

Overview

HPE 8Gb PCI-e FC HBAs

The HPE 8Gb PCI-e Fibre Channel Host Bus Adapters brings datacenter infrastructure components to a higher level of performance and efficiency with the ability to deliver twice the I/O performance of 4Gb HBAs. An 8Gb FC HBA purchased today is backward compatible with 4 and 2 Gb storage networks and will protect future investments. When using storage intensive applications, such as backup/restore, database transactions, virtualization, and rich media, the increased performance of the 8 Gb infrastructure enables more rapid storage and retrieval of critical information.

Finally, 8Gb PCI-e FC Host Bus Adapters provide a number of features that work together to reduce power consumption, thus delivering a "green" benefit within the server.

What's New

- HPE StoreFabric 84Q 4P 8Gb Fibre Channel Host Bus Adapter (P9D91A)
- HPE StoreFabric 84E 4P 8Gb Fibre Channel Host Bus Adapter (E7Y63A)

Key Features and Benefits

Performance

The PCI-e 8Gb Fibre Channel Host Bus Adapters deliver twice the I/O performance of 4Gb FC HBAs

Moving to 8 Gb technology provides the infrastructure required for the more powerful servers and data intensive applications of the future.

When using storage intensive applications like backup/restore, database transactions, virtualization and rich media, the improved I/O performance enables faster storage and retrieval of data.

Support for greater Server Virtualization

Ideal for high density server virtualization environments

- Enables more applications and VMs to run on a single server and Fibre Channel port, resulting in reduced cabling and a higher return on IT investment

Provides HPE ProLiant Connectivity to Storage And Network

Robust interoperability testing

- Provides an HPE-branded HBA solution which has undergone extensive HPE interoperability testing for connecting HPE ProLiant servers into storage and networking environments.
- Optimal for connecting to HPE's 8Gb FC edge/core network switches.

Models

Models

		Part Number
Brocade	<u>HP 81B 8Gb 1-port PCIe Fibre Channel Host Bus Adapter</u>	AP769B
	HPE 8Gb PCIe to Fibre Channel Host Bus Adapter	
	HP 82B 8Gb 2-port PCIe Fibre Channel Host Bus Adapter	AP770B
	HPE 8Gb Dual Channel PCIe to Fibre Channel Host Bus Adapter	
Emulex	HP 81E 8Gb 1-port PCIe Fibre Channel Host Bus Adapter	AJ762B
	HPE 8Gb PCIe to Fibre Channel Host Bus Adapter	
	HP 82E 8Gb 2-port PCIe Fibre Channel Host Bus Adapter	AJ763B
	HPE 8Gb Dual Channel PCIe to Fibre Channel Host Bus Adapter	
	HP StoreFabric 84E 4-port 8Gb Fibre Channel Host Bus Adapter	E7Y63A
	HPE 8Gb 4port PCIe to Fibre Channel Host Bus Adapter	
QLogic	HP 81Q 8Gb 1-port PCIe Fibre Channel Host Bus Adapter	AK344A
	HPE 8Gb PCIe to Fibre Channel Host Bus Adapter	
	HP 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter	AJ764A
	HPE 8Gb Dual Channel PCIe to Fibre Channel Host Bus Adapter	
	HPE StoreFabric 84Q 4-port 8Gb Fibre Channel Host Bus Adapter	P9D91A
	HPE 8Gb 4port PCIe to Fibre Channel Host Bus Adapter	

Service and Support, HPE Care Pack and Warranty Information

Warranty

3-0-0 Three-year parts exchange warranty. Additional warranty protection can be purchased.

HPE Global Services provides a three-year, limited warranty, fully supported by a worldwide network of resellers and service providers toll-free 7 x 24 hardware technical phone support for the duration of the warranty. In addition, available service offerings include a full range of HPE Care Pack packaged hardware and software services.

NOTE: Certain restrictions and exclusions apply. Consult the HPE Customer Support Center for details.

Service

Technology Services for increased uptime, productivity and ROI

Trust HPE storage technology experts for every level of service and support. Our integrated portfolio of services for storage help customers reduce costs, optimize data, streamline storage management, and improve backup and recovery. Capitalizing on HPE Storage Systems' capabilities requires a service partner who understands your increasingly complex environment. Team with the people who know Hewlett Packard Enterprise infrastructure hardware and software best—the experienced professionals at HPE Services.

Support

- HPE Host Bus Adapters (HBA) take on the support level of the HPE server in which it is installed.
- For HBA s installed outside of an HPE environment, HPE Foundation Care 24x7 Service is recommended
- For a higher return on your storage investment, HPE Foundation Care 24x7 Service provides integrated hardware and software support services designed specifically for your technology.
- Available 24x7, this 3-year combined reactive support option delivers onsite hardware support and over-the-phone software support around-the-clock.
- Improve uptime with responsive hardware and software services
- Enjoy consistent service coverage across geographically dispersed sites
- Update HPE software at a predictable cost
- Increase customer satisfaction—with no interoperability gaps

Installations

- HPE Installation is included with the HPE Server install if purchased together. If Host Bus Adapters (HBA) is ordered as an add-on to an existing HPE Server or for installation into a non-HPE Server, HPE Installation Service is recommended. HPE Hardware Installation provides basic installation of your product into your technology environment (System configuration is not included).
- Allows your IT resources to stay focused on their core tasks and priorities
- Reduces implementation time, impact and risk to your storage environmen

Remote Support Tools

HPE Insight Remote Support-: Available at no additional cost to all warranty, HPE Care Pack Service and service agreement customers, uses proven technology to deliver secure, reliable 24x7 remote monitoring, diagnosis and problem resolution.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-4676ENW.pdf>

For more information

<http://www.hp.com/services/storage>

To learn more on HPE Storage Services, please contact your Hewlett Packard Enterprise sales

Service and Support, HPE Care Pack and Warranty Information

representative or Hewlett Packard Enterprise Authorized Channel Partner

HPE Care Pack Services are sold by HPE and Hewlett Packard Enterprise Authorized Service Partners:

- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.
- Customers purchasing from a commercial reseller can find HPE Care Pack Services at [**http://www.hp.com/go/lookuptool**](http://www.hp.com/go/lookuptool)

Technical Specifications

	81B	82B	81E	82E	81Q	82Q
Number of channels	Single	Dual	Single	Dual	Single	Dual
Port Speed	8 Gbps	8 Gbps	8 Gbps	8 Gbps	8 Gbps	8 Gbps
Slot type supported	PCI Express 2.0 to Fibre Channel	PCI Express 2.0 to Fibre Channel	PCI Express 2.0 to Fibre Channel	PCI Express 2.0 to Fibre Channel	PCI Express 2.0 to Fibre Channel	PCI Express 2.0 to Fibre Channel
OS Supported						
NOTE: Always refer to the HPE Single Point of Connectivity Knowledge for HPE Storage Products at: http://www.hp.com/storage/spock for specific product support information.						
Windows Server 2003	x86, x64, R2	x86, x64, R2	x86, x64, IA64, R2	x86, x64, IA64, R2	x86, x64, IA64, R2	x86, x64, IA64, R2
Windows Server 2008	x86, x64, R2	x86, x64, R2	x86, x64, IA64, R2	x86, x64, IA64, R2	x86, x64, IA64, R2	x86, x64, IA64, R2
VMware 3.5	U4/U5	U4/U5	U4/U5	U4/U5	U4/U5	U4/U5
VMware 4.0	YES	YES	YES	YES	YES	YES
VMware 4.1	YES	YES	YES	YES	YES	YES
RHEL 4	N/A	N/A	x86, x64	x86, x64	x86, x64	x86, x64
RHEL 5	x86, x64	x86, x64	x86, x64	x86, x64	x86, x64	x86, x64
SLES 10	x86, x64	x86, x64	x86, x64	x86, x64	x86, x64	x86, x64
SLES 11	x86, x64	x86, x64	x86, x64	x86, x64	x86, x64	x86, x64
Solaris 10 x86	N/A	N/A	x86	x86	x86	x86
Always refer to the HPE Single Point of Connectivity Knowledge for HPE Storage Products at: http://www.hp.com/storage/spock for specific product support information.						
Servers Supported	Select HPE ProLiant G7, G6, and G5/G5p servers NOTE: Refer to server QuickSpecs for details regarding supported options.					
Array Platforms Supported	Refer to http://www.hp.com/storage/spock for specific product support information					
What's Included in the Box?	8 Gbps HBA with standard bracket, one 8 Gbps SFP+, low-profile bracket, documentation	8 Gbps HBA with standard bracket, two 8 Gbps SFP+, low-profile bracket, documentation	8 Gbps HBA with standard bracket, one 8 Gbps SFP+, low-profile bracket, documentation	8 Gbps HBA with standard bracket, two 8 Gbps SFP+, low-profile bracket, documentation	8 Gbps HBA with standard bracket, one 8 Gbps SFP+, low-profile bracket, documentation	8 Gbps HBA with standard bracket, two 8 Gbps SFP+, low-profile bracket, documentation
Environmental - Operating Temperature	32° to 122° F (0° to 50° C) (dry bulb)	32° to 122° F (0° to 50° C) (dry bulb)	32° to 131° F (0° to 55° C)	32° to 131° F (0° to 55° C)	32° to 131° F (0° to 55° C)	32° to 131° F (0° to 55° C)
Environmental - Storage Temperature	-40° F to 163° F (-43° to 73° C) (dry bulb)	-40° F to 163° F (-43° to 73° C) (dry bulb)	-20° to 158° F (-40° to 70° C)	-20° to 158° F (-40° to 70° C)	-20° to 158° F (-40° to 70° C)	-20° to 158° F (-40° to 70° C)
Environmental - Relative Humidity - Operating	5% to 93% (relative, non-condensing)	5% to 93% (relative, non-condensing)	5% to 95% non-condensing	5% to 95% non-condensing	10% to 90% non-condensing	10% to 90% non-condensing
Product Dimensions (HxW)	1.63 x 6.5 in (43 x 165 mm)	1.63 x 6.5 in (43 x 165 mm)	6.60 x 2.71 in (167.64 x 68.8 mm)	6.60 x 2.71 in (167.64 x 68.8 mm)	6.60 x 2.54 in (167.64 x 64.4 mm)	6.60 x 2.54 in (167.64 x 64.4 mm)

Technical Specifications

Media	Multi-mode Optic (SFP+)	Multi-mode Optic (SFP+)	Multi-mode Optic (SFP+)	Multi-mode Optic (SFP+)	Multi-mode Optic (SFP+)	Multi-mode Optic (SFP+)
Connector	Short wave laser with LC type connector	Short wave laser with LC type connector	Short wave laser with LC type connector	Short wave laser with LC type connector	Short wave laser with LC type connector	Short wave laser with LC type connector
PCIe Connector	PCIe x8 Max x4 lanes Gen2 Max x8 lanes Gen1	PCIe x8 Max x4 lanes Gen2 Max x8 lanes Gen1	PCIe x8 Max x4 lanes Gen2 Max x8 lanes Gen1	PCIe x8 Max x4 lanes Gen2 Max x8 lanes Gen1	PCIe x8 Max x4 lanes Gen2 Max x8 lanes Gen1	PCIe x8 Max x4 lanes Gen2 Max x8 lanes Gen1
Auto-negotiation	8/4/2 Gbps	8/4/2 Gbps	8/4/2 Gbps	8/4/2 Gbps	8/4/2 Gbps	8/4/2 Gbps
Brackets	Shipped with both ½ height and full-height brackets	Shipped with both ½ height and full-height brackets	Shipped with both ½ height and full-height brackets	Shipped with both ½ height and full-height brackets	Shipped with both ½ height and full-height brackets	Shipped with both ½ height and full-height brackets
	84E			84Q		
Number of channels	Quad			Quad		
Port Speed	8 Gbps			8 Gbps		
Slot type supported	PCI Express 2.0 to Fibre Channel			PCI Express 2.0 to Fibre Channel		
Windows Server 2003	x86, x64, R2			x86, x64, R2		
Windows Server 2008	x86, x64, R2			x86, x64, R2		
VMware 3.5	U4/U5			U4/U5		
VMware 4.0	YES			YES		
VMware 4.1	YES			YES		
RHEL 4	N/A			N/A		
RHEL 5	x86, x64			x86, x64		
SLES 10	x86, x64			x86, x64		
SLES 11	x86, x64			x86, x64		
Solaris 10 x86	N/A			N/A		
	Always refer to the HPE Single Point of Connectivity Knowledge for HPE Storage Products at: http://www.hp.com/storage/spock for specific product support information.					
Servers Supported	Select HPE ProLiant G7, G6, and G5/G5p servers NOTE: Refer to server QuickSpecs for details regarding supported options.					
Array Platforms Supported	Refer to http://www.hp.com/storage/spock for specific product support information					
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Environmental - Storage Temperature	-40° F to 163° F (-43° to 73° C) (dry bulb)			-40° F to 163° F (-43° to 73° C) (dry bulb)		
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Product Dimensions (HxW)	1.63 x 6.5 in (43 x 165 mm)			1.63 x 6.5 in (43 x 165 mm)		
Media	Multi-mode Optic (SFP+)			Multi-mode Optic (SFP+)		

Technical Specifications

Connector	Short wave laser with LC type connector	Short wave laser with LC type connector
PCIe Connector	PCIe x8 Max x4 lanes Gen2 Max x8 lanes Gen1	PCIe x8 Max x4 lanes Gen2 Max x8 lanes Gen1
Auto-negotiation	8/4/2 Gbps	8/4/2 Gbps
Brackets	Shipped with both ½ height and full-height brackets	Shipped with both ½ height and full-height brackets

Summary of Changes

Date	Version History	Action	Description of Change
31-Mar-2016	From Version 14 to 15	Changed	Changes made to the Overview and Tech Specs Sections
09-May-2014	From Version 13 to 14	Changed	Support was revised.
13-Aug-2012	From Version 12 to 13	Changed	Changes were made in Overview, Models, Service and Support, HPE Care Pack and Warranty Information and in Technical Specifications sections.
04-Nov-2011	From Version 11 to 12	Changed	Changes made to the Technical Specifications section only.
14-Oct-2011	From Version 10 to 11	Changed	Array Platforms Supported was revised in the Technical Specifications chart.
09-Jun-2011	From Version 9 to 10	Removed	Mentions of StorageWorks were removed.
01-Apr-2011	From Version 8 to 9	Changed	Servers Supported was completely revised in Technical Specifications.
15-Oct-2010	From Version 7 to 8	Changed	PCI-e was changed to PCIe throughout, including in the title Servers Supported and Array Platforms Supported were revised, U5 was added to VMware 3.5 and VMware 4.1 was added in Technical Specifications
08-Jan-2010	From Version 6 to 7	Added	VMware ESX Server 3.5 and 4.0, Windows Server 2003 R2 and 2008 R2, EVA6400 and EVA8400, XP disk Arrays and HPE ProLiant DL785 G5/G6 were added.
18-Sep-2009	From Version 5 to 6	Changed	Changes were made throughout the QuickSpecs. Note the title has changed.
28-May-2009	From Version 4 to 5	Changed	The QuickSpecs was rebuilt.
22-Sep-2008	From Version 3 to 4	Changed	Changes were made to the Overview: Models and the Features and Benefits: Key Features sections.
11-Jul-2008	From Version 2 to 3	Changed	PCI-E to PCIe throughout the entire QuickSpecs, including the Title Revised Benefits At A Glance in the Features and Benefits section Changes made to the Chart in the Technical Specifications section include: Addition of Microsoft Windows Server 2008, Red Hat Enterprise Linux 4.5/4.6 and 5.1/5.2 and SUSE Linux Enterprise Server 9 Removal of EVA 3000 and EVA 5000 Array Platforms
16-Jun-2008	From Version 1 to 2	Changed	Changes were made throughout the QuickSpecs including, Models and Product Description in the Overview section, Benefits in the Features and Benefits section and the Chart in Technical Specifications and

Summary of Changes

			adding Key Features for Emulex LPe 12000/LPe 12002 to the Technical Specifications section. NOTE also the title has changed.
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