EMULEX®
We network storage

LightPulse® LP9002L

PCI Host Bus Adapter

MAJOR FEATURES

- simultaneous full duplex 2Gb/s Fibre Channel delivers up to 400MB/s
- automatic speed negotiation
- full fabric support using F_Port and FL_Port connections
- onboard hardware context cache for superior fabric performance
- support for concurrent multiple protocols (SCSI, IP)
- full support for both FC service Class 2 and 3
- support for FC-Tape (FCP-2) devices
- end–to–end parity protection for high data integrity
- buffered data architecture to support up to 50km cabling at full 2Gb/s bandwidth
- robust suite of software including IP and storage protocols under Windows Server 2003, Windows 2000, Windows NT, HP-UX, Linux, NetWare, Solaris and AIX
- optical small form factor (LC) interface short–wave optics
- 32/64 bit and 33/66 MHz PCI support
- supports common HBA API Management Interface (FC-MI Annex A)
- supports Fibre Channel fabric boot

The LightPulse® LP9002L Fibre Channel PCI host adapter provides support for 2Gb/s Fibre Channel data rates, delivering the industry's highest performance. The LP9002L features automatic speed negotiation capability which allows complete compatibility with existing 1Gb/s Fibre Channel SANs, while allowing seamless upgrades to higher speed 2Gb/s SANs.

The LP9002L provides the flexibility and broad interoperability needed for complex highly scalable SANs. The LP9002L provides a unique combination of features, including fabric support using F_Port and FL_Port connections, full–duplex data transfers, high data integrity features, support for all Fibre Channel topologies, and support for service class 2 and 3.

The LP9002L also features sophisticated hardware that provides superior performance in storage area networks, delivering low latency and high throughput in fabric and clustered environments.

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2Gb/s Fibre Channel

LightPulse® LP9002L

PCI Host Bus Adapter

STANDARDS
FC-PH 1, 2, 3:
Fibre Channel physical and signaling interface standards

FC-PI:
Fibre Channel physical interface

FC-MJS:
Fibre Channel methodologies for Jitter specification

FCP:
Fibre Channel protocol for SCSI standard

PCI:
Local bus specification version 2.2

ARCHITECTURE
Emulex Centaur ASIC technology up to 66MHz PCI bus master DMA

2Gb/s or 1Gb/s FC Link
2MB FLASH memory
1MB code RAM
256KB buffer RAM

SOFTWARE ENVIRONMENTS
Windows Server 2003
Windows 2000
Windows NT
HP-UX
Linux
NetWare
Solaris
AIX

HARDWARE ENVIRONMENTS
x86, SPARC and PowerPC PCI hardware platforms
3.3 or 5v signaling

OPTICAL
Data rates: 1.0625/2.125Gb/s

Optics:
short-wave single-mode lasers
Cable:
9/125µm single-mode fiber
50/125µm multi-mode fiber
62.5/125µm multi-mode fiber

Connector: LC

Distance:
(1Gb/s)
500 meters (1640') 50/125 µm fiber
300 meters (984') 62.5/125 µm fiber

(2Gb/s)
300 meters (984') 50/125 µm fiber
150 meters (492') 62.5/125 µm fiber

PHYSICAL DIMENSIONS
Short, low profile MD2 form factor
Low profile or standard bracket
167.64mm x 64.41mm (6.60" x 2.54")

POWER REQUIREMENTS
Volts: +3.3 VDC (± 5%)
Power: 7.2 watts typical (9.3w max)

ENVIRONMENTAL CONDITIONS
Operating temperature:
0° to 45°C (32° to 113°F)

Airflow required:
100 lf/m

Storage temperature:
-40° to 70°C (-40° to 158°F)

Relative humidity:
5% to 95% non-condensing

AGENCY APPROVALS
Class 1 Laser Product per DHHS 21CFR (J) & EN60825

UL recognized to UL 1950

CUR recognized to CSA22.2, No. 950

TUV certified to EN60950

FCC rules, Part 15, Class A

ICES–003, Class A

EMC Directive 89/336/EEC (CE Mark)
- EN55022, Class A
- EN55024

Australian EMC Framework (C–Tick Mark)
- AS/NZS 3548, Class A

VCCI, Class A

DRIVER SUPPORT
The LightPulse® LP9002L is complemented by a rich suite of software support including storage protocol (SCSI), network protocol (IP) as well as concurrent multi-protocol (SCSI & IP) operation, enabling advanced Storage Area Network (SAN) implementations in Windows Server 2003, Windows 2000, Windows NT, HP-UX, Linux, NetWare, Solaris and AIX environments. All drivers are also fully compatible with the entire line of Emulex LightPulse Fibre Channel HBAs.

MANAGEMENT INTERFACE
Emulex HBAs also support the common HBA API Management Interface (FC-MI Annex A). This provides the ability to monitor, discover, and control the fabric from a management application. The management API allows the HBA to provide a common and consistent view of a Fibre Channel SAN which will significantly reduce the total cost of ownership for customers.

ORDERING INFORMATION
LP9002L–F2
embedded multi–mode optic interface (LC)

05-158 11/04

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