QLOGIC®
The Ultimate in Performance

DATA SHEET

2600 Series

16Gbps Gen 5 Fibre Channel-to-PCIe Adapters

Overview

The 2600 Series 16Gb Gen 5 Fibre Channel Adapters boast industry-leading native Fibre Channel performance—achieving dual-port, line-rate, 16-gigabit Fibre Channel throughput—at extremely low CPU usage with full hardware offloads. Gen 5 Fibre Channel resolves data center complexities by enabling a storage network infrastructure that supports powerful virtualization features, application-aware services, and simplified management. This achievement provides a next-generation storage networking infrastructure capable of supporting the most demanding virtualized and cloud-enabled environments while fully leveraging the capabilities of high-performance 16Gb Fibre Channel and solid-state disk (SSD) storage. These features help reduce cost and complexity while the unmatched 16Gbps performance eliminates potential I/O bottlenecks in today's powerful multiprocessor, multicore servers.

Highlights

- 16Gbps per port maximum throughput for high bandwidth storage (SAN) traffic
- Over 1.2 million IOPS reduce latency in high transaction intensive applications and virtualized environments
- Reduced hardware, cabling, and management costs by enabling more applications (VMs) to run on a single server and Fibre Channel port
- Decreased power and cooling costs by using the fewest PCI Express® lanes in PCIe Gen3 environments
- Overlapping protection domains (OPDs) to ensure the highest level of reliability as data moves to and from the PCI bus and Fibre Channel network
- Complete investment protection for legacy 8Gb and 4Gb Fibre Channel infrastructure
- Future-proof design enables conversion to a 10-gigabit Ethernet (GbE) Converged Network Adapter

Leadership, Confidence, and Trust

QLogic is the undisputed leader in Fibre Channel Adapters, with over 15 years of experience and six generations of Fibre Channel products that have been qualified by all major server OEMs in multiple form factors. QLogic owns the most established, proven Fibre Channel stack in the industry with more Fibre Channel ports shipped than any other vendor.

Virtualization Optimized

The 2600 Series Adapters, powered by QLogic VMflex™ technology, support standards-based virtualization features such as N_Port ID virtualization (NPIV). In addition, line rate 16Gb throughput and unmatched storage performance maximize the number of VMs that each server can support.

Superior Application Performance

The QLogic 2600 Series 16Gb Gen 5 Fibre Channel Adapters consume the fewest CPU cycles to drive storage traffic at line rate across all ports. With support for over 1.2 million I/O transactions per second, QLogic adapters deliver the best storage application performance in virtualized and non-virtualized environments.

Power Optimized

The 2600 Series Adapters use QLogic's StarPower™ technology to provide maximum power efficiency. The adapters offer dynamic power management, which ensures that the PCIe® host bus link uses the minimal number of PCIe lanes, regardless of whether the server supports PCIe Gen2 or Gen3, to meet the required Fibre Channel bandwidth. Using fewer PCIe lanes means that these adapters use less power, while continuing to maintain the highest level of Fibre Channel performance.

Investment Protection

The adapters are backward compatible with existing 4Gb and 8Gb Fibre Channel infrastructure.

The adapters are also compatible with the same Fibre Channel software driver stack that has been tested and validated across all major hardware platforms, all major hypervisors and OSs, and has been battle-hardened in millions of previous installations.

Simplified Management

QLogic's new, unified management application, QConvergeConsole® (QCC), provides single-pane-of-glass management for the company's broad product line of storage and networking adapters (Fibre Channel, converged networking, NIC, and iSCSI).

In addition, QLogic supports all major APIs, giving the end user the flexibility to manage their QLogic Fibre Channel Adapter portfolio using third-party management tools, including a vCenter™ plug-in for VMware®.

Future-Proof Design

The QLogic 2600 Series Adapters have the unique capability of transforming from a 16Gb Gen 5 Fibre Channel Host Bus Adapter to an 8300 Series 10GbE Converged Network Adapter that supports NIC, Fibre Channel over Ethernet (FCoE), and iSCSI traffic. QLogic I/OFlex™ technology provides the end-user field upgradability to change adapter "personality" from Fibre Channel to Ethernet. Based on QLogic's I/OFlex technology, the adapter's flexibility simplifies and reduces cost for customers who want to deploy a Fibre Channel SAN today and migrate to an Ethernet SAN in the future.

Host Bus Interface Specifications

Bus Interface

- PCI Express Gen3 x4, Gen2 x8 (x8 physical connector)

Host Interrupts

- INTx and MSI-X

Compliance

- *PCI Express Base Specification*, rev. 3.0; *PCI Express Card Electromechanical Specification*, rev. 2.0; *PCI Bus Power Management Interface Specification*, rev. 1.2

Fibre Channel Specifications

Throughput

- 16Gbps full-duplex line rate per port (maximum)

Logins

- Support for 2,048 concurrent logins and 2,048 active exchanges
- Expandable to 16K concurrent logins and 32K active exchanges

Port Virtualization

- NPIV

Compliance

- *SCSI-3 Fibre Channel Protocol* (SCSI-FCP), *Fibre Channel Tape (FC-TAPE) Profile, SCSI Fibre Channel Protocol-2* (FCP-2), *Second Generation FC Generic Services* (FC-GS-2), and *Third Generation FC Generic Services* (FC-GS-3)

Tools and Utilities

Management Tools and Device Utilities

- QConvergeConsole: a unified management tool (GUI and CLI) for Fibre Channel/FCoE, iSCSI, and networking

Boot Support

- BIOS, UEFI, FCode

APIs

- SNIA HBA API V2, SMI-S

Operating Systems

- For the latest applicable operating system information, see http://driverdownloads.qlogic.com.

Physical Specifications

Ports

- QLE2670: single 16Gbps Gen 5 Fibre Channel
- QLE2672: dual 16Gbps Gen 5 Fibre Channel

Form Factor

- Low-profile PCIe card: (6.6 inches × 2.54 inches)
- Custom form factors also available

Environment and Equipment Specifications

Temperature

- Operating: 0°C/32°F to 55°C/131°F
- Storage: –20°C/–4°F to 70°C/158°F

Humidity

- Relative (noncondensing): 10% to 90%
- Storage: 5% to 95%

Maximum Cable Distances

Rate	Multi-Mode Optic Cable and Distance (m)			
	OM1	OM2	OM3	OM4
4Gbps	70	150	380	400
8Gbps	21	50	150	190
16Gbps	15	35	100	125

Agency Approvals

Safety

- US, Canada, and Europe

EMI and EMC (Class A)

- US, Canada, Europe, Australia/New Zealand, Japan, Korea

Ordering Information

QLE2670 (single port)
QLE2672 (dual port)

- Ships in an individually packed box with a standard-size bracket and a spare low-profile bracket
- Ships with SR optical transceivers installed

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