CardBus 10/100 Ethernet Attached Port PC Card Adapter

User Manual

INSTRUCTIONS MANUAL
FEDERAL COMMUNICATIONS COMMISSION
INTERFERENCE STATEMENT

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 euipment into an outlet on a circuir different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

CAUTION:

To assure continued FCC compliance:
(1) Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the euipment.

FCC Label 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.

About This Manual

This manual will explain how to install and use your 10/100Mbps dual speeds Fast Ethernet PC Card. The following guideline will help you through the installation process.

Chatper 1 presents you the basic information about the CardBus technology. It also provides some methods to ensure your notebook are CardBus equipped and correctly configured.

After you already make sure your mobile computer is ready to run CardBus 10/100M Ethernet PC Card. You can go on the **Chapter 2** to know how to install the PC Card and Connect it to network.

The CardBus 10/100M Ethernet PC Card provides wide range of driver's software to meet your need. You can pick up the section within **Chapter 3** to install and configure the network driver.

The Questions and Answers listed in the **Chapter 4** give you some solutions when you encounter problem during installation of the network drivers.

Finally you can find the detail specification of this innovative product in the **Appendix A**.

System Requirements

- An IBM compatible notebook computer with 486 or faster processor with CardBus supported socket.

- Drivers and utilities provided with this product

- PCMCIA PC Card compliant Card Services and Socket Services

- 100Base-TX Fast Ethernet or 10BaseT Ethernet connectivity to your local area network.

Operating Environments

- Windows 95, Windows 95 OSR2, Windows 98

- Windows 2000,

- Novell Netware 3.x, 4.x

- Microsoft Windows NT 3.51, NT 4.0

- Windows Millenum ready

INTRODUCTION TO CARDBUS

Cardbus is the next generation 32-bit version issued by PCMCIA PC Card standard. In addition to support a wider bus (32 bits instead of 16 bits), CardBus also supports bus mastering and operation speeds up to 33 MHz. The 132MBytes bus transfer rate (compares with legacy 16-bit I/0 PC Card, 20MByte) provides the mobile user to enjoy the high-bandwidth network connection.

A Mobil computer, which equipped with CardBus and properly configured is the fundamental requirement to use the CardBus 10/100M PC Card. To make sure about this point, please follow the guideline listed below:

- Cardbus is designed to support both 16-bit and Cardbus Card. But the legacy 16-bit PC Card slot couldn't accept the CardBus PC Card. In order to prevent the wrong operation, CardBus is thus developed with particular mechanical consideration to prevent it fit into the legacy 16-bit PC Card Slot. If you can't insert the CardBus 10/100 PC Card into the slot firmly reaching the bottom, your notebook probably hasn't the capability to support CardBus technology. Please check your notebook manual for detail information.

NoteBook with only
16 bit PC Card
Capability

16bit
PC Card

CardBus PC Card

CardBus equipped
NoteBook

16bit PC Card
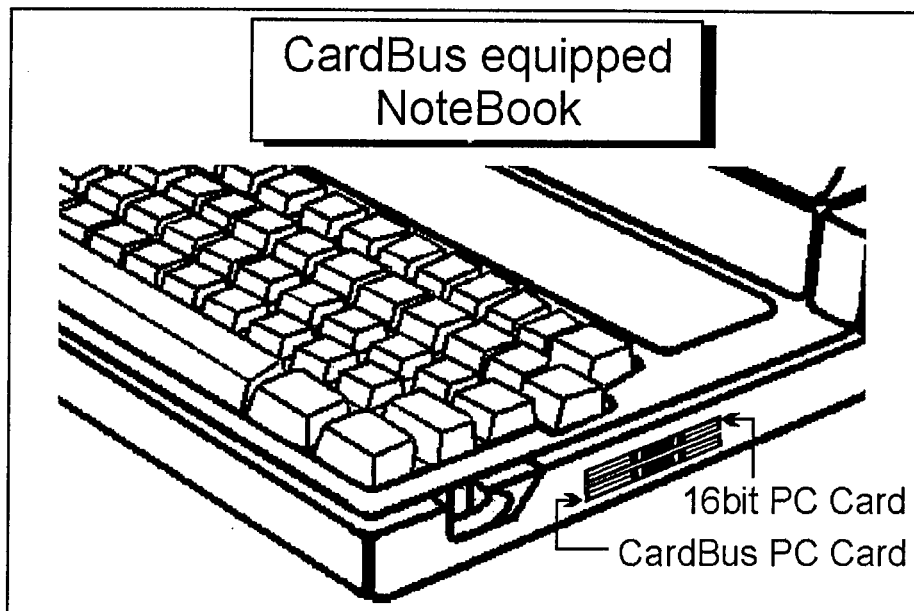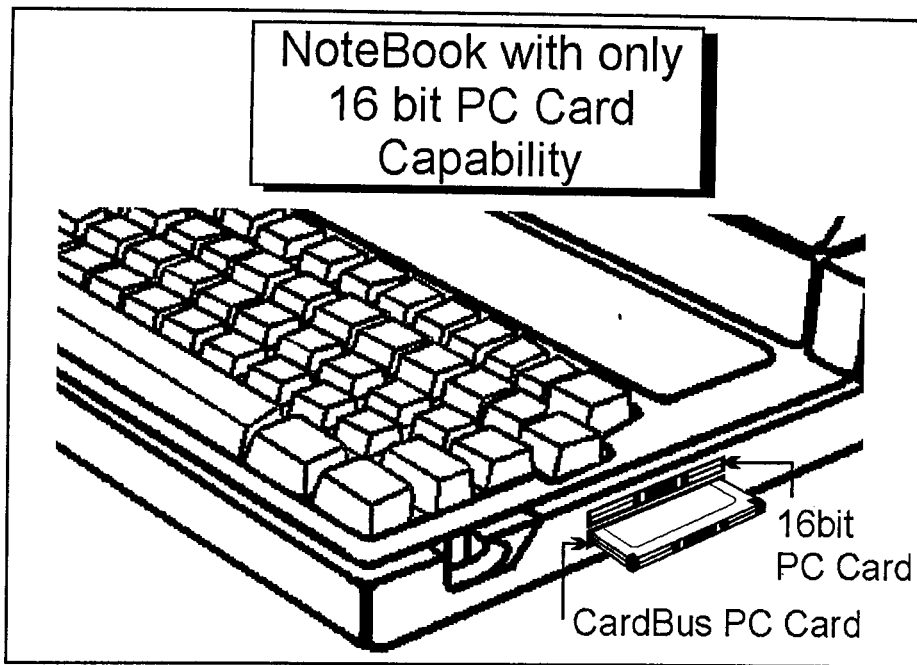
CardBus PC Card

- Due to variant design of notebook computers, some models implement a setting in the Computer 's BIOS to switch between Cardbus and 16-bit PC Card modes. You could consult the User's Guide of your notebook and properly set on the **CardBus** or **Auto_Detect** mode.

HARDWARE INSTALLATION

This chapter describes how to install the CardBus 10/100M dual-speed PC Card in your notebook computer and connect it to network. It's referred to "the PC Card" in this manual.

The PC Card could be connected to either 100Mbps Fast Ethernet or 10Mbps Ethernet. The PC Card has the ability of automatic sensing and operating on either speed without manual recofiguration.

After finishing the installation of PC Card into your Notebook, please refer to **Chapter.3 Software Installation** on how to install network drivers using menu driven installation utility.

Inserting the CardBus Dual-Speed PC Card

1. Hold the CardBus PC Card with wide connector toward the slot and the brand lable facing upward.

2. Insert the CardBus PC Card and push it firmly into the bottom. (Please see the figuer on the next page for reference)

Removing the CardBus Dual-Speed PC Card

It's quite different for various computer mechanical designs. Please refer to the PC Card removal instruction in the document for your notebook computer.
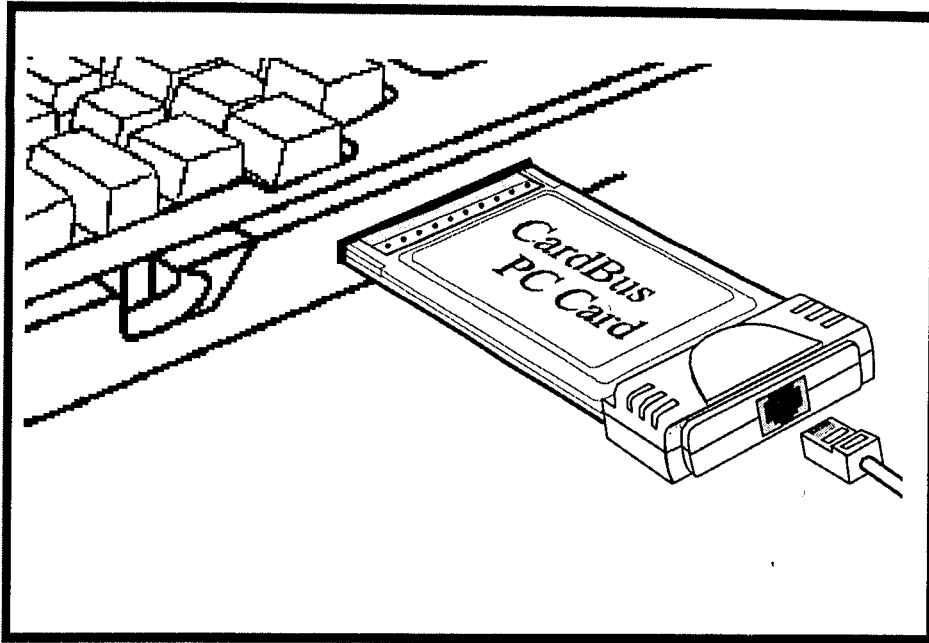
Connecting to the Network

Connect RJ-45 port of the CardBus 10/100 Ethernet PC Card Adapter to the Category 5 Network cable before loading any network driver.

- For operation in the 100Mbps (100Base-TX) Ethernet network, a Category 5 unshielded twisted pair (UTP) cable should be used to connect between the RJ-45 port and 100Mbps hub or switch.

- For operation in the 10Mbps (10Base-T) Ethernet network, Category 3, 4 or 5 unshielded twisted pair (UTP) cable could be used to connect between the RJ-45 port and a 10Mbps hub or switch.

Parts Names and Functions
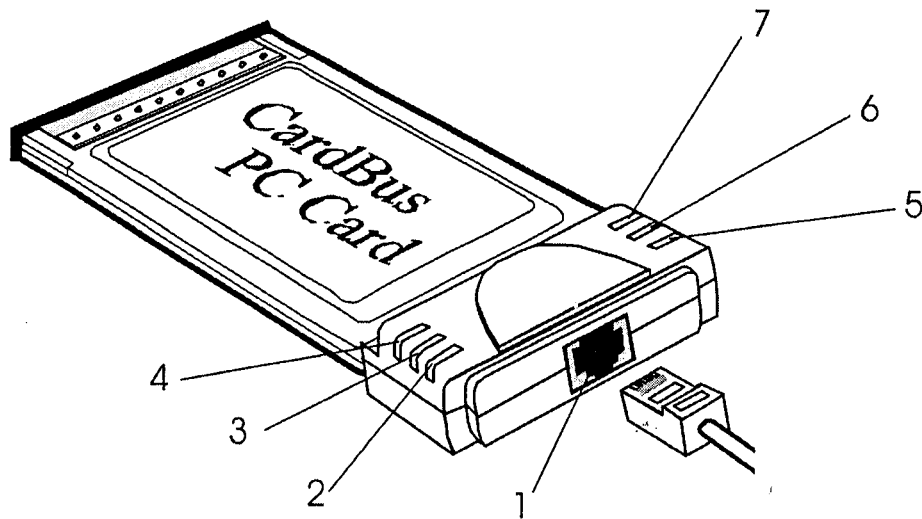
1. **RJ-45 port**: connects to the Category 5 Ethernet Network Cable.

2. **10** LED indicator: glows green when operated in the 10Mbps Ethernet network.

3. **100** LED indicator: glows green when operated in the 100Mbps Ethernet network.

4. **ACT** LED indicator: blinks green when the CardBus 10/100 Ethernet Attached Port PC Card Adapter is transmitting/receiving data.

5. **Power** LED indicator: glows green when inserted into the CardBus 10/100 Ethernet PC Card after your PC powers on.

6. **Wake** LED indicator: glows green when the CardBus 10/100 Ethernet PC Card receives a Magic Packet frame from network.

7. **Full** LED indicator: keeps on when in Full Duplex mode.

SOFTWARE INSTALLATION

Extensive software drivers have been developped for CardBus 10/100M PC Card including DOS-Mode, Microsoft Windows 3.x, Windows 95, Windows NT. Some of the Operating Systems and PC Card/Socket Services haven't been well implemented to support new CardBus technology at the present time. Our unique drivers and utility enable the CardBus 10/100M Ethernet PC Card to run almost all the major environments.

This Chapter consists four main parts: **Windows 95, Windows 98, Windows 2000, Windows NT 4.0, Windows NT 3.5x** and various configurations in **DOS-mode**. The user could refer to specific section for installation.

Windows 95 Installation

Windows 95 released two major versions at the time when this manual is written. The first version (refer to *"Native Windows 95"* afterward) supports for 16-bit PC Card but not for CardBus PC Card. The latest version Windows 95 with OEM Service Release #2 (refer to *OSR2 Windows 95 or later*) supports both 16-bit and CardBus PC Card. The CardBus 10/100M Ethernet PC Card could operates in either Native or OSR2 version Windows 95 environments. However, the installation procedures are different. The section will presents you how to identify your version of Windows 95 first. Then you could decide which kind of installation process should be followed:

A SPECIFICATIONS

Network Interface Specifications:

- 10Mbps Ethernet:IEEE 802.3 standard 10BaseT baseband CSMA/CD local area network.

- 100Mbps Ethernet:IEEE 802.3u standard 100Base-TX baseband CSMA/CD local area network.

- 20/200Mbps full duplex support

- Autonegotiation between all four operation modes.

Host Interface and Physical Specifications:

- Cardbus PC Card Standard compliant.

- Type II PC Card form factor

- 3.37" x 2.128" x 0.197" (86mm x 54mm x 5.0mm)

- 40gw in weight

Operating Environments:

Novell NetWare 3.x, 4.x

Microsoft LAN Manager

Packet Driver Applications

Microsoft Windows for Workgroups 3.11, Windows 3.1

Microsoft Windows NT 3.5x, NT 4.0

Windows 95, 98, 2000

Lantastic 6.0

Power Requirements:

- Normal Operation:+3.3V·DC, 380mA max

- Sleep Mode:+3.3V DC,   80mA max

General Specification:

LEDs:Act, 10/100Mbps, Power, Wake, Full

Environments Ranges:

Operating:32°F to 140°F   (0°C to 60°C)

Storage:-4°F to 158°F   (0°C to 70°C)

Humidity:10% - 90% , noncondensing

Certifications:FCC, Part 15, Class B

CE Mark (EN55022,ClassB, EN50082-1)