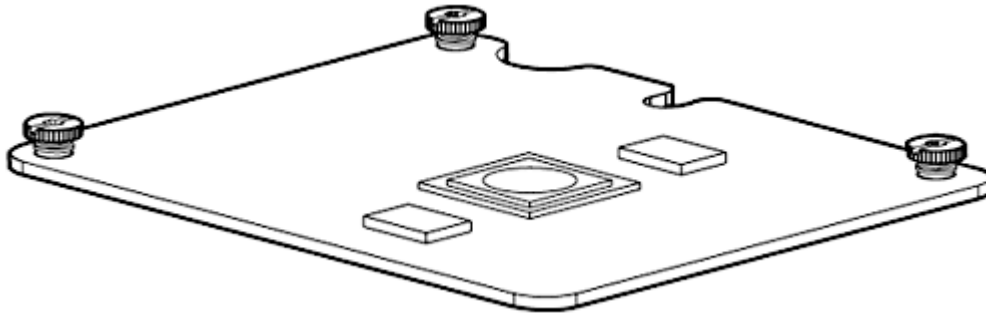


### Overview

The QLogic QMH2562 8Gb FC HBA is a dual channel PCI Express Fibre Channel mezzanine card that provides reliable, high-performance connectivity at up to 8Gb/s. Operating systems supported include Windows and Linux. 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>



**QLogic QMH2562 8Gb FC HBA for HP c-Class BladeSystem**

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### Models

QLogic QMH2562 8Gb FC HBA for HP c-Class BladeSystem

451871-B21

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### Kit Contents

- QLogic QMH2562 8Gb FC HBA for HP c-Class BladeSystem
- QMH 2562 FC HBA
- Quick install card
- Product warranty statement

Drivers, user guide, and utilities via: <http://www.hp.com>

### Compatibility

#### BladeSystem Compatibility

8Gb c-Class HBA Mezzanine (Mezz) Card Applications

|                            | Mezz Slot 1 |           | Mezz Slot 2 |           | Mezz Slot 3                  |           |
|----------------------------|-------------|-----------|-------------|-----------|------------------------------|-----------|
|                            | Port 1      | Port 2    | Port 1      | Port 2    | Port 1                       | Port 2    |
| <b>Half Height Servers</b> |             |           |             |           |                              |           |
| BL280c G6                  | Up to 8Gb   | Up to 8Gb | Up to 8Gb   | Up to 8Gb | No Mezz Slot 3 on this model |           |
| BL460c G6                  | Up to 8Gb   | Up to 8Gb | Up to 8Gb   | Up to 8Gb | No Mezz Slot 3 on this model |           |
| BL460c G7                  | Up to 8Gb   | Up to 8Gb | Up to 8Gb   | Up to 8Gb | No Mezz Slot 3 on this model |           |
| BL465c G7                  | Up to 8Gb   | Up to 8Gb | Up to 8Gb   | Up to 8Gb | No Mezz Slot 3 on this model |           |
| BL490c G6                  | Up to 8Gb   | Up to 8Gb | Up to 8Gb   | Up to 8Gb | No Mezz Slot 3 on this model |           |
| BL490c G7                  | Up to 8Gb   | Up to 8Gb | Up to 8Gb   | Up to 8Gb | No Mezz Slot 3 on this model |           |
| <b>Full Height Servers</b> |             |           |             |           |                              |           |
| BL620c G7                  | Up to 8Gb   | Up to 8Gb | Up to 8Gb   | Up to 8Gb | Up to 8Gb                    | Up to 8Gb |
| BL685c G6                  | Up to 8Gb   | Up to 8Gb | Up to 8Gb   | Up to 8Gb | Up to 8Gb                    | Up to 8Gb |
| BL685c G7                  | Up to 8Gb   | Up to 8Gb | Up to 8Gb   | Up to 8Gb | Up to 8Gb                    | Up to 8Gb |
| BL860c*                    | Up to 4Gb   | Up to 4Gb | Up to 8Gb   | Up to 8Gb | Up to 8Gb                    | Up to 8Gb |
| BL860c i2                  | Up to 8Gb   | Up to 8Gb | Up to 8Gb   | Up to 8Gb | Up to 8Gb                    | Up to 8Gb |
| BL870c                     | Up to 4Gb   | Up to 4Gb | Up to 8Gb   | Up to 8Gb | Up to 8Gb                    | Up to 8Gb |

**NOTE:** The QLogic QMH2562 8Gb FC HBA for HP c-Class BladeSystem must be deployed with the c-Class BladeSystem infrastructure and will only work with the BL c-Class Server Enclosures.

**NOTE:** HP ProLiant Generation (G5) and earlier server blades do not support the QLogic QMH2562 8Gb FC HBA for HP c-Class BladeSystem.

\*The BL860c "A" versions (AD217A, AD323A) do not support the QLogic QMH2562 8Gb Fibre Channel mezzanine card. The BL860c "B" versions (AD217B, AD323B) are required when using the QMH2562. The BL860c "A" version can be upgraded to the "B" version with the AM333A system board upgrade kit.

#### Switch interoperability

##### HP Storage and Third

##### Party Switches

- 4Gb Switches and Directors
- 2Gb Switches and Directors
- Compatible with Fibre Channel switches including HP and third party vendors including Cisco, Brocade, and McDATA

### Standard Features

#### 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
  - Lower power consumption means HBA requires lower airflow
- 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 2003, Windows Server 2008, VMware 3.5, VMware 4.0, VMware 4.1, RHEL 4, RHEL 5, SLES 10, SLES 11, Solaris 10 x86

#### 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

### Service and Support

#### Service and Support

This product is covered by a global limited warranty and supported by HP Services and a worldwide network of HP Authorized Channel Partners. Additional support may be covered under the warranty or available for an additional fee. Enhancements to warranty services are available through HP Care Pack services or customized service agreements.

**NOTE:** Server Options Limited Warranty includes 1 year Parts.

Care Pack services provide a range of life cycle support options that let you choose the service levels that meet your business requirements, from basic to mission-critical.

A full range of HP Care Pack hardware and software services are available including:

- Installation and start up
- Education courses
- Extended onsite hardware coverage hours from same business day 13 hours, 5 day to 24 hours, 7 days call window with options including 4-hour response or 6-hour Call To Repair
- Comprehensive range of software technical support for Microsoft, Linux, ProLiant Essentials and VMware-based IT solutions helping to deliver high level of application availability. Response times range from 30 mins for critical problems to 2 hours.
- System Management, Performance Services and Mission Critical Support Solution

HP has introduced a new building block approach which allows customers to purchase the right coverage at the right time whether purchasing an initial server blade plus enclosure or purchasing additional ProLiant server blades over time. HP will offer two sets of Care Pack services, one designed to support the server blade and one designed to support the enclosure.

HP Care Pack services for HP ProLiant 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.

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.

**NOTE:** For more information regarding the Blade service portfolio visit our worldwide web site on the internet at: <http://h20219.www2.hp.com/services/cache/81725-0-0-225-121.html>

**NOTE:** For more information on HP Care Pack services, contact any of our worldwide sales offices or resellers or visit our worldwide Web site on the internet at: <http://www.hp.com/hps/carepack>

**NOTE:** For more complete information on HP Services offerings, customers and resellers, please visit us at: <http://www.hp.com/hps>

**NOTE:** Additional information regarding worldwide limited warranty and technical support is available at: <http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html>

(1-1-1) Hardware Warranty - One-year on-site warranty, 8x5, next business day response, installation not included.

**NOTE:** The hardware warranty covers firmware and embedded non-saleable software. Saleable software carries its own warranty, please see below.

Software Warranty: HP warrants only that the software media will be free of physical defects for a period of ninety (90) days from delivery.

**EXCLUSIVE REMEDY:** The entire liability of HP and its suppliers and your exclusive remedy for software

### Service and Support

that does not conform to this Limited Warranty shall be the repair or replacement of the defective media. This warranty and remedy are subject to your returning the defective media during the warranty period to HP in the country in which you obtained the software.

### 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**

4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic UE458E

4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic UE459E

6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic UE460E

**Support Plus 24**

Onsite HW support 24x7, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic 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**

Next Business Day On-site Service, 5-Day x 9-Hour Coverage, 3 Years, Electronic UE477E

**NOTE:** Uplifts the Ethernet devices to the same level of warranty as the c-class enclosure

4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic UE478E

4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic UE479E

6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic 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**

Next Business Day On-site Service, 5-Day x 9-Hour Coverage 3 Years, Electronic UC007E

4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic UC008E

4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic UC009E

6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic UC023E

**NOTE:** The HP Care Pack service part numbers below covers the HP 4Gb, 24 Port SAN Switch.

**Hardware Services On-site Service**

Next Business Day On-site Service, 5-Day x 9-Hour Coverage, 3 Years, Electronic UE436E

4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic UE437E

4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic UE438E

6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic UE439E

Hardware Installation, Electronic 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**

### Related Options

|  |        |
|--|--------|
| Onsite HW support, 8am-9pm, M-F, 4hr response and SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays, Electronic   | UE728E |
| <b>Support Plus 24</b>   |        |
| Onsite HW support 24x7, 4hr response and SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic  | UE729E |
| <b>Installation &amp; Start-up Services</b>  |        |
| HP Installation & Startup Service for HP BladeSystem Infrastructure, Electronic  | UE602E |
| <b>NOTE:</b> 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 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 |        |
| ProLiant BL c-Class Blade Server Hardware Installation, Electronic   | UE493E |
| ProLiant BL c-Class Enclosure and Server Blade Hardware Installation, Electronic   | UE494E |
| Provides for the Installation and Start-up of ProLiant Essentials Rapid Deployment Pack, Electronic  | U5683E |
| <b>NOTE:</b> 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.  |        |
| Provides for the Installation and Start-up of Rapid Deployment Pack Implementation of Rapid Deployment Pack (Basic) (Electronic)   | UA042E |
| <b>NOTE:</b> 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.   |        |
| Provides for the Installation and Start-up of System Insight Manager (Electronic)  | UA041E |
| Provides for the Installation and Start-up of System Insight Manager Agents (Electronic)   | UA040E |
| <b>Software Operating Environment Care Packs</b>   |        |
| Microsoft Software Operating Environment Software Telephone 9x5 - 3 incident (Electronic)  | U8169E |
| Red Hat Software Operating Environment Software Telephone 9x5 - 10 incident (Electronic)   | U3402E |
| SUSE Software Operating Environment Software Telephone 9x5 - 3 incident (Electronic)   | U9615E |
| ProLiant Essentials Operating Environment, - 5 Day, 9x5,1 year, 3 incident (Electronic)  | U8222E |
| ProLiant Essentials Operating Environment, - 5 Day, 24x7,1 year, 3 incident (Electronic)   | U8301E |
| ProLiant Essentials Operating Environment, - 5 Day, 9x5,1 year, 10 incident  | UE006E |
| ProLiant Essentials Operating Environment, - 5 Day, 24x7,1 year, 10 incident   | UE116E |

### Related Options

|   |        |
|---|--------|
| ProLiant Essentials Operating Environment, - 5 Day, 9x5, 1 year, 25 incident                | UE117E |
| ProLiant Essentials Operating Environment, - 5 Day, 24x7, 1 year, 25 incident               | UE118E |
| ProLiant Essentials Operating Environment, - 5 Day, 9x5, 1 year, 50 incident                | UE119E |
| ProLiant Essentials Operating Environment, - 5 Day, 24x7, 1 year, 50 incident               | UE120E |
| ProLiant Essentials Operating Environment, - 5 Day, 9x5, 1 year, unlimited SW Tech Support  | UE121E |
| ProLiant Essentials Operating Environment, - 5 Day, 24x7, 1 year, unlimited SW Tech Support | UE452E |
| ProLiant Essentials Operating Environment, - 5 Day, 9x5, 3 year, unlimited SW Tech Support  | UE453E |
| ProLiant Essentials Operating Environment, - 5 Day, 24x7, 3 year, unlimited SW Tech Support | UE454E |



### Technical Specifications

|                    |   |  |
|--------------------|---|--|
| <b>System Unit</b> | <b>Dimensions (H x W)</b>                 | 4.460 in x 3.970 in  |
|                    | <b>Media</b>                              | N/A (Backplane connection to Virtual Connect, Switch or Pass-Thru Module)  |
|                    | <b>Ports</b>                              | Two  |
|                    | <b>System Inlet Temperature</b>           | <p>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).</p> <p>Non-operating -30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).</p> |
|                    | <b>Relative Humidity (non-condensing)</b> | <p>Operating 10 to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.</p> <p>Non-operating 5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.</p>  |
|                    | <b>Altitude</b>                           | <p>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).</p> <p>Non-operating 9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).</p>   |

**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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