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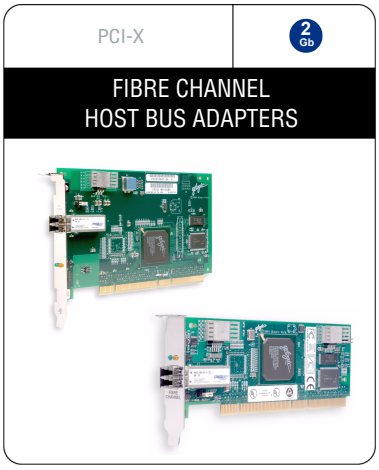
Find the *QLogic QLA2310F* at our website: *Click HERE*

QLOGIC®

SANblade®

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

QLA®2310F/ QLA2310FL



Ease of Use

- Autonegotiation of Fibre Channel speed bit rate (1 Gbps or 2 Gbps)
- Easy detection of activities through an LED panel:
  - Power
  - Online
  - Signal acquired
  - Loss of synchronization
  - Firmware error
- Automatic topology detection
- Quick start guide
- Persistent binding

Superior Scalability

- Concurrent support for SCSI and IP protocols
- Load balancing for optimized performance
- Simultaneous initiator and target mode support
- Local and remote management

Enhanced Reliability

- Unique, single-integrated Fibre Channel controller for added reliability and optimum performance

- HBA and LUN level failover
- LUN masking
- Loopback and read/write buffer tests

Why QLOGIC? Designed and deployed by major server and storage OEMs, the QLogic SANblade QLA2310F and QLA2310FL host bus adapters (HBAs) offer the high performance of 2-Gbps Fibre Channel combined with 64-bit, 66-MHz PCI-X. These multimode optic HBAs are targeted for servers in direct attach storage (DAS) as well as storage area network (SAN) environments.

Cost Effective. For a cost-effective, optic solution for your SAN with the added performance of 2 Gbps, the QLA2310F is the right solution. If you are looking for low-profile boards for 1U and 2U servers, the QLA2310FL, a low-profile MD2 compliant version of the QLA2310F, is the perfect fit.

Leading Single Chip Integration. The QLA2310F/2310FL uniquely integrates a RISC processor, a Fibre protocol engine, and transceivers into a single, efficient FC controller chip that increases reliability and performance by lowering CPU utilization.

Broad Oem Acceptance. The QLA2310F/2310FL HBA is validated by every major OEM including Dell, EMC, HDS, HP, IBM, and Sun. The QLA2310's extensive certification from major server and storage manufacturers makes it the perfect choice for multiplatform requirements.

Simplified Setup. Point-and-click installation and configuration wizards simply the HBA setup process. Storage administrators can quickly deploy HBAs across a SAN using standard HBA management tools and device utilities. The QLA2310F/2310FL 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.

Proven Archetecture. The QLA2310F/2310FL architecture is the result of more than 15 years of progressive development and testing. Proven architecture from QLogic delivers higher overall reliability and enables advanced functionality with its single-chip integration, placing QLogic years ahead of its competitors. The QLA2310F/2310FL also has proven interoperability with all major software applications, hardware platforms, and operating systems.

The Bottom Line. Driving the standard for interoperability with extensive FC testing in SAN environments, you can feel confident in choosing the QLogic solution.

Host Bus Interface Specifications	
Speed	64-bit, 66-MHz PCI-X
Signal voltage	3.3 V and 5.0 V buses supported
Compliance	*PCI Local Bus Specification* rev. 2.2, *PCI-X Addendum* rev. 1.0a, *PCI Hot Plug Specification* rev. 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
Topology	FC-AL, FC-AL-2, point to point, switched fabric (FL_Port and F_Port)
Buffer credits	For 512-byte frame size, 9 credits issued. For 2K-byte frame size, 3 credits issued.
Class of service	Class 3 Fibre Channel service
Protocols	SCSI-FCP, IP, FC-TAPE
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), RFC 2625 *IP and APR Over Fibre Channel, Fibre Channel Framing and Signaling* (FC-FS)

Physical Specifications	
Ports	One
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	Half size: 17.78 cm×10.67 cm (7.0"×4.2") (QLA2310F); Low-profile MD2: 16.93 cm×5.15 cm (6.7"×2.5") (QLA2310FL)
Bracket size	QLA2310F: standard size; QLA2310FL: 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 (noncondensing): 10% to 90%, Storage: 5% to 95%	
Power dissipation	~ 4.75 watts	
Cable	50/125µm multimode fiber, 62.5/125 µm multimode fiber	
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

Agency Approvals—Product Safety	
US/Canada	UL, cUL UL1950 (QLA2310FL) UL60950 (QLA2310F) cUL C22.2 No.950 (QLA2310FL) CSA C22.2 No.60950 (QLA2310F) Class 1 Laser Product per DHHS 21CFR J
Europe	73/23/ECC Low Voltage Directive: TUV: EN60950: 1992+A1,2,3,4,11 EN60825-1: 1994+A11 EN60825-2: 1994

Agency Approvals—EMI and EMC	
US	FCC Part 15, Class B
Canada	Industry Canada ICES-003, Class B (QLA2310FL only)
Europe	89/336/EEC EMC Directive CE Mark: EN55022: 1995 Class B EN55024: 1998 EN61000-3-2:1995 EN61000-3-3:1994
Japan	VCCI, Class B
Taiwan	CNS 13438 Class B BSMI
New Zealand/Australia	AS/NZS 3548 Class B
Korea	MIC

Tools and Utilities	
Management tools	FC HBA Manager
Device utilities	Command line interface; configuration utilities resident with BIOS and FCode
Boot support	Intel x86: BIOS (32-bit), EFI (64-bit); Solaris SPARC: FCode
APIs	SNIA HBA API V2, SMI-S, and FDMI
Operating systems	Windows Server 2003 (32-bit and 64-bit), Windows NT, Windows 2000, Windows XP, Solaris SPARC, Linux (32-bit and 64-bit), Novell NetWare, Mac OS X

Ordering Information	
QLA2310F	Ships to OEMs in an individually packed box with a standard size bracket
QLA2310F-BK	Ships to OEMs in a bulk pack box in quantities of 20, 50, or 100 with standard size brackets
QLA2310F-CK	Ships in an individually packed box with a standard size bracket, FC HBA Manager, and Quick Start Guide
QLA2310FL	Ships to OEMs in an individually packed box with a low-profile size bracket
QLA2310FL-BK	Ships to OEMs in a bulk pack box in quantities of 20, 50, or 100 with low-profile size brackets
QLA2310FL-CK	Ships in an individually packed box with a low-profile bracket, FC HBA Manager, and Quick Start Guide

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