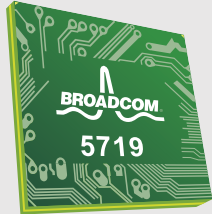


Broadcom® 5719-Based Network Interface Card



Third-party information brought to you courtesy of Dell®.

QUAD-PORT GbE NETWORK INTERFACE CARD FOR DELL® PowerEdge® 12G RACK AND TOWER SERVERS



Highlights

- Delivers full line-rate performance across all ports.
- Ideal for high transaction environments requiring greater small packet performance.
- Quad-port connectivity for improved performance in multi-processor systems.
- Optimizes virtualization: VMware® NetQueue™ and Microsoft® VMQ support.
- Reduces adapter power consumption by up to 42% leveraging Energy Efficient Ethernet (EEE) standards.
- Support for Precision Time Protocol (PTP) provides more granular level of time synchronization between the constituents of an Ethernet network for greater accuracy in data packet delivery.
- Streamlines administrative tasks; Broadcom Advanced Control Suite (BACS) management application and integration into Dell's embedded management framework (iDRAC7 and Lifecycle Controller).
- Improves reliability and interoperability—leverages Broadcom's market-proven Ethernet architecture and software.

Overview

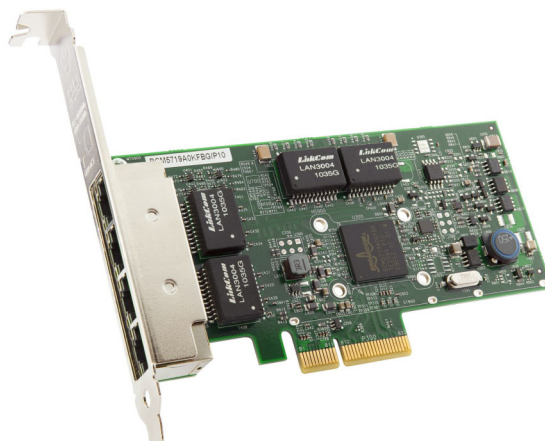
Broadcom® now offers a quad-port 1Gb Ethernet (GbE) Network Interface Card (NIC) for Dell® PowerEdge® 12G rack and tower servers. It leverages Broadcom's long-standing industry leadership in Ethernet, providing the highest levels of performance, efficiency, and scalability for the enterprise data center.

Designed for today's enterprise, the Broadcom 5719-based NIC adapter is the ideal solution for multicore servers, delivering full line-rate throughput across all ports. The adapter utilizes Broadcom's quad-port BCM5719 integrated controller to deliver lower power consumption and Energy Efficient Ethernet™ (EEE), reducing IT operation costs.

Increasing application workloads are placing greater demands on enterprise networks, and the Broadcom 5719-based quad-port 1GbE NIC is the solution of choice for such environments, providing a reliable, high-performance, energy-efficient 1GbE connectivity solution.

Features

- Quad-port GbE NIC for Dell PowerEdge 12G rack and tower servers
- x4 PCI Express® (PCIe™) v2.0 (5 GT/s) support
- Precision Time Protocol (PTP)
- Energy Efficient Ethernet (EEE)
- Full line-rate performance across all ports
- Broad OS and hypervisor support
- iSCSI remote boot support
- Preboot eXecution Environment (PXE) support
- Support for VMware® NetQueue™ and Microsoft® VMQ
- Link aggregation and automatic load-balancing
- Wake-on-LAN support
- MSI and MSI-X support
- IPv4 and v6 offloads
- Stateless offload
- TCP, UDP, and IP checksum
- Large Send Offload (LSO)
- TCP Segmentation Offload (TSO)
- Receive Side Scaling (RSS)
- Transmit Side Scaling (TSS)
- VLAN support with VLAN tagging
- Jumbo frame support for frames larger than 1500 Bytes
- Broadcom Advanced Control Suite (BACS) management application and integration into Dell's embedded management framework (iDRAC7 and Lifecycle Controller)



	5719
Service Provider	●
Data Centers	●
Enterprise	●

● Best Choice

Benefits

- **Accelerates Server Performance:**
 - Boosts network performance with full line-rate performance across all ports.
 - 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 Transmit/Receive Side Scaling (TSS/RSS).
- **Delivers Advanced Ethernet Capabilities:**
 - Precision Time Protocol (PTP)—Provides greater accuracy of data packet delivery within the network.
 - Energy Efficient Ethernet (EEE)—Reduces adapter power consumption by up to 42% through intelligent adaptive power management, adjusting power based on data traffic load.
- **Robust Virtualization Capabilities:**
 - Superior network performance with support for VMware NetQueue and Microsoft VMQ technologies.
 - Enhances network management and efficiency with support for VLAN/VLAN tagging.
- **Streamlines Deployment and Management:**
 - Increases deployment flexibility with four GbE connectivity ports.
 - Simplifies deployment and management complexity—Broadcom Ethernet solutions available across a wide range of Dell server platforms.
 - Unifies the NIC and storage management using Dell iDRAC and Lifecycle Controller management framework or Broadcom Advanced Management Suite (BACS).

Specifications

General

Form factor	Low profile 5.2" x 2.7" (132.08 mm x 68.58 mm)
Supported servers	Dell PowerEdge 12G rack (R720, R720XD, R620) and tower (T620) servers
Bus type	x4 PCI Express 2.0 (5 GT/s)
Data transfer rate per port	10/100/1000 Mbps
MAC controller	BCM5719
Connector	RJ45

OS Support

Microsoft	Windows Server® 2008, 2008 R2, all editions
Linux	Red Hat® Enterprise Linux (RHEL) 5.7/5.8, 6.1/6.2 Novell® SUSE® Enterprise Server (SLES) 10 SP4, 11 SP2
VMware	vSphere™ 4.1 and 5.0
Citrix	XenServer 6.0

Management

Broadcom	BACS management application, WMI, and Broadcom Management API (BMAPI)
Dell	Embedded management framework (iDRAC and Lifecycle Controller)

Environmental Requirements

Operating temperature	32°F to 131°F (0°C to 55°C)
Storage temperature	–40°F to 149°F (–40°C to 65°C)
Relative humidity	5% to 95% noncondensing

Hardware

Certifications	RoHS, FCC A, UL, CE, VCCI, BSMI, CTICK, KC
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Advanced Features and Standards

PCI Express base specification 2.0
PCI bus power management interface (rev 1.2)
Advanced Error Reporting (AER)
TCP segmentation/large send offload
PCI hot plug/hot swap
ACPI v2.0
SMBus 2.0
IEEE 1588—Precision Time Protocol (PTP)-ready
IEEE 802.1q—Virtual LAN (VLAN) support—VLAN tagging support
IEEE 802.3x—Flow control
IEEE 802.3z (Clause 30)—Statistics for SNMP MIB II, Ethernet-like MIB, and Ethernet MIB
IEEE 802.3az—Energy Efficient Ethernet
IPv4 and IPv6 offload
Teaming support
MSI-X supports independent queues

Ordering Information

Broadcom 5719 Quad-Port 1GbE Network Interface Card

PG SKU#

Full-height bracket: 430-4425
Low-profile bracket: 430-4426

About Broadcom

Broadcom Corporation (NASDAQ: BRCM), a FORTUNE 500® company, is a global leader and innovator in semiconductor solutions for wired and wireless communications. Broadcom® products seamlessly deliver voice, video, data, and multimedia connectivity in the home,

office, and mobile environments. With the industry's broadest portfolio of state-of-the-art system-on-a-chip and embedded software solutions, Broadcom is changing the world by Connecting everything®. For more information, go to www.broadcom.com.

