

# 3200 Series

## 10Gbps Ethernet-to-PCIe Intelligent Ethernet Adapters

### Overview

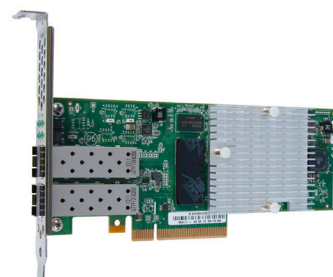
The 3200 Series adapters boast industry-leading Ethernet performance, achieving dual-port, line-rate 10-gigabit Ethernet (GbE) throughput. This extreme performance eliminates potential I/O bottlenecks in today's powerful multiprocessor, multicore servers. In addition, support for powerful virtualization 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 with NIC partitioning (NPAR)



QLE3242-RJ



QLE3242

## Highlights

- Dual-port, line-rate 10Gbps throughput for moving large amounts of data and eliminating server I/O bottlenecks
- Flexible connectivity options including SFP+ Direct Attach Copper (DAC), SFP+ SR optical, SFP+ LR optical and 10GBase-T (RJ45) copper
- Increased application throughput and reduced host CPU usage 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 OS network management tools, as well as QLogic's QConvergeConsole® (QCC)
- Auto-negotiates to connect to 1GbE and 10GbE ports (QLE3242-RJ version only)

## 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 a 3200 Series adapter with any specific 10GbE switch model to enable partitioning.

## Management

Networking management is easy with QLogic's new, unified management application, QConvergeConsole. 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, 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)

- NIC partitioning (NPAR)

### 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), 802.3an (10GBase-T), 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

- For the latest applicable operating system information, see <http://driverdownloads.qlogic.com>.

## 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

- QLE324x-SR: 300m, OM3 multimode fibre
- QLE324x-LR: 10Km, single mode fibre
- QLE3242-RJ: 100m, CAT7, CAT6a

## 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/Resources/Documents/LineCards/Copper\\_Cables\\_Support\\_Matrix\\_Line\\_Card.pdf](http://www.qlogic.com/Resources/Documents/LineCards/Copper_Cables_Support_Matrix_Line_Card.pdf)

### 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

### QLE3242-RJ-CK (dual port)

- Ships with RJ45 connectors (10GBase-T). Intended for use with twisted pair copper cabling (not included).



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