

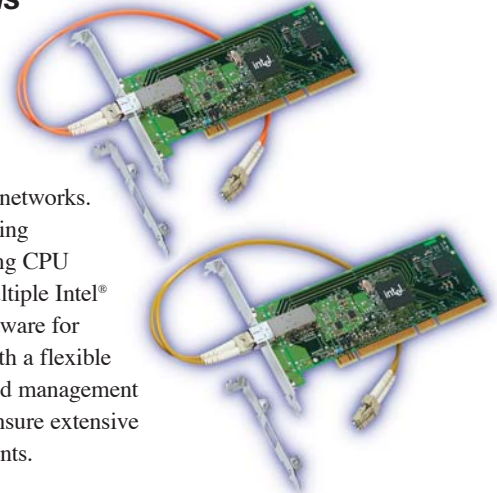


# Intel® PRO/1000 MF Server Adapter Intel® PRO/1000 MF Server Adapter (LX)

**High-Performance 1000BASE-SX and 1000BASE-LX Gigabit Fiber Connections for Servers**

## The Intelligent Way to Connect

Alleviate bottlenecks and increase uptime with Gigabit performance for servers in single- and multi-mode fiber-optic networks. The Intel® PRO/1000 MF Server Adapter, with a self-configuring PCI/PCI-X interface, delivers high throughput while conserving CPU resources. Enhance server performance further by teaming multiple Intel® PRO Server Adapters with Intel's advanced server feature software for multi-Gigabit scalability and redundant failover capability. With a flexible design that fits almost any type of PCI bus, the standards-based management features and wide network operating system support help to ensure extensive compatibility with the latest server and networking environments.



Features	Benefits
<b>WIDESPREAD COMPATIBILITY</b>	
<b>Support for most NOSs</b>	Enables widespread deployment
<b>Intel® SingleDriver™ technology</b>	Common driver suite for Gigabit Ethernet reduces installation complexity
<b>Backward Compatibility with previous generations of Intel PRO/1000 Network Adapters</b>	Reduces support costs and simplifies installation and maintenance
<b>Supports 64- or 32-bit PCI-X 1.0 or PCI 2.2 buses</b>	This flexible, auto-sensing adapter works in a variety of bus types
<b>Remote Management Support (WfM, RIS, SNMP/DMI)</b>	Reduces support costs with remote management based on industry-wide standards
<b>IEEE 802.3z Compatibility</b>	Supports Gigabit Ethernet industry-wide networking standard
<b>NEW FEATURES IN THE INTEL PRO/1000 MF SERVER ADAPTER</b>	
<b>Intel® 82545 Gigabit Controller</b>	Provides high performance, reliability, and low power use in a single integrated Gigabit Ethernet controller chip
<b>Full-height and low profile, screw-on brackets included with each adapter</b>	Compatible with full-height and low-profile PCI slots—the standard, full-height bracket can be easily swapped out and replaced by the shorter, low-profile bracket, for installation in high-density 1U and 2U servers that feature low-profile PCI slots
<b>Interrupt Moderation</b>	Delivers increased performance while significantly reducing CPU utilization
<b>Large Send Off-load/TCP Segmentation Off-load</b>	Compatible with Large Send Off-load feature of Microsoft Windows® Server 2003, 2000 and XP which enables wire speed performance with low CPU utilization
<b>Expanded Advanced Server Features</b>	Intel® ANS software increases uptime with redundant, teamed connections and scales bandwidth by balancing network traffic across multiple server connections. Now offers Switch Fault Tolerance and Test Switch Configuration to test compatibility and further increase uptime
<b>GIGABIT-OVER-FIBER ADVANTAGES</b>	
<b>LC Connectors</b>	This new, smaller connector design is compatible with the latest fiber-optic cabling standards
<b>1000BASE-SX Multi-Mode Fiber</b>	Available with the Intel PRO/1000 MF Server Adapter—ensures compatibility with fiber-optic cable lengths up to 275 meters
<b>1000BASE-LX</b>	Available with the Intel PRO/1000 MF Server Adapter (LX)—ensures compatibility with fiber-optic cable lengths up to 550 meters in multi-mode, and up to 5 kilometers in single-mode which will later support 10 Gigabit speeds

▪ High 1000BASE-LX and 1000BASE-SX performance via 64-bit PCI-X bus running up to 133 MHz

▪ Multi-Gigabit scalability and increased uptime through advanced server features

▪ Optional low-profile bracket included for high density, rack-mounted servers

Intel® PRO  
Network Connections

## SPECIFICATIONS

	Intel® PRO/1000 MF Server Adapter	Intel® PRO/1000 MF Server Adapter (LX)		Intel® PRO/1000 MF Server Adapter	Intel® PRO/1000 MF Server Adapter (LX)
<b>GENERAL</b>			<b>ADVANCED SOFTWARE FEATURES</b>		
Product Codes	PWLA8490MF	PWLA8490LX	Adapter Fault Tolerance	■	■
Connectors	LC	LC	Switch Fault Tolerance	■	■
IEEE Standard/Network Topology	1000BASE-SX	1000BASE-LX	Adaptive Load Balancing	■	■
Wiring	Multi-mode fiber (62.5 um or 50 um)	Single-mode fiber (9 um) or Multi-mode fiber (62.5 um or 50 um)	Receive Load Balancing	■	■
			Gigabit EtherChannel*	■	■
			IEEE 802.3ad (Link Aggregation Control Protocol)*	■	■
<b>ADAPTER PRODUCT FEATURES</b>			Test Switch Configuration	■	■
Intel® SingleDriver™ technology	■	■	PCI Hot Plug* and Active PCI*	■	■
Plug and Play Specification Support	Standard	Standard	802.1Q VLANs	■	■
Easy Installation, Intel® PROSet II Utility and Intel® Intelligent Install	■	■	802.3x Flow Control	■	■
Auto-negotiation, Full-duplex Capable	■	■	TCP Checksum Offload	■	■
Includes a Low-profile and a Full-height Bracket	■	■	IEEE 802.1p	■	■
Cable Distance	275m at 62.5 um 550m at 50 um	550m at 62.5 um or 50 um 5km at 9 um	TCP Segmentation/Large Send Offload	■	■
			Interrupt Moderation	■	■
			Save and Restore	■	■
<b>NETWORK MANAGEMENT</b>			<b>TECHNICAL FEATURES</b>		
Wired for Management (WfM)	■	■	Data Rate(s) Supported per Port	1,000 Mbps	1,000 Mbps
Baseline v2.0 Enabled for Servers	■	■	Bus Type	PCI/PCI-X	PCI/PCI-X
DMI 2.0 Support, WMI & SNMP-manageable	■	■	Bus Width	32- or 64-bit	32- or 64-bit
Offline Diagnostics	■	■	Bus Speed (MHz)	33/66/100/133	33/66/100/133
Intel® Boot Agent	■	■	Onboard Memory	64 KB	64 KB
ACPI Power Management	■	■	Interrupt Levels	INTA	INTA
PXE 2.0	■	■	IEEE Support	802.3z	802.3z
			Hardware Certifications	FCC A, CE	FCC A, CE
<b>NOS SOFTWARE SUPPORT</b>			Data Transfer Mode	Bus-master DMA	Bus-master DMA
Microsoft Windows® Server 2003 and 2000	■	■	Controller—Processor	Intel® 82545	Intel® 82545
Microsoft Windows® XP 32- and 64-bit Editions	■	■	Typical Power Consumption	1A at +5VDC	1A at +5VDC
Microsoft Windows NT® 4.0	■	■	Operating Temperature	0–55°C	0–55°C
Linux® 2.4.x or later (32- and 64-bit)	■	■	Operating Humidity	85% at +55°C	85% at +55°C
FreeBSD 4.x or later	■	■	<b>PHYSICAL DIMENSIONS</b>		
Novell Netware® 4.11, 4.2, 5.0, 5.1, 6.0	■	■	Length	16.5cm (6.6 in)	16.5cm (6.6 in)
SunSoft Solaris® 7, 8	■	■	Width	6.4cm (2.5 in)	6.4cm (2.5 in)
UnixWare® 7.x, OpenUNIX 8 (ddi8)	■	■	Height of Full-Height End Bracket	12.1cm (4.75 in)	12.1cm (4.75 in)
SCO5®	■	■	Height of Low-Profile End Bracket	8.1cm (3.2 in)	8.1cm (3.2 in)
			<b>INTEL BACKING</b>		
			Limited Lifetime Warranty	■	■
			90-day Money-back Guarantee (U.S. and Canada)	■	■

### ORDER CODES

PWLA8490MF (Single Packs SX)  
 PWLA8490MFBLK5 (Five Packs SX)  
 PWLA8490LX (Single Packs LX)  
 PWLA8490LXBLK5 (Five Packs LX)

### 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 Dual Port Server Adapter
- Other Intel® PRO Desktop, Mobile, Wireless 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 on the World Wide Web: [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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### ONLINE DOCUMENTS

For the latest product information, visit us on the World Wide Web at [www.intel.com/network/connectivity](http://www.intel.com/network/connectivity)

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\*Other names and brands may be claimed as the property of others.

†Available only when used with a capable switch.

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