

IBM System Storage EXP3000 Direct Attach Interoperability Matrix

Revision Date: April 13, 2010

What's new in the EXP3000 Interoperability Matrix?

April 13, 2010:

- Added support for 2TB SATA disk drive.
- Marked the 73GB 3Gb SAS disk drive and all Express disk drive options as withdrawn from marketing.

February 1, 2010:

- Added support for 300GB, 450GB and 600GB 6Gb SAS disk drives.
- Removed support for the SAS Connectivity Card (CFFv) for BladeCenter (43W3974).

June 5, 2009:

- Added BladeCenter daughter cards needed for EXP3000 connectivity.
- Updated Sample Configuration for BladeCenter with EXP3000.

May 15, 2009:

- Added BladeCenter SAS Connectivity Module and sample configuration with BladeCenter.
- Added support for Solid State Drive when attached to ServeRAID MR10M adapter.

October 27, 2008:

- Added ServeRAID 8k-I SAS Controller
- Added 450 GB SAS HDD

February 12, 2008:

- Added 1 TB SATA HDD
- Added ServeRAID-MR10K and ServeRAID-MR10M SAS/SATA Controllers
- Removed list of servers supported with each HBA – see check the server proven information for each server at this URL: www-03.ibm.com/servers/eserver/serverproven/compat/us/

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What is in the box?

After you unpack the EXP3000, make sure that you have the following items:

1. **Hardware:**
 - a. IBM System Storage EXP3000
 - b. Two rack jumper power cords
 - c. One sheet of ID labels
 - d. Two front bezels (left and right)
 - e. One rack installation hardware kit
2. **Printed documents:**
 - a. IBM System Storage EXP3000 Quick Start Guide
 - b. Rack Installation Instructions
3. **Online documents:**
 - a. IBM System Storage EXP3000 Installation and User's Guide
 - b. IBM Systems Safety Notices

All documents are available on the IBM Documentation CD or from the IBM support Web site at <http://www.ibm.com/servers/storage/support/>

EXP3000 Expansion Units with Direct Attachment to System x Server Host Bus Adapters and BladeCenter SAS Connectivity Module

Description	Part Number	MTM	FC	Comments
IBM System Storage EXP3000 (Single ESM)	172701X	1727-HC1	2676	
IBM System Storage EXP3000 DC Power Model (Dual ESMs included)	172702T	1727-HC5	2628	
<i>IBM System Storage EXP3000 Express Model (3m SAS cable included)</i>	<i>172701E</i>	<i>N/A</i>	<i>2708</i>	<i>Withdrawn</i>
<i>IBM System Storage EXP3000 Express Model (3m MegaRAID SAS cable included)</i>	<i>172701M</i>	<i>N/A</i>	<i>2713</i>	<i>Withdrawn</i>
System x HBA options				Maximum Number of EXP3000s attached
MegaRAID 8480 PCIe Controller	39R8850		1690	4
ServeRAID 8s SAS/SATA Controller	39R8765		1684	1
ServeRAID 8k SAS Controller ¹	25R8064		1670	1
ServeRAID 8k-I SAS Controller ²	25R8065		1671	1
ServeRAID MR10k SAS/SATA Controller	43W4280		3557	9
ServeRAID MR10M SAS/SATA Controller	43W4339		3559	18
BladeCenter options				Maximum Number of EXP3000s attached
IBM BladeCenter SAS Connectivity Module	39Y9195			4
ServeRAID-MR10ie (CIOv) Controller for IBM BladeCenter w/Battery CIOv	46C7167		5752	NA
Cable and connector options				
<i>3m MegaRAID SAS Cable (SAS to mini-SAS)</i>	<i>39R6471</i>		<i>3706</i>	<i>Withdrawn</i>
1m SAS Cable (mini-SAS to mini-SAS)	39R6529		3708	
3m SAS Cable (mini-SAS to mini-SAS)	39R6531		3707	

¹ The server needs to have an external SAS port with the ServeRAID 8k SAS Controller

² The server needs to have an external SAS port with the ServeRAID 8k-I SAS Controller

Supported Hard Disk Drives (HDD)

Description	PN / SEO Option	MTM	FC
73GB 10,000 rpm Hot Swap SAS ¹	40K1039	1727	5163
146GB 10,000 rpm Hot Swap SAS ¹	40K1040	1727	5164
300GB 10,000 rpm Hot Swap SAS ¹	40K1041	1727	5156
36GB 15,000 rpm Hot Swap SAS ¹	40K1042	1727	5160
73GB 15,000 rpm Hot Swap SAS ¹	40K1043	1727	5161
146GB 15,000 rpm Hot Swap SAS	40K1044	1727	5162
300GB 15,000 rpm Hot Swap SAS	43X0802	1727	5532
450GB 15,000 rpm Hot Swap SAS	42D0519	1727	5586
300GB 15,000 rpm Hot Swap SAS (6Gb) ²	44W2234	1727	5311
450GB 15,000 rpm Hot Swap SAS (6Gb) ²	44W2239	1727	5312
600GB 15,000 rpm Hot Swap SAS (6Gb) ²	44W2244	1727	5313
500GB 7,200 rpm Hot Swap Dual Port SATA	39M4558	1727	5516
750GB 7,200 rpm Hot Swap Dual Port SATA	43W7580	1727	5540
1TB 7,200 rpm Hot Swap Dual Port SATA	43W7630	1727	5561
2TB 7,200 rpm Hot Swap Dual Port SATA	49Y1940	1727	5423
73GB 15,000 rpm Hot Swap SAS Express ¹	43W7481	N/A	N/A
146GB 15,000 rpm Hot Swap SAS Express ¹	43W7482	N/A	N/A
300GB 15,000 rpm Hot Swap SAS Express ¹	43W7506	N/A	N/A
450GB 15,000 rpm Hot Swap SAS Express ¹	42D0560	N/A	N/A
500GB Hot Swap Dual Port SATA Express ¹	41Y8240	N/A	N/A
750GB Hot Swap Dual Port SATA Express ¹	41Y8244	N/A	N/A
1TB Hot Swap Dual Port SATA Express ¹	41Y8248	N/A	N/A
50GB Hot Swap Dual Port SATA Solid State Drive ³	43W7698	1727	5597

¹ These disk drives have been withdrawn from marketing.

² These drives support up to 6 Gbps data transfer rate, but will operate at 3 Gbps when installed in DS3000 series controllers and EXP3000 expansion units.

³ The EXP3000 supports Solid State Drives only when attached to System x ServerRAID MR10M adapter. They are not supported when EXP3000 is attached to DS3000 as an expansion unit.

Warranty and Maintenance Offerings

Description	Part Number
Warranty and Maintenance Offerings	
3 YR onsite repair 9x5x4 hour	21P2044
3 YR onsite repair 24x7x4 hour	41L2768
3 YR onsite repair 24x7x2 hour	41L2769
5 YR onsite repair 24x7x4 hour	69P9283
5 YR onsite repair 24x7x2 hour	69P9284
Post Warranty Maintenance Offerings	
1 YR IOR 9x5/next day	69P9423
1 YR IOR 24x7x4 hour	69P9424
1 YR IOR 24x7x2 hour	69P9425
2 YR IOR 9x5/next day	96P2162
2 YR IOR 24x7x4 hour	96P2163
2 YR IOR 24x7x2 hour	96P2164

Sample Configurations

The following pages contain sample configurations of the EXP3000.

The configurations show cabling and information on quantities required to build the configurations. Please note that the sample configurations are not an exhaustive list that can be built with EXP3000. The configurations are meant to give an understanding of how EXP3000 works together with the portfolio of hardware and software options from IBM.

How to use the configurations and component tables

Reference letters in component tables

Dotted line shows a host

	Description	MTM	Part Number		#
			Option	FC	
S.	IBM System Storage EXP3000	1727-01X	N/A	2676	3
H.	MegaRAID 8480	N/A	39R8850	1690	1
C1.	3m SAS Cable for MegaRAID 8480	N/A	39R6471	3706	2
C2.	IBM 1m SAS Cable	N/A	39R6529	3708	1
	IBM 3m SAS Cable	N/A	39R6531	3707	

When part spans multiple rows, it shows that multiple components can be used. Pick only a single row.

Description of component

MTM of component

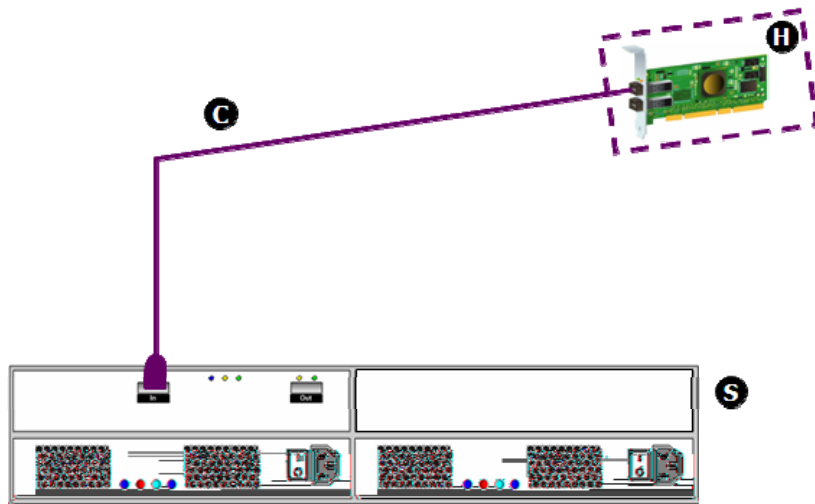
Option part number

Quantity

Feature Code

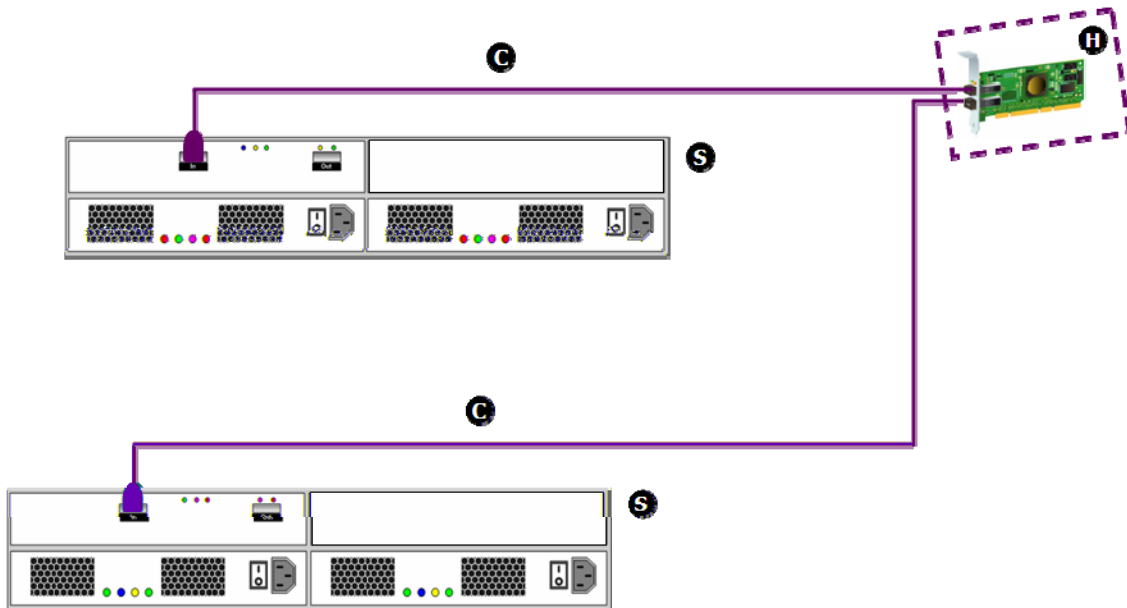
IBM MegaRAID 8480 PCIe Controller with IBM System Storage EXP3000: Up to 12 SAS and/or SATA disks

	Description	Part Number	MTM	FC	#
S	IBM System Storage EXP3000	1727-01X	1727-HC1	2676	1
H	MegaRAID 8480 PCIe Controller	39R8850		1690	1
C	IBM 3m MegaRAID SAS Cable (SAS to mini-SAS)	39R6471		3706	1



IBM MegaRAID 8480 PCIe Controller with IBM System Storage EXP3000: Up to 24 SAS and/or SATA disks

	Description	Part Number	MTM	FC	#
S	IBM System Storage EXP3000	1727-01X	1727-HC1	2676	2
H	MegaRAID 8480 PCIe Controller	39R8850		1690	1
C	IBM 3m MegaRAID SAS Cable (SAS to mini-SAS)	39R6471		3706	2

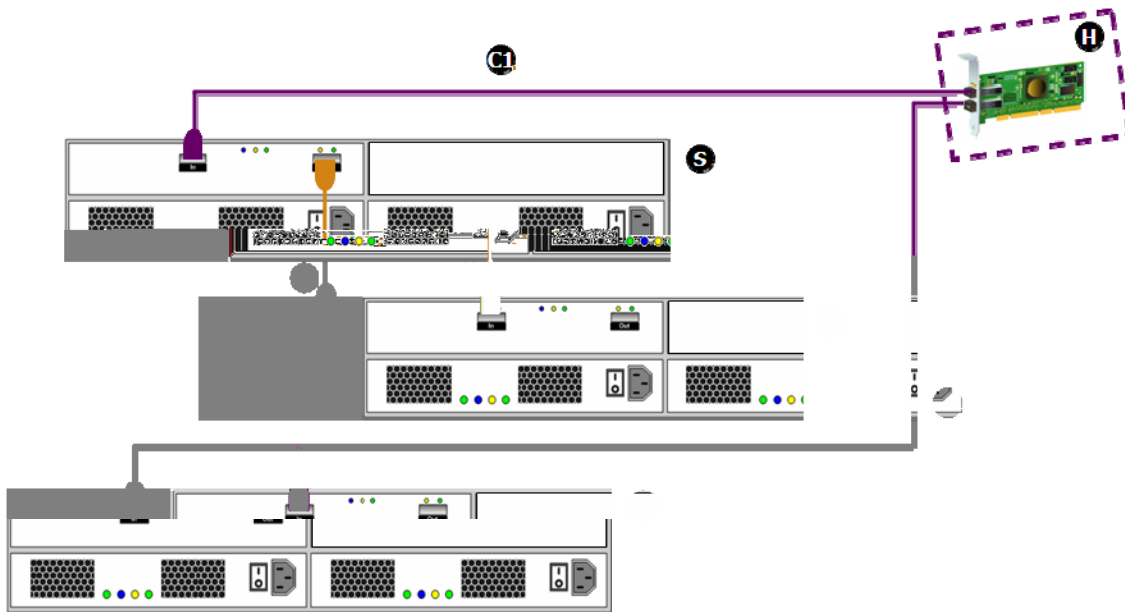


IBM MegaRAID 8480 PCIe Controller with IBM System Storage EXP3000: Up to 36 SAS and/or SATA disks

	Description	Part Number	MTM	FC	#
S	IBM System Storage EXP3000	1727-01X	1727-HC1	2676	3
H	MegaRAID 8480 PCIe Controller	39R8850		1690	1
C1	IBM 3m MegaRAID SAS Cable (SAS to mini-SAS)	39R6471		3706	2
C2	IBM 1m SAS Cable (mini-SAS to mini-SAS)	39R6529		3708	1
	IBM 3m SAS Cable (mini-SAS to mini-SAS)	39R6531		3707	

Note:

Pick only one row from C2.

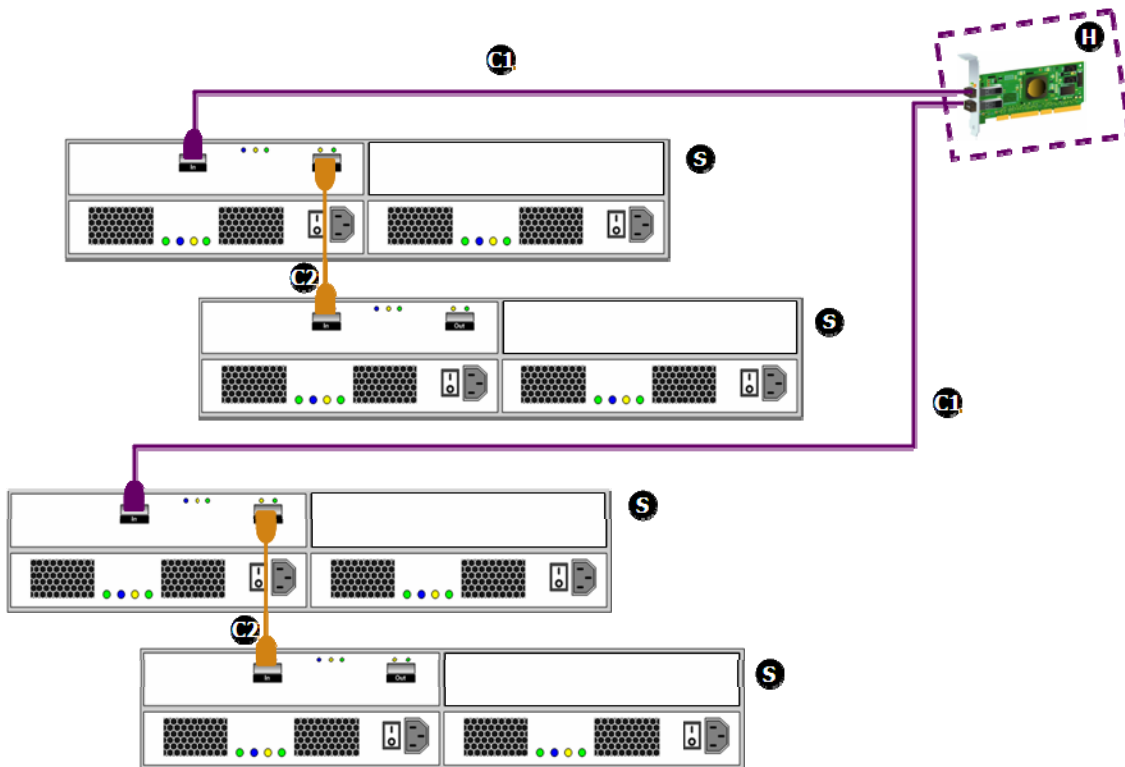


IBM MegaRAID 8480 PCIe Controller with IBM System Storage EXP3000: Up to 48 SAS and/or SATA disks

	Description	Part Number	MTM	FC	#
S	IBM System Storage EXP3000	1727-01X	1727-HC1	2676	4
H	MegaRAID 8480 PCIe Controller	39R8850		1690	1
C1	IBM 3m MegaRAID SAS Cable (SAS to mini-SAS)	39R6471		3706	2
C2	IBM 1m SAS Cable (mini-SAS to mini-SAS)	39R6529		3708	2
	IBM 3m SAS Cable (mini-SAS to mini-SAS)	39R6531		3707	

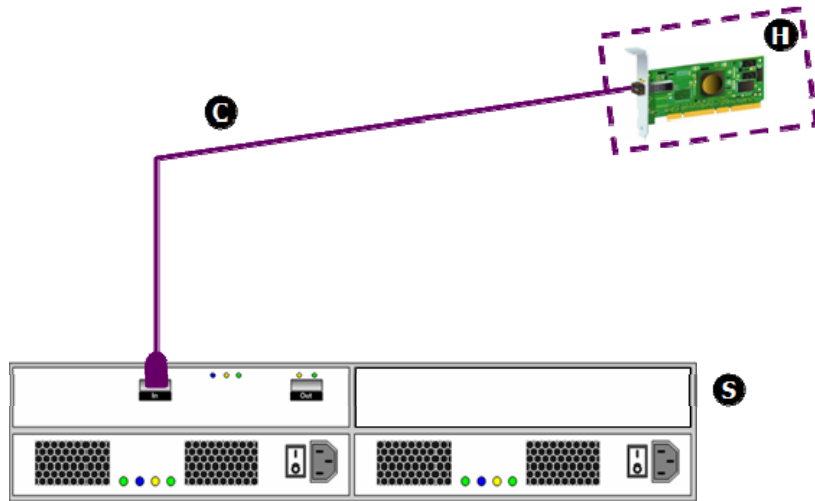
Note:

Pick only one row from C2.



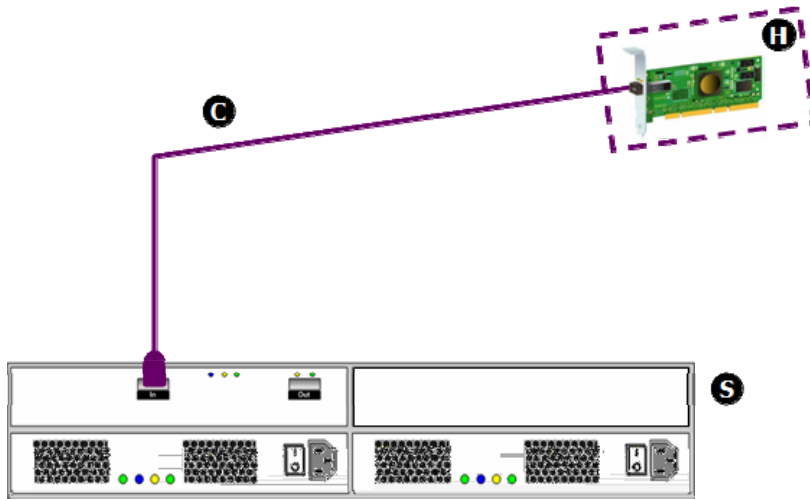
IBM ServeRAID-8s SAS/SATA Controller with IBM System Storage EXP3000: Up to 12 SAS and/or SATA disks

	Description	Part Number	MTM	FC	#
S	IBM System Storage EXP3000	1727-01X	1727-HC1	2676	1
H	ServeRAID-8s SAS/SATA Controller	39R8765		1684	1
C	IBM 3m MegaRAID SAS Cable (SAS to mini-SAS)	39R6471		3706	1



IBM ServeRAID-8k SAS/SATA Controller with IBM System Storage EXP3000: Up to 12 SAS and/or SATA disks

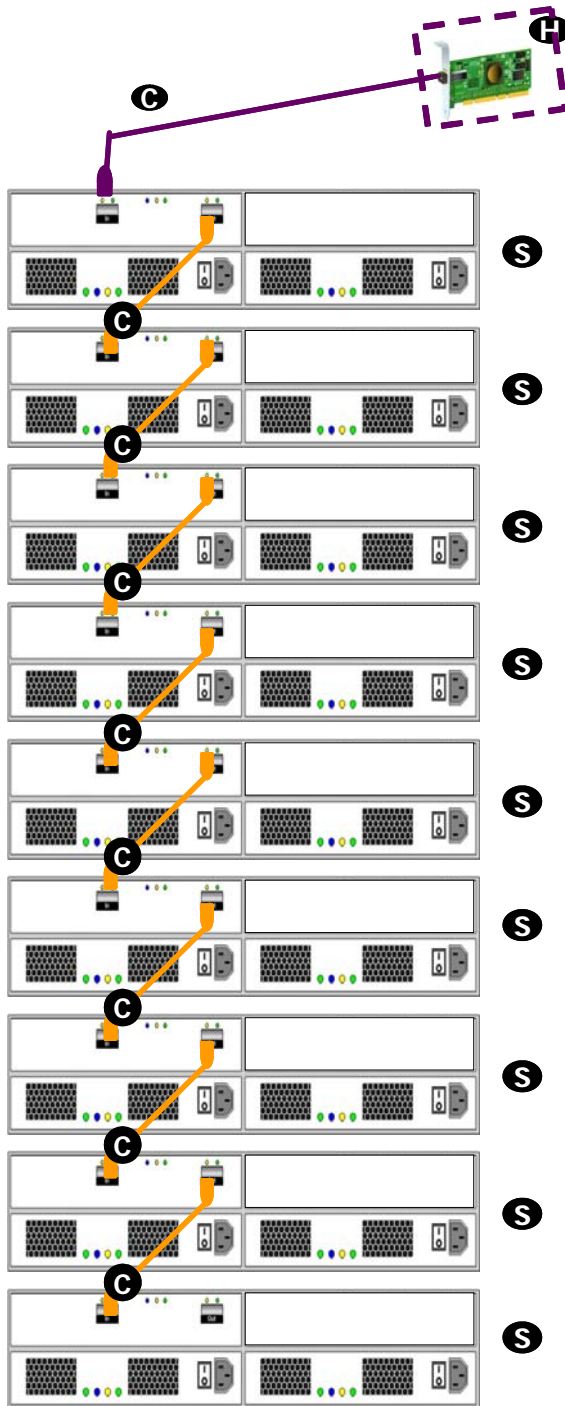
	Description	Part Number	MTM	FC	#
S	IBM System Storage EXP3000	1727-01X	1727-HC1	2676	1
H	ServeRAID-8k SAS Controller ¹	25R8064		1684	1
C	IBM 1m SAS Cable (mini-SAS to mini-SAS)	39R6529		3708	1
	IBM 3m SAS Cable (mini-SAS to mini-SAS)	39R6531		3707	



¹ The server needs to have an external SAS port with the ServeRAID-8k SAS Controller

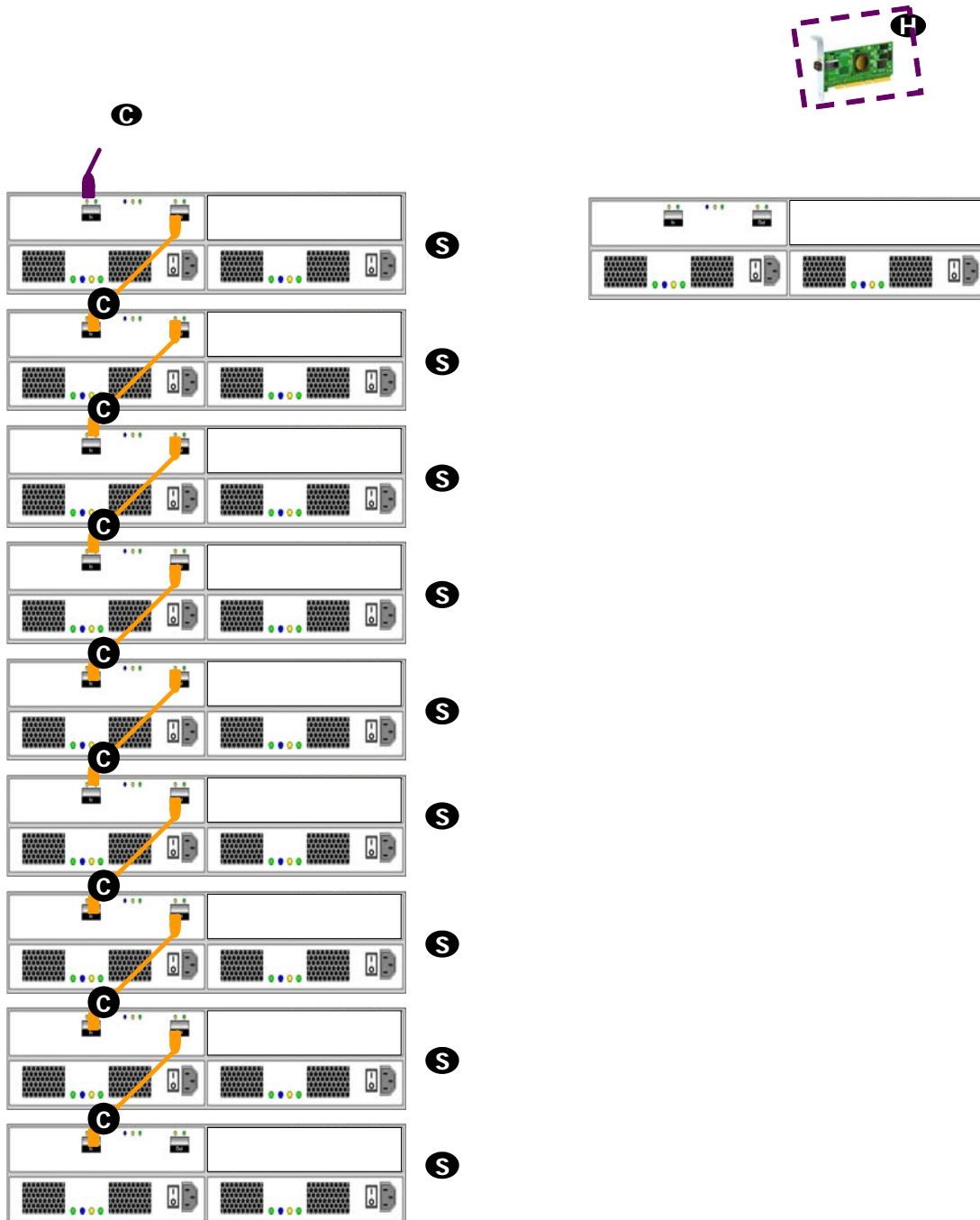
IBM ServeRAID-MR10k SAS/SATA Controller with IBM System Storage EXP3000: Up to 108 SAS and/or SATA disks

	Description	Part Number	MTM	FC	#
S	IBM System Storage EXP3000	1727-01X	1727-HC1	2676	9
H	ServeRAID-MR10k SAS/SATA Controller	43W4280		3557	1
C	IBM 1m SAS Cable (mini-SAS to mini-SAS)	39R6529		3708	9
C	IBM 3m SAS Cable (mini-SAS to mini-SAS)	39R6531		3707	



IBM ServeRAID-MR10M SAS/SATA Controller with IBM System Storage EXP3000: Up to 216 SAS and/or SATA disks

	Description	Part Number	MTM	FC	#
S	IBM System Storage EXP3000	1727-01X	1727-HC1	2676	18
H	ServeRAID-MR10M SAS/SATA Controller	43W4339		3559	1
C	IBM 1m SAS Cable (mini-SAS to mini-SAS)	39R6529		3708	18
	IBM 3m SAS Cable (mini-SAS to mini-SAS)	39R6531		3707	

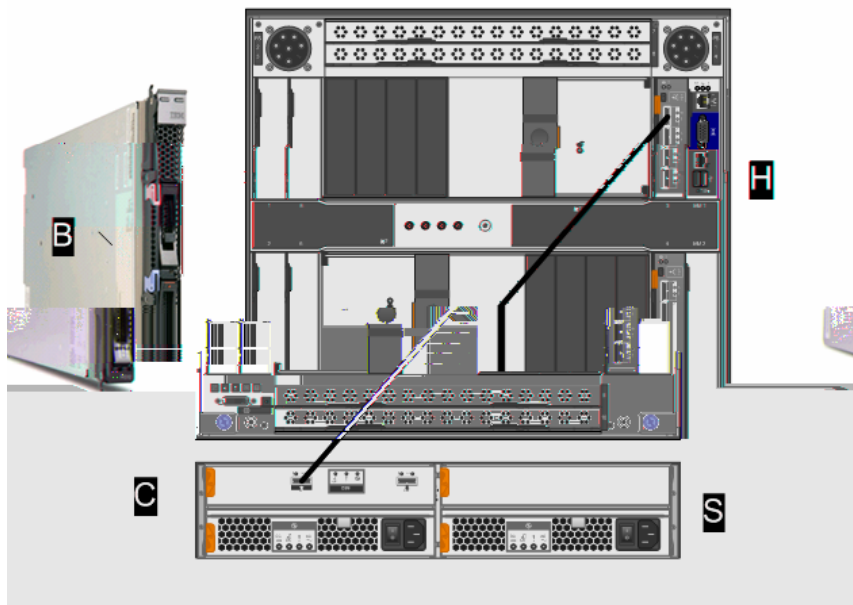


IBM BladeCenter SAS Connectivity Module attached to IBM System Storage EXP3000

	Description	Part Number	MTM	FC	#
S	IBM System Storage EXP3000	1727-01X	1727-HC1	2676	1 - 8
H	IBM BladeCenter SAS Connectivity Module	39Y9195			1 - 2
B	IBM BladeCenter HS12 Model 8028	8028-xxx	8028-xxx		6 or 8
B	ServeRAID-MR10ie (C10v) Controller for IBM BladeCenter w/Battery C10v	46C7167		5752	1 per blade
C	IBM 1m SAS Cable (mini-SAS to mini-SAS)	39R6529		3708	1 - 8
	IBM 3m SAS Cable (mini-SAS to mini-SAS)	39R6531		3707	

Note:

1 to 4 EXP3000s can attach to each BladeCenter SAS Connectivity Module.



Important Disclaimer Information

The compatibility/interoperability information provided by IBM should be used as a reference guide only, because hardware and software levels and releases may vary, and numerous hardware and software combinations are possible. IBM makes no representation or guarantee regarding the compatibility of specific hardware or software products.

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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To take full advantage of the constant improvements in the IBM System Storage EXP3000 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 EXP3000 model page located at:

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

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