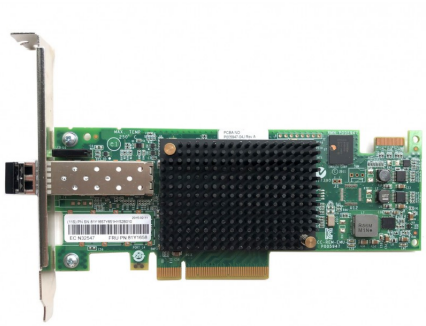
IBM 81Y1658 Datasheet



IBM 81Y1658 81Y1657 FC 16Gb 1-Port PCIE 3.0 x8 Emulex LPe16000 Controller

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The Brocade 16 Gb Fibre Channel (FC) host bus adapters (HBAs) from QLogic are part of a family of high-performance FC HBA solutions for System x. These HBAs deliver exceptional performance, enabling small and medium businesses to experience unsurpassed robustness and reliability for a wide spectrum of servers, storage, and SANs.

Brocade 16Gb FC HBAs enhance availability via a unified driver with integrated firmware and simplified broadcast of driver updates across the fabric, including a proactive driver/firmware check of version levels to ensure synchronization. Fabric boot LUN discovery allows a server to boot-from-SAN, simplifying startup and reducing image management complexity. Fabric Assigned World Wide Name (FA-WWN) auto-assigns the switch port WWN upon install, simplifying server deployment and ongoing management.

Diagnostic Ports (D_Ports) are a new port type supported by the Brocade 16Gb HBAs that enables administrators to quickly identify and isolate 16 Gbps optics, port and cable problems, reducing fabric deployment and diagnostic times. If the optical media is found to be the source of the problem, it can be transparently replaced, as 16 Gbps optics are hot-pluggable.

Part number information

- 81Y1671 81Y1670, 81Y1668: Brocade 16Gb FC Single-port HBA
- 81Y1678, 81Y1677, 81Y1675: Brocade 16Gb FC Dual-port HBA

Features

The Brocade 16Gb FC Single-port and Dual-port HBAs have the following features:

- 16 Gbps Fibre Channel

16 Gb FC enables I/O consolidation of multiple 2/4/8 Gbps Fibre Channel HBAs into a single adapter to dramatically reduce CapEx/OpEx costs. It can also provide 50% server rack space savings by reducing from a 2U to 1U rack-mount server with fewer PCIe adapter slots.

- Over 500,000 IOPS per port

The industry’s most powerful FC adapter that achieves the highest transaction performance to maximize density of VMs per server, performance of 315,000 IOPS for E-mail Exchange, and 205,000 IOPS for SQL Database.

- 16 Gbps and 8 Gbps optical media support

Investment protection for existing previous-generation 8 Gbps optics.

- Fabric Assigned World Wide Name (FA-WWN)

FA-WWN virtualizes host WWNs to simplify server deployment by enabling pre-provisioning prior to initial install and to eliminate time-consuming fabric reconfigurations when replacing adapters and servers.

- Boot-From-SAN

Automate SAN Boot LUN discovery to simplify boot from SAN and reduce image management complexity and support

for Direct Attached Storage (DAS point-to-point topology).

- Brocade Server Application Optimization (SAO)

Quality of Service (QoS) levels assignable to VM applications and support for N_Port Trunking of 2×16 Gbps links into a single logical 32 Gbps link to improve application performance and availability.

- Direct I/O

This enables native (direct) I/O performance by allowing VMs to bypass the hypervisor and communicate directly with the adapter.

- Brocade Network Advisor

This simplifies and unifies the management of Brocade adapter, SAN, and LAN resources through a single pane-of-glass.

- Brocade Diagnostics (D-Port)

This improves detection and isolation of 16 Gbps optics problems between adapters and switches.

- LUN Masking

Initiator-based LUN masking for storage traffic isolation.

- Target Rate Limiting (TRL)

This throttles data traffic when accessing slower speed storage targets to avoid back pressure problems.

Technical specifications

The Brocade 16Gb FC Single-port and Dual-port HBAs have the following specifications:

- Host interface: PCI Express Gen 2 x8

- Data rate: 14.025 Gbps (1600 MBps); 8.5 Gbps (800 MBps); 4.25 Gbps (400 MBps); 2.125 Gbps (200 MBps) autosensing (per port); full duplex
- Performance: over 500,000 IOPS per port (1,000,000 IOPS per dual-port adapter)
- Boot support: Boot from SAN, Fabric-based Boot LUN Discovery
- Protocols: SCSI-FCP, FCP-2, FCP-3, FC-SP
- Topology: Point-to-point (N_Port), switched fabric (N_Port)
- N_Port Trunking of 2×16 Gbps links into a single logical 32 Gbps link
- Supported media: Brocade 16 Gbps and 8 Gbps Fibre Channel LC-style pluggable (SFP+), SWL (850 nm), hot-pluggable
- Distance support:
- 15 m at 16 Gbps on 62.5/125 μm (OM1) Multi-Mode Fiber (MMF)
- 35 m at 16 Gbps on 50/125 μm OM2 MMF
- 100 m at 16 Gbps on 50/125 μm OM3 MMF
- 125 m at 16 Gbps on 50/125 μm OM4 MMF
- Management software:
- Brocade Host Connectivity Manager (HCM)
- Brocade Configuration Utility (BCU) Command Line Interface (CLI)
- Brocade Network Advisor