# **Qlogic QLE2460 Datasheet**



Genuine Qlogic QLE2460-CK PCI Express x4 Single-port 4Gb Fibre Channel Host Bus Adapter QLE2460

The QLE2460 4Gb Adapters deliver unprecedented levels of performance, scalability, and reliability. The adapters offer unique networking functionality, including Intelligent Interleaved DMA (iiDMA), Dual Read DMA (DRDMA), and Overlapping Protection Domains (OPD). For virtualization at the Fibre Channel port level, QLogic 4Gb adapters support N\_Port ID Virtualization (NPIV) by allowing multiple N\_Port IDs to share the same physical Fibre Channel port.

- Intelligent interleaved DMA (iiDMA) ensures maximum utilization of data links
- Dual Read DMA (DRDMA) processes I/O requests faster
- Overlapping Protection Domains (OPD) provides enhanced reliability
- 4/2/1Gbps (auto-negotiation)
- 150,000 IOPS per port
- 2,048 concurrent logins per port
- RoHS compliant
- 2400 Series Host Bus Adapter.
- The 2400 Series adapters are the industry's first, true enterprise class, 4Gbps-to-PCI Express® adapters. The 2400 Series adapters deliver unprecedented levels of performance and availability, as well as intelligent networking features specific to enterprise class data centers.

#### Enterprise Class Features.

The 2400 Series adapters are the highest performing and most reliable adapter in the industry. Additionally, the 2400 Series adapters provide intelligent storage networking features that redefine the enterprise class adapter, providing increased data protection, advanced frame routing, and enterprise-wide management capabilities.

Simplified Setup.

Point-and-click installation and configuration wizards simplify the adapter setup process. Storage administrators can quickly deploy adapters across a SAN using standard adapter management tools and device utilities. The 2400 Series adapters are fully compatible with SNIA API and SMI-S, thereby allowing administrators to manage QLogic adapters using third-party software applications.

Comprehensive Operating System (OS) Support.

QLogic offers the broadest range of support for all major operating systems to ensure OS and hardware server compatibility. Drivers are available for all major operating systems and hardware server platforms. A single driver strategy per OS allows storage administrators to easily deploy and manage adapters in heterogeneous SAN configurations.

Guaranteed Interoperability.

Storage partner certifications, combined with agency and regulatory testing, ensures all products meet world compliance hardware and software specifications. All adapters are tested extensively with third-party hardware, along with multiple software applications, to ensure best-in-class SAN interoperability and compatibility. You can be confident purchasing QLogic adapters to meet your Fibre Channel storage networking needs.

Investment Protection.

For over 15 years, QLogic has been a technological leader with products that address the customer's current needs. In addition, QLogic provides 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.

## **Host Bus Specifications**

- Bus Interface
  - o x4 PCI Express
- Memory
  - 1 MB SRAM per port, 1 MB FLASH (SPI), and 2 KB NVRAM (SPI)
- Compliance
  - Conforms to PCI Express Base Specification rev. 1.0a, PCI Express Card Electromechanical Specification,
    rev. 1.0a, PCI Bus Power Management Interface Specification revision 1.1

## Fibre Channel Specifications

- Data Rate
  - 4/2/1 Gb/s auto-negotiation (4.25/2.125/1.0625 Gb/s)
- Performance
  - 150,000 IOPS per port
- Throughput
  - 750 MB/s maximum per port
- Topology
  - Point-to-point (N\_Port), Arbitrated Loop (NL\_Port), and Switched Fabric (N\_Port)
- Logins
  - Support for F\_Port and FL\_Port login. 2,048 concurrent logins and 2,048 active exchanges.
- Class of Service
  - o Class 2 and 3
- Protocols
  - FCP (SCSI-FCP), IP (FC-IP), FICON (FC-SB-2), FC-TAPE (FCP-2)
- Buffer Credits
  - 3 credits available (2,112 Byte frame payload)

#### Compliance

SCSI-3 Fibre Channel Protocol (SCSI-FCP), Fibre Channel Physical and Signaling Interface (FC-PH), Fibre Channel 2nd Generation (FC-PH-2), Third Generation Fibre Channel Physical and Signaling Interface (FC-PH-3), Fibre Channel-Arbitrated Loop (FC-AL-2), Fibre Channel Fabric Loop Attachment Technical Report (FC-FLA), Fibre Channel-Private Loop Direct Attach Technical Report (FC-PLDA), Fibre Channel Tape (FC-TAPE) profile, SCSI Fibre Channel Protocol-2 (FCP-2), Second Generation FC Generic Services (FC-GS-3), Third Generation FC Generic Services (FC-GS-3), Fibre Channel Framing and Signaling (FC-FS)

### **Physical Specifications**

- Ports
  - Single (QLE2460)
- Connections
  - Small Form Factor Fixed (SFF) multimode optic with LC-style connector
- Form factor
  - Low-profile MD2: 16.93 cm × 5.15 cm (6.7 in. × 2.5 in.)
- · Bracket size
  - Standard: 1.84 cm x 12.08 cm (.73 in. x 4.76 in.)
  - Low profile: 1.84 cm x 8.01 cm (.73 in. x 3.15 in.)

## **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 (non-condensing): 10% to 90%
  - Storage: 5% to 95%
- Power dissipation
  - 。~9.0 W
- Cable distances

  - o 2 Gbps: 300 meters 50/125 ☐m fiber, 150 meters 62.5/125 ☐m fiber

- o 4 Gbps: 150 meters 50/125 ☐m fiber, 70 meters 62.5/125 ☐m fiber
- RoHS Compliant
  - Only RoHS compliant HBAs will be offered in the QLE246x family

#### Software

- Applications
  - o SANsurfer FC HBA Manager, SANsurfer FC CLI, SANsurfer Express
- Operating Systems
  - Windows ServerTM 2003, Windows® 2000, SolarisTM 9,10, Linux® Red Hat® AS 3.0, 4.0, Linux
    SUSE® SLES 8, 9, Novell® NetWare® 6.5
- HW Platforms
  - o IA32 (x86), IA64, IEM64T, AMD Opteron 64, SUN SPARC
- Flash Utilities
  - Utilities for firmware, driver, boot code, and NVRAM
- Boot Support
  - o BIOS, EFI, and FCode
- Compliance
  - SNIA HBA API V2, SMI-S, FC-SP/DH-CHAP, and FDMI

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