EXHIBIT C

User Manual

10/100BASE-TX Fast Ethernet Card
for PCI

32-bit Bus Mastering
and Auto-Configuration

Installation and Configuration Guide

FCC Compliance Statement

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE

This equipment has been tested and found to comply with the limits 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 in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.
Cet appareil numérique de la Classe B respecte toutes les exigences du Réglement sur le matériel brouilleur du Canada.

CE Compliance Statement

We hereby certify that the PCI Ethernet adapter complies with the EN 50081-1 and EN 50082-1 requirements.

CE

NOTE:

EN 50081-1 standard : EN 55022 Class B
(CISPR 22 Class B)
EN 50082-1 standard : IEC 801-2
(Electrostatic Discharge)
: IEC 801-3
(Radiated Immunity)
: IEC 801-4
(Electrical Fast Transient/Burst)

CONTENTS

Section 1 Introduction

Your PCI-based adapter is a 10/100BASE-TX Fast Ethernet PCI adapter that implements the 32-bit-wide, and bus mastering interface. The Fast Ethernet PCI adapter is based upon Industry Standard PCI local bus specification revision 2.0 and 2.2, that features the Plug-and-Play(PnP) function, making it fully auto-configurable.

The Fast Ethernet PCI adapter is a dual-speed adapter connected to an Ethernet network with a single connection over unshielded twisted-pair (UTP) cable. The adapter automatically senses and switches to either 10 Mbps or 100 Mbps. This 10/100 Mbps NIC also could be used on a PC system which supports Remote Wake-Up connector, no additional setting needed while install with Remote Wake-Up operation environment. Refer to Section 4 for the detail installation procedures.

Adapter features:

- Compliant with both 10BASE-T and 100BASE-TX specifications of the IEEE 802.3 standards
- 32-bit bus mastering for high throughput and low processor utilization
- Full-duplex operation at both 10 Mbps and 100 Mbps
- Automatic selection for 10 or 100 Mbps network operation
- Remote Wake-up support
- Single shielded RJ-45 connector for use at either speed (Category 3, 4, or 5 UTP cable for 10 Mbps operation, and Category 5 UTP cable for 100 Mbps operation)
- On-board socket for BOOT ROM. ***(Optional)***
- Diagnostic software, network driver installation utility, and network drivers on the diskette

Section 2 Card Installation

This section describes how to install your Ethernet adapter. Perform the following steps to install the adapter.

1. Turn off your computer and all peripherals.
2. Make a note of the cables and cords that are connected to the computer and disconnect them.
3. Remove your personal computer's cover (refer to the owner's manual of your personal computer).
4. Select any available bus mastering PCI slot, and remove the slot cover.
5. Carefully install the Ethernet adapter into the expansion slot by firmly pressing the card into the connector slot until the adapter is snugly seated in the expansion slot then fasten the retaining bracket with screw from the slot cover.
6. Reinstall your personal computer's cover and reconnect the power cord and all cables.
7. Connect the Ethernet cable to the RJ-45 connector on your personal computer.

NOTE:

System Requirements:

A PC and BIOS that support the PCI Local Bus Specification revision 2.x.

Section 3 Remote Wake-Up

The Remote Wake-Up function will be automatic enabled while using the 10/100 PCI Ethernet adapter in a PC system that supports Remote Wake-Up through the PCI bus. The Remote Wake-Up function will be enabled automatically while install with a Remote Wake-Up environment.

To provide the proper operating condition, make sure the following installation procedures.

(1) Insert the Remote Wake-Up cable into the 3-pin connector on the 10/100Mbps NIC.

(2) Attach the Remote Wake-Up cable to the connector on the PC motherboard. The connecoter may be located on different locations, refer to the user manual of your PC motherboard to finding the 3-pin connector location.

Section 4 Configuration and Diagnositcs

Your Ethernet adapter is automatically configured when you power-up your computer, In certain computers, however, you must modify your BIOS by entering your CMOS SETUP utility.

To view the configuration parameters assigned by the BIOS, insert the software diskette into your drive and execute the utility software, by typing RSET8139.

Section 5 BOOT ROM Installation *(Optional)*

The optional BOOT ROM device allows you to connect a diskless workstation to the network. Perform the following steps to install your BOOT ROM device.

1. Insert the BOOT ROM into the socket on the adapter.
2. Execute the RSET8139 file to enable the BOOT ROM function by selecting the appropriate BOOT ROM address from the configuration menu.
3. Refer to the installation procedure provided by your Networking Operating System. Here lists the reference subjects under four commonly used Networking Operating System.

Novell NetWare:	DOSGEN
Microsoft LAN MANAGER:	Starting Remoteboot Service
Microsoft Windows NT:	Starting Remoteboot Service
IBM LAN Server:	Starting Remote BOOT Access

Section 6 Card Specifications

IEEE 802.3 standards:	10BASE-T and 100BASE-TX
Wiring Connector:	RJ-45
Bus Characteristics:	32 bits bus master; PCI local bus revision 2.0 and 2.2
I/O address:	Assigned by the BIOS to a free I/O address block
IRQ Line:	INTA; assigned by the BIOS to a free IRQ (interrupt) number
Dimensions:	w/ BOOT ROM 120mm x 60mm (4.72" x 2.36") w/o BOOT ROM 120mm x 45mm (4.72" x 1.77")
Emission Compliance:	FCC Part 15 Class B EN 55022 Class B CISPR 22 Class B
Immunity Compliance:	IEC 801-2 (Electrostatic Discharge) IEC 801-3 (Radiated Immunity) IEC 801-4 (Electrical Fast Transient/Burst)
Power Consumption:	350mA, @3.3V
Operating Temperature:	0 to 55 degrees Centigrade
Operating Humidity:	10% to 90%, non-condensing

Section 7 Understanding the status LEDs

10/100BASE-TX Indicators

The green 100 Mbps LED and green LNK LED indicate the connecting status on the port for either speed.

LED State		Description
LNK	100	
Off	---	No connection between adapter and hub
On	On	Good 100BASE-TX connection between adapter and hub
On	Off	Good 10BASE-T connection between adapter and hub

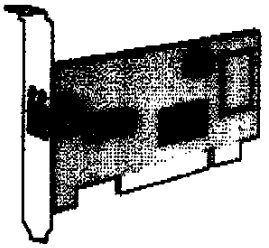
To: 林先生
From: CIS

10/100 PCI Ethernet Adapter

Revision: 2000, JAN 10

Product Information Sheet

The PCI based adapter is a high performance 10/100BASE-TX Fast Ethernet PCI adapter that implements the 32-bit-wide and bus mastering interface. The Ethernet PCI adapter is based on the Industry Standard PCI local bus specification, revision 2.2. It features a Plug-and-Play (PnP) function, making it fully auto-configurable.



This Fast Ethernet PCI adapter is a dual-speed adapter connected to an Ethernet network with a single connection over Unshielded Twisted-Pair (UTP) cable. The adapter automatically senses and switches to either 10 Mbps or 100 Mbps. For 100 Mbps operation, the adapter supports operation on Category 5 UTP cable. For 10 Mbps operation, the adapter supports operation on Category 3, 4, or 5 UTP cable.

Features

- Realtek RTL8139C based.
- Compliant with 10BASE-T, 100BASE-TX specification of IEEE 802.3u standards.
- 32-bit bus mastering for high throughput and low processor utilization.
- Single RJ-45 connector for use at either speed (Category 3, 4, or 5 UTP cable for 10 Mbps operation, and Category 5 UTP cable for 100 Mbps operation).
- Automatic selection for 10 or 100 Mbps network operation.
- Full-duplex operation at both 10 Mbps and 100 Mbps.
- On-board socket for optional BOOT ROM.

Revision: 2000. JAN 10

Specifications

Model Name
WS-R450

Connectors
RJ-45 *1

Board Layer
2 Layers

Mechanical
Unit Dimensions: 120mm x 45mm
Unit Weight: TBD

Power Consumption
300mA, @3.3V

BOOT ROM Support
Netware 3.X, 4.X, Windows NT
LAN Manager, LAN Server

Emission Compliance
FCC Part 15 Class B
CISPR 22 Class B, EN55022 Class B

Operating Environmnet
Temperature: 0 ~ 50°C
Humidity: 10% ~ 90% (non-condensing)

Immunity Compliance
IEC 801-2 (Electronic Discharge)
IEC 801-3 (Radiated Immunity)
IEC 801-4 (Electrical Fast Transient/Burst)

Storage Environment
Temperature: -20 ~ 80°C
Humidity: 10% ~ 90% (non-condensing)

CE

LED Indicators
LNK (Green) Green LED will light when a good link is established.
100 (Green) Green LED will light when a good 100Mbps connection is established. Green LED will be unlit when a good 10 Mbps connection is detected.

Drivers Support
DOS ODI Driver - Novell NetWare V3.12, V4.x. 4.1x. 5.0 Server/Client
NDIS 2.0 for DOS and OS/2 - Windows for Workgroups V3.11
LAN Manager V2.X, BANYAN VINES R5.52
IBM LAN Server V3.0/V4.0, OS/2 Warp
SUN PC-NFS V5.X, Wollongong PATHWAY
FTP PC/TCP, Artisoft LANtastic V6.X
NDIS 3.0 driver - Windows NT3.51
NDIS 4.0 driver Windows 95/NT4.0
NDIS 5.0 driver Windows 98, Windows 2000
Packet Driver - FTP PC/TCP
SCO UNIX Driver - SCO UNIX 4.0/5.0
Diagnostic/Driver Installation Utility
Linux