

# QuickSpecs

## Brocade 804 8Gb FC HBA for HPE BladeSystem c-Class

### Overview

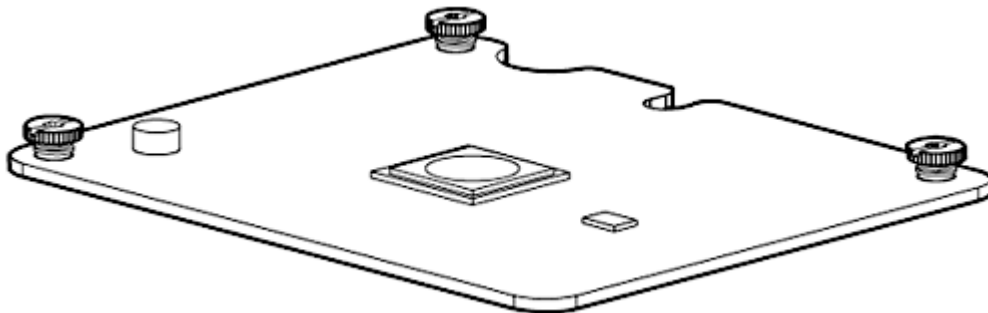
#### Brocade 804 8Gb FC HBA for HPE BladeSystem c-Class

Brocade 8Gb FC Host Bus Adapters offer high performance connectivity, extend fabric features to the server and applications, and integrate seamlessly with management software such as DCFM to provide a complete end-to-end data center solution.

Brocade FC HBAs support the Server Application Optimization (SAO) license to extend Brocade data center fabric technologies to the server infrastructure, thereby improving overall application performance and virtual machine scalability. SAO enables individual traffic flows to be specifically configured, prioritized, and optimized throughout the data center. SAO is enabled via software licensing on Brocade switches and directors, and is deployed along with Brocade FC HBAs to help IT organizations more easily manage SAN services across next-generation data centers.

Brocade FC HBAs achieve up to 500,000 IOPs per port and deliver line rate throughput performance, making the adapters suitable for I/O intensive applications such as database, backup/restore, virtualization, and rich media. The high performance capabilities of Brocade 8Gb FC HBAs improve server consolidation ratios and reduce overall total cost of ownership for virtualized and non-virtualized environments.

Finally, Brocade FC HBAs seamlessly integrate into HPE's StorageWorks Data Center Fabric Manager, providing customers a single pane of view of the data center to easily configure and manage all devices from a central location.



**Brocade 804 8Gb FC HBA for HPE BladeSystem c-Class**

### Models

HP BLc Brocade 804 8Gb Fibre Channel Host Bus Adapter

### Key Features

- Server Application Optimization
  - Application oriented Quality of Service (AQoS) providing the ability to configure, prioritize, and optimize traffic flows from virtual machines and/or applications to the target port.
- Superior Performance
  - PCIe 8Gb FC HBAs deliver not only 2x better throughput than 4Gb HBAs, but also 500,000 IOPs to better drive I/O intensive applications and enable higher consolidation ratios.
- Unified Manageability
  - Integrates with StorageWorks DCFM to provide a single pane of control and visibility of both the server edge and the fabric switches.

### Features and Benefits

- Virtualization Focused
  - Server Application Optimization (SAO) enables virtualization scalability without compromising service levels
- High Performance

## Overview

- Outperforms competition with up to 500K IOPS
- Simplified Management
  - Unified management of SAN fabric and server connectivity resources from a single pane of glass
- Comprehensive Virtualization
  - Support for N\_Port ID virtualization with up to 256 vports to enhance server consolidation and asset utilization.
- Fabric Based Boot LUN Discovery
  - Simplifies boot from SAN configurations by automating the diskless boot process with centralized configuration on the switch and offering the ability to deploy large scale bare metal provisioning.
- Security Support
  - Provides "host to fabric" Fibre Channel Security Protocol (FC-SP) authentication support to protect the SAN from potential threats such as WWN spoofing, and compromised applications accessing storage.
- Target Rate Limiting
  - Ensures maximum throughput of the link between the server and switch by throttling the traffic flow to individual targets, regardless of storage data rate.
- Interrupt Routing
  - Improves host utilization and enhances application performance by supporting Message Signaled Interrupted eXtended (MSI-X)
- Brocade FC HBAs provide low power consumption.
- Virtualization Focused
  - Server Application Optimization (SAO) enables virtualization scalability without compromising service levels

## Product Highlights

### 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
BL680c 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

**NOTE:** The Brocade 804 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:** HPE ProLiant Generation (G5) and earlier server blades do not support the Brocade 804 8Gb FC HBA for HPE BladeSystem c-Class.

**NOTE:** HPE ProLiant BL465c G6 and the BL495c G6 do not support the Brocade 804 8Gb FC HBA for HPE BladeSystem c-Class.

### Switch interoperability

#### HPE StorageWorks and Third Party Switches

- 8Gb Switches and Directors
- 4Gb Switches and Directors
- 2Gb Switches and Directors
- Compatible with 8Gb and 16Gb HPE BladeSystem c-Class Fibre Channel switches and Virtual Connect Modules
- Compatible with Fibre Channel switches including HPE StorageWorks and third party vendors including Cisco, Brocade, and McDATA

## Standard Features

### Service and Support

This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of Hewlett Packard Enterprise Authorized Channel Partners. Additional support may be covered under the warranty or available for an additional fee. Enhancements to warranty services are available through HPE 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 HPE 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  
Hewlett Packard Enterprise 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. Hewlett Packard Enterprise will offer two sets of Care Pack services, one designed to support the server blade and one designed to support the enclosure.

HPE Care Pack services for HPE ProLiant 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.

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.

**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 HPE 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 HPE 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: Hewlett Packard Enterprise 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 HPE and its suppliers and your exclusive remedy for

## Standard Features

software 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 HPE in the country in which you obtained the software.

## 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

**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

**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

**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

**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

**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 Windows or Linux, using scripted operating

## Related Options

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

**NOTE:** For more information, customer/resellers can contact

<http://www.hp.com/hps/carepack/services/>

### 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

**NOTE:** For more information, customer/resellers can contact

<http://www.hp.com/hps/carepack/services/>

## Technical Specifications

<b>System Unit</b>	<b>Dimensions (H x W)</b>	4.460" x 3.970"		
	<b>Media</b>	N/A (Backplane connection to Virtual Connect, Switch or Pass-Thru Module)		
	<b>Ports</b>	Two		
	<b>Power requirement</b>	10W maximum		
	<b>System Inlet Temperature</b>	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).	
	<b>Relative Humidity (non-condensing)</b>	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.	
	<b>Altitude</b>	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 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.hp.com/go/green>. To recycle your product, please go to: <http://www.hp.com/go/green> 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.hp.com/go/green>. 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
14-Oct-2016	From version 7 to 8	Changed	Rebranding Edition
13-Feb-2015	From Version 6 to 7	Changed	Overview, Product Highlights, Standard Features and Related Options sections were updated
20-Jun-2011	From Version 5 to 6	Changed	System Inlet Operating Temperature was revised.
06-May-2011	From Version 4 to 5	Changed	Changes made to the Product Highlights chart.
17-Aug-2010	From Version 3 to 4	Changed	Only PDF formatting changes were made.
25-Jun-2010	From Version 2 to 3	Added	8Gb Switches and Directors was added to HPE StorageWorks and Third Party Switches and Power Requirement was added to System Unit.
25-Jun-2010	Version 1	Created	Document created



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