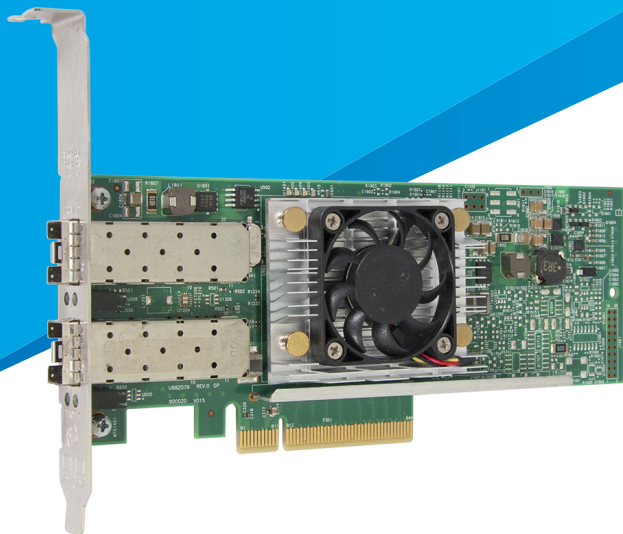


QLogic® 57810S SFP+/DA

Dual-Port 10GbE SFP+ or Direct Attach (DA) Converged Network Adapter for Dell PowerEdge Servers



- Delivers full line-rate 10GbE performance across both ports
- Consolidates network traffic and storage traffic over converged 10GbE connections
- Enables provisioning of 10GbE ports for greater deployment flexibility through Dell Switch Independent Partitioning
- Boosts host CPU efficiency with hardware offload for storage (iSCSI or FCoE) data traffic
- Streamlines administrative tasks with management application and integration into Dell's embedded management framework (iDRAC7 and Lifecycle Controller)

OVERVIEW

QLogic® offers a dual-port 10-gigabit Ethernet (10GbE) Converged Network Adapter for Dell™ PowerEdge™ rack and tower servers. The 57810S leverages QLogic's long-standing industry leadership in Ethernet, providing the highest level of performance, efficiency, and scalability for the enterprise data center.

For more effective use of the 10GbE bandwidth, the QLogic 57810S-based Converged Network Adapter offers Dell Switch Independent Partitioning, which enables segmentation of each 10GbE port into four virtual ports, with flexible allocation of bandwidth to each port. The segmentation allows IT organizations to improve resource utilization while lowering infrastructure and operational costs.

Virtualization, cloud computing, High Performance Computing, convergence, and clustering initiatives are increasing workload demands. The QLogic 57810S-based Converged Network Adapter is the solution of choice for workload-intensive computing environments, providing a reliable, high-performance 10GbE connectivity solution.

FEATURES

- Dual-port 10GbE connectivity for Dell PowerEdge rack and tower servers
- x8 PCI Express® (PCIe®) v2.0 (5 GT/s) support
- Full iSCSI hardware offload
- Full Fibre Channel over Ethernet (FCoE) hardware offload
- Network boot support:
 - iSCSI remote boot
 - FCoE remote boot
 - Pre-execution environment (PXE) 2.0
- MSI and MSI-X support
- IPv4 and IPv6 offloads
- PCI-SIG® single root input/output virtualization (SR-IOV) support
- Comprehensive stateless offloads
- RX/TX multiqueue
 - VMware® NetQueue™
 - Microsoft® virtual machine queue (VMQ)
 - Linux® multiqueue

FEATURES *(continued)*

- Receive side scaling (RSS)
- Transmit side scaling (TSS)
- Jumbo frame support for frames larger than 1,500 bytes
- Network teaming, failover, and load balancing:
 - Smart Load Balancing™ (SLB)
 - Link aggregation control protocol (LACP) and generic trunking
- Data center bridging (DCB)
- FCoE Converged Network Adapter features provide support for:
 - FCoE initialization protocol (FIP) and FCoE Ethertypes
 - Fabric-provided MAC address (FPMA)
 - Boot from SAN
 - Large, concurrent port logins and exchanges (4,096 each)
 - Native OS storage failover and load balancing
 - N_Port ID virtualization (NPIV)

BENEFITS**Accelerates Server Performance**

- Boosts network performance with full line-rate 10GbE throughput across both ports
- Increases server performance with full hardware offload for storage traffic
- Maximizes server processing performance by reducing CPU overhead and lowering interrupt latency through the use of the MSI-X standard
- Boosts performance in Windows® and Linux environments by directing interrupts to the server's CPU cores, leveraging TSS and RSS

Includes Robust Virtualization Capabilities

- Enhances server CPU scaling through full support of virtualization technologies such as VMware NetQueue and Microsoft VMQ
- Enhances network management and efficiency with support for VLAN and VLAN tagging

Streamlines Deployment and Management

- Increases network flexibility, scalability, and capacity with Dell Switch Independent Partitioning, segmenting 10GbE ports, and reallocating their bandwidth and resources to address application's performance requirements
- Simplifies deployment and management complexity—QLogic Ethernet solutions are available across a wide range of Dell server platforms
- Unifies the NIC and storage management using the integrated Dell Remote Access Controller (iDRAC) and Lifecycle Controller management framework or QLogic Control Suite (QCS)

DISCLAIMER

Reasonable efforts have been made to ensure the validity and accuracy of this data. QLogic Corporation is not liable for any errors in this document. QLogic specifically disclaims any warranty, expressed or implied, relating to this product.



QLOGIC®

The Ultimate in Performance
www.qlogic.com

Follow us:



Share:



Corporate Headquarters QLogic Corporation 26650 Aliso Viejo Parkway Aliso Viejo, CA 92656 949-389-6000

International Offices UK | Ireland | Germany | France | India | Japan | China | Hong Kong | Singapore | Taiwan | Israel

© 2014, 2015 QLogic Corporation. Specifications are subject to change without notice. All rights reserved worldwide. QLogic and the QLogic logo are registered trademarks of QLogic Corporation. Smart Load Balancing is a trademark of Broadcom Corporation. Citrix and XenServer are registered trademarks of Citrix Systems, Inc. Dell and PowerEdge are registered trademarks of Dell Inc. Linux is a registered trademark of Linus Torvalds. Microsoft, Windows, Windows PowerShell, and Windows Server are registered trademarks of Microsoft Corporation. Novell and SUSE are registered trademarks of Novell, Inc. PCI-SIG, PCI Express, and PCIe are registered trademarks of PCI-SIG Corporation. Red Hat is a registered trademark of Red Hat, Inc. VMware and vSphere are trademarks or registered trademarks of VMware, Inc. All other brand and product names are trademarks or registered trademarks of their respective owners. Information supplied by QLogic Corporation is believed to be accurate and reliable. QLogic Corporation assumes no responsibility for any errors in this brochure. QLogic Corporation reserves the right, without notice, to make changes in product design or specifications.

Host Bus Interface Specifications

Bus Interface

- PCI Express Gen2 x8

Host Interrupts

- MSI-X supports independent queues

I/O Virtualization

- Single-root input/output virtualization (SR-IOV)
 - Maximum virtual functions per device: 128
- Dell Switch Independent Partitioning
- Network Virtualization using Generic Routing Encapsulation (NVGRE) packet task offloads
- Virtual Extensible LAN (VXLAN) packet task offloads

Compliance

- PCI Express base specification 2.0
- PCI bus power management interface (rev 1.2)
- Advanced configuration and power interface (ACPI) v2.0
- SMBus 2.0

Ethernet Specifications

Throughput

- 10Gbps full-duplex line rate per port

Ethernet Frame

- 1,500 bytes and larger (jumbo frame)

Stateless Offload

- TCP segmentation offload (TSO)
- Large send offload (LSO)
- Large receive offload (LRO)
- Giant send offload (GSO)
- TCP and user datagram protocol (UDP) checksum offloads (CO)
- Hardware transparent packet aggregation (TPA)
- Receive segment coalescing (RSC)
- Interrupt coalescing
- RSS and TSS—Maximum of 16 queues per physical function (PF) in single function (SF) and Dell Switch Independent Partitioning modes
- VMware NetQueue and Microsoft VMQ:
 - VMware NetQueues and Windows Server® 2008 R2 Hyper-V VMQs up to 16 queues per any PF in SF and Dell Switch Independent Partitioning modes can be set by the user.

- Windows Server 2012 R2 Hyper-V automatically allocates up to 61 dynamic VMQs per any PF in SF and Dell Switch Independent Partitioning modes. The current host-allocated number is displayed by the Microsoft Windows PowerShell® `Get-NetAdapterVmq` command in the `NumberOfReceiveQueues` field.

Compliance

- IEEE 802.3ae 10Gb Ethernet
- IEEE 802.1q VLAN
- IEEE 802.3ad Link Aggregation
- IEEE 802.3x Flow Control
- IPv4 (RFC 791)
- IPv6 (RFC 2460)
- IEEE 802.1Qbb Priority-based Flow Control
- IEEE 802.1Qaz DCBX and Enhanced Transmission Selection

FCoE Specifications

Performance

- 2.6 million FCoE IOPS

iSCSI Specifications

Performance

- 1.5 million iSCSI IOPS

Tools and Utilities

Management Tools and Device Utilities

- QLogic Control Suite (QCS)
- Embedded management framework (iDRAC and Lifecycle Controller)
- Native OS management tools for networking

Boot Support

- iSCSI remote boot
- FCoE remote boot
- PXE 2.0

Operating System Support

Linux

- Red Hat® Enterprise Linux (RHEL) 5.7, 6.1, 7.0, and later
- Novell® SUSE® Linux Enterprise Server (SLES) 10 SP3, 11 SP1, 12, and later

Microsoft

- Windows Server 2008 and 2008 R2
- Windows Server 2012 and 2012 R2, all editions

VMware

- vSphere™ 5.x (all updates)

Citrix®

- XenServer® 6.0 and later

Physical Specifications

Ports

- Dual 10Gbps Ethernet

Form Factor

- PCI Express short, low-profile card; also available in full-height
- 6.60in × 2.71in (167.64mm × 68.91mm)

Supported Servers

- 13th Generation: R630, R730, R730xd, and T630
- 12th Generation: R220, R320, R420, R520, R620, R720, R720xd, R820, R920, T420, and T620

Certifications

- RoHS, FCC A, UL, CE, VCCI, BSMI, C-Tick, , KCC, TUV, and ICES-003

Environmental and Equipment Specifications

Temperature

- Operating: 32°F to 131°F (0°C to 55°C)
- Storage: -40°F to 149°F (-40°C to 65°C)

Relative Humidity

- 5% to 95% noncondensing

Ordering Information

QLogic 57810S Dual 10GbE PCIe Standup SFP+ or DA Converged Network Adapter

- With server, order PG SKU#:
 - Full-height bracket: 430-4421
 - Low-profile bracket: 430-4422
- Without server (separate kit), order PG SKU#:
 - Full-height bracket: 430-4415
 - Low-profile bracket: 430-4414