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1. About This Manual

This manual provides a comprehensive user's guide and installation manual for ADSL PCI Modem. It has been organized in such a way to make it easy to be followed by users worldwide. In order to ensure optimal comprehension, the following list provides brief descriptions of the formatting styles used throughout this manual.

- **Commands** : Commands are always referred to by using the word “ **Click** ” before them. These commands are always shown as bold-faced words. For example, click **Next** , click **OK**, or click **Cancel**.
- **Names of Windows (Dialog Boxes)** : The names of the windows (also referred to as dialog boxes) that appear on the PC screen are always referred to in quotes. For example, the “ **Setup Complete** ” window.
- **Names of Options in Windows** : The names of options to choose from inside the windows that appear on the PC screen are always referred to in italics. For example, choose the “*Yes, I want to restart my computer*” option from the window.
- **Notes** : In some cases, preparatory or cautionary information is needed before proceeding to the next step in an installation process. This kind of information is provided in the form of notes, which are always referred to in bold-faced and italicized letters.

2. Specifications

ADSL Modem:

- DMT Data Rates :
 - ◆ Up to 8Mb downstream
 - ◆ Up to 1024Kbps upstream
- Compliant Standards :
 - ◆ ITU G.992.1 (Annex A , Annex B)
 - ◆ G.992.2
 - ◆ ANSI T1.413 Issue 2
 - ◆ ETSI TR328
- RFC Protocols :
 - ◆ RFC 1483 (Multi-Protocol Encapsulation Over ATM (ALL5))
 - ◆ RFC 2364 (Point-To-Point Protocol Over ATM (ALL5))
 - ◆ RFC 2516 (Point-To-Point Protocol Over Ethernet)

Interface Type

PCI 2.1, 2.2 Compliant

Cables & Connectors

1 RJ-45/11 cable

Graphical User Interface

DSL GUI is a tool that enables users to monitor PCI Modem and ADSL line status, and to change the Modem configuration.

Operating System Support

Win95, Win98FE, Win98SE, WinME , Win2000 , WinXP , and WinNT

Physical Description

Dimension : 64.4mm X 120mm

Operating Environment

Operating +0°C ~ +50°C
Non-operating -20°C ~ +70°C

Humidity

Operating	20%~80% RH
Non-operating	10%~80% RH

Standard Approval

CE CLASS B

FCC PART 15 CLASS B

EN60950

K.21

Status LED

1 LED indicates Tx /Rx

1 LED indicates Ready

Features

The Acer ADSL Surf PCI Modem provides the following features:

- Compliant with PCI Specification Revision 2.1, 2.2,
- Supports two device drivers: NDISWAN, NDISLAN
- Compatible with G.992.1 (Annex A, B), G.992.2, T1.413 Issue 2, ETSI TR328
- Software upgradeable
- Includes a DSL GUI monitoring program for configuring the adapter and checking the status of the connection
- Provides an RJ-11 connector for connection to the telephone line
- Supports DSL downstream data rates up to 8Mbps (125 times faster than standard 56K modems)
- Supports DSL upstream data rates up to 1024 Kbps
- Supports 3rd party PPP Over Ethernet (PPPoE) clients

Ship Kit Contents

You can get the following items:

- One ADSL PCI Modem
- One RJ-45/11 cable
- One System CD (with Manual, Driver)

3. Preface

The Acer ADSL Surf PCI Manual

This manual contains information regarding the installation, operation, and configuration of the ADSL PCI Modem.

The following chapters are included in this manual:

- **Chapter 1 :** “ Overview ” offers a brief description of ADSL, protocol ,device and driver selection ,.device installation.
- **Chapter 2 :** Device installation and system requirements
- **Chapter 3 :** NDISLAN (RFC1483) Driver for Win95 ,Win98FE, Win98SE,WinME, WinXP, Win2K and WinNT

Chapter 1 : Overview

About ADSL

Asymmetric Digital Subscriber Line (ADSL) technology provides high-speed data access across regular phone lines (copper wires) by making use of previously unused frequency bandwidth above the voice band. By placing the ADSL signal above the frequency of the voice signal, ADSL service is able to coexist on the same line with your telephone service. ADSL is asymmetric in the sense that it provides a higher data rate in the downstream (receive) direction than in the upstream (transmit) direction. Asymmetric operation is ideal for typical home and small office use where files and information are downloaded more frequently than uploaded.

There are several standard types of ADSL modulation techniques including Discrete Multi-tone (DMT) and Carrier-less Amplitude and Phase (CAP). The Acer ADSL Surf PCI Modem capable of supporting the following DSL standards: ITU G.992.1 (G.DMT) (Annex A, Annex B), ITU G.992.2 (G.LITE), ANSI T1.413 Issue 2 and ETSI TR328.

Protocol and Device Driver Selection

ADSL modems employ ATM (Asynchronous Transfer Mode) framing. ATM is a protocol that divides packets into small fixed sized cells for rapid transmission over high-speed networks. The ATM protocol allows various types of traffic (e.g. data, voice, and video) to be securely and efficiently carried over the same network. ATM is being widely deployed by telecommunications carriers in their backbone networks. Two type of ATM connections are possible, PVC (Permanent Virtual Circuit) and SVC (Switched Virtual Circuit).

Several different protocols are used on top of ATM. The protocol required in your configuration depends on the equipment deployed by your DSL service provider. There are several possibilities:

1. Point to Point Protocol (PPP) over ATM (RFC 2364) - PPP provides session setup, user authentication (login), and encapsulation for upper layer protocols such as IP (Internet Protocol). The use of PPP makes the modem appear as a dial modem to the operating system. Dial-Up Networking is used to establish a connection. PPP is supported by either the WAN (Wide Area Network) driver, or the ATM driver.
2. Bridged/Routed Ethernet/IP over ATM (RFC 1483) – This protocol makes the modem appear as a local area network (LAN) device to the operating system.

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3. Point to Point Protocol (PPP) over Ethernet (RFC 2516) – This protocol makes the modem appear as a local area network (LAN) device to the operating system. It allows multiple computer users on an Ethernet to share a common DSL connection to the Internet.

Three types of device drivers are provided for the ADSL PCI Modem, WAN, LAN, and ATM. Note that all three drivers support ATM protocol. In addition, the ATM driver works with ATM services that are available in recent Windows operating systems. The proper choice of driver depends on the combination of Windows operating system and protocol.

1. LAN driver – this driver makes the modem appear as a LAN or Ethernet device. Connection establishment is automatic. This driver supports RFC 1483 with PVC connections. Additionally, PPPoE is supported. It can be used with Windows 98, Windows 98 SE, Windows 2000, Windows ME and Windows XP.

The device driver choices are summarized in the table below:

Driver Type	Protocol	Windows OS
PPPoE	RFC 1483	Windows 95 OSR2 with IE5 Windows 98 FE, SE Windows 2000 Windows ME Windows XP Windows NT 4.0

DEVICE INSTALLATION AND REQUIREMENT

Installation

1. Turn off the computer and all peripheral devices.
2. Remove the power cord and computer cover.
3. Locate a free PCI slot in the motherboard and remove the metal plate from the slot, putting aside the screw. (Refer to your computer manufacturer's instructions.)
4. Align the PCI ADSL Internal Network Interface Card (NIC) with the PCI slot and insert the board.
5. Secure the card to the PCI slot by re-inserting the screw that you set aside earlier.
6. Connect one end of the telephone cable to the ADSL line.
7. Connect the other end of the telephone cable to the phone jack receptacle of the PCI (NIC) ADSL Modem
8. Replace the computer cover and power cord.
9. Turn on the computer. Your system will automatically detect the card you have just installed and Windows will display a message that it is searching for an appropriate device driver.
10. Follow the procedure as shown beginning on chapter 3 in order to install the appropriate device drivers.

System Requirement

1. Pentium 133MHz CPU or faster
2. 5MB free space on your hard drive
3. 256-color VGA, or higher resolution
4. CD-ROM drive
5. One available PCI slot
6. Microsoft Windows 95 with IE 5.0 above., 98SE, 98SE, ME, NT, 2000, and XP (supplied by respective vendors)

Chapter 3 : NDISLAN(RFC1483)Driver for Win95 ,Win98FE Win98SE, WinME , WinXP ,WIN2K and WINNT

Description

The NDISLAN driver exports a standard Ethernet interface to the Windows operating system and binds with Microsoft protocols that communicate with NDIS 3 or with third-party PPPoE client software (provided by your ADSL service provider) running under Microsoft Windows such as WinPoet and NTS. Consult your service provider for the appropriate PPPoE client software and related documentation. VPI, VCI, and other specifications, can be configured via DSLMON GUI or during installation of software drivers.

The following instructions apply for Windows 98,98SE,ME, XP and 2000. Some of the screens may slightly differ from those shown due to different Operating System.

Installation for Win95

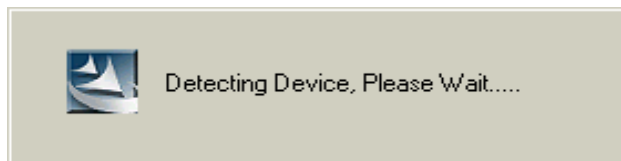
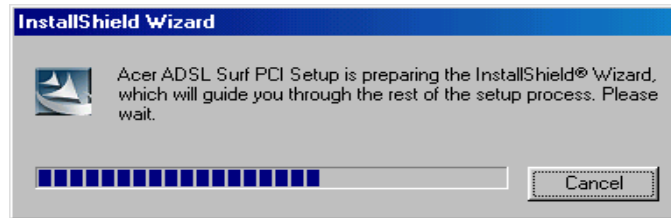
Note :The driver support windows 95 OSR2 with IE 5 Version above

1. Turn on your system. Once Windows has detected your hardware, you should see the following Screen.

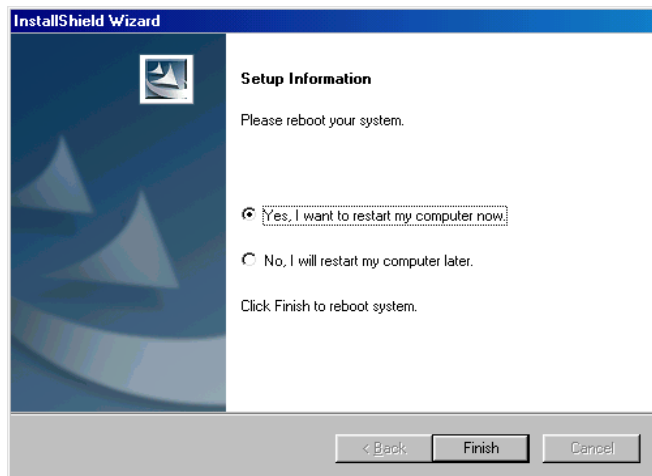


2. Insert your CD with the device driver software into the CD-ROM driver and click "**Cancel**". The driver will auto-run the installation .

3. Waiting for the installation procedure

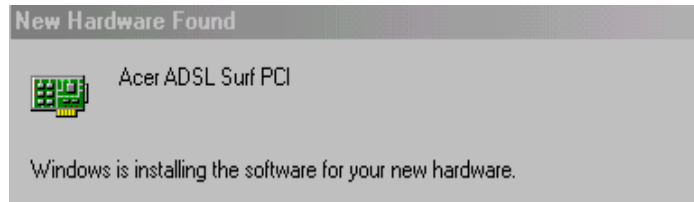


4. Follow the screen, click "**Finish**" to completed the installation.

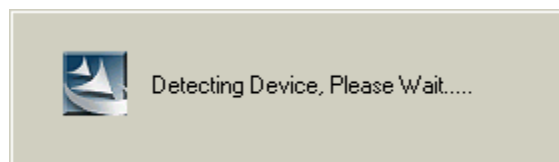
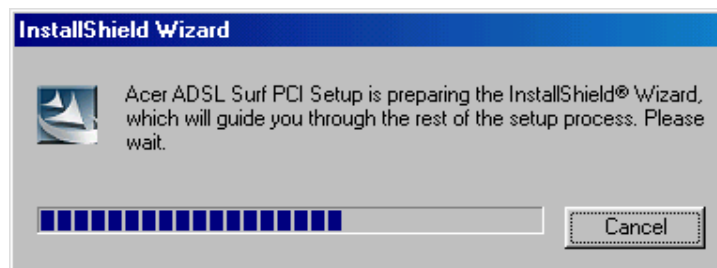


Installation for Win98FE, Win98SE

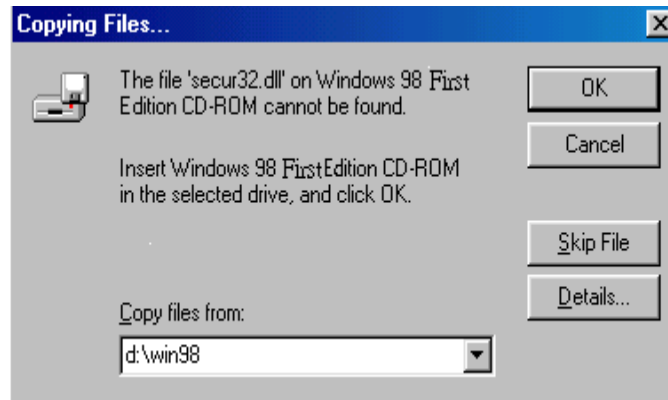
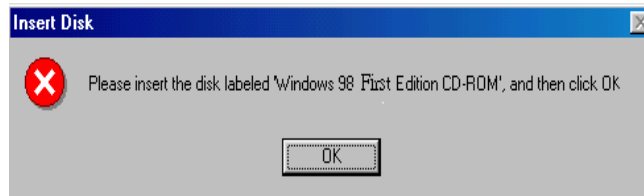
1. Turn on your system. Once Windows has detected your hardware, you should see the following Screen.



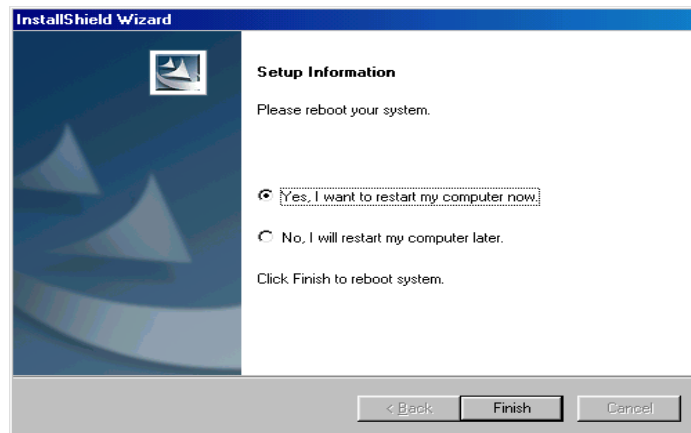
2. Insert your CD with the device driver software into the CD-ROM driver and click "**Cancel**". The driver will auto-run the installation .
3. Waiting for the installation procedure



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4. The system will detect the new hardware. Follow the screen instruction to install the driver

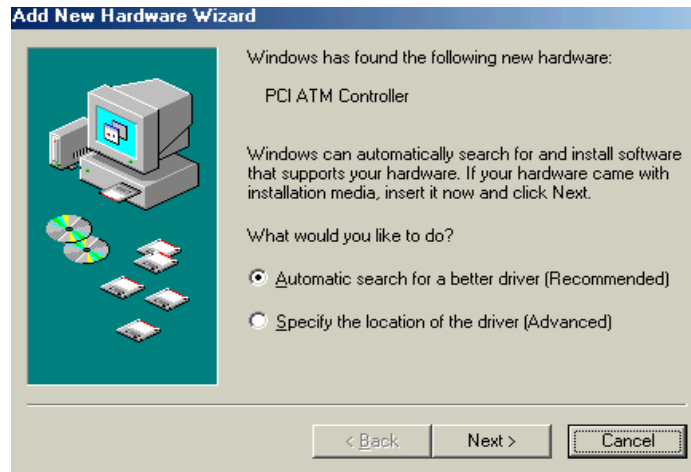


5. Follow the screen, click “**Finish**” to reboot your PC.

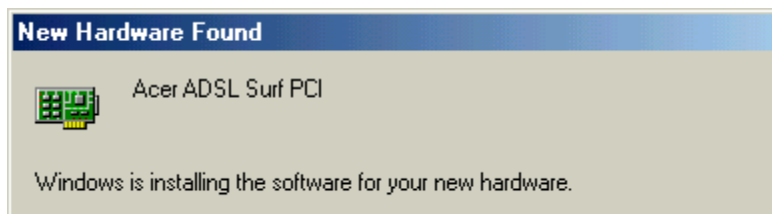
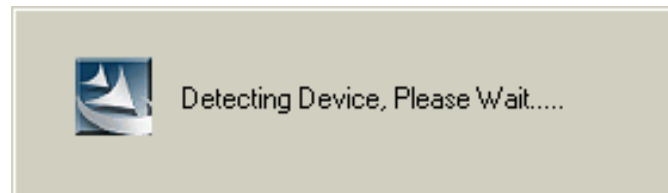
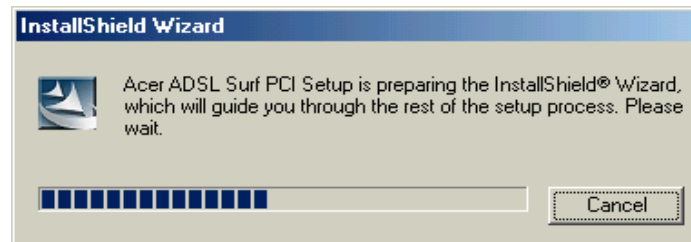


Installation for WinME

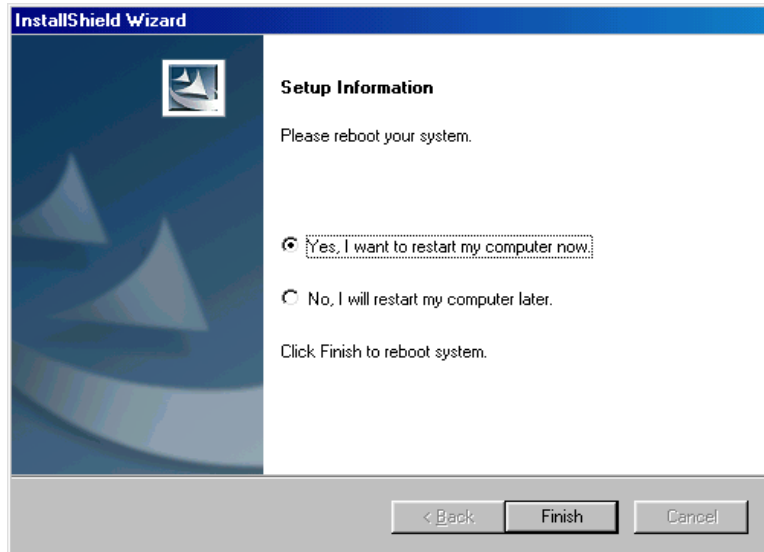
1. Turn on your system. Once Windows has detected your hardware, you should see the following Screen.



2. Insert your CD with the device driver software into the CD-ROM driver and click "**Cancel**". The driver will auto-run the installation
3. Waiting for the installation procedure

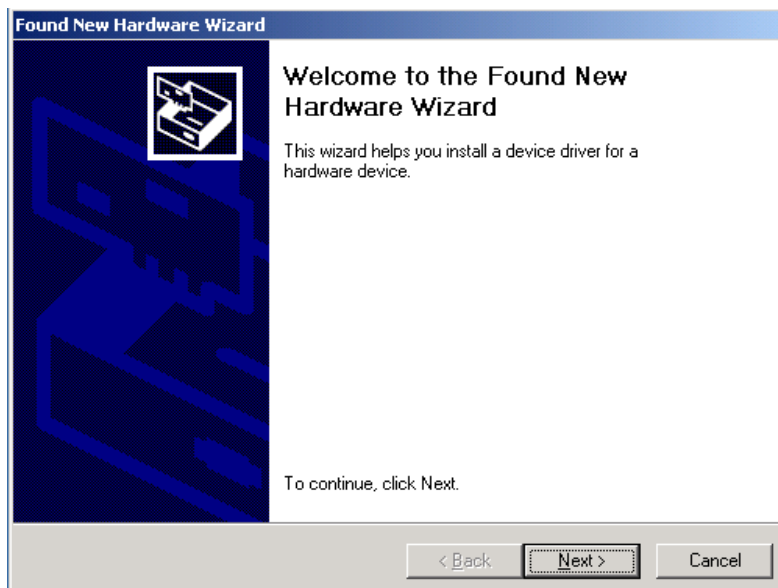


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4. Click "Finish" to completed the driver installation



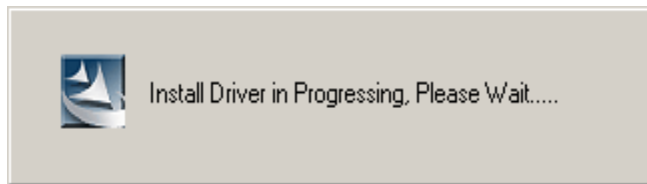
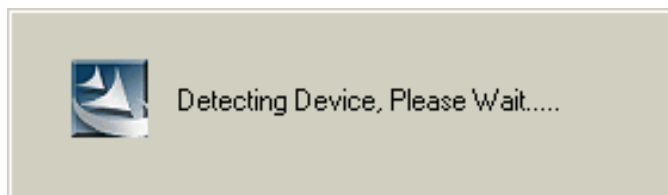
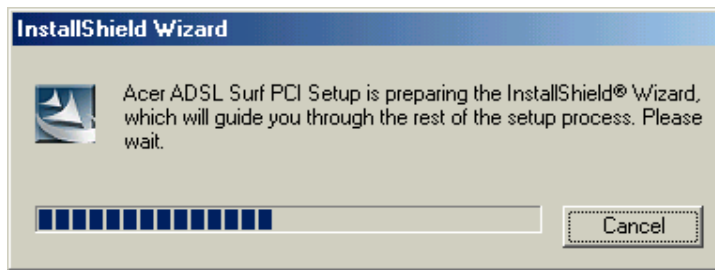
Installation for Win2k

1. Turn on your system. Once Windows has detected your hardware, you should see the following Screen.



2. Insert your CD with the device driver software into the CD-ROM driver and click "Cancel" .The driver will auto-run the installation

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3. Waiting for the installation procedure and to completed the installation

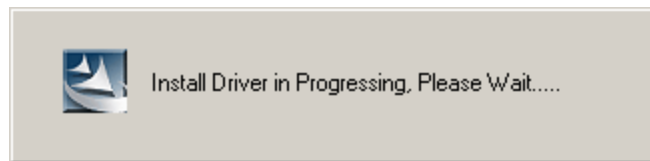
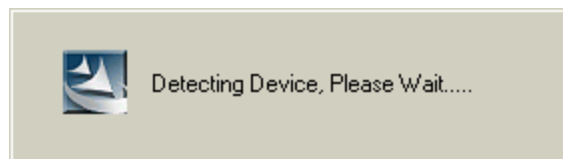
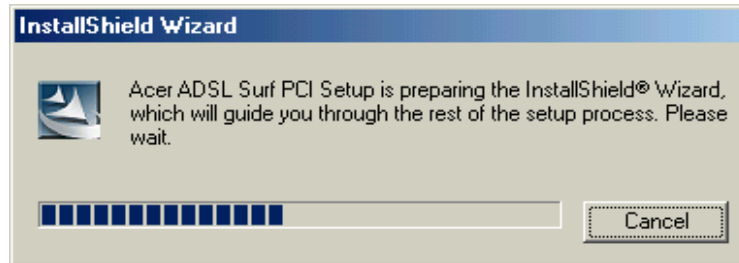


Installation for WinXP

1. Turn on your system. Once Windows has detected your hardware, you should see the following Screen,"

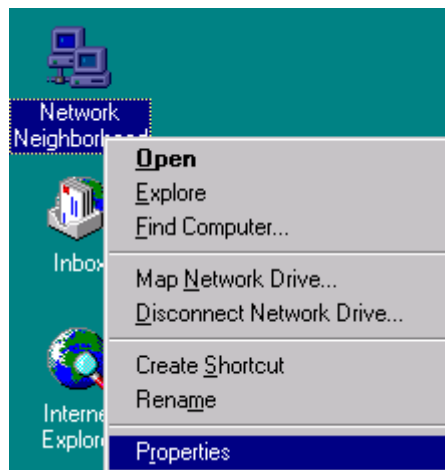


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2. Insert your CD with the device driver software into the CD-ROM driver and click "**Cancel**". The driver will auto-run the installation
 3. Waiting for the installation procedure and to completed the installation

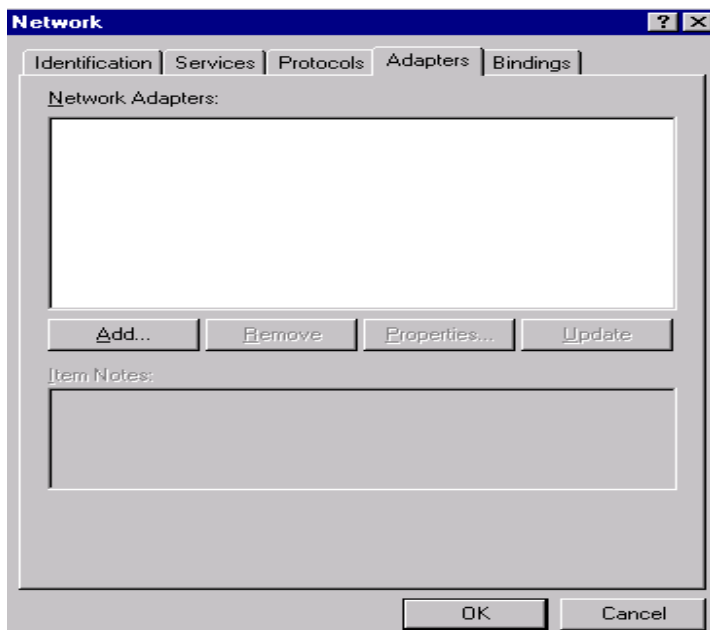


Installation WINNT4.0

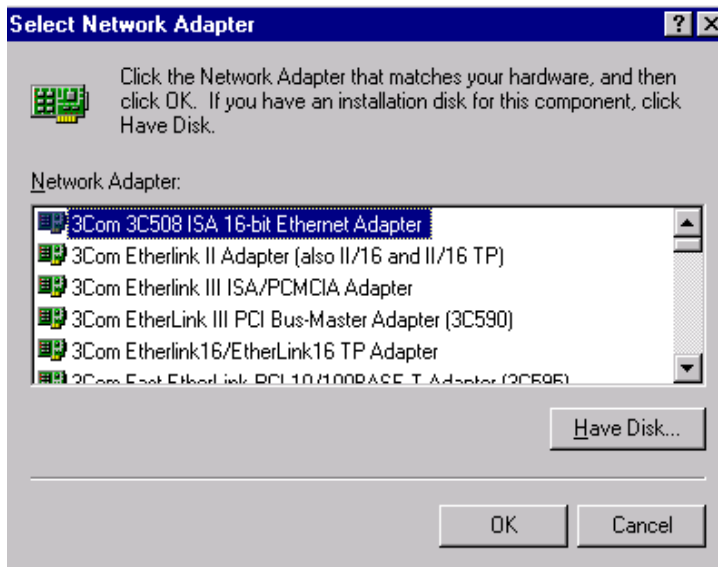
1. Turn on your system, move the cursor to the "**Network Neighborhood**" icon and click right bottom.



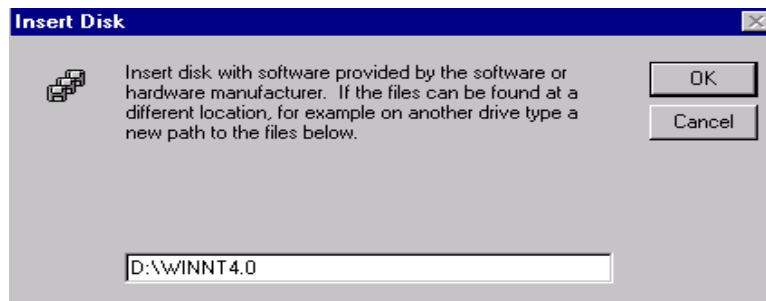
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2. Click on “**Properties**”. You should see the following Screen and select “**Adapters**” to add the new hardware device



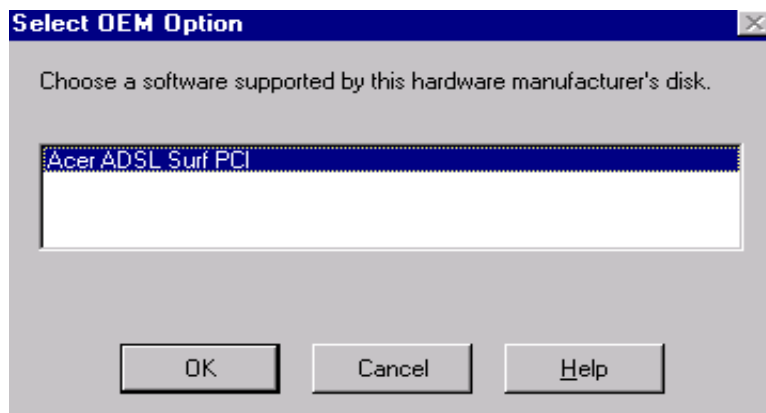
3. Insert your CD-ROM with the device driver software into the CD-ROM drive and click “**Have Disk**”.



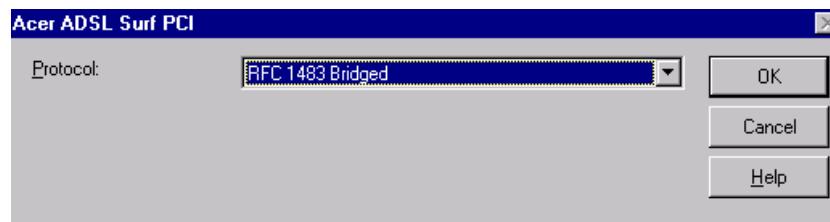
-
4. Key in the driver path for installation.



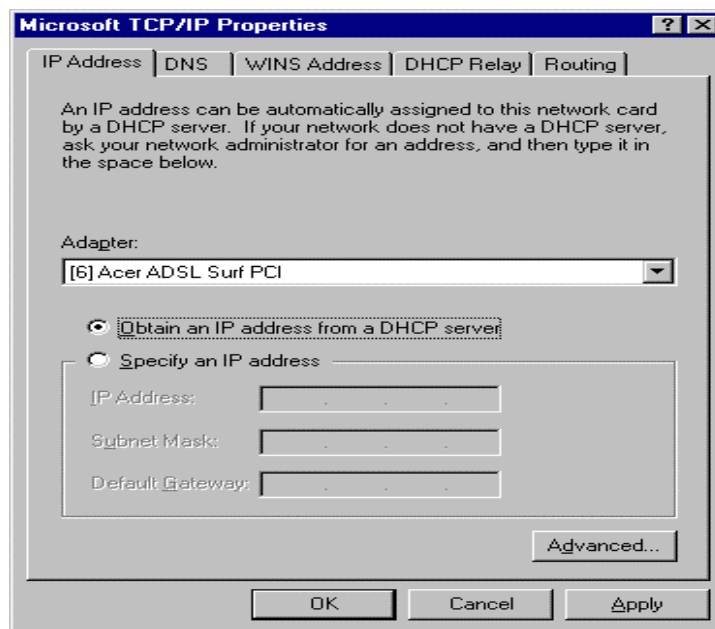
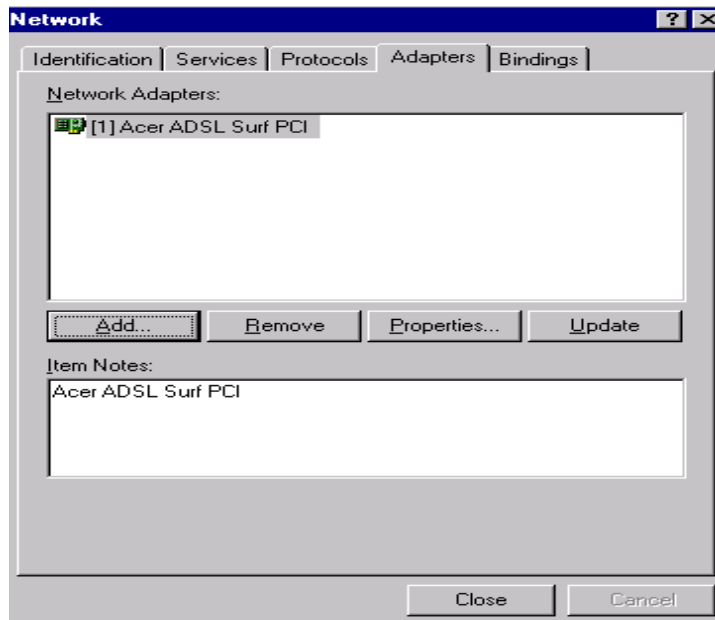
5. Select a correct device and click “OK”.



6. Select a correct protocol (the setting is provide by ISP) .



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7. Select “Obtain an IP address from a DHCP server” or “specify an IP address”(the setting is provide by ISP).



8. Click “YES” to complete the installation procedure.

