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MegaRAID® SAS 9380-8e RAID Controller

Quick Installation Guide

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Revision History

Version and Date	Description of Changes
54984-00, Rev. B, April 2014	Updated board installation figure.
54984-00, Rev. A, January 2014	Initial release of the document.

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MegaRAID® SAS 9380-8e RAID Controller Quick Installation Guide

Thank you for purchasing the 12Gb/s LSI® MegaRAID® SAS 9380-8e RAID controller. Your MegaRAID controller provides reliability, high performance, and fault-tolerant drive subsystem management, and it offers an ideal RAID solution for the external storage of workgroup, departmental, and enterprise systems.

Before you install your RAID controller, take a few minutes to read this quick installation guide. This guide describes the MegaRAID SAS 9380-8e RAID controller and documents how to install your controller. In addition, this guide describes the LSICVM02 CacheVault® Kit (sold separately). The LSICVM02 kit contains a CacheVault Flash Module 04 (CVFM04), a CacheVault Power Module 02 (CVPM02), a clip, and a cable.

If you need more information about any topic covered in this guide or about the related products, refer to the following documentation on the *MegaRAID Universal Software Suite* CD:

- *12Gb/s MegaRAID SAS RAID Controllers User Guide*
- *LSICVM02 Kit Quick Installation Guide*
- *MegaRAID Advanced Software Options Hardware Key Quick Installation Guide*
- *MegaRAID SAS Device Driver Installation User Guide*
- *MegaRAID SAS Software User Guide*
- Software license agreement

Product Overview

The MegaRAID SAS 9380-8e RAID controller is a PCI-Express® (PCIe®) 3.0, low-profile controller with RAID control capability, based on the LSISAS3108 RAID On-a-Chip (ROC) device. The controller uses 1 GB of DDR3 1866-MHz memory. In addition, it controls eight external Serial Attached SCSI (SAS)/Serial Advanced Technology Attachment (SATA) ports through two SFF-8644 mini-SAS HD-4e external connectors.

This 12Gb/s MegaRAID SATA+SAS RAID controller is based on the LSI first-to-market SAS IC technology and proven MegaRAID technology. As a third-generation PCIe RAID controller, this controller addresses the growing demand for increased data throughput and scalability requirements across midrange and enterprise-class server platforms. This RAID controller provides these features:

- 12Gb/s SAS III performance
- 6Gb/s SATA III performance
- Eight-lane 8-GT/s PCIe host interface

SAS technology brings a wealth of options and flexibility with the use of SAS devices and SATA devices within the same storage infrastructure. However, SAS devices and SATA devices bring individual characteristics that make each one a more suitable choice depending on your storage needs. MegaRAID products give you the flexibility to combine these two similar technologies on the same controller, within the same enclosure, and in the same virtual drive.

NOTE This RAID controller supports SATA II and SATA III technologies.

For more information, including the technical specifications for your RAID controller, refer to the *12Gb/s MegaRAID SAS RAID Controllers User Guide* on the *MegaRAID Universal Software Suite* CD.

NOTE Record your RAID controller serial number in a safe location in case you need to contact LSI.

CacheVault Flash Module and CacheVault Power Module

The MegaRAID SAS 9380-8e RAID controller supports the CacheVault Module Kit LSICVM02, which includes a CVFM04 module, a CVPM02 module, a clip, and a cable. The CVFM04 module is an Open NAND Flash Interface (ONFI) flash module that provides cache offload capability to protect cached data in case of host power loss or server failure. The CVPM02 module is a super-capacitor pack that provides power for the backup of your data in case of host power loss or server failure.

You can install the CVFM04 module directly on the RAID connector, and then connect the CVFM04 module by cable to a remote CVPM02 module that is attached to a remote mount board.

For more information about the CVFM04 module and the CVPM02 module, refer to the *LSICVM02 Kit Quick Installation Guide* or the *Cache Backup Products for MegaRAID SAS+SATA RAID Controllers User Guide* on the *MegaRAID Universal Software Suite* CD.

Installing the MegaRAID SAS 9380-8e RAID Controller

CAUTION It is good practice to back up your data before adding hardware, such as a RAID controller, to your system.

1. **Unpack the RAID controller.**

   Unpack the RAID controller in a static-free environment. Remove it from the antistatic bag, and inspect it for damage. A low-profile bracket is included with the RAID controller. If the RAID controller appears to be damaged, or if the *MegaRAID Universal Software Suite* CD or the low-profile bracket is missing, contact LSI or your MegaRAID OEM support representative.

   The latest versions of the documentation, drivers, and firmware are available on the LSI website at http://www.lsi.com/support/Pages/download-search.aspx. See Technical Support for more information.

   The CD contains utility programs, device drivers for various operating systems, and related documentation.

2. **Prepare the host computer.**

   Turn off the host computer, and unplug the power cords from the rear of the power supply. Remove the cover from the host computer.

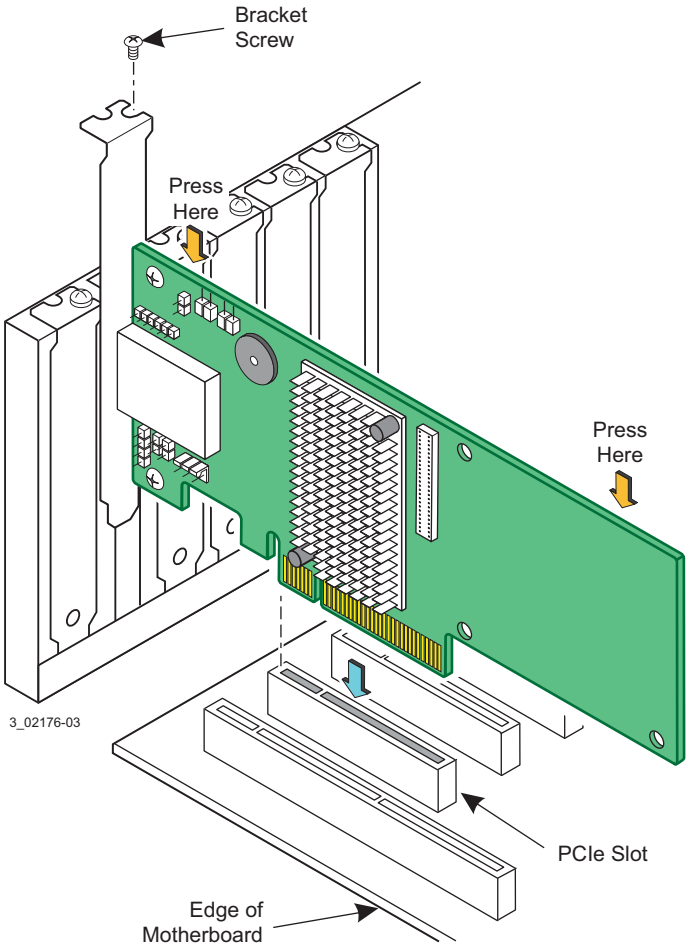
   CAUTION Before you install the RAID controller, make sure that the host computer is disconnected from the power and from any networks.

3. **Install the RAID controller.**

   Insert the RAID controller into a PCIe slot on the motherboard in the host computer, as shown in the following figure. Press down gently, but firmly, to seat the RAID controller correctly in the slot. Secure the RAID controller to the host computer chassis with the bracket screw.

   NOTE This RAID controller is a PCIe *x*8 card, and it can operate in *x*8 or *x*16 slots. Some PCIe slots, however, support only PCIe graphics cards; if a RAID controller is installed in one of these slots, the RAID controller will not function. Refer to the guide for your motherboard for information about the PCIe slot.

Figure 1 Installing the MegaRAID SAS 9380-8e RAID Controller



4. **Configure and install the SAS devices, SATA devices, or both in the host computer case.**

   Refer to the documentation for the devices for any preinstallation configuration requirements.

5. **Connect the RAID Controller to the SAS devices, SATA devices, or both in the host computer case.**

   Use SAS cables to connect the RAID controller to SAS devices, SATA devices, or both. Refer to the *12Gb/s MegaRAID SAS RAID Controllers User Guide* on the *MegaRAID Universal Software Suite* CD for information about the connector locations.

   NOTE Refer to the *12Gb/s MegaRAID SAS RAID Controllers User Guide* on the *MegaRAID Universal Software Suite* CD for detailed information about the SAS cables.

6. **Turn on the power to the host computer.**

   Reinstall the computer cover, and reconnect the power cords. Turn on the power to the host computer. Make sure that the power is turned on to the SAS devices and the SATA III devices before or at the same time that the power to the host computer is turned on. If the power is turned on to the host computer before it is turned on to the devices, the host computer might not recognize the devices.

   The firmware takes several seconds to initialize. During this time, the RAID controller scans the ports.

7. **Run the MegaRAID BIOS Configuration Utility.**

   Run the MegaRAID BIOS Configuration Utility to configure the groups and the virtual drives. When the message about the configuration utility appears on the screen, immediately press Ctrl+R to run the utility.

   NOTE Refer to the *MegaRAID SAS Software User Guide* on the *MegaRAID Universal Software Suite* CD for detailed steps on configuring drive groups and virtual drives.

8. **Install the operating system driver.**

   The RAID controller can operate under various operating systems, but you must install the software drivers first.

   The *MegaRAID Universal Software Suite* CD includes the software drivers for the supported operating systems, along with documentation. You can view the supported operating systems and download the latest drivers for RAID controllers from the LSI website at: http://www.lsi.com/cm/DownloadSearch.do. Access the download center, and follow the steps to download the driver.

   Refer to the *MegaRAID SAS Device Driver Installation User Guide* on the *MegaRAID Universal Software Suite* CD for more information about installing the driver. Be sure to use the latest service packs that are provided by the operating system manufacturer and to review the `readme` file that accompanies the appropriate driver.

Technical Support

For assistance in installing, configuring, or running your MegaRAID SAS 9380-8e RAID controller, contact an LSI Technical Support representative.

Click the following link to access the LSI Technical Support page for storage and controller support:

http://www.lsi.com/about/contact/pages/support.aspx

This page contains links to the following URLs for support by email, support request, or phone. In addition, you can hover over the *Support* heading on the Technical Support page, and click the support option you want.

Email Requests:

http://www.lsi.com/support/email/Pages/megaraid.aspx

Support Requests:

http://www.lsi.com/support/Pages/submitsupportrequest.aspx

Phone Support:

http://www.lsi.com/support/Pages/call-us.aspx

You can download the latest documentation, management applications, and drivers for these controllers at http://www.lsi.com/support/Pages/download-search.aspx. You can hover over the *Support* heading on the Technical Support page, and then click *Find Support Documents & Downloads by Product* to access this page.

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