

Quick Installation Guide

HBA 9400-16e and HBA 9400-8e Storage Adapters



Thank you for purchasing the Host Bus Adapter (HBA). Please take a few minutes to read this quick installation guide before you install the HBA.

ATTENTION: Perform all installation work at an electrostatic discharge (ESD)-safe workstation that meets the requirements of EIA-625, *Requirements for Handling Electrostatic-Discharge-Sensitive Devices*. You must perform all actions in accordance to the latest revision of the IPC-A-610 ESD-recommended practices.

Hardware Installation Instructions

To install the 12Gb/s Serial Attached SCSI (SAS) HBA, follow these steps:

1. Unpack the HBA, and inspect it for damage. Unpack the HBA in a static-free environment. Remove the HBA from the anti-static bag, and carefully inspect the device for damage. If you notice any damage, contact Avago or your reseller support representative.

ATTENTION: To avoid the risk of data loss, back up your data before you change your system configuration.

2. Prepare the computer. Turn off the computer, and disconnect the power supply.

CAUTION: Disconnect the computer from the power supply and from any networks to which you will install the HBA, or you risk damaging the system or experiencing electrical shock.

3. Remove the cover from the chassis.

4. Check the mounting bracket on the HBA (system- dependent) If required for your system, replace the full-height mounting bracket that ships on the HBA with the low-profile bracket supplied. Complete the following steps to attach the short bracket.

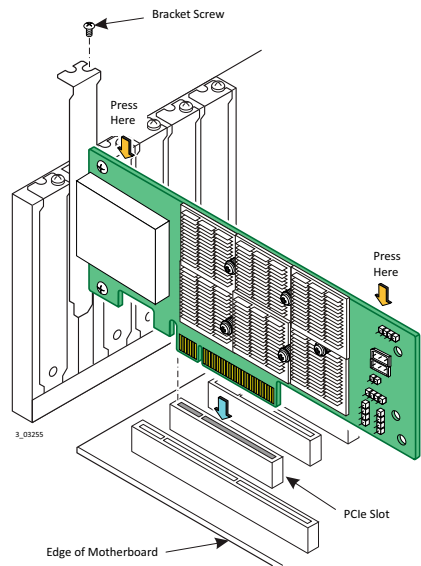
- a. Using a #1 Phillips screwdriver that is ESD safe, remove the two Phillips screws that connect the full-profile bracket to the board. Unscrew the two screws located at the top and bottom edges of the board. Avoid touching any board components with the screwdriver or bracket.
- b. Remove the full-profile bracket. Do not damage the HBA.
- c. Place the HBA 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 #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 board, connectors, or screws, and can void the warranty on the board.

5. Insert the HBA into an available PCIe slot. Locate an empty x8 PCIe slot adequate for your board. Remove the blank bracket panel on the rear of the computer that aligns with the empty PCIe slot. Save this bracket screw, if applicable. Align the HBA to a PCIe slot. Press down gently, but firmly, to seat the HBA correctly in the slot. The following figure shows how to insert the HBA into a PCIe slot.

NOTE: The shape, size, and locations of the components on your HBA and its bracket might vary from this illustration. The HBA requires an x8 PCIe slot.

Figure 1. Installing the 9400-16e HBA in a PCIe Slot



NOTE: This example shows the 9400-16e HBA being installed. The 9400-8e HBA is connected in the same way. The difference between the two adapters is that the 9400-16e HBA supports 16 ports, and the 9400-8e HBA supports eight ports.

6. Connect the cables between the adapter and the enclosure or the storage devices. The 9400-16e HBA has four SFF-8644 external x4 Mini SAS HD connectors and the 9400-8e HBA has two SFF-8644 external x4 Mini SAS HD connectors. Use cables with an external Mini SAS HD connector on one end (to connect to the HBA) and the appropriate connector on the other end to attach to the enclosure or the storage devices.

7. Make sure the system provides the required airflow for the controller. The following table shows the required airflow and the inlet temperature for the 9400-16e HBA and the 9400-8e HBA. The adapter requires appropriate airflow and inlet temperature to avoid operating the SAS3416 I/O controller or the SAS3408 I/O controller above the maximum junction temperature.

PCIe Adapter	Airflow	Inlet Temperature
9400-16e	200 LFM	55 °C
9400-8e	200 LFM	55 °C

8. Replace the cover and reconnect any cords and cables, and power up the system. Replace the chassis cover, reconnect any power cords, and reconnect any network cables. Turn on the power.

The hardware installation of your 12Gb/s SAS HBA is complete.

Driver Installation

The firmware and drivers are routinely updated and made available on the Support and Download center. Please visit <http://www.avagotech.com/support/download-search> and download the latest firmware and driver for the controller.

TECHNICAL SUPPORT

For assistance installing, configuring, or running the HBA, contact Avago Technical Support:

Web Site: www.avagotech.com

WARRANTY NOTICE

- 1. The warranty does not cover the return of parts damaged by changing the bracket.
- 2. The warranty does not cover ESD damage to the HBA. HBAs returned without a bracket mounted on the board will be returned without return merchandise authorization (RMA) processing.

