

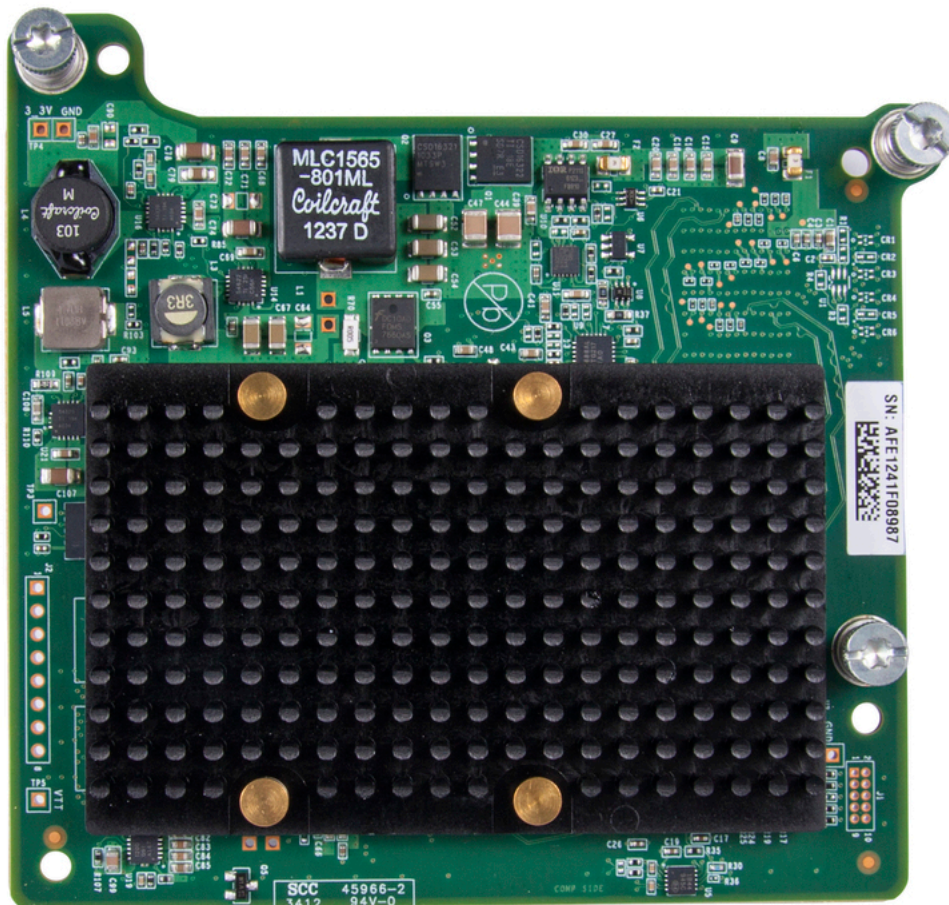
### Overview

#### HPE QMH2672 16Gb FC HBA for BladeSystem c-Class

Recommended SKU - This adapter is a recommended option that has been selected by HPE experts to provide the right technology for a range of workloads and market segments offering the best combination of performance, value and availability.

The QMH2672 16Gb FC HBA is a dual channel Fibre Channel mezzanine card that provides reliable, high-performance connectivity at 8Gb/s or 16Gb/s. This is a Type A mezzanine card for HPE BladeSystem c-Class that is compatible with HPE ProLiant Server blades starting with Gen8. All HPE 8 Gb and 16 Gb Fibre Channel Interconnects for BladeSystem c-Class are supported by the QMH2672. 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 <https://www.hpe.com/us/en/networking/switches.html>.

The HPE BladeSystem c7000 Platinum Enclosure is required to permit 16Gb/s speed. Other HPE BladeSystem c7000 Enclosures and HPE BladeSystem c3000 Enclosures will have a maximum speed of 8Gb/s.



HPE QMH2672 16Gb FC HBA for HPE BladeSystem c-Class

## Platform Information

### Models

HPE QMH2672 16Gb Fibre Channel Host Bus Adapter 710608-B21

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**Kit Contents** HPE QMH2672 16Gb FC HBA for HPE BladeSystem c-Class  
Quick install card  
Product warranty statement

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**Compatibility - Supported Servers** HPE ProLiant BL460c Gen9 Server  
HPE ProLiant BL660c Gen9 Server  
HPE ProLiant WS460c Gen9 Server  
HPE ProLiant BL460c Gen10 Server

**NOTE:** The HPE QMH2672 16Gb FC HBA for HPE BladeSystem c-Class must be deployed with the BladeSystem c-Class infrastructure and will only work with the BL c-Class Server Enclosures.

**NOTE:** The HPE BladeSystem c7000 Platinum Enclosure is required to permit 16Gb/s speed. Other HPE BladeSystem c7000 Enclosures and HPE BladeSystem c3000 Enclosures will have a maximum speed of 8Gb/s.

**NOTE:** The HPE QMH2672 16Gb FC HBA for HPE BladeSystem c-Class is not compatible with 4Gb BladeSystem c-Class Fibre Channel interconnects.

**NOTE:** The HPE QMH2672 16Gb 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.

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**Interoperability - HPE Storage and Third Party Switches** 16/8/4 Gb Switches and Directors  
Compatible with external Fibre Channel switches including Hewlett Packard Enterprise and third party vendors including Cisco and Brocade  
Compatible with 8Gb and 16Gb HPE BladeSystem c-Class Fibre Channel switches and Virtual Connect Modules  
For details on supported HPE Fibre Channel SAN Switches, please consult the SAN Design Reference Guide at the following WEB address: <https://www.hpe.com/us/en/networking/switches.html>.

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## Standard Features

### At a Glance Features

- Performance Optimized:
  - Capable of delivering twice the data throughput (MB/s) compared to 8Gb FC HBAs
  - High link speed combined with larger data block sizes results in improved application performance
- Virtualization Optimized:
  - Ideal for high density server virtualization environments
  - Enables more applications and Virtual Machines to run on a single server and Fibre Channel port, resulting in reduced cabling and a higher return on IT investment
- Power Optimized:
  - Latest generation technology saves power
  - Reduced number of components on each FC HBA reduces overall power consumption
- 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 interoperability issues between firmware and driver versions and reduces upgrade time
  - Common drivers for 16Gb, 8Gb and 4Gb
- Fault tolerant HBA Architecture
- Two 16Gb/s Fibre Channel ports
- 16/8- automatic speed negotiation without throttling down to the external SAN speed
- Multi-Path support for redundant HBAs and paths including Linux driver failover
- Superior performance capable of sustaining more than 500,000 I/Os per second per channel
- RoHS compliance
- QLogic Converge Console management utility for centralized management and remote control of distributed HBAs
- Operating Systems and Virtualization Software Supported: Windows Server 2012, Windows Server 2012 Hyper-V, Windows Server 2008 R2 SP1 x64, Windows Server 2008 SP2 x86 and x64, Windows Server 2008 R2 SP1 Hyper-V x64, VMware 5.1 x64, RHEL 5.8, RHEL 5.9, RHEL 6.3 x64, RHEL 6.4 x64, SLES 11

**NOTE: For more operating system support & certification information, please visit: [http://h17007.www1.hpe.com/us/en/enterprise/servers/supportmatrix/redhat\\_linux.aspx#.V4e8tPkrJD8](http://h17007.www1.hpe.com/us/en/enterprise/servers/supportmatrix/redhat_linux.aspx#.V4e8tPkrJD8)**

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### Warranty

Maximum: The remaining warranty of the HPE product in which it is installed (to a maximum three-year, limited warranty).

Minimum: One year limited warranty.

**NOTE: Additional information regarding worldwide limited warranty and technical support is available at: <http://h17007.www1.hpe.com/us/en/enterprise/servers/warranty/index.aspx#.V4e3tPkrJhE>**

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## Service and Support

**Service and Support** **NOTE: This adapter is covered under HPE Support Services/ Service Contract applied to the HPE ProLiant Server or enclosure. No separate HPE Support Services# need to be purchased.**

Most HPE branded options sourced from HPE that are compatible with your product will be covered under your main product support at the same level of coverage, allowing you to upgrade freely. Additional support is required on select workload accelerators, switches, racks and UPS options 12KVA and over. Coverage of the UPS battery is not included under HPE support services; standard warranty terms and conditions apply.

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**Warranty and Support Services**

Warranty and Support Services will extend to include HPE options configured with your server or storage device. The price of support service is not impacted by configuration details. HPE sourced options that are compatible with your product will be covered under your server support at the same level of coverage allowing you to upgrade freely. Installation for HPE options is available as needed. To keep support costs low for everyone, some high value options will require additional support. Additional support is only required on select high value workload accelerators, fibre switches, InfiniBand and UPS options 12KVA and over. Coverage of the UPS battery is not included under TS support services; standard warranty terms and conditions apply.

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**Protect your business beyond warranty with HPE Support Services**

HPE Technology Services delivers confidence, reduces risk and helps customers realize agility and stability. Connect to HPE to help prevent problems and solve issues faster. HPE Support Services enable you to choose the right service level, length of coverage and response time as you purchase your new server, giving you full entitlement to the support you need for your IT and business.  
Protect your product, beyond warranty.

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**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 recommended engineering improvements. Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services. The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.

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**For more information**

Visit the Hewlett Packard Enterprise Service and Support [website](#).

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## Technical Specifications

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| <b>System Unit</b>   | <b>Dimensions (L x W)</b>  | 3.5 in x 3.9 in  |
| <b>Power and Environmental Specifications</b>  | <b>Media Ports</b>   | N/A (Always connects to BladeSystem interconnect module)   |
|  | <b>Power</b>   | Two<br>13 W Max  |
|  | <b>Temperature - Operating</b>   | 10° to 70°C (55° to 158°F) at sea level with an altitude derating of 1.0°C per every 305 m (1,000 ft) above sea level to a maximum of 3050m (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.<br>System performance may be reduced if operating with a fan fault or above 30°C (86°F). |
|  | <b>Temperature - Non-Operating</b>   | -30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).   |
|  | <b>Humidity - Operating</b>  | 10 to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.  |
|  | <b>Humidity - Non-operating</b>  | 5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.  |
|  | <b>Altitude - Operating</b>  | 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).  |
|  | <b>Altitude - Non-operating</b>  | 9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).   |
| <b>Environment-friendly Products and Approach - End-of-life Management and Recycling</b> | <p>Hewlett Packard Enterprise offers end-of-life <b>product return, trade-in, and recycling programs</b> in many geographic areas, for our products. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner.</p> <p>The EU WEEE Directive (2012/19/EU) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the <b>Hewlett Packard Enterprise web site</b>. These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.</p> |  |

## Summary of Changes

| Date        | Version History | Action  | Description of Change  |
|-------------|-----------------|---------|--|
| 05-Feb-2018 | Version 7       | Changed | Overview section was updated   |
| 17-Jul-2017 | Version 6       | Changed | Compatibility section was updated.   |
| 10-Feb-2017 | Version 5       | Changed | Overview, Compatibility, Standard Features and Technical Specifications sections were updated. |
| 14-Oct-2016 | Version 4       | Changed | Re-branding edition  |
| 24-Apr-2015 | Version 3       | Added   | Service and Support was revised.   |
|             |                 | Changed | Service and Support was revised.   |
|             |                 | Removed | Service and Support was revised.   |
| 18-Apr-2014 | Version 2       | Changed | Service and Support was revised.   |



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