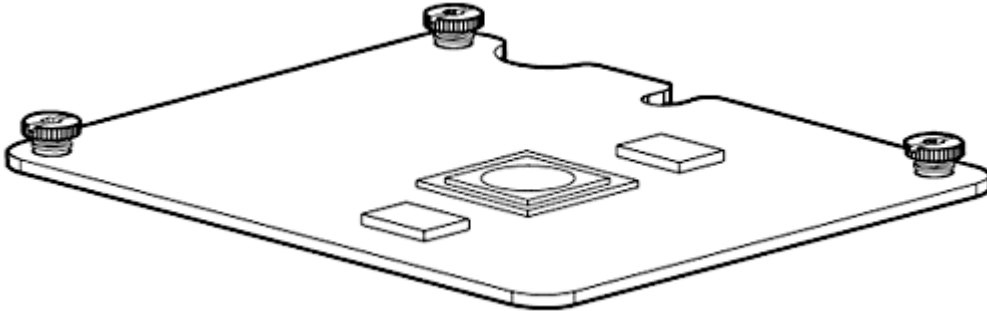## Overview

The QLogic QMH2462 4Gb FC HBA is a dual channel PCI Express mezzanine form factor card specifically designed for c-Class BladeSystem server blades. Operating systems supported include Windows and Linux. This HBA is qualified for use in all c-Class blade servers. It is optimized for HP Storage as well as 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:
www.hp.com/go/san-documentation

QLogic QMH2462 4Gb FC HBA for HP c-Class BladeSystem

Models

QLogic QMH2462 4Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	403619-B21

Key Features

- Two 4Gb/s Fibre Channel ports
- 4/2/1 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 150,000 I/Os per second per channel
- RoHS compliance
- Common drivers for 4Gb and legacy 2Gb HBAs
- QLogic SANsurfer Manager for centralized management and remote control of distributed HBAs.

Features and Benefits

- Higher performance with a low price per channel
- Investment protection with 4/2/1 auto speed negotiation
- Supports the Windows and Linux operating environments
- Provides the flexibility and broad interoperability need for complex highly scalable SANs
- Multi-path software for Linux built into the driver

Standard Features

Software Features

BladeSystem compatibility

NOTE: The QLogic QMH2462 4Gb 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 Enclosure.

HP ProLiant and Integrity Servers
- Compatible with current releases of HP ProLiant and HP Integrity c-class Blade Servers supporting Type 1 Mezzanine Cards

Switch interoperability

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

Service and Support

Service and Support	**HP Care Pack Services: Packaged server and storage services for increased uptime, productivity and ROI**

When you buy HP server and storage products and solutions, it's also a good time to think about what levels of support you may need. Our portfolio of service options reduce deployment and management worries while helping you get the most out of your server and storage investments. We take a holistic approach to your environment, bridging servers, blades, storage, software and network infrastructures with our packaged HP Care Pack Services for servers and storage.

Protect your business beyond warranty
When it comes to robustness and reliability, standard computing equipment warranties have matured along with technology. Good news that can also create problems stemming from depending on standard warranties designed to only protect against product defects and some downtime causes. Using a standard approach to warranty uplifts, such as HP Care Pack Services, helps reduce downtime risks and provides operational consistency for mission-critical and standard business computing.

HP Care Pack Services: Upgrading or extending standard server and storage warranties cost effectively
HP recommends Proactive Care for your BladeSystem servers, enclosures and components to prevent problems with proactive advice and assistance, resolve issues and rapidly recover by connecting to HP's enhanced call experience and advanced technical expertise. In addition with HP Proactive Select, you can acquire the specific proactive constancy and technical services. HP Proactive Select menu offers a broad set of service options that you can mix and match depending on your specific requirements. Proactive service options include offers for server, storage, network, SAN device, software, environment and education services.

HP server and storage lifecycle support services offers a full spectrum of customer care-from technology support to complex migrations to complete managed services. HP Factory Express provides customization, integration and deployment services for turnkey solutions. HP Education Services offer flexible, comprehensive training on to help your IT staff get the most out of your server and storage investments. HP Financial solutions extend innovative financing and cost-effective asset management programs-from purchase to equipment retirement.

Learn more: www.hp.com/services/servers and www.hp.com/services/storage

NOTE: Care Pack Services availability may vary by product and country.

HP Care Pack Services are sold by HP and HP Authorized Service Partners:

- Services for customers purchasing from HP or an enterprise reseller are quoted using HP order configuration tools.
- Customers purchasing from a commercial reseller can find HP Care Pack Services at http://www.hp.com/go/lookuptool

Service and Support

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

HP Insight Remote Support software delivers secure remote support for your HP Servers and Storage, 24 X 7, so you can spend less time solving problems and more time focused on your business. You can have your systems remotely monitored for hardware failure using secure technology that's been proven at thousands of companies around the world. In many cases, you can avoid problems before they occur.

Customer Technical Training	In today's cost-conscious business environment, IT professionals, developers, consultants and users face an interesting challenge: how to keep up with the latest technologies and expand important skills while delivering profitable results on current projects. To help address this challenge, HP offers innovative training solutions that help keep you up-to-date on virtualization, server, storage, Insight Control, Citrix, Microsoft® and open source/Linux-related topics-while spending less time away from business-critical activities.

HP Services Awards	HP Technology 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.

Additional Services Information	To learn more on HP ProLiant servers, HP BladeSystem servers and HP storage products, please contact your HP sales representative or HP Authorized Channel Partner. Or visit: www.hp.com/services/proliant or www.hp.com/services/bladesystem or http://www.hp.com/services/storage

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 **NOTE:** Uplifts the Ethernet devices to the same level of warranty as the c-class enclosure	UE477E
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

Support Plus 24

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

Installation & Start-up Services

HP Installation & Startup Service for HP BladeSystem Infrastructure, Electronic	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 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

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.

Provides for the Installation and Start-up of Rapid Deployment Pack Implementation of Rapid Deployment Pack (Basic) (Electronic)	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.

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

NOTE: For more information, customer/resellers can contact
http://www.hp.com/services/servers

Software Operating Environment Care Packs

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

Related Options

ProLiant Essentials Operating Environment, - 5 Day, 9x5,1 year, 10 incident	UE006E
ProLiant Essentials Operating Environment, - 5 Day, 24x7,1 year, 10 incident	UE116E
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

NOTE: For more information, customer/resellers can contact
http://www.hp.com/services/servers

Technical Specifications

System Unit	Dimensions (H x W)		4.460 in x 3.970 in (113.28mm x 100.84mm)
	Media		N/A (Backplane connection to Virtual Connect, Switch or Pass-Thru 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).

| 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