Intel® PRO/100 SR and CardBus Mobile Adapters

- **• CardBus LAN-only**

- **• CardBus Combo**

User's Guide

for Type II and Type III Models

June 2000

Product Registration

Please complete Product Registration by visiting the following Intel web site:

http://www.intel.com/product/register/index.htm

Contents

Hardware Installation

Installation Overview

Follow the instructions in this chapter to install your Intel® PRO/100 Mobile adapter and associated network and modem cables. Then proceed to the software installation chapter for your operating system environment, as follows:

Chapter 2. Windows Me, 98, and 95 Installation

Chapter 3. Windows NT Installation

Chapter 4. Windows 2000

Chapter 5. Diagnostics and Troubleshooting

NOTE: For information on DOS and 32-bit ODI installation and troubleshooting, and supplementary information for other operating systems, see the Help file CB2HELP.HLP on the Intel CD.

The PRO/100 Mobile adapters provide access to both 10 Mbps and 100 Mbps networks with a single adapter cable, and auto-negotiates 10 Mbps or 100 Mbps network speed.

NOTE: Category 5 (data grade) unshielded twisted pair (UTP) cabling is required for 100Mbps. Category 3 or 5 can be used for 10Mbps.

Before Installing Hardware

Check Package Contents

- PRO/100 Mobile adapter or PRO/100 Combo Mobile adapter
- LAN adapter cable with 15-pin PC Card connector at one end and a female RJ-45 connector at the other (Type II product only)
- Modem cable with a 26-pin PC Card connector at one end and a female RJ-11 modular telephone connector at the other (Type II Modem product only)
- RJ-11 modular telephone cable (Modem products only)
- Software and User's Guide on CD-ROM
- Printed Quick Installation Guide
- Late Breaking News (if required)

• CTR21 Regulatory Document

Verify Other Required Equipment

To install the PRO/100 Mobile adapter, you need the following:

1 Type II adapters require a portable PC with a CardBus slot. Type III adapters require two slots, stacked on each other; the bottom slot must be CardBus compatible; or a Type III CardBus slot.

2 A local area network supporting 10 or 100Mbps Ethernet, as required, and a network operating system supported by the PRO/100 Mobile adapter.

   NOTE: Since the PRO/100 Mobile adapter automatically detects the speed of the network to which it is connected, it may be safely connected to either a 100Base-TX or 10Base-T network, as specified in items 3 and 4 below.

3 For connection to a 100Base-TX 100Mbps Ethernet network, you need a Category 5 (data grade) unshielded twisted pair (UTP) network cable terminating in a male RJ-45 connector and connected to a 100Mbps hub or switch.

4 For connection to a 10Base-T twisted pair Ethernet network, you need a category 3 or 5 UTP network cable terminating in a male RJ-45 connector and connected to a 10Mbps hub or switch.

5 For modem operations: an analog telephone line, RJ-11 modular telephone cable (supplied), and if needed, an RJ-11 adapter for the local telephone system. Communications software is also required for modem and fax operations.

   CAUTION: Do not connect to a digital telephone line or digital PBX system. In case of inadvertent connection to a digital line, special circuitry protects your modem.

Determine System Requirements

During installation of the PRO/100 Mobile adapter hardware, the computer should be ON and your standard operating software should be loaded (except Windows NT 4.0 computers. See chapter 3 for details). If configured to do so, your system will detect the PRO/100 Mobile adapter. For details on how to install driver software, see the chapter for your operating system environment.

   NOTE: The PRO/100 Mobile adapter hardware is compatible with Types II and III PC Card slots that support CardBus technology. Installation and removal procedures may vary on different computers.

Installing the Type II Hardware

NOTE: Windows 95 and Windows 98 Users: Before proceeding with the following instructions, make sure your laptop is on and that Windows is running.

Connecting the Modem Cable (Combo adapter only)

- Attach the 26-pin connector at the end of the Intel modem cable to the matching receptacle on the **right side** of the PRO/100 Combo adapter. Press the connector gently into the receptacle on the card until it's firmly in place. Do not force the connection.

Modem
Cable

PC-1994
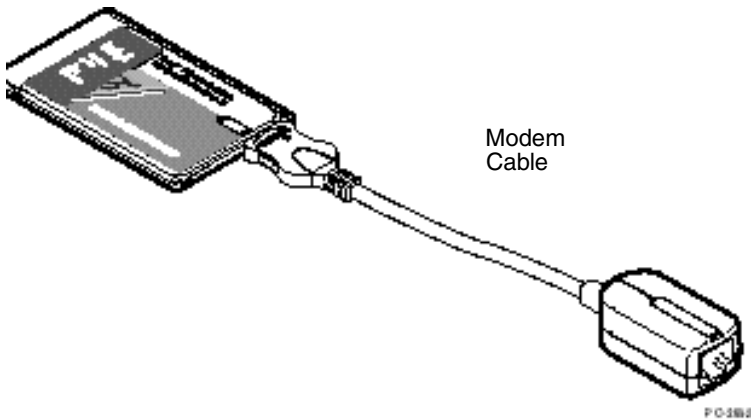
Connecting the LAN Adapter Cable (LAN-only adapter and Combo adapter)

- Attach the 15-pin connector at the end of the Intel adapter cable to the **left** connector on the end of the PRO/100 Mobile adapter. Press the cable connector gently into the connector on the card until it stops. Do not force the connection.

Modem Cable

LAN Cable

PC-SBM
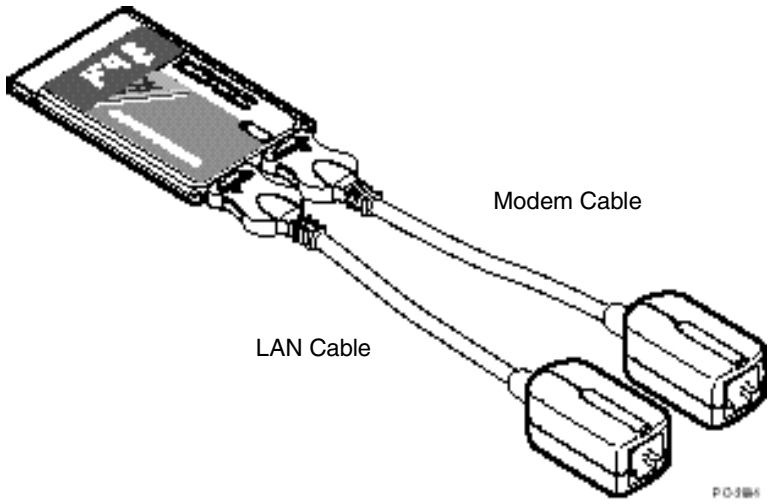
Attach the Ethernet LAN cable to the adapter cable

Attach your twisted pair LAN cable to the adapter LAN cable.

Twisted Pair Ethernet
Cable
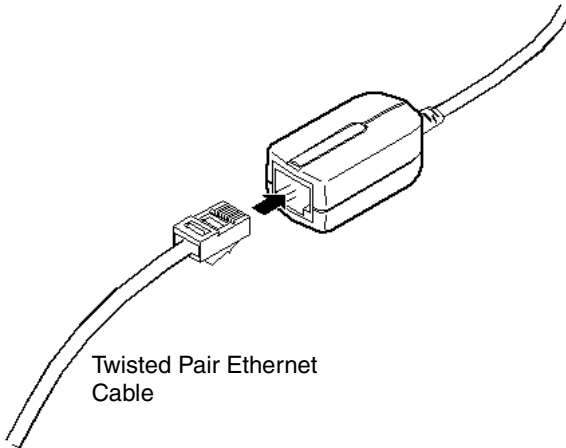
Attach the Phone line to the Modem connector (Comb-oCombo adapters only)

Attach your analog phone line to the RJ-11 connector on the Modem connector. Examine the icons on the cables to ensure correct placement. Take care not to insert the phone line into the LAN connector.

Phone
Line
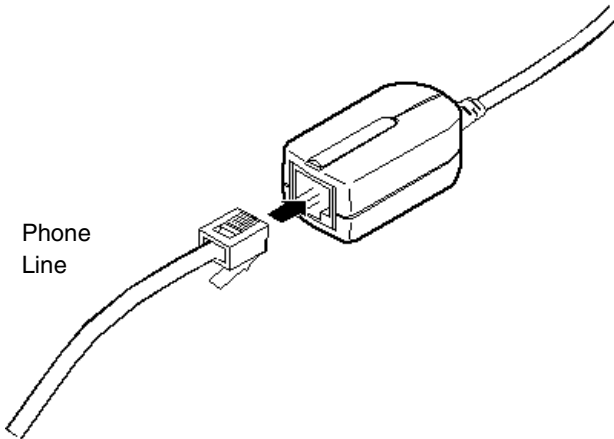
Insert the PRO/100 Mobile Adapter

1 Grasp the adapter by the edges with the Intel label facing upward and the wide connector next to the insert slot.

2 Insert the card into a CardBus slot and push it in until it is firmly seated.

CardBus Slot

Modem Cable

LAN Cable

PC-3896
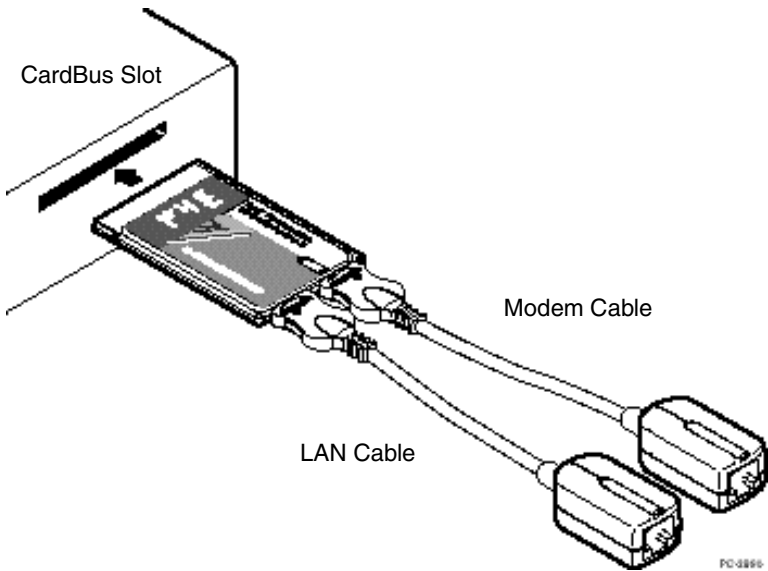
NOTE: The PRO/100 Mobile adapter can only be used in CardBus-compliant PC Card slots.

Windows 98 Users: When you insert the PRO/100 Mobile adapter into a CardBus slot, Windows 98 automatically displays the New Hardware Found window and starts the wizard.

Disconnecting Modem Cable from the Adapter

- Grasp the small connector with the thumb and forefinger and gently pull it free of the card.

Disconnecting Adapter Cable from the Card

- Pull the small connector with the thumb and forefinger to free the adapter cable from the card.

CAUTION: The PRO/100 Combo adapter will not work with digital telephone lines or digital PBX systems. Special circuitry protects your modem against damage from inadvertent connection to a digital line.

Installing the Type III Hardware

> NOTE: Windows 95 and Windows 98 Users: Before pro-
> ceeding with the following instructions, make sure your laptop
> is on and that Windows is running.

Connecting the LAN and Modem Cables (Combo adapter only)

Attach your phone line and LAN cable to the adapter as shown below. Use the icons on the bottom of the adapter to correctly identify each jack. Take care not to attach the phone line to the LAN connector. Fully insert the adapter into a Type III slot or the bottom slot in a pair of Type II CardBus slots.

Cell Phone/Data Port Jack
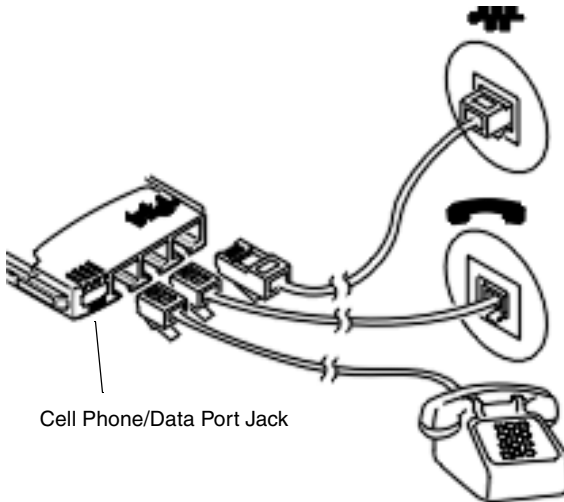
Note: connecting the telephone is optional.

Cell Phone/Data Port Jack

The Type III adapter can attach to selected cellular phones or devices. This requires a special cable. For a list of compatible cell phone models and cable accessories, visit

http://support.intel.com/network/products/mobile_adapters.htm

PRO/100 LAN-only card (Type III)

Attach your LAN cable to the adapter as shown in the diagram below. Fully insert the adapter into a Type III slot or the bottom slot in a pair of

Type II CardBus slots.

Making Floppy Disks

To make a floppy disk for driver installation, use the MAKEDISK utility. Place a formatted floppy disk in your drive. Go to the \MAKEDISK folder on the Intel CD. At the command line type:

   MAKEDISK [operating system] [destination]

where [operating system] is the type of operating system (OS) which needs the diskette and [destination] is the drive letter.

OS options are:

   NT = Windows NT

   W9X = Windows 95 or 98

   W2K = Windows 2000

   NW = NetWare servers and clients

   DOS = MS-DOS, Windows 3.1, OS/2

   MODEM=Modem drivers for the PRO/100 Combo adapters
   (all versions of Windows)

Example:

   MAKEDISK NT A: <Enter>

Intel Network Encryption Co-Processor

The Intel PRO/100 S Family of Network Adapters include an Intel 82594ED IPSec encryption co-processor. If Windows 2000 is enabled for IPSec encryption, it automatically offloads the intensive encryption and authentication functions onto the adapter, increasing throughput and decreasing CPU utilization.

Windows Me, 98, and 95 Installation

Plug and Play Installation

Most CardBus-enabled computers support plug and play installation of the PRO/100 Mobile adapters under Windows 98 and Windows 95, OSR2. However, early versions of Windows 95 (950 or 950a) are not supported.

LAN Drivers Available

The following drivers for Windows 98 and Windows 95 OSR2 are supplied with the PRO/100 Mobile adapters:

- NDIS4 driver (E100BNT.SYS)
- NDIS5 driver (E100BNT5.SYS)

The best NDIS driver for your operating system will be installed by default using the procedures described in this chapter.

Novell Client 32 Driver

If your environment requires the Novell client 32 driver under Windows 98/95 (as indicated by your network administrator), see the Windows Help file **CB2HELP.HLP** and Netware.txt on the Intel CD.

Windows Me - Type II adapters

This Windows version was not fully released at the time the Intel CD was finalized. The drivers on this CD have been tested with "Release Candidate" versions of Windows Me.

To install drivers in Windows Me, use the following procedure:

1 With computer power on, insert your new adapter as described in Chapter 1.

2 Connect the network cable and modem cable if it is a combo card.

3 Windows Me starts and detects the adapter. A default Windows LAN driver installs first and then the default modem driver. Although these drivers provide basic functionality, you'll need to update them with the drivers on the Intel CD. To update the drivers, continue this procedure.

4 Right-click the My Computer Icon on the desktop and click Prop-

erties. Click the Device Manager Tab. This displays a list of devices.

5   Find the Network adapters icon and expand if necessary. Select the Intel PRO/100 adapter and click Properties. Click the Driver Tab. The driver date of 10/23/99 is shown. Click Update Driver.

6   Insert your Intel CD into your drive and wait a few moments for it to spin up. The "Update Device Driver Wizard" starts. Select Automatic Search and click Next to continue.

7   After a few moments, the wizard displays the LAN driver on the Intel CD and automatically installs it. Click Finish.

8   Restart your computer when prompted.

9   Repeat steps 4 - 7 for the Modem. In the Device Manager, expand the Modem listing and choose the Intel PRO/100 Mobile Combo adapter.

10   Restart your computer when prompted.

11   If you are not in the U.S. or Canada, run the Country Identifier utility to specify your location. The utility is located in the Intel Mobile program group.

See the "Installing Intel PROSet II" later in this chapter to install PROSet and other advanced features using the Intel Setup utility.

For most networks, you will need to configure properties for your protocols, computer identification, and preferred servers. Contact your network administrator for details if you need assistance.

Windows Me - Type III Adapters

This Windows version was not fully released at the time the Intel CD was finalized. The drivers on this CD have been tested with "Release Candidate" versions of Windows Me.

To install drivers in Windows Me, use the following procedure:

1   With computer power on, insert your new adapter as described in Chapter 1.

2   Connect the network cable and modem cable if it is a combo card.

3   Windows Me detects the adapter. The Add New Hardware Wizard starts. Follow the prompts in the wizard to install the drivers from the Intel CD.

4   Restart your computer when prompted

5   If you are not in the U.S. or Canada, run the Country Identifier utility to specify your location. The utility is located in the Intel

Mobile program group.

See the "Installing Intel PROSet II" later in this chapter to install PROSet and other advanced features using the Intel Setup utility.

For most networks, you will need to configure properties for your protocols, computer identification, and preferred servers. Contact your network administrator for details if you need assistance.

Windows 98 - Type II Adapters

Note: for Windows 98 Second Edition, see the next section in this chapter. To check your version of Windows 98, right-click the My Computer icon and then select Properties. The Windows 98 version is displayed on this screen. If you do not see the words "Second Edition" then you are running the original version of Windows 98.

1 With Windows running, insert the PRO/100 Mobile adapter into the CardBus slot and connect cables as shown in Hardware Installation.

2 Windows detects the adapter (PCI Ethernet Controller) and displays the Add New Hardware Wizard. Click Next to continue. In this procedure, the LAN driver will be installed first and then the modem driver (if you have the PRO/100 Combo adapter). If the New Hardware Found window does NOT appear, you may need to enable CardBus support in your mobile computer's BIOS. See your computer's manual for information.

3 On the next screen, Windows prompts for a driver search. Choose "Search for the best driver (Recommended)" and click Next.

4 Insert the Intel CD or floppy disk and select the corresponding checkbox. Click Next to continue. If necessary, specify the path to your CD-ROM or floppy drive.

Note: When you insert the Intel CD to install drivers, an autorun file displays an introductory screen with several buttons. This is not part of the installation process, and you may close it or leave it open for later reading.

5 The new dialog displays the name of the adapter, depending on the product you are installing. Choose "The updated driver (Recommended)." Click Next.

6 Windows confirms the device name and location of the LAN driver (NET82557.INF). Click Next to continue. Windows may prompt you for the location of Windows networking files. Usually these are located in C:\windows\options\cabs or on your Windows 98 installation CD.

7 A message confirming successful LAN driver installation appears. Click Finish.

8 If you have the LAN only adapter, restart your computer when prompted and proceed to step 11.

   If you have the Combo adapter, do not restart your computer yet. When prompted to do so, click No and proceed to step 9.

9 Windows detects the modem portion of the adapter (PCI Serial Controller) and repeats the wizard process above for the modem (driver name is MDME100B.INF). At the end of this process, a small dialog appears stating "Your card has been successfully configured." Click OK to close this dialog.

10 If the New Hardware Found wizard is present, click Finish.

11 For most networks, you will need to configure properties for your protocols, computer identification, and preferred servers. Contact your network administrator for details if you need assistance.

12 Restart the computer to complete installation.

13 If you are not in the U.S. or Canada, run the Country Identifier utility to specify your location. The utility is located in the Intel Mobile program group.

Windows 98 - Type III Adapters

1 With computer power on, insert your new adapter as described in Chapter 1.

2 Connect the network cable and modem cable if it is a combo card.

3 Windows detects the adapter. The Add New Hardware Wizard starts. Follow the prompts in the wizard to install the drivers from the Intel CD.

4 Restart your computer when prompted

5 If you are not in the U.S. or Canada, run the Country Identifier utility to specify your location. The utility is located in the Intel Mobile program group.

See the "Installing Intel PROSet II" later in this chapter to install PROSet and other advanced features using the Intel Setup utility.

For most networks, you will need to configure properties for your protocols, computer identification, and preferred servers. Contact your network administrator for details if you need assistance.

Windows 98 Second Edition (SE) - Type II Adapters

Note: if your laptop computer does not have a CD-ROM drive, see "Making a Floppy Disk."

Note: When you insert the Intel CD to install drivers, an auto-run file displays an introductory screen with several buttons. This is not part of the installation process, and you may close it or leave it open for later reading.

1 With Windows running, insert the PRO/100 Mobile adapter into the CardBus slot and connect cables as shown in Hardware Installation.

2 In this procedure, a default Windows LAN driver will be installed first and then the modem driver (if you have the PRO/100 Combo adapter). Windows detects the adapter (PCI Ethernet Controller) and installs a resident driver for the LAN portion of the adapter. Later in this installation procedure, you'll need to update the default LAN driver.

3 Windows detects the modem portion of the adapter (PCI Serial Controller) and starts the Add New Hardware Wizard for the modem driver (driver name is MDME100B.INF). Click Next to proceed.

4 Select "Search for the best driver..." on this screen and click Next. Insert your Intel CD or Floppy. Click the CD-ROM drive box or Floppy drive box depending on the media your Intel drivers are on. Wait a few moments while the CD spins up. Click Next to proceed. The wizard displays the adapter name and driver name. Click Next to proceed.

5 The driver is copied and a dialog appears telling you that your card has been successfully configured. Click OK to close this diaglog. A reboot message appears. Click OK to close. Click Finish to close the hardware wizard and then restart your computer.

Note: if the Intel CD autorun screen appears, close it before restarting.

6 Now you need to update the default Windows LAN driver with the newer version on the Intel CD. Right-click the My Computer icon on your desktop. Click Properties. Click the Device Manager tab. You'll see a list of hardware devices. Under Network Adapters, select the Intel PRO/100 Mobile adapter (or combo adapter). Click Properties.

7 In the Properties window, click the Driver tab. On this screen

you'll see a driver dated 4-23-99. This is the old driver that comes with Windows SE. Click Update Driver. This starts the Update Device Driver Wizard.

8 Click Next to proceed. On the next screen select "Display a list of all the drivers..." and click Next. The Select Device window appears. Click the Have Disk button. Make sure your Intel CD or floppy is still in the drive. You may need to type the path to your CD-ROM drive.

9 On the refreshed Select Device window, pick the Intel driver dated 6-9-2000 or later and click OK.

10 The adapter name and driver name are displayed. Click Next to proceed.

11 Several files are copied from the Intel CD to your computer's hard drive. Click Finish to proceed.

12 Restart your computer when prompted by clicking Yes.

13 For most networks, you will need to configure properties for your protocols, computer identification, and preferred servers. Contact your network administrator for details if you need assistance.

14 If you are not in the U.S. or Canada, run the Country Identifier utility to specify your location. The utility is located in the Intel Mobile program group.

Windows 98 Second Edition (SE) - Type III Adapters

Note: if your laptop computer does not have a CD-ROM drive, see "Making a Floppy Disk."

Note: When you insert the Intel CD to install drivers, an auto-run file displays an introductory screen with several buttons. This is not part of the installation process, and you may close it or leave it open for later reading.

To install drivers, use the following procedure:

1 With computer power on, insert your new adapter as described in Chapter 1.

2 Connect the network cable and modem cable if it is a combo card.

3 Windows detects the adapter. The Add New Hardware Wizard starts. Follow the prompts in the wizard to install the drivers from the Intel CD.

4 Restart your computer when prompted

5 If you are not in the U.S. or Canada, run the Country Identifier utility to specify your location. The utility is located in the Intel Mobile program group.

See the "Installing Intel PROSet II" later in this chapter to install PROSet and other advanced features using the Intel Setup utility.

For most networks, you will need to configure properties for your protocols, computer identification, and preferred servers. Contact your network administrator for details if you need assistance.

Windows 95 OSR2

Note: if your laptop computer does not have a CD-ROM drive, see "Making a Floppy Disk."

Note: When you insert the Intel CD to install drivers, an auto-run file displays an introductory screen with several buttons. This is not part of the installation process, and you may close it or leave it open for later reading.

This procedure covers Windows 95 OSR2 (4.00.950B or later) only. If you are running the original retail version of Windows 95 (4.00.950) see the MOBILE.TXT file on the Intel CD.

1 With Windows running, insert the PRO/100 Mobile adapter into the CardBus slot and connect cables as shown above.

2 Windows detects a PCI Ethernet controller and displays the Update Device Driver Wizard. In this procedure, the LAN driver will be installed first and then the modem driver. Insert the Intel CD and click Next to start the procedure. (If the New Hardware Found window does NOT appear, you may need to enable Card-Bus support in your computer BIOS. See your computer's manual for information or check their website.)

3 Windows confirms the device name. Click Finish. This installs the LAN driver. If prompted for the NET82557.INF file, change the path back to your Intel CD. Windows may also ask you for the location of Windows networking files. Usually these are located in C:\windows\options\cabs or on your Windows 95 installation CD.

4 If prompted to restart, click Yes if you have the PRO/100 LAN only adapter and proceed to step 6.

Click No if you have the PRO/100 Combo adapter and proceed to step 5.

5 Windows detects the modem portion of the adapter (PCI Serial

Controller) and repeats the process above for the modem component, or if prompted for other files, try changing the path to the Intel CD.

NOTE: Windows may display a message indicating some VXD files are out of date. To determine if this affects operation of your computer, restart and check the modem. If it will not function, see the MOBILE.TXT file for detailed information.

6 For most networks, you will need to configure properties for your protocols, computer identification, and preferred servers. Contact your network administrator for details if you need assistance.

7 Restart the computer for the configuration to take effect.

8 If you are not in the U.S. or Canada, run the Country Identifier utility to specify your location. The utility is located in the Intel Mobile program group.

Using Intel PROSet II

PROSet II is an advanced configuration utility designed by Intel. With PROSet II, you can easily see Link and Activity status, test hardware, set advanced adapter features, and set standard features. To install PROSet II, Insert the Intel CD and wait for the Autorun screen to appear. Click Install Advanced Features on the Autorun screen. When the Component Selection screen appears, choose Intel PROSet II and click Install. The installer copies the files needed to your computer.

PROSet II runs when you click the Intel PROSet II icon in the Control panel or the tray icon near your clock on the Windows desktop.

Modem Installation Troubleshooting

Review this section if any of the following problems occur:

• Modem initialization errors occur when attempting to dial-out using a communications application.

• Connection fails or other problems occur.

It may be necessary to define a modem type within your communications application. If the Intel modem is not listed, choose a "Generic Hayes compatible" device.

If your computer is equipped with an infrared communications port, you may need to disable this port. These ports often use COM port resources required for other communications devices. Disable the infrared port both in the computer's CMOS or BIOS setup program and the Windows 95 Device Manager, as follows:

1   Some computers use a hardware setup utility to configure the infrared port in the BIOS. See your computer documentation.

2   To disable the infrared communications port in Windows 95, go to Device Manager tab under System in the Control Panel.

3   Double-click the Ports (COM & LPT) entry and the IR Serial Port entry. Check the Disable in this Hardware Profile option to disable the device.

4   You may also need to comment out any "device=" lines containing TRANXIT in the SYSTEM.INI file. Use a semicolon at the beginning of the line to comment out the line.

Use the Modem Diagnostics Tool to verify the computer-to-modem interface.

1   In the Modems option in Control Panel, click Diagnostics.

2   In Diagnostics properties, highlight the COM port associated with the Intel modem and click the More Info button. This causes Windows 95 and 98 to send commands to and read responses from the modem and display information about the modem and its COM port. The Port Information box should display the following information:

• The IRQ and I/O address of the modem's COM port. These should match the physical configuration of the port or modem adapter.

• Modem responses to various AT commands. The Intel modem may return ERROR for some AT commands that are not supported. This does not indicate a failure.

3   The Record a Log File option in the Modems option can also help identify modem problems by recording modem commands and responses in a MODEMLOG.TXT file. To create the MODEM-LOG.TXT file, go to Control Panel, Modems, Properties, Connection, Advanced. In the Advanced Connection Settings window, place a check mark in the Record a log file option box. A MODEMLOG.TXT file will be created in the C:\WINDOWS directory the next time the modem is used.

Chapter 3

Windows 2000 Installation

Note: when you insert the Type II adapter, Windows 2000 detects the controllers on the adapter and automatically installs drivers. Although these drivers provide basic LAN and modem functionality, you should update the drivers as described below. For Type III adapters, no default driver is available. Follow the procedure in the Type III section.

Type II Adapters Only

If you have the LAN-only Mobile adapter, follow steps 1 through 13. If installing the Combo Mobile adapter, follow all steps below.

1 On the Windows desktop, right click My Computer.

2 Click the Hardware tab.

3 Click the Device Manager button.

4 Double-click the Network Adapters device. You'll see the Intel adapter listed.

5 Right click the Intel adapter and click Properties. On the dialog that appears, click the Driver tab.

6 Click the Update driver button. This starts the Upgrade Device Driver Wizard. Click Next to start.

7 On the next screen select "Search for a suitable driver ...." Click Next.

8 On the next screen, unclick all boxes except the CD-ROM drives one. Insert the Intel CD and wait until the Autorun screen appears. Close the Autorun screen by clicking the X in the upper right hand corner. Click Next in the wizard.

9 The next screen indicates a driver was found. **Be sure to check the box at the bottom of the screen, called Install one of the other drivers. Click Next to continue.**

10 The next screen displays a list of drivers. Carefully examine the list. Look in the "Provider" column and select the first driver with Intel as the provider. The location column should indicate this driver is on your CD-ROM drive. Click Next.

11 The drivers are copied to your compuer. When the wizard reappears, click Finish.

12   Close the Intel adapter Properties dialog by clicking Close.

13   If your adapter is a LAN only product you are done. If your adapter is a Combo product, proceed to step 14.

14   To update the modem driver, double-click the Modems device in the Device Manager.

15   Right click the Intel modem and click Properties. On the dialog that appears, click the Driver tab.

16   Repeat steps 6 through 12 above.

17   Close the Device Manager, and click OK on the System Properties window to close it.

18   Modem users only, Go to Start, Programs, Intel PRO/100 Mobile Adapters.

19   Click Intel Country Identifier. The utility scans for modems. After a few moments the country dialog appears.

20   Select your country from the pull-down list and click Save and then Exit.

Note: after restarting your computer, you can use Intel PROSet II to configure LAN advanced settings. See Using Intel PROSet II for more information.

Type III Adapters Only

1   With computer power on, insert your new adapter as described in Chapter 1.

2   Connect the network cable and modem cable if it is a combo card.

3   Windows detects the adapter. The Add New Hardware Wizard starts. Follow the prompts in the wizard to install the drivers from the Intel CD.

4   Restart your computer when prompted.

5   If you are not in the U.S. or Canada, run the Country Identifier utility to specify your location. The utility is located in the Intel Mobile program group.

See the "Installing Intel PROSet II" later in this chapter to install PROSet and other advanced features using the Intel Setup utility.

For most networks, you will need to configure properties for your protocols, computer identification, and preferred servers. Contact your network administrator for details if you need assistance.

Using Intel PROSet II

PROSet II is an advanced configuration utility designed by Intel. With PROSet II, you can easily see Link and Activity status, test hardware, set advanced adapter features, and set standard features. To install PROSet II, Insert the Intel CD and wait for the Autorun screen to appear. Click Install Advanced Features on the Autorun screen. When the Component Selection screen appears, choose Intel PROSet II and click Install. The installer copies the files needed to your computer.

PROSet II runs when you click the Intel PROSet II icon in the Control panel or the tray icon near your clock on the Windows desktop.

Modem Installation Troubleshooting

Review this section if any of the following problems occur:

- Modem initialization errors occur when attempting to dial-out using a communications application.
- Connection fails or other problems occur.

It may be necessary to define a modem type within your communications application. If the Intel modem is not listed, choose a "Generic Hayes compatible" device.

If your computer is equipped with an infrared communications port, you may need to disable this port. These ports often use COM port resources required for other communications devices. Disable the infrared port both in the computer's CMOS or BIOS setup program and the Windows 95 Device Manager, as follows:

1 Some computers use a hardware setup utility to configure the infrared port in the BIOS. See your computer documentation.

2 To disable the infrared communications port in Windows 95, go to Device Manager tab under System in the Control Panel.

3 Double-click the Ports (COM & LPT) entry and the IR Serial Port entry. Check the Disable in this Hardware Profile option to disable the device.

4 You may also need to comment out any "device=" lines containing TRANXIT in the SYSTEM.INI file. Use a semicolon at the beginning of the line to comment out the line.

Use the Intel Modem Test utility

To help diagnose modem problems, run the Intel Modem Test Utility. This utility was installed when you installed the Intel adapter. To run

the utility, click Start, Programs, Intel Modems, and Modem Test Utility.

Use the Modem Diagnostics Tool to verify the computer-to-modem interface.

1 In the Modems option in Control Panel, click Diagnostics.

2 In Diagnostics properties, highlight the COM port associated with the Intel modem and click the More Info button. This causes Windows 95 and 98 to send commands to and read responses from the modem and display information about the modem and its COM port. The Port Information box should display the following information:

- The IRQ and I/O address of the modem's COM port. These should match the physical configuration of the port or modem adapter.

- Modem responses to various AT commands. The Intel modem may return ERROR for some AT commands that are not supported. This does not indicate a failure.

3 The Record a Log File option in the Modems option can also help identify modem problems by recording modem commands and responses in a MODEMLOG.TXT file. To create the MODEMLOG.TXT file, go to Control Panel, Modems, Properties, Connection, Advanced. In the Advanced Connection Settings window, place a check mark in the Record a log file option box. A MODEMLOG.TXT file will be created in the C:\WINDOWS directory the next time the modem is used.

Intel Network Encryption Co-Processor

The Intel PRO/100 S Family of Network Adapters includes an Intel 82594ED IPSec encryption co-processor. If Windows 2000 is enabled for IPSec encryption, it automatically offloads the intensive encryption and authentication functions onto the adapter, increasing throughput and decreasing CPU utilization.

Windows NT Installation

The PRO/100 Mobile adapter supports manual installation under Microsoft Windows NT 4.0. When the PRO/100 Mobile adapter is installed, the other PC Card slot is available for use by another PC Card (Type II adapters only).

> NOTE: do not install the adapter with the laptop power on unless using CardWizard 4.1 or newer.

Card and Socket Services Software

Some Windows NT 4.0 installations include third-party Card and Socket Services (CSS) software. The PRO/100 Mobile adapters may not operate correctly with Card and Socket Services products (such as CardWare or CardWizard.* See MOBILE.TXT file for details.) If you have a new laptop computer with CSS, try insalling the Mobile adapter with CSS. If this does not work, you may need to remove CSS software prior to installing the PRO/100 Mobile adapter. Use the Add/Remove Software icon in Control Panel to properly remove the CSS software. Then, install the driver by performing the following procedure.

Software Driver Installation

> NOTE: if you have not previously installed NT Networking Services, you'll need to do this first. See the section "Installing Windows NT Networking" later in this chapter.

The LAN driver (NDIS4) installs first, followed by the modem driver if you have the Combo adapter.

1   Before powering up your mobile computer, insert the PRO/100 Mobile adapter into the CardBus slot, as shown in the Hardware Installation section.

2   With the adapter in the CardBus slot, power-up the computer, click Start, click Settings, and select Control Panel. Control Panel opens.

3   Double-click the Network icon. The Network Settings window opens.

4   Click the Adapters tab. The Network Adapters window opens.

5   Click Add. The Select Network Adapter window opens.

6   Click Have Disk, insert the Intel CD, and specify the correct path for the CD. Click OK to continue.

7   The CardBus Resources window opens, displaying settings for memory and interrupt values (the default interrupt is 10). If you are installing the Combo adapter, a Modem tab also appears. Select values for each setting. A single interrupt is shared for the LAN and modem functions. (If your computer has card and socket services installed the CardBus resources window does not appear; proceed to step 9.)

   Note: In most circumstances, the default settings will properly operate the adapter. However, some computers may require changes to the defaults. Usually, only the IRQ setting needs adjustment. See step 11 to verify settings.

8   Click OK. The Network Settings window redisplays.

9   Click Close. Complete any relevant dialog boxes that appear such as TCP/IP settings. Contact your Network Administrator for help if necessary.

10 When the Network Settings Change window opens, click Yes to restart the computer.

11 To check the resources chosen in step 7, start PROSet II by double-clicking the Intel PROSet II icon in Control Panel. If there are no conflicts with the LAN settings, you'll see the General tab with adapter status information. If there is a resource conflict with another device, PROSet II displays a Troubleshooting tab with instructions. Follow these instructions to choose different resources. Resources can be changed by clicking the Advanced tab and choosing an interrupt and/or memory value. Close the PROSet II utility and restart when prompted.

Modem Setup (Combo Adapters Only)

1   After the computer has restarted, check the NT Event Log for any possible Modem resource issues from step 7 above. You may need to change resources if the log indicates a Modem problem. See step 11 above for changing resources. If no problems are noted, select Modems from Control Panel.

2   At the Install New Modem screen make sure that the *Don't detect my modem; I will select it from a list* check box is NOT checked. Click Next. NT will query the COM ports looking for the Intel modem. Once the Intel modem is found, click Next. If a Standard Modem is found, click Change. On the next screen, click Have disk. Type the path to your CD-ROM drive and click OK.

3 At the Install New Modem screen, click OK. After confirming that Intel(R) PRO/100 Mobile adapter appears in the dialog box, click Next. Then, click Finish to complete the installation.

4 At the Modems Properties screen click Dialing Properties to set up dialing properties (not necessary if a modem had been previously installed). If necessary, change the maximum speed to 115,200. Click Close when done.

If you are not in the U.S. or Canada, run the Country Identifier utility to specify you location. The utility is located in the Intel Mobile program group.

For a complete list and description of modem commands, view the CB2HELP.HLP file on the Intel CD. This is a standard Windows help file. To view it, double-click the file in the Windows Explorer or File Manager.

Installing Windows NT Networking

If your laptop running NT does not have Networking installed, use the following procedure to install Networking and the Intel adapter. With power off, insert the adapter into a CardBus slot. Turn on the power and follow this procedure.

1 Select Yes at the "Windows NT Networking is not installed. Do you want to install it now?"

2 At the next screen you will tell the system whether you are connecting to the network through the modem or a LAN adapter. Select the appropriate box and click "Next".

3 At the "Network Setup Wizard" screen, click "Select from list…"

4 From the "Select Network Adapter" screen click "Have Disk.."

5 At the "Inset Disk" screen, type the driver letter for the CD-ROM in the box and click OK.

6 From the "Select OEM Option" screen highlight the "Intel® PRO Adapter" and click OK.

7 The "Network Setup Wizard" screen comes up again, make sure the "Intel PRO Adapter" is highlighted and select "Next".

8 The next screen requires you to select the networking protocols your networking environment is using. Select the appropriate box and click Next. If you don't know what Protocol your networking system is using, contact your Network Administrator.

9   The next screen shows you the services that will be installed by the system; if you need a service that isn't listed, click "Select from list…" to add the service you need. If you are unsure of what services you need, contact your Network Administrator.

10   Click Next on the next screen to install the Networking system.

11   The "Windows NT Setup" screen appears next, direct it to the location of the NT files, either on your NT CD or at the I386 directory, usually on root drive of your system.

12   The "CardBus Resources" screen appears next. For most installations the default values will work. Check the Mobile.txt file on your Intel CD to see if your computer requires different settings. If you are installing a LAN / Modem combination card, the resource button for the Modem will also be at this screen. Again, most systems will work fine with the default resources. When your resources have been selected, click "OK" to continue.

13   If you have selected TCP/IP as one of the protocols, a "TCP/IP Setup" screen appears; if you are going to use DHCP, select "Yes" to continue. If you don't know whether or not you use DHCP, ask your Network Administrator.

14   If you select "Yes", continue here. If you selected "No" go to step …20

15   At the next screen you setup the order that your system locates information on the network, you can also disable bindings if you want. When this is done, select "Next"

16   At the next screen, select "Next" to complete the Networking installation on your system. Your system will be busy for a couple of minutes installing Networking.

17   At the next screen you will need to enter the name of your system and the name of the workgroup or domain of your network. If you don't know this information, ask your Network Administrator. Click "Next" to continue.

18   At the next screen click "Finish" to complete the LAN portion of the installation.

19   You will need to restart your computer to finish the installation.

20   If you said "no" during step 14, you'll be taken to the "Microsoft TCP/IP Properties" screen. Here you will have to set up your IP address information. If you don't know this information, see your Network administrator. Now finish the installation from step 15.

Modem Diagnostics

Use the Intel Modem Test utility

To help diagnose modem problems, run the Intel Modem Test Utility. This utility was installed when you installed the Intel adapter. To run the utility, click Start, Programs, Intel Modems, and Modem Test Utility.

Use the Modem Diagnostics Tool to verify the computer-to-modem interface.

1   In the Modems option in Control Panel, click Diagnostics.

2   In Diagnostics properties, highlight the COM port associated with the Intel modem and click the More Info button. This causes Windows 95 and 98 to send commands to and read responses from the modem and display information about the modem and its COM port. The Port Information box should display the following information:

• The IRQ and I/O address of the modem's COM port. These should match the physical configuration of the port or modem adapter.

• Modem responses to various AT commands. The Intel modem may return ERROR for some AT commands that are not supported. This does not indicate a failure.

3   The Record a Log File option in the Modems option can also help identify modem problems by recording modem commands and responses in a MODEMLOG.TXT file. To create the MODEM-LOG.TXT file, go to Control Panel, Modems, Properties, Connection, Advanced. In the Advanced Connection Settings window, place a check mark in the Record a log file option box. A MODEMLOG.TXT file will be created in the C:\WINDOWS directory the next time the modem is used.

Using Intel PROSet II

When you install the PRO/100 Mobile adapter Windows drivers, an advanced configuration utility designed by Intel called PROSet IIproset ii is also installed. With PROSet II, you can easily see Link and Activity status, test hardware, set advanced adapter features, and set standard features with PROSet II.

PROSet II runs when you click the Intel PROSet II icon in the Network Control panel or the tray icon near your clock on the Windows desktop.

Diagnostics and Troubleshooting

This chapter contains supplementary diagnostics and troubleshooting information for the PRO/100 Mobile adapters. For troubleshooting information specific to your operating environment, see the appropriate installation chapter. This supplementary information is intended for users or network administrators who are already familiar with the PRO/100 Mobile adapters and documentation, and who have run into difficulties after having completed the appropriate installation and troubleshooting procedures for their operating environment.

> NOTE: For additional troubleshooting information, see the Windows Help file CB2HELP.HLP on the Intel Installation CD.

The following topics are covered in this chapter:

- LED Indicators
- Diagnostic Test
- Troubleshooting Checklist
- Changing Driver Parameters

Additional Sources of Information

Consult your computer and network documentation as needed. For the latest technical notes on the PRO/100 Mobile adapters, see the **MOBILE.TXT** file on the Intel Installation CD.

See **Appendix A** in this User's Guide for Intel support services access information.

LED Indicators

Type II adapters, with cables

The LEDs are located in the cable connector housing, just below the Intel logo. See the diagrams below.

LAN CABLE:
Network Activity: BLINKING

LINK INTEGRITY
100 Mbps: ORANGE
10 Mbps: GREEN
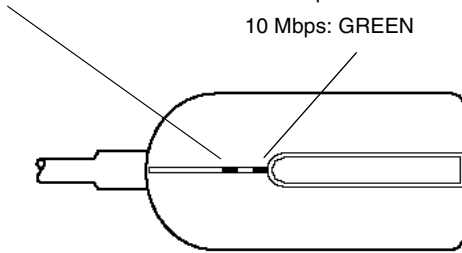
PRO/100 Mobile adapter LAN Type II connector and LEDs

MODEM CABLE:
Transmit or Receive
Activity: BLINKING

CARRIER DETECT:
GREEN
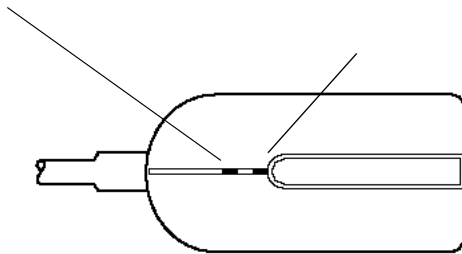
PRO/100 Mobile adapter modem Type II connector and LEDs

Type III adapters, without cables

The LEDs are located on the left front of the adapter, above the Intel logo. Refer to the bottom of the adapter to identify LED function.

Windows LAN Diagnostics

To run Mobile hardware diagnostics from Windows, run the PROSet II utility.

1. Double-click the Intel PROSet II icon in the Control Panel.
2. Click the Diagnostics tab.
3. Click the Run Tests button. Click Help for details.
4. Click Advanced to run a Sender-Responder test.

In addition, you can check the Link and Activity status on the General tab. To monitor driver activity, click the Network Driver tab.

Troubleshooting Checklist

- Review the MOBILE.TXT file on the Installation CD.

- Be sure you have the current drivers for your adapter. You can check the version numbers on the Intel website at **suport.intel.com.**

- Try reinstalling the adapter drivers. Remove installed drivers first. For Windows 98/95, use Add/Remove Programs in Control Panel. For Windows NT, remove the LAN portion by running Network in Control Panel and the modem portion by running Modems in the Control Panel.

- When loading drivers or running the test utility, keep the LAN adapter cable attached to the Mobile adapter.

- Under Novell, ensure that the FRAME TYPE you are using is the same as that of the file server. The server frame type should be specified as the first frame type in the NET.CFG.

- In a twisted pair environment, try plugging directly into the hub or concentrator.

- Plug in to a known working network connection.

- Try using the PRO/100 Mobile adapter on a different computer.

- Try another PRO/100 Mobile adapter if available.

- Try forcing the speed and duplex settings on the adapter.

- If your computer has multiple PC Card sockets, move the adapter to another socket.

- If you have more than one PC Card device in your computer, remove the non-Intel PC Card devices.

- Test the PRO/100 Mobile adapter without loading Card and Socket Services to prevent conflicts between the Intel adapter and Card and Socket Services.

- Make sure that the PRO/100 Mobile adapter interrupt, memory address, and I/O address do not conflict with other installed hardware (such as sounds cards, CD-ROM drives and PEN devices).

- Try loading the Mobile drivers at different memory locations (i.e.: C8000, CC000, D4000, D8000, E2000).

- Try using different interrupt values (i.e.: 3, 10, 11).

- Try using different port addresses (i.e.: 280, 290, 310, 320).

- In Windows 95, change autodetect to specific frame type.

- In NT (mostly), change the interrupt settings if you experience steady on/off blinking of link light on cable connector, or if you experience sporadic mouse movement.

Changing Driver Parameters

For Windows installations, use PROSet II to modify driver parameters such as network speed, duplex, and other advanced settings. In most cases the default settings for these parameters are best and do not need changing.

For Novell installations, see the NETWARE.TXT file on the Intel CD.

Modem Diagnostics

Use the Intel Modem Test utility

To help diagnose modem problems, run the Intel Modem Test Utility. This utility was installed when you installed the Intel adapter. To run the utility, click Start, Programs, Intel Modems, and Modem Test Utility.

Use the Modem Diagnostics Tool to verify the computer-to-modem interface.

1 In the Modems option in Control Panel, click Diagnostics.

2 In Diagnostics properties, highlight the COM port associated with the Intel modem and click the More Info button. This causes Windows 95 and 98 to send commands to and read responses from the modem and display information about the modem and its COM port. The Port Information box should display the following information:

- The IRQ and I/O address of the modem's COM port. These should match the physical configuration of the port or modem adapter.

- Modem responses to various AT commands. The Intel modem may return ERROR for some AT commands that are not supported. This does not indicate a failure.

3 The Record a Log File option in the Modems option can also help identify modem problems by recording modem commands and responses in a MODEMLOG.TXT file. To create the MODEM-LOG.TXT file, go to Control Panel, Modems, Properties, Connection, Advanced. In the Advanced Connection Settings

window, place a check mark in the Record a log file option box. A MODEMLOG.TXT file will be created in the C:\WINDOWS directory the next time the modem is used.

Intel Automated Customer Support

You can reach Intel's automated support services 24 hours a day, every day at no charge. The services contain the most up-to-date information about Intel products. You can access installation instructions, trouble-shooting information, and general product information.

Readme and Help files on Your Product CD

Review the topics in the MOBILE.TXT and CB2HELP.HLP files on the Intel CD.

Web and Internet Sites

Support:	http://support.intel.com
Network Products:	http://www.intel.com/network
Corporate:	http://www.intel.com
FTP Host:	download.intel.com
FTP Directory:	/support/network/adapter/

Customer Support Technicians

US and Canada: 1-916-377-7000 (7:00 - 17:00 M-F Pacific Time)

Europe (Swindon, UK)   British Time 08:30-16:00 (GMT) M-F

English   +44 (0) 870 607 2439

French   +33 (0) 1 41 91 85 29

German   +49 (0) 69 9509 6099

Italian   +39 (0) 2 696 33276

Worldwide access: Intel has technical support centers worldwide. Many of the centers are staffed by technicians who speak the local languages. For a list of all Intel support centers, the telephone numbers, and the times they are open, download document 9089 from one of the automated services.

Specifications

General Specifications

Type II: Model MBLA3300 (LAN only)

Type II: Model MBLA3356 (Combo)

Type III: Model MBLA3400C3 (LAN only)

Type III: Model MBLA3456C3 (Combo)

Cable:100Base-TX unshielded twisted pair for use on Category 5 (data grade) cabling; 10Base-T unshielded twisted pair (UTP)

Connectors (Type II only): RJ-45 for LAN and RJ-11C for phone (modem)

Operating Distance: 328 ft (100 m)

Ethernet Specifications

Ethernet IEEE 802.3 for 10 Mbps, 802.3u for 100 Mbps

Type II/III CardBus PC Card

10/100 Mbps full-duplex

Size: 3.37 in (86 mm) x 2.13 in (54.0 mm) x 0.20 in (5.0 mm) excluding adapter cable and network connection

Weight: 0.85 oz (24 g)

Power Requirements:

MBLA3300/3400C3   3.3V DC, 52 mA at 10 Mbps;120 mA at 100 Mbps

MBLA3356/3456C3   3.3V DC, 96 mA at 10 Mbps;160 mA at 100 Mbps; modem only 225 mA

Power Management:

Supports ACPI and CardBus Power Management Specification

Note: This adapter includes the smart power down feature. By disconnecting the LAN cable from the adapter, Smart power down automatically reduces the power consumed by the PC card. This feature intelligently extends battery life and provides a power savings of up to 84 percent.

Temperature Range:

Operating:	32°F to 131°F (0°C to 55°C)
Storage:	-4°F to 149°F (-20°C to 65°C)
Humidity:	95% max. noncondensing

LEDs:	Link integrity, transmission activity
Certification:	FCC Code of Federal Regulations, Title 47, Part 15, Subpart B, Class A
	CE Mark (EN 55022, Class A, EN50082)
	C-Tick (Australia)
	RRL (South Korea)

Modem Specifications

Data modulation:K56flex*/V.90 up to 56000 bps (subject to local regulations); V.34 from 33,600 down to 2400 bps; V.32terbo at 19200 and 16800 bps; V.32bis at 14400, 12000, 9600, and 7200 bps, uncoded at 4800 bps; V.32 at 9600 bps, uncoded at 4800 bps; V.23 at 1200/75 and 75/1200 bps; V.22bis at 2400 bps; V.22 at 1200 bps; Bell 212A at 1200 bps

Fax modulation:V.17 at 14400, 12000, 9600, 7200, and 4800 bps; V.29 at 9600, 7200, and 4800 bps; V.27ter at 4800 and 2400 bps

Fax support: Group 3, EIA/TIA Class 1

Error control:V.42 Error Control, MNP Levels 2-4 Error Detection

Data compression:V.42bis (4:1) or MNP Level 5 (2:1)

Diagnostics: Power-up self tests of program RAM, data RAM, and non-volatile memory.

Nonvolatile RAM:1 user definable profile; 2 thirty-six digit telephone numbers; LAN Adapter ID and serial number

Command set:Hayes and Microcom compatible AT commands

Data interface:PCMCIA Release 2.1 compliant, 68-pin CardBus connector

Analog interface:RJ-11C modular telephone connector

DTE speeds: 1200, 2400, 4800, 7200, 9600, 14400, 19200, 37400, 57600, and 115200 bps

Certification:

FCC code of federal regulations, Title 47, Part 68.

Industsry Canada, C503 155VE8

CTR21 (Europe), iDA (Singapore); A-Tick Mark (Australia), Telepermit (New Zealand), TEC (India).

Appendix C

Limited Lifetime Hardware Warranty

Intel warrants to the original owner that the adapter product delivered in this package will be free from defects in material and workmanship. This warranty does not cover the adapter product if it is damaged in the process of being installed or improperly used.

THE ABOVE WARRANTY IS IN LIEU OF ANY OTHER WARRANTY, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF NON-INFRINGEMENT OF INTELLECTUAL PROPERTY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE ARISING OUT OF ANY PROPOSAL, SPECIFICATION, OR SAMPLE.

This warranty does not cover replacement of adapter products damaged by abuse, accident, misuse, neglect, alteration, repair, disaster, improper installation, or improper testing. If the adapter product is found to be defective, Intel, at its option, will replace or repair the hardware product at no charge except as set forth below, or refund your purchase price provided that you deliver the adapter product along with a Return Material Authorization (RMA) number (see below), along with proof of purchase (if not registered), either to the dealer from whom you purchased it or to Intel with an explanation of any deficiency. If you ship the adapter product, you must assume the risk of damage or loss in transit. You must use the original container (or the equivalent) and pay the shipping charge.

Intel may replace or repair the adapter product with either new or reconditioned parts, and any adapter product, or part thereof replaced by Intel becomes Intel's property. Repaired or replaced adapter products will be returned to you at the same revision level as received or higher, at Intel's option. Intel reserves the right to replace discontinued adapter products with an equivalent current generation adapter product.

Returning a Defective Product

From North America:

Before returning any adapter product, contact Intel Customer Support and obtain a Return Material Authorization (RMA) number by calling +1 916-377-7000.

If the Customer Support Group verifies that the adapter product is defective, they will have the RMA department issue you an RMA number to place on the outer package of the adapter product. Intel cannot accept any product without an RMA number on the package.

All Other Locations:

Return the adapter product to the place of purchase for a refund or replacement.

Intel Adapter Money-Back Guarantee (North America Only)

Intel wants you to be completely satisfied with the Intel adapter product that you have purchased. Any time within ninety (90) days of purchase, you may return your Intel adapter to the original place of purchase for a full refund of the purchase price from your dealer. Resellers and distributors, respectively, accepting returns and refunding money back to their customers may return Intel adapters to their original place of purchase. Intel guarantees that it will accept returns under this policy and refund the original purchase price to customers purchasing directly from Intel.

Limitation of Liability and Remedies

INTEL'S SOLE LIABILITY HEREUNDER SHALL BE LIMITED TO DIRECT, OBJECTIVELY MEASURABLE DAMAGES. IN NO EVENT SHALL INTEL HAVE ANY LIABILITY FOR ANY INDIRECT OR SPECULATIVE DAMAGES (INCLUDING, WITHOUT LIMITING THE FORE-GOING, CONSEQUENTIAL, INCIDENTAL, AND SPECIAL DAMAGES) INCLUDING, BUT NOT LIMITED TO, INFRINGEMENT OF INTELLECTUAL PROPERTY, REPROCUREMENT COSTS, LOSS OF USE, BUSINESS INTERRUPTIONS, LOSS OF GOODWILL, AND LOSS OF PROFITS, WHETHER ANY SUCH DAMAGES ARISE OUT OF CONTRACT NEGLIGENCE, TORT, OR UNDER ANY WARRANTY, IRRESPECTIVE OF WHETHER INTEL HAS ADVANCE NOTICE OF THE POSSIBILITY OF ANY SUCH DAMAGES. NOTWITHSTANDING THE FOREGOING, INTEL'S TOTAL LIABILITY FOR ALL CLAIMS UNDER THIS AGREEMENT SHALL NOT EXCEED THE PRICE PAID FOR THE PRODUCT. THESE LIMITATIONS ON

POTENTIAL LIABILITIES WERE AN ESSENTIAL ELEMENT IN SETTING THE PRODUCT PRICE. INTEL NEITHER ASSUMES NOR AUTHORIZES ANYONE TO ASSUME FOR IT ANY OTHER LIABILITIES.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

Critical Control Applications: Intel specifically disclaims liability for use of the adapter product in critical control applications (including, for example only, safety or health care control systems, nuclear energy control systems, or air or ground traffic control systems) by Licensee or Sublicensees, and such use is entirely at the user's risk. Licensee agrees to defend, indemnify, and hold Intel harmless from and against any and all claims arising out of use of the adapter product in such applications by Licensee or Sublicensees.

Software: Software provided with the adapter product is not covered under the hardware warranty described above. See the applicable software license agreement which shipped with the adapter product for details on any software warranty.

Appendix D

Software License Agreement

IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING.

Do not use or load this software and any associated materials (collectively, the "Software") until you have carefully read the following terms and conditions. By loading or using the Software, you agree to the terms of this Agreement. If you do not wish to so agree, do not install or use the Software.

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3. You may not reverse engineer, decompile, or disassemble the Software.

4. You may not sublicense or permit simultaneous use of the Software by more than one user.

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LIMITED MEDIA WARRANTY. If the Software has been delivered by Intel on physical media, Intel warrants the media to be free from material physical defects for a period of ninety (90) days after delivery by Intel. If such a defect is found, return the media to Intel for replacement or alternate delivery of the Software as Intel may select.

EXCLUSION OF OTHER WARRANTIES. EXCEPT AS PROVIDED ABOVE, THE SOFTWARE IS PROVIDED "AS IS" WITHOUT ANY EXPRESS OR IMPLIED WARRANTY OF ANY KIND INCLUDING WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, OR FITNESS FOR A PARTICULAR PURPOSE. Intel does not warrant or assume responsibility for the accuracy or completeness of any information, text, graphics, links or other items contained within the Software.

LIMITATION OF LIABILITY. IN NO EVENT SHALL INTEL OR ITS SUPPLIERS BE LIABLE FOR ANY DAMAGES WHATSOEVER (INCLUDING, WITHOUT LIMITATION, LOST PROFITS, BUSINESS INTERRUPTION, OR LOST INFORMATION) ARISING OUT OF THE USE OF OR INABILITY TO USE THE SOFTWARE, EVEN IF INTEL HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. SOME JURISDICTIONS PROHIBIT EXCLUSION OR LIMITATION OF LIABILITY FOR IMPLIED WARRANTIES OR CONSEQUENTIAL OR INCIDENTAL DAMAGES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. YOU MAY ALSO HAVE OTHER LEGAL RIGHTS THAT VARY FROM JURISDICTION TO JURISDICTION.

TERMINATION OF THIS AGREEMENT. Intel may terminate this Agreement at any time if you violate its terms. Upon termination, you will immediately destroy the Software or return all copies of the Software to Intel.

APPLICABLE LAWS. Claims arising under this Agreement shall be governed by the laws of California, excluding its principles of conflict of laws and the United Nations Convention on Contracts for the Sale of Goods. You may not export the Software in violation of applicable export laws and regulations. Intel is not obligated under any other agreements unless they are in writing and signed by an authorized representative of Intel.

GOVERNMENT RESTRICTED RIGHTS. The Software is provided with "RESTRICTED RIGHTS." Use, duplication, or disclosure by the Government is subject to restrictions as set forth in FAR52.227-14 and DFAR252.227-7013 *et seq. or their successors. Use of the Software by the Government constitutes acknowledgment of Intel's proprietary rights therein. Contractor or Manufacturer is Intel Corporation, 2200 Mission College Blvd., Santa Clara, CA 95052.*

Appendix E

Regulatory Agency Notices

FCC Compliance Statement

FCC Rules and Regulations - Part 15

This product has been tested and found to comply with the limits for a Class B computing device pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Installed correctly, it probably will not interfere with radio or TV reception. However, we do not guarantee the absence of interference.

This product generates and uses energy of about the same frequency as radio and TV broadcasts. Installed incorrectly, it may interfere with reception of radio and TV broadcasts.

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

To reduce interference, try these suggestions:

- **Change the direction of the radio or TV antenna.**
- Move the computer, radio or TV. For example, if the computer is to the right of the TV, move it to the left of the TV. Or move them farther apart.
- Plug the computer into a different electrical outlet than the radio or TV.
- 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.

NOTE

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.

CAUTION

If the device is changed or modified without permission from Intel, the user may void his or her authority to operate the equipment.

FCC Rules and Regulations - Part 68

Intel PRO/100 LAN+Modem56 Mobile Adapters comply with Part 68 of the FCC Rules. On the back of the adapters is a label that contains, among other information, the FCC Registration Number and Ringer Equivalency Number (REN) for this equipment. You must, upon request, provide this information to your telephone company.

The REN is useful to determine the quantity of devices you may connect to your telephone line and still have all those devices ring when your telephone number is called. In most but not all areas, the sum of the RENs of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.

If your telephone equipment causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. But if advance notice is not practical, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

If you experience trouble with this telephone equipment, please contact Intel Customer Support, at

916-377-7000 for information on obtaining service or repairs. The telephone company may ask that you disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

There are no user serviceable parts contained in this equipment.

This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs.

Canadian Compliance (Industry Canada)

When tested in at least one intended host:

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Canadian Department of Communications.

Cet appareil numérique respecte les limites bruits radioélectriques applicables aux appareils numériques de Class B prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques", NMB-003 édictée par le Ministre Canadien des Communications.

NOTICE: The Industry Canada (IC) label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by a user to this equipment, or equipment malfunctions, may give the telephone communications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection, that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

NOTICE: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

REN: See back of unit.

Manufacturer Declaration

This certifies that Intel PRO/100 CardBus II Mobile Adapters comply with the EU Directive 89/336/EEC, using the EMC standards EN55022 (Class B) and EN50082-1. These products also meet or exceed safety requirements for the EU Directive 73/23/EEC using EN60950. In addition, Intel PRO/100 LAN+Modem56 CardBus II adapters comply with the EU directive 98/13/EC, using the common technical regulation CTR21.

This product has been tested and verified to meet CISPR 22 Class B requirements.

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