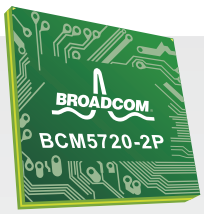
NetXtreme® BCM5720-2P Dual-Port Ethernet Server Adapter



- Delivers full line-rate performance across all ports.
- Ideal for high-transaction environments requiring greater small packet performance.
- Dual-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 standards.
- Improves reliability and interoperability—leverages Broadcom's market-proven Ethernet architecture and software.

BCM5720-2P	
✓	Service Provider
✓	Data Centers
✓	Enterprise

OVERVIEW

Leveraging long-standing industry leadership in Ethernet, Broadcom now offers the NetXtreme BCM5720-2P Ethernet Server Adapter, providing the highest levels of performance, efficiency, and scalability for the enterprise data center.

Designed for today's enterprise and data center environments, the Broadcom BCM5720-2P Ethernet Server adapter is the ideal solution for multicore servers, delivering full line-rate throughput across all ports. The adapter utilizes Broadcom's field-proven dual-port BCM5720-2P integrated controller device to deliver lower power consumption and Energy Efficient Ethernet (EEE), reducing IT operation costs. The BCM5720-2P is compatible with x86 and x64 servers utilizing the PCIe v1.x and v2.x interfaces.

Increasing application workloads are placing greater demands on enterprise networks, and the BCM5720-2P-based dual-port 1GbE Server Adapter is the solution of choice for such environments, providing a reliable, high-performance, energy-efficient 1GbE connectivity solution.

FEATURES

- Dual-port 1GbE adapter for rack and tower servers
- x1 PCI Express (PCIe) v2.0 (5 GT/s) support
- Energy Efficient Ethernet (EEE)
- I/O Virtualization supported with 17 receive queues and 16 transmit queues per port
- Full line-rate performance across all ports
- Broad OS and hypervisor 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 IPv6 offloads
- TCP, UDP, and IP checksum offloads
- 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
- iSCSI remote boot support

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:
  - Energy Efficient Ethernet—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 tagging.
- Streamlines Deployment and Management:
  - Simplifies deployment and management complexity—Broadcom Ethernet solutions available across a wide range of server platforms.
  - Unifies the Server Adapter and storage management using Broadcom Advanced Management Suite (BACS).

SPECIFICATIONS

General

- Form factor—Low profile 4.3" x 2.7" (109.22 mm x 68.58 mm)
- Bus type—x1 PCI Express 2.0 (5 GT/s)
- Data rate—10/100/1000 Mbps per port, per direction
- MAC controller—BCM5720-2P
- Connector—RJ-45

OS Support

- Microsoft—Windows Server 2008, 2008 R2, and 2012, all editions
- Linux
  - Red Hat Enterprise Linux (RHEL) 5.9/5.8, 6.4/6.3
  - Novell SUSE Linux Enterprise Server (SLES) 10 SP4/SP3, 11 U3/U2
- VMware—vSphere 5.x
- Citrix—XenServer 6.1

Hardware

- Certifications—RoHS, FCC A, UL, CE, VCCI, BSMI, CTICK, KCC
- Compatible with x86 and x64 servers utilizing the PCIe v1.x and v2.x interfaces

Management

- Broadcom—BACS management application, WMI, and Broadcom Management API (BMAPI)

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

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
- ACPI v2.0
- SMBus 2.0
- IEEE 802.3ab 1000BASE-T
- IEEE 802.3u 100BASE-TX
- IEEE 802.3i 10BASE-T
- IEEE 802.1q—VLAN tagging support
- IEEE 802.3x—Flow control
- IEEE 802.3az—EEE
- IPv4 and IPv6 offload
- Teaming support
- MSI-X supports independent queues

ORDERING INFORMATION

	Part Number
Dual-Port Ethernet Server Adapter (Single)	BCM5720-2P
Dual-Port Ethernet Server Adapter (Bulk 10-pack)	BCM5720-2PBLK

For more information, visit:
www.broadcom.com

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.

5720-PB302-R • March 12, 2015

© 2015 Broadcom Corporation. All rights reserved. Broadcom®, the pulse logo, Connecting everything, NetXtreme®, and the Connecting everything logo are among the trademarks of Broadcom Corporation and/or its affiliates in the United States, certain other countries and/or the EU. Any other trademarks or trade names mentioned are the property of their respective owners.