

### Overview

The HP StorageWorks 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.

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### What's New

- HP StorageWorks 81B and 82B PCI-e Fibre Channel Host Bus Adapters now support ProLiant G6 servers.

### Models

#### Models

##### Brocade

	Description	Part Number
HP StorageWorks 81B PCI-e FC HBA Single Port	HP StorageWorks 8Gb PCI-e to Fibre Channel Host Bus Adapter	AP769A

HP StorageWorks 82B PCI-e FC HBA Dual Port	HP StorageWorks 8Gb Dual Channel PCI-e to Fibre Channel Host Bus Adapter	AP770A
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	Description	Part Number
Emulex HP StorageWorks 81E PCI-e FC HBA Single Port	HP StorageWorks 8Gb PCI-e to Fibre Channel Host Bus Adapter	AJ762A

HP StorageWorks 82E PCI-e FC HBA Dual Port	HP StorageWorks 8Gb Dual Channel PCI-e to Fibre Channel Host Bus Adapter	AJ763A
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	Description	Part Number
QLogic HP StorageWorks 81Q PCI-e FC HBA Single Port	HP StorageWorks 8Gb PCI-e to Fibre Channel Host Bus Adapter	AK344A

HP StorageWorks 82Q PCI-e FC HBA Dual Port	HP StorageWorks 8Gb Dual Channel PCI-e to Fibre Channel Host Bus Adapter	AJ764A
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### 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.

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#### HP Care Pack Services. Scalable, Flexible, Dependable. Like your storage.

Your storage is evolving. Get scalable support that evolves with it. HP Care Pack Services is an easy-to-buy, easy-to-use portfolio of packaged services covering your lifecycle needs. You can rely on our highly skilled, HP certified professionals to offer a breadth of expertise across leading storage technologies, and work side by side with you for optimal results. Partner with HP Technology Services to boost availability and avoid costly downtime by mitigating technology-related business risks. To help take the worry out of deploying, supporting and managing your storage technologies, we've designed a portfolio of service options that are as flexible, scalable and affordable as our storage.

#### Protect your business beyond the warranty

Standard warranty protects against product defects and some causes of downtime. HP Care Pack Services helps you proactively guard against unplanned downtime which can reduce your productivity and profitability. By using a standard approach to warranty uplifts, such as HP Care Pack Services, customers can be certain of consistency of operations for both mission-critical and standard business computing.

#### Extending warranties with HP Care Pack Services

The key to normalizing the warranty of combined solutions-is making service uplift simple: HP Care Pack Services. This portfolio of predefined packages, extending across the entire IT lifecycle, offering consulting, education, technical support, optimization, risk assessment, and more. It's entirely flexible allowing customers to extend the cover to the precise level of support required. Customer's standard hardware warranty, for example, can be upgraded to next-business-day response, to same-day coverage, or even to a committed six-hour call-to-repair service available 24 hours every day of the week.

#### Provide consistent, predictable levels of support across your entire department or business

Give you direct access to proven technical and problem-solving expertise

Offer a choice of response-time and repair-time commitments

Are available whenever and wherever you do business

For many products, post-warranty HP Care Pack Services are available when your original warranty has expired. Choose the support levels that meet your business requirements, from basic to mission-critical. In the new world of business technology, when your technology has to work for your business to work, who can you trust to make your technology work? HP Technology Services, the trusted business technology experts who manage your technology in action, because when technology works, business works.

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

**NOTE:** Care Pack Services availability may vary by product and country.

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

**Recommended Services**    **HP Care Pack Services recommended for optimal satisfaction of all deployments of your product.**  
 3-Year HP Support Plus 24 HP Host Bus Adapters (HBA) take on the support level of the HP server in  
 for HP Host Bus Adapters    which it is installed.  
 (HBA)

For HBA's installed outside of an HP environment: 3-Year HP Support Plus 24  
 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. 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.

HP Install Storage HBAs    For customers purchasing HBA as an add-on to existing HP Server or for  
 SVC    installation into a non-HP server, HP Hardware Installation provides initial  
 hardware installation of your product into your technology environment  
 (System configuration is not included)

Product Number	Product Name	Service Name	Care Pack Services Product # and Band	Alternate Care Pack Services Product #
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**NOTE:** HP Host Bus Adapters (HBA) take on the support level of the HP server in which it is installed. For  
 support of an HP HBA in a non-HP Server, the following services are recommended:

AP769A	HP 81B PCIe 8Gb FC Single Port HBA	3-Year HP Support Plus 24	HA110A3-8D4	
AP770A	HP 82B PCIe 8Gb FC Dual Port HBA	3-Year HP Support Plus 24	HA110A3-8D4	
AK344A	HP StorageWorks 81Q PCI-e FC HBA Single Port	3-Year HP Support Plus 24	HA110A3-8D4	
AJ764A	HP StorageWorks 82Q PCI-e FC HBA Dual Port	3-Year HP Support Plus 24	HA110A3-8D4	
AJ762A	HP StorageWorks 81E PCI-e FC HBA Single Port	3-Year HP Support Plus 24	HA110A3-8D4	
AJ763A	HP StorageWorks 82E PCI-e FC HBA Dual Port	3-Year HP Support Plus 24	HA110A3-8D4	

**NOTE:** Installation is included with Server install if purchased together. If HBA is ordered as an add-on to  
 existing HP Server or for installation into a non-HP Server, the following service is recommended:

HP Install Storage HBAs SVC	HA113A1-527	U6305E
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### Service and Support, HP Care Pack and Warranty Information

#### eSupport

HP eSupport is a portfolio of technology-based services that assist you with managing your business environment - from the desktop to the data center.

#### Support Portal

The HP support portal provides one-stop access to the information, tools and services you need to manage the daily operations of your IT environment.

Features include:

- Access to self-solve tools (including search technical knowledge base)
- Efficient logging and tracking of support cases
- Collaboration with other business and IT professionals
- Download of patches and drivers
- Access to diagnostic tools
- Proactive notification of relevant information

Access to certain features of the support portal requires an HP service agreement. To access the support portal, visit: <http://www.hp.com/support>

#### Customer Technical Training

Consider education as an integral part of your strategy to get the best return on investment for your HP storage solution. HP offers a variety of training courses on storage software, networking, archiving and disk storage systems. Our classes are available in many delivery modalities from traditional instructor-led courses at one of our 80 training centers worldwide to on-site training customized to your needs or online. [www.hp.com/learn/storage](http://www.hp.com/learn/storage)

#### HP Services Awards

HP Services continues to be recognized for service and support excellence by customers, partners, industry organizations and publications around the world. Recent honors and award reflect our services team's dedications, technical expertise, professionalism and uncompromising commitment to customer satisfaction. For a list of all our awards, please visit: <http://h20219.www2.hp.com/services/cache/433028-0-0-225-121.html>

#### Additional Services Information

For more information about HP Care Pack Services for Storage, please visit: <http://www.hp.com/hps/storage>

If you have specific questions, contact your local HP representative. Contact information for a representative in your area can be found at "Contact HP" <http://www.hp.com>

### Technical Specifications

	81B /AP769A	82B/AP770A	81E/AJ762A	82E/AJ763A	81Q/AK344A	82Q/AJ764A
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
<b>OS Supported</b> <b>NOTE:</b> Always refer to the HP StorageWorks Single Point of Connectivity Knowledge for HP Storage Products at: <a href="http://www.hp.com/storage/spock">www.hp.com/storage/spock</a> for specific product support information.						
Windows Server 2003	x86, x64	x86, x64	x86, x64, IA64	x86, x64, IA64	x86, x64, IA64	x86, x64, IA64
Windows Server 2008	x86, x64	x86, x64	x86, x64, IA64	x86, x64, IA64	x86, x64, IA64	x86, x64, IA64
VMware v3.5 U2 minimum	N/A	N/A	✓	✓	✓	✓
RHEL 4	N/A	N/A	x86, x64, IA64	x86, x64, IA64	x86, x64, IA64	x86, x64, IA64
RHEL 5	x86, x64	x86, x64	x86, x64, IA64	x86, x64, IA64	x86, x64, IA64	x86, x64, IA64
SLES 10	x86, x64	x86, x64	x86, x64, IA64	x86, x64, IA64	x86, x64, IA64	x86, x64, IA64
SLES 11	x86, x64	x86, x64	x86, x64, IA64	x86, x64, IA64	x86, x64, IA64	x86, x64, IA64
Solaris 10 x86	N/A	N/A	x86	x86	x86	x86
Always refer to the HP StorageWorks Single Point of Connectivity Knowledge for HP Storage Products at: <a href="http://www.hp.com/storage/spock">www.hp.com/storage/spock</a> for specific product support information.						
Servers Supported	HP ProLiant	HP ProLiant	HP ProLiant and HP Integrity	HP ProLiant and HP Integrity	HP ProLiant and HP Integrity	HP ProLiant and HP Integrity
	ProLiant G5/G6:	ProLiant G5/G6:	ProLiant G5/G6:	ProLiant G5/G6:	ProLiant G5/G6:	ProLiant G5/G6:
	DL160	DL160	DL160	DL160	DL160	DL160
	DL165	DL165	DL165	DL165	DL165	DL165
	DL180	DL180	DL180	DL180	DL180	DL180
	DL185	DL185	DL185	DL185	DL185	DL185
	DL320 G6 only	DL320 G6 only	DL320	DL320	DL320	DL320
	DL360	DL360	DL360	DL360	DL360	DL360
	DL365	DL365	DL365	DL365	DL365	DL365
	DL370	DL370	DL370	DL370	DL370	DL370
	DL380	DL380	DL380	DL380	DL380	DL380
	DL385	DL385	DL385	DL385	DL385	DL385
	DL580	DL580	DL580	DL580	DL580	DL580
	DL585	DL585	DL585	DL585	DL585	DL585
	ML350	ML350	ML350	ML350	ML350	ML350
	ML370	ML370	ML370	ML370	ML370	ML370
Array Platforms Supported	EVA4000	EVA4000	EVA4x00,	EVA4x00,	EVA4x00,	EVA4x00,
	EVA4100	EVA4100	EVA4400s	EVA4400s	EVA4400s	EVA4400s
	EVA4400	EVA4400	EVA6x00,	EVA6x00,	EVA6x00,	EVA6x00,
	EVA4400s	EVA4400s	EVA8x00,	EVA8x00,	EVA8x00,	EVA8x00,
	EVA6000	EVA6000	MSA1000	MSA1000	MSA1000	MSA1000
	EVA6100	EVA6100	MSA1500	MSA1500	MSA1500	MSA1500
	EVA8000	EVA8000	MSA2000fc	MSA2000fc	MSA2000fc	MSA2000fc
	EVA8100	EVA8100	XP128/1024	XP128/1024	XP128/1024	XP128/1024
	MSA2000fc	MSA2000fc	XP10000/12000	XP10000/12000	XP10000/12000	XP10000/12000
			XP20000/24000	XP20000/24000	XP20000/24000	XP20000/24000
What's Included in the	8 Gbps HBA	8 Gbps HBA				



### Technical Specifications

Box?	with standard bracket, one 8 Gbps SFP+, low-profile bracket, documentation	with standard bracket, two 8 Gbps SFP+, low-profile bracket, documentation	8 Gbps HBA, one 8 Gbps SFP+, low-profile bracket, documentation	8 Gbps HBA, two 8 Gbps SFP+, low-profile bracket, documentation	8 Gbps HBA, one 8 Gbps SFP+, low-profile bracket, documentation	8 Gbps HBA, 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)
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

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