

Overview

The HP StorageWorks 4Gb PCI-Express Fibre Channel Host Bus Adapters (HBAs) support customers using HP ProLiant servers with PCIe I/O slots running a broad range of operating systems. These Fibre Channel HBAs are second generation products that support this new higher speed I/O bus architecture and provide customers the ability to use it to connect to their HP StorageWorks arrays.

For supported Fibre Channel SAN Switches, please consult the SAN Design Reference Guide at the following URL:
<http://h18006.www1.hp.com/products/storageworks/san/documentation.html>

Models

| Brocade | Description | Part Number |
|--|--|-------------|
| HP StorageWorks 41B 4Gb PCIe FC HBA | HP StorageWorks Single Channel 4Gb PCIe Fibre Channel Host Bus Adapter | AP767A |
| HP StorageWorks 42B 4Gb Dual-Port PCIe FC HBA | HP StorageWorks Dual Channel 4Gb PCIe Fibre Channel Host Bus Adapter | AP768A |
| Emulex | | |
| HP StorageWorks FC2142 4Gb PCIe HBA | HP StorageWorks Single Channel 4Gb PCIe Fibre Channel Host Bus Adapter | A8002A |
| HP StorageWorks FC2242 Dual Channel 4Gb PCIe HBA | HP StorageWorks Dual Channel 4Gb PCIe Fibre Channel Host Bus Adapter | A8003A |
| QLogic | | |
| HP StorageWorks FC1142 4Gb PCIe HBA | HP StorageWorks Single Channel 4Gb PCIe Fibre Channel Host Bus Adapter | AE311A |
| HP StorageWorks FC1242 Dual Channel 4Gb PCIe HBA | HP StorageWorks Dual Channel 4Gb PCIe Fibre Channel Host Bus Adapter | AE312A |

What's New

- HP StorageWorks 41B and 42B PCIe Fibre Channel Host Bus Adapters now support ProLiant G6 servers.

Overview

At A Glance

Industry leading PCI-Express based solutions for Fibre Channel

- Agility: Adds 4Gb PCI Express single and dual channel I/O connectivity to HP storage arrays.
- Throughput: 4 Gbps FC increases aggregate throughput rate to 800 MBps per channel in full-duplex mode.
- Performance: PCI-Express host bus interface for high throughput applications.
- High Transfer Rate: Minimum 150,000 IOPS per channel delivers high I/O transfer rates for storage applications.
- Management: Enterprise wide management capabilities.

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 and Support, HP Care Pack, and Warranty Information

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 ServicesHP 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 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 # | Alternate Care Pack Services Product # |
|----------------|--------------|--------------|---------------------------------|---|
|----------------|--------------|--------------|---------------------------------|---|

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:

| | | | | |
|--------|--|------------------------------|-------------|--|
| AP767A | HP 41B PCI-e 4Gb FC Single Port HBA | 3-Year HP Support Plus 24 | HA110A3-8D4 | |
| AP768A | HP 42B PCI-e 4Gb FC Dual Port HBA | 3-Year HP Support Plus 24 | HA110A3-8D4 | |
| AE311A | HP StorageWorks FC1142 4Gb PCI-e HBA | 3-Year HP Support Plus 24 | HA110A3-8D4 | |
| AE312A | HP StorageWorks FC1242 Dual Channel 4Gb PCI-e HBA | 3-Year HP Support Plus 24 | HA110A3-8D4 | |
| A8002A | HP StorageWorks FC2142 4Gb PCI-e HBA | 3-Year HP Support Plus 24 | HA110A3-8D4 | |
| A8003A | HP StorageWorks FC2242 Dual Channel 4Gb PCI-e HBA | 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 |
|--------------------------------|-------------|--------|

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/433028-00-225-121.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

| Family Comparison Table | | | | | | |
|---|---|---|--|--|--|--|
| | 41B/AP767A | 42B/AP768A | FC2142SR / A8002A | FC2242SR / A8003A | FC1142SR / AE311A | FC1242SR / AE312A |
| Number of channels | Single | Dual | Single | Dual | Single | Dual |
| Port Speed | 4 Gbps | 4 Gbps | 4 Gbps | 4 Gbps | 4 Gbps | 4 Gbps |
| Slot type supported | PCI Express to Fibre Channel | PCI Express to Fibre Channel | PCI Express to Fibre Channel | PCI Express to Fibre Channel | PCI Express to Fibre Channel | PCI Express 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 | 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 v2.x 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 | N/A | 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 |
| | ProLiant G5/G6: DL160 DL165 DL180 DL185 DL320 G6 only DL360 DL365 DL370 DL380 DL385 DL580 DL585 ML350 ML370 | ProLiant G5/G6: DL160 DL165 DL180 DL185 DL320 G6 only DL360 DL365 DL370 DL380 DL385 DL580 DL585 ML350 ML370 | ProLiant G5/G6: DL160 DL165 DL180 DL185 DL320 DL360 DL365 DL370 DL380 DL385 DL580 DL585 DL785 ML350 ML370 | ProLiant G5/G6: DL160 DL165 DL180 DL185 DL320 DL360 DL365 DL370 DL380 DL385 DL580 DL585 DL785 ML350 ML370 | ProLiant G5/G6: DL160 DL165 DL180 DL185 DL320 DL360 DL365 DL370 DL380 DL385 DL580 DL585 DL785 ML350 ML370 | ProLiant G5/G6: DL160 DL165 DL180 DL185 DL320 DL360 DL365 DL370 DL380 DL385 DL580 DL585 DL785 ML350 ML370 |
| Array Platforms Supported | EVA4000, EVA4100, EVA4400, EVA4400s, EVA6000, EVA6100 | EVA4000, EVA4100, EVA4400, EVA4400s, EVA6000, EVA6100 | EVA3000, EVA4x00, EVA4400s, EVA5000, EVA6x00, EVA8x00, | EVA3000, EVA4x00, EVA4400s, EVA5000, EVA6x00, EVA8x00, | EVA3000, EVA4x00, EVA4400s, EVA5000, EVA6x00, EVA8x00, | EVA3000, EVA4x00, EVA4400s, EVA5000, EVA6x00, EVA8x00, |

Technical Specifications

| | | | | | | |
|---|---|---|---|---|--|--|
| | EVA8000, EVA8100 MSA2000fc | EVA8000, EVA8100 MSA2000fc | XP Disk Arrays, MSA1000 MSA1500, MSA2000fc | XP Disk Arrays, MSA1000 MSA1500, MSA2000fc | XP Disk Arrays, MSA1000, MSA1500, MSA2000fc | XP Disk Arrays, MSA1000, MSA1500, MSA2000fc |
| 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 113° F (0° to 45° C) | 32° to 113° F (0° to 45° 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) | -4 ° to 158° F (-20° to 70° C) | -4 ° to 158° F (-20° to 70° C) | -20° to 158° F (-4° to 70° C) | -20° to 158° F (-4° 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 | 5% to 95% 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 2.54 in (167.64mm x 64.4 mm) | 6.60 x 2.54 in (167.64mm x 64.4 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 | Multi-mode Optic | Multi-mode Optic | Multi-mode Optic | Multi-mode Optic | Multi-mode Optic |
| 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 |
| 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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