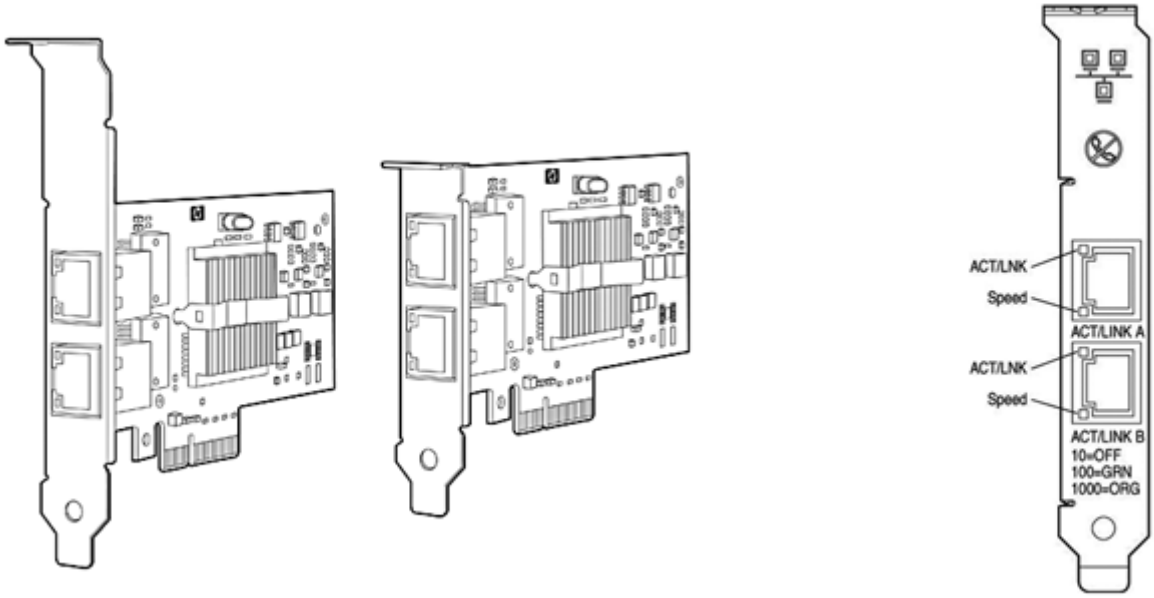
RETIRED: This document has been officially retired, and the base products listed herein are now considered obsolete and are no longer available for sale. Consequently, the information contained within may no longer be current. This document is provided exclusively for reference and informational purposes.

QuickSpecs

HP NC360T PCI Express Dual Port Gigabit Server Adapter

Overview

The NC360T is a high performance PCI Express (PCIe) dual port, copper, gigabit network solution for ProLiant customers who demand the latest in dual port Ethernet network adapter bandwidth and features. It offers two ports on a single PCI Express adapter, allowing customers to save valuable I/O slots for other uses. It is based upon the high performance Intel 82571EB chipset and offers a 4 lane (x4) PCI Express bus. Unique customer benefits and differentiators are: flexiblity to order and install (It has both standard and low profile capability.); and, usable in Ethernet or Fast Ethernet legacy twisted pair environments to preserve legacy infrastructure investments.



Models

HP NC360T PCI-E Dual Port Gigabit Server Adapter	412648-B21

Kit Contents

- HP NC360T PCI Express Dual Port Gigabit Server Adapter PCA with a standard height bracket attached to it. (The low profile bracket is included in the clamshell that the PCA ships in.)
- Product Warranty statement and the Quick Install Card (QIC).

Compatibility

Server Support **ProLiant DL (rack-optimized)**:

- HP ProLiant DL120 G5
- HP ProLiant DL120 G6
- HP ProLiant DL120 G7
- HP ProLiant DL140 G2
- HP ProLiant DL140 G3
- HP ProLiant DL145
- HP ProLiant DL145 G2
- HP ProLiant DL145 G3
- HP ProLiant DL160 G5
- HP ProLiant DL160 G6
- HP ProLiant DL160se G6
- HP ProLiant DL165 G5
- HP ProLiant DL165 G5p
- HP ProLiant DL165 G6
- HP ProLiant DL165 G7
- HP ProLiant DL170e G6
- HP ProLiant DL170h G6
- HP ProLiant DL180
- HP ProLiant DL180 G5
- HP ProLiant DL180 G6
- HP ProLiant DL320 G3
- HP ProLiant DL320 G4
- HP ProLiant DL320 G5
- HP ProLiant DL320 G5p
- HP ProLiant DL320 G6
- HP ProLiant DL320s
- HP ProLiant DL360 G4
- HP ProLiant DL360 G4p
- HP ProLiant DL360 G5
- HP ProLiant DL360 G6
- HP ProLiant DL360 G7
- HP ProLiant DL365
- HP ProLiant DL365 G5
- HP ProLiant DL370 G6
- 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 DL380 G6
- HP ProLiant DL380 G7
- HP ProLiant DL385 Packaged Cluster with MSA500 G2
- HP ProLiant DL385 G2
- HP ProLiant DL385 G5
- HP ProLiant DL385 G5p
- HP ProLiant DL385 G6
- HP ProLiant DL385 G7
- HP ProLiant DL580 G3

Compatibility

- HP ProLiant DL580 G4
- HP ProLiant DL580 G5
- HP ProLiant DL580 G7
- HP ProLiant DL585 G2
- HP ProLiant DL585 G5
- HP ProLiant DL585 G6
- HP ProLiant DL585 G7
- HP ProLiant DL785 G5
- HP ProLiant DL785 G6
- HP ProLiant DL980 G7

ProLiant ML (expansion-optimized):

- HP ProLiant ML110 G4
- HP ProLiant ML110 G5
- HP ProLiant ML110 G6
- HP ProLiant ML110 G7
- HP ProLiant ML150 G6
- HP ProLiant ML115
- HP ProLiant ML115 G5
- HP ProLiant ML150 G2
- HP ProLiant ML150 G3
- HP ProLiant ML150 G5
- HP ProLiant ML150 G6
- HP ProLiant ML310 G4
- HP ProLiant ML310 G5
- HP ProLiant ML310 G5p
- HP ProLiant ML330 G6
- HP ProLiant ML350 G4
- HP ProLiant ML350 G4p
- HP ProLiant ML350 G5
- HP ProLiant ML350 G6
- HP ProLiant ML370 G4
- HP ProLiant ML370 G5
- HP ProLiant ML370 G6
- HP ProLiant ML570 G3
- HP ProLiant ML570 G4

ProLiant SL (scalable line):

- HP ProLiant SL160s G6
- HP ProLiant SL160z G6
- HP ProLiant SL165s G7
- HP ProLiant SL165z G6
- HP ProLiant SL165z G7
- HP ProLiant SL170s G6
- HP ProLiant SL170z G6
- HP ProLiant SL2x170z G6
- HP ProLiant SL390s G7

NOTE: This is a list of supported servers. Some may be discontinued.

Standard Features

Performance

Gigabit Throughput Combined with Legacy Ethernet Support	10/100/1000 Mbps Ethernet transfer rate delivers outstanding network performance that improves response time and removes bottlenecks. Because the NC360T 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 Express Interface	HP was an early champion of PCI Express bus technology and has played a key role in the development and industry adoption of the PCI Express specification. The NC360T features a high performance Intel 82571EB chipset and offers a four lane (x4) PCI Express bus based on the PCIe v1.0a standard, yielding faster transmissions with lower CPU utilization than earlier solutions.
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 four dual-port NC360T adapters (total of 8 ports) in a HP ProLiant server and aggregate their throughput up to a theoretical maximum of 16 Gigabits 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 NC360T 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

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 NC360T is the latest in our legacy of best-of-breed dual port devices for HP ProLiant servers. **NOTE:** Port enumeration on the NC360T is from the top down, i.e. the port near the top of the adapter is port #1 and the port closest to the gold teeth is port #2
Network Fault Tolerance (NFT)	Network Fault Tolerance, sometimes called "failover" or "NIC Redundancy," allows for the installation of multiple 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.
Distance capabilities	The NC360T supports cable runs up to 100 meters (328 feet).

Network Management

Auto-negotiation	The NC360T 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.

Standard Features

Wake-on-LAN	The NC360T provides Wake-on-LAN (WOL) support through the PCI Express 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 NC360T ships with drivers and agents that can be managed from all versions of Systems Insight Manager. Additionally, it supports any management application that supports SNMP.
Server Integration	The SmartStart configuration utility includes setup support for the NC360T so that the adapter can be configured as part of the SmartStart configuration process. Insight Manager can recognize the NC360T 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 NC360T for critical event logging on HP ProLiant servers.
Configuration Utilities	Each NC360T 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

Service and Support

HP Care Pack Services: Packaged server and storage services for increased uptime, productivity and ROI

When you buy HP server and storage products and solutions, it's also a good time to think about what levels of support you may need. Our portfolio of service options reduce deployment and management worries while helping you get the most out of your server and storage investments. We take a holistic approach to your environment, bridging servers, blades, storage, software and network infrastructures with our packaged HP Care Pack Services for servers and storage.

Protect your business beyond warranty

When it comes to robustness and reliability, standard computing equipment warranties have matured along with technology. Good news that can also create problems stemming from depending on standard warranties designed to only protect against product defects and some downtime causes. Using a standard approach to warranty uplifts, such as HP Care Pack Services, helps reduce downtime risks and provides operational consistency for mission-critical and standard business computing.

HP Care Pack Services: Upgrading or extending standard server and storage warranties cost effectively

HP Care Pack Services offer a standard reactive hardware and software support services suite sold separately, or combined with our Support Plus and Support Plus 24 services. The portfolio also provides a combination of integrated proactive and reactive services, such as Proactive 24 Service and Critical Service. In addition with HP Proactive Select, you can acquire the specific proactive constancy and technical services. HP Proactive Select menu offers a broad set of service options that you can mix and match depending on your specific requirements. Proactive service options include offers for server, storage, network, SAN device, software, environment and education services.

HP server and storage lifecycle support services offers a full spectrum of customer care-from technology support to complex migrations to complete managed services. HP Factory Express provides customization, integration and deployment services for turnkey solutions. HP Education Services offer flexible, comprehensive training on to help your IT staff get the most out of your server and storage investments. HP Financial solutions extend innovative financing and cost-effective asset management programs-from purchase to equipment retirement.

Learn more: www.hp.com/services/servers and www.hp.com/services/storage

NOTE: Care Pack Services availability may vary by product and country.

HP Care Pack Services are sold by HP and HP Authorized Service Partners:

- Services for customers purchasing from HP or an enterprise reseller are quoted using HP order configuration tools.
- Customers purchasing from a commercial reseller can find HP Care Pack Services at http://www.hp.com/go/lookuptool

Service and Support

Recommended HP Care Pack Services for optimal satisfaction with your HP product

Recommended Services

Hardware Options Support

HP Care Packs provide support for all HP-branded hardware options qualified for inclusion in your server or storage solution. Any additional HP-qualified options installed within the server are covered at the same service level and for the same period as the server and no additional cost.

- Help improve or maintain system uptime
- Convenient onsite support
- Committed response time

http://h20195.www2.hp.com/V2/GetPDF.aspx/5982-6547EEE

3-Year HP Hardware Support Onsite Service, 4-hour response, 24x7

Provides you with rapid remote support and if required an HP authorized representative who will arrive on site any time and day of the year to begin hardware maintenance service within 4 hours of the service request being logged.

This service provides a trained HP service specialist to perform an installation that meets HP quality standards, for:

- Help improve or maintain system uptime
- Convenient onsite support
- Committed response time

http://h20195.www2.hp.com/V2/GetPDF.aspx/5982-6547EEE

HP Installation and Startup of HP ProLiant Servers

Provides for the installation of your new HP ProLiant server and operating system to assist you in bringing your new HP ProLiant server and operating system into operation in a timely and professional manner.

This service provides a trained HP service specialist to perform an installation that meets HP quality standards, for:

- Delivery of the service at a mutually scheduled time convenient to your organization
- Availability of an HP service specialist to answer basic questions during the onsite delivery of this service
- Custom installation as detailed in "Delivery specifications" or in a Statement of Work (SOW)
- Verification prior to installation that all service prerequisites are met

http://h20195.www2.hp.com/V2/GetPDF.aspx/5982?7572ENN

Service and Support

Optional HP Care Pack Services that will enhance your HP product experience

Optional Services

3-Year HP Hardware Support Onsite Call-to-Repair (CTR) Service, 6- or 24-hour
As an alternative to our recommended support level, for customers who need committed call-to-repair for server hardware.

Provides your IT manager with a team of support specialists who will quickly begin troubleshooting the system to help return the hardware to operating condition within 6 or 24 hours of the initial service request to the HP Global Solution Center.

http://h20195.www2.hp.com/V2/GetPDF.aspx/5982-6547EN.pdf

3-Year HP Support Plus 24
As an alternative to our recommended support level, for customers who need access to responsive 24x7 hardware and software support plus software updates on HP and selected third party products:

For a higher return on your server and storage technology, our 3-year combined reactive support service delivers integrated onsite hardware/software support services available 24x7x365, including access to HP technical resources, 4-hour response onsite hardware support and software updates.

http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-6638EEE

HP Proactive Select Service
Customer needs on demand access to consulting, technical proactive services and education courses

Provides a flexible way to purchase HP best-in-class consultancy and technical services. You can buy Proactive Select Service Credits when you purchase your hardware and then use the credits over the next 12 months.

http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-3842ENN

eSupport

HP eSupport is a portfolio of technology-based services that assist you with managing your business environment - from the desktop to the data center.

Support Portal
The HP support portal provides one-stop access to the information, tools and services you need to manage the daily operations of your IT environment.

Features include:

- Access to self-solve tools (including search technical knowledge base)
- Efficient logging and tracking of support cases
- Collaboration with other business and IT professionals
- Download of patches and drivers
- Access to diagnostic tools
- Proactive notification of relevant information

Access to certain features of the support portal requires an HP service agreement. To access the support portal, visit: http://www.hp.com/support

Service and Support

HP Insight Remote Support software delivers secure remote support for your HP Servers and Storage, 24 X 7, so you can spend less time solving problems and more time focused on your business. You can have your systems remotely monitored for hardware failure using secure technology that's been proven at thousands of companies around the world. In many cases, you can avoid problems before they occur.

Customer Technical Training

In today's cost-conscious business environment, IT professionals, developers, consultants and users face an interesting challenge: how to keep up with the latest technologies and expand important skills while delivering profitable results on current projects. To help address this challenge, HP offers innovative training solutions that help keep you up-to-date on virtualization, server, storage, Insight Control, Citrix, Microsoft® and open source/Linux-related topics-while spending less time away from business-critical activities.

HP Services Awards

HP Technology Services continues to be recognized for service and support excellence by customers, partners, industry organizations and publications around the world. Recent honors and award reflect our services team's dedications, technical expertise, professionalism and uncompromising commitment to customer satisfaction.

Additional Services Information

To learn more on HP ProLiant servers, HP BladeSystem servers and HP storage products, please contact your HP sales representative or HP Authorized Channel Partner. Or visit: www.hp.com/services/proliant or www.hp.com/services/bladesystem or http://www.hp.com/services/storage

Related Options

Gigabit Server Adapters	HP NC112T PCI Express Gigabit Server Adapter	503746-B21
	HP NC364T PCI-E Quad Port Gigabit Server Adapter	435508-B21
	HP NC365T 4-port Ethernet Server Adapter	593722-B21
	HP NC373F PCI-E Multifunction 1000SX Gigabit Svr Adapter	394793-B21
	HP NC373T PCI-E Multifunction Gigabit Server Adapter	394791-B21
	HP NC375T PCI Express Quad Port Gigabit Server Adapter	538696-B21
	HP NC382T PCI Express Dual Port Multifunction Gigabit Server Adapter	458492-B21
	HP Ethernet 1Gb 4-port 331T Adapter	647594-B21
	HP Ethernet 1Gb 2-port 332T Adapter	615732-B21
	HP Ethernet 1Gb 2-port 361T Adapter	652497-B21
10 Gigabit Server Adapters	**NOTE:** A minimum of two Gigabytes (2 GB) of server memory is required per each adapter.	
	HP NC522SFP Dual Port 10GbE Gigabit Server Adapter	468332-B21
	HP NC523SFP 10Gb 2-port Server Adapter	593717-B21
	HP NC524SFP Dual Port 10GbE Module	489892-B21
	NOTE: NC524SFP is available only on DL370 G6, ML370 G6, DL580 G7, DL585 G7, and DL980 G7.	
	HP NC550SFP Dual Port 10GbE Server Adapter	581201-B21
	HP NC552SFP 10Gb 2-port Ethernet Server Adapter	614203-B21
	HP Ethernet 10Gb 2-port 530SFP Adapter	652503-B21
	HP Ethernet 10Gb 2-port 530T Adapter	656596-B21
	HP Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21
	HP Ethernet 10Gb 2-port 561T Adapter	716591-B21
	HP Ethernet 10Gb 2-port 570SFP+ Adapter	718904-B21
FlexibleLOM Adapters	**NOTE:** A minimum of two Gigabytes (2 GB) of server memory is required per each adapter.	
	Ethernet Adapters	
	HP Ethernet 1Gb 4-port 331FLR Adapter	629135-B21
	HP Ethernet 1Gb 4-port 366FLR Adapter	665240-B21
	HP Ethernet 10Gb 2-port 530FLR-SFP+ Adapter	647581-B21
	HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter	665243-B21
	HP Ethernet 10Gb 2-port 561FLR-T Adapter	700699-B21
	HP Ethernet 10Gb 2-port 570FLR-SFP+ Adapter	717491-B21
	FlexFabric Adapters	
	HP FlexFabric 10Gb 2-port 526FLR SFP+ Adapter	629138-B21
	HP FlexFabric 10Gb 2-port 533FLR-T Adapter	700759-B21
	HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter	700751-B21
	HP FlexFabric 10Gb 2-port 554FLR-SFP+ Adapter	629142-B21
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: www.hp.com/go/ProLiantNICs	

Technical Specifications

Compliance

- 802.3, 802.3u, 802.3x, 802.3ab, 802.3ad, 802.1p, 802.1Q
- PCIe v1.0a standard
- RoHS (6 of 6)
- FCC (U.S. only) Class B
- DOC (Canada) Class B
- CE EN 55024, EN55022 Class B
- VCCI Class II
- UL 1950
- CSA 950
- EN 60950
- CE
- ACPI 1.1a
- MicroSoft WHQL (Windows Hardware Quality Labs)

General Specifications

Communications Processor	Intel 82571EB	
On-board memory	96 KB	
Data rate	10/100/1000 Mbps, Half- and full-duplex	
Data path	Four lane (x4) PCI Express compatible with x1, x4, x8, and x16 PCI Express slots	
Interrupt levels	Automatically configured	
Cable Connector	Two RJ-45	
Bus Connector	PCI Express	
Distance and Wiring	Up to 328 feet/100 m with Category 5 (or better) twisted-pair cabling	
Card Dimensions (without brackets) (L x W)	5.1 x 2.7 in (12.95 x 6.8 cm)	

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 185° F (-40° to 85° C)
	Humidity	-5% to 95%
Power requirement	1280 mA @ 3.3V 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
- Microsoft Windows Server 2008
- Microsoft Windows HPC Server 2008
- 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
- Red Hat Enterprise Linux
- SUSE Linux Enterprise Server

- Solaris 10 8/07
- MS-DOS Client for unattended installation

NOTE: For more Linux OS support & certification information, please visit our the ProLiant & BladeSystem Server Linux matrix: http://h18004.www1.hp.com/products/servers/linux/hplinuxcert.html
NOTE: For more OS support & certification information, please visit the NIC driver download web pages at this location: http://h18004.www1.hp.com/support/files/networking/us/index.html

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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