**EMULEX**®

CONNECTIVITY

LightPulse®
LPe1205-CIOv

8GFC CIOv Expansion Card Host Bus Adapter for IBM BladeCenter
IBM Part No. 46M6140

UNPARALLELED MANAGEABILITY, RELIABILITY, PERFORMANCE AND EASE OF DEPLOYMENT
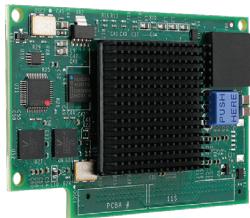
Streamlined installation and management, unrivaled scalability, and industry-leading virtualization support make the Emulex LPe1205-CIOv dual-channel expansion card an ideal solution for IBM BladeCenter SAN environments. The LPe1205-CIOv provides the flexibility to utilize CFFh-based I/O connectivity options, such as the Emulex Virtual Fabric Adapter, in conjunction with the CIOv-based Fibre Channel HBA. With powerful management tools and seamless integration into IBM Director, it delivers maximum performance in the broadest range of applications and environments.

Proven Design, Architecture and Interface

LightPulse HBAs' highly integrated single-chip design minimizes onboard components, while advanced error-checking methods assure robust data integrity. The Emulex firmware-based architecture enables feature and performance upgrades without costly hardware changes. The unique Service Level Interface (SLI™) allows use of a common driver across all models of Emulex HBAs. Installation and management applications are designed to minimize reboots and further simplify deployment.

Powerful management software for maximum data center efficiency

The Emulex OneCommand™ Manager enterprise-class management application features a multiprotocol, cross-platform architecture that provides centralized management of all Emulex HBAs and Universal Converged Network Adapters (UCNAs). This enables IT administrators to manage Fibre Channel (FC), Fibre Channel over Ethernet (FCoE), Internet Small Computer System Interface (iSCSI) and Network Interface Card (NIC) adapters with one tool for maximum efficiency. The unique OneCommand Manager plug-in for VMware vCenter™ enables adapters to be managed directly within the VMware environment, further simplifying the management process.

Key Benefits

- Support more Virtual Machines per server with better performance and lower power consumption due to CPU Off-Load capabilities

- Improved Service Level Agreements with No-Reboot Firmware

- Superior quality and reliability ensure data availability

- Highly efficient installation accelerates deployment and reduces administration costs

- Maximum SAN performance increases scalability and user satisfaction in large enterprise installations

- Robust interoperability simplifies deployment and upgrades of SAN hardware and software

- LightPulse Virtual HBA technology provides efficient host utilization and compliance with SAN management best practices

Key Features

- Exceptional performance and full-duplex data throughput

- Comprehensive virtualization capabilities with support for N_Port ID Virtualization (NPIV) and Virtual Fabric

- Simplified installation and configuration using common HBA drivers and AutoPilot Installer®

- Efficient centralized administration of Emulex HBAs via powerful management tools

- Common driver model eases management and enables upgrades independent of HBA firmware

IBM Business Partner

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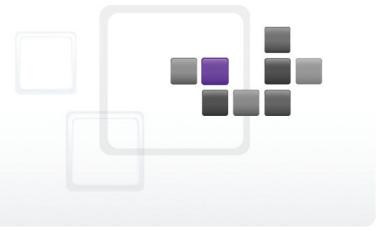
SPECIFICATIONS

Standards

· ANSI Fibre Channel: FC-PI-4, FC-FS-2, FC-FS-2/AM1, FC-LS, FC-AL-2, FC-GS-6, FC-FLA, FC-PLDA, FC-TAPE, FC-DA, FCP through FCP-4, SBC-3, FC-SP, FC-HBA, FC-SW, FC-PH and SMI-S v1.1

· PCI Express base spec 2.0

· Fibre Channel class 2 and 3

Architecture

· CIOv form factor

· Dual-channel

· Up to 200,000 IOPS per port performance

· 8Gbps, 4Gbps or 2Gbps FC Link speeds automatically detected

Comprehensive OS Support

· Windows Server 2008

· Windows Server 2003

· Linux

· VMware

· AIX

Hardware Environments

· IBM BladeCenter (BCS, BCE & BCH)

Power and Environmental Requirements

· Volts: +3.3 and 5 VDC

· 50° to 126° F (10° to 52° C), Operating, 50-150 LFM

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

· Relative humidity: 5% to 95% non-condensing

Ordering Information

· The Emulex LPe1205-CIOv Fibre Channel HBA is available from IBM. To order, use IBM Part Number 46M6140

· Visit www.ibm.com/bladecenter

Additional Features

Performance features

· Frame-level Multiplexing and out-of-order frame reassembly increases link efficiency and maximizes HBA performance.

Data protection features

· End-to-end data protection with hardware parity, CRC, ECC and other advanced error checking and correcting algorithms ensure data is safe from corruption.

Deployment and management features

· Universal Boot capability allows the appropriate boot environment to be automatically selected for any given hardware.

· Boot from SAN capability reduces system management costs and increases uptime.

· Detailed real-time event logging and tracing enables quick diagnosis of SAN problems.

· Beaconing feature flashes the HBA LEDs, simplifying their identification within server racks.

· Environmental monitoring feature helps to optimize SAN availability.

Management Features

· The Emulex AutoPilot Installer automates the HBA installation process and significantly reduces time to deployment and administrative costs. Automated installation and configuration of driver and management tools simplifies deployment of multiple adapters within Windows environments. A single installation of driver and management application eliminates multiple reboots and ensures that each component is installed correctly and the HBA is ready to use.

· The Emulex OneCommand™ Manager application enables centralized discovery, monitoring, reporting, and administration of Emulex HBAs and UCNAs on local and remote hosts. Powerful automation capabilities facilitate remote driver parameter, firmware and boot code upgrades. Advanced diagnostic features such as adapter port beaconing and adapter statistics help to optimize management and network performance while the environmental monitoring feature helps to maintain optimum host to fabric connections. In addition to the GUI interface, management functions can also be performed via a scriptable Command Line Interface (CLI) as well as a web browser. With in-band and out-of-band management capabilities, Emulex provides data center administrators with the greatest level of management flexibility.

· Emulex's management instrumentation complies to Open Management Standards, such as SMI-S and common HBA API support, which enables seamless upward integration into enterprise storage and server management solutions such as IBM Director.

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