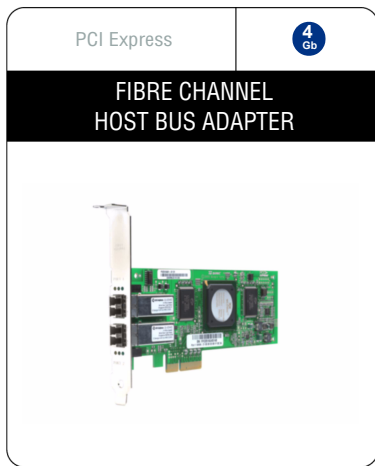




SANblade®

Dual Port 4-Gbps Fibre Channel (FC) to
PCI Express Host Bus Adapter (HBA)

QLE2462



High Performance

- 300,000 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™, and Mac OS®.
- 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 per port display real-time status and link activity information.

- 4/2/1 Gbps (auto-negotiation)
- 2,048 concurrent logins per port
- SCSI initiator, target, and initiator/target modes

- Persistent binding
- HBA and target level failover
- HBA information, topology, maps, statistics, and graphs

- LUN masking
- Loopback and read/write buffer tests
- RoHS compliant

QLE2462 Host Bus Adapter. The QLE2462 is the industry's first, true enterprise class, 4-Gbps to PCI Express x4 HBA. The QLE2462 not only delivers unprecedented levels of performance and availability, but also intelligent networking features specific to enterprise class data centers.

Enterprise Class Features. The QLE2462 HBA is the highest performing and most reliable HBA in the industry. It delivers unmatched performance by leveraging a single ASIC design, combining a unique hardware architecture to deliver over 300,000 IOPS, nearly 1.6 GBps throughput, and support for PCI Express x4 bus speeds. More importantly, the QLE2462 HBA provides new intelligent storage networking features that redefine the enterprise class HBA, providing increased data protection, advanced frame routing, and enterprise wide management capabilities.

Simplified Setup. Point-and-click installation and configuration wizards simplify the HBA setup process. Storage administrators can quickly deploy HBAs across a SAN using standard HBA management tools and device utilities. The QLE2462 is also fully compatible with industry standard application programming interfaces (APIs), including SNIA HBA API and SMI-S, thereby allowing administrators to manage QLogic HBAs 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 fully tested and available for all major operating systems, including Windows®, Linux™, Solaris™, NetWare®, and Mac OS® X. A single driver strategy per OS allows storage administrators to easily deploy and manage HBAs in heterogeneous SAN configurations. QLogic's driver suite supports all major hardware server platforms, including 32/64-bit computing platforms from Intel (IA32, IEM64T, IA64), AMD (Opteron64), Sun (SPARC), and Apple® G5 (Power Mac®).

Guaranteed Interoperability. Storage partner certifications, combined with agency and regulatory testing, ensures all products meet world compliance hardware and software specifications. All HBAs 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 HBAs to meet your FC storage networking needs.

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, 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	PCI Express x4
Memory	1-MB SRAM per port, 1-MB flash (SPI), and 2-KB NVRAM (SPI)
HW platforms*	IA32 (x86), IA64, IEM64T, AMD Opteron64, Sun SPARC, Apple G5 (Power Mac)
Compliance	PCI Express Base Specification rev. 1.0a, PCI Express Card Electromechanical Specification rev. 1.0, PCI Bus Power Management Interface Specification revision. 1.1

Fibre Channel Specifications

Data rate	4/2/1 Gbps auto-negotiation (4.2480/2.1240/1.0625 Gbps)
Performance	150,000 IOPS 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 per port
Class of service	Class 2 and 3
Protocols	FCP (SCSI-FCP), IP (FC-IP), 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-3), Third Generation FC Generic Services (FC-GS-3), Fibre Channel Framing and Signaling (FC-FS)

Physical Specifications

Ports	Dual 4-Gbps FC
Connections	Small form factor fixed (SFF) multimode optic with LC-style connector
Form factor	Low-profile PCI Express Card: 16.765 cm × 6.89 cm (6.6 in. × 2.713 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	No airflow required.
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	6.5 W (maximum)
Cable distances	1 Gbps: 500 meters 50/125 µm fiber, 300 meters 62.5/125 µm fiber 2 Gbps: 300 meters 50/125 µm fiber, 150 meters 62.5/125 µm fiber 4 Gbps: 150 meters 50/125 µm fiber, 70 meters 62.5/125 µm fiber

Agency Approvals—Product Safety

US/Canada	UL, cUL UL60950 CSA C22.2 No.60950 Class 1 Laser Product per DHHS 21CFR J
Europe	73/23/EEC 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 B
Canada	Industry Canada ICES-003, Class B
Europe	89/336/EEC EMC Directive CE Mark: EN55022: 1998 / CISPR22:1997 Class B EN55024: 1998 EN61000-3-2:1995 EN61000-3-3:1994
Japan	VCCI, Class B
Taiwan	CNS 13438 Class B
New Zealand/Australia	AS/NZS 3548 Class B
Korea	MIC

Tools and Utilities

Management tools	FC HBA Manager
Device utilities	Command line interface; utilities for firmware, driver, boot code, and NVRAM
Boot support	BIOS, EFI, and FCode
APIs	SNIA HBA API V2, SMI-S, and FDMI
Operating systems*	Windows® Server™ 2003; Windows 2000; Windows XP Pro; Solaris 10; Linux Red Hat AS 3.0, 4.0; Linux SuSE SLES 8, 9; Novell NetWare 6.5, Mac OS X

Ordering Information

QLE2462-CK	Ships in an individually packed box with a standard size bracket and a spare low-profile bracket, FC HBA Manager CD, and Quick Start Guide
QLE2462-BK	Ships in a bulk box in quantities of 20 and 50 with standard size brackets

* Subject to availability of OS and hardware from respective OEMs.



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