IA300/IA310

ADSL PCI Modem Card

Installation Guide

Microsoft Windows 95, 98, ME, NT 4.0, 2000 and XP

Driver Version V2.3.4 / Rev.001

TABLE OF CONTENTS

CONGRATULATIONS!

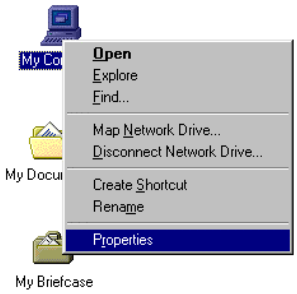
You are about to accelerate into ADSL technology. Your new ADSL modem card is an internal Asymmetric Digital Subscriber Line (ADSL) PCI modem card, which conveniently plugs into your computer system. The modem connects directly to your telephone line via a standard connector.
This guide is designed to walk you through installation of your ADSL Modem card in the easiest and quickest way possible. Please follow the instructions carefully.

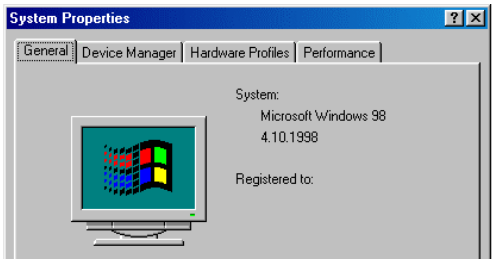
Model: IA300

Model: IA310

CHAPTER 1. Know your PC's Operating System

You will need to know the exact version of Microsoft Windows installed in your computer. If you do not know or are unsure, please proceed as follows to determine your version of the Microsoft Operating System.
On your desktop, Right-click **My Computer**. Then select **Properties**. The version number of the Microsoft Windows Operating System installed in your computer will be displayed on the **General** tab. Refer to the following table for more detailed information.





Windows OS	System Properties Description	Release (Microsoft Web)
Win 95A	4.00.950A	Windows 95 OSR1
Win 95B	4.00.950B	Windows 95 OSR2
Win 98	4.10.1998	Window 98
Win 98SE	4.10.2222A 2nd Edition	Windows 98 2nd Edition
Win ME	4.90.3000	Windows Millenium Edition
Win NT	4.00.1381	Windows NT 4.0
Win 2000	5.00.2195	Windows 2000
Win XP	Version 2002	Windows XP Professional

If you have questions regarding your PC system and the Microsoft Windows Operating System, please contact your original PC manufacturer or Microsoft for assistance.

Before Installing the ADSL PCI Modem Card, it is important to verify that the ADSL data port RJ-11 jack is configured so that the center two pins, pins 3 and 4, are used for ADSL data, otherwise the ADSL PCI modem card will not make a proper connection. If the ADSL data port installation uses pins 2 and 5 for data, then a wiring converter will be required. Do not alter or remove a wiring converter if present. Consult with your ADSL service provider regarding a wiring converter or before attempting any wiring changes.

CHAPTER 2. Determine your Connection Settings

You need to know your PC systems **Windows OS** and **Internet Protocol** supplied by your ADSL service provider. Refer to the following chart for your **ADSL Driver.**

	Protocol Selection
RFC1483	⇨ Bridged Ethernet over ATM
RFC1577	⇨ Classical Internet Protocol over ATM
RFC2364	⇨ Point-to-Point Protocol over ATM
RFC2516	⇨ Point-to-Point Protocol over Ethernet

ADSL Driver Support	Windows 95A & 95B	Windows 98 & 98SE	Windows ME	Windows NT4.0	Windows 2000	Windows XP
RFC1483	Yes	Yes	Yes	Yes	Yes	Yes
RFC1577	Yes	Yes	Yes	Yes	Yes	Yes
RFC2364	Yes	Yes	Yes	Yes	Yes	Yes
RFC2516	Yes	Yes	Yes	Yes	Yes	Yes

Having determined the ADSL Driver you will be installing, you now need to gather the connection information supplied by your ADSL service provider.

VPI value:_____

VCI value:_____

Framing: ❑ VC/MUX ❑ LLC/SNAP

Mode: ❑ ANSI T1.413 ❑ ITU G.lite ❑ ITU G.dmt

For RFC 1483 or 1577	For RFC 2364 or 2516
Host:	**User Name:**
Domain:	**Password:**
Gateway:	**Host or IP Address:**
IP Address:	
Subnet Mask:	
DNS or server address:	

CHAPTER 3. Install the ADSL Modem Card

Caution: To avoid possible damage to your modem card, touch the metal chassis of your PC system to remove static charge from your person, and then remove your ADSL modem card from the protective anti-static bag.

1. Shut down your computer and **switch the power off**.

2. **Unplug the power cord** for your computer from the electrical outlet.

3. **Remove the cover** from your systems chassis (see your PC manufacturer's manual).

4. **Unscrew "slot cover bracket"** from an unused PCI (usually white in color) slot.

5. Gently and evenly **insert the ADSL PCI modem card** into your empty PCI slot.

6. Make sure the card is firmly seated, and then **secure the card with the bracket screw**.

7. **Replace the cover** of your computer system.

8. **Connect the ADSL/phone line** to the connector **LINE** port on the modem card and plug the other end of the cable into your ADSL/phone service.

9. Connect the Telephone cord to the connector **PHONE** port on the modem card and plug the other end of the cord into your telephone.

CHAPTER 4. Install the Drivers and Make a Connection

You will be installing drivers and then proceeding to make an Internet connection. This process requires you to enter in information as prompted by the Microsoft Installation Wizard.

> **NOTE**:
> You may need the Microsoft Windows Operating System installation files (CAB files) to complete the installation. The CAB files are contained in the Microsoft's system CD-ROM. Some systems may have already installed the CAB files to the hard drive, but you should have the Microsoft Windows CD-ROM handy just in case.

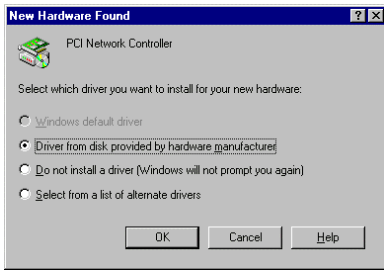
Proceed now to the installation procedure for the Windows Operating System installed in your computer.

Windows 95A – Driver Installation

After installing the ADSL modem card, plug the power cable back into the PC system and turn the power on.

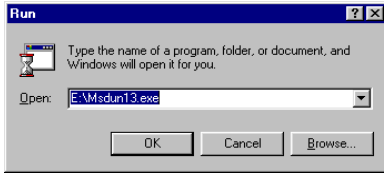
NOTE: Before you proceed to install drivers you will need to upgrade your Dial-Up Networking (DUN) application to version 1.3 or above. You can download the Microsoft DUN 1.3 program (file size: 2,356KB) from the address as following: **http://www.microsoft.com/windows95/downloads/contents/WURecommended/S_WUNetworking/dun13win95/license.asp**

1. After restart, the **New Hardware Found window** will detect the ADSL modem as a **PCI Network Controller.** At this time, **CANCEL** the **New hardware found** window**.**

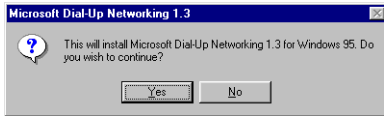


2. At your desktop, click **Start**, and then select **Run**.

3. The **Run** window appears. Click on **Browse** and proceed to locate and select the **Msdun13.exe** file. The **Msdun13.exe** appears in the Open box. Click **OK**.

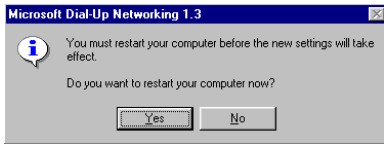


4. The **Microsoft Dial-Up Networking 1.3** window appears with the message: **This will install Microsoft Dial-Up Networking 1.3 for Windows 95. Do you wish to continue?** Click **Yes**.



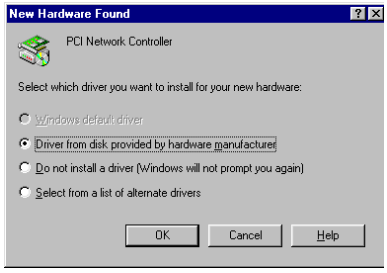
5. An **End-User License Agreement** will appear. To accept, click **Yes**.

6. Back in the **Microsoft Dial-Up Networking 1.3** window. You will be asked: **Do you want to restart your computer now?** Click **Yes**.



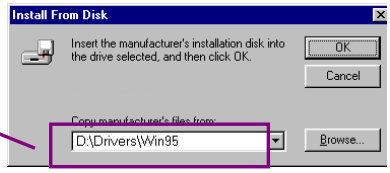
NOTE: You may need the Microsoft Windows Operating System installation files (CAB files) to complete the installation. The CAB files are contained in the Microsoft's system CD-ROM. Some systems may have already installed the CAB files to the hard drive, but you should have the CD-ROM handy just in case.

7. After your computer reboots, the **New Hardware Found** window will detect the ADSL modem card as a **PCI Network Controller.** Select the **Driver from disk provided by hardware manufacturer** option. Click **OK**.

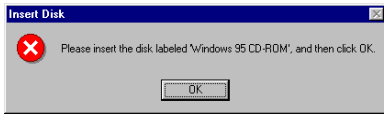


8. Insert the **ADSL Driver** CD-ROM into your systems CD drive.

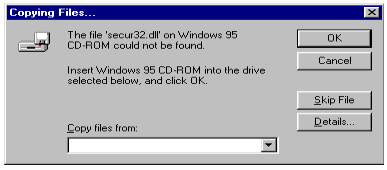
9. The **Install From Disk** window appears. Click **Browse** to locate the driver on your CD-ROM for the protocol supported by your ADSL provider: **RFC_1483, RFC_1577, RFC_2364 or RFC_2516** (The example uses "D" as the CD-ROM drive letter. Drive letters may vary.) Then click **OK**.



NOTE:
During the installation process you may be asked to insert your Windows 95 CD. Insert the **Windows 95 CD** into the CD drive and click **OK**.



NOTE:
If during the file copying process a file is reported as "not found" enter the path with the CD Drive letter and **:\Win95** (ex: D:\Win95).



10. At the conclusion of the ADSL modem driver installation, the **Add New Hardware Wizard** window appears and displays your newly installed **ITeX ADSL PCI NIC** software. Click **Finish**.

11. The **System Settings Change** window appears. For the PC system to set up the **ITeX ADSL PCI NIC**, a system **Restart** is required. Click **Yes**.

NOTE: After restarting the system, the **Diagnostic Tool** icon (See Appendix) is active and monitoring connectivity.

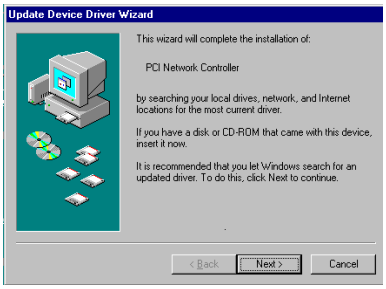
You must now set the ADSL configuration. **Go to page 15.**

Windows 95B – Driver Installation

After installing the ADSL modem card, plug the power cable back into the PC system and turn the power on.

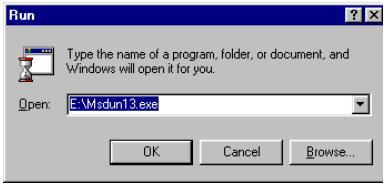
NOTE: Before you proceed to install drivers you will need to upgrade your Dial-Up Networking (DUN) application to version 1.3 or above. You can download the Microsoft DUN 1.3 program (file size: 2,356KB) from the address as following:
http://www.microsoft.com/windows95/downloads/contents/WURecommended/S_WUNetworking/dun13win95/license.asp

1. After restart, the **Update Device Driver Wizard** will detect the ADSL modem card as a **PCI Network Controller.** At this time, **CANCEL** the **Update Device Driver Wizard** window**.**

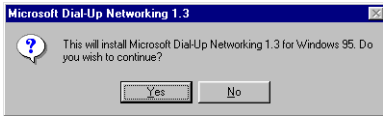


2. At your desktop, click **Star**t, and then select **Run**.

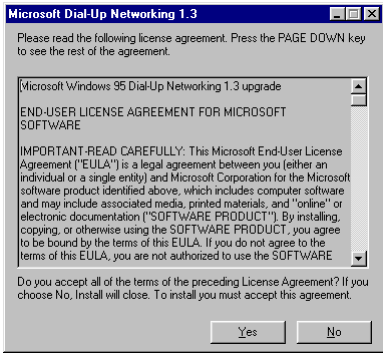
3. The **Run** window appears. Click on **Browse** and proceed to locate and select the **Msdun13.exe** file. The **Msdun13.exe** appears in the **Open** box. Click **OK**.



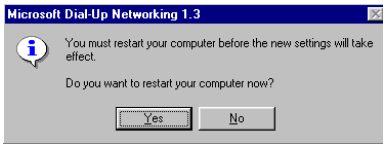
4. The **Microsoft Dial-Up Networking 1.3** window appears with the message: **This will install Microsoft Dial-Up Networking 1.3 for Windows 95. Do you wish to continue?** Click **Yes**.



5. An **End-User License Agreement** will appear. To accept, click **Yes**.



6. Back in the **Microsoft Dial-Up Networking 1.3** window. You will be asked: **Do you want to restart your computer now?** Click **Yes**.

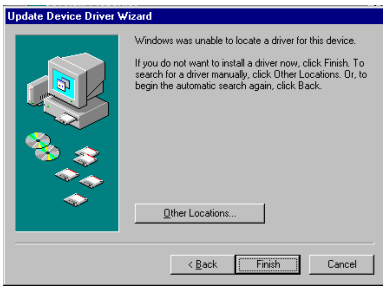


NOTE:
You may need the Microsoft Windows Operating System installation files (CAB files) to complete the installation. The CAB files are contained in the Microsoft's system CD-ROM. Some systems may have already installed the CAB files to the hard drive, but you should have the CD-ROM handy just in case.

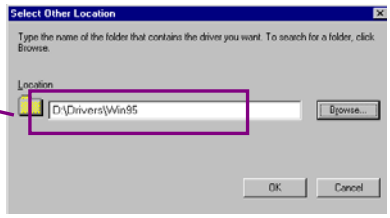
7. After your computer reboots, the **Update Device Driver Wizard** will detect the ADSL modem card as a **PCI Network Controller**, click **Next**.

8. Insert the **ADSL Driver** CD-ROM into you systems CD drive.

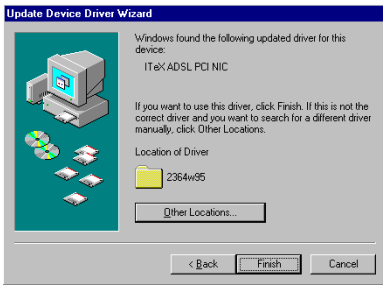
9. The **Update Device Driver Wizard** will appear and indicate "**Windows was unable to locate a driver for this device**". Click **Other Locations**.



10. The **Select Other Location window** appears. Click **Browse** to locate the driver on your CD-ROM for the protocol supported by your ADSL provider: **RFC_1483, RFC_1577, RFC_2364 or RFC_2516** (The example uses "D" as the CD-ROM drive letter. Your drive may have a different letter.) Then click **OK**.



11. The **Update Device Driver Wizard** will then find the **ITeX ADSL PCI NIC**. Click **Finish**.

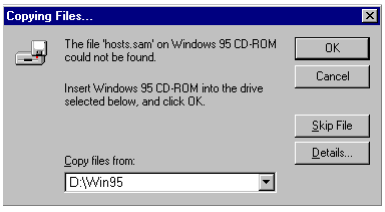


NOTE:

During the installation process you may be asked to insert your Windows 95 CD-ROM. Insert the **Windows 95 CD** into the drive and click **OK**.

NOTE:

If during the file copying process a file is reported as "not found" enter the path (CD Drive letter) and **:\Win95** (ex. **D:\Win95**)



12. At the conclusion of the ADSL modem driver installation, the **Add New Hardware Wizard** windows appears and displays your newly installed **ITeX ADSL PCI NIC** software. Click **Finish**.

13. The **System Settings Change** window appears. For the PC system to set up the **ITeX ADSL PCI NIC** driver, a system **Restart** is required. Click **Yes**.

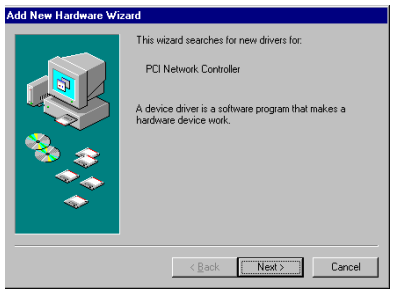
NOTE: After restarting the system, the **Diagnostic Tool** icon (See Appendix) is active and monitoring connectivity.

You must now set the ADSL configuration. **Go to page 15.**

Windows 98, 98SE – Driver Installation

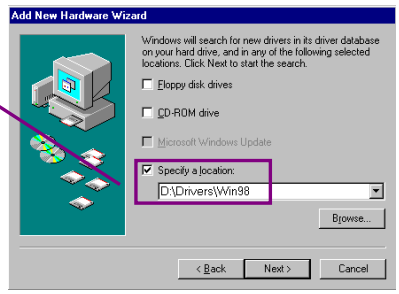
After installing the ADSL modem card, plug the power cable back into the PC system and turn the power on.

1. The **Add New Hardware Wizard** window will automatically appear to indicate that a new **PCI Network Controller** has been found. Click **Next**.



2. Still in the **ADD New Hardware Wizard**. You will be asked, **"What do you want Windows to do?"** Select the **Search for the best driver for your device** option then click on **Next**.
3. Insert the **ADSL Driver CD** into your systems CD-ROM drive.

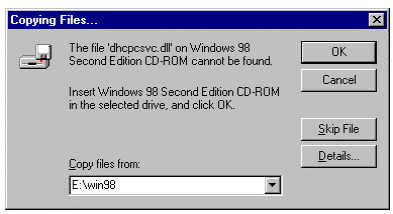
4. Select **Specify a location** and click **Browse** to locate the driver on your CD-ROM for the protocol supported by your ADSL provider: **RFC_1483, RFC_1577, RFC_2364 or RFC_2516** (The example uses "D" as the CD-ROM drive letter. Your drive may have a different letter.) Then click on **Next**.



5. The **Add New Hardware Wizard** will appear and indicate the **ITeX ADSL PCI NIC** has been recognized and will install a new driver. Click **Next**.

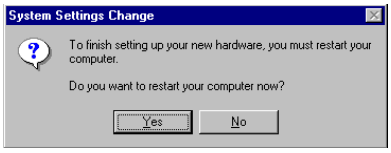
6. If prompted to insert your Windows CD, do so at this time, then click **OK.**

7. Enter the [CD drive Letter] and then **:\Win98** (e.g: **E:\Win98**) and click **OK**.



8. At the conclusion of the ADSL modem driver installation, the **Add New Hardware Wizard** window appears and displays your newly installed **ITeX ADSL PCI NIC** software.
Click **Finish.**

9. The **System Settings Change** window appears. For the PC system to set up the **ITeX ADSL PCI NIC** driver, a system **Restart** is required.
Click **Yes**.



NOTE:

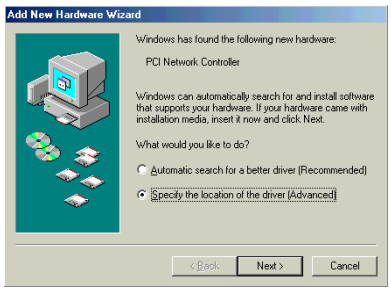
After restarting the system, the **Diagnostic Tool** icon (See Appendix) is active and monitoring connectivity.

You must now set the ADSL configuration. **Go to page 15.**

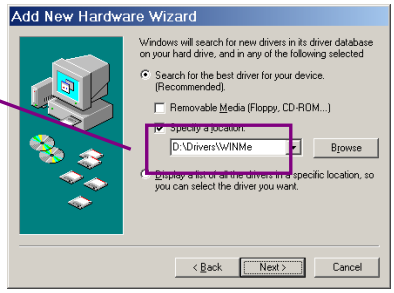
Windows ME – Driver installation

After installing the ADSL modem card, plug the power cable back into the PC system and turn the power on.

1. The **Add New Hardware Wizard** window will automatically appear to indicate that a new **PCI Network Controller** has been found.
   Select the **Specify the location of the driver (Advanced)** option. Click **Next**.

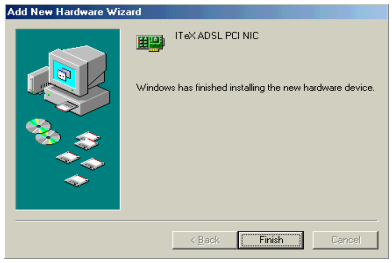


2. Select **Specify a location** and click **Browse** to locate the driver on your CD-ROM for the protocol supported by your ADSL provider: **RFC_1483, RFC_1577, RFC_2364** or **RFC_2516** (The example uses "D" as the CD-ROM drive letter. Drive letters may vary.) Then click on **Next**.

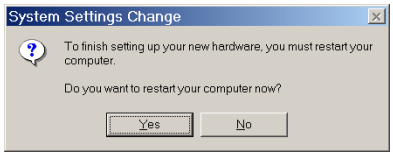


3. The **Add New Hardware Wizard** will appear and indicate **ITEX ADSL PCI NIC** has been recognized and will install a new driver. Click **Next**.

4. At the conclusion of the ADSL modem driver installation, the **Add New Hardware Wizard** s appear and indicate the **ITeX ADSL PCI NIC** has been recognized and will install a new driver. Click **Finish**.



5. The **System Setting Change** window appears. Click **Yes** to restart your PC system and to allow the new changes to take effect.

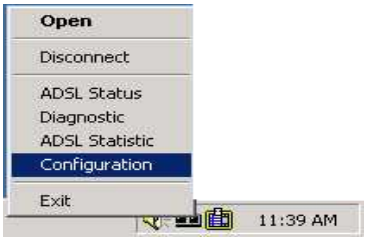


You must now set the ADSL configuration. **Go to page 15.**

Windows 95/98/ME – Setting the ADSL Configuration

For RFC 1483/1577/2364/2516

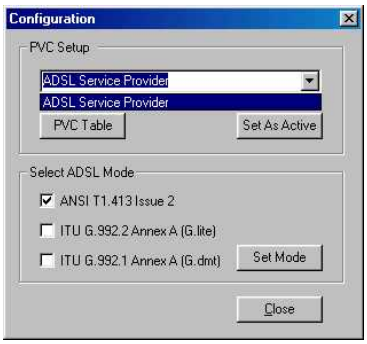
1. After your PC has rebooted, right-click on the **Diagnostic Tool Icon** (See Appendix), and select the **Configuration** option**.**



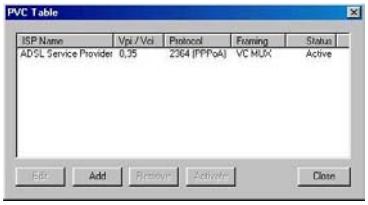
2. The **Configuration** window appears, scroll through the **PVC setup** section to locate the service you will be connecting to. Then click **Set As Active**.

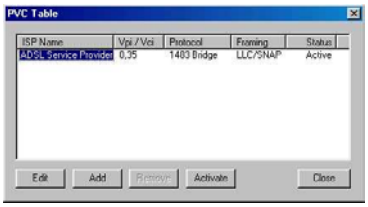
3. In the **Select ADSL Mode** section, select the mode(s) recommended by your ADSL service provider. Then click **Set Mode**.

4. When you have set both the **PVC Setup** and **ADSL Mode**, Click **Close**.



NOTE: To modify, add, or remove ISP settings from the **Configuration** window, in the **PVC Setup** section, click on the **PVC Table** button. The **PVC Table** window then appears for the Protocol you are using.





NOTE:
You may be asked if you want to restart your computer, if so click **Yes.**
If you are not asked, you need to restart your computer manually at this time.

You must now make an ADSL connection. **Proceed to the section for your protocol** you are using as follow:

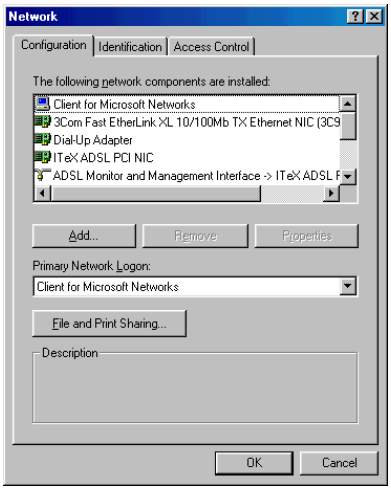
RFC1483:	Bridged Ethernet over ATM	⇨ **Go to page 16**
RFC1577:	Classical Internet Protocol over ATM	⇨ **Go to page 16**
RFC2364:	Point-to-Point Protocol over ATM	⇨ **Go to page 18**
RFC2516:	Point-to-Point Protocol over Ethernet	⇨ **Go to page 18**

Windows 95/98/ME - Making an ADSL Connection

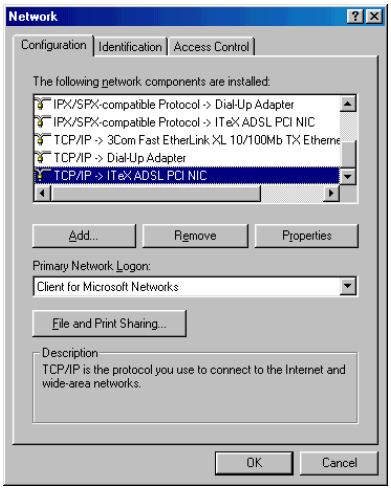
For RFC 1483 – Bridged Ethernet over ATM
For RFC 1577 - Classical Internet Protocol over ATM

1. From the **Start** menu on the tool bar, select **Settings**, **Control Panel**, and then double-click on the **Network** icon.

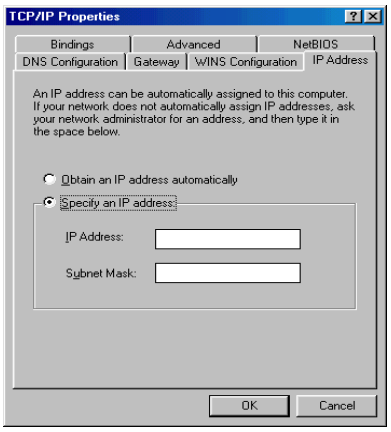
2. The **Network** window appears. Select the **Configuration** tab, scroll the installed network component window and find **ITeX ADSL PCI NIC**.



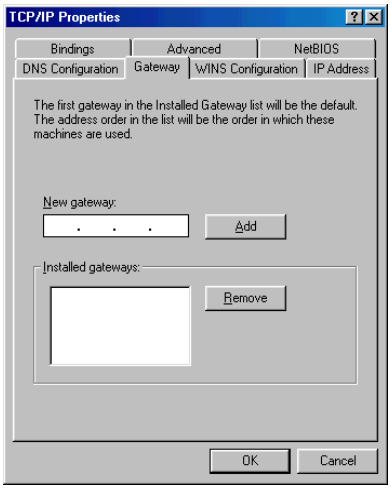
3. Scroll the installed network component window and select **TCP/IP →ITeX ADSL PCI NIC.** Then click the **Properties** button.



4. The **TCP/IP Properties** window will appear. Select the **IP Address** tab and then select the **Specify an IP Address** option. Enter the **IP Address** and **Subnet Mask** settings supplied by your ADSL provider.



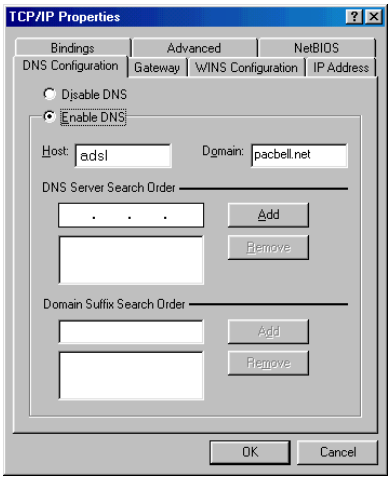
5. To setup a new gateway, select the **Gateway** tab, and then enter the setting in the **New Gateway** section. Click **Add**.



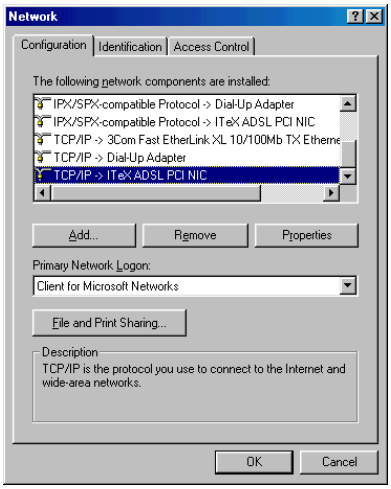
6. Select DNS Configuration tab. Select the Enable DNS option.

NOTE:
You now need to have available the **Host**, **Domain** and **DNS** settings supplied by your ADSL service provider.

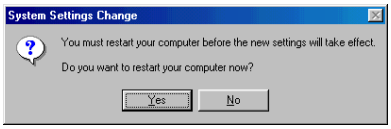
7. Enter your host name into **Host**: box.
8. Enter your domain name into **Domain**: box.
9. Enter **DNS** number into **DNS Server Search Order** box and click **Add**. If you have more than one **DNS** numbers, repeat this step.
10. After setting all the necessary TCP/IP properties, click **OK**.



11. The **Network** window appears. Click **OK**.



12. The **System Setting Change** window appears. You will be asked if you want to restart your computer. Click **Yes**.



Congratulations, you are done. Your ADSL Internet connection is established!

Windows 95/98/ME - Making an ADSL Connection

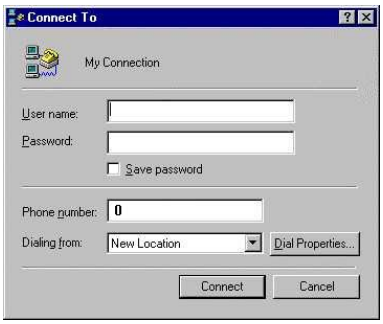
For RFC 2364 - Point-to-Point Protocol over ATM

For RFC 2516 - Point-to-Point Protocol over Ethernet

1. Double-click on the **ADSL PCI NIC** icon that appears on your desktop.

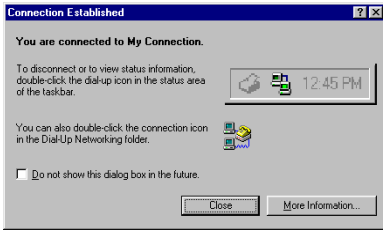
ADSL PCI NIC

2. The **Connect To** window appears. Enter the **User Name** and **Password** supplied by your Internet service provider (ISP). Unless instructed to enter a phone number by ISP, enter zero "0". Then click **Connect**.



3. The **Connecting to My Connection** window appears. The message **Logging on to network** confirms a valid connecting process.

4. The **Connection Established** window appears. Internet service is now established. Click **Close** and then the **Diagnostic tool** icon will appear on the task bar.



Congratulations, you are done. Your ADSL Internet connection is established!

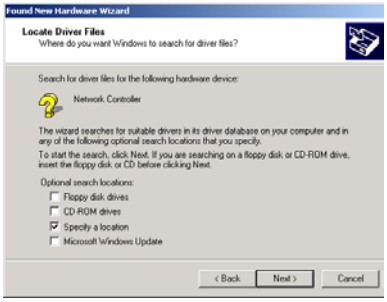
Windows 2000 – Driver Installation

After installing the ADSL modem card, plug the power cable back into the PC system and turn the power on.

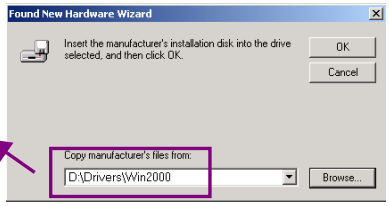
1. After installing the ADSL modem card, power on the PC system. After start-up, the **Found New Hardware Wizard** will appear. Click **Next**.

2. Still in the **Found New Hardware Wizard**, select the **Search for a suitable device...** option. Click **Next**.

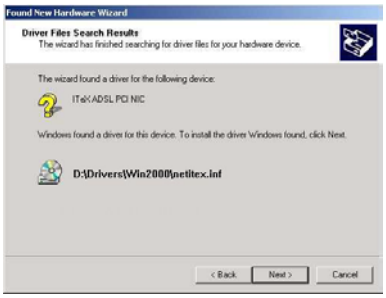
3. Next you will be prompted for software drivers. Select **Specify a location.** Click **Next**.



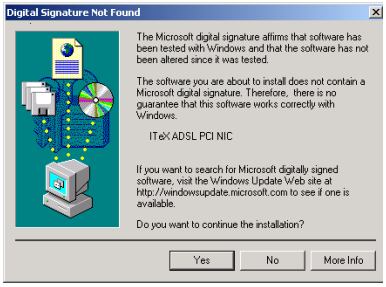
4. Insert the **ADSL Driver** CD into the systems CD-ROM drive. Click **Browse** to locate the driver on your CD-ROM for the protocol supported by your ADSL provider: **RFC_1483, RFC_1577, RFC_2364 or RFC_2516** (The example uses "D" as the CD-ROM drive letter. Your drive may have a different letter.) Click **OK**.



5. The **Found New Hardware Wizard** will then find the ITeX ADSL PCI NIC and display driver you selected, click on **Next**.



6. The **Digital Signature Not Found** window appears. You will be asked, **"Do you want to continue installation?"** Click **Yes**.



7. The **Found New Hardware Wizard** will prompt that **Windows has finished installing the software for this device**. Click **Finish**.

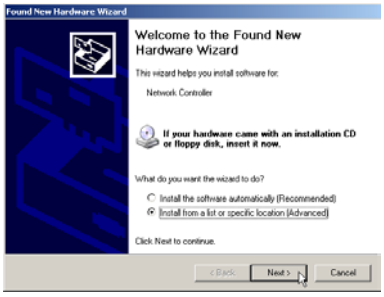
NOTE:
You may be asked if you want to restart your computer, if so click **Yes.** If you are not asked, you need to restart your computer manually at this time.

You must now set the ADSL configuration. **Go to page 22.**

Windows XP – Driver Installation

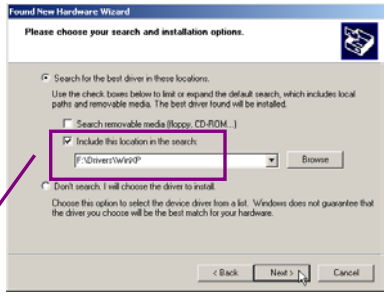
After installing the ADSL modem card, plug the power cable back into the PC system and turn the power on.

1. After installing the ADSL modem card, power on the PC system. After start-up, the **Found New Hardware Wizard** will appear. Click **Next**.

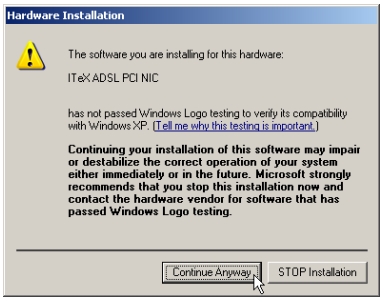


2. Still in the **Found New Hardware Wizard**, choose the **Search for the best driver in these locations** option and **Include this location in the search** option.

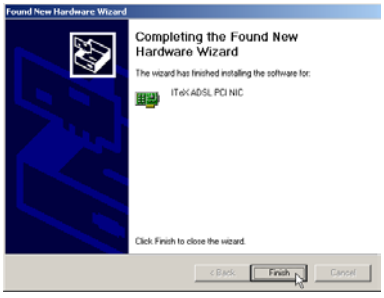
3. Insert the **ADSL Driver** CD into the systems CD-ROM drive. Click **Browse** to locate the driver on your CD-ROM for the protocol supported by your ADSL provider: **RFC_1483, RFC_1577, RFC_2364 or RFC_2516** (The example uses "F" as the CD-ROM drive letter. Your drive may have a different letter.) . Then click on **Next**.



4. **Hardware Installation** window will appear, then click on **Continue Anyway**.



5. The **Found New Hardware Wizard** will prompt that **Windows has finished installing the software for this device**. Click **Finish**.



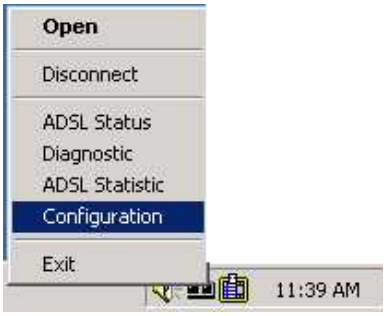
NOTE:
You may be asked if you want to restart your computer, if so click **Yes.**
If you are not asked, you need to restart your computer manually at this time.

You must now set the ADSL configuration. **Go to page 22.**

Windows 2000 / XP – Setting the ADSL Configuration

For RFC 1483/1577/2364/2516

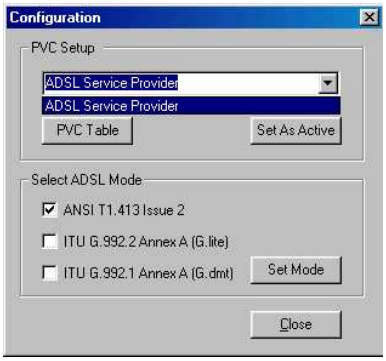
1. After your PC has rebooted, right-click on the **Diagnostic Tool Icon** (See Appendix), and select the **Configuration** option.



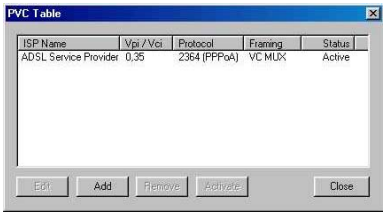
2. The Configuration window appears, scroll through the **PVC setup** section to locate the service you will be connecting to. Then click **Set As Active**.

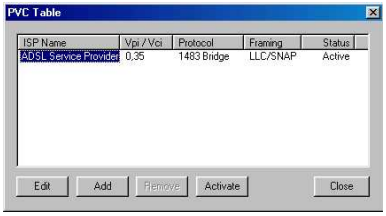
3. In the **Select ADSL Mode** section, select the mode(s) recommended by your ADSL service provider. Then click **Set Mode**.

4. When you have set both the **PVC Setup** and **ADSL Mode**, Click **Close**.



NOTE: To modify, add, or remove ISP settings from the **Configuration** window, in the **PVC Setup** section, click on the **PVC Table** button. The **PVC Table** window then appears for the Protocol you are using.





NOTE:

You may be asked if you want to restart your computer, if so click **Yes.**
If you are not asked, you need to restart your computer manually at this time.

You must now make an ADSL connection. **Proceed to the section for your protocol** you are using as follow:

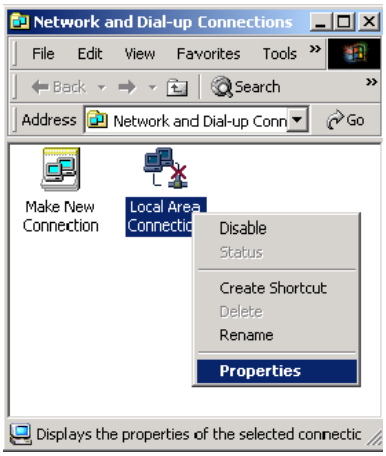
RFC1483 :	Bridged Ethernet over ATM	⇨ **Go to page 23**
RFC1577 :	Classical Internet Protocol over ATM	⇨ **Go to page 23**
RFC2364 :	Point-to-Point Protocol over ATM	⇨ **Go to page 25**
RFC2516 :	Point-to-Point Protocol over Ethernet	⇨ **Go to page 25**

Windows 2000 / XP - Making an ADSL Connection

For RFC 1483 – Bridged Ethernet over ATM
For RFC 1577 – Classical Internet Protocol over ATM

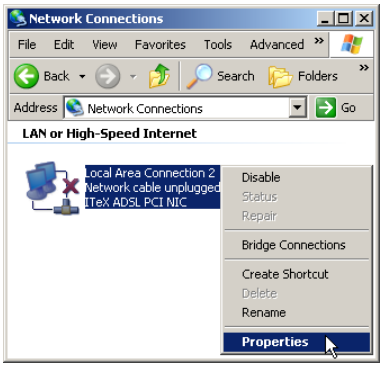
1. **(For Windows 2000)**
   Double-click **My Computer**, **Control Panel**, and then **Network and Dial-up Connections**.

2. **(For Windows 2000)**
   The **Network and Dial-up Connections** window appears. Right-click on the **Local Area Connection**, and then click on **properties**.

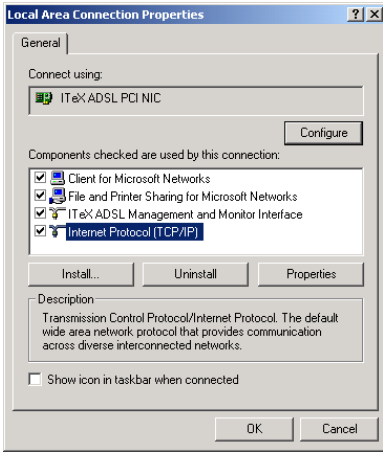


1. **(For Windows XP)**
   Click **Network Connections** icon in **Control Panel** window.

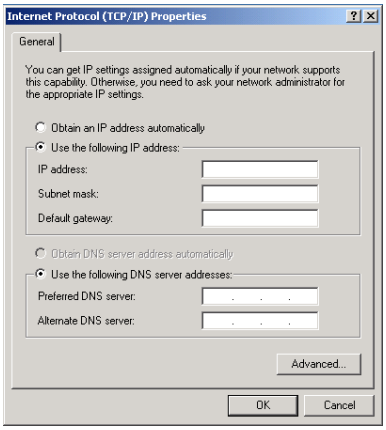
2. **(For Windows XP)**
   The **Network Connections** window appears. Right-click on the **Local Area Connection**, and then click on **properties**.



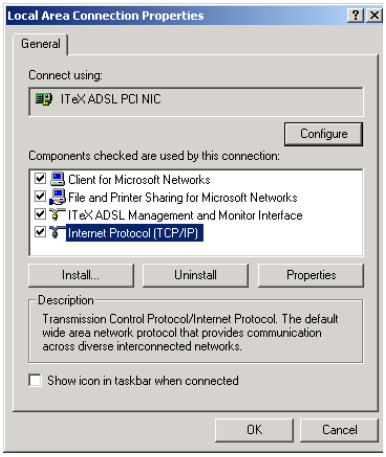
3. The **Local Area Connection properties** window appears. Click on **Internet Protocol (TCP/IP)**, then click on **Properties**.



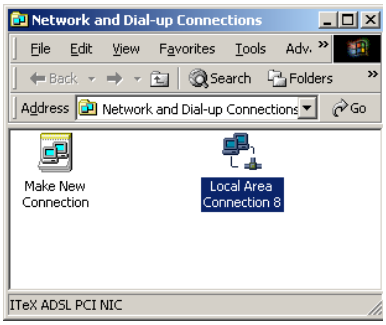
4. The **Internet Protocol (TCP/IP) properties** window appears. Under the **General** tab, enable **Use the following IP address**.
The default settings for IP configurations will turn from **gray** to **clear**. Enter in the **IP address**, **Subnet Mask**, and **Default Gatewa**y supplied by your ADSL service provider. Click **OK**.



5. The previous **General** Tab window appears. Click **OK**.



6. The **Network and Dial-up Connections** window appears. **Close** this window and your connection is complete.



Congratulations, you are done. Your ADSL Internet connection is established!

Windows 2000 / XP-Making an ADSL Connection

For RFC 2364 - Point-to-Point Protocol over ATM

For RFC 2516 - Point-to-Point Protocol over Ethernet

1. Double-click on the **ADSL PCI NIC** icon that appears on your desktop.

ADSL PCI NIC

2. The **Connect My Connection** window will appear. Enter your **User Name** and **Password** supplied by your ADSL service provider. Unless instructed to enter a phone number by ISP, enter zero "0". You are now ready to make a network connection. Click **Dial**.

3. The **Connection complete** window appears, click **OK**.

Congratulations, you are done. Your ADSL connection is established!

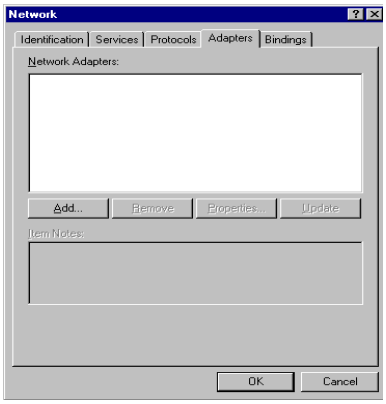
Windows NT4.0 – Driver Installation

For RFC 1483 – Bridged Ethernet over ATM
For RFC 1577 - Classical Internet Protocol over ATM

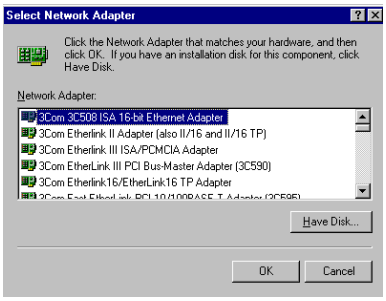
After installing the ADSL modem card, plug the power cable back into the PC system and turn the power on.

NOTE: Before you process to install drivers ,you will need to upgrade your NT4.0 to Service Pack 3 or above. You can download it from Microsoft website and install it into your system.

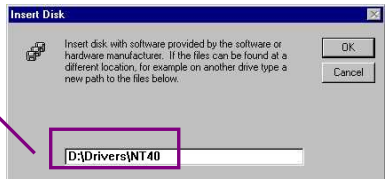
1. On your desktop, double-click **My Computer**, and then double-click **Control Panel**.
2. In the **Control Panel** window, double-click the **Network** icon. The **Network** window appears. Select the **Adapters** tab and then click **Add**.



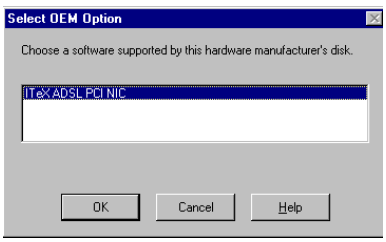
3. The **Select Network Adapter** window appears. Click **Have Disk**.
4. Insert **ADSL Driver CD-ROM** into your systems CD drive.



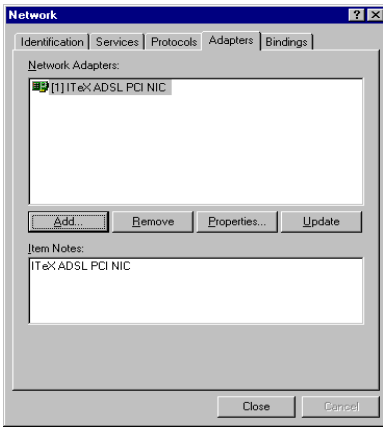
5. The **Insert Disk** window appears. Click **Browse** to locate the driver on your CD-ROM for the protocol supported by your ADSL provider: **RFC_1483 or RFC_1577** (The example uses "d" as the CD-ROM drive letter. Your drive may have a different letter.) Click **OK**.



6. The **Select OEM Option** window will find the **ITeX ADSL PCI NIC**, Click **OK**.



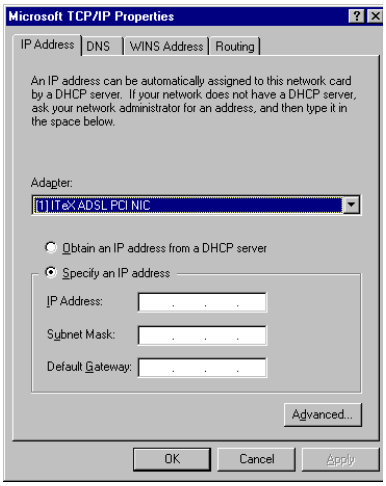
7. The **Network** window will appear. Click the **Adapters** tab to verify that the **ITeX ADSL PC NIC** has been found. Click on the **Protocols** tab and verify that the **ADSL Management and Monitor Interface** is present. When you have verified these items, click **close**.



NOTE:
To review the Network window properties at any time, right-click the **Network Neighborhood** icon and select **Properties**.

NOTE:
If no previous network devices have been installed, then the **Network Neighborhood** icon will not be present on your desktop. To open the Network window, double-click **My Computer** then **Control Panel** and then **Network**.

8. The **Microsoft TCP/IP Properties** window appears **Specify an IP address**. Enter in the **IP Address**, **Subnet Mask** and **Default Gateway** supplied by your ADSL service provider. Click **OK**.



9. The **Network Settings Change** window appears. You must now re-start your computer for the settings to take effect. Click **Yes**.

You must now set the ADSL configuration. **Go to page 30.**

Windows NT4.0 –Driver Installation

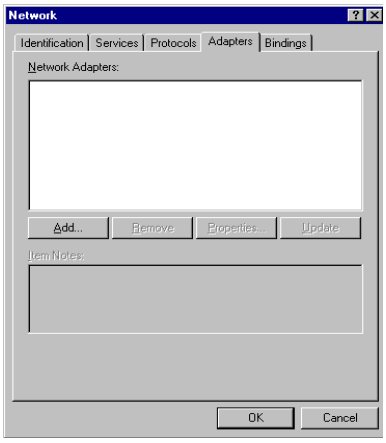
For RFC 2364 – Point to Point Protocol over ATM

For RFC 2516 – Point to Point Protocol over Ethernet

After installing the ADSL modem card, plug the power cable back into the PC system and turn the power on.

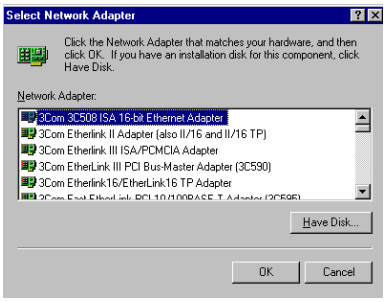
1. On your desktop, double-click **My Computer**, and then double-click **Control Panel**.

2. In the **Control Panel** window, double-click the **Network** icon. The **Network** window appears. Select the **Adapters** tab and then click **Add**.

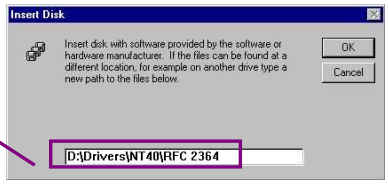


3. The **Select Network Adapter** window appears. Click **Have Disk**.

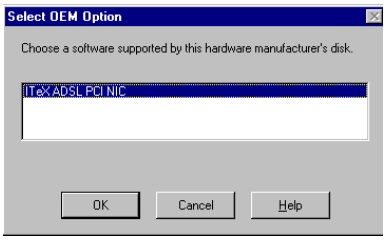
4. Insert the **ADSL Driver CD-ROM** into your systems CD drive.



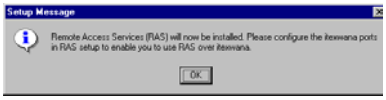
5. The **Insert Disk** window appears. Click **Browse** to locate the driver on your CD-ROM for the protocol supported by your ADSL provider: **D:\Drivers\NT40\RFC_2364 or RFC_2516** (The example uses "d" as the CD-ROM drive letter. Your drive may have a different letter.) Click **OK**.



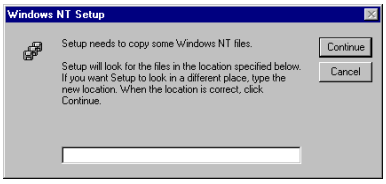
6. The **Select OEM Option** window will find the **ITeX ADSL PCI NIC**, Click **OK**.



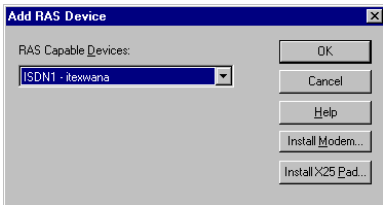
7. The **Setup Message** window appears. Click **OK**.



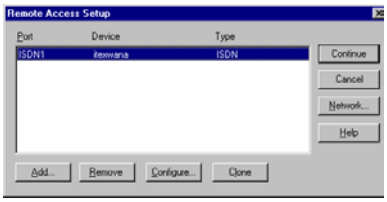
8. The **Windows NT Setup** window appears. Insert your NT4.0 CD-ROM into the PC system CD drive, and type in "D:\i386" (The example uses "d" as the CD-ROM drive letter. Your drive may have a different letter.) Click **Continue**.



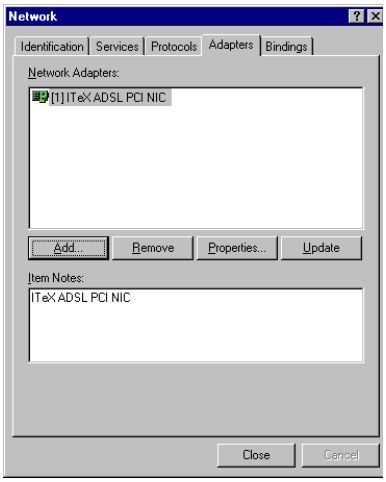
9. The **Add RAS Device** window appears. Click on the "Scroll arrow" to locate **ISDN1-TBCIwana**. Then click **OK**.



10. The **Remote Access Setup** window appears. Click **Continue**.



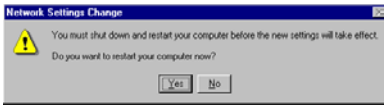
11. The **Network** window will appear. Click the **Adapters** tab to verify that the **IteX ADSL PC NIC** has been found. Click on the **Protocols** tab and verify that the **ADSL Management and Monitor Interface** is present. Click on the **Services** tab to verify that the **Remote Access Service** is present. Then click **Close**.



NOTE:
To review the Network window properties at any time, right-click the **Network Neighborhood** icon and select **Properties**.

NOTE:
If no previous network devices have been installed, then the **Network Neighborhood** icon will not be present on your desktop. To open the **Network** window, double-click **My Computer** then **Control Panel** and then **Network**.

12. The **Network Settings Change** window appears. You must now re-start your computer for the settings to take effect. Click **Yes**.

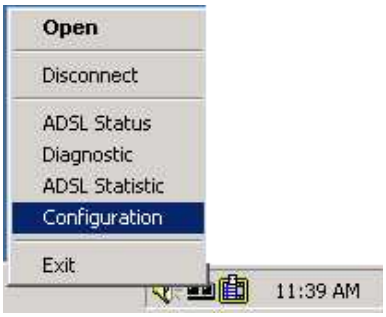


You must now set the ADSL configuration. **Go to page 30.**

Windows NT 4.0 – Setting the ADSL Configuration

For RFC 1483 – Bridged Ethernet over ATM
For RFC 1577 – Classical Internet Protocol over ATM
For RFC 2364 – Point to Point Protocol over ATM
For RFC 2516 – Point to Point Protocol over Ethernet

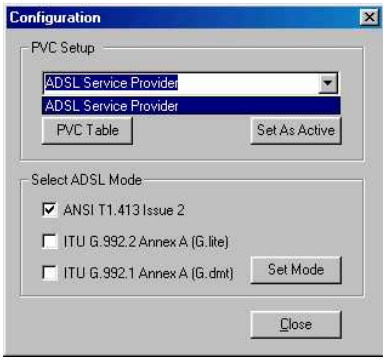
1. After your PC has rebooted, right-click on the **Diagnostic Tool Icon** (See Appendix), and select the **Configuration** option**.**



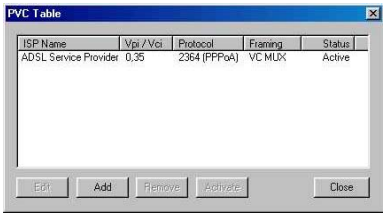
2. The Configuration window appears, scroll through the **PVC setup** section to locate the service you will be connecting to. Then click **Set As Active**.

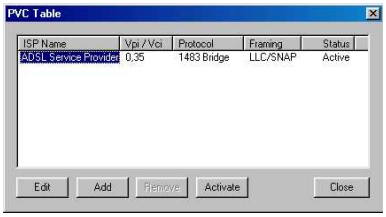
3. In the **Select ADSL Mode** section, select the mode(s) recommended by your ADSL service provider. Then click **Set Mode**.

4. When you have set both the **PVC Setup** and **ADSL Mode**, Click **Close**.



NOTE: To modify, add, or remove ISP settings from the **Configuration** window, in the **PVC Setup** section, click on the **PVC Table** button. The **PVC Table** window then appears for the Protocol you are using.





5. The **PVC Setup** window appears. Click **Yes** to restart your PC system and to allow the new changes to take effect.

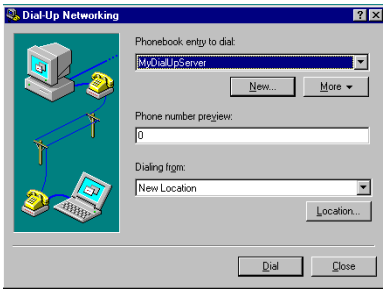
You must now create a Dial-up Network Connection for RFC 2364 / RFC 2516.
Please go to page 31.

Windows NT4.0 – Creating a Dial-Up Network Connection

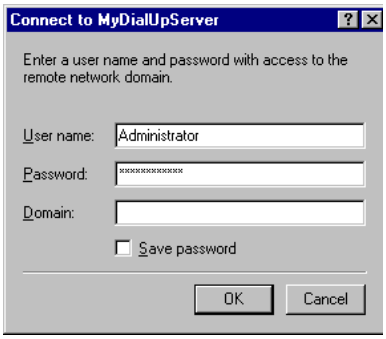
1. Double-click on the **ADSL PCI NIC** icon that appears on your desktop.

ADSL PCI NIC

2. The **Dial-Up Networking** window appears and prompts for the phone number of the dial-up server. **Unless instructed to enter a phone number** by the ADSL service provider, enter zero "0". Click **Dial**.



3. The **Connect to MyDialUpServer** window appears. Enter the **User name, Password** and **Domain** supplied by your ADSL service provider. Click **OK**.



NOTE:
If this screen persists and a connection logon error is reported, confirm that the correct User name and Password are entered and try the connection again. Also verify that the connection address is correct.

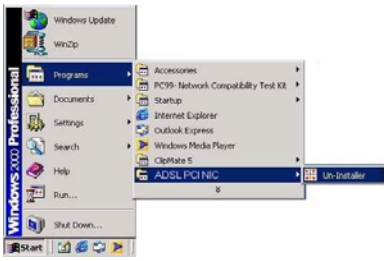
4. The **Connection Complete** window is displayed at the completion of a successful Dial-Up logon. Choose a display behavior and click **OK** to close.

Congratulations, you are done. Your ADSL Internet connection is established!

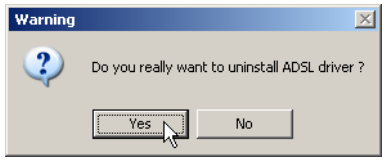
APPENDIX - Removing Drivers

Windows 95 / 98 / ME / NT4.0 / 2000 / XP

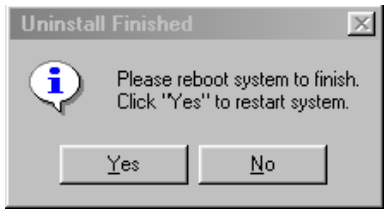
1. On the desktop, click the **START Menu** on the **Task Bar**.
2. Select **Programs**. The system window appears.
3. Select the **ADSL PCI NIC** Tab, and then click on the **Un-Installer** Tab.



4. A warning screen will ask you to ensure to remove the selected modem and then click on **Yes**.



Note:
For Win 95 / 98 / ME / NT4, an Uninstall Finished windows message appears. Click **Yes** to restart your system and confirm changes.



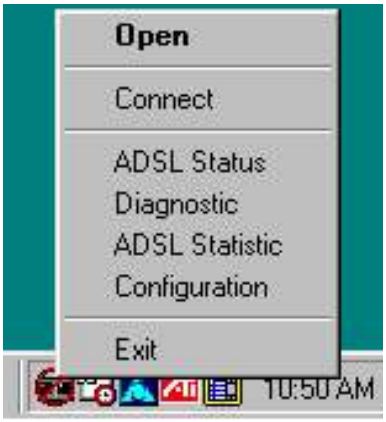
APPENDIX - Diagnostic Tools

The diagnostic tool icon allows the user to monitor the ADSL connectivity, setup the service connection address, and run diagnostic tests. The Diagnostic Tools icon is displayed on the task bar as shown. By positioning the mouse cursor over the icon, the upstream and downstream rates are displayed.

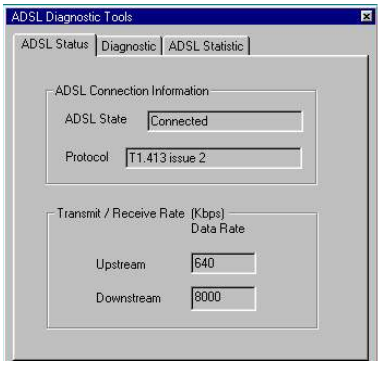
The Diagnostic Tool icon consists of two lights side by side. The left light indicates data is being transmitted whereas the right light indicates data is being received. The state of the connection can be determined as follows:

Color Code	Description
Red, Red	**No** ADSL connection and **No** ADSL handshaking. Check your cable connections.
Black, Yellow or Yellow flashing	ADSL handshaking – Connection not established. Precursor to establishing an ADSL connecting.
Black, Black	ADSL connection established – no data traffic or idle connection
Black, Green	ADSL connection established – NIC is receiving data (TX/off, RX/on)
Green, Black	ADSL connection established – NIC is transmitting data (TX/on, RX/off)
Green, Green	ADSL connection established – NIC is transmitting and receiving data (TX/on, RX/on)
	NIC is disconnected or a driver problem exists.

To access the Diagnostic tools, locate the **Diagnostic Tool** icon, on the right hand side of the status bar, and right-click the icon to display the menu. Then click **Open**.

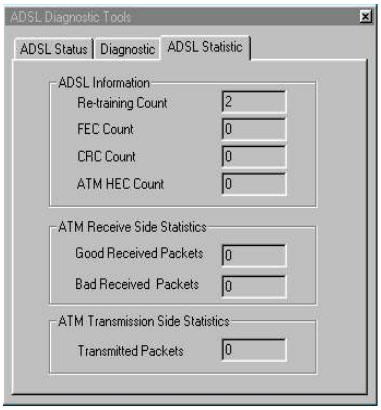


The ADSL Diagnostic Tool window appears on your desktop. The three tabs of the Diagnostic Tools are **ADSL Status**, **Diagnostic**, and **ADSL Statistics**.



- ⇨ The **ADSL Status** tab displays the current status of the ADSL connection, including the current ADSL State, ADSL Protocol in use, and the Transmit/Receive Rate for upstream and downstream data.

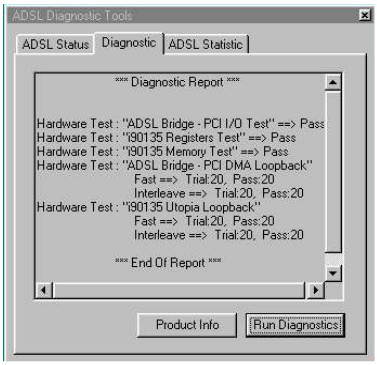
NOTE: ADSL protocols supported by the ADSL drivers are T1.413, G.dmt and G.lite. The protocol must be support also by the ADSL equipment located at the central office.



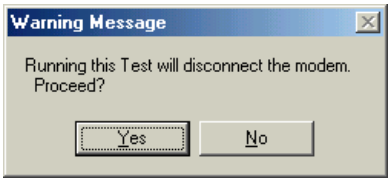
- ⇨ The **ADSL Statistic** tab shows errors that might affect overall system performance.
- ⇨ **Re-training Count** tracks the number of ADSL connections performed.
- ⇨ **FEC COUNT** TRACKS THE FORWARD ERROR CORRECTION COUNT.
- ⇨ **CRC Count** tracks the number of CRC errors.
- ⇨ **ATM HEC Count** (Header Error Check) errors are recorded as an indication of ATM packet accuracy.

As a measure of packet transfer performance, the **ATM Receive Side** and **ATM Transmission Side Statistics** (Packet Errors) are counted.

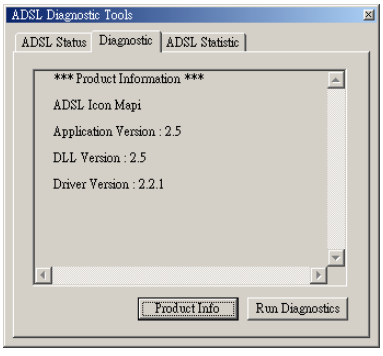
The **Diagnostic** tab makes available an automated test program for basic ADSL functionality and report the status. To perform the test, click **Run Diagnostics.**



A **Warning Message** window will appear after clicking on Run Diagnostics. If connected to the Internet at this time, disconnect any Dial-up sessions. Click **Yes** to begin the **Diagnostics** program or click **No** to exit **Diagnostics** program. The **Diagnostics** program performs a brief hardware check and displays the **Diagnostic Report** (previous window).



Still in on the **Diagnostic** tab window, you can obtain driver revision information by clicking on the **Product Info** button.



APPENDIX - Trouble Shooting

- **Always unplug the power cord from the PC before installing the ADSL modem card!**
- **Power down mode does not turn off the power to the PC card slot - you must turn off and unplug the power cord from the PC before installing the ADSL modem card!**

If you have completed the ADSL modem card installation procedures and your ADSL connection is not operational, then refer to the following guidelines for assistance in getting your ADSL modem connection up and running.

If there is no Diagnostic icon on the taskbar

- ✓ **Restart** the PC system.
- ✓ If your system's OS is Windows 95, you must up-grade the DUN to version 1.3. The Dun up-grade is contained on the installation CD-ROM.
- ✓ Un-install the drivers using the utility described in the appendix of the installation manual.
- ✓ Re-install the drivers. Make sure you are selecting the correct driver for the Operating system used.

If there are two Diagnostic icons on the taskbar

- ✓ You have inadvertently installed two drivers. Run the un-install utility.

Is the NIC achieving ADSL connection?

- ✓ If the Line is connected, the modem should already be connected to the TelCo after the driver has installed successfully.

- ✓ If the Diagnostic Icon flashing Black/Yellow but never connects:
  - The ADSL line Pin assignment may be wrong – Pin 2&5 vs. 3&4.
  - Check with your ISP or TelCo for the physical wire connection.
  - You may have a bad connection on the telephone jacks.
  - You may have a bad telephone cord.
  - There may be some problem on the analog circuit of the modem.

  Visually check whether there is any obvious component problem or other damage on the ADSL circuit board.

- ✓ If the Diagnostic Icon never flashes Black/Yellow, but always stays on Red:
  - Check whether the ADSL line is properly connected between the telephone jack on the back of the Modem Card and the telephone jack from the TelCo.
  - Using the ADSL Diagnostic Icon to run the Diagnostic software.
  - If all the 5 tests passed, the digital circuit is OK. The problem may come from the Analog Circuit.
  - If any of the 5 tests failed, the digital circuit is defective.
  - Return the PCB.

- ✓ If the Diagnostic Icon shows hardware defective:
  - Return the PCB.

- ✓ If successfully connected to the TelCo but repeatedly try's to reconnect.
  - The ADSL line may be too close to outside "noise" (radio frequency) interference.
  - You may have a bad component – Return the PCB.

Is the NIC constantly trying to make a connection – with blinking yellow panels?

- ✓ The ADSL line Pin assignment may be wrong - Pin 2&5 vs. 3&4.
- ✓ Check with your ISP or TelCo for the physical wire connection.
- ✓ Examine the RJ-11 connectors and cable for any deterioration.
- ✓ You may be have a bad telephone cord.
- ✓ Select **Disconnect** from the Diagnostic Tools then try to reconnect.
- ✓ Restart the PC system and try to reconnect.
- ✓ Has the wiring for your ADSL service been altered recently?
- ✓ Does condition change with time of day? (a possible problem with line noise)
- ✓ Are appliances near the PC system introducing noise into your ADSL service?
- ✓ Power down the PC system and re-seat the ADSL modem card.

Is the NIC achieving ADSL connection - but you can't reach the Internet?

- ✓ Is the service connection address correct?
- ✓ Bridged Ethernet – Are the TCP/IP, Gateway and DNS addresses correct (refer to your ADSL or ISP provider documentation)
- ✓ Point-to-Point – For Windows 95 is the Dial-Up Network Upgrade v1.3 installed?
- ✓ Browser configured correctly – check your browser documentation.

How can I determine the TCP/IP address for Point-to-Point?

- ✓ For Windows 95/98, run the program Ipconfig from the DOS prompt (e.g. C:\Windows\IPCONFIG).

Must TCP/IP be loaded for both Point-to-Point and Bridged Ethernet protocols?

- ✓ Yes. Please carry out the TCP/IP installation procedure before loading the driver.

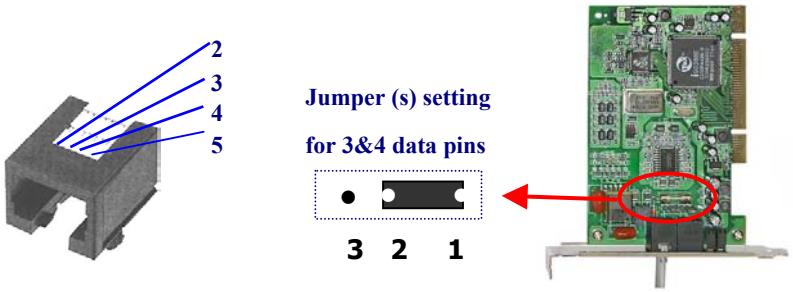
Driver installation resulted in errors or warnings, and you can't connect.

- ✓ Perform the driver removal procedure.
- ✓ Verify which version of Microsoft Windows is loaded in the PC system.
- ✓ Perform the driver removal procedure
- ✓ For Point-to-Point – Reload Dial-Up Network upgrade 1.3
- ✓ Install the driver again.

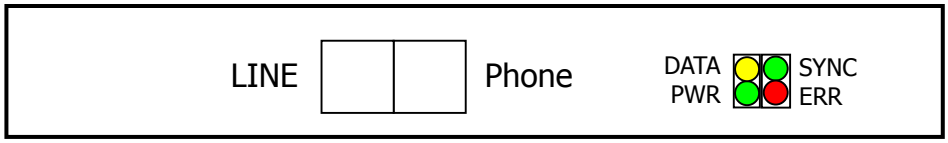
APPENDIX - RJ-11 Connector & Jumper-pin Configuration Guide

It is important to verify that the ADSL data port RJ-11 jack is configured so that the center two pins, pins 3 and 4, are used for ADSL data, otherwise the ADSL PCI modem card will not make a proper connection. Your ADSL modem card features pin jumpers that enable the user to set the configuration to make the proper connection. The modem card is default set to 3 and 4.

If the ADSL data port installation uses pins 2 and 5 for data, then the jumper settings on your board will need to be reconfigured.
For IA300: Then a wiring converter will be required. Do not alter or remove the wiring converter if present. Consult with your ADSL provider before attempting any wiring changes.
For IA310: To do this, orient your board per the diagram below (the RJ-11 connector should be facing towards you) and simply lift the jumper off of the pin setting for 2 and 3, and place it onto the pin setting for 1 and 2, or visa versa.



ADSL Modem Card Bracket (IA310 only)



ADSL Modem Card LED Indicators (IA310 only)

LED	*Status*	*Signal*	*Description*
Green Bottom	PWR	Flashing On	Initialized, idle mode (disconnect) Power Supply OK
Green Top	SYNC	Flashing Fast Flashing slow	Modem Connecting Modem Connected
Yellow Top	DATA	On TX or RX Off no data	ATM data transmission
Red Bottom	ERR	Flash on CRC error	ATM data transmission
All four		All On	Driver not installed or modem card is defective

APPENDIX - Microsoft DUN 1.3 Year 2000 Update

In an ongoing effort toward Year 2000 compliance, Microsoft has identified a minor Year 2000 issues with the Windows® 95 DUN 1.3 Updates. This update corrects a minor issue associated with generating dates on your computer on or after January 1, 2000.

http://www.microsoft.com/windows95/downloads/contents/WURecommended/S_WUNetworking/dunwinsky2k/Default.asp

APPENDIX - System Requirements & Compliance Certification

System Requirements

- IBM PC/AT or compatible
- Pentium 133Mhz or faster
- 30Mbytes available hard disk space or more
- 2x CD-ROM drive or better
- 32Mbyte available system memory or more

Power Requirements

- 0.75A Max @ +5V ± 5%, 0.1A max @ ± 12V, ± 5%

Environmental Requirements

- Operating Temperature: 0 °C to 70°C with airflow
- Non-operating Temperature: -10 °C to 85 °C
- Operating Humidity: 10% to 90% non-condensing
- Non-operating storage humidity: 5% to 95% non-condensing

Compliance Certification

- UL 1950
- CE approved
- FCC Part 15 Class B / Part 68

Appendix - Government compliance notices

FCC compliance

This equipment complies with Part 68 of the FCC Rules. On this equipment is a label that contains, among other information, the FCC registration number and Ringer Equivalence Number (REN) for this equipment. You must, upon request, provide this information to your telephone company.

If your telephone equipment causes harm to the telephone network. The Telephone Company may discontinue your service temporarily. If possible, they will notify in advance. But, if advance notice isn't 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 proper operation of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service. The FCC prohibits this equipment to be connected to party lines or coin telephone service. In the event that this equipment should fail to operate properly, disconnect the equipment from the phone line to determine if it is causing the problem. If the problem is with the equipment, discontinue use and contact your dealer or vendor.

FCC Class B statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Notice: 1) Shielded cables, if any, must be used in order to comply with the emission limits.

2) Any change or modification not expressly approved by the Grantee of the equipment authorization could void the user' s authority to operate the equipment.

Austel compliance information

Unit shall be connected to telecommunication network through a line card, which meets the requirements of ACA technical standard TS008.

European CTR 21 compliance

The equipment has been approved in accordance with Council Decision 98/482/EC for pan-European single terminal connection to the public switched telephone network (PSTN). However, due to differences between the individual PSTNs provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN network termination point. In the event of problem, you should contact your equipment supplier in the first instance.

Note: The manufacturer should ensure that the vendor and user of the equipment is clearly informed of the above information by means of package and /or user manuals of the forms of user instructions.