

### Overview

## Models

DZ556A

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Now Gigabit Ethernet becomes accessible via PCI-Express.

HP's Broadcom BCM5751 NetXtreme™ Gigabit Ethernet Controller for Workstations (PCI-Express) provides 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 workstation, many benefits are achieved for network administrators and for end users. Deploying Gigabit to the desktop 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.

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.

Upgrading to Gigabit 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.

## Key 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:

- Broadcom MAC Address
- Compliant with IEEE 802.3ab 1000Base-T
- Compliant with IEEE 802.3u 100Base-TX
- Compliant with IEEE 802.3 10Base-T
- Integrated 10/100/1000BASE-T Transceiver (BCM5751)
  - Automatic MDI Crossover Function
  - Automatic Detection and correction of pair swaps, pair skew and pair polarity
- Auto-negotiation with Next Page capability
- Gigabit Media Independent Interface (GMII) as specified in IEEE 802.3
- " Low 1.2 Voltage CMOS with 5V Tolerant PCI-E I/Os
- PCI-E v1.0a compliant, point-to-point serial bus Interface. It can support 2.5Gbit per sec per lane per direction transfer rate.
- Integrated 96Kb Frame Buffer Memory
- VLAN Tag support (IEEE 802.1q)
- Layer 2 Priority Encoding (802.1p)
- Full Duplex Flow Control (IEEE 802.3x)
- Supports link aggregation - 802.3ad GEC/FEC
- Smart load balancing with heterogeneous, mixed speed failover
- SMB Interface supporting Alert Specification Forum (ASF) v2.0
- Conformance to PCI Power Management Spec v1.1.
- Support for WOL (wake on LAN) on Magic Packet and on pattern match.
- Programmable rules checker for advanced packet filtering and classification
- Up to 9Kb jumbo frame support

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- Statistics for SNMP MIB II, Ethernet like MIB, and Ethernet MIB (802.3z, Clause 30)
- Multiple transmit and receive descriptor queues
- Scatter/gather bus mastering architecture
- Test modes (BIST, SCAN, etc.)
- Half and Full Duplex Operation (10/100)
- Auto negotiation for 1000Mbps
- 4 Wire SPI Flash interface
- Calculation and verification of TCP, UDP, and IP checksums
- TCP Segmentation capability compatible with NT5.x offloading features

Remote cable management with diagnostics and fault isolation

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### Compatibility

The Broadcom BCM5751 NetXtreme™ Gigabit Ethernet Controller (PCI-E) is PCI-E 1.0a compliant and compatible with HP xw4200, xw4300, xw6200, and xw8200 and xw9300 Workstations. Not available in all regions.

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### Service and Support

The Broadcom BCM5751 NetXtreme™ Gigabit Ethernet Controller 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 5751 PCI-E 1.0a LAN Controller
<b>Memory</b>	Integrated 96Kb frame buffer memory
<b>Data rates supported</b>	10/100/1000 Mbps
<b>Compliance</b>	IEEE 802.3, 802.3AB and 802.3u compliant, 802.3x flow control
<b>Bus architecture</b>	PCI-E 1.0a
<b>Data path width</b>	X1
<b>Data path speed</b>	2.5Gbit per sec per direction transfer rate
<b>Data transfer mode</b>	Bus-master DMA
<b>Hardware certifications</b>	FCC class B, NRTL Mark Canada and United States, C-Tick for Australia, BSMI for Taiwan, VCCI for Japan, MIC for Korea, GOST for Russia
<b>Power requirement</b>	3.1 watts @ +3.3V AUX supply
<b>Boot ROM support</b>	Yes
<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, 1000Mbps
<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 inches (11.2 x 5.5 x .2 cm)
<b>Operating system driver support</b>	Microsoft Windows 2000 and XP, Red Hat Linux 7.2, 7.3 and Red Hat Enterprise Linux 3
<b>Management capabilities</b>	WOL, PXE , Remote cable management
<b>Alerting</b>	ASF 2.0
<b>Kit contents</b>	Broadcom 5751, CD, Broadcom NetXtreme Gigabit Ethernet PCI NIC, drivers, quick install guide, product warranty statement

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HP recommends Microsoft® Windows® XP Professional for Business

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