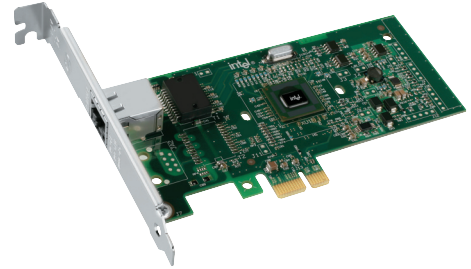# Intel® PRO/1000 PT Desktop Adapter

PCI Express* Gigabit Performance to the Desktop

- High-performance, self-configuring 10/100/1000 Mbps connection for PCI Express* slots
- Easy installation, maintenance and advanced management capabilities
- Built on Intel® lead-free[1] technology

Connectivity You Can Count On

For PCs with PCI Express (PCIe*) slots, the Intel® PRO/1000 PT Desktop Adapter offers the newest technology for maximizing system performance and increasing end-user productivity. Specifically, the Intel PRO/1000 PT Desktop Adapter uses auto-negotiation to allow the adapter to run at the highest available network speed (10, 100 or 1000 Mbps), and it maintains full bandwidth capacity with the dedicated 2.5-Gbps bandwidth of a PCI Express input/output (I/O) bus to provide connectivity you can count on.

Enhancing Desktop Performance Enhances Network Performance: Fast servers and server connections are important for high network performance. However, server speed cannot overcome the drag of slow desktop performance. This is because when a desktop PC initiates a transaction with the network server, the server quickly performs its portion of the transaction, but must wait for the desktop PC to complete its part of the transaction. The slower the PC, the longer the server must wait for transaction completion before moving to the next transaction.

Features / Benefits

Features	Benefits
Intel® 82572GI Gigabit Controller	• Enhances high performance and reliability
Interrupt moderation	• Delivers increased performance while significantly reducing CPU utilization
PCI Express* x1 slot compatible	• Designed for high performance on the new PCI Express desktop bus architecture while maintaining compatibility with PCI applications
Compatible with Fast Ethernet and Ethernet	• Reduces deployment and training costs and enables easy, quick migration to Gigabit Ethernet
10/100/1000 Mbps self-configuring	• Automatically compatible with Ethernet, Fast Ethernet, and Gigabit Ethernet networks
Support for most network operating systems	• Enables widespread deployment
Category-5 unshielded twisted pair (UTP), 4-pair cabling	• Uses pre-existing 4-pair cabling and saves re-wiring cost
RoHS compliant,[2] lead-free[1] technology	• Compliant with the new European Union directive (effective July 2006) to reduce the use of hazardous materials
Advanced configuration and power interface (ACPI), Wake on LAN* (WoL), Preboot Execution Environment (PXE)	• Allows lower power consumption, remote wake and remote booting
Remote Management Support	• Reduces support costs with remote management based on industry-wide standards
Intel® PROSet Utility for Microsoft* Device Manager	• Provides point-and-click power over individual adapters, advanced adapter features, connection teaming, and virtual local area network (VLAN) configuration
Advanced cable diagnostics	• Dynamically tests and reports network problems (error rate, cable length) and automatically compensates for cable issues (cross-over cable, wrong pin-out/polarity)
Intel backing	• Backed by an Intel® limited lifetime warranty, 90-day, money-back guarantee (U.S. and Canada), and worldwide support

Intel® PRO
Network Connections

Specifications: Intel® PRO/1000 PT Desktop Adapter

General

Product code	EXPI9300PT³
Connectors	RJ-45
IEEE standards/network topology	10/100/1000BASE-T
Wiring	Category-5 UTP, 4-pair

Adapter Product Features

Intel® PROSet Utility and Intel® PRO Intelligent Install for easy installation	•
Intel® lead-free¹ technology	•
Plug and play specification support	Standard
Auto-negotiation, full-duplex capable	•
Integrated media access control (MAC) and physical layer (PHY)	•
Cable distance	100 m Category-5 for 1000/100 Mbps; Category-3 for 10 Mbps

Network Management

Wired for Management (WfM) baseline v2.0 enabled for servers	•
DMI 2.0 support, Windows Management Instrumentation (WMI) and SNMP-manageable SMBus support	•
Remote Installation Services (RIS)	•
Diagnostics (loopback, testability, PHY register access)	•
Intel® boot agent	•
ACPI 1.0 power management	•
Wake on LAN* support over PCI Express*	•
PXE 2.0 enabled through boot read-only memory (ROM)	•

Network Operating Systems (NOS) Software Support

Microsoft Windows* Professional, XP, 2000	•
Red Hat Linux* 2.4x or later (32- and 64-bit)	•
Novell Netware* 5.x, 6.x	•

Intel Backing

Limited lifetime warranty	•
90-day, money-back guarantee (U.S. and Canada)	•

Advanced Software Features

Test switch configuration	Tested with major switch original equipment manufacturers (OEMS)
TCP checksum offload—transmission control protocol (TCP), user datagram protocol (UDP), Internet protocol (IP)	•
IEEE 802.1p,* Intel® Priority Packet II	•
TCP segmentation/large send offload	•
Interrupt moderation	•

Technical Features

Data rate(s) supported per port	10, 100, and 1000 Mbps
Bus type	PCI Express 1.0a
Bus width	x1 lane PCI Express operable in x1, x4, x8, x16 slots
Bus speed (x1, encoded rate)	2.5 Gbps uni-directional; 5 Gbps bi-directional
EEPROM-SPI and single EEPROM support	•
Interrupt levels	INTA
IEEE support	802.3z*
Hardware certifications	FCC B, UL, CE, VCCI, BSMI, CTICK, MIC
Controller-processor	Intel® 82572GI
Typical power consumption	3.3 W (3.3 V @ 1 A)
Operating temperature	0-55° C
LEDs	2 (1/port, link and speed) solid and blinking

Physical Dimensions

Length	12.9 cm (5.1 in)
Width (standard bracket)	2.2 cm (0.85 in)
Width (low-profile bracket)	1.8 cm (0.725 in)
Height of full-height end bracket	12.0 cm (4.725 in)
Height of low-profile end bracket	7.9 cm (3.1 in)

With the PCI Express Gigabit performance to the desktop provided by the Intel PRO/1000 PT Desktop Adapter, transactions on the PC side complete significantly faster, allowing the network to service more transactions faster.

Gigabit Ethernet is Faster than Fast Ethernet: Simply put, Gigabit Ethernet (1000 Mbps) is potentially ten times faster than Fast Ethernet (100 Mbps). Therefore, upgrading the desktop to Gigabit performance is an important first step to higher overall system performance and greater user productivity. With its Gigabit Ethernet performance, the Intel PRO/1000 PT Desktop Adapter provides this important upgrade path.

PCI Express Can Make Gigabit Ethernet Even Faster: PCIe is a new third-generation I/O standard with performance that supersedes the previous Peripheral Component Interconnect (PCI) and PCI-X* slot standards. The key to PCIe performance is its higher dedicated I/O bandwidth. Unlike the PCI bus, which shares its I/O resources with all devices on the bus, PCIe dedicates its I/O to a single device. The Intel PRO/1000 PT Desktop Adapter allows you to take advantage of this dedicated I/O by combining Gigabit Ethernet with PCI Express to provide high-performance network connectivity for desktops with PCI Express slots.

Quick and Easy Installation: Like all Intel® PRO Network Connections, the Intel PRO/1000 PT Desktop Adapter is supported by Intel® PROSet Utility for Microsoft* Device Manager and Intel® PRO Intelligent Install. Intel PROSet simplifies adapter installation and gives you point-and-click power for configuring and managing all your Intel PRO Network Connections.

Order Code

Single Unit: EXPI9300PT[3]

Companion Products

Consider these Intel® products in your server and network planning:

- Intel® PRO/1000 Server Adapters
  - Copper or fiber-optic network connectivity, up to four ports per card
  - Solutions for PCI Express, PCI-X, and PCI interfaces
- Intel® PRO/10GbE Server Adapters
  - CX4 offering for cost-effective 10 Gigabit-over-copper connections
  - Short-range and long-range connectivity solutions for fiber-optic cabling
- Intel® PRO/1000 Desktop Adapters for PCI Express and PCI interfaces
- Other Intel® PRO Desktop and Server Adapters
- Intel® Xeon™ processors
- Intel® Server Boards

Network-Ready PCs

Top PC and server manufacturers offer Intel® adapters in their new products. Specify or ask for Intel PRO Network Connections with your next PC, server, or mobile PC purchase. For a list of preferred suppliers, visit us at: **www.intel.com/network/connectivity/how_to_buy/index.htm**.

Customer Support

Intel® Customer Support Services offers a broad selection of programs including phone support and warranty service. For more information, contact us at **http://support.intel.com/support/network**. Service and availability may vary by country.

For Product Information

To speak to a customer service representative regarding Intel products, please call 1-800-538-3373 (U.S. and Canada) or visit **www.intel.com/support/9089.htm** for the telephone number in your area. For additional product information on Intel® Networking Connectivity products, visit **www.intel.com/network/connectivity**.

PCI EXPRESS®

To see the full line of Intel® PRO/1000 Network Adapters for PCI Express, visit www.intel.com/go/pcie

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