IBM System Storage DS3000 series
Interoperability Matrix

Last Revised: June 5, 2009

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To take full advantage of the constant improvements in the IBM System Storage DS3000 series firmware, you should upgrade to the latest code levels as soon as it is available. The latest code levels are available by selecting the Product Support link from the appropriate DS3000 series model page located at:
http://www-1.ibm.com/servers/storage/disk/index.html

For specific Operating System support on your server, refer to IBM Server Proven at:
www-03.ibm.com/servers/eserver/serverproven/compat/us/

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What's New in the DS3000 Interop Matrix?

6/5/2009 update:
- Added support for System x servers: x3550M2 and x3650M2 and HS22, JS23, JS43 blades (see page 11)
- Added support for Solaris 9 on SPARC (see page 18)

3/26/2009 update:
- Added VMware support for DS3300 with iSCSI hardware initiators (see page 18)
- Corrections on System x servers supported with DS3200 (see page 11)
- Added BCS support with DS3200 (see page 11)
- Added Steeleye Clustering for DS3300 (see page 19)
- Added FC and SAS HBAs for Solaris hosts (see page 12 and 16)

2/17/2009 update:
- Withdrawal of selected express models (see page 7)
- Added 8 Gb FC HBAs for System x servers (see page 14)
- Added 8 Gb FC daughter cards for BladeCenter (see page 15)

12/15/2008 update:
- System p FC HBAs (see page 14)
- IBM Tivoli FastBack support (see page 19)

11/21/2008 update:
- DS3200 boot and data supported with BladeCenter SAS switch (see pages 11 – 12)
- VIOS with IBM i client support with DS3200 (see page 18)
- QS22 cell blade support (see page 11)

11/7/2008 update:
- Sun Solaris Host Support, Solaris multi-pathing, Solaris clustering (see pages 18 - 19)
- Windows HyperV support (see page 19)
- VIOS with IBM i client support with DS3400 (see page 18)
- Operating system and software product currency updates (see pages 18 – 19)
- Support 450 GB SAS HDD (see page 20)
- New 8 and 32 partition options and enhanced FlashCopy option see pages 9 – 10)
- Withdrawal of selected Express Models (see page 7)

7/29/2008 update:
- Added support for new DS3400 Simple SAN Kits: 1726-41S, 1726-42S (see page 7)

7/18/2008 update:
- Added support for DS3200 SAS Controller attached to BladeCenter SAS switch (see pages 11, 12)
- Added DS3400 FC Controller support for new 8 Gb FC HBAs and switches (see page 14 - 17)
- Added new servers and blades: x3950 M2, x3350, x3250 M2, x3200 M2, HS21 XM blade (see page 11)
- Added VMware support with DS3300 iSCSI Controller (see page 18)
- Added GPFS support with DS3400 FC Controller (see page 19)

5/9/2008 update:
- Added Windows Server 2008 support (see page 18)
- Currency for Linux and AIX operating systems (see page 18)
- Additional Cisco FC SAN switches added (see page 17)
- Added HS12 blade (see page 11)

4/23/2008 update:
- Added support for Cisco FC SAN switches (see page 17)
- Added VMware support for DS3200 SAS Storage Controller (see page 18)
- Added 1 TB SATA HDD Express and updated part number for 750 GB SATA HDD Express (see page 20)
- Updated descriptions for Advanced Function Features (see page 9)

2/20/2008 update:
- Added VMware 3.5/3i support with DS3400 (see page 18)

2/12/2008 update:
- Added 1 TB SATA HDD (see page 20)
- Added DS3300 iSCSI Dual Controller DC Power Model (see page 7)
- The DS3200 Software Feature Pack, DS3300 Software Feature Pack, DS3400 Software Feature Pack and the EXP300 Expansion License have been incorporated into the base models and are no longer needed as pre-reqs to the other advanced function options (see page 9 and 10). The required controller firmware that enables this

function must be at firmware level: v06.70.23.00 or later and is available on the DS3000 product support Web site: http://www-03.ibm.com/systems/storage/disk/entry/index.html
- Added new server System x 3850 M2 (see page 11)
- Added DS3300 to System Storage Interoperation Center (SSIC) see page 6

1/4/2008 update:
- Added SATA HDD Express part numbers (see page 20)

12/7/2007 update:
- Added interoperability support for the December 2007 firmware release
- SATA HDD support (see page 20)
- AIX and Linux on Power host operating system support (see page 18)
- AIX/VIOS and Linux on Power Host Attach Licenses (see pages 9 and 10)
- Added System p servers (see page 11) and System p HBAs (see page 14)
- SAS HDD Express part numbers (see page 20)
- Added SAN Volume Controller and Virtual I/O Server (see page 19)

10/16/2007 update:
- Added information on iSCSI booting support (see page 13)
- Added support for IBM TotalStorage Productivity Center (see page 19)
- Added support for VMware ESX 3.0.2 (see page 18)
- Added service pack levels for Linux and Netware (see page 18)

9/19/2007 update:
- Configuration support is now available for the DS3000 and EXP3000 in the US and Canada – added machine types and model numbers into the ordering information
- DS3300 iSCSI software initiators (see page 19)

8/28/2007 update:
- DS3000 added to System Storage Interoperation Center (see page 6)
- DS3300 iSCSI Storage Controllers: 1726-31X, 1726-32X (see page 7)
- DS3300 iSCSI Express Models: 1726-31E, 1726-32E (see page 7)
- DS3300 Software Feature Pack (42C2142) and DS3300 iSCSI Controller Upgrade (39R6511) (see page 10)
- iSCSI Host Bus Adapters added (see page 11)
- EXP3000 Express Models: 1727-01E, 1727-01M (see page 7)
- DS3400 Simple SAN Express Kits: 1726-41U, 1726-42U (see page 7)
- IBM eServer xSeries X226, x236, x306, x366 supported with DS3200 (see page 11)
- SteelEye Lifekeeper Linux clustering with DS3200 (see page 19)

7/10/2007 update:
- 3 new models: 1726-22T, 1726-42T, and 1727-02T (see page 7)
- System x server x3755 (see page 11)
- Multi-pathing information (see page 19)

5/28/2007 update:
- The Sample Configurations have been moved into a separate document.
- LSI SAS PCIx HBA with DS3200 (see page 12)
- SteelEye Lifekeeper Linux clustering with DS3400 (see page 19)

What is in the box?

The DS3000 series enclosure ships with the following hardware and software items.

Hardware

1. Hard disk drive filler panels (12)
2. RAID controllers (up to 2)
3. Power supplies (2)
4. Battery units (up to 2)
5. Power cables (2 jumper line cords)
6. Rack-mounting hardware kit (1), including:
    a. Rails (2) (right and left assembly)
    b. Rail end plate covers (2) (right and left assembly)
    c. M5 black hex-head slotted screws (12)
    d. Washers (8)

Attention: The DS3000 series enclosure does not ship with region-specific power cords. You must obtain the IBM-approved power cords for your region.

Software and documentation

1. IBM System Storage DS3200, DS3300, and DS3400 Support CD
    The Support CD contains the IBM DS3000 Storage Manager Host software. The CD also includes firmware, online help, and publications in Adobe Acrobat Portable Document Format (PDF)
2. IBM System Storage DS3200 Storage Subsystem Installation, User's and Maintenance Guide
3. IBM System Storage DS3300 Storage Subsystem Installation, User's and Maintenance Guide
4. IBM System Storage DS3400 Storage Subsystem Installation, User's and Maintenance Guide
5. IBM Systems Safety Notices
6. Instructions for installing the DS3000 series enclosure in a rack cabinet are provided in the Rack Installation Instructions.
7. Box of ID labels (used to label the enclosure IDs on the front of the enclosure)

If an item is missing or damaged, contact your IBM marketing representative or authorized reseller. Product documentation and software can be found online at this web link using product family=disk and product=DS3200, DS3300, DS3400: http://www-304.ibm.com/jct01004c/systems/support/supportsite.wss/brandmain?brandind=5345868

System Storage Interoperation Center (SSIC)

The DS3200, DS3300, and DS3400 products have been added to the System Storage Interoperation Center (SSIC). Please see this web site http://www-03.ibm.com/systems/support/storage/config/ssic for more detailed information on interoperability than what is listed in this Interoperability Matrix.

The SSIC lists interoperability for various release levels of firmware on the DS3000 family. It also has details on operating system service pack levels that have been tested with the DS3000 products.

DS3000 Storage Controllers and Expansion Units

Description	Part No. / SEO ID	MTM	FC	Comments
DS3200 SAS Storage Controllers				
IBM System Storage DS3200 SAS Single Controller	172621X	1726-HC2	2603	
IBM System Storage DS3200 SAS Dual Controller	172622X	1726-HC2	2604	
IBM System Storage DS3200 SAS Dual Controller DC Power Model[1]	172622T	1726-HC6	2627	
IBM System Storage DS3200 SAS Single Controller Express Model	172621E	N/A	N/A	Withdrawn
IBM System Storage DS3200 SAS Dual Controller Express Model	172622E	N/A	N/A	Withdrawn
DS3300 iSCSI Storage Controllers				
IBM System Storage DS3300 iSCSI Single Controller	172631X	1726-HC3	2618	
IBM System Storage DS3300 iSCSI Dual Controller	172632X	1726-HC3	2619	
IBM System Storage DS3300 iSCSI Dual Controller DC Power Model	172632T	1726-HC7	2711	
IBM System Storage DS3300 iSCSI Single Controller Express Model	172631E	N/A	N/A	Withdrawn
IBM System Storage DS3300 iSCSI Dual Controller Express Model	172632E	N/A	N/A	Withdrawn
DS3400 FC Storage Controllers				
IBM System Storage DS3400 FC Single Controller	172641X	1726-HC4	2605	
IBM System Storage DS3400 FC Dual Controller	172642X	1726-HC4	2606	
IBM System Storage DS3400 FC Dual Controller DC Power Model	172642T	1726-HC8	2626	
IBM System Storage DS3400 FC Single Controller Express Model	172641E	N/A	N/A	Withdrawn
IBM System Storage DS3400 FC Dual Controller Express Model	172642E	N/A	N/A	Withdrawn
IBM System Storage DS3400 FC Single Controller Simple SAN Express Kit	172641U	N/A	N/A	Withdrawn
IBM System Storage DS3400 FC Dual Controller Simple SAN Express Kit	172642U	N/A	N/A	Withdrawn
IBM System Storage DS3400 FC Single Controller Simple SAN Express Kit	172641S	N/A	N/A	Withdrawn
IBM System Storage DS3400 FC Dual Controller Simple SAN Express Kit	172642S	N/A	N/A	Withdrawn
EXP3000 Expansion Units				
IBM System Storage EXP3000 (Single Environmental Service Module)[2]	172701X	1727-HC1	2676	
IBM System Storage EXP3000 DC Power Model (Dual ESMs included)	172702T	1727-HC5	2628	
IBM System Storage EXP3000 Express Model (for DS3000 attachment)	172701E	N/A	N/A	Withdrawn
IBM System Storage EXP3000 Express Model (for MegaRAID attach)	172701M	N/A	N/A	Withdrawn

[1] Two SAS 2 port daughter cards (39R6509) included with DS3200 DC Power Model
[2] Expand a single controller DS3200, DS3300, or DS3400 using an EXP3000 with a single Environmental Services Module (ESM) EXP3000 and a dual controller DS3200, DS3300, or DS3400 using an EXP3000 with two ESMs (ESM part number listed in the table below)

DS3000 Hardware Options

Description	PN	MTM	FC	DS3200		DS3300		DS3400	
				Single	Dual	Single	Dual	Single	Dual
Hardware Options									
DS3000 1GB Cache Memory Upgrade	39R6517	1726	4838	Y	Y[1]	Y	Y[1]	Y	Y[1]
DS3000 System Memory Cache Battery Replacement	39R6519	1726	4839	Y	Y[1]	Y	Y[1]	Y	Y[1]
DS3200 SAS 2-Port Daughter Card	39R6509	1726	4836	Y	Y[1]	-	-	-	-
DS3200 SAS Controller Upgrade	39R6507	N/A	N/A	Y	-	-	-	-	-
DS3300 iSCSI Controller Upgrade	39R6511	N/A	N/A	-	-	Y	-	-	-
DS3400 FC Controller Upgrade	39R6513	N/A	N/A	-	-	-	-	Y	-
EXP3000 Environmental Services Module	39R6515	1727	4802	-	Y[2]	-	Y[2]	-	Y[2]
Cable and Connector Options									
IBM 1m SAS Cable	39R6529	1726	3708	Y	Y	Y[3]	Y[3]	Y[3]	Y[3]
IBM 3m SAS Cable	39R6531	1726	3707	Y	Y	Y[3]	Y[3]	Y[3]	Y[3]
4-Gbps SW SFP Transceiver	39R6475	1726	4804	-	-	-	-	Y	Y
1M LC-LC Fibre Channel Cable	39M5696	1726	3703	-	-	-	-	Y	Y
5M LC-LC Fibre Channel Cable	39M5697	1726	3704	-	-	-	-	Y	Y
25M LC-LC Fibre Channel Cable	39M5698	1726	3705	-	-	-	-	Y	Y

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[1] One per controller required
[2] Expand a single controller DS3200, DS3300 or DS3400 using a single ESM EXP3000, and a dual controller DS3200, DS3300 or DS3400 using a dual ESM EXP3000
[3] SAS cables are needed when attaching EXP3000 expansion units

DS3000 Series Advanced Features Structure

Out-of-the-box: 4 partitions on DS3200, DS3300, and DS3400,
Attachment License for 1 – 3 EXP3000 expansion units,
Windows and Linux on Intel Host Attach License,
and 2 FlashCopies per system

Out-of-the-box solution is "complete" for large majority of
typical storage workloads, however, if you need to grow…

DS3000 AIX/VIOS Host Attach
License (1 license per DS3000)
13N1923

DS3000 Linux on Power Host Attach
License (1 license per DS3000)
44W2101

DS3000 Solaris Host Attach
License (1 license per DS3000)
44W2136

DS3000 1GB Cache Memory
Upgrade (1 per controller)
39R6517

DS3000 FlashCopy Expansion
License (1 license per DS3000)
4 FlashCopies/Volume
Up to 64 total active FlashCopies
39R6533

DS3000 VolumeCopy License
(1 license per DS3000)
39R6534

DS3000 FlashCopy VolumeCopy
License (1 license per DS3000)
4 FlashCopies/Volume
Up to 64 total active FlashCopies
39R6535

DS3000 FlashCopy Expansion Plus
License (1 license per DS3000)
4 -> 8 FlashCopies/Volume
Up to 64 total active FlashCopies
44W2149

DS3000 4 -> 8 Partition License
(1 license per DS3000)
44W2138

DS3000 4 -> 16 Partition License
(1 license per DS3000)
39R6536

DS3000 4 -> 32 Partition License
(1 license per DS3000)
44W2140

DS3000 8 -> 16 Partition License
(1 license per DS3000)
44W2142

DS3000 8 -> 32 Partition License
(1 license per DS3000)
44W2144

DS3000 16 -> 32 Partition License
(1 license per DS3000)
44W2152

DS3000 Software Options

Software Options				DS3200		DS3300		DS3400	
Description	PN	MTM	FC	Single	Dual	Single	Dual	Single	Dual
DS3200 Software Feature Pack[1]	39R6540	1726	4840	W	W	-	-	-	-
DS3300 Software Feature Pack[1]	42C2142	1726	4856	-	-	W	W	-	-
DS3400 Software Feature Pack[1]	42C2143	1726	4857	-	-	-	-	W	W
DS3000 EXP3000 Expansion License[1]	39R6537	1726	4846	W	W	W	W	W	W
DS3000 4 to 8 Partition Expansion License	44W2138	1726	5068	Y	Y	Y	Y	Y	Y
DS3000 4 to 16 Partition Expansion License	39R6536	1726	4841	Y	Y	Y	Y	Y	Y
DS3000 4 to 32 Partition Expansion License	44W2140	1726	5069	Y	Y	Y	Y	Y	Y
DS3000 8 to 16 Partition Expansion License	44W2142	1726	5070	Y	Y	Y	Y	Y	Y
DS3000 8 to 32 Partition Expansion License	44W2144	1726	5071	Y	Y	Y	Y	Y	Y
DS3000 16 to 32 Partition Expansion License	44W2152	1726	5072	Y	Y	Y	Y	Y	Y
DS3000 FlashCopy Expansion License[2]	39R6533	1726	4842	Y	Y	Y	Y	Y	Y
DS3000 VolumeCopy License	39R6534	1726	4843	Y	Y	Y	Y	Y	Y
DS3000 FlashCopy and VolumeCopy License[2]	39R6535	1726	4844	Y	Y	Y	Y	Y	Y
DS3000 FlashCopy Plus Expansion License[3]	44W2149	1726	5091	Y	Y	Y	Y	Y	Y
DS3000 AIX/VIOS Host Attach License	13N1923	1726	4923	Y	Y	-	-	Y	Y
DS3000 Linux on Power Host Attach License	44W2101	1726	4924	Y	Y	Y	Y	Y	Y
DS3000 Solaris Host Attach License	44W2136	1726	5073	Y	Y	Y	Y	Y	Y

[1] The DS3200 Software Feature Pack, DS3300 Software Feature Pack, DS3400 Software Feature Pack and the EXP3000 Expansion License have been incorporated into the base models and are no longer needed as pre-reqs to the other advanced function options. The required controller firmware that enables this function must be at firmware level: v06.70.24.00 or later and is available on the DS3000 product support Web site: http://www-03.ibm.com/systems/storage/disk/entry/index.html
[2] Supports up to 4 FlashCopies per volume and up to 64 total active FlashCopies
[3] Upgrade from 4 to 8 FlashCopies per volume, prereqs FlashCopy Expansion License or FlashCopy/Volume Copy license

Supported System x, BladeCenter, System p Servers

Description	DS3200		DS3300		DS3400	
	Single	Dual	Single	Dual	Single	Dual
IBM xSeries & System x Servers						
IBM eServer xSeries 225, 235, 255	-	-	-	-	Y	Y
IBM eServer xSeries 226, 236	-	-	Y	Y	Y	Y
IBM eServer xSeries 260	-	-	Y	Y	Y	Y
IBM eServer xSeries 306	-	-	Y	Y	-	-
IBM eServer xSeries 306m	-	-	Y	Y	Y	Y
IBM eServer xSeries 326, 326m	-	-	-	-	Y	Y
IBM eServer xSeries 336	-	-	Y	Y	Y	Y
IBM eServer xSeries 343	-	-	-	-	Y	Y
IBM eServer xSeries 346	-	-	Y	Y	Y	Y
IBM eServer xSeries 366	Y	Y	Y	Y	Y	Y
IBM eServer xSeries 460	-	-	Y	Y	Y	Y
IBM System x3200	-	-	Y	Y	-	-
IBM System x3200 M2, x3250, x3250 M2	Y	Y	Y	Y	Y	Y
IBM System x3350	Y	Y	Y	Y	Y	Y
IBM System x3400 / 3455	Y	Y	Y	Y	Y	Y
IBM System x3500 / x3550 / x3550 M2	Y	Y	Y	Y	Y	Y
IBM System x3650 / 3655 / x3650 M2	Y	Y	Y	Y	Y	Y
IBM System x3755	-	-	Y	Y	Y	Y
IBM System x3800 / x3850	-	-	Y	Y	Y	Y
IBM System x3850 M2	Y	Y	Y	Y	Y	Y
IBM System x3950	-	-	Y	Y	Y	Y
IBM System x3950 M2	Y	Y	Y	Y	Y	Y
IBM Blade Servers						
IBM BladeCenter LS20 / LS21 / LS22 / LS41 / LS42	-	Y[1]	Y	Y	Y	Y
IBM BladeCenter HS12 / HS20 / HS21 / HS21 XM / HS22 / HS40	-	Y[1]	Y	Y	Y	Y
IBM BladeCenter JS12 / JS20 / JS21 / JS22 / JS23 / JS43	-	Y[1]	Y[2]	Y[2]	Y	Y
IBM BladeCenter QS22	-	Y[1]	-	-	-	-
IBM System p Servers[3]						
IBM System p4, p5, p6	-	-	Y	Y	Y[3]	Y[3]

[1] DS3200 boot and data supported with BladeCenter SAS switch in BCE, BCH, BCS, BCT, BCHT. Only one DS3200 is supported attached the BladeCenter.
[2] Only supported with iSCSI software initiators
[3] All System p servers are supported with one of the supported Fibre Channel HBAs listed below

Minimum Non-IBM Server Hardware Requirements

Server	Processor Speed	Memory
Intel Compatiable servers[1]	Intel Pentium® or Pentium-equivalent microprocessor (450 MHz or faster)	System memory: For Windows Server 2003 and 2008, Linux, NetWare, and Solaris: A minimum of 256 MB (512 MB preferred)
AMD Compatible servers[1]	AMD Compatible microprocessor (450 MHz or faster)	System memory: For Windows Server 2003 and 2008, Linux, NetWare, and Solaris: A minimum of 256 MB (512 MB preferred)
Sun SPARC servers	450 MHz or faster	System memory: For Solaris: A minimum of 256 MB (512 MB preferred)

Supported SAS Host Bus Adapters (HBA)

Description	PN	MTM	FC	DS3200
SAS HBAs 3 Gbps – for System x servers				
IBM SAS HBA Controller v2[2]	44E8700			Y
IBM SAS HBA Controller [2]	25R8060		1681	Y
LSI SAS PCIx HBA (LSISAS3801X) [2]	N/A	N/A	N/A	Y
SAS HBAs for BladeCenter				
SAS Expansion Card (CFFv) for IBM BladeCenter[2]	39Y9190		8250	Y
SAS Connectivity Card (CFFv) for IBM BladeCenter[2]	43W3974			Y
SAS Passthrough Exp Cd, CIOv for IBM BladeCenter[2]	43W4068		8246	Y
SAS HBAs for Solaris on SPARC and x86 servers				
LSI SAS PCIx HBA (LSISAS3801X)	N/A	N/A	N/A	Y
LSI SAS PCIe HBA (LSISAS3801E)	N/A	N/A	N/A	Y
Sun SG-XPCI8SAS-E-Z	N/A	N/A	N/A	Y
Sun SG-XPCIE8SAS-E-Z	N/A	N/A	N/A	Y

Supported SAS Switch for IBM BladeCenter

Description	PN	DS3200
IBM BladeCenter SAS Connectivity Module[2]	39Y9195	Y

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[1] A HBA from the list of supported HBAs is required.
[2] Boot from DS3200 is supported when attached to BladeCenter SAS switch, not for direct attached DS3200.

Supported iSCSI Host Bus Adapters (HBA)

Description	PN	DS3300
iSCSI HBAs[1][2][3] - for System x servers		
IBM Qlogic iSCSI Single Port PCI-e HBA	39Y6146	Y
IBM Qlogic iSCSI Dual Port PCI-e HBA	42C1770	Y
IBM iSCSI Server SX Adapter	30R5501	Y
IBM iSCSI Server TX Adapter	30R5201	Y
Qlogic 4050 iSCSI HBA (QLA4050)	N/A	Y
Qlogic 4050C iSCSI HBA (QLA4050C)	N/A	Y
Qlogic 4052C iSCSI HBA (QLA4052C)	N/A	Y
Qlogic 4060C iSCSI HBA (QLA4060C)	N/A	Y
Qlogic 4062C iSCSI HBA (QLA4062C)	N/A	Y
iSCSI HBAs[1][2][3]- for BladeCenter servers		
QLogic iSCSI Expansion Card	26K6487	Y
IBM iSCSI Daughter Card for BladeCenter	32R1923	Y

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[1] iSCSI software initiators are also supported with the DS3300
[2] Boot from DS3300 iSCSI attached storage is supported
[3] DS3300 is not supported directly attached, Ethernet switch is required

Supported Fibre Channel Host Bus Adapters (HBA) for Servers

Description	PN	FC	DS3400
8Gbps – for System x servers[1]			
QLogic 8Gb FC Single-port HBA for IBM System x	42D0501	3578	Y
QLogic 8Gb FC Dual-port HBA for IBM System x	42D0510	3579	Y
Emulex 8Gb FC Single-port HBA for IBM System x	42D0485	3580	Y
Emulex 8Gb FC Dual-port HBA for IBM System x	42D0494	3581	Y
Brocade 8Gb FC Single-port HBA for IBM System x	46M6049	3589	Y
Brocade 8Gb FC Dual-port HBA for IBM System x	46M6050	3591	Y
4Gbps – for xSeries & System x servers [1]			
Emulex 4Gb FC Single-Port PCI-X HBA for IBM System x (Emulex LP110002[2])	42D0405	1696	Y
Emulex 4Gb FC Dual-Port PCI-X HBA for IBM System x (Emulex LP11002[2])	42D0407	1697	Y
Emulex 4Gb FC Single-Port PCI-E HBA for IBM System x (Emulex LPe11000[2])	42C2069	1698	Y
Emulex 4Gb FC Dual-Port PCI-E HBA for IBM System x (Emulex LPe11002[2])	42C2071	1699	Y
QLogic 4Gb FC Single-Port PCIe HBA for IBM System x (QLE2460[2])	39R6525	3567	Y
QLogic 4Gb FC Dual-Port PCIe HBA for IBM System x (QLE2462[2])	39R6527	3568	Y
DS4000 FC 4Gbps - PCI-X Single Port HBA (QLA2460[2])	39M5894	3550	Y
DS4000 FC 4Gbps - PCI-X Dual Port HBA (QLA2462[2])	39M5895	3551	Y
2Gbps – for xSeries & System x servers[1]			
FAStT FC-133 Host Bus Adapter (QLA2340[2])	24P0960	1650	Y
IBM SMB 2-Gbps Fibre Channel HBA (QLA200[2])	13N1873	1687	Y
8Gbps – for pSeries & System p servers[1]			
8Gb PCI Express Dual Port Fibre Channel Adapter	N/A	5735	Y
4Gbps – for pSeries & System p servers[1]			
4Gb Single-Port Fibre Channel PCI-X 2.0 DDR Adapter (Emulex LP 11000)	N/A	5758 / 1905	Y
4Gb Dual-Port Fibre Channel PCI-X 2.0 DDR Adapter (Emulex LP11002)	N/A	5759 / 1910	Y
4Gb PCI Express Single Port Fibre Channel Adapter	N/A	5773	Y
4Gb PCI Express Dual Port Fibre Channel Adapter	N/A	5774	Y
2Gbps – for pSeries & System p servers[1]			
2Gb Single-Port Fibre Channel Adapter	N/A	6239	Y
2Gb Single-Port Fibre Channel PCI-X 1.0 Adapter (Emulex LP1000)	N/A	1957 / 1977 / 5716	Y

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[1] Boot from SAN operation supported on DS3400 with HBAs in this section
[2] Non-IBM HBAs supported only with IBM BIOS, NVS RAM, and device drivers (if applicable)

Supported Fibre Channel Host Bus Adapters (HBA) / Expansion Cards for IBM BladeCenter

Description	PN	FC	DS3400
8Gbps – for BladeCenter servers			
QLogic Ethernet and 8Gb Fibre Channel Expansion Card (CFFh) for IBM BladeCenter	44X1940	N/A	Y
4Gbps – for BladeCenter servers[1]			
Emulex 4Gb SFF Fibre Channel Expansion Card for IBM BladeCenter	39Y9186	N/A	Y
QLogic 4Gb SFF Fibre Channel Expansion Card for IBM eServer BladeCenter	26R0890	N/A	Y
QLogic 4Gb Fibre Channel Expansion Card for IBM eServer BladeCenter	26R0884	N/A	Y
Emulex 4Gb Fibre Channel Expansion Card (CFFv) for IBM BladeCenter	43W6859	8251	Y
QLogic 4Gb Fibre Channel Expansion Card (CFFv) for IBM eServer BladeCenter	41Y8527	N/A	Y
QLogic Ethernet and 4Gb FC Expansion Card (CFFh) for IBM eServer BladeCenter	39Y9306	8252	Y
IBM HS20 Fibre Channel Expansion Card	13N2203	N/A	Y
IBM HS20 Fibre Channel Expansion Card	48P7061	N/A	Y
Qlogic 4Gb Fibre Channel Dual Port Expansion Card (CFF/PCIX) for IBM BladeCenter	41Y8527	8248	Y
2Gbps – for BladeCenter servers[3]			
BladeCenter SFF Fibre Channel Expansion Card	26K4841	N/A	Y

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[1] Boot from SAN operation supported on DS3400 with HBAs in this section for all host OSes except AIX 5.2. (AIX 5.3, AIX 6.1, and VIOS are supported.)

Supported Fibre Channel Host Bus Adapters (HBA) for Solaris Servers

Description	PN	FC	DS3400
Emulex LP9802, LP9802DC	N/A	N/A	Y
Emulex LP10000, LP10000DC, LP11000, LP11002	N/A	N/A	Y
Emulex LPE11000, LPE11002	N/A	N/A	Y
Emulex LPE12000, LPE12002	N/A	N/A	Y
Qlogic QLA2310F, QLA2340, QLA2342	N/A	N/A	Y
Qlogic QLA2460, QLA2462	N/A	N/A	Y
Qlogic QLE2460, QLE2462	N/A	N/A	Y
Qlogic QLE2560, QLE2562	N/A	N/A	Y
Sun SG-XPCI1FC-EM2, SG-XPCI1FC-EM4-Z	N/A	N/A	Y
Sun SG-XPCI1FC-QF2, SG-XPCI1FC-QL2, SG-XPCI1FC-QF4	N/A	N/A	Y
Sun SG-XPCI2FC-EM2, SG-XPCI2FC-EM4-Z	N/A	N/A	Y
Sun SG-XPCI2FC-QF2, SG-XPCI2FC-QF2-Z, SG-XPCI2FC-QF4	N/A	N/A	Y
Sun SG-XPCIE1FC-EM4	N/A	N/A	Y
Sun SG-XPCIE2FC-EM4, SG-XPCIE2FC-EM8-Z	N/A	N/A	Y
Sun SG-XPCIE2FC-QF4, SG-XPCIE2FC-QM8-Z	N/A	N/A	Y

Supported SAN Switches

Description	PN	DS3400
8Gbps – for servers		
IBM System Storage SAN24B-4 Express	249824E	Y
IBM System Storage SAN40B-4	249840E	Y
4Gbps – for servers		
IBM System Storage SAN10Q-2[1]	691810X	Y
IBM TotalStorage SAN16B-2[1]	200516B	Y
IBM TotalStorage SAN16M-2[1]	202616E	Y
IBM TotalStorage SAN18B-R	200518R	Y
IBM TotalStorage SAN32B-2[1]	200532B	Y
IBM TotalStorage SAN32M-2[1]	202632E	Y
IBM TotalStorage SAN64B-2	200564B	Y
Cisco MDS 9124 for IBM System Storage switch	2053-424	Y
Cisco MDS 9134 for IBM System Storage switch	2053-434	Y
Cisco MDS 9222i for IBM System Storage switch	2054-E01	Y
Cisco MDS 9506 Multilayer Director for IBM System Storage	2062-D04	Y
Cisco MDS 9509 Multilayer Director for IBM System Storage	2062-D07	Y
Cisco MDS 9513 Multilayer Director for IBM System Storage	2062-E11	Y
2Gbps – for servers		
2109-F16 SAN FC Switch	2109F16	Y
2109-F32 SAN FC Switch	2109F32	Y
2109-F32 SAN FC Switch	3534F08	Y
Cisco MDS 9120 Multilayer Fabric Switch[1]	2061-020	Y
Cisco MDS 9140 Multilayer Fabric Switch[1]	NA	Y
Cisco MDS 9216 Multilayer Fabric Switch[1]	NA	Y
8Gbps – for BladeCenter		
QLogic 8Gb 20-Port 8 Gb SAN Switch Modules for IBM BladeCenter	44X1905	Y
QLogic 8Gb Intelligent Pass-thru Module for IBM BladeCenter	44X1907	Y
4Gbps – for BladeCenter		
Brocade 10-port 4Gb SAN Switch Module for IBM BladeCenter	32R1813	Y
Brocade 20-port 4Gb SAN Switch Module for IBM BladeCenter	32R1812	Y
QLogic 10-port 4Gb Fibre Channel Switch Module for IBM BladeCenter	32R1904	Y
Qlogic 10 port 4 Gb Full Fabric Switch	43W6724	Y
QLogic 20-port 4Gb Fibre Channel Switch Module for IBM BladeCenter	26R0881	Y
Cisco 10 port 4 Gb Switch Module for IBM BladeCenter	39Y9284	Y
Cisco 20 port 4 Gb Switch Module for IBM BladeCenter	39Y9280	Y
2Gbps – for BladeCenter		
BladeCenter 2pt Fibre Channel Switch Module	48P7062	Y
Brocade Enterprise SAN Switch Module for IBM BladeCenter	90P0165	Y
Brocade Entry SAN Switch Module for IBM BladeCenter	26K5601	Y

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[1] This part number has been withdrawn from marketing.

Supported Operating Systems

Description	DS3200	DS3300	DS3400
Linux			
Red Hat Enterprise Linux 4 U7 AS and ES for x86/AMD64/EM64T	Y[1]	Y	Y
Red Hat Enterprise Linux 4 U7 for POWER[2]	-	Y	Y
Red Hat Enterprise Linux 5 U2 AS and ES for x86/AMD64/EM64T	Y	Y	Y
Red Hat Enterprise Linux 5 U2 for POWER[2]	Y	Y	Y
Novell SUSE Linux Enterprise Server 9 SP4 for x86/AMD64/EM64T	Y[1]	Y	Y
Novell SUSE Linux Enterprise Server 9 SP4 for POWER[2]	-	Y	Y
Novell SUSE Linux Enterprise Server 10 SP2 for x86/AMD64/EM64T	Y	Y	Y
Novell SUSE Linux Enterprise Server 10 SP2 for POWER[2]	Y	Y	Y
Microsoft			
Microsoft Windows Server 2003 R2 Web Edition	Y	Y	Y
Microsoft Windows Server 2003 R2 Datacenter Edition, DataCenter x64 Ed.	Y	Y	Y
Microsoft Windows Server 2003 R2 Enterprise Edition, Enterprise x64 Ed.	Y	Y	Y
Microsoft Windows Server 2003 R2 Standard Edition, Standard x64 Ed.	Y	Y	Y
Microsoft Windows Storage Server 2003 R2 Standard Edition	Y	Y	Y
Windows Small Business Server 2003 R2 Premium Edition	Y	Y	Y
Microsoft Windows Server 2008 Datacenter Edition, DataCenter x64 Ed.	Y	Y	Y
Microsoft Windows Server 2008 Enterprise Edition, Enterprise x64 Ed.	Y	Y	Y
Microsoft Windows Server 2008 Standard Edition, Standard x64 Ed.	Y	Y	Y
Microsoft Windows Server 2008 CoreServer	Y	Y	Y
NetWare			
NetWare 6.5 SP7	Y[1]	-	Y
AIX			
AIX 5.2[3], AIX 5.3[3], AIX 6.1[3]	Y[4]	-	Y
Virtual I/O Server (VIOS)			
VIOS 1.5.2[3], VIOS 2.1[3]	Y[4]	-	Y
IBM i			
VIOS 1.5.2, VIOS 2.1 with IBM i client[3]	Y[4]	-	Y
Sun Solaris			
Solaris 9 on SPARC	Y	Y[5]	Y
Solaris 10 update 5 on x86 and SPARC	Y	Y[5]	Y
VMware[6]			
VMware ESX Server 2.5.4	-	-	Y
VMware ESX Server 3.0.2	-	-	Y
VMware ESX Server 3.5.3 / 3i.3	Y[1]	Y[7]	Y

[1] Supported with DS3200 direct attach only
[2] Requires DS3000 Linux on Power Host Attach License
[3] Requires DS3000 AIX Host Attach License
[4] Supported with Power blades only
[5] iSCSI software initiators are supported only, not hardware initiators
[6] VMware VMotion is supported
[7] For VMware, booting with iSCSI software initiators is not supported, booting with iSCSI hardware initiators is supported

Other Supported Software Products

Management Applications	DS3200	DS3300	DS3400
IBM Director v 5.2.0 [1]	Y	Y	Y
IBM System Storage Productivity Center 1.2 (previously called TotalStorage Productivity Center)	-	-	Y
IBM Tivoli FastBack	Y	Y	Y
Storage Virtualization			
IBM SAN Volume Controller 4.2.1[2], 4.3.0.2	-	-	Y
Microsoft Windows Server 2008 with HyperV	Y	Y	Y
Clustering Solutions			
Microsoft Cluster Server (MSCS)	Y	Y	Y
SteelEye LifeKeeper Linux Clustering 6.3.2, 6.4.2	Y	Y	Y
IBM General Parallel File System (GPFS) 3.1, 3.2[3]	-	-	Y
Sun Solaris Cluster 3.2	Y	Y	Y
Multi-pathing			
Microsoft Windows MPIO	Y	Y	Y
Linux RDAC	Y	Y	Y
AIX MPIO	Y	-	Y
Solaris MPxIO	Y	Y	Y
iSCSI Software Initiators			
Microsoft Windows	-	Y	-
Red Hat Linux native iSCSI software initiator	-	Y	-
SuSE Linux native iSCSI software initiator	-	Y	-
Solaris native iSCSI software initiator	-	Y	-
VMware native iSCSI software initiator[4]	-	Y	-

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[1] IBM Director Version 5.2.0 and DS3000 Storage Manager required to be installed on same server.
[2] SATA HDDs are not supported in the DS3400 when using the IBM SAN Volume Controller 4.2.1
[3] GPFS is supported with AIX 5.3 and 6.1, Red Hat 5.1 on x86 and Power, and SuSE Linux ES 10.1 on x86 and Power.
GPFS support requires DS3000 controller firmware level 06.70.69.00.
[4] For VMware, booting with iSCSI software initiators is not supported, booting with iSCSI hardware initiators is supported

Supported Hard Disk Drives (HDD)

DS3200, DS3300, DS3400, and EXP3000 can have up to 12 HDDs: SAS or SATA or both.
Up to 3 EXP3000s can be attached to the DS3200, DS3300, and DS3400 for expansion up the 48 HDDs total.

Description	PN / SEO Option	MTM	FC	DS3200	DS3300	DS3400	EXP3000
73GB 10K Hot Swap SAS[1]	40K1039	1726/1727	5163	Y	Y	Y	Y
146GB 10K Hot Swap SAS[1]	40K1040	1726/1727	5164	Y	Y	Y	Y
300GB 10K Hot Swap SAS[1]	40K1041	1726/1727	5156	Y	Y	Y	Y
36GB 15K Hot Swap SAS[1]	40K1042	1726/1727	5160	Y	Y	Y	Y
73GB 15K Hot Swap SAS	40K1043	1726/1727	5161	Y	Y	Y	Y
146GB 15K Hot Swap SAS	40K1044	1726/1727	5162	Y	Y	Y	Y
300GB 15K Hot Swap SAS	43X0802	1726/1727	5532	Y	Y	Y	Y
450GB 15K Hot Swap SAS	42D0519	1726/1727	5586	Y	Y	Y	Y
500GB Hot Swap Dual Port SATA	39M4558	1726/1727	5516	Y	Y	Y	Y
750GB Hot Swap Dual Port SATA	43W7580	1726/1727	5540	Y	Y	Y	Y
1000GB Hot Swap Dual Port SATA	43W7630	1726/1727	5561	Y	Y	Y	Y
73GB 15K Hot Swap SAS Express	43W7481	N/A	N/A	Y	Y	Y	Y
146GB 15K Hot Swap SAS Express	43W7482	N/A	N/A	Y	Y	Y	Y
300GB 15K Hot Swap SAS Express	43W7506	N/A	N/A	Y	Y	Y	Y
450GB 15K Hot Swap SAS Express	42D0560	N/A	N/A	Y	Y	Y	Y
500GB Hot Swap Dual Port SATA Express	41Y8240	N/A	N/A	Y	Y	Y	Y
750GB Hot Swap Dual Port SATA Express	41Y8244	N/A	N/A	Y	Y	Y	Y
1000GB Hot Swap Dual Port SATA Express	41Y8248	N/A	N/A	Y	Y	Y	Y

[1] These HDDs are supported but are no longer available for new orders.

Warranty and Maintenance Offerings

Description	PN (Option)	MTM	FC	DS3200	DS3300	DS3400	EXP3000
3-year IOR 9 x 5 Four (4) hour	44J8067	N/A	7249	Y	-	-	-
3-year IOR 24 x 7 Four (4) hour	44J8068	N/A	7250	Y	-	-	-
3-year IOR 24 x 7 Two (2) hour	44J8069	N/A	7251	Y	-	-	-
5-year IOR 24 x 7 Four (4) hour	44J8070	N/A	7252	Y	-	-	-
5-year IOR 24 x 7 Two (2) hour	44J8071	N/A	7253	Y	-	-	-
3-year IOR 9 x 5 Four (4) hour	44J8072	N/A	7254	-	Y	Y	-
3-year IOR 24 x 7 Four (4) hour	44J8073	N/A	7255	-	Y	Y	-
3-year IOR 24 x 7 Two (2) hour	44J8074	N/A	7256	-	Y	Y	-
5-year IOR 24 x 7 Four (4) hour	44J8075	N/A	7257	-	Y	Y	-
5-year IOR 24 x 7 Two (2) hour	44J8076	N/A	7258	-	Y	Y	-
3-year IOR 9 x 5 Four (4) hour	21P2044	N/A		-	-	-	Y
3-year IOR 24 x 7 Four (4) hour	41L2768	N/A		-	-	-	Y
3-year IOR 24 x 7 Two (2) hour	41L2769	N/A		-	-	-	Y
5-year IOR 24 x 7 Four (4) hour	69P9283	N/A		-	-	-	Y
5-year IOR 24 x 7 Two (2) hour	69P9284	N/A		-	-	-	Y