Quick Installation Guide

LSI® SAS 9300-4i4e PCI Express® to 12Gb/s SAS Host Bus Adapter

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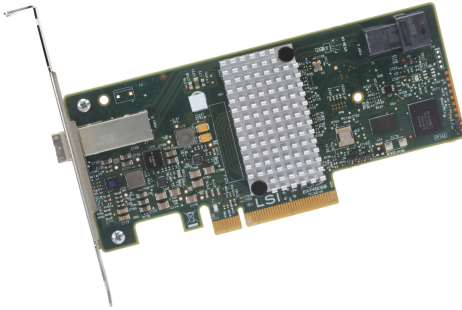
Thank you for purchasing the LSI SAS 9300-4i4e Host Bus Adapter (HBA). Please take a few minutes to read this quick installation guide before you install the HBA.

For more information about any topic covered in this guide, refer to the documents on the accompanying *LSI 12Gb/s SAS+SATA Drivers and Documentation* CD.

The *LSI 12Gb/s SAS+SATA Drivers and Documentation* CD contains device drivers for the Windows® operating system and the Linux® operating system. The CD also contains the following LSI documentation:

- "LSI SAS 9300-4i4e PCI Express to 12Gb/s Serial Attached SCSI (SAS) Host Bus Adapter User Guide"
- LSI HBA technical product briefs

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.

To install the LSI® 12Gb/s 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 antistatic bag, and carefully inspect the device for damage. If you notice any damage, contact LSI or your reseller support representative.

ATTENTION: To avoid the risk of data loss, make a backup of your data before changing your system configuration.

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2. **Prepare the computer.** Turn off the computer, and disconnect the power cord from the rear of 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.**

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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 step a through step d to attach the short bracket.

    a. Use a #1 Phillips® screwdriver that is ESD safe to 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 other board components with the screwdriver or the bracket.

CAUTION: **Damaging the screw can void the warranty. To prevent damage to the screw, center the screwdriver in the top of the screw.**

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    b. Remove the full-profile bracket from the HBA. Do not damage the board.

    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. Use 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 head screws removed in step a.

CAUTION: **Exceeding these torque specifications can damage the board, connectors, or screws, and can void the warranty on the HBA.**
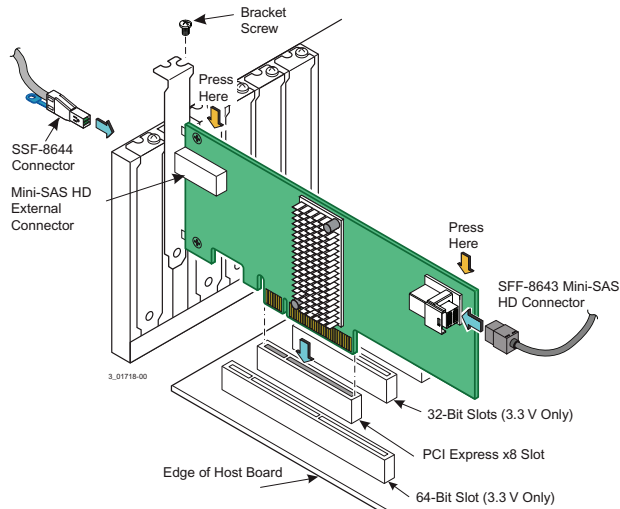
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5. **Insert the HBA into an available PCIe® slot.** Locate an empty x8 PCIe slot. Remove the blank bracket panel on the rear of the computer that aligns with the empty PCIe slot. Save this bracket screw, if applicable. Align the HBA to a PCIe slot. 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 a x8 PCIe slot.

53859-01A

Install an LSI 12Gb/s x8 HBA in a PCIe Slot

Bracket Screw

Press Here

SSF-8644 Connector

Mini-SAS HD External Connector

Press Here

SFF-8643 Mini-SAS HD Connector

3_01718-00

32-Bit Slots (3.3 V Only)

PCI Express x8 Slot

Edge of Host Board

64-Bit Slot (3.3 V Only)

6. **Secure the HBA bracket to the system's chassis.** Install the bracket screw, if applicable, or engage the system retention mechanism to secure the HBA to the system's chassis.

7. **Connect internal SAS cables between the HBA and the SAS backplane, any other SATA or SAS devices in the system chassis, or both.** The LSI 12Gb/s SAS HBA has one SFF-8643, internal x4, mini-SAS HD connector. Use a cable with an internal mini-SAS HD connector on one end (to connect to the HBA) and the appropriate connector to attach to the SAS or SATA devices or backplane on the other end.

8. **Replace the cover of the chassis.**

9. **Connect SAS cables between the HBA and the SAS enclosure that contains SATA or SAS devices.** The LSI 12Gb/s SAS HBA has one, SFF-8644, external x4 mini-SAS HD connector. Use a cable with an external mini-SAS HD connector (SFF-8644) on one end (to connect to the HBA) and the appropriate connector to attach to the enclosure that contains SAS or SATA devices on the other end.

10. **Reconnect any power cords and power up the system.** Reconnect any power cords and reconnect any network cables. Turn on the power.

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

WINDOWS DRIVER INSTALLATION

Use the LSI_SAS3.SYS driver for the Windows XP x64, Windows Server® 2003 (x86, x64, or A64),

Windows Server 2008 (x86, x64, or IA64), Windows Server 2012, Windows Vista® (x86 or x64), Windows 7, or Windows Server 2008 R2 operating systems (OSs). LSI does not support the Windows XP x86 server.

Refer to the Windows `ReadMe.txt` file on the *LSI 12Gb/s SAS+SATA Drivers and Documentation* CD for driver installation directions for your particular OS version.

LINUX DRIVER INSTALLATION

Refer to the Linux `ReadMe.txt` file on the *LSI 12Gb/s SAS+SATA Drivers and Documentation* CD. LSI provides open source drivers that you can implement in the following ways:

- Adding precompiled binaries to an existing installation using driver update disks or RPM software packages for selected distributions.
- Adding or updating the Fusion-MPT™ source in the Linux kernel for any distribution.

Corporate Headquarters
San Jose, CA
800-372-2447

Email
globalsupport@lsi.com

Website
www.lsi.com

Document Number: 53859-01A
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TECHNICAL SUPPORT

For assistance installing, configuring, or running the LSI SAS 9300-4i4e HBA, contact LSI Technical Support:

E-mail:	support@lsi.com
Phone:	1-800-633-4545 (North America)
	00-800-5745-6442 (International)
Web Site:	http://www.lsi.com/channel/ products/storagecomponents/ Pages/HBAs.aspx

WARRANTY NOTICE

1. Warranty does not cover the return of parts damaged by changing the bracket.

2. 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.

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