SANblade® Express

QLOGIC®

2-Gbps Fibre Channel (FC) to
PCI-X Host Bus Adapters (HBAs)

QLA®210 Family

SAN X EXPRESS™

PCI-X | 2 Gb

**FIBRE CHANNEL
HOST BUS ADAPTER**
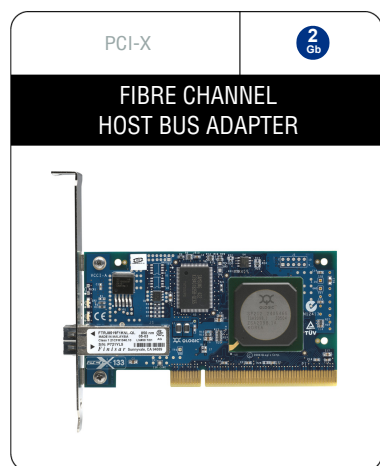
Simplified Ease of Use
- Auto-install software with wizards
- LED beaconing
- Quick start guide
- Preconfigured settings

Enhanced Reliability
- 133 MHz, 32-bit PCI-X support
- Integrated single-chip solution
- Enhanced level of support: online, by phone, and via email, all available over extended hours

Cost Effective
- Web based online training for installation and configuration
- Easy, reliable, scalable, high-performance, resilient host bus adapter (HBA) with optimized price/performance/functionality for SMBs

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- 2-Gbps Fibre Channel

- RoHS compliant

- Windows® 2000, Windows Server™ 2003, Linux®, and Solaris™ x86 support

- Multi-switch fabric (up to two switches supported)

- Plug and play

- Localized documentation: available in English, French, German, Chinese, Japanese, Portuguese, Italian, Spanish, and Korean.

Why a QLA210? The QLA210 offers a reliable, high-performance, dependable storage area network (SAN) to the small and medium business (SMB) market. The QLA210:

- Is easy to use
- Has demonstrated robustness (highest mean-time between failures (MTBF))
- Has proven quality

Ease of Use. Designing a successful user experience requires understanding their needs, expectations, experience, and usage patterns. By applying this knowledge to the HBA and software, QLogic has created a design that requires minimum user effort while providing maximum user satisfaction. The wide adoption of installation/configuration wizards eliminates the complexity and intricacies of Fibre Channel SANs. Emphasis on ease-of-use at every step assures a successful, enhanced user experience. Default factory settings and autodetect configuration (similar to Windows® XP) eliminates the need to know about each and every knob and button on the dashboard.

Plug and play. The QLA210's technology makes a huge leap in out-of-the-box plug and play SAN setup. An illustrative quick-start guide, a detailed user manual, and extended support (including online, via email, and by phone) makes installation, configuration, maintenance, and upgrades easy for even a novice user. In addition,

the QLA210 package is available in eight languages, making it even easier for geographically diverse end-customers to adopt the SAN infrastructure.

True Value. Rather than a philosophy of one size fits all, the QLA210 technology addresses the needs of the SMB market segment. QLogic brings optimal performance (400 MBps throughput) for the best possible price to SMB customers. QLogic has worked with its customers to determine the ideal feature set and with suppliers to adopt highly reliable, low-cost components.

Why QLogic? The QLogic QLA200 HBA family is the defacto standard for small-medium business (SMB) HBAs. All major OEMs have selected the QLA200 HBA family as the result of:

- QLogic's ground-up approach to developing an SMB HBA (not just a *make-from*)
- Reflection of a much deeper understanding of the end-user's needs
- Closely working with OS vendors (such as Microsoft®) to simplify and provide a single application to manage HBAs, switches, and disk drives

Host Bus Interface Specifications

Speed	133-MHz, 32-bit PCI-X 1.0
Signal voltage	Only 3.3 V bus is supported
Compliance	Conforms to *PCI-X Addendum* rev. 1.0a, *PCI Local Bus Specification* rev. 2.2, *PCI Hot Plug Specification* 1.0, *PCI Bus Power Management Interface Specification* rev 1.1

Fibre Channel Specifications

Speed	200 MBps maximum at half-duplex, 400 MBps maximum at full-duplex (2-Gbps speed only)
Topology	FC-AL, FC-AL-2, switched fabric (F-Port)
Logins	Up to 16 total logins in private loop (FC-AL/FC-AL-2) topology, 8 (target) logins in fabric (F-Port connect) topology, and up to 64 FCP/FCP-2 exchanges
Class of service	Class 3 Fibre Channel service
Protocols	SCSI (FCP), tape (FCP-2)
FC frame size	2K fixed
Buffer credits	2 credits issued
Compliance	*Second Generation FC Generic Services Definition* (FC-GS-2), *Third Generation FC Generic Services Definition* (FC-GS-3), *Fibre Channel-Physical and Signaling Interface* (FC-PH), *SCSI-3 Fibre Channel Protocol* (SCSI-FCP), *Fibre Channel-Arbitrated Loop-2* (FC-AL-2), *Fibre Channel-Private Loop Direct Attach Technical Report* (FC-PLDA), *Fibre Channel Framing and Signaling* (FC-FS)

Physical Specifications

Ports	One
LEDs	Two (with beacon support)
Media	Multimode optic
Optics	Short wave laser
Connectors	LC-style connector that supports non-OFC, multimode fibre optic cabling using a small form factor optical transceiver module
Form factor	Low-profile MD1: 11.99 cm×6.44 cm (4.721"×2.536")
Bracket size	Standard size, with optional low profile size

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
Airflow	0 lf/m
Humidity	Relative (non-condensing): 10% to 90%, Storage: 5% to 95%
Power dissipation	~ 4.5 watts
Cable distances	2 Gbps: 300 meters 50/125 μm fiber, 150 meters 62.5/125 μm fiber
Cable	50/125μm multimode fiber, 62.5/125 μm multimode fiber

Agency Approvals—Product Safety (Preliminary)

US/Canada	UL, cUL UL60950-1 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 (Preliminary)

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 EN61000-3-2:2000 EN61000-3-3:2001;A1:2001
Japan	VCCI, Class A
Taiwan	CNS 13438 Class A
New Zealand/Australia	AS/NZS 3548 Class A
Korea	MIC Class A

Tools and Utilities

Management tools	FC HBA Manager
Device utilities	Configuration utilities resident with boot code
Boot support	Intel x86: BIOS (32-bit)
APIs	SNIA HBA API V2, SMI-S, and FDMI
Operating systems	Windows Server 2003, Windows 2000, Linux (Red Hat 8, 9, Advanced Server 2.1 and 3.0; SuSE® SLES 8), Solaris x86. Only 32-bit variants are supported. A single common driver supports the QLA210 and all 2-Gbps QLogic FC HBAs.

Ordering Information

QLA210-BK	Ships in a bulk box in quantities of 20, 50, or 100 with standard size brackets
QLA210-CK	Ships in an individually packed box with a standard size bracket and a spare low-profile bracket, QLA2*xx* CD, and Quick Start Guide

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