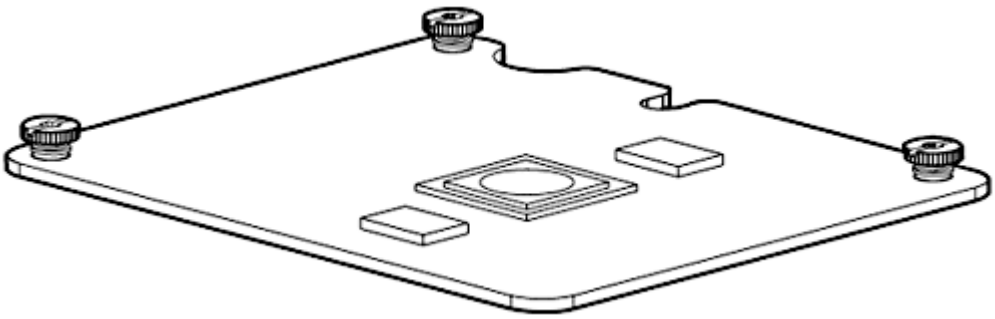
Overview

The QMH2572 8Gb FC HBA is a dual channel PCI Express Fibre Channel mezzanine card that provides reliable, high-performance connectivity at up to 8Gb/s. This is a Type A mezzanine card for HP BladeSystem c-Class that is compatible with HP ProLiant Server blades starting with Gen8. It is optimized for HP and is also supported by third-party SAN vendors. For details on supported HP Fibre Channel SAN Switches, please consult the SAN Design Reference Guide at the following WEB address: http://www.hp.com/go/san-documentation



HP QMH2572 8Gb FC HBA for HP BladeSystem c-Class

Models

HP QMH2572 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class	651281-B21

Key Features

- Advanced embedded support for virtualized environments
  - Supports virtualized servers for overall effective server utilization
  - Allows multiple logical (virtual) connections to share the same physical ports
  - 256 queue pairs for intensive virtualization
  - Prioritization of queues prevents conflicts between multiple queues
- Fault tolerant 8Gb HBA Architecture
- Reduced power consumption
  - Latest generation technology saves power
  - Reduced number of components on each FC HBA reduces overall power consumption
- PCI Express Bus: Gen I (x8), Gen II (x4)
- Two 8Gb/s Fibre Channel ports
- 8/4/2 automatic speed negotiation without throttling down to the lowest target speed on the network
- Multi-Path support for redundant HBAs and paths including Linux driver failover.
- Superior performance capable of sustaining up to 200,000 I/Os per second per channel
- RoHS compliance
- QLogic SANsurfer Manager for centralized management and remote control of distributed HBAs.
- Operating Systems and Virtualization Software Supported: Windows Server 2008, VMware 4.1, VMware 5.0, RHEL 5.7, RHEL 6.0, SLES 10, SLES 11, Solaris 10 x86. For full list of compatible Operating Systems please visit : http://spock.corp.hp.com

Overview

Features and Benefits

- Performance Optimized
  - Reduces response time of mission critical Datacenter applications and backup windows
  - 2X throughput of 4Gb
- Virtualization Optimized
  - Delivers enhanced security, Quality-of-Service and Dynamic Provisioning during live migration
- Power Optimized
  - Adaptive power management techniques to ensure lowest power & cooling enabled by QLogic StarPower™ Technology
- RAS Optimized
  - Highest Data Integrity; Overlapping Protection Domains (OPD) extended for control and data paths
- Security Optimized
  - SAN-level authentication (FC-SP), fabric-level isolation (NPIV and end-to-end data integrity (T10)
- Management Optimized
  - Unified driver model eliminates potential interop issues between firmware and driver versions and cuts upgrade time in half
  - Common drivers for 8Gb, 4Gb and 2Gb

Kit Contents

1. HP QMH2572 8 GB FC HBA for HP BladeSystem c-Class
2. Quick install card
3. Product warranty statement

NOTE: Drivers, user guide, and utilities via http://www.hp.com/go/QMH2572

Product Highlights

BladeSystem Compatibility

Supported HP ProLiant Server Blades

- BL660c Gen8
- BL465c Gen8
- BL460c Gen8
- BL420c Gen8

NOTE: The HP QMH2572 8Gb FC HBA for HP BladeSystem c-Class must be deployed with the c-Class BladeSystem infrastructure and will only work with the BL c-Class Server Enclosures.
NOTE: The HP QMH2572 8Gb FC HBA for HP BladeSystem c-Class is not compatible with HP ProLiant G7 and earlier server blades.
NOTE: This is a Type A mezzanine card, and can be configured in either Type A or Type B slots on HP ProLiant Gen8 Server Blades.

Switch interoperability

HP Storage and Third Party Switches

- 8Gb Switches and Directors
- 4Gb Switches and Directors
- 2Gb Switches and Directors
- Compatible with Fibre Channel switches including HP and third party vendors including Cisco, Brocade, and McDATA
- HP 4Gb Fibre Channel Pass Thru Module for BladeSystem c-Class*

NOTE: *Servers must connect to a SAN and never directly to a storage device.

Standard Features

Service and Support

HP Technology Services

HP Technology Services offers you consultants and support experts to solve your most complex infrastructure problems. We help keep your business running, boost availability and avoid downtime.

Protect your business beyond warranty with HP Care Pack Services
When you buy HP Options, it's also a good time to think about what level of service you may need. HP Care Pack services provide total care and support expertise with committed response choices designed to meet your IT and business need.

HP Foundation Care services deliver scalable support-packages for HP industry-standard servers and software. You can choose the type and level of service that is most suitable for your business needs. New to this portfolio is HP Collaborative Support. If you are running business critical environments, HP offers Proactive Care or Critical Advantage. These services help you deliver high levels of application availability through proactive service management and advanced technical response.

Here is the support service recommendation from the Foundation Care and Proactive Care portfolio. For customized support service solution, HP can work with you to tailor a service solution for your unique support requirements using broader services portfolio of Foundation Care and Proactive Care.

Recommended Services

Recommended HP Care Pack Services for optimal satisfaction with your HP product

3-Year HP 24x7 4 hour Response, Hardware Support Onsite Service

Provides you with rapid remote support and if required an HP authorized representative who will arrive on site any time and day of the year to begin hardware maintenance service within 4 hours of the service request being logged.

http://h20195.www2.hp.com/V2/GetPDF.aspx/5982-6547EEE.pdf

OR

3-Year HP 24x7 4 hour Response, HP Collaborative Support

Offers customers a single point of contact for server problem diagnosis, hardware problem resolution, and basic software problem diagnosis, fault isolation, and resolution if available to HP. If the problem is with HP HW, the representative will arrive on site any time and day of the year to begin hardware maintenance service within 4 hours of the service request being logged. In case, the issue is with HP or supported third-party software product and cannot be resolved by applying known fixes, HP will contact the third-party vendor and create a problem incident on your behalf.

HP ProLiant Server Hardware Installation

Provides for the basic hardware installation of HP branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner.

http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN.pdf

Standard Features

Related Services

Related HP Care Pack Services to enhance your HP product experience

3-Year HP 24x7 4 hour Response, Proactive Care or Critical Advantage

Helps optimize your systems and delivers high levels of application availability through proactive service management and advanced technical response. A skilled Technical Manager will own your query or issue end to end until resolved, delivering a single point of contact for you.

http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA3-2140ENW.pdf

OR

3-Year HP 6-hour Onsite Call-to-Repair, HP Collaborative Support

Offers customers a single point of contact for server problem diagnosis, hardware problem resolution to return the hardware in operating condition within 6 hours of the initial service request to the HP Global Solution Center, and basic software problem diagnosis, fault isolation, and resolution if available to HP. In case, the issue is with HP or supported third-party software product and cannot be resolved by applying known fixes, HP will contact the third-party vendor and create a problem incident on your behalf.

HP Proactive Select Service

Provides a flexible way to purchase HP best-in-class consultancy and technical services. You can buy Proactive Select Service Credits when you purchase your hardware and then use the credits over the next 12 months.

http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-3842ENN.pdf

Insight Remote Support

Provides 24 X 7 remote monitoring, proactive notifications, and problem resolution. Learn more http://www.hp.com/go/insightremotesupport

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HP Support Center

Personalized online support portal with access to information, tools and experts to support HP business products. Submit support cases online, chat with HP experts, access support resources c collaborate with peers. Learn more http://www.hp.com/go/hpsc

HP's Support Center Mobile App* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime. HP Insight Remote Support and HP Support Center are available at no additional cost with a HP warranty, HP Care Pack or HP contractual support agreement.

*HP' Support Center Mobile App is subject to local availability.

Parts and materials

HP will provide HP-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements. Supplies and consumable parts will not be provided as part of this service; standard warranty terms and conditions apply. Parts and components that have exceeded their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual or the technical product data sheet will not be provided, repaired or replaced as part of this service.

Standard Features

Warranty / Service Coverage	For ProLiant servers and storage systems, this service covers HP-branded hardware options qualified for the server, purchased at the same time or afterward, internal to the enclosure, as well as external monitors up to 22" and tower UPS products; these items will be covered at the same service level and for the same coverage period as the server unless the maximum supported lifetime and/or the maximum usage limitation has been exceeded. Coverage of the UPS battery is not included; standard warranty terms and conditions apply. The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by HP due to malfunction. It does not apply to any exchange of Disk or SSD/Flash Drives that have not failed. SSD/Flash Drives that are specified by HP as consumable parts and/or that have exceeded maximum supported lifetime and/or the maximum usage limit as set forth in the manufacturer's operating manual or the technical data sheet are not eligible for the defective media retention service feature option.
For more information	To learn more on services for HP ESSN Options, please contact your HP sales representative or HP Authorized Channel Partner. Or visit: http://www.hp.com/services/proliant or www.hp.com/services/bladesystem

Related Options

Service and Support Offerings (HP Care Pack Services)	**NOTE:** The HP Care Pack service part numbers below for ProLiant BL c-Class server blades, cover the server blade and all HP branded hardware options qualified for the server, purchased at the same time or afterwards, internal to the server.	
	Hardware Services On-site Service	
	HP 3year 4hour 13x5 c-Class Server Blade HW Support	UE458E
	HP 3year 4hour 24x7 c-Class Server Blade Hardware Support	UE459E
	HP 3year 6hour 24x7 Call to Repair c-Class Server Blade Hardware Support	UE460E
	Support Plus 24	
	HP 3year SupportPlus24 Microsoft c-ClassServer Blade Service	UE473E
	NOTE: HP Care Pack services for the c7000 and c3000 Enclosure cover the enclosure, power supplies and fans. HP qualified rack options are covered by these services when installed within the same rack. HP Supported Ethernet devices covered include the Ethernet Pass-Through Module, Fibre Channel Pass-Through Module, Cisco Catalyst 3020 Blade Switch and GbE2c Ethernet Blade Switch.	
	Hardware Services On-site Service	
	HP 3 year Next business day c7000 Enclosure Hardware Support **NOTE:** Uplifts the Ethernet devices to the same level of warranty as the c-class enclosure	UE477E
	HP 3 year 4 hour 13x5 c7000 Enclosure Hardware Support	UE478E
	HP 3 year 4 hour 24x7 c7000 Enclosure Hardware Support	UE479E
	HP 3 year 6 hour 24x7 Call to Repair c7000 Enclosure Hardware Support	UE480E
	NOTE: The HP Care Pack service part numbers below covers the HP 4Gb, 12 Port SAN Switch & 4Gb, 12 Port SAN Switch Upgrade LTU.	
	Hardware Services On-site Service	
	HP 3 year Next business day SAN Blade Switch Hardware Support	UC007E
	HP 3 year 4 hour 13x5 SAN Blade Switch Hardware Support	UC008E
	HP 3 year 4 hour 24x7 SAN Blade Switch Hardware Support	UC009E
	HP 3 year 6 hour 24x7 Call to Repair SAN Blade Switch Hardware Support	UC023E
	NOTE: The HP Care Pack service part numbers below covers the HP 4Gb, 24 Port SAN Switch.	
	Hardware Services On-site Service	
	HP 3 Years Next business day c-Class SAN Switch Hardware Support	UE436E
	HP 3 Years 4 hour 13x5 c-Class SAN Switch Hardware Support	UE437E
	HP 3 Years 4 Hour 24 hours days 1-7 c-Class SAN Switch Hardware Support	UE438E
	HP 3 Years 6 Hour 24x7 Call-To-Repair c-Class SAN Switch Hardware Support	UE439E
	HP Installation Storage Switches Service	U5988E
	NOTE: The HP Care Pack service part numbers below covers the HP 4Gb, 24 Port SAN Switch Power Pack.	
	Hardware Services On-site Service	
	Support Plus	
	HP 3 year Support Plus 4/24 SAN Switch Power Pack Service	UE728E
	Support Plus 24	
	HP 3 year Support Plus 24 4/24 Switch Power Pack Service	UE729E
	Installation & Start-up Services	
	HP Startup Blade System c-Class Infrastructure Service	UE602E
	NOTE: Provides for an integrated hardware and software implementation that includes remote service planning, onsite deployment of hardware and software, installation verification testing and customer orientation. Hardware deployment covers the installation of a single BladeSystem enclosure that include server	

Related Options

blades (up to 16), Ethernet network interconnect, and power options. Software deployment covers the installation and configuration of HP Systems Insight Manager (SIM), HP Rapid Deployment Pack (RDP), and deploy up to two operating system editions of either Windows or Linux, using scripted operating system installation software	
HP Install c-Class Server Blade Service	UE493E
HP Install c-Class Enclosure & ServerBlade Service	UE494E
HP Installation and Startup for Insight Control Server Deployment - previously Rapid Deployment Pack	U5683E
NOTE: Provides installation on a Customer supplied server designated as a Deployment Server. Includes the deployment of a single server. This new server will be deployed using either one of the pre-configured scripts or an image. In addition, the service will provide for the capture and storage of the configuration of the newly deployed server and orientation on product usage. To be delivered during standard office ours, standard office days.	
HP Implementation HP Rapid Deployment Pack (Basic) Service	UA042E
NOTE: Service coverage: onsite installation of the Vulnerability and Patch Management (VPM) software on a customer designated server, configuration of the VPM software to acquire security patches, enabling the VPM software to scan up to five (5) systems, applying the security patches to the designated servers, generating a report from VPM that shows the vulnerability assessment results, and providing customer with an orientation to the software.	
HP Startup HP Systems Insight Manager Service	UA041E
HP Startup HP Systems Insight Manager Management Agents Service	UA040E
Software Operating Environment Care Packs	
HP 1year 9x5 3incidents Microsoft/Novell Operating Environment SW Technical Support	U8169E
HP 1 year 9x5 10 incident Red Hat High Performance Computing Software Technical Support	U3402E
HP 1year 9x5 3incidents SUSE SLES8 SW Technical Support	U9615E
HP 1year 9x5 3incidents ProLiant Essentials SW Technical Support	U8222E
HP 1year 24x7 3incidents ProLiant Essentials SW Technical Support	U8301E
HP 1year 9x5 10incidents ProLiant Essentials SW Technical Support	UE006E
HP 1year 24x7 10incidents ProLiant Essentials SW Technical Support	UE116E
HP 1year 9x5 25incidents ProLiant Essentials SW Technical Support	UE117E
HP 1year 24x7 25incidents ProLiant Essentials SW Technical Support	UE118E
HP 1year 9x5 50incidents ProLiant Essentials SW Technical Support	UE119E
HP 1year 24x7 50incidents ProLiant Essentials SW Technical Supprot	UE120E
HP 1year 9x5 ProLiant Essentials SW Technical Support	UE121E
HP 1year 24x7 ProLiant Essentials SW Technical Support	UE452E
HP 3y 9x5 ProLiant Esnt SW Tech Supp	UE453E
HP 3y 24x7 ProLiant Esnt SW Tech Supp	UE454E

Technical Specifications

System Unit	**Dimensions** (H x W)	3.5 in x 3.9 in	
	Media	N/A (Always connects to BladeSystem interconnect module)	
	Ports	Two	
	System Inlet Temperature	Operating	10° to 70°C (55° to 158°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30°C (86°F).
		Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
	Relative Humidity (non-condensing)	Operating	10 to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.
		Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
	Altitude	Operating	3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
		Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Power Consumption	Max	7.56 W
		Typical	4.13 W on x8 PCIe Gen 1 3.8 W possible on x4 PCIe Gen 2 with PCIe Gen 2 capable system

Environment-friendly Products and Approach	**End-of-life Management and Recycling**	Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: http://www.hp.com/go/green. To recycle your product, please go to: http://www.hp.com/go/green or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/green. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

Technical Specifications

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