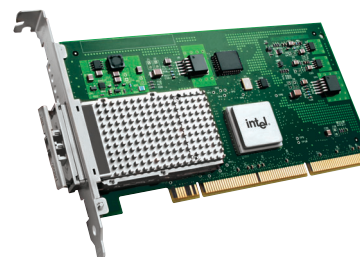




# Intel® PRO/10GbE LR Server Adapter

Industry-leading 10 Gigabit Single-mode Fiber Server Connection

- Extends Ethernet distances up to 10 km
- Highly integrated PCI-X second-generation silicon for high performance
- Smaller form factor with XPAK Optical Transceiver fits in a standard server PCI or PCI-X slot



## The Intelligent Way to Connect

The Intel® PRO/10GbE LR Server Adapter—the industry's second-generation 10 Gigabit Ethernet adapter—enables more productive networks with the fastest Ethernet connectivity available. The Intel PRO/10GbE LR Server Adapter delivers industry-leading performance to bandwidth-intensive applications using a highly integrated PCI-X Intel® 82597EX 133 MHz/64-bit 10GbE controller. High-speed server connectivity—once reserved for costly proprietary technologies such as high-performance computing clusters and grid-based computing—can now be achieved with the industry-standard Intel PRO/10GbE LR Server Adapter.

The IEEE 802.3ae\* 10 Gigabit Ethernet standard extends single-mode fiber distances to 10 km at 10 Gbps line speeds. Using

the Intel PRO/10GbE LR Server Adapter, enterprises can cost-effectively expand campus-wide connectivity and take control of their corporate networks with privately owned fiber that eliminates costly leased lines. And the Intel PRO/10GbE LR Server Adapter makes it possible for global companies to decrease critical data center back-up time to provide maximum network availability.

The Intel PRO/10GbE LR Server Adapter helps improve network productivity, extend reach, and eliminate costly proprietary networking technologies, while enabling deployment of standards-compliant Ethernet connectivity based on IEEE 802.3ae 10 Gigabit Ethernet standard.

## Features

Intel® 82597EX 10GbE PCI-X 133 MHz/64-bit MAC controller

Single-mode fiber support through 1310 nm optical module

IEEE 802.3ae\* 10GBase-LR compliant

Jumbo Frames supported up to 16 KB

TCP/IP segmentation and TCP checksum offload in RX and TX

256 KB RX and 32 KB TX data FIFO

Parity protection for RX FIFO buffer

Mechanisms for delaying/reducing TX and RX frame interrupts

PCI-X 1.0a and PCI 2.3

SC-Duplex connector for single-mode optical fiber

Flow Control 802.3x\*

PCI 2.2 Message Signaled Interrupts

## Benefits

High performance on widely adopted 2<sup>nd</sup>-generation PCI host-bus interface

Extends cable length up to 10 km; noise resistant for signal integrity

Supports industry-wide 10 Gigabit Ethernet standard

Increase performance through reduced overhead

Provides efficiency for host processing

Enhanced TX and RX logic with minimum buffer requirements

Data integrity

Reduces CPU utilization

Compatible with compliant host bus interface

Ease of use with currently available 10GbE equipment

Supports industry-wide networking standard

Improves system interrupt handling

**Intel® PRO**  
Network Connections

## Specifications: Intel® PRO/10GbE LR Server Adapter

### General

Product Code	PXLA8591LR
Connectors	SC duplex
IEEE Standard/Network Topology	IEEE 10GBase-LR
Wiring	Single-mode fiber

### Adapter Product Features

Intel® SingleDriver™ Technology	■
Plug and Play Specification Support	■
Easy Installation, Intel® PROSet Utility and Intel® PRO Intelligent Install	■
Full-duplex	■
Fiber Medium Distance	10 km

### Network Management

WBEM-CIM Support	■
WMI & SNMP-manageable	■
Hardware Diagnostics	■
Intel® Boot Agent	■
ACPI Power Management	■
PXE 2.0	■
Jumbo Frames Support (16 KB)	■

### NOS Software Support

Microsoft Windows* 2000	■
Microsoft Windows Server 2003	■
Linux* 2.2.5 or Later	■
Free BSD 1.0.6	■

### Warranty

Limited Lifetime Warranty	■
90-day Money-back Guarantee (U.S. and Canada)	■

### Advanced Software Features

Adapter Fault Tolerance	■
802.1q VLANs	■
802.3x Flow Control	■
TCP Checksum Offload	■
IEEE 802.1p*	■
TCP Segmentation/Large Send Off-load	■
Save and Restore	■

### Technical Features

Data Rate(s) Supported per Port	10 Gbps
Bus Type	PCI or PCI-X
Bus Width	64-bit
Bus Speed (MHz)	133
Onboard Memory	256 KB
Interrupt Levels	INTA
IEEE Support	802.3ae*
Hardware Certifications	FCC Class A, CE, and Microsoft
Data Transfer Mode	Bus-master DMA
Controller—Processor	Intel® 82597EX
Typical Power Consumption	<10 watts
Operating Temperature	0–55°C
Operating Humidity	85% at +55°C
Laser Product	Class 1 laser product

### Physical Dimensions

Length	16.8 cm (6.6 in)
Width	9.1 cm (3.575 in)

## Order Code

- PXLA8591LR (Single Pack)

## Companion Products

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

- Intel® PRO/1000 MT Desktop Adapter
- Intel® PRO/1000 MT Server Adapter
- Intel® PRO/1000 MT Dual Port Server Adapter
- Intel® PRO/1000 MT Quad Port Server Adapter
- Intel® PRO/1000 MF Server Adapter
- Intel® PRO/1000 MF Server Adapters (LX)
- Intel® PRO/1000 MF Dual Port Server Adapter
- Intel® PRO/10GbE SR Server Adapter
- Other Intel® PRO Desktop, Mobile, Wireless and Server Adapters
- Intel® Itanium® processors
- 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).

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