

### Overview

## Models

Broadcom NetXtreme Gigabit Ethernet PCI-Express Adapter

EA833AA

## Introduction

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.

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. Just as networks migrated from 10-Mbit to 100-Mbit and gained a 10-fold improvement, the same will be true when moving from 100-Mbit to Gigabit. By alleviating congestion and removing bottlenecks, the network simply performs better.

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.

## Affordability

Implementing Gigabit speeds in a network is very affordable for many reasons. Gigabit Ethernet runs perfectly on virtually all existing CAT-5 cabling so there is no rewiring expense and ease of use and management capabilities lower administrative costs.

## Ease of Deployment

Gigabit to the desktop or workstation can be done gradually because the technology is completely backwards compatible. The entire network can be upgraded to Gigabit speed one device at a time as clients are upgraded or replaced by simply plugging the new Gigabit-ready device into the switch.

## Performance Benefits

Until recently, networks only had to support the transfer of files from one place to another. As networks and computers have evolved, so have the applications that are being used. Administrators require more control and performance at the edge of the network. Bandwidth needs are continually growing, especially with the convergence of media-rich applications, such as, video and voice.

## Key Benefits

- ACPI, WOL, PXE - allows lower power consumption, remote wake and remote booting
- Advanced Cable diagnostics - dynamically tests and reports network problems (interrupts, 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

### Overview

### 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
- TCP, IP, UDP checksum, TCP segmentation, CPU task offload
- Adaptive interrupts for low CPU utilization

### Compatibility

The Broadcom NetXtreme Gigabit Ethernet Controller is compatible with all HP Compaq Business Desktop PCs with the exception of the dx2000 and dc5150 series PCs and the dc7600 ultra-slim desktop, and is also compatible with xw4200, xw4300, xw6200, xw8200 and xw9300 Workstations. Not all models available in all regions.

### Service and Support

Your Option Limited Warranty is a one (1) year (HP Option Limited Warranty Period) parts replacement warranty on any HP-branded or Compaq-branded options (HP Options). If your HP Option is installed in an HP Hardware Product, HP may provide warranty service either for the HP Option Limited Warranty Period or the remaining Limited Warranty Period of the HP Hardware Product in which the HP Option is being installed, whichever period is the longer but not to exceed three (3) years from the date you purchased the HP Option.

### Technical Specifications

<b>Connector</b>	RJ-45
<b>Controller</b>	Broadcom 5751 PCI-Express LAN Controller
<b>Memory</b>	Integrated 96Kb frame buffer memory
<b>Data rates supported</b>	10/100/1000 Mbps
<b>Compliance</b>	IEEE 802.1P, 802.1Q, 802.2, 802.3, 802.3AB and 802.3u compliant, 802.3x flow control
<b>Bus architecture</b>	PCI-E
<b>Data path width</b>	Single channel, PCI-E
<b>Data transfer mode</b>	Bus-master DMA
<b>Hardware certifications</b>	FCC, B, CE, TUV- cTUVus Mark Canada and United States, TUV- GS Mark for European Union
<b>Power requirement</b>	3.1 watts @ +3.3V AUX supply with 5V tolerance
<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 Mbps 10BASE-T (full-duplex) 20 Mbps 100BASE-TX (half-duplex) 100 Mbps 100BASE-TX (full-duplex) 200 Mbps 1000BASE-T (full-duplex) 2000 Mbps
<b>Environmental</b>	<b>Operating temperature</b> 32° to 131°F (0° to 55° C) <b>Operating humidity</b> 85% at 131° F (55° C)
<b>Dimensions</b>	4.4 x 2.2 x 0.08 in (11.2 x 5.5 x 2 cm)
<b>Operating system driver support</b>	Microsoft® Windows® NT® 4.0, Microsoft Windows 98, Microsoft 2000, Microsoft XP, Linux 2.2, Linux 2.4
<b>Management capabilities</b>	ACPI, WOL and DMI 2.0, PXE 2.0, WfM 2.0, Broadcom mgmt utility
<b>Alerting</b>	N/A
<b>Kit contents</b>	Broadcom 5751, CD, Broadcom NetXtreme Gigabit Ethernet PCI-E Adapter, drivers, quick install guide, product warranty statement

© Copyright 2005 Hewlett-Packard Development Company, L.P.  
The information contained herein is subject to change without notice.

Microsoft and Windows NT are US registered trademarks of Microsoft Corporation.

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.