

**TE100-PCIWN**

**TE100-PCIWA**

32-bit PCI-Bus 10/100Mbps

ACPI Fast Ethernet Card

**User's Guide**

Rev. D1-01

## **FCC Class B Certification**

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 Class B Compliance (Japan)**

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。

## **Introduction**

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Thank you for choosing the 32-bit PCI-Bus 10/100Mbps NWay ACPI Fast Ethernet Card, this card is auto-configurable upon power up and also supports auto-negotiation to automatically select the optimum speed and communication mode of an attached device. Additionally, the 32-bit PCI-Bus 10/100Mbps NWay ACPI Fast Ethernet Card complies with ACPI, and PC99, and includes support for Remote Wake-Up by Magic Packet™, LinkChg and Microsoft® wake-up frame.

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### **About Fast Ethernet**

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Fast Ethernet is a network technology specified by IEEE Standard 802.3u. It extends the traditional 10Mbps Ethernet technology to achieve 100Mbps transmission and reception, while retaining the same CSMA/CD Ethernet protocol. Thus while Fast Ethernet provides a tenfold increase in network capacity, it is wholly compatible with traditional 10Mbps Ethernet network facilities.

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### **About Auto-negotiation**

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Auto-negotiation is an IEEE 802.3 procedure of negotiating the highest data flow capability between the device (in this case, our Adapter) and their links partner (some other device). The data flow information, to be negotiated, consists of the data speed (10Mbps or 100Mbps) and data transfer (half-duplex or full-duplex communication). The physical process of auto-negotiation requires only a few milliseconds to choose the fastest communications capability between the two devices.

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## Remote LAN Wakeup

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Remote LAN Wakeup capability is a key feature of a centrally managed PC environment. This technology allows networked PCs to be powered up and managed from a central location, at any time of the day or night. To employ Remote LAN Wakeup, three elements are required:

- Desktop management software that can send a “wake-up” packet to a PC.
- A Wake-On-LAN enabled PC motherboard that can supply low-level auxiliary power to a network card when the PC is powered off.
- A Wake-On-LAN network card that can recognize a wake-up packet and signal the PC to power up.

A Wake-On-LAN enabled PC is never completely powered off, it maintains a low-level auxiliary power supply to the motherboard. The 3-wire Wake-On-LAN cable provides one line for the network card auxiliary power and one line for the card wake-up signal, the other line is ground (if you have PCI 2.2 slot not need the Wake-On-LAN cable). Even if the PC is powered off network card is always active and monitoring the network. When a wake-up packet is detected, the card signals the motherboard to power up the PC. With the PC powered on, maintenance and other support tasks can be performed.

## Product Features

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Designed for versatility and performance, the 32-bit PCI bus 10/100Mbps Fast Ethernet Adapter provides the following features:

- Compliant to IEEE 802.3, 10BASE-T standard
- Compliant to IEEE 802.3u 100BASE-TX standard
- Compliant to IEEE ANSI/802.3 NWay Auto-negotiation standard
- Compliant to PCI 2.1, 2.2 standards
- Compliant to PC99 standard
- Supports Wake-On-LAN function for remote wake-up (AMD Magic Packet, LinkChg and Microsoft wake-up frame)
- Supports 4 Wake-On-LAN (WOL) signals (active high, active low, positive pulse, and negative pulse)
- Supports ACPI, PCI power management.
- Half/Full duplex capability
- Supports Full Duplex Flow Control (IEEE 802.3x)
- Built-in FIFO buffers reduce overhead of memory transfers.
- Drivers for all leading Network Operating Systems.
- Two LED indicators: Link, Activity.
  - Link Indicator  
A steady *green* LED indicates good linkage between the 32-bit PCI bus 10/100Mbps Fast Ethernet Adapter and its supporting hub.
  - Activity Indicator  
A flashing *green* LED indicates that the adapter is sending or receiving data.

## **Installation**

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Installation the 10/100Mbps PCI bus Fast Ethernet Card requires Hardware installation first, then BIOS and Software installation.

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### **Step 1, Hardware Installation**

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1. Switch off the computer, unplug the power cord, and remove the computer's cover.
  2. Select an unused PCI bus-master slot and remove its protective bracket.
  3. Carefully insert the card and press until all the edge connectors are firmly seated inside the slot. Then, screw the card's bracket securely into the PC's chassis.
  4. Attach the Wake-On-LAN cable (for installing TE100-PCIWA on PCI 2.1 Motherboard only). If you require Wake-On-LAN capability, attach one end of the 3-pin Wake-On-LAN cable to the connector on the top edge of the card, and the other end to the "WOL" connector on the computer's motherboard. Refer to your computer's installation manual to locate this connector.
  5. Install the bracket screw, which secures the card to the cinouter chassis.
  6. Replace the computer's cover and connect the network cable to newly installed network card. Reconnect the computer's power cord and plug it into the power outlet.
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**Step 2, BIOS Configuration**

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Due to a fault in some Plug-n-Play BIOS programs, it happens occasionally that a newly installed adapter is assigned an Interrupt Number which is already assigned to another device. In such a case, the conflict of Interrupt Number will cause faults in the behavior of both devices. Then it is necessary to run the CMOS Setup utility, and manually assign a non-conflicting Interrupt Number.

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**Step 3, Driver Installation**

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Before you connect the 10/100Mbps PCI bus 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 HELP8139.EXE file under root directory lists the information and detailed installation procedure of all the available drivers.

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**Step 4, Boot ROM Installation (optional)**

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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 Card.
2. Refer to the installation procedure provided by networking operating system.

## **Troubleshooting**

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If you experience any problems with the adapter, first verify that the appropriate driver is loaded, that the proper grade of cable is employed for the network connection, and that the supporting hub is functioning properly.

1. Ascertain that the adapter card is fully and firmly seated in the slot connector.
2. Check the length and rating of connecting cables.
3. Ascertain that the adapter's PCI slot is not deactivated at the BIOS level. The CMOS Setup utility in PCI computers ordinarily provides the option to activate or deactivate PCI slots.
4. Replace the adapter in question with a verified adapter, reboot the computer to DOS by using a DOS diskette or a Windows Startup disk, and run **RSET8139.EXE** diagnostic tests on the software diskette at directory of \DIAG\.

*Note: RSET8139.EXE was written for running in DOS environment. It may not run properly in the DOS prompt in Windows.*

5. Install the questioned adapter in another PCI computer and run the tests again.

Remove all other PCI adapters from the computer and run the tests again. If the verification/diagnostic run is not normal, then there is probably an interrupt



number conflict which will have to be resolved manually by a CMOS Setup utility run after you have reinstalled all of the expansion cards.

## **Specifications**

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Standards:	IEEE 802.3 10BASE-T IEEE802.3u 100BASE-TX ANSI/IEEE 802.3 Nway Auto-negotiation IEEE 802.3x Full Duplex flow control PCI Local Bus Rev.2.1, 2.2
Host interface:	32-bit PCI 2.1, 2.2. Bus Master
Wake-On-Lan:	Magic Packet LinkChg Microsoft wake-up frame
LED indicators:	Link, Activity
Media	RJ-45
Interface:	
EMI	FCC Class B
Compatibility:	CE Certification, Class B VCCI Class B
Temperture:	Storage: -10°C ~ 70°C Operating: 0°C ~ 50°C
Humidity:	10% ~90% non-condensing
Power	0.8 Watts (maximum)
Consumption:	
PCB Layer:	2 layers