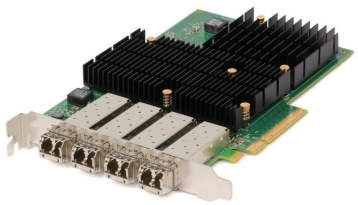
Emulex LPe16004 Datasheet



Emulex LPe16004 Gen 5 16GFC PCIe 3.0 Quad-port Fibre Channel Host Bus Adapter

LPe16004

The Emulex LPe16004 quad-port Gen 5 Fibre Channel (16GFC) Host Bus Adapter (HBA) by Broadcom delivers up to 2.4 million I/O operations per second (IOPS)—twice the IOPS of other Gen 5 FC HBAs, making it ideal for slot constrained servers and environments that need to maximize FC connectivity performance. It provides maximum IOPS for solid state disks (SSDs) and new multi-core processor servers.

The LPe16004 HBA cuts response times by more than half and delivers 4x more IOPS per watt compared to 8GFC HBAs, making it the clear choice for the most demanding virtualized, cloud and mission critical deployments. Its advanced management functionality can shave days off installing and managing adapters.

The LPe16004 features the Emulex bullet-proof driver-stack, backward compatibility to 4GFC and 8GFC HBAs and rock-solid reliability with a heritage that spans back to the first generation of Fibre Channel to today's Gen 5 Fibre Channel HBAs. Emulex is trusted by data centers the world over, with more than 15 million HBA ports shipped and installed to date

Key benefits

- Maximum performance—up to 2.4 million IOPS per adapter to support larger server virtualization deployments and scalable cloud initiatives, as well as performance to match new multi-core processors, SSDs and faster PCIe 3.0 server host bus architectures
- Ability to meet SLAs and ensure Quality of Service for prioritized traffic with ExpressLane™
- Simplified and time-saving diagnostics of storage network connectivity by using ClearLink supported Brocade Switches and Emulex HBAs
- Provides FC connectivity for slot constrained server environments
- Delivers quad-channel connectivity for 16GFC target applications
- Improves IT staff productivity through simplified deployment and management
- 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
- Assures data availability and data integrity
- Provides highest FC performance within the PCIe power specification

Key features

- PCI Express (PCIe) 3.0 bus increases interconnect performance bandwidth by 2x compared to PCIe 2.0; the new encoding scheme reduces overhead by 20% resulting in more efficient data transfers and power efficiency
- Performance and scalability—multi-core ASIC engine with eight cores supports 255 virtual functions (VFs), 1024 Message Signaled Interrupts eXtended (MSI-X) and 8192 logins/open exchanges for maximum virtual machine (VM) density—up to 4x more than other adapters
- 2x management functionality, and takes half the time to manage with OneCommand Manager
- Power efficiency—reduces data center power consumption and associated operational expenditures (OPEX) by delivering up to 4x better IOPS performance/watt
- T10-PI data integrity offload—high performance T10 Protection Information (T10 PI) end-to-end data integrity protects against silent data corruption with no performance degradation
- CPU offload—lowers CPU burden on host server, enabling support for more VMs
- Rock-solid reliability and thermal characteristics, essential for mission-critical, cloud and virtualized applications
- Support for MSI-X, improves host utilization and enhances application performance
- Support for Gen 5 Fibre Channel (16GFC), 8GFC and 4GFC devices
- Comprehensive virtualization capabilities with support for N_Port ID Virtualization (NPIV) and Windows virtual HBAs
- Secure management with role-based administration integrated with Light Directory Access Protocol (LDAP) and

Active Directory (AD) services

- Common driver model, allows a single driver to support all Emulex HBAs on a given OS

For more specifications of this LPe16004, please visit below Broadcom website:

https://docs.broadcom.com/doc/AV00-0377EN

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