		5799-GPC	6004		
Lotus® Domino for iSeries Version 6.0	P	5733-LD6	---		M
Lotus Domino for iSeries Version 5.0	P	5769-LNT	---		M
QuickPlace® for iSeries Version 2.0	P	5733-LQP	---		
Application Program Driver	P	5722-PD1	1031		S
Visualage Generator Server for iSeries	P	5769-VG1	1033		S
WebSphere Development Studio (Toolset)	---	5722-WDS	1015	5050	S
Application Development ToolSet <sup>6</sup>	---	Option 21			
Application Development Manager	---	Option 22	1543		
Application Dictionary Services	---	Option 23	1544		

Application development products	Skip ship <sup>2</sup>	Product identifier	HIPO feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription or maintenance <sup>8</sup>
ILE RPG for iSeries <sup>6</sup>	---	Options 31-35			
ILE COBOL for iSeries <sup>6</sup>	---	Options 41-45			
ILE C++ for AS/400	---	Options 52, 54			
ILE C for AS/400 <sup>6</sup>	---	Options 51, 53			
XML Toolkit for iSeries	P	5733-XT1	---		S

Office support and printing products	Skip ship <sup>2</sup>	Product identifier	HIPO feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription or maintenance <sup>8</sup>
Advanced Function Printing™ Utilities for AS/400 <sup>6</sup>	---	5722-AF1	1001	5050	S
AFP™ PrintSuite for AS/400 <sup>6</sup> APU Advanced Print Utility PPFA Page Printer Formatting Aid AF3 SAP® R3 AFP Print	P	5798-AF3 Option 1	- 1514	5101	S
Advanced DBCS Printer Support for AS/400 <sup>6</sup>	---	5722-AP1	1014	5050	S
AFP Font Collection for Workstation and OS/400		5648-B45	---		
Dictionaries and Linguistic Tools for iSeries <sup>6</sup>	P	5769-DL1	1026		M
Business Graphics Utility for AS/400 <sup>6</sup>	---	5722-DS1	1027		S
Facsimile Support for iSeries	---	5798-FAX	---		S
Advanced Function Printing Fonts for AS/400 <sup>6</sup>  Font Options	P	5769-FNT  Options 1-15	---  --- 1520-1534		S
Advanced Function Printing DBCS Fonts for AS/400 <sup>6†</sup> Font Options	P	5769-FN1	--- 1535-1539		S
Domino Fax for iSeries		5733-FXD	---		S
Infoprint® Designer for iSeries	P	5733-ID1	6003		S
Infoprint Server for iSeries	---	5722-IP1	1006	5050	S
Content Manager for iSeries  Object Server  Advanced Workflow	P	5722-VI1  Option 1  Option 4	1034  ---  ---		M

Additional and packaged products	Skip ship <sup>2</sup>	Product identifier	HIPO feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription or maintenance <sup>8</sup>
Host Access Client Package for iSeries, Version 3.0 Personal Communications V5.6 Screen Customizer Version 1.0.70 WebSphere Host On-Demand V7.0		5733-A78	---		
Host Access Client Package for multiplatforms, Version 3.0 Personal Communications V5.6 Screen Customizer V2.0.70 WebSphere Host On-Demand V7.0		5648-E81	---		
Lotus Enterprise Integrator® for iSeries <sup>6</sup>	---	5769-LNP	---		M
Lotus Domino Enterprise Server for iSeries	P	5769-LNT	6001		M
CISC to RISC Upgrade Kit		5798-TBU	---		
ValuPak for V5R2: 5722-SS1: OS/400 5722-SS1: 1-45 ipm feature 5722-XW1: Client Access Family/iSeries Access 5722-QU1: Query 400 5722-ST1: DB2/400 Query Manager and SQL Development Kit 5722-PT1: Performance Tools (Manager feature)		5722-VP1	---		

## 12.8 OS/400 V5R1 software

The following tables show the V5R1 OS/400-based software products that are most commonly installed. It is not a definitive list of all possible IBM software products for the iSeries or AS/400e. See 12.9, “Notes for Version 5 software tables” on page 428, for Version 5 software group information.

Operating system and base products	Skip ship <sup>2</sup>	Product identifier	HIPO feature (5372-IS5) <sup>2</sup> V5R1	Keyed stamped media <sup>9</sup>	Software subscription or maintenance <sup>8</sup>
Operating System/400 <sup>6,7</sup>	---	5722-SS1	1000	5050	S
Media and Storage Extensions	---	5722-SS1 Option 18	1500	5103	S
OptiConnect for OS/400	---	5722-SS1 Option 23	1515		S
DB2 Symmetric Multiprocessing	---	5722-SS1 Option 26	1517		S
DB2 MultiSystem	---	5722-SS1 Option 27	1518		S
Print Services Facility (PSF/400) 1-45 IPM 1-100 IPM Any speed	---	5722-SS1 Option 36 Option 37 Option 38	--- --- 1503	5112 5113 5114	S
S/38 Utilities for AS/400 <sup>6</sup>	---	5722-DB1	1521		S
HTTP Server for iSeries	---	5722-DG1	---		S
IBM Toolbox for Java	---	5722-JC1	---		S
IBM Developer Kit for Java	---	5722-JV1	---		S
DB2 Query Manager and SQL Development Kit for iSeries <sup>6, 7</sup>	---	5722-ST1	1011	5050	S
iSeries Integration for Windows Server	---	5722-WSV	---		S

OS/400 complementary database software	Skip ship <sup>2</sup>	Product identifier	HIPO feature (5372-IS5) <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription or maintenance <sup>8</sup>
DCE Base Services		5769-DC1	1023		S
DCE DES Library Routines		5769-DC3	1024		S
DB2 Universal Database Extenders for iSeries V7.2	---	5722-DE1	---	5050	S
DB2 DataPropagator for iSeries Version 7.1 <sup>6</sup> (V5R1)	P	5769-DP3	1005	5050	S
QMF for Windows for iSeries	V5R1	5697-G24	---		S
DB2 Table Editor for iSeries	V5R1	5697-G84	---		S
DB2 Web Query Tool	V5R1	5697-G85	---		S
DB2 Intelligent Miner for Data V6.1	V5R1	5733-IM3	---		S
iSeries ODBC Driver for Linux	---	5733-LO1	---		
DB2 OLAP Server for iSeries V7.1	---	5686-OLP	---		
Query for iSeries <sup>6, 7</sup>	---	5722-QU1	1009	5050	S
Electronic Service Agent for iSeries		5798-RZG	---		
System Openness Includes	---	5722-SS1 Option 13	---		S
NetWare Enhanced Integration	---	5722-SS1 Option 25	---		S
Portable Application Solution Environment	---	5722-SS1 Option 33	1519		S
TCP/IP Connectivity Utilities for iSeries	---	5722-TC1	---		S
Client Access Express - Windows/iSeries Access for Windows	---	5722-XE1	---		S
iSeries Access Family <sup>6,7</sup>	---	5722-XW1	1012	5050	S

Networking products	Skip ship <sup>2</sup>	Product identifier	HIPO feature <sup>2</sup> (5372-IS5)	Keyed stamped media <sup>9</sup>	Software subscription or maintenance <sup>8</sup>
Cryptographic Access Provider 56-bit <sup>6</sup> (V5R1)	---	5722-AC2	1016		S
Cryptographic Access Provider 128-bit <sup>6</sup>	---	5722-AC3	1017		S
MQSeries for iSeries (V5.2) <sup>6</sup>	✓	5733-A38	---	-	S
iSeries Client Encryption (56-bit) <sup>6</sup> (V5R1)	---	5722-CE2	1018		S
iSeries Client Encryption (128-bit) <sup>6</sup>	---	5722-CE3	1019		S
Communications Utilities for iSeries <sup>6</sup>	---	5722-CM1	1003	5050	S
Cryptographic Support for AS/400 <sup>6</sup>	---	5722-CR1	1520		S
DCE Base Services for AS/400 <sup>6</sup>	✓	5769-DC1	1023		S
DCE DES Library Routines for AS/400 <sup>6</sup>	✓	5769-DC3	1024		S
Communications Server for Windows NT	V5R1	5639-F25	---		



Networking products	Skip ship <sup>2</sup>	Product identifier	HIPO feature <sup>2</sup> (5372-IS5)	Keyed stamped media <sup>9</sup>	Software subscription or maintenance <sup>8</sup>
MQSeries Integrator for iSeries (V5R1)	---	5697-F49	---		S
iSeries Access for Windows	---	5722-XE1	---		S

WebSphere and on demand business products	Skip ship <sup>2</sup>	Product identifier	HIPO features <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription or maintenance <sup>8</sup>
WebSphere Standard Edition <sup>6</sup> (V5R1)	✓	5733-AS3	---		S
Connect for iSeries (V5R1)	✓	5733-B2B	---		S
WebSphere Advanced Edition V3.5 <sup>6</sup>	✓	5733-WA3	6002		S
WebSphere Advanced Edition V4.0.1 <sup>6</sup>	---	5733-WA4	6000		S
WebSphere Advanced Edition Single Server V4.0.1	---	5733-WS4	---		S

Systems management products	Skip ship <sup>2</sup>	Product identifier	HIPO feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription or maintenance <sup>8</sup>
Backup Recovery and Media Services for iSeries <sup>6</sup>	---	5722-BR1	1002	5050	S
Network Feature	---		1506	5101	
Advanced Feature			1507	5102	
Advanced Job Scheduler for iSeries <sup>6</sup>	---	5722-JS1	1007	5050	S
Tivoli Management Agent		1TME-LCF	---		---
Managed System Services for iSeries <sup>6</sup>	---	5722-MG1	1030		S
Performance Tools for iSeries <sup>6</sup>	---	5722-PT1	1008	5050	S
Manager Feature		Option 1	1508	5101	
Agent Feature		Option2	1509	5102	
Content Manager OnDemand for iSeries <sup>6</sup>	---	5722-RD1	1010		S
PDF Indexer Feature		Option 12	1510		
Web Enablement Kit Feature		Option 11	1511		
System Manager for iSeries <sup>6</sup>	---	5722-SM1	1032		S

Application development products	Skip ship <sup>2</sup>	Product identifier	HIPO feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription or maintenance <sup>8</sup>
CICS Transaction Server for iSeries <sup>6</sup>	---	5722-DFH	1025		S
Lotus Domino for iSeries		5733-LD6	---		S
Lotus Domino for iSeries		5769-LNT	---		S
QuickPlace for iSeries		5733-LQP	---		
Application Program Driver	✓	5722-PD1	1031		S
WebSphere Payment Manager for iSeries (V5R1)	✓	5733-PY2	---		S
Visualage Generator Server for iSeries	✓	5769-VG1	1033		S
WebSphere Commerce Suite, Pro Edition for AS/400, Version 4.1	✓	5798-WC4	-		S

Application development products	Skip ship <sup>2</sup>	Product identifier	HIPO feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription or maintenance <sup>8</sup>
WebSphere Commerce Suite, Pro Edition for iSeries, Version 5.1	✓	5798-WC5	---		S
WebSphere Development Studio (Toolset)	---	5722-WDS	1015	5050	S
ILE COBOL for iSeries <sup>6</sup>	---	Options 41-45			
ILE RPG for iSeries <sup>6</sup>	---	Options 31-35			
ILE C++ for AS/400	---	Options 52, 54			
ILE C for AS/400 <sup>6</sup>	---	Options 51, 53			
Application Development ToolSet <sup>6</sup>	---	Option 21			
Application Development Manager	---	Option 22	1543		
Application Dictionary Services	---	Option 23	1544		
XML Toolkit for iSeries		5733-XT1	---		S

Office support and printing products	Skip ship <sup>2</sup>	Product identifier	HIPO feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription or maintenance <sup>8</sup>
Advanced Function Printing Utilities for AS/400 <sup>6</sup>	---	5722-AF1	1001	5050	S
AFP PrintSuite for AS/400 <sup>6</sup> APU Advanced Print Utility PPFA Page Printer Formatting Aid AF3 SAP R3 AFP Print	✓	5798-AF3 Option 1	- ---	5101	M
Advanced DBCS Printer Support for AS/400 <sup>6</sup>	---	5722-AP1	1014	5050	S
AFP Font Collection for Workstation and OS/400		5648-B45	---		
Dictionaries and Linguistic Tools for iSeries <sup>6</sup>	✓	5769-DL1	1026		S
Business Graphics Utility for AS/400 <sup>6</sup>	---	5722-DS1	1027		S
Facsimile Support for iSeries	---	5798-FAX	-		S
Advanced Function Printing Fonts for AS/400 <sup>6</sup>	✓	5769-FNT	-		S
Font Options		Options 1-15	1520-1534		
Advanced Function Printing DBCS Fonts for AS/400 <sup>6†</sup> Font Options	✓	5769-FN1	- 1535-1539		S
Domino Fax for iSeries		5733-FXD	---		S
Infoprint Designer for iSeries	---	5733-ID1	6003		S
Infoprint Server for iSeries	---	5722-IP1	1006	5050	S
Content Manager for iSeries	✓	5722-VI1	1034		S
Object Server		Option 1	-		
Advanced Workflow		Option 4	-		

Additional and packaged products	Skip ship <sup>2</sup>	Product identifier	HIPO feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription or maintenance <sup>8</sup>
Lotus Enterprise Integrator for iSeries <sup>6</sup>	✓	5769-LNP	---		S
Lotus Domino Enterprise Server for iSeries	✓	5769-LNT	6001		S
CISC to RISC Upgrade Kit		5798-TBU	---		
ValuPak for V5R1: 5722-SS1: OS/400 5722-SS1: 1-45 ipm feature 5722-XW1: Client Access Family/iSeries Access 5722-QU1: Query 400 5722-ST1: DB2/400 Query Manager and SQL Development Kit 5722-PT1: Performance Tools (Manager feature)		5722-VP1	---		

## 12.9 Notes for Version 5 software tables

<b>Note 1</b>	<p>V5 is supported on the following AS/400e RISC models <i>only</i>. See the overview table in the model chapters for the <i>minimum</i> OS/400 release to support each model.</p> <ul style="list-style-type: none"> <li>▶ 9401-150 (V5R1 does not support 5649-<i>nnn</i> products. 5722-<i>nnn</i> programs in group P05 support the 9401-150.)</li> <li>▶ 9402/4-4xx (V5R1 only)</li> <li>▶ 9404/6-5xx (V5R1 only)</li> <li>▶ 9402/4/6-620, 630, 640, S20, S30, S40</li> <li>▶ 9406-170</li> <li>▶ 9402/4/6-720, 730, 740</li> <li>▶ 9406-250</li> <li>▶ 9402/4/6-270</li> <li>▶ 9402/4/6-820, 830, 840</li> <li>▶ 9406-SB2/SB3</li> </ul> <p>V5 <i>is not</i> supported on any AS/400 CISC models.</p>
<b>Note 2</b>	<p>Products marked with a “✓” in the Skip ship column are unchanged from a previous version or release and are referred to as being “skip shipped”. These products retain their original product identifiers.</p> <p>The HIPO feature column provides the feature codes that are included in the HIPO (5732-IS5) when a specific product or feature is ordered to be preloaded in the factory. If you order a software upgrade, or if the initial order does not include the #5000 software preload code, the order does not include the HIPO (5732-IS5).</p> <p>With the introduction of Keyed Stamped Media in V4R4, all products the client ordered are no longer “stacked” on a single set of CDs. The client receives a grouping of CDs. With V5R2, this includes:</p> <ul style="list-style-type: none"> <li>▶ Licensed Internal Code (I_Base_01)</li> <li>▶ OS/400 Base Operating System CD (B29xx_01)</li> <li>▶ OS/400 No Charge Options (B29xx_02 to B29xx_06)</li> <li>▶ No charge License Programs (B29xx_07 to B29xx_09)</li> <li>▶ Set of Keyed Stamped Media CDs (L29xx_01 to L29xx_02)</li> <li>▶ Individual CD for each product ordered that is not part of Keyed Stamped Media (F29xx_01 and higher)</li> <li>▶ Cumulative PTF CDs (Cyddvrm_01)</li> <li>▶ Secondary Languages if ordered (N29xx_01)</li> <li>▶ iSeries Information Center (SK3T-4091)</li> </ul>
<b>Note 3</b>	<p>† This product is available in Asia Pacific (AP) countries or regions only.</p> <p>†† This product is available in the United States and Canada only.</p> <p>††† This product is available in Europe, Middle East, and Africa (EMEA) countries or regions only.</p> <p>†††† This product is available in EMEA, AP, and Latin America (LA) countries or regions only.</p>

Note 4	<p><b>Alternate IPL Device Feature Codes:</b></p> <p>The following feature codes are hardware features. They are used to specify which storage device is to be used as an alternate IPL device.</p> <ul style="list-style-type: none"><li>▶ #5502 840 MB Mini ¼-inch Cartridge Tape Unit (not 250, 270, 720, 730, 740, 820, 830, 840)</li><li>▶ #5503 9347 Tape Unit (not 250, 270, 820, 830, 840)</li><li>▶ #5504 3490 E01/E11 Tape Units</li><li>▶ #5505 2440 Tape Unit (not 250, 270, 820, 830, 840)</li><li>▶ #5506 4 GB ¼-inch Cartridge Tape Unit</li><li>▶ #5507 9348 Tape Unit</li><li>▶ #5508 3422 Tape Subsystem (not 250, 270, 820, 830, 840)</li><li>▶ #5509 3430 Tape Subsystem (not 250, 270, 820, 830, 840)</li><li>▶ #5511 3480 Tape Subsystem</li><li>▶ #5512 3490 C10/C11/C22 Tape Unit</li><li>▶ #5513 3490 Tape Subsystem</li><li>▶ #5514 7208 8 mm Tape Drive and Internal 8 mm Tape Unit</li><li>▶ #5515 3570 Tape Subsystem</li><li>▶ #5516 1.2 GB ¼-inch Cartridge Tape Unit</li><li>▶ #5517 2.5 GB ¼-inch Cartridge Tape Unit</li><li>▶ #5518 13 GB ¼-inch Cartridge Tape Unit</li><li>▶ #5519 3590 Tape System</li><li>▶ #5531 16 GB or 30 GB ¼-inch Cartridge Tape Unit</li><li>▶ #5536 25 GB or 50 GB ¼-inch Cartridge Tape Unit</li><li>▶ #5537 358x Ultrium</li><li>▶ #5538 DVD-RAM</li><li>▶ #5599 No Save/Restore Device</li></ul> <p>Refer to Chapter 9, “External storage, SANs, QIC, and VXA-2 formats for IBM iSeries and AS/400e servers” on page 307, and the internal tape unit sections of each processor’s chapter to see which tapes are supported for that model.</p> <p>Features #5504, #5506, #5507, #5511, #5512, #5513, #5514, #5515, #5517, #5519, #5521, #5531, #5536, #5537, #5538, and #5599 withdrawn from marketing on 1 December, 2005</p>																																																						
Note 5	<p><b>Maximum number of chargeable users by product</b></p> <table><thead><tr><th colspan="2"></th><th colspan="7">Maximum number of users</th></tr><tr><th></th><th></th><th>P05</th><th>P10</th><th>P20</th><th>P30</th><th>P40</th><th>P50</th><th>P60</th></tr></thead><tbody><tr><td>5722-DFH</td><td>CICS for iSeries</td><td>450</td><td>450</td><td>450</td><td>450</td><td>450</td><td>450</td><td>450</td></tr><tr><td>5722-RD1</td><td>OnDemand for iSeries - concurrent user</td><td>--</td><td>--</td><td colspan="3">No maximum limit</td><td>--</td><td>--</td></tr><tr><td>5769-VI1</td><td>Content Manager for iSeries</td><td>--</td><td>--</td><td colspan="3">No maximum limit</td><td>--</td><td>--</td></tr></tbody></table> <p>The number of individual user licenses that, when priced, equates the tier (based on processor) pricing and is the maximum that can be used in a conversion for user based to tier (processor) pricing in that tier:</p> <table><tbody><tr><td>5722-XW1</td><td>iSeries Access Family</td><td>10</td><td>40</td><td>100</td><td>150</td><td>200</td><td>250</td><td>300</td></tr></tbody></table>			Maximum number of users									P05	P10	P20	P30	P40	P50	P60	5722-DFH	CICS for iSeries	450	450	450	450	450	450	450	5722-RD1	OnDemand for iSeries - concurrent user	--	--	No maximum limit			--	--	5769-VI1	Content Manager for iSeries	--	--	No maximum limit			--	--	5722-XW1	iSeries Access Family	10	40	100	150	200	250	300
		Maximum number of users																																																					
		P05	P10	P20	P30	P40	P50	P60																																															
5722-DFH	CICS for iSeries	450	450	450	450	450	450	450																																															
5722-RD1	OnDemand for iSeries - concurrent user	--	--	No maximum limit			--	--																																															
5769-VI1	Content Manager for iSeries	--	--	No maximum limit			--	--																																															
5722-XW1	iSeries Access Family	10	40	100	150	200	250	300																																															
Note 6	<p>These products are licensed using the International Program License Agreement (IPLA). The remaining V4 licensed programs are licensed under the International Customer Agreement (ICA) or IBM Agreement for Programs (IAP) terms.</p> <p>Three documents, <i>Proof of Entitlement (POE)</i>, <i>License Information Document (LID)</i>, and <i>International Program License Agreement</i> are provided with IPLA software as proof of a valid license. IPLA software can be sold to another party. You must notify the purchaser of the program’s terms and provide the POE, LID, and IPLA documents to the purchaser. IBM licenses the purchaser when that party accepts the program’s license terms by initial use of the program. The seller’s license is terminated at this time.</p> <p>When ordering upgrades to software licensed under the IPLA, such as OS/400, a copy of the POE should be provided by the client to validate the license to the software.</p>																																																						
Note 7	<p><b>5722-VP1 ValuPak for OS/400 (not available on OS/400 V4R5) includes:</b></p> <p>5722-SS1 Operating System/400</p> <p>5722-PSF1-45 ipm Option 36 of OS/400<b>Note:</b> Provides this number of users</p> <p>5722-XW1 iSeries Access Family for Windows XW1: P05/10 P10/20 P20/50 P30/70 P40/125 P50/150</p> <p>5722-QU1 Query/400 P60/175</p> <p>5722-ST1 DB2/400 Query Manager and SQL Development Kit</p> <p>57xx-PT1 Performance Tools (Option 1 Manager feature)</p>																																																						

<b>Note 8</b>	<p>S = Software Subscription M = Software Maintenance</p> <p>New versions and updates to these products are covered by one of these two methods. "S" indicates that the product is on the Eligible Products List for Software Subscription. Clients must purchase Software Subscription when they move to Version 4 or higher to upgrade to new versions or releases. Software Subscription is available at prepaid options of one or three years.</p> <p>The price of Software Subscription is the same regardless of whether the software has been licensed to a system. Most iSeries stacked software is covered by Software Subscription. Clients who do not take out Software Subscription when they install Version 4 must either re-license the software or purchase the After License For iSeries license to join if they want to upgrade to a new version or release. You can find a current list of program products covered by Software Subscription on the Web at: <a href="http://www-1.ibm.com/servers/eserver/iseries/sftsol/subscript2.htm">http://www-1.ibm.com/servers/eserver/iseries/sftsol/subscript2.htm</a></p> <p>Software Subscription is ordered as a unique product/model combination depending upon the method of payment:</p> <ul style="list-style-type: none"> <li>▶ 5733-SW1 Software Subscription for AS/400 1-Year Prepay. <i>Withdrawn from marketing.</i></li> <li>▶ 5733-SW3 Software Subscription for AS/400 3-Year Prepay. <i>Withdrawn from marketing.</i></li> <li>▶ 5733-CA1 After License for iSeries</li> </ul> <p>For the prepayment options and the Subscription After License, specify the corresponding processor-based feature for 5733-SWx.</p> <p>"M" indicates Software Maintenance, which differs from Software Subscription. It requires maintenance to be purchased separately based on individual product. Some products that were covered by Software Subscription are now covered by Software Maintenance. Clients that have these products covered under an existing Software Subscription are still eligible for upgrades under Software Subscription, but need to carefully plan their requirements when that Software Subscription expires. You can find a list of program products covered by Software Maintenance and their Maintenance product codes on the Web at the same site listed earlier in this note.</p>
<b>Note 9</b>	<p>A number (representing the Installation ID of the product) in the Keyed Stamped Media column indicates that the product is one of those provided in V5R1 on iSeries Keyed Stamped Media and shipped with OS/400. This is to provide on demand delivery of these products and features and allows a 70-day evaluation period for any of the provided products or features. To use the software distributed on the keyed stamped media after the 70-day evaluation period, order a Software License Key. New Software License Keys are also required when the version, release, or modification level of the software changes. If the software is transferred to a different system, a new software key is required. Some software is keyed based on the Software group, and a new software key must be obtained when the Software group changes.</p> <p>When a Software License Key is ordered, retain the <i>Software License Key Sheet</i> that IBM provides.</p> <p>If a Keyed Stamped Media product or feature is to be upgraded, the current Software License Key Sheet for the product must be provided as proof of license.</p>

## 12.10 OS/400 V4R5 software

The following tables show those V4R5 OS/400-based software products that are most commonly installed. It is not a definitive list of all possible IBM software products for the iSeries or AS/400e. See 12.14, "Notes for Version 4 software tables" on page 450, for Version 4 software group information.

Database products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription <sup>8</sup>
System Program Order	7/2002		5755-AS5	-	-		
Operating System/400 <sup>6</sup>	7/2002		5769-SS1 <sup>4</sup>	#2501		5050	✓
TCP/IP Connectivity Utilities/400 <sup>10</sup>			5769-TC1*		#2529		
Integration for Windows Server			5769-WSV*		#2547		
HTTP Server for AS/400 <sup>10</sup>			5769-DG1*		#2553		
Performance Manager <sup>10</sup>			5769-PM1*		#2556		
AS/400 Toolbox for Java Refresh <sup>10</sup>			5769-JC1*		#2584		
AS/400 Toolbox for Java <sup>10</sup>			5769-JC1*		#2585		
AS/400 Developer Kit for Java <sup>10</sup>			5769-JV1*		#2586		
WebSphere Applications Server <sup>10</sup>			5769-AS1*		#2591		
Client Access Express for Windows <sup>10</sup>			5769-XE1*		#2603		
Media and Storage Extensions					#2619	5103	
OptiConnect for OS/400					#2642		
Integration Services for FSIOP					#2644		
Novel Enhanced Integration					#2646		
Private Address Space Environment					#2648		
PSF/400 1-28 IPM					#2681	5112	
PSF/400 1-45 IPM					#2682	5113	
PSF/400 Any Speed					#2683	5114	
PSF/400 Fax Feature					#2684	5102	
CPA Toolkit					#2690		
DB2 Symmetric Multiprocessing					#2698		
DB2 MultiSystem					#2699		
Cryptographic Support for AS/400 <sup>6</sup>	7/2002	✓	5769-CR1	#2518	-		✓
S/38 Utilities for AS/400 <sup>6</sup>	7/2002	✓	5769-DB1	#2519	-		✓
DataPropagator Relational 7.1 for AS/400 <sup>6</sup>	11/2003		5769-DP3	#2546		5050	✓
Query for AS/400 <sup>6</sup>	7/2002		5769-QU1	#2508	-	5050	✓
DB2 Query Manager and SQL Development Kit for AS/400 <sup>6</sup>	7/2002		5769-ST1	#2511	-	5050	✓

Networking products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription <sup>8</sup>
Cryptographic Access Provider 40-bit <sup>6†††</sup>	7/2002		5769-AC1	#2560	-		✓
Cryptographic Access Provider 56-bit <sup>6††††</sup>	7/2002		5769-AC2	#2561	-		✓
Cryptographic Access Provider 128-bit <sup>6,12</sup>	7/2002		5769-AC3	#2562	-		✓
AS/400 Client Encryption (40-bit) <sup>6†††</sup>	7/2002		5769-CE1	#2580	-		✓
AS/400 Client Encryption (56-bit) <sup>6††††</sup>	7/2002		5769-CE2	#2581	-		✓
AS/400 Client Encryption (128-bit) <sup>6,12</sup>	7/2002		5769-CE3	#2582	-		✓
Point-of-Sale Communications Utility for OS/400 <sup>6</sup>	✓	✓	5769-CF1	#2528	-		✓
Communications Utilities for AS/400 <sup>6</sup>	7/2002	✓	5769-CM1	#2503	-	5050	✓
DCE Base Services for AS/400 <sup>6</sup>	7/2002	✓	5769-DC1	#2563	-		✓
DCE DES Library Routines for AS/400 <sup>6</sup>	7/2002	✓	5769-DC3	#2564	-		✓
Firewall for AS/400 <sup>6</sup>	✓	✓	5769-FW1	#2514	-		-
Host Access Client Package	1/2002		5648-E09				
MQSeries for AS/400 (V4R2M1) <sup>6</sup>	✓	✓	5769-MQ2	#2524	-		-
MQSeries for AS/400 (V5.1) <sup>6</sup>			5733-A38			-	-
MQSeries for AS/400 (V5.1) <sup>13</sup>			5801-AAR				-
MQSeries Integrator for AS/400 <sup>14</sup>			5801-AAR				-
Client Access Family <sup>6</sup> Enhanced Windows 3.1 Client Windows 95 Client	7/2002		5769-XW1	#2516			✓
Wireless Connection for AS/400	7/2001		5798-TBW	-	-		-
56-bit WebSphere Standard Edition <sup>6††††</sup>	✓		5733-AS2	-	-		-
128-bit WebSphere Standard Edition <sup>6, 12</sup>		✓	5733-AS3	-	-		-
56-bit WebSphere Advanced Edition <sup>6††††</sup>	8/2001	✓	5733-WA2	-	-		-
128-bit WebSphere Advanced Edition <sup>6,12</sup>		✓	5733-WA3	-	-		-
WebSphere Personalization for AS/400 V3.5			5733-A47				
Network Station® Manager V1R3	✓	✓	5648-C05	-	-		-
Network Station Manager V2R1 (40-bit)	7/2002	✓	5648-C07	-	-		-
Network Station Manager V2R1 (128-bit) <sup>††</sup>	7/2002	✓	5648-C08	-	-		-
Network Station Manager for AS/400 (V3R7)	✓		5648-B07	-	-		-
Network Station Browser (40-bit encryption)	✓		5648-B08	-	-		-
Navio NC Navigator for IBM Network Station (40-bit encryption)	✓		5648-B10	-	-		-



Networking products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription <sup>8</sup>
Network Station Browser (128-bit encryption) <sup>††</sup>	✓		5648-B18	-	-		-
Navio NC Navigator for IBM Network Station (128-bit encryption) <sup>††</sup>	✓		5648-B20	-	-		-

Systems management products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription <sup>8</sup>
Backup Recovery and Media Services for OS/400 <sup>6</sup>	7/2002	✓	5769-BR1	#2521		5050	✓
Advanced Feature		✓			#2616	5102	
Network		✓			#2617	5101	
Advanced Job Scheduler for AS/400 <sup>6</sup>	7/2002	✓	5769-JS1	#2594	-	5050	✓
Managed System Services for AS/400 <sup>6</sup>	7/2002	✓	5769-MG1	#2558	-		✓
Performance Tools for AS/400 <sup>6</sup>	7/2002		5769-PT1	#2525	-	5050	✓
Manager Feature					#2610	5101	
Agent Feature					#2611	5102	
Content Manager OnDemand for AS/400 <sup>6</sup>	7/2002		5769-RD1	#2593		5050	-
Server Feature					#2693		
Spool File Archive					#2694	5101	
Record Level Archive					#2695	5103	
Object Level Archive					#2696	5102	
Anystore					#2697	5104	
System Manager for OS/400 <sup>6</sup>	7/2002		5769-SM1	#2533	-		✓

Application development products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription <sup>8</sup>
ILE COBOL for AS/400 <sup>6</sup>	7/2002	✓	5769-CB1	#2513	-	5050	✓
Application Development ToolSet Client Server <sup>6</sup>	7/2002	✓	5769-CL3	#2568	-		-
ILE C for AS/400 <sup>6</sup>	7/2002	✓	5769-CX2	#2527	-	5050	✓
VisualAge® C++ for AS/400 <sup>6</sup>	7/2002	✓	5769-CX5	#2532			✓
VisualAge C++ for Windows Client		✓			#2620		
CICS for AS/400 <sup>6</sup>	7/2002	✓	5769-DFH	#2545	-		✓
Application Program Driver for AS/400	7/2002	✓	5769-PD1	#2557	-		✓
Application Development ToolSet for AS/400 <sup>6</sup>	7/2002	✓	5769-PW1	#2526		5050	✓

Application development products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription <sup>8</sup>
Application Dictionary Services Feature <sup>7</sup>		✓			#2612	5102	
Application Development Manager Feature <sup>7</sup>		✓			#2613	5101	
ILE RPG for AS/400 <sup>6</sup>	7/2002	✓	5769-RG1	#2512	-	5050	✓
Visualage Generator Server for AS/400			5769-VG1	#2577	-		✓
Net.Commerce™ for AS/400 (V3.2)	✓	✓	5798-NC3	-	-		-
WebSphere Payment Manager for AS/400		✓	5733-PY2	-	-		✓

Office products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription <sup>8</sup>
Advanced Function Printing Utilities for AS/400 <sup>6</sup>	7/2002	✓	5769-AF1	#2541	-	5050	✓
Advanced DBCS Printer Support <sup>6</sup> IPDS™ Printer Support	7/2002		5769-AP1	#2510	#2607	5050 5101	✓
Language Dictionaries for AS/400	7/2002	✓	5716-DCT	#2105	-		-
Dictionaries and Linguistic Tools for AS/400 <sup>6</sup>			5769-DL1	#2522	-		-
Business Graphics Utility for AS/400 <sup>6</sup>	7/2002	✓	5769-DS1	#2507	-		✓
Advanced Function Printing Fonts for AS/400 <sup>6</sup>		✓	5769-FNT	#2550	-		✓
Various Fonts					#2625 to #2639		
Advanced Function Printing DBCS Fonts for AS/400 <sup>6†</sup> Various Fonts		✓	5769-FN1	#2535	- #2650 to #2654		✓
OfficeVision® for AS/400 <sup>6</sup>	7/2002	✓	5769-WP1	#2504	-		-
Content Manager for AS/400 Object Server Advanced Workflow	7/2002		5769-VI1	#2551	- #2687 #2689		-
AFP PrintSuite for AS/400 <sup>6</sup>			5798-AF3	-	-		✓
Facsimile Support for AS/400	7/2002	✓	5798-TBY	-	-		✓
OfficeVision JustMail for AS/400	5/2001		5798-TBT	-	-		✓
Domino Fax for iSeries			5733-FXD				

Additional products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>	Product identifier	Stack feature	Addn'l feature	Keyed stamped media <sup>9</sup>	Software subscription <sup>8</sup>
Connect for iSeries	1/2003	✓	5733-B2B				✓
Lotus Domino Enterprise Server for AS/400 <sup>6</sup>	1/2003		5769-LNT				-
Lotus Enterprise Integrator <sup>6</sup>	1/2003		5769-LNP				-
System/38™ Migration Aid	✓		5714-MG1	-	-		-
System/36 Migration Aid	✓		5727-MG1	-	-		-

## 12.11 OS/400 V4R4 software

The following tables show the V4R4 OS/400-based software products that are most commonly installed. It is not a definitive list of all possible IBM software products for the iSeries or AS/400e. See 12.14, “Notes for Version 4 software tables” on page 450, for Version 4 software group information.

Database products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription <sup>8</sup>
System Program Order	✓		5755-AS5	-	-		
Operating System/400 <sup>6</sup>	✓		5769-SS1 <sup>4</sup>	#2501		5050	✓
TCP/IP Connectivity Utilities/400 <sup>10</sup>			5769-TC1*		#2529		
HTTP Server for AS/400 <sup>10</sup>			5769-DG1*		#2553		
NetQuestion for AS/400 <sup>10</sup>					#2554		
Performance Manager <sup>10</sup>			5769-PM1*		#2556		
AS/400 Toolbox for Java Refresh <sup>10</sup>			5769-JC1*		#2584		
AS/400 Toolbox for Java <sup>10</sup>			5769-JC1*		#2585		
AS/400 Developer Kit for Java <sup>10</sup>			5769-JV1*		#2586		
WebSphere Applications Server <sup>10</sup>			5769-AS1*		#2591		
Client Access Express for Windows <sup>10</sup>			5769-XE1*		#2603		
Media and Storage Extensions					#2619	5103	
Client Access Express for Windows Refresh					#2641		
PSF/400 1-20 IPM					#2681	5112	
PSF/400 1-45 IPM					#2682	5113	
PSF/400 Any Speed					#2683	5114	
PSF/400 Fax Feature					#2684	5102	
CPA Toolkit					#2690		
OptiConnect for OS/400					#2642		
Integration Services for Integrated PC Server					#2644		

Database products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription <sup>8</sup>
Integration for Novell NetWare	✓				#2645		
Enhanced Integration for Novel NetWare					#2646		
Private Address Space Environment					#2648		
Integration for Windows NT Server					#2692		
DB2 Symmetric Multiprocessing					#2698		
DB2 MultiSystem					#2699		
Cryptographic Support for AS/400 <sup>6</sup>	✓		5769-CR1	#2518	-		✓
S/38 Utilities for AS/400 <sup>6</sup>	✓		5769-DB1	#2519	-		✓
DataPropagator Relational 5.1 for AS/400 <sup>6</sup>	✓	✓	5769-DP2	#2552			-
Query for AS/400 <sup>6</sup>	✓		5769-QU1	#2508	-	5050	✓
DB2 Query Manager and SQL Development Kit <sup>6</sup>	✓		5769-ST1	#2511	-	5050	✓

Networking products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription <sup>8</sup>
Cryptographic Access Provider 40-bit <sup>6†††</sup>	✓		5769-AC1	#2560	-		✓
Cryptographics Access Provider 56-bit <sup>6††††</sup>	✓		5769-AC2	#2561	-		✓
Cryptographics Access Provider 128-bit <sup>6,12</sup>	✓		5769-AC3	#2562	-		✓
AS/400 Client Encryption (40-bit) <sup>6†††</sup>	✓		5769-CE1	#2580	-		✓
AS/400 Client Encryption (56-bit) <sup>6††††</sup>	✓		5769-CE2	#2581	-		✓
AS/400 Client Encryption (128-bit) <sup>6,12</sup>	✓		5769-CE3	#2582	-		✓
Point-of-Sale Communication Utility for OS/400 <sup>6</sup>	✓		5769-CF1	#2528	-		✓
Communications Utilities for AS/400 <sup>6</sup>	✓		5769-CM1	#2503	-	5050	✓
CallPath for AS/400 <sup>6</sup>	✓	✓	5769-CP4	#2534			-
Switch Connection					#2608		
DCE Base Services for AS/400 <sup>6</sup>	✓	✓	5769-DC1	#2563	-		✓
DCE DES Library Routines <sup>6</sup>	✓	✓	5769-DC3	#2564	-		✓
Firewall for AS/400 <sup>6</sup>	✓		5769-FW1	#2514	-		-
MQSeries for AS/400 (V4R2M1) <sup>6</sup>	✓	✓	5769-MQ2	#2524	-		-
MQSeries for AS/400 (V5.1) <sup>6</sup>			5733-A38			-	-
MQSeries Integrator for AS/400 <sup>14</sup>			5801-AAR				-
Client Access Family for Windows <sup>6</sup> Enhanced Windows 3.1 Client Windows 95 Client	✓		5769-XW1	#2516			✓
Client Access Family <sup>6</sup>	✓	✓	5769-XY1	#2517			-

Networking products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription <sup>8</sup>
DOS Client							
DOS Extended Client							-
OS/2 Client							
Optimized OS/2 Client							
Windows 3.1 Client							
OS/2 Warp Server for AS/400 <sup>6</sup>	✓	✓	5769-XZ1	#2566	-		-
Wireless Connection for AS/400	✓		5798-TBW	-	-		-
56-bit WebSphere Standard Edition <sup>6††††</sup>	✓		5733-AS2	-	-		-
128-bit WebSphere Standard Edition <sup>6,12</sup>			5733-AS3	-	-		-
56-bit WebSphere Advanced Edition <sup>6††††</sup>	✓		5733-WA2	-	-		-
128-bit WebSphere Advanced Edition <sup>6,12</sup>			5733-WA3	-	-		-
Network Station Manager V1R3	✓	✓	5648-C05	-	-		-
Network Station Manager V2R1 (40-bit)	✓	✓	5648-C07	-	-		-
Network Station Manager V2R1 (128-bit) <sup>††</sup>	✓	✓	5648-C08	-	-		-
Network Station Manager for AS/400 (V3R7)	✓		5648-B07	-	-		-
Network Station Browser (40-bit encryption)	✓		5648-B08	-	-		-
Navio NC Navigator for IBM Network Station (40-bit encryption)	✓		5648-B10	-	-		-
Network Station Browser (128-bit encryption) <sup>††</sup>	✓		5648-B18	-	-		-
Navio NC Navigator for IBM Network Station (128-bit encryption) <sup>††</sup>	✓		5648-B20	-	-		-

Systems management products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription <sup>8</sup>
Backup Recovery and Media Services for OS/400 <sup>6</sup>	✓		5769-BR1	#2521		5050	✓
Advanced					#2616	5102	
Network					#2617	5101	
Job Scheduler for AS/400 <sup>6</sup>	✓		5769-JS1	#2594	-	5050	✓
Managed System Services for AS/400 <sup>6</sup>	✓	✓	5769-MG1	#2558	-		✓
Performance Tools for AS/400 <sup>6</sup>	✓		5769-PT1	#2525	-	5050	✓
Performance Tools Manager					#2610	5101	
Performance Tools Agent					#2611	5102	
OnDemand for AS/400 <sup>6</sup>	✓		5769-RD1	#2593		5050	-
Server Feature					#2693		

Systems management products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription <sup>8</sup>
Spool File Archive					#2694	5101	
Record Level Archive					#2695	5103	
Object Level Archive					#2696	5102	
Anystore					#2697	5104	
SystemView® System Manager for OS/400 <sup>6</sup>	✓		5769-SM1	#2533	-		✓
Netfinity Server for AS/400 <sup>6</sup>	✓		5769-SVA	#2536	-		-
Netfinity AS/400 Manager for OS/2 V3R7 <sup>6</sup>	✓		5769-SVD	#2537	-		-
Netfinity AS/400 Manager for Windows 95 V3R7 <sup>6</sup>	✓		5769-SVE	#2538	-		-
ADSTAR Distributed Storage Manager <sup>6</sup>	✓	✓	5769-SV3	#2598			-
Multiple Client Workstations Supported		✓			#1442 #1446		

Packaged software	WDFM <sup>11</sup>	Skip ship <sup>2</sup>	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription <sup>8</sup>
ValuPak for OS/400	✓		5769-VP1	#1463	-		-
ValuPak for AS/400 Printing	✓		5769-PPK	#1452	-		-
Application Development ToolSet Plus <sup>6</sup>	✓		5769-PWK	#1453	-		-

Additional products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>	Product identifier	Stack feature	Addn'l feature	Keyed stamped media <sup>9</sup>	Software subscription <sup>8</sup>
Lotus Domino Enterprise Server for AS/400	✓		5769-LNT				-
Lotus Enterprise Integrator	✓		5769-LNP				-
System/38 Migration Aid	✓		5714-MG1	-	-		-
System/36 Migration Aid	✓		5727-MG1	-	-		-

Application development products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription <sup>8</sup>
ILE COBOL for AS/400 <sup>6</sup>	✓		5769-CB1	#2513	-	5050	✓
Application Development ToolSet Client Server <sup>6</sup>	✓	✓	5769-CL3	#2568	-		-
ILE C for AS/400 <sup>6</sup>	✓		5769-CX2	#2527	-	5050	✓
VisualAge C++ for AS/400	✓	✓	5716-CX4	#2190			-
VisualAge C++ for OS/2 Client		✓			#2214		
VisualAge C++ for AS/400 (Windows) <sup>6</sup>	✓		5769-CX5	#2532			✓

Application development products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription <sup>8</sup>
VisualAge C++ for Windows Client					#2620		
CICS Transaction Server for AS/400 <sup>6</sup>	✓		5769-DFH	#2545	-		✓
Application Program Driver for AS/400	✓	✓	5769-PD1	#2557	-		✓
Application Development ToolSet for AS/400 <sup>6</sup>	✓		5769-PW1	#2526		5050	✓
Application Dictionary Services/400 <sup>7</sup>					#2612	5102	
Application Development Manager/400 <sup>7</sup>					#2613	5101	
ILE RPG for AS/400 <sup>6</sup>	✓		5769-RG1	#2512	-	5050	✓
VisualGen® Host Services for AS/400	✓		5716-VG1	#2177	-		-
Net.Commerce for AS/400 (V2)	✓		5798-NC2	-	-		-
Net.Commerce for AS/400 (V3.2)	✓		5798-NC3	-	-		-
Payment Server for AS/400	✓		5733-PY1	-	-		-
WebSphere Payment Manager for AS/400			5733-PY2	-	-		-

Office products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Keyed stamped media <sup>9</sup>	Software subscription <sup>8</sup>
Advanced Function Printing Utilities for AS/400 <sup>6</sup>	✓		5769-AF1	#2541	-	5050	✓
Advanced DBCS Printer Support <sup>6†</sup> IPDS Printer Support	✓		5769-AP1	#2510		#2607	✓
Language Dictionaries for AS/400	✓	✓	5716-DCT	#2105	-		-
Business Graphics Utility for AS/400 <sup>6</sup>	✓		5769-DS1	#2507	-		✓
Advanced Function Printing Fonts for AS/400 <sup>6</sup> Various Fonts		✓	5769-FNT	#2550	-	#2625 to #2639	✓
Advanced Function Printing DBCS Fonts for AS/400 <sup>6†</sup>		✓	5769-FN1	#2535	-		✓
Various Fonts					#2650 to #2654		
OfficeVision for AS/400 <sup>6</sup>	✓	✓	5769-WP1	#2504	-		-
ImagePlus® VisualInfo™ for AS/400 Secondary Object Server Advanced Workflow	✓		5769-VI1	#2551	-	#2687 #2689	-
AFP PrintSuite for AS/400	✓		5798-AF3	-	-		✓
OfficeVision JustMail for AS/400	✓		5798-TBT	-	-		-
Facsimile Support for AS/400	✓		5798-TBY	-	-		✓

## 12.12 OS/400 V4R3 software

The following tables show the V4R3 OS/400-based software products that are most commonly installed. It is not a definitive list of all possible IBM software products for the iSeries or AS/400e. See 12.14, "Notes for Version 4 software tables" on page 450, for Version 4 software group information.

Database products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R3	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
System Program Order (also known as Software Stack)	✓			✓	5755-AS5	-	-	
Operating System/400 <sup>6</sup> (including TCP/IP Connectivity Utilities/400)	✓			✓	5769-SS1 <sup>4</sup> -	#2501 -	- #2529	✓ ✓
HTTP Server for AS/400				✓			#2553	✓
NetQuestion for AS/400 (including Performance Manager)				✓ ✓	- -	- -	#2554 #2556	✓ ✓
AS/400 Toolbox for Java				✓	-	-	#2585	✓
AS/400 Toolbox for Java Refresh				✓	-	-	#2584	✓
AS/400 Developer Kit for Java				✓	-	-	#2586	✓
SystemView Base for OS/400	✓			✓	-	-	#2195	✓
Operations Navigator				✓	-	-	#2601	✓
Print Services Facility/400 <sup>6</sup>				✓	-	-	#2691	✓
CPA Toolkit				✓	-	-	#2690	✓
Media and Storage Extensions <sup>6</sup>				✓	-	-	#2619	✓
Client Access Express for Windows Refresh <sup>6</sup>							#2641	✓
OptiConnect for OS/400 <sup>6</sup>				✓	-	-	#2642	✓
Integration Services for Integrated PC Server				✓	-	-	#2644	✓
Integration for Novell NetWare	✓			✓	-	-	#2645	✓
Enhanced Integration for Novel NetWare <sup>6</sup>				✓	-	-	#2646	✓
Integration of Lotus Notes®				✓	-	-	#2656	✓
DB2 Symmetric Multiprocessing <sup>6</sup>				✓	-	-	#2698	✓
DB2 MultiSystem <sup>6</sup>				✓	-	-	#2699	✓
Integration for Windows NT Server <sup>6</sup>				✓	-	-	#2692	✓
Private Address Space Environment				✓	-	-	#2648	✓
Cryptographic Support for OS/400	✓			✓	5769-CR1	#2518	-	✓
S/38 Utilities for OS/400 <sup>6</sup>	✓			✓	5769-DB1	#2519	-	✓



Database products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R3	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
DataPropagator Relational Capture and Apply <sup>7</sup>	✓			✓	5769-DP1	#2565	-	-
DataPropagator Relational 5.1 for AS/400 <sup>6</sup>	✓			✓	5769-DP2	#2552		-
Query for OS/400 <sup>7</sup>	✓			✓	5769-QU1	#2508	-	✓
DB2 Query Manager and SQL Development Kit <sup>7</sup>	✓			✓	5769-ST1	#2511	-	✓

Networking products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R3	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
Cryptographic Access Provider 40-bit <sup>6</sup>	✓			✓	5769-AC1	#2560		✓
Cryptographics Access Provider 56-bit <sup>6</sup>	✓			✓	5769-AC2	#2561		✓
Cryptographics Access Provider 120-bit <sup>6</sup>	✓			✓	5769-AC3	#2562		✓
Point-of-Sale Communication Utility for OS/400	✓			✓	5769-CF1	#2528	-	
Communications Utilities for OS/400 <sup>6</sup>	✓			✓	5769-CM1	#2503	-	✓
CallPath for OS/400 <sup>6</sup>	✓			✓	5769-CP4	#2534	-	-
DCE Base Services for AS/400 <sup>6</sup>	✓			✓	5769-DC1	#2563		✓
DCE DES Library Routines <sup>6</sup>	✓			✓	5769-DC3	#2564		✓
Firewall for AS/400	✓			✓	5769-FW1	#2514	-	-
MQSeries for OS/400 (V4R2) <sup>6</sup>	✓			✓	5769-MQ1	#2523	-	-
MQSeries for OS/400 (V4R2M1) <sup>6</sup>	✓			✓	5769-MQ2	#2524		-
Internet Connection Secure Server <sup>6††</sup>	✓			✓	5769-NC1	#2506	-	-
Internet Connection Secure Server for AS/400 <sup>6</sup>	✓			✓	5769-NCE	#2509	-	-
Client Access Family for Windows <sup>7</sup>	✓			✓	5769-XW1	#2516	-	✓
Enhanced Windows 3.1 Client				✓	-	-	-	✓
Windows 95 Client				✓	-	-	-	✓
Windows 95/NT Client Refresh				✓	-	-	#2640	✓
Client Access Family	✓			✓	5769-XY1	#2517	-	-
DOS Client				✓	-	-	-	
DOS Extended Client				✓	-	-	-	
OS/2 Client				✓	-	-	-	
Optimized OS/2 Client				✓	-	-	-	
Windows 3.1 Client				✓	-	-	-	

Networking products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R3	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
OS/2 Warp Server for OS/400	✓			✓	5769-XZ1	#2566	-	-
Wireless Connection for AS/400	✓	✓	✓	✓	5798-TBW	-	-	-
Network Station Manager V1R3			✓	✓	5648-C05	-	-	-
Network Station Manager V2R1 (40-bit)				✓	5648-C07	-	-	-
Network Station Manager V2R1 (128-bit) <sup>††</sup>				✓	5648-C08	-	-	-
Network Station Manager for AS/400 (V3R7)	✓		✓	✓	5648-B07	-	-	-
Network Station Browser (40-bit encryption)	✓		✓	✓	5648-B08	-	-	-
Navio NC Navigator for IBM Network Station (40-bit encryption)	✓		✓	✓	5648-B10	-	-	-
Network Station Browser (128-bit encryption) <sup>††</sup>	✓		✓	✓	5648-B18	-	-	-
Navio NC Navigator for IBM Network Station (128-bit encryption) <sup>††</sup>	✓		✓	✓	5648-B20	-	-	-

Systems management products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R3	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
Backup Recovery and Media Services for OS/400	✓			✓	5769-BR1	#2521	-	✓
Job Scheduler for OS/400	✓			✓	5769-JS1	#2594	-	✓
Managed System Services for OS/400	✓			✓	5769-MG1	#2558	-	✓
Performance Tools for OS/400 <sup>7</sup>	✓			✓	5769-PT1	#2525	-	✓
Performance Tools Manager			✓	✓	-	-	#2610	✓
Performance Tools Agent				✓	-	-	#2611	✓
OnDemand for AS/400	✓			✓	5769-RD1	#2593	-	-
Server Feature				✓	-	-	#2693	
Spool File Archive				✓	-	-	#2694	
Record Level Archive				✓	-	-	#2695	
Object Level Archive				✓	-	-	#2696	
Anystore				✓	-	-	#2697	
SystemView System Manager for OS/400	✓			✓	5769-SM1	#2533	-	✓
Netfinity Server for AS/400 <sup>6</sup>	✓			✓	5769-SVA	#2536	-	-
Netfinity AS/400 Manager for OS/2 V3R7 <sup>6</sup>	✓			✓	5769-SVD	#2537	-	-

Systems management products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R3	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
Netfinity AS/400 Manager for Windows 95 V3R7 <sup>6</sup>	✓			✓	5769-SVE	#2538	-	-
ADSTAR Distributed Storage Manager <sup>6</sup>	✓			✓	5769-SV3	#2598	-	-
Multiple Client Workstations Supported				✓	-	-	#1442- #1446	

Multimedia products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R3	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
Ultimedia Business Conferencing for OS/400	✓	✓	✓	✓	5716-UB1	#2170	-	-
Person-to-Person		✓	✓	✓	-	-	#2223	-
Client Access Ultimedia Tools for OS/400	✓	✓	✓	✓	5716-US1	#2172	-	-
Ultimedia Perfect Image/400		✓	✓	✓	-	-	#2221	-
Ultimedia Builder/400		✓	✓	✓	-	-	#2222	-

Application development products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R3	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
ILE COBOL for OS/400 <sup>6</sup>	✓			✓	5769-CB1	#2513	-	✓
Application Development ToolSet Client Server <sup>6</sup>	✓			✓	5769-CL3	#2568	-	✓
ILE C for OS/400 <sup>6</sup>	✓			✓	5769-CX2	#2527	-	✓
VisualAge C++ for OS/400	✓	✓	✓	✓	5716-CX4	#2190	-	-
VisualAge C++ for OS/2 Client					-	-	#2214	-
VisualAge C++ for AS/400 (Windows)	✓		✓	✓	5716-CX5	#2132		✓
VisualAge C++ for Windows Client		✓	✓	✓	-	-	#2220	✓
CICS for OS/400	✓			✓	5769-DFH	#2545	-	✓
Application Program Driver for OS/400	✓			✓	5769-PD1	#2557	-	✓
Application Development ToolSet for OS/400 <sup>6</sup>	✓			✓	5769-PW1	#2526	-	✓
Application Dictionary Services/400				✓	-	-	#2612	✓
Application Development Manager/400				✓	-	-	#2613	✓
ILE RPG for OS/400 <sup>6</sup>	✓			✓	5769-RG1	#2512	-	✓
VisualGen Host Services for OS/400	✓			✓	5716-VG1	#2177	-	✓
Net.Commerce for AS/400	✓			✓	5798-NC2	-	-	-

Office products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R3	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
Advanced Function Printing Utilities for OS/400	✓			✓	5769-AF1	#2541	-	✓
Advanced DBCS Printer Support <sup>†</sup>	✓			✓	5769-AP1	#2510	-	✓
IPDS Printer Support				✓		#2607	-	****
Language Dictionaries for OS/400 <sup>7</sup>	✓		✓	✓	5716-DCT	#2105	-	-
Business Graphics Utility for OS/400 <sup>6</sup>	✓			✓	5769-DS1	#2507	-	✓
Advanced Function Printing Fonts for OS/400	✓			✓	5769-FNT	#2550	-	✓
Various Fonts				✓	-	-	#2625 to #2639	✓
Advanced Function Printing DBCS Fonts for OS/400	✓			✓	5769-FN1	#2535	-	✓
Various Fonts				✓	-	-	#2650 to #2654	✓
OfficeVision for OS/400 <sup>7</sup>	✓			✓	5769-WP1	#2504	-	-
ImagePlus VisualInfo for AS/400	✓			✓	5769-VI1	-	-	-
AFP PrintSuite for OS/400 <sup>7</sup>	✓		✓	✓	5798-AF3	-	-	-
OfficeVision JustMail for OS/400	✓			✓	5798-TBT	-	-	-
Facsimile Support for OS/400	✓			✓	5798-TBY	-	-	✓

Packaged software	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R3	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
ValuPak for OS/400	✓			✓	5769-VP1	#1463	-	-
GrowthPak for OS/400	✓			✓	5769-GP1	#1464	-	-
Application Development ToolSet Plus <sup>6</sup>	✓			✓	5769-PWK	#1453	-	-
ValuPak for AS/400 Printing	✓			✓	5769-PPK	#1452	-	-
Operations Productivity Pak	✓			✓	5769-OPK	#1771	-	-

Additional products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R3	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
System/38 Migration Aid	✓	✓	✓	✓	5714-MG1	-	-	-
System/36 Migration Aid	✓	✓	✓	✓	5727-MG1	-	-	-

## 12.13 OS/400 V4R2 software

The following tables show the V4R2 OS/400-based software products that are most commonly installed. It is not a definitive list of all possible IBM software products for the iSeries or AS/400e. See 12.14, “Notes for Version 4 software tables” on page 450, for Version 4 software group information.

Database products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R2	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
System Program Order (also known as Software Stack)	✓			✓	5755-AS5	-	-	
Operating System/400 <sup>6</sup>	✓			✓	5769-SS1 <sup>4</sup>	#2501	-	✓
(including TCP/IP Connectivity Utilities/400)	✓			✓	-	-	#2529	✓
(including Performance Manager)	✓			✓	-	-	#2556	✓
AS/400 Toolbox for Java	✓			✓	-	-	#2585	✓
AS/400 Developer Kit for Java	✓			✓	-	-	#2586	✓
SystemView Base for OS/400	✓			✓	-	-	#2195	✓
Windows 95/NT Client (shipped with OS/400)	✓			✓	-	-	#2601	
Advanced Printer Function Feature	✓			✓	-	-	#2691	✓
CPA Toolkit	✓			✓	-	-	#2690	✓
Media and Storage Extensions	✓			✓	-	-	#2619	✓
OptiConnect for OS/400	✓			✓	-	-	#2642	✓
Integration Services for Integrated PC Server	✓			✓	-	-	#2644	✓
NetWare Integration for OS/400	✓			✓	-	-	#2645	✓
Enhanced NetWare Integration	✓			✓	-	-	#2646	✓
Integration of Lotus Notes	✓			✓	-	-	#2656	✓
DB2 Symmetric Multiprocessing	✓			✓	-	-	#2698	✓
DB2 MultiSystem	✓			✓	-	-	#2699	✓
Integration for Windows NT Server	✓			✓	-	-	#2692	✓
Cryptographic Support for OS/400	✓			✓	5769-CR1	#2518	-	✓
S/38 Utilities for OS/400 <sup>6</sup>	✓			✓	5769-DB1	#2519	-	✓
DataPropagator Relational Capture and Apply <sup>7</sup>	✓			✓	5769-DP1	#2565	-	-
Query for OS/400 <sup>7</sup>	✓			✓	5769-QU1	#2508	-	✓
DB2 Query Manager and SQL Development Kit <sup>7</sup>	✓			✓	5769-ST1	#2511	-	✓

Networking products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R2	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
Point-of-Sale Communication Utility for OS/400	✓			✓	5769-CF1	#2528	-	
Communications Utilities for OS/400 <sup>6</sup>	✓			✓	5769-CM1	#2503	-	✓
CallPath for OS/400	✓		✓	✓	5716-CP3	#2131	-	-
Firewall for AS/400	✓			✓	5769-FW1	#2514	-	
MQSeries for OS/400 (V4R2) <sup>6</sup>	✓			✓	5769-MQ1	#2523	-	-
MQSeries for OS/400 (V4R2M1) <sup>6</sup>	✓			✓	5769-MQ2	#2524		
Internet Connection Secure Server <sup>††</sup>	✓			✓	5769-NC1	#2506	-	
Internet Connection Secure Server for AS/400	✓			✓	5769-NCE	#2509	-	
Client Access Family for Windows <sup>7</sup>	✓			✓	5769-XW1	#2516	-	✓
Enhanced Windows 3.1 Client	✓			✓	-	-		✓
Windows 95 Client	✓			✓	-	-		✓
Windows 95/NT Client Refresh	✓			✓	-	-	#2640	✓
Client Access Family	✓			✓	5769-XY1	#2517	-	-
DOS Client	✓			✓	-	-	-	
DOS Extended Client	✓			✓	-	-	-	
OS/2 Client	✓			✓	-	-	-	
Optimized OS/2 Client	✓			✓	-	-	-	
Windows 3.1 Client	✓			✓	-	-	-	
OS/2 Warp Server for AS/400	✓			✓	5769-XZ1	#2566	-	-
Wireless Connection for AS/400	✓	✓	✓	✓	5798-TBW	-	-	-
Network Station Manager V1R3			✓	✓	5648-C05	-	-	-
Network Station Manager V2R1 (40-bit)				✓	5648-C07	-	-	-
Network Station Manager V2R1 (128-bit) <sup>††</sup>				✓	5648-C08	-	-	-
Network Station Manager for AS/400	✓		✓	✓	5648-B07	-	-	-
Network Station Browser (40-bit encryption)	✓		✓	✓	5648-B08	-	-	-
Navio NC Navigator for IBM Network Station (40-bit encryption)	✓		✓	✓	5648-B10	-	-	-
Network Station Browser (128-bit encryption) <sup>††</sup>	✓		✓	✓	5648-B18	-	-	-
Navio NC Navigator for IBM Network Station (128-bit encryption) <sup>††</sup>	✓		✓	✓	5648-B20	-	-	-

Systems management products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R2	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
Backup Recovery and Media Services for AS/400	✓			✓	5769-BR1	#2521	-	✓
Job Scheduler for OS/400	✓			✓	5769-JS1	#2594	-	✓
Managed System Services for OS/400	✓			✓	5769-MG1	#2558	-	✓
Performance Tools for OS/400 <sup>7</sup>	✓			✓	5769-PT1	#2525	-	✓
Performance Tools Manager	✓		✓	✓	-	-	#2610	✓
Performance Tools Agent	✓			✓	-	-	#2611	✓
OnDemand for AS/400	✓			✓	5769-RD1	#2593	-	-
Spool File Archive	✓			✓	-	-	#2694	
Record Level Archive	✓			✓	-	-	#2695	
Object Level Archive	✓			✓	-	-	#2696	
Anystore	✓			✓	-	-	#2697	
SystemView System Manager for OS/400	✓			✓	5769-SM1	#2533	-	✓
Netfinity Server for AS/400	✓		✓	✓	5716-SVA	#2136	-	-
Netfinity AS/400 Manager for OS/2	✓		✓	✓	5716-SVD	#2137	-	-
Netfinity AS/400 Manager for Windows95	✓		✓	✓	5716-SVE	#2138	-	-
ADSTAR Distributed Storage Manager <sup>7</sup>	✓		✓	✓	5716-SV2	#2197	-	-
Multiple Client Workstations Supported	✓		✓	✓	-	-	#1419- #1440	-

Multimedia products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R2	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
Ultimedia Business Conferencing for OS/400	✓	✓	✓	✓	5716-UB1	#2170	-	-
Person-to-Person	✓	✓	✓	✓	-	-	#2223	-
Client Access Ultimedia Tools for OS/400	✓	✓	✓	✓	5716-US1	#2172	-	-
Ultimedia Perfect Image/400	✓	✓	✓	✓	-	-	#2221	-
Ultimedia Builder/400	✓	✓	✓	✓	-	-	#2222	-

Application development products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R2	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
ILE COBOL for OS/400 <sup>6</sup>	✓			✓	5769-CB1	#2513	-	✓
Application Development ToolSet Client Server <sup>6</sup>	✓			✓	5769-CL3	#2568	-	✓
ILE C for OS/400 <sup>6</sup>	✓			✓	5769-CX2	#2527	-	✓
VisualAge C++ for OS/400	✓	✓	✓	✓	5716-CX4	#2190	-	-
VisualAge C++ for OS/2 Client	✓	✓	✓	✓	-	-	#2214	-
VisualAge C++ for AS/400 (Windows)	✓		✓	✓	5716-CX5	#2132		-
VisualAge C++ for Windows Client	✓	✓	✓	✓	-	-	#2220	-
CICS for OS/400	✓			✓	5769-DFH	#2545	-	✓
Application Program Driver for OS/400	✓			✓	5769-PD1	#2557	-	✓
Application Development ToolSet for OS/400 <sup>6</sup>	✓			✓	5769-PW1	#2526	-	✓
Application Dictionary Services/400 <sup>7</sup>	✓			✓	-	-	#2612	✓
Application Development Manager/400 <sup>7</sup>	✓			✓	-	-	#2613	✓
ILE RPG for OS/400 <sup>6</sup>	✓			✓	5769-RG1	#2512	-	✓
VisualGen Host Services for OS/400	✓			✓	5716-VG1	#2177	-	-
Net.Commerce for AS/400	✓			✓	5798-NC2	-	-	-

Office products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R2	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
Advanced Function Printing Utilities for OS/400	✓			✓	5769-AF1	#2541	-	✓
Advanced DBCS Printer Support <sup>†</sup>	✓			✓	5769-AP1	#2510	-	✓
PDS Printer Support	✓			✓			2607	✓
Language Dictionaries for OS/400 <sup>7</sup>	✓		✓	✓	5716-DCT	#2105	-	-



Office products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R2	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
Business Graphics Utility for OS/400 <sup>6</sup>	✓			✓	5769-DS1	#2507	-	✓
Advanced Function Printing Fonts for OS/400	✓			✓	5769-FNT	#2550	-	✓
Various Fonts	✓			✓	-	-	#2625 to #2639	✓
Advanced Function Printing DBCS Fonts for OS/400	✓			✓	5769-FN1	#2535	-	✓
Various Fonts	✓			✓	-	-	#2650 to #2654	✓
OfficeVision for OS/400 <sup>7</sup>	✓			✓	5769-WP1	#2504	-	-
ImagePlus VisualInfo for AS/400	✓		✓	✓	5733-A18	-	-	-
AFP PrintSuite for OS/400 <sup>7</sup>	✓		✓	✓	5798-AF3	-	-	✓
OfficeVision JustMail for OS/400	✓			✓	5798-TBT	-	-	-
Facsimile Support for OS/400	✓			✓	5798-TBY	-	-	✓

Packaged software	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R2	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
ValuPak for OS/400	✓			✓	5769-VP1	#1463	-	-
GrowthPak for OS/400	✓			✓	5769-GP1	#1464	-	-
Application Development ToolSet Plus	✓			✓	5769-PWK	#1453	-	-
ValuPak for AS/400 Printing	✓			✓	5769-PPK	#1452	-	-
Operations Productivity Pak	✓			✓	5769-OPK	#1771	-	-

Additional products	WDFM <sup>11</sup>	Skip ship <sup>2</sup>		V4R2	Product identifier	Stack feature <sup>2</sup>	Addn'l feature <sup>2</sup>	Software subscription <sup>8</sup>
		V3R6	V3R7					
System/38 Migration Aid	✓	✓	✓	✓	5714-MG1	-	-	-
System/36 Migration Aid	✓	✓	✓	✓	5727-MG1	-	-	-

## 12.14 Notes for Version 4 software tables

<b>Note 1</b>	<p>V4 is supported on the following AS/400e RISC models <i>only</i>. See the overview table in the model chapters for the <i>minimum</i> OS/400 release to support each model.</p> <ul style="list-style-type: none"><li>▶ 9401-150</li><li>▶ 9402/4-4xx</li><li>▶ 9404/6-5xx</li><li>▶ 9402/4/6-600, 620, 640, 650, S20, S30, S40</li><li>▶ 9406-170 (V4R2)</li><li>▶ 9402/4/6-720, 730, 740 (V4R3)</li><li>▶ 9406-250 (V4R5)</li><li>▶ 9402/4/6-270 (V4R5)</li><li>▶ 9402/4/6-820, 830, 840 (V4R5)</li><li>▶ 9406-SB2/SB3 (V4R5)</li></ul> <p>Version 4 <i>does not</i> support any AS/400 CISC models.</p>																											
<b>Note 2</b>	<p>Products marked with a checkmark (✓) in the Skip ship column are unchanged from a previous version or release and are referred to as being skip shipped. These products retain their original product identifiers but are still shipped as part of a 5755-AS5 stacked media when ordered.</p> <p>The Stack feature and Addn'l feature columns provide the feature codes that are included in the System Program Order (5755-AS5) when a specific product or feature is ordered. Prior to V4R4, most AS/400 products are supplied together on a stacked media that is generated based on the features listed in the 5755-AS5 product. For Version 4, the only stacked media available is CD-ROM.</p> <p>With the introduction of Keyed Stamped Media in V4R4, all products the client ordered are no longer stacked on a single set of CDs. For V4R4 and later, the SIPO provides a list of all products the client receives. The client receives this group of CDs:</p> <ul style="list-style-type: none"><li>▶ Microcode CDs</li><li>▶ OS/400 Base Operating System CDs</li><li>▶ Set of Keyed Stamped Media CDs</li><li>▶ Individual CD for each product ordered that is not part of Keyed Stamped Media</li><li>▶ Cumulative PTF CDs</li></ul> <p>A typical order for licensed programs can be constructed as shown here:</p> <table><tr><td>5755-AS5</td><td>#2501</td><td>OS/400</td></tr><tr><td></td><td>#25xx</td><td>V4R1 and V4R2 Licensed Programs</td></tr><tr><td></td><td>#26xx</td><td>Additional Features of V4R1 and V4R2 Licensed Programs</td></tr><tr><td></td><td>#1991</td><td>New Releases and CumPacks supplied on request only</td></tr><tr><td></td><td>#19xx</td><td>Update Feature</td></tr><tr><td></td><td>#29xx</td><td>Primary Language</td></tr><tr><td></td><td>#3410</td><td>CD-ROM Media</td></tr><tr><td></td><td>#35xx</td><td>Release Specifier</td></tr><tr><td></td><td>#5000</td><td>SW Preload</td></tr></table> <p>Release specifiers: #3550 Release specifier for V4R5</p> <p>Update features: #1960 Version 3 to Version 4 Release 1 Upgrade PTFs</p> <p>#1925 PTFs when upgrading to V4R2</p>	5755-AS5	#2501	OS/400		#25xx	V4R1 and V4R2 Licensed Programs		#26xx	Additional Features of V4R1 and V4R2 Licensed Programs		#1991	New Releases and CumPacks supplied on request only		#19xx	Update Feature		#29xx	Primary Language		#3410	CD-ROM Media		#35xx	Release Specifier		#5000	SW Preload
5755-AS5	#2501	OS/400																										
	#25xx	V4R1 and V4R2 Licensed Programs																										
	#26xx	Additional Features of V4R1 and V4R2 Licensed Programs																										
	#1991	New Releases and CumPacks supplied on request only																										
	#19xx	Update Feature																										
	#29xx	Primary Language																										
	#3410	CD-ROM Media																										
	#35xx	Release Specifier																										
	#5000	SW Preload																										
<b>Note 3</b>	<p>† This product is available in Asia Pacific (AP) countries or regions only.</p> <p>†† This product is available in the United States and Canada only.</p> <p>††† This product is available is Europe, Middle East, and Africa (EMEA) countries or regions only.</p> <p>†††† This product is available is EMEA, AP, and Latin America (LA) countries or regions only.</p>																											

<b>Note 4</b>	<p><b>Alternate IPL Device Feature Codes:</b></p> <p>The following feature codes are hardware features. They are used to specify which storage device is to be used as an alternate IPL device.</p> <p>#5502 840 MB Mini ¼-inch Cartridge Tape Unit (not 250, 270, 720, 730, 740, 820, 830, and 840)</p> <p>#5503 9347 Tape Unit (not 250, 270, 8xx)</p> <p>#5504 3490 E01/E11 Tape Units</p> <p>#5505 2440 Tape Unit (not 250, 270, 8xx)</p> <p>#5506 4 GB ¼-inch Cartridge Tape Unit (not 150, 4xx, 5xx)</p> <p>#5507 9348 Tape Unit</p> <p>#5508 3422 Tape Subsystem (not 250, 270, 720, 730, 740, 820, 830, and 840)</p> <p>#5509 3430 Tape Subsystem (not 250, 270, 720, 730, 740, 820, 830, and 840)</p> <p>#5511 3480 Tape Subsystem</p> <p>#5512 3490 C10/C11/C22 Tape Unit</p> <p>#5513 3490 Tape Subsystem</p> <p>#5514 7208 8 mm Tape Drive and Internal 8 mm Tape Unit</p> <p>#5515 3570/358x Tape Subsystem</p> <p>#5516 1.2 GB ¼-inch Cartridge Tape Unit (not 270, 820, 830, 840)</p> <p>#5517 2.5 GB ¼-inch Cartridge Tape Unit</p> <p>#5518 13 GB ¼-inch Cartridge Tape Unit</p> <p>#5519 3590 Tape System</p> <p>#5531 16 GB ¼-inch Cartridge Tape Unit</p> <p>#5536 25 GB ¼-inch Cartridge Tape Unit</p> <p>#5599 No Save/Restore Device</p> <p>Refer to Chapter 9, "External storage, SANs, QIC, and VXA-2 formats for IBM iSeries and AS/400e servers" on page 307, and the internal tape unit section of each processor chapter to see which tapes are supported.</p> <p>Features #5504, #5506, #5507, #5511, #5512, #5513, #5514, #5515, #5517, #5519, #5531, #5536, and #5599 withdrawn from marketing on 1 December, 2005.</p>																																																																																																																								
<b>Note 5</b>	<p><b>Maximum number of chargeable users by product</b></p> <table><tr><th colspan="2"></th><th colspan="6">Maximum number of users</th></tr><tr><th></th><th></th><th>P05</th><th>P10</th><th>P20</th><th>P30</th><th>P40</th><th>P50</th></tr><tr><td>5769-BR1</td><td>BRMS for OS/400</td><td>50</td><td>50</td><td>50</td><td>50</td><td>50</td><td>50</td></tr><tr><td>5769-FW1</td><td>Firewall for AS/400</td><td>--</td><td>--</td><td>16 IPCS</td><td>--</td><td>--</td><td>--</td></tr><tr><td>5769-SM1</td><td>System Manager for AS/400</td><td>250</td><td>250</td><td>250</td><td>250</td><td>250</td><td>250</td></tr><tr><td>5769-WP1</td><td>OfficeVision for AS/400</td><td>10</td><td>40</td><td>100</td><td>200</td><td>300</td><td>300</td></tr><tr><td>5769-XW1</td><td>Client Access Family For Windows</td><td>10</td><td>40</td><td>100</td><td>150</td><td>200</td><td>250</td></tr><tr><td>5769-XY1</td><td>Client Access Family</td><td>10</td><td>40</td><td>100</td><td>150</td><td>200</td><td>250</td></tr><tr><td>5769-XZ1</td><td>OS/2 Warp Server for AS/400</td><td>--</td><td>--</td><td>16 IPCS</td><td>--</td><td>--</td><td>--</td></tr><tr><td>5798-TBT</td><td>JustMail/400</td><td>--</td><td>--</td><td>No maximum limit</td><td>--</td><td>--</td><td>--</td></tr><tr><td>5769-DFH</td><td>CICS for AS/400</td><td>450</td><td>450</td><td>450</td><td>450</td><td>450</td><td>450</td></tr><tr><td>5769-RD1</td><td>OnDemand for AS/400 (Spl File Arch)</td><td>25</td><td>25</td><td>25</td><td>25</td><td>25</td><td>25</td></tr><tr><td>5769-SVD</td><td>Netfinity AS/400 Manager for OS/2</td><td>250</td><td>250</td><td>250</td><td>250</td><td>250</td><td>250</td></tr><tr><td>5769-SVE</td><td>Netfinity AS/400 Manager for WIN95</td><td>250</td><td>250</td><td>250</td><td>250</td><td>250</td><td>250</td></tr><tr><td>5769-SV3</td><td>ADSTAR Distributed Storage Mgr V3</td><td>250</td><td>250</td><td>250</td><td>250</td><td>250</td><td>250</td></tr></table>			Maximum number of users								P05	P10	P20	P30	P40	P50	5769-BR1	BRMS for OS/400	50	50	50	50	50	50	5769-FW1	Firewall for AS/400	--	--	16 IPCS	--	--	--	5769-SM1	System Manager for AS/400	250	250	250	250	250	250	5769-WP1	OfficeVision for AS/400	10	40	100	200	300	300	5769-XW1	Client Access Family For Windows	10	40	100	150	200	250	5769-XY1	Client Access Family	10	40	100	150	200	250	5769-XZ1	OS/2 Warp Server for AS/400	--	--	16 IPCS	--	--	--	5798-TBT	JustMail/400	--	--	No maximum limit	--	--	--	5769-DFH	CICS for AS/400	450	450	450	450	450	450	5769-RD1	OnDemand for AS/400 (Spl File Arch)	25	25	25	25	25	25	5769-SVD	Netfinity AS/400 Manager for OS/2	250	250	250	250	250	250	5769-SVE	Netfinity AS/400 Manager for WIN95	250	250	250	250	250	250	5769-SV3	ADSTAR Distributed Storage Mgr V3	250	250	250	250	250	250
		Maximum number of users																																																																																																																							
		P05	P10	P20	P30	P40	P50																																																																																																																		
5769-BR1	BRMS for OS/400	50	50	50	50	50	50																																																																																																																		
5769-FW1	Firewall for AS/400	--	--	16 IPCS	--	--	--																																																																																																																		
5769-SM1	System Manager for AS/400	250	250	250	250	250	250																																																																																																																		
5769-WP1	OfficeVision for AS/400	10	40	100	200	300	300																																																																																																																		
5769-XW1	Client Access Family For Windows	10	40	100	150	200	250																																																																																																																		
5769-XY1	Client Access Family	10	40	100	150	200	250																																																																																																																		
5769-XZ1	OS/2 Warp Server for AS/400	--	--	16 IPCS	--	--	--																																																																																																																		
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5769-DFH	CICS for AS/400	450	450	450	450	450	450																																																																																																																		
5769-RD1	OnDemand for AS/400 (Spl File Arch)	25	25	25	25	25	25																																																																																																																		
5769-SVD	Netfinity AS/400 Manager for OS/2	250	250	250	250	250	250																																																																																																																		
5769-SVE	Netfinity AS/400 Manager for WIN95	250	250	250	250	250	250																																																																																																																		
5769-SV3	ADSTAR Distributed Storage Mgr V3	250	250	250	250	250	250																																																																																																																		
<b>Note 6</b>	<p>These products are licensed using the IPLA. The remaining Version 4 licensed programs are licensed under the International Customer Agreement (ICA) or IBM Agreement for Programs (IAP) terms.</p> <p>Three documents, <i>Proof of Entitlement</i>, <i>License Information Document</i>, and <i>International Program License Agreement</i>, are provided with IPLA software as proof of a valid license. IPLA software can be sold to another party. You must notify the purchaser of the program's terms and provide the POE, LID, and IPLA documents to the purchaser. IBM licenses the purchaser when that party accepts the program's license terms by initial use of the program. The seller's license is terminated at this time.</p> <p>When ordering upgrades to software licensed under the IPLA, such as OS/400, a copy of the POE should be provided by the client to validate the license to the software.</p>																																																																																																																								
<b>Note 7</b>	<p>The table no longer references this note.</p> <p>5769-GP1 GrowthPak for OS/400 (OS/400 V4R1, V4R2, or V4R3 only) includes:</p> <ul style="list-style-type: none"><li>▶ 5769-PWK Application Development ToolSet Plus (5716-PWK in OS/400 V4R1)</li><li>▶ 5769-APK OS/400 Integration Base Pack for Lotus Notes (OS/400 V4R1 only)</li><li>▶ 5769-EPK OS/400 Integration Enhanced Pack for Lotus Notes (OS/400 V4R1 only)</li><li>▶ 5769-OPK Operations Productivity Pak (OS/400 V4R1, V4R2, or V4R3 only)</li></ul>																																																																																																																								

<b>Note 8</b>	<p>A number in the Software Subscription column indicates that the product is on the Eligible Products List for Software Subscription. Clients must purchase Software Subscription when they move to Version 4 to upgrade to new versions or releases. Software Subscription is available at prepaid options of one or three years.</p> <p>The price of Software Subscription is the same regardless of what software has been licensed to a system. Most AS/400 stacked software is covered by Software Subscription. Clients who do not take out Software Subscription when they install Version 4 or Version 5 must either relicense the software or pay the Subscription After License to join if they want to upgrade to a new version or release.</p> <p>For more information about Software Subscription and the list of programs it covers, refer to:  <a href="http://www-1.ibm.com/servers/eserver/iseriess/sftsol/subscript2.htm">http://www-1.ibm.com/servers/eserver/iseriess/sftsol/subscript2.htm</a></p> <p>Software Subscription is ordered as a unique product/model combination depending upon the method of payment:</p> <ul style="list-style-type: none"> <li>▶ 5733-SW1 Software Subscription for AS/400 1-Year Prepay. <i>Withdrawn from marketing.</i></li> <li>▶ 5733-SW3 Software Subscription for AS/400 3-Year Prepay. <i>Withdrawn from marketing.</i></li> </ul> <p>For the Prepayment options and the Subscription After License, specify the corresponding processor-based feature for 5733-SWx.</p>
<b>Note 9</b>	<p>A number (representing the Installation Code ID of the product) in the Keyed Stamped Media column indicates that the product is one of those provided in V4R4 on AS/400 Keyed Stamped Media and shipped with OS/400. This is to provide on demand delivery of these products and features and allows a 70-day evaluation period for any of the provided products or features.</p> <p>To use the software distributed on the keyed stamped media after the 70-day evaluation period, order a Software License Key. New Software License Keys are also required when the version, release, or modification level of the software changes. If the software is transferred to a different system, a new software key is required as well. Some software is keyed based on the software group and a new software key must be obtained when the software group changes.</p> <p>When a Software License Key is ordered, retain the <i>Software License Key Sheet</i> that IBM provides.</p> <p>If a Keyed Stamped Media product or feature is to be upgraded, the current Software License Key Sheet for the product must be provided as proof of license.</p> <p>In the United States, Canada, and Asia Pacific, a client upgrading from V4R4 to V4R5 receives only new Software License Key sheets for program products that changed in V4R5. Program Products that changed in V4R5 are identified by a blank in the Skip ship column.</p>
<b>Note 10</b>	Included in SPO when OS/400 is ordered; no 5769-SS1 chargeable feature is required.
<b>Note 11</b>	<p>A checkmark (✓) in the WDFM (Withdrawn from marketing) column indicates that the product has been withdrawn from marketing for a specific version and release.</p> <p>A date in the WDFM column indicates that the product is to be withdrawn from marketing on the date specified.</p>
<b>Note 12</b>	<p>Available in the United States and Canada only.</p> <p>Can be made available with a bulk license outside the United States and Canada if the client who receives the product meets the standards set forth by the United States Government.</p>
<b>Note 13</b>	MQSeries for AS/400, V5.1, can be ordered as product 5801-AAR, feature 5610. It can also be ordered using part number 0704923.
<b>Note 14</b>	MQSeries Integrator can be ordered as product 5801-AAR, feature 6002. It can also be ordered using part number 0764248.

## 12.15 OS/400 software pricing groups

OS/400 software is priced by software groups. This section shows the software group for each iSeries and AS/400e processor for Version 5 and Version 4. Use the Work with License Information (WRKLICINF) command to display the software group of the installed AS/400e or iSeries server.

For information about software groups for earlier systems, refer to *AS/400e RISC System Builder*, REDP-0342.

### 12.15.1 OS/400 Version 5 software groups

The following table shows the software group for each iSeries and AS/400e processor supported by OS/400 Version 5 Release 2 or Release 1.

Hardware models	Processor feature	Interactive feature or Server/Edition feature	Version 5 group
720	#2061	#1500	P10
		#1501, #1502	P20
	#2062	#1500	P10
		#1501, #1502, #1503	P20
	#2063	#1500	P20
		#1502, #1503, #1504	P30
	#2064	#1500	P20
		#1502, #1503, #1504, #1505	P30
730	#2065	#1506	P20
		#1507, #1508, #1509	P30
	#2066	#1506	P20
		#1507, #1508, #1509, #1510	P30
	#2067	#1506	P30
		#1508, #1509, #1510, #1511	P40
	#2068	#1506	P30
		#1508, #1509, #1510, #1511	P40
740	#2069	#1510, #1511, #1512	P50
		#1514	P40
	#2070	#1510, #1511, #1512, #1513	P50
		#1514	P40

Hardware models	Processor feature	Interactive feature or Server/Edition feature	Version 5 group
820	#0150, #0151	-	P20
	#0152	-	P30
	#2395	#1521	P10
		#1522, #1523, #1524	P20
	#2396	#1522, #1523, #1524, #1525	P30
	#2397	#1521	P20
		#1522, #1523, #1524, #1525, #1526	P30
	#2398	#1521	P30
		#1522, #1523, #1524, #1525, #1526, #1527	P40
	#2425	-	P05
	#2426, #2427	-	P10
	#2435	#1521	P10
		#1522, #1523, #1524	P20
	#2436	#1521	P20
		#1522, #1523, #1524	P30
	#2437	#1521	P20
		#1522, #1523, #1524, #1526, #1527	P30
	#2438	#1521	P30
		#1522, #1523, #1524, #1525, #1526, #1527	P40
830	#2456	-	P05
	#2457, #2458	-	P10
	#0153	-	P30
	#2349	#1531	P30
		#1532, #1533, #1534, #1535, #1536, #1537	P40
	#2400	#1531	P20
		#1532, #1533, #1534, #1535	P30
	#2402	#1531	P30
		#1532, #1533, #1534, #1535, #1536	P40
	#2403	#1531	P40
		#1532, #1533, #1534, #1535, #1536, #1537	P50

Hardware models	Processor feature	Interactive feature or Server/Edition feature	Version 5 group
840	#0158, #0159	-	P40
	#2352	#1540	P40
		#1541, #1542, #1543, #1544, #1545, #1546	P50
	#2353	#1540	P40
		#1541, #1542, #1543, #1544, #1545, #1546, #1547	P50
	#2354	#1540	P40
		#1541, #1542, #1543, #1544, #1545, #1546, #1547, #1548	P50
	#2416	#1540	P40
		#1541, #1542, #1543, #1544, #1545, #1546	P40
	#2417	#1540	P40
		#1541, #1542, #1543, #1544, #1545, #1546	P50
	#2418	#1540	P40
		#1541, #1542, #1543, #1544, #1545, #1546	P50
	#2419	#1540	P40
		#1541, #1542, #1543, #1544, #1545, #1546, #1547	P50
	#2420	#1540	P40
	#2420	#1541, #1542, #1543, #1544, #1545, #1546, #1547	P50
	#2461	#1540	P40
		#1541, #1542, #1543, #1544, #1545, #1546, #1547, #1548	P50

### 12.15.2 OS/400 Version 4 software groups

The following table shows the software group for each iSeries and AS/400e processor supported by OS/400 Version 4.

Hardware model	Processor feature	Interactive feature	Version 4 group
170	#2159, #2160	-	P05
	#2164, #2176	-	P10
	#2183, #2286	-	P20
	#2289, #2290, #2291	-	P05
	#2292, #2385	-	P10
	#2386, #2388	-	P20
	#2407, #2408	-	P05
	#2409	-	P10
250	#2295, #2296	-	PPS

Hardware model	Processor feature	Interactive feature	Version 4 group
270	#2248	#1517	P05
	#2250	#1516, #1518	P10
	#2252	#1516, #1519	P10
	#2253	#1516, #1520	P20
	#2422, #2423	-	P05
	#2424	-	P10
	#2431	#1518	P10
	#2432	#1516, #1519	P10
	#2434	#1516, #1520	P20
	#2452, #2454	-	P10
720	#2061	#1500	P10
		#1501, #1502	P20
	#2062	#1500	P10
		#1501, #1502, #1503	P20
	#2063	#1500	P20
		#1502, #1503, #1504	P30
730	#2064	#1500	P20
		#1502, #1503, #1504, #1505	P30
	#2065	#1506	P20
		#1507, #1508, #1509	P30
	#2066	#1506	P20
		#1507, #1508, #1509, #1510	P30
740	#2067	#1506	P30
		#1508, #1509, #1510, #1511	P40
	#2068	#1506	P30
		#1508, #1509, #1510, #1511	P40
	#2069	#1510, #1511, #1512	P50
		#1514	P40
820	#2070	#1510, #1511, #1512, #1513	P50
		#1514	P40
	#2395	#1521	P10
		#1522, #1523, #1524	P20
	#2396	#1521	P20
		#1522, #1523, #1524, #1525	P30
830	#2397	#1521	P20
		#1522, #1523, #1524, #1525, #1526	P30
	#2398	#1521	P30
		#1522, #1523, #1524, #1525, #1526, #1527	P30 or P40
	#2425	---	P05
	#2426, #2427	---	P10
830	#2400	#1531	P20
		#1532, #1533, #1534, #1535, #1536, #1537	P30
	#2402	#1531	P30
		#1532, #1533, #1534, #1535, #1536	P40
	#2403	#1531	P40
		#1532, #1533, #1534, #1535, #1536, #1537	P50



Hardware model	Processor feature	Interactive feature	Version 4 group
840	#2416	#1540	P40
		#1541, #1542, #1543, #1544, #1545, #1546, #1547	P50
	#2417	#1540	P40
		#1541, #1542, #1543, #1544, #1545, #1546, #1547	P50
	#2418	#1540	P40
		#1541, #1542, #1543, #1544, #1545, #1546, #1547	P50
	#2419	#1540	P40
		#1541, #1542, #1543, #1544, #1545, #1546, #1547	P50
	#2420	#1540	P40
		#1541, #1542, #1543, #1544, #1545, #1546, #1547	P50
SB2	#2315	-	P30
SB3	#2316, #2318	-	P40

## 12.16 Release-to-release software product mapping

The following table shows a list of iSeries software products, with the product number associated with each OS/400 release level. Use this information to understand how a particular software product is offered for a given OS/400 installed release. The products are listed in sequential order by the software product's model number in the right-most column (the latest release of OS/400). For example, 5722-SS1 is listed prior to 5722-TC1 and after 5733-CO2. V5R2 is the column used as a sorting reference. An asterisk (\*) in the column indicates the product is skip-shipped for that release. The dashes (---) indicate that the product was not offered for that release. N/A indicates that the product is not supported for that release.

Refer to *AS/400e RISC System Builder*, REDP-0342, for a software product map for releases prior to OS/400 V4R2. For a list of withdrawn software products and their recommended replacements, and further information, refer to the iSeries Planning Web site at:


<http://www.ibm.com/servers/eserver/iseries/support/planning>

V4R1	V4R2	V4R3	V4R4	V4R5	V5R1	V5R2
---	---	---	---	---	---	5724-A18
5716-MQ1*	5769-MQ2	*	*	5733-A38	*	*
---	---	---	---	5733-A47	*	N/A
---	---	---	5648-DO1	5648-DO1	5733-A61	5733-A78
---	---	---	5748-C54	*	5733-A61	5733-A78
---	---	5769-AC2	*	*	5722-AC2	N/A
---	---	5769-AC1	*	*	5722-AC3	5722-AC3
5716-AF1*	5769-AF1	*	*	*	5722-AF1	5722-AF1
---	5798-AF3	*	*	*	*	*
5716-AP1*	5769-AP1	*	*	*	5722-AP1	5722-AP1
---	---	---	5769-AS1	*	5733-AS3	5724-D06
---	---	---	---	---	---	5733-AZ1
5769-BR1	5769-BR1	*	*	*	5722-BR1	5722-BR1
---	---	---	---	---	---	5724-B08

V4R1	V4R2	V4R3	V4R4	V4R5	V5R1	V5R2
---	---	---	---	---	---	5648-B45
---	---	---	---	5733-B2B	*	5733-CO2
5716-CP2*	5716-CP2*	5769-CP4	*	5648-C69	*	N/A
---	---	---	5769-CE1	*	N/A	N/A
---	---	---	5769-CE2	*	5722-CE2	N/A
---	---	---	5769-CE3	*	5722-CE3	5722-CE3
5716-CF1*	5769-CF1	*	5769-CF1	*	N/A	N/A
5716-CM1*	5769-CM1	*	5769-CM1	*	5722-CM1	5722-CM1
---	5769-CP4	*	*	N/A	N/A	N/A
5716-CR1*	5769-CR1	*	5769-CR1	*	5722-CR1	5722-CR1
5716-DB1*	5769-DB1	*	5769-DB1	*	5722-DB1	5769-DB1
---	---	5769-DC1	*	*	*	*
---	---	5769-DC3	*	*	*	*
---	---	---	---	---	5722-DE1	5722-DE1
5716-DFH*	5769-DFH	5769-DFH	5769-DFH	*	5722-DFH	5722-DFH
5716-DCT*	5716-DCT*	*	*	5769-DL1	*	*
5716-DP1*	5769-DP1	5769-DP2	*	5769-DP3	*	5722-DP4
5716-DS1*	5769-DS1	*	*	*	5722-DS1	5722-DS1
---	---	---	---	5648-E09	5733-A57	5733-E81
---	5798-TBY	*	*	*	5798-FAX	5798-FAX
---	---	---	---	---	---	5620-FIF
5716-FN1*	5769-FN1	*	*	*	*	*
5716-FNT*	5769-FNT	*	*	*	*	*
5716-FS1*						
5769-FW1	5769-FW1	*	5769-FW1	5769-FW1	N/A	N/A
---	---	---	5733-FXD	*	*	*
---	---	---	---	---	5639-F25	5639-F25
---	---	---	---	---	5697-G14	N/A
---	---	---	---	---	5697-G23	N/A
---	---	---	---	---	5697-G24	*
---	---	---	---	---	5697-G84	*
---	---	---	---	---	---	5697-G85
---	---	---	---	---	5733-ID1	*
---	---	---	---	---	5733-IM3	*
---	---	---	---	---	---	5698-ISE
---	---	---	---	---	5722-IP1	5722-IP1
---	---	---	---	---	---	5722-IWE
---	---	---	5798-JC1	*	*	*
5716-JS1*	5769-JS1	5769-JS1	*	5769-JS1	5722-JS1	5722-JS1
---	---	---	---	---	---	1TME-LCF
---	---	---	---	---	---	5733-LD6
---	---	---	---	---	---	5733-LE1
---	---	---	5769-LNP	*	*	P/N
---	---	---	5769-LNT	*	*	P/N
5716-MG1*	5769-MG1	*	*	*	5722-MG1	5722-MG1
5716-MS1*						
5769-NCE						
5769-NC1						
5716-OS1*						
5769-PD1	5769-PD1	*	*	*	5722-PD1	*

V4R1	V4R2	V4R3	V4R4	V4R5	V5R1	V5R2
5716-PT1*	5769-PT1	*	5769-PT1	5769-PT1	5722-PT1	5722-PT1
---	---	---	5733-PY1	5733-PY2	*	5733-PY3
5716-QU1	5716-QU1	5769-QU1	5769-QU1	5769-QU1	5722-QU1	5722-QU1
5716-RD1	5769-RD1	*	5769-RD1	5769-RD1	5722-RD1	5722-RD1
N/A	N/A	N/A	N/A	N/A	N/A	N/A
5716-SM1	5716-SM1	5769-SM1	5769-SM1	5769-SM1	5722-SM1	5722-SM1
5716-PM1	5716-PM1	---	5769-PM1	*	5722-SS1	*
5769-SS1	5769-SS1	*	*	*	5722-SS1	5722-SS1
5716-ST1	5716-ST1	5769-ST1	5769-ST1	5769-ST1	5722-ST1	5722-ST1
---	5716-SV2	5769-SV3	*	*	N/A	N/A
---	---	5798-TBG	*	*	*	*
---	5716-VG1	*	*	5769-VG1	*	*
---	---	---	5733-A18	5769-VI1	5722-VI1	5722-VI1
---	---	5733-WA2	*	*	N/A	N/A
---	---	5733-WA3	*	*	*	5733-WA4
---	---	---	5798-WC4	*	*	N/A
---	---	---	5798-NC3	5798-WC5	*	N/A
---	5769-PW1	*	5769-PW1	5769-WDS	5722-WDS	5722-WDS
---	5769-CL3	*	5769-CL3	5769-WDS	5722-WDS	5722-WDS
---	5769-CX2	5769-CX2	5769-CX2	5769-WDS	5722-WDS	5722-WDS
---	5716-CX4*	*	*		Windows and CX5	5722-WDS
---	5769-CB1	*	*	5769-WDS	5722-WDS	5722-WDS
---	5716-CX5*	*	5769-CX5	5769-WDS	5722-WDS	5722-WDS
---			5769-PW1	5769-WDS	5722-WDS	5722-WDS
---	5769-RG1	*	*	5769-WDS	5722-WDS	5722-WDS
---	---	---	---	---	---	5733-WS5
---	---	---	---	---	---	5733-XT1
---	5769-XW1	5769-XW1	5769-XW1	5769-XW1	5722-XW1	5722-XW1

Archived



## **Cable part numbers for IBM iSeries and AS/400e systems**

This chapter has feature code descriptions for the HSL, power, and communication cables used with the IBM iSeries and AS/400e servers.

## 13.1 HSL cables

Use the following table as a reference for the HSL cables supported on IBM iSeries or AS/400e systems.

HSL cables	
#1460	<p><b>#1460 - 3.0 m Copper HSL Cable</b> The #1460 - 3.0 m HSL Cable is used to connect HSL ports in towers and system units.</p> <p>Supported on Models 270, 820, 830, 840 Minimum operating system level: OS/400 V4R5 The #1460 is a Customer Install Feature</p>
#1461	<p><b>#1461 - 6.0 m Copper HSL Cable</b> The #1461 - 6.0 m HSL Cable is used to connect HSL ports in towers and system units.</p> <p>Supported on Models 270, 820, 830, 840, Minimum operating system level: OS/400 V4R5 The #1461 is a Customer Install Feature</p>
#1462	<p><b>#1462 - 15.0 m Copper HSL Cable</b> The #1462 - 15.0 m HSL Cable is used to connect HSL ports in towers and system units.</p> <p>On the Model 820 this cable cannot be attached to system port A1 unless only migration tower connected. On the Model 270 this cable cannot be attached directly to any system port, it can however be used in between I/O Expansion towers which are attached to those systems.</p> <p>Supported on Models 270, 820, 830, 840. Minimum operating system level: OS/400 V4R5 The #1462 is a Customer Install Feature</p>
#1470	<p><b>#1470 - 6.0 m Optical HSL Cable</b> The #1470 - 6.0 m HSL cable is used to connect optical HSL ports in towers and system units.</p> <p>Supported on Models 830 and 840 Minimum operating system level: OS/400 V5R1 The #1470 is a Customer Install Feature</p>
#1471	<p><b>#1471 - 30.0 m Optical HSL Cable</b> The #1471 - 30.0 m HSL cable is used to connect optical HSL ports in towers and system units.</p> <p>Supported on Models 830 and 840 Minimum operating system level: OS/400 V5R1 The #1471 is a Customer Install Feature</p>
#1472	<p><b>#1472 - 100.0 m Optical HSL Cable</b> The #1472 - 100.0 m HSL cable is used to connect optical HSL ports in towers and system units.</p> <p>Supported on Models 830 and 840 Minimum operating system level: OS/400 V5R1 The #1472 is a Customer Install Feature</p>
#1473	<p><b>#1473 - 250.0 m Optical HSL Cable</b> The #1473 - 250.0 m HSL cable is used to connect optical HSL ports in towers and system units.</p> <p>Supported on Models 830 and 840 Minimum operating system level: OS/400 V5R1 The #1473 is a Customer Install Feature</p>
#1474	<p><b>#1474 - 6 m HSL to HSL-2 Cable</b> The #1474 - 6 m HSL to HSL-2 Cable is used to connect HSL and HSL-2/RIO-G ports in towers and system units.</p> <p>Supported on Models 820, 830, 840 Minimum operating system level: i5/OS V5R3 The #1474 is a Customer Install Feature.</p>

#1475	<b>#1475 - 10 m HSL to HSL-2 Cable</b> The #1475 - 10 m HSL to HSL-2 Cable is used to connect HSL and HSL-2/RIO-G ports in towers and system units.  Supported on Models 820, 830, 840 Minimum operating system level: i5/OS V5R3 The #1475 is a Customer Install Feature
#1482	<b>#1482 - 3.5 m HSL-2 Cable</b> The #1482 - 3.5 m HSL-2 Cable is used to connect HSL-2/RIO-G ports in towers and system units.  Supported on Models 820, 830, 840 Minimum operating system level: i5/OS V5R3 The #1482 is a Customer Install Feature
#1483	<b>#1483 - 10 m HSL-2 Cable</b> The #1483 - 10 m HSL-2 Cable is used to connect HSL-2/RIO-G ports in towers and system units.  Supported on Models 820, 830, 840 Minimum operating system level: i5/OS V5R3 The #1483 is a Customer Install Feature
#1485	<b>#1485 - 15.0 m Copper HSL-2 Cable</b> The #1485 - 15 m HSL-2 Cable is used to connect HSL-2/RIO-G ports in towers and system units.  Supported on Models 820, 830, 840 Minimum operating system level: i5/OS V5R3 The #1485 is a Customer Install Feature

Refer to the following resources for an explanation of HSL configuration rules and placement considerations:

- ▶ *IBM eServer iSeries Migration: A Guide to Upgrades and Migrations to POWER Technology*, SG24-7200  
This IBM Redbook also contains configuration rules for iSeries models and towers.
- ▶ *IBM eServer iSeries Migration: System Migration and Upgrades at V5R1 and V5R2*, SG24-6055  
This IBM Redbook also contains configuration rules for iSeries models and towers.
- ▶ *High-speed Link Loop Architecture for the IBM eServer iSeries Server: OS/400 Version 5 Release 2*, REDP-3652
- ▶ iSeries Information Center at:  
[http://publib.boulder.ibm.com/infocenter/eserver/v1r2s/en\\_US/index.htm](http://publib.boulder.ibm.com/infocenter/eserver/v1r2s/en_US/index.htm)

## 13.2 SPCN (power) cables

Use the following table as a reference for the power cords supported on IBM iSeries or AS/400e systems. For more information use the following online resource:

[http://publib.boulder.ibm.com/infocenter/eserver/v1r2s/en\\_US/index.htm](http://publib.boulder.ibm.com/infocenter/eserver/v1r2s/en_US/index.htm)

SPCN cables	
#6001	<b>#6001 Power Control Cable - 2 m</b> The #6001 is a 2 m SPCN Power Control Cable. The #6001 is a Customer Install Feature.
#6006	<b>#6006 Power Control Cable - 3M</b> The #6006 is a 3 m SPCN Power Control Cable. The #6006 is a Customer Install Feature.
#6007	<b>#6007 Power Control Cable - 15M</b> The #6007 is a 15 m SPCN Power Control Cable. The #6007 is a Customer Install Feature.
#6008	<b>#6008 Power Control Cable - 6M</b> The #6008 is a 6 m SPCN Power Control Cable. The #6008 is a Customer Install Feature.
#6029	<b>#6029 Power Control Cable - 30M</b> The #6029 is a 30 m SPCN Power Control Cable. The #6029 is a Customer Install Feature.
Special Power and Control Cables	
#1422	<b>#1422 PDU Line Cord</b> The #1422 PDU Line Cord is used from a rack-mounted device to a #5160/#5161/#5162/#5163/#7188 Power Distribution Unit in that same rack.  Supported on Model 820, 830, and 840, #0578, #0595, #7104, and #7188 expansion units Minimum operating system level: OS/400 V5R1 The #1422 is a Customer Install Feature.
#0382	<b>#0382 Remote Control Panel Cable</b> The #0382 ships a cable to enable remote control on an Model 820, 830, or 840. This cable attaches to a PC parallel port. An available parallel port (LPT) is needed on the PC instead of a COM port. The parallel port must be configured to use Enhanced Parallel Port 1.9 (EPP) support, which might require a change in the PC's Basic Input/Output Services (BIOS). Check with your PC manufacturer for any assistance.  The Remote Control Panel is installed and used from PCs running the Windows NT 4.0 or Windows 2000 Professional PC operating system. Some PCs might not support this function due to BIOS or hardware incompatibilities. Supported on Models 820, 830 and 840 The #0382 is a Customer Install Feature (CIF). The #0382 Remote Control Panel Cable was withdrawn from marketing on 12 February 2002.
#0383	<b>#0383 Remote Control Panel Cable</b> The #0383 Remote Control Panel Cable provides a remote control panel parallel port cable. An available parallel port (LPT) is needed on the PC instead of a communications port. This port must be configured to use Enhanced Parallel Port 1.9 (EPP) support, which might require a change in the PC's BIOS. It is only supported on PCs running Windows NT 4.0 or Windows 2000 Professional, and OS/400 V5R2 iSeries Access for Windows running on the Operations Console PC. iSeries Access clients at OS/400 V5R1 can receive this by ordering the refresh of iSeries Access Family #2645. OS/400 V5R1 clients without an iSeries Access license need to purchase one.  Supported on Models 820, 830, and 840 Minimum operating system level: OS/400 V5R1 The #0383 is a Customer Install Feature.



## 13.3 Dual-line cords

Use the following table as a reference for the dual-line cords that are supported on IBM iSeries or AS/400e systems. For more information use the following online resource:

[http://publib.boulder.ibm.com/infocenter/eserver/v1r2s/en\\_US/index.htm](http://publib.boulder.ibm.com/infocenter/eserver/v1r2s/en_US/index.htm)

Dual-line cords	
#5102	<p><b>#5102 Dual Line Cords (820 CEC)</b></p> <p>The #5102 Dual Line Cords (820 CEC) provides dual-line cord capability for the Model 820 system unit. Two #14xx line cords must be ordered for the 820 when a #5102 is ordered on an initial order or a model upgrade into an 820 from a non-820 model. When ordering a #5102 as an MES, one additional #14xx line cord is required to be ordered (for a total of two line cords for the system unit).</p> <p>Prerequisite: #5155, #5157, and #9002</p> <p>Minimum operating system level: OS/400 V5R1</p>
#5103	<p><b>#5103 Dual Line Cords - 830 CEC</b></p> <p>The #5103 Dual Line Cords - 830 CEC provides dual-line cord capability for the Models 830 system unit and attached #9074 Base I/O Tower. Two 14xx line cords must be ordered for the Model 830 when a #5103 is ordered on an initial order or a model upgrade into a Model 830 from a non-830 model. When ordering a #5103 as an MES, one additional #14xx line cord is required to be ordered (for a total of two line cords for the system unit).</p> <p>Convert any #5101 30 Disk Unit Expansion features installed in the #5074 to #5111 30 Disk Expansion with Dual Line Cord features. No parts are shipped.</p> <p>Supported on Model 830 and SB2</p> <p>Minimum operating system level: OS/400 V5R1</p>
#5104	<p><b>#5104 Dual Line Cords - 840 CEC</b></p> <p>The #5104 Dual Line Cords - 840 CEC provides dual-line cord capability for the #9079 Base I/O Tower. Two #14xx line cords must be ordered for the #9079 Base I/O Tower when the #5104 is ordered on an initial order or a model upgrade into a Model 840 from a non-840 model. When ordering a #5104 as an MES, one additional #14xx line cord is required to be ordered for the #9079.</p> <p>If the Model 840 is ordered with the #8079 Optional Base 1.8 M I/O Rack, the #5104 provides dual-line cord capability for the lower unit in the #8079. Two #14xx line cords must be ordered for the lower unit in the #8079 when a #5104 is ordered on an initial order or a model upgrade into an 840 from a non-840 model. When ordering a #5104 as an MES, one additional #14xx line cord is required to be ordered for the lower unit in the #8079. The #5105 must be ordered for the dual-line cord capability for the upper unit in the #8079.</p> <p>Convert any installed #5101 30 Disk Unit Expansion features to #5111 30 Disk Expansion with Dual Line Cord features. No parts are shipped.</p> <p>Supported on Model 840</p> <p>Minimum operating system level: OS/400 V5R1</p> <p>The #5104 has country- or region-specific usage.</p>
#5105	<p><b>#5105 Dual Line Cords - I/O Tower</b></p> <p>The #5105 Dual Line Cords - I/O Tower provides dual-line cord capability for a #5079 and top unit in an #8079 Optional Base 1.8 M I/O Rack. Two #14xx line cords must be ordered for each #5074 PCI Expansion Tower with a #5105 when a #5105 is ordered on an initial order of a #5074. When ordering a #5105 as an MES, against an existing #5074, one additional #14xx line cord is required to be ordered (for a total of two line cords for a #5074). A #5074 mounted in a #0551 iSeries Rack is supported with the #5105.</p> <p>Convert any #5101 30 Disk Unit Expansion features installed in the #5074 to #5111 30 Disk Expansion with Dual Line Cord features. No parts are shipped.</p> <p>Supported on standalone #5074 or the top unit in a #8079</p> <p>Minimum operating system level: OS/400 V5R1</p>
#5106	<p><b>#5106 Dual Line Cords - #5079 Tower</b></p> <p>The #5106 Dual Line Cords - #5079 Tower provides dual-line cord capability for a single unit in a #5079 1.8 M I/O Tower. Two #14xx line cords must be ordered for each #5106 present, when a #5106 is ordered on an initial order of a #5079.</p> <p>When ordering a #5106 as an MES, against an existing #5079, one additional #14xx line cord is required to be ordered for each #5106 ordered. The IBM marketing configurator defaults a quantity of two #5106s, for each #5079 ordered, on a system that has dual-line cords on the system unit.</p> <p>Convert any #5101 30 Disk Unit Expansion features installed in the #5079 to #5111 30 Disk Expansion with Dual Line Cord features. No parts are shipped.</p> <p>Minimum operating system level: OS/400 V5R1</p>

Dual-line cords	
#5115	<b>#5115 Dual Line Cords - Tower</b> The #5115 Dual Line Cords - Tower is a dual-line cord enabler for the #5094 PCI-X Expansion Tower. One 840W power supply is shipped. A second line cord must be ordered for each tower installing a #5115. Maximum: One #5115 per #5094 PCI-X Expansion Tower. Minimum operating system level: OS/400 V5R2
#5116	<b>#5116 Dual Line Cords - #5294</b> The #5116 Dual Line Cords - #5294 provides dual-line cord capability for a single unit in a #5294 1.8 m I/O Tower. Two line cords are required for each #5116 present. One 840W power supply is shipped. The IBM marketing configurator defaults a quantity of two #5116s for each #5294 ordered on a system that has dual-line cords on the system unit. Minimum operating system level: OS/400 V5R2

## 13.4 Communication cables

Use the following table as a reference to order cables for the IBM iSeries and AS/400e models. The part numbers might not be available in all countries or regions or on all models and can change.

Description	Length	Part number	Feature code
<b>SPD communication cables non-enhanced</b>			
RS232 Cable	6.1 m (20 ft)	22F0149	#9022
RS232 Cable - Germany	6.1 m (20 ft)	22F0150	#9022
RS232 Cable - Japan	6.1 m (20 ft)	22F0151	#9022
RS232 Cable	15.2 m (50 ft)	22F9348	#9836
RS232 Cable - Germany	15.2 m (50 ft)	21F9953	#9836
RS232 Cable - Japan	15.2 m (50 ft)	21F9349	#9836
RS366 Cable	6.1 m (20 ft)	72X5643	#9840
RS366 Cable - Japan	6.1 m (20 ft)	21F4415	#9840
<b>SPD communication cables enhanced</b>			
V.24 Cable	6.1 m (20 ft)	22F0152	#9023
V.24 Cable - Germany	6.1 m (20 ft)	22F0153	#9023
V.24 Cable - Japan	6.1 m (20 ft)	22F0154	#9023
V.24 Cable	15.2 m (50 ft)	21F9350	#9835
V.24 Cable - Germany	15.2 m (50 ft)	21F9352	#9835
V.24 Cable - Japan	15.2 m (50 ft)	21F9351	#9835
V.24 Cable	24.2 m (80 ft)	74F1837	#9869
<b>Other SPD communication cables</b>			
V.35 Cable	6.1 m (20 ft)	72X5641	#9020
V.35 Cable	15.2 m (50 ft)	21F9357	#9838
V.35 Cable	24.4 m (80 ft)	74F1839	#9870
X.21 Cable	6.1 m (20 ft)	72X5640	#9021
X.21 Cable	15.2 m (50 ft)	21F9356	#9839
2 Port Communication Cable	3 m (10 ft)	21F9345	#9843
<b>#2666 High-Speed Communications Adapter (SPD)</b>			
RS449 Cable	6.1 m (20 ft)	17G4000	#9882
RS449 Cable	24.4 m (80 ft)	17G4001	#9883
RS449 Cable	45.7 m (150 ft)	17G4002	#9884
V.35 Cable	6.1 m (20 ft)	17G3991	#9879
V.35 Cable	24.4 m (80 ft)	17G3992	#9880
X.21 Cable	6.1 m (20 ft)	17G3987	#9885

PCI/SPD miscellaneous server cables			
BBU Cable	2.4 m (8 ft)	86G7712	#5144
Diskette Cable	2.4 m (8 ft)	46G3658	#9886
Diskette/Twinaxial Cable	2.4 m (8 ft)	46G3585	#9887
Ethernet Cable	3.0 m (10 ft)	86G7691	#9025
Token Ring Cable	2.4 m (8 ft)	6339098	#9024
PCI Communication Cables for Models 150, 600, S10, 620, S20, 720, 250, 270, 820, 830, SB2, 840, and SB3			
RS232 Cable	6.1 m (20 ft)	44H7480	#0348
RS232 Cable - Germany	6.1 m (20 ft)	44H7482	#0348
RS232 Cable - Japan	6.1 m (20 ft)	44H7484	#0348
V.24 Cable	6.1 m (20 ft)	44H7486	#0350
V.24 Cable	6.1 m (20 ft)	44H7489	#0350
V.24 Cable	6.1 m (20 ft)	44H7492	#0350
V.35 Cable	6.1 m (20 ft)	44H7495	#0353
V.36 Cable	6.1 m (20 ft)	44H7498	#0356
X.21 Cable	6.1 m (20 ft)	44H7501	#0359
Client Access Console Cable	6.1 m (20 ft)	44H7504	#0362
Operations Console Cable	6.1 m (20 ft)	97H7557	#0367
Remote Control Panel Cable	6.1 m (20 ft)	97H7591	#0381
PCI Communication Cables for Models 170, 600, S10, 620, S20, 720, 250, 270, 820, 830, SB2, 840, and SB3.			
RS232 Cable	15.2 m (50 ft)	44H7481	#0349
RS232 Cable - Germany	15.2 m (50 ft)	44H7483	#0349
RS232 Cable - Japan	15.2 m (50 ft)	44H7485	#0349
V.24 Cable	15.2 m (50 ft)	44H7487	#0351
V.24 Cable - Germany	15.2 m (50 ft)	44H7490	#0351
V.24 Cable - Japan	15.2 m (50 ft)	44H7493	#0351
V.24 Cable	24.4 m (80 ft)	44H7488	#0352
V.24 Cable - Germany	24.4 m (80 ft)	44H7491	#0352
V.24 Cable - Japan	24.4 m (80 ft)	44H7494	#0352
V.24 Cable	24.4 m (80 ft)	97H7386	#0365
V.24 Cable - Germany	24.4 m (80 ft)	97H7387	#0365
V.24 Cable - Japan	24.4 m (80 ft)	97H7388	#0365
V.35 Cable	15.2 m (50 ft)	44H7496	#0354
V.35 Cable	24.4 m (80 ft)	44H7497	#0355
V.36 Cable	15.2 m (50 ft)	44H7499	#0357
V.36 Cable	45.7 m (150 ft)	44H7500	#0358
X.21 Cable	15.2 m (50 ft)	44H7502	#0360

SPD Communication Cables for Models 600, 620, 640, 650, S10, S20, S30, S40 and SB1			
RS232 Cable	6.1 m (20 ft)	21H3764	#0330
RS232 Cable - Germany	6.1 m (20 ft)	21H3765	#0330
RS232 Cable - Japan	6.1 m (20 ft)	21H3766	#0330
RS232 Cable	15.2 m (50 ft)	21H3767	#0331
RS232 Cable - Germany	15.2 m (50 ft)	21H3768	#0331
RS232 Cable - Japan	15.2 m (50 ft)	21H3769	#0331
V.24 Cable	6.1 m (20 ft)	21H3770	#0332
V.24 Cable - Germany	6.1 m (20 ft)	21H3771	#0332
V.24 Cable - Japan	6.1 m (20 ft)	21H3772	#0332
V.24 Cable	15.2 m (50 ft)	21H3773	#0333
V.24 Cable - Germany	15.2 m (50 ft)	21H3774	#0333
V.24 Cable - Japan	15.2 m (50 ft)	21H3775	#0333
V.24 Cable	24.4 m (80 ft)	21H3776	#0334
V.24 Cable - Germany	24.4 m (80 ft)	21H3777	#0334
V.24 Cable - Japan	24.4 m (80 ft)	21H3778	#0334
V.35 Cable	6.1 m (20 ft)	21H3787	#0335
V.35 Cable	15.2 m (50 ft)	21H3788	#0336
V.35 Cable	45.7 m (150 ft)	21H3789	#0337
V.36 Cable	6.1 m (20 ft)	21H3783	#0341
V.36 Cable	6.1 m (20 ft)	21H3792	#0338
V.36 Cable	15.2 m (50 ft)	21H3785	#0339
X.21 Cable	24.4 m (80 ft)	21H3786	#0340
X.21 Cable	15.2 m (50 ft)	21H3779	#0342
Client Access Console Cable	6.1 m (20 ft)	21H3782	#0344
Operations Console Cable	6.1 m (20 ft)	97H7556	#0328
Remote Control Panel Cable	6.1 m (20 ft)	97H7584	#0380
Client Access Console Cable	6 m (20 ft)	46G0450	#9026
Client Access Console Cable	2.5 m (8 ft)	46G0479	#9027
Modem (telephone) Cables for #9771 Base PCI Two-Line WAN with integrated modem, #2761 Integrated Analog Modem, and #4761 PCI Integrated Analog Modems			
Modem Cable - Africa	9.1 m (30 ft)	21H4904	#1012
Modem Cable - Australia	9.1 m (30 ft)	75G3807	#1019
Modem Cable - Austria	9.1 m (30 ft)	21H4902	#1010
Modem Cable - Belgium	9.1 m (30 ft)	21H4903	#1011
Modem Cable - Denmark	9.1 m (30 ft)	75G3812	#1024
Modem Cable - Finland/Norway	9.1 m (30 ft)	75G3809	#1021
Modem Cable - France	9.1 m (30 ft)	75G3803	#1015
Modem Cable - Germany	9.1 m (30 ft)	75G3804	#1016
Modem Cable - China (Hong Kong S.A.R.)/New Zealand	9.1 m (30 ft)	75G3808	#1020
Modem Cable - Iceland/Sweden	9.1 m (30 ft)	87G6236	#1018
Modem Cable - Israel	9.1 m (30 ft)	21H4905	#1013
Modem Cable - Italy	9.1 m (30 ft)	75G3802	#1014
Modem Cable - Netherlands	9.1 m (30 ft)	75G3810	#1022
Modem Cable - Switzerland	9.1 m (30 ft)	75G3811	#1023
Modem Cable - United Kingdom	9.1 m (30 ft)	75G3805	#1017
Modem Cable - U.S./Canada	9.1 m (30 ft)	787G623	#1025

For a more complete list of iSeries cables, see the iSeries Information Center at:

<http://publib.boulder.ibm.com/pubs/html/as400/infocenter.htm>

After you reach the Information Center:

1. On the left panel, click **Plan for hardware and software**.
2. On the right page, scroll down and, under Planning reference, select **Cables**.
3. On the Plan for cables page, scroll down and select **All cables**.

## Summary of IBM AS/400 CISC models

This chapter provides the capacity charts that indicate the minimum and maximum configurations of CISC models of the IBM AS/400.

For detailed information about CISC features and models, see *AS/400 CISC System Builder*, REDP-0042. You can find a summary of RISC models in Chapter 15, “Summary of IBM AS/400e RISC models” on page 485, and more detail in *AS/400e RISC System Builder*, REDP-0342.

**Note:** OS/400 V1R2 through V3R2 support CISC systems.

The following table represents the general availability and end-of-marketing dates for AS/400 CISC models.

Model	General availability	Withdrawn from marketing
Bxx	26 August 1988	03 December 1991
Cxx	23 February 1990	03 December 1991
Dxx	24 May 1991	19 August 1992
Exx	06 March 1992	03 May 1994
Fxx	05 March 1993	30 June 1996
2xx/3xx	03 June 1994	04 November 1997

**Note:** You can find footnotes for each of the table entries in 14.7, “Notes for all CISC system summary tables” on page 484.

## 14.1 AS/400 Model P02, P03, and 10S capacities

The following sections provide the systems minimum and maximum capacity tables for 9401 Model P02, P03, and 10S.

### 14.1.1 Model P02 capacities

Processor Feature	Minimum	Maximum
Relative system performance (RAMP-C) <sup>2</sup>	2.5	2.5
Main storage (MB)	8	16
Disk storage (GB)	1.03	2.06
Twinaxial devices	1	7
Communication lines	1	1
Optional external tapes	1	1

### 14.1.2 Model P03 and 10S capacities

Package name and feature	P03								10S
	T01 (#0101)	T02 (#0102)	T03 (#0108)	T11 (#0124)	T12 (#0144)	L01 (#0103)	L02 (#0104)	L03 (#0109)	S01 (#0105)
Relative system performance (CPW) <sup>1</sup>	7.3	9.6	16.8	9.6	7.3	7.3	9.6	16.8	5.5/17.1 <sup>5</sup>
Relative system performance (RAMP-C) <sup>2</sup>	2.5	3.3	3.9	3.3	2.5	2.5	3.3	3.9	1.9/5.9 <sup>5</sup>
Main storage (MB)	8-24	8-40	8-56	8-40	8-24	8-24	8-40	8-56	8-56
Disk storage (MB)	1.03-299	1.96-3.93	1.96-3.93	1.03-2.99	1.96-3.93	1.03-2.99	1.96-3.93	1.96-3.93	1.96-3.93
Communication lines	1	2	2	2	1	2 <sup>12</sup>	2 <sup>12</sup>	2 <sup>12</sup>	2 <sup>12</sup>
LAN adapters	-	-	-	-	-	1	1	1	1
Maximum workstations (one minimum)									
Twinaxial	7	14	14	14	7	-	-	-	-
LAN attached	-	-	-	-	-	16	16	16	16
840 MB ¼-inch crtrdg tape									
Internal	1	1	1	1	1	1	1	1	1
External	1	1	1	1	1	1	1	1	1
3450 ¼-inch cartridge	1	1	1	1	1	1	1	1	1

## 14.2 AS/400 Model Y10, 236, and 436 capacities

The following sections provide the minimum and maximum capacities for the 9402 Model Y10, 236 and 436 systems.

### 14.2.1 Model Y10 capacities

Processor Feature	9402 Y10
Main storage (MB)	1-2
Disk storage (MB)	160-760
Diskette unit	1
Tape (¼-inch cartridge)	0-1
Communication lines	0-3
LAN adapters	0-1

## 14.2.2 Model 236 and 436 capacities

Processor Feature	236	436 SSP only			436 SSP and OS/400		
	#2100	#2102	#2104	#2106	#2102	#2104	#2106
Relative system performance (RAMP-C) <sup>4</sup>	1.0	1.0	1.3	2.4	4.8	6.1	8.7
Relative system performance (CPW V3R6) <sup>1</sup>	2	2	2	2	14.4	18.3	24.5
Relative system performance (CPW V3R7/V4R1/V4R2/V4R3) <sup>1</sup>	2	2	2	2	16.3	20.6	27.4
Main storage (MB)	32-96	32-224	32-224	32-256	64-224	64-224	64-256
Disk storage (GB)							
SSP	1.03-4.1	1.03-4.12 <sup>8</sup>			-		
V3R6	2	-			1.96-236		
V3R7 or higher	-	-			1.96-50.3		
Feature card slots	6	6			6		
Communication lines	1-8	1-8			1-20		
LAN adapters <sup>11</sup>	0-2	0-2			0-2		
ATM adapters	0	0			0-1		
Maximum workstation controllers	2	4			7		
Twinaxial	2	4			7		
ASCII	0	0			6		
LocalTalk	0	0			0		
Maximum workstations (1 minimum)							
Twinaxial	80	160			280		
ASCII	0	0			108		
LocalTalk	0	0			0		
¼-inch/8 mm cartridge tape (internal)	1	1			1-4		
½-inch tape (external)							
9348	0-2	0-2			0-4		
34xx/35xx	0	0			0-2		
8 mm cartridge tape (external)	0	0			0-4		
Tape libraries	0	0			0-2		
Optical libraries	0	0			0-4		
Diskette drives (5 ¼-inch or 8-inch)	0-1	0-1			0-2		
Fax adapters	0	0			0-6		
Cryptographic processors	0	0			0-1		
System I/O buses	1	1			1		

## 14.2.3 Model 436 package capacities

Package name and Feature	Entry #0114 <sup>7</sup>	Growth #0115 <sup>7</sup>	Large #0116 <sup>7</sup>
Relative system performance (CPW V3R6) <sup>1</sup>	14.4-24.5	14.4-24.5	14.4-24.5
Relative system performance (CPW V3R7, V4R1, V4R2, or V4R3) <sup>1</sup>	16.3-27.4	16.3-27.4	16.3-27.4
Relative system performance (RAMP-C OS/400) <sup>2</sup>	4.8-8.7	4.8-8.7	4.8-8.7
Relative system performance (RAMP-C SSP) <sup>6</sup>	1.0-2.4	1.0-2.4	1.0-2.4
Main storage (MB)	32-256	32-256	64-256
Disk storage (GB) <sup>9</sup>	1.03-23.6	1.96-23.6	3.93-23.6
Standard tape	¼-inch cartridge	¼-inch cartridge	¼-inch cartridge
Twinaxial devices	40-280	40-280	80-280
LAN adapters <sup>11</sup>	0-2	0-2	0-2
Communication lines	1-20	2-20	2-20



## 14.3 AS/400 Model C, D, E, and F capacities

The following sections provide the minimum and maximum capacities for the 9402 Model C, D, E, and F systems.

### 14.3.1 Model C and D capacities

Processor Feature	C04	C06	D02	D04	D06
Relative system performance (CPW) <sup>1</sup>	3.1	3.6	3.8	4.4	5.5
Relative system performance (RAMP-C) <sup>2</sup>	1.1	1.3	1.3	1.5	1.9
Main storage (MB)	8-12	8-16	8-16	8-16	8-20
Disk storage (MB)	640-1280	640-1280	800-1200	800-1600	800-1600
Maximum feature card slots	3	3	1	3	3
Communication lines	1-5	1-5	0-3	1-8	1-8
LAN adapters	0-1	0-1	0-1	0-1	0-1
Maximum workstation controllers	1	2	1	2	2
Twinaxial	1	2	1	2	2
ASCII	1	2	1	2	2
LocalTalk	0	0	1	1	1
Maximum workstations (one minimum)					
Twinaxial	14	54	14	28	54
ASCII	6	24	12	12	24
LocalTalk	0	0	31	31	31
¼-inch cartridge tape	1	1	1	1	1
½-inch reel tape	0-1	0-1	0	0-1	0-1
½-inch cartridge tape	0	0	0	0	0
8 mm cartridge tape	0	0	0	0-2	0-2
Tape libraries	0	0	0	0-1	0-1
Optical libraries	0	0	0	0-1	0-1
Diskette drives (5 ¼-inch or 8-inch)	0-1	0-1	0-1	0-1	0-1
Fax adapters	0	0	0	0-2	0-3
Cryptographic processors	0	0	0	0-1	0-1
System I/O buses	1	1	1	1	1

### 14.3.2 Model E and F capacities

Processor Feature	E02	E04	E06	F02	F04	F06
Relative system performance (CPW) <sup>1</sup>	4.5	5.5	7.3	5.5	7.3	9.6
Relative system performance (RAMP-C) <sup>2</sup>	1.5	1.9	2.6	1.9	2.5	3.3
Main storage (MB)	8-24	8-24	8-40	8-24	8-24	8-40
Disk storage (MB)	988-2019	988-4081	988-4081	1031-2062	1031-4124	1031-8248
Maximum feature card slots	1	3	7	1	3	7
Communication lines	0-3	1-8	1-14	0-8	1-8	1-14
LAN adapters	0-1	0-1	0-2	0-1	0-1	0-2
Maximum workstation controllers	1	3	4	2	4	6
Twinaxial	1	2	2	2	2	3
ASCII	1	3	4	2	4	6
Local Talk	1	1	2	2	2	3
Maximum workstations (one minimum)						
Twinaxial	14	42	68	28	68	108
ASCII	12	48	66	18	66	102
LocalTalk	31	31	62	31	62	93
¼-inch cartridge tape	1	1	1-2	1	1	1-2
½-inch reel tape	0	0-1	0-2	0-1	0-1	0-2
½-inch cartridge tape	0	0	0	0	0	0
8 mm cartridge tape	0	0-2	0-4	0-2	0-2	0-4
Tape libraries	0	0-1	0-2	0-1	0-1	0-2
Optical libraries	0	0-1	0-2	0-1	0-1	0-2
Diskette drives (5¼-inch or 8-inch)	0-1	0-1	0-1	0-1	0-1	0-1
Fax adapters	0	0-2	0-3	0-1	0-2	0-3
Cryptographic processors	0	0-1	0-1	0-1	0-1	0-1
System I/O buses	1	1	2	1	1	2

## 14.4 AS/400 Model 200, 20S, 1xx, and 3xS capacities

The following sections provides the minimum and maximum capacities for the 9402 Model 200 and 20S, and the 9402, 9404 and 9406 Model 1xx, 20S and 3xS systems.

### 14.4.1 Model 1xx, 20S, and 3xS capacities

Processor Feature	9402 100	9404 135	9404 140	9402 20S	9406 30S	9406 30S
				#2010	#2411	#2412
Relative system performance (CPW) <sup>1</sup>						
Client/server environment	17.1	32.3	65.6	17.1	32.3	68.5
Interactive environment	5.5	9.6	11.6	5.5	9.6	11.6
Relative system performance (RAMP-C) <sup>2</sup>						
Client/server environment	5.9	10.9	22.5	5.9	10.9	23.5
Interactive environment	1.9	3.3	4.0	1.9	3.3	4.0
Number of n-way multiprocessors	1	1	2	1	1	2
Main storage (MB)	16-56	32-384	64-512	16-128	32-384	64-832
Disk storage (GB)	1.03-8.2	1.03-27.5	1.03-86.5	1.03-23.6	1.03-86.5	1.03-86.5
Maximum feature card slot	6	6	21	5	64	114
Communication lines	1-8	1-14	1-20	1-20	1-33	1-33
LAN adapters	1-2	1-4	1-6	1-2	1-8	1-8
Maximum workstation controllers						
Twinaxial	1	1	1	1	1	1
ASCII	1	1	1	1	1	1
LocalTalk	1	2	2	1	2	2
Maximum workstations (one minimum)						
Twinaxial	7	7	7	7	7	7
ASCII	6	6	6	6	6	6
LocalTalk devices	31	62	62	31	62	62
¼-inch cartridge tape/8 mm cartridge tape (internal)	1-2	1-2	1-3	0-4	0-5	0-5
½-inch tape (external)						
9348/2440 (The 2440 is not supported by the Model 100 or 20S)	0-2	0-4	0-4	0-4	0-4	0-4
34xx/35xx	0	0-2	0-2	0-2	0-2	0-2
8 mm cartridge tape (external)	0-4	0-4	0-4	0-4	0-4	0-4
Tape libraries	0	0	0	0-2	0-2	0-2
Optical libraries	0-1	0-6	0-10	0-4	0-10	0-10
Diskette drives (5 ¼-inch or 8-inch)	0-1	0-2	0-2	0-2	0-2	0-2
Fax adapters	0-3	0-6	0-10	0-6	0-16	0-16
Cryptographic processors	0-1	0-1	0-1	0-1	0-1	0-1
System I/O buses	1-2	1-2	1-5	1	1-3	1-5

## 14.4.2 Model 200 capacities

Processor Feature	200		
	#2030	#2031	#2032
Relative system performance (CPW) <sup>1</sup>	7.3	11.6	16.8
Relative system performance (RAMP-C) <sup>2</sup>	2.5	4.0	6.2
Main storage (MB)	8-24	8-56	16-128
Disk storage (GB)		1.03-23.6	
(V3R1/R6)		1.03-50.3	
(V3R2/R7, V4R1/R2/R3)		6	
Maximum feature card slots		1-20	
Communication lines		0-2	
LAN adapters		0	
ATM adapters		7	
Maximum workstation controllers		7	
Twinaxial		7	
ASCII		7	
LocalTalk		7	
Maximum workstations		280	
Twinaxial		126	
ASCII		217	
LocalTalk		0-4	
¼-inch/8 mm cartridge tape (internal)		0-4	
½-inch tape (external)		0-2	
9348		0-4	
34xx/35xx		0-2	
8 mm cartridge tape (external)		0-4	
Tape libraries		0-2	
Optical libraries		0-4	
Diskette drives (5 ¼-inch or 8-inch)		0-2	
Fax adapters		0-6	
Cryptographic processors		0-1	
System I/O buses		1	

## 14.4.3 Model 20S package capacities

Package name and Feature	Twinaxial server 2FS	LAN server 2FS	Starter server 2SS	Growth server 2SG
Relative system performance (CPW) <sup>1</sup>	17.1	17.1	17.1	17.1
Client/server environment	5.5	5.5	5.5	5.5
Interactive environment				
Relative system performance (RAMP-C) <sup>2</sup>	5.9	5.9	5.9	5.9
Client/server environment	1.9	1.9	1.9	1.9
Interactive environment				
Main disk storage (MB)	16-128	16-128	16-128	16-128
Disk storage (GB)	1.96-7.84	1.96-7.84	1.96-7.84	1.96-7.84
Standard tape	¼-inch cartridge	¼-inch cartridge	¼-inch cartridge	¼-inch cartridge
Twinaxial devices	7	0	0	0
LAN adapters	1-2	1-2	1	1
Communication lines <sup>14</sup>	1-3	1-2	1-2	1-2

## 14.5 AS/400 Model B, C, D, E, and F capacities

The following section provide the minimum and maximum capacities for the 9404 Model B, C, D, E, and F systems.

### 14.5.1 Model B and C capacities

Processor Feature	B10	B20	C10	C20	C25
Relative system performance (CPW) <sup>1</sup>	2.9	5.1	3.9	5.3	6.1
Relative system performance (RAMP-C) <sup>2</sup>	1.0	1.7	1.3	1.8	2.2
Main storage (MB)	4-16	4-28	8-20	8-32	8-40
Disk storage (MB)	630-2400	630-4800	640-2400	640-4800	640-6400
Maximum feature card slots	4	9	4	9	9
Communication lines	1-8	1-14	1-8	1-14	1-14
LAN adapters	0-1	0-2	0-1	0-2	0-2
Workstation controllers					
Twinaxial	1	2	1	2	2
ASCII	2	4	2	4	4
Maximum workstations (one minimum)					
Twinaxial	40	80	40	80	80
ASCII	36	72	36	72	72
½-inch cartridge tape	1	1-2	1	1-2	1-2
¼-inch reel tape	0-1	0-1	0-1	0-1	0-1
¼-inch cartridge tape	0-1	0-1	0-1	0-1	0-1
8 mm cartridge tape	0-2	0-2	0-2	0-4	0-4
Tape libraries	0-1	0-2	0-1	0-2	0-2
Optical libraries	0	0	0	0	0
Diskette drives (5 ¼-inch or 8-inch)	0-1	0-2	0-1	0-2	0-2
Fax adapters	0	0	0	0	0
Cryptographic processors	0	0	0	0	0
System I/O buses	1	1-2	1	1-2	1-2

## 14.5.2 Model D and E capacities

Processor Feature	D10	D20	D25	E10	E20	E25
Relative system performance (CPW) <sup>1</sup>	5.3	6.8	9.7	7.6	9.7	11.8
Relative system performance (RAMP-C) <sup>2</sup>	1.9	2.4	3.4	2.6	3.5	4.2
Main storage (MB)	8-32	8-40	16-64	8-40	8-72	16-80
Disk storage (MB)	800-9504	800-9504	800-15808	988-19670	988-19670	988-19670
Maximum feature card slots	9	9	9	9	9	9
Communication lines	1-14	1-14	1-14	1-14	1-20	1-26
LAN adapters	0-2	0-2	0-2	0-2	0-2	0-3
Maximum workstation controllers						
Twinaxial	2	2	4	4	4	6
ASCII	4	4	6	9	9	9
LocalTalk	2	2	4	4	4	6
Maximum workstations (one minimum)						
Twinaxial	80	80	160	160	160	240
ASCII	72	72	108	162	162	162
LocalTalk	62	62	124	124	124	186
½-inch cartridge tape	1-2	1-2	1-2	1-2	1-2	1-2
¼-inch reel tape	0-4	0-4	0-4	0-4	0-4	0-4
¼-inch cartridge tape	0-1	0-1	0-1	0-1	0-1	0-1
8 mm cartridge tape	0-4	0-4	0-4	0-4	0-4	0-4
Tape libraries	0-2	0-2	0-2	0-2	0-2	0-2
Optical libraries	0-2	0-2	0-2	0-2	0-2	0-2
Diskette drives (5 ¼-inch or 8-inch)	0-2	0-2	0-2	0-2	0-2	0-2
Fax adapters	0-8	0-8	0-8	0-8	0-8	0-8
Cryptographic processors	0-1	0-1	0-1	0-1	0-1	0-1
System I/O buses	1-2	1-2	1-2	1-2	1-2	1-2

## 14.5.3 Model F capacities

Processor Feature	F10	F20	F25
Relative system performance (CPW) <sup>1</sup>	9.6	11.6	13.7
Relative system performance (RAMP-C) <sup>2</sup>	3.4	4.2	4.8
Main storage (MB)	8-72	16-80	16-80
Disk storage (GB)	1.03-20.62	1.03-20.62	1.03-20.62
Maximum feature card slots	9	9	9
Communication lines	1-14	1-20	1-26
LAN adapters	0-2	0-4	0-4
Maximum workstation controllers			
Twinaxial	9	9	9
ASCII	9	9	9
LocalTalk	9	9	9
Maximum workstations (one minimum)			
Twinaxial	360	360	360
ASCII	162	162	162
LocalTalk	279	279	279
½-inch cartridge tape	1-2	1-2	1-2
¼-inch reel tape	0-4	0-4	0-4
¼-inch cartridge tape	0-2	0-2	0-2
8 mm cartridge tape	0-4	0-4	0-4
Tape libraries	0-2	0-2	0-2
Optical libraries	0-2	0-4	0-4
Diskette drives (5 ¼-inch or 8-inch)	0-2	0-2	0-2
Fax adapters	0-8	0-8	0-8
Cryptographic processors	0-1	0-1	0-1
System I/O buses	1-2	1-2	1-2

## 14.6 AS/400 Model B, D, E, F, and 3xx capacities

The following sections provide the minimum and maximum capacities for 9406 Model B, D, E, and F, and the 3xx systems.

### 14.6.1 Model B capacities

Processor Feature	B30	B35	B40	B45	B50	B60	B70
Relative system performance (CPW) <sup>1</sup>	3.8	4.6	5.2	6.5	9.3	15.1	20.0
Relative system performance (RAMP-C) <sup>2</sup>	1.4	1.6	2.0	2.3	3.2	5.2	7.0
Main storage (MB)	4-36	8-40	8-40	8-40	16-48	32-96	32-192
Disk storage (GB)	0.6-13.7	0.6-13.7	0.6-13.7	0.6-13.7	0.6-27.4	0.6-54.8	0.6-54.8
Minimum feature card slots	5	5	5	5	10	13	13
Maximum feature card slots	14	14	24	24	39	71	71
Main storage feature card slots <sup>10</sup>	2	2	2	2	2	4	4/5
Communication lines	2-16	2-16	2-32	2-32	2-32	2-32	2-48
LAN adapters	0-4	0-4	0-4	0-4	0-4	0-4	0-4
Maximum workstation controllers							
Twinaxial/ASCII	4	4	6	6	10	15	20
¼-inch cartridge tape	0-1	0-1	0-1	0-1	0-1	0-1	0-1
½-inch reel tape							
9347	0-2	0-2	0-2	0-2	0-2	0-2	0-2
9348/2440	0-2	0-2	0-2	0-2	0-4	0-4	0-4
3422/3430	0-1	0-1	0-1	0-1	0-2	0-2	0-2
½-inch cartridge tape							
3480/3490	0-1	0-1	0-1	0-1	0-2	0-2	0-2
8 mm cartridge tape	0-2	0-2	0-2	0-2	0-4	0-4	0-4
Tape libraries (9427 not supported)	0-1	0-1	0-1	0-1	0-2	0-2	0-2
Optical libraries	0	0	0	0	0	0	0
Diskette drives (5 ¼-inch or 8-inch)	0-4	0-4	0-6	0-6	0-10	0-15	0-20
Fax adapters	0	0	0	0	0	0	0
Cryptographic processors	0	0	0	0	0	0	0
System I/O buses	1	1	1	1	2	3	3

## 14.6.2 Model D capacities

Processor Feature	D35	D45	D50	D60	D70	D80
Relative system performance (CPW) <sup>1</sup>	7.4	10.8	13.3	23.9	32.3	56.6
Relative system performance (RAMP-C) <sup>2</sup>	2.6	3.7	4.8	8.3	11.2	19.8
Number of n-way multiprocessors	1	1	1	1	1	2
Main storage (MB)	8-72	16-80	32-128	64-192	64-256	64-384
Disk storage base (GB)	1.28	1.28	1.28	1.28	1.28	1.28
Maximum internal (GB)	4.1	4.1	4.1	4.1	4.1	4.1
Maximum external (GB)	63.0	63.0	94.3	141.7	141.7	251.8
Minimum feature card slots	11	11	18	18	18	18
Maximum feature card slots	55	55	84	140	140	196
Main storage feature card slots	2	2	5	5	5	5
Communication lines	1-17	1-33	1-33	1-33	1-49	1-64
LAN adapters	0-4	0-4	0-4	0-4	0-4	0-4
Maximum workstation controllers						
Twinaxial/ASCII/LocalTalk	6	10	15	20	30	50
Maximum workstations (one minimum)						
Twinaxial	240	400	600	800	1200	2000
ASCII	108	180	270	360	540	900
LocalTalk	186	310	465	620	930	1550
¼-inch cartridge tape	0-5	0-5	0-9	0-9	0-9	0-9
½-inch reel tape						
9347	0-2	0-2	0-2	0-2	0-2	0-2
2440/9348/3422/3430	0-2	0-2	0-4	0-4	0-4	0-4
½-inch cartridge tape						
3480/3490/3490E/3590/3570	0-2	0-2	0-4	0-4	0-4	0-4
8 mm cartridge tape	0-4	0-4	0-4	0-4	0-4	0-4
Tape libraries	0-2	0-2	0-4	0-4	0-4	0-4
Optical libraries	0-8	0-8	0-14	0-14	0-14	0-14
Diskette drives (5 ¼-inch or 8-inch)	0-2	0-2	0-2	0-2	0-2	0-2
Fax adapters	0-8	0-16	0-16	0-16	0-24	0-32
Cryptographic processors	0-1	0-1	0-1	0-1	0-1	0-1
System I/O buses	2	2	3	3-5	3-5	3-7



### 14.6.3 Model E capacities

Processor Feature	E35	E45	E50	E60	E70	E80	E90	E95
Relative system performance (CPW) <sup>1</sup>	9.7	13.8	18.1	28.1	39.2	69.4	96.7	116.6
Relative system performance (RAMP-C) <sup>2</sup>	3.4	4.8	6.4	10.2	14.2	25.2	34.4	42.1
Number of n-way multiprocessors	1	1	1	1	1	2	3	4
Main storage (MB)	8-72	16-80	32-128	64-192	64-256	64-512	64-1024	64-1152
Disk storage base (GB)	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06
Maximum internal (GB)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Maximum external (GB)	63.0	63.0	94.3	141.7	141.7	251.8	251.8	251.8
Minimum feature card slots	11	11	18	18	18	18	18	18
Maximum feature card slots	55	55	84	140	140	196	196	196
Main storage feature card slots	2	2	5	5	5	5	5	5
Communication lines	1-20	1-33	1-33	1-33	1-49	1-64	1-64	1-64
LAN adapters	0-4	0-4	0-4	0-4	0-4	0-6	0-6	0-6
Maximum workstation controllers								
Twinaxial/ASCII/LocalTalk	9	12	18	25	35	60	60	60
Maximum workstations (one minimum)	360	480	720	1000	1400	2400	2400	2400
Twinaxial	162	216	324	450	630	1080	1080	1080
ASCII	279	372	558	775	1085	1860	1860	1860
LocalTalk	0-5	0-5	0-9	0-9	0-9	0-9	0-9	0-9
¼-inch cartridge tape								
½-inch reel tape								
9347	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2
2440/9348/3422/3430	0-2	0-2	0-4	0-4	0-4	0-4	0-4	0-4
½-inch cartridge tape								
3480/3490/3490E/3590/3570	0-2	0-2	0-4	0-4	0-4	0-4	0-4	0-4
8 mm cartridge tape	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4
Tape libraries	0-2	0-2	0-4	0-4	0-4	0-4	0-4	0-4
Optical libraries	0-8	0-8	0-14	0-14	0-14	0-14	0-14	0-14
Diskette drives (5 ¼-inch or 8-inch)	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2
Fax adapters	0-10	0-16	0-16	0-16	0-24	0-32	0-32	0-32
Cryptographic processors	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
System I/O buses	2	2	3	3-5	3-5	3-7	3-7	3-7

## 14.6.4 Model F capacities

Processor Feature	F35	F45	F50	F60	F70	F80	F90	F95	F97
Relative system performance (CPW) <sup>1</sup>	13.7	17.1	27.8	40.0	57.0	97.1	127.7	148.8	177.4
Relative system performance (RAMP-C) <sup>2</sup>	4.8	6.0	10.2	14.7	21.0	36.5	50.5	59.0	71.5
Number of n-way multiprocessors	1	1	1	1	1	2	3	4	4
Main storage (MB)	16-80	16-80	64-192	128-384	128-512	128-768	128-1024	128-1280	128-1536
Disk storage base (GB)	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06
Maximum internal (GB)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Maximum external (GB)	63.0	63.0	110.2	141.7	251.8	251.8	251.8	251.8	251.8
Minimum feature card slots	11	11	18	18	17	17	17	17	17
Maximum feature card slots	55	55	140	140	195	195	195	195	195
Main storage feature card slots	2	2	5	5	5	5	5	5	5
Communication lines	1-20	1-33	1-33	1-33	1-64	1-64	1-64	1-64	1-96
LAN adapters	0-4	0-4	0-4	0-4	0-6	0-6	0-6	0-6	0-8
Maximum workstation controllers									
Twinaxial/ASCII/LocalTalk	12	18	25	35	60	60	60	60	120
Maximum workstations (one minimum)									
Twinaxial	480	720	1000	1400	2400	2400	2400	2400	4800
ASCII	216	324	450	630	1080	1080	1080	1080	2160
LocalTalk	372	558	775	1085	1860	1860	1860	1860	3270
¼-inch cartridge tape									
120 MB	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
1.2 GB/2.5 GB	0-5	0-5	0-9	0-9	0-9	0-9	0-9	0-9	0-9
½-inch reel tape									
9347	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2
2440/9348/3422/3430	0-2	0-2	0-4	0-4	0-4	0-4	0-4	0-4	0-4
½-inch cartridge tape									
3480/3490/3490E/3590/3570	0-2	0-2	0-4	0-4	0-4	0-4	0-4	0-4	0-4
8 mm cartridge tape	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4
Tape libraries	0-2	0-2	0-4	0-4	0-4	0-4	0-4	0-4	0-4
Optical libraries	0-8	0-8	0-14	0-14	0-14	0-14	0-14	0-14	0-14
Diskette drives (5 ¼-inch or 8-inch)	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2
Fax adapters	0-10	0-16	0-16	0-24	0-32	0-32	0-32	0-32	0-32
Cryptographic processors	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
System I/O buses	2	2	3-5	3-5	3-7	3-7	3-7	3-7	3-7

## 14.6.5 Model 300, 310, and 320 capacities

Processor Feature	300			310		320		
	#2040	#2041	#2042	#2043	#2044	#2050	#2051	#2052
Relative system performance (CPW) <sup>1</sup>	11.6	16.8	21.1	33.8	56.5	67.5	120.3	177.4
Relative system performance (RAMP-C) <sup>3</sup>	4.2	6.0	7.5	12.0	20.2	25.7	45.8	71.5
Number of n-way multiprocessors	1	1	1	1	2	1	2	4
Main storage (MB)	8-72	16-80	32-160	64-832	64-832	128-1536	128-1536	128-1536
Disk storage base (GB)	1.03			1.03		1.03		
Maximum internal (GB)	117.44			159.38		259.52		
Maximum external (GB)	94.42			141.63		251.79		
Maximum combined (GB)	117.44			159.38		259.66		
External disk unit IOPS	0-6			0-16		0-28		
Minimum feature card slots	8			3		1		
Maximum feature card slots	45			115		151		
Feature main storage slots	2			3		5		
Communication lines	1-33			1-64		1-96		
LAN adapters <sup>13</sup>	0-4			0-8		0-8		
Maximum workstation controllers								
Twinaxial/ASCII/LocalTalk	25			60		120		
Maximum workstations (1 minimum)								
Twinaxial	1000			2400		4800		
ASCII	450			1080		2160		
LocalTalk	775			1860		3720		
¼-inch/8 mm cartridge tape (internal)	0-5			0-9		0-9		
½-inch tape (external)								
9348/2440	0-4			0-4		0-4		
34xx/35xx	0-2			0-4		0-4		
8 mm cartridge tape (external)	0-4			0-4		0-4		
Tape libraries	0-2			0-4		0-4		
Optical libraries	0-8			0-14		0-2		
Diskette drives (5 ¼-inch or 8-inch)	0-2			0-2		0-32		
Fax adapters	0-16			0-32		0-1		
Cryptographic processors	0-1			0-1		1-7		
System I/O buses	1-2			1-5				
System expansion								
#5063	0-1							
#5062				0-4		0-6		
#5061				0-4		0-6		
Bus extension								
#5042				0-2		0-3		
#5040/#5060	0-2			0-5		0-6		
Storage expansion								
#5051	0-1			0-1		0		
#5052	0-2			0-5		0-6		

## 14.7 Notes for all CISC system summary tables

<b>Note 1</b>	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application running determine what performance is achievable.
<b>Note 2</b>	CPW figures are not available for systems running only SSP.
<b>Note 3</b>	Relative system performance ratios are estimated based on AS/400 environment RAMP-C workload. A measurement of 1.0 is set as the base to represent the performance of a 9404 B10 with 16 MB of main storage and 945 MB of disk storage. The ratios shown are estimated at maximum configurations running at 70% utilization. Relative system performance ratios might not be realized in all environments.
<b>Note 4</b>	The relative system performance for SSP is estimated based on running the System/36 version of RAMP-C with a maximum configured Model 236 equaling 1.0. For OS/400, the relative system performance ratios are estimated based on AS/400 environment RAMP-C workload, with a 9404 Model B10 with 16 MB of main storage and 945 MB of disk equaling 1.0. The ratios shown were estimated at maximum configurations running at 70% utilization. Relative system performance ratios might not be realized in all environments. The SSP relative performance ratings cannot be compared to the OS/400 relative performance ratings.
<b>Note 5</b>	First Figure = Interactive Environment; Second Figure = Client/Server Environment
<b>Note 6</b>	The relative system performance is estimated based on running the System/36 version of RAMP-C in SSP with maximum configured Model 236 equaling 1.0. The SSP relative performance ratings cannot be compared to the OS/400 relative performance ratings. Client results can vary.
<b>Note 7</b>	Some of the hardware on the Model 436 is not supported by SSP and requires OS/400 to support it. Additional hardware can be configured if supported as required.
<b>Note 8</b>	An additional direct access storage device (DASD) can be configured on the 436 with SSP only to support RAID and mirroring.
<b>Note 9</b>	As of February 1997 with V3R7, the maximum disk capacity is 50.3 GB.
<b>Note 10</b>	The number of available main storage features card slots for the Model B70 depends on whether 16 MB or 32 MB main storage cards are installed. When only 16 MB main storage cards are installed, the number of main storage feature card slots is four. When only 32 MB main storage cards are installed, the number of main storage feature card slots is five.
<b>Note 11</b>	The Model 400 and packages, the 40S and packages, the 40E, 41E, 40G, 41G, 40L, and 41L packages and Model 436 support three local area network (LAN) adapters if running Firewall for AS/400 (5769-FW1). Package 4HS and 4SS have a base Ethernet or token ring adapter.
<b>Note 12</b>	On LAN and Server Packages, one line must be used to provide system console support.
<b>Note 13</b>	On Models 300 and 320, a one -port or 2-port Integrated PC Server (formerly known as File Serving Input Output Processor (FSIOP)) counts as a single LAN. On Model 310, a 2-port Integrated PC Server counts as two LANs.
<b>Note 14</b>	When Client Access Console is used, one communication line is reserved for this.

## Summary of IBM AS/400e RISC models

This chapter provides the capacity charts that indicate the minimum and maximum configurations of RISC models of the IBM AS/400e.

For detailed information about RISC features and models, see *AS/400e RISC System Builder*, REDP-0342. You can find a summary of CISC models in Chapter 14, “Summary of IBM AS/400 CISC models” on page 469, and more detail in *AS/400 CISC System Builder*, REDP-0042.

**Note:** OS/400 V3R6 through V5R2 support RISC systems.

The following table represents the announcement or general availability and end-of-marketing dates for AS/400e RISC models.

Model and processor	Announce/general availability	Withdrawn from marketing
SB1 #2310, #2311	Announced 19 August 1997	29 December 2000
SB1 #2312, #2313	Announced 1 September 1998	29 December 2000
S10 #2118	19 August 1997	31 May 1999
S10 #2119	19 August 1997	31 May 2000
S20 #2161, #2163, #2165, #2166, #2177, #2178	19 August 1997	31 May 2000
S20 #2170	19 May 1998	31 May 1999
S30 #2257, #2258, #2259, #2260, #2320, #2321, #2322	19 August 1997	31 May 2000
S40 #2256	10 February 1998	31 May 2000
S40 #2261	19 August 1997	31 May 2000
S40 #2207, #2208, #2340, #2341	01 September 1998	31 May 2000

Model and processor	Announce/general availability	Withdrawn from marketing
150 #0181, #0182, #0183, #0184	01 October 1996	12 December 1997
150 #0191, #0192, #0193, #0194	19 August 1997	31 August 1998
150 #0291, #0292, #0293, #0294	10 February 1998	31 December 1999
150 #0391, #0392, #0393, #0394	01 September 1998	31 December 1999
150 #0591, #0592, #0593, #0594	09 February 1999	31 October 2000
40S #2109	20 February 1996	31 August 1998
40S #2110	20 February 1996	31 March 1999
40S #2111, #2112	01 September 1996	31 March 1999
400 #2109 4SS, 4SE, 4SG, 4SL, 4HS, 4HE, 4HG, 4HL	20 February 1996	31 August 1998
400 #2110	20 February 1996	31 March 1999
400 #2111, #2112 4TG and 4TL	1 September 1996	31 March 1999
400 #2130 40E, 40G, 42E, 42G, and 42L	21 June 1995	31 August 1998
400 #2131 41E, 41G, 40L, 41L #2132 41E, #2133 41E	21 June 1995	31 March 1999
Model 400	01 September 1995	30 June 1998
50S #2120	21 June 1995	31 August 1998
50S #2121	21 June 1995	31 March 1999
50S #2122	01 September 1996	31 March 1999
53S #2154	21 June 1995	30 October 1998
53S #2155	21 June 1995	31 March 1999
53S #2156	21 June 1995	01 July 1997
53S #2157	01 September 1996	31 March 1999
Model 5xx	01 September 1995	30 June 1998
600 #2129	19 August 1997	31 May 1999
600 #2134, #2135, #2136, #2179	19 August 1997	31 May 2000
600 #2175	28 October 1997	31 May 2000
620 #2180, #2181, #2182	19 August 1997	31 May 2000
640 #2237, #2238, #2239	19 August 1997	31 May 2000
650 #2240 and #2243	19 August 1997	31 May 2000
650 #2188 and #2189	01 September 1998	31 May 2000

**Note:** You can find footnotes for each of the table entries in 15.6, “Notes for all RISC system summary tables” on page 502.

## 15.1 AS/400e Model S10, S20, S30, and S40 capacities

The following sections provide the minimum and maximum capacities for the Model S10, S20, S30, and S40 system.

### 15.1.1 Model S10 capacities

Processor Feature	Model S10	
	#2118	#2119
Relative system performance (CPW) <sup>1</sup>		
Client/server environment	45.4	73.1
Interactive environment	16.2	24.4
Number of n-way multiprocessors	1	1
Main storage (MB)	64-384	128-512
Disk storage base (GB)	4.19	
Maximum internal (GB)		
V4R1	85.8	
V4R2/V4R3	175.4	
System I/O card slots		
SPD	0	
PCI	8	
Communication lines <sup>4</sup>	1-10	
LAN/ATM adapters	1-3	
Maximum workstation controllers		
Twinaxial	1	
ASCII	0	
Maximum workstations		
Twinaxial (V4R1)	7	
Twinaxial (V4R2/V4R3)	28	
ASCII	0	
¼-inch/8 mm cartridge tape (internal)	0-1	
½-inch tape (external)		
Reel 9348	0-1	
Reel 2440,9347	0	
Cartridge 34xx, 35xx	0-1	
8 mm cartridge (external)	0-1	
Optical libraries	0-1	
Diskettes (5 ¼-inch or 8-inch)	0	
Fax adapters	0	
Cryptographic processor	0	
System I/O buses	1	

## 15.1.2 Model S20 capacities

Processor Feature	Model S20						
	#2161	#2163	#2165	#2166	#2170	#2177	#2178
Relative system performance <sup>1</sup>							
Client/server environment	113.8	210.0	464.3	759.0	464.3	759.0	759.0
Interactive environment	31.0	35.8	49.7	56.9	49.7	110.7	221.4
Number of n-way multiprocessors	1	1	2	4	1	4	4
Main storage (MB)	256-2048	256-2048	256-4096	256-4096	256-4096	256-4096	256-4096
<b>Numbers are for all processor features</b>	<b>Base system</b>	<b>SUE #5064 PCI (#9329)<sup>15</sup></b>	<b>SUE #5064 SPD (#9331)<sup>15</sup></b>	<b>Expansion tower</b>	<b>#5065 Expansion Tower</b>	<b>System maximum</b>	
Disk storage base (GB)	4.19	-	-	274.8		4.19	
Maximum internal (GB) (V4R2/V4R3)	263.2 <sup>9</sup>	263.2	263.2	561.5		944.8	
Maximum external (GB) (V4R2/V4R3)	-	-	Note 8	Note 8		893.3	
Total maximum (GB) (V4R2/V4R3)						944.8	
Total maximum (GB) (V4R4)	263.2 <sup>9</sup>	263.2	263.2	561.5	386.5	944.8	
Total maximum (GB) (V5R1)	263.2 <sup>9</sup>	263.2	263.2	561.5	773.0	944.8	
External SPD bus	0	4	4	0		4	
Maximum card slots-SPD	0	0	6	13	0	58	
Maximum card slots-PCI	8	14	0	0	12	22	
Communication lines <sup>4</sup>	1-10	0-18	0-30	0-78	0-36	96	
LAN/ATM adapters	1-3	0-5	0-6	0-13	3	16	
Maximum workstation controllers <sup>17</sup>					12		
Twinaxial	1	1	1	1		1	
ASCII (V4R1)	0	0	1	1		1	
ASCII (V4R2/V4R3)	0	0	2	2		2	
Maximum workstations <sup>17</sup>							
Twinaxial (V4R1)	7	7	7	7	28	7	
Twinaxial (V4R2/V4R3)	28	28	28	28	1	28	
Twinaxial (V4R4)	0	0	6	6		6	
ASCII (V4R1)	0	0	28	28		28	
ASCII (V4R2/V4R3)							
¼-inch/8 mm cartridge tape (internal)	0-1	0-3	0-3	0-4	0-2	0-17	
½-inch tape (external)							
Reel 9348	0-1	0-2	0-4	0-4		4	
Reel 2440	0	0	0-4	0-4		4	
Reel 9347	0	0	0	0		0	
Cartridge 34xx, 35xx	0-1	0-2	0-4	0-4	0-3	6	
8 mm cartridge (external)	0-1	0-2	0-4	0-4	0-3	4	
Tape libraries	0-1	0-2	0-4		0-3	4	
Optical libraries	0-1	0-2	0-12	0-14	3	14	
Diskettes (5 ¼-inch or 8-inch)	0	0	0-2	0-2		2	
Fax adapters	0	0	0-6	0-13		32	
Cryptographic processor	0	0	0-1	0-1	0-3	1	



### 15.1.3 Model S30 capacities

Processor Feature	Model S30						
	#2257	#2258	#2259	#2260	#2320	#2321	#2322
Relative system performance (CPW) <sup>1</sup>							
Client/server environment	319.0	583.3	998.6	1794.0	998.6	1794.0	1794.0
Interactive environment	51.5	64.0	64.0	64.0	215.1	386.4	579.6
Number of n-way multiprocessors	1	2	4	8	4	8	8
Main storage (MB)							
Minimum	512	512	512	1024	512	1024	1024
Maximum (V4R1/V4R2)	12288	12288	12288	12288	12288	12288	12288
Maximum (V4R3)	16384	16384	16384	24576	16384	24576	24576
Disk storage base (GB)		4.19				4.19	
Maximum internal (GB) (V4R1)		927.7				927.7	
Maximum external (GB) (V4R1)		893.3				893.3	
Maximum combined (GB) (V4R1)		927.7				927.7	
Max internal (GB) (V4R2/V4R3)		1340.0				1340.0	
Maximum external (GB) (V4R2/V4R3)		1305.6				1305.6	
Maximum combined (GB) (V4R2/V4R3)		1340.0				1340.0	
Disk unit IOPs		1-37				1-37	
Minimum feature card slots		3				3	
Maximum feature card slots		235				235	
Communication lines		1-200				1-200	
LAN/ATM adapters <sup>7</sup>		1-32				1-32	
Maximum workstation controllers							
Twinaxial		1				175	
ASCII (V4R1)		1				175	
ASCII (V4R2/V4R3)		2				175	
Maximum workstations							
Twinaxial (V4R1)		7				7000	
Twinaxial (V4R2/V4R3)		28				7000	
ASCII (V4R1)		6				3150	
ASCII (V4R2/V4R3)		28				3150	
¼-inch/8 mm cartridge tape (internal)		0-17				0-17	
½-inch tape (external)							
Reel 2440, 9348		0-4				0-4	
34xx, 35xx		0-8				0-8	
8 mm cartridge tape (external)		0-4				0-4	
Optical libraries		0-22				0-22	
Diskettes (5 ¼-inch or 8-inch)		0-2				0-2	
Fax adapters		0-32				0-32	
Cryptographic processor		0-1				0-1	
System I/O buses		1-19				1-19	
System expansion		0-18				0-18	
(#5072, #5073, #5082, #5083)							
Storage expansion (#5055/#5057)		0-1				0-1	
Storage expansion (#5052/#5058)		0-18				0-18	

## 15.1.4 Model S40 capacities

Processor Feature	Model S40					
	#2256	#2261	#2207	#2208	#2340	#2341
Relative system performance (CPW) <sup>1</sup>						
Client/server environment	1794	2340	3660	4550	3660	4450
Interactive environment	64	64	120	120	1050	2050
Number of n-way multiprocessors	8	12	8	12	8	12
Main storage (MB)						
Minimum	1024	1024	1024	1024	1024	1024
Maximum (V4R1/V4R2)	20480	20480	-	-	-	-
Maximum (V4R3)	32768	32768	40960	40960	40960	40960
Disk storage base (GB)						
Minimum			4.19			4.19
V4R1						
Maximum internal			996.4			-
Maximum external			893.3			-
Maximum combined			996.4			-
V4R2						
Maximum internal			1546.1			-
Maximum external			1511.8			-
Maximum combined			1546.8			-
V4R3						
Maximum internal			2095.9			2095.9
Maximum external			2061.3			2061.3
Maximum combined			2095.9			2095.9
Disk unit IOPs			1-37			1-37
Minimum feature card slots			3			3
Maximum feature card slots			237			237
Communications lines						
V4R1/V4R2			1-250			-
V4R3			1-300			1-300
LAN/ATM adapters <sup>7</sup>						
V4R1/V4R2			1-48			-
V4R3			1-72			1-72
Workstation controllers			1-3			1-175
Twinaxial			0-1			0-175
ASCII (V4R1)			0-1			-
ASCII (V4R2/V4R3)			0-2			0-175
Maximum workstations						
Twinaxial (V4R1)			7			-
Twinaxial (V4R2/V4R3)			28			7000
ASCII (V4R1)			6			-
ASCII (V4R2/V4R3)			28			3150
¼-inch/8 mm cartridge tape			0-17			0-17
½-inch tape (internal)						
½-inch Tape (external)						
Reel-to-reel (2440, 9348)			0-4			0-4
Cartridge (34xx, 35xx)			0-8			0-8
8 mm cartridge tape (external)			0-4			0-4
Optical libraries			0-22			0-22
Diskettes (5 ¼-inch or 8-inch)			0-2			0-2
Fax adapters			0-32			0-32
Cryptographic processor			0-1			0-1
System I/O buses			1-19			1-19
System expansion			0-18			0-18
(#5072, #5073, #5082, #5083)						
Storage expansion (#5057)			0-1			0-1
Storage expansion (#5052/#5058)			0-18			0-18

## 15.2 AS/400e Model 150 capacities

The following tables provide the minimum and maximum capacities for the Model 9406 150 system.

Package	Twinaxial Entry #0181	Twinaxial Growth #0182	Server Entry #0183	Server Growth #0184	Twinaxial Entry #0191	Twinaxial Growth #0192	Server Entry #0193	Server Growth #0194
Minimum software release	V3R7	V3R7	V3R7	V3R7	V4R1	V4R1	V4R1	V4R1
Relative system performance (CPW-V3R7)								
Constrained <sup>1,2</sup>	10.9/10.9	10.9/10.9	10.9/10.9	10.9/10.9	N/A	N/A	N/A	N/A
Unconstrained <sup>1,2</sup>	13.8/27.0	20.6/33.3	13.8/27.0	20.6/33.3	N/A	N/A	N/A	N/A
Relative system performance (CPW-V4R1, V4R2/V4R3)								
Constrained <sup>1,2</sup>	13.8/20.2	20.2/20.2	13.8/20.2	20.2/20.2	13.8/20.2	20.2/20.2	13.8/20.2	20.2/20.2
Unconstrained <sup>1,2</sup>	13.8/27.0	20.6/35.0	13.8/27.0	20.6/35.0	13.8/27.0	20.6/35.0	13.8/27.0	20.6/35.0
Main storage (V3R7) (MB)	32-96	64-96	32-96	64-96	N/A	N/A	N/A	N/A
Main storage (V4R1/R2/R3) (MB)	64-192	64-192	64-192	64-192	64-192	128-192	64-192	128-192
Disk storage (V3R7/V4R1) (GB)	4.19-16.77	4.19-16.77	4.19-16.77	4.19-16.77	4.19-16.77	4.19-16.77	4.19-16.77	4.19-16.77
Disk storage (V4R2/V4R3) (GB)	4.19-29.9	4.19-29.9	4.19-29.9	4.19-29.9	4.19-29.9	4.19-29.9	4.19-29.9	4.19-29.9
Maximum feature card slots <sup>13</sup>	5	5	5	5	5	5	5	5
Communication lines	1-5	1-5	1-5	1-5	1-5	1-5	1-5 <sup>21</sup>	1-5 <sup>21</sup>
LAN IOAs	0-2	0-2	1-2	1-2	0-2	0-2	1-2	1-2
Integrated PC Server LANs	2	2	2	2	2	2	2	2
MFIOP LANs	1	1	1	1	1	1	1	1
Workstation controllers								
Twinaxial	1	1	0-1	0-1	1	1	0-1	0-1
ASCII	0	0	0	0	0	0	0	0
Workstations								
Twinaxial (V3R7, V4R1)	1-7	1-14	0-7	0-14	1-7	1-14	0-7	0-14
Twinaxial (V4R2, V4R3)	1-7	1-28	0-7	0-28	1-7	1-28	0-7	0-28
ASCII	0	0	0	0	0	0	0	0
¼-inch cartridge tape (2.5 GB)	1	1	1	1	1	1	1	1
½-inch reel tape	0	0	0	0	0	0	0	0
½-inch cartridge tape	0	0	0	0	0	0	0	0
8 mm cartridge tape	0	0	0	0	0	0	0	0
Tape libraries	0	0	0	0	0	0	0	0
Optical libraries	0	0	0	0	0	0	0	0
Diskettes	0	0	0	0	0	0	0	0
Fax adapters	0	0	0	0	0	0	0	0
Cryptographic processors	0	0	0	0	0	0	0	0
System I/O buses	0	0	0	0	0	0	0	0

Package	Twinaxial Entry #0291/#0391 #0591	Twinaxial Growth #0292/#0392 #0592	Server Entry #0293/#0393 #0593	Server Growth #0294/#0394 #0594
Minimum OS/400 release	V4R2/V4R3 V4R4	V4R2/V4R3 V4R4	V4R2/V4R3 V4R4	V4R2/V4R3 V4R4
Relative system performance (CPW) <sup>1, 2</sup>				
Constrained	13.8/20.2	20.2/20.2	13.8/20.2	20.2/20.2
Unconstrained	13.8/27.0	20.6/35.0	13.8/27.0	20.6/35.0
Main storage (MB)	64-192	128-192	64-192	128-192
Disk storage (GB)	4.19-29.9	4.19-29.9	4.19-29.9	4.19-29.9
Maximum feature card slots <sup>14, 20</sup>	5	5	5	5
Communication lines <sup>20</sup>	1-5	1-5	1-5 <sup>20</sup>	1-5 <sup>20</sup>
LAN IOAs	0-2	0-2	1-2	1-2
#2790 PCI Integrated Netfinity Server LANs	0-2	0-2	0-2	1-2
MFIO LANs	1	1	1	1
Workstation controllers				
Twinaxial	1	1	0-1	0-1
ASCII	0	0	0	0
LocalTalk	0	0	0	0
Workstations				
Twinaxial	1-7	1-28	0-7	0-28
ASCII	0	0	0	0
LocalTalk	0	0	0	0
¼-inch cartridge tape (4.0 GB)	1	1	1	1
½-inch reel tape	0	0	0	0
½-inch cartridge tape	0	0	0	0
8 mm cartridge tape	0	0	0	0
Tape libraries	0	0	0	0
Optical libraries	0	0	0	0
Diskettes	0	0	0	0
Fax adapters	0	0	0	0
Cryptographic processors	0	0	0	0
System I/O buses	0	0	0	0

## 15.3 AS/400e Model 4HS, 4HE, 4HG, 4HL, 42E, 42G, and 42L packages and Model 4SS, 4SE, 4SG, 4TG, 4SL, 4TL, 40E, 41E, 40G, 41G, 40L, 41L, 400, and 40S capacities

The following sections provide the minimum and maximum capacities for 9406 Model 4HS, 4HE, 4HG, 4HL, 42E, 42G, and 42L packages and the 9406 Model 4SS, 4SE, 4SG, 4TG, 4SL, 4TL, 40E, 41E, 40G, 41G, 40L, 41L, 400, and 40S systems.

### 15.3.1 Model 4HS, 4HE, 4HG, and 4HL package capacities

Package name	Small Server 4HS	Entry Server 4HE	Growth Server 4HG	Large Server 4HL
Relative system performance (CPW-V3R6) <sup>1</sup>				
Client/server environment	24.5-77.3	24.5-52.9	24.5-52.9	24.5-52.9
Interactive environment	8.4-26.9	8.4-18.3	8.4-18.3	8.4-18.3
Relative system performance (CPW-V3R7) <sup>1</sup>				
Client/server environment	27.0-87.3	27.0-59.8	27.0-59.8	27.0-59.8
Interactive environment	9.4-30.7	9.4-20.6	9.4-20.6	9.4-20.6
Main storage (MB) <sup>22</sup>	32-224/64-512	32-224/64-512	64-224/128-512	96-224/128-512
Disk storage (GB) <sup>11</sup>	3.93-23.6	3.93-23.6	7.84-23.6	11.0-23.6
Standard tape cartridge	¼-inch	¼-inch	¼-inch	8 mm
Twinaxial devices (maximum)	7	7	7	7
LAN adapters <sup>18</sup>	1-2	1-2	1-2	1-2
Communication lines	1-20	2-20	2-20	2-20

### 15.3.2 Model 42E, 42G, and 42L package capacities

Package name	Entry 42E	Growth 42G	Large 42L
Relative system performance (CPW-V3R6) <sup>1</sup>	12.3-30.6	12.3-30.6	12.3-30.6
Relative system performance (CPW-V3R7) <sup>1</sup>	13.8-33.3	13.8-33.3	13.8-33.3
Main storage (MB) <sup>23</sup>	64-160/64-224	96-160/96-224	160/160-224
Disk storage (GB) <sup>11</sup>	3.93-23.6	7.84-23.6	11.80-23.6
Standard tape cartridge	¼-inch	¼-inch	8 mm
Twinaxial devices	40-280	40-280	80-280
LAN adapters <sup>18</sup>	0-2	0-2	0-2
Communications	1-20	2-20	2-20

### 15.3.3 Model 4SS, 4SE, 4SG, 4TG, 4SL, and 4TL capacities

Package name	Small Server 4SS	Entry Server 4SE	Growth Server 4SG	Growth Server 4TG	Large Server 4SL	Large Server 4TL
Relative system performance (CPW-V3R6) <sup>1</sup>						
Client/server environment	24.5-52.9	24.5-52.9	24.5-52.9	77.3	24.5-52.9	77.3
Interactive environment	8.4-18.3	8.4-18.3	8.4-18.3	26.9	8.4-18.3	26.9
Relative system performance (CPW-V3R7) <sup>1</sup>						
Client/server environment	27.0-59.8	27.0-59.8	27.0-59.8	87.3	27.0-59.8	87.3
Interactive environment	9.4-20.6	9.4-20.6	9.4-20.6	30.7	9.4-20.6	30.7
Main storage (MB) <sup>22</sup>	32-224/ 64-512	32-224/ 64-512	32-224/ 64-512	128-512	96-224/ 128-512	128-512
Disk storage (GB) <sup>11</sup>	3.93-23.6	3.93-23.6	7.86-23.6	7.86-23.6	11.0-23.6	11.80-23.6
Standard tape cartridge	¼-inch	¼-inch	¼-inch	¼-inch	8 mm	8 mm
Twinaxial devices	7	7	7	7	7	7
LAN adapters <sup>18</sup>	1-2	1-2	1-2	1-2	1-2	1-2
Communication lines	2-20	2-20	2-20	2-20	2-20	2-20
Software Charge Group	P05	P05	P05	P10	P05	P10

### 15.3.4 Model 40E, 41E, 40G, 41G, 40L, and 41L capacities

Package name	Entry 40E	Entry 41E	Growth 40G	Growth 41G	Large 40L	Large 41L
Relative system performance (CPW-V3R6) <sup>1</sup>	12.3	18.3-30.6	12.3	12.3	12.3	12.3
Relative system performance (CPW-V3R7) <sup>1</sup>	13.8	20.6-33.3	13.8	20.6-33.3	13.8	20.6-33.3
Main storage (MB)	64-160	64-224	96-180	96-224	160	160-224
Disk storage (GB) <sup>11</sup>	3.93-23.6	3.93-23.6	7.86-23.6	7.86-23.6	11.80-23.6	11.80-23.6
Standard tape cartridge	¼-inch	¼-inch	¼-inch	¼-inch	8 mm	8 mm
Twinaxial devices	40-280	40-280	40-280	40-280	80-280	80-280
LAN adapters <sup>18</sup>	0-2	0-2	0-2	0-2	0-2	0-2
Communication lines	1-20	1-20	2-20	2-20	2-20	2-20
Software Group	P05	P10	P05	P05	P05	P10

### 15.3.5 Model 400 capacities

Processor Feature	400			
	#2130	#2131	#2132	#2133
Relative system performance (CPW-CISC or V3R6 RISC) <sup>1</sup>	12.3	18.3	24.5	30.6
Relative system performance (CPW - V3R7 RISC) <sup>1</sup>	13.8	20.6	27.0	33.3
Relative system performance (CPW - V4R1 RISC) <sup>1</sup>	13.8	20.6	27.0	35.0
Relative system performance (RAMP-C) <sup>3</sup>	4.1	6.1	8.7	10.9
Main storage (MB)	32-160	32-224	32-224	32-224
Disk storage (GB)	1.96-23.6			
(V3R1/V3R6)				
(V3R2/V3R7, V4R1/V4R2/V4R3)	1.96-50.3			
Maximum feature card slots	6			
Communication lines	1-20			
LAN adapters <sup>18</sup>	0-2			
ATM adapters	0-1			
Maximum workstation controllers	7			
Twinaxial	7			
ASCII	7			
LocalTalk	7			
Maximum workstations	280			
Twinaxial				
ASCII				
LocalTalk	217			
¼-inch/8 mm cartridge tape (internal)	0-4			
½-inch tape (external)	0-4			
9348				
34xx/35xx	0-2			
8 mm cartridge tape (external)	0-4			
Tape libraries	0-2			
Optical libraries	0-4			
Diskettes (5 ¼-inch or 8-inch)	0-2			
Fax adapters	0-6			
Cryptographic processors	0-1			
System I/O buses	1			

## 15.3.6 Model 40S capacities

Processor Feature	9402 40S	9402 40S	9402 40S	9402 40S
	#2109	#2110	#2111	#2112
Relative system performance (CPW-V3R6) <sup>1</sup>				
Client/server environment	24.5	30.6	52.9	77.3
Interactive environment	8.4	12.3	18.3	26.9
Relative system performance (CPW-V3R7) <sup>1</sup>				
Client/server environment	27.0	33.3	59.8	87.3
Interactive environment	9.4	13.8	20.6	30.7
Relative system performance (CPW-V4) <sup>1</sup>				
Client/server environment	27.0	35.0	63.0	91.0
Interactive environment	9.4	14.5	21.6	32.2
Relative system performance (RAMP-C) <sup>3</sup>				
Client/server environment	8.3	10.6	† <sup>10</sup>	† <sup>10</sup>
Interactive environment	2.6	3.8	† <sup>10</sup>	† <sup>10</sup>
Number of n-way multiprocessors	1	1	1	1
Main storage (MB) <sup>22</sup>	32-224		64-512	
Disk storage (GB)				
V3R6				
V3R7	1.96-23.6			
V4	1.96-50.3			
Maximum feature card slots	1.96-50.3			
Communication lines				
LAN ports <sup>18</sup>	5			
ATM ports	1-20			
Maximum workstation controllers	1-2			
Twinaxial	0-1			
ASCII				
LocalTalk	1			
Maximum workstations (1 minimum)	1			
Twinaxial	1			
ASCII				
LocalTalk devices	7			
¼-inch cartridge tape/8 mm	6			
Cartridge tape (internal)	31			
½-inch tape 9348/2440 (external)	0-4			
2440 is not supported on Model 40S				
34xx/35xx	0-4			
8 mm cartridge tape (external)				
Tape libraries	0-2			
Optical libraries	0-4			
Diskettes (5 ¼-inch or 8-inch)	0-2			
Fax adapters	0-4			
Cryptographic processors	0-2			
System I/O buses	0-5			
	0-1			
	1			



## 15.4 AS/400e Model 50S, 53S, 500, 510, and 530 capacities

The following sections provide the minimum and maximum capacities for 9406 Model 50S, 53S, 500, 510, and 530 systems.

### 15.4.1 Model 50S, and 53S capacities

Processor Feature	50S	50S	50S	53S	53S	53S	53S
	#2120	#2121	#2122	#2154	#2155	#2156	#2157
Relative system performance (CPW-V3R6) <sup>1</sup>							
Client/server environment	66.7	85.0	106.8	132.5	198.7	299.0	349.8
Interactive environment	18.7	26.9	26.9	26.9	26.9	26.9	26.9
Relative system performance (CPW-V3R7) <sup>1</sup>							
Client/server environment	77.7	104.2	130.7	162.7	278.8	459.3	509.9
Interactive environment	21.4	30.7	30.7	30.7	30.7	30.7	30.7
Relative system performance (CPW-V4) <sup>1</sup>							
Client/server environment	81.6	111.5	138.0	188.2	319.0	598.0	650.0
Interactive environment	22.5	32.8	32.8	32.8	32.8	32.8	32.8
Relative system performance (RAMP-C) <sup>3</sup>							
Client/server environment	19.7	26.6	† <sup>10</sup>	43.4	66.6	101.4	† <sup>10</sup>
Interactive environment	5.7	8.3	† <sup>10</sup>	8.3	8.3	8.3	† <sup>10</sup>
Number of n-way multiprocessors	1	1	1	1	2	4	4
Main storage (MB)	64-1024			256-4096			512-4096
Disk storage (GB)							
V3R6							
V3R7							
V4	1.96-318.7			1.96-520.0			
Maximum feature card slots	1.96-318.7			1.96-520.0			
Communication lines	4.19-652.8			4.19-996.4			
LAN ports <sup>18</sup>							
ATM ports	82			237			
Maximum workstation controllers	1-96			1-200			
Twinaxial	1-16			1-32			
ASCII	0-8			0-16			
LocalTalk							
Maximum workstations (1 minimum)	1			1			
Twinaxial	1			1			
ASCII	2			4			
LocalTalk devices							
¼-inch cartridge tape/8 mm	7			7			
Cartridge tape (internal)	6			6			
½-inch tape 9348/2440 (external)	62			124			
2440 is not supported on Model 40S	17			0-17			
34xx/35xx							
8 mm cartridge tape (external)	0-4			0-4			
Tape libraries							
Optical libraries	0-4			0-4			
Diskettes (5 ¼-inch or 8-inch)	0-4			0-4			
Fax adapters	0-2			0-2			
Cryptographic processors	0-14			0-22			
System I/O buses	0-2			0-2			
	0-32			0-32			
	0-1			0-1			
	1-7			0-19			

## 15.4.2 Model 500, 510, and 530 capacities

Model	500			510		530				
Processor Feature	#2140	#2141	#2142	#2143	#2144	#2150	#2151	#2152	#2153	#2162
Relative system performance (CPW-V3R6) <sup>1</sup>	18.7	26.9	38.3	66.7	85.0	107.1	132.5	198.7	299.0	349.8
Relative system performance (CPW-V3R7) <sup>1</sup>	21.4	30.7	43.9	77.7	104.2	131.1	162.7	278.8	459.3	509.9
Relative system performance (CPW-V4) <sup>1</sup>	21.4	30.7	43.9	81.6	111.5	148.0	188.2	319.0	598.0	650.0
Relative system performance (RAMP-C) <sup>3</sup>	6.4	9.3	12.6	21.6	28.5	37.4	48.9	74.0	119.2	Note 1
Number of n-way multiprocessors	1	1	1	1	1	1	1	2	4	4
Main storage (MB)	64-76	64-76	64-102	256-10	256-10	512-40	512-40	512-40	512-40	512-40
Disk storage base (GB)	8	8	4	24	24	96	96	96	96	96
V3R6/R7										
V4		1.96			1.96			1.96		
Maximum internal-GB		4.19			4.19			4.19		
V3R6/R7										
V4		150.99			318.76			520.09		
Maximum external-GB		652.80			652.80			996.40		
V3R6/R7										
V4		134.21			301.98			503.31		
Maximum combined-GB		618.40			618.40			962.00		
V3R6/R7										
V4		150.99			318.76			520.09		
Disk unit IOPS		652.80			652.80			996.40		
Internal								0-37		
External		0-13			0-13					
Minimum feature card slots		0-16			0-28					
Maximum feature card slots		6			6			4		
Communication lines		83			83			238		
LAN ports		1-33			1-96			1-200		
ATM ports		0-16			0-16			0-32		
Maximum workstation controllers		0-8			0-8			0-16		
Twinaxial/ASCII/LocalTalk										
Maximum workstations - Min. of 1		35			60			175		
Twinaxial										
ASCII		1400			2400			7000		
LocalTalk		630			1080			3150		
¼-inch/8 mm cartridge tape (internal)		1085			1860			5425		
½-inch tape (external)		0-9			0-17			0-17		
9348/2440										
34xx/35xx		0-4			0-4			0-4		
8 mm cartridge tape (external)		0-4			0-4			0-4		
Tape libraries		0-4			0-4			0-4		
Optical libraries		0-2			0-2			0-2		
Diskettes (5¼-inch or 8-inch)		0-14			0-14			0-22		
Fax adapters		0-2			0-2			0-2		
Cryptographic processors		0-16			0-32			0-32		
System I/O buses		0-1			0-1			0-1		
System expansion		1-7			1-7			1-19		
#507x/#508x										
Bus extension		0-6			0-6			0-18		
#5044										
Storage expansion		0-3			0-3			0-9		
#5051										
#5052/#5058		0-1			0-1					
#8052/#9051		0-7			0-7			0-18		
								1		

## 15.5 AS/400e Model 600, 620, 640, and 650 capacities

The following sections provide the minimum and maximum capacities for 9406 Model 600, 620, 640, and 650 systems.

### 15.5.1 Model 600 capacities

Processor Feature	Model 600			
	#2129	#2134	#2135	#2136
Relative system performance (CPW) <sup>1</sup>	22.7	32.5	45.4	73.1
Number of n-way multiprocessors	1	1	1	1
Main storage (MB)	64-384	64-384	64-384	128-512
Disk storage base (GB)				
Maximum internal (GB)	4.19			
V4R1	85.8			
V4R2 and later	175.4			
System I/O card slots				
SPD	0			
PCI	8			
Communication lines <sup>5</sup>	1-18			
LAN/ATM adapters	0-3			
Maximum workstation controllers				
Twinaxial	5			
ASCII	0			
Maximum workstations				
Twinaxial	188			
ASCII	0			
¼-inch/8 mm cartridge tape (internal)	0-1			
½-inch tape (external)				
Reel 9348	0-1			
Reel 2440, 9347	0			
Cartridge 34xx, 35xx	0-1			
8 mm cartridge (external)	0-1			
Optical libraries	0-1			
Diskettes (5 ¼-inch or 8-inch)	0			
Fax adapters	0			
Cryptographic processor	1			
System I/O buses	1			

## 15.5.2 Model 620 capacities

	Model 620					
Processor Feature	#2175	#2179	#2180		#2181	#2182
Relative system performance (CPW) <sup>1</sup>	50.0	85.6	113.8		210.0	464.3
Number of n-way multiprocessors	1	1	1		1	2
Main storage (MB)	64-1856 <sup>16</sup>	256-2048	256-2048		256-2048	256-4096
Numbers are for all processor features	Base system	SUE #9364 PCI (#9329) (#9330) <sup>12</sup>	SUE #9364 SPD (#9331) <sup>12</sup>	#5065 Strg/PCI Expansion Tower	Expansion tower	System maximum
Disk storage base (GB)	4.19	-	-		-	4.19
V4R1						
Maximum internal (GB)	128.8 <sup>9</sup>	128.8	128.8 <sup>8</sup>		274.8 <sup>8</sup>	704.3
Maximum external (GB)	-	-				652.8
Total maximum (GB)						704.3
V4R2/V4R3						
Maximum internal (GB)	263.2 <sup>9</sup>	263.2	263.2 <sup>8</sup>		561.5 <sup>8</sup>	944.8
Maximum external (GB)	-	-				893.3
Total maximum (GB)						944.8
V4R4						
Maximum internal (GB)	263.2 <sup>9</sup>	263.2	263.2 <sup>8</sup>	386.5	561.5 <sup>8</sup>	944.8
Maximum external (GB)	-	-				893.3
Total maximum (GB)						944.8
V5R1						
Maximum internal (GB)	263.2 <sup>9</sup>	263.2	263.2 <sup>8</sup>	773.0	561.5 <sup>8</sup>	944.8
Maximum external (GB)	-	-				893.3
Total maximum (GB)						944.8
External SPD bus	0	4	4		0	4
Maximum card slots - SPD	0	0	6	0	13	58
Maximum card slots - PCI	8	14	0	12	0	22
Communication lines <sup>5</sup>	1-18	0-40	0-36	0-42	0-78	96
LAN/ATM adapters	0-3	0-5	0-6	0-6	0-13	16
Maximum workstation controllers						
Twinaxial	5	9	18	12	39	60
ASCII	0	0	6	0	13	58
Maximum workstations						
Twinaxial	188	360	720	240	1560	2388
ASCII	0	0	108	0	234	1044
¼-inch/8 mm cartridge tape (internal)	0-1	0-3	0-3	0-2	0-4	17
½-inch tape (external)						
Reel 9348	0-1	0-2	0-4	0-3	0-4	4
Reel 2440	0	0	0-4	0	0-4	4
Reel 9347	0	0	0-2	0	0-2	2
Cartridge 34xx, 35xx	0-1	0-2	0-4	0-3	0-4	6
8 mm cartridge (external)	0-1	0-2	0-4	3	0-4	4
Optical libraries	0-1	0-2	0-12	3	0-14	14
Diskettes (5 ¼-inch or 8-inch)	0	0	0-2	0	0-2	2
Fax adapters	0	0	0-6	0	0-13	32
Cryptographic processor	0	0	0-1	3	0-1	3

### 15.5.3 Model 640 and 650 capacities

	Model 640			Model 650			
Processor Feature	#2237	#2238	#2239	#2240	#2243	#2188	#2189
Relative system performance (CPW) <sup>1</sup>	319.0	583.3	998.6	1794.0	2340.0	3660.0	4550.0
Number of n-way multiprocessors	1	2	4	8	12	8	12
Main storage (MB)							
V4R2	512-12288	512-12288	512-12288	1024-20480	1024-20480	-	-
V4R3	512-16384	512-16384	512-16384	1024-32758	1024-32758	1024-40960	1024-40960
Disk storage base (GB)	4.19			4.19			
<b>V4R1</b>							
Maximum internal (GB)	927.7			996.4			
Maximum external (GB)	893.3			962.0			
Maximum combined (GB)	927.7			996.4			
<b>V4R2</b>							
Maximum internal (GB)	1340.0			1546.1			
Maximum external (GB)	1305.6			1511.8			
Maximum combined (GB)	1340.0			1546.1			
<b>V4R3/V4R4</b>							
Maximum internal (GB)	1340.0			2095.9			
Maximum external (GB)	1305.6			2061.3			
Maximum combined (GB)	1340.0			2095.9			
Disk unit IOPs	1-37			1-37			
Minimum feature card slots	3			3			
Maximum feature card slots-SPD	235			237			
Maximum feature card slots-PCI	216			216			
Communications lines (V4R1/V4R2)	1-200			1-250			
Communications lines (V4R3/V4R4)	1-200			1-300			
LAN/ATM adapters <sup>7</sup>	0-32			0-48			
V4R1/V4R2/V4R3	0-32			0-72			
Maximum workstation controllers							
Twinaxial / ASCII	175			175			
Maximum workstations							
Twinaxial	7000			7000			
ASCII	3150			3150			
¼-inch/8 mm cartridge tape (internal)	0-17			0-17			
½-inch tape (external)							
Reel 2440, 9348	0-4			0-4			
34xx, 35xx	0-8			0-8			
9347	0-2			0-2			
8 mm cartridge tape (external)	0-4			0-4			
Optical libraries	0-22			0-22			
Diskettes (5 ¼-inch or 8-inch)	0-2			0-2			
Fax adapters	0-32			0-32			
Cryptographic processor	0-3			0-3			
System I/O buses	1-19			1-19			
System expansion							
#5065, #5072, #5073, #5082, #5083	0-18			0-18			
Bus expansion (#5044)	0-9			0-9			
Storage expansion							
#5055/#5057	0-1			0-1			
#5052/#5058	0-18			0-18			

## 15.6 Notes for all RISC system summary tables

<b>Note 1</b>	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application running determine what performance is achievable.
<b>Note 2</b>	The constrained figures are for the 9401 Model 150 with its maximum configuration. The unconstrained figures show what the performance would be if the processor was not limited by the maximum main storage and direct access storage device (DASD) of the Model 150. In each case, the figure is for interactive workload, and the second is for client/server.
<b>Note 3</b>	Relative system performance ratios are estimated based on AS/400 environment RAMP-C workload. A measurement of 1.0 is set as the base to represent the performance of a 9404 B10 with 16 MB of main storage and 945 MB of disk storage. The ratios shown are estimated at maximum configurations running at 70% utilization. Relative system performance ratios might not be realized in all environments.
<b>Note 4</b>	One line is used for Operations Console or Client Access if selected. The maximum is nine if Twinaxial Console is selected.
<b>Note 5</b>	17 lines in the base system if Client Access Operations Console is chosen.
<b>Note 7</b>	Can include up to 16 Integrated PC Servers
<b>Note 8</b>	External DASD can be attached with an SPD card in the expansion unit.
<b>Note 9</b>	Maximum is 85.8 GB (V4R1) or 175.4 GB (V4R2/V4R3/V4R4) on the #2161 processor
<b>Note 10</b>	Information not available.
<b>Note 11</b>	As of February 1997 with V3R7, the maximum disk capacity is 50.3 GB.
<b>Note 12</b>	The #9364 must be configured with #9329/#9330 (PCI) or #9331 (SPD). Therefore, these columns are mutually exclusive.
<b>Note 13</b>	Two of these slots are reserved for the Integrated PC Server. Three are driven by the MFIOP.
<b>Note 14</b>	Three are driven by the MFIOP. Two of these slots are reserved for the Integrated PC Server.
<b>Note 15</b>	The #5064 must be configured with #9329 (PCI) or #9331 (SPD). Therefore, these columns are mutually exclusive.
<b>Note 16</b>	The #0004 specify code indicates that the Model 620 #2175 processor shipped with base memory of 256 MB. These systems have a maximum memory of 2048 MB.
<b>Note 17</b>	The S20 processors #2170, #2177, and #2178 support a maximum of 60 twinaxial and 58 ASCII Workstations Controllers and 2392 twinaxial and 1044 ASCII Workstations
<b>Note 18</b>	The Model 400 and packages, the 40S and packages, the 40E, 41E, 40G, 41G, 40L and 41L packages and Model 436 support three LAN adapters if running Firewall for AS/400 (5769-FW1). Package 4HS and 4SS have a base Ethernet or token-ring adapter.
<b>Note 20</b>	Six lines are supported, but one is dedicated to Client Access Console (#029x Packages) or Operations Console (#039x and 059x packages).
<b>Note 21</b>	Six lines are supported but one is dedicated to Client Access Console.
<b>Note 22</b>	The #2109 and #2110 processor support 32 to 224 MB main storage. The #2111 and #2112 processor support 64 to 512 MB main storage.
<b>Note 23</b>	The #2130 processor supports 160 MB main storage. The #2131, #2132, and #2133 processors support a maximum of 224 MB main storage.

# Related publications

We consider the publications that we list in this section particularly suitable for a more detailed discussion of the topics that we cover in this IBM Redpaper.

## IBM Redbooks

For information about ordering the following publications, see “How to get IBM Redbooks” on page 505. Note that some of the documents that we reference here might be available in softcopy only.

- ▶ *IBM eServer i5 and iSeries System Handbook*, GA19-5486
- ▶ *IBM eServer iSeries Migration: System Migration and Upgrades at V5R1 and V5R2*, SG24-6055
- ▶ *IBM eServer iSeries in Storage Area Networks: Implementing Fibre Channel Disk and Tape with iSeries*, SG24-6220 (RedDraft)
- ▶ *IBM TotalStorage Tape Selection and Differentiation Guide*, SG24-6946
- ▶ *IBM eServer iSeries Migration: A Guide to Upgrades and Migrations to POWER Technology*, SG24-7200(Reddraft)
- ▶ *IBM eServer iSeries Pocket Handbook*, SG24-9406
- ▶ *AS/400 CISC System Builder*, REDP-0042
- ▶ *AS/400e RISC System Builder*, REDP-0342
- ▶ *Update of ESS (Shark) Features Supported by the IBM eServer iSeries Server*, REDP-0199
- ▶ *PCI Card Placement Rules for the IBM eServer iSeries Server*, REDP-3638
- ▶ *High-speed Link Loop Architecture for the IBM eServer iSeries Server: OS/400 Version 5 Release 2*, REDP-3652

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## Other publications

The following publications are also relevant as further information sources:

- ▶ *AS/400 Physical Planning Reference*, SA41-5109
- ▶ *AS/400 RoadMap for Changing to PowerPC Technology*, SA41-5150
- ▶ *System Upgrade RoadMap (RISC to RISC)*, SA41-5155
- ▶ *Software Installation*, SC41-5120
- ▶ *Backup and Recovery*, SC41-5304
- ▶ *iSeries Performance Capabilities Reference*, SC41-0607  
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