### **Overview**

The HP 8Gb PCIe 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 PCIe 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**

• New RoHS compliant HP 8Gb Fibre Channel HBAs

**NOTE:** Restriction of Hazardous Substances Directive or RoHS is a directive adopted by the European Union that restricts the use of certain hazardous materials in the manufacture of various types of electronic and electrical equipment. The RoHS compliant products with new part numbers listed in this document are functionally equivalent to the corresponding products with old part numbers and are fully interchangeable.



## Models

## **Models**

		Part Number
Brocade	HP 81B PCIe FC HBA Single Port	AP769B
	HP 8Gb PCIe to Fibre Channel Host Bus Adapter	
	HP 82B PCIe FC HBA Dual Port	AP770B
	HP 8Gb Dual Channel PCIe to Fibre Channel Host Bus Adapter	
Emulex	HP 81E PCIe FC HBA Single Port	AJ762B
Lindten	HP 8Gb PCIe to Fibre Channel Host Bus Adapter	107025
	HP 82E PCIe FC HBA Dual Port	AJ763B
	HP 8Gb Dual Channel PCIe to Fibre Channel Host Bus Adapter	
	UD add DSI TS UDA SI LL D	44244
QLogic	HP 81Q PCIe FC HBA Single Port	AK344A
	HP 8Gb PCIe to Fibre Channel Host Bus Adapter	
	HP 82Q PCIe FC HBA Dual Port	AJ764A
	HP 8Gb Dual Channel PCIe to Fibre Channel Host Bus Adapter	



## Service and Support, HP Care Pack and Warranty Information

### Warranty

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

HP 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 HP Care Pack packaged hardware and software services.

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

#### **Service**

#### Technology Services for increased uptime, productivity and ROI

Trust HP 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 HP Storage Systems' capabilities requires a service partner who understands your increasingly complex environment. Team with the people who know HP infrastructure hardware and software best-the experienced professionals at HP Services.

#### **Protect your business beyond warranty**

Warranty protects against manufacturer defects, however warranty uplifts, such as HP Care Pack Services protect the business-by reducing downtime risks and providing operational consistency for mission-critical and standard business computing.

#### What HP Storage Technology Services can do for you

HP Storage Technology Services can help you design, deploy, test, integrate, support, and manage IT and infrastructure solutions. HP storage lifecycle support services offers a full spectrum of customer care-from technology support to complex migrations to complete managed services.

#### Choose the right level of support, deployment and integration services

Leverage the full strength of HP Technology Services - customers can trust the services professionals at HP to work collaboratively with them, putting our strategic and technical know-how to work across their entire infrastructure.

#### Support

- HP Host Bus Adapters (HBA) take on the support level of the HP server in which it is installed.
- For HBA's installed outside of an HP environment, 3-Year HP Support Plus 24 is recommended
- For a higher return on your storage investment, HP Support Plus 24 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 HP software at a predictable cost
- Increase customer satisfaction-with no interoperability gaps

#### Installations

- HP Installation is included with the HP Server install if purchased together. If Host Bus Adapters
   (HBA) is ordered as an add-on to an existing HP Server or for installation into a non-HP Server, HP
   Installation Service is recommended. HP 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



## Service and Support, HP Care Pack and Warranty Information

Remote Support Tools

**HP Insight Remote Support-**: Available at no additional cost to all warranty, HP 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

#### www.hp.com/services/storage

To learn more on HP Storage Services, please contact your HP sales representative or HP Authorized Channel Partner

HP Care Pack Services are sold by HP and HP Authorized Service Partners:

- Services for customers purchasing from HP or an enterprise reseller are quoted using HP order configuration tools.
- Customers purchasing from a commercial reseller can find HP Care Pack Services at www.hp.com/go/lookuptool



## **Technical Specifications**

To Fibre Channel   To Fibre Ch							
Solutype supported   Sobps   Sobps   Sobps   Sobps   Sobps   Sobps   Sobps   Sobps   Sobps   PCI Express 2.0   PCI Exp		81B	82B	81E	82E	81Q	82Q
PCI Express 2.0 to Fibre Channel to Fi	Number of channels	Single	Dual	Single	Dual	Single	Dual
To Fibre Channel   To Fibre Ch	Port Speed	8 Gbps	8 Gbps	8 Gbps	8 Gbps	8 Gbps	8 Gbps
OS Supported           NOTE: Always refer to the HP Single Point of Connectivity Knowledge for HP Storage Products at: 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         R2 <td>Slot type supported</td> <td>PCI Express 2.0</td>	Slot type supported	PCI Express 2.0	PCI Express 2.0	PCI Express 2.0	PCI Express 2.0	PCI Express 2.0	PCI Express 2.0
NOTE: Always refer to the HP Single Point of Connectivity Knowledge for HP Storage Products at: www.hp.com/storage/spock for specific product support information.    Windows Server 2008		to Fibre Channel	to Fibre Channel	to Fibre Channel	to Fibre Channel	to Fibre Channel	to Fibre Channel
Windows Server 2003	OS Supported						
Windows Server 2003	<b>NOTE:</b> Always refer to the H	IP Single Point of (	Connectivity Know	ledge for HP Stora	age Products at: w	ww.hp.com/stora	ge/spock <b>fo</b> r
Windows Server 2008	specific product support inf	ormation.			v		
VMware 3.5	Windows Server 2003	x86, x64, R2	x86, x64, R2				x86, x64, IA64, R2
VMware 4.0   YES	Windows Server 2008	x86, x64, R2	x86, x64, R2				x86, x64, IA64, R2
VMware 4.1	VMware 3.5	U4/U5	U4/U5	U4/U5	U4/U5	U4/U5	U4/U5
RHEL 4	VMware 4.0	YES	YES	YES	YES	YES	YES
RHEL 5	VMware 4.1	YES	YES	YES	YES	YES	YES
RHEL 5	RHEL 4	N/A	N/A	x86, x64	x86, x64	x86, x64	x86, x64
SLES 10	RHEL 5	x86, x64	x86, x64		i		i
SLES 11		i	i		î	i	
Solaris 10 x86 N/A N/A x86 x86 x86 x86 x86 Always refer to the HP Single Point of Connectivity Knowledge for HP Storage Products at: www.hp.com/storage/spock for specific product support information.  Servers Supported  Servers Supported  NOTE: Refer to server QuickSpecs for details regarding supported options.  Array Platforms Supported  What's Included in the Box?  What's Included in the Box?  B Gbps HBA with standard bracket, one 8 Gbps SFP+, low-profile bracket, documentation documentation  B Gbps SFP+, low-profile bracket, documentation  B Gbps SFP+, low-profile br		î	i		î		i
Always refer to the HP Single Point of Connectivity Knowledge for HP Storage Products at:  www.hp.com/storage/spock for specific product support information.  Select HP ProLiant G7, G6, and G5/G5p servers  NOTE: Refer to server QuickSpecs for details regarding supported options.  Refer to www.hp.com/storage/spock for specific product support information  Redeption  Refer to www.hp.com/storage/spock for specific product support information  Response for details regarding supported optics bracket, was alobys that in standa	•				<del></del>		i
Servers Supported  Select HP ProLiant G7, G6, and G5/G5p servers  NOTE: Refer to server QuickSpecs for details regarding supported options.  Refer to www.hp.com/storage/spock for specific product support information  Redea							
Select HP ProLiant G7, G6, and G5/G5p servers  NOTE: Refer to server QuickSpecs for details regarding supported options.  Refer to www.hp.com/storage/spock for specific product support information  Redeau Supported  Refer to sever profile bracket, dosadard bracket, two 8 Gbps SFP+, low-profile bracket, two 8 Gbps SFP+, low-profile bracket, documentation documentation  Refer to www.hp.com/storage/spock for specific product support information  Refer to www.hp.com/storage/spock for specific product support information  Redeau Supported  Redeau Supported  Refer to www.hp.com/storage/spock for specific product support information  Redeau Supported  Refer to www.hp.com/storage/spock for specific product support information documentation  Refer to ww			_		, ,	_	
Refer to server QuickSpecs for details regarding supported options.  Refer to www.hp.com/storage/spock for specific product support information  Rediation and the standard bracket, was standard bracket, two 8 Gbps FBA with standard bracket, two 8 Gbps FBP+, low-profile bracket, documentation  Rediator and the standard bracket, two 8 Gbps FFP+, low-profile bracket, documentation  Rediator and the standard bracket, two 8 Gbps FFP+, low-profile bracket, documentation  Rediator and the standard bracket, two 8 Gbps FFP+, low-profile bracket, documentation  Rediator and the standard bracket, two 8 Gbps FFP+, low-profile bracket, documentation  Rediator and the standard bracket, two 8 Gbps FFP+, low-profile bracket, documentation  Rediator and the sta	Servers Supported						
Supported  What's Included in the Box?  B Gbps HBA with standard bracket, one 8 Gbps SFP+, low-profile bracket, two 8 Gbps SFP+, low-profile bracket, documentation documentation documentation  Environmental - Operating Temperature  Environmental - Storage Temperature  C Environmental - Relative Humidity - Operating  Froduct Dimensions (HxW)  Media  B Gbps HBA with standard bracket, one 8 Gbps SFP+, low-profile bracket, documentation documental bracket, one 8 Gbps SFP+, low-profile bracket, documentation documentati					•		5.
Supported  What's Included in the Box?  B Gbps HBA with standard bracket, one 8 Gbps SFP+, low-profile bracket, documentation documentation  Environmental - Operating Temperature  Environmental - Storage Temperature  C Environmental - Relative Humidity - Operating  Froduct Dimensions (HxW)  Media  B Gbps HBA with standard bracket, two 8 Gbps SFP+, low-profile bracket, documentation documental obracket, two 8 Gbps SFP+, low-profile bracket, documentation documentation documentation documentation  B Gbps HBA with standard bracket, one 8 Gbps SFP+, low-profile bracket, documentation documentation documentation documentation documentation documentation documentation  B Gbps HBA with standard bracket, two 8 Gbps SFP+, low-profile bracket, documentation	Array Platforms	Re	fer to www.hp.con	n/storage/spock f	or specific product	t support informat	ion
standard bracket, one 8 Gbps SFP+, low-profile bracket, documentation do	Supported						
bracket, one 8 Gbps SFP+, low-profile bracket, documentation  Environmental - Operating Temperature  Description Media  bracket, one 8 Gbps SFP+, low-profile bracket, documentation  Description Bracket, documen	What's Included in the	8 Gbps HBA with	8 Gbps HBA with	8 Gbps HBA with	8 Gbps HBA with	8 Gbps HBA with	8 Gbps HBA with
Gbps SFP+, low-profile bracket, documentation profile bracket, documentation documenta	Box?	standard	standard	standard	standard	standard	standard
profile bracket, documentation documentation documentation  Environmental - Operating Temperature  Description Temperatur		bracket, one 8	bracket, two 8	bracket, one 8	bracket, two 8	bracket, one 8	bracket, two 8
Comparison   Com		Gbps SFP+, low-	Gbps SFP+, low-	Gbps SFP+, low-	Gbps SFP+, low-	Gbps SFP+, low-	Gbps SFP+, low-
Series   Condensing   Condens		profile bracket,	profile bracket,	profile bracket,	profile bracket,	profile bracket,	profile bracket,
Operating Temperature         to 50° C) (dry bulb)         to 50° C) (dry bulb)         to 50° C) (dry bulb)         32° to 131° F (0° to 55° C)         40° to 70° C)         50° to 158° F (-40° to 70° C)         50° to 15		documentation	documentation	documentation	documentation	documentation	documentation
Operating Temperature         to 50° C) (dry bulb)         to 50° C) (dry bulb)         (0° to 55° C)         (0° to 55° C) <td>Environmental -</td> <td>32º to 122º F (0º</td> <td>32º to 122º F (0º</td> <td>220+- 1210 F</td> <td>220+- 1210 F</td> <td>220+- 1210 F</td> <td>220+- 1210 5</td>	Environmental -	32º to 122º F (0º	32º to 122º F (0º	220+- 1210 F	220+- 1210 F	220+- 1210 F	220+- 1210 5
Environmental - Storage   -40° F to 163° F   (-43° to 73° C) (dry bulb)     -40° F to 163° F   (-43° to 73° C) (dry bulb)     -40° to 70° C)     (-40° to 70° C)   (-40° to 70° C)     (	Operating Temperature	to 50º C) (dry	to 50º C) (dry				
Temperature (-43° to 73° C) (dry bulb) (-43° to 73° C) (dry bulb) (-40° to 70° C) (-40° to 70°		bulb)	bulb)	(0° to 55° C)	(0.10.55.0)	(0° to 55° C)	(0° to 55° C)
Temperature (-43° to 73° C) (dry bulb) (-43° to 73° C) (dry bulb) (-40° to 70° C) (-40° to 70°	Environmental - Storage	-40º F to 163º F	-40º F to 163º F	2001 45005			
Condensing   Con	_	(-43º to 73º C)					
Condensing   Con				(-40° to 70° C)	(-40° to 70° C)	(-40° to 70° C)	(-40° to 70° C)
Condensing   Con	Environmental - Relative	5% to 93%	5% to 93%	E0/ to 050/ non	E0/ to 050/ non	100/ to 000/ non	100/ to 000/ nam
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	Humidity - Operating	(relative, non-	(relative, non-				
Media   Tes mm)   mm]   mm)   mm]   mm)   mm]		condensing)	condensing)	_	Condensing	Condensing	Condensing
Media   Tes mm)   mm]   mm)   mm]   mm)   mm]	Product Dimensions (HxW)	1.53 v. 6.5 in (42 v. 1.53 v. 6.5 iv (42		6.60 x 2.71 in	6.60 x 2.71 in	6.60 x 2.54 in	6.60 x 2.54 in
Media   Tes mm)   mm]   mm)   mm]		165 mm\	165 mm)	(167.64 x 68.8	(167.64x 68.8	(167.64 x 64.4	(167.64 x 64.4
		(ווווו) כסו	(וווווו כסו		mm)	mm)	mm)
(SFP+)   (SFP+)   (SFP+)   (SFP+)   (SFP+)   (SFP+)	Media	Multi-mode Optic	Multi-mode Optic	Multi-mode Optic	Multi-mode Optic	Multi-mode Optic	Multi-mode Optic
(1110) (110) (110) (110)		(SFP+)	(SFP+)	(SFP+)	(SFP+)	(SFP+)	(SFP+)



## **Technical Specifications**

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

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