Emulex LPe32000 Datenblatt

Emulex LPe32000 Gen 6 32GFC Single-port FC Host Bus Adapter

LPe32000

Fibre Channel is known as the gold standard for network storage connectivity in enterprise and cloud deployments. The latest Emulex Gen 6 FC HBAs with Dynamic Multi-core architecture offer higher performance, lower latency, enhanced diagnostics and manageability that benefit both 16GFC and 32GFC environments.

The Emulex 32 Gb LPe32000/LPe32002 Fibre Channel host bus adapters (FC HBAs) are an ideal solution when requiring high-speed data transfer in storage connectivity for virtualized environments, data backup, and mission-critical applications. They are designed to meet the needs of modern networked storage systems that utilize high performance and low latency solid state storage drives for caching and persistent storage as well as hard disk drive arrays.

The Emulex 32 Gb FC HBAs feature ExpressLane, which prioritizes mission-critical traffic in congested networks ensuring maximum application performance on flash storage arrays. They also seamlessly support Brocade ClearLink diagnostics through Emulex HBA Manager (formerly named Emulex OneCommand Manager), ensuring the reliability and management of storage network when connected to Brocade FC SAN fabrics.

Key features

The Emulex LPe32000 32 Gb FC HBAs have the following features:

- Maximum performance with up to 1.6 million IOPS per adapter to support larger server virtualization deployments and scalable cloud initiatives, and performance to match new multicore processors, SSDs/flash storage, and faster server host bus architectures.
- The unique Emulex Dynamic Multi-core Architecture delivers high performance and more efficient port utilization than other HBAs by applying all ASIC resources to either port of a dual-port adapter when the other port is not being used.
- Supports Brocade Clearlink diagnostics, which helps ensure optical and signal integrity for Fibre Channel cables and optics by validating the health, reliability and performance of the network prior to, and after, deployment. Allows the IT administrator to detect faulty cables and optics in minutes versus hours. Brocade ClearLink is also seamlessly integrated into Emulex HBA Manager.
- Offer end-to-end Quality of Service (QoS) application prioritization with ExpressLane technology, which allows customers to prioritize faster storage traffic (such as SSDs) ahead of slower traffic (such as spinning hard drives), alleviating potential bottlenecks from slow storage.
- Frame-level multiplexing and out-of-order frame reassembly increases link efficiency and maximizes HBA performance.
- vScale performance and scalability: Multicore ASIC engine with eight cores supports 255 VFs, 1024 MSI-X, and 16127 logins/open exchanges for maximum VM density.
- The Emulex HBA Manager enterprise class management application features a multiprotocol and cross-platform architecture that provides centralized management of all Emulex HBAs. VMware vCenter plug-in provides HBA Manager support within a VMware environment.
- GreenState power efficiency reduces data center power consumption and associated operational expenses by delivering exceptional power to port ratios.
- End-to-end data protection with hardware parity, CRC, ECC, and other advanced error checking and correcting algorithms, which ensures that data is safe from corruption.
- Support Forward Error Correction (FEC), a new feature that provides enhanced data reliability and performance by automatically detecting and recovering from bit errors.
- T10-PI data integrity with high performance offload provides end-to-end data corruption protection.
- Rock-solid reliability and thermal characteristics, which are essential for mission-critical, cloud, and virtualized applications.
- Emulex HBAs are renowned for reliability, ensuring maximum SAN uptime. Their "it just works” reputation is based on 17 million installed ports with proven industry-leading reliability of 10 million hours field Mean Time Between Failures (MTBF).
- Support for Message Signaled Interrupts eXtended (MSI-X) improves host utilization and enhances application performance.

- Support for 32 Gb, 16 Gb, 8 Gb, and 4 Gb FC devices.
- Comprehensive virtualization capabilities with support for N_Port ID Virtualization (NPIV).
- A common driver model allows a single driver to support all Emulex HBAs on a given OS.
- Reduces the number of cards, cables, and PCIe slots required.
- Exceptional performance per watt and price/performance ratios.
- Integrates seamlessly into existing SANs.
- Allows application of SAN best practices, tools, and processes with virtual server deployments.
- Ensures data availability and data integrity.
- Universal boot capability allows the appropriate boot environment to be automatically selected for any given hardware.
- Boot from SAN capability reduces the system management costs and increases uptime.
- Detailed and real-time event logging and tracing enables quick diagnosis of SAN problems.
- The beaconing feature flashes the HBA LEDs, simplifying their identification within server racks.
- The environmental monitoring feature helps optimize SAN availability.

Specifications

- Lifecycle: Active
- Distributor Inventory: Yes
- ECD Cable Support: 100m at 32Gb on 50/125 µm OM4 MMF, 20m at 32Gb on 50/125 µm OM2 MMF, 70m at 32Gb on 50/125 µm OM3 MMF, Operating at 32Gb
- OS Support: Additional support is available from OEMs and partners, Oracle Solaris, SUSE® Linux Enterprise Server, VMware vSphere
- Generation: Gen 6 (32/16GFC)
- Hardware Environment: PowerPC, SPARC, x86, x64 and Intel Itanium 64-bit processor family
- Host Bus Type: PCIe Gen3 x8
- Industry Standards: Current ANSI/IETF Standards: FC-PI-4, FC-DA, FC-DA-2, FC-FS, FC-GS-6, FC-LS-2, FC-PH-2, FC-PH-3, FC-PI, FC-PI-2, FC-PI-5, FCP-4, Fibre Channel class 3, Legacy ANSI/IETF standards: FC-PH, PCIe base spec 3.0, PCIe card electromechanical spec 3.0, PHP hot plug-hot swap, SBC-3, SPC-4, SSC-4
- I/O Controller XE501
- Operating Humidity: 5% to 95% non-condensing
- Optical Data Rates: 32GFC (28.05 GBaud NRZ), 16GFC (14.025 GBaud NRZ), 8GFC (8.5 GBaud NRZ), automatically detected
- Optics: Optics Short wave lasers with LC type connector optics
- Ordering Optional Accessories: LP32-LW-OPT-1 32GFC Optic (longwave laser with LC connector SFP+

transceiver): 1 pack, LP32-LW-OPT-2 32GFC Optics (longwave laser with LC connector SFP+ transceiver): 2 pack

- Ordering Part #: LPe32000-M2, 1 Port 32GFC Short Wave Optical – LC SFP+
- Physical Dimensions: Short, low profile PCIe card, 167.64mm x 68.91mm (6.60” x 2.71”), Standard bracket (low profile bracket ships in box)
- Ports: 1
- Regulatory Certifications: Australia(RCM), Japan(VCCI Class A), China(China RoHS Compliant), Europe(CE Mark, EU RoHS compliant,TUV Bauart Certified), Korea(MSIP[formerly KCC/MIC]Class A), Taiwan(BSMI Class A)
- Storage Temperature: -20° to 85°C (-4° to 185°F)
- Whats in the box. Each box includes:
    - Quantity 1, low-profile Host Bus Adapter with optic/s
    - Quantity 1, standard bracket (installed)
    - Quantity 1, low-profile bracket

For more specifications of this LPe32000, please visit below Broadcom website:

https://www.broadcom.com/products/storage/fibre-channel-host-bus-adapters/lpe32000-m2

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