

Ambit PCI Full Rate ADSL Modem

Installation Manual

For Windows[®] 95, 98, and NT4.0

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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.

Microsoft Windows	RFC
Operating Systems	1483
Win95 OSR1 and OSR2	Yes
Win98 – 1 st edition	Yes
Win98 – 2 nd 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 1st edition and 2nd 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:





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 1st Edition)
- 2) Windows 98 2nd Edition

Please make sure your OS is either Windows 98 1st Edition or Windows 98 2nd Edition. Windows 98 2nd Edition can support advanced features which Windows 98 1st Edition can not. If you are running Windows 98 2nd 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.



Add New Hardware Wizar	d
	 What do you want Windows to do? Search for the best driver for your device. (Recommended). Display a list of all the drivers in a specific location, so you can select the driver you want.
	< <u>B</u> ack Next≻ Cancel

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

Add New Hardware Wiz	zard			
	Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search.			
	Floppy disk drives			
	CD-ROM drive			
	☐ Microsoft Windows Update			
	Specify a location:			
	Browse			
	< <u>B</u> ack Next > Cancel			

If your Ambit PCI ADSL Modem comes with floppy diskettes, then insert the Windows 98 driver diskette (use the Windows 98 2nd edition diskette for installing on Windows 98 2nd edition and the Windows 98 diskette for installing on Windows 98 1st 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 1st edition; d:\win98-v2 for Windows 98 2nd edition). Select "Next."



Add New Hardware Wizard
Windows driver file search for the device: ITEX ADSL Network Modem (Apollo 2 - 8Mb/s) Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue. Location of driver: Image: A:NETITEX.INF
< <u>B</u> ack [Next>] Cancel

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

Copying Files	18	
Source: A:\ITeXA2.sy_		
Destination: C:\WINDOWS	\SYSTEM\itexa2.sys	
	42%	<u>i</u>);
	Cancel	

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.



then select its value of	ing you want to change on on the right.	the left, and
Property:	Yalue:	
VBI VPI	35	
Control of		

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.

Add New Hardware Wi	zard	
		ITeX ADSL Network Modern (Apollo 2 - 8Mb/s)
	Windows hardware	has finished installing the software that your new device requires.
	[< Back Finish Cancel

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

System S	Settings Change 🛛 🔀
?	To finish setting up your new hardware, you must restart your computer.
ч	Do you want to restart your computer now?
	<u>Yes</u> <u>N</u> o

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."

	Iocations: Click Next to start the se Eloppy disk drives LD-FIGM drive Microsoff Windows Update Specify a location:	e ronuvwrg selected
	L.WIT135	Biower.

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.



ITeX RFC 1483 for Ethernet	Transport Properties	? ×
Advanced		
' The following properties must adapter. Click the setting you then select its value on the ri	: be set to use this network I want to change on the left, a ght.	nd
Property:	∐alue:	
VCI	35	
\Box Set this protocol to be the	default protocol.	
	OK Ca	ancel

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 1st 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 \rightarrow Dial up Adapter
- TCP/IP → ITeX ADSL Network Modem(Apollo2-8MB/s)

Windows 98 2nd 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

İTeX 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 (1st and 2nd Edition)

🗟 Control	Panel				_	
∫ <u>F</u> ile <u>E</u> di	it <u>V</u> iew <u>G</u>	<u>à</u> o F <u>a</u> vorites	<u>H</u> elp			
	• _ > _	- È	X	È		»
ј васк	Forward		Lut	Сору	Faste	
	UCONTROL Par	nel				
_		option			-	
Ó I	<u>دم</u>	- -		2 7		
Mouse	Multimed	lia Networ	K OC Sou)BC Data irces (32bit)	Passwords	
4	2)	e		•
1 object(s) se	lected			🔜 My Com	puter	

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



Network
Configuration Identification Access Control
The following <u>n</u> etwork components are installed:
TCP/IP -> ATM Emulated LAN
TCP/IP -> ITeX RFC 1483 Ethernet Adapter
Add Remove Properties
Primary Network Logon:
Client for Microsoft Networks
Eile and Print Sharing
Description TCP/IP is the protocol you use to connect to the Internet and wide-area networks.
OK Cancel

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

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

Т	CP/IP Properties				? ×		
	Bindings	Advanced NetBIOS		etBIOS	Į		
	DNS Configuration	Gateway WINS Configuration		guration	IP Address		
	An IP address can be automatically assigned to this computer. If your network does not automatically assign IP addresses, ask your network administrator for an address, and then type it in the space below.						
	◯ <u>O</u> btain an IP	address aut	omatically				
	Specify an IP address						
	<u>I</u> P Address:	192	.168.4	.105			
	S <u>u</u> bnet Masl	c 255	.255.255	. 0			
			OK		Cancel		

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.

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TCP/IP Properties				<u>? ×</u>
Bindings DNS Configuration	Ì Adv Gateway	anced WINS Confi	Ne guration	etBIOS IP Address
The first gateway i The address order machines are used	n the Installe in the list wi 1.	ed Gateway lis Il be the order	t will be ti in which	he default. these
New gateway:	-	<u>A</u> dd		
Installed gatewa	ys:	<u>H</u> emov	/e	
		ОК		Cancel

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.

CP/IP Properties		? ×
Bindings DNS Configuration	Advanced Gateway WINS Conf	NetBIOS
C Disable DNS	Domain: [
DNS Server Sear	ch Order	Add
Domain Suffix Se	arch Order	Aud .
		Cancel

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.



Network	? ×				
Configuration Identification Access Control					
The following network components are installed:					
Client for Microsoft Networks					
Microsoft PPP over ATM Adapter Microsoft PPP over ATM Adapter					
Add Remove Propert	ies				
Primary Network Logon:					
Client for Microsoft Networks	-				
Eile and Print Sharing					
Description					
OK	Cancel				

Click "OK" to close the Network window.

System Settings Change 🛛 🕅			
?	To finish setting up your new hardware, you must restart your computer. Do you want to restart your computer now?		
	Yes <u>N</u> o		

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

SETTING THE PVC VALUES FOR ETHERNET OVER ATM (RFC1483)

Windows 98 2nd 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		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 1st 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.

116 1010	wing network a	components ar	e installed:	
TCP.	/IP -> 3Com Fa	ast EtherLink ×	L 10/100МЬ	TX Etherne
TCP.	IP -> Dial-Up.	Adapter		
TCP.	/IP -> ITeX AD	SL Network M	Iodem (Apollo	2 - 8Mb/s)
TCP.	/IP -> IT e⊠ BF	C 1483 Ethern	iet Adapter	
< 1				
			0.000	
- A	dd.	Remove		Properties
rimary N	etwork Logon	r.,		
Microsol	t Family Logor	90		
<u>File</u> a	nd Print Sharir	ng		
Descrip	tion			
TCP/IF	is the protoco	al you use to co	onnect to the	Internet and

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

TCP/IP Properties		? ×				
Bindings DNS Configuration	│ Advanced │ Gateway │ WINS Configurati	NetBIOS on IPAddress				
An IP address can If your network doo your network admi the space below.	An IP address can be automatically assigned to this computer. If your network does not automatically assign IP addresses, ask your network administrator for an address, and then type it in the space below.					
○ <u>O</u> btain an IP ○ <u>Specify an IP</u>	address automatically					
IP Address:	192.168. 4 .10	5				
S <u>u</u> bnet Mas	k: 255.255.255.0					
	ОК	Cancel				

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.



TCP/IP Properties		? ×
Bindings	Advanced	NetBIOS]
DNS Configuration	Gateway WINS Conf	iguration IP Address
The first gateway ir The address order machines are used	n the Installed Gateway li in the list will be the orde	st will be the default. r in which these
New gateway:	. <u>A</u> do	
Installed gateway	is: <u>Etemo</u>	ve
	01	< Cancel

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.

Bindings	Advanced	NetBIOS
DNS Configuration	Gateway WINS Con	figuration IP Addres:
C Disable DNS		
G Eachie DNC		
Enable Divisi		
Host:	D <u>o</u> main:	
DNS Server Searc	ch Order	
		Add
		heuriowe
	122	
Domain Suffix Sea	arch Order	
T		And 1
7		1111111
	Ę	temove.

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.



Network					
Configuration Identification Access Control					
The following network components are installed:					
Client for Microsoft Networks					
Big Dial-Up Adapter					
I tex ADSL Network Modern (Apolo 2 - oMD/S)					
ATM Call Manager -> IT eX ADSL Network Modem (Apollo -1					
Add Remove Properties					
Rrimann Nichwork Logon:					
Client for Microsoft Networks					
File and Print Sharing					
Description					
Description					
UK Cancel					

Click "OK" to close the Network window.

System Settings Change 🛛 🕅	
?	To finish setting up your new hardware, you must restart your computer. Do you want to restart your computer now?
	Yes <u>N</u> o

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."