IBM

PC Card Enabler with Advanced EtherJet Feature

User's Guide

OPTIONS *by* IBM

Contents

Part 1. Using the PC Card Enabler with Advanced EtherJet Feature

The *PC Card Enabler with Advanced EtherJet Feature* (hereafter called the *PC Card Enabler*) has two PC Card slots and includes a LAN adapter with the Wake-on-LAN function. When you use the PC Card Enabler with your computer, you need to install the device driver for the LAN adapter.

The PC Card Enabler supports the following ThinkPad computers:

> ThinkPad 600 and 600E
> ThinkPad 770, 770E, 770ED, and 770X

To use the PC Card Enabler, you need a port replicator: either a *SelectaBase 600* for the ThinkPad 600*x* computer or a *SelectaBase 770* for the ThinkPad 770*x* computer.

Note:

> In the Windows 95, Windows NT, Windows 3.1, or DOS environment, you need to install PC Card support software *after* docking your computer to the PC Card Enabler–port replicator assembly. If you have already installed the PC Card support software, uninstall it and then reinstall it after you dock your computer to the PC Card Enabler–port replicator assembly.

Note for Windows 98 and Windows NT User

When you dock your computer to the PC Card Enabler–port replicator assembly, the computer might recognize a **82557-based PCI Ethernet** device driver. You need to install the device driver supplied on the Advanced EtherJet Feature Diskette, nonetheless, by following the steps appropriate for your operating system.

Identifying the Hardware Features

(Rear view) (Front view)
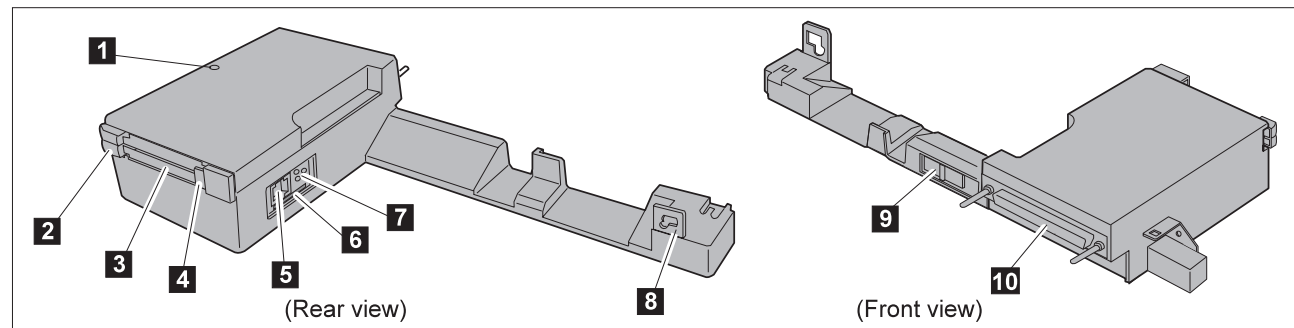
1   The **docking indicator** turns on when the computer is in use. When the indicator is on, you cannot remove your computer.

2   The **PC Card eject buttons** eject the PC Cards from the slots.

3   Each **PC Card slot** accept one Type I, II, or III PC Card.
Note: You can insert a Type III PC Card only in the lower slot. The slots support a CardBus card, but not a Zoomed Video card.

4   The **PC Card lock** prevents PC Cards from being removed from the PC Card slots.

5   The **Ethernet connector (RJ-45)** is for network communication.

6   The **media access control (MAC) address label** is for the integrated EtherJet feature.

7   The **status LEDs** indicate the condition of the network. (See the details on the next page.)

8   The **security key hole** is used with a mechanical lock.

9   The **PC Card eject lock slide** prevents the PC Cards from being removed.

1   The **docking connector** is where you dock a PC Card Enabler to the port replicator.
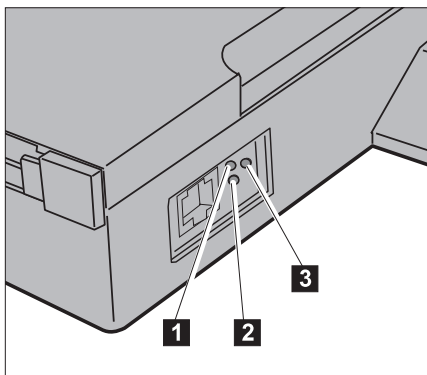
LED	Indication	Meaning
1 Activity LED	On or flashing	The PC Card Enabler is sending or receiving direct packets or broadcast packets for this specific adapter. (When packets are being sent, this LED is active due to the network acknowledgments that are received.)
	Off	The PC Card Enabler is not receiving direct packets or broadcast packets.
2 Link LED	On	The PC Card Enabler and the hub are receiving power. The cable connection between the PC Card Enabler and the hub is good.
	Off	The PC Card Enabler and the hub are not receiving power. The cable connection between the PC Card Enabler and the hub is faulty, or you have a driver configuration problem.
3 100-Mbps LED	On	Communication is at 100 Mbps.
	Off	Communication is at 10 Mbps.

Attaching the PC Card Enabler to the SelectaBase Port Replicator

To attach the PC Card Enabler to the port replicator, do as follows.

Note: The SelectaBase 770 port replicator is featured in the illustrations, but the following procedure also applies to the SelectaBase 600 port replicator (unless otherwise indicated).

1 Make sure the security key of the port replicator is in the Unlock position.
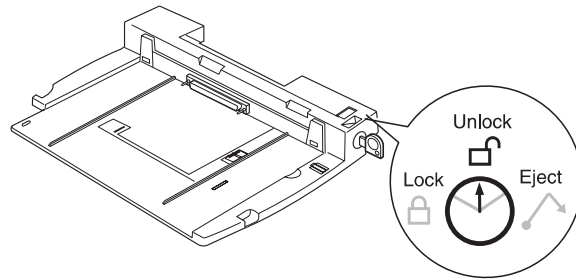
Using the PC Card Eject Lock

To prevent PC Cards from being removed from the PC Card Enabler, use the PC Card eject lock. Before you attach the PC Card Enabler to the port replicator, insert each PC Card into a PC Card slot of the PC Card Enabler. (If the card is fully inserted, the eject button comes out.)
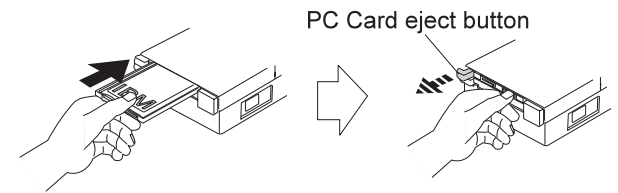
Then slide the PC Card eject lock slide to the Lock position.
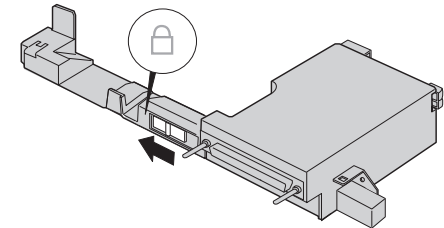
2 Align the PC Card Enabler's docking connector with the expansion connector of the port replicator; then press and engage the PC Card Enabler with the port replicator.
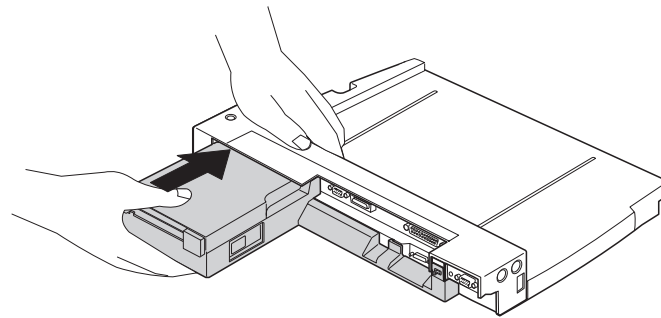
3 Connect the AC Adapter to the port replicator 1 , and an ac power outlet 2 .
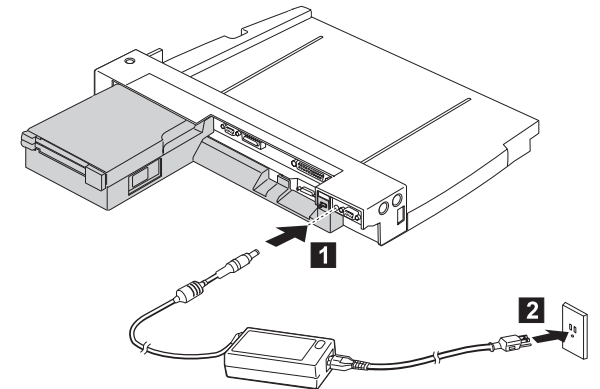
You have finished attaching the PC Card Enabler to the port replicator and are ready to prepare to dock your computer to the assembly.

Docking Your Computer to the Port Replicator Assembly

This section describes how to dock or undock your computer to the PC Card Enabler–port replicator assembly (hereafter called the *port replicator assembly*).

For the Windows 98 or Windows 95 user, there are three modes when you dock or undock your computer to the port replicator assembly.

Cold docking or undocking:
> Docking or undocking the computer while it is powered off.

Warm docking or undocking:
> Docking or undocking the computer while it is in suspend mode.

Hot docking or undocking:
> Docking or undocking the computer while it is operating or in standby mode.

If you are using an other operating system, you must cold dock your computer to the port replicator assembly.

```
┌─ Important ──────────────────────────────────────┐
│                                                  │
│  Even if you are a Windows 98 or Windows 95       │
│  user, you must cold dock your computer to the    │
│  port replicator assembly for the first time.     │
│  This operation enables hot or warm docking or    │
│  undocking for subsequent times, however.         │
│                                                  │
└──────────────────────────────────────────────────┘
```

Cold Docking

To dock your computer to the port replicator assembly in cold mode, do as follows:

1 Turn off your computer.

2 Disconnect all peripheral devices cables from your computer.

3 Place the computer on the port replicator assembly as shown. Then engage the computer with the port replicator assembly using the finger holds until it is fully seated.
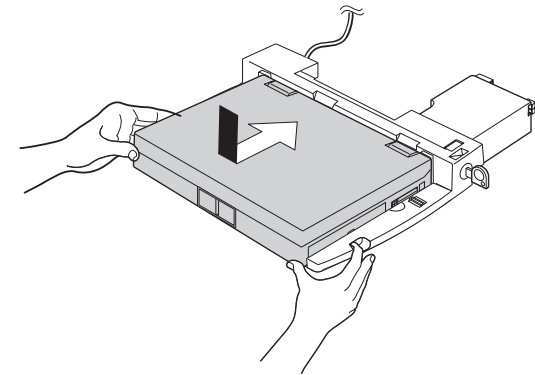
4 Connect all peripheral devices cables to the port replicator assembly.

5 Turn the security key to the Lock position to secure the devices; then remove the key.
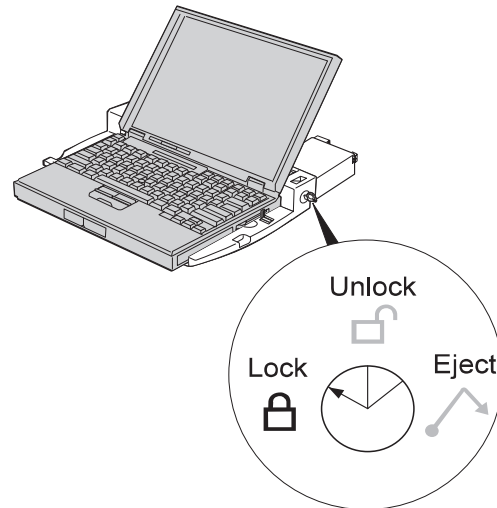
6 Power on your computer, using its power switch. The computer starts to boot.

You have completed docking the computer to the port replicator assembly.

For **Windows 98** or **Windows 95 user**, continue with this procedure.

The operating system checks the status of the port replicator assembly and restarts a couple of times.

7 Follow the instructions that appear on the screen.

The operating system creates a configuration profile for the port replicator assembly named **Dock *x***.

Notes:
1. *x* can be any number.
2. The message "Version Conflict" might appear on the screen. Answer **Yes** to the prompt "Do you want to keep this file?"

8 Double-click on **My Computer**, **Control Panel**, and **System**.

9 Click on the **Hardware Profile** tab.

10 Make sure the new profile, **Dock *x***, has been created. Select the **Device Manager** tab and make sure that the new devices are displayed in the device list.

If **Dock *x*** has not been created, repeat from step 1.

Note: If the symbol "**!**" or "**X**" appears next to a device symbol, a resource conflict might have occurred.

Once the new hardware profile **Dock *x*** has been created, you can dock or undock your computer in hot or warm mode.

> **Important**
>
> Do not remove the AC Adapter while your computer is docked to the port replicator assembly.

11 To prevent your computer from being removed from the port replicator assembly, attach a security system lock to the security key hole on the PC Card Enabler.
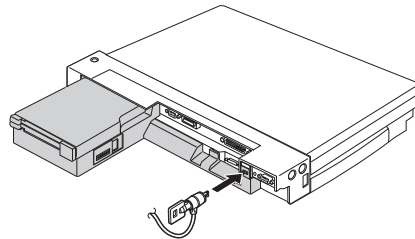
Cold Undocking

This procedure describes how to undock your computer from the port replicator assembly when the computer power is turned off.

1 Turn off your computer.

2 Turn the security key to the Eject position to eject the computer.

**3** Grasp the computer and lift it out.

You have completed cold undocking.

Hot or Warm Undocking (for Windows 98 or Windows 95)

You must cold dock your computer to the port replicator assembly for the first time. This section describes hot or warm undocking for subsequent times.

To hot- or warm-undock your computer (with Windows 98 or Windows 95), do the following:

1 Request the ejection of the computer in either of the following ways:

Select **Eject PC** in the **Start** menu.

or

Turn the security key to the Eject position and release the key.

An ejection request is made to the operating system.
Considerable time might be required to complete the ejection.

Notes:
1. To see if the ejection process has completed, click on **Start**. If **Eject PC** appears, undocking is still in progress. If not, the ejection process has completed.
2. If the operating system rejects the request, messages appear on the screen explaining the reason. In this case, use cold undocking.

2 When you hear a beep, make sure that the docking indicator of the PC Card Enabler is off.

The computer cannot be removed from the port replicator assembly while this indicator is on.

3 Turn the security key to the Eject position again to eject the computer from the port replicator assembly.

Using a PC Card

You can insert a Type I and Type II PC Card into either the upper slot or the lower slot. If you are using a Type III PC Card, you can insert it only into the lower slot.

Note

In the Windows 95, Windows NT, Windows 3.1, or DOS environment, you need to install PC Card support software *after* docking your computer to the port replicator assembly. If you have already installed the PC Card support software, uninstall it and then reinstall it after you dock your computer to the port replicator assembly.

PC Card Support

The following table shows the relationship between functions and operating systems:

Function	Windows 98	Windows 95	Windows NT 4.0	Windows 3.1	OS/2	DOS
PCMCIA Rel. 2	Yes	Yes	Yes	Yes	Yes	Yes
CardBus	Yes	Yes	No	No	No	No
Notes:						

Notes:

1. PCMCIA Release 2.1 support by preload.
2. CardBus support by preload.
3. PC Card Director supports PCMCIA Release 2.1.

Installing the Software

This section describes how to install the device driver and the PROSet program for Windows 98, Windows 95, or Windows NT. After docking your computer to the port replicator assembly, go to the appropriate section according to the operating system you are using.

Note: You might be prompted to install the display driver during the device driver installation. Exit the window by clicking on **OK** and then **Cancel**. You need to customize the display setting after you have installed the device driver.

For Windows 98, go to the following section.
For Windows 95, go to "Installing the Device Driver for Windows 95" on page 1-12.
For Windows NT, go to "Installing the Device Driver for Windows NT 4.0" on page 1-16.

For any other operating system, see the README file in the Advanced EtherJet Feature Diskette.

Installing the Device Driver for Windows 98

Note: The computer might recognize a **82557-based PCI Ethernet** device driver. You need to install the device driver supplied on the Advanced EtherJet Feature Diskette, nonetheless, according to following steps.

When you dock your computer to the port replicator assembly for the first time and power on, the message "Add New Hardware Wizard" appears. To install the device driver for Windows 98, do as follows:

1 If the "Add New Hardware Wizard" appears, go to the next step.

If the "Add New Hardware Wizard" message does not appear, go to "Installing the Driver If the Message Does Not Appear" on page 1-14.

2 When the message "This wizard searches for new drivers for: Intel 8255x-based PCI Ethernet Adapter (10/100)" appears, click on **Next**.

3 Click on **Search for the best driver for your device**.

4 Click on **Next**.

5 Make sure there is a check mark in the **Floppy disk drive** check box.

6 Insert the Advanced EtherJet Feature Diskette into the diskette drive.

7 Click on **Next**.

8 Click on **One of the other drivers**.

9 Click on **View List...**

10 Click on **Intel EtherExpress PRO PCI Adapter**.

11 Click on **OK**.

12 Click on **Next**.

13 When the message "Windows driver file search for new device: Intel EtherExpress PRO PCI Adapter" appears, click on **Next**.

14 Follow the instructions on the screen.

15 When the computer prompts you to specify the drive that the adapter device driver is in, type A:\ and click on **OK**.

16 Click on **Finish**.

17 Remove the diskette from the diskette drive, and then reboot your computer to make the changes effective.

Installing the Device Driver for Windows 95

If you are using Windows 95 OSR0 or OSR1, go to "For Windows 95 OSR0 or OSR1" on page 1-13.

If you are using Windows 95 OSR2.1 or OSR2.5 (hereafter called OSR2.*x*), go to "For Windows 95 OSR2.x" on page 1-13.

Your Version of Windows 95

You can check which version of Windows 95 you are using by doing the following:

1. Click on **Start**, move the cursor to **Settings**, and then click on **Control Panel**.
2. Double-click on **System**.

The following window appears:

You can check the version in this window. Read the numbers under "System."

4.00.950 means that it is Windows 95 OSR0.
4.00.950a means that it is Windows 95 OSR1.
4.00.950B means that it is Windows 95 OSR2.1.
4.00.950C means that it is Windows 95 OSR2.5.

For Windows 95 OSR0 or OSR1: When you dock your computer to the port replicator assembly and power it on for the first time, the message "New Hardware Found" appears.

1 If the message "New Hardware Found" appears. go to the next step.

   If the message does not appear, go to "Installing the Driver If the Message Does Not Appear" on page 1-14.

2 Click on **Driver from disk provided hardware manufacturer**, and click on **OK**.

   The "Install From Disk" window appears.

3 Insert the Advanced EtherJet Feature Diskette into the diskette drive.

4 When the computer prompts you to specify the drive that the device driver is in, type A:\

5 Click on **OK**.

6 Follow the instructions on the screen.

7 When the computer prompts you to specify the drive that the adapter device driver is in, type A:\

8 Follow the instructions on the screen.

9 Remove the diskette from the diskette drive, and then reboot your computer to make the changes effective.

For Windows 95 OSR2.x: When you dock your computer to the port replicator assembly and power it on for the first time, the message "New Hardware Found" appears.

1 If the message "New Hardware Found" appears, go to the next step.

   If the message does not appear, go to "Installing the Driver If the Message Does Not Appear" on page 1-14.

2 When the "This wizard will complete the installation of: PCI Ethernet Controller" message appears, insert the Advanced EtherJet Feature Diskette into the diskette drive.

3 Click on **Next**.

4 When the "Windows found the following updated driver for this device: Intel EtherExpress PRO PCI Adapter" message appears, click on **Finish**.

5 When the computer prompts you to specify the drive that the device driver is in, type A:\

6 Click on **OK**.

7 Follow the instructions on the screen.

8 Remove the Advanced EtherJet Feature Diskette from the diskette drive, and then reboot your computer to make the changes effective.

The PROSet Program: The PROSet program allows you to test the LAN adapter in the PC Card Enabler. It can also display the computer resources that are assigned to the LAN adapter in the PC Card Enabler. To install the program, do as follows:

1 Insert the Advanced EtherJet Feature Diskette into the diskette drive.

2 From **My Computer** or Windows Explorer, double-click on the **3½ Floppy [A:]** icon.

3 Place the cursor on the **PROSet** icon in the root directory of the diskette, and click the right mouse button.

4 Click on **Install**.

5 Follow the instructions on the screen.

6 After the installation of the adapter's device driver has finished, run PROSet:

  a Click on **Start**, move the cursor to **Settings**, and then click on **Control Panel**.

  b Double-click on the **PROSet** icon.

  The PROSet program examines your computer and displays the PROSet window. This window shows the I/O address, interrupt, and Ethernet address.

  c To run the test, click on **Test**.

Changing the Card Parameters: To change the card parameters, do as follows:

1 Click on **Start**, move the cursor to **Settings**, and then click on **Control Panel**.

2 Double-click on **Network**.

3 Click on **Intel EtherExpress PRO PCI Adapter**.

4 Click on the **Properties** button.

5 Change any parameter you wish.

  For information on the parameters, see "Advanced Configuration Parameters" on page 1-17.

Installing the Driver If the Message Does Not Appear

If the "New Hardware Found" message does not appear and you cannot connect to the network, make sure that the new adapter is set up correctly as follows:

1 Click on **Start**, move the cursor to **Settings**, and then click on **Control Panel**.

2 Double-click on **System**.

3 Click on the **Device Manager** tab.

4 Double-click on **Network adapters** and make sure the new adapter (Intel EtherExpress PRO PCI Adapter) is present in the list. If it is, skip the remaining steps.

If the new adapter is not in the list, go to the next step.

5 If you use Windows 98 and the Intel 8255x-based PCI Ethernet Adapter (10/100) has already been installed, do the following, otherwise, go to step 6.

   a. Double-click on **Intel 8255x-based PCI Ethernet Adapter (10/100)**.
   b. Click on the **Driver** tab.
   c. Click on **Update Driver...**
   d. Return to the step 2 on page 1-11 and follow the instructions.

6 Double-click on **Other Devices** in the area.

7 Double-click on **PCI Ethernet Controller**.

8 Click on the **Driver** tab; then click on **Update Driver...**.

If you are using Windows 95 OSR0, go to the next step.

If you are using Windows 95 OSR2.x, go to step 2 on page 1-13 (in the "For Windows 95 OSR2.x" on page 1-13).

If you are using Windows 98, go to step 2 on page 1-11

9 Click on **Network Adapter**, and then click on **OK**.

10 Click on **Have Disk...**

11 Insert the Advanced EtherJet Feature Diskette into the diskette drive, and click on **OK**.

12 Follow the instructions on the screen.

Installing the Device Driver for Windows NT 4.0

1 Insert the Advanced EtherJet Feature Diskette into the diskette drive.

2 Click on **Start**, move the cursor to **Settings**, and then click on **Control Panel**.

3 Double-click on **Network**.

4 Click on the **Adapter** tab.

5 Click on **Add...**

Attention

Do not select any adapter in the list that appears.

---

6 Click on **Have Disk**.

7 Type `A:\` and click on **OK**.

Follow the instructions on the screen. When the installation finishes, the new network adapter name appears in the list.

8 Select the adapter you installed by clicking on it.

9 Click on **OK**.

10 Click on the **Properties** button to run the PROSet program.

You can see the the adapter configuration or test the diagnostics.

11 Click on **OK** in the main PROSet window to return to Windows NT.

12 Click on **Close**.

If you have installed TCP/IP, its configuration window appears.

13 Reboot your computer to make the new setting effective.

The PROSet Program: The PROSet program allows you to test the LAN adapter in the PC Card Enabler. It can also resolve some issues that result from changing or updating a LAN adapter. To run the PROSet program, do as follows:

1 Click on **Start**, move the cursor to **Settings**, and then click on **Control Panel**.

2 Double-click on the **PROSet** icon.

If you want to change the parameters of the card, click on **Change** and change the parameters.

For more information on the parameters, see "Advanced Configuration Parameters" on page 1-17.

Note: You need to run the PROSet program when the condition that the adapter is receiving or sending data. Otherwise, an error might be detected even if the system works correctly.

Advanced Configuration Parameters

DUPLEX MODE	Enables you to select how the LAN adapter sends and receives packets over the network. An ordinary LAN adapter can perform only one operation at a time (half-duplexing), whereas the LAN adapter in the PC Card Enabler can send and receive packets at the same time (full-duplexing).
	
	Full duplexing requires a full duplex switch. The PC Card Enabler supports auto-negotiate, full duplex, and half duplex at 10 Mbps or 100 Mbps.
	
	Auto duplex:
	    The LAN adapter negotiates with the hub how to send or receive packets, either full or half duplex. You need to use a hub that supports auto-negotiation (known as Nway).
	
	Full duplex:
	    The LAN adapter sends and receive packets at the same time. This improves the performance of your LAN adapter. Set duplex mode to full duplex only if you have a duplex hub.
	
	Half duplex:
	    The LAN adapter performs one operation at a time, either send or receive.

ADVANCED TECHNOLOGY	Customizes the LAN adapter to the respective operating system by downloading microcode to the controller. This improves performance and minimizes CPU utilization.

SPEED	Sets the speed that you use the LAN adapter on the Ethernet wire: 10 Mbps, 100 Mbps, or auto detect. In the auto detect mode, the LAN adapter detects the speed as 100 Mbps if it is possible. If it is not possible, it detects 10 Mbps. If you are using a crossover cable connected to another LAN adapter, set the speed to either 10 Mbps or 100 Mbps.
COALESCE BUFFERS	Specifies number of memory buffers available to the driver in case the driver runs out of available map registers. This area is also used when a packet consists of many fragments.
RECEIVE BUFFERS	Specifies the number of buffers used by the driver when copying data to the protocol memory.
MAP REGISTERS	Specifies how many map registers (system resources used in physical-to-virtual address conversion with bus mastering cards) should be allocated to the driver.
TRANSMIT CONTROL BLOCKS	Specifies how many transmit control buffers the driver allocates for card use. This corresponds to how many outstanding packets the driver can have in its *send* queue.
ADAPTIVE TRANSMIT THRESHOLD	Dynamically optimizes the point at which early transmit cycles are run. This results in higher performance but may generate an occasional underrun. To eliminate underrun, set this parameter to OFF.

For more details, see the README file in the Advanced EtherJet Feature Diskette.

Notes for Using the PC Card Enabler with Advanced EtherJet Feature

A "No docking station" message might appear on the status bar of the ThinkPad Configuration program window if you click on **Docking Station**, but you can disregard this message.

The LAN adapter in this PC Card Enabler has a built-in on-board ROM.

To change or update the Flash module, do the following:

1. Insert the Advanced EtherJet Feature Flash Utility Diskette into the diskette drive.

2. Shut down and reboot the system.

3. When you are prompted to specify an action, type E to erase the current code.

4. Press **Enter** to reboot the system.

5. When you are prompted to specify an action, type D for DHCP, R for RPL, E for erase, or C for cancel.

For more details, see the README file in the Advanced EtherJet Feature Flash Utility Diskette.

The Advanced EtherJet Feature Diskette includes information on the LAN adapter. This information is applicable for the PC Card Enabler except for the information on OS/2 ODI and AFT. The PC Card Enabler does not support OS/2 ODI or AFT.

Do not enter hibernation mode, because the Ethernet network driver does not support hibernation mode.

Under the Ethernet network environment, you can use suspend mode when you are using the NDIS3 driver (E100.SYS) on Windows 95 OSR0 or the NDIS4 driver on Windows 95 OSR2 or Windows 98. Do not put a check mark in the **Suspend/Hibernate while docked** check box in the system management subwindow of the ThinkPad Configuration program.

Part 2. Troubleshooting

Problem	Action
The computer hangs when you power on or resume operation.	Make sure that: The AC Adapter is connected to the port replicator. The docking indicator of the PC Card Enabler is on. The computer is securely attached to the port replicator. The PC Card Enabler is securely attached to the port replicator. Remove the PC Card Enabler and power on the computer. If there is still a problem, have the computer or the port replicator serviced.
PC Card slots are unusable.	Make sure that: The AC Adapter is connected to the port replicator. The docking indicator of the PC Card Enabler is on. The computer is securely attached to the port replicator. The PC Card Enabler is securely attached to the port replicator. Run the diagnostic test for the PCMCIA slot. Refer to the *User's Reference* of your computer. If there is still a problem, have the PC Card Enabler serviced.
An installed PC Card does not work.	Make sure that: The PC Card is correctly installed. The PC Card can be used without a problem when installed directly in your computer. If not, pursue the problem using the troubleshooting guide in the *User's Reference* of your computer. The PC Card is correctly set up, including computer resource assignments and device driver installation. Run the diagnostic test for the PCMCIA slot. Refer to the *User's Reference* of your computer.

Problem	Action
The computer shuts down when the PC Card Enabler is connected to the port replicator.	Do the following: 1. Make sure that you are using the 56W AC Adapter. 2. Remove any PC Card you are not using. 3. Disable functions you are not using. If there is still a problem, have the PC Card Enabler serviced.

If the TCP/IP protocol is installed, even when DHCP doesn't exist on the network, booting the system takes a long time.	If your computer is connected to the network, do one of the following:
	
	– If you use the TCP/IP, specify the IP address.
	– If you do not use the TCP/IP, remove the TCP/IP protocol as follows:
	  1. Click on **Start**.
	  2. Move the cursor to **Settings**, and click on **Control Panel**.
	  3. Double-click on **Network**
	  4. Click on the **TCP/IP** icon.
	  5. Click on **Intel EtherExpress PRO PCI Adapter**.
	  6. Click on the **Remove** button.
	  7. Click on **OK**.
	
	If your computer is not connected to the network, disable the network drive.

When you are using the port replicator assembly, resuming normal opertation from hibernation or suspend mode takes a long time.	This is not the problem. If you have not connect the network cable, the computer queries the Ethernet until the timeout timer is reached. Connect the network cable if you want to use the Ethernet. If you are not using the network, disable the Ethernet port as follows: 1. Double-click on the **System** icon in the **Control Panel**. 2. Click on the **Device Manager** tab. 3. Double-click on **Network Adapter**. 4. Double-click on **Intel 8255x-based PCI Ethernet Adapter (10/100)**. 5. Put a check mark in the **Disable in this hardware profile** check box by clicking on it. 6. Click on **OK**. 7. Close all windows. 8. Restart the computer.

Problem	Action
An Ethernet function does not work	Make sure of the following: The Ethernet cable is installed properly. The network cable must be securely attached at both RJ-45 connections. If you're directly connecting two systems (no hub), use a crossover cable. Make sure the correct driver is installed. – **For Windows 98 or Windows 95** Make sure the driver is loaded and the protocols are bound. Check the list in the "Device Manager" window for trouble indicators (an X or ! symbol). – **For Windows NT** Make sure the driver is loaded and the protocols are bound. Check the "Network Bindings" dialog box. Check the Event viewer for error messages. If you are attaching to a NetWare network, check your frame type and verify that NetWare client software has been installed. – **For DOS or Windows 3.1 for Novell NetWare** If you're replacing an existing adapter, make sure the LINK statement in your configuration NET.CFG is correct for the net adapter. Verify that the frame type in your NET.CFG file matches your network. If setting up a server, check your LOAD and BIND statements. Make sure the switch port and the adapter have the same duplex setting. If you configured the adapter for full duplex, make sure the switch port is also configured for full duplex. Setting the wrong duplex mode can degrade performance, cause data loss, or cause lost connections. Test the adapter by running diagnostics. For DOS or Windows 3.1, run **Setup** on the Advanced EtherJet Feature Diskette. For Windows NT, Windows 95, and Windows 98, run PROSet by double-clicking the **PROSet** icon in the **Control Panel**. Click on **Help** from the main PROSet window to get complete diagnostics information and instructions. **Note:** You need to run the PROSet program when the adapter is receiving or sending data. Otherwise, an error might be detected even if the system works correctly.

Appendix A. Help and Service Information

If you have questions about your new Options by IBM product, or require technical assistance, visit the IBM Personal Computing Support Web site at http://www.pc.ibm.com/support. For information about IBM, IBM PC products, or Options by IBM visit the IBM Personal Computing Web site at http://www.pc.ibm.com. Additionally, you can receive information from the IBM Automated Fax system at 1-800-426-3395 (in Canada, 1-800-465-3299), or from the Personal Systems Group Bulletin Board System (PSG BBS) at 1-919-517-0001. You can also get help and information through the IBM PC HelpCenter, 24 hours a day, seven days a week. Response time might vary depending on the number and nature of the calls received.

Marketing, installation, and configuration support through the HelpCenter will be withdrawn or made available for a fee, at IBM's discretion, 90 days after the option has been withdrawn from marketing. Additional support offerings, including step-by-step installation assistance, are available for a nominal fee.

During the warranty period, assistance for replacement or exchange of defective components is available. In addition, if your IBM option is installed in an IBM computer, you might be entitled to service at your location. Your technical support representative can help you determine the best alternative.

Step 1. Problem Solving

You may be able to solve the problem yourself. Before calling the HelpCenter, please prepare for the call by following these steps:

1. If you are having installation or configuration problems, refer to the detailed sections on installation found in this manual, and review any README.TXT files found on the installation diskettes.

2. Visit the Personal Computing Support Web site specific to the model of option you have purchased. Updated installation instructions, hints and tips, or updated system-specific notes are often published in this section. You might find that later device drivers are available that will improve the performance and compatibility for your new option.

    If you are installing this option in an IBM computer, also visit the applicable support Web page for that computer model. These pages might also contain useful hints and tips related to installation of this option and might refer to BIOS or device-driver updates required for your computer model. If you are installing the option in a non-IBM computer, refer to the manufacturer's Web site.

3. Uninstall and then reinstall the option. During the uninstallation process, be sure to remove any files that were installed during the previous installation. Many IBM options include uninstallation programs.

4. Check all cabling to be sure that it is correct as shown in this manual. When you connect a cable to a cable connector, pay close attention to the colored stripes along the edge of the cable, and ensure that they are matched with PIN 1 on both the computer connector and the option connector.

5. If your option contains jumpers or switches, be sure their positions and orientation match the instructions in this manual.

Step 2. Preparing for the Call

To assist the technical support representative, have available as much of the following information as possible:

1. Option name
2. Option number
3. Proof of purchase
4. Computer manufacturer, model, serial number (if IBM), and manual
5. Exact wording of the error message (if any)
6. Description of the problem
7. Hardware and software configuration information for your system

If possible, be at your computer. Your technical support representative might want to walk you through the problem during the call.

Step 3. Placing the Call to IBM

If you call 90 days or more after the date of withdrawal or after your warranty has expired, you might be charged a fee.

For the support telephone number and support hours by country, refer to the following table or to the enclosed technical support insert. If the number is not provided, contact your IBM reseller or IBM marketing representative.

Support 24 hours a day, 7 days a week	
Canada	1-800-565-3344
U.S.A. or Puerto Rico	1-800-772-2227

Additional Technical Support Resources

Online technical support is available during the life of your product. Online assistance can be obtained through the Personal Computing Support Web site, the PSG Electronic Bulletin Board System (BBS), and the IBM Automated Fax System.

Online Technical Support	
IBM Personal Computing Support Web site	**http://www.pc.ibm.com/support**
IBM PSG BBS	1-919-517-0001
IBM Automated Fax System	1-800-426-3395 1-800-465-3299 (in Canada)

Appendix B. Product Warranty

The following warranty information applies to products purchased in the United States, Canada, and Puerto Rico. For warranty terms and conditions for products purchased in other countries, see the enclosed warranty insert, or contact your IBM reseller or IBM marketing representative.

International Business Machines Corporation   Armonk, New York 10504

Statement of Limited Warranty

The warranties provided by IBM in this Statement of Limited Warranty apply only to Machines you originally purchase for your use, and not for resale, from IBM or your reseller. The term "Machine" means an IBM machine, its features, conversions, upgrades, elements, or accessories, or any combination of them. Unless IBM specifies otherwise, the following warranties apply only in the country where you acquire the Machine. If you have any questions, contact IBM or your reseller.

Machine: PC Card Enabler with Advanced EtherJet Feature

Warranty Period*: One year

*Contact your place of purchase for warranty service information.

Production Status
Each Machine is manufactured from new parts, or new and used parts. In some cases, the Machine may not be new and may have been previously installed. Regardless of the Machine's production status, IBM's warranty terms apply.

The IBM Warranty for Machines
IBM warrants that each Machine 1) is free from defects in materials and workmanship and 2) conforms to IBM's Official Published Specifications. The warranty period for a Machine is a specified, fixed period commencing on its Date of Installation. The date on your receipt is the Date of Installation, unless IBM or your reseller informs you otherwise.

During the warranty period IBM or your reseller, if authorized by IBM, will provide warranty service under the type of service designated for the Machine and will manage and install engineering changes that apply to the Machine.

For IBM or your reseller to provide warranty service for a feature, conversion, or upgrade, IBM or your reseller may require that the Machine on which it is installed be 1) for certain Machines, the designated, serial-numbered Machine and 2) at an engineering-change level compatible with the feature, conversion, or upgrade. Many of these transactions involve the removal of parts and their return to IBM. You represent that all removed parts are genuine and unaltered. A part that replaces a removed part will assume the warranty service status of the replaced part.

If a Machine does not function as warranted during the warranty period, IBM or your reseller will repair it or replace it with one that is at least functionally equivalent, without charge. The replacement may not be new, but will be in good working order. If IBM or your reseller is unable to repair or replace the Machine, you may return it to your place of purchase and your money will be refunded.

If you transfer a Machine to another user, warranty service is available to that user for the remainder of the warranty period. You should give your proof of purchase and this Statement to that user. However, for Machines which have a lifetime warranty, this warranty is not transferable.

Warranty Service

To obtain warranty service for the Machine, you should contact your reseller or call IBM. In the United States, call IBM at **1-800-772-2227**. In Canada, call IBM at **1-800-565-3344**. You may be required to present proof of purchase.

IBM or your reseller will provide certain types of repair and exchange service, either at your location or at IBM's or your reseller's service center, to restore a Machine to good working order.

When a type of service involves the exchange of a Machine or part, the item IBM or your reseller replaces becomes its property, and the replacement becomes yours. You represent that all removed items are genuine and unaltered. The replacement may not be new, but will be in good working order and at least functionally equivalent to the item replaced. The replacement assumes the warranty service status of the replaced item. Before IBM or your reseller exchanges a Machine or part, you agree to remove all features, parts, options, alterations, and attachments not under warranty service. You also agree to ensure that the Machine is free of any legal obligations or restrictions that prevent its exchange.

You agree to:

1. obtain authorization from the owner to have IBM or your reseller service a Machine that you do not own; and
2. where applicable, before service is provided —
   a. follow the problem determination, problem analysis, and service request procedures that IBM or your reseller provide,
   b. secure all programs, data, and funds contained in a Machine, and
   c. inform IBM or your reseller of changes in a Machine's location.

IBM is responsible for loss of, or damage to, your Machine while it is 1) in IBM's possession or 2) in transit in those cases where IBM is responsible for the transportation charges.

Extent of Warranty

IBM does not warrant uninterrupted or error-free operation of a Machine.

The warranties may be voided by misuse, accident, modification, unsuitable physical or operating environment, improper maintenance by you, removal or alteration of Machine or parts identification labels, or failure caused by a product for which IBM is not responsible.

THESE WARRANTIES REPLACE ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THESE WARRANTIES GIVE YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM JURISDICTION TO JURISDICTION. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF EXPRESS OR IMPLIED WARRANTIES, SO THE ABOVE EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU. IN THAT EVENT SUCH WARRANTIES ARE LIMITED IN DURATION TO THE WARRANTY PERIOD. NO WARRANTIES APPLY AFTER THAT PERIOD.

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2. the amount of any other actual direct damages or loss, up to the greater of U.S. $100,000 or the charges (if recurring, 12 months' charges apply) for the Machine that is the subject of the claim.

UNDER NO CIRCUMSTANCES IS IBM LIABLE FOR ANY OF THE FOLLOWING:

1. THIRD-PARTY CLAIMS AGAINST YOU FOR LOSSES OR DAMAGES (OTHER THAN THOSE UNDER THE FIRST ITEM LISTED ABOVE);

2. LOSS OF, OR DAMAGE TO, YOUR RECORDS OR DATA; OR

3. SPECIAL, INCIDENTAL, OR INDIRECT DAMAGES OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS OR SAVINGS), EVEN IF IBM OR YOUR RESELLER IS INFORMED OF THEIR POSSIBILITY. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU.

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Electronic Emission Notice

Federal Communications Commission (FCC) Statement

IBM ThinkPad PC Card Enabler with Advanced EtherJet Feature (05K5339)

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 equipment into an outlet on a circuit different from that to which the receiver is connected.
Consult an IBM authorized dealer or service representative for help.

IBM is not responsible for any radio or television interference caused by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

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.

Responsible Party:

International Business Machines Corporation
New Orchard Road
Armonk, NY 10504
Telephone 1-919-543-2193

Industry Canada Class B Emission Compliance Statement

This Class B digital apparatus complies with Canadian ICES-003.

Avis de conformité à la réglementation d'Industrie Canada

Cet appareil numérique de la classe B est conform à la norme NMB-003 du Canada.

Deutsche EMV-Direktive (electromagnetische Verträglichkeit)

Dieses Gerät ist berechtigt in Übereinstimmung mit dem deutschen EMVG vom 9.Nov.92 das EG-Konformitätszeichen zu führen.

Der Aussteller der Konformitätserklärung ist die IBM UK, Greenock.

Dieses Gerät erfüllt die Bedingungen der EN 55022 Klasse B.

European Union - Emission Directive

This product is in conformity with the protection requirements of EU Council Directive 89/366/ECC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

IBM can not accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-IBM option cards.

This product has been tested and found to comply with the limits for Class B Information Technology Equipment according to CISPR 22 / European Standard EN 55022. The limits for Class B equipment were derived for typical residential environments to provide reasonable protection against interference with licensed communication devices.

Union Européenne - Directive Conformité électromagnétique

Ce produit est conforme aux exigences de protection de la Directive 89/336/EEC du Conseil de l'UE sur le rapprochement des lois des États membres en matière de compatibilité électromagnétique.

IBM ne peut accepter aucune responsabilité pour le manquement aux exigences de protection résultant d'une modification non recommandée du produit, y compris l'installation de cartes autres que les cartes IBM.

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Unione Europea - Directiva EMC
(Conformidad électromagnética)

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IBM no puede aceptar responsabilidad alguna si este producto deja de satisfacer dichos requisitos de protección como resultado de una modificación no recomendada del producto, incluyendo el ajuste de tarjetas de opción que no sean IBM.

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Union Eurpea - Normativa EMC

Questo prodotto è conforme alle normative di protezione ai sensi della Direttiva del Consiglio dell'Unione Europea 89/336/CEE sull'armonizzazione legislativa degli stati membri in materia di compatibilità elettromagnetica.

IBM non accetta responsabilità alcuna per la mancata conformità alle normative di protezione dovuta a modifiche non consigliate al prodotto, compresa l'installazione di schede e componenti di marca diversa da IBM.

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