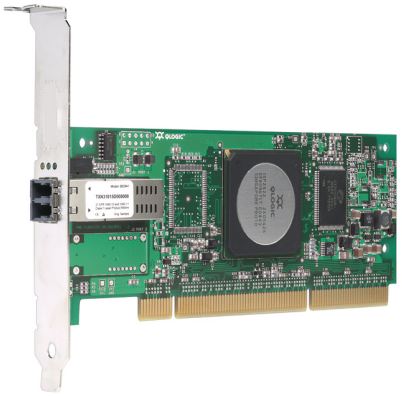
QLOGIC®
The Ultimate in Performance

QLA2460

Single-Port, 4Gbps Fibre Channel-to-PCI-X 2.0 266-MHz Adapter



A BETTER 4Gb QLOGIC

High Performance

- 150,000 IOPS delivers high I/O transfer rates for storage applications
- Intelligent interleaved DMA (iiDMA) ensures maximum utilization of data links
- Out-of-order frame reassembly (OoOFR) reduces congestion and retransmissions

Superior Scalability

- Multi-ID and N_Port virtualization ready. Allows physical ports to be part of multiple logical networks.
- Cisco® VSAN ready. Allows physical ports to be part of multiple logical networks.
- Comprehensive operating system (OS) driver support including Windows®, Linux®, Solaris®, NetWare®, Mac OS®, Citrix®, Oracle®, and VMware®.
- Universal boot support manages multiple hardware platforms and boot options.

Enhanced Reliability

- Overlapping protection domains for continuous protection of internal data paths.
- T10 cyclic redundancy check (CRC) ensures end-to-end data integrity across storage area networks (SANs).
- Three LEDs display real-time status and link activity information.

QLA®2460 Host Bus Adapter. The QLA2460 is the industry's first, true enterprise class, 4Gbps-to-PCI-X® 2.0 adapter. The QLA2460 delivers unprecedented levels of performance and availability, as well as intelligent networking features specific to enterprise class data centers.

Enterprise Class Features. The QLA2460 is the highest performing and most reliable adapter in the industry. It delivers unmatched performance by leveraging a single ASIC design, combining a unique hardware architecture to deliver over 150,000 IOPS, nearly 800MBps throughput, and support for the PCI-X 2.0 266-MHz double data rate (DDR) bus speed. More importantly, the QLA2460 provides new intelligent storage networking features that redefine the enterprise class adapter, including increased data protection, advanced frame routing, and enhanced 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 QLA2460 is fully compatible with SNIA API and SMI-S, thereby allowing administrators to manage QLogic adapters using third-party software applications.

Comprehensive 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 that 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 Interface Specifications

Bus interface
- 64-bit, PCI-X 2.0 266MHz DDR, compatible with 66/33MHz PCI and 133/100/66MHz PCI-X

Signal voltage
- 3.3V (mode 1), 3.3V/1.5V (mode 2)

Memory
- 1MB SRAM, 1MB flash (SPI), and 2KB NVRAM (SPI)

Hardware platforms
- IA32 (x86), IA64, IEM64T, AMD Opteron™ 64, Sun™ SPARC®, Apple® G5 (Xserve® and Power Mac®)

Compliance
- *PCI Local Bus Specification*, revision 2.3, *PCI-X Protocol Addendum to the PCI Local Bus Specification*, revision 2.0a, *PCI-X Electrical and Mechanical Addendum* (revision 2.0a) to the *PCI Local Bus Specification, PCI Bus Power Management Interface Specification* revision 1.1, *PCI Hot Plug Specification*, revision 1.0

Fibre Channel Specifications

Data rate
- 4/2/1Gbps auto-negotiation (4.2480/2.1240/1.0625Gbps)

Performance
- 150,000 IOPS

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
- Class 2 and 3

Protocols
- FCP (SCSI-FCP), FC-TAPE (FCP-2)

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-2), Third Generation FC Generic Services (FC-GS-3), Fibre Channel Framing and Signaling (FC-FS)*

Physical Specifications

Ports
- Single 4Gbps Fibre Channel

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 × 12.08 cm (.73 in. × 4.76 in.)
- Low-profile: 1.84 cm × 8.01 cm (.73 in. × 3.15 in.)

Environment and Equipment Specifications

Airflow (none)

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
- 6.5W (maximum)

Cable distances
- 1Gbps: 500 meters 50/125 µm fiber, 300 meters 62.5/125 µm fiber
- 2Gbps: 300 meters 50/125 µm fiber, 150 meters 62.5/125 µm fiber
- 4Gbps: 150 meters 50/125 µm fiber, 70 meters 62.5/125 µm fiber

Agency Approvals—Product Safety

US and 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

Agency Approvals—EMI and EMC

US: FCC Part 15, Class A

Canada: Industry Canada ICES-003, Class A

Europe: 89/336/EEC EMC Directive CE Mark, EN55022: 1998/CISPR22:1997 Class A, EN55024: 1998, EN61000-3-2:1995, EN61000-3-3:1994

Japan: VCCI, Class A

Taiwan: CNS 13438 Class A

New Zealand and Australia: AS/NZS 3548 Class A

Korea: MIC

Tools and Utilities

Management tools
- SANsurfer® Fibre Channel HBA Manager

Device utilities
- Command line interface; utilities for firmware, driver, boot code, NVRAM

Boot support
- BIOS, EFI, FCode

APIs
- SNIA API V2, SMI-S, FDMI

Operating systems
- Windows Server® 2003, 2008, 2008 R2; Windows 2000; Windows XP Pro; Windows Vista; Solaris 8, 9, 10; OpenSolaris™ 2008, 2009; Red Hat® RHEL 3.0, 4.0, 5.0; Novell SLES 8, 9, 10, 11; Novell NetWare 6.5; Mac OS X; Citrix XenServer™ 3.2 – 4.1, 5.0, 5.5; Oracle Enterprise Linux 4, 5; VMware ESX™/ESXi 3.5, 4.0

Ordering Information

QLA2460-CK
- Ships in an individually packed box with a standard-size bracket, a spare low-profile bracket, a SANsurfer Fibre Channel HBA Manager CD, and a Quick Start Guide

QLA2460-BK
- Ships in a bulk box in quantities of 20 and 50 with standard size brackets

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