

32-bit CardBus

10/100 Ethernet (R5)

USER MANUAL

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FCC COMPLIANCE STATEMENTS

This equipment has been tested and found to comply with the limits for a Class A 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 Distance between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

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

CAUTION

CHANGE OR MODIFICATIONS NOT EXPRESSLY APPROVED BY PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER AUTHORITY TO OPERATE THE EQUIPMENT.

TRADEMARKS

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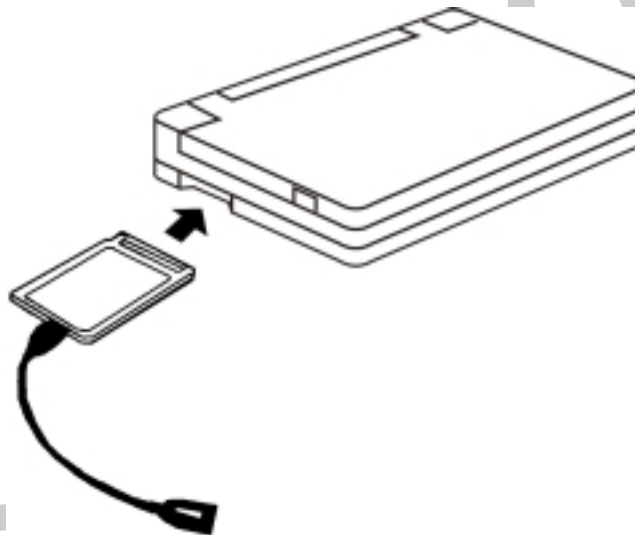
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SYSTEM REQUIREMENTS

- Notebook or desktop computer with CardBus slot.
- PC Card (PCMCIA/JEIDA) Card service and Socket device driver compliant preferred. If the drivers are not present, the Direct Enabler for TI PCI-1131 CardBus Controller or compatible will be installed. (Windows NT system.)
- One of the following Operating Systems: DOS Version 5.0 or higher, Windows 3.x, Windows 95/98/2000, or Window NT Version 3.51, 4.0.
- Network Operating System specific files (depending on your network type).

HARDWARE INSTALLATION

1. Connect the cable of the 32-bit CardBus 10/100 Ethernet (R5) with the 32-bit CardBus 10/100 Ethernet (R5) PC Card. (Note: the 15-pin keyed connector can be easily attached to the card if you are plugging it with the right side up.)
2. Locate the CardBus slot. If you are not sure of this, consult your computer's user manual for the location of the CardBus socket.
3. Align the 32-bit CardBus 10/100 Ethernet (R5) with the arrow sign pointing toward the computer's socket. And you can also see the card is keyed to guide the proper installation.



4. Slowly insert the Ethernet card into the slot and press firmly until the Ethernet connector is seated.
5. Hardware installation is now completed. The Ethernet card will obtain power directly from the computer. You are now ready to install the 32-bit CardBus 10/100 Ethernet (R5) device driver.

SOFTWARE INSTALLATION FOR WINDOWS 95/98

FOR WINDOWS 98

Perform the following procedures for Windows 98 installation.

1. The following screen will appear when you are inserting the 32-bit CardBus 10/100 Ethernet (R5) interface card into your computer for the first time. Click *Next*.



2. Check the 'Search for the best driver for your device', and click *Next*.
3. When the following dialog box appears, insert the 32-bit CardBus 10/100 Ethernet (R5) device driver diskette into your floppy drive and click *Next*.



4. When the following dialog box appears, click *Next*.



5. After the needed files are copied into hard disk, click *Finish* button to complete the installation of device driver.

FOR WINDOWS 95 OSR2

Before installing the 32-bit CardBus 10/100 Ethernet (R5), make sure your Windows 95 version is OSR2, i.e. version 4.00.950B. If your Windows 95 is version 4.00.950 or 4.00.950A, you won't be able to use the 32-bit CardBus 10/100 Ethernet (R5).

You may go to *My Computer*, click *Control Panel*, select *System* to check the version of your Windows 95 as the following screen displays.



It is also necessary to have your Windows 95 CD-ROM handy, as the installation programs need to copy the networking support files into your hard disk.

Perform the following procedures for Windows 95 installation.

1. Once you insert the 32-bit CardBus 10/100 Ethernet (R5) into the CardBus slot for the first time, the following screen will display.

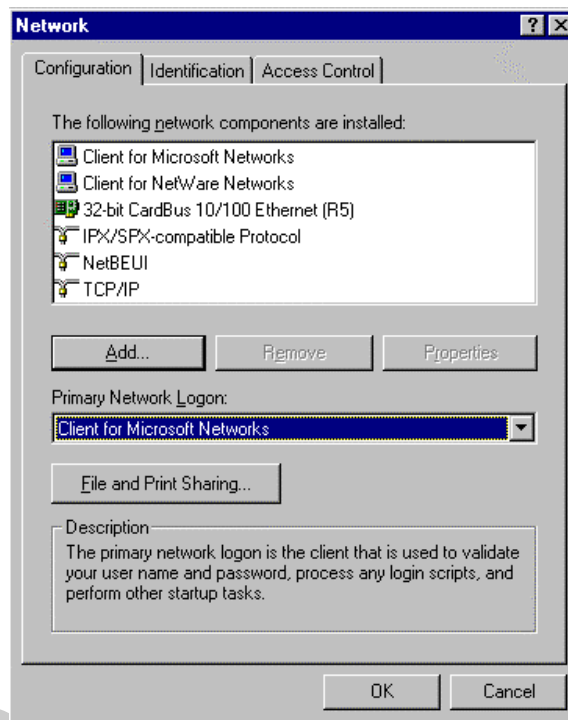


2. Insert the device driver diskette into your floppy drive. Click *Next* button to continue.
3. Windows 95 will find a device driver, **DO NOT USE IT**, it is not the correct driver for Windows 95, and you have to specify the path for the correct device driver. Click '*Other Locations*', on the next screen, type 'A:\WIN95' in the Location box, then click *OK*.
4. Windows 95 will find another device driver in the 'WIN95' folder, click *Next* button.
5. After the needed files are copied into hard disk, click *Finish* button to complete the installation of device driver.

SETTING UP THE NETWORK

Go to *Control Panel* then double-click on *Network* icon.

All the network settings for the 32-bit CardBus 10/100 Ethernet (R5), such as various type of protocol, Client for the Microsoft and Novell NetWare Network, or binding the adapter with a driver, etc. can be done through the following screen.



In the *Configuration* tab, the 32-bit CardBus 10/100 Ethernet (R5) should be listed. Click on the 'Add...' button to add the others network component that you may need. Consult the Windows 95/98 user's manual for more details.

Use the *Network Neighborhood* icon to check your network installation. From the desktop, double click on the icon. You should be able to see at least a server on the network.

SOFTWARE INSTALLATION FOR WINDOWS Me

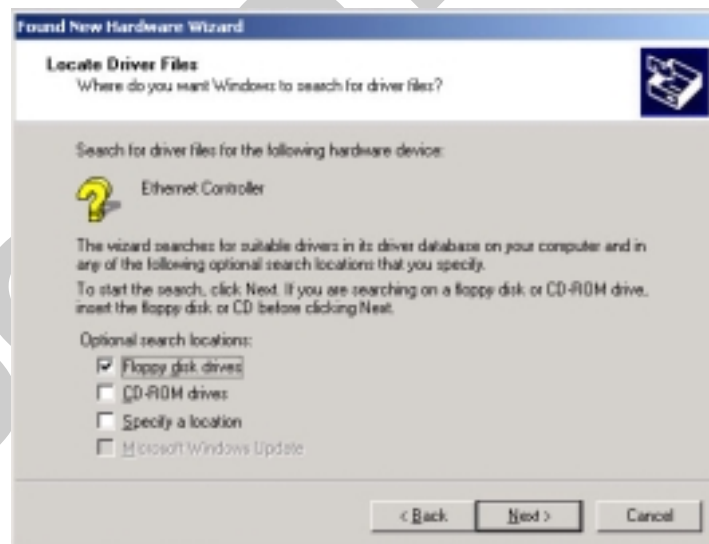
1. Boot-up your computer into the Windows Me.
2. Insert the Ethernet card into the PCMCIA socket of computer. Windows will start up the 'Add New Hardware Wizard'. Check the 'Specify the location of the driver (Advanced)', and click on *Next*.
3. On the following screen, only check the 'Search for the best driver for your device (Recommended)', and check the 'Specify a location', leave the check box of the other locations be empty (don't select them). Then type 'A:\' in the box, insert the device driver diskette into floppy drive, and click on *Next*.
4. After Windows search for the content of this diskette, a list of all available drivers will appear. Select the one that location is "A:\CB8139.INF", and then click *OK*.
5. After the necessary files are copied into hard disk, click on *Finish*.
6. Windows will ask to restart computer, click *Yes* to reboot.
7. Change the network settings if necessary.

SOFTWARE INSTALLATION FOR WINDOWS 2000

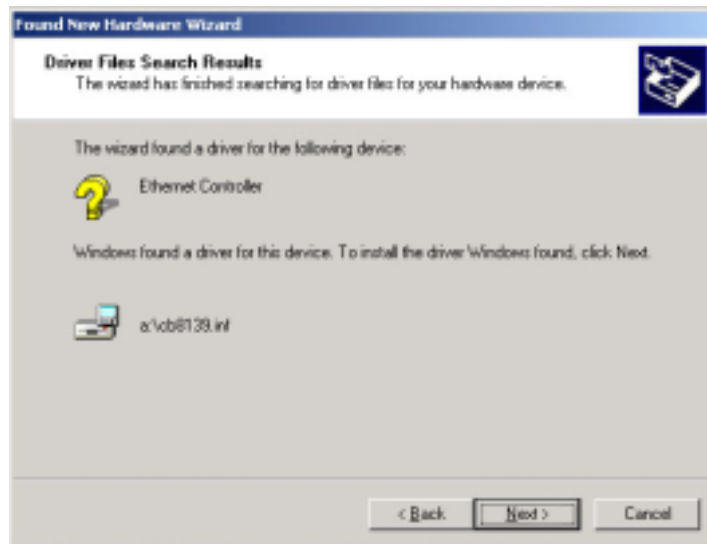
The Windows 2000 provides the ‘hot-swap’ feature for PCMCIA device, it is not necessary to connect the 32-bit CardBus 10/100 Ethernet (R5) every time you reboot your computer; connect it only when you need to use it.

After the very first time installation, you can connect or disconnect the CardBus Ethernet without power off the computer, please follow the steps when you want to do the above actions:

1. If you are inserting the 32-bit CardBus 10/100 Ethernet (R5) into your computer for the very first time, the “Found New Hardware Wizard” dialog box appears, click *Next*.
2. Another dialog box appears, select the ‘Search for a suitable driver for my device (recommended)’, click on *Next*.
3. On the dialog box shows below, only select the ‘Floppy disk drives’ under the ‘Optional search locations’ line, leave the check box of the other locations be empty (don’t select them). Insert the device driver diskette into your floppy drive, and click on *Next*.



4. On the following screen, the suitable device driver is found. Make sure the device driver that Windows found is 'A:\CB8139.INF'. Click *Next* to continue.



5. Click *Yes* on the 'Digital Signature Not Found' screen.
6. After the files copied into hard disk, click *Finish* to complete the device driver installation.



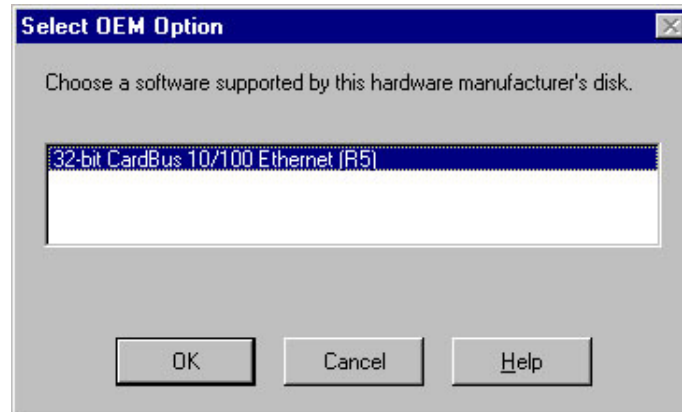
SOFTWARE INSTALLATION FOR WINDOWS NT

BEFORE YOU BEGIN

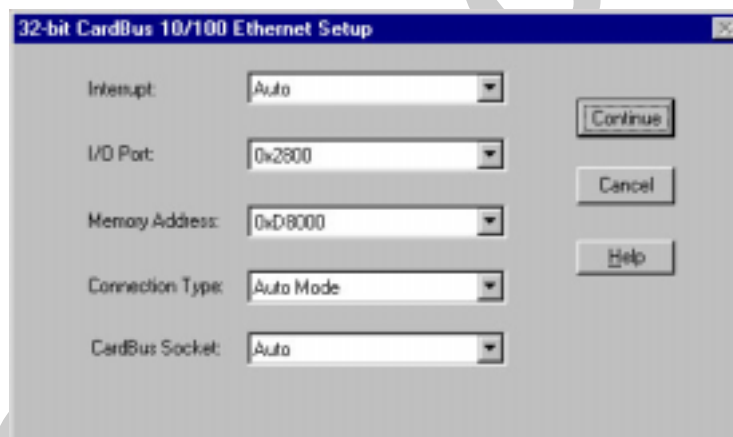
- ◆ Be sure the Windows NT you are to install is version 3.51 or higher.
- ◆ Since Windows NT does not support the “Hot Insert/Remove” feature, the 32-bit CardBus 10/100 Ethernet should be connected with your computer prior to starting Windows NT. Likewise, do not remove the 32-bit CardBus 10/100 Ethernet before you shut down the Windows NT.
- ◆ It is also recommended that if other device, Modem PC card, for example, is to be used at the same time, a Card Service program, e.g. SystemSoft’s CardWizard for Windows NT, should be installed; otherwise directly enabling the 32-bit CardBus 10/100 Ethernet (R5) will result in the other PC Card devices disabled. Windows NT will detect the 32-bit CardBus 10/100 Ethernet (R5) automatically if a Card Service program is installed.

INSTALL THE 32-BIT CARDBUS 10/100 ETHERNET (R5)

1. Go to *Control Panel*. Double-click on *Network* icon.
2. The Network dialog box will then be displayed. Click *Adapters* tab. Click *Add* button.
3. When the Select network adapter screen appears, click *Have Disk* button to continue. Windows NT will then prompt you to insert the manufacturer installation disk. Insert the 32-bit CardBus 10/100 Ethernet (R5) device driver diskette into your floppy drive. Specify the directory as A:\WINNT (or B:\WINNT whichever contains the diskette) and select OK.
4. When the following dialog box appears, select the 32-bit CardBus 10/100 Ethernet (R5) and click *OK* button.

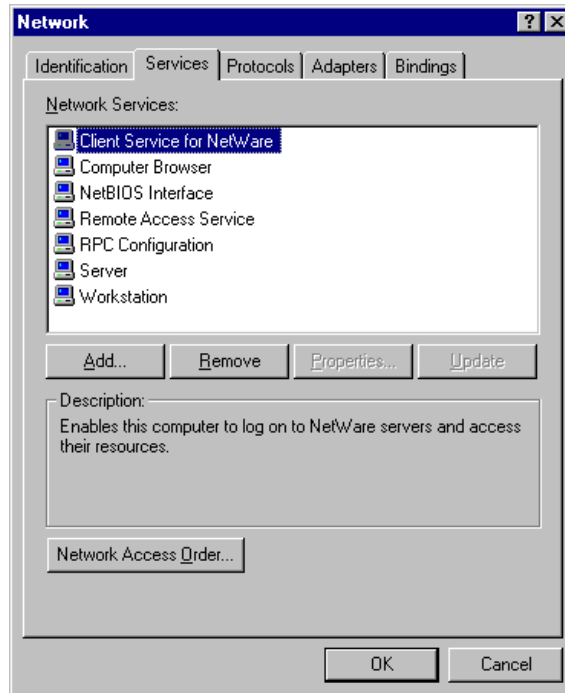


5. The screen will prompt the default setting of the card. You may change it if necessary (but if CardWizard for Windows NT is installed, you do not have to change it). Make sure the setting for Interrupt and I/O Port address is not conflicting with other devices. Click *Continue*.



6. The 32-bit CardBus 10/100 Ethernet Controller (R5) will appear in the Network dialog box, click *Close* to finish the installation.
7. If the Microsoft TCP/IP Properties dialog box appears, enter your IP address and click *OK*, or click *Cancel* to skip if your network environment is not using TCP/IP.
8. Remove the device driver diskette. Reboot your computer to activate the 32-bit CardBus 10/100 Ethernet (R5).

If you want to change the setting of network, choose the appropriate tab applied to your network operation from the Network screen. Click *Add* button to add network functions or services, protocol, etc. Consult the Window NT 4.0 user manual or Resource Kit for more details regarding the network installation.



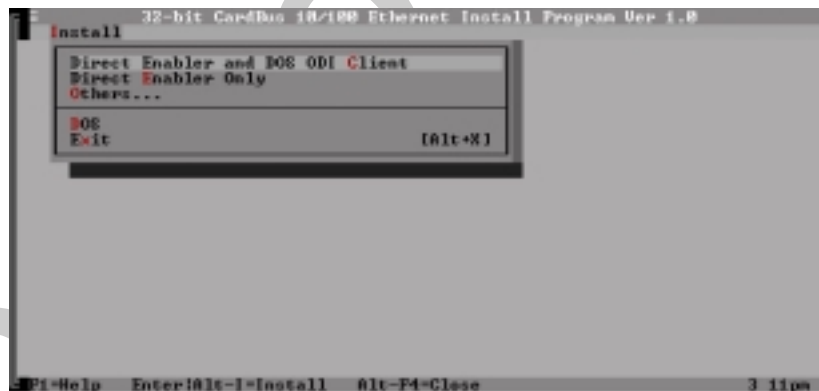
SOFTWARE INSTALLATION FOR DOS/WINDOWS 3.1

The 32-bit CardBus 10/100 Ethernet (R5) provides both NetWare DOS ODI and NDIS device driver.

If your computer is Card Services installed, check your Card Services documentation to see if it supports the CardBus PC Card. If not, you must either remove Card Services or upgrade your Card Services. Refer to the documentation for details.

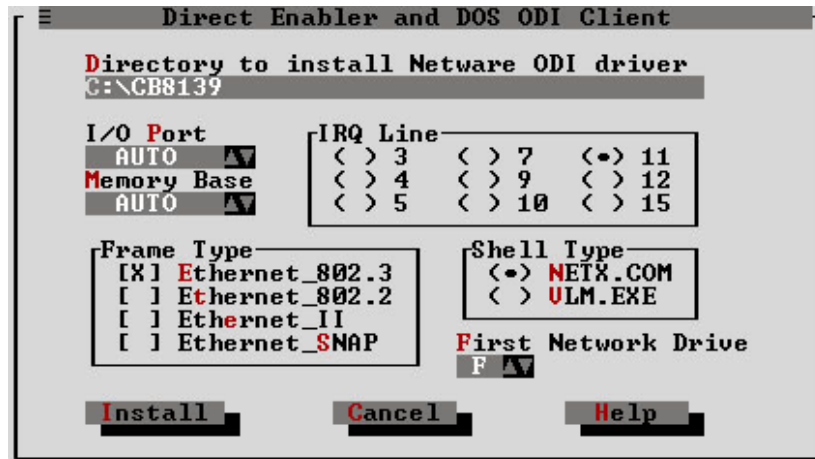
AUTOMATIC INSTALLATION

1. Insert the device driver diskette into a floppy disk drive on your computer.
2. Change the working directory to the floppy drive containing the device driver diskette by typing 'A:', then press ENTER.
3. At the DOS prompt ('A:>'), type 'INSTALL' followed by the ENTER key.
4. Press **Enter** or **Alt +I** to continue when the opening screen appears.



5. If you want to install NetWare DOS ODI Client Driver please select 'Direct Enabler and DOS ODI Client', a dialog box as shown below will appear. You can modify the default setting, or click the *Install* button to continue. The default settings are for NetWare v.3.11. For NetWare v.3.12 or higher, the Frame Type may be Ethernet_802.2, and the Shell

Type may be VLM.EXE. Refer to your server administrator or MIS department for detailed information.



6. If you want to install NDIS Driver for different NOS, e.g. Windows for Workgroup, please select 'Direct Enabler Only', a dialog box as shown below will appear. You can modify the default setting, or click the *Install* button to continue. (You may also refer to the 'Others....' option for the different NOS's installation guide of NDIS driver after install the Direct Enabler driver.)



7. After completing the selections, click the *Install* button to continue.
8. The installation program will proceed automatically. And the CONFIG.SYS and AUTOEXEC.BAT files on your computer will be updated automatically.

9. Reboot your computer to activate the 32-bit CardBus 10/100 Ethernet (R5).

MANUAL INSTALLATION

You may manually install the 32-bit CardBus 10/100 Ethernet (R5) Direct Enabler Driver and ODI Client Driver by performing the following procedure.

1. Copy the file CB8139EN.EXE and all the files included in the directory DOSODI from the device driver diskette to a directory (may be C:\CB8139) of your hard disk.
2. Add the following lines to the BOTTOM of your CONFIG.SYS file:

DEVICE=drive:\path\CB8139EN.EXE /i11 /mD000

CB8139EN.EXE is the Direct Enabler Driver for the 32-bit CardBus 10/100 Ethernet (R5). The parameters of CB8139EN.EXE are described as follows:

/i is used to set the IRQ number. The valid IRQs are 3, 4, 5, 7, 9, 10, 11, 12, and 15. The default is /i11.

/p is used to set the I/O ports. The valid I/O ports are 1000~FF80. The default is /p1000.

/m is used to set the Memory base address. The valid address are C000~FFC0. The default is /mC900.

/r is used to set the IRQ routing mode (PCI interrupts or ISA IRQ). The default is /r1 (PCI interrupts mode).

3. After reboot, execute the following to login the NetWare Network.

CD \CB8139 (Suppose *path* is CB8139)

LSL

CB8139

IPXODI

NETX

(or VLM, VLM is for NetWare 4.1 or 3.12)

X:

(X: First Network Drive, may be F:)

LOGIN

NET.CFG of NetWare ODI Driver

You may edit the NET.CFG file per your requirements.

NET.CFG is the configuration file for NetWare ODI driver. However, modification of this file is not recommended.

The following is an example of NET.CFG for illustration.

Link Driver CB8139

Frame Ethernet_802.3

;Frame Ethernet_802.2

;Frame Ethernet_II

;Frame Ethernet_SNAP

Netware DOS Requester

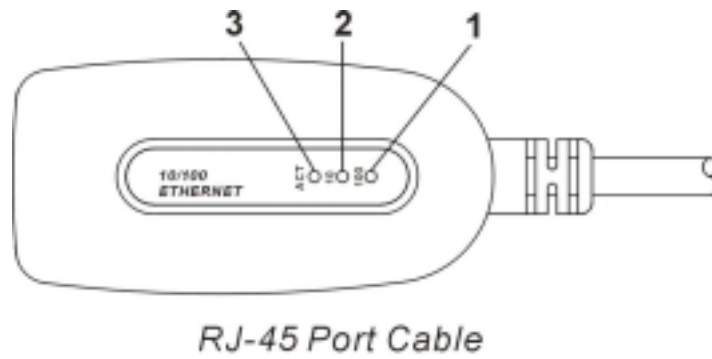
FIRST NETWORK DRIVE = F

Frame <type>

where <type> is Ethernet_802.3, Ethernet_802.2, Ethernet_II, Ether_SNAP. Defaults to Ethernet_802.2 if not present. You must be using a frame type that the server you are trying to attach supports to be able to connect to it.

; any line begins with this semicolon indicates that this line is for annotation.

LED DESCRIPTIONS



LED	Description	Steady	Off
1	100 Mbps	Good 100BASE-TX connection between PC Card and hub	No connection between PC Card and hub
2	10 Mbps	Good 10BASE-T connection between PC Card and hub	No connection between PC Card and hub
3	Activity status	Blinking: indicates a receive or a transmission is in process	

TROUBLESHOOTING

- ◆ Check the CardBus Ethernet card installation in related chapter.
- ◆ Inspect all cables and connections.
- ◆ Check the settings of network, e.g. IP Address, Gateway, DNS Server, and others. Make sure all of the necessary protocols are installed into your notebook.
- ◆ Make sure the CardBus slot of your notebook is already work properly before install the CardBus Ethernet. You must set CardBus mode from BIOS setup in some brands of notebook, if you have questions about setting CardBus mode, refer to your notebook documentation.
- ◆ Try the notebook at a known working location.
- ◆ Try the CardBus Ethernet card in a known working notebook.
- ◆ Replace the failed CardBus Ethernet card with a working CardBus Ethernet card, using the same settings as those used on the failed CardBus Ethernet card. If the working CardBus Ethernet card works, the original CardBus Ethernet card is probably defective.
- ◆ If you think you have resource conflicts (I/O base address or interrupts), the following steps will guide you how to change these values.

FOR WINDOWS 95 OSR2 & 98

The resources of 32-bit CardBus Ethernet (R5) are provided by the CardBus slot of notebook. If you find resource conflicts on the Ethernet card, it means the CardBus slot does not work properly. Follow the next steps to make sure the CardBus slot is enabled and works properly.

1. Go to *Control Panel*, then double-click the *System* icon.
2. Click the *Device Manager* tab, then click on *PCMCIA Socket*.
3. A string similar as ‘.....CardBus Controller’ should be displayed under *PCMCIA Socket*. If the string does not exist or any mark (yellow exclamation or red cross) on it, the CardBus slot is not enabled

or has resource conflicts with other device. Refer to your notebook documentation for diagnostic.

FOR WINDOWS NT

1. Use Windows NT Diagnostics (click *Start* ⇒ *Programs* ⇒ *Administrative Tools* ⇒ *Windows NT Diagnostics*) to find what resource is conflict.
2. In the *Control Panel*, double-click *Network*.
3. Click the *Adapters* tab.
4. Select '32-bit CardBus 10/100 Ethernet (R5)' and click *Properties*.
5. If you sure what resource is conflict, change the value of that resource.
6. If you don't sure what resource is conflict, try change the IRQ to another value (IRQ9, 10, 11 are recommended). The I/O and Memory Range usually don't need to change.
7. Restart computer and check the result.
8. If problem still happen, contact our technical support.

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