

Overview

The HP StorageWorks 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

- Updated support for the 8Gb FC HBAs



Models

Models

Brocade

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

HP StorageWorks 82B PCIe FC HBA Dual Port	HP StorageWorks 8Gb Dual Channel PCIe to Fibre Channel Host Bus Adapter	AP770A
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Emulex

HP StorageWorks 81E PCIe FC HBA Single Port	HP StorageWorks 8Gb PCIe to Fibre Channel Host Bus Adapter	AJ762A
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HP StorageWorks 82E PCIe FC HBA Dual Port	HP StorageWorks 8Gb Dual Channel PCIe to Fibre Channel Host Bus Adapter	AJ763A
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QLogic

HP StorageWorks 81Q PCIe FC HBA Single Port	HP StorageWorks 8Gb PCIe to Fibre Channel Host Bus Adapter	AK344A
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HP StorageWorks 82Q PCIe FC HBA Dual Port	HP StorageWorks 8Gb Dual Channel PCIe 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.

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.



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 SVC For customers purchasing HBA as an add-on to existing HP Server or for 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 PCIe FC HBA Single Port	3-Year HP Support Plus 24	HA110A3-8D4	
AJ764A	HP StorageWorks 82Q PCIe FC HBA Dual Port	3-Year HP Support Plus 24	HA110A3-8D4	
AJ762A	HP StorageWorks 81E PCIe FC HBA Single Port	3-Year HP Support Plus 24	HA110A3-8D4	
AJ763A	HP StorageWorks 82E PCIe 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

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
OS Supported						
NOTE: Always refer to the HP StorageWorks 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	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, 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: www.hp.com/storage/spock 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
	G5:	G5:	G5:	G5:	G5:	G5:
	DL160 G5	DL160 G5	DL160 G5	DL160 G5	DL160 G5	DL160 G5
	DL165 G5	DL165 G5	DL165 G5	DL165 G5	DL165 G5	DL165 G5
	DL180 G5	DL180 G5	DL180 G5	DL180 G5	DL180 G5	DL180 G5
	DL185 G5	DL185 G5	DL185 G5	DL185 G5	DL185 G5	DL185 G5
	DL360 G5	DL360 G5	DL360 G5	DL360 G5	DL360 G5	DL360 G5
	DL365 G5	DL365 G5	DL365 G5	DL365 G5	DL365 G5	DL365 G5
	DL380 G5	DL380 G5	DL380 G5	DL380 G5	DL380 G5	DL380 G5
	DL385 G5	DL385 G5	DL385 G5	DL385 G5	DL385 G5	DL385 G5
	DL580 G5	DL580 G5	DL580 G5	DL580 G5	DL580 G5	DL580 G5
	DL585 G5	DL585 G5	DL585 G5	DL585 G5	DL585 G5	DL585 G5
	DL785 G5	DL785 G5	DL785 G5	DL785 G5	DL785 G5	DL785 G5
	ML350 G5	ML350 G5	ML350 G5	ML350 G5	ML350 G5	ML350 G5
	ML370 G5	ML370 G5	ML370 G5	ML370 G5	ML370 G5	ML370 G5
	G6:	G6:	G6:	G6:	G6:	G6:
	DL160 G6	DL160 G6	DL120 G6	DL120 G6	DL120 G6	DL120 G6
	DL160se G6	DL160se G6	DL160 G6	DL160 G6	DL160 G6	DL160 G6
	DL165 G6	DL165 G6	DL160se G6	DL160se G6	DL160se G6	DL160se G6
	DL170h G6	DL170h G6	DL165 G6	DL165 G6	DL165 G6	DL165 G6
	DL180 G6	DL180 G6	DL170h G6	DL170h G6	DL170h G6	DL170h G6
	DL320 G6	DL320 G6	DL180 G6	DL180 G6	DL180 G6	DL180 G6



QuickSpecs

Technical Specifications

	DL360 G6 DL370 G6 DL380 G6 DL385 G6 DL585 G6 DL785 G6 ML350 G6 ML370 G6	DL360 G6 DL370 G6 DL380 G6 DL385 G6 DL585 G6 DL785 G6 ML350 G6 ML370 G6	DL320 G6 DL360 G6 DL370 G6 DL380 G6 DL385 G6 DL585 G6 DL785 G6 ML350 G6 ML370 G6	DL320 G6 DL360 G6 DL370 G6 DL380 G6 DL385 G6 DL585 G6 DL785 G6 ML350 G6 ML370 G6	DL320 G6 DL360 G6 DL370 G6 DL380 G6 DL385 G6 DL585 G6 DL785 G6 ML350 G6 ML370 G6	DL320 G6 DL360 G6 DL370 G6 DL380 G6 DL385 G6 DL585 G6 DL785 G6 ML350 G6 ML370 G6
	G7:	G7:	G7:	G7:	G7:	G7:
	DL165 G7 DL360 G7 DL380 G7 DL385 G7 DL580 G7 DL585 G7 SL165z G7	DL165 G7 DL360 G7 DL380 G7 DL385 G7 DL580 G7 DL585 G7 SL165z G7	DL165 G7 DL360 G7 DL380 G7 DL385 G7 DL580 G7 DL585 G7 SL165z G7	DL165 G7 DL360 G7 DL380 G7 DL385 G7 DL580 G7 DL585 G7 SL165z G7	DL165 G7 DL360 G7 DL380 G7 DL385 G7 DL580 G7 DL585 G7 SL165z G7	DL165 G7 DL360 G7 DL380 G7 DL385 G7 DL580 G7 DL585 G7 SL165z G7
Array Platforms Supported	EVA: EVA4x00 EVA4400s EVA6x00 EVA8x00	EVA: EVA4x00 EVA4400s EVA6x00 EVA8x00	EVA: EVA4x00, EVA4400s EVA6x00, EVA8x00	EVA: EVA4x00, EVA4400s EVA6x00, EVA8x00	EVA: EVA4x00, EVA4400s EVA6x00, EVA8x00	EVA: EVA4x00, EVA4400s EVA6x00, EVA8x00
	XP:	XP:	XP:	XP:	XP:	XP:
	XP10000/12000 XP20000/24000 P9500	XP10000/12000 XP20000/24000 P9500	XP128/1024 XP10000/12000 XP20000/24000 P9500	XP128/1024 XP10000/12000 XP20000/24000 P9500	XP128/1024 XP10000/12000 XP20000/24000 P9500	XP128/1024 XP10000/12000 XP20000/24000 P9500
	MSA:	MSA:	MSA:	MSA:	MSA:	MSA:
	MSA2000fc P2000 G3	MSA2000fc P2000 G3	MSA1000 MSA1500 MSA2000fc P2000 G3	MSA1000 MSA1500 MSA2000fc P2000 G3	MSA1000 MSA1500 MSA2000fc P2000 G3	MSA1000 MSA1500 MSA2000fc P2000 G3
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)



Technical Specifications

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 (167.64x 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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