

3200 Series

10Gbps Ethernet-to-PCIe Intelligent Ethernet Adapters

Overview

The 3200 Series adapters boast industry-leading Ethernet performance, achieving dual-port, line-rate 10-gigabit Ethernet (GbE) throughput. This extreme performance eliminates potential I/O bottlenecks in today's powerful multiprocessor, multicore servers. In addition, support for powerful virtualization features make this adapter ideal for virtualized environments that need excellent I/O performance to service growing numbers of virtual machines (VMs).

The 3200 Series adapters improve on previous generation products with the following features:

- Dual-port, line-rate 10GbE throughput, approaching 40Gbps bidirectional
- Advanced virtualization features, such as single root I/O virtualization (SR-IOV) and NIC partitioning (NPAR)



Highlights

- Dual-port, line-rate 10Gbps throughput for moving large amounts of data and eliminating server I/O bottlenecks
- SFP+ interface for cost effective connectivity to switches with direct attach copper and SR, LR optics
- Increased application throughput and reduced host CPU utilization with stateless offloads
- State-of-the-art virtualization features that provide security and quality of service (QoS) to virtual machines while maintaining superior performance
- Compatible with common operating system (OS) network management tools, as well as QLogic's QConvergeConsole™ (QCC).

3200 Series. The 3200 Series of 10Gbps Intelligent Ethernet Adapters are designed for high-performance applications such as virtualization, network security appliances, IP content delivery systems, grid computing, network attached storage (NAS), and backup servers.

High Performance. The 3200 Series adapters boast industry-leading networking performance, with bidirectional, dual-port throughput equalling approximately 40Gbps. This performance makes the adapter suitable for high-bandwidth applications, as well as applications that require network scaling. The 3200 Series delivers this extreme performance while consuming only minimal CPU resources, approaching the CPU utilization found with TCP/IP offload engine (TOE) solutions. Consequently, more CPU resources are available, resulting in faster application performance and higher VM density per server.

VMflex™. With QLogic's new NPAR technology, one adapter is viewed by the server OS as a flexible mix (up to four per physical port) of standalone NICs, with the ability to allocate guaranteed bandwidth to each virtual adapter. This unique feature is switch agnostic—it is not necessary to pair an 3200 Series adapter with any specific 10GbE switch model to enable partitioning. The 3200 Series adapters also include support for SR-IOV and several upcoming industry standard I/O virtualization features that will be enabled with future firmware updates.

Management. Networking management is easy with QLogic's new, unified management application, QConvergeConsole (QCC). QCC provides single pane-of-glass management for QLogic's broad product line of storage and networking adapters. The 3200 Series also has API support so that it can be managed by other popular third-party management tools, including native OS management tools for networking.

Diskless Boot. The 3200 Series adapters support booting the server from remote storage over the LAN (pre-execution environment (PXE) boot). Consequently, data centers can deploy thinner servers, centralize OS image management, increase system availability, and simplify image redeployment.

iSCSI. The 3200 Series adapters support iSCSI initiators that are available with all major operating systems, connecting servers to iSCSI storage over a high-speed 10GbE pipe.

Unmatched Expertise. QLogic is the leading supplier of high performance infrastructure solutions including Fibre Channel, Ethernet, iSCSI, InfiniBand, and Converged Network Adapters.

Host Bus Interface Specifications

Bus Interface

- PCI Express® Gen2 x8

Host Interrupts

- INTx, MSI, and MSI-X

I/O Virtualization (VMflex)

- SR-IOV¹
- NIC partitioning (NPAR)¹

Compliance

- *PCI Express Base Specification, rev. 2.0, PCI Express Card Electromechanical Specification, rev. 2.0, PCI Bus Power Management Interface specification, rev. 1.2*

Ethernet Specifications

Throughput

- 10Gbps full-duplex line rate per port

Ethernet Frame

- 1500 byte or 9600 byte (jumbo frame)

Stateless Offload

- IP, TCP, and UDP checksum offloads
- Large and giant send offload (LSO, GSO)
- Large receive offload (LRO)
- Receive side scaling (RSS)
- Interrupt coalescing
- VMware® NetQueue
- Microsoft® VMQ

Compliance

- IEEE: 802.3ae (10Gb Ethernet), 802.1q (VLAN), 802.3ad (Link Aggregation), 802.1p (Priority Encoding), 802.3x (Flow Control), IPv4 (RFC 791), IPv6 (RFC 2460)

Tools and Utilities

Management Tools and Device Utilities

- QConvergeConsole: a unified management tool (GUI and CLI) for Fibre Channel/FCoE, iSCSI, and networking
- Native OS management tools for networking

Boot Support

- PXE

Operating Systems

- Microsoft Windows Server®, Red Hat® Linux®, Novell® SLES, VMware ESX™/ESXi, Citrix® XenServer™

Physical Specifications

Ports

- QLE3240: single 10Gbps Ethernet
- QLE3242: dual 10Gbps Ethernet

Form Factor

- Low-profile PCIe® card: (6.6 in. × 2.54 in.)
- Custom form factors also available

Environment and Equipment Specifications

Temperature

- Operating: 0°C/32°F to 55°C/131°F
- Storage: -20°C/-4°F to 70°C/158°F

Humidity

- Relative (non-condensing): 10% to 90%
- Storage: 5% to 95%

Maximum Cable Distances (Optical)

- QLE324x-SR: 300m, OM3 multimode fibre
- QLE324x-LR: 10Km, single mode fibre

Agency Approvals

Safety

- US, Canada, Europe

EMI and EMC (Class A)

- US, Canada, Europe, Australia/New Zealand, Japan, Korea

Ordering Information

QLE3242-CU-CK (dual port)

- Ships without transceivers. Intended for use with copper cables (not included). A list of approved copper cables is posted at http://www.qlogic.com/Products/CU_Cables.aspx

QLE3240-SR-CK (single port)

QLE3242-SR-CK (dual port)

- Ships with SR optical transceivers installed

QLE3240-LR-CK (single port)

QLE3242-LR-CK (dual port)

- Ships with LR optical transceivers installed

¹ Available with future firmware update



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