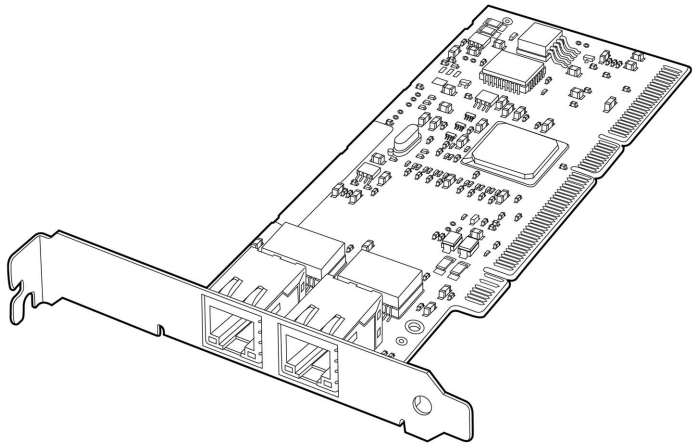
Overview

The HP NC7170 PCI-X Dual Port 1000T Gigabit Server Adapter is a networking solution for HP ProLiant servers using twisted-pair cabling. The NC7170 NIC is available with two different brackets with two different model numbers:

- A standard, full size bracket
- A half-length, low-profile bracket that fits into HP ProLiant half slots

Both versions run over Category 5 (or better) wiring and are the first HP server adapters to combine dual port 10/100/1000 speeds with PCI-X bus technology for twisted-pair environments. Along with all the advanced features that HP ProLiant customers have come to expect, the NC7170 includes support for Wake-on-LAN (WOL), Dual Address Cycles (DAC), and Pre-Boot Execution environment (PXE).



Models

HP NC7170 PCI-X Dual Port 1000T Gigabit Server Adapter 313881-B21

NOTE: Please see the "Server Support" section for supported HP ProLiant server details.

NOTE: The NC7170 supports 10/100/1000Mbps Ethernet speeds as well as a PCI-X 64-bit/133MHz Interface, and it is backwards compatible with existing PCI bus architectures. Additionally, the NC7170 ships with support for PCI Hot Plug, Jumbo Frames, Network Fault Tolerance, Load Balancing, and various offload capabilities that improve performance.

Kit Contents	NC7170 PCI-X Dual Port 1000T Gigabit Server Adapter CD containing Drivers, User Guide, and Installation and Diagnostic Utilities Quick Install Card Product Quality Statement Product Warranty Statement

Overview

Standard Features

Server Support

ProLiant DL (rack-optimized):

- HP ProLiant DL140 G2
- HP ProLiant DL140 G3
- HP ProLiant DL145
- HP ProLiant DL145 G2
- HP ProLiant DL320 G3
- HP ProLiant DL320 G4
- HP ProLiant DL360 G4
- HP ProLiant DL360 G4p
- HP ProLiant DL360 G5
- HP ProLiant DL365
- HP ProLiant DL380 G4
- HP ProLiant DL380 G4 Packaged Cluster with MSA1000
- HP ProLiant DL380 G4 Packaged Cluster with MSA500 G2
- HP ProLiant DL380 G5
- HP ProLiant DL385
- HP ProLiant DL385 Packaged Cluster with MSA500 G2
- HP ProLiant DL385 G2
- HP ProLiant DL580 G2
- HP ProLiant DL580 G3
- HP ProLiant DL580 G4
- HP ProLiant DL585
- HP ProLiant DL585 G2
- HP ProLiant DL740
- HP ProLiant DL760 G2

ProLiant ML (expansion-optimized):

- HP ProLiant ML310 G2
- HP ProLiant ML330 G3
- HP ProLiant ML350 G4
- HP ProLiant ML350 G4p
- HP ProLiant ML350 G5
- HP ProLiant ML370 G4
- HP ProLiant ML370 G5
- HP ProLiant ML570 G2
- HP ProLiant ML570 G3
- HP ProLiant ML570 G4

NOTE: This is a list of supported servers. Some may be discontinued. Please check server QuickSpecs for additional compatibility information.

Performance

Gigabit Throughput Combined with Legacy Ethernet Support	A 10/100/1000Mbps Ethernet transfer rate delivers outstanding network performance that improves response time and removes bottlenecks. Because the NC7170 supports both 10Mbps Ethernet and 100Mbps Fast Ethernet in addition to Gigabit Ethernet, users are guaranteed end-to-end protocol support across their enterprise.
PCI-X Interface	HP was an early champion of PCI-X bus technology and has played a key role in the development and industry adoption of the PCI-X specification. The NC7170 features a PCI-X 64-bit/133MHz Interface, which yields faster transmissions with lower CPU utilization than earlier PCI-based, gigabit fiber solutions.
Checksum Offloading	The NC7170 allows TCP Checksum Offloading. This feature reduces the load on the CPU for overall improved system response.
Load Balancing	Transmit Load Balancing (TLB) and Switch-assisted Load Balancing (SLB) are two advanced features that customers can use to build a bigger pipe for improved networking bandwidth. These port bonding techniques enable users to install up to eight NC7170 adapters in a HP ProLiant server and aggregate their throughput up to a theoretical maximum of 16Gigabits per second full-duplex transmissions.
Jumbo Frames	Jumbo Frames (also known as Extended Frames) offer a 9K byte Maximum Transmission Unit (MTU), which is six times the size of traditional Ethernet frames. Like all HP ProLiant server adapters, the NC7170 supports jumbo frames as a way to achieve higher throughput and better CPU utilization when deployed in a network infrastructure that supports them. Jumbo frames are particularly useful for database transfers and tape backups.

Scalability and Reliability

PCI-X Support for Traditional PCI slots	PCI-X technology ensures hardware investment protection by retaining backward compatibility with the standard PCI bus architecture at the device and driver level. When the NC7170 is used in a traditional 64/100, 64/66, 64/33, or 32/33 PCI IO slot, its performance is limited to the maximum of the conventional bus architecture.
Dual Ports	Two Gigabit ports allow users to save slots in situations where their servers are slot-constrained. HP has long been an advocate of dual port adapters for servers; the NC7170 is the latest in our legacy of best-of-breed dual port devices for HP ProLiant servers.
Network Fault Tolerance (NFT)	Network Fault Tolerance, sometimes called "failover" or "NIC Redundancy," allows for the installation of multiple NC7170 server adapters so that the active device can be backed up by a redundant adapter to improve availability. HP's teaming utility also allows users to specify that when a failed adapter is fixed and replaced, the original adapter resumes its function as the primary network connection.
PCI Hot Plug	The NC7170 ships with PCI Hot Plug support, which enables it to be replaced or added to a PCI Hot Plug compatible server without powering down the system. This feature provides increased system availability and serviceability in business-critical computing environments.

Performance

Distance capabilities	The NC7170 supports cable runs up to 100 meters (328 feet).

Network Management

Auto-negotiation	The NC7170 automatically senses and configures itself to the speed of the device to which it is attached. It also automatically configures for half or full duplex, depending on the duplex mode of the switch, hub, or router at the other end of the cable.
Wake-on-LAN	The NC7170 provides Wake-on-LAN (WOL) support through the PCI bus. A system that supports Wake on LAN can remain available to a systems administrator during its normal downtime. Once the machine is awakened, the systems administrator can remotely control, audit, debug, or manage the machine.
Management Support	Like all HP ProLiant server adapters, the NC7170 ships with drivers and agents that can be managed from all versions of Insight Manager. Additionally, it supports any management application that supports SNMP.
Server Integration	The SmartStart configuration utility includes setup support for the NC7170 so that the adapter can be configured as part of the SmartStart configuration process. Insight Manager can recognize the NC7170 individually or in a port-bonded team, and it can collect and report SNMP statistics on the adapter events. Integrated Management Log (IML) support is provided by the NC7170 for critical event logging on HP ProLiant servers.
Configuration Utilities	Each NC7170 ships with a set of utilities that allow the user to: • Enable initial diagnostics within Windows, Linux, Netware, and DOS operating systems. • Configure network adapter teaming in a Windows environment. The Windows adapter teaming configuration utility includes a patented teaming GUI for Microsoft Windows 2000 and 2003 operating systems. Support for scripted installations of teams in a Microsoft Windows environment allow for unattended OS installations.
LED Indicators	Bracket LED indicators show link integrity, network activity, and speed on each port for easy troubleshooting.
Warranty	Maximum: The remaining warranty of the HP product in which it is installed (to a maximum three-year, limited warranty). Minimum: One year limited warranty. See Internet address http://www.hp.com for overall information on HP.

Service and Support, HP Care Pack, and Warranty Information

Warranty	Additional information regarding worldwide limited warranty and technical support is available at: http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html
Support Services	Care Pack services provide a range of life cycle support options that let you choose the service levels that meet your business requirements, from basic to mission-critical. A full range of HP Care Pack hardware and software services are available including: ● Installation and start up ● Education courses ● Extended onsite hardware coverage hours from same business day 13 ours, 5 day to 24 hours, 7 days call window with options including 4-hour response or 6-hour Call-To-Repair. ● Comprehensive range of software technical support for Microsoft, Linux, ProLiant Essentials, and VMWare-based IT solutions helping to deliver high level of application availability. Response times ranging from 30 minutes for critical problems to 2 hours. ● System Management, Performance Services and Mission Critical Support Solution NOTE: For more information on HP Care Pack services, contact any of our worldwide sales offices or resellers or visit our worldwide Web site on the internet at: http://www.hp.com/hps/carepack NOTE: For more complete information on HP Services offerings, customers and resellers, please visit us at: http://www.hp.com/hps NOTE: Additional information regarding worldwide limited warranty and technical support is available at: http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html

Related Options

Gigabit Server Adapters	HP NC110T PCI Express Gigabit Server Adapter NOTE: Does not support Windows 2000.	434905-B21
	HP NC112T PCIe Gigabit Server Adapter	503746-B21
	HP NC360T PCI Express Dual Port Gigabit Server Adapter	412648-B21
	HP NC364T PCI Express Quad Port Gigabit Server Adapter NOTE: Does not support Windows 2000.	435508-B21
	HP NC373F PCI Express Multifunction Gigabit Server Adapter	394793-B21
	HP NC373T PCI Express Multifunction Gigabit Server Adapter	394791-B21
	HP NC380T PCI Express Dual Port Multifunction Gigabit Server Adapter NOTE: Supported on a Full Length-Full Height slot only.	394795-B21
	HP NC382T PCI Express Dual Port Multifunction Gigabit Server Adapter	458492-B21
10 Gigabit Server Adapters	HP NC522SFP Dual Port 10GbE Server Adapter NOTE: A minimum of two Gigabytes (2 GB) of server memory is required per each NC522SFP adapter. NOTE: Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately.	468332-B21
	HP NC524SFP Dual Port 10GbE Server Adapter NOTE: A minimum of two Gigabytes (2 GB) of server memory is required per each NC524SFP module. NOTE: Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately.	489892-B21

Technical Specifications

Compliance	• 802.3, 802.3u, 802.3x, 802.3ab, Dynamic 802.3ad, 802.1p, 802.1Q • PCI-X 1.0 • PCI 2.2 • ACPI v1.1		
General Specifications	Communications Processor	Intel 82546EB	
	On-board memory	128 KB	
	Data rate	10/100/1000 Mbps, Half- and full-duplex	
	Data path	64-bit/133MHz, compatible with 64/100, 64/66, 64/33 and 32/33	
	Interrupt levels	INTA and B	
	Bus architecture	PCI bus-mastering, compatible with existing PCI bus architecture	
	Cable Connector	Two RJ-45	
	Bus Connector	Universal, keyed for 3.3 and 5 volt slots	
	Distance and Wiring	Up to 328 feet/100 m with Category 5 (or better) twisted-pair cabling	
	Standard Dimensions (L x W)	6.6 x 2.5 in (16.5 x 6.4 cm) (L x W), 4.8 in (12.2 cm) width including bracket	
	Half-Length, Low-Profile Dimensions (L x W)	6.6 x 2.5 in (16.5 x 6.4 cm) (L x W), 3.1 in (7.9 cm) width including bracket	
Power and Environmental Specifications	Operating	Temperature	32° to 131° F (0° to 55° C)
		Humidity	10% to 95% non-condensing
	Non-operating	Temperature	-40° to 85° F (-40° to 185° C)
		Humidity	-5% to 95%
	Power requirement	1600 mA @ 5V maximum; 1550 mA @ 5V typical	
	Emissions Standards	FCC Class B, VCCI Class B, BSMI Class A, CISPR 22 Class B, EN 55022 Class B, EN55024-1, ICES-003 Class B, MIC Class B, ACA Class B	
	Safety Compliant	UL, Canada UL, EN60950	
Operating System Support	• Microsoft® Windows Server 2003, x64 Edition, and Windows 2000 • Novell NetWare 6.x Server • SCO UnixWare 7.1.3 • SCO UnixWare 7.1.4 • SCO OpenServer 5.0.7 • SCO OpenServer 6.0.0 • Solaris 9 • Solaris 10 • MS-DOS Client for unattended installation		

Environment-friendly Products and Approach	End-of-life Management and Recycling	Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to http://www.hp.com/go/green. To recycle your product, please go to: http://www.hp.com/go/green or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/green. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

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