



MegaRAID® SAS 9361-4i and SAS 9361-8i RAID Controllers

Quick Installation Guide

Rev. E

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For a comprehensive list of changes to this document, see the [Revision History](#).

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MegaRAID® SAS 9361-4i and SAS 9361-8i RAID Controllers Quick Installation Guide

Thank you for purchasing the 12Gb/s MegaRAID® SAS 9361-4i RAID controller or the MegaRAID SAS 9361-8i RAID controller. Your MegaRAID controller provides reliability, high performance, and fault-tolerant drive subsystem management, and it offers an ideal RAID solution for the internal 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 9361-4i RAID controller and the MegaRAID SAS 9361-8i RAID controller, and it documents how to install your controller. In addition, this guide describes the CVM02 CacheVault® Kit (sold separately). The CVM02 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:

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

1 Product Overview

The MegaRAID SAS 9361-4i RAID controller and the MegaRAID SAS 9361-8i RAID controller are PCI Express (PCIe) 3.0, low-profile controllers with RAID control capability, based on the SAS3108 RAID On-a-Chip (RoC) device.

The MegaRAID SAS 9361-4i RAID controller uses 1 GB of DDR3 1866-MHz memory and controls four internal Serial Attached SCSI (SAS)/Serial Advanced Technology Attachment (SATA) ports through one SFF-8643 mini-SAS HD-4i internal connector.

The MegaRAID SAS 9361-8i RAID controller uses 1 GB or 2 GB of DDR3 1866-MHz memory and controls eight internal SAS/SATA ports through two SFF-8643 mini-SAS HD-4i internal connectors. This capability lets you use a system that supports both enterprise-class SAS drives and desktop-class SATA III drives.

These 12Gb/s MegaRAID SATA+SAS RAID controllers are based on the proven Broadcom® MegaRAID technology. As third-generation PCIe RAID controllers, these controllers address the growing demand for increased data throughput and scalability requirements across midrange and enterprise-class server platforms. These RAID controllers provide 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 These RAID controllers support SATA II and SATA III technologies.

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

2 CacheVault Flash Module and CacheVault Power Module

The MegaRAID SAS 9361 RAID controllers support the CacheVault Module Kit CVM02, 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 supercapacitor 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*.

3 Installing the MegaRAID SAS 9361 RAID Controller

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

This section shows the installation of the MegaRAID SAS 9361-8i RAID controller as an example. You can install the MegaRAID SAS 9361-4i RAID controller in the same way.

1. **Unpack the RAID controller.** Unpack and remove the RAID controller. If the RAID controller appears to be damaged, contact Broadcom or your sales representative.
The latest versions of the documentation, drivers, and firmware are available at <https://www.broadcom.com/support/download-search>. See [Section 4, Technical Support](#), for more information.
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. **Check the mounting bracket on the RAID controller.**

If required for your system, replace the full-profile mounting bracket that ships on the RAID controller with the low-profile bracket supplied. Complete the following steps to attach the low-profile bracket.

- a. Using a No. 1 Phillips screwdriver that is ESD safe, remove the two Phillips screws that connect the full-profile bracket to the RAID controller. Unscrew the two screws located at the top and bottom edges of the RAID controller. Avoid touching any RAID controller components with the screwdriver or the bracket.
- b. Remove the full-profile bracket. Do not damage the RAID controller.
- c. Place the RAID controller on top of the low-profile bracket. Position the bracket so that the screw holes in the tabs align with the openings in the board.
- d. Using a No. 1 Phillips torque screwdriver that is ESD safe, set to a maximum torque of 4.8 ± 0.5 inch-pounds. Replace the two Phillips screws removed in step a.

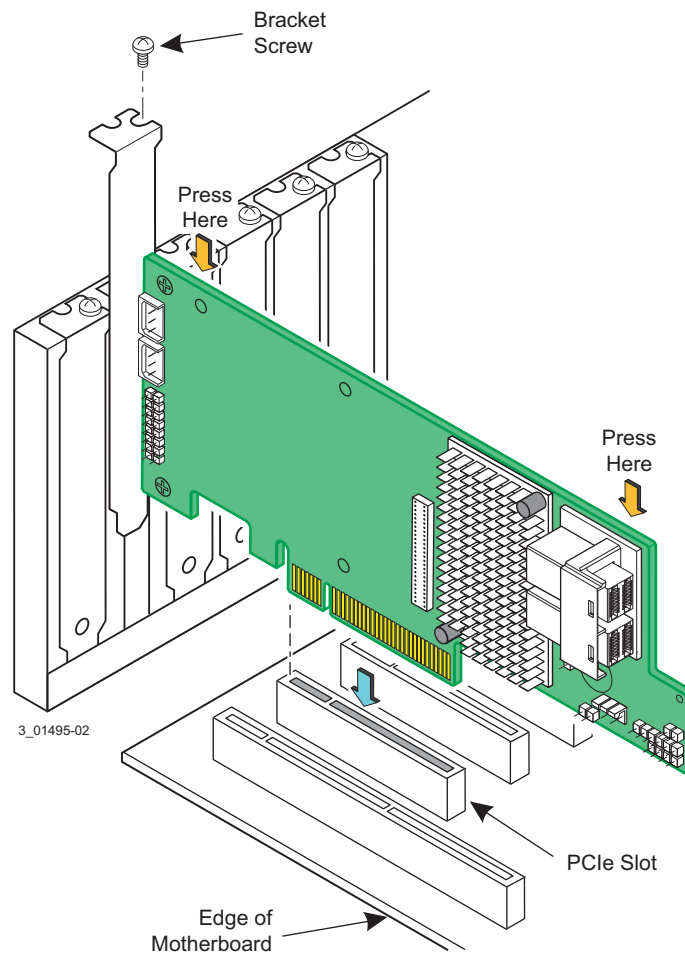
ATTENTION Exceeding this torque specification can damage the RAID controller, connectors, or screws, and can void the warranty on the RAID controller.

ATTENTION Damage caused to the RAID controller as a result of changing the bracket can void the warranty on the RAID controller. RAID controllers returned without a bracket mounted on the board will be returned without return merchandise authorization (RMA) processing.

4. **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 x8 card, and it can operate in x8 or x16 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 9361-8i RAID Controller



5. **Configure and install the SAS devices, SATA devices, or both in the host computer case.** Refer to the device documentation for any preinstallation configuration requirements.
6. **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 *12Gb/s MegaRAID SAS RAID Controllers User Guide* for information about the connector locations.
7. **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.

8. **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.

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

9. **Install the operating system driver.** The RAID controller can operate under various operating systems, but you must install the software drivers first.

You can view the supported operating systems and download the latest drivers for RAID controllers at <https://www.broadcom.com/support/download-search>.

Refer to the *MegaRAID SAS Device Driver Installation User Guide* for more information about installing the driver. Use the latest service packs provided by the operating system manufacturer and review the `readme` file that accompanies the appropriate driver.

4 Technical Support

For assistance in installing, configuring, or running your MegaRAID SAS 9361 RAID controller, contact a Broadcom Technical Support representative.

Website: <http://www.broadcom.com/support/>

Phone Support: <http://www.broadcom.com/support/call-us>

- 1-800-633-4545 (North America)
- 00-800-5745-6442 (International)
- 49 (0) 8941 352 0123 (Germany)

NOTE The international toll-free number does not require country-specific access codes.

Documents and Downloads: <http://www.broadcom.com/support/download-search>

5 Revision History

5.1 Revision E, March 9, 2018

The following document changes were made.

- Revised support information.
- Updated the template and branding to Broadcom.

5.2 53774-00, Rev. D, May 2014

Revised controller installation figure.

5.3 53774-00, Rev. C, August 2013

Added CacheVault support.

5.4 53774-00, Rev. B, June 2013

Revised support information.

5.5 53774-00, Rev. A, April 2013

Initial document release.

