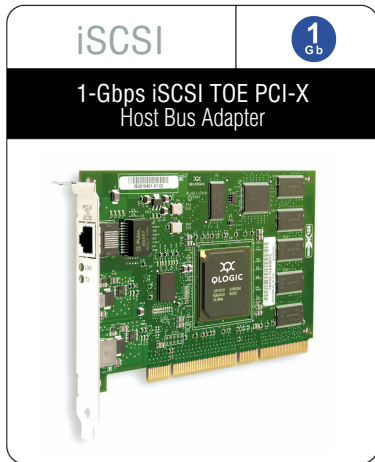




# SANblade™

1-Gbps  
iSCSI TOE PCI-X  
Host Bus Adapter

QLA4010/  
QLA4010C



## Features

- Supports current iSCSI standard, with firmware downloads as standards evolve
- Complete iSCSI and TCP/IP protocol offload
- SCSI initiator, initiator/target, and target modes
- Support for challenge authentication protocol (CHAP), internet storage name service (iSNS), service locator protocol (SLP), and dynamic host configuration protocol (DHCP)
- 1-Gbps, Full-duplex line rate data transfer
- PCI-X 133-MHz backward compatible with 32/64-bit, 33/66 MHz PCI
- Integrated SAN management software
- Comprehensive suite of software drivers
- Optical and copper models

## Applications

- Remote backup
- Storage consolidation
- Clustering
- Near and online storage

**SCSI OVER IP: iSCSI.** IT managers now have a choice when considering storage area networks (SANs). With the new industry standard iSCSI protocol, Ethernet networks can now be used to build SANs. iSCSI based SANs will provide the same benefits as Fibre Channel SANs, but they use TCP/IP, which is more familiar to many IT managers. In addition, iSCSI enables seamless integration to wide area networks (WANs), enabling new applications such as remote storage.

**ENHANCED TOTAL SYSTEM PERFORMANCE.** The QLA4010 implements the complete protocol stack including Ethernet, TCP/IP and iSCSI on a single chip and offloads all I/O protocol processing from the host system. This complete offload of the host eliminates the protocol processing load of TCP/IP, and also reduces CPU interrupts. At 1-Gbps speeds, these I/O protocol burdens placed on the host system are significant and reduce the bandwidth available to other applications running on the host. The QLA4010 maximizes I/O bandwidth and allows the host system to deliver optimum application performance. The QLA4010 architecture combines a hardware state-based design with embedded processors to provide the optimum mix of performance and flexibility. This flexible architecture allows firmware upgrades to support changes to the iSCSI standard. Updated firmware, drivers, and management software are available on the QLogic® website, [support.qlogic.com](http://support.qlogic.com).

**COMMON PROGRAMMING INTERFACE.** The QLA4010 shares a common programming interface with QLogic's award-winning line of SCSI and Fibre Channel adapters. This common API simplifies the development of drivers and integration with existing storage applications. Users can be assured that the QLA4010 will support the majority of existing storage applications due to this interface commonality with Fibre Channel products.

**EASY MANAGEMENT.** The QLA4010 includes SANsurfer Control iX™, a Java-based management application that greatly simplifies set up, configuration, and maintenance of the host bus adapter. In addition, the QLA4010 will support the SNIA iSCSI management API (IMA) for integration into other management platforms.

**PROVEN INTEROPERABILITY.** QLogic continually tests its products in multi-vendor industry forums to assure product reliability and ease of use. As the leading provider of I/O controllers, QLogic controllers are found in every type of SAN node including servers, hard disk drives, JBODs, RAID subsystems, tape libraries, virtualization systems, and routers. QLogic has the experience necessary to deliver robust products in emerging markets like iSCSI.

Host Bus Interface Specifications	
Speed	64-bit, 133-MHz PCI-X
Voltage	3.3 V and 5.0 V buses supported
Compliance	Conforms to <i>PCI Local Bus Specification rev. 2.2</i> , <i>PCI-X Specification rev. 1.0a</i> , <i>PCI Bus Power Management Interface Specification rev. 1.1</i>
iSCSI, TCP/IP, and Ethernet Specifications	
Speed	1-Gbps full-duplex line rate
Topology	Switched Gigabit Ethernet
Reassembly buffer	32-MB SDRAM
Compliance	RFC 3347: <i>iSCSI Requirements and Design Considerations</i> , <i>IETF document: draft-ietf-ips-iscsi-20.txt</i> , RFC791: IPv4, RFC793: TCP, RFC1122: <i>Requirements for Internet Hosts - Communication Layers</i> , RFC1323: <i>TCP Extensions for High Performance</i> , RFC2581: <i>TCP Congestion Control</i> , RFC2481: <i>Explicit Congestion Notification (ECN)</i>
Physical Specifications	
Ports	One
Media	QLA4010: multimode optic; QLA4010C: copper
Form factor	Short card (6.875" × 4.200")
Bracket size	Standard size
Connectors	QLA4010: SFF-LC duplex multimode optical; QLA4010C: RJ45
Power consumption	QLA4010: 5.7 watts at 66 MHz, 5.9 watts at 133 MHz. QLA4010C: 6.3 watts at 66 MHz, 6.5 watts at 133 MHz
Environment and Equipment Specifications	
Airflow	0 lf/m
Temperature	Operating: 0°C/32°F to 55°C/131°F. Storage: -20°C/-4°F to 70°C/158°F
Humidity	Relative (noncondensing): 10% to 90%, Storage: 5% to 95%
Cable	QLA4010: 850nm multimode fiber (up to 500 meters), 62.5/125µm multimode fiber (up to 220 meters), 50/125µm multimode fiber (up to 500 meters) QLA4010C: Category 5e UTP (up to 100 meters)
Software	
SANsurfer HBA Manager	Easy to use, Java-based, configuration, diagnostics and analysis HBA management application for heterogeneous SAN management across multiple hosts. Includes persistent binding capabilities and authentication (available July 2004).
SANsurfer Control IX	GUI-based utility provided for installation, configuration, persistent binding, and diagnostic functions on the local host.
Operating system drivers	Windows 2000, Windows Server 2003, Solaris SPARC, Linux (32-bit and 64-bit)
Ordering Information	
QLA4010-BK	Ships to OEMs in a bulk pack box in quantities of 20, 50, or 100 with standard size brackets.
QLA4010	Ships to authorized OEMs, distributors, and resellers in an individually packed box with a standard size bracket and the management CD.
QLA4010C-BK	Ships to OEMs in a bulk pack box in quantities of 20, 50, or 100 with standard size brackets.
QLA4010C	Ships to authorized OEMs, distributors, and resellers in an individually packed box with a standard bracket and the management CD.



[ www.qlogic.com ]

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