TEG-PCISX*plus*

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

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, which send and/or receive large amounts of data. It also includes the newest networking technologies, such as VLAN and multicasting support that require more network bandwidth and further help the card maximize data throughput.

Features

- 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?m or 62.5/125?m multi-mode fiber
- Supports Full-duplex mode doubles network data rate to 2000Mbps
- Built-in FIFO buffers reduces memory transfer overhead
- Virtual LAN (VLAN) and long frame support. VLAN tag insertion supports for transmit packets. VLAN tag detection and removal for receive packets
- 802.3x Full duplex flow control, including automatic transmission of Pause frames based on Rx FIFO thresholds
- Two LED indicators for easy diagnostic

Gigabit Ethernet Technology

Gigabit Ethernet is an extension of IEEE 802.3 Ethernet, which utilizes the same packet structure, format, CSMA/CD protocol, full duplex, flow control, and management objects. From the bandwidth point of view, Gigabit Ethernet has a tenfold increase in theoretical throughput over 100Mbps Fast Ethernet and a hundredfold increase over 10Mbps Ethernet. Since it is also compatible with 10Mbps and 100Mbps Ethernet environments, Gigabit Ethernet provides a straightforward upgrade without wasting a company's existing investment in hardware, software, and trained personnel.

The higher packet transfer speed and extra bandwidth offered by Gigabit Ethernet is essential when coping with the network bottlenecks that frequently developed as the computers and their busses 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

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

Unpacking

CAUTION: *Under normal condition, the 32/64-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 occasions that you may carry a high static charge, and this can 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 hardware installation.*

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

- One 32/64-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.

Installing Fiber Adapter into PCI slot

Step 1: Power off the computer and disconnect the computer power cord.

Step 2: Remove any jewelry on your hands.

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 back-plate for that slot on the chassis. If there is a screw holding the back-plate, remove it and save it for Step 6.

Step 5: Carefully insert the Fiber Adapter into the chosen slot; press it firmly and make sure it is fully seated in the slot (all the gold contacts are in the slot).

Step 6: Secure the Fiber Adapter with the screw from step 4.

Step 7: Replace the PC cover.

Step 8: Proceed to "Connecting the Fiber Cable" section.

<Note>
Always ensure the power is cut off before any installation to avoid electric shock and possible damage to the equipments.

Connecting the Fiber (SC type connector) Cable

A Multi-mode Fiber cable (50/125µm or 62/125µm, wavelength 850nm) with SC connector is required for the Gigabit fiber Ethernet Card. The connector connects in a certain way; do not force to make the connection. Also, make sure to connect the card's TX port to the RX port of the other device and vise versa.
For cabling requirements and maximum segment distance for the Fiber Adapter, please refer to the Technical Specifications on page 11.

Software Installation

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

LED INDICATORS

Link

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

Activity (ACT)

This indicator blinks green when transmitting or receiving data on the network.

TECHNICAL SPECIFICATIONS

General	
Standards	IEEE 802.3z 1000BASE-SX compliant
Protocol	CSMA/CD
Data Transfer Rate	Gigabit Ethernet: 2000Mbps (Full-Duplex)
Topology	Star
Network Cables	50/125?m multimode fiber with SC type connector, up to 550m 62.5/125?m multimode fiber with SC type connector, up to 220m
LED Indicator	Link, Activity
Physical and Environmental	
Power Consumption	5V, 510mA
Temperature	Operating: 0? ~ 50? C, Storage: -10? ~ 70? C
Humidity	Operating: 10% ~ 90%, Storage: 5% ~ 90%
Dimensions	175 x 69 mm (W x H)
EMI:	FCC Class B, CE Mark B, VCCI-B