

IBM System x™

Configuration and Options Guide

Overview

(July 29, 2008)

Version 65.0

The IBM System x *Configuration and Options Guide* (COG) is now available in Hypertext Markup Language (HTML). The Configuration and Options Guide contains general configuration information about IBM products and supported options, such as, IBM System x™; BladeCenter; IntelliStation; Datacenter and other servers.

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New information

Versions of this document released on or after August 8th, 2006, will contain references to feature codes.

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

For more details about feature codes, contact your IBM representative.

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<http://www.ibm.com/support/docview.wss?rs=1201&uid=psg1SCOD-3ZVQ5W>

Table 1. Information Sources

Audience	Link	Additional information
IBM eServer Configuration and Options Guide (COG)		
Customers	www.ibm.com/support/docview.wss?rs=1201&uid=psg1SCOD-3ZVQ5W http://www.ibm.com/systems/xbc/cog/index.html	PDF & HTML versions HTML version
Business Partners	http://www.ibm.com/partnerworld/pwhome.nsf/weblook/index.html	User ID and password required.
IBM Employees	www.ibm.com/support/docview.wss?rs=1201&uid=psg1SCOD-3ZVQ5W	-
Feedback	datadoc@us.ibm.com	
IBM Server Proven		
Customers	http://www.ibm.com/servers/eserver/serverproven/compat/us/	-
Partnerworld program		
Business Partners	http://www.ibm.com/partnerworld/pwhome.nsf/weblook/index.html	User ID and password required.
Feedback	IBMSHD08@us.ibm.com	-
Latest product & technical information		
Customers	www.ibm.com/systems/x/	-
Business Partners	http://www.ibm.com/partnerworld/pwhome.nsf/weblook/index.html	Select Products & Services (user ID and password required).
Standalone Solutions Configuration Tool (SSCT)		
Customers	http://www.ibm.com/systems/support/supportsite.wss/docdisplay?Indocid=MIGR-62168&brandind=5000008	-
Additional URLs		
Technical spec sheets (PSREF)	www.ibm.com/systems/x/	Select Technical spec sheets (PSREF).
IBM Datacenter Solutions	http://www.ibm.com/systems/x/solutions/os/windows/datacenter.html	-
Clustering (US, LA, CAN)	http://www.ibm.com/systems/clusters/hardware/1350/index.html	Select appropriate category or server.
Benchmark Results	http://www.ibm.com/systems/x/resources/benchmarks/	Select appropriate category or server.
Options/NOS/ Server Compatibility	www.ibm.com/systems/x/	Select appropriate Product Type.
Active PCI	www.ibm.com/systems/x/	Select <xSeries Compatibility>, <Active PCI Info>.
IBM Storage Products	http://www.ibm.com/systems/storage/index.html	Select appropriate category.
Adv Sys Mgmt Adapter Firmware	http://www.ibm.com/systems/management/index.html	Select Servers, select Intel-based Servers, select Fixes, select Get Fixes, select appropriate category.
Flash BIOS Updates	http://www.ibm.com/support/us/en/?cm_re=masthead-_-supdl-_-supdl	Select Servers, select Intel-based Servers, select Fixes, select Get Fixes, select device drivers by server, select appropriate category.
ServerRAID™ Updates	http://www.ibm.com/support/us/en/?cm_re=masthead-_-supdl-_-supdl	Select Servers, select Intel-based Servers, select Fixes, select Get Fixes, select appropriate category.
VMware	http://www.ibm.com/systems/x/solutions/infrastructure/virtualization/index.html	-
Options Continuation Program	www.ibm.com/systems/x/	-

System x3100 (4348)

Attention:

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At-A-Glance Options

Table 1. System x3100 (4348) at-a-glance

Part number ^{1, 2}	CPU/FSB speed (GHz/MHz)-cache	Number of processors (std / max)	Memory (std / max) ³	Form factor	Power supply quantity (std / max) ⁴	Hot-swap (power, slots, HDD, fans, memory)	System Mgmt Processor
4348-22C	Intel Pentium Dual Core E2140 (1.6GHz/800MHz-1MB DC)	1/1	512MB/8GB	Tower	1/1	-	-
4348-42C	Dual Core Intel Xeon Processor 3065 (2.33GHz/1333MHz-4MB DC)	1/1	1GB/8GB	Tower	1/1	-	-

Table 1. System x3100 (4348) at-a-glance (continued)

Part number ^{1, 2}	Integrated ethernet	Storage controller	Internal HDD interface	Internal HDD storage (std / max)	Optical drive	Bays (total / avail)	Slots (total / avail) ⁵
4348-22C	1Gb	SATA	Fixed	160GB/1.5TB	SATA DVD-ROM	5/4	4/4
4348-42C	1Gb	SATA	Fixed	160GB/1.5TB	SATA DVD-ROM	5/4	4/4

Notes:

1. Model numbers provided are available in China only.
2. Comes standard with a keyboard and mouse.
3. Models 22x comes installed with 1x512MB memory. Model 42x comes installed with 1x1GB memory.
4. Standard power supply is 310w.
5. Slots available are one PCI-E x8 full length, one PCI-E x8 (x4 elect) half length, and two PCI 32/33.

System x3100 (4348)

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At-A-Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#)

SBB number	Option number	Feature codes	Processor options ¹	Model support
Standard processor				
-	-	-	-	-
Additional processors				
-	-	-	-	-

Notes:

1. Supported options will be published in a future release as they become available.

System x3100 (4348)

Attention:

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At-A-Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#)

SBB number	Option number	Feature code	Memory description ¹
Memory DIMMs			
-	41Y2726	-	512MB (1x512MB) PC2-5300 CL5 ECC DDR2 DIMM
-	41Y2732	-	4GB (2x2GB) PC2-5300 CL5 ECC DDR2 SDRAM DIMM
-	41Y2729	-	2GB (2x1GB) PC2-5300 CL5 ECC DDR2 SDRAM DIMM

System x3100 (4348)

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[At-A-Glance](#)
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SBB number	Option number	Feature code	Description ¹	Height	Bays supported	Maximum quantity
Diskette Drive						
-	40K1692	-	IBM USB Portable Diskette Drive	-	-	-
SATA Simply-Swap HDDs						
-	39M4504	-	160GB SATA SS 3.0Gbps Option	-	-	-
-	39M4508	-	250GB 7200-rpm Simple-swap SATA II HDD	-	-	-
-	39M4514	-	500GB 7200 RPM 3.0 GB/sec SATA II HDD Simple-Swap	-	-	-
-	43W7572	-	750GB SS SATA HDD Option	-	-	-
Optical Devices						
-	-	-	-	-	-	-

System x3100 (4348)

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[At-A-Glance](#)
[Options](#)
[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#)

SBB number	Part number	Feature codes	Description ¹	Adapter length	PCI support	Slots supported	Hot-Plug capable	Max supported
Storage controllers								
-	-	-	-	-	-	-	-	-
External Disk Systems and Options								
-	-	-	-	-	-	-	-	-
Networking								
-	73P5101	-	PRO/1000 GT Dual Port Server Adapter by Intel	-	-	-	-	-
Systems Management								
-	-	-	-	-	-	-	-	-
Other I/O								
-	-	-	-	-	-	-	-	-

System x3100 (4348)

Attention:

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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | **[Pwr acc](#)** | [Tape](#)

SBB number	Option number	Feature codes	Description
Power ¹			
-	-	-	-
Power Distribution Units			
-	-	-	-
Uninterruptible Power Supply (UPS) ²			
-	2130R4X	-	IBM UPS 1000T HV
-	2130R6X	-	IBM UPS 1500T HV
-	2130R2X	-	IBM UPS 750T HV

System x3100 (4348)

Attention:

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At A Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | **[Tape](#)**

SBB number	Part number	Feature codes	Description ¹	Bays supported	Storage interface	Form factor	Ext tape enclosure
Tape drives							
-	-	-	-	-	-	-	-
External tape enclosures							
-	-	-	-	-	-	-	-
Tape libraries							
-	-	-	-	-	-	-	-
Associated tape options							
-	-	-	-	-	-	-	-

Notes:

1. Supported options will be published in a future release as they become available.

System x3200 M2 (4367, 4368)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Table 1. System x3200 M2 (4367, 4368) at-a-glance

Part number ¹	CPU/FSB speed (GHz/MHz)-cache	Number of processors (std / max)	Memory (std / max)	Form factor	Power supply quantity (std / max)	Hot-swap (power, slots, HDD, fans, memory)	System Mgmt Processor
4367-22Y	Core 2 Duo Intel E4600 (2.4GHz/800MHz FSB, 2MB DC)	1/1	512MB/8GB	Tower	1/1	-	-
4367-32Y	Dual-Core Intel Xeon E3110 (3.0GHz/1333MHz FSB, 6MB DC)	1/1	1GB/8GB	Tower	1/1	-	-
4367-34Y	Dual-Core Intel Xeon E3110 (3.0GHz/1333MHz FSB, 6MB DC)	1/1	1GB/8GB	Tower	1/1	H	-
4367-42Y	Quad-Core Intel Xeon X3320 (2.5GHz/1333MHz FSB, 6MB QC)	1/1	1GB/8GB	Tower	1/1	H	-
4367-52Y	Quad-Core Intel Xeon X3350 (2.66GHz/1333MHz FSB, 12MB QC)	1/1	1GB/8GB	Tower	1/1	H	-
4367-54Y	Quad-Core Intel Xeon X3350 (2.66GHz/1333MHz FSB, 12MB QC)	1/1	1GB/8GB	Tower	2/2	PH	-
4367-72Y	Quad-Core Intel Xeon X3360 (2.83GHz/1333MHz FSB, 12MB QC)	1/1	2GB/8GB	Tower	1/1	H	-
4367-74Y	Quad-Core Intel Xeon X3360 (2.83GHz/1333MHz FSB, 12MB QC)	1/1	2GB/8GB	Tower	2/2	PH	-
4367-E1Y ²	Core 2 Duo Intel E4600 (2.4GHz/800MHz FSB, 2MB DC)	1/1	2GB/8GB	Tower	1/1	-	N
4368-22Y	Core 2 Duo Intel E4600 (2.4GHz/800MHz FSB, 2MB DC)	1/1	512MB/8GB	Tower	1/1	-	-
4368-32Y	Dual-Core Intel Xeon E3110 (3.0GHz/1333MHz FSB, 6MB DC)	1/1	1GB/8GB	Tower	1/1	-	-
4368-34Y	Dual-Core Intel Xeon E3110 (3.0GHz/1333MHz FSB, 6MB DC)	1/1	1GB/8GB	Tower	1/1	H	-
4368-42Y	Quad-Core Intel Xeon X3320 (2.5GHz/1333MHz FSB, 6MB QC)	1/1	1GB/8GB	Tower	1/1	H	-

4368-52Y	Quad-Core Intel Xeon X3350 (2.66GHz/1333MHz FSB, 12MB QC)	1/1	1GB/8GB	Tower	1/1	H	-
4368-54Y	Quad-Core Intel Xeon X3350 (2.66GHz/1333MHz FSB, 12MB QC)	1/1	1GB/8GB	Tower	2/2	PH	-
4368-72Y	Quad-Core Intel Xeon X3360 (2.83GHz/1333MHz FSB, 12MB QC)	1/1	2GB/8GB	Tower	1/1	H	-
4368-74Y	Quad-Core Intel Xeon X3360 (2.83GHz/1333MHz FSB, 12MB QC)	1/1	2GB/8GB	Tower	2/2	PH	-
4368-E1Y ²	Dual-Core Intel Xeon E3110 (3.0GHz/1333MHz FSB, 6MB DC)	1/1	2GB/8GB	Tower	1/1	H	N
4368-E2Y ²	Quad-Core Intel Xeon X3350 (2.66GHz/1333MHz FSB, 12MB QC)	1/1	2GB/8GB	Tower	2/2	PH	N

Table 1. System x3200 M2 (4367, 4368) at-a-glance (continued)

Part number ¹	Integrated ethernet	Storage controller	Internal HDD interface	Internal HDD storage (std / max)	Optical drive	Bays (total / avail)	Slots (total / avail)
4367-22Y	1GB	SATA	Simple-swap	0GB/3TB	Half-High SATA DVD-ROM	7/6	5/5
4367-32Y	1GB	SATA	Simple-swap	0GB/3TB	Half-High SATA DVD-ROM	7/6	5/5
4367-34Y	1GB	SAS	Hot-swap	0GB/3TB	Half-High SATA DVD-ROM	7/6	4/4
4367-42Y	1GB	SAS	Hot-swap	0GB/3TB	Half-High SATA DVD-ROM	7/6	4/4
4367-52Y	1GB	SAS	Hot-swap	0GB/584GB	Half-High SATA DVD-ROM	7/6	4/4
4367-54Y	1GB	SAS	Hot-swap	0GB/3TB	Half-High SATA DVD-ROM	7/6	4/4
4367-72Y	1GB	SAS	Hot-swap	0GB/3TB	Half-High SATA DVD-ROM	7/6	4/4
4367-74Y	1GB	SAS	Hot-swap	0GB/584GB	Half-High SATA DVD-ROM	7/6	4/44/4
4367-E1Y ²	1GB	SATA	Simple-Swap	0GB/3TB	Half-High SATA DVD-ROM	7/6	5/5
4368-22Y	1GB	SATA	Simple-swap	0GB/3TB	Half-High SATA DVD-ROM	7/6	5/5
4368-32Y	1GB	SATA	Simple-swap	0GB/3TB	Half-High SATA DVD-ROM	7/6	5/5
4368-34Y	1GB	SAS	Hot-swap	0GB/3TB	Half-High SATA DVD-ROM	7/6	4/4
4368-42Y	1GB	SAS	Hot-swap	0GB/3TB	Half-High SATA DVD-ROM	7/6	4/4
4368-52Y	1GB	SAS	Hot-swap	0GB/584GB	Half-High SATA DVD-ROM	7/6	4/4
4368-54Y	1GB	SAS	Hot-swap	0GB/3TB	Half-High SATA DVD-ROM	7/6	4/4
4368-72Y	1GB	SAS	Hot-swap	0GB/3TB	Half-High SATA DVD-ROM	7/6	4/4
4368-74Y	1GB	SAS	Hot-swap	0GB/584GB	Half-High SATA DVD-ROM	7/6	4/4
4368-E1Y ²	1GB	SAS	Hot-swap	0GB/3TB	Half-High SATA DVD-ROM	7/6	4/4
4368-E2Y ²	1GB	SAS	Hot-swap	160GB/3TB	Half-High SATA DVD-ROM	7/5	4/4

Notes:

1. Model numbers provided are worldwide generally available variant (GAV) model numbers which are not orderable as listed and need to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 4367-12Y is 4367-12U. See the product specific Official IBM announcement letter for other country-specific GAV model numbers. GAV to MTM mapping for A.P. Geographies follow
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- the same pattern. Substitute the last character with the country-specific designator.
2. Express model.

System x3200 M2 (4367, 4368)

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At-A-Glance Options

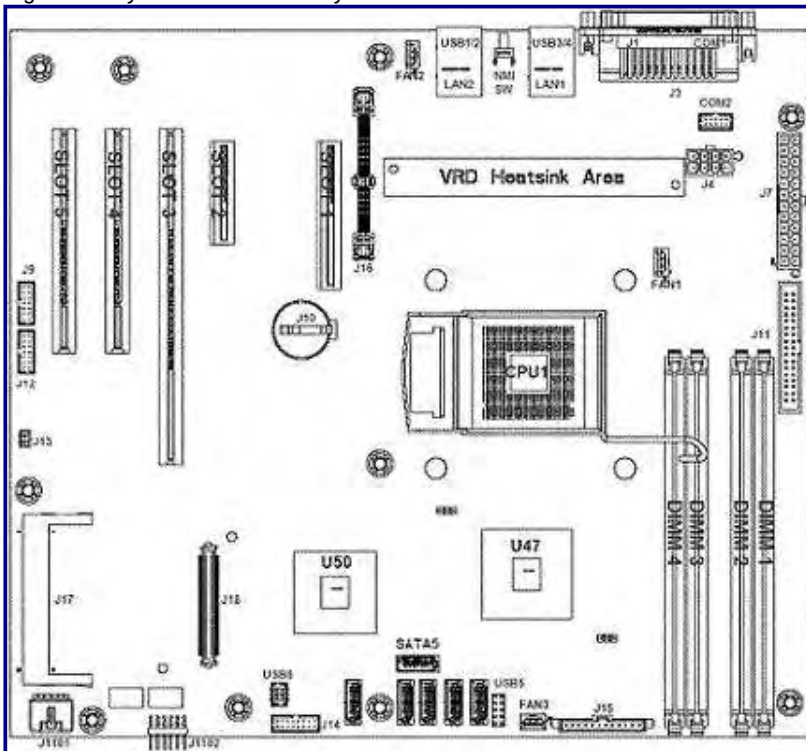
[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#) |

SBB number	Option number ¹	Feature codes	Processor options	Models supported
Standard processor				
44E7584	-	3091	Dual-Core Intel Xeon E3110 (3.0GHz/1333MHz FSB, 6MB DC)	32Y, 34Y, 4368-E1Y
44E7585	-	3092	Quad-Core Intel Xeon X3320 (2.5GHz/1333MHz FSB, 6MB QC)	42Y
44E7586	-	3093	Quad-Core Intel Xeon X3350 (2.66GHz/1333MHz FSB, 12MB QC)	52Y, 54Y, 4368-E2Y
44E7587	-	3094	Quad-Core Intel Xeon X3360 (2.83GHz/1333MHz FSB, 12MB QC)	72Y, 74Y
44E7640	-	3667	Core 2 Duo Intel E4600 (2.4GHz/800MHz FSB, 2MB DC)	22Y, 4367-E1Y

Notes:

- Supported options will be published in a future release as they become available.

Figure 1. System x3200 M2 system board



[Click image to enlarge](#)

System x3200 M2 (4367, 4368)

Attention:

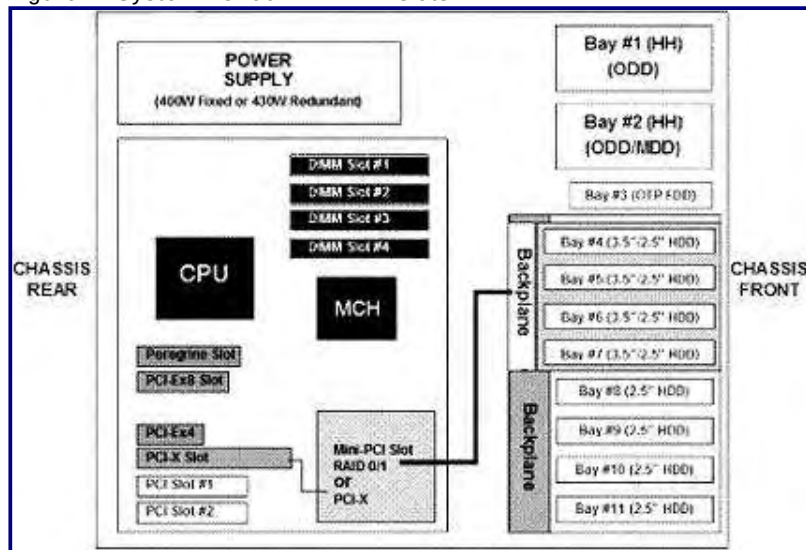
A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Processor | **Memory** | HDD | I/O | Pwr acc | Tape |

SBB number	Option number	Feature codes	Memory description
Memory DIMMs			
41Y2724	41Y2726	1902	512MB DDR2 667 SDRAM DIMM Memory
41Y2727	-	1903	1GB DDR2 667 SDRAM DIMM Memory
41Y2730	-	1904	2GB DDR2 667 SDRAM DIMM Memory
-	41Y2729	-	2GB (2x 1GB Kit) PC2-5300 CL5 ECC DDR2 SDRAM DIMM
-	41Y2732	-	4GB (2x 2GB Kit) PC2-5300 CL5 ECC DDR2 SDRAM DIMM

Figure 1. System x3200 M2 DIMM slots



[Click image to enlarge](#)

Table 1. Standard Memory Configuration

Model	Std. DIMM Configuration
72Y, 74Y, E1Y, 4368-E2Y	(2S) 1GB DDR2 667 SDRAM DIMM Memory
32Y, 34Y, 42Y, 52Y, 54Y	(2S) 512MB DDR2 667 SDRAM DIMM Memory
22Y	512MB DDR2 667 SDRAM DIMM Memory

System x3200 M2 (4367, 4368)

Attention:

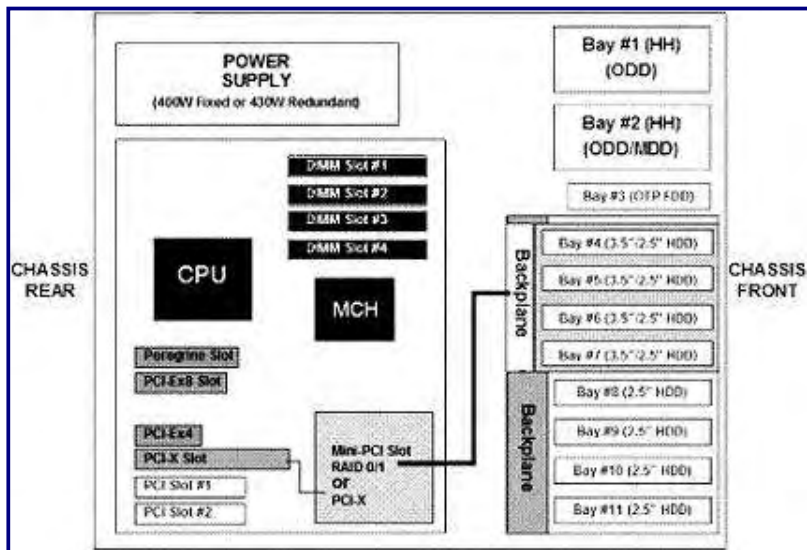
A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Processor | Memory | **HDD** | I/O | Pwr acc | Tape |

SBB number	Option number	Feature codes	Description	Height	Bays supported	Max qty
Diskette						
25R8812	-	5305	Floppy Disk Drive Kit	-	3	1
SATA Simple-Swap HDDs¹						
39M4505	39M4504	5291	160GB 7200 RPM 3.5" Simple-Swap SATA II	SL	4,5,6,7	4
39M4509	39M4508	5292	250GB 7200 RPM 3.5" Simple-Swap SATA II	SL	4,5,6,7	4
39M4515	39M4514	5288	500GB 7200 RPM 3.5" Simple-Swap SATA II	SL	4,5,6,7	4
43W7573	43W7572	5531	750GB 7200 RPM 3.5" Simple-Swap SATA II	SL	4,5,6,7	4
SATA Hot-Swap HDDs¹						
39M4523	39M4522	5150	160GB 7200 RPM 3.5" Hot-Swap SATA II	SL	4,5,6,7	4
39M4527	39M4526	5151	250GB 7200 RPM 3.5" Hot-Swap SATA II	SL	4,5,6,7	4
39M4531	39M4530	5196	500GB 7200 RPM 3.5" Hot-Swap SATA II	SL	4,5,6,7	4
43W7577	43W7576	5530	750GB 7200 RPM 3.5" Hot-Swap SATA II	SL	4,5,6,7	4
SAS Hot-Swap HDDs¹						
40K1075	40K1043	5161	73GB 15K 3.5" Hot-Swap SAS	SL	4,5,6,7	4
40K1076	40K1044	5162	146GB 15K 3.5" Hot-Swap SAS	SL	4,5,6,7	4
43X0808	43X0802	5532	300GB 15K 3.5" Hot-Swap SAS	SL	4,5,6,7	4
40K1084	40K1052	5159	73GB 10K 2.5" Hot-Swap SAS HDD	SFF	4 - 11	8
43X0826	43X0824	5534	146GB 10K 2.5" Hot-Swap SAS HDD	SFF	4 - 11	8
43X0841	43X0837	5543	73GB SAS 15K 2.5" SFF HS	SFF	4 - 11	8
Optical drives						
43W8264	-	4154	Half-High SATA DVD-ROM	SL	1, 2	2
43W8265	-	4155	Half-High SATA Multi-Burner	SL	1, 2	2
External Disk Systems and Options						
-	172621X	-	IBM System Storage DS3200 SAS Single Controller	-	-	-
-	172622X	-	IBM System Storage DS3200 SAS Dual Controller	-	-	-
-	172631X	-	IBM System Storage DS3300 iSCSI Single Controller	-	-	-
-	172632X	-	IBM System Storage DS3300 iSCSI Dual Controller	-	-	-
-	172641X	-	IBM System Storage DS3400 FC Single Controller	-	-	-
-	172642X	-	IBM System Storage DS3400 FC Dual Controller	-	-	-
-	172701X	-	IBM System Storage EXP3000	-	-	-

Figure 1. System x3200 M2 DIMM slots



Click image to enlarge

Bay	Form Factor	Height	Front access	Usage
1	133 mm (5.25in)	HH	Y	Std. Optical
2	133 mm (5.25in)	HH	Y	Optical / Tape/ Special HD
3	89mm (3.5in)	SL	Y	Floppy
4	89mm (3.5in)	SL	Y	3.5"HDD/2.5"HDD(2.5 in. SSF)
5	89mm (3.5in)	SL	Y	3.5"HDD/2.5"HDD(2.5 in. SSF)
6	89mm (3.5in)	SL	Y	3.5"HDD/2.5"HDD(2.5 in. SSF)
7	89mm (3.5in)	SL	Y	3.5"HDD/2.5"HDD(2.5 in. SSF)
8	2.5 in.	SFF	Y	2.5" HDD
9	2.5 in.	SFF	Y	2.5" HDD
10	2.5 in.	SFF	Y	2.5" HDD
11	2.5 in.	SFF	Y	2.5" HDD

Note:

1. A 3.5" HDD may be installed in bay #2, using a converter (feature code number 0895).

System x3200 M2 (4367, 4368)

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At-A-Glance Options

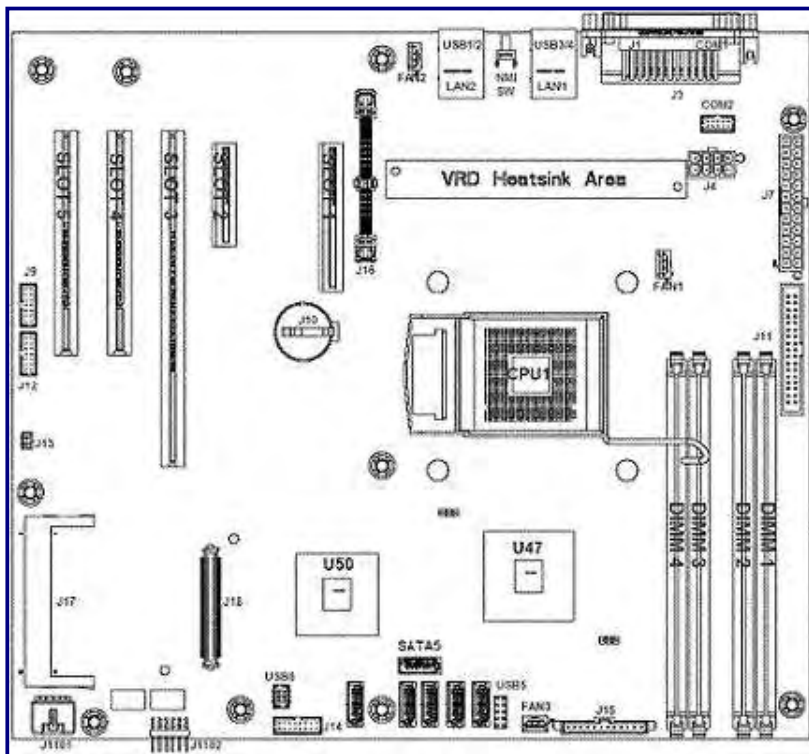
Processor | Memory | HDD | I/O | Pwr acc | Tape |

SBB number	Part number	Feature codes	Description	Adapter length	PCI support	Slots supported	Hot-Plug capable ¹
Storage controllers							
25R8072	25R8060	1681	IBM SAS HBA Controller	Half	PCI-E x8	1	N
39R8752	39R8743	1680	IBM Ultra320 SCSI Controller 2	Half	PCI-X	3,4,5	N
42C2179	39R6525	3567	QLogic 4Gb FC Single-Port PCIe HBA for IBM System x	Half	PCI-E x4	1,2	N
42C2182	39R6527	3568	QLogic 4Gb FC Dual-Port PCIe HBA for IBM System x	Half	PCI-E x4	1,2	N
43W4298	43W4296	3571	IBM ServeRAID-MR10i SAS/SATA Controller ¹	Half	PCI-E x8	1	N
43W4326	43W4324	3569	IBM Ultra 320 SCSI PCIe Controller	Half	PCI-E x1	1,2	N
43W4340	43W4339	3559	ServeRAID-MR10M SAS/SATA Controller	Half	PCI-E x8	1	N
43W7489	42D0405	1696	Emulex 4GB FC Single-Port PCI-X HBA for IBM System x	Half	PCI-X	3	N
43W7490	42D0407	1697	Emulex 4GB FC Dual-Port PCI-X HBA for IBM System x	Half	PCI-X	3	N
43W7491	42C2069	1698	Emulex 4GB FC Single-Port PCI-E HBA for IBM System x	Half	PCI-E x4	1,2	N
43W7492	42C2071	1699	Emulex 4GB FC Dual-Port PCI-E HBA for IBM System x	Half	PCI-E x4	1,2	N
-	44X0411	-	ServeRAID-BR10il SAS/SATA Controller Kit	-	-	-	-
Networking							
30R5205	30R5201	1483	IBM iSCSI Server TX Adapter	Half	32/64 bit	3	N
30R5505	30R5501	1481	IBM iSCSI Server SX Adapter	Half	32/64 bit	3	N
39Y6096	39Y6093	1489	NetXtreme 1000 T + Dual Port Ethernet Adapter- PCI-X	Half	64-bit/133MHz	3,4,5	N
39Y6071	39Y6066	1485	NetXtreme II 1000 Express G Ethernet Adapter- PCIe	Half	PCI-E x4	1,2	N
39Y6129	39Y6126	2944	PRO/1000 PT Dual Port Server Adapter by Intel	Half	PCI-E x4	1,2	N
39Y6149	39Y6146	2976	QLogic iSCSI Single Port PCIe HBA for IBM System x	Half	PCI-E x4	1,2	N
42C1773	42C1770	2977	QLogic iSCSI Dual Port PCIe HBA for IBM System x	Half	PCI-E x4	1,2	N
42C1783	42C1780	2995	NetXtreme II 1000 Express Dual Port Ethernet Adapter	Half	PCI-E x4	1,2	N
Systems Management							
39Y9567	39Y9566	1605	Remote Supervisor Adapter II Slimline	-	-	-	-

Notes:

1. Supported on Hot Swap models only

Figure 1. System x3200 M2 PCI slots



Click image to enlarge

Slot	Type	Bus	Voltage (V)	Frequency MHz	Data path	Active PCI	Slot length
PCI Slot 1	PCI Express	PCI-E 1.0a	-	-	-	N	Full
PCI Slot 2	PCI Express	PCI-E 1.0a	-	-	-	N	Full
PCI Slot 3	PCI-X	PCI-X 1.0a	3.3	66/133 MHz	64 bit	N	Full
PCI Slot 4	PCI	PCI 2.2	5	33MHz	32bit	N	Full
PCI Slot 5	PCI	PCI 2.2	5	33MHz	32bit	N	Full

System x3200 M2 (4367, 4368)

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At-A-Glance Options

Processor | Memory | HDD | I/O | **Pwr acc** | Tape |

SBB number	Option number	Description
Power		
-	-	-
Power Distribution Units		
-	39Y8905	DPI 100-127v PDU with Fixed Nema L5-15P line cord
-	39Y8923	DPI 60A Three Phase C19 Enterprise PDU w/ IEC309 3P+G (208V) line cord
-	39Y8935	63A/250V Front-end PDU IEC 309 P+N+G
-	39Y8938	30amp/125V Front-end PDU with NEMA L5-30P connector
-	39Y8939	30amp/250V Front-end PDU with NEMA L6-30P connector
-	39Y8940	60amp/250V Front-end PDU with IEC 309 60A 2P+N+Gnd connector
-	39Y8941	DPI Single Phase C13 Enterprise PDU w/o line cord
-	39Y8948	DPI Single Phase C19 Enterprise PDU w/o line cord
-	39Y8951	DPI Universal Rack PDU w/ Nema L5-20P & L6-20P (US cord)
-	40K9614	IBM DPI 30a Cord (NEMA L6-30P)(all models)
-	40K9615	IBM DPI 60a Cord (IEC 309 2P+G)(all models)
Uninterruptible Power Supply (UPS)		
-	2130R1X	IBM UPS750TLV
-	2130R2X	IBM UPS750THV
-	2130R3X	IBM UPS1000TLV
-	2130R5X	IBM UPS1500TLV
-	2130R6X	IBM UPS1500THV
-	39Y8857	IBM UPS 3U Online Battery Pack
Associated Options		
-	-	-

SBB number	Part number	Feature code	Description
Rack / Tower Conversion Kits			
-	42C8923	-	5U X 20 Tower to Rack Conversion Kit
Racks			
-	93072RX	-	IBM 25U S2 standard rack
-	93074RX	-	NetBAY S2 42U Standard Rack Cabinet
-	93074XX	-	IBM 42U S2 expansion rack
-	93084RX	-	NetBAY42 Enterprise Rack
-	93084XX	-	NetBAY42 Enterprise Expansion Rack
Console Connectivity			
-	17351GX	-	IBM Local 2x8 Console Manager (LCM2)
-	17351LX	-	IBM 1 x 8 Console Switch
-	17352GX	-	IBM Global 2x16 Console Mngr(GCM2)
-	17352LX	-	IBM 2 x 16 Console Switch
-	17354GX	-	Global 4x16 Console Mngr (GCM4)
Monitors			
-	4942	-	IBM T115 15 TFT LCD
-	4943	-	IBM T117 17 TFT LCD
-	4944	-	IBM T119 19 TFT LCD
-	4945	-	IBM T120 20 TFT LCD
Keyboard and Mouse			
40K9490	40K9584	8750	IBM Preferred Pro Keyboard USB - US English 103P
40K9491	40K9200	8912	IBM 2 Button Optical Wheel Mouse - Black - USB

40K9492	40K9201	8913	IBM 3 Button Optical Mouse - Black - USB

System x3200 M2 (4367, 4368)

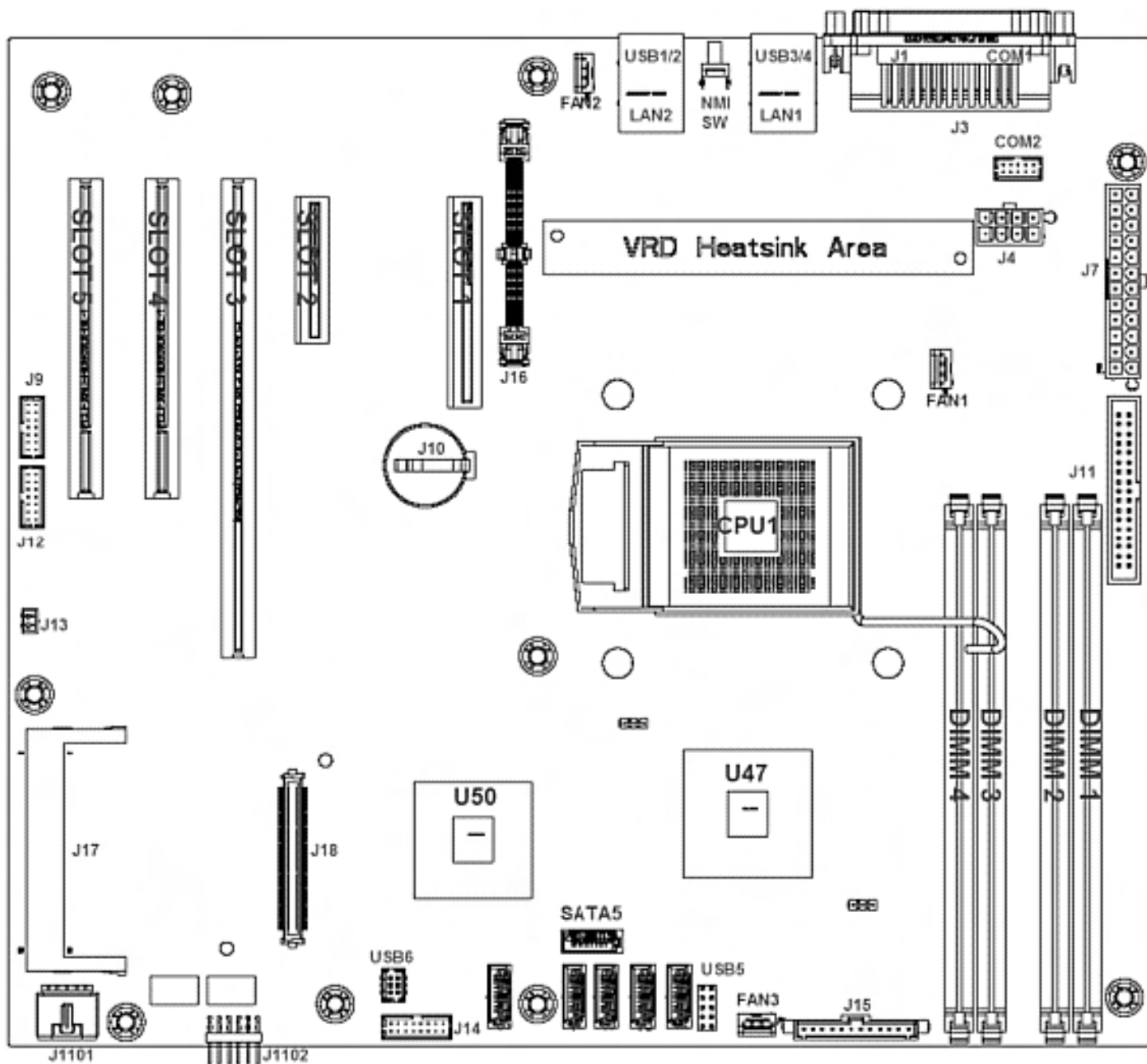
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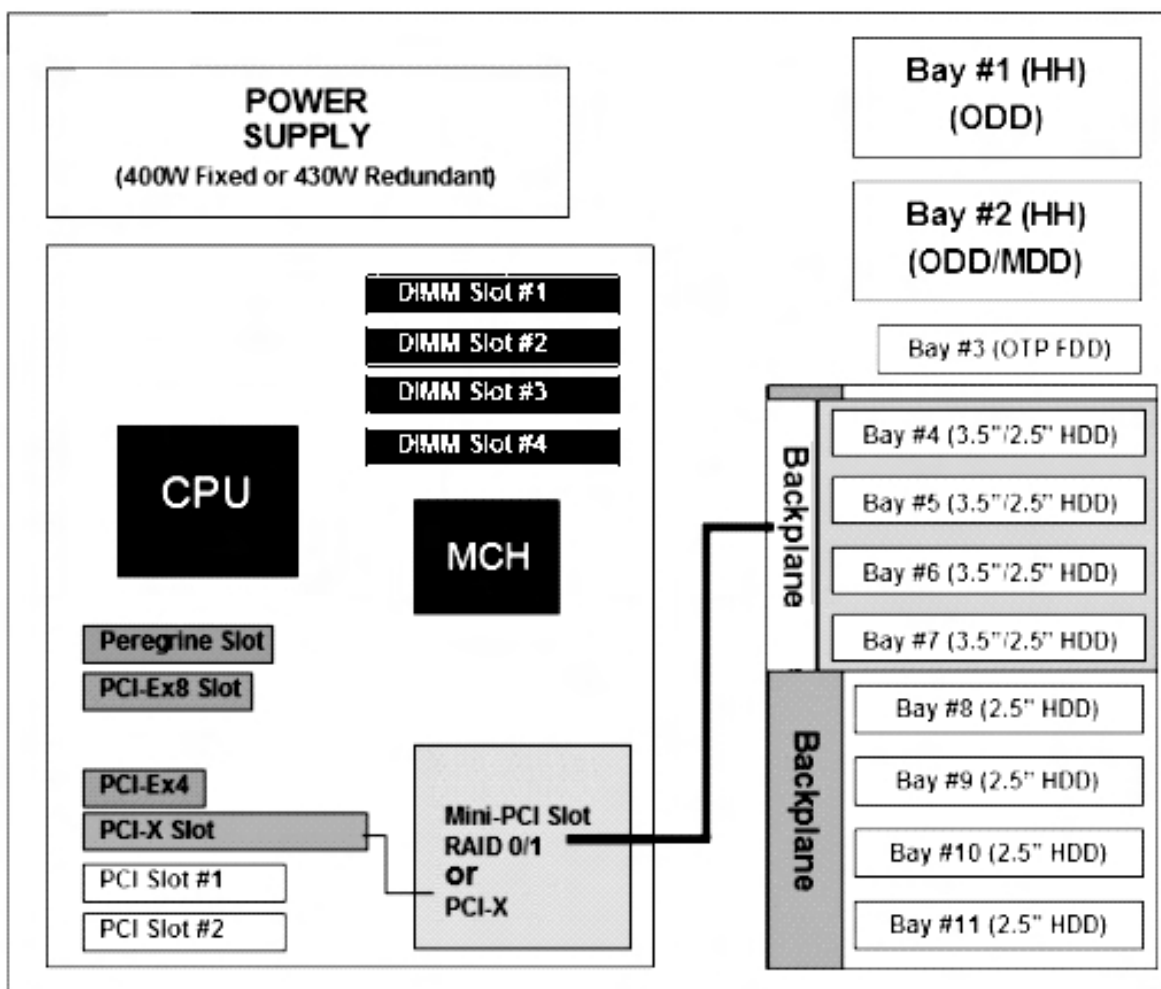
At-A-Glance Options

Processor | Memory | HDD | I/O | Pwr acc | **Tape** |

SBB number	Option number	Feature codes	tape options	Bays supported	Storage interface	Form factor	Ext tape enclosures
Tape drives							
39M5624	25R0045	5362	VXA 3 Half High Internal Back-up	2	SCSI	89mm (5.25in)HH	-
42C3912	-	4352	GoVault Tape Drive	2	SATA	89mm (5.25in)HH	-
71P9176	39M5656	5355	36/72GB DDS Generation 5 Tape Drive	2	SCSI	89mm (5.25in)HH	-
39M5621	39M5658	5364	IBM Half High LTO Gen 2 Tape Drive	2	SCSI	89mm (5.25in)HH	-
39M5664	39M5659	5385	DLT V4 Tape Drive	2	SATA	89mm (5.25in) HH	-
43W8490	43W8478	5393	IBM Half High LTO Gen 3 SAS Tape Drive	2	SAS	89mm (5.25in) HH	-
43W8492	39M5636	5395	IBM DDS Generation 6 USB Tape Drive	2	USB	89mm (5.25in) HH	-
43W8487	43W8480	5392	IBM DDS Gen 5 SATA Tape Drive	2	SATA	89mm (5.25in) HH	-
44E8897	44E8895	5397	IBM Half High LTO Gen 4 SAS Tape Drive	2	SAS	89mm (5.25in) HH	-
Tape enclosures							
-	87651UX	-	1U Tape Drive Enclosure	-	-	-	-
-	87664UX	-	4U Tape Drive Enclosure	-	-	-	-
-	8768FHX	-	Full High Tape Drive Enclosure	-	-	-	-
-	8767HNX	-	IBM Half High Tabletop Tape Enclosure	-	-	-	-
-	8768FHX	-	IBM Full High Tabletop Tape Enclosure	-	-	-	-
-	87651UX	-	IBM 1U Rackmount Tape Enclosure	-	-	-	-
Tape autoloaders							
-	87691VX	-	VXA 320 1U Autoloader (1 Drive / 10 cartridges)	-	-	-	-
External tape libraries							
-	-	-	-	-	-	-	-
Associated tape options							
43W8474	42D8771	4860	GoVault Carrier Option	2	SATA	89mm (5.25in) HH	-



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System x3250 M2 (4190, 4194)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Table 1. System x3250 M2 (4190, 4194) at-a-glance

Part number ¹	CPU/FSB speed (GHz/ MHz)- cache	Number of processors (std / max)	Memory (std / max)	Form factor	Power supply quantity (std / max)	Hot-swap (power, slots, HDD, fans, memory)	System Mgmt Processor
4190-15Y	Single-Core Intel Celeron 440 (2.0GHz/800MHz FSB, 512K L2)	1/1	1GB/8GB	Rack (1U)	1/1	-	N
4190-22Y	Dual-Core Intel Core 2 Duo E4600 (2.4GHz/800MHz FSB, 2MB L2)	1/1	1GB/8GB	Rack (1U)	1/1	-	N
4190-52Y	Dual-Core Intel Xeon E3110 (3.00GHz/1333MHz FSB, 6MB L2)	1/1	1GB/8GB	Rack (1U)	1/1	H	N
4190-62Y	Quad-Core Intel Xeon X3320 (2.50GHz/1333MHz FSB, 6MB L2)	1/1	1GB/8GB	Rack (1U)	1/1	-	N
4190-64Y	Quad-Core Intel Xeon X3320 (2.50GHz/1333MHz FSB, 6MB L2)	1/1	1GB/8GB	Rack (1U)	1/1	H	N
4190-66Y	Quad-Core Intel Xeon X3320 (2.50GHz/1333MHz FSB, 6MB L2)	1/1	1GB/8GB	Rack (1U)	1/1	H	N
4190-72Y	Quad-Core Intel Xeon X3350 (2.66GHz/1333MHz FSB, 12MB L2)	1/1	2GB/8GB	Rack (1U)	1/1	H	N
4190-74Y	Quad-Core Intel Xeon X3350 (2.66GHz/1333MHz FSB, 12MB L2)	1/1	2GB/8GB	Rack (1U)	1/1	H	N
4194-15Y	Single-Core Intel Celeron 440 (2.0GHz/800MHz FSB, 512K L2)	1/1	1GB/8GB	Rack (1U)	1/1	-	N
4194-22Y	Dual-Core Intel Core 2 Duo E4600 (2.4GHz/800MHz FSB, 2MB L2)	1/1	1GB/8GB	Rack (1U)	1/1	-	N
4194-52Y	Dual-Core Intel Xeon E3110 (3.00GHz/1333MHz FSB, 6MB L2)	1/1	1GB/8GB	Rack (1U)	1/1	H	N
4194-62Y	Quad-Core Intel Xeon X3320 (2.50GHz/1333MHz FSB, 6MB L2)	1/1	1GB/8GB	Rack (1U)	1/1	-	N
4194-64Y	Quad-Core Intel Xeon X3320 (2.50GHz/1333MHz FSB, 6MB L2)	1/1	1GB/8GB	Rack (1U)	1/1	H	N

4194-66Y	Quad-Core Intel Xeon X3320 (2.50GHz/1333MHz FSB, 6MB L2)	1/1	1GB/8GB	Rack (1U)	1/1	H	N
4194-72Y	Quad-Core Intel Xeon X3350 (2.66GHz/1333MHz FSB, 12MB L2)	1/1	2GB/8GB	Rack (1U)	1/1	H	N
4194-74Y	Quad-Core Intel Xeon X3350 (2.66GHz/1333MHz FSB, 12MB L2)	1/1	2GB/8GB	Rack (1U)	1/1	H	N

Table 1. System x3250 M2 (4190, 4194) at-a-glance (continued)

Part number ¹	Integrated ethernet	Storage controller	Internal HDD interface	Internal HDD storage (std / max)	Optical drive	Bays (total / avail)	Slots (total / avail)
4190-15Y	Dual 1Gb	SATA	Simple-Swap	0GB/1500GB	CD-RW/DVD Combo	2/3	2/2
4190-22Y	Dual 1Gb	SATA	Simple-Swap	0GB/1500GB	CD-RW/DVD Combo	2/3	2/2
4190-52Y	Dual 1Gb	3.5" SAS/SATA	Hot-Swap	0GB/1500GB	CD-RW/DVD Combo	2/3	2/2
4190-62Y	Dual 1Gb	SATA	Simple-Swap	0GB/1500GB	CD-RW/DVD Combo	2/3	2/2
4190-64Y	Dual 1Gb	3.5" SAS/SATA	Hot-Swap	0GB/1500GB	CD-RW/DVD Combo	2/3	2/2
4190-66Y	Dual 1Gb	SAS 2.5in	Hot-Swap	0GB/584GB	CD-RW/DVD Combo	4/5	2/2
4190-72Y	Dual 1Gb	3.5" SAS/SATA	Hot-Swap	0GB/1500GB	CD-RW/DVD Combo	2/3	2/2
4190-74Y	Dual 1Gb	SAS 2.5in	Hot-Swap	0GB/584GB	CD-RW/DVD Combo	4/5	2/2
4194-15Y	Dual 1Gb	SATA	Simple-Swap	0GB/1500GB	CD-RW/DVD Combo	2/3	2/2
4194-22Y	Dual 1Gb	SATA	Simple-Swap	0GB/1500GB	CD-RW/DVD Combo	2/3	2/2
4194-52Y	Dual 1Gb	3.5" SAS/SATA	Hot-Swap	0GB/1500GB	CD-RW/DVD Combo	2/3	2/2
4194-62Y	Dual 1Gb	SATA	Simple-Swap	0GB/1500GB	CD-RW/DVD Combo	2/3	2/2
4194-64Y	Dual 1Gb	3.5" SAS/SATA	Hot-Swap	0GB/1500GB	CD-RW/DVD Combo	2/3	2/2
4194-66Y	Dual 1Gb	SAS 2.5in	Hot-Swap	0GB/584GB	CD-RW/DVD Combo	4/5	2/2
4194-72Y	Dual 1Gb	3.5" SAS/SATA	Hot-Swap	0GB/1500GB	CD-RW/DVD Combo	2/3	2/2
4194-74Y	Dual 1Gb	SAS 2.5in	Hot-Swap	0GB/584GB	CD-RW/DVD Combo	4/5	2/2

Notes:

1. Model numbers provided are worldwide generally available variant (GAV) model numbers which are not orderable as listed and need to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 4367-12Y is 4367-12U. See the product specific Official IBM announcement letter for other country-specific GAV model numbers. GAV to MTM mapping for A.P. Geographies follow the same pattern. Substitute the last character with the country-specific designator.

System x3250 M2 (4190, 4194)

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At-A-Glance Options

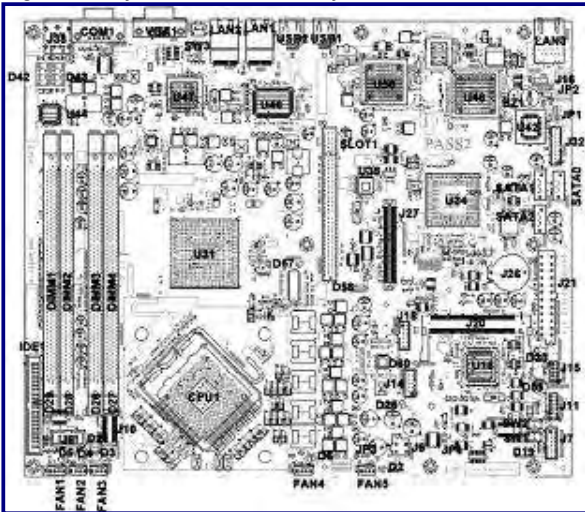
[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#) |

SBB number	Option number ¹	Feature codes	Processor options	Models supported
Standard processor				
43W5066	-	2844	Single-Core Intel Celeron 440 (2.0GHz/800MHz FSB, 512K L2)	15Y
44R5766	-	3650	Dual-Core Intel Xeon E3110 (3.00GHz/1333MHz FSB, 6MB L2)	52Y
44R5767	-	3651	Quad-Core Intel Xeon X3320 (2.50GHz/1333MHz FSB, 6MB L2)	62Y, 64Y, 66Y
44R5768	-	3652	Quad-Core Intel Xeon X3350 (2.66GHz/1333MHz FSB, 12MB L2)	72Y, 74Y
44R5769	-	3653	Dual-Core Intel Core 2 Duo E4600 (2.4GHz/800MHz FSB, 2MB L2)	22Y

Notes:

- Supported options will be published in a future release as they become available.

Figure 1. System x3250 M2 system board



[Click image to enlarge](#)

System x3250 M2 (4190, 4194)

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At-A-Glance Options

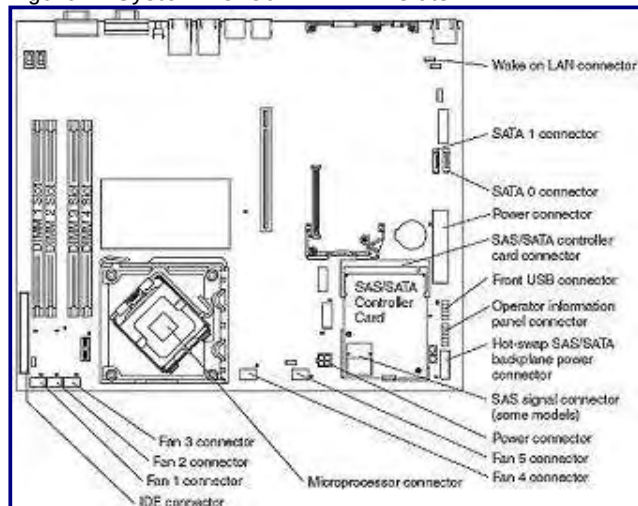
[Processor](#) | **[Memory](#)** | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#) |

SBB number	Option number	Feature codes	Memory description
Memory cards			
Memory DIMMs			
41Y2724	41Y2726	1902	512MB DDR2 667 SDRAM DIMM Memory
41Y2727	-	1903	1GB DDR2 667 SDRAM DIMM Memory
41Y2730	-	1904	2GB DDR2 667 SDRAM DIMM Memory
-	41Y2729	-	2GB (2x 1GB Kit) PC2-5300 CL5 ECC DDR2 SDRAM DIMM
-	41Y2732	-	4GB (2x 2GB Kit) PC2-5300 CL5 ECC DDR2 SDRAM DIMM

Table 1. Standard Memory Configuration

Model	Std. DIMM Configuration
15Y	1 * 512MB DDR2 667 SDRAM DIMM Memory
22Y, 52Y, 62Y, 64Y, 66Y	2 * 512MB DDR2 667 SDRAM DIMM Memory
72Y, 74Y	2 * 1GB DDR2 667 SDRAM DIMM Memory

Figure 1. System x3250 M2 DIMM slots



[Click image to enlarge](#)

System x3250 M2 (4190, 4194)

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At-A-Glance Options

Processor | Memory | **HDD** | I/O | Pwr acc | Tape |

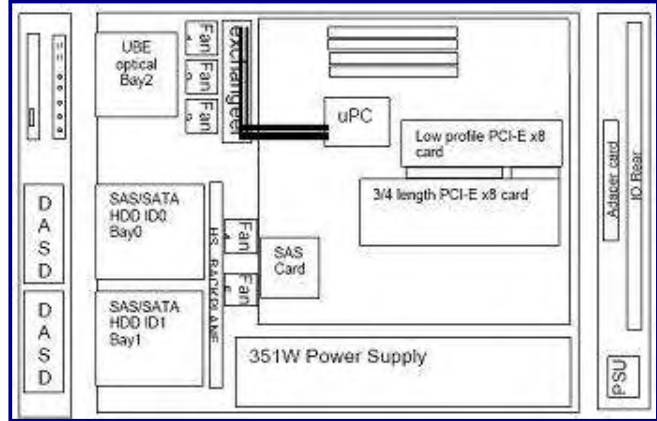
SBB number	Option number	Feature codes	Description	Height	Bays supported	Max qty
Diskette						
-	40K1692	-	IBM USB Portable Diskette Drive	-	-	-
SATA Simple-Swap HDDs¹						
39M4505	39M4504	5291	160GB 7200 RPM 3.5" Simple-Swap SATA II	SL	0...1	2
39M4509	39M4508	5292	250GB 7200 RPM 3.5" Simple-Swap SATA II	SL	0...1	2
39M4515	39M4514	5288	500GB 7200 RPM 3.5" Simple-Swap SATA II	SL	0...1	2
43W7573	43W7572	5531	750GB 7200 RPM 3.5" Simple-Swap SATA II	SL	0...1	2
SATA Hot-Swap HDDs¹						
39M4523	39M4522	5150	160GB 7200 RPM 3.5" Hot-Swap SATA II	SL	0...1	2
39M4527	39M4526	5151	250GB 7200 RPM 3.5" Hot-Swap SATA II	SL	0...1	2
39M4531	39M4530	5196	500GB 7200 RPM 3.5" Hot-Swap SATA II	SL	0...1	2
43W7577	43W7576	5530	750GB 7200 RPM 3.5" Hot-Swap SATA II	SL	0...1	2
SAS Hot-Swap HDDs¹						
40K1075	40K1043	5161	73GB 15K 3.5" Hot-Swap SAS	SL	0...1	2
40K1076	40K1044	5162	146GB 15K 3.5" Hot-Swap SAS	SL	0...1	2
43X0808	43X0802	5532	300GB 15K 3.5" Hot-Swap SAS	SL	0...1	2
40K1084	40K1052	5159	73GB 10K 2.5" Hot-Swap SAS HDD	SFF	0...3	4
43X0826	43X0824	5534	146GB 10K 2.5" Hot-Swap SAS HDD	SFF	0...3	4
43X0841	43X0837	5543	73GB SAS 15K 2.5" SFF HS	SFF	0...3	4
Optical Devices						
43W8262	-	4156	UltraSlim Enhanced CD-RW / DVD-ROM Combo	US	4 or 2	1
43W8263	-	4157	UltraSlim Enhanced Multi-Burner	US	4 or 2	1
External Storage Expansion Unit				Form Factor		
-	17011RL	-	IBM TotalStorage DS300 - Single Controller LC	-		
-	17011RS	-	IBM Total Storage DS300 - Single Controller	-		
-	172621X	-	IBM System Storage DS3200 SAS Single Controller	-		
-	172622X	-	IBM System Storage DS3200 SAS Dual Controller	-		
-	172641X	-	IBM System Storage DS3400 FC Single Controller	-		
-	172642X	-	IBM System Storage DS3400 FC Dual Controller	-		
-	172701X	-	IBM System Storage EXP3000	-		

Bay	Form Factor	Height	Front access	Usage
3.5" Drive Bay Configuration				
0 ¹	89mm (3.5in)	SL	Y	HDD
1	89mm (3.5in)	SL	Y	HDD
2	133mm (5.25in)	SFF	Y	Std. Optical
2.5" Drive Bay Configuration				
0 ¹	63.5mm (2.5in)	SL	Y	HDD
1	63.5mm (2.5in)	SL	Y	HDD
2	63.5mm (2.5in)	SL	Y	HDD
3	63.5mm (2.5in)	SL	Y	HDD
4	133mm (5.25in)	SFF	Y	Std. Optical

Note:

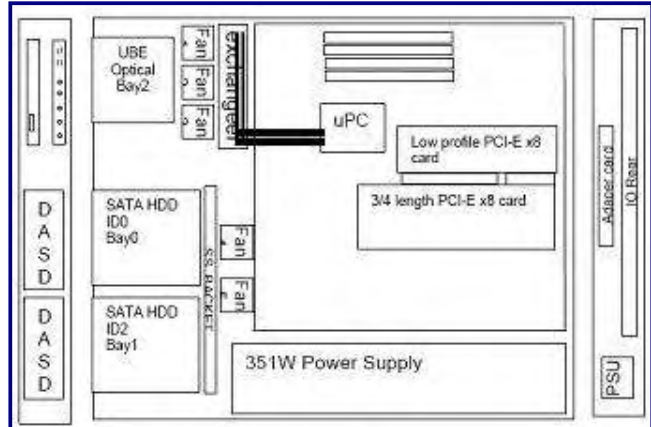
- The standard hard disk drive, on a non-open bay model, is installed in bay 0

Figure 1. System x3250 M2 3.5" Hot-Swap SAS-SATA drive bays



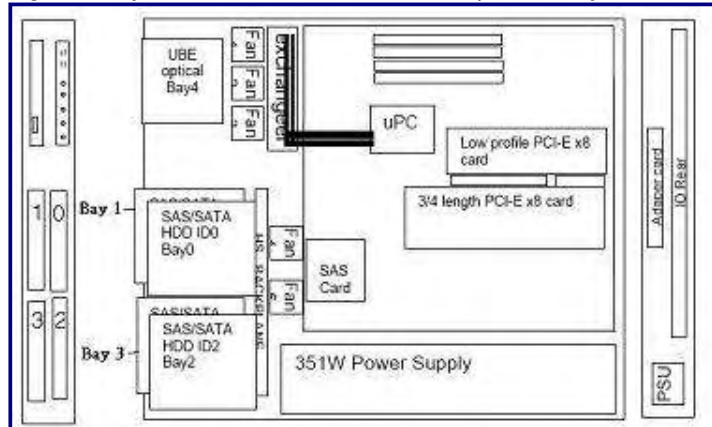
[Click image to enlarge](#)

Figure 2. System x3250 M2 3.5" Simple-Swap SATA drive bays



[Click image to enlarge](#)

Figure 3. System x3250 M2 2.5" Hot-Swap drive bays



[Click image to enlarge](#)

System x3250 M2 (4190, 4194)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Processor | Memory | HDD | I/O | Pwr acc | Tape |

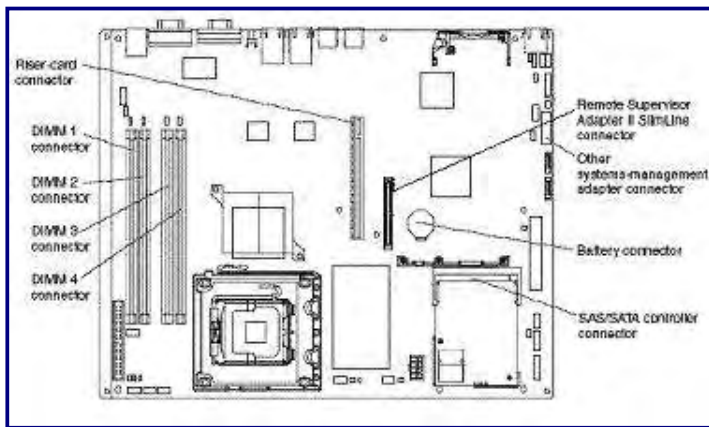
SBB number	Part number	Feature codes	Description	Adapter length	PCI support	Slots supported	Hot-Plug capable
Storage controllers							
25R8072	25R8060	1681	IBM SAS HBA Controller	Half	PCI-E	1, 2	N
42C2179	39R6525	3567	QLogic 4Gb FC Single-Port PCIe HBA for IBM System x	Half	PCI-E	1, 2	N
42C2182	39R6527	3568	QLogic 4Gb FC Dual-Port PCIe HBA for IBM System x	Half	PCI-E	1, 2	N
43W4298	43W4296	3571	IBM ServeRAID-MR10i SAS/SATA Controller ^{1, 2}	Half	PCI-E	1	N
43W4340	43W4339	3559	ServeRAID-MR10M SAS/SATA Controller ³	Half	x8 PCIe	1	N
43W7491	42C2069	1698	Emulex 4GB FC Single-Port PCI-E HBA for IBM System x	Half	PCI-E	1, 2	N
43W7492	42C2071	1699	Emulex 4GB FC Dual-Port PCI-E HBA for IBM System x	Half	PCI-E	1, 2	N
-	44X0411	-	ServeRAID-BR10iL SAS/SATA Controller Kit	-	-	-	-
Networking							
39Y6149	39Y6146	2976	QLogic iSCSI Single Port PCIe HBA for IBM System x	Half	PCIe x4	1, 2	N
42C1773	42C1770	2977	QLogic iSCSI Dual Port PCIe HBA for IBM System x	Half	PCIe x4	1, 2	N
39Y6071	39Y6066	1485	NetXtreme II 1000 Express G Ethernet Adapter - PCIe	Half	PCI-e x4	1,2	Y
39Y6129	39Y6126	2944	PRO/1000 PT Dual Port Server Adapter by Intel	Half	PCI-e x4	1,2	Y
-	39Y6136	-	PRO/1000 PT Quad Port Server Adapter	Half	PCIe x4	1, 2	N
42C1753	42C1750	2975	PRO/1000 PF Server Adapter	Half	PCIe x4	1, 2	N
42C1783	42C1780	2995	NetXtreme II 1000 Express Dual Port Ethernet Adapter	Half	PCI-E (x4)	1,2	N
Systems Management							
42C4178	39Y9566	1607	Remote Supervisor Adapter II Slimline	Half	-	RSA slot	N

Notes:

1. The ServeRAID MR10i is only supported on models with 2.5 drive bays.
2. Supported on Hot Swap models in slot 1 only.
3. Supported in slot 1 only.

Slot	Type	Bus	Voltage (V)	Frequency MHz	Data path	Active PCI	Slot length
PCI Slot 1	PCI-E	0	3.3	x8	-	N	3/4
PCI Slot 2	PCI-E	Port 1	3.3	x8	-	N	Half
RSA	BTB	-	-	-	-	-	-

Figure 1. x3250 M2 riser-card and RSA connectors



[Click image to enlarge](#)

System x3250 M2 (4190, 4194)

Attention:

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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | **[Pwr acc](#)** | [Tape](#) |

SBB number	Option number	Description
Power Distribution Units		
-	39Y8905	DPI 100-127v PDU with Fixed Nema L5-15P line cord
-	39Y8923	IBM Enterprise C19 3 phase PDU (60a)
-	39Y8935	63A/250V Front-end PDU IEC 309 P+N+G
-	39Y8938	30amp/125V Front-end PDU with NEMA L5-30P connector
-	39Y8939	30amp/250V Front-end PDU with NEMA L6-30P connector
-	39Y8940	60amp/250V Front-end PDU with IEC 309 60A 2P+N+Gnd connector
-	39Y8941	DPI Single Phase C13 Enterprise PDU w/o line cord
-	39Y8948	DPI Single Phase C19 Enterprise PDU w/o line cord
-	39Y8951	DPI Universal Rack PDU w/ NEMA L5-20P & L6-20P (US cord)
-	39Y8999	32A/230V 3P w/IEC309 3P+N+Gnd Conn
-	39Y9000	60A/208V 3P w/IEC309 3P+Gnd Conn
-	40K9614	IBM DPI 30a Cord (NEMA L6-30P)(all models)
-	40K9615	IBM DPI 60a Cord (IEC 309 2P+G)(all models)
Uninterruptible Power Supply (UPS)		
-	21301RX	IBM UPS 3000 LV
-	21302RX	IBM UPS 3000 HV
-	40K9620	IBM UPS 3000 EBM

SBB number	Option number	Feature code	Description
Racks			
-	17231RX	-	IBM 1U 17 Flat Panel Console Kit w/ Optical Drive Bay
-	17233RX	-	IBM 1U 15 Flat Panel Console Kit
-	93072RX	-	IBM 25U S2 standard rack
-	93074RX	-	NetBAY S2 42U Standard Rack Cabinet
-	93074XX	-	IBM 42U S2 expansion rack
-	93084XX	-	NetBAY42 Enterprise Expansion Rack Cabinet (EX)
Console Connectivity			
39Y7953	31R3132	3751	IBM 3M Console Switch Cable (USB)
-	39M2895	-	IBM USB Conversion Option (UCO)
-	17351GX	-	IBM Local 2x8 Console Manager (LCM2)
-	17352GX	-	IBM Global 2x16 Console Mngr(GCM2)
-	17354GX	-	Global 4x16 Console Mngr (GCM4)
Monitors			
-	4942	-	IBM T115 15 TFT Monitor
-	4943	-	IBM T117 17 TFT Monitor
-	4944	-	IBM T119 19 TFT Monitor
Keyboard and Mouse			
42C1473	40K5372	8693	IBM Keyboard w/ Integrated Pointing Device USB - US English 103P
40K9490	40K9584	8750	IBM Preferred Pro Keyboard USB - US English 103P
40K9491	40K9200	8912	IBM 2 Button Optical Wheel Mouse - Black - USB
40K9492	40K9201	8913	IBM 3 Button Optical Mouse - Black - USB

System x3250 M2 (4190, 4194)

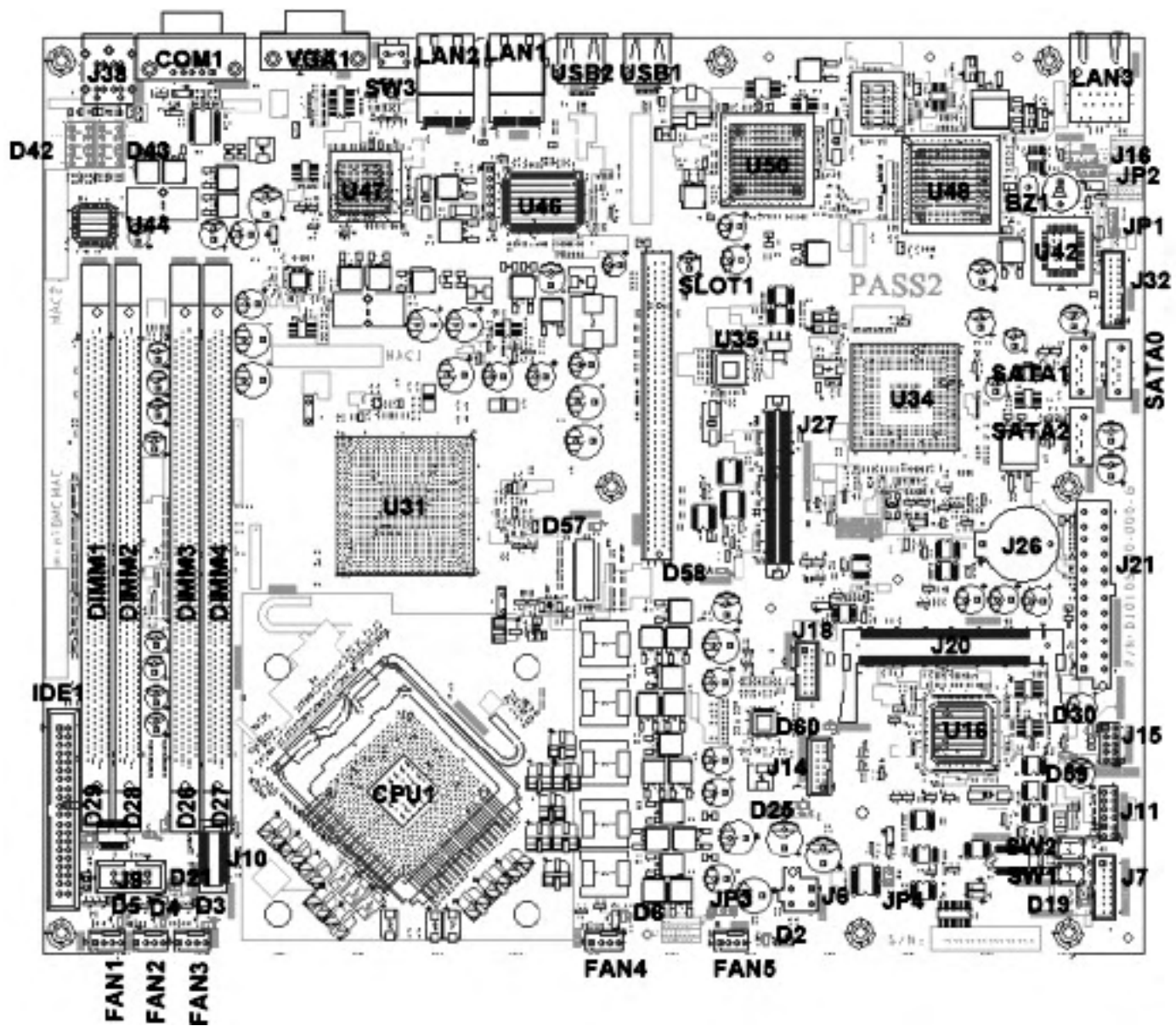
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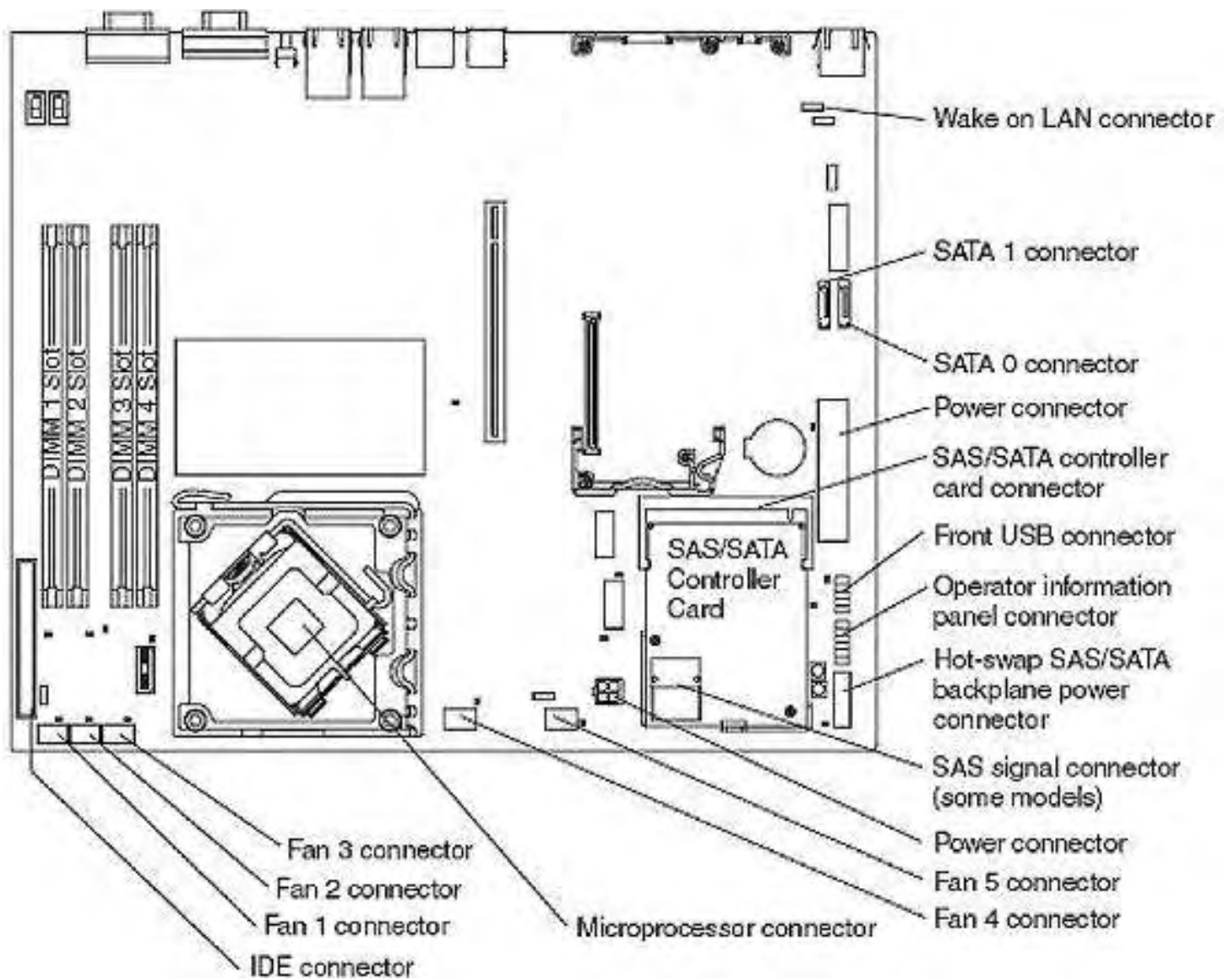
A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

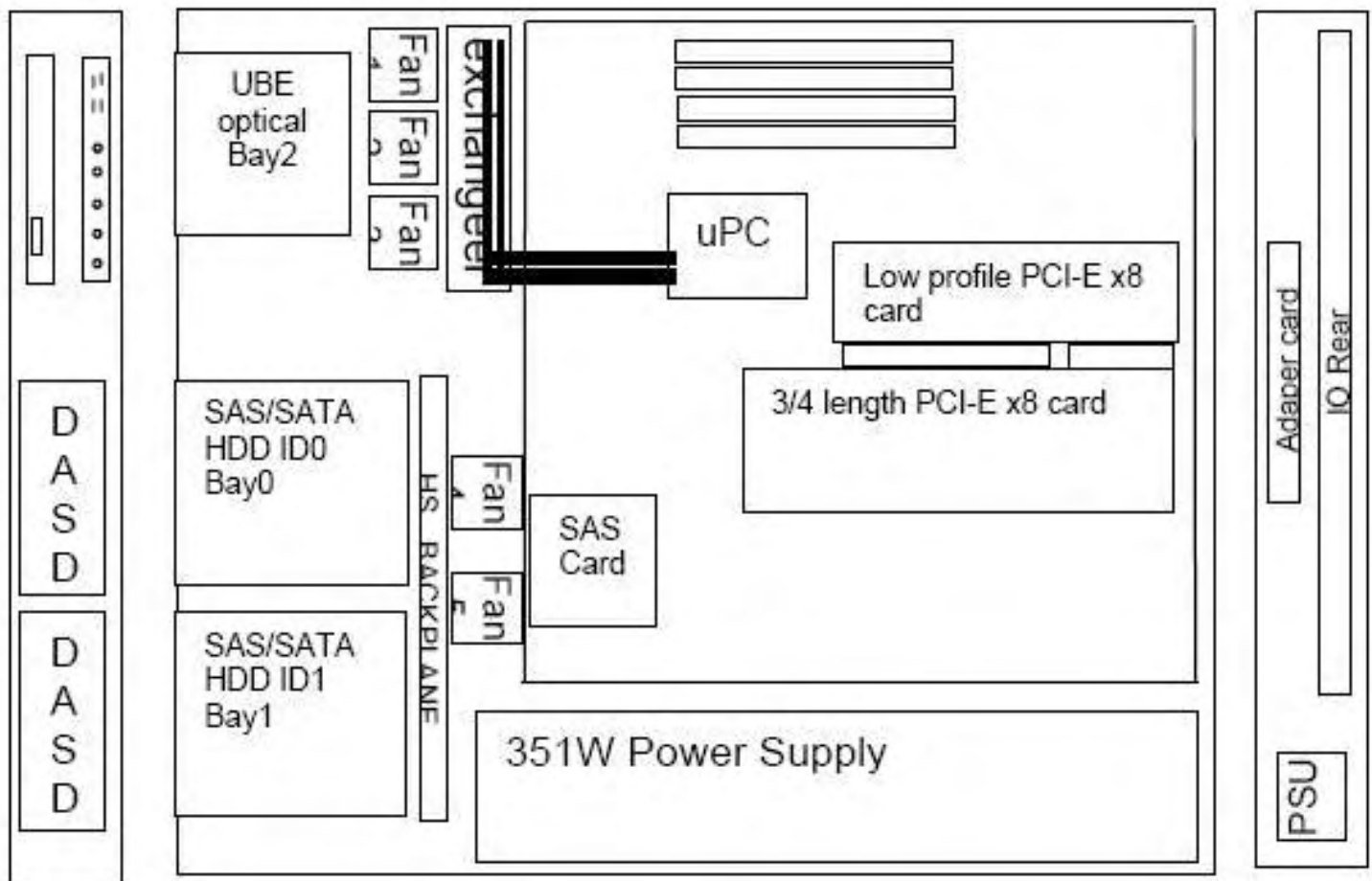
At A Glance Options

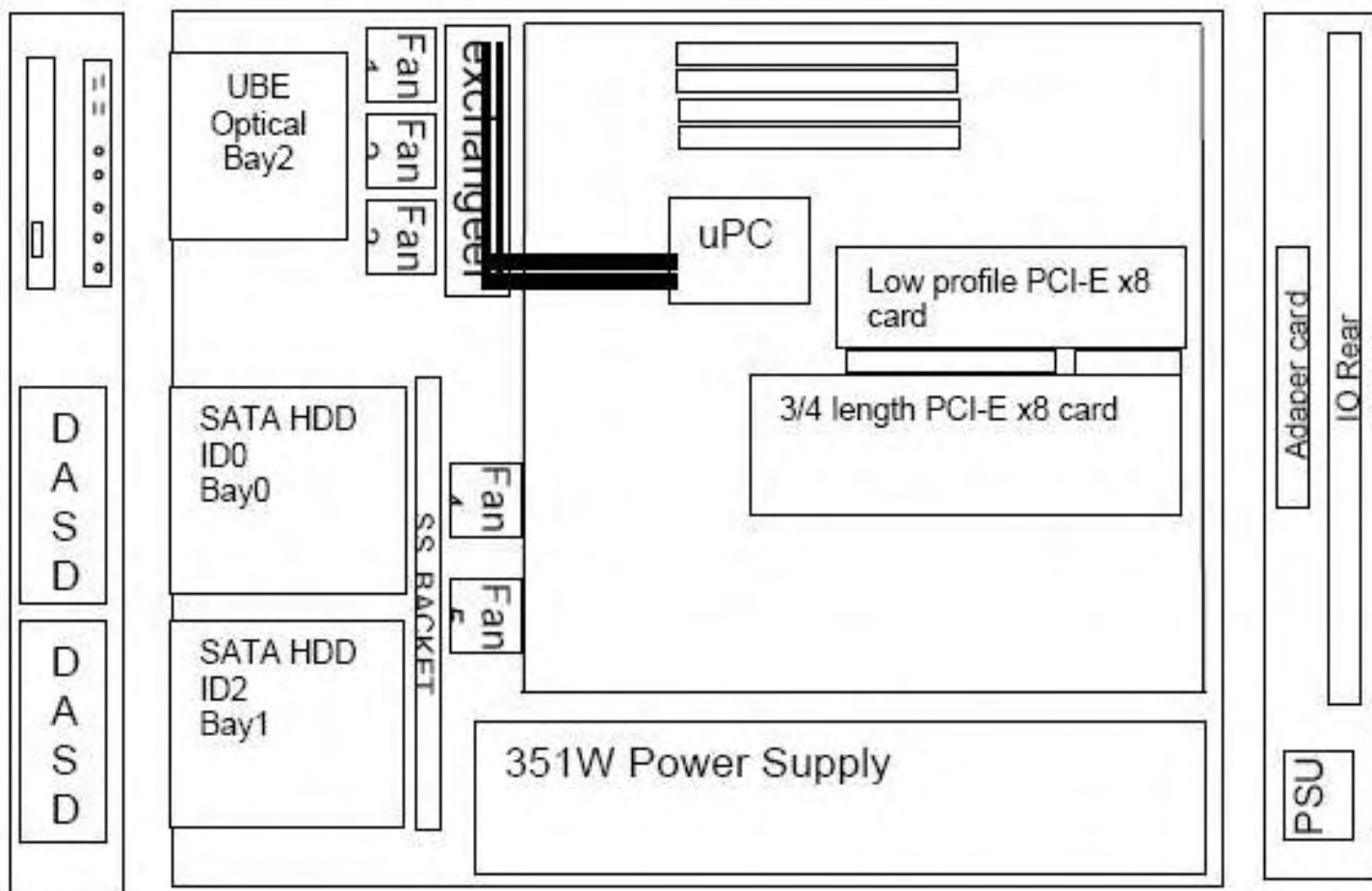
[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | **[Tape](#)** |

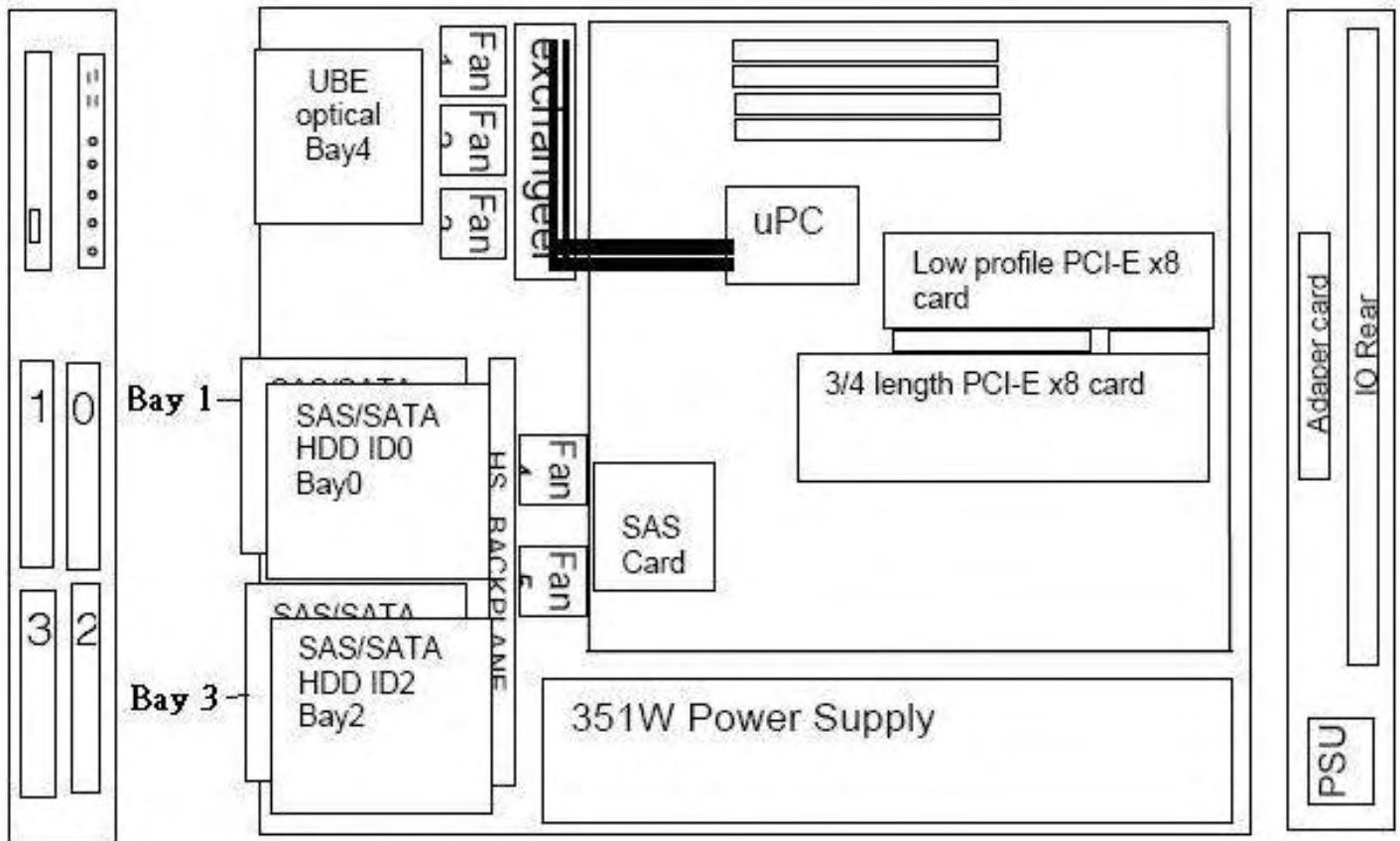
SBB number	Option number	Feature codes	tape options	Bays supported	Storage interface	Form factor	Ext tape enclosures
Tape drives							
-	25R0045	-	IBM VXA320 160/320GB Tape Drive	-	-	-	87651UX 87664UX 8767HHX
-	39M5617	-	GoVault 80GB Cartridge	-	-	-	-
-	39M5636	-	IBM DDS Generation 6 USB Tape Drive	-	-	-	87651UX 87664UX 8767HHX
-	39M5658	-	HH LTO Gen 2 Tape Drive	-	-	-	87664UX 8767HHX
-	42D8771	-	IBM GoVault Internal Dock	-	-	-	-
-	44E8895	-	IBM Half High LTO Gen 4 SAS Tape Drive	-	-	-	-
External Tape Libraries							
-	87651UX	-	1U Tape Drive Enclosure	-	-	-	-
-	87664UX	-	4U Tape Drive Enclosure	-	-	-	-
-	8767HHX	-	Half High Tape Drive Enclosure	-	-	-	-
-	8768FHX	-	Full High Tape Drive Enclosure	-	-	-	-
Associated tape options							
-	40K2599	-	SAS Enclosure Adapter Kit	-	-	-	-
-	44E8869	-	USB Enclosure Adapter Kit	-	-	-	-

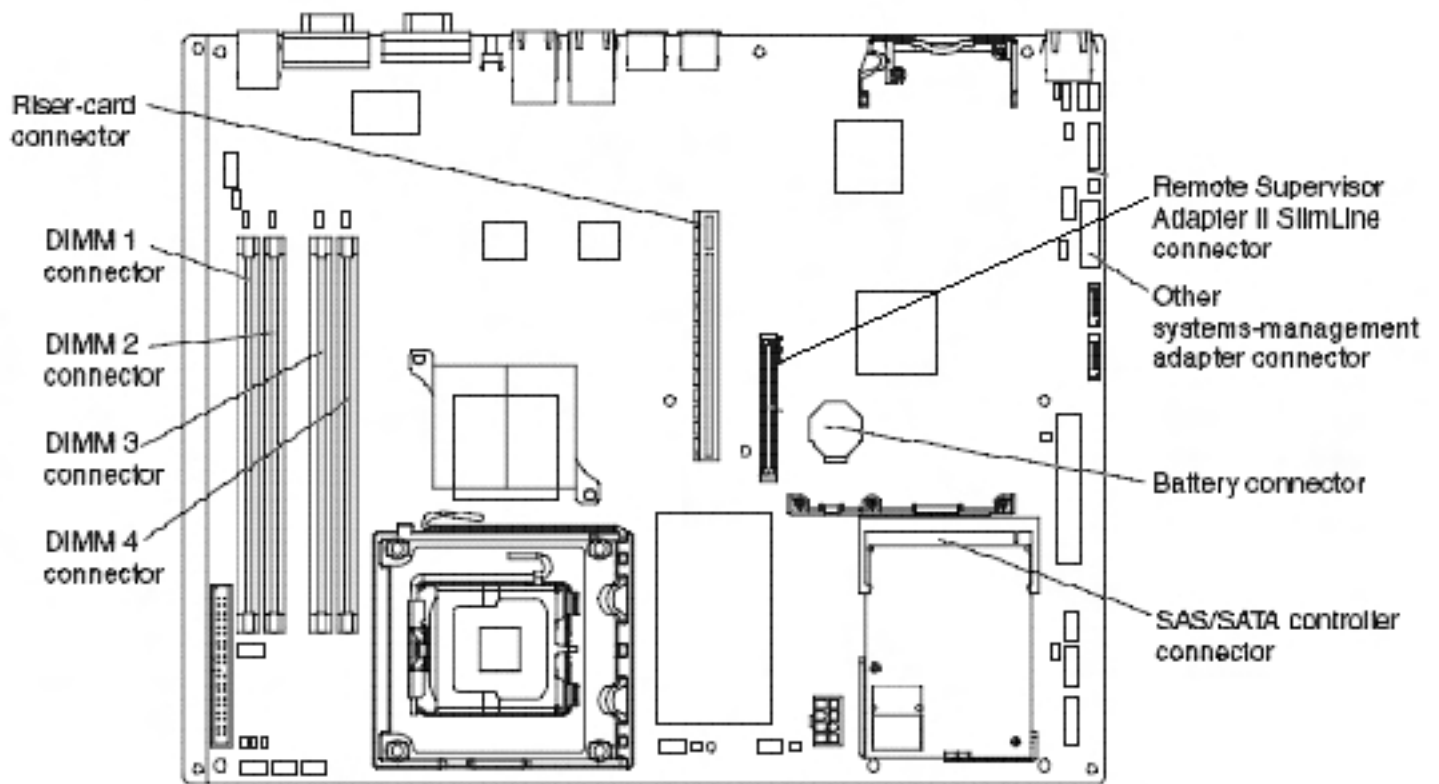












System x3350 (4192, 4193)

Attention:

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At-A-Glance Options

Table 1. System x3350 (4192, 4193) at-a-glance

Part number ¹	CPU / FSB speed (GHz / MHz)- cache	Number of processors (std / max)	Memory (std / max)	Form factor	Power supply quantity (std / max)	Hot-swap (power, slots, HDD, fans, memory)	System Mgmt Processor
4192-32Y	Dual-Core Intel Xeon Processor 3065 (2.33GHz/1333MHz- 4MB)	1/1	1GB/8GB	Rack (1U)	1/2	-	N
4192-42Y	Dual-Core Intel Xeon Processor 3075 (2.66GHz/1333MHz- 4MB)	1/1	1GB/8GB	Rack (1U)	1/2	-	N
4192-44Y	Dual-Core Intel Xeon Processor 3075 (2.66GHz/1333MHz- 4MB)	1/1	1GB/8GB	Rack (1U)	1/2	H	N
4192-52Y	Dual-Core Intel Xeon Processor E3110 (3.0GHz/1333MHz- 6MB)	1/1	1GB/8GB	Rack (1U)	1/2	H	N
4192-62Y	Quad-Core Intel Xeon Processor X3320 (2.5GHz/1333MHz- 6MB)	1/1	2GB/8GB	Rack (1U)	1/2	H	N
4192-72Y	Quad-Core Intel Xeon Processor X3350 (2.66GHz/1333MHz- 12MB)	1/1	2GB/8GB	Rack (1U)	1/2	H	N
4192-82Y	Quad-Core Intel Xeon Processor X3360 (2.83GHz/1333MHz- 12MB)	1/1	2GB/8GB	Rack (1U)	1/2	H	N
4192-E1Y	Dual-Core Intel Xeon Processor 3065 (2.33GHz/1333MHz- 4MB)	1/1	2GB/8GB	Rack (1U)	1/2	H	N
4192-E2Y	Quad-Core Intel Xeon Processor X3320 (2.5GHz/1333MHz- 6MB)	1/1	4GB/8GB	Rack (1U)	1/2	H	N
4193-32Y	Dual-Core Intel Xeon Processor 3065 (2.33GHz/1333MHz- 4MB)	1/1	1GB/8GB	Rack (1U)	1/2	-	N
4193-42Y	Dual-Core Intel Xeon Processor 3075 (2.66GHz/1333MHz- 4MB)	1/1	1GB/8GB	Rack (1U)	1/2	-	N
4193-44Y	Dual-Core Intel Xeon Processor 3075 (2.66GHz/1333MHz- 4MB)	1/1	1GB/8GB	Rack (1U)	1/2	H	N

4193-52Y	Dual-Core Intel Xeon Processor E3110 (3.0GHz/1333MHz-6MB)	1/1	1GB/8GB	Rack (1U)	1/2	H	N
4193-62Y	Quad-Core Intel Xeon Processor X3320 (2.5GHz/1333MHz-6MB)	1/1	2GB/8GB	Rack (1U)	1/2	H	N
4193-72Y	Quad-Core Intel Xeon Processor X3350 (2.66GHz/1333MHz-12MB)	1/1	2GB/8GB	Rack (1U)	1/2	H	N
4193-82Y	Quad-Core Intel Xeon Processor X3360 (2.83GHz/1333MHz-12MB)	1/1	2GB/8GB	Rack (1U)	1/2	H	N
4193-E1Y	Quad-Core Intel Xeon Processor X3360 (2.83GHz/1333MHz-12MB)	1/1	4GB/8GB	Rack (1U)	2/2	H	N

Table 1. System x3350 (4192, 4193) at-a-glance (continued)

Part number ¹	Integrated ethernet	Storage controller	Internal HDD interface	Internal HDD storage (std / max)	Optical drive	Bays (total / avail)	Slots (total / avail)
4192-32Y	Dual 1Gb	SATA	Simple-Swap	0GB/1500GB	CD-RW/DVD Combo	3/3	2/2
4192-42Y	Dual 1Gb	SATA	Simple-Swap	0GB/1500GB	CD-RW/DVD Combo	3/3	2/2
4192-44Y	Dual 1Gb	3.5 SAS/SATA	Hot-Swap	0GB/1500GB	CD-RW/DVD Combo	3/3	2/2
4192-52Y	Dual 1Gb	3.5 SAS/SATA	Hot-Swap	0GB/1500GB	CD-RW/DVD Combo	3/3	2/2
4192-62Y	Dual 1Gb	SAS 2.5in	Hot-Swap	0GB/584GB	CD-RW/DVD Combo	5/5	2/2
4192-72Y	Dual 1Gb	SAS 2.5in	Hot-Swap	0GB/584GB	CD-RW/DVD Combo	5/5	2/2
4192-82Y	Dual 1Gb	SAS 2.5in	Hot-Swap	0GB/584GB	CD-RW/DVD Combo	5/5	2/2
4192-E1Y	Dual 1Gb	SATA	Simple-Swap	0GB/1500GB	CD-RW/DVD Combo	3/3	2/2
4192-E2Y	Dual 1Gb	SAS 2.5in	Hot-Swap	0GB/584GB	CD-RW/DVD Combo	5/5	2/2
4193-32Y	Dual 1Gb	SATA	Simple-Swap	0GB/1500GB	CD-RW/DVD Combo	3/3	2/2
4193-42Y	Dual 1Gb	SATA	Simple-Swap	0GB/1500GB	CD-RW/DVD Combo	3/3	2/2
4193-44Y	Dual 1Gb	3.5 SAS/SATA	Hot-Swap	0GB/1500GB	CD-RW/DVD Combo	3/3	2/2
4193-52Y	Dual 1Gb	3.5 SAS/SATA	Hot-Swap	0GB/1500GB	CD-RW/DVD Combo	3/3	2/2
4193-62Y	Dual 1Gb	SAS 2.5in	Hot-Swap	0GB/584GB	CD-RW/DVD Combo	5/5	2/2
4193-72Y	Dual 1Gb	SAS 2.5in	Hot-Swap	0GB/584GB	CD-RW/DVD Combo	5/5	2/2
4193-82Y	Dual 1Gb	SAS 2.5in	Hot-Swap	0GB/584GB	CD-RW/DVD Combo	5/5	2/2
4193-E1Y	Dual 1Gb	SAS 2.5in	Hot-Swap	0GB/584GB	CD-RW/DVD Combo	5/5	2/2

Notes:

1. Model numbers provided are worldwide generally available variant (GAV) model numbers which are not orderable as listed and need to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 4367-12Y is 4367-12U. See the product specific Official IBM announcement letter for other country-specific GAV model numbers. GAV to MTM mapping for A.P. Geographies follow the same pattern. Substitute the last character with the country-specific designator.

System x3350 (4192, 4193)

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At-A-Glance Options

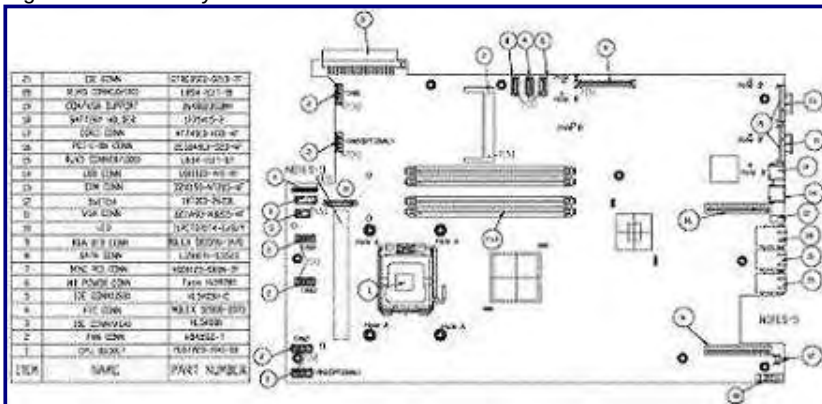
[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#) |

SBB number	Option number ¹	Feature codes	Processor options	Models supported
Standard processor				
43W4923	-	2839	Dual-Core Intel Xeon Processor 3065 (2.33GHz/1333MHz-4MB)	32Y, 4192-E1Y
43W4924	-	2840	Dual-Core Intel Xeon Processor 3075 (2.66GHz/1333MHz-4MB)	42Y, 44Y
44X0200	-	3087	Dual-Core Intel Xeon Processor E3110 (3.0GHz/1333MHz-6MB)	52Y
44X0201	-	3088	Quad-Core Intel Xeon Processor X3320 (2.5GHz/1333MHz-6MB)	62Y, E2Y
44X0202	-	3089	Quad-Core Intel Xeon Processor X3350 (2.66GHz/1333MHz-12MB)	72Y
44X0203	-	3090	Quad-Core Intel Xeon Processor X3360 (2.83GHz/1333MHz-12MB)	82Y, 4193-E1Y

Notes:

1. Supported options will be published in a future release as they become available.

Figure 1. x3350 system board



[Click image to enlarge](#)

System x3350 (4192, 4193)

Attention:

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At-A-Glance Options

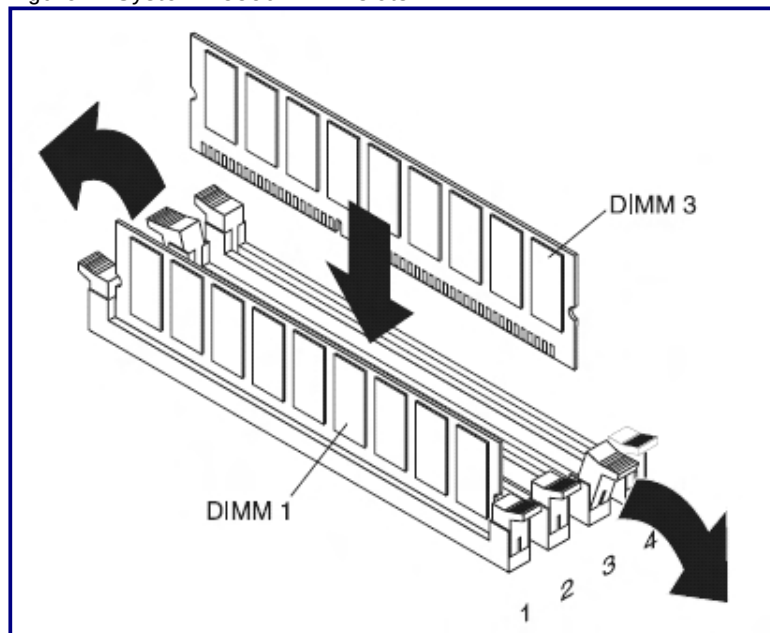
[Processor](#) | **[Memory](#)** | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#) |

SBB number	Option number	Feature codes	Memory description
Memory cards			
41Y2724	41Y2726	1902	512MB DDR2 667 SDRAM DIMM Memory
41Y2727	-	1903	1GB DDR2 667 SDRAM DIMM Memory
41Y2730	-	1904	2GB DDR2 667 SDRAM DIMM Memory
-	41Y2729	-	2GB (2x 1GB Kit) PC2-5300 CL5 ECC DDR2 SDRAM DIMM
-	41Y2732	-	4GB (2x 2GB Kit) PC2-5300 CL5 ECC DDR2 SDRAM DIMM

Table 1. Standard Memory Configuration

Model	Std. DIMM Configuration
32Y,42Y,44Y,52Y	2 * 512MB DDR2 667 SDRAM DIMM Memory
62Y,72Y,82Y	2 * 1GB DDR2 667 SDRAM DIMM Memory

Figure 1. System x3350 DIMM slots



[Click image to enlarge](#)

System x3350 (4192, 4193)

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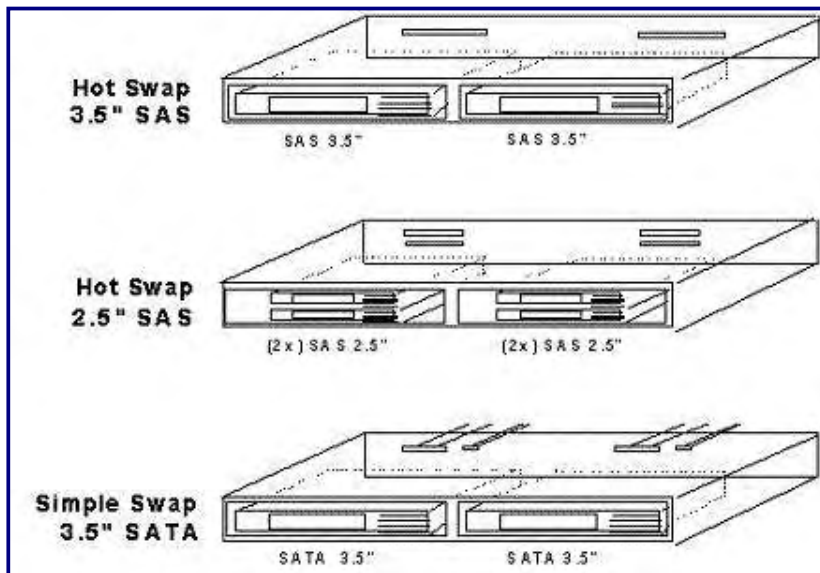
At-A-Glance Options

Processor | Memory | **HDD** | I/O | Pwr acc | Tape |

SBB number	Option number	Feature codes	Description	Height	Bays supported	Max qty
SATA Simple-Swap HDDs						
39M4505	39M4504	5291	160GB 7200 RPM 3.5" Simple-Swap SATA II	SL	0...1	2
39M4509	39M4508	5292	250GB 7200 RPM 3.5" Simple-Swap SATA II	SL	0...1	2
39M4515	39M4514	5288	500GB 7200 RPM 3.5" Simple-Swap SATA II	SL	0...1	2
43W7573	43W7572	5531	750GB 7200 RPM 3.5" Simple-Swap SATA II	SL	0...1	2
SATA Hot-Swap HDDs						
39M4523	39M4522	5150	160GB 7200 RPM 3.5" Hot-Swap SATA II	SL	0...1	2
39M4527	39M4526	5151	250GB 7200 RPM 3.5" Hot-Swap SATA II	SL	0...1	2
39M4531	39M4530	5196	500GB 7200 RPM 3.5" Hot-Swap SATA II	SL	0...1	2
43W7577	43W7576	5530	750GB 7200 RPM 3.5" Hot-Swap SATA II	SL	0...1	2
SAS Hot-Swap HDDs						
40K1075	40K1043	5161	73GB 15K 3.5" Hot-Swap SAS	SL	0...1	2
40K1076	40K1044	5162	146GB 15K 3.5" Hot-Swap SAS	SL	0...1	2
40K1084	40K1052	5159	73GB 10K 2.5" Hot-Swap SAS HDD	SFF	0...3	4
43X0808	43X0802	5532	300GB 15K 3.5" Hot-Swap SAS	SL	0...1	2
43X0826	43X0824	5534	146GB 10K 2.5" Hot-Swap SAS HDD	SFF	0...3	4
43X0841	43X0837	5543	73GB SAS 15K 2.5" SFF HS	SFF	0...3	4
Optical Drives						
32R2784	39Y6824	4144	CD-RW/DVD Combo V Ultrabay Enhanced	SFF	4 or 2	1
32R2901	-	4143	Multi-Burner Ultrabay Enhanced Drive	SFF	4 or 2	1
External Storage Expansion Unit				Form Factor		
-	172701X	-	IBM System Storage EXP3000	-	-	-
-	18128xx	-	IBM System Storage EXP810 Storage Expansion Unit (all models)	Rack Drawer (3U)		
-	18147Vx	-	IBM System Storage DS4200 Midrange Disk System (all models)	-		
-	18147xx	-	IBM System Storage DS4700 Midrange Disk System (all models)	-		
-	2107-xxx	-	IBM TotalStorage DS8100 2107 (all models)	-		
-	24P82xx	-	IBM TotalStorage DS4300 Model 60U with Turbo	-		

Bay	Form Factor	Height	Front access	Usage
3.5" Drive Bay Configuration				
0	89mm (3.5in)	SL	Y	HDD
1	89mm (3.5in)	SL	Y	HDD
2	133mm (5.25in)	SFF	Y	Std. Optical
2.5" Drive Bay Configuration				
0	63.5mm (2.5in)	SL	Y	HDD
1	63.5mm (2.5in)	SL	Y	HDD
2	63.5mm (2.5in)	SL	Y	HDD
3	63.5mm (2.5in)	SL	Y	HDD
4	133mm (5.25in)	SFF	Y	Std. Optical

Figure 1. System x3350 HDD configurations



[Click image to enlarge](#)

System x3350 (4192, 4193)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Processor | Memory | HDD | I/O | Pwr acc | Tape |

SBB number	Part number	Feature codes	Description	Adapter length	PCI support	Slots supported	Hot-Plug capable ¹
Storage controllers							
42C2179	39R6525	3567	QLogic 4Gb FC Single-Port PCIe HBA for IBM System x	Half	x8 PCI-E	1, 2	N
42C2182	39R6527	3568	QLogic 4Gb FC Dual-Port PCIe HBA for IBM System x	Half	x8 PCI-E	1, 2	N
43W4298	43W4296	3571	IBM ServeRAID-MR10i SAS/SATA Controller ¹	Half	PCI-E	2	N
43W4340	43W4339	3559	ServeRAID-MR10M SAS/SATA Controller ²	Half	x8 PCI-E	2	N
-	42C2069	-	Emulex 4GB FC Single-Port PCI-E HBA for IBM System x	-	-	-	-
-	42C2071	-	Emulex 4GB FC Dual-Port PCI-E HBA for IBM System x	-	-	-	-
-	25R8060	-	IBM SAS HBA Controller	-	-	-	-
-	43W4324	-	IBM Ultra 320 SCSI PCIe Controller	-	-	-	-
-	44X0411	-	ServeRAID-BR10i SAS/SATA Controller Kit	-	-	-	-
Networking							
-	42C1750	-	PRO/1000 PF Server Adapter by Intel	-	-	-	-
39Y6071	39Y6066	1485	NetXtreme II 1000 Express G Ethernet Adapter - PCIe	Half	PCI-e x4	1,2	Y
39Y6129	39Y6126	2944	PRO/1000 PT Dual Port Server Adapter by Intel	Half	PCI-e x4	1,2	Y
-	39Y6136	-	PRO/1000 PT Quad Port Server Adapter by Intel	Half	PCI-e x4	1, 2	N
39Y6149	39Y6146	2976	QLogic iSCSI Single Port PCIe HBA for IBM System x	Half	PCI-e x4	1, 2	N
-	42C1760	-	IBM 10 GbE PCIe SR Server Adapter ³	-	-	-	-
42C1773	42C1770	2977	QLogic iSCSI Dual Port PCIe HBA for IBM System x	Half	PCI-e x4	1, 2	N
42C1783	42C1780	2995	NetXtreme II 1000 Express Dual Port Ethernet Adapter	Half	PCI-e x4	1,2	N
Systems Management							
42C4178	39Y9566	1607	Remote Supervisor Adapter II Slimline	Half	-	RSA Slot	N

Notes:

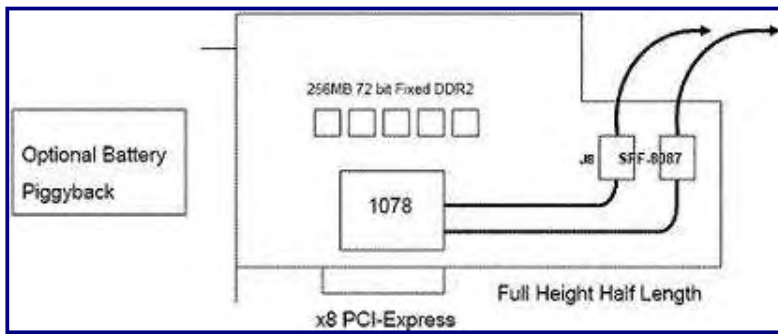
- Supported on Hot Swap models in slot 2 only.
- Supported in slot 2 only.
- Not supported on systems with greater than 32GB installed memory.

Slot ¹	Type	Bus	Voltage (V)	Frequency MHz	Data path	Active PCI	Slot length
PCI Slot 1 ²	PCI-E	-	-	x8	-	-	HL / FH
PCI Slot 2 ³	PCI-E	-	-	x8	-	-	HL / FH

Notes:

- An additional dedicated RSA slot is available for the Remote Supervisor Adapter II Slimline Refresh 1 option.

Figure 1. x3350 x8 PCI-E connections



[Click image to enlarge](#)

System x3350 (4192, 4193)

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At-A-Glance Options

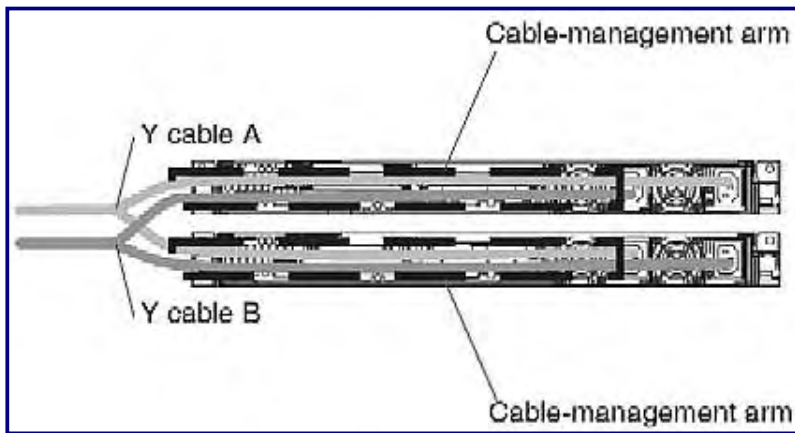
Processor | Memory | HDD | I/O | **Pwr acc** | Tape |

SBB number	Option number	Feature code	Description
Power			
43V7410	-	1989	Power supply 450W
43V7427	43V7477	1990	x3350 Redundant Power Supply 450W (Worldwide)
Power Distribution Units			
-	39M2816	-	IBM DPI C13 PDU+ ²
-	39M2818	-	IBM DPI C19 PDU+ ²
-	39M2819	-	IBM DPI C19 3 phase PDU+ ³
-	39Y8905	-	DPI 100-127v PDU with Fixed Nema L5-15P line cord
-	39Y8923	-	IBM Enterprise C19 3 phase PDU (60a) ³
-	39Y8935	-	63A/250V Front-end PDU IEC 309 P+N+G
-	39Y8938	-	DPI 30amp/125V Front-end PDU with NEMA L5-30P
-	39Y8939	-	DPI 30amp/250V Front-end PDU with NEMA L6-30P
-	39Y8940	-	DPI 60amp/250V Front-end PDU with IEC 309 2P+Gnd connector
-	39Y8941	-	IBM Enterprise C13 PDU ²
-	39Y8948	-	IBM Enterprise C19 PDU ²
-	39Y8951	-	DPI Universal Rack Power Distribution Unit with Nema L5-20P and L6-20P ⁴
-	40K9614	-	IBM DPI 30a Cord (NEMA L6-30P)(all models)
-	40K9615	-	IBM DPI 60a Cord (IEC 309 2P+G)(all models)
Uninterruptible Power Supply (UPS)			
-	21301RX	-	IBM UPS 3000 LV 21302RX
-	21302RX	-	IBM UPS 3000 HV
-	21303RX	-	IBM UPS 7500XHV
-	21304RX	-	IBM UPS 10000XHV
-	39Y8857	-	IBM UPS 3U Online Battery Pack
-	40K9620	-	IBM UPS 3000 EBM

Notes:

1. The power supply ships with a Y-cable which replaces the system's standard power cable. When used in conjunction with multiple 4192s or 4193s, the Y-cable is designed to be split between two 4192s or 4193s. Therefore, the number of PDU outlets used is reduced and a certain level of redundancy is provided.
2. Ships without a line cord.
3. Line cord is attached.
4. Ships with a US line cord.

Figure 1. Y power cable supplied with the redundant power supply.



Click image to enlarge

SBB number	Part number	Feature code	Description
Racks			
-	14104RX	-	IBM Linux Cluster Rack
-	17231RX	-	IBM 1U 17 Flat Panel console Kit w/ Optical Drive Bay
-	17233RX	-	IBM 1U 15 Flat Panel Console Kit
-	93072RX	-	IBM 25U S2 standard rack
-	93074RX	-	NetBAY S2 42U Standard Rack Cabinet
-	93074XX	-	IBM 42U S2 expansion rack
-	93084XX	-	NetBAY42 Enterprise Expansion Rack
Console Connectivity			
-	17351GX	-	IBM Local 2x8 Console Manager (LCM2)
-	17352GX	-	IBM Global 2x16 Console Mngr (GCM2)
-	17353LX	-	IBM 1x8 Console Switch
-	17354GX	-	Global 4x16 Console Mngr (GCM4)
-	17354LX	-	IBM 2 x 16 Console Switch
Monitors			
-	4942	-	IBM T115 15 TFT LCD
-	4943	-	IBM T117 17 TFT LCD
-	4944	-	IBM T119 19 TFT LCD
Keyboard and Mouse			
42C1473	40K5372	8693	IBM Keyboard w/ Integrated Pointing Device USB - US English 103P
40K9490	40K9584	8750	IBM Preferred Pro Keyboard USB - US English 103P
40K9491	40K9200	8912	IBM 2 Button Optical Wheel Mouse - Black - USB
40K9492	40K9201	8913	IBM 3 Button Optical Mouse - Black - USB

System x3350 (4192, 4193)

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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | **[Tape](#)** |

SBB number	Option number	Feature codes	tape options	Bays supported	Storage interface	Form factor	Ext tape enclosures
Tape drives							
-	25R0045	-	IBM VXA320 160/320GB Tape Drive	-	-	-	87651UX 87664UX 8767HHX
-	39M5636	-	IBM DDS Generation 6 USB Tape Drive	-	-	-	87651UX 87664UX 8767HHX
-	39M5617	-	GoVault 80GB Cartridge	-	-	-	-
-	39M5658	-	HH LTO Gen 2 Tape Drive	-	-	-	87664UX 8767HHX
-	44E8895	-	IBM Half High LTO Gen 4 SAS Tape Drive	-	-	-	-
External tape enclosures^{4,5}							
-	87651UX	-	1U Tape Drive Enclosure	-	-	-	-
-	87664UX	-	4U Tape Drive Enclosure	-	-	-	-
-	8767HHX	-	Half High Tape Drive Enclosure	-	-	-	-
-	8768FHX	-	Full High Tape Drive Enclosure	-	-	-	-
External tape libraries							
-	3573-xxx	-	IBM System Storage TS3100/TS3200 Tape Library (all models)	-	-	-	-
-	3584-xxx	-	IBM Ultrium3 Ultra Scalable Tape Library (all models)	-	-	-	-
Associated tape options							
-	40K2599	-	SAS Enclosure Adapter Kit	-	-	-	-
-	44E8869	-	USB Enclosure Adapter Kit	-	-	-	-
-	42D8771	-	IBM GoVault Internal Dock	-	-	-	-

System x3400 (7973, 7974)

Attention:

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At-A-Glance Options

Table 1. System x3400, (7973, 7974) at-a-glance

Part number ¹	Withdrawal date ²	CPU/FSB speed (GHz/ MHz)- cache	Number of processors (std / max)	Memory (std / max)	Form factor	Power supply quantity (std / max)	Simple Swap (power, slots, HDD, fans, memory)	System Mgmt Processor
7973-12Y	Jun 29 2007	Dual-Core Intel Xeon Processor 5050 (3.0GHz 667MHz 2x2MB L2 Cache)	1/2	1GB/32GB	5U Tower	1/1	F	Y
7973-42Y	-	1.60GHz 1066MHz FSB 2x2MB L2 Cache Dual Core Xeon Processor	1/2	1GB/32GB	5U Tower	1/1 ³	F	Y
7973-52Y	Apr 4 2007	1.86GHz 1066MHz FSB 2x2MB L2 Cache Dual Core Xeon Processor	1/2	1GB/32GB	5U Tower	1/1 ³	F	Y
7973-62Y	Aug 31 2007	2.0GHz 1333MHz FSB 2x2MB L2 Cache Dual Core Xeon Processor	1/2	1GB/32GB	5U Tower	1/1 ³	F	Y
7973-A2Y	-	Quad-Core Intel Xeon Processor 54xx (2.0GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1 ³	F	Y
7973-B2Y	Apr 4 2007	Quad-Core Intel Xeon Processor E5310 (1.60GHz 8MB L2 1066MHz 80w)	1/2	1GB/32GB	5U Tower	1/1	F	Y
7973-C2Y	Apr 4 2007	Quad-Core Intel Xeon Processor E5320 (1.86GHz 8MB L2 1066MHz 80w)	1/2	1GB/32GB	5U Tower	1/1	F	Y
7973-D2Y	-	Quad-Core Intel Xeon Processor E5410 (2.33GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1	F	Y

7973-E1Y	-	Quad-Core Intel Xeon Processor E5410 (2.33GHz 12MB L2 1333MHz 80w)	1/2	2GB/32GB	5U Tower	1/1	F	Y
7973-E3Y	-	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	1/2	1GB/32GB	5U Tower	1/1	F	Y
7973-E4Y	Apr 4 2007	Dual-Core Intel Xeon Processor 5110 (1.60GHz 4MB L2 Cache)	1/2	2GB/32GB	5U Tower	1/1	F	Y
7973-F2Y	Apr 4 2007	Quad-Core Intel Xeon Processor E5335 (2.00GHz 8MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1	F	Y
7973-J2Y	-	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1	F	Y
7973-L2Y	-	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1	F	Y
7974-12Y	Jun 29 2007	Dual-Core Intel Xeon Processor 5050 (3.0GHz 667MHz 2x2MB L2 Cache)	1/2	1GB/32GB	5U Tower	1/1	F	Y
7974-42Y	-	1.60GHz 1066MHz FSB 2x2MB L2 Cache Dual Core Xeon Processor	1/2	1GB/32GB	5U Tower	1/1 ³	F	Y
7974-52Y	Apr 4 2007	1.87GHz 1066MHz FSB 2x2MB L2 Cache Dual Core Xeon Processor	1/2	1GB/32GB	5U Tower	1/1 ³	F	Y
7974-62Y	Sept 28 2007	2.0GHz 1333MHz FSB 2x2MB L2 Cache Dual Core Xeon Processor	1/2	1GB/32GB	5U Tower	1/1 ³	F	Y
7974-A2Y	-	Quad-Core Intel Xeon Processor 54xx (2.0GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1 ³	F	Y
7974-B2Y	Apr 4 2007	Quad-Core Intel Xeon Processor E5310 (1.60GHz 8MB L2 1066MHz 80w)	1/2	1GB/32GB	5U Tower	1/1	F	Y

7974-C2Y	Apr 4 2007	Quad-Core Intel Xeon Processor E5320 (1.86GHz 8MB L2 1066MHz 80w)	1/2	1GB/32GB	5U Tower	1/1	F	Y
7974-D2Y	-	Quad-Core Intel Xeon Processor E5410 (2.33GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1	F	Y
7974-F2Y	Apr 4 2007	Quad-Core Intel Xeon Processor E5335 (2.00GHz 8MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1	F	Y
7974-J2Y	-	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1	F	Y
7974-L2Y	-	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1	F	Y

Table 1. System x3400, (7973, 7974) at-a-glance (continued)

Part number ¹	Withdrawal date ²	Integrated ethernet	Storage controller	Internal HDD interface	Internal HDD storage (std / max)	Optical drive	Bays (total / avail)	Slots (total / avail)
7973-12Y	Jun 29 2007	1GB	SATA	Simple Swap	0GB / 2000GB	48X-20X CD-ROM	7/7	6/6
7973-42Y	-	1GB	SATA	Simple Swap	0GB / 2000GB	48X-20X CD-ROM	7/7	6/6
7973-52Y	Apr 4 2007	1GB	SATA	Simple Swap	0GB / 2000GB	48X-20X CD-ROM	7/7	6/6
7973-62Y	Aug 31 2007	1GB	SATA	Simple Swap	0GB / 2000GB	48X-20X CD-ROM	7/7	6/6
7973-A2Y	-	1GB	SATA	Simple Swap	0GB / 2000GB	48X-20X CD-ROM	7/7	6/6
7973-B2Y	Apr 4 2007	1GB	SATA	Simple Swap	0GB / 2000GB	48X-20X CD-ROM	7/7	6/6
7973-C2Y	Apr 4 2007	1GB	SATA	Simple Swap	0GB / 2000GB	48X-20X CD-ROM	7/7	6/6
7973-D2Y	-	1GB	SATA	Simple Swap	0GB / 2000GB	48X-20X CD-ROM	7/7	6/6
7973-E1Y	-	1GB	SATA	Simple Swap	0GB / 2000GB	48X-20X CD-ROM	7/7	6/6
7973-E3Y	-	1GB	SATA	Simple Swap	0GB / 2000GB	48X-20X CD-ROM	7/7	6/6
7973-E4Y	Apr 4 2007	1GB	SATA	Simple Swap	0GB / 2000GB	48X-20X CD-ROM	7/7	6/6
7973-F2Y	Apr 4 2007	1GB	SATA	Simple Swap	0GB / 2000GB	48X-20X CD-ROM	7/7	6/6
7973-J2Y	-	1GB	SATA	Simple Swap	0GB / 2000GB	48X-20X CD-ROM	7/7	6/6
7973-L2Y	-	1GB	SATA	Simple Swap	0GB / 2000GB	48X-20X CD-ROM	7/7	6/6
7974-12Y	Jun 29 2007	1GB	SATA	Simple Swap	0GB / 2000GB	48X-20X CD-ROM	7/7	6/6
7974-42Y	-	1GB	SATA	Simple Swap	0GB / 2000GB	48X-20X CD-ROM	7/7	6/6
7974-52Y	Apr 4 2007	1GB	SATA	Simple Swap	0GB / 2000GB	48X-20X CD-ROM	7/7	6/6
7974-62Y	Sept 28 2007	1GB	SATA	Simple Swap	0GB / 2000GB	48X-20X CD-ROM	7/7	6/6

7974-A2Y	-	1GB	SATA	Simple Swap	0GB/ 2000GB	48X-20X CD-ROM	7/7	6/6
7974-B2Y	Apr 4 2007	1GB	SATA	Simple Swap	0GB/ 2000GB	48X-20X CD-ROM	7/7	6/6
7974-C2Y	Apr 4 2007	1GB	SATA	Simple Swap	0GB/ 2000GB	48X-20X CD-ROM	7/7	6/6
7974-D2Y	-	1GB	SATA	Simple Swap	0GB/ 2000GB	48X-20X CD-ROM	7/7	6/6
7974-F2Y	Apr 4 2007	1GB	SATA	Simple Swap	0GB/ 2000GB	48X-20X CD-ROM	7/7	6/6
7974-J2Y	-	1GB	SATA	Simple Swap	0GB/ 2000GB	48X-20X CD-ROM	7/7	6/6
7974-L2Y	-	1GB	SATA	Simple Swap	0GB/ 2000GB	48X-20X CD-ROM	7/7	6/6

Notes:

1. Model numbers provided are worldwide generally available variant (GAV) model numbers which are not orderable as listed and need to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 7973-42Y is 7973-42U. See the product specific Official IBM announcement letter for other country-specific GAV model numbers. GAV to MTM mapping for A.P. Geographies follow the same pattern. Substitute the last character with the country-specific designator.
2. Withdrawal dates are provided for U.S. and Canada only. Business Partner Inventory may be available.
3. This model ships with a single, 670w universal, autoswitching power supply.

System x3400 (7973, 7974)

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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#) |

SBB number	Option number	Feature codes	Processor options ¹	Models supported
Standard processor				
41Y4257	40K1231	1296	Dual-Core Intel Xeon Processor 5110 (1.60GHz 4MB L2 Cache)	42Y, E4Y,
41Y4258	40K1232	1297	Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 Cache)	52Y
41Y4259	40K1233	1298	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	62Y, E3Y,
41Y4404	-	2874	Quad-Core Intel Xeon Processor E5310 (1.60GHz 8MB L2 1066MHz 80w)	B2Y
41Y4405	-	2875	Quad-Core Intel Xeon Processor E5320 (1.86GHz 8MB L2 1066MHz 80w)	C2Y
43W5177	-	2894	Quad-Core Intel Xeon Processor E5335 (2.00GHz 8MB L2 1333MHz 80w)	F2Y
44R5612	-	3078	Quad-Core Intel Xeon Processor E5405 (2.0GHz 12MB L2 1333MHz 80w)	A2Y
44R5613	-	3079	Quad-Core Intel Xeon Processor E5410 (2.33GHz 12MB L2 1333MHz 80w)	D2Y, E1Y
44R5614	-	3080	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 1333MHz 80w)	J2Y
44R5615	-	3081	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 1333MHz 80w)	L2Y
Additional processors¹				
41Y4263	40K1231	1380	Addl Dual-Core Intel Xeon Processor 5110 (1.60GHz 4MB L2 Cache)	-
41Y4264	-	1381	Addl Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 Cache)	-
41Y4265	40K1233	1382	Addl Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	-
43W5783	-	1447	Addl Quad-Core Intel Xeon Proc E5310 (1.60GHz 1066MHz 80w)	-
43W5785	-	1448	Addl Quad-Core Intel Xeon Proc E5320 (1.86GHz 1066MHz 80w)	-
43W5818	-	3456	Addl Quad-Core Intel Xeon Processor E5335 (2.0GHz 1333MHz 80w)	-
44R5620	44R5630	3492	Addl Quad-Core Intel Xeon Proc E5405 (2.0GHz 1333MHz 80w)	-
44R5621	44R5631	3493	Addl Quad-Core Intel Xeon Proc E5410 (2.33GHz 1333MHz 80w)	-
44R5622	44R5632	3494	Addl Quad-Core Intel Xeon Proc E5420 (2.5GHz 1333MHz 80w)	-
44R5623	44R5633	3495	Addl Quad-Core Intel Xeon Proc E5430 (2.66GHz 1333MHz 80w)	-

Notes:

1. One additional processor may be installed, providing a maximum of two. All processors must be identical in type, speed and cache size.

System x3400 (7973, 7974)

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At-A-Glance Options

Processor | **Memory** | HDD | I/O | Pwr acc | Tape |

SBB number	Option number	Feature codes	Memory description
Memory DIMMs¹			
39M5780	-	0546	512MB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
39M5783	-	0542	1GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
39M5789	-	0544	2GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
39M5795	-	0556	4GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
-	39M5782	-	1GB Kit (2x 512MB DIMM) PC2 5300 DDR2 FBD CL4
-	39M5785	-	2GB Kit (2 x1GB DIMM) PC2 5300 DDR2 FBD CL4
-	39M5791	-	4GB Kit (2x 2GB DIMM) PC2 5300 DDR2 FBD CL4
-	39M5797	-	8GB Kit (2x 4GB DIMM) PC2 5300 DDR2 FBD CL4

Notes:

1. Memory mirroring requires an exact match between the DIMM types and sizes on both memory buses. Memory-mirroring effectively reduces available memory by half.

Table 1. Standard Memory Configuration

Model	Std. DIMM Configuration ¹
42Y, 52Y, 62Y, 12Y, B2Y, C2Y, F2Y, 7973-E3Y, A2Y, D2Y, J2Y, L2Y	512MB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
7973-E4Y, 7973-E1Y	1GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz

Notes:

1. Memory mirroring requires an exact match between the DIMM types and sizes on both memory buses. Memory-mirroring effectively reduces available memory by half.

System x3400 (7973, 7974)

Attention:

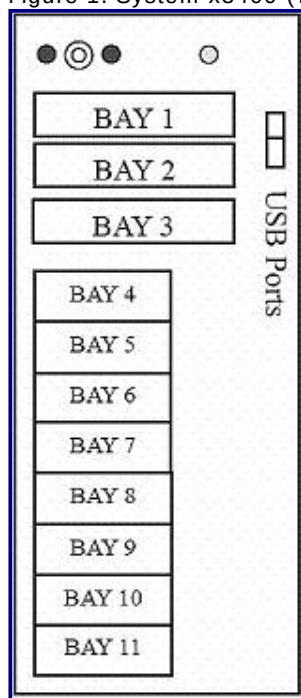
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At-A-Glance Options

[Processor](#) | [Memory](#) | **[HDD](#)** | [I/O](#) | [Pwr acc](#) | [Tape](#) |

SBB number	Option number	Feature codes	Description	Height	Bays supported	Maximum quantity
SAS Simple-Swap HDDs						
-	40K1049	-	73GB 15K U320 SAS (simple swap)	-	-	-
-	40K1050	-	146GB 15K U320 SAS (simple swap)	-	-	-
SATA Simple-Swap HDDs						
39M4505	39M4504	5291	160GB 7200 RPM 3.5" Simple-Swap SATA II	SL	8...11	4
39M4509	39M4508	5292	250GB 7200 RPM 3.5" Simple-Swap SATA II	SL	8...11	4
39M4515	39M4514	5288	500GB 7200 RPM 3.5" Simple-Swap SATA II	SL	8...11	4
-	43X0814	-	300GB SAS 15K Simple Swap	-	-	-
SAS Hot-Swap HDDs						
-	40K1043	-	73GB 15K 3.5" SAS Hot-Swap HDD	-	-	-
-	40K1044	-	146GB 15K 3.5" SAS Hot-Swap HDD	-	-	-
Optical devices						
22P1999	-	4149	IBM 16X RAM-Read DVD-ROM IDE Drive	HH	1...2	2
39M6342	-	4137	IBM 48X-20X CD-ROM Black Internal IDE Drive	HH	1...2	2
39M6344	-	4139	IBM 48X/32X/48X/16X Max CD-RW/DVD-ROM Combination Drive	HH	1...2	2
39M6345	-	4140	IBM DVD Multi-Burner Plus Drive	HH	1...2	2

Figure 1. System x3400 (7973, 7974) Front View



Click image to enlarge

Bay	Form factor	Height	Front access	Usage
1	133 mm (5.25in)	-	-	CD-R
2	133 mm (5.25in)	-	-	-
3	133 mm (5.25in)	-	-	-

4	89mm (3.5in)	-	-	-
5	89mm (3.5in)	-	-	-
6	89mm (3.5in)	-	-	-
7	89mm (3.5in)	-	-	-
8 ¹	89mm (3.5in)	-	-	HDD
9	89mm (3.5in)	-	-	HDD
10	89mm (3.5in)	-	-	HDD
11 ¹	89mm (3.5in)	-	-	HDD

Note:

1. Bays 8 and 11 are available on SATA models only.

System x3400 (7973, 7974)

Attention:

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At-A-Glance Options

Processor | Memory | HDD | **I/O** | Pwr acc | Tape |

SBB number	Part number	Feature codes	Description	Adapter length	PCI support	Slots supported	Max quantity	Hot-Plug capable
Storage controllers¹								
39R8752	39R8743	1680	IBM Ultra320 SCSI Controller 2	Half	64-bit/133MHz	4...5	1	Y
25R8072	25R8060	1681	IBM SAS HBA Controller	Half	PCI-E (x8)	2...3	2	Y
25R8077	25R8064	1670	IBM ServerRAID 8k SAS Controller ¹	-	-	key Largo	1	N
39R8767	39R8765	1684	IBM ServerRAID 8s SAS PCIe Controller ^{2,3}	Full	PCI-E (x8)	2	1	-
39R8871	39R8812	1693	IBM ServerRAID-8s Battery ⁴	-	-	-	-	-
43W4326	43W4324	3569	IBM Ultra 320 SCSI PCIe Controller	Half	PCI-E	1...3	3	N
43W7489	42D0405	1696	Emulex 4GB FC Single-Port PCI-X HBA for IBM System x	Half	64-bit/133MHz	4...5	2	N
43W7490	42D0407	1697	Emulex 4GB FC Dual-Port PCI-X HBA for IBM System x	Half	64-bit/133MHz	4...5	2	N
43W7491	42C2069	1698	Emulex 4GB FC Single-Port PCI-E HBA for IBM System x	Half	PCI-E (x4)	1...3	3	N
43W7492	42C2071	1699	Emulex 4GB FC Dual-Port PCI-E HBA for IBM System x	Half	PCI-E (x4)	1...3	3	N
42D0486	42D0485	3580	Emulex 8Gb FC Single-port HBA for IBM System x	Half	PCI-E (x8)	1,2	2	N
42D0495	42D0494	3581	Emulex 8Gb FC Dual-port HBA for IBM System x	Half	PCI-E (x8)	1,2	2	N
42D0502	42D0501	3578	QLogic 8Gb FC Single-port HBA for IBM System x	Half	PCI-E (x8)	2...3	2	N
42D0511	42D0510	3579	QLogic 8Gb FC Dual-port HBA for IBM System x	Half	PCI-E (x8)	2...3	2	N
External Disk Systems and Options								
-	172621X	-	IBM System Storage DS3200	-	-	-	-	-
-	172622X	-	IBM System Storage DS3200	-	-	-	-	-
-	172641X	-	FC SAS Single Controller DS3400	-	-	-	-	-
-	172642X	-	FC SAS Dual Controller DS3400	-	-	-	-	-
-	1750-511	-	IBM TotalStorage DS6800 1750 model 511	-	-	-	-	-
-	18147Vx	-	IBM System Storage DS4200 Midrange Disk System (all models)	-	-	-	-	-
-	18128Vx	-	IBM System Storage EXP420 Storage Expansion Unit (all models)	-	-	-	-	-
Networking								

25R8590	-	2961	ClearSpeed Advance PCI-X Accelerator Board	Half	32/64 bit	4...6	1	N
40K8840	-	1677	Myricom Myrinet 333MHz Dual Fiber PCI-X Adapter w/ 2MB Memory	Half	32/64 bit	4...6	2	N
40K8841	-	2916	Myricom Myrinet 333MHz Single Fiber PCI-X Adapter w/ 2MB Memory	Half	32/64 bit	4...6	1	N
40K8842	-	1476	Voltaire 10Gbps Host Channel PCI Express Adapter	Half	PCI-E (x8)	2...3	2	N
40K9098	-	2918	Myricom Myri-10G 2MB PCI Express Adapter w/ 10GBASE-CX4 Port	Half	PCI-E (x8)	2...3	2	N
40K9099	-	2919	Myricom Myri-10G 2MB PCI Express Adapter w/ XAUI-MTP Port	Half	PCI-E (x8)	2...3	2	N
40K9100	-	2920	Myricom Myri-10G PCI Express Adapter w/ 10GBASE-SR Port	Half	PCI-E (x8)	2...3	2	N
41Y4576	-	2960	Cisco 10Gbps Dual-Port 4x InfiniBand PCI-E HCA	Half	PCI-E (x8)	2...3	2	N
42D3708	-	2963	Voltaire Dual-Port 4x InfiniBand PCI-E HCA	Full	PCI-E (x8)	2...3	2	N
39Y6071	39Y6066	1485	NetXtreme II 1000 Express Ethernet Adapter	Half	PCI-E (x4)	1&3	3	Y
39Y6101	-	1486	NetXtreme 1000 Express G Ethernet Adapter- PCIe	Half	PCI-E (x4)	1&3	3	Y
-	39Y6126	-	PRO/1000 PT IOAT Dual Port Server Adapter by Intel PCIe	-	-	-	-	-
30R5205	30R5201	1483	IBM iSCSI Server TX Adapter	Half	32/64-bit	4...6	3	Y
-	73P5201	-	PRO/1000 GT Quad Port Server Adapter by Intel	-	-	-	-	-
73P5105	73P5101	1579	PRO/1000 GT Dual Port Server Adapter by Intel	Half	32/64-bit	4...6	3	Y
42C2179	39R6525	3567	QLogic 4Gb FC Single-Port PCIe HBA for IBM System x	-	-	-	-	-
42C2182	39R6527	3568	QLogic 4Gb FC Dual-Port PCIe HBA for IBM System x	-	-	-	-	-
39Y6149	39Y6146	2976	QLogic iSCSI Single Port PCIe HBA for IBM System x	Half	PCI-E(x4)	1...3	3	N
39Y6091	39Y6088	1487	NetXtreme 1000 S + Ethernet Adapter	Half	32/64 bit	4...5	2	Y
39Y6096	39Y6093	1489	NetXtreme 1000 T + Dual Port Ethernet Adapter	Half	32/64 bit	4...6	3	Y
42C1783	42C1780	2995	NetXtreme II 1000 Express Dual Port Ethernet Adapter	Half	PCI-E (x4)	1&3	N	3
39Y6139	39Y6136	2974	PRO/1000 PT Quad Port Server Adapter ⁵	Half	PCI-E (x4)	1	1	Y
42C1753	42C1750	2975	PRO/1000 PF Server Adapter ⁵	Half	PCI-E (x4)	1...3	3	N
42C1763	42C1760	2978	IBM 10 GbE PCIe SR Server Adapter ⁶	Half	PCI-E (x8)	2, 3	2	N
39Y6149	39Y6146	2976	QLogic iSCSI Single Port PCIe HBA for IBM System x	Half	PCI-E (x4)	1...3	3	N
42C1773	42C1770	2977	QLogic iSCSI Dual Port PCIe HBA for IBM System x	Half	PCI-E (x4)	1...3	3	N
Systems Management								
39Y9567	39Y9566	1605	Remote Supervisor Adapter II Slimline	-	-	RSA Socket	1	-

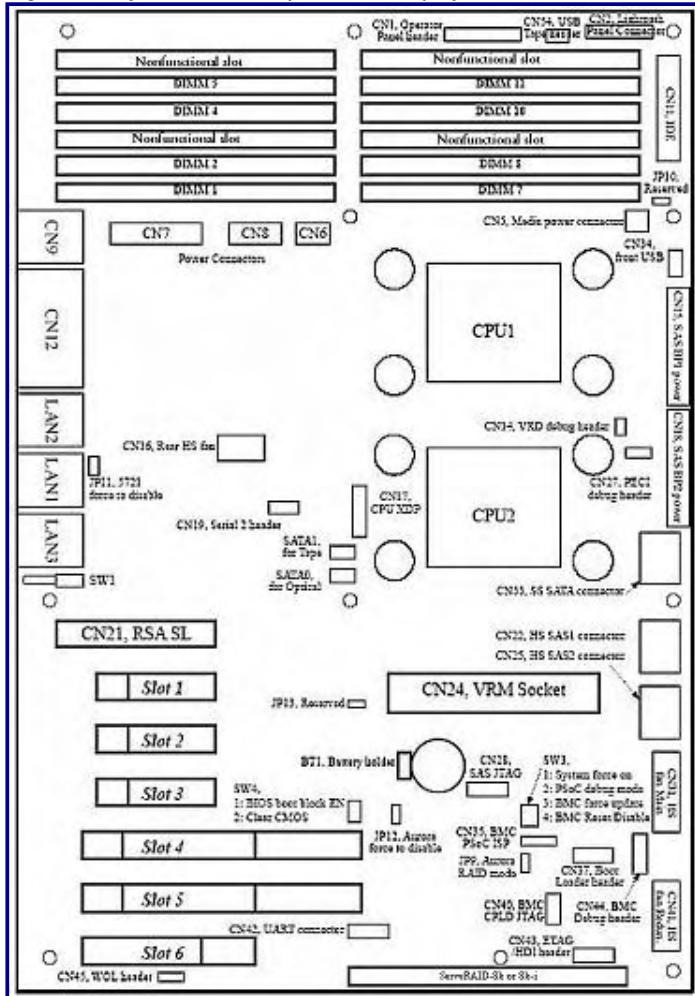
Note:

1. All x3400 (7975, 7976) models ship standard with ServeRAID-8k-I which offers RAID 0, 1, 10. To upgrade to RAID 1E, 5, or 6, replace ServeRAID-8k-I with optional ServeRAID-8k, P/N 25R8064.
2. x3400 support for ServeRAID-8s is for full function RAID attachment to a single EXP3000 storage expansion unit. EXP3000 support by ServeRAID-8s is currently limited to SAS HDDs only.
3. Before you install or ship this option in your server, first read the installation instructions provided in the option package.
4. ServeRAID-8s Battery 39R8812 enables Battery Backed Cache on ServeRAID-8s.
5. Supports Intel I/O Acceleration Technology for System x IOAT capable servers.

6. Supports TCP/IP Offload Engine (TOE). Not supported on systems with greater than 32GB installed memory.

Slot	Type	Frequency MHz	Slot Length
PCI Slot 1	PCI-E x 4	-	Half
PCI Slot 2	PCI-E x 8	-	Full
PCI Slot 3	PCI-E x 8	-	Full
PCI Slot 4	PCI-X 64-bit/133Mhz	133	Full
PCI Slot 5	PCI-X 64-bit/133Mhz	133	Full
PCI Slot 6	PCI-32-bit/33Mhz	33	Half

Figure 1. System x3400 (7973, 7974) system board



Click image to enlarge

System x3400 (7973, 7974)

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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | **[Pwr acc](#)** | [Tape](#) |

Option number	Description
Power	
-	-
Power Distribution Units	
39Y8905	DPI NEMA Rack PDU
39Y8923	DPI 60A Three Phase C19 Enterprise PDU w/ IEC309 3P+G (208V) line cord
39Y8938	30amp/125V Front-end PDU with NEMA L5-30P connector
39Y8939	30amp/250V Front-end PDU with NEMA L6-30P connector
39Y8940	60amp/250V Front-end PDU with IEC 309 60A 2P+N+Gnd connector
39Y8941	IBM DPI C13 Enterprise PDU without line cord ¹
39Y8948	DPI 60A Single Phase C19 Enterprise PDU w/ IEC309 2P+G (208V) line cord
39Y8951	DPI Universal Rack PDU w/ Nema L5-20P & L6-20P (US cord)
71762MX	IBM Ultra Density Enterprise PDU C19 PDU+ (WW)
71762NX	IBM Ultra Density Enterprise PDU C19 PDU (WW)
71763MU	IBM Ultra Density Enterprise PDU C19 3 phase 60A PDU+ (NA)
71763NU	IBM Ultra Density Enterprise PDU C19 3 phase 60A PDU (NA)
Uninterruptible Power Supply (UPS)	
2130R5X	IBM UPS 1500T LV
2130R6X	IBM UPS 1500T HV
2130R9X	IBM UPS 1500T JV

Note:

- Ships without a line cord. See the 'xSeries rack power configurator' chapter for supported line cords.

Option number	Description
Rack and NetBAY	
14104RX	IBM Linux Cluster Rack
39M2895	IBM USB Conversion Option
39M2896	IBM Short KVM Conversion Option
39M2897	IBM Long KVM Conversion Option
17235RX	IBM Rack Keyboard Tray
93061RX	NetBAY11 Standard Rack
93072RX	IBM 25U S2 standard rack
93074RX	NetBAY S2 42U Standard Rack Cabinet
93074XX	IBM 42U S2 expansion rack
93084RX	NetBAY42 Enterprise Rack
93084XX	NetBAY42 Enterprise Expansion Rack
Rack / tower conversion kits	
39Y8382	5Ux26D Tower to Rack Conversion Kit
Console Connectivity	
17351GX	IBM 2x8 Local Console Manager
17352GX	IBM Global 2x16 Console Manager
17353LX	IBM 1x8 Console Switch
17354LX	IBM 2x16 Console Switch
17354GX	IBM Global 4x16 Console Manager
31R3130	IBM 3M Console Switch Cable (PS/2)
31R3132	IBM 3M Console Switch Cable (USB)

Monitors	
17233RX	1U 15" Flat Panel Monitor Console Kit (without keyboard)
4938-7xx	IBM C117 17" (15.9inch VIS) FST CRT
4942	15 TFT 4942-15U
4943	17 TFT 4943-17U
4944	19 TFT 4944-19U
Keyboard and Mouse	
40K9584	IBM Preferred Pro Keyboard USB - US English 103P
40K5372	IBM Preferred Pro Keyboard- Full Width - 2m Cable - Black - USB - US English 103P
40K9200	IBM 2 Button Optical Wheel Mouse - Black - USB
40K9201	IBM 3 Button Optical Mouse - Black - USB

System x3400 (7973, 7974)

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At-A-Glance Options

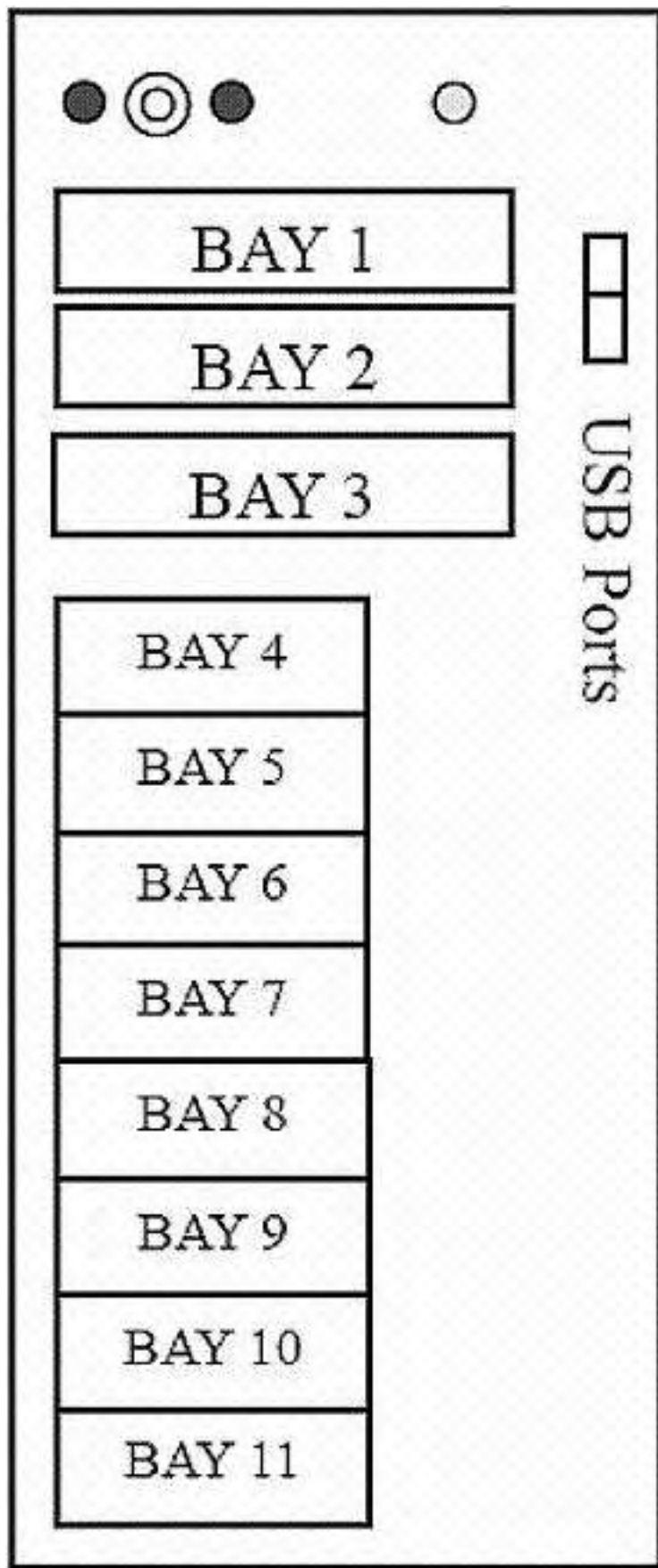
[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | **[Tape](#)** |

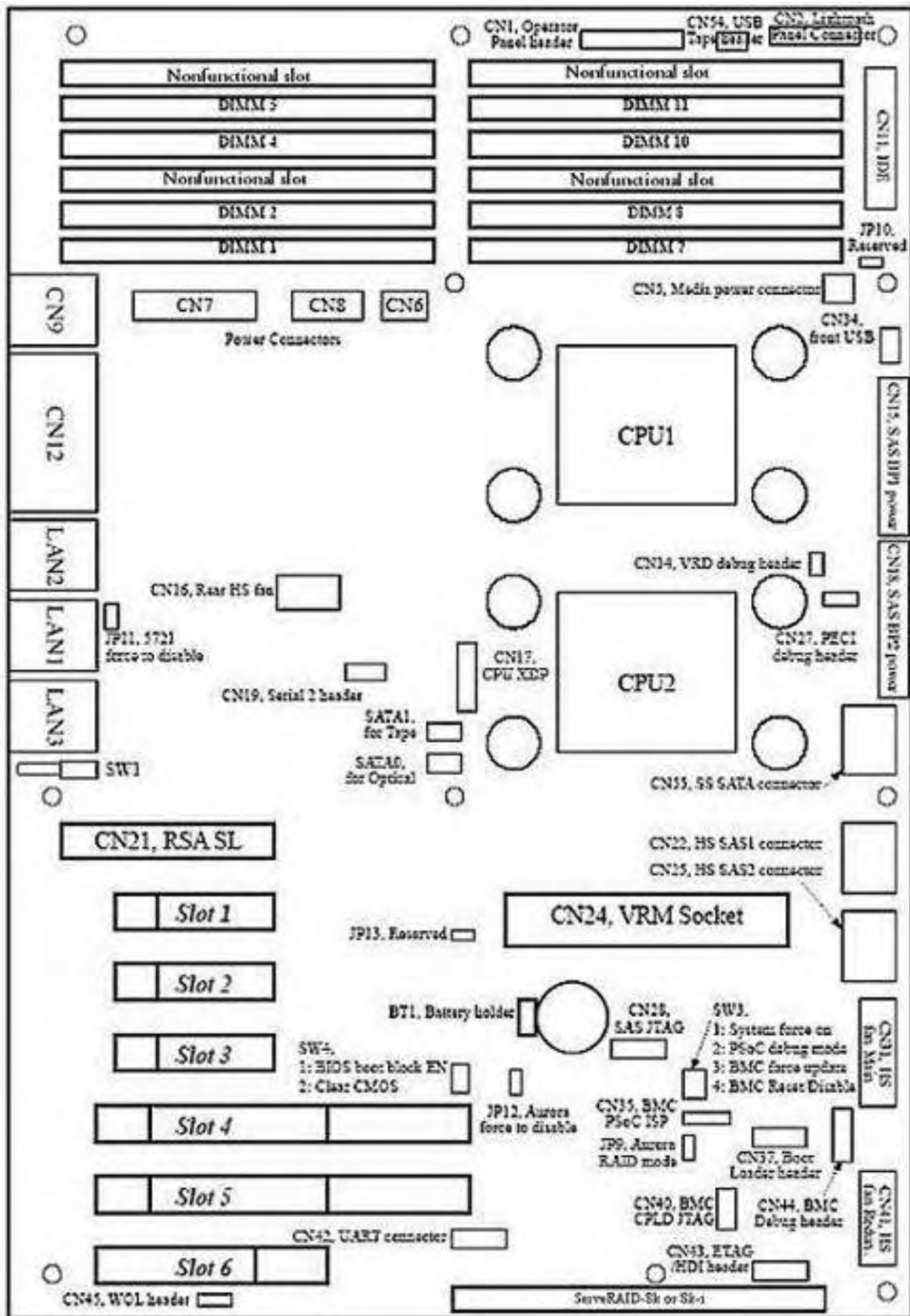
SBB number	Option number	Feature codes	Tape drive ¹	Bays supported	Storage interface	Form factor	Ext tape enclosures
42C3912	-	4352	GoVault Tape Drive	2...3	SATA I and SATA II	89mm (5.25in) HH	-
43W8492	39M5636	5395	IBM DDS Generation 6 USB Tape Drive	2...3	USB	89mm (5.25in) HH	-
71P9176	39M5656	5355	36/72GB DDS Generation 5 Tape Drive	2...3	Ultra 320 (16-bit)	89mm (5.25in) HH	-
42C3932	39M5657	5365	LTO 400/800GB Full High Gen 3 Internal Back-Up	2 and 3	Ultra 320 (16-bit)	133mm (5.25in) FH	-
39M5621	39M5658	5364	IBM Half High LTO Gen 2 Tape Drive	3	Ultra 320 (16-bit)	89mm (5.25in) HH	-
39M5624	25R0045	5362	VXA 3 Half High Internal Back-up	2 or 3	Ultra160 (16-bit)	89mm (5.25in) HH	45594UX
-	3580-xxx	-	IBM TotalStorage Ultrium3 3580 Tape Drive (all models)	-	Ultra160 SCSI LVD	Standalone or Rack Mount ²	-
43W8490	43W8478	5393	IBM Half High LTO Gen 3 SAS Tape Drive	3	SAS	89mm (5.25in) HH	-
43W8487	43W8480	5392	IBM DDS Gen 5 SATA Tape Drive	2 or 3	SATA I and SATA II	89mm (5.25in) HH	-
44E8897	44E8895	5397	IBM Half High LTO Gen 4 SAS Tape Drive	3	SAS	89mm (5.25in) HH	-
External tape enclosures^{1,3}							
-	8767HHX	-	IBM Half High Tabletop Tape Enclosure	-	-	HH Table Top	-
-	8768FHX	-	IBM Full High Tabletop Tape Enclosure	-	-	FH Table Top	-
-	87651UX	-	IBM 1U Rackmount Tape Enclosure	-	-	1U Rack Mount	-
-	87664UX	-	IBM 4U Rackmount Tape Enclosure	-	-	4U Rack Mount	-
Tape autoloaders¹							
-	87691VX	-	VXA3 Autoloader	-	-	1U Rack Mount	-
Tape libraries							
-	33614LX	-	IBM LTO3 4U Tape Library ^{1,4}	-	-	4U Rack Mount	-
-	3573-xxx	-	IBM System Storage TS3100/TS3200 Tape Library (all models) ¹	-	-	-	-
Associated Options							
43W8474	42D8771	4860	GoVault Carrier Option	2...3	SATA I and SATA II	89mm (5.25in) HH	-
-	40K2579	-	3361 Library iSCSI Adapter	-	-	-	-
-	40K2599	-	SAS Enclosure Adapter Kit Option	-	-	-	-

-	44E8869	-	USB Enclosure Adapter Kit	-	-	-	-

Notes:

1. Internal SCSI tape drives, external SCSI enclosures, and SCSI based automation products require a 39R8743 PCI-X U320 SCSI storage controller.
2. A 19-inch rack mount shelf (option 96P1565) is available for placing in a rack.
3. A quantity of one 42C3910, SCSI Interface and Cabling Kit is required for each SCSI tape drive installed (see External tape and tape library attributes appendix).
4. The base 33614LX library requires the addition of one LTO magazine and a minimum of one (maximum of two) LTO sled drive(s).





System x3400 (7975, 7976)

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At-A-Glance Options

Table 1. System x3400, (7975, 7976) at-a-glance

Part number ¹	Withdrawal date ²	CPU /FSB speed (GHz / MHz)- cache	Number of processors (std / max)	Memory (std / max)	Form factor	Power supply quantity (std / max)	Hot Swap (power, slots, HDD, fans, memory)	System Mgmt Processor
7975-14Y	Jun 29 2007	Dual-Core Intel Xeon Processor 5050 (3.0GHz 667MHz 2x2MB L2 Cache)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7975-16Y	-	Dual-Core Intel Xeon Processor 5050 (3.0GHz 667MHz 2x2MB L2 Cache)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y
7975-42Y	-	Dual-Core Intel Xeon Processor 5110 (1.60GHz 4MB L2 Cache)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7975-4AY	-	Dual-Core Intel Xeon Processor 5110 (1.60GHz 4MB L2 Cache)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y
7975-52Y	Apr 4 2008	Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 Cache)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7975-5AY	Apr 4 2008	Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 Cache)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y
7975-62Y	Aug 31 2007	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7975-6AY	Aug 31 2007	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y

7975-A2Y	-	Quad-Core Intel Xeon Processor 54xx (2.0GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7975-ABY	-	Quad-Core Intel Xeon Processor 54xx (2.0GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y
7975-B2Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5310 (1.60GHz 8MB L2 1066MHz 80w)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y
7975-B4Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5310 (1.60GHz 8MB L2 1066MHz 80w)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7975-C2Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5320 (1.86GHz 8MB L2 1066MHz 80w)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y
7975-C4Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5320 (1.86GHz 8MB L2 1066MHz 80w)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7975-D2Y	-	Quad-Core Intel Xeon Processor E5410 (2.33GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7975-DBY	-	Quad-Core Intel Xeon Processor E5410 (2.33GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y
7975-E2Y	-	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 1333MHz 80w)	1/2	2GB/32GB	5U Tower	2/2	PHF	Y
7975-E6Y	Apr 4 2008	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	1/2	2GB/32GB	5U Tower	2/2	PHF	Y
7975-ECY	Apr 4 2008	Quad-Core Intel Xeon Processor E5320 (1.86GHz 8MB L2 1066MHz 80w)	1/2	2GB/32GB	5U Tower	2/2	PHF	Y

7975-F2Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5335 (2.00GHz 8MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7975-F4Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5335 (2.00GHz 8MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y
7975-J2Y	-	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7975-JBY	-	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y
7975-L2Y	-	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7975-LBY	-	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y
7976-14Y	Jun 29 2007	Dual-Core Intel Xeon Processor 5050 (3.0GHz 667MHz 2x2MB L2 Cache)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7976-16Y	Jun 29 2007	Dual-Core Intel Xeon Processor 5050 (3.0GHz 667MHz 2x2MB L2 Cache)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y
7976-42Y	-	Dual-Core Intel Xeon Processor 5110 (1.60GHz 4MB L2 Cache)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7976-4AY	-	Dual-Core Intel Xeon Processor 5110 (1.60GHz 4MB L2 Cache)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y
7976-52Y	Apr 4 2008	Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 Cache)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y

7976-5AY	Apr 4 2008	Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 Cache)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y
7976-62Y	Aug 31 2007	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7976-6AY	Aug 31 2007	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	1/2	1GB/32GB	5U Tower	1/1 ⁴	PHF	Y
7976-A2Y	-	Quad-Core Intel Xeon Processor 54xx (2.0GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7976-ABY	-	Quad-Core Intel Xeon Processor 54xx (2.0GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y
7976-B2Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5310 (1.60GHz 8MB L2 1066MHz 80w)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y
7976-B4Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5310 (1.60GHz 8MB L2 1066MHz 80w)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7976-C2Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5320 (1.86GHz 8MB L2 1066MHz 80w)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y
7976-C4Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5320 (1.86GHz 8MB L2 1066MHz 80w)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7976-D2Y	-	Quad-Core Intel Xeon Processor E5410 (2.33GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7976-DBY	-	Quad-Core Intel Xeon Processor E5410 (2.33GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/2 ⁵	HF	Y
7976-E5Y	-	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 1333MHz 80w)	1/2	2GB/32GB	5U Tower	2/2	PHF	Y

7976-E4Y	Apr 4 2008	Dual-Core Intel Xeon Processor 5110 (1.60GHz 4MB L2 Cache)	1/2	2GB/32GB	5U Tower	2/2	PHF	Y
7976-E6Y	-	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 1333MHz 80w)	1/2	2GB/32GB	5U Tower	2/2	PHF	Y
7976-EBY	Apr 4 2008	Quad-Core Intel Xeon Processor E5310 (1.60GHz 8MB L2 1066MHz 80w)	1/2	2GB/32GB	5U Tower	2/2	PHF	Y
7976-F2Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5335 (2.00GHz 8MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7976-F4Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5335 (2.00GHz 8MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y
7976-J2Y	-	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7976-JBY	-	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y
7976-L2Y	-	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/1 ⁴	HF	Y
7976-LBY	-	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	5U Tower	1/2 ⁵	PHF	Y

Table 1. System x3400, (7975, 7976) at-a-glance (continued)

Part number ¹	Withdrawal dates ²	Integrated ethernet	Storage controller	Internal HDD interface	Internal HDD storage (std / max) ³	Optical drive	Bays (total / avail)	Slots (total / avail) ³
7975-14Y	Jun 29 2007	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-16Y	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-42Y	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-4AY	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-52Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6

7975-5AY	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-62Y	Aug 31 2007	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-6AY	Aug 31 2007	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-A2Y	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-ABY	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-B2Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-B4Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-C2Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-C4Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-D2Y	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-DBY	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-E2Y	-	1GB	SAS/SATA	Hot Swap	73GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-E6Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-ECY	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-F2Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-F4Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-J2Y	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-JBY	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-L2Y	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7975-LBY	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-14Y	Jun 29 2007	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-16Y	Jun 29 2007	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-42Y	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-4AY	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-52Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-5AY	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-62Y	Aug 31 2007	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-6AY	Aug 31 2007	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-A2Y	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-ABY	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-B2Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-B4Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-C2Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-C4Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-D2Y	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-DBY	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-E5Y	-	1GB	SAS/SATA	Hot Swap	73GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-E4Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6

7976-E6Y	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-EBY	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-F2Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-F4Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-J2Y	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-JBY	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-L2Y	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6
7976-LBY	-	1GB	SAS/SATA	Hot Swap	0GB/4000GB	48X-20X CD-ROM	11/10	6/6

Notes:

1. Model numbers provided are worldwide generally available variant (GAV) model numbers which are not orderable as listed and need to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 7975-42Y is 7975-42U. See the product specific Official IBM announcement letter for other country-specific GAV model numbers. GAV to MTM mapping for A.P. Geographies follow the same pattern. Substitute the last character with the country-specific designator.
2. Withdrawal dates are provided for U.S. and Canada only. Business Partner Inventory may be available.
3. To achieve maximum capacity, the Hot Swap SAS/SATA 4-Pac HDD option upgrade kit (option 39Y8406) must be installed
4. This model includes one fixed 670W power supply.
5. This model includes 1 hot swap 835W power supply, a second power supply (Option 39Y8487, IBM xSeries Redundant Power and Cooling Option) can be added for redundancy.

System x3400 (7975, 7976)

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At-A-Glance Options

Processor | **Memory** | **HDD** | **I/O** | **Pwr acc** | **Tape** |

SBB number	Option number	Feature codes	Standard processor ¹	Model support
41Y4257	40K1231	1296	Dual-Core Intel Xeon Processor 5110 (1.60GHz 4MB L2 Cache)	42Y, 4AY, E1Y, 7976-E4Y
41Y4259	40K1233	1298	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	62Y, 6AY, 7976-E3Y, 7975-E6,
41Y4404	-	2874	Quad-Core Intel Xeon Processor E5310 (1.60GHz 8MB L2 1066MHz 80w)	B2Y, B4Y, 7976-EBY
41Y4405	-	2875	Quad-Core Intel Xeon Processor E5320 (1.86GHz 8MB L2 1066MHz 80w)	C2Y, C4Y, 7975-ECY
43W5177	-	2894	Quad-Core Intel Xeon Processor E5335 (2.00GHz 8MB L2 1333MHz 80w)	F2Y, F4Y
44R5612	-	3078	Quad-Core Intel Xeon Processor E5405 (2.0GHz 12MB L2 1333MHz 80w)	A2Y, ABY
44R5613	-	3079	Quad-Core Intel Xeon Processor E5410 (2.33GHz 12MB L2 1333MHz 80w)	D2Y, DBY
44R5614	-	3080	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 1333MHz 80w)	J2Y, JBY, 7975-E2Y, 7976-E5Y
44R5615	-	3081	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 1333MHz 80w)	L2Y, LBY, 7976-E6Y
41Y4258	40K1232	1297	Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 Cache)	52Y, 5AY, 7976-E2Y
Additional processors				
41Y4263	40K1231	1380	Additional Dual-Core Intel Xeon Processor 5110 (1.60GHz 2x2MB L2 Cache Dual-Core Xeon Processor)	42Y, 4AY, E1Y, E4Y
41Y4265	40K1233	1382	Additional Dual-Core Intel Xeon Processor 5130 (2.0GHz 2x2MB L2 Cache Dual-Core Xeon Processor)	62Y, 6AY, E3Y, E6Y
44R5620	44R5630	3492	Addl Quad-Core Intel Xeon Proc E5405 (2.0GHz 1333MHz 80w)	A2Y, ABY
44R5621	44R5631	3493	Addl Quad-Core Intel Xeon Proc E5410 (2.33GHz 1333MHz 80w)	D2Y, DBY
44R5622	44R5632	3494	Addl Quad-Core Intel Xeon Proc E5420 (2.5GHz 1333MHz 80w)	7975-E2Y, E5Y, J2Y, JBY
44R5623	44R5633	3495	Addl Quad-Core Intel Xeon Proc E5430 (2.66GHz 1333MHz 80w)	E6Y, L2Y, LBY
41Y4264	40K1232	1381	Addl Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 Cache)	-
43W5783	43W5821	1447	Addl Quad-Core Intel Xeon Proc E5310 (1.60GHz 1066MHz 80w)	-
43W5785	43W5822	1448	Addl Quad-Core Intel Xeon Proc E5320 (1.86GHz 1066MHz 80w)	-
43W5818	43W5823	3456	Addl Quad-Core Intel Xeon Processor E5335 (2.0GHz 1333MHz 80w)	-

Notes:

1. One additional processor may be installed, providing a maximum of two. All processors must be identical in type, speed and cache size.

System x3400 (7975, 7976)

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At-A-Glance Options

Processor | **Memory** | HDD | I/O | Pwr acc | Tape |

SBB number	Option number	Feature codes	Memory description
Memory cards			
-	-	-	-
Memory DIMMs¹			
39M5780	-	0546	512MB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
39M5783	-	0542	1GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
39M5789	-	0544	2GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
39M5795	-	0556	4GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
-	39M5782	-	1GB Kit (2x 512MB DIMM) PC2 5300 DDR2 FBD CL4
-	39M5785	-	2GB Kit (2x1GB DIMM) PC2 5300 DDR2 FBD CL4
-	39M5791	-	4GB Kit (2x 2GB DIMM) PC2 5300 DDR2 FBD CL4
-	39M5797	-	8GB Kit (2x 4GB DIMM) PC2 5300 DDR2 FBD CL4

Notes:

1. Memory mirroring requires an exact match between the DIMM types and sizes on both memory buses. Memory-mirroring effectively reduces available memory by half.

Table 1. Standard Memory Configuration

Model	Standard DIMM configuration
42Y, 52Y, 62Y, 4AY, 5AY, 6AY, 14Y, 16Y, E1Y, 7976-E2Y, 2*512MB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz 7976-E3Y, B2Y, C2Y, B4Y, C4Y, F2Y, F4Y, A2Y, ABY, D2Y, DBY, J2Y, JBY, L2Y, LBY	
7975-E6Y, 7975-ECY, 7976-E4Y, 7976-EBY, 7975-E2Y, 2*1GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz 7976-E5Y, 7976-E6Y	

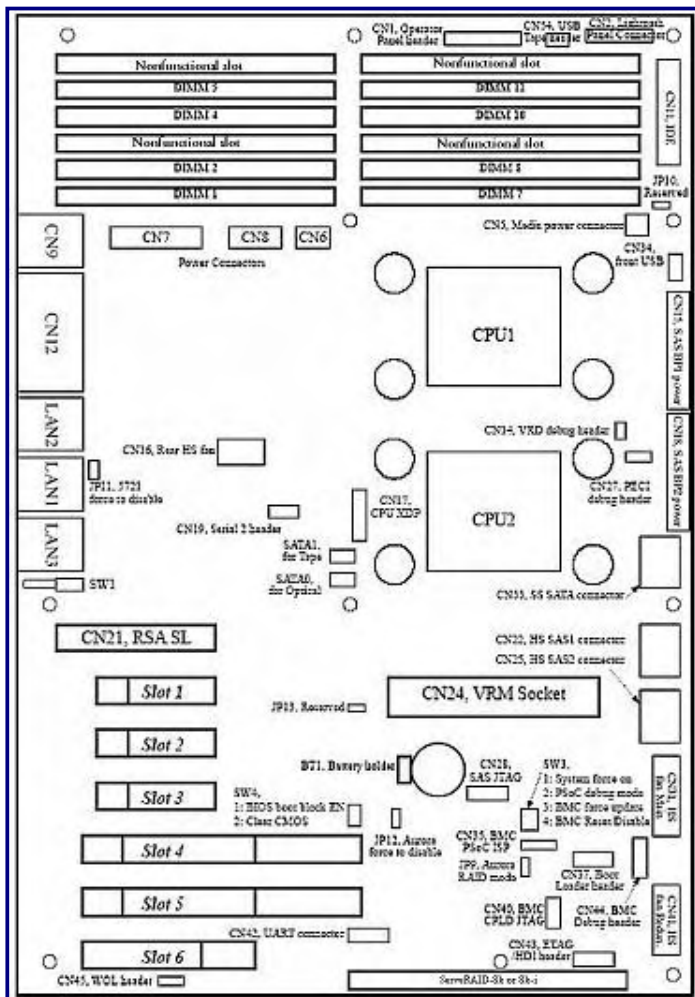
Table 2. 8-DIMM Configuration in non-mirrored model

Number of DIMMS	DIMM slots
1	1
2	1,4
4	1,4,7,10
6	1,4,7,10,2,5
8	1,4,7,10,2,5,8,11

Table 3. 8-DIMM Configuration in mirrored mode

Number of DIMMS	DIMM slots
4	1,4,7,10
8	1,4,7,10,2,5,8,11

Figure 1. System x3400, (7975, 7976) system board



Click image to enlarge

System x3400 (7975, 7976)

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At-A-Glance Options

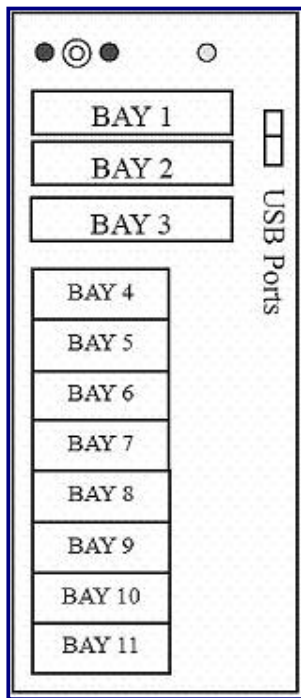
Processor | Memory | **HDD** | I/O | Pwr acc | Tape |

SBB number	Option number	Feature codes	Description	Height	Bays supported	Maximum quantity
SATA Hot-Swap HDDs						
39M4523	-	5150	160GB 7200 RPM 3.5" Hot-Swap SATA II	SL	4...11	8
39M4527	39M4526	5151	250GB 7200 RPM 3.5" Hot-Swap SATA II	SL	4...11	8
39M4531	39M4530	5196	500GB 7200 RPM 3.5" Hot-Swap SATA II	SL	4...11	8
43W7627	43W7626	5560	IBM 1TB 7200 SATA 3.5" HS HDD	SL	4...11	8
SAS Hot-Swap HDDs¹						
40K1075	40K1043	5161	73GB 15K 3.5" Hot-Swap SAS	SL	4...11	8
40K1076	40K1044	5162	146GB 15K 3.5" Hot-Swap SAS	SL	4...11	8
43X0808	43X0802	5532	300GB 15K 3.5" Hot-Swap SAS	SL	4...11	8
Optical devices						
22P1999	-	4149	IBM 16X RAM-Read DVD-ROM IDE Drive	HH	1...2	2
39M6342	-	4137	IBM 48X-20X CD-ROM Black Internal IDE Drive	HH	1...2	2
39M6344	-	4139	IBM 48X/32X/48X/16X Max CD-RW/DVD-ROM Combination Drive	HH	1...2	2
39M6345	-	4140	IBM DVD Multi-Burner Plus Drive	HH	1...2	2
Associated options						
39Y8338	39Y8406	4307	Hot-swap SAS/SATA 4-Pac HDD Option Upgrade Kit ²	-	-	-
External Storage Expansion Units				Form factor		
-	1750-511	-	IBM TotalStorage DS6800 1750 model 511	-		
-	18147xx	-	IBM System Storage DS4700 Midrange Disk System (all models)	-		
-	18158xx	-	IBM System Storage DS4800 Midrange Disk System (all models)	-		
-	2107-xxx	-	IBM TotalStorage DS8100 2107 (all models)	-		

Notes:

- Hot-Swap SAS/SATA HDDs are installed in the order of Bay 11 as standard then Bay 10, 9, 8.
- Up to 8 Hot-Swap SAS/SATA HDDs can be installed when the Hot-swap SAS/SATA 4-Pac HDD Option Upgrade Kit (option 39Y8406) is selected.

Figure 1. System x3400 (7975, 7976) Front View



Click image to enlarge

Bay	Form factor	Height	Front access	Usage
1	133 mm (5.25in)	-	-	-
2	133 mm (5.25in)	-	-	-
3	133 mm (5.25in)	-	-	-
4	89mm (3.5in)	-	-	HDD
5	89mm (3.5in)	-	-	HDD
6	89mm (3.5in)	-	-	HDD
7	89mm (3.5in)	-	-	HDD
8	89mm (3.5in)	-	-	HDD
9	89mm (3.5in)	-	-	HDD
10	89mm (3.5in)	-	-	HDD
11	89mm (3.5in)	-	-	HDD

System x3400 (7975, 7976)

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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#) |

SBB number	Part number	Feature codes	Description	Adapter length	PCI support	Slots supported	Maximum quantity
Storage controllers¹							
25R8077	25R8064	1670	IBM ServerAID-8k SAS Controller ¹	-	-	key Largo	1
25R8080	-	1671	IBM ServerAID 8k-I SAS Controller	-	-	key Largo	1
39R8752	39R8743	1680	IBM Ultra320 SCSI Controller 2	Half	64-bit/133MHz	4...5	1
43W4326	43W4324	3569	IBM Ultra 320 SCSI PCIe Controller	Half	PCI-E	1...3	3
39R8767	39R8765	1684	IBM ServerAID 8s SAS PCIe Controller ^{2,3}	Full	PCI-E (x8)	2	1
39R8871	39R8812	1693	IBM ServerAID-8s Battery ⁴	-	-	-	-
25R8072	25R8060	1681	IBM SAS HBA Controller	Half	PCI-E (x8)	2...3	2
43W7489	42D0405	1696	Emulex 4GB FC Single-Port PCI-X HBA for IBM System x	Half	64-bit/133MHz	4...5	2
43W7490	42D0407	1697	Emulex 4GB FC Dual-Port PCI-X HBA for IBM System x	Half	64-bit/133MHz	4...5	2
43W7491	42C2069	1698	Emulex 4GB FC Single-Port PCI-E HBA for IBM System x	Half	PCI-E (x4)	1...3	3
43W7492	42C2071	1699	Emulex 4GB FC Dual-Port PCI-E HBA for IBM System x	Half	PCI-E (x4)	1...3	3
39M6015	39M5894	3550	DS4000 FC 4Gb PCI-X Single Port HBA	Half	64-bit/133MHz	4...5	2
39M6013	39M5895	3551	DS4000 FC 4Gb PCI-X Dual Port HBA	Half	64-bit/133MHz	4...5	2
42C2179	39R6525	3567	QLogic 4Gb FC Single-Port PCIe HBA for IBM System x	Half	PCI-E (x4)	1...3	3
42C2182	39R6527	3568	QLogic 4Gb FC Dual-Port PCIe HBA for IBM System x	Half	PCI-E (x4)	1...3	3
Networking							
25R8590	-	2961	ClearSpeed Advance PCI-X Accelerator Board	Half	32/64 bit	4...6	2
39Y6149	39Y6146	2976	QLogic iSCSI Single Port PCIe HBA for IBM System x	Half	PCI-E (x4)	1...3	3
40K8840	-	1677	Myricom Myrinet 333MHz Dual Fiber PCI-X Adapter w/ 2MB Memory	Half	32/64 bit	4...6	2
40K8841	-	2916	Myricom Myrinet 333MHz Single Fiber PCI-X Adapter w/ 2MB Memory	Half	32/64 bit	4...6	2
40K8842	-	1476	Voltaire 10Gbps Host Channel PCI Express Adapter	Half	PCI-E (x8)	2...3	2
40K9098	-	2918	Myricom Myri-10G 2MB PCI Express Adapter w/ 10GBASE-CX4 Port	Half	PCI-E (x8)	2...3	1
40K9099	-	2919	Myricom Myri-10G 2MB PCI Express Adapter w/ XAUI-MTP Port	Half	PCI-E (x8)	2...3	1
40K9100	-	2920	Myricom Myri-10G PCI Express Adapter w/ 10GBASE-SR Port	Half	PCI-E (x8)	2...3	1
41Y4576	-	2960	Cisco 10Gbps Dual-Port 4x InfiniBand PCI-E HCA	Half	PCI-E (x8)	2...3	2
42D3708	-	2963	Voltaire Dual-Port 4x InfiniBand PCI-E HCA	Half	PCI-E (x8)	2...3	2
42C1773	42C1770	2977	QLogic iSCSI Dual Port PCIe HBA for IBM System x	Half	PCI-E (x4)	1...3	3
73P5105	73P5101	1579	PRO/1000 GT Dual Port Server Adapter by Intel- PCI-X	Half	32/64 bit	4 ... 6	3

39Y6071	39Y6066	1485	NetXtreme II 1000 Express Ethernet Adapter	Half	PCI-E (x4)	1â€¦3	3
39Y6091	39Y6088	1487	NetXtreme 1000 S + Ethernet Adapter- PCI-X	Half	32/64 bit	4 ... 5	2
39Y6096	39Y6093	1489	NetXtreme 1000 T + Dual Port Ethernet Adapter- PCI-X	Half	32/64 bit	4 ... 6	3
42C1783	42C1780	2995	NetXtreme II 1000 Express Dual Port Ethernet Adapter	Half	PCI-E (x4)	1â€¦3	3
-	39Y6126	-	PRO/1000 PT IOAT Dual Port Server Adapter by Intel PCIe	-	-	-	-
42C1753	42C1750	2975	PRO/1000 PF Server Adapter ⁵	Half	PCI-E (x4)	1...3	3
42C1763	42C1760	2978	IBM 10 GbE PCIe SR Server Adapter ⁶	Half	PCI-E (x8)	2...3	2
30R5205	30R5201	1483	IBM iSCSI Server TX Adapter	Half	32/64 bit	4...6	3
39Y6139	39Y6136	2974	PRO/1000 PT Quad Port Server Adapter ⁵	Half	PCI-E (x4)	1...3	3
Systems Management							
39Y9567	39Y9566	1605	Remote Supervisor Adapter II Slimline	-	-	RSA SL Socket	1

Note:

1. All x3400 (7975, 7976) models ship standard with ServeRAID-8k-I which offers RAID 0, 1, 10. To upgrade to RAID IE, 5 or 6, replace ServeRAID-8k-I with option ServeRAID-8k, p/n 25R8064.
2. x3400 support for ServeRAID-8s is for full function RAID attachment to a single EXP3000 storage expansion unit. EXP3000 support by ServeRAID-8s is currently limited to SAS HDDs only.
3. Before you install or ship this option in your server, first read the installation instructions provided in the option package.
4. ServeRAID-8s Battery 39R8812 enables Battery Backed Cache on ServeRAID-8s.
5. Supports Intel I/O Acceleration Technology for System x IOAT capable servers.
6. Supports TCP/IP Offload Engine (TOE). Not supported on systems with greater than 32GB installed memory.

Slot	Type	Frequency MHz
PCI Slot 1	PCI-E x 8	-
PCI Slot 2	PCI-E x 8	-
PCI Slot 3	PCI-E x 8	-
PCI Slot 4	PCI-X 64-bit/133Mhz	133
PCI Slot 5	PCI-X 64-bit/133Mhz	133
PCI Slot 6	PCI-32-bit/33Mhz	33

System x3400 (7975, 7976)

Attention:

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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | **[Pwr acc](#)** | [Tape](#) |

Option number	Description
Power	
-	-
Power Distribution Units	
39Y8905	DPI NEMA Rack PDU
39Y8923	DPI 60A Three Phase C19 Enterprise PDU w/ IEC309 3P+G (208V) line cord
39Y8938	30amp/125V Front-end PDU with NEMA L5-30P connector
39Y8939	30amp/250V Front-end PDU with NEMA L6-30P connector
39Y8940	60amp/250V Front-end PDU with IEC 309 60A 2P+N+Gnd connector
39Y8941	IBM DPI C13 Enterprise PDU without line cord ¹
39Y8948	DPI 60A Single Phase C19 Enterprise PDU w/IEC309 2P+G (208V) line cord
39Y8951	DPI Universal Rack PDU w/ Nema L5-20P & L6-20P (US cord)
71762MX	IBM Ultra Density Enterprise PDU C19 PDU+ (WW)
71762NX	IBM Ultra Density Enterprise PDU C19 PDU (WW)
71763MU	IBM Ultra Density Enterprise PDU C19 3 phase 60A PDU+ (NA)
71763NU	IBM Ultra Density Enterprise PDU C19 3 phase 60A PDU (NA)
Uninterruptible Power Supply (UPS)	
2130R5X	IBM UPS 1500T LV
2130R6X	IBM UPS 1500T HV
2130R9X	IBM UPS 1500T JV

Note:

1. Ships without a line cord. See the 'xSeries rack power configurator' chapter for supported line cords.

Option number	Description
Rack and NetBAY	
14104RX	IBM Linux Cluster Rack
39M2895	IBM USB Conversion Option
39M2896	IBM Short KVM Conversion Option
39M2897	IBM Long KVM Conversion Option
17235RX	IBM Rack Keyboard Tray
93061RX	NetBAY11 Standard Rack
93072RX	IBM 25U S2 standard rack
93074RX	NetBAY S2 42U Standard Rack Cabinet
93074XX	IBM 42U S2 expansion rack
93084RX	NetBAY42 Enterprise Rack
93084XX	NetBAY42 Enterprise Expansion Rack
Rack / Tower Conversion Kits	
39Y8382	5Ux26D Tower to Rack Conversion Kit
Console Connectivity	
17351GX	IBM 2x8 Local Console Manager
17352GX	IBM Global 2x16 Console Manager
17353LX	IBM 1x8 Console Switch
17354LX	IBM 2x16 Console Switch
17354GX	IBM Global 4x16 Console Manager
31R3130	IBM 3M Console Switch Cable (PS/2)
31R3132	IBM 3M Console Switch Cable (USB)
Monitors	
17233RX	1U 15" Flat Panel Monitor Console Kit (without keyboard)

4938-7xx	IBM C117 17" (15.9inch VIS) FST CRT
4942	15 TFT 4942-15U
4943	17 TFT 4943-17U
4944	19 TFT 4944-19U
Keyboard and Mouse	
40K9584	IBM Preferred Pro Keyboard USB - US English 103P
40K5372	IBM Keyboard w/ Integrated Pointing Device USB - US English 103P
40K9200	IBM 2 Button Optical Wheel Mouse - Black - USB
40K9201	IBM 3 Button Optical Mouse - Black - USB

System x3400 (7975, 7976)

Attention:

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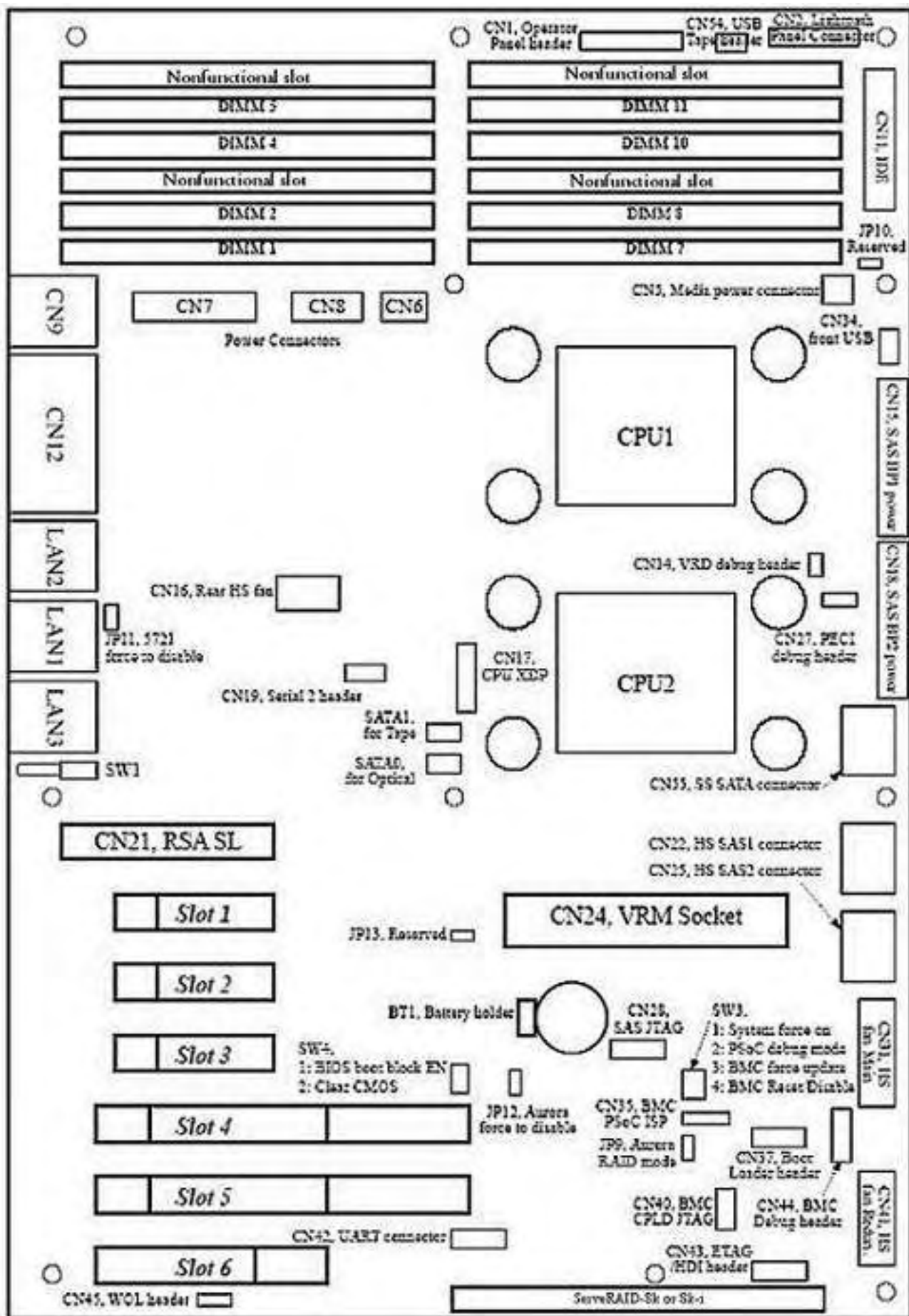
At-A-Glance Options

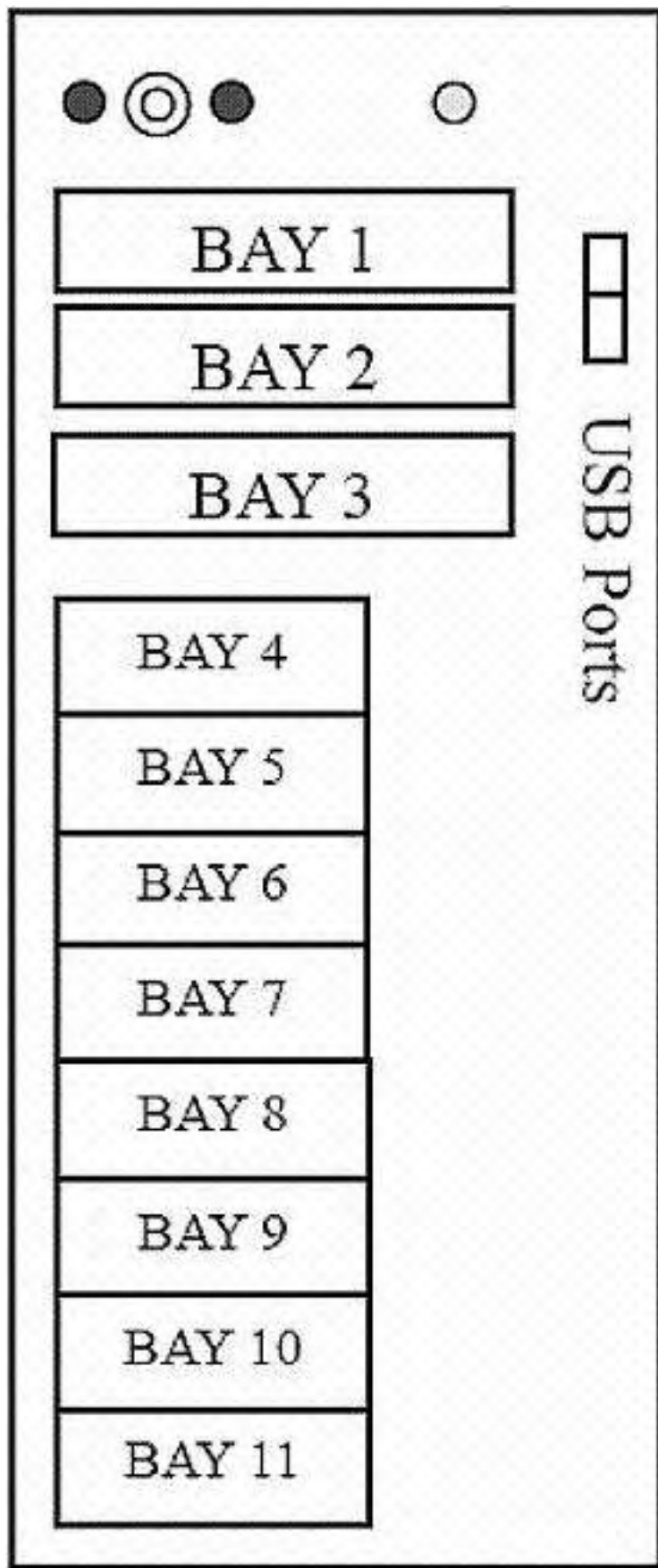
Processor | Memory | HDD | I/O | Pwr acc | **Tape** |

SBB number	Option number	Feature codes	Tape drive ¹	Bays supported	Storage interface	Form factor	Ext tape enclosures
39M5624	25R0045	5362	VXA 3 Half High Internal Back-up	2 or 3	Ultra160(16-bit)	Internal HH 89mm (5.25in)	8767HHX 87651UX 87664UX
43W8492	39M5636	5395	IBM DDS Generation 6 USB Tape Drive	2 or 3	USB	Internal HH 89mm (5.25in)	-
71P9176	39M5656	5355	36/72GB DDS Generation 5 Tape Drive	2 or 3	Ultra 320 (16-bit)	Internal 3.5" with 5.25" mounting kit	8767HHX 87651UX 87664UX
42C3932	39M5657	5365	LTO 400/800GB Full High Gen 3 Internal Back -Up	2 and 3	Ultra 320 (16-bit)	133mm (5.25in) FH	8768HHX 87664UX
39M5621	39M5658	5364	IBM Half High LTO Gen 2 Tape Drive	3	Ultra 320 (16-bit)	Internal HH 89mm (5.25in)	8767HHX 87651UX 87664UX
-	3580-L33/L3H	-	IBM TotalStorage Ultrium3 3580 model L33/L3H Tape Drive	-	Ultra160 SCSI LVD	Standalone or Rack Mount ²	-
43W8490	43W8478	5393	IBM Half High LTO Gen 3 SAS Tape Drive	3	SAS	89mm (5.25in) HH	-
43W8487	43W8480	5392	IBM DDS Gen 5 SATA Tape Drive	2...3	SATA I and SATA II	89mm (5.25in) HH	-
43W8474	42D8771	4860	GoVault Carrier Option	2...3	SATA I and SATA II	89mm (5.25in) HH	-
42C3912	-	4352	GoVault Tape Drive	2...3	SATA I and SATA II	89mm (5.25in) HH	-
44E8897	44E8895	5397	IBM Half High LTO Gen 4 SAS Tape Drive	3	SAS	89mm (5.25in) HH	-
External tape enclosures²							
-	8767HHX	-	IBM Half High Tabletop Tape Enclosure	-	-	-	-
-	8768FHX	-	IBM Full High Tabletop Tape Enclosure	-	-	-	-
-	87651UX	-	IBM 1U Rackmount Tape Enclosure	-	-	-	-
-	87664UX	-	IBM 4U Rackmount Tape Enclosure	-	-	-	-
Tape autoloaders¹							
-	87691VX	-	VXA3 Autoloader	-	Ultra 160 SCSI LVD	-	-
Tape libraries							
-	33614LX	-	IBM LTO3 4U Tape Library ^{1,3}	-	Ultra 160 SCSI LVD or 4 Gbps Fibre	-	-
Associated Options							
-	44E8869	-	USB Enclosure Adapter Kit	-	-	-	-

Notes:

1. Internal SCSI tape drives and external SCSI tape drives require a 39R8743 PCI-X U320 SCSI storage controller.
2. A quantity of one 42C3910, SCSI Interface and Cabling kit is required for each SCSI Tape Drive installed (see External tape and tape library attributes appendix).
3. Base 33614LX library requires the addition of one LTO magazine and a minimum of one (maximum of two) LTO sled drive(s).





System x3450 (7948)

Attention:

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At-A-Glance Options

Table 1. System x3450 (7948) at-a-glance

Part number ¹	CPU/FSB speed (GHz / MHz) - cache	Number of processors (std / max)	Memory (std / max)	Form factor	Power supply quantity (std / max)	Hot-swap (power, slots, HDD, fans, memory)	System Mgmt Processor
7948-22X	Dual Core Intel Xeon Proc X5272 (3.4GHz 1600MHz 6MB L2 80w)	2/2	4GB/64GB	Rack(1U)	1/1	-	-
7948-2BX	Dual Core Intel Xeon Proc X5272 (3.4GHz 1600MHz 6MB L2 80w)	2/2	8GB/64GB	Rack(1U)	1/1	-	-
7948-32X	Quad Core Intel Xeon Proc E5462 (2.8GHz 1600MHz 12MB L2 80w)	2/2	4GB/64GB	Rack(1U)	1/1	-	-
7948-3BX	Quad Core Intel Xeon Proc E5462 (2.8GHz 1600MHz 12MB L2 80w)	2/2	8GB/64GB	Rack(1U)	1/1	-	-
7948-42X	Quad Core Intel Xeon Proc X5472 (3.0GHz 1600MHz 12MB L2 120w)	2/2	4GB/64GB	Rack(1U)	1/1	-	-
7948-4BX	Quad Core Intel Xeon Proc X5472 (3.0GHz 1600MHz 12MB L2 120w)	2/2	8GB/64GB	Rack(1U)	1/1	-	-
7948-52X	Quad Core Intel Xeon Proc E5472 (3.0GHz 1600MHz 12MB L2 80w)	2/2	4GB/64GB	Rack(1U)	1/1	-	-
7948-54X	Quad Core Intel Xeon Proc E5472 (3.0GHz 1600MHz 12MB L2 80w)	2/2	32GB/64GB	Rack(1U)	1/1	-	-
7948-56X	Quad Core Intel Xeon Proc E5472 (3.0GHz 1600MHz 12MB L2 80w)	2/2	64GB/64GB	Rack(1U)	1/1	-	-
7948-58X	Quad Core Intel Xeon Proc E5472 (3.0GHz 1600MHz 12MB L2 80w)	2/2	64GB/64GB	Rack(1U)	1/1	-	-

7948-5BX	Quad Core Intel Xeon Proc E5472 (3.0GHz 1600MHz 12MB L2 80w)	2/2	8GB/64GB	Rack(1U)	1/1	-	-

Table 1. System x3450 (7948) at-a-glance (continued)

Part number ¹	Integrated ethernet	Storage controller	Internal HDD interface	Internal HDD storage (std / max)	Optical drive	Bays (total / avail)	Slots (total / avail)
7948-22X	Dual GB	SATA	3.5" Non-Hotswap	0GB/1.5TB	-	2/2	1/1
7948-2BX	Dual GB	SATA	3.5" Non-Hotswap	0GB/1.5TB	-	2/2	1/1
7948-32X	Dual GB	SATA	3.5" Non-Hotswap	0GB/1.5TB	-	2/2	1/1
7948-3BX	Dual GB	SATA	3.5" Non-Hotswap	0GB/1.5TB	-	2/2	1/1
7948-42X	Dual GB	SATA	3.5" Non-Hotswap	0GB/1.5TB	-	2/2	1/1
7948-4BX	Dual GB	SATA	3.5" Non-Hotswap	0GB/1.5TB	-	2/2	1/1
7948-52X	Dual GB	SATA	3.5" Non-Hotswap	0GB/1.5TB	-	2/2	1/1
7948-54X	Dual GB	SATA	3.5" Non-Hotswap	500GB/1.5TB	-	2/1	1/1
7948-56X	Dual GB	SATA	3.5" Non-Hotswap	500GB/1.5TB	-	2/1	1/1
7948-58X	Dual GB	SATA	3.5" Non-Hotswap	1TB/1.5TB	-	2/0	1/1
7948-5BX	Dual GB	SATA	3.5" Non-Hotswap	1TB/1.5TB	-	2/0	1/1

Notes:

1. Model numbers provided are available worldwide.

System x3450 (7948)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#)

SBB number	Option number	Feature codes	Processor options ¹	Model support
Standard processor				
-	-	-	-	-
Additional processors				
-	-	-	-	-

Notes:

1. Supported options will be published in a future release as they become available.

System x3450 (7948)

Attention:

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At-A-Glance **Options**

[Processor](#) | **[Memory](#)** | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#) |

SBB number	Option number	Feature codes	Memory description
Memory cards			
-	-	-	-
Memory DIMMs			
-	39M5791	-	4GB Kit (2x 2GB DIMM) PC2 5300 DDR2 FBD CL4
-	39M5797	-	8GB Kit (2x 4GB DIMM) PC2 5300 DDR2 FBD CL5

Table 1. Standard Memory Configuration

Model	Std. DIMM Configuration
22Y,32Y,42Y, 52Y	2x2GB DDR2 667 FBDIMM
54Y	8x4GB DDR2 667 FBDIMM
56Y	16x2GB DDR2 667 FBDIMM
58Y	16x4GB DDR2 667 FBDIMM

System x3450 (7948)

Attention:

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At-A-Glance Options

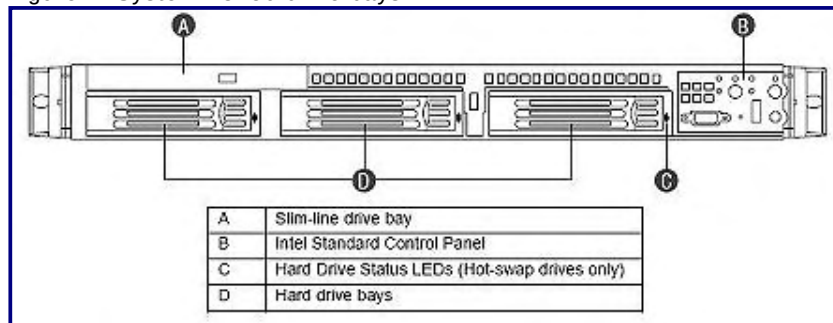
[Processor](#) | [Memory](#) | **[HDD](#)** | [I/O](#) | [Pwr acc](#) | [Tape](#)

SBB number	Option number	Feature code	Description ¹	Height	Bays supported	Maximum quantity
Diskette Drive						
-	-	-	-	-	-	-
SATA Hot-Swap HDDs						
-	-	-	-	-	-	-
SAS Hot-Swap HDDs						
-	-	-	-	-	-	-
Optical Devices						
-	-	-	-	-	-	-

Note:

- Supported options will be published in a future release as they become available.

Figure 1. System x3450 drive bays



[Click image to enlarge](#)

System x3450 (7948)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#)

SBB number	Part number	Feature codes	Description ¹	Adapter length	PCI support	Slots supported	Hot-Plug capable	Max supported
Storage controllers								
-	-	-	-	-	-	-	-	-
External Disk Systems and Options								
-	-	-	-	-	-	-	-	-
Networking								
-	39Y6126	-	PRO/1000 PT Dual Port Server Adapter by	-	-	-	-	-
-	39Y6136	-	PRO/1000 PT Quad Port Server Adapter by Intel	-	-	-	-	-
-	42C1750	-	PRO/1000 PF Server Adapter by Intel	-	-	-	-	-
Systems Management								
-	-	-	-	-	-	-	-	-
Other I/O								
-	-	-	-	-	-	-	-	-

Notes:

- Supported options will be published in a future release as they become available.

Slot	Type	Bus	Voltage (V)	Frequency MHz	Data path	Active PCI	Slot Height
PCI Slot 1	PCIe x16 Gen2 slot (Full height)	-	-	-	-	No	Full Height
Disc Controller	ESB2-E (3Gb/s SATA)	-	-	-	-	-	-
Ethernet Controller	ESB2-E (Dual GbE)	-	-	-	-	-	-
Video Controller	ATI* ES1000 video controller with 32MB DDR SDRAM	-	-	-	-	-	-

System x3450 (7948)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | **[Pwr acc](#)** | [Tape](#)

SBB number	Option number	Feature codes	Description ¹
Power			
-	-	-	-
Power Distribution Units			
-	-	-	-
Uninterruptible Power Supply (UPS)			
-	-	-	-

Notes:

1. Supported options will be published in a future release as they become available.

System x3450 (7948)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

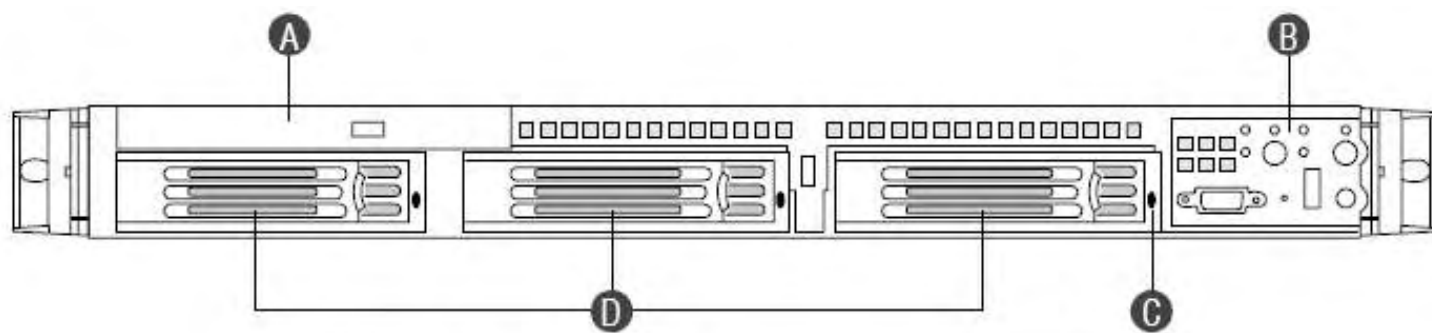
At A Glance
Options

[Processor](#) |
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 [HDD](#) |
 [I/O](#) |
 [Pwr acc](#) |
 [Tape](#)

SBB number	Part number	Feature codes	Description ¹	Bays supported	Storage interface	Form factor	Ext tape enclosure
Tape drives							
-	-	-	-	-	-	-	-
External tape enclosures							
-	-	-	-	-	-	-	-
Tape libraries							
-	-	-	-	-	-	-	-
Associated tape options							
-	-	-	-	-	-	-	-

Notes:

- Supported options will be published in a future release as they become available.



A	Slim-line drive bay
B	Intel Standard Control Panel
C	Hard Drive Status LEDs (Hot-swap drives only)
D	Hard drive bays

System x3455 (7940)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Table 1. System x3455 (7940) at-a-glance

Part number ¹	CPU/FSB speed (GHz/ MHz)- cache	Number of processors (std/ max)	Memory (std/ max)	Form factor	Power supply quantity (std/ max)	Hot-swap (power, slots, HDD, fans, memory)	System Mgmt Processor
7940-32Y	Quad Core AMD Opteron Processor Model 2352 (2.1GHz 115W)	1/2	2 GB/ 48 GB	Rack (1U)	1/1	-	Y
7940-52Y	Quad Core AMD Opteron Processor Model 2356 (2.3GHz 115W)	1/2	2 GB/ 48 GB	Rack (1U)	1/1	-	Y
7940-62Y	Quad Core AMD Opteron Processor Model 2360 SE (2.5GHz 137W)	2/2	8 GB/ 48 GB	Rack (1U)	1/1	-	Y

Table 1. System x3455 (7940) at-a-glance (continued)

Part number ¹	Integrated ethernet	Storage controller	Internal HDD interface	Internal HDD storage (std/ max)	Optical drive	Bays (total/ avail)	Slots (total/ avail)
7940-32Y	Dual 1Gb	SATA	Fixed	160GB/1500GB	-	2/1	2/2
7940-52Y	Dual 1Gb	SATA	Fixed	160GB/1500GB	-	2/1	2/2
7940-62Y	Dual 1Gb	SATA	Fixed	160GB/1500GB	-	2/1	2/2

Notes:

- Model numbers provided are worldwide generally available variant (GAV) model numbers which are not orderable as listed and need to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 7940-32Y is 7940-32U. See the product specific Official IBM announcement letter for other country-specific GAV model numbers. GAV to MTM mapping for A.P. Geographies follow the same pattern. Substitute the last character with the country-specific designator.
- Withdrawal dates are provided for U.S. and Canada only. Business Partner Inventory may be available.

System x3455 (7940)

Attention:

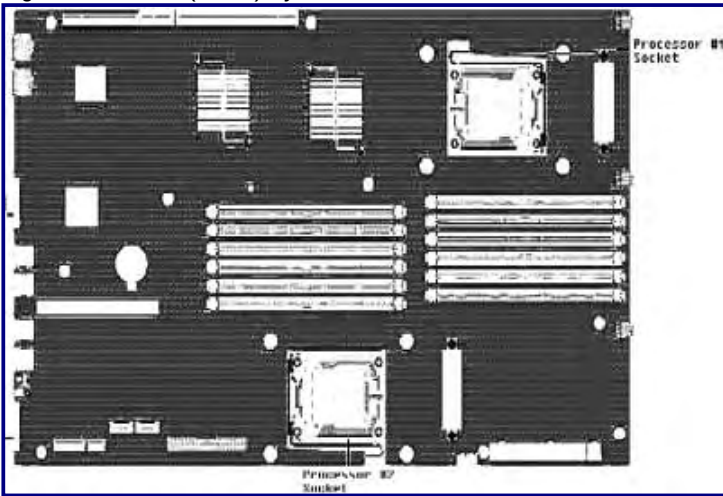
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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#) |

SBB number	Option number	Feature codes	Processor options ¹	Model support
43W7430	-	3065	Quad Core AMD Opteron Processor Model 2352 (2.1GHz 115W)	32Y
43W7432	43W7463	3067	Quad Core AMD Opteron Processor Model 2356 (2.3GHz 115W)	52Y
43W7433	-	3068	Quad Core AMD Opteron Processor Model 2360 SE (2.5GHz 137W)	62Y
Additional processors ¹				
44R5903	43W7461	3479	Addl Quad Core AMD Opteron Processor Model 2352 (2.1GHz 115W)	32Y
44R5905	43W7463	3481	Addl Quad Core AMD Opteron Processor Model 2356 (2.3GHz 115W)	52Y
44R5906	-	3482	Addl Quad Core AMD Opteron Processor Model 2360 SE (2.5GHz 137W)	62Y

Figure 1. x3455 (7940) system board



[Click image to enlarge](#)

System x3455 (7940)

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At-A-Glance Options

Processor | **Memory** | HDD | I/O | Pwr acc | Tape |

SBB number	Option number	Feature codes	Memory description
Memory DIMMs¹			
40K7177	-	0597	512 MB DDR 2 667MHz DIMM memory
-	41Y2759	-	1GB Kit (2x 512MB DIMM) PC2-5300 CL5 ECC DDR2 SDRAM LP RDIMM
40K7178	-	0598	1.0 GB DDR 2 667MHz DIMM memory
-	41Y2762	-	2GB Kit (2x 1GB DIMM) PC2-5300 CL5 ECC DDR2 SDRAM LP RDIMM
40K7179	-	0599	2.0 GB DDR 2 667MHz DIMM memory
-	41Y2765	-	4GB Kit (2x 2GB DIMM) PC2-5300 CL5 ECC DDR2 SDRAM LP RDIMM
40K7181	-	1901	4.0 GB DDR 2 667MHz DIMM memory
-	41Y2768	-	8GB Kit (2x 4GB DIMM) PC2-5300 CL5 ECC DDR2 SDRAM LP RDIMM

Notes:

1. DIMMs are installed in pairs. See the 'DIMM Population Sequence' table below for the correct placement of DIMMs when two processors are utilized.

Table 1. Standard Memory Configuration

Model	Std. DIMM Configuration
32Y, 52Y	2 x 1.0 GB DDR 2 667MHz DIMM memory
62Y	4 x 2.0 GB DDR 2 667MHz DIMM memory

Table 2. DIMM installation sequence

Number of DIMMs installed	DIMM connector population with one microprocessor installed	DIMM connector population with two microprocessors installed
2	1, 2	1, 2
4	1, 2, 3, 4	1, 2, 7, 8
6	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 7, 8
8	Not supported	1, 2, 3, 4, 7, 8, 9, 10
10	Not supported	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
12	Not supported	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

System x3455 (7940)

Attention:

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At A Glance Options

Processor | Memory | **HDD** | I/O | Pwr acc | Tape |

SBB number	Option number	Feature codes	Description	Height	Bays supported	Maximum quantity
Diskette						
-	40K1692	-	IBM USB Portable Diskette Drive	-	-	-
SAS HDDs						
40K1196	40K1049	5504	73GB 15K 3.5" Simple-Swap SAS	SL	1, 2	2
40K1197	40K1050	5505	146GB 15K 3.5" Simple-Swap SAS	SL	1, 2	2
SATA HDDs						
39M4535	39M4504	5294	160GB 3.5" Simple-Swap SATA II	SL	1, 2	2
39M4537	39M4508	5295	250GB 3.5" Simple-Swap SATA II	SL	1, 2	2
39M4599	39M4514	5180	500GB 7200 RPM 3.5" Simple-Swap SATA II	SL	1, 2	2
43W7588	43W7572	5541	750GB 3.5" Simple-Swap SATA II	SL	1, 2	2
Optical drives						
32R2784	-	4144	CD-RW/DVD Combo V Ultrabay Enhanced	Ultra-Slim	3	1
32R2899	-	4141	CDROM Ultrabay Enhanced Drive	Ultra-Slim	3	1
External Storage Expansion Units				Form Factor		
-	17401xx	-	IBM TotalStorage DS4000 EXP700 Expansion Unit (all models)	-		
-	17407xx	-	IBM TotalStorage DS4000 EXP710 Storage Expansion Unit (all models)	-		
-	18128xx	-	IBM System Storage EXP810 Storage Expansion Unit (all models)	-		
-	2107-92E/9AE	-	IBM TotalStorage DS8000 Expansion Unit 2107 model 92E/9AE	-		

Table 1. Standard Memory Configuration

Bay	Form Factor	Height	Front Access	Usage
1	3.5in SAS or SATA HDD Models	SSL	Y	HDD
2	3.5in SAS or SATA HDD Models	SSL	Y	HDD
3	DVD-ROM or CD-ROM	SL	Y	CD

System x3455 (7940)

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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#) |

SBB number	Option number	Feature codes	Description	Adapter length	Adapter height	PCI support	Slots supported	Hot-Plug capable
Storage Controllers and Options								
25R8072	25R8060	1681	IBM SAS HBA Controller	half	Half Height	x8 PCI-E	1, 2	N
42C2179	39R6525	3567	QLogic 4Gb FC Single-Port PCIe HBA for IBM System x	half	Low Profile	x8 PCI-E	1, 2	N
42C2182	39R6527	3568	QLogic 4Gb FC Dual-Port PCIe HBA for IBM System x	half	Low Profile	x8 PCI-E	1, 2	N
43W7491	42C2069	1698	Emulex 4GB FC Single-Port PCI-E HBA for IBM System x	half	Low Profile	x8 PCI-E	1, 2	N
43W7492	42C2071	1699	Emulex 4GB FC Dual-Port PCI-E HBA for IBM System x	half	Low Profile	x8 PCI-E	1, 2	N
43W4326	-	3569	IBM Ultra 320 SCSI PCIe Controller	half	Full Height	x1 PCI-E	1, 2	N
External Disk Systems and Options								
-	17421xx	-	IBM TotalStorage DS4400 Midrange Disk System (all models)	-	-	-	-	-
-	18147Vx	-	IBM System Storage DS4200 Midrange Disk System (all models)	-	-	-	-	-
-	2107-xxx	-	IBM TotalStorage DS8100 2107 (all models)	-	-	-	-	-
-	24P82xx	-	IBM TotalStorage DS4300 Model 60U with Turbo	-	-	-	-	-
Networking								
39Y6071	39Y6066	1485	NetXtreme II 1000 Express G Ethernet Adapter- PCIe ¹	half	Full Height	PCI-E x4	1, 2	Y
39Y6129	39Y6126	2944	PRO/1000 PT Dual Port Server Adapter by Intel	half	Low Profile	PCI-E x4	1, 2	N
39Y6139	-	2974	PRO/1000 PT Quad Port Server Adapter	half	Low Profile	PCI-E x4	1, 2	N
39Y6149	39Y6146	2976	QLogic iSCSI Single Port PCIe HBA for IBM System x	half	Full Height	PCI-E x4	1, 2	N
42C1773	42C1770	2977	QLogic iSCSI Dual Port PCIe HBA for IBM System x	half	Full Height	PCI-E x4	1, 2	N
42C1783	42C1780	2995	NetXtreme II 1000 Express Dual Port Ethernet Adapter	half	Low Profile	PCI-E x4	1, 2	N
44E9031	-	1589	Cisco Single-port 4X SDR IB PCI-E HCA (memory free)	half	Low Profile	PCI-E x4	1, 2	N

44E9035	-	1588	Cisco Single-port 4X DDR IB PCI-E HCA (memory free)	half	Low Profile	PCI-E x4	1, 2	N
40K8842	-	1476	Voltaire 10Gbps Host Channel PCI Express Adapter	half	Full Height	PCI-E x8	1, 2	N
40K9098	-	2918	Myricom Myri-10G 2MB PCI Express Adapter w/ 10GBASE-CX4 Port	half	Full Height	PCI-E x8	1, 2	N
40K9099	-	2919	Myricom Myri-10G 2MB PCI Express Adapter w/ XAUI-MTP Port	half	Full Height	PCI-E x8	1, 2	N
40K9100	-	2920	Myricom Myri-10G PCI Express Adapter w/ 10GBASE-SR Port	half	Full Height	PCI-E x8	1, 2	N
41Y4576	-	2960	Cisco 10Gbps Dual-Port 4x InfiniBand PCI-E HCA	half	Low Profile	PCI-E x8	1	N
42C1753	-	2975	PRO/1000 PF Server Adapter	half	Low Profile	PCI-E x8	1, 2	N
42D3708	-	2963	Voltaire Dual-Port 4x InfiniBand PCI-E HCA	half	Low Profile	PCI-E x8	1, 2	N
Other I/O								
43V5766	-	1822	NVIDIA Quadro FX 1700 3D Graphics Card	Half	Full Height	PCI-E x16	2	N

Notes:

1. Even though the NetXtreme II 1000 Express G Ethernet Adapter- PCIe (option 39Y6066) can be installed as a full-height or low profile, only the full height installation is supported.

Slot / Device	Type	Bus	Voltage (V)	Frequency MHz	Data Path	Active PCI? (Hotswap)	Slot length	Scan sequence	Device #
PCI Slot 1	PCI-E x8 or HTX depending on which riser card is installed	Full	-	-	-	-	Full	-	-
PCI Slot 2	PCI-E x16	Half	-	-	-	-	Half	-	-

System x3455 (7940)

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At-A-Glance Options

Processor | Memory | HDD | I/O | **Pwr acc** | Tape |

SBB number	Option number	Feature code	Description
Power			
-	-	-	-
Power Distribution Units			
-	39Y8905	-	DPI NEMA Rack PDU
-	39Y8935	-	63A/250V Front-end PDU IEC 309 P+N+G
-	39Y8938	-	30amp/125V Front-end PDU with NEMA L5-30P connector
-	39Y8939	-	30amp/250V Front-end PDU with NEMA L6-30P connector
-	39Y8940	-	60amp/250V Front-end PDU with IEC 309 60A 2P+N+Gnd connector
-	39Y8941	-	DPI Single Phase C13 Enterprise PDU w/o line cord
-	39Y8951	-	DPI Universal Rack PDU w/ Nema L5-20P & L6-20P (US cord)
Uninterruptible Power Supply (UPS)			
-	21303RX	-	BM UPS 7500XHV
-	21304RX	-	IBM UPS 10000XHV
-	39Y8857	-	IBM UPS 3U Online Battery Pack

SBB number	Option number	Feature codes	Description
Rack and NetBAY			
-	93084RX	-	NetBAY42 Enterprise Rack Cabinet
-	93084XX	-	NetBAY42 Enterprise Expansion Rack Cabinet (EX)
Rack Console Connectivity			
-	31R3132	-	IBM 3M Console Switch Cable (USB)
-	39M2895	-	IBM USB Conversion Option Pack
-	17352GX	-	IBM Global 2x16 Console Manager
-	17354GX	-	IBM Global 4x16 Console Manager
39Y7953	31R3132	3751	3m Console Switch Cable (USB)
Racks			
-	17231RX	-	IBM 1U 17" Flat Panel Console Kit w/ Optical Drive Bay
-	17233RX	-	IBM 1U 15" Flat Panel Console Kit
-	93072RX	-	IBM 25U Standard Rack
-	93074RX	-	IBM 42U Standard Rack
-	93074XX	-	IBM 42U Standard Rack Extension
Monitors			
-	4942	-	IBM T115 15" TFT LCD
-	4943	-	IBM T117 17" TFT LCD
-	4944	-	IBM T119 19" TFT LCD
Keyboard and Mouse			
42C1473	40K5372	8693	IBM Rack Mountable Keyboard & Pointing Device - 3m Cable - Black - USB - US English 103P
40K9490	40K9584	8750	IBM Preferred Pro Keyboard- Full Width - 2m Cable - Black - USB - US English 103P
40K9491	40K9200	8912	IBM 2 Button Optical Wheel Mouse - Black - USB
40K9492	40K9201	8913	IBM 3 Button Optical Mouse - Black - USB

System x3455 (7940)

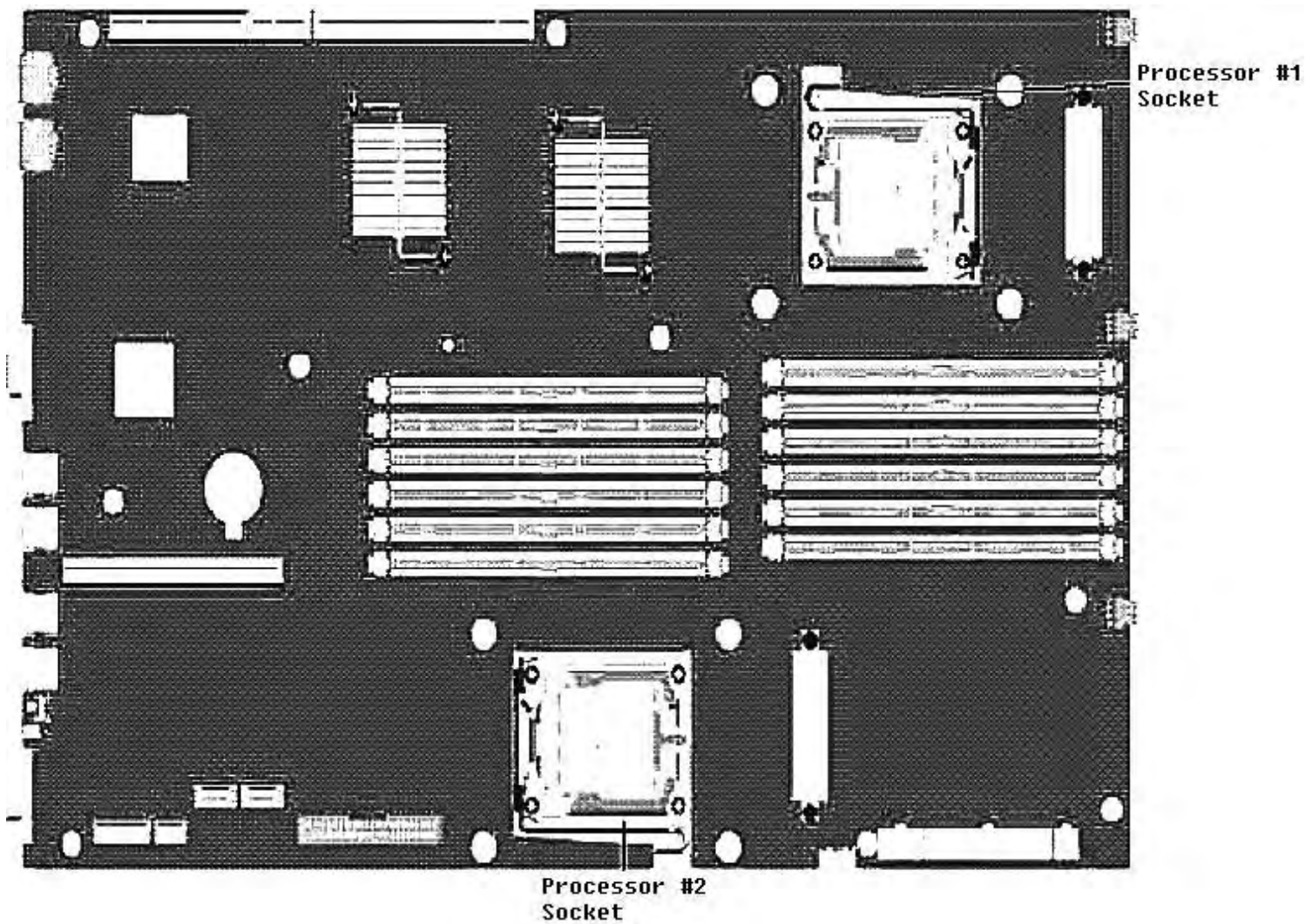
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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | **[Tape](#)** |

SBB number	Part number	Feature code	Description	Bays supported	Storage interface	Form factor	Ext tape encl
Tape drives							
-	44E8895	-	IBM Half High LTO Gen 4 SAS Tape Drive	-	-	-	-
External tape enclosures							
-	87664NX	-	IBM 4U Rackmount Tape Enclosure	-	-	-	-
-	8767HNX	-	IBM Half High Tabletop Tape Enclosure	-	-	-	-
-	8768FNX	-	IBM Full High Tabletop Tape Enclosure	-	-	-	-
Tape library							
-	3573-xxx	-	IBM System Storage TS3100/TS3200 Tape Library (all models)	-	-	-	-
-	3576-xxx	-	IBM System Storage TS3310 Modular Tape Library (all models)	-	-	-	-
-	3584-xxx	-	IBM Ultrium3 Ultra Scalable Tape Library (all models)	-	-	-	-
Associated tape options							
-	-	-	-	-	-	-	-



System x3500 (7977)

Attention:

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At-A-Glance Options

Table 1. System x3500 (7977) at-a-glance

Part number ¹	Withdrawal date ²	CPU/FSB speed (GHz/ MHz)- cache	Number of processors (std / max)	Memory (std / max)	Form factor	Power supply quantity (std / max)	Hot Swap (power, slots, HDD, fans, memory)	System Mgmt Processor
7977-12Y	Jun 29 2007	Dual-Core Intel Xeon Processor 5050 (3.0GHz 667MHz 2x2MB L2 Cache)	1/2	1GB/48GB	5U Tower	1/2	PHF	Y
7977-22Y	Jun 29 2007	Dual-Core Intel Xeon Processor 5060 (3.2GHz 1067MHz 2x2MB L2 Cache)	1/2	1GB/48GB	5U Tower	1/2	PHF	Y
7977-42Y	-	Dual-Core Intel Xeon Processor 5110 (1.60GHz 4MB L2 Cache)	1/2	1GB/48GB	5U Tower	1/2	PHF	Y
7977-52Y	Oct 27 2007	Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 Cache)	1/2	1GB/48GB	5U Tower	1/2	PHF	Y
7977-62Y	Apr 4 2008	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	1/2	1GB/48GB	5U Tower	1/2	PHF	Y
7977-72Y	Oct 27 2007	Dual-Core Intel Xeon Processor 5140 (2.33GHz 4MB L2 Cache)	1/2	1GB/48GB	5U Tower	1/2	PHF	Y
7977-82Y	Oct 27 2007	Dual-Core Intel Xeon Processor 5150 (2.66GHz 4MB L2 Cache)	1/2	1GB/48GB	5U Tower	1/2	PHF	Y
7977-92Y	Apr 4 2008	Dual-Core Intel Xeon Processor 5160 (3.0GHz 4MB L2 Cache)	1/2	1GB/48GB	5U Tower	1/2	PHF	Y

7977-A2Y	-	Quad-Core Intel Xeon Processor E5405 (2.0GHz 12MB L2 1333MHz 80w)	1/2	1GB/48GB	5U Tower	1/2	PHF	Y
7977-B2Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5310 (1.60GHz 8MB L2 1066MHz 80w)	1/2	1GB/48GB	5U Tower	1/2	PHF	Y
7977-C2Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5320 (1.86GHz 8MB L2 1066MHz 80w)	1/2	1GB/48GB	5U Tower	1/2	PHF	Y
7977-D2Y	-	Quad-Core Intel Xeon Processor E5410 (2.33GHz 12MB L2 1333MHz 80w)	1/2	1GB/48GB	5U Tower	1/2	PHF	Y
7977-E3Y	-	Quad-Core Intel Xeon Processor E5440 (2.83GHz 12MB L2 1333MHz 80w)	1/2	4GB/48GB	5U Tower	2/2	PHF	Y
7977-E6Y	Apr 4 2008	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	1/2	2GB/48GB	5U Tower	2/2	PHF	Y
7977-E7Y	-	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 1333MHz 80w)	1/2	2GB/48GB	5U Tower	1/2	PHF	Y
7977-E8Y	-	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 1333MHz 80w)	1/2	4GB/48GB	5U Tower	2/2	PHF	Y
7977-E9Y	-	Quad-Core Intel Xeon Processor X5450 (3.0GHz 12MB L2 1333MHz 120W)	2/2	8GB/48GB	5U Tower	2/2	PHF	Y
7977-EFY	Apr 4 2008	Quad-Core Intel Xeon Processor E5335 (2.00GHz 8MB L2 1333MHz 80w)	1/2	2GB/48GB	5U Tower	2/2	PHF	Y
7977-EGY	Apr 4 2008	Quad-Core Intel Xeon Processor E5345 (2.33GHz 8MB L2 1333MHz 80w)	1/2	4GB/48GB	5U Tower	2/2	PHF	Y

7977-F2Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5335 (2.00GHz 8MB L2 1333MHz 80w)	1/2	1GB/48GB	5U Tower	1/2	PHF	Y
7977-G2Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5345 (2.33GHz 8MB L2 1333MHz 80w)	1/2	1GB/48GB	5U Tower	1/2	PHF	Y
7977-H2Y	Apr 4 2008	Quad-Core Intel Xeon Processor X5355 (2.66GHz 8MB L2 1333MHz 120w)	1/2	1GB/48GB	5U Tower	1/2	PHF	Y
7977-J2Y	-	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 1333MHz 80w)	1/2	1GB/48GB	5U Tower	1/2	PHF	Y
7977-L2Y	-	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 1333MHz 80w)	1/2	1GB/48GB	5U Tower	1/2	PHF	Y
7977-M2Y	-	Quad-Core Intel Xeon Processor E5440 (2.83GHz 12MB L2 1333MHz 80w)	1/2	1GB/48GB	5U Tower	1/2	PHF	Y
7977-R2Y	-	Quad-Core Intel Xeon Processor X5450 (3.0GHz 12MB L2 1333MHz 120W)	1/2	1GB/48GB	5U Tower	1/2	PHF	Y

Table 1. System x3500 (7977) at-a-glance (continued)

Part number ¹	Withdrawal date ²	Integrated ethernet	Storage controller	Internal HDD interface	Internal HDD storage (std / max)	Optical drive	Bays (total / avail)	Slots (total / avail)
7977-12Y	Jun 29 2007	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-22Y	Jun 29 2007	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-42Y	-	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-52Y	Oct 27 2007	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-62Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-72Y	Oct 27 2007	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-82Y	Oct 27 2007	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-92Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-A2Y	-	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-B2Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-C2Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6

7977-D2Y	-	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-E3Y	-	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-E6Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-E7Y	-	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-E8Y	-	1GB	SAS SFF	Hot Swap	0GB/1752GB	DVD-ROM (16X)	15/14	6/6
7977-E9Y	-	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-EFY	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-EGY	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-F2Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-G2Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-H2Y	Apr 4 2008	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-J2Y	-	1GB	SAS	Hot Swap	0GB/1752GB	DVD-ROM (16X)	15/14	6/6
7977-L2Y	-	1GB	SAS	Hot Swap	0GB/1752GB	DVD-ROM (16X)	15/14	6/6
7977-M2Y	-	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6
7977-R2Y	-	1GB	SAS/SATA	Hot Swap	0GB/6000GB	DVD-ROM (16X)	11/10	6/6

Notes:

1. Model numbers provided are worldwide generally available variant (GAV) model numbers which are not orderable as listed and need to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 7977-12Y is 7977-12U. See the product specific Official IBM announcement letter for other country-specific GAV model numbers. GAV to MTM mapping for A.P. Geographies follow the same pattern. Substitute the last character with the country-specific designator.
2. Withdrawal dates are provided for U.S. and Canada only. Business Partner Inventory may be available.

System x3500 (7977)

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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#) |

SBB number	Option number	Feature codes	Processor options	Model support
Standard processor¹				
41Y4257	40K1231	1296	Dual-Core Intel Xeon Processor 5110 (1.60GHz 4MB L2 Cache)	42Y, E1Y
41Y4258	-	1297	Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 Cache)	52Y
41Y4259	40K1233	1298	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	62Y
41Y4260	40K1234	1299	Dual-Core Intel Xeon Processor 5140 (2.33GHz 4MB L2 Cache)	72Y, E4Y
41Y4261	-	1300	Dual-Core Intel Xeon Processor 5150 (2.66GHz 4MB L2 Cache)	82Y, E5Y
41Y4262	40K1236	1301	Dual-Core Intel Xeon Processor 5160 (3.0GHz 4MB L2 Cache)	92Y
41Y4404	-	2874	Quad-Core Intel Xeon Processor E5310 (1.60GHz 8MB L2 1066MHz 80w)	B2Y, E6Y
41Y4405	-	2875	Quad-Core Intel Xeon Processor E5320 (1.86GHz 8MB L2 1066MHz 80w)	C2Y
43W5173	-	2893	Quad-Core Intel Xeon Processor X5355 (2.66GHz 8MB L2 1333MHz 120w)	F2Y, EFY
43W5177	-	2894	Quad-Core Intel Xeon Processor E5335 (2.00GHz 8MB L2 1333MHz 80w)	G2Y
43W5178	-	2895	Quad-Core Intel Xeon Processor E5345 (2.33GHz 8MB L2 1333MHz 80w)	H2Y, EGY
44R5612	-	3078	Quad-Core Intel Xeon Processor E5405 (2.0GHz 12MB L2 1333MHz 80w)	A2Y
44R5613	-	3079	Quad-Core Intel Xeon Processor E5410 (2.33GHz 12MB L2 1333MHz 80w)	D2Y
44R5614	-	3080	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 1333MHz 80w)	E7Y, J2Y
44R5615	-	3081	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 1333MHz 80w)	E8Y, L2Y
44R5616	-	3082	Quad-Core Intel Xeon Processor E5440 (2.83GHz 12MB L2 1333MHz 80w)	E3Y, M2Y
46C1148	-	3604	Quad-Core Intel Xeon Processor X5450 (3.0GHz 12MB L2 1333MHz 120W)	E9Y, R2Y
Additional processors¹				
41Y4263	40K1231	1380	Addl Dual-Core Intel Xeon Processor 5110 (1.60GHz 4MB L2 Cache)	-
41Y4265	40K1233	1382	Addl Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	-
41Y4266	40K1234	1383	Addl Dual-Core Intel Xeon Processor 5140 (2.33GHz 4MB L2 Cache)	-
41Y4268	40K1236	1385	Addl Dual-Core Intel Xeon Processor 5160 (3.0GHz 4MB L2 Cache)	-
44R5620	44R5630	3492	Addl Quad-Core Intel Xeon Proc E5405 (2.0GHz 1333MHz 80w)	-
44R5621	44R5631	3493	Addl Quad-Core Intel Xeon Proc 5410 (2.33GHz 1333MHz 80w)	-
44R5622	44R5632	3494	Addl Quad-Core Intel Xeon Proc 5420 (2.5GHz 1333MHz 80w)	-
44R5623	44R5633	3495	Addl Quad-Core Intel Xeon Proc 5430 (2.66GHz 1333MHz 80w)	-
44R5624	44R5634	3496	Addl Quad-Core Intel Xeon Proc 5440 (2.83GHz 1333MHz 80w)	-
-	44R5635	-	Addl Quad-Core Intel Xeon Proc 5450 (3.0GHz 1333MHz 80w)	-
41Y4264	40K1232	1381	Addl Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 Cache)	-
41Y4267	40K1235	1384	Addl Dual-Core Intel Xeon Processor 5150 (2.66GHz 4MB L2 Cache)	-
44E5120	44E5122	3382	Addl Quad-Core Intel Xeon Proc X5450(3.0GHz 12MB L2 1333MHz 120W)	-
43W5783	43W5821	1447	Addl Quad-Core Intel Xeon Proc E5310 (1.60GHz 1066MHz 80w)	-
43W5785	43W5822	1448	Addl Quad-Core Intel Xeon Proc E5320 (1.86GHz 1066MHz 80w)	-
43W5818	43W5823	3456	Addl Quad-Core Intel Xeon Processor E5335 (2.0GHz 1333MHz 80w)	-
43W5819	43W5824	3457	Addl Quad-Core Intel Xeon Processor E5345 (2.33GHz 1333MHz 80w)	-
43W5820	43W5825	3458	Addl Quad-Core Intel Xeon Processor X5355 (2.66GHz 1333MHz 120w)	-

Notes:

1. One additional processor may be installed, providing a maximum of two. All processors must be identical in type, speed and cache size.

System x3500 (7977)

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At-A-Glance Options

Processor | **Memory** | HDD | I/O | Pwr acc | Tape |

SBB number	Option number	Feature codes	Memory description
Memory DIMMs^{1,2}			
39M5780	-	0546	512MB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
39M5783	-	0542	1GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
39M5789	-	0544	2GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
39M5795	-	0556	4GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
-	39M5782	-	1GB Kit (2x 512MB DIMM) PC2 5300 DDR2 FBD CL4
-	39M5785	-	2GB Kit (2x1GB DIMM) PC2 5300 DDR2 FBD CL4
-	39M5791	-	4GB Kit (2x 2GB DIMM) PC2 5300 DDR2 FBD CL4
-	39M5797	-	8GB Kit (2x 4GB DIMM) PC2 5300 DDR2 FBD CL4

Notes:

1. Pairs are not required to match.
2. Memory mirroring requires an exact match between the DIMM types and sizes on both memory buses. Memory mirroring effectively reduces available memory by half.

Table 1. Standard Memory Configuration

Model	Std. DIMM configuration
12Y, 22Y, 42Y, 52Y, 62Y, 72Y, 82Y, 92Y, E5Y, E4Y, E1Y, C2Y, B2Y, H2Y, G2Y, F2Y, A2Y, D2Y, J2Y, L2Y, M2Y, R2Y	2 x 512MB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
E6Y, EFY, E2Y, E7Y	2 x 1GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
EGY, E8Y, E3Y	2 x 2GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
E9Y	4 x 2GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz

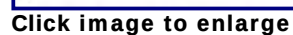
Table 2. 12-DIMM Configuration in non-mirrored mode

Number of DIMMs	DIMM Slots
1	1
2	1, 4
4	1, 4, 7, 10
6	1, 4, 7, 10, 2, 5
8	1, 4, 7, 10, 2, 5, 8, 11
10	1, 4, 7, 10, 2, 5, 8, 11, 3, 6
12	1, 4, 7, 10, 2, 5, 8, 11, 3, 6, 9, 12

Table 3. 12-DIMM Configuration in mirrored mode

Number of DIMMs	DIMM Slots
4	1, 4, 7, 10
8	1, 4, 7, 10, 2, 5, 8, 11
12	1, 4, 7, 10, 2, 5, 8, 11, 3, 6, 9, 12

Figure 1. System x3500 system board



System x3500 (7977)

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At-A-Glance Options

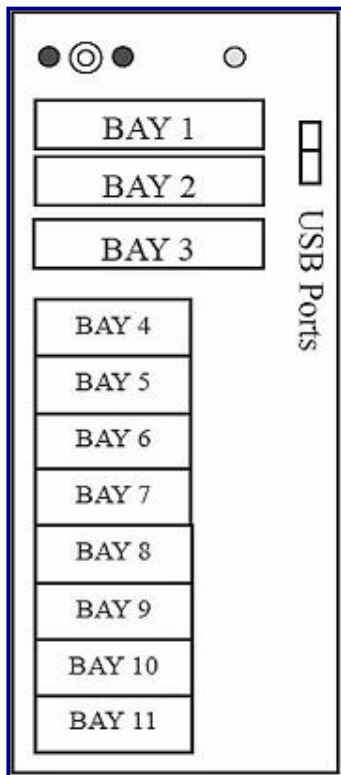
Processor | Memory | **HDD** | I/O | Pwr acc | Tape |

SBB number	Option number	Feature codes	Description	Height	Bays supported	Maximum quantity
SATA Hot-Swap HDDs¹						
39M4523	39M4522	5150	160GB 7200 RPM 3.5" Hot-Swap SATA II	SL	4...11	8
39M4527	39M4526	5151	250GB 7200 RPM 3.5" Hot-Swap SATA II	SL	4...11	8
39M4531	39M4530	5196	500GB 7200 RPM 3.5" Hot-Swap SATA II	SL	4...11	8
43W7577	43W7576	5530	750GB 7200 RPM 3.5" Hot-Swap SATA II	SL	4...11	8
43W7627	43W7626	5560	IBM 1TB 7200 SATA 3.5" HS HDD	SL	4...11	8
SAS Hot-Swap HDDs¹						
40K1075	40K1043	5161	73GB 15K 3.5" Hot-Swap SAS	SL	4...11	8
40K1076	40K1044	5162	146GB 15K 3.5" Hot-Swap SAS	SL	4...11	8
43X0808	43X0802	5532	300GB 15K 3.5" Hot-Swap SAS	SL	4...11	8
40K1084	40K1052	5159	73GB 10K 2.5" Hot-Swap SAS HDD	SL	4...15	12
43X0826	43X0824	5534	146GB 10K 2.5" Hot-Swap SAS HDD	SL	4...15	12
43X0841	-	5543	73GB SAS 15K 2.5" SFF HS	SL	4...15	12
Optical devices						
22P1999	-	4149	IBM 16X RAM-Read DVD-ROM IDE Drive	HH	1...2	2
39M6342	-	4137	IBM 48X-20X CD-ROM Black Internal IDE Drive	HH	1...2	2
39M6344	-	4139	IBM 48X-32X-48X-16X Max CD-RW/ DVD-ROM Combination Drive	HH	1...2	2
39M6345	-	4140	IBM DVD Multi-Burner Plus Drive	HH	1...2	2
External Storage Expansion Units				Form Factor		
-	18128Vx	-	EXP420 Expansion Unit (all models)	-		

Notes:

- Hot-Swap SAS/SATA HDDs are installed in the order of Bay 4 as standard then Bay 5, 6, 7, 8, 9, 10, 11.

Figure 1. x3500 front view



Click image to enlarge

Bay	Form factor	Height	Front access	Usage
1	133 mm (5.25in)	-	Y	-
2	133 mm (5.25in)	-	Y	-
3	133 mm (5.25in)	-	Y	-
4	89mm (3.5in)	-	Y	HDD
5	89mm (3.5in)	-	Y	HDD
6	89mm (3.5in)	-	Y	HDD
7	89mm (3.5in)	-	Y	HDD
8	89mm (3.5in)	-	Y	HDD
9	89mm (3.5in)	-	Y	HDD
10	89mm (3.5in)	-	Y	HDD
11	89mm (3.5in)	-	Y	HDD

System x3500 (7977)

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At-A-Glance Options

Processor | Memory | HDD | I/O | Pwr acc | Tape |

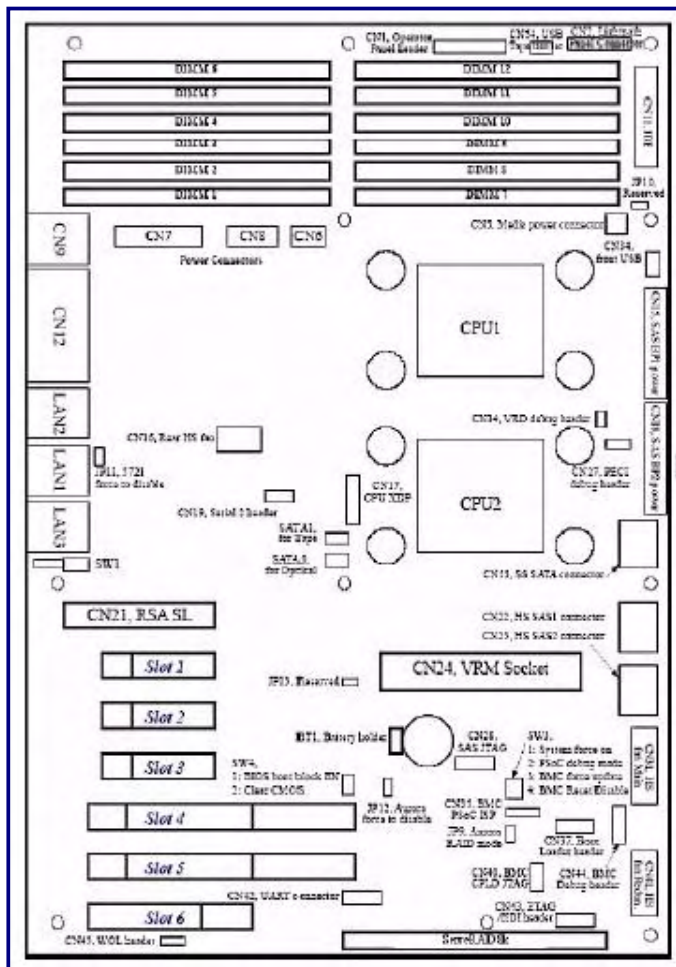
SBB number	Part number	Feature codes	Description	Adapter length	PCI support	Slots supported	Max quantity
Storage controllers¹							
25R8072	25R8060	1681	IBM SAS HBA Controller	Half	PCI-E x8	2...3	2
30R5505	-	1481	IBM iSCSI Server SX Adapter	Half	32/64 bit	4...6	3
30R5205	30R5201	1483	IBM iSCSI Server TX Adapter	Half	32/64 bit	4...6	3
39R8767	39R8765	1684	IBM Server RAID 8s SAS PCIe Controller ^{2, 3}	Full	PCI-E x8	2	1
39R8871	39R8812	1693	Server RAID-8s Battery ⁴	-	-	-	-
25R8077	-	1670	IBM Server RAID-8k SAS Controller	-	-	key Largo	-
39R8851	39R8850	1690	MegaRAID 8480	Half	PCI-E x8	2, 3	2
39R8752	39R8743	1680	IBM Ultra320 SCSI Controller 2	Half	64-bit/133MHz	4...5	1
43W4326	43W4324	3569	IBM Ultra 320 SCSI PCIe Controller	Half	PCI-E	1...3	3
39M6013	39M5895	3551	DS4000 FC 4Gb PCI-X Dual Port HBA	Half	64-bit/133MHz	4...5	2
39M6015	39M5894	3550	DS4000 FC 4Gb PCI-X Single Port HBA	Half	64-bit/133MHz	4...5	2
43W7489	42D0405	1696	Emulex 4GB FC Single-Port PCI-X HBA for IBM System x	Half	64-bit/133MHz	4...5	2
43W7490	42D0407	1697	Emulex 4GB FC Dual-Port PCI-X HBA for IBM System x	Half	64-bit/133MHz	4...5	2
43W7491	42C2069	1698	Emulex 4GB FC Single-Port PCI-E HBA for IBM System x	Half	PCI-E x4	1...3	3
43W7492	42C2071	1699	Emulex 4GB FC Dual-Port PCI-E HBA for IBM System x	Half	PCI-E x4	1...3	3
42D0486	42D0485	3580	Emulex 8Gb FC Single-port HBA for IBM System x	Half	PCI-E (x8)	2..3	2
42D0495	42D0494	3581	Emulex 8Gb FC Dual-port HBA for IBM System x	Half	PCI-E (x8)	2..3	2
42C2179	39R6525	3567	QLogic 4Gb FC Single-Port PCIe HBA for IBM System x	Half	PCI-E x4	1...3	3
42C2182	39R6527	3568	QLogic 4Gb FC Dual-Port PCIe HBA for IBM System x	Half	PCI-E x4	1...3	3
42D0502	42D0501	3578	QLogic 8Gb FC Single-port HBA for IBM System x	Half	PCI-E (x8)	2..3	2
42D0511	42D0510	3579	QLogic 8Gb FC Dual-port HBA for IBM System x	Half	PCI-E (x8)	2..3	2
External Disk Systems and Options							
-	172621X	2620	IBM System Storage DS3200	-	-	-	-
-	172622X	2621	IBM System Storage DS3200	-	-	-	-
-	172641X	2622	IBM System Storage DS3400	-	-	-	-
-	172642X	2623	IBM System Storage DS3400	-	-	-	-
-	2107-xxx	-	IBM TotalStorage DS8100 2107 (all models)	-	-	-	-
-	2107-xxx	-	IBM TotalStorage DS8300 2107 (all models)	-	-	-	-
-	18147xx	-	IBM System Storage DS4700 Midrange Disk System (all models)	-	-	-	-
-	1750-511	-	IBM TotalStorage DS6800 1750 model 511	-	-	-	-

-	1750-EX1	-	IBM TotalStorage DS6000 Expansion Unit 1750 model EX1	-	-	-	-
-	2005-B32	-	IBM TotalStorage SAN32B-2 Fabric Switch	-	-	-	-
-	2026-224	-	IBM TotalStorage SAN 24M-1 Fabric Switch (24-port)	-	-	-	-
-	2026-E12	-	IBM TotalStorage SAN 12M-1 Fabric Switch (12 port)	-	-	-	-
-	2027-140	-	IBM TotalStorage SAN 140M-1 Enterprise Director (140-port)	-	-	-	-
-	2027-232	-	IBM TotalStorage SAN 32M-1 Fabric Switch (32-port)	-	-	-	-
-	2027-256	-	IBM TotalStorage SAN 256M Director Switch (256-port)	-	-	-	-
Networking							
73P5105	73P5101	1579	PRO/1000 GT Dual Port Server Adapter by Intel- PCI-X	Half	32/64-bit	4...6	3
73P5205	73P5201	1580	PRO/1000 GT Quad Port Server Adapter by Intel- PCI-X	Half	64-bit/133MHz	4...5	2
39Y6071	39Y6066	1485	NetXtreme II 1000 Express G Ethernet Adapter- PCIe	Half	PCI-E x4	1...3	3
39Y6091	39Y6088	1487	NetXtreme 1000 S + Ethernet Adapter- PCI-X	Half	32/64-bit	4...5	2
39Y6096	39Y6093	1489	NetXtreme 1000 T + Dual Port Ethernet Adapter- PCI-X	Half	32/64-bit	4...6	3
42C1783	42C1780	2995	NetXtreme II 1000 Express Dual Port Ethernet Adapter	Half	PCI-E (x4)	1&€ 3	3
39Y6129	39Y6126	2944	PRO/1000 PT Dual Port Server Adapter by Intel	Half	PCI-E x4	1 ... 3	3
39Y6139	39Y6136	2974	PRO/1000 PT Quad Port Server Adapter ⁵	Half	PCI-E x4	1	1
42C1753	42C1750	2975	PRO/1000 PF Server Adapter ⁵	Half	PCI-E x4	1...3	3
42C1763	42C1760	2978	IBM 10 GbE PCIe SR Server Adapter ⁶	Half	PCI-E x8	2...3	2
39Y6149	39Y6146	2976	QLogic iSCSI Single Port PCIe HBA for IBM System x	Half	PCI-E x4	1...3	3
42C1773	42C1770	2977	QLogic iSCSI Dual Port PCIe HBA for IBM System x	Half	PCI-E x4	1...3	3
25R8590	-	2961	ClearSpeed Advance PCI-X Accelerator Board	Half	32/64 bit	4....6	1
40K8840	-	1677	Myricom Myrinet 333MHz Dual Fiber PCI-X Adapter w/ 2MB Memory	Half	32/64 bit	4....6	2
40K8841	-	2916	Myricom Myrinet 333MHz Single Fiber PCI-X Adapter w/ 2MB Memory	Half	32/64 bit	4....6	1
40K8842	-	1476	Voltaire 10Gbps Host Channel PCI Express Adapter	Half	PCI-E x8	2...3	2
42D3708	-	2963	Voltaire Dual-Port 4x InfiniBand PCI-E HCA	Half	PCI-E x8	2...3	2
40K9098	-	2918	Myricom Myri-10G 2MB PCI Express Adapter w/ 10GBASE-CX4 Port	Half	PCI-E x8	2...3	1
40K9099	-	2919	Myricom Myri-10G 2MB PCI Express Adapter w/ XAUI-MTP Port	Half	PCI-E x8	2...3	1
40K9100	-	2920	Myricom Myri-10G PCI Express Adapter w/ 10GBASE-SR Port	Half	PCI-E x8	2...3	1
41Y4576	-	2960	Cisco 10Gbps Dual-Port 4x InfiniBand PCI-E HCA	Half	PCI-E x8	2...3	2
Systems Management							
39Y9567	39Y9566	1605	Remote Supervisor Adapter II Slimline	-	-	RSA SL Socket	1

Note:

1. All x3500 models ship standard with ServeRAID-8k which offers RAID 0, 1, 1E, 5, 6, and 10.
2. x3500 support for ServeRAID-8s is for full function RAID attachment to a single EXP3000 storage expansion unit. EXP3000 support by ServeRAID-8s is currently limited to SAS HDDs only.
3. Before you install or ship this option in your server, first read the installation instructions provided in the option package.
4. ServeRAID-8s Battery, p/n 39R8812, enables Battery Backed Cache on ServeRAID-8s.
5. Supports Intel I/O Acceleration Technology for System x IOAT capable servers.
6. Supports TCP/IP Offload Engine (TOE). Not supported on systems with greater than 32GB installed memory.

Figure 1. System x3500 system board



Click image to enlarge

Slot	Type	Bus	Voltage (V)	Frequency MHz	Data path	Active PCI	Slot length
PCI Slot 1	PCI-E x 4	-	-	-	-	-	Half
PCI Slot 2	PCI-E x 8	-	-	-	-	-	Full
PCI Slot 3	PCI-E x 8	-	-	-	-	-	Full
PCI Slot 4	PCI-X 64-bit	-	3	133	-	N	Full
PCI Slot 5	PCI-X 64-bit	-	3	133	-	N	Full
PCI Slot 6	PCI-32-bit	-	5	33	-	N	Half
RSA SL Socket	-	-	-	-	-	-	-
ServerRAID	-	-	-	-	-	-	-

System x3500 (7977)

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At-A-Glance Options

Processor | Memory | HDD | I/O | **Pwr acc** | Tape |

SBB number	Option number	Feature codes	Description
Power			
39Y8326	39Y8487	0942	x3400/x3500 Redundant Power and Cooling Option
-	39Y8935	-	63A/250V Front-end PDU IEC 309 P+N+G
Power Distribution Units			
-	39Y8905	-	DPI NEMA Rack PDU
-	39Y8905	-	DPI NEMA Rack PDU
-	39Y8923	-	DPI 60A Three Phase C19 Enterprise PDU w/ IEC309 3P+G (208V) line cord
-	39Y8938	-	30amp/125V Front-end PDU with NEMA L5-30P connector
-	39Y8939	-	30amp/250V Front-end PDU with NEMA L6-30P connector
-	39Y8940	-	60amp/250V Front-end PDU with IEC 309 60A 2P+N+Gnd connector
-	39Y8941	-	IBM Enterprise C13 PDU
-	39Y8948	-	DPI 60A Single Phase C19 Enterprise PDU w/ IEC309 2P+G (208V) line cord
-	39Y8951	-	DPI Universal Rack PDU w/ Nema L5-20P & L6-20P (US cord)
-	71762MX	-	IBM Ultra Density Enterprise PDU C19 PDU+ (WW)
-	71762NX	-	IBM Ultra Density Enterprise PDU C19 PDU (WW)
-	71763MU	-	IBM Ultra Density Enterprise PDU C19 3 phase 60A PDU+ (NA)
-	71763NU	-	IBM Ultra Density Enterprise PDU C19 3 phase 60A PDU (NA)
Uninterruptible Power Supply (UPS)			
-	2130R5X	-	IBM UPS 1500T LV

SBB number	Option number	Feature code	Description
Rack and NetBAY			
-	17233RX	-	IBM 1U 15 Flat Panel Console Kit
-	93061RX	-	NetBAY11 Standard Rack
-	93072RX	-	IBM 25U S2 standard rack
-	93074RX	-	NetBAY S2 42U Standard Rack Cabinet
-	93074XX	-	IBM 42U S2 expansion rack
-	93084RX	-	NetBAY42 Enterprise Rack
-	93084XX	-	NetBAY42 Enterprise Expansion Rack
Rack / tower conversion kits			
-	39Y8382	-	5U x 26 Tower to Rack Conversion Kit
-	17235RX	-	IBM Rack Keyboard Tray
-	39M2895	-	IBM USB Conversion Option (UCO)
-	39M2896	-	IBM Short KVM Conversion Option (Short KCO)
-	39M2897	-	IBM Long KVM Conversion Option (Long KCO)
Console Connectivity			
-	17351GX	-	IBM Local 2x8 Console Manager (LCM2)
-	17352GX	-	IBM Global 2x16 Console Mngr(GCM2)
-	17353LX	-	IBM 1 x 8 Console Switch
-	17354LX	-	IBM 2 x 16 Console Switch
-	17354GX	-	Global 4x16 Console Mngr (GCM4)
-	39M2897	-	IBM Long KVM Conversion Option (Long KCO)
-	31R3130	-	IBM 3M Console Switch Cable (PS/2)
-	31R3132	-	IBM 3M Console Switch Cable (USB)
Monitors			

-	17233RX	-	IBM 1U 15 Flat Panel Console Kit
-	4938	-	IBM C117 17 CRT Monitor
-	4942	-	IBM T115 15 TFT LCD Monitor
-	4943	-	IBM T117 17 TFT LCD Monitor
-	4944	-	IBM T119 19 TFT LCD Monitor
Keyboard and Mouse			
-	40K5372	-	IBM Keyboard with Integrated Pointing Device - USB - US English
40K9490	40K9584	8750	IBM Preferred Pro Keyboard USB - US English 103P
40K9491	40K9200	8912	IBM 2 Button Optical Wheel Mouse - Black - USB
40K9492	40K9201	8913	IBM 3 Button Optical Mouse - Black - USB

System x3500 (7977)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

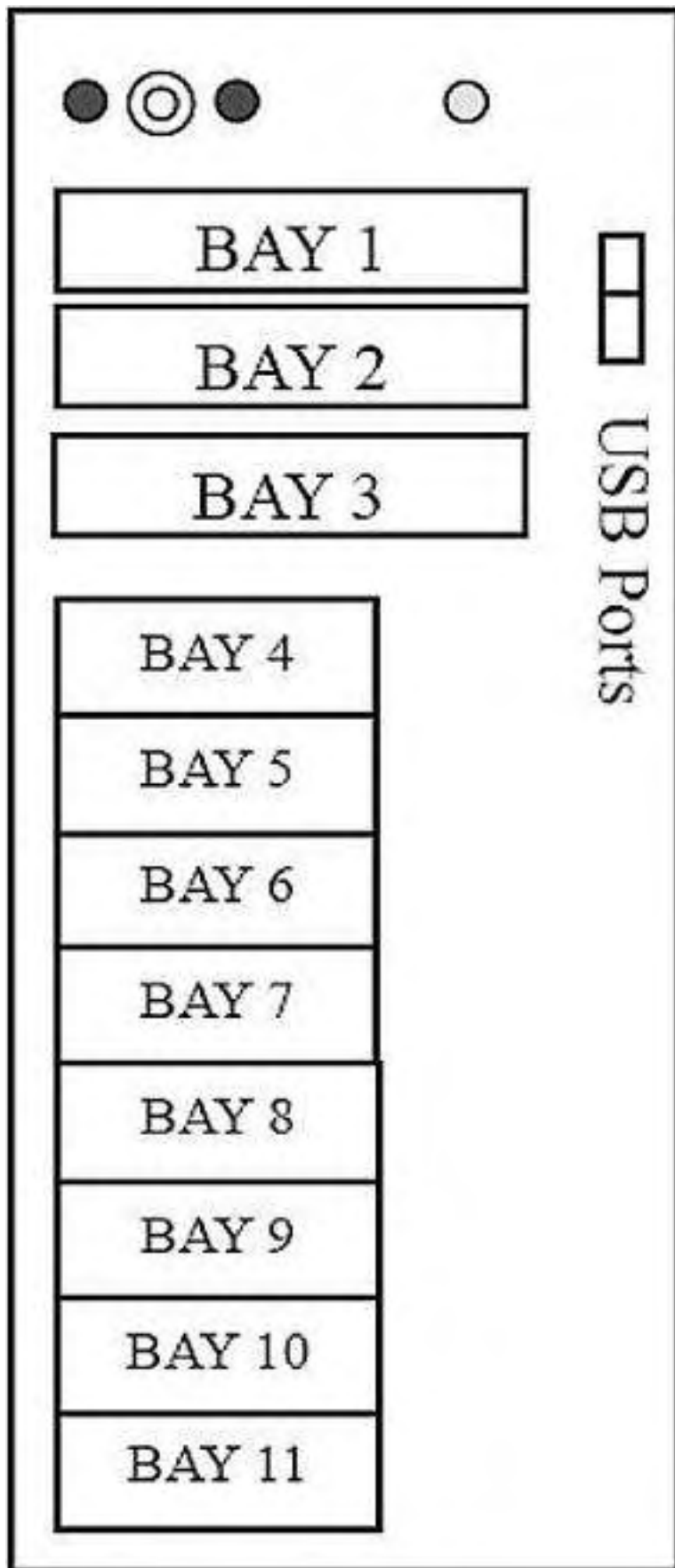
Processor | Memory | HDD | I/O | Pwr acc | **Tape** |

SBB number	Option number	Feature codes	Tape drives	Bays supported	Storage interface	Form factor	Ext tape enclosures
43W8492	39M5636	5395	IBM DDS Generation 6 USB Tape Drive	2, 3	USB	89mm (5.25in) HH	-
71P9176	39M5656	5355	36/72GB DDS Generation 5 Tape Drive ¹	2, 3	Ultra 320 (16-bit)	89mm (5.25in) HH	8767HHX 87651UX 87664UX
39M5624	25R0045	5362	VXA 3 Half High Internal Back-up ¹	2, 3	Ultra160 (16-bit)	89mm (5.25in) HH	8767HHX 87651UX 87664UX
39M5621	39M5658	5364	IBM Half High LTO Gen 2 Tape Drive ¹	3	Ultra 320 (16-bit)	89mm (5.25in) HH	8767HHX 87651UX 87664UX
42C3932	39M5657	5365	LTO 400/800GB Full High Gen 3 Internal Back-Up ¹	2, 3	Ultra 320 (16-bit)	133mm (5.25in) FH	8768FHX 87664UX
43W8490	43W8478	5393	IBM Half High LTO Gen 3 SAS Tape Drive	3	SAS	89mm (5.25in) HH	-
43W8487	43W8480	5392	IBM DDS Gen 5 SATA Tape Drive	2...3	SATA I and SATA II	89mm (5.25in) HH	-
42C3912	-	4352	GoVault Tape Drive	2...3	SATA I and SATA II	89mm (5.25in) HH	-
43W8474	42D8771	4860	GoVault Carrier Option	2...3	SATA I and SATA II	89mm (5.25in) HH	-
44E8897	44E8895	5397	IBM Half High LTO Gen 4 SAS Tape Drive	3	SAS	89mm (5.25in) HH	-
External tape enclosures²							
-	8767HHX	-	IBM Half High Tabletop Tape Enclosure	-	-	HH Table Top	-
-	8768FHX	-	IBM Full High Tabletop Tape Enclosure	-	-	FH Table Top	-
-	87651UX	-	IBM 1U Rackmount Tape Enclosure	-	-	1U Rack Mount	-
-	87664UX	-	IBM 4U Rackmount Tape Enclosure	-	-	4U Rack Mount	-
Tape autoloaders¹							
-	87691VX	-	VXA3 Autoloader	-	-	1U Rack Mount	-
External tape libraries							
-	33614LX	-	IBM LTO3 4U Tape Library ^{1,3}	-	-	4U Rack Mount	-
-	3573-xxx	-	IBM System Storage TS3100/TS3200 Tape Library (all models)	-	-	-	-
-	3580-xxx	-	IBM TotalStorage Ultrium3 3580 Tape Drive (all models)	-	Ultra160 SCSI LVD	Standalone or Rack Mount ⁴	-
-	40K2599	-	SAS Enclosure Adapter Kit Option	-	-	-	-
-	44E8869	-	USB Enclosure Adapter Kit	-	-	-	-

Notes:

1. Internal SCSI tape drives, external SCSI enclosures, and SCSI based automation products require a PCI-X U320 SCSI storage controller.
2. A quantity of one SCSI interface and cabling kit (42C3910) is required for each SCSI tape drive.
3. Base 33614LX Library requires the addition of one LTO magazine and a minimum of one LTO sled drive (maximum of two).

4. A 19in rack mount shelf (option 96P1565) is available for placing in a rack.



System x3550 (7978)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Table 1. System x3550 (7978) at-a-glance

Part number ¹	Withdrawal date ²	CPU/FSB speed (GHz / MHz) - cache	Number of processors (std / max)	Memory (std / max)	Form factor	Power supply qty (std / max)	Hot-swap (power, slots, HDD, fans, memory)	System Mgmt Proc.
7978-21Y	May 30 2008	1.60GHz 1066MHz FSB 2x2MB L2 Cache Dual Core Processor	1/2	1GB/ 32GB	Rack(1U)	1/2	PHF	-
7978-22Y	May 30 2008	1.60GHz 1066MHz FSB 2x2MB L2 Cache Dual Core Processor	1/2	1GB/ 32GB	Rack(1U)	1/2	PF	-
7978-31Y	Aug 31 2007	1.86GHz 1066MHz FSB 2x2MB L2 Cache Dual Core Processor	1/2	1GB/ 32GB	Rack(1U)	1/2	PHF	-
7978-32Y	Aug 31 2007	1.86GHz 1066MHz FSB 2x2MB L2 Cache Dual Core Processor	1/2	1GB/ 32GB	Rack(1U)	1/2	PF	-
7978-3AY	Aug 31 2007	1.86GHz 1066MHz FSB 2x2MB L2 Cache Dual Core Processor	1/2	1GB/ 32GB	Rack(1U)	1/2	PHF	-
7978-41Y	Aug 31 2007	2.00GHz 1333MHz FSB 2x2MB L2 Cache Dual Core Processor	1/2	1GB/ 32GB	Rack(1U)	1/2	PHF	-
7978-42Y	Aug 31 2007	2.00GHz 1333MHz FSB 2x2MB L2 Cache Dual Core Processor	1/2	1GB/ 32GB	Rack(1U)	1/2	PF	-
7978-45Y	Jan 19 2007	3.73GHz 1066MHz FSB 2x2MB L2 Cache Dual Core Processor	1/2	1GB/ 32GB	Rack(1U)	1/2	PHF	-

7978-4AY	Aug 31 2007	2.00GHz 1333MHz FSB 2x2MB L2 Cache Dual Core Processor	1/2	1GB/ 32GB	Rack(1U)	1/2	PHF	-
7978-4SY	Jan 19 2007	3.73GHz 1066MHz FSB 2x2MB L2 Cache Dual Core Processor	1/2	1GB/ 32GB	Rack(1U)	1/2	PHF	-
7978-51Y	May 30 2008	2.33GHz 1333MHz FSB 2x2MB L2 Cache Dual Core Processor	1/2	1GB/ 32GB	Rack(1U)	1/2	PHF	-
7978-5AY	May 30 2008	2.33GHz 1333MHz FSB 2x2MB L2 Cache Dual Core Processor	1/2	1GB/ 32GB	Rack(1U)	1/2	PHF	-
7978-61Y	Aug 31 2007	2.66GHz 1333MHz FSB 2x2MB L2 Cache Dual Core Processor	1/2	1GB/ 32GB	Rack(1U)	1/2	PHF	-
7978-6AY	Aug 31 2007	2.66GHz 1333MHz FSB 2x2MB L2 Cache Dual Core Processor	1/2	1GB/ 32GB	Rack(1U)	1/2	PHF	-
7978-71Y	-	3.00GHz 1333MHz FSB 2x2MB L2 Cache Dual Core Processor	1/2	1GB/ 32GB	Rack(1U)	1/2	PHF	-
7978-7AY	-	3.00GHz 1333MHz FSB 2x2MB L2 Cache Dual Core Processor	1/2	1GB/ 32GB	Rack(1U)	1/2	PHF	-
7978-A1Y	Mar 11 2008	Quad-Core Intel Xeon Processor E5310 (1.60GHz 8MB L2 1066MHz 80w)	1/2	1GB/ 32GB	Rack(1U)	1/2	PHF	-
7978-A2Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5335 (2.0GHz 8MB L2 1333MHz 80w)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-ALY	-	Dual-Core Intel Xeon Processor 5160 (3.0GHz 4MB L2 Cache)	2/2	8GB/ 32GB	Rack (1U)	2/2	PHF	-
7978-AMY	-	Quad-Core Intel Xeon Processor E5310 (1.60GHz 8MB L2 1066MHz 80w)	2/2	8GB/ 32GB	Rack (1U)	2/2	PHF	-
7978-ANY	-	Quad-Core Intel Xeon Processor E5335 (2.0GHz 8MB L2 1333MHz 80w)	2/2	8GB/ 32GB	Rack (1U)	2/2	PHF	-
7978-B1Y	-	Quad-Core Intel Xeon Processor E5405 (2.0GHz 12MB L2 80W)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-

7978-B3Y	-	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 80W)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-B4Y	-	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 80W)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-B5Y	-	Quad-Core Intel Xeon Processor E5440 (2.83GHz 12MB L2 80W)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-B7Y	-	Quad-Core Intel Xeon Processor X5460 (3.16GHz 12MB L2 120W)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-B9Y	-	Quad-Core Intel Xeon Processor X5450 (3.0GHz 12MB L2 120W)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-BAY	-	Quad-Core Intel Xeon Processor E5405 (2.0GHz 12MB L2 80W)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-BCY	-	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 80W)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-BDY	-	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 80W)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-BEY	-	Quad-Core Intel Xeon Processor E5440 (2.83GHz 12MB L2 80W)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-BJY	-	Quad-Core Intel Xeon Processor X5450 (3.0GHz 12MB L2 120W)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-BGY	-	Quad-Core Intel Xeon Processor X5460 (3.16GHz 12MB L2 120W)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-C1Y	Mar 11 2008	Quad-Core Intel Xeon Processor E5320 (1.86GHz 8MB L2 1066MHz 80w)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-

7978-C2Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5345 (2.33GHz 8MB L2 1333MHz 80w)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-C3Y	Apr 4 2008	Quad-Core Intel Xeon Processor X5355 (2.66GHz 8MB L2 1333MHz 80w)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-C4Y	Apr 4 2008	Quad-Core Intel Xeon Processor X5365 (3.0GHz 8MB L2 1333MHz 120w)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-CBY	Apr 4 2008	Quad-Core Intel Xeon Processor E5345 (2.33GHz 8MB L2 1333MHz 80w)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-CCY	Apr 4 2008	Quad-Core Intel Xeon Processor X5355 (2.66GHz 8MB L2 1333MHz 80w)	1/2	2GB/ 32GB	Rack (1U)	1/2	PF	-
7978-CDY	Apr 4 2008	Quad-Core Intel Xeon Processor X5365 (3.0GHz 8MB L2 1333MHz 120w)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-E4Y	Jan 4 2008	Dual-Core Intel Xeon Processor 5130 (2.00GHz 4MB L2 1333MHz 65w)	1/2	2GB/ 32GB	Rack (1U)	1/2	PF	-
7978-E5Y	-	Quad-Core Intel Xeon Processor E5405 (2.0GHz 12MB L2 80W)	1/2	4GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-EAY	Apr 4 2008	Quad-Core Intel Xeon Processor E5335 (2.0GHz 8MB L2 1333MHz 80w)	1/2	4GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-ECY	Apr 4 2008	Quad-Core Intel Xeon Processor E5345 (2.33GHz 8MB L2 1333MHz 80w)	1/2	4GB/ 32GB	Rack (1U)	2/2	PHF	-
7978-EDY	Apr 4 2008	Quad-Core Intel Xeon Processor X5355 (2.66GHz 8MB L2 1333MHz 80w)	1/2	4GB/ 32GB	Rack (1U)	2/2	PHF	-

7978-EHY	-	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 80W)	1/2	4GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-EJY	-	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 80W)	1/2	4GB/ 32GB	Rack (1U)	2/2	PHF	-
7978-E9Y	-	Quad-Core Intel Xeon Processor X5450 (3.0GHz 12MB L2 120W)	1/2	4GB/ 32GB	Rack (1U)	2/2	PHF	-
7978-EMY	-	Dual-Core Intel Xeon Processor E5205 (1.86GHz/ 1066MHz 6MB L2 65W)	1/2	2GB/ 32GB	Rack (1U)	2/2	PHF	-
7978-G5Y	Mar 30 2007	3.00GHz 667MHz FSB 2x2MB L2 Cache Dual Core Processor	1/2	1GB/ 32GB	Rack(1U)	1/2	PHF	-
7978-G6Y	Mar 30 2007	3.00GHz 667MHz FSB 2x2MB L2 Cache Dual Core Processor	1/2	1GB/ 32GB	Rack(1U)	1/2	PF	-
7978-JAY	May 30 2008	Quad-Core Intel Xeon LV Processor L5310 (1.60GHz 8MB L2 1066MHz 50w)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-JBY	May 30 2008	Quad-Core Intel Xeon LV Processor L5320 (1.86GHz 8MB L2 1066MHz 50w)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-L2Y	-	Quad-Core Intel Xeon Processor L5420 (2.5GHz/ 1333MHz 50W)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-LBY	-	Quad-Core Intel Xeon Processor L5420 (2.5GHz/ 1333MHz 50W)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-M1Y	-	Dual-Core Intel Xeon Processor E5205 (1.86GHz/ 1066MHz 6MB L2 65W)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-
7978-MAY	-	Dual-Core Intel Xeon Processor E5205 (1.86GHz/ 1066MHz 6MB L2 65W)	1/2	2GB/ 32GB	Rack (1U)	1/2	PHF	-

Table 1. System x3550 (7978) at-a-glance (continued)

Part number ¹	Withdrawal date ²	Integrated ethernet	Storage controller	Internal HDD interface	Internal HDD storage (std / max)	Optical drive	Bays (total / avail)	Slots (total / avail)
7978-21Y	May 30 2008	Dual 1GB	SAS/ SATA	Hot-swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-22Y	May 30 2008	Dual 1GB	SATA	Simple-swap	0GB/ 1500GB ⁵	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-31Y	Aug 31 2007	Dual 1GB	SAS/ SATA	Hot-swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-32Y	Aug 31 2007	Dual 1GB	SATA	Simple-swap	0GB/ 1500GB ⁵	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-3AY	Aug 31 2007	Dual 1GB	SAS	Hot-swap	0GB/ 587.2 GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2
7978-41Y	Aug 31 2007	Dual 1GB	SAS/ SATA	Hot-swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-42Y	Aug 31 2007	Dual 1GB	SATA	Simple-swap	0GB/ 1500GB ⁵	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-45Y	Jan 19 2007	Dual 1GB	SAS/ SATA	Hot-swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-4AY	Aug 31 2007	Dual 1GB	SAS	Hot-swap	0GB/ 587.2 GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2
7978-4SY	Jan 19 2007	Dual 1GB	SAS	Hot-swap	0GB/ 587.2 GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2
7978-51Y	May 30 2008	Dual 1GB	SAS/ SATA	Hot-swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-5AY	May 30 2008	Dual 1GB	SAS	Hot-swap	0GB/ 587.2GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2
7978-61Y	Aug 31 2007	Dual 1GB	SAS/ SATA	Hot-swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-6AY	Aug 31 2007	Dual 1GB	SAS	Hot-swap	0GB/ 587.2GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2
7978-71Y	-	Dual 1GB	SAS/ SATA	Hot-swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-7AY	-	Dual 1GB	SAS	Hot-swap	0GB/ 587.2GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2
7978-A1Y	Mar 11 2008	Dual 1GB	SAS/ SATA	Hot-swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-A2Y	-	Dual 1GB	SAS/ SATA	Hot-swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2

7978-ALY	-	Dual 1GB	SAS/ SATA	Hot- swap	600GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-AMY	-	Dual 1GB	SAS/ SATA	Hot- swap	146GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/0	2/2
7978-ANY	-	Dual 1GB	SAS/ SATA	Hot- swap	146GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/0	2/2
7978-B1Y	-	Dual 1GB	SAS/ SATA	Hot- swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-B3Y	-	Dual 1GB	SAS/ SATA	Hot- swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-B4Y	-	Dual 1GB	SAS/ SATA	Hot- swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-B5Y	-	Dual 1GB	SAS/ SATA	Hot- swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-B7Y	-	Dual 1GB	SAS/ SATA	Hot- swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-B9Y	-	Dual 1GB	SAS/ SATA	Hot- swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-BAY	-	Dual 1GB	SAS	Hot- swap	0GB/ 587.2GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2
7978-BCY	-	Dual 1GB	SAS	Hot- swap	0GB/ 587.2GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2
7978-BDY	-	Dual 1GB	SAS	Hot- swap	0GB/ 587.2GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2
7978-BEY	-	Dual 1GB	SAS	Hot- swap	0GB/ 587.2GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2
7978-BJY	-	Dual 1GB	SAS	Hot- swap	0GB/ 587.2GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2
7978-BGY	-	Dual 1GB	SAS	Hot- swap	0GB/ 587.2GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2
7978-C1Y	Mar 11 2008	Dual 1GB	SAS/ SATA	Hot- swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-C2Y	Apr 4 2008	Dual 1GB	SAS/ SATA	Hot- swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-C3Y	Apr 4 2008	Dual 1GB	SAS/ SATA	Hot- swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-C4Y	Apr 4 2008	Dual 1GB	SAS/ SATA	Hot- swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2

7978-CBY	Apr 4 2008	Dual 1GB	SAS	Hot- swap	0GB/ 584GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2
7978-CCY	Apr 4 2008	Dual 1GB	SATA	Simple- swap	0GB/ 1500GB ⁵	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-CDY	Apr 4 2008	Dual 1GB	SAS	Hot- swap	0GB/ 587.2 GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2
7978-E4Y	Jan 4 2008	Dual 1GB	SATA	Simple- swap	0GB / 1500GB ⁵	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-E5Y	-	Dual 1GB	SAS/ SATA	Hot- swap	292GB / 1500GB ⁵	CD-RW/DVD Combo V Ultrabay Enhanced	3/0	2/2
7978-EAY	Apr 4 2008	Dual 1GB	SAS/ SATA	Hot- swap	0GB / 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-ECY	Apr 4 2008	Dual 1GB	SAS	Hot- swap	0GB / 587.2GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2
7978-EDY	Apr 4 2008	Dual 1GB	SAS/ SATA	Hot- swap	0GB / 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-EHY	-	Dual 1GB	SAS/ SATA	Hot- swap	0GB / 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-EJY	-	Dual 1GB	SAS	Hot- swap	0GB / 587.2GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2
7978-E9Y	-	Dual 1GB	SAS/ SATA	Hot- swap	0GB / 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-EMY	-	Dual 1GB	SAS/ SATA	Hot- swap	0GB / 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-G5Y	Mar 30 2007	Dual 1GB	SAS/ SATA	Hot- swap	0GB/ 1500GB ³	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-G6Y	Mar 30 2007	Dual 1GB	SATA	Simple- swap	0GB/ 1500GB ⁵	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-JAY	May 30 2008	Dual 1GB	SAS	Hot- swap	0GB / 587.2GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2
7978-JBY	May 30 2008	Dual 1GB	SAS	Hot- swap	0GB / 587.2GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2
7978-L2Y	-	Dual 1GB	SAS/ SATA	Hot- swap	0GB / 1500GB ⁵	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2
7978-LBY	-	Dual 1GB	SAS	Hot- swap	0GB / 587.2GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2
7978-M1Y	-	Dual 1GB	SAS/ SATA	Hot- swap	0GB / 1500GB ⁵	CD-RW/DVD Combo V Ultrabay Enhanced	3/3	2/2

7978-MAY	-	Dual 1GB	SAS	Hot- swap	0GB / 587.2GB ⁴	CD-RW/DVD Combo V Ultrabay Enhanced	5/5	2/2

Notes:

1. Model numbers provided are worldwide generally available variant (GAV) model numbers which are not orderable as listed and need to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 7978-71Y is 7978-71U. See the product specific Official IBM announcement letter for other country-specific GAV model numbers. GAV to MTM mapping for A.P. Geographies follow the same pattern. Substitute the last character with the country-specific designator.
2. Withdrawal dates are provided for U.S. and Canada only. Business Partner Inventory may be available.
3. 3.5" SAS form factor
4. 2.5" SAS form factor
5. 3.5" SATA form factor

System x3550 (7978)

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At-A-Glance Options

Processor | **Memory** | **HDD** | **I/O** | **Pwr acc** | **Tape** |

SBB number	Option number	Feature codes	Processor options	Model support
Standard processor¹				
42C4223	-	1310	Dual-Core Intel Xeon Processor 5110 (1.60GHz 4MB L2 Cache)	21Y, 22Y
42C4221	-	1309	Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 Cache)	31Y, 32Y, 3AY
42C4219	-	1308	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	E4Y, 41Y, 42Y, 4AY
42C4217	-	1307	Dual-Core Intel Xeon Processor 5140 (2.33GHz 4MB L2 Cache)	51Y, 5AY
42D3769	-	2851	Dual-Core Intel Xeon Processor 5148 (2.33GHz 4MB L2 Cache LV)	-
42C4215	-	1306	Dual-Core Intel Xeon Processor 5150 (2.66GHz 4MB L2 Cache)	61Y, 6AY
42C4213	-	1305	Dual-Core Intel Xeon Processor 5160 (3.0GHz 4MB L2 Cache)	ALY, 71Y, 7AY
42D3870	-	2889	Quad-Core Intel Xeon Processor E5310 (1.60GHz 8MB L2 1066MHz 80w)	A1Y, AMY
42D3789	-	2888	Quad-Core Intel Xeon Processor E5320 (1.86GHz 8MB L2 1066MHz 80w)	C1Y
42D3793	-	2887	Quad-Core Intel Xeon Processor E5335 (2.0GHz 8MB L2 1333MHz 80w)	EAY, A2Y, ANY
42D3791	-	2886	Quad-Core Intel Xeon Processor E5345 (2.33GHz 8MB L2 1333MHz 80w)	ECY, C2Y, CBY
42D3797	-	2884	Quad-Core Intel Xeon LV Processor L5310 (1.60GHz 8MB L2 1066MHz 50w)	JAY
43W5906	-	2831	Quad-Core Intel Xeon LV Processor L5320 (1.86GHz 8MB L2 1066MHz 50w)	JBY
42D3795	-	2885	Quad-Core Intel Xeon Processor X5355 (2.66GHz 8MB L2 1333MHz 80w)	C3Y, CCY, EDY
44E5037	-	3069	Quad-Core Intel Xeon Processor X5365 (3.0GHz 8MB L2 1333MHz 120W)	C4Y, CDY
44E5058	-	3680	Quad-Core Intel Xeon Processor E5405 (2.0GHz 12MB L2 80W)	B1Y, BAY, E5Y
44E5059	-	3681	Quad-Core Intel Xeon Processor E5410 (2.33GHz 12MB L2 80W)	-
44E5060	-	3682	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 80W)	B3Y, BCY, EHY
44E5061	-	3683	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 80W)	B4Y, BDY, EJY
44E5062	-	3684	Quad-Core Intel Xeon Processor E5440 (2.83GHz 12MB L2 80W)	B5Y, BEY
44E5063	-	3685	Quad-Core Intel Xeon Processor E5450 (3.0GHz 12MB L2 80W)	-
44E5064	-	3686	Quad-Core Intel Xeon Processor X5460 (3.16GHz 12MB L2 120W)	B7Y, BGY
44E5116	-	3695	Quad-Core Intel Xeon Processor X5450 (3.0GHz 12MB 1333MHz 120W)	B9Y, BJY, E9Y
44E5146	-	3608	Quad-Core Intel Xeon Processor L5420 (2.5GHz 12MB L2 50W)	L2Y, LBY
44E5147	-	3607	Dual-Core Intel Xeon Processor E5205 (1.86GHz 6MB L2 65W)	EMY, M1Y, MAY
Additional processors¹				
42C4224	40K1237	1391	Addl Dual-Core Intel Xeon Processor 5110 (1.60GHz 4MB L2 Cache)	21Y, 22Y
42C4222	40K1238	1390	Addl Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 Cache)	31Y, 32Y, 3AY
42C4220	40K1239	1389	Addl Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	E4Y, 41Y, 42Y, 4AY
42C4218	40K1240	1388	Addl Dual-Core Intel Xeon Processor 5140 (2.33GHz 4MB L2 Cache)	51Y, 5AY
42D3770	-	1415	Addl Dual-Core Intel Xeon Processor 5148 (2.33GHz 4MB L2 Cache) LV)	-
42C4214	40K1242	1386	Addl Dual-Core Intel Xeon Processor 5160 (3.0GHz 4MB L2 Cache)	ALY, 71Y, 7AY
42D3871	-	1442	Addl Quad-Core Intel Xeon Processor E5310 (1.60GHz 1066MHz 80w)	A1Y
42D3790	-	1441	Addl Quad-Core Intel Xeon Processor E5320 (1.86GHz 1066MHz 80w)	C1Y
42D3794	-	1440	Addl Quad-Core Intel Xeon Processor E5335 (2.0GHz 1333MHz 80w)	EAY, A2Y
42D3792	-	1439	Addl Quad-Core Intel Xeon Processor E5345 (2.33GHz 1333MHz 80w)	ECY, C2Y, CBY
42D3798	43W5909	1437	Addl Quad-Core Intel Xeon LV Processor L5310 (1.60GHz 1066MHz 50w)	JAY
43W5907	43W5910	3468	Addl Quad-Core Intel Xeon LV Processor L5320 (1.86GHz 1066MHz 50w)	JBY
42D3796	-	1438	Addl Quad-Core Intel Xeon Processor X5355 (2.66GHz 1333MHz 80w)	C3Y, CCY, EDY
44E5038	44E5036	3483	Addl Quad-Core Intel Xeon Processor X5365 (3.0GHz 1333MHz 120W)	C4Y, CDY
44E5119	44E5121	3381	Addl Quad-Core Intel Xeon Processor X5450 (3.0GHz 12MB L2 120W)	B9Y, BJY, E9Y

44E5073	44E5080	3375	Addl Quad-Core Intel Xeon Processor X5460 (3.16GHz 12MB L2 120W)	B7Y, BGY
44E5071	44E5078	3373	Addl Quad-Core Intel Xeon Processor E5440 (2.83GHz 12MB L2 80W)	B5Y, BEY
44E5072	44E5079	3374	Addl Quad-Core Intel Xeon Processor E5450 (3.0GHz 12MB L2 80W)	-
44E5070	44E5077	3372	Addl Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 80W)	B4Y, BDY, EJY
44E5069	44E5076	3371	Addl Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 80W)	B3Y, BCY, EHY
44E5068	44E5075	3370	Addl Quad-Core Intel Xeon Processor E5410 (2.33GHz 12MB L2 80W)	-
44E5067	44E5074	3369	Addl Quad-Core Intel Xeon Processor E5405 (2.0GHz 12MB L2 80W)	B1Y, BAY
42C4216	40K1241	1387	Addl Dual-Core Intel Xeon Processor 5150 (2.66GHz 4MB L2 Cache)	61Y, 6AY
44E5135	44E5137	3392	Addl Quad-Core Intel Xeon Processor L5420 (2.5GHz 12MB L2 50W)	L2Y, LBY
44E5136	44E5138	3391	Addl Dual-Core Intel Xeon Processor E5205 (1.86GHz 6MB L2 65W)	EMY, M1Y, MAY

Notes:

1. One additional processor may be installed, providing a maximum of two. All processors must be identical in type, speed and cache size.

System x3550 (7978)

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At-A-Glance Options

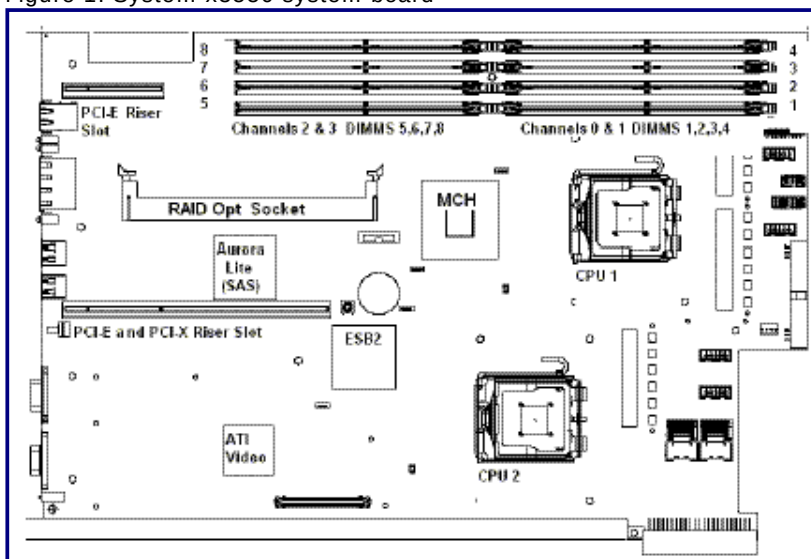
Processor | **Memory** | HDD | I/O | Pwr acc | Tape |

SBB number	Option number	Feature codes	Memory description
Memory DIMMs			
39M5780	-	0546	512MB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
39M5783	-	0542	1GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
39M5789	-	0544	2GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
39M5795	-	0556	4GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
-	39M5782	-	1GB Kit (2x 512MB DIMM) PC2 5300 DDR2 FBD CL4
-	39M5785	-	2GB Kit (2x1GB DIMM) PC2 5300 DDR2 FBD CL4
-	39M5791	-	4GB Kit (2x 2GB DIMM) PC2 5300 DDR2 FBD CL4
-	39M5797	-	8GB (2x4GB DIMM) PC2-5300 ECC DDR2 FBDIMM Kit

Table 1. Standard Memory Configuration

Model	Std. DIMM configuration
E1Y, E2Y, E3Y, 21Y, 22Y, 31Y, 32Y, 3AY, 41Y, 42Y, 4AY, 51Y, 5AY, 61Y, 6AY, 71Y, 7AY, 45Y, 4SY, G5Y, G6Y, A1Y	2 x 512MB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
A2Y, C1Y, C2Y, CBY, CCY, C3Y, C4Y, CDY, E4Y, EAY, ECY, JAY, JBY, B1Y, B3Y, B4Y, B5Y, B9Y, B7Y, BAY, BCY, BDY, BEY, BGY, L2Y, LBY, M1Y, MAY, EMY	2 x 1GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
AMY, ANY, ALY	8 x 1GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
EDY, EHY, EJY, E9Y	2 x 2GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz

Figure 1. System x3550 system board



[Click image to enlarge](#)

System x3550 (7978)

Attention:

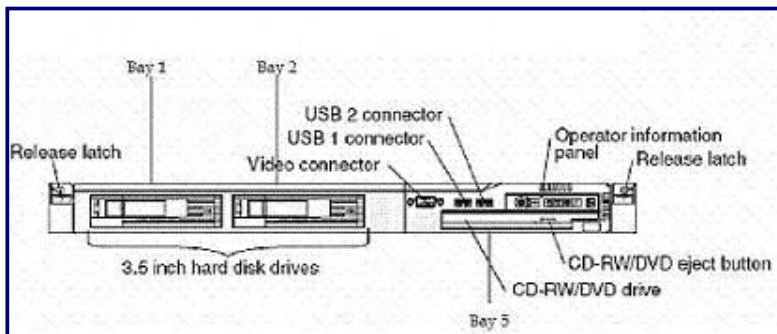
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At-A-Glance Options

Processor | Memory | **HDD** | I/O | Pwr acc | Tape |

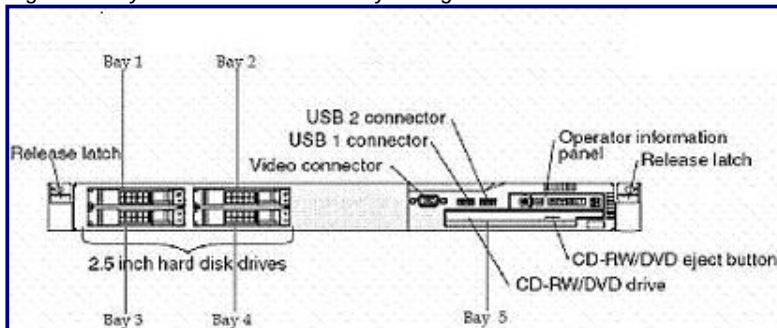
SBB number	Option number	Feature codes	Description	Height	Bays supported	Maximum quantity
Diskette						
-	40K1692	-	IBM External USB Floppy Drive	-	-	-
SATA Hot-Swap HDDs						
39M4523	39M4522	5150	160GB 7200 RPM 3.5" Hot-Swap SATA II	SL	1, 2	2
39M4527	39M4526	5151	250GB 7200 RPM 3.5" Hot-Swap SATA II	SL	1, 2	2
39M4531	39M4530	5196	500GB 7200 RPM 3.5" Hot-Swap SATA II	SL	1, 2	2
43W7577	43W7576	5530	750GB 7200 RPM 3.5" Hot-Swap SATA II	SL	1, 2	2
-	40K6890	-	500GB 7200 RPM HDD Cisco	SL	1, 2	2
-	41Y8208	-	Express 160 GB Hot-Swap SATA II	SL	1, 2	2
-	43W7584	-	Cisco 750GB 7200RPM HDD	SL	1, 2	2
43W7627	43W7626	5560	IBM 1TB 7200 SATA 3.5" HS HDD	SL	1, 2	2
SATA Simple-Swap HDDs						
39M4505	39M4504	5291	160GB 7200 RPM 3.5" Simple-Swap SATA II	SL	1, 2	2
39M4509	39M4508	5292	250GB 7200 RPM 3.5" Simple-Swap SATA II	SL	1, 2	2
39M4515	39M4514	5288	500GB 7200 RPM 3.5" Simple-Swap SATA II	SL	1, 2	2
43W7573	43W7572	5531	750GB 7200 RPM 3.5" Simple-Swap SATA II	SL	1, 2	2
SAS Hot-Swap HDDs						
40K1075	40K1043	5161	73GB 15K 3.5" Hot-Swap SAS	SL	1, 2	2
40K1076	40K1044	5162	146GB 15K 3.5" Hot-Swap SAS	SL	1, 2	2
40K1084	40K1052	5159	73GB 10K 2.5" Hot-Swap SAS HDD	SFF	1...4	4
43X0808	43X0802	5532	300GB 15K 3.5" Hot-Swap SAS	SL	1...2	2
43X0826	43X0824	5534	146GB 10K 2.5" Hot-Swap SAS HDD	SFF	1...4	4
43X0841	43X0837	5543	73GB SAS 15K 2.5" SFF HS	SFF	1...4	4
Optical devices						
32R2899	-	4141	CDROM Ultrabay Enhanced Drive	Ultra-Slim	5	1
32R2784	39Y6824	4144	CD-RW/DVD Combo V Ultrabay Enhanced	Ultra-Slim	5	1
32R2901	43W8304	4143	Multi-Burner Ultrabay Enhanced Drive	Ultra-Slim	5	1
External storage expansion units				Form factor		
-	1750-511	-	IBM TotalStorage DS6800 1750 model 511	3U		
-	18147Vx	-	IBM System Storage DS4200 Midrange Disk System (all models)	-		
-	18147xx	-	IBM System Storage DS4700 Midrange Disk System (all models)	-		
-	18158xx	-	IBM System Storage DS4800 Midrange Disk System (all models)	-		
-	2107-xxx	-	IBM TotalStorage DS8100 2107 (all models)	3U		
-	2107-xxx	-	IBM TotalStorage DS8300 2107(all models)	3U		
-	172701X	-	IBM System Storage EXP3000	-		

Figure 1. System x3550 drive bay designations with 3.5 inch hard disk drives



[Click image to enlarge](#)

Figure 2. System x3550 drive bay designations with 2.5 inch hard disk drives



[Click image to enlarge](#)

Bay	Form factor	Height	Front access	Usage
1	[3.5in SAS or SATA HDD Models] or [2.5in SAS HDD Models]	SSL/SFF	Y	HDD
2	[3.5in SAS or SATA HDD Models] or [2.5in SAS HDD Models]	SSL/SFF	Y	HDD
3	2.5in SAS HDD Models	SFF	Y	HDD
4	2.5in SAS HDD Models	SFF	Y	HDD
5	DVD-ROM or CD-ROM	SL	Y	CD

System x3550 (7978)

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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#) |

SBB number	Part number	Feature codes	Description	Adapter length	PCI support	Slots supported	Hot-Plug capable
Storage controllers¹							
25R8077	25R8064	1670	IBM ServerRAID-8k SAS Controller ¹	-	-	Dedicated connector	Y
25R8080	-	1671	IBM ServerRAID 8k-I SAS Controller ¹	-	-	Dedicated connector	-
39R8752	39R8743	1680	IBM Ultra320 SCSI Controller 2	Half	64 bit/133MHz	2	N
43W4326	43W4324	3569	IBM Ultra 320 SCSI PCIe Controller	Half	x1 PCI-E	1, 2	N
39R8851	39R8850	1690	MegaRAID 8480 ²	Half	x8 PCI-E	1,2	N
25R8072	25R8060	1681	IBM SAS HBA Controller	Half	x8 PCI-E	1,2	Y
39M6013	39M5895	3551	DS4000 FC 4Gbps PCI-X Dual Port HBA	Half	64 bit/266MHz	2	N
39M6015	39M5894	3550	DS4000 FC 4Gb PCI-X Single Port HBA	Half	64 bit/266MHz	2	N
43W7489	-	1696	Emulex 4GB FC Single-Port PCI-X HBA for IBM System x ³	Half	PCI-X	2	N
43W7490	-	1697	Emulex 4GB FC Dual-Port PCI-X HBA for IBM System x ³	Half	PCI-X	2	N
43W7491	42C2069	1698	Emulex 4GB FC Single-Port PCI-E HBA for IBM System x ⁴	Half	x8 PCI-E	1,2	N
43W7492	42C2071	1699	Emulex 4GB FC Dual-Port PCI-E HBA for IBM System x ⁴	Half	x8 PCI-E	1,2	N
42D0486	42D0485	3580	Emulex 8Gb FC Single-port HBA for IBM System x	Half	PCI-E	1,2	N
42D0495	42D0494	3581	Emulex 8Gb FC Dual-port HBA for IBM System x	Half	PCI-E	1,2	N
42C2179	39R6525	3567	QLogic 4Gb FC Single-Port PCIe HBA for IBM System x	Half	PCI-E	1,2	N
42C2182	39R6527	3568	QLogic 4Gb FC Dual-Port PCIe HBA for IBM System x	Half	PCI-E	1,2	N
42D0502	42D0501	3578	QLogic 8Gb FC Single-port HBA for IBM System x	Half	PCI-E (x8)	2...3	N
42D0511	42D0510	3579	QLogic 8Gb FC Dual-port HBA for IBM System x	Half	PCI-E (x8)	2...3	N
External Disk Systems and Options							
-	172621X	2620	IBM System Storage DS3200	-	-	-	-
-	172622X	2621	IBM System Storage DS3200	-	-	-	-
-	172641X	2622	IBM System Storage DS3400	-	-	-	-
-	172642X	2623	IBM System Storage DS3400	-	-	-	-
Networking							
30R5205	30R5201	1483	IBM iSCSI Server TX Adapter	Half	64-bit/133MHz	2	Y
30R5505	-	1481	IBM iSCSI Server SX Adapter	Half	64-bit/133MHz	2	Y
39Y6071	39Y6066	1485	NetXtreme II 1000 Express G Ethernet Adapter - PCIe ⁵	Half	PCI-E 1X	1,2	Y
39Y6091	39Y6088	1487	NetXtreme 1000 S + Ethernet Adapter - PCI-X	Half	64-bit/133MHz	2	Y
39Y6096	39Y6093	1489	NetXtreme 1000 T + Dual Port Ethernet Adapter - PCI-X	Half	64-bit/133MHz	2	Y

39Y6129	39Y6126	2944	PRO/1000 PT Dual Port Server Adapter by Intel	Half	PCI-E 4X	1,2	N
73P5105	73P5101	1579	PRO/1000 GT Dual Port Server Adapter by Intel- PCI-X	Half	64-bit/133MHz	2	Y
39Y6139	39Y6136	2974	PRO/1000 PT Quad Port Server Adapter ⁶	Half	PCI-E 4x	1, 2	-
42C1753	42C1750	2975	PRO/1000 PF Server Adapter ⁶	Half	PCI-E 4x	1, 2	N
42C1763	42C1760	2978	IBM 10 GbE PCIe SR Server Adapter ⁷	Half	PCI-E 8x	1, 2	N
39Y6149	39Y6146	2976	QLogic iSCSI Single Port PCIe HBA for IBM System x	Half	PCI-E 4x	1, 2	N
42C1773	42C1770	2977	QLogic iSCSI Dual Port PCIe HBA for IBM System x	Half	PCI-E 4x	1, 2	-
40K8840	-	1677	Myricom Myrinet 333MHz Dual Fiber PCI-X Adapter w/ 2MB Memory	Half	64-bit/133MHz	2	N
40K8841	-	2916	Myricom Myrinet 333MHz Single Fiber PCI-X Adapter w/ 2MB Memory	Half	64-bit/133MHz	2	N
40K8842	-	1476	Voltaire 10Gbps Host Channel PCI Express Adapter	Half	PCI-E 8x	1, 2	N
42D3708	-	2963	Voltaire Dual-Port 4x InfiniBand PCI-E HCA	Half	PCI-E 8x	1, 2	N
44R8727	-	5471	Mellanox ConnectX Dual-Port 4X DDR IB PCI-E 2.0 x8 5.0GT/s HCA	Half	PCI-E 8x	1, 2	N
44R9975	-	5468	Mellanox Single-Port 4X DDR IB PCI-E x8 HCA	Half	PCI-E 4x	1, 2	N
40K9098	-	2918	Myricom Myri-10G 2MB PCI Express Adapter w/ 10GBASE-CX4 Port	Half	PCI-E 8x	1, 2	N
40K9099	-	2919	Myricom Myri-10G 2MB PCI Express Adapter w/ XAUI-MTP Port	Half	PCI-E 8x	1, 2	N
40K9100	-	2920	Myricom Myri-10G PCI Express Adapter w/ 10GBASE-SR Port	Half	PCI-E 8x	1, 2	N
41Y4576	-	2960	Cisco 10Gbps Dual-Port 4x InfiniBand PCI-E HCA	Half	PCI-E 8x	1, 2	N
44E9031	-	1589	Cisco Single-port 4X SDR IB PCI-E HCA (memory free)	Half	PCI-E 4x	1, 2	N
44E9035	-	1588	Cisco Single-port 4X DDR IB PCI-E HCA (memory free)	Half	PCI-E 4x	1, 2	N
73P5205	73P5201	1580	PRO/1000 GT Quad Port Server Adapter by Intel- PCI-X	Half	64-bit/133MHz	2	Y
42C1783	42C1780	2995	NetXtreme II 1000 Express Dual Port Ethernet Adapter	Half	PCI-E 4x	1,2	N
Systems Management							
42C4178	39Y9566	1607	Remote Supervisor Adapter II Slimline	-	-	Dedicated connector	-
Other I/O							
39Y6744	-	4317	PCI-E Riser Card	-	-	-	-
32R2798	32R2816	4288	PCI-X Riser Card ⁵	-	-	-	-

Notes:

1. All x3550 models ship standard with ServerAID-8k-I which offers RAID 0, 1, 10. To upgrade to RAID 1E, 5 or 6, replace ServerAID-8k-I with optional ServerAID-8k, pn 25R8064.
2. To avoid damage to the server, always remove the MegaRAID 8480 adapter before relocating or shipping the server. MegaRAID 8480 must be shipped separately as originally packaged from IBM.
3. Requires PCI-X Riser Card (Option 32R2816).
4. Requires PCI-E Riser Card (SBB 39Y6744). This riser card ships on all standard x3550 models.
5. A PCI-X Riser Card must be selected when a PCI-X adapter is selected
6. Supports Intel I/O Acceleration Technology for System x IOAT capable servers.
7. Supports TCP/IP Offload Engine (TOE). Not supported on systems with greater than 32GB installed memory.

Slot	Type	Bus	Voltage(V)	Frequency MHz	Data path	Active PCI	Slot length
PCI Slot 1	PCI-E	-	-	x8	-	-	HL / FH
PCI Slot 2	PCI-X or PCI-E	A	-	133	64	-	HL / FH

System x3550 (7978)

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At-A-Glance Options

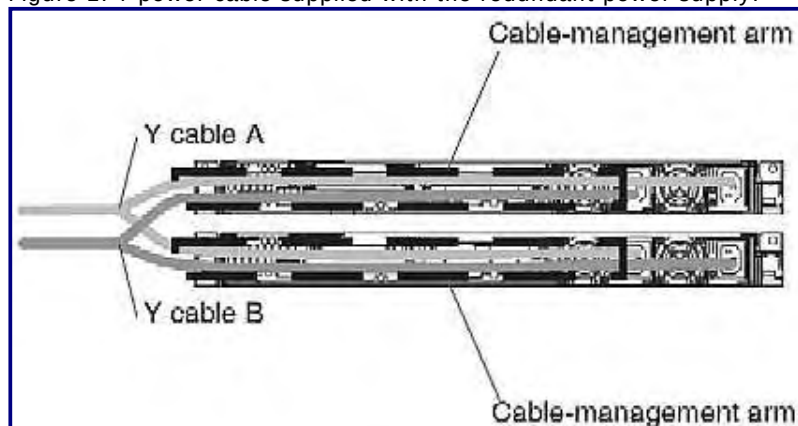
[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | **[Pwr acc](#)** | [Tape](#) |

SBB number	Option number	Feature codes	Description
Power¹			
32R2810	32R2815	1964	x3550 Redundant Power Supply 670W ²
Power Distribution Units			
-	39Y8905	-	DPI NEMA Rack PDU
-	39Y8938	-	30amp/125V Front-end PDU with NEMA L5-30P connector
-	39Y8939	-	30amp/250V Front-end PDU with NEMA L6-30P connector
-	39Y8940	-	60amp/250V Front-end PDU with IEC 309 60A 2P+N+Gnd connector
-	39Y8941	-	DPI 32A Single Phase C13 Enterprise PDU w/o line cord ²
-	39Y8948	-	DPI 60A Single Phase C19 Enterprise PDU w/o line cord ²
-	39Y8951	-	DPI Universal Rack PDU w/ Nema L5-20P & L6-20P (US cord)
-	39Y8923	-	DPI 60A Three Phase C19 Enterprise PDU w/ IEC309 3P+G (208V) fixed line cord
-	39Y8999	-	32A/230V 3P w/IEC309 3P+N+Gnd Conn
-	71762MX	-	IBM Ultra Density Enterprise PDU C19 PDU+ (WW)
-	71762NX	-	IBM Ultra Density Enterprise PDU C19 PDU (WW)
-	71763MU	-	IBM Ultra Density Enterprise PDU C19 3 phase 60A PDU+ (NA)
-	71763NU	-	IBM Ultra Density Enterprise PDU C19 3 phase 60A PDU (NA)
Uninterruptible Power Supply (UPS)²			
-	21304RX	-	IBM UPS 10000XHV
-	2130R6X	-	IBM UPS 1500T HV
-	39Y8857	-	IBM UPS 3U Online Battery Pack

Notes:

1. System x3550 ships with a single 670w hot-swap capable power supply, and two power cords standard, including one rack power cable (2.8m, 125-250V, C13 to IEC 320-C14) and one AC line cord (C13 to NEMA 5-15P).
2. The power supply ships with a single 2.8m rack power Y-cable (39M5440) which replaces the system's standard power cable. When used in conjunction with multiple 7978s, the Y-cable is designed to be split between 7978s. Therefore, the number of PDU outlets used is reduced and a certain level of redundancy is provided.

Figure 1. Y power cable supplied with the redundant power supply.



[Click image to enlarge](#)

Option number	Description
Rack and NetBAY	
141042X	IBM Linux Cluster Rack
17231RX	IBM 1U 17" Flat Panel Console Kit w/ Optical Drive Bay
17235RX	IBM Rack Keyboard Tray
93061RX	NetBAY11 Standard Rack
93072RX	IBM 25U S2 standard rack
93074RX	NetBAY S2 42U Standard Rack Cabinet
93074XX	IBM 42U S2 expansion rack
93084RX	NetBAY42 Enterprise Rack
93084XX	NetBAY42 Enterprise Expansion Rack
Rack Console Connectivity	
17351GX	IBM 2x8 Local Console Manager
17353LX	IBM 1x8 Console Switch
17354LX	IBM 2x16 Console Switch
17352GX	IBM Global 2x16 Console Manager
17354GX	IBM Global 4x16 Console Manager
1735L04	NetBAY Local Console Manager
1735R16	NetBAY Remote Console Manager
31R3132	IBM 3M Console Switch Cable (USB)
39M2895	IBM USB Conversion Option
39M2894	IBM Virtual Media Conversion Option
Monitors	
4938	C117 17" TFT CRT
4942	IBM T115 15" TFT LCD
4943	IBM T117 17" TFT LCD
4944	IBM T119 19" TFT LCD
Keyboard and mouse	
40K9200	IBM 2 Button Optical Wheel Mouse - Black - USB
40K9201	IBM 3 Button Optical Mouse - Black - USB
40K9584	IBM Preferred Pro Keyboard- Full Width - 2m Cable - Black - USB - US English

System x3550 (7978)

Attention:

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At-A-Glance Options

Processor | Memory | HDD | I/O | Pwr acc | **Tape** |

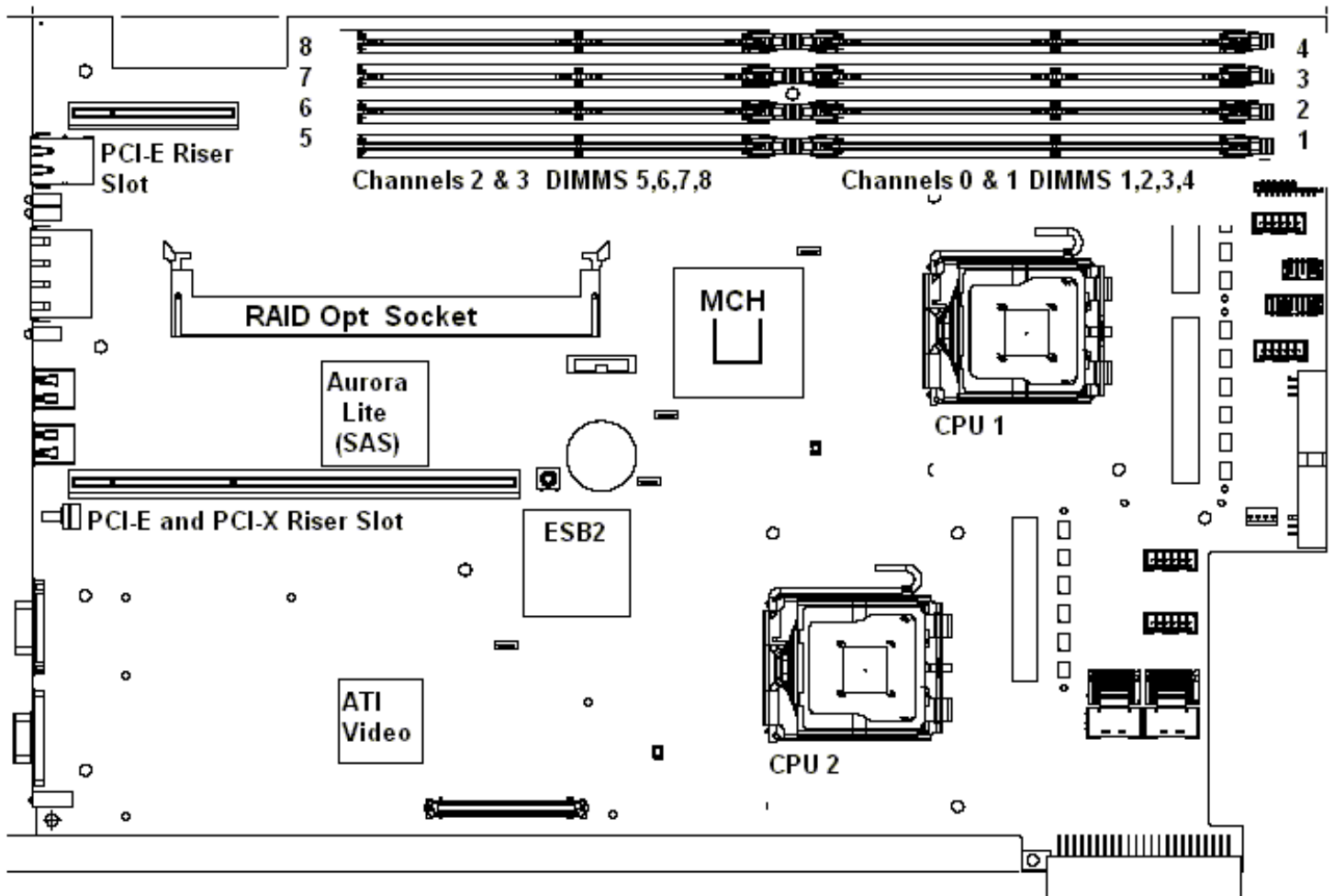
SBB number	Option number	Feature code	Description	Bays supported	Storage interface	Form factor	Ext tape enclosures
Tape drives							
-	25R0045	-	IBM 160/320GB VXA3 Tape Drive	-	Ultra160 SCSI LVD	Internal HH 89mm (5.25in)	87651UX 87664UX
-	39M5636	-	IBM DDS Generation 6 USB Tape Drive	-	-	-	87651UX 87664UX 8767HHX
-	39M5656	-	IBM DDS/5 Tape Option ¹	-	Ultra80 SCSI LVD	Internal 3.5" HH with 5.25" HH mounting kit	87651UX 87664UX
-	39M5658	-	IBM HH LTO2 Tape Option ¹	-	Ultra160 SCSI LVD	Internal HH 89mm (5.25in)	87651UX 87664UX
-	39M5657	-	IBM 400/800GB LTO3 Tape Option ¹	-	Ultra160 SCSI LVD	Internal FH 133mm (5.25in)	87664UX
-	43W8478	-	IBM 400/800GB HH LTO3 SAS Tape Drive	-	-	-	87651UX 87664UX 8767HHX
-	43W8480	-	IBM 36/72GB DDS Gen5 SATA Tape Drive	-	-	-	87651UX 87664UX 8767HHX
-	44E8895	-	IBM Half High LTO Gen 4 SAS Tape Drive	-	-	-	-
External tape enclosures^{2,3}							
-	87651UX	-	IBM 1U Rackmount Tape Enclosure	-	-	1U Rack Mount	-
-	87664UX	-	IBM 4U Rackmount Tape Enclosure	-	-	4U Rack Mount	-
Tape autoloaders³							
-	87691VX	-	1U VXA-320 Tape Autoloader	-	Ultra160 SCSI LVD	1U Rack Mount	-
-	33622LX	-	IBM LTO3 2U Autoloader ⁴	-	Ultra160 SCSI LVD	2U Rack Mount	-
External tape libraries							
-	33614LX	-	IBM LTO3 4U Tape Library ^{3,5}	-	Ultra160 SCSI LVD	4U Rack Mount	-
-	3573-xxx	-	IBM System Storage TS3100/TS3200 Tape Library (all models)	-	-	-	-
Associated tape options							
-	40K2579	-	3361 Library iSCSI Adapter	-	-	-	-
-	40K2596	-	3362 Autoloader LTO Generation 3 SCSI Drive	-	Ultra160 SCSI LVD	-	-
-	40K2597	-	3362 Autoloader LTO Magazine	-	-	-	-
-	40K2599	-	SAS Enclosure Adapter Kit Option	-	-	-	-

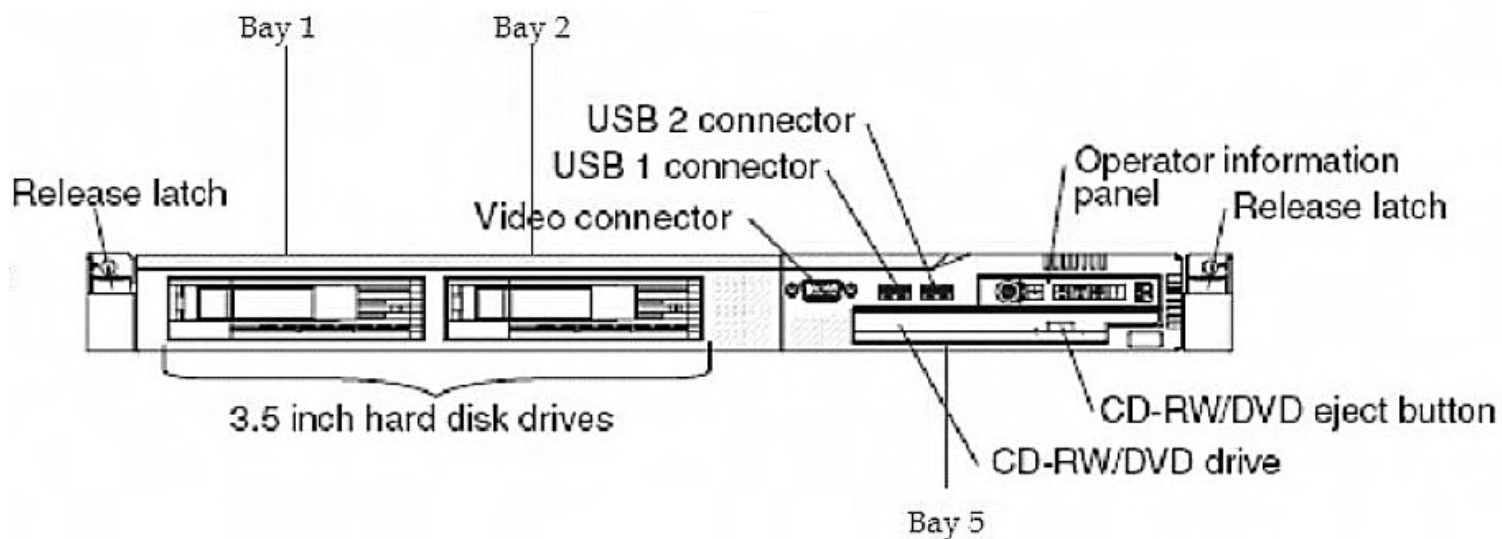
Notes:

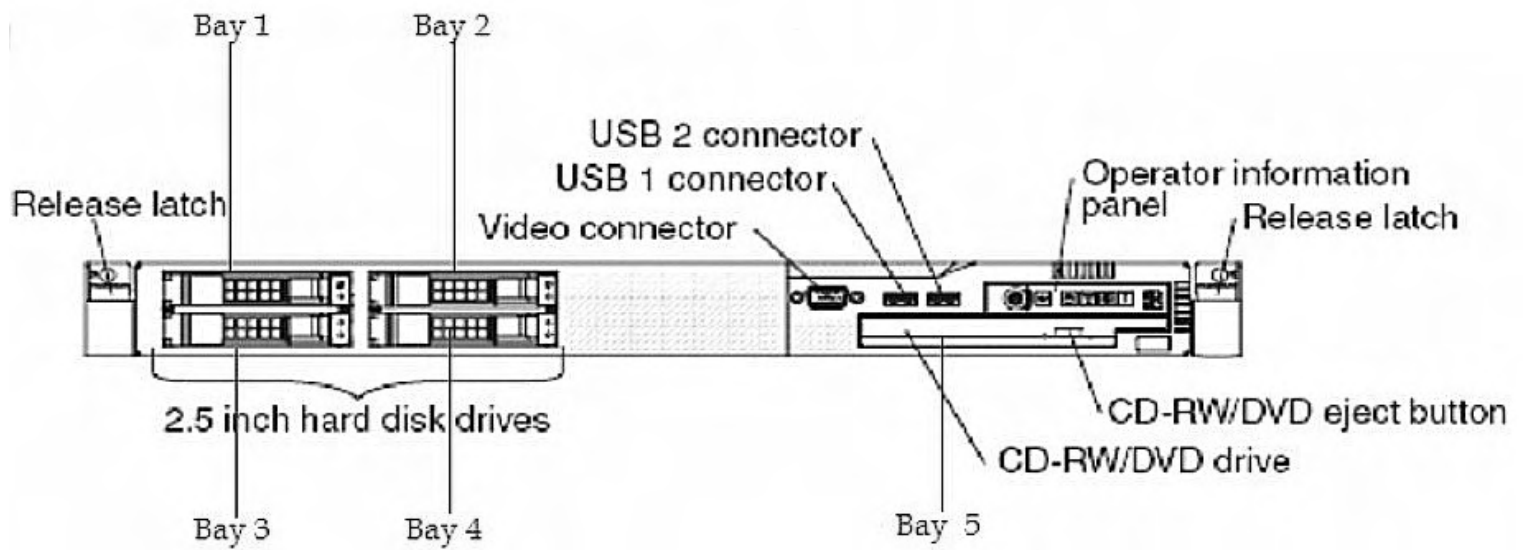
1. These Internal tape drives are not supported internally on this system and require an external tape enclosure for installation.
2. Quantity of one 42C3910 SCSI interface and cabling kit required per SCSI tape drive required.
3. SCSI tape enclosures and automation products are connected via

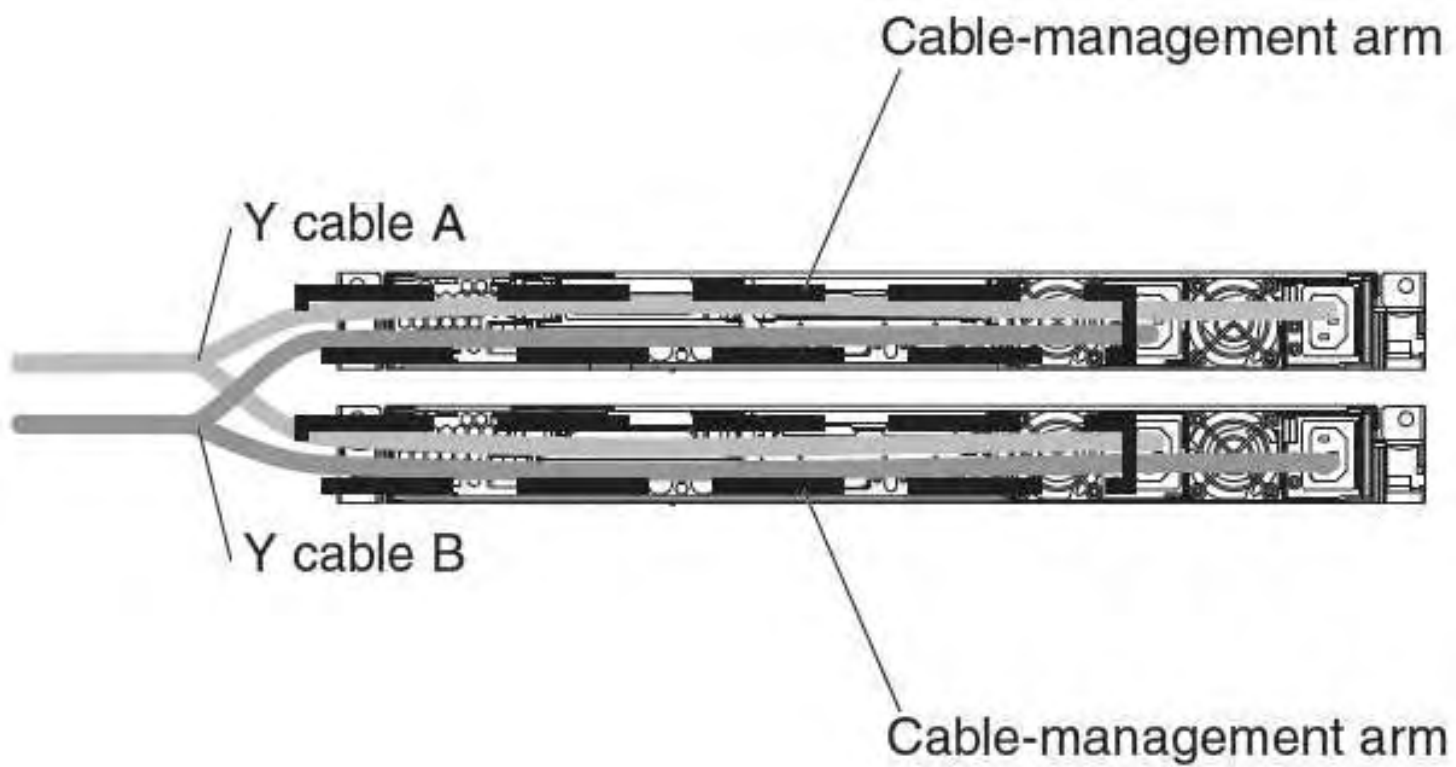
39R8743 PCI-X U320 SCSI storage controller . 39R8743 PCI-X U320 storage controller requires 32R2816 PCI-X riser card on this system.

4. Base 33622LX autoloader requires one LTO sled and one LTO magazine to be added.
5. Base 33614LX library requires one LTO magazine to be added and a minimum of 1 LTO sled drive (two maximum).









System x3610 (7942)

Attention:

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At-A-Glance Options

Table 1. System x3610 (7942) at-a-glance

Part number ¹	CPU/FSB speed (GHz/MHz)-cache	Number of processors (std / max)	Memory (std / max) ²	Form factor	Power supply quantity (std / max) ³	Hot-swap (power, slots, HDD, fans, memory)	System Mgmt Processor
7942-22C	Intel Xeon Processor 5110 1.60GHz/1066MHz-4MB (65w)	1/2	1GB/12GB	2U Rack	1/2	H	Y
7942-24C	Dual Core Intel Xeon Processor X5205 1.86GHz/1066MHz-6MB (65w)	1/2	1GB/12GB	2U Rack	1/2	H	Y
7942-42C	Quad-Core Intel Xeon Processor E5405 2.0GHz/1333MHz-12MB (80w)	1/2	1GB/12GB	2U Rack	1/2	H	Y
7942-62C	Quad-Core Intel Xeon Processor E5405 2.0GHz/1333MHz-12MB (80w)	1/2	2GB/12GB	2U Rack	1/2	H	Y

Table 1. System x3610 (7942) at-a-glance (continued)

Part number ¹	Integrated ethernet	Storage controller ⁴	Internal HDD interface	Internal HDD storage (std / max)	Optical drive	Bays (total / avail)	Slots (total / avail)
7942-22C	Dual 1Gb	SAS/SATA	Hot-swap	0GB/4500GB	SATA DVD-ROM	7/6	4/4
7942-24C	Dual 1Gb	SAS/SATA	Hot-swap	0GB/4500GB	SATA DVD-ROM	7/6	4/4
7942-42C	Dual 1Gb	SAS/SATA	Hot-swap	0GB/4500GB	SATA DVD-ROM	7/6	4/4
7942-62C	Dual 1Gb	SAS/SATA	Hot-swap	0GB/4500GB	SATA DVD-ROM	7/6	4/4

Notes:

1. Model numbers provided are available in China only.
2. Models 22x, 24x, and 42x comes installed with 1x1GB memory. Model 62x comes installed with 2x1GB memory.
3. Standard power supply is 600w. An optional redundant power supply can be installed.
4. Comes standard with H/W RAID 0,1,1E storage controller. An optional H/W RAID 5 SAS/SATA storage controller is available.

System x3610 (7942)

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At-A-Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#)

SBB number	Option number	Feature codes	Processor options ¹	Model support
Standard processor				
-	44X1872	-	Dual-Core Intel Xeon Processor 5110	-
-	44X1873	-	Dual-Core Intel Xeon Processor E5205	-
-	44X1874	-	Quad-Core Intel Xeon Processor E5405	-
Additional processors				
-	-	-	-	-

System x3610 (7942)

Attention:

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At A Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#)

SBB number	Option number	Feature code	Memory description ¹
Memory DIMMs			
-	41Y2759	-	1GB (2x512MB) PC2-5300 CL5 ECC DDR2 667 LP RDIMM
-	41Y2762	-	Express 2GB (2x1GB) PC2-5300 CL5 ECC DDR2 RDIMM
-	41Y2771	-	4GB Kit (2x 2GB DIMM) PC2-5300 CL5 ECC DDR2 SDRAM LP RDIMM

System x3610 (7942)

Attention:

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[At-A-Glance](#) | [Options](#)
[Processor](#) | [Memory](#) | **[HDD](#)** | [I/O](#) | [Pwr acc](#) | [Tape](#)

SBB number	Option number	Feature code	Description ¹	Height	Bays supported	Maximum quantity
Diskette Drive						
-	40K1692	-	IBM USB Portable Diskette Drive	-	-	-
SATA Hot-Swap HDDs						
-	39M4526	-	250GB 7200 RPM Hot Swap SATA II HDD	-	-	-
-	39M4530	-	500GB 7200 RPM 3.0 GB/sec Hot-Swap SATA	-	-	-
-	43W7576	-	750GB HS SATA HDD Option	-	-	-
SAS Hot-Swap HDDs						
-	40K1043	-	73GB 15K 3.5" SAS Hot-Swap HDD	-	-	-
-	40K1044	-	146GB 15K 3.5" SAS Hot-Swap HDD	-	-	-
-	43X0802	-	300GB 15K 3.5" Hot-Swap SAS	-	-	-
Optical Devices						
-	-	-	-	-	-	-

System x3610 (7942)

Attention:

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At-A-Glance **Options**

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#)

SBB number	Part number	Feature codes	Description ¹	Adapter length	PCI support	Slots supported	Hot-Plug capable	Max supported
Storage controllers								
-	-	-	-	-	-	-	-	-
External Disk Systems and Options								
-	-	-	-	-	-	-	-	-
Networking								
-	-	-	-	-	-	-	-	-
Systems Management								
-	-	-	-	-	-	-	-	-
Other I/O								
-	-	-	-	-	-	-	-	-

Notes:

- Supported options will be published in a future release as they become available.

System x3610 (7942)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | **[Pwr acc](#)** | [Tape](#)

SBB number	Option number	Feature codes	Description
Power¹			
-	44X1875	-	Redundant Power Supply 600W for x3610
Power Distribution Units			
-	-	-	-
Uninterruptible Power Supply (UPS)²			
-	21302RX	-	IBM UPS 3000 HV

Option number	Description
Rack and NetBAY	
17237RX	IBM Rack Fixed Shelf
17235RX	IBM Rack Keyboard Tray
93072RX	IBM 25U Standard Rack
93074RX	IBM 42U Standard Rack
Rack / Tower Conversion Kits	
-	-
Rack Console Connectivity	
39Y8959	DPI Universal Rack Power Distribution Unit with China Power Cord
40K9774	4.3m, 16A/220V, C19 to GB 2099.1 (China) Line Cord
Monitors	
-	-
Keyboard and Mouse	
40K9584	IBM Preferred Pro Keyboard- Full Width - 2m Cable - Black - USB - US English 103P
40K9200	IBM 2 Button Optical Wheel Mouse - Black - USB

System x3610 (7942)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At A Glance
Options

[Processor](#) |
 [Memory](#) |
 [HDD](#) |
 [I/O](#) |
 [Pwr acc](#) |
 [Tape](#)

SBB number	Part number	Feature codes	Description ¹	Bays supported	Storage interface	Form factor	Ext tape enclosure
Tape drives							
-	-	-	-	-	-	-	-
External tape enclosures							
-	-	-	-	-	-	-	-
Tape libraries							
-	-	-	-	-	-	-	-
Associated tape options							
-	-	-	-	-	-	-	-

Notes:

- Supported options will be published in a future release as they become available.

System x3650 (7979)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Table 1. System x3650 (7979) at-a-glance

Part number ¹	Withdrawal date ²	CPU/FSB speed (GHz/MHz)-cache	Number of processors (std / max)	Memory (std / max)	Form factor	Power supply qty (std / max)	Hot-swap (power, slots, HDD, fans, memory)	System Mgmt Proc
7979-A1Y ³	Apr 4 2008	Quad-Core Intel Xeon Processor E5310 (1.60GHz/1066MHz FSB)	1/2	1GB/48GB	Rack(2U)	1/2	PHF	Y
7979-A2Y ³	Apr 4 2008	Quad-Core Intel Xeon Processor E5335 (2.0GHz 8MB L2 1333MHz 80w)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-ABY ⁴	Apr 4 2008	Quad-Core Intel Xeon Processor E5335 (2.0GHz 8MB L2 1333MHz 80w)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-AMY ⁴	-	Quad-Core Intel Xeon Processor E5335 (2.0GHz 8MB L2 1333MHz 80w)	2/2	8GB/48GB	Rack(2U)	1/2	PHF	Y
7979-B1Y ³	-	Quad-Core Intel Xeon Processor E5405 (2.0GHz 12MB L2 1333MHz 80w)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-B3Y ³	-	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 1333MHz 80w)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-B4Y ³	-	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 1333MHz 80w)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-B5Y ³	-	Quad-Core Intel Xeon Processor E5440 (2.83GHz 12MB L2 1333MHz 80w)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-B7Y ³	-	Quad-Core Intel Xeon Processor X5460 (3.16GHz 12MB L2 1333MHz 120w)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-B9Y ³	-	Quad-Core Intel Xeon Proc X5450 (3.0GHz 12MB L2 1333MHz 120W)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-BAY ⁴	-	Quad-Core Intel Xeon Processor E5405 (2.0GHz 12MB L2 1333MHz 80w)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y

7979-BCY ⁴	-	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 1333MHz 80w)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-BDY ⁴	-	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 1333MHz 80w)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-BEY ⁴	-	Quad-Core Intel Xeon Processor E5440 (2.83GHz 12MB L2 1333MHz 80w)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-BGY ⁴	-	Quad-Core Intel Xeon Processor X5460 (3.16GHz 12MB L2 1333MHz 120w)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-BJY ⁴	-	Quad-Core Intel Xeon Proc X5450 (3.0GHz 12MB L2 1333MHz 120W)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-C1Y ³	Apr 4 2008	Quad-Core Intel Xeon Processor E5320 (1.86GHz/1066MHz FSB)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-C3Y ³	Apr 4 2008	Quad-Core Intel Xeon Processor X5355 (2.66GHz /8MB L2 1333MHz 120w)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-C4Y ³	Apr 4 2008	Quad-Core Intel Xeon Processor X5365 (3.0GHz 8MB L2 1333MHz 120W)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-CAY ⁴	Apr 4 2008	Quad-Core Intel Xeon Processor E5320 (1.86GHz/1066MHz FSB)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-CBY ⁴	Apr 4 2008	Quad-Core Intel Xeon Processor E5345 (2.33GHz 8MB L2 1333MHz 80w)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-CCY ⁴	Apr 4 2008	Quad-Core Intel Xeon Processor X5355 (2.66GHz 8MB L2 1333MHz 120w)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-CDY ⁴	Apr 4 2008	Quad-Core Intel Xeon Processor X5365 (3.0GHz 8MB L2 1333MHz 120W)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-CMY ⁴	-	Quad-Core Intel Xeon Processor E5320 (1.86GHz/1066MHz FSB)	2/2	8GB/48GB	Rack(2U)	1/2	PHF	Y
7979-E5Y ³	Apr 4 2008	Dual-Core Intel Xeon Processor 5140 (2.33GHz 4MB L2 Cache)	1/2	2GB/48GB	Rack(2U)	2/2	PHF	Y
7979-E7Y	-	Quad-Core Intel Xeon Processor E5405 (2.0GHz 12MB L2 1333MHz 80w)	1/2	4GB/48GB	Rack(2U)	2/2	PHF	Y
7979-EAY ³	Apr 4 2008	Quad-Core Intel Xeon Processor E5335 (2.0GHz 8MB L2 1333MHz 80w)	1/2	4GB/48GB	Rack(2U)	2/2	PHF	Y
7979-ECY ⁴	Apr 4 2008	Quad-Core Intel Xeon Processor E5345 (2.33GHz 8MB L2 1333MHz 80w)	1/2	4GB/48GB	Rack(2U)	2/2	PHF	Y

7979-EDY ³	Apr 4 2008	Quad-Core Intel Xeon Processor X5355 (2.66GHz 8MB L2 1333MHz 120w)	1/2	4GB/48GB	Rack(2U)	2/2	PHF	Y
7979-EVY ³	-	Quad-Core Intel Xeon Proc X5450 (3.0GHz 12MB L2 1333MHz 120W)	2/2	8GB/48GB	Rack(2U)	2/2	PHF	Y
7979-G5Y ³	Jun 29 2007	Dual-Core Intel Xeon Processor 5050 (3.0GHz 2x2MB L2 Cache Dual-Core Xeon Processor)	1/2	1GB/48GB	Rack(2U)	1/2	PHF	Y
7979-GSY ⁴	Jun 29 2007	Dual-Core Intel Xeon Processor 5050 (3.0GHz 2x2MB L2 Cache Dual-Core Xeon Processor)	1/2	1GB/48GB	Rack(2U)	1/2	PHF	Y
7979-H5Y ³	Jan 19 2007	Dual-Core Intel Xeon Processor 5063 (3.2GHz 2x2MB L2 Cache Dual-Core Xeon Processor)	1/2	1GB/48GB	Rack(2U)	1/2	PHF	Y
7979-HSY ⁴	Jan 19 2007	Dual-Core Intel Xeon Processor 5063 (3.2GHz 2x2MB L2 Cache Dual-Core Xeon Processor)	1/2	1GB/48GB	Rack(2U)	1/2	PHF	Y
7979-JAY ⁴	May 30 2008	Quad-Core Intel Xeon LV Processor L5310 (1.60GHz 8MB L2 1066MHz 50w)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-JBY ⁴	May 30 2008	Quad-Core Intel Xeon LV Processor L5320 (1.86GHz 8MB L2 1066MHz 50w)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-LBY ⁴	-	Quad-Core Intel Xeon Processor L5420 (2.5GHz/1333MHz 50W)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-L2Y ³	-	Quad-Core Intel Xeon Processor L5420 (2.5GHz/1333MHz 50W)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-21Y ³	May 30 2008	Dual-Core Intel Xeon Processor 5110 (1.60GHz 4MB L2 Cache)	1/2	1GB/48GB	Rack(2U)	1/2	PHF	Y
7979-2AY ⁴	May 30 2008	Dual-Core Intel Xeon Processor 5110 (1.60GHz 4MB L2 Cache)	1/2	1GB/48GB	Rack(2U)	1/2	PHF	Y
7979-31Y ³	Aug 31 2007	Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 Cache)	1/2	1GB/48GB	Rack(2U)	1/2	PHF	Y
7979-3AY ⁴	Aug 31 2007	Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 Cache)	1/2	1GB/48GB	Rack(2U)	1/2	PHF	Y
7979-41Y ³	May 30 2008	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	1/2	1GB/48GB	Rack(2U)	1/2	PHF	Y
7979-4AY ⁴	May 30 2008	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	1/2	1GB/48GB	Rack(2U)	1/2	PHF	Y
7979-51Y ³	May 30 2008	Dual-Core Intel Xeon Processor 5140 (2.33GHz 4MB L2 Cache)	1/2	1GB/48GB	Rack(2U)	1/2	PHF	Y

7979-5AY ⁴	May 30 2008	Dual-Core Intel Xeon Processor 5140 (2.33GHz 4MB L2 Cache)	1/2	1GB/48GB	Rack(2U)	1/2	PHF	Y
7979-61Y ³	Aug 31 2007	Dual-Core Intel Xeon Processor 5150 (2.66GHz 4MB L2 Cache)	1/2	1GB/48GB	Rack(2U)	1/2	PHF	Y
7979-6AY ⁴	Aug 31 2007	Dual-Core Intel Xeon Processor 5150 (2.66GHz 4MB L2 Cache)	1/2	1GB/48GB	Rack(2U)	1/2	PHF	Y
7979-71Y ³	-	Dual-Core Intel Xeon Processor 5160 (3.0GHz 4MB L2 Cache)	1/2	1GB/48GB	Rack(2U)	1/2	PHF	Y
7979-7AY ⁴	-	Dual-Core Intel Xeon Processor 5160 (3.0GHz 4MB L2 Cache)	1/2	1GB/48GB	Rack(2U)	1/2	PHF	Y
7979-7MY ⁴	-	Dual-Core Intel Xeon Processor 5160 (3.0GHz 4MB L2 Cache)	2/2	8GB/48GB	Rack(2U)	1/2	PHF	Y
7979-E9Y ³	-	Quad-Core Intel Xeon Proc X5450 (3.0GHz 12MB L2 1333MHz 120W)	1/2	4GB/48GB	Rack(2U)	2/2	PHF	Y
7979-EHY ³	-	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 1333MHz 80w)	1/2	4GB/48GB	Rack(2U)	1/2	PHF	Y
7979-EJY ⁴	-	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 1333MHz 80w)	1/2	4GB/48GB	Rack(2U)	2/2	PHF	Y
7979-EMY ³	-	Dual-Core Intel Xeon Processor E5205 (1.86GHz/1066MHz 6MB L2 65W)	1/2	2GB/48GB	Rack(2U)	2/2	PHF	Y
7979-MAY ⁴	-	Dual-Core Intel Xeon Processor E5205 (1.86GHz/1066MHz 6MB L2 65W)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
7979-M1Y ⁴	-	Dual-Core Intel Xeon Processor E5205 (1.86GHz/1066MHz 6MB L2 65W)	1/2	2GB/48GB	Rack(2U)	1/2	PHF	Y
Storage Servers								
7979-NAY ³	Oct 27 2007	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	1/2	1GB/48GB	Rack(2U)	1/2	PHF	Y
7979-ENY ³	Oct 27 2007	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	1/2	1GB/48GB	Rack(2U)	1/2	PHF	Y
7979-EPY ³	Apr 4 2008	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	1/2	1GB/48GB	Rack(2U)	2/2	PHF	Y
7979-EQY ³	Apr 4 2008	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	1/2	1GB/48GB	Rack(2U)	2/2	PHF	Y

Table 1. System x3650 (7979) at-a-glance (continued)

Part number ¹	Withdrawal date ²	Integrated ethernet	Storage controller	Internal HDD interface	Internal HDD storage (std / max)	Optical drive	Bays (total / avail)	Slots (total / avail)

7979-A1Y ³	Apr 4 2008	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-A2Y ³	Apr 4 2008	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-ABY ⁴	Apr 4 2008	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-AMY ⁴	-	Dual 1GB	SAS	Hot-Swap	1022/ 1168GB (2.5")	CD-RW/ DVD Combo	8/0	4/4
7979-B1Y ³	-	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-B3Y ³	-	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-B4Y ³	-	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-B5Y ³	-	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-B7Y ³	-	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-B9Y ³	-	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-BAY ⁴	-	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-BCY ⁴	-	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-BDY ⁴	-	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-BEY ⁴	-	Dual 1GB	SAS	Hot-Swap	0/1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-BGY ⁴	-	Dual 1GB	SAS	Hot-Swap	0/1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-BJY ⁴	-	Dual 1GB	SAS	Hot-Swap	0/1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-C1Y ³	Apr 4 2008	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-C3Y ³	Apr 4 2008	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-C4Y ³	Apr 4 2008	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-CAY ⁴	Apr 4 2008	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-CBY ⁴	Apr 4 2008	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-CCY ⁴	Apr 4 2008	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-CDY ⁴	Apr 4 2008	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-CMY ⁴	-	Dual 1GB	SAS	Hot-Swap	1022/ 1168GB (2.5")	CD-RW/ DVD Combo	8/0	4/4
7979-E5Y ³	Apr 4 2008	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-E7Y	-	Dual 1GB	SAS	Hot-Swap	0/ 1160GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-EAY ³	Apr 4 2008	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4

7979-ECY ⁴	Apr 4 2008	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-EDY ³	Apr 4 2008-	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-EVY ³	-	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-G5Y ³	Jun 29 2007	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-GSY ⁴	Jun 29 2007	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-H5Y ³	Jan 19 2007	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-HSY ⁴	Jan 19 2007	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-JAY ⁴	May 30 2008	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-JBY ⁴	May 30 2008	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-LBY ⁴	-	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-L2Y ³	-	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-21Y ³	May 30 2008	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-2AY ⁴	May 30 2008	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-31Y ³	Aug 31 2007	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-3AY ⁴	Aug 31 2007	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-41Y ³	May 30 2008	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-4AY ⁴	May 30 2008	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-51Y ³	May 30 2008	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-5AY ⁴	May 30 2008	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-61Y ³	Aug 31 2007	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-6AY ⁴	Aug 31 2007	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-71Y ³	-	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-7AY ⁴	-	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-7MY ⁴	-	Dual 1GB	SAS	Hot-Swap	1022/ 1168GB (2.5")	CD-RW/ DVD Combo	8/0	4/4
7979-E9Y ³	-	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-EHY ³	-	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4

7979-EJY ⁴	-	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-EMY ³	-	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-MAY ⁴	-	Dual 1GB	SAS	Hot-Swap	0/ 1168GB (2.5")	CD-RW/ DVD Combo	8/8	4/4
7979-M1Y ³	-	Dual 1GB	SAS	Hot-Swap	0/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
Storage Servers								
7979-NAY ³	Oct 27 2007	Dual 1GB	SAS	Hot-Swap	1272/ 1800GB (3.5")	CD-RW/ DVD Combo	6/0	4/4
7979-ENY ³	Oct 27 2007	Dual 1GB	SAS	Hot-Swap	72/ 1800GB (3.5")	CD-RW/ DVD Combo	6/4	4/4
7979-EPY ³	Apr 4 2008	Dual 1GB	SAS	Hot-Swap	72GB/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4
7979-EQY ³	Apr 4 2008	Dual 1GB	SAS	Hot-Swap	1272GB/ 1800GB (3.5")	CD-RW/ DVD Combo	6/6	4/4

Notes:

1. Model numbers provided are worldwide generally available variant (GAV) model numbers which are not orderable as listed and need to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 7979-12Y is 7979-12U. See the product specific Official IBM announcement letter for other country-specific GAV model numbers. GAV to MTM mapping for A.P. Geographies follow the same pattern. Substitute the last character with the country-specific designator.
2. Withdrawal dates are provided for U.S. and Canada only. Business Partner Inventory may be available.
3. 3.5" SAS Form Factor
4. 2.5" SAS Form Factor

System x3650 (7979)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#)

SBB number	Option number	Feature codes	Processor options	Model support
Standard processor^{1,2}				
41Y8978	-	1322	Dual-Core Intel Xeon Processor 5110 (1.60GHz 4MB L2 Cache)	21Y, 2AY
41Y8979	-	1323	Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 Cache)	31Y, 3AY, E1Y
41Y8980	-	1324	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 Cache)	41Y, 4AY, NAY, ENY, EPY, EQY
41Y8981	-	1325	Dual-Core Intel Xeon Processor 5140 (2.33GHz 4MB L2 Cache)	51Y, 5AY, E2Y, E3Y, E5Y
41Y8982	-	1326	Dual-Core Intel Xeon Processor 5150 (2.66GHz 4MB L2 Cache)	61Y, 6AY
41Y8983	-	1327	Dual-Core Intel Xeon Processor 5160 (3.0GHz 4MB L2 Cache)	71Y, 7AY, 7MY
42D3785	-	2853	Dual-Core Intel Xeon Processor 5148 (2.33GHz 4MB L2 Cache LV)	-
43W5782	-	2897	Quad-Core Intel Xeon Processor E5310 (1.60GHz/1066MHz FSB)	A1Y
43W5784	-	2898	Quad-Core Intel Xeon Processor E5320 (1.86GHz/1066MHz FSB)	CAY,C1Y, CMY
43W5826	-	2815	Quad-Core Intel Xeon Processor E5335 (2.0GHz 8MB L2 1333MHz 80w)	A2Y, ABY, EAY, AMY
43W5827	-	2816	Quad-Core Intel Xeon Processor E5345 (2.33GHz 8MB L2 1333MHz 80w)	CBY, ECY
43W5828	-	2817	Quad-Core Intel Xeon Processor X5355 (2.66GHz 8MB L2 1333MHz 120w)	C3Y, CCY, EDY
43W5911	-	2829	Quad-Core Intel Xeon LV Processor L5310 (1.60GHz 8MB L2 1066MHz 50w)	JAY
43W5913	-	2830	Quad-Core Intel Xeon LV Processor L5320 (1.86GHz 8MB L2 1066MHz 50w)	JBY
44E5034	-	3099	Quad-Core Intel Xeon Processor X5365 (3.0GHz 8MB L2 1333MHz 120W)	C4Y,CDY
44E5046	-	3660	Quad-Core Intel Xeon Processor E5405 (2.0GHz 12MB L2 1333MHz 80w)	B1Y,BAY, E7Y
44E5048	-	3662	Quad-Core Intel Xeon Processor E5420 (2.5GHz 12MB L2 1333MHz 80w)	B3Y,BCY, EHY
44E5049	-	3663	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 1333MHz 80w)	B4Y,BDY, EJY
44E5050	-	3664	Quad-Core Intel Xeon Processor E5440 (2.83GHz 12MB L2 1333MHz 80w)	B5Y, BEY
44E5123	-	3696	Quad-Core Intel Xeon Proc X5450 (3.0GHz 12MB L2 1333MHz 120W)	B9Y, BJY, E9Y, EVY
44E5052	-	3666	Quad-Core Intel Xeon Processor X5460 (3.16GHz 12MB L2 1333MHz 120w)	B7Y, BGY
44E5047	-	3661	Quad-Core Intel Xeon Processor E5410 (2.33GHz 12MB L2 1333MHz 80W)	-
44E5051	-	3665	Quad-Core Intel Xeon Processor E5450 (3.0GHz 12MB L2 1333MHz 80w)	-
44E5141	-	3610	Quad-Core Intel Xeon Processor L5420 (2.5GHz/1333MHz 50W)	L2Y,LBY
44E5142	-	3609	Dual-Core Intel Xeon Processor E5205 (1.86GHz/1066MHz 6MB L2 65W)	EMY,MAY, M1Y
Additional processors²				
41Y4263	40K1231	1380	Additional Dual-Core Intel Xeon Processor 5110 (1.60GHz 1066MHz FSB 4MB L2 Cache)	21Y,2AY
41Y4265	40K1233	1382	Additional Dual-Core Intel Xeon Processor 5130 (2.0GHz 1333MHz FSB 4MB L2 Cache)	41Y,4AY, NAY, ENY, EPY,EQY
41Y4266	40K1234	1383	Additional Dual-Core Intel Xeon Processor 5140 (2.33GHz 2x2MB L2 Cache Dual-Core Xeon Processor)	51Y, 5AY, E2Y, E3Y, E5Y
41Y4268	40K1236	1385	Additional Dual-Core Intel Xeon Processor 5160 (3.0GHz 2x2MB L2 Cache Dual-Core Xeon Processor)	71Y,7AY
43W5912	43W5918	3466	Addl Quad-Core Intel Xeon LV Processor L5310 (1.60GHz 1066MHz 50w)	JAY

43W5914	43W5919	3467	Addl Quad-Core Intel Xeon LV Processor L5320 (1.86GHz 1066MHz 50w)	JBY
44R5620	44R5630	3492	Addl Quad-Core Intel Xeon Proc E5405 (2.0GHz 1333MHz 80w)	B1Y,BAY
44R5621	44R5631	3493	Addl Quad-Core Intel Xeon Proc E5410 (2.33GHz 1333MHz 80w)	-
44R5622	44R5632	3494	Addl Quad-Core Intel Xeon Proc E5420 (2.5GHz 1333MHz 80w)	B3Y,BCY
44R5623	44R5633	3495	Addl Quad-Core Intel Xeon Proc E5430 (2.66GHz 1333MHz 80w)	B4Y,BDY
44R5624	44R5634	3496	Addl Quad-Core Intel Xeon Proc E5440 (2.83GHz 1333MHz 80w)	B5Y,BEY
44R5625	44R5635	3497	Addl Quad-Core Intel Xeon Proc E5450 (3.0GHz 1333MHz 80w)	-
44E5056	44E5057	3356	Addl Quad-Core Intel Xeon Processor X5460 (3.16GHz 1333MHz 120w)	B7Y,BGY
44E5120	44E5122	3382	Addl Quad-Core Intel Xeon Proc X5450 (3.0GHz 12MB L2 1333MHz 120W)	B9Y,BJY, E9Y,EVY
41Y4264	40K1232	1381	Addl Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 Cache)	31Y,3AY, E1Y
41Y4267	40K1235	1384	Addl Dual-Core Intel Xeon Processor 5150 (2.66GHz 4MB L2 Cache)	61Y,6AY
44E5131	44E5133	3394	Addl Quad-Core Intel Xeon Processor L5420 (2.50GHz/1333MHz 50W)	L2Y,LBY
44E5132	44E5134	3393	Addl Dual-Core Intel Xeon Processor E5205 (1.86GHz/1066MHz 6MB L2 65W)	EMY
42D3786	-	1416	Addl Dual-Core Intel Xeon Processor 5148 (2.33GHz 4MB L2 Cache LV)	-
43W5783	-	1447	Addl Quad-Core Intel Xeon Proc E5310 (1.60GHz 1066MHz 80w)	A1Y
43W5785	-	1448	Addl Quad-Core Intel Xeon Proc E5320 (1.86GHz 1066MHz 80w)	CAY,C1Y,CMY
43W5818	-	3456	Addl Quad-Core Intel Xeon Processor E5335 (2.0GHz 1333MHz 80w)	A2Y,ABY, EAY,AMY
43W5819	-	3457	Addl Quad-Core Intel Xeon Processor E5345 (2.33GHz 1333MHz 80w)	CBY, ECY
43W5820	-	3458	Addl Quad-Core Intel Xeon Processor X5355 (2.66GHz 1333MHz 120w)	C3Y,CCY,EDY
44E5035	-	3499	Addl Quad-Core Intel Xeon Processor X5365 (3.0GHz 1333MHz 120W)	C4Y,CDY

Notes:

1. One dummy CPU heatsink (p/n: 39M6802) is required in Microprocessor 2 socket (U4) if only one CPU is installed.
2. One additional processor may be installed, providing a maximum of two. All processors must be identical in type, speed and cache size.

System x3650 (7979)

Attention:

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At-A-Glance Options

Processor | **Memory** | HDD | I/O | Pwr acc | Tape

SBB number	Option number	Feature code	Memory description
Memory DIMMs ^{1,2}			
39M5780	-	0546	512MB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
39M5783	-	0542	1GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
39M5789	-	0544	2GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
39M5795	-	0556	4GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
-	39M5782	-	1GB Kit (2x 512MB DIMM) PC2 5300 DDR2 FBD CL4
-	39M5785	-	2GB Kit (2x1GB DIMM) PC2 5300 DDR2 FBD CL4
-	39M5791	-	4GB Kit (2x 2GB DIMM) PC2 5300 DDR2 FBD CL4
-	39M5797	-	8GB Kit (2x 4GB DIMM) PC2 5300 DDR2 FBD CL4

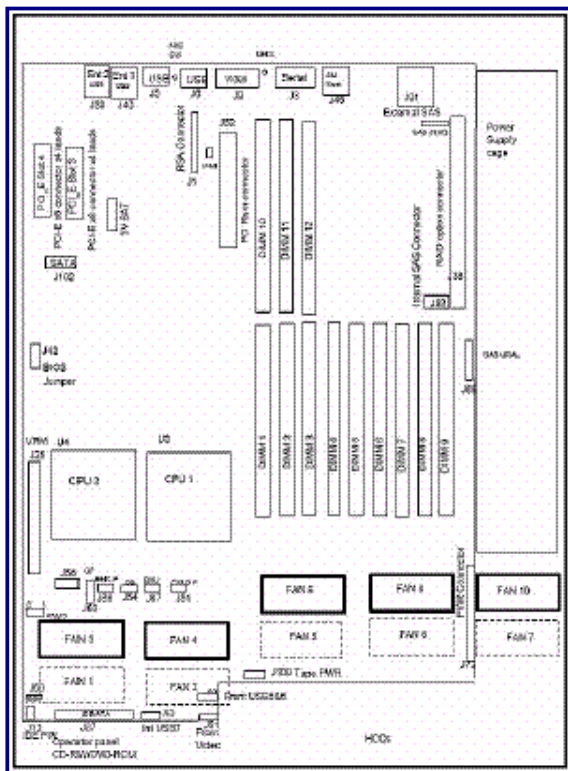
Notes:

1. Memory must be installed in matching pairs.
2. Memory mirroring requires a minimum upgrade increment of four DIMMs shared across both branches. These four DIMMS must all match, but do not need to match adjacent slot positions. Only half of the installed memory is available to the operating system when memory mirroring is used.

Table 1. Standard Memory Configuration

Model	Std. DIMM Configuration
A1Y, E1Y, E2Y, E3Y, ENY, NAY, 21Y, 2AY, 31Y, 3AY, 41Y, 4AY, 51Y, 5AY, 61Y, 6AY, 71Y, 7AY, G5Y, GSY, H5Y, HSY, EPY, EQY	2 x 512MB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
A2Y, ABY, C3Y, CAY, CBY, CCY, C1Y, E5Y, JAY, JBY, EWY	2 x 1GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
7MY, AMY, CMY	8 x 1GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
EAY, ECY, EDY, EHY, EJY, E6Y, E7Y, E9Y	2 x 2GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
EVY	4 x 2GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
B1Y, B3Y, B4Y, B5Y, B7Y, B9Y, BAY, BCY, BDY, BEY, BGY, BJY, C4Y, CDY, EMY, L2Y, LBY, M1Y, MAY, E4Y	2 x 1GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz

Figure 1. x3650 system board



[Click image to enlarge](#)

System x3650 (7979)

Attention:

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At-A-Glance Options

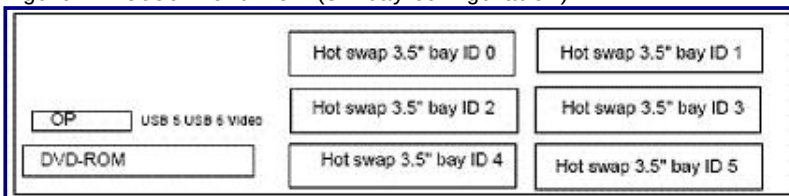
Processor | Memory | **HDD** | I/O | Pwr acc | Tape

SBB number	Option number	Feature code	Description	Height	Bays supported	Maximum quantity
Diskette Drive						
-	40K1692	-	IBM USB Portable Diskette Drive	-	-	-
SATA Hot-Swap HDDs¹						
39M4531	39M4530	5196	500GB 3.5" Hot-Swap SATA II	3.5" SATA	1..6	6
43W7577	43W7576	5530	750GB 3.5" Hot-Swap SATA II	3.5" SATA	1..6	6
43W7627	43W7626	5560	IBM 1TB 7200 SATA 3.5" HS HDD	3.5" SATA	1..6	6
SAS Hot-Swap HDDs¹						
40K1075	40K1043	5161	73GB 15K 3.5" Hot-Swap SAS	3.5" SAS	1..6	6
40K1076	40K1044	5162	146GB 15K 3.5" Hot-Swap SAS	3.5" SAS	1..6	6
43X0808	43X0802	5532	300GB 15K 3.5" Hot-Swap SAS	3.5" SAS	1..6	6
43X0826	43X0824	5534	146GB 10K 2.5" Hot-Swap SAS HDD	2.5" SAS	1..8	8
43X0841	43X0837	5543	73GB SAS 15K 2.5" SFF HS	2.5" SAS	1..8	8
40K1084	40K1052	5159	73GB 10K 2.5" Hot-Swap SAS HDD	2.5" SAS	1..8	8
Optical Devices						
32R2784	39Y6824	4144	CD-RW/DVD Combo V Ultrabay Enhanced	-	CD Bay	1
32R2901	43W8304	4143	Multi-Burner Ultrabay Enhanced Drive	-	CD Bay	1
32R2899	-	4141	CDROM Ultrabay Enhanced Drive	-	CD Bay	1
External storage expansion units				Form factor		
-	172701X	-	IBM System Storage EXP3000	-		

Note:

1. Mixing SAS and SATA hard drives is not allowed or supported.

Figure 1. x3650 Front View (six bay configuration)



Click image to enlarge

System x3650 (7979)

Attention:

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At-A-Glance

Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#)

SBB number	Part number	Feature codes	Description	Adapter length	PCI support	Slots supported	Hot-Plug capable	Max supported
Storage controllers								
24P0963	24P0960	1650	DS4000 Host Bus Adapter	Half	PCI-X	1, 2	Y	2
25R8077	25R8064	1670	IBM ServeRAID 8k SAS Controller ¹	-	-	Dedicated connector	-	1
25R8080	-	1671	IBM ServeRAID 8k-I SAS Controller ¹	-	-	Dedicated connector	-	1
25R8072	25R8060	1681	IBM SAS HBA Controller ²	Half	PCI-E	1...4	Y	2
43W4326	43W4324	3569	IBM Ultra 320 SCSI PCIe Controller	Half	PCI-E	1...4	N	4
39R8767	39R8765	1684	IBM ServeRAID-8s SAS PCIe Controller ^{3,4}	3/4 ⁵	PCI-E	1	N	1
39R8819	39R8815	1685	ServeRAID-6M Ultra320 SCSI Controller (128MB)	Full	PCI-X	1	N	1
39R8820	39R8816	1686	ServeRAID-6M Ultra320 SCSI Controller (256MB)	Full	PCI-X	1	N	1
39R8871	39R8812	1693	IBM ServeRAID-8s Battery ⁶	-	-	-	-	-
39M6013	39M5895	3551	DS4000 FC 4Gb PCI-X Dual Port HBA	Half	PCI-X	1,2	Y	2
39M6015	39M5894	3550	DS4000 FC 4Gb PCI-X Single Port HBA	Half	PCI-X	1,2	Y	2
42C2179	39R6525	3567	QLogic 4Gb FC Single-Port PCIe HBA for IBM System x	Half	PCI-E	1...4	-	4
42C2182	39R6527	3568	QLogic 4Gb FC Dual-Port PCIe HBA for IBM System x	Half	PCI-E	1...4	-	4
39R8752	39R8743	1680	IBM Ultra320 SCSI Controller 2	Half	PCI-X	1,2	Y	2
39R8851	39R8850	1690	MegaRAID 8480 ⁷	Half	PCI-E	1, 2	-	2
43W7489	42D0405	1696	Emulex 4GB FC Single-Port PCI-X HBA for IBM System x ⁷	Half	PCI-X	1, 2	-	2
43W7490	42D0407	1697	Emulex 4GB FC Dual-Port PCI-X HBA for IBM System x ⁸	Half	PCI-X	1, 2	-	2
43W7491	42C2069	1698	Emulex 4GB FC Single-Port PCI-E HBA for IBM System x ⁹	Half	PCI-E	1...4	-	4
43W7492	42C2071	1699	Emulex 4GB FC Dual-Port PCI-E HBA for IBM System x ⁹	Half	PCI-E	1...4	-	4
42D0486	42D0485	3580	Emulex 8Gb FC Single-port HBA for IBM System x	Half	PCI-E	1...4	N	4
42D0495	42D0494	3581	Emulex 8Gb FC Dual-port HBA for IBM System x	Half	PCI-E	1...4	N	4
42D0502	42D0501	3578	QLogic 8Gb FC Single-port HBA for IBM System x	Half	PCI-E	1..4	N	4
42D0511	42D0510	3579	QLogic 8Gb FC Dual-port HBA for IBM System x	Half	PCI-E	1..4	N	4
-	43W4296	-	ServeRAID-MR10i SAS/SATA Controller ¹⁰	-	-	-	-	-
43W4340	43W4339	3559	ServeRAID-MR10M SAS/SATA Controller ¹¹	Half	PCI-E	1...4	-	4
External Disk Systems and Options								
-	172621X	2620	SAS - SAS Single Controller DS3200	-	-	-	-	-
-	172622X	2621	IBM System Storage DS3200	-	-	-	-	-
-	172641X	2622	FC SAS Single Controller DS3400	-	-	-	-	-
-	172642X	2623	FC SAS Dual Controller DS3400	-	-	-	-	-
-	17421xx	-	TotalStorage DS4400 Midrange Disk System (all models)	-	-	-	-	-
-	17429xx	-	TotalStorage DS4500 Midrange Disk system (all models)	-	-	-	-	-

-	5198-001	-	IBM TotalStorage Enterprise NAS Gateway 500	-	-	-	-	-
-	2107-921	-	IBM TotalStorage DS8100 2107 model 921	-	-	-	-	-
-	2107-922/9A2	-	IBM TotalStorage DS8300 2107 model 922/9A2	-	-	-	-	-
-	1750-511	-	IBM TotalStorage DS6800 1750 model 511	-	-	-	-	-
Networking								
30R5005	30R5001	1566	IBM 10 GB Ethernet Adapter	Half	64-bit/133MHz	1,2	Y	2
30R5205	30R5201	1483	IBM iSCSI Server TX Adapter	Half	64-bit/133MHz	1,2	-	2
30R5505	-	1481	IBM iSCSI Server SX Adapter	Half	64-bit/133MHz	1,2	-	2
39Y6071	39Y6066	1485	NetXtreme II 1000 Express Ethernet Adapter	Half	PCI-E 4x	1...4	-	4
39Y6091	39Y6088	1487	NetXtreme 1000 SX + Fiber Ethernet Adapter	Half	64-bit/133MHz	1,2	-	2
39Y6096	39Y6093	1489	NetXtreme 1000 T + Dual Port Ethernet Adapter	Half	64-bit/133MHz	1,2	-	2
42C1793	42C1790	5451	NetXtreme II 10 GigE Express Fiber SR Adapter	Half	PCI-E 8x	1&4	N	4
39Y6129	39Y6126	2944	PRO/1000 PT Dual Port Server Adapter by Intel	Half	PCI-E 4x	1...4	Y	4
73P5105	73P5101	1579	PRO/1000 GT Dual Port Server Adapter by Intel- PCI-X	Half	64-bit/133MHz	1,2	-	2
39Y6139	39Y6136	2974	PRO/1000 PT Quad Port Server Adapter ¹²	Half	PCI-E 4x	1...4	-	4
42C1753	42C1750	2975	PRO/1000 PF Server Adapter ¹²	Half	PCI-E 4x	1...4	-	4
42C1763	42C1760	2978	IBM 10 GbE PCIe SR Server Adapter ¹³	Half	PCI-E 8x	1...4	-	4
42C1773	42C1770	2977	QLogic iSCSI Dual Port PCIe HBA for IBM System x	Half	PCI-E 4x	1...4	-	4
42C1783	42C1780	2995	NetXtreme II 1000 Express Dual Port Ethernet Adapter	Half	PCI-E 4x	1&4	-	4
39Y6149	39Y6146	2976	QLogic iSCSI Single Port PCIe HBA for IBM System x	Half	PCI-E 4x	1...4	-	4
25R8590	-	2961	ClearSpeed Advance PCI-X Accelerator Board	3/4	64-bit/133MHz	1	-	1
40K8840	-	1677	Myricom Myrinet 333MHz Dual Fiber PCI-X Adapter w/ 2MB Memory	Half	64-bit/133MHz	1,2	-	2
40K8841	-	2916	Myricom Myrinet 333MHz Single Fiber PCI-X Adapter w/ 2MB Memory	Half	64-bit/133MHz	1,2	-	2
40K8842	-	1476	Voltaire 10Gbps Host Channel PCI Express Adapter	Half	PCI-E 8x	1,2	-	2
40K9098	-	2918	Myricom Myri-10G 2MB PCI Express Adapter w/ 10GBASE-CX4 Port	Half	PCI-E 8x	1,2	-	1
40K9099	-	2919	Myricom Myri-10G 2MB PCI Express Adapter w/ XAUI-MTP Port	Half	PCI-E 8x	1,2	-	1
40K9100	-	2920	Myricom Myri-10G PCI Express Adapter w/ 10GBASE-SR Port	Half	PCI-E 8x	1,2	-	1
41Y4576	-	2960	Cisco 10Gbps Dual-Port 4x InfiniBand PCI-E HCA	Half	PCI-E 8x	3,4	-	2
42D3708	-	2963	Voltaire Dual-Port 4x InfiniBand PCI-E HCA	Half	PCI-E 8x	1	-	1
44E9031	-	1589	Cisco Single-port 4X SDR IB PCI-E HCA (memory free)	Half	PCI-E 8x	1&4	-	4
44E9035	-	1588	Cisco Single-port 4X DDR IB PCI-E HCA (memory free)	Half	PCI-E 8x	1&4	-	4
73P5205	73P5201	1580	PRO/1000 GT Quad Port Server Adapter by Intel- PCI-X	Half	64-bit/133MHz	1,2	-	2
44R8727	-	5471	Mellanox ConnectX Dual-Port 4X DDR IB PCI-E 2.0 x8 5.0GT/s HCA	Half	PCI-E 4x	1&4	N	4
44R9975	-	5468	Mellanox Single-Port 4X DDR IB PCI-E x8 HCA	Half	PCI-E 2.0 8x	1&4	N	4
Systems Management								
39R9504	39Y9566	1606	Remote Supervisor Adapter II Slimline	Half	-	RSA Socket	-	1
Other I/O								
40K0028	40K1907	4334	PCI Express Riser Card x3650 ^{10,12}	-	-	-	-	-
40K0032	40K1908	4316	PCI-X Riser Card x3650 ^{14,15}	-	-	-	-	-

Notes:

1. All x3650 models ship standard with ServerRAID-8k-I which offers RAID 0, 1, 10. To upgrade to RAID 1E, 5 or 6, replace ServerRAID-8k-I with optional ServerRAID-8k, option 25R8064.
2. A maximum of one SAS HBA Adapter (25R8060) may be configured in x3650 prior to shipping. However, customers may install up to a total of four adapters, provided they

disable the boot ROM on the adapters.

3. x3650 support for ServeRAID-8s is for full function attachment to a single EXP3000 storage expansion unit. EXP3000 support by ServeRAID-8s is currently limited to SAS HDDs only.
4. Before you install or ship this option in your server, first read the installation instructions provided in the option package.
5. Full-length with stiffener.
6. ServeRAID-8s Battery, option 39R8812, enables Battery Backed Cache on ServeRAID-8s.
7. One PCI-E riser is required to install a maximum of two MegaRAID 8480 controllers. To avoid damage to the server, always remove the MegaRAID 8480 adapter before relocating or shipping the server. MegaRAID 8480 must be shipped separately as originally packaged from IBM.
8. Requires PCI-X Riser Card (Option 40K1908).
9. Requires PCI-E Riser Card (Option 40K0028). This riser card ships on all standard x3650 models.
10. Supported on 3.5" HDD configuration in slot 1 only.
11. Supported in slot 1 only.
12. Supports Intel I/O Acceleration Technology for System x IOAT capable servers.
13. Supports TCP/IP Offload Engine (TOE). Not supported on systems with greater than 32GB installed memory.
14. The PCI Express Riser Card for x3650 comes standard with System x3650
15. A PCI-X riser is required when installing a PCI-X adapter in either slot 1 or slot 2.

Slot	Type	Bus	Voltage (V)	Frequency MHZ	Data path	Active PCI	Slot length	Scan sequence
PCI Slot 1 ^{1,2}	PCI / PCI-X / PCI-E Full-size, Full-length	1A	3V	133MHz	64-bit	No	Full	1
PCI Slot 2 ^{1,2}	PCI / PCI-X / PCI-E Full-size, Half-length	24	3V	133MHz	64-bit	No	Half	2
PCI Slot 3 ^{3,4}	PCI-Express (low profile)	6	-	-	-	No	Half	3
PCI Slot 4 ^{3,4}	PCI-Express (low profile)	16	-	-	-	No	Half	4

Notes:

1. Slots 1 and 2 require a riser compatible to the adapter being installed.
2. Depending on which riser card is installed, supports either PCI Express x8 connector x8 lanes or PCI -X 133 Mhz, PCI-X 100Mhz, PCI-X 66Mhz, PCI 66Mhz, PCI 33Mhz. PCI 2.3 and PCIX 1.0a compliant.
3. Non-hot plug low profile PCI Express slots accept x8 connector with x4 lanes.
4. Slots 3 and 4 are low-profile (2U) PCI-E slots that do not require a riser.

System x3650 (7979)

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At-A-Glance Options

Processor | Memory | HDD | I/O | **Pwr acc** | Tape

SBB number	Option number	Feature codes	Description
Power¹			
40K0029	40K1905	1968	xSeries 835W Redundant Power Option (110-127v)
43W5901	43W5902	1988	700W - 48V DC Power Supply
Power Distribution Units			
-	39Y8935	-	63A/250V Front-end PDU IEC 309 P+N+G
-	39Y8999	-	32A/230V 3P w/IEC309 3P+N+Gnd Conn
-	39Y8941	-	DPI 32A Single Phase C13 Enterprise PDU w/o line cord ²
-	39Y8948	-	DPI 60A Single Phase C19 Enterprise PDU w/o line cord ²
-	39Y8923	-	DPI 60A Three Phase C19 Enterprise PDU w/ IEC309 3P+G (208V) fixed line cord
-	71762MX	-	IBM Ultra Density Enterprise PDU C19 PDU+ (WW)
-	71762NX	-	IBM Ultra Density Enterprise PDU C19 PDU (WW)
-	71763MU	-	IBM Ultra Density Enterprise PDU C19 3 phase 60A PDU+ (NA)
-	71763NU	-	IBM Ultra Density Enterprise PDU C19 3 phase 60A PDU (NA)
Uninterruptible Power Supply (UPS)²			
-	21304RX	-	IBM UPS 10000XHV
-	2130R3X	-	IBM UPS 1000T LV
-	39Y8857	-	IBM UPS 3U Online Battery Pack
-	21303RX	-	IBM UPS 7500XHV

Notes:

1. System x3650 ships with a single power supply. and two power cords standard, including one rack power cable (2.8m, 125-250V, C13 to IEC 320-C14) and one AC line cord (C13 to NEMA 5-15P). A second hot-swap power supply is optional for redundancy
2. Ships without a line cord. See the 'xSeries rack power configurator' chapter for supported line cords.

Option number	Description
Rack and NetBAY	
14104RX	IBM Linux Cluster Rack
Rack / Tower Conversion Kits	
17233RX	IBM 1U 15" Flat Panel Console Kit
17231RX	IBM 1U 17" Flat Panel Console Kit w/ Optical Drive Bay
39M2895	IBM USB Conversion Option
39M2894	IBM Virtual Media Conversion Option
17235RX	Rack Keyboard Tray
Rack Console Connectivity	
1735L04	NetBAY Local Console Manager
1735R16	NetBAY Remote Console Manager
17351GX	IBM 2x8 Local Console Manager
17353LX	IBM 1x8 Console Switch
17354LX	IBM 2x16 Console Switch
31R3132	IBM 3M Console Switch Cable (USB)
39M2895	IBM USB Conversion Option
17354GX	IBM Global 4x16 Console Manager
Monitors	
4938	IBM C117 17" (15.9inch VIS) FST CRT
4942	IBM T115 15" TFT LCD

4943	IBM T117 17" TFT LCD
4944	IBM T119 19" TFT LCD
Keyboard and Mouse	
40K5372	IBM Keyboard with Integrated Pointing Device - 3m Cable - Black - USB - US English
40K9200	IBM 2 Button Optical Wheel Mouse - Black - USB
40K9201	IBM 3 Button Optical Mouse - Black - USB
40K9584	IBM Preferred Pro Keyboard- Full Width - 2m Cable - Black - USB - US English

System x3650 (7979)

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At A Glance Options

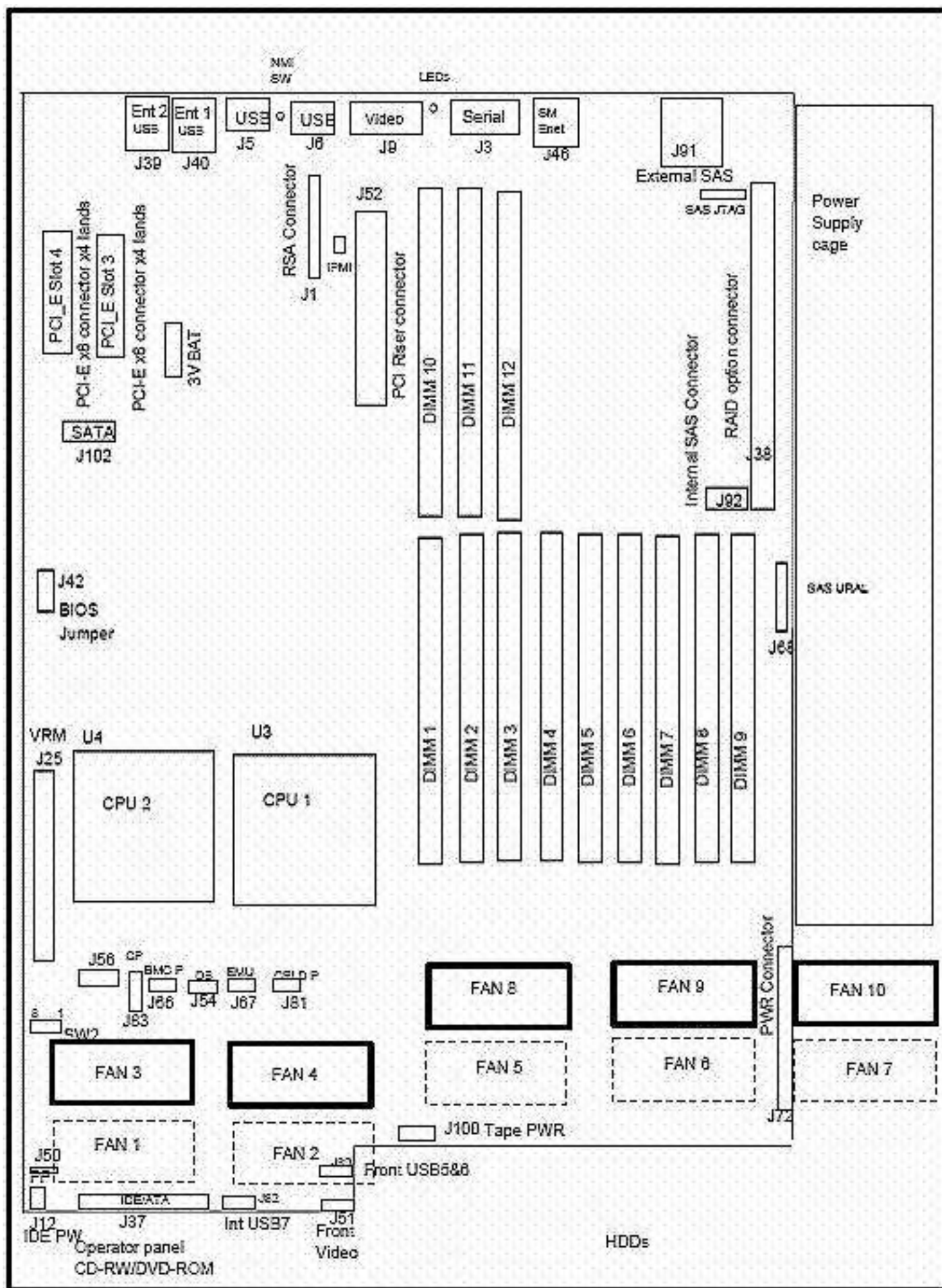
Processor | Memory | HDD | I/O | Pwr acc | **Tape**

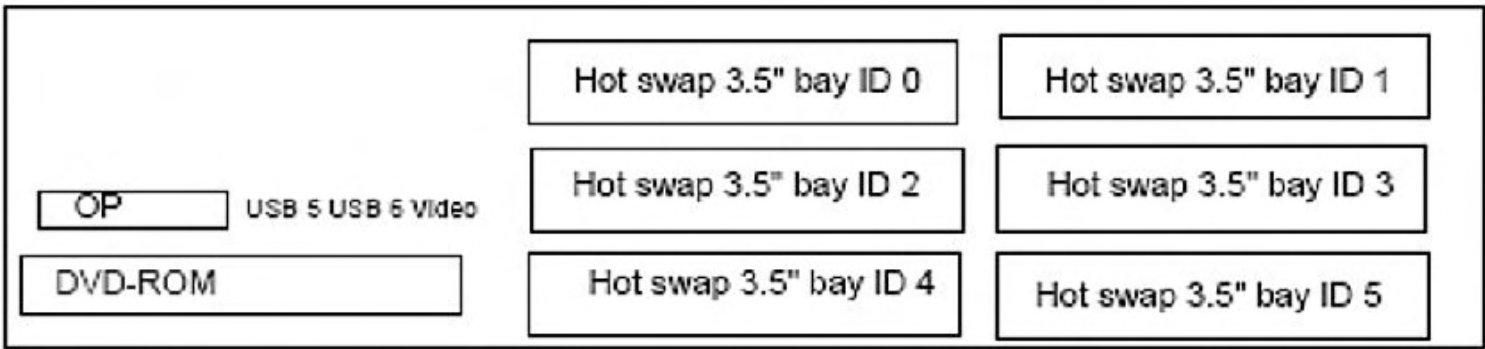
SBB number	Part number	Feature codes	Description	Bays supported	Storage interface	Form factor	Ext tape enclosure
Tape drives							
-	25R0045	-	IBM 160/320GB VXA3 Tape Drive	-	Ultra160 SCSI LVD	Internal HH 89mm (5.25in)	87651UX 87664UX
-	39M5636	-	IBM DDS Generation 6 USB Tape Drive ¹	3.5"systems, bay ID 2 & 4; 2.5" systems, Tape drive bay	USB	-	87651UX 87664UX 8767HHX 8768FHX
71P9176	39M5656	5355	IBM DDS/5 Tape Option ²	3.5"systems, bay ID 2 & 4; 2.5" systems, Tape drive bay	Ultra80 SCSI LVD	Internal 3.5" HH with 5.25" HH mounting kit	87651UX 87664UX 8767HHX
40K6522	41Y8976	4335	IBM GoVault Rack Optimization Bundle ^{4, 5}	3.5"systems, bay ID 2 & 4; 2.5" systems, Tape drive bay	SATA II	Internal 3.5" HH	-
-	59P6745	-	IBM 80/160 GB Half High VS160 Tape Drive ³	External only	Ultra160	5.25" HH	45591UX
-	43W8478	-	IBM 400/800GB HH LTO3 SAS Tape Drive	External only	-	-	87651UX 87664UX 8767HHX
43W8487	43W8480	5392	IBM DDS Gen 5 SATA Tape Drive	3.5" systems, bay ID 2 & 4; 2.5" systems, Tape drive bay	SATA II	-	-
-	44E8895	-	IBM Half High LTO Gen 4 SAS Tape Drive	-	-	-	-
44E8870	-	5398	IBM DDS Generation 6 USB Tape Drive ⁶	"3.5""systems, bay ID 2 & 4; 2.5"" systems, Tape drive bay"	USB	-	-
External tape enclosures^{6, 7}							
-	4559FHX	-	IBM 2U Full High Stand Alone SCSI Tape Drive Enclosure ⁸	-	-	FH Table Top	-
-	87651UX	-	IBM 1U Rackmount Tape Enclosure	-	-	1U Rack Mount	-
-	87664UX	-	IBM 4U Rackmount Tape Enclosure	-	-	4U Rack Mount	-
-	8767HHX	-	IBM Half High Tabletop Tape Enclosure	-	-	HH Table Top	-
Tape libraries⁷							
-	3573-xxx	-	IBM System Storage TS3100/TS3200 Tape Library (all models)	-	-	-	-
Associated tape options							
-	39M5617	-	80GB GoVault Cartridge	-	SATA II	-	-
-	40K2537	-	3361 Library LTO Generation 3 SCSI Drive	-	Ultra160 SCSI LVD	-	-
-	40K2577	-	3361 Library LTO Magazine	-	-	-	-

-	40K2579	-	3361 Library iSCSI Adapter	-	-	-	-
-	40K2599	-	SAS Enclosure Adapter Kit Option	-	-	-	-
-	44E8869	-	USB Enclosure Adapter Kit	-	-	-	-
43V5958	43V5959	5387	IBM DDS Tape Enablement Kit ¹⁰	-	-	-	-
43W7319	43V5959	4873	IBM DDS Tape Enablement Kit for 2.5" HDD	-	Ultra160	5.25" HH	45591UX

Notes:

1. This internal tape drive attaches via a USB cable (SBB 44E8880/FC 3833) to the internal USB connector.
2. This internal tape drive requires an external tape enclosure for installation in systems with a 2.5" SAS form factor.
3. This internal tape drive is not supported internally on this system and requires an external tape enclosure for installation.
4. 41Y8976 includes one base internal dock, enablement kit, and a 80GB GoVault cartridge. 3.5-inch models have six 3.5-inch hot-swap hard disk drive bays. If installing an IBM GoVault rack optimization bundle, this drive will occupy two of the six 3.5-inch drive bays. 2.5-inch models have eight 2.5-inch hot-swap hard disk drive bays and one dedicated 3.5-inch bay for the BM GoVault rack optimization bundle.
5. The IBM GoVault Rack Optimization Bundle is an internal SATA drive that attaches to the SATA connector, J102, on the system planar.
6. A quantity of one 42C3910 SCSI interface and cabling kit is required per SCSI tape drive required.
7. SCSI tape enclosures and automation products are connected via 39R8743 PCI-X U320 SCSI controller. The 39R8743 PCI-X U320 storage controller requires a 40K1908 PCI-X riser card on this system.
8. Desktop or rack tape enclosure which supports a single 133mm (5.25in) full-high tape drive. Requires a fixed shelf if installed in a rack (allow an additional 1U for fixed shelf). Includes a power cord and an external 68-pin to 0.8mm VHDCI SCSI cable.
9. Base 33614LX library requires one LTO magazine to be added and a minimum of one LTO sled drive (two maximum).
10. For use with 3.5" configurations.





System x3650 T (7980)

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At-A-Glance Options

Table 1. System x3650 T (7980) at-a-glance

Part number ¹	CPU/FSB speed (GHz/MHz)-cache	Number of processors (std/max)	Memory (std/max)	Form factor	Power supply quantity (std/max)	Hot-swap (power, slots, HDD, fans, memory)	System Management Processor
7980-51X	Dual 3.2Ghz/800Mhz processors, 2MB L2 cache, 2 x 1GB, O/B Hot-swap Ultra 320 SCSI, Dual DC power	2/2	2GB/12GB	2U x 20" deep	2/2 ²	P,H,S	Y
7980-52Y	Dual 3.2Ghz/800Mhz processors, 2MB L2 cache, 2 x 512MB, O/B Hot-swap Ultra 320 SCSI, Dual DC power	2/2	1GB/12GB	2U x 20" deep	2/2 ²	P,H,S	Y
7980-53Y	Dual 3.2Ghz/800Mhz processors, 2MB L2 cache, 2 x 1GB, O/B Hot-swap Ultra 320 SCSI, Dual AC power	2/2	2GB/12GB	2U x 20" deep	2/2 ³	P,H,S	Y
7980-54Y	Dual 3.2Ghz/800Mhz processors, 2MB L2 cache, 2 x 1GB, 2 x 146GB HDD, Dual DC power	2/2	2GB/12GB	2U x 20" deep	2/2 ²	P,H,S	Y
7980-55Y	Dual 3.2Ghz/800Mhz processors, 2MB L2 cache, 2 x 1GB, 2 x 146GB HDD, Dual AC power	2/2	2GB/12GB	2U x 20" deep	2/2 ³	P,H,S	Y

Table 1. System x3650 (7980) T at-a-glance (continued)

Part number ¹	Integrated ethernet	Storage controller	Internal HDD interface	Internal HDD storage (std/max)	Optical drive	Bays (total/avail)	Slots (total/avail)
7980-51X	Dual Gbit	U320	Hot-Swap	0GB/292GB	CD RW/DVD 24x	2/2	6/6
7980-52Y	Dual Gbit	U320	Hot-Swap	0GB/292GB	CD ROM	2/0	6/6
7980-53Y	Dual Gbit	U320	Hot-Swap	0GB/292GB	CD RW/DVD 24x	2/2	6/6
7980-54Y	Dual Gbit	U320	Hot-Swap	2X146GB /292 GB	CD RW/DVD 24x	2/0	6/6
7980-55Y	Dual Gbit	U320	Hot-Swap	2X146GB /292 GB	CD RW/DVD 24x	2/2	6/6

Notes:

- Model numbers provided are worldwide generally available variant (GAV) model numbers which are not orderable as listed and need to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 7980-52Y is 7980-52U. See the product

specific Official IBM announcement letter for other country-specific GAV model numbers. GAV to MTM mapping for L.A. and A.P. Geographies follow the same pattern.

Substitute the last character with a country-specific designator.

2. This model includes dual DC power supplies.
3. This model includes dual AC power supplies.

System x3650 T (7980)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance **Options**[Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#)

SBB number	Option number	Feature codes	Memory description
Memory DIMMs ¹			
0001938	39M5809	1938	2GB (2x1GB Kit) PC2-3200 CL3 ECC DDR2 SDRAM RDIMM (512Mb)

Notes:

1. A minimum of one DIMM is required. However, for performance, a minimum of two identical DIMMs should be populated. Pairs must always match.

System x3650 T (7980)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance **Options**[Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#)

SBB number	Option number	Feature codes	Description	Height	Bays supported	Maximum quantity
SAS Hot-Swap HDDs ¹						
-	-	-	-	-	-	-
External Storage Expansion Units				Form Factor		
-	18147Vx	-	System Storage DS4200 Midrange Disk System (all models)	-		

Notes:

1. Supported options will be published in a future release as they become available

System x3650 T (7980)

Attention:

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[At-A-Glance](#) | [Options](#)
[Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#)

SBB number	Part number	Feature code	Description	Adapter length	PCI support	Slots supported	Hot-Plug capable	Max supported
Storage controllers								
41Y3368	-	1692	Intel SRCZCRX Ultra320 SCSI RAID 0/1/5/10/50 Storage Controller ATX/LP PCI-X	Half	PCI-X	All (3 full-height, 3 low-profile)	N	6
-	172641X	-	FC SAS Single Controller DS3400	-	-	-	-	-
-	172642X	-	FC SAS Dual Controller DS3400	-	-	-	-	-
Networking								
73P5105	73P5101	1579	PRO/1000 GT Dual Port Server Adapter by Intel-PCI-X	Half	64-bit/133MHz	1...3	N	3
73P5205	73P5201	1580	PRO/1000 GT Quad Port Server Adapter by Intel-PCI-X	Half	64-bit/133MHz	1...3	N	3

System x3650 T (7980)

Attention:

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At-A-Glance **Options**[Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#)

Part number	Description
Power	
71762MX	IBM Ultra Density Enterprise PDU C19 PDU+ (WW)
71762NX	IBM Ultra Density Enterprise PDU C19 PDU (WW)
71763MU	IBM Ultra Density Enterprise PDU C19 3 phase 60A PDU+ (NA)
71763NU	IBM Ultra Density Enterprise PDU C19 3 phase 60A PDU (NA)
Monitors	
4944	IBM T119 19" TFT LCD

System x3655 (7943)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Table 1. System x3655 (7943) at-a-glance

Part number ¹	CPU/FSB speed (GHz / MHz)-cache	Number of processors (std / max)	Memory (std / max)	Form factor	Power supply quantity (std / max)	Hot-swap (power, slots, HDD, fans, memory)	System Mgmt Processor
7943-22Y	Quad Core AMD Opteron Processor 2344 HE (1.7GHz, 55W ACP)	1/2	2GB/64GB	Rack(2U)	1/2	PHF	Y
7943-32Y	Quad Core AMD Opteron Processor 2352 (2.1GHz, 75W ACP)	1/2	2GB/64GB	Rack(2U)	1/2	PHF	Y
7943-34Y	Quad Core AMD Opteron Processor 2352 (2.1GHz, 75W ACP)	1/2	2GB/64GB	Rack(2U)	1/2	PHF	Y
7943-52Y	Quad Core AMD Opteron Processor 2356 (2.3GHz, 75W ACP)	1/2	2GB/64GB	Rack(2U)	1/2	PHF	Y
7943-E1Y	Quad Core AMD Opteron Processor 2344 HE (1.7GHz, 55W ACP)	1/2	4GB/64GB	Rack(2U)	1/2	PHF	Y
7943-E2Y	Quad Core AMD Opteron Processor 2352 (2.1GHz, 75W ACP)	1/2	4GB/64GB	Rack(2U)	1/2	PHF	Y

Table 1. System x3655 (7943) at-a-glance (continued)

Part number ¹	Integrated ethernet	Storage ctrl	Internal HDD interface	Internal HDD storage (std / max)	Optical drive	PCI-X slots (total / avail)	Bays (total / avail)	Slots (total / avail)
7943-22Y	Dual 1GB	SAS	Hot-swap	0/4500GB (3.5")	CD-RW/ DVD Combo	1/1 ²	6/6	4/4
7943-32Y	Dual 1GB	SAS	Hot-swap	0/1168GB (2.5")	CD-RW/ DVD Combo	1/1 ²	8/8	4/4
7943-34Y	Dual 1GB	SAS	Hot-swap	0/4500GB (3.5")	CD-RW/ DVD Combo	1/1 ²	6/6	4/4
7943-52Y	Dual 1GB	SAS	Hot-swap	0/1168GB (2.5")	CD-RW/ DVD Combo	1/1 ²	8/8	4/4
7943-E1Y	Dual 1GB	SAS	Hot-swap	0/4500GB (3.5")	CD-RW/ DVD Combo	1/1 ²	6/6	4/4
7943-E2Y	Dual 1GB	SAS	Hot-swap	0/1168GB (2.5")	CD-RW/ DVD Combo	1/1 ²	8/8	4/4

Notes:

- Model numbers provided are worldwide generally available variant (GAV) model numbers which are not orderable as listed and need to be modified by country. The U.S. GAV model numbers

use the following nomenclature: xxU. For example, the U.S. orderable part number for 7943-32Y is 7943-32U. See the product specific Official IBM announcement letter for other country-specific GAV model numbers. GAV to MTM mapping for A.P. Geographies follow the same pattern. Substitute the last character with the country-specific designator.

2. Slot 1 is available as a HTX, PCI-X or PCI-E slot, depending on the riser chosen. A riser is required in order to use this slot. Each riser supports one adapter, plus one Remote Supervisor adapter.

System x3655 (7943)

Attention:

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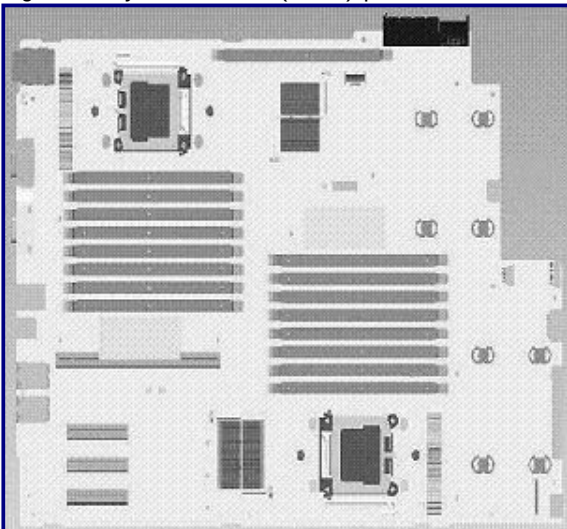
At-A-Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#)

SBB number	Option number ¹	Feature codes	Standard processor	Model support
44R6069	-	3687	Quad Core AMD Opteron Processor 2352 (2.1GHz, 75W ACP)	32Y, 34Y, E2Y
44R6071	-	3688	Quad Core AMD Opteron Processor 2356 (2.3GHz, 75W ACP)	52Y
46M2280	-	6975	Quad Core AMD Opteron Processor 2344 HE (1.7GHz, 55W ACP)	22Y, E1Y
Additional processors				
44R6070	44R5930	3376	Addl Quad Core AMD Opteron Processor 2352 (2.1GHz, 75W ACP)	32Y,34Y
44R6072	44R5932	3377	Addl Quad Core AMD Opteron Processor 2356 (2.3GHz, 75W ACP)	52Y
46M2281	46M2282	4434	Addl Quad Core AMD Opteron Processor 2344 HE (1.7GHz, 55W ACP)	22Y, E1Y

Notes:

1. Supported options will be published in a future release as they become available.

Figure 1. System x3655 (7943) processor



[Click image to enlarge](#)

System x3655 (7943)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Processor | **Memory** | HDD | I/O | Pwr acc | Tape

SBB number	Option number	Feature code	Memory description
Memory DIMMs ¹			
40K7177	-	0597	512 MB DDR 2 667MHz DIMM memory
-	41Y2759	-	1GB Kit (2x 512MB DIMM) PC2-5300 CL5 ECC DDR2 SDRAM LP RDIMM
40K7178	-	0598	1.0 GB DDR 2 667MHz DIMM memory
-	41Y2762	-	2GB Kit (2x 1GB DIMM) PC2-5300 CL5 ECC DDR2 SDRAM LP RDIMM
40K7179	-	0599	2.0 GB DDR 2 667MHz DIMM memory
-	41Y2765	-	4GB Kit (2x 2GB DIMM) PC2-5300 CL5 ECC DDR2 SDRAM LP RDIMM
40K7181	-	1901	4.0 GB DDR 2 667MHz DIMM memory
-	41Y2768	-	8GB Kit (2x 4GB DIMM) PC2-5300 CL5 ECC DDR2 SDRAM LP RDIMM
46C7534	-	3977	2.0GB DDR2 667 MHZ DIMM memory
46C7535	-	3978	4.0GB DDR2 667 MHZ DIMM memory

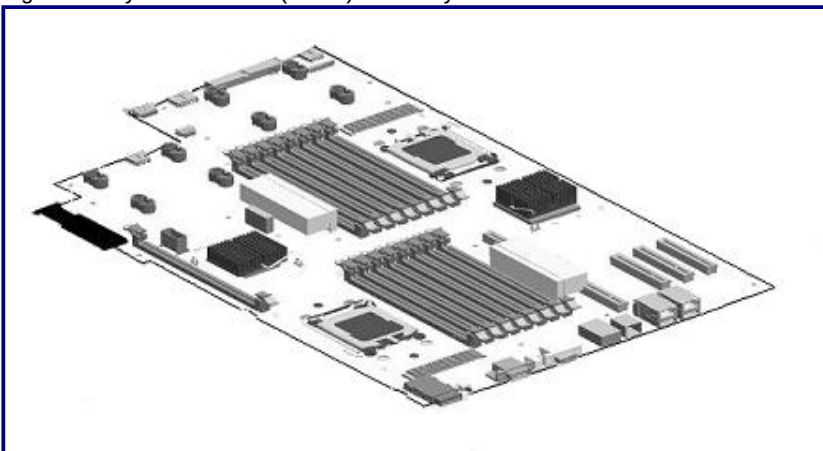
Notes:

1. Matching memory DIMMs should be installed in pairs, in adjacent sockets. Memory is populated starting farthest away from the associated processor, starting with socket 1 and 2.

Table 1. Standard Memory Configuration

Model	Std. DIMM Configuration
32Y, 34Y, 52Y	2 x 1.0 GB DDR 2 667MHz DIMM memory

Figure 1. System x3655 (7943) memory



Click image to enlarge

System x3655 (7943)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Processor | Memory | **HDD** | I/O | Pwr acc | Tape

SBB number	Option number	Feature code	Description	Height	Bays supported	Maximum quantity
Diskette						
-	40K1692	-	IBM USB Portable Diskette Drive	-	-	-
SATA Hot-Swap HDDs						
39M4531	-	5196	500GB 7200 RPM 3.5" Hot-Swap SATA HDD	-	1..6	6
43W7577	-	5530	750GB 3.5" Hot-Swap SATA II	-	1..6	6
SAS Hot-Swap HDDs						
40K1075	-	5161	73GB 15K 3.5" Hot-Swap SAS HDD	-	1..6	6
40K1076	-	5162	146GB 15K 3.5" Hot-Swap SAS HDD	-	1..6	6
40K1084	-	5159	73GB 10K 2.5" Hot-Swap SAS HDD	-	1..8	6
43X0808	-	5532	300GB 15K 3.5" Hot-Swap SAS HDD	-	1..6	6
43X0826	-	5534	146GB 10K 2.5" Hot-Swap SAS HDD	-	1..8	8
43X0841	-	5543	73GB SAS 15K 2.5" SFF HS	-	1..8	8
Optical Devices						
32R2784	-	4144	CD-RW/DVD Combo V Ultrabay Enhanced	-	Optical Drive Bay	1
32R2899	-	4141	CDROM Ultrabay Enhanced Drive	-	Optical Drive Bay	1
32R2901	-	4143	Multi-Burner Ultrabay Enhanced Drive	-	Optical Drive Bay	1
External Storage Expansion Units				Form factor		
-	18128xx	-	IBM System Storage EXP810 Storage Expansion Unit (all models)	-		
-	18147Vx	-	IBM System Storage DS4200 Midrange Disk System (all models)	-		
-	18147xx	-	IBM System Storage DS4700 Midrange Disk System (all models)	-		
-	24P82xx	-	IBM TotalStorage DS4300 Model 60U with Turbo	-		

Table 1. Bay Configuration for 3.5" Models

Bays	Form Factor	Height	Front Access	Usage
1	89mm (3.50 in.)	3.50 in	Y	HDD
2	89mm (3.50 in.)	3.50 in	Y	HDD
3	89mm (3.50 in.)	3.50 in	Y	HDD
4	89mm (3.50 in.)	3.50 in	Y	HDD
5	89mm (3.50 in.)	3.50 in	Y	HDD
6	89mm (3.50 in.)	3.50 in	Y	HDD
Middle Left=3, Bottom Left=5	133mm (5.25 in.)	5.25 in.	Y	TAPE
Optical Drive Bay	5.25 in.	-	Y	CD/DVD/MultiBurner

Note:

1. In 3.5" models, the internal tape drive occupies hard drive bays 3 and 5, reducing the number of possible installed hard drives to four.

Table 2. Bay Configuration for 2.5" Models

Bays	Form Factor	Height	Front Access	Usage
1	2.50 in.	2.50 in.	Y	HDD
2	2.50 in.	2.50 in.	Y	HDD
3	2.50 in.	2.50 in.	Y	HDD
4	2.50 in.	2.50 in.	Y	HDD
5	2.50 in.	2.50 in.	Y	HDD
6	2.50 in.	2.50 in.	Y	HDD

7	2.50 in.	2.50 in.	Y	HDD
8	2.50 in.	2.50 in.	Y	HDD
Tape Bay	3.25 in.	3.25 in	Y	TAPE
Optical Drive Bay	5.25 in.	-	Y	CD/DVD/MultiBurner

System x3655 (7943)

Attention:

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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | [Tape](#)

SBB number	Part number	Feature codes	Description	Adapter length	PCI support	Slots supported	Hot-Plug capable	Max supported
Storage Controllers¹								
25R8072	-	1681	IBM SAS HBA Controller	Half	PCI-E	1,3,4	N	3
25R8077	-	1670	IBM ServeRAID-8k SAS Controller ¹	-	-	Dedicated	N	1
25R8080	-	1671	IBM ServeRAID 8k-I SAS Controller ¹	-	-	Dedicated	N	1
39M6013	-	3551	DS4000 FC 4Gb PCI-X Dual Port HBA	Half	PCI-X	1	N	1
39M6015	-	3550	DS4000 FC 4Gb PCI-X Single Port HBA	Half	PCI-X	1	N	1
39R8752	-	1680	IBM Ultra320 SCSI Controller 2	Half	PCI-X	1	N	1
39R8767	-	1684	IBM ServeRAID 8s SAS PCIe Controller ^{3,4}	3/4 (full-length with stiffener)	PCI-E 8x	1	N	1
39R8871	-	1693	IBM ServeRAID-8s Battery ⁵	-	-	-	-	-
39R8851	-	1690	MegaRAID 8480 ⁷	Half	PCI-E	1 ⁶	N	1
42C2179	-	3567	QLogic 4Gb FC Single-Port PCIe HBA for IBM System x	Half	PCI-E	1...4	N	4
42C2182	-	3568	QLogic 4Gb FC Dual-Port PCIe HBA for IBM System x	Half	PCI-E	1...4	N	4
43W4326	-	3569	IBM Ultra 320 SCSI PCIe Controller	Half	PCI-E	1,2,3,4	N	4
43W7489	-	1696	Emulex 4GB FC Single-Port PCI-X HBA for IBM System x	Half	PCI-X	1	N	1
43W7490	-	1697	Emulex 4GB FC Dual-Port PCI-X HBA for IBM System x	Half	PCI-X	1	N	1
43W7491	-	1698	Emulex 4GB FC Single-Port PCI-E HBA for IBM System x	Half	PCI-E 4x	1,2,3,4	N	4
43W7492	-	1699	Emulex 4GB FC Dual-Port PCI-E HBA for IBM System x	Half	PCI-E 4x	1,2,3,4	N	4
External Disk Systems and Options								
-	-	-	-	-	-	-	-	-
Networking								
25R8590	-	2961	ClearSpeed Advance PCI-X Accelerator Board	Half	PCI-X	1	N	1
30R5005	30R5001	1566	IBM 10 GB Ethernet Adapter	Half	PCI-X	1	N	1
30R5205	-	1483	IBM iSCSI Server TX Adapter	Half	PCI-X	1	N	1
30R5505	-	1481	IBM iSCSI Server SX Adapter	Half	PCI-X	1	N	1
39Y6071	39Y6066	1485	NetXtreme II 1000 Express G Ethernet Adapter	Half	PCI-E	1...4	N	4
39Y6091	39Y6088	1487	NetXtreme 1000 S + Ethernet Adapter	Half	PCI-X	1	N	1

39Y6096	39Y6093	1489	NetXtreme 1000 T + Dual Port Ethernet Adapter	Half	PCI-X	1	N	1
39Y6129	-	2944	PRO/1000 PT Dual Port Server Adapter by Intel	Half	PCI-E 4x	1...4	N	4
39Y6139	39Y6136	2974	PRO/1000 PT Quad Port Server Adapter	Half	PCI-E 4x	1...4	N	4
39Y6149	-	2976	QLogic iSCSI Single Port PCIe HBA for IBM System x	Half	PCI-E 4x	1...4	N	4
40K8840	-	1677	Myricom Myrinet 333MHz Dual Fiber PCI-X Adapter w/ 2MB Memory	Half	PCI-X	1	N	1
40K8841	-	2916	Myricom Myrinet 333MHz Single Fiber PCI-X Adapter w/ 2MB Memory	Half	PCI-X	1	N	1
40K8842	-	1476	Voltaire 10Gbps Host Channel PCI Express Adapter	Half	PCI-E	1,3,4	N	3
40K9098	-	2918	Myricom Myri-10G 2MB PCI Express Adapter w/ 10GBASE-CX4 Port	Half	PCI-E	1,3,4	N	2
40K9099	-	2919	Myricom Myri-10G 2MB PCI Express Adapter w/ XAUI-MTP Port	Half	PCI-E	1,3,4	N	2
40K9100	-	2920	Myricom Myri-10G PCI Express Adapter w/ 10GBASE-SR Port	Half	PCI-E	1,3,4	N	2
41Y4576	-	2960	Cisco 10Gbps Dual-Port 4x InfiniBand PCI-E HCA	Half	PCI-E	1,3,4	N	3
42C1753	42C1750	2975	PRO/1000 PF Server Adapter	Half	PCI-E 4x	1,2,3,4	N	4
42C1763	42C1760	2978	IBM 10 GbE PCIe SR Server Adapter	Half	PCI-E 8x	1,3,4	N	3
42C1773	-	2977	QLogic iSCSI Dual Port PCIe HBA for IBM System x	Half	PCI-E 4x	1,2,3,4	N	4
42C1783	-	2995	NetXtreme II 1000 Express Dual Port Ethernet Adapter	Half	PCI-E 4x	1,2,3,4	N	4
42D3708	-	2963	Voltaire Dual-Port 4x InfiniBand PCI-E HCA	Full	PCI-E	1,3,4	N	3
44E9031	-	1589	Cisco Single-port 4X SDR IB PCI-E HCA (memory free)	Half	PCI-E 8x	1,3,4	N	3
44E9035	-	1588	Cisco Single-port 4X DDR IB PCI-E HCA (memory free)	Half	PCI-E 8x	1,3,4	N	3
73P3605	-	1507	IBM iSCSI Server Adapter	Half	PCI-X	1	N	1
73P5105	73P5101	1579	PRO/1000 GT Dual Port Server Adapter by Intel	Half	PCI-X	1	N	1
73P5205	73P5201	1580	PRO/1000 GT Quad Port Server Adapter by Intel	Half	PCI-X	1	N	1
Systems Management								
39R9504	39Y9566	1606	Remote Supervisor Adapter II Slimline	Half	N	Dedicated	N	1
Other I/O								
40K7304	-	2082	PCI-X 133MHz (FH/FL) Riser for x System 3655	-	-	-	-	-
40K7305	40K7428	2083	PCI-E x16 (FH/FL) Riser for IBM x System 3655	-	-	-	-	-

Notes:

1. All x3655 models ship standard with ServeRAID-8k-I which offers RAID 0, 1, 10. To upgrade to RAID 1E, 5 or 6, replace ServeRAID-8k-I with optional ServeRAID-8k, pn 25R8064.
2. ServeRAID-8s Battery, option 39R8812, enables Battery Backed Cache on ServeRAID-8s.
3. x3655 support for ServeRAID-8s is for full function RAID attachment to a single EXP3000 storage expansion unit. EXP3000 support by ServeRAID-8s is currently limited to SAS HDDs only.
4. Before you install or ship this option in your server, first read the installation instructions provided in the option package.
5. ServeRAID-8s Battery 39R8812 enables Battery Backed Cache on ServeRAID-8s.
6. Requires optional PCI-E x16 (FH/FL) Riser for IBM System x3655, 40K7428.
7. To avoid damage to the server, always remove the MegaRAID 8480 adapter before relocating or shipping the server. MegaRAID 8480 must be shipped separately as originally packaged from IBM.

Slot	Type ¹	Slot height / length	Voltage (V)	Frequency MHz	Data path	Active PCI? (Hot Swap)
1	HTX ²	Full Height / Full Length	3.3	133	64	N
2 ³	PCI-E x4	Half Height / Half Length	3.3	133	64	N
3 ³	PCI-E x8	Half Height / Half Length	3.3	133	64	N
4 ³	PCI-E x8	Half Height / Half Length	3.3	133	64	N

Notes:

1. x3655 offers 4 PCI express slots, two x8 lanes low profile, one x4 low profile, and one full length/full height option card slot.
2. One full length/full height riser option is supported at a time. The standard HTX slot on riser may be replaced with PCI-E x16 or PCI-X risers.
3. Supports PCI-E low profile adapters.

System x3655 (7943)

Attention:

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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | **[Pwr acc](#)** | [Tape](#)

SBB number	Option number	Feature codes	Description
Power			
40K0029	40K1905	1968	835W Redundant Power Supply
Power Distribution Units			
-	39Y8935	-	63A/250V Front-end PDU IEC 309 P+N+G
-	39M2816	-	IBM DPI C13 PDU+C13 without line cord
-	39M2818	-	IBM DPI C19 PDU+C19 without line cord
-	39M2819	-	IBM DPI C19 3 phase PDU+C19 with attached line cord
-	39Y8905	-	DPI NEMA Rack PDU
-	39Y8923	-	DPI 60A Three Phase C19 Enterprise PDU w/ IEC309 3P+G (208V) fixed line cord
-	39Y8938	-	30amp/125V Front-end PDU with NEMA L5-30P connector
-	39Y8939	-	30amp/250V Front-end PDU with NEMA L6-30P connector
-	39Y8940	-	60amp/250V Front-end PDU with IEC 309 60A 2P+N+Gnd connector
-	39Y8941	-	DPI Single Phase C13 Enterprise PDU w/o line cord
-	39Y8948	-	DPI Single Phase C19 Enterprise PDU w/o line cord
-	39Y8951	-	DPI Universal Rack PDU w/ Nema L5-20P & L6-20P (US cord)
Uninterruptible Power Supply (UPS)			
-	21301RX	-	IBM UPS 3000 LV
-	21302RX	-	IBM UPS 3000 HV
-	21303RX	-	IBM UPS 7500XHV
-	21304RX	-	IBM UPS 10000XHV

Option number	Description
Rack and NetBAY	
17235RX	IBM Rack Keyboard Tray
93061RX	NetBAY11 Standard Rack Cabinet
93072RX	IBM 25U Standard Rack
93074RX	IBM 42U Standard Rack
93074XX	IBM 42U Standard Rack Extension
93084RX	NetBAY42 Enterprise Rack Cabinet
93084XX	NetBAY42 Enterprise Expansion Rack Cabinet (EX)
Rack / Tower Conversion Kits	
-	-
Rack Console Connectivity	
17351GX	IBM 2x8 Local Console Manager
17352GX	IBM Global 2x16 Console Manager
17353LX	IBM 1 x 8 Console Switch
17354GX	IBM Global 4x16 Console Manager
17354LX	IBM 2 x 16 Console Switch
17231RX	IBM 1U 17" Flat Panel Console Kit w/ Optical Drive Bay
17233RX	IBM 1U 15" Flat Panel Console Kit
Monitors	
40K9200	IBM 2 Button Optical Wheel Mouse - Black - USB
40K9201	IBM 3 Button Optical Mouse - Black - USB
Keyboard and Mouse	
40K5372	IBM Rack Mountable Keyboard & Pointing Device - 3m Cable - Black - USB - US English 103P
40K9584	IBM Preferred Pro Keyboard- Full Width - 2m Cable - Black - USB - US English 103P

System x3655 (7943)

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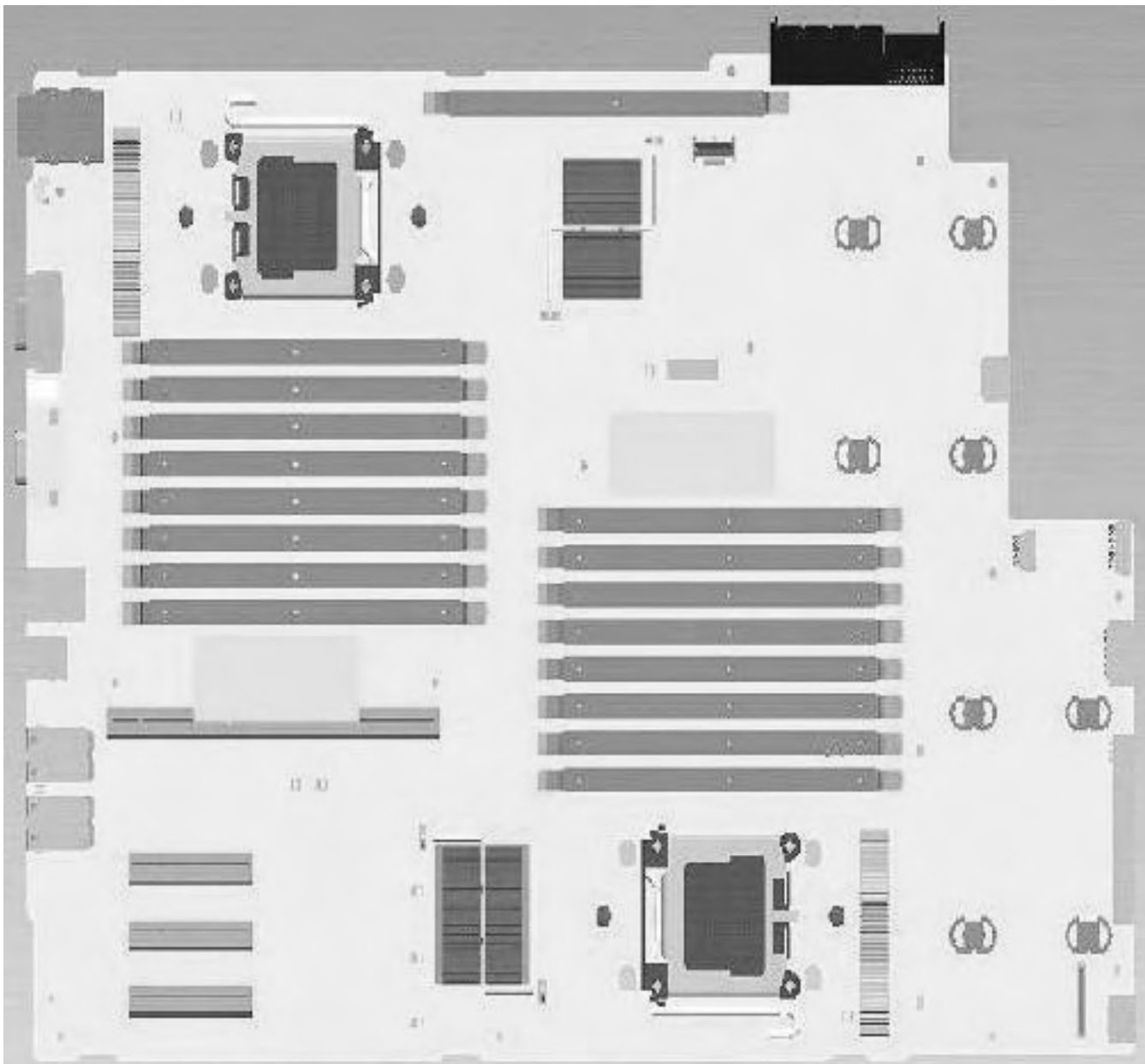
At A Glance Options

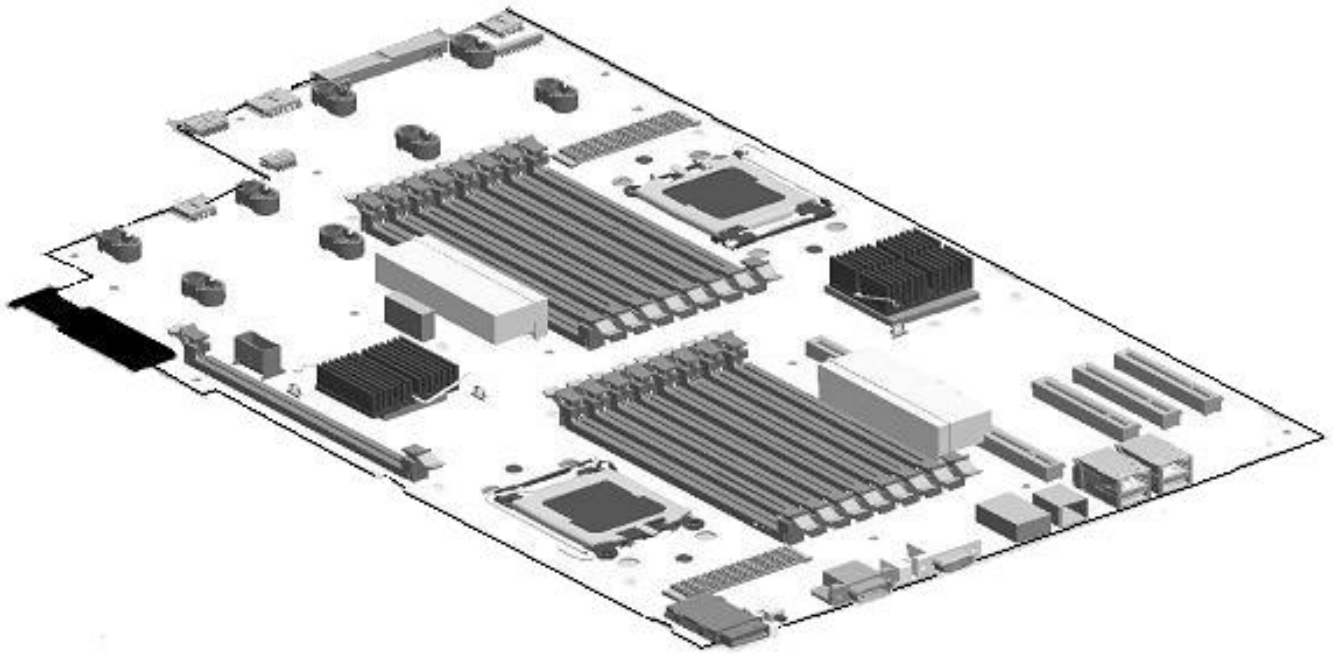
[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | **[Tape](#)**

SBB number	Part number	Feature codes	Description	Bays supported	Storage interface	Form factor	Ext tape encl
Tape drives¹							
71P9176	-	5355	IBM DDS/5 Tape Option	for 3.5 HDD = left, middle and bottom, for 2.5 = tapedrive bay	Ultra80 SCSI LVD	Internal 3.5" HH with 5.25" HH mounting kit	87651UX 87664UX
43W7319	-	4873	IBM DDS Tape Enablement Kit ²	for 3.5 HDD = left, middle and bottom, for 2.5 = tapedrive bay	-	2.5"	-
40K6522	-	4335	IBM GoVault Rack Optimization Bundle	for 3.5 HDD = left middle and bottom, for 2.5 = tapedrive bay	Ultra160 SCSI LVD	Internal 3.5" HH with 5.25" HH mounting kit	-
43W8487	-	5392	IBM DDS Gen 5 SATA Tape Drive	for 3.5 HDD = left, middle and bottom, for 2.5 = tapedrive bay	SATA II	Internal 3.5" HH with 5.25" HH mounting kit	87651UX 87664UX
44E8870	-	5398	IBM DDS Generation 6 USB Tape Drive	for 3.5 HDD = left middle and bottom, for 2.5 = tapedrive bay	USB	Internal 3.5" HH with 5.25" HH mounting kit	87651UX 87664UX
43V5958	-	5387	IBM DDS Tape Enablement Kit	-	-	3.5"	-
External Tape Enclosures							
-	-	-	-	-	-	-	-
Tape Autoloaders							
-	-	-	-	-	-	-	-
Tape library							
-	-	-	-	-	-	-	-
Associated tape options							
-	-	-	-	-	-	-	-

Notes:

1. These Internal tape drives are not supported internally on this system and require an external tape enclosure for installation.
2. For use with 3.5" configurations.





System x3755 (7163)

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At-A-Glance Options

Table 1. System x3755 (7163) at-a-glance

Part number ¹	CPU/FSB speed GHz/MHz)- cache	Number of processors (std / max) ²	Memory (std / max)	Form factor	Power supply quantity (std / max)	Hot-swap (power, slots, HDD, fans, memory)	System Mgmt Processor
7163-1RY	QCore AMD Opteron Processor Model 8350 (2.0GHz 4x512KB L2 2MB L3)	2/4	4GB/128GB	4U	1/2	PHF	Y
7163-3RY	QCore AMD Opteron Processor Model 8356 (2.3GHz 4x512KB L2 2MB L3)	2/4	4GB/128GB	4U	1/2	PHF	Y
7163-5RY	QCore AMD Opteron Processor Model 8360 SE (2.5GHz 4x512KB L2 2MB L3)	2/4	4GB/128GB	4U	1/2	PHF	Y
7163-E5Y	QCore AMD Opteron Processor Model 8360 SE (2.5GHz 4x512KB L2 2MB L3)	2/4	16GB/128GB	4U	2/2	PHF	Y

Table 1. System x3755 (7163) at-a-glance (continued)

Part number ¹	Integrated ethernet	Storage controller	Internal HDD interface	Internal HDD storage (std / max)	Optical drive	Bays (total / avail)	Slots (total / avail)
7163-1RY	Dual 1GB	SAS	Hot-Swap	0GB/1200 GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	6/6
7163-3RY	Dual 1GB	SAS	Hot-Swap	0GB/1200 GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	6/6
7163-5RY	Dual 1GB	SAS	Hot-Swap	0GB/1200 GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	6/6
7163-E5Y	Dual 1GB	SAS	Hot-Swap	0GB/1200 GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	6/6

Notes:

- Model numbers provided are worldwide generally available variant (GAV) model numbers which are not orderable as listed and need to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 7163-12Y is 7163-12U. See the product

specific Official IBM announcement letter for other country-specific GAV model numbers. GAV to MTM mapping for A.P. Geographies follow the same pattern. Substitute the last character with the country-specific designator.

2. The Pass Thru Card (40K7118) is required with 1 or 3 processor configurations

System x3755 (7163)

Attention:

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At-A-Glance Options

Processor | **Memory** | **HDD** | **I/O** | **Pwr acc** | **Tape** |

SBB number	Option number ¹	Feature codes	Standard processor	Model support
43W7400	-	3075	QCore AMD Opteron Processor Model 8356 (2.3GHz 4x512KB L2 2MB L3)	3RY
43W7402	-	3077	QCore AMD Opteron Processor Model 8360 SE (2.5GHz 4x512KB L2 2MB L3)	5RY / E5Y
44R6294	-	6974	QCore AMD Opteron Processor Model 8350 (2.0GHz 4x512KB L2 2MB L3)	1RY
Additional processor ²				
44R5954	43W7406	3489	Addl QCore AMD Opteron Processor Model 8356 (2.3GHz 4x512KB L2 2MB L3)	3RY
44R5956	43W7408	3491	Addl QCore AMD Opteron Processor Model 8360 SE (2.5GHz 4x512KB L2 2MB L3)	5RY / E5Y
44R6295	-	4433	Addl QCore AMD Opteron Processor Model 8350 (2.0GHz 4x512KB L2 2MB L3)	1RY

When 2 processors are populated, it is recommended (but not required) that memory be evenly distributed, in pairs, between the two, always keeping pairs together. For example, in a two processor system with 6 DIMMs, an even distribution would be 4 DIMMs with processor 1 and 2 DIMM's with processor 2. Do not install 3 DIMMs for processor 1 and 3 DIMM's for processor 2. That would violate the pairing rule.

Notes:

1. Supported options will be published in a future release as they become available.
2. Additional processors must match the speed of the initial processor.

Table 1. Associated Processor Options

SBB Number	Option Number	Feature Code	Description
40K7118	40K7547	2093	CPU Pass Thru Card ¹
40K7270	40K7545	2095	Redundant Cooling ²

Notes:

1. The Pass Thru Card (40K7118) is required with 1 or 3 processor configurations
2. If more than 2 processors are configured, additional fans 40K7270 FC 2095 must be selected.

System x3755 (7163)

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At-A-Glance Options

[Processor](#) |
 [Memory](#) |
 [HDD](#) |
 [I/O](#) |
 [Pwr acc](#) |
 [Tape](#) |

SBB Number	Option Number	Feature code	Memory Description
Memory DIMMs¹			
40K7177	-	0597	512 MB DDR 2 667MHz DIMM memory
-	41Y2759	-	1.0 GB (2x 512MB) DDR 2 667MHz DIMM memory Kit
40K7178	-	0598	1.0 GB DDR 2 667MHz DIMM memory
-	41Y2762	-	2GB (2x 1GB) DDR 2 667MHz DIMM memory Kit
46C7534	-	3977	2.0GB DDR2 667 MHz DIMM memory
46C7535	-	3978	4.0GB DDR2 667 MHz DIMM memory
-	41Y2768	-	8GB (2x4GB) PC2-5300 CL5 ECC DDR2 667 LP RDIMM
-	41Y2765	-	4GB (2x2GB) PC2-5300 CL5 ECC DDR2 667 LP RDIMM

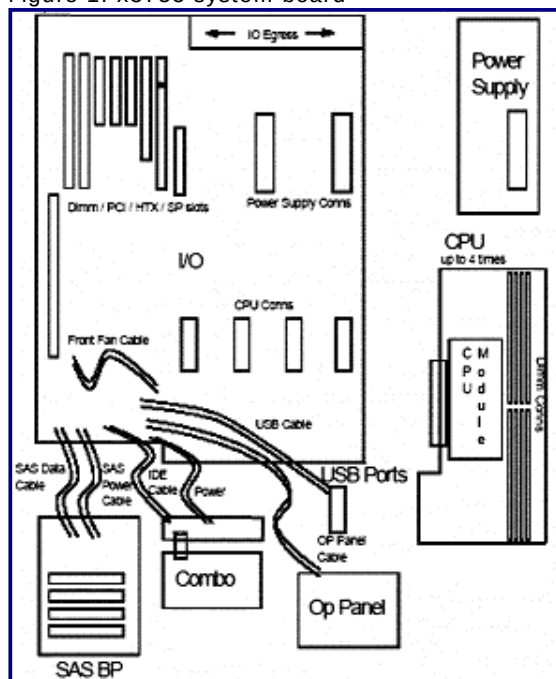
Notes:

1. Do not install DIMMs on a processor card without a CPU installed on it.
2. Install largest DIMM sizes first (in pairs of matching type and size) then next smaller DIMM size, etc.

Table 1. Standard Memory Configuration

Model	Std. DIMM Configuration
1RY, 3RY, 5RY	4 x 1 GB DDR 2 667Mhz DIMM memory
E5Y	4 x 4.0 GB DDR 2 667MHz DIMM memory

Figure 1. x3755 system board



[Click image to enlarge](#)

System x3755 (7163)

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At-A-Glance Options

[Processor](#) | [Memory](#) | **HDD** | [I/O](#) | [Pwr acc](#) | [Tape](#) |

SBB number	Option number	Feature codes	Description	Type	Height	Bays supported	Maximum quantity
Diskette drive							
-	40K1692	-	IBM USB Portable Diskette Drive	-	-	-	-
Hot-swap SAS HDDs							
40K1075	40K1043	5161	73GB 15K 3.5" Hot-Swap SAS	SAS	SL	0...3	4
40K1076	40K1044	5162	146GB 15K 3.5" Hot-Swap SAS	SAS	SL	0...3	4
43X0808	43X0802	5532	300GB 15K 3.5" Hot-Swap SAS HDD	SAS	SL	0...3	4
Optical Devices							
32R2899	-	4141	CDROM Ultrabay Enhanced Drive	-	SL	4	1
32R2784	-	4144	CD-RW/DVD Combo V Ultrabay Enhanced	-	SL	4	1
External storage expansion units				Form factor			
-	-	-	-	-			

Table 1. Bays

Bays	Form Factor	Height	Front Access	Usage
zero	2.5"	SFF	Y	HDD
1	2.5"	SFF	Y	HDD
2	2.5"	SFF	Y	HDD
3	2.5"	SFF	Y	HDD
4	12.7mm	US	Y	Optical

System x3755 (7163)

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At-A-Glance Options

Processor | Memory | HDD | I/O | Pwr acc | Tape |

SBB number	Part number	Feature codes	Description	Adapter length	PCI support	Slots supported	Max supported
Storage Controllers¹							
25R8077	25R8064	1670	IBM ServeRAID 8k SAS Controller ¹	-	-	ROC DIMM	1
25R8080	-	1671	IBM ServeRAID 8k-I SAS Controller ¹	-	-	ROC DIMM	1
39R8752	39R8743	1680	IBM Ultra320 SCSI Controller 2	Half	PCI-X	PCI-X (5 or 6)	2
39R8851	39R8850	1690	MegaRAID 8480 ³	Half	PCI-E	PCI-E (1,2,3)	3
39M6013	39M5895	3551	DS4000 FC 4Gb PCI-X Dual Port HBA	Half	PCI-X	PCI-X (5 or 6)	2
39M6015	39M5894	3550	DS4000 FC 4Gb PCI-X Single Port HBA	Half	PCI-X	PCI-X (5 or 6)	2
25R8072	25R8060	1681	IBM SAS HBA Controller	Half	PCI-e x8	PCI-E (1,2,3,4)	2
42C2179	39R6525	3567	QLogic 4Gb FC Single-Port PCIe HBA	Half	PCI-E	PCI-E (1,2,3,4)	2
42C2182	39R6527	3568	QLogic 4Gb FC Dual-Port PCIe HBA	Half	PCI-E	PCI-E (1,2,3,4)	4
43W7489	42D0405	1696	Emulex 4GB FC Single-Port PCI-X HBA for IBM System x	Half	PCI-X	PCI-X (5 or 6)	1
43W7490	42D0407	1697	Emulex 4GB FC Dual-Port PCI-X HBA for IBM System x	Half	PCI-X	PCI-X (5 or 6)	1
43W7491	42C2069	1698	Emulex 4GB FC Single-Port PCI-E HBA for IBM System x	Half	PCI-E	PCI-E (1,2,3,4)	2
43W7492	42C2071	1699	Emulex 4GB FC Dual-Port PCI-E HBA for IBM System x	Half	-	PCI-E (1,2,3,4)	2
39R8767	39R8765	1684	IBM ServeRAID-8s SAS PCIe Controller ^{2, 3}	3/4 ²	PCIe x8	PCI-E x8 (1,2,3)	3
43W4326	-	3569	IBM Ultra 320 SCSI PCIe Controller	Half	PCIe x1	PCI-E (1,2,3,4)	4
External Disk Systems and Options							
-	-	-	-	-	-	-	-
Networking							
30R5005	30R5001	1566	IBM 10 GB Ethernet Adapter	Half	64-bit/133MHz	5, 6	2
30R5205	30R5201	1483	IBM iSCSI Server TX Adapter	Half	64-bit/133MHz	5, 6	2
30R5505	30R5501	1481	IBM iSCSI Server SX Adapter	Half	PCI X	5, 6	2
39Y6071	39Y6066	1485	NetXtreme II 1000 Express G Ethernet Adapter- PCIe	Half	PCI E 1X	1,2,3,4	4
39Y6091	39Y6088	1487	NetXtreme 1000 S + Ethernet Adapter PCI-X	Half	64-bit/133MHz	5, 6	2
39Y6096	39Y6093	1489	NetXtreme 1000 T + Dual Port Ethernet Adapter PCI-X	Half	64-bit/133MHz	5, 6	2
73P5105	-	1579	PRO/1000 GT Dual Port Server Adapter by Intel- PCI-X	Half	64-bit/133MHz	5, 6	2
73P5205	-	1580	PRO/1000 GT Quad Port Server Adapter by Intel- PCI-X	Half	64-bit/133MHz	5, 6	2
25R8590	-	2961	ClearSpeed Advance PCI-X Accelerator Board	Half	PCIx	5, 6	1
40K8840	-	1677	Myricom Myrinet 333MHz Dual Fiber PCI-X Adapter w/ 2MB Memory	Half	PCIx	5, 6	2
40K8841	-	2916	Myricom Myrinet 333MHz Single Fiber PCI-X Adapter w/ 2MB Memory	Half	PCIx	5, 6	2
40K8842	-	1476	Voltaire 10Gbps Host Channel PCI Express Adapter	Half	PCIe	1...4	2
40K9098	-	2918	Myricom Myri-10G 2MB PCI Express Adapter w/ 10GBASE-CX4 Port	Half	PCIe	1...4	1

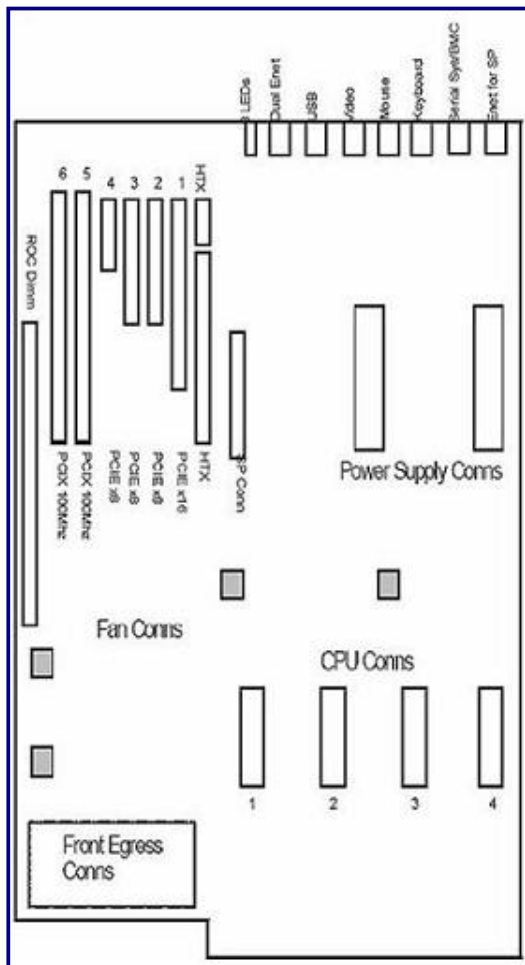
40K9099	-	2919	Myricom Myri-10G 2MB PCI Express Adapter w/ XAUI-MTP Port	Half	PCIe	1...4	1
40K9100	-	2920	Myricom Myri-10G PCI Express Adapter w/ 10GBASE-SR Port	Half	PCIe	1...4	2
41Y4576	-	2960	Cisco 10Gbps Dual-Port 4x InfiniBand PCI-E HCA	Half	PCIe	1...4	2
42D3708	-	2963	Voltaire Dual-Port 4x InfiniBand PCI-E HCA	Half	PCIe	1...4	1
42C1753	42C1750	2975	PRO/1000 PF Server Adapter ²	Half	PCIe	1,2,3,4	1
42C1763	42C1760	2978	IBM 10 GbE PCIe SR Server Adapter ⁵	Half	PCIe	1,2,3,4	2
39Y6139	-	2974	PRO/1000 PT Quad Port Server Adapter ²	Half	PCIe	1,2,3,4	4
39Y6129	39Y6126	2944	PRO/1000 PT Dual Port Server Adapter by Intel	Half	PCI-e x4	1,2,3,4	4
39Y6149	-	2976	Qlogic iSCSI Single Port PCIe HBA for IBM System x	Half	PCI-e x4	1,2,3,4	2
42C1773	-	2977	Qlogic iSCSI Dual Port PCIe HBA for IBM System x	Half	PCI-e x4	1,2,3,4	2
44E9031	-	1589	Cisco Single-port 4X SDR IB PCI-E HCA (memory free)	Half	PCI-E 8x	1,2,3	3
44E9035	-	1588	Cisco Single-port 4X DDR IB PCI-E HCA (memory free)	Half	PCI-E 8x	1,2,3	3
43V5761	-	1821	nVidia Quadro FX5600 Graphics Adapter	Full	PCI-E 16x	1	1
42C1783	-	2995	NetXtreme II 1000 Express Dual Port Ethernet Adapter	Half	PCI-E 4x	1,2,3,4	4
System Management							
39Y9567	39Y9566	1605	Remote Supervisor Adapter II Slimline	-	-	Dedicated slot	1

Notes:

1. All x3755 models ship standard with ServeRAID-8k-I which offers RAID 0, 1, 10. To upgrade to RAID 1E, 5 or 6, replace ServeRAID-8k-I with optional ServeRAID-8k, pn 25R8064.
2. Full length when installed with stiffener.
3. To avoid damage to the server, always remove the MegaRAID 8480 adapter before relocating or shipping the server. MegaRAID 8480 must be shipped separately as originally packaged from IBM.
4. Supports Intel I/O Acceleration Technology for System x IOAT capable servers.
5. Supports TCP/IP Offload Engine (TOE). Not supported on systems with greater than 32GB installed memory.

Slot	Type	Bus	Voltage (V)	Frequency MHz	Data path	Active PCI	Slot length
PCI Slot 1	PCI-E x16	-	3.3V	x16	64	-	Full
PCI Slot 2	PCI-E x8	-	3.3V	x8	64	-	Full
PCI Slot 3	PCI-E x8	-	3.3V	x8	64	-	Full
PCI Slot 4	PCI-E x4	-	3.3V	x4	64	-	Full
PCI Slot 5	PCI-X	A	5/ 3.3V	100/133MHz	64	-	Full
PCI Slot 6	PCI-X	A	5/ 3.3V	100/133MHz	64	-	Full
HTX Slot	HTX	-	5/ 3.3V	100/133MHz	64	-	Half

Figure 1. x3755 (7163) I/O power backplane



Click image to enlarge

System x3755 (7163)

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At-A-Glance Options

Processor | Memory | HDD | I/O | **Pwr acc** | Tape |

SBB number	Option number	Feature codes	Description
Power			
40K7397	40K7543	1974	1500 Watt PWR Supply ¹
Power Distribution Units			
-	39Y8941	-	DPI 32A Single Phase C13 Enterprise PDU w/o line cord ²
-	39Y8948	-	DPI 60A Single Phase C19 Enterprise PDU w/o line cord ²
-	39Y8951	-	DPI Universal Rack PDU w/ Nema L5-20P & L6-20P (US cord)
Uninterruptible Power Supply (UPS)			
-	-	-	-
Associated Options			
40K7270	40K7545	2095	Redundant Cooling

Note:

1. If the additional Power Supply (SBB 40K7397 FC 1974) is selected, PDU Jumper Cable (SBB 39Y5533 FC 6311) must be ordered also.
2. Ships without a line cord. See the 'xSeries rack power configurator' chapter for supported line cords.

SBB number	Option number	Feature codes	Description
Rack and NetBAY			
-	-	-	-
Rack / Tower Conversion Kits			
-	-	-	-
Rack Console Connectivity			
-	17351GX	-	IBM 2x8 Local Console Manager
-	17352GX	-	IBM Global 2x16 Console Manager
-	17354GX	-	IBM Global 4x16 Console Manager
39Y7953	31R3132	3751	3m Console Switch Cable (USB)
Racks			
-	17231RX	-	IBM 1U 17" Flat Panel Console Kit w/ Optical Drive Bay
-	17233RX	-	IBM 1U 15" Flat Panel Console Kit
-	93072RX	-	IBM 25U Standard Rack
-	93074RX	-	IBM 42U Standard Rack
-	93074XX	-	IBM 42U Standard Rack Extension
-	93084RX	-	NetBAY42 Enterprise Rack Cabinet
-	93084XX	-	NetBAY42 Enterprise Expansion Rack Cabinet (EX)
Monitors			
-	4943	-	IBM T117 17" TFT LCD
Keyboard and Mouse			
-	40K5372	-	IBM Keyboard with Integrated Pointing Device - 3m Cable - Black - USB - US English
-	40K9584	-	IBM Preferred Pro Keyboard- Full Width - 2m Cable - Black - USB - US English
40K9491	40K9200	8912	IBM 2 Button Optical Wheel Mouse - Black - USB
-	40K9201	-	IBM 3 Button Optical Mouse - Black - USB

System x3755 (7163)

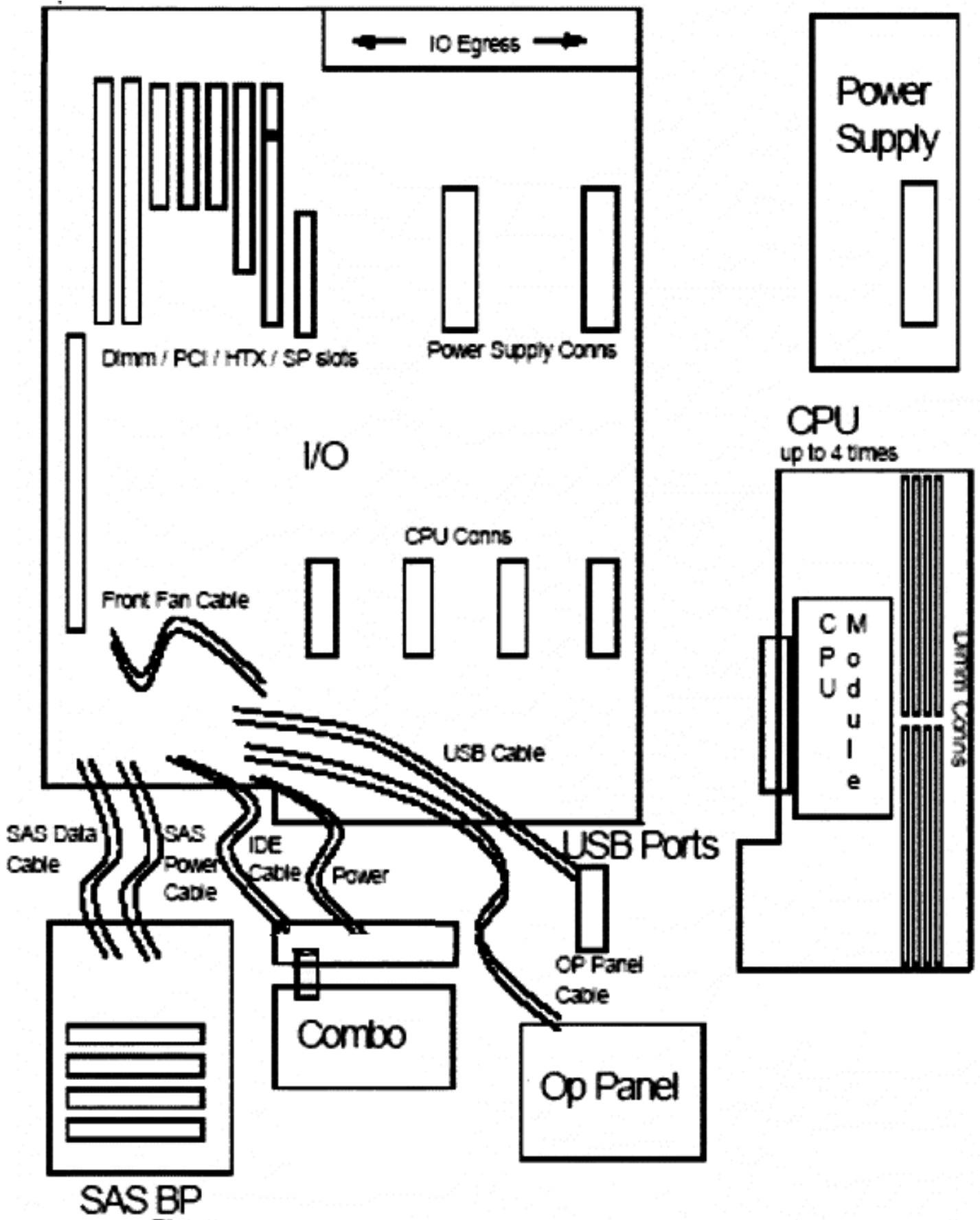
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At-A-Glance **Options**

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | **[Tape](#)** |

SBB number	Part number	Feature codes	Description	Bays supported	Storage interface	Form factor	Ext tape encl
Tape drives							
-	-	-	-	-	-	-	-
External tape enclosures							
-	87664UX	-	IBM 4U Rackmount Tape Enclosure	-	-	4U Rack Mount	-
-	8768FHX	-	IBM Full High Tabletop Tape Enclosure	-	-	FH Table Top	-
Tape autoloaders							
-	-	-	-	-	-	-	-
External tape libraries							
-	-	-	-	-	-	-	-
Associated tape options							
-	42C3910	-	SCSI Interface & Cabling Kit	-	-	-	-
-	87691VX	-	VXA3 Autoloader	-	Ultra160 SCSI LVD	2U Rack Mount	-



System x3755 (8877)

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At-A-Glance Options

Table 1. System x3755 (8877) at-a-glance

Part number ¹	Withdrawal date ²	CPU/FSB speed (GHz/MHz)-cache	Number of processors (std/max) ³	Memory (std/max)	Form factor	Power supply quantity (std/max)	Hot-swap (power, slots, HDD, fans, memory)	System Mgmt Processor
8877-1RY ³	Jun 29 2007	Dual Core AMD Opteron Processor Model 8212 (2.0GHz 2x1MB L2 95W)	1/4	1GB/ 128GB	4U	1/2	PHF	Y
8877-2RY ^{3,4}	-	Dual Core AMD Opteron Processor Model 8214 (2.2GHz 2x1MB L2 95W)	1/4	1GB/ 128GB	4U	1/2	PHF	Y
8877-3RY ⁴	-	Dual Core Opteron Processor Model 8216 (2.4GHz 1MB L2 1MB L3 Cache)	1/4	1GB/ 128GB	4U	1/2	PHF	Y
8877-4RY ⁴	-	Dual Core AMD Opteron Processor Model 8218 (2.6GHz 2x1MB L2 95W)	2/4	4GB/ 128GB	4U	1/2	PHF	Y
8877-5MY	-	Dual Core Opteron (2x2.8GHz/ 1000MHz)	4/4	8GB/ 128GB	4U	1/2	PHF	Y
8877-5RY	Jun 29 2007	Dual Core AMD Opteron Processor Model 8220 SE (2.8GHz 2x1MB L2 120W)	2/4	4GB/ 128GB	4U	1/2	PHF	Y
8877-5SY ⁴	-	Dual Core Opteron Processor Model 8220 (2.8GHz 1MB L2 1MB L3 Cache)	2/4	4GB/ 128GB	4U	1/2	PHF	Y

8877-6RY ⁴	-	Dual Core Opteron Processor Model 8222SE (3.0GHz 1MB L2 1MB L3 Cache)	2/4	4GB/ 128GB	4U	1/2	PHF	Y
8877-7RY ⁴	-	Dual Core Opteron Processor Model 8224 (3.2 GHz 2x1MB L2 120W)	2/4	4GB/ 128GB	4U	1/2	PHF	Y
8877-E4Y ^{5, 6}	-	Dual Core AMD Opteron Processor Model 8218 (2.6GHz 2x1MB L2 95W)	2/4	8GB/ 128GB	4U	2/2	PHF	Y

Table 1. System x3755 (8877) at-a-glance (continued)

Part number ¹	Withdrawal date ²	Integrated ethernet	Storage controller	Internal HDD interface	Internal HDD storage (std / max)	Optical drive	Bays (total / avail)	Slots (total / avail)
8877-1RY ³	Jun 29 2007	2 1GB	SAS	Hot-Swap	0GB/1200 GB	Slim DVD: IDE	5/4	6/6
8877-2RY ^{3,4}	-	2 1GB	SAS	Hot-Swap	0GB/1200 GB	Slim DVD: IDE	5/4	6/6
8877-3RY ⁴	-	2 1GB	SAS	Hot-Swap	0GB/1200 GB	CD-RW/ DVD	5/4	6/6
8877-4RY ⁴	-	2 1GB	SAS	Hot-Swap	0GB/1200 GB	Slim DVD: IDE	5/4	6/6
8877-5MY	-	2 1GB	SAS	Hot-Swap	0GB/1200 GB	CD-RW/ DVD	5/4	6/6
8877-5RY	Jun 29 2007	2 1GB	SAS	Hot-Swap	0GB/1200 GB	Slim DVD: IDE	5/4	6/6
8877-5SY ⁴	-	2 1GB	SAS	Hot-Swap	0GB/1200 GB	CD-RW/ DVD	5/4	6/6
8877-6RY ⁴	-	2 1GB	SAS	Hot-Swap	0GB/1200 GB	CD-RW/ DVD	5/4	6/6
8877-7RY ⁴	-	2 1GB	SAS	Hot-Swap	0GB/1200 GB	CD-RW/ DVD	5/4	6/6
8877-E4Y ^{5, 6}	-	2 1GB	SAS	Hot-Swap	72GB/1200 GB	CD-RW/ DVD	5/2	6/6

Notes:

1. Model numbers provided are worldwide generally available variant (GAV) model numbers which are not orderable as listed and need to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 7979-12Y is 7979-12U. See the product specific Official IBM announcement letter for other country-specific GAV model numbers. GAV to MTM mapping for A.P. Geographies follow the same pattern. Substitute the last character with the country-specific designator.
2. Withdrawal dates are provided for U.S. and Canada only. Business Partner Inventory may be available.
3. Pass Thru Card (40K7547) is required with a configuration of 1 or 3 processors. One Pass Thru Card comes standard on the 1RY and 2RY models.
4. This model comes standard with an IBM ServeRAID-8k-I SAS Controller (SBB 25R8077).
5. This model comes standard with an IBM ServeRAID-8k SAS Controller (SBB 25R8080).
6. This model comes standard with a Remote Supervisor Adapter II Slimline (SBB 39Y9567).

System x3755 (8877)

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At-A-Glance Options

Processor | **Memory** | **HDD** | **I/O** | **Pwr acc** | **Tape** |

SBB number	Option number	Feature codes	Standard processor	Model support
40K7271	40K1200	1291	Dual Core AMD Opteron Processor Model 8212 (2.0GHz 2x1MB L2 95W)	1RY
40K7272	40K1201	1292	Dual Core AMD Opteron Processor Model 8214 (2.2GHz 2x1MB L2 95W)	2RY
40K7273	40K1202	1293	Dual Core AMD Opteron Processor Model 8218 (2.6GHz 2x1MB L2 95W)	4RY, E4Y
40K7274	40K1203	1294	Dual Core AMD Opteron Processor Model 8220 SE (2.8GHz 2x1MB L2 120W)	5RY
43W7224	43W7244	2822	Dual Core Opteron Processor Model 8216 (2.4GHz 1MB L2 1MB L3 Cache)	3RY
43W7226	43W7246	2823	Dual Core Opteron Processor Model 8220 (2.8GHz 1MB L2 1MB L3 Cache)	5SY
43W7227	43W7247	2824	Dual Core Opteron Processor Model 8222SE(3.0GHz 1MB L2 1MB L3 Cache)	6RY
44R6032	-	3084	Dual Core Opteron Processor Model 8224 (3.2 GHz 2x1MB L2 120W)	5MY
Additional processors¹				
40K7275	-	1376	Addl Dual Core AMD Opteron Processor Model 8212 (2.0GHz 95W)	1RY
40K7276	-	1377	Addl Dual Core AMD Opteron Processor Model 8214 (2.2GHz 95W)	2RY, LRY
40K7278	-	1379	Addl Dual Core AMD Opteron Processor 8220 SE (2.8GHz 120W)	5RY
40K7277	40K1202	1378	Addl Dual Core AMD Opteron Processor Model 8218 (2.6GHz 95W)	4RY, E4Y
43W7229	43W7244	3459	Additional Dual Core Opteron Processor Model 8216 (2.4GHz 1MB L2 1MB L3 Cache)	3RY
43W7231	43W7246	3460	Additional Dual Core Opteron Processor Model 0GHz8220 (2.8GHz 1MB L2 1MB L3 Cache)	5SY
43W7232	43W7247	3461	Additional Dual Core Opteron Processor Model 8222 SE (3.0GHz 1MB L2 1MB L3 Cache)	6RY
44R6033	-	3498	Additional Dual Core Opteron Processor Model 8222 SE (3.0GHz 1MB L2 1MB L3 Cache)	5MY

When 2 processors are populated, it is recommended (but not required) that memory be evenly distributed, in pairs, between the two, always keeping pairs together. For example, in a two processor system with 6 DIMMs, an even distribution would be 4 DIMMs with processor 1 and 2 DIMM's with processor 2. Do not install 3 DIMMs for processor 1 and 3 DIMM's for processor 2. That would violate the pairing rule.

Notes:

1. Additional processors must match the speed of the initial processor.

Table 1. Associated Processor Options

SBB Number	Option Number	Feature Code	Description
40K7118	40K7547	2093	CPU Pass Thru Card ¹
40K7270	40K7545	2095	Redundant Cooling ²

Notes:

1. Pass Thru Card (40K7547) is required with a configuration of 1 or 3 processors. The Pass Thru Card comes standard on the 1RY and 2RY models
2. If more than 2 processors are configured, additional fans (40K7545) must be selected.

System x3755 (8877)

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At-A-Glance Options

Processor | **Memory** | HDD | I/O | Pwr acc | Tape |

SBB Number	Option Number	Feature code	Memory Description
Memory DIMMs¹			
40K7177	-	0597	512 MB DDR 2 667MHz DIMM memory
-	41Y2759	-	1.0 Gb (2x 512MB) DDR 2 667MHz DIMM memory Kit
40K7178	-	0598	1.0 GB DDR 2 667MHz DIMM memory
-	41Y2762	-	2GB (2x 1GB) DDR 2 667MHz DIMM memory Kit
40K7179	-	0599	2.0 GB DDR 2 667MHz DIMM memory
-	41Y2765	-	4GB (2x 2GB) DDR 2 667MHz DIMM memory Kit
40K7181	-	1901	4.0 GB DDR 2 667MHz DIMM memory
-	41Y2768	-	8GB (2x 4GB) DDR 2 667MHz DIMM memory Kit

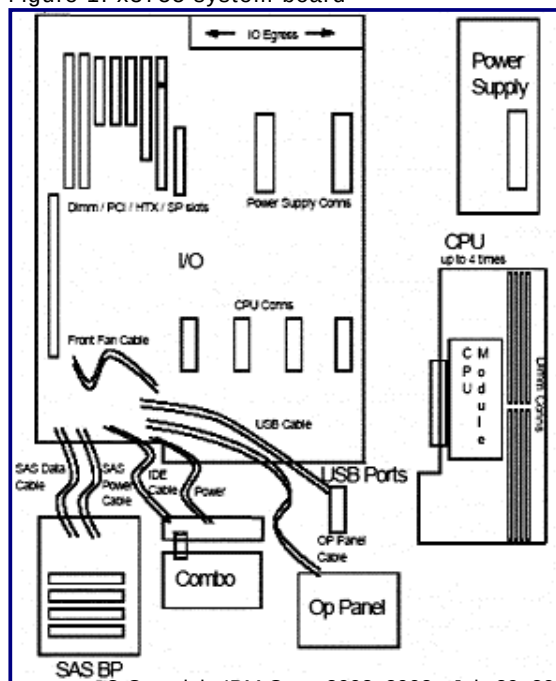
Notes:

1. Do not install DIMMs on a processor card without a CPU installed on it.
2. Install largest DIMM sizes first (in pairs of matching type and size) then next smaller DIMM size, etc.

Table 1. Standard Memory Configuration

Model	Std. DIMM Configuration
1RY, 2RY	2 x 512 MB DDR 2 667MHz DIMM memory
4RY, 5RY	4 x 1 GB DDR 2 667MHz DIMM memory
3RY	2 x 512 MB DDR 2 667Mhz DIMM memory
5SY, 6RY	4 x 1 GB DDR 2 667Mhz DIMM memory
E4Y	4 x 2.0 GB DDR 2 667MHz DIMM memory

Figure 1. x3755 system board



System x3755 (8877)

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At-A-Glance Options

[Processor](#) | [Memory](#) | **[HDD](#)** | [I/O](#) | [Pwr acc](#) | [Tape](#) |

SBB number	Option number	Feature codes	Description	Height	Bays supported	Maximum quantity
Diskette drive						
-	40K1692	-	IBM USB Portable Diskette Drive	-	-	-
Hot-swap SAS HDDs						
40K1075	40K1043	5161	73GB 15K 3.5" Hot-Swap SAS	-	1...4	4
40K1076	40K1044	5162	146GB 15K 3.5" Hot-Swap SAS	-	1...4	4
43X0808	43X0802	5532	300GB 15K 3.5" Hot-Swap SAS HDD	-	1...4	4
Optical Devices						
32R2899	-	4141	CDROM Ultrabay Enhanced Drive	-	SL	-
32R2784	39Y6824	4144	CD-RW/DVD Combo V Ultrabay Enhanced	-	SL	-
-	43W8304	-	Multi-Burner Ultrabay Enhanced Drive	-	-	-
External storage expansion units				Form factor		
-	172701X	-	IBM System Storage EXP3000	-		
-	17407xx	-	IBM TotalStorage DS4000 EXP710 Storage Expansion Unit (all models)	-		
-	18128Vx	-	IBM System Storage EXP420 Storage Expansion Unit (all models)	-		
-	18128xx	-	IBM System Storage EXP810 Storage Expansion Unit (all models)	-		
-	2107-92E/9AE	-	IBM TotalStorage DS8000 Expansion Unit 2107 model 92E/9AE	-		
-	1750-511	-	IBM TotalStorage DS6800 1750 model 511	3U		
-	18147Vx	-	IBM System Storage DS4200 Midrange Disk System (all models)	-		
-	18158xx	-	IBM System Storage DS4800 Midrange Disk System (all models)	-		
-	2107-xxx	-	IBM TotalStorage DS8100 2107 (all models)	3U		

System x3755 (8877)

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At-A-Glance Options

Processor | Memory | HDD | I/O | Pwr acc | Tape |

SBB number	Part number	Feature codes	Description	Adapter length	PCI support	Slots supported	Max supported
Storage Controllers¹							
25R8072	25R8060	1681	IBM SAS HBA Controller	Half	PCI-e x8	PCI-E (1,2,3)	3
25R8080	-	1671	IBM ServeRAID 8k-I SAS Controller ¹	-	-	ROC DIMM	1
25R8077	25R8064	1670	IBM ServeRAID 8k SAS Controller ¹	-	-	ROC DIMM	1
39M6013	39M5895	3551	DS4000 FC 4Gb PCI-X Dual Port HBA	Half	PCI-X	PCI-X (5 or 6)	2
39M6015	39M5894	3550	DS4000 FC 4Gb PCI-X Single Port HBA	Half	PCI-X	PCI-X (5 or 6)	2
39R8752	39R8743	1680	IBM Ultra320 SCSI Controller 2	Half	PCI-X	PCI-X (5 or 6)	2
43W4326	43W4324	3569	IBM Ultra 320 SCSI PCIe Controller	Half	PCIe x1	PCI-E (1,2,3,4)	4
39R8767	39R8765	1684	IBM ServeRAID-8s SAS PCIe Controller ^{2, 3}	3/4 ⁴	PCIe x8	PCI-E x8 (1,2,3)	3
39R8871	39R8812	1693	IBM ServeRAID-8s Battery ⁵	-	-	-	-
39R8851	39R8850	1690	MegaRAID 8480 ⁶	-	PCI-E	PCI-E (1,2,3)	3
42C2179	39R6525	3567	QLogic 4Gb FC Single-Port PCIe HBA	Half	PCI-E	PCI-E (1,2,3,4)	2
42C2182	39R6527	3568	QLogic 4Gb FC Dual-Port PCIe HBA	Half	PCI-E	PCI-E (1,2,3,4)	4
43W7489	42D0405	1696	Emulex 4GB FC Single-Port PCI-X HBA for IBM System x	Half	PCI-X	PCI-X (5 or 6)	1
43W7490	42D0407	1697	Emulex 4GB FC Dual-Port PCI-X HBA for IBM System x	Half	PCI-X	PCI-X (5 or 6)	1
43W7491	42C2069	1698	Emulex 4GB FC Single-Port PCI-E HBA for IBM System x	Half	PCI-E	PCI-E (1,2,3,4)	2
43W7492	42C2071	1699	Emulex 4GB FC Dual-Port PCI-E HBA for IBM System x	Half	-	PCI-E (1,2,3,4)	2
42D0486	42D0485	3580	Emulex 8Gb FC Single-port HBA for IBM System x	Half	PCI-E	PCI-E (1,2,3,4)	2
42D0495	42D0494	3581	Emulex 8Gb FC Dual-port HBA for IBM System x	Half	PCI-E	PCI-E (1,2,3,4)	2
42D0502	42D0501	3578	QLogic 8Gb FC Single-port HBA for IBM System x	Half	PCI-E	PCI-E (1,2,3,4)	2
42D0511	42D0510	3579	QLogic 8Gb FC Dual-port HBA for IBM System x	Half	PCI-E	PCI-E (1,2,3,4)	2
39Y6149	39Y6146	2976	QLogic iSCSI Single Port PCIe HBA for IBM System x	Half	x4 PCIe	1,2,3,4	2
42C1773	42C1770	2977	QLogic iSCSI Dual Port PCIe HBA for IBM System x	Half	x4 PCIe	1,2,3,4	2
43W4340	43W4339	3559	ServeRAID-MR10M SAS/SATA Controller	Half	PCIe x8	PCI-E x8 (1,2,3)	3
30R5505	-	1481	IBM iSCSI Server SX Adapter	Half	PCI X	5, 6	2
External Disk Systems and Options							
-	18158xx	-	IBM System Storage DS4800 Midrange Disk System (all models)	-	-	-	-
-	2005-B32	-	IBM TotalStorage SAN32B-2 Fabric Switch	-	-	-	-
-	2026-224	-	IBM TotalStorage SAN 24M-1 Fabric Switch (24-port)	-	-	-	-
-	2027-140	-	IBM TotalStorage SAN 140M-1 Enterprise Director (140-port)	-	-	-	-

-	2027-232	-	IBM TotalStorage SAN 32M-1 Fabric Switch (32-port)	-	-	-	-
-	2027-256	-	IBM TotalStorage SAN 256M Director Switch (256-port)	-	-	-	-
-	2026-E12	-	IBM TotalStorage SAN 12M-1 Fabric Switch (12 port)	-	-	-	-
-	2109-M12	-	IBM SAN Switch Model M12 (2x64 ports)	-	-	-	-
-	2109-M14	-	IBM TotalStorage SAN Switch M14 (128-port)	-	-	-	-
Networking							
25R8590	25R8589	2961	ClearSpeed Advance PCI-X Accelerator Board	Half	PCIx	5, 6	1
40K8840	-	1677	Myricom Myrinet 333MHz Dual Fiber PCI-X Adapter w/ 2MB Memory	Half	PCIx	5, 6	2
40K8841	-	2916	Myricom Myrinet 333MHz Single Fiber PCI-X Adapter w/ 2MB Memory	Half	PCIx	5, 6	2
40K8842	-	1476	Voltaire 10Gbps Host Channel PCI Express Adapter	Half	PCIe	1...4	2
40K9098	-	2918	Myricom Myri-10G 2MB PCI Express Adapter w/ 10GBASE-CX4 Port	Half	PCIe	1...4	1
40K9099	-	2919	Myricom Myri-10G 2MB PCI Express Adapter w/ XAUI-MTP Port	Half	PCIe	1...4	1
40K9100	-	2920	Myricom Myri-10G PCI Express Adapter w/ 10GBASE-SR Port	Half	PCIe	1...4	2
41Y4576	-	2960	Cisco 10Gbps Dual-Port 4x InfiniBand PCI-E HCA	Half	PCIe	1...4	2
42D3708	-	2963	Voltaire Dual-Port 4x InfiniBand PCI-E HCA	Half	PCIe	1...4	1
73P5105	73P5101	1579	PRO/1000 GT Dual Port Server Adapter by Intel- PCI-X	Half	64-bit/133MHz	5, 6	2
73P5205	73P5201	1580	PRO/1000 GT Quad Port Server Adapter by Intel- PCI-X	Half	64-bit/133MHz	5, 6	2
30R5005	30R5001	1566	IBM 10 GB Ethernet Adapter	Half	64-bit/133MHz	5, 6	2
30R5205	30R5201	1483	IBM iSCSI Server TX Adapter	Half	64-bit/133MHz	5, 6	2
39Y6071	39Y6066	1485	NetXtreme II 1000 Express G Ethernet Adapter- PCIe	Half	PCI E 1X	1,2,3,4	4
39Y6091	39Y6088	1487	NetXtreme 1000 S + Ethernet Adapter PCI-X	Half	64-bit/133MHz	5, 6	2
39Y6096	39Y6093	1489	NetXtreme 1000 T + Dual Port Ethernet Adapter PCI-X	Half	64-bit/133MHz	5, 6	2
39Y6082	-	1478	NetXtreme 1000 T + Ethernet Adapter- PCI-X	Half	64-bit/133MHz	5, 6	2
39Y6129	39Y6126	2944	PRO/1000 PT Dual Port Server Adapter by Intel	Half	x4 PCIe	1,2,3,4	4
39Y6139	39Y6136	2974	PRO/1000 PT Quad Port Server Adapter ⁷	Half	PCIe	1,2,3,4	4
42C1753	42C1750	2975	PRO/1000 PF Server Adapter ⁷	Half	PCIe	1,2,3,4	1
42C1763	42C1760	2978	IBM 10 GbE PCIe SR Server Adapter ⁸	Half	PCIe	1,2,3,4	2
42C1780	42C1780	2995	NetXtreme II 1000 Express Dual Port Ethernet Adapter	Half	PCI-E 4x	1,2,3,4	4
43V5761	-	1821	nVidia Quadro FX5600 Graphics Adapter	Full	PCI-E 16x	1	1
44E9031	-	1589	Cisco Single-port 4X SDR IB PCI-E HCA (memory free)	Half	PCI-E 8x	1,2,3	3
44E9035	-	1588	Cisco Single-port 4X DDR IB PCI-E HCA (memory free)	Half	PCI-E 8x	1,2,3	3
44R8727	-	5471	Mellanox ConnectX Dual-Port 4X DDR IB PCI-E 2.0 x8 5.0GT/s HCA	-	-	-	-
44R9975	-	5468	Mellanox Single-Port 4X DDR IB PCI-E x8 HCA	-	-	-	-
System Management							
39Y9567	39Y9566	1605	Remote Supervisor Adapter II Slimline	Half	Riser	RSA Socket	1

Notes:

1. All x3755 models ship standard with ServeRAID-8k-I which offers RAID 0, 1, 10. To upgrade to RAID 1E, 5 or 6, replace ServeRAID-8k-I with optional ServeRAID-8k, pn 25R8064.
2. x3755 support for ServeRAID-8s is for full function RAID attachment to a single EXP3000 storage expansion unit. EXP3000 support by ServeRAID-8s is currently limited to SAS HDDs only.
3. Before you install or ship this option in your server, first read the installation instructions provided in the option package.
4. Full length when installed with stiffener.
5. ServeRAID-8s Battery, pn 39R8812, enables Battery Backed Cache on ServeRAID-8s.
6. To avoid damage to the server, always remove the MegaRAID 8480 adapter before relocating or shipping the server. MegaRAID 8480 must be shipped separately as originally packaged from IBM.

7. Supports Intel I/O Acceleration Technology for System x IOAT capable servers.
8. Supports TCP/IP Offload Engine (TOE). Not supported on systems with greater than 32GB installed memory.

Slot	Type	Bus	Voltage (V)	Frequency MHz	Data path	Active PCI	Slot length
PCI Slot 1	PCI-E x16	-	3.3V	x16	64	-	HL / FH
PCI Slot 2	PCI-E x8	-	3.3V	x8	64	-	HL / FH
PCI Slot 3	PCI-E x8	-	3.3V	x8	64	-	HL / FH
PCI Slot 4	PCI-E x4	-	3.3V	x4	64	-	HL / FH
PCI Slot 5	PCI-X	-	5/ 3.3V	100/133MHz	64	-	HL / FH
PCI Slot 6	PCI-X	A	5/ 3.3V	100/133MHz	64	-	HL / FH
HTX Slot	HTX	A	-	-	64	-	HL

System x3755 (8877)

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At-A-Glance Options

Processor | Memory | HDD | I/O | **Pwr acc** | Tape |

SBB number	Option number	Feature codes	Description
Power			
40K7397	40K7543	1974	1500 Watt PWR Supply ¹
Power Distribution Units			
-	39M2816	-	IBM DPI C13 PDU+C13 without line cord
-	39M2818	-	IBM DPI C19 PDU+C19 without line cord
-	39M2819	-	IBM DPI C19 3 phase PDU+C19 with attached line cord
-	39Y8923	-	DPI 60A Three Phase C19 Enterprise PDU w/ IEC309 3P+G (208V) fixed line cord
-	39Y8935	-	63A/250V Front-end PDU IEC 309 P+N+G
-	39Y8940	-	60amp/250V Front-end PDU with IEC 309 60A 2P+N+Gnd connector
-	39Y8941	-	DPI 32A Single Phase C13 Enterprise PDU w/o line cord ²
-	39Y8948	-	DPI 60A Single Phase C19 Enterprise PDU w/o line cord ²
-	39Y8951	-	DPI Universal Rack PDU w/ Nema L5-20P & L6-20P (US cord)
-	71762MX	-	IBM Ultra Density Enterprise PDU C19 PDU+ (WW)
-	71762NX	-	IBM Ultra Density Enterprise PDU C19 PDU (WW)
-	71763MU	-	IBM Ultra Density Enterprise PDU C19 3 phase 60A PDU+ (NA)
-	71763NU	-	IBM Ultra Density Enterprise PDU C19 3 phase 60A PDU (NA)
Uninterruptible Power Supply (UPS)			
-	-	-	-
Associated Options			
40K7270	40K7545	2095	Redundant Cooling

Note:

1. If the additional Power Supply (SBB 40K7397 FC 1974) is selected, PDU Jumper Cable (SBB 39Y5533 FC 6311) must be ordered also.
2. Ships without a line cord. See the 'xSeries rack power configurator' chapter for supported line cords.

SBB number	Option number	Feature codes	Description
Rack and NetBAY			
-	-	-	-
Rack/Tower Conversion Kits			
-	39M2894	-	IBM Virtual Media Conversion Option (VCO)
-	39M2895	-	IBM USB Conversion Option (UCO)
-	39M2896	-	IBM Short KVM Conversion Option Pack
-	39M2897	-	IBM Long KVM Conversion Option Pack
Rack Console Connectivity			
-	17351GX	-	IBM 2x8 Local Console Manager
-	17351GX	-	IBM 1x8 Local Console Manager
-	17352GX	-	IBM Global 2x16 Console Manager
-	17352LX	-	IBM 2x16 Local Console Manager
-	17354GX	-	IBM Global 4x16 Console Manager
39Y7952	31R3130	3750	IBM 3M Console Switch Cable (PS/2)
39Y7953	31R3132	3751	IBM 3M Console Switch Cable (USB)
Racks			
-	17231RX	-	IBM 1U 17" Flat Panel Console Kit w/ Optical Drive Bay
-	17233RX	-	IBM 1U 15" Flat Panel Console Kit
-	17235RX	-	IBM Rack Keyboard Tray
-	93072RX	-	IBM 25U Standard Rack

-	93074RX	-	IBM 42U Standard Rack
-	93074XX	-	IBM 42U Standard Rack Extension
-	93084RX	-	NetBAY42 Enterprise Rack Cabinet
-	93084XX	-	NetBAY42 Enterprise Expansion Rack Cabinet (EX)
Monitors			
-	4938	-	IBM C117 17" (15.9inch VIS) FST CRT
-	4942	-	IBM T115 15" TFT LCD
-	4943	-	IBM T117 17" TFT LCD
-	4944	-	IBM T119 19" TFT LCD
Keyboard and Mouse			
-	40K5372	-	IBM Keyboard with Integrated Pointing Device - 3m Cable - Black - USB - US English
-	40K9584	-	IBM Preferred Pro Keyboard- Full Width - 2m Cable - Black - USB - US English
40K9491	40K9200	8912	IBM 2 Button Optical Wheel Mouse - Black - USB
-	40K9201	-	IBM 3 Button Optical Mouse - Black - USB

System x3755 (8877)

Attention:

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At-A-Glance Options

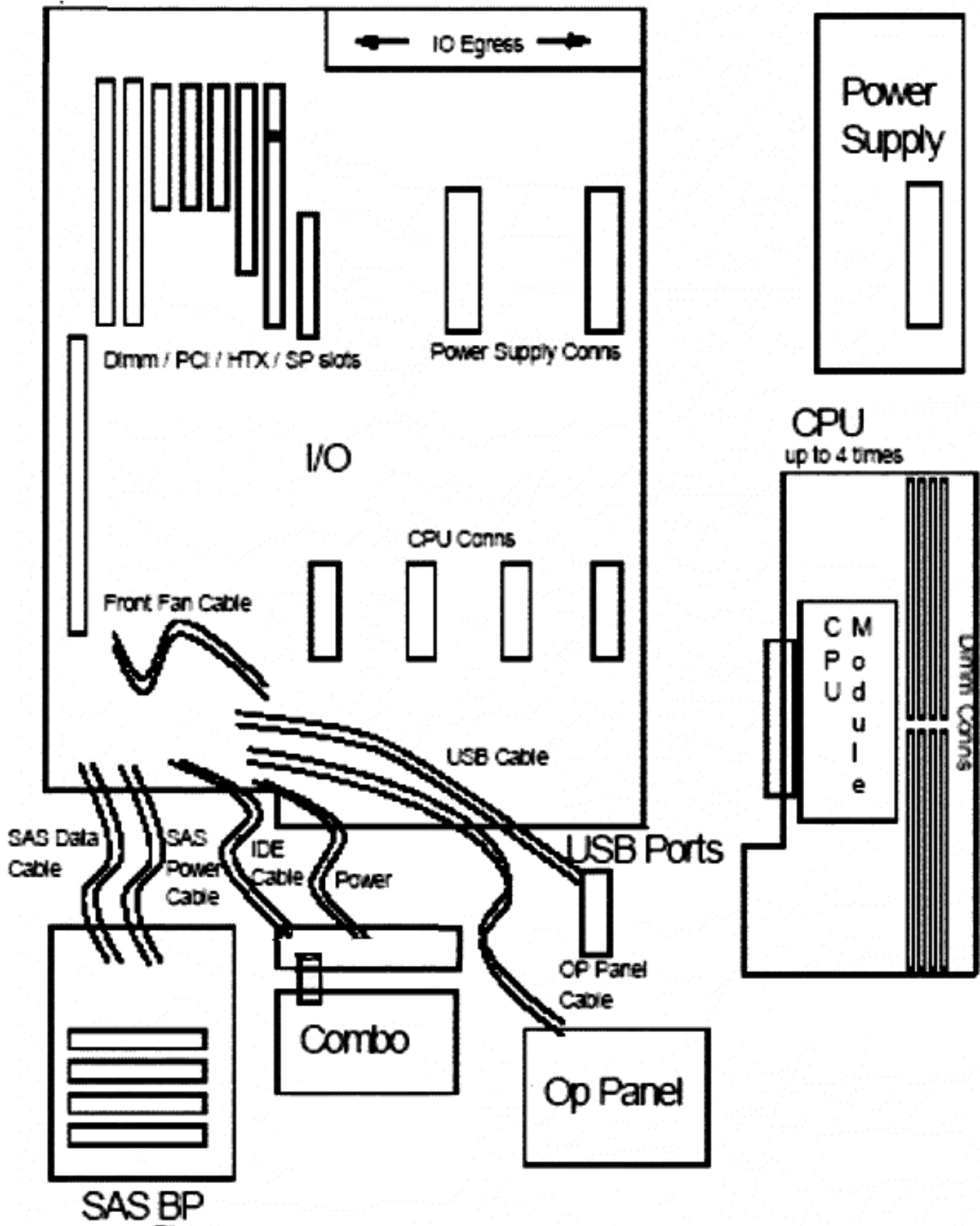
Processor | Memory | HDD | I/O | Pwr acc | **Tape** |

SBB number	Part number	Feature codes	Description	Bays supported ¹	Storage interface	Form factor	Ext tape encl
Tape drives							
-	39M5657	-	IBM 400/800GB LTO3 Tape Option ¹	1, 2	Ultra160 SCSI LVD	Internal FH 133mm (5.25in)	87664UX 8768FHX
-	43W8478	-	IBM 400/800GB HH LTO3 SAS Tape Drive	-	-	-	87651UX 87664UX 8767HHX
-	44E8895	-	IBM Half High LTO Gen 4 SAS Tape Drive	-	-	-	-
External tape enclosures^{2,3}							
-	87664UX	-	IBM 4U Rackmount Tape Enclosure	-	-	4U Rack Mount	-
-	8768FHX	-	IBM Full High Tabletop Tape Enclosure	-	-	FH Table Top	-
Tape autoloaders³							
-	87691VX	-	VXA3 Autoloader	-	Ultra160 SCSI LVD	2U Rack Mount	-
External tape libraries							
-	33614LX	-	IBM LTO3 4U Tape Library ^{3,4}	-	Ultra160 SCSI LVD	4U Rack Mount	-
-	3573-xxx	-	IBM System Storage TS3100/TS3200 Tape Library (all models)	-	-	-	-
Associated tape options							
-	42C3910	-	SCSI Interface & Cabling Kit	-	Ultra160 SCSI LVD	-	-
-	40K2537	-	3361 Library LTO Generation 3 SCSI Drive	-	Ultra160 SCSI LVD	-	-
-	40K2577	-	3361 Library LTO Magazine	-	-	-	-
-	40K2579	-	3361 Library iSCSI Adapter	-	-	-	-
-	40K2599	-	SAS Enclosure Adapter Kit Option	-	-	-	-

Note: Additional tape drive and tape library attributes, requirements and options can be found in the Tape Drive Attributes and Tape Library Attributes appendices, respectively.

Notes:

1. This internal tape drive is not supported internally on this system and requires an external tape enclosure for installation.
2. One SCSI interface and cabling kit (P/N 42C3910) is required per SCSI tape drive.
3. SCSI tape enclosures and automation products are connected via PCI-X U320 SCSI controller (P/N 39R8743).
4. Tape library (P/N 33614LX) requires one LTO magazine to be added and a minimum of one LTO sled Drive (two maximum).



System x3850/3950 M2 (7141)

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At-A-Glance Options

Table 1. System x3850/3950 M2 (7141) at-a-glance

Part number ¹	CPU/FSB speed (GHz/ MHz)- cache	Number of processors (std / max)	Memory (std / max)	Form factor	Power supply quantity (std / max)	Hot-swap (power, slots, HDD, fans memory)	System Mgmt Processor ²
7141-3AY ³	Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w)	2/4	8GB/256GB	Rack (4U)	2/2	PHFS	Y
7141-4AY ³	Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w)	2/4	8GB/256GB	Rack (4U)	2/2	PHFS	Y
7141-3BY ³	Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w)	2/4	8GB/256GB	Rack (4U)	2/2	PHFS	Y
7141-4BY ³	Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w)	2/4	8GB/256GB	Rack (4U)	2/2	PHFS	Y
7141-3DY ³	Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w)	2/4	8GB/256GB	Rack (4U)	2/2	PHFS	Y
7141-4DY ³	Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w)	2/4	8GB/256GB	Rack (4U)	2/2	PHFS	Y
7141-3EY ³	Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w)	2/4	8GB/256GB	Rack (4U)	2/2	PHFS	Y
7141-4EY ³	Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w)	2/4	8GB/256GB	Rack (4U)	2/2	PHFS	Y
7141-1RY	Dual Core Intel Xeon Processor E7210 (2.40GHz 8MB L2 80w)	2/4	4GB/256GB	Rack (4U)	2/2	PHFS	Y
7141-2RY	Quad Core Intel Xeon Processor E7320 (2.13GHz 4MB L2 80w)	2/4	4GB/256GB	Rack (4U)	2/2	PHFS	Y
7141-3RY	Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w)	2/4	8GB/256GB	Rack (4U)	2/2	PHFS	Y
7141-4RY	Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w)	2/4	8GB/256GB	Rack (4U)	2/2	PHFS	Y
7141-1SY	Quad Core Intel Xeon Processor E7310 (1.60GHz 4MB L2 80w)	2/4	4GB/256GB	Rack (4U)	2/2	PHFS	Y

7141-3SY	Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w)	2/4	8GB/256GB	Rack (4U)	2/2	PHFS	Y
7141-4SY	Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w)	2/4	8GB/256GB	Rack (4U)	2/2	PHFS	Y
7141-E1Y ⁴	Dual Core Intel Xeon Processor E7210 (2.40GHz 8MB L2 80w)	2/4	8GB/256GB	Rack (4U)	2/2	PHFS	Y
7141-E3Y ⁴	Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w)	2/4	16GB/256GB	Rack (4U)	2/2	PHFS	Y
7141-3HY ⁵	Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w)	2/4	8GB/256GB	Rack (4U)	2/2	PHFS	Y

Table 1. System x3850/3950 M2 (7141) at-a-glance (continued)

Part number ^{1, 2}	Integrated ethernet	Storage controller	Internal HDD interface	Internal HDD storage (std / max)	Optical drive	Bays (total / avail)	Slots (total / avail)
7141-3AY ³	2Gb	SAS	Hotswap	0GB/584GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	7/7
7141-4AY ³	2Gb	SAS	Hotswap	0GB/584GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	7/7
7141-3BY ³	2Gb	SAS	Hotswap	0GB/584GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	7/7
7141-4BY ³	2Gb	SAS	Hotswap	0GB/584GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	7/7
7141-3DY ³	2Gb	SAS	Hotswap	0GB/584GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	7/7
7141-4DY ³	2Gb	SAS	Hotswap	0GB/584GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	7/7
7141-3EY ³	2Gb	SAS	Hotswap	0GB/584GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	7/7
7141-4EY ³	2Gb	SAS	Hotswap	0GB/584GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	7/7
7141-1RY	2Gb	SAS	Hotswap	0GB/584GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	7/7
7141-2RY	2Gb	SAS	Hotswap	0GB/584GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	7/7
7141-3RY	2Gb	SAS	Hotswap	0GB/584GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	7/7
7141-4RY	2Gb	SAS	Hotswap	0GB/584GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	7/7
7141-1SY	2Gb	SAS	Hotswap	0GB/584GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	7/7

7141-3SY	2Gb	SAS	Hotswap	0GB/584GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	7/7
7141-4SY	2Gb	SAS	Hotswap	0GB/584GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	7/7
7141-E1Y ⁴	2Gb	SAS	Hotswap	0GB/584GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	7/7
7141-E3Y ⁴	2Gb	SAS	Hotswap	0GB/584GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	7/7
7141-3HY ⁵	2Gb	SAS	Hotswap	0GB/584GB	CD-RW/DVD Combo V Ultrabay Enhanced	5/4	7/7

Notes:

1. Model numbers provided are worldwide generally available variant (GAV) model numbers which are not orderable as listed and need to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 8878-1RY is 8878-1RU. See the product specific Official IBM announcement letter for other country-specific GAV model numbers. GAV to MTM mapping for L.A. and A.P. Geographies follow the same pattern. Substitute the last character with a country-specific designator.
2. System x3850/x3950 M2 comes standard with a remote supervisor adapter II.
3. Datacenter model. For a more detailed description of model configuration see the DataCenter section.
4. E1Y and E3Y are express models.
5. 3HY is a single-node, embedded Hypervisor model.

System x3850/3950 M2 (7141)

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At-A-Glance Options

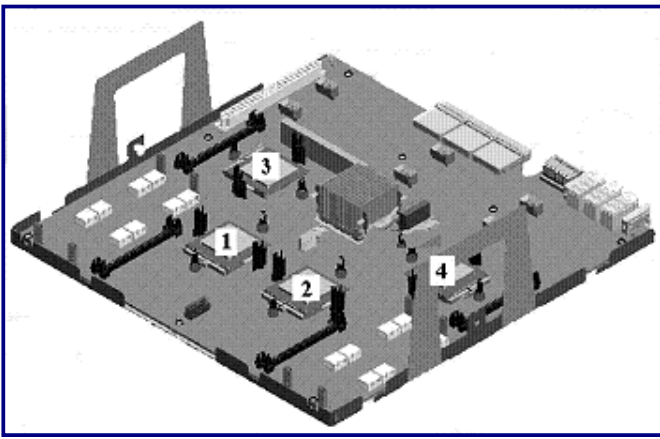
Processor | **Memory** | **HDD** | **I/O** | **Pwr acc** | **Tape** |

SBB number	Option number	Feature codes	Standard processor ¹	Model support
43W8600	-	3050	Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w)	4SY, 4RY, 4AY, 4BY, 4DY, 4EY
43W8601	-	3051	Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w)	3SY, 3RY, E3Y, 3AY, 3BY, 3DY, 3EY, 3HY
43W8602	-	3052	Quad Core Intel Xeon Processor E7320 (2.13GHz 4MB L2 80w)	2RY
43W8761	-	3053	Dual Core Intel Xeon Processor E7210 (2.40GHz 8MB L2 80w)	1RY, E1Y
43W8603	-	3613	Quad Core Intel Xeon Processor E7310 (1.60GHz 4MB L2 80w)	1SY
44E4504	-	6969	Quad Core Intel Xeon Processor L7345 (1.86 GHz 8MB L2 50W)	-
Additional processors ²				
43W8765	44E4243	3475	Addl. Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w)	4SY, 4RY, 4AY, 4BY, 4DY, 4EY
43W8764	44E4242	3474	Addl. Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w)	3SY, 3RY, E3Y, 3AY, 3BY, 3DY, 3EY, 3HY
43W8763	44E4241	3473	Addl. Quad Core Intel Xeon Processor E7320 (2.13GHz 4MB L2 80w)	2RY
43W8766	44E4244	3476	Addl. Dual Core Intel Xeon Processor E7210 (2.40GHz 8MB L2 80w)	1RY, E1Y
44W2781	44W2784	3397	Addl. Quad Core Intel Xeon Processor E7310 (1.60GHz 4MB L2 80w)	1SY
44E4505		4432	Addl. Quad Core Intel Xeon Processor L7345 (1.86 GHz 8MB L2 50W)	-

Notes:

- Two processors are standard in preconfigured systems, with a maximum of four processors. Installation of three processors is not supported for a preconfigured system.
- Installing two CPUs in the left (CPUs 1 and 3) or the right (CPUs 2 and 4) will result in lower performance. Follow the recommended order: For a 2+2 application, plug CPUs in order, starting with positions 1 and 2 in each node. All processors must be identical in type, speed, and cache size

Figure 1. System x3850/3950 M2 (7141) Processors



Click image to enlarge

System x3850/3950 M2 (7141)

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At-A-Glance Options

Processor | **Memory** | HDD | I/O | Pwr acc | Tape |

SBB number	Option number	Feature codes	Memory description ¹
Memory cards²			
43W8606	44E4252	4894	Memory Expansion Card
Memory DIMMs³			
41Y2760	-	3935	1GB PC2-5300 CL5 ECC DDR2 SDRAM RDIMM
41Y2766	-	3937	4GB PC2-5300 CL5 ECC DDR2 SDRAM RDIMM
43V7354	-	3938	8GB PC2-5300 CL5 ECC DDR2 SDRAM RDIMM
41Y2769	-	3939	2GB PC2-5300 CL5 ECC DDR2 SDRAM RDIMM
-	41Y2762	-	2GB Kit (2x 1GB DIMM) PC2-5300 CL5 ECC DDR2 SDRAM LP RDIMM
-	41Y2768	-	8GB Kit (2x 4GB DIMM) PC2-5300 CL5 ECC DDR2 SDRAM LP RDIMM
-	41Y2771	-	4GB Kit (2x 2GB DIMM) PC2-5300 CL5 ECC DDR2 SDRAM LP RDIMM
-	43V7356	-	16GB Kit (2x 8GB DIMM) PC2-5300 CL5 ECC DDR2 SDRAM LP RDIMM ⁴

Note: A maximum of four memory cards may be installed, each card containing four pairs of single-ranked PC2-5300 DDRII DIMMS. For memory mirroring, Card1 mirrors Card2, and Card3 mirrors Card4.

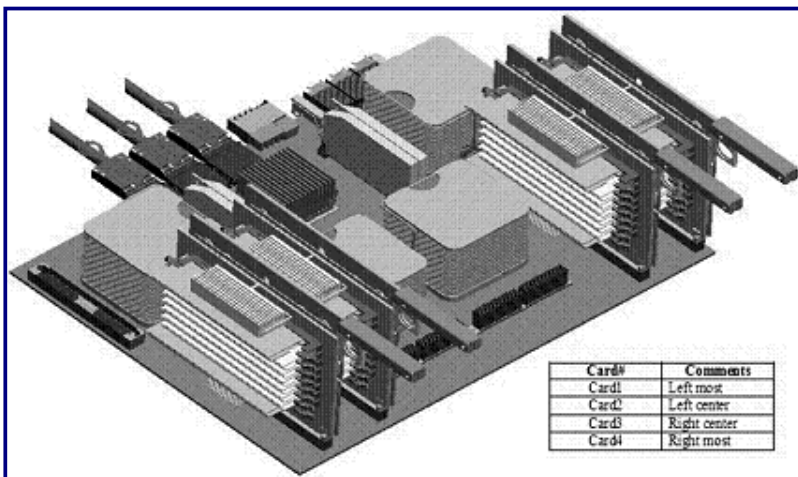
Notes:

1. The system can be configured with up to 4 memory cards. Each memory card can be configured with up to 8 memory DIMMs.
2. Memory Cards support 8 DDR-II DIMMs, each card requires 2 DIMMs minimum. At least two Memory cards are required on preconfigured systems (four memory cards maximum, per node and 32 DIMMS maximum per chassis).
3. The minimum configuration of two memory cards provide a total of 16 expansion slots. Three memory cards provide a total of 24 expansion slots. The maximum of four memory cards provide a total 32 expansion slots.
4. Support for 43V7354 (8GB DIMMs) is limited to 1 or 2 node systems. 43V7354 is not supported on 3 or 4 node systems.

Table 1. Standard Memory Configuration

Model	Std. DIMM configuration
1RY , 2RY , 1SY	4 x 1GB PC2-5300 CL5 ECC DDR2 SDRAM RDIMM
3RY , 4RY , E1Y , 3SY , 4SY , 3AY , 4AY, 3BY , 4BY , 3DY , 4DY , 3EY , 4EY	8 x 1GB PC2-5300 CL5 ECC DDR2 SDRAM RDIMM
E3Y	8 x 2GB PC2-5300 CL5 ECC DDR2 SDRAM RDIMM
3HY	4 x 2GB PC2-5300 CL5 ECC DDR2 SDRAM RDIMM

Figure 1. System x3850/3950 M2 (7141)



[Click image to enlarge](#)

System x3850/3950 M2 (7141)

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At-A-Glance Options

Processor | Memory | **HDD** | I/O | Pwr acc | Tape |

SBB number	Option number	Feature codes	Description ¹	Height	Bays supported	Maximum quantity
Diskette drives						
-	40K1692	-	IBM USB Portable Diskette Drive	-	-	-
SAS Hot-Swap HDDs						
40K1084	40K1052	5159	73GB 10K 2.5" Hot-Swap SAS HDD	SFF	0-3	4
43X0826	43X0824	5534	146GB 10K 2.5" Hot-Swap SAS HDD	SFF	0-3	4
43X0841	43X0837	5543	73GB SAS 15K 2.5" SFF HS	SFF	0-3	4
Optical devices						
43W8262	-	4156	UltraSlim Enhanced CD-RW / DVD-ROM Combo ²	US	-	1
43W8263	-	4157	UltraSlim Enhanced Multi-Burner	US	-	1
External storage expansion units				Form factor		
-	172701X	-	IBM System Storage EXP3000	-		

Notes:

1. Installation may require removing standard devices.
2. All models ship standard with a UltraSlim Enhanced CD-RW/DVD-ROM Combo.

Bay	Form factor	Height	Front access	Usage
zero	2.5"	SFF	Yes	HDD
1	2.5"	SFF	Yes	HDD
2	2.5"	SFF	Yes	HDD
3	2.5"	SFF	Yes	HDD
4	12.7mm	US	Yes	Optical

System x3850/3950 M2 (7141)

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At-A-Glance Options

Processor | Memory | HDD | **I/O** | Pwr acc | Tape |

SBB number	Part number	Feature codes	Description	Adapter length	PCI support	Slots supported	Hot-Plug capable
Storage controllers							
25R8072	25R8060	1681	IBM SAS HBA Controller	Half	x8 PCIe	1...7	N
42C2179	39R6525	3567	QLogic 4Gb FC Single-Port PCIe HBA for IBM System x	Half	x8 PCIe	1...7	Y
42C2182	39R6527	3568	QLogic 4Gb FC Dual-Port PCIe HBA for IBM System x	Half	x8 PCIe	1,5,2,6	Y
43W4281	43W4280	3557	ServeRAID-MR10k SAS/SATA Controller	-	-	Dedicated connector	N
43W4326	43W4324	3569	IBM Ultra 320 SCSI PCIe Controller	Half	x8 PCIe	1...7	N
43W4340	43W4339	3559	ServeRAID-MR10M SAS/SATA Controller	Half	x8 PCIe	1...7	N
43W7491	42C2069	1698	Emulex 4GB FC Single-Port PCI-E HBA for IBM System x	Half	x4 PCIe	1...7	Y
43W7492	42C2071	1699	Emulex 4GB FC Dual-Port PCI-E HBA for IBM System x ¹	Half	x4 PCIe	1,5,2,6	Y
External disk systems and options							
-	24P82xx	-	IBM TotalStorage DS4300 Model 60U with Turbo	-	-	-	-
-	17421xx	-	IBM TotalStorage DS4400 Midrange Disk System (all models)	-	-	-	-
-	18147Vx	-	IBM System Storage DS4200 Midrange Disk System (all models)	-	-	-	-
-	18147xx	-	IBM System Storage DS4700 Midrange Disk System (all models)	-	-	-	-
-	18158xx	-	IBM System Storage DS4800 Midrange Disk System (all models)	-	-	-	-
Networking							
39Y6071	39Y6066	1485	NetXtreme II 1000 Express G Ethernet Adapter- PCIe	Half	x1 PCIe	1-7	Y
39Y6129	39Y6126	2944	PRO/1000 PT Dual Port Server Adapter by Intel	Half	x4 PCIe	1-7	N
39Y6139	39Y6136	2974	PRO/1000 PT Quad Port Server Adapter	Half	x4 PCIe	1-7	N
39Y6149	39Y6146	2976	QLogic iSCSI Single Port PCIe HBA for IBM System x	Half	x4 PCIe	1-7	N
42C1753	42C1750	2975	PRO/1000 PF Server Adapter	Half	x4 PCIe	1-7	N
42C1773	42C1770	2977	QLogic iSCSI Dual Port PCIe HBA for IBM System x	Half	x4 PCIe	1-7	N
42C1783	42C1780	2995	NetXtreme II 1000 Express Dual Port Ethernet Adapter	Half	x4 PCIe	1-7	N
Systems Management							
-	-	-	-	-	-	-	-

Notes:

- If this PCI-E adapter is selected, it may be populated in any or all of the following available slots ; 1-4,5-7,1-4,5-7.
The preferred slot priority, if available is ; 1,5,2,6.
A maximum of four may be added.

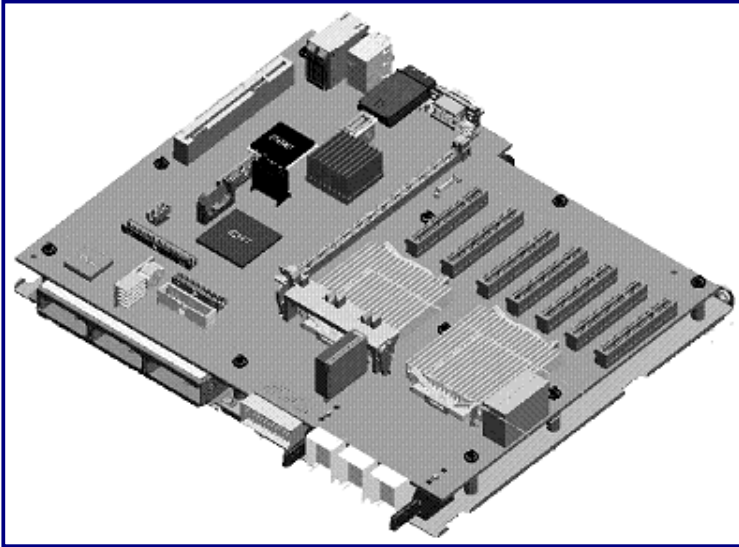
Slot	Type	Bus	Voltage (V)	Frequency MHz	Data path	Active PCI	Slot length
PCI Slot 1 ¹	x8 PCIe 1.1	0x15	3.3V	2.5Gb/s	x8	N	Half
PCI Slot 2 ¹	x8 PCIe 1.1	0x1A	3.3V	2.5Gb/s	x8	N	Half
PCI Slot 3 ¹	x8 PCIe 1.1	0x1F	3.3V	2.5Gb/s	x8	N	Half

PCI Slot 4 ¹	x8 PCIe 1.1	0x24	3.3V	2.5Gb/s	x8	N	Half
PCI Slot 5 ²	x8 PCIe 1.1	0x04	3.3V	2.5Gb/s	x8	N	Half
PCI Slot 6 ^{2,3}	x8 PCIe 1.1	0x09	3.3V	2.5Gb/s	x8	Y	Half
PCI Slot 7 ^{2,3}	x8 PCIe 1.1	0x0E	3.3V	2.5Gb/s	x8	Y	Half
LSI 1078 Serial SAS Razor 8-port Controller ²	-	0x13	Universal	2.5Gb/s	x8	N	-
Broadcom 5704 Dual Gb Ethernet Controller	-	0x02	Universal	2.5Gb/s	x4	N	-
Broadcom 5709 Dual Gb Ethernet Controller	-	0x02	Universal	2.5Gb/s	x4	N	-
ATI RN50 Video Ctrl w/16MB memory	-	0x01	Universal	33	32	N	-

Notes:

1. Slots 1-4 are on the first PCIe bridge.
2. Slots 5-7 and SAS controller are on the second PCIe bridge.
3. Slots 6-7 are hot swap capable.

Figure 1. System x3850/3950 M2 (7141) system board



[Click image to enlarge](#)

System x3850/3950 M2 (7141)

Attention:

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At-A-Glance Options

Processor | Memory | HDD | I/O | **Pwr acc** | Tape |

SBB number	Option number	Description
Power		
43W8614	-	1440W Power Supply
Uninterruptible Power Supply (UPS)		
-	21303RX	IBM UPS 7500XHV
-	21304RX	IBM UPS 10000XHV
-	39Y8857	IBM UPS 3U Online Battery Pack
Power Distribution Units		
-	39Y8923	IBM Enterprise C19 3 phase PDU (60a)
-	39Y8941	IBM Enterprise C13 PDU
-	39Y8948	IBM Enterprise C19 PDU
-	71762MX	IBM Ultra Density Enterprise PDU C19 PDU+ (WW)
-	71762NX	IBM Ultra Density Enterprise PDU C19 PDU (WW)
-	71763MU	IBM Ultra Density Enterprise PDU C19 3 phase 60A PDU+ (NA)
-	71763NU	IBM Ultra Density Enterprise PDU C19 3 phase 60A PDU (NA)

SBB number	Option number	Description
Rack / Tower Conversion Kit		
-	39M2895	IBM USB Conversion Option Pack
39Y7957	39M2894	IBM Virtual Media Conversion Option
Racks		
-	17235RX	IBM Rack Keyboard Tray
-	93061RX	NetBAY11 Standard Rack
-	93072RX	IBM 25U S2 standard rack
-	93074RX	NetBAY S2 42U Standard Rack Cabinet
-	93074XX	IBM 42U S2 expansion rack
-	93084RX	NetBAY42 Enterprise Rack Cabinet
-	93084XX	NetBAY42 Enterprise Expansion Rack
Console Connectivity		
-	17351GX	IBM Local 2x8 Console Manager (LCM2)
-	17352GX	IBM Global 2x16 Console Mngr(GCM2)
-	17353LX	IBM 1 x 8 Console Switch
-	17354GX	Global 4x16 Console Mngr (GCM4)
-	17354LX	IBM 2 x 16 Console Switch
Associated Rack Options		
-	44E4249	IBM XpandOnDemand Scalability Kit (2-3 Node) ¹
-	44E4250	4-Chassis Cable Kit ¹
Keyboard and Mouse		
-	40K5372	IBM Keyboard w/ Integrated Pointing Device USB - US English 103P
-	40K9584	IBM Preferred Pro Keyboard USB - US English 103P
-	40K9200	IBM 2 Button Optical Wheel Mouse - Black - USB
-	40K9201	IBM 3 Button Optical Mouse - Black - USB

Notes:

1. Not supported on the single-node Hypervisor model, 7141-3HY.

System x3850/3950 M2 (7141)

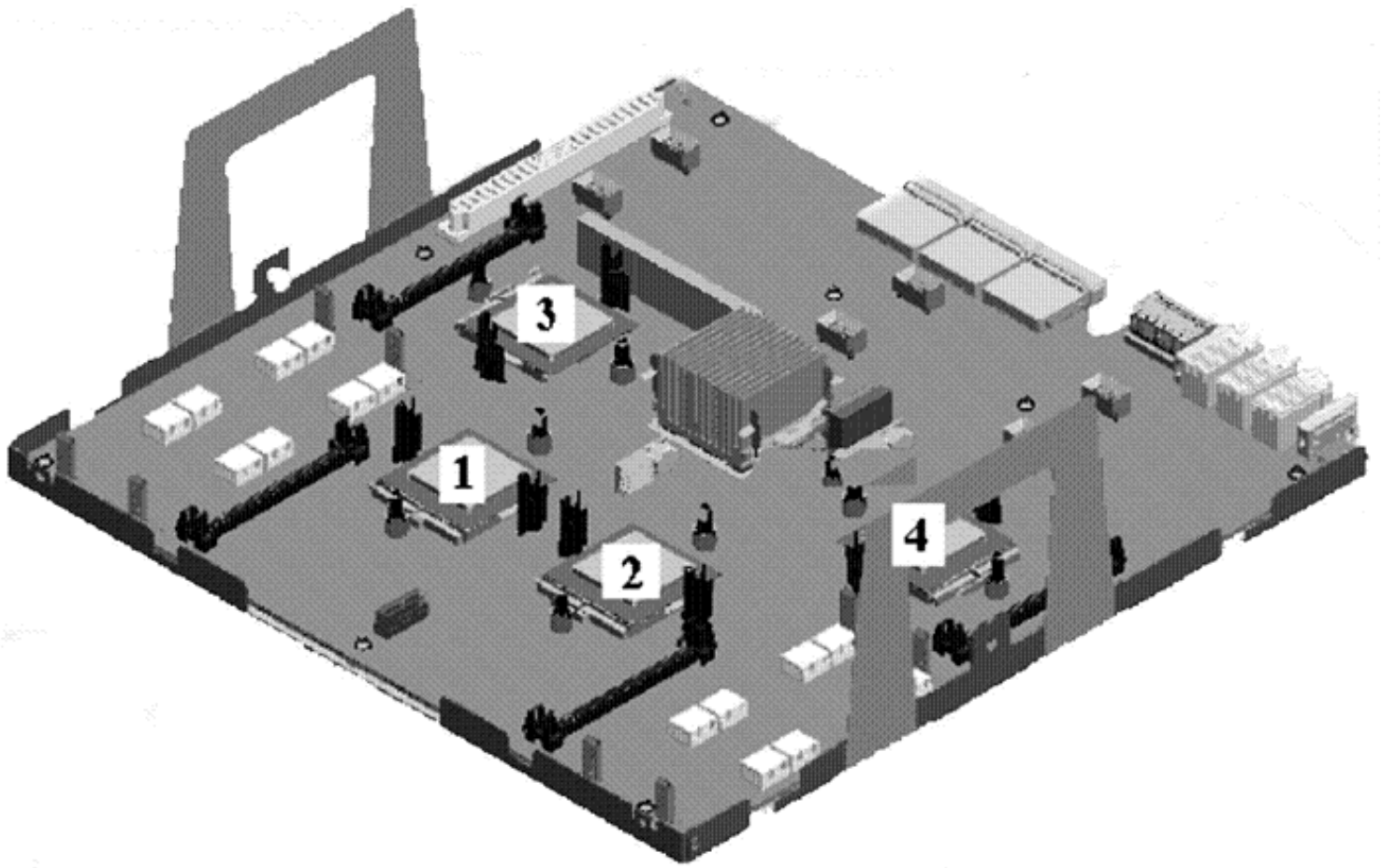
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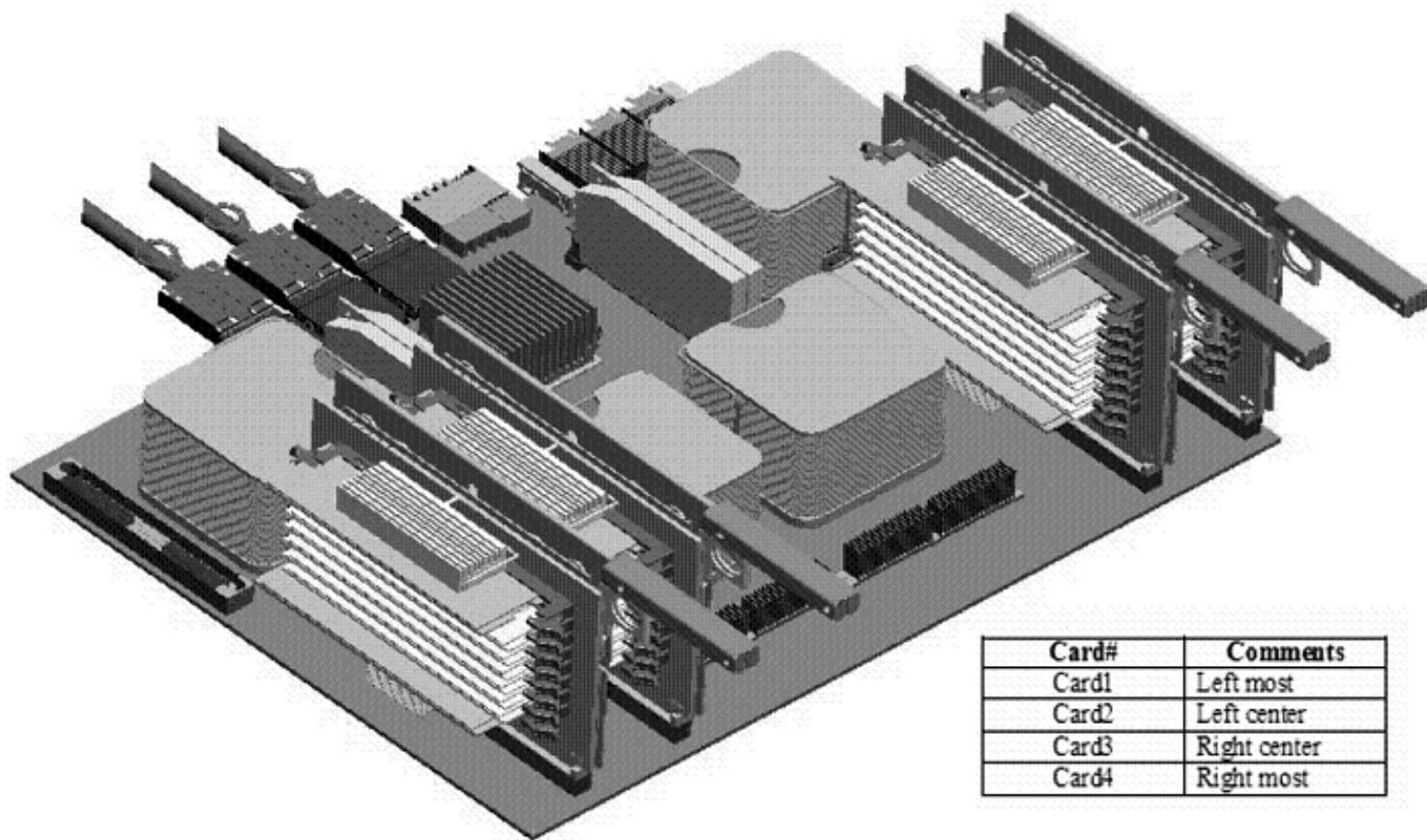
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At-A-Glance **Options**

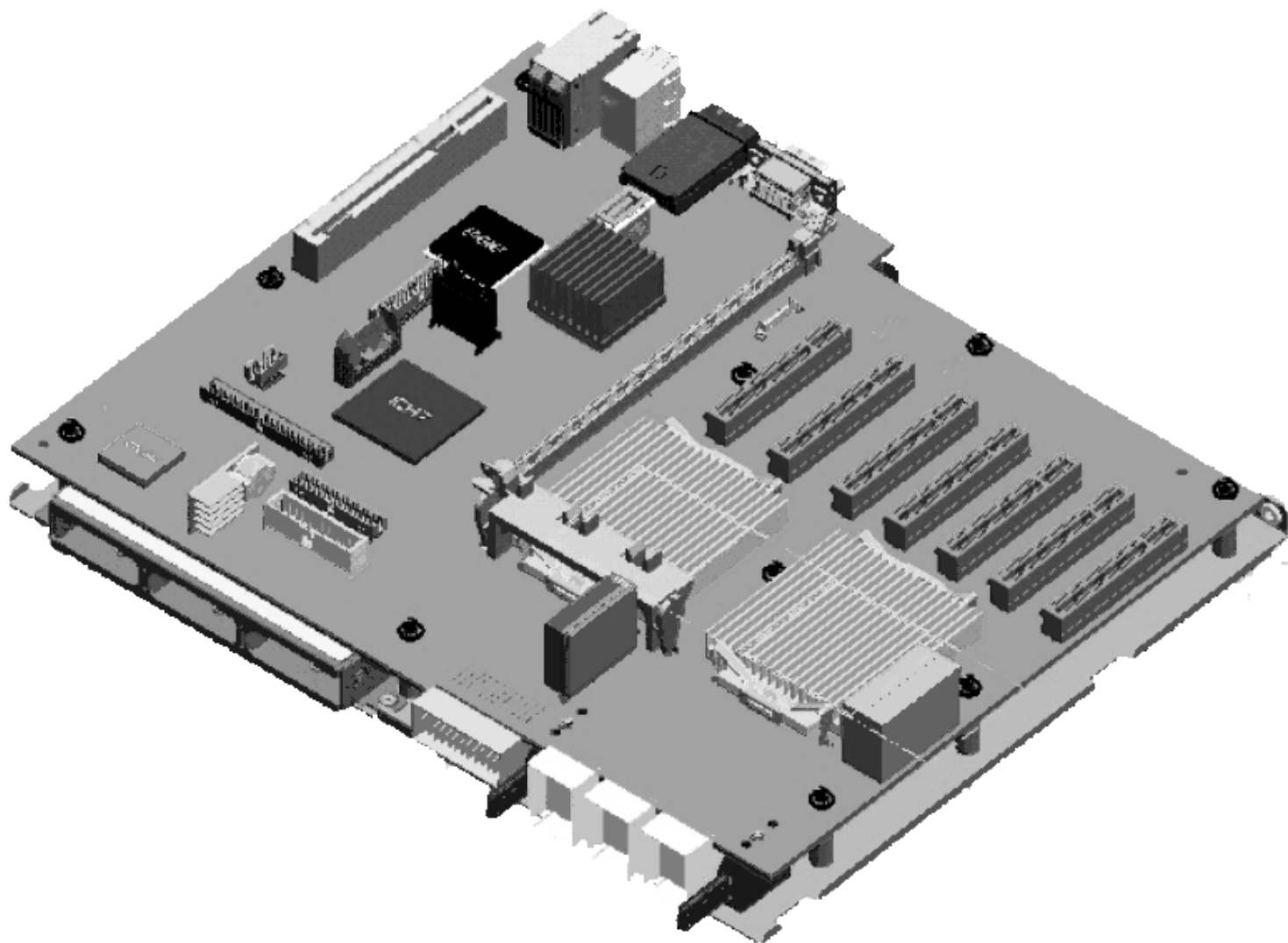
[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Pwr acc](#) | **[Tape](#)** |

SBB number	Option number	Feature codes	Description	Bays supported	Storage interface	Form factor	Ext tape enclosures
Tape libraries							
-	3573-xxx	-	IBM System Storage TS3100/TS3200 Tape Library (all models)	-	-	-	-
-	3576-xxx	-	IBM System Storage TS3310 Modular Tape Library (all models)	-	-	-	-
-	3584-xxx	-	IBM Ultrium3 Ultra Scalable Tape Library (all models)	-	-	-	-
-	44E8895	-	IBM Half High LTO Gen 4 SAS Tape Drive	-	-	-	-
Associated tape options							
-	44E8869	-	USB Enclosure Adapter Kit	-	-	-	-





Card#	Comments
Card1	Left most
Card2	Left center
Card3	Right center
Card4	Right most



BladeCenter S (8886)

Attention:

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At-A-Glance Options

Table 1. BladeCenter S (8886) at-a-glance

Part number	Form Factor (Width / Depth)	Power Modules	Power Module Quantity (Std / Max)	Hot-Swap (Power, Bays, Blowers)	Redundancy (Optional, Standard)
8886-1MY	Rack (7U) 19in x 28in	950 - 1450 (110 - 220VAC)	2/4	P,B,B	S - Blower O - Power
8886-E1Y ⁴	Rack (7U) 19in x 28in	950 - 1450 (110 - 220VAC)	4/4	P,B,B	S - Blower O - Power

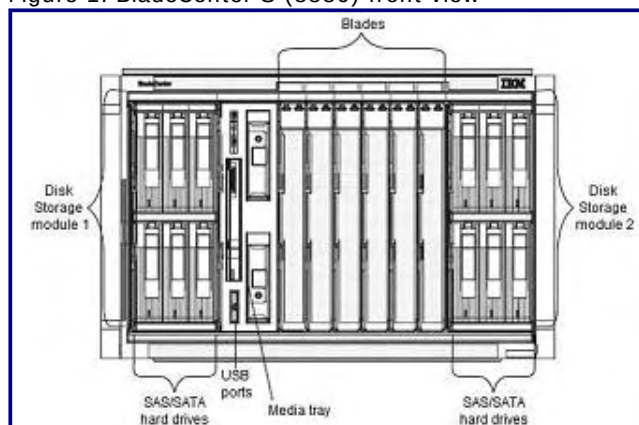
Table 1. BladeCenter S (8886) at-a-glance (continued)

Part number	Management Module (Std / Max) ¹	I / O Module Bays (Total / Avail) ²	Optical Drive	Diskette Drive	Blade Bays (Total / Avail) ³
8886-1MY	1/1	4/3	UltraSlim Enhanced CD-RW/DVD-ROM Combo ⁵	-	6/6
8886-E1Y ⁴	1/1	4/3	UltraSlim Enhanced CD-RW/DVD-ROM Combo ⁵	-	6/6

Note:

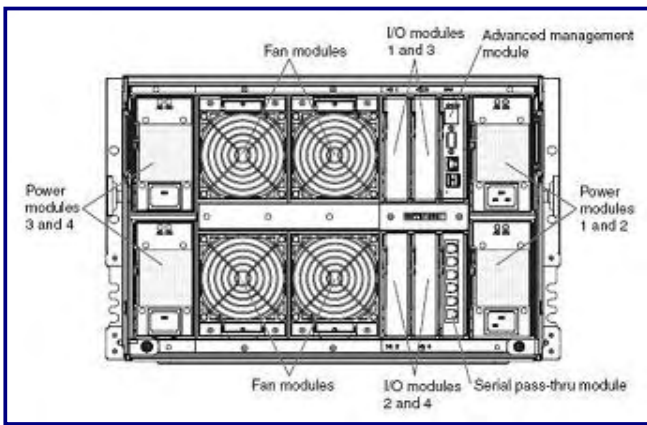
1. The Management Module incorporates a chassis-level management processor and a Keyboard/Video/Mouse (KVM) switch. No external KVM switching is required.
2. IBM BladeCenter S supports a maximum of three I/O switches can be installed in the rear of the system. A combination of up to three Gb Ethernet switches, or one Gb Ethernet switch and up to two Fiber Channel switches, or one Gb Ethernet switch and up to two SAS switch modules can be installed.
3. Supports up to 6 singlewide blade servers. Additional power supplies are required to maintain full redundancy beyond 2 blade servers.
4. IBM BladeCenter S Express offering includes (1) 6-Disk Storage Module, (1) SAS Connectivity Module, and redundant power supplies 3 & 4 as standard offerings.
5. The write function does not work on BladeCenter S.

Figure 1. BladeCenter S (8886) front view



Click image to enlarge

Figure 1. BladeCenter S (8886) rear view



Click image to enlarge

Table 2. BladeCenter S Chassis, blade server support

Blade Server	8886
HS12	All
HS20	All
HS21	All
HS21 XM	All
HC10	All
LS20	All
LS21	All
LS41	All

BladeCenter S (8886)

Attention:

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At-A-Glance Options

Cabling | **HDD** | **I/O** | **Pwr Acc** |

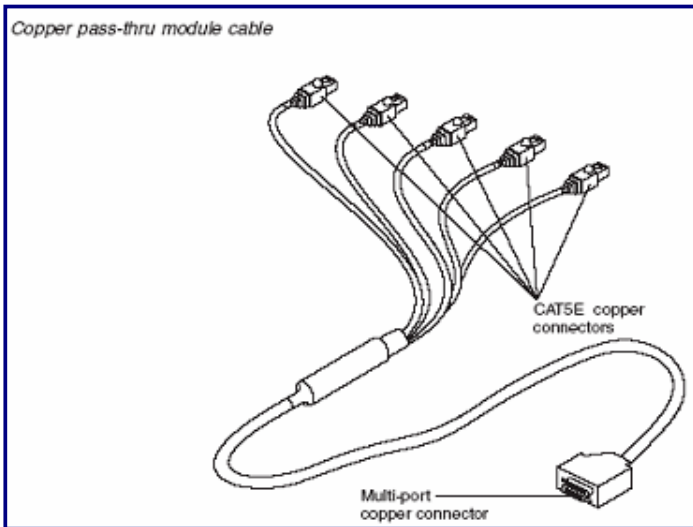
SBB number	Option number	Feature codes	Description	Connection type from	Connection type to	# of Drops	Connects from	Connects to
32R1938	32R1937	4362	IBM CX4 1.5 Meter Cable	CX4 Connector	CX4 Connector	1	10Gb ESM CX4 Port	Another Nortel 10Gb ESM or external 10Gb switch with CX4 ports
32R1942	32R1941	4363	IBM CX4 3.0 Meter Cable	CX4 Connector	CX4 Connector	1	10Gb ESM CX4 Port	Another Nortel 10Gb ESM or external 10Gb switch with CX4 ports
39Y9173	39Y9171	4364	IBM BladeCenter Optical Pass-thru Module SC Cable for IBM BladeCenter	Multiport Optical	SC Duplex Optical Connections	4	OPM switch	SAN
39Y9175	39Y9172	4365	IBM BladeCenter Optical Pass-thru Module LC Cable for IBM BladeCenter	Multiport Optical	LC Duplex Optical Connections	4	OPM switch	SAN
39Y9331	39Y9170	4366	IBM BladeCenter Copper Pass-thru Module Cable for IBM BladeCenter ^{2,3}	Multiport Copper	CAT 5E Copper Connections	5	CPM switch	Network

Note: Utilizing pass-thru technology will disable serial over LAN concurrent KVM capabilities.

Notes:

1. This cable is 1.5 m in length and provides four connections between the optical pass-thru-module (OPM) and an external Ethernet or fibre environment.
2. Provides five copper connections between the copper pass-thru module (CPM) and an external gigabit Ethernet environment. A maximum of 14 connections per CPM is supported. One CPM cable ships with the CPM option. Two additional cables can be installed.
3. Option 39Y9170 cannot be installed by manufacturing. It must be shipped separately, as an accessory.

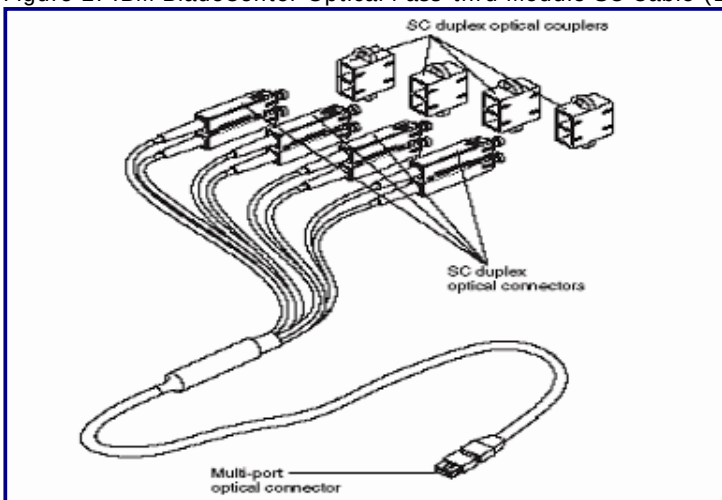
Figure 1. IBM BladeCenter Copper Pass-thru Module Cable (3.1 m)



Click image to enlarge

This IBM BladeCenter option provides connection between the copper pass-thru module and an external environment. The cable allows up to five copper connections to blade servers. One 3.1 m (9.4 ft) cable is included with each copper pass-thru module.

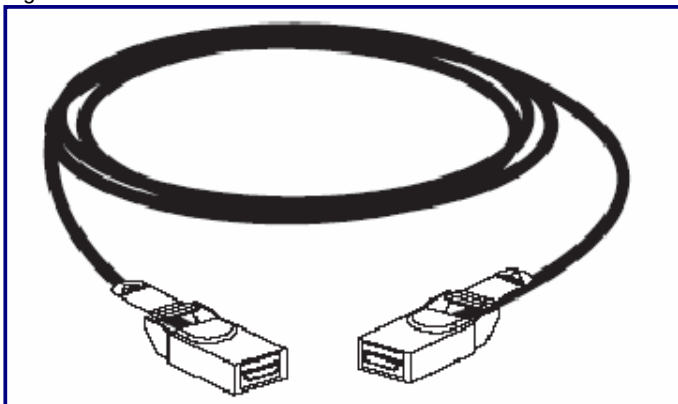
Figure 2. IBM BladeCenter Optical Pass-thru Module SC Cable (1.5 m)



Click image to enlarge

The 1.5 m cable above provides four SC connections between the Optical Pass-thru Module and an external environment.

Figure 3. IBM CX4 1.5 or 3-meter Cable for IBM BladeCenter (connector color is Gray)



Click image to enlarge

BladeCenter S (8886)

Attention:

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At-A-Glance Options

[Cabling](#) | **HDD** | [I/O](#) | [Pwr Acc](#) |

SBB number	Option number	Feature codes	Description	Height	Bays supported	Maximum quantity
HDDs						
43W7527	43W7523	3748	73GB 15K 3.5" SAS Hot-Swap HDD	-	1-12	12
43W7528	43W7524	3749	146GB 15K 3.5" SAS Hot-Swap HDD	-	1-12	12
43W7581	43W7580	3746	750GB Dual Port SATA Hot Swap Option	-	1-12	12
43X0808	43X0802	3747	300GB 15K 3.5" Hot-Swap SAS HDD	-	1-12	12
39M4559	39M4558	3743	IBM 500 GB DUAL PORT HS SATA HDD FOR IBM SYSTEM X	-	1-12	12
43W7631	43W7630	5561	IBM 1TB 7200 Dual Port SATA 3.5" HS HDD	-	1-12	12
Associated options						
-	43W3581	-	IBM BladeCenter S 6-Disk Storage Module ^{1,2, 3}	-	-	-

Notes:

1. BladeCenter S chassis supports a maximum of two P/N 43W3581. Each 6-Disk Storage Module supports up to six 3.5in drives.
2. One SAS Connectivity Module for IBM BladeCenter (P/N 39Y9195) is required in Switch Module 3 in order to use the IBM BladeCenter S 6-Disk Storage Module. Support exists for two if redundancy is needed.
3. Four power supplies are required for the BladeCenter S chassis (8886) to support two Storage Modules. If adding a second Storage Module (43W3581) to the BladeCenter S chassis, you may need to add two additional power supplies; depending on your current configuration.

BladeCenter S (8886)

Attention:

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At-A-Glance Options

[Cabling](#) | [HDD](#) | [I/O](#) | [Pwr Acc](#) |

SBB number	Option number	Feature codes	Description	Form factor	Slots supported	Hot plug capable	Max supported
Networking^{1,2}							
40Y1245	39Y9195	3267	IBM BladeCenter SAS Connectivity Module	-	3, 4	Y	2
40Y1122	32R1783	3210	Nortel 10Gb Uplink Ethernet Switch Module for IBM BladeCenter	-	1, 3, 4	Y	3
40Y1116	32R1813	3207	Brocade 4Gb 10-port SAN Switch Module for IBM eServer BladeCenter	-	3, 4	Y	2
32R1862	32R1859	1494	Nortel Networks Layer 2-7 Gb Ethernet Switch Mod for IBM BladeCenter	-	1, 3, 4	Y	3
40Y1126	32R1860	3212	Nortel Networks L2/L3 Copper Gb Ethernet Sw Mod for IBM BladeCenter	-	1, 3, 4	Y	3
40Y1128	32R1861	3213	Nortel Networks L2/L3 Fiber Gb Ethernet Sw Mod for IBM BladeCenter	-	1, 3, 4	Y	3
43W4398	43W4395	3174	Cisco Catalyst Switch Module 3012 for IBM BladeCenter	StFF	1,3,4	Y	3
40Y1217	39Y9284	3241	Cisco Systems 4Gb 10-port Fibre Channel Module	-	3, 4	Y	2
40Y1138	39Y9316	3218	IBM BladeCenter Optical Pass-thru Module	-	1, 3, 4	Y	3
40Y1140	39Y9320	3219	IBM BladeCenter Copper Pass-thru Module	-	1, 3, 4	Y	3
40Y1142	39Y9324	3220	Server Connectivity Module for IBM BladeCenter	-	1, 3, 4	Y	3
40Y1225	43W6723	3245	QLogic 4Gb Intelligent Pass-thru Module for IBM	-	3, 4	Y	2
40Y1221	43W6724	3243	Qlogic 10-port 4Gb SAN Switch Module for IBM	-	3, 4	Y	2
44W4405	44W4404	1590	Nortel 1/10Gb Uplink Ethernet Switch Module for IBM BladeCenter	-	1,3,4	Y	3
44W4484	44W4483	5865	Intelligent Copper Pass-thru Module for IBM BladeCenter	-	1, 3, 4	Y	3
Associated Options							
-	43W3581	-	IBM BladeCenter S 6-Disk Storage Module	-	-	-	-
-	43W3583	-	IBM BladeCenter S Serial Pass-thru Module	-	-	-	-

Note: Form Factor abbreviations are as follows: SFF = Small Form Factor, StFF = Standard Form Factor, HSFF = High Speed Form Factor.

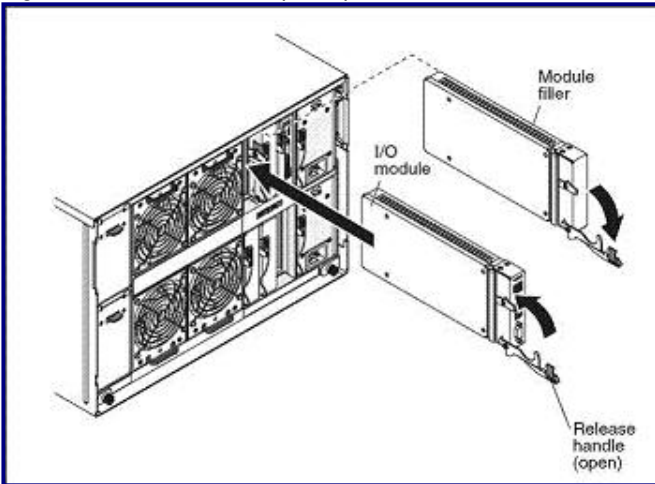
The Standard Form Factor (StFF) card is the original form factor for expansion cards in blade servers. An StFF expansion card uses the PCI-X connector on the blade server and expansion units. When an StFF expansion card is installed using the PCI-X connector it is not possible to install a CFFh nor HSFF expansion card on the adjacent PCI-E connector (if one exists in the server) In addition, when an StFF expansion card is installed, the second hard disk drive on some blade servers cannot be installed.

Notes:

1. If you are using the internal storage in the chassis with IBM BladeCenter S 6-Disk Storage Module you are required to have one SAS Connectivity Module for IBM BladeCenter (P/N 39Y9195) in Switch Module 3. Support for two is available for redundancy via Switch Module 4. If using the SAS Connectivity Module in Switch Module 3 you must have the same Switch Module in Switch

- Module 4.
2. The mixing of fabric switches is not allowed in bays 3 and 4.

Figure 1. BladeCenter S (8886) I/O modules



[Click image to enlarge](#)

BladeCenter S (8886)

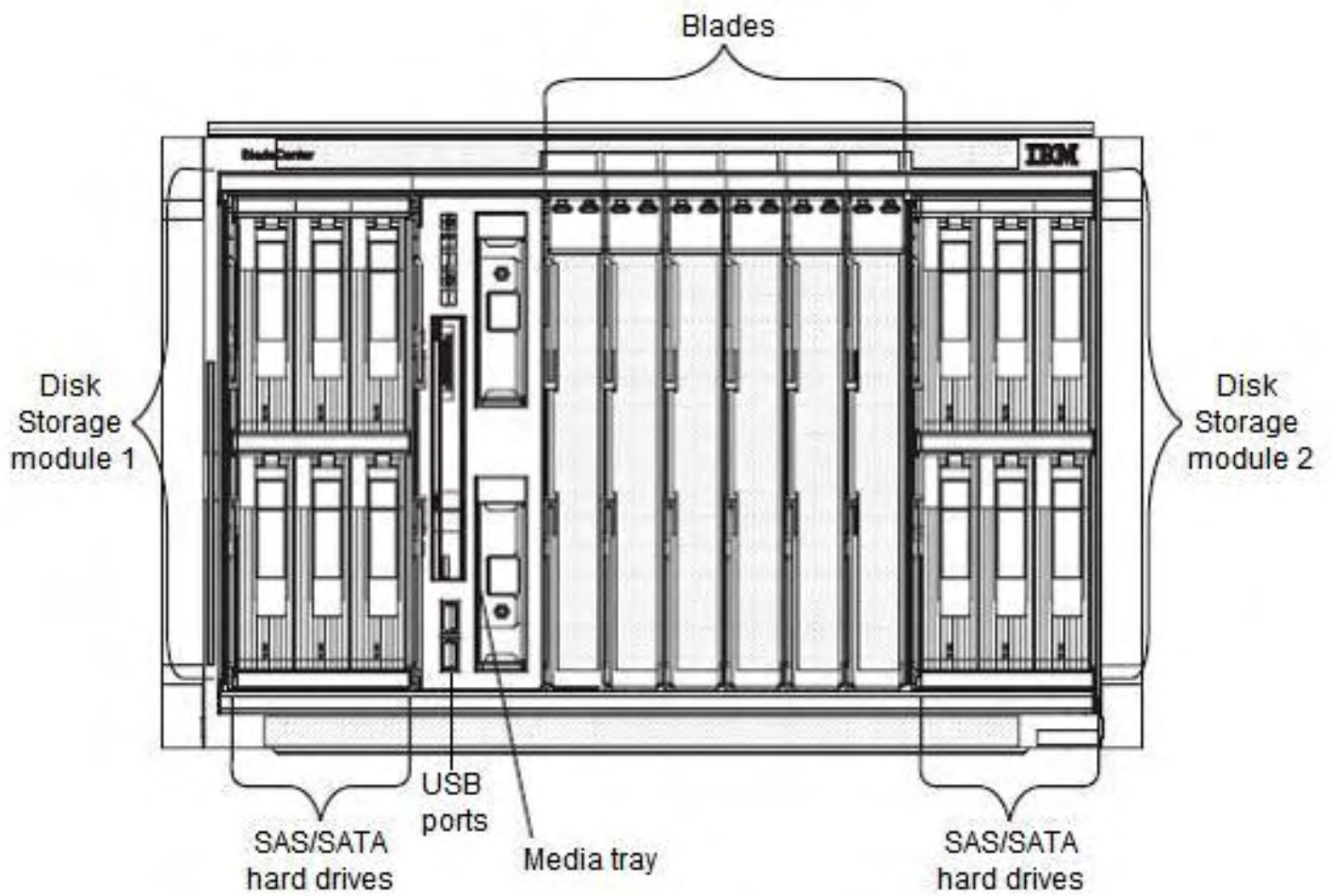
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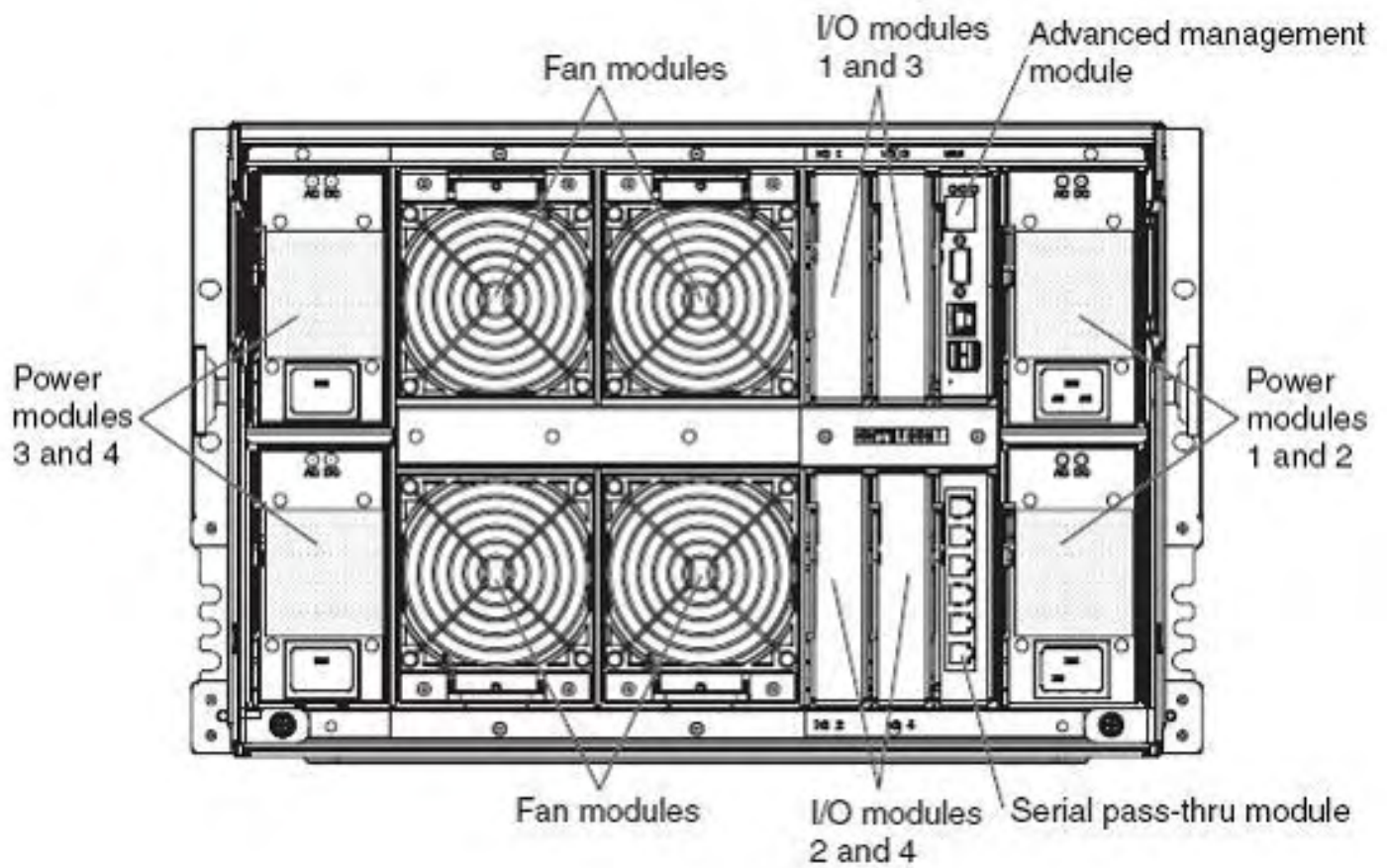
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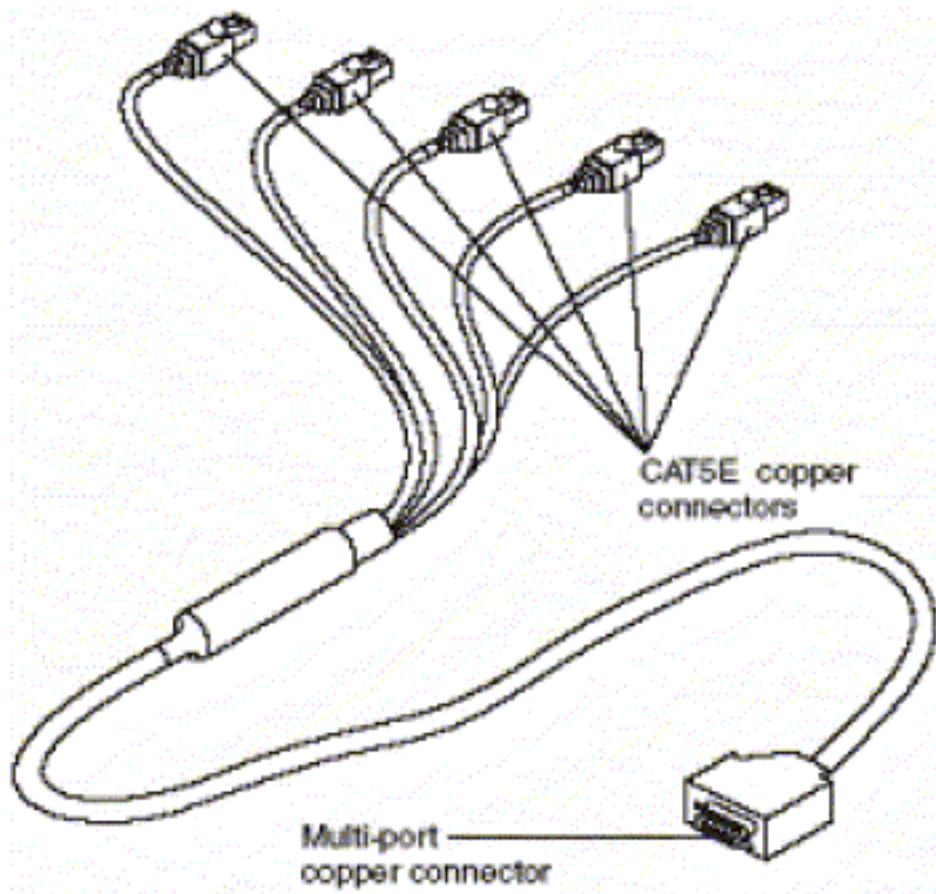
At-A-Glance Options

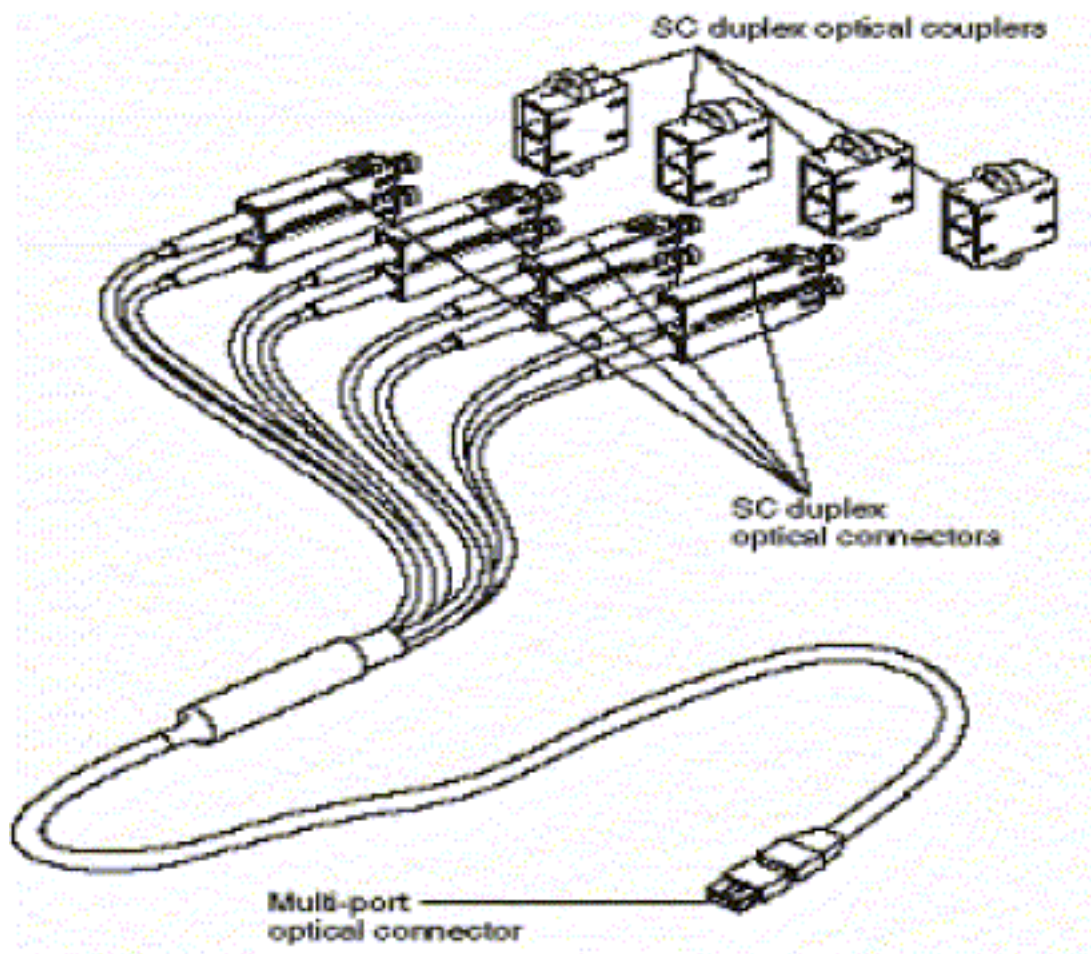
[Cabling](#) | [HDD](#) | [I/O](#) | [Pwr Acc](#) |

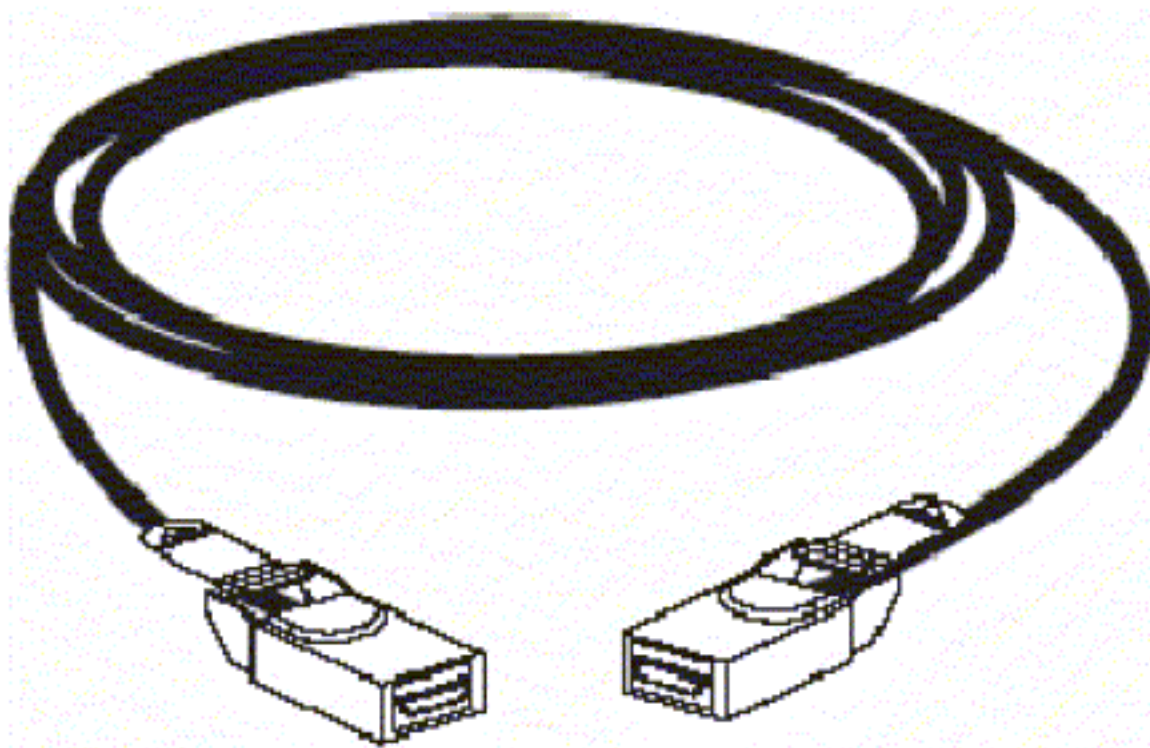
SBB number	Option number	Feature codes	Description
Power			
-	21304RX	-	IBM UPS 10000XHV
-	43W3582	-	IBM BladeCenter S 950W/1450W Auto-Sensing Power Supplies 3 & 4 (Worldwide)
Power Distribution Units			
-	39M2818	-	IBM DPI C19 PDU+C19 without line cord
-	39M2819	-	IBM DPI C19 3 phase PDU+C19 with attached line cord
-	39Y8923	-	DPI 60A Three Phase C19 Enterprise PDU w/ IEC309 3P+G (208V) fixed line cord
-	39Y8948	-	DPI Single Phase C19 Enterprise PDU w/o line cord
-	39Y8999	-	32A/230V 3P w/IEC309 3P+N+Gnd Conn
Racks			
-	201886X	-	BCS Office Enablement Kit
-	14102RX	-	IBM eServer Cluster 25U Rack
-	14104RX	-	IBM Linux Cluster Rack
-	93061RX	-	NetBAY11 Standard Rack Cabinet
-	93072RX	-	IBM 25U Standard Rack
-	93074RX	-	IBM 42U Standard Rack
-	93074XX	-	IBM 42U Standard Rack Extension
-	93084RX	-	NetBAY42 Enterprise Rack Cabinet
-	93084XX	-	NetBAY42 Enterprise Expansion Rack Cabinet (EX)
Monitors			
-	17233RX	-	IBM 1U 15" Flat Panel Console Kit
Keyboard and Mouse			
-	17235RX	-	IBM Rack Keyboard Tray
-	40K5372	-	IBM Rack Mountable Keyboard & Pointing Device - 3m Cable - Black - USB - US English 103P
-	40K9584	-	IBM Preferred Pro Keyboard- Full Width - 2m Cable - Black - USB - US English 103P
-	40K9200	-	IBM 2 Button Optical Wheel Mouse - Black - USB
-	40K9201	-	IBM 3 Button Optical Mouse - Black - USB
Associated Options			
-	43X0340	-	IBM BladeCenter Airborne Contaminant Filter

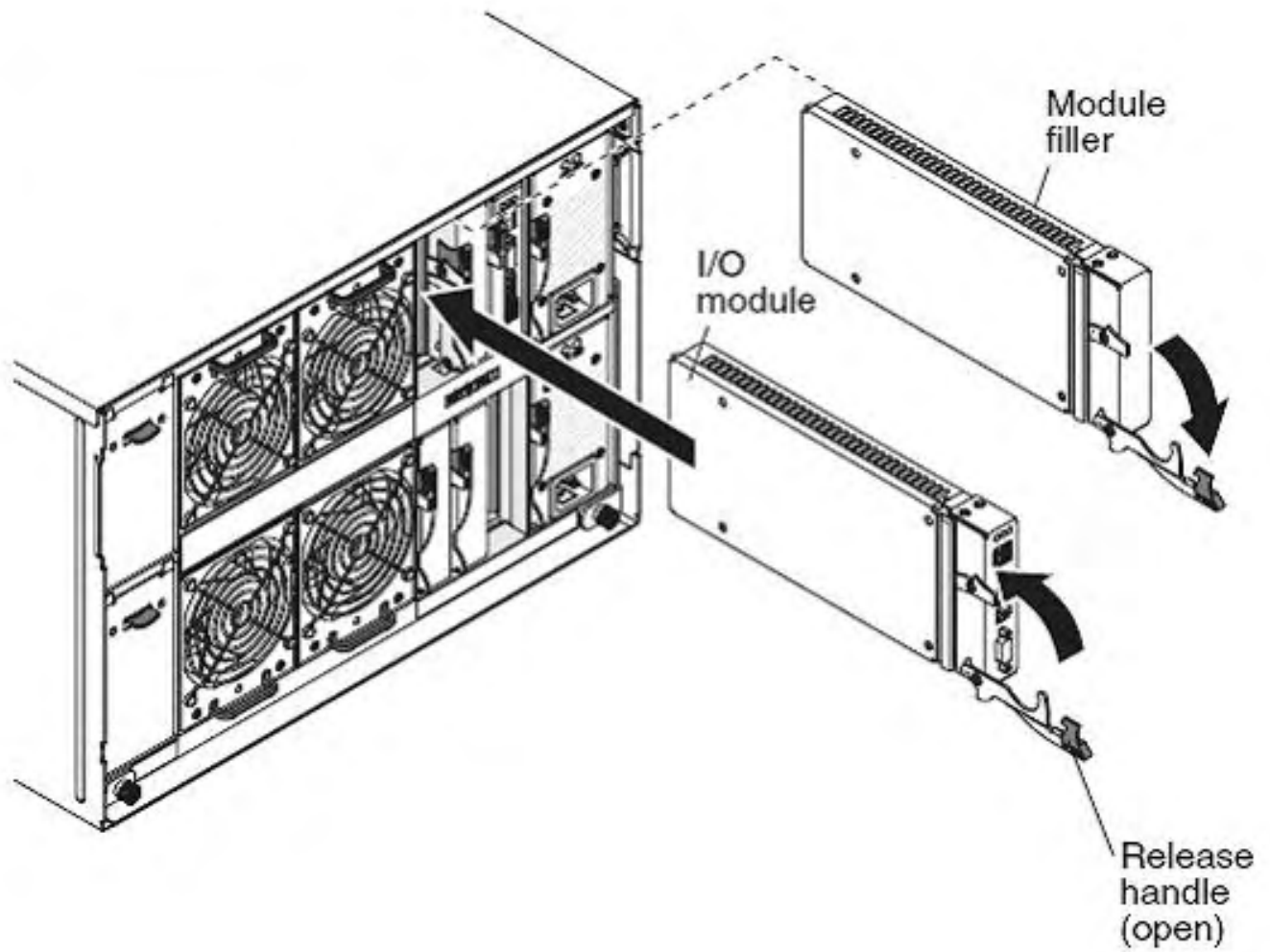












BladeCenter T (8720)

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At-A-Glance Options

Table 1. BladeCenter T (8720) Chassis at-a-glance

Part number	Form factor (width / depth)	Power modules	Power module quantity (std / max)	Hot-swap (power, bays, blowers)	Redundancy (optional, standard)
8720-2RY	Rack 8U 13.75in x 17.4in	1300W-DC (-48v)	2/4	P, B, B	S-Blower S-Power

Table 1. BladeCenter T (8720) Chassis at-a-glance (continued)

Part number	Management module (std / max) ¹	I/O module bays (total / avail) ²	Optical drive	Diskette drive	Blade bays (total / avail) ³
8720-2RY	1/2	4/4	24x CD/DVD R/W	-	8/8

Notes:

1. The Management Module incorporates a chassis-level management processor and dual Keyboard/Video/Mouse (KVM) switches. No external KVM switching is required. Installation of additional Management Module will require additional power supplies.
2. A maximum of four I/O switches can be installed in the rear of the system. A maximum of four Gbit Ethernet switches or a maximum of two Gbit Ethernet switches and two-fiber channel switches can be installed. The minimum system configuration requires one Gbit Ethernet switch to be installed.
3. Supports up to 8 single-wide blade servers. Additional power supplies are required to maintain full redundancy beyond 4 blade servers.

Table 2. BladeCenter T Chassis, blade server support

Blade server	8720
HS20	All
HS21	Dual Core ¹ - L1Y, L2Y, L3Y, L4Y, L5Y, E1Y, E5Y, H1Y, NTY ² Quad Core ³ - A1Y, A2Y, AMY, C1Y, C2Y, EHY, EQY, ERY, G1Y, G3Y, G4Y, G5Y, G6Y, J1Y, J2Y
HS21 XM	Dual Core ¹ - L1Y, L2Y, L3Y, L4Y, L5Y, E5Y, H1Y, NTY Quad Core ⁴ - J1Y, J2Y, J3Y
JS20	All
JS21	All
LS20	All
LS21 ⁵	21Y, 31Y, 51Y, 2TY, E1Y, 61Y
LS41 ⁵	31Y, 32Y, 51Y, 52Y, 61Y, 62Y, 4TY, E2Y

Notes:

1. Blade servers up to 65 watts are supported.
2. Due to limited power availability some higher power models require installation at lower densities.
3. Supports a maximum capacity of 7 blade servers at 80 watts.
4. Supports a maximum capacity of 7 blade servers at 65 watts.
5. Blade servers up to 68 watts are supported.

BladeCenter T (8720)

Attention:

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At-A-Glance Options

Cabling | [Optical storage](#) | [I/O](#) | [Pwr Acc](#) |

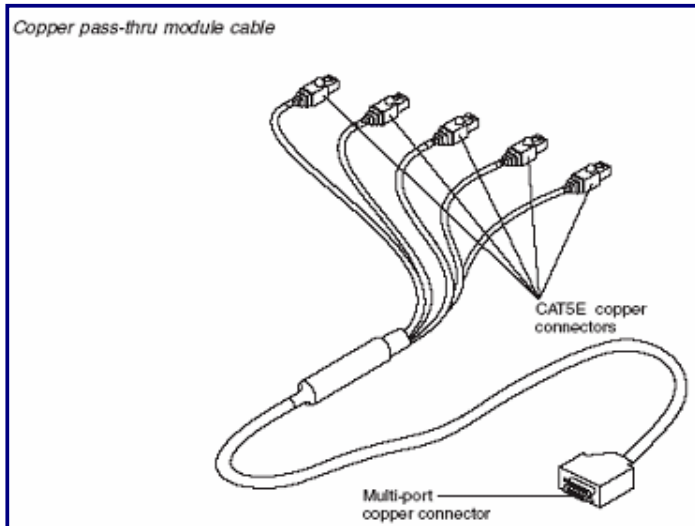
SBB Number	Option number	Feature codes	Description	Connection type from	Connection type to	# of drops	Connects from	Connects to
39Y9173	39Y9171	4364	IBM BladeCenter Optical Pass-thru Module SC Cable for IBM BladeCenter	Multiport Optical	SC Duplex Optical Connections	4	OPM switch	SAN
39Y9175	39Y9172	4365	IBM BladeCenter Optical Pass-thru Module LC Cable for IBM BladeCenter	Multiport Optical	LC Duplex Optical Connections	4	OPM switch	SAN
39Y9331	39Y9170	4366	IBM BladeCenter Copper Pass-thru Module Cable for IBM BladeCenter	Multiport Copper	CAT 5E Copper Connections	5	CPM switch	Network
32R1852	26R0813	4296	InfiniBand 4x Cable 3 meter for IBM eServer BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 4x connector	InfiniBand Fabric
32R1853	26R0814	4867	InfiniBand 4 meter 12x Cable for IBM BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 12x connector	InfiniBand Fabric
32R1854	-	4255	InfiniBand 12x to (3) 4x Cable 3 meter for IBM eServer BladeCenter	InfiniBand Switch	4x InfiniBand	3	InfiniBand 12x connector	InfiniBand Fabric
32R1849	26R0847	4294	InfiniBand 8 meter 4x Cable for IBM eServer BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 4x connector	InfiniBand Fabric
32R1850	26R0849	4295	InfiniBand 8 meter 12 to (3) 4x Cable for IBM eServer BladeCenter	InfiniBand Switch	4x InfiniBand	3	InfiniBand 12x connector	InfiniBand Fabric
43W4383	43W4377	4866	InfiniBand 10 meter 4x Cable for IBM BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 4x connector	InfiniBand Fabric
43W4384	43W4378	4868	InfiniBand 10 meter 12x Cable for IBM BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 4x connector	InfiniBand Fabric
43W4385	43W4379	4869	InfiniBand 11 meter 12x to (3) 4x Cable for IBM BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 12x connector	InfiniBand Fabric
32R1938	32R1937	4362	IBM CX4 1.5 Meter Cable	CX4 Connector	CX4 Connector	1	10Gb ESM CX4 Port	Another Nortel 10Gb ESM or external 10Gb switch with CX4 ports.
32R1942	32R1941	4363	IBM CX4 3.0 Meter Cable	CX4 Connector	CX4 Connector	1	10Gb ESM CX4 Port	Another Nortel 10Gb ESM or external 10Gb switch with CX4 ports.

Notes:

1. This cable is 1.5m in length and provides four connections between the optical pass-thru-module (OPM) and an external Ethernet or fibre environment.
2. Provides five copper connections between the copper pass-thru module (CPM) and an external gigabit Ethernet environment. A maximum of 14 connections per CPM is supported. One CPM cable ships with the CPM option. Two additional cables can be installed.

3. Option 39Y9170 cannot be installed by manufacturing. It must be shipped separately, as an accessory.

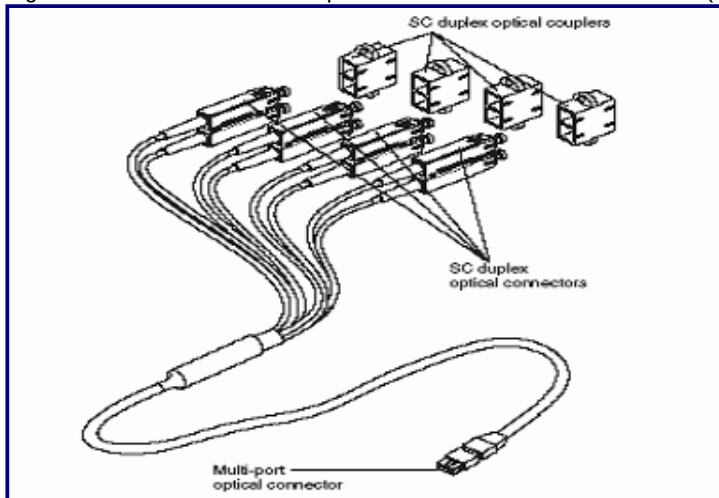
Figure 1. IBM BladeCenter Copper Pass-thru Module Cable



Click image to enlarge

This IBM BladeCenter option provides connection between the copper pass-thru module and an external environment. This cable allows up to five copper connections to blade servers. One of these cables included with each copper pass-thru module. Cable is 3.1m (9.4ft) in length.

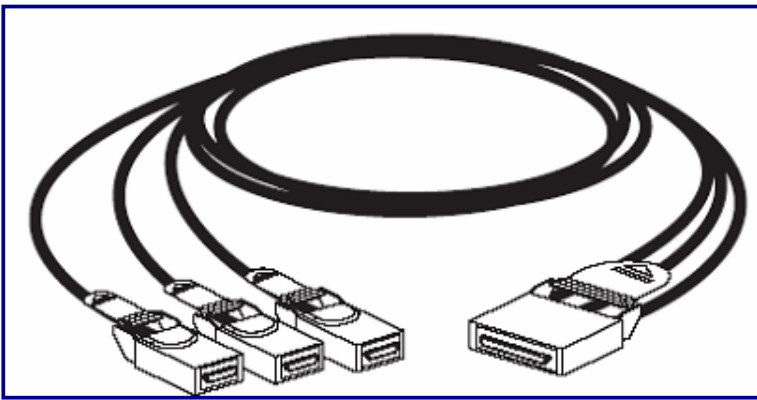
Figure 2. IBM BladeCenter Optical Pass-thru Module SC Cable (1.5M)



Click image to enlarge

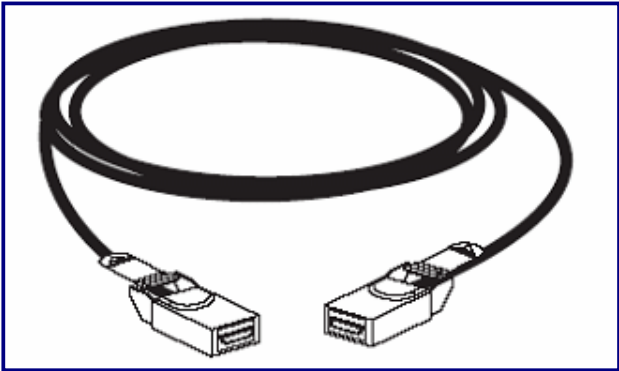
The cable above provides connection between the Optical Pass-thru Module and an external environment. This 1.5 m cable presents four SC connections.

Figure 3. InfiniBand 12x to (3) 4x Cable 3 meter for IBM BladeCenter



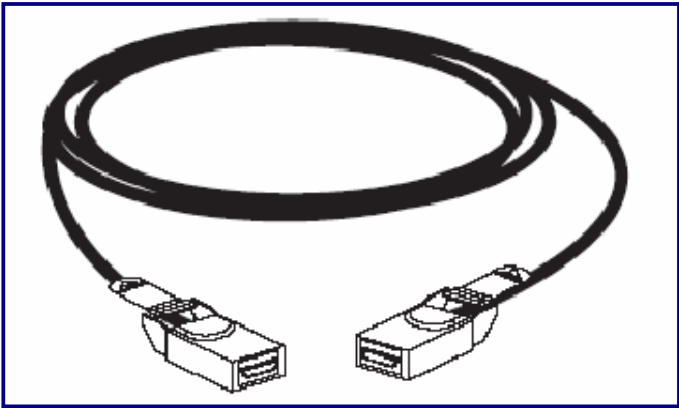
[Click image to enlarge](#)

Figure 4. InfiniBand 4x Cable 3 meter for IBM BladeCenter



[Click image to enlarge](#)

Figure 5. IBM CX4 1.5 or 3.0 meter Cable for IBM BladeCenter (Connector color is Gray)



[Click image to enlarge](#)

BladeCenter T (8720)

Attention:

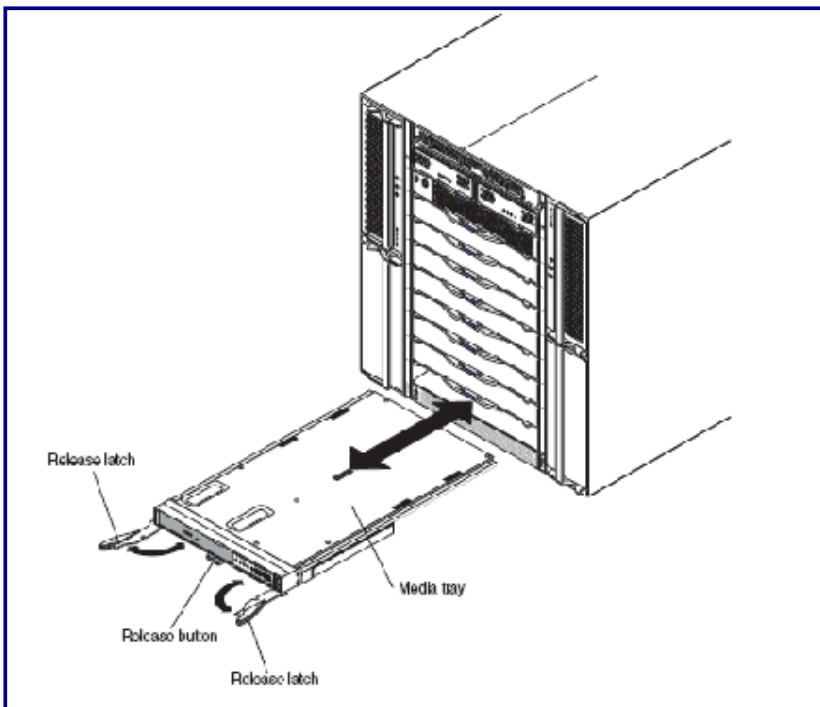
A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

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SBB number	Option number	Feature codes	Description	Type	Height	Bays supported	Max quantity
32R2854	-	4145	Optical drive 24x combo CD/DVD R/W	-	-	-	-

Figure 1. BladeCenter T (8720) front view



[Click image to enlarge](#)

BladeCenter T (8720)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

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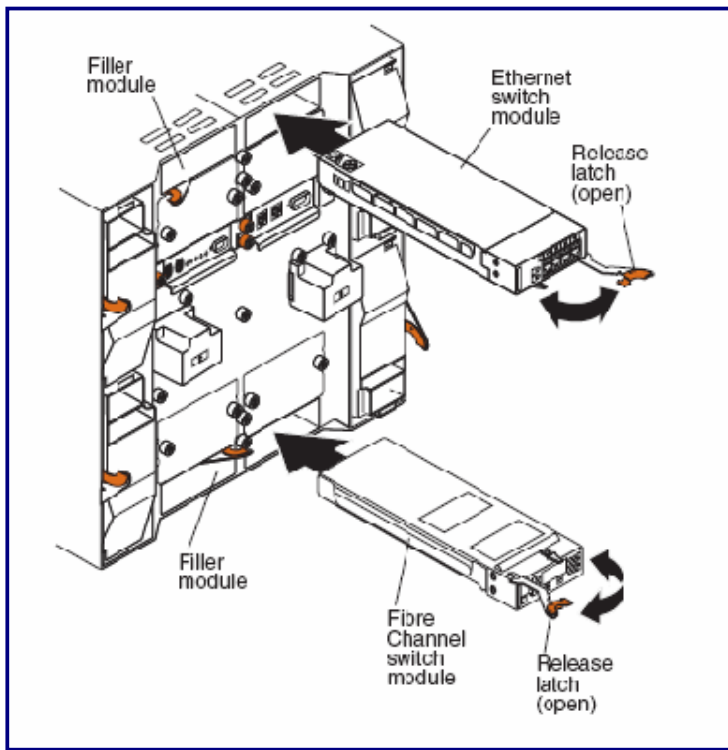
SBB number	Option number	Feature codes	Description	Form factor	Slots supported	Hot plug capable	Max supported
Storage Controllers							
-	172641X	-	FC SAS Single Controller DS3400	-	-	-	-
Networking¹							
32R1907	32R1905	1576	McData 4Gb 10-port Fibre Channel Switch Module for eServer ¹	StFF	3,4	Y	2
32R1834	32R1833	1562	McData 4Gb 20-port Fibre Channel Module for eServer BladeCenter ¹	StFF	3,4	Y	2
32R1906	32R1904	1575	QLogic 4Gb 10-port Fibre Channel Switch Module for eServer ¹	StFF	3,4	Y	2
26R0882	26R0881	1560	QLogic 4Gb 20-port Fibre Channel Switch Module for IBM eServer ¹	StFF	3,4	Y	2
43W6729	43W6723	2985	QLogic 4Gb Intelligent Pass-thru Module for IBM	StFF	3,4	Y	2
-	43W6836	-	QLogic/ McData 10-port Upgrade for IBM eServer BladeCenter	StFF	3,4	Y	2
-	43W6837	-	QLogic Fabric Security for IBM BladeCenter	StFF	3,4	Y	2
43W6730	43W6724	2986	Qlogic 10-port 4Gb SAN Switch Module for IBM	StFF	3,4	Y	2
-	32R1912	-	QLogic/ McData 10-port Upgrade for IBM eServer BladeCenter	StFF	3,4	Y	2
-	43W6838	-	QLogic Enterprise Fabric Suite 2007 for IBM BladeCenter	StFF	3,4	Y	2
43W6731	43W6725	2987	QLogic 20-port 4Gb SAN Switch Module for IBM BladeCenter	StFF	3,4	Y	2
32R1815	32R1812	1569	Brocade 4Gb 20-port SAN Switch Module for IBM eServer BladeCenter ¹	StFF	3,4	Y	2
32R1816	32R1813	1571	Brocade 4Gb 10-port SAN Switch Module for IBM eServer BladeCenter ¹	StFF	3,4	Y	2
32R1784	32R1783	1493	Nortel 10Gb Uplink Ethernet Switch Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1862	32R1859	1494	Nortel Networks Layer 2-7 Gb Ethernet Switch Mod for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1863	32R1860	1495	Nortel Networks L2/L3 Copper Gb Ethernet Sw Mod for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1864	32R1861	1496	Nortel Networks L2/L3 Fiber Gb Ethernet Sw Mod for IBM BladeCenter	StFF	1,2,3,4	Y	4
41Y8520	41Y8522	2988	Cisco Catalyst Switch 3110X for IBM BladeCenter	StFF	1,2,3,4	Y	4
41Y8521	41Y8523	2989	Cisco Catalyst Switch 3110G for IBM BladeCenter	StFF	1,2,3,4	Y	4
43W4398	43W4395	5450	Cisco Catalyst Switch Module 3012 for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1889	32R1888	1497	Cisco Systems Fiber Intelligent Gb Ethrnt Sw Mod for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1893	32R1892	1498	Cisco Systems Intelligent Gb Ethrnt Sw Mod for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1901	32R1900	1499	Cisco Systems InfiniBand switch module for IBM BladeCenter	StFF	3,4	Y	2
39Y9279	39Y9280	2983	Cisco Systems 4Gb 20 - port Fibre Channel Module	StFF	3,4	Y	2

39Y9283	39Y9284	2984	Cisco Systems 4Gb 10 -port Fibre Channel Module	StFF	3,4	Y	2
39Y9194	39Y9195	2980	IBM BladeCenter SAS Connectivity Module	-	3,4	Y	2
39Y9325	39Y9324	1484	Server Connectivity Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
39Y9317	39Y9316	1556	IBM BladeCenter Optical Pass-thru Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
39Y9321	39Y9320	2900	IBM BladeCenter Copper Pass-thru Module for IBM BladeCenter	StFF	1, 2, 3, 4	Y	4
44W4484	44W4483	5452	Intelligent Copper Pass-thru Module for IBM BladeCenter	-	1, 2, 3, 4	Y	4
44W4405	44W4404	1590	Nortel 1/10Gb Uplink Ethernet Switch Module for IBM BladeCenter ²	-	1,2,3,4	Y	4
44W4409	44W4408	4942	10GbE 850 nm Fiber SFP+ Transceiver (SR) for IBM BladeCenter ²	-	-	-	12
System Management							
32R0855	32R0835	4239	IBM BladeCenter T Advanced Management Module	Adv Mgmt Module Bay	Redundant 2KVM/Adv Mgmt Module Slot	Y	2
Associated options							
32R1879	32R1877	4360	IBM 10GbE 850nm Fiber XFP Transceiver (SR)	-	-	-	-
32R1880	-	4361	IBM 10GbE 1310nm Fiber XFP Transceiver (LR)	-	-	-	-
41Y8597	-	4863	Cisco Systems 4Gb Short-wave Length 4-pack SFP Modules for IBM BladeCenter	-	-	-	-
41Y8599	-	4864	Cisco Systems 4Gb Short-wave Length SFP Module for IBM BladeCenter	-	-	-	-
41Y8601	-	4865	Cisco Systems 4Gb Long-wave Length SFP Module for IBM BladeCenter	-	-	-	-
Note: Form Factor abbreviations are as follows: SFF = Small Form Factor, StFF = Standard Form Factor, HSFF = High Speed Form Factor The Standard Form Factor (StFF) card is the original form factor for expansion cards in blade servers. An StFF expansion card uses the PCI-X connector on the blade server and expansion units. When an StFF expansion card is installed using the PCI-X connector it is not possible to install a CFFh nor HSFF expansion card on the adjacent PCI-E connector (if one exists in the server) In addition, when an StFF expansion card is installed, the second hard disk drive on some blade servers cannot be installed.							

Notes:

1. Mixing Ethernet (including Copper Pass-thru Module (CPM)) and Fibre/SAN switches in I/O module bays 3 and 4 is not supported. However, mixing Optical Pass-thru modules (OPM) and Ethernet or Fibre/SAN switches in bays 3 and 4 is supported.
2. Up to three (3) 10GbE 850 nm Fiber SFP+ Transceivers are supported for each installed Nortel 1/10Gb Uplink Ethernet Switch Module (SBB 44W4405, Option 44W4404), allowing a maximum of twelve (12).

Figure 1. BladeCenter T (8720) modules



[Click image to enlarge](#)

BladeCenter T (8720)

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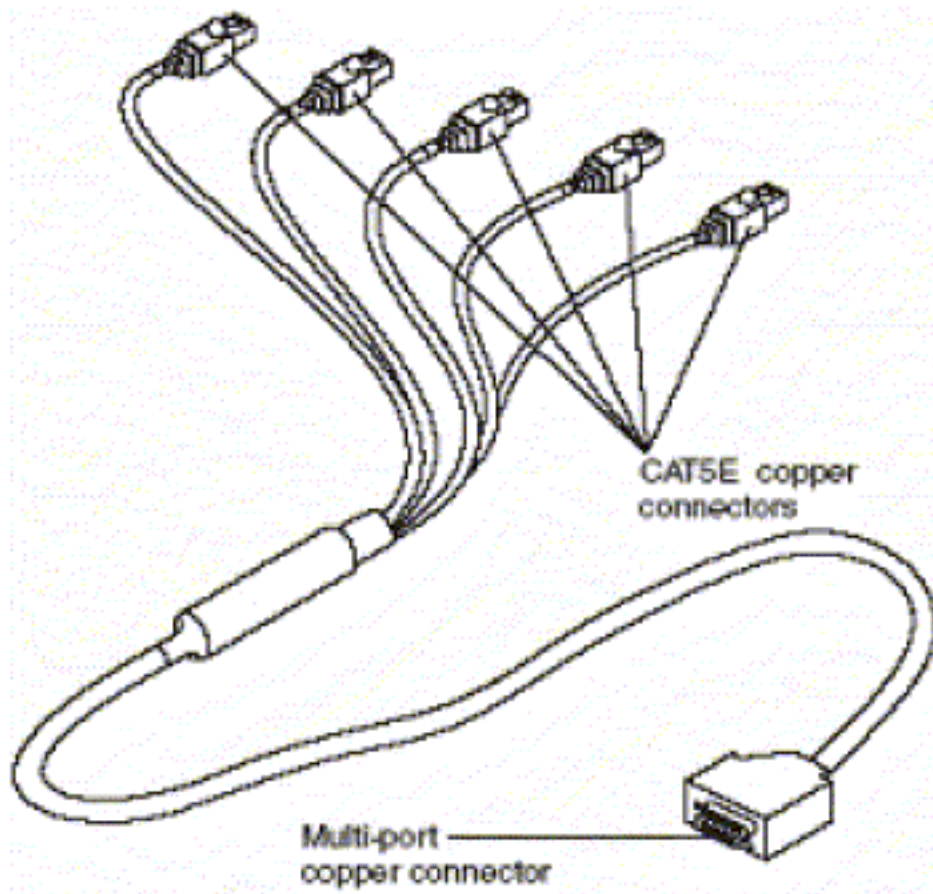
At-A-Glance Options

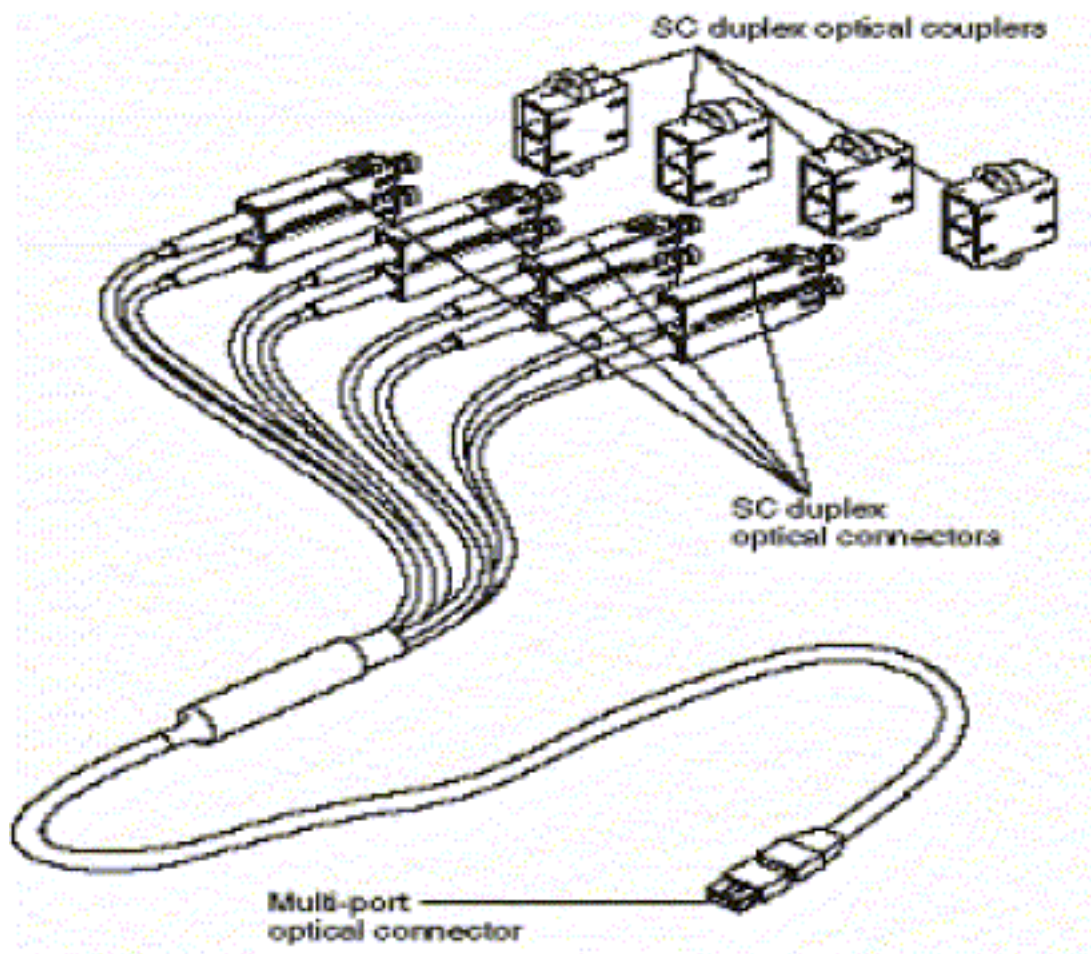
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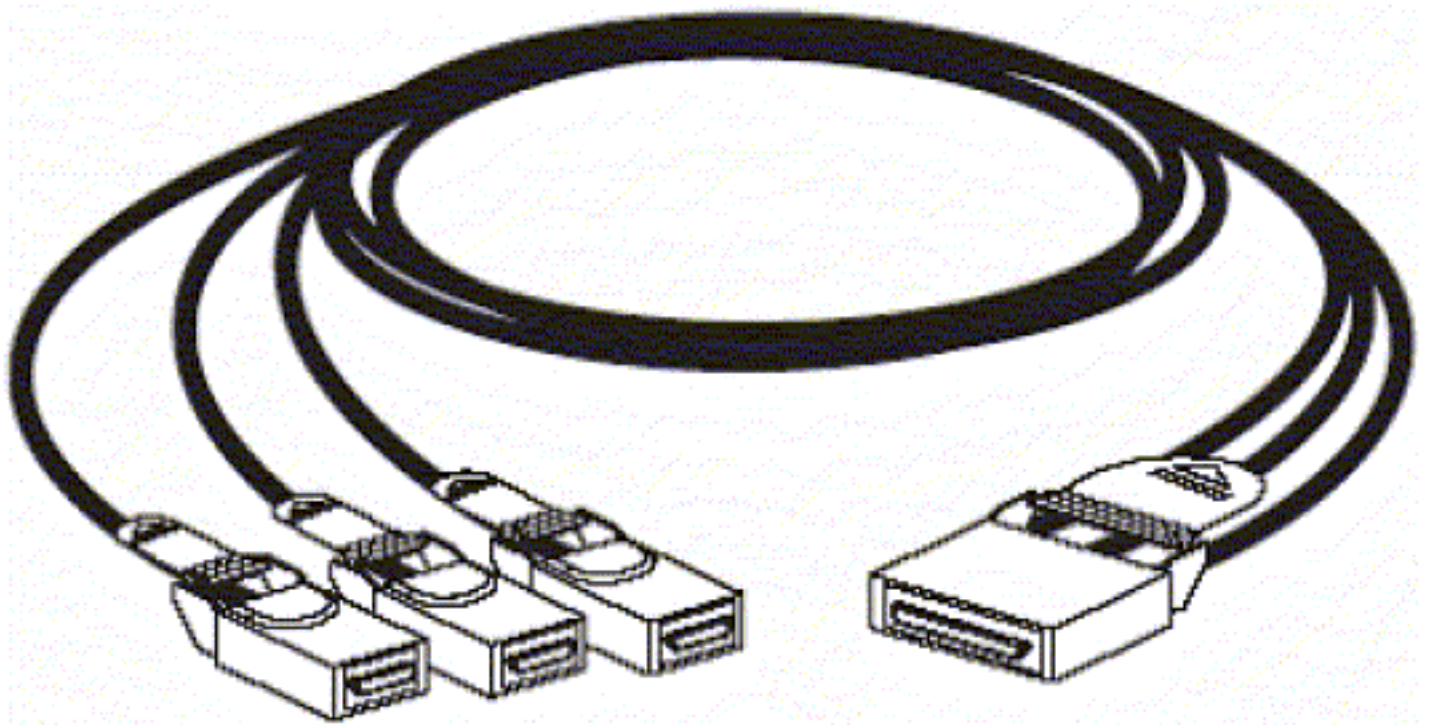
Table 1. BladeCenter Standard Power Configuration

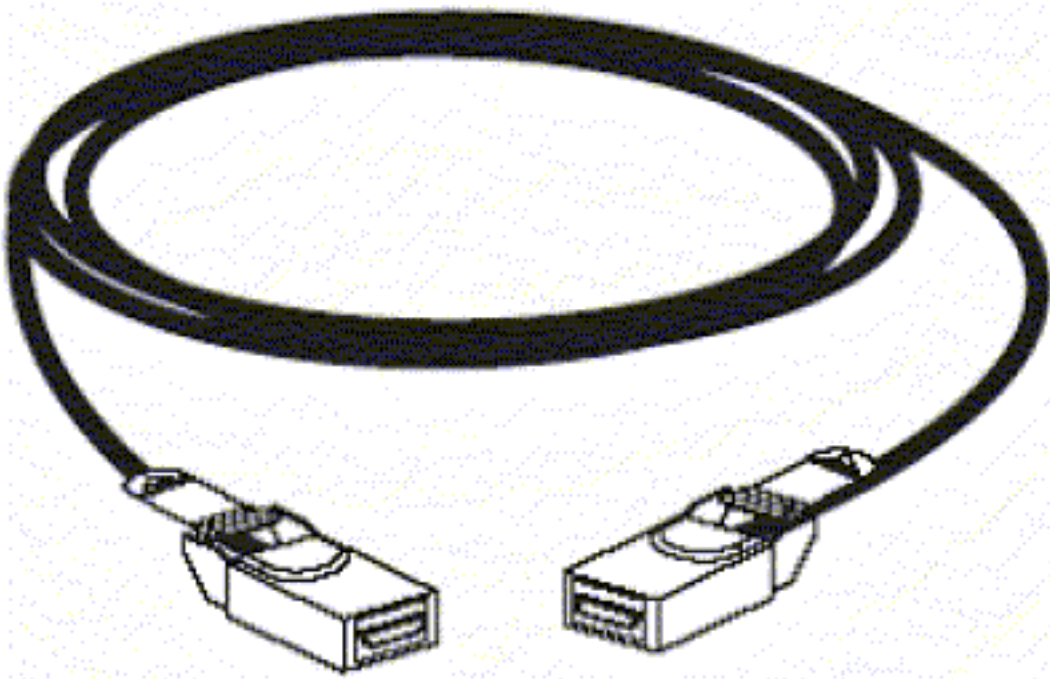
Model	Power modules	Power cord
8720-2RY	2 x 1300w, -48v DC power cables are customer supplied to -60v DC	

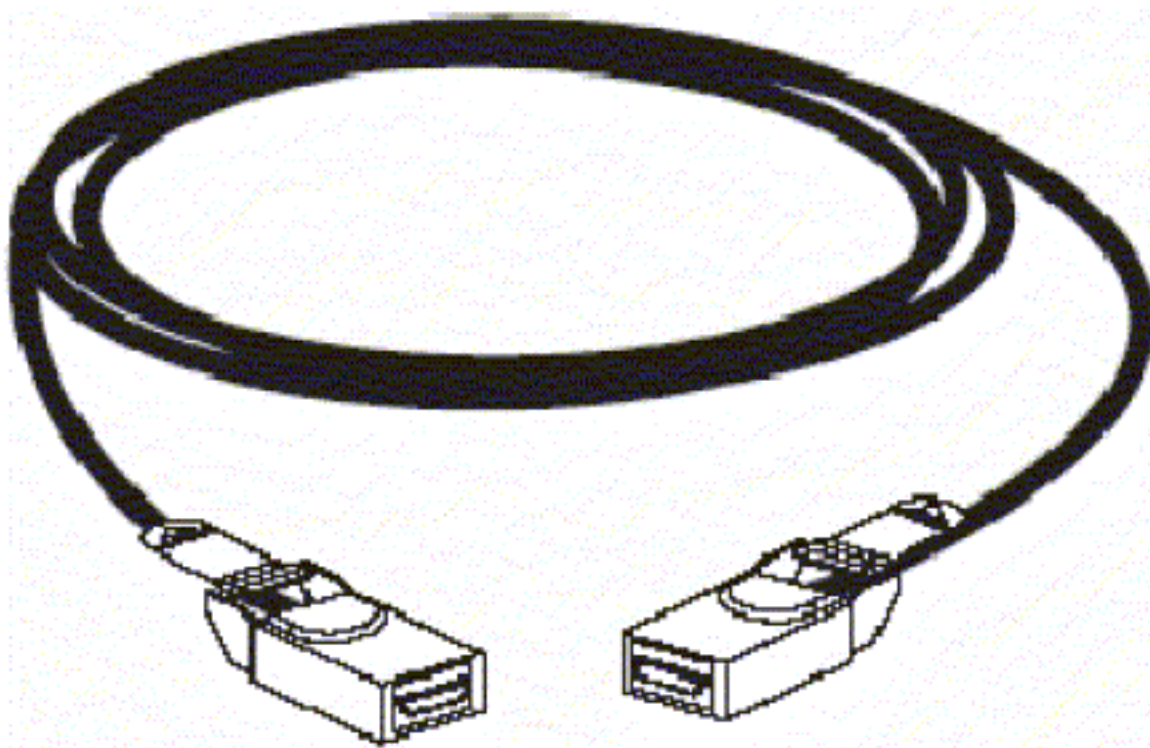
SBB Number	Option Number	Feature codes	Description
Power			
32R0823	-	1959	Redundant BladeCenter T 1300W-DC Power Supplies
32R0799	32R0833	1958	BladeCenter T 1300W-DC Power Supplies
Racks			
39R8309	-	4292	IBM BladeCenter T 2-Post Rack Mount Kit
39R8311	32R0837	4293	IBM BladeCenter T 4-Post Rack Mount Kit
-	17233RX	-	IBM IU 15in Flat Panel Monitor Console Kit
-	17231RX	-	IBM 1U 17in Flat Panel Monitor Console Kit w/Optical Drive Bay
Monitors			
-	4938	-	C117 17in (15.9 inch VIS) FST CRT
-	4942	-	T115 15in TFT LCD
-	4943	-	T117 17in TFT LCD

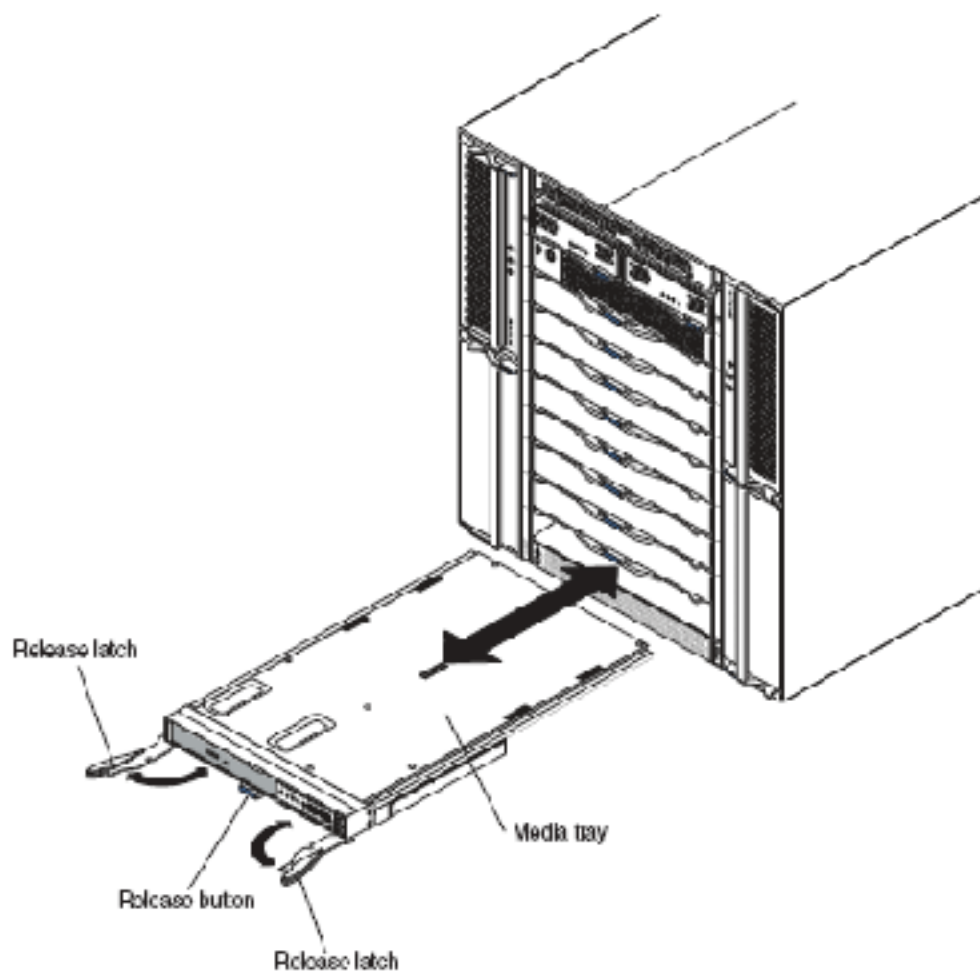


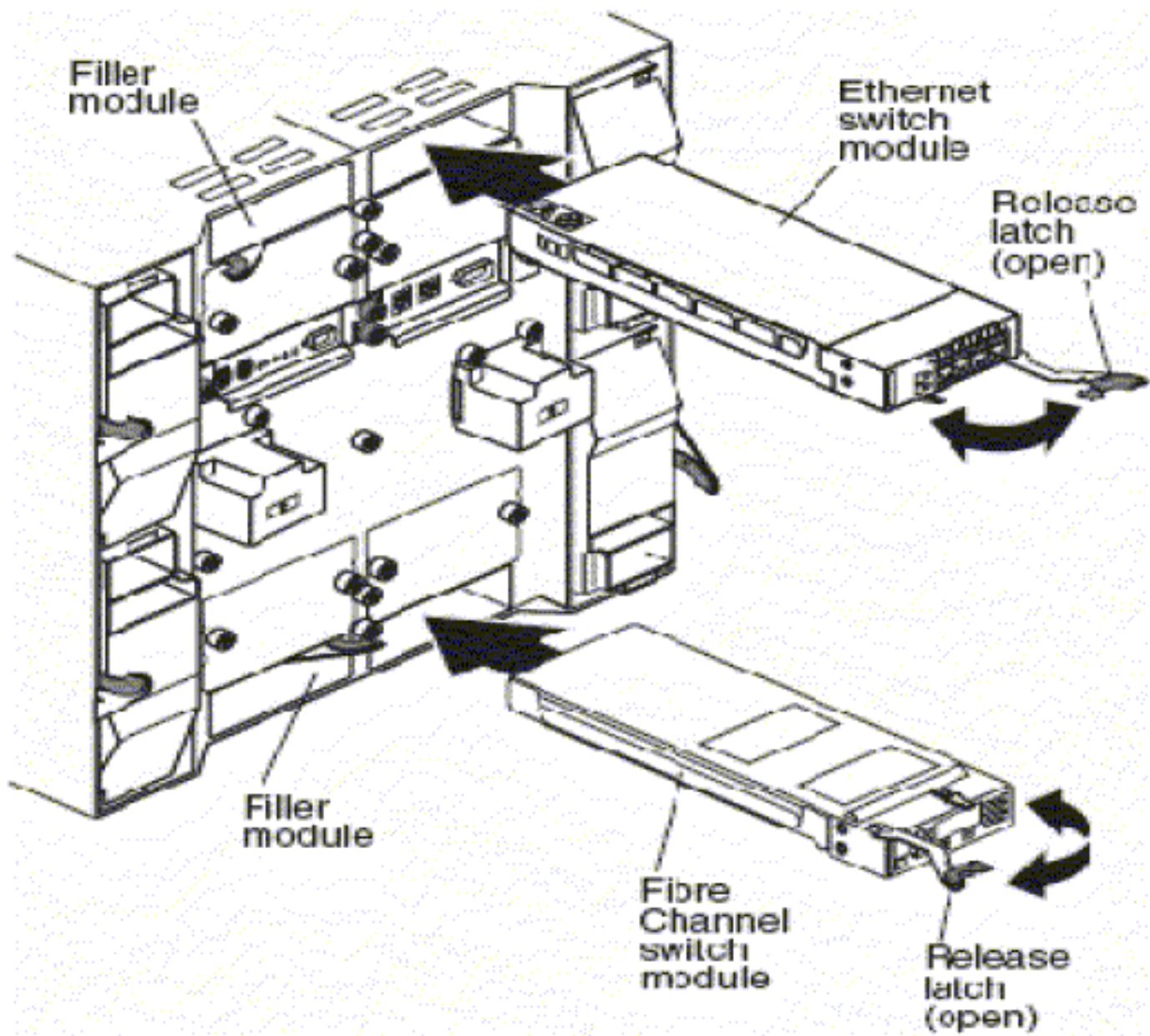












BladeCenter T (8730)

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At-A-Glance Options

Table 1. BladeCenter T (8730) Chassis at-a-glance

Part number	Form factor (width/depth)	Power modules	Power module quantity (std / max)	Hot-swap (power, bays, blowers)	Redundancy (optional, standard)
8730-2RY	Rack 8U 13.75in x 17.4in	1300W-AC (200v-240v)	2/4	P, B, B	S-Blower S-Power

Table 1. BladeCenter T (8730) Chassis at-a-glance (continued)

Part number	Management module (std / max) ¹	I/O module bays (total / avail) ²	Optical drive	Diskette drive	Blade bays (total / avail) ³
8730-2RY	1/2	4/4	24x CD/DVD-RW	-	8/8

Notes:

1. The Management Module incorporates a chassis-level management processor and dual Keyboard/Video/Mouse (KVM) switches. No external KVM switching is required. Installation of additional Management Module will require additional power supplies.
2. A maximum of four I/O switches can be installed in the rear of the system. A maximum of four Gbit Ethernet switches or a maximum of two Gbit Ethernet switches and two-fiber channel switches can be installed. The minimum system configuration requires one Gbit Ethernet switch to be installed.
3. Supports up to 8 single-wide blade servers. Additional power supplies are required to maintain full redundancy beyond 4 blade servers.

Table 2. BladeCenter T Chassis, blade server support

Blade server	8730
HS20	All
HS21 ¹	L1Y, L2Y, L3Y, L4Y, L5Y, L6Y, EXY, H1Y, J1Y, J2Y, C4Y, NTY ²
HS21 XM	Dual Core ³ - L1Y, L2Y, L3Y, L4Y, L5Y, E5Y, H1Y, NTY Quad Core ¹ - A1Y, A2Y, C1Y, C2Y, E2Y, J1Y, J2Y, J3Y
JS20	All
JS21	All
LS20	All
LS21 ³	21Y, 31Y, 51Y, 2TY, E1Y
LS41 ⁴	31Y, 32Y, 51Y, 52Y, 4TY, E2Y

Notes:

1. Supports a maximum capacity of 7 blade servers.
2. Due to limited power availability some higher power models require installation at lower densities.
3. Supports a maximum capacity of 8 blade servers.
4. Supports a maximum capacity of 4 blade servers.

BladeCenter T (8730)

Attention:

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At-A-Glance Options

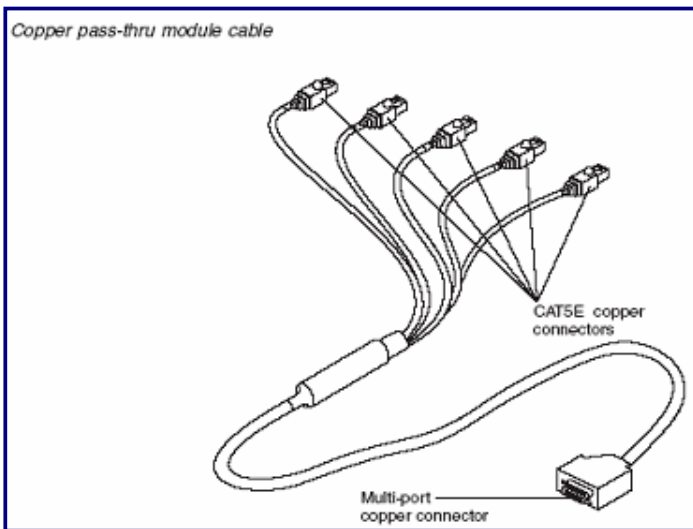
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SBB number	Option number	Feature codes	Description	Connection type from	Connection type to	# of drops	Connects from	Connects to
39Y9173	39Y9171	4364	IBM BladeCenter Optical Pass-thru Module SC Cable for IBM BladeCenter	Multiport Optical	SC Duplex Optical Connections	4	OPM switch	SAN
39Y9175	39Y9172	4365	IBM BladeCenter Optical Pass-thru Module LC Cable for IBM BladeCenter	Multiport Optical	LC Duplex Optical Connections	4	OPM switch	SAN
39Y9331	39Y9170	4366	IBM BladeCenter Copper Pass-thru Module Cable for IBM BladeCenter	Multiport Copper	CAT 5E Copper Connections	5	CPM switch	Network
32R1852	26R0813	4296	InfiniBand 4x Cable 3 meter for IBM eServer BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 4x connector	InfiniBand Fabric
32R1853	26R0814	4867	InfiniBand 4 m 12x Cable for IBM BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 12x connector	InfiniBand Fabric
32R1849	26R0847	4294	InfiniBand 8 meter 4x Cable for IBM eServer BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 4x connector	InfiniBand Fabric
32R1850	26R0849	4295	InfiniBand 8 meter 12 to (3) 4x Cable for IBM eServer BladeCenter	InfiniBand Switch	4x InfiniBand	3	InfiniBand 12x connector	InfiniBand Fabric
43W4383	43W4377	4866	InfiniBand 10 meter 4x Cable for IBM BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 4x connector	InfiniBand Fabric
43W4385	43W4379	4869	InfiniBand 11 meter 12x to (3) 4x Cable for IBM BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 12x connector	InfiniBand Fabric
32R1938	32R1937	4362	IBM CX4 1.5 Meter Cable	CX4 Connector	CX4 Connector	1	10Gb ESM CX4 Port	Another Nortel 10Gb ESM or external 10Gb switch with CX4 ports.
32R1942	32R1941	4363	IBM CX4 3.0 Meter Cable	CX4 Connector	CX4 Connector	1	10Gb ESM CX4 Port	Another Nortel 10Gb ESM or external 10Gb switch with CX4 ports.

Notes:

1. This cable is 1.5m in length and provides four connections between the optical pass-thru-module (OPM) and an external Ethernet or fibre environment.
2. Provides five copper connections between the copper pass-thru module (CPM) and an external gigabit Ethernet environment. A maximum of 14 connections per CPM is supported. One CPM cable ships with the CPM option. Two additional cables can be installed.
3. Option 39Y9170 cannot be installed by manufacturing. It must be shipped separately, as an accessory.

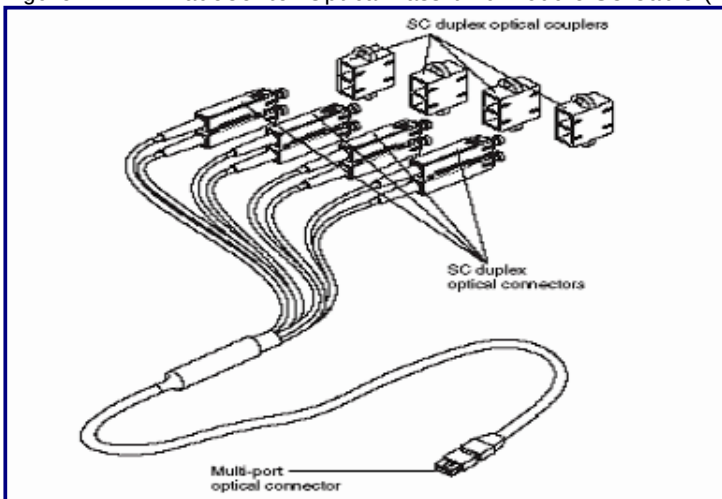
Figure 1. IBM BladeCenter Copper Pass-thru Module Cable



Click image to enlarge

This IBM BladeCenter option provides connection between the copper pass-thru module and an external environment. This cable allows up to five copper connections to blade servers. One of these cables included with each copper pass-thru module. Cable is 3.1m (9.4ft) in length.

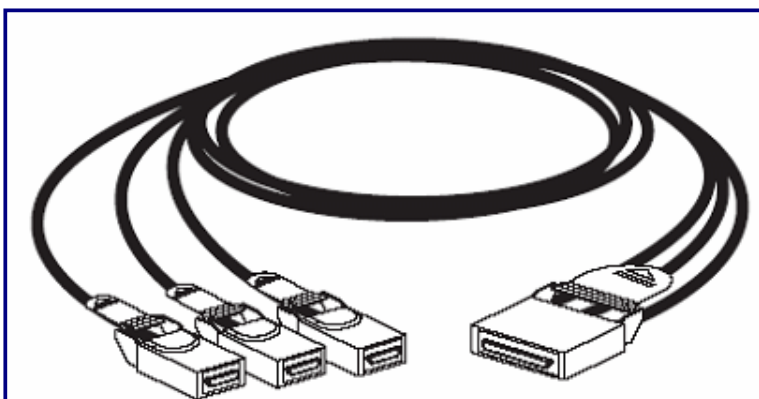
Figure 2. IBM BladeCenter Optical Pass-thru Module SC Cable (1.5M)



Click image to enlarge

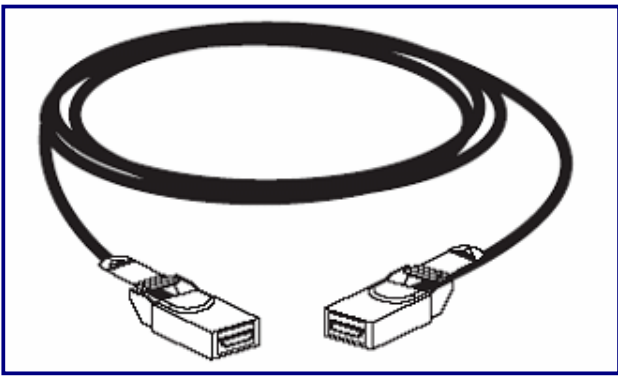
This cable provides connection between the Optical Pass-thru Module and an external environment. This 1.5 m cable presents four SC connections.

Figure 3. InfiniBand 12x to (3) 4x Cable 3 meter for IBM BladeCenter



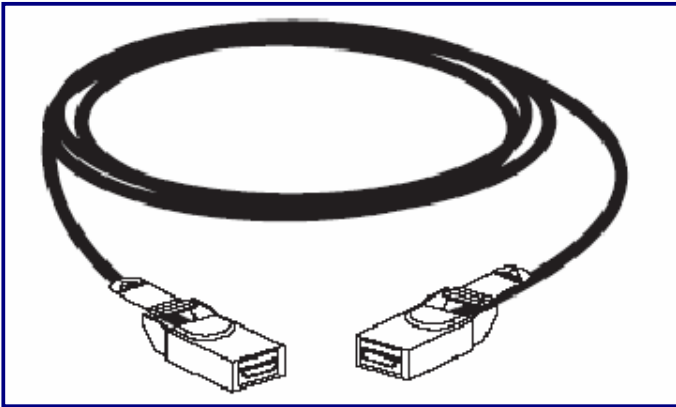
Click image to enlarge

Figure 4. InfiniBand 4x Cable 3 meter for IBM BladeCenter



Click image to enlarge

Figure 5. IBM CX4 1.5 or 3.0 meter Cable for IBM BladeCenter (Connector color is Gray)



Click image to enlarge

BladeCenter T (8730)

Attention:

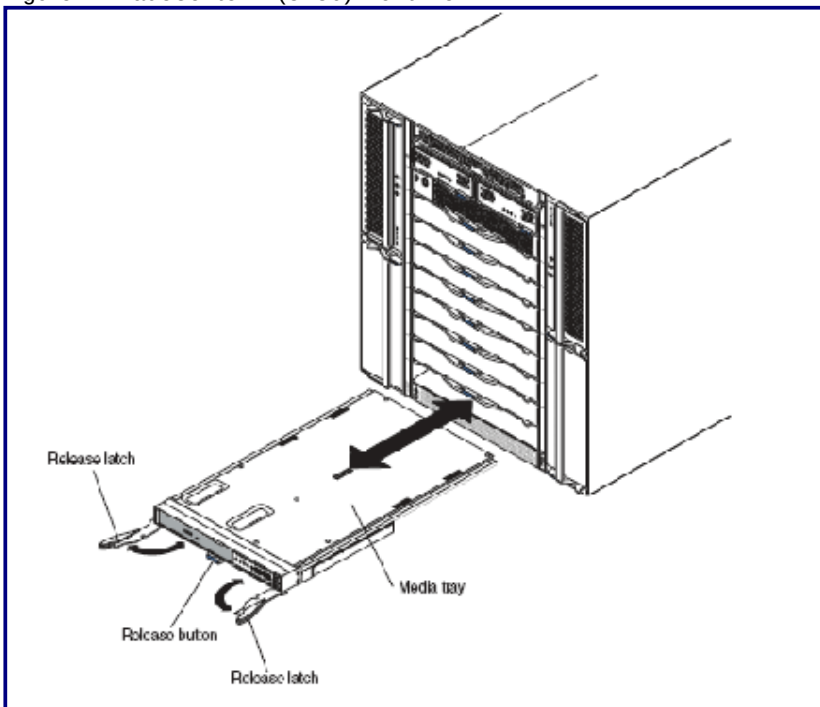
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At-A-Glance Options

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SBB number	Option number	Feature codes	Description	Type	Height	Bays supported	Max quantity
32R2854	-	4145	Optical drive 24x combo CD/DVD R/W	IDE	-	Optical	1

Figure 1. BladeCenter T (8730) front view



[Click image to enlarge](#)

BladeCenter T (8730)

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At-A-Glance Options

[Cabling](#) | [Optical storage](#) | [I/O](#) | [Pwr Acc](#) |

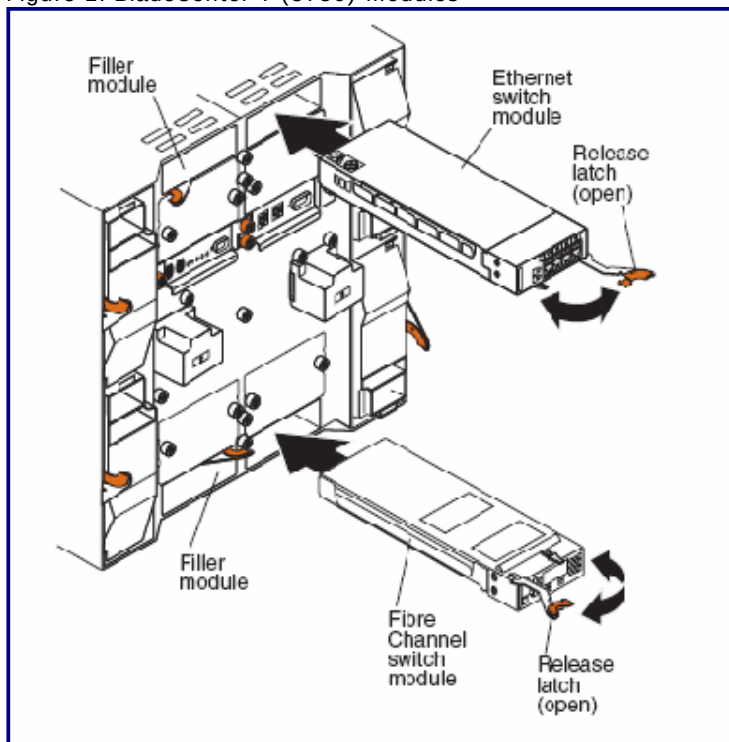
SBB number	Option number	Feature codes	Description	Form factor	Slots supported	Hot plug capable	Max supported
Storage Controllers							
-	172641X	-	FC SAS Single Controller DS3400	-	-	-	-
Networking							
26R0882	26R0881	1560	QLogic 4Gb 20-port Fibre Channel Switch Module for IBM eServer ¹	StFF	3,4	Y	2
32R1906	32R1904	1575	QLogic 4Gb 10-port Fibre Channel Switch Module for IBM eServer BladeCenter ¹	StFF	3,4	Y	2
43W6729	43W6723	2985	QLogic 4Gb Intelligent Pass-thru Module for IBM BladeCenter	StFF	3,4	Y	2
-	43W6836	-	QLogic SAN Doctor for IBM BladeCenter	StFF	3,4	Y	2
43W6730	43W6724	2986	QLogic 10-port 4Gb SAN Switch Module for IBM BladeCenter	StFF	3,4	Y	2
-	32R1912	-	QLogic/ McData 10-port Upgrade for IBM eServer BladeCenter	StFF	3,4	Y	2
-	43W6838	-	QLogic Enterprise Fabric Suite 2007 for IBM BladeCenter	StFF	3,4	Y	2
43W6731	43W6725	2987	QLogic 20-port 4Gb SAN Switch Module for IBM BladeCenter	StFF	3,4	Y	2
-	43W6837	-	QLogic Fabric Security for IBM BladeCenter	StFF	3,4	Y	2
32R1815	32R1812	1569	Brocade® 4Gb 20-port SAN Switch Module for IBM eServer BladeCenter ¹	StFF	3,4	Y	2
32R1816	32R1813	1571	Brocade® 4Gb 10-port SAN Switch Module for IBM eServer BladeCenter ¹	StFF	3,4	Y	2
32R1834	32R1833	1562	McDATA 4Gb 20-port Fibre Channel Switch Module for IBM eServer BladeCenter ¹	StFF	3,4	Y	2
32R1907	32R1905	1576	McDATA 4Gb 10-port Fibre Channel Switch Module for IBM eServer BladeCenter ¹	StFF	3,4	Y	2
32R1784	32R1783	1493	Nortel 10Gb Uplink Ethernet Switch Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1862	32R1859	1494	Nortel Networks Layer 2 - 7 Gigabit Ethernet Switch Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1863	32R1860	1495	Nortel Networks L2/L3 Copper Gigabit Ethernet Switch Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1864	32R1861	1496	Nortel Networks L2/L3 Fiber Gigabit Ethernet Switch Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
41Y8520	41Y8522	2988	Cisco Catalyst Switch 3110X for IBM BladeCenter	StFF	1,2,3,4	Y	4
41Y8521	41Y8523	2989	Cisco Catalyst Switch 3110G for IBM BladeCenter	StFF	1,2,3,4	Y	4
43W4398	43W4395	5450	Cisco Catalyst Switch Module 3012 for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1889	32R1888	1497	Cisco Systems Fiber Intelligent Gigabit Ethernet Switch Module for IBM BladeCenter	StFF	1,2,3,4	Y	4

32R1893	32R1892	1498	Cisco Systems Intelligent Gigabit Ethernet Switch Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1901	32R1900	1499	Cisco Systems InfiniBand Switch Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
39Y9279	39Y9280	2983	Cisco Systems 4Gb 20 port Fibre Channel Module	StFF	3,4	Y	2
39Y9283	39Y9284	2984	Cisco Systems 4Gb 10 port Fibre Channel Module	StFF	3,4	Y	2
-	39Y9290	-	CS 10 port License Upgrade for IBM BladeCenter 4Gb Modules	StFF	3,4	Y	2
39Y9325	39Y9324	1484	Server Connectivity Module for IBM BladeCenter	StFF	1,2,3,4	-	4
39Y9317	39Y9316	1556	IBM BladeCenter Optical Pass-thru Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
39Y9321	39Y9320	2900	IBM BladeCenter Copper Pass-thru Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
44W4484	44W4483	5452	Intelligent Copper Pass-thru Module for IBM BladeCenter	-	1,2,3,4	Y	4
44W4405	44W4404	1590	Nortel 1/10Gb Uplink Ethernet Switch Module for IBM BladeCenter	-	1,2,3,4	Y	4
System Management							
32R0855	32R0835	4239	IBM BladeCenter T Advanced Management Module	Adv Mgmt Module Bay	Redundant 2KVM/Adv Mgmt Module Slot	Y	2
Associated Options							
32R1879	32R1877	4360	IBM 10GbE 850nm Fiber XFP Transceiver	-	-	-	-
32R1880	-	4361	IBM 10GbE 1310nm Fiber XFP Transceiver (LR)	-	-	-	-
41Y8597	41Y8596	4863	Cisco Systems 4Gb Short-wave Length 4-pack SFP Modules for IBM BladeCenter	-	-	-	-
41Y8599	41Y8598	4864	Cisco Systems 4Gb Short-wave Length SFP Module for IBM BladeCenter	-	-	-	-
41Y8601	41Y8600	4865	Cisco Systems 4Gb Long-wave Length SFP Module for IBM BladeCenter	-	-	-	-
Note: Form Factor abbreviations are as follows: SFF = Small Form Factor, StFF = Standard Form Factor, HSFF = High Speed Form Factor.							

Notes:

1. When installed in switch module bay 3, port 1 is enabled on blade-installed Fibre Channel expansion cards. When installed in switch bay 4, port 2 is enabled on blade-installed Fibre Channel expansion cards.
2. One required per system. Install in Management Module bay 1.

Figure 1. BladeCenter T (8730) modules



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BladeCenter T (8730)

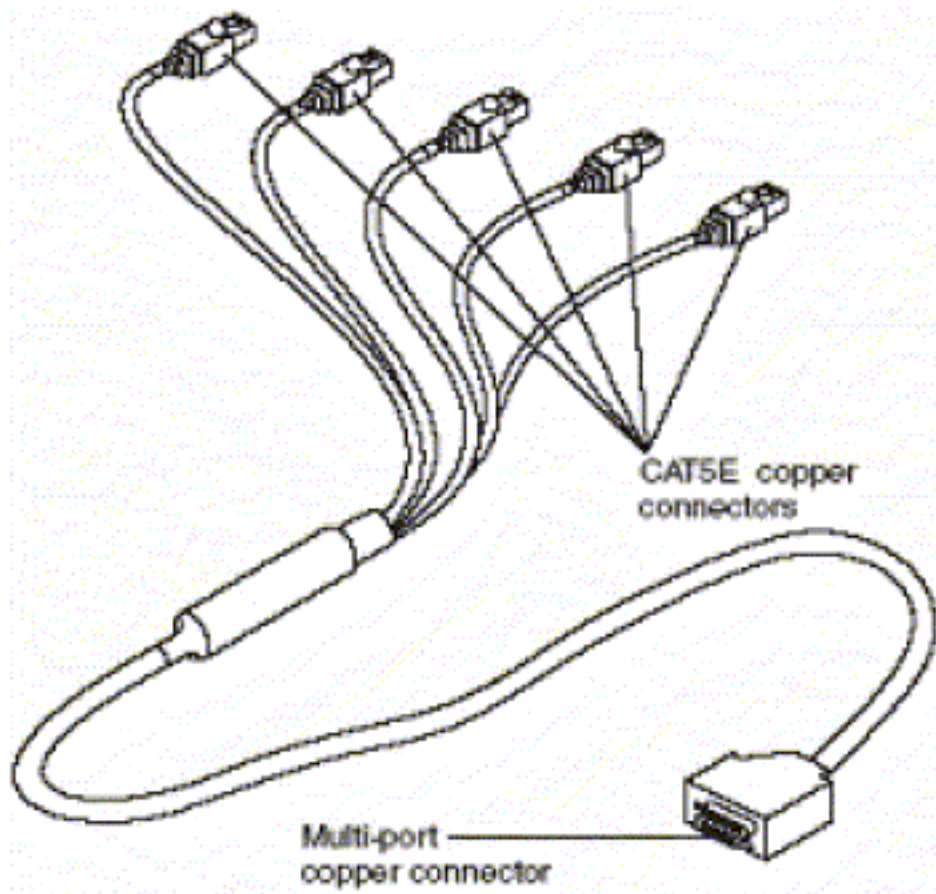
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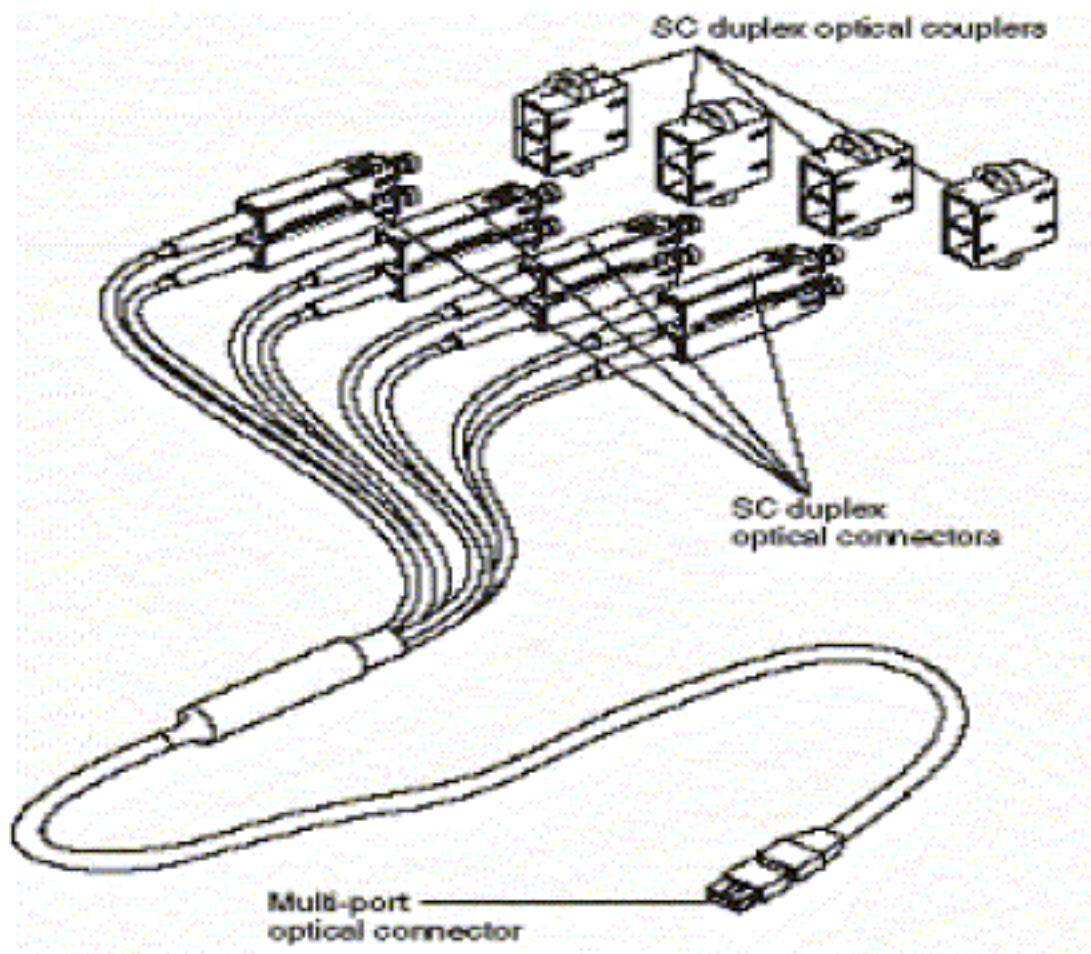
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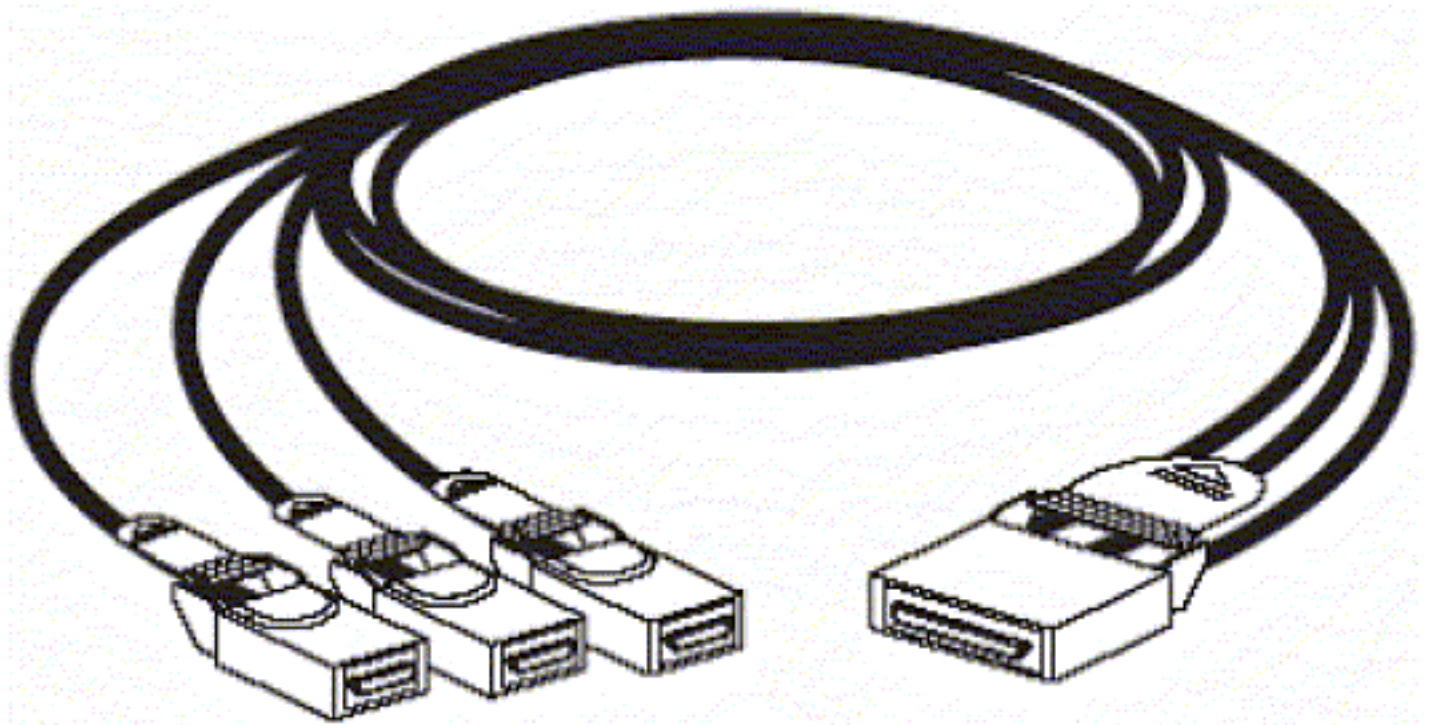
At-A-Glance Options

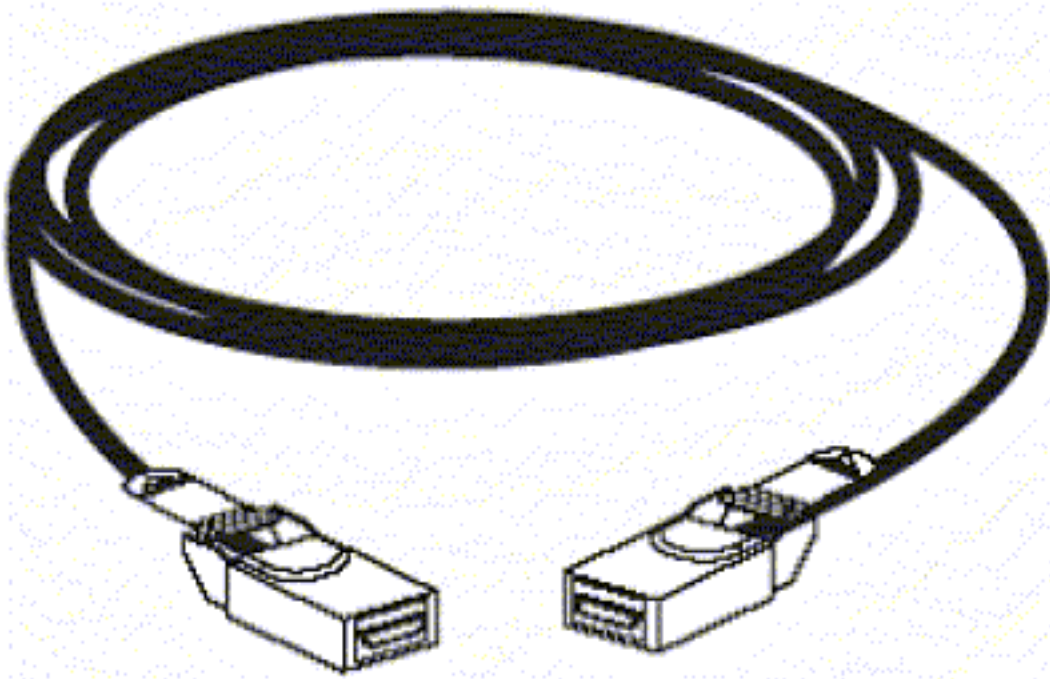
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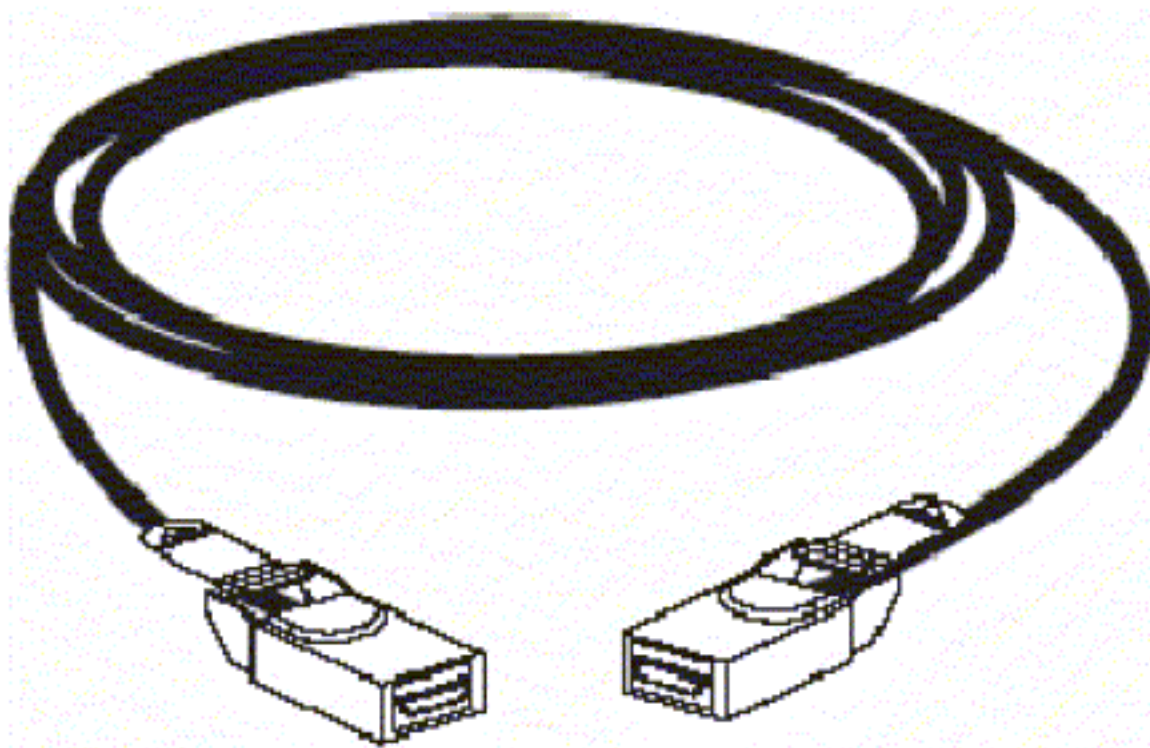
SBB Number	Option Number	Feature codes	Description
Power			
32R0826	-	1961	Redundant BladeCenter T 1300W-DC Power Supplies
Power Distribution Units			
-	39M2816	-	IBM DPI C13 PDU+C13 without line cord
-	39M2818	-	IBM DPI C19 PDU+C19 without line cord
-	39M2819	-	IBM DPI C19 3 phase PDU+C19 with attached line cord
-	39Y8905	-	DPI NEMA Rack PDU
-	39Y8923	-	DPI 60A Three Phase C19 Enterprise PDU w/ IEC309 3P+G (208V) fixed line cord
-	39Y8935	-	63A/250V Front-end PDU IEC 309 P+N+G
-	39Y8938	-	30amp/125V Front-end PDU with NEMA L5-30P connector
-	39Y8939	-	30amp/250V Front-end PDU with NEMA L6-30P
-	39Y8940	-	60amp/250V Front-end PDU with IEC 309 60A 2P+N+Gnd connector
Rack Console Connectivity			
-	17353LX	-	IBM 1x8 Console Switch
-	17354LX	-	IBM 2x16 Console Switch
Racks			
39R8309	-	4292	IBM BladeCenter T 2-Post Rack Mount Kit
39R8311	32R0837	4293	IBM BladeCenter T 4-Post Rack Mount Kit
Monitors			
-	4938	-	C117 17in (15.9 inch VIS) FST CRT
-	4942	-	T115 15in TFT LCD
-	4943	-	T117 17in TFT LCD

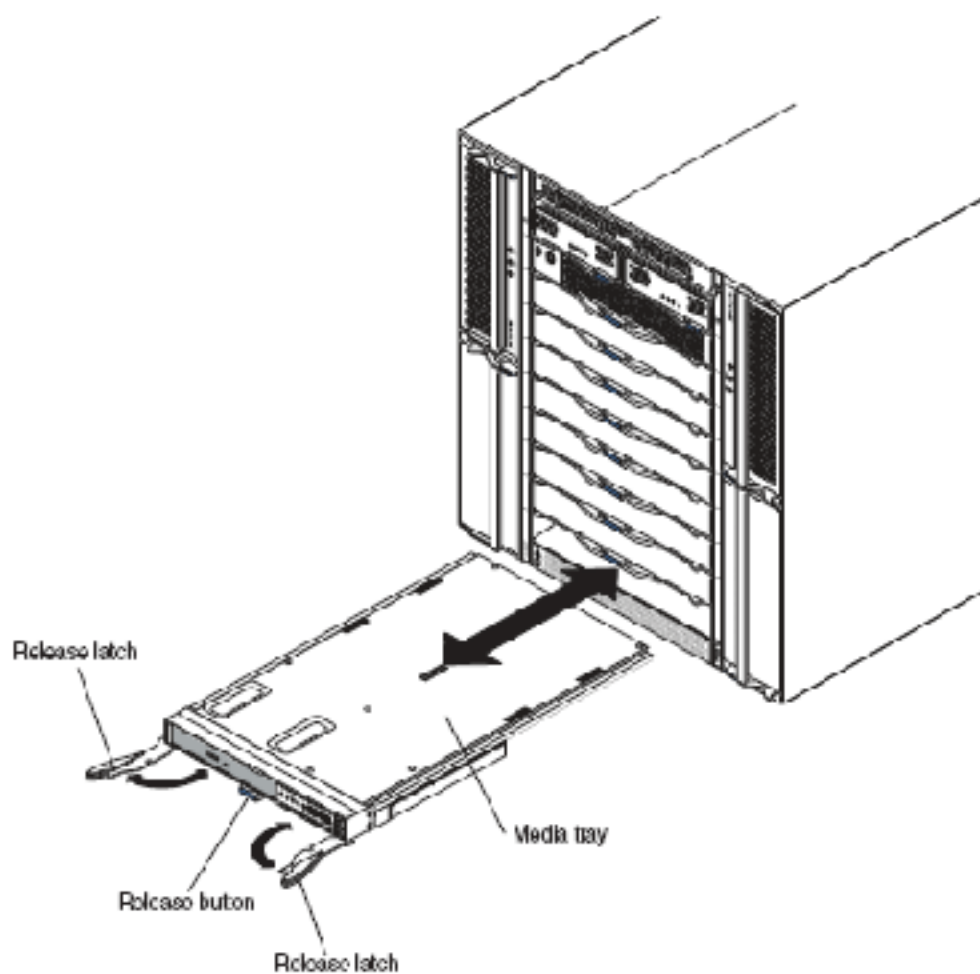


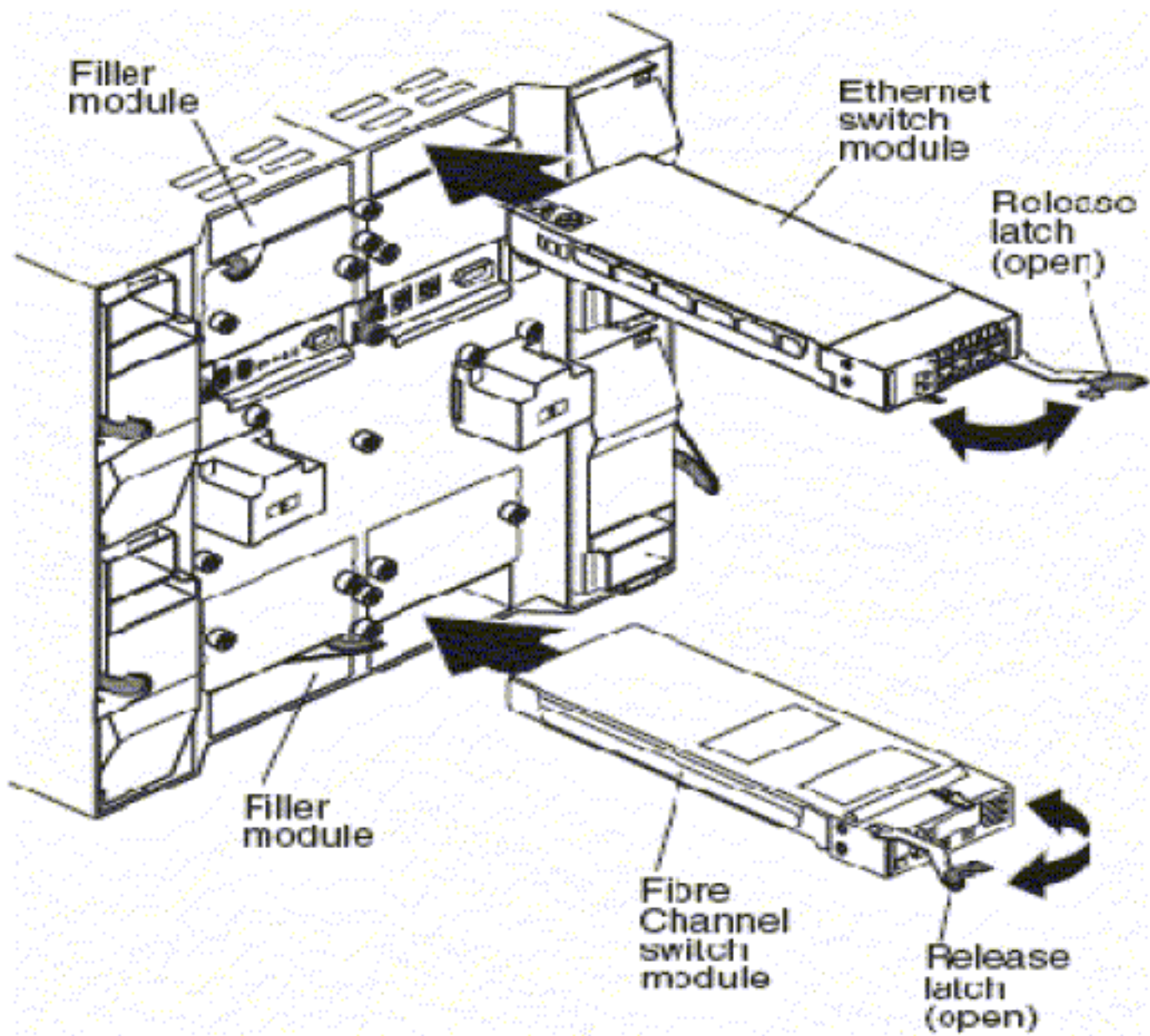












BladeCenter HT DC (8740)

Attention:

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At-A-Glance Options

Table 1. BladeCenter HT DC (8740) Chassis at-a-glance

Part number	Form factor (width / depth)	Power modules	Power module quantity (std / max)	Hot-swap (power, bays, blowers)	Redundancy (optional, standard)
8740-1RY	Rack 12U 19in x 24in	2535w (-48v to -60v)	2/4	P, B, B	S-Fans, S-Power

Table 1. BladeCenter HT DC (8740) Chassis at-a-glance (continued)

Part number	Management module (std / max)	I / O module bays (total / avail)	Optical drive	Diskette drive	Blade bays (total / avail)
8740-1RY	1/2	8/8	-	-	12/12

Table 2. BladeCenter HT Chassis, blade server support

Blade Server	8740
HS20	All
HS21	All Dual Core ¹ All Quad Core ²
HS21 XM	All Dual Core ¹ All Quad Core ³
JS20	All
JS21	All
LS20	All
LS21	All
LS41	All
QS21	All

Notes:

1. Supports a maximum capacity of 12 blade servers.
2. Supports a maximum capacity of 10 blade servers at 120 watts.
3. Supports a maximum capacity of 12 blade servers at 80 watts.

BladeCenter HT DC (8740)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

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SBB number	Option number	Feature codes	Description	Connection type from	Connection type to	# of drops	Connects from	Connects to
39Y9173	39Y9171	4364	IBM BladeCenter Optical Pass-thru Module SC Cable ¹	Multiport Optical	SC Duplex Optical Connections	4	OPM switch	SAN
39Y9175	39Y9172	4365	IBM BladeCenter Optical Pass-thru Module LC Cable	Multiport Optical	LC Duplex Optical Connections	4	OPM switch	SAN
39Y9331	39Y9170	4366	IBM BladeCenter Copper Pass-thru Module Cable for IBM BladeCenter ^{2,3}	Multiport Copper	CAT 5E Copper Connections	5	CPM switch	Network
-	73P5992	-	IBM BladeCenter Optical Pass-thru Module SC Cable	-	-	-	-	-
-	73P6033	-	IBM BladeCenter Optical Pass-thru Module LC Cable	-	-	-	-	-
-	73P6101	-	IBM BladeCenter Copper Pass-thru Module Cable	-	-	-	-	-
42D1472	-	3712	InfiniBand 4x 3 meter DDR Cable	InfiniBand Switch	4x InfiniBand	-	InfiniBand 4x connector	InfiniBand Fabric
42D1474	-	3713	InfiniBand 4x 3 meter DDR Cable	InfiniBand Switch	4x InfiniBand	-	InfiniBand 4x connector	InfiniBand Fabric
32R1849	26R0847	4294	InfiniBand 8 meter 4x Cable for IBM eServer BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 4x connector	InfiniBand Fabric
32R1850	26R0849	4295	InfiniBand 8 meter 12 to (3) 4x Cable for IBM eServer BladeCenter	InfiniBand Switch	4x InfiniBand	3	InfiniBand 12x connector	InfiniBand Fabric
32R1938	32R1937	4362	IBM CX4 1.5 Meter Cable	CX4 Connector	CX4 Connector	1	10 Gb ESM CX4 Port	Another Nortel 10 Gb ESM or external 10 Gb switch with CX4 ports.
32R1942	32R1941	4363	IBM CX4 3.0 Meter Cable	CX4 Connector	CX4 Connector	1	10 Gb ESM CX4 Port	Another Nortel 10 Gb ESM or external 10 Gb switch with CX4 ports.

BladeCenter HT DC (8740)

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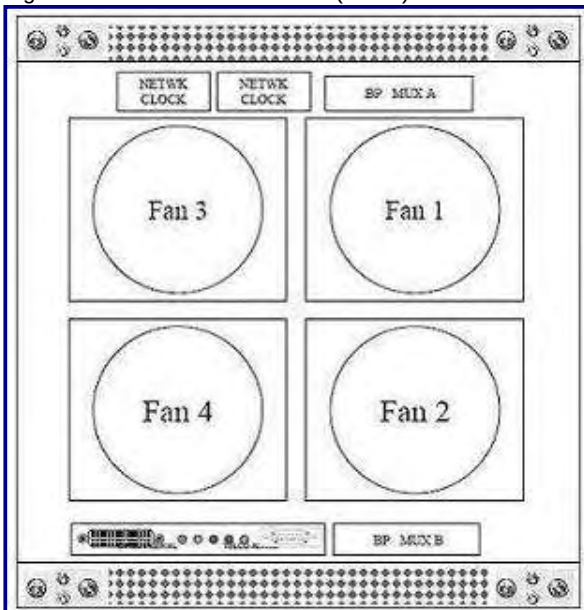
SBB number	Option number	Feature codes	Description	Type	Height	Bays supported	Max qty
-	-	-	-	-	-	-	-

Figure 1. BladeCenter HT DC (8740) front view



[Click image to enlarge](#)

Figure 2. BladeCenter HT DC (8740) rear view



[Click image to enlarge](#)

BladeCenter HT DC (8740)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

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SBB number	Option number	Feature codes	Description	Form factor	Slots supported	Hot plug capable	Max supported
Networking¹							
32R1907	32R1905	1576	McData 4Gb 10-port Fibre Channel Switch Module for eServer ¹	StFF	3, 4	Y	2
32R1834	32R1833	1562	McDATA® 4Gb 20-port Fibre Channel Module for eServer BladeCenter ¹	StFF	3, 4	Y	2
39Y9206	39Y9207	2941	QLogic InfiniBand Ethernet Bridge Module for IBM BladeCenter	StFF	-	-	-
43W6729	43W6723	2985	QLogic 4Gb Intelligent Pass-thru Module for IBM	StFF	3, 4	Y	2
-	22R4242	-	4Gb Short Wave SFP Module	StFF	3, 4	Y	2
-	22R4897	-	4 Gbps SW SFP Transceiver 4 Pack	StFF	3, 4	Y	2
32R1906	32R1904	1575	QLogic 4Gb 10-port Fibre Channel Switch Module for eServer ¹	StFF	3, 4	Y	2
26R0882	26R0881	1560	QLogic 4Gb 20-port Fibre Channel Switch Module for IBM eServer ¹	StFF	3, 4	Y	2
-	43W6836	-	QLogic SAN Doctor for IBM BladeCenter	StFF	3, 4	Y	2
43W6730	43W6724	2986	Qlogic 10-port 4Gb SAN Switch Module for IBM	StFF	3, 4	Y	2
-	32R1912	-	QLogic/ McData 10-port Upgrade for IBM eServer BladeCenter	StFF	3, 4	Y	2
43W6731	43W6725	2987	QLogic 20-port 4Gb SAN Switch Module for IBM BladeCenter	StFF	3, 4	Y	2
-	43W6838	-	QLogic Enterprise Fabric Suite 2007 for IBM BladeCenter	StFF	3, 4	Y	2
-	43W6837	-	QLogic Fabric Security for IBM BladeCenter	StFF	3, 4	Y	2
32R1815	32R1812	1569	Brocade 4Gb 20-port SAN Switch Module for IBM eServer BladeCenter ¹	StFF	3, 4	Y	2
32R1816	32R1813	1571	Brocade 4Gb 10-port SAN Switch Module for IBM eServer BladeCenter ¹	StFF	3, 4	Y	2
39Y9266	-	2952	Nortel 10Gb Ethernet Switch Module for IBM BladeCenter	StFF	7,8,9,10	Y	4
32R1784	32R1783	1493	Nortel 10 Gb Uplink Ethernet Switch Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1862	32R1859	1494	Nortel Networks Layer 2 - 7 Gb Ethernet Switch Mod for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1863	32R1860	1495	Nortel Networks L2/L3 Copper Gb Ethernet Sw Mod for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1864	32R1861	1496	Nortel Networks L2/L3 Fiber Gb Ethernet Sw Mod for IBM BladeCenter	StFF	1,2,3,4	Y	4
41Y8520	41Y8522	2988	Cisco Catalyst Switch 3110X for IBM BladeCenter	StFF	1,2,3,4	Y	4
41Y8521	41Y8523	2989	Cisco Catalyst Switch 3110G for IBM BladeCenter	StFF	1,2,3,4	Y	4
43W4398	43W4395	5450	Cisco Catalyst Switch Module 3012 for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1889	32R1888	1497	Cisco Systems Fiber Intelligent Gb Ethrnt Sw Mod for IBM BladeCenter	StFF	1,2,3,4	Y	4
-	39Y9284	-	CS 4Gb 10 port Fibre Channel Switch Module for IBM BladeCenter	StFF	3, 4	Y	2

32R1893	32R1892	1498	Cisco Systems Intelligent Gb Ethrnt Sw Mod for IBM BladeCenter	StFF	1,2,3,4	Y	4
-	32R1822	-	Brocade 4Gb 10-port Upgrade for IBM BladeCenter	StFF	1,2,3,4	Y	4
-	32R1855	-	Brocade 4Gb Fabric Watch for IBM BladeCenter	StFF	1,2,3,4	Y	4
-	26K5605	-	Brocade Performance Bundle for IBM eServer BladeCenter	StFF	1,2,3,4	Y	4
-	26K5607	-	Brocade ISL Trunking for IBM eServer BladeCenter	StFF	1,2,3,4	Y	4
-	26K5613	-	Brocade Extended Fabrics for IBM eServer BladeCenter	StFF	1,2,3,4	Y	4
-	26K5617	-	Brocade Advanced Security (Secure OS) for IBM eServer BladeCenter	StFF	1,2,3,4	Y	4
39Y9194	39Y9195	2980	IBM BladeCenter SAS Connectivity Module	-	3, 4	Y	2
39Y9325	39Y9324	1484	Server Connectivity Module for IBM BladeCenter	StFF	1,2,3,4	-	4
39Y9317	39Y9316	1556	IBM BladeCenter Optical Pass-thru Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
-	02R9080	-	Optical Pass-thru Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
39Y9321	39Y9320	2900	IBM BladeCenter Copper Pass-thru Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
-	73P6100	-	Copper Pass-thru Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
44W4405	44W4404	1590	Nortel 1/10Gb Uplink Ethernet Switch Module for IBM BladeCenter	-	1,2,3,4	Y	4
44W4484	44W4483	5452	Intelligent Copper Pass-thru Module for IBM BladeCenter	-	1,2,3,4	Y	4
System Management							
42C5273	42C5300	4818	IBM BladeCenter HT Interposer for Gb Switches and Bridge Bays	-	-	-	-
42C5274	42C5301	2035	BladeCenter HT Interposer for Gb Switch/ Bridge Bays w/ ISL	-	-	-	-
42C5276	42C5302	4820	IBM BladeCenter HT Interposer for HS Switch Bay	-	-	-	-
42C5314	42C5315	2022	IBM BladeCenter HT Advanced Management Module Interposer	-	-	-	-
25R5779	25R5778	1604	IBM BladeCenter KVM/Advanced Management Module	Adv Mgmt Module Bay 2	Redundant KVM/Adv Mgmt Module Slot	Y	2
46C3555	44W3981	4941	IBM BladeCenter Open Fabric Manager	-	-	-	-
Associated option							
-	25K8373	-	IBM BladeCenter PCI I/O Expansion Unit II	-	-	-	-
32R1879	32R1877	4360	IBM 10GbE 850nm Fiber XFP Transceiver (SR)	-	-	-	-
32R1880	-	4361	IBM 10GbE 1310nm Fiber XFP Transceiver (LR)	-	-	-	-
Note:	Form Factor abbreviations are as follows: SFF = Small Form Factor, StFF = Standard Form Factor, HSFF = High Speed Form Factor.						
	The Standard Form Factor (StFF) card is the original form factor for expansion cards in blade servers. An StFF expansion card uses the PCI-X connector on the blade server and expansion units. When an StFF expansion card is installed using the PCI-X connector it is not possible to install a CFFh nor HSFF expansion card on the adjacent PCI-E connector (if one exists in the server) In addition, when an StFF expansion card is installed, the second hard disk drive on some blade servers cannot be installed.						

Note:

1. One interposer is required per switch.

BladeCenter HT DC (8740)

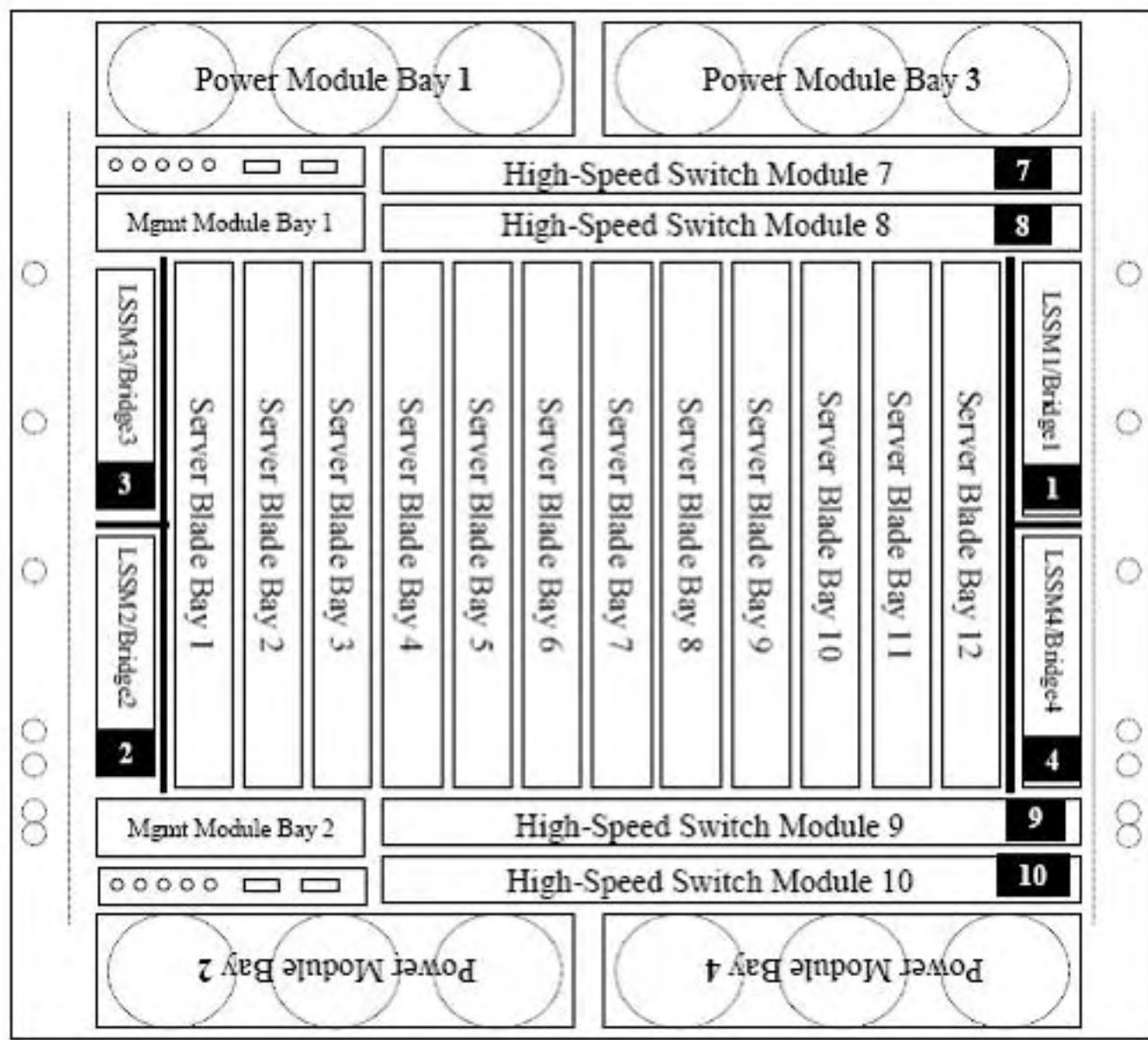
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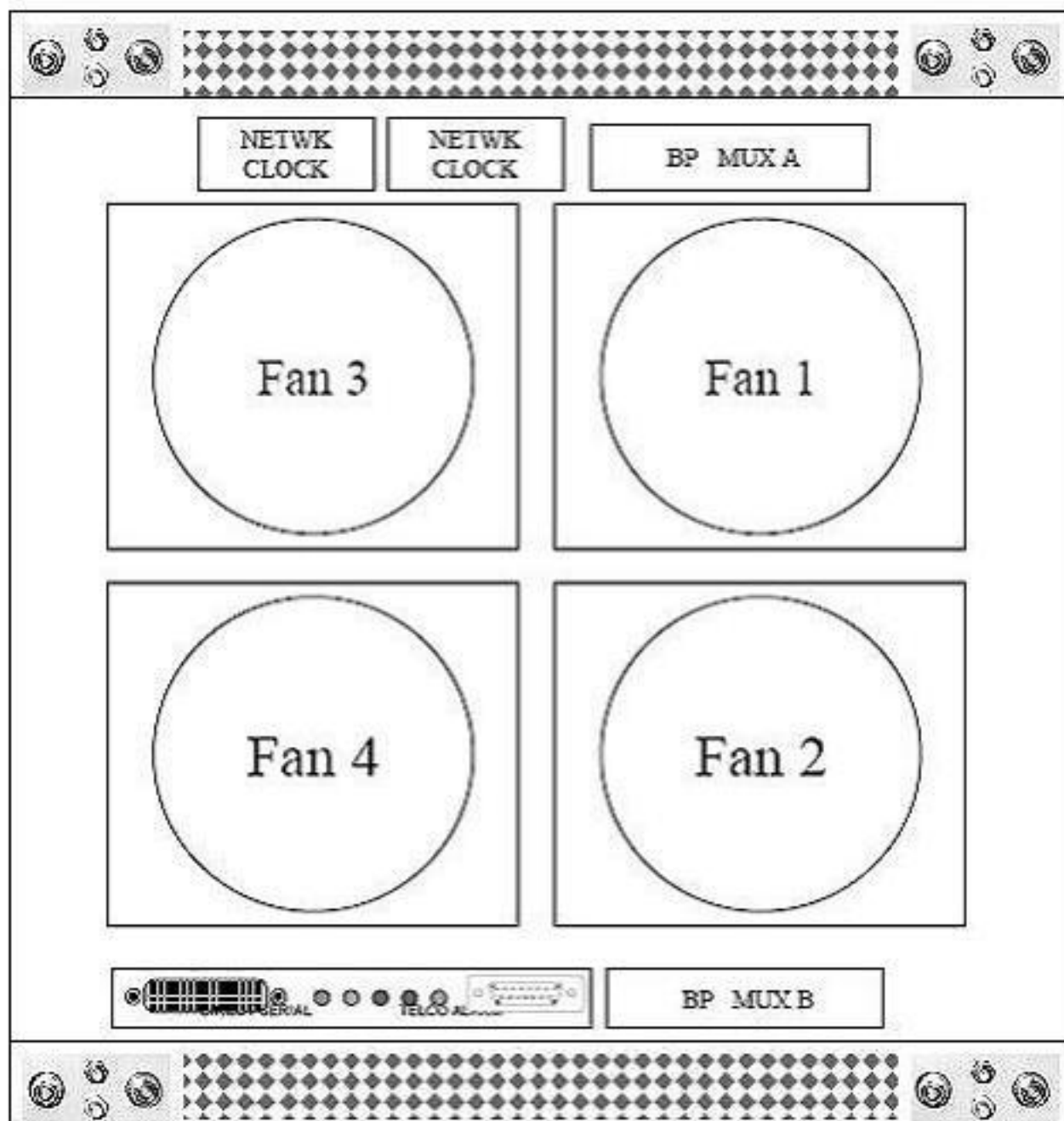
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SBB number	Option number	Feature codes	Description
Power			
43W6751	-	1987	DC Power Supply 1 & 2
42C5264	42C5279	1984	DC Power Supply 3 & 4
Racks			
-	93072RX	-	IBM 25U Standard Rack
-	93074RX	-	IBM 42U Standard Rack
-	93074XX	-	IBM 42U Standard Rack Extension
-	93084RX	-	NetBAY42 Enterprise Rack Cabinet
-	93084XX	-	NetBAY42 Enterprise Expansion Rack Cabinet (EX)
-	42C5284	-	IBM BladeCenter HT 4-Post Rack Mount Kit
42C5265	42C5278	4816	IBM BladeCenter HT Bezel (Incl Filter and Cable Mgmt Collar)
-	40K9627	-	IBM Acoustic Door for Enterprise Rack
-	17233RX	-	IBM 1U 15in Flat Panel Monitor Console Kit
-	17231RX	-	IBM 1U 17in Flat Panel Monitor Console Kit w/Optical Drive Bay
-	42C5316	-	IBM BladeCenter HT Chassis Bezel/Filter (4 pack)
42C5271	42C5305	4817	BladeCenter HT Redundant Media Tray Option
Rack console connectivity			
-	17351GX	-	IBM 2x8 Local Console Manager
-	17352GX	-	IBM Global 2x16 Console Manager
-	17354GX	-	IBM Global 4x16 Console Manager
39Y7953	31R3132	3751	IBM 3M Console Switch Cable (USB)
-	39M2894	-	IBM Virtual Media Conversion Option
-	39M2895	-	IBM USB Conversion Option
Monitors			
-	17231RX	-	IBM 1U 17in Flat Panel Console Kit w/ Optical Drive Bay
-	17233RX	-	IBM 1U 15in Flat Panel Monitor Console Kit





BladeCenter HT AC (8750)

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At-A-Glance Options

Table 1. BladeCenter HT AC (8750) Chassis at-a-glance

Part number	Form factor (width / depth)	Power modules	Power module quantity (std / max)	Hot-swap (power, bays, blowers)	Redundancy (optional, standard)
8750-1RY	Rack 12U 19in x 24in	3160w (200v-240v)	2/4	P, B, B	S-Fans, S-Power

Table 1. BladeCenter HT AC (8750) Chassis at-a-glance (continued)

Part number	Management module (std / max)	I / O module bays (total / avail)	Optical drive	Diskette drive	Blade bays (total / avail)
8750-1RY	1/2	8/8	-	-	12/12

Table 2. BladeCenter HT Chassis, blade server support

Blade Server	8750
HS20	All
HS21	All Dual Core ¹ All Quad Core ²
HS21 XM	All Dual Core ¹ All Quad Core ³
JS20	All
JS21	All
LS20	All
LS21	All
LS41	All
QS21	All

Notes:

1. Supports a maximum capacity of 12 blade servers.
2. Supports a maximum capacity of 10 blade servers.
3. Supports a maximum capacity of 12 blade servers at 80 watts.

BladeCenter HT AC (8750)

Attention:

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SBB number	Option number	Feature codes	Description	Connection type from	Connection type to	# of drops	Connects from	Connects to
39Y9331	39Y9170	4366	IBM BladeCenter Copper Pass-thru Module Cable for IBM BladeCenter ^{2,3}	Multiport Copper	CAT 5E Copper Connections	5	CPM switch	Network
39Y9173	39Y9171	4364	IBM BladeCenter Optical Pass-thru Module SC Cable ¹	Multiport Optical	SC Duplex Optical Connections	4	OPM switch	SAN
-	73P5992	-	IBM BladeCenter Optical Pass-thru Module SC Cable	-	-	-	-	-
-	73P6033	-	IBM BladeCenter Optical Pass-thru Module LC Cable	-	-	-	-	-
-	73P6101	-	IBM BladeCenter Copper Pass-thru Module Cable	-	-	-	-	-
32R1849	26R0847	4294	InfiniBand 8 meter 4x Cable for IBM eServer BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 4x connector	InfiniBand Fabric
32R1850	26R0849	4295	InfiniBand 8 meter 12 to (3) 4x Cable for IBM eServer BladeCenter	InfiniBand Switch	4x InfiniBand	3	InfiniBand 12x connector	InfiniBand Fabric

BladeCenter HT AC (8750)

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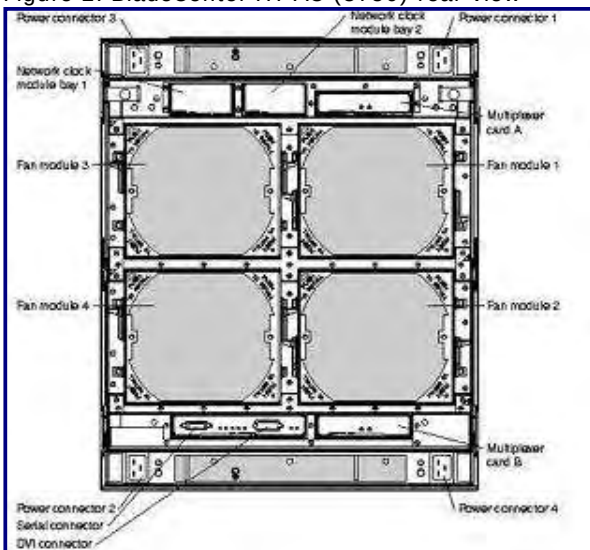
SBB number	Option number	Feature codes	Description	Type	Height	Bays supported	Max qty
-	-	-	-	-	-	-	-

Figure 1. BladeCenter HT AC (8750) front view



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Figure 2. BladeCenter HT AC (8750) rear view



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BladeCenter HT AC (8750)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

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SBB number	Option number	Feature codes	Description	Form factor	Slots supported	Hot plug capable	Max supported
Networking¹							
32R1907	32R1905	1576	McData 4Gb 10-port Fibre Channel Switch Module for eServer ¹	StFF	3, 4	Y	2
32R1834	32R1833	1562	McDATA® 4Gb 20-port Fibre Channel Module for eServer BladeCenter ¹	StFF	3, 4	Y	2
32R1906	32R1904	1575	QLogic 4Gb 10-port Fibre Channel Switch Module for eServer ¹	StFF	3, 4	Y	2
26R0882	26R0881	1560	QLogic 4Gb 20-port Fibre Channel Switch Module for IBM ¹	StFF	3, 4	Y	2
39Y9206	39Y9207	2941	QLogic Infiniband Ethernet Bridge Module for IBM BladeCenter	StFF	3, 4	-	2
43W6729	43W6723	2985	QLogic 4Gb Intelligent Pass-thru Module for IBM	StFF	3, 4	Y	2
-	43W6836	-	QLogic SAN Doctor for IBM BladeCenter	StFF	3, 4	Y	2
-	22R4242	-	4Gb Short Wave SFP Module	StFF	3, 4	Y	2
-	22R4897	-	4 Gbps SW SFP Transceiver 4 Pack	StFF	3, 4	Y	2
-	43W6837	-	QLogic Fabric Security for IBM BladeCenter	StFF	3, 4	Y	2
43W6730	43W6724	2986	Qlogic 10-port 4Gb SAN Switch Module for IBM	StFF	3, 4	Y	2
-	32R1912	-	QLogic/ McData 10-port Upgrade for IBM eServer BladeCenter	StFF	3, 4	Y	2
-	43W6838	-	QLogic Enterprise Fabric Suite 2007 for IBM BladeCenter	StFF	3, 4	Y	2
43W6731	43W6725	2987	QLogic 20-port 4Gb SAN Switch Module for IBM BladeCenter	StFF	3, 4	Y	2
39Y9266	-	2952	Nortel 10Gb Ethernet Switch Module for IBM BladeCenter	StFF	7,8,9,10	Y	4
32R1784	32R1783	1493	Nortel 10Gb Uplink Ethernet Switch Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1862	32R1859	1494	Nortel Networks Layer 2-7 Gb Ethernet Switch Mod for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1863	32R1860	1495	Nortel Networks L2/L3 Copper Gb Ethernet Sw Mod for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1864	32R1861	1496	Nortel Networks L2/L3 Fiber Gb Ethernet Sw Mod for IBM BladeCenter	StFF	1,2,3,4	Y	4
41Y8520	41Y8522	2988	Cisco Catalyst Switch 3110X for IBM BladeCenter	StFF	1,2,3,4	Y	4
41Y8521	41Y8523	2989	Cisco Catalyst Switch 3110G for IBM BladeCenter	StFF	1,2,3,4	Y	4
43W4398	43W4395	5450	Cisco Catalyst Switch Module 3012 for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1889	32R1888	1497	Cisco Systems Fiber Intelligent Gb Ethrnt Sw Mod for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1893	32R1892	1498	Cisco Systems Intelligent Gb Ethrnt Sw Mod for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1815	32R1812	1569	Brocade 4Gb 20-port SAN Switch Module for IBM eServer BladeCenter	StFF	3,4	Y	2
32R1816	32R1813	1571	Brocade 4Gb 10-port SAN Switch Module for IBM eServer BladeCenter	StFF	3,4	Y	2
-	32R1822	-	Brocade 4Gb 10-port Upgrade for IBM BladeCenter	StFF	1,2,3,4	Y	4

-	32R1855	-	Brocade 4Gb Fabric Watch for IBM BladeCenter	StFF	1,2,3,4	Y	4
-	26K5607	-	Brocade ISL Trunking for IBM eServer BladeCenter	StFF	1,2,3,4	Y	4
-	26K5605	-	Brocade Performance Bundle for IBM eServer BladeCenter	StFF	1,2,3,4	Y	4
-	26K5613	-	Brocade Extended Fabrics for IBM eServer BladeCenter	StFF	1,2,3,4	Y	4
-	26K5617	-	Brocade Advanced Security (Secure OS) for IBM eServer BladeCenter	StFF	1,2,3,4	Y	4
39Y9325	39Y9324	1484	Server Connectivity Module for IBM BladeCenter	StFF	1,2,3,4	-	4
39Y9317	39Y9316	1556	IBM BladeCenter Optical Pass-thru Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
-	02R9080	-	Optical Pass-thru Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
39Y9321	39Y9320	2900	IBM BladeCenter Copper Pass-thru Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
-	73P6100	-	Copper Pass-thru Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
44W4484	44W4483	5452	Intelligent Copper Pass-thru Module for IBM BladeCenter	-	1,2,3,4	Y	4
44W4405	44W4404	1590	Nortel 1/10Gb Uplink Ethernet Switch Module for IBM BladeCenter	-	1,2,3,4	Y	4
System Management							
42C5273	42C5300	4818	IBM BladeCenter HT Interposer for Gb Switches and Bridge Bays	-	-	-	-
42C5274	42C5301	2035	BladeCenter HT Interposer for Gb Switch/ Bridge Bays w/ ISL	-	-	-	-
42C5276	42C5302	4820	IBM BladeCenter HT Interposer for HS Switch Bay	-	-	-	-
42C5314	42C5315	2022	IBM BladeCenter HT Advanced Management Module Interposer	-	-	-	-
25R5779	25R5778	1604	IBM BladeCenter KVM/Advanced Management Module	Adv Mgmt Module Bay 2	Redundant KVM/Adv Mgmt Module Slot	Y	2
46C3555	44W3981	4941	IBM BladeCenter Open Fabric Manager	-	-	-	-
Associated option							
-	25K8373	-	IBM eServer BladeCenter PCI I/O Expansion Unit II	-	-	-	-
32R1879	32R1877	4360	IBM 10GbE 850nm Fiber XFP Transceiver (SR)	-	-	-	-
32R1880	-	4361	IBM 10GbE 1310nm Fiber XFP Transceiver (LR)	-	-	-	-
Note: Form Factor abbreviations are as follows: SFF = Small Form Factor, StFF = Standard Form Factor, HSFF = High Speed Form Factor The Standard Form Factor (StFF) card is the original form factor for expansion cards in blade servers. An StFF expansion card uses the PCI-X connector on the blade server and expansion units. When an StFF expansion card is installed using the PCI-X connector it is not possible to install a CFFh nor HSFF expansion card on the adjacent PCI-E connector (if one exists in the server) In addition, when an StFF expansion card is installed, the second hard disk drive on some blade servers cannot be installed.							

Note:

1. One interposer is required per switch.

BladeCenter HT AC (8750)

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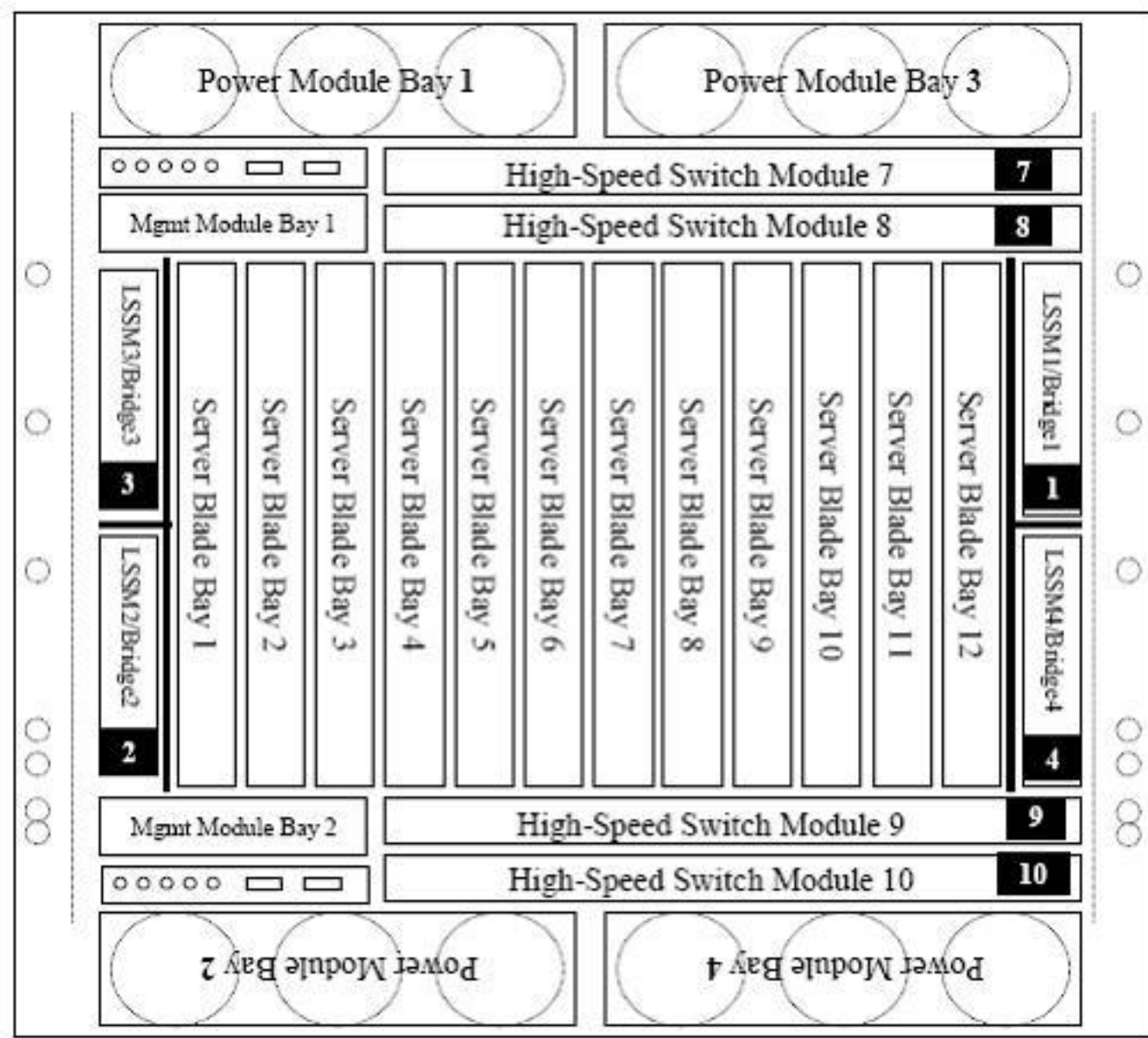
At-A-Glance Options

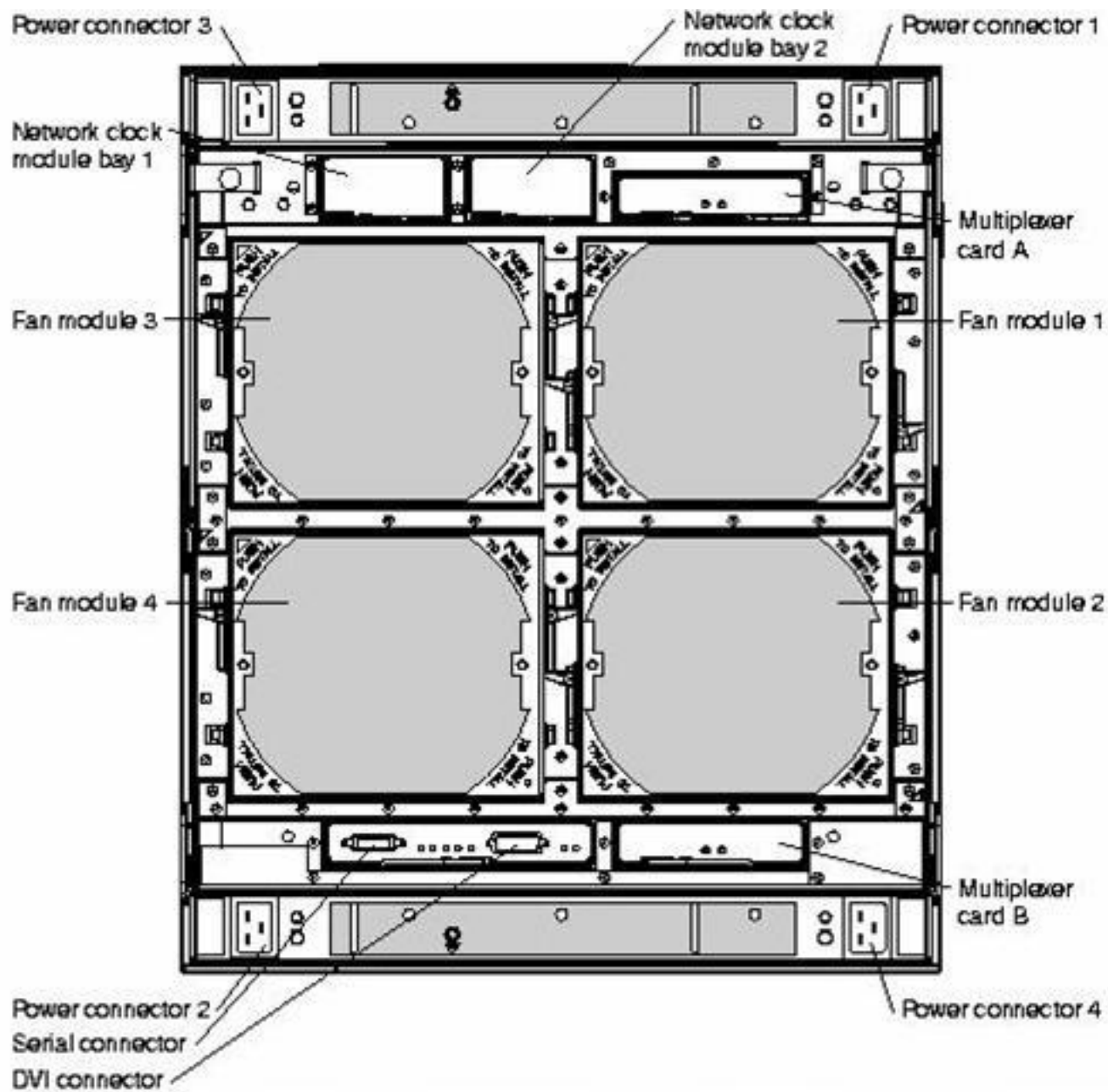
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SBB number	Option number	Feature codes	Description
Power			
43W6757	-	1986	AC Power Supply 1 & 2
42C5262	42C5280	1983	AC Power Supply 3 & 4
Power Distribution Units			
-	39Y8923	-	IBM Enterprise C19 3 phase PDU (60a)
-	39Y8935	-	63A/250V Front-end PDU IEC 309 P+N+G
-	39Y8940	-	DPI 60amp/250V Front-end PDU with IEC 309 2P+ Gnd connector
-	39Y8941	-	IBM Enterprise C13 PDU ¹
-	39Y8948	-	IBM Enterprise C19 PDU ¹
Racks			
-	93072RX	-	IBM 25U S2 standard rack
-	93074RX	-	NetBAY S2 42U Standard Rack Cabinet
-	93074XX	-	IBM 42U S2 expansion rack
-	93084RX	-	NetBAY42 Enterprise Rack
-	93084XX	-	IBM 42U S2 expansion rack
-	17351GX	-	IBM Local 2x8 Console Manager (LCM2)
-	17352GX	-	IBM Global 2x16 Console Mngr (GCM2)
-	17354GX	-	IBM Global 4x16 Console Mngr (GCM4)
-	31R3132	-	IBM 3M Console Switch Cable (USB)
-	39M2894	-	IBM Virtual Media Conversion Option (VCO)
-	39M2895	-	IBM USB Conversion Option (UCO)
42C5265	42C5278	4816	IBM BladeCenter HT Bezel (Incl Filter and Cable Mgmt Collar)
-	42C5284	-	IBM BladeCenter HT 4-Post Rack Mount Kit
-	42C5316	-	IBM BladeCenter HT Chassis Bezel/Filter (4 pack)
-	40K9627	-	IBM Acoustic Door for Enterprise Rack
42C5271	42C5305	4817	IBM BladeCenter HT Media Tray
Monitors			
-	4943	-	IBM T117 17in TFT LCD
-	4942	-	IBM T115 15in TFT LCD
-	17231RX	-	IBM 1U 17 Flat Panel console Kit w/ Optical Drive Bay
-	17233RX	-	IBM 1U 15 Flat Panel Monitor console Kit

Note:

1. Ships without a line cord. See the 'Rack power configurator' chapter for supported line cords.





BladeCenter E (8677)

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Table 1. BladeCenter E (8677) at-a-glance

Part number ¹	Withdrawal date ²	Form factor (width / depth) ³	Power modules	Power module qty (std / max)	Hot-swap (power, bays, blowers)	Redun. (opt., std)
8677-3XY	Oct 26 2006	Rack (7U) 19in x 28in	2000w AC (200v-240v)	2/4	P, B, B	S-Blowers, S-Power
8677-3RY ⁷	-	Rack (7U) 19in x 28in	2000w AC (200v-240v)	2/4	P, B, B	S-Blowers, S-Power
8677-E2Y	Dec 1 2006	Rack (7U) 19in x 28in	1800w AC (200v-240v)	4/4	P, B, B	S-Blowers, S-Power

Note: BladeCenter E can provide increased density per rack over standalone 1U servers by housing multiple blades in less rack space. BladeCenter solutions increase usability and reduce complexity by providing common sourcing for blade servers, cabling, cabling connections, I/O options, power modules, system management requirements (optional adapters and external cabling), external Fibre Channel storage switching and connectivity, and network management and expansion.

Table 1. BladeCenter E (8677) at-a-glance (continued)

Part number ¹	W'drawal date ²	Mgmt module (std / max) ⁴	I/O module bays (total / avail)	Optical drive	Diskette drive	Blade bays (total / avail)
8677-3XY	Oct 26 2006	1/2	4/4	DVD-ROM (8x-SLIM) ⁵	USB Floppy	14/14 ⁶
8677-3RY ⁷	-	1/2	4/4	DVD-ROM (8x-SLIM) ⁵	USB Floppy	14/14 ⁶
8677-E2Y	Dec 1 2006	1/2	4/4	DVD-ROM (8x-SLIM) ⁵	USB Floppy	14/14 ⁶

Note: BladeCenter E can provide increased density per rack over standalone 1U servers by housing multiple blades in less rack space. BladeCenter solutions increase usability and reduce complexity by providing common sourcing for blade servers, cabling, cabling connections, I/O options, power modules, system management requirements (optional adapters and external cabling), external Fibre Channel storage switching and connectivity, and network management and expansion.

Notes:

1. Model number is a worldwide general available variant (GAV) model number which is not orderable as listed and needs to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 8677-3XY is 8677-3XU. See the product specific Official IBM announcement letter for other country-specific GAV model numbers.
2. Withdrawal dates are provided for U.S. and Canada only. Business Partner Inventory may be available.
3. Housed in a 19in rack-mountable E.
4. The management modules for BladeCenter include KVM components.
5. Only the read function is supported on DVD-ROM drives.
6. Supports up to 14 single-wide blade servers. Additional power supplies are required to maintain full redundancy beyond six blade servers.
7. Utilizes Advanced Management Module technology.

Table 2. BladeCenter E, blade server support

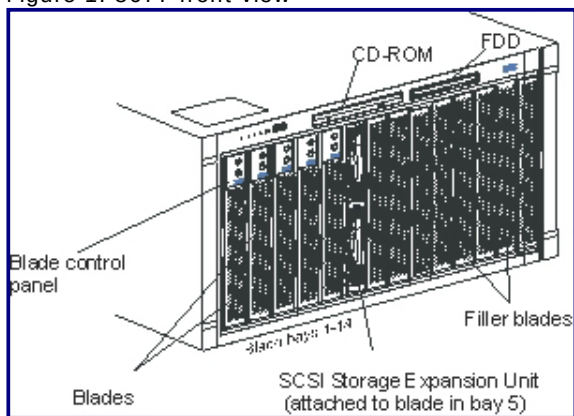
Blade Server	8677
HC10	All
HS12	All
HS20	All

HS21	Dual Core - All Quad Core ¹ - C1Y, C2Y, A1Y, A2Y, J1Y, J2Y, EQY, ERY, AMY, EHY, G1Y, G2Y, G3Y, G4Y, G5Y, G6Y
HS21 XM ²	All
JS20	All
JS21	All
LS20	All
LS21	All ³
LS41	All ³

Notes:

1. Blade servers up to 80 watts are supported.
2. When fully configuring a BC-E (8677) chassis with the maximum possible HS21 XM blade server configuration (fourteen HS21 XM blade servers, each with two 80W processors, eight 4GB memory DIMMs, one SAS HDD, one USB-based flash drive, one I/O card and one cKVM card), there could be periods of time that Power Domain 2 exceeds the 13.5amp rating guidance (Power Domain 1 will not exceed the rating guidance). While this is not violating any safety rules, we recommend that your clients review the electrical infrastructure and power distribution of their installations to account for a peak of 14.4A.
3. Two different processor wattage options are offered in the LS21 and LS41: a 95W version and a High Efficiency 68W version. Versions of the LS21/41 that use the 95W processors are designed for use in the BladeCenter H chassis. Due to increased power and thermal needs, these 95W versions will run at 'n-2' processor speed in the BladeCenter and BladeCenter T chassis. In most cases this represents a speed reduction of 400 MHz. The versions of the LS21 and LS41 that use the High Efficiency 68W processors will run at full speed in all chassis.

Figure 1. 8677 front view



Click image to enlarge

BladeCenter E (8677)

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SBB number	Option number	Feature codes	Description	Connection type from	Connection type to	# of drops	Connects from	Connects to
39Y9173	39Y9171	4364	IBM BladeCenter Optical Pass-thru Module SC Cable for IBM BladeCenter	Multiport Optical	SC Duplex Optical Connections	4	OPM switch	SAN
39Y9175	39Y9172	4365	IBM BladeCenter Optical Pass-thru Module LC Cable for IBM BladeCenter	Multiport Optical	LC Duplex Optical Connections	4	OPM switch	SAN
39Y9331	39Y9170	4366	IBM BladeCenter Copper Pass-thru Module Cable for IBM BladeCenter	Multiport Copper	CAT 5E Copper Connections	5	CPM switch	Network
42D1362	-	3781	Cyclades RJ45-to-DB9 Serial Cable Adapter for BladeCenter	-	-	-	-	-
32R1853	26R0814	4867	InfiniBand 4 meter 12x Cable for IBM BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 12x connector	InfiniBand Fabric
32R1849	26R0847	4294	InfiniBand 8 meter 4x Cable for IBM eServer BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 4x connector	InfiniBand Fabric
43W4383	-	4866	InfiniBand 10 meter 4x Cable for IBM BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 4x connector	InfiniBand Fabric
43W4384	43W4378	4868	InfiniBand 10 meter 12x Cable for IBM BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 4x connector	InfiniBand Fabric
43W4385	-	4869	InfiniBand 11 meter 12x to (3) 4x Cable for IBM BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 12x connector	InfiniBand Fabric
32R1938	-	4362	IBM CX4 1.5 Meter Cable	CX4 Connector	CX4 Connector	1	10Gb ESM CX4 Port	Another Nortel 10Gb ESM or external 10Gb switch with CX4 ports.
32R1942	-	4363	IBM CX4 3.0 Meter Cable	CX4 Connector	CX4 Connector	1	10Gb ESM CX4 Port	Another Nortel 10Gb ESM or external 10Gb switch with CX4 ports.
-	39Y8966	-	IBM USB to PS/2 Converter Cable	USB	PS/2	-	-	-

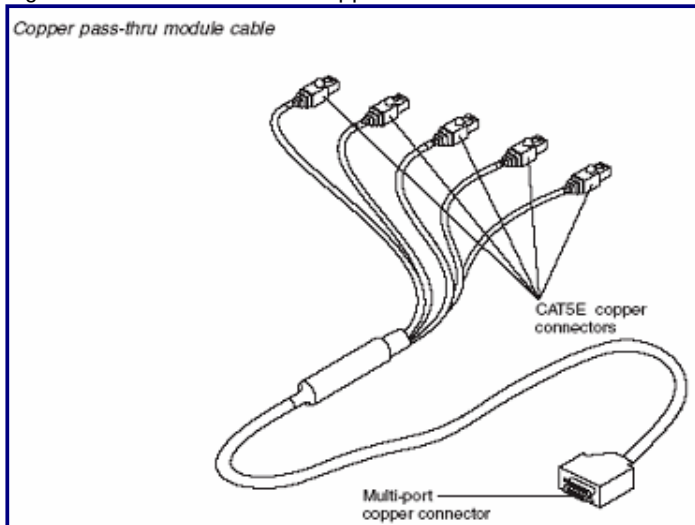
Note: Utilizing pass-thru technology will disable serial over LAN and concurrent KVM capabilities.

Notes:

1. This cable is 1.5m in length and provides four connections between the optical pass-thru-module (OPM) and an external Ethernet or fibre environment.
2. Provides five copper connections between the copper pass-thru module (CPM) and an external gigabit Ethernet environment. A maximum of 14 connections per CPM is supported. One CPM cable ships with the CPM option. Two additional cables can be installed.

3. Option 39Y9170 cannot be installed by manufacturing. It must be shipped separately, as an accessory.

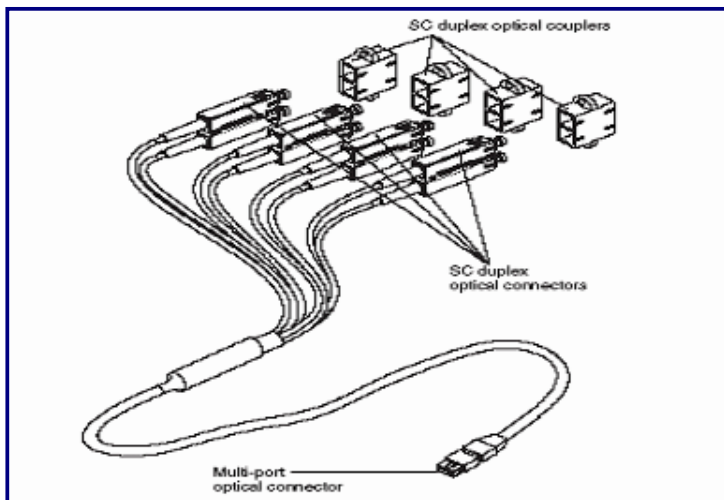
Figure 1. IBM BladeCenter Copper Pass-thru Module Cable



[Click image to enlarge](#)

This IBM BladeCenter option provides connection between the copper pass-thru module and an external environment. This cable allows up to five copper connections to blade servers. One of these cables included with each copper pass-thru module. Cable is 3.1m (9.4ft) in length.

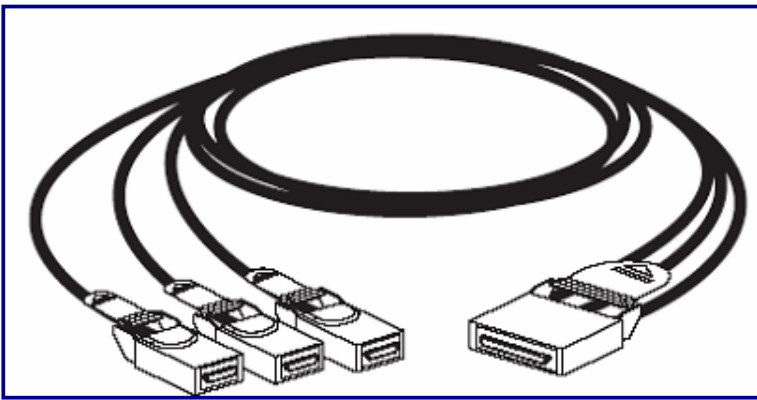
Figure 2. IBM BladeCenter Optical Pass-thru Module SC Cable (1.5M)



[Click image to enlarge](#)

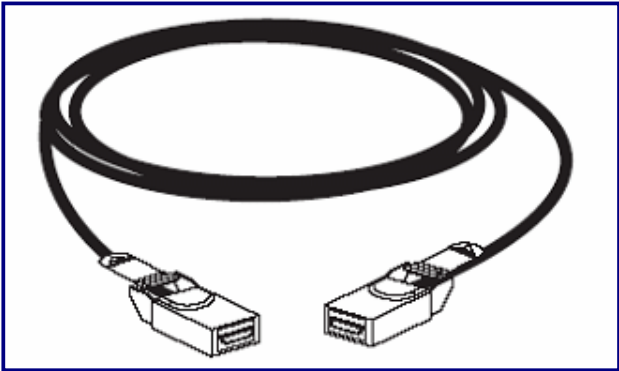
The cable above provides connection between the Optical Pass-thru Module and an external environment. This 1.5 m cable presents four SC connections.

Figure 3. InfiniBand 12x to (3) 4x Cable 3 meter for IBM BladeCenter



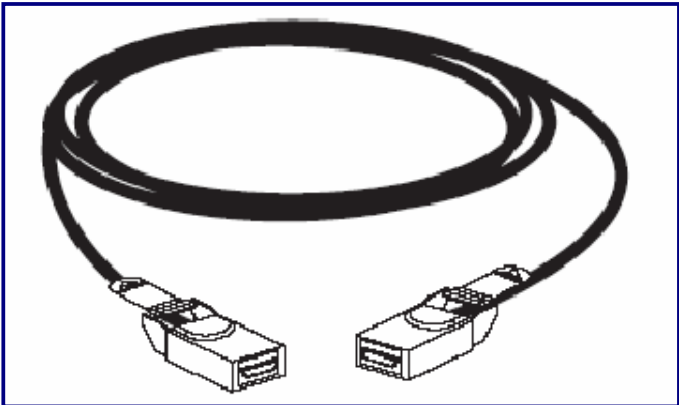
[Click image to enlarge](#)

Figure 4. InfiniBand 4x Cable 3 meter for IBM BladeCenter



[Click image to enlarge](#)

Figure 5. IBM CX4 1.5 or 3.0 meter Cable for IBM BladeCenter (Connector color is Gray)



[Click image to enlarge](#)

BladeCenter E (8677)

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SBB number	Option number	Feature codes	Description	Type	Height	Bays supported	Max quantity
26K9321	-	4148	8X Slim DVD-ROM Internal IDE Drive	IDE	-	Optical Bay	1
32P0902	-	4109	24X Slim CD-ROM Internal IDE Drive	IDE	-	Optical Bay	1
59P5800	-	4110	8X Slim DVD-ROM Internal IDE Drive	IDE	-	Optical Bay	1
44W3251	-	4161	UltraSlim Enhanced SATA DVD-ROM	SATA	-	Optical Bay	1
44W3253	-	4163	UltraSlim Enhanced SATA Multi-Burner	SATA	-	Optical Bay	1

BladeCenter E (8677)

Attention:

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SBB number	Option number	Feature codes	Description	PCI support	Slots supported	Hot plug capable	Max supported
Storage Controllers							
-	172641X	-	FC SAS Single Controller DS3400	-	-	-	-
Networking¹							
26R0882	26R0881	1560	QLogic 4Gb 20-port Fibre Chan Switch Module for eServer ^{1,2,3}	StFF	3,4	Y	2
43W6729	43W6723	2985	QLogic 4Gb Intelligent Pass-thru Module for IBM	StFF	3,4	Y	2
43W6730	43W6724	2986	QLogic 10-port 4Gb SAN Switch Module for IBM	StFF	3,4	Y	2
43W6731	43W6725	2987	QLogic 20-port 4Gb SAN Switch Module for IBM BladeCenter	StFF	3,4	Y	2
32R1906	32R1904	1575	QLogic 4Gb 10-port Fibre Channel Switch Module for eServer ¹	StFF	3,4	Y	2
32R1907	32R1905	1576	McData 4Gb 10-port Fibre Channel Switch Module for eServer ¹	StFF	3,4	Y	2
32R1834	32R1833	1562	McDATA® 4Gb 20-port Fibre Channel Module for eServer BladeCenter ¹	StFF	3,4	Y	2
32R1815	32R1812	1569	Brocade 4Gb 20-port SAN Switch Module for IBM eServer BladeCenter ^{1,2,3}	StFF	3,4	Y	2
32R1816	32R1813	1571	Brocade 4Gb 10-port SAN Switch Module for IBM eServer BladeCenter ^{1,2,3}	StFF	3,4	Y	2
-	32R1822	-	Brocade 4Gb 10-port Upgrade for IBM BladeCenter	StFF	3,4	Y	2
32R1784	32R1783	1493	Nortel 10Gb Uplink Ethernet Switch Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1862	32R1859	1494	Nortel Networks Layer 2-7 Gb Ethernet Switch Mod for IBM BladeCenter ⁵	StFF	1,2,3,4	Y	4
32R1863	32R1860	1495	Nortel Networks L2/L3 Copper Gb Ethernet Sw Mod for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1864	32R1861	1496	Nortel Networks L2/L3 Fiber Gb Ethernet Sw Mod for IBM BladeCenter	StFF	1,2,3,4	Y	4
41Y8520	41Y8522	2988	Cisco Catalyst Switch 3110X for IBM BladeCenter	StFF	1,2,3,4	Y	4
41Y8521	41Y8523	2989	Cisco Catalyst Switch 3110G for IBM BladeCenter	StFF	1,2,3,4	Y	4
43W4398	43W4395	5450	Cisco Catalyst Switch Module 3012 for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1889	32R1888	1497	Cisco Systems Fiber Intelligent Gb Ethrnt Sw Mod for IBM BladeCenter ⁶	StFF	1,2,3,4	Y	4
32R1893	32R1892	1498	Cisco Systems Intelligent Gb Ethrnt Sw Mod for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1901	32R1900	1499	Cisco Systems® InfiniBand Switch Module for IBM BladeCenter®	StFF	3,4	Y	2
39Y9279	39Y9280	2983	Cisco Systems 4Gb 20-port Fibre Channel Module	StFF	3,4	Y	2
39Y9283	39Y9284	2984	Cisco Systems 4Gb 10-port Fibre Channel Module	StFF	3,4	Y	2
39Y9194	39Y9195	2980	IBM BladeCenter SAS Connectivity Module	-	3,4	Y	2
39Y9317	39Y9316	1556	IBM BladeCenter Optical Pass-thru Module for IBM BladeCenter ⁷	StFF	1,2,3,4	Y	4

39Y9321	39Y9320	2900	IBM BladeCenter Copper Pass-thru Module for IBM BladeCenter ⁸	StFF	1,2,3,4	Y	4
39Y9325	39Y9324	1484	Server Connectivity Module for IBM BladeCenter	StFF	1,2,3,4	Y	4
44W4484	44W4483	5452	Intelligent Copper Pass-thru Module for IBM BladeCenter	-	1,2,3,4	Y	4
44W4405	44W4404	1590	Nortel 1/10Gb Uplink Ethernet Switch Module for IBM BladeCenter	-	1,2,3,4	Y	4
System Management							
25R5779	25R5778	1604	IBM BladeCenter KVM/Advanced Management Module ⁹	-	Mgmt Module	Y	1
46C3555	44W3981	4941	IBM BladeCenter Open Fabric Manager	-	-	-	-
Associated Options							
39Y9129	-	1615	Nortel Port Aggregator L1 39Y9128	-	-	-	-
39Y9122	22R4902	4299	IBM Short Wave SFP Module	-	-	-	-
-	22R4242	-	4Gb Short Wave SFP Module	StFF	3,4	Y	2
-	22R4897	-	4 Gbps SW SFP Transceiver 4 Pack	StFF	3,4	Y	2
32R1879	32R1877	4360	IBM 10GbE 850nm Fiber XFP Transceiver (SR)	-	-	-	-
32R1880	-	4361	IBM 10GbE 1310nm Fiber XFP Transceiver (LR)	-	-	-	-
41Y8597	-	4863	Cisco Systems 4Gb Short-wave Length 4-pack SFP Modules for IBM BladeCenter	-	-	-	-
41Y8599	-	4864	Cisco Systems 4Gb Short-wave Length SFP Module for IBM BladeCenter	-	-	-	-
41Y8601	-	4865	Cisco Systems 4Gb Long-wave Length SFP Module for IBM BladeCenter	-	-	-	-

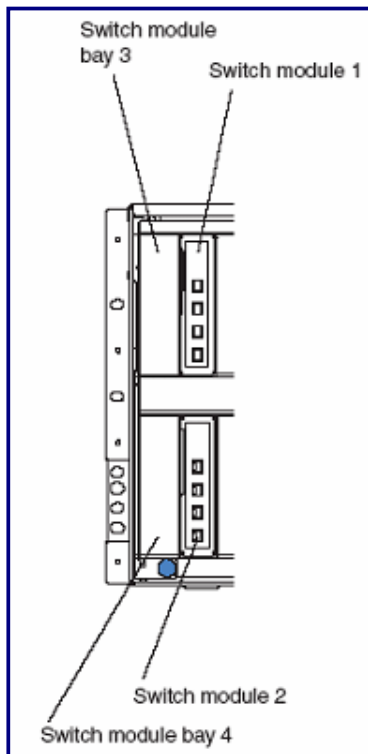
Note: Form Factor abbreviations are as follows: SFF = Small Form Factor, StFF = Standard Form Factor, HSFF = High Speed Form Factor.

The Standard Form Factor (StFF) card is the original form factor for expansion cards in blade servers. An StFF expansion card uses the PCI-X connector on the blade server and expansion units. When an StFF expansion card is installed using the PCI-X connector it is not possible to install a CFFh nor HSFF expansion card on the adjacent PCI-E connector (if one exists in the server) In addition, when an StFF expansion card is installed, the second hard disk drive on some blade servers cannot be installed.

Notes:

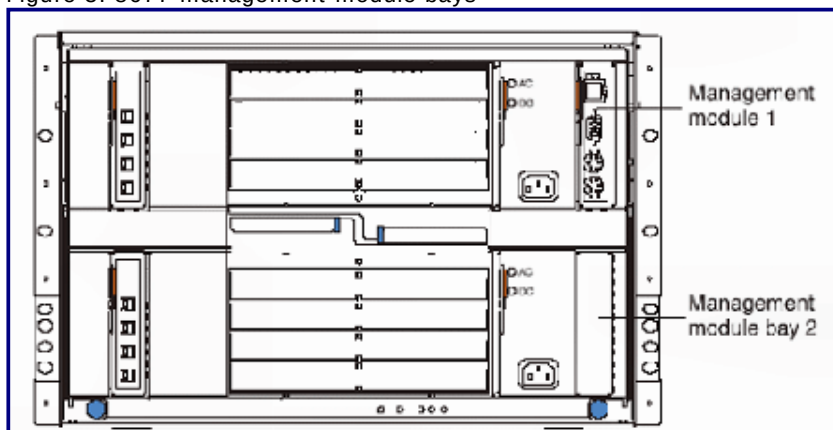
1. Mixing Ethernet (including Copper Pass-thru Module (CPM) and Fibre/SAN switches in I/O module bays 3 and 4 is not supported. However, mixing Optical Pass-thru modules (OPM) and Ethernet or Fibre/SAN switches in bays 3 and 4 is supported.
2. Short- or Long-wave SFP Modules (Option number 22R4902 or feature code 4863, 4864 or 4865) are required for each fibre channel port connection.
3. Installs in I/O module bays 3 or 4. When installed in bay 3, port 1 is enabled on blade-installed Fibre Channel expansion cards. When installed in bay 4, port 2 is enabled on blade- installed Fibre Channel expansion cards.
4. The Brocade switch modules for BladeCenter allows the interconnection of up to 239 switches.
5. Maximum of four allowed in BC and BCT. If supported in BCE, then a maximum of two allowed. Can be installed in any I/O module bay. When installed in I/O module bay 1, integrated Ethernet controller 1 is enabled on all blades. When installed in bay 2, integrated Ethernet controller 2 is enabled on all blades. Installation in I/O module bays 3 or 4 (not supported in BCE) requires an Ethernet expansion card to be installed in blade servers.
6. SFPs are not included and are available from Cisco (P/N GLC-SX-MM=).
7. OPM provides 2Gb data rate when used with any Fibre Channel Expansion Card.
8. Copper Pass-thru Modules come with one cable. Each module can support up to three cables.
9. One Management Module or Advanced Management Module is standard in the BladeCenter (8677). A maximum of two matched modules are supported, (i.e. two Management Modules or two Advanced Management Modules).

Figure 2. 8677 switch module bays



[Click image to enlarge](#)

Figure 3. 8677 management module bays



[Click image to enlarge](#)

BladeCenter E (8677)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

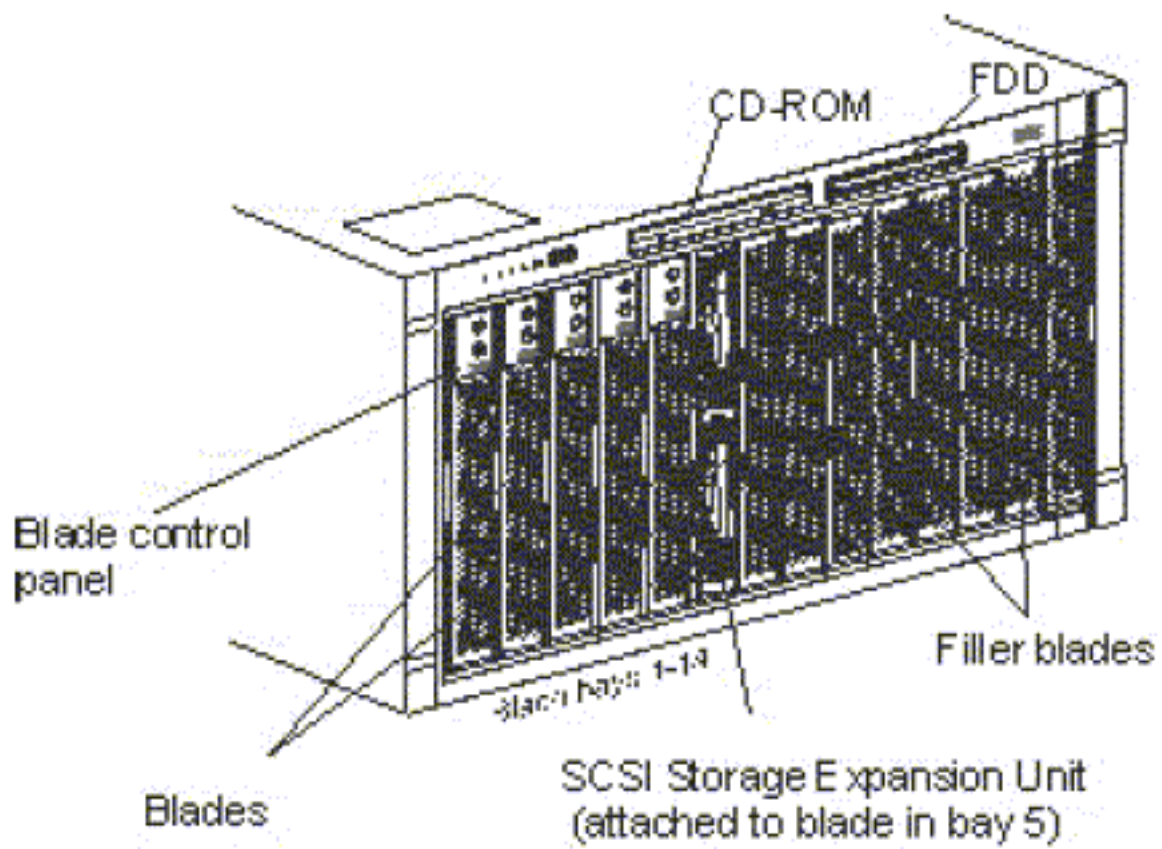
At A Glance Options

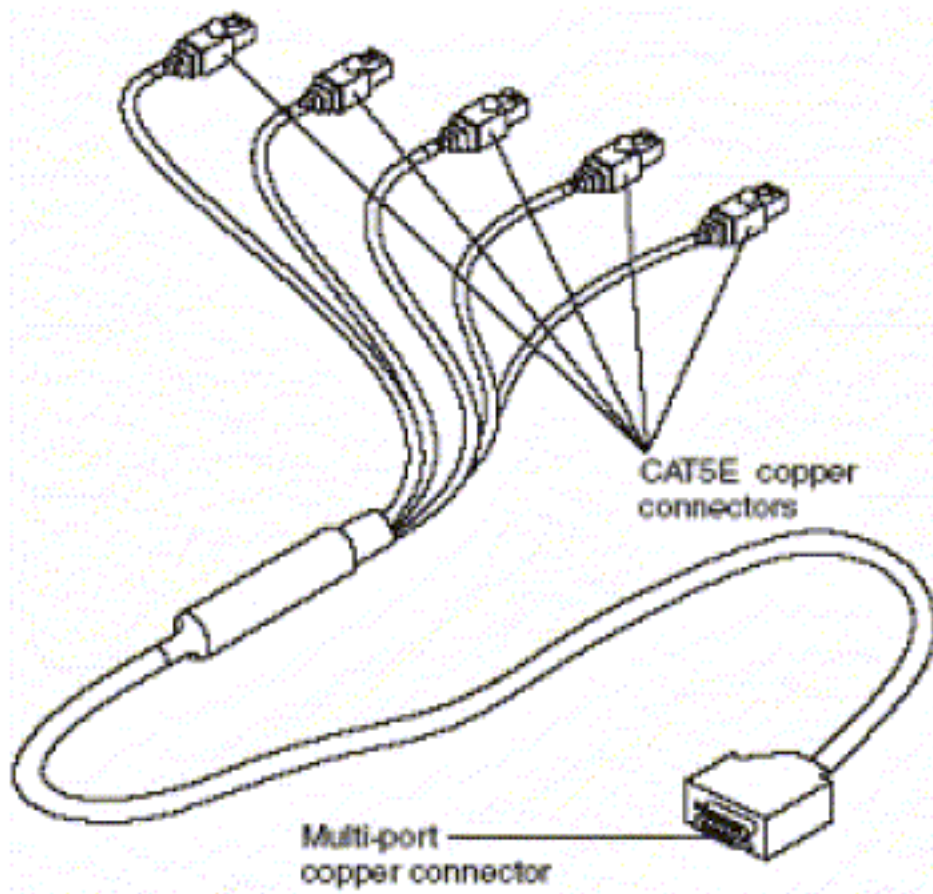
[Cabling](#) | [Optical storage](#) | [I/O](#) | [Pwr Acc](#) |

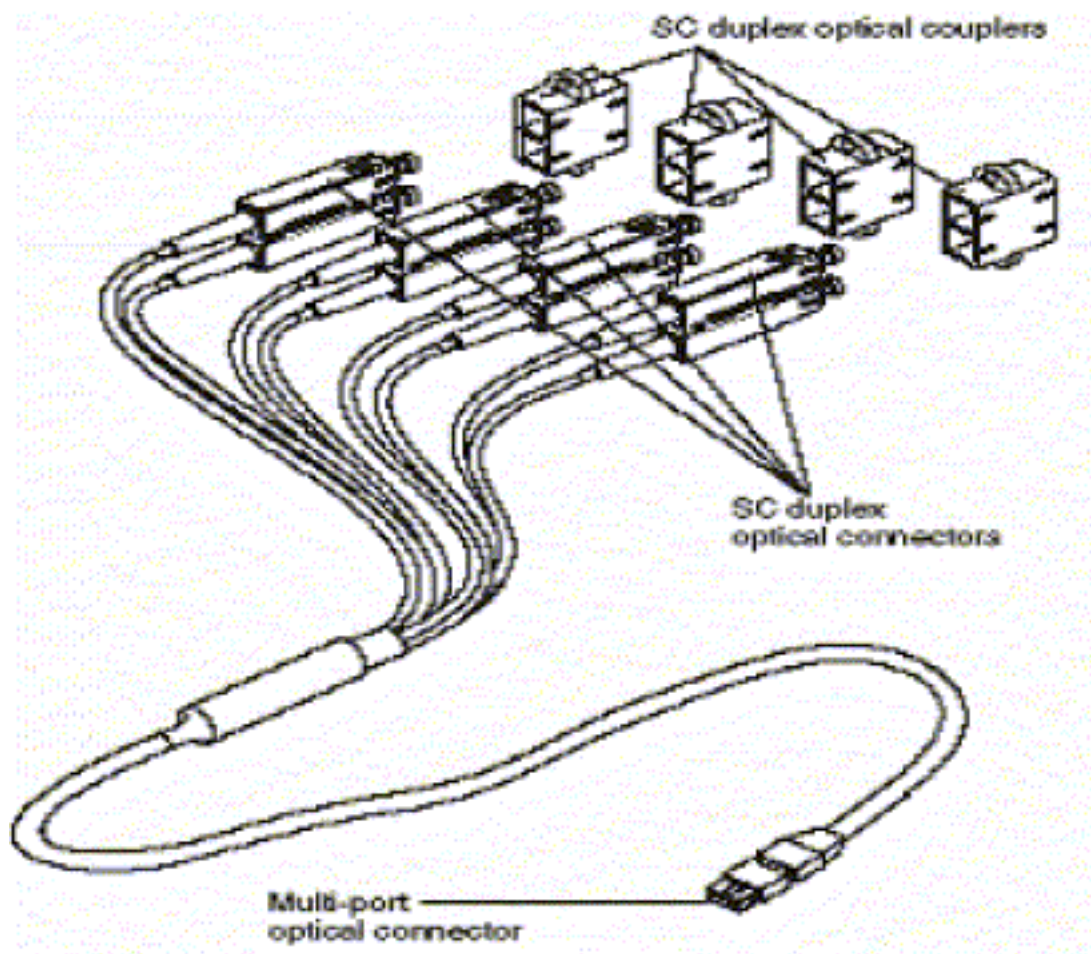
Table 1. BladeCenter Standard Power Configuration

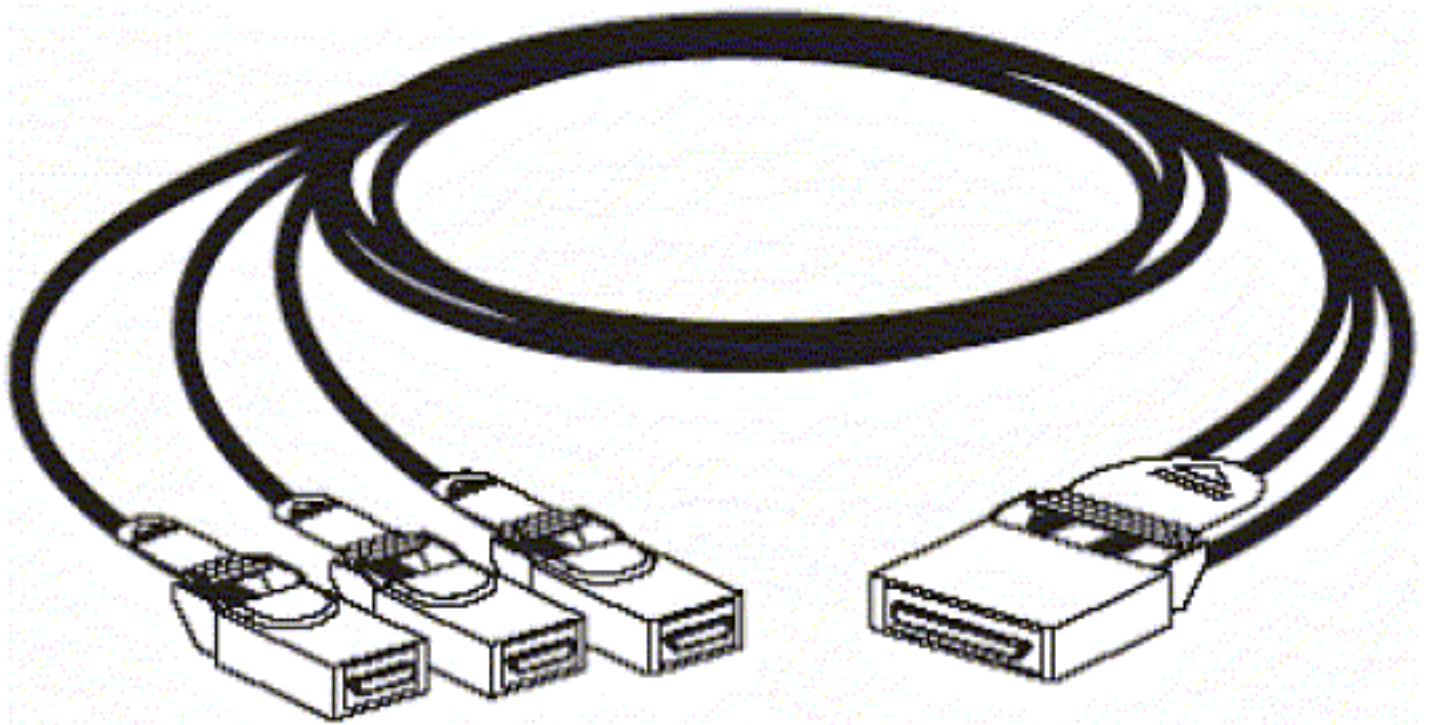
Model	Power modules		Power cord
8677-3XY, 8677-3EY, 8677-3RY	2 x 2000w	2 x 2.5m/8.2ft, 100-240V IEC 320-C19 to IEC 320-C20 rack power cables	

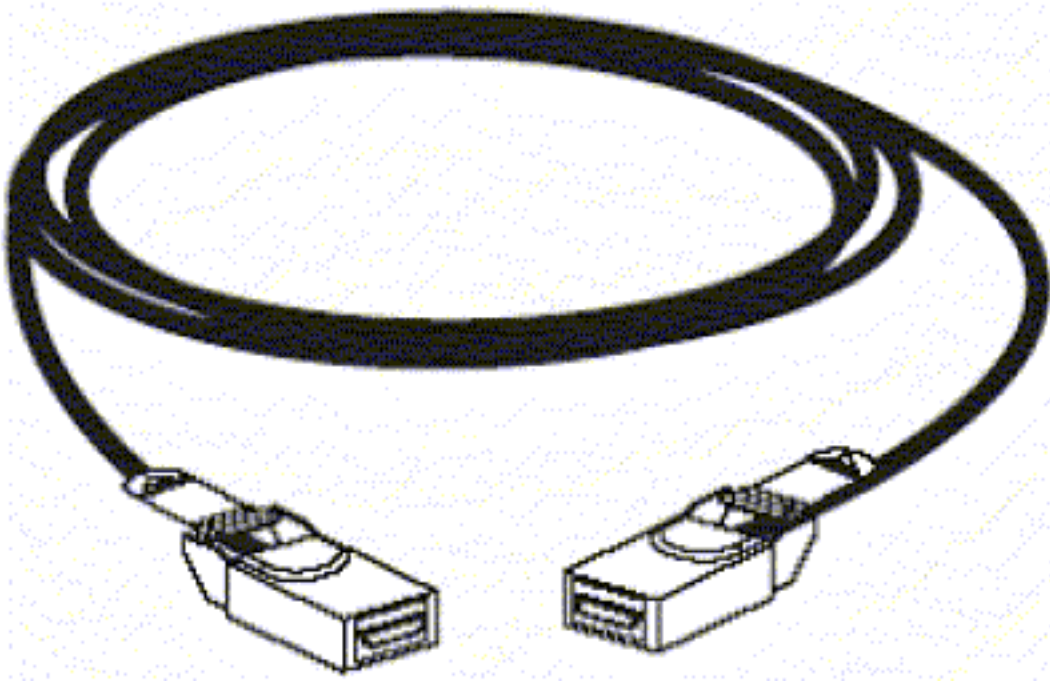
SBB number	Option number	Feature codes	Description
Power			
39M4622	39M4675	1966	IBM BladeCenter 2000W Power Supplies
26R0239	-	1965	IBM BladeCenter 2000W Power Supplies 1 & 2
Power Distribution Units			
-	39M2816	-	IBM DPI C13 PDU+C13 without line cord
-	39M2818	-	IBM DPI C19 PDU+C19 without line cord
-	39M2819	-	IBM DPI C19 3 phase PDU+C19 with attached line cord
-	17353LX	-	IBM 1x8 Console Switch
-	17354LX	-	IBM 2x16 Console Switch
Monitors			
-	4938	-	C117 17in (15.9 inch VIS) FST CRT
-	4942	-	T115 15in TFT LCD
-	4943	-	T117 17in TFT LCD
-	17233RX	-	IBM 1U 15in Flat Panel Monitor Console Kit
-	17231RX	-	IBM 1U 17in Flat Panel Monitor Console Kit w/Optical Drive Bay
Keyboard and mouse			
-	17235RX	-	IBM Rack Keyboard Tray
-	39M7228	-	IBM USB UltraNav Keyboard - USB
-	43X0340	-	IBM BladeCenter Airborne Contaminant Filter

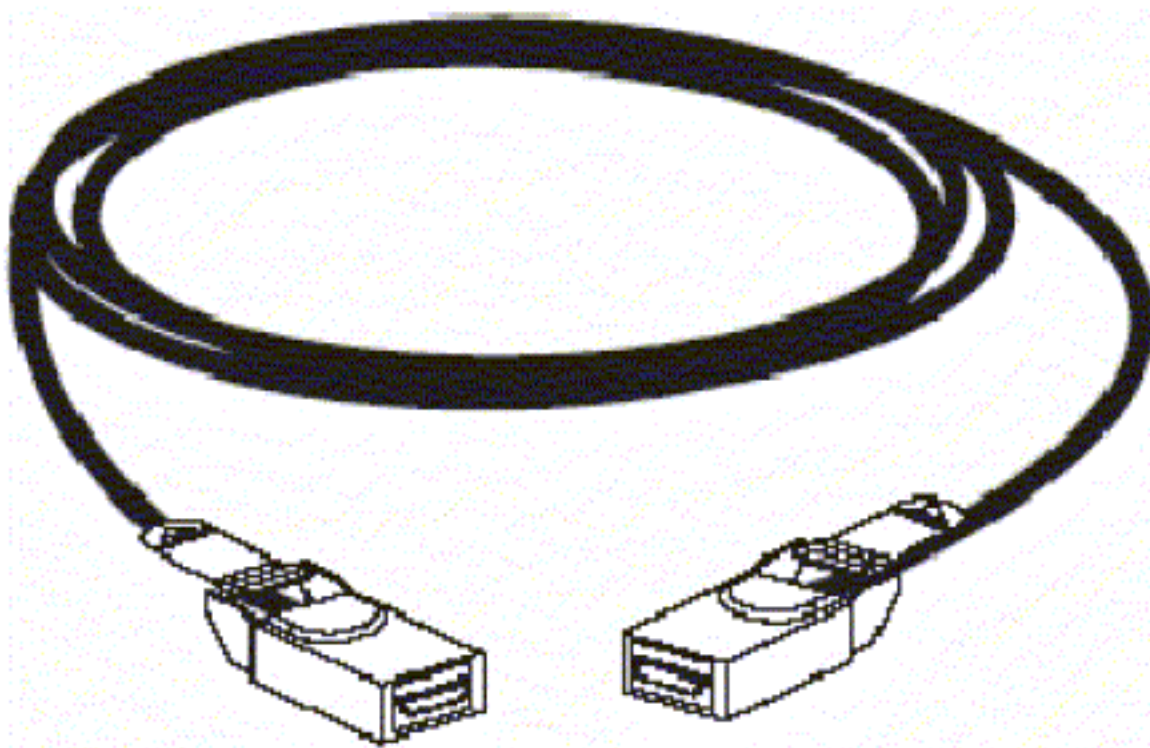


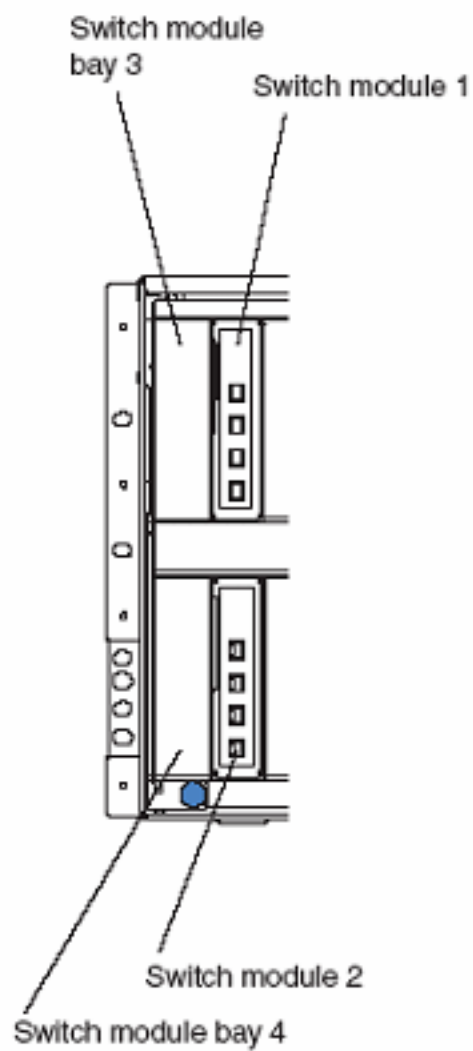


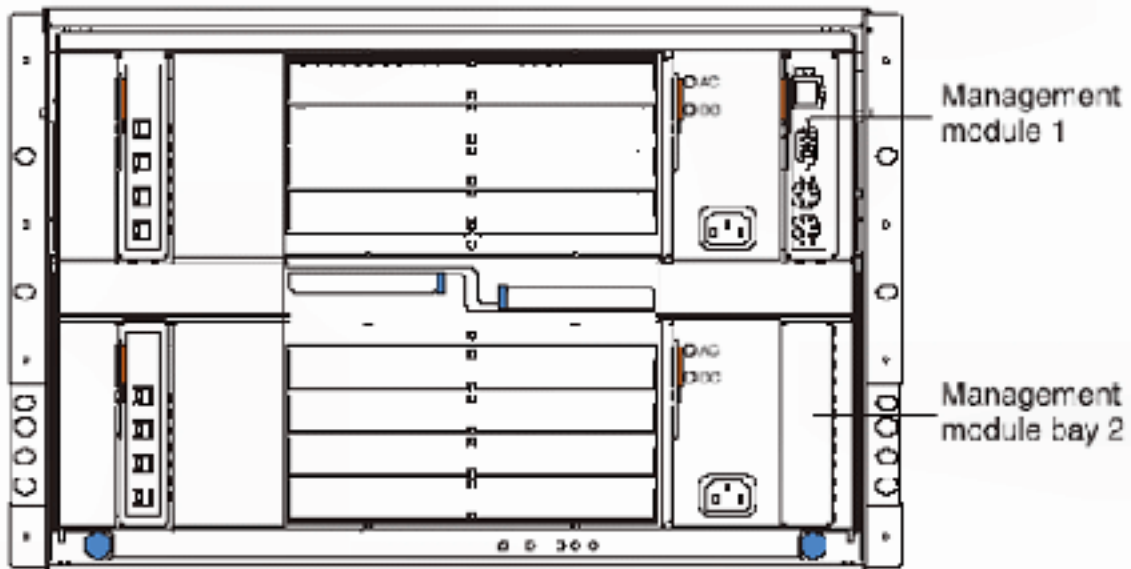












BladeCenter H (8852)

Attention:

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At-A-Glance Options

Table 1. BladeCenter H (8852) at-a-glance

Part number ¹	Form Factor (width / depth) ²	Power modules	Power module quantity (std / max)	Hot-swap (power, bays, blowers)	Redundancy (optional, standard)
8852-4XY	Rack (9U) 19in x 29in	2900w (200V-240V)	2/4	P, B, B	S-Blowers, S-Power
8852-4YY	Rack (9U) 19in x 29in	2900w (200V-240V)	2/4	P, B, B	S-Blowers, S-Power

Note: Two power cords are needed and must be ordered separately.

BladeCenter chassis can provide increased density per rack over standalone 1U servers by housing multiple blades in less rack space. BladeCenter solutions increase usability and reduce complexity by providing common sourcing for blade servers, cabling, cabling connections, I/O options, power modules, system management requirements (optional adapters and external cabling), external Fibre Channel storage switching and connectivity, and network management and expansion.

Table 1. BladeCenter H (8852) at-a-glance (continued)

Part number ¹	Advanced Management module (std / max) ³	I / O module bays (total / avail)	Optical drive	Diskette drive ⁴	Blade bays (total / avail) ⁵
8852-4XY	1/2	10/10	Combo2 24x/24x/24x/8x ⁶	-	14/14
8852-4YY	1/2	10/10	UltraSlim Enhanced Multi-Burner	-	14/14

Note: Two power cords are needed but must be ordered separately.

BladeCenter chassis can provide increased density per rack over standalone 1U servers by housing multiple blades in less rack space. BladeCenter solutions increase usability and reduce complexity by providing common sourcing for blade servers, cabling, cabling connections, I/O options, power modules, system management requirements (optional adapters and external cabling), external Fibre Channel storage switching and connectivity, and network management and expansion.

Notes:

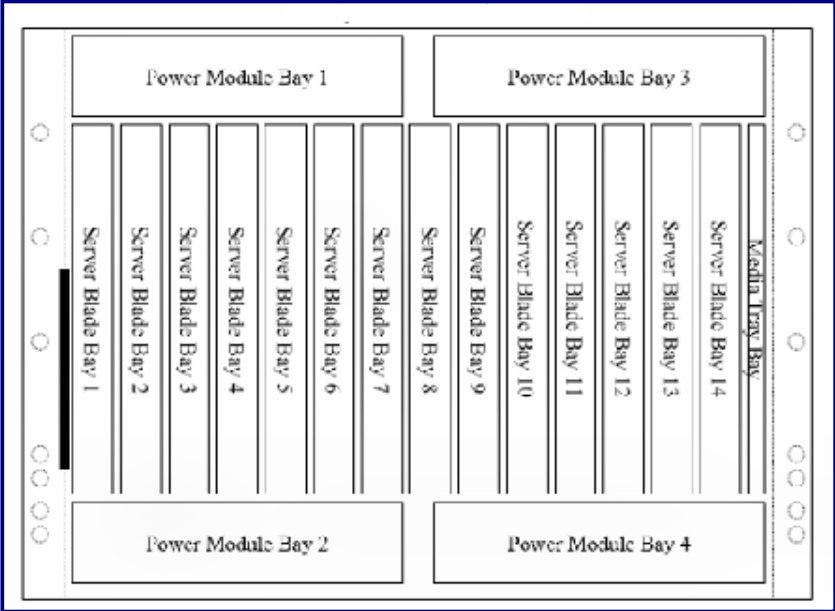
1. Model number is a worldwide general available variant (GAV) model number which is not orderable as listed and needs to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 8852-3XY is 8852-3XU. See the product specific Official IBM announcement letter for other country-specific GAV model numbers.
2. Housed in a 19in rack-mountable chassis.
3. The management modules for BladeCenter include KVM components.
4. Does not ship with a diskette drive. An external FDD is supported attached to one of the two front mounted USB ports.
5. Supports up to 14 singlewide blade servers. Additional power supplies are required to maintain full redundancy beyond seven blade servers.
6. Only the read function is supported on the Combo2 drive.

Table 2. BladeCenter H, blade server support

Blade server	8852
HS12	All
HS20	All
HS21	All
HS21 XM	All
JS20	All
JS21	All
LS20	All

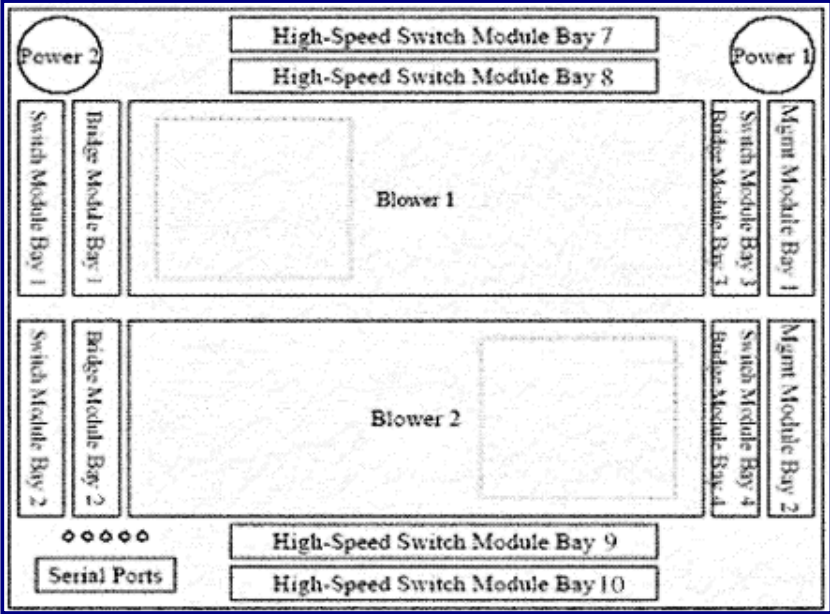
LS21	All
LS41	All
QS21	All

Figure 1. BladeCenter H (8852) front view



Click image to enlarge

Figure 2. BladeCenter H (8852) rear view



Click image to enlarge

BladeCenter H (8852)

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At-A-Glance Options

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SBB number	Option number	Feature codes	Description	Connection type from	Connection type to	# of Drops	Connects from	Connects to
40K9606	40K9605	4811	IBM BladeCenter H Serial Port Breakout Cable	-	-	-	-	-
39Y9173	39Y9171	4364	IBM BladeCenter Optical Pass-thru Module SC Cable for IBM BladeCenter ¹	Multiport Optical	SC Duplex Optical Connections	4	OPM switch	SAN
39Y9175	39Y9172	4365	IBM BladeCenter Optical Pass-thru Module LC Cable for IBM BladeCenter	Multiport Optical	LC Duplex Optical Connections	4	OPM switch	SAN
39Y9331	39Y9170	4366	IBM BladeCenter Copper Pass-thru Module Cable for IBM BladeCenter ^{2,3}	Multiport Copper	CAT 5E Copper Connections	5	CPM switch	Network
32R1852	26R0813	4296	InfiniBand 4x Cable 3 meter for IBM eServer BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 4x connector	InfiniBand Fabric
32R1853	26R0814	4867	InfiniBand 4 meter 12x Cable for IBM BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 4x connector	InfiniBand Fabric
32R1854	26R0816	4255	InfiniBand 12x to (3) 4x Cable 3 meter for IBM eServer BladeCenter	InfiniBand Switch	4x InfiniBand	3	InfiniBand 4x connector	InfiniBand Fabric
32R1849	26R0847	4294	InfiniBand 8 meter 4x Cable for IBM eServer BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 4x connector	InfiniBand Fabric
32R1850	26R0849	4295	InfiniBand 8 meter 12 to (3) 4x Cable for IBM eServer BladeCenter	InfiniBand Switch	4x InfiniBand	3	InfiniBand 12x connector	InfiniBand Fabric
43W4383	-	4866	InfiniBand 10 meter 4x Cable for IBM BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 4x connector	InfiniBand Fabric
43W4384	43W4378	4868	InfiniBand 10 meter 12x Cable for IBM BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 4x connector	InfiniBand Fabric
43W4385	-	4869	InfiniBand 11 meter 12x to (3) 4x Cable for IBM BladeCenter	InfiniBand Switch	4x InfiniBand	1	InfiniBand 12x connector	InfiniBand Fabric

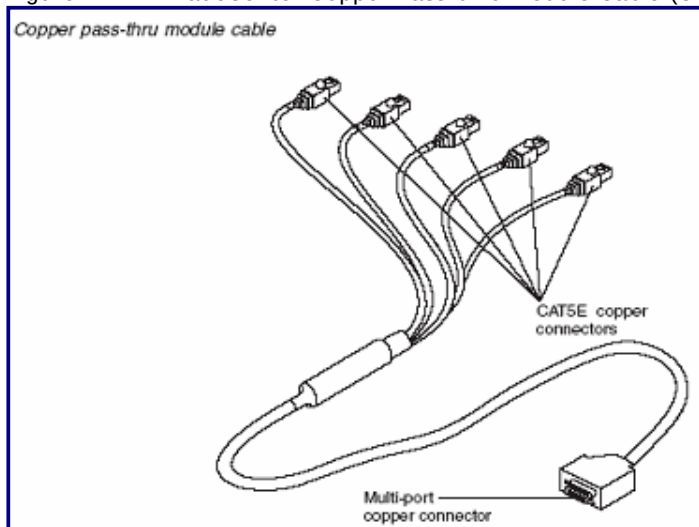
32R1938	32R1937	4362	IBM CX4 1.5 Meter Cable	CX4 Connector	CX4 Connector	1	10 Gb ESM CX4 Port	Another Nortel 10 Gb ESM or external 10 Gb switch with CX4 ports.
32R1942	32R1941	4363	IBM CX4 3.0 Meter Cable	CX4 Connector	CX4 Connector	1	10 Gb ESM CX4 Port	Another Nortel 10 Gb ESM or external 10 Gb switch with CX4 ports.
-	39Y8966	-	IBM USB to PS/2 Converter Cable	USB	PS/2	-	-	-

Note: Utilizing pass-thru technology will disable serial over LAN concurrent KVM capabilities.

Notes:

1. This cable is 1.5 m in length and provides four connections between the optical pass-thru-module (OPM) and an external Ethernet or fibre environment.
2. Provides five copper connections between the copper pass-thru module (CPM) and an external gigabit Ethernet environment. A maximum of 14 connections per CPM is supported. One CPM cable ships with the CPM option. Two additional cables can be installed.
3. Option 39Y9170 cannot be installed by manufacturing. It must be shipped separately, as an accessory.

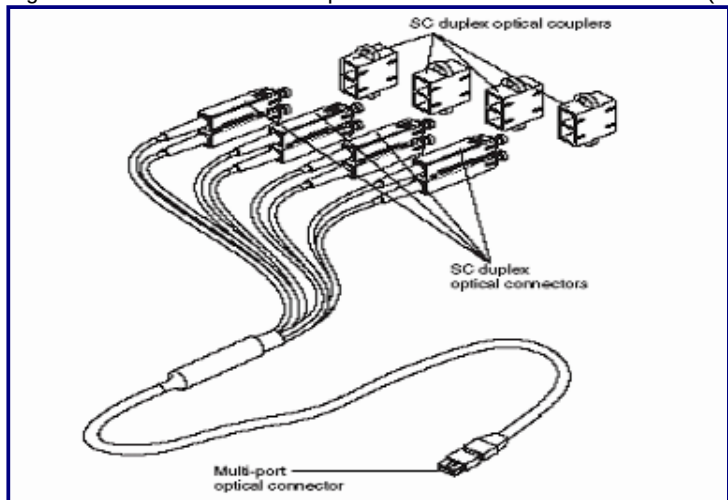
Figure 1. IBM BladeCenter Copper Pass-thru Module Cable (3.1 m)



[Click image to enlarge](#)

This IBM BladeCenter option provides connection between the copper pass-thru module and an external environment. The cable allows up to five copper connections to blade servers. One 3.1 m (9.4 ft) cable is included with each copper pass-thru module.

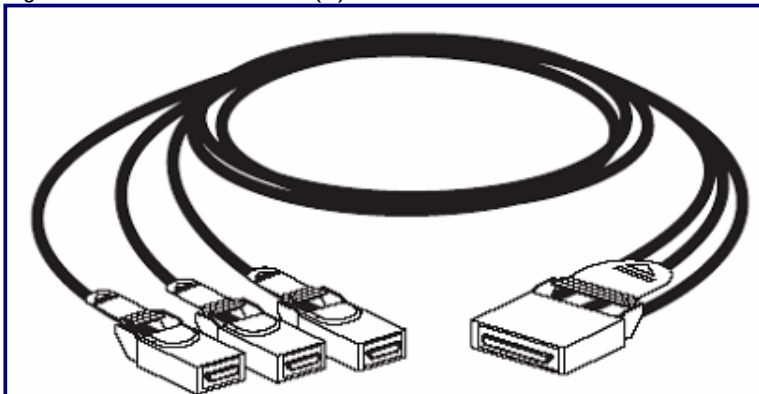
Figure 2. IBM BladeCenter Optical Pass-thru Module SC Cable (1.5 m)



[Click image to enlarge](#)

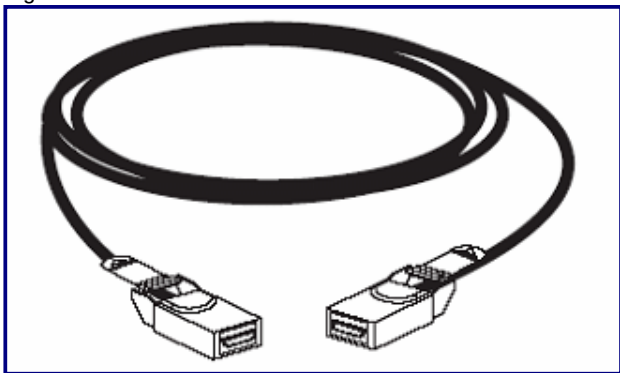
The 1.5 m cable above provides four SC connections between the Optical Pass-thru Module and an external environment.

Figure 3. InfiniBand 12x to (3) 4x Cable 3-meter for IBM BladeCenter



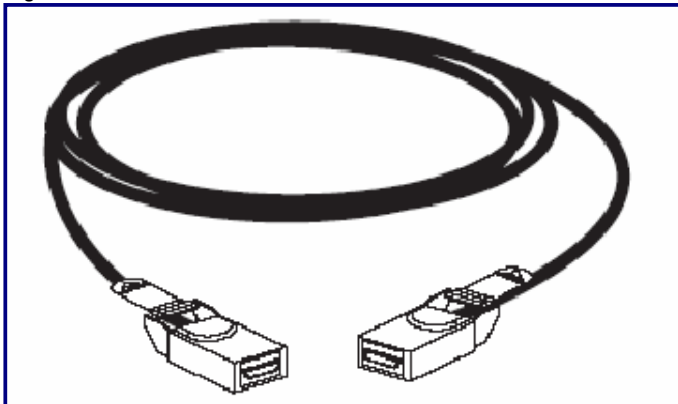
Click image to enlarge

Figure 4. InfiniBand 4x Cable 3-meter for IBM BladeCenter



Click image to enlarge

Figure 5. IBM CX4 1.5 or 3-meter Cable for IBM BladeCenter (connector color is Gray)



Click image to enlarge

BladeCenter H (8852)

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SBB number	Option number	Feature codes	Description	Type	Height	Bays supported	Max qty
32R2203	-	4147	Combo II Ultrabay slim 24x24x24x8x ¹	USB	9.5mm	Media Tray	1
43W8263	-	4157	UltraSlim Enhanced Multi-Burner	-	-	-	-
43W8364	-	4158	UltraSlim Enhanced DVD-ROM	-	-	-	-

Notes:

1. Only the read function is supported on the Combo II drive.

BladeCenter H (8852)

Attention:

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SBB Number	Option Number	Feature codes	Description	PCI Support	Slots Supported	Hot Plug Capable	Max Supported
Storage Controllers							
-	172641X	-	FC SAS Single Controller DS3400	-	-	-	-
Networking¹							
32R1907	32R1905	1576	McData 4Gb 10-port Fibre Channel Switch Module for eServer ¹	StFF	3,4, 7 Right, 9 Right	Y	2
32R1834	32R1833	1562	McDATA® 4Gb 20-port Fibre Channel Module for eServer BladeCenter ¹	StFF	3,4, 7 Right, 9 Right	Y	2
32R1906	32R1904	1575	QLogic 4Gb 10-port Fibre Channel Switch Module for eServer ¹	StFF	3,4, 7 Right, 9 Right	Y	2
26R0882	26R0881	1560	QLogic 4 Gb 20-port Fibre Chan Switch Module for eServer ^{1,2,3}	StFF	3,4, 7 Right, 9 Right	Y	2
39Y9206	39Y9207	2941	QLogic InfiniBand Ethernet Bridge Module for eServer ^{1,2,3}	StFF	1,3	Y	2
39Y9210	39Y9211	2942	QLogic InfiniBand Fibre Channel Bridge Module for IBM BladeCenter	StFF	1,3	Y	2
43W6729	43W6723	2985	QLogic 4Gb Intelligent Pass-thru Module for IBM	StFF	3, 4	Y	2
-	43W6836	-	QLogic SAN Doctor for IBM BladeCenter	-	-	-	-
43W6730	43W6724	2986	QLogic 10-port 4Gb SAN Switch Module for IBM	StFF	3, 4	Y	2
-	32R1912	-	QLogic/ McData 10-port Upgrade for IBM eServer BladeCenter	-	-	-	-
43W6731	43W6725	2987	QLogic 20-port 4Gb SAN Switch Module for IBM BladeCenter	StFF	3, 4	Y	2
-	43W6838	-	QLogic Enterprise Fabric Suite 2007 for IBM BladeCenter	-	-	-	-
-	43W6837	-	QLogic Fabric Security for IBM BladeCenter	-	-	-	-
32R1815	32R1812	1569	Brocade 4 Gb 20-port SAN Switch Module for IBM eServer BladeCenter ^{1,2,3}	StFF	3,4, 7 Right, 9 Right	Y	2
32R1816	32R1813	1571	Brocade 4 Gb 10-port SAN Switch Module for IBM eServer BladeCenter ^{1,2,3}	StFF	3,4, 7 Right, 9 Right	Y	2
39Y9266	39Y9267 ⁴	2952	Nortel 10Gb Ethernet Switch Module for IBM BladeCenter	HSFF	HSSM 1, 2	Y	2
32R1784	32R1783	1493	Nortel 10 Gb Uplink Ethernet Switch Module for IBM BladeCenter ⁵	StFF	1,2,3,4, 7 Left, 9 Left	Y	4
32R1862	32R1859	1494	Nortel Networks Layer 2 - 7 Gg Ethernet Switch Mod for IBM BladeCenter ⁵	StFF	1,2,3,4	Y	4
32R1863	32R1860	1495	Nortel Networks L2/L3 Copper Gb Ethernet Sw Mod for IBM BladeCenter ⁵	StFF	1,2,3,4	Y	4
32R1864	32R1861	1496	Nortel Networks L2/L3 Fiber Gb Ethernet Sw Mod for IBM BladeCenter ⁵	StFF	1,2,3,4	Y	4
41Y8520	41Y8522	2988	Cisco Catalyst Switch 3110X for IBM BladeCenter	StFF	1,2,3,4	Y	4

41Y8521	41Y8523	2989	Cisco Catalyst Switch 3110G for IBM BladeCenter	StFF	1,2,3,4	Y	4
43W4398	43W4395	5450	Cisco Catalyst Switch Module 3012 for IBM BladeCenter	StFF	1,2,3,4	Y	4
32R1901	32R1900	1499	Cisco Systems® InfiniBand Switch Module for IBM BladeCenter®	StFF	3,4	Y	4
32R1889	32R1888	1497	Cisco Systems Fiber Intelligent Gb Ethrnt Sw Mod for IBM BladeCenter ^{5,10}	StFF	1,2,3,4, 7 Left, 9 Left	Y	4
32R1893	32R1892	1498	Cisco Systems Intelligent Gb Ethrnt Sw Mod for IBM BladeCenter ⁵	StFF	1,2,3,4, 7 Left, 9 Left	-	4
-	32R1822	-	Brocade 4Gb 10-port Upgrade for IBM BladeCenter ⁵	-	-	-	-
39Y9279	39Y9280	2983	Cisco Systems 4 Gb 20 port Fibre Channel Module	StFF	3,4	Y	2
39Y9283	39Y9284	2984	Cisco Systems 4 Gb 10 port Fibre Channel Module	StFF	3,4	Y	2
43W4429	43W4419	2990	4X InfiniBand Pass-thru Module for IBM BladeCenter	StFF	7, 9	Y	2
32R1757	32R1756 ⁴	1574	Cisco Systems 4X InfiniBand Switch module for IBM BladeCenter ⁸	HSFF	HSSM 1, 2	Y	4
39Y9194	39Y9195 ^{4,11}	2980	IBM BladeCenter SAS Connectivity Module	-	3, 4	Y	2
39Y9317	39Y9316	1556	IBM BladeCenter Optical Pass-thru Module for IBM BladeCenter ^{7,12}	StFF	1,2,3,4, 7 Left or 7 Right, 9 Left or 9 Right	Y	4
39Y9321	39Y9320	2900	IBM BladeCenter Copper Pass-thru Module for IBM BladeCenter ⁵	StFF	1,2,3,4, 7 Left, 9 Left	Y	4
40K8919	-	2972	Voltaire InfiniBand Pass-Through Module for BladeCenter	StFF	HSSM 7,8 or HSSM 9,10 (Each module uses 2 slots)	-	4
39Y9325	39Y9324	1484	Server Connectivity Module for IBM BladeCenter ⁵	StFF	1,2,3,4, 7 Left, 9 Left	-	4
44E5158	39Y9314	1465	Multi-switch Interconnect Module for IBM BladeCenter™	-	HSSM 7,8 or HSSM 9,10 (Each module uses 2 slots)	Y	2
44W4484	44W4483	5452	Intelligent Copper Pass-thru Module for IBM BladeCenter	-	1,2,3,4, 7 left/ 9 left	-	6
44W4405	44W4404	1590	Nortel 1/10Gb Uplink Ethernet Switch Module for IBM BladeCenter	-	1,2,3,4	Y	4
System Management							
25R5779	25R5778	1604	IBM BladeCenter KVM/Advanced Management Module	-	Redundant KVM/Mgmt Module Slot	Y	1
46C3555	44W3981	4941	IBM BladeCenter Open Fabric Manager	-	-	-	-
Associated Options							
39Y9122	22R4902	4299	IBM Short Wave SFP Module	-	-	-	-
32R1879	32R1877	4360	IBM 10 GbE 850nm Fiber XFP Transceiver (SR)	-	-	-	-
32R1880	-	4361	IBM 10 GbE 1310nm Fiber XFP Transceiver (LR)	-	-	-	-
41Y8597	-	4863	Cisco Systems 4Gb Short-wave Length 4-pack SFP Modules for IBM BladeCenter	-	-	-	-
41Y8599	-	4864	Cisco Systems 4Gb Short-wave Length SFP Module for IBM BladeCenter	-	-	-	-
41Y8601	-	4865	Cisco Systems 4Gb Long-wave Length SFP Module for IBM BladeCenter	-	-	-	-
39Y9122	22R4902	4299	IBM Short Wave SFP Module	-	-	-	-

Note: Form Factor abbreviations are as follows: SFF = Small Form Factor, StFF = Standard Form Factor, HSFF = High Speed Form Factor.

The Standard Form Factor (StFF) card is the original form factor for expansion cards in blade servers. An StFF expansion card uses the PCI-X connector on the blade server and expansion units. When an StFF expansion card is installed using the PCI-X connector it is not possible to install a CFFh nor HSFF expansion card on the adjacent PCI-E connector (if one exists in the server) In addition, when an StFF expansion card is installed, the second hard disk drive on some blade servers cannot be installed.

Notes:

1. Mixing Ethernet (including Copper Pass-thru Module (CPM)) and

- Fibre/SAN switches in I/O module bays 3 and 4 is not supported. However, mixing Optical Pass-thru modules (OPM) and Ethernet or Fibre/SAN switches in bays 3 and 4 is supported.
2. Short- or Long-wave SFP Modules (Option number 22R4902 or feature code 4863, 4864 or 4865) are required for each fibre channel port connection.
 3. Installs in I/O module bays 3 or 4. When installed in bay 3, port 1 is enabled on blade-installed Fibre Channel expansion cards. When installed in bay 4, port 2 is enabled on blade-installed Fibre Channel expansion cards.
 4. All 4 power modules must be populated for installation.
 5. Maximum of four allowed in BC and BCT. Can be installed in any I/O module bay. When installed in I/O module bay 1, integrated Ethernet controller 1 is enabled on all blades. When installed in bay 2, integrated Ethernet controller 2 is enabled on all blades. Installation in I/O module bays 3 or 4 requires an Ethernet expansion card to be installed in blade servers.
 6. Installs in I/O module bays 3 and/or 4. Requires the Cisco InfiniBand Host Channel Adapter expansion card to be installed in at least one blade server.
 7. Maximum of four allowed and can be installed in any I/O module bay. Must be installed in I/O module bay 4 when Myrinet cluster expansion cards are installed in blade servers. If selected and an OPM SC Cable (P/N 39Y9171) or an OPM LC Cable (P/N 39Y9172) is not selected, issue the following warning message: "A minimum of one Optical Pass-thru Module cable must be installed in each Optical Pass-thru Module to enable connectivity to your network or Storage Area Network (SAN)."
 8. Installs in High Speed I/O module bays 1 and/or 2. When installed in HS bay 1, port 1 is enabled on Blade-installed Cisco 4X InfiniBand HCA (P/N 32R1761). When installed in HS bay 2, port 2 is enabled.
 9. Copper Pass-thru Modules come with one cable. Each module can support up to three cables. A maximum of two cables are allowed in BC and BCT.
 10. SFPs are not included and are available from Cisco (P/N GLC-SX-MM=).
 11. The Cisco 4Gb 20-port FC Module (P/N 39Y9280), Cisco Systems 4Gb 10-port Fibre Channel Module (P/N 39Y9284), Nortel 10Gb Ethernet Switch Module (P/N 39Y9267), Cisco Systems 4X InfiniBand Switch module (P/N 32R1756), Nortel Networks Layer 2-7 Gb Ethernet Switch Mod (P/N 32R1859), QLogic InfiniBand Fibre Channel Bridge Module (P/N 39Y9211), QLogic InfiniBand Ethernet Bridge Module (P/N 39Y9207), and Cisco 4Gb Short-wave Length 4-pack SFP Modules (P/N 41Y8596) are not supported in the Multi-Switch Interconnect Module (SBB 39Y9314). Up to 2 Multi-Switch Interconnect Modules are supported in the chassis, using slots 7 and 8 for one and/or slots 9 and 10 for the other.
 12. OPM provides 2 Gb data rate when used with any Fibre Channel Expansion Card.

BladeCenter H (8852)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

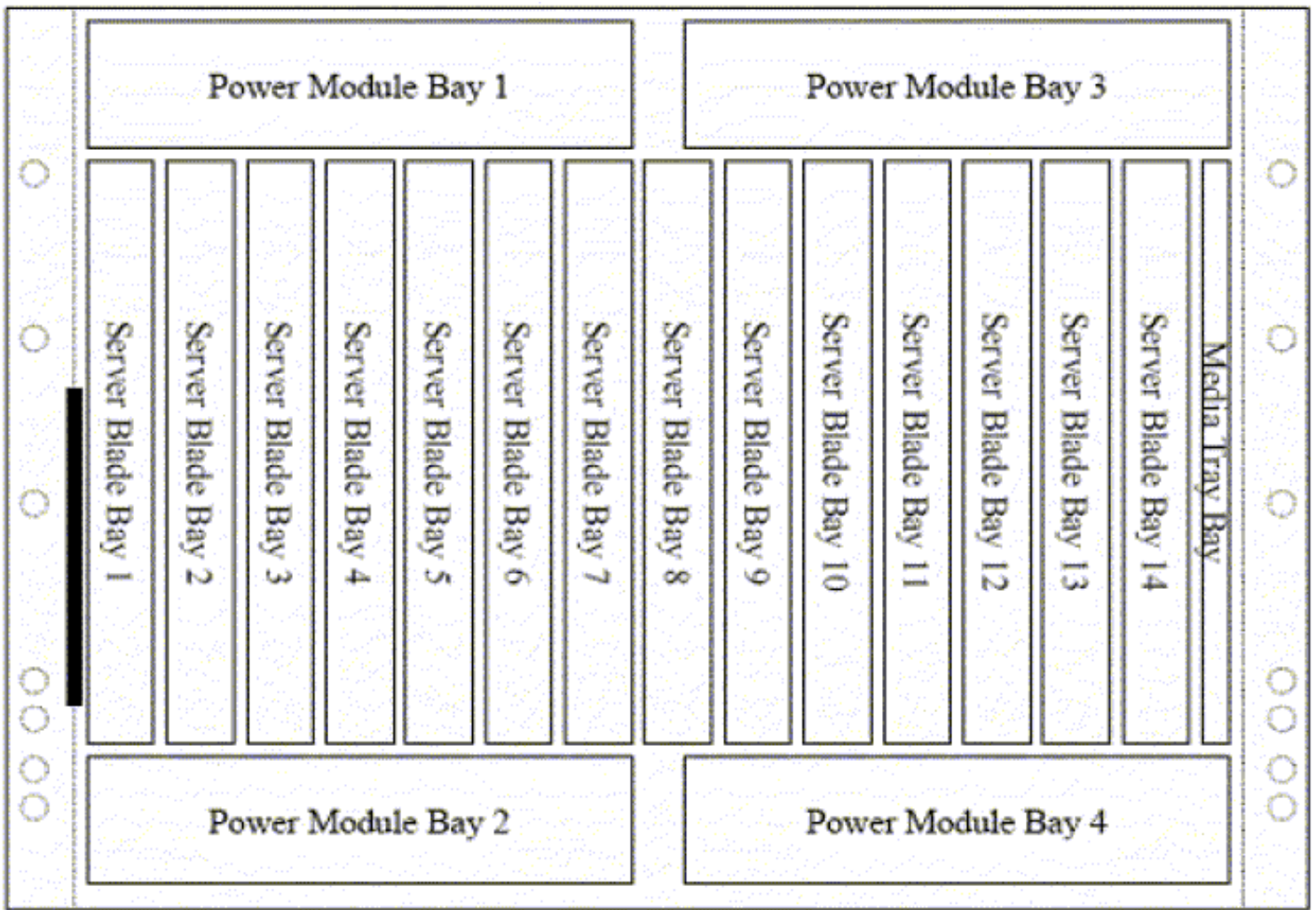
[Cabling](#) | [Optical storage](#) | [I/O](#) | [Pwr Acc](#) |

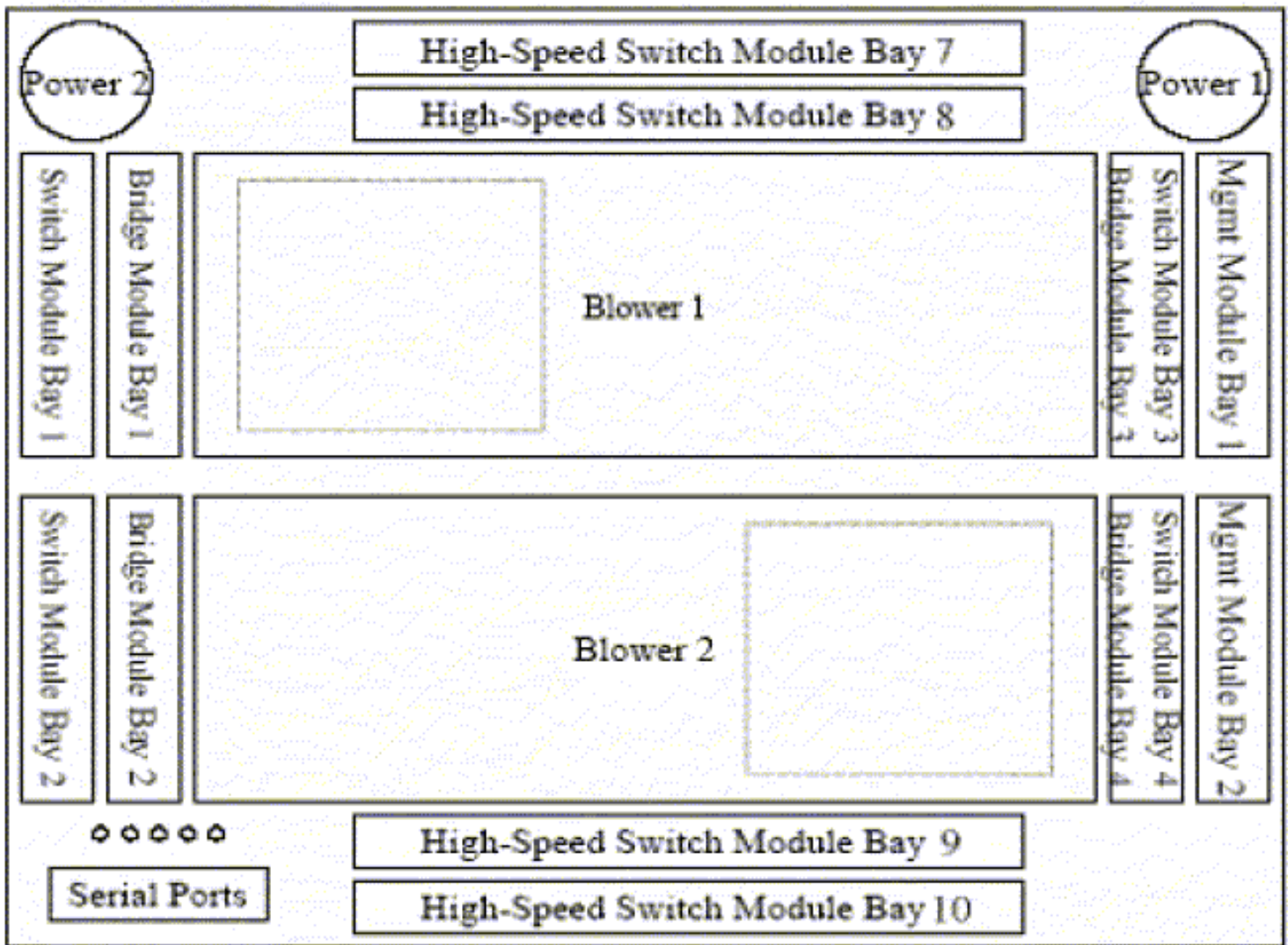
Table 1. BladeCenter Standard Power Configuration

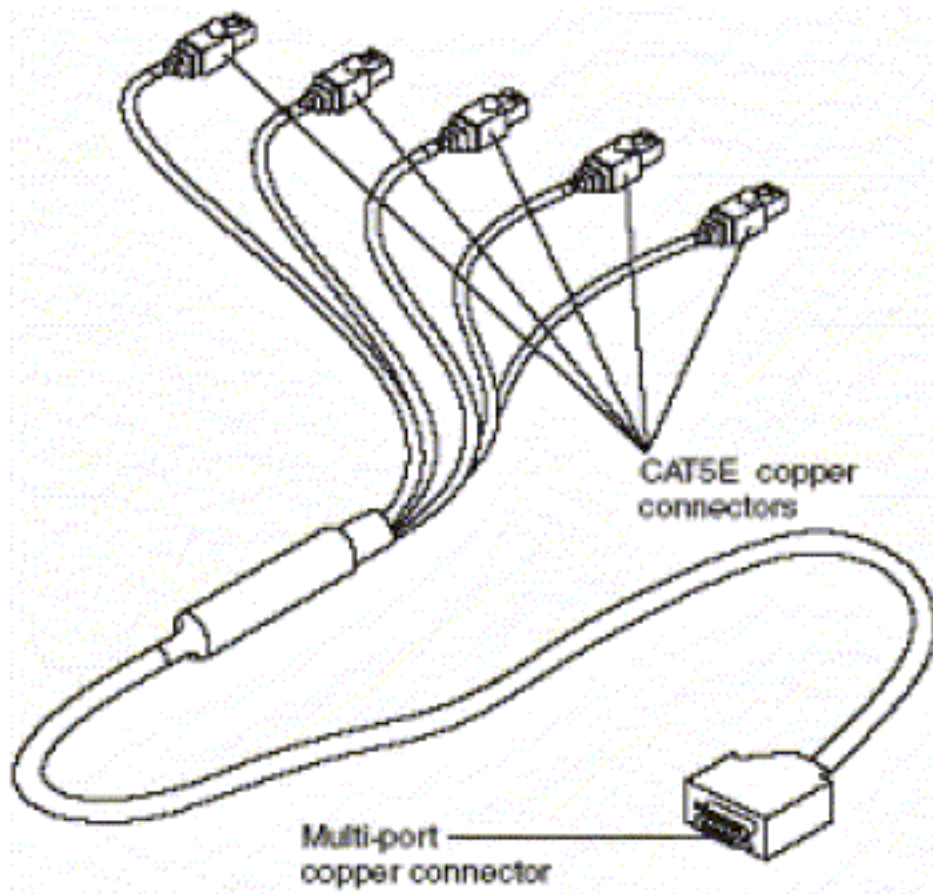
Model		Power modules	
8852-4XY		2x 2900w	
SBB number	Option number	Feature codes	Description
Power			
32R2314	-	1963	BladeCenter 2900W Power Supplies 1 & 2
32R2112	31R3335	1962	IBM BladeCenter H 2900W AC Power Module w/Fan Pack
Power cords¹			
32R2108	25R5785	6226	2.8m, 200-240V, Triple 16A IEC 320-C20 Power Cable
32R2110	25R5784	6271	4.3, 230V, Dual 32A IEC 309 P+N+G / 16A IEC 320-C20 Line Cord
32R2109	25R5783	6270	4.3m, 208V, Double 30A NEMA L6-30P (US) Line Cord
Power Distribution Units			
-	39M2818	-	IBM DPI C19 PDU+
-	39M2819	-	IBM DPI C19 3 phase PDU+
Rack Console Connectivity			
-	17353LX	-	IBM 1x8 Console Switch
-	17354LX	-	IBM 2x16 Console Switch
-	40K9627	-	IBM Acoustic Door for Enterprise Rack
Monitors			
-	17233RX		IBM 1U 15 Flat Panel Console Kit
-	17231RX		IBM 1U 17 Flat Panel console Kit w/Optical Drive Bay
Keyboard and mouse			
-	17235RX		IBM Rack Keyboard Tray
-	39M7228	-	IBM USB UltraNav Keyboard - USB

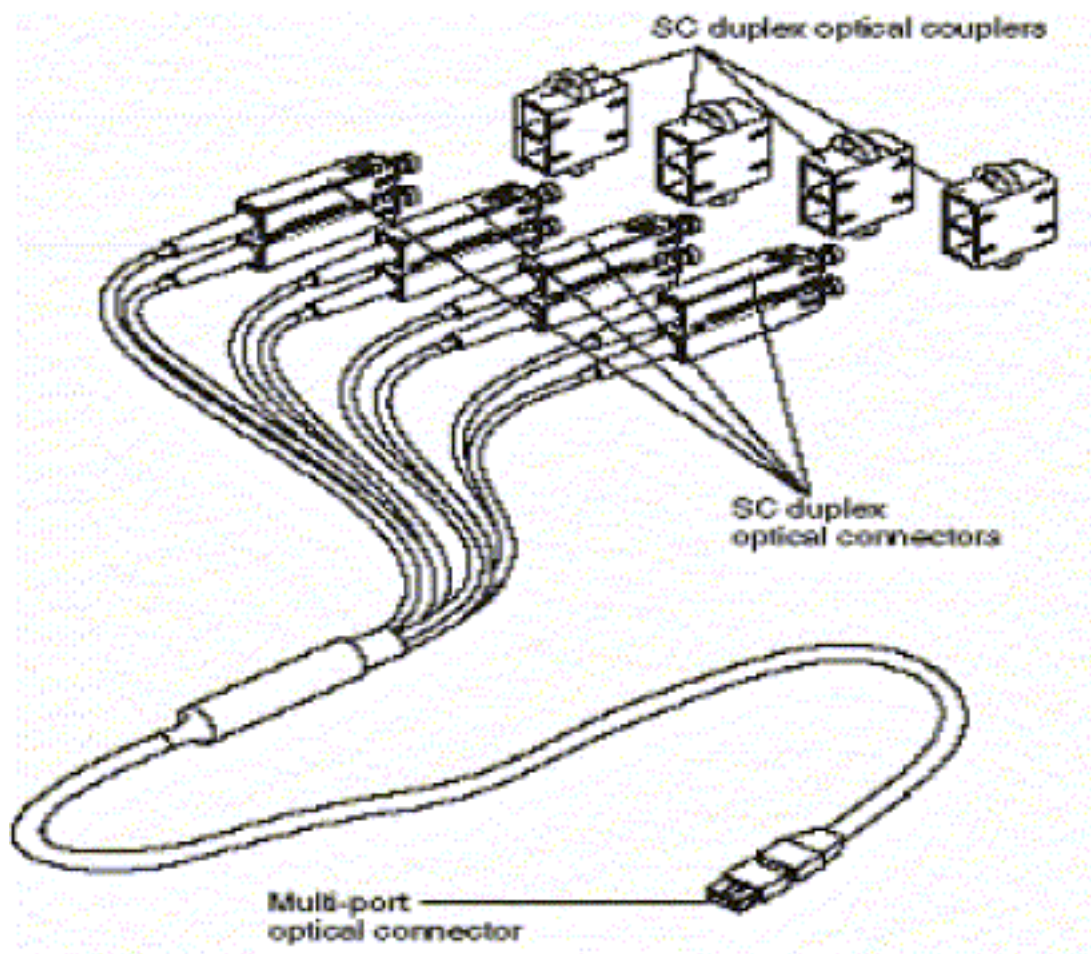
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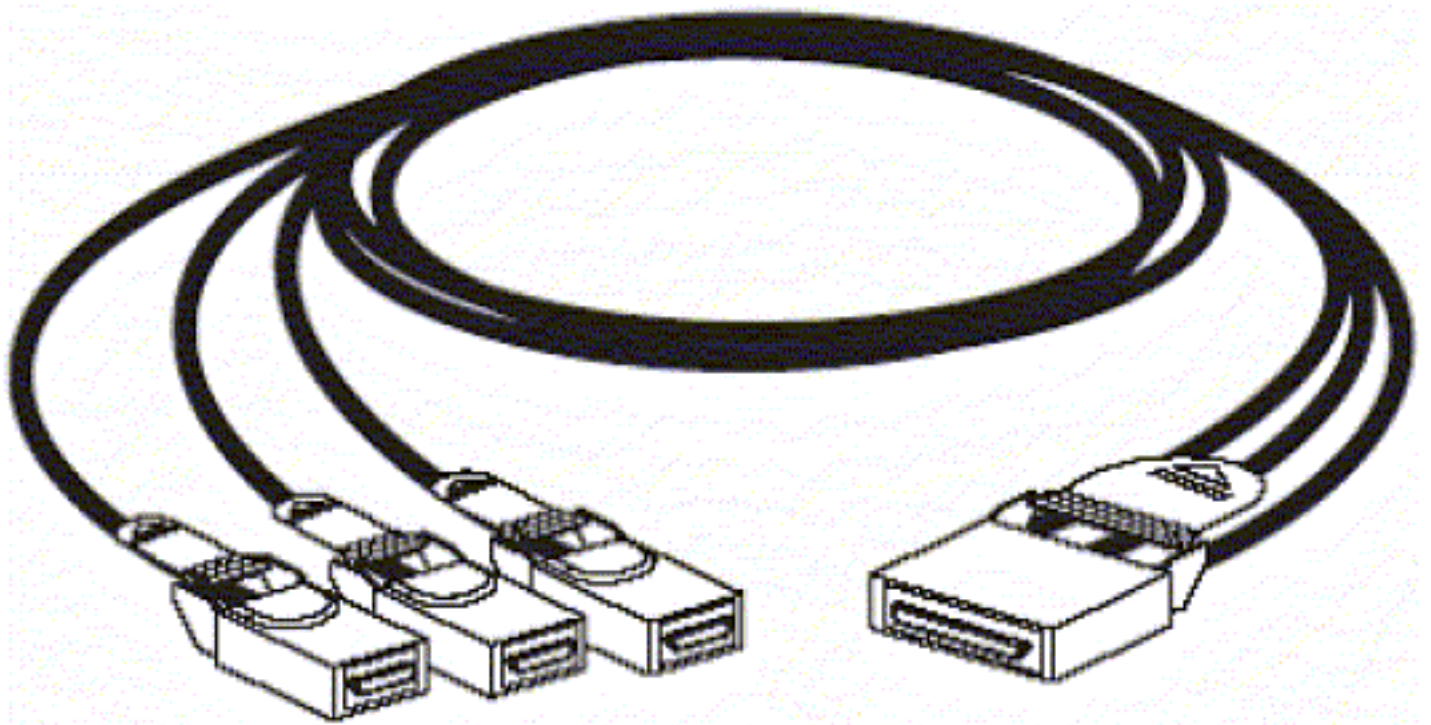
1. Two power cords are required.

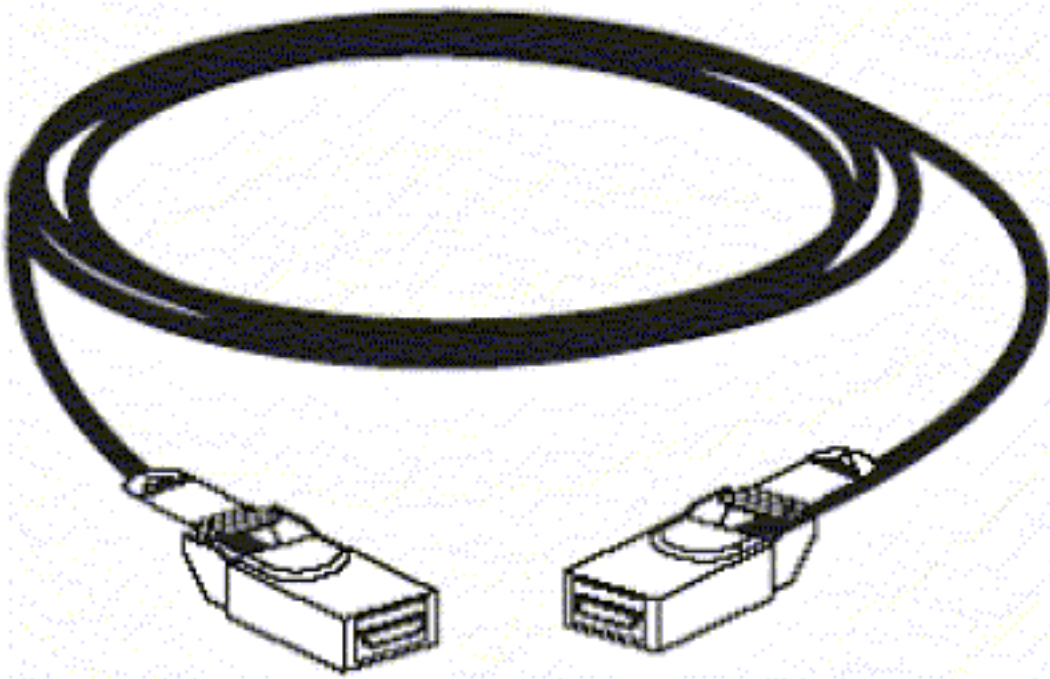


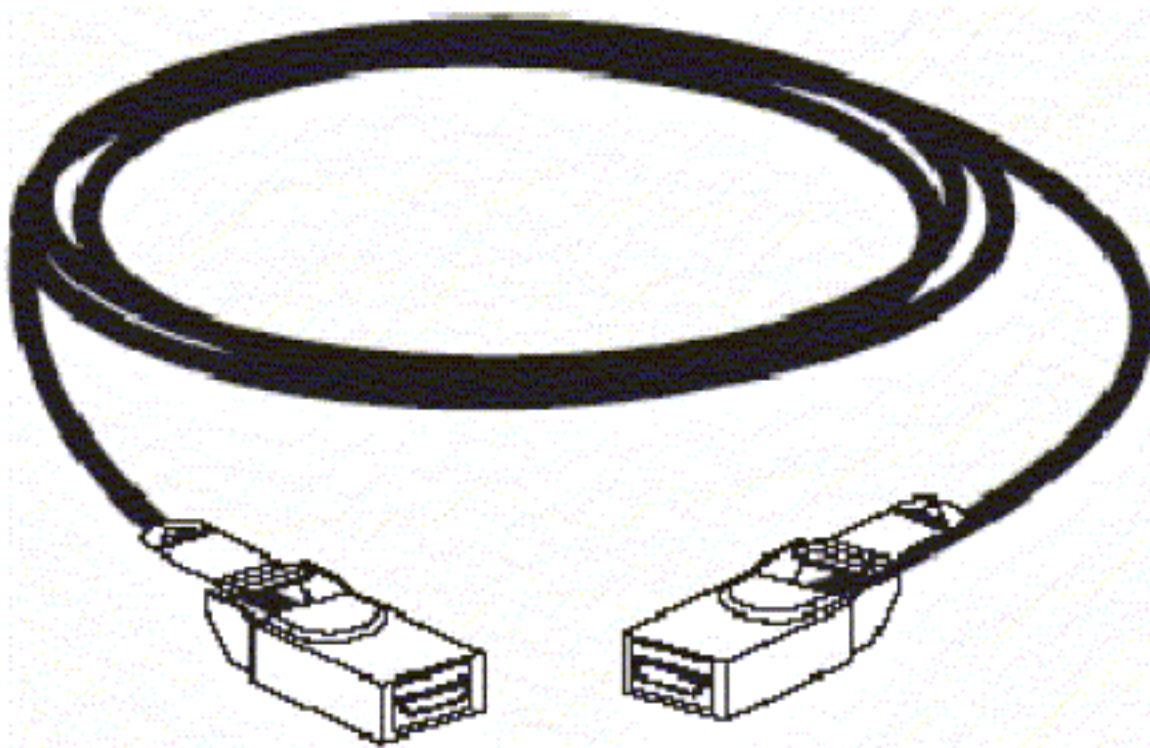












BladeCenter HS12 (8014)

Attention:

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At-A-Glance Options

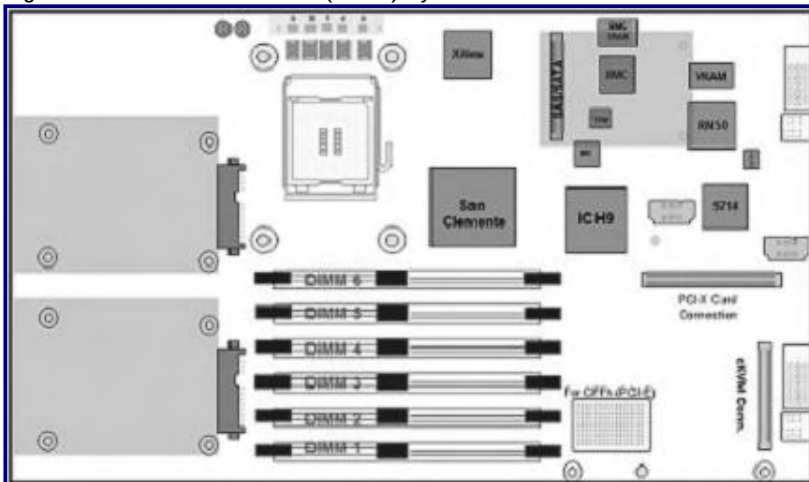
Table 1. BladeCenter HS12 (8014) at-a-glance

Part number ¹	CPU/FSB speed (GHz/MHz) - cache	Number of processors (std / max)	Memory (std / max)	System Management Processor (Std / Max)	Integrated ethernet
8014-1AY	Single Core Intel Celeron Processor 445 (1.86GHz 512KB L2 1066MHz 65W)	1/1	512MB/24GB	-	2GB
8014-2BY	Dual Core Intel Core 2 Duo Processor E6305 (1.86GHz 2MB L2 1066MHz 65W)	1/1	2GB/24GB	-	2GB
8014-EBY	Dual Core Intel Core 2 Duo Processor E6305 (1.86GHz 2MB L2 1066MHz 65W)	1/1	4GB/24GB	-	2GB

Table 1. BladeCenter HS12 (8014) at-a-glance (continued)

Part number ¹	Storage controller	Internal HDD interface	Internal HDD storage (Std / Max)	HDD bays (Std / Max)	Expansion slots (Std / Max)
8014-1AY	SATA	Fixed	0GB/160GB	0/2	0/3
8014-2BY	SATA	Fixed	0GB/160GB	0/2	0/3
8014-EBY	SATA	Fixed	0GB/160GB	0/2	0/3

Figure 1. BladeCenter HS12 (8014) system board



Click image to enlarge

BladeCenter HS12 (8014)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB Number	Option Number ¹	Feature Codes	Processor Options	Models Supported
Standard Processor				
44R5499	-	3654	Single Core Intel Celeron Processor 445 (1.86GHz 512KB L2 1066MHz 65W)	1AY
44R5500	-	3655	Dual Core Intel Core 2 Duo Processor E6305 (1.86GHz 2MB L2 1066MHz 65W)	2BY, EBY

Notes:

1. Supported options will be published in a future release as they become available.

BladeCenter HS12 (8014)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance **Options**

[Processor](#) | **[Memory](#)** | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description
39M5859	-	0548	512 MB VLP PC2-5300 DDR-2 DIMM
-	39M5861	-	1GB (2x 512MB Kit) PC2-5300 CL5 ECC DDR2 SDRAM VLP RDIMM
39M5862	-	0549	1GB VLP PC2-5300 DDR-2 DIMM
-	39M5864	-	2GB (2x 1GB Kit) PC2-5300 CL5 ECC DDR2 SDRAM VLP RDIMM
46C0506	-	3946	2GB SR VLP PC2-5300 DDR-2 DIMM
-	46C0512	-	4GB (2x2GB) PC2-5300 CL5 ECC DDR2 667MHz SR VLP RDIMM
-	46C0513	-	8GB (2x4GB) PC2-5300 CL5 ECC DDR2 667 Dual Rank VLP RDIMM

Table 1. Standard Memory Configuration

Model	Std. DIMM configuration
1AY	512 MB PC2-5300 CL5 ECC DDR2 VLP RDIMM
2BY	2GB (2x1GB) PC2-5300 CL5 ECC DDR2 VLP RDIMM
EBY	4GB (2x2GB) PC2-5300 CL5 ECC DDR2 VLP RDIMM

BladeCenter HS12 (8014)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance **Options**[Processor](#) | [Memory](#) | **[HDD](#)** | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description	Height	Bays supported	Maximum quantity
HDDs						
43W7615	43W7614	5557	IBM 15.8GB 2.5" Solid State Drive	SFF	0-1	2
43W7619	43W7618	5563	IBM 31.4 GB SATA 2.5" SFF Slim-HS SSD	SFF	0-1	2
43W7641	43W7640	5575	IBM 80 GB Non Hot-Swap 7200 SATA HDD	SFF	0-1	2

BladeCenter HS12 (8014)

Attention:

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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description	Form factor
Storage Controllers				
-	-	-	-	-
Networking				
26K4843	39R8624	1548	SFF Gb Ethernet Exp. Card	SFF
26K5942	26K5939	1568	cKVM Feature Card for IBM BladeCenter	-
39Y9189	39Y9190	2979	SAS Expansion Card (CFFv) for IBM BladeCenter	CFFv
39Y9309	39Y9310	2969	Ethernet Expansion Card (CFFv) for IBM BladeCenter	CFFv
39Y9270	39Y9271	2967	NetXen 10Gb Ethernet Expansion Card (CFFh) for IBM BladeCenter	CFFh
39Y9305	39Y9306	2968	Qlogic Ethernet & 4Gb Fibre Channel Exp Card (CFFh) for BladeCenter	CFFh
41Y8526	41Y8527	2970	QLogic 4Gb Fibre Channel Expansion Card (CFFv) for BladeCenter	CFFv
43W6861	43W6859	2994	Emulex 4Gb Fibre Channel Expansion Card (CFFv) for IBM BladeCenter	CFFv
Blade Server Expansion Cards				
-	32R1760	-	Cisco 4X Infiniband Expansion Card for IBM BladeCenter	HSFF
43W4392	-	4339	IBM BladeCenter PCI Express I/O Expansion Unit	-

Note: Form Factor abbreviations are as follows: SFF = Small Form Factor, StFF = Standard Form Factor, HSFF = High Speed Form Factor, CFFh = Combo Form Factor Horizontal I/O Expansion Card, CFFv = Combo Form Factor Vertical I/O Expansion Card.

The Standard Form Factor (StFF) card is the original form factor for expansion cards in blade servers. An StFF expansion card uses the PCI-X connector on the blade server and expansion units. When an StFF expansion card is installed using the PCI-X connector it is not possible to install a CFFh nor HSFF expansion card on the adjacent PCI-E connector (if one exists in the server).

BladeCenter HS12 (8014)

Attention:

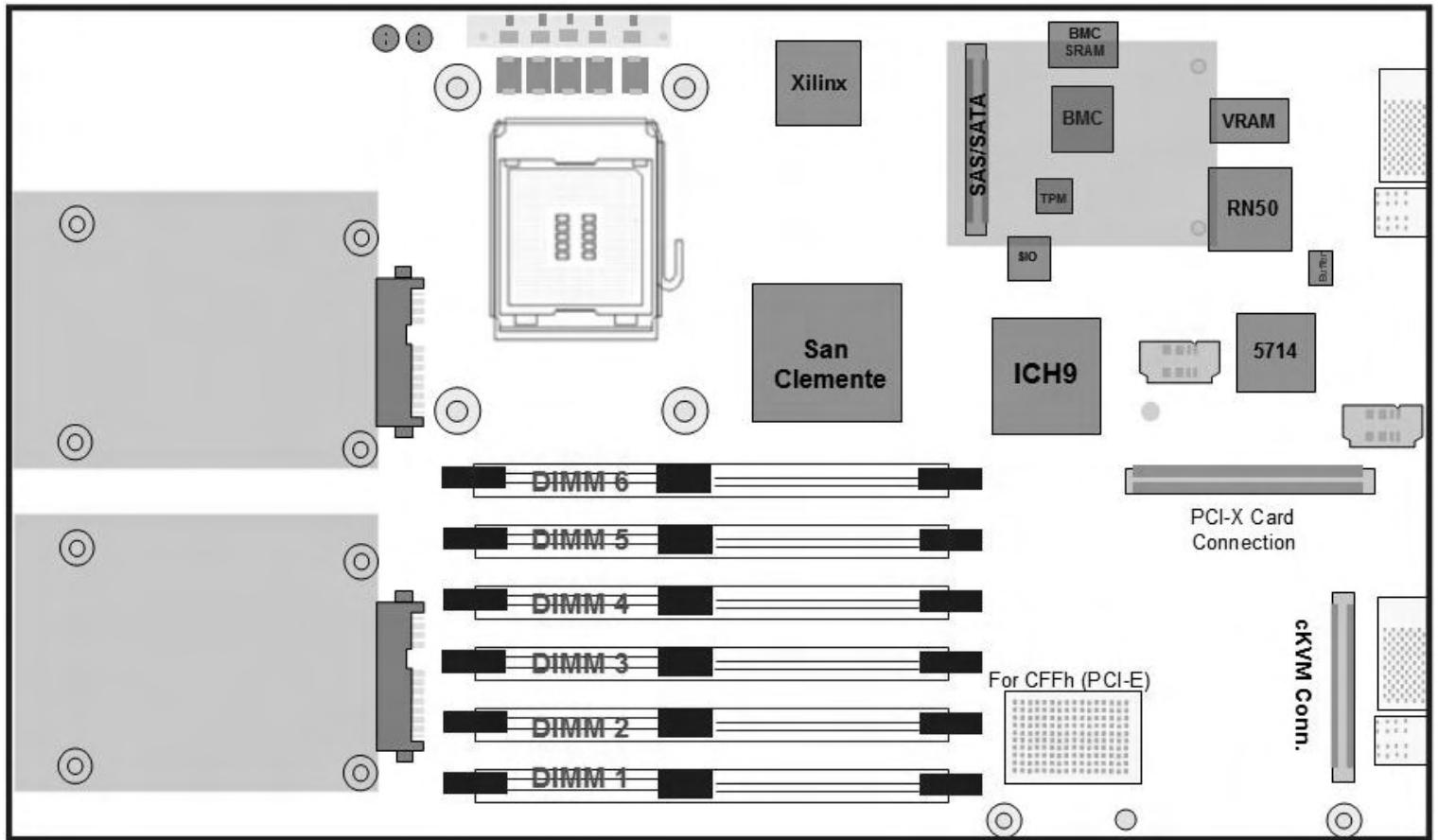
A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | **[Additional information](#)**

|

SBB number	Option number	Feature codes	Description
			Power Supplies
-	-	-	-



BladeCenter HS12 (8028)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Table 1. BladeCenter HS12 (8028) at-a-glance

Part number	CPU /FSB speed (GHz /MHz) - cache	Number of processors (std / max)	Memory (std / max)	System Management Processor (Std / Max)	Integrated ethernet
8028-23Y	Dual Core Intel Xeon Processor E6405 (2.13GHz 2MB L2 1066MHz 65w)	1/1	2GB/24GB	-	2GB
8028-44Y	Quad Core Intel Xeon Processor X3323 (2.50GHz 6MB L2 1333MHz 80w)	1/1	2GB/24GB	-	2GB
8028-45Y	Quad Core Intel Xeon Processor X3353 (2.66GHz 12MB L2 1333MHz 80w)	1/1	2GB/24GB	-	2GB
8028-46Y	Quad Core Intel Xeon Processor X3363 (2.83GHz 12MB L2 1333MHz 80w)	1/1	2GB/24GB	-	2GB
8028-E3Y	Dual Core Intel Xeon Processor E6405 (2.13GHz 2MB L2 1066MHz 65w)	1/1	4GB/24GB	-	2GB
8028-27Y	Dual Core Intel Xeon Processor E3113 (3.0GHz 6MB L2 1333MHz 80w)	1/1	2GB/24GB	-	2GB

Table 1. BladeCenter HS12 (8028) at-a-glance (continued)

Part number	Storage controller	Internal HDD interface	Internal HDD storage (Std / Max)	HDD bays (Std / Max)	Expansion slots (Std / Max)
8028-23Y	SAS	Hot-Swap	0GB/292GB	0/2	0/3
8028-44Y	SAS	Hot-Swap	0GB/292GB	0/2	0/3
8028-45Y	SAS	Hot-Swap	0GB/292GB	0/2	0/3
8028-46Y	SAS	Hot-Swap	0GB/292GB	0/2	0/3
8028-E3Y	SAS	Hot-Swap	73GB/292GB	1/2	0/3
8028-27Y	SAS	Hot-Swap	0GB/292GB	0/2	0/3

Figure 1. BladeCenter HS12 (8028) system board



BladeCenter HS12 (8028)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance **Options**

Processor | [Memory](#) | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB Number	Option Number ¹	Feature Codes	Processor Options	SMP Support
Standard Processor				
44R5501	-	3656	Dual Core Intel Xeon Processor E6405 (2.13GHz 2MB L2 1066MHz 65w)	23Y, E3Y
44R5502	-	3657	Quad Core Intel Xeon Processor X3323 (2.50GHz 6MB L2 1333MHz 80w)	44Y
44R5503	-	3658	Quad Core Intel Xeon Processor X3353 (2.66GHz 12MB L2 1333MHz 80w)	45Y
44R5504	-	3659	Quad Core Intel Xeon Processor X3363 (2.83GHz 12MB L2 1333MHz 80w)	46Y
46C7640	-	3634	Dual Core Intel Xeon Processor E3113 (3.0GHz 6MB L2 1333MHz 80w)	27Y

Notes:

- Supported options will be published in a future release as they become available.

BladeCenter HS12 (8028)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance **Options**

[Processor](#) | **[Memory](#)** | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description
39M5859	-	0548	512 MB VLP PC2-5300 DDR-2 DIMM
-	39M5861	-	1GB (2x 512MB Kit) PC2-5300 CL5 ECC DDR2 SDRAM VLP RDIMMs
39M5862	-	0549	1GB VLP PC2-5300 DDR-2 DIMM
-	39M5864	-	2GB (2x 1GB Kit) PC2-5300 CL5 ECC DDR2 SDRAM VLP RDIMMs
46C0506	-	3946	2GB SR VLP PC2-5300 DDR-2 DIMM
-	46C0512	-	4GB (2x2GB) PC2-5300 CL5 ECC DDR2 667MHz SR VLP RDIMM
-	46C0513	-	8GB (2x4GB) PC2-5300 CL5 ECC DDR2 667 Dual Rank VLP RDIMM

Table 1. Standard Memory Configuration

Model	Std. DIMM configuration
23Y, 44Y, 45Y, 46Y, 27Y	2 x 1 GB VLP PC2-5300 DDR-2 DIMM
E3Y	2 x 2 GB VLP PC2-5300 DDR-2 DIMM

BladeCenter HS12 (8028)

Attention:

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At-A-Glance **Options**[Processor](#) | [Memory](#) | **[HDD](#)** | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description	Height	Bays supported	Maximum quantity
HDDs						
43W7539	43W7535	5577	IBM 73 GB 10K SAS 2.5" SFF Slim-HS HDD	SFF	0-1	2
43W7540	43W7536	5578	IBM 146 GB 10K SAS 2.5" SFF Slim-HS HDD	SFF	0-1	2
43W7547	43W7545	5579	IBM 73 GB 15K SAS 2.5" SFF Slim-HS HDD	SFF	0-1	2
43W7649	43W7648	5576	IBM 31.4 GB SATA 2.5" SFF Slim-HS SSD	SFF	0-1	2

BladeCenter HS12 (8028)

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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description	Form factor
Storage Controllers				
-	-	-	-	-
Networking				
26K4843	39R8624	1548	SFF Gb Ethernet Exp. Card	SFF
26K5942	26K5939	1568	cKVM Feature Card for IBM BladeCenter	-
39Y9189	39Y9190	2979	SAS Expansion Card (CFFv) for IBM BladeCenter	CFFv
39Y9309	39Y9310	2969	Ethernet Expansion Card (CFFv) for IBM BladeCenter	CFFv
39Y9270	39Y9271	2967	NetXen 10Gb Ethernet Expansion Card (CFFh) for IBM BladeCenter	CFFh
39Y9305	39Y9306	2968	Qlogic Ethernet & 4Gb Fibre Channel Exp Card (CFFh) for BladeCenter	CFFh
41Y8526	41Y8527	2970	QLogic 4Gb Fibre Channel Expansion Card (CFFv) for BladeCenter	CFFv
43W6861	43W6859	2994	Emulex 4Gb Fibre Channel Expansion Card (CFFv) for IBM BladeCenter	CFFv
46C5068	43W3974	1591	IBM SAS Connectivity Card (CFFv) for IBM BladeCenter	CFFv
39Y6139	-	2974	PRO/1000 PT Quad Port Server Adapter	Half
39Y6071-	-	1485	NetXtreme II 1000 Express G Ethernet Adapter- PCIe	Half
46C5068	43W3974	1591	SAS Connectivity Card (CFFv) for IBM BladeCenter	CFFv
Blade Server Expansion Cards				
-	32R1760	-	Cisco 4X Infiniband Expansion Card for IBM BladeCenter	HSFF
43W4392	-	4339	IBM BladeCenter PCI Express I/O Expansion Unit	-

Note: Form Factor abbreviations are as follows: SFF = Small Form Factor, StFF = Standard Form Factor, HSFF = High Speed Form Factor, CFFh = Combo Form Factor Horizontal I/O Expansion Card, CFFv = Combo Form Factor Vertical I/O Expansion Card.

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BladeCenter HS12 (8028)

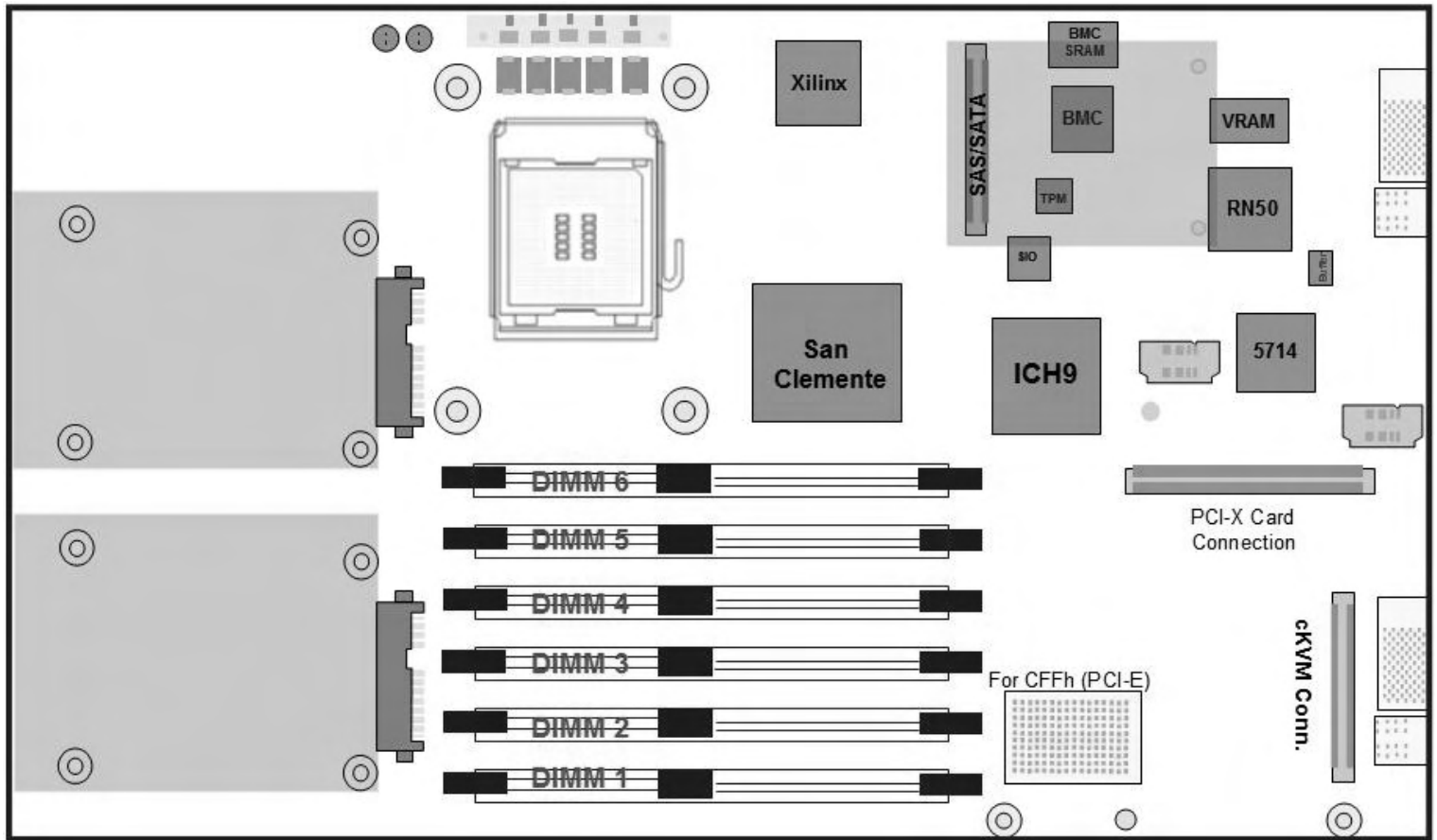
Attention:

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At-A-Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Additional information](#)

|

SBB number	Option number	Feature codes	Description
			Power Supplies
-	-	-	-



BladeCenter HS21 XM (7995)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Table 1. BladeCenter HS21 XM (7995) at-a-glance

Part Number ¹	Withdrawal Date ²	CPU /FSB Speed (GHz /MHz) - cache	Number of Processors (Std / Max)	Memory (Std / Max) ³	System Management Processor ⁴	Integrated Ethernet ⁵
7995-L1Y	Apr 4 2008	Dual-Core Intel Xeon Processor 5110 (1.6GHz 4MB L2 1066MHz 65w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-L2Y	Sept 28 2007	Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 1066MHz 65w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-L3Y	Sept 28 2007	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 1333MHz 65w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-L4Y	-	Dual-Core Intel Xeon Processor 5140 (2.33GHz 4MB L2 1333MHz 65w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-L5Y	Apr 4 2008	Dual-Core Intel Xeon Processor 5150 (2.66GHz 4MB L2 1333MHz 65w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-L6Y	Apr 4 2008	Dual-Core Intel Xeon Processor 5160 (3.0GHz 4MB L2 1333MHz 80w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-NTY	-	Dual-Core Intel Xeon LV Processor 5138 (2.13GHz 4MB L2 1066MHz 35w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-H1Y	Jul 3 2008	Dual-Core Intel Xeon LV Processor 5148 (2.33GHz 4MB L2 1222MHz 40w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-E5Y	Jan 4 2008	Dual-Core Intel Xeon Processor 5150 (2.66GHz 4MB L2 1333MHz 65w)	2/2	4GB/32GB	Y	Dual 1GB ⁵
7995-R2Y	-	Dual-Core Intel Xeon Processor E5260 (3.33GHz 6MB L2 1333MHz 80w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-EHY	-	Quad-Core Intel Xeon Processor E5450 (3.0GHz 12MB L2 1333MHz 80w)	2/2	4GB/32GB	Y	Dual 1GB ⁵
7995-G1Y	-	Quad-Core Intel Xeon Processor E5405 (2.0GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-G3Y	-	Quad-Core Intel Xeon Processor E5420 (2.50GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-G4Y	-	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-G5Y	-	Quad-Core Intel Xeon Processor E5440 (2.83GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-G6Y	-	Quad-Core Intel Xeon Processor E5450 (3.0GHz 12MB L2 1333MHz 80w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-GLY	-	Quad-Core Intel Xeon Processor L5420 (2.50GHz 12MB L2 1333MHz 50w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-HVY	-	Quad-Core Intel Xeon Processor E5450 (3.0GHz 12MB L2 1333MHz 80w)	2/2	1GB/32GB	Y	Dual 1GB ⁵
7995-J1Y	Jul 3 2008	Quad-Core Intel Xeon LV Processor L5310 (1.6GHz 8MB L2 1066MHz 50w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-J2Y	Jul 3 2008	Quad-Core Intel Xeon LV Processor L5320 (1.86GHz 8MB L2 1066MHz 50w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-J3Y	Jul 3 2008	Quad-Core Intel Xeon Processor L5335 (2.0GHz 8MB L2 1333MHz 50W)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-A1Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5310 (1.6GHz 8MB L2 1066MHz 80w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-C1Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5320 (1.86GHz/ 8MB L2 1066MHz 80w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-A2Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5335 (2.0GHz 8MB L2 Cache 1066MHz 80w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-C2Y	Apr 4 2008v	Quad-Core Intel Xeon Processor E5345 (2.33GHz 8MB L2 1333MHz 80w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-E2Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5345 (2.33GHz 8MB L2 1333MHz 80w)	2/2	4GB/32GB	Y	Dual 1GB ⁵

7995-RLY	-	Dual-Core Intel Xeon Processor L5240 (3.0GHz 6MB L2 1333MHz 40w)	1/2	1GB/32GB	Y	Dual 1GB ⁵
7995-GNY	-	Quad Core Intel Xeon Processor L5408 (2.13GHz 12MB 1066MHz 40W)	1/2	4GB/32GB	Y	Dual 1GB ⁵

Table 1. BladeCenter HS21 XM (7995) at-a-glance (continued)

Part Number ¹	Withdrawal Date ²	Storage Controller ⁶	Internal HDD Interface	Internal HDD Storage (Std / Max) ⁷	HDD Bays (Std / Max) ⁸	Expansion Cards (Std / Max) ^{8,9}
7995-L1Y	Apr 4 2008	SAS	Fixed	0/146GB (+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-L2Y	Sept 28 2007	SAS	Fixed	0/146GB (+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-L3Y	Sept 28 2007	SAS	Fixed	0/146GB(+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-L4Y	-	SAS	Fixed	0/146GB(+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-L5Y	Apr 4 2008	SAS	Fixed	0/146GB(+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-L6Y	Apr 4 2008	SAS	Fixed	0/146GB(+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-NTY	-	SAS	Fixed	0/146GB (+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-H1Y	Jul 3 2008	SAS	Fixed	0/146GB (+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-E5Y	Jan 4 2008	SAS	Fixed	0/146GB (+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-R2Y	-	SAS	Fixed	0/146GB (+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-EHY	-	SAS	Fixed	0/146GB (+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-G1Y	-	SAS	Fixed	0/146GB (+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-G3Y	-	SAS	Fixed	0/146GB (+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-G4Y	-	SAS	Fixed	0/146GB (+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-G5Y	-	SAS	Fixed	0/146GB (+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-G6Y	-	SAS	Fixed	0/146GB (+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-GLY	-	SAS	Fixed	0/146GB (+4-8GB via optional Modular Flash Drive)	0/1	0/2

7995-HVY	-	SAS	Fixed	0/146GB (+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-J1Y	Jul 3 2008	SAS	Fixed	0/146GB (+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-J2Y	Jul 3 2008	SAS	Fixed	0/146GB (+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-J3Y	Jul 3 2008	SAS	Fixed	0/146GB (+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-A1Y	Apr 4 2008	SAS	Fixed	0/146GB(+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-C1Y	Apr 4 2008	SAS	Fixed	0/146GB(+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-A2Y	Apr 4 2008	SAS	Fixed	0/146GB(+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-C2Y	Apr 4 2008	SAS	Fixed	0/146GB(+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-E2Y	Apr 4 2008	SAS	Fixed	0/146GB(+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-RLY	-	SAS	Fixed	0/146GB (+4-8GB via optional Modular Flash Drive)	0/1	0/2
7995-GNY	-	SAS	Fixed	0/146GB (+4-8GB via optional Modular Flash Drive)	0/1	0/2

Notes:

1. Model numbers provided are worldwide generally available variant (GAV) model numbers which are not orderable as listed and need to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 7995-L1Y is 7995-L1U. See the product-specific Official IBM announcement letter for other country-specific GAV model numbers. GAV to MTM mapping for A.P. Geographies follow the same pattern. Substitute the last character with a country-specific designator.
2. Withdrawal dates are provided for U.S. and Canada only. Business Partner Inventory may be available.
3. Maximum capacity requires replacing the standard DIMMs. Memory-mirroring, memory sparing and Chipkill functions are supported.
4. System management functionality, interconnect network connectivity and console connectivity are managed through the standard management module. The standard integrated service processor monitors the HS21 XM-7995 system management activity, communicating with the management module in the BladeCenter.
5. Dual Broadcom BMC5708S Gb Ethernet controllers.
6. An integrated LSI 1064 SAS/SATA Controller supporting one onboard SAS hard disk drive or a single or dual configured solid state drive.
7. Maximum internal storage capacity is based on installation of one 146GB SAS HDD or a single or dual configured solid state drive. Additional internal storage is via the optional 4GB or 8GB Modular Flash Drive (P/N 39R8697 or P/N 43W3934), which consists of a USB 2.0 flash memory card connected to a dedicated USB-based slot on the system planar.
8. An optional BladeCenter Storage and I/O Expansion Blade

unit (P/N 39R7563) is available that attaches directly to the blade server adding three hot-swap SAS HDD bays for a total of four HDD bays and adds expansion card slot capacity for a total of three expansion card slots.

9. CFFh (high-speed) and CFFv (normal speed) adapters are designed to work together, utilizing a minimum amount of physical space, solving the issue of allowing only one adapter to exist in a confined space. Inside the Blade Base one non-Hot Swap HDD can be used with one CFFv adapter and either one CFFh adapter or Storage and I/O Expansion Unit. Using the Storage and I/O Expansion Unit it is possible to configure one CFFv adapter (Ethernet) in the front expansion slot and one CFFv and CFFh adapter in the rear expansion slots.

BladeCenter HS21 XM (7995)

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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Additional information](#) |

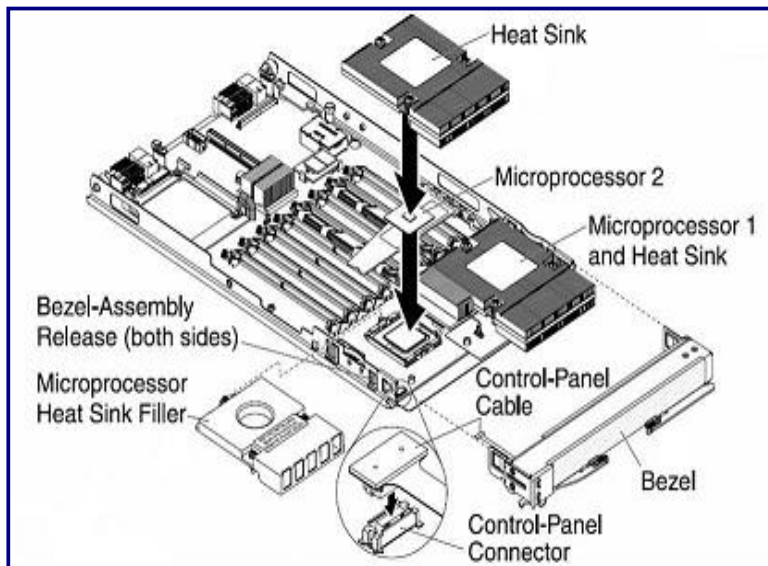
SBB number	Option number	Feature codes	Processor options	SMP support
39R8699	-	2854	Dual-Core Intel Xeon Processor 5110 (1.6GHz 4MB L2 1066MHz 65w)	L1Y
39R8700	-	2855	Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 1066MHz 65w)	L2Y
39R8701	-	2856	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 1333MHz 65w)	L3Y
39R8702	42C0565	2857	Dual-Core Intel Xeon Processor 5140 (2.33GHz 4MB L2 1333MHz 65w)	L4Y
39R8703	-	2858	Dual-Core Intel Xeon Processor 5150 (2.66GHz 4MB L2 1333MHz 65w)	L5Y, E5Y
39R8704	-	2859	Dual-Core Intel Xeon Processor 5160 (3.0GHz 4MB L2 1333MHz 80w) ¹	L6Y
42C0553	42C0568	2860	Dual-Core Intel Xeon LV Processor 5138 (2.13GHz 4MB L2 1066MHz 35w)	NTY
42C0554	-	2861	Dual-Core Intel Xeon LV Processor 5148 (2.33GHz 4MB L2 1222MHz 40w)	H1Y
43W4032	43W4036	3699	Dual-Core Intel Xeon Processor X5260 (3.33GHz 6MB L2 1333MHz 80w)	R2Y
42C0556	-	2863	Quad-Core Intel Xeon Processor E5320 (1.86GHz 8MB L2 1066MHz 80w) ¹	C1Y
42C0557	-	2864	Quad-Core Intel Xeon LV Processor L5310 (1.6GHz 8MB L2 1066MHz 50w)	J1Y
43W3919	-	2832	Quad-Core Intel Xeon LV Processor L5320 (1.86GHz 8MB L2 1066MHz 50w)	J2Y
43W3946	-	3070	Quad-Core Intel Xeon LV Processor L5335 (2.0GHz 8MB L2 1333MHz 50W)	J3Y
43W3977	43W3991	3674	Quad-Core Intel Xeon Processor E5405 (2.0GHz 12MB L2 1333MHz 80w)	G1Y
43W3979	43W3993	3675	Quad-Core Intel Xeon Processor E5420 (2.50GHz 12MB L2 1333MHz 80w)	G3Y
43W3980	43W3994	3676	Quad-Core Intel Xeon Processor E5430 (2.66GHz 12MB L2 1333MHz 80w)	G4Y
43W3981	43W3995	3677	Quad-Core Intel Xeon Processor E5440 (2.83GHz 12MB L2 1333MHz 80w)	G5Y
43W3982	43W3996	3678	Quad-Core Intel Xeon Processor E5450 (3.0GHz 12MB L2 1333MHz 80w)	EHY, G6Y
43X1004	-	2896	Quad-Core Intel Xeon Processor E5310 (1.6GHz 8MB L2 1066MHz 80w) ¹	A1Y
43X1005	-	2891	Quad-Core Intel Xeon Processor E5335 (2.0GHz 8MB L2 1066MHz 80w) ¹	A2Y
43X1006	42C0570	2892	Quad-Core Intel Xeon Processor E5345 (2.33GHz 8MB L2 1333MHz 80w) ¹	C2Y, E2Y
44T1807	-	3614	Quad-Core Intel Xeon Processor L5420 (2.50GHz 12MB L2 1333MHz 50w) ¹	GLY
43W4070	-	3615	Dual-Core Intel Xeon Processor L5240 (3.0GHz 6MB L2 1333MHz 40w) ¹	RLY
46C5092	-	6959	Quad Core Intel Xeon Processor L5408 (2.13GHz 12MB 1066MHz 40W) ¹	GNY
SBB number	Option number	Feature code	Additional processor options	SMP support
39R8705	-	1417	Addl Dual-Core Intel Xeon Processor 5110 (1.6GHz 4MB L2 1066MHz 65w)	L1Y
39R8706	42C0563	1418	Addl Dual-Core Intel Xeon Processor 5120 (1.86GHz 1066MHz 65w)	L2Y

39R8707	42C0564	1419	Addl Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 1333MHz 65w)	L3Y
42C0550	42C0565	1420	Addl Dual-Core Intel Xeon Processor 5140 (2.33GHz 1333MHz 65w)	L4Y
42C0551	-	1421	Addl Dual-Core Intel Xeon Processor 5150 (2.66GHz 1333MHz 65w)	L5Y, E5Y
42C0552	-	1422	Addl Dual-Core Intel Xeon Processor 5160 (3.0GHz 4MB L2 1333MHz 80w)	L6Y
42C0558	42C0568	1423	Addl Dual-Core Intel Xeon LV Processor 5138 (2.13GHz 1066MHz 35w)	NTY
42C0585	-	1427	Addl Dual-Core Intel Xeon LV Processor 5148 (2.33GHz 1333MHz 40w)	H1Y
43W4038	43W4036	3380	Addl Dual-Core Intel Xeon Processor X5260(3.33GHz 6MB L2 1333MHz 80w)	R2Y
42C0561	-	1426	Addl Quad-Core Intel Xeon Processor E5320 (1.86GHz 1066MHz 80w)	C1Y
42C0560	-	1425	Addl Quad-Core Intel Xeon Processor L5310 (1.6GHz 8MB L2 1066MHz 80w)	J1Y
43W3921	-	3469	Addl Quad-Core Intel Xeon LV Processor L5320 (1.86GHz 1066MHz 50w)	J2Y
43W3867	-	3484	Addl Quad-Core Intel Xeon LV Processor L5335 (2.0GHz 8MB L2 1333MHz 50W)	J3Y
43W3984	43W3991	3363	Addl Quad Core Intel Xeon Processor E5405(2.00GHz 12MB 1333MHz 80W)	G1Y
43W3986	43W3993	3364	Addl Quad Core Intel Xeon Processor E5420(2.50GHz 12MB 1333MHz 80W)	G3Y
43W3987	43W3994	3365	Addl Quad Core Intel Xeon Processor E5430(2.66GHz 12MB 1333MHz 80W)	G4Y
43W3988	43W3995	3366	Addl Quad Core Intel Xeon Processor E5440(2.83GHz 12MB 1333MHz 80W)	G5Y
43W3989	43W3996	3367	Addl Quad Core Intel Xeon Processor E5450(3.00GHz 12MB 1333MHz 80W)	EHY, G6Y
43X1007	-	1449	Addl Quad-Core Intel Xeon Processor E5310 (1.6GHz 8MB L2 1066MHz 80w)	A1Y
43X1008	-	1445	Addl Quad-Core Intel Xeon Processor E5335 (2.0GHz 8MB L2 1333MHz 80w)	A2Y
43X1009	42C0570	1446	Addl Quad-Core Intel Xeon Processor E5345(2.33GHz 8MB L2 1333MHz 80w)	C2Y, E2Y
44T1808	46C5050	3398	Addl Quad-Core Intel Xeon Processor L5420 (2.50GHz 12MB L2 1333MHz 50w)	GLY
43W4071	46C5051	3399	Addl Dual-Core Intel Xeon Processor L5240 (3.0GHz 6MB L2 1333MHz 40w)	RLY
46C5093	46C5094	4431	Addl Quad Core Intel Xeon Processor L5408 (2.13GHz 12MB 1066MHz 40W)	GNY

Notes:

1. When fully configuring a BC-E (8677) chassis with the maximum possible HS21 XM blade server configuration (fourteen HS21 XM blade servers, each with two 80W processors, eight 4GB memory DIMMs, one SAS HDD, one USB-based flash drive, one I/O card and one cKVM card), there could be periods of time that Power Domain 2 exceeds the 13.5amp rating guidance (Power Domain 1 will not exceed the rating guidance). While this is not violating any safety rules, we recommend that your clients review the electrical infrastructure and power distribution of their installations to account for a peak of 14.4A.
2. A blade using a single CPU must have it installed in the CPU 1 socket.
3. The system should not be allowed to boot with an empty CPU 1 socket.
4. If the CPU 2 socket is empty, it must have a CPU heat sink filler installed. The CPU heat sink filler is a baffle which maintains proper airflow through the blade.
5. The CPU heat sink filler is required to be installed in CPU 2 socket.
6. A terminator is not required.

Figure 1. HS21 XM - 7995 system planar



[Click image to enlarge](#)

BladeCenter HS21 XM (7995)

Attention:

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At-A-Glance Options

[Processor](#) | **[Memory](#)** | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description
39M5780	-	0546	512MB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
-	39M5782	-	1GB (2x512MB) PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
39M5783	-	0542	1GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
-	39M5785	-	2GB (2x1GB) PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
39M5789	-	0544	2GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
-	39M5791	-	4GB (2x2GB) PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
39M5795	-	0556	4GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
-	39M5797	-	8GB (2x4GB) PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz

Note: When installing 2 DIMMs in the HS21 XM use DIMM Connectors 5 (J171) and 7 (J173). HS21 XM does not support a 3 pair configuration. Pairs three and four must be installed at the same time. Three memory configuration modes can be used in the HS21 XM, including Flat, Sparing and Mirroring.

Flat Mode: DIMMs must be added in identical pairs: DIMM pair 1 (DIMMs 5 and 7), DIMM pair 2 (DIMMs 2 and 4), DIMM pair 3 (DIMMs 1, 3 and 6, 8 or 6, 8 and 1, 3)

Sparing Mode: This configuration is supported for the 2 DIMM pair configuration with identical DIMM types. With a single DIMM pair sparing is supported if the DIMMs are dual rank only.

Mirroring Mode: Both branches must be populated identically; the same as both channels. Each slot number of each channel must include DIMMs with the same electrical characteristics (speed, density, and organization).

Table 1. Standard Memory Configuration

Model	Std. DIMM Configuration
A1Y, A2Y, C1Y, C2Y, G1Y, G3Y, G4Y, G5Y, G6Y, GLY, H1Y, J1Y, J2Y, J3Y, L1Y, L2Y, L3Y, L4Y, L5Y, L6Y, NTY, R2Y, RLY	2x 512MB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
E2Y, E5Y, EHY, GNY, HVY	2x 2GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz

BladeCenter HS21 XM (7995)

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At-A-Glance Options

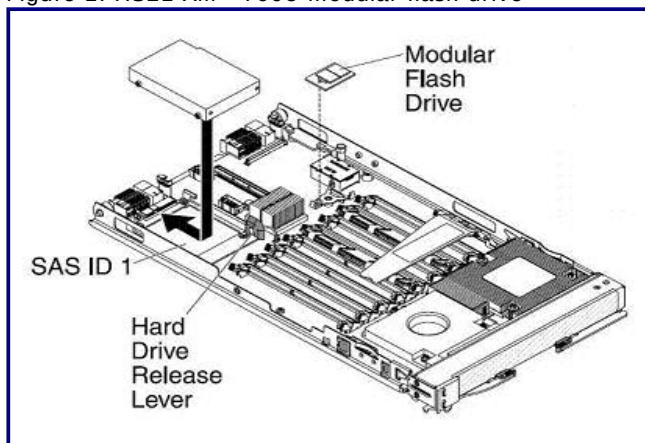
[Processor](#) | [Memory](#) | **[HDD](#)** | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description	Height	Bays supported	Maximum quantity
SAS HDDs¹						
43W7619	43W7618	5563	IBM 31.4GB 2.5" Solid State Drive	2.5"	1	1
26K5781	26K5777	5298	73GB 10K 2.5" Non Hot-Swap SAS SFF	2.5"	1	1
39R7393	39R7389	5153	73GB 10K 2.5" Hot-Swap SAS SFF	2.5"	2,3,4 ²	3
43W7607	43W7606 ³	5558	IBM Dual 15.8GB 2.5" Solid State Drives	2.5"	1	1
43W7615	43W7614	5557	IBM 15.8GB 2.5" Solid State Drive	2.5"	1	1
42D0423	42D0421	5529	IBM ServerBlade 146GB SAS 10K 2.5" SFF NHS	2.5"	1	1
43X0849	43X0845	5545	IBM ServerBlade 73GB SAS 15K 2.5" SFF NHS	2.5"	1	1
39R8695	39R8697 ⁴	2042	IBM 4GB Modular Flash Drive	2.5"	1	1
43W3933	43W3934 ⁴	5548	IBM 8GB Modular Flash Drive	2.5"	1	1

Note:

1. Installing a StFF expansion card on the HS21-XM prevents installation of an internal hard drive.
2. Only available on the BladeCenter Storage and Expansion Unit (P/N 39R7563).
3. 43W7606 is a single physical device with two solid state drives that uses only one bay.
4. The IBM 4GB Modular Flash Drive (SBB 39R8695, FC 2042) and IBM 8GB Modular Flash Drive (SBB 43W3933, FC 5548) are USB 2.0 compatible drives that occupy a dedicated slot on the system planar. Refer to the following image.

Figure 1. HS21 XM - 7995 modular flash drive



[Click image to enlarge](#)

BladeCenter HS21 XM (7995)

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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description	Form factor
Networking				
39Y6091	-	1487	NetXtreme 1000 S + Ethernet Adapter- PCI-X	-
39Y6096	-	1489	NetXtreme 1000 T + Dual Port Ethernet Adapter- PCI-X	-
46C5068	43W3974	1591	SAS Connectivity Card (CFFv) for IBM BladeCenter	CFFv
Storage controllers				
25R8077	25R8064	1670	IBM ServeRAID-8k SAS Controller ¹	-
25R8080	-	1671	IBM ServeRAID 8k-I SAS Controller ¹	-
39R8752	-	1680	IBM Ultra320 SCSI Controller 2 ¹	-
39R8819	-	1685	ServeRAID-6M Ultra320 SCSI Controller (128MB) ¹	-
39R8820	-	1686	ServeRAID-6M Ultra320 SCSI Controller (256MB) ¹	-
Blade Server Expansion Cards²				
43W4430	43W4420	2993	Voltaire 4X InfiniBand DDR Expansion Card (CFFh) for IBM BladeCenter	CFFh
43W4431	43W4421	2992	Cisco 4X InfiniBand DDR Expansion Card (CFFh) for IBM BladeCenter	CFFh
32R1761	32R1760	1466	Cisco Systems 4X InfiniBand Expansion Card for IBM BladeCenter	HSFF
39Y9117	32R1896	1492	Cisco Systems InfiniBand HCA Expansion Card for IBM BladeCenter	-
43W4433	43W4423	2991	4X InfiniBand DDR Expansion Card (CFFh) for IBM BladeCenter	CFFh
43W6861	43W6859	2994	Emulex 4Gb Fibre Channel Expansion Card (CFFv) for IBM BladeCenter	CFFv
39Y9185	39Y9186	2925	Emulex 4Gb SFF Fibre Channel Expansion Card for IBM BladeCenter	SFF
39Y9189	39Y9190	2979	SAS Expansion Card (CFFv) for IBM BladeCenter	CFFv
26K4837	73P6000	1546	Myrinet Cluster Exp. Card	StFF
26K5942	26K5939	1568	cKVM Feature Card for IBM BladeCenter	-
26K4844	26K4841	1549	SFF Fibre Channel Exp Card	SFF
26K4843	39R8624	1548	SFF Gb Ethernet Exp. Card	SFF
39Y9270	39Y9271	2967	NetXen 10Gb Ethernet Expansion Card (CFFh) for IBM BladeCenter	CFFh
39Y9309	39Y9310	2969	Ethernet Expansion Card (CFFv) for IBM BladeCenter	CFFv
26R0891	26R0890	1577	QLogic 4Gb SFF Fibre Channel Expansion Card for eServer	SFF
39Y9116	32R1923	1458	Qlogic iSCSI Daughtercard for IBM BladeCenter	StFF
39Y9305	39Y9306	2968	Qlogic Ethernet & 4Gb Fibre Channel Exp Card (CFFh) for BladeCenter	CFFh
41Y8526	41Y8527	2970	QLogic 4Gb Fibre Channel Expansion Card (CFFv) for IBM BladeCenter	CFFv
43X0834	-	5535	IBM Storage and I/O Blade 146GB SAS 10K 2.5" SFF HS	-
43X0857	-	5547	IBM Storage and I/O Blade 73GB SAS 15K 2.5" SFF HS	-
43W4392	43W4391	4339	IBM BladeCenter PCI Express I/O Expansion Unit	-
31R2266	39R7563	4265	IBM BladeCenter Storage and I/O Expansion Blade	-
32R0792	25K8373	4244	IBM eServer BladeCenter PCI I/O Expansion Unit II	-
Associated options				
40K8918	-	2965	Voltaire 4x InfiniBand HCA for BladeCenter	-
42D1471	-	2966	Voltaire 4x DDR InfiniBand HCA for BladeCenter	-

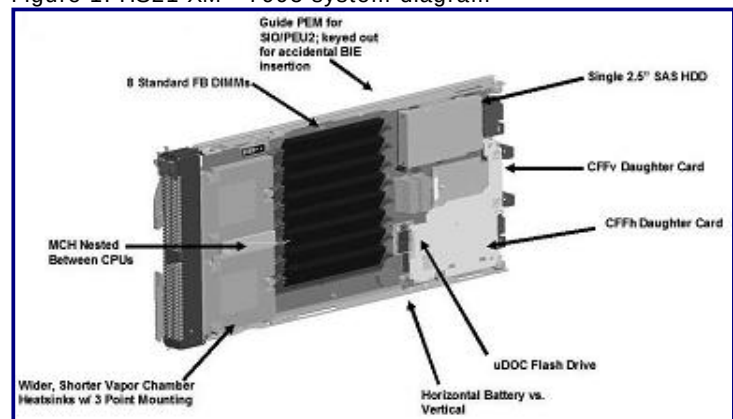
Note: Form Factor abbreviations are as follows: SFF = Small Form Factor, StFF = Standard Form Factor, HSFF = High Speed Form Factor.

The Standard Form Factor (StFF) card is the original form factor for expansion cards in blade servers. An StFF expansion card uses the PCI-X connector on the blade server and expansion units. When an StFF expansion card is installed using the PCI-X connector it is not possible to install a CFFh nor HSFF expansion card on the adjacent PCI-E connector (if one exists in the server) In addition, when an StFF expansion card is installed, the second hard disk drive on some blade servers cannot be installed.

Notes:

1. BladeCenter Storage Expansion Unit (P/N 39R7563) is required for use.
2. Installing a StFF expansion card on the HS21-XM prevents installation of an internal hard drive.

Figure 1. HS21 XM - 7995 system diagram



[Click image to enlarge](#)

BladeCenter HS21 XM (7995)

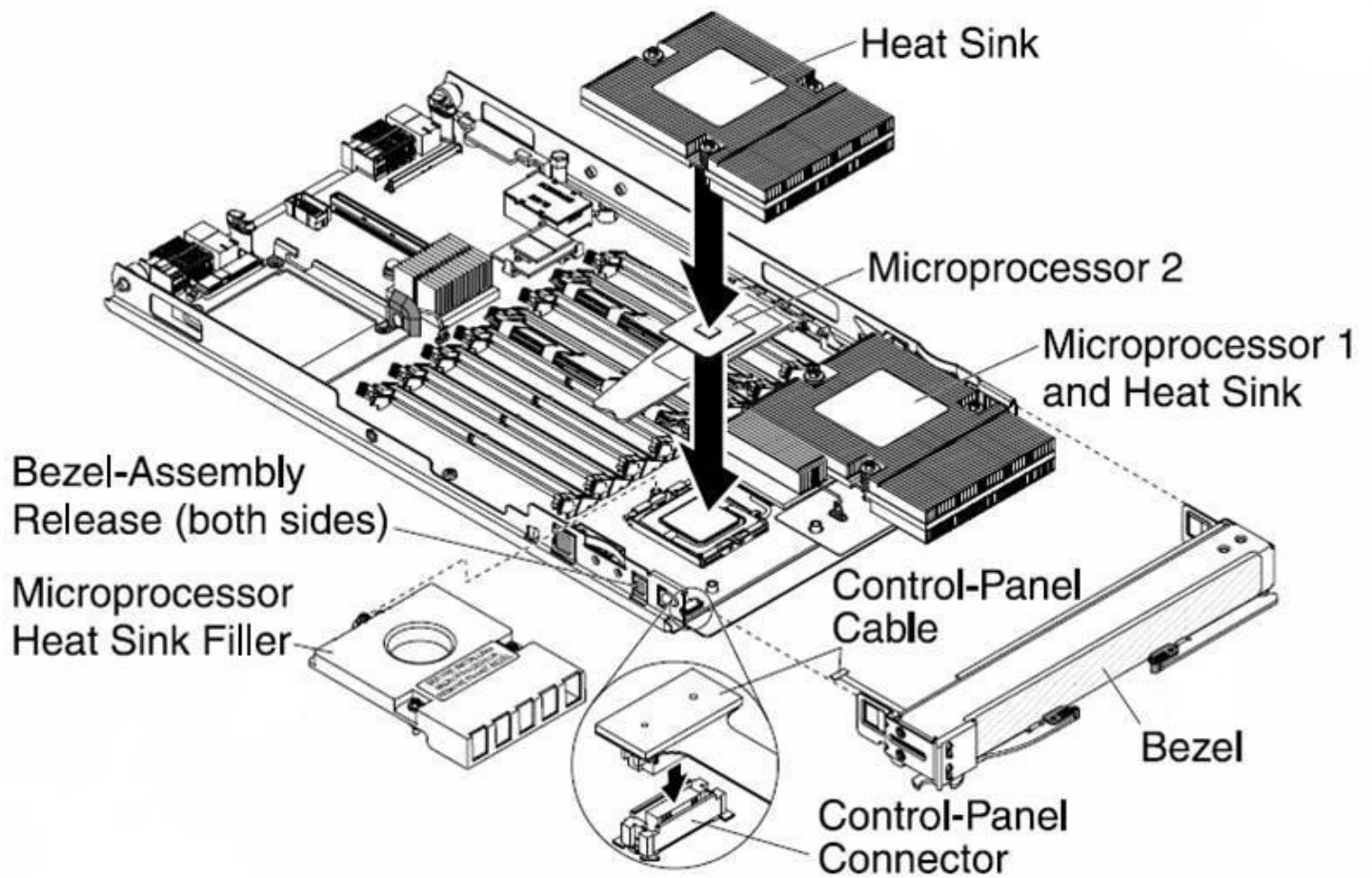
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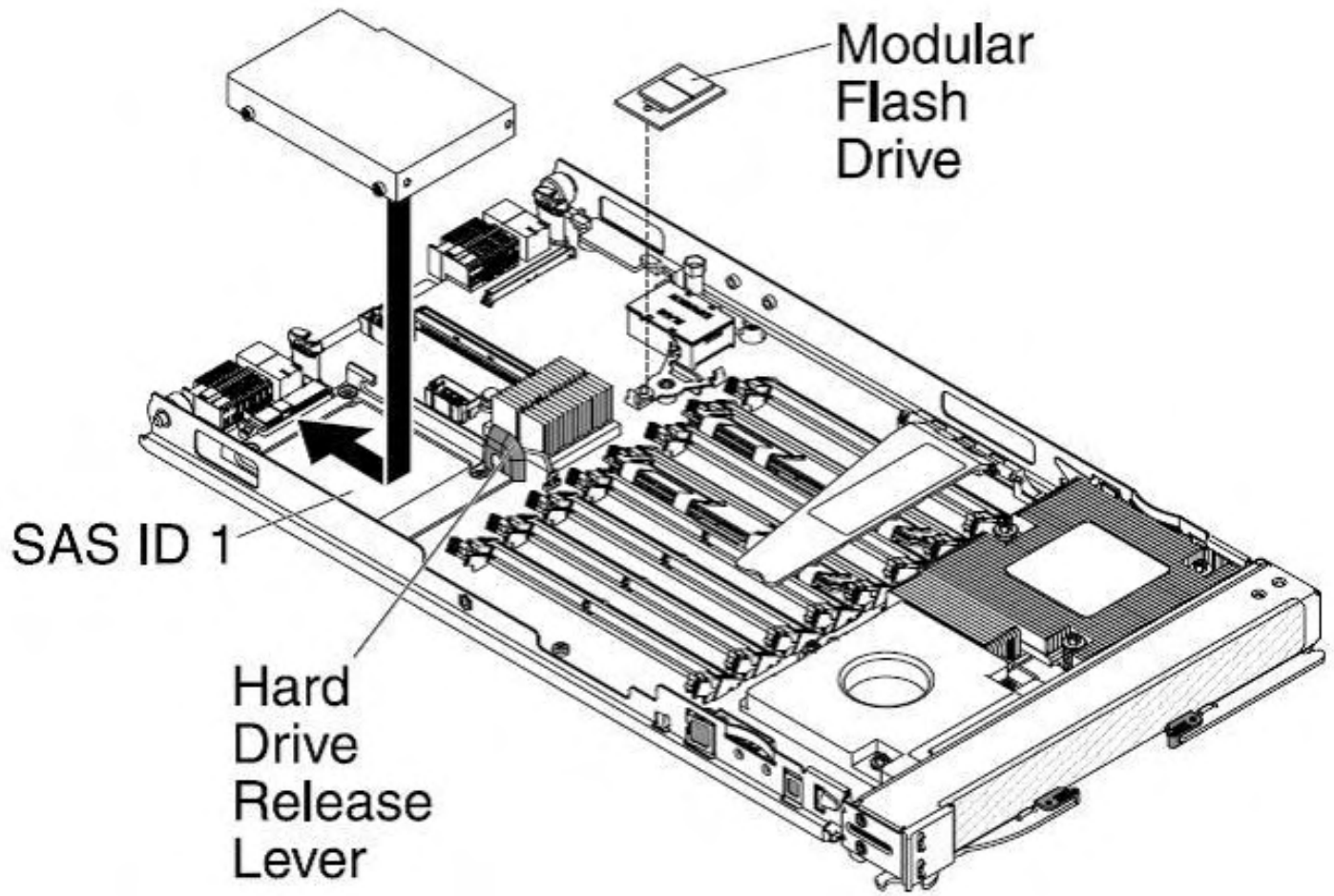
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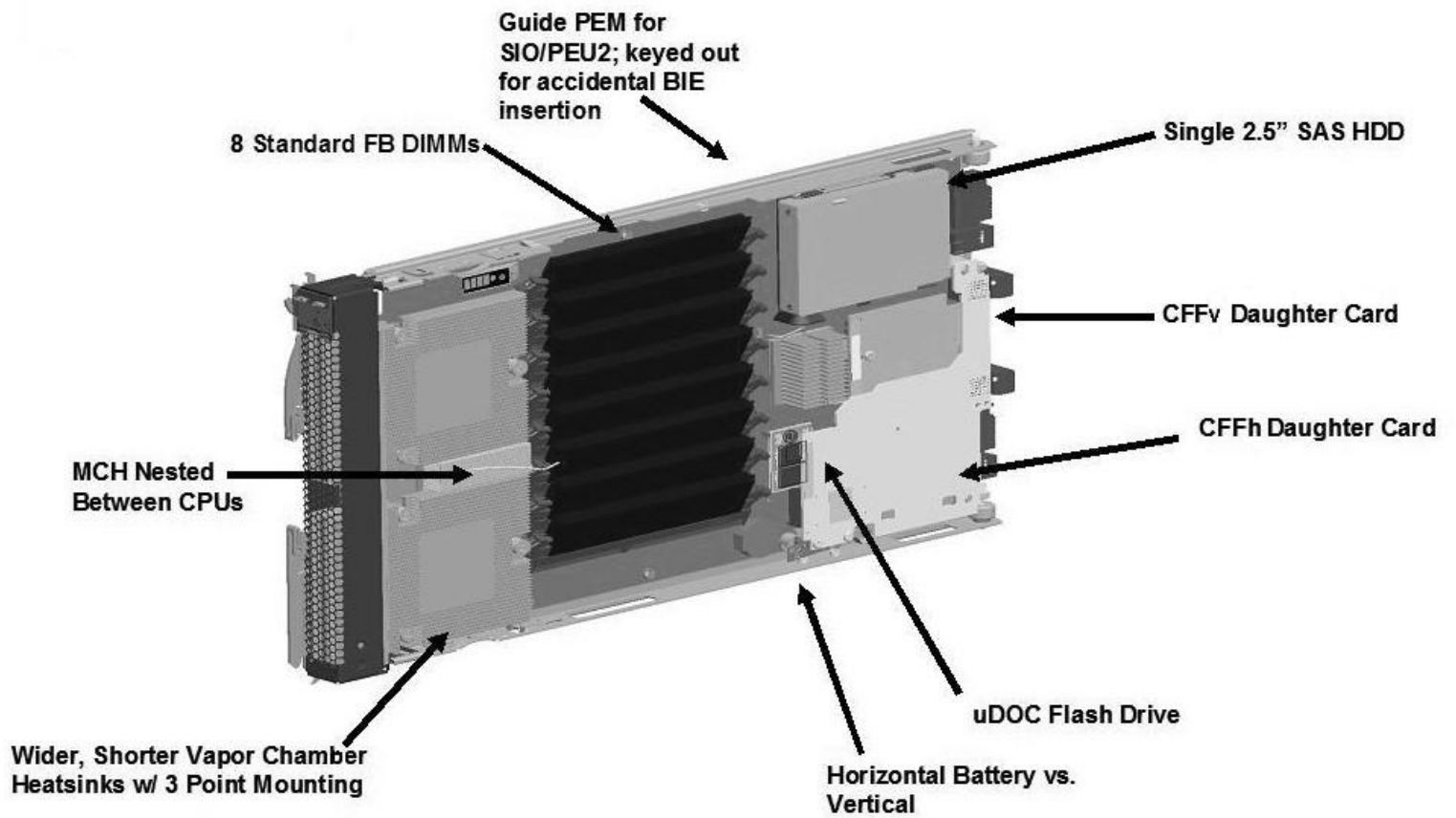
At-A-Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | **[Additional information](#)**

|

SBB number	Option number	Feature codes	Description
Rack Console Connectivity			
-	17353LX	-	IBM 1x8 Console Switch
-	17354LX	-	IBM 2x16 Console Switch







BladeCenter HC10 (7996)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Table 1. BladeCenter HC 10 - (7996) at-a-glance

Part number ¹	CPU/FSB speed (GHz / MHz) - cache	Number of Processor quantity (std / max)	Memory (std / max) ²	System Management Processor ³	Integrated ethernet ⁴
7996-21Y	Intel Core 2 Duo Processor E6300 (1.86GHz 2MB L2 1066MHz 65w)	1/1	1GB/8GB	Y	Dual 1GB
7996-51Y	Intel Core 2 Duo Processor E6700 (2.66GHz 4MB L2 1066MHz 65w)	1/1	2GB/8GB	Y	Dual 1GB
7996-5AY	Intel Core 2 Duo Processor E6700 (2.66GHz 4MB L2 1066MHz 65w)	1/1	2GB/8GB	Y	Dual 1GB
7996-5BY	Intel Core 2 Duo Processor E6700 (2.66GHz 4MB L2 1066MHz 65w)	1/1	4GB/8GB	Y	Dual 1GB
7996-35Y	Intel Core 2 Duo Processor E6400 (2.13GHz 2MB L2 1066MHz 65w)	1/1	1GB/ 8GB	Y	Dual 1GB
7996-55Y	Intel Core 2 Duo Processor E6700 (2.66GHz 4MB L2 1066MHz 65w)	1/1	2GB/ 8GB	Y	Dual 1GB
7996-5RY	Intel Core 2 Duo Processor E6700 (2.66GHz 4MB L2 1066MHz 65w)	1/1	2GB/ 8GB	Y	Dual 1GB
7996-5SY	Intel Core 2 Duo Processor E6700 (2.66GHz 4MB L2 1066MHz 65w)	1/1	4GB/8GB	Y	Dual 1GB

Note: Video adapters used for BladeCenter HC10 (7996) individual Machine Type Models (MTM) are: 7996-21Y (NVIDIA Quadro NVS 120M), 7996-51Y (NVIDIA Quadro NVS 120M), 7996-5AY (NVIDIA Quadro FX1600M), 7996-5BY (NVIDIA Quadro FX1600M), 7996-35Y (NVIDIA Quadro NVS 120M), 7996-55Y(NVIDIA Quadro NVS 120M), 7996-5RY (NVIDIA Quadro FX1600M), 7996-5SY(NVIDIA Quadro FX1600M)

Table 1. BladeCenter HC 10 - (7996) at-a-glance (continued)

Part number ¹	Storage Controller	Internal HDD interface	Internal HDD storage (std / max)	HDD Bays (std / Avail)	Expansion cards (std / max)
7996-21Y	SATA	Fixed	60GB/60GB	1/1	0/0
7996-51Y	SATA	Fixed	60GB/60GB	1/1	0/0
7996-5AY	SATA	Fixed	60GB/60GB	1/1	0/0
7996-5BY	SATA	Fixed	60GB/60GB	1/1	0/0
7996-35Y	SATA	Fixed	80GB/80GB	1/1	0/0
7996-55Y	SATA	Fixed	80GB/80GB	1/1	0/0
7996-5RY	SATA	Fixed	80GB/80GB	1/1	0/0
7996-5SY	SATA	Fixed	80GB/80GB	1/1	0/0

Note: Video adapters used for BladeCenter HC10 (7996) individual Machine Type Models (MTM) are: 7996-21Y (NVIDIA Quadro NVS 120M), 7996-51Y (NVIDIA Quadro NVS 120M), 7996-5AY (NVIDIA Quadro FX1600M), 7996-5BY (NVIDIA Quadro FX1600M), 7996-35Y (NVIDIA Quadro NVS 120M), 7996-55Y(NVIDIA Quadro NVS 120M), 7996-5RY (NVIDIA Quadro FX1600M), 7996-5SY(NVIDIA Quadro FX1600M)

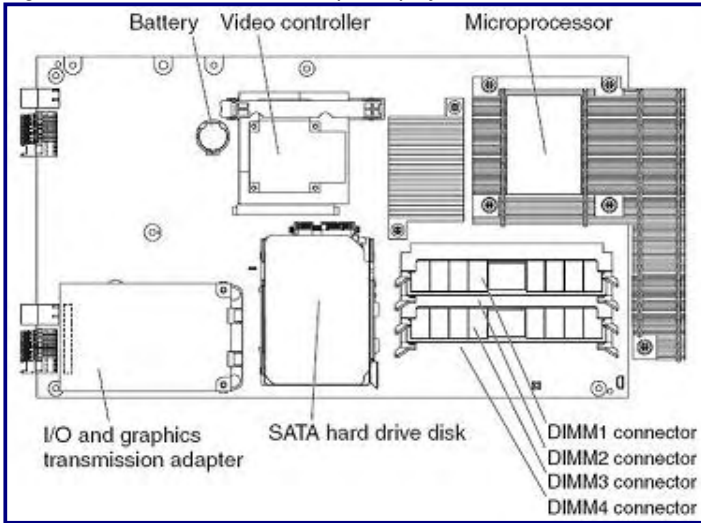
Notes:

1. Model numbers provided are worldwide generally available variant (GAV) model numbers which are not orderable as listed and need to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 7996-21Y is 7996-21U. See the product-specific Official IBM announcement letter for other country-specific GAV model numbers. GAV to MTM mapping for A.P. Geographies follow the same pattern. Substitute the last character with a country-specific designator.
2. Maximum capacity requires replacing the standard DIMMs. Memory mirroring, memory sparing and Chipkill functions are supported.
3. System management functionality, interconnect network connectivity and console connectivity are managed through

the standard management module. The standard integrated service processor monitors the BladeCenter HC10 (7996) system management activity, communicating with the advanced management module in the BladeCenter.

4. The BladeCenter HC10 (7996) comes preloaded with Microsoft Windows Vista Business Blade PC 64-bit Edition.

Figure 1. BladeCenter HC 10 (7996) system board



[Click image to enlarge](#)

BladeCenter HC 10 (7996)

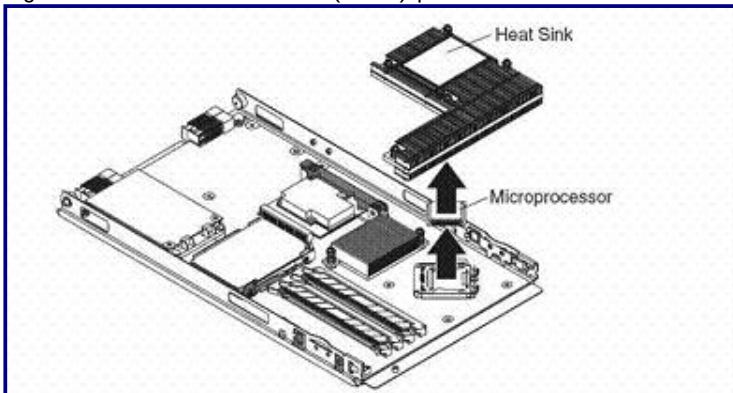
Attention:

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At-A-Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Processor options	SMP support
43W0947	-	2870	Intel Core 2 Duo Processor E6700 (2.66GHz 4MB L2 1066MHz 65w)	51Y, 5AY, 5BY, 55Y, 5RY,
43W0953	-	2872	Intel Core 2 Duo Processor E6300 (1.86GHz 2MB L2 1066MHz 65w)	21Y
43W6237	-	2834	Intel Core 2 Duo Processor E6400 (2.13GHz 2MB L2 1066MHz 65w)	35Y

Figure 1. BladeCenter HC 10 (7996) processor



[Click image to enlarge](#)

BladeCenter HC 10 (7996)

Attention:

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At-A-Glance Options

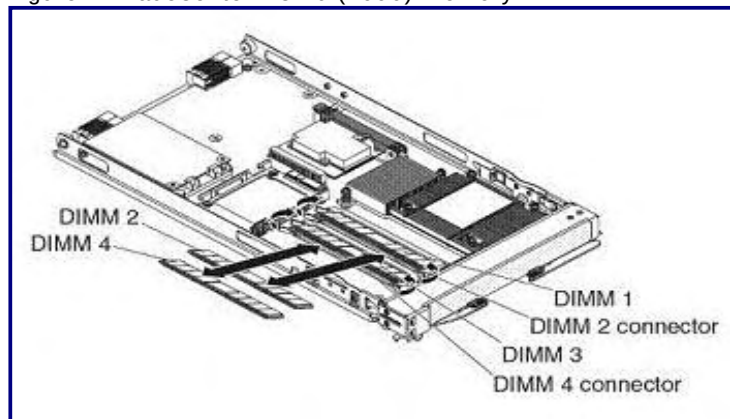
[Processor](#) | **[Memory](#)** | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description
41Y2820	-	3931 -	
-	41Y2822	-	1GB (2x512MB) PC2-5300 CL5 DDR2 667 DIMM
41Y2823	-	3932	1GB PC2-5300 CL5 DDR2 667 DIMM
-	41Y2825	-	2GB (2x1GB Kit) PC2-5300 CL5 DDR2 667 DIMM
41Y2826	-	3933	2GB PC2-5300 CL5 DDR2 667 DIMM
-	41Y2828	-	4GB (2x 2GB Kit) PC2-5300 CL5 DDR2 667 DIMM

Table 1. Standard Memory Configuration

Model	Std. DIMM Configuration
21Y	2x 512MB PC2-5300 CL5 ECC DDR2 667MHz DIMM
51Y	2x 1GB PC2-5300 CL5 ECC DDR2 667MHz DIMM
5AY	2x 1GB PC2-5300 CL5 ECC DDR2 667MHz DIMM
5BY	2x 2GB PC2-5300 CL5 ECC DDR2 667MHz DIMM
35Y	(2x) 512MB PC2-5300 CL5 DDR2 667 DIMM
55Y	(2x) 1GB PC2-5300 CL5 DDR2 667 DIMM
5RY	(2x) 1GB PC2-5300 CL5 DDR2 667 DIMM
5SY	(2x) 2GB PC2-5300 CL5 DDR2 667 DIMM

Figure 1. BladeCenter HC 10 (7996) memory



[Click image to enlarge](#)

BladeCenter HC 10 (7996)

Attention:

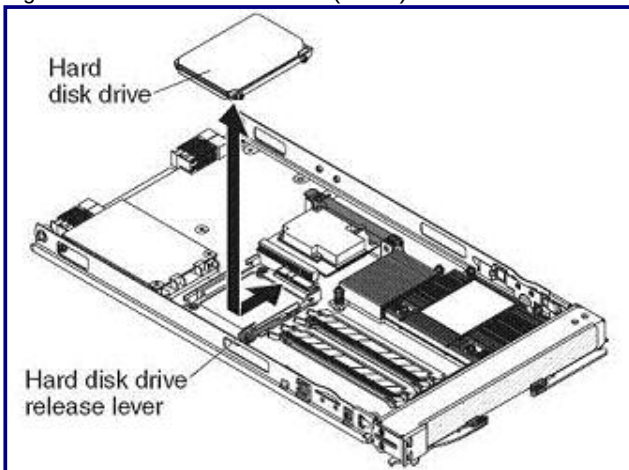
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At-A-Glance Options

[Processor](#) | [Memory](#) | **[HDD](#)** | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description	Height	Bays supported	Maximum qty
SATA HDDs						
43W6175	-	5539	60GB 5.4K rpm SATA HDD	-	-	-
41Y8213	-	5573	80GB 7.2K rpm SATA HDD	-	-	-

Figure 1. BladeCenter HC 10 (7996) hard disk drive



[Click image to enlarge](#)

BladeCenter HC 10 (7996)

Attention:

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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description	Form factor
-	-	-	-	-
Networking				
-	3096CDX	-	IBM CP20 Workstation Connection Device ¹	-
Systems Management				
-	3096CDX	-	IBM CP20 Workstation Connection Device ¹	-
Associated Options²				
43W0932	-	2948	IBM BladeCenter I/O and Graphics Transmission Adapter	-
43W0935	-	2949	NVIDIA Quadro® NVS 120M graphics board	-
43W0940	-	2950	NVIDIA Quadro® FX 1600M graphics board	-
43W0999	-	2982	Video Pass-through Card	-
-	40K9200	-	IBM 2 Button Optical Wheel Mouse - Black - USB	-
-	40K9584	-	IBM Preferred Pro Keyboard- Full Width - 2m Cable - Black - USB - US English 103P	-
-	40K1692	-	IBM USB Portable Diskette Drive	-
-	4943	-	IBM T117 17" TFT LCD	-
-	4944	-	IBM T119 19" TFT LCD	-

Note: Form Factor abbreviations are as follows: SFF = Small Form Factor, StFF = Standard Form Factor, HSFF = High Speed Form Factor.

The Standard Form Factor (StFF) card is the original form factor for expansion cards in blade servers. An StFF expansion card uses the PCI-X connector on the blade server and expansion units. When an StFF expansion card is installed using the PCI-X connector it is not possible to install a CFFh nor HSFF expansion card on the adjacent PCI-E connector (if one exists in the server) In addition, when an StFF expansion card is installed, the second hard disk drive on some blade servers cannot be installed.

Note:

1. Keyboard, mouse, monitor and line cord sold separately.
2. Options associated with IBM CP20 Workstation Connection Device, option 3096CDX.

BladeCenter HC 10 (7996)

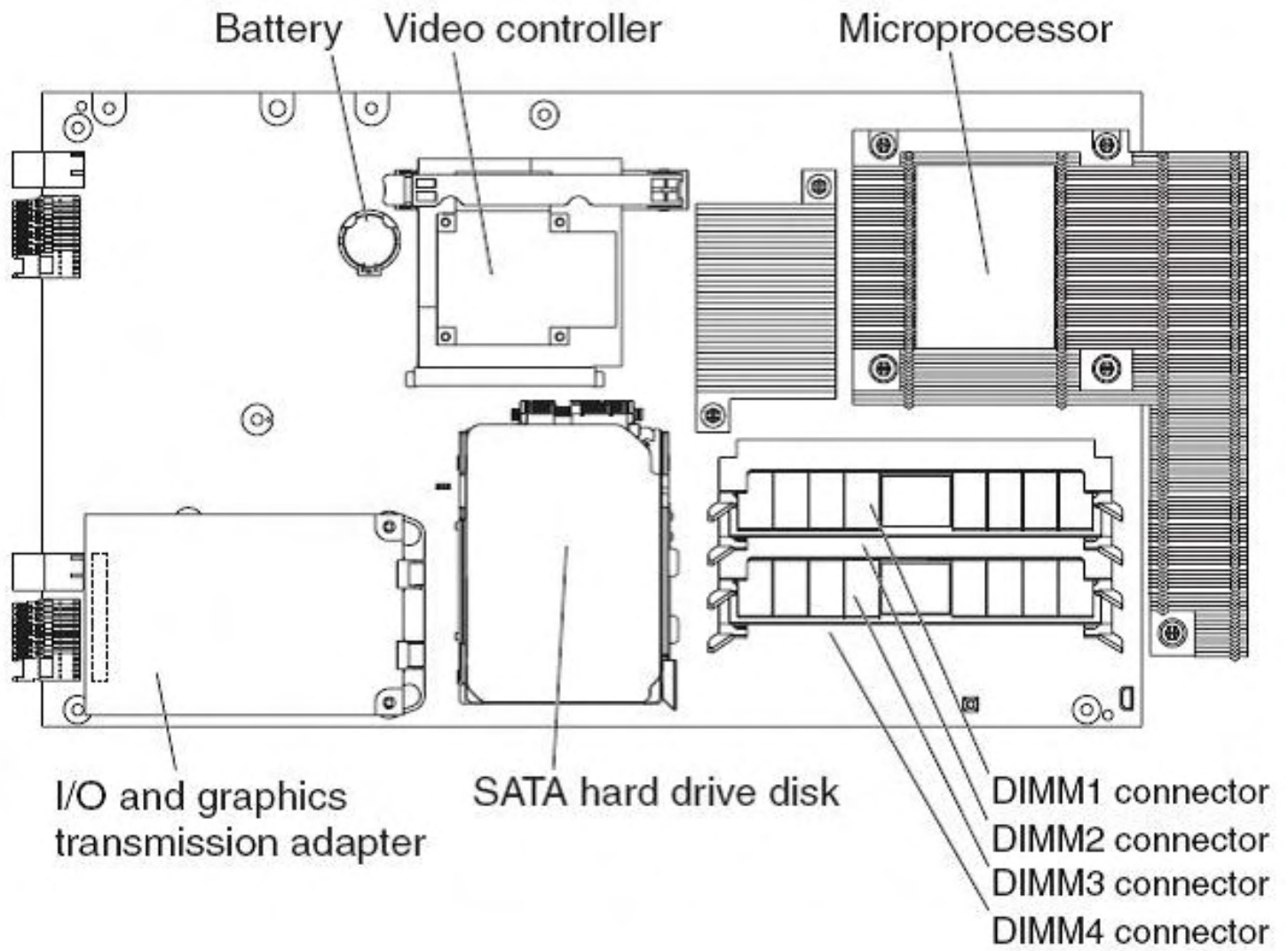
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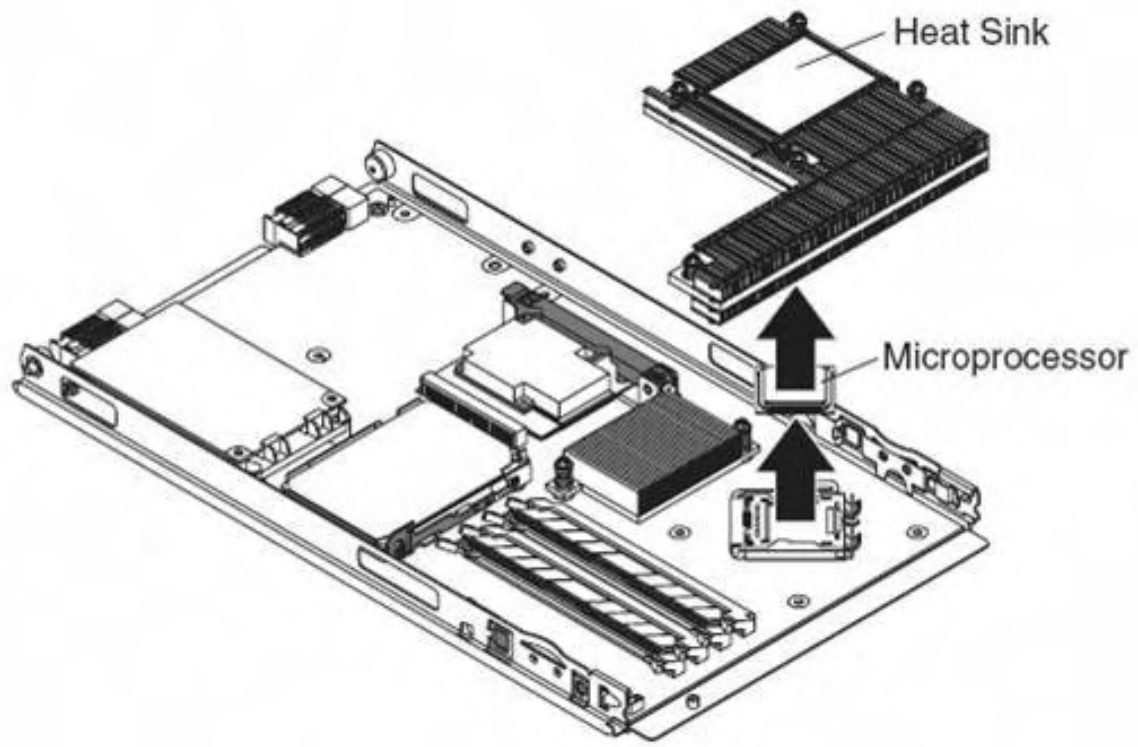
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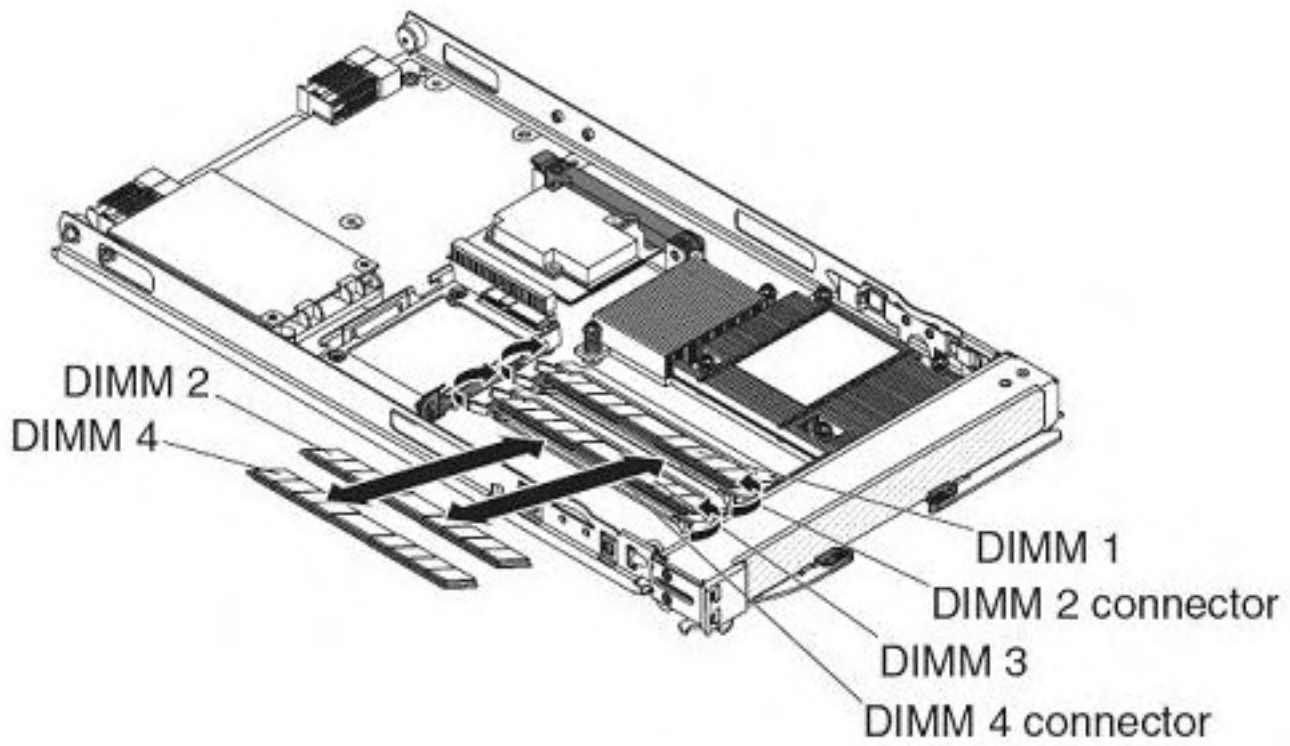
At-A-Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | **[Additional information](#)**

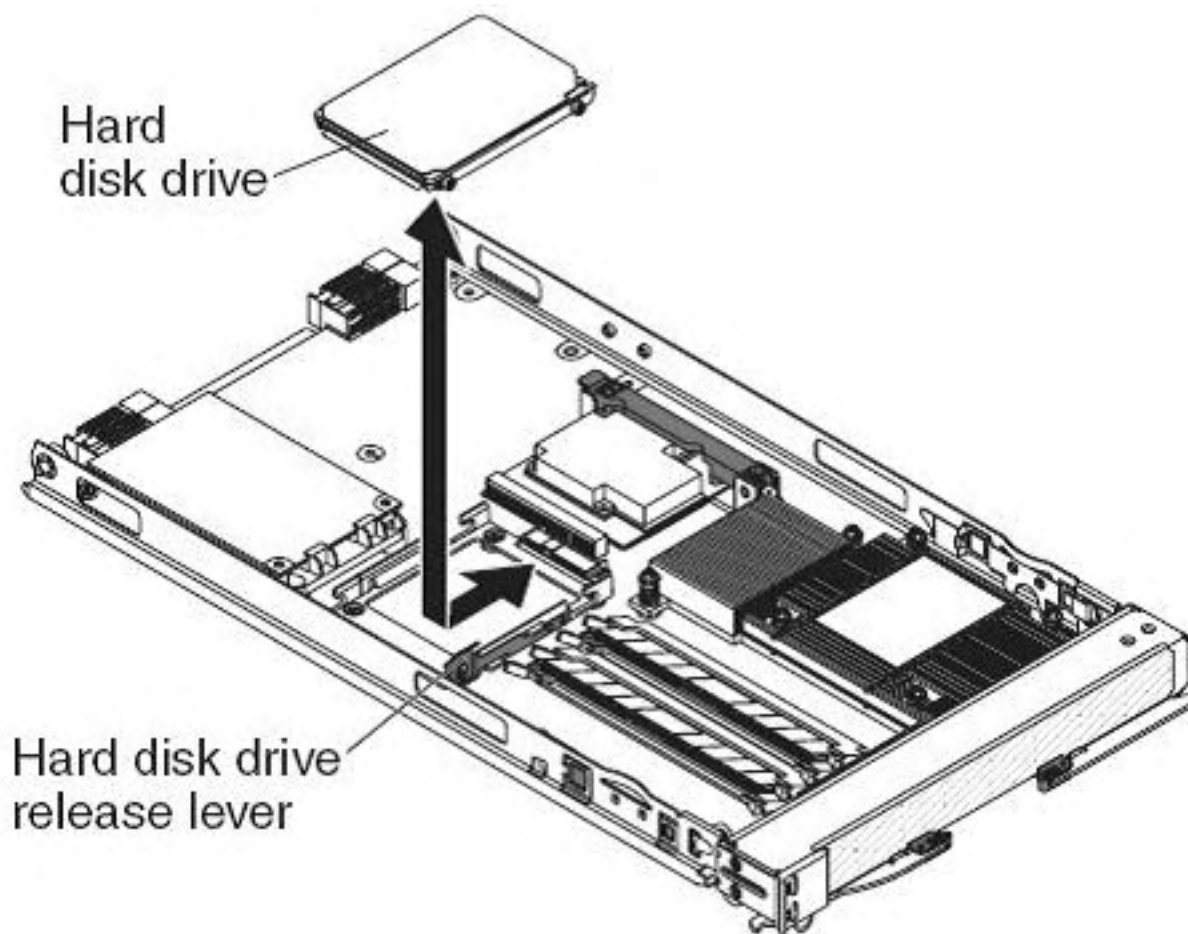
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SBB number	Option number	Feature codes	Description
			Power Supplies
-	-	-	-









BladeCenter HS21 (8853)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Table 1. BladeCenter HS21 (8853) at-a-glance

Part Number ¹	Withdrawal Date ²	CPU/FSB Speed (GHz/MHz) - cache	Number of Processors (std / max)	Memory (std / max) ³	System Management Processor ⁴	Integrated Ethernet ⁵
8853-L1Y	Apr 4 2008	Dual-Core Intel Xeon Processor 5110 (1.6GHz 4MB L2 1066MHz 65w)	1/2	1GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-L2Y	Sept 28 2007	Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 1066MHz 65w)	1/2	1GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-L3Y	Sept 28 2007	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 1333MHz 65w)	1/2	1GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-L4Y	-	Dual-Core Intel Xeon Processor 5140 (2.33GHz 4MB L2 1333MHz 65w)	1/2	1GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-L5Y	Apr 4 2008	Dual-Core Intel Xeon Processor 5150 (2.66GHz 4MB L2 1333MHz 65w)	1/2	1GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-L6Y	Apr 4 2008	Dual-Core Intel Xeon Processor 5160 (3.0GHz 4MB L2 1333MHz 80w)	1/2	1GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-E1Y	Jan 4 2008	Dual-Core Intel Xeon Processor 5110 (1.6GHz 4MB L2 1066MHz 65w)	1/2	2GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-E5Y	Jan 4 2008	Dual-Core Intel Xeon Processor 5150 (2.66GHz 4MB L2 1333MHz 65w)	2/2	4GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-H1Y	Jul 3 2008	Dual-Core Intel Xeon LV Processor 5148 (2.33GHz 4MB L2 1333MHz 40w)	1/2	1GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-NTY	-	Dual-Core Intel Xeon LV Processor 5138 (2.13GHz 4MB L2 1066MHz 35w)	1/2	1GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-R2Y	-	Dual Core Intel Xeon Processor X5260 (3.33GHz 6MB L2 1333MHz 80w)	1/2	2GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-LMY	-	Dual-Core Intel Xeon Processor 5160 (3.0GHz 4MB L2 1333MHz 80w)	2/2	8GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-C1Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5320 (1.86GHz 8MB L2 1066MHz 80w)	1/2	2GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-C2Y	-	Quad-Core Intel Xeon Processor E5345 (2.33GHz 8MB L2 1333MHz 80w)	1/2	2GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-A1Y	Apr 4 2008	Quad Core Intel Xeon Processor E5310 (1.6GHz 4MB L2 1066MHz 80w)	1/2	2GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-A2Y	Apr 4 2008	Quad-Core Intel Xeon Processor E5335 (2.0GHz 1066MHz 80w)	1/2	2GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-J1Y	Jul 3 2008	Quad-Core Intel Xeon LV Processor L5310 (1.6GHz 8MB L2 1066MHz 50w)	1/2	2GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-J2Y	Jul 3 2008	Quad Core Intel Xeon LV Processor L5320 (1.86GHz 8MB L2 1066MHz 50w)	1/2	2GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-C3Y	Apr 4 2008	Quad Core Intel Xeon Processor X5355 (2.66GHz 8MB L2 1333MHz 120w)	1/2	2GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-C4Y	Apr 4 2008	Quad-Core Intel Xeon Processor X5365 (3.0GHz 8MB L2 1333MHz 120w)	1/2	2GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-EQY	Apr 4 2008	Quad Core Intel Xeon Processor E5310 (1.6GHz 8MB L2 1066MHz 80w)	1/2	4GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-ERY	Apr 4 2008	Quad-Core Intel Xeon Processor E5345 (2.33GHz 8MB L2 1333MHz 80w)	2/2	4GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-AMY	-	Quad Core Intel Xeon Processor E5310 (1.6GHz 8MB L2 1066MHz 80w)	2/2	8GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-ANY	-	Quad-Core Intel Xeon Processor E5335 (2.0GHz 8MB L2 1333MHz 80w)	2/2	8GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-EHY	-	Quad Core Intel Xeon Processor E5450 (3.00GHz 12MB 1333MHz 80w)	2/2	4GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-G1Y	-	Quad Core Intel Xeon Processor E5405 (2.00GHz 12MB 1333MHz 80w)	1/2	2GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}

8853-G3Y	-	Quad Core Intel Xeon Processor E5420 (2.50GHz 12MB 1333MHz 80W)	1/2	2GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-G4Y	-	Quad Core Intel Xeon Processor E5430 (2.66GHz 12MB 1333MHz 80W)	1/2	2GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-G5Y	-	Quad Core Intel Xeon Processor E5440 (2.83GHz 12MB 1333MHz 80W)	1/2	2GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-G6Y	-	Quad Core Intel Xeon Processor E5450 (3.00GHz 12MB 1333MHz 80W)	1/2	2GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-G7Y	-	Quad-Core Intel Xeon Processor X5460 (3.16GHz 12MB 1333MHz 120W)	1/2	2GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-GLY	-	Quad Core Intel Xeon Processor L5420 (2.50GHz 12MB 1333MHz 50W)	1/2	2GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-GNY	-	Quad Core Intel Xeon Processor L5408 (2.13GHz 12MB 1066MHz 40W)	1/2	2GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}
8853-RLY	-	Dual Core Intel Xeon Processor L5240 (3.00GHz 6MB 1333MHz 40W)	1/2	2GB/32GB ⁹	Y	Dual 1 Gb ^{5,9}

Table 1. BladeCenter HS21 (8853) at-a-glance (continued)

Part Number ¹	Withdrawal Date ²	Storage Controller ⁶	Internal HDD Interface	Internal HDD Storage (std / max) ⁷	HDD Bays (Std / Max) ⁸	Expansion Slots (Std / Max) ^{8,9}
8853-L1Y	Apr 4 2008	SAS	Fixed	0/292GB	0/2	0/2
8853-L2Y	Sept 28 2007	SAS	Fixed	0/292GB	0/2	0/2
8853-L3Y	Sept 28 2007	SAS	Fixed	0/292GB	0/2	0/2
8853-L4Y	-	SAS	Fixed	0/292GB	0/2	0/2
8853-L5Y	Apr 4 2008	SAS	Fixed	0/292GB	0/2	0/2
8853-L6Y	Apr 4 2008	SAS	Fixed	0/292GB	0/2	0/2
8853-E1Y	Jan 4 2008	SAS	Fixed	0/292GB	0/2	0/2
8853-E5Y	Jan 4 2008	SAS	Fixed	0/292GB	0/2	0/2
8853-H1Y	Jul 3 2008	SAS	Fixed	0/292GB	0/2	0/2
8853-NTY	-	SAS	Fixed	0/292GB	0/2	0/2
8853-R2Y	-	SAS	Fixed	0/292GB	0/2	0/2
8853-LMY	-	SAS	Fixed	146/292GB	2/2	0/2
8853-C1Y	Apr 4 2008	SAS	Fixed	0/292GB	0/2	0/2
8853-C2Y	Apr 4 2008	SAS	Fixed	0/292GB	0/2	0/2
8853-A1Y	Apr 4 2008	SAS	Fixed	0/292GB	0/2	0/2
8853-A2Y	Apr 4 2008	SAS	Fixed	0/292GB	0/2	0/2
8853-J1Y	Jul 3 2008	SAS	Fixed	0/292GB	0/2	0/2
8853-J2Y	Jul 3 2008	SAS	Fixed	0/292GB	0/2	0/2
8853-C3Y	Apr 4 2008	SAS	Fixed	0/292GB	0/2	0/2
8853-C4Y	Apr 4 2008	SAS	Fixed	0/292GB	0/2	0/2
8853-EQY	Apr 4 2008	SAS	Fixed	0/292GB	0/2	0/2
8853-ERY	Apr 4 2008	SAS	Fixed	0/292GB	0/2	0/2
8853-AMY	-	SAS	Fixed	146/292GB	2/2	0/2
8853-ANY	-	SAS	Fixed	146/292GB	2/2	0/2
8853-EHY	-	SAS	Fixed	0/292GB	2/2	0/2
8853-G1Y	-	SAS	Fixed	0/292GB	2/2	0/2
8853-G3Y	-	SAS	Fixed	0/292GB	2/2	0/2
8853-G4Y	-	SAS	Fixed	0/292GB	2/2	0/2
8853-G5Y	-	SAS	Fixed	0/292GB	2/2	0/2
8853-G6Y	-	SAS	Fixed	0/292GB	2/2	0/2
8853-G7Y	-	SAS	Fixed	0/292GB	2/2	0/2
8853-GLY	-	SAS	Fixed	0/292GB	2/2	0/2
8853-GNY	-	SAS	Fixed	0/292GB	2/2	0/2
8853-RLY	-	SAS	Fixed	0/292GB	0/2	0/2

Notes:

1. Model numbers provided are worldwide generally available variant (GAV) model numbers which are not orderable as listed and need to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 8853-L1Y is 8853-L1U. See the product-specific Official IBM announcement letter for other country-specific GAV model numbers. GAV to MTM mapping for AP Geographies follow the same pattern. Substitute the last character with a country-specific designator.
2. Withdrawal dates are provided for U.S. and Canada only. Business Partner Inventory may be available.
3. Maximum capacity requires replacing the standard DIMMs. Memory-mirroring, hot-spare memory and Chipkill functions are supported.
4. System management functionality, interconnect network connectivity and console connectivity are managed through
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the standard management module. The standard integrated service processor monitors HS21 - (8853) system management activity, communicating with the management module in the BladeCenter.

5. Dual Broadcom 5708S Gb Ethernet controllers.
6. An integrated, single-channel, SAS controller supports integrated RAID-0 and 1. RAID-1E and 5 requires the optional BladeCenter Storage and I/O Expansion Blade.
7. Maximum internal storage capacity is based on installation of two 146GB SAS HDDs.
8. An optional BladeCenter Storage and I/O Expansion Blade unit is available that attaches directly to the blade server adding three hot-swap SAS HDD bays for a total of five HDD bays and adds expansion card slot capacity for a total of three expansion card slots.
9. Maximum capacity is achieved by populating all four DIMM slots with four, 4GB DIMMs and selecting the IBM BladeCenter Memory and I/O Expansion Blade (42C1600) which adds an additional four DIMM slots and three I/O expansion card slots, providing a total of eight 4GB DIMMs and three I/O expansion card slots. Dual-port Broadcom 5714S Gb Ethernet controller. These configurations have a total of four Gb ethernet ports.

BladeCenter HS21 (8853)

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At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Additional information](#) |

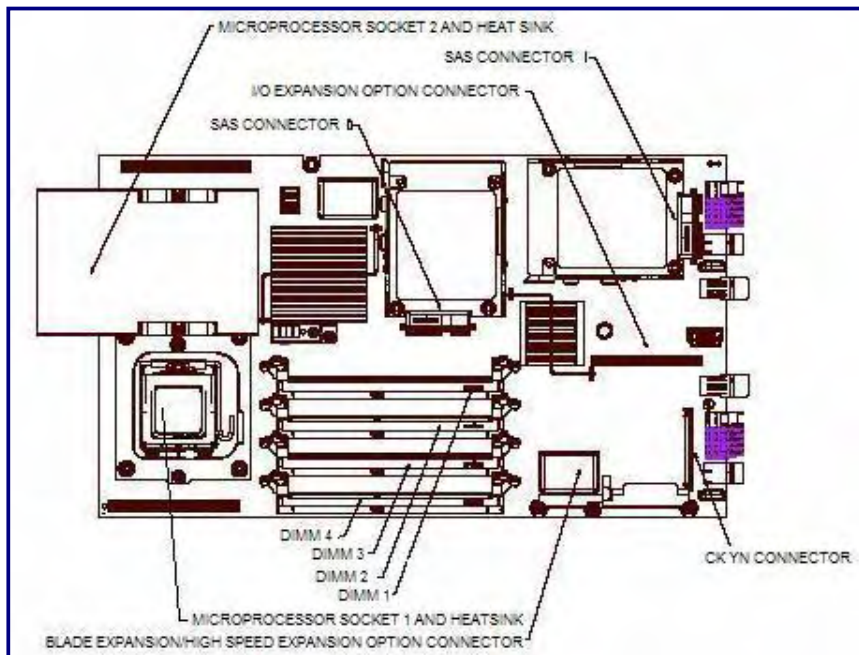
SBB Number	Option Number	Feature Codes	Processor Options	SMP Support
40K6907	-	1311	Dual-Core Intel Xeon Processor 5110 (1.6GHz 4MB L2 1066MHz 65w)	L1Y, E1Y
42C1621	40K1226	1329	Dual-Core Intel Xeon Processor 5120 (1.86GHz 4MB L2 1066MHz 65w)	L3Y
40K6911	40K1227	1313	Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 1333MHz 65w)	L3Y
42C1622	40K1228	1330	Dual-Core Intel Xeon Processor 5140 (2.33GHz 4MB L2 1333MHz 65w)	L4Y
40K6914	40K1230	1316	Dual-Core Intel Xeon Processor 5150 (2.66GHz 4MB L2 1333MHz 65w)	L5Y, E5Y
42C1623	-	1331	Dual-Core Intel Xeon Processor 5160 (3.0GHz 4MB L2 1333MHz 80w)	L6Y, LMY
42C9124	40K1218	2865	Dual-Core Intel Xeon LV Processor 5138 (2.13GHz 4MB L2 1066MHz 35w)	NTY
42C9125	40K1217	2866	Dual-Core Intel Xeon LV Processor 5148 (2.33GHz 4MB L2 1333MHz 40w)	H1Y
44T1790	44T1792	3697	Dual Core Intel Xeon Processor X5260 (3.33GHz 6MB L2 1333MHz 80W)	R2Y
42C9163	-	2877	Quad-Core Intel Xeon Processor E5320 (1.86GHz 8MB L2 1066MHz 80w)	C1Y
40K6948	-	2890	Quad Core Intel Xeon Processor E5310 (1.6GHz 8MB L2 1066MHz 80w)	A1Y, EQY, AMY
42C9130	43W1144	2802	Quad-Core Intel Xeon Processor E5345 (2.33GHz 8MB L2 1333MHz 80w)	C2Y, ERY
43W1124	43W1145	2803	Quad-Core Intel Xeon LV Processor L5310 (1.6GHz 8MB L2 1066MHz 50w)	J1Y
43W1126	40K1274	2804	Quad-Core Intel Xeon Processor E5335 (2.0GHz 8MB L2 1333MHz 80w)	A2Y, ANY
43W6081	43W6084	2827	Quad Core Intel Xeon LV Processor L5320 (1.86GHz 8MB L2 1066MHz 50w)	J2Y
43W6085	-	2828	Quad Core Intel Xeon Processor X5355 (2.66GHz 8MB L2 1333MHz 120w)	C3Y
43W6130	-	3071	Quad-Core Intel Xeon Processor X5365 (3.0GHz 8MB L2 1333MHz 120W)	C4Y
44T1713	44T1716	3668	Quad Core Intel Xeon Processor E5405 (2.00GHz 12MB 1333MHz 80W)	G1Y
44T1721	44T1724	3669	Quad Core Intel Xeon Processor E5430 (2.66GHz 12MB 1333MHz 80W)	G4Y
44T1725	44T1728	3670	Quad Core Intel Xeon Processor E5450 (3.00GHz 12MB 1333MHz 80W)	EHY, G6Y
44T1729	44T1738	3671	Quad-Core Intel Xeon Processor X5460 (3.16GHz 12MB 1333MHz 120W)	G7Y
44T1731	44T1740	3672	Quad Core Intel Xeon Processor E5440 (2.83GHz 12MB 1333MHz 80W)	G5Y
44T1733	44T1742	3673	Quad Core Intel Xeon Processor E5420 (2.50GHz 12MB 1333MHz 80W)	G3Y
44T1813	-	3611	Quad Core Intel Xeon Processor L5420 (2.50GHz 12MB 1333MHz 50W)	GLY
44T1809	-	3612	Dual Core Intel Xeon Processor L5240 (3.00GHz 6MB 1333MHz 40W)	RLY
44T1897	-	6958	Quad Core Intel Xeon Processor L5408 (2.13GHz 12MB 1066MHz 40W)	GNY
SBB Number	Option Number	Feature Codes	Additional Processor Options	SMP support

40K6916	-	1392	Addl Dual-Core Intel Xeon Processor 5110 (1.6GHz 4MB L2 1066MHz 65w)	-
42C1624	40K1226	1404	Addl Dual-Core Intel Xeon Processor 5120(1.86GHz 4MB L2 1066MHz 65w)	-
40K7095	40K1227	1394	Addl Dual-Core Intel Xeon Processor 5130 (2.0GHz 4MB L2 1333MHz 65w)	-
42C9126	40K1218	1428	Addl Dual-Core Intel Xeon LV Processor 5138 (2.13GHz 1066MHz 35w)	-
42C9127	40K1217	1429	Addl Dual-Core Intel Xeon LV Processor 5148 (2.33GHz 1333MHz 40w)	-
42C1625	40K1228	1405	Addl Dual-Core Intel Xeon Processor 5140(2.33GHz 4MB L2 1333MHz 65w)	-
40K7098	40K1230	1397	Addl Dual-Core Intel Xeon Processor 5150(2.66GHz 1333MHz 65w)	-
42C1626	-	1406	Addl Dual-Core Intel Xeon Processor 5160 (3.0GHz 4MB L2 1333MHz 80w)	-
44T1791	44T1792	3383	Addl Dual Core Intel Xeon Processor X5260 (3.33GHz 6MB 1333MHz 80W)	-
40K6949	-	1443	Addl Quad Core Intel Xeon Processor E5310(1.6GHz 1066MHz 80w)	-
43W1125	43W1145	3451	Addl Quad-Core Intel Xeon LV Processor L5310 (1.6GHz 1066MHz 50w)	-
42C9165	-	1430	Addl Quad-Core Intel Xeon Processor E5320 (1.86GHz 1066Mhz 80w)	-
43W6082	43W6084	3464	Addl Quad-Core Intel Xeon LV Processor L5320 (1.86GHz 1066MHz 50w)	-
43W1127	40K1274	3452	Addl Quad-Core Intel Xeon Processor E5335 (2.0GHz 1333MHz 80w)	-
44T1714	44T1716	3357	Addl Quad Core Intel Xeon Processor E5405(2.00GHz 12MB 1333MHz 80W)	-
42C9131	43W1144	3450	Addl Quad-Core Intel Xeon Processor E5345 (2.33GHz 1333MHz 80w)	-
44T1734	44T1742	3362	Addl Quad Core Intel Xeon Processor E5420(2.50GHz 12MB 1333MHz 80W)	-
44T1814	44T1816	3395	Addl Quad Core Intel Xeon Processor L5420 (2.50GHz 12MB 1333MHz 50W)	-
43W6086	-	3465	Addl Quad-Core Intel Xeon Processor X5355 (2.66GHz 1333MHz 120w)	-
44T1722	44T1724	3358	Addl Quad Core Intel Xeon Processor E5430(2.66GHz 12MB 1333MHz 80W)	-
44T1732	44T1740	3361	Addl Quad Core Intel Xeon Processor E5440(2.83GHz 12MB 1333MHz 80W)	-
43W6131	-	3485	Addl Quad-Core Intel Xeon Processor X5365 (3.0GHz 1333MHz 120W)	-
44T1726	44T1728	3359	Addl Quad Core Intel Xeon Processor E5450(3.00GHz 12MB 1333MHz 80W)	-
44T1730	44T1738	3360	Addl Quad-Core Intel Xeon Processor X5460(3.16GHz 12MB 1333MHz 120W)	-
44T1810	44T1812	3396	Addl Dual Core Intel Xeon Processor L5240 (3.00GHz 6MB 1333MHz 40W)	-
44T1898	44T1899	33443096	Addl Quad Core Intel Xeon Processor L5408 (2.13GHz 12MB 1066MHz 40W)	-

Notes:

1. A blade using a single CPU must have it installed in the CPU 1 socket.
2. The system should not be allowed to boot with an empty CPU 1 socket.
3. If the CPU 2 socket is empty, it must have a CPU heat sink filler installed. The CPU heat sink filler is a baffle which maintains proper airflow through the blade.
4. The CPU heat sink filler is required to be installed in CPU 2 socket.
5. A terminator is not required.

Figure 1. BladeCenter HS21 (8853) planar



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BladeCenter HS21 (8853)

Attention:

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At-A-Glance **Options**

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SBB Number	Option Number	Feature Codes	Description
39M5780	-	0546	512MB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
-	39M5782	-	1GB Kit (2x 512MB DIMM) PC2 5300 DDR2 FBD CL4
39M5783	-	0542	1GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
-	39M5785	-	2GB (2x1GB) PC2-5300 CL5 ECC DDR2 Chipkill FB-DIMM 667MHz
39M5789	-	0544	2GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
-	39M5791	-	4GB (2x2GB) PC2-5300 CL5 ECC DDR2 Chipkill FB-DIMM 667MHz
39M5795	-	0556	4GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
-	39M5797	-	8GB (2x4GB) PC2-5300 CL5 ECC DDR2 Chipkill FB-DIMM 667MHz

Table 1. Standard Memory Configuration

Model	Std. DIMM Configuration
E3Y, E4Y, E6Y, H1Y, L1Y, L2Y, L3Y, L4Y, L5Y, L6Y, NTY	2x 512MB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
A1Y, A2Y, C1Y, C2Y, C3Y, C4Y, E1Y, E7Y, G1Y, G3Y, G4Y, G5Y, G6Y, G7Y, GLY, J1Y, J2Y, R2Y, RLY	2x 1GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
E5Y, EHY, EQY, ERY, GNY	2x 2GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz
AMY, ANY, LMY	4x 2GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz

BladeCenter HS21 (8853)

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SBB Number	Option Number	Feature Codes	Description	Height	Bays Supported	Maximum Qty
SAS HDDs						
43W7619	43W7618	5563	IBM 31.4GB 2.5" Solid State Drive	2.5"	1, 2	2
39R7393	-	5153	73GB 10K 2.5" Hot-Swap SAS SFF	2.5"	1, 2	2
26K5781	26K5777	5298	73GB 10K 2.5" Non Hot-Swap SAS SFF	2.5"	1, 2	2
42D0423	42D0421	5529	IBM ServerBlade 146GB SAS 10K 2.5" SFF NHS	2.5"	1, 2	2
43X0849	43X0845	5545	IBM ServerBlade 73GB SAS 15K 2.5" SFF NHS	2.5"	1, 2	2

BladeCenter HS21 (8853)

Attention:

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At-A-Glance Options

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SBB Number	Option Number	Feature Codes	Description	Form Factor
Networking				
39Y6091	-	1487	NetXtreme 1000 S + Ethernet Adapter- PCI-X	-
39Y6096	-	1489	NetXtreme 1000 T + Dual Port Ethernet Adapter- PCI-X	-
Storage controllers				
25R8077	25R8064	1670	IBM ServeRAID-8k SAS Controller ¹	-
25R8080	-	1671	IBM ServeRAID 8k-I SAS Controller	-
39R8752	39R8743	1680	IBM Ultra320 SCSI Controller 2 ²	-
-	172641X	-	FC SAS Single Controller DS3400	-
39R8819	-	1685	ServeRAID-6M Ultra320 SCSI Controller (128MB)	-
39R8820	-	1686	ServeRAID-6M Ultra320 SCSI Controller (256MB)	-
-	172642X	-	FC SAS Dual Controller DS3400	-
Blade Server Expansion Cards				
40K8918	-	2965	Voltaire 4x InfiniBand HCA for BladeCenter	-
42D1471	-	2966	Voltaire 4x DDR InfiniBand HCA for BladeCenter	-
43W4430	43W4420	2993	Voltaire 4X InfiniBand DDR Expansion Card (CFFh) for IBM BladeCenter	CFFh
43W4431	43W4421	2992	Cisco 4X InfiniBand DDR Expansion Card (CFFh) for IBM BladeCenter	CFFh
32R1761	32R1760	1466	Cisco Systems 4X InfiniBand expansion card for IBM BladeCenter	HSFF
39Y9117	32R1896	1492	Cisco Systems InfiniBand HCA Expansion Card for IBM BladeCenter	-
43W4433	43W4423	2991	4X InfiniBand DDR Expansion Card (CFFh) for IBM BladeCenter	CFFh
43W6861	43W6859	2994	Emulex 4Gb Fibre Channel Expansion Card (CFFv) for IBM BladeCenter	CFFv
39Y9185	39Y9186	2925	Emulex 4Gb SFF Fibre Channel Expansion Card for IBM BladeCenter	SFF
39Y9189	39Y9190	2979	SAS Expansion Card (CFFv) for IBM BladeCenter	CFFv
26K4837	73P6000	1546	Myrinet Cluster Exp. Card	StFF
26K4843	39R8624	1548	SFF Gb Ethernet Exp. Card	SFF
39Y9270	39Y9271	2967	NetXen 10Gb Ethernet Expansion Card (CFFh) for IBM BladeCenter	CFFh
39Y9309	39Y9310	2969	Ethernet Expansion Card (CFFv) for IBM BladeCenter	CFFv
26K5942	26K5939	1568	cKVM Feature Card for IBM BladeCenter	-
26R0891	26R0890	1577	QLogic 4Gb SFF Fibre Channel Expansion Card for eServer	SFF
39Y9116	32R1923	1458	Qlogic iSCSI Daughtercard for IBM BladeCenter	StFF
39Y9305	39Y9306	2968	Qlogic Ethernet & 4Gb Fibre Channel Exp Card (CFFh) for BladeCenter	CFFh
41Y8526	41Y8527	2970	QLogic 4Gb Fibre Channel Expansion Card (CFFv) for IBM BladeCenter	CFFv
31R2266	39R7563	4265	IBM BladeCenter Storage and I/O Expansion Blade	-
43W4392	43W4391	4339	IBM BladeCenter PCI I/O Expansion Unit 3e	-
32R0792	25K8373	4244	IBM BladeCenter PCI I/O Expansion Unit II	-
Associated Options				
-	42C1600	-	IBM BladeCenter Memory and I/O Blade	-
43X0834	-	5535	IBM Storage and I/O Blade 146GB SAS 10K 2.5" SFF HS	-
43X0857	43X0853	5547	IBM Storage and I/O Blade 73GB SAS 15K 2.5" SFF HS	-

Note: Form Factor abbreviations are as follows: SFF = Small Form Factor, StFF = Standard Form Factor, HSFF = High Speed Form Factor.

The Standard Form Factor (StFF) card is the original form factor for expansion cards in blade servers. An StFF expansion card uses the PCI-X connector on the blade server and expansion units. When an StFF expansion card is installed using the PCI-X connector it is not possible to install a CFFh nor HSFF expansion card on the adjacent PCI-E connector (if one exists in the server) In addition, when an StFF expansion card is installed, the second hard disk drive on some blade servers cannot be installed.

Notes:

1. BladeCenter Storage Expansion Unit (P/N 39R7563) is required.
2. IBM BladeCenter PCI I/O Expansion Unit II (P/N 25K8373) is required.

BladeCenter HS21 (8853)

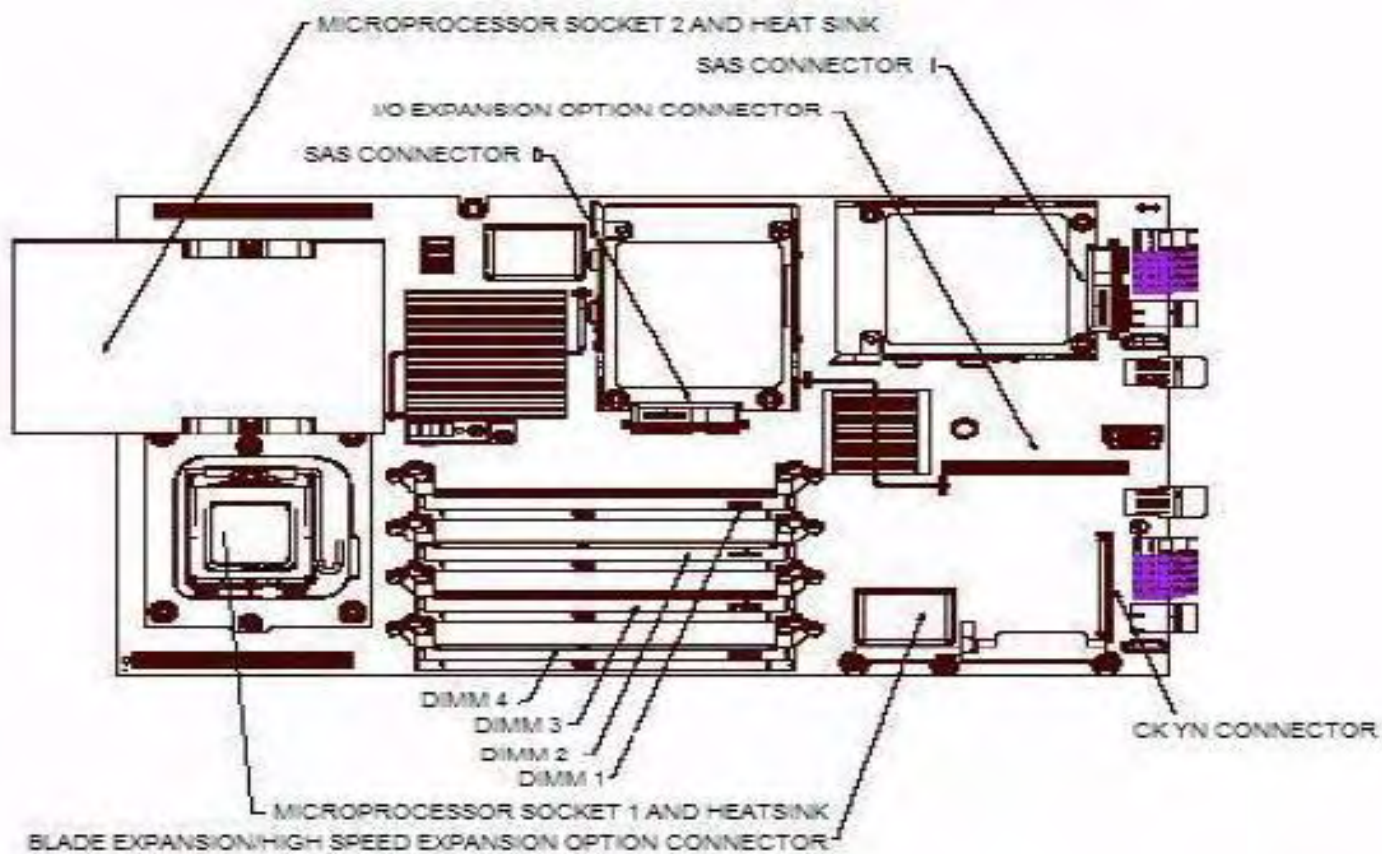
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At-A-Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Additional information](#)

|

SBB Number	Option Number	Feature Codes	Description
Power			
-	-	-	-
Rack Console Connectivity			
-	17353LX	-	IBM 1x8 Console Switch
-	17354LX	-	IBM 2x16 Console Switch



BladeCenter LS21 (7971)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Table 1. BladeCenter LS21 (7971) at-a-glance

Part number ¹	Withdrawal date ²	CPU/FSB speed (GHz/MHz) - cache ³	Number of processors (std/ max)	Memory (std/ max) ³	System Management Processor ⁵	Integrated ethernet ⁵
7971-31Y	Jan 4 2008	Dual Core AMD Opteron Processor Model 2212 HE (2.0GHz 2x1MB L2 68w)	1/2	1GB/32GB	Y	Dual 1Gb
7971-3AY	Jun 29 2007	Dual Core AMD Opteron Processor Model 2212 (2.0GHz 2x1MB L2 95w)	1/2	1GB/32GB	Y	Dual 1Gb
7971-51Y	-	Dual Core AMD Opteron Processor Model 2216 HE (2.4GHz 2x1MB L2 68w)	1/2	2GB/32GB	Y	Dual 1Gb
7971-6AY	Jan 4 2008	Dual Core AMD Opteron Processor Model 2218 (2.6GHz 2x1MB L2 95w)	1/2	2GB/32GB	Y	Dual 1Gb
7971-21Y	Jan 4 2008	Dual Core AMD Opteron Processor Model 2210 HE (1.8GHz 2x1MB L2 68W)	1/2	1GB/32GB	Y	Dual 1Gb
7971-2TY	-	Dual Core AMD Opteron Processor Model 2210 EE (1.8GHz 2x1MB L2 45W)	1/2	1GB/32GB	Y	Dual 1Gb
7971-7AY	-	Dual Core AMD Opteron Processor Model 2220 (2.8GHz 2x1MB L2 95W)	1/2	2GB/32GB	Y	Dual 1Gb
7971-8AY	-	Dual Core AMD Opteron Processor Model 2222 (3.0GHz 2x1MB L2 95W)	1/2	2GB/32GB	Y	Dual 1Gb
7971-E1Y	-	Dual Core AMD Opteron Processor Model 2218 HE (2.6GHz 2x1MB L2 68W)	2/2	4GB/ 32GB	Y	Dual 1Gb
7971-61Y	-	Dual Core AMD Opteron Processor Model 2216 HE (2.4GHz 2x1MB L2 68w)	1/2	2GB/ 32GB	Y	Dual 1Gb
7971-6MY	-	Dual Core AMD Opteron Processor Model 2218 (2.6GHz 2x1MB L2 95w)	2/2	8GB/ 32GB	Y	Dual 1Gb

Table 1. BladeCenter LS21 (7971) at-a-glance (continued)

Part number ¹	Withdrawal date ²	Storage controller ⁷	Internal HDD interface	Internal HDD storage (std / max) ⁸	HDD (std / max)	Expansion slots ⁹
7971-31Y	Jan 4 2008	SAS	Fixed	0/146GB	0/1	2
7971-3AY	Jun 29 2007	SAS	Fixed	0/146GB	0/1	2
7971-51Y	-	SAS	Fixed	0/146GB	0/1	2
7971-6AY	Jan 4 2008	SAS	Fixed	0/146GB	0/1	2
7971-21Y	Jan 4 2008	SAS	Fixed	0/146GB	0/1	2
7971-2TY	-	SAS	Fixed	0/146GB	0/1	2
7971-7AY	-	SAS	Fixed	0/146GB	0/1	2
7971-8AY	-	SAS	Fixed	1/146GB	0/1	2
7971-E1Y	-	SAS	Fixed	0/146GB	0/1	2
7971-61Y	-	SAS	Fixed	0/146GB	0/1	2
7971-61Y	-	SAS	Fixed	0/146GB	0/1	2
7971-6MY	-	SAS	Fixed	1/146GB	0/1	2

Notes:

1. Model numbers provided are worldwide generally available variant (GAV) model numbers which are not orderable as listed and need to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 8843-01Y is 8843-01U. See the product-specific Official IBM announcement letter for other country-specific GAV model numbers. GAV to MTM mapping for A.P. Geographies follow the same pattern. Substitute the last character with a country-specific designator.
2. Withdrawal dates are provided for U.S. and Canada only. Business Partner Inventory may be available.
3. AMD Dual-Core Opteron processor with two 1MB L2 Cache, provides three high-performance HyperTransport links to I/O, as well as a 128-bit high-performance DDR-2 SDRAM memory controller.
4. Memory subsystem is two-way interleaved, Very Low Profile (VLP) DDR-2 SDRAMs supporting chip kill technology. Each Opteron processor contains the memory controller responsible for four DIMMs.
5. Integrated Service Processor subsystem supports Vulture 3 features which include monitoring the LS21 systems management activity as well as communicating with the management module in the BladeCenter.
6. Dual Broadcom BCM5706S Gigabit Ethernet Controllers
7. An integrated LSI 1064 SAS Controller supporting one onboard SAS Hard Disk Drive
8. Maximum internal storage capacity is based on installation of one 146GB SAS HDD.
9. An optional BladeCenter expansion unit is available that attaches directly to the blade server adding three hot-swap SAS HDD bays for a total of four HDD bays and two expansion card slots for a total of three expansion card slots.

BladeCenter LS21 (7971)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

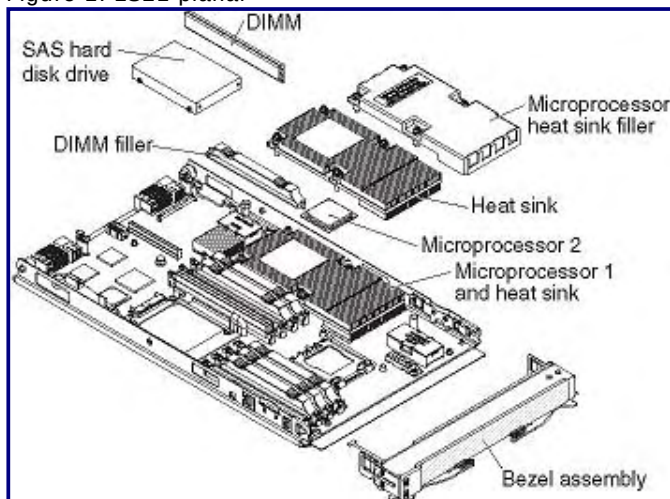
[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Processor options	SMP support
39R9221	25R8898	0680	Dual Core AMD Opteron Processor Model 2212 HE (2.0GHz 2x1MB L2 68w)	31Y
39R9222	25R8931	0681	Dual Core AMD Opteron Processor Model 2212 (2.0GHz 2x1MB L2 95w)	3AY
39R9223	25R8899	0682	Dual Core AMD Opteron Processor Model 2216 HE (2.4GHz 2x1MB L2 68w)	51Y, E1Y
39R9224	25R8897	0683	Dual Core AMD Opteron Processor Model 2218 (2.6GHz 2x1MB L2 95w)	6AY,6MY
43X0900	40K1263	2883	Dual Core AMD Opteron Processor Model 2210 EE (1.8GHz 2x1MB L2 45W)	2TY
43X0901	40K1269	2882	Dual Core AMD Opteron Processor Model 2210 HE (1.8GHz 2x1MB L2 68W)	21Y
44E5213	44E5246	2825	Dual Core AMD Opteron Processor Model 2218 HE (2.6GHz 2x1MB L2 68W)	61Y
43X0902	40K1264	2881	Dual Core AMD Opteron Processor Model 2220 (2.8GHz 2x1MB L2 95W)	7AY
44R4942	-	3072	Dual Core AMD Opteron Processor Model 2222 (3.0GHz 2x1MB L2 95W)	8AY
SBB number	Option number	Feature code	Additional processor options	SMP support
39R9228	25R8897	0471	Addl Dual Core AMD Opteron Processor 2218 (2.6GHz 2x1MB L2 95w)	6MY
39R9225	25R8898	0468	Addl Dual Core AMD Opteron Processor 2212 HE (2.0GHz 2x1MB L2 68w)	-
39R9227	25R8899	0470	Addl Dual Core AMD Opteron Processor 2216 HE (2.4GHz 2x1MB L2 68w)	E1Y
39R9226	25R8931	0469	Addl Dual Core AMD Opteron Processor 2212 (2.0GHz 2x1MB L2 95w)	-
43X0903	40K1263	1436	Addl Dual Core AMD Opteron Processor 2210 EE (1.8GHz 2x1MB L2 45W)	-
43X0905	40K1264	1434	Addl Dual Core AMD Opteron Processor 2220 (2.8GHz 2x1MB L2 95W)	-
43X0904	40K1269	1435	Addl Dual Core AMD Opteron Processor 2210 HE (1.8GHz 2x1MB L2 68W)	-
44E5214	44E5246	3462	Addl Dual Core AMD Opteron Processor 2218 HE (2.6GHz 2x1MB L2 68W)	-
44R4943	44R4946	3486	Addl Dual Core AMD Opteron Processor Model 2222 (3.0GHz 2x1MB L2 95W)	8AY

Note: If one processor is installed, it must be plugged into CPU 1 socket. The system will not be allowed to boot if the CPU 1 socket is not populated. CPU 2 socket must contain a heatsink filler in order to maintain proper airflow. If multiple processors are installed, they must have the same set of features and functions. Mixing processors that have different values for their respective features is not allowed.

Note: Three different processor wattage options are offered in the LS21 and LS41: 95W version, Highly Efficient 68W version, and an Energy Efficient 45W version. LS21 and LS41 systems that use the 95W processors are designed for the BladeCenter H chassis. Due to increased power and thermal the 95W version will run at 'n-2' processor speed in the BladeCenter and BladeCenter T chassis. In most cases this represents a speed reduction of 400MHz. LS21 and LS41 systems using the Highly Efficient 68W or the Energy Efficient 45W processor will run at full speed in all chassis.

Figure 1. LS21 planar



[Click image to enlarge](#)

BladeCenter LS21 (7971)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

[Processor](#) | **[Memory](#)** | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description
39M5859	-	0548	512MB VLP PC2-5300 DDR-2 DIMM
-	39M5861	-	1GB (2x 512MB) PC2-5300 CL4 ECC DDR2 SDRAM VLP RDIMM
39M5862	-	0549	1GB VLP PC2-5300 DDR-2 DIMM
-	39M5864	-	2GB (2x1GB) PC2-5300 CL4 ECC DDR2 SDRAM VLP RDIMM
39M5868	-	0551	4 GB VLP PC2-4200 DDR-2 DIMM
-	39M5870	-	8GB (2x4GB) PC2-4200 CL4 ECC DDR2 SDRAM VLP RDIMM
46C0506	-	3946	2 GB SR VLP PC2-5300 DDR-2 DIMM ¹
-	46C0512	-	4GB (2x2GB) SR VLP PC2-5300 DDR-2 DIMM

Note: The memory subsystem is two-way interleaved. Each Opteron processor is responsible for four DIMMs. Memory must be populated in pairs of two identical DIMMs per processor installed.

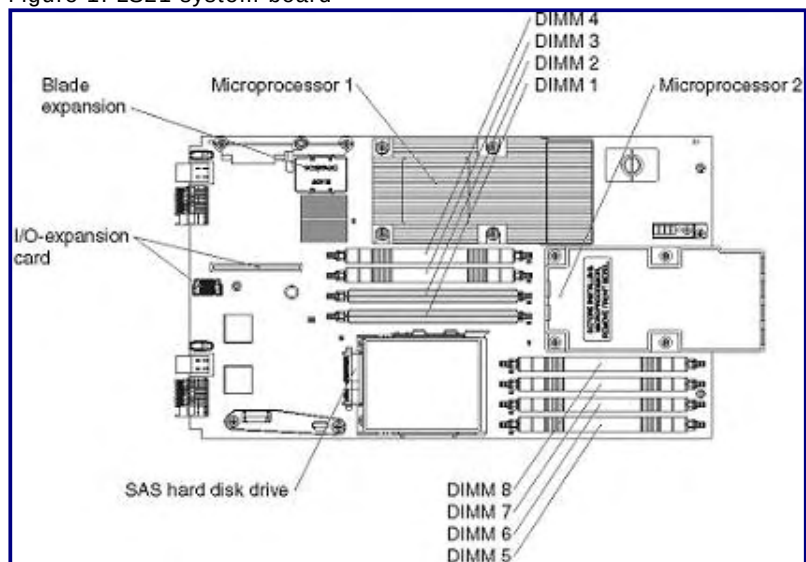
Notes:

1. If selected, only SBB 46C0506 (FC 3946) is allowed in the system. This SBB cannot co-exist with other memory in the same system.

Table 1. Standard Memory Configuration

Model	Std DIMM configuration
21Y, 2TY, 31Y, 3AY	2x 512MB VLP PC2-5300 DDR2 DIMM
51Y, 6AY, 61Y, 7AY	2x 1 GB VLP PC2-5300 DDR-2 DIMM
E1Y	2x 2 GB VLP PC2-5300 DDR-2 DIMM
6MY	8x 1 GB VLP PC2-5300 DDR-2 DIMM

Figure 1. LS21 system board



[Click image to enlarge](#)

BladeCenter LS21 (7971)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

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[Options](#)
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SBB number	Option number	Feature codes	Description	Height	Bays supported	Max qty
SAS HDDs						
43W7619	43W7618	5563	IBM 31.4GB 2.5" Solid State Drive	2.5"	1	1
39R7393	-	5153	73GB 10K 2.5" Hot-Swap SAS SFF	2.5"	2,3,4	3
26K5781	26K5777	5298	73GB 10K 2.5" Non Hot-Swap SAS SFF	2.5"	1	1
42D0423	42D0421	5529	IBM ServerBlade 146GB SAS 10K 2.5" SFF NHS	2.5"	1	1
43X0849	43X0845	5545	IBM ServerBlade 73GB SAS 15K 2.5" SFF NHS	2.5"	1	1
Note: The Serial Attached SCSI (SAS) subsystem in the LS21 consists of the LSI 1064 SAS controller and one onboard SFF SAS hard drive.						

BladeCenter LS21 (7971)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Processor | Memory | HDD | I/O | Additional information |

SBB number	Option number	Feature codes	Description	Form factor
Networking				
39Y6091	-	1487	NetXtreme 1000 S + Ethernet Adapter- PCI-X	-
39Y6096	-	1489	NetXtreme 1000 T + Dual Port Ethernet Adapter- PCI-X	-
Blade server expansion cards				
43W4430	43W4420	2993	Voltaire 4X InfiniBand DDR Expansion Card (CFFh) for IBM BladeCenter	CFFh
40K8918	-	2965	Voltaire 4x InfiniBand HCA for BladeCenter	-
42D1471	-	2966	Voltaire 4x DDR InfiniBand HCA for BladeCenter	-
43W4431	43W4421	2992	Cisco 4X InfiniBand DDR Expansion Card (CFFh) for IBM BladeCenter	CFFh
43W4433	43W4423	2991	4X InfiniBand DDR Expansion Card (CFFh) for IBM BladeCenter	CFFh
32R1761	32R1760	1466	Cisco Systems 4X InfiniBand Expansion Card for IBM BladeCenter	HSFF
39Y9117	32R1896	1492	Cisco Systems InfiniBand HCA Expansion Card for IBM BladeCenter	-
43W6861	43W6859	2994	Emulex 4Gb Fibre Channel Expansion Card (CFFv) for IBM BladeCenter	CFFv
39Y9185	39Y9186	2925	Emulex 4Gb SFF Fibre Channel Expansion Card for IBM BladeCenter	SFF
39Y9189	39Y9190	2979	SAS Expansion Card (CFFv) for IBM BladeCenter	SFF
26K4843	39R8624	1548	SFF Gb Ethernet Exp. Card	SFF
39Y9270	39Y9271	2967	NetXen 10Gb Ethernet Expansion Card (CFFh) for IBM BladeCenter	CFFh
39Y9309	39Y9310	2969	Ethernet Expansion Card (CFFv) for IBM BladeCenter	CFFv
26K5942	26K5939	1568	cKVM Feature Card for IBM BladeCenter	-
26K4837	73P6000	1546	Myrinet Cluster Exp. Card	StFF
26R0891	26R0890	1577	QLogic 4Gb SFF Fibre Channel Expansion Card for eServer	SFF
26R0885	26R0884	1581	QLogic 4Gb Standard Fibre Channel Expansion Card for eServer	-
39Y9116	32R1923	1458	Qlogic iSCSI Daughtercard for IBM BladeCenter	StFF
39Y9305	39Y9306	2968	Qlogic Ethernet & 4Gb Fibre Channel Exp Card (CFFh) for BladeCenter	CFFh
41Y8526	41Y8527	2970	QLogic 4Gb Fibre Channel Expansion Card (CFFv) for IBM BladeCenter	CFFv
43W4392	43W4391	4339	IBM BladeCenter PCI I/O Expansion Unit 3e	-
31R2266	39R7563	4265	IBM BladeCenter Storage and I/O Expansion Blade	-
Storage controllers				
25R8077	25R8064	1670	IBM ServeRAID-8k SAS Controller	-
25R8080	-	1671	IBM ServeRAID 8k-I SAS Controller	-
39R8819	-	1685	ServeRAID-6M Ultra320 SCSI Controller (128MB)	-
39R8820	-	1686	ServeRAID-6M Ultra320 SCSI Controller (256MB)	-
Associated options				
43X0834	-	5535	IBM Storage and I/O Blade 146GB SAS 10K 2.5" SFF HS	-
43X0857	-	5547	IBM Storage and I/O Blade 73GB SAS 15K 2.5" SFF HS	-

Note: Form Factor abbreviations are as follows: SFF = Small Form Factor, StFF = Standard Form Factor, HSFF = High Speed Form Factor.

The Standard Form Factor (StFF) card is the original form factor for expansion cards in blade servers. An StFF expansion card uses the PCI-X connector on the blade server and expansion units. When an StFF expansion card is installed using the PCI-X connector it is not possible to install a CFFh nor HSFF expansion card on the adjacent PCI-E connector (if one exists in the server) In addition, when an StFF expansion card is installed, the second hard disk drive on some blade servers cannot be installed.

BladeCenter LS21 (7971)

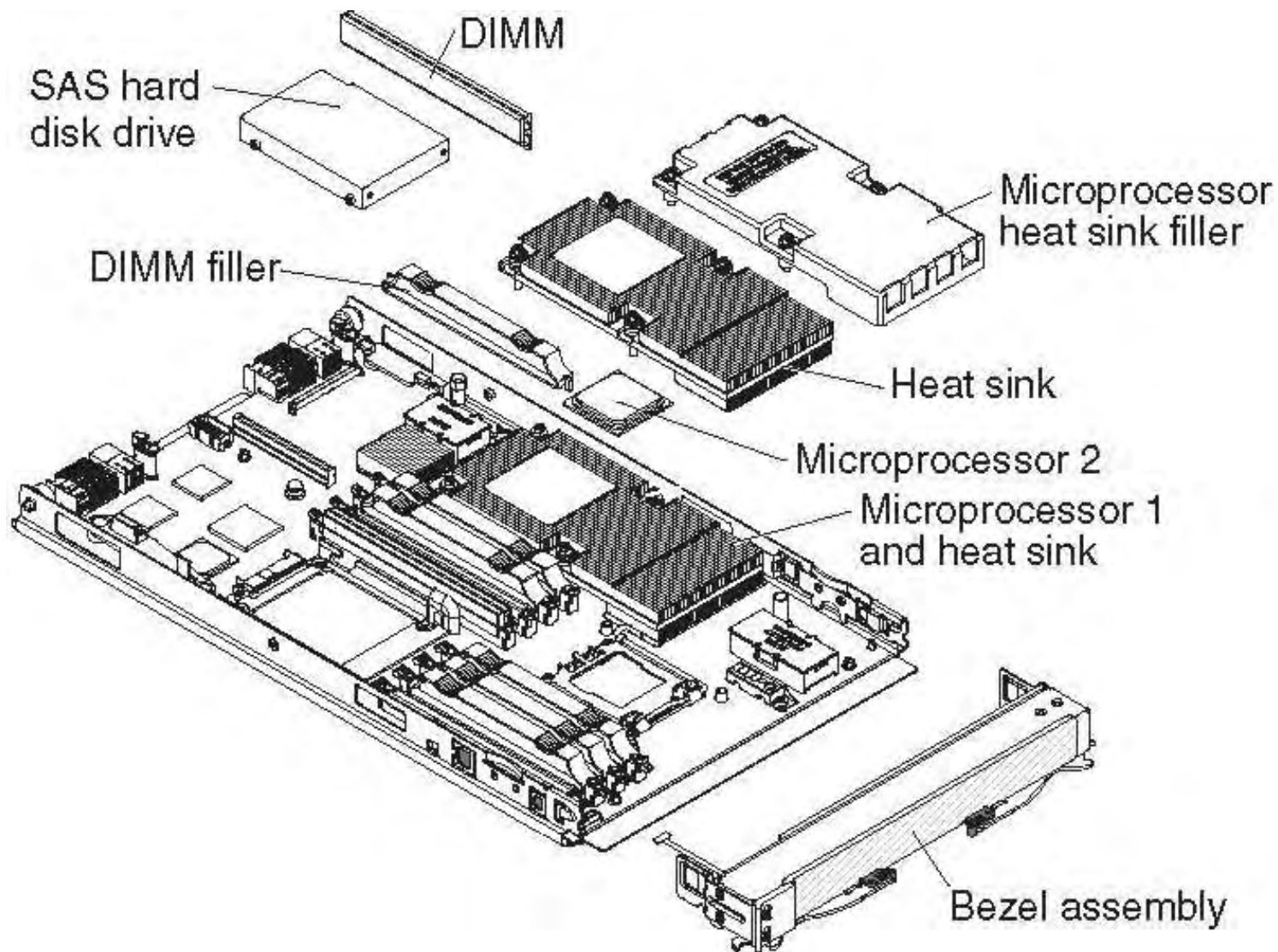
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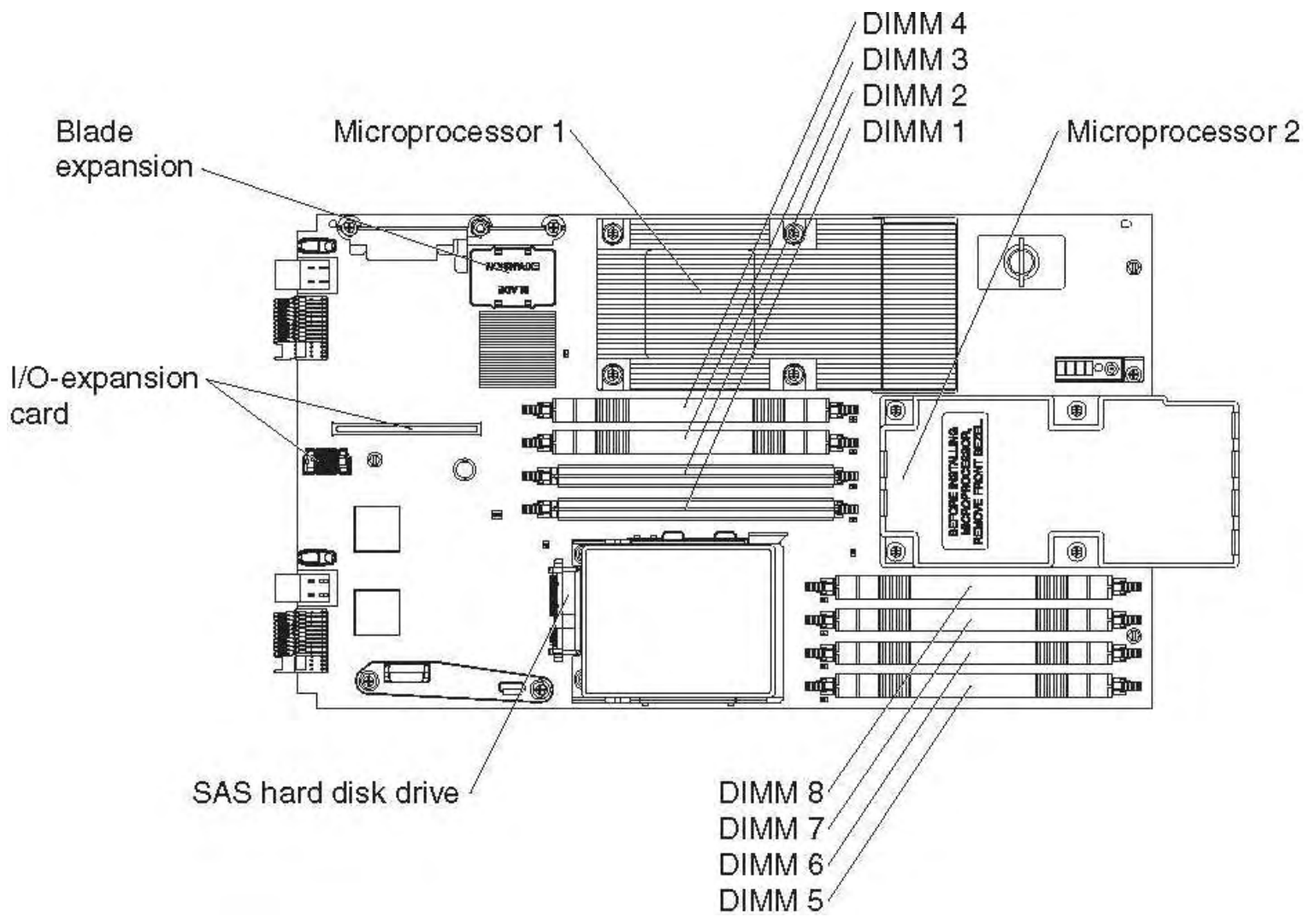
A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | **[Additional information](#)**

|

SBB number	Option number	Feature codes	Description
Rack Console Connectivity			
-	17353LX	-	IBM 1x8 Console Switch
-	17354LX	-	IBM 2x16 Console Switch





BladeCenter LS41 (7972)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Table 1. BladeCenter LS41 at-a-glance

Part number ¹	Withdrawal date ²	CPU /FSB speed (GHz /MHz) - cache ³	Number of processors (std / max)	Memory (std / max) ⁴	System Management Processor ⁵	Integrated ethernet ⁶
7972-31Y ¹⁰	Jan 4 2008	Dual Core AMD Opteron Processor Model 8212 HE (2.0GHz 2x1MB L2 68w)	1/4	1GB/32GB	Y	Dual 1GB
7972-32Y ¹¹	Jan 4 2008	Dual Core AMD Opteron Processor Model 8212 HE (2.0GHz 2x1MB L2 68w)	2/4	2GB/64GB	Y	2x Dual 1GB
7972-3AY ¹⁰	Jun 29 2007	Dual Core AMD Opteron Processor Model 8212 (2.0GHz 2x1MB L2 95w)	1/4	1GB/32GB	Y	Dual 1GB
7972-3BY ¹¹	Jun 29 2007	Dual Core AMD Opteron Processor Model 8212 (2.0GHz 2x1MB L2 95w)	2/4	2GB/64GB	Y	2x Dual 1GB
7972-51Y ¹⁰	-	Dual Core AMD Opteron Processor Model 8216 HE (2.4GHz 2x1MB L2 68w)	1/4	2GB/32GB	Y	Dual 1GB
7972-52Y ¹¹	-	Dual Core AMD Opteron Processor Model 8216 HE (2.4GHz 2x1MB L2 68w)	2/4	4GB/64GB	Y	2x Dual 1GB
7972-6AY ¹⁰	July 27 2007	Dual Core AMD Opteron Processor Model 8218 (2.6GHz 2x1MB L2 95w)	1/4	2GB/32GB	Y	Dual 1GB
7972-6BY ¹¹	-	Dual Core AMD Opteron Processor Model 8218 (2.6GHz 2x1MB L2 95w)	2/4	4GB/64GB	Y	2x Dual 1GB
7972-4TY ¹¹	-	Dual Core AMD Opteron Processor Model 8214 HE (2.2GHz 2x1MB L2 68w)	2/4	2GB/64GB	Y	2x Dual 1GB
7972-7AY ¹¹	July 27 2007	Dual Core AMD Opteron Processor Model 8220 (2.8GHz 2x1MB L2 95w)	1/4	2GB/64GB	Y	Dual 1GB

7972-7BY ¹¹	-	Dual Core AMD Opteron Processor Model 8220 (2.8GHz 2x1MB L2 95w)	2/4	4GB/64GB	Y	2x Dual 1GB
7972-E2Y ¹⁰	-	Dual Core AMD Opteron Processor Model 8216 HE (2.4GHz 2x1MB L2 68w)	4/4	16GB/64GB	Y	2x Dual 1GB
7972-61Y ¹¹	July 27 2007	Dual Core AMD Opteron Processor Model 8218 HE (2.6GHz 2x1MB L2 68W)	1/4	2GB/64GB	Y	Dual 1GB
7972-62Y ¹¹	Apr 4 2008	Dual Core AMD Opteron Processor Model 8218 HE (2.6GHz 2x1MB L2 68W)	2/4	4GB/64GB	Y	2x Dual 1GB
7972-7MY ¹¹	-	Dual Core AMD Opteron Processor Model 8220 (2.8GHz 2x1MB L2 95w)	4/4	16GB/64GB	Y	2x Dual 1GB
7972-8BY ¹¹	-	Dual Core AMD Opteron Processor Model 8222 (3.0GHz 2x1MB L2 95W)	2/4	4GB/64GB	Y	2x Dual 1GB

Table 1. BladeCenter LS41 at-a-glance (continued)

Part number ¹	Withdrawal date ²	Storage controller ⁷	Internal HDD interface	Internal HDD storage (std/ max) ⁸	HDD (std/ max)	Expansion slots ⁹
7972-31Y ¹⁰	Jan 4 2008	SAS	Fixed	0/292GB	0/2	3
7972-32Y ¹¹	Jan 4 2008	SAS	Fixed	0/292GB	0/2	3
7972-3AY ¹⁰	Jun 29 2007	SAS	Fixed	0/292GB	0/2	3
7972-3BY ¹¹	Jun 29 2007	SAS	Fixed	0/292GB	0/2	3
7972-51Y ¹⁰	-	SAS	Fixed	0/292GB	0/2	3
7972-52Y ¹¹	-	SAS	Fixed	0/292GB	0/2	3
7972-6AY ¹⁰	July 27 2007	SAS	Fixed	0/292GB	0/2	3
7972-6BY ¹¹	-	SAS	Fixed	0/292GB	0/2	3
7972-4TY ¹¹	-	SAS	Fixed	0/292GB	0/2	3
7972-7AY ¹¹	July 27 2007	SAS	Fixed	0/292GB	0/2	3
7972-7BY ¹¹	-	SAS	Fixed	0/292GB	0/2	3
7972-E2Y ¹⁰	-	SAS	Fixed	0/292GB	0/2	3
7972-61Y ¹¹	July 27 2007	SAS	Fixed	0/292GB	0/1	3
7972-62Y ¹⁰	Apr 4 2008	SAS	Fixed	0/292GB	0/1	3
7972-7MY ¹¹	-	SAS	Fixed	146/292GB	2/2	3
7972-8BY ¹¹	-	SAS	Fixed	0/292GB	0/2	3

Notes:

1. Model numbers provided are worldwide generally available variant (GAV) model numbers which are not orderable as listed, and need to be modified by country. The U.S. GAV model numbers use the following nomenclature: xxU. For example, the U.S. orderable part number for 8843-01Y is 8843-01U. See the product-specific Official IBM announcement letter for other country-specific GAV model numbers. GAV to MTM mapping for A.P. Geographies follow the same pattern. Substitute the last character with a country-specific designator.
2. Withdrawal dates are provided for U.S. and Canada only. Business Partner Inventory may be available.
3. AMD Dual-Core Opteron processor with two 1MB L2 Cache, provides three high-performance HyperTransport links to I/O, as well as a 128-bit high-performance DDR-2 SDRAM memory controller.
4. Memory subsystem is two-way interleaved, Very Low Profile (VLP) DDR-2 SDRAMs supporting chip kill technology. Each Opteron processor contains the memory controller responsible for four DIMMs.
5. Integrated Service Processor subsystem supports features which include monitoring the LS41 systems management activity as well as communicating with the management module in the BladeCenter.
6. Dual Broadcom BCM5706S TOE-enabled Gigabit Ethernet Controllers on the base board and Dual Broadcom BCM5708S TOE-enabled Gigabit Ethernet Controllers on the expansion board.
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Ethernet Controllers on the multiprocessor expansion unit.

7. An integrated LSI 1064 SAS Controller on the Base Processor Blade to provide support for two SAS Hard Disk Drives, located on the Base Processor Blade and in the Multiprocessor Expansion Blade.
8. Maximum internal storage capacity is based on installation of two 73GB SAS HDD.
9. An optional BladeCenter expansion unit is available that attaches directly to the blade server adding three hot-swap SAS HDD bays for a total of five HDD bays and two expansion card slots for a total of four expansion card slots.
10. For maximum capacity, an optional Multiprocessor Expansion Blade can attach directly to the base blade server to add support for two additional AMD Opteron processors, eight memory DIMMs, one additional SAS HDD, one legacy expansion card slot, and one blade expansion connector, which supports high speed expansion cards or an optional expansion unit.
11. The Multiprocessor Expansion Blade (P/N 25K5934) is a standard component attached directly to the base blade server for maximum capacity. It adds support for two additional AMD Opteron processors, eight memory DIMMs, one additional SAS HDD, one legacy expansion card slot, and one blade expansion connector which supports high speed expansion cards or an optional expansion unit.

BladeCenter LS41 (7972)

Attention:

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At-A-Glance Options

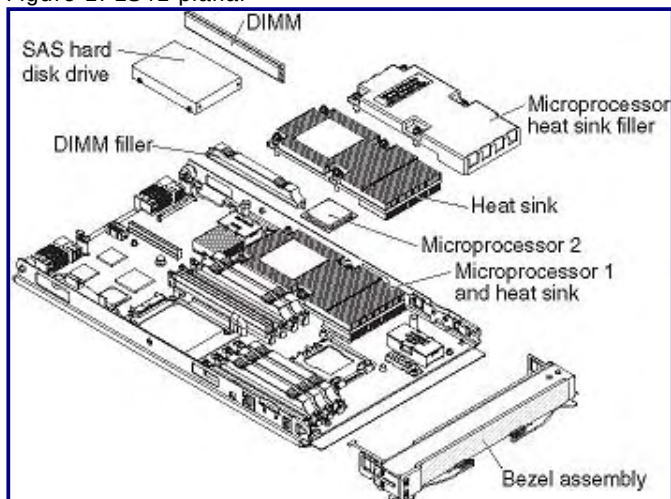
[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Processor options	SMP support
39R9229	25R8934	0669	Dual Core AMD Opteron Processor Model 8212 HE (2.0GHz 2x1MB L2 68w)	31Y,32Y
39R9230	25R8932	0670	Dual Core AMD Opteron Processor Model 8212 (2.0GHz 2x1MB L2 95w)	3AY,3BY
43X0906	40K1265	2880	Dual Core AMD Opteron Processor Model 8214 HE (2.2GHz 2x1MB L2 68w)	4TY
39R9231	25R8935	0671	Dual Core AMD Opteron Processor Model 8216 HE (2.4GHz 2x1MB L2 68w)	51Y,52Y E2Y
39R9232	-	0672	Dual Core AMD Opteron Processor Model 8218 (2.6GHz 2x1MB L2 95w)	6AY,6BY
44E5215	44E5247	2826	Dual Core AMD Opteron Processor Model 8218 HE (2.6GHz 2x1MB L2 68W)	61Y, 62Y
43X0907	40K1266	2879	Dual Core AMD Opteron Processor Model 8220 (2.8GHz 2x1MB L2 95w)	7AY,7BY 7MY
44R4947	-	3073	Dual Core AMD Opteron Processor Model 8222 (3.0GHz 2x1MB L2 95W)	8BY
Additional Processor Options				
39R9233	25R8934	0462	Addl Dual Core AMD Opteron Processor 8212 HE (2.0GHz 2x1MB L2 68w)	-
39R9234	25R8932	0463	Addl Dual Core AMD Opteron Processor 8212 (2.0GHz 2x1MB L2 95w)	-
43X0908	40K1265	1433	Addl Dual Core AMD Opteron Processor 8214 HE (2.2GHz 2x1MB L2 68w)	-
39R9235	25R8935	0464	Addl Dual Core AMD Opteron Processor 8216 HE (2.4GHz 2x1MB L2 68w)	E2Y
39R9236	-	0465	Addl Dual Core AMD Opteron Processor 8218 (2.6GHz 2x1MB L2 95w)	-
43X0909	40K1266	1432	Addl Dual Core AMD Opteron Processor 8220 (2.8GHz 2x1MB L2 95w)	7MY
44R4948	-	3487	Addl Dual Core AMD Opteron Proc 8222(3.0GHz 2x1MB L2 95W)	-
44E5216	44E5247	3463	Addl Dual Core AMD Opteron Processor 8218 HE (2.6GHz 2x1MB L2 68W)	-

Note: If one processor is installed, it must be plugged into CPU 1 socket. The system will not be allowed to boot if the CPU 1 socket is not populated. CPU 2 socket must contain a heatsink filler in order to maintain proper airflow. When the MPE is installed, the first processor installed on the MPE must be plugged into the CPU 3 socket and CPU 4 socket must contain a heatsink filler if a processor is not installed. If multiple processors are installed, they must have the same set of features and functions. Mixing of processors that have different values for their respective features is not allowed.

Three different processor wattage options are offered in the LS21 and LS41: 95W version, Highly Efficient 68W version, and an Energy Efficient 45W version. LS21 and LS41 systems that use the 95W processors are designed for the BladeCenter H chassis. Due to increased power and thermal the 95W version will run at 'n-2' processor speed in the BladeCenter and BladeCenter T chassis. In most cases this represents a speed reduction of 400MHz. LS21 and LS41 systems using the Highly Efficient 68W or the Energy Efficient 45W processor will run at full speed in all chassis.

Figure 1. LS41 planar



[Click image to enlarge](#)

BladeCenter LS41 (7972)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

[Processor](#) | **[Memory](#)** | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description
39M5859	-	0548	512MB VLP PC2-5300 DDR-2 DIMM
-	39M5861	-	1GB (2x 512MB) PC2-5300 CL4 ECC DDR2 SDRAM VLP RDIMM
39M5862	-	0549	1GB VLP PC2-5300 DDR-2 DIMM
-	39M5864	-	2GB (2x 1GB) PC2-5300 CL4 ECC DDR2 SDRAM VLP RDIMM
39M5868	-	0551	4GB VLP PC2-4200 DDR-2 DIMM
-	39M5870	-	8GB (2x 4GB) PC2-4200 CL4 ECC DDR2 SDRAM VLP RDIMM
46C0506	-	3946	2 GB SR VLP PC2-5300 DDR-2 DIMM ¹
-	46C0512	-	4GB (2x2GB) SR VLP PC2-5300 DDR-2 DIMM

Note: The memory subsystem is two-way interleaved. Each Opteron processor is responsible for four DIMMs. Memory must be populated in pairs of two identical DIMMs per processor installed.

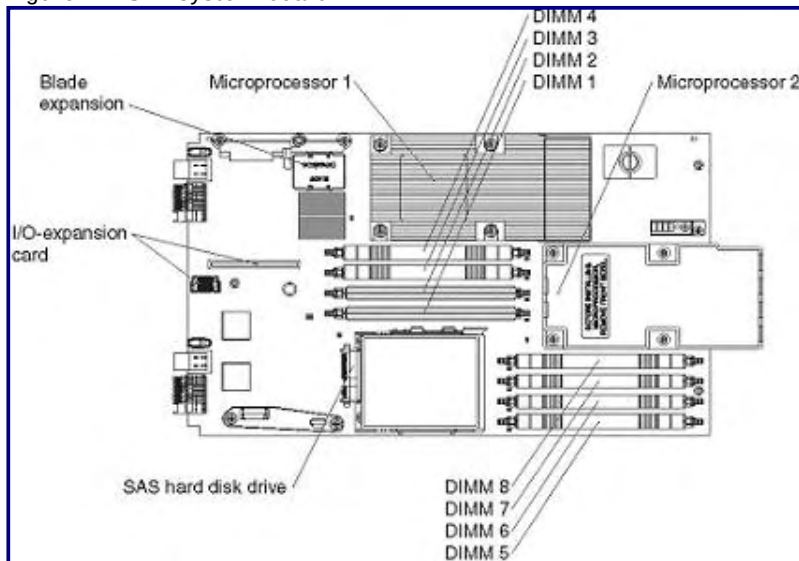
Note:

1. If selected, only SBB 46C0506 (FC 3946) is allowed in the system. This SBB cannot co-exist with other memory in the same system.

Table 1. Standard Memory Configuration

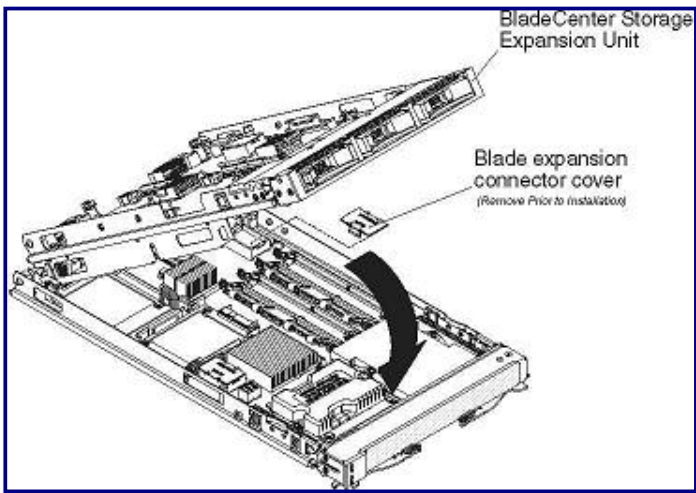
Model	Std DIMM configuration
31Y, 3AY	2x 512MB VLP PC2-5300 DDR-2 DIMM
32Y, 3BY, 4TY	4x 512MB VLP PC2-5300 DDR-2 DIMM
51Y, 6AY, 7AY, 61Y	2x 1GB VLP PC2-5300 DDR-2 DIMM
52Y, 6BY, 7BY, 62Y	4x 1GB VLP PC2-5300 DDR-2 DIMM
E2Y	8x 2GB VLP PC2-5300 DDR-2 DIMM
7MY	16x 1GB VLP PC2-5300 DDR-2 DIMM

Figure 1. LS41 system board



[Click image to enlarge](#)

Figure 1. BladeCenter Storage and I/O Expansion Unit



[Click image to enlarge](#)

BladeCenter LS41 (7972)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance **Options**

[Processor](#) | [Memory](#) | **[HDD](#)** | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description	Height	Bays supported	Max qty
SAS HDDs						
43W7619	43W7618	5563	IBM 31.4GB 2.5" Solid State Drive	2.5"	1	1
39R7393	-	5153	73GB 10K 2.5" Hot-Swap SAS SFF	2.5"	3,4,5	3
26K5781	26K5777	5298	73GB 10K 2.5" Non Hot-Swap SAS SFF	2.5"	1, 2	2
42D0423	42D0421	5529	IBM ServerBlade 146GB SAS 10K 2.5" SFF NHS	2.5"	1, 2	2
43X0849	43X0845	5545	IBM ServerBlade 73GB SAS 15K 2.5" SFF NHS	2.5"	1, 2	2

Note: The Serial Attached SCSI (SAS) subsystem in the LS41 consists of the LSI 1064 SAS controller on the Base Processor Blade, providing support to the SAS connectors located on the Processor Blade and in the Multiprocessor Expansion Blade, to support up to two onboard SFF SAS hard drives.

BladeCenter LS41 (7972)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

Processor | Memory | HDD | I/O | Additional information |

SBB number	Option number	Feature codes	Description	Form factor
Networking				
39Y6091	-	1487	NetXtreme 1000 S + Ethernet Adapter- PCI-X	-
39Y6096	-	1489	NetXtreme 1000 T + Dual Port Ethernet Adapter- PCI-X	-
Blade server expansion cards				
43W4430	43W4420	2993	Voltaire 4X InfiniBand DDR Expansion Card (CFFh) for IBM BladeCenter	CFFh
40K8918	-	2965	Voltaire 4x InfiniBand HCA for BladeCenter	-
42D1471	-	2966	Voltaire 4x DDR InfiniBand HCA for BladeCenter	-
39Y9117	32R1896	1492	Cisco Systems InfiniBand HCA Expansion Card for IBM BladeCenter	-
43W4431	43W4421	2992	Cisco 4X InfiniBand DDR Expansion Card (CFFh) for IBM BladeCenter	CFFh
32R1761	32R1760	1466	Cisco Systems 4X InfiniBand expansion card for IBM BladeCenter	HSFF
43W4433	43W4423	2991	4X InfiniBand DDR Expansion Card (CFFh) for IBM BladeCenter	CFFh
39Y9270	39Y9271	2967	NetXen 10Gb Ethernet Expansion Card (CFFh) for IBM BladeCenter	CFFh
43W6861	43W6859	2994	Emulex 4Gb Fibre Channel Expansion Card (CFFv) for IBM BladeCenter	CFFv
39Y9185	39Y9186	2925	Emulex 4Gb SFF Fibre Channel Expansion Card for IBM BladeCenter	SFF
39Y9189	39Y9190	2979	SAS Expansion Card (CFFv) for IBM BladeCenter	CFFv
26K5942	26K5939	1568	cKVM Feature Card for IBM BladeCenter	-
26K4837	73P6000	1546	Myrinet Cluster Exp. Card	StFF
39Y9116	32R1923	1458	QLogic iSCSI Daughtercard for IBM BladeCenter	StFF
26R0885	26R0884	1581	QLogic 4Gb Standard Fibre Channel Expansion Card for eServer	-
26R0891	26R0890	1577	QLogic 4Gb SFF Fibre Channel Expansion Card for eServer	SFF
39Y9305	39Y9306	2968	QLogic Ethernet & 4Gb Fibre Channel Exp Card (CFFh) for BladeCenter	CFFh
41Y8526	41Y8527	2970	QLogic 4Gb Fibre Channel Expansion Card (CFFv) for IBM BladeCenter	CFFv
26K4843	39R8624	1548	SFF Gb Ethernet Exp. Card	SFF
39Y9309	39Y9310	2969	Ethernet Expansion Card (CFFv) for IBM BladeCenter	CFFv
-	43W4391	-	PCI Extended Unit for PCI-e for BladeCenter	-
31R2266	39R7563	4265	IBM BladeCenter Storage and I/O Expansion Blade	-
26K5941	26K5934	4266	AMD Opteron LS41 Multiprocessor Expansion Unit	-
Storage controllers				
25R8077	25R8064	1670	IBM ServeRAID-8k SAS Controller	-
25R8080	-	1671	IBM ServeRAID 8k-L SAS Controller	-
39R8819	-	1685	ServeRAID-6M Ultra320 SCSI Controller (128MB)	-
39R8820	-	1686	ServeRAID-6M Ultra320 SCSI Controller (256MB)	-
Associated options				
43X0834	-	5535	IBM Storage and I/O Blade 146GB SAS 10K 2.5" SFF HS	-
43X0857	-	5547	IBM Storage and I/O Blade 73GB SAS 15K 2.5" SFF HS	-

Note: Form Factor abbreviations are as follows: SFF = Small Form Factor, StFF = Standard Form Factor, HSFF = High Speed Form Factor.

The Standard Form Factor (StFF) card is the original form factor for expansion cards in blade servers. An StFF expansion card uses the PCI-X connector on the blade server and expansion units. When an StFF expansion card is installed using the PCI-X connector it is not possible to install a CFFh nor HSFF expansion card on the adjacent PCI-E connector (if one exists in the server) In addition, when an StFF expansion card is installed, the second hard disk drive on some blade servers cannot be installed.

BladeCenter LS41 (7972)

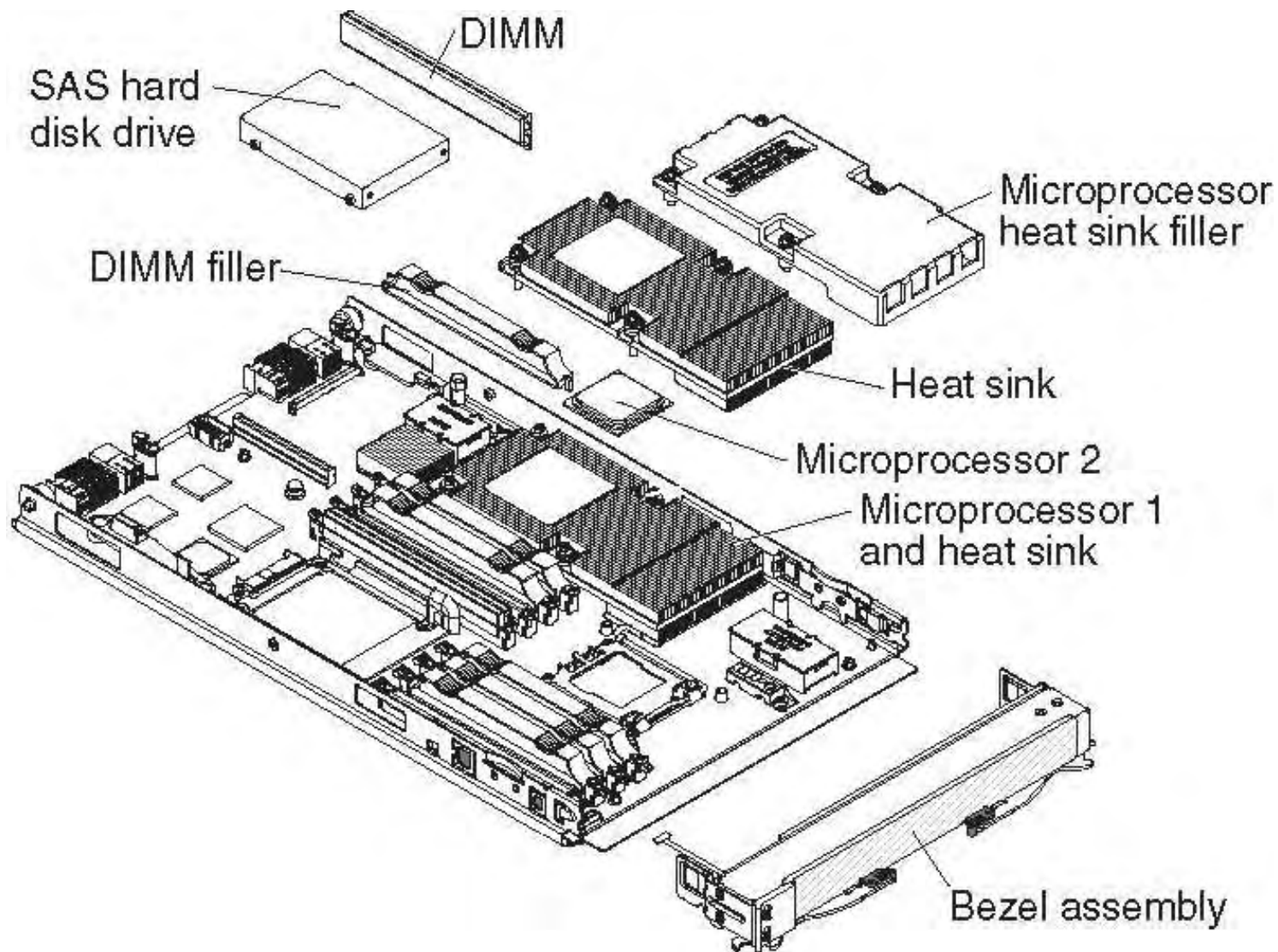
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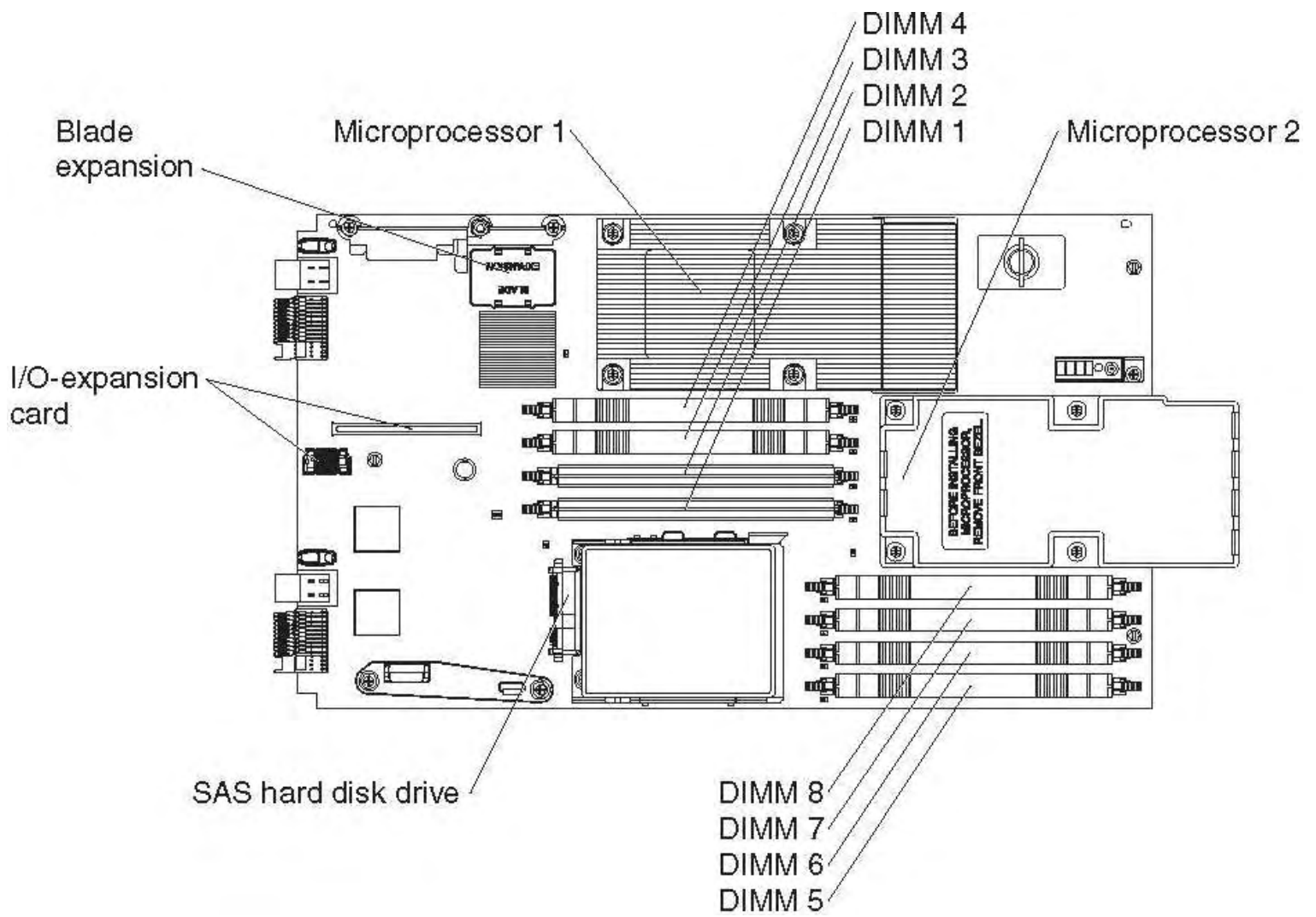
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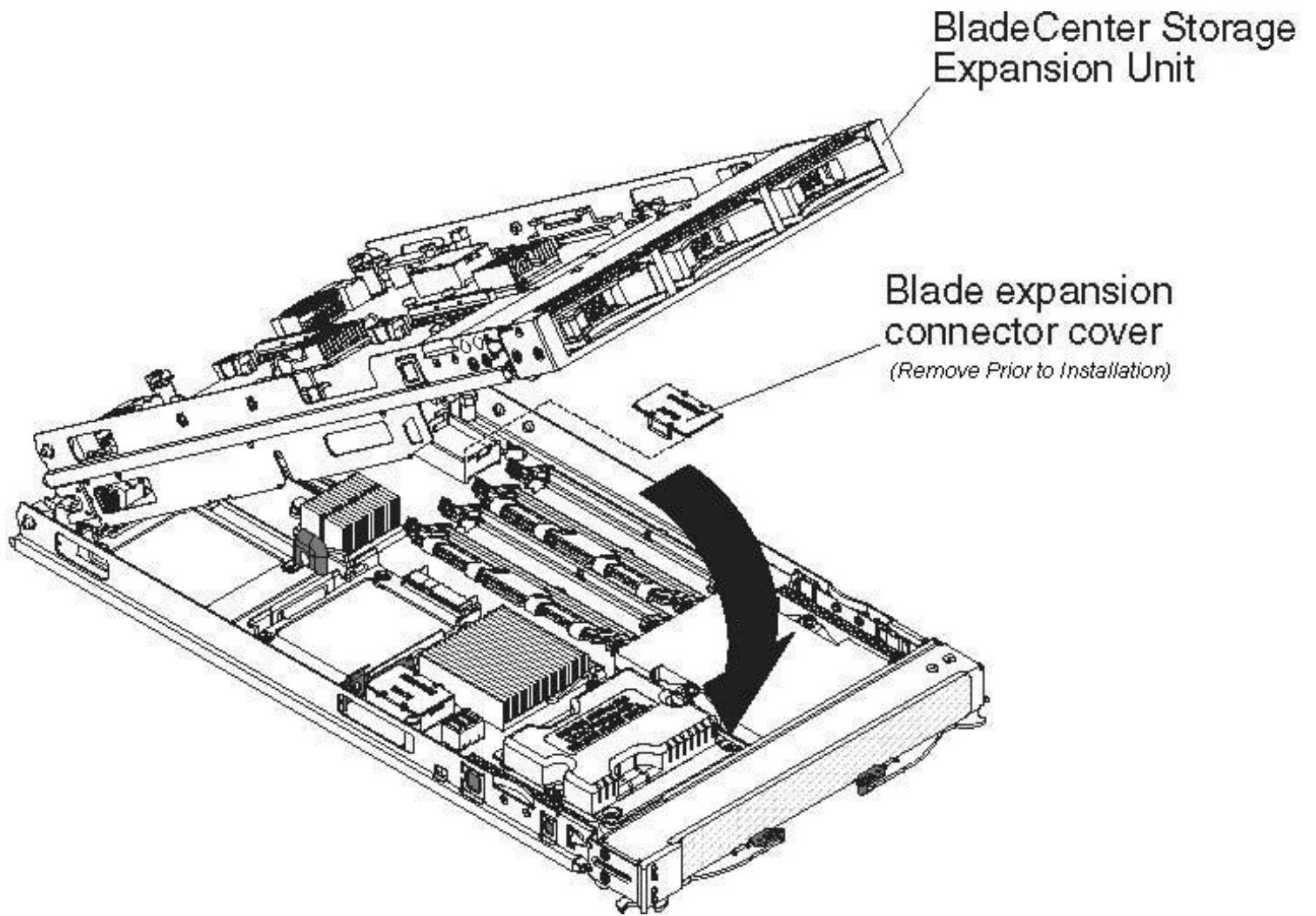
At-A-Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | **[Additional information](#)**

|

SBB number	Option number	Feature codes	Description
Rack Console Connectivity			
-	17353LX	-	IBM 1x8 Console Switch
-	17354LX	-	IBM 2x16 Console Switch







BladeCenter QS21 (0792)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

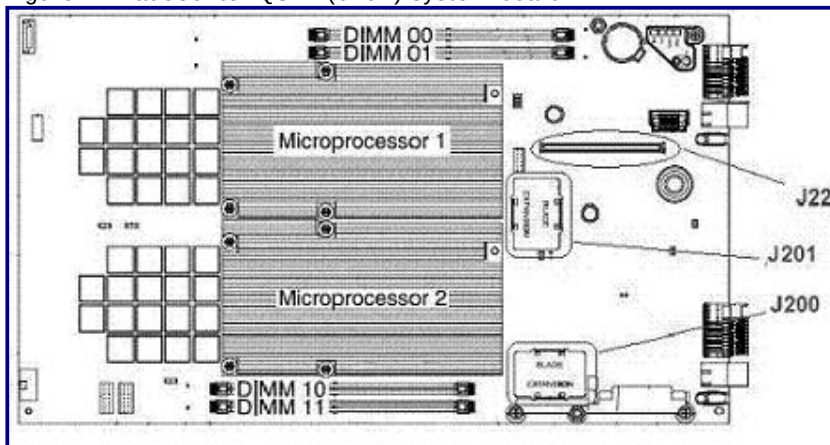
Table 1. BladeCenter QS21 (0792) at-a-glance

Part number ¹	CPU/FSB speed (GHz/MHz) - cache	Number of processors (std / max)	Memory (std / max)	System Management Processor (Std / Max)	Integrated ethernet
0792-32Y	2-way CBE, 10KE technology(90nm) 3.2 GHz core frequency	2/2	2GB/2GB	2/2	Dual 1GB

Table 1. BladeCenter QS21 (0792) at-a-glance (continued)

Part number ¹	Storage controller	Internal HDD interface	Internal HDD storage (Std / Max)	HDD bays (Std / Max)	Expansion slots (Std / Max)
0792-32Y	-	-	-	-	2/2

Figure 1. BladeCenter QS21 (0792) system board



[Click image to enlarge](#)

BladeCenter QS21 (0792)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

[At-A-Glance](#) [Options](#)[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Processor options	SMP support

BladeCenter QS21 (0792)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description
-	-	-	-

Table 1. Standard Memory Configuration

Model	Std. DIMM configuration
-	-

BladeCenter QS21 (0792)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance **Options**[Processor](#) | [Memory](#) | **[HDD](#)** | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description	Height	Bays supported	Maximum quantity
SAS HDDs						
-	-	-	-	-	-	-

BladeCenter QS21 (0792)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description	Form factor
-	-	-	-	-
Blade Server Expansion Cards				
32R1761	32R1760	1466	Cisco Systems 4X InfiniBand Expansion Card for IBM BladeCenter	HSFF
39Y9189	-	2979	SAS Expansion Card (CFFv) for IBM BladeCenter	CFFv
Note:	Form Factor abbreviations are as follows: SFF = Small Form Factor, StFF = Standard Form Factor, HSFF = High Speed Form Factor.			
	The Standard Form Factor (StFF) card is the original form factor for expansion cards in blade servers. An StFF expansion card uses the PCI-X connector on the blade server and expansion units. When an StFF expansion card is installed using the PCI-X connector it is not possible to install a CFFh nor HSFF expansion card on the adjacent PCI-E connector (if one exists in the server) In addition, when an StFF expansion card is installed, the second hard disk drive on some blade servers cannot be installed.			

BladeCenter QS21 (0792)

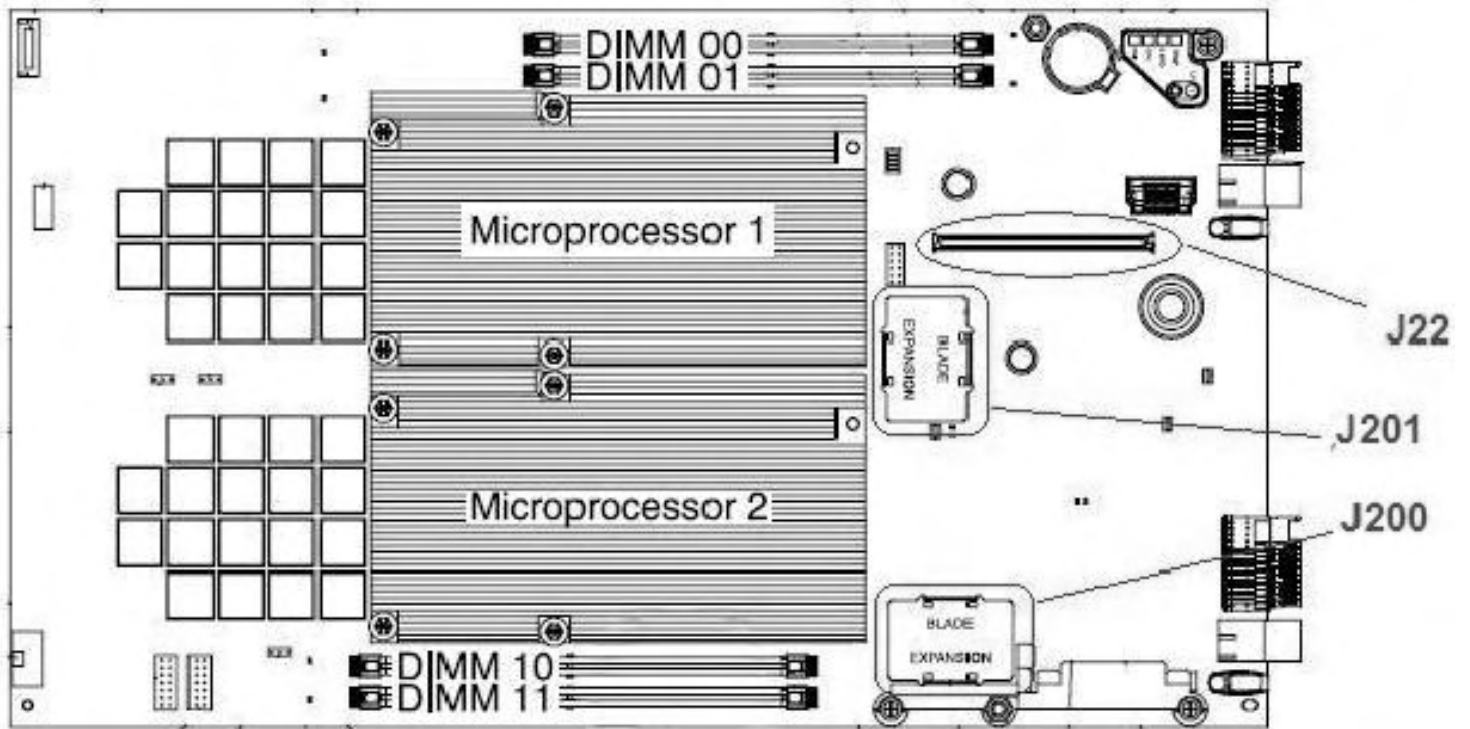
Attention:

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At-A-Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | **[Additional information](#)**

|

SBB number	Option number	Feature codes	Description
			Power supplies
-	-	-	-



BladeCenter QS22 (0793)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

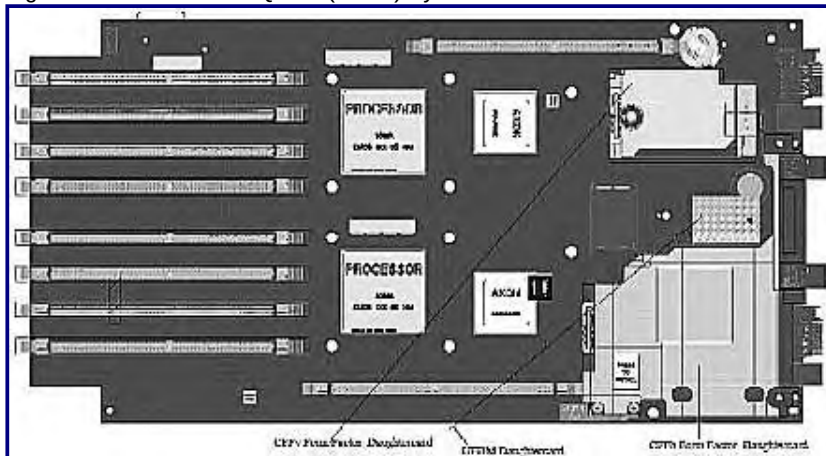
Table 1. BladeCenter QS22 (0793) at-a-glance

Part number ¹	CPU / FSB speed (GHz / MHz) - cache	Number of processors (std / max)	Memory (std / max)	System Management Processor (Std / Max)	Integrated ethernet
0793-38Y	Dual PowerXCell 8i, 65nm (CMOS 11S) operated at 3.2GHz core speed	2/2	8GB/8GB	Y	Dual GB
0793-40Y	Dual PowerXCell 8i, 65nm (CMOS 11S) operated at 3.2GHz core speed	2/2	16GB/32GB	Y	Dual GB

Table 1. BladeCenter QS22 (0793) at-a-glance (continued)

Part number ¹	Storage controller	Internal HDD interface	Internal HDD storage (Std / Max)	HDD bays (Std / Max)	Expansion slots (Std / Max)
0793-38Y	-	-	-	-	0/2
0793-40Y	-	-	-	-	0/2

Figure 1. BladeCenter QS22 (0793) system board



[Click image to enlarge](#)

BladeCenter QS22 (0793)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Processor options	SMP support
Standard processor				
-	-	-	-	-
Additional processors				
-	-	-	-	-

Notes:

1. Supported options will be published in a future release as they become available.

BladeCenter QS22 (0793)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance **Options**

[Processor](#) | **[Memory](#)** | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description ¹
46C0500	-	3952	1GB VLP PC2-6400 DDR-2 x8 DIMM
46C0503	-	3953	2GB VLP PC2-6400 DDR-2 x8 DIMM
46C0504	-	3954	4GB VLP PC2-6400 DDR-2 x4 DIMM
-	46C0501	-	2GB (2 x 1 GB) VLP PC2-6400 DDR-2 x8 DIMM ²
-	46C0510	-	8GB (2 x 4 GB) VLP PC2-6400 DDR-2 x4 DIMM

Note: IBM BladeCenter QS22 has eight DIMM sockets for processor memory (options listed above) and two DIMM sockets for special purpose I/O buffer memory. The function of I/O buffer memory is unlike processor memory in that applications must be written or modified to utilize these memory DIMMs which are accessed via the IBM I/O bridge chips on QS22.

Notes:

1. Highest memory bandwidth and optimal performance can be achieved when all eight memory DIMM sockets are populated. For base models with less than eight DIMMs installed (ie, 0793-40Y), it is strongly recommended that option memory is added such that all memory DIMM sockets are used.
2. This processor memory may also be used as optional I/O buffer memory if purchased as an option. This option includes two 1GB DIMMs that can be plugged into the two available I/O buffer memory sockets on QS22.

Table 1. Standard Memory Configuration

Model	Std. DIMM configuration
38Y	8 X 1GB VLP PC2-6400 DDR-2 x8 DIMM
40Y	4 X 4GB VLP PC2-6400 DDR-2 x4 DIMM

BladeCenter QS22 (0793)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

[Processor](#) | [Memory](#) | **HDD** | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description	Height	Bays supported	Maximum quantity
SAS HDDs						
-	-	-	-	-	-	-

Notes:

1. Supported options will be published in a future release as they become available.

BladeCenter QS22 (0793)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

At-A-Glance Options

[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | [Additional information](#) |

SBB number	Option number	Feature codes	Description	Form factor
Networking				
39Y9189	39Y9190	2979	SAS Expansion Card (CFFv) for IBM BladeCenter	CFFv
39Y9270	39Y9271	2967	NetXen 10Gb Ethernet Expansion Card (CFFh) for IBM BladeCenter	CFFh
32R1761	32R1760	1466	Cisco Systems 4X InfiniBand expansion card for IBM BladeCenter	HSEC or CFFh
43W4430	43W4420	2993	Voltaire 4X InfiniBand DDR Expansion Card (CFFh) for IBM BladeCenter	CFFh
43W4431	43W4421	2992	Cisco 4X InfiniBand DDR Expansion Card (CFFh) for IBM BladeCenter	CFFh
43W4433	43W4423	2991	4X InfiniBand DDR Expansion Card (CFFh) for IBM BladeCenter	CFFh
Note:	Form Factor abbreviations are as follows: SFF = Small Form Factor, CFFv = Combo Form Factor Vertical I/O Expansion Card.			
	The Standard Form Factor (StFF) card is the original form factor for expansion cards in blade servers. An StFF expansion card uses the PCI-X connector on the blade server and expansion units. When an StFF expansion card is installed using the PCI-X connector it is not possible to install a CFFh nor HSFF expansion card on the adjacent PCI-E connector (if one exists in the server) In addition, when an StFF expansion card is installed, the second hard disk drive on some blade servers cannot be installed.			

Slot	Type	Bus	Voltage (V)	Frequency MHZ	Data path	Active PCI	Slot length	Scan sequence
Slot 1: Blade onboard PCI-x legacy connector	PCI-x	std PCI-x	3.3	100MHz	64	-	CFFv or SFF	-
Slot 2: Blade onboard PCI-e high-speed connector	PCI-e	std PCI-e, 2 times x8 PCI-e	-	2.5GHz per lane	64	-	CFFh or HSEC	-
Slot 3: PEU III	-	-	-	-	-	-	-	-

BladeCenter QS22 (0793)

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

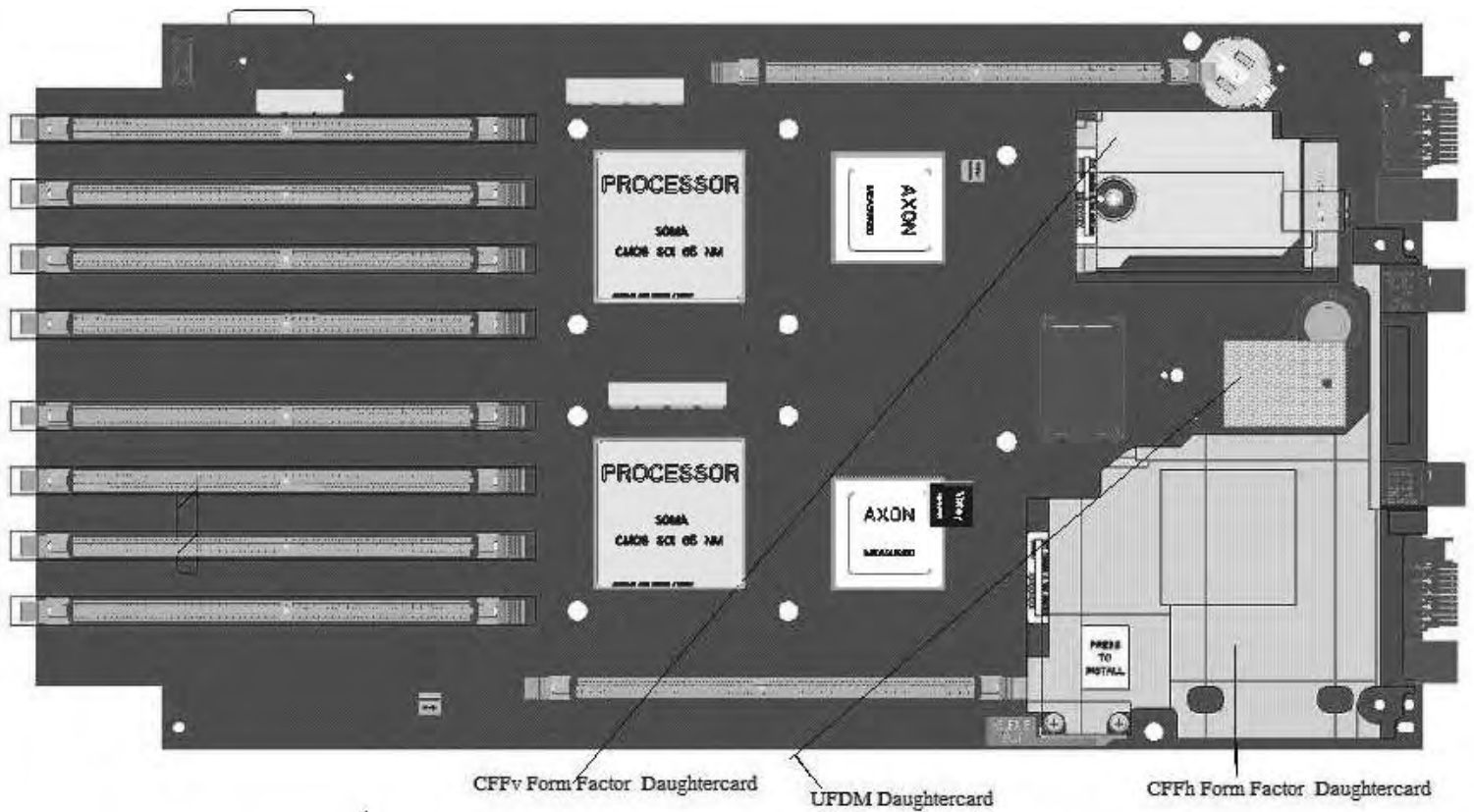
At-A-Glance **Options**[Processor](#) | [Memory](#) | [HDD](#) | [I/O](#) | **[Additional information](#)**

|

SBB number	Option number	Feature codes	Description
			Power supplies
-	-	-	-

Notes:

1. Supported options will be published in a future release as they become available.



Blade server storage and I/O expansion blade

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

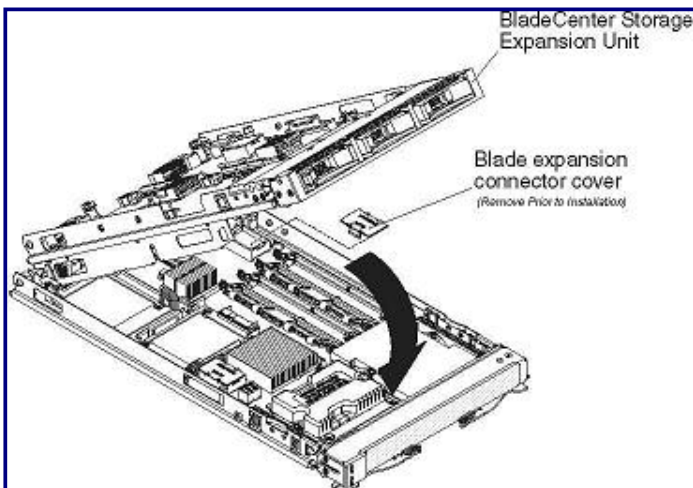
Table 1. BladeCenter SCSI Storage Expansion Unit

SBB number	Option number	Feature codes	Description	Form factor	Slots supported	Maximum quantity
31R2266	39R7563 ²	4265	IBM BladeCenter Storage and I/O Expansion Blade	-	-	-
Hot-Swap SAS HDDs						
-	43X0853 ³	-	73GB SAS 15K BSE-3	2.5"	1, 2, 3	3 per SIO
-	43X0832 ³	-	146GB SAS 10K SFF BSE-3	2.5"	1, 2, 3	3 per SIO
39R7393	39R7389 ³	5153	73GB 10K SAS SFF HS HDD	2.5"	1, 2, 3	3 per SIO
Blade Server RAID Adapter⁴						
25R8077	25R8064	1670	IBM ServeRAID-8k SAS Controller	-	-	1

Notes:

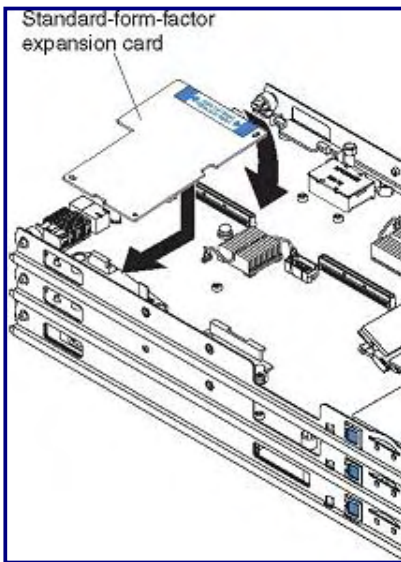
1. Embedded support is provided for RAID levels 0 and 1.
2. Option is supported on the BladeCenter HS21 XM(7995), HS21 (8853), LS21 (7971), and LS41 (7972). Supports up to three 2.5" SAS Hotswap HDDs.
3. Options apply to IBM BladeCenter Storage and I/O Expansion Unit only.
4. Requires appropriate I/O modules to be installed in a BladeCenter chassis. Refer to BladeCenter chassis I/O Options for more information. ServeRAID-8k replaces the standard ServeRAID-8k-L.

Figure 1. BladeCenter Storage and I/O Expansion Unit, view 1



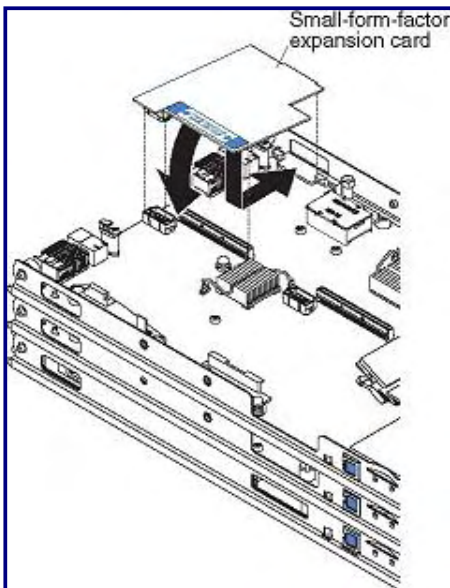
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Figure 2. BladeCenter Storage and I/O Expansion Unit, view 2



[Click image to enlarge](#)

Figure 3. BladeCenter Storage and I/O Expansion Unit, view 3



[Click image to enlarge](#)

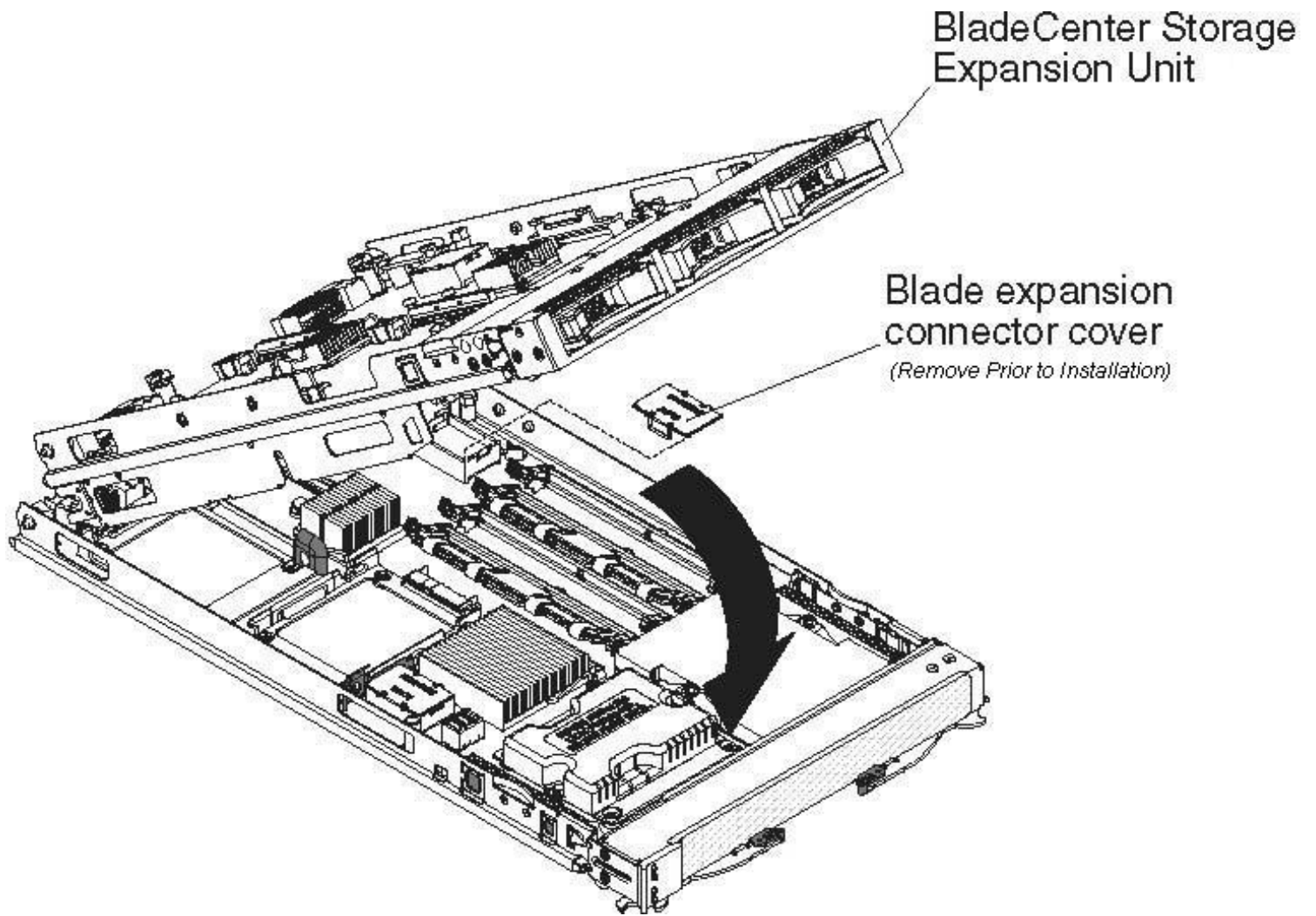
Table 3. BladeCenter PCI Expansion Unit II

SBB number	Option number	Feature codes	Description
32R0792	25K8373	4244	IBM eServer BladeCenter PCI Expansion Unit II
PCI expansion Unit II			
24P0963	24P0960	1650	DS4000 Host Bus Adapter
71P8614	71P8594	1652	Single Channel Ultra320 SCSI Controller
31P9605	-	1512	PRO/1000 MT Server Ethernet Adapter by Intel
32P9296	22P7801	1501	NetXtreme 1000 SX Fiber Ethernet Adapter
31P6305	31P6301	1502	NetXtreme 1000 T Ethernet Adapter (copper)
32P9298	31P6401	1503	NetXtreme 1000 T Dual Port Ethernet Adapter (copper)

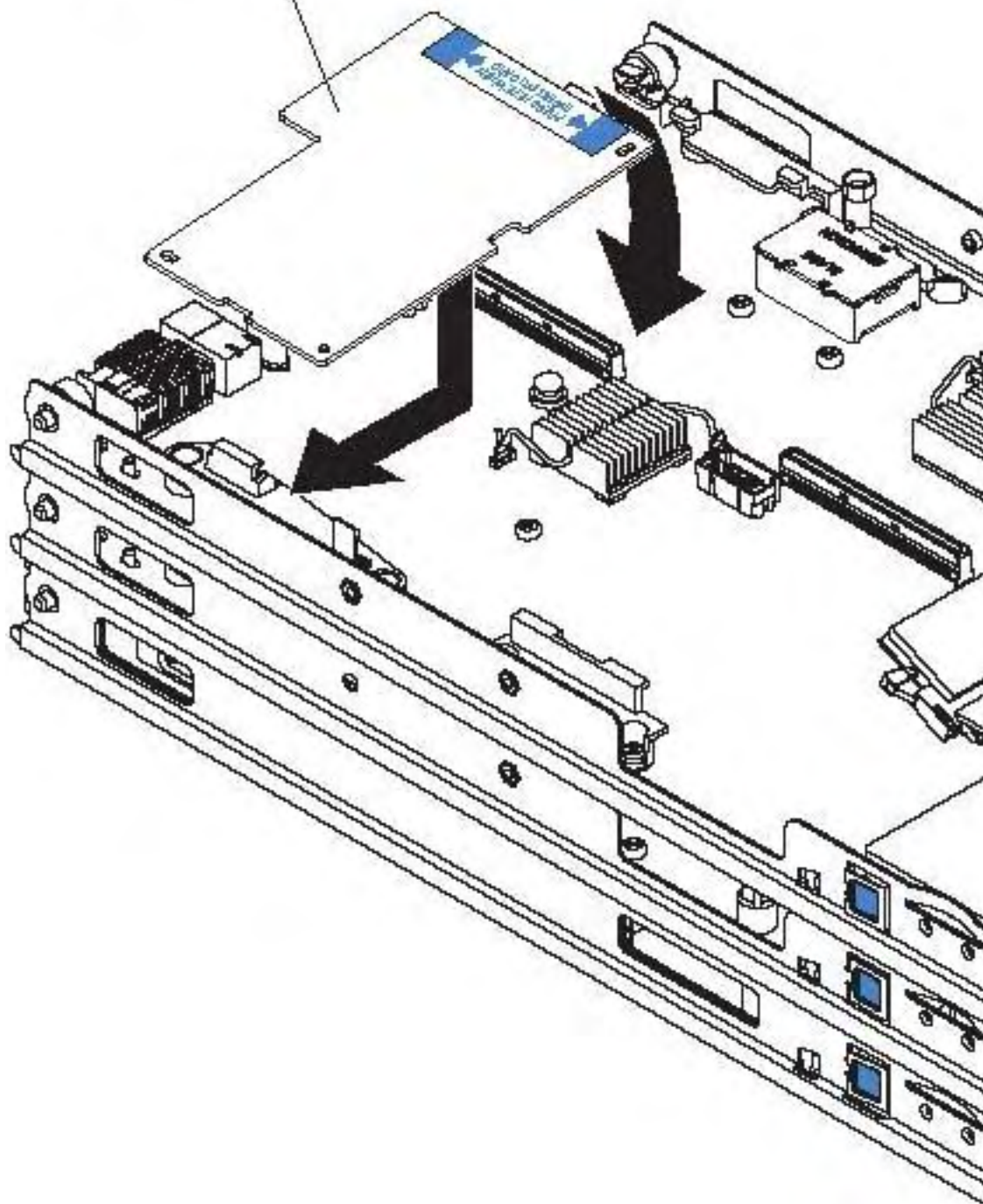
Note: The BladeCenter PCI I/O Expansion Unit provides two 64-bit/100MHz PCI-X slots. The expansion unit itself occupies one BladeCenter slot. The expansion unit attaches to the blade server and both units are installed together into the BladeCenter chassis as a single unit occupying two BladeCenter slots.

Notes:

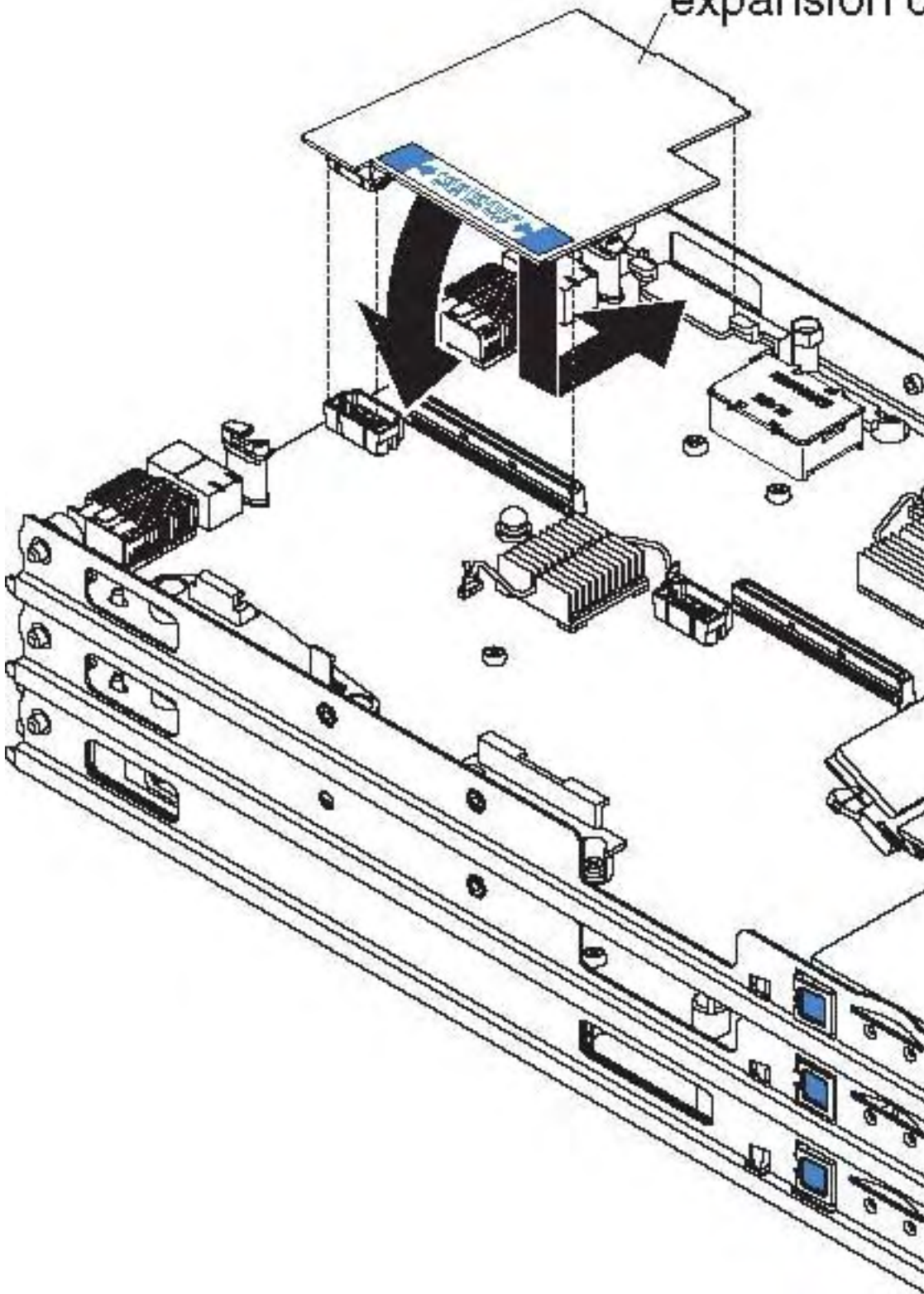
1. PCI adapter options for the BladeCenter PCI I/O Expansion Unit.
PCI adapters in the unit provide external connections only.



Standard-form-factor
expansion card



Small-form-factor
expansion card



Datacenter solution program

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

[Datacenter](#) | [Software](#) | [Solutions](#) | [System x3950](#)

The IBM Datacenter Solution Program is a comprehensive set of hardware, software, and service offerings intended to deliver true enterprise computing solutions based on the Microsoft Windows Server 2003 R2 Datacenter Edition operating systems. The IBM System x3950 supports 4-socket to 32-socket Datacenter solutions.

IBM offers two separate Datacenter solutions. The Datacenter Unlimited Virtualization (UV) offering for stand-alone server solutions and the Datacenter Unlimited Virtualization with High Availability (UVHA) Program for Datacenter tested and supported cluster configurations including storage. The IBM Datacenter Solutions include Microsoft-certified hardware, Windows Datacenter Server operating systems and onsite services and remote support offerings through System x Lab Services and IBM Global Technology Services (GTS). Microsoft Software Assurance is available for MS WS Datacenter upgrades and updates.

In addition to the configuration information on the following pages, the IBM Datacenter Solution Program includes the following services. The service offerings must be contracted separately, and are required with the Datacenter UVHA offerings. An **Expert Solutions Assurance Review (SAR)** must be conducted by IBM or a IBM Business Partner to ensure that the configuration being ordered is valid and complete prior to placing any orders.

The product content described herein is consistent worldwide; however, there may be some variance in IBM part numbers outside of the US and Canada. Contact your IBM Business Partner or IBM Marketing Representative for assistance with your specific configuration requirements.

Datacenter customers purchasing 4-socket through 32-socket Datacenter solutions with intentions of later partitioning their Datacenter servers into smaller servers should order more than one x3950 server in their original purchase. The Datacenter OS is shipped with the x3950 server only and not the x3950E. The x3950E Expansion unit includes only the Datacenter OS license. For example, if a customer purchasing a 16-way stand-alone server would like to later partition the server into two 8-way servers, they should purchase two x3950 servers and two x3950E Expansion units.

Datacenter solution program

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Datacenter **Software** **Solutions** **System x3950**

Software

Microsoft Windows Server 2003 R2, Datacenter Edition or Microsoft Windows Server 2003 R2, Datacenter x64 Edition is included with the designated x3950 Datacenter servers. x3950 Datacenter UV and UVHA offerings include the IBM certified "Drop in the box" MS Datacenter OS to be installed post-delivery (4-socket license). MS Datacenter solutions/licenses are offered to support 4-socket through 32-socket solutions. The x3950E Datacenter Expansion Unit has no physical Datacenter OS installed or shipped separately. Each x3950E is shipped with a Certificate of Authenticity (COA) for a 4-socket Datacenter license (Five Client Access Licenses (CAL) are included. Additional CAL must be purchased separately from Microsoft).¹

Required services for Datacenter UVHA offerings

- All Datacenter UVHA configurations are to be validated by IBM technical support prior to an Expert Solutions Assurance Review
- Expert Solutions Assurance Review²
- Installation and Integration Support Contract with System x lab Services (xLS)
- Remote Support Contract with Global Technology Services (GTS)
- Limited Warranty service with 24x7 same day response³
- A Microsoft Software Assurance Contract is required for Datacenter OS Upgrades and OS Maintenance

IBM optional support services for Datacenter UV offerings

- Contracted Onsite installation and Integration by IBM (xLS)
- Contracted Remote Software Support by IBM (GTS)
- Warranty upgrade (24x7x2 hour response)

IBM optional support services for Datacenter UV and UVHA offerings

- Testing Services - proof of concept, assessment, design and planning
- Custom services for unique requirements provided by IGS

Note: A Datacenter node represents a single instance of the operating system, regardless of the number of chassis in the configuration.

Note:

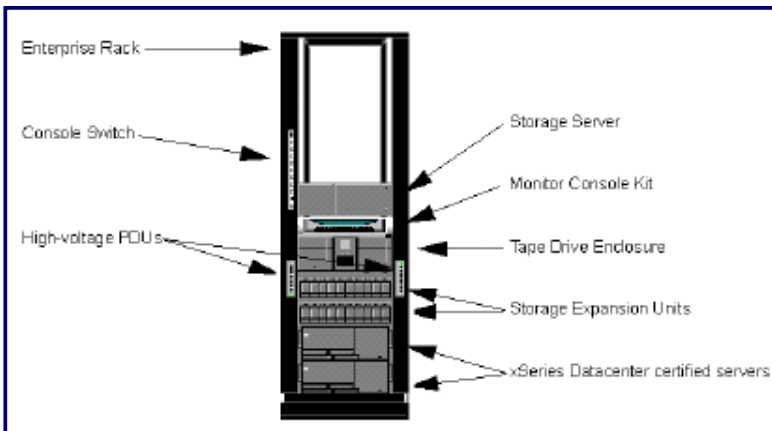
1. IBM makes no representations or warranties regarding non-IBM products or services. These products are offered and warranted by third parties.
2. IBM provides this service standard for all Datacenter sales directly through IBM. Business Partners will also perform this service but may choose to charge a fee.
3. For information on IBM's Statement of Limited Warranty, call 1-800-772-2227 or contact your IBM representative or reseller. Copies are available upon request. International Warranty Service available in those countries where the particular product is sold by IBM or IBM Business Partners. With respect to onsite service, IBM sends a technician after attempting to resolve the problem remotely.

Datacenter solution program

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

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Datacenter solution program

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

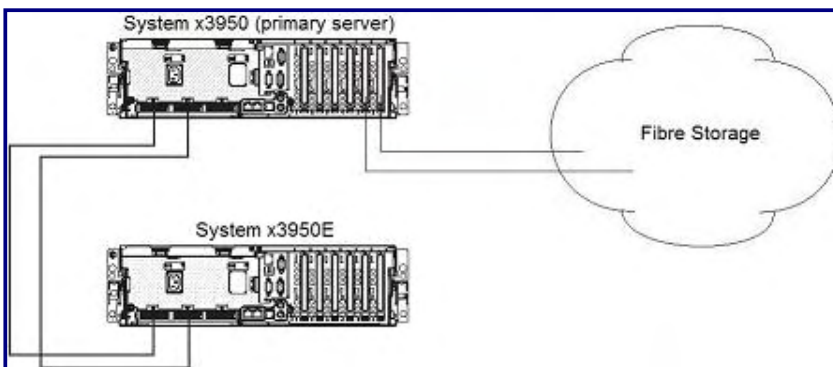
Datacenter Software Solutions System x3950

- | [Single node Datacenter unlimited virtualization w/ high avail. solutions](#)
- | [Multi-node Datacenter unlimited virtualization w/ high avail. solutions](#)
- | [Datacenter unlimited virtualization w/ high avail. solutions addtl. opts.](#)
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System x3950 scalable diagrams

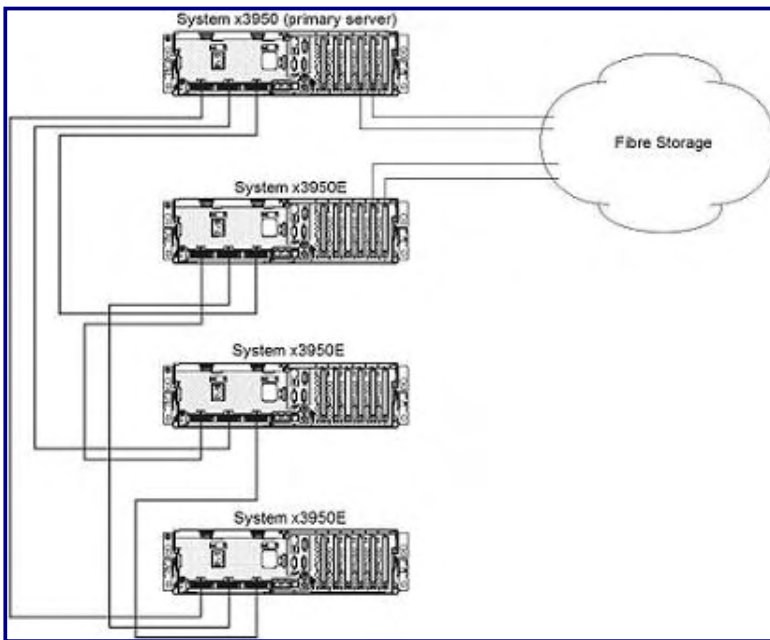
Note: The following sample configurations are for illustration only and may not be suitable for any specific customer installation. Contact your IBM Business Partner or IBM Marketing Representative for assistance with your specific configuration requirements.

Figure 1. System x3950 Single Node 8-way Configuration



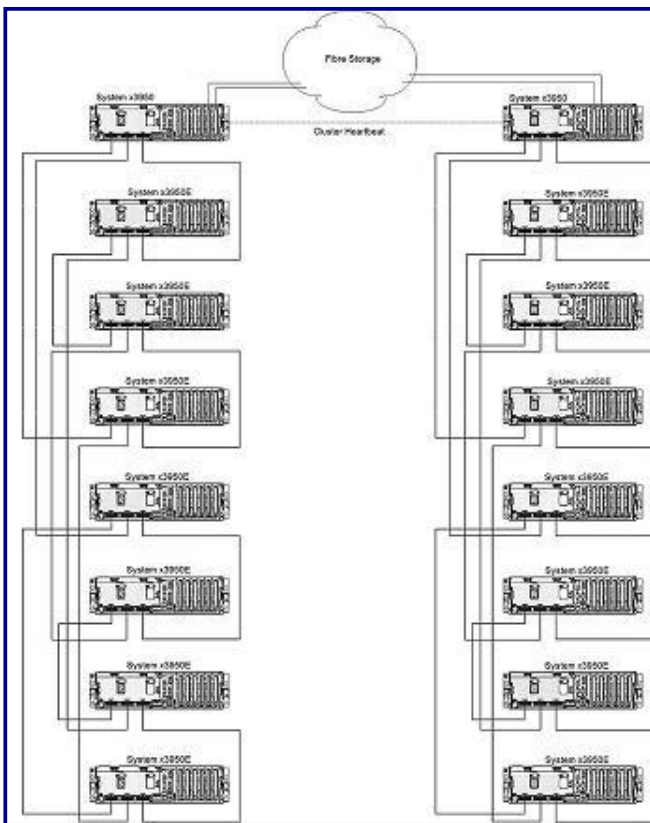
[Click image to enlarge](#)

Figure 2. x3950 Single Node 16-way Configuration



[Click image to enlarge](#)

Figure 3. 2 Node, 32-way Configuration



[Click image to enlarge](#)

Datacenter solution program

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

Datacenter **Software** **Solutions** **System x3950**

| **Single node Datacenter unlimited virtualization w/ high avail.**

solutions

| Multi-node Datacenter unlimited virtualization w/ high avail. solutions

| Datacenter unlimited virtualization w/ high avail. solutions addtl. opts.

| Datacenter unlimited virtualization solutions

| Datacenter unlimited virtualization solutions addtl opts.

The Datacenter Unlimited Virtualization with High Availability (UVHA) Program Offering delivers a fully configured, Datacenter-certified, IBM-installed hardware and operating system solution for a tightly-controlled high availability environment.

Table 1. Single-Node Datacenter Unlimited Virtualization with High Availability Solutions

The Datacenter UVHA Solutions will contain, at a minimum, the components below in the appropriate quantities. Additional Datacenter certified options are listed in the 'Additional Options' table. Required service offerings are listed in the 'Required Service Offerings' table.

				Total Quantities Single Node
Option number	Feature code	SEO	Description	
Select one of the following				
Quad Core Processors				
71413AY	-	71413AY	2 x Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w), 8GB Mem, open-bay, MS DTC Unlimited Virtualization w/ High Availability (HA) 32-bit	1
71414AY	-	71414AY	2 x Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w), 8GB Mem, open-bay, MS DTC Unlimited Virtualization w/ High Availability (HA) 32-bit	1
71413BY	-	71413BY	2 x Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w), 8GB Mem, open-bay, MS DTC Unlimited Virtualization w/ High Availability (HA) 64-bit	1
71414BY	-	71414BY	2 x Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w), 8GB Mem, open-bay, MS DTC Unlimited Virtualization w/ High Availability (HA) 64-bit	1
Select appropriate additional node(s) ⁵				
71413AY	-	71413AY	2 x Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w), 8GB Mem, open-bay, MS DTC Unlimited Virtualization w/ High Availability (HA) 32-bit	0
71414AY	-	71414AY	2 x Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w), 8GB Mem, open-bay, MS DTC Unlimited Virtualization w/ High Availability (HA) 32-bit	0

71413BY	-	71413BY	2 x Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w), 8GB Mem, open-bay, MS DTC Unlimited Virtualization w/ High Availability (HA) 64-bit	0		
71414BY	-	71414BY	2 x Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w), 8GB Mem, open-bay, MS DTC Unlimited Virtualization w/ High Availability (HA) 64-bit	0		
Scalability kit⁶						
44E4294	4896	-	Scalability Cable 3.08m	0		
44E4293	4895	-	Scalability Cable 3.26m	0		
Select appropriate processor^{4,3}						
-	3475	-	Addl. Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w)	2		
-	3474	-	Addl. Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w)	2		
Select memory^{5,6}						
30R5145	0535	-	8GB (2x4GB) PC2-3200 ECC DDR2 RDIMM Kit	-		
39M5809	0552	-	2GB (2x1GB Kit) PC2-3200 CL3 ECC DDR2 SDRAM RDIMM (512Mb)	-		
39M5812	0553	-	4GB (2x2GB Kit - 8GB Max Memory) PC2-3200 CL3 Double Rank ECC DDR2 SDRAM RDIMM	-		
Select the following as required						
41Y5000	4338	-	4-DIMM DDR2 Memory Card ⁷	-	-	-
Select the following						
43W4280	3557	-	ServeRAID-MR10k SAS/SATA Controller	-		
Select HDDs						
40K1052	5159	-	73GB 10K 2.5" SAS Hot-Swap HDD	-		
43X0824	5534	-	146GB 10K 2.5" Hot-Swap SAS HDD	-		
43X0837	5543	-	IBM Server 73GB SAS 15K 2.5" SFF HS	-		
Select the following⁸						
39R6525	3567	-	QLogic 4Gb FC Single-Port PCIe HBA for IBM System x	-		
39R6527	3568	-	QLogic 4Gb FC Dual-Port PCIe HBA for IBM System x	-		
Select the following⁹						
-	-	-	Customer-supplied Ethernet cable	1		

Note: Refer to the Required Service Offerings section at the end of the Datacenter section for any manufacturing install fees that may apply.

Note: A node represents a single instance of the operating system. For example, a two-node, 16-way configuration will consist of two System x3950 servers. A four-node 16-way configuration will consist of four System x3950 servers.

Notes:

1. All final customer configurations and solutions require IBM Solution Assurance Approval.
2. Order cables in quantities shown per configuration. Connects chassis in a node together for scalability.
3. x3950 Datacenter models ship standard with the maximum number of processors.
4. All processors in the solution must match.
5. x3950 Datacenter models have eight (8) 1GB DIMMs standard.
6. Datacenter models ship standard with four memory cards.
7. Memory installation populates one pair of DIMMs per memory card, until four cards are populated.
8. Minimum two required per primary server (x3950) for load balancing and redundancy. Optional for x3950 E.
9. One required per chassis for service processor interconnection. The service processors of all chassis must be connected together via an ethernet network.

Datacenter solution program

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

Datacenter Software Solutions System x3950

| Single node Datacenter unlimited virtualization w/ high avail. solutions

| **Multi-node Datacenter unlimited virtualization w/ high avail.**

solutions

| Datacenter unlimited virtualization w/ high avail. solutions addtl. opts.

| Datacenter unlimited virtualization solutions

| Datacenter unlimited virtualization solutions addtl opts.

The Datacenter Unlimited Virtualization with High Availability (UVHA) Program Offering delivers a fully configured, Datacenter-certified, IBM-installed hardware and operating system solution for a tightly-controlled high availability environment.

Table 1. Multi-Node Configurations (two and four node examples)^{1, 2}

The Datacenter UVHA Solutions will contain, at a minimum, the components below in the appropriate quantities. Additional Datacenter certified options are listed in the 'Additional Options' table. Required service offerings are listed in the 'Required Service Offerings' table.

Total Quantities						
Option number	Feature code	SEO	Description	2 Node 8-way	3 Node 12-way ³	4 Node 16-way ³
Select one of the following ⁴						
Quad Core Processors						
71413AY	-	71413AY	2 x Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w), 8GB Mem, open-bay, MS DTC Unlimited Virtualization w/ High Availability (HA) 32-bit	1	1	1
71414AY	-	71414AY	2 x Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w), 8GB Mem, open-bay, MS DTC Unlimited Virtualization w/ High Availability (HA) 32-bit	1	1	1
71413BY	-	71413BY	2 x Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w), 8GB Mem, open-bay, MS DTC Unlimited Virtualization w/ High Availability (HA) 64-bit	1	1	1
71414BY	-	71414BY	2 x Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w), 8GB Mem, open-bay, MS DTC Unlimited Virtualization w/ High Availability (HA) 64-bit	1	1	1
Select appropriate additional node(s) ⁵						
71413AY	-	71413AY	2 x Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w), 8GB Mem, open-bay, MS DTC Unlimited Virtualization w/ High Availability (HA) 32-bit	1	2	3
71414AY	-	71414AY	2 x Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w), 8GB Mem, open-bay, MS DTC Unlimited Virtualization w/ High Availability (HA) 32-bit	1	2	3

71413BY	-	71413BY	2 x Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w), 8GB Mem, open-bay, MS DTC Unlimited Virtualization w/ High Availability (HA) 64-bit	1	2	3
71414BY	-	71414BY	2 x Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w), 8GB Mem, open-bay, MS DTC Unlimited Virtualization w/ High Availability (HA) 64-bit	1	2	3
Scalability kit⁶						
44E4294	4896	-	Scalability Cable 3.08m	2	3	4
44E4293	4895	-	Scalability Cable 3.26m	0	0	2
Select appropriate processor^{7,8}						
-	3475	-	Addl. Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w)	8	16	24
-	3474	-	Addl. Quad Core Intel Xeon Processor E7330 (2.40GHz 6MB L2 80w)	8	16	24
Select memory^{9,10}						
30R5145	0535	-	8GB (2x4GB) PC2-3200 ECC DDR2 RDIMM Kit	-	-	-
39M5809	0552	-	2GB (2x1GB Kit) PC2-3200 CL3 ECC DDR2 SDRAM RDIMM (512Mb)	-	-	-
39M5812	0553	-	4GB (2x2GB Kit - 8GB Max Memory) PC2-3200 CL3 Double Rank ECC DDR2 SDRAM RDIMM	-	-	-
Select the following as required						
41Y5000	4338	-	4-DIMM DDR2 Memory Card ^{9,10,11}	-	-	-
Select the following						
43W4280	3557	-	ServeRAID-MR10k SAS/SATA Controller	-	-	-
Select HDDs¹²						
40K1052	5159	-	73GB 10K 2.5" SAS Hot-Swap HDD	-	-	-
43X0824	5534	-	146GB 10K 2.5" Hot-Swap SAS HDD	-	-	-
43X0837	5543	-	IBM Server 73GB SAS 15K 2.5" SFF HS	-	-	-
Select the following¹³						
39R6525	3567	-	QLogic 4Gb FC Single-Port PCIe HBA for IBM System x	-	-	-
39R6527	3568	-	QLogic 4Gb FC Dual-Port PCIe HBA for IBM System x	-	-	-
Select the following¹⁴						
-	-	-	Customer-supplied Ethernet cable	4	8	8

Note: Refer to the Required Service Offerings section at the end of the Datacenter section for any manufacturing install fees that may apply.

Note: A node represents a single instance of the operating system. For example, a two-node, 16-way configuration will consist of two System x3950 servers. A four-node 16-way configuration will consist of four System x3950 servers.

Notes:

1. All final customer configurations and solutions require IBM Solution Assurance Approval.
2. Multi-node configurations are essentially single-node configurations clustered together. Hardware/software that would be necessary for clustering is not covered here.
3. January 2008 announcement is for 2 Node Datacenter solutions. Three and four node solutions will be available later in 2008.
4. Select one model to serve as the primary server. The OS will reside on this server.
5. Select based on primary server selected.
6. Order cables in quantities shown per configuration. Connects chassis in a node together for scalability.
7. x3950 Datacenter models ship standard with the maximum number of processors.
8. All processors in the solution must match.
9. x3950 Datacenter models have eight (8) 1GB DIMMs standard.
10. Datacenter models ship standard with four memory cards.
11. Memory installation populates one pair of DIMMs per memory card, until four cards are populated.
12. Minimum two identical HDDs required on primary server (x3950) for OS. HDDs are optional for x3950 Es. Max = 6 HDDs per chassis.
13. Minimum two required per primary server (x3950) for load balancing and redundancy. Optional for x3950 E.
14. One required per chassis for service processor interconnection. The service processors of all chassis must be connected together via an ethernet network.

Datacenter solution program

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

Datacenter Software Solutions System x3950

| [Single node Datacenter unlimited virtualization w/ high avail. solutions](#)

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addtl. opts.

| [Datacenter unlimited virtualization solutions](#)

| [Datacenter unlimited virtualization solutions addtl opts.](#)

Table 1. Datacenter unlimited virtualization with high availability solutions additional options¹

Additional certified options for use with IBM Datacenter solutions					
Option Number	Feature code	SEO	MTM	Description	Comment
					Can be attached to both x3950 and x3950E. Please refer to the System x3950 section for disk system compatibility.
Disk Systems					
I/O Controllers					
39Y6088	1487	-	-	NetXtreme 1000 SX + Fiber Ethernet Adapter	Can be installed in x3950 or x3950E
73P5101	1579	-	-	PRO/1000 GT Dual Port Server Adapter by Intel- PCI-X	Can be installed in x3950 or x3950E
73P5201	1580	-	-	PRO/1000 GT Quad Port Server Adapter by Intel- PCI-X	Can be installed in x3950 or x3950E
30R5001	1566	-	-	IBM 10GB Ethernet Adapter	Can be installed in x3950 or x3950E
Racks					
93084RX	1045	-	93084RX	NetBAY42 ER Enterprise Rack Cabinet - 42u standalone/primary	-
93084XX	1046	-	93084XX	NetBAY42 EX Enterprise Expansion Cabinet - 42u expansion	-

Note: Refer to the Required Service Offerings section at the end of the Datacenter section for any manufacturing install fees that may apply. Refer to the x3950 sections of the Configuration and Options Guide (COG) for supported external options such as keyboards, mice, UPS and switches. Refer to the External Storage section of the COG for further external storage configuration. Refer to the Rack Cabinets and Options section for rack options.

Notes:

1. All final customer configurations and solutions require IBM Solution Assurance Approval.

Datacenter solution program

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

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The Datacenter Unlimited Virtualization (UV) Program Offering delivers a Datacenter Solution that meets Microsoft Datacenter certification requirements in a non-cluster environment giving the customer greater freedom in choosing I/O and other system components.

Table 1. Datacenter Unlimited Virtualization Configurations¹

The Datacenter UV Solutions will contain at a minimum, the components below in the appropriate quantities. Additional Datacenter certified options are listed in the 'Additional Options' table. Required service offerings are listed in the 'Required Service Offerings' table.

				Total quantities			
Option number	Feature code	SEO	Description	4-way	8-way	16-way	32-way
Select one of the following ^{2,3}							
Dual Core Processors							
88783DY	-	88783DY	4 x Dual Core 3.16GHz 8MB L3 Cache Xeon MP, 4GB Mem w/2 mem cd, openbay, 32-bit WS03 R2, UV HA DC	1	1	1	1
88783EY	-	88783EY	4 x Dual Core 3.16GHz 8MB L3 Cache Xeon MP, 4GB Mem w/2 mem cd, openbay, 64-bit WS03 R2, UV HA DC	1	1	1	1
88785DY	-	88785DY	4 x Dual Core 3.5 GHz 16MB L3 Cache Xeon MP, 4GB Mem w/4 mem cd, openbay, 32-bit WS03 R2, UV HA DC	1	1	1	1
88785EY	-	88785EY	4 x Dual Core 3.5 GHz 16MB L3 Cache Xeon MP, 4GB Mem w/4 mem cd, openbay, 64-bit WS03 R2, UV HA DC	1	1	1	1
Select appropriate expansion enclosure ⁴							
88791DY	-	88791DY	x3950E 8879 with Dual Core 4-way 32-bit UV HA COA	0	1	3	7
88791EY	-	88791EY	x3950E 8879 with Dual Core 4-way 32-bit UV HA COA	0	1	3	7
Scalability kit ⁵							
13M7414	4236	-	2.3m Scalability Cable	0	2	6	8
13M7416	4237	-	2.9m Scalability Cable	0	0	0	4
Select appropriate processor ^{6,7}							

40K1261	1341	-	Intel Xeon Processor 7130N (3.16GHz 8MB L3 Dual Core)	0	4	12	28
43V4553	2807	-	Intel Xeon Processor 7150N (3.5GHz 16MB L3 Dual Core)	0	4	12	28
Select memory^{8,9}				Min=4GB	Min=8GB	Min=16GB	Min=32GB
30R5145	0535	-	8GB (2x4GB) PC2-3200 ECC DDR2 RDIMM Kit	-	-	-	-
39M5809	0552	-	2GB (2x1GB Kit) PC2-3200 CL3 ECC DDR2 SDRAM RDIMM (512Mb)	-	-	-	-
39M5812	0553	-	4GB (2x2GB Kit - 8GB Max Memory) PC2-3200 CL3 Double Rank ECC DDR2 SDRAM RDIMM	-	-	-	-
Select the following as required^{8,9,10}							
41Y5000	4338	-	4-DIMM DDR2 Memory Card	-	-	-	-
Select HDDs¹¹				Min=2GB	Min=2GB	Min=2GB	Min=2GB
40K1052	5159	-	73GB 10K 2.5" SAS Hot-Swap HDD	-	-	-	-
Select the following¹²							
-	-	-	Ethernet Cable	1	2	4	8

Note: Refer to the Required Service Offerings section at the end of the Datacenter section for any manufacturing install fees that may apply.

Note: A node represents a single instance of the operating system. For example, a single-node, 16-way configuration will consist of one x3950 and three x3950E systems.

Notes:

1. All final customer configurations and solutions require IBM Solution Assurance Approval.
2. The Datacenter OS is not preloaded but is provided "in-box" with each Scalable DC model.
3. Select one model to serve as the primary server. The OS will reside on this server.
4. Select based on primary server selected. x3950E COA must match the selected x3950 OS.
5. Order both cables in quantities shown per configuration. Connects chassis in a node together for scalability.
6. x3950 Datacenter models ship standard with the maximum number of processors. The x3950E systems have zero processors standard.
7. All processors in the solution must match. Select processors for x3950E based on the processor installed in the primary x3950. Select in quantities of four per x3950E.
8. Scalable x3950 Datacenter models have two 2GB DIMMs standard. x3950E Datacenter models have zero DIMMs standard. Minimum of two DIMMs (one option kit) equating to 4GB required per chassis. Each chassis must contain the same memory configuration.
9. All Datacenter model 8878-3XY ships standard with two memory cards. Datacenter model 8878-5XY ships standard with four memory cards. Datacenter model 8879-1XY ships standard with two memory cards. Each memory card supports four DIMMs. A Max of four cards are supported per chassis.
10. Memory can be installed using one of two methodologies: Performance installation or cost-effective installation. Performance installation populates one pair of DIMMs per memory card, until four cards are installed, before adding a second pair of DIMMs to a card. Cost-effective installation fully populates each memory card before adding additional cards.
11. Minimum two identical HDDs required on primary server (x3950) for OS. HDDs are optional for x3950E. A maximum of six HDDs per chassis is possible.
12. One required per chassis for service processor interconnection. The service processors of all chassis must be connected together via an ethernet network.

Datacenter solution program

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

Datacenter Software Solutions System x3950

- | [Single node Datacenter unlimited virtualization w/ high avail. solutions](#)
- | [Multi-node Datacenter unlimited virtualization w/ high avail. solutions](#)
- | [Datacenter unlimited virtualization w/ high avail. solutions addtl. opts.](#)
- | [Datacenter unlimited virtualization solutions](#)
- | [Datacenter unlimited virtualization solutions addtl opts.](#)

Table 1. Datacenter unlimited virtualization solutions additional options¹

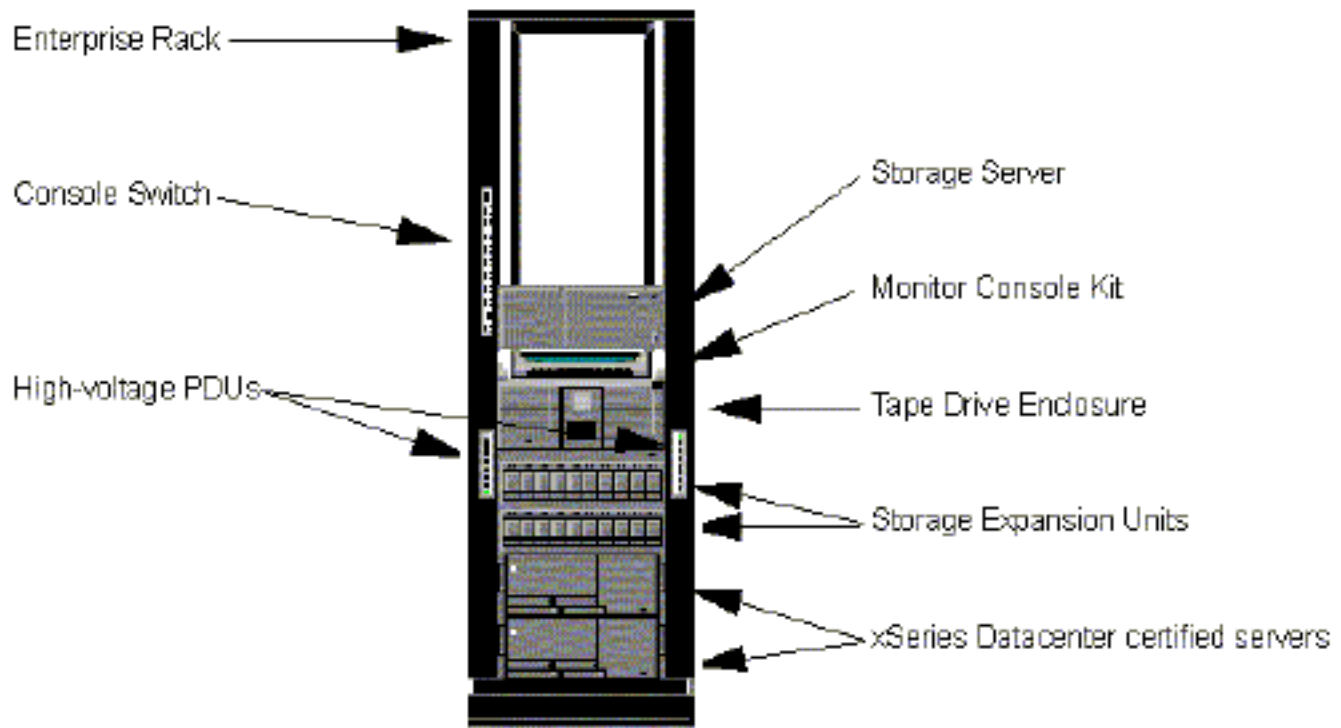
Additional certified options for use with IBM Datacenter solutions					
Option number	Feature code	SEO	MTM	Description	Comment
					Can be attached to both x3950 and x3950 E. Please refer to the System x3950 section for disk system compatibility.
Disk Systems					
I/O Controllers					
39M5895	3551	-	-	DS4000 FC 4Gb PCI-X Dual Port HBA	Can be installed in x3950 or x3950E
39M5894	3550	-	-	DS4000 FC 4Gb PCI-X Single Port HBA	Can be installed in x3950 or x3950E
39Y6088	1487	-	-	NetXtreme 1000 S + Ethernet Adapter - PCI-X	Can be installed in x3950 or x3950E
73P5101	1579	-	-	PRO/1000 GT Dual Port Server Adapter by Intel - PCI-X	Can be installed in x3950 or x3950E
73P5201	1580	-	-	PRO/1000 GT Quad Port Server Adapter by Intel - PCI-X	Can be installed in x3950 or x3950E
30R5001	1566	-	-	IBM 10GB Ethernet Adapter	Can be installed in x3950 or x3950E
Racks					
93084RX	-	-	93084RX	NetBAY42 ER Enterprise Rack Cabinet - 42u standalone/primary	-
93084XX	-	-	93084XX	NetBAY42 Enterprise Expansion Rack Cabinet - 42u expansion	-

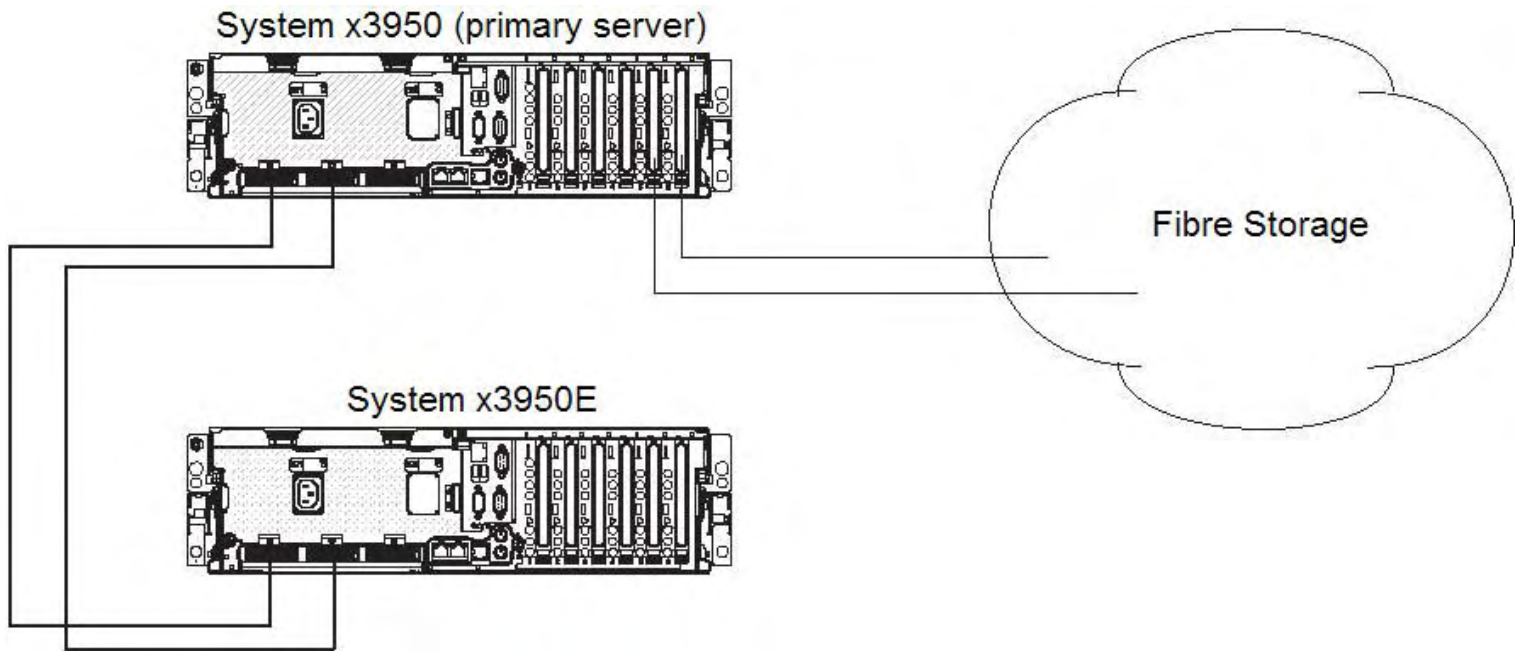
Note:Refer to the Required Service Offerings section at the end of the Datacenter section for any manufacturing install fees that may apply.

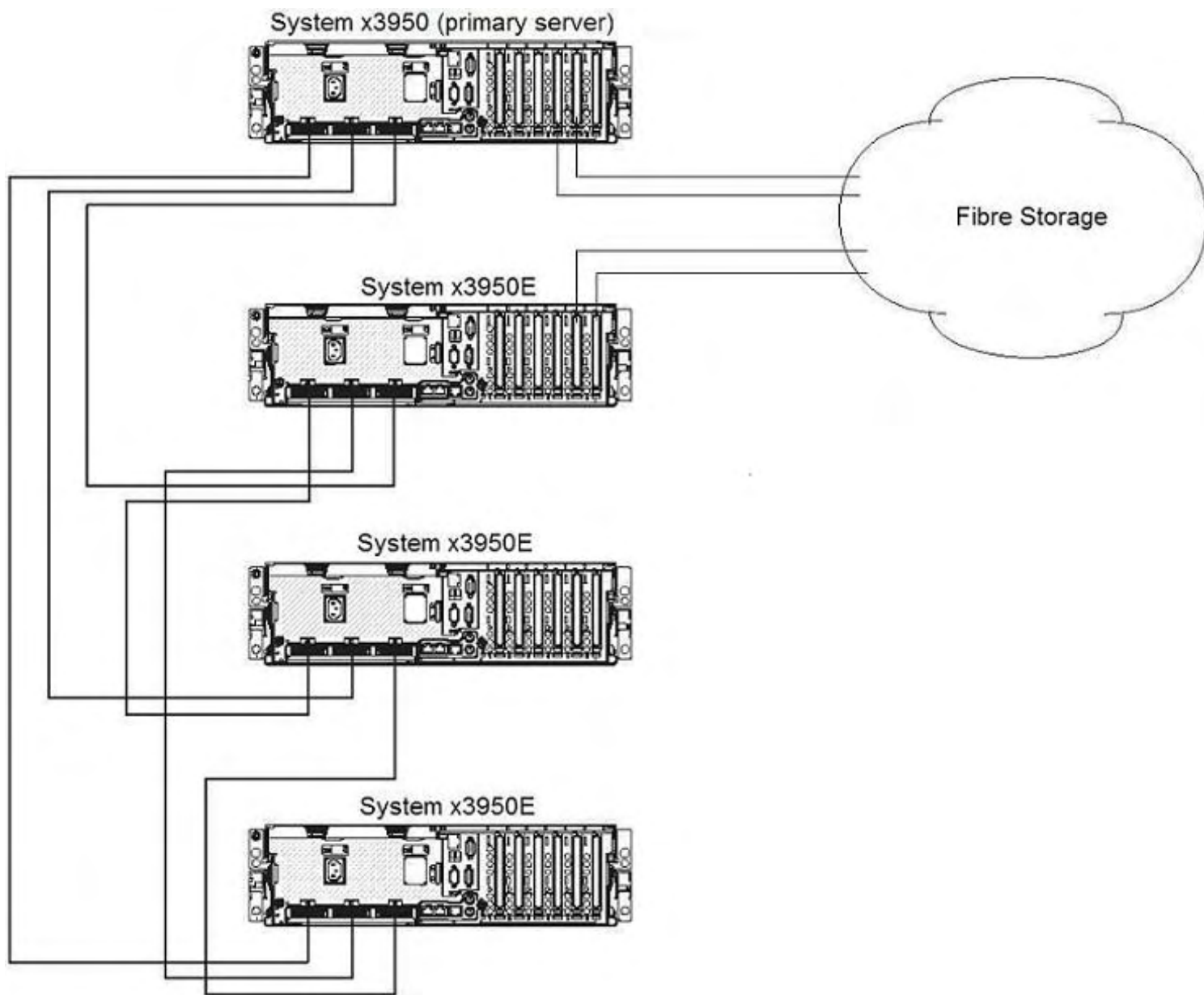
Note:Refer to the x3950 sections of the COG for supported external options such as keyboards, mice, UPS and switches. Refer to the external storage section of the COG for further external storage configuration. Refer to the Rack section for rack options.

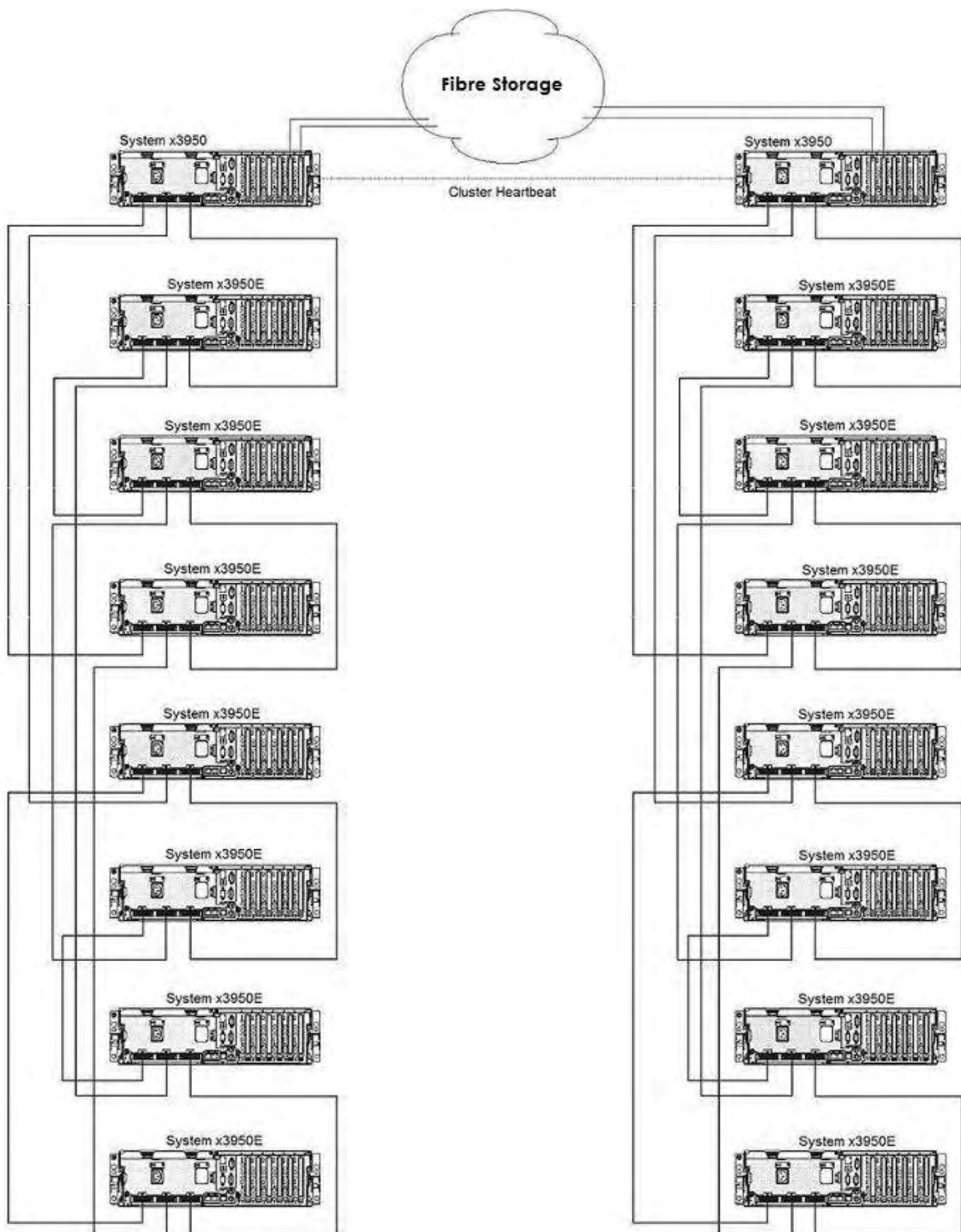
Notes:

- All final customer configurations and solutions require IBM Solution Assurance Approval.
- A maximum of two ServeRAID 8i controllers is allowed per Datacenter node (each instance of the operating system). One of the two ServeRAID 8i controllers must be installed in the x3950. The other ServeRAID 8i controller can be installed in an x3950E to fit your configuration.









System x operating system offerings

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

All OS offerings must be purchased with new hardware. If the hardware is bought directly from IBM, Microsoft offerings must be purchased integrated within new hardware. The eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada should be used to specify the four-digit Microsoft feature code that must be chosen to intergrate into a new server configuration. All OS offerings may also be available from IBM Business Partners. Subscription offerings from Red Hat and SUSE may be purchased without new IBM hardware when renewing an offering subscription that was initially purchased from IBM.

IBM Systems Group offers Operating Systems (OS) on System x and BladeCenter servers. IBM OS offerings are made available on a server after rigorous testing is completed to assure that they are reliable solutions. Purchasing the OS with new hardware is a convenient and cost-effective way to deploy new hardware. Some Microsoft OS offerings are available pre-installed on the server. All other offerings must be installed by the customer.

The following chart shows which OS offerings are available for each System x server or chassis.

System x Operating Systems offerings

Option number	Canadian Option Number	Network Operating System (NOS) offerings	x3200 (4362, 4363)	x3200 M2 (4367, 4368)	x3250 (4364, 4365)	x3250 M2 (4190, 4194)
System withdrawal date			Jun 5, 2008	-	Jul 1, 2008	-
4815KHU	4815KHU	Red Hat Enterprise Linux Advanced Platform Standard Subscription 1 yr (Multilanguage)	X	X	X	X
4815NHU	4815NHU	Red Hat Enterprise Linux Advanced Platform Premium Subscription 1 yr (Multilanguage)	X	X	X	X
4815LHU	4815LHU	Red Hat Enterprise Linux Advanced Platform Standard Subscription 3 yr (Multilanguage)	X	X	X	X
4815OHU	4815OHU	Red Hat Enterprise Linux Advanced Platform Premium Subscription 3 yr (Multilanguage)	X	X	X	X
4815CHU	4815CHU	Red Hat Enterprise Linux up to 2 Sockets Standard Subscription 1 yr (Multilanguage)	X	X	X	X
4815EHU	4815EHU	Red Hat Enterprise Linux up to 2 Sockets Premium Subscription 1 yr (Multilanguage)	X	X	X	X
4815DHU	4815DHU	Red Hat Enterprise Linux up to 2 Sockets Standard Subscription 3 yr (Multilanguage)	X	X	X	X
4815FHU	4815FHU	Red Hat Enterprise Linux up to 2 Sockets Premium Subscription 3 yr (Multilanguage)	X	X	X	X
4815PHU	4815PHU	Red Hat Enterprise Linux Advanced Platform Standard Red Hat Support 1 yr (Multilanguage)	X	X	X	X
4815RHU	4815RHU	Red Hat Enterprise Linux Advanced Platform Premium Red Hat Support 1 yr (Multilanguage)	X	X	X	X
4815QHU	4815QHU	Red Hat Enterprise Linux Advanced Platform Standard Red Hat Support 3 yr (Multilanguage)	X	X	X	X
4815SHU	4815SHU	Red Hat Enterprise Linux Advanced Platform Premium Red Hat Support 3 yr (Multilanguage)	X	X	X	X
4815GHU	4815GHU	Red Hat Enterprise Linux up to 2 Sockets Standard Red Hat Support 1 yr (Multilanguage)	X	X	X	X
4815IHU	4815IHU	Red Hat Enterprise Linux up to 2 Sockets Premium Red Hat Support 1 yr (Multilanguage)	X	X	X	X

4815HHU	4815HHU	Red Hat Enterprise Linux up to 2 Sockets Standard Red Hat Support 3 yr (Multilanguage)	X	X	X	X
4815JHU	4815JHU	Red Hat Enterprise Linux up to 2 Sockets Premium Red Hat Support 3 yr (Multilanguage)	X	X	X	X
48156HU	48156HU	Red Hat Enterprise Linux HPCC 4 pack Red Hat Basic Support Subscription up to 2 Socket 1 yr (Multilanguage)			X	
48157HU	48157HU	Red Hat Enterprise Linux HPCC 4 pack Red Hat Basic Support Subscription up to 2 Socket 3 yr (Multilanguage)			X	
48153QU	42C6551	SUSE LINUX Enterprise Server 1-32 Sockets with 1 yr Subscription	X	X	X	X
48153RU	42C6552	SUSE LINUX Enterprise Server 1-32 Sockets with 3 yr Subscription	X	X	X	X
48151QU	42C6553	SUSE LINUX Enterprise Server 1 Socket with 1 yr Subscription	X	X	X	X
48151RU	42C6554	SUSE LINUX Enterprise Server 1 Socket with 3 yr Subscription	X	X	X	X
OS Level (OS) Offerings						
-	-	Windows 2003 Server, Standard Edition R2	X	X	X	X
-	-	Windows 2003 Server R2, Enterprise Edition (1-2 Processor)	X	X	X	X
-	-	Windows 2003 Small Business Server, Standard Edition R2	X	X		
-	-	Windows 2003 Small Business Server, Premium Edition R2	X			
-	-	Microsoft Windows Server 2003 R2, Standard x64 Edition	X	X	X	X
-	-	Windows 2003 Server R2, Enterprise x64 Edition (1-2 Processor)	X	X	X	X
-	-	Microsoft Windows Compute Cluster Server			X	
-	-	Microsoft Compute Cluster Edition			X	
-	-	Windows Server 2008 Standard (32-bit, 1-4 Processor, 5 CAL)	X	X	X	X
-	-	Windows Server 2008 Enterprise (32-bit, 1-8 Processor, 25 CAL)	X	X	X	X
-	-	Windows Server 2008 Standard (64-bit, 1-4 Processor, 5 CAL)	X	X	X	X
-	-	Windows Server 2008 Enterprise (64-bit, 1-8 Processor, 25 CAL)	X	X	X	X

System x Operating Systems offerings (continued)

Option number	Canadian Option Number	Network Operating System (NOS) offerings	x3350 (4192, 4193)	x3400 (7973, 7974)	x3400 (7975, 7976)	x3455 (7940, 7984)	x3500 (7977)	x3550 (7978)
System withdrawal date			-	-	-	Jul 8, 2008 (7984 only)	-	-
4815KHU	4815KHU	Red Hat Enterprise Linux Advanced Platform Standard Subscription 1 yr (Multilanguage)	X	X	X	X	X	X
4815NHU	4815NHU	Red Hat Enterprise Linux Advanced Platform Premium Subscription 1 yr (Multilanguage)	X	X	X	X	X	X
4815LHU	4815LHU	Red Hat Enterprise Linux Advanced Platform Standard Subscription 3 yr (Multilanguage)	X	X	X	X	X	X
4815OHU	4815OHU	Red Hat Enterprise Linux Advanced Platform Premium Subscription 3 yr (Multilanguage)	X	X	X	X	X	X
4815CHU	4815CHU	Red Hat Enterprise Linux up to 2 Sockets Standard Subscription 1 yr (Multilanguage)	X	X	X	X	X	X
4815EHU	4815EHU	Red Hat Enterprise Linux up to 2 Sockets Premium Subscription 1 yr (Multilanguage)	X	X	X	X	X	X
4815DHU	4815DHU	Red Hat Enterprise Linux up to 2 Sockets Standard Subscription 3 yr (Multilanguage)	X	X	X	X	X	X

4815FHU	4815FHU	Red Hat Enterprise Linux up to 2 Sockets Premium Subscription 3 yr (Multilanguage)	X	X	X	X	X	X
4815PHU	4815PHU	Red Hat Enterprise Linux Advanced Platform Standard Red Hat Support 1 yr (Multilanguage)	X	X	X	X	X	X
4815RHU	4815RHU	Red Hat Enterprise Linux Advanced Platform Premium Red Hat Support 1 yr (Multilanguage)	X	X	X	X	X	X
4815QHU	4815QHU	Red Hat Enterprise Linux Advanced Platform Standard Red Hat Support 3 yr (Multilanguage)	X	X	X	X	X	X
4815SHU	4815SHU	Red Hat Enterprise Linux Advanced Platform Premium Red Hat Support 3 yr (Multilanguage)	X	X	X	X	X	X
4815GHU	4815GHU	Red Hat Enterprise Linux up to 2 Sockets Standard Red Hat Support 1 yr (Multilanguage)	X	X	X	X	X	X
4815IHU	4815IHU	Red Hat Enterprise Linux up to 2 Sockets Premium Red Hat Support 1 yr (Multilanguage)	X	X	X	X	X	X
4815HHU	4815HHU	Red Hat Enterprise Linux up to 2 Sockets Standard Red Hat Support 3 yr (Multilanguage)	X	X	X	X	X	X
4815JHU	4815JHU	Red Hat Enterprise Linux up to 2 Sockets Premium Red Hat Support 3 yr (Multilanguage)	X	X	X	X	X	X
48156HU	48156HU	Red Hat Enterprise Linux HPCC 4 pack Red Hat Basic Support Subscription up to 2 Socket 1 yr (Multilanguage)				X		X
48157HU	48157HU	Red Hat Enterprise Linux HPCC 4 pack Red Hat Basic Support Subscription up to 2 Socket 3 yr (Multilanguage)				X		X
48153QU	42C6551	SUSE LINUX Enterprise Server 1-32 Sockets with 1 yr Subscription	X	X	X	X	X	X
48153RU	42C6552	SUSE LINUX Enterprise Server 1-32 Sockets with 3 yr Subscription	X	X	X	X	X	X
48151QU	42C6553	SUSE LINUX Enterprise Server 1 Socket with 1 yr Subscription	X					
48151RU	42C6554	SUSE LINUX Enterprise Server 1 Socket with 3 yr Subscription	X					
OS Level (OS) Offerings								
-	-	Windows 2003 Server, Standard Edition R2	X	X	X	X	X	X
-	-	Windows 2003 Server R2, Enterprise Edition (1-2 Processor)	X	X	X	X	X	X
-	-	Windows 2003 Small Business Server, Standard Edition R2		X	X		X	
-	-	Windows 2003 Small Business Server, Premium Edition R2		X			X	
-	-	Microsoft Windows Server 2003 R2, Standard x64 Edition	X	X	X	X	X	X
-	-	Windows 2003 Server R2, Enterprise x64 Edition (1-2 Processor)	X	X	X	X	X	X

-	-	Windows Server 2008 Standard (32-bit, 1-4 Processor, 5 CAL)	X	X	X	X	X	X
-	-	Windows Server 2008 Enterprise (32-bit, 1-8 Processor, 25 CAL)	X	X	X	X	X	X
-	-	Windows Server 2008 Standard (64-bit, 1-4 Processor, 5 CAL)	X	X	X	X	X	X
-	-	Windows Server 2008 Enterprise (64-bit, 1-8 Processor, 25 CAL)	X	X	X	X	X	X

System x Operating Systems offerings (continued)

Option number	Canadian Option Number	Network Operating System (NOS) offerings	x3650 (7979)	x3655 (7943, 7985)	x3755 (7163, 8877)	x3800 (8866)
System withdrawal date			-	Jul 8, 2008 (7985 only)	-	May 30, 2008
4815KHU	4815KHU	Red Hat Enterprise Linux Advanced Platform Standard Subscription 1 yr (Multilanguage)	X	X	X	X
4815NHU	4815NHU	Red Hat Enterprise Linux Advanced Platform Premium Subscription 1 yr (Multilanguage)	X	X	X	X
4815LHU	4815LHU	Red Hat Enterprise Linux Advanced Platform Standard Subscription 3 yr (Multilanguage)	X	X	X	X
4815OHU	4815OHU	Red Hat Enterprise Linux Advanced Platform Premium Subscription 3 yr (Multilanguage)	X	X	X	X
4815CHU	4815CHU	Red Hat Enterprise Linux up to 2 Sockets Standard Subscription 1 yr (Multilanguage)	X	X		
4815EHU	4815EHU	Red Hat Enterprise Linux up to 2 Sockets Premium Subscription 1 yr (Multilanguage)	X	X		
4815DHU	4815DHU	Red Hat Enterprise Linux up to 2 Sockets Standard Subscription 3 yr (Multilanguage)	X	X		
4815FHU	4815FHU	Red Hat Enterprise Linux up to 2 Sockets Premium Subscription 3 yr (Multilanguage)	X	X		
4815PHU	4815PHU	Red Hat Enterprise Linux Advanced Platform Standard Red Hat Support 1 yr (Multilanguage)	X	X	X	X
4815RHU	4815RHU	Red Hat Enterprise Linux Advanced Platform Premium Red Hat Support 1 yr (Multilanguage)	X	X	X	X
4815QHU	4815QHU	Red Hat Enterprise Linux Advanced Platform Standard Red Hat Support 3 yr (Multilanguage)	X	X	X	X
4815SHU	4815SHU	Red Hat Enterprise Linux Advanced Platform Premium Red Hat Support 3 yr (Multilanguage)	X	X	X	X
4815GHU	4815GHU	Red Hat Enterprise Linux up to 2 Sockets Standard Red Hat Support 1 yr (Multilanguage)	X	X		
4815IHU	4815IHU	Red Hat Enterprise Linux up to 2 Sockets Premium Red Hat Support 1 yr (Multilanguage)	X	X		
4815HHU	4815HHU	Red Hat Enterprise Linux up to 2 Sockets Standard Red Hat Support 3 yr (Multilanguage)	X	X		
4815JHU	4815JHU	Red Hat Enterprise Linux up to 2 Sockets Premium Red Hat Support 3 yr (Multilanguage)	X	X		
48156HU	48156HU	Red Hat Enterprise Linux HPCC 4 pack Red Hat Basic Support Subscription up to 2 Socket 1 yr (Multilanguage)	X	X		
48157HU	48157HU	Red Hat Enterprise Linux HPCC 4 pack Red Hat Basic Support Subscription up to 2 Socket 3 yr (Multilanguage)	X	X		
48158HU	48158HU	Red Hat Enterprise Linux HPCC 4 pack Red Hat Basic Support Subscription up to 4 Socket 1 yr (Multilanguage)			X	
48159HU	48159HU	Red Hat Enterprise Linux HPCC 4 pack Red Hat Basic Support Subscription up to 4 Socket 3 yr (Multilanguage)			X	
48153QU	42C6551	SUSE LINUX Enterprise Server 1-32 Sockets with 1 yr Subscription	X	X	X	X
48153RU	42C6552	SUSE LINUX Enterprise Server 1-32 Sockets with 3 yr Subscription	X	X	X	X
4812S1U	4812S1U	Solaris up to 2 Sockets Standard Sun Support 1 year	X			
4812S2U	4812S2U	Solaris up to 2 Sockets Premium Sun Support 1 year	X			
4812S3U	4812S3U	Solaris 3-8 Sockets Standard Sun Support 1 year				
4812S4U	4812S4U	Solaris 3-8 Sockets Premium Sun Support 1 year				
OS Level (OS) Offerings						
-	-	Windows 2003 Server, Standard Edition R2	X	X	X	X
-	-	Windows 2003 Server R2, Enterprise Edition (1-2 Processor)	X	X		

-	-	Windows 2003 Server R2, Enterprise Edition (1-8 Processor)			X	X
-	-	Microsoft Windows Server 2003 R2, Standard x64 Edition	X	X	X	X
-	-	Windows 2003 Server R2, Enterprise x64 Edition (1-2 Processor)	X	X		
-	-	Windows 2003 Server R2, Enterprise x64 Edition (1-8 Processor)			X	X
-	-	Solaris 1-2 Sockets Standard Sun Support 1 year	X			
-	-	Solaris Standard Sun Support 1 Yr	X		X	
-	-	Solaris Premium Sun Support 1 Yr	X		X	
-	-	Microsoft Windows Compute Cluster Server	X	X	X	
-	-	Microsoft Compute Cluster Edition	X	X	X	
-	-	Windows Server 2008 Standard (32-bit, 1-4 Processor, 5 CAL)	X	X	X	
-	-	Windows Server 2008 Enterprise (32-bit, 1-8 Processor, 25 CAL)	X	X	X	
-	-	Windows Server 2008 Standard (64-bit, 1-4 Processor, 5 CAL)	X	X	X	
-	-	Windows Server 2008 Enterprise (64-bit, 1-8 Processor, 25 CAL)	X	X	X	

System x Operating Systems offerings (continued)

Option number	Canadian Option Number	Network Operating System (NOS) offerings	x3850 (8864)	x3950 (8878)	x3850M2 7141 AC1/ MC1	x3950M2 7141 AC2/ MC2
System withdrawal date			Feb 29, 2008	Apr 4, 2008	-	-
4815KHU	4815KHU	Red Hat Enterprise Linux Advanced Platform Standard Subscription 1 yr (Multilanguage)	X	X	X	
4815NHU	4815NHU	Red Hat Enterprise Linux Advanced Platform Premium Subscription 1 yr (Multilanguage)	X	X	X	
4815LHU	4815LHU	Red Hat Enterprise Linux Advanced Platform Standard Subscription 3 yr (Multilanguage)	X	X	X	
4815OHU	4815OHU	Red Hat Enterprise Linux Advanced Platform Premium Subscription 3 yr (Multilanguage)	X	X	X	
4815PHU	4815PHU	Red Hat Enterprise Linux Advanced Platform Standard Red Hat Support 1 yr (Multilanguage)	X	X	X	
4815RHU	4815RHU	Red Hat Enterprise Linux Advanced Platform Premium Red Hat Support 1 yr (Multilanguage)	X	X	X	
4815QHU	4815QHU	Red Hat Enterprise Linux Advanced Platform Standard Red Hat Support 3 yr (Multilanguage)	X	X	X	
4815SHU	4815SHU	Red Hat Enterprise Linux Advanced Platform Premium Red Hat Support 3 yr (Multilanguage)	X	X	X	
48158HU	48158HU	Red Hat Enterprise Linux HPCC 4 pack Red Hat Basic Support Subscription up to 4 Socket 1 yr (Multilanguage)	X			
48159HU	48159HU	Red Hat Enterprise Linux HPCC 4 pack Red Hat Basic Support Subscription up to 4 Socket 3 yr (Multilanguage)	X			
48153QU	42C6551	SUSE LINUX Enterprise Server 1-32 Sockets with 1 yr Subscription	X	X	X	
48153RU	42C6552	SUSE LINUX Enterprise Server 1-32 Sockets with 3 yr Subscription	X	X	X	
4812S3U	4812S3U	Solaris 3-8 Sockets Standard Sun Support 1 year			X	
4812S4U	4812S4U	Solaris 3-8 Sockets Premium Sun Support 1 year			X	
OS Level (OS) Offerings						
-	-	VMware ESX Server 3i image only			X	
-	-	VMware ESX Server 3i license only			X	
-	-	VMware ESX Server 3i with 3 Yr Subscription - 2 Sockets			X	
-	-	VMware ESX Server 3i with 3 Yr Subscription - 4 Sockets			X	
-	-	VMware ESX Server 3i Plus Upgr to Foundation w/3 Yr Sub - 2 Sockets			X	

-	-	VMware ESX Server 3i Plus Upgr to Foundation w/3 Yr Sub - 4 Sockets		X
-	-	VMware ESX Server 3i Plus Upgr to Standard w/3 Yr Sub - 2 Sockets		X
-	-	VMware ESX Server 3i Plus Upgr to Standard w/3 Yr Sub - 4 Sockets		X
-	-	VMware ESX Server 3i Plus Upgr to Enterprise w/3 Yr Sub - 2 Sockets		X
-	-	VMware ESX Server 3i Plus Upgr to Enterprise w/3 Yr Sub - 4 Sockets		X
-	-	Windows 2003 Server, Standard Edition R2	X	X
-	-	Windows 2003 Server R2, Enterprise Edition (1-8 Processor)	X	X
-	-	Microsoft Windows Server 2003 R2, Standard x64 Edition	X	X
-	-	Windows 2003 Server R2, Enterprise x64 Edition (1-8 Processor)	X	
-	-	Windows Server 2008 Standard (32-bit, 1-4 Processor, 5 CAL)		X
-	-	Windows Server 2008 Enterprise (32-bit, 1-8 Processor, 25 CAL)		X
-	-	Windows Server 2008 Standard (64-bit, 1-4 Processor, 5 CAL)		X
-	-	Windows Server 2008 Enterprise (64-bit, 1-8 Processor, 25 CAL)		X
-	-	Solaris Standard Sun Support 1 Yr		X
-	-	Solaris Premium Sun Support 1 Yr		X

Notes:

1. All Linux offerings are installed by the customer.
2. OS offerings must be purchased with new hardware.
3. Linux offerings may also be purchased as a renewal to a subscription that was previously purchased from IBM.
4. Red Hat offerings that do not include Red Hat Support must be ordered with IBM support, either IBM Remote Technical Support or IBM Support Line.
5. Unless otherwise noted operating systems may also be configured on system model types XXXX-AC1 (for Linux) or XXXX-MC1 or as part of a system configuration purchased from IBM Business Partners.

System x Operating Systems offerings

Option number	Canadian Option Number	Network Operating System (NOS) offerings	BC T (8720)	BC T (8730)	BC HT DC (8740)	BC HT DC (8750)	BC chassis (8677)
System withdrawal date			-	-	-	-	-
4815CQB	42C6555	SUSE LINUX Enterprise Server for BladeCenter Chassis with 1 yr Subscription					X
4815CRB	42C6556	SUSE LINUX Enterprise Server for BladeCenter Chassis with 3 yr Subscription					X
4815TQU	42C6557	SUSE LINUX Enterprise Server for BladeCenter Telco Chassis with 1 yr Subscription	X	X			
4815TRU	42C6558	SUSE LINUX Enterprise Server for BladeCenter Telco Chassis with 3 yr Subscription	X	X			

System x Operating Systems offerings (continued)

Option number	Canadian Option Number	Network Operating System (NOS) offerings	BC H (8852)	BC HS20 (8843)	BC HS21 XM (7995)	BC HS21 (8853)	BC HS12 (8014)	BC HS12 (8028)
System withdrawal date			-	Apr 4, 2008	-	-	-	-
4815KHU	4815KHU	Red Hat Enterprise Linux Advanced Platform Standard Subscription 1 yr (Multilanguage)			X	X	X	X
4815NHU	4815NHU	Red Hat Enterprise Linux Advanced Platform Premium Subscription 1 yr (Multilanguage)			X	X	X	X

4815LHU	4815LHU	Red Hat Enterprise Linux Advanced Platform Standard Subscription 3 yr (Multilanguage)		X	X	X	X
4815OHU	4815OHU	Red Hat Enterprise Linux Advanced Platform Premium Subscription 3 yr (Multilanguage)		X	X	X	X
4815CHU	4815CHU	Red Hat Enterprise Linux up to 2 Sockets Standard Subscription 1 yr (Multilanguage)		X	X	X	X
4815EHU	4815EHU	Red Hat Enterprise Linux up to 2 Sockets Premium Subscription 1 yr (Multilanguage)		X	X	X	X
4815DHU	4815DHU	Red Hat Enterprise Linux up to 2 Sockets Standard Subscription 3 yr (Multilanguage)		X	X	X	X
4815FHU	4815FHU	Red Hat Enterprise Linux up to 2 Sockets Premium Subscription 3 yr (Multilanguage)		X	X	X	X
4815PHU	4815PHU	Red Hat Enterprise Linux Advanced Platform Standard Red Hat Support 1 yr (Multilanguage)		X	X	X	X
4815RHU	4815RHU	Red Hat Enterprise Linux Advanced Platform Premium Red Hat Support 1 yr (Multilanguage)		X	X	X	X
4815QHU	4815QHU	Red Hat Enterprise Linux Advanced Platform Standard Red Hat Support 3 yr (Multilanguage)		X	X	X	X
4815SHU	4815SHU	Red Hat Enterprise Linux Advanced Platform Premium Red Hat Support 3 yr (Multilanguage)		X	X	X	X
4815GHU	4815GHU	Red Hat Enterprise Linux up to 2 Sockets Standard Red Hat Support 1 yr (Multilanguage)		X	X	X	X
4815IHU	4815IHU	Red Hat Enterprise Linux up to 2 Sockets Premium Red Hat Support 1 yr (Multilanguage)		X	X	X	X
4815HHU	4815HHU	Red Hat Enterprise Linux up to 2 Sockets Standard Red Hat Support 3 yr (Multilanguage)		X	X	X	X
4815JHU	4815JHU	Red Hat Enterprise Linux up to 2 Sockets Premium Red Hat Support 3 yr (Multilanguage)		X	X	X	X
48156HU	48156HU	Red Hat Enterprise Linux HPCC 4 pack Red Hat Basic Support Subscription up to 2 Socket 1 yr (Multilanguage)		X	X	X	X
48157HU	48157HU	Red Hat Enterprise Linux HPCC 4 pack Red Hat Basic Support Subscription up to 2 Socket 3 yr (Multilanguage)		X	X	X	X
48153QU	42C6551	SUSE LINUX Enterprise Server 1-32 Sockets with 1 yr Subscription	X	X	X	X	X
48153RU	42C6552	SUSE LINUX Enterprise Server 1-32 Sockets with 3 yr Subscription	X	X	X	X	X
4815CQB	42C6555	SUSE LINUX Enterprise Server for BladeCenter Chassis with 1 yr Subscription	X				

4815CRB	42C6556	SUSE LINUX Enterprise Server for BladeCenter Chassis with 3 yr Subscription	X						
4812S1U	4812S1U	Solaris up to 2 Sockets Standard Sun Support 1 year					X		
4812S2U	4812S2U	Solaris up to 2 Sockets Premium Sun Support 1 year					X		
48151QU	42C6553	SUSE LINUX Enterprise Server 1 Socket with 1 yr Subscription						X	X
48151RU	42C6554	SUSE LINUX Enterprise Server 1 Socket with 3 yr Subscription						X	X
OS Level (OS) Offerings									
-	-	VMware ESX Server 3i image only					X		
-	-	VMware ESX Server 3i license only					X		
-	-	VMware ESX Server 3i with 3 Yr Subscription - 2 Sockets					X		
-	-	VMware ESX Server 3i with 3 Yr Subscription - 4 Sockets					X		
-	-	VMware ESX Server 3i Plus Upgr to Foundation w/3 Yr Sub - 2 Sockets					X		
-	-	VMware ESX Server 3i Plus Upgr to Standard w/3 Yr Sub - 2 Sockets					X		
-	-	VMware ESX Server 3i Plus Upgr to Enterprise w/3 Yr Sub - 2 Sockets					X		
-	-	Windows 2003 Server, Standard Edition R2	X	X	X	X	X	X	X
-	-	Windows 2003 Server R2, Enterprise Edition (1-2 Processor) (CD)	X	X	X	X	X	X	X
-	-	Windows 2003 Small Business Server, Standard Edition R2						X	X
-	-	Microsoft Windows Server 2003 R2, Standard x64 Edition	X	X	X	X	X	X	X
-	-	Windows 2003 Server R2, Enterprise x64 Edition (1-2 Processor)	X	X	X	X	X	X	X
-	-	Solaris 1-2 Sockets Standard Sun Support 1 year					X		
-	-	Windows Server 2008 Standard (32-bit, 1-4 Processor, 5 CAL)					X	X	X
-	-	Windows Server 2008 Enterprise (32-bit, 1-8 Processor, 25 CAL)					X	X	X
-	-	Windows Server 2008 Standard (64-bit, 1-4 Processor, 5 CAL)					X	X	X
-	-	Windows Server 2008 Enterprise (64-bit, 1-8 Processor, 25 CAL)					X	X	X
-	-	Solaris Standard Sun Support 1 Yr					X		
-	-	Solaris Premium Sun Support 1 Yr					X		

System x Operating Systems offerings (continued)

Option number	Canadian Option Number	Network Operating System (NOS) offerings	BC LS20 (8850)	BC LS21 (7971)	BC LS41 (7972)
System withdrawal date			Jan 4, 2008	-	-

4815KHU	4815KHU	Red Hat Enterprise Linux Advanced Platform Standard Subscription 1 yr (Multilanguage)	X	X	X
4815NHU	4815NHU	Red Hat Enterprise Linux Advanced Platform Premium Subscription 1 yr (Multilanguage)	X	X	X
4815LHU	4815LHU	Red Hat Enterprise Linux Advanced Platform Standard Subscription 3 yr (Multilanguage)	X	X	X
4815OHU	4815OHU	Red Hat Enterprise Linux Advanced Platform Premium Subscription 3 yr (Multilanguage)	X	X	X
4815CHU	4815CHU	Red Hat Enterprise Linux up to 2 Sockets Standard Subscription 1 yr (Multilanguage)	X	X	
4815EHU	4815EHU	Red Hat Enterprise Linux up to 2 Sockets Premium Subscription 1 yr (Multilanguage)	X	X	
4815DHU	4815DHU	Red Hat Enterprise Linux up to 2 Sockets Standard Subscription 3 yr (Multilanguage)	X	X	
4815PHU	4815PHU	Red Hat Enterprise Linux Advanced Platform Standard Red Hat Support 1 yr (Multilanguage)	X	X	X
4815RHU	4815RHU	Red Hat Enterprise Linux Advanced Platform Premium Red Hat Support 1 yr (Multilanguage)	X	X	X
4815QHU	4815QHU	Red Hat Enterprise Linux Advanced Platform Standard Red Hat Support 3 yr (Multilanguage)	X	X	X
4815SHU	4815SHU	Red Hat Enterprise Linux Advanced Platform Premium Red Hat Support 3 yr (Multilanguage)	X	X	X
4815GHU	4815GHU	Red Hat Enterprise Linux up to 2 Sockets Standard Red Hat Support 1 yr (Multilanguage)	X	X	
4815IHU	4815IHU	Red Hat Enterprise Linux up to 2 Sockets Premium Red Hat Support 1 yr (Multilanguage)	X	X	
4815HHU	4815HHU	Red Hat Enterprise Linux up to 2 Sockets Standard Red Hat Support 3 yr (Multilanguage)	X	X	
48156HU	48156HU	Red Hat Enterprise Linux HPCC 4 pack Red Hat Basic Support Subscription up to 2 Socket 1 yr (Multilanguage)	X	X	
48157HU	48157HU	Red Hat Enterprise Linux HPCC 4 pack Red Hat Basic Support Subscription up to 2 Socket 3 yr (Multilanguage)	X	X	
48158HU	48158HU	Red Hat Enterprise Linux HPCC 4 pack Red Hat Basic Support Subscription up to 4 Socket 1 yr (Multilanguage)			X
48159HU	48159HU	Red Hat Enterprise Linux HPCC 4 pack Red Hat Basic Support Subscription up to 4 Socket 3 yr (Multilanguage)			X
48153QU	42C6551	SUSE LINUX Enterprise Server 1-32 Sockets with 1 yr Subscription	X	X	X
48153RU	42C6552	SUSE LINUX Enterprise Server 1-32 Sockets with 3 yr Subscription	X	X	X
4812S3U	4812S3U	Solaris 3-8 Sockets Standard Sun Support 1 year			X
4812S4U	4812S4U	Solaris 3-8 Sockets Premium Sun Support 1 year			X
4815JHU	4815JHU	Red Hat Enterprise Linux up to 2 Sockets Premium Red Hat Support 3 yr (Multilanguage)	X	X	
4815FHU	4815FHU	Red Hat Enterprise Linux HPCC 4 pack Red Hat Basic Support Subscription up to 2 Socket 1 yr (Multilanguage)	X	X	
OS Level (OS) Offerings					
-	-	Microsoft Windows 2003 R2 Server, Standard Edition	X	X	X
-	-	Microsoft Windows Server 2003 R2, Enterprise Edition	X	X	X
-	-	Microsoft Windows Server 2003 R2, Standard x64 Edition	X	X	X
-	-	Microsoft Windows Server 2003 R2, Enterprise x64 Edition	X	X	X
-	-	Windows Server 2008 Standard (32-bit, 1-4 Processor, 5 CAL)	X	X	X
-	-	Windows Server 2008 Enterprise (32-bit, 1-8 Processor, 25 CAL)	X	X	X
-	-	Windows Server 2008 Standard (64-bit, 1-4 Processor, 5 CAL)	X	X	X
-	-	Windows Server 2008 Enterprise (64-bit, 1-8 Processor, 25 CAL)	X	X	X
-	-	Solaris Standard Sun Support 1 Yr			X
-	-	Solaris Premium Sun Support 1 Yr			X

Notes:

1. All Linux offerings are installed by the customer.
2. OS offerings must be purchased with new hardware.
3. Linux offerings may also be purchased as a renewal to a subscription that was previously purchased from IBM.
4. Red Hat offerings that do not include Red Hat Support must be ordered with IBM support, either IBM Remote Technical Support or IBM Support Line.
5. Unless otherwise noted operating systems may also be configured on system model types XXXX-AC1 (for Linux) or XXXX-MC1 or as part of a system configuration purchased from IBM Business Partners.

IBM and third party software applications

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

Check with your IBM representative to verify application software availability for your system. IBM makes no representations or warranties regarding third-party products or services. Some software may differ from its retail version (if available) and may not include user manuals or all program functionality. Software License agreements may apply.

Table 1. IBM Director

US Option number	Canadian Option number	IBM Director
Director is provided with all System x servers. Director Agent is provided with all System x, IntelliStations and NetVista systems. Features Include:		
- Basic hardware management including inventory, monitoring, alerting, group management, RAID manager and management processor. - Help Desk and Support including remote control, remote session, file transfer and real-time diagnostics. - Upward integration to Tivoli, CA, HP, MS, SMS, MOM, BMC or NetIQ.		
Director v5.20		
42D8233	43W6532	IBM Director 5.20 Media Package
43W6520	43W6524	IBM Director 5.20 per Agent License with 1 Year Subscription
43W6521	43W6525	IBM Director 5.20 per Server License with 1 Year Subscription
Capacity Manager v5.20		
42D8812	43W6537	IBM Director Capacity Manager 5.20 Media Package
43W6522	43W6526	IBM Director Capacity Manager 5.20 per Server, Single License with 1 Year Subscription
Software Distribution Premium Edition v5.20		
43W6523	43W6527	IBM Director Soft Dist Premium Edition 5.20 per Server, Single License with 1 Year Subscription
42D8817	43W6542	IBM Director Software Distribution Premium Edition 5.20 Media Package
Director v5.10		
32R1223	42C6448	IBM Director 5.10 per Server License with 1 Year Subscription
32R1224	42C6447	IBM Director 5.10 per Agent License with 1 Year Subscription
32R1227	42C6541	IBM Director 5.10 Media Package
Capacity Manager v5.10		
32R1225	42C6450	IBM Director Capacity Manager 5.10 per Server, Single License with 1 Year Subscription
32R1230	42C6542	IBM Director Capacity Manager 5.10 Media Package
Software Distribution Premium Edition v5.10		
32R1226	42C6452	IBM Director Soft Dist Premium Edition 5.10 per Server, Single License with 1 Year Subscription
32R1233	42C6543	IBM Director Software Distribution Premium Edition 5.10 Media Package
Active Energy Manager v3.1		
44W3911	46C0229	IBM Systems Director Active Energy Manager for x86 V3.1 (CD Media Pack)
44W3914	44W3914	IBM Systems Director Active Energy Manager for x86 V3.1 per Server (1 Year Subscription After License)
44W3913	44W3913	IBM Systems Director Active Energy Manager for x86 V3.1 per Server (1 Year Subscription Renewal)
46C0219	46C0220	IBM Systems Director Active Energy Manager for x86 V3.1 per Server (License + 1 year subscription)
Virtual Availability Management v1.1		
44E7895	44E7895	IBM Systems Director Virtual Availability Management for x86, V1.1 per processor (1 Year Subscription After License)
44E7893	44E7893	IBM Systems Director Virtual Availability Management for x86, V1.1 per processor (1 Year Subscription Renewal)
44E7896	44E7896	IBM Systems Director Virtual Availability Management for x86, V1.1 per processor (2 Year Subscription After License)
44E7894	44E7894	IBM Systems Director Virtual Availability Management for x86, V1.1 per processor (2 Year Subscription Renewal)
44R9093	44R9094	IBM Systems Director Virtual Availability Management for x86, V1.1 per processor (License + 1 year subscription)
44E7891	44R9102	IBM Systems Director Virtual Availability Management, V1.1 (CD Media Pack)
Virtual Image Management v1.1		
44E7889	44E7889	IBM Systems Director Virtual Image Management for x86, V1.1 per processor (1 Year Subscription After License)
44E7887	44E7887	IBM Systems Director Virtual Image Management for x86, V1.1 per processor (1 Year Subscription Renewal)
44E7890	44E7890	IBM Systems Director Virtual Image Management for x86, V1.1 per processor (2 Year Subscription After License)
44E7888	44E7888	IBM Systems Director Virtual Image Management for x86, V1.1 per processor (2 Year Subscription Renewal)

44R9091	44R9092	IBM Systems Director Virtual Image Management for x86, V1.1 per processor (License + 1 year subscription)
44E7885	44R9101	IBM Systems Director Virtual Image Management, V1.1 (CD Media Pack)
Usage and Accounting Manager v7.1		
44W3983	44W3983	IBM Usage and Accounting Manager Virtualization (UAV) Edition V7.1 for System x per Server (1 Year Subscription After License)
44W3982	44W3982	IBM Usage and Accounting Manager Virtualization (UAV) Edition V7.1 for System x per Server (1 Year Subscription Renewal)
46C0000	46C0002	IBM Usage and Accounting Manager Virtualization (UAV) Edition V7.1 for System x per Server (License + 1 year subscription)
44E8017	46C0001	IBM Usage and Accounting Manager Virtualization (UAV) Edition V7.1 for System x Media Package
Usage and Accounting Manager v6.1		
42D8850	42C6540	IBM Usage and Accounting Manager - 6.1 Media Pack
42D8849	42C6535	IBM Usage and Accounting Manager 6.1 - System License + 1 Year Subscription
Usage and Accounting Manager v5.1		
42C4658	42C6545	IBM Usage and Accounting Manager - 5.1 Media Pack
42C4657	42C6464	IBM Usage and Accounting Manager 5.1 - System License + 1 Year Subscription
Subscription services		
25K8633	25K8633	IBM Director Agent - Subscription Renewal After License - 1 Year
25K8634	25K8634	IBM Director Agent - Subscription Renewal - 1 Year
25K8635	25K8635	IBM Director Agent - Subscription Renewal - 2 Year
44R9103	44R9103	IBM Director Capacity Manager per Server, Single License Subscription Renewal - 1 Year
39Y5183	39Y5183	IBM Director Capacity Manager per Server, Single License Subscription Renewal After License - 1 Year
39Y5182	39Y5182	IBM Director Capacity Manager per Server, Single License Subscription Renewal - 2 Year
25K8631	25K8631	IBM Director Server - Subscription Renewal - 1 Year
25K8632	25K8632	IBM Director Server - Subscription Renewal - 2 Year
25K8630	25K8630	IBM Director Server - Subscription Renewal After License - 1 Year
25K8641	25K8641	IBM Director Soft Dist P E per Server, Single License Subscription Renewal - 2 Year
44R9104	44R9104	IBM Director Soft Dist P E per Server, Subscription Renewal - 1 Year
25K8639	25K8639	IBM Director Soft Dist P E per Server, Subscription Renewal After License - 1 Year

Table 2. Remote Deployment Manager

US Option number	Canadian Option number	Remote Deployment Manager
Features Include:		
• Remote replication of system installations • Remote unattended system deployment • Updating system and option firmware • Rapid image backup and restore technology		
Remote Deployment Manager v4.4		
44R9030	44R9030	Remote Deployment Manager 4.4 per Server - Subscription Renewal - 1 Year
44R9031	44R9031	Remote Deployment Manager 4.4 - per Workstation - Subscription Renewal - 1 Year
24R9416	24R9416	Remote Deployment Manager per Server - Subscription Renewal After License - 1 Year
24R9418	24R9418	Remote Deployment Manager per Server - Subscription Renewal - 2 Year
24R9419	24R9419	Remote Deployment Manager per Workstation - Subscription Renewal After License - 1 Year
24R9421	24R9421	Remote Deployment Manager per Workstation - Subscription Renewal - 2 Year
4836MDD	43W6671	IBM Remote Deployment Manager 4.4 - Media Package
43W6651	43W6652	IBM Remote Deployment Manager 4.4 (Single Managed Server License with 1 year subscription)
43W6653	43W6654	IBM Remote Deployment Manager 4.4 (Single Managed Workstation License with 1 year subscription)
43W6655	43W6656	IBM Remote Deployment Manager 4.4 (BladeCenter Chassis License With One Year Subscription)
43W6657	43W6658	IBM Remote Deployment Manager 4.4 (Managed Workstation License 10 Pack with 1 year subscription)

Table 3. Other IBM Software

US Option number	Canadian Option number	Open Fabric Manager
46C3551	46C0231	BladeCenter Open Fabric Manager - Advanced Upgrade
46C3552	46C0232	BladeCenter Open Fabric Manager - Advanced Upgrade for IBM Director

Table 4. IBM Tivoli Storage Manager

US Option number	Canadian Option number	IBM Tivoli Storage Manager v5.4
The IBM Tivoli Storage Manager family of products is designed to help provide a comprehensive solution focused on the key data protection activities of backup, archive, recovery, space management and disaster recovery planning.		
43W6556	43W6556	Tivoli Storage Manager for Database, 10 Value Units with 1 Year SW Maintenance
43W6557	43W6557	Tivoli Storage Manager for Database, 250 10 Value Units with 1 Year SW Maintenance
43W6558	43W6558	Tivoli Storage Manager for Mail, 10 Value Units with 1 Year SW Maintenance
43W6559	43W6559	Tivoli Storage Manager for Mail, 250 10 Value Units with 1 Year SW Maintenance
46C0335	46C0335	IBM Tivoli Provisioning Manager for OS Deployment V5.1.1, Per Client Device with 1 Yr SW Subscription and Support

46C0336	46C0336	IBM Tivoli Provisioning Manager for OS Deployment V5.1.1, Per 250 Client Devices with 1 Yr SW Subscription and Support
46C0337	46C0337	IBM Tivoli Provisioning Manager for OS Deployment V5.1.1, Per 10 Proc Value Units with 1 Yr SW Subscription and Support
46C0338	46C0338	IBM Tivoli Provisioning Manager for OS Deployment V5.1.1, Per 250, 10 Proc Value Units with 1 Yr SW Sub and Support
46C0339	46C0339	IBM Tivoli Monitoring for Microsoft Applications V6.1, Entry Edition Per Server with 1 Yr SW Subscription and Support
46C0340	46C0340	IBM Tivoli Monitoring for Microsoft Applications V6.1, Advanced Ed Per 10 Proc Value Units with 1 Yr SW Subs and Support
46C0341	46C0341	IBM Tivoli Continuous Data Protection for Files Starter Edition, Per Client Device with 1 Yr SW Subscription and Support
46C0342	46C0342	IBM Tivoli Continuous Data Protection for Files Starter Edition, Per 250 Client Devices with 1 Yr SW Subscription and Support
46C0343	46C0343	IBM Tivoli Continuous Data Protection for Files, Per Server with 1 Yr SW Subscription and Support
46C0344	46C0344	IBM Tivoli Continuous Data Protection for Files, Per 250 Servers with 1 Yr SW Subscription and Support
46C0345	46C0345	IBM Tivoli Continuous Data Protection for Files, Per Client Device with 1 Yr SW Subscription and Support
46C0346	46C0346	IBM Tivoli Continuous Data Protection for Files, Per 250 Client Devices with 1 Yr SW Subscription and Support
43W6564	43W6564	Tivoli Storage Manager for ERP, 10 Value Units with 1 Year SW Maintenance
43W6565	43W6565	Tivoli Storage Manager for ERP, 250 10 Value Units with 1 Year SW Maintenance
43W6566	43W6566	Tivoli Storage Manager for Application Servers, 10 Value Units with 1 Year SW Maintenance
43W6567	43W6567	Tivoli Storage Manager for Application Servers, 250 10 Value Units with 1 Year SW Maintenance
46C0347	46C0347	System Storage Archive Manager, Terabyte 1-12 with 1 Year SW Maintenance
46C0348	46C0348	System Storage Archive Manager, Terabyte 13-32 with 1 Year SW Maintenance
46C0349	46C0349	System Storage Archive Manager, Terabyte 33-64 with 1 Year SW Maintenance
46C0350	46C0350	System Storage Archive Manager, Terabyte 65-100 with 1 Year SW Maintenance
46C0351	46C0351	System Storage Archive Manager, Terabyte 100-250 with 1 Year SW Maintenance
46C0352	46C0352	System Storage Archive Manager, Terabyte 251+ with 1 Year SW Maintenance
46C0353	46C0353	System Storage Archive Manager, 250 Terabytes (251+) with 1 Year SW Maintenance
43W6570	43W6570	Tivoli Storage Manager for Copy Services, 10 Value Units with 1 Year SW Maintenance
43W6571	43W6571	Tivoli Storage Manager for Copy Services, 250 10 Value Units with 1 Year SW Maintenance
43W6574	43W6574	IBM Tivoli Storage Manager, Client Devices with 1 Year SW Maintenance
43W6575	43W6575	IBM Tivoli Storage Manager, 250 Client Devices with 1 Year SW Maintenance
43W6576	43W6576	IBM Tivoli Storage Manager, 10 Value Units with 1 Year SW Maintenance
43W6577	43W6577	IBM Tivoli Storage Manager, 250 10 Value Units with 1 Year SW Maintenance
43W6578	43W6578	Tivoli Storage Manager Extended Edition, Client Devices with 1 Year SW Maintenance
43W6579	43W6579	Tivoli Storage Manager Extended Edition, 250 Client Devices with 1 Year SW Maintenance
43W6580	43W6580	Tivoli Storage Manager Extended Edition, 10 Value Units with 1 Year SW Maintenance
43W6581	43W6581	Tivoli Storage Manager Extended Edition, 250 10 Value Units with 1 Year SW Maintenance
43W6582	43W6582	Tivoli Storage Manager for Storage Area Networks, Client Devices with 1 Year SW Maintenance
43W6583	43W6583	Tivoli Storage Manager for Storage Area Networks, 250 Client Devices with 1 Year SW Maintenance
43W6584	43W6584	Tivoli Storage Manager for Storage Area Networks, 10 Value Units with 1 Year SW Maintenance
43W6585	43W6585	Tivoli Storage Manager for Storage Area Networks, 250 10 Value Units with 1 Year SW Maintenance
43W6586	43W6586	Tivoli Storage Manager Express for Microsoft SQL, 10 Value Units with 1 Year SW Maintenance
43W6587	43W6587	Tivoli Storage Manager Express for Microsoft SQL, 250 10 Value Units with 1 Year SW Maintenance
43W6588	43W6588	Tivoli Storage Manager Express, 10 Value Units with 1 Year SW Maintenance
43W6589	43W6589	Tivoli Storage Manager Express, 250 10 Value Units with 1 Year SW Maintenance
43W6590	43W6590	Tivoli Storage Manager Express for Microsoft Exchange, 10 Value Units with 1 Year SW Maintenance
43W6591	43W6591	Tivoli Storage Manager Express for Microsoft Exchange, 250 10 Value Units with 1 Year SW Maintenance

Table 5. Altiris Deployment Solution

US Option number	Canadian Option number	Altiris Deployment Solution for Servers
Features Include:		
		- Comprehensive server deployment for both Windows and Linux environments, including configuration of BIOS, RAID, and other components. - Full system imaging and scripted operating system installations of Windows and Linux. - Web console that lets you install local or remote deployment servers and manage them from a central location. - Remote installation of applications, hotfixes, and service packs as part of server build process. - Support for BladeCenter which includes the ability to recognize bay in the Blade chassis for rip and replace function
4819L1X	4819L1X	Linux Altiris Deployment Solution for Servers
4819U1X	4819U1X	Altiris Deployment Solution for Servers - Annual Upgrade Protection
4819S1X	4819S1X	Altiris Support Incident Pack - 5 Incidents - Americas
4819S2X	4819S2X	Altiris On-site Support - Standard Work Day - Americas
4819S4X	4819S4X	Altiris On-Site Support - Weekends and After Hours - Americas
4819S8X	4819S8X	Altiris Assigned Engineer - 25% for 12 Months - Americas
4819B1X	4819B1X	Altiris Deployment Solution for BladeCenter Chassis - License
4819S9X	4819S9X	Altiris Annual Premium Global Support - Americas
4819SBX	4819SBX	Altiris Annual Premium 50 Support - Americas
4819SCX	4819SCX	Altiris Annual Premium 25 Support - Americas

Table 6. Leostream Connection Broker

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US Option number	Canadian Option number	Leostream Connection Broker
46C0356	46C0356	Leostream Connection Broker Enterprise - 1 User - License + 1 Year Subscription
46C0357	46C0357	Leostream Connection Broker Enterprise - 14 Users - License + 1 Year Subscription
46C0358	46C0358	Leostream Connection Broker Enterprise - 100 Users - License + 1 Year Subscription
46C0359	46C0359	Leostream Connection Broker Enterprise - 1000 Users - License + 1 Year Subscription
46C0360	46C0360	Leostream Connection Broker Enterprise - 4000 Users - License + 1 Year Subscription
46C0361	46C0361	Leostream Connection Broker Enterprise - 10000 Users - License + 1 Year Subscription
4812M02	4812M02	Leostream Connection Broker Enterprise - 1 User - 1 Year Subscription Renewal
4812M03	4812M03	Leostream Connection Broker Enterprise - 14 Users - 1 Year Subscription Renewal
4812M04	4812M04	Leostream Connection Broker Enterprise - 100 Users - 1 Year Subscription Renewal
4812M05	4812M05	Leostream Connection Broker Enterprise - 1000 Users - 1 Year Subscription Renewal
4812M06	4812M06	Leostream Connection Broker Enterprise - 4000 Users - 1 Year Subscription Renewal
4812M07	4812M07	Leostream Connection Broker Enterprise - 10000 Users - 1 Year Subscription Renewal
4812M01	4812M01	Leostream Connection Broker Basic - 1 User - 1 Year Subscription Renewal

VMware offerings

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

Note: VMware Subscription Services

Table 1. VMware Infrastructure 3 with VMware VirtualCenter Management Server 2

US Option number	Canadian Option number	Description
VMware		
Subscription Services		
4817ELA	4817ELA	VMware Infrastructure Enterprise License Agreement
4817V01	4817V01	VMware Infrastructure 3 Starter for 2 sockets
4817S01	4817S01	VMware Infrastructure 3 Starter for 2 sockets - 1 year Full Subscription
4817T01	4817T01	VMware Infrastructure 3 Starter for 2 sockets - 3 year Full Subscription
4817U01	4817U01	VMware Infrastructure 3 Starter for 2 sockets - 5 year Full Subscription
4817V02	4817V02	VMware Infrastructure 3 Standard for 2 sockets
4817S02	4817S02	VMware Infrastructure 3 Standard for 2 sockets - 1 year Full Subscription
4817T02	4817T02	VMware Infrastructure 3 Standard for 2 sockets - 3 year Full Subscription
4817U02	4817U02	VMware Infrastructure 3 Standard for 2 sockets - 5 year Full Subscription
4817V03	4817V03	VMware Infrastructure 3 Enterprise for 2 sockets
4817S03	4817S03	VMware Infrastructure 3 Enterprise for 2 sockets - 1 year Full Subscription
4817T03	4817T03	VMware Infrastructure 3 Enterprise for 2 sockets - 3 year Full Subscription
4817U03	4817U03	VMware Infrastructure 3 Enterprise for 2 sockets - 5 year Full Subscription
4817V04	4817V04	VMware HA 2 for 2 sockets
4817S04	4817S04	VMware HA 2 for 2 sockets - 1 year Full Subscription
4817T04	4817T04	VMware HA 2 for 2 sockets - 3 year Full Subscription
4817U04	4817U04	VMware HA 2 for 2 sockets - 5 year Full Subscription
4817V05	4817V05	VMware DRS 2 for 2 sockets
4817S05	4817S05	VMware DRS 2 for 2 sockets - 1 year Full Subscription
4817T05	4817T05	VMware DRS 2 for 2 sockets - 3 year Full Subscription
4817U05	4817U05	VMware DRS 2 for 2 sockets - 5 year Full Subscription
4817V24	4817V24	VMware VirtualCenter Management Server 2 for VMware Infrastructure
4817S24	4817S24	VMware VirtualCenter Management Server 2 - 1 year Full Subscription
4817T24	4817T24	VMware VirtualCenter Management Server 2 - 3 year Full Subscription
4817U24	4817U24	VMware VirtualCenter Management Server 2 - 5 year Full Subscription
4817V25	4817V25	VMware VMotion 2 for 2 Sockets
4817S25	4817S25	VMware VMotion 2 for 2 Sockets - 1 year Full Subscription
4817T25	4817T25	VMware Vmotion for 2 Sockets - 3 year Full Subscription
4817U25	4817U25	VMware Vmotion 2 for 2 Sockets - 5 year Full Subscription
4817V08	4817V08	VMware Infrastructure 3 Starter to Standard Upgrade for 2 sockets
4817V09	4817V09	VMware Infrastructure 3 Starter to Enterprise Upgrade for 2 sockets
4817V10	4817V10	VMware Infrastructure 3 Standard to Enterprise Upgrade for 2 sockets
4817V19	4817V19	VMware Virtual Desktop Infrastructure (VDI) Enterprise Pilot Bundle including PSO VDI Pilot, 25 VMs, VirtualCenter Management Server up to 4 sockets
4817S19	4817S19	VMware Virtual Desktop Infrastructure (VDI) Enterprise Pilot - 1 year Full Subscription
4817T19	4817T19	VMware Virtual Desktop Infrastructure (VDI) Enterprise Pilot - 3 year Full Subscription
4817U19	4817U19	VMware Virtual Desktop Infrastructure (VDI) Enterprise Pilot - 5 year Full Subscription
4817V23	4817V23	VMware Virtual Desktop Infrastructure (VDI) 100 Enterprise VMs for up to 16 Sockets - 1 year Full Subscription
4817S23	4817S23	VMware Virtual Desktop Infrastructure (VDI) 100 Enterprise VMs for up to 16 Sockets - 1 year Full Subscription
4817T23	4817T23	VMware Virtual Desktop Infrastructure (VDI) 100 Enterprise VMs for up to 16 Sockets - 3 year Full Subscription
4817U23	4817U23	VMware Virtual Desktop Infrastructure (VDI) 100 Enterprise VMs for up to 16 Sockets - 5 year Full Subscription
4817V21	4817V21	VMware Virtual Desktop Infrastructure (VDI) Enterprise Pilot Bundle including 25 VMs, VirtualCenter Management Server up to 4 Sockets
4817V16	4817V16	VMware Infrastructure Media Kit
4817V30	4817V30	VMware Infrastructure 3 Enterprise Blade Server License Pack for 16 Sockets
4817V31	4817V31	VMware Infrastructure 3 Enterprise Blade Server License Pack for 20 Sockets
4817V32	4817V32	VMware Infrastructure 3 Enterprise Blade Server License Pack for 28 Sockets
4817S38	43W6547	Subscription Only- 2 sockets 1 Year Full Upgrade from VI3 Std to Ent
4817T38	43W6548	Subscription Only- 2 sockets 3 Year Full Upgrade from VI3 Std to Ent

4817U38	43W6549	Subscription Only- 2 sockets 5 Year Full Upgrade from VI3 Std to Ent
4817V63	4817V63	VMware Infrastructure Media Kit
4817V64	4817V64	VMware VDI Starter Kit - 10 VMs
4817V65	4817V65	VMware VDI Bundle - 100 VMs
4817V66	4817V66	VMware VDI Bundle - 10 additional VMs
4817V67	4817V67	VMware VDM 2 Connection Broker - 100 VMs
4817V68	4817V68	VMware VDM 2 Connection Broker - 10 additional VMs
4817V71	4817V71	VMware Infrastructure Foundation - 2 Sockets License Only
4817V72	4817V72	VMware Infrastructure Standard - 2 Sockets License Only
4817V73	4817V73	VMware Infrastructure Enterprise - 2 Sockets License Only
4817V74	4817V74	VMware HA - 2 Sockets License Only
4817V75	4817V75	VMware DRS - 2 Sockets License Only
4817V76	4817V76	VMware VCMS - 2 Sockets License Only
4817V77	4817V77	VMware VCMS Foundation - 2 Sockets License Only
4817V78	4817V78	VMware VMotion w/Storage VMotion- 2 Sockets License Only
4817V79	4817V79	VMware ESX Server 3i to Foundation Upgrade - 2 Sockets License Only
4817V80	4817V80	VMware ESX Server 3i to Standard Upgrade - 2 Sockets License Only
4817V81	4817V81	VMware ESX Server 3i to Enterprise Upgrade - 2 Sockets License Only
4817V82	4817V82	VMware VirtCtr Fdn to VMware VirtCtr Svr Upgr - 2 Socket - Lic Only
4817V83	4817V83	VMware Foundation to Standard Upgrade - 2 Sockets License Only
4817V84	4817V84	VMware Foundation to Enterprise Upgrade - 2 Sockets License Only
4817V85	4817V85	VMware Standard to Enterprise Upgrade - 2 Sockets License Only
4817V86	4817V86	VMware Infra Std HA Acceleration Kit for 4 Sockets License Only
4817V87	4817V87	VMware Infra Fdn Acceleration Kit for 6 Sockets License Only
4817T61	4817T61	VMware ESX Server 3i - 2 Sockets - 3 Year Subscription
4817S64	4817S64	Subscription Only VMware VDI Starter Kit - 10 VMs - 1 Year
4817S65	4817S65	Subscription Only VMware VDI Bundle - 100 VMs - 1 Year
4817S66	4817S66	Subscription Only VMware VDI Bundle - 10 Additional VMs - 1 Year
4817S67	4817S67	Subscription Only VMware VDM 2 Conn Broker - 100 VMs - 1 Year
4817S68	4817S68	Subscription Only VMware VDM 2 Conn Broker - 10 Addtl VMs - 1 Year
4817S71	4817S71	Subscription Only VMware Infrastructure Fndn - 2 Sockets - 1 Year
4817S72	4817S72	Subscription Only VMware Infrastructure Std - 2 Sockets - 1 Year
4817S73	4817S73	Subscription Only VMware Infrastructure Ent - 2 Sockets - 1 Year
4817S74	4817S74	Subscription Only VMware HA - 2 Sockets - 1 Year
4817S75	4817S75	Subscription Only VMware DRS - 2 Sockets - 1 Year
4817S76	4817S76	Subscription Only VMware VCMS - 2 Sockets - 1 Year
4817S77	4817S77	Subscription Only VMware VCMS Foundation - 2 Sockets - 1 Year
4817S78	4817S78	Subscription Only VMware VMotion w/Storage VMotion - 2 Socket - 1 Yr
4817S79	4817S79	Subscription Only VMware ESX Svr 3i to Fndn Upgr - 2 Sockets - 1 Yr
4817S80	4817S80	Subscription Only VMware ESX Svr 3i to Std Upgr - 2 Sockets - 1 Yr
4817S81	4817S81	Subscription Only VMware ESX Svr 3i to Ent Upgr - 2 Sockets - 1 Yr
4817S82	4817S82	Subscription Only VCMS Fndn to VCMS Upgrade - 2 Sockets - 1 Year
4817S83	4817S83	Subscription Only VMware Fndn to Std Upgrade - 2 Sockets - 1 Year
4817S84	4817S84	Subscription Only VMware Fndn to Ent Upgrade - 2 Sockets - 1 Year
4817S85	4817S85	Subscription Only VMware Std to Ent Upgrade - 2 Sockets - 1 Year
4817S86	4817S86	Subscription Only VMware Infra Std HA Accel Kit - 4 Sockets - 1 Year
4817S87	4817S87	Subscription Only VMware Infra Fdn Accel Kit - 6 Sockets - 1 Year
4817T64	4817T64	Subscription Only VMware VDI Starter Kit - 10 VMs - 3 Year
4817T65	4817T65	Subscription Only VMware VDI Bundle - 100 VMs - 3 Year
4817T66	4817T66	Subscription Only VMware VDI Bundle - 10 Additional VMs - 3 Year
4817T67	4817T67	Subscription Only VMware VDM 2 Conn Broker - 100 VMs - 3 Year
4817T68	4817T68	Subscription Only VMware VDM 2 Conn Broker - 10 Addtl VMs - 3 Year
4817T71	4817T71	Subscription Only VMware Infrastructure Fndn - 2 Sockets - 3 Year
4817T72	4817T72	Subscription Only VMware Infrastructure Std - 2 Sockets - 3 Year
4817T73	4817T73	Subscription Only VMware Infrastructure Ent - 2 Sockets - 3 Year
4817T74	4817T74	Subscription Only VMware HA - 2 Sockets - 3 Year
4817T75	4817T75	Subscription Only VMware DRS - 2 Sockets - 3 Year
4817T76	4817T76	Subscription Only VMware VCMS - 2 Sockets - 3 Year
4817T77	4817T77	Subscription Only VMware VCMS Foundation - 2 Sockets - 3 Year
4817T78	4817T78	Subscription Only VMware VMotion w/Storage VMotion - 2 Socket - 3 Yr
4817T79	4817T79	Subscription Only VMware ESX Svr 3i to Fndn Upgr - 2 Sockets - 3 Yr
4817T80	4817T80	Subscription Only VMware ESX Svr 3i to Std Upgr - 2 Sockets - 3 Yr
4817T81	4817T81	Subscription Only VMware ESX Svr 3i to Ent Upgr - 2 Sockets - 3 Yr
4817T82	4817T82	Subscription Only VCMS Fndn to VCMS Upgrade - 2 Sockets - 3 Year
4817T83	4817T83	Subscription Only VMware Fndn to Std Upgrade - 2 Sockets - 3 Year
4817T84	4817T84	Subscription Only VMware Fndn to Ent Upgrade - 2 Sockets - 3 Year
4817T85	4817T85	Subscription Only VMware Std to Ent Upgrade - 2 Sockets - 3 Year
4817T86	4817T86	Subscription Only VMware Infra Std HA Accel Kit - 4 Sockets - 3 Year
4817T87	4817T87	Subscription Only VMware Infra Fdn Accel Kit - 6 Sockets - 3 Year

Storage systems

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

DS3200 | **DS3300** | **DS3400** | **DS4200** | **DS4700**

at-a-glance | **HDD** | **Misc.** |

Table 1. System Storage DS3200 Disk System at-a-glance

Name	Part number	Storage type	HDD bays (std / max)	Hot-swap HDD bays (Y / N)	Max internal storage capacity(TB)	Max supported storage capacity
IBM System Storage DS3200 ¹	1726-21X	SAS/SATA	12/12	Y	12 TB	48 TB ⁷
IBM System Storage DS3200 Express Model ²	1726-21E	SAS/SATA	12/12	Y	12 TB	48 TB ⁷
IBM System Storage DS3200 ³	1726-22X	SAS/SATA	12/12	Y	12 TB	48 TB ⁷
IBM System Storage DS3200 Express Model ⁴	1726-22E	SAS/SATA	12/12	Y	12 TB	48 TB ⁷
IBM System Storage DS3200 DC Power Model ⁵	1726-22T	SAS/SATA	12/12	Y	12 TB	48 TB ⁷
IBM BladeCenter Boot Disk System ⁶	1726-22B	SAS/SATA	12/12	Y	3.6TB	3.6TB

Note: To determine cabling requirements, refer to the host systems Standard Cabling section and/or the I/O Option Attributes section for external connection information.

Table 1. System Storage DS3200 Disk System at-a-glance (continued)

Name	Part number	Dimensions (W x D x H)	Form factor	Max cfg wt	Power supply quantity (std. / max) - size
IBM System Storage DS3200 ¹	1726-21X	482mm x 511mm x 87mm(19in x 20.1in x 3.43in)	Rack Drawer(2U)	18kg(39.68lbs)	2/2 - 515w
IBM System Storage DS3200 Express Model ²	1726-21E	482mm x 511mm x 87mm(19in x 20.1in x 3.43in)	Rack Drawer(2U)	18kg(39.68lbs)	2/2 - 515w
IBM System Storage DS3200 ³	1726-22X	482mm x 511mm x 87mm(19in x 20.1in x 3.43in)	Rack Drawer(2U)	18kg(39.68lbs)	2/2 - 515w
IBM System Storage DS3200 Express Model ⁴	1726-22E	482mm x 511mm x 87mm(19in x 20.1in x 3.43in)	Rack Drawer(2U)	18kg(39.68lbs)	2/2 - 515w
IBM System Storage DS3200 DC Power Model ⁵	1726-22T	482mm x 511mm x 87mm(19in x 20.1in x 3.43in)	Rack Drawer(2U)	18kg(39.68lbs)	2/2 - 515w DC Power
IBM BladeCenter Boot Disk System ⁶	1726-22B	482mm x 511mm x 87mm(19in x 20.1in x 3.43in)	Rack Drawer(2U)	18kg(39.68lbs)	2/2 - 515w

Note: To determine cabling requirements, refer to the host systems Standard Cabling section and/or the I/O Option Attributes section for external connection information.

Notes:

1. DS3200 Model 21X provides one RAID controller with 512MB cache. Ships with the rack mounting kit and two 2.8m/9ft intra-rack power cords (IEC 320-C13 to IEC 320-C14). Can
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be upgraded to dual controllers.

2. DS3200 Model 21E provides one RAID controller with 512MB cache. Ships with the rack mounting kit, two 2.8m/9ft intra-rack power cords (IEC 320-C13 to IEC 320-C14), one SAS HBA (P/N 25R8060), and one 3M SAS cable (P/N 39R6531). Can be upgraded to dual controllers.
3. DS3200 Model 22X provides two RAID controllers with 512MB cache each. Ships with the rack mounting kit and two 2.8m/9ft intra-rack power cords (IEC 320-C13 to IEC 320-C14).
4. DS3200 Model 22E provides two RAID controllers with 512MB cache each. Ships with the rack mounting kit, two 2.8m/9ft intra-rack power cords (IEC 320-C13 to IEC 320-C14), two SAS HBAs (25R8060), and two 3M SAS cables 39R6531.)
5. DS3200 Model 22T provides two RAID controllers with 512MB cache each. Ships standard with two -48v DC Power Supplies, two DC Power Cables (P/N 42D3294), and two SAS daughter cards (P/N 39R6509).
6. DS3200 Model 22B provides two RAID controllers with 512MB cache each. Ships with rack mounting kit and two 2.8m/9ft intra-rack power cords (IEC 320-C13 to IEC 320-C14).
7. 48TB of total storage is supported via forty eight 1.0 TB SATA HDDs in the DS3200 and three EXP3000 expansion units.

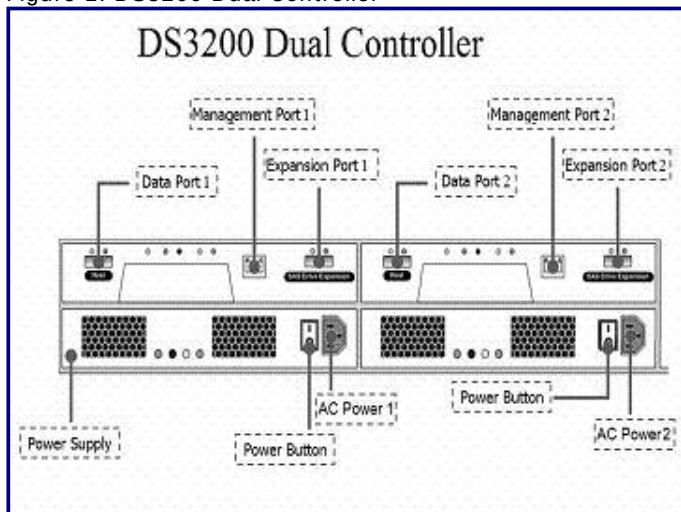
Table 2. Additional Features

	1726-21X	1726-21E	1726-22X	1726-22E	1726-22T	1726-22B
Host partitions (std/max)	4/16	4/16	4/16	4/16	4/16	4/16
Host ports (std/max)	1/3 ^{1,2}	1/3 ^{1,2}	2/6 ¹	2/6 ¹	2/6 ¹	2/6 ¹
Max redundant host connections	-	-	3	3	3	3
Expansion ports (std/max)	1	1	2	2	2	-
Redundant drive loops (std/max)	-	-	1	1	1	-

Notes:

1. Host ports can be increased by adding one DS3200 SAS 2-Port Daughter Card (P/N 39R6509) per controller.
2. Additional host port expansion can be obtained by upgrading to dual controllers.

Figure 1. DS3200 Dual Controller



Click image to enlarge

Storage systems

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

DS3200 | **DS3300** | **DS3400** | **DS4200** | **DS4700**

[at-a-glance](#) | **HDD** | [Misc.](#) |

Option number	Feature code	Description	Height	Bays supported	Max qty
40K1043	5161	73GB 15K Hot Swap SAS	SL	1...12	12
40K1044	5162	146GB 15K Hot Swap SAS	SL	1...12	12
43X0802	5532	300GB 15K SAS HS	SL	1...12	12
39M4558	5516	IBM 500GB Dual Port Hot-Swap SATA	SL	1...12	12
43W7580	5540	750GB Dual Port SATA Hot Swap Option	SL	1...12	12
43W7630	5561	1000 GB Dual Port Hot Swap SATA	SL	1...12	12
External Storage Expansion Units ¹			Form Factor		
172701X		IBM System Storage EXP3000	Rack (2U)		

Notes:

1. External options may require software upgrades, licenses, etc. Refer to the 'Other Options' table for possible related options.

Storage systems

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

DS3200 | **DS3300** | **DS3400** | **DS4200** | **DS4700**

[at-a-glance](#) | [HDD](#) | [Misc.](#) |

Option number	Feature codes	Description	Max qty
System Storage DS3200 other options			
39R6531	3707	IBM 3M SAS Cable	-
39R6529	3708	IBM 1M SAS Cable	-
39R6507	4835	DS3200 SAS Controller Upgrade	1
39R6509	4836	DS3200 SAS 2-Port Daughter Card ¹	2
39R6517	4838	DS3000 1GB Cache Memory Upgrade ^{1,2}	2
39R6519	4839	DS3000 System Memory Cache Battery ¹	2
39R6536	4841	DS3000 Partition Expansion License ^{2,3}	1
39R6533	4842	DS3000 FlashCopy Expansion License ²	1
39R6534	4843	DS3000 VolumeCopy License ²	1
39R6535	4844	DS3000 FlashCopy VolumeCopy License ²	1
39R6537	4846	DS3000 EXP3000 Expansion License ^{2,4}	1

Notes:

1. One per controller. Must be ordered in pairs for dual controller systems.
2. Requires DS3200 Software Feature Pack P/N 39R6540
3. Enables partition expansion for 5-16 storage partitions.
4. Provides expansion license for up to three EXP3000 expansion units

Storage systems

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

DS3200 | **DS3300** | **DS3400** | **DS4200** | **DS4700**

at-a-glance | **HDD** | **Misc.** |

Table 1. System Storage DS3300 Disk System at-a-glance

Name	Part number	Storage type	HDD bays (std / max)	Hot-swap HDD bays (Y / N)	Max internal storage capacity (TB)	Max supported storage capacity
IBM System Storage DS3300 ¹	1726-31X	SAS/SATA	12/12	Y	12TB	48 TB ⁶
IBM System Storage DS3300 Express Model ²	1726-31E	SAS/SATA	12/12	Y	12TB	48 TB ⁶
IBM System Storage DS3300 ³	1726-32X	SAS/SATA	12/12	Y	12TB	48 TB ⁶
IBM System Storage DS3300 Express Model ⁴	1726-32E	SAS/SATA	12/12	Y	12TB	48 TB ⁶
IBM System Storage DS3300 DC Power Model ⁵	1726-32T	SAS/SATA	12/12	Y	12TB	48 TB ⁶

Note: To determine cabling requirements refer to the host system's Standard Cabling section and/or the I/O Option section for external connection information.

Table 1. System Storage DS3300 Disk System at-a-glance (continued)

Name	Part number	Dimensions (W x D x H)	Form factor	Max cfg wt	Power supply quantity (std. / max) - size
IBM System Storage DS3300 ¹	1726-31X	482mm x 511mm x 87mm (19in x 20.1in x 3.43in)	Rack Drawer (2U)	18kg (39.68lbs)	2/2 - 515w
IBM System Storage DS3300 Express Model ²	1726-31E	482mm x 511mm x 87mm (19in x 20.1in x 3.43in)	Rack Drawer (2U)	18kg (39.68lbs)	2/2 - 515w
IBM System Storage DS3300 ³	1726-32X	482mm x 511mm x 87mm (19in x 20.1in x 3.43in)	Rack Drawer (2U)	18kg (39.68lbs)	2/2 - 515w
IBM System Storage DS3300 Express Model ⁴	1726-32E	482mm x 511mm x 87mm (19in x 20.1in x 3.43in)	Rack Drawer (2U)	18kg (39.68lbs)	2/2 - 515w
IBM System Storage DS3300 DC Power Model ⁵	1726-32T	482mm x 511mm x 87mm (19in x 20.1in x 3.43in)	Rack Drawer (2U)	18kg (39.68lbs)	2/2 - 515w DC Power

Note: To determine cabling requirements refer to the host system's Standard Cabling section and/or the I/O Option section for external connection information.

Notes:

- DS3300 Model 31X provides one RAID controller with 512MB cache. Ships with the rack mounting kit and two 2.8m/9ft intra-rack power cords (IEC 320-C13 to IEC 320-C14). Can be upgraded to dual controllers.
- DS3300 Model 31E provides one RAID controller with 512MB cache. Ships with the rack mounting kit, two 2.8m/9ft intra-rack power cords (IEC 320-C13 to IEC 320-C14) and one QLogic iSCSI Single Port PCIe HBA. Can be upgraded to dual controllers.

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3. DS3300 Model 32X provides two RAID controllers with 512MB cache each. Ships with the rack mounting kit and two 2.8m/9ft intra-rack power cords (IEC 320-C13 to IEC 320-C14).
4. DS3300 Model 32E provides two RAID controllers with 512MB cache each. Ships with the rack mounting kit, two 2.8m/9ft intra-rack power cords (IEC 320-C13 to IEC 320-C14) and one QLogic iSCSI Single Port PCIe HBA.
5. DS3300 Model 32T provides two RAID controllers with 512MB cache each. Ships standard with two -48v DC Power Supplies and two DC Power Cables (42D3294)
6. 48 TB of total storage is supported via forty eight 1.0 TB SATA HDDs in the DS3300 and three EXP3000 expansion units.

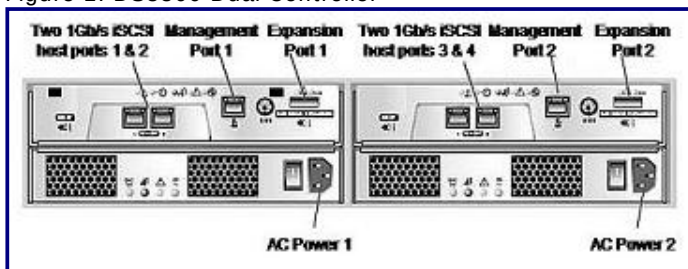
Table 2. Additional Features

	1726-31X	1726-31E	1726-32X	1726-32E	1726-32T
Host Partitions (std/max)	2/16	2/16	2/16	2/16	2/16
Host Ports (std/max)	2/4 ¹	2/4 ¹	4/4	4/4	4/4
Max redundant host connections	-	-	2	2	2
Expansion ports (std/max)	1	1	2	2	2
Redundant drive loops (std/max)	-	-	1	1	1

Notes:

1. Additional host port expansion can be obtained by upgrading to dual controllers.

Figure 1. DS3300 Dual Controller



Click image to enlarge

Storage systems

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

[DS3200](#) | [DS3300](#) | [DS3400](#) | [DS4200](#) | [DS4700](#)

[at-a-glance](#) | **HDD** | [Misc.](#) |

Option number	Feature code	Description	Height	Bays supported	Max qty
40K1043	5161	73GB 15K Hot Swap SAS	SL	1...12	12
40K1044	5162	146GB 15K Hot Swap SAS	SL	1...12	12
43X0802	5532	300GB 15K SAS HS	SL	1...12	12
39M4558	5516	IBM 500GB Dual Port Hot-Swap SATA	SL	1...12	12
43W7580	5540	750GB Dual Port SATA Hot Swap Option	SL	1...12	12
43W7630	5561	1000 GB Dual Port Hot Swap SATA	SL	1...12	12
External storage expansion units¹			Form factor		
172701X		IBM System Storage EXP3000	Rack (2U)		

Notes:

1. External options may require software upgrades, licenses, etc.
Refer to the 'Other Options' table for possible related options.

Storage systems

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

[DS3200](#) | [DS3300](#) | [DS3400](#) | [DS4200](#) | [DS4700](#)

[at-a-glance](#) | [HDD](#) | [Misc.](#) |

Option number	Feature code	Description	Max qty
System Storage DS3300 other options			
39R6531	3707	IBM 3M SAS Cable	-
39R6529	3708	IBM 1M SAS Cable	-
39R6511	4925	DS3300 SAS Controller Upgrade	1
39R6517	4838	DS3000 1GB Cache Memory Upgrade ^{1,2}	2
39R6519	4839	DS3000 System Memory Cache Battery ¹	2
39R6536	4841	DS3000 Partition Expansion License ^{2,3}	1
39R6533	4842	DS3000 FlashCopy Expansion License ²	1
39R6534	4843	DS3000 VolumeCopy License ²	1
39R6535	4844	DS3000 FlashCopy VolumeCopy License ²	1
39R6537	4846	DS3000 EXP3000 Expansion License ^{2,4}	1
44W2101	4924	DS3000 Linux on Power Host License	1

Notes:

1. One per controller. Must be ordered in pairs for dual controller systems.
2. Requires DS3300 Software Feature Pack p/n 42C2142
3. Enables partition expansion for 5-16 storage partitions.
4. Provides expansion license for up to three EXP3000 expansion units

Storage systems

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

DS3200 | **DS3300** | **DS3400** | **DS4200** | **DS4700**

at-a-glance | **HDD** | **Misc.** |

Table 1. System Storage DS3400 Disk System at-a-glance

Name	Part number	Storage type	HDD bays (std / max)	Hot-swap HDD bays (Y / N)	Max internal storage capacity (TB)	Max supported storage capacity
IBM System Storage DS3400 ¹	1726-41X	SAS/SATA	12/12	Y	12 TB	48 TB ⁸
IBM System Storage DS3400 Express Model ²	1726-41E	SAS/SATA	12/12	Y	12 TB	48 TB ⁸
IBM System Storage DS3400 ³	1726-42X	SAS/SATA	12/12	Y	12 TB	48 TB ⁸
IBM System Storage DS3400 Express Model ⁴	1726-42E	SAS/SATA	12/12	Y	12 TB	48 TB ⁸
IBM System Storage DS3400 DC Power Model ⁵	1726-42T	SAS/SATA	12/12	Y	12 TB	48 TB ⁸
DS3400 Simple SAN Express Model 41S ⁶	1726-41S	SAS/SATA	12/12	Y	12 TB	48 TB ⁸
DS3400 Simple SAN Express Model 42S ⁷	1726-42S	SAS/SATA	12/12	Y	12 TB	48 TB ⁸

Notes: To determine cabling requirements refer to the host system's Cabling section and/or the I/O Option section for external connection information.

Table 1. System Storage DS3400 Disk System at-a-glance (continued)

Name	Part number	Dimensions (W x D x H)	Form factor	Max cfg wt	Power supply quantity (std. / max) - size
IBM System Storage DS3400 ¹	1726-41X	482mm x 511mm x 87mm (19in x 20.1in x 3.43in)	Rack Drawer(2U)	18kg(39.68lbs)	2/2 - 515w
IBM System Storage DS3400 Express Model ²	1726-41E	482mm x 511mm x 87mm (19in x 20.1in x 3.43in)	Rack Drawer(2U)	18kg(39.68lbs)	2/2 - 515w
IBM System Storage DS3400 ³	1726-42X	482mm x 511mm x 87mm (19in x 20.1in x 3.43in)	Rack Drawer(2U)	18kg(39.68lbs)	2/2 - 515w
IBM System Storage DS3400 Express Model ⁴	1726-42E	482mm x 511mm x 87mm (19in x 20.1in x 3.43in)	Rack Drawer(2U)	18kg(39.68lbs)	2/2 - 515w
IBM System Storage DS3400 DC Power Model ⁵	1726-42T	482mm x 511mm x 87mm (19in x 20.1in x 3.43in)	Rack Drawer(2U)	18kg(39.68lbs)	2/2 - 515w DC Power
DS3400 Simple SAN Express Model 41S ⁶	1726-41S	482mm x 511mm x 87mm (19in x 20.1in x 3.43in)	Rack Drawer(2U)	18kg(39.68lbs)	2/2 - 515w DC Power
DS3400 Simple SAN Express Model 42S ⁷	1726-42S	482mm x 511mm x 87mm (19in x 20.1in x 3.43in)	Rack Drawer(2U)	18kg(39.68lbs)	2/2 - 515w DC Power

Notes: To determine cabling requirements refer to the host system's Cabling section and/or the I/O Option section for external connection information.

Notes:

1. DS3400 Model 41X provides one RAID controller with 512MB cache. Ships with the rack mounting kit and two 2.8m/9ft intra-rack power cords (IEC 320-C13 to IEC 320-C14). Can be upgraded to dual controllers.
2. DS3400 Model 41E provides one RAID controller with 512MB cache. Ships with the rack mounting kit, two 2.8m/9ft intra-rack power cords (IEC 320-C13 to IEC 320-C14), two 5M Fibre Channel cables (P/N 39M5697), and two SW SFPs (P/N 39R6475). Can be upgraded to dual controllers.
3. DS3400 Model 42X provides two RAID controllers with 512MB cache each. Ships with the rack mounting kit and two 2.8m/9ft intra-rack power cords (IEC 320-C13 to IEC 320-C14).
4. DS3400 Model 42E provides two RAID controllers with 512MB cache each. Ships with the rack mounting kit, two 2.8m/9ft intra-rack power cords (IEC 320-C13 to IEC 320-C14), four 5M Fibre Channel cables (39M5697), and four SW SFPs (39R6475.)
5. DS3400 Model 42T provides two RAID controllers with 512MB cache each. Ships standard with two -48v DC Power Supplies and two DC Power Cables (P/N 42D3294).
6. DS3400 Model 41S provides one RAID controller with 512MB cache. Ships with two IBM Emulex 4 Gbps FC 1-port PCI-E Enterprise HBAs (42C2069), four 5m LC-LC fiber optic cables (39M5697), two rack power cords (p/n 39M5377), and rack mounting hardware.
7. DS3400 Model 42S provides two RAID controllers with 512MB cache. Ships with four IBM Emulex 4Gbps FC 1-port PCI-E Enterprise HBAs (42C2069), eight 5m LC-LC Fiber Optic cables (39M5697), Four 4Gbps SW SFP transceivers (39R6475), two rack power cords (p/n 39M5377), and rack mounting hardware
8. 48 TB of total storage is supported via forty eight 1.0 TB SATA HDDs in the DS3400 and three EXP3000 expansion units.

Table 2. Additional Features

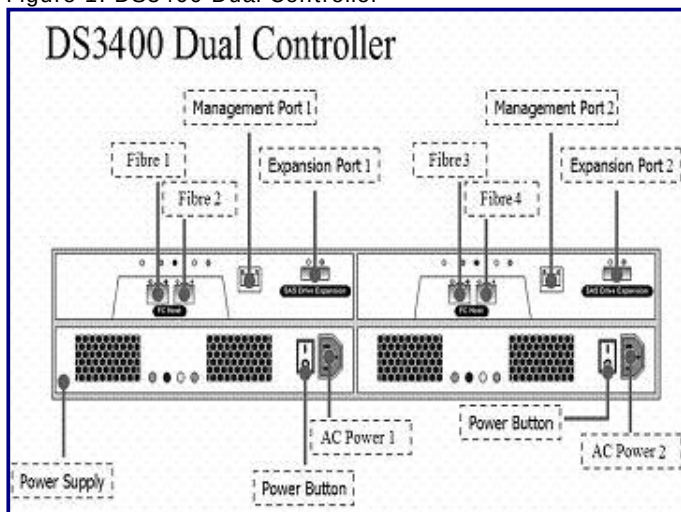
	1726-41X	1726-41E	1726-42X	1726-42E	1726-42T
Host partitions (std/max)	2/16	2/16	2/16	2/16	2/16
Host ports (std/max)	2/2 ¹	2/2 ¹	4/4	4/4	4/4
Max redundant host connections	-	-	2	2	2
Expansion ports (std/max)	1	1	2	2	2
Redundant drive loops (std/max)	-	-	1	1	1

Note: DS3400 Supports short-wave connections on host ports.

Notes:

1. Additional host port expansion can be obtained by upgrading to dual controllers.

Figure 1. DS3400 Dual Controller



Click image to enlarge

Storage systems

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

[DS3200](#) | [DS3300](#) | [DS3400](#) | [DS4200](#) | [DS4700](#)

[at-a-glance](#) | **HDD** | [Misc.](#) |

Option number	Feature code	Description	Height	Bays supported	Max qty
40K1043	5161	73GB 15K Hot Swap SAS	SL	1...12	12
40K1044	5162	146GB 15K Hot Swap SAS	SL	1...12	12
43X0802	5532	300GB 15K SAS HS	SL	1...12	12
39M4558	5516	IBM 500GB Dual Port Hot-Swap SATA	SL	1...12	12
43W7580	5540	750GB Dual Port SATA Hot Swap Option	SL	1...12	12
43W7630	5561	1000 GB Dual Port Hot Swap SATA	SL	1...12	12
External storage expansion units¹			Form factor		
172701X		IBM System Storage EXP3000	Rack (2U)		

Notes:

1. External options may require software upgrades, licenses, etc. Refer to the 'Other Options' table for possible related options.

Storage systems

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

[DS3200](#) | [DS3300](#) | [DS3400](#) | [DS4200](#) | [DS4700](#)

[at-a-glance](#) | [HDD](#) | [Misc.](#) |

Option number	Feature code	Description	Max qty
System Storage DS3400 other options			
39R6531	3707	IBM 3M SAS Cable	-
39R6529	3708	IBM 1M SAS Cable	-
39M5696	3703	1M LC-LC Fibre Channel Cable	-
39M5697	3704	5m LC-LC Fibre Channel Cable	-
39M5698	3705	25m LC-LC Fibre Channel Cable	-
39R6475	4804	IBM 4 Gbps SW SFP Transceiver	-
39R6513	4837	DS3400 FC Controller Upgrade	1
39R6517	4838	DS3000 1GB Cache Memory Upgrade ^{1,2}	2
39R6519	4839	DS3000 System Memory Cache Battery ¹	2
39R6536	4841	DS3000 Partition Expansion License ^{2,3}	1
39R6533	4842	DS3000 FlashCopy Expansion License ²	1
39R6534	4843	DS3000 VolumeCopy License ²	1
39R6535	4844	DS3000 FlashCopy VolumeCopy License ²	1
39R6537	4846	DS3000 EXP3000 Expansion License ^{2,4}	1
44W2101	4924	DS3000 Linux on Power Host License	1
13N1923	4923	DS3000 AIX Host License	1

Notes:

1. One per controller. Must be ordered in pairs for dual controller systems.
2. Requires DS3400 Software Feature Pack p/n 42C2143
3. Provides expansion license for 5-16 storage partitions.
4. Provides expansion license for up to three EXP3000 expansion units

Storage systems

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

DS3200 | **DS3300** | **DS3400** | **DS4200** | **DS4700**

at-a-glance | **HDD** | **Misc.** |

Table 1. System Storage DS4200 Disk System at-a-glance

Name	Part number	Storage type	HDD bays (std / max)	Hot-swap HDD bays (y / n)	Max internal storage capacity (TB)	Max supported storage capacity
DS4200 Express Model 7V ¹	18147VH	SATA	16/16	Y	12.0TB	84TB ²

Note: Requires attachment to a Fibre Channel host bus adapter or to a Fibre Channel/SAN switch.

Table 1. System Storage DS4200 Disk System at-a-glance (continued)

Name	Part number	Dimensions (W x D x H)	Form factor	Max cfg wt	Power supply quantity (std. / max) - size
DS4200 Express Model 7V ¹	18147VH	482mm x 572mm x 130mm (19in x 22.5in x 5.10in)	3U Rack	39.92kg (88.2lbs)	2/2 - 390w

Note: Requires attachment to a Fibre Channel host bus adapter or to a Fibre Channel/SAN switch.

Notes:

1. DS4200 Model 7V provides two RAID controllers with 1GB Cache each. Ships with the rail mounting kit, four 4GBps SFP transceivers, and two 2.8m/9ft intra-rack power cords (IEC 320-C13 to IEC 320-C14.)
2. Based on a maximum of 112 750GB Fibre Channel HDDs installed in DS4200 and six EXP420 expansion units.

Table 2. Additional Features

	1814-7VH
Host Partitions (std/max)	2/64
Host Ports (std/max)	4/4
Max Redundant Host Connections	2
Expansion Ports (std/max)	4/4
Redundant Drive Loops (std/max)	2/2

Notes: DS4200 ships standard with four SFPs which can be used in any of the Host Ports or Expansion Ports. Up to four additional SFPs can be ordered to add full support for all ports.

Storage systems

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

[DS3200](#) | [DS3300](#) | [DS3400](#) | [DS4200](#) | [DS4700](#)

[at-a-glance](#) | [HDD](#) | [Misc.](#) |

Option number	Feature code	Description	Height	Bays supported	Max qty
FAST SATA HDDs					
42D0389	4612	DS4200 500GB SATA EV-DDM	SL	1 ... 16	16
43W9738	4617	DS4200 750GB SATA EV-DDM	SL	1 ... 16	16
44X2454	4619	DS4200 1,000 GB/7.2K SATA EV-DDM	SL	1 ... 16	16
External storage expansion units¹					
18128VH		System Storage DS4000 EXP420			

Notes:

1. External options may require software upgrades, licenses, etc. Refer to the 'Other Options' table for possible related options

Storage systems

Attention:

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[DS3200](#) | [DS3300](#) | [DS3400](#) | [DS4200](#) | [DS4700](#)

[at-a-glance](#) | [HDD](#) | [Misc.](#) |

Option number	Option number	Description	Max qty
System Storage DS4200 other options			
41Y0743	7321	DS4200 FlashCopy	-
44X2429	7333	DS4200 FlashCopy â€” 4-8 FC Upgrade	1
41Y0746	7323	DS4200 VolumeCopy	1
41Y0738	7324	DS4200 Flash/VolumeCopy	1
44E5435	7336	DS4200 Enhanced Remote Mirror â€” 32-64 Mirror Upgrade	1
41Y0739	7325	DS4200 Enhanced Remote Mirror	1
39M5954	7380	DS4200 EXPs Attach 1-3	1
39M5957	7381	DS4200 EXPs Attach 4-6	1
39M6009	7601	DS4200 Linux/Intel Host Kit	1
39M6041	7602	DS4200 Novell Netware Host	1
39M6048	7611	DS4200 AIX Host Kit	1
41Y5163	7612	DS4200 SUN Host Kit	1
41Y0686	7613	DS4200 HP/UX Host Kit	1
42D3252	7614	DS4200 Linux on Power Host	1
39M6046	7603	DS4200 VMware ESX Host Kit	1
42D3254	8760	DS4200 2-4 Storage Partition Upgrade	1
42D3257	8761	DS4200 2-8 Storage Partition Upgrade	1
42D3260	8762	DS4200 4-8 Storage Partition Upgrade	1
42D3263	8763	DS4200 4-16 Storage Partition Upgrade	1
42D3266	8764	DS4200 8-16 Storage Partition Upgrade	1
44E5436	8767	DS4200 8-32 Storage Partition Upgrade	1
42D3269	8765	DS4200 8-64 Storage Partition Upgrade	1
44E5437	8768	DS4200 16-32 Storage Partition Upgrade	1
42D3272	8766	DS4200 16-64 Storage Partition Upgrade	1
44E5438	8769	DS4200 32-64 Storage Partition Upgrade	1
44E5439	8770	DS4200 32-128 Storage Partition Upgrade	1
44E5440	8771	DS4200 64-128 Storage Partition Upgrade	1
26K7941	2410	SW 4 Gbps SFP Transceiver Pair ¹	1
39M5696	3703	1m Fiber Optic Cable LC-LC	-
39M5697	3704	5m Fiber Optic Cable LC-LC	-
39M5698	3705	25m Fiber Optic Cable LC-LC	-

Notes:

- Option includes two 4Gbps SW SFPs.

Storage systems

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

DS3200 **DS3300** **DS3400** **DS4200** **DS4700**

at-a-glance | **HDD** | **Misc.** |

Table 1. TotalStorage DS4700 Disk System at-a-glance

Name	Part number	Storage type	HDD bays (std / max)	Hot-swap HDD bays (Y/N)	Max internal storage capacity (TB)
DS4700 Express Model 70 ^{1,3}	181470H	Fibre Channel	16/16	Y	12TB
DS4700 Express Model 70-DC ¹	181470T	Fibre Channel	16/16	Y	12TB
DS4700 Express Model 72 ^{2,3}	181472H	Fibre Channel	16/16	Y	12TB
DS4700 Express Model 72-DC ²	181472T	Fibre Channel	16/16	Y	12TB

Note: Requires attachment to a Fibre Channel host bus adapter or to a Fibre Channel/SAN switch.

Table 1. TotalStorage DS4700 Disk System at-a-glance (continued)

Name	Part number	Max supported storage capacity	Dimensions (W x D x H)	Form factor	Max cfg wt	Power supply quantity (std./max) - size
DS4700 Express Model 70 ^{1,3}	181470H	84TB ⁴	482mm x 572mm x 130mm (19in x 22.5in x 5.10in)	3U Rack	39.92kg	2/2
DS4700 Express Model 70-DC ¹	181470T	84TB ⁴	482mm x 572mm x 130mm (19in x 22.5in x 5.10in)	3U Rack	39.92kg	2/2 DC
DS4700 Express Model 72 ^{2,3}	181472H	84TB ⁴	482mm x 572mm x 130mm (19in x 22.5in x 5.10in)	3U Rack	39.92kg	2/2
DS4700 Express Model 72-DC ²	181472T	84TB ⁴	482mm x 572mm x 130mm (19in x 22.5in x 5.10in)	3U Rack	39.92kg	2/2 DC

Note: Requires attachment to a Fibre Channel host bus adapter or to a Fibre Channel/SAN switch.

Notes:

1. DS4700 Model 70 provides two RAID controllers with 1GB Cache each. Ships with the rail mounting kit and four 4GBps SFP transceivers.
2. DS4700 Model 72 provides two RAID controllers with 2GB Cache each. Ships with the rail mounting kit and six 4GBps SFP transceivers.
3. Also includes two 2.8m/9ft intra-rack power cords (IEC 320-C13 to IEC 320-C14).
4. Based on a maximum of 112 750GB Fibre Channel HDDs installed in DS4700 and six EXP810 expansion units.

Table 2. Additional Features

	1814-70H	1814-70T	1814-72H	1814-72T
Host Partitions (std/max)	2/16	2/16	8/16	8/16
Host Ports (std/max)	4/4	4/4	8/8	8/8
Max Redundant Host Connections	4	4	4	4
Expansion Ports (std/max)	4/4	4/4	4/4	4/4
Redundant Drive Loops (std/max)	2/2	2/2	2/2	2/2

Notes: DS4700 ships standard with four SFPs which can be used in any of the Host Ports or Expansion Ports. Up to eight additional SFPs can be ordered to add full support for all ports.

Storage systems

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

[DS3200](#) | [DS3300](#) | [DS3400](#) | [DS4200](#) | [DS4700](#)

[at-a-glance](#) | [HDD](#) | [Misc.](#) |

Option number	Feature code	Description	Height	Bays supported	Maximum quantity
40K6812	5412	36.4GB 15Krpm 4GB/s FC E-DDM Option	SL	1 ... 16	16
40K6816	5413	73.4GB 15Krpm 4GB/s FC E-DDM Option	SL	1 ... 16	16
40K6820	5414	146.8GB 15Krpm 4GB/s FC E-DDM Option	SL	1 ... 16	16
42D0410	5415	300GB 15Krpm 4GB/s FC E-DDM Option	SL	1 ... 16	16
39M4554	4610	500 GB/7.2K SATA E-DDM	SL	1 ... 16	16
43W9714	4615	750 GB/7.2K SATA E-DDM	SL	1 ... 16	16
44X2458	4618	1,000 GB/7.2K SATA E-DDM	SL	1 ... 16	16
External storage expansion units¹					
181281H		DS4000 EXP810 Storage Expansion Unit	-		-

Notes:

1. External options may require software upgrades, licenses, etc. Refer to the 'Other Options' table for possible related options.

Storage systems

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

[DS3200](#) | [DS3300](#) | [DS3400](#) | [DS4200](#) | [DS4700](#)

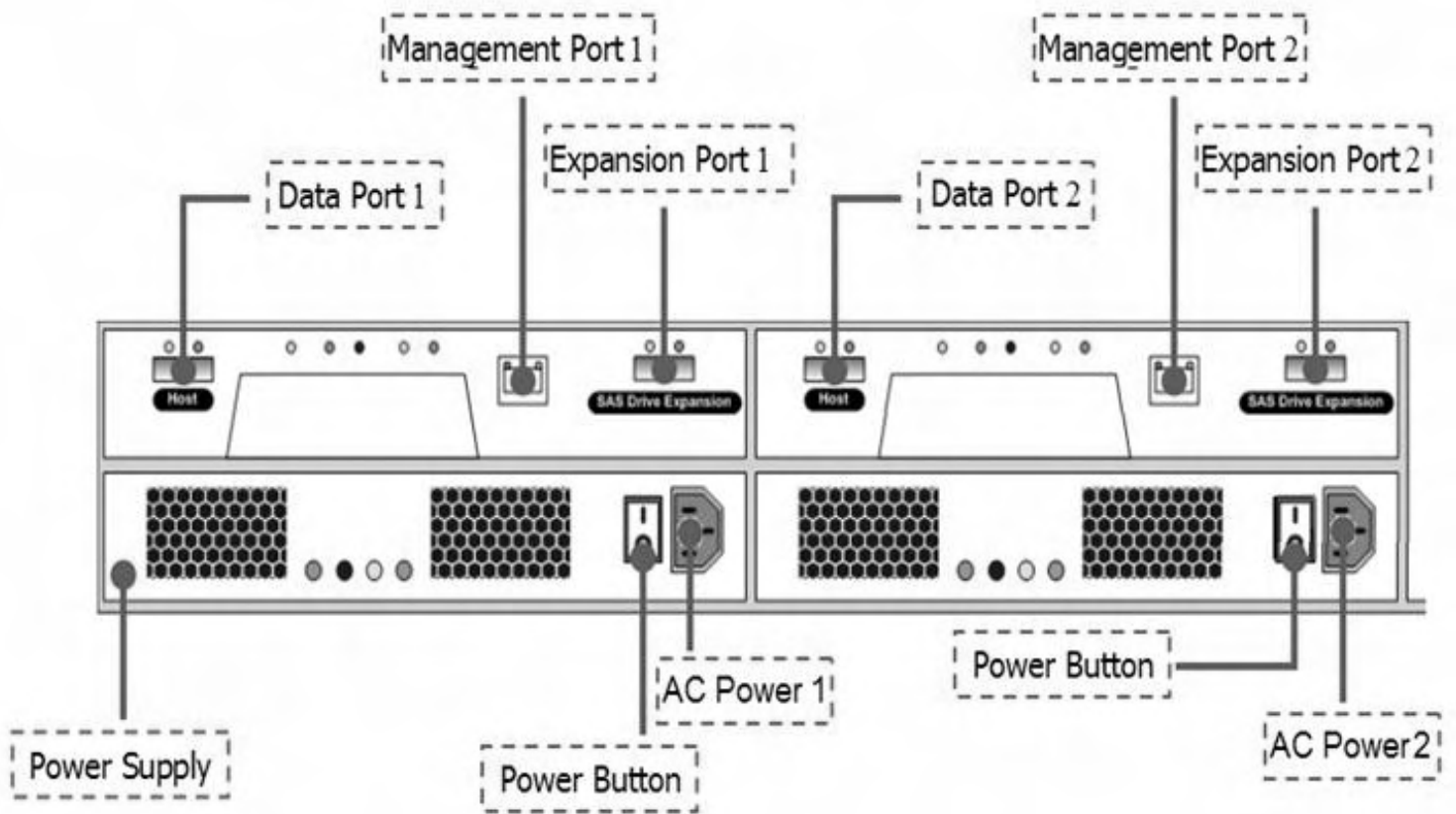
[at-a-glance](#) | [HDD](#) | [Misc.](#) |

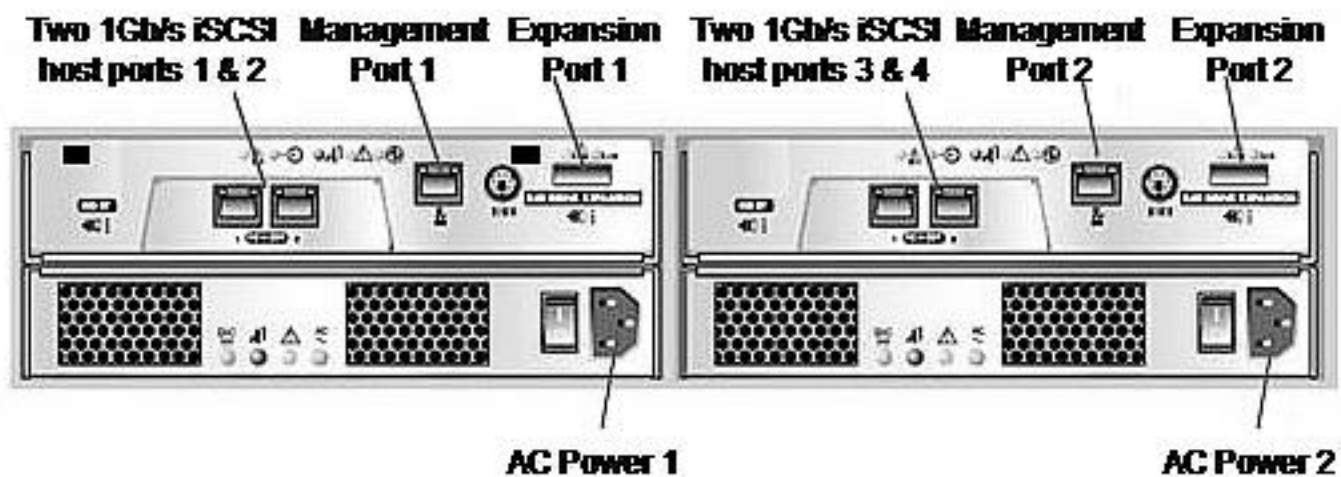
Option number	Feature code	Description	Max qty
41Y5203	7301	DS4700 FlashCopy ¹	-
44X2430	7313	DS4700 FlashCopy â€” 4-8 FC Upgrade	1
41Y5208	7303	DS4700 VolumeCopy ¹	1
41Y5212	7304	DS4700 Flash/VolumeCopy ¹	1
41Y5214	7305	DS4700 Enhanced Remote Mirror ¹	1
44E5447	7316	DS4700 Enhanced Remote Mirror â€” 32-64 Mirror Upgrade	1
41Y5217	7306	DS4700 FC/SATA Enclosure Intermix	1
41Y5222	7382	DS4700 Mod 70 EXPs Att 1-3 ¹	1
41Y5225	7383	DS4700 Mod 70 EXPs Att 4-6 ¹	1
41Y0704	7384	DS4700 Mod 72 EXPs Att 4-6 ¹	1
41Y5178	7701	DS4700 Linux/Intel Host Kit ¹	1
41Y5180	7702	DS4700 Novell Netware Host ¹	1
41Y5184	7711	DS4700 AIX Host Kit ¹	1
41Y5186	7712	DS4700 SUN Host Kit ¹	1
41Y5188	7713	DS4700 HPUX Host Kit ¹	1
41Y5190	7714	DS4700 Linux on Power Host ¹	1
41Y5182	7703	DS4700 VMware ESX Host Kit	1
41Y5228	8860	DS4700 2-4 Storage Partition Upgrade ¹	1
41Y0652	8861	DS4700 2-8 Storage Partition Upgrade ¹	1
41Y0656	8862	DS4700 4-8 Storage Partition Upgrade ¹	1
41Y0660	8863	DS4700 4-16 Storage Partition Upgrade ¹	1
41Y0664	8864	DS4700 8-16 Storage Partition Upgrade ¹	1
44E5448	8867	DS4700 8-32 Storage Partition Upgrade	1
41Y0668	8865	DS4700 8-64 Storage Partition Upgrade ¹	1
44E5449	8868	DS4700 16-32 Storage Partition Upgrade	1
41Y0672	8866	DS4700 16-64 Storage Partition Upgrade ¹	1
44E5450	8869	DS4700 32-64 Storage Partition Upgrade	1
44E5451	8841	DS4700 32-128 Storage Partition Upgrade	1
44E5452	8842	DS4700 64-128 Storage Partition Upgrade	1
26K7941	2410	SW 4 Gbps SFP transceiver pair ²	1
39M5696	3703	1m Fiber Optic Cable LC-LC	1
39M5697	3704	5m Fiber Optic Cable LC-LC	1
39M5698	3705	25m Fiber Optic Cable LC-LC	1
42D3306	2010	DS4700 Telco Bezel	1
42D3329	2012	DS4700/EXP810 DC Power Cord Pair	1

Notes:

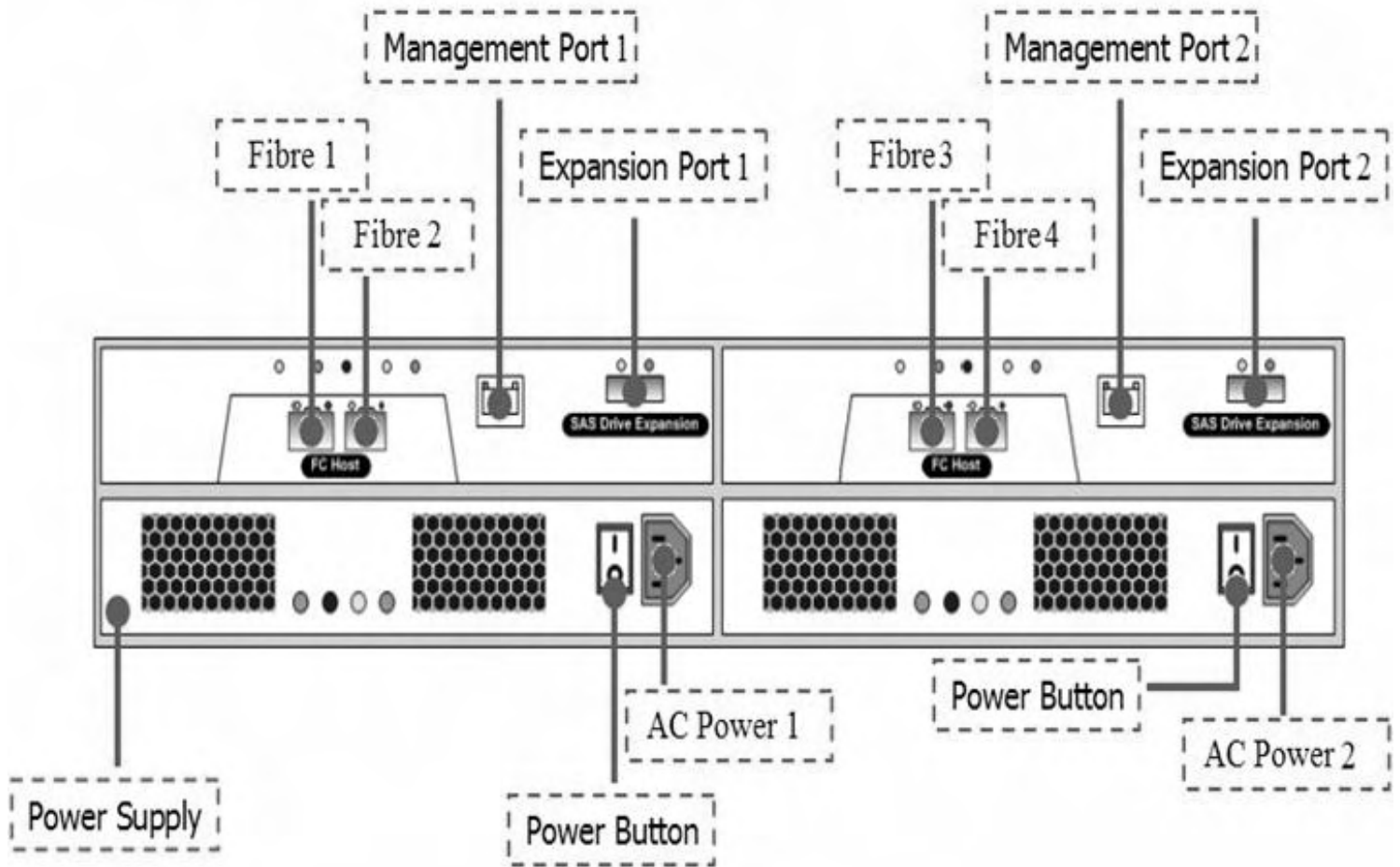
1. Licensed one per DS4700.
2. Option includes two 4Gbps SW SFPs.

DS3200 Dual Controller





DS3400 Dual Controller



External expansion units

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

EXP3000 | **EXP420** | **EXP810**

at-a-glance | **HDD** | **Misc.** |

Table 1. EXP3000 Storage Expansion Unit at-a-glance

Name	Part number	Storage type	HDD bays (std / max)	Hot-swap HDD bays (Y/N)	Max Internal storage capacity (GB)
System Storage EXP3000 ¹	1727-01X	SAS/SATA	12/12	Y	9.0TB
System Storage EXP3000 DC Power Model ²	1727-02T	SAS/SATA	12/12	Y	9.0TB

Note: To determine cabling requirements, refer to the host systems Standard Cabling section and/or the I/O Option Attributes section for external connection information.

Table 1. EXP3000 Storage Expansion Unit at-a-glance (continued)

Name	Part number	Dimensions (W x D x H)	Form factor	Max cfg wt	Power supply quantity (std / max) - size
System Storage EXP3000 ¹	1727-01X	449mm x 518mm x 87mm (17.7in x 20.4in x 3.4in)	Rack Drawer (2U)	27.2kg (60lbs)	2/2
System Storage EXP3000 DC Power Model ²	1727-02T	449mm x 518mm x 87mm (17.7in x 20.4in x 3.4in)	Rack Drawer (2U)	27.2kg (60lbs)	2/2 DC Power

Note: To determine cabling requirements, refer to the host systems Standard Cabling section and/or the I/O Option Attributes section for external connection information.

Notes:

1. Ships standard with dual hot-swap redundant power supplies and two rack power cables.
2. Ships standard with two ESMs, two -48v DC power supplies, and two DC Power Cables (P/N 42D3294).

Table 2. Additional Features

	1727-01X	1727-02T
ESMs (std/max)	1/2 ¹	2/2
SAS Ports (std/max)	2/4	4/4

Notes:

1. Second ESM required for attachment to dual controller models of DS3200/DS3400.

External expansion units

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

[EXP3000](#) | [EXP420](#) | [EXP810](#)

[at-a-glance](#) | [HDD](#) | [Misc.](#) |

Option number	Description	Height	Bays supported	Maximum quantity
SATA HDDs				
40K1043	73GB 15K Hot Swap SAS	SSL	1 ... 12	12
40K1044	146GB 15K Hot Swap SAS	SSL	1 ... 12	12
43X0802	300GB 15K SAS HS	SSL	1 ... 12	12
39M4558	IBM 500GB Dual Port Hot-Swap SATA	SSL	1 ... 12	12
43W7580	750GB Dual Port SATA Hot Swap Option	SSL	1 ... 12	12

External expansion units

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

[EXP3000](#) | [EXP420](#) | [EXP810](#)

[at-a-glance](#) | [HDD](#) | [Misc.](#) |

Option number	Description	Max qty
39R6471	MegaRAID 3m SAS Cable	1
39R6531	IBM 3M SAS Cable	-
39R6529	IBM 1M SAS Cable	-
39R6515	EXP3000 Environmental Services Module (ESM)	1
39R8850	MegaRAID 8480 ¹	-

Notes:

1. Two port adapter SAS Raid adapter that supports up to four EXP3000 Expansion Units.

External expansion units

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

[EXP3000](#) | [EXP420](#) | [EXP810](#)

[at-a-glance](#) | [HDD](#) | [Misc.](#) |

Table 1. EXP420 Storage Expansion Unit at-a-glance

Name	Part number	Storage type	HDD bays (std / max)	Hot-swap HDD bays (Y/N)	Max Internal storage capacity (GB)
System Storage DS4000 EXP420 ¹	1812-8VH	SATA	16/16	Y	12TB

Note: To determine cabling requirements, refer to the host systems Standard Cabling section and/or the I/O Option Attributes section for external connection information.

Table 1. EXP420 Storage Expansion Unit at-a-glance (continued)

Name	Part number	Dimensions (W x D x H)	Form factor	Max cfg wt	Power supply quantity (std / max) - size
System Storage DS4000 EXP420 ¹	1812-8VH	483mm x 559mm x 129mm (19in x 22in x 5.1in)	Rack Drawer (3U)	38.56kg (85lbs)	2/2 - 600w

Note: To determine cabling requirements, refer to the host systems Standard Cabling section and/or the I/O Option Attributes section for external connection information.

Notes:

- Includes two 4Gbps SW SFPs, dual hot-swap 600w redundant power supplies, and two rack power cables.

Table 2. Additional Features

	1812-8VH
ESMs (std/max)	2/2
Fibre Ports (std/max)	4/4

External expansion units

Attention:

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[EXP3000](#) [EXP420](#) [EXP810](#)

[at-a-glance](#) | [HDD](#) | [Misc.](#) |

Option number	Description	Height	Bays supported	Maximum quantity
SATA HDDs				
42D0389	DS4200 500 GB SATA EV-DDM	SL	1 ... 16	16
43W9738	DS4200 750 GB SATA EV-DDM	SL	1 ... 16	16
44X2454	DS4200 1,000 GB/7.2K SATA EV-DDM	SL	1 ... 16	16

External expansion units

Attention:

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[EXP3000](#) [EXP420](#) [EXP810](#)

[at-a-glance](#) | [HDD](#) | [Misc.](#) |

Option number	Description	Max qty
26K7941	SW 4 Gbps SFP Transceiver Pair	1
39M5696	1m LC-LC Fibre Channel Cable	-
39M5697	5m LC-LC Fibre Channel Cable	-
39M5698	25m LC-LC Fibre Channel Cable	-

External expansion units

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

[EXP3000](#) | [EXP420](#) | [EXP810](#)

[at-a-glance](#) | [HDD](#) | [Misc.](#) |

Table 1. TotalStorage DS4000 EXP810 Fibre Channel Storage Expansion Unit at-a-glance

Name	Part number	Storage type	HDD bays (std / max)	Hot-swap HDD bays (Y / N)	Max internal storage capacity (TB)	Dimensions (WxDxH)	Form factor	Max cfg wt	Power supply quantity (std / max) - Size
DS4000 EXP810 Model 81 ^{1,2,3}	181281H	Fibre Channel ⁴	16/16	Y	12TB	482mm x 559mm x 132mm (18.97in x 23.52in x 5.21 in)	Rack Drawer (3U)	38.56kg (85lbs)	2/2 - 450w
DS4000 EXP810 Model 81-DC ^{1,2}	181281T	Fibre Channel ⁴	16/16	Y	12TB	482mm x 559mm x 132mm (18.97in x 23.52in x 5.21 in)	Rack Drawer (3U)	38.56kg (85lbs)	2/2 - 450w

Notes:

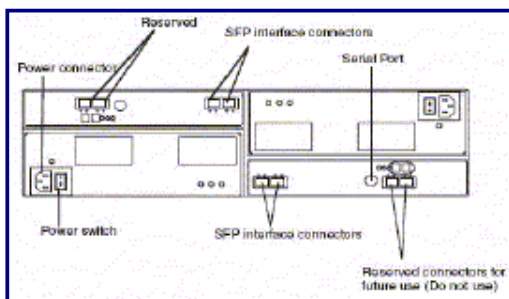
1. Attachment to a supported Storage Server is required. This expansion unit does not attach directly to the server.
2. DS4000 EXP810 accommodates up to four short-wave SFP modules. The unit ships with two short-wave SFP modules.
3. Also includes two 2.8m/9ft intra-rack power cords (IEC 320-C13 to IEC 320-C14). If U.S. wall-outlet power cords are required, then order quantity two of P/N 39Y7931.
4. Supports Enhanced Disk Drive Module (E-DDM) disks only. Insertion of unsupported disks will cause significant damage.

Table 2. Additional Features

	1812-81H	1812-81T
ESMs (std/max)	2/2 ¹	2/2 ¹
Input Ports (std/max)	2/2	2/2
Output Ports (std/max)	2/2	2/2

Note:

1. Ships standard with two ESMs, each providing one input port and one output port.



[Click image to enlarge](#)

External expansion units

Attention:

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[EXP3000](#) [EXP420](#) [EXP810](#)

[at-a-glance](#) | **HDD** | [Misc.](#) |

Option number	Description	Height	Bays supported	Max qty
40K6800	36.4GB 15K rpm 2Gbps FC E-DDM Disk Module	SL	1 ... 16	16
40K6804	73.4GB 15K rpm 2Gbps FC E-DDM Disk Module	SL	1 ... 16	16
40K6808	146.8GB 15K rpm 2Gbps FC E-DDM Disk Module	SL	1 ... 16	16
40K6812	36.4GB 15Krpm 4GB/s FC E-DDM Option	SL	1 ... 16	16
40K6816	73.4GB 15Krpm 4GB/s FC E-DDM Option	SL	1 ... 16	16
40K6820	146.8GB 15Krpm 4GB/s FC E-DDM Option	SL	1 ... 16	16
42D0410	300GB 15Krpm 4GB/s FC E-DDM Option	SL	1 ... 16	16
39M4554	500 GB/7.2K SATA E-DDM	SL	1 ... 16	16
43W9714	750 GB/7.2K SATA E-DDM	SL	1 ... 16	16
44X2458	1,000 GB/7.2K SATA E-DDM	SL	1 ... 16	16

External expansion units

Attention:

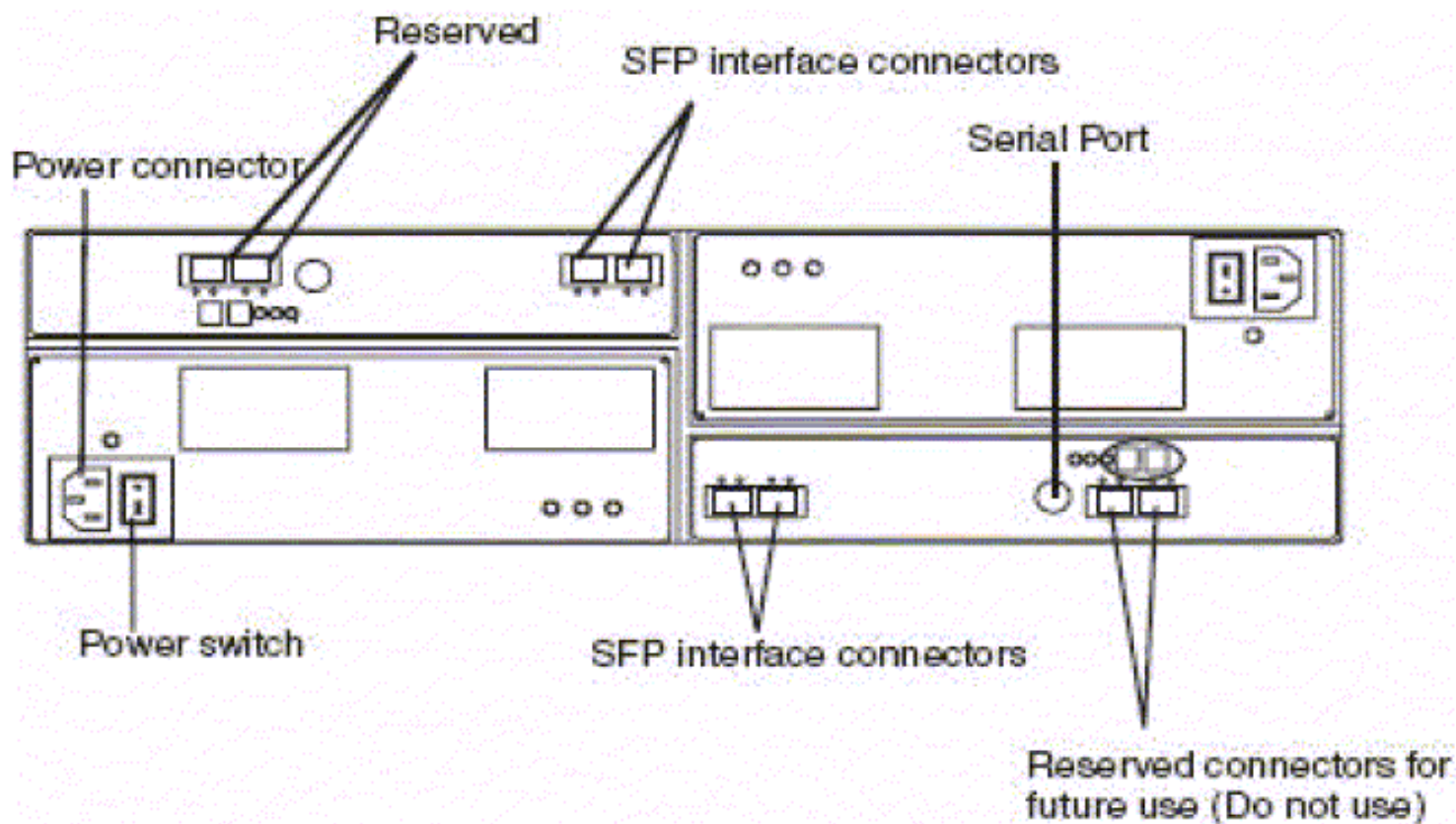
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[EXP3000](#) [EXP420](#) [EXP810](#)

[at-a-glance](#) | [HDD](#) | [Misc.](#) |

Option number	Description	Max qty
26K7941	SW 4 Gbps SFP transceiver pair	4
39M5696	1m Fibre Optic Cable LC-LC	-
39M5697	5m Fibre Optic Cable LC-LC	-
39M5698	25m Fibre Optic Cable LC-LC	-
39Y7931	4.3m, 100-120V, C13 to NEMA 5-15P (US) Line Cord	2
42D3305	EXP810 Telco Bezel	1
42D3329	DS4700/EXP810 DC Power Cord Pair	1

Note: A minimum of two fiber optic cables are required for attachment to DS4000 Disk Systems or to other DS4000 Expansion Units.



Additional fibre channel components

Attention:

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Table 1. TotalStorage Switch L10

Option number	Withdrawal date	Description	Ports (std / max)	SFP modules (std)
691810X	1/4/2008	IBM System Storage SAN10Q ^{1, 2, 3}	10/10	4
Related options				
39R6475		4-Gbps SW SFP Transceiver		

Notes:

1. Provides 10 ports in a 1/2-rack width, 1U high chassis. Ships standard with four short-wave SFP modules, serial cable and a rack power cord.
2. Supports short-wave connections only.
3. Entry level switch compatible with DS400 only.
4. Supports two L10 switches in a 1U rack space.

Table 2. IBM TotalStorage SAN16B-2 Express Model

Option number	Withdrawal date	Description	Ports (std / max)	SFP modules (std)
200516B	-	IBM TotalStorage SAN16B-2 Express Model ^{1, 2}	8/16	8
Related options				
22R5332		16B Express Model 4-Port upgrade ³		
22R4901		16B 4-Port Activation ⁴		
22R4891		16B Advanced Security Activation		
22R4904		16B Fabric Watch		
23R1705		16B Extended Fabric Activation		
22R5460		16B Full Fabric Activation		
22R5469		16B Performance Bundle Activation		
22R4897		4 Gbps SW SFP Transceiver 4 Pack		
22R4902		4 Gbps SW SFP Transceiver		
19K1272		Long-wave SFP module ⁵		
22R0484		2 Gbps LW SFP Module 4 Pack		
23R1703		4 Gbps 4 km longwave SFP Transceiver		
23R1704		4 Gbps 4 km longwave SFP Transceiver 4 Pack		
23R1701		4 Gbps 10 km longwave SFP Transceiver		
23R1702		4 Gbps 10 km longwave SFP Transceiver 4 Pack		
22R0487		9 Micron Fibre Cable 31 m, singlemode, SC/LC		
22R0488		9 Micron Fibre Cable 31 m, singlemode, LC/LC		
22R0489		9 Micron Fibre Cable 2 m, singlemode, SC/LC		

Notes:

1. Provides 16 ports in a 1U high chassis. Ships standard with eight short-wave 4 Gbps SFP modules, rack power cord and a rail kit.
2. Supports short-wave and long-wave connections.
3. Includes four 4GBps SW SFP transceivers and port activation for four ports.
4. Provides port activation only for four ports. One optional SFP transceiver is required per port.
5. Long-wave SFP Module operates at 2Gbps transfer rate.

Table 3. TotalStorage SAN32B-2 Express Model

Option number	Withdrawal date	Description	Ports (std / max)	SFP modules (std)
200532B	10/6/2007	IBM TotalStorage SAN32B-2 Express model ^{1, 2}	16/32	16
Related options				
22R5129		32B Remote Switch Activation		

22R4894	32B Extended Fabric Activation
22R4895	32B Advanced Security Activation
22R4896	32B Performance Bundle
22R5505	32B 8-Port Activation ³
22R5078	32B 8-Port Upgrade Option ⁴
22R4897	4 Gbps SW SFP Transceiver 4 Pack
22R4902	4 Gbps SW SFP Transceiver
19K1272	Long-wave SFP Module ⁵
23R1703	4 Gbps 4 km longwave SFP Transceiver
23R1704	4 Gbps 4 km longwave SFP Transceiver 4 Pack
23R1701	4 Gbps 10 km longwave SFP Transceiver
23R1702	4 Gbps 10 km longwave SFP Transceiver 4 Pack

Notes:

1. Provides 32 ports in a 1U high chassis. Ships standard with sixteen short-wave 4 Gbps SFP modules, rack power cord and a rail kit.
2. Supports short-wave and long-wave connections.
3. Provides port activation only. Does not include SFP Transceivers.
4. Provides activation for 8 ports and eight 4 Gbps shortwave SFP transceivers.
5. Long-wave SFP Module operates at 2Gbps transfer rate.

Table 4. TotalStorage SAN32B-3 Express Model

Option number	Withdrawal date	Description	Ports (std / max)	SFP modules (std)
20055KB	-	IBM System Storage SAN32B-3 ^{1,2}	16/32	0

Related options

17P9138	20055KB Optional Rail Kit
22R4894	32B Extended Fabric Activation
22R4895	32B Advanced Security Activation
22R4896	32 Performance Bundle
39M5696	1M LC-LC Fibre Channel Cable
39M5697	5M LC-LC Fibre Channel Cable
39M5698	25M LC-LC Fibre Channel Cable
22R0488	9 Micron Fibre Cable 31 m, singlemode, LC/LC
22R5505	32B 8-Port Activation ³
22R4897	4 Gbps SW SFP Transceiver 4 Pack
22R4902	4 Gbps SW SFP Transceiver
23R1703	4 Gbps 4 km longwave SFP Transceiver
23R1704	4 Gbps 4 km longwave SFP Transceiver 4 Pack
23R1701	4 Gbps 10 km longwave SFP Transceiver
23R1702	4 Gbps 10 km longwave SFP Transceiver 4 Pack

Notes:

1. Provides 32 ports in a 1U high chassis. Ships standard with two 2.8m/9ft intra-rack power cords (IEC 320-C13 to IEC 320-C14.) and rack mounting tabs.
2. Supports short-wave and long-wave connections.
3. Provides port activation only. Does not include SFP Transceivers.

Table 5. IBM TotalStorage SAN16M-2 Express Model

Option number	Withdrawal date	Description	Ports (std / max)	SFP modules (std)
202616E	9/29/2007	IBM TotalStorage SAN16M-2 Express Model ^{1,2,3}	8/16	8

Related options

22R5892	SAN16M-2 Express Shelf Kit ⁴
22R5424	SAN16M-2 Express Optional Hot-Swap Redundant Power Supply
22R5893	SAN16M-2 Express Element Manager
22R5895	SAN16M-2 Express SANtegrity Enhanced
22R5897	SAN16M-2 Express Open Trunking (FCP Support Only)
22R5888	4-Port FlexPort Expansion Kit ⁵
39M5696	1M L-LC Fibre Channel Cable
39M5697	5M LC-LC Fibre Channel Cable
39M5698	25M LC-LC Fibre Channel Cable
19K1250	LC-SC Fibre Channel Adapter cable
23R1490	LW 4 Gbps 4 km SFP Transceiver
23R1492	LW 4 Gbps 10 km SFP Transceiver

Notes:

1. Provides up to 16 ports in a half-rack width chassis. Ships

- standard with eight short-wave 4 Gbps SFP modules, and US power cord.
- 2. Currently supports short-wave connections only.
- 3. Includes eight 4GBps SW SFP transceivers and port activation for eight ports.
- 4. Rack shelf supports up to two SAN16M-2 Express Models.
- 5. Includes four 4GBps SW SFPs and port activation for four ports.

Table 6. IBM TotalStorage SAN32M-2 Express

Option number	Withdrawal date	Description	Ports (std / max)	SFP modules (std)
202632E	9/29/2007	IBM TotalStorage SAN32M-2 Express ^{1,2,3}	16/32	16
Related options				
22R5907		SAN32M-2 Express Element Manager		
22R5909		SAN32M-2 Express SANtegrity Enhanced		
22R5911		SAN32M-2 Express Open Trunking (FCP Support Only)		
39M5696		1M L-LC Fibre Channel Cable		
39M5697		5M LC-LC Fibre Channel Cable		
39M5698		25M LC-LC Fibre Channel Cable		
19K1250		LC-SC Fibre Channel Adapter cable		
22R5906		8-Port FlexPort Expansion Kit ⁴		
19K1272		Long-wave SFP Module ⁵		
23R1490		LW 4 Gbps 4 km SFP Transceiver		
23R1492		LW 4 Gbps 10 km SFP Transceiver		

Notes:

- 1. Provides 32 ports in a 1U high chassis. Ships standard with sixteen short-wave 4 Gbps SFP modules, two rack power cords, two US power cords, and a rail kit.
- 2. Supports short-wave and long-wave connections.
- 3. Includes sixteen 4GBps SW SFPs and port activation for 16 ports.
- 4. Includes eight 4GBps SW SFPs and port activation for eight ports.
- 5. Long-wave SFP Module operates at 2Gbps transfer rate.

Table 7. Cisco MDS 9124 for IBM System Storage

Option number	Withdrawal date	Description	Ports (std / max)	SFP modules (std)
241724C	-	Cisco MDS 9124 for IBM System Storage ^{1,2}	8/24	8
Related options				
39M5696		1M Fiber Optic Cable LC-LC		
39M5697		5M Fiber Optic Cable LC-LC		
39M5698		25M LC-LC Fibre Channel Cable		
45W0654		9124 8 Port Act + 8 SW SFPs ³		
45W0655		9124 2nd Power Supply		

Notes:

- 1. Provides 24 ports in a 1U high chassis. Ships standard with eight short-wave 4 Gbps SFP modules, rack power cord and a rail kit.
- 2. Supports short-wave and long-wave connections.
- 3. Provides port activation and SFP transceivers for 8 ports.

Table 8. IBM System Storage SAN24B-4 Express

Option number	Withdrawal date	Description	Ports (std / max)	SFP modules (std)
249824E	-	IBM System Storage SAN24B-4 Express ^{1,2}	8/24	0
Related options				
45W0502		8 Port Activation ³		
45W0503		24E Enterprise Package		
45W0504		Fabric Watch		
45W0505		Extended Fabric		
45W0508		Advanced Performance Monitor		
45W0509		Trunking Activation		
45W0510		Adaptive Networking		
45W0512		Full Fabric		
45W0630		EGM (Enhanced Group Management)		
39M5697		Fiber Cable LC/LC 5M Multimode		
39M5698		Fiber Cable LC/LC 25M Multimode		
22R0488		9 Micron Fibre Cable 31MSM LC/LC		
45W0493		SFP Transceiver 4 Gbps SW		

45W0496	SFP Transceiver 4 Gbps SW 8-Pack
45W0500	SFP Transceiver 8 Gbps SW
45W0501	SFP Transceiver 8 Gbps SW 8-Pack
45W0494	SFP Transceiver 4 Gbps 4Km LW
45W0497	SFP Transceiver 4 Gbps 4Km LW 8-Pack
45W0495	SFP Transceiver 4 Gbps 10Km LW
45W0498	SFP Transceiver 4 Gbps 10Km LW 8-Pack
45W0499	SFP Transceiver 4 Gbps 30Km ELW

Notes:

1. Provides 24 ports in a 1U high chassis. Ships standard with rack power cord and a rack rail kit.
2. Supports short-wave and long-wave connections.
3. Provides port activation only. Does not include SFP Transceivers.

Table 9. IBM System Storage SAN40B-4

Option number	Withdrawal date	Description	Ports (std / max)	SFP modules (std)
249840E	-	IBM System Storage SAN40B-4 1 ^{1,2}	24/40	0
Related options				
45W0524		8 Port Activation ³		
45W0525		B40/40E Enterprise Package		
45W0526		Extended Fabric		
45W0527		Advanced Performance Monitor		
45W0528		Trunking Activation		
45W0529		Adaptive Networking		
45W0530		Integrated Routing		
45W0531		FICON w/ CUP Activation		
39M5697		Fiber Cable LC/LC 5M Multimode		
39M5698		Fiber Cable LC/LC 25M Multimode		
22R0488		9 Micron Fibre Cable 31MSM LC/LC		
45W0493		SFP Transceiver 4 Gbps SW		
45W0496		SFP Transceiver 4 Gbps SW 8-Pack		
45W0500		SFP Transceiver 8 Gbps SW		
45W0501		SFP Transceiver 8 Gbps SW 8-Pack		
45W0494		SFP Transceiver 4 Gbps 4Km LW		
45W0497		SFP Transceiver 4 Gbps 4Km LW 8-Pack		
45W0495		SFP Transceiver 4 Gbps 10Km LW		
45W0498		SFP Transceiver 4 Gbps 10Km LW 8-Pack		
45W0499		SFP Transceiver 4 Gbps 30Km ELW		

Notes:

1. Provides 40 ports in a 1U high chassis. Ships standard with rack power cord and a rack rail kit.
2. Supports short-wave and long-wave connections.
3. Provides port activation only. Does not include SFP Transceivers.

External storage configuration examples

Attention:

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The following sample configurations are for illustration only and may not be suitable for any specific customer installation. Contact your IBM Business Partner or IBM Marketing Representative for assistance with your specific configuration requirements.

Table 1. Cable Group legend

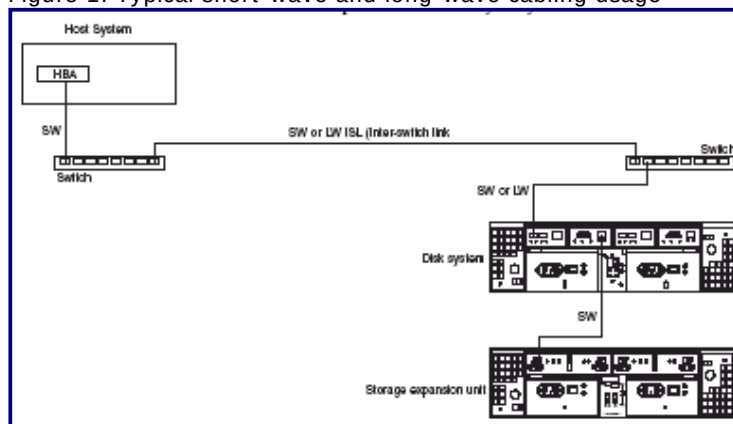
Cable Group A (0.8mm to 0.8mm)	
03K9310	Netfinity 2m Ultra2 SCSI cable
03K9311	Netfinity 4.2m Ultra2 SCSI cable
Cable Group SW (short-wave)	
19K1247	1m LC-LC Fibre Channel cable
19K1248	5m LC-LC Fibre Channel cable
19K1249	25m LC-LC Fibre Channel cable
Cable Group LW (long-wave)¹	
-	Customer supplied

Notes:

1. Customer-supplied cables of longer lengths can be used. Short-wave supports up to 500m. Long-wave supports up to 10km.

The illustration below shows what a typical solution might look like in terms of where short-wave and long-wave cables would be used. Actual implementation may vary based on individual hardware.

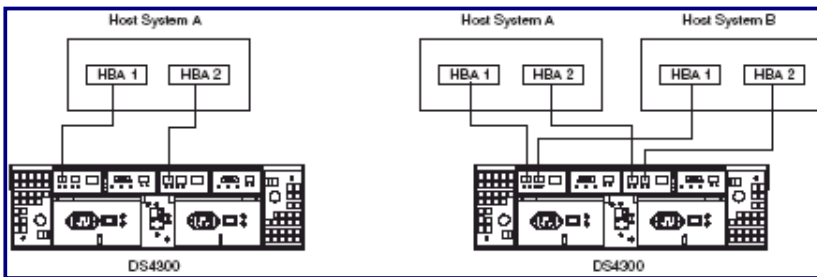
Figure 1. Typical short-wave and long-wave cabling usage



[Click image to enlarge](#)

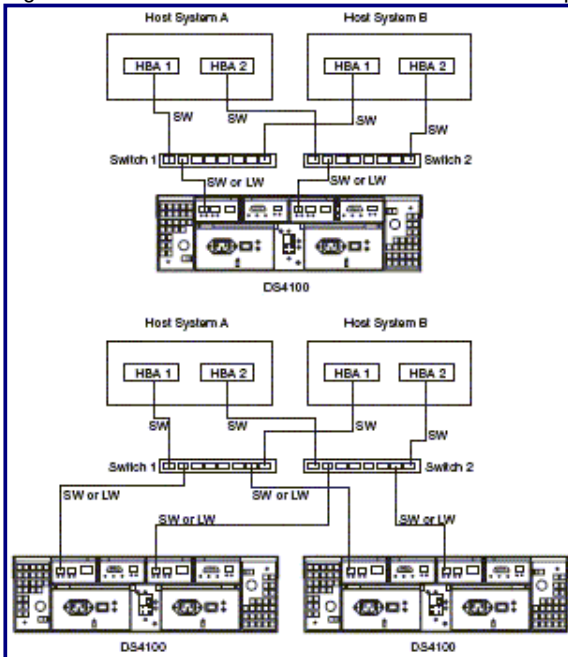
The following sample configurations are for illustration only and may not be suitable for any specific customer installation. Contact your IBM Business Partner or IBM Marketing Representative for assistance with your specific configuration requirements.

Figure 2. DS4100 and DS4300 Host Attach Examples



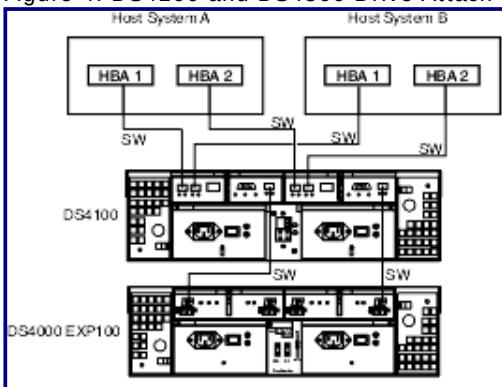
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Figure 3. DS4100 and DS4300 Drive Attach Examples



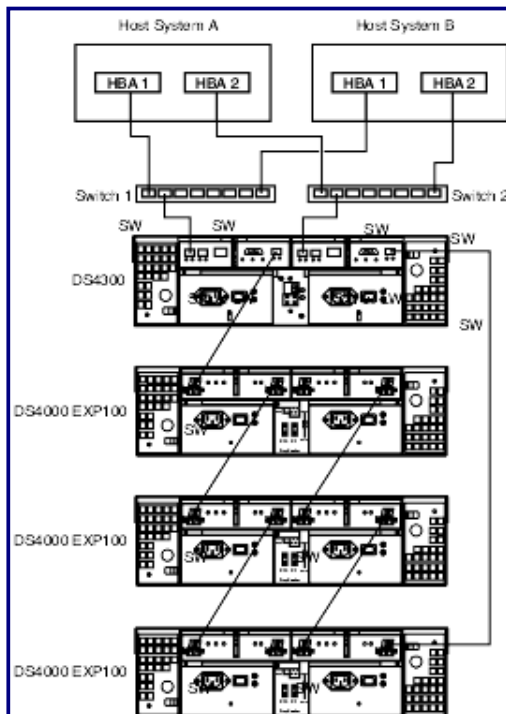
[Click image to enlarge](#)

Figure 4. DS4100 and DS4300 Drive Attach Examples



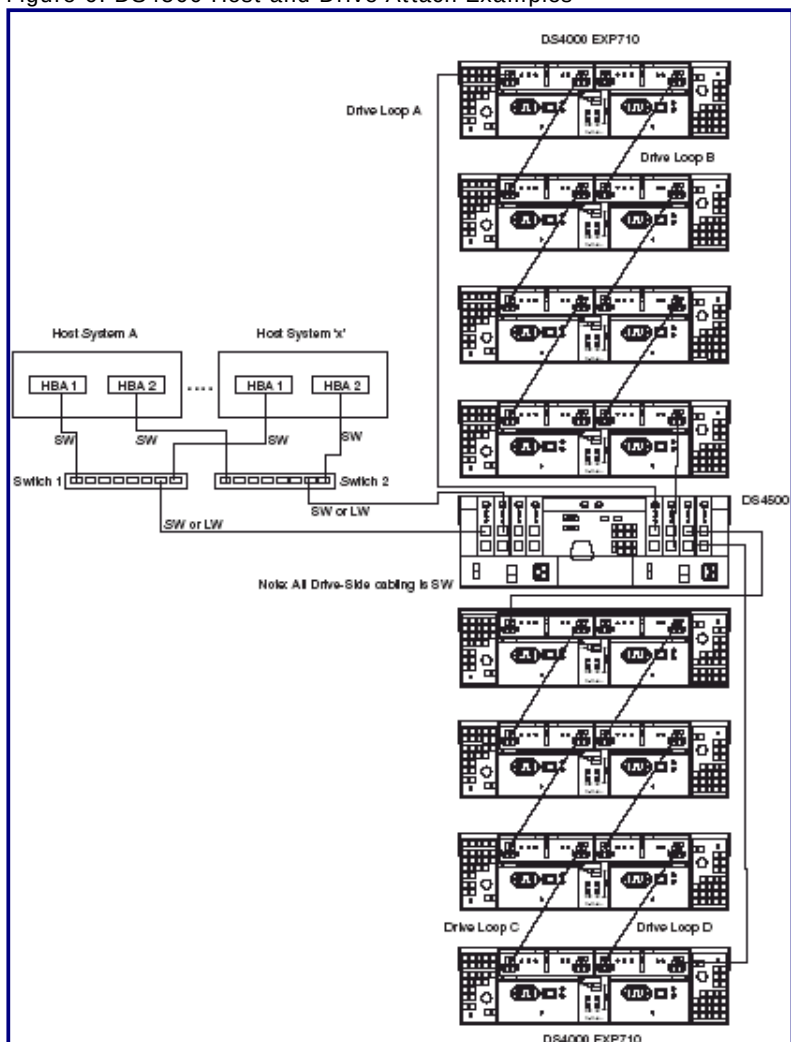
[Click image to enlarge](#)

Figure 5. DS4100 and DS4300 Drive Attach Examples

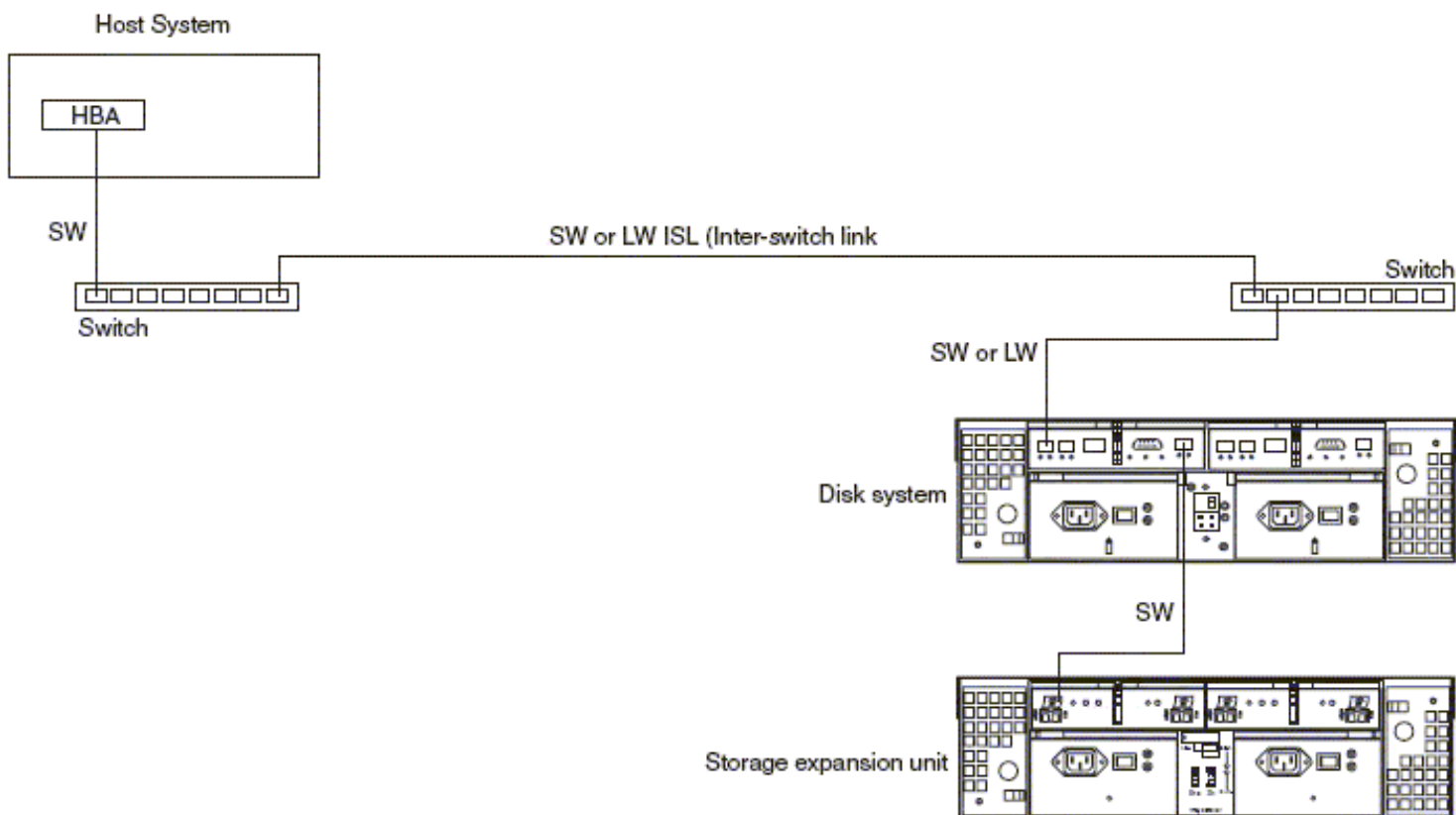


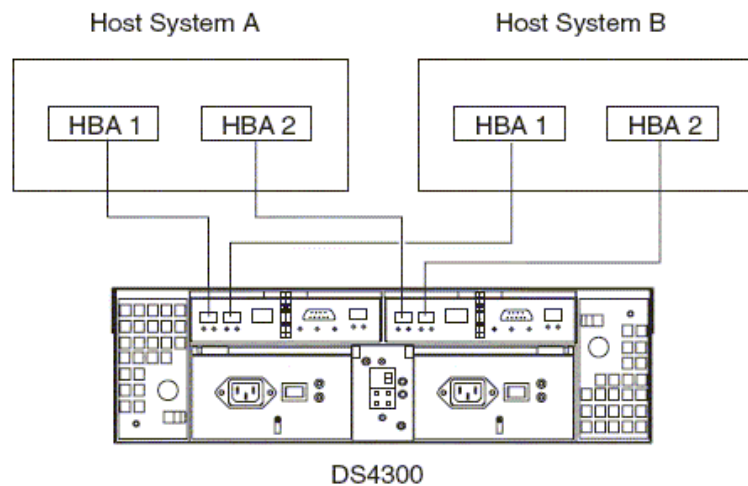
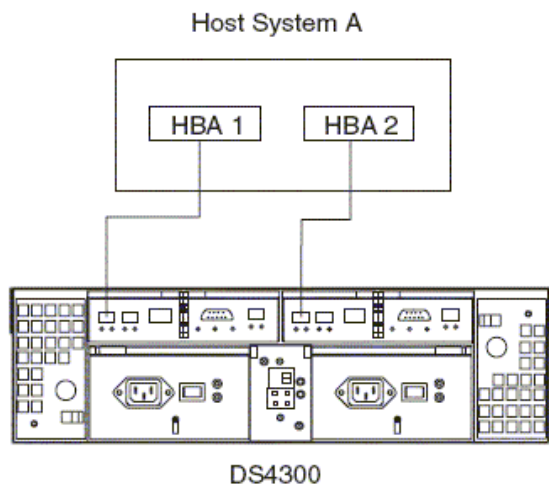
[Click image to enlarge](#)

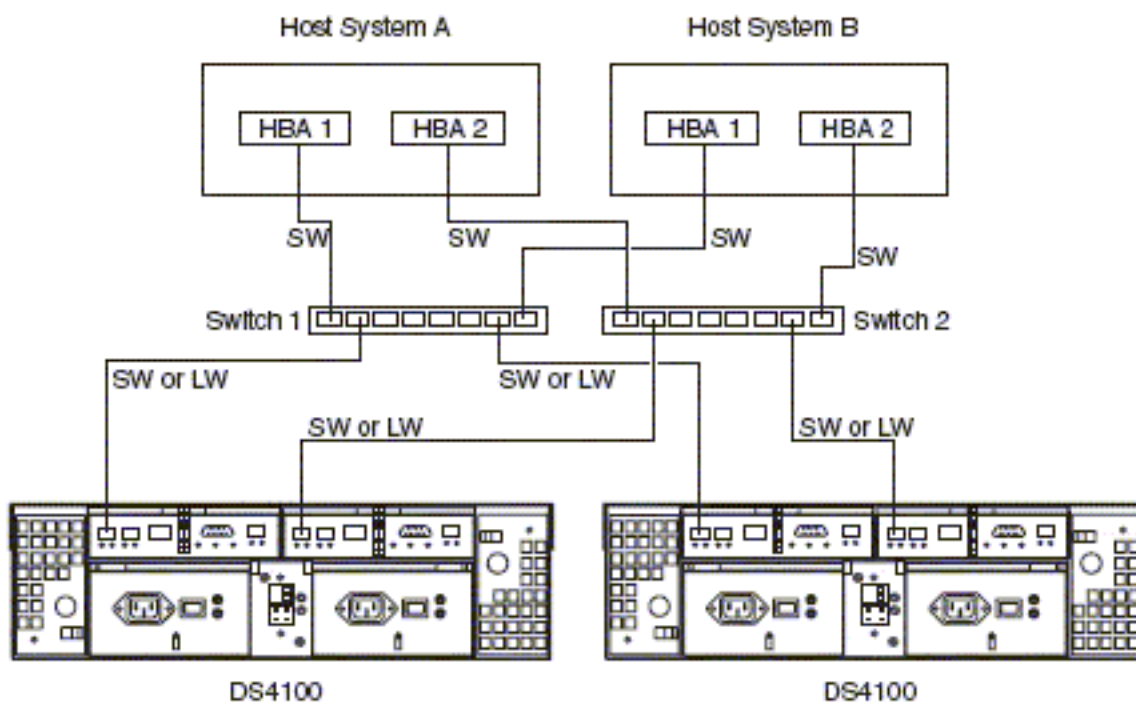
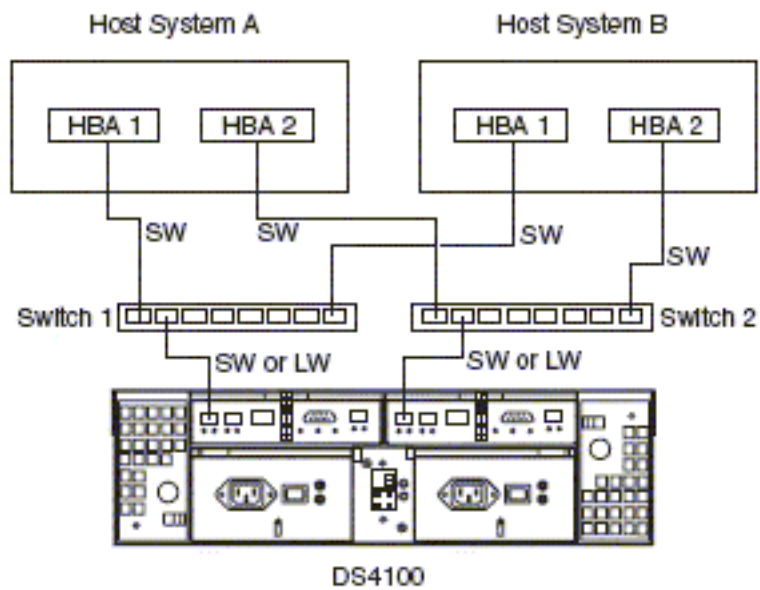
Figure 6. DS4500 Host and Drive Attach Examples

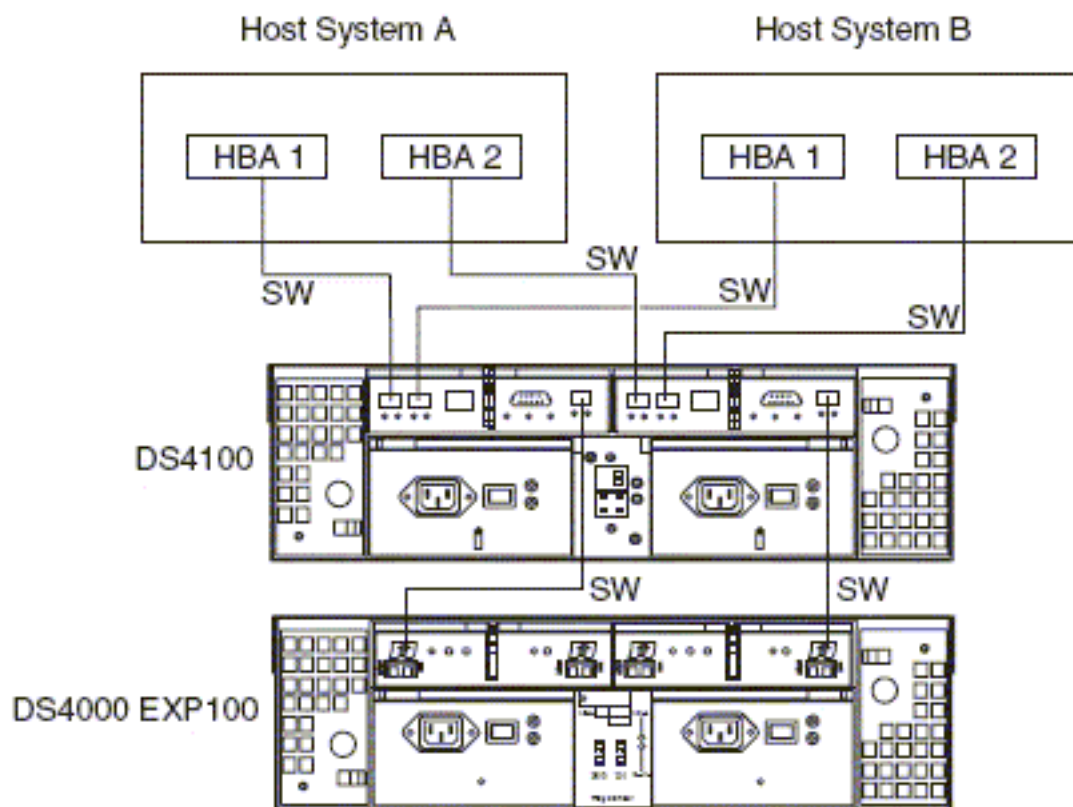


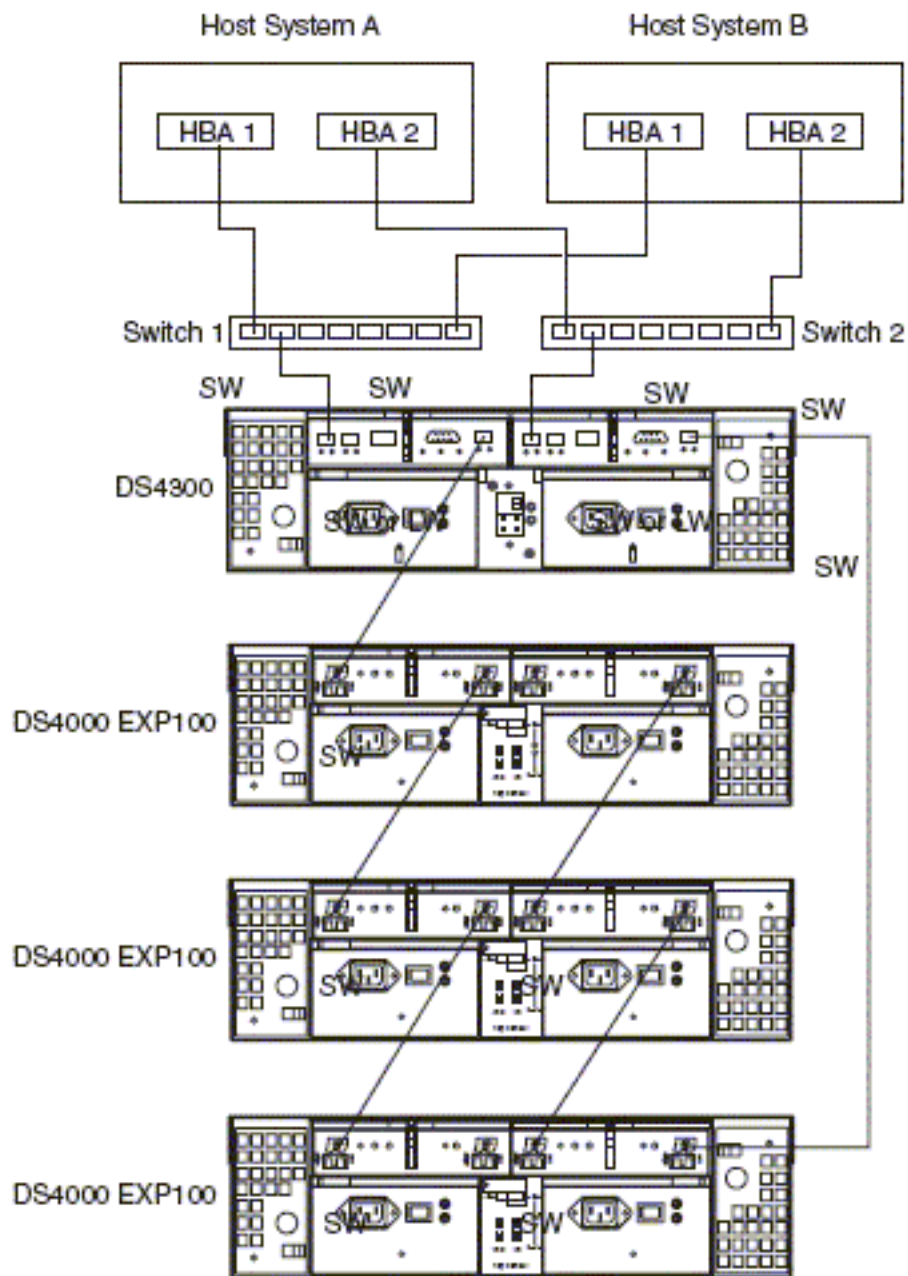
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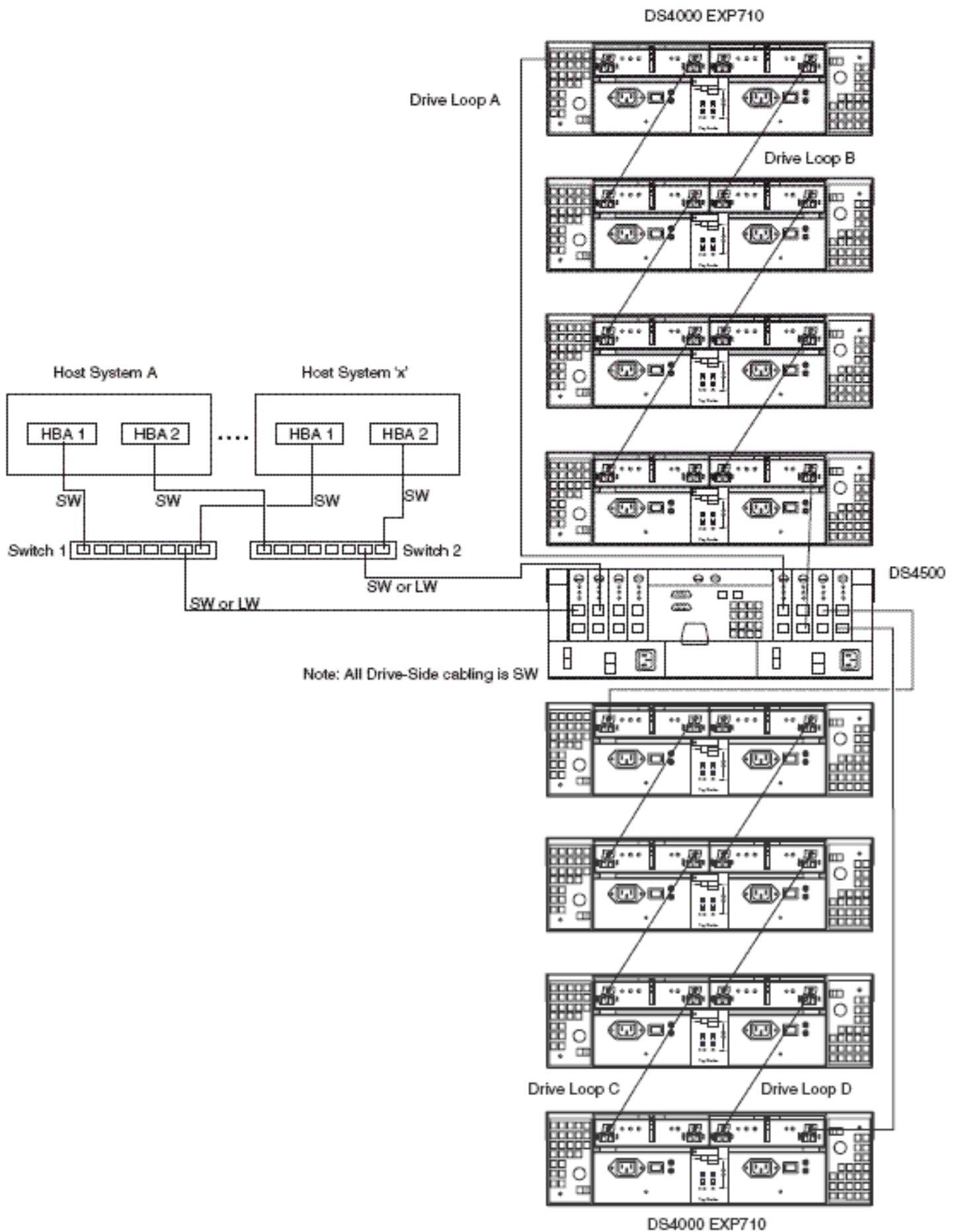












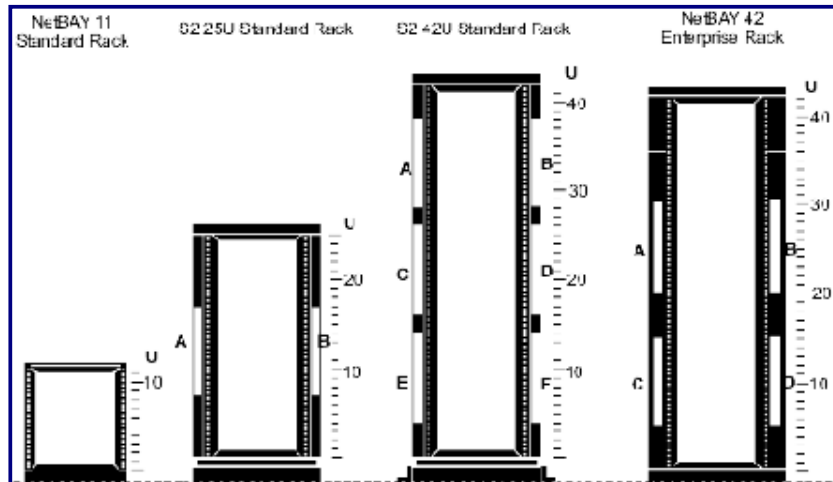
Rack cabinets and options

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

Rack cabinets > Rack mounted products

Figure 1. Rack cabinets



Click image to enlarge

Table 1. Rack cabinets

	NetBay11 standard rack	S2 25U standard rack	S2 42U standard rack	
Machine type model ¹	93061RX	93072RX	93074RX	93074XX
T-M-F Format	9306-RC1-1041	9307-RC2-1042	9307-RC4-1043	9307-RC4-1044
EIA capacity ²	11U	25U	42U	42U
Sidewall compartments	0	2	6	6
Front stabilizers	Std	Std	Std	Std
Side stabilizers	NR	NR	Std ³	NR
Casters	Std	Std	Std	Std
Leveling feet	NA	Std	Std	Std
Side covers	Std	Std	Std	NR
Rack attachment kit ⁴	NA	NA	NR	Std
Glass front door	NA	NA	NA	NA
Perforated front door	Std	Std	Std	Std
Perforated rear door	NA	Std	Std	Std
Height (mm/in) ⁵	611/24.1	1344/53	1999/78.7	1999/78.7
Width (mm/in)	518/20.4	605/23.8	605/23.8	600/23.6
Depth (mm/in)	873/34.4	1000/39.4	1000/39.4	1000/39.4
Empty weight (kg/lb)	36/79	100/220	125/276	94/207
Max load (kg/lb)	182/401	567/1250	907/2000	907/2000
Total weight (kg/lb)	218/481	667/1470	1032/2276	1032/2276
Shippable loaded ⁶	Yes	Yes	No	No

Note: NR - Not required; NA - Not available; 1U - 1.75in (44.45mm)

Table 1. Rack cabinets (continued)

	NetBay42 Enterprise rack		IBM 42U Enterprise rack	
Machine type model ¹	93084RX	93084XX	93084PX	93084EX

T-M-F Format	9308-RC4-1045	9308-RC4-1046	9308-RC4-5621	9308-RC4-5622
EIA capacity ²	42U	42U	42U	42U
Sidewall compartments	4	4	4	4
Front stabilizers	Std	Std	Std	Std
Side stabilizers	NR	NR	NR	NR
Casters	Std	Std	Std	Std
Leveling feet	Std	Std	Std	Std
Side covers	Std	NR	Std	NR
Rack attachment kit ⁴	NR	Std	NR	Std
Glass front door	NA	NA	NA	NA
Perforated front door	Std	Std	Std	Std
Perforated rear door	Std	Std	Std	Std
Height (mm/in) ⁵	2020/79.5	2020/79.5	2020/79.5	2020/79.5
Width (mm/in)	648/25.5	648/25.5	648/25.5	648/25.5
Depth (mm/in)	1105/43.5	1105/43.5	1105/43.5	1105/43.5
Empty weight (kg/lb)	261/575	234/516	220/485	177/390
Max load (kg/lb)	932/2055	932/2055	932/2055	932/2055
Total weight (kg/lb)	1193/2630	1193/2630	1152/2540	1109/2445
Shippable loaded ⁶	Yes	Yes	Yes	Yes

Note: NR - Not required; NA - Not available; 1U - 1.75in (44.45mm)

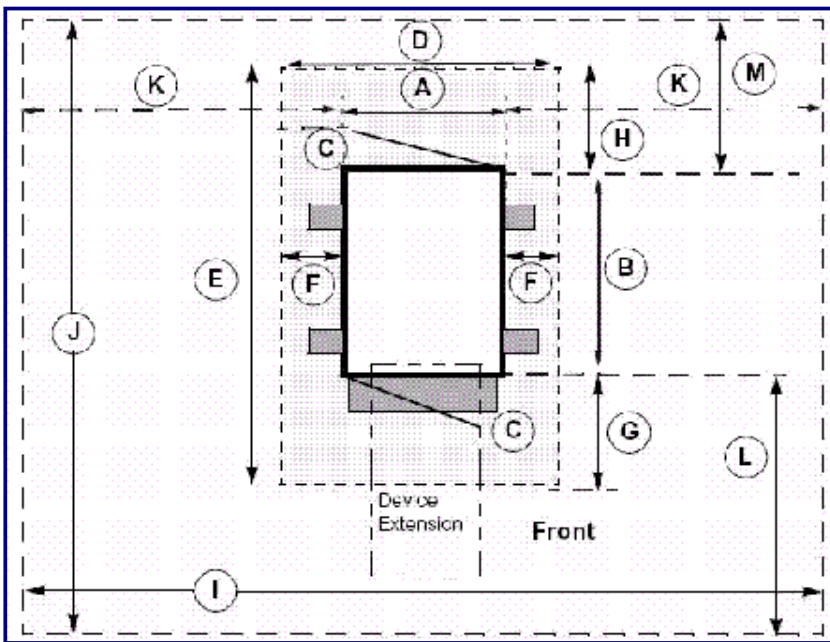
Notes:

1. This is the option part number. The T-M-F format is for the US and Canada.
2. Conforms to EIA 310 - D Standard 19in rack specification for a Type A cabinet with universal hole spacing.
3. Side stabilizer brackets are included to bolt the cabinet to the floor. They are needed when a single, standalone cabinet is lightly loaded. See the installation instructions for additional information.
4. Required to attach racks together to make a suite.
5. Minimum clearance to the ceiling is 305 mm/12 in.
6. 'Shippable loaded' means the cabinet is capable of being transported with equipment installed. Required packaging is provided. The integrator/assembler is responsible for assuring the stability of the shipped configuration. Rack Integration Services are available from IBM.

Table 2. Floor Layout

	9306-xxx (inches)	9307-xxx (inches)	9308-xxx (inches)	Description
Box footprint				
A	20.4	23.6	25.5	Width of rack
B	34.4	39.4	43.5	Depth of rack (not including front stabilizer)
C	21	24/12.5	26	Front/rear door clearance (when required)
Operational Clearance				
D	24.4	27.5	29.5	Width of Operational Clearance area
E	74.4	93.4	110	Depth of Operational Clearance area
F	2	2	2	Left/Right sides of rack to Operational Clearance area
G	30	36	36	Front of rack to Operational Clearance area
H	10	24	26	Rear of rack to Operational Clearance area
Service Clearance				
I	26	95.6	97.5	Width of Service Clearance area
J	78.3	129.4	133.5	Depth of Service Clearance area
K	2.8	36	36	Left/Right sides of rack to Service Clearance area
L	36	60	60	Front of rack to Service Clearance area
M	30	30	30	Rear of rack to Service Clearance area

Figure 2. Rack Floor Layout



[Click image to enlarge](#)

Rack cabinets and options

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

Rack cabinets Rack mounted products

General rack placement rules and other information:

1. Place the heavier components toward the bottom of the rack (i.e., UPS, then servers or storage, etc.).
2. Do not extend more than one component on slide rails at a time.
3. Utilize sidewall compartments for mounting PDUs and console switches without using EIA space.
4. Consider user and service requirements when mounting components in a rack.
5. Consider extension of cable management arms and overall cable routing when selecting length of power, console, and storage cables.

Table 1. IBM Rack Mounted Products¹

					Conversion kits		
Description	Machine type / model	Size (U) ²	Depth (in)	Approx weight (lb) ³	42C8923 5Ux22D Tower-to-Rack Kit	39Y8382 5Ux26D Tower-to-Rack Kit	32R0719 7Ux26D Tower-to-Rack Kit II
Server system units ⁴							
x3105 ⁵	4347	-	-	-			
x3200 ⁶	4362, 4363	5	22	84	X		
x3200 M2 ⁶	4367, 4368	5	22	84	X		
x3250	4364, 4365	1	22	32			
x3250 M2	4190, 4191, 4194	1	22	32			
x3400 entry ⁶	7973, 7974	5	27.5	84		X	
x3400 mid-range ⁶	7975, 7976	5	27.5	84		X	
x3455	7984	1	26	35			
x3500 ⁶	7977	5	27.5	84		X	
x3550	7978	1	28	45			
x3650	7979	2	27.5	73			
x3655	7985	2	27.5	65			
x3755	8877	4	28	113			
x3800	8865, 8866	7	28	161			X
x3850	8863	3	28	103			
x3950	8872, 8878	3	28	104			
x3850 M2, x3950 M2	7141	4	28	112			
BladeCenter w/ two 2000w power supplies	8677	7	28	150			
BladeCenter w/ four 2000w power supplies	8677	7	28	246			
BladeCenter S w/ two 950/1450W power supplies	8886	7	28	153			
BladeCenter S w/ four 950/1450W power supplies	8886	7	28	228			
BladeCenter H w/ two 2900w power supplies	8852	9	29	262			

BladeCenter H w/ four 2900w power supplies	8852	9	29	350
Storage units				
EXP3000	172701X	2	21	63
DS3200	17262xx	2	20.5	60
DS3300	17263xx	2	20.5	60
DS3400	17264xx	2	20.5	60
DS4200	18147VH	3	22	88
DS4700	18147xx	3	22	88
DS4000 EXP420	18128Vx	3	22	85
DS4000 EXP810	181281x	3	22	85
FC Switch 10- port	691810X	2 per 1	6	2
Tape units				
1U Tape Enclosure	87651UX	1	20	18
4U Tape Enclosure	87664UX	4	18	28
1U VXA320 Tape Autoloader	87691VX	1	27	23
2U Universal Tape Autoloader	33622LX	2	29	34
4U Universal Tape Library	33614LX	4	30	86
TS3100 Tape Library	3573L2U	2	29	33
TS3200 Tape Library	3573L4U	4	29	33

Rack options

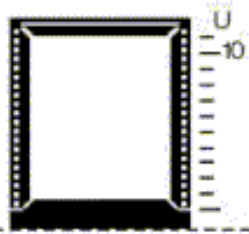
Option part number	T-M-F / FC ¹	Description	Information
Console support:			
17235RX	1723-HC1- 1073	Rack Keyboard Tray	Supports large or small keyboards in racks.
17231RX	1723-HC1- 1071	1U 17in Flat Panel Monitor Console Kit with Ultrabay	1U built-in 17in Flat Panel Monitor (17in viewable image), space for UltraNav Keyboard (order keyboard separately), space for Ultrabay CDROM drive.
39Y6824	4144	CD-RW/DVD Combo Ultrabay Enhanced Drive	Compatible with the 17231RX 1U built-in 17in Flat Panel Monitor Console Kit.
17233RX	1723-HC1- 1072	1U 15in Flat Panel Monitor Console Kit	1U, built-in 15in Flat Panel Monitor (15in viewable image), space for UltraNav Keyboard (order keyboard separately).
42C0030	1723-HC1- 8699	UltraNav Keyboard (PS/2) - US English	IBM Rack Mountable Keyboard & Pointing Device, 3m cable, black, PS/2, US English.
42C0038	1723-HC1- 8738	UltraNav Keyboard (PS/2) - Canadian French	IBM Rack Mountable Keyboard & Pointing Device, 3m cable, black, PS/2, French Canadian, 445 multilingual.
40K5372	1723-HC1- 8660	UltraNav Keyboard (USB) - US English	IBM Rack Mountable Keyboard & Pointing Device, 3m cable, black, USB, US English.
40K5380	1723-HC1- 8668	UltraNav Keyboard (USB) - Canadian French	IBM Rack Mountable Keyboard & Pointing Device, 3m cable, black, USB, French Canadian, 445 multilingual.
17353LX	1735-HC1- 2610	IBM 1x8 Console Switch	1U enhanced KVM console switch, mounts in sidewall compartments, EIA space, or behind 1U Console Kit; 8 enhanced KVM/ACT ports; a single switch supports one to 128 servers, one local console.
17354LX	1735-HC1- 2611	IBM 2x16 Console Switch	1U enhanced KVM console switch, mounts in sidewall compartments, EIA space, or behind 1U Console Kit; 16 enhanced KVM/ACT ports; a single switch supports one to 256 servers, two local consoles.
31R3130	3750	3m Console Switch Cable (PS2)	Connects servers with PS/2 K-V-M ports to the enhanced KVM console switches
31R3132	3751	3m Console Switch Cable (USB)	Connects servers with USB and VGA K-V-M ports to the enhanced KVM console switches
17351GX	1735-HC1- 1066	Local Console Manager (LCM2)	1U mounts in sidewall compartments, EIA space, or behind 1U Console Kit; 8 ACT ports; supports one to 128 servers, two local consoles, locally attached media devices.
17352GX	1735-HC1- 1067	Global Console Manager (GCM2)	1U mounts in sidewall compartments or EIA space; 16 ACT ports; supports one to 256 servers, one local console and two remote consoles, locally attached media devices.
17354GX	1735-HC1- 1068	Global Console Manager (GCM4)	1U mounts in sidewall compartments or EIA space; 16 ACT ports; supports one to 256 servers, one local console and four remote consoles, locally attached media devices.

39M2896	3752	Short KVM Conversion Option Pack	Converts the console signals of servers with PS/2 and VGA console ports and without cable management arms (not on slides) so they can be chained to connect to a Local or Global Console Manager using Cat5 cable. Option Pack includes four sets of cables.
39M2897	3754	Long KVM Conversion Option Pack	Converts the console signals of servers with PS/2 and VGA console ports and cable management arms (on slides) so they can be chained to connect to a Local or Global Console Manager using Cat5 cable. Option Pack includes four sets of cables.
39M2895	3756	USB Conversion Option Pack	Converts the console signals of servers with USB and VGA console ports and cable management arms (on slides) so they can be chained to connect to a Local or Global Console Manager using Cat5 cable. Option Pack includes four sets of cables.
39M2894	3758	Virtual Media Conversion Option	Converts the console signals of servers with USB and VGA console ports and cable management arms (on slides) so they can be connected to a Local or Global Console Manager using Cat5 cable; supports server communication with a media device connected to the console manager. Option includes one cable set.
Power Distribution Support - Power Cables³			
39Y7931	6207	Rack Power Cable - 4.3m C13/5-15P	4.3m long rated 10A/127V with IEC 320-C13 to NEMA 5-15P connectors, used to connect components to the DPI 100-127V NEMA PDU and the UPS3000LV
39Y7937	6201	Rack Power Cable - 1.5m C13/C14	1.5m long rated 10A/100-250V with IEC 320-C13 to IEC 320-C14 connectors, used to connect components to DPI Universal Rack, Enterprise C13 PDUs, and UPS3000HV
39Y7932	6263	Rack Power Cable - 4.3m C13/C14	4.3m long rated 10A/100-250V with IEC 320-C13 to IEC 320-C14 connectors, used to connect components to DPI Universal Rack, Enterprise PDUs, and UPS3000HV
39Y7938	6204	Rack Power Cable - 2.8m C13/C20	2.8m long, rated 10A/100-250V, with IEC 320-C13 to IEC 320-C20 connectors, used to connect components to DPI Front-end, High Density, and Enterprise C19 PDUs, UPS7500XHV and UPS10000XHV, bypassing the need for a DPI Rack PDU.
39Y7916	6252	Rack Power Cable - 2.5m C19/C20	2.5m long, rated 16A/100-250V, with IEC 320-C19 to IEC 320-C20 connectors, used to connect high power components with C20 inlets to DPI Front-end, High Density, or Enterprise C19 PDUs, and UPS7500XHV, and UPS10000XHV.
Mechanical options			
25R5559	4272	1U Quick Install Filler Panel Kit	Consists of five 1U blank filler panels.
25R5560	4274	3U Quick Install Filler Panel Kit	Consists of five 3U blank filler panels.
32R0712	4392	Heat Exchanger Rear Door	Rear door for the 9308 Enterprise Rack; requires customer provided chilled water.
40K9627	4852	Acoustic Door Kit for Enterprise Rack	Front and rear doors for the 9308 Enterprise Rack; usable with the BladeCenter and BladeCenter H enclosures.
17237RX	1723-HC1-1070	Fixed Shelf	Supports up to 100lbs.

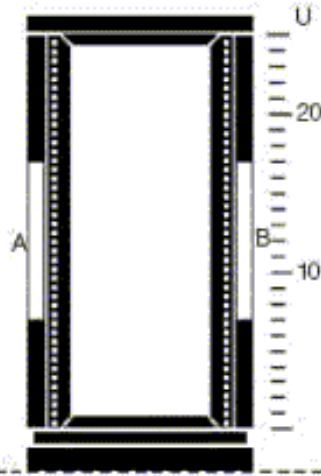
Note:

1. Type-Model-Feature or Feature Code. This format is used with the eConfig Product and Solution Configurator in the US and Canada.
2. See the Rack Power Configurator Chapter for a complete listing of PDUs and UPS options.

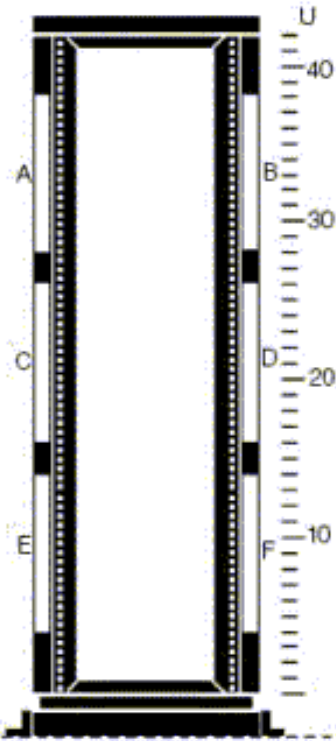
NetBAY11
Standard Rack



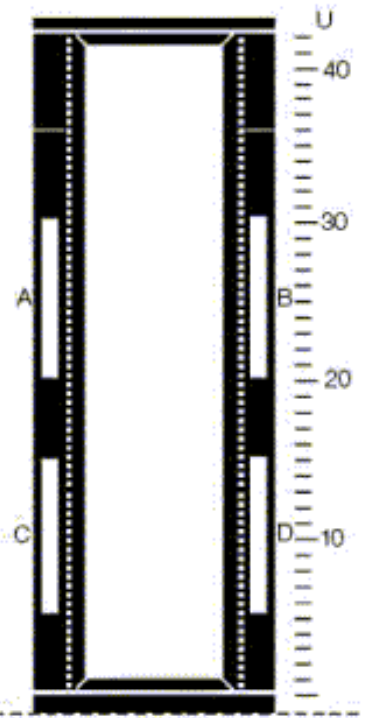
S2 25U Standard Rack

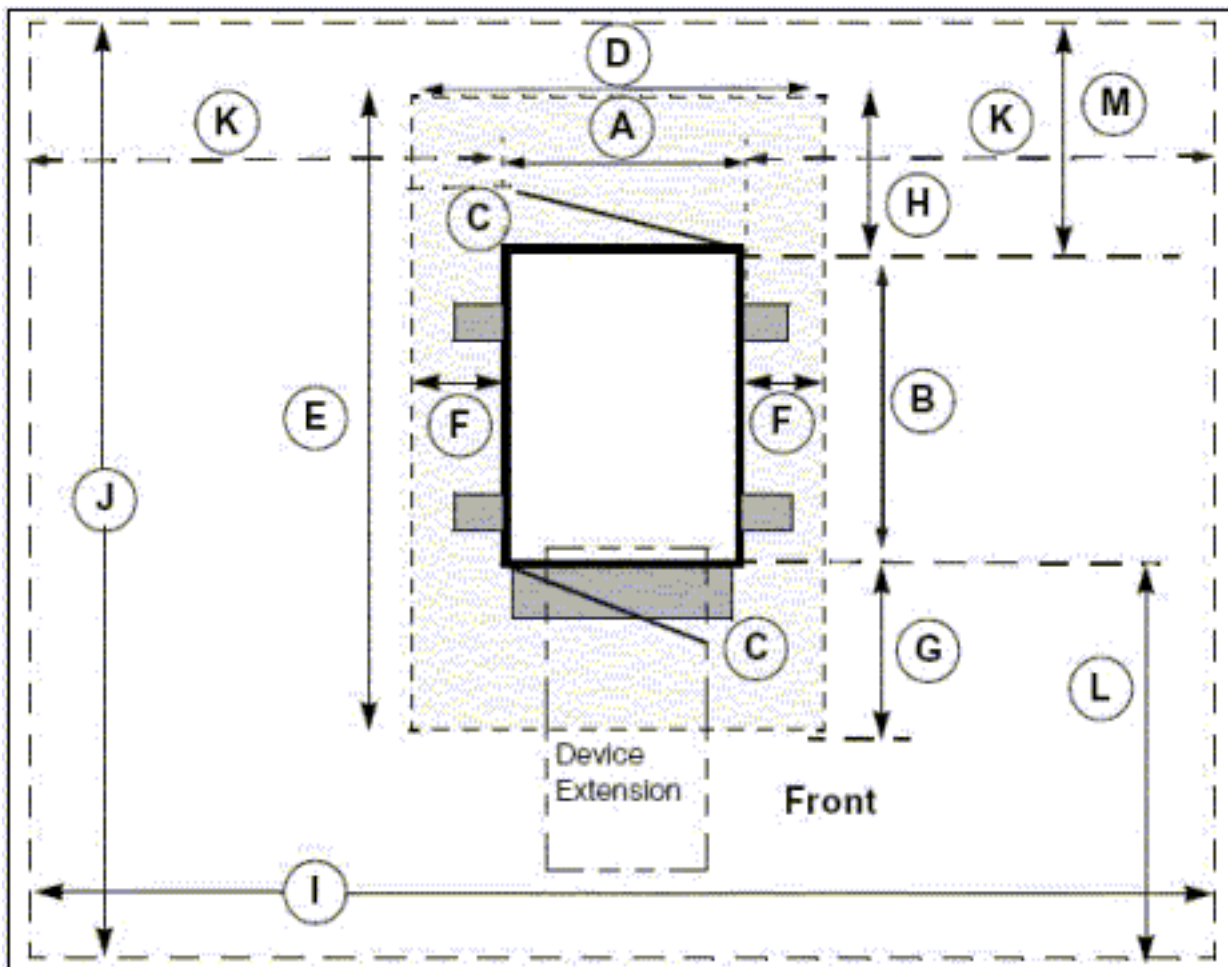


S2 42U Standard Rack



NetBAY42
Enterprise Rack





Rack console options

Attention:

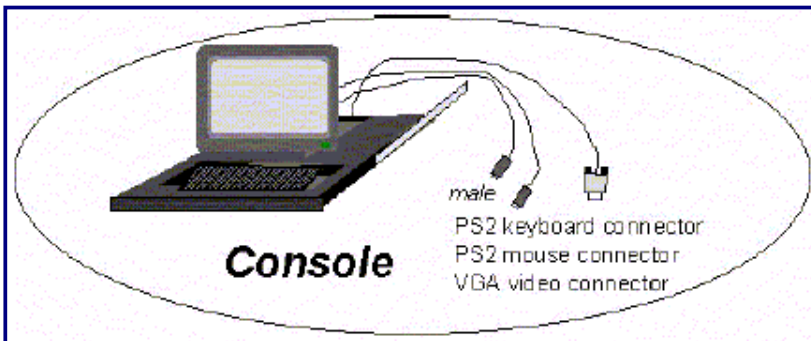
A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

Rack options

Console switching

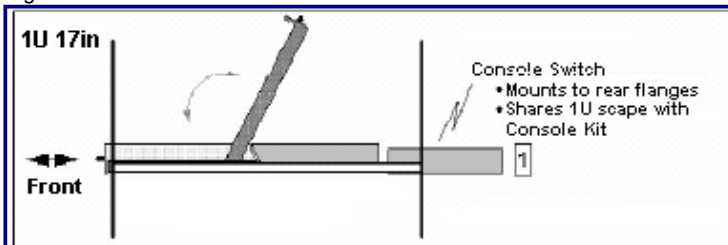
A console consisting of a keyboard, monitor and pointing device is required by each server for system maintenance and support. The console may be local or remote and may be dedicated to a single server or shared across a large array of servers, which requires the use of one or more console switching devices.

Flat Panel Monitor Console Kits



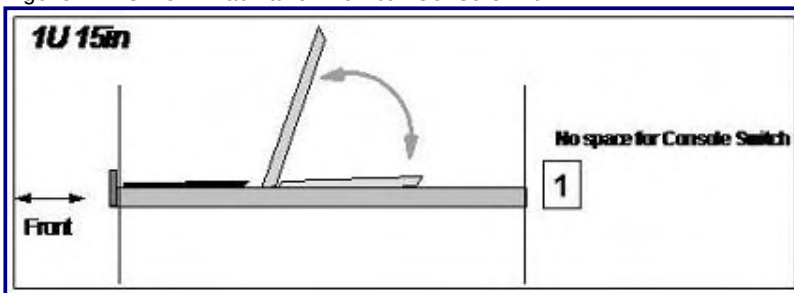
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Figure 1. 1U 17in Flat Panel Monitor Console Kit



[Click image to enlarge](#)

Figure 2. 1U 15in Flat Panel Monitor Console Kit



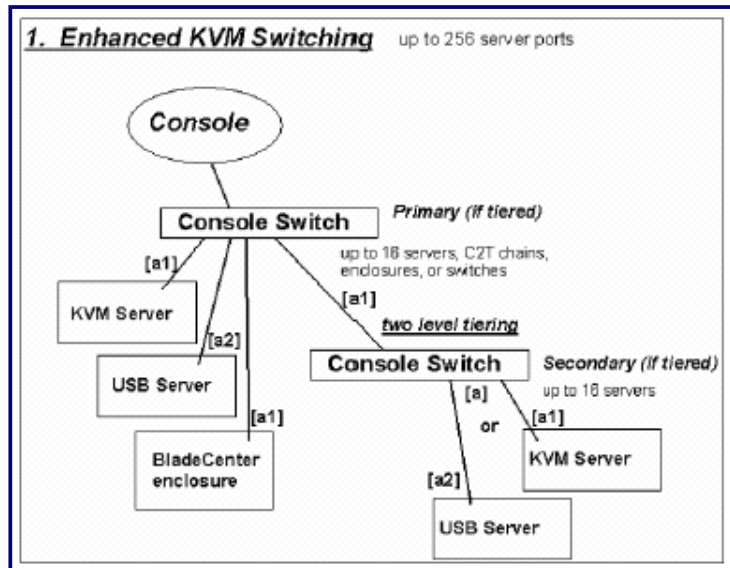
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Rack console options

Attention:

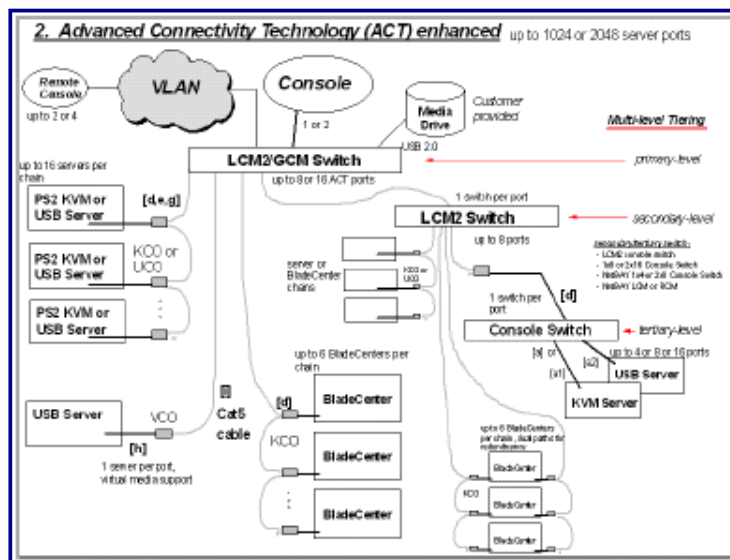
A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

Rack options Console switching



Click image to enlarge

Refer to the cable labeling key in the Cable Options table appearing later in this section.



Click image to enlarge

Refer to the cable labeling key in the Cable Options table appearing later in this section.

Switch options

	Ports	
IN		OUT
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		506

Option number	T-M-F ¹	Description ²	Switch type	Type ³	Qty	Type	Qty	ACI ports ⁴
17353LX	1735-HC1-2610	1x8 Console Switch	Enh KVM/ACT Combo	ARI/ACT Combo ⁵	8	PS2 or USB	1	1
17354LX	1735-HC1-2611	2x16 Console Switch	Enh KVM/ACT Combo	ARI/ACT Combo ⁵	16	PS2 or USB	2	1
17351GX	1735-HC1-1066	2x8 Local Console Manager (LCM2)	ACT	ACT	8	PS2 or USB	2	1
17352GX	1735-HC1-1067	2x16 Global Console Manager (GCM2)	ACT	ACT	16	PS2 or USB	1	0
						LAN	1	
17354GX	1735-HC1-1068	4x16 Global Console Manager (GCM4)	ACT	ACT	16	PS2 or USB	1	0
						LAN	1	

Switch options (continue)

Capacity									
Option number	T-M-F ¹	Description ²	Switch type	Single switch		Two-level tiering			
				max PS2 KVM servers	max USB KVM servers	max BladeCenters	ACT chains	max switches	max KVM servers
17353LX	1735-HC1-2610	1x8 Console Switch	Enh KVM/ACT Combo	128	128	48	8	8	128
17354LX	1735-HC1-2611	2x16 Console Switch	Enh KVM/ACT Combo	256	256	96	16	16	256
17351GX	1735-HC1-1066	2x8 Local Console Manager (LCM2)	ACT	128	128	48	8	8	512
17352GX	1735-HC1-1067	2x16 Global Console Manager (GCM2)	ACT	256	256	96	16	16	2048
17354GX	1735-HC1-1068	4x16 Global Console Manager (GCM4)	ACT	256	256	96	16	16	2084

Switch options (continue)

Capacity							
Option number	T-M-F ¹	Description ²	Three-level tiering				
			max switches	max KVM servers	local consoles	remote consoles	
17353LX	1735-HC1-2610	1x8 Console Switch	-	-	1	-	
17354LX	1735-HC1-2611	2x16 Console Switch	-	-	2	-	
17351GX	1735-HC1-1066	2x8 Local Console Manager (LCM2)	64	1024	2	-	
17352GX	1735-HC1-1067	2x16 Global Console Manager (GCM2)	128	2048	1	2	
17354GX	1735-HC1-1068	4x16 Global Console Manager (GCM4)	128	2048	1	4	

Switch options (continue)

Standard parts							
Option number	T-M-F ¹	Description ²	1U blank filler panel	1.8m Cat5 cable	Cat5 terminator	EIA mounting kit	side-wall mounting kit
17353LX	1735-HC1-2610	1x8 Console Switch	1	1	8	1	1

17354LX	1735-HC1-2611	2x16 Console Switch	1	1	16	1	1
17351GX	1735-HC1-1066	2x8 Local Console Manager (LCM2)	1	1	8	1	1
17352GX	1735-HC1-1067	2x16 Global Console Manager (GCM2)	1	1	16	1	1
17354GX	1735-HC1-1068	4x16 Global Console Manager (GCM4)	1	1	16	1	1

Notes:

1. Type-Model-Feature ordering system now used in the US and Canada.
2. All switches are RoHS compliant.
3. ARI port is an RJ45 connector used to connect servers with appropriate console cables (Option P/Ns 31R3130, 31R3132); ACT port is an advanced ARI RJ45 port supporting chaining of servers and virtual media using Cat5 cables and appropriate conversion cables (Option P/Ns 39M2894, 39M2895, 39M2896, 39M2897).
4. ACI port is an RJ45 connector used for direct connection of this switch up to one of the parent switch's ARI or ACT ports using Cat5 cable.
5. ARI/ACT Combo ports allow use of either console cables (Option P/Ns 31R3130, 31R3132) or ACT conversion cables (Option P/Ns 39M2895, 39M2896, 39M2897). The Virtual Media conversion cable (Option P/N 39M2894) is not supported.

Switch placement rules

Mounting locations	LCM2	GCM
Monitor shelf\switch bay	yes	no
1U 17in Console\switch bay	yes	no
1U 15in Console\switch bay	yes	yes
Side-wall compartment	yes	yes
U compartment (EIA space)	yes	yes

Cable options (Table 1)

Label	Part number	Feature code ¹	Description	2.1m KVM cable (PS2 male to PS2 male)	3.8m KVM cable (PS2 male to PS2 male)	3m PS2 KVM cable (PS2 male to RJ45)	3m USB KVM cable (USB, DB15 to RJ45)	260mm C2T chaining cable (C2T male to C2T male) ²	2m C2T chaining cable (C2T male to C2T male) ³	2m C2T breakout cable (C2T male to PS2 female)
[a1]	31R3130	3750	3m PS2 Console Switch Cable	-	-	1	-	-	-	-
[a2]	31R3132	3751	3m USB Console Switch Cable	-	-	-	1	-	-	-
[d]	39M2896	3752	short KVM Conversion Option kit (KCO)	-	-	-	-	-	-	-
	-	3753	short KVM conversion cable set	-	-	-	-	-	-	-
[e]	39M2897	3754	long KVM Conversion Option kit (KCO)	-	-	-	-	-	-	-
	-	3755	long KVM conversion cable set	-	-	-	-	-	-	-
[g]	39M2895	3756	USB Conversion Option Kit (UCO)	-	-	-	-	-	-	-
	-	3757	USB conversion cable set	-	-	-	-	-	-	-
[h]	39M2894	3758	Virtual Media Conversion Option (VCO)	-	-	-	-	-	-	-
[i]	-	3760 3761	Cat5 cable	various lengths provided with option or by customer						

The following options have been withdrawn from marketing:

[a]	09N4293	-	Console Cable Set - 7ft	1	-	-	-	-	-
[a]	94G7447	-	Console Cable Set - 12ft	-	1	-	-	-	-
[b]	with server	-	C2T chaining cable	-	-	-	-	1	-
[c]	06P4792	-	Virtual Media Conversion Option (VCO)	-	-	-	-	1	1
[f]	32P1637	-	C2T Conversion Option Kit	-	-	-	-	-	-

Cable options (Table 2)

Label	Part number	Feature code ¹	Description	250mm KCO cable (PS2 male to RJ45)	1.5m KCO cable (PS2 male to RJ45)	114mm CCO cable (C2T male to RJ45)	1.5m UCO cable (USB, DB15 to RJ45)	1.5m VCO cable (USB, DB15 to RJ45)
[a1]	31R3130	3750	3m PS2 Console Switch Cable	-	-	-	-	-
[a2]	31R3132	3751	3m USB Console Switch Cable	-	-	-	-	-
[d]	39M2896	3752	short KVM Conversion Option kit (KCO)	4	-	-	-	-
	-	3753	short KVM conversion cable set	1	-	-	-	-
[e]	39M2897	3754	long KVM Conversion Option kit (KCO)	-	4	-	-	-
	-	3755	long KVM conversion cable set	-	1	-	-	-
[g]	39M2895	3756	USB Conversion Option Kit (UCO)	-	-	-	4	-
	-	3757	USB conversion cable set	-	-	-	1	-
[h]	39M2894	3758	Virtual Media Conversion Option (VCO)	-	-	-	-	1
[i]	-	3760 3761	Cat5 cable	various lengths provided with option or by customer				
The following options have been withdrawn from marketing:								
[a]	09N4293	-	Console Cable Set - 7ft	-	-	-	-	-
[a]	94G7447	-	Console Cable Set - 12ft	-	-	-	-	-
[b]	with server	-	C2T chaining cable	-	-	-	-	-
[c]	06P4792	-	C2T Cable Kit	-	-	-	-	-
[f]	32P1637	-	C2T Conversion Option Kit	-	-	1	-	-

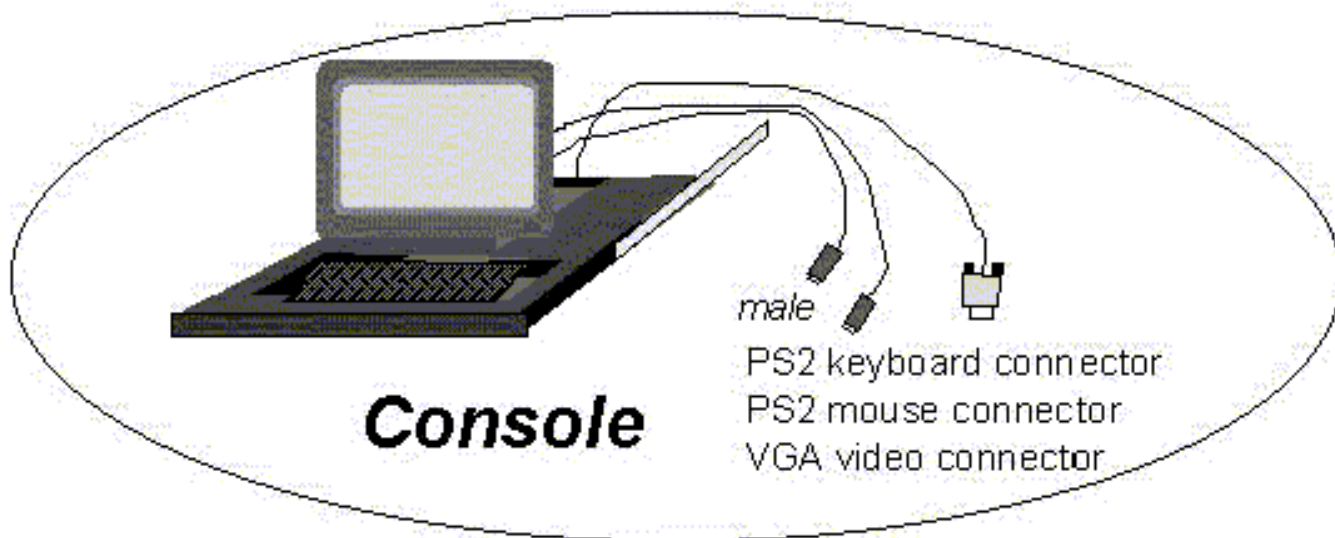
Cable options (Table 3)

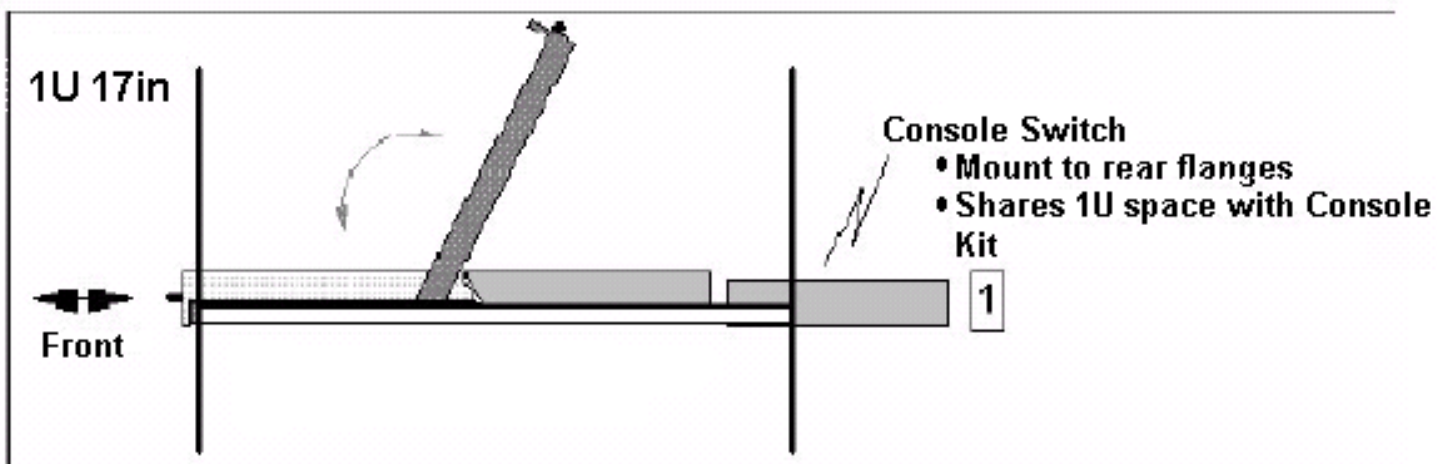
Label	Part number	Feature code ¹	Description	150mm Cat5 cable (RJ45 to RJ45)	350mm Cat5 cable (RJ45 to RJ45)	1.8m Cat5 cable (RJ45 to RJ45)	Usage
[a1]	31R3130	3750	3m PS2 Console Switch Cable	-	-	-	servers with PS2 KVM ports
[a2]	31R3132	3751	3m USB Console Switch Cable	-	-	-	servers with USB +VGA KVM ports
[d]	39M2896	3752	short KVM Conversion Option kit (KCO)	4	-	-	servers with PS2 KVM ports and no cable management arms
	-	3753	short KVM conversion cable set	1	-	-	

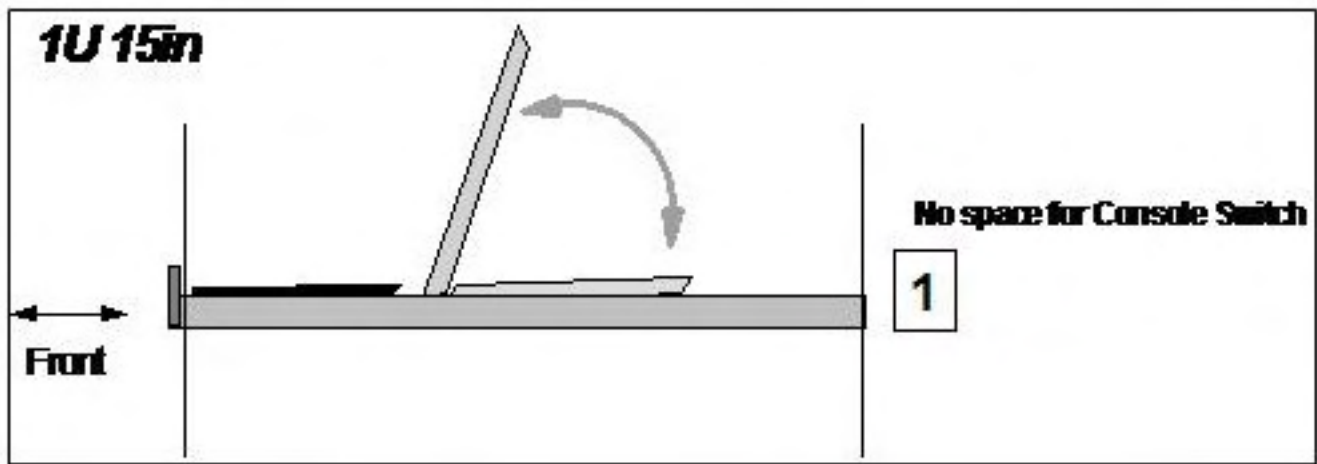
[e]	39M2897	3754	long KVM Conversion Option kit (KCO)	-	4	-	servers with PS2 KVM ports and with cable management arms
	-	3755	long KVM Conversion Option kit (KCO)	-	1	-	
[g]	39M2895	3756	USB Conversion Option Kit (UCO)	-	4	-	servers with USB +VGA KVM ports
	-	3757	USB conversion cable set	-	1	-	
[h]	39M2894	3758	Virtual Media Conversion Option (VCO)	-	-	1	servers with USB +VGA KVM ports
[i]	-	3760 3761	Cat5 cable	various lengths provided with option or by customer			
The following options have been withdrawn from marketing:							
[a]	09N4293	-	Console Cable Set - 7ft	-	-	-	servers with PS2 KVM ports ⁴
[a]	94G7447	-	Console Cable Set - 12ft	-	-	-	servers with PS2 KVM ports ⁴
[b]	with server	-	C2T chaining cable	-	-	-	included with x335 ⁵
[c]	06P4792	-	C2T Cable Kit	-	-	-	x335
[f]	32P1637	-	C2T Conversion Option Kit	-	-	1	x335 ⁶

Notes:

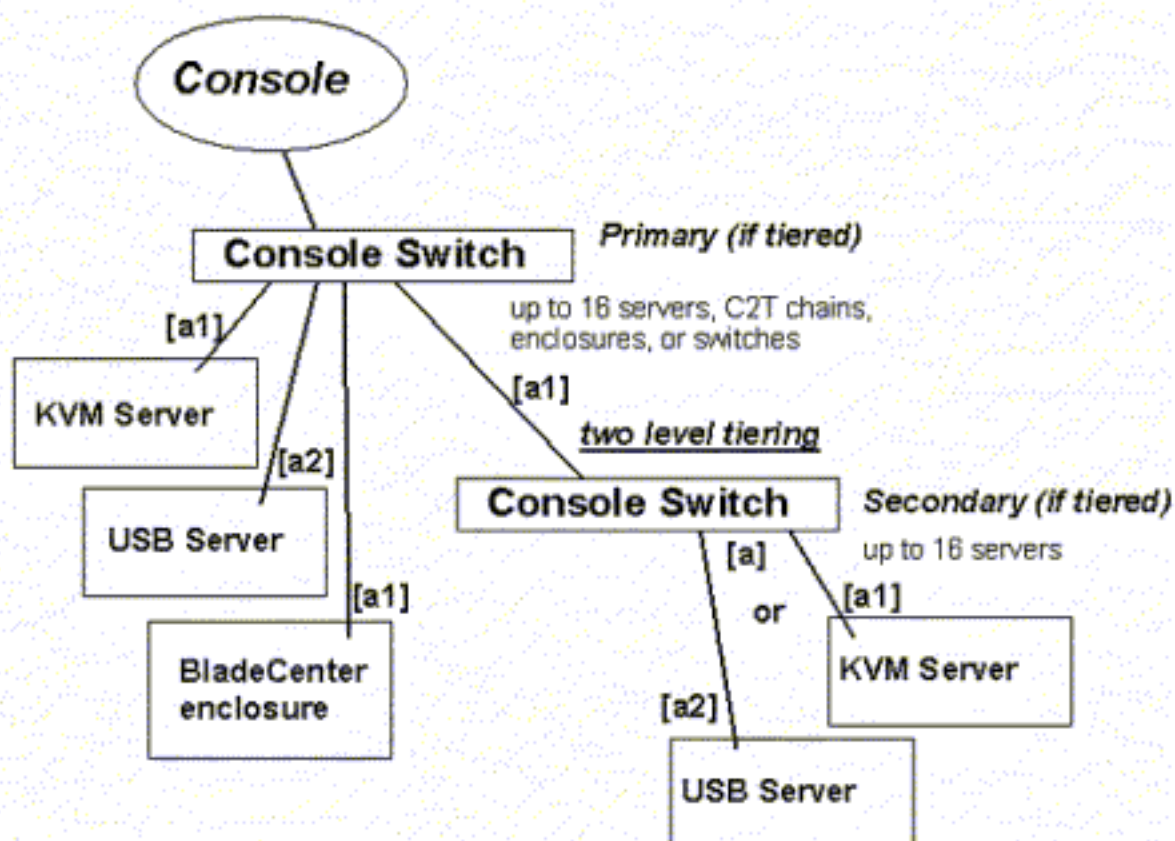
1. Type-Model-Feature ordering system now used in the US and Canada.
2. Short C2T chaining cable standard with the C2T-capable servers.
3. C2T Cable Kit (P/N 06P4792) includes a long C2T chaining cable for use when interconnected servers are farther than three EIA units apart.
4. PS2 KVM connectors: keyboard 6-pin DIN, mouse 6-pin DIN, video HD-15 VGA.
5. C2T Interconnect ports use special connectors.
6. ACT conversion options convert from PS2 KVM, USB plus VGA, or C2T interconnect to Cat5 RJ45 connectors.







1. Enhanced KVM Switching up to 256 server ports



up to 1024 or 2048 server ports



Rack power configurator

Attention:

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Overview | **US & Canada** | **EMEA** | **Asia Pacific** | **Latin America**

Rack Power Products | [Sample Power Configurations](#) |

[Rack Placement](#) |

Attention: UPS Data for Latin America and Asia Pacific will be added in a later COG release.

Rack Power Products:**IBM Distributed Power Interconnect (DPI) Power Distribution Units (PDU)**

- DPI 100-127v NEMA PDU
- DPI Universal Rack PDU
- DPI Single-phase Front-end PDUs
- DPI Single-phase Enterprise PDUs and PDU+ with Monitoring
- DPI Three-phase Enterprise PDUs and PDU+ with Monitoring
- DPI Three-phase High Density PDU

IBM 7176 Ultra Density Enterprise Power Distribution Units (PDUs)

- Ultra Density Enterprise PDU
- Ultra Density Enterprise PDU+ with Monitoring

IBM Uninterruptable Power Supplies (UPS)

- UPS3000LV
- UPS3000HV
- UPS75000XHV
- UPS10000XHV

Power Outlets**IBM Power Distribution Unit**

Outlets	C19	C13	5-15R
NEMA PDU	0	0	6
Rack PDU	0	7	0
Front-end PDU	3	0	0
Enterprise C13 PDU	0	12	0
Enterprise C13 PDU+	0	12	0
Enterprise C19 PDU	6	0	0
Enterprise C19/C13 PDU+	6	3	0
High Density PDU	12	0	0
Ultra Density Enterprise C19/C13 PDU	9	3	0
Ultra Density Enterprise C19/C13 PDU+	9	3	0

IBM Uninterruptable Power Supplies

	Native ports	Total Ports Using Rack PDUs

Outlets	C19	C13	5-15R	L5-30R	C19	C13	5-15R	L5-30R
IBM 3000LV	0	0	6	1	0	0	6	1
IBM 3000HV	1	9	0	0	0	16	0	0
IBM 7500XHV	4	0	0	0	0	28	0	0
IBM 10000XHV	4	0	0	0	0	28	0	0

Notes: (reference the following graphic):

1. Each device usually comes with a power cord. The PDU requires the power cord to have an IEC 320-C14 plug. Order 39Y7932(14ft) if appropriate cord is not provided with the device.
2. Each PDU comes with or requires a country-specific power cord.
3. P/S = Power Supply
4. One 2m internal rack power cable provided with DPI Rack PDU.
5. Devices with C20 power inlets require C19 to C20 power cords.
6. Option 39Y7938 provides a C13 to C20 power cord to attach normal devices with C14 power inlets directly to Front-end, Enterprise C19, or High Density PDUs.
7. UPS uses a country-specific line cord or has a terminal block requiring an electrician to connect to power source.
8. Line cord provided with Front-end PDU.

Attention: Customers are responsible for providing a dedicated circuit for each line cord protected with an appropriate circuit breaker.

Rack power configurator

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[Rack Power Products](#) | [Sample Power Configurations](#) |

[Rack Placement](#) |

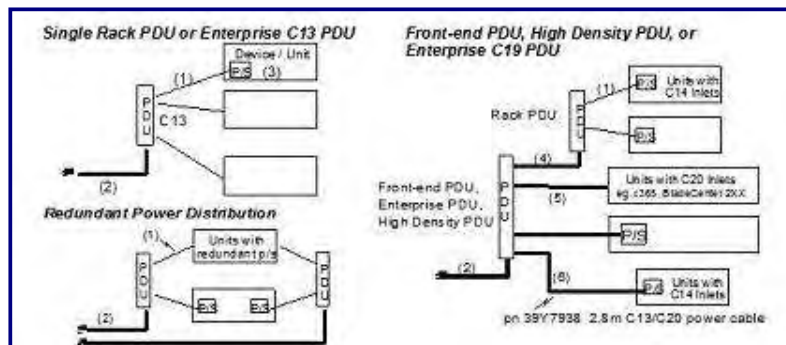
Notes (referencing the following graphic):

1. Each device usually comes with a power cord. The PDU requires the power cord to have an IEC 320-C14 plug. Order 39Y7932 (14ft) if appropriate cord is not provided with the device.
2. Each PDU comes with or requires a country-specific power cord.
3. P/S = Power Supply
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7. UPS uses a country-specific line cord or has a terminal block requiring an electrician to connect to power source.
8. Line cord provided with Front-end PDU.

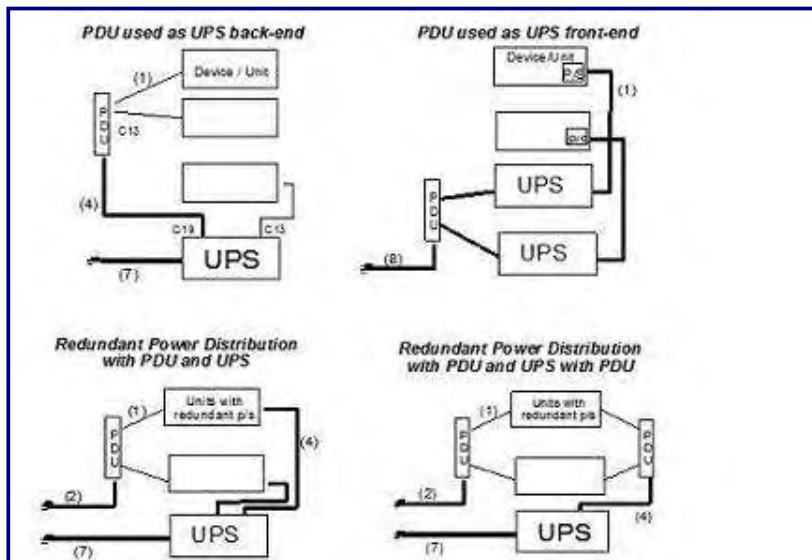
Attention: Customers are responsible for providing a dedicated circuit for

each line cord protected with an appropriate circuit breaker.

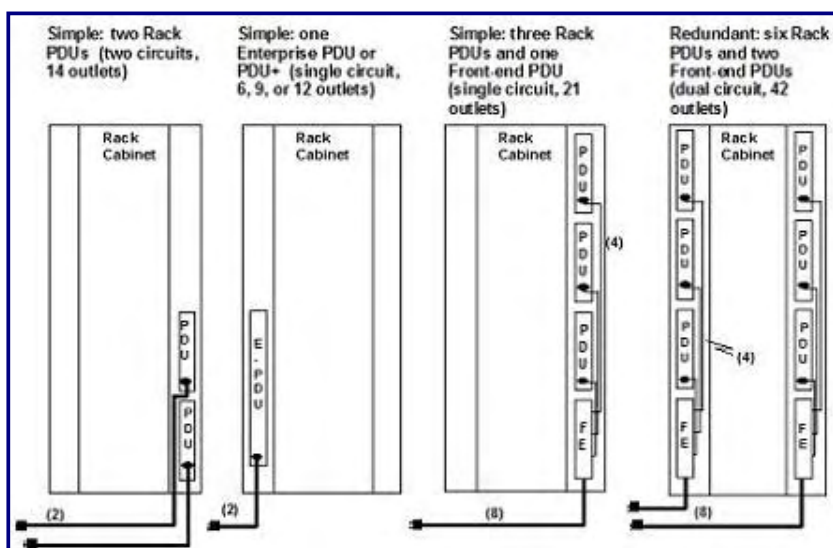
Sample Power Configuration:



[Click image to enlarge](#)



Click image to enlarge



Click image to enlarge

Rack power configurator

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[Rack Power Products](#) | [Sample Power Configurations](#) |

[Rack Placement](#) |

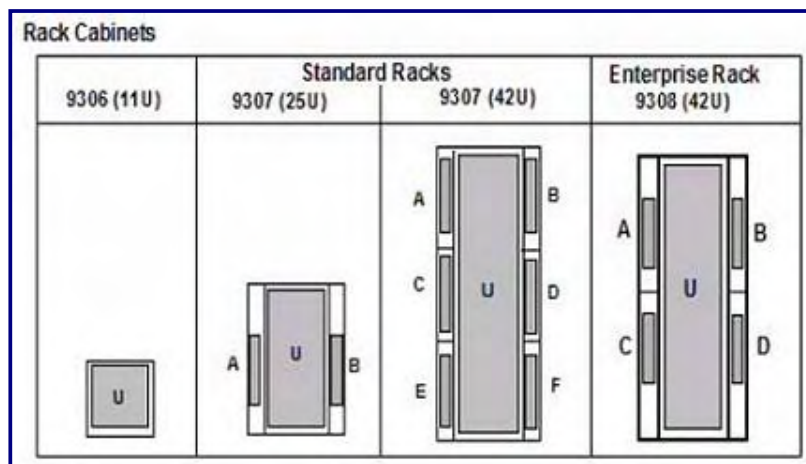
Rack Placement:

Rack PDU Placement Rules and PDU Capacities

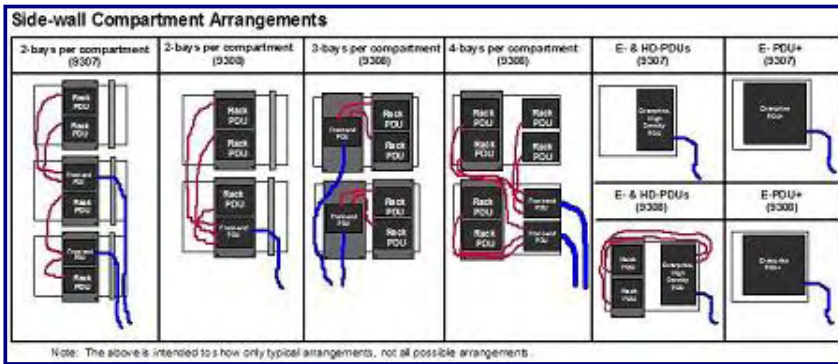
- NetBay and DPI PDUs cannot be mixed in the same side-wall compartment.
- DPI Rack PDUs can be cabled to NetBay Front-end PDUs.

PDUs per Rack	Standard		Enterprise		
	25U 2-bay	9307 42U 2-bay	9308 2-bay	3-bay	4-bay
Rack PDUs	4	8	8	8	12
Front-end PDUs	2	4	2	4	4 or 8
Enterprise PDUs	2	4	2	4	4
High Density PDUs	2	4	4	4	4
Total PDUs	4	12	8	12	16

NOTE: The 9306 11U small rack cabinet does not have a sidewall compartment. A PDU can be installed, but is normally not required.

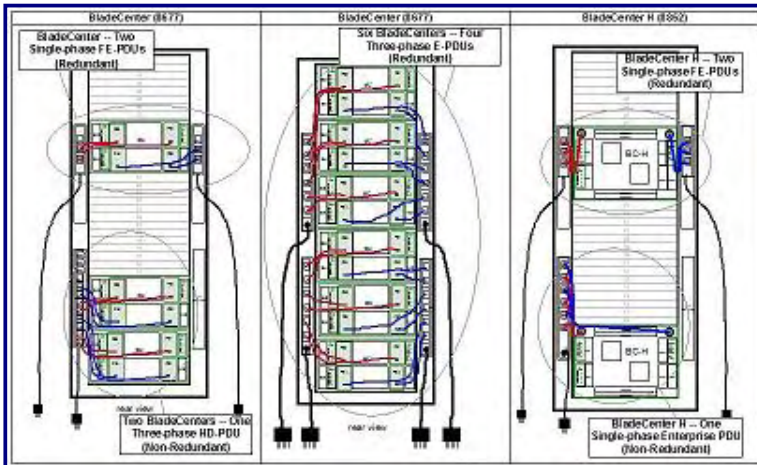


[Click image to enlarge](#)



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BladeCenter examples:



[Click image to enlarge](#)

Rack power configurator

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[Overview](#) | [US & Canada](#) | [EMEA](#) | [Asia Pacific](#) | [Latin America](#)

[DPI PDU](#) | [DPI Enterprise PDU](#) | [IBM 7176 Ultra Density Enterprise PDU](#) |

[IBM UPS](#) |

DPI Power Distribution Units (US and Canada)

The following PDUs have line cords included:

Option part number	Feature code	Description	Power cord description	Power source
DPI 100-127V NEMA PDU				
39Y8905	5900	DPI 100-127V NEMA PDU	attached line cord: 9ft NEMA L5-15P	single-phase 15A/100-127V 60Hz
		Specifications Outlets:six NEMA 5-15R Power Capacity:1440W @ 120V Power Limit per Outlet:10A Power Limit per PDU:12A circuit breaker Power Monitoring:No		
DPI Universal Rack PDU				
	5950	DPI Universal Rack PDU (US)	rack power cable: 2m C19/C20	another PDU or UPS (100-250V)
39Y8951	5949		line cord: 4.3m NEMA L5-20P	single-phase 20A/120V 60Hz
	5951		line cord: 4.3m NEMA L6-20P	single-phase 20A/208V 60Hz
		Specifications Version: to PDU or UPS Outlets: seven IEC C13 Power Capacity: 3000W @ 200V Power Limit per Outlet: 10A Power Limit per PDU: 15A circuit breaker Power Monitoring: No		
DPI Front-end PDU				
39Y8938	6002	DPI Single-phase 30A/120V Front-end PDU (US)	detachable line cord: 2.5m NEMA L5-30P	single-phase 30A/120V
39Y8939	6003	DPI Single-phase 30A/208V Front-end PDU(US)	detachable line cord: 2.5m NEMA L6-30P	single-phase 30A/208V
39Y8940	6004	DPI Single-phase 60A/208V Front-end PDU(US)	detachable line cord: 2.5m IEC 309 2P+G	single-phase 60A/208V
		Specifications Version: 30A/120V 30A/208V 60A/208V		

			Outlets: three IEC C19	three IEC C19	three IEC C19
			Power Capacity: 2880W @ 120V	4992W @ 208V	9984W @ 208V
			Power Limit per Outlet: 16A	16A	16A
			Power Limit per PDU: 24A	24A	48A
			Power Monitoring: No	No	No
DPI High Density PDU					
73P5847	6071	DPI Three-phase 60A/208V High Density PDU (US)		attached line cord: 4.3m IEC 309 3P+G	three-phase 60A/208V
		Specifications			
		Outlets: twelve IEC C19			
		Power Capacity: 17285W @ 208V			
		Power Limit per Outlet: 16A			
		Grouping: four per phase			
		Power Limit per Group: 27.7A			
		Power Monitoring: No			
Note:	This table describes some of the IBM Distributed Power Interconnect products, a family of power distribution units (PDUs). See the table DPI Enterprise Power Distribution Units for more options. When ordering PDUs as separate options, use the Option Part Number. For integrated rack-based solutions, Feature Codes are used to order the PDUs as features of the Rack Cabinet. Feature Codes are used with the eConfig Product and Solution Configurator.				

Rack power configurator

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[DPI PDU](#) | [DPI Enterprise PDU](#) | [IBM 7176 Ultra Density Enterprise PDU](#) |

[IBM UPS](#) |

DPI Enterprise Power Distribution Units (US & Canada)

Order a PDU Module...			Plus a Line Cord					
Feature code for bundle	Option part number	Feature code	PDU model description	+	Option part number	Feature code	Power card description	Power source
DPI Enterprise PDU and PDU +								
6012	39Y8941	6010	DPI C13 Enterprise Module (WW)	+	40K9614	6500	4.3m, 30A/208V, NEMA L6-30P (US) Line Cord	single-phase 30A/208V 60Hz
6013	39Y8941	6010	DPI C13 Enterprise Module (WW)	+	40K9615	6501	4.3m, 60A/208V, IEC 309 2P+G (US) Line Cord	single-phase 60A/208V 60Hz
			Specifications					
			Version:	30A/208V	60A/208V			
			Outlets:	twelve IEC C13	twelve IEC C13			
			Power Capacity:	4992W @ 208V	9984W @ 208V			
			Power Limit per Outlet:	10A	10A			
			Power Limit per PDU:	24A	48A			
			Power Monitoring:	No	No			
6062	39Y8948	6060	DPI C19 Enterprise Module (WW)	+	40K9614	6500	4.3m, 30A/208V, NEMA L6-30P (US) Line Cord	single-phase 30A/208V 60Hz
6063	39Y8948	6060	DPI C19 Enterprise Module (WW)	+	40K9615	6501	4.3m, 60A/208V, IEC 309 2P+G (US) Line Cord	single-phase 60A/208V 60Hz
6061	39Y8923	6061	DPI Three-phase 60A/208V C19 Enterprise PDU(US)				attached line cord: 4.3m IEC 309 3P+G	three-phase 60A/208V 60Hz
			Specifications					
			Version:	30A/208V	60A/208V	3-phase		
			Outlets:	six IEC C19	six IEC C19	six IEC C19		
			Power Capacity:	4992W @ 208V	9984W @ 208V	17285W @ 208V		
			Power Limit per Outlet:	16A	16A	16A		
			Grouping:	-	-	two per phase		
			Power Limit per Group:	-	-	27.7A		
			power limit per pdu:	24A	48A	-		
			Power Monitoring:	No	No	No		

6032	39M2816	6030	DPI C13 Enterprise PDU + Module (WW)	+	40K9614	6500	4.3m, 30A/208V, NEMA L6-30P (US) Line Cord	single-phase 30A/208V 60Hz																																																								
6033	39M2816	6030	DPI C13 Enterprise Module (WW)	+	40K9615	6501	4.3m, 60A/208V, IEC 309 2P+G (US) Line Cord	single-phase 60A/208V 60Hz																																																								
Specifications																																																																
<table><tr><td>Version:</td><td>30A/208V</td><td>60A/208V</td></tr><tr><td>Outlets:</td><td>twelve IEC C13</td><td>twelve IEC C13</td></tr><tr><td>Power Capacity:</td><td>4992W @ 208V</td><td>9984W @ 208V</td></tr><tr><td>Power Limit per Outlet:</td><td>10A</td><td>10A</td></tr><tr><td>Power Limit per PDU:</td><td>24A</td><td>48A</td></tr><tr><td>Power Monitoring:</td><td>Yes</td><td>Yes</td></tr></table>									Version:	30A/208V	60A/208V	Outlets:	twelve IEC C13	twelve IEC C13	Power Capacity:	4992W @ 208V	9984W @ 208V	Power Limit per Outlet:	10A	10A	Power Limit per PDU:	24A	48A	Power Monitoring:	Yes	Yes																																						
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6082	39M2818	6080	DPI C19 Enterprise PDU + Module (WW)	+	40K9614	6500	4.3m, 30A/208V, NEMA L6-30P (US) Line Cord	single-phase 30A/208V 60Hz																																																								
6083	39M2818	6080	DPI C19 Enterprise PDU + Module (WW)	+	40K9615	6501	4.3m, 60A/208V, IEC 309 2P+G (US) Line Cord	single-phase 60A/208V 60Hz																																																								
6081	39M2819	6081	DPI Three-phase 60A/208V C19 Enterprise PDU+ (US)				attached line cord: 4.3m IEC 309 3P +Gnd	three-phase 60A/208V 60Hz																																																								
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<table><tr><td>Version:</td><td colspan="2">30A/208V</td><td colspan="2">60A/208V</td><td colspan="2">3-phase</td></tr><tr><td>Outlets:</td><td>six IEC C19</td><td>three IEC C13</td><td>six IEC C19</td><td>three IEC C13</td><td>six IEC C19</td><td>three IEC C13</td></tr><tr><td>Power Capacity:</td><td colspan="2">4992W @ 208V</td><td colspan="2">9984W @ 208V</td><td colspan="2">17285W @ 208V</td></tr><tr><td>Power Limit per Outlet:</td><td>16A</td><td>10A</td><td>16A</td><td>10A</td><td>16A</td><td>10A</td></tr><tr><td>Grouping:</td><td colspan="2">pairing of one C13 with one C19</td><td colspan="2">pairing of one C13 with one C19</td><td colspan="2">each phase has two C19 + one C13</td></tr><tr><td>Power Limit per Group:</td><td colspan="2">20A</td><td colspan="2">20A</td><td colspan="2">27.7A</td></tr><tr><td>Power Limit per PDU:</td><td colspan="2">24A</td><td colspan="2">48A</td><td colspan="2">-</td></tr><tr><td>Power Monitoring:</td><td colspan="2">Yes</td><td colspan="2">Yes</td><td colspan="2">Yes</td></tr></table>									Version:	30A/208V		60A/208V		3-phase		Outlets:	six IEC C19	three IEC C13	six IEC C19	three IEC C13	six IEC C19	three IEC C13	Power Capacity:	4992W @ 208V		9984W @ 208V		17285W @ 208V		Power Limit per Outlet:	16A	10A	16A	10A	16A	10A	Grouping:	pairing of one C13 with one C19		pairing of one C13 with one C19		each phase has two C19 + one C13		Power Limit per Group:	20A		20A		27.7A		Power Limit per PDU:	24A		48A		-		Power Monitoring:	Yes		Yes		Yes	
Version:	30A/208V		60A/208V		3-phase																																																											
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Note:	This table describes some of the IBM Distributed Power Interconnect products that are part of a family of power distribution units (PDUs). See the table 'DPI Power Distribution Units' for more options. When ordering PDUs as separate options use the Option Part Number. For integrated rack-based solutions, Feature Codes are used to order the PDUs as features of the Rack Cabinet. Feature Codes for Bundles are used with the eConfig Product and Solution Configurator.																																																															

Rack power configurator

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[Overview](#) | [US & Canada](#) | [EMEA](#) | [Asia Pacific](#) | [Latin America](#)

[DPI PDU](#) | [DPI Enterprise PDU](#) | **[IBM 7176 Ultra Density Enterprise PDU](#)**

| [IBM UPS](#) |

IBM 7176 Ultra Density Enterprise Power Distribution Units (US & Canada)

Order a PDU Module...			Plus a Line Cord				
MTM	Feature code	PDU model description	SEO / Option part number		Feature code	Power cord description	Power source
IBM Ultra Density Enterprise PDU and PDU+							
7176 - PN1 IBM Ultra Density Enterprise C19/C13 PDU							
71762NX	6050	IBM Ultra Density Enterprise C19/C13 PDU Module (WW)	+	40K9614	6500	4.3m, 30A/208V, NEMA L6-30P (US) Line Cord	single-phase 30A/208V 60Hz
			+	40K9615	6501	4.3m, 60A/208V, IEC 309 2P+G (US) Line Cord	single-phase 60A/208V 60Hz
		Specifications					
		Version:		30A/208V		60A/208V	
		Outlets:		nine IEC C19	three IEC C13	nine IEC C19	three IEC C13
		Power Capacity:		4992W @ 208V		9984W @ 208V	
		Power Limits -					
		per outlet:		16A	10A	16A	10A
		grouping:		pairing of one 10A with one 16A		pairing of one 10A with one 16A	
		per group:		20A		20A	
		per PDU:		24A		48A	
		Power Monitoring:		No		No	
		71763NU	6051	IBM Ultra Density Enterprise C19/C13 PDU 60A/208V/3ph (US)			
		Specifications					
		Version:		3-phase			
		Outlets:		nine IEC C19	three IEC C13		
		Power Capacity:		17285W @ 208V			
		Power Limit -					
		per Outlet:		16A	10A		
		grouping:		each phase has three 16A + one 10A			
		per group		27.7A			
		per PDU:		--			
		Power Monitoring:		No			

7176 - PM1 IBM Ultra Density Enterprise C19/C13 PDU+

71762MX	6090	IBM Ultra Density Enterprise C19/C13 PDU+ Module (WW)	+	40K9614	6500	4.3m, 30A/208V, NEMA L6-30P (US) Line Cord	single-phase 30A/208V 60Hz
			+	40K9615	6501	4.3m, 60A/208V, IEC 309 2P+G (US) Line Cord	single-phase 60A/208V 60Hz
Specifications							
Version:		30A/208V		60A/208V			
Outlets:		nine IEC C19	three IEC C13	nine IEC C19	three IEC C13		
Power Capacity:		4992W @ 208V		9984W @ 208V			
Power Limits -							
per outlet:		16A	10A	16A	10A		
grouping:		pairing of one 10A with one 16A		pairing of one 10A with one 16A			
per group:		20A		20A			
per PDU:		24A		48A			
Power Monitoring:		Yes		Yes			
71763MU	6091	IBM Ultra Density Enterprise C19/C13 PDU+ 60A/208V/3ph (US)				attached line cord: 4.3m IEC 309 3P +Gnd	three-phase delta 60A/208V 60Hz
Specifications							
Version:		3-phase					
Outlets:		nine IEC C19	three IEC C13				
Power Capacity:		17285W @ 208V					
Power Limit -							
per Outlet:		16A	10A				
grouping:		each phase has three 16A + one 10A					
per group		27.7A					
per PDU:		--					
Power Monitoring:		Yes					
Note:							
- o This table describes some of the IBM power distribution unit products available for use with System x and BladeCenter servers. - o For C19/C13 PDUs, each C19 outlet has a 20A circuit breaker. Each C13 shares one of the C19 circuit breakers. - o The combined load on the C13 and associated C19 must not exceed 20A. - o These PDUs carry their own Machine Type number. - o When ordering Line Cords as separate options, use the Single Entity Offering (SEO) order part number. - o For integrated rack-based solutions, Feature Codes are used to order the Line Cords as features of the PDUs. - o See the table DPI Power Distribution Units for more options.							

Rack power configurator

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

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[DPI PDU](#) | [DPI Enterprise PDU](#) | [IBM 7176 Ultra Density Enterprise PDU](#) |

[IBM UPS](#) |

IBM Uninterruptable Power Supplies (US & Canada)

Order a UPS Product...			Plus a Line Cord			
Option part number	Feature code	Description	Option part number	Feature code	Description	Power source
IBM Tower UPS (2130-TU1)						
2130R1X	1081	IBM UPS750TLV	attached line cord: 6ft NEMA 5-15P			single-phase 15A/120V
2130R3X	1083	IBM UPS1000TLV	attached line cord: 6ft NEMA 5-15P			single-phase 15A/120V
2130R5X	1085	IBM UPS1500TLV	attached line cord: 6ft NEMA 5-15P			single-phase 15A/120V
Specifications						
		Version:	750VA	1000VA	1500VA	
		Outlets:	six NEMA 5-15R	eight NEMA 5-15R	eight NEMA 5-15R	
		Power Capacity:	500W	670W	980W	
		Power Limit per Outlet:	10A	10A	10A	
		Power Limit per UPS:	6.25A	8.3A	12A	
		Power Monitoring:	Yes	Yes	Yes	
		Battery Expansion:	No	No	No	
IBM Rack UPS (2130-RU1)						
21301RX	1077	IBM UPS3000LV	attached line cord: 12ft NEMA L5-30P			
40K9620	5742	IBM UPS Extend Run Battery Pack (2U)				
Specifications						
		Outlets:	six NEMA 5-15R	one NEMA L5-30R		
		Power Capacity:	2700W @ 120V			
		Power Limit per Outlet:	10A	10A		
		Grouping:	2x(two 5-15R)	1x(two 5-15R + L5-30R)		
		Power Limit per Group:	20A	20A		
		Power Limit per UPS:	24A			
		Power Monitoring:	Yes			
		Battery Expansion:	Yes, four 2U units max (P/N 40K9620)			
21302RX	1078	IBM UPS3000HV	select from the list of Line Cords below:			
			Line Cords:			
			40K9772	6275	4.3m, 16A/208V, C19 to NEMA L6-20P (US) Line Cord	
40K9620	5742	IBM UPS Extend Run Battery Pack (2U)				
Specifications						
		Outlets:	nine IEC C13	one IEC C19		
		Power Capacity:	2700W @ 208V			
		Power Limit per Outlet:	10A	16A		

		Grouping: 2x(three C13) 1x(three C13 + one C19)	
		Power Limit per Group:	20A 20A
		Power Limit per UPS:	16A
		Power Monitoring:	Yes
		Battery Expansion:	Yes, four 2U units max (P/N 40K9620)
21303RX	1079	IBM UPS7500XHV	requires electrician to connect to source power circuit (with 50A circuit breaker (typical))
39Y8857	5743	IBM UPS Extend Run Battery Pack (3U)	
		Specifications	
		Version:	single phase
		Outlets:	four IEC C19 (using Rack PDUs: 28 IEC C13)
		Power Capacity:	6000W @ 200V
		Power Limit per Outlet:	15A
		Power Limit per UPS:	38A
		Power Monitoring:	Yes
		Battery Expansion:	Yes, four 3U units max (P/N 39Y8857)
21304RX	1080	IBM UPS10000XHV	requires electrician to connect to source power circuit (with 70A circuit breaker (typical))
39Y8857	5743	IBM UPS Extend Run Battery Pack (3U)	
		Specifications	
		Version:	single phase
		Outlets:	four IEC C19 (using Rack PDUs: 28 IEC C13)
		Power Capacity:	8000W @ 200V
		Power Limit per Outlet:	15A
		Power Limit per UPS:	50A
		Power Monitoring:	Yes
		Battery Expansion:	Yes, four 3U units max (P/N 39Y8857)
Note: This table describes the IBM System x family Uninterruptable Power Supply (UPS) products. Feature Codes are used with the eConfig Product and Solution Configurator.			

Rack power configurator

Attention:

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[DPI PDU](#) | [DPI Enterprise PDU](#) | [IBM 7176 Ultra Density Enterprise PDU](#) |

[IBM UPS](#) |

DPI Power Distribution Units (EMEA)

The following PDU products have line cords included:

Option part number	Description	Power cord description	Power source	
DPI Universal Rack PDU (includes 2m C19/C20 rack power cable)				
any of the following	DPI Universal Rack PDU module without line cord	rack power cable: 2m C19/C20	another PDU or UPS (100-250V)	
39Y8952	DPI Universal Rack PDU (Europe)	line cord: 4.3m CEE7-VII	single-phase 16A/230V	
39Y8953	DPI Universal Rack PDU (Den/Sws)	line cord: 4.3m IEC 309 P+N+G	single-phase 16A/230V	
39Y8954	DPI Universal Rack PDU (Israel)	line cord: 4.3m SI 32	single-phase 16A/230V	
39Y8955	DPI Universal Rack PDU (Italy)	line cord: 4.3m CEI 23-16	single-phase 16A/230V	
39Y8956	DPI Universal Rack PDU (South Africa)	line cord: 4.3m SABS 164	single-phase 16A/230V	
39Y8957	DPI Universal Rack PDU (UK)	line cord: 4.3m BS 1363/A	single-phase 13A/230V	
39Y8951	DPI Universal Rack PDU (US)	line cord: 4.3m NEMA L5-20P (detachable)	single-phase 20A/120V 60Hz	
		line cord: 4.3 NEMA L6-20P (detachable)	single-phase 20A/208V 60Hz	
Specifications				
Version:	to PDU or UPS	16A/230V	UK	Saudi Arabia (US LV)
Outlets:	seven IEC C-13	seven IEC C-13	seven IEC C-13	seven IEC C-13
Power Capacity:	3000W @ 200V	3450W @ 230V	2990W @ 230V	1800W @ 120V
Power Limit per Outlet:	10A	10A	10A	10A
Power Limit per PDU:	15A	15A	13A	15A
Power Monitoring:	No	No	No	No
DPI Front end PDU				
39Y8938	DPI Single-phase 30A/120V Front-end PDU (US)	line cord: 2.5m NEMA L5-30P	single-phase 30A/120V	
39Y8934	DPI Single-phase 32A/230V Front-end PDU high voltage (non US)	line cord: 2.5m IEC 309 P+N+G	single-phase 32A/220-240V	
39Y8935	DPI Single-phase 63A/230V Front-end PDU high voltage (non US)	line cord: 2.5m IEC 309 P+N+G	single-phase 63A/220-240V	
Specifications				
Version:	30A/120V	32A/220-240V	63A/220-240V	
Outlets:	three IEC C19	three IEC C19	three IEC C19	
Power Capacity:	2880W @ 120V	7360W @ 230V	14490W @ 230V	

Rack power configurator

Attention:

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[DPI PDU](#) | [DPI Enterprise PDU](#) | [IBM 7176 Ultra Density Enterprise PDU](#) |

[IBM UPS](#) |

DPI Enterprise Power Distribution Units (EMEA)

Order a PDU Module...		Plus a Line Cord			
Option part number	PDU model description	+	Option part number	Power cord description	Power source
DPI Enterprise PDU and PDU+					
39Y8941	DPI C13 Enterprise Module (WW)	+	40K9612	4.3m, 32A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 32A/220-240V
39Y8941	DPI C13 Enterprise Module (WW)	+	40K9613	4.3m, 63A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 63A/220-240V
39Y8941	DPI C13 Enterprise Module (WW)	+	40K9611	4.3m, 32A/380-415V, IEC 309 3P+N+G (non-US) Line Cord	three-phase wye 32A/380-415V
Specifications					
		Version: 32A/220-240V		63A/220-240V 3-phase	
		Outlets: twelve IEC C13	twelve IEC C13	twelve IEC C13	
		Power Capacity: 7360W @ 230V	14490W @ 230V	22080W @ 230V	
		Power Limit per Outlet: 10A	10A	10A	
		Grouping: -	-	four per phase	
		Power Limit per Group: -	-	32A	
		Power Limit per PDU: 32A	63A	-	
		Power Monitoring: No	No	No	
39Y8948	DPI C19 Enterprise Module (WW)	+	40K9612	4.3m, 32A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 32A/220-240V
39Y8948	DPI C19 Enterprise Module (WW)	+	40K9613	4.3m, 63A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 63A/220-240V
39Y8948	DPI C19 Enterprise Module (WW)	+	40K9611	4.3m, 32A/380-415V, IEC 309 3P+N+G (non-US) Line Cord	three-phase wye 32A/380-415V
Specifications					
		Version: 32A/220-240V		63A/220-240V 3-phase	
		Outlets: six IEC C19	six IEC C19	six IEC C19	
		Power Capacity: 7360W @ 230V	14490W @ 230V	22080W @ 230V	
		Power Limit per Outlet: 16A	16A	16A	
		Grouping: -	-	two per phase	
		Power Limit per Group: -	-	32A	
		Power Limit per PDU: 32A	63A	-	
		Power Monitoring: No	No	No	
39M2816	DPI C13 Enterprise PDU+Module (WW)	+	40K9612	4.3m, 32A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 32A/220-240V

39M2816	DPI C13 Enterprise PDU+Module (WW)	+	40K9613	4.3m, 63A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 63A/220-240V
39M2816	DPI C13 Enterprise PDU+Module (WW)	+	40K9611	4.3m, 32A/380-415V, IEC 309 3P+N+G (non-US) Line Cord	three-phase wye 32A/380-415V
Specifications					
		Version: 32A/220- 240V		63A/220-240V	3-phase
		Outlets: twelve IEC C13		twelve IEC C13	twelve IEC C13
		Power Capacity: 7360W @ 230V		14490W @ 230V	22080W @ 230V
		Power Limit per Outlet:		10A	10A
		Grouping:		-	four per phase
		Power Limit per Group:		-	32A
		Power Limit per PDU:		32A	63A
		Power Monitoring:		Yes	Yes
39M2818	DPI C19 Enterprise PDU+Module (WW)	+	40K9612	4.3m, 32A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 32A/220-240V
39M2818	DPI C19 Enterprise PDU+Module (WW)	+	40K9613	4.3m, 63A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 63A/220-240V
39M2818	DPI C19 Enterprise PDU+Module (WW)	+	40K9611	4.3m, 32A/380-415V, IEC 309 3P+N+G (non-US) Line Cord	three-phase wye 32A/380-415V
Specifications					
		Version: 32A/220-240V		63A/220-240V	3-phase
		Outlets: six IEC C19		three IEC C13	six IEC C19
		Power Capacity: 7360W @ 230V		14490W @ 230V	22080W @ 230V
		Power Limit per Outlet:		16A	10A
		Grouping: pairing of one C13 with one C19		pairing of one C13 with one C19	each phase has two C19 + one C13
		Power Limit per Group:		20A	32A
		Power Limit per PDU:		32A	-
		Power Monitoring:		Yes	Yes
Note:	This table describes some of the IBM Distributed Power Interconnect products, a family of power distribution units (PDUs). See the table DPI Enterprise Power Distribution Units for more options.				

Rack power configurator

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[DPI PDU](#) | [DPI Enterprise PDU](#) | **[IBM 7176 Ultra Density Enterprise PDU](#)**

| [IBM UPS](#) |

IBM 7176 Ultra Density Enterprise Power Distribution Units (EMEA)

Order a PDU Module...		Plus a Line Cord				
MTM	PDU Module Description	SEO / Option Part Number	Power Cord Description			Power Source
IBM Ultra Density Enterprise PDU and PDU+						
7176 - PN1 IBM Ultra Density Enterprise C19/C13 PDU						
71762NX	IBM Ultra Density Enterprise C19/C13 PDU Module (WW)	+	40K9612	4.3m, 32A/230V, IEC 309 P+N+G (non-US) Line Cord		single-phase 32A/220-240V
		+	40K9613	4.3m, 63A/230V, IEC 309 P+N+G (non-US) Line Cord		single-phase 63A/220-240V
		+	40K9611	4.3m, 32A/380-415V, IEC 309 3P+N+G (non-US) Line Cord		three-phase wye 32A/380-415V
Specifications:						
Version:		32A/220-240V		63A/220-240V		3-phase
Outlets:		nine IEC C19	three IEC C13	nine IEC C19	three IEC C13	three IEC C13
Power Capacity:		7360W @ 230V		14490W @ 230V		22080W @ 230V
Power Limits -						
per outlet:		16A	10A	16A	10A	16A 10A
grouping:		pairing of one 10A with one 16A		pairing of one 10A with one 16A		each phase has two 16A + one 10A
per group:		20A		20A		32A
per PDU:		32A		63A		--
Power Monitoring:		No		No		No
7176 - PM1 IBM Ultra Density Enterprise C19/C13 PDU+						
71762MX	IBM Ultra Density Enterprise C19/C13 PDU+ Module (WW)	+	40K9612	4.3m, 32A/230V, IEC 309 P+N+G (non-US) Line Cord		single-phase 32A/220-240V
		+	40K9613	4.3m, 63A/230V, IEC 309 P+N+G (non-US) Line Cord		single-phase 63A/220-240V
		+	40K9611	4.3m, 32A/380-415V, IEC 309 3P+N+G (non-US) Line Cord		three-phase wye 32A/380-415V
Specifications:						
Version:		32A/220-240V		63A/220-240V		3-phase
Outlets:		nine IEC C19	three IEC C13	nine IEC C19	three IEC C13	three IEC C13
Power Capacity:		7360W @ 230V		14490W @ 230V		22080W @ 230V
Power Limits -						
per outlet:		16A	10A	16A	10A	16A 10A
grouping:		pairing of one 10A with one 16A		pairing of one 10A with one 16A		each phase has two 16A + one 10A
per group:		20A		20A		32A
per PDU:		32A		63A		--
Power Monitoring:		Yes		Yes		Yes

Note:

- This table describes some of the IBM power distribution unit products available for use with System x and BladeCenter servers.
- For C19/C13 PDUs, each C19 outlet has a 20A circuit breaker. Each C13 shares one of the C19 circuit breakers.
- The combined load on the C13 and associated C19 must not exceed 20A.
- These PDUs carry their own Machine Type number.
- When ordering Line Cords as separate options, use the Single Entity Offering (SEO) order part number.
- For integrated rack-based solutions, Feature Codes are used to order the Line Cords as features of the PDUs.
- See the table DPI Power Distribution Units for more options.

Rack power configurator

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[IBM UPS](#) |

IBM Uninterruptable Power Supplies (EMEA)

Order a UPS Product...		Plus a Line Cord		
Option part number	Description	Option part number	Description	Power source
IBM Tower UPS (2130-TU1)				
2130R2X	IBM UPS750THV	select from the list of line cords below:		
2130R4X	IBM UPS1000THV			
2130R6X	IBM UPS1500THV			
		Line Cords:		
		39Y7917	2.8m, 10A/230V, C13 to CEE7-VII (Europe) Line Cord	single-phase 10A/230V
		39Y7918	2.8m, 10A/230V, C13 to DK2-5a (Denmark) Line Cord	single-phase 10A/230V
		39Y7920	2.8m, 10A/230V, C13 to SI 32 (Israel) Line Cord	single-phase 10A/230V
		39Y7921	2.8m, 10A/230V, C13 to CEI 23-16 (Italy) Line Cord	single-phase 10A/230V
		39Y7922	2.8m, 10A/230V, C13 to SABS 164 (South Africa) Line Cord	single-phase 10A/230V
		39Y7919	2.8m, 10A/230V, C13 to SEV 1011-S24507 (Sws) Line Cord	single-phase 10A/230V
		39Y7923	2.8m, 10A/230V, C13 to BS 1363/A (UK) Line Cord	single-phase 10A/230V
Specifications				
Version:		750VA	1000VA	1500VA
Outlets:		six IEC C13	eight IEC C13	eight IEC C13
Power Capacity:		500W	670W	980W
Power Limit per Outlet:		10A	10A	10A
Power Limit per UPS:		3.4	4.5	6.8
Power Monitoring:		Yes	Yes	Yes
Battery Expansion:		No	No	No
IBM Rack UPS (2130-RU1)				
21301RX	IBM UPS3000LV	attached line cord: 12ft NEMA L5-30P		
40K9620	IBM UPS Extend Run Battery Pack (2U)			
Specifications				
Outlets:		six NEMA 5-15R	one NEMA L5-30R	
Power Capacity:		2700W @ 120V		
Power Limit per Outlet:		10A	10A	
Grouping:		two 5-15R	two 5-15R + L5-30R	
Power Limit per Group:		20A	20A	

	Power Limit per UPS:	24A
	Power Monitoring:	Yes
	Battery Expansion:	Yes, four 2U units max (P/N 40K9620)
21302RX	IBM UPS3000HV	select from the list of Line Cords below:
		Line Cords:
		40K9766 4.3m, 16A/230V, C19 to CEE7-VII (Europe) Line Cord single-phase 16A/230V
		40K9769 4.3m, 16A/230V, C19 to IEC 309-P+N+G (Den/Sws) Line Cord single-phase 16A/230V
		40K9771 4.3m, 16A/230V, C19 to SI 32 (Israel) Line Cord single-phase 16A/230V
		40K9768 4.3m, 16A/230V, C19 to CEI 23-16 (Italy) Line Cord single-phase 16A/230V
		40K9770 4.3m, 16A/230V, C19 to SABS 164 (South Africa) Line Cord single-phase 16A/230V
		40K9767 4.3m, 13A/230V, C19 to BS 1363/A w/13A fuse (UK) Line Cord single-phase 16A/230V
40K9620	IBM UPS Extend Run Battery Pack (2U)	
	Specifications	
	Outlets:	nine IEC C13 one IEC C19
	Power Capacity:	2700W @ 208V
	Power Limit per Outlet:	10A 16A
	Grouping:	2x(three C13) 1x(three C13 + one C19)
	Power Limit per Group:	20A 20A
	Power Limit per UPS:	16A
	Power Monitoring:	Yes
	Battery Expansion:	Yes, four 2U units max (P/N 40K9620)
21303RX	IBM UPS7500XHV	requires electrician to connect to source power circuit (with 50A circuit breaker (typical))
39Y8857	IBM UPS Extend Run Battery Pack (3U)	
	Specifications	
	Version:	single phase 3-phase
	Outlets:	four IEC C19 (using Rack PDUs: 28 IEC C13)
	Power Capacity:	6000W @ 200V 6000W @ 200V
	Power Limit per Outlet:	15A 15A
	Power Limit per UPS:	38A 38A
	Power Monitoring:	Yes Yes
	Battery Expansion:	Yes, four 3U units max (P/N 39Y8857)
21304RX	IBM UPS10000XHV	requires electrician to connect to source power circuit (with 63A circuit breaker (typical))
39Y8857	IBM UPS Extend Run Battery Pack (3U)	
	Specifications	
	Version:	single phase 3-phase
	Outlets:	four IEC C19 (using Rack PDUs: 28 IEC C13)
	Power Capacity:	8000W @ 200V 8000W @ 200V
	Power Limit per Outlet:	15A 15A
	Power Limit per UPS:	50A 50A
	Power Monitoring:	Yes Yes
	Battery Expansion:	Yes, four 3U units max (P/N 39Y8857)
Note: This table describes the IBM System x family of Uninterruptible Power Supply (UPS) products. Feature Codes are used with the eConfig Product and Solution Configurator.		

Rack power configurator

Attention:

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[DPI PDU](#) | [DPI Enterprise PDU](#) | [IBM 7176 Ultra Density Enterprise PDU](#) |

DPI Power Distribution Units (Asia Pacific)

The following PDU products have line cords included:

Option part number	Description	Power cord description	Power source		
DPI 100-127V NEMA PDU					
39Y8905	DPI 100-127V NEMA PDU	attached line cord: 9ft NEMA L5-15P	single-phase 15A/100-127V 60Hz		
Specifications Version: Taiwan (US LV) Outlets: six NEMA 5-15R Power Capacity: 1440W @ 120V Power Limit per Outlet: 10A Power Limit per PDU: 12A circuit breaker Power Monitoring: No					
DPI Universal Rack PDU					
any of the following:	DPI Universal Rack PDU module without line cord	rack power cable: 2m C19/C20	another PDU or UPS (100-250V)		
39Y8958	DPI Universal Rack PDU (Aus/NZ)	line cord: 4.3m AS/NZ 3112	single-phase 15A/230V		
39Y8959	DPI Universal Rack PDU (China)	line cord: 4.3m GB 2099.1	single-phase 16A/220V		
39Y8961	DPI Universal Rack PDU (India)	line cord: 4.3m IS6538	single-phase 16A/240V		
39Y8952	DPI Universal Rack PDU (Europe)	line cord: 4.3m CEE7-VII	single-phase 16A/230V		
39Y8953	DPI Universal Rack PDU (Den/Sws)	line cord: 4.3m IEC 309 P+N+G	single-phase 16A/230V		
39Y8956	DPI Universal Rack PDU (South Africa)	line cord: 4.3m SABS 164	single-phase 16A/230V		
39Y8957	DPI Universal Rack PDU (UK)	line cord: 4.3m BS 1363/A	single-phase 13A/230V		
39Y8951	DPI Universal Rack PDU (US)	line cord: 4.3m NEMA L5-20P	single-phase 20A/120V 60Hz		
		line cord: 4.3m NEMA L6-20P	single-phase 20A/208V 60Hz		
Specifications					
Version:	to PDU or UPS	Aus/NZ	China	Hong Kong (UK)	Taiwan (US LV)
Outlets:	seven IEC C13	seven IEC C13	seven IEC C13	seven IEC C13	seven IEC C13
Power Capacity:	3000W @ 200V	3450W @ 230V	3300W @ 220V	2990W @ 230V	1800W @ 120V
Power Limit per Outlet:	10A	10A	10A	10A	10A
Power Limit per PDU:	15A circuit breaker	15A circuit breaker	15A circuit breaker	13A	15A circuit breaker
Power Monitoring:	No	No	No	No	No
DPI Front-end PDU					
39Y8937	DPI Single-phase 32A/230V Front-end PDU (Aus/NZ)	line cord: 2.5m AS/NZS 3112	single-phase 32A/230V		
39Y8936	DPI Single-phase 30A/220V Fron-tend PDU (S Korea)	line cord: 2.5m KSC 8305	single-phase 30A/220V		
39Y8934	DPI Single-phase 32A/230V Front-end PDU (nonUS)	line cord: 2.5m IEC 309 P+N+G	single-phase 32A/220-240V		
39Y8935	DPI Single-phase 63A/230V Front-end PDU (nonUS)	line cord: 2.5m IEC 309 P+N+G	single-phase 63A/220-240V		
39Y8939	DPI Single-phase 30A/120V Front-end PDU (US)	line cord: 2.5m NEMA L6-30P	single-phase 30A/208V		

39Y8940	DPI Single-phase 60A/208V Front-end PDU (US)	line cord: 2.5m IEC 309 2P+G	single-phase 60A/208V		
39Y8938	DPI Single-phase 30A/120V Front-end PDU (US)	line cord: 2.5m NEMA L5-30P	single-phase 30A/120V		
Specifications					
Version:	Aus/NZ	S Korea	32A/220-240V	63A/220-240V	30A/120V
Outlets:	three IEC C19	three IEC C19	three IEC C19	three IEC C19	three IEC C19
Power Capacity:	2880W @ 230V	7360W @ 220V	14490W @ 230V	7360W @ 230V	2880W @ 120V
Power Limit per Outlet:	16A	16A	16A	16A	16A
Power Limit per PDU:	32A	30A	63A	32A	24A
Power Monitoring:	No	No	No	No	No
DPI High Density PDU					
39Y8999	DPI Three-phase 32A/380-415V High Density PDU (nonUS)	attached line cord: 4.3m IEC 309 3P+N +G	three-phase wye 32A/380-415V		
73P5847	DPI Three-phase 60A/208V High Density PDU (US)	attached line cord: 4.3m IEC 309 3P+G	three-phase delta 60A/208V		
Specifications					
Version:	three-phase wye	three-phase delta			
Outlets:	twelve IEC C19	twelve IEC C19			
Power Capacity:	22080W @ 230V	17285W @ 208V			
Power Limit per Outlet:	16A	16A			
Grouping:	four per phase	four per phase			
Power Limit per Group:	32A	27.7A			
Power Monitoring:	No	No			
Note: This table describes some of the IBM Distributed Power Interconnect products, a family of power distribution units (PDUs). See the table DPI Enterprise Power Distribution Units for more options.					

Rack power configurator

Attention:

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[DPI PDU](#) | [DPI Enterprise PDU](#) | [IBM 7176 Ultra Density Enterprise PDU](#) |

DPI Enterprise Power Distribution Units (Asia Pacific)

NOTE: Also see the [US/Canada](#) section.

Order a PDU Module...		Plus a Line Cord			
Option part number	PDU model description	+	Option part number	Power cord description	Power source
DPI Enterprise PDU and PDU+ (also see the DPI Enterprise PDU and PDU+ table for the US)					
39Y8941	DPI C13 Enterprise Module (WW)	+	40K9612	4.3m, 32A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 32A/220-240V
39Y8941	DPI C13 Enterprise Module (WW)	+	40K9613	4.3m, 63A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 63A/220-240V
39Y8941	DPI C13 Enterprise Module (WW)	+	40K9611	4.3m, 32A/380-415V, IEC 309 3P+N+G (non-US) Line Cord	three-phase wye 32A/380-415V
39Y8941	DPI C13 Enterprise Module (WW)	+	40K9617	4.3m, 32A/230V, AS/NZS 3112 (Aus/NZ) Line Cord	single-phase 32A/230V
39Y8941	DPI C13 Enterprise Module (WW)	+	40K9618	4.3m, 30A/220V, KSC 8305 (S. Korea) Line Cord	single-phase 30A/220V
Specifications					
Version:		32A/220-240V	63A/220-240V	3-phase	
Outlets:		twelve IEC C13	twelve IEC C13	twelve IEC C13	
Power Capacity:		7360W @ 230V	14490W @ 230V	22080W @ 230V	
Power Limit per Outlet:		10A	10A	10A	
Grouping:		-	-	four per phase	
Power Limit per Group:		-	-	32A	
Power Limit per PDU:		32A	63A	-	
Power Monitoring:		No	No	No	
39Y8948	DPI C19 Enterprise Module (WW)	+	40K9612	4.3m, 32A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 32A/220-240V
39Y8948	DPI C19 Enterprise Module (WW)	+	40K9613	4.3m, 63A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 63A/220-240V
39Y8948	DPI C19 Enterprise Module (WW)	+	40K9611	4.3m, 32A/380-415V, IEC 309 3P+N+G (non-US) Line Cord	three-phase wye 32A/380-415V
39Y8948	DPI C19 Enterprise Module (WW)	+	40K9617	4.3m, 32A/230V, AS/NZS 3112 (Aus/NZ) Line Cord	single-phase 32A/230V
39Y8948	DPI C19 Enterprise Module (WW)	+	40K9618	4.3m, 30A/220V, KSC 8305 (S. Korea) Line Cord	single-phase 30A/220V
Specifications					
Version:		32A/220- 240V	63A/220-240V	3-phase	
Outlets:		six IEC C19	six IEC C19	six IEC C19	
Power Capacity:		7360W @ 230V	14490W @ 230V	22080W @ 230V	
Power Limit per Outlet:		16A	16A	16A	
Grouping:		-	-	two per phase	
Power Limit per Group:		-	-	32A	

	Power Limit per PDU:		32A	63A	-
	Power Monitoring:		No	No	No
39M2816	DPI C13 Enterprise PDU+Module (WW)	+	40K9612	4.3m, 32A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 32A/220-240V
39M2816	DPI C13 Enterprise PDU+Module (WW)	+	40K9613	4.3m, 63A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 63A/220-240V
39M2816	DPI C13 Enterprise PDU+Module (WW)	+	40K9611	4.3m, 32A/380-415V, IEC 309 3P+N+G (non-US) Line Cord	three-phase wye 32A/380-415V
39M2816	DPI C13 Enterprise PDU+Module (WW)	+	40K9617	4.3m, 32A/230V, AS/NZS 3112 (Aus/NZ) Line Cord	single-phase 32A/230V
39M2816	DPI C13 Enterprise PDU+Module (WW)	+	40K9618	4.3m, 30A/220V, KSC 8305 (S. Korea) Line Cord	single-phase 30A/220V
Specifications					
	Version:	32A/220- 240V	63A/220-240V	3-phase	
	Outlets:	twelve IEC C13	twelve IEC C13	twelve IEC C13	
	Power Capacity:	7360W @ 230V	14490W @ 230V	22080W @ 230V	
	Power Limit per Outlet:	10A	10A	10A	
	Grouping:	-	-	four per phase	
	Power Limit per Group:	-	-	32A	
	Power Limit per PDU:	32A	63A	-	
	Power Monitoring:	Yes	Yes	Yes	
39M2818	DPI C19 Enterprise PDU+Module (WW)	+	40K9612	4.3m, 32A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 32A/220-240V
39M2818	DPI C19 Enterprise PDU+Module (WW)	+	40K9613	4.3m, 63A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 63A/220-240V
39M2818	DPI C19 Enterprise PDU+Module (WW)	+	40K9611	4.3m, 32A/380-415V, IEC 309 3P+N+G (non-US) Line Cord	three-phase wye 32A/380-415V
39M2818	DPI C19 Enterprise PDU+Module (WW)	+	40K9617	4.3m, 32A/230V, AS/NZS 3112 (Aus/NZ) Line Cord	single-phase 32A/230V
39M2818	DPI C19 Enterprise PDU+Module (WW)	+	40K9618	4.3m, 30A/220V, KSC 8305 (S. Korea) Line Cord	single-phase 30A/220V
Specifications					
	Version:	32A/220-240V		63A/220-240V	3-phase
	Outlets:	six IEC C19	three IEC C13	six IEC C19	three IEC C13
	Power Capacity:	7360W @ 230V		14490W @ 230V	22080W @ 230V
	Power Limit per Outlet:	16A	10A	16A	10A
	Grouping:	pairing of one C13 with one C19		pairing of one C13 with one 7 C19	each phase has two C19 + one C13
	Power Limit per Group:	20A		20A	32A
	Power Limit per PDU:	32A		63A	-
	Power Monitoring:	Yes		Yes	Yes
Note: This table describes some of the IBM Distributed Power Interconnect products, a family of power distribution units (PDUs). See the table DPI Enterprise Power Distribution Units for more options.					

Rack power configurator

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

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[DPI PDU](#) | [DPI Enterprise PDU](#) | **[IBM 7176 Ultra Density Enterprise PDU](#)**

IBM 7176 Ultra Density Enterprise Power Distribution Units (Asia Pacific)

NOTE: Also see the [US/Canada](#) and the [EMEA](#) sections.

Order a PDU Module &C		Plus a Line Cord			
MTM	PDU Module Description	SEO / Option Part Number		Power Cord Description	Power Source
IBM Ultra Density Enterprise PDU and PDU+					
7176 - PN1 IBM Ultra Density Enterprise C19/C13 PDU					
71762NX	IBM Ultra Density Enterprise C19/C13 PDU Module (WW)	+	40K9617	4.3m, 32A/230V, AS/NZS 3112 (Aus/NZ) Line Cord	single-phase 32A/230V
		+	40K9618	4.3m, 30A/220V, KSC 8305 (S. Korea) Line Cord	single-phase 30A/220V
Specifications:					
Version:		32A/230V		30A/220V	
Outlets:		nine IEC C19	three IEC C13	nine IEC C19	three IEC C13
Power Capacity:		7360W @ 230V		6600W @ 220V	
Power Limits -					
per outlet:		16A	10A	16A	10A
grouping:		pairing of one 10A with one 16A		pairing of one 10A with one 16A	
per group:		20A		20A	
per PDU:		32A		30A	
Power Monitoring:		No		No	
7176 - PM1 IBM Ultra Density Enterprise C19/C13 PDU+					
71762MX	IBM Ultra Density Enterprise C19/C13 PDU+ Module (WW)	+	40K9617	4.3m, 32A/230V, AS/NZS 3112 (Aus/NZ) Line Cord	single-phase 32A/230V
		+	40K9618	4.3m, 30A/220V, KSC 8305 (S. Korea) Line Cord	single-phase 30A/220V
Specifications:					
Version:		32A/230V		30A/220V	
Outlets:		nine IEC C19	three IEC C13	nine IEC C19	three IEC C13
Power Capacity:		7360W @ 230V		6600W @ 220V	
Power Limits -					
per outlet:		16A	10A	16A	10A
grouping:		pairing of one 10A with one 16A		pairing of one 10A with one 16A	
per group:		20A		20A	
per PDU:		32A		30A	
Power Monitoring:		Yes		Yes	

Note:

- This table describes some of the IBM power distribution unit products available for use with System x and BladeCenter servers.
- For C19/C13 PDUs, each C19 outlet has a 20A circuit breaker. Each C13 shares one of the C19 circuit breakers.
- The combined load on the C13 and associated C19 must not exceed 20A.
- These PDUs carry their own Machine Type number.
- When ordering Line Cords as separate options, use the Single Entity Offering (SEO) order part number.
- For integrated rack-based solutions, Feature Codes are used to order the Line Cords as features of the PDUs.
- See the table DPI Power Distribution Units for more options.

Rack power configurator

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DPI Power Distribution Units (Latin America)

The following PDU products have line cords included:

Option part number	Description	Power cord description	Power source		
DPI 100-127V NEMA PDU					
39Y8905	DPI 100-127V NEMA PDU	attached line cord: 9ft NEMA L5-15P	single-phase 15A/100-127V 60Hz		
Specifications					
Outlets:		six NEMA 5-15R			
Power Capacity:		1440W @ 120V			
Power Limit per Outlet:		10A			
Power Limit per PDU:		12A circuit breaker			
Power Monitoring:		No			
DPI Universal Rack PDU					
any of the following:	DPI Universal Rack PDU module without line cord	rack power cable: 2m C19/C20	another PDU or UPS (100-250V)		
39Y8962	DPI Universal Rack PDU (Argentina)	line cord: 4.3m IRAM 2073	single-phase 16A/220V		
39Y8960	DPI Universal Rack PDU (Brazil)	line cord: 4.3m NBR 6147	single-phase 15A/125V		
39Y8955	DPI Universal Rack PDU (Italy)	line cord: 4.3m CEI 23-16	single-phase 16A/230V		
39Y8951	DPI Universal Rack PDU (US)	line cord: 4.3m NEMA L5-20P	single-phase 20A/120V 60Hz		
		line cord: 4.3m NEMA L6-20P	single-phase 20A/208V 60Hz		
Specifications					
Version:	to PDU or UPS	Argentina	Brazil	(NEMA LV)	(NEMA HV)
Outlets:	seven IEC C13	seven IEC C13	seven IEC C13	seven IEC C13	seven IEC C13
Power Capacity:	3000W @ 200V	3300W @ 220V	1875W @ 125V	1800W @ 120V	3120W @ 208V
Power Limit per Outlet:	10A	10A	10A	10A	10A
Power Limit per PDU:	15A circuit breaker	15A circuit breaker	15A circuit breaker	13A	15A circuit breaker
Power Monitoring:	No	No	No	No	No
DPI Front-end PDU					
39Y8938	DPI Single-phase 30A/120V Front-end PDU (US)	line cord: 2.5m NEMA L5-30P	single-phase 30A/120V		
39Y8939	DPI Single-phase 30A/208V Front-end PDU (US)	line cord: 2.5m NEMA L6-30P	single-phase 30A/208V		
39Y8940	DPI Single-phase 60A/208V Front-end PDU (US)	line cord: 2.5m IEC 309 2P+G	single-phase 60A/208V		
39Y8934	DPI Single-phase 32A/230V Front-end PDU (nonUS)	line cord: 2.5m IEC 309 P+N+G	single-phase 32A/220-240V		
39Y8935	DPI Single-phase 63A/230V Front-end PDU (nonUS)	line cord: 2.5m IEC 309 P+N+G	single-phase 63A/220-240V		
Specifications					
Version:	30A/120V	30A/208V	60A/208V	32A/220-240V	63A/220-240V
Outlets:	three IEC C19	three IEC C19	three IEC C19	three IEC C19	three IEC C19
Power Capacity:	2880W @ 120V	4992W @ 208V	9984W @ 208V	7360W @ 230V	14490W @ 230V
Power Limit per Outlet:	16A	16A	16A	16A	16A
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Power Limit per PDU:	24A	24A	48A	32A	63A
Power Monitoring:	No	No	No	No	No
DPI High Density PDU					
73P5847	DPI Three-phase 60A/208V High Density PDU (US)		attached line cord: 4.3m IEC 309 3P+G	three-phase delta 60A/208V	
39Y8999	DPI Three-phase 32A/380-415V High Density PDU (nonUS)		attached line cord: 4.3m IEC 309 3P+N +G	three-phase wye 32A/380-415V	
Specifications					
Version:		three-phase delta	three-phase wye		
Outlets:		twelve IEC C19	twelve IEC C19		
Power Capacity:		17285W @ 208V	22080W @ 230V		
Power Limit per Outlet:		16A	16A		
Grouping:		four per phase	four per phase		
Power Limit per Group:		27.7A	32A		
Power Monitoring:		No	No		
Note: This table describes some of the IBM Distributed Power Interconnect products, a family of power distribution units (PDUs). See the table DPI Enterprise Power Distribution Units for more options.					

Rack power configurator

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DPI Enterprise Power Distribution Units (Latin America)

NOTE: Also see the [US/Canada](#) section.

Order a PDU Module...		Plus a Line Cord			
Option part number	PDU model description	+	Option part number	Power cord description	Power source
DPI Enterprise PDU and PDU+ (also see the DPI Enterprise PDU and PDU+ table for the US)					
39Y8941	DPI C13 Enterprise Module (WW)	+	40K9612	4.3m, 32A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 32A/220-240V
39Y8941	DPI C13 Enterprise Module (WW)	+	40K9613	4.3m, 63A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 63A/220-240V
39Y8941	DPI C13 Enterprise Module (WW)	+	40K9611	4.3m, 32A/380-415V, IEC 309 3P+N+G (non-US) Line Cord	three-phase wye 32A/380-415V
Specifications					
Version:		32A/220-240V	63A/220-240V	3-phase	
Outlets:		twelve IEC C13	twelve IEC C13	twelve IEC C13	
Power Capacity:		7360W @ 230V	14490W @ 230V	22080W @ 230V	
Power Limit per Outlet:		10A	10A	10A	
Grouping:		-	-	four per phase	
Power Limit per Group:		-	-	32A	
Power Limit per PDU:		32A	63A	-	
Power Monitoring:		No	No	No	
39Y8948	DPI C19 Enterprise Module (WW)	+	40K9612	4.3m, 32A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 32A/220-240V
39Y8948	DPI C19 Enterprise Module (WW)	+	40K9613	4.3m, 63A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 63A/220-240V
39Y8948	DPI C19 Enterprise Module (WW)	+	40K9611	4.3m, 32A/380-415V, IEC 309 3P+N+G (non-US) Line Cord	three-phase wye 32A/380-415V
Specifications					
Version:		32A/220-240V	63A/220-240V	3-phase	
Outlets:		six IEC C19	six IEC C19	six IEC C19	
Power Capacity:		7360W @ 230V	14490W @ 230V	22080W @ 230V	
Power Limit per Outlet:		16A	16A	16A	
Grouping:		-	-	two per phase	
Power Limit per Group:		-	-	32A	
Power Limit per PDU:		32A	63A	-	
Power Monitoring:		No	No	No	
39M2816	DPI C13 Enterprise PDU+Module (WW)	+	40K9612	4.3m, 32A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 32A/220-240V
39M2816	DPI C13 Enterprise PDU+Module (WW)	+	40K9613	4.3m, 63A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 63A/220-240V

39M2816	DPI C13 Enterprise PDU+Module (WW)	+	40K9611	4.3m, 32A/380-415V, IEC 309 3P+N+G (non-US) Line Cord	three-phase wye 32A/380-415V
Specifications					
Version:		32A/220- 240V	63A/220- 240V	3-phase	
Outlets:		twelve IEC C13	twelve IEC C13	twelve IEC C13	
Power Capacity:		7360W @ 230V	14490W @ 230V	22080W @ 230V	
Power Limit per Outlet:		10A	10A	10A	
Grouping:		-	-	four per phase	
Power Limit per Group:		-	-	32A	
Power Limit per PDU:		32A	63A	-	
Power Monitoring:		Yes	Yes	Yes	
39M2818	DPI C19 Enterprise PDU+Module (WW)	+	40K9612	4.3m, 32A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 32A/220-240V
39M2818	DPI C19 Enterprise PDU+Module (WW)	+	40K9613	4.3m, 63A/230V, IEC 309 P+N+G (non-US) Line Cord	single-phase 63A/220-240V
39M2818	DPI C19 Enterprise PDU+Module (WW)	+	40K9611	4.3m, 32A/380-415V, IEC 309 3P+N+G (non-US) Line Cord	three-phase wye 32A/380-415V
Specifications					
Version:		32A/220-240V		63A/220-240V	3-phase
Outlets:		six IEC C19	three IEC C13	six IEC C19	three IEC C13
Power Capacity:		7360W @ 230V		14490W @ 230V	22080W @ 230V
Power Limit per Outlet:		16A	10A	16A	10A
Grouping:		pairing of one C13 with one C19		pairing of one C13 with one C19	each phase has two C19 + one C13
Power Limit per Group:		20A		20A	32A
Power Limit per PDU:		32A		63A	-
Power Monitoring:		Yes		Yes	Yes
Note: This table describes some of the IBM Distributed Power Interconnect products, a family of power distribution units (PDUs). See the table DPI Enterprise Power Distribution Units for more options.					

Rack power configurator

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[DPI PDU](#) | [DPI Enterprise PDU](#) | **[IBM 7176 Ultra Density Enterprise PDU](#)**

IBM 7176 Ultra Density Enterprise Power Distribution Units (Latin America)

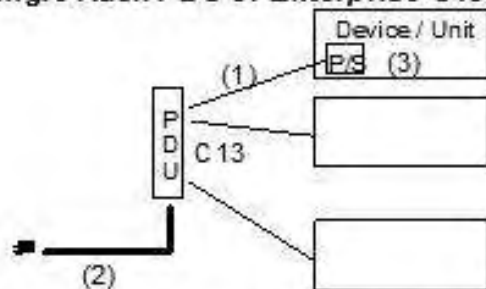
NOTE: Also see the [US/Canada](#) section.

Order a PDU Module É		Plus a Line Cord					
MTM	PDU Module Description	SEO / Option Part Number		Power Cord Description		Power Source	
IBM Ultra Density Enterprise PDU and PDU+							
7176 - PN1 IBM Ultra Density Enterprise C19/C13 PDU							
71762NX	IBM Ultra Density Enterprise C19/C13 PDU Module (WW)	+	40K9612	4.3m, 32A/230V, IEC 309 P+N+G (non-US) Line Cord		single-phase 32A/220-240V	
		+	40K9613	4.3m, 63A/230V, IEC 309 P+N+G (non-US) Line Cord		single-phase 63A/220-240V	
		+	40K9611	4.3m, 32A/380-415V, IEC 309 3P+N+G (non-US) Line Cord		three-phase wye 32A/380-415V	
Specifications:							
Version:		32A/220-240V		63A/220-240V		3-phase	
Outlets:		nine IEC C19	three IEC C13	nine IEC C19	three IEC C13	nine IEC C19	three IEC C13
Power Capacity:		7360W @ 230V		14490W @ 230V		22080W @ 230V	
Power Limits -							
per outlet:		16A	10A	16A	10A	16A	10A
grouping:		pairing of one 10A with one 16A		pairing of one 10A with one 16A		each phase has two 16A + one 10A	
per group:		20A		20A		32A	
per PDU:		32A		63A		--	
Power Monitoring:		No		No		No	
7176 - PM1 IBM IBM Ultra Density Enterprise C19/C13 PDU+							
71762MX	IBM Ultra Density Enterprise C19/C13 PDU+ Module (WW)	+	40K9612	4.3m, 32A/230V, IEC 309 P+N+G (non-US) Line Cord		single-phase 32A/220-240V	
		+	40K9613	4.3m, 63A/230V, IEC 309 P+N+G (non-US) Line Cord		single-phase 63A/220-240V	
		+	40K9611	4.3m, 32A/380-415V, IEC 309 3P+N+G (non-US) Line Cord		three-phase wye 32A/380-415V	
Specifications:							
Version:		32A/220-240V		63A/220-240V		3-phase	
Outlets:		nine IEC C19	three IEC C13	nine IEC C19	three IEC C13	nine IEC C19	three IEC C13
Power Capacity:		7360W @ 230V		14490W @ 230V		22080W @ 230V	
Power Limits -							
per outlet:		16A	10A	16A	10A	16A	10A
grouping:		pairing of one 10A with one 16A		pairing of one 10A with one 16A		each phase has two 16A + one 10A	
per group:		20A		20A		32A	
per PDU:		32A		63A		--	
Power Monitoring:		Yes		Yes		Yes	

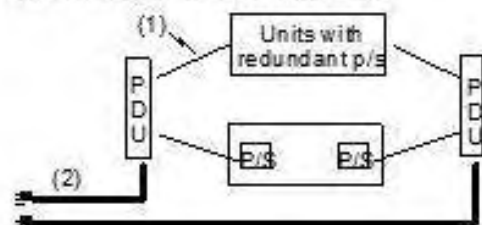
Note:

- This table describes some of the IBM power distribution unit products available for use with System x and BladeCenter servers.
- For C19/C13 PDUs, each C19 outlet has a 20A circuit breaker. Each C13 shares one of the C19 circuit breakers.
- The combined load on the C13 and associated C19 must not exceed 20A.
- These PDUs carry their own Machine Type number.
- When ordering Line Cords as separate options, use the Single Entity Offering (SEO) order part number.
- For integrated rack-based solutions, Feature Codes are used to order the Line Cords as features of the PDUs.
- See the table DPI Power Distribution Units for more options.

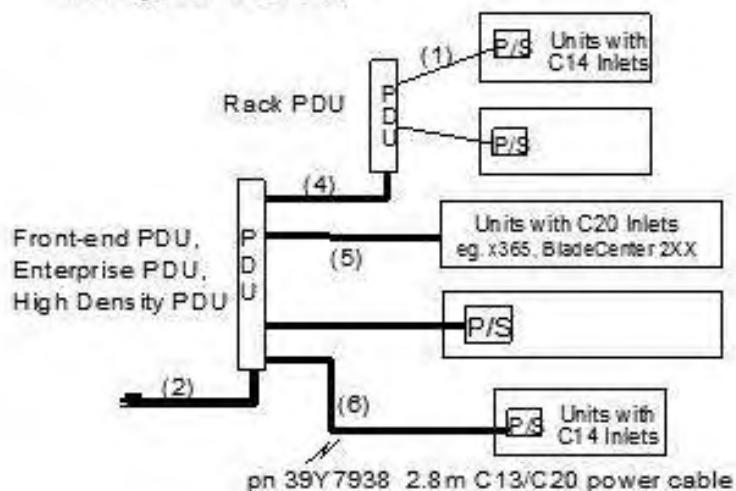
Single Rack PDU or Enterprise C13 PDU



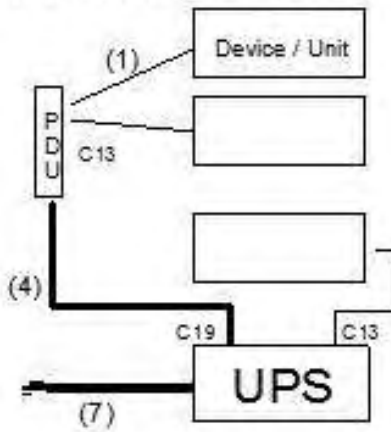
Redundant Power Distribution



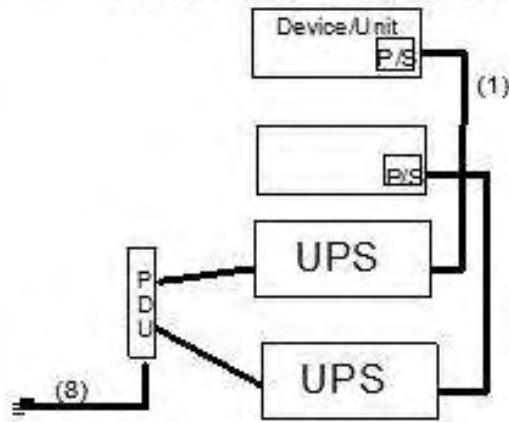
Front-end PDU, High Density PDU, or Enterprise C19 PDU



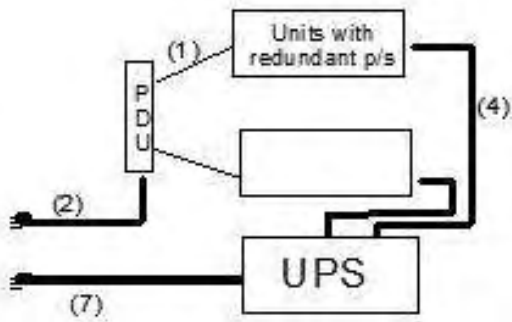
PDU used as UPS back-end



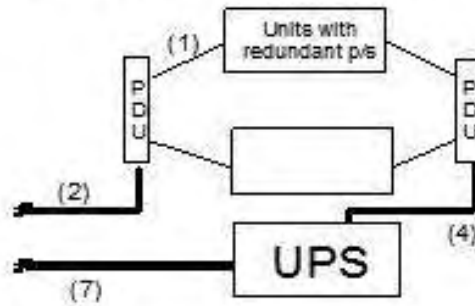
PDU used as UPS front-end



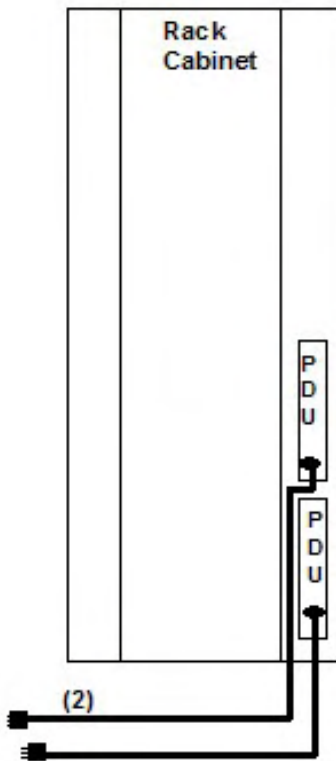
Redundant Power Distribution with PDU and UPS



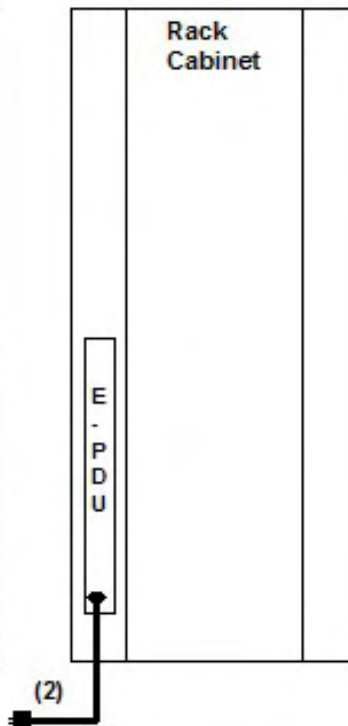
Redundant Power Distribution with PDU and UPS with PDU



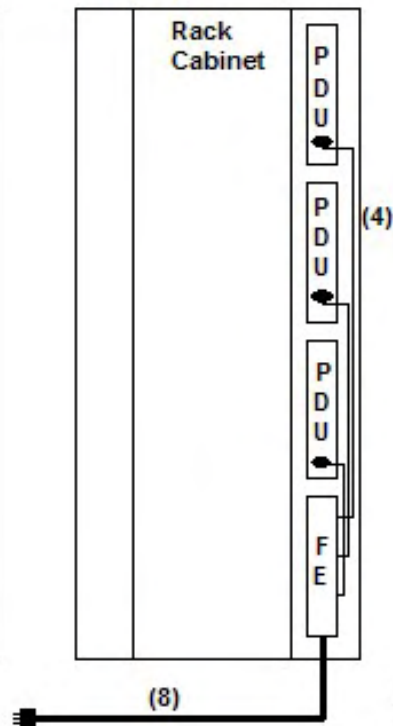
Simple: two Rack PDUs (two circuits, 14 outlets)



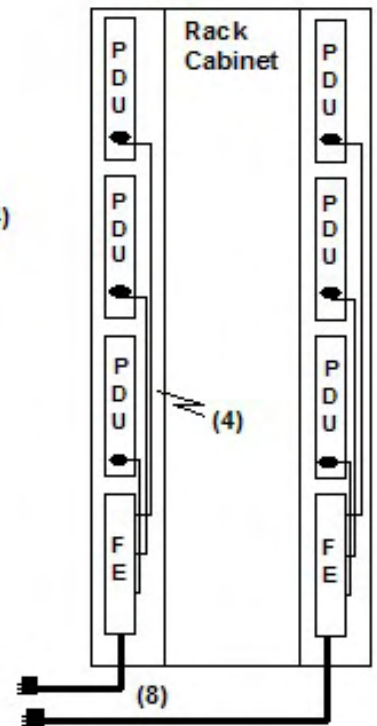
Simple: one Enterprise PDU or PDU+ (single circuit, 6, 9, or 12 outlets)



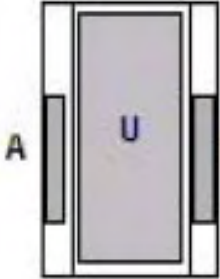
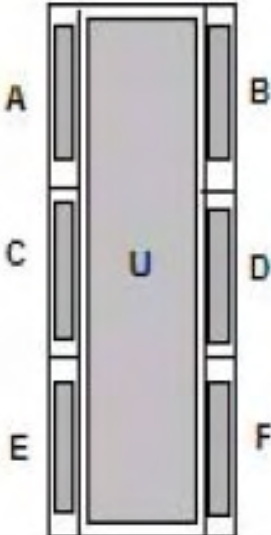
Simple: three Rack PDUs and one Front-end PDU (single circuit, 21 outlets)



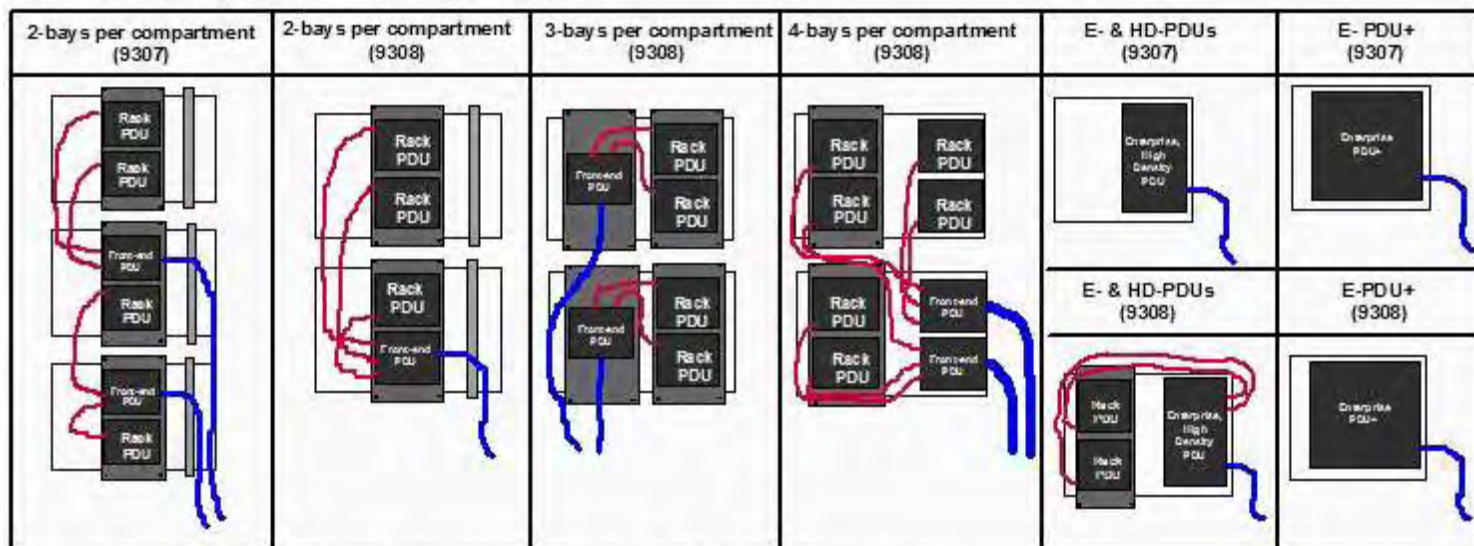
Redundant: six Rack PDUs and two Front-end PDUs (dual circuit, 42 outlets)



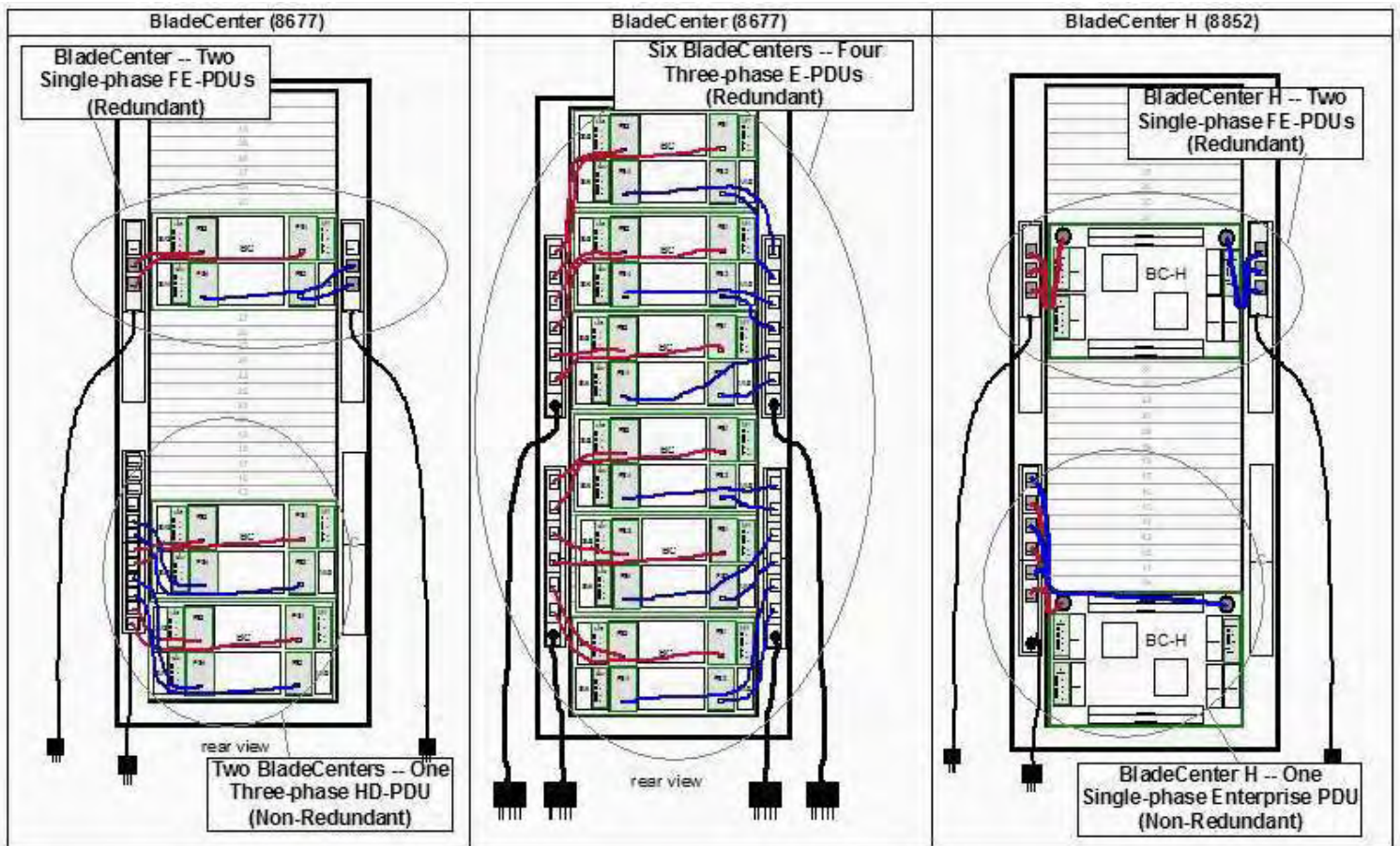
Rack Cabinets

9306 (11U)	Standard Racks		Enterprise Rack
	9307 (25U)	9307 (42U)	9308 (42U)
			

Side-wall Compartment Arrangements



Note: The above is intended to show only typical arrangements, not all possible arrangements.



Appendix A.

External tape and tape library attributes

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

[Ext tape drives](#) [Ext tape libraries](#) [Ext tape enclosures](#)

Installing tape devices on the same bus as other devices may impact performance of those devices.

Table 1. TotalStorage Ultrium tape drive 3580 model L33

Option number	Description	Storage interface	Form factor	Max. storage ¹	MB/sec ¹	Data cartridges (std / max)
3580L3H	TotalStorage Ultrium tape drive 3580 model L33 ²	Ultra320 (16-bit LVD)	Stand-alone or Rack Mount ³	400/800 GB	80/160	1/1

Related Options

96P1565	19-inch Rack Mount Kit
23R7133	2.5 m VHDCI/HD68 SCSI Cable
23R7134	4.5 m VHDCI/HD68 SCSI Cable
23R7135	10.0 m VHDCI/HD68 SCSI Cable
95P2020	Ultrium 3 Data Cartridge (GEN3) 5-Pack

Notes:

1. Data provided is in the syntax of Native/Compressed.
2. 3580 Model L33 is an LTO Ultrium 3 tape drive and ships with an external 2.5m SCSI cable (0.8mm VHDCI -to- 68pin), one data cartridge and one cleaning cartridge. A power cord does not ship standard with the unit.
3. A 19in rack mount shelf (P/N 96P1565) is available for placing in a rack.

Table 2. TotalStorage Ultrium Tape Drive 3580 Model L3E

Option number	Description	Storage interface	Form factor	Max. storage ¹	MB/sec ¹	Data cartridges (std / max)
3580L3E	TS2230 Tape Drive Express Model H3L ²	Ultra320 (16-bit, LVD)	Stand-alone or Rack Mount ³	400/800 GB	60/120	1/1

Related Options

96P1565	19-inch Rack Mount Kit
95P2020	Ultrium 3 Data Cartridge (GEN3) 5-Pack
23R7008	Ultrium Cleaning Cartridge
23R7133	2.5 m VHDCI/HD68 SCSI Cable
23R7134	4.5 m VHDCI/HD68 SCSI Cable
23R7135	10.0 m VHDCI/HD68 SCSI Cable

Notes:

1. Data provided is in the syntax of Native/Compressed.
2. 3580 Model L3E is an LTO Ultrium 3 tape drive and ships with an external 2.5m SCSI cable (0.8mm VHDCI to 68pin), one data cartridge, one cleaning cartridge, US line cord, and rack to PDU line cord.
3. A 19in rack mount shelf (P/N 96P1565) is available for placing in a rack.

Table 3. TotalStorage Ultrium Tape Drive 3580 Model H3S

Option number	Description	Storage interface	Form factor	Max. storage ¹	MB/sec ¹	Data cartridges (std / max)
3580S3E	TS2230 Tape Drive Model H3S ²	SAS	Stand-alone or Rack Mount ³	400/800 GB	60/120	1/1
Related Options						
96P1565	19-inch Rack Mount Kit					
95P2020	Ultrium 3 Data Cartridge (GEN3) 5-Pack					
23R7008	Ultrium Cleaning Cartridge					
95P4711	2 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)					
95P4712	5.5 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)					
95P4713	2 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)					
95P4714	5.5 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)					

Notes:

1. Data provided is in the syntax of Native/Compressed.
2. 3580 Model H3S is an Ultrium 3 tape drive that ships with one data cartridge, one cleaning cartridge, US line cord, and rack to PDU line cord.
3. A 19in rack mount shelf (P/N 96P1565) is available for placing in a rack.

Table 4. TS2340 Tape Drive Express Model L43

Option number	Description	Storage interface	Form factor	Max. storage ¹	MB/sec ¹	Data cartridges (std / max)
3580L4X	TS2340 Tape Drive Express Model L43 ²	Ultra320 (16-bit, LVD)	Stand-alone or Rack Mount ³	800/1600 GB	120/240	1/1
Related Options						
96P1565	19-inch Rack Mount Kit					
95P4278	Ultrium 4 Data Cartridge (5-pack)					
23R7008	Ultrium Cleaning Cartridge					
23R7133	2.5 m VHDCI/HD68 SCSI Cable					
23R7134	4.5 m VHDCI/HD68 SCSI Cable					
23R7135	10.0 m VHDCI/HD68 SCSI Cable					

Notes:

1. Data provided is in the syntax of Native/Compressed.
2. 3580 Model L43 is an LTO Ultrium 4 tape drive that ships with an external 2.5m SCSI cable (0.8mm VHDCI -to- 68pin), one data cartridge, one cleaning cartridge, and one 2.8m C13 to 5-15P US line cord.
3. A 19in rack mount shelf (P/N 96P1565) is available for placing in a rack.

Table 5. TS2340 Tape Drive Express Model S43

Option number	Description	Storage interface	Form factor	Max. storage ¹	MB/sec ¹	Data cartridges (std / max)
3580S4X	TS2340 Tape Drive Express Model S43 ²	SAS	Stand-alone or Rack Mount ³	800/1600 GB	120/240	1/1
Related Options						
96P1565	19-inch Rack Mount Kit					
95P4278	Ultrium 4 Data Cartridge (5-pack)					
23R7008	Ultrium Cleaning Cartridge					
95P4711	2 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)					
95P4712	5.5 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)					
95P4713	2 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)					
95P4714	5.5 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)					

Notes:

1. Data provided is in the syntax of Native/Compressed.
2. 3580 Model S43 is an LTO Ultrium 4 tape drive that ships with one data cartridge, one cleaning cartridge, and one 2.8m C13 to 5-15P US line cord.
3. A 19in rack mount shelf (P/N 96P1565) is available for placing in a rack.

Table 6. System Storage TS2240 Tape Drive Model H4S

Option number	Description	Storage interface	Form factor	Max. storage ¹	MB/sec ¹	Data cartridges (std / max)
3580S4E	System Storage TS2240 Tape Drive Model H4S ²	SAS	Stand-alone or Rack Mount ³	800/1600 GB	120/240	1/1
Related Options						
96P1565	19-inch Rack Mount Kit					
95P4278	Ultrium 4 Data Cartridge (5-pack)					
23R7008	Ultrium Cleaning Cartridge					
95P4711	2 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)					
95P4712	5.5 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)					
95P4713	2 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)					
95P4714	5.5 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)					

Notes:

1. Data provided is in the syntax of Native/Compressed.
2. 3580 Model S4E is an LTO Ultrium 4 tape drive that ships with one data cartridge, one cleaning cartridge, and one 2.8m C13 to 5-15P US line cord.
3. A 19in rack mount shelf (option 96P1565) is available for placing in a rack.

Table 7. System Storage TS2240 Tape Drive Model H4S for Express Seller

Option number	Description	Storage interface	Form factor	Max. storage ¹	MB/sec ¹	Data cartridges (std / max)
3580E4S	System Storage TS2240 Tape Drive Model H4S for Express Seller ²	SAS	Stand-alone or Rack Mount ³	800/1600 GB	120/240	1/1
Related Options						
96P1565	19-inch Rack Mount Kit					
95P4278	Ultrium 4 Data Cartridge (5-pack)					
23R7008	Ultrium Cleaning Cartridge					
95P4711	2 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)					
95P4712	5.5 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)					
95P4713	2 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)					
95P4714	5.5 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)					

Notes:

1. Data provided is in the syntax of Native/Compressed.
2. 3580 Model E4S is an LTO Ultrium 4 tape drive that ships with one data cartridge, one cleaning cartridge, and one 2.8m C13 to 5-15P US line cord.
3. A 19in rack mount shelf (option 96P1565) is available for placing in a rack.

Appendix A.

External tape and tape library attributes

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

[Ext tape drives](#) [Ext tape libraries](#) [Ext tape enclosures](#)

SCSI interface and cable legend

F	Female - External
M	Male - External
68	16-bit, 68-pin High Density connector
0.8	16-bit, 68-pin Very High Density Connection Interface (VHDI) 0.8mm connector
SE	Single-ended SCSI
HVD	High Voltage Differential SCSI
LVD	Low Voltage Differential SCSI

Table 1. 1U VXA 320 Autoloader (PN 87691VX)

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹
87691VX	1U VXA-320 Tape Autoloader ¹	LVD SCSI	1U Rack	0/10	1/1	1/1	1.6 TB/ 3.2 TB	12/24

Related options

24R2137	VXA3 Data Cartridge
71P9160	VXA x23 Data Cartridge 5 pack
24R2138	VXA Cleaning Cartridge

Note:

- Includes tape library with tape drive, rack mounting hardware, cleaning cartridge, 125V US power cord, rack to PDU power cord, and 3m 0.8mm VHDCI to 68 pin SCSI cable.

Table 2. 4U Universal Tape Library (PN 33614LX)

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹
33614LX	4U Universal Tape Library ¹	LVD SCSI/ Fibre Channel ²	4U Rack	0/38	0/2	0/2	15.2 TB/ 30.4 TB	576/1152

Related Options

40K2573	LTO Generation 3 SCSI Drive
40K2575	LTO Generation 3 Fibre Channel Sled Drive
40K2577	LTO Magazine Option
40K2579	iSCSI Option
25R0032	LTO 3 Media 5 pack
39M5696	1M LC-LC Fibre Channel Cable
39M5697	5m LC-LC Fibre Channel Cable
39M5698	25m LC-LC Fibre Channel Cable

Note:

- Includes tape library with tape drive, rack mounting hardware, cleaning cartridge, two 125V US power cords, two rack to PDU power cord, and 3m 0.8mm VHDCI to 68 pin SCSI cable.
- Storage interface type is dependent upon drivesled selection. See 'Related Options' for compatible drivesleds.

Table 3. IBM System Storage TS3100 Tape Library Express Model L3S (PN 3573L3S)

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge Mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹
3573L3S	IBM System Storage TS3100 Tape Library Express Model L3S ¹	LVD SCSI	2U Rack	1/24	2/2	1/1	9.6 TB/ 19.2 TB	20/40

Related Options

23R6999	3573 Right Side Magazine - Additional
23R6998	3573 Rack Mount Kit
23R7133	2.5 m VHDCI/HD68 SCSI Cable
23R7134	4.5 m VHDCI/HD68 SCSI Cable
23R7135	10.0 m VHDCI/HD68 SCSI Cable
95P2020	Ultrium 3 Data Cartridge (GEN3) 5-Pack
23R7008	Ultrium Cleaning Cartridge

Note:

1. Includes tape library with LTO3 tape drive, rack mounting hardware, one data cartridge, one cleaning cartridge, 125V US power cord, and rack to PDU power cord.

Table 4. IBM System Storage TS3100 Tape Library Express Model F3S (PN 3573F3S)

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge Mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹
3573F3S	IBM System Storage TS3100 Tape Library Express Model F3S ¹	4 Gbps Fiber	2U Rack	1/24	2/2	1/1	9.6 TB/ 19.2 TB	20/40

Related Options

23R6999	3573 Right Side Magazine - Additional
23R6998	3573 Rack Mount Kit
23R7136	5.0 m LC/LC Fibre Cable
23R7137	13.0 m LC/LC Fibre Cable
23R7138	25.0 m LC/LC Fibre Cable
23R7140	LC-SC Fibre Cable Interposer
95P2020	Ultrium 3 Data Cartridge (GEN3) 5-Pack
23R7008	Ultrium Cleaning Cartridge

Note:

1. Includes tape library with LTO3 tape drive, rack mounting hardware, one data cartridge, one cleaning cartridge, 125V US power cord, and rack to PDU power cord.

Table 5. IBM System Storage TS3100 Tape Library Express Model L4S (P/N 3573L4S)

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹
3573L4S	IBM System Storage TS3100 Tape Library Express Model L4S ¹	LVD SCSI	2U Rack	1/24	2/2	1/1	19.2 TB/ 38.4 TB	120/240

Related options

23R6999	3573 Right Side Magazine - Additional
23R6998	3573 Rack Mount Kit
23R7133	2.5 m VHDCI/HD68 SCSI Cable
23R7134	4.5 m VHDCI/HD68 SCSI Cable
23R7135	10.0 m VHDCI/HD68 SCSI Cable
95P4278	Ultrium 4 Data Cartridges (5-pack)
23R7008	Ultrium Cleaning Cartridge

Note:

1. Includes tape library with LTO4 tape drive, one data cartridge, one cleaning cartridge, and 125V US power cord.

Table 6. IBM System Storage TS3100 Tape Library Express Model F4S (P/N 3573F4S)

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹
3573F4S	IBM System Storage TS3100 Tape Library Express Model F4S ¹	4Gbps Fibre	2U Rack	1/24	2/2	1/1	19.2 TB/ 38.4 TB	120/240

Related options

23R6999	3573 Right Side Magazine - Additional
23R6998	3573 Rack Mount Kit
23R7136	5.0 m LC/LC Fibre Cable
23R7137	13.0 m LC/LC Fibre Cable
23R7138	25.0 m LC/LC Fibre Cable
23R7140	LC-SC Fibre Cable Interposer
95P4278	Ultrium 4 Data Cartridges (5-pack)
23R7008	Ultrium Cleaning Cartridge

Note:

1. Includes tape library with LTO4 tape drive, one data cartridge, one cleaning cartridge, and 125V US power cord.

Table 7. IBM System Storage TS3100 Tape Library Express Model S4S (P/N 3573S4S)

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹
3573S4S	IBM System Storage TS3100 Tape Library Express Model S4S ¹	SAS	2U Rack	1/24	2/2	1/1	19.2 TB/ 38.4 TB	120/240

Related options

23R6999	3573 Right Side Magazine - Additional
23R6998	3573 Rack Mount Kit
95P4711	2 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)
95P4712	5.5 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)
95P4713	2 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)
95P4714	5.5 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)
95P4994	SAS/Mini-SAS 4x Interposer
95P4996	Mini-SAS/Mini-SAS 4x Interposer
95P4278	Ultrium 4 Data Cartridges (5-pack)
23R7008	Ultrium Cleaning Cartridge

Note:

1. Includes tape library with LTO4 tape drive, one data cartridge, one cleaning cartridge, and 125V US power cord.

Table 8. IBM System Storage TS3100 Tape Library Express Model L32 (P/N 3573L32)

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹
3573L32	IBM System Storage TS3100 Tape Library Express Model L32 ¹	LVD SCSI	2U Rack	1/24	2/2	1/2	9.6 TB/ 19.2 TB	60/120

Related options

95P4998	LTO Ultrium 3 Half High SCSI Drive Sled
23R6999	3573 Right Side Magazine - Additional
23R6998	3573 Rack Mount Kit
23R7133	2.5 m VHDCI/HD68 SCSI Cable
23R7134	4.5 m VHDCI/HD68 SCSI Cable
23R7135	10.0 m VHDCI/HD68 SCSI Cable
95P2020	Ultrium 3 Data Cartridges (GEN3) 5-pack
23R7008	Ultrium Cleaning Cartridge

Note:

1. Includes tape library with LTO3 tape drive, one data cartridge, one cleaning cartridge, and 125V US power cord.

Table 9. IBM System Storage TS3100 Tape Library Express Model S32 (P/N 3573S32)

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹
3573S32	IBM System Storage TS3100 Tape Library Express Model S32 ¹	SAS	2U Rack	1/24	2/2	1/2	9.6 TB/ 19.2 TB	60/120
Related options								
95P5000	LTO Ultrium 3 Half High SAS Drive Sled							
23R6999	3573 Right Side Magazine - Additional							
23R6998	3573 Rack Mount Kit							
95P4711	2 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)							
95P4712	5.5 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)							
95P4713	2 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)							
95P4714	5.5 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)							
95P4994	SAS/Mini-SAS 4x Interposer							
95P4996	Mini-SAS/Mini-SAS 4x Interposer							
95P2020	Ultrium 3 Data Cartridges (GEN3) 5-pack							
23R7008	Ultrium Cleaning Cartridge							

Note:

1. Includes tape library with LTO3 tape drive, one data cartridge, one cleaning cartridge, and 125V US power cord.

Table 10. IBM System Storage TS3100 Tape Library Express Model L2U

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge Mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹
3573S42	IBM System Storage TS3100 Tape Library Express Model L2U ¹	SAS	2U Rack	1/24	2/2	1/2	19.2 TB/ 38.4 TB	120/240
Related Options								
45E2243	LTO Ultrium 4 Half-High SAS Drive Sled							
45E3081	Transparent LTO Encryption							
95P5008	Encryption Configuration							
23R6999	3573 Right Side Magazine - Additional							
45E2237	3573 Left Side 2U Magazine							
23R6998	3573 Rack Mount Kit							
95P4711	2 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)							
95P4712	5.5 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)							
95P4713	2 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)							
95P4714	5.5 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)							
95P4994	SAS/Mini-SAS 4x Interposer							
95P4996	Mini-SAS/Mini-SAS 4x Interposer							
95P4278	Ultrium 4 Data Cartridges 5-Pack							
23R7008	Ultrium Cleaning Cartridge							

Note:

1. Includes tape library with LTO4 tape drive, one data cartridge, one cleaning cartridge, and 125V US power cord.

Table 11. IBM System Storage TS3100 Tape Library Express Seller Model L2U

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge Mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹
3573E42	IBM System Storage TS3100 Tape Library Express Seller Model L2U ¹	SAS	2U Rack	1/24	2/2	1/2	19.2 TB/ 38.4 TB	120/240
Related Options								
45E2243	LTO Ultrium 4 Half-High SAS Drive Sled							
45E3081	Transparent LTO Encryption							
95P5008	Encryption Configuration							

23R6999	3573 Right Side Magazine - Additional
45E2237	3573 Left Side 2U Magazine
23R6998	3573 Rack Mount Kit
95P4711	2 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)
95P4712	5.5 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)
95P4713	2 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)
95P4714	5.5 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)
95P4994	SAS/Mini-SAS 4x Interposer
95P4996	Mini-SAS/Mini-SAS 4x Interposer
95P4278	Ultrium 4 Data Cartridges 5-Pack
23R7008	Ultrium Cleaning Cartridge

Note:

1. Includes tape library with LTO4 tape drive, one data cartridge, one cleaning cartridge, rack mount kit, PDU line cord, and 125V US power cord.

Table 12. IBM System Storage TS3200 Tape Library Express Model L3H(PN 3573L3H)

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge Mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹
3573L3H	IBM System Storage TS3200 Tape Library Express Model L3H ¹	LVD SCSI	4U Rack	1/48	4/4	1/2	9.2 TB/ 38.4 TB	40/80

Related Options

23R7260	3573 Ultrium 3 LVD SCSI Tape Drive Sled
23R6999	3573 Right Side Magazine - Additional
23R6998	3573 Rack Mount Kit
23R7008	Ultrium Cleaning Cartridge
23R7133	2.5 m VHDCI/HD68 SCSI Cable
23R7134	4.5 m VHDCI/HD68 SCSI Cable
23R7135	10.0 m VHDCI/HD68 SCSI Cable
95P2020	Ultrium 3 Data Cartridge (GEN3) 5-Pack
23R7262	3573 Additional Power Supply

Note:

1. Includes tape library with tape drive, rack mounting hardware, one data cartridge, one cleaning cartridge, 125V US power cord, and rack to PDU power cord.

Table 13. IBM System Storage TS3200 Tape Library Express Model F3H(PN 3573F3H)

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge Mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹
3573F3H	IBM System Storage TS3200 Tape Library Express Model F3H ¹	LC Fiber	4U Rack	1/48	4/4	1/2	19.2 TB/ 38.4 TB	40/80

Related Options

23R7261	3573 Ultrium 3 Fibre Tape Drive Sled
23R6999	3573 Right Side Magazine - Additional
23R6998	3573 Rack Mount Kit
23R7008	Ultrium Cleaning Cartridge
23R7136	5.0 m LC/LC Fibre Cable
23R7137	13.0 m LC/LC Fibre Cable
23R7138	25.0 m LC/LC Fibre Cable
95P2020	Ultrium 3 Data Cartridge (GEN3) 5-Pack
23R7262	3573 Additional Power Supply

Note:

1. Includes tape library with tape drive, rack mounting hardware, one data cartridge, one cleaning cartridge, 125V US power cord, and rack to PDU power cord.

Table 14. IBM System Storage TS3100 Tape Library Express Model L34 (P/N 3573L34)

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge Mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹
3573L34	IBM System Storage TS3200 Tape Library Express Model L34 ¹	LVD SCSI	4U Rack	1/48	4/4	1/4	19.2TB/ 38.4TB	60/120

Related Options

95P4998	LTO Ultrium 3 Half High SCSI Drive Sled
23R6999	3573 Right Side Magazine - Additional
23R6998	3573 Rack Mount Kit
23R7008	Ultrium Cleaning Cartridge
95P2020	Ultrium 3 Data Cartridges (GEN3) 5-pack
23R7133	2.5 m VHDCI/HD68 SCSI Cable
23R7134	4.5 m VHDCI/HD68 SCSI Cable
23R7135	10.0 m VHDCI/HD68 SCSI Cable
23R7262	3573 Additional Power Supply

Note:

1. Includes tape library with tape drive, one data cartridge, one cleaning cartridge, and 125V US power cord.

Table 15. IBM System Storage TS3100 Tape Library Express Model S34 (P/N 3573S34)

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge Mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹
3573S34	IBM System Storage TS3200 Tape Library Express Model S34 ¹	SAS	4U Rack	1/48	4/4	1/4	19.2 TB/ 38.4 TB	60/120

Related Options

95P5000	LTO Ultrium 3 Half High SAS Drive Sled
23R6999	3573 Right Side Magazine - Additional
23R6998	3573 Rack Mount Kit
23R7008	Ultrium Cleaning Cartridge
95P2020	Ultrium 3 Data Cartridge (GEN3) 5-Pack
95P4711	2 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)
95P4712	5.5 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)
95P4713	2 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)
95P4714	5.5 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)
95P4994	SAS/Mini-SAS 4x Interposer
95P4996	Mini-SAS/Mini-SAS 4x Interposer
23R7262	3573 Additional Power Supply

Note:

1. Includes tape library with tape drive, one data cartridge, one cleaning cartridge, and 125V US power cord.

Table 16. IBM System Storage TS3200 Tape Library Express Model L4U

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge Mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹
3573S44	IBM System Storage TS3200 Tape Library Express Model S34 ¹	SAS	4U Rack	1/48	4/4	1/4	38.4TB/76.8TB	120/240

Related Options

45E2243	Ultrium 4 Half-High Tape Drive
45E2225	3573 Left Upper 4U Magazine
45E2231	3573 Left Lower 4U Magazine
45E3081	Transparent LTO Encryption
95P5008	Encryption Configuration
23R6998	3573 Rack Mount Kit
95P4278	Ultrium 4 Data Cartridges 5-Pack
23R7008	Ultrium Cleaning Cartridge
95P4711	2 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)

95P4712	5.5 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)
95P4713	2 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)
95P4714	5.5 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)
95P4994	SAS/Mini-SAS 4x Interposer
95P4996	Mini-SAS/Mini-SAS 4x Interposer
23R7262	3573 Additional Power Supply

Note:

1. Includes tape library with tape drive, one data cartridge, one cleaning cartridge, and 125V US power cord.

Table 17. IBM System Storage TS3200 Tape Library Express Seller Model L4U

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge Mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹
3573E44	IBM System Storage TS3200 Tape Library Express Seller Model L4U ¹	SAS	4U Rack	1/48	4/4	1/4	38.4TB/76.8TB	120/240

Related Options

45E2243	Ultrium 4 Half-High Tape Drive
45E2225	3573 Left Upper 4U Magazine
45E2231	3573 Left Lower 4U Magazine
45E3081	Transparent LTO Encryption
95P5008	Encryption Configuration
23R6998	3573 Rack Mount Kit
95P4278	Ultrium 4 Data Cartridges 5-Pack
23R7008	Ultrium Cleaning Cartridge
95P4711	2 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)
95P4712	5.5 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)
95P4713	2 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)
95P4714	5.5 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)
95P4994	SAS/Mini-SAS 4x Interposer
95P4996	Mini-SAS/Mini-SAS 4x Interposer
23R7262	3573 Additional Power Supply

Note:

1. Includes tape library with tape drive, one data cartridge, one cleaning cartridge, rack mount kit, PDU line cord, and 125V US power cord.

Table 18. IBM System Storage TS3200 Tape Library Express Model L4H(P/N 3573L4H)

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge Mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹
3573L4H	IBM System Storage TS3200 Tape Library Express Model L4H ¹	LVD SCSI	4U Rack	1/48	4/4	1/2	38.4 TB/ 79.8 TB	120/240

Related Options

95P5002	Ultrium 4 LVD SCSI Drive
23R6999	3573 Right Side Magazine - Additional
23R6998	3573 Rack Mount Kit
23R7008	Ultrium Cleaning Cartridge
95P4278	Ultrium 4 Data Cartridges (5-pack)
23R7133	2.5 m VHDCI/HD68 SCSI Cable
23R7134	4.5 m VHDCI/HD68 SCSI Cable
23R7135	10.0 m VHDCI/HD68 SCSI Cable
23R7262	3573 Additional Power Supply

Note:

1. Includes tape library with tape drive, one data cartridge, one cleaning cartridge, and 125V US power cord.

Table 19. IBM System Storage TS3200 Tape Library Express Model F4H(P/N 3573F4H)

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge Mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹

3573F4H	IBM System Storage TS3200 Tape Library Express Model F4H ¹	4Gbps Fibre	4U Rack	1/48	4/4	1/2	38.4 TB/76.8 TB	120/240
Related Options								
95P5004	Ultrium 4 Fibre Channel Drive							
23R6999	3573 Right Side Magazine - Additional							
23R6998	3573 Rack Mount Kit							
23R7008	Ultrium Cleaning Cartridge							
95P4278	Ultrium 4 Data Cartridges (5-pack)							
23R7136	5.0 m LC/LC Fibre Cable							
23R7137	13.0 m LC/LC Fibre Cable							
23R7138	25.0 m LC/LC Fibre Cable							
23R7140	LC-SC Fibre Cable Interposer							
23R7262	3573 Additional Power Supply							

Note:

1. Includes tape library with tape drive, one data cartridge, one cleaning cartridge, and 125V US power cord.

Table 20. IBM System Storage TS3200 Tape Library Express Model S4H(P/N 3573S4H)

Part number	Description	Storage interface	Form factor	Data cartridges (std / max)	Cartridge Mags (std / max)	Quantity of drives (std / max)	Max storage - native / compressed	MB/sec - native / compressed ¹
3573S4H	IBM System Storage TS3200 Tape Library Express Model S4H ¹	SAS	4U Rack	1/48	4/4	1/2	38.4 TB/76.8 TB	120/240
Related Options								
95P5006	Ultrium 4 SAS Drive							
23R6999	3573 Right Side Magazine - Additional							
23R6998	3573 Rack Mount Kit							
23R7008	Ultrium Cleaning Cartridge							
95P4278	Ultrium 4 Data Cartridges (5-pack)							
95P4711	2 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)							
95P4712	5.5 M SAS/Mini-SAS 1x Cable (host SFF-8470 to target SFF-8088)							
95P4713	2 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)							
95P4714	5.5 M Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)							
95P4994	SAS/Mini-SAS 4x Interposer							
95P4996	Mini-SAS/Mini-SAS 4x Interposer							
23R7262	3573 Additional Power Supply							

Note:

1. Includes tape library with tape drive, one data cartridge, one cleaning cartridge, and 125V US power cord.

Appendix A.

External tape and tape library attributes

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

[Ext tape drives](#) [Ext tape libraries](#) [Ext tape enclosures](#)

Table 1. IBM 1U Tape Drive External Enclosure

Option number	Description	Form factor	Max tape drives ²
87651UX	IBM 1U Tape Drive External Enclosure ¹	1U Rack Mount	2
Related options			
39M5656	36/72GB DDS Generation 5 Tape Drive		
25R0045	VXA 3 Half High Internal Back-up		
39M5658	IBM Half High LTO Gen 2 Tape Drive		
43W8480	IBM DDS Gen 5 SATA Tape Drive		
43W8478	IBM Half High LTO Gen 3 SAS Tape Drive		
39M5636	IBM DDS Generation 6 USB Tape Drive		
44E8895	IBM Half-high LTO Gen 4 SAS Tape Drive		
42C3910	Tape Enclosure SCSI Kit ²		
40K2599	Tape Enclosure SAS Kit ²		
44E8869	USB Enclosure Adapter Kit ²		

Note:

1. Ships standard with tape enclosure, rack mounting hardware, 125V US power cord, and rack to PDU power cord.
2. One tape enclosure adapter kit required for each tape drive to be installed.

Table 2. IBM 4U Tape Drive External Enclosure

Option number	Description	Form factor	Max tape drives ²
87664UX	IBM 4U Tape Drive External Enclosure ¹	4U Rack Mount	6
Related Options			
39M5656	36/72GB DDS Generation 5 Tape Drive		
25R0045	VXA 3 Half High Internal Back-up		
39M5658	IBM Half High LTO Gen 2 Tape Drive		
39M5657	LTO 400/800GB Full High Gen 3 Internal Back -Up		
43W8478	IBM Half High LTO Gen 3 SAS Tape Drive		
39M5636	IBM DDS Generation 6 USB Tape Drive		
44E8895	IBM Half-high LTO Gen 4 SAS Tape Drive		
42C3910	Tape Enclosure SCSI Kit ^{2, 3}		
40K2599	Tape Enclosure SAS Kit ^{2, 3}		
44E8869	USB Enclosure Adapter Kit ^{2, 3}		

Note:

1. Ships standard with tape enclosure, rack mounting hardware, 125V US power cord, and rack to PDU power cord.
2. A maximum of six tape enclosure SCSI, SAS, or USB adapter kits may be installed. Provides up to 9 half high drive bays. Installation of a full high tape drive will require two half high bays.
3. One tape enclosure adapter kit required for each tape drive to be installed.

Table 3. IBM Half High Tape Drive External Enclosure

Option number	Description	Form factor	Max tape drives ²
8767HHX	IBM Half High Tape Drive External Enclosure ¹	Half High Stand-alone	1
Related Options			

39M5656	36/72GB DDS Generation 5 Tape Drive
25R0045	VXA 3 Half High Internal Back-up
39M5658	IBM Half High LTO Gen 2 Tape Drive
43W8480	IBM DDS Gen 5 SATA Tape Drive
43W8478	IBM Half High LTO Gen 3 SAS Tape Drive
39M5636	IBM DDS Generation 6 USB Tape Drive
44E8895	IBM Half-high LTO Gen 4 SAS Tape Drive
42C3910	Tape Enclosure SCSI Kit ²
40K2599	Tape Enclosure SAS Kit ²
44E8869	USB Enclosure Adapter Kit ²

Note:

1. Ships standard with tape enclosure and 125V US power cord.
2. One tape enclosure adapter kit required for each tape drive to be installed.

Table 4. IBM Full High Tape Drive External Enclosure

Option number	Description	Form factor	Max tape drives ¹
8768FHX	IBM Full High Tape Drive External Enclosure ¹	Full High Stand-alone	1
Related Options			
39M5657	LTO 400/800GB Full High Gen 3 Internal Back -Up		
42C3910	Tape Enclosure SCSI Kit ²		
40K2599	Tape Enclosure SAS Kit ²		

Note:

1. Ships standard with tape enclosure and 125V US power cord.
2. One tape enclosure adapter kit required for each tape drive to be installed.

Appendix B. Uninterruptible power supplies

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

UPS runtime estimator

Steps to determine UPS runtimes and suitable UPS for desired configurations:

1. Using the 'Power Product Data' table in the 'Power Data Overview Appendix', sum the power load (watts) of all devices in the configuration. Use either Maximum Load for minimum runtimes, or Typical Load for typical runtimes.
2. Using the 'Runtimes' table, locate the configuration's total load calculated in step 1.
3. Select the most appropriate UPS model to achieve the desired runtime.

Note: If the configuration's total load is greater than the entries in the 'Runtimes' table, split the load across two or more UPS units.

IBM UPS 750T, 1000T, 1500T

Table 1. IBM UPS750T, 1000T, 1500T attributes

		Tower		
	Low Voltage Versions (US)	UPS750TLV	UPS1000TLV	UPS1500TLV
	New T-M-F Ordering System ⁴	2130TU1-1081	2130TU1-1083	2130TU1-1085
	Part Number	2130R1X	2130R3X	2130R5X
	(Old Part Number)	(21301TX)	(21303TX)	(21305TX)
	Low Voltage Versions (Int'l)	UPS750THV	UPS1000THV	UPS1500THV
	Part Number	2130R2X	2130R4X	2130R6X
	(Old Part Number)	(21302TX)	(21304TX)	(21306TX)
	Japan Versions	UPS750TJV	UPS1000TJV	UPS1500TJV
	Part Number	2130R7X	2130R8X	2130R9X
	(Old Part Number)	(21307TX)	(21308TX)	(21309TX)
UPS attributes				
Communications links to servers		Serial/USB/Enet	Serial/USB/Enet	Serial/USB/Enet
Color		black	black	black
APC SmartSlot		one	one	one
International models				
50 or 60Hz, single phase,VAC:		220-240(xxx) ^{1,2}	220-240(xxx) ^{1,2}	220-240(xxx) ^{1,2}
10-Amp, IEC 320-C13 (Device)receptacles		6	8	8
16-Amp, IEC 320-C19 (PDU)receptacles		-	-	-
Receptacles (NEMA L5-20R)		-	-	-
Line cord length, NEMA plug		-	-	-
Line cord receptacle (IEC 320-)		C14 ³	C14 ³	C14 ³
Low Voltage Versions (US models and Japan models)				
50 or 60Hz, single phase,VAC:		100-127(120) ¹	100-127(120) ¹	100-127(120) ¹
Receptacles (NEMA 5-15R)		6	8	8
Receptacles (NEMA L5-20R)		-	-	-
10-Amp, IEC 320-C13 (Device)receptacles		-	-	-
16-Amp, IEC 320-C19 (PDU)receptacles		-	-	-
Line cord length, NEMA plug		6ft, 5-15P	6ft, 5-15P	6ft, 5-15P
Line cord receptacle (IEC 320-)		-	-	-

Notes:

1. How-to-Read example for 200-240(208): Input VAC is 200-240 as is the UPS output when electric service is active. When electric service is interrupted and the UPS is on battery, the UPS output is 208 VAC.
2. Battery output may be set to 220, 225, 230 or 240 VAC.
3. Country-specific line cords available as options.
4. Type-Model-Feature ordering system now used in the US and Canada.

Table 2. IBM UPS700T, 1000T, 1500T Runtimes¹

Total load (watts)	Tower		
	UPS750T Runtime (minutes)	UPS1000T Runtime (minutes)	UPS1500T Runtime (minutes)
50	105	224	269
100	57	127	157
200	28	64	80
300	18	41	51
400	13	29	37
500	10	23	28
600	-	18	22
700	-	15	18
800	-	12	15
900	-	11	13
1000	-	9	11
1200	-	-	9
1400	-	-	7

Notes:

1. Data provided by APC.

Table 3. Country-specific line cords usable with UPS750THV, UPS1000THV, and UPS1500THV:

Option number	Description
39Y7930	2.8m, 10A/220V, C13 to IRAM 2073 (Argentina) Line Cord
39Y7929	2.8m, 10A/125V, C13 to NBR 6147 (Brazil) Line Cord
39Y7917	2.8m, 10A/230V, C13 to CEE7-VII (Europe) Line Cord
39Y7918	2.8m, 10A/230V, C13 to DK2-5a (Denmark) Line Cord
39Y7920	2.8m, 10A/230V, C13 to SI 32 (Israel) Line Cord
39Y7921	2.8m, 10A/230V, C13 to CEI 23-16 (Italy) Line Cord
39Y7922	2.8m, 10A/230V, C13 to SABS 164 (South Africa) Line Cord
39Y7919	2.8m, 10A/230V, C13 to SEV 1011-S24507 (Sws) Line Cord
39Y7923	2.8m, 10A/230V, C13 to BS 1363/A (UK) Line Cord
39Y7924	2.8m, 10A/230V, C13 to AS/NZS 3112 (Aus/NZ) Line Cord
39Y7927	2.8m, 10A/240V, C13 to IS6538 (India) Line Cord
39Y7928	2.8m, 10A/220V, C13 to GB 2099.1 (China) Line Cord
39Y7925	2.8m, 10A/220V, C13 to KSC 8305 (S. Korea) Line Cord

IBM UPS3000LV and HV

Table 4. IBM UPS3000LV and HV Attributes

	Version	Tower or rack mount		
		UPS3000LV	UPS3000HV	UPS extend run battery pack
	New T-M-F Ordering System ¹	2130RU1-1077	2130RU1-1078	FC 5742
	Part Number	21301RX	21302RX	40K9620
UPS attributes				
Communications links to servers		Serial/USB/Enet	Serial/USB/Enet	-
Color		black	black	black
EIA height		2U	2U	2U
Versions		Low Voltage	High Voltage	
50 or 60Hz, single phase,VAC:		120(120) ¹	220-240(xxx) ^{1, 2}	-
Maximum power capacity (watts)		2700	2700	-
10-Amp, IEC 320-C13 (Device) receptacles		-	9 ⁴	-
16-Amp, IEC 320-C19 (PDU)receptacles		-	1 ³	-
Receptacles (NEMA 5-15R)		6	-	-
Receptacles (NEMA L5-30R)		1	-	-
Attached line cord length, NEMA plug type		12ft, L5-30P	-	-
Line cord receptacle(IEC 320-)		-	C20 ⁵	-

Notes:

1. How-to-Read example for 200-240(208): Input VAC is 200-240 as is the UPS output when electric service is active. When electric service is interrupted and the UPS is on battery, the UPS output
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- is 208 VAC.
- 2. Battery output may be set to 220, 225, 230 or 240 VAC.
- 3. One 2.5m PDU jumper cable ships with the UPS for attachment from the IEC 320-C19 receptacle to a Power Distribution Unit (PDU) with C20 inlet.
- 4. Four IEC power cables are provided to attach devices to the UPS outlets, which are 2m long with IEC 320-C13/C14 connectors.
- 5. Country-specific line cords are available as options.
- 6. Type-Model-Feature ordering system now used in the US and Canada.

Table 5. IBM UPS3000LV Runtimes¹

Total Load (Watts)	Number of battery packs (P/N 40K9620)				
	+0	+1	+2	+3	+4
	Runtime (hours / minutes)	Runtime (hours / minutes)	Runtime (hours / minutes)	Runtime (hours / minutes)	Runtime (hours / minutes)
200	1/3	5/16	7/57	11/15	14/34
300	55	4/35	7/0	9/55	12/50
400	48	4/1	6/6	8/39	11/12
500	42	3/31	5/19	7/31	9/44
600	36	3/3	4/31	6/24	8/17
700	31	2/35	3/50	5/26	7/2
800	26	2/12	3/20	4/43	6/6
900	23	1/55	2/51	4/2	5/14
1000	19	1/38	2/23	3/23	4/23
1100	16	1/22	2/4	2/56	3/48
1200	14	1/11	1/48	2/33	3/19
1300	12	1/2	1/35	2/14	2/54
1400	10	54	1/20	1/54	2/28
1500	9	46	1/11	1/41	2/10
1600	8	41	1/8	1/37	2/5
1700	8	40	1/8	1/37	2/5
1800	8	40	1/8	1/37	2/5
1900	7	39	1/0	1/25	1/50
2000	7	35	1/0	1/25	1/50
2100	7	35	1/0	1/25	1/50

Notes:

- 1. Data provided by Eaton.

Table 6. IBM UPS3000HV Runtimes¹

Total Load (Watts)	Number of battery packs (P/N 40K9620)				
	+0	+1	+2	+3	+4
	Runtime (hours / minutes)	Runtime (hours / minutes)	Runtime (hours / minutes)	Runtime (hours / minutes)	Runtime (hours / minutes)
200	1/3	4/38	9/5	12/48	16/42
300	55	4/5	8/0	11/16	14/42
400	48	3/33	6/59	9/59	12/50
500	42	3/6	6/4	8/33	11/10
600	36	2/38	5/10	7/17	9/30
700	31	2/14	4/23	6/11	8/4
800	26	1/56	3/48	5/22	7/0
900	23	1/40	3/16	4/36	6/0
1000	19	1/23	2/44	3/51	5/2
1100	16	1/12	2/22	3/20	4/22
1200	14	1/3	2/4	2/54	3/48
1300	12	55	1/48	2/33	3/20
1400	10	47	1/32	2/10	2/50
1500	9	45	1/28	2/4	2/42
1600	9	41	1/20	1/53	2/28
1700	8	40	1/18	1/50	2/24
1800	8	40	1/18	1/50	2/24
1900	7	35	1/8	1/36	2/6
2000	7	35	1/8	1/36	2/6
2100	7	33	1/5	1/32	2/0
2200	6	30	58	1/22	1/48
2300	6	30	58	1/22	1/48
2400	6	30	58	1/22	1/48
2500	6	26	51	1/12	1/34
2600	5	25	49	1/9	1/30
2700	5	25	49	1/9	1/30

Notes:

- 1. Data provided by Eaton.

Table 7. Country-specific line cords usable with UPS3000HV

Option number	Description
40K9772	4.3m, 16A/208V, C19 to NEMA L6-20P (US) Line Cord
40K9777	4.3m, 16A/220V, C19 to IRAM 2073 (Argentina) Line Cord
40K9775	4.3m, 15A/125V, C19 to NBR 6147 (Brazil) Line Cord
40K9766	4.3m, 16A/230V, C19 to CEE7-VII (Europe) Line Cord
40K9769	4.3m, 16A/230V, C19 to IEC 309-P+N+G (Den/Sws) Line Cord
40K9771	4.3m, 16A/230V, C19 to SI 32 (Israel) Line Cord
40K9768	4.3m, 16A/230V, C19 to CEI 23-16 (Italy) Line Cord
40K9770	4.3m, 16A/230V, C19 to SABS 164 (South Africa) Line Cord
40K9767	4.3m, 13A/230V, C19 to BS 1363/A w/13A fuse (UK) Line Cord
40K9773	4.3m, 15A/230V, C19 to AS/NZS 3112 (Aus/NZ) Line Cord
40K9774	4.3m, 16A/220V, C19 to GB 2099.1 (China) Line Cord
40K9776	4.3m, 16A/240V, C19 to IS 6538 (India) Line Cord

IBM UPS 7500XHV, 10000XHV

Table 8. IBM UPS7500XHV, 10000XHV attributes

Version	Tower or rack mount		
	UPS7500XHV	UPS10000XHV	UPS extend run battery pack
New T-M-F Ordering System⁶	2130RU1-1079	2130RU1-1080	FC 5743
Part number (Old part number)	21303RX (21306RX)	21304RX (21308RX)	39Y8857 (25R5582)
UPS attributes			
Communication links to servers	Serial/USB/Enet	Serial/USB/Enet	--
Color	black	black	black
EIA height	6U	6U	3U
Versions			
50 or 60Hz, single phase, VAC:	220-240(xxx) ^{1, 2}	220-240(xxx) ^{1, 2}	-
Maximum power capacity (watts)	6000	8000	-
10 Amp, IEC 320-C13 receptacles	-	-	-
16 Amp, IEC 320-C19 receptacles	4 ^{3, 4}	4 ^{3, 4}	-
Line cord receptacle	terminal block ⁵	terminal block ⁵	-

Notes:

1. How-to-Read example for 200-240(208): Input VAC is 200-240 as is the UPS output when electric service is active. When electric service is interrupted and the UPS is on battery, the UPS output is 208 VAC.
2. Battery output may be set to 208, 220, 225, 230 or 240 VAC.
3. Four IEC power cables are provided to attach devices or PDUs to the UPS outlet, which are 2m long with IEC 320-C19/C20 connectors.
4. Each outlet is protected by a 15amp circuit breaker.
5. Requires electrician to connect directly to the terminal block inlet.
6. Type-Model-Feature ordering system now used in the US and Canada.

Table 9. IBM UPS7500XHV, 10000XHV Runtimes¹

Watts load	Number of battery packs (P/N 39Y8857)			
	+0	+1	+2	+4
	Runtime (hours/minutes)	Runtime (hours/minutes)	Runtime (hours/minutes)	Runtime (hours/minutes)
200	4/6	7/36	11/54	20/54
300	3/6	5/48	9/6	16/0
400	2/30	4/36	7/18	12/48
500	2/6	3/54	6/6	10/42
600	1/48	3/18	5/12	9/12
700	1/30	2/54	4/30	8/0
800	1/18	2/30	4/0	7/0
900	1/12	2/18	3/36	6/12
1000	1/6	2/0	3/12	5/42
1200	55	1/42	2/42	4/48
1400	47	1/30	2/18	4/6
1600	41	1/12	2/0	3/36
1800	36	1/6	1/48	3/12
2000	32	1/0	1/36	2/54

3000	19	39	1/0	1/48
4000	13	28	46	1/18
5000	10	21	35	1/0
6000	7	16	28	52
7000	5	13	23	44
8000	4	11	20	37

Note: UPS7500 is rated for up to 6000 total watts; UPS10000 is rated for up to 8000 total watts.

Notes:

1. Data provided by APC.

Appendix C. Power data overview

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

Note: The following table is used in conjunction with the UPS Runtime tables in the Uninterruptible power supplies appendix.

B = Basic (included standard), D = Default (recommended), S = Selectable

Table 1. Product Power Data

				External Power Line Cords ³					
Machine type/ model	Power inlets (std/ max)	Power Watts Load (Watts) (Typical/ Max) ¹	(6369) 1.8m C13/ 5-15P	(6313) 2.8m C13/ 5-15P	(6370) 4.3m C13/ 5-15P	(6351) 1.8m C13/ 6-15P	(6372) 2.8m C13/ 6-15P	(6389) 1.8m C13/ L6-15P	(6390) 2.8m C13/ L6-15P
Server products									
x3200 ³	4362, 4363	1/2	190/272	S	D	S	S	S	
x3200 M2 ³	4367, 4368	1/2	190/272	S	D	S	S	S	
x3250 ³	4364, 4365	1/1	210/300	S	D		S	S	
x3250 M2 ³	4190, 4191, 4194	1/1	245/350	S	D		S	S	
x3350 ³	4192, 4193	1/2	280/400	S	S		S	S	
x3400 entry ³	7973, 7974	1/1	463/662		D				
x3400 mid-range ³	7975, 7976	1/2	476/680		D				
x3455 ³	7984	1/1	350/495	S	S	S	S	S	S
x3500 ³	7977	1/2	476/680		D				
x3550 ³	7978	1/2	490/700	S	S		S	S	
x3650 ³	7979	1/2	679/970	S	S		S	S	
x3655 ³	7985	1/2	679/970		S	S		S	S
x3755 (one power supply) ³	8877	1/1	610/872		S			S	S
x3755 (two power supplies) ³	8877	2/2	1190/1700		S			S	S
x3800 (two power supplies) ³	8865, 8866	2/2	679/970		D		S		
x3800 (three power supplies) ³	8865, 8866	3/3	1288/1840		D		S		
x3850 ³	8863	2/2	1103/1575		S		S		
x3850 M2 ³ (low voltage) ⁵	7141	2/2	590/843						
x3850 M2 (high voltage) ³	7141	2/2	1098/1568				S		
x3950 ³	8872, 8878	2/2	1103/1575						S
x3950 M2 ³	7141	2/2	1098/1568				S		
BladeCenter S (two 950w power supplies) ^{3, 6}	8886	2/4	1585/2235						
BladeCenter S (four 950w power supplies) ^{3, 6}	8886	4/4	2347/3353						

BladeCenter S (two 1450w power supplies) ^{3, 6}	8886	2/4	2240/3200	
BladeCenter S (four 1450w power supplies) ^{3, 6}	8886	4/4	2240/3200	
BladeCenter (two 2000w power supplies) ^{3,4}	8677	2/4	1855/2650	
BladeCenter (four 2000w power supplies) ^{3,4}	8677	4/4	3710/5300	
BladeCenter H (two 2900w power supplies) ^{3,4}	8852	2/2	3325/4750	
BladeCenter H (four 2900w power supplies) ^{3,4}	8852	4/4	6650/9500	
Storage products				
EXP400 Storage Expansion Unit ³	17331RU	2/2	310/440	2B
EXP3000 Storage Expansion Unit ³	172001X	2/2	350/500	
DS300 Storage Subsystem ³	1701xxx	2/2	391/558	
DS400 Storage Subsystem ³	1700xxx	2/2	391/558	
DS3200 Disk System ³	17622xx	2/2	421/500	
DS3300 Disk System ³	17233xx	2/2	421/500	
DS3400 Disk System ²	17234xx	2/2	421/500	
DS4200 Disk System ²	18147VH	2/2	427/600	
DS4300 Disk System ²	17226xx	2/2	275/390	2B
DS4700 Disk System ²	18147xx	2/2	427/600	
DS4800 Storage Controller ²	18158xx	2/2	140/200	
DS4000 EXP420 Storage Expansion Unit ²	18128VH	2/2	420/600	
DS4000 EXP810 Storage Expansion Unit ²	181281H	2/2	420/600	
Fibre Channel Switch, 16- Port	200516B	1/1	53/75	
Fibre Channel Switch, 32- Port	200532B	2/2	147/210	
Other products				

Console Switch	1735xLX	1/1	28/40
Console Manager	1735xGX	1/1	28/40
1U 17in Console Kit	17231RX	1/1	38/54
1U 15in Console Kit	17233RX	1/1	25/35

Table 1. Product Power Data (continued)

				External Power Line Cords (continue) ³					
	Machine type / model	Power inlets (std / max)	Power Watts Load (Watts) (Typical / Max) ¹	(6391) 4.3m C13 / L6-15P	(6535) 2.5m C19 / 5-15P	(6274) 4.3m C19 / L5-20P	(6253) 2.5m C19 / 6-15P	(6275) 4.3m C19 / L6-20P	(6270) 4.3m 2xL6-30P
Server products									
x3200 ³	4362, 4363	1/2	190/272						
x3200 M2 ³	4367, 4368	1/2	190/272						
x3250 ³	4364, 4365	1/1	210/300						
x3250 M2 ³	4190, 4191, 4194	1/1	245/350						
x3350 ³	4192, 4193	1/2	280/400						
x3400 entry ³	7973, 7974	1/1	463/662						
x3400 mid-range ³	7975, 7976	1/2	476/680						
x3455 ³	7984	1/1	350/495	S					
x3500 ³	7977	1/2	476/680						
x3550 ³	7978	1/2	490/700						
x3650 ³	7979	1/2	679/970						
x3655 ³	7985	1/2	679/970	S					
x3755 (one power supply) ³	8877	1/1	610/872	S					
x3755 (two power supplies) ³	8877	2/2	1190/1700	S					
x3800 (two power supplies) ³	8865, 8866	2/2	679/970						
x3800 (three power supplies) ³	8865, 8866	3/3	1288/1840						
x3850 ³	8863	2/2	1103/1575						
x3850 M2 ³ (low voltage) ⁵	7141	2/2	590/843						
x3850 M2 (high voltage) ³	7141	2/2	1098/1568						
x3950 ³	8872, 8878	2/2	1103/1575						
x3950 M2 ³	7141	2/2	1098/1568						
BladeCenter S (two 950w power supplies) ^{3, 6}	8886	2/4	1585/2235		S	S			
BladeCenter S (four 950w power supplies) ^{3, 6}	8886	4/4	2347/3353		S	S			
BladeCenter S (two 1450w power supplies) ^{3, 6}	8886	2/4	2240/3200				S	S	
BladeCenter S (four 1450w power supplies) ^{3, 6}	8886	4/4	2240/3200				S	S	

BladeCenter (two 2000w power supplies) ^{3,4}	8677	2/4	1855/2650	S
BladeCenter (four 2000w power supplies) ^{3,4}	8677	4/4	3710/5300	S
BladeCenter H (two 2900w power supplies) ^{3,4}	8852	2/2	3325/4750	S
BladeCenter H (four 2900w power supplies) ^{3,4}	8852	4/4	6650/9500	S
Storage products				
EXP400 Storage Expansion Unit ³	17331RU	2/2	310/440	
EXP3000 Storage Expansion Unit ³	172001X	2/2	350/500	
DS300 Storage Subsystem ³	1701xxx	2/2	391/558	
DS400 Storage Subsystem ³	1700xxx	2/2	391/558	
DS3200 Disk System ³	17622xx	2/2	421/500	
DS3300 Disk System ³	17233xx	2/2	421/500	
DS3400 Disk System ²	17234xx	2/2	421/500	
DS4200 Disk System ²	18147VH	2/2	427/600	
DS4300 Disk System ²	17226xx	2/2	275/390	
DS4700 Disk System ²	18147xx	2/2	427/600	
DS4800 Storage Controller ²	18158xx	2/2	140/200	
DS4000 EXP420 Storage Expansion Unit ²	18128VH	2/2	420/600	
DS4000 EXP810 Storage Expansion Unit ²	181281H	2/2	420/600	
Fibre Channel Switch, 16- Port	200516B	1/1	53/75	
Fibre Channel Switch, 32- Port	200532B	2/2	147/210	
Other products				
Console Switch	1735xLX	1/1	28/40	
Console Manager	1735xGX	1/1	28/40	
1U 17in Console Kit	17231RX	1/1	38/54	
1U 15in Console Kit	17233RX	1/1	25/35	

Table 1. Product Power Data (continued)
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Internal Power Cables ³									
	Machine type/ model	Power inlets (std/ max)	Power Watts Load (Watts) (Typical/ Max) ¹	(6201) 1.5m C13/ C14	(6316) 2m C13/ C14	(6311) 2.8m C13/ C14	(6263) 4.3m C13/ C14	(6204) 2.8m C13/ C20	2xC13/ C14 Y-cable
Server products									
x3200 ³	4362, 4363	1/2	190/272	S	S	S		S	
x3200 M2 ³	4367, 4368	1/2	190/272			S		S	
x3250 ³	4364, 4365	1/1	210/300	D	S	S		S	
x3250 M2 ³	4190, 4191, 4194	1/1	245/350	D	S	S		S	
x3350 ³	4192, 4193	1/2	280/400	D	S	S	S	S	
x3400 entry ³	7973, 7974	1/1	463/662						
x3400 mid- range ³	7975, 7976	1/2	476/680						
x3455 ³	7984	1/1	350/495			D			
x3500 ³	7977	1/2	476/680						
x3550 ³	7978	1/2	490/700	S	S	S		S	
x3650 ³	7979	1/2	679/970	S	S	D	S	S	
x3655 ³	7985	1/2	679/970			S			
x3755 (one power supply) ³	8877	1/1	610/872			S			
x3755 (two power supplies) ³	8877	2/2	1190/1700			S			
x3800 (two power supplies) ³	8865, 8866	2/2	679/970	S		D	S	S	
x3800 (three power supplies) ³	8865, 8866	3/3	1288/1840	S		D	S	S	
x3850 ³	8863	2/2	1103/1575			D	S	S	
x3850 M2 ³ (low voltage) ⁵	7141	2/2	590/843	S		D	S	S	
x3850 M2 (high voltage) ³	7141	2/2	1098/1568	S		D	S	S	
x3950 ³	8872, 8878	2/2	1103/1575	S		D	S	S	
x3950 M2 ³	7141	2/2	1098/1568	S		S	S	S	
BladeCenter S (two 950w power supplies) ^{3, 6}	8886	2/4	1585/2235						
BladeCenter S (four 950w power supplies) ^{3, 6}	8886	4/4	2347/3353						
BladeCenter S (two 1450w power supplies) ^{3, 6}	8886	2/4	2240/3200						
BladeCenter S (four 1450w power supplies) ^{3, 6}	8886	4/4	2240/3200						
BladeCenter (two 2000w power supplies) ^{3,4}	8677	2/4	1855/2650						
BladeCenter (four 2000w power supplies) ^{3,4}	8677	4/4	3710/5300						
BladeCenter H (two 2900w power supplies) ^{3,4}	8852	2/2	3325/4750						

BladeCenter H (four 2900w power supplies) ^{3,4}	8852	4/4	6650/9500	
Storage products				
EXP400 Storage Expansion Unit ³	17331RU	2/2	310/440	2B
EXP3000 Storage Expansion Unit ³	172001X	2/2	350/500	2B
DS300 Storage Subsystem ³	1701xxx	2/2	391/558	1B
DS400 Storage Subsystem ³	1700xxx	2/2	391/558	2B
DS3200 Disk System ³	17622xx	2/2	421/500	2B
DS3300 Disk System ³	17233xx	2/2	421/500	2B
DS3400 Disk System ²	17234xx	2/2	421/500	2B
DS4200 Disk System ²	18147VH	2/2	427/600	2B
DS4300 Disk System ²	17226xx	2/2	275/390	2B
DS4700 Disk System ²	18147xx	2/2	427/600	2B
DS4800 Storage Controller ²	18158xx	2/2	140/200	2B
DS4000 EXP420 Storage Expansion Unit ²	18128VH	2/2	420/600	2B
DS4000 EXP810 Storage Expansion Unit ²	181281H	2/2	420/600	2B
Fibre Channel Switch, 16- Port	200516B	1/1	53/75	1B
Fibre Channel Switch, 32- Port	200532B	2/2	147/210	2B
Other products				
Console Switch	1735xLX	1/1	28/40	1B
Console Manager	1735xGX	1/1	28/40	1B
1U 17in Console Kit	17231RX	1/1	38/54	1B
1U 15in Console Kit	17233RX	1/1	25/35	1B

Table 1. Product Power Data (continued)

Internal Power Cables (continue) ³				
Machine type/ model	Power inlets (std/ max)	Power Watts Load (Watts) (Typical/ Max) ¹	(6312) 1.8m C13/5-1	(6366) 2.8m C13/5-15P (6207) 4.3m C13/5-15P (6252) 2.5m C19/C20 (6226) 2.8m 3xC20
Server products				
x3200 ³	4362, 4363	1/2	190/272	
x3200 M2 ³	4367, 4368	1/2	190/272	
x3250 ³	4364, 4365	1/1	210/300	

x3250 M2 ³	4190, 4191, 4194	1/1	245/350			
x3350 ³	4192, 4193	1/2	280/400	S	S	S
x3400 entry ³	7973, 7974	1/1	463/662			
x3400 mid-range ³	7975, 7976	1/2	476/680			
x3455 ³	7984	1/1	350/495	S		S
x3500 ³	7977	1/2	476/680			
x3550 ³	7978	1/2	490/700			S
x3650 ³	7979	1/2	679/970			S
x3655 ³	7985	1/2	679/970	S		
x3755 (one power supply) ³	8877	1/1	610/872	S		
x3755 (two power supplies) ³	8877	2/2	1190/1700	S		
x3800 (two power supplies) ³	8865, 8866	2/2	679/970			
x3800 (three power supplies) ³	8865, 8866	3/3	1288/1840			
x3850 ³	8863	2/2	1103/1575			
x3850 M2 ³ (low voltage) ⁵	7141	2/2	590/843			
x3850 M2 (high voltage) ³	7141	2/2	1098/1568			
x3950 ³	8872, 8878	2/2	1103/1575			
x3950 M2 ³	7141	2/2	1098/1568			
BladeCenter S (two 950w power supplies) ^{3, 6}	8886	2/4	1585/2235			S
BladeCenter S (four 950w power supplies) ^{3, 6}	8886	4/4	2347/3353			S
BladeCenter S (two 1450w power supplies) ^{3, 6}	8886	2/4	2240/3200			S
BladeCenter S (four 1450w power supplies) ^{3, 6}	8886	4/4	2240/3200			S
BladeCenter (two 2000w power supplies) ^{3,4}	8677	2/4	1855/2650			S
BladeCenter (four 2000w power supplies) ^{3,4}	8677	4/4	3710/5300			S
BladeCenter H (two 2900w power supplies) ^{3,4}	8852	2/2	3325/4750			S
BladeCenter H (four 2900w power supplies) ^{3,4}	8852	4/4	6650/9500			S
Storage products						
EXP400 Storage Expansion Unit ³	17331RU	2/2	310/440			
EXP3000 Storage Expansion Unit ³	172001X	2/2	350/500			
DS300 Storage Subsystem ³	1701xxx	2/2	391/558			

DS400 Storage Subsystem ³	1700xxx	2/2	391/558
DS3200 Disk System ³	17622xx	2/2	421/500
DS3300 Disk System ³	17233xx	2/2	421/500
DS3400 Disk System ²	17234xx	2/2	421/500
DS4200 Disk System ²	18147VH	2/2	427/600
DS4300 Disk System ²	17226xx	2/2	275/390
DS4700 Disk System ²	18147xx	2/2	427/600
DS4800 Storage Controller ²	18158xx	2/2	140/200
DS4000 EXP420 Storage Expansion Unit ²	18128VH	2/2	420/600
DS4000 EXP810 Storage Expansion Unit ²	181281H	2/2	420/600
Fibre Channel Switch, 16-Port	200516B	1/1	53/75
Fibre Channel Switch, 32-Port	200532B	2/2	147/210
Other products			
Console Switch	1735xLX	1/1	28/40
Console Manager	1735xGX	1/1	28/40
1U 17in Console Kit	17231RX	1/1	38/54
1U 15in Console Kit	17233RX	1/1	25/35

Notes:

1. This table represents general guidelines for selecting the appropriate UPS based on minimum and typical runtime estimates. A 'maximum configuration' load will result in 'minimum' UPS runtime. â€™Typical' loads are based on a production system running at approximately 70% of maximum capacity. The 'typical' load represents a more likely configuration by providing an accurate estimation of runtime. Customer environments are unique and are unlikely to be precisely represented by any of the specific entries in the table.
2. This is a representative list of supported power cables, it is not complete. Please see the Sales Configurator for a full list of available power cables.
3. Power-Factor Corrected (PFC) power supply.
4. Use with IBM UPS7500X or UPS10000X only.
5. x3850 M2 is limited to 2-way max when using low voltage (100-127V).
6. BladeCenter S power supplies provide 950w when using low voltage (100-127V) and 1450w when using high voltage (200-250V). BladeCenter S uses different feature codes for power cables. The following lists the BladeCenter S power cable feature code and the regular feature code shown in the table above in parenthesis 4558 (6252), 3733 (6253), 4560 (6275), 4578 (6535), 4559 (6274).

Note: B = Basic (included standard), D = Default (recommended), S = Selectable

Table 2. Power supply options

Power cables¹

Power supply	Option number	Feature code	SBB	Geography	Compatible with	(6369) 1.8m C13/5-15P	(6313) 2.8m C13/5-15P	(6207) 4.3m C13/5-15P	(6351) 1.8m C13/6-15P
450W	43V7477	1990	43V7427	WW	x3550				
670W	32R2815	1964	32R2810	WW	x3550				
775W	41Y5002	1973	39R9506	WW	x3800		S		
835W	39Y8487	0942	39Y8326	WW	x3400, x3500		S		
835W	40K1905	-	-	US/Can	x3650, x3655		1B		
	-	1968	40K0029	US/Can			S		
	40K1906	-	-	non-US					
1300W	-	1972	39R9505	US/Can	x3850				
1500W	40K7543	-	-	US/Can	x3755		1B		
	-	1974	40K7397	US/Can			S		
	40K7544	-	-	non-US					
950/ 1450W	43W3582	-	-	WW	BladeCenter S				
	-	4548	43W3614	US/Can					
2000W	39M4675	-	-	WW	BladeCenter ²				
	-	1966	39M4622	US/Can					
2900W	31R3335	1962	32R2112	WW	BladeCenter H				

Table 2. Power supply options (continued)

Power supply	Option number	Feature code	SBB	Geography	Compatible with	Power cables ¹			
						(6372) 2.8m C13/6-15P	(6201) 1.5m C13/ C14	(6316) 2m C13/C14	(6311) 2.8m C13/ C14
450W	43V7477	1990	43V7427	WW	x3550				
670W	32R2815	1964	32R2810	WW	x3550				
775W	41Y5002	1973	39R9506	WW	x3800	S	S		S
835W	39Y8487	0942	39Y8326	WW	x3400, x3500				
835W	40K1905	-	-	US/Can	x3650, x3655				1B
	-	1968	40K0029	US/Can					S
	40K1906	-	-	non-US					1B
1300W	-	1972	39R9505	US/Can	x3850				S
1500W	40K7543	-	-	US/Can	x3755				1B
	-	1974	40K7397	US/Can					S
	40K7544	-	-	non-US					1B
950/ 1450W	43W3582	-	-	WW	BladeCenter S				
	-	4548	43W3614	US/Can					
2000W	39M4675	-	-	WW	BladeCenter ²				
	-	1966	39M4622	US/Can					
2900W	31R3335	1962	32R2112	WW	BladeCenter H				

Table 2. Power supply options (continued)

Power supply	Option number	Feature code	SBB	Geography	Compatible with	Power cables ¹			
						(6263) 4.3m C13/ C14	(6204) 2.8m C13/ C20	2xC13/ C14 Y-cable	(4578) 2.5m C19/5-15P
450W	43V7477	1990	43V7427	WW	x3550			1B	
670W	32R2815	1964	32R2810	WW	x3550			1B	
775W	41Y5002	1973	39R9506	WW	x3800	S	S		
835W	39Y8487	0942	39Y8326	WW	x3400, x3500				
835W	40K1905	-	-	US/Can	x3650, x3655				
	-	1968	40K0029	US/Can					
	40K1906	-	-	non-US					
1300W	-	1972	39R9505	US/Can	x3850				
1500W	40K7543	-	-	US/Can	x3755				
	-	1974	40K7397	US/Can					
	40K7544	-	-	non-US					
950/ 1450W	43W3582	-	-	WW	BladeCenter S				
	-	4548	43W3614	US/Can					S
2000W	39M4675	-	-	WW	BladeCenter ²				
	-	1966	39M4622	US/Can					
2900W	31R3335	1962	32R2112	WW	BladeCenter H				

Table 2. Power supply options (continued)

Power supply	Option number	Feature code	SBB	Geography	Compatible with	Power cables ¹			
						(3733) 2.5m C19/6-15P	(6253) 2.5m C19/6-15P	(4558) 2.5m C19/6-15P	(6252) 2.5m C19/ C20

450W	43V7477	1990	43V7427	WW	x3550				
670W	32R2815	1964	32R2810	WW	x3550				
775W	41Y5002	1973	39R9506	WW	x3800				
835W	39Y8487	0942	39Y8326	WW	x3400, x3500				
835W	40K1905	-	-	US/Can	x3650, x3655				
	-	1968	40K0029	US/Can					
	40K1906	-	-	non-US					
1300W	-	1972	39R9505	US/Can	x3850				
1500W	40K7543	-	-	US/Can	x3755				
	-	1974	40K7397	US/Can					
	40K7544	-	-	non-US					
950/ 1450W	43W3582	-	-	WW	BladeCenter S				2B
	-	4548	43W3614	US/Can		S		S	
2000W	39M4675	-	-	WW	BladeCenter ²				2B
	-	1966	39M4622	US/Can		S		S	
2900W	31R3335	1962	32R2112	WW	BladeCenter H				

Notes:

1. Optional rack power cords: P/N 39Y7931 - 14ft C13/NEMA 5-15P, P/N 39Y7932 - 14ft C13/IEC 320-C14, P/N 39Y7938 - 2.8m C13/IEC 320-C20. See the sales configurator tool for additional power cable selections that may be available.
2. Refer to the 'BladeCenter Power Module Upgrade Guidelines' Appendix for important information that will help determine when a BladeCenter power module upgrade is necessary.

Table 3. Power cables

Option number	SBB	Feature code	Cable part number	Description
Products with 10amp C14 Inlets - Country-specific Line Cords (US / Canada)				
-	39Y5650	6369	39M5080	1.8m, 10A/120V, C13 to NEMA 5-15P (US) Line Cord
-	39Y5651	6313	39M5081	2.8m, 10A/120V, C13 to NEMA 5-15P (US) Line Cord
-	39Y5652	6370	39M5082	4.3m, 10A/120V, C13 to NEMA 5-15P (US) Line Cord
-	39Y8121	6351	39M5094	1.8m, 10A/208V, C13 to NEMA 6-15P (US) Line Cord
-	39Y8122	6372	39M5095	2.8m, 10A/208V, C13 to NEMA 6-15P (US) Line Cord
-	39Y8123	6373	39M5096	4.3m, 10A/208V, C13 to NEMA 6-15P (US) Line Cord
-	39Y6555	6390	39M5116	2.8m, 10A/208V, C13 to NEMA L6-15P (US) Line Cord
-	39Y6556	6391	39M5117	4.3m, 10A/208V, C13 to NEMA L6-15P (US) Line Cord
Products with 10amp C14 Inlets - Internal Rack Power Cables (Worldwide)				
-	39Y5531	6201	39M5375	1.5m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable
-	39Y5532	6316	39M5376	2m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable
-	39Y5533	6311	39M5377	2.8m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable
39Y7932	39Y7979	6263	39M5378	4.3m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable
39Y7938	39Y5547	6204	39M5392	2.8m, 10A/100-250V, C13 to IEC 320-C20 Rack Power Cable
39Y7931	39Y5646	6207	39M5076	4.3m, 10A/120V, C13 to NEMA 5-15P Rack Power Cable
BladeCenter with 16amp C20 Inlets				
39Y7916	26R0244	6252	39M5389	2.5m, 16A/100-250V, C19 to IEC 320-C20 Rack Power Cable
-	43W8324	6538	39M5278	2.5m, 16A/208V, C19 to NEMA L6-20P (US) Line Cord
40K9772	39Y5565	6275	39M5279	4.3m, 16A/208V, C19 to NEMA L6-20P (US) Line Cord
BladeCenter H with 37amp UTG Inlets				
25R5785	32R2108	6226	39M5445	2.8m, 200-240V, Triple 16A IEC 320-C20 (WW) Power Cable
25R5783	32R2109	6270	39M5446	4.3m, 208V, Double 30A NEMA L6-30P (US) Line Cord

Appendix D. System Management overview

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

Overview

IBM system management solutions allow you to run your business-critical applications using innovative hardware technology that prevents most outages and recovers rapidly from the few that do occur. This technology makes System x simpler to service and easier to manage.

This section shows the available range of standard and optional system management processors and describes the features and configuration process for each. This section further demonstrates how these service processors can be interconnected to form a communication network for alerting and monitoring a wide range of system functions and hardware conditions.

Legend

ISMP	Integrated System Management Processor
BMC	Baseboard Management Controller
RSA II	Remote Supervisor Adapter II
RSA II SL	Remote Supervisor Adapter II SlimLine
ASMIC	Advanced System Management Interconnect ¹

Notes:

1. An advanced system management interconnect network is for interconnectivity of legacy service processors and/or RSA IIs with one RSA II serving as the gateway to the customer LAN routing alerts and management functions. Service processors that can support an ASM network are: Remote Supervisor Adapter II, Remote Supervisor Adapter, Integrated Systems Management Processor, Advanced Systems Management PCI Adapter and the Advanced Systems Management Processor.

Appendix D. System Management overview

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Overview Addition information

[Support by server](#) | [Functional comparison](#) | [Advanced examples](#)

Table 1. Support by server

Server	ISMP ¹	BMC ¹	RSAlI ²	RSAlI SL ³	ASMIC
x206	-	standard	optional	-	optional
x206m ⁴	-	standard	optional	-	optional
x226	-	-	optional	-	optional
x236	-	standard	-	optional	-
x255	standard	-	optional	-	optional
x260	-	standard	optional	-	-
x306	-	-	optional	-	optional
x306m ⁴	-	-	optional	-	-
x336	-	standard	-	optional	-
x343 ⁵	-	-	-	-	-
x346	-	standard	-	optional	-
x365	standard	-	standard	-	cable kit option ⁶
x366	-	standard	-	optional	-
x445 ⁷	standard	-	standard ⁵	-	standard
x455 ⁸	standard	-	-	-	cable kit option ⁶
e326 ⁴	-	standard	optional	-	-
e326m ⁴	-	standard	optional	-	-
x460	-	standard	-	standard	-
x460-MXE	-	standard	-	standard	-
x3200	-	standard	-	optional	-
x3250	-	standard	-	optional	-
x3400	-	standard	-	optional	-
x3500	-	standard	-	optional	-
x3550	-	standard	-	optional	-
x3650	-	standard	-	optional	-
x3655	-	standard	-	optional	-
x3755	-	standard	-	optional	-
x3800	-	standard	-	optional	-
x3850	-	standard	-	optional	-
x3950	-	standard	-	standard	-
x3950E	-	standard	-	standard	-

Notes:

1. This service processor is integrated into the systemboard.
2. This service processor is a PCI adapter.
3. This service processor is a pluggable module with a dedicated connector.
4. The BMC is automatically disabled by the server hardware when the RSA-II is installed.
5. x343 has its own integrated service processor which is not compatible with other service processors.
6. ASM interconnect requires a breakout cable contained in cable kit option 03K9309.
7. x445 uses the RSAlI-EXA and not the RSAlI.
8. x455 ships standard with the RSA adapter which is no longer available as an option.

Appendix D. System Management overview

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Overview

Addition information

[Support by server](#) | [Functional comparison](#) | [Advanced examples](#)

Table 1. Functional comparison

	ISMP	BMC	RSA II	RSAIL SL
Feature/function				
Monitoring & alerting				
In-band alerting	yes ¹	yes	yes	yes
Remote out-of-band alerting	yes ²	yes	yes	yes
Out-of-band environmental monitoring	yes ²	yes	yes	yes
System voltage monitoring	yes	yes	yes	yes
Battery voltage monitoring ³	no	yes	yes	yes
System temperature monitoring	yes	yes	yes	yes
Fan speed monitoring	yes	yes	yes	yes
Fan speed control	yes	yes	yes	yes
Power good signal monitor	yes	yes	yes	yes
NMI detection ³	yes	yes	yes	yes
SMI detection and generation	yes	yes ⁴	yes	yes
Auto server-restart watchdog alert	yes	yes	yes	yes
Management				
System reset control	yes	yes	yes	yes
Remote system power control	yes ²	yes	yes	yes
Text console redirection	no	yes	yes	yes ⁵
Remind button detection	yes	yes ⁴	yes	yes
System LED control (power, disk, alert)	yes	yes	yes	yes
Lightpath LED control	yes	yes	yes	yes
Other				
RS-485 Interconnect network	yes	no	yes	no
Feature/Function				
Remote access via LAN	yes ⁶	yes	yes	yes
Serial-over-LAN	yes ⁶	yes	yes	no
IPMI Serial-over-LAN	no	yes	no ⁷	no ⁷

Notes:

1. Requires IBM Director Agent
2. Available via the ASM interconnect or from customer LAN with RSAIL installed.
3. This capability is not provided by the hardware in all servers.
4. Not available on e326.
5. This capability is not available on the x236, x336, x346, x460, x460-MXE, x3950, x3950E, x366, x3850, x260, and x3800 servers.
6. Requires the addition of a RSAIL to serve as a gateway to customer LAN.
7. See the Text Console Redirection feature.

Appendix D. System Management overview

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

Overview

Addition information

[Support by server](#) | [Functional comparison](#) | [Advanced examples](#)

The following sample configurations are for illustration only and may not be suitable for any specific customer installation. Contact your IBM Business Partner or IBM Marketing Representative for assistance with your specific configuration requirements.

1. Sample ASM network

The ASM interconnect network is logically and distinctly separate from the customer LAN. Thus, the ASM-nodes are not required to be connected into the LAN. A system with the RSAII or the RSAII-EXA installed will serve as the gateway to the customer LAN and the Director server.

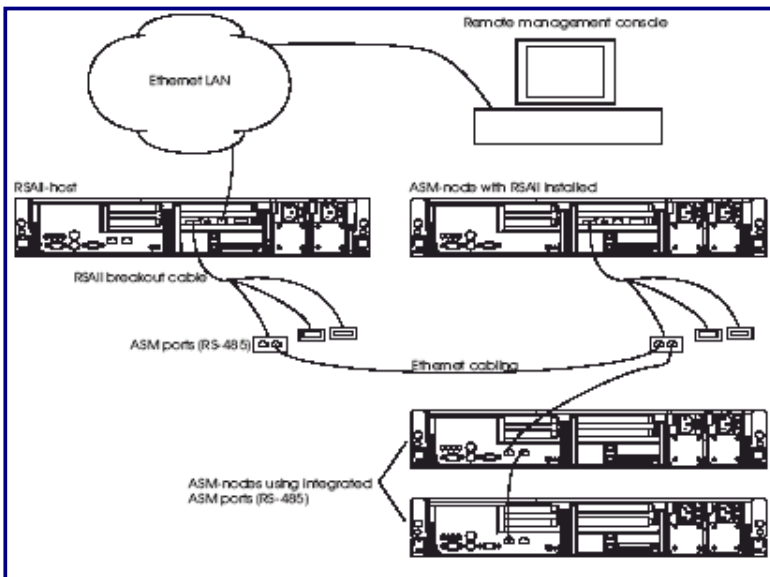
Legend

RSAIL-host	System which has the RSAIL or RSAIL-EXA adapter installed that will be serving as the gateway for the ASM network to the customer LAN for management.
ASM-node	ASM-node=all systems in the ASM network excluding the RSAIL-host.
RSA	Refers to RSAIL or RSAIL-EXA

Cabling rules:

1. Connect the ASM breakout cable to the RSA adapter in the RSAIL-host.
2. Using a standard ethernet cable(RJ45), connect one ASM port of RSAIL-host's ASM breakout cable to an ASM port of the first ASM-node.
3. Using standard ethernet cables(RJ45), connect remaining ASM port of first ASM-node to an ASM port of the second ASM-node and continue daisy-chaining all remaining ASM-nodes in the same manner. The total ASM interconnect network may be no longer than 91.4m (300ft).
4. Using a standard ethernet cable(RJ45), connect the ethernet port of the RSAIL-host's RSA adapter to the customer LAN for ASM management of the ASM network from a remote management console.
5. An Advanced System Management Interconnect Cable Kit may be required. See the Support by Server Table for more information.

Figure 1. Sample ASM network



[Click image to enlarge](#)

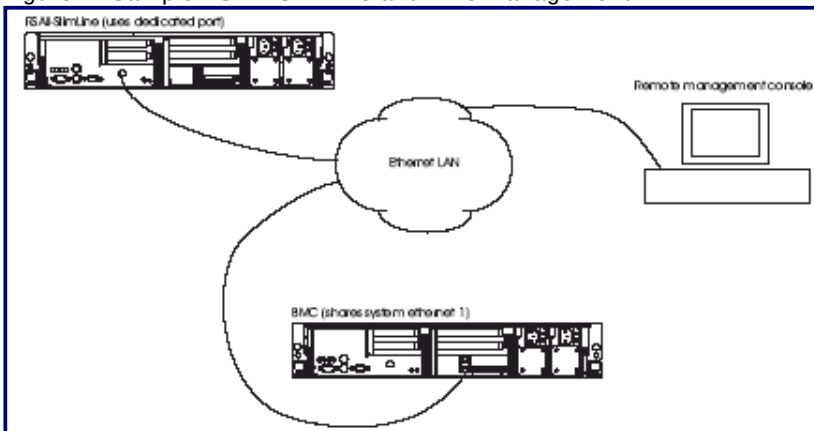
Note: RSAL-SlimLine and BMC management do not support a dedicated ASM network.

2. RSAL-SlimLine and BMC Management

Note: RSAL-SlimLine and BMC management do not support a dedicated ASM network. Management access is via the Customer LAN using the appropriate ASM ethernet port.

Note: BMC access is shared with a designated system ethernet port. The RSAL-SlimLine access is through a separate, dedicated ethernet port.

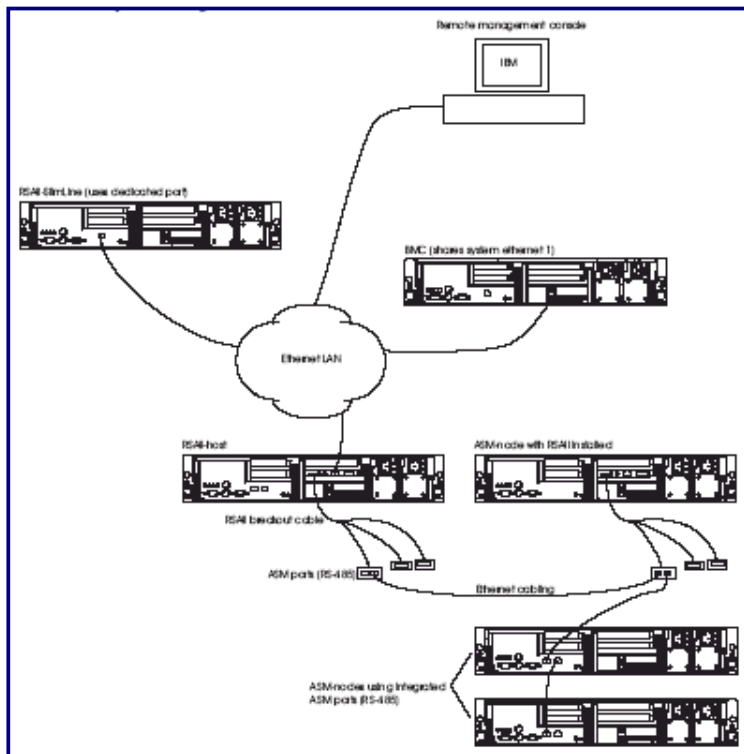
Figure 2. Sample RSAL-SlimLine and BMC Management



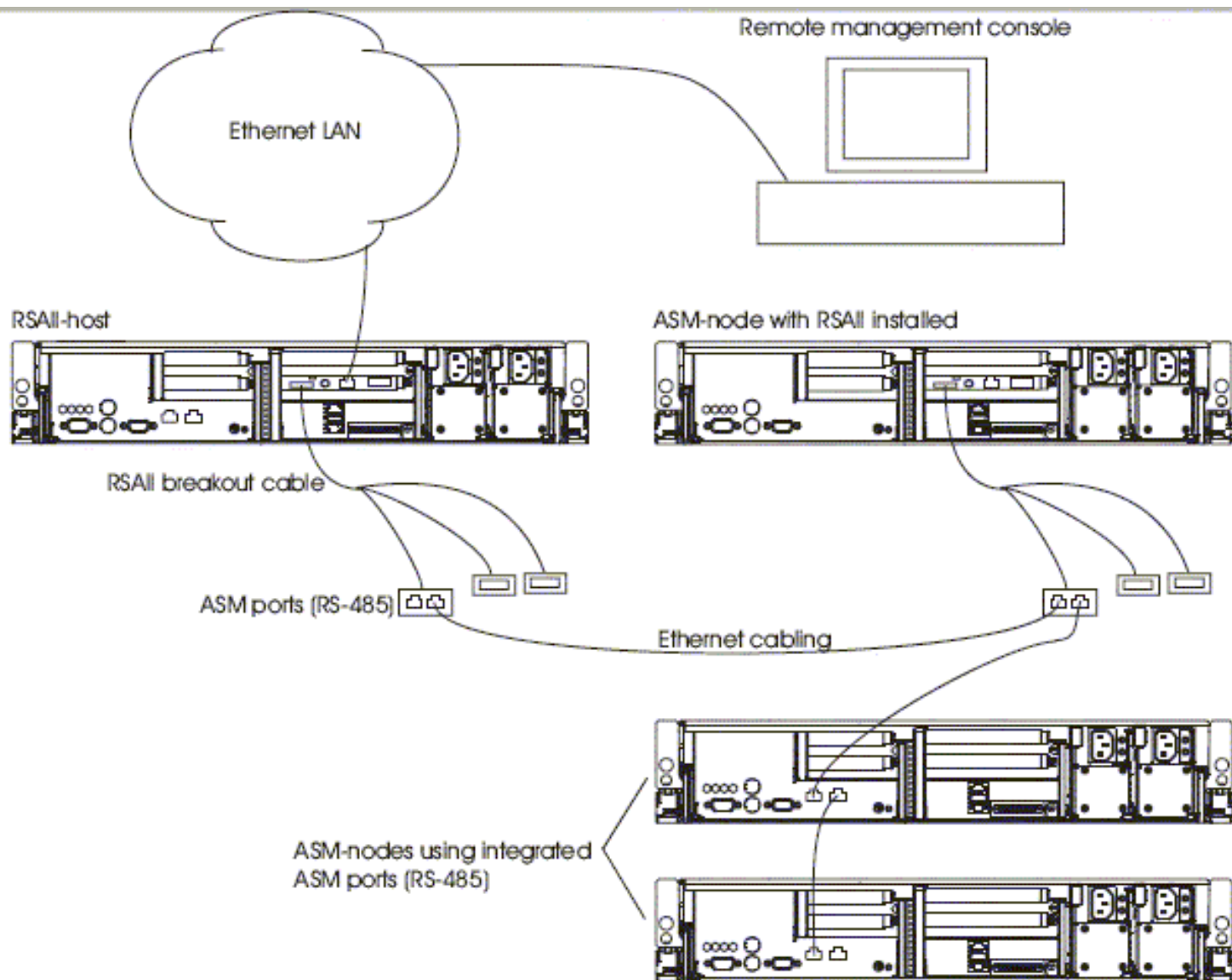
[Click image to enlarge](#)

3. Advanced System Management scenario

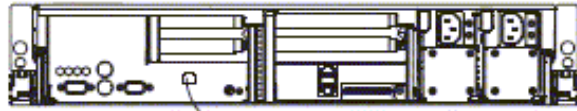
Figure 3. Advanced System Management scenario



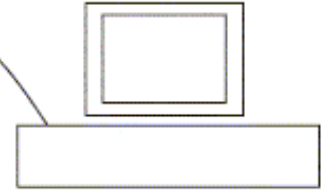
Click image to enlarge



RSAll-SlimLine (uses dedicated port)

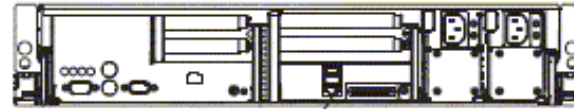


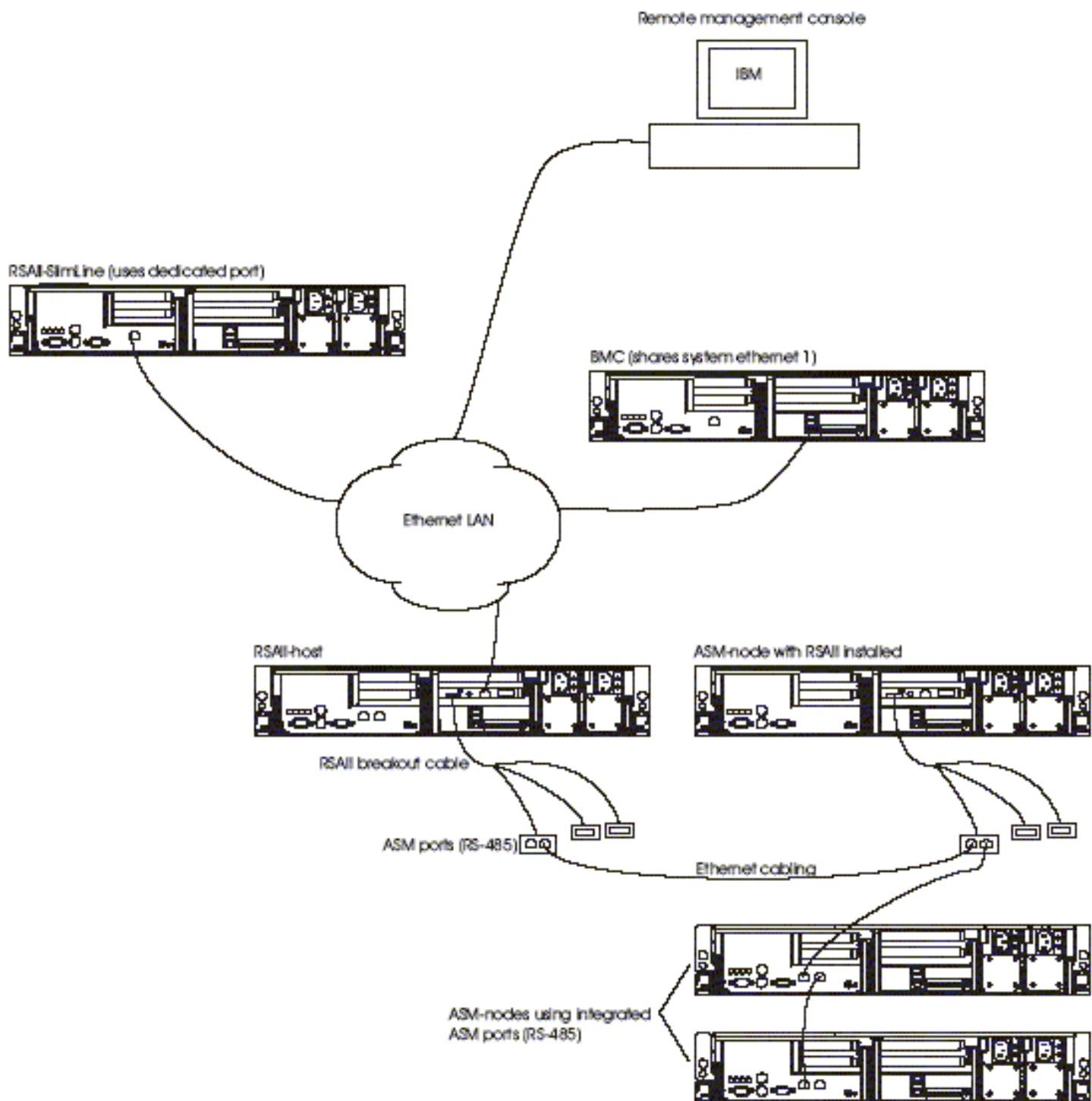
Remote management console



Ethernet LAN

BMC (shares system ethernet 1)





Appendix E. System x I/O option attributes

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

Option number	Description	Adapter length	PCI support ¹	Low-profile capable	Hot-plug ²
Storage controllers					
39M5894	DS4000 FC 4 Gbps PCI-X Single Port HBA	Half	64-bit/133MHz ⁴	-	-
39M5895	DS4000 FC 4 Gbps PCI-X Single Port HBA	Half	64-bit/133MHz ⁴	-	-
39R8805	ServerAID-7i SATA RAID controller ⁷	Half	64-bit/66MHz	X	-
71P8594	Single Channel Ultra320 SCSI controller ⁸	Half	64-bit/133MHz ⁴	X	-
Fibre Storage controllers and options⁹					
174290U	FASTt900 Storage server (US line cord)	-	-	-	-
17421RU	FASTt700 Fibre Channel Storage server	-	-	-	-
172260U	FASTt600 Storage server (US line cord, English pubs)	-	-	-	-
Networking					
26R0881	QLogic 4Gb 20-port Fibre Channel Switch Module for IBM	StFF	-	-	X
32R1812	Brocade 4Gb 20-port SAN Switch Module for IBM	StFF	-	-	X
32R1813	Brocade 4Gb 10-port SAN Switch Module for IBM	StFF	-	-	X
32R1783	Nortel 10Gb Uplink Ethernet Switch Module for IBM	StFF	-	-	X
32R1859	Nortel Networks Layer 2-7 Gb Ethernet Switch Module for IBM	StFF	-	-	X
32R1860	Nortel Networks Layer L2/L3 Copper Gb Ethernet Switch Module for IBM	StFF	-	-	X
32R1861	Nortel Networks Layer L2/L3 Fiber Gb Ethernet Switch Module for IBM	StFF	-	-	X
32R1888	Cisco Systems Fiber Intelligent Gb Ethernet Switch Module for IBM	StFF	-	-	X
32R1892	Cisco Systems Intelligent Gb Ethernet Switch Module for IBM	StFF	-	-	X
39Y9324	Server Connectivity Module for IBM	StFF	-	-	-
39Y9316	Optical Pass-thru Module for IBM	StFF	-	-	X
39Y9320	Copper Pass-thru Module for IBM	StFF	-	-	X
22P4501	Intel Pro/100S Desktop adapter ¹¹	Half	32-bit/33MHz	-	-
22P6501	Pro/1000 T Desktop Adapter by Intel ¹²	Half	32-bit/33MHz	-	-
22P7801	NetXtreme 1000 SX Fibre ethernet adapter ¹⁴	Half	64-bit/133MHz ⁶	X	X
31P6301	NetXtreme 1000 T ethernet adapter (copper) ^{12, 14}	Half	64-bit/133MHz ⁶	X	X
31P6401	NetXtreme 1000 T Dual Port ethernet adapter (copper) ¹⁰	Half	PCIe 1X	-	X
System Management¹³					
32R0835	IBM BladeCenter T Advanced Management Module	-	-	-	X
03K9309	Advanced System Management interconnect cable kit ¹⁴	-	-	-	-
09N7585	Remote Supervisor Adapter ¹⁵	Half	32-bit	-	-
39Y9566	Remote Supervisor Adapter II SlimLine ¹⁶	-	-	-	-
Communications					
1519100	IXA Adapter ¹⁷	Full	64-bit	-	-
22P5888	PCI Parallel port adapter (low profile)	Half	32-bit	-	-
Related I/O cables					
32P8164	External SCSI interface kit ¹⁸	-	-	-	-
10K3661	USB to Serial Adapter ^{19, 20}	-	-	-	-

Notes:

- Adapters rated at a lower frequency than the slots in which they are installed will reduce the bus to the frequency of the slowest adapter. 133MHz PCI-X adapters are backward compatible with 33/66MHz, 64-bit PCI-based servers.
- Hot-plug feature only supported in systems with Active PCI slots. For network operating system support, point your browser to www.pc.ibm.com/us/compat.
- ServerAID-6i+ Controller is a PCI-X adapter supporting both Ultra320 and Ultra160 HDDs in a dedicated or mixed environment, allowing each HDD to perform at rated capacity. The adapter
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installs into limited PCI slots and converts both channels of the integrated SCSI controller to RAID in conjunction with the LSI 1030 chipset. Both standard and the optional SCSI HDD backplanes as well as internal tape drives and external SCSI devices cabled directly to the onboard controller connectors. Supports up to 1,064MB/s data transfers across the PCI bus with 128MB ECC SDRAM write-back cache with battery backup. Supports RAID levels 0, 1, 10, 5, 50 and 1E. The option includes brackets for installation in both low-profile and standard PCI slots. Internal and external tape drives are supported by ServeRAID-6i+ only when a second channel on the integrated controller is available and the RAID configuration designates the second channel as a conventional SCSI bus. See system sections for supported tape drives.

4. This adapter is designed using PCI-X technology.
5. ServeRAID-6M adapters are PCI-X adapters powered by a 600MHz Intel xScale processor, providing 256MB or 128MB of ECC SDRAM battery-backed cache. The dual-channel Ultra320 controller includes two internal 68-pin connectors and two external 0.8mm VHDCI connectors, supporting up to 14 HDDs on each channel at data transfer rates of up to 1,064MB/s. Supports RAID levels 0, 1, 10, 1E, 5, 50 and 5EE with both Ultra160 and Ultra320 HDDs.
6. ServeRAID-7k is available for select systems, installs into a dedicated slot and does not consume a PCI slot. It works in conjunction with the integrated SCSI controller providing the following RAID levels: 0, 00, 1, 10, 1E, 1E0, 5 and 50 with 256MB of ECC DDR1 battery-backed cache.
7. ServeRAID-7t is a low-profile capable, four-port SATA controller supporting RAID levels 0, 1, 5 and 10. All ports are internal. ServeRAID-7t is a universal PCI 2.2 compliant adapter powered by Intel's 400MHz 80302 I/O processor and has 64MB of cache.
8. Single Channel Ultra320 SCSI Controller (P/N 71P8594) provides a single channel with one 68-pin internal connector, a four-drop multimode terminated LVD SCSI cable and one external 0.8mm VHDCI connector. Only one of the two connectors may be utilized. Hardware is included in the option to support either low-profile (2U) or full-size (3U) installations.
9. See Fibre Channel Solutions Overview section for additional configuration information.
10. The option includes brackets for installation in both low-profile and full-size PCI slots.
11. For use of the Alert on LAN 2 features in the Desktop adapter, the system must be enabled with IBM-compatible Alert on LAN 2 hardware and software components. Use of the Wake on LAN function requires a PCI 2.2 compatible system that supports Wake on LAN and provides auxiliary 3.3v power through the PCI bus.
12. Use of the Wake on LAN function requires a PCI 2.2 compatible system that supports Wake on LAN and provides auxiliary power through the PCI bus.
13. Up to 24 Integrated System Management Processors or Remote Supervisors Adapters may be interconnected with an aggregate connection length of no more than 91.4m (300ft). This interconnect network of 24 devices may also include a maximum of 12 Advanced System Management Processors or advanced System Management PCI Adapters. A customer-supplied Cat5 cable is required for each interconnection.
14. When a standard Remote Supervisor Adapter or ASM PCI Adapter is installed in a dedicated PCI slot with an external connector, support for connection to other servers in an ASM interconnect network requires an optional Advanced System Management Interconnect Cable Kit (P/N 03K9309). Where applicable, direct connection to the RXE drawer management controller in an RXE-100 Remote Expansion Enclosure is supported through a standard Interconnect Management Cable Kit with 3.5m cable (8m optional cable is available). Support is provided through a single LAN or modem connection.
15. Remote Supervisor Adapter (P/N 09N7585) includes an adapter card, 20-pin ribbon cable, AC power adapter, power cable, power cable for UPS attachment, single pigtail cable, two RS-485 terminators and 1ft Cat5 cable.
16. Remote Supervisor Adapter II SlimLine is similar to RSA II and is available for select systems. It is not supported on an ASM interconnect network. The RSA II SlimLine installs into a dedicated slot on the system board and does not consume a PCI slot. An external AC adapter is not required as this card uses standby power from the system's power.

17. Some System x servers support the IXA Adapter (P/N 1519100) for connection to iSeries models. Refer to system sections for PCI slot restrictions.
18. Required to enable external 0.8mm VHDCI connectors on some systems.
19. When supported, this option can be used for certain external device connections when only USB ports rather than serial or parallel ports are present on a system chassis.
20. Available only in the US.

Appendix F. BladeCenter power module upgrade guidelines

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

BladeCenter Addition information

This *Technical Update* contains information that will help you determine whether to upgrade the power modules in your IBM® BladeCenter® Type 8677 unit when installing IBM BladeCenter blade servers or options.

Note: These guidelines apply to an IBM® BladeCenter Type 8677 unit. These guidelines do not apply to an IBM BladeCenter T Type 8720 or 8730 unit.

The latest version of the BladeCenter management module firmware includes new features to assist you in managing the power load of the chassis. The new features (Fuel Gauge and Power Management Policy) provide additional indication on whether the power supply in your system configuration supports full redundancy and extend the capability of the 2000 watt (W) power supplies. If you have not already done so, to take advantage of these new features, download and install the latest management module firmware from <http://www.ibm.com/support/>.

Attention: Power modules must always be present and operating in power bays 1 and 2. When any blade server or option is in blade bays 7 through 14, power modules must be present and operating in all four power-module bays.

If a power module fails or an ac power failure occurs, BladeCenter units configured for redundant power operation, as described in this document, will operate in a nonredundant mode, and the blower modules will run at full speed. You must replace the failing power module or restore ac power as soon as possible to regain redundant power operation and to reset the blower modules to their normal operating speed.

As of the date of this printing, four BladeCenter power-module options are supported:

- IBM BladeCenter 1200 W Power Supply Module (part number 48P7052)
- IBM BladeCenter 1200 W to 1400 W Power Supply Upgrade Kit (part number 90P0197)
- IBM BladeCenter 1800 W Power Supply Module (part number 13N0570)
- IBM BladeCenter 2000 W Power Supply Module (part number 26K4816)

Go to <http://www.ibm.com/servers/eserver/serverproven/compat/us/> for information about these options.

The most recent version of this document and all other BladeCenter documentation is at <http://www.ibm.com/support/>.

Appendix F. BladeCenter power module upgrade guidelines

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

BladeCenter [Addition information](#)

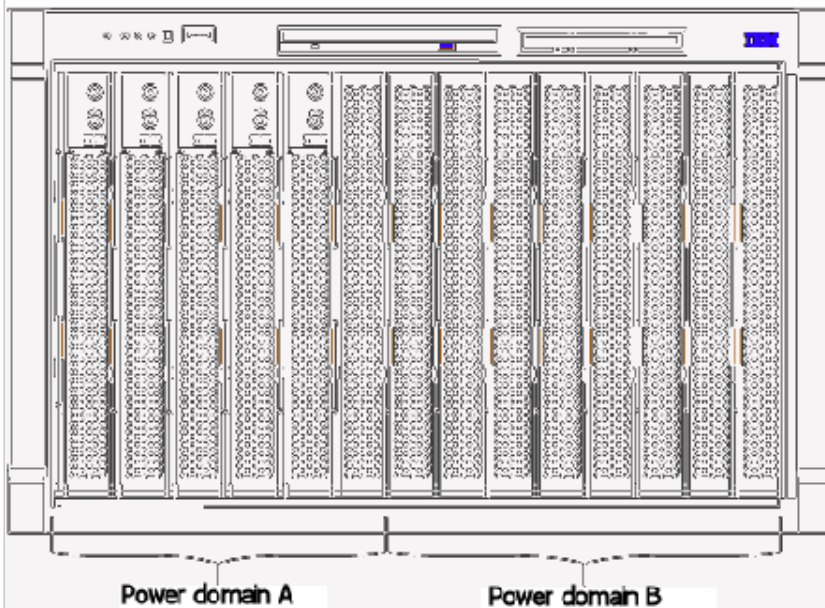
[Overview](#) | [Upgrade calc.](#) | [Distribution](#) | [Worksheets](#) |

[Example calc.](#) |

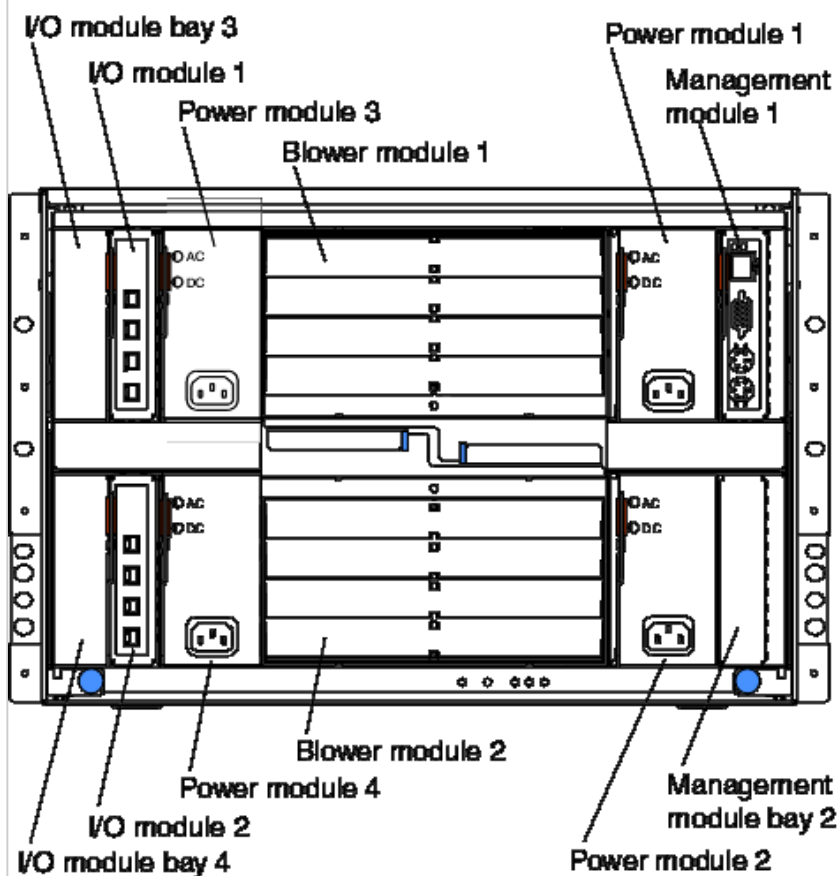
Your BladeCenter unit is separated into two power domains. Power domain A supports all the BladeCenter modules and bays 1 through 6; power domain A uses power modules 1 and 2.

Power domain B supports bays 7 through 14 and uses power modules 3 and 4. To support devices in power domain B, a power-supply option (consisting of two power modules) must be installed.

BladeCenter unit frontview



BladeCenter unit rear view



Important:

1. The power modules must be installed in pairs in a domain and must match each other in capacity (wattage, amperage, and so on).
2. A power domain operating above the capacity of a single power module results in a nonredundant power condition.
3. In a pair of power modules, a power module that is not connected to 200-240 volt ac power source results in a nonredundant power condition.
4. To provide true redundant power, BladeCenter power modules 1 and 3 must be connected to a different 200 - 240 volt ac power source than power modules 2 and 4.
5. An installed power module must be connected to an ac power source and must not be used as a filler module.

The following tables list the power requirement for each IBM® BladeCenter blade server or option that is available as of the date of this printing. These power requirements assume that each blade server is fully configured and are based on typical workloads. Use the values in these tables and complete the upgrade calculation (see [Upgrade calculation](#)) to determine which power modules are needed to deliver full power redundancy for your configuration.

Table 1. HS20 blade server power values

BladeCenter HS20 blade server	IBM power units for the corresponding number of installed microprocessors	
	1 microprocessor	2 microprocessors
2.0 GHz/400 MHz (8678-21X)	0.9	1.1
2.4 GHz/400 MHz (8678-41X)	0.9	1.2
2.6 GHz/400 MHz (8678-51X)	1.0	1.2
2.8 GHz/400 MHz (8678-61X)	1.0	1.3
2.4 GHz/533 MHz (8832-9TX)	0.9	1.2
2.8 GHz/533 MHz (8832-21X, 8832-L1X, 8832-LTX)	1.0	1.5
3.06 GHz/533 MHz (8832-31X, 8832-M1X)	1.2	1.6
3.06 GHz/533 MHz (8832-N1X)	Does not apply	1.9
3.2 GHz/533 MHz (8832-G1X, 8832-J1X, 8832-GTX)	1.2	1.65
2.8 GHz/800 MHz (8843-L1X and 8843-LTU)	1.05	1.55
2.8 to 3.8 GHz/800 MHz (all 8843 except as listed above)	1.4	2.3

Table 2. HS40 blade server power values

BladeCenter HS40 blade server (occupies 2 bays)	IBM power units and the corresponding number of installed microprocessors (power unit value for each bay)			
	1 microprocessor	2 microprocessors	3 microprocessors	4 microprocessors
2.0 GHz/400 MHz (8839-21X)	0.70	0.90	1.10	1.30
2.8 GHz/400 MHz (8839-41X)	0.75	1.0	1.30	1.55

Important:

The HS40 blade server occupies two adjacent bays. When you complete the [Power worksheets](#), enter the power unit value from [Table 2](#) twice, once for each bay that the blade server occupies. If you install an HS40 blade server in bays 6 and 7, the blade server will use power from both power domain A and power domain B. In the power worksheets, enter the power unit value twice, once for bay 6 of power domain A and once for bay 7 of power domain B.

Table 3. JS20 blade server power values

BladeCenter JS20 blade server	IBM power units for two installed microprocessors
1.6 GHz/800 MHz (8842-21X)	1.5
2.2 GHz/1.1GHz (8842-41X)	1.6

Table 4. LS20 blade server power values

BladeCenter LS20 blade server	IBM power units for the corresponding number of installed microprocessors	
	1 microprocessor	2 microprocessors
2.0 to 2.6 GHz Single Core (8850-51X, 8850-71X, 8850-81X)	1.2	1.8
2.0 GHz Dual Core (8850-55x)	1.2	1.8

Table 5. BladeCenter expansion unit power values

BladeCenter Expansion unit ¹	IBM power units
SCSI Storage Expansion Unit, SCSI Storage Expansion Unit 2	0.4

Note:

1. The SCSI Storage Expansion Unit is not available for the LS20 blade server.

Appendix F. BladeCenter power module upgrade guidelines

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

BladeCenter Addition information

Overview | **Upgrade calc.** | Distribution | Worksheets |

Example calc. |

To determine the power-module capacity that is needed to maintain full redundancy in each power domain, complete the following steps.

If you have two 2000 W power modules installed in power domain A and two 2000 W power modules installed in power domain B, you do not need to complete this upgrade calculation. Your system meets the requirements to maintain full power redundancy in both domains.

Attention: If you are replacing the existing power modules with 2000 W power modules, you must upgrade the management-module firmware. If two management modules are installed in the BladeCenter unit, both management modules must be upgraded to the same level of firmware. Go to the IBM Support Web site at <http://www.ibm.com/support/> and obtain the latest firmware.

1. In the power worksheets on page [Power worksheets](#), list the blade servers or other devices that are installed in the bays.
2. In the tables on page [table 1](#), look up the number of IBM® power units associated with each device and enter it in the applicable power worksheet (see [Example calculation](#)).
3. Add all of the IBM power unit values for each domain and enter the totals.
4. To maintain full power redundancy in power domain A, make sure that the power modules in bays 1 and 2 are connected to different 200 - 240 volt ac power sources and meet the requirements in the following table:

table 1. Power domain A minimum power requirements

Sum of IBM power units for blade servers in Power domain A	Minimum power module required
Less than 7.4	1200 W (labeled 7.5A)
Greater than or equal to 7.4 and less than 9.0	1400 W (labeled 9A)
Greater than or equal to 9.0 and less than 10.0	1800 W (labeled 12A)
Greater than or equal to 10.0	2000 W (labeled 13.5A)

Important: If the sum of the power unit values in power domain A is greater than the capacity of the installed power modules, power domain A has nonredundant power. Complete the following steps:

- a. Determine whether rearranging the installed devices between power domain A and power domain B in the BladeCenter unit will sufficiently reduce the power requirements for the power domain (use the power worksheets on page [Power worksheets](#)).
 - b. If rearranging the installed devices does not sufficiently reduce the power requirements, the power modules must be upgraded to maintain redundancy. Install the 1200 W to 1400 W Power Supply Upgrade Kit
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(part number 90P0197) on the power modules to attain 1400 W, install the 1800 W Power Supply Module option (part number 13N0570) to attain 1800 W, or install the 2000 W Power Supply Module option (part number 26K4816) to attain 2000 W. Go to <http://www.ibm.com/servers/eserver/serverproven/compat/us/> for information about ordering these options.

5. To maintain full power redundancy in power domain B, make sure that the power modules in bays 1 and 2 are connected to different 200 - 240 volt ac power sources and meet the requirements in the following table:

table 2. Power domain B minimum power requirements

Sum of IBM power units for blade servers in Power domain B	Minimum power module required
Less than 9.9	1200 W (labeled 7.5A)
Greater than or equal to 9.9 and less than 11.5	1400 W (labeled 9A)
Greater than or equal to 11.5 and less than 13.4	1800 W (labeled 12A)
Greater than or equal to 13.4	2000 W (labeled 13.5A)

Important: If the sum of the power unit values in power domain B is greater than the capacity of the installed power modules, power domain B has nonredundant power. Complete the following steps:

- a. Determine whether rearranging the installed devices between power domain A and power domain B in the BladeCenter unit will sufficiently reduce the power requirements for the power domain (use the power worksheets on page [Power worksheets](#)).
- b. If rearranging the installed devices does not sufficiently reduce the power requirements, the power modules must be upgraded to maintain redundancy. Install the 1200 W to 1400 W Power Supply Upgrade Kit (part number 90P0197) on the power modules to attain 1400 W, install the 1800 W Power Supply Module option (part number 13N0570) to attain 1800 W, or install the 2000 W Power Supply Module option (part number 26K4816) to attain 2000 W. Go to <http://www.ibm.com/servers/eserver/serverproven/compat/us/> for information about ordering these options.

Statement 13



DANGER

Overloading a branch circuit is potentially a fire hazard and a shock hazard under certain conditions. To avoid these hazards, ensure that your system electrical requirements do not exceed branch circuit protection requirements. Refer to the information that is provided with your device for electrical specifications.

Appendix F. BladeCenter power module upgrade guidelines

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

BladeCenter Addition information

[Overview](#) | [Upgrade calc.](#) | **[Distribution](#)** | [Worksheets](#) |

[Example calc.](#) |

If your calculations indicate that you need to upgrade your power modules, you will also need to reassess your power distribution unit (PDU) configuration. Use the IBM® *BladeCenter Planning and Installation Guide* to determine the number and types of PDUs that you need. To obtain the *BladeCenter Planning and Installation Guide*, go to <http://www.ibm.com/support/>.

Appendix F. BladeCenter power module upgrade guidelines

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

BladeCenter

Addition information

[Overview](#) | [Upgrade calc.](#) | [Distribution](#) | **[Worksheets](#)** |

[Example calc.](#) |

Power domain A worksheet (for power modules 1 and 2)

Blade bay	Description of installed device	IBM power units
1		
2		
3		
4		
5		
6		
Total		

Power domain B worksheet (for power modules 3 and 4)

Blade bay	Description of installed device	IBM power units
7		
8		
9		
10		
11		
12		
13		
14		
Total		

Appendix F. BladeCenter power module upgrade guidelines

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

BladeCenter Addition information

[Overview](#) | [Upgrade calc.](#) | [Distribution](#) | [Worksheets](#) |

[Example calc.](#) |

Power domain A worksheet (for power modules 1 and 2)

Blade bay	Description of installed device	IBM power units
1	3.06 GHz/533 MHz HS20 blade server with 2 microprocessors 8832-31X	1.6
2	SCSI Storage Expansion Unit	0.4
3	3.06 GHz/533 MHz HS20 blade server with 2 microprocessors 8832-31X	1.6
4	SCSI Storage Expansion Unit	0.4
5	3.06 GHz/533 MHz HS20 blade server with 2 microprocessors 8832-31X	1.6
6	3.06 GHz/533 MHz HS20 blade server with 2 microprocessors 8832-31X	1.6
Total		7.2

Result:

- 7.2 IBM power units < 7.4 IBM power units
- Two 1200 W power modules will provide full power redundancy for power domain A

Power domain B worksheet (for power modules 3 and 4)

Blade bay	Description of installed device	IBM power units
7	3.06 GHz/533 MHz HS20 blade server with 2 microprocessors 8832-N1X	1.9
8	3.06 GHz/533 MHz HS20 blade server with 2 microprocessors 8832-N1X	1.9
9	3.06 GHz/533 MHz HS20 blade server with 2 microprocessors 8832-N1X	1.9
10	3.06 GHz/533 MHz HS20 blade server with 2 microprocessors 8832-N1X	1.9
11	3.2 GHz/533 MHz HS20 blade server with 2 microprocessors 8832-G1X	1.65
12	2.8 GHz/400 MHz HS40 blade server with 4 microprocessors - first bay (HS40 occupies 2 bays) 8832-41X	1.55
13	2.8 GHz/400 MHz HS40 blade server with 4 microprocessors - second bay (HS40 occupies 2 bays) 8839-41X	1.55
14	3.2 GHz/533 MHz HS20 blade server with 2 microprocessors 8832-G1X	1.65
Total		14.0

Result:

- 14.0 IBM power units > 13.4 IBM power units
- Two 2000 W power modules will provide full power redundancy for power domain B

Attention: To maintain proper system cooling, each unoccupied blade bay must contain a filler blade. To maintain proper module cooling, each unoccupied I/O, management-module, or power-module bay must contain a filler module. An installed power module must be powered on and must not be used as a filler module.

Important notices

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MHz and GHz measure only microprocessor internal clock speed, not application performance. Many factors affect application performance.

When referring to storage capacity, MB means 1 000 000 bytes, GB means 1 000 000 000 and TB means 1 000 000 000 000 bytes.

Accessible capacity is less; up to 3 GB is used in the service partition. Actual storage capacity will vary based upon many factors and might be less than stated. Some numbers given for storage capacities give capacity in native mode followed by capacity using data compression technology.

Adapters rated at a lower frequency than the slots in which they are installed might reduce the bus to the frequency of the slowest adapter.

Tape drives that use data compression technology have storage capacity that will vary depending upon whether the drive is operating in native mode (without compression) or compressed mode. Actual storage capacity will vary based upon many factors and might be less than the maximum possible.

Maximum internal hard disk and memory capacities might require the replacement of any standard hard disk drives and memory and the population of all hard disk drive bays and memory slots with the largest currently supported available drives and memory modules. When referring to variable speed CDs and DVDs, actual playback speed will vary and is often less than the maximum possible.

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through Easy Access. Although similar to machine type models (MTM), CTO systems utilize different part numbers called Sales Building Blocks (SBB). The contents of an option might not entirely correspond to an SBB because only a certain component within an option package might be required to configure a specific system. Additional or different configuration rules or limitations might apply to the SBB. When a difference occurs, the rules will be documented in the tables, diagrams or footnotes.

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What's new?

(July 29, 2008)

Welcome to the **What's new?** page of the *Configuration and Options Guide*. This is your source for finding information on new released products as well as the latest updates on products currently published in the *Configuration and Options Guide*.

General information

Attention:

A four-digit feature code is used to specify a component that is configurable in the IBM configurators, the eBusiness Configurator (eConfig) and the IBM Web-based Hardware Configurator, used in US and Canada. Options that do not have feature codes cannot be integrated by IBM into a system using these IBM configurators. To purchase options separately, refer to the option part number provided in this document.

For more details about feature codes, contact your IBM representative.

Publishing dates are provided in this document at the bottom of the page as a version reference to help verify that this is the most current information available. This date will be the same publishing date for both versions of the Configuration and Options Guide, HTML Web pages and PDF document.

Versions of this document released on or after August 8th, 2006 will contain references to feature codes. Feature code is the nomenclature used to specify components of configurable System x products used in US and Canada Web configurators. For more details about feature codes, contact your IBM representative.

New products

(July 29, 2008)

What's changed

Updated on July 29, 2008

- .System x3200 M2 (4367, 4368) tape options
- .System x3250 M2 (4190, 4194) tape options
- .System x3350 (4192, 4193) power and accessories
- .System x3350 (4192, 4193) tape options
- .System x3400 (7973, 7974) I/O options
- .System x3500 (7977) I/O options
- .System x3550 (7978) I/O options
- .System x3650 (7979) hard disk drive and storage options
- .System x3650 (7979) I/O options
- .System x3650 T (7980) hard disk drive and storage options
- .System x3655 (7943) At-A-Glance
- .System x3655 (7943) processor options
- .System x3655 (7943) memory options
- .System x3655 (7943)hard disk drive and storage options
- .System x3655 (7943) I/O options
- .System x3655 (7943) power and accessories
- .System x3755 (8877) I/O options
- .System x3755 (8877) power and accessories
- .BladeCenter QS22 (0793) memory options
- .BladeCenter QS22 (0793) I/O options
- .System x operating system offerings
- .IBM and third party software applications
- .Storage systems

References

[➔ Withdrawn products](#)

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Withdrawn products

(July 29, 2008)

As a convenience, IBM provides this data regarding products no longer for sale. Some of the data contained herein may be out of date or contain inaccuracies. Updates to this data will not be provided.

References

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Withdrawn products list

Products	Machine type	Date withdrawn
System x3455 (7984)	7984	July 8, 2008
System x3655 (7985)	7985	July 8, 2008
System x3250 (4364, 4365)	4364, 4365	July 1, 2008
System x3200 (4362, 4363)	4362, 4363	June 5, 2008
System x3800 (8866)	8866	May 30, 2008
System x3950 / x3950 E (8878, 8879)	8878, 8879	April 4, 2008
BladeCenter HS20 (8843)	8843	April 4, 2008
System x3850 (8864)	8864	February 29, 2008
IntelliStation video adapter selection guide	-	February 29, 2008
IntelliStation M Pro (9229)	9229	February 29, 2008
IntelliStation Z Pro (9228)	9228	February 29, 2008
System x3105 (4347)	4347	January 8, 2008
BladeCenter LS20 (8850)	8850	January 4, 2008
TotalStorage DS4300 disk systems	DS4300	November 15, 2007
BladeCenter HS20 (7981)	7981	August 16, 2007
BladeCenter JS21 (8844)	8844	August 16, 2007
BladeCenter JS20 (8842)	8842	August 16, 2007
xSeries 306m	8849, 8491	August 16, 2007
IntelliStation A Pro 6217	6217	August 16, 2007
IntelliStation M Pro 6218	6218	July 31, 2007
System x3850 and xSeries 366	8863	June 29, 2007
xSeries 206m	8485, 8490	June 29, 2007
System x3950 xSeries 460	8872	June 29, 2007
System x3800	8865	June 29, 2007
IntelliStation Z Pro 6223	6223	May 5, 2007
TotalStorage DS300 disk system	DS300	February 23, 2007
TotalStorage DS400 disk system	DS400	February 23, 2007
TotalStorage DS4100 disk system	DS4100	February 23, 2007
TotalStorage DS4500 disk system	DS4500	February 23, 2007
TotalStorage DS4800 disk system	DS4800	February 23, 2007
e326m	7969	January 19, 2007
xSeries 226	8648	January 19, 2007
xSeries 236	8841	January 19, 2007
xSeries 346	8840	January 19, 2007
xSeries 336	8837	December 1, 2006
xSeries 260	8865	December 1, 2006
xSeries 100	8486	December 1, 2006
EXP400 storage expansion	EXP400	October 26, 2006
EXP100 storage expansion	EXP100	October 26, 2006
EXP710 storage expansion	EXP710	October 26, 2006
xSeries 343	8847	June 27, 2006
BladeCenter HS40	8839	May 30, 2006
IntelliStation M Pro 6225	6225	March 4, 2006
xSeries 306	1878,8489,8836	March 3, 2006
eServer 326	8848	January 27, 2006
xSeries 255	8685	December 27, 2005
xSeries 455	8855	December 27, 2005
BladeCenter Chassis 7967	7967	December 27, 2005

