



# **Ambit PCI Full Rate ADSL Modem Installation Manual**

For Windows® 95, 98, and NT4.0

Dec 16, 1999



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## 1. INTRODUCTION

The Ambit PCI Full Rate ADSL Modem is an internal ADSL modem, which conveniently plugs into a PC system, eliminating the need for an external modem. The Ambit PCI ADSL Modem connects to a telephone line via a standard RJ-11 connector and fully complies with practices governing the PC world (e.g. Plug 'n Play). The Ambit PCI ADSL Modem supports DMT (Discrete Multi-Tone) modulation to ensure interoperability with the service providers DSL systems.

### **Feature**

Remote bridging with RFC 1483 encapsulation, both LLC-SNAP and PVC multiplexing options

### **WAN Protocols Supported under Microsoft Operation Systems**

The following is a list of supported WAN protocols by Ambit PCI ADSL Network Modem.

<b>Microsoft Windows Operating Systems</b>	<b>RFC 1483</b>
Win95 -- OSR1 and OSR2	Yes
Win98 -- 1 <sup>st</sup> edition	Yes
Win98 -- 2 <sup>nd</sup> edition	Yes
NT 4.0 -- Service Pack 3	Yes



### System Requirement

The following equipment and information is required (at a minimum) to setup your ADSL network modem.

#### Hardware Requirement

The following is the minimum hardware requirement. Please make sure your PC system meets ALL of the following requirements.

- ✓ IBM PC/AT or its compatibles
- ✓ CPU speed: Pentium® 100Mhz or above
- ✓ Hard disk space: 6Mbyte space available or above
- ✓ CD-ROM: 24x CD-ROM drive or above
- ✓ Main memory: 32Mbyte or above

#### Software Requirement

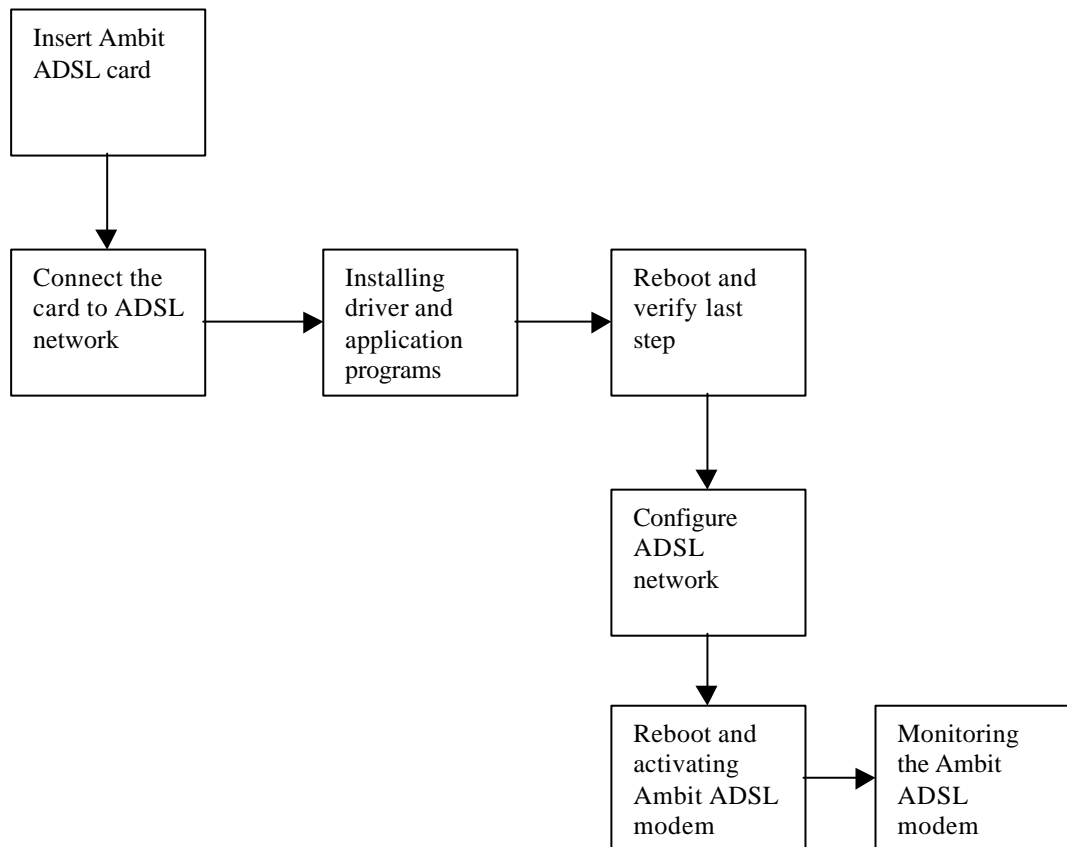
The Ambit PCI ADSL Modem supports most of Microsoft Windows operating systems. Please make sure you have one of the following operating systems in your PC.

- ◆ Microsoft Windows 95 – OSR1 and OSR2, or
- ◆ Microsoft Windows 98 – 1<sup>st</sup> edition and 2<sup>nd</sup> edition, or
- ◆ Microsoft NT – NT 4.0 service pack 3.

**NOTE:** You need the Windows operating system installation files (CAB files) to complete the installation.

Before you start:

Ambit ADSL Modem Installation  
&  
Configuration Flow Chart





## **2. INSTALLING THE ADSL NETWORK MODEM BOARD**

To install the Ambit PCI Full Rate ADSL Modem in your PC and connect it to ADSL network, follow these steps:

### ***Insert ADSL Network Interface Card – Step 1***

- 1) Open the shipping container and inspect each item for damage.
- 2) Remove all jewelry from your hands and wrists. Use only insulated or nonconductive tools.
- 3) Unplug the PC and disconnect all cables.
- 4) Remove the PC cover.
- 5) Choose an empty bus mastering PCI slot.
- 6) Unscrew the screw holding the PCI slot's backplate and remove it.
- 7) Insert the Ambit PCI ADSL Modem into an empty PCI slot.
- 8) Secure the NIC with the screw you removed earlier.
- 9) Replace the PC cover and reconnect all previously connected cables.
- 10) Turn on the power to the PC.
- 11) Proceed to the next section, "Connecting to the ADSL Network."

### ***Connect NIC to ADSL Network – Step 2***

Connect the telephone cable to the RJ-11 port on the Ambit PCI ADSL Modem.

### 3. INSTALLING THE AMBIT PCI DEVICE DRIVERS AND UTILITY

Please have the following information available in order to complete the installation and setup of the Ambit PCI ADSL Modem.

1. TCP/IP properties, this includes the PVC values (VPI and VCI), IP address, the gateway, and the domain name server. You will need this information to complete the configuration of the network modem card. Please contact your MIS manager for more information regarding the TCP/IP settings.
2. Windows 95, 98 or NT4.0 diskettes or Installation CD.

#### 3.1 Windows 98

\* BEFORE YOU START: You need the Windows 98 system installation files (CAB files) to complete the installation (Which comes with your PC system).

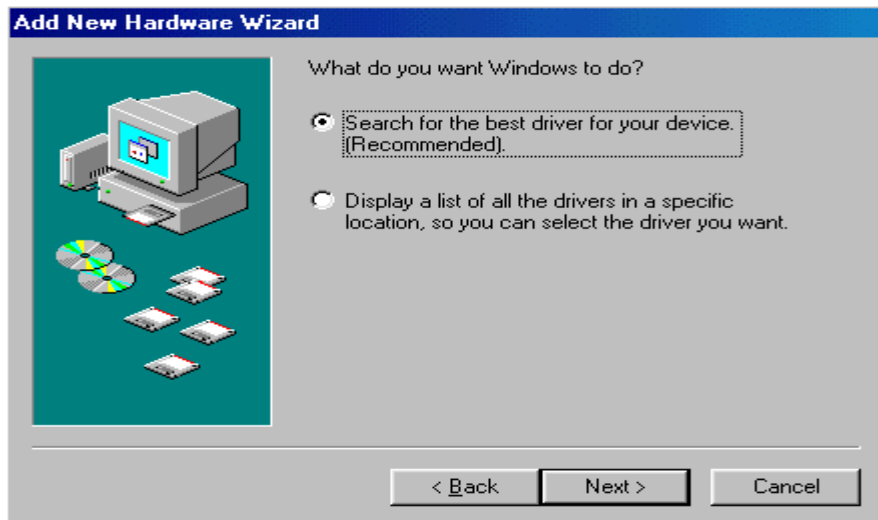
This section describes how to install the network driver when your PC is running Windows 98. There are two major revisions of Windows 98:

- 1) Windows 98 original (or it may be referred to as the 1<sup>st</sup> Edition)
- 2) Windows 98 2<sup>nd</sup> Edition

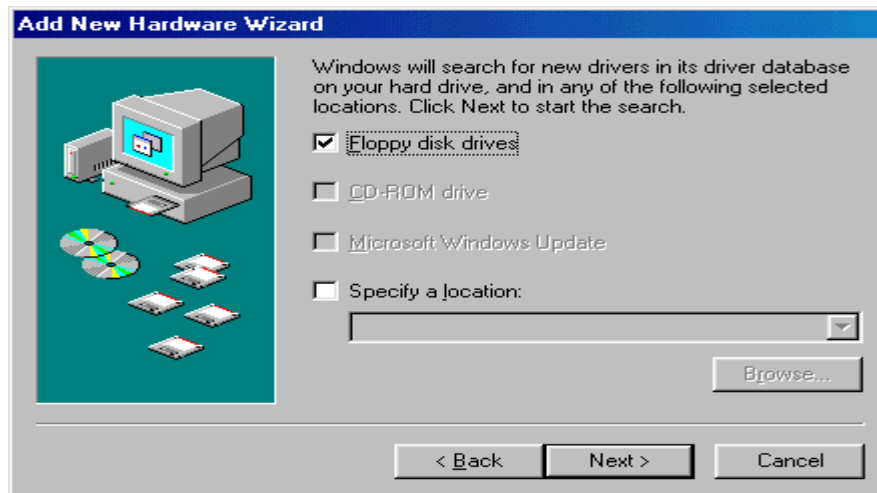
Please make sure your OS is either Windows 98 1<sup>st</sup> Edition or Windows 98 2<sup>nd</sup> Edition. Windows 98 2<sup>nd</sup> Edition can support advanced features which Windows 98 1<sup>st</sup> Edition can not. If you are running Windows 98 2<sup>nd</sup> Edition, installing the Windows drivers to your system is highly recommended. If you are not sure of the operating system version currently used, please contact your original PC manufacturer for information. Make sure the Ambit PCI ADSL Network Modem is installed. Turn your PC on.



Windows will find the Ambit ADSL Network Modem and will search for a device driver for the card. Click Next.



The Add New Hardware Wizard window will appear. When prompted, select "Search for the best driver for your device. (Recommended)". Click "Next".



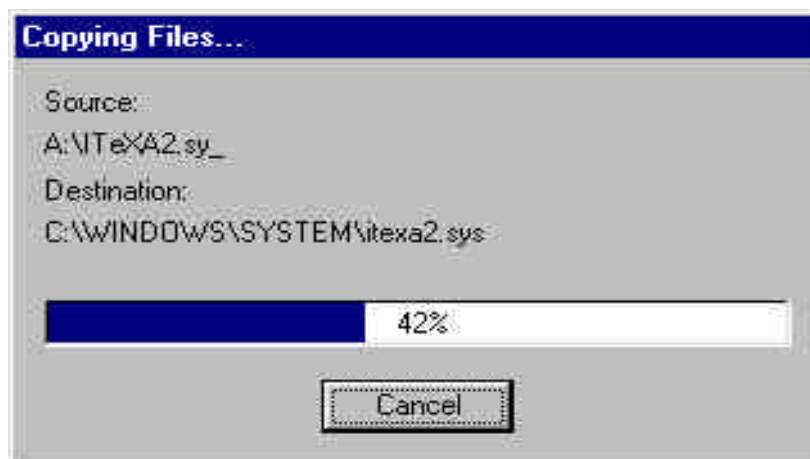
If your Ambit PCI ADSL Modem comes with floppy diskettes, then insert the Windows 98 driver diskette (use the Windows 98 2<sup>nd</sup> edition diskette for installing on Windows 98 2<sup>nd</sup> edition and the Windows 98 diskette for installing on Windows 98 1<sup>st</sup> edition) into the floppy disk drive. Select the "Floppy disk drives" option from the menu and click "Next."

If your Ambit PCI ADSL Modem comes with a CD, then insert the CD into the CD-ROM, select "Specify a location", enter the correct path (i.e. d:\win98-v1 for Windows 98 1<sup>st</sup> edition; d:\win98-v2 for Windows 98 2<sup>nd</sup> edition). Select "Next."

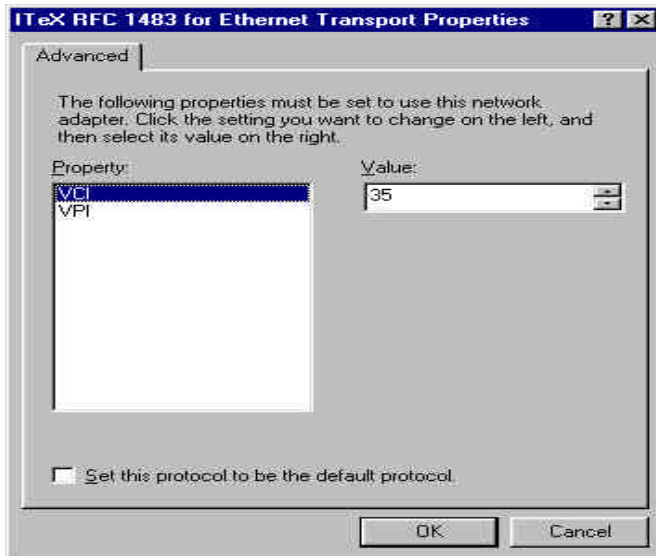




Windows should find the \*.INF (NETITEX.INF for Windows 98 2<sup>nd</sup> edition) file in the directory specified. Click "Next" to continue.



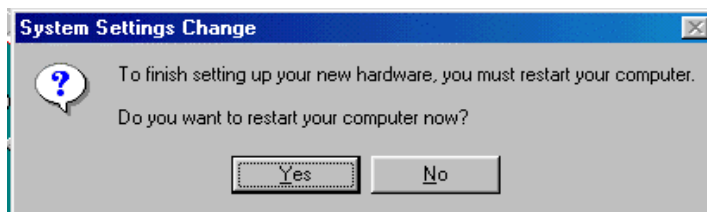
Windows will start to copy the drivers. Make sure that the Windows 98 CD is in the CD-ROM or that it is easily accessible.



For RFC1483, the default PVC values are 8 and 35 for VPI and VCI respectively. If necessary, these values can be changed at this time. The range for both VPI and VCI is from 0 to 255.



Windows has finished installing all the Ambit ADSL Modem drivers. Click "Finish" to complete the installation.



Click "Yes" when prompted "Do you want to restart your computer now?" If you are using floppy diskettes, remove the floppy diskette from the diskette drive. Continue on to 3.4

### 3.2 Windows 95

\* BEFORE YOU START: You need the Windows 95 system installation files to complete the installation.

This section describes how to install the network driver when your PC is running Windows 95.

There are three major revisions of Windows 95:

Windows 95 original

Windows 95 OSR1

Windows 95 OSR2

**NOTE:** Before you install your Ambit PCI ADSL Modem, please make sure your operating system is either Win95 OSR1 or Win95 OSR2 to ensure the ADSL network performs well. If you are not sure of the operating system version, please contact your original PC manufacturer for information.

Make sure you have already installed the Ambit PCI ADSL Modem into your PC.

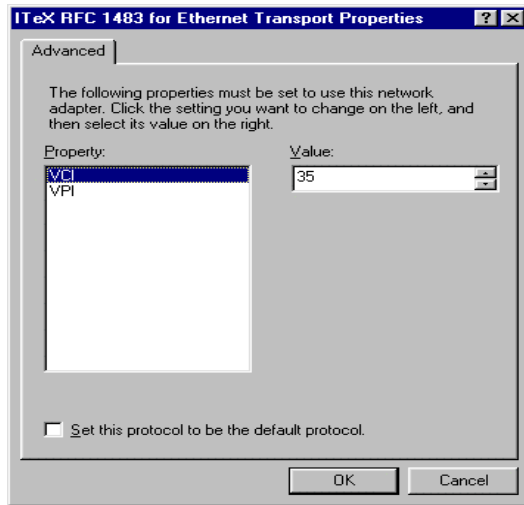
Power on the PC. Windows 95 automatically detects the NIC in the PC. The Add Hardware Wizard window will appear. When prompted, select "Search for the best driver for your device."

If your Ambit PCI ADSL Modem comes with diskettes, insert the Windows 95 driver diskette in the floppy disk driver and select "Floppy Disk Drives". Click "Next."



If your Ambit PCI ADSL Modem comes with a CD, insert the Ambit PCI CD into your CD-ROM and select "Specify a location." Enter the correct path (i.e. "d:\win95") and click "Next."

Follow the screen instructions until the "ITeX RFC 1483 for Ethernet Transport Properties" window appears.



For RFC 1483, the default PVC values are VPI=8 and VCI=35 respectively.

If necessary, these values can be changed at this time. The range for both VPI and VCI is 0 to 255.

For more detailed information regarding the values of VPI and VCI, please check with your ADSL service provider.

**CAUTION:** Failure to setup the right VPI, VCI may cause the ADSL network to fail.

Follow the screen instructions until Windows 95 asks you to restart your computer. Click "Yes" to restart your computer. Restart Your System. If you are using floppy diskettes, then remove the disk from the diskette drive. Continue on with section 3.4

### 3.3 Windows NT4.0 with Service Pack 3

From the Start menu, select Settings and then select Control Panel. Double-click on the Network icon.

In the Network dialog window, select Adapters. Click "Add".

In the Select Network Adapter dialog window, Click "Have Disk".

If the Ambit PCI ADSL Network Modem comes with diskettes, insert the Windows NT4.0 driver diskette into the floppy disk drive. If the Ambit PCI ADSL Network Modem comes with a CD, insert the Ambit PCI CD into your CD-ROM drive.

Click Ok.

Select OEM Option window

You don't have to restart your computer when under Windows NT4.0.

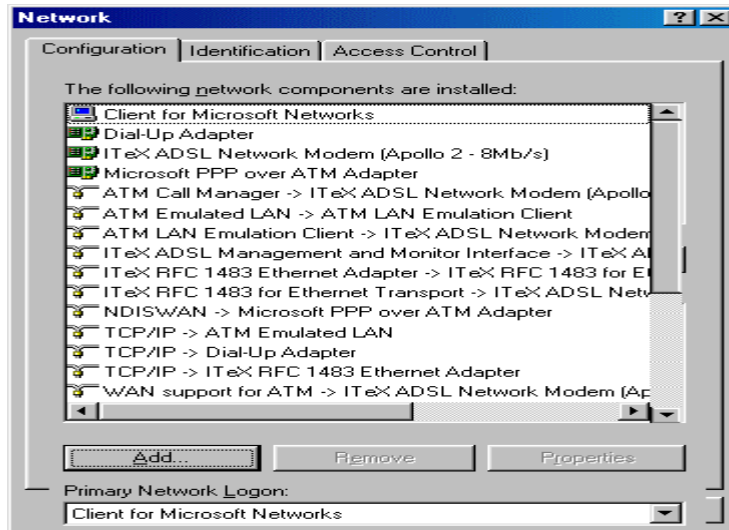
### 3.4 INSTALLING THE AMBIT PCI MODEM ICON UTILITY

Note: The Ambit PCI modem icon utility is provided as a tool to monitor and test the Ambit PCI ADSL modem. Please refer to the User's Guide for more advanced information regarding this test application.

Windows will ask if you want to install the ITeX utility software, click "Yes" to continue. To install the software into the default folder, click "Next". Otherwise, click "Browse" to select a different folder. Click "Next" again to complete the installation. Select "No" when prompted if you want to restart your computer. Click "OK."

## 4. Verifying the Driver Installation

### 4.1 Windows 95 and Windows 98



From the Start menu, select settings and open the control panel. Double click on the Network icon. Verify that the following network components were installed:

#### Windows 98 1<sup>st</sup> Edition

- ITeX ADSL Network Modem (Apollo 2 - 8MB/s)
- ITeX ADSL Management and Monitor Interface→ITeX ADSL Network Modem (Apollo 2 - 8MB/s)
- TCP/IP → Dial up Adapter
- TCP/IP → ITeX ADSL Network Modem(Apollo2-8MB/s)

#### Windows 98 2<sup>nd</sup> Edition

- ITeX ADSL Network Modem (Apollo 2 - 8MB/s)
- ATM Call Manager → ITeX ADSL Network Modem (Apollo 2 - 8MB/s)
- ATM Emulated LAN → ATM LAN Emulation Client
- ATM LAN Emulation Client→ITeX ADSL Network Modem(Apollo2-8MB/s)
- ITeX ADSL Management and Monitor Interface→ITeX ADSL Network Modem (Apollo 2 - 8MB/s)
- ITeX RFC1483 Ethernet Adapter → ITeX RFC1483 for Ethernet Transport
- ITeX RFC1483 for Ethernet Transport → ITeX ADSL Network Modem (Apollo 2 - 8MB/s)
- TCP/IP → ATM Emulated LAN
- TCP/IP → Dial up Adapter
- TCP/IP → ITeX ADSL Network Modem(Apollo2-8MB/s)
- TCP/IP → ITeX RFC1483 Ethernet Adapter

Windows 95

- ITeX ADSL Network Modem (Apollo 2 - 8MB/s)
- ATM Call Manager → ITeX ADSL Network Modem (Apollo 2 - 8MB/s)
- TCP/IP

Click "Cancel" to close the Network window.

#### 4.2 Windows NT 4.0

Double-click the Network icon. The network dialog window appears. In the Network dialog window, select the Configuration tab.

Verify the following network components were installed in the:

Adapters Tab

- ITeX ADSL Network Modem (Apollo 2 – 8Mb/s)

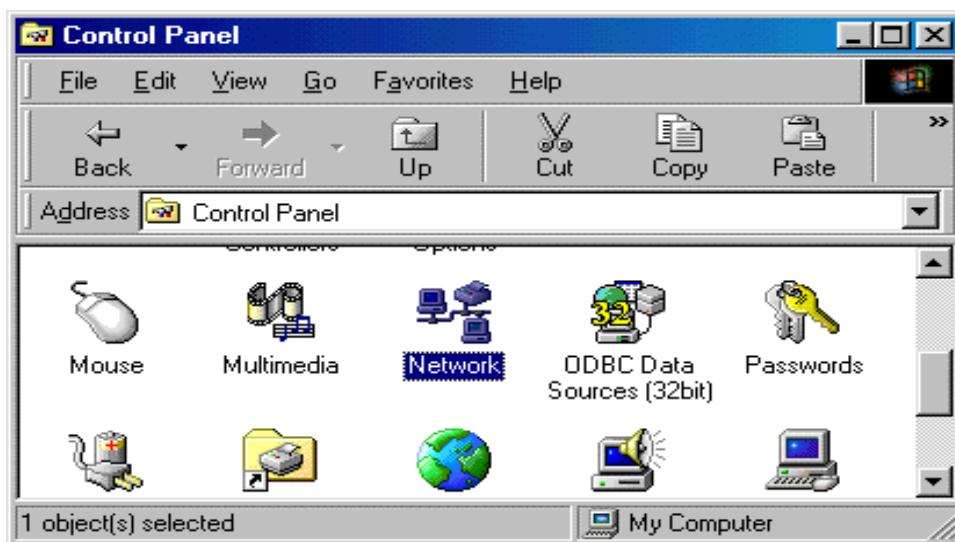
Protocols Tab

- ADSL Management and Monitor Interface
- TCP/IP Protocol

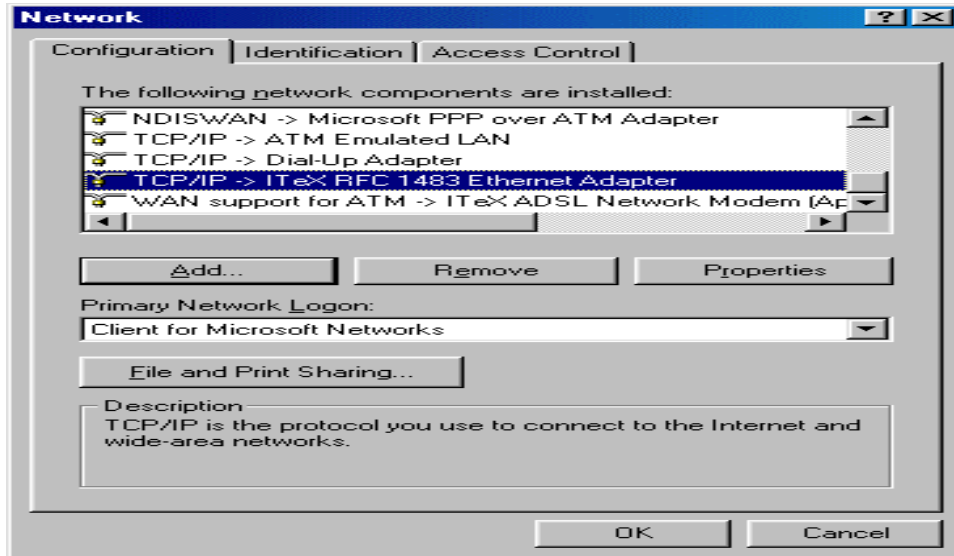
Click Ok to close the Network dialog window.

### 5.CONFIGURING THE ADSL NETWORK FOR ETHERNET OVER ATM (RFC1483)

#### 5.1 Windows 95 (OSR1/OSR2) and Windows 98 (1<sup>st</sup> and 2<sup>nd</sup> Edition)

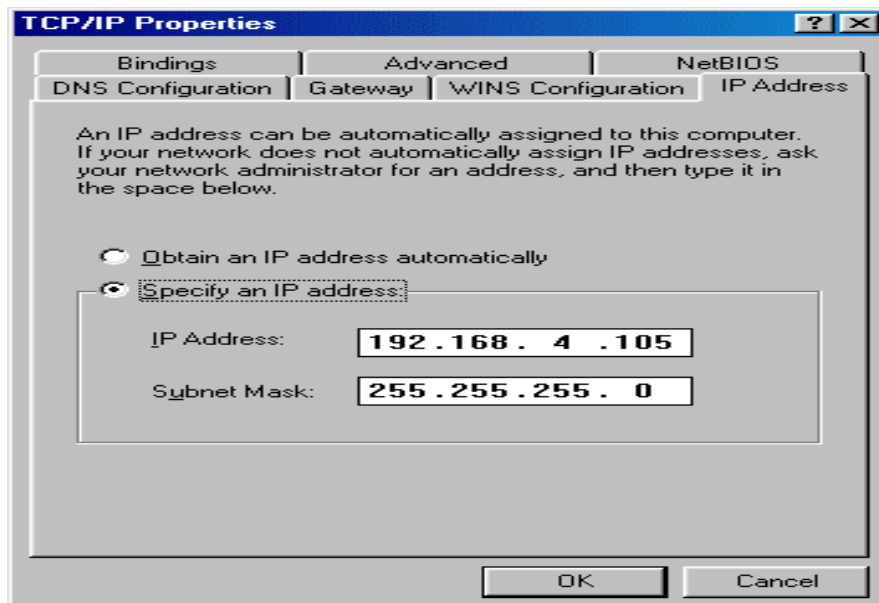


From the Start menu, select settings and open the control panel. Double click on the Network icon. The Network window will appear.

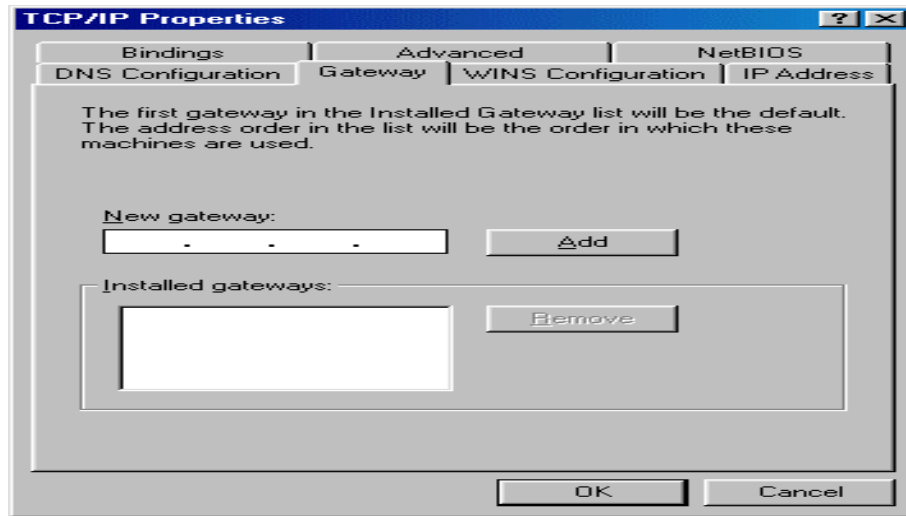


Select the Configuration Tab and scroll through the installed network component list.

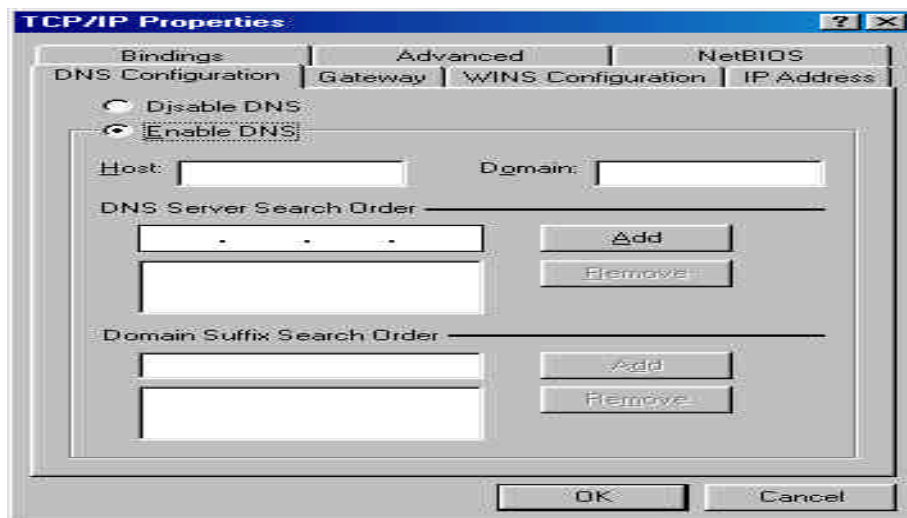
For Windows 98 2<sup>nd</sup> Edition, highlight the TCP/IP → ITeX RFC1483 Ethernet Adapter component. For Windows 98 1<sup>st</sup> Edition, highlight the TCP/IP→ITeX ADSL Network Modem (Ambit PCI - 8Mbps). For Windows 95, highlight "TCP/IP". Click "Properties." The TCP/IP Properties window will appear.



To setup the IP Address, select the IP Address tab and then select the "Specify an IP address" option. Enter the IP Address and Subnet Mask settings.



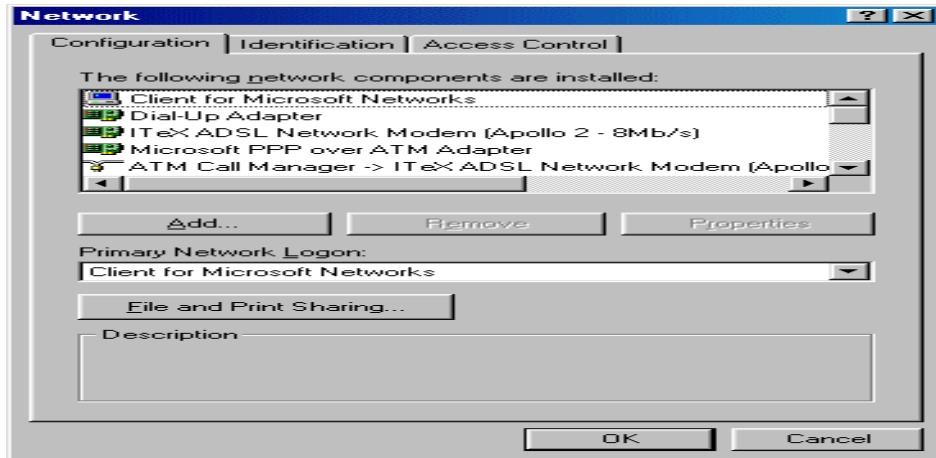
To setup a new gateway, enter the setting in the new gateway section and click "Add." This will add the setting into the installed gateways.



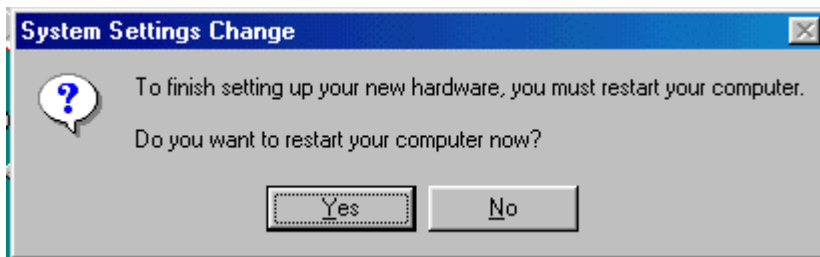
To configure the Domain Name Server, simply select the Enable DNS option. Enter the Host and Domain settings. Enter the DNS Server search order and click "Add."

Once all the TCP/IP properties have been set, click "OK" to return to the Network window.





Click "OK" to close the Network window.



Click "No" when prompted "Do you want to restart your computer now?"

### SETTING THE PVC VALUES FOR ETHERNET OVER ATM (RFC1483)

#### Windows 98 2<sup>nd</sup> Edition

For RFC1483, the VPI and VCI have a default setting of 8 and 35 respectively. To change the values for RFC1483, follow these instructions:

Using the Modem Icon Utility to Set the PVC Values

Refer to "User's Guide to the Modem Icon Utility" for more information.

Parameter	Value	Meaning
VPI	0 - 255	Virtual Path Identifier
VCI	0 - 255	Virtual Channel Identifier

Close the ITeX ADSL Test Application window and restart the computer. Configuring the ADSL modem for RFC1483 is completed.

#### Windows 98 1<sup>st</sup> Edition and Windows 95

From the Network configuration window, select "ITeX ADSL Network Modem (Apollo 2 - 8Mb/s)". Select Properties and then select the Advanced tab. Enter the VPI and VCI values.

## 5.2 Windows NT4.0

Ethernet over ATM (RFC1483)

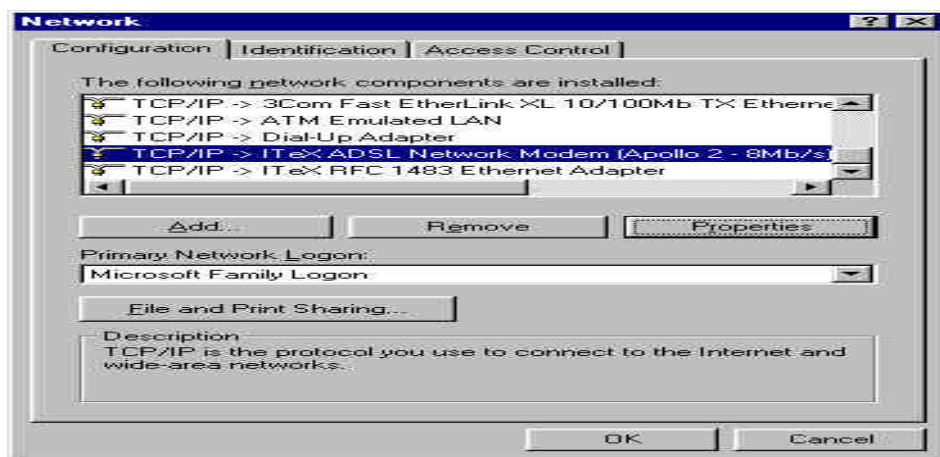
Open the Network dialog window by double clicking My Computer->Control Panel->Network.

In the Network window, select the Adapters tab.

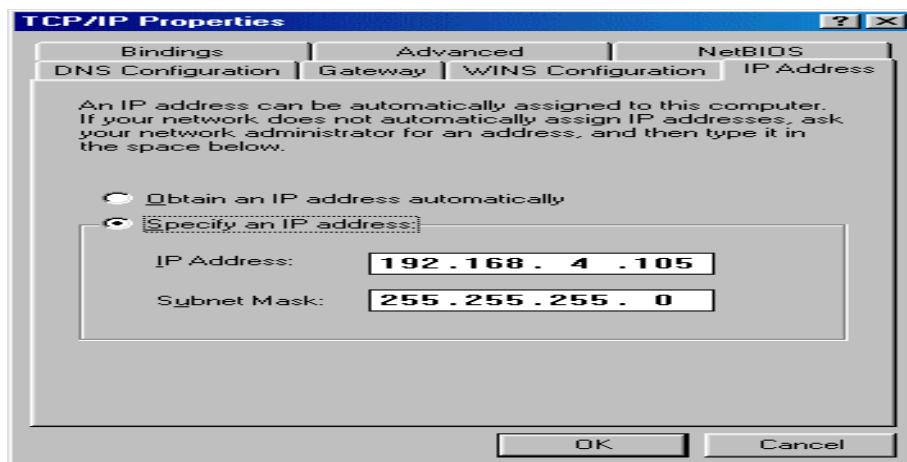
Scroll through the installed network components list. Highlight the "ITeX ADSL Network Modem (Apollo 2 - 8Mbps)" and click Properties.

The TCP/IP Properties window appears.

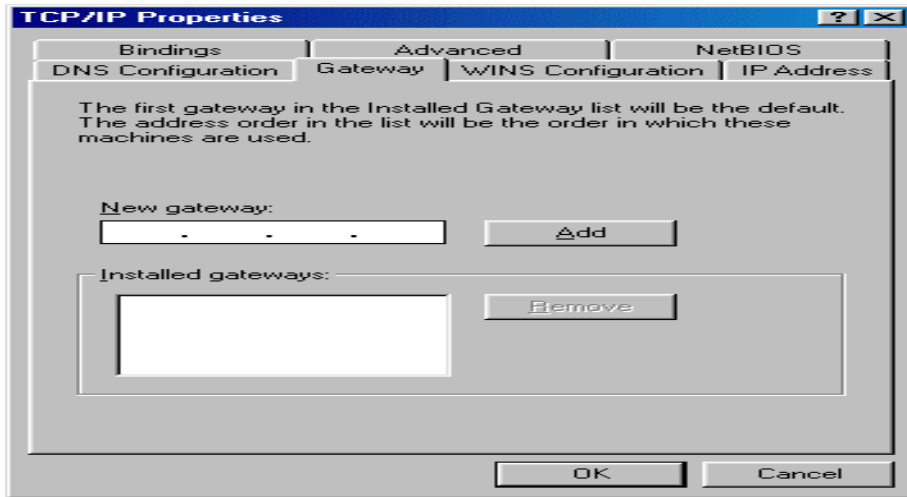
Please check your TCP/IP configuration with your Internet service provider.



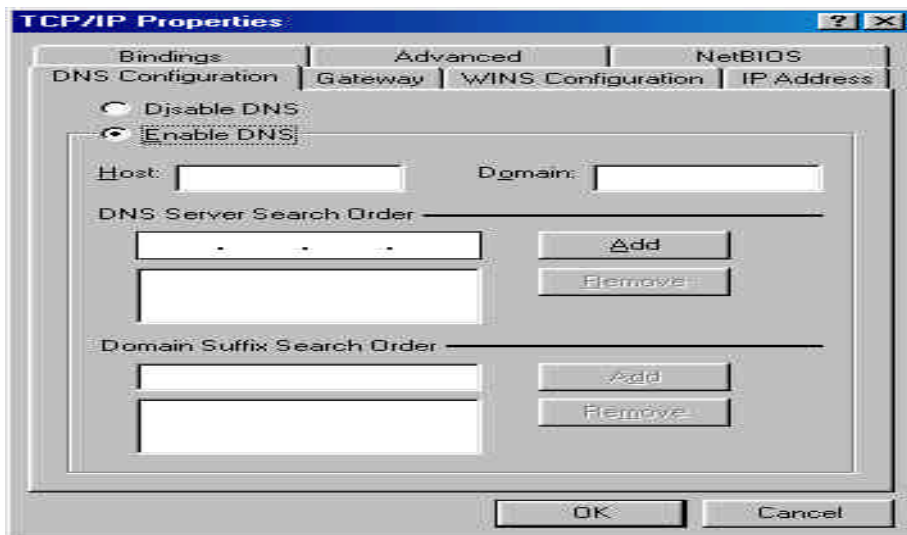
From the Network configuration window, select the "TCP/IP → ITeX ADSL Network Modem (Ambit PCI - 8 Mb/s)" option in the configuration tab, click "Properties." The TCP/IP Properties window will appear.



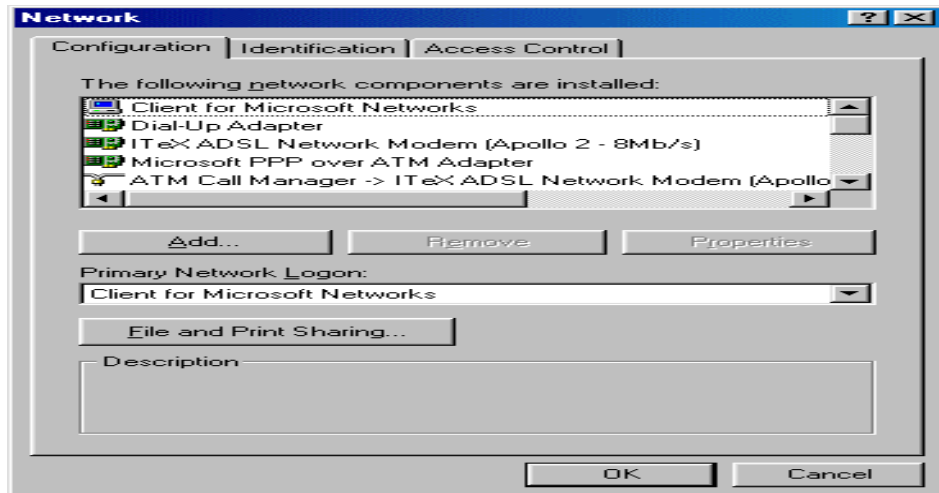
To setup the IP Address, select the IP Address tab and then select the "Specify an IP address" option. Enter the IP Address and Subnet Mask settings.



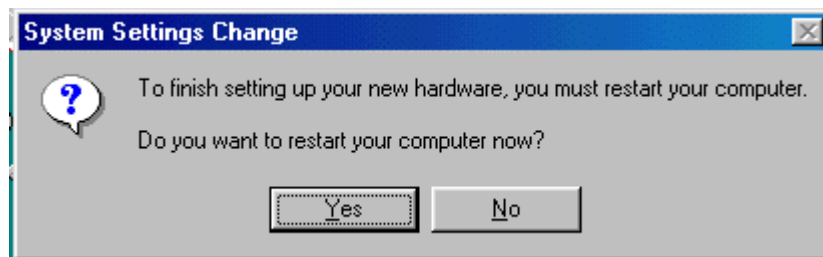
To setup a new gateway, enter the setting in the new gateway section and click "Add." This will add the setting into the installed gateways.



To configure the Domain Name Server, simply select the Enable DNS option. Enter the Host and Domain settings. Enter the DNS Server Search Order and click "Add." Once all the TCP/IP properties have been set, click "OK" to return to the Network window.



Click "OK" to close the Network window.



Click "Yes" when prompted "Do you want to restart your computer now?"

## 6. ACTIVATING THE AMBIT PCI ADSL NETWORK MODEM

For RFC1483 :

Once the drivers are installed and the setup is complete, the Ambit ADSL Modem is ready to run. Each time the computer is turned on, the modem automatically connects to the central office equipment. Simply run the internet browser software to verify.

## 7. MONITORING THE AMBIT PCI ADSL NETWORK MODEM

Please refer to the User's Guide to the Modem Icon for more information on how to monitor the Ambit PCI ADSL network modem.

## 8. UNINSTALLING THE AMBIT PCI FULL RATE ADSL MODEM AND TEST APPLICATION

**To uninstall the software drivers:**



- Right click on the "My Computer" icon; select Properties; select Device Manager; Scroll down to "Network Adapters." Open the "Network Adapters" folder.
- Right click "ITeX A2 ADSL NIC" and click "Remove." Click "OK" when prompted with a warning about removing and adapter. Click "OK" to close the Systems window.

**To uninstall the test application:**

- From the Start menu, select "Programs," select "ITeX ADSL," select "Uninstall ADSL," then click on the "Uninstall Test Application."