



# Intel® PRO/1000 PT Server Adapter

## Trusted PCI Express\* Gigabit Copper Connection for Servers

- High-performance, self-configuring 10/100/1000 Mbps connection for PCI Express\* slots
- Multi-Gigabit scalability and increased uptime through advanced server features
- Optional low-profile bracket included for high-density, rack-mounted servers



### Connectivity You Can Count On

Take advantage of PCI Express (PCIe\*) server slots to enhance network performance with the Intel® PRO/1000 PT Server Adapter. The dedicated input/output (I/O) bandwidth of PCIe ensures priority performance—without bus sharing—for Gigabit Ethernet connectivity in Category-5 networks. Additionally, the Intel PRO/1000 PT Server Adapter is designed to provide high performance in multi-processor systems by efficiently balancing network loads across multiple Central Processing Units (CPUs) when used with Receive-Side Scaling from Microsoft or Scalable I/O on Linux.\*

The Intel PRO/1000 PT Server Adapter represents the fifth generation of Intel® network adapters for Gigabit Ethernet, and features 10/100/1000 Mbps self-configuration for compatibility with mixed-speed network devices. For easy installation and management, all Intel® PRO Network Connections are supported by Intel® PRO Intelligent Install and the new Intel® PROSet Utility for Microsoft® Device Manager. Intel PROSet simplifies adapter installation and gives you point-and-click power to configure and manage all your Intel PRO Network Connections for connectivity you can count on.

### Features

### Benefits

Intel® 82572EI Gigabit Controller	• Enhances high performance and reliability
Load balancing on multiple CPUs	• Increases performance on multi-processor systems by efficiently balancing network loads across CPU cores when used with Receive-Side Scaling from Microsoft or Scalable I/O on Linux*
Interrupt moderation	• Delivers increase performance while significantly reducing CPU utilization
Compatible with x1, x4, x8, and x16 full-height and low-profile PCI Express* slots	• Allows use in any PCI Express server slot
Support for most network operating systems (NOS)	• Enables widespread deployment
Remote Management Support	• Reduces support costs with remote management based on industry-wide standards
Category-5 unshielded twisted pair (UTP), 4-pair cabling	• Uses existing 4-pair cabling and saves re-wiring costs
RoHS compliant <sup>1</sup> ; lead-free <sup>2</sup> technology	• Compliant with the new European Union directive (effective July 2006) to reduce the use of hazardous materials
Intel® PROSet Utility for Microsoft® Device Manager	• Provides point-and-click power over individual adapters, advanced adapter features, connection teaming, and 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

# Specifications: Intel® PRO/1000 PT Server Adapter

## General

Product code	EXPI9400PT <sup>3</sup>
Connectors	RJ-45
IEEE standards/network topology	10BASE-T, 100BASE-TX, 1000BASE-T
Wiring	Category-5, UTP, 4-pair

## Adapter Product Features

Intel® PROSet Utility and Intel® PRO Intelligent Install for easy installation	•
Intel® lead-free <sup>2</sup> technology	•
Plug and play specification support	Standard
Auto-negotiation, full-duplex capable	•
Integrated media access control (MAC) and physical layer (PHY)	•
Includes full-height and low-profile bracket options	•
Cable distance	100 m in Category-5 for 100/1000 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	•
Remote Installation Services (RIS)	•
Diagnostics (loopback, testability, PHY register access)	•
Advanced configuration and power interface (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* Server 2003, Enterprise, Datacenter (32- & 64-bit)	•
Microsoft Windows 2000	•
Red Hat Linux* 2.4x or later (32- and 64-bit)	•
FreeBSD 4.x or later	•
Novell Netware* 5.x, 6.x	•
Sun Solaris* x86, OS 8 and later	•
SCO Open Server 5, OpenUNIX 8*	•

## Intel Backing

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

## Advanced Software Features

Adapter fault tolerance (AFT)	•
Switch fault tolerance (SFT)	•
Adaptive load balancing (ALB)	•
Fast EtherChannel** (FEC)	•
Gigabit EtherChannel** (GEC)	•
Teaming support	Scales up to 4 connections
Multiple teams	Supports 2 separate teams, maximum
IEEE 802.3ad* (link aggregation control protocol) <sup>4</sup>	•
Test switch configuration	Tested with major switch original equipment manufacturers (OEMs)
PCIe Hot Plug*/Active peripheral component interconnect (PCI)	•
IEEE 802.1Q* VLANs	•
IEEE 802.3* (z, ab, u, x) flow control support	•
TCP checksum offload — transmission control protocol (TCP), user datagram protocol (UDP), Internet protocol (IP)	•
IEEE 802.1p*	•
TCP checksum/large send offload	•
Interrupt moderation	•

## Technical Features

Data rate(s) supporter 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	802.3ab*
Hardware certifications	FCC B, UL, CE, VCCI, BSMI, CTICK, MIC
Controller-processor	Intel® 82572EI
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)

## Order Code

Singlue Unit: EXPI9400PT<sup>3</sup>

## 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](http://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](http://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](http://www.intel.com/network/connectivity).



**To see the full line of Intel® PRO/1000 Network Adapters  
for PCI Express, visit [www.intel.com/go/pcie](http://www.intel.com/go/pcie)**

<sup>1</sup> Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as proposed by the EU or (2) an approved/pending exemption applies.

<sup>2</sup> Lead has not been intentionally added, but lead may still exist as an impurity below 1000 ppm, or an approved RoHS exemption applies.

<sup>3</sup> Bulk packs also available for minimum order quantities of five adapters. One driver CD per order of five units.

<sup>4</sup> Available only when used with a capable switch.

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