BENQ AEN100/101

10/100Mbps Fast Ethernet Card

User's Guide

BenQ

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Disclaimer

FCC COMPLIANCE STATEMENT

This equipment has been tested and found to comply with the limits of a Class B computing devices, 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.

If you suspect this product is causing interference, turn your computer on and off while your radio or TV is showing interference.   If the interference disappears then when you turn the computer off and reappears then you turn the computer on, something in the computer is causing interference.

You can try to correct the interference by one or more of the following measures:

1. Reorient/Relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit difference from that to which the receiver is connected.
4. Ensure that all expansion slots (on the back or side of the computer) are covered.   Also ensure that all metal retaining brackets are tightly attached to the computer.

Table of Content

1   Introduction

Thanks you for purchasing Benq AEN100/101 Fast Ethernet Card. This guide is to provide the installation and usage of this product for network installers and users. The AEN100/101 10/100Mbps Fast Ethernet Card complies to PCI 2.1 and PCI 2.2 specification and supports half/full duplex feature which can double network speed.

The AEN100/101 support both 10Mbps and 100Mbps network speed, 100Base-TX operates on two pairs of category 5 UTP cable and 10Base-T operates on Category 3,4,5 UTP cable.

With the Auto-Negotiation technology, network speed is auto detected. When you connect it to 10Base-T hub via UTP cable, the network speed becomes 10Mbps. Similarly, if you connect it to 100Base-TX hub, the network speed is 100Mbps. If the hub is a switching hub that supports full duplex function, then the speed will be doubled to 20Mbps/200Mbps. Real hassle free installation is achieved by conforming to PCI bus. Just plug in the card and all setup is done automatically. No more software to run!

Furthermore, the AEN100 Fast Ethernet Card supporting the Wake On LAN (WOL) feature allows users to configure network card that are capable of "listening to" network packets even when the computer is turned off.

The AEN100/101 supplies many drivers including ODI driver for NetWare 3.x/4.x/5.x, NDIS driver for Microsoft LAN Manager, Windows95/98/NT/2000/Me, Linux, and a Packet Driver for TCP/IP software. Whatever your requirements are ease of installation, superior

performance or responsive support backed up by unlimited technical support, the Benq AEN100/101 is the superior choice.

Note: The AEN100 and AEN101 are different in some features: The AEN100 supports Wake on LAN (WOL) and Boot ROM functions, and the AEN101 doesn't support these functions.

2   Package Contents

First, please check if the following items are included in the package:
• For AEN100
   - Fast Ethernet Card * 1
   - Driver Diskette * 1
   - User's Guide * 1

• For AEN101
   - Fast Ethernet Card * 1
      (Without Wake on LAN and Boot ROM functions)
   - Driver Diskette * 1
   - User's Guide * 1
   - WOL Cable * 1

3 Features and Specifications

3.1   Features & Benefits

- Supports 32-bit PCI Bus Master for high performance and low processor utilization.
- Complies to PCI 2.1 and PCI 2.2 specification
- Complies with the IEEE 802.3 CSMA/CD, 100Base-TX and 10Base-T standard.
- Full duplex design to double the performance to 20Mbps/200Mbps.
- One STP connector for 100Mbps or 10Mbps network speed.
- Support Auto-negotiation function.
- Built-in FIFO buffers to eliminate external memory.
- Auto-setups IRQ and I/O address.
- Supports early interrupt on transmit to increase performance.
- Supports ODI driver for NetWare 3.x/4.x/5.x: NDIS driver for LAN Manager, Windows 95/98/NT/2000/Me, Linux, and Packet Driver for TCP/IP software.
- Provides diagnostic software and two LEDs to indicate network link/activity and 10/100Mbps selection.

3.2   Technical Specifications

Topology	Star
Connector	RJ-45
Standard	IEEE 802.3 10Base-T, IEEE 802.3u 100 Base-TX
Transmission Rate	Half duplex – 10Mbps or 100Mbps, Full duplex – 20Mbps or 200Mbps
Hardware Requirement	IBM compatible PC with available PC slots (PCI 2.1 or PCI 2.2)
IRQ Line	Assigned by System

I/O Address	Assigned by System
Drivers	ODI driver for NetWare 3/4/5 NDIS driver for LAN Manager, Windows 95/98/2000/Me, Linux, Packet Driver for TCP/IP software
Temperature	0^0C to 55^0C (Opening)
Humidity	10% to 90% (Non-condensing)
Certification	FCC Class B, CE Mark Microsoft Certified
LED	**Yellow**:*On*-10M/Link; *Off*-10M/Unlink; *Blinking*-10M/Activity **Green**: *On*-100M/Link; *Off*-100M/Unlink; *Blinking*-100M/Activity
Dimension	120x44 mm
Power Consumption	1.8W (Max.)

4 Installation

4.1 Hardware Installation

To insert the network card into your PC, follow the steps below:
1. Turn off the computer and remove its cover.
2. Insert the card into a PCI slot.
3. Secure this card to the rear of the computer chassis and put back the computer cover.
4. Connect the card to the network using twisted-pair cable.

4.2 Hardware Requirement for Wake on LAN

- If your motherboard supports the PCI 2.1 only, then the motherboard must provide a 3-pin WOL connector. (Some computers may require you to change a setting in your computer's BIOS or setup program to enable the WOL feature.) If the motherboard supports PCI 2.2, we don't need the 3-pin WOL connector. (The function will be provided from the PCI bus directly)
- ATX 2.01 power supply.

Note: Install only one active WOL adapter per computer. You can install additional, non-WOL adapters.

4.3 Hardware Installation for Wake on LAN

If your motherboard supports the PCI 2.2 standard, no other procedure is needed. But, you still can follow the steps (for PCI 2.1) below on the PCI 2.2 motherboard, and all the function include the WOL will work normally.

4.4   Driver Installation

Use the drivers supplied by the diskette included in this product. For detail description, please refer to readme.doc or readme.exe in the diskette.

5   Troubleshooting

If you experience any problems with the AEN100/101, first make sure the appropriate driver is loaded, the proper cable is connected to the adapter port and the hub complies with the adapter specification, such as 10Mbps 10Base-T or 100Mbps 100Base-TX, then check the LED. The AEN 100/101 provides two LEDs to indicate network status:

•**10M/Link/Activity**

A yellow LED indicates if the 10Mbps UTP has been LINK ok or not. When the light is OFF, it indicates that the 10Mbps UTP port has not been connected or LINK not ok. When the light is ON, it indicates that the 10Mbps UTP port LINK ok. When the light is BLINKING, it indicates that there is traffic flow on the network that the card is connected to.

• **100M/Link/Activity**

A green LED indicates if the 100Mbps UTP has been LINK ok or not. When the light is OFF, it indicates that the 100Mbps UTP port has not been connected or LINK not ok.   When the light is ON, it indicates that the 100Mbps UTP port LINK ok.   When the light is BLINKING, it indicates that there is traffic flow on the network which the card is connected to.

(Wake On LAN)

••The PC cannot boot up after installing the AEN 100.

1. Remove the 3-pin cable from the PC connector.
2. Boot up the PC, run setup program to configure the AEN100 as "Active Low"(Default setting is "Active High")
3. Turn off the PC and reconnect the 3-pin cable to the PC.
4. Boot up the PC again.

• The PC does not boot up when a Magic Packet or Wake Up Frame is sent.

1. Check the specification of this PC meets the hardware requirement in chapter 2.
2. Verify the BIOS setting of Wake On LAN is configured properly. (Please check your computer owner's manual or contact your dealer for more information.)
3. Remove the PC cover and check the 3-pin cable connection.
4. Run configure program to check the setting of this card.
5. If the card still does not wake up, install a known good working Wake On LAN card and 3-pin auxiliary power cable in the PC and recheck the PC.

[!] Contact your dealer if problem persist.

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