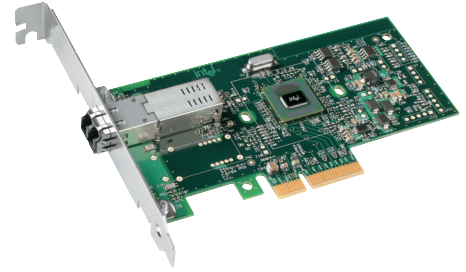




Intel® PRO/1000 PF Server Adapter

Trusted 1000BASE-SX PCI Express* Gigabit Fiber Connection for Servers

- High-performance 1000BASE-SX network connection for PCI Express* slots
- Multi-Gigabit scalability and increased uptime through advanced server features
- Built on Intel® lead-free¹ technology



Connectivity You Can Count On

Take advantage of PCI Express (PCIe*) server slots and fiber-optic connectivity to enhance network performance with the Intel® PRO/1000 PF Server Adapter. The dedicated input/output (I/O) bandwidth of PCIe ensures priority performance—without bus sharing—for Gigabit Ethernet connectivity in fiber-optic networks. Additionally, the Intel PRO/1000 PF 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 PF Server Adapter represents the fifth generation of Intel® network adapters for Gigabit Ethernet, and features the high noise immunity and long-distance reach of fiber-optic connectivity. 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® 82572GI 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 increased performance while significantly reducing CPU utilization |
| Compatible with x4, x8, and x16 full-height ² PCI Express* slots | • Allows operation in almost any PCI Express server slot, except x1 slots |
| Support for most network operating systems (NOS) | • Enables widespread deployment |
| Remote management support | • Reduces support costs with remote management based on industry-wide standards |
| LC connectors | • Small connector design is compatible with the latest fiber-optic cabling standards |
| 1000BASE-SX multi-mode fiber | • Ensures compatibility with fiber-optic cable lengths up to 275 meters |
| RoHS compliant ³ ; lead-free ¹ 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 virtual local area network (VLAN) configuration |
| 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 PF Server Adapter

General

| | |
|---------------------------------|-------------------------------------|
| Product code | EXPI9400PF ⁴ |
| Connectors | LC |
| IEEE standards/network topology | 1000BASE-SX |
| Wiring | Multi-mode fiber (62.5 μm or 50 μm) |

Adapter Product Features

| | |
|--------------------------------------------------------------------------------|----------------------------------|
| Intel® PROSet Utility and Intel® PRO Intelligent Install for easy installation | • |
| Intel® lead-free ¹ technology | • |
| Plug and play specification support | Standard |
| Auto-negotiation, full-duplex capable | • |
| Integrated media access control (MAC) and physical layer (PHY) | • |
| Includes a full-height bracket | • |
| Cable distance | 275 m at 62.5 μm; 550 m at 50 μm |

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) | • |
| 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- and 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* ⁵ (FEC) | • |
| Gigabit EtherChannel* ⁵ (GEC) | • |
| Teaming support | Scales up to 4 connections |
| Multiple teams | Supports 2 separate teams, maximum |
| IEEE 802.3ad* (link aggregation control protocol) ⁵ | • |
| 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 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 | x4 lane PCI Express operable in x4, x8, x16 slots |
| Bus speed (x4, encoded rate) | 10 Gbps uni-directional; 20 Gbps bi-directional |
| EEPROM-SPI and single EEPROM support | • |
| Interrupt levels | INTA |
| IEEE support | 802.3z* |
| Hardware certifications | FCC B, UL, CE, VCCI, BSMI, 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 | 12.95 cm (5.1 in) |
| Width | 2.16 cm (0.85 in) |
| Height of end bracket | 12.0 cm (4.725 in) |

Order Code

Single Unit: EXPI9400PF⁴

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.



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

¹Lead has not been intentionally added, but lead may still exist as an impurity below 1000 ppm, or an approved RoHS exemption applies.

²Low-profile brackets will be included with this product in early 2006.

³Lead 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.

⁴Bulk packs also available for minimum order quantities of five adapters. One driver CD per order of five units.

⁵Available only when used with a capable switch.

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