

100/10M PCI Adapter &

100/10M Wake on LAN

PCI Adapter

## User's Guide



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## Federal Communications Commission Frequency Interference Statement

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions in this manual, may cause interference to radio communications. This equipment has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of the FCC rules, which are designed to provide reasonable protection against radio interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures are necessary to correct the interference.

## CE Declaration of conformity

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022 class A for ITE and EN 50082-1. This meets the essential protection requirements of the European Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

## Trademarks

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## **Introduction**

This User's Guide is used for the 100/10M PCI Adapter with wake on LAN function which supports M/B with PCI 2.1/2.2 spec. It is a 32-bit adapter for using in personal computers with a Peripheral Component Interconnect (PCI) computer bus to eliminate I/O bottle necks and to reduce CPU loading using bus master architecture. Wake on LAN (for PCI 2.1/2.2) function supports you to turn on PCs from a sleep state over the network remotely during off-hours.

It is a Full-Duplex adapter connected to an Ethernet network with a single connection over unshielded twisted pair (UTP) cable and can auto-sense either 10 Mbps or 100 Mbps by full auto-detection.

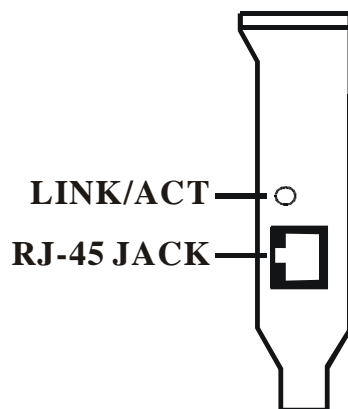
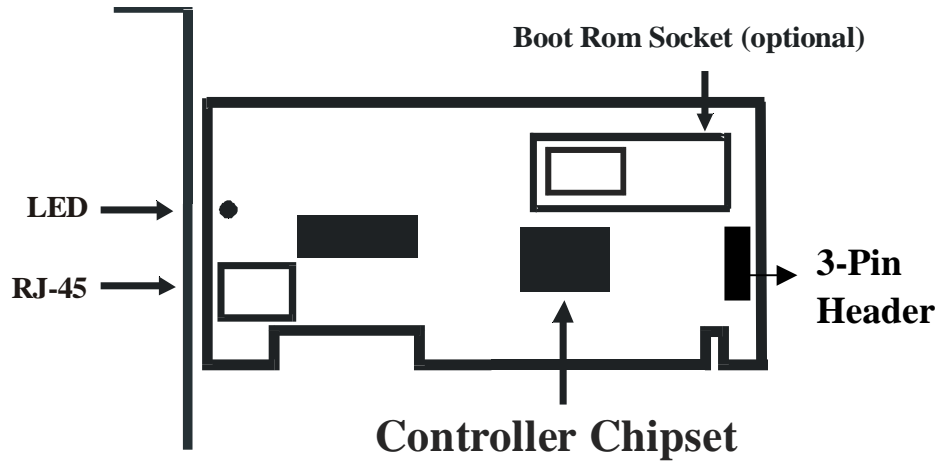
## **Key Features**

- Single-chip controller complies to PCI local bus specification revision 2.1/2.2
- Conform with IEEE 802.3 10BASE-T and IEEE 802.3u 100BASE-TX standards
- Support Wake on LAN function (EP-320X-R/S/V/P only)
- Support ACPI, PCI power management
- High performance bus master architecture for low CPU and bus utilization
- Single RJ-45 connector for using at either 10 or 100Mbps speed
- On-board socket for an optional remote boot ROM (EP-320X-R/S only)
- Provide diagnostic LED to monitor linking status
- Provide high performance network drivers such as ODI, NDIS, NDIS3, NDIS4, NDIS5, UNIX, etc.

## **Package Contents**

- One Ethernet PCI adapter
- Driver Diskette
- One User's Guide (In Diskette)

## The Card Layout



### Note

This 3-pin header is for Wake-on-LAN function. You must connect WOL cable to this pin header as Red wire in Red pin header, Black wire in Black pin header, and Green wire in Green pin header.

### LED Indicator

One LED indicator on the rear bracket of each card for tracking network linking status When working on PCI 2.2 for Wake On LAN

## Technical Specification

Standards	IEEE 802.3u 100BASE-TX ; IEEE 802.3 10BASE-T
Access Method	CSMA/CD
Media Support	Category 5 cable (100Mbps mode), Category 3,4,5 cable (10Mbps mode)
System clock	Up to 33MHz
Host data bus architecture	32-bit Bus Mastering
I/O Address	Automatically determined by configuration space
Interrupt level	INT A, mapping to BIOS IRQ setup
Power Management	ACPI & PCI support
LED indicator	Act./Link
Temperature	Operating: 5°C~55°C Storage: 0°C~65°C
Humidity	Operating: 10%~90% Storage: 5%~90%
EMI conformance	FCC, CE

## Hardware Installation

For installing the hardware, the following precautions should be taken.

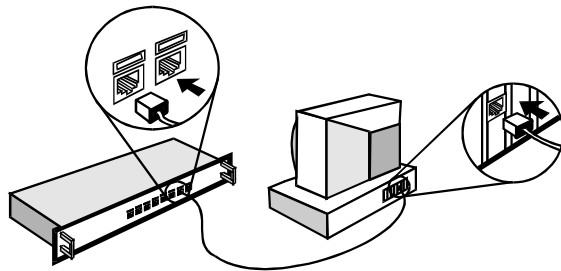
1. Make sure that your PC is disconnected and that there is no supply voltage.
2. Now unscrew the computer housing
3. After you have unscrewed the computer housing you should make sure that you are free of any static electricity. You can do this for instance by holding a (uncovered) tube of the central heating system or the water mains. You should also make sure that you do not use a magnetic screwdriver. You can check this by touching the iron frame of your PC. Of course, you should avoid touching any of the contact points of the PC, the 10/100M Ethernet Adapter or the memory.
4. Next, you can look for an available PCI-lock. As soon as you have found one you can remove the protective flap that is fitted in front of the available lock in the computer housing. It is possible that it is not easy to fit the 10/100M Ethernet Adapter in the PCI-lock. If this happens, please do not force anything, but try another available PCI-lock.
5. Once the 10/100M Ethernet Adapter has been successfully fitted, then you should check whether all the other PCI cards are still fitted in the PCI –locks in the proper or even the complete PC to dysfunction.

6. Subsequently you can mount the computer housing again and reconnect all cables you disconnected from your PC.

## **Making Network Connection**

### **Twisted Pair Cable Connection**

Twisted pair cable is used in conjunction with the RJ-45 modular plug on the rear bracket. To make the connection, perform the steps described as follows and illustrated as Figure A:



Max. Nodes per Concentrator: Depends on Concentrator  
Max. Cable Length to Concentrator: 100 meters ( 328 Feet )

Figure A : Twisted-Pair Cable Connection

Note:

Make sure you have the correct wiring. To reliably operate your network at 100 Mbps, you must use unshielded twisted pair (UTP) Category 5 or better Data Grade cable. While Category 3 or 4 cables may initially seem to work, it will soon cause data loss. The higher speed needs higher quality cables.

1. Make sure the power to your computer is off to avoid damage to both the computer and the network interface card.
2. Using the RJ-45 plug and twisted-pair cable, connect the network interface card to a 10BASE-T or 100BASE-TX hub (concentrator). Note that the maximum cable length between a hub and any computer is 100 meters (328 feet).

## **Setup Driver Program**

### **README File**

Driver setup to the card is described in the README.DOC file found on the diskette provided. Please take a few minutes to print and read this file so that you don't miss any important notices.

**Note: Please also refer to README.DOC file for more about Wake on LAN function.**

### **Device Drivers on Diskette**

The Driver Diskette contains several device drivers. These drivers are described below. The utility diskette also contains more updated information on configuring and installing these

drivers with the network operating system of your choice.

#### ODI

The ODI drivers are used when the card is installed in a Novell NetWare network.

#### NDIS

The NDIS driver is used by Microsoft LAN Manager, Windows for Workgroups, Banyan VINES, DECnet Pathworks, WIN/TCP PathWay Access, IBM LAN Support Progra and 3Com's 3+ Open, among others.

#### NDIS3

The NDIS 3.X drivers are used by WFW 3.11/ NT 3.51/Win 95.

#### NDIS4

The NDIS 4.X drivers are used by NT 4.0/ Win 95 OSR2.

#### NDIS5

The NDIS 5.X drivers are used by Win98/ Win2000 ( WinMe ).

#### UNIX

Supports SCO UNIX, Linux FreeBSD.

#### Packet

The Packet driver is used at TCP/IP environment.