EMULEX®

Generations Ahead

4Gb/s FIBRE CHANNEL
ExpressModule Host Bus Adapter
for the Sun Blade 8000
Modular System

Unparalleled manageability, reliability, performance and ease of deployment

Streamlined installation and management, unrivaled scalability, and industry-leading virtualization support make the Emulex LPem11002-S dual-channel ExpressModule HBA an ideal solution for Sun Blade 8000 Modular Systems being deployed in storage area network (SAN) environments. The ExpressModule form factor provides a standardized method of deploying granular remote I/O that allows installation and removal of the Fibre Channel host bus adapter (HBA) without tools.

Proven design, architecture and interface

LightPulse HBA's 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.

KEY BENEFITS

- Superior quality and reliability ensure data availability
- Highly efficient installation accelerates deployment and reduces administration costs
- Remote I/O provides installation and removal with no disruption to on-going blade server activity
- Maximum SAN performance and scalability increase 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 administration via HBAnyware® for HBAs anywhere in the SAN
- Common driver model eases management and enables upgrades independent of HBA firmware

Specifications

STANDARDS

ANSI Fibre Channel: FC-PH-3, FC-PI-2, FC-FS, FC-AL-2, FC-GS-4, FC-FLA, FC-PLDA, FC-TAPE, FCP-2 and RFC 2625 (IP over FC)

PCI Express base spec 1.0a

Fibre Channel class 2 and 3

PHP hot plug–hot swap

PCIe ExpressModule Electromechanical Specification 1.0

ARCHITECTURE

Dual-channel

4Gb/s, 2Gb/s or 1Gb/s FC Link speeds automatically detected

Integrated data buffer and code space memory

COMPREHENSIVE OS SUPPORT

Windows Server 2003, Linux, Sun Solaris and VMware

HARDWARE ENVIRONMENT

Sun Blade 8000 Modular System

POWER AND ENVIRONMENTAL REQUIREMENTS

Volts: +12 VDC

Power consumption (typ/max): 6.60W / 9.43W

Operating temperature: 0º to 55ºC (32 to 131ºF)

Airflow required: 2.0 CFM

Storage temperature: -40º to 70ºC (-40º to 158ºF)

Relative humidity: 5% to 93% non-condensing

AGENCY APPROVALS

Class 1 Laser Product per DHHS 21CFR (J) and EN60825-1

UL recognized to UL 60950-1 :2003

CUR recognized to CSA22.2, No. 60950-1-03

TUV certified to EN60950-1

FCC rules, Part 15, Class A

ICES-003, Class A

EMC Directive 2004/108/EEC (CE Mark)
  - EN55022, Class A
  - EN55024

Australian EMC Framework (C-Tick Mark)
  - AS/NZS CISPR22:2002; Class A

VCCI, Class A

BSMI Class A (Taiwan)

MIC Class A approval (Korea)

RoHS Compliant (Directive 2002/95/EC) for environmental requirements.

China RoHS compliant

ORDERING INFORMATION

For ordering information on the Emulex-based Fibre Channel ExpressModule HBA (Sun Part No. SG-XPCIE2FC-EB4-Z) visit www.sun.com/servers/blades/8000/

Available from Sun and Sun authorized resellers.

ADDITIONAL FEATURES

Emulex LightPulse technology features Frame-level Multiplexing and out-of-order frame reassembly for maximum link utilization.

End-to-end data protection with hardware parity, cyclic redundancy check (CRC), error correcting code (ECC) and other advanced error checking ensure that data is safe from corruption.

Beaconing support enables detection and identification to improve manageability.

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

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

SOFTWARE FEATURES

Emulex's feature-rich software simplifies and speeds deployment and device management, while reducing administration costs and protecting your IT investment.

HBAnyware enables centralized discovery monitoring, reporting and management of both local and remote HBAs from a secure remote client. HBAnyware provides in-depth management capabilities including remote firmware and boot code upgrades, statistics and advanced diagnostics. An extensive CLI is available for scripting.

AutoPilot Installer simplifies the installation and configuration of drivers and management applications for multiple HBAs on Windows servers. A single installation of drivers and applications eliminates multiple reboots and ensures that each component is installed correctly and the HBA is ready to use.

Emulex VMPilot™ enables rapid deployment and migration of virtual machines (VM) with SAN-attached storage in a Microsoft Virtual Server environment. Using a simple wizard, an IT manager can quickly create VMs with virtual HBA ports based on ANSI T11 N-Port ID Virtualization technology.

Emulex's management instrumentation is based on Open Management Standards. SMI-S and common HBA API support enable seamless upward integration into enterprise storage and server management solutions.

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