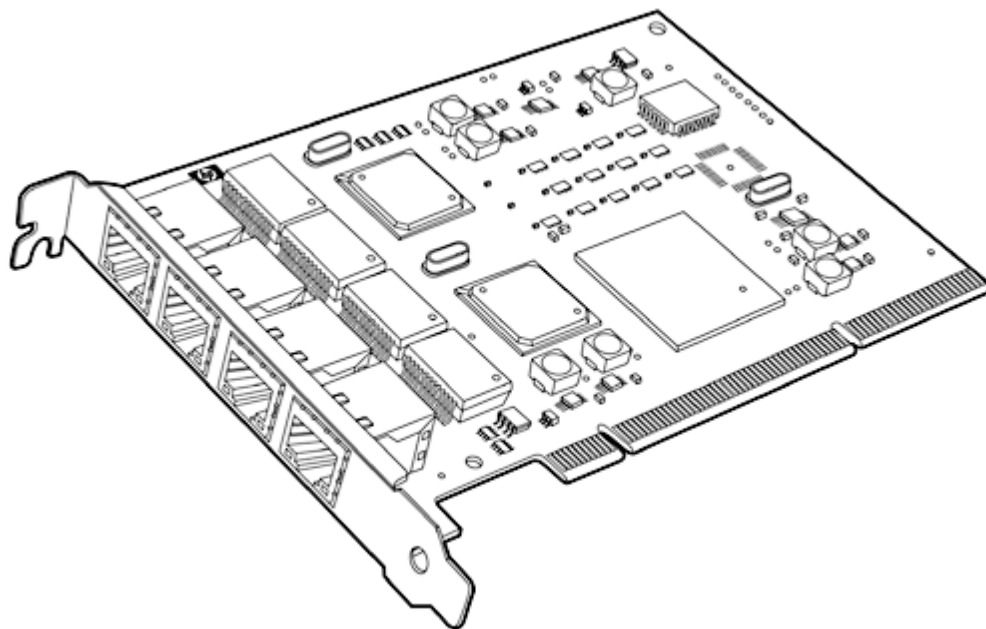


Overview

The HP NC340T PCI-X 4-port 1000T Gigabit Server Adapter features four 10/100/1000T Gigabit Ethernet ports on a single card, saving valuable server I/O slots for other purposes. The four gigabit ports make the NC340T provides the greatest bandwidth in an NC-series Ethernet adapter, ideal for virtualization, server consolidation, network segmentation, and other ProLiant server applications requiring maximum throughput and port density. Each port uses a PCI-X 64-bit/133MHz interface behind a PCI-C bridge. For best performance, install the adapter in a 64-bit/133Mhz slot The 10/100/1000 Mb/s capability enables the NC340T to be used in Ethernet or Fast Ethernet legacy wiring plants, as well as for Gigabit environments.

Tested and proven to meet demanding HP standards, the NC340T provides full driver support on a wide variety of ProLiant servers. The NC340T ships with teaming drivers for all major operating systems, teaming utilities, multiple VLAN tagging capability, configuration utilities, and support for the optional HP ProLiant Essentials Intelligent Network Pack that proactively adapts to changes in the network infrastructure.



Models

HP NC340T PCI-X 4-port 1000T Gigabit Server Adapter

391661-B21

NC340T Kit contents

HP NC340T PCI-X 4-port 1000T Gigabit Server Adapter
CD containing drivers, user guide, installation and diagnostic utilities
Quick install card
Product warranty statement

Overview

Standard Features

Server Support

- HP ProLiant DL140 G2
- HP ProLiant DL145 G2
- HP ProLiant DL320 G4
- HP ProLiant DL360 G4
- HP ProLiant DL360 G4p
- HP ProLiant DL380 G4
- HP ProLiant DL385
- HP ProLiant DL580 G3
- HP ProLiant DL585
- HP ProLiant ML350 G4
- HP ProLiant ML350 G4p
- HP ProLiant ML370 G4
- HP ProLiant ML570 G3

Performance

Quad-port Gigabit Ethernet Throughput

Up to 1000Mbps Ethernet transfer rate deliver outstanding network performance that improves response time and removes bottlenecks across the entire network. Four ports on a single adapter is ideal for high density, I/O slot constrained servers, virtualization applications, and increased network segmentation. In addition to Gigabit Ethernet, the NC340T network adapter (NIC) supports both 10Mbps and 100Mbps providing compatibility with Ethernet and Fast Ethernet twisted pair networks.

Jumbo frames

Jumbo frames (also known as extended frames) permit a 9K byte transmission unit (MTU), which is six times the size of standard 1500 byte Ethernet frame. The NC340T supports jumbo frames as a way to achieve higher throughput and better CPU utilization. Jumbo frames are particularly useful for database transfers and tape backups.

802.1Q VLANs with 802.1p QoS tagging

IEEE 802.1Q virtual local area network (VLAN) protocol allows each physical port of the NC340T to be separated into multiple virtual NICs for added network segmentation and enhanced security and performance. VLANs increase security by isolating traffic between users. Limiting the broadcast traffic to within the same VLAN domain also improves performance. IEEE quality of service (QoS) 802.1p tagging allows the adapter to mark or tag frames with a priority level across a QoS-aware network for improved traffic flow.

TCP/IP Offloading

The offload capabilities of the NC340T improve network performance by offloading functions from the server's processor to the network adapter. TCP checksum offload is responsible for reducing the load on the server processor for overall improved system response. Large send offload or LSO (also called TCP segmentation offload) allows the adapter to offload large TCP packets for segmentation for improved system performance.

Interrupt coalescence

Interrupt coalescence groups multiple packets and issues a single interrupt to the host server. This process optimizes host efficiency, providing a further means to leave the server CPU available for other duties. Without interrupt coalescence, each packet is forwarded to the host CPU causing it to temporarily stop processing other applications to process the packet.

Overview

Dual address cycles Dual address cycles (DAC) provide the ability to address memory above 4 GB and improve system performance by preventing the server operating system from performing a buffer copy from below 4 GB to above 4 GB.

High Availability

ProLiant Essentials upgrade The NC340T supports the optional and cost effective HP ProLiant Essentials Intelligent Networking Pack (INP). This advanced network option maximizes availability and performance by proactively gathering information on the state of the network infrastructure to steer traffic to the most efficient port and by selecting the network path that provides greatest bandwidth. Also included in INP, Virus Throttle is designed to reduce virus threats before they spread to the entire network. More information on INP is available at the [ProLiant Essentials](#) home page.

Network Adapter Teaming ProLiant Network Adapter Teaming provides fault tolerance and load balancing across a team of two or more network adapters. The team of adapters works together as a single virtual adapter. Support for several different types of teaming is included. Optional advanced teaming capabilities are further supported through the ProLiant Essentials Intelligent Networking Pack.

The teaming options offer IT professionals an easy, efficient, and cost-effective way to provide network fault tolerance and increased network bandwidth. For more information, see the [ProLiant Network Adapter Teaming](#) home page.

PCI Hot Plug PCI Hot Plug support enables the NC340T to be replaced or added to a PCI Hot Plug compatible server without powering down the system.

Network Management

Auto-negotiation The NC340T 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 connected to the adapter.

Management Support Like all HP server adapters, the NC340T ships with drivers and agents that can be managed from HP Systems Insight Manager, as well as using any other management application that supports SNMP. HP Systems Insight Manager can recognize the NC340T individually or in teams, and can collect and report SNMP statistics on the adapter events.

Server Integration The NC340T is a completely integrated, tested, and qualified solution that is optimized for HP servers. HP validates a wide variety of major operating systems drivers with the full suite of web-based enterprise management utilities and ProLiant Essentials (including SmartStart and HP Systems Insight Manager) that simplify network management. Integrated Management Log (IML) support is provided by the NC340T for critical event logging on HP servers.

This approach provides a more robust and reliable networking solution than offerings from other vendors and provides users with a single point of contact for both their servers and their network adapters.

Overview

Configuration Utilities	Each NC340T ships with a suite of operating system-tailored configuration utilities that allow the user to enable initial diagnostics and configure adapter teaming. This includes a patented teaming GUI for Microsoft Windows operating systems. Additionally, 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 network speed for easy troubleshooting.
WOL	The NC340T provides Wake-on-LAN (WOL) support allowing an administrator to remotely power on a WOL-capable server. When the server powers down, the NC340T maintains power through an alternate source and continuously monitors the network for a special wake-up packet. When the adapter receives the special packet created for its MAC address, the NC340T instructs the server to power on.
PXE	Support for pre-boot execution environment (PXE) enables automatic deployment of computing resources remotely from anywhere. It allows a new or existing server to boot over the network and download software, including the operating system, from a management/ deployment server at another location on the network. Additionally, PXE enables decentralized software distribution and remote troubleshooting and repairs.

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>

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Related Options

Additional Gigabit Server Adapters	HP NC310F PCI-X 1000SX Gigabit Server Adapter	368169-B21
	HP NC320T PCI Express 1000T Gigabit Server Adapter	367047-B21
	HP NC370F PCI-X Multifunction Gigabit Server Adapter	374193-B22
	HP NC370T PCI-X Multifunction 1000T Gigabit Server Adapter	374191-B22
	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 Low Profile Dual Port 1000T Gigabit Server Adapter	383738-B21
	HP NC7771 PCI-X 1000T Gigabit Server Adapter	290563-B21
Combo Switch Adapter	HP NC150T PCI 4-port Gigabit 1000T Combo Switch Adapter	367132-B21
Intelligent Networking Software	ProLiant Essentials Intelligent Networking Pack - single server license	372906-B21
	ProLiant Essentials Intelligent Networking Pack - flexible license	373950-B21
	ProLiant Essentials Intelligent Networking Pack - tracking license	372951-B21

Technical Specifications

Compliance	IEEE 802.3ab, 802.3u, 802.3x, Dynamic 802.3ad, 802.3p, 802.1Q PCI 2.3 PCI-X 1.0a ACPI 1.1a RoHS Compliance																											
General Specifications	<table><tr><td>Processor</td><td>Two Intel 82546GB with a Pericom PCI-X bridge</td></tr><tr><td>Data rate</td><td>Four ports each at 10/100/1000 Mb/s</td></tr><tr><td>On-board memory</td><td>256 KB</td></tr><tr><td>Bus type</td><td>PCI-X/PCI</td></tr><tr><td>Bus width</td><td>32- or 64-bit</td></tr><tr><td>Bus speed (MHz)</td><td>33/66/100/133</td></tr><tr><td>Interrupt levels</td><td>Automatically configured</td></tr><tr><td>Connector</td><td>Four RJ-45</td></tr><tr><td>Distance</td><td>Up to 328 ft (100 m)</td></tr><tr><td>Wiring</td><td>Category 5 (CAT-5) or better twisted-pair cabling</td></tr><tr><td>Dimensions (L x W)</td><td>6.39 x 4.2 in (16.23 x 10.66 cm) without bracket</td></tr></table>	Processor	Two Intel 82546GB with a Pericom PCI-X bridge	Data rate	Four ports each at 10/100/1000 Mb/s	On-board memory	256 KB	Bus type	PCI-X/PCI	Bus width	32- or 64-bit	Bus speed (MHz)	33/66/100/133	Interrupt levels	Automatically configured	Connector	Four RJ-45	Distance	Up to 328 ft (100 m)	Wiring	Category 5 (CAT-5) or better twisted-pair cabling	Dimensions (L x W)	6.39 x 4.2 in (16.23 x 10.66 cm) without bracket					
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Power and Environmental Specifications	<table><tr><td>Operating</td><td>Temperature</td><td>32° to 131° F (0° to 55° C)</td></tr><tr><td></td><td>Humidity</td><td>10% to 90% non-condensing</td></tr><tr><td>Non-operating</td><td>Temperature</td><td>-40° to 185° F (-40° to 85° C)</td></tr><tr><td></td><td>Humidity</td><td>5% to 95% non-condensing</td></tr><tr><td>Power requirement</td><td colspan="2">1850 mA @ 5 V maximum</td></tr><tr><td>Emissions Classifications</td><td colspan="2">Class B</td></tr><tr><td>Agency Approvals</td><td>USA</td><td>FCC (CFR 47 part 15) and UL 60950</td></tr><tr><td></td><td>Canada</td><td>ICES-003 and CSA60950</td></tr><tr><td>Safety</td><td colspan="2">UL Mark (USA and Canada) CE Mark EN 60590</td></tr></table>	Operating	Temperature	32° to 131° F (0° to 55° C)		Humidity	10% to 90% non-condensing	Non-operating	Temperature	-40° to 185° F (-40° to 85° C)		Humidity	5% to 95% non-condensing	Power requirement	1850 mA @ 5 V maximum		Emissions Classifications	Class B		Agency Approvals	USA	FCC (CFR 47 part 15) and UL 60950		Canada	ICES-003 and CSA60950	Safety	UL Mark (USA and Canada) CE Mark EN 60590	
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Operating System Support	<ul style="list-style-type: none">• 32-bit Windows<ul style="list-style-type: none">◦ Microsoft Windows Server 2003 Standard, Web, Small Business, and Enterprise Editions◦ Microsoft Windows 2000 Server, Advanced Server, and Datacenter Server• 64-bit Windows<ul style="list-style-type: none">◦ Microsoft Windows Server 2003 Standard and Enterprise Editions• Microsoft certified miniport and teaming drivers• 32-Bit Linux:<ul style="list-style-type: none">◦ Red Hat Enterprise Linux 3, 4◦ SUSE Linux Enterprise Server 8, 9• 64-Bit Linux:<ul style="list-style-type: none">◦ Red Hat Enterprise Linux 3, 4◦ SUSE Linux Enterprise Server 8, 9• Novell NetWare 6.5• Novell Open Enterprise Server x86• SCO UnixWare 7.1.3, 7.1.4• OpenServer 5.0.7, 6.0• Solaris 9, 10• NDIS 2 for DOS unattended operating system install (43K or less in size)																											

Technical Specifications

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