



**32-bit PCI 10/100Mbps
Fast Ethernet Adapter
Model # ASOHORL
Quick Installation Guide**

Ver. 1A

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.

Introduction

Thank you for choosing the 32-bit PCI 10/100Mbps Fast Ethernet Adapter, this Adapter 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 Adapter complies with ACPI, and PC99, and includes support for Remote Wake-Up by Magic Packet™, LinkChg and Microsoft® wake-up frame.

About Fast Ethernet

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 completely compatible with traditional 10Mbps Ethernet network facilities.

About Auto-negotiation

Auto-negotiation is an IEEE 802.3 procedure of negotiating the highest data flow capability between the device (in this case, the Adapter) and its link partner (some other device). The data flow information 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.

Remote LAN Wakeup

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. To utilize Remote LAN Wakeup, three elements are required:

- Desktop management software that can send a “wake-up” packet to the PC.
- A Wake-On-LAN enabled PC motherboard that can supply low-level auxiliary power to a network Adapter when the PC is powered off.
- A Wake-On-LAN network Adapter 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 Adapter auxiliary power and one line for the Adapter wake-up signal, the other line is ground. (If you have a PCI 2.1 slot, then you do not need the Wake-On-LAN cable). Even if the PC is powered off, the network Adapter is always active and monitoring the network. When a wake-up packet is detected, the Adapter signals the motherboard to power up the PC. With the PC powered on, maintenance and other support tasks can be performed.

Product Features

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 connection 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

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

Step 1, Hardware Installation

1. Switch off the computer, unplug the power cord, and remove the computer's cover.
2. Select an unused PCI slot and remove its protective bracket.
3. Carefully insert the Adapter and press until all the edge connectors are firmly seated inside the slot. Then, screw the Adapter's bracket securely into the PC's chassis.
4. Attach the Wake-On-LAN cable (optional, for PCI 2.1 motherboard). 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 Adapter, 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 Adapter to the computer's chassis.
6. Replace the computer's cover and connect the network cable to the newly installed network Adapter. Reconnect the computer's power cord and plug it into the power outlet.

Step 2, BIOS Configuration

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. In that case, it is necessary to run the CMOS Setup utility, and manually assign a non-conflicting Interrupt Number.

Step 3, Driver Installation

Before you connect the 10/100Mbps PCI bus Adapter to the network, you have to install the Adapter's driver first. For most Windows operating systems, the driver is already included with the OS. The driver for each operating system is under a separate folder of the provided floppy disk. A HELPME.COM file under the root directory of the floppy disk lists the information and detailed installation procedure for all the available drivers. Please refer to the HELPME.COM file if you need assistance in installing the drivers.

Step 4, 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. Refer to the installation procedures provided by the network operating system.

Troubleshooting

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. Verify that the Adapter is fully and firmly seated in the slot connector.
2. Check the length and rating of the connecting cables.
3. Verify that the Adapter's PCI slot is not deactivated at the BIOS level. The CMOS Setup utility of the computer ordinarily provides the option to activate or deactivate PCI slots.
4. Replace the Adapter in question with a verified Adapter and run *RSET8139.EXE* diagnostic tests from the \DIAG\ folder of the floppy disk.
5. Install the Adapter to 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

test is not normal, then there is probably an interrupt number conflict which will have to be resolved manually by the CMOS Setup utility after you have reinstalled all of the expansion Adapters.

Technical Support

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