

#### MAJOR FEATURES

- 2Gb/s Fibre Channel link with auto speed negotiation with 1Gb/s Fibre Channel SANs
- Dual Fibre Channel ports
- PCI-X 133 MHz bus
- Superior Performance
  - Full duplex 2Gb/s bandwidth per port
  - Capable of sustaining up to 70,000 I/Os per second per port
  - Frame level multiplexing and out of order frame reassembly
  - On-board hardware context cache for superior fabric support and high transaction performance
- End-to-end data protection with hardware parity and CRC support
- HBAware™ provides centralized, in-depth management of HBAs anywhere in the SAN
- Enterprise AutoPilot Installer™ simplifies and accelerates the HBA installation process
- Firmware-based architecture enables HBAs to be updated with new features & functionality, maintaining investment value
- Hardware independent drivers ease management & allow driver upgrade independently of HBA firmware
- SMI-S and common HBA API support enable seamless upward integration into enterprise storage and server management solutions
- Universal boot provides multi-platform support for remote SAN boot, offering enhanced server management and reduced system costs
- Detailed, real-time event logging and tracing enables quick diagnosis of SAN problems
- RoHS Compliant (Directive 2002/95/EC)

# LightPulse<sup>®</sup> LP10000DC

Dual Channel 2Gb/s Fibre Channel

## PCI-X Host Bus Adapter

The Emulex<sup>®</sup> LightPulse<sup>®</sup> LP10000DC delivers on Emulex's history of excellence in performance, reliability, and manageability. The LP10000DC is a high performance, dual-channel PCI-X Fibre Channel HBA that's ideally suited for large enterprise or mixed operating system Storage Area Network (SAN) environments. With renowned driver support for Windows, Linux, and Unix operating systems, the LightPulse LP10000DC can be effectively applied within a broad range of storage networking solutions.

Emulex is the most trusted name in storage networking connectivity. That's because each and every Emulex LightPulse HBA leverages five generations of advanced, field-proven technologies to deliver a distinctive set of benefits that the world's largest enterprises have come to rely on. From their unique firmware upgradeable architecture, to their common driver model, Emulex HBAs are simply "Generations Ahead" of competing solutions.

**SUPERIOR QUALITY AND RELIABILITY**— Emulex HBAs deliver industry-leading reliability levels by utilizing a field-proven, single-chip design that minimizes components. Emulex HBAs also use a combination of parity, CRC, ECC and other advanced error checking methods to verify the integrity of data blocks, which are passed from the host interface through the HBA.

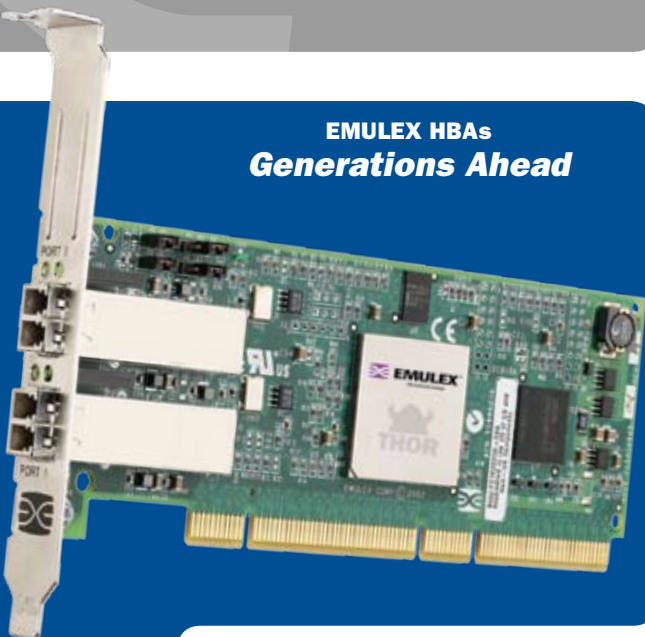
**THE MOST EFFICIENT INSTALLATION AND MANAGEMENT**— Emulex management tools automate installation and provide local and remote HBA configuration and management. Emulex's unique Service Level Interface (SLI) architecture allows complete independence of device drivers from HBA hardware and firmware. That means no reboots during most configuration changes and no need for OS specific firmware. A single driver model simplifies management across multiple generations of HBAs. In addition, Emulex HBAs have a firmware-based architecture that enables feature and performance upgrades without costly hardware changes, for long-term investment protection and seamless backward compatibility.

**MAXIMUM SAN PERFORMANCE**— Emulex HBAs deliver maximum performance levels in real-world application environments, with superior full-duplex data throughput and I/Os per second. And Emulex's exclusive Dynamic Frame Multiplexing ensures consistently superior performance in mixed load environments such as disk and tape back-up applications.

**THE FASTEST DIAGNOSIS AND RECOVERY**— Comprehensive diagnostic functions, coupled with detailed event logging and tracing, provide for fast, efficient SAN troubleshooting.

**THE BROADEST ENTERPRISE DEPLOYMENT**— With the largest installed base of any Fibre Channel HBA supplier, Emulex is trusted by the world's largest, mission critical enterprises. Long-standing partnerships with leading storage vendors ensure unparalleled compatibility levels.

EMULEX HBAs  
**Generations Ahead**



[www.emulex.com](http://www.emulex.com)

# LightPulse® LP10000DC

**PCI-X  
Host Bus Adapter**

### STANDARDS

ANSI Fibre Channel:  
FC-FS, FC-PH, FC-PI, FCP, FCP-2, FC-AL,  
FC-PLDA, FC-MI, FC-FLA, IETF IP over FC

PCI-X 1.0a and PCI 2.3

Fibre Channel Class 2 and 3

PHP hot plug—hot swap

### ARCHITECTURE

Emulex LightPulse® technology

2Gb/s or 1Gb/s FC Link

Quad Data Rate (QDR) SRAM Unified Data Buffer and Code Space memory

### DRIVER SUPPORT

Windows Server 2003

Windows 2000

Windows NT

Linux

NetWare

Solaris

HP-UX

OEM custom drivers

### HARDWARE ENVIRONMENTS

x86 and Intel® Itanium® processor family

SPARC and PowerPC PCI hardware platforms

3.3V signaling, 5V tolerant

32/64-bit 33/66MHz PCI

66/100/133MHz PCI-X

### OPTICAL

data rates:  
1.0625/2.125Gb/s (auto-detected)

optics:  
short wave lasers with LC type connector

cable:  
50/125µm, up to 300 meters at 2Gb/s  
62.5/125µm, up to 150 meters at 2Gb/s

“smart” digital diagnostics interface supported

### PHYSICAL DIMENSIONS

short low profile MD2 form factor card

167.64mm x 64.42mm (6.60” x 2.54”)

standard bracket (low profile available)

### POWER & ENVIRONMENTAL REQUIREMENTS

volts: +3.3 and +5 VDC

power @ 66MHz (typical/max):  
LP10000: 7.1/10.1 watts  
LP10000DC: 9.1/12.9 watts

power @ 100/133MHz (typical/max):  
LP10000: 7.5/10.6 watts  
LP10000DC: 10.1/14.4 watts

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

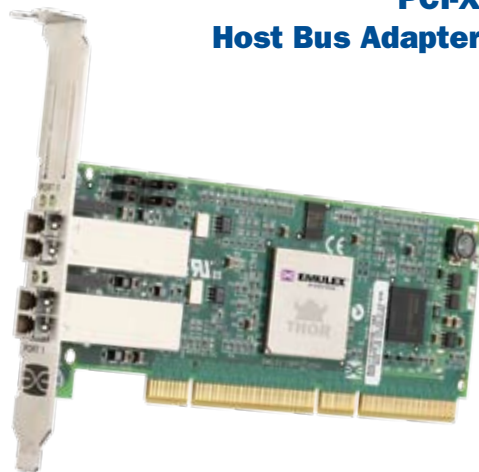
VCCI, Class A

MIC (Korea), Class A

BSMI (Taiwan), Class A

### ORDERING INFORMATION

**LP10000DC-M2**  
Dual-channel, embedded multi-mode optic interface



### SOFTWARE FEATURES

A rich suite of software complements the LightPulse LP10000 family of enterprise and midrange-class Fibre Channel HBAs. Setup programs like Enterprise AutoPilot Installer streamline the installation of HBA drivers and management applications to a few simple commands, and provide customizable scripting capabilities for both interactive and automated installations. As a centralized management suite, HBAAnyware incorporates agent technology that provides discovery, reporting and management of local and remote HBAs with both in-band Fibre Channel and out-of-band IP support, enabling sophisticated management capabilities such as remote firmware upgrades and advanced diagnostics from a single console anywhere in the SAN.

All Emulex device drivers are fully compatible with previous generations of Emulex host bus adapters. A single driver binary supports all Emulex HBAs on a given host platform, streamlining the management of device drivers in environments with multiple generations and versions of HBAs, simplifying the upgrade process, and providing investment protection.

This document refers to various companies and products by their trade names. In most, if not all cases, their respective companies claim these designations as trademarks or registered trademarks. This information is provided for reference only. Although this information is believed to be accurate and reliable at the time of publication, Emulex assumes no responsibility for errors or omissions. Emulex reserves the right to make changes or corrections without notice.

[www.emulex.com](http://www.emulex.com)

06-384 3/06