



Kinpo Electronics, Inc.

**SAM ADSL Network Modem
Model:A100A (K2)**

Installation Manual

Version : E1
Date : Oct. 22, 1999
Software: Itex

Preliminary

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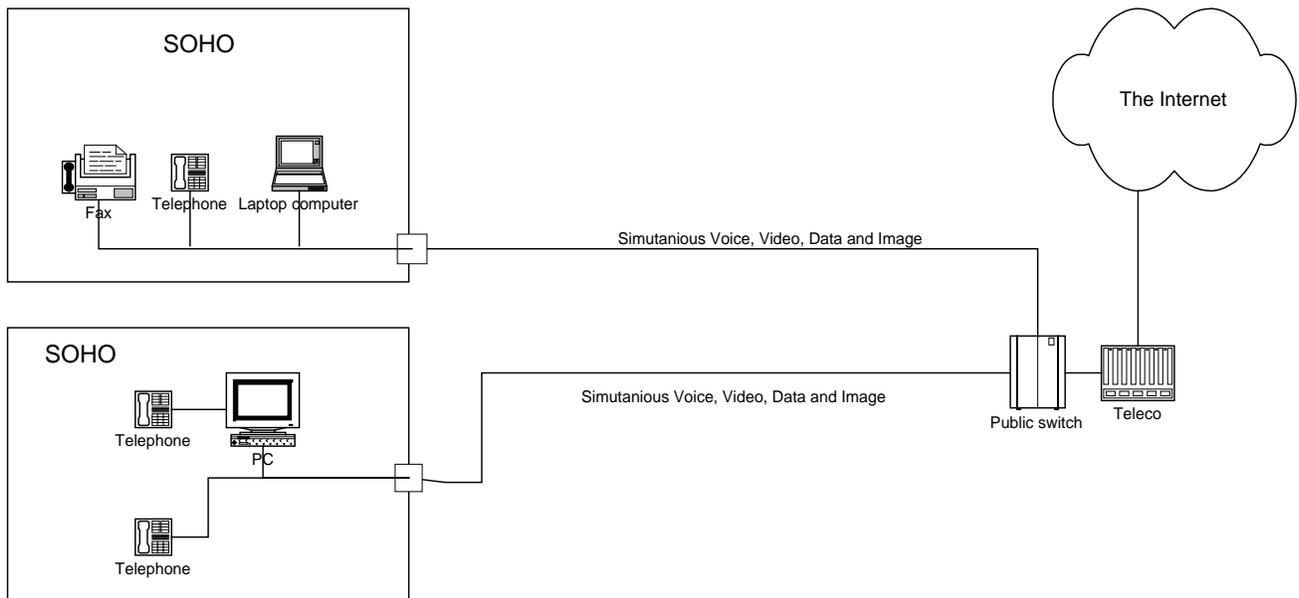
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1. INTRODUCTION

ADSL Network

This is a diagram showing how an ADSL network looks.



System Requirement

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

[PC system requirement]

1. IBM PC and compatibles running a Pentium II, Pentium III, AMD or Cyrix 300MHz CPU or faster
2. 32Mbyte main memory and 10 Mbytes hard disk space
3. Microsoft Windows 98, 95, NT4.0 or 2000

[ADSL network]

1. Subscribe to an ADSL service from your local telephone company or have access to an ADSL DSLAM.
2. An IP address, gateway and DNS numbers from your telephone company (for ADSL network configuration) or network administrator.
3. A VCI and VPI values from your telephone company (for ADSL network configuration) or network administrator.

2. INSTALLING THE ADSL NETWORK MODEM BOARD

Before installing the ITeX ADSL Network Modem board, please make sure that the following minimum system requirements are met.

Minimum System Requirement

[PC System Requirement]

1. IBM PC and compatibles running a Pentium II, Pentium III, AMD or Cyrix 300MHz CPU or faster
2. 32Mbyte main memory and 10 Mbytes hard disk space
3. Microsoft Windows 98, 95, NT4.0 or 2000

[ADSL Network Subscription]

1. Subscribe to an ADSL service from your local telephone company or service provider or have access to an ADSL DSLAM.
2. An IP address, gateway and DNS numbers from the telephone company (for ADSL network configuration) or from your network administrator.
3. A VCI and VPI value from your telephone company (for ADSL network configuration) or network administrator.

Before installing the ITeX ADSL Network Modem, please make sure that the power to the computer is turned off. Remove the cover of the personal computer. Insert the ITeX ADSL Network Modem into one of the free PCI slots available. Consult your computer's manual for instructions on where to find the PCI slot. Make sure that the network modem is securely fastened into the computer.

Connect the ADSL phone line directly to the RJ-11 connector marked "L". If there is no marking, then connect the ADSL phone line to the top connector of the modem. Also, since the ITeX ADSL Network Modem comes equipped with an inline filter, you can attach a phone directly to the second RJ-11 jack.

3. INSTALLING THE SAM DEVICE DRIVERS AND DIAGNOSTICS (ITEX ADSL SAM TEST APPLICATION)

Please have the following information available in order to complete the installation and setup of the ITeX SAM ADSL Network 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 98 CD.

3.1 Windows 98

This installation guide will walk the user through the installation of the ITeX SAM ADSL Network Modem software drivers and help to configure the modem.



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



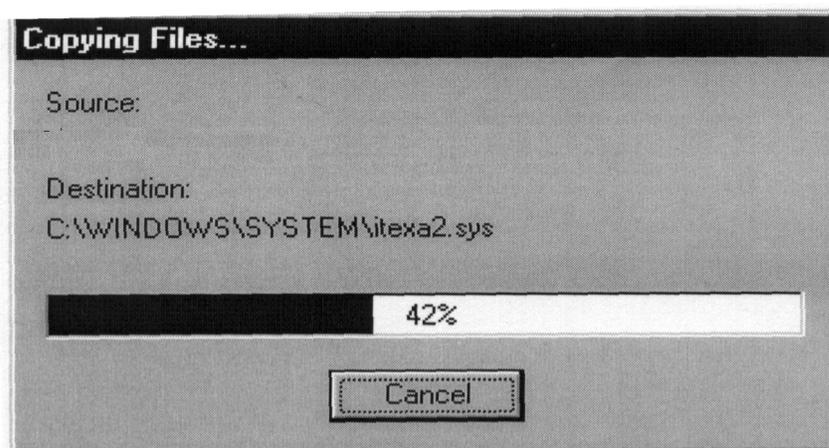
The Add New Hardware Wizard window will appear. When prompted, select "search for the best driver for your device. (Recommended)". Click Next.



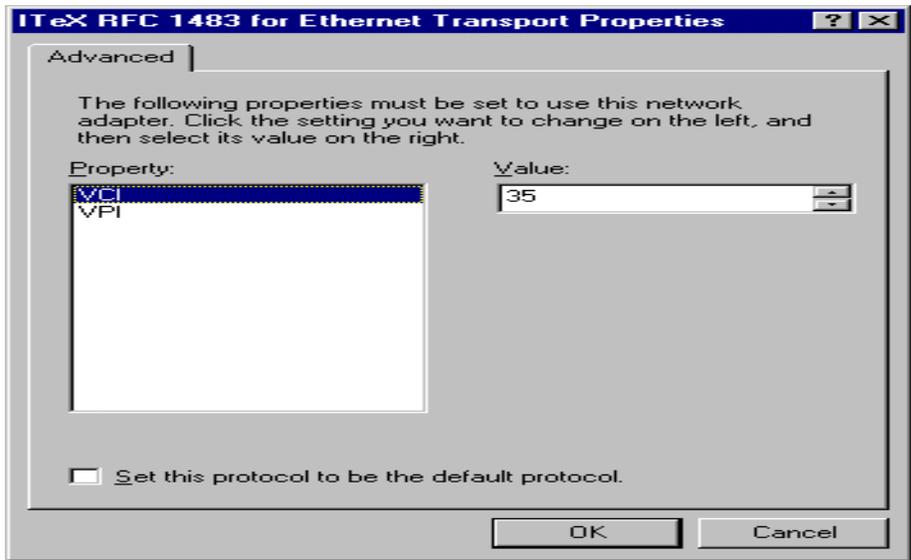
Insert the SAM ADSL Software Drivers CD into your CD-ROM drive and select the "Specify a location" option from the menu and type "Drive:\win95_98 or win98sec_2000 (where is your CD_ROM drive)". Click Next.



Windows should find the NETITEX.INF file in the floppy disk drive. If this is correct, then click Next to continue. Otherwise, click Back to re-enter the location of the driver. Windows may not be able to find some of the Windows 98 files. If so, enter the location of the Windows 98 CD and proceed with the installation.



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.



Windows has finished installing all the ITeX ADSL Network Modem drivers. Click Finish to complete the installation.

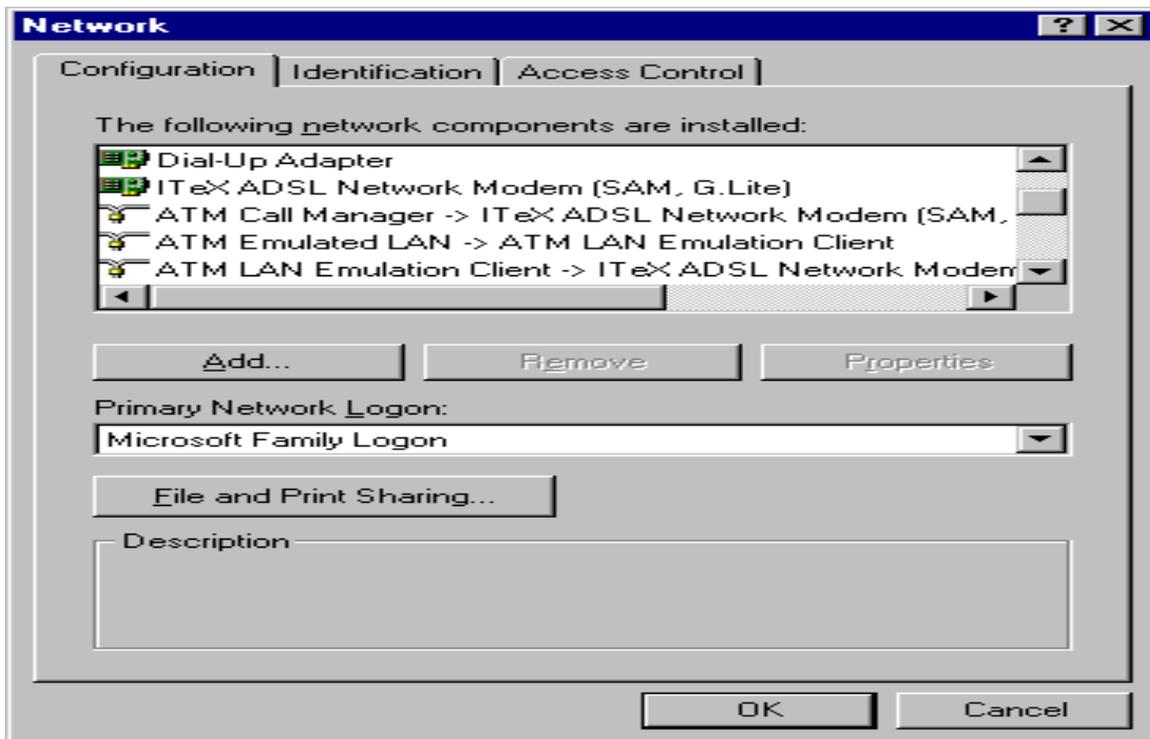


Click Yes when prompted "Do you want to restart your computer now?" Proceed to installing the SAM Diagnostic Software.

3.2 INSTALLING THE SAM DIAGNOSTIC SOFTWARE (ITeX ADSL K2 Test Application)

After installing the drivers, Windows will ask if you want to install the SAM diagnostic software (ITeX ADSL K2 Mapi). 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 asked if you want to restart your computer". Click OK.

4. VERIFYING THE DRIVER INSTALLATION

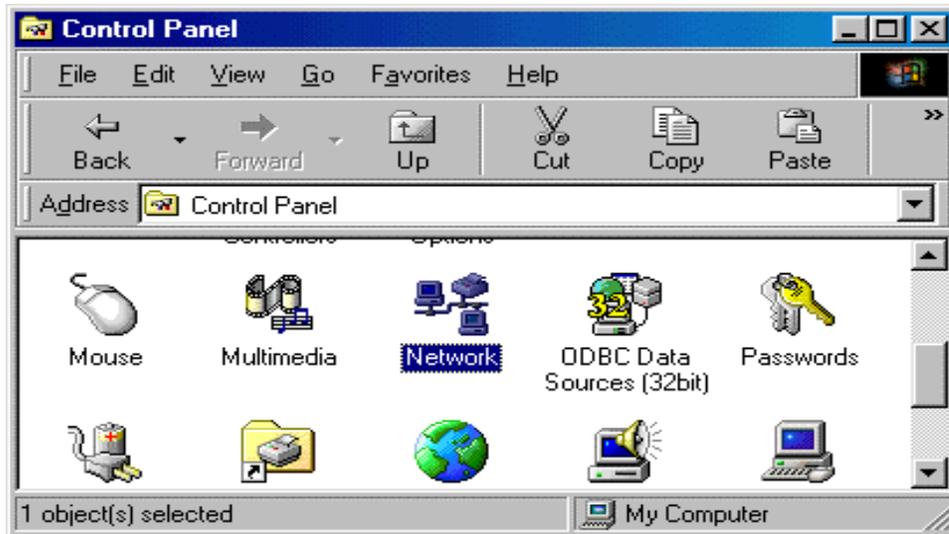


From the Start menu, select settings and open the control panel. Double click on the Network icon. Verify that the following network components were installed:

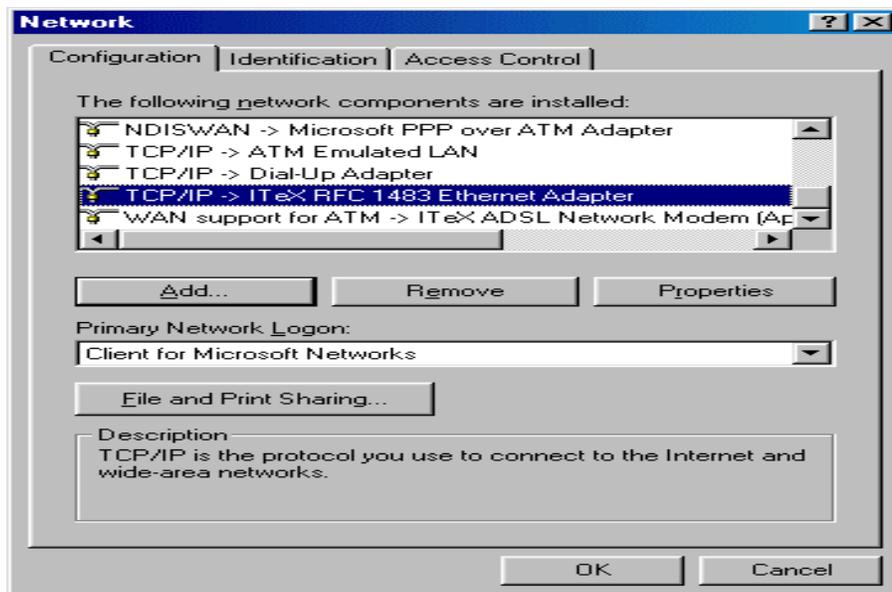
- ITeX ADSL Network Modem (SAM, G.lite)
- ATM Call Manager → ITeX ADSL Network Modem (SAM, G.lite)
- ATM LAN Emulation Client → ITeX ADSL Network Modem (SAM, G.lite)
- ITeX ADSL Management and Monitor Interface → ITeX ADSL Network Modem (SAM, G.lite)
- ITeX RFC1483 Ethernet Adapter → ITeX RFC1483 for Ethernet Transport
- ITeX RFC1483 for Ethernet Transport → ITeX ADSL Network Modem (SAM, G.lite)
- TCP/IP → ITeX RFC1483 Ethernet Adapter
- TCP/IP → ITeX ADSL Network Modem (SAM, G.lite)

Click Cancel to close the Network window.

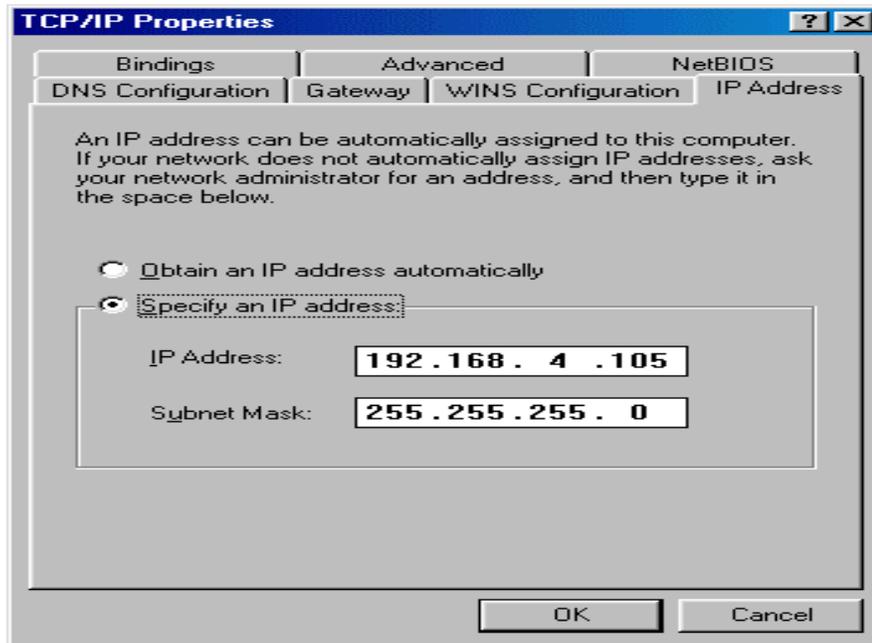
5. CONFIGURING THE ADSL NETWORK (TCP/IP) FOR RFC1483



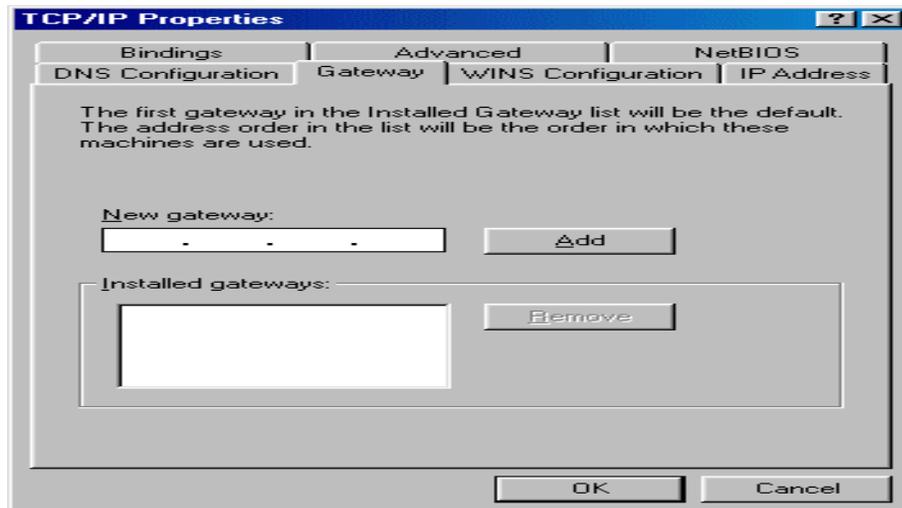
From the Start menu, select settings and open the control panel. Double click on the Network icon. The Network window will appear.



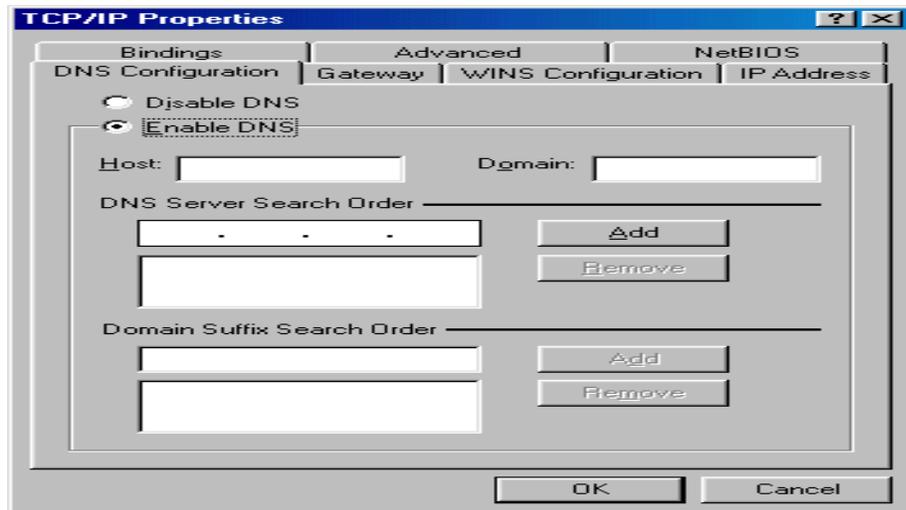
Select the Configuration tab and scroll through the installed network components list. Highlight the TCP/IP → ITeX RFC1483 Ethernet Adapter component and click Properties. The TCP/IP Properties window will appear.



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.

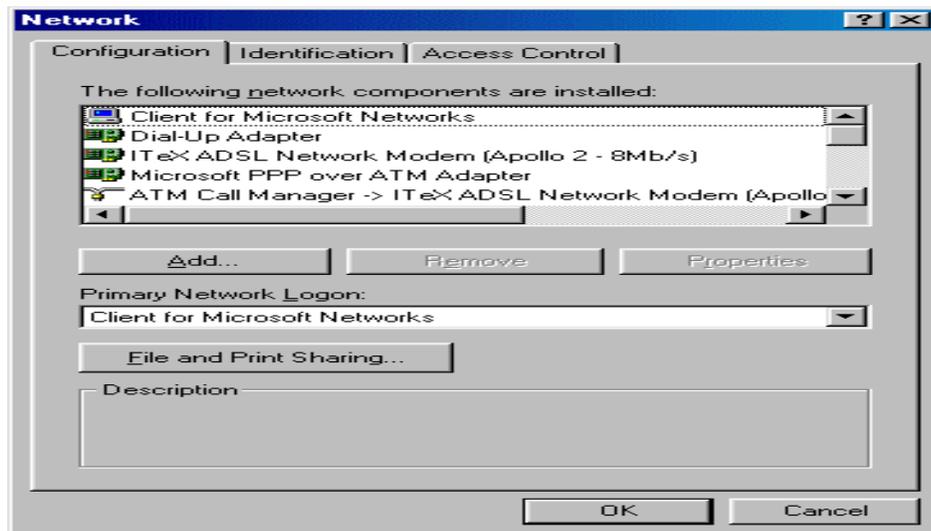


To setup a new gateway, enter the setting in the new gateway section and click Add. This will add the setting into the installed gateways.



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?"

Configuring the ADSL modem for RFC1483 is completed. Go to the next step.

SETTING THE PVC VALUES

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

From the Start menu, select "Programs", select "ITeX ADSL", select "K2", then click on "Mapi" to execute the test application. Open the "Configuration" tab. Select "PVC Setup for RFC1483". Enter a pair of recommended VPI/VCI values from the table below, click "PVC Setting" to apply these values and to create a new PVC setup.

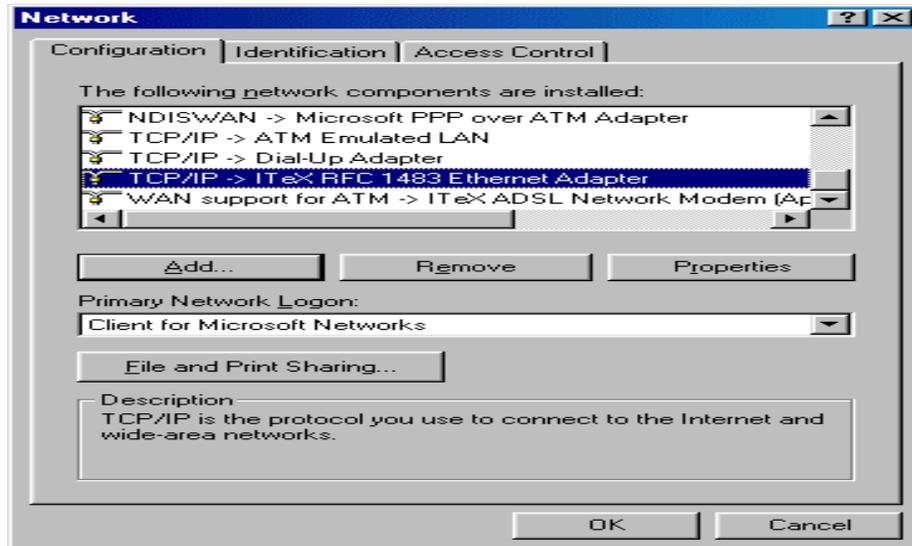
Parameter	Value	Meaning
VPI	0 - 255	Virtual Path Identifier
VCI	0 - 255	Virtual Channel Identifier

For first time setups, windows creates a PVC key registry, click "OK" to create a PVC key in the registry, click "OK" at the successful window. The PVC setting will be updated when the system is restarted.

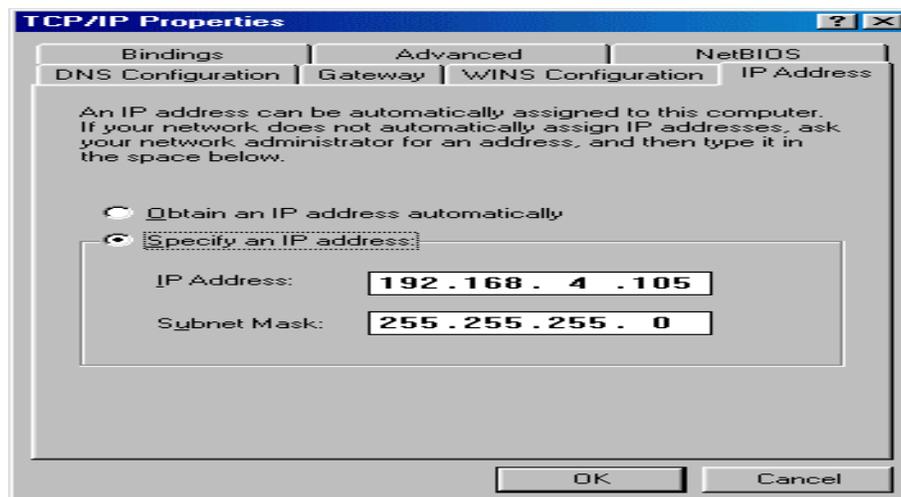
Close the ITeX ADSL K2 Test Application window and restart the computer.

6. CONFIGURING THE ADSL NETWORK (TCP/IP) FOR RFC1577

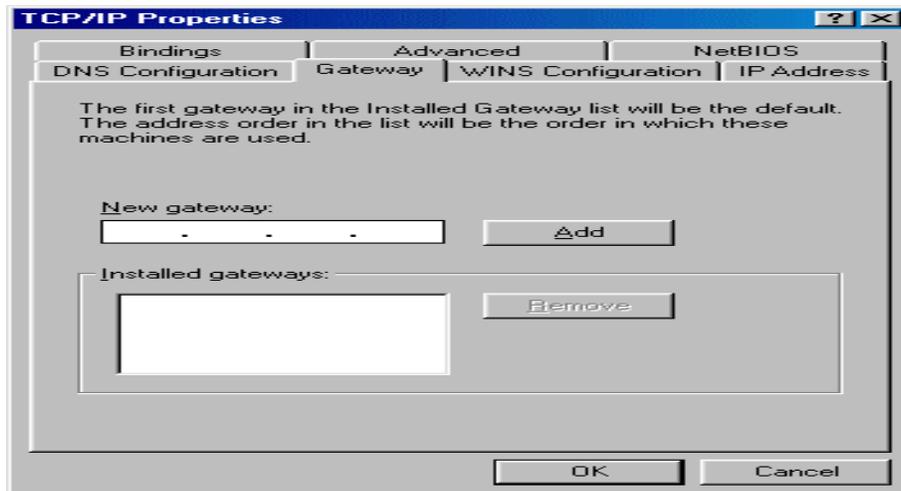
Note: Windows 98 2nd Edition is required to support RFC1577.



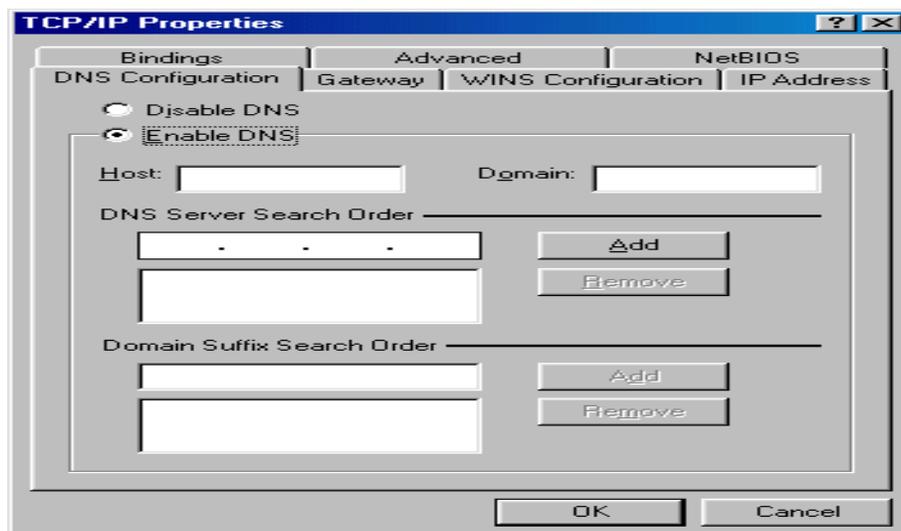
From the Network configuration window, select the "TCP/IP → ITeX ADSL Network Modem (SAM, G.lite)" option in the configuration tab, click "Properties". The TCP/IP Properties window will appear.



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.

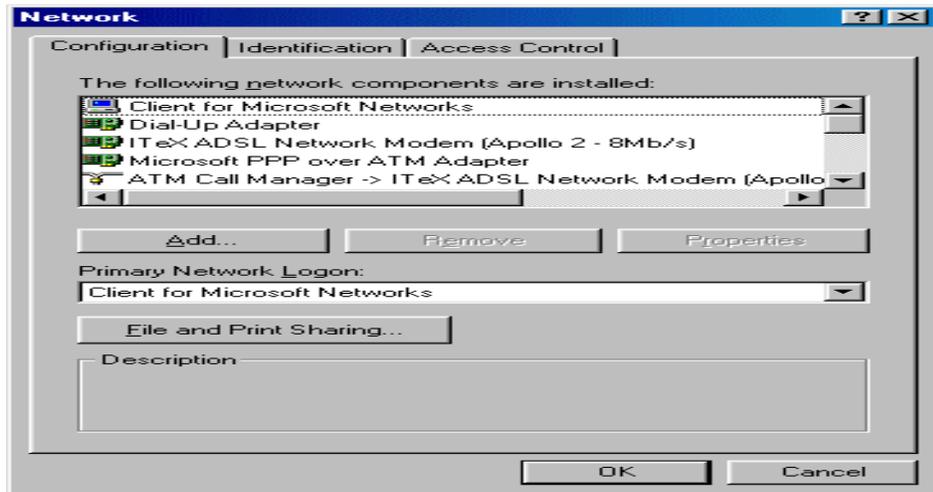


To setup a new gateway, enter the setting in the new gateway section and click Add. This will add the setting into the installed gateways.



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

Configuring the ADSL modem for RFC1577 is completed. Go to the next step.

SETTING THE PVC VALUES FOR RFC1577

To set the PVC values for RFC1577, follow the below instructions:

From the Start menu, select "Programs", select "ITeX ADSL", select "K2", then click on "Mapi" to execute the test application. Open the "Configuration" tab. Select "PVC Setup for RFC1577". Enter a pair of recommended VPI/VCI values from the table below, click "PVC Setting" to apply these values and to create a new PVC setup.

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

For first time setups, windows creates a PVC key registry, click "OK" to create a PVC key in the registry, click "OK" at the successful window. The PVC setting will be updated when the system is restarted.

Close the ITeX ADSL K2 Test Application window and restart the computer.

7. CONFIGURING THE ADSL NETWORK MODEM FOR PPP OVER ATM

Note: Windows 98 2nd Edition is required to support PPP over ATM

7.1 SETTING UP PPP OVER ATM

From the Start menu, select Setting, then open the Control Panel. Open the Network icon. The Network window will appear. In the configuration window, scroll through the installed network components and verify that the "Dial up adapter" is installed. Click Add to add a network component. Double click on Adapter. Click Add, Choose Microsoft in the "Manufacture" section and the Microsoft PPP over ATM Adapter in the "Network Adapters" section. Click OK to return to the Configuration window.

In the configuration window, the following two bindings will now exist:

NDISWAN -> Microsoft PPP over ATM Adapter

WAN support for ATM -> ITeX K2 ADSL NIC

Click OK, Windows may ask to insert the Windows 98 CD. Make sure that the Windows 98 CD is in the CD-ROM, click OK. Restart the computer

7.2 ESTABLISHING A PPP OVER ATM CONNECTION

From the Start menu, select Programs, select Accessories, select Communications, and then double click on Dial-Up Networking. Double click on the "Make New Connection" icon. Type in a name for the computer you are dialing. Select the PPP ATM Adapter option in the "Select a device:" section. Click Configure

The Quality of Service window will appear. For Type, select "Unspecified Bit Rate". For Rate, select 25Mbps. For Circuit type, select Permanent Virtual Circuit and enter VPI and VCI values. For Framing, select "Null Encapsulation". Click OK, click Next, enter "0" or any telephone number. Select the country and click Next. Click Finish. Windows will generate a dial up network icon which will be used for activating the PPP over ATM connection. Insert the Windows 98 CD into the CD-ROM when prompted. Click OK to exit the Communications window. Restart the computer

8. ACTIVATING THE SAM ADSL NETWORK MODEM

For RFC1483 and RFC1577:

Once the drivers are installed and the setup is complete, the ITeX ADSL Network 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.

For PPP over ATM:

From the Start menu, select Program, select Accessories, select Communications, select dial up network. Double click on the dial up network icon.

When the "Connect to" window appears, enter the user name and password. Click on "Connect" and enter the user name, password, and logon domain information in the user logon window. Click OK. If the connection is established, Windows will display a connection established window. Click Close. PPP over ATM is now running.

9. MONITORING THE SAM ADSL NETWORK MODEM

From the Start menu, select Programs, select ITeX ADSL, select K2, and click on the MAPI application. The ITeX ADSL K2 Test Application window will appear. Displayed at the bottom of the window will be the modem status, the downstream (DN) and upstream (UP) data rates (in Kbytes) as well as the connection time for this period. The data rates for the ITeX ADSL Network Modem can be monitored from this window by watching the rates shown next to DN and UP.

Please refer to the User's Guide for more information.

10. UNINSTALLING THE SAM ADSL NETWORK 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 K2 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".

11. SPECIFICATIONS

- Compliant with ANSI T1.413 Issue 2, ITU G.992.1(G.dmt), ITU G.992.2(G.lite), UAWG 1.0
- Compatible with full rate T1.413 DSLAM (Alcatel) at central office (CO) side.
- DMT (Discrete Multi-Tone) modulation
- Splitterless operation
- Full rate operation with downstream up to 1.5Mbps and upstream up to 512Kbps
- Rate adaptive at 32 Kbps steps depending on the line condition
- Up to 18Kft loop reach
- Support for Windows 95/98/2000 and Windows NT4.0
- Full ATM protocol stacks implementation over ADSL, ATM TC layer, ATM layer with traffic shaping, AAL layer(AAL5 & SAR), IP over ATM, RFC 1483/1577,PPP over ATM
- Software upgradable
- Performance scalable, based on host processor

Interface :

- 32 bits 33MHz PCI interface, PCI 2.2 power management, Plug and Play
- RJ-11 port x1 for Line
- RJ-11 port x1 for Telephone

System Requirement:

- Pentium II processor, Windows 95/98/2000 and NT 4.0, 64M RAM

Physical Dimensions:

- Width : 18.4 mm
- Height : 107 mm
- Depth : 160 mm

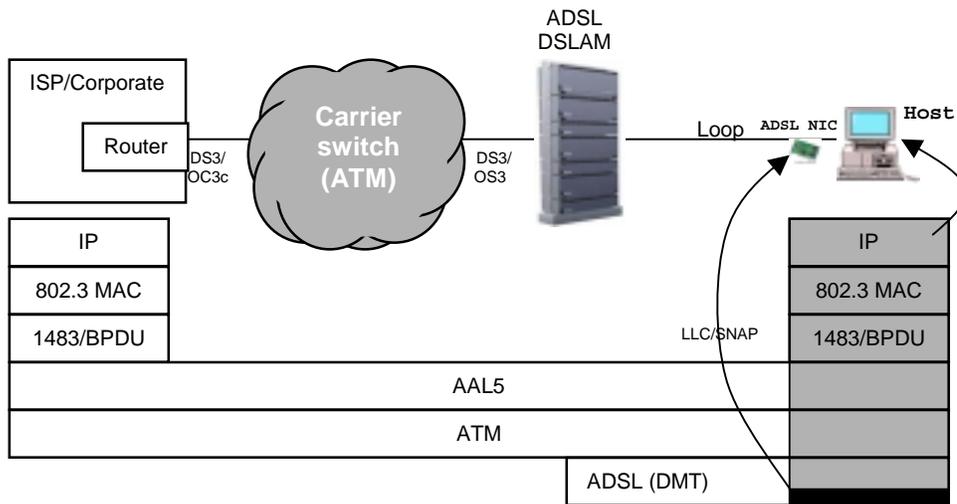
Operating Temperature : 32 - 104 F (0 - 40 C)

Regulatory Approvals : FCC Class B

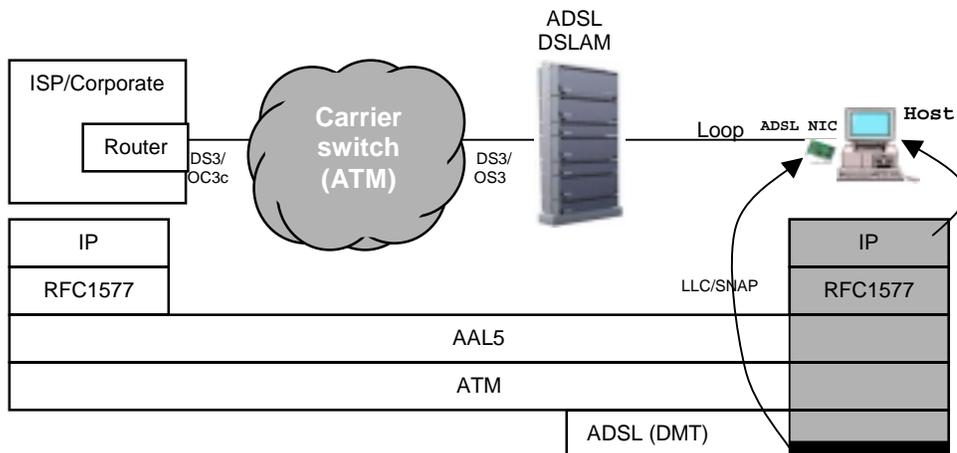
SAM End-to-End Application Scenarios:

End-to-end applications can be accommodated by the following three scenarios.

Bridged Ethernet over ATM PVC (RFC 1483 BPDU)



Classical IP over ATM (RFC 1577)



PPP over ATM (RFC 2364)

