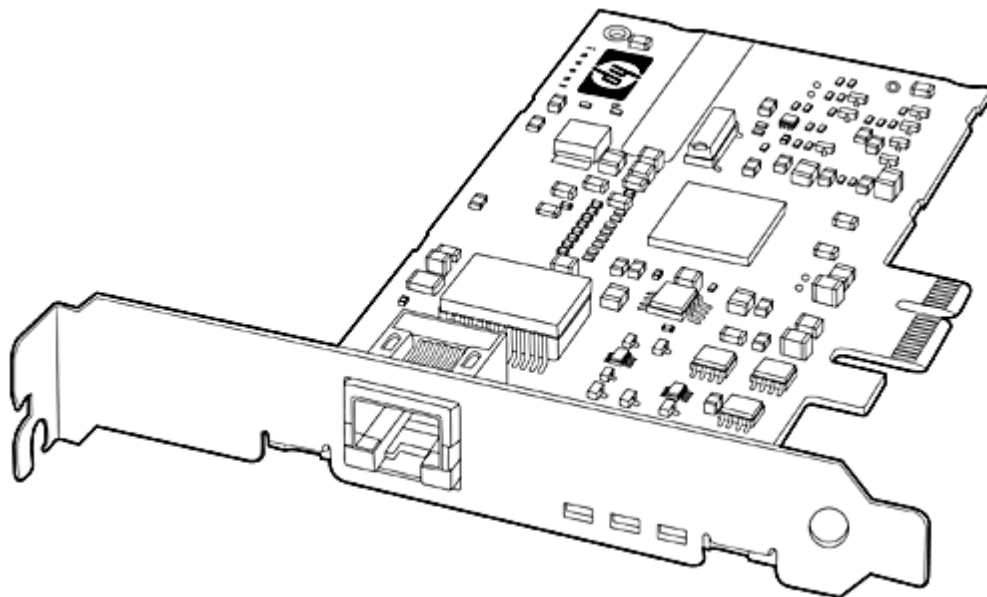


Overview

The HP NC320T server adapter is a single port Gigabit Ethernet network adapter for Local Area Networks using copper cabling. The NC320T is a single lane (x1), serial device designed for PCI Express slots, and it has been tested and validated on all ProLiant servers that include PCI Express slots. The NC320T comes with 40KB onboard memory. Along with all the advanced features that ProLiant customers have come to expect, the NC320T includes support for teaming for failover and load balancing, Pre-Boot Execution Environment (PXE), large send offload capability, Wake-on-LAN (WOL), and multiple VLAN tagging. The NC320T supports 10/100/1000Mbps Ethernet speeds and works with drivers and utilities that support all PCI and PCI-X server adapters. This software compatibility enables HP customers to protect their current hardware investment in PCI and PCI-X devices while also future-proofing their ProLiant servers for the inevitable increase in networking throughput.



Models

HP NC320T PCI Express Gigabit Server Adapter

367047-B21

Kit Contents

HP NC320T PCI Express Gigabit Server Adapter
CD containing Drivers, User Guide, and Installation and Diagnostic Utilities
Quick Install Card
Product Warranty Statement

Overview

Standard Features

Server Support

ProLiant DL (rack-optimized):

- HP ProLiant DL140
- 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 DL320 G5
- 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 DL580 G3
- HP ProLiant DL580 G4

ProLiant ML (expansion-optimized):

- HP ProLiant ML110 G2
- HP ProLiant ML110 G3
- HP ProLiant ML150 G2
- HP ProLiant ML150 G3
- HP ProLiant ML310 G2
- HP ProLiant ML310 G3
- HP ProLiant ML310 G4
- 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.

Performance

Gigabit Ethernet Throughput

Up to 1000Mbps Ethernet transfer rate delivers outstanding network performance that improves response time and removes bottlenecks across the entire network.

Overview

Load Balancing

Transmit Load Balancing (TLB) and Switch-Assisted Load Balancing (SLB) are two advanced features used to build a bigger pipe for improved networking bandwidth. These port bonding techniques enable users to install up to eight NC320T adapters in a ProLiant server and aggregate their throughput up to a theoretical maximum of 16 Gigabits per second full-duplex transmission. The NC320T can be configured to work with other NC-series Ethernet server adapter teams supported on ProLiant servers, when running under Microsoft Windows.

Scalability and Reliability

Tri-Speed Support

Because the NC320T supports 10Mbps Ethernet and 100Mbps Fast Ethernet in addition to Gigabit Ethernet, users are guaranteed end-to-end protocol support across their enterprise. Like all HP server adapters, the NC320T adheres to open industry standards, insuring that it will work seamlessly with any network devices that also support IEEE standards.

PCI Express slots

The NC320T is a single lane (x1) serial device that is compatible with x4 and x8 PCI Express slots found on the latest ProLiant servers.

Network Fault Tolerance (NFT)

Network Fault Tolerance, sometimes called "failover" or "NIC redundancy", allows for the installation of multiple NC320T server adapters or other network 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.

The NC320T can be configured to work with other NC-series Ethernet server adapter teams supported on ProLiant servers, when running under Microsoft Windows.

Network Management

Auto-negotiation

The NC320T automatically senses 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.

Management Support

Like all HP server adapters, the NC320T ships with drivers and agents that can be managed from all versions of HP Insight Manager 7, as well as using any management application that supports SNMP.

Server Integration

HP Insight Manager can recognize the NC320T individually or in port-bonded teams, and can collect and report SNMP statistics on the adapter events. Additionally, Integrated Management Log (IML) support is provided by the NC320T for critical event logging on HP servers.

Configuration Utilities

Each NC320T ships with a suite of OS-tailored configuration utilities that allow the user to run initial diagnostics and configure adapter teams for Network Fault Tolerance, Transmit Load Balancing, or Switch-Assisted Load Balancing.

LED Indicators

Bracket LED indicators show link integrity, network activity, and network speed for easy troubleshooting.

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 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

Additional Gigabit Server Adapters	HP NC310F PCI-X 1000SX Gigabit Server Adapter	368169-B21
	HP NC340T PCI-X 4-port 1000T Gigabit Server Adapter	391661-B21
	HP NC360T PCI Express Dual Port Gigabit Server Adapter	412648-B21
	HP NC370F PCI-X Multifunction Gigabit Server Adapter	374193-B22
	HP NC370T PCI-X Multifunction Gigabit Server Adapter	374191-B22
	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	394795-B21
	HP NC1020 PCI 1000T Gigabit Server Adapter	353377-B21
	HP NC7170 PCI-X Dual Port 1000T Gigabit Server Adapter	313881-B21
	HP NC7170 PCI-X Dual Port Low Profile 1000T Gigabit Server Adapter	383738-B21
Combo Switch Adapter 10 Gigabit Server Adapter	HP NC7771 PCI-X 1000T Gigabit Server Adapter	290563-B21
	HP NC150T PCI 4-port 1000T Gigabit Combo Switch Adapter	367132-B21
	HP NC510C PCIe 10 Gigabit Server Adapter	414129-B21
	NOTE: A minimum of 1 gigabyte (1 GB) of server memory is required per each NC510C adapter.	
	HP NC510F PCIe 10 Gigabit Server Adapter	414126-B21
	NOTE: A minimum of 1 gigabyte (1 GB) of server memory is required per each NC510F adapter.	

Service and Support, HP Care Pack, and Warranty Information

ProLiant Essentials

ProLiant Essentials Intelligent Networking Pack - single server license	436225-B21
ProLiant Essentials Intelligent Networking Pack - flexible license	436227-B21
ProLiant Essentials Intelligent Networking Pack - tracking license	372951-B21
ProLiant Essentials Intelligent Networking Pack - single server license	436229-B21
ProLiant Essentials Intelligent Networking Pack - flexible license	436231-B21
ProLiant Essentials Intelligent Networking Pack - tracking license	397006-B21

Technical Specifications

Compliance	IEEE 802.3-2002, 802.3ab, Dynamic 802.3ad, 802.1Q PCI Express ver 1.0a ACPI ver 2.0			
General Specifications	Communications Processor	Broadcom 5721		
	On-board memory	40KB		
	Data path	Single lane (x1), 100MHz PCI Express Reference Clock		
	Interrupt levels	INTA		
	Connector	RJ-45		
	Distance	Up to 328 ft (100 m)		
	Wiring	Category 5 or better UTP		
	Dimensions (LxW)	4.5 x 3.0 in (11.43 cm x 7.62 cm)		
	Power and Environmental Specifications	Operating	Temperature	32° to 131° F (0° to 55° C)
			Humidity	5% to 95% non-condensing
Non-operating		Temperature	-22° to 140° F (-40° to 65° C)	
		Humidity	5% to 95% non-condensing	
Power requirement		Operating Voltage: 3.3V +/- 5% Maximum: 1250 mA @ 3.3V(DC)		
Emissions Classifications		Class B		
Agency Approvals		USA: FCC (CFR 47 part 15) and UL 60950 Canada: ICES-003 and CSA60950		
Operating system support	<ul style="list-style-type: none">• Microsoft® Windows Server 2003, x64 Edition, 2003 Datacenter, 2003 Web Edition, 2003 Small Business Server, Windows 2000 Server, Windows 2000 Advanced Server, Windows 2000 Datacenter Microsoft certified miniport and teaming drivers• Red Hat Linux, Enterprise Advanced Server 3 and 2.1, Enterprise Server 3 and 2.1• SUSE SLES 9• United Linux 1.0• Novell certified NetWare 6.x drivers• SCO UnixWare 7.1.3• SCO UnixWare 7.1.4• SCO OpenServer 5.0.7• SCO OpenServer 6.0.0• Solaris 9• Solaris 10• NDIS 2 for DOS unattended operating system install (43K or less in size)			

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