



ServeRAID-MR10i SAS/SATA Controller

IBM System x at-a-glance guide

The ServeRAID-MR10i SAS/SATA Controller is a low-cost PCI Express RAID controller for Internal System RAID 0, 1, 10, 5, 50, 6, and 60. This full-height, half-length adapter uses an LSI 1078 controller with an x8 PCI Express host interface and eight internal SAS/SATA II 3 Gb/s ports. MegaRAID Storage Manager (MSM), included with ServeRAID-MR10i, is a robust RAID management, configuration, and reporting application.

Figure 1 shows the ServeRAID-MR10i SAS/SATA Controller.



Figure 1. ServeRAID-MR10i SAS/SATA Controller

Did you know

This adapter is a mainstream RAID controller offering a wide range of RAID features and is suitable for most entry and midrange System x servers.

Part number information

Table 1. Ordering part numbers and feature codes

Description	Part number	Feature code				
ServeRAID MR10i SAS/SATA Controller	43W4296	3571				
ServeRAID-MR10i NiMH Battery	43W4299*	None				
ServeRAID-MR10i Li-Ion Battery	44E8826	5864				

* Withdrawn from marketing

Specifications

The ServeRAID-MR10i SAS/SATA Controller has the following specifications:

- Full-height (3U), half-length card
- Two internal x4 SFF-8087 connectors
- PCI Express x8 host interface
- SAS Controller: LSI 1078e
- 3 Gbps per port data transfer rate
- Supports SAS 3 Gbps and SATA 2
- 256 MB cache
- Optional battery backup; two options: NiMH (now withdrawn from marketing) or Li-Ion
- Maximum stripe size: 1024 KB
- RAID levels : RAID 0, 1, 5, 6, 10, 50, and 60

Note: Not all servers that support this controller also support the battery. See ServerProven for details.

Operating environment

The ServeRAID-MR10i SAS/SATA Controller is supported in the following environment:

- Temperature:
 - At 0 1000 m (0 3000 ft): 10 35° C (50 95° F)
 - At 1000 2100 m (3000 7000 ft): 10 32° C (50 90° F)
- Relative humidity: 20 80% (non-condensing)

Warranty

The ServeRAID-MR10i SAS/SATA Controller has a one-year limited warranty. When installed on a System x server, these cards assume your system's base warranty and any IBM ServicePac upgrade. Batteries are consumables and therefore are not covered under the warranty.

Supported servers

The ServeRAID-MR10i SAS/SATA Controller is supported on the IBM System x servers listed in Table 2.

Table 2. Supported System x servers

Adapter	Part number	x3100 M3	x3200 M2	x3200 M3	x3250 M2	x3250 M3	x3350	x3400	x3400 M2	x3400 M3	x3455	x3500	x3500 M2	x3500 M3
ServeRAID-MR10i Controller	43W4296	Ν	Y	Y	Y	Y‡	Y	Y	Y	Y	N	Y	Y	Y

[‡] The ServeRAID MR10i is only supported on models of the x3250 M2 with 2.5" drive bays. The MR10i is not supported on models with 3.5" drive bays.

Table 2 (continued). Supported System x servers

Adapter	Part number	x3550	x3550 M2	X3550 M3	x3620 M3	x3630 M3	x3650	X3650 T	x3650 M2	x3650 M3	x3655	x3690 X5	x3755	x3755 M3	x3850 M2	x3950 M2	x3850 X5
ServeRAID-MR10i Controller	43W4296	Y	Y	Y	Ν	Ν	Y	Ν	Y	Y	Ν	Ν	N	Ν	Ν	Ν	Ν

See the IBM ServerProven website for the latest information about the adapters supported by each System x server type: http://ibm.com/servers/eserver/serverproven/compat/us/

Related publications

For more information refer to the following documents:

- ServeRAID MR10i User's Guide http://www.ibm.com/support/docview.wss?uid=psg1MIGR-5074114
- ServeRAID software and drivers http://www.ibm.com/support/docview.wss?uid=psg1SERV-RAID
- IBM Announcement Letter
 US: http://ibm.com/common/ssi/cgi-bin/ssialias?infotype=dd&subtype=ca&&htmlfid=897/ENUS108-055
 EMEA: http://ibm.com/common/ssi/cgi-bin/ssialias?infotype=dd&subtype=ca&&htmlfid=877/ENUSZG08-0114

Notices

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service. IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing, IBM Corporation, North Castle Drive, Armonk, NY 10504-1785 U.S.A.

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you. This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you. Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products. This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurement may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs.

© Copyright International Business Machines Corporation 2010. All rights reserved.

Note to U.S. Government Users Restricted Rights -- Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

This document was created or updated on September 28, 2010.

Send us your comments in one of the following ways:

- Use the online Contact us review form found at: ibm.com/redbooks
- Send your comments in an e-mail to: redbook@us.ibm.com
- Mail your comments to: IBM Corporation, International Technical Support Organization Dept. HYTD Mail Station P099 2455 South Road Poughkeepsie, NY 12601-5400 U.S.A.

This document is available online at http://www.ibm.com/redbooks/abstracts/tips0735.html .

Trademarks

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both. These and other IBM trademarked terms are US registered or common law trademarks owned by IBM at the time this information was published. Such trademarks may also be registered or common law trademarks in other countries. A current list of IBM trademarks is available on the Web at http://www.ibm.com/legal/copytrade.shtml

The following terms are trademarks of the International Business Machines Corporation in the United States, other countries, or both:

IBM® Redpaper™ Redbooks (logo)® ServerProven® ServicePac® System x®

Other company, product, or service names may be trademarks or service marks of others.