

BROCADE 815 AND 825 FC HBAs

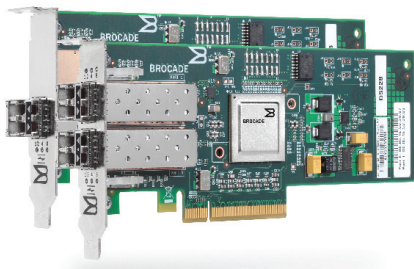


SERVER CONNECTIVITY

Server Connectivity for Next-Generation Data Centers

HIGHLIGHTS

- Uniquely enables end-to-end (server-to-storage) management in Brocade DCF environments
- Maximizes bus throughput with a Fibre Channel to PCIe 2.0a Gen2 (x8) bus interface with intelligent lane negotiation
- Maximizes I/O transfer rates with up to 500,000 IOPS per port at 8 Gbit/sec
- Enhances security with Fibre Channel-Security Protocol (FC-SP) for device authentication
- Supports virtualized environments with N_Port ID Virtualization (NPIV) for 255 virtual ports



The Brocade® 815 (single port) and Brocade 825 (dual ports) 8 Gbit/sec Fibre Channel to PCIe Host Bus Adapters (HBAs) provide a new level of server connectivity through unmatched hardware capabilities and unique software configurability. This new class of HBAs is designed to help IT organizations deploy and manage end-to-end SAN services across next-generation data centers.

STRATEGIC DATA CENTER FABRIC ARCHITECTURE

Most data centers were designed to meet basic connectivity options for physical servers, switches, and storage. As virtualization becomes more prevalent, however, organizations require new connectivity options with higher performance, improved service levels, simplified management, and greater data protection for both physical and virtualized environments.

The Brocade Data Center Fabric (DCF) architecture provides a strategic framework to help simplify data center connectivity, optimize performance and scalability, and reduce cost and risk. It combines storage networking and server-to-server clustering into a converged infrastructure composed of Fibre Channel switches, directors, and backbones along with this new class of HBA.

END-TO-END STORAGE NETWORKING

As part of the Brocade DCF architecture, the Brocade 815 and Brocade 825 HBAs lay the foundation for extending fabric intelligence to servers, virtual machines, applications, and services—enabling end-to-end storage network management.

By installing Brocade HBAs, organizations will have the foundation to leverage NPIV and Quality of Service (QoS) from the virtual port throughout the fabric.

UNIFIED MANAGEMENT

For local or remote management, Brocade provides Host Connectivity Manager (HCM) native GUI and CLI tools to configure and monitor its HBAs. In addition, Brocade Network Advisor provides unified, end-to-end management across fabrics with Brocade Fibre Channel switches and HBAs. Both Brocade Network Advisor and HCM provide open APIs and standards-based interfaces for integration with popular third-party applications and higher-level frameworks to help orchestrate Brocade hardware and SAN services.

MAXIMIZING INVESTMENTS

To help optimize technology investments, Brocade and Dell offer complete solutions that include education, support and services. For more information, contact an authorized Dell sales partner, or your Dell representative, or visit www.dell.com.



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KEY FEATURES**High-performance configuration:**

- Intelligent PCIe lane negotiation to maximize bus throughput
- Parallel I/O engines to support simultaneous I/O transfers
- Hardware-based low/medium/high data prioritization enables QoS
- Flow control to maximize link utilization between HBAs and adjacent switch ports

Centralized management and provisioning:

- Local and remote management of distributed HBAs with fabric-based boot LUN discovery for automated SAN boot configuration to quickly deploy diskless servers
- FC-ping, FC-Traceroute, and LED port beaconing to simplify fault isolation

Data protection, authentication, and encryption:

- Data protection across PCIe and FC (T10 CRC), memory blocks, and ASIC (ECC)
- FC-SP security for device authentication and the capability for in-flight AES-GCM data encryption

Enhanced server virtualization:

- Multiple I/O data queues to increase performance for virtualized environments
- Certified for Microsoft, Novell, and VMware hypervisors

**BROCADE 815 AND BROCADE 825 SPECIFICATIONS**

Fibre Channel Specifications	
Data rate	Per port: 8 Gbit/sec (1600 MB/sec); 4 Gbit/sec (800 MB/sec); 2 Gbit/sec (400 MB/sec)
Performance	Up to 500,000 IOPS per port (maximum)
Protocols	SCSI-FCP, FCP-2, FCP-3, FC-SP
Topology	Point-to-point (N_Port), switched fabric (N_Port)
Distance support	50 meters at 8 Gbit/sec on 62.5/125 µm Multi-Mode Fiber (MMF)
Host Specifications	
Server platform	Dell PowerEdge® Servers (R620, R720, R720XD, T620, T410, R905, R900, R805, T710, R910, R810, R710, R610, R410, T610, R510, R815, R715, NX3100, PE2970)
Bus interface	PCI Express Gen 2.0 Compatible (x8), with MSI-X and INTx
Software	
Driver- and HCM-supported operating systems	Windows Server 2008/R2; Windows Server 2003/R2, Windows 7/ SP1, RHEL 4/5/6; SLES 9/10/11; Solaris 10 (x86), SuSE 10/11, and VMware ESX 3.5 ESX/ESXi 4.0/4.1, ESXi 5.0
Brocade Network Advisor	Yes (Professional, Professional Plus, Enterprise)
APIs	SNIA-HBA-API 2.0 and FDMI-I
Warranty and Support	
Warranty and support	Three years Advanced Replacement hardware warranty and related 24x7x365 telephone and e-mail access to live technical support
Physical Specifications	
Transceivers	8 Gbit/sec Fibre Channel LC-style pluggable (SFP+), MMF (850 nm)

Form factor	PCI Express low-profile form factor; 16.77 cm × 6.89 cm (6.60 in. × 2.71 in.)
Bracket size	Standard: 1.84 cm × 12.08 cm (.73 in. × 4.76 in.) Low profile: 1.84 cm × 8.01 cm (.73 in. × 3.15 in.)

Environmental and Power Requirements	
Airflow	No airflow required
Operating temperature	0° C/32° F to 55° C/131° F (dry bulb)
Non-operating temperature	-43° C/-40° F to 73° C/163° F (dry bulb)
Operating humidity	5% to 93% (relative, non-condensing)
Non-operating humidity	5% to 95% (relative, non-condensing)
Power dissipation	6 W (typical)
Operating voltage	3.3 V

Agency Approvals	
United States	Bi-Nat UL/CSA 60950-1 1st Ed; ANSI C63.4; cCSAus; FCC Class B
Canada	Bi-Nat UL/CSA 60950-1 1st Ed; ICES-003 Class B; cCSAus
Japan	CISPR22 Class B and JEIDA (Harmonics); VCCI-B
European Union	EN60950-1; EN55022 Class B and EN55024; TUVBauart, CE Mark
Australia, New Zealand	EN55022 and CISPR22 Class B or AS/NZS CISPR22; C-Tick
Russia	IEC60950-1; 51318.22-99 and .24-99; GOST Mark
Korea	KN22 and KN24; MIC Mark Class B
Taiwan	CNS 14336(94); CNS 13438(95) Class A; BSMI Mark

Ordering Information	
TWWC3	815, Single port 8Gbps FC HBA with 1 SWL SFP
2MR3M	825, Dual port 8Gbps FC HBA with 2 SWL SFP's

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