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••••• USER'S MANUAL

Gigabit Ethernet  
1000BASE-SX  
Fiber Adapter  
32/64-bit PCI Bus

User's Guide

## **FCC Warning**

This equipment has been tested and found to comply with the regulations for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this user's guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

## **CE Mark Warning**

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

## **VCCI Warning**

注意

この装置は、情報処理装置等電波障害自主規制協議会 (VCCI) の基準に基づく第一種情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

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## ***INTRODUCTION***

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Thank you for choosing the Gigabit fiber Ethernet Card for 32/64-bit PCI Bus-equipped personal computers. The Gigabit fiber Ethernet Card is ideal for speeding up data transfers for network servers and other computers, such as those used for video-conferencing, that send and/or receive large amounts of data. It also includes the newest networking technologies, such as Jumbo frame and multicasting support, that use network bandwidth more efficiently and further help the card maximize data throughput.

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### **Features**

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- ◆ IEEE 802.3z 1000BASE-SX compliant
- ◆ Support 64/32-bit 66/33Mhz PCI Local Bus Master high-speed operation of Rev.2.1/2.2 specification
- ◆ Plug-and-Play installation
- ◆ SC type connector for 50/125 $\mu$ m or 62.5/125 $\mu$ m multi-mode fiber
- ◆ Supports Full-duplex mode doubles network data rate to 2000Mbps

- ◆ Built-in FIFO buffers reduces overhead of memory transfers
- ◆ 802.3x Full duplex flow control, including automatic transmission of Pause frames based on Rx FIFO thresholds
- ◆ Two LED indicators for easy diagnostic

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## Gigabit Ethernet Technology

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Gigabit Ethernet is an extension of IEEE 802.3 Ethernet utilizing the same packet structure, format, and support for CSMA/CD protocol, full duplex, and management objects, but with a tenfold increase in theoretical throughput over 100Mbps Fast Ethernet and a one hundred-fold increase over 10Mbps Ethernet.

The increased speed and extra bandwidth offered by Gigabit Ethernet is essential to coping with the network bottlenecks that frequently develop as computers and their buses get faster and more users use applications that generate more traffic. Upgrading key components, such as your

backbone and servers to Gigabit Ethernet can greatly improve network response times as well as significantly speed up the traffic between your subnets.

Fiber Gigabit Ethernet enables Fiber cable connections to support video conferencing, complex imaging, and similar data-intensive applications. Likewise, since data transfers occur 10 times faster than Fast Ethernet, servers outfitted with Gigabit Ethernet NIC's are able to perform 10 times the number of operations in the same amount of time.



## ***UNPACKING AND INSTALLATION***

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This chapter provides unpacking and installation information for the 32/64-bit PCI Bus Gigabit fiber Ethernet card

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### **Unpacking**

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**CAUTION:** *Under ordinary circumstances, the 64-bit PCI 1000Mbps Fiber Gigabit Ethernet Card will not be affected by static charge as may be received through your body during handling of the unit. However, there are special circumstances where you may carry an extraordinarily high static charge, and possibly damage the card and/or your computer. It is good practice to eliminate all static electricity by touching a ground (an unpainted metal area of your computer chassis, for example) before performing any installations.*

Open the shipping carton and carefully remove all items. In addition to this User's Guide, ascertain that you have:

- ◆ One 64-bit PCI 1000BASE-SX Gigabit fiber Ethernet Card.
- ◆ One Driver Diskette
- ◆ This User's Guide.

If any item is found missing or damaged, please contact your local reseller for replacement.

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## Installing Fiber Adapter into PCI slot

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**Step 1:** Turn off the power to the PC.

**Step 2:** Remove any metal decorations from your hands and wrists.

**Step 3:** Remove the cover from your PC.

**Step 4:** Locate an empty, non-shared bus mastering 32bit or 64bit PCI slot and remove the corresponding backplate. Save the screw for use in Step 6.

**Step 5:** Carefully insert the Fiber Adapter into the chosen slot and press firmly with proper push to ensure it is fully seated in the slot.

**Step 6:** Secure the Fiber Adapter with the screw you saved in step 4.

**Step 7:** Replace the PC cover.

**Step 8:** Proceed to “Connecting to Your Network” section.

**NOTE:** *Always ensure the power is cut off before any installation to avoid electric shock and possible damage to the equipments.*

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## Connecting the Fiber ( SC ) Cable

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A Multi-mode Fiber cable (50/125 $\mu$ m or 62.5/125 $\mu$ m, wavelength850nm) with SC connector is required for the Gigabit fiber Ethernet Card.

For cabling requirements and maximum segment distance when connecting the Fiber Adapter to your network, please refer to the Technical Specifications on page 11.

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## Software Installation

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Before you connect the Gigabit fiber Ethernet Card to the network, you have to install the network driver first. The driver for each networking operating system is under a separate directory. A HELPME.COM file under root directory lists the information and detailed installation procedure of all the available drivers.

## ***LED INDICATORS***

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### **Link**

This indicator lights green when the Gigabit Card is connects to 1000BASE-SX Gigabit Ethernet Network.

### **Activity (ACT)**

This indicator blinking green will be transmitting or received data on the network.

## ***TECHNICAL SPECIFICATIONS***

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<b>General</b>	
Standards	IEEE 802.3z 1000BASE-SX compliant
Protocol	CSMA/CD
Data Transfer Rate	Gigabit Ethernet: 2000Mbps (Full-Duplex)
Topology	Star
Network Cables	50/125 $\mu$ m multimode fiber with SC type connector, up to 550m 62.5/125 $\mu$ m multimode fiber with SC type connector, up to 220m
LED Indicator	Link, Activity
<b>Physical and Environmental</b>	
Power Consumption	5V, 250mA
Temperature	Operating: 0° ~ 50° C, Storage: -10° ~ 70° C
Humidity	Operating: 10% ~ 90%, Storage: 5% ~ 90%
Dimensions	164 x 83 mm (W x H)
EMI:	FCC Class B, CE Mark B, VCCI-B