MegaRAID® CacheVault™ Flash Module 02

Quick Installation Guide

March 2012

53378-00, Rev. B

Revision History

Version and Date	Description of Changes
53378-00, Rev. B, March 2012	Updated trademark information and Figure 4.
53378-00, Rev. A, October 2011	Initial release of document.

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MegaRAID CacheVault Flash Module 02 Quick Installation Guide

Before you install the MegaRAID® CacheVault™ Flash Module 02 (CVFM02) module, please take a few minutes to read this guide. This guide describes the CVFM02 module and explains how to attach the module directly to the MegaRAID SAS 9266-4i RAID controller and the MegaRAID SAS 9266-8i RAID controller. In addition, this guide documents how to connect the CVFM02 module by cable to a CacheVault Power Module 02 (CVPM02) module that is mounted on a remote mount board.

The CVFM02 module is a USB flash module that provides cache offload capability to protect cached data in case of host power loss or server failure. The CVFM02 module is part of the CacheVault Module Kit LSICVM01, which also includes a CVPM02 module, a clip, and a cable. The CVFM02 module attaches directly to the RAID controller, and then it connects by cable to a remotely located CVPM02 module. The CVPM02 module is a super-capacitor pack that provides power for the backup of your data.

For more information about the CVFM02 module, refer to the *Cache Backup Products for MegaRAID SAS+SATA RAID Controllers User Guide* and the *MegaRAID SAS 9266-4i and SAS 9266-8i RAID Controllers Quick Installation Guide* on your *MegaRAID Universal Software Suite* CD.

For more information about the CVPM02 module, refer to the *MegaRAID CacheVault Power Module 02 Quick Installation Guide*. For more information about other topics covered in this guide, refer to the other documents on the CD.

Top View and Bottom View of the CVFM02 Module

The following figure shows the top view and the bottom view of the CVFM02 module. The top view is the side that you can see when the unit is installed on a RAID controller.

Figure 1 Top View and Bottom View of the CVFM02 Module
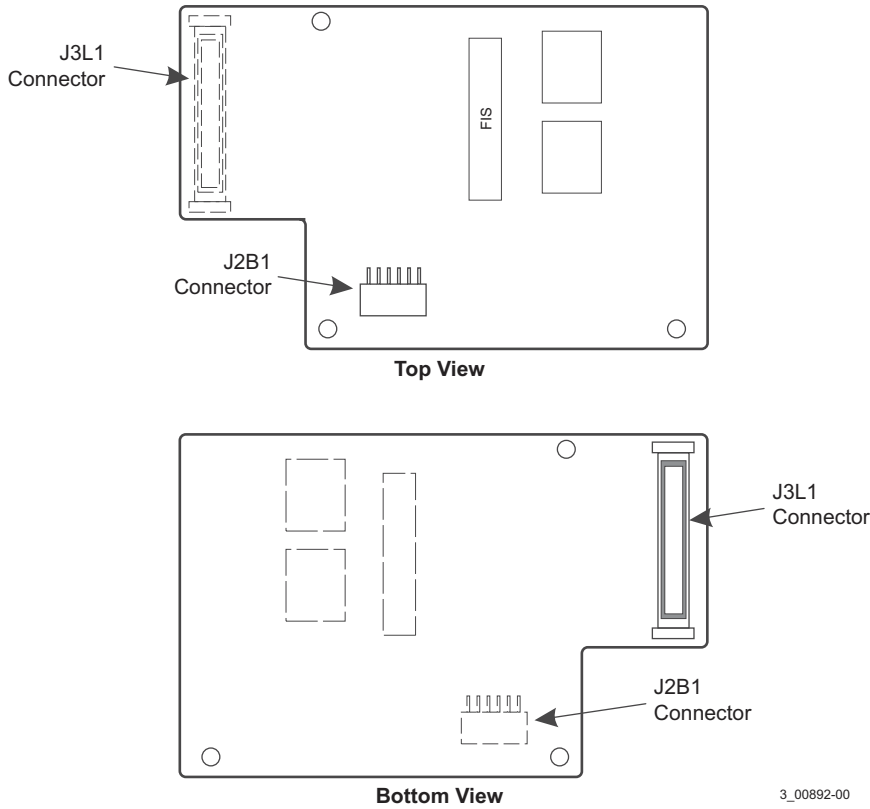
Attaching the CVFM02 Module to a RAID Controller and Connecting It to a CVPM02 Module on a Remote Mount Board

This section describes how to attach the CVFM02 module directly to a MegaRAID SAS 9266 RAID controller, and then connect it to a CVPM02 module on a remote mount board. The CVPM02 module fits on a clip that directly attaches to the BBU-BRACKET-05 remote mount board (sold separately). The RAID controller and the remote mount board are then installed in PCI Express slots on the motherboard.

MegaRAID CacheVault Flash Module 02 Quick Installation Guide
March 2012

MegaRAID CacheVault Flash Module 02 Quick Installation Guide
Attaching the CVFM02 Module to a RAID Controller and Connecting It to a CVPM02 Module
on a Remote Mount Board

Installing the CVFM02 Module Directly on the MegaRAID SAS 9266-8i RAID Controller

Perform the following tasks to install the CVFM02 module directly on the MegaRAID SAS 9266-8i RAID controller.

NOTE You can install the CVFM02 module to the MegaRAID SAS 9266-8i RAID controller using these same procedures.

CAUTION Electrostatic discharge (ESD) can damage the CVFM02 module and the MegaRAID SAS RAID controller. Make sure that you install the CVFM02 module at an ESD-safe workstation that meets the requirements of EIA-625 – "Requirements For Handling Electrostatic Discharge Sensitive Devices." When you install the CVFM02 module, follow the ESD-recommended practices in the latest revision of IPC-A-610.

1. Remove the RAID controller from the computer.
   a. Turn off the power, and unplug the power cords.
   b. Ground yourself, and make sure that the system is grounded.
   c. Remove the cover from the computer, using the instructions in the system user's manual, to allow access to the controller.
   d. Unplug all cables from the controller, remove the screw that attaches the bracket to the computer chassis, and carefully remove the controller from the slot.
   e. Place the controller on a flat, clean, static-free surface, and continue with the next procedure.
2. Attach the CVFM02 module directly to the RAID controller.
   a. Ground yourself, and make sure that the system is grounded.
   b. Remove the CVFM02 module from the package.
   c. Place the CVFM02 module front-side-up on a flat, clean, static-free surface.
   d. With the front side up, place the RAID controller on a flat, clean, static-free surface.
   e. Hold the CVFM02 module so that the top side is facing up, and the J3L1 connector on the CVFM02 module lines up with the J4B1 connector on the RAID controller, as shown in the following figure.

Figure 2 Installing the CVFM02 Module on the SAS 9266-8i RAID Controller
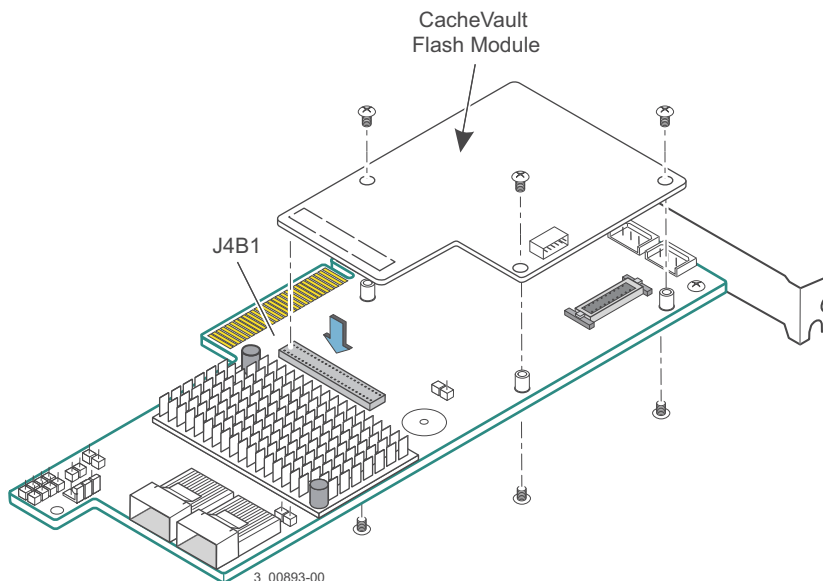
   f. Carefully press the CVFM02 module onto the RAID controller so that the two connectors are firmly joined.

MegaRAID CacheVault Flash Module 02 Quick Installation Guide
March 2012

MegaRAID CacheVault Flash Module 02 Quick Installation Guide
Attaching the CVFM02 Module to a RAID Controller and Connecting It to a CVPM02 Module
on a Remote Mount Board

g. Secure the CVFM02 module to the RAID controller with the screws and the standoffs in the three screw holes.

The standoffs are threaded at both ends, and a screw goes into each end. The screw threads from the rear of the controller board into the board-to-board standoffs on the bottom of the CVFM02 module.
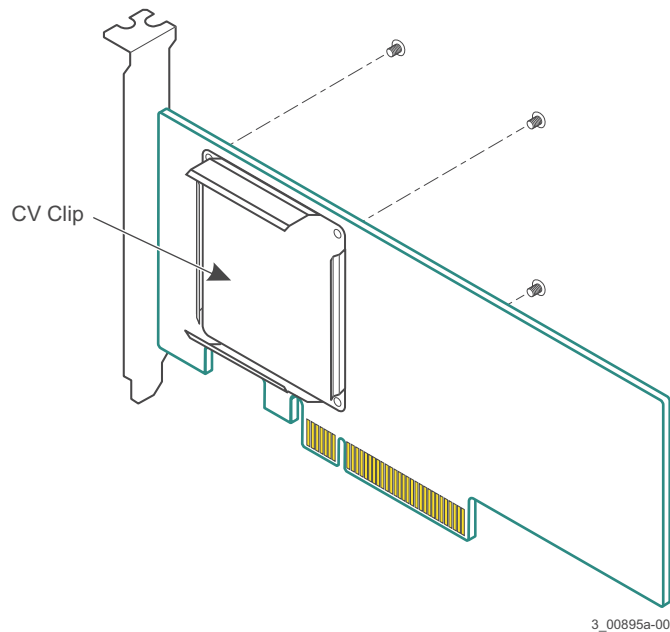
NOTE Center the screwdriver carefully to avoid stripping the screw heads. Do not over-tighten the screws.

Installing the Clip on the Remote Mount Board

Follow these steps to install the clip directly on the BBU-BRACKET-05 remote mount board.

1. Make sure the remote mount board is on a flat, clean, static-free surface. Ground yourself, and make sure that the system is grounded.
2. Remove the clip and the remote mount board module from the package.
3. Place the clip and the remote mount board module front-side-up on a flat, clean, static-free surface.
4. Hold the clip so that the screw holes on the clip line up with the screw holes on the remote mount board, as shown in the following figure.

Figure 3 Installing the Clip on the Remote Mount Board

CV Clip

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5. Secure the clip to the remote mount board in three screw holes with the screws and the nuts.

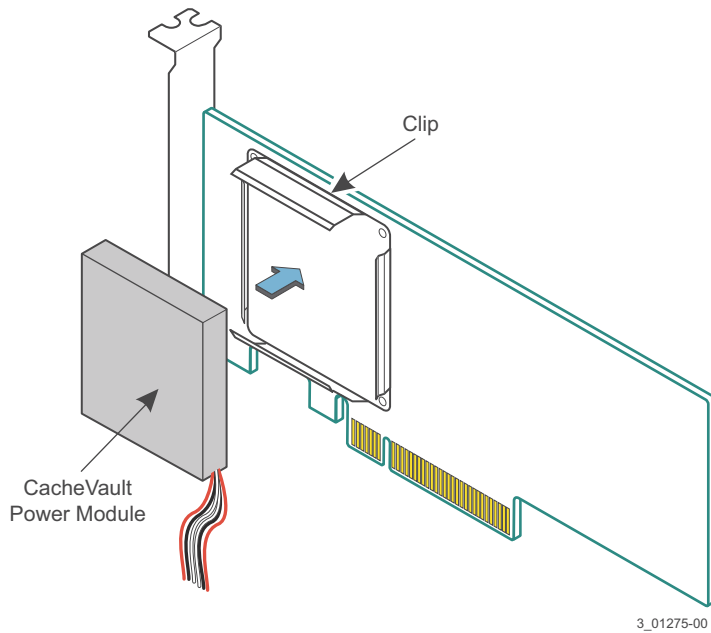The screws thread through the front of the clip and the remote mount board.

NOTE Center the screwdriver carefully to avoid stripping the screw heads. Do not over-tighten the screws.

MegaRAID CacheVault Flash Module 02 Quick Installation Guide
March 2012

MegaRAID CacheVault Flash Module 02 Quick Installation Guide
Attaching the CVFM02 Module to a RAID Controller and Connecting It to a CVPM02 Module
on a Remote Mount Board

Attaching the CVPM02 Module to the Clip on the Remote Mount Board

Follow these steps to attach the CVPM02 module to the clip on the remote mount board.

1. Make sure the remote mount board is on a flat, clean, static-free surface. Ground yourself, and make sure that the system is grounded.
2. Remove the CVPM02 module from the package.
3. Press the CVPM02 module into the clip on the remote mount board until the module clicks firmly into place, as shown in the following figure.

Figure 4 Connecting the CVPM02 Module to the Clip on the Remote Mount Board

MegaRAID CacheVault Flash Module 02 Quick Installation Guide
March 2012

MegaRAID CacheVault Flash Module 02 Quick Installation Guide
Attaching the CVFM02 Module to a RAID Controller and Connecting It to a CVPM02 Module
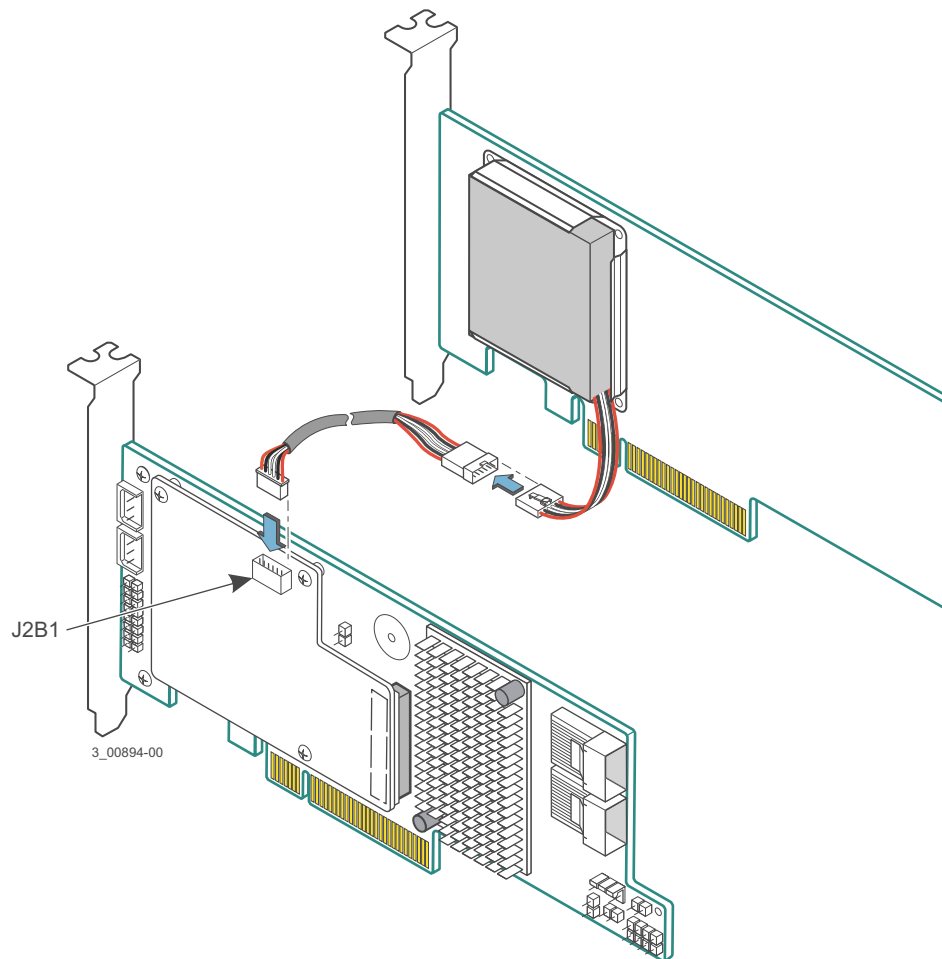on a Remote Mount Board

Connecting the CVFM02 Module to the Remote CVPM02 Module

Follow these steps to connect the CVFM02 module on the MegaRAID SAS 9266-8i RAID controller by cable to the remote CVPM02 module.

1. Make sure the remote mount board is on a flat, clean, static-free surface. Ground yourself, and make sure that the system is grounded.

2. Remove the cable that is included in the RAID controller box.

3. Insert the smaller of the two 6-pin cable connectors on the cable into the 6-pin J2B1 cable connector on the CVFM02 module, as shown in the following figure.

4. Insert the larger of the two 6-pin cable connectors on the other end of the cable into the 6-pin cable connector on the remote CVPM02 module.

5. Align the cable connectors to make sure that they are connected correctly.

Figure 5 Connecting the CVFM02 Module on the RAID Controller to the Remote CVPM02 Module

MegaRAID CacheVault Flash Module 02 Quick Installation Guide
March 2012

MegaRAID CacheVault Flash Module 02 Quick Installation Guide
Attaching the CVFM02 Module to a RAID Controller and Connecting It to a CVPM02 Module
on a Remote Mount Board

Reinstalling the MegaRAID SAS 9266-8i RAID Controller on the Motherboard

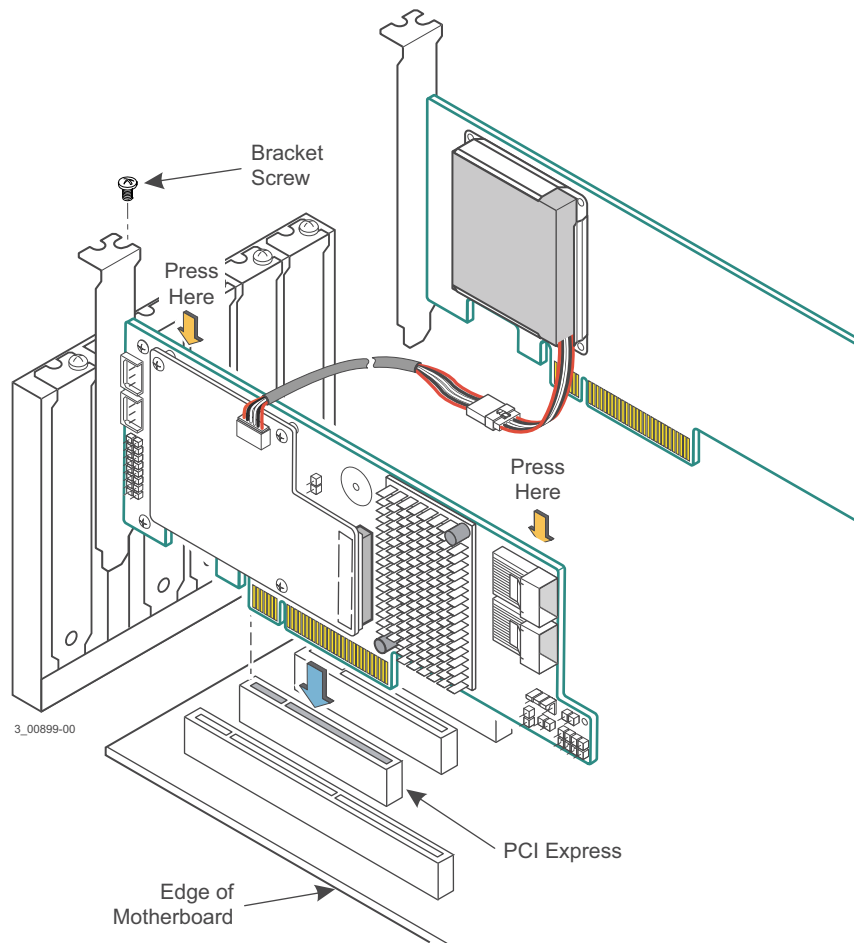Follow these steps to reinstall the CVFM02 module on a motherboard.

1. With the power to the chassis still turned off and the power cords unplugged, make sure that the chassis is grounded and has no AC power.

2. Install the RAID controller in a PCI Express slot on the motherboard, as shown in the following figure.

> **NOTE** Some PCI Express slots support only PCI Express graphics cards; if a RAID controller is installed in one of these slots, the controller will not function. Refer to your computer documentation for information about the PCI Express slot.

3. Press down gently, but firmly, to seat the card correctly in the slot.

4. Secure the controller to the computer chassis with the bracket screw.

Figure 6 Reinstalling the MegaRAID SAS 9266-8i RAID Controller

MegaRAID CacheVault Flash Module 02 Quick Installation Guide
March 2012

MegaRAID CacheVault Flash Module 02 Quick Installation Guide
Attaching the CVFM02 Module to a RAID Controller and Connecting It to a CVPM02 Module
on a Remote Mount Board

Installing the Remote Mount Board in the System

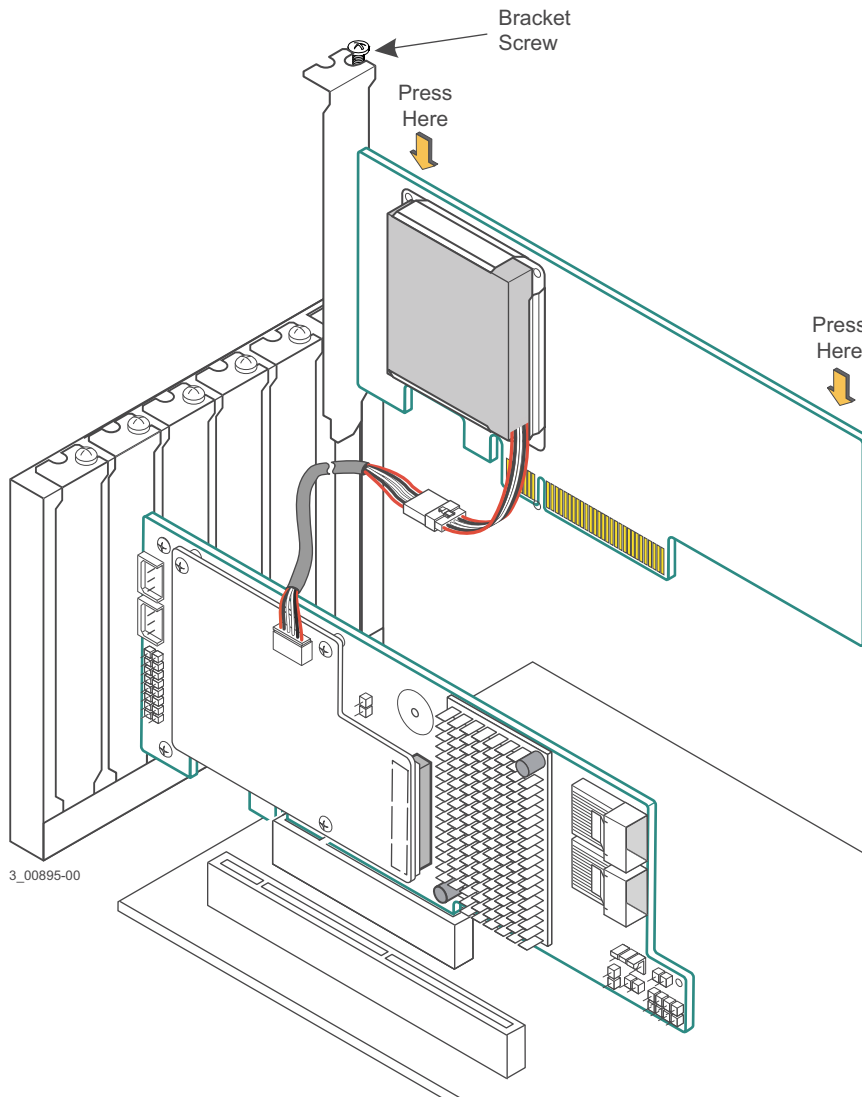Follow these steps to install the remote mount board in the computer.

1. With the power to the chassis still turned off and the power cords unplugged, make sure that the chassis is grounded and has no AC power.

2. Insert the remote mount board in a PCI Express slot on the motherboard, as shown in the following figure.

> **NOTE** Some PCI Express slots support only PCI Express graphics cards; if a RAID controller is installed in one of these slots, the controller will not function. Refer to your computer documentation for information about the PCI Express slot.

3. Press down gently, but firmly, to seat the board correctly in the slot.

4. Secure the remote mount board to the computer chassis with the bracket screw.

Figure 7 Installing the Remote Mount Board

5. Reinstall the computer cover, and reattach the power cords.

MegaRAID CacheVault Flash Module 02 Quick Installation Guide
March 2012

MegaRAID CacheVault Flash Module 02 Quick Installation Guide
Attaching the CVFM02 Module to a RAID Controller and Connecting It to a CVPM02 Module
on a Remote Mount Board

6. Turn on the power to the computer.

Refer to the *MegaRAID SAS Software User Guide* for information about running the RAID configuration utility and installing the software drivers.