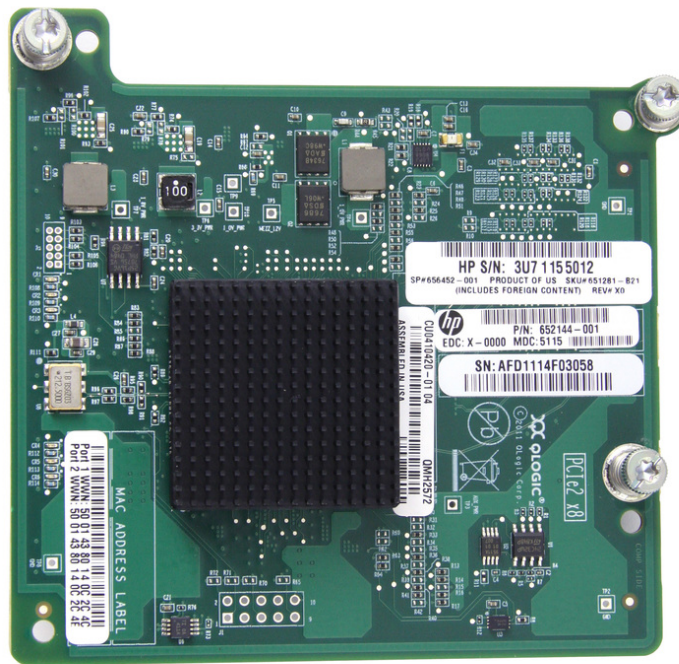


Overview

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

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 HPE BladeSystem c-Class that is compatible with HPE ProLiant Server blades starting with Gen8. It is optimized for HPE and is also supported by third-party SAN vendors. For details on supported HPE Fibre Channel SAN Switches, please consult the SAN Design Reference Guide at the following WEB address:

<http://www8.hp.com/us/en/products/switches/>



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

Models

HPE 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

Overview

- 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>

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

Product Highlights

BladeSystem Compatibility

Supported HPE ProLiant Server Blades	<ul style="list-style-type: none">• BL460c Gen9• BL660c Gen9• WS460c Gen9
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NOTE: The HPE QMH2572 8Gb FC HBA for HPE 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 HPE QMH2572 8Gb FC HBA for HPE BladeSystem c-Class is not compatible with HPE 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 HPE ProLiant Gen8 Server Blades.

Switch interoperability

HPE Storage and Third Party Switches	<ul style="list-style-type: none">• 8Gb Switches and Directors• 4Gb Switches and Directors• 2Gb Switches and Directors• Compatible with Fibre Channel switches including Hewlett Packard Enterprise and third party vendors including Cisco, Brocade, and McDATA• Compatible with 8Gb and 16Gb HPE BladeSystem c-Class Fibre Channel switches and Virtual Connect Modules• HPE 4Gb Fibre Channel Pass Thru Module for BladeSystem c-Class* <p>*Servers must connect to a SAN and never directly to a storage device.</p>
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Standard Features

Service and Support

HPE Technology Services

HPE 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 HPE Care Pack Services

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

HPE Foundation Care services deliver scalable support-packages for Hewlett Packard Enterprise industry-standard servers and software. You can choose the type and level of service that is most suitable for your business needs. If you are running business critical environments, Hewlett Packard Enterprise 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, Hewlett Packard Enterprise 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 HPE Care Pack Services for optimal satisfaction with your HPE product 3-Year HPE 24x7 4 hour Response, Hardware Support Onsite Service

Provides you with rapid remote support and if required an Hewlett Packard Enterprise 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.

<https://www.hpe.com/h20195/v2/GetDocument.aspx?docname=5981-9356EN>

HPE ProLiant Server Hardware Installation

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

<https://www.hpe.com/h20195/v2/GetDocument.aspx?docname=4AA5-3259ENW>

Insight Remote Support

Provides 24 X 7 remote monitoring, proactive notifications, and problem resolution. Learn more

<http://h20564.www2.hpe.com/hpsc/doc/public/display?docId=c04844073>

HPE Support Center

Personalized online support portal with access to information, tools and experts to support Hewlett Packard Enterprise business products. Submit support cases online, chat with HPE experts, access support resources or collaborate with peers. Learn more <https://www.hpe.com/us/en/support.html>

The HPE 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.

HPE Insight Remote Support and HPE Support Center are available at no additional cost with a HPE warranty, HPE Care Pack or Hewlett Packard Enterprise contractual support agreement.

*The Hewlett Packard Enterprise Support Center Mobile App is subject to local availability.

Parts and materials

Hewlett Packard Enterprise will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and

Standard Features

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.

Warranty / Service Coverage For ProLiant servers and storage systems, this service covers HPE-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 Hewlett Packard Enterprise 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 Hewlett Packard Enterprise 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 HPE ESSN Options, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Or visit:
<https://www.hpe.com/us/en/servers>

Related Options

Service and Support Offerings (HPE Care Pack Services)

NOTE: The HPE Care Pack service part numbers below for ProLiant BL c-Class server blades, cover the server blade and all Hewlett Packard Enterprise 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
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NOTE: HPE Care Pack services for the c7000 and c3000 Enclosure cover the enclosure, power supplies and fans. HPE qualified rack options are covered by these services when installed within the same rack. Hewlett Packard Enterprise 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

HPE 3 year Next business day c7000 Enclosure Hardware Support	UE477E
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NOTE: Uplifts the Ethernet devices to the same level of warranty as the c-class enclosure

HPE 3 year 4-Hour 24x7 c7000 Enclosure Hardware Support	UE479E
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NOTE: The HPE Care Pack service part numbers below covers the HPE 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 HPE Care Pack service part numbers below covers the HPE 4Gb, 24 Port SAN Switch.

Hardware Services On-site Service

HPE Installation Storage Switches Service	U5988E
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NOTE: The HPE Care Pack service part numbers below covers the HPE 4Gb, 24 Port SAN Switch Power Pack.

Hardware Services On-site Service

Installation & Start-up Services

HPE BladeSystem c7000 Infrastructure Startup Service	UE602E
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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 blades (up to 16), Ethernet network interconnect, and power options. Software deployment covers the installation and configuration of HPE Systems Insight Manager (SIM), HPE Rapid Deployment Pack (RDP), and deploy up to two operating system editions of either

Related Options

Windows or Linux, using scripted operating system installation software

HPE Install c-Class Server Blade Service	UE493E
HPE Hardware Install c-Class Enclosure and Server Blade Service	UE494E
HPE Insight Control Server Custom Deployment Service	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 hours, standard office days.

HPE Systems Insight Manager (SIM) Startup Service	UA041E
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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 Support	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 Enterprise offers end-of-life Hewlett Packard Enterprise product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: <http://www.hpe.com/info/recycle>. To recycle your product, please go to: <http://www.hpe.com/info/recycle> or contact your nearest Hewlett Packard Enterprise sales office. Products returned to Hewlett Packard Enterprise 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 Enterprise web site at: <http://www.hpe.com/info/recycle>. These instructions may be used by recyclers and other WEEE treatment facilities as well as HPE OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

Summary of Changes

Date	Version History	Action	Description of Change
05-Dec-2016	From Version 7 to 8	Changed	Overview, Product Highlights and Related Options sections were updated.
23-Sep-2016	From Version 6 to 7	Changed	QuickSpecs' sections were updated.
17-Jul-2015	From Version 5 to 6	Changed	Product Highlights and Related Options sections were updated.
		Removed	Obsolete SKUs were removed: UE478E, UE439E, UE480E, UE728E, UE436E, UE729E, UE437E, UA042E, UE438E, UA040E.
18-Apr-2014	From Version 3 to 4	Changed	Changes made in Service and Support section.
31-Aug-2012	From Version 2 to 3	Changed	Changes were made in Overview and Product Highlights sections.
08-Jun-2012	From Version 1 to 2	Changed	Modified URL in Overview, Compatability and Technical Specifications.



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