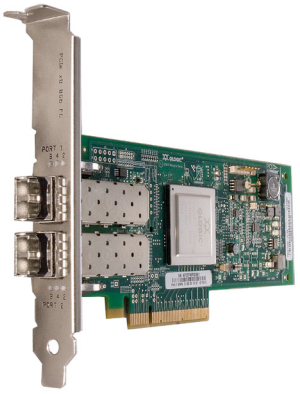
QLOGIC®
The Ultimate in Performance

2500 Series

PCIe-to-8Gbps Fibre Channel Adapters



Benefits

- Virtualization optimized with dynamic provisioning and quality of service (QoS) of virtual I/O ports
- Power optimized with dynamic, PCI Express® link training while preserving storage performance
- Reliability, availability, serviceability (RAS) optimized
- Security optimized with standards based fabric isolation and end-to-end data protection (T10)
- Management optimized with unified firmware and driver. Deployments managed through QConvergeConsole management applications (GUI and CLI)

Features

- Fibre Channel 8Gb to PCI Express
- 3200MBps (full-duplex) per port
- 200,000 initiator and target IOPS per port
- StarPower™ technology

2500 Series. The 2500 Series adapters are designed to meet the business requirements of the enterprise data center by enabling the lowest possible power consumption and the highest level of data protection. These adapters interface to the host server with a PCIe® Gen2 bus, ensuring no internal performance bottlenecks.

Virtualization Optimized. The 2500 Series adapters deliver enhanced security, quality of service (QoS), and enable dynamic provisioning. The 2500 Series adapters also allow multiple logical (virtual) connections to share the same physical port. Each logical connection has its own resources and the ability to be managed independently.

Power Optimized. The 2500 Series adapters take advantage of QLogic StarPower technology, ensuring power efficiency. QLogic StarPower technology offers dynamic and adaptive power management features such as power and bandwidth optimized intelligent PCI Express link training, low-power switching power supplies, and thermally efficient layout requiring lower airflows.

RAS Optimized. The 2500 Series adapters provide the highest data integrity by ensuring overlapping protection domains (OPD) on both the control and data paths. In addition, the 2500 Series adapters utilize enhanced hardware assist firmware tracing (EHAFT), allowing more comprehensive debugging with standard drivers.

Security Optimized. The 2500 Series adapters support SAN-level authentication (FC-SP) fabric-level isolation (NPIV), and are capable of end-to-end data integrity (T10).

Management Optimized. The 2500 Series adapters are backward compatible with 4Gb and 2Gb speeds. A single common driver per operating system for three generations of Fibre Channel adapters (8Gb, 4Gb, and 2Gb) simplifies deployment. QLogic's unified driver model (firmware embedded in the driver) eliminates potential interoperability issues between firmware and driver versions. The 2500 Series adapters' API compatibility with 4Gb products accelerates deployment while ensuring application compatibility.

Investment Protection. For over 15 years, QLogic has been a technological leader with products that address the current needs of customers, yet provide strong investment protection to support emerging technologies and standards. QLogic stands alone in the industry with its product portfolio depth and experience in successfully delivering technological solutions that address the needs of today and tomorrow.

Fibre Channel Specifications

Negotiation

- 8/4/2Gbps auto-negotiation

IOPS

- 200,000 initiator and target IOPS per port

Class of service

- 2 and 3

Topology

- FC-AL, FC-AL2, point-to-point, switched fabric

Protocols

- FCP-3-SCSI
- FC-Tape (FCP-2)

Cable distances

	Multi-Mode Optic		
	Cable Type and Distance (m)		
Rate	OM1	OM2	OM3
2Gbps	150	300	500
4Gbps	70	150	380
8Gbps	21	50	150

PCI Express Interface

Compliance

- *PCI Express Base Specification* rev. 2.0
- *PCI Express Card Electromechanical Specification* rev. 2.0
- *PCI Bus Power Management Interface Specification* rev. 1.2
- *PCI Hot Plug Specification* rev. 1.0

Physical and electrical

- PCIe x8 physical connector
- StarPower link training
  - Maximum x4 lanes for Gen2 rate
  - Maximum x8 lanes for Gen1 rate

Connectivity

Ports

- QLE2560: single 8Gbps Fibre Channel
- QLE2562: dual 8Gbps Fibre Channel
- QLE2564: quad 8Gbps Fibre Channel

HBA Specifications

Airflow

- No airflow required

Power Consumption

- QLE2560: 5.5Watts (typical)
- QLE2562: 6.2Watts (typical)
- QLE2564: 13Watts (typical)

Form Factor

- QLE2560/QLE2562
  - Low-profile PCIe card (6.6 in. × 2.54 in.)
- QLE2564
  - Full-height PCIe card (6.6 in. × 4.376 in.)

Temperature

- 0 to 55°C (operating)
- -40 to 70°C (non-operating)

Relative Humidity

- 10% to 90% (operating, non-condensing)
- 5% to 93% (non-operating, non-condensing)

RoHS Compliance

- RoHS 6

Tools and Utilities

Management Tools

- QConvergeConsole: a unified management tool (GUI and CLI) for Fibre Channel

Device Utilities

- Utilities for flashing bootcode
- Linux® scripting tools

Boot Support

- BIOS, FCode, UEFI, EFI

APIs

- SNIA HBA API V2, SMI-S, FDMI

Platform/Operating System Support

Hardware platforms

- IA32 (x86), IA64, Intel® 64
- AMD™ Opteron64
- Sun™ SPARC®

Operating systems

- Microsoft® Windows Server®, XP Professional x64, Windows Vista®; Red Hat® Linux; Novell® SLES, NetWare®; VMware® ESX™/ESXi; Oracle® Solaris®, Linux; Citrix® XenServer™

Agency Approvals—EMI and EMC

US/Canada

- FCC Part 15, Subpart B, Class A; ICES-003, Class A

Europe

- EN55022, Class A

New Zealand/Australia

- AS/NZS 3548 Class A

Japan

- VCCI V-3/2004.4, Class A

Korea

- MIC

Taiwan

- BSMI (CNS 13438)

Agency Approvals—Safety

US/Canada

- UL, cUL: UL60950, CSA C22.2 No.60950, Class 1 Laser Product per DHHS 21CFR J

Europe

- 73/23/ECC Low Voltage Directive:
  - TUV: EN60950-1:2001, EN60825-1:1994+A1+A2, EN60825-2:1994+A1

Ordering Information

- QLE2560-CK (single port)[1, 2]
- QLE2562-CK (single port)[1,2]
- QLE2564-CK (quad port)[2, 3]

1 Ships in an individually packed box with a standard-size bracket, a spare low-profile bracket, and a Quick Start Guide

2 Ships with SR optical transceivers installed

3 Ships in an individually packed box with a standard-size bracket and a Quick Start Guide

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