

DSL700P

Version 1.1

ADSL MODEM CARD

User's Manual

(Configured for SingTel Magix Service)



Internet at its fastest.

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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.

With ADSL modem, you do not require a new phone line. Neither do you need to switch your existing phone line between phone communication and Internet surfing. 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!

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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® 166 processor
- A CD-ROM drive
- A free PCI Bus slot
- 32MB RAM
- 30MB free hard disk space (system files and modem drivers only)

2.1.2 Software - Operating System

- Windows® 98 Second Edition

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.
- If you have an existing *non* Plug-and-Play modem installed in your computer, you must first uninstall its modem driver before you remove the card. Refer to the documentation of your existing modem for details.

If your existing modem is Plug-and-Play, you may proceed to install your new modem.

Chapter 3



Setting Up the Modem Card

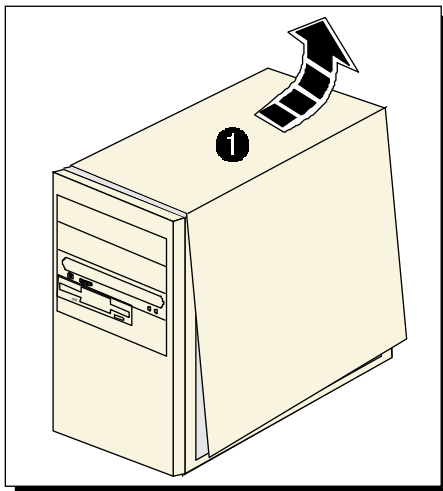
This chapter contains information on how to install and connect the modem card.

3.1 Installing the Modem Card



You need to remove any **existing modem** installed in your computer. If your modem is **non Plug-and-Play**, you need to uninstall its modem driver before you remove it. Check your existing modem documentation for details on this.

Power off your computer and any connected devices before installing your modem!

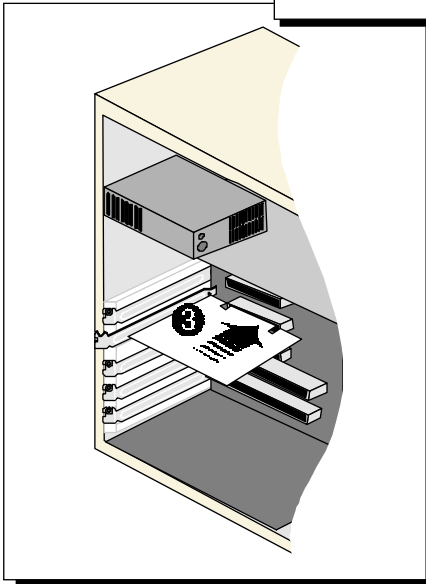
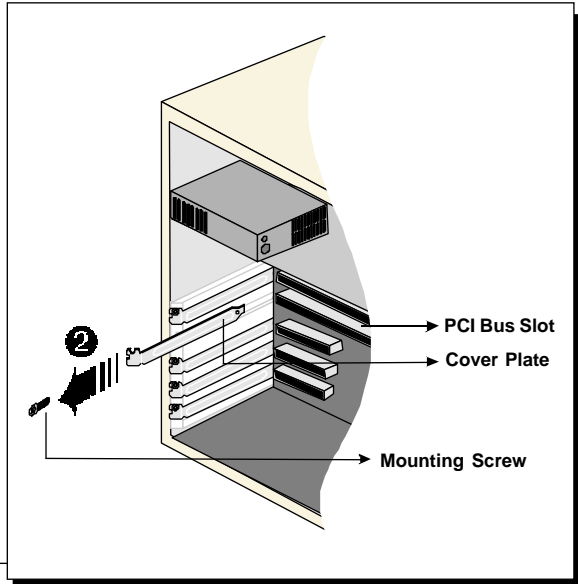


- 1 Remove the cover of your computer.

3. Setting Up the Modem Card

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

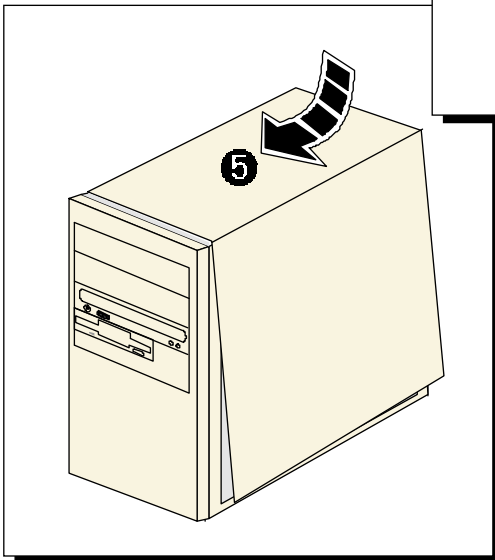
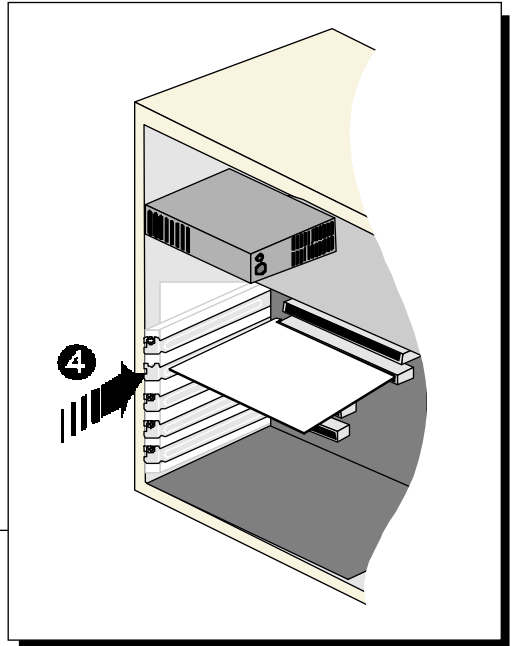
Keep the mounting screw to secure your card later.



- 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.

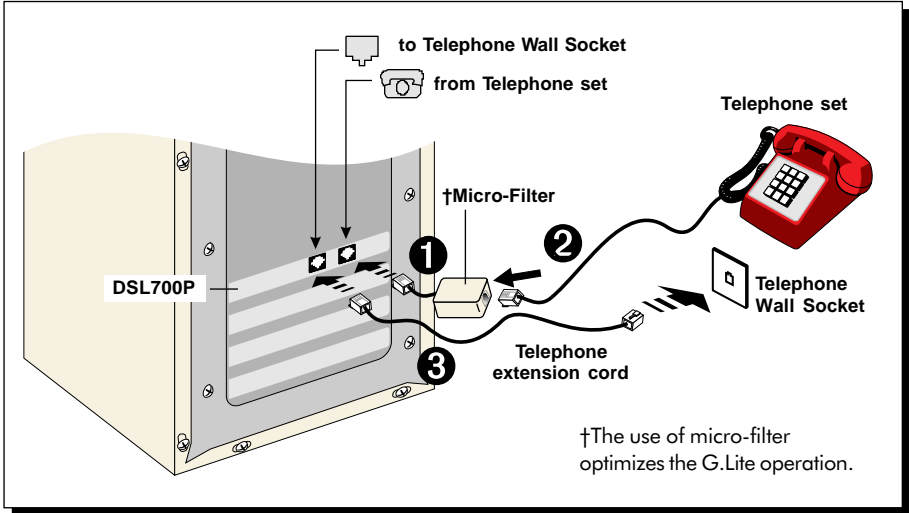
- 4** Secure your card to the computer chassis with the mounting screw.



- 5** Replace the cover of your computer.

This completes the ADSL modem card installation. Please proceed to the following section on the card connection for ADSL line.

3.2 Connecting the Modem Card



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 the Modem Driver

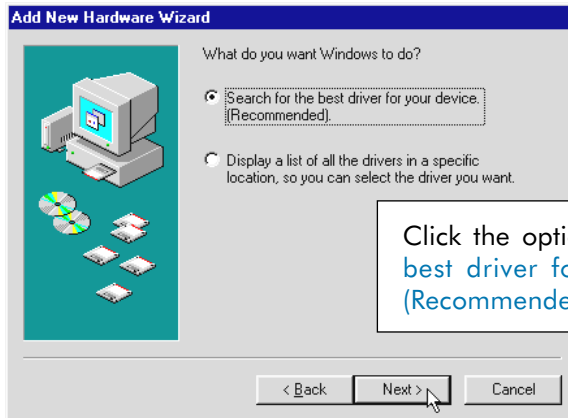
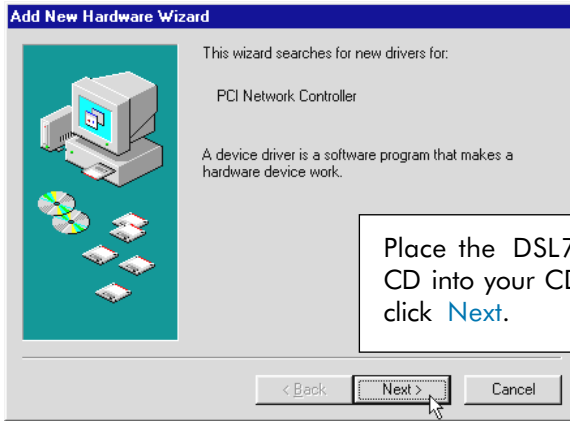
*This chapter contains information on how to install the driver for
ADSL modem card in Windows® 98 Second Edition.*



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.*

4. Installing the Modem Driver

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



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.

4. Installing the Modem Driver

5

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



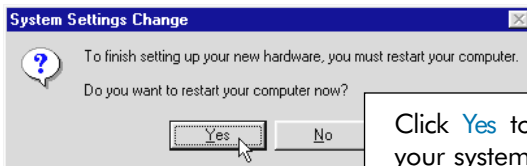
Replace the DSL700P Installation CD in your CD-ROM drive with your Windows Installation CD and click **OK**.

6



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

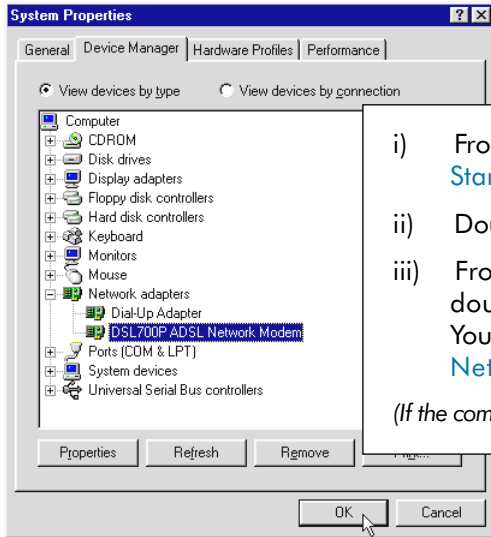
7



Click **Yes** to restart your system.

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.



- 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.)

4. Installing the Modem Driver

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Chapter 5



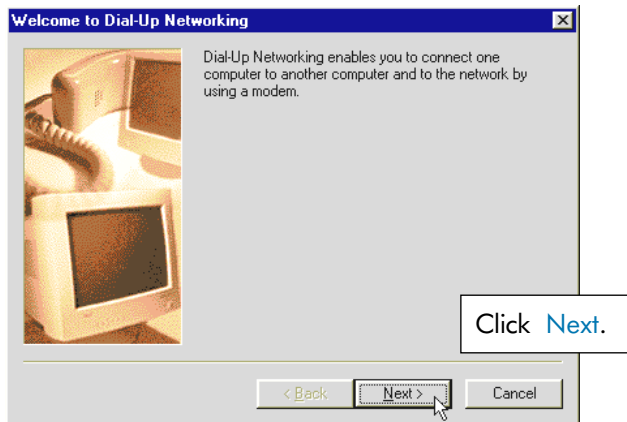
Using the Internet

This chapter contains information on creating a dial-up icon for the Magix Internet Connection.

1

For connection to Magix Internet, you need to create a dial-up icon. From your Windows taskbar, click [Start](#) > [Programs](#) > [Accessories](#) > [Communications](#) > [Dial-Up Networking](#).

2



5. Using the Internet

3

Type a name for the computer you are dialing:

Magix

Select a device:

DSL700P

Configure...

< Back Next > Cancel

Enter 'Magix' for the computer name and select **DSL700P** device. Click **Next**.

4

Type the name or address of the VPN server:

Host name or IP Address:

Magix

< Back Next > Cancel

Enter 'Magix' as the Host name / IP address and click **Next**.

5

You have successfully created a new Dial-Up Networking connection called:

Magix


Click Finish to save it in your Dial-Up Networking folder. Double-click it to connect.

To edit this connection later, click it, click the File menu and then click Properties.

< Back Finish Cancel

Click **Finish** to complete the dial-up icon settings.

6

A dial-up icon,  will be generated on your Windows desktop.

7

Double-click on the icon. Enter your username and password. Click [Connect](#) to establish a connection to Magix.

Upon successful username and password verifications, you will be able to access the Internet.

(For details, you may refer to the [Magix Service Manual](#) that comes with your package.)

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Chapter 6

Uninstalling the Modem Driver

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



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  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 the Modem Driver


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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.

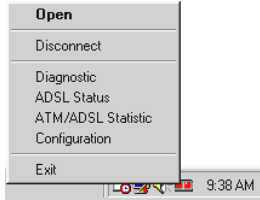
A-1 MAPI LEDs

The left LED indicates information being transmitted and the right LED indicates information being received. The following table summarizes 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 Connect/Disconnect

This option allows you to connect or disconnect from the central office equipment.

[For advanced users \(A-2-2 to A-2-5\)](#)

A-2-2 Diagnostic

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).

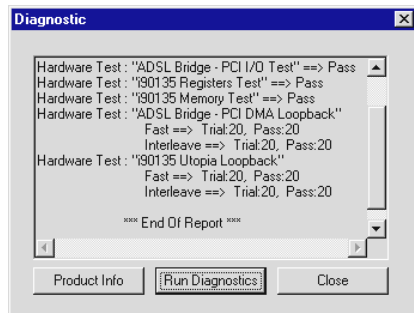
[Product Infor](#) lists the versions of the MAPI Icon and the protocol driver installed. The DLL version describes the software being used by both the drivers and MAPI Icon.



This information is useful whenever making a technical support call.

[Run Diagnostics](#) performs a brief hardware check and display the hardware status.

Close all Dial-up sessions before running the diagnostic test.



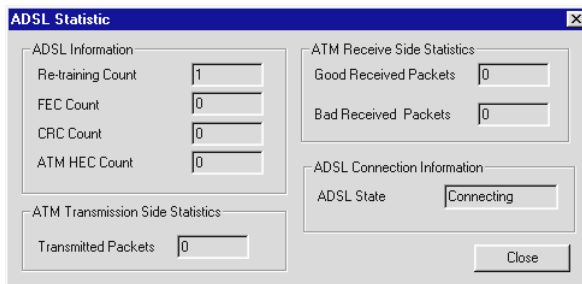
A-2-3 ADSL Status

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-2-4 ATM/ADSL Statistic

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

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

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.

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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.

C. Frequently Asked Questions



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 “Magix Internet Services” everywhere I go?



No, you cannot. You can connect to this service, only via ADSL phone line enabled for the Magix Internet Services.



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. 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 ?

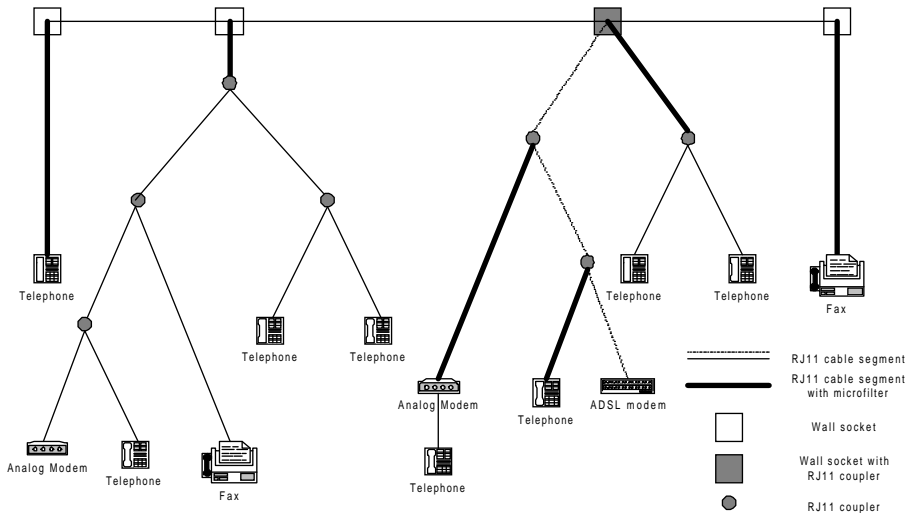


Please refer to the diagram on the following page.

Generally, you should abide to the following rules:

- 1. The port of the Micro-Filter must be connected to your normal phone device (exclude ADSL modem) with its tail end to the wall socket. The reverse will not work.*

2. The Micro-Filter should be connected to the top-most branch of the wiring tree that is not connected to the ADSL modem. That implies that the segments of RJ11 cable (see dotted line in the diagram) from the wall socket to the ADSL modem must not be microfiltered.
3. Restrict the number of Micro-Filters to a maximum of 4.



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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 and reinstall the modem drivers.



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 the 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.



How do I change or check the PVC values of my DSL modem ?



From your Windows taskbar, right-click on . Select **Configuration**. At the **Configuration** dialog box, enter your new **VPI** and **VCI** values and click **Setting**. At the next prompt, click **Yes** to restart your system.



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 Internet Services 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.

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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.

E. Technical Support

- 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.

