



IBM 6Gb HBAs offer enterprise-grade data-transfer solutions; Rack Mount Cable enables remote battery mounting in ultra-dense servers

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At a glance

The IBM® 6Gb SAS and SSD HBAs provide an ideal solution for all servers needing high-speed data transfer in disk connectivity for data-backup and mission-critical applications. The HBAs provide support for SAS and SATA HDDs, SSDs, and tape drive configurations.

Features:

- Allow you to realize a higher level of performance through:
 - Attachment of 3Gb or 6Gb RAIDed external storage enclosures
 - Enablement of 3Gb or 6Gb tape storage connectivity for data-archiving applications
- Provide backward compatibility in a 3Gb environment
- Use a familiar code stack that minimizes qualification and training and reduces time-to-market for performance-rich solutions

The ServeRAID™ M5000 Series Battery Remote Mount Cable enables remote battery mounting in ultra-dense servers, thereby reducing thermal challenges.

- Remote mount capability: Ideal for space-limited server environments
- Flexible battery placement: Effective thermal budget management

For ordering, contact your IBM representative, an IBM Business Partner, or IBM Americas Call Centers at 800-IBM-CALL (Reference: YE001).

Overview

IBM 6Gb SAS HBA (46M0907) and IBM 6Gb SSD HBA (46M0983)

The IBM 6Gb SAS HBA and IBM 6Gb SSD HBA are economical storage enablers to attach RAIDed external storage enclosures and provide 3Gb or 6Gb tape storage connectivity for data-archiving applications to realize a higher level of performance.

The PCIe small form-factor IBM 6Gb SAS HBA is based on LSI's SAS2008 controller and can handle medium- to large-capacity server storage applications by connecting an 8-lane PCI-Express adapter with one external x4 SFF-8088 connector and four internal SATA connectors.

Features and functions:

- 6 Gbps per SAS port
- uEFI support
- PCI-e small form-factor design (MD-2)
- Four x1 internal SATA / one x4 external SFF-8088 connectors
- 8-lane Gen 2 PCI-Express
- Connection to both SAS and SATA HDDs, and SSDs
- Connection to internal and external tape drives
- Connection to external storage controllers
- Support for all major operating systems, including open-source drivers for Linux®
- Initiator Target Firmware (IT)
- Non-RAID

ServeRAID M5000 Series Battery Remote Mount Cable (68Y7396)

The ServeRAID M5000 Series Battery Remote Mount Cable offers a cost-effective, enterprise-grade remote battery mounting solution to an organization's storage infrastructure.

Features and functions:

- 24-inch cable length for flexible battery mounting
- Allows for ServeRAID M5000 Series SAS/SATA Controllers to be configured with a remote mounted battery

Warranty: One year parts only

Key prerequisites

The 6Gb adapters can be used on supported System x® servers with an available PCI Express® expansion slot.

Planned availability date

- May 31, 2010:
 - IBM 6Gb SAS HBA (46M0907)
 - IBM 6Gb SSD HBA (46M0983)
 - 2U Bracket for ServeRAID M1015 SAS Controller or 6Gb SSD HBA (46M0984)
 - 2U Bracket for IBM 6Gb SAS HBA (46M0985)
 - SAS 710MM Cable (69Y4439)
- June 21, 2010:
 - ServeRAID M5000 Series Battery Remote Mount Cable (68Y7396)

Description

Based on LSI's SAS2008 chip, the IBM 6Gb SAS HBA allows you to attach external storage enclosures and provide 3Gb or 6Gb tape storage connectivity for data-archiving applications to realize a higher level of performance. This controller is ideal for supporting server applications where high levels of sustained read and write operations are required.

Features:

- Investment protection
- Ease of use

Compatibility

- Support for popular network operating systems
- ServerProven® testing, which verifies servers, HDDs, tapes, and expansion units will function properly

Product number

Single Entity Offerings (SEOs)

Description	SEO number
IBM 6Gb SAS HBA	46M0907
ServerRAID M5000 Series Battery Remote Mount Cable	68Y7396

The following are newly announced features on the specified models of the IBM System x 4190, 4192, 4193, 4194, 4251, 4252, 7163, 7233, 7327, 7328, 7836, 7837, 7839, 7946, 7947, 7978, and 7979 machine types:

Description	MT	Model	Feature
2U Bracket for ServerRAID M1015 SAS/SATA Controller or 6Gb SSD HBA	7946	AC1 MC1	2145
IBM 6Gb SSD HBA	7233	AC1 AC2 MC1 MC2	3876
IBM 6Gb SSD HBA	7946	AC1 MC1	
IBM 6Gb SSD HBA	7947	AC1 MC1	
SAS 710MM Cable	7946	AC1 MC1	6433
	7947	AC1 MC1	

Business Partner information

If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld® ID and password are required (use IBM ID).

<https://www.ibm.com/partnerworld/mem/sla.jsp?num=110-013>

Publications

Publications are shipped with the announced product.

The IBM Systems Information Center provides you with a single information center where you can access product documentation for IBM systems hardware, operating systems, and server software. Through a consistent framework, you can efficiently find information and personalize your access. The IBM Systems Information Center is at

<http://publib14.boulder.ibm.com/infocenter/systems>

IBM Publications Center Portal

<http://www.ibm.com/shop/publications/order>

The Publications Center is a worldwide central repository for IBM product publications and marketing material with a catalog of 70,000 items. Extensive search facilities are provided, as well as payment options via credit card. A large number of publications are available online in various file formats, which can currently be downloaded free of charge.

Displayable softcopy publications

None

Source file publications

None

Services

Global Technology Services

IBM services include business consulting, outsourcing, hosting services, applications, and other technology management.

These services help you learn about, plan, install, manage, or optimize your IT infrastructure to be an On Demand Business. They can help you integrate your high-speed networks, storage systems, application servers, wireless protocols, and an array of platforms, middleware, and communications software for IBM and many non-IBM offerings. IBM is your one-stop shop for IT support needs.

For details on available services, contact your IBM representative or visit

<http://www.ibm.com/services/>

For details on available IBM Business Continuity and Recovery Services, contact your IBM representative or visit

<http://www.ibm.com/services/continuity>

For details on education offerings related to specific products, visit

<http://www.ibm.com/services/learning/index.html>

Select your country, and then select the product as the category.

System x and BladeCenter support services

Recommended core technical support

When you buy IBM System x technology, include the support services you need -- to help keep both your hardware and software working for you, day after day, at peak performance. It's your first step toward helping to protect your investment and sustain high levels of system availability. We offer service-level and response-time options to fit your business needs. And we'll help you get started with a core support package that includes:

- **Continuous system monitoring**

Electronic monitoring that helps speed up problem-solving with automated, early detection of potential problems and system errors.

- **Hardware maintenance**

World-class remote and on-site hardware problem determination and repair services.

- **Software technical support**

Access to help line calls for fast, accurate answers to your questions during installation and throughout ongoing operations.

For more information, visit

<http://www.ibm.com/servers/eserver/xseries/services.html>

Technical information

Specified operating environment

Physical specifications

IBM 6Gb SAS HBA (46M0907) and IBM 6Gb SSD HBA (46M0983)

- Approximate height: 69 mm (2.72 in)
- Approximate width: 168 mm (6.61 in)
- Approximate depth: 14 mm (0.55 in)
- Approximate weight: 95 g (0.21 lb)

Shipping dimensions

- Approximate height: 140 mm (5.51 in)
- Approximate width: 217 mm (8.54 in)
- Approximate depth: 48 mm (1.89 in)
- Approximate weight: 450 g (0.99 lb)

ServeRAID M5000 Series Battery Remote Mount Cable (68Y7396)

- Approximate height: 150 mm (5.91 in)
- Approximate width: 100 mm (3.94 in)
- Approximate depth: 20 mm (0.787 in)
- Approximate weight: 400 g (0.88 lb)

Shipping dimensions

- Approximate height: 160 mm (6.30 in)
- Approximate width: 120 mm (4.73 in)
- Approximate depth: 30 mm (1.18 in)
- Approximate weight: 420 g (0.926 lb)

Agency approvals

- EN55022
- EN55024
- EN60950 / CE
- EN 61000-3-2
- EN 61000-3-3
- IEC 950 CB Scheme
- FCC Part 15 Class A, and Class B
- UL 1950
- CSA C22.2 950-95
- VCCI
- NZ AS3548 / C-tick
- RRL for MIC (KCC)

- BSMI
- UL 94-/V

Standards

None

Operating environment

Temperature:

- 10 to 35 degrees C (50 to 95 degrees F) at 0 to 914 m (0 to 3,000 ft)
- 10 to 32 degrees C (50 to 90 degrees F) at 914 to 2133 m (3,000 to 7,000 ft)

Relative humidity: 20% to 80% (noncondensing)

Maximum altitude: 2,133 m (7,000 ft)

Hardware requirements

The HBA adapters must be installed in a selected System x server.

Software requirements

The IBM 6Gb HBAs support the following major operating systems:

- Microsoft® Windows® 2003
- Microsoft Windows 2008
- Red Hat Enterprise Linux 4
- Red Hat Enterprise Linux 5
- SUSE Linux Enterprise Server 10
- SUSE Linux Enterprise Server 11
- VMware 4.0 u1
- Solaris 10

Compatibility

For latest compatibility information, visit

<http://www.ibm.com/servers/eserver/serverproven/compat/us/>

Note: Some configurations may not be compatible.

Limitations

None

User group requirements

This announcement satisfies or partially satisfies the requirements from one or more of the worldwide user group communities. Groups include COMMON, COMMON Europe, Guide Share Europe (GSE), InterAction (Australia/New Zealand), Japan Guide Share (JGS), and SHARE Inc.

Planning information

Customer responsibilities

The IBM 6Gb HBA products are designated as customer setup. Customer installation instructions are shipped with each option part.

Cable orders

None

Installability

The IBM 6Gb SAS HBA and IBM 6Gb SSD HBA require about 20 minutes for installation.

Installation includes unpacking, setting up, and powering on.

Packaging

IBM 6Gb HBAs

Product	Package description	Boxes
IBM 6Gb SAS HBA IBM 6Gb SSD HBA	Option Unit Box	1
Contents:		
6Gb SAS adapter or 6Gb SSD adapter		
2U bracket		
Quick install guide		
CD with pub		
Important Notices Flyer		

The 6Gb HBA is shipped as a single package. Other items are in zipped bags. **Retail only.**

Packaging dimensions and weight

- Single box (HxDxW): 140 mm (5.51 in) x 48 mm (1.89 in) x 217 mm (8.54 in)
- Package weight: 450 g (0.99 lb)

Note: All measurements are approximate.

Supplies

For end users

IBM 6Gb Adapters can be purchased through dealers around the world.

The ServeRAID M5000 Series Battery Remote Mount Cable can be purchased through dealers around the world.

Security, auditability, and control

It is a customer's responsibility to ensure that the server is secure to prevent sensitive data from being removed.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communications facilities.

IBM Electronic Services

IBM has transformed its delivery of hardware and software support services to help you achieve higher system availability. Electronic Services is a Web-enabled solution that offers an exclusive, no-additional-charge enhancement to the service and support available for IBM servers. These services are designed to provide the opportunity for greater system availability with faster problem resolution and preemptive monitoring. Electronic Services comprises two separate, but

complementary, elements: Electronic Services news page and Electronic Services Agent.

The Electronic Services news page is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. The news page enables you to gain easier access to IBM resources for assistance in resolving technical problems.

The Electronic Service Agent™ is no-additional-charge software that resides on your server. It monitors events and transmits system inventory information to IBM on a periodic, client-defined timetable. The Electronic Service Agent automatically reports hardware problems to IBM. Early knowledge about potential problems enables IBM to deliver proactive service that may result in higher system availability and performance. In addition, information collected through the Service Agent is made available to IBM service support representatives when they help answer your questions or diagnose problems. Installation and use of IBM Electronic Service Agent for problem reporting enables IBM to provide better support and service for your IBM server.

To learn how Electronic Services can work for you, visit

<http://www.ibm.com/support/electronic>

Terms and conditions

Field installable feature

Yes

Warranty period

One year

IBM 6Gb HBA Adapters and ServeRAID M5000 Battery Mount Cable

- Warranty period¹: 1 year
- Service type (IOR/IOE/CCE/CCR): CRU
- Maintenance agreement: No
- Optional upgrade: No

These features assume the same warranty or maintenance terms as the machine in which they are installed for the remainder of the warranty or maintenance period for such machine or the original option warranty, whichever is greater.

¹ For information on the IBM Statement of Limited Warranty, visit

<http://www-947.ibm.com/systems/support/supportsite.wss/warrantyform?brandind=5000008>

Alternatively, this information is available through your IBM representative or reseller. Copies are available upon request.

With respect to on-site service, IBM sends a technician after attempting to diagnose and resolve the problem remotely.

Customer setup

Yes

Machine code

No license terms apply.

Pricing

For current prices, contact IBM at 888-Shop-IBM (746-7426) or visit

<http://www-03.ibm.com/systems/x/>

Description	Part number
IBM 6Gb SAS HBA	46M0907
ServerAID M5000 Series Battery Remote Mount Cable	68Y7396
Field install only	Plant install only
MES removal	Cables required
N	N

The following are newly announced features on the specified models of the IBM System x 7233 machine type:

Description	Model number	Feature number	Initial/MES/Both support
IBM 6Gb SAS HBA	AC1 AC2 MC1 MC2	3875	Initial Initial Initial Initial
IBM 6Gb SSD HBA	AC1 AC2 MC1 MC2	3876	Initial Initial Initial Initial

The following are newly announced features on the specified models of the IBM System x 7946 machine type:

Description	Model number	Feature number	Initial/MES/Both support
2U Bracket for ServerAID M1015 SAS/SATA Controller or 6Gb SSD HBA	AC1 MC1	2145	Initial Initial
IBM 6Gb SSD HBA	AC1 MC1	3876	Initial Initial
SAS 710MM cable	AC1 MC1	6433	Initial Initial

The following are newly announced features on the specified models of the IBM System x 7947 machine type:

Description	Model number	Feature number	Initial/MES/Both support
IBM 6Gb SSD HBA			

SAS 710MM Cable	AC1	3876	Initial
	MC1		Initial
	AC1	6433	Initial
	MC1		Initial

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