



Emulex 4 Gb Fibre Channel Host Bus Adapters for IBM System x Quick Installation Guide

Before using this information and the product it supports, read the “IBM Statement of Limited Warranty” in the IBM® *Emulex 4 Gb Fibre Channel Host Bus Adapters for IBM System x™ Installation and User’s Guide* on the *IBM Documentation and Support CD* that comes with the host bus adapter.

This *Quick Installation Guide* provides information about installing and configuring an Emulex 4 Gb Fibre Channel Single-Port or Dual-Port PCI-X or PCIe host bus adapter. For more information, see the *Installation and User’s Guide* on the *IBM Documentation and Support CD*.

Hardware and software requirements

The host bus adapter requires the following minimum hardware and software:

- The server must have one of the following slots:
 - For a PCI-X 2.0 host bus adapter:
 - PCI 32/64-bit data and 33/66 MHz clock frequency, 3.3 V signaling
 - PCI-X Mode 1 64-bit data and 66/100/133 MHz clock frequency
 - PCI-X Mode 2 64-bit data and 266 MHz (133 MHz clock frequency, double data rate)
 - 3.3 V and 5 V PCI power required for operation
 - For a PCI Express (PCIe) host bus adapter:
 - x1 or x4 lane transfer link interface at 2.5 Gbps per lane
 - 3.3 V power required for operation
- The server must have one of the following operating systems:
 - Microsoft® Windows® Server 2003, Advanced Server, or Enterprise Edition
 - Novell Netware version 6.5
 - Red Hat® Enterprise Linux® Advanced Server or Enterprise Server version 4
 - SUSE Linux Enterprise Server version 8 or version 9
 - VMware ESX Server 2.5 or 3.0

Option package contents

The host bus adapter option package includes the following items. If any items are missing or damaged, contact your place of purchase.

- One of the following host bus adapters:
 - Emulex 4 Gb FC Single-Port PCI-X HBA for IBM System x
 - Emulex 4 Gb FC Dual-Port PCI-X HBA for IBM System x
 - Emulex 4 Gb FC Single-Port PCIe HBA for IBM System x
 - Emulex 4 Gb FC Dual-Port PCIe HBA for IBM System x
- One low-profile expansion slot bracket
- This *Quick Installation Guide*
- One *IBM Documentation and Support CD* (includes the *Installation and User’s Guide* and the *IBM Systems Safety Notices* document)

Installing the host bus adapter



DANGER

When working on or around the system, observe the following precautions:

Electrical voltage and current from power, telephone, and communication cables are hazardous. To avoid a shock hazard:

- Connect power to this unit only with the provided power cord. Do not use the provided power cord for any other product.
- Do not open or service any power supply assembly.
- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- The product might be equipped with multiple power cords. To remove all hazardous voltages, disconnect all power cords.
- Connect all power cords to a properly wired and grounded electrical outlet. Ensure that the outlet supplies proper voltage and phase rotation according to the system rating plate.
- Connect any equipment that will be attached to this product to properly wired outlets.
- When possible, use one hand only to connect or disconnect signal cables.
- Never turn on any equipment when there is evidence of fire, water, or structural damage.
- Disconnect the attached power cords, telecommunications systems, networks, and modems before you open the device covers, unless instructed otherwise in the installation and configuration procedures.
- Connect and disconnect cables as described in the following procedures when installing, moving, or opening covers on this product or attached devices.

To disconnect:

1. Turn off everything (unless instructed otherwise).
2. Remove the power cords from the outlets.
3. Remove the signal cables from the connectors.
4. Remove all cables from the devices.

To connect:

1. Turn off everything (unless instructed otherwise).
2. Attach all cables to the devices.
3. Attach the signal cables to the connectors.
4. Attach the power cords to the outlets.
5. Turn on the devices.

(D005a)

To install the host bus adapter in the server, complete the following steps:

1. Read the *IBM Systems Safety Notices* document on the *IBM Documentation and Support CD*.
2. Turn off the server and peripheral devices, disconnect the power cords, and remove the server cover.
3. Determine which PCI-X slot (32-bit or 64-bit) or PCIe slot (x1 or x4) you will use. For information about the slot type and specification, see the server documentation.
4. Remove the expansion-slot cover by removing the expansion-slot screw or releasing the bracket lever.
5. Remove the host bus adapter from the static-protective package. Do not place the host bus adapter on the server cover or on a metal surface.
6. If you have to remove the preinstalled expansion-slot bracket and replace it with the low-profile bracket, complete the following steps; otherwise, go to step 7.
 - a. Use a small Phillips screwdriver to carefully remove the two screws from the bracket, and set the screws and bracket aside for later use.
 - b. Align the two screw holes on the low-profile bracket with the holes on the host bus adapter; then, attach the bracket to the host bus adapter, using the two screws that you removed in step 6a.
7. Position the host bus adapter by aligning the PCI-X or PCIe connector with the PCI-X or PCIe slot on the system board. Insert the host bus adapter firmly into the connector.
8. Secure the host bus adapter to the server chassis with the expansion-slot screw, if you removed it in step 3, or return the bracket lever to the closed position.



CAUTION:

This product might contain one or more of the following devices: CD-ROM drive, DVD-ROM drive, DVD-RAM drive, or laser module, which are Class 1 laser products. Note the following information:

- **Do not remove the covers. Removing the covers of the laser product could result in exposure to hazardous laser radiation. There are no serviceable parts inside the device.**
- **Use of the controls or adjustments or performance of procedures other than those specified herein might result in hazardous radiation exposure.**

(C026)



CAUTION:

Data processing environments can contain equipment transmitting on system links with laser modules that operate at greater than Class 1 power levels. For this reason, never look into the end of an optical fiber cable or open receptacle. (C027)

9. Connect one end of an LC-LC fiber-optic cable to the optical interface connector on the host bus adapter. Connect the other end to the Fibre Channel device.
10. Replace the server cover and reconnect the power cords.
11. Turn on all external Fibre Channel devices; then, turn on the server. To be sure that the host bus adapter is functioning correctly, check the amber and green LEDs on the front bracket of the host bus adapter. For more information about the host bus adapter LEDs, see the *Installation and User's Guide*.

For detailed information about how to install the host bus adapter device drivers and how to update the host bus adapter boot code and firmware, see Chapter 3 in the *Installation and User's Guide*.

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