

### Overview

## Models

Broadcom NetXtreme Gigabit Ethernet Plus NIC (PCIe)

FS215AA

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## Introduction

The Broadcom NetXtreme line of Gigabit Ethernet products provide a complete end-to-end Gigabit solution from the server and server backbone to the switch infrastructure and now down through to the desktop and workstation.

Today, Fast Ethernet makes up the majority of LANs, however in the very near future Gigabit Ethernet will overtake Fast Ethernet as the primary network technology. Gigabit Ethernet's dramatic increase in popularity is based on its scalable performance, flexibility, ease of implementation and lowered costs approaching 10/100 Ethernet. As the trend for bandwidth-intensive applications continues, the need for high-performance connectivity solutions will fuel the Gigabit transition.

By bringing Gigabit to the desktop and workstation, many benefits are achieved for network administrators and for end users. Deploying Gigabit is no longer an unattainable feat; it is a reality that is being achieved due to three items - affordability, ease of deployment, and performance benefits.

The Broadcom NetXtreme Gigabit Ethernet Plus NIC supports DASH 1.1 (Desktop and mobile Architecture for System Hardware) capability. This architecture provides an industry standard for secure remote management of desktop and mobile systems from multiple vendors, regardless of power setting. DASH defines a common framework for managing clients, providing flexibility to accomplish essential management tasks such as remote power and boot control, asset inventory, and security in a multi-vendor, distributed enterprise environment.

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## Performance and Features

### Key Benefits

- High-performance connectivity solution for your LAN. No rewiring expenses - runs perfectly on virtually all existing CAT-5 cabling
- Better network performance by alleviating congestion and removing bottlenecks
- ACPI, WOL, PXE - allows lower power consumption, remote wake and remote booting
- Advanced Cable diagnostics - dynamically tests and reports network problems (interruptions, error rate, cable length) and automatically compensates for cable issues
- Supports 802.3ad link aggregation, GEC/FEC, and Smart Load Balancing
- Failover - Smart Load Balancing allow heterogeneous, mixed speed failover
- Integrated Cable Testing - link quality, length, pair skew, pair polarity, pair swap
- Extremely low power consumption helps enable a more environment-friendly IT environment
- Web services-based remote manageability can help reduce IT costs

### Performance

- Dual high-speed on-chip RISC processors
- Full-duplex and half-duplex capability for all transceivers except the 1000BASE-T (full-duplex only)
- Network transfer capability increases performance for demanding desktop applications in Gigabit mode
- High performance, low overhead SW/HW interface
- Integrated 96Kb packet Frame Buffer Memory
- Support for major operating systems and network operating systems

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- TCP, IP, UDP checksum, TCP segmentation, CPU task offload
  - Adaptive interrupts for low CPU utilization
  - DASH 1.1 supports the secure and flexible tools that you need to efficiently perform essential client management tasks
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### Compatibility

The Broadcom NetXtreme Gigabit Ethernet Plus NIC is supported on the following HP Workstations: Z210 CMT and SFF, Z400, Z420, Z600, Z620, Z800 and Z820. Support for DASH is available on all platforms with the exception of Z210 CMT and SFF.

The Broadcom NetXtreme Gigabit Ethernet Plus NIC is also supported on the following HP Compaq Business PCs: HP Compaq 4000 Pro SFF, HP Compaq 6000 Pro MT, HP Compaq 6000 Pro SFF, HP Compaq 4300 Pro SFF, HP Compaq 6005 Pro MT, HP Compaq 6005 Pro SFF, HP Compaq 6200 Pro MT, HP Compaq 6200 Pro SFF, HP Compaq 6300 Pro MT, HP Compaq 6300 Pro SFF, HP Compaq 8200 Elite SFF, HP Compaq 8200 Elite CMT, HP Compaq 8200 Elite MT, HP Compaq 8300 Elite CMT, HP Compaq 8300 Elite MT, HP Compaq 8300 Elite SFF, HP Compaq 6305 Pro MT, HP Compaq 6305 Pro SFF, HP rp5700 Retail System, and HP rp5800 Retail System.

**NOTE:** Please check [this product's web page on HP.com](#) for current compatibility information.

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### Service and Support

The Broadcom NetXtreme Gigabit Ethernet Plus NIC has a one-year limited warranty or the remainder of the warranty of the HP product in which it is installed. Technical support is available seven days a week, 24 hours a day, by phone, as well as online support forums. Certain restrictions and exclusions apply.

### Technical Specifications

<b>Connector</b>	RJ-45
<b>Controller</b>	Broadcom 5761 PCI-Express LAN Controller
<b>Memory</b>	8 MB NVRAM serial Flash
<b>Data Rates Supported</b>	10/100/1000 Mb/s
<b>Compliance</b>	IEEE 802.1P, 802.1Q, 802.2, 802.3, 802.3AB, 802.3u, and 802.3x
<b>Bus Architecture</b>	PCI-Express
<b>Data Path Width</b>	Single Channel PCI-Express
<b>Data Transfer Mode</b>	Bus Master DMA
<b>Hardware Certifications</b>	FCC class B, Canada and US NRTL Mark, C-Tick for Australia, BSMI for Taiwan, VCCI for Japan, MIC for Korea, GOST for Russia, UL listed (E212044), European Union Notice (CE 0682)
<b>Power Requirement</b>	1.8W @ 3.3V
<b>Boot ROM Support</b>	Yes
<b>Network Transfer Mode</b>	Full-duplex Half-duplex (not available for the 1000BASE-T transceiver)
<b>Network Transfer Rate</b>	10BASE-T (half-duplex) 10 Mb/s 10BASE-T (full-duplex) 20 Mb/s 100BASE-TX (half-duplex) 100 Mb/s 100BASE-TX (full-duplex) 200 Mb/s 1000BASE-T (full-duplex) 2000 Mb/s
<b>Operating Temperature</b>	32° to 131°F (0° to 55° C)
<b>Operating Humidity</b>	131° F (55° C) with 5% to 95% non-condensing humidity
<b>Dimensions (H x W x D)</b>	7 cm x 10.5 cm (2.75 in x 4.13 in), low profile compatible
<b>Operating System Driver Support</b>	Windows 8 Pro*, Windows 8*, Windows 7 Professional 32-bit and 64-bit, Windows Vista 32-bit SP1, Windows Vista x64 SP1, Windows XP 32 bit professional, Windows XP x64 Red Hat Enterprise Linux (RHEL) 5, 6; Novell SLED 10 & 11 <b>*NOTE: Windows 8 ready with download of new drivers.</b>
<b>Management Capabilities</b>	ACPI, WOL and DMI 2.0, PXE 2.0, WfM 2.0, Broadcom mgmt utility, ASF2.0, DASH 1.0 and DASH 1.1 profiles
<b>Kit Contents</b>	Broadcom NetXtreme Gigabit Ethernet Plus NIC, Broadcom NetXtreme Gigabit Ethernet Plus NIC USB Cable Assembly, CD, drivers, quick install guide, product warranty statement

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