Qlogic QLE2694 Datasheet

Genuine Qlogic QLE2694-SR-CK PCIe 3.0 x8 Quad-port 16GFC SR-Optic SFP+ Full Height 16Gb Fibre Channel Adapter QLE2694

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The QLogic QLE2694/QLE2694L quad-port adapters from Cavium™ are the industry’s first Enhanced Gen 5 FC (16GFC) adapters, boasting industry leading native FC performance with low CPU usage and full hardware offloads.

ENHANCED GEN 5 FC

QLogic's unique Enhanced Gen 5 FC technology provides the industry's first native quad-port 16GFC adapter in both low-profile (QLE2694L) and standard height (QLE2694) form factors. QLogic’s Enhanced Gen 5 FC solution offers higher per-port performance (up to 650K IOPS) with lower power consumption (3W per port). In addition, QLogic StorFusion technology delivers streamline provisioning, guaranteed QoS, and improved resiliency while addressing the needs of IT organizations that require reliability, integrated management, and guaranteed network performance.

Enhanced Gen 5 FC technology resolves data center complexities by enabling a storage network infrastructure that supports powerful virtualization features, application-aware services, and simplified anagement. The QLE2694/QLE2694L Adapters provide advanced storage networking features capable of supporting the most demanding virtualized and private cloud environments while fully leveraging the capabilities of high-performance 16GFC and all-flash arrays (AFAs). Powerful management tools automate and simplify SAN provisioning to help reduce cost and complexity, while the unmatched 16GFC performance eliminates potential I/O bottlenecks in today’s powerful multiprocessor, multicore servers.

SUPERIOR PERFORMANCE

The QLE2694/QLE2694L Adapters provide industry-leading application performance by up to 2.6 million IOPS for physical, virtual, and private cloud environments. QLogic adapters deliver the best throughput performance in virtualized and non-virtualized environments with 12,800MBps of aggregate throughput, per-second. Integrated QLogic StarPower™ technology delivers dynamic power management, which ensures that the PCIe® host bus link uses the minimum number of PCIe lanes to meet the required bandwidth.

NVM EXPRESS® SUPPORT

The QLE2694/QLE2694L Adapters support the recently ratified FC-NVMe (NVMe over Fibre Channel) protocol and can concurrently support FC NVMe and FCP-SCSI storage traffic. NVMe storage offers exceptionally high performance at very low latencies. NVMe works best with a network that can provide lossless, low-latency, and high-performing transport. The 2600 Enhanced Gen 5 FC Adapters bring the best of both worlds by offering the highest performance and lowest latency access to NVMe and SCSI storage over an FC network.

Features

- Industry's first native quad-port solution supporting 16GFC technology
- Four ports of 16GFC Enhanced Gen 5 FC deliver 12,800MBps aggregate bandwidth
- Up to 2.6 million IOPS fuel high performance in AFAs and high density virtualized environments
- FC-NVMe capability allows concurrent access to NVMe™ and FCP Storage on the same port
- Enhanced reliability, diagnostics and accelerated deployment powered by QLogic® StorFusion™ technology
- Port isolation design offers consistent and reliable performance on each port

Host Bus Interface Specifications

- Bus Interface
    - QLE2694: PCI Express® 3.0 x8
    - QLE2694L: PCI Express 3.0 x8
- Host Interrupts
    - INTx and MSI-X
- Compliance

- PCI Express Base Specification, Rev. 3.1
- PCI Express Card Electromechanical Specification, Rev. 3.0
- PCI Bus Power Management Interface Specification, Rev. 1.2

Fibre Channel Specifications

- Throughput
  - 3,200MBps bandwidth per port
- Logins
  - Support for 2,048 concurrent logins and 2,048 active exchanges
  - Expandable to 32K concurrent logins and 32K active exchanges (with DDR3 or host memory)
- Port Virtualization
  - NPIV
- Compliance
  - SCSI-3 Fibre Channel Protocol (SCSI-FCP)
  - Fibre Channel Tape (FC-TAPE) Profile
  - SCSI Fibre Channel Protocol-2 (FCP-2)
  - Second Generation Fibre Channel Generic Services (FC-GS-2)
  - Third Generation Fibre Channel Generic Services (FC-GS-3)
  - Fibre Channel Physical Interface 5 (FC-PI5)

Physical Specifications

- Ports
  - Quad-port, 16GFC
- Form Factor
  - QLE2694: Standard-height PCIe card (6.6 inches×4.381 inches)
  - QLE2694L: Low-profile PCIe card (6.6 inches×2.731 inches)

Ordering Information

- QLE2694-SR-CK (Quad Port)
  - Ships in an individually packed box with a standard height bracket installed
  - Ships with SR optical transceivers installed

- QLE2694L-CK (Quad Port)
    - Ships in an individually packed box with a low-profile bracket installed
    - Ships with soldered small form factor (SFF) optical transceivers installed

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