

## Emulex 8Gb FC Single-port and Dual-port HBAs

### Product Guide

Streamlined installation and management, plus unrivaled scalability and industry-leading virtualization support make the Emulex 8Gb Fibre Channel host bus adapters ideal solutions for enterprise and mixed-OS environments. With powerful management tools, they deliver maximum performance in the widest range of applications and environments.

Figure 1 shows the single-port and dual-port adapters.

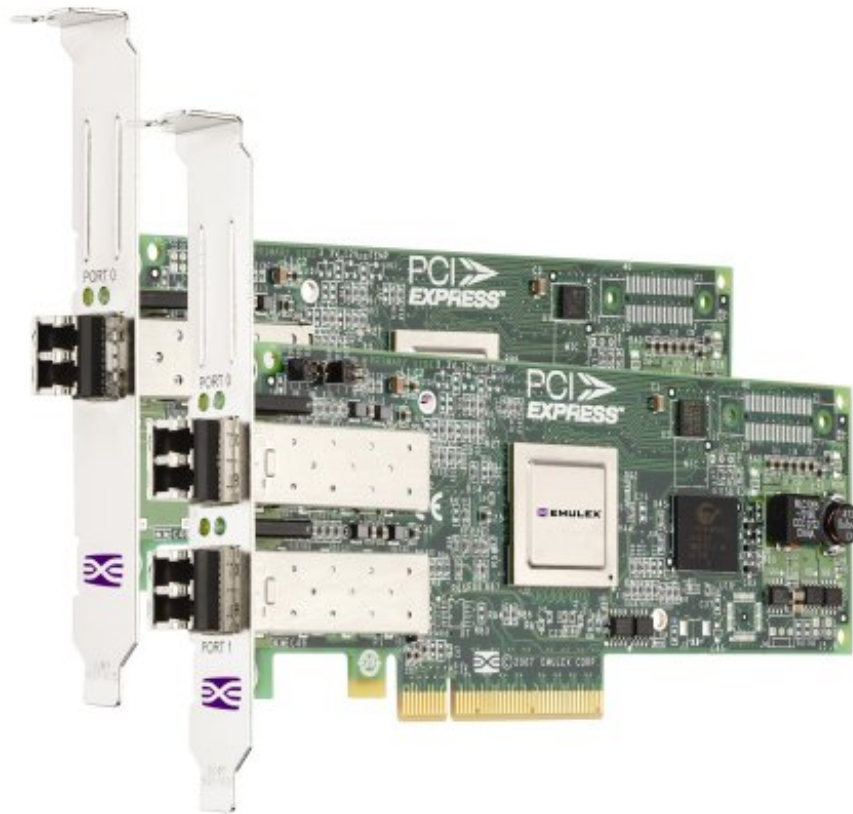


Figure 1. Emulex 8Gb Fibre Channel single-port and dual-port HBAs

### Did you know?

The configuration of the Emulex 8 Gb HBAs is fully integrated in the UEFI interface which results in an easy to use and intuitive way to set up the adapter. The HBAs provide the ability to build high-performance, highly available SANs and are easy to set up and integrate into existing SAN configurations. Emulex 8Gb HBAs use passive cooling devices to deliver enhanced thermal protection for highest reliability and maximum server availability.

## Part number information

The following tables list the ordering information.

Table 1. Part numbers and feature codes

Part number	Feature code	Description
ThinkSystem part numbers and feature codes		
4XC7A08221*	B0X0	ThinkSystem Emulex LPe12002-M8-L PCIe 8Gb 2-Port SFP+ Fibre Channel Adapter

\* ThinkSystem part numbers are only available in the following countries: China, Japan, and markets in the Asia Pacific region.

The part numbers for the adapters include the following items:

- FC HBA adapter with one or two SFPs installed and 3U bracket attached
- Additional 2U bracket
- Product publication flyer

## Features

The adapters have the following features:

- Based on the Emulex LPe12000 (single port) and LPe12002 (dual port) adapters
- Standard PCI Express card with low profile form factor
- One or two independent Fibre Channel ports with optical modules included
- PCI Express 2.0 host interface
- Support for both standard and low-profile PCI Express slots
- Auto-negotiation between 2 Gb, 4 Gb, or 8 Gb link attachments
- Processes over 200K I/O operations per second (IOPS), per port
- Support for up to 1600 MB per second maximum at full-duplex, per port

## Fibre Channel specifications

- Full support for all Fibre Channel topologies, including point-to-point (N\_Port), arbitrated loop (NL\_Port), and switched fabric (N\_Port)
- Support for F\_Port and FL\_Port login
- Full support for Fibre Channel services class 2 and 3
- Up to 4096 FC port logins and up to 4096 concurrent exchanges per FC port

## Server support - ThinkSystem

**Country availability:** The ThinkSystem part numbers are only available in the following countries: China, Japan, and markets in the Asia Pacific region.

The following tables list the ThinkSystem servers that are compatible.

Table 2. Server support - ThinkSystem (Part 1 of 3)

Part Number	Description	Edge		1S Intel V2			AMD V3			Intel V3			Dense V3			2S Intel V2						
		SE350 (7Z46 / 7D1X)	SE450 (7D8T)	ST50 V2 (7D8K / 7D8J)	ST250 V2 (7D8G / 7D8F)	SR250 V2 (7D7R / 7D7Q)	SR645 V3 (7D9D / 7D9C)	SR665 V3 (7D9B / 7D9A)	SR675 V3 (7D9Q / 7D9R)	SR630 V3 (7D72 / 7D73)	SR650 V3 (7D75 / 7D76)	SR850 V3 (7D97 / 7D96)	SR860 V3 (7D94 / 7D93)	SD665 V3 (7D9P)	SD665-N V3 (7DAZ)	SD650 V3 (7D7M)	SD650-1 V3 (7D7L)	ST650 V2 (7Z75 / 7Z74)	SR630 V2 (7Z70 / 7Z71)	SR650 V2 (7Z72 / 7Z73)	SR670 V2 (7Z22 / 7Z23)	
4XC7A08221	ThinkSystem Emulex LPe12002-M8-L PCIe 8Gb 2-Port SFP+ Fibre Channel Adapter	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Table 3. Server support - ThinkSystem (Part 2 of 3)

Part Number	Description	AMD V1					4S/8S V2			4S V1			Dense V2			1S Intel V1				
		SR635 (7Y98 / 7Y99)	SR655 (7Y00 / 7Z01)	SR655 Client OS	SR645 (7D2Y / 7D2X)	SR665 (7D2W / 7D2V)	SR850 V2 (7D31 / 7D32)	SR860 V2 (7Z59 / 7Z60)	SR950 (7X11 / 7X12)	SR850 (7X18 / 7X19)	SR850P (7D2F / 2D2G)	SR860 (7X69 / 7X70)	SD630 V2 (7D1K)	SD650 V2 (7D1M)	SD650-N V2 (7D1N)	SN550 V2 (7Z69)	ST50 (7Y48 / 7Y50)	ST250 (7Y45 / 7Y46)	SR150 (7Y54)	SR250 (7Y52 / 7Y51)
4XC7A08221	ThinkSystem Emulex LPe12002-M8-L PCIe 8Gb 2-Port SFP+ Fibre Channel Adapter	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Table 4. Server support - ThinkSystem (Part 3 of 3)

Part Number	Description	2S Intel V1								Dense V1			
		ST550 (7X09 / 7X10)	SR530 (7X07 / 7X08)	SR550 (7X03 / 7X04)	SR570 (7Y02 / 7Y03)	SR590 (7X98 / 7X99)	SR630 (7X01 / 7X02)	SR650 (7X05 / 7X06)	SR670 (7Y36 / 7Y37)	SD530 (7X21)	SD650 (7X58)	SN550 (7X16)	SN850 (7X15)
4XC7A08221	ThinkSystem Emulex LPe12002-M8-L PCIe 8Gb 2-Port SFP+ Fibre Channel Adapter	N	Y	Y	Y	Y	Y	Y	N	Y	N	N	N

## Operating system support

The following tables list the supported operating systems for the adapters:

- [1-port and 2-port ThinkSystem adapters](#)

**Tip:** These tables are automatically generated based on data from [Lenovo ServerProven](#). Older systems are not shown in the tables - refer to ServerProven for those systems.

Table 5. Operating system support for ThinkSystem Emulex LPe12002-M8-L PCIe 8Gb 2-Port SFP+ Fibre Channel Adapter (PRC only), 4XC7A08221

Operating systems	SD530 (Gen 2)	SR530 (Gen 2)	SR550 (Gen 2)	SR570 (Gen 2)	SR590 (Gen 2)	SR630 (Gen 2)	SR650 (Gen 2)	SD530 (Gen 1)	SR530 (Gen 1)	SR550 (Gen 1)	SR570 (Gen 1)	SR590 (Gen 1)	SR630 (Gen 1)	SR650 (Gen 1)
Microsoft Windows Server 2012 R2	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2016	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server version 1709	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	N
Microsoft Windows Server version 1803	N	N	N	N	N	N	N	Y	N	N	N	N	Y	Y
Red Hat Enterprise Linux 6.10	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 6.9	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.3	N	N	N	N	N	N	N	Y	Y	Y	N	N	Y	Y
Red Hat Enterprise Linux 7.4	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.5	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

	SD530 (Gen 2)	SR530 (Gen 2)	SR550 (Gen 2)	SR570 (Gen 2)	SR590 (Gen 2)	SR630 (Gen 2)	SR650 (Gen 2)	SD530 (Gen 1)	SR530 (Gen 1)	SR550 (Gen 1)	SR570 (Gen 1)	SR590 (Gen 1)	SR630 (Gen 1)	SR650 (Gen 1)
<b>Operating systems</b>														
Red Hat Enterprise Linux 8.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 11 SP4	N	N	N	N	N	N	N	Y	Y	N	Y	Y	Y	Y
SUSE Linux Enterprise Server 11 SP4 with Xen	N	N	N	N	N	N	N	Y	Y	N	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP2	N	N	N	N	N	N	N	Y	Y	N	N	N	Y	Y
SUSE Linux Enterprise Server 12 SP2 with Xen	N	N	N	N	N	N	N	Y	Y	N	N	N	Y	Y
SUSE Linux Enterprise Server 12 SP3	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.0 U3	N	N	N	N	N	N	N	Y	Y	N	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5	N	N	N	N	N	N	N	Y	Y	N	N	N	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U1	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
VMware vSphere Hypervisor (ESXi) 6.5 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Operating systems	SD530 (Gen 2)	SR530 (Gen 2)	SR550 (Gen 2)	SR570 (Gen 2)	SR590 (Gen 2)	SR630 (Gen 2)	SR650 (Gen 2)	SD530 (Gen 1)	SR530 (Gen 1)	SR550 (Gen 1)	SR570 (Gen 1)	SR590 (Gen 1)	SR630 (Gen 1)	SR650 (Gen 1)
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

<sup>1</sup> The WWPN show wrong when created by excute FC-NPIV test under VM6.5.2 os.

## Operating environment

The adapters are supported in this environment:

- Temperature:
  - Operating: 0° to 55°C (32° to 131°F) at 0 to 914 m (0 to 3,000 ft)
  - Storage: -40° to 70°C (-40° to 158°F) at 914 to 2,133 m (3,000 to 7,000 ft)
- Relative humidity:
  - 5% to 95%, non-condensing

## Warranty

These adapters have a one-year limited warranty. When installed in a Lenovo server, these cards assume the server's base warranty and any warranty upgrade.

## Related publications

For more information, refer to the following resources:

- Lenovo ThinkSystem FC adapters product page:  
<https://lenovopress.com/lp0765-networking-options-for-thinksystem-servers#fibre-channel-adapters>
- ServerProven compatibility information  
<http://www.lenovo.com/us/en/serverproven>

## Related product families

Product families related to this document are the following:

- [Host Bus Adapters](#)

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This document, TIPS0727, was created or updated on July 21, 2021.

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