

Emulex 8Gb FC Single-port and Dual-port HBAs Product Guide (withdrawn product)

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.

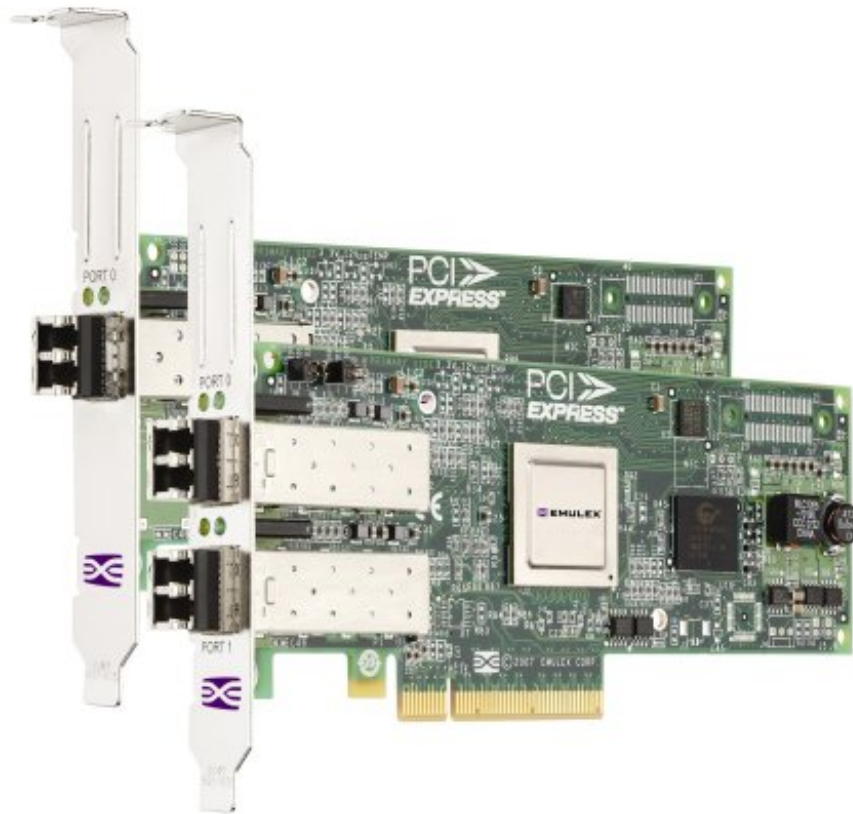


Figure 1. Emulex 8Gb Fibre Channel single-port and dual-port HBAs

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.

Withdrawn from marketing: The adapters listed in this product guide are now withdrawn from marketing.

Table 1. Part numbers and feature codes

Part number	Feature code	Description
ThinkSystem part numbers and feature codes		
4XC7A08220*	B0WZ	ThinkSystem Emulex LPe12000-M8-L PCIe 8Gb 1-Port SFP+ Fibre Channel Adapter
4XC7A08221*	B0X0	ThinkSystem Emulex LPe12002-M8-L PCIe 8Gb 2-Port SFP+ Fibre Channel Adapter
System x part numbers and feature codes		
42D0485	3580	Emulex 8Gb FC Single-port HBA
42D0494	3581	Emulex 8Gb FC Dual-port HBA

* 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 4)

Part Number	Description	AMD V3				2S Intel V3			4S 8S Intel V3			Multi Node		GPU Rich			1S V3				
		SR635 V3 (7D9H / 7D9G)	SR655 V3 (7D9F / 7D9E)	SR645 V3 (7D9D / 7D9C)	SR665 V3 (7D9B / 7D9A)	ST650 V3 (7D7B / 7D7A)	SR630 V3 (7D72 / 7D73)	SR650 V3 (7D75 / 7D76)	SR850 V3 (7D97 / 7D96)	SR860 V3 (7D94 / 7D93)	SR950 V3 (7DC5 / 7DC4)	SD535 V3 (7DD8 / 7DD1)	SD530 V3 (7DDA / 7DD3)	SD550 V3 (7DD9 / 7DD2)	SR670 V2 (7Z22 / 7Z23)	SR675 V3 (7D9Q / 7D9R)	SR680a V3 (7DHE)	SR685a V3 (7DHC)	ST50 V3 (7DF4 / 7DF3)	ST250 V3 (7DCF / 7DCE)	SR250 V3 (7DCM / 7DCL)
4XC7A08220	ThinkSystem Emulex LPe12000-M8-L PCIe 8Gb 1-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
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

Table 3. Server support - ThinkSystem (Part 2 of 4)

Part Number	Description	Edge				Super Computing				1S Intel V2		2S Intel V2				
		SE350 (7Z46 / 7D1X)	SE350 V2 (7DA9)	SE360 V2 (7DAM)	SE450 (7D8T)	SE455 V3 (7DBY)	SD665 V3 (7D9P)	SD665-N V3 (7DAZ)	SD650 V3 (7D7M)	SD650-I V3 (7D7L)	SD650-N V3 (7D7N)	ST50 V2 (7D8K / 7D8J)	ST250 V2 (7D8G / 7D8F)	SR250 V2 (7D7R / 7D7Q)	ST650 V2 (7Z75 / 7Z74)	SR630 V2 (7Z70 / 7Z71)
4XC7A08220	ThinkSystem Emulex LPe12000-M8-L PCIe 8Gb 1-Port SFP+ Fibre Channel Adapter	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
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

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

Part Number	Description	AMD V1				Dense V2				4S V2	8S	4S V1		1S Intel V1							
		SR635 (7Y98 / 7Y99)	SR655 (7Y00 / 7Z01)	SR655 Client OS		SR645 (7D2Y / 7D2X)	SR665 (7D2W / 7D2V)	SD630 V2 (7D1K)	SD650 V2 (7D1M)	SD650-N V2 (7D1N)	SN550 V2 (7Z69)	SR850 V2 (7D31 / 7D32)	SR860 V2 (7Z59 / 7Z60)	SR950 (7X11 / 7X12)	SR850 (7X18 / 7X19)	SR850P (7D2F / 2D2G)	SR860 (7X69 / 7X70)	ST50 (7Y48 / 7Y50)	ST250 (7Y45 / 7Y46)	SR150 (7Y54)	SR250 (7Y52 / 7Y51)
4XC7A08220	ThinkSystem Emulex LPe12000-M8-L PCIe 8Gb 1-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
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

Table 5. Server support - ThinkSystem (Part 4 of 4)

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)
4XC7A08220	ThinkSystem Emulex LPe12000-M8-L PCIe 8Gb 1-Port SFP+ Fibre Channel Adapter	N	Y	Y	Y	Y	Y	Y	N	Y	N	N	N
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 System x 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 6. Operating system support for Emulex 8Gb FC Single-port HBA for Lenovo System x, 42D0485

Operating systems	x3850/3950 X6 (3837)	x3850/3950 X6 (6241, E7 v2)	x3850/3950 X6 (6241, E7 v3)	x3850/3950 X6 (6241, E7 v4)	x3250 M6 (3633)	rx360 M5 (5465)	x3500 M5 (5464)	x3550 M5 (5463)	x3550 M5 (8869)	x3650 M5 (5462)	x3650 M5 (8871)	x3100 M5 (5457)	x3250 M5 (5458)
Microsoft Windows Server 2008 R2	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2012	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2012 R2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Microsoft Windows Server 2016	N	Y ¹	Y ¹	Y ¹	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2019	N	N	N	Y	Y	N	N	N	Y	N	Y	N	N
Microsoft Windows Server version 1709	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
Microsoft Windows Server version 1803	N	N	N	N	N	N	N	N	Y	N	Y	N	N
Red Hat Enterprise Linux 5 Server Edition	N	N	N	N	N	N	N	N	N	N	N	N	Y
Red Hat Enterprise Linux 5 Server x64 Edition	N	N	N	N	N	N	N	N	N	N	N	N	Y
Red Hat Enterprise Linux 6 Server Edition	N	N	N	N	N	N	N	N	N	N	N	N	Y
Red Hat Enterprise Linux 6 Server x64 Edition	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y
Red Hat Enterprise Linux 7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.0	N	N	N	Y	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 11 for AMD64/EM64T	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
SUSE Linux Enterprise Server 11 for x86	N	N	N	N	N	N	N	N	N	N	N	Y	N
SUSE Linux Enterprise Server 11 with Xen for AMD64/EM64T	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	N
SUSE Linux Enterprise Server 12	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 with Xen	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15	N	N	Y	Y	Y	Y	N	N	Y	N	Y	N	N
SUSE Linux Enterprise Server 15 with Xen	N	N	Y	Y	Y	Y	N	N	Y	N	Y	N	N
VMware vSphere 5.1 (ESXi)	Y	Y	N	N	N	Y	Y	Y	N	Y	N	Y	Y
VMware vSphere Hypervisor (ESXi) 5.5	Y	Y	N	N	Y	N	Y	Y	Y	Y	Y	N	Y
VMware vSphere Hypervisor (ESXi) 6.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
VMware vSphere Hypervisor (ESXi) 6.5	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7	N	N	N	Y	Y ²	Y	Y ²	N	Y ²	N	Y ²	N	N

¹ [in box driver support only]

² Detail information please refer to [Support Tip HT506708](#)

Table 7. Operating system support for ThinkSystem Emulex LPe12002-M8-L PCIe 8Gb 2-Port SFP+ Fibre Channel Adapter, 4XC7A08221

Operating systems	SD530 (Xeon Gen 2)	SR530 (Xeon Gen 2)	SR550 (Xeon Gen 2)	SR570 (Xeon Gen 2)	SR590 (Xeon Gen 2)	SR630 (Xeon Gen 2)	SR650 (Xeon Gen 2)	SD530 (Xeon Gen 1)	SR530 (Xeon Gen 1)	SR550 (Xeon Gen 1)	SR570 (Xeon Gen 1)	SR590 (Xeon Gen 1)	SR630 (Xeon Gen 1)	SR650 (Xeon 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
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

Operating systems	SD530 (Xeon Gen 2)	SR530 (Xeon Gen 2)	SR550 (Xeon Gen 2)	SR570 (Xeon Gen 2)	SR590 (Xeon Gen 2)	SR630 (Xeon Gen 2)	SR650 (Xeon Gen 2)	SD530 (Xeon Gen 1)	SR530 (Xeon Gen 1)	SR550 (Xeon Gen 1)	SR570 (Xeon Gen 1)	SR590 (Xeon Gen 1)	SR630 (Xeon Gen 1)	SR650 (Xeon Gen 1)
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 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 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 ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
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
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

¹ 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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