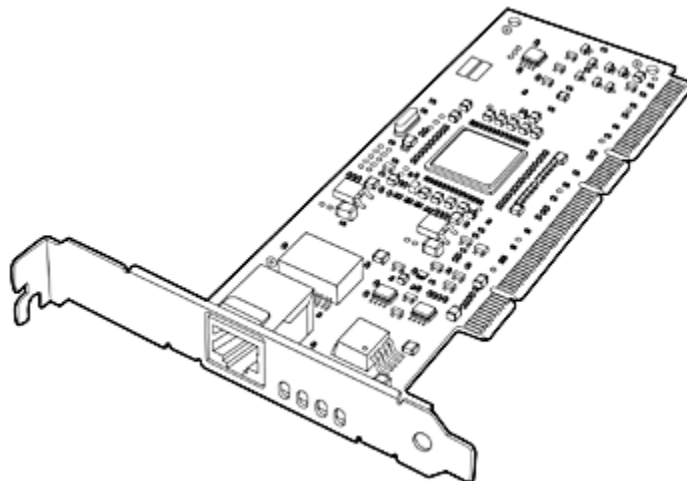


Overview

The NC7771 supports 10/100/1000Mbps Ethernet speeds as well as a PCI-X 64-bit/133MHz data path and it is backwards compatible with existing PCI bus architectures. This range of features enables HP customers to protect their current hardware investment while also future-proofing their HP ProLiant servers for the inevitable increase in networking throughput. Additionally, the NC7771 ships with support for PCI Hot Plug, Network Fault Tolerance, Load Balancing, Jumbo Frames, PXE, Cold Boot Wake-on-LAN (WOL), and various offload capabilities that improve performance. These improvements in speed and throughput come at a cost-effective price for environments using Category 5 (or better) twisted-pair cabling.



Models

HP NC7771 PCI-X 1000T Gigabit Server Adapter 290563-B21

The HP NC7771 server adapter is a follow-on to the NC7770. The NC7771 is a single port copper, PCI-X, Gigabit Ethernet server adapter that runs over Category 5 (or better) twisted-pair cabling. Along with all the advanced features that HP ProLiant customers have come to expect, the NC7771 includes support for teaming for failover and load balancing, jumbo frames, Dual Address Cycles (DAC), Pre-Boot Execution Environment (PXE), PCI hot plug, large send offload capability, cold boot WOL, and multiple VLAN tagging.

Kit Contents

NC7771 PCI-X 1000T Gigabit Server Adapter
CD containing Drivers, User Guide, and Installation and Diagnostic Utilities
Quick Install Card
Product Quality Statement
Product Warranty Statement

Related Gigabit Server Adapters

HP NC310F PCI-X 1000SX Gigabit Server Adapter 368169-B21
HP NC320T PCI Express 1000T Gigabit Server Adapter 367047-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 (low profile for half height slots) 383738-B21

Combo Switch Adapter

HP NC150T PCI 4-port 1000T Gigabit Combo Switch Adapter 367132-B21

ProLiant Essentials Intelligent Networking Pack

ProLiant Essentials Intelligent Networking Pack - single server license 372906-B21
ProLiant Essentials Intelligent Networking Pack - flexible license 372950-B21
ProLiant Essentials Intelligent Networking Pack - tracking license 372951-B21

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.

PCI-X Data Path

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 PCI-X, 64-bit/133MHz data path of the NC7771 yields faster transmission with lower CPU utilization than smaller bus architectures.

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 NC7771 adapters in a HP ProLiant server and aggregate their throughput up to a theoretical maximum of 16Gigabits per second full-duplex transmission.

Jumbo Frames

Jumbo Frames (also known as Extended Frames) offer a 9K byte maximum Transmission Unit, which is six times the size of traditional Ethernet frames. The NC7771 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.

TCP Offloads and Interrupt Coalescing

The NC7771 features TCP Checksum Offloads as well as TCP Segmentation Offloads and Interrupt Coalescence. These features reduce the load on the CPU for overall improved system response. Interrupt Coalescence is a feature that groups multiple packets and issues a single interrupt to the host. This process optimizes host efficiency, leaving the CPU available for other duties.

Scalability and Reliability

Tri-Speed Support	Because the NC7771 supports both 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 NC7771 adheres to open industry standards, insuring that it will work seamlessly with any network devices that also support IEEE standards.
PCI-X Support for Traditional PCI slots	PCI-X technology insures hardware investment protection by retaining backward compatibility with the standard PCI bus architecture at the device and driver level. When the NC7771 is used in a 64/100, 64/66, 64/33, or 32/33 IO slot, the performance is limited to the maximum of those conventional bus architectures.
Network Fault Tolerance (NFT)	Network Fault Tolerance, sometimes called "failover" or "NIC redundancy," allows for the installation of multiple NC7771 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.
PCI Hot Plug	The NC7771 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 non-stop serviceability in business-critical computing environments.
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 and Advanced 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○ Red Hat Enterprise Linux 4○ SUSE Linux Enterprise Server 8○ SUSE Linux Enterprise Server 9● 64-Bit Linux:<ul style="list-style-type: none">○ Red Hat Enterprise Linux 3○ Red Hat Enterprise Linux 4○ SUSE Linux Enterprise Server 8○ SUSE Linux Enterprise Server 9● Novell NetWare 6● Novell NetWare 6.5● Novell Open Enterprise Server x86● SCO UnixWare 7.1.3● SCO UnixWare 7.1.4● SCO OpenServer 5.0.7● SCO OpenServer 6● Solaris x86 Version 8, 9● NDIS 2 for DOS unattended operating system install (43K or less in size)

Scalability and Reliability

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 Hewlett-Packard Company. For further information on HP products, contact HP Sales at 1-800-544-5255 or the HP Technical Support Center (post sales) at 1-800-652-6672. For customer support and information about HP and its products, call 1-800-OK-HP.

Network Management

Auto-negotiation The NC7771 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.

Management Support Like all HP server adapters, the NC7771 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's SmartStart configuration utility includes setup support for the NC7771 so the adapter can be configured as part of the SmartStart configuration process. HP Insight Manager can recognize the NC7771 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 NC7771 for critical event logging on HP servers.

Configuration Utilities Each NC7771 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 network speed for easy troubleshooting.

Technical Specifications

Compliance	IEEE 802.3u, 802.3x, 802.3ab, Dynamic 802.3ad, 802.1p, and 802.1q PCI-X 1.0 PCI 2.2 ACPI v1.1a
General Specifications	
Communications Processor	Broadcom 5703 10/100/1000 Mbps, Half- and full-duplex
On-board memory	96KB
Data path	64-bit/133MHz, compatible with 64/100, 64/66, 64/33 and 32/33
Interrupt levels	INTA
Bus architecture	PCI-X bus-mastering, compatible with existing PCI bus architectures
Connector	RJ-45
Distance	Up to 328 ft (100 m)
Wiring	Category 5 or higher UTP
Dimensions (LxW)	6.6 x 2.5 in (16.8 x 6.4 cm)
Power and Environmental Specifications	
Operating	Temperature 32° to 131° F (0° to 55° C) Humidity 5% to 95% non-condensing
Non-operating	Temperature -40° to 149° F (-40° to 65° C) Humidity 5% to 95% non-condensing
Power requirement	1A @ 5V max
Emissions Classifications	Class B
Agency Approvals	USA: FCC (CFR 47 part 15) and UL 60950 Canada: ICES-003 and CSA60950 Japan: VCCI Korea: MIC (RRL), EMC Registration Australia: ACA, AS/NZS3548/EN55022:1998, EN55024:1998 EU: EN55022:1998 (CISPR 22), EN55024:1998, and IEC60950:1999 (EN60950:2000)

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