

DSL700P

Version 1.17

ADSL MODEM CARD

User's Manual

(Configured for SingTel Magix Service)



Internet at its fastest.

Product warranty does not apply to damage caused by lightning, power surges or wrong voltage usage.

Contents



Chapter 1	Introduction	5
	1.1 Package	6
Chapter 2	Before You Begin	7
	2.1 Minimum System Requirements	7
	2.2 Safety Precaution	8
	2.3 Installation Notes	8
Chapter 3	Installing Your Modem Card	9
	3.1 Setting Up Your Modem Card	9
	3.2 Connecting Your Modem Card	12
Chapter 4	Installing Your Modem Driver	13
	4.1 Installing Your Modem Driver - For Windows® 98 Second Edition	14
	4.2 Installing the Modem Driver - For Windows® Me.....	17
Chapter 5	Connecting to the Internet.....	21
	5.1 Connecting to the Internet	21
	5.2 Ready to Go!	23
Chapter 6	Uninstalling Your Modem Driver	25
Appendix A	ADSL MAPI Icon.....	27
	A-1 MAPI LEDs	27
	A-2 MAPI Menu	28
Appendix B	Technical Specifications	31
	B-1 Drivers Support	31
	B-2 Features	31

	B-3 ADSL Chipset	32
	B-4 ADSL Software Support	33
	B-5 Interfaces	33
Appendix C	Frequently Asked Questions	35
Appendix D	Troubleshooting Guide	39
Appendix E	Aztech Technical Support	43

Chapter 1



Introduction

Congratulations on your purchase of DSL700P ADSL Modem card!

ADSL, which stands for **Asymmetric Digital Subscriber Line**, is the latest communication technology that offers faster and uninterrupted Internet access.

The **DSL700P** is a PCI based Controller-less ADSL modem. It is capable of data rate in both Full-Rate and G.Lite, with **Full Rate transmission up to 8 Mbps downstream, 640 Kbps upstream** and **G.Lite transmission up to 1.5 Mbps downstream, 512 Kbps upstream**.

The ADSL modem makes use of your existing phone line for Internet surfing and at the same time, allows you to talk on the phone! As your phone line is dedicated to your home, your connection to the Internet will also be highly secured and reliable!

DSL700P definitely meets more than comfortably, the demands of today's bandwidth intensive applications!

1.1 Package

Check that you have the following listed items inside your DSL700P package. For any missing item, please contact your dealer immediately.

- 1 DSL700P ADSL Modem Card
- 1 User's Manual
- 1 DSL700P Installation CD
- 2 Micro-Filters
- 1 RJ-11 Telephone Extension cable

Chapter 2

Before You Begin

This chapter contains information that you need to know before installing your modem card. Please go through them before proceeding with the installation.

2.1 Minimum System Requirements*

2.1.1 Hardware

- IBM PC-based computer with Pentium® MMX 233 processor or equivalent
- 1 CD-ROM drive
- 1 free PCI Bus slot
- 32MB RAM
- 30MB free hard disk space# for system files and modem drivers (Windows CD-ROM may be required during installation, depending on your system configurations.)

2.1.2 Software - Operating System

- Windows® 98 Second Edition
- Windows® Me

* The information listed are minimum system requirements needed to install your ADSL modem card. Please check and ensure that your system also meets the minimum system requirements set by the ISP you subscribed to. Your system should meet the higher requirements of the two.

#Additional free hard disk space may be required for your Internet Service Provider (ISP) installation program and browser installation. Please check with your ISP.

2.2 Safety Precaution

- Do not remove your card from its protective bag until you are ready to install it.
- Always try to hold your card by its edges. Avoid touching any electronic components on your card.
- Static electricity can cause permanent damage to your card. To prevent such a damage, you must ground yourself during the installation:
 - » Use a grounding strap - a coiled wire with a clip at one end and an elastic strap at the other. Wear the strap around your wrist and attach the clip to any non-painted metal surface of your computer chassis.
 - » If you do not have a grounding strap, touch any non-painted surface of your computer chassis before you begin installation, and again every minute or so until the installation is completed.

2.3 Installation Notes

- The graphics and screen illustrations shown in this manual may differ from what you see in your system, but the steps still apply.
- A Philips screwdriver is required.
- The documentation for your computer should come in handy during the installation. Have it ready by your side.
- You may be prompted for your Windows CD-ROM during the driver installation. Have it ready by your side.

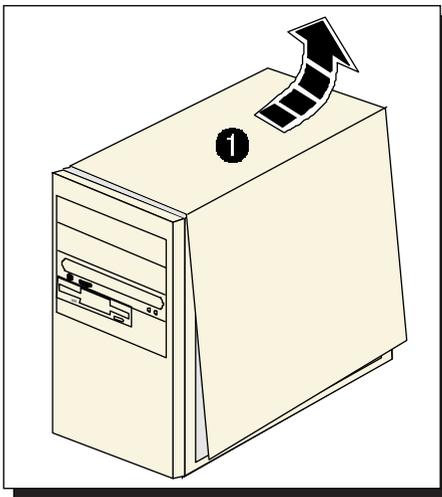
Chapter 3



Setting Up Your Modem Card

This chapter contains information on how to install and connect your modem card.

3.1 Installing Your Modem Card

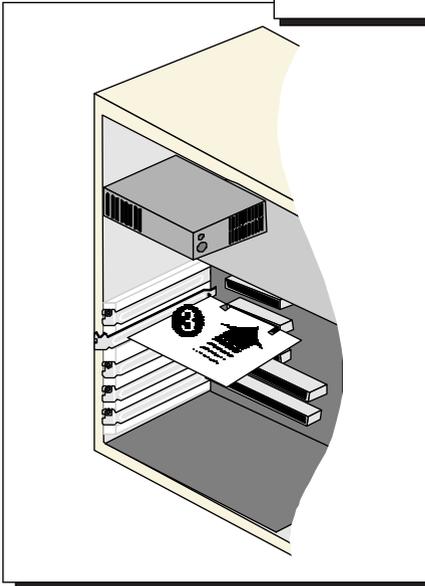
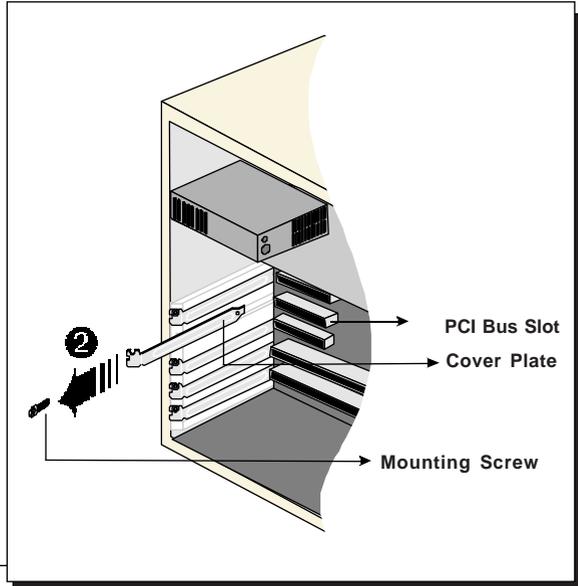


- 1 Remove the cover of your computer.

3. Setting Up Your Modem Card

2 Locate any available PCI Bus Slot and remove its cover plate.

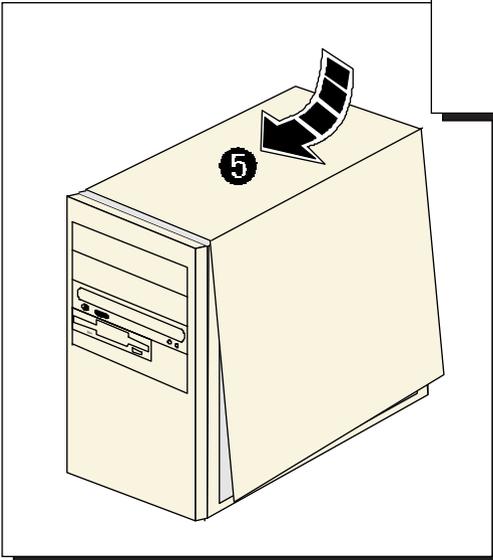
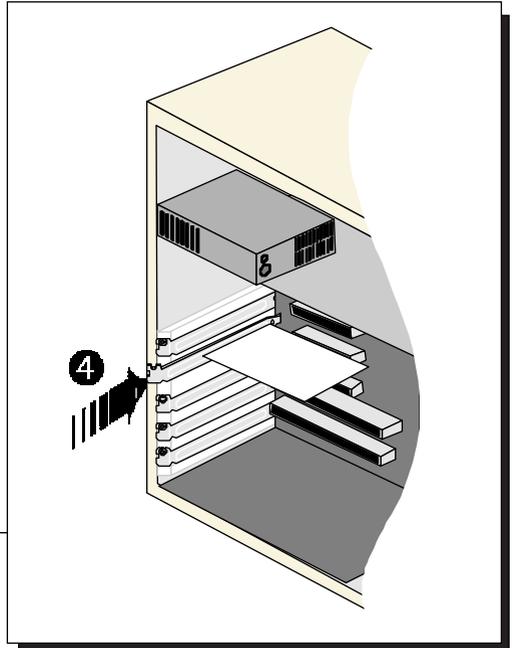
Keep the mounting screw to secure your card later.



3 Align your card with the selected PCI Bus slot and firmly push it into the slot.

If the card does not slide in, do not force it. Make sure that the card is aligned properly and try again.

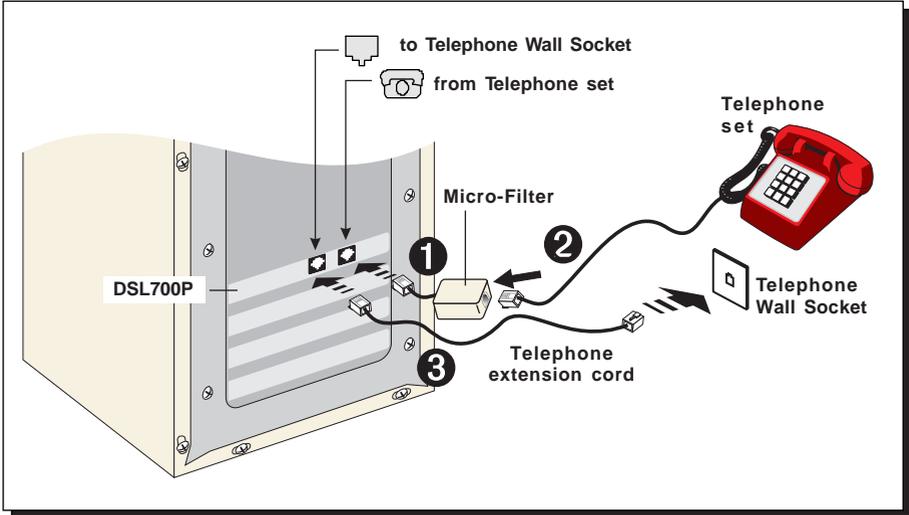
- 4 Secure your card to the computer chassis with the mounting screw.



- 5 Replace the cover of your computer.

This completes the ADSL modem card installation. Please proceed to the following section to connect your card to ADSL line for Internet access.

3.2 Connecting Your Modem Card



Carry out the connections as illustrated above.

This completes the ADSL modem card connection. Please proceed to the next chapter to install the driver for your modem.



The connection to the **Telephone set** is **optional**. The **Phone** jack provides convenience to users who need to use the phone when accessing the computer.

The **Micro-Filter** is not required if you are not connecting to a **Telephone set**.

Chapter 4



Installing Your Modem Driver

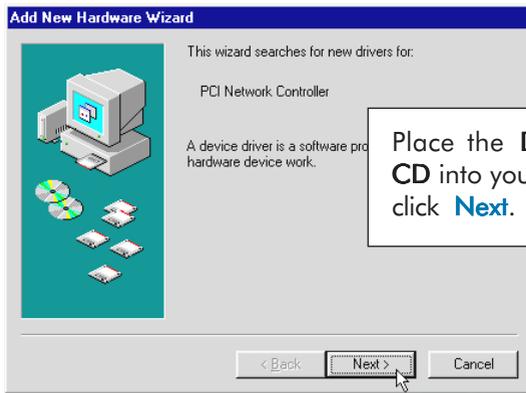
This chapter contains information on how to install the driver for your ADSL modem card in Windows® 98 Second Edition and Windows® Me.



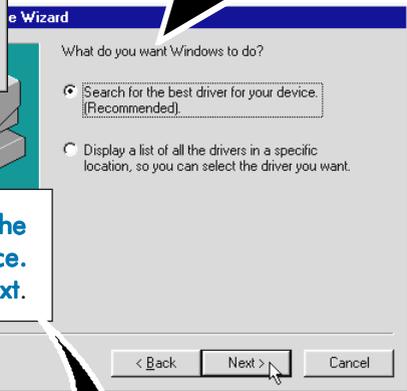
1. The screens illustrations in this chapter assume that your **CD-ROM Drive** is 'D'. Please change the letter according to your own CD-ROM drive.
2. **System may prompt for your Windows 98 Second Edition Installation CD during the driver installation. Have it ready by your side.**
3. The screen captures in this section are included for your easy installation. The actual screens or screens information you see on your system may vary, depending on your system configurations. **For any dissimilarities, follow closely to your online instructions.**

4.1 Installing Your Modem Driver - For Windows® 98 Second Edition

Power on your computer to start Windows. It will detect your newly-installed ADSL modem card and prompt for its driver.



1
Place the **DSL700P Installation CD** into your CD-ROM Drive and click **Next**.



2
Click the option "**Search for the best driver for your device. (Recommended).**" and click **Next**.



3
Select **Specify a location** and click **Browse...** .
Navigate to the directory '**Win98SE**' on your CD-ROM and click **OK**.
Click **Next**.

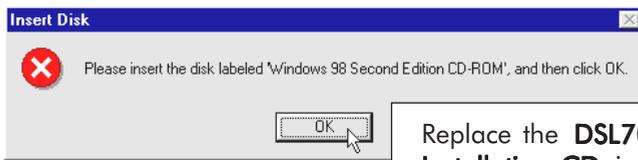


4

Click **Next** again to proceed installation with the specified driver. Allow some time for your system to install the driver.

5

System may prompt for your **Windows 98 Second Edition Installation CD**.



Replace the **DSL700P Installation CD** in your CD-ROM drive with your Windows Installation CD and click **OK**.



6

Upon copying files complete, click **Finish**.

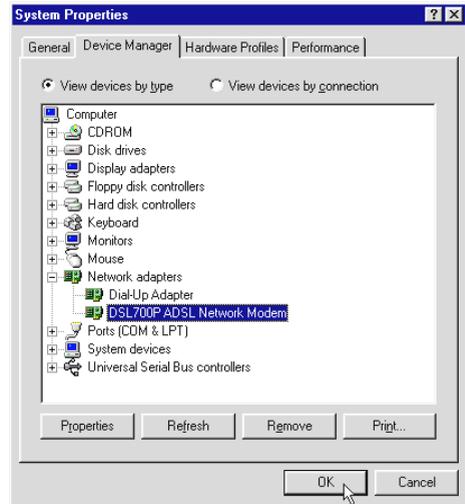
4. Installing Your Modem Driver



This completes the driver installation for your ADSL modem card in Windows® 98 Second Edition.

Allow some time for your system to restart. Upon system rebooted, please proceed with the following step to verify if your card has been installed properly.

- 8
- i) From your Windows taskbar, click **Start > Settings > Control Panel**.
 - ii) Double-click **System** icon.
 - iii) From the **Device Manager** tab, double-click **Network adapters**.
You should see **DSL700P ADSL Network Modem** listed.
Click **OK**.
(If the component is not listed, reinstall your driver.)



Please proceed to the next chapter to connect to the Internet.

4.2 Installing Your Modem Driver - For Windows® Me

Power on your computer to start Windows. It will detect your newly-installed ADSL modem card and prompt for its driver.

1

Place the **DSL700P Installation CD** into your CD-ROM Drive.

Select the option '**Specify the location of the driver (Advanced)**' and click **Next**.

2

Select the option '**Specify a location**'. Click **Browse...**

Navigate to the directory '**\WinMe**' on your CD-ROM and click **OK**.

Click **Next**.

4. Installing Your Modem Driver



3

Click **Next** again to proceed installation with the specified driver.

Allow some time for your system to install the driver.



4

Upon copying files complete, click **Finish**.



Click **Yes** to restart your system.

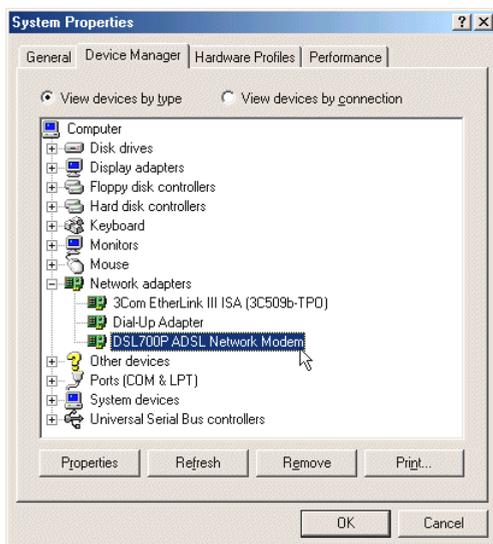
This completes the driver installation for your ADSL modem card in Windows® Me.

Allow some time for your system to restart. Upon system rebooted, please proceed with the following step to verify if your card has been installed properly.

6

- i) From your Windows taskbar, click **Start > Settings > Control Panel**.
- ii) Double-click **System** icon.
- iii) From the **Device Manager** tab, double-click **Network adapters**. You should see **DSL700P ADSL Network Modem** listed.

(If the component is not listed, reinstall your driver.)



Click **OK**.

Please proceed to the next chapter to connect to the Internet.

4. Installing Your Modem Driver

This page is intentionally left blank.

Chapter 5

Connecting to the Internet

This chapter contains information on how to connect to the Internet in Windows® 98 Second Edition and Windows® Me.

5.1 Connecting to the Internet

1

To connect to SingTel Magix Service, double-click on the dial-up icon



from your Windows desktop.

(This icon was generated during your modem driver installation. If you do not see the icon from your Windows desktop, re-install your driver as described in **Chapter 4 - Installing Your Modem Driver.**)

2

From the **Connect To** dialog box, enter your **User name** and **Password** given by your ADSL Service Provider. Click **Connect**.



5. Connecting to the Internet

Upon successful dial-up, you should be able to see an icon



() displayed at the corner of your Windows taskbar.

Double-click on the icon. You will be able to see the following information.



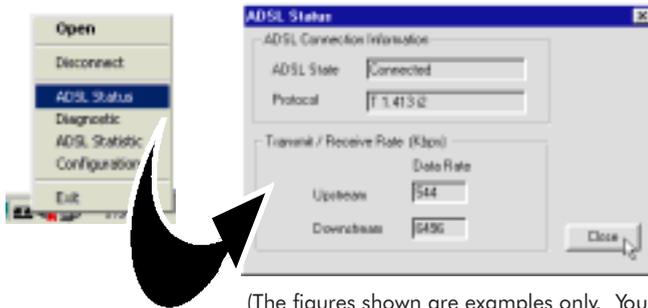
(The connection speed indicates the speed that the ADSL modem can achieved. Your actual connection speed will depend on the subscription plan that you have signed-up.)

3

To check the ADSL connection status, at the corner of your Windows taskbar, right-click on the **MAPI Icon** .

(You may refer to **Appendix A - MAPI Icon** for more descriptions.)

Select **ADSL Status**. The **ADSL State** should indicate **Connected** if your ADSL connection is successful.



(The figures shown are examples only. Your data rates may not be as shown.)

5.2 Ready to Go!

You are now connected to the Internet.

Launch your Internet Browser ([Internet Explorer](#) / [Netscape Navigator](#) / [Netscape Communicator](#) and so on).

You may start surfing!

5.2.1 Checking the Session Connection time

Upon successful dial-up, you should be able to see an icon () displayed at the corner of your Windows taskbar. Double-click on the icon. Check your connection time by looking at the **Duration**.



(The connection speed indicates the speed that the ADSL modem can achieved. Your actual connection speed will depend on the subscription plan that you have signed-up.)

5.2.2 Disconnecting from the Internet

Close your web browser. Double-click on the icon (). Click **Disconnect**.



(The connection speed indicates the speed that the ADSL modem can achieved. Your actual connection speed will depend on the subscription plan that you have signed-up.)

This page is intentionally left blank.

Chapter 6

Uninstalling Your Modem Driver

This chapter contains information on how to uninstall your modem driver in Windows® 98 Second Edition and Windows® Me.



Make sure that you have exited the **MAPI Icon** before proceeding with the uninstallation.
(From your Windows taskbar, right-click on . Select **Exit**.)

1

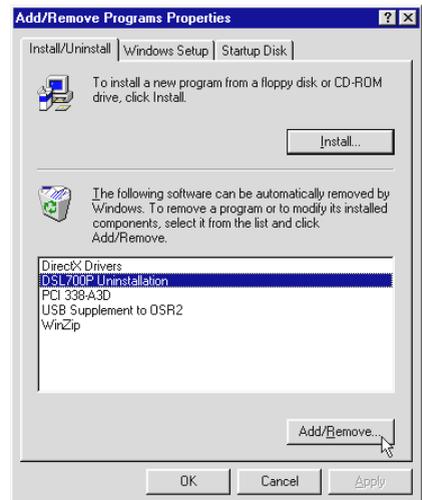
From your Windows taskbar, click **Start > Settings > Control Panel**.

Double-click  **(Add/Remove Programs)** icon.

2

From the **Install/Uninstall** tab, select **DSL700P Uninstallation** and click **Add/Remove...**

Follow the on-line instructions to complete the uninstallation process.
Restart the system when prompted.



6. Uninstalling Your Modem Driver

This page is intentionally left blank.

Appendix

A

ADSL MAPI Icon

This chapter explains the functions on the MAPI Icon.

The MAPI Icon allows you to monitor your ADSL connection, ATM/ADSL states, configure the PVC values and run a few diagnostics tests.

Upon successful driver installation, the MAPI icon  will be displayed at the corner of your Windows taskbar.

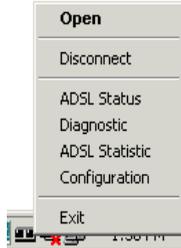
A-1 MAPI LEDs

The **left LED** indicates **information being transmitted** and the **right LED** indicates **information being received**. The following table summaries the LED activities.

LED	Description
Red, Red	No ADSL connection
Black, Yellow is flashing or Yellow, Black is flashing	Establishing ADSL connection
Black, Black	ADSL Connection established - no data traffic
Green, Green	ADSL Connection established - modem is transmitting and receiving data
Green, Black	ADSL Connection established - modem is transmitting data
Black, Green	ADSL Connection established - modem is receiving data
∅	Modem is disconnected, or a problem exists

A-2 MAPI Menu

Right-click the **MAPI Icon** . The **MAPI Menu** will be displayed. A-2-1 to A-2-5 will describe each of the option.



A-2-1 Connect/Disconnect (with reference to A-2. MAPI Menu)

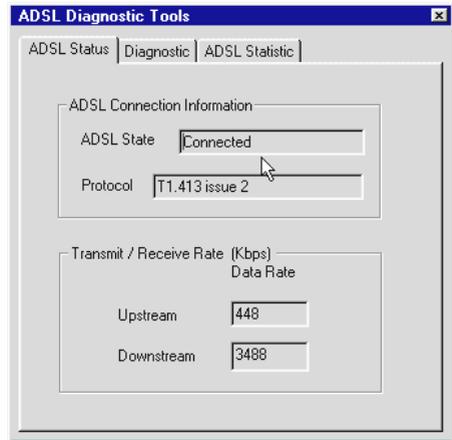
This option allows you to **connect or disconnect** from the Telephone Exchange.

For advanced users (A-2-2 to A-2-5)

A-2-2 ADSL Status (with reference to A-2. MAPI Menu)

This dialog box allows you to **monitor the ADSL connection** as well as the **transmit and receive line rates**.

- **ADSL State** displays the current status of the modem.
- **Protocol** displays which ADSL standard is being used.
- **Transmit/Receive Rate** shows the line rate for both the upstream and downstream.



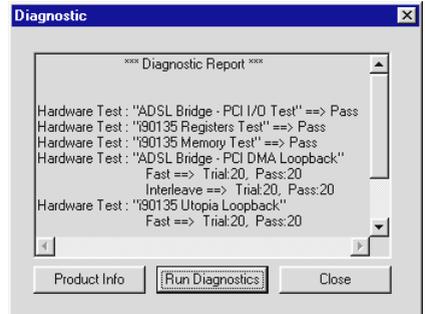
A-2-3 Diagnostic

(with reference to A-2. MAPI Menu)

This option allows you to **view the product information** and to **perform hardware test** on the ADSL card (e.g. ADSL Bridge test and Registers test).

Product Infor lists the versions of the MAPI Icon and the protocol driver installed. The DLL version describes the software being used by both the drivers and MAPI Icon.

Run Diagnostics performs a brief hardware check and display the hardware status. (Close all Dial-up sessions before running the diagnostic test.)

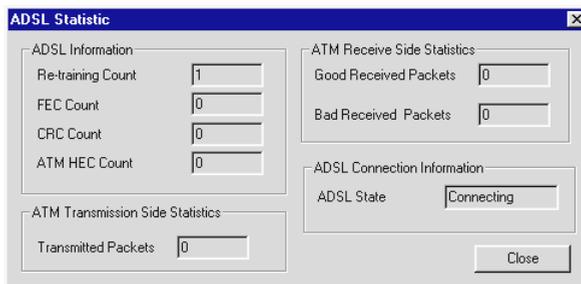


This information is useful whenever making a technical support call.

A-2-4 ATM/ADSL Statistic

(with reference to A-2. MAPI Menu)

This dialog box keeps tabs on **errors** that might affect overall system performance. The counts are reset whenever the PC system is restarted.



- **Re-training Count** tracks the *number of ADSL connections performed*. Due to unexpected line condition changes, the driver can retrain the connection causing the Re-training Count to increase.

ADSL implements Reed Solomon (RS) error checking:

- **FEC Count** tracks the *forward error correction count*.
- **CRC Count** tracks the *accuracy of correcting data errors* over each 17msec.
- **ATM HEC Count** (header error check) errors are recorded as an *indication of ATM packet accuracy*.

As a measure of packet transfer performance, the Packet Errors are counted and tracked against the total number of **Packets Received**. An error rate of less than 0.1% is reasonable under clean ADSL line conditions.

If you have received *Bad Received Packets* and are concerned about your service, multiply the Bad Received Packets count by 1000 and compare the result with the *total Packets Received* count. If the number is *smaller* than the total *Packets Received* count, then the board is operating normally.

- **ATM Transmission Side Statistics** displays the *number of packets transmitted*.
- **ATM Receive Side Statistics** displays the *number of good and bad packets received*.

A-2-5 Configuration

(with reference to A-2. MAPI Menu)

This option allows you to check or change the ADSL network modem **PVC values**.

Appendix

B

Technical Specifications

*This chapter contains the technical specifications of your card.
The information may be more useful for technically inclined users.*

B-1 Drivers Support

- Windows® 98 Second Edition
- Windows® Me

B-2 Features

- 32-bit Controllerless ADSL PCI Modem
- UTOPIA Specifications Level I and Level II compliant
- ANSI T1.413 issue 2, ITU-T G.992.1 (G.dmt) and G.992.2 (G.lite) compliant
- Using Discrete Multi-Tone (DMT) line encoding scheme
- Full rate transmission at up to 8 Mbps downstream and 640 Kbps upstream
- G.lite transmission at up to 1.5 Mbps downstream and 512 Kbps upstream
- Rate Adaptive modem at 32 Kbps steps
- Up to 18,000 ft loop reach
- PCI 2.1 Power Management specification compliant
- Software upgradable for future feature enhancement
- Full RFC1483/RFC1577/ RFC2364 protocol stack support
- Spectral compatibility with POTS

B-3 ADSL Chipset

Using ITEX Apollo2 Chipset:

- I90188 ADSL PCI/UTOPIA Interface
- I90135 ADSL DMT Modem and ATM Framer
- I90134 ADSL Analog Front End
- NDIS 5.0 miniport driver

B-3-1 I90188 ADSL PCI/Utopia Interface

- PCI 32-bit Bus Master Interface compliant to PCI Specification v2.2
- UTOPIA Level I v1.0 and Level II v2.01 support for D0 and D3 hot
- I90135 Configuration Register Interface
- ANSI T1.413 issue 2, ITU-T G.992.1 (G.dmt) and G.992.2 (G.lite) compliant
- AC'97 Digital Controller compliant to AC'97 Specification 2.1
- +3.3-volt & +5-volt supplies, 1.60-pin PQFP

B-3-2 I90135 ADSL DMT Modem & ATM Framer

- ANSI T1.413 Issue 2 standard DMT modem with embedded ATM Framer
- Standard Utopia Level I and Level II ATM Interfaces
- DMT Modulation up to maximum of 256 tones (14 bits)
- ADSL/ATM cell-specific Framing and Deframing
- Generic ATM TC Layer functions
- ATM Specific TC Layer functions
- Rotor and Frequency Domain Gain Correction and Equalization
- Performs DMT Modulation, Demodulation, Reed-Solomon Encoding, Bit Interleaving, and 4D Trellis Coding
- 3.3-volt, 144-pin PQFP

B-3-3 I90134 ADSL Analog Front-End

- Integrated Analog Front End (AFE) for ADSL
- High sampling rate at 8.832 MHz for both ADC and DACs
- Two (2) 12-bit DACs, One 13-bit ADC

- Differential Analog Input/Output
- Accurate continuous-time low pass filters for channel filtering
- 3.3-volt, 64-pin LQFP

B-4 ADSL Software Support

- ATM Layer with Traffic shaping
- AAL ATM Attributes - AAL5 & SAR
- RFC-2364 PPP over ATM PVCs
- RFC-1483 Routed IP over ATM PVCs
- RFC-1577 Classical IP over ATM PVCs
- UNI 3.0, 3.1 and UNI 4.0 ATM Signalling

B-5 Interfaces

B-5-1 External connectors

- 2 x RJ11 Telephone socket for telephone line & handset



The specifications herein are subject to change without prior notification.

This page is intentionally left blank.

Frequently Asked Questions

This chapter provides the answers to some of the commonly asked questions on your modem.



What is ADSL ?



ADSL, Asymmetric Digital Subscriber Line is a broadband communication technology designed for use on regular phone lines. It has the ability to move data over the phone lines at speeds up to 140 times faster than the analog modem available today.



Why is it called Asymmetric ?



It is called asymmetric because more bandwidth is reserved for receiving data than for sending data. This is useful because many users of the Internet receive much more data than they send.



What are the benefits of ADSL over analog modems ?



Besides the high-speed advantage, ADSL connection is always on. There is no longer a need to log on and off, no more busy signals and no more waiting for the connection to established - it is always there. On top of these, you can use the phone even when the data connection is on. You do not need to switch between surfing the Net and talking over the phone.



Will my modem constantly connect near the maximum speed ?



At ADSL speeds, the limitations are much more of the performance of the Internet server you are trying to reach and the amount of traffic on the Internet.



Can I connect to the “SingTel Magix Service” everywhere I go?



No, you cannot. You can connect to this service, only via ADSL phone line enabled for the SingTel Magix Service provided by your Internet Service Provider (ISP).



Can I run both dial-up modem and ADSL modem?



Yes, but it is not recommended. You may experience slowness during surfing as well as incurring additional cost of maintaining two active connections.



Do I need to use Micro-Filter when using ADSL?



Yes, if you are sharing your DSL line with your telephone. The Micro-Filter would eliminate noise on the telephone line to ensure the best possible networked phone performance. All telephone line extensions using the same telephone number will need to attach to a Micro-Filter. If the DSL uses a different line and not sharing with your telephone, then a Micro-Filter wouldn't be necessary.



How do I most efficiently connect Micro-Filters to my telephone network ?

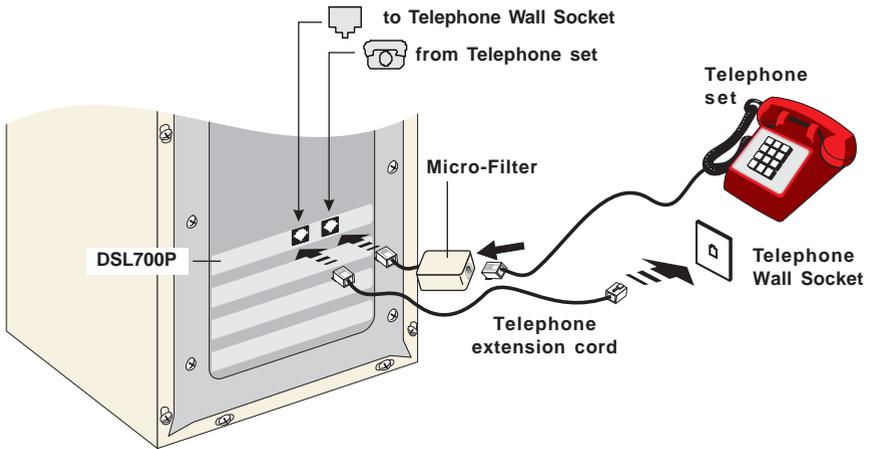


Please refer to the diagram on the following page.

Generally, you should abide to the following rules:

- 1. There must not be any Micro-Filters between your ADSL modem card and your Telephone Wall socket.*

2. Micro-Filters are not required if you are not connecting to your Telephone sets.
3. Restrict the number of Micro-Filters to a maximum of 4.



C-1. Connecting Micro-Filter to your Telephone

This page is intentionally left blank.

Troubleshooting Guide

You may encounter some problems while installing or using your modem. This chapter highlights some of the more common issues concerning your modem and their possible solutions.



My system does not detect the network modem when I boot up for the first time.



Make sure your network modem is fully inserted into the PCI Bus slot.

However, if you are sure that the modem has been properly installed, do the following:

1. From the Windows taskbar, click **Start > Settings > Control Panel**.
2. Double-click on the **System** icon.
3. Click the **Device Manager** tab.
4. Check whether there is any yellow exclamation mark (error) on the network devices. If yes, remove the network modem devices (refer to **Chapter 6 - Uninstalling the Modem Driver**) and reinstall the modem driver as described in **Chapter 4 - Installing the Modem Driver**.



The Mapi icon on the taskbar retrains (with blinking yellow LEDs) every time I use the phone while surfing on the Internet.



Make sure that you have connected the Micro-Filter as described in **section 3.2 - Connecting Your Modem Card**.



My ADSL card constantly tries to establish a ADSL connection (with blinking yellow LEDs), but fails.



Verify the following points:

1. From the **MAPI Menu**, select **Disconnect** and **Connect** again.
2. Try restarting your PC system and reconnect.
3. If the condition changes with the time of the day, there could be a possible problem with the line.
4. Appliances near your PC may also be introducing noise to your ADSL service. Minimise appliances around your PC.



There isn't any MAPI Icon displayed on my taskbar.



You need to install Dial-Up Networking (DUN) version 1.3 to have the MAPI Icon. Have you upgraded your DUN to version 1.3 ?

If DUN v1.3 is already installed, try restarting your PC. Else, uninstall the driver and try installing again.



I accidentally exited from my MAPI Icon. How do I called out the icon again ?



To call out the icon, double-click '**mapiicon.exe**' from your '**C:\windows\system**'.



There is no sound when video is being streamed.



Ensure that Master Volume Control under the desktop system tray (bottom right hand corner of your screen) is not set to "mute".



My ADSL connection disconnects when I run the Diagnostic program.



Running the Diagnostic program will disconnect your card from the ADSL Line. To re-activate the ADSL Line, right-click the **MAPI Icon** and select **Connect**.



When I try to connect to the Internet by clicking the **Magix** icon, an error message **'Request service is unknown'** is displayed.



Check that you have entered the correct user name. Another reason could be that you are not registered for the listed service. Subscribe to the service and try again.

This page is intentionally left blank.



Technical Support

Aztech Sales Enquiries

Hotline : (65) 741 7211 (Marketing and Sales Department)
Email : sales@aztech.com.sg
Fax : (65) 749 1198
Working Hours : Monday to Friday - 0900 to 1800
Saturday/Sunday/Public Holidays - Closed

Aztech Technical Support

Hotline : (65) 741 7211
Email : support@aztech.com.sg
Fax : (65) 749 1198
Working Hours : Monday to Friday - 0900 to 1800
Saturday/Sunday/Public Holidays - Closed

Technical Support Considerations

Majority of enquiries can be resolved efficiently. However, there may be cases when it is beyond our technical support to assist you. We may not be able to assist you in:

- **Hardware conflicts**

We will try to discover them and make suggestions but we are unable to repair them over the telephone.

- **Software conflicts**

Removal of other software and reinstalling our software may be the only solution.

- **O/S problem**

If you encounter problems like fatal exception or illegal operation, kindly refer to your PC vendor.

- **Modifications made to your software**

Our technical support officers are trained to support the software we provide as part of our service and they are knowledgeable about a wide range of other programs. However, we are unable to support software that has been modified.