

# Network Adapter Cards

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AT-2400 Series  
AT-2450/AT-2451 Series  
AT-2500/AT-2501 Series  
AT-2700/AT-2701 Series  
AT-2745/AT-2746 Series  
AT-2915 Series  
AT-2930 Series  
AT-AT-2970/2971 Series



# Installation Guide

BOOK I

FOR WINDOWS 95, 98, 2000, ME, NT, AND XP  
OPERATING SYSTEMS

PN 613-50241-00 Rev C

 **Allied Telesyn**  
Simply connecting the  world

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# Electrical Safety and Emission Compliance Statement

Standards: This product meets the following standards

U.S. Federal Communications Commission	
<b>Declaration Of Conformity</b>	
Manufacture Name:	Allied Telesyn, Inc.
Manufacture Address:	960 Stewart Drive, Suite B Sunnyvale, CA 94085 USA
Manufacture Telephone:	408-730-0950
Declares that the product:	Network Adapter Cards
Model Numbers:	AT-2400T, AT-2400BT, AT-2450FTX, AT-2451FTX, AT-2500, AT-2501, AT-2500TX, AT-2700TX, AT-2700FX, AT-2700FTX, AT-2701FTX, AT-2701FX, AT-2746FX, AT-2745FX, AT-2915T, AT-2930T, AT-2930SX, AT-2970SX, AT-2970SX/2, AT-2970T, AT-2970T/2, AT-2971T, AT-2971SX
This product complies with FCC Part 15B, Class B Limits:	
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device must not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.	
<b>Radiated Energy</b>	
Note: This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with instructions, may cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on. The user is encouraged to try to correct the interference by one or more of the following measures:	
<ul style="list-style-type: none"><li>- Reorient or relocate the receiving antenna.</li><li>- Increase the separation between the equipment and the receiver.</li><li>- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.</li><li>- Consult the dealer or an experienced radio/TV technician for help.</li></ul>	
Changes and modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commission rules.	

Industry Canada
This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.
Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

RFI Emission

EN55022 Class B, EN61000-3-2, EN61000-3-3 1



**Warning:** In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures. 2

Immunity

EN55024 3


Electrical Safety


EN60950, UL 1950 (UL/cUL) 4





Laser


EN60825 5


**Important:** Appendix A contains translated safety statements for installing this equipment. When you see the , go to Appendix A for the translated safety statement in your language.


**Wichtig:** Anhang A enthält übersetzte Sicherheitshinweise für die Installation dieses Geräts. Wenn Sie  sehen, schlagen Sie in Anhang A den übersetzten Sicherheitshinweis in Ihrer Sprache nach.


**Vigtigt:** Tillæg A indeholder oversatte sikkerhedsadvarsler, der vedrører installation af dette udstyr. Når De ser symbolet , skal De slå op i tillæg A og finde de oversatte sikkerhedsadvarsler i Deres eget sprog.


**Belangrijk:** Appendix A bevat vertaalde veiligheidsopmerkingen voor het installeren van deze apparatuur. Wanneer u de  ziet, raadpleeg Appendix A voor vertaalde veiligheidsinstructies in uw taal.


**Important:** L'annexe A contient les instructions de sécurité relatives à l'installation de cet équipement. Lorsque vous voyez le symbole , reportez-vous à l'annexe A pour consulter la traduction de ces instructions dans votre langue.


**Tärkeää:** Liite A sisältää tämän laitteen asentamiseen liittyvät käännettyä turvaohjeet. Kun näet -symbolin, katso käännettyä turvaohjetta liitteestä A.

**Importante:** L'Appendice A contiene avvisi di sicurezza tradotti per l'installazione di questa apparecchiatura. Il simbolo , indica di consultare l'Appendice A per l'avviso di sicurezza nella propria lingua.

**Viktig:** Tillegg A inneholder oversatt sikkerhetsinformasjon for installering av dette utstyret. Når du ser , åpner du til Tillegg A for å finne den oversatte sikkerhetsinformasjonen på ønsket språk.

**Importante:** O Anexo A contém advertências de segurança traduzidas para instalar este equipamento. Quando vir o símbolo , leia a advertência de segurança traduzida no seu idioma no Anexo A.

**Importante:** El Apéndice A contiene mensajes de seguridad traducidos para la instalación de este equipo. Cuando vea el símbolo , vaya al Apéndice A para ver el mensaje de seguridad traducido a su idioma.

**Obs!** Bilaga A innehåller översatta säkerhetsmeddelanden avseende installationen av denna utrustning. När du ser , skall du gå till Bilaga A för att läsa det översatta säkerhetsmeddelandet på ditt språk.

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# Preface

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This installation guide contains instructions on how to install an Allied Telesyn adapter card in your computer and how to load the adapter driver. This guide also explains the AT-Setup program which simplifies the task of installing or updating an adapter driver.

## **Purpose of this Guide**

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This guide is intended for anyone who needs to install or update a network adapter card or driver on their PC-compatible system.

## How This Guide is Organized

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This guide contains the following chapters and appendix:

Chapter 1, [Installing the Network Adapter Card](#), describes how to install an adapter card into your computer.

Chapter 2, [AT-Setup for Windows 98, 2000, Me, or XP](#), contains instructions on how install an adapter driver using AT-Setup.

Chapter 3, [Manually Installing a Network Adapter Driver](#), contains the procedures for manually installing a network adapter driver on a PC-compatible system.

Chapter 4, [Updating a Network Adapter Driver](#), contains the procedures for manually updating an adapter driver.

Chapter 5, [Removing a Network Adapter Driver](#), contains the procedures for removing a network adapter driver from your systems.

Chapter 6, [AT-Stat](#), contains instructions on how to install and remove the AT-Stat utility.

Chapter 7, [VLAN](#), contains instructions on how to install and remove VLANs.

Chapter 8, [Troubleshooting](#), contains instructions for running the diagnostics program and guidelines for troubleshooting.

Appendix A, [Translated Safety and Emission Information](#), contains multi-language translations of the safety and emission statements in this guide.

## **Where to Find Related Guides**

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The Allied Telesyn web site at [www.alliedtelesyn.com](http://www.alliedtelesyn.com) offers you an easy way to access the most recent documentation, software updates, and technical information for all of our products. The documents provided on our web site are available as PDF files.

## Document Conventions

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This guide uses several conventions that you should become familiar with before you begin to install the product.

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### **Note**

Notes provide additional information.

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### **Warning**

Warnings inform you that performing or omitting a specific action may result in bodily injury.

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### **Caution**

Cautions inform you that performing or omitting a specific action may result in equipment damage or loss of data.

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## Contacting Allied Telesyn Technical Support

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You can contact Allied Telesyn technical support online or by telephone or e-mail.

### Online Support

You can request technical support online by accessing the Knowledge Base at <http://kb.alliedtelesyn.com>. You can use the Knowledge Base to submit questions to our technical support staff and review answers to previously asked questions.

### Telephone Support

For technical support by phone, contact Allied Telesyn at one of the following locations:

#### Americas

United States, Canada, Mexico, Central America, South America  
Tel: 1 (800) 428-4835

#### Germany

Germany, Switzerland, Austria, Eastern Europe  
Tel: (+49) 30-435-900-126

#### Asia

Singapore, Taiwan, Thailand, Malaysia, Indonesia, Korea, Philippines, China, India, Hong Kong  
Tel: (+65) 3815-612

#### Italy

Italy, Spain, Portugal, Greece, Turkey, Israel  
Tel: (+39) 02-41-30-41

#### Australia

Australia, New Zealand  
Tel: 1 (800) 000-880

#### Japan

Tel: (+81) 3-3443-5640

#### France

France, Belgium, Luxembourg, The Netherlands, Middle East, Africa  
Tel: (+33) 1-60-92-15-25

#### United Kingdom

United Kingdom, Denmark, Norway, Sweden, Finland, Iceland  
Tel: (+44) 1-235-442560

### E-mail Support

**Latin America, Mexico, Puerto Rico, Caribbean, and Virgin Islands**  
[latin\\_america@alliedtelesyn.com](mailto:latin_america@alliedtelesyn.com)

**United Kingdom, Sweden, Norway, Denmark, and Finland**  
[support\\_europe@alliedtelesyn.com](mailto:support_europe@alliedtelesyn.com)

## Returning Products

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Products for return or repair must first be assigned a Return Materials Authorization (RMA) number. A product sent to Allied Telesyn without a RMA number will be returned to the sender at the sender's expense.

To obtain an RMA number, contact technical support at one of the following locations:

- United States and Canada**  
Toll-free: 1-800-762-1664  
Fax: 1-425-806-1050
- Europe, Africa, and the Middle East**  
Tel: +44-1793-501401  
Fax: +44-1793-431099
- Latin America, the Caribbean, and Virgin Islands**  
Tel: International code + 425-481-3852  
Fax: International code + 425-481-3895
- Puerto Rico**  
Toll-free: 1-800-424-5012, ext 3852  
or 1-800-424-4284, ext 3852
- Mexico**  
Toll-free: 800-424-5012, ext 3852  
Fax: International code + 425-481-3895
- Asia and Southeast Asia**  
Tel: +65 381-5612  
Fax: +65 383-3830
- Australia**  
Toll-free: 1-800-000-880  
Fax: 2-9438-4966
- New Zealand**  
Toll-free: 0800-45-5782

## **For Sales or Corporate Information**

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You can contact Allied Telesyn for sales or corporate information at the location listed below:

**Allied Telesyn, Inc.**

19800 North Creek Parkway, Suite 200

Bothell, WA 98011

Tel: 1 (425) 487-8880

Fax: 1 (425) 489-9191

## **Tell Us What You Think**

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If you have any comments or suggestions on how we might improve this or other Allied Telesyn documents, please fill out the General Enquiry Form online. This form can be accessed by selecting **Contact Us** from [www.alliedtelesyn.com](http://www.alliedtelesyn.com).

## Chapter 1

# Installing the Network Adapter Card

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This chapter contains instructions for installing the following Allied Telesyn network adapter cards:

- AT-2400 Series
- AT-2450/AT-2451 Series
- AT-2500/AT-2501 Series
- AT-2700/AT-2701 Series
- AT-2745/AT-2746 Series
- AT-2915 Series
- AT-2930 Series
- AT-2970/AT-2971 Series

### **Verifying Package Contents**

Make sure the following items are included in your package. If any item is missing or damaged, contact your Allied Telesyn sales representative for assistance.

- Allied Telesyn Network Adapter Card
- CardAssistant CD
- Wake-on-LAN cable (AT-2450, AT-2451, AT-2500, AT-2501, AT-2700, and AT-2701 Series only)

## Reviewing Safety Precautions

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Please review the following safety precautions before you install the network adapter card.



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**Warning**

This is a "Class 1 LED product". 6

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**Warning**

Do not stare into the laser beam. (AT-2450FT, AT-2450FL, AT-2451FTX, AT-2700FX, AT-2701, AT-2971SX Series only) 7

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**Warning**

**Lightning Danger:** Do not work on this equipment or cables during periods of lightning activity. 8

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**Caution**

**Operating Temperature:** This product is designed for a maximum ambient temperature of 40 degrees C. 9

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**Caution**

**All Countries:** Install this product in accordance with local and National Electric Codes. 10

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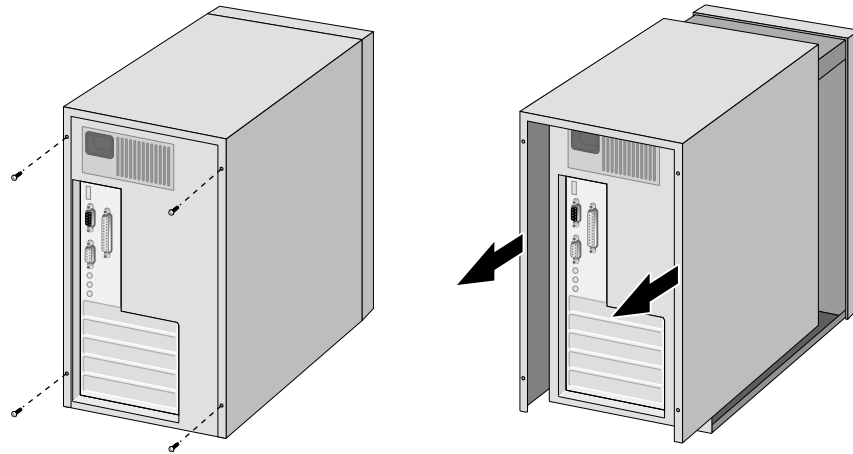
## Installing a Network Adapter Card

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This section explains how to install a network adapter card in most PC-compatible computers.

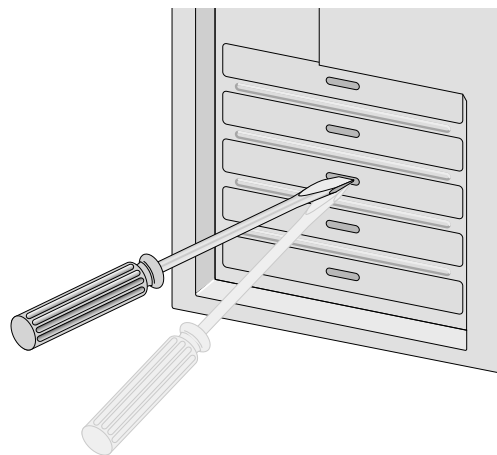
To install the adapter card, perform the following procedure:

1. Shutdown your PC and disconnect the power cord from the outlet.
2. Remove the PC's cover by removing the screws from the chassis and gently sliding off the cover. See Figure 1.



**Figure 1** Removing the PC Cover

3. Select an empty, non-shared PCI slot and remove the faceplate. Keep the faceplate in a safe place. You may need it for future use. See Figure 2.



**Figure 2** Removing the Faceplate From PCI Slot

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### Note

If you cannot locate or know how to find an PCI slot, refer to the documentation that came with your PC.

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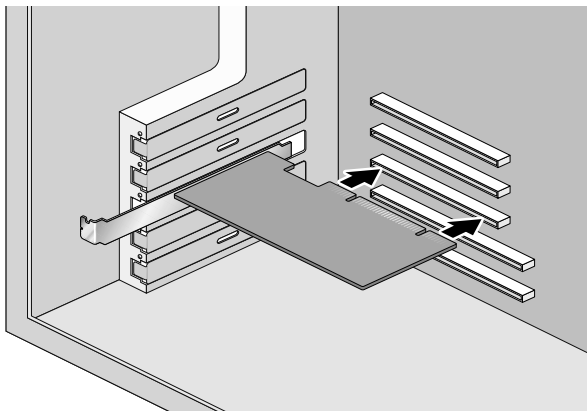
4. Remove the network adapter card from the shipping package and store the packaging material in a safe location.



**Caution**

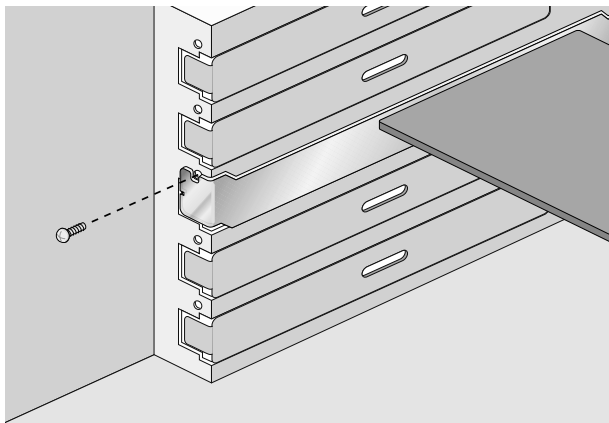
Wear a grounding device and observe electrostatic discharge precautions when installing the network adapter card in a PC. Failure to observe this caution could result in damage to the adapter card.

5. Gently insert the network adapter card into the PCI slot. Make sure the card is securely seated.



**Figure 3** Inserting the Network Adapter Card

6. Secure the network adapter card to the chassis with a Phillips-head screw, not provided.



**Figure 4** Securing the Adapter Card

7. For the AT-2450, AT-2500, or AT-2700 Series adapters, to use the adapter card's Wake-on-LAN feature in your computer using an Advanced Configuration and Power Interface (ACPI), you must connect the Wake-on-LAN cable to the Wake-on-LAN connector on the adapter card and to the Wake-on-LAN connector on the motherboard of the computer. For the location of the Wake-on-LAN connector on the motherboard, refer to the documentation that came with your computer.

The AT-2501, AT-2451F, AT-2701, AT-2915, AT-2930, and AT-2971 do not require the optional external Wake-on-LAN cable. These devices are PCI 2.2 compliant and can use the PCI 2.2 BUS for Wake-on-LAN features.

8. Replace the PC's cover and secure it with the screws removed in [Step 2](#).
9. Connect the adapter card to the network by connecting the appropriate data cable.
10. Power ON the PC.

You are now ready to install the network adapter driver. You can install a network adapter driver by performing either of the following procedures: [Running AT-Setup](#) on page 24 or [Manually Installing a Network Adapter Driver](#) on page 31.



## Chapter 2

# AT-Setup for Windows 98, 2000, Me, or XP

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This chapter contains the instructions for:

- [Running AT-Setup](#) on page 24
- [Running AT-Setup to Complete Driver Installation](#) on page 29

Before running AT-Setup, be sure to read [AT-Setup Guidelines](#) on page 23.

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### Note

AT-Setup does not currently support the AT-2970 and AT-2971 Series Adapters.

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## Overview

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Allied Telesyn has created a special program called AT-Setup to simplify the installation of your network adapter card and driver. This program automatically installs, updates, or corrects the adapter driver on your computer.

You can run AT-Setup either before or after you install the adapter card. Running AT-Setup before installing the adapter card will pre-load the appropriate driver.

If you install an adapter card in your system before running AT-Setup, your operating system may attempt to install an adapter driver automatically. This will depend on your Windows operating system and which Allied Telesyn adapter card you are installing. Microsoft's New Hardware Installation Wizard will prompt you to install the appropriate driver for the adapter card. You can either instruct the installation wizard to the proper location or cancel and perform AT-Setup without removing the adapter card.

You can also use AT-Setup to correct problems during installation. If an error message occurs, simply run AT-Setup again. This will allow AT-Setup to scan your operating system and fix any known issues.

AT-Setup is located on the CardAssistant CD included with the network adapter card or it can be downloaded from our web site at [www.alliedtelesyn.com](http://www.alliedtelesyn.com). AT-Setup can only be used to install an adapter driver on a system running Windows 98, 2000, Me, or XP.

To automatically install an adapter driver, refer to [Running AT-Setup](#) on page 24. To manually install an adapter driver, refer to [Manually Installing a Network Adapter Driver](#) on page 31.

If you are installing an adapter card in an operating system other than Windows 98, 2000, Me, or XP, refer to the **Network Adapter Card Installation Guide - Book II**. This guide is located on the CardAssistant CD or it can be downloaded from [www.alliedtelesyn.com](http://www.alliedtelesyn.com).

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**Note**

If you are updating an adapter driver, refer to [Updating a Network Adapter Driver](#) on page 57.

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## AT-Setup Guidelines

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Before running AT-Setup, review the following guidelines:

- ❑ The AT-Setup program is designed for Windows 98, 2000, Me, and XP operating systems only. You cannot use this program to install an adapter driver on any other type of operating system.
- ❑ If you are installing multiple network adapter cards in a Windows 98, 2000, Me, or XP operating system, you must install a separate adapter driver for each adapter card. You can either run AT-Setup for each adapter card you are installing or you can manually install the adapter drivers. Refer to [Running AT-Setup](#) on page 24 or [Manually Installing a Network Adapter Driver](#) on page 31.
- ❑ If the computer in which you are installing the adapter card does not have a CD-ROM drive, you must create a driver installation disk to install the adapter driver. Refer to [Creating a Driver Installation Disk](#) on page 33 for instructions.
- ❑ Allied Telesyn network adapter cards are PCI-compliant. The adapter card's operating parameters, such as interrupt level and memory range, are set automatically by the computer so that they do not conflict with other devices in your computer. Do not change any of the operating parameters of an adapter card without a full understanding of the parameters' functions.
- ❑ Allied Telesyn adapter cards are auto-negotiation compliant for both speed (for dual-speed adapter cards) and duplex mode on the twisted pair port. This means that the adapter card will automatically set the speed and duplex mode of the port to match the speed and duplex mode of the end-node (for example, an Ethernet hub or switch) to which the adapter port is connected. The fiber optic port is not auto-negotiation compliant, so it must be manually configured for both speed and duplex mode.

## Running AT-Setup

To run AT-Setup to install a new driver, perform the following procedure:

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### Note

AT-Setup does not currently support the AT-2970 and AT-2971 Series Adapters.

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1. Insert the CardAssistant CD into your CD-ROM drive. If you are using a driver installation disk, proceed to [Step 7](#).

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### Note

For instructions on how to create a driver installation disk, refer to [Creating a Driver Installation Disk](#) on page 33.

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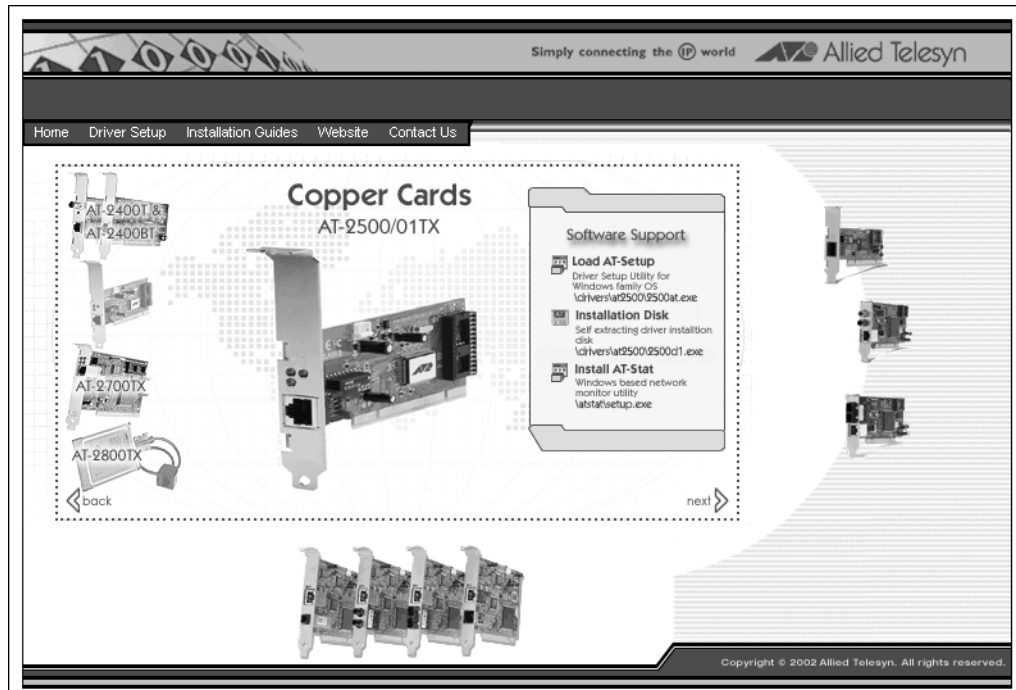
The CardAssistant Main Menu shown in Figure 5 is displayed. If this menu is not displayed, double-click on the My Computer icon, then double-click on the Allied Telesyn CD-ROM icon.



**Figure 5** CardAssistant CD Main Menu

2. From the **Driver Setup** drop-down menu, select the adapter card that you purchased.

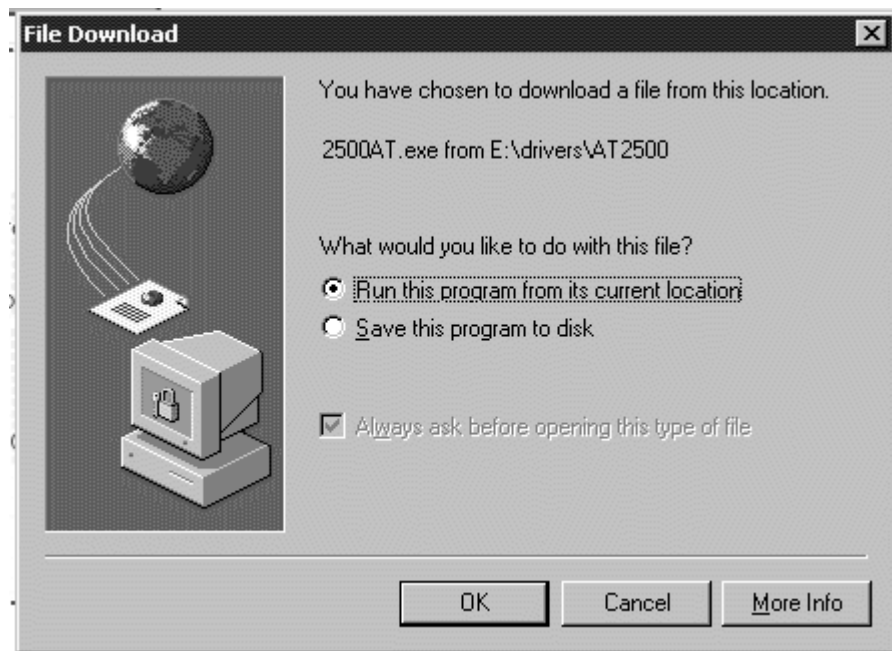
A window similar to Figure 6 is displayed.



**Figure 6** Network Adapter Card Window

- Under Software Support, select **Load AT-Setup**.

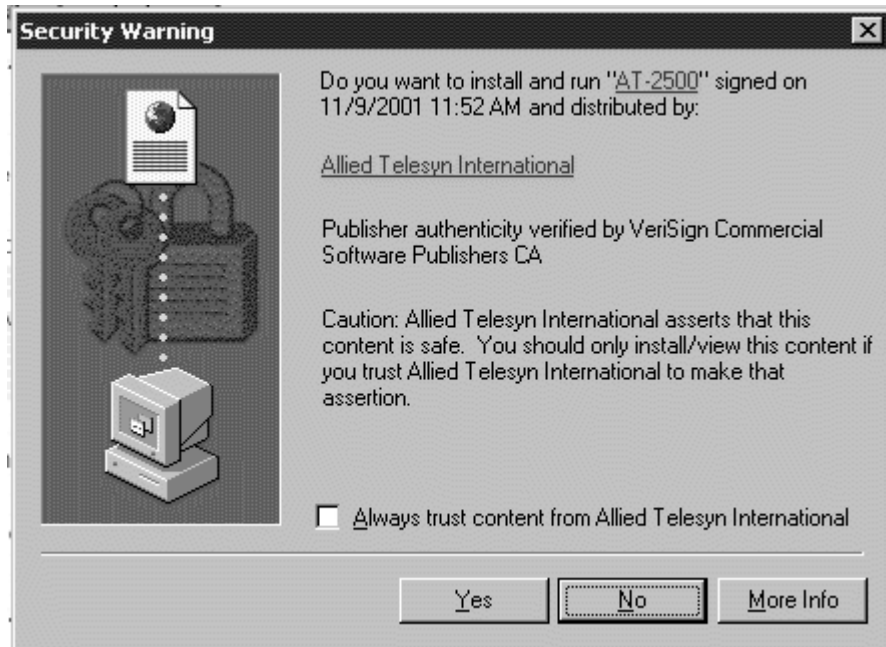
The window shown in Figure 7 is displayed.



**Figure 7** AT-Setup Prep Window

4. Select **Run this program from its current location**, then **OK**.

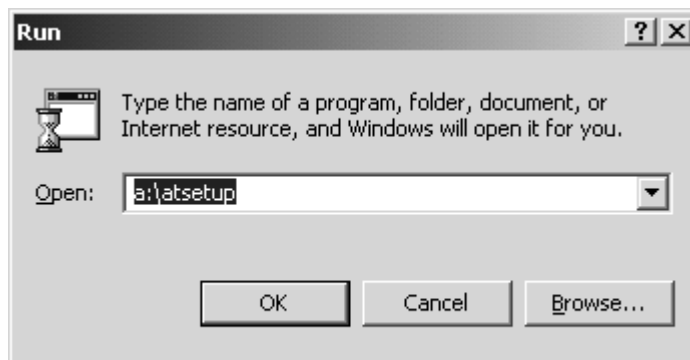
This launches the AT-Setup program and displays the window shown in Figure 8.



**Figure 8** Security Warning Window

5. Proceed to Step 7.
6. If you are installing an Allied Telesyn network adapter card from a driver installation disk, perform the steps below.
  - a. Insert the driver installation disk into the floppy drive.
  - b. Select **Start** from the Window's toolbar.
  - c. Select **Run**.

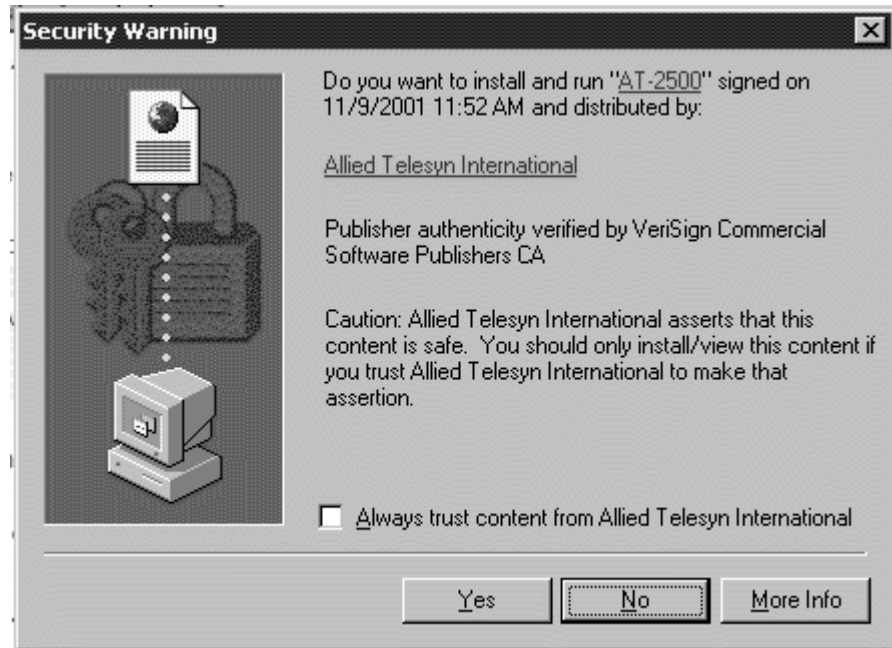
The window shown in Figure 9 is displayed.



**Figure 9** Run Window

- d. In the Open field, type: **A:\atsetup**.  
Where 'A' is the letter name of the floppy drive.
- e. Select **OK**.

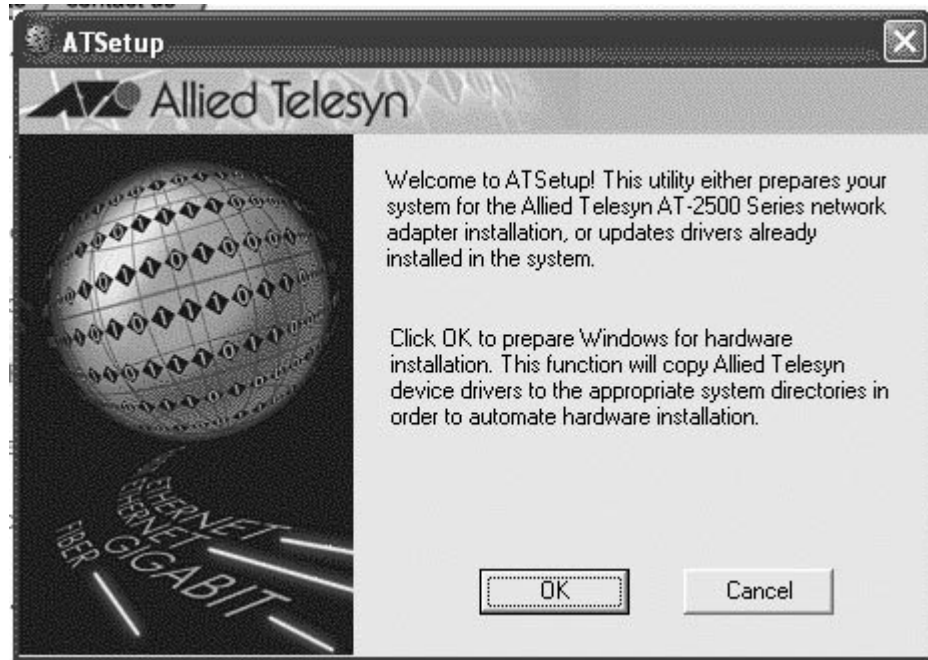
This launches the AT-Setup program and displays the window shown in Figure 10.



**Figure 10** Security Warning Window

- f. Proceed to Step 7.
7. Select **Yes**.

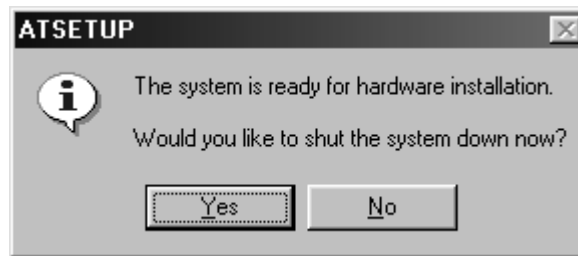
The window shown in Figure 11 is displayed.



**Figure 11** Welcome to AT-Setup Window

8. Select **OK**.

When AT-Setup has finished installing the driver, it displays the prompt shown in Figure 12.



**Figure 12** Shut Down Prompt

9. Select **Yes** and perform the following procedure:
  - a. Power OFF your computer.
  - b. Refer to [Installing a Network Adapter Card](#) on page 17 for instructions.
  - c. Power ON your computer.

The network adapter card and driver are now ready for network operations.

## **Running AT-Setup to Complete Driver Installation**

---

If you were unable to complete the installation of the adapter driver or if an error occurred during installation, run AT-Setup again. AT-Setup will scan your operating system and correct any known problems. Refer to [Running AT-Setup](#) on page 24 for instructions.



## Chapter 3

# Manually Installing a Network Adapter Driver

---

This chapter contains procedures for manually installing a network adapter driver on a PC-compatible system. The chapter provides the procedure for each of the following Windows operating systems.

- ❑ [Windows 95](#) on page 36
- ❑ [Windows 98](#) on page 38
- ❑ [Windows Me](#) on page 42
- ❑ [Windows 2000 and XP](#) on page 44
- ❑ [Windows NT 4.0](#) on page 50

This chapter also contains the procedure for [Creating a Driver Installation Disk](#) on page 33.

## Installation Guidelines

---

Please review the following guidelines before you begin to manually install a network adapter driver on your computer:

- ❑ If your computer is running Windows 98, 2000, Me, or XP and has a CD-ROM drive, you can run AT-Setup to automatically install an adapter driver. This program is included on the CardAssistant CD. For instructions, refer to [AT-Setup for Windows 98, 2000, Me, or XP](#) on page 21.
- ❑ If you are installing multiple network adapter cards in a Windows 98, 2000, Me, or XP operating system, you must install a separate adapter driver for each adapter card. You can either run AT-Setup for each adapter card you are installing or you can manually install the adapter drivers. Refer to [Running AT-Setup](#) on page 24 or [Manually Installing a Network Adapter Driver](#) on page 31.
- ❑ If the computer in which you are installing the adapter card does not have a CD-ROM drive, you must create a driver installation disk to install the adapter driver. Refer to [Creating a Driver Installation Disk](#) on page 33 for instructions.
- ❑ Allied Telesyn adapter cards are PCI-compliant. The adapter card's operating parameters, such as interrupt level and memory range, are set automatically by the computer so that they do not conflict with other devices in your computer. Do not change any of the operating parameters of a adapter card without a full understanding of the parameters' functions.
- ❑ Allied Telesyn adapter cards are auto-negotiation compliant for both speed (for dual-speed adapter cards) and duplex mode on the twisted pair port. This means that the adapter card will automatically set the speed and duplex mode of the port to match the speed and duplex mode of the end-node (for example, an Ethernet hub or switch) to which the adapter port is connected. The fiber optic port is not auto-negotiation compliant, so it must be manually configured for both speed and duplex mode.

## Creating a Driver Installation Disk

If the computer in which you are installing the adapter card does not have a CD-ROM drive, you will need to create a driver installation disk to install the adapter driver.

### Note

Creating a driver installation disk is not currently supported for the AT-2970 and AT-2971 Series Adapters.

To create a driver installation disk, locate a computer with both a CD-ROM and floppy drive, then perform the following procedure:

1. Make sure your computer is turned ON and the Windows operating system is running.
2. Insert the CardAssistant CD into the CD-ROM drive.

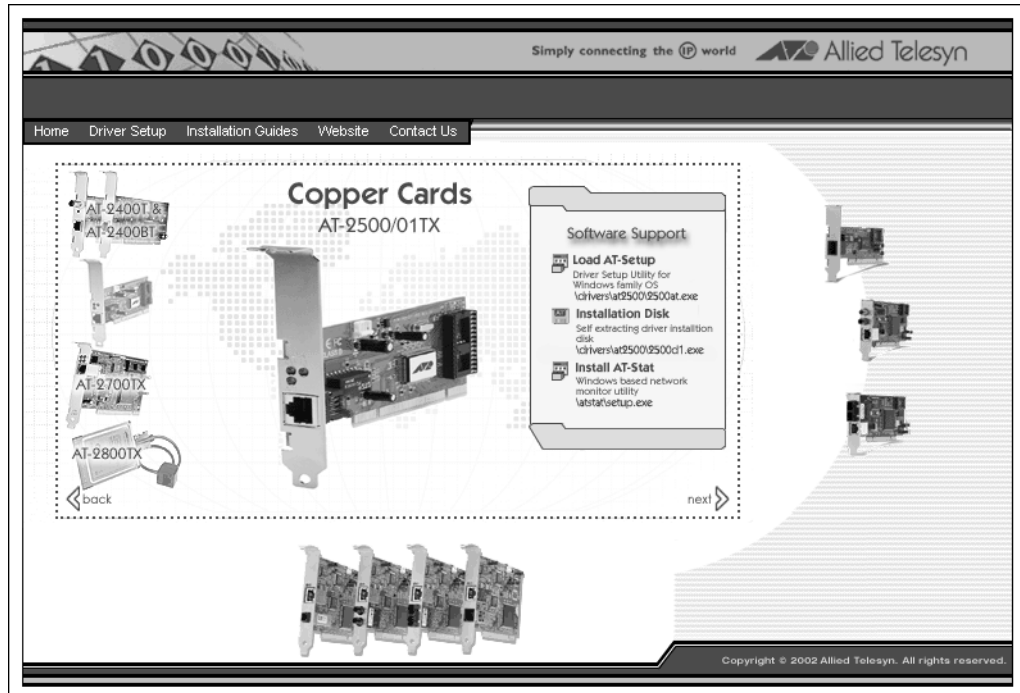
The CardAssistant Main Menu shown in Figure 13 is displayed. If this menu is not displayed, double-click on the My Computer icon, then double-click on the Allied Telesyn CD-ROM icon.



Figure 13 CardAssistant CD Main Menu

3. From the **Driver Setup** drop-down menu, select the adapter card that you purchased.

A window similar to Figure 14 is displayed.



**Figure 14** Network Adpater Card Window

4. Insert a blank, formatted floppy disk into the floppy drive.
5. Under Software Support, select **Installation Disk**.

The window shown in Figure 15 is displayed.



**Figure 15** File Download Window

6. Select **Run this program from its current location**, then **OK**.

The window shown in Figure 16 is displayed.



**Figure 16** CardAssistant - InstallShield Wizard Window

7. Specify the floppy drive containing the blank disk.
8. Select **Next**. The appropriate adapter drivers and the AT-Setup utility are saved to the floppy disk.

The driver installation disk has been created.

9. Continue the installation process by performing the appropriate procedure for your operating system.

## Windows 95

---

This section contains the procedure for manually installing a network adapter driver in a Windows 95 operating system. The AT-2915, AT-2930, AT-2970, and AT-2971 Series Adapters are not supported by Windows 95.

---

### Note

Please review the [Installation Guidelines](#) on page 32 before performing the following procedure.

---

1. Shutdown Windows 95 and power OFF the computer.
2. Install the network adapter card. Refer to [Installing the Network Adapter Card](#) on page 15 and the documentation that came with your computer for instructions.
3. Power ON the computer.

---

### Note

You should have the Windows 95 CD or floppy disk(s) available. You may be prompted to copy support files for networking.

---

Windows 95 will search the computer for any new hardware. Once it detects a new adapter card, it will display a prompt notifying you that it has found a new adapter card and that the adapter driver needs to be installed.

4. Insert the CardAssistant CD or the driver installation disk into the appropriate drive.

---

### Note

If you are using the CardAssistant CD and your computer launches the web browser, close or minimize the web browser window.

---

5. Type in the letter name and path to the adapter driver, then select **Return**.

For example, if you are installing an adapter driver for an AT-2500 Series adapter and the CD is mapped to drive D, you would enter: **D:\drivers\at2500**.

Where 'D' is the letter name of the CardAssistant CD and '\drivers\at2500' is the location of the adapter driver to be installed. The adapter driver locations on the CardAssistant CD are:

Adapter Card	Driver Location
AT-2400T, AT-2400BT	\drivers\at2400
AT-2500TX, AT-2501TX	\drivers\at2500
AT-2450FTX, AT-2451FTX, AT-2700TX, AT-2700FX, AT-2701FX, AT-2746FX, AT-2700FTX, AT-2701FTX, AT-2745FX	\drivers\at2701

If you are using a driver installation disk, you would enter: **A:\**. The adapter driver is stored in the root directory on the disk.

6. When prompted, insert the Windows 95 Installation CD or disk.
7. Reboot the computer when prompted.

The network adapter card and driver are now ready for network operations.

## Windows 98

---

This section contains the procedure for manually installing a network adapter driver in a Windows 98 operating system. The AT-2970 and AT-2971 Series Adapters do not support Windows 98.

---

### Note

Please review the [Installation Guidelines](#) on page 32 before performing the following procedure.

---

1. Shutdown Windows 98 and power OFF your computer.
2. Install the network adapter card. Refer to [Installing the Network Adapter Card](#) on page 15 and the documentation that came with your computer for instructions.
3. Power ON the computer.

The Microsoft Installation Wizard displays the window shown in Figure 17, notifying you that it has detected a new adapter card in the computer.



**Figure 17** Add New Hardware Wizard Window (1 of 3)

4. Select **Next**.

The window shown in Figure 18 is displayed.



**Figure 18** Add New Hardware Wizard Window (2 of 3)

5. Select **Search for the best driver for your device (Recommended)**.
6. Select **Next**.

The window shown in Figure 19 is displayed.



**Figure 19** Add New Hardware Wizard Window (3 of 3)

7. If you are using the CardAssistant CD, do the following. If you are using a driver installation disk, proceed to [Step 8](#).
  - a. Insert the CardAssistant CD into the CD-ROM drive.

---

**Note**

If your computer launches the web browser when you insert the CD, minimize or close the web browser window.

---

- b. Select **CD-ROM drive**.
- c. Click on **Specify a location**, if not already selected.
- d. In the Specify a Location field, enter the drive letter and path to the adapter driver. The adapter driver locations on the CardAssistant CD are:

Adapter Card	Driver Location
AT-2400T, AT-2400BT	\drivers\at2400
AT-2500TX, AT-2501TX	\drivers\at2500
AT-2450FTX, AT-2451FTX, AT-2700TX, AT-2700FX, AT-2701FX, AT-2746FX, AT-2700FTX, AT-2701FTX, AT-2745FX	\drivers\at2701
AT-2915T, AT-2930	\drivers\at29xx

For example if you are installing an adapter driver for an AT-2500 Series adapter and the CD is mapped to drive D, you would enter: **D:\drivers\at2500**

- e. Click **Next**.
  - f. Proceed to [Step 9](#).
8. If you are using a driver installation disk, do the following:
    - a. Insert the driver installation disk into the floppy disk drive.
    - b. Select **Floppy disk drives**.
    - c. Select **Specify a location**, if not already selected.
    - d. In the Specify a Location field, enter **A:\**. The adapter driver is stored in the root directory on the disk.

- e. Click **Next**.
  - f. Proceed to the next step.
9. Reboot the computer when prompted.

The network adapter card and driver are ready for network operations.

## Windows Me

---

This section contains the procedure for manually installing a network adapter driver in a Windows Me operating system. The AT-2970 and AT-2971 Series Adapters do not support Windows Me.

---

### Note

Please review the [Installation Guidelines](#) on page 32 before performing the following procedure.

---

1. Shutdown Windows Me and power OFF your computer.
2. Install the network adapter card. Refer to [Installing the Network Adapter Card](#) on page 15 and the documentation that came with your computer for instructions.
3. Power ON the computer.

The Microsoft Installation Wizard displays the window shown in Figure 20, notifying you that it has detected a new adapter card in the computer.



Figure 20 Add New Hardware (1 of 2)

4. Select **Automatic search for a better driver (Recommended)**.

5. If you are using the CardAssistant CD, do the following. If you are using a driver installation disk, proceed to [Step 6](#).
  - a. Insert the CardAssistant CD into the CD-ROM drive.

---

**Note**

If your computer launches the web browser when you insert the CD, minimize or close the web browser window.

---

- b. Proceed to [Step 7](#).
6. If you are using a driver installation disk, do the following:
  - a. Insert the driver installation disk into the floppy drive.
  - b. Proceed to [Step 7](#).
7. Select **Next**.

Windows Me searches for the new adapter driver and automatically installs it onto your computer. After the installation is complete, the window shown in Figure 21 is displayed.



**Figure 21** Add New Hardware (2 of 2)

8. Select **Finish**.
9. Reboot the computer when prompted.

The network adapter card and driver are ready for network operations.

## Windows 2000 and XP

---

This section contains the procedure for manually installing a network adapter driver in a Windows 2000 or XP operating system.

---

**Note**

You should review the [Installation Guidelines](#) on page 32 before performing the following procedure.

---

1. Shutdown Windows 2000 or XP and power OFF your computer.
2. Install the network adapter card. Refer to [Installing the Network Adapter Card](#) on page 15 and the documentation that came with your computer for instructions.
3. Power ON the computer.

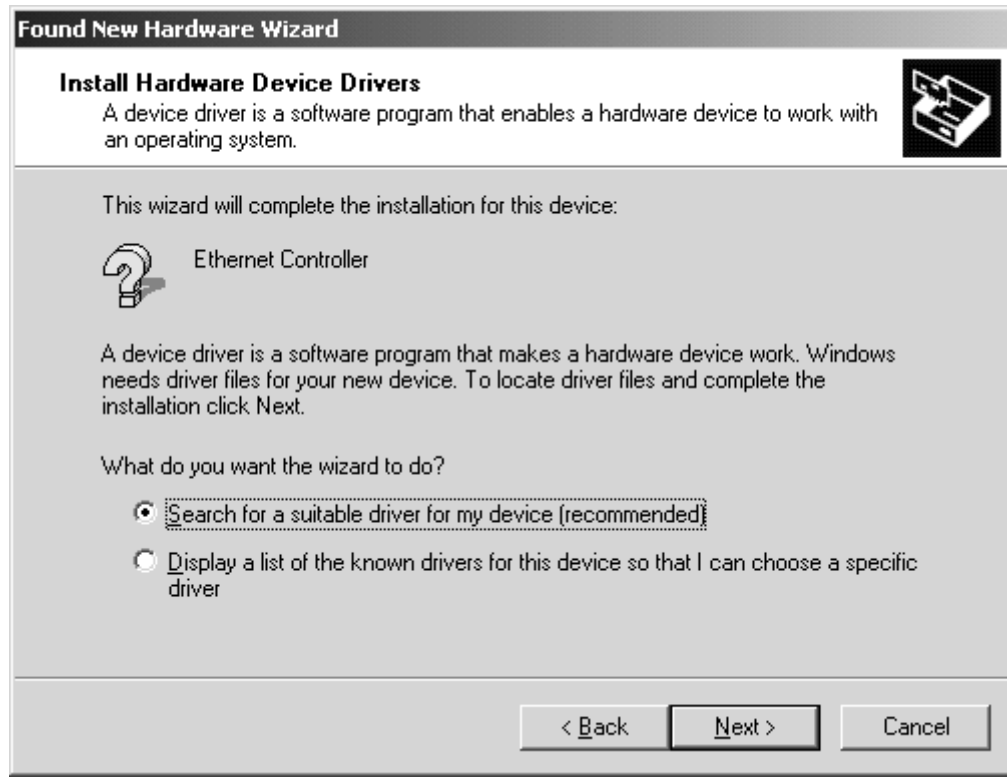
The Found New Hardware Wizard displays the window shown in Figure 22, notifying you that it has detected a new adapter card in your computer.



**Figure 22** Found New Hardware Wizard Window (1 of 5)

4. Select **Next**.

The window shown in Figure 23 is displayed.



**Figure 23** Found New Hardware Wizard Window (2 of 5)

5. Select **Search for a suitable driver for my device (recommended)**.
6. Select **Next**.

The window shown in Figure 24 is displayed.



**Figure 24** Found New Hardware Wizard Window (3 of 5)

7. If you are using the CardAssistant CD, do the following. If you are using a driver installation disk, proceed to [Step 8](#).
  - a. Insert the CardAssistant CD into the CD-ROM drive.

---

**Note**

If your computer launches the web browser when you insert the CD, minimize or close the web browser window.

---

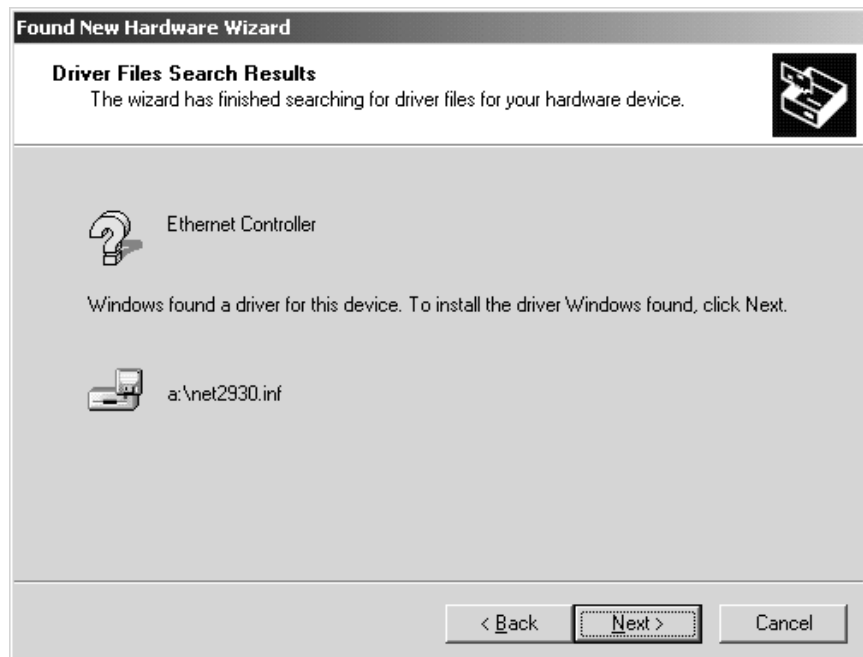
- b. Select **CD-ROM drives**.
- c. Select **Specify a location**.
- d. Select **Next**.

- e. In the Specify a Location field, enter the drive letter and path to the adapter driver. The driver locations on the CardAssistant CD are:

Adapter Card	Driver Location
AT-2400T, AT-2400BT	\drivers\lat2400
AT-2500TX, AT-2501TX	\drivers\lat2500
AT-2450FTX, AT-2451FTX, AT-2700TX, AT-2700FX, AT-2701FX, AT-2746FX, AT-2700FTX, AT-2701FTX, AT-2745FX	\drivers\lat2701
AT-2915T, AT-2930	\drivers\lat29xx
AT-2970SX, AT-2970SX/2, AT-2970T, AT-2970T/2, AT-2971T, AT-2971SX	\drivers\lat2971

For example, if you are installing an adapter driver for an AT-2500 Series adapter and the CD is mapped to drive D, you would enter: **D:\drivers\lat2500**.

The Found New Hardware Wizard starts to search for the appropriate adapter driver file. After an adapter driver has been found, the window shown in Figure 25 is displayed.



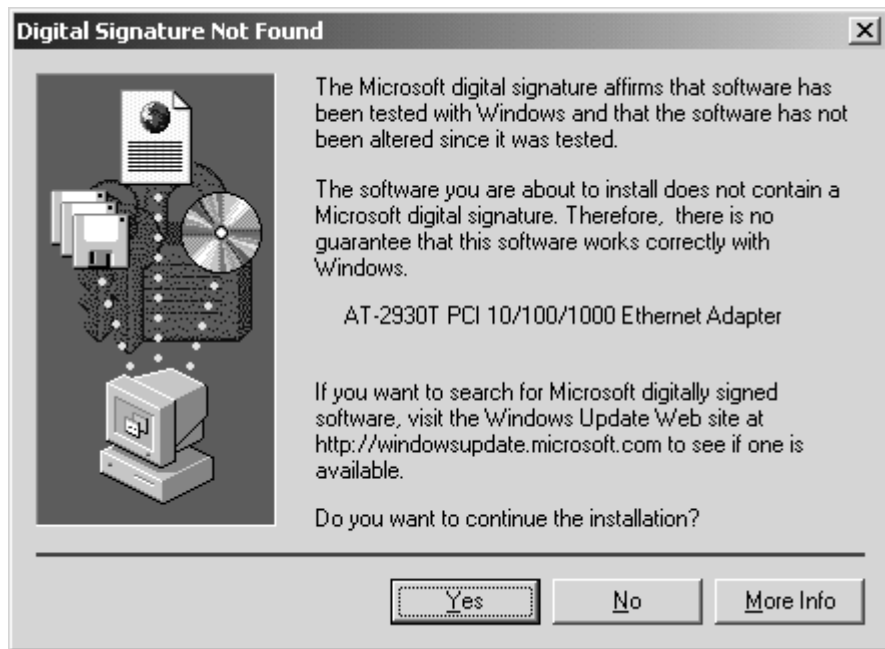
**Figure 25** Found New Hardware Wizard Window (4 of 5)

- f. Proceed to Step 9.
- 8. If you are using a driver installation disk, do the following:
  - a. Insert the driver installation disk into the floppy disk drive.
  - b. Select **Floppy disk drives**.
  - c. Select **Specify a location**.
  - d. Select **Next**.
  - e. In the Specify a Location field, enter **A:\**. The adapter driver is stored in the root directory on the disk.

The Found New Hardware Wizard starts to search for the appropriate adapter driver file. After an adapter driver has been found, the window shown in Figure 25 is displayed.

- f. Proceed to Step 9.
- 9. Select **Next**.

The window in Figure 26 is displayed.



**Figure 26** Digital Signature Not Found Window

- 10. Select **Yes**.

The window shown in Figure 27 is displayed.



**Figure 27** Found New Hardware Wizard Window (5 of 5)

11. Select **Finish**.
12. Reboot your computer when prompted.

The network adapter card and driver are ready for network operations.

## Windows NT 4.0

---

This section contains the procedure for manually installing a network adapter driver in a Windows NT 4.0 operating system. The AT-2970 and AT-2971 Series Adapters are currently not available for Windows NT 4.0. Please check Allied Telesyn's website at [www.alliedtelesyn.com](http://www.alliedtelesyn.com) for updates.

---

### Note

You should review the [Installation Guidelines](#) on page 32 before performing the following procedure.

---

1. Shutdown Windows NT and power OFF the computer.
2. Install the network adapter card. Refer to [Installing the Network Adapter Card](#) on page 15 and the documentation that came with your computer for instructions.
3. Power ON the computer.
4. From the desktop, click **Start**.
5. Select **Settings**, then select **Control Panel**, as shown in Figure 28.

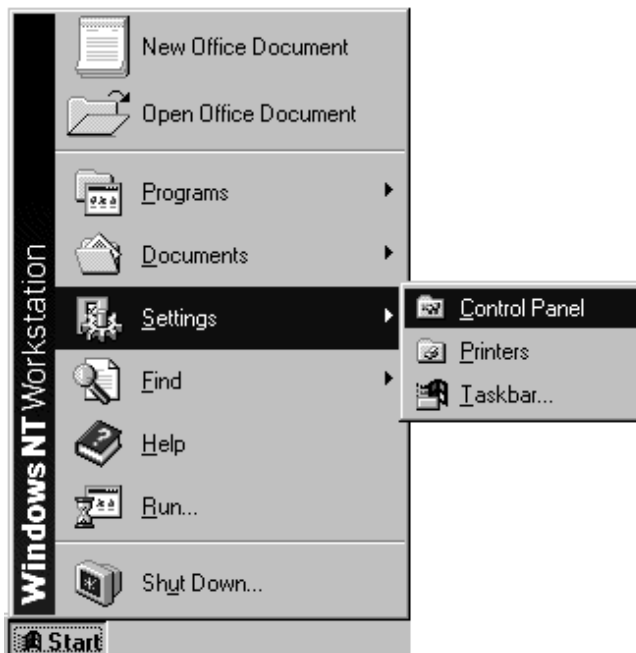
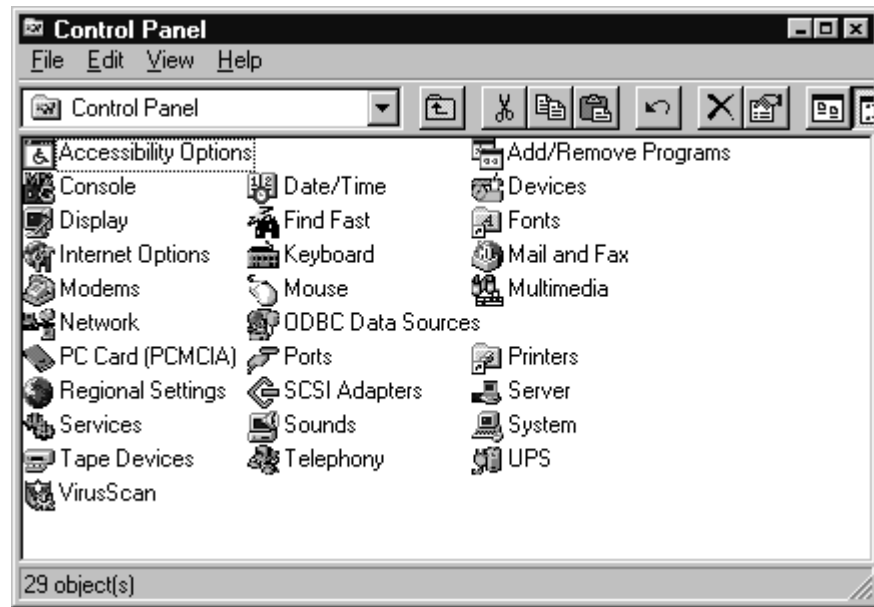


Figure 28 Start Menu

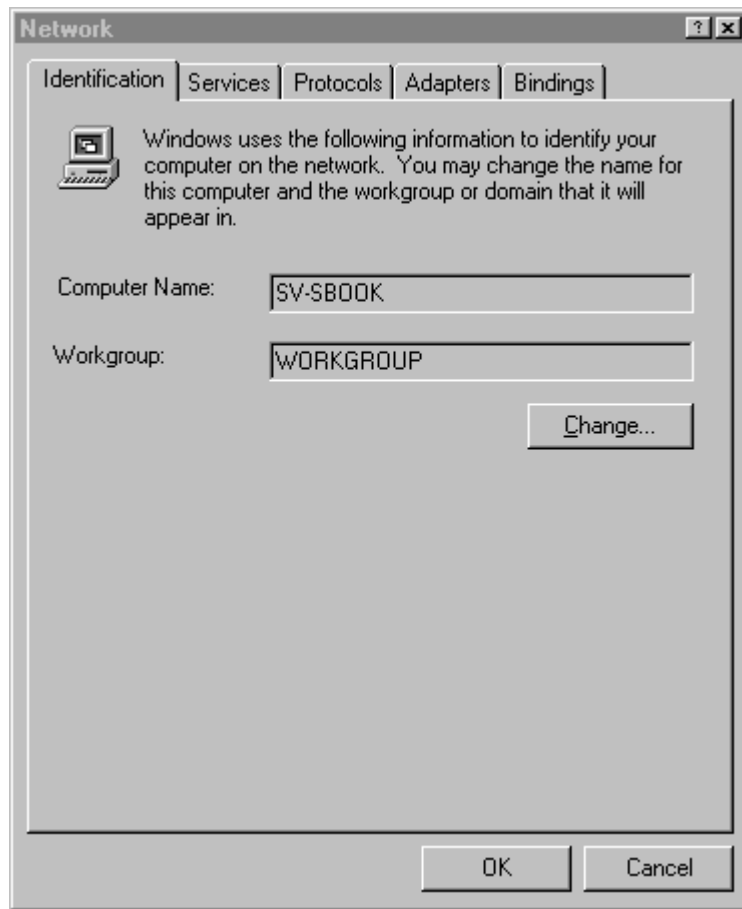
The window shown in Figure 29 is displayed.



**Figure 29** Control Panel Window

6. Double-click on the **Network** icon.

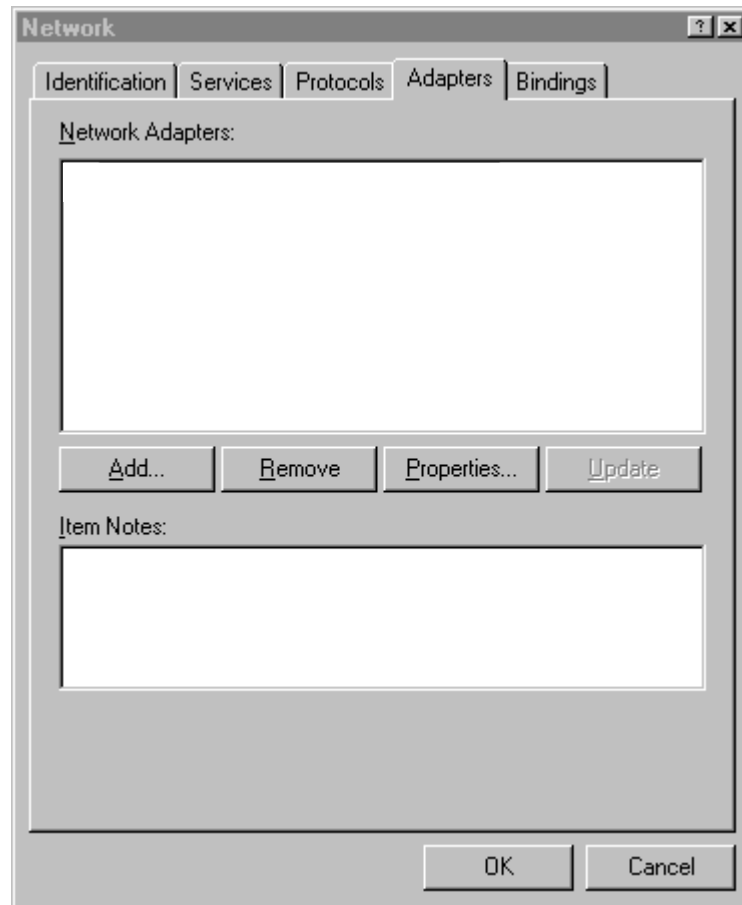
The window shown in Figure 30 is displayed.



**Figure 30** Network Window

7. Select the **Adapters** tab.

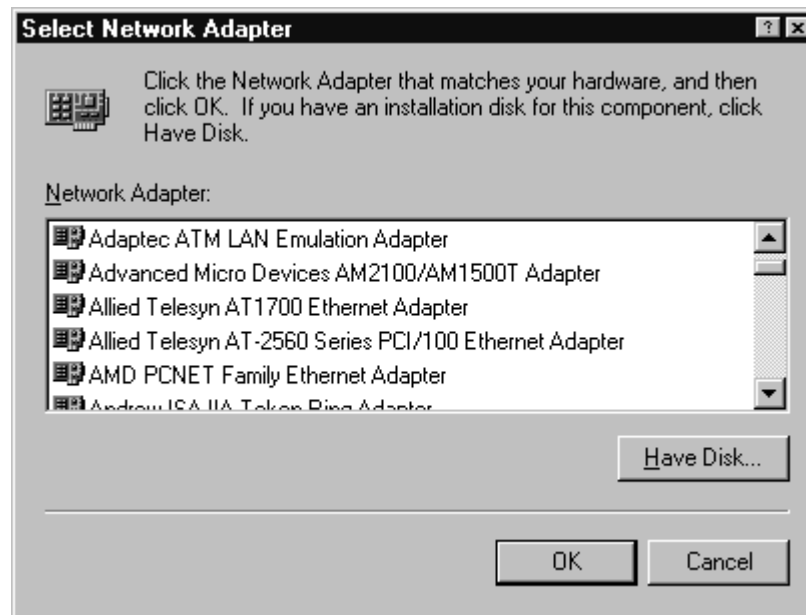
The window shown in Figure 31 is displayed.



**Figure 31** Adapters Tab Window

8. Select **Add**.

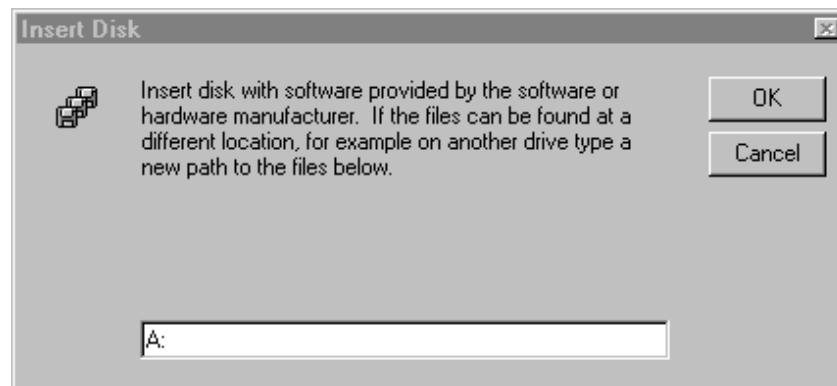
The window shown in Figure 32 is displayed.



**Figure 32** Select Network Adapter Window

9. Select **Have Disk**.

The window shown in Figure 33 is displayed.



**Figure 33** Insert Disk Window

10. Insert the CardAssistant CD or the driver installation disk into the appropriate drive.

---

**Note**

If you are using the CardAssistant CD and your computer launches the web browser, close or minimize the web browser window.

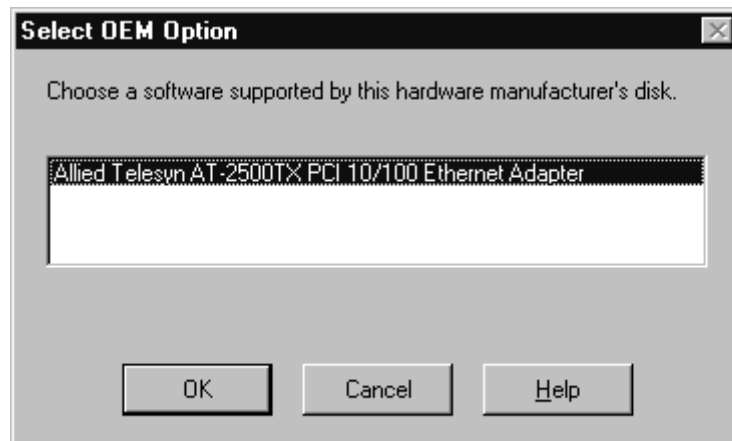
---

11. If you are using the CardAssistant CD, the location of the adapter drivers are:

Adapter Card	Driver Location
AT-2400T, AT-2400BT	\drivers\at2400
AT-2500TX, AT-2501TX	\drivers\at2500
AT-2450FTX, AT-2451FTX, AT-2700TX, AT-2700FX, AT-2701FX, AT-2746FX, AT-2700FTX, AT-2701FTX, AT-2745FX	\drivers\at2701
AT-2915T, AT-2930T, AT-2930SX	\drivers\at29xx

If you are using a driver installation disk, the adapter driver is in the root directory. For example, if the driver installation disk is in drive A, you would enter **A:\**.

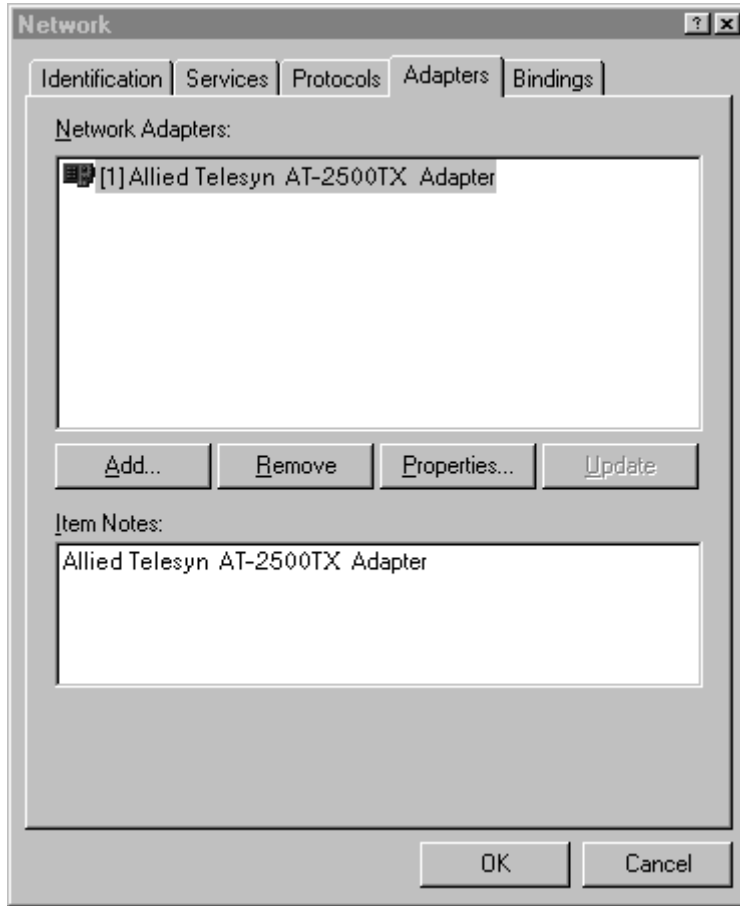
The window shown in Figure 34 is displayed.



**Figure 34** Select OEM Option Window

12. Select the appropriate Allied Telesyn network adapter card.
13. Select **OK**.

The window shown in Figure 35 is displayed.



**Figure 35** Adapters Tab Window

14. Verify that the correct Allied Telesyn network adapter card that you purchased appears in the list, then select **OK**.

---

**Note**

Windows NT 4.0 will prompt you to configure the protocols that you will be using for network communications.

---

15. Restart your computer when prompted.

The network adapter card and driver are ready for network operations.

## Chapter 4

# Updating a Network Adapter Driver

---

This chapter contains the following instructions:

- ❑ Manually Updating a Driver for Windows 98, 2000, Me, or XP on page 58

## Manually Updating a Driver for Windows 98, 2000, Me, or XP

---

You can use either the CardAssistant CD or a driver installation disk to manually update an adapter driver. To create a driver installation disk, refer to [Creating a Driver Installation Disk](#) on page 33 for instructions.

---

### Note

You should have the Windows Installation CD or floppy disk(s) available. You may be prompted to copy support files for networking.

---

To update a driver, perform the following procedure:

1. From the desktop, right-click the **My Computer** icon and select **Properties** from the menu, as shown in Figure 36.



**Figure 36** My Computer Icon and Menu

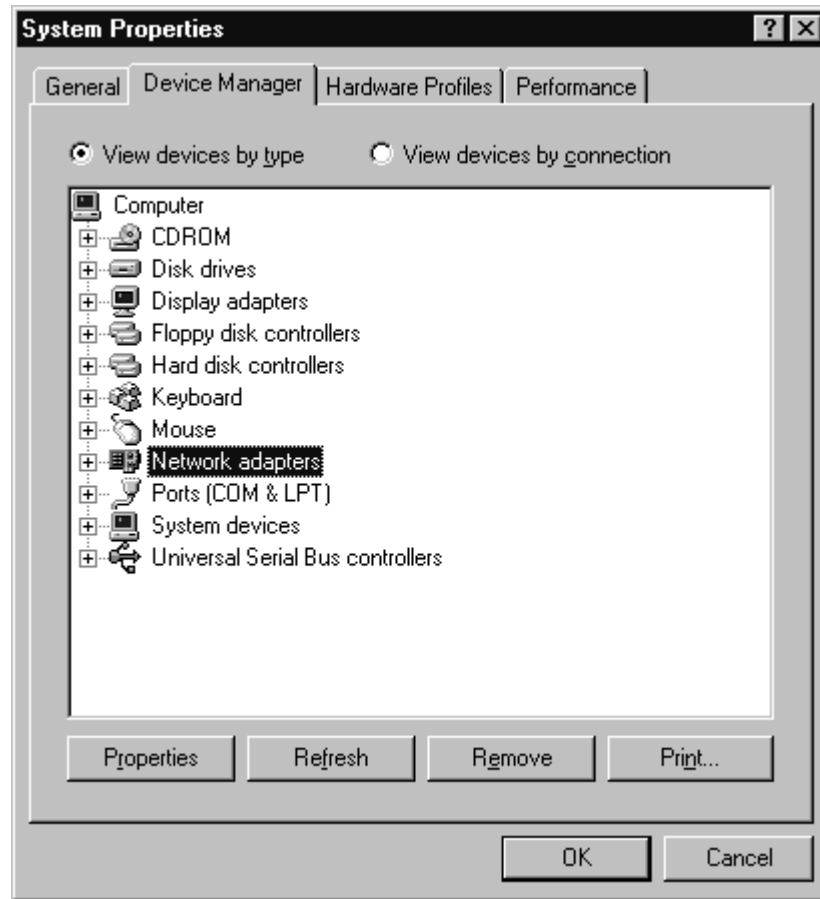
The window shown in Figure 37 is displayed.



**Figure 37** System Properties Window

2. Select the **Device Manager** tab.

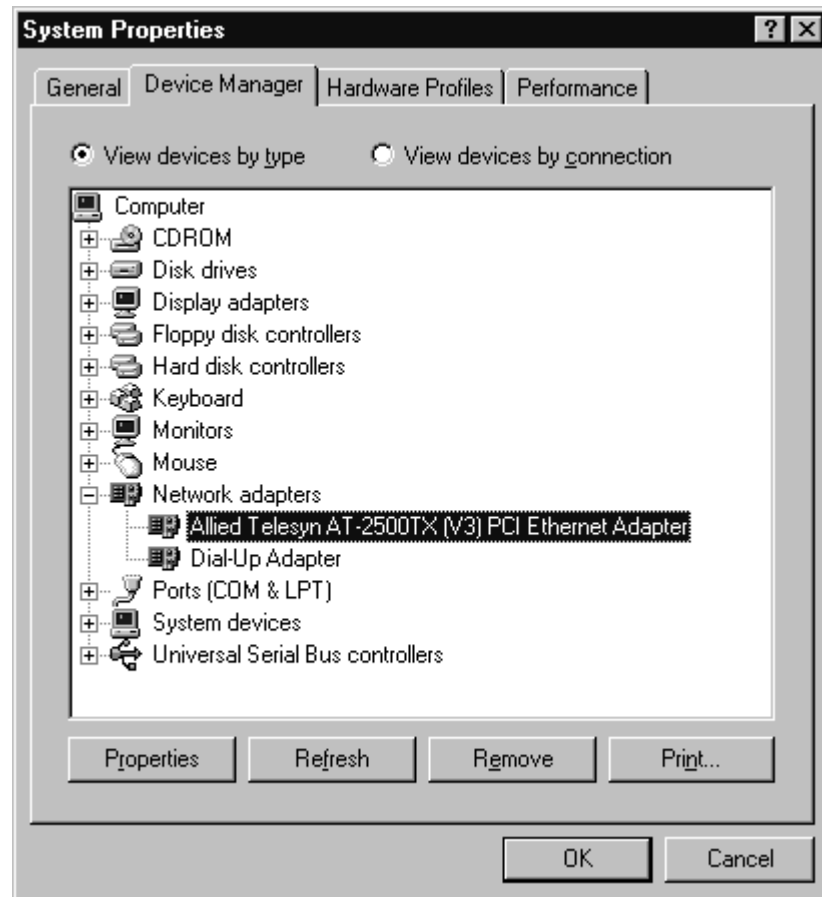
The window shown in Figure 39 is displayed.



**Figure 38** Device Manager Tab Window

3. Double-click on **Network adapters**.

4. Select the correct Allied Telesyn network adapter, then select **Properties**.



**Figure 39** Selecting the Network Adapter Card

A window similar to Figure 40 is displayed.



**Figure 40** Properties Window

5. Select the **Driver** tab.

The window shown in Figure 41 is displayed.



**Figure 41** Device Manager Tab Window

6. Select **Update Driver**.

The window shown in Figure 42 is displayed.



**Figure 42** Update Device Driver Wizard Window (1 of 4)

7. Select **Next**.

The window shown in Figure 43 is displayed.



**Figure 43** Update Device Driver Wizard (2 of 4)

8. Select **Search for a better driver than the one your device is using now. (Recommended)**.

9. Select **Next**.

The window shown in Figure 44 is displayed.



**Figure 44** Update Device Driver Window (3 of 4)

10. If you are using the CardAssistant CD, do the following. If you are using a driver installation disk, proceed to [Step 11](#).
  - a. Insert the CardAssistant CD into the CD-ROM drive.

---

**Note**

If your computer launches the web browser when you insert the CD, minimize or close the web browser window.

---

- b. Select **CD-ROM drive**.
- c. Select **Specify a location**, if not already selected.
- d. In the Specify a Location field, enter the drive letter and path to the adapter driver. The adapter driver locations on the CardAssistant CD are:

Adapter Card	Driver Location
AT-2400T, AT-2400BT	\drivers\at2400
AT-2500, AT-2500TX, AT-2501	\drivers\at2500

AT-2450FTX, AT-2451FTX, AT-2700TX, AT-2700FX, AT-2701FX, AT-2746FX, AT-2700FTX, AT-2701FTX, AT-2745FX	\\drivers\at2701
AT-2915T, AT-2930T, AT-2930SX	\\drivers\at29xx
AT-2970SX, AT-2970SX/2, AT-2970T, AT-2970T/2, AT-2971T, AT-2971SX	\\drivers\at2971

For example, if you are updating an adapter driver for an AT-2500 Series adapter and the CD is mapped to drive D, you would enter:  
**D:\drivers\at2500**

- e. Proceed to Step 12.
11. If you are using a driver installation disk, do the following:
    - a. Insert the driver installation disk into the floppy disk drive.
    - b. Select **Floppy disk drives**.
    - c. Select **Specify a location**, if not already selected.
    - d. In the Specify a Location field, enter **A:\**. The adapter driver is stored in the root directory on the disk.
    - e. Proceed to the next step.
  12. Select **Next**.

Windows starts to search for the appropriate adapter driver file. After an adapter driver has been found, the window shown in Figure 45 is displayed.



**Figure 45** Update Device Driver Wizard (4 of 4)

13. Select **Next**.
14. When prompted, insert the Windows Installation CD or disk.

The window shown in Figure 46 is displayed.



**Figure 46** Update Device Driver Wizard Window

15. Select **Finish**.

The network adapter card and driver are ready for network operations.

## Chapter 5

# Removing a Network Adapter Driver

---

This chapter contains the procedures for removing a network adapter driver from the following operating systems:

- [Windows 95, 98, or Me](#) on page 70
- [Windows 2000 or XP](#) on page 74
- [Windows NT 4.0](#) on page 77

## Windows 95, 98, or Me

---

This section contains the procedure for removing a network adapter driver from a Windows 95, 98, or Me operating system.

---

### Note

Do not remove the network adapter card from the system until after you have performed this procedure. The adapter driver cannot be uninstalled if the network adapter card has been removed from the computer.

---

1. From the desktop, right-click the **My Computer** icon, then select **Properties** from the menu, as shown in Figure 47.



**Figure 47** My Computer Icon and Menu

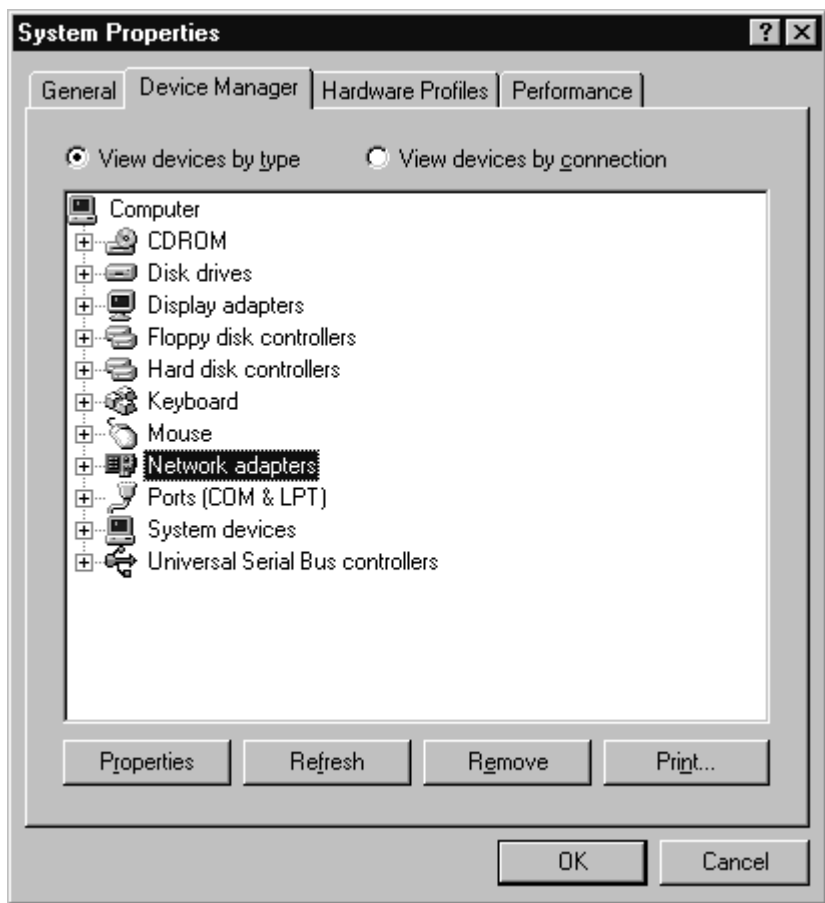
The System Properties window shown in Figure 48 is displayed.



**Figure 48** System Properties Window

2. Select the **Device Manager** tab.

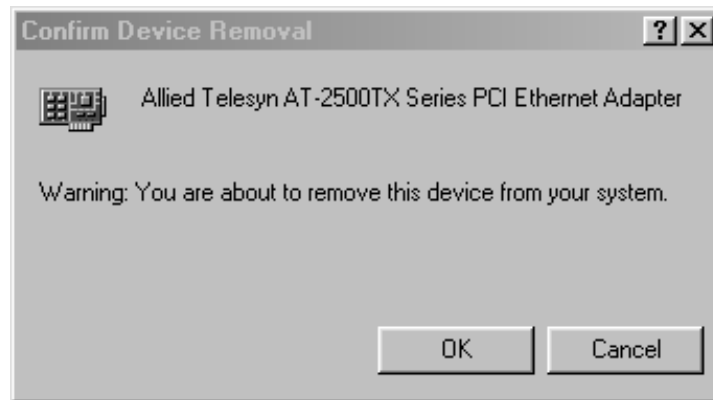
The window in Figure 49 is displayed.



**Figure 49** Device Manager Tab Window

3. Double-click **Network adapters** to display a list of the adapter cards installed in your computer.
4. Select the Allied Telesyn network adapter card whose driver you want removed.
5. Select **Remove**.

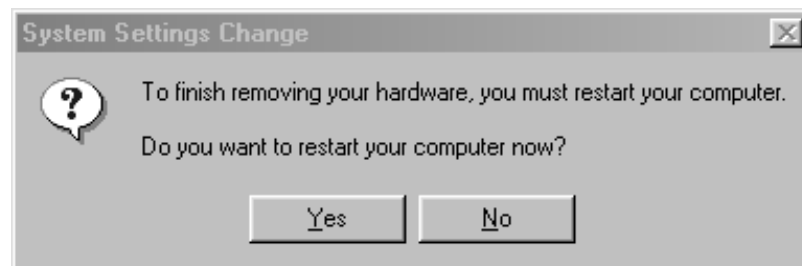
The warning shown in Figure 50 is displayed.



**Figure 50** Confirm Device Removal Window

6. Select **OK**.

After the network adapter driver has been removed, the window in Figure 51 is displayed.



**Figure 51** System Settings Change Window

7. Select **No**.

---

**Note**

If you select **Yes**, Windows will attempt to reload the driver.

---

8. Shutdown Windows 95, 98 or Me and power OFF your computer.
9. Remove the network adapter card from the computer. For instructions on removing the network adapter card, refer to the documentation that came with your computer.
10. Power ON your computer.

The network adapter card and driver have now been removed from your computer.

## Windows 2000 or XP

---

This section contains the procedure for removing a network adapter driver from a Windows 2000 or XP operating system.

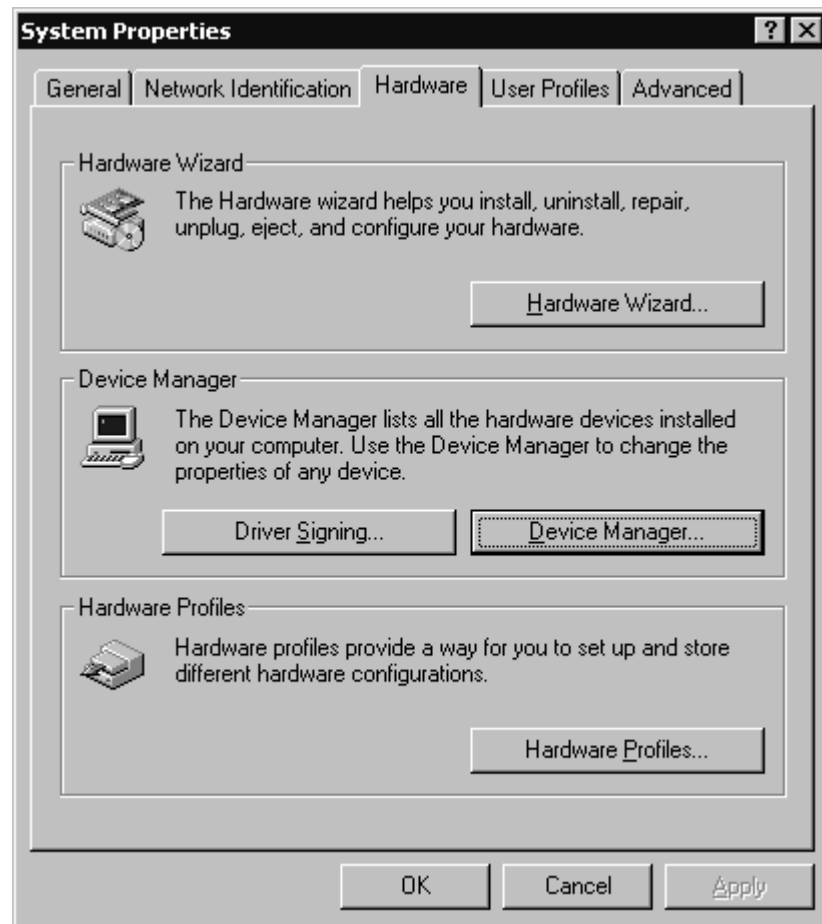
1. From the desktop, right-click **My Computer**, then select **Properties**. The window shown in Figure 52 is displayed.



Figure 52 Properties Window

2. Select the **Hardware** tab.

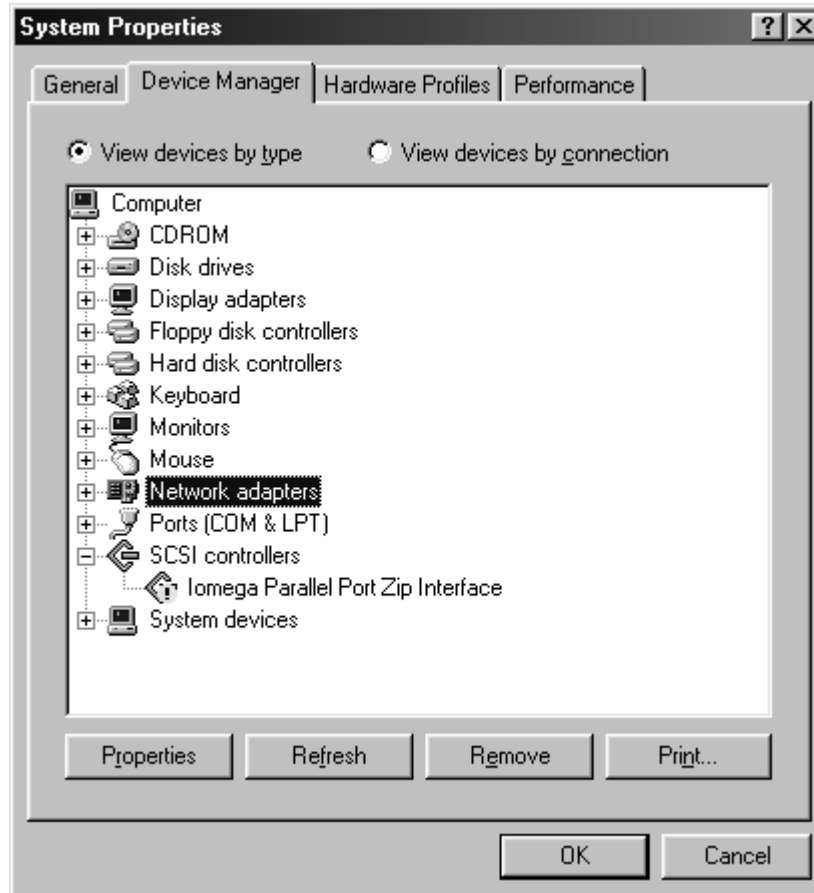
The window shown in Figure 53 is displayed.



**Figure 53** Hardware Tab Window

3. Select **Device Manager**.

The window shown in Figure 54 is displayed.



**Figure 54** Device Manager Window

4. Double-click **Network Adapters** to display a list of the adapter cards installed in your computer.
5. Right-click the Allied Telesyn adapter card whose driver you want to remove.
6. Select **Remove**.
7. When prompted, select **OK**.
8. Shutdown Windows 2000 or XP and power OFF your computer.
9. Remove the network adapter card from the computer. For instructions on removing the network adapter card, refer to the documentation that came with your computer.
10. Power ON your computer.

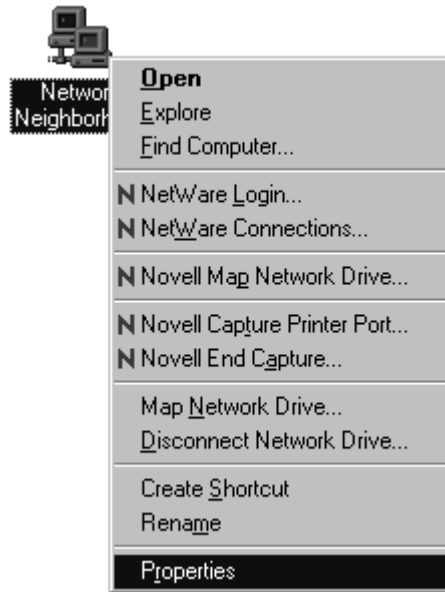
The network adapter card and driver have now been removed from your computer.

## Windows NT 4.0

---

This section contains the procedure for removing a network adapter driver from a Windows NT 4.0 operating system.

1. From the desktop, right-click the **Network Neighborhood** icon, then select **Properties** from the menu, as shown in Figure 55.



**Figure 55** Network Neighborhood Icon and Menu

The window shown in Figure 56 is displayed.

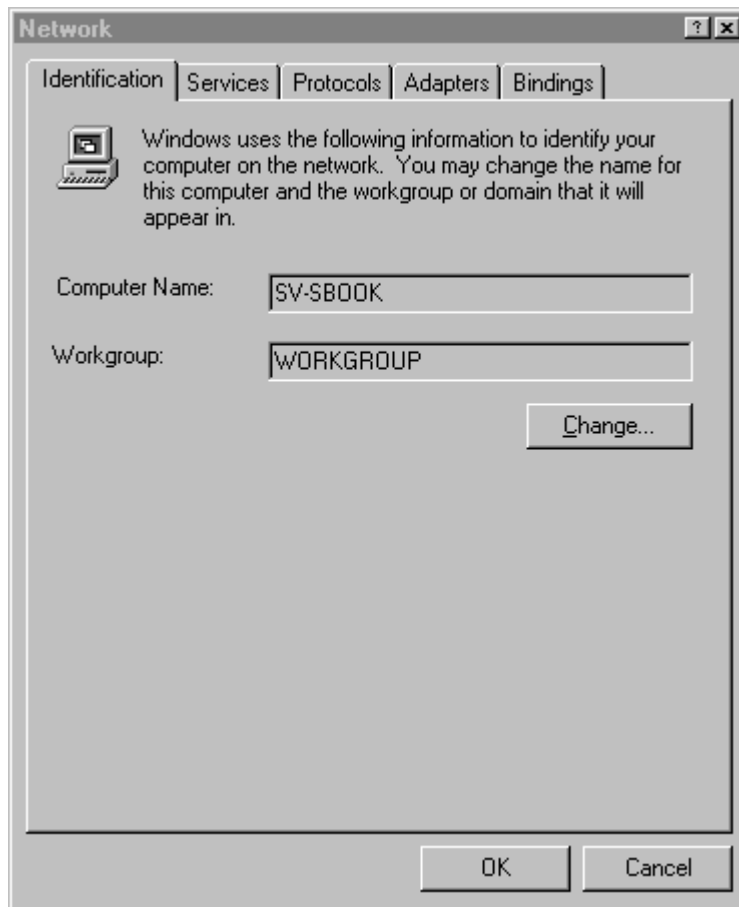
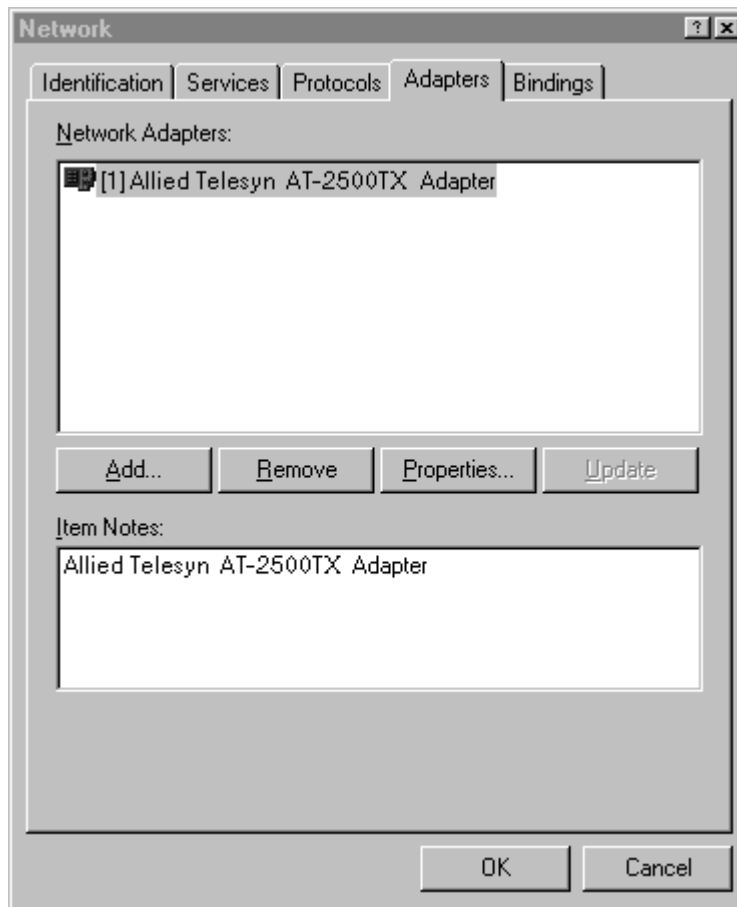


Figure 56 Network Window

2. Select the **Adapters** tab.

The window shown in Figure 57 is displayed.



**Figure 57** Adapters Tab Window

3. Select the Allied Telesyn network adapter card whose driver you want to remove.
4. Select **Remove**.
5. If prompted, select **Yes** to confirm that you want to remove the adapter driver.

The Adapters Tab Window is once again displayed. The icon for the adapter card is removed from the network adapter list.

6. Select **OK**.
7. If prompted to restart the computer, select **No**.

---

**Note**

If you select **Yes**, Windows NT 4.0 will attempt to reload the adapter driver.

---

8. Shutdown Windows NT 4.0 and power OFF your computer.

9. Remove the network adapter card from your computer. For instructions on removing the adapter card, refer to the documentation that came with your computer.
10. Power ON your computer.

The network adapter card and driver have now been removed from your computer.

# Chapter 6

# AT-Stat

---

This chapter contains the instructions for:

- ❑ [Installing AT-Stat](#) on page 84
- ❑ [Removing AT-Stat](#) on page 88

---

**Note**

AT-Stat does not currently support the AT-2970 and AT-2971 Series Adapters.

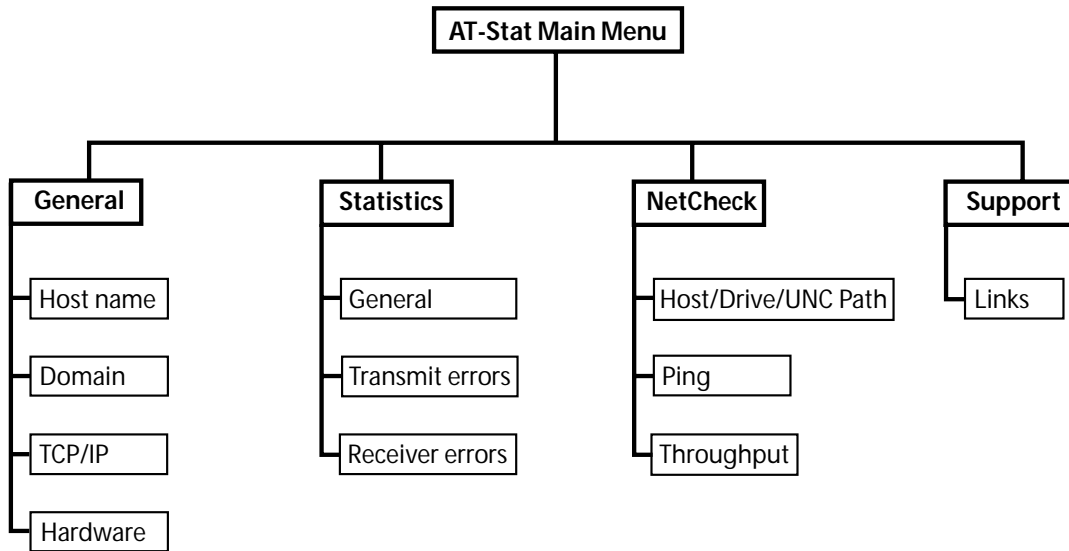
---

## Overview

---

AT-Stat is an Allied Telesyn utility designed for Windows 2000 and XP. This program provides Ethernet statistics for the Allied Telesyn network adapter card and driver installed on your computer.

Figure 58 illustrates the menu structure for AT-Stat. Refer to Table 1 on page 82 for a description of these features.



**Figure 58** AT-Stat Menu Tree

Table 1 describes the features and functions for AT-Stat.

**Table 1** AT-Stat Menu Features

Tab	Function
<b>General</b>	
Host name	Displays the name of the host server.
Domain	Displays the name of the domain.
TCP/IP	Displays the IP address, subnet mask, gateway address, DHCP, MAC address, WINS and DNS.
Hardware	Displays the hardware status, IRQ, I/O and memory range.
<b>Statistics</b>	
General	Displays the connection and line speed. Also shows packets sent and received.
Transmit Errors	Displays total transmit errors and collisions.
Receiver Errors	Displays total received errors, buffer, and alignment information.
<b>NetCheck</b>	

**Table 1** AT-Stat Menu Features

Tab	Function
Host/Drive/UNC Path	This field will determine which device the Ping or Throughput test will communicate with. For Ping, insert an IP address of a remote IP device, for example, 10.10.10.10. For the Throughput test enter a network driver letter, for example 'F:\' for Universal Naming Convention (UNC) for example, '\\<computername>\drive'
Ping	Displays sent, received, and timeout pings. Also allows you to start or stop pings or set it to continuous ping mode.
Throughput	Displays the average sent and received throughputs. You can also start or stop the throughput test.
<b>Support</b>	
Links	Provides active URL links to Allied Telesyn's home page, technical support, and our networking products page.

## **System Requirements**

To run AT-Stat, your system must be operating in either Windows 2000 or XP and have an Allied Telesyn network adapter card and driver installed.

## Installing AT-Stat

---

---

**Note**

AT-Stat does not currently support the AT-2970 and AT-2971 Series Adapters.

---

To install AT-Stat, perform the following procedure:

---

**Note**

The adapter driver for an AT-2450, AT-2451, AT-2500, AT-2501, AT-2700, or AT-2701 Series network adapter card must be updated to obtain custom statistics. Otherwise, only generic statistics are available. To update an adapter driver, refer to [Updating a Network Adapter Driver](#) on page 57.

---

1. Insert the CardAssistant CD into the CD-ROM drive.

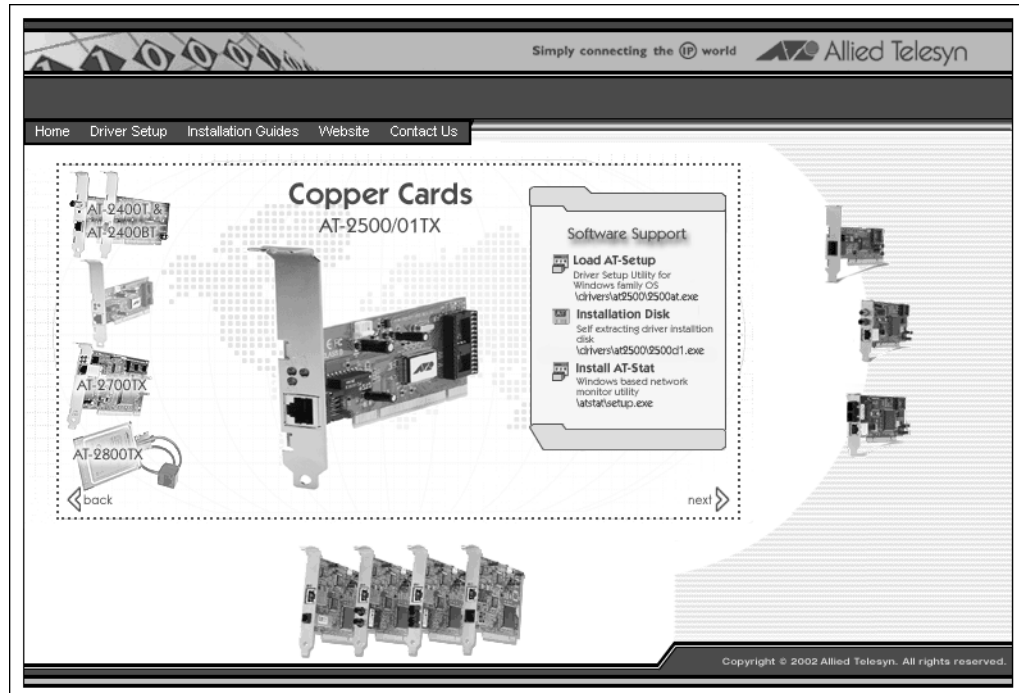
The CardAssistant Main Menu shown in Figure 59 is displayed. If this menu is not displayed, double-click on the My Computer icon, then double-click on the Allied Telesyn CD-ROM icon.



**Figure 59** CardAssistant CD Main Menu

2. From the **Driver Setup** drop-down menu, select the adapter card that you purchased.

A window similar to Figure 60 is displayed.



**Figure 60** Network Adapter Card Window

- Under Software Support, select **Install AT-Stat**.

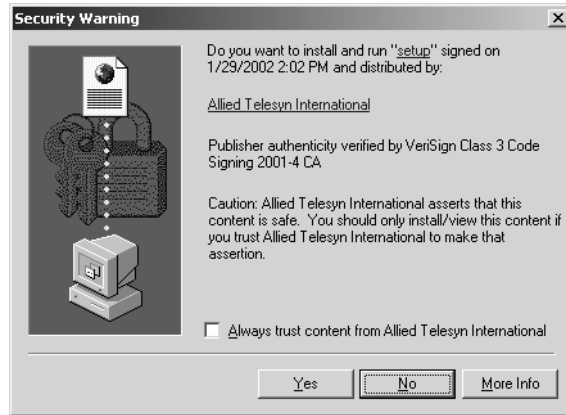
The window shown in Figure 61 is displayed.



**Figure 61** File Download Window

- Click on **Run this program from its current location**, then select **OK**.

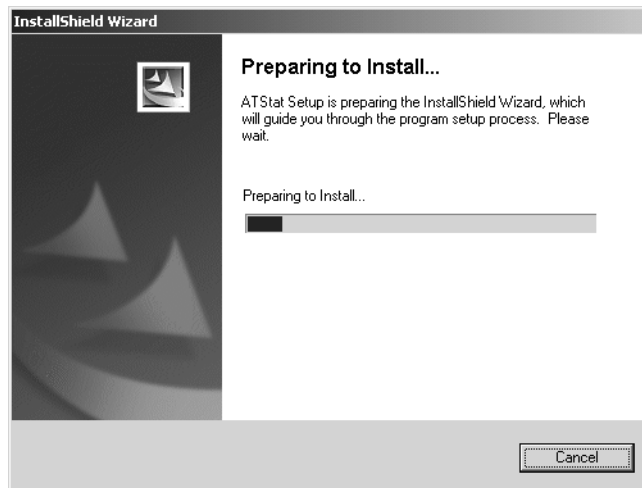
The window shown in Figure 62 is displayed.



**Figure 62** Security Warning Window

- 5. Select **Yes**.

The InstallShield Wizard, shown in Figure 63, prepares to install AT-Stat.



**Figure 63** InstallShield Wizard Window

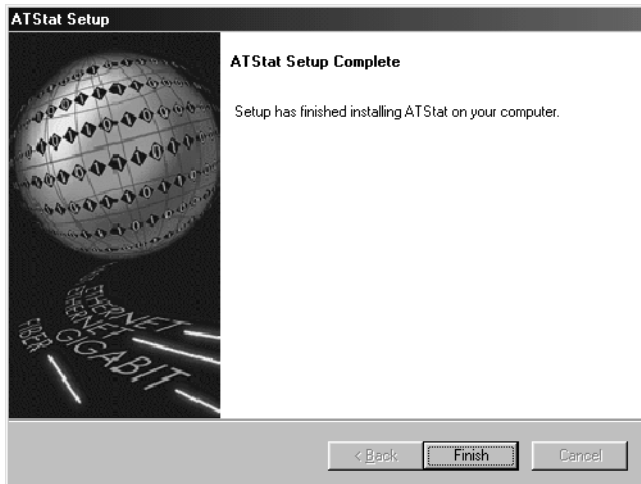
When the InstallShield Wizard finishes preparing the installation, the window shown in Figure 64 is displayed.



**Figure 64** AT-Stat Setup Window

6. Select **Next**.

When the Setup program has finished installing AT-Stat on your system, the window shown Figure 65 is displayed.



**Figure 65** AT-Stat Setup Complete Window

7. Select **Finish**.

AT-Stat is ready for use.

## Removing AT-Stat

---

This section contains the procedure for removing AT-Stat from your Windows 2000 or XP operating system.

1. From the desktop, select **Start**.
2. Select **Settings**, then **Control Panel**. The window shown in Figure 66 is displayed.

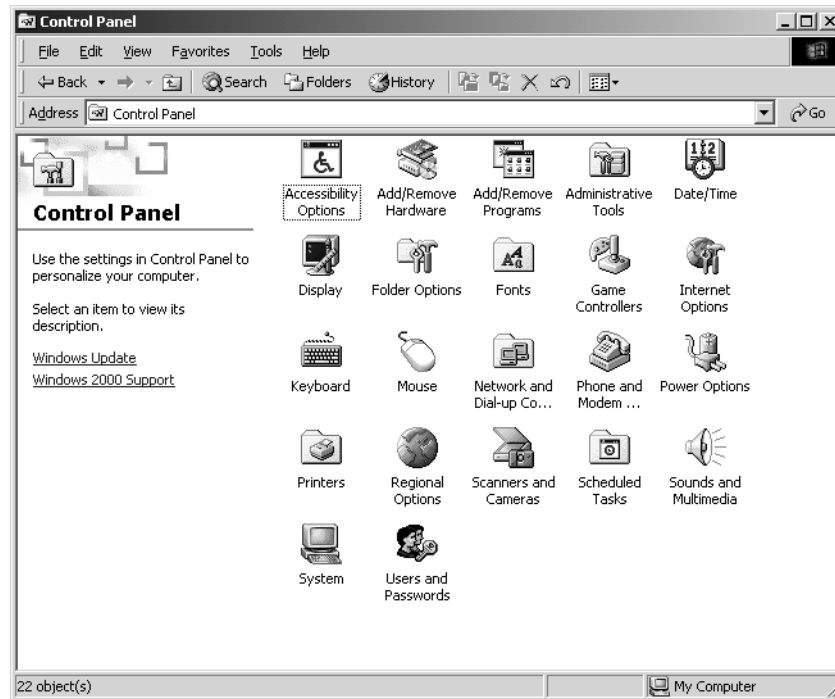
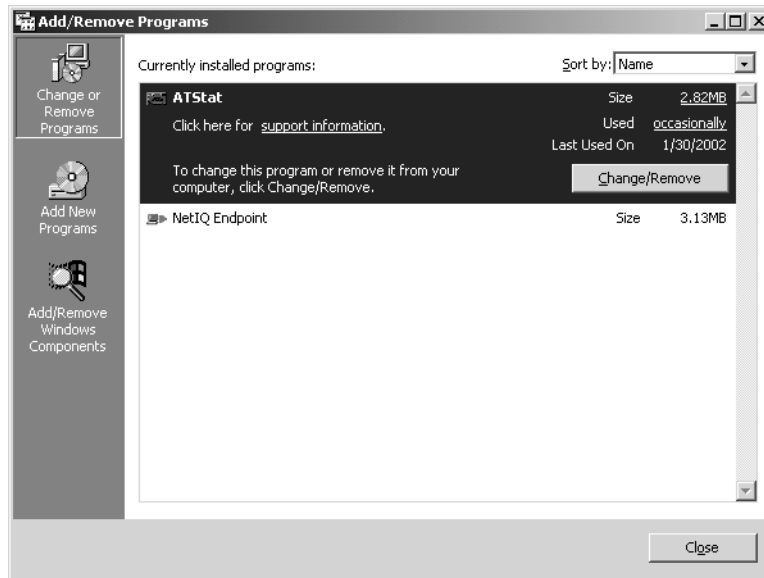


Figure 66 Control Panel Window

3. Double-click on **Add/Remove Programs**.

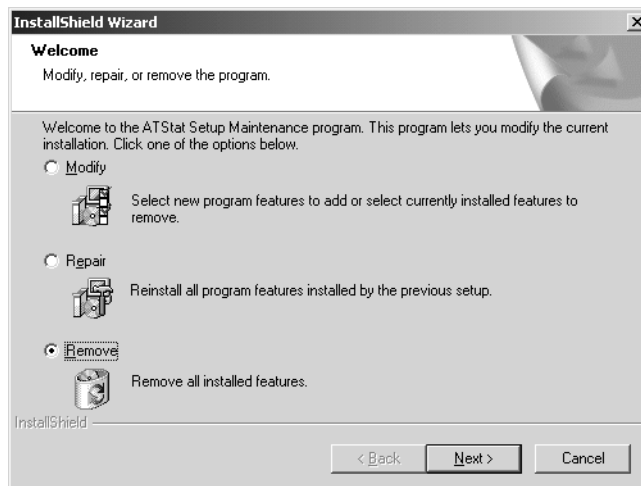
The window shown in Figure 67 is displayed.



**Figure 67** Add/Remove Programs Window

4. Select **AT-Stat** from the list.
5. Select **Change/Remove**.

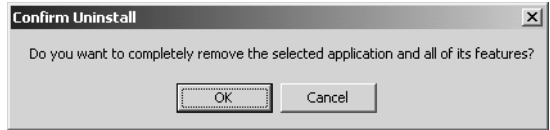
The window shown in Figure 68 is displayed.



**Figure 68** InstallShield Wizard Welcome Window

6. Select **Remove**, then **Next**.

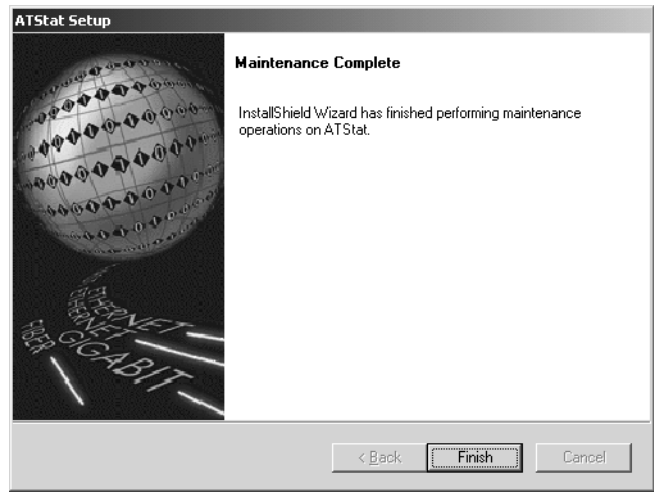
The Confirm Uninstall window shown in Figure 69 is displayed.



**Figure 69** Confirm Uninstall Window

7. Select **OK**.

The InstallShield Wizard will begin to remove AT-Stat from your system. When complete, the window shown in Figure 70 is displayed.



**Figure 70** AT-Stat Setup Maintenance Complete Window

8. Select **Finish**.

AT-Stat has been removed from your system.

# Chapter 7

# VLAN

---

This chapter contains the following sections:

- ❑ [Installing an ATMUX VLAN Driver](#) on page 93
- ❑ [Adding an Additional VLAN](#) on page 100
- ❑ [Removing a VLAN](#) on page 104
- ❑ [Removing the Allied Telesyn Multi-Vlan Support Protocol](#) on page 106

## Overview

---

Allied Telesyn's ATMUX protocol driver allows you to configure virtual LANS (VLANS) for the AT-2450FTX, AT-2451 Series, AT-2700/AT-2701 Series, AT-2745/AT-2746 Series, AT-2915, and AT-2930 Network Adapters. Allied Telesyn's ATMUX driver is based upon the 802.1Q standard, a special 4-byte tag inserted into every Ethernet frame.

---

**Note**

ATMUX does not currently support the AT-2970 and AT-2971 Series Adapters.

---

With VLANs you can logically group end-nodes that consist of clients and servers that reside in a common broadcast domain without any router hops. The benefit of this is an isolated broadcast domain with no physical limitations within your switch fabric.

This can be a great benefit as employees move, business restructure, and technologies merge. By offering a flexible structure VLANS can reduce performance bottlenecks that occur when traditional routers cannot meet fast growing demand.

---

**Note**

Before installing the VLAN protocol driver the latest driver Windows 2000/XP Ndis 5 driver (version 4.1.10) must be installed in the operating system.

---

To properly configure the ATMUX VLAN protocol driver, the VLAN ID and IP Subnet that the network adapter card will be participating in are required. The system administrator should be able to provide the configuration details.

## Installing an ATMUX VLAN Driver

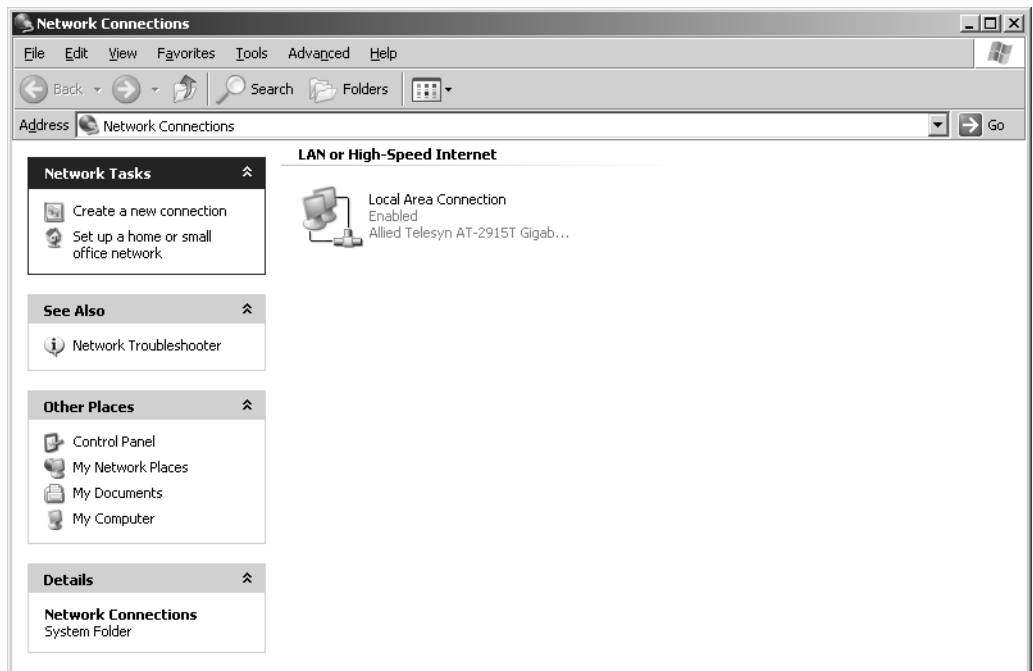
To install an ATMUX driver, perform the following procedure:

### Note

ATMUX does not currently support the AT-2970 and AT-2971 Series Adapters.

1. From the desktop, right-click the **My Network Places** icon and select **Properties** from the menu.

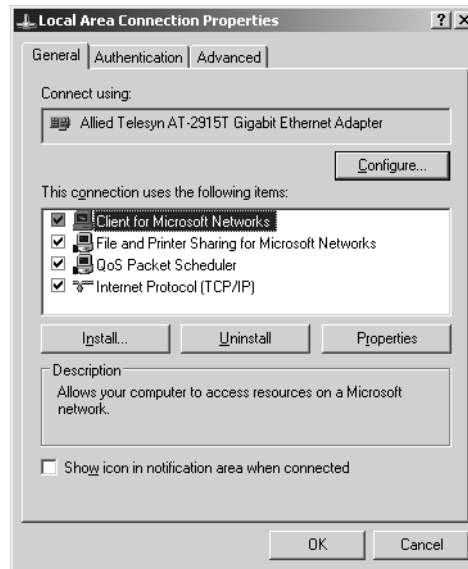
The window shown in Figure 71 is displayed.



**Figure 71** Network Connections Window

2. Right-click on the appropriate local area connection then select **Properties**.

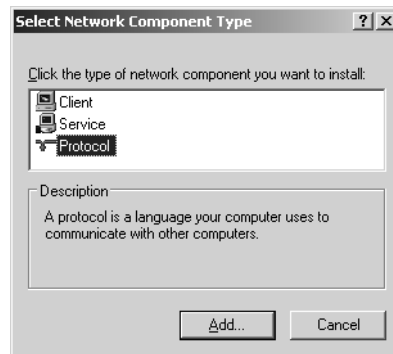
The window shown in Figure 72 is displayed.



**Figure 72** Local Area Connection Properties Window

3. Select **Install**.

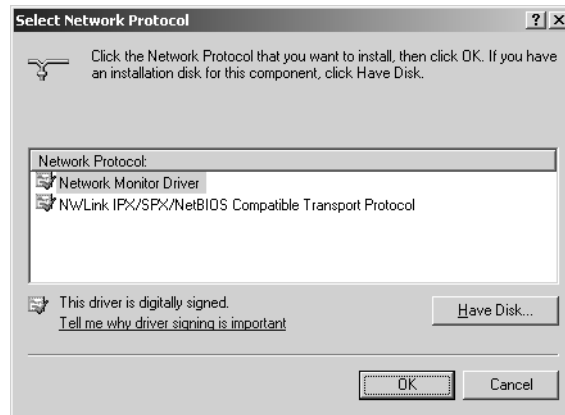
The window shown in Figure 73 is displayed.



**Figure 73** Select Network Component Type Window

4. Select **Protocol** then select **Add**.

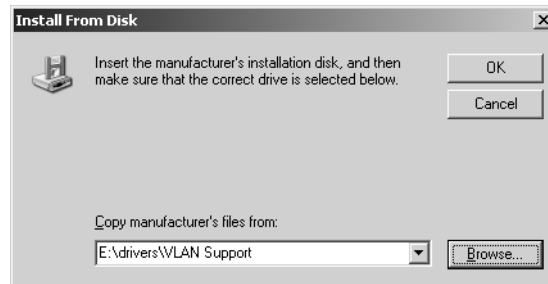
The window in Figure 74 is displayed.



**Figure 74** Select Network Protocol Window

5. Select **Have Disk**.

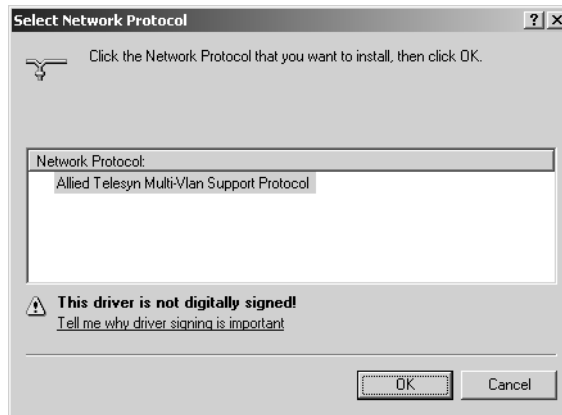
The window in Figure 75 is displayed.



**Figure 75** Install From Disk Window

6. Select **Browse**. The ATMUX install file is located at: <CD-ROM Drive>:/drivers/VLAN Support.
7. Select **OK**.

The window shown in Figure 76 is displayed.



**Figure 76** Select Network Protocol Window

The Allied Telesyn Multi-Vlan Support Protocol is now displayed in the Select Network Protocol window.

---

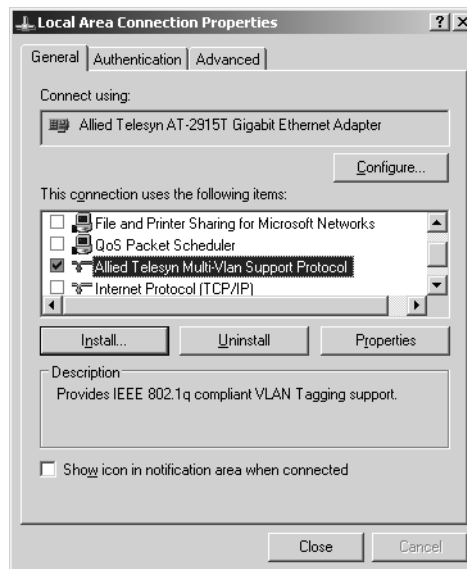
**Note**

The statement **This Driver Not Digitally Signed** and the Windows logo error messages that may pop up during installation, can be ignored. Allied Telesyn is in the process of digitally signing ATMUX driver but was unable to complete the process before release of this installation guide.

---

8. Select **OK**.

The window shown in Figure 77 is displayed.

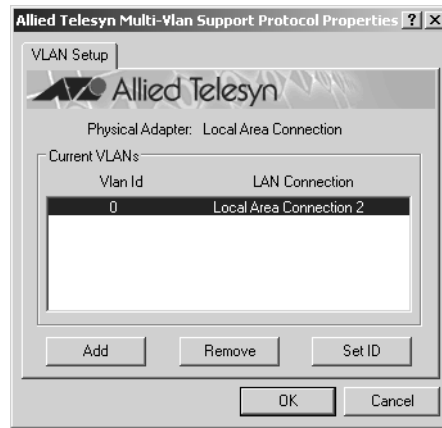


**Figure 77** Local Area Connection Properties Window

The ATMUX driver is now shown in the Local Area Connection Properties window.

9. Select **Allied Telesyn Multi-Vlan Support Protocol** then select **Properties**.

Then window shown in Figure 78 is displayed.



**Figure 78** VLAN Setup Window

10. The default VLAN ID is 0. To change the VLAN ID, select **Set ID**.

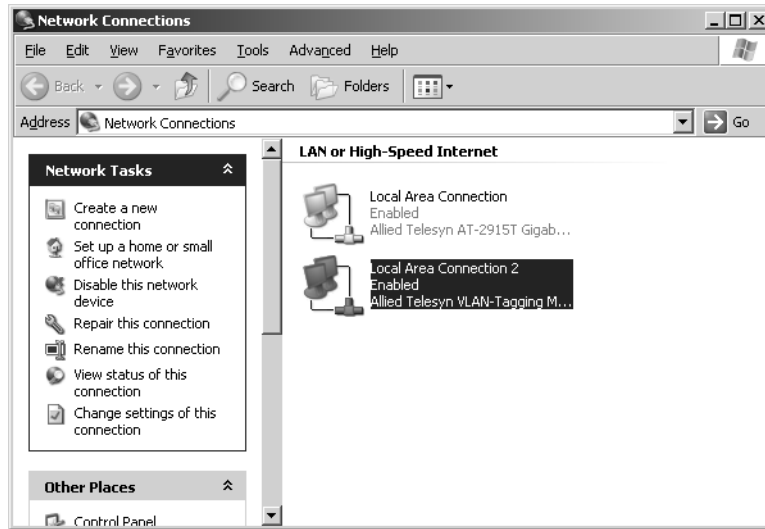
The window shown in Figure 79 is displayed.



**Figure 79** Set VLAN ID Window

11. Select or enter the correct VLAN ID. This VLAN ID is determined by the system administrator; please contact the administrator for the correct VLAN information. For this example, we will set the VLAN ID to **1** then select **OK**.

The window shown in Figure 80 is displayed.

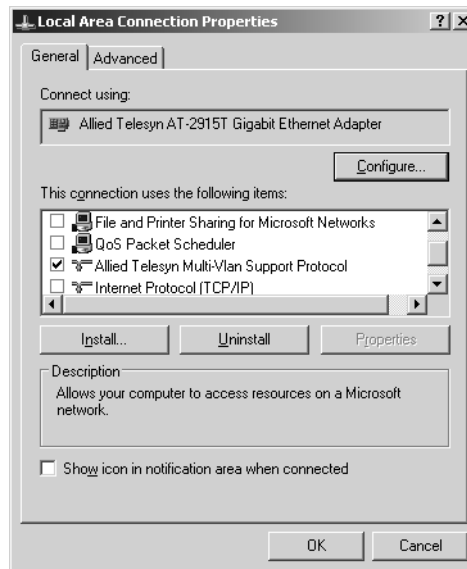


**Figure 80** Network Connections Window

There are now two Local Area Connections options; one for the network adapter and the other for the VLAN connection.

12. Right-click **Local Area Connection** then select **Properties**.

The window shown in Figure 81 is displayed.

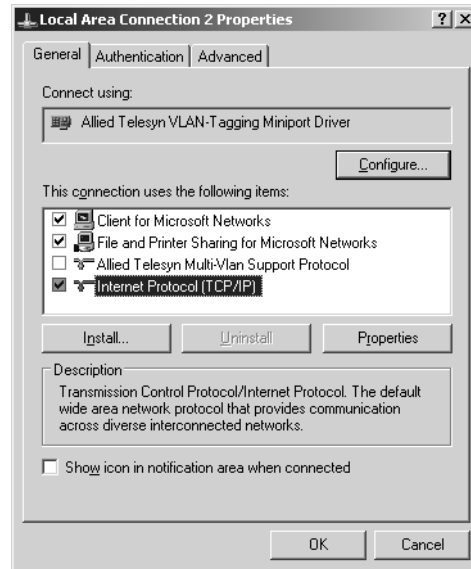


**Figure 81** Local Area Connection Properties Window

You will notice that the properties for the Local Area Connection has only one Allied Telesyn Multi-Vlan Support Protocol. The other protocols are disabled. The disabled protocols are options for the Local Area Connection 2.

13. Select **OK**.
14. From the Network Connections window, select **Local Connection 2** then select **Properties**.

The window shown in Figure 82 is displayed.



**Figure 82** Local Area Connection 2 Properties Window

From the Local Area Connection 2 Properties window you can configure network properties, e.g. Internet Properties (TCP/IP).

---

**Note**

For proper VLAN communications is important that the switch fabric is configured properly for VLAN tagged packets.

---

## Adding an Additional VLAN

---

To add an additional VLAN, perform the following procedure:

1. From the desktop, right-click the **My Network Places** icon and select **Properties** from the menu.

The window shown in Figure 83 is displayed.

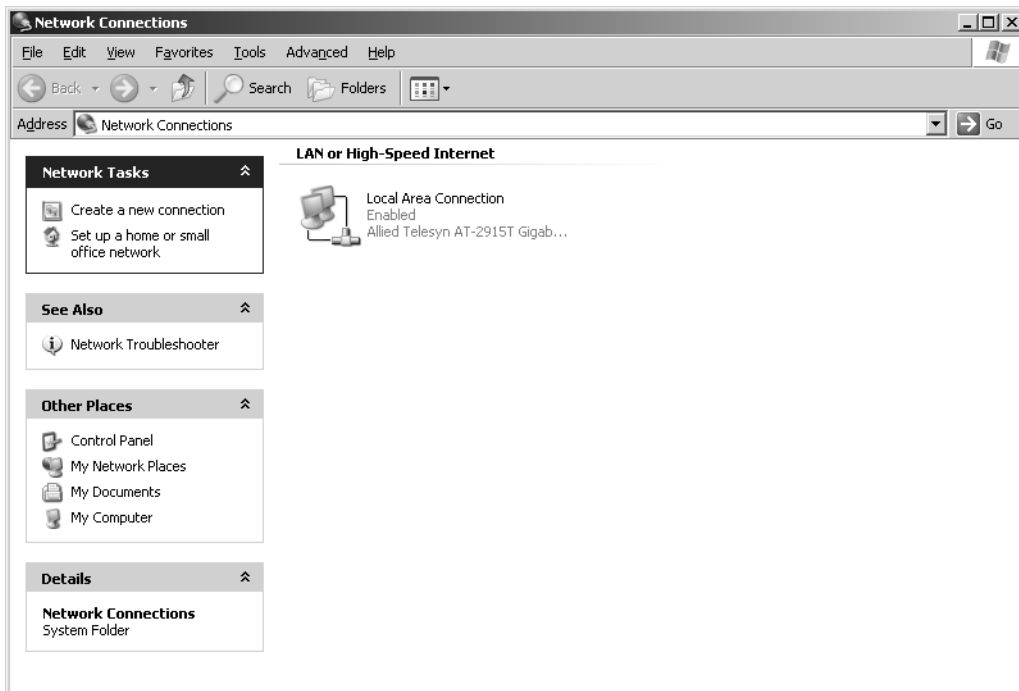
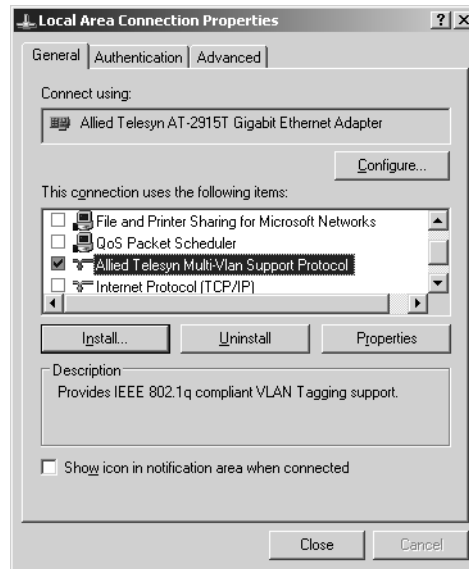


Figure 83 Network Connections Window

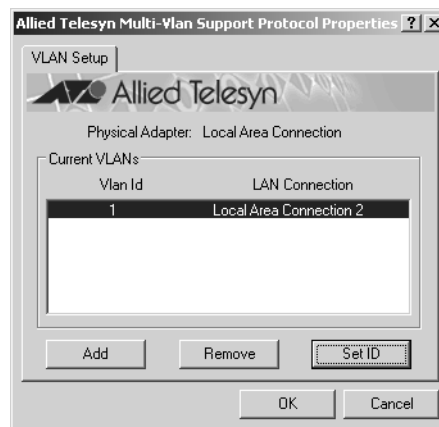
2. Right-click **Local Area Connections** then select **Properties**.

The window shown in Figure 84 is displayed.



**Figure 84** Local Area Connection Properties Window

3. Select **Allied Telesyn Multi-Vlan Support Protocol** then select **Properties**.
4. The window shown in Figure 85 is displayed.



**Figure 85** VLAN Setup Window

5. Select **Add**.

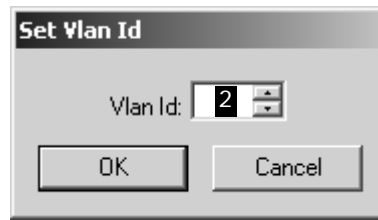
---

**Note**

Ignore the "Not pass Windows Logo testing..." messages.

---

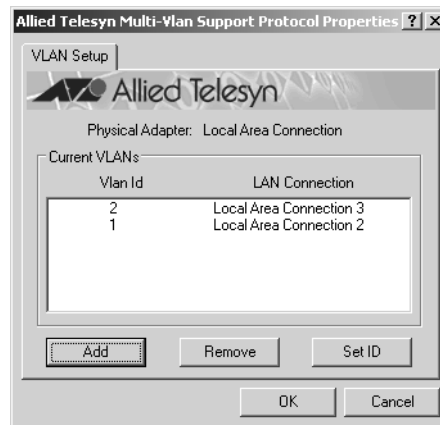
It may take Windows a few moments to renumber the adapter. When this has been completed, the window shown in Figure 86 is displayed.



**Figure 86** Set VLAN ID Window

6. Select or enter the correct VLAN ID. This VLAN ID is determined by the system administrator; please contact the administrator for the correct VLAN information. For this example, we will set the VLAN ID to **2** then select **OK**.

The window shown in Figure 87 is displayed.

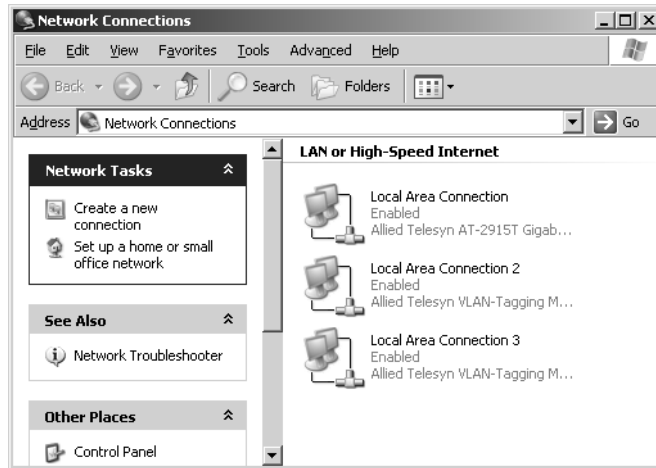


**Figure 87** VLAN Setup Window

A new Local Area Connection appears under Current VLANs. The connection number may vary depending on your system.

7. Select **OK**.
8. From the Local Area Connection Properties window, select **OK**.

The window shown in Figure 88 is displayed.



**Figure 88** Network Connections Window

The new VLAN now appears. Repeat this procedure to install additional VLANs. To configure the network properties for the new connection, refer to [Step 14](#) on page 99.

## Removing a VLAN

To remove a VLAN, perform the following procedure:

1. From the desktop, right-click the **My Network Places** icon and select **Properties** from the menu.

The window shown in Figure 89 is displayed.

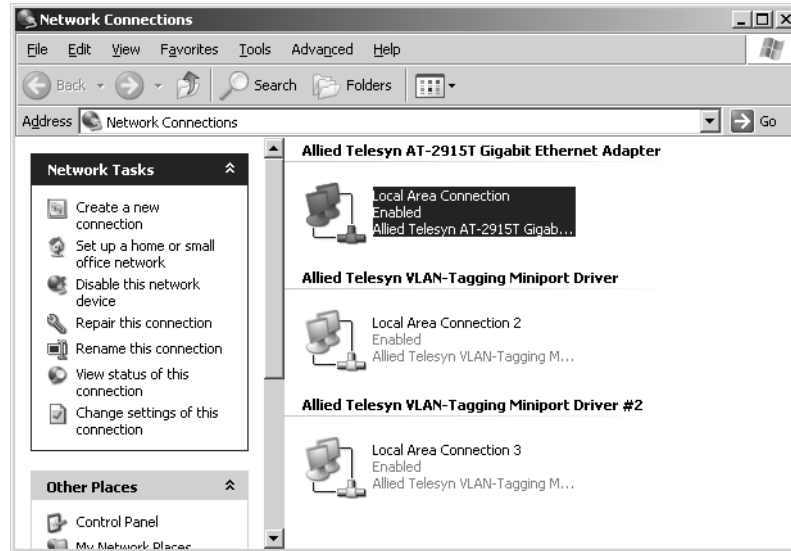


Figure 89 Network Connections Window

2. Right-click **Local Area Connection** then select **Properties**.

The window shown in Figure 90 is displayed.

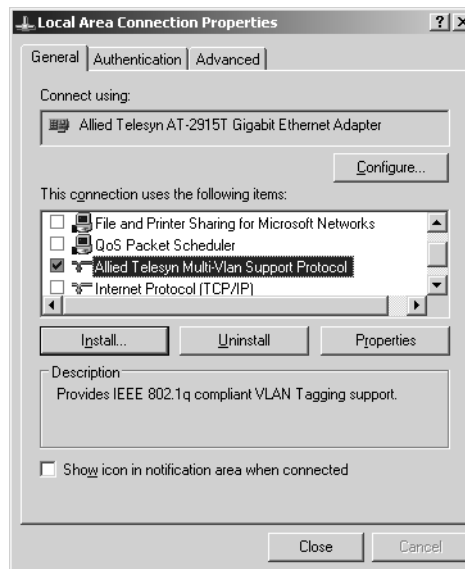
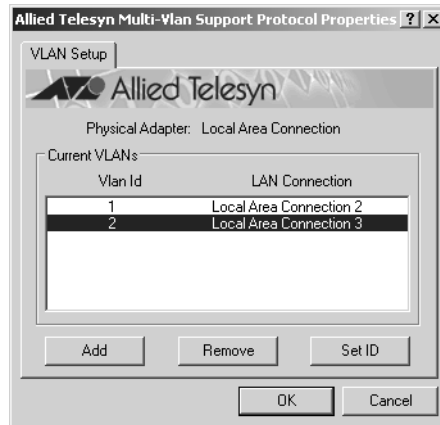


Figure 90 Local Area Connection Properties Window

3. Select **Allied Telesyn Multi-Vlan Support Protocol** then select **Properties**.
4. The window shown in Figure 91 is displayed.



**Figure 91** VLAN Setup Window (1 of 2)

5. Select the VLAN to be removed.
6. Select **Remove**. It may take Windows a few moments to renumber the adapter driver.

When completed, the window shown in Figure 92 is displayed.



**Figure 92** VLAN Setup Window (2 of 2)

The desired VLAN has been removed.

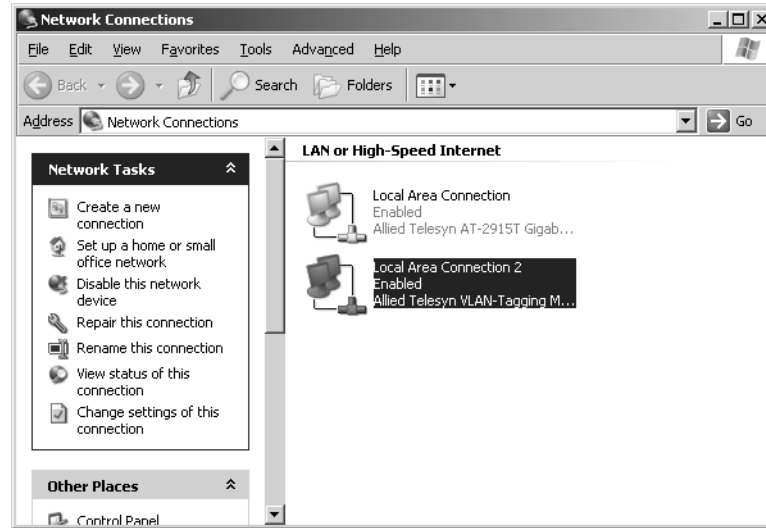
7. Select **OK**.  
The Local Area Connection Properties window is displayed.
8. Select **OK**.  
To remove additional VLANs, repeat this procedure.

## Removing the Allied Telesyn Multi-Vlan Support Protocol

To remove the multi-VLAN support protocol, perform the following procedure:

1. From the desktop, right-click the **My Network Places** icon and select **Properties** from the menu.

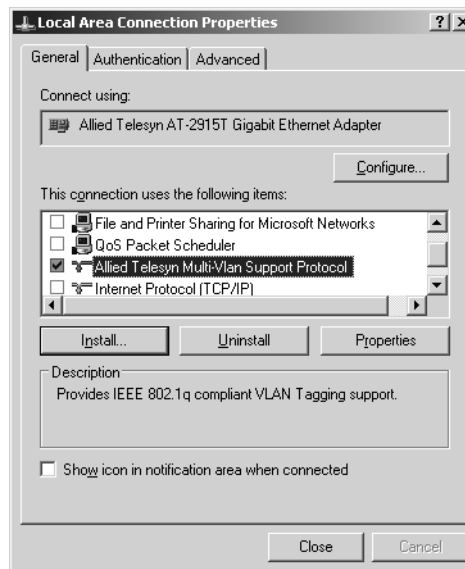
The window shown in Figure 93 is displayed.



**Figure 93** Network Connections Window

2. Right-click on the local area connection to remove then select **Properties**.

The window shown in Figure 94 is displayed.



**Figure 94** Local Area Connection Properties Window

3. Select **Allied Telesyn Multi-Vlan Support Protocol**.
4. Select **Uninstall**

This VLAN capabilities have been removed from the network adapter.



# Chapter 8

# Troubleshooting

---

This chapter contains the following procedures:

- ❑ [Running Diagnostics](#) on page 110
- ❑ [Additional Diagnostics Functions for the AT-2970/AT-2971 Series Adapters](#) on page 117

## Running Diagnostics

---

**For the AT-24xx,  
AT-25xx,  
AT-27xx,  
AT-2915, and  
AT-2930 Series**

The diagnostics utility is useful for setting the Speed/Duplex and BootROM. You can also insure proper operation of the network adapter card. This utility is located on the CardAssistant CD or the driver installation disk.

### Speed/Duplex

This option allows the user to configure speed and duplex to one of the available options. The options for speed and duplex vary depending on adapter model

### BootROM Port

The BootROM port setting is only for multi-port AT-2450, AT-2700, and AT-2745 Series PCI Ethernet Adapter Cards without integrated Manage BootROM, specifically the AT-2450FTX, AT-2700FTX, and AT-2745FX. When using one of these three adapters in a BootROM configuration, it may be necessary to change these settings. For any other AT-2450/AT-2700 Series PCI Ethernet Adapter Card the BootROM Port setting should not be changed.

### BootROM

This feature is only available for the AT-2500 and AT-2501TX Series Adapters. Using the Diagnostics program (diag25.exe) set BootROM to enable.

### Diagnostics

There are two diagnostic utilities, Card Test and Network Test.

Card Test

This test checks several parts and functions of the adapter card to ensure proper operation of the adapter card.

Network test

This test allows the user to send and receive raw packets without a driver loaded to check the card functionality.

To run diagnostics, perform the following procedure:

---

**Note**

Diagnostics is a DOS based program and must be run in true DOS, not in a DOS shell within Windows.

---

1. If ON, power OFF your computer and reboot into DOS mode.
2. At the DOS prompt and without the drivers loaded, type **diag.exe**.

The location of the diagnostic files on the CardAssistant CD are:

Adapter Card	Diagnostic Location
AT-2400 Series	\drivers\at2400\diag\diag24.exe
AT-2500, AT-2501 Series	\drivers\at2500\diag\diag25.exe
AT-2450, AT-2700, AT-2701, AT-2745, AT-2746 Series	\drivers\at2701\diag\diag.exe
AT-2915, AT-2930 Series	\drivers\at29xx\diag\diag29.exe

For example, if you want to run diagnostics for an AT-2500 Series adapter card and the CD is mapped to drive D, you would enter:

**D:\drivers\at2500\diag\diag25.exe**

If you are using a driver installation disk, the diagnostic files are stored in the root directory on the disk.

**For the AT-2970  
and AT-2971  
Series**

Diagnostics Program

The network adapter can be tested with the supplied diagnostics program (running DOS). The diagnostics program run offline, for example, normal operation of the network adapter can not be maintained. During testing the link of the tested port will be down, for example, no data can be transferred. The following test are available:

- Simple test without loopback

This test covers all components but not the port (socket including components for transmitting/receiving the data signals).

- Comprehensive port test with loopback

All components are tested, including the port.

---

**Note**

The tests do not run in a Windows DOS box.

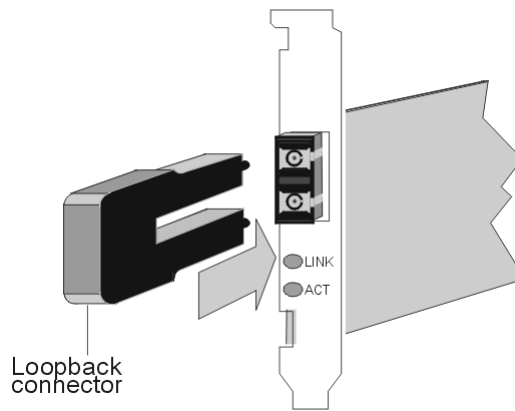
---

The location of the diagnostic file on the CardAssistant CD is:

Adapter Card	Driver Location
AT-2970, AT-2971 Series	\drivers\at2971\diag\diag2971.exe

**Loopback Test for Fiber Adapters**

To perform the loopback test on fiber adapters, you will need a loopback connector. Refer to Figure 95 below.



**Figure 95** Setup for Loopback Testing

Be sure to observe the [Translated Safety and Emission Information](#) on page 75.

To test the adapter, perform the following procedure:

1. Power OFF your computer.
2. If the computer is still connected to the network, unplug the data cable from the network adapter's port.
3. Connect the network adapter as follows:
  - For the simple test, insert the protective plugs into the ports.
  - For the loopback test, insert the loopback connector into the port.
4. Boot to DOS. Wait until the operating system is loaded and the DOS prompt is displayed.
5. Insert the CardAssistant CD into the CD-ROM drive.

6. Go to the product directory and type **diag2971**.
7. Press **<Enter>**.
8. From the Main Menu of the diagnostics program, select one of the following:
  - DIAGNOSTICS** for the simple test (no loopback)
  - LOOPB. WRAP PLUG** for the loopback test

The various components will now be tested. This will take between one and two minutes. If the test was successful, a window similar to Figure 96 will be displayed.

```

Diagnostics v6.02 (20030227)           Free Mem.  62 kB           00:00:00:25
Allied Telesyn AT-2971SX/SC-001      VDS not installed
Output none

Main menu
-----
Exit
Diagnostics
Loopb. Wrap Plug
Repeater Mode
Show Configuration
Show Sensors
Flash PROM ...
VPD Data ...

Board register check      ..... passed
On board timer check     ..... passed
On board memory check    ..... passed
DMA engine check         ..... passed
LAN Interface check      ..... passed
Bus throughput tests     ..... passed
*** All tests passed successfully ***

Measuring DMA speed:
  DMA speed : 117.820 MB/s
*** DMA speed measured successfully ***
Press any key to continue ...
  
```

**Figure 96** Diagnostic Window (1 of 5)

You can follow the progress of the test in the right-hand window. Each test is displayed as it is being performed (e.g. Board Register Check).

If the test is successful, the word **PASSED** is displayed at the end of the line and the next test is started. If there is a problem, the word **Failed** is displayed.

If errors are reported, follow the instructions that are provided.

9. Check the configuration and if necessary, repeat the test (see Failure of a Test).

10. To continue testing, press any key.
11. To quit the diagnostics program, select **Exit** from the Main Menu.
12. Remove the loopback connector from the port.
13. Re-connect the data cables to the network port.



### Caution

For safety reasons, if the adapter is not connected immediately to the data network, insert the protective plug. Otherwise laser light may be emitted. Inserting the protective plug is also protects the port against dust and dirt.

---

### Repeater Test for Copper Adapters

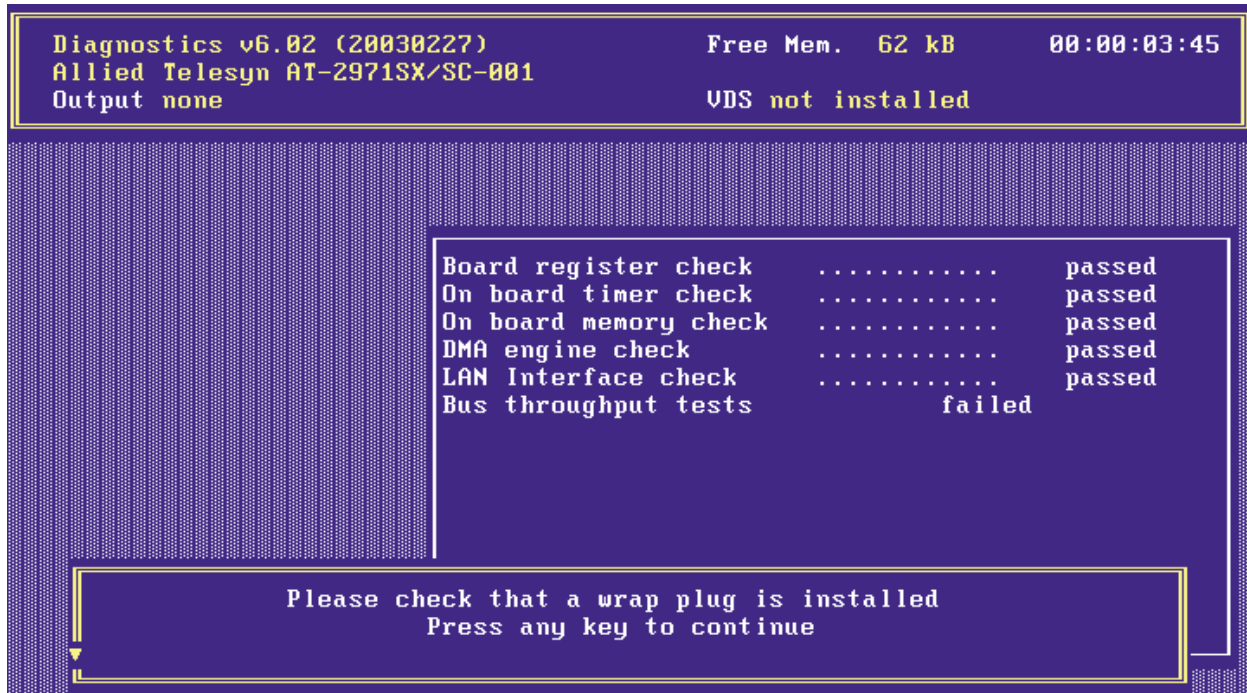
For the AT-2970 and AT-2971 Series adapters the test via wrap plug is not available. However, loopback testing may be carried out by connecting the adapter to another adapter installed in a second computer running in repeater mode (further known as the repeater computer). The computer in which the adapter is installed, which is to be tested, is called test computer.

To test the copper adapter, perform the following procedure:

1. Install a copper adapter in the repeater computer.
2. Boot the repeater computer to DOS.  
  
Wait until the operating system is loaded and the DOS prompt is displayed.
3. Insert the CardAssistant CD into the CD-ROM drive.
4. Go to the product directory and type **diag2971**.
5. Press **<Enter>**.
6. From the Main Menu of the diagnostics program, select **Repeater Mode**.
7. Select the port which is to be tested, for example, **A** (for single link adapters, only A is available).
8. Press **<Enter>**.  
  
The window Repeater Mode Port A is displayed.
9. Install a copper adapter in the test computer.

10. Connect the adapter in the repeater computer to the adapter in the test computer. Use a category 5 cable with RJ-45 plugs.
11. Boot the test computer to DOS.  
  
Wait until the operating system is loaded and the DOS prompt is displayed.
12. Insert the CardAssitant CD into the CD-ROM drive.
13. Go to the product directory and type **diag2971**.
14. Press **<Enter>**.
15. From the Main Menu of the diagnostics program, select **LOOPB.WRAP PLUG**.
16. Press **<Enter>**.  
  
When the test was successful, the message **All tests passed successfully** is displayed.  
  
When the test fails, the message **failed** is displayed. The further procedure is described in section **Failure of a Test**.
17. Press any key to continue.
18. On the test computer, select **Exit** to quit the diagnostics program.
19. On the repeater computer, select **Exit** to quit the diagnostics program.

## Failure of a Test



**Figure 97** Diagnostic Window (2 of 5)

For a test to be completed successfully, each of the following conditions must be met:

- The network adapter operates correctly.
- The network adapter is cabled correctly for the test or is equipped with the correct connectors.
- The network adapter has been installed correctly in the computer.

The **failed** message does not necessarily imply that the network adapter is faulty.

If a **failed** message is displayed, perform the following procedure:

1. Follow the instructions that are displayed in the window below the list of tests.
2. Make sure that the adapter is inserted correctly and the ports are connected properly (connectors are firmly seated, the correct end of the cable is connected).

If it is necessary to install the network adapter again, perform the following procedure:

1. Switch OFF the computer. Be sure to observe the [Translated Safety and Emission Information](#) on page 75.
2. Remove the computer cover. Refer to the manual that came with your computer for instructions or refer to [Installing the Network Adapter Card](#) on page 17.
3. Make sure the network adapter is properly seated in the PCI bus slot on the motherboard. If not, do not remove the network adapter completely but raise it sufficiently to withdraw it from the PCI bus slot.
4. Carefully realign the bus connector on the network adapter with the PCI bus slot.
5. Press the network adapter until it is firmly seated in the slot.
6. Repeat to [Step 6](#) of the [Loopback Test for Fiber Adapters](#) on page 112 and to [Step 4](#) of the [Repeater Test for Copper Adapters](#) on page 114.
7. Repeat the test.
8. To quit the diagnostics program, select **EXIT** in the Main Menu.
9. If necessary, remove the loopback connector from the port.
10. Re-connect the data cables to the network ports.

### **Additional Diagnostics Functions for the AT-2970/AT-2971 Series Adapters**

**Checking Other Displays and Data.** In addition to performing the three network adapter tests, the diagnostics program can also read out network adapter-specific data that may be useful for pinpointing the causes of failure.

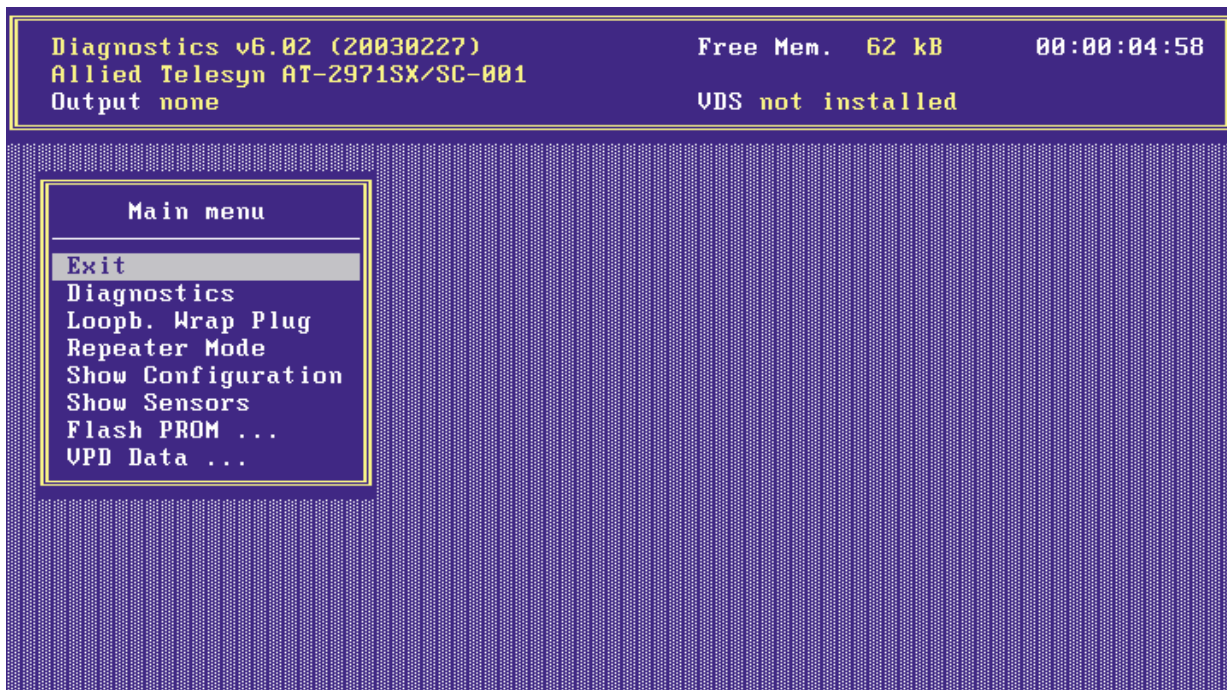
You can:

- read sensor data
- read configuration data
- read and write VPD data
- read and write Flash EPROM data

**Main Program.** To start the main program, proceed as follows:

1. Boot to DOS and wait for the prompt.
2. Insert the installation CD-ROM into the CD-ROM drive of the computer in which the network adapter is installed.
3. Type the letter of your CD-ROM drive (for example, **D:**)
4. Go to the appropriate product directory and type **diag2971**.
5. Press **<Enter>**.

The Main Menu as shown in Figure 98 is displayed:



**Figure 98** Diagnostic Window (3 of 5)

6. Select the appropriate item from the menu.
7. To quit the program, select **EXIT** in the Main Menu.

This option is automatically offered for selection if you did not select a menu item previously.

**Reading Sensor Data.** To read sensor data, perform the following procedure:

1. Start the main program. Refer to [Main Program](#) on page 118 for instructions.
2. Select **Show Sensors** in the Main Menu. A separate window will be displayed for the following sensor data:
  - Temperature of the board
  - Voltage on the PCI card
  - Voltage on the PCI I/O lines
  - Other supply voltages

In the Main Menu, Show Sensors changes to Hide Sensors.

3. You can close the window by selecting **Hide Sensors** from the Main Menu.

Other windows may be opened while this window is still open, for example, the window displaying the configuration data.

**Reading Configuration Data.** To read configuration data, perform the following procedure:

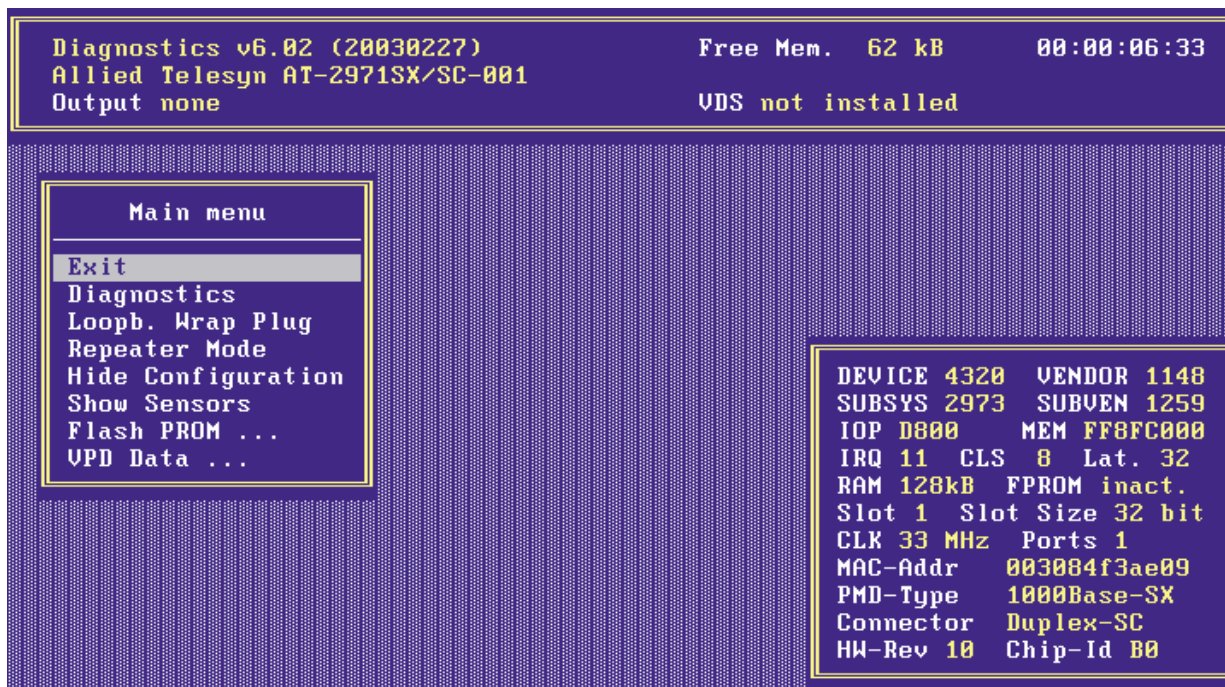
1. Start the main program. Refer to [Main Program](#) on page 118 for instructions.
2. Select SHOW CONFIGURATION in the main menu. A separate window will be displayed showing:
  - Device code (Device)
  - Various vendor codes (Vendor)
  - Interrupt no. (IRQ)
  - Cache Line Size (CLS)
  - Latency (Lat.)
  - RAM size (RAM)
  - PCI slot index and size (Slot and Slot size)
  - PCI bus clock (clk)
  - MAC address (MAC Addr)
  - Port type (PMD-Type)

- Connector (connector)
- Hardware revision (HW Rev)
- Chip ID (Chip Id)

In the Main Menu, Show Configuration changes to Hide Configuration.

3. You can close the window by selecting **Hide Configuration** from the Main Menu.

Other windows may be displayed while this window is still open, for example, a window shown in Figure 99 will be displayed.



**Figure 99** Diagnostic Window (4 of 5)

**Reading VPD Data.** To read VPD data (Vital Product Data), perform the following procedure:

1. Start the main program. Refer to [Main Program](#) on page 118 for instructions.
2. Select **VPD Data** from the Main Menu. A submenu with the following options will be displayed:
  - EXIT (return to the Main Menu)
  - DISPLAY VPD DATA

- CLEAR ERROR LOGS
- ADD/MODIFY VPD DATA (you can enter user-defined data and keywords here)
- DELETE VPD KEYWORDS

```
Diagnostics v6.02 (20030227)           Free Mem.  62 kB           00:00:07:52
Allied Telesyn AT-2971SX/SC-001
Output none                           VDS not installed

Display VPD Data: <Enter> to exit

Product Name:
Allied Telesyn AT-2971SX/SC-001

VPD Read Only Area:           21 bytes unused
Board Part Number (PN):      AT-2971SX/SC-001
Engineering Level (EC):      Rev. 1.0
Manufacturer ID (MN):        SysKonnect
Serial Number (SN):          CSI10L3F3AE09
Extended Capabil. (CP):      0x01, 0x10, 0x03cc

VPD Read/Write Area:         121 bytes available
Asset Tag ID (YA):           < Keyword not present >
First Error Log (VF):        < Keyword not present >
Last Error Log (VL):         < Keyword not present >
```

**Figure 100** Diagnostic Window (5 of 5)

3. Select the desired option or return to the Main Menu by selecting **Exit** (default option).



## Appendix A

# Translated Safety and Emission Information

---

**Important:** This appendix contains multiple-language translations for the safety statements in this guide.

**Wichtig:** Dieser Anhang enthält Übersetzungen der in diesem Handbuch enthaltenen Sicherheitshinweise in mehreren Sprachen.

**Vigtigt:** Dette tillæg indeholder oversættelser i flere sprog af sikkerhedsadvarslerne i denne håndbog.

**Belangrijk:** Deze appendix bevat vertalingen in meerdere talen van de veiligheidsopmerkingen in deze gids.

**Important:** Cette annexe contient la traduction en plusieurs langues des instructions de sécurité figurant dans ce guide.

**Tärkeää:** Tämä liite sisältää tässä oppaassa esiintyvät turvaohjeet usealla kielellä.

**Importante:** questa appendice contiene traduzioni in più lingue degli avvisi di sicurezza di questa guida.

**Viktig:** Dette tillegget inneholder oversettelser til flere språk av sikkerhetsinformasjonen i denne veiledningen.

**Importante:** Este anexo contém traduções em vários idiomas das advertências de segurança neste guia.

**Importante:** Este apéndice contiene traducciones en múltiples idiomas de los mensajes de seguridad incluidos en esta guía.

**Obs!** Denna bilaga innehåller flerspråkiga översättningar av säkerhetsmeddelandena i denna handledning.

**Standards:** This product meets the following standards.


U.S. Federal Communications Commission	
<b>Declaration Of Conformity</b>	
Manufacture Name:	Allied Telesyn, Inc.
Manufacture Address:	960 Stewart Drive, Suite B Sunnyvale, CA 94085 USA
Manufacture Telephone:	408-730-0950
Declares that the product:	Network Adapter Cards
Model Numbers:	AT-2400T, AT-2400BT, AT-2450FTX, AT-2451FTX, AT-2500, AT-2501, AT-2500TX, AT-2700TX, AT-2700FX, AT-2700FTX, AT-2701FTX, AT-2701FX, AT-2746FX, AT-2745FX, AT-2915T, AT-2930T, AT-2930SX, AT-2971T, AT-2971SX
This product complies with FCC Part 15B, Class B Limits:	
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device must not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.	
<b>Radiated Energy</b>	
Note: This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with instructions, may cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on. The user is encouraged to try to correct the interference by one or more of the following measures:	
<ul style="list-style-type: none"> <li>- Reorient or relocate the receiving antenna.</li> <li>- Increase the separation between the equipment and the receiver.</li> <li>- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.</li> <li>- Consult the dealer or an experienced radio/TV technician for help.</li> </ul>	
Changes and modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commission rules.	

Industry Canada
This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

**European Community (EC) Electromagnetic Compatibility Directive**

This equipment has been tested and found to comply with the protection requirements of European Emission Standards EN55022 Class B/EN61000-3-2 and the ITE European Immunity Standard EN55024

1 RFI Emission EN55022 Class B, EN61000-3-2, EN61000-3-3


2  **Warning:** In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

3 Immunity EN55024

**Safety**

4 Electrical Safety TUV-EN60950, UL1950, CSA 950, EN60825

5 Laser EN60825

6  This is a "CLASS 1 LED PRODUCT"




7 Warning Do not stare into the Laser beam.

8 **Lightning Danger**  
**Danger:** Do not work on equipment or cables during periods of lightning activity.




9  **Operating Temperature:** This product is designed for a maximum ambient temperature of 50 degrees C.

10 **All Countries:** Install product in accordance with local and National Electrical Codes.




**Normen:** Dieses Produkt erfüllt die Anforderungen der nachfolgenden Sicherheitsnormen.

- 1 Hochfrequenzstörung EN55022 Klasse B
- 2  **Warnung:** Bei Verwendung zu Hause kann dieses Produkt Funkstörungen hervorrufen. In diesem Fall müßte der Anwender angemessene Gegenmaßnahmen ergreifen.
- 3 Störsicherheit EN55024
- Sicherheit**
- 4 Elektrische Sicherheit TUV-EN60950, UL1950, CSA 950
- 5 Laser EN60825
- 6  Das ist ein "LED Produkt der Klasse 1"
- 7 **Warnung:** Nicht direkt in den Strahl blicken.
- 8 **Gefahr Durch Blitzschlag**  
**Gefahr:** Keine Arbeiten am Gerät oder an den Kabeln während eines Gewitters ausführen.
- 9  **Betriebstemperatur:** Dieses Produkt wurde für den Betrieb in einer Umgebungstemperatur von nicht mehr als 50° C entworfen.
- 10 **Alle Länder:** Installation muß örtlichen und nationalen elektrischen Vorschriften entsprechen.




**Standarder:** Dette produkt opfylder følgende sikkerhedsstandarder.

- 1 Radiofrekvens forstyrrelsesemission EN55022 Klasse B
- 2  **Advarsel:** I et hjemligt miljø kunne dette produkt forårsage radio forstyrrelse. Bliver det tilfældet, påkræves brugeren muligvis at tage tilstrækkelige foranstaltninger.
- 3 Immunitet EN55024
- Sikkerhed**
- 4 Elektrisk sikkerhed TUV-EN60950, UL1950, CSA 950
- 5 Laser EN60825
- 6  Dette er et "PRODUKT UNDER KLASSE 1 LED"
- 7 **Advarsel:** Stirr ikke på strålen.
- 8 **Fare Under Uvejr**  
**Fare:** UNDLAD at arbejde på udstyr eller KABLER i perioder med LYNAKTIVITET.
- 9  **Betjeningstemperatur:** Dette apparat er konstrueret til en omgivende temperatur på maksimum 50grader C.
- 10 **Alle lande:** Installation af produktet skal ske i overensstemmelse med lokal og national lovgivning for elektriske installationer.




**Normen:** Dit product voldoet aan de volgende veiligheidsnormen.

- 1 RFI Emissie EN55022 Klasse B
- 2  **Waarschuwing:** Binnenshuis kan dit product radiostoring veroorzaken, in welk geval de gebruiker verplicht kan worden om gepaste maatregelen te nemen.
- 3 Immuniteit EN55024
- Veiligheid**
- 4 Electricische Veiligheid TUV-EN60950, UL1950, CSA 950
- 5 Laser EN60825
- 6  Dit is een "KLASSE 1 LED-PRODUKT"
- 7 **Waarchuwing:** Neit in de straal staren.
- 8 **Gevaar Voor Bliksemingslag**  
**Gevaar:** NIET aan toestellen of KABELS WERKEN bij BLIKSEM.
- 9  **Bedrijfstemperatuur:** De omgevingstemperatuur voor dit produkt mag niet meer bedragen dan 50 graden Celsius.
- 10 **Alle landen:** het toestel installeren overeenkomstig de lokale en nationale elektrische voorschriften.




**Normes:** ce produit est conforme aux normes de sécurité suivantes :

- 🌀 1 Emission d'interférences radioélectriques EN55022 Classe B
- 🌀 2  **Mise En Garde:** dans un environnement domestique, ce produit peut provoquer des interférences radioélectriques. Auquel cas, l'utilisateur devra prendre les mesures adéquates.
- 🌀 3 Immunité EN55024
- Sécurité**
- 🌀 4 Sécurité électrique TUV-EN60950, UL1950, CSA 950
- 🌀 5 Laser EN60825
- 🌀 6  Ce matériel est un "PRODUIT À DIODE ÉLECTROLUMINESCENTE DE CLASSE 1"
- 🌀 7 **Attention:** Ne pas fixer le faisceau des yeux.
- 🌀 8 **Danger De Foudre**  
**Danger:** Ne pas manier le matériel ou les CÂBLES lors d'activité orageuse.
- 🌀 9  **Température De Fonctionnement:** Ce matériel est capable de tolérer une température ambiante maximum de 50 degrés Celsius.
- 🌀 10 **Pour Tous Pays:** Installer le matériel conformément aux normes électriques nationales et locales.




**Normit:** Tämä tuote on seuraavien turvallisuusnormien mukainen.

- 🌀 1 Radioaaltojen häirintä EN55022 Luokka B
- 🌀 2  **Varoitus:** Kotiolosuhteissa tämä laite voi aiheuttaa radioaaltojen häiriötä, missä tapauksessa laitteen käyttäjän on mahdollisesti ryhdyttävä tarpeellisiin toimenpiteisiin.
- 🌀 3 Kestävyys EN55024
- Turvallisuus**
- 🌀 4 Sähköturvallisuus TUV-EN60950, UL1950, CSA 950
- 🌀 5 Laser EN60825
- 🌀 6  Tämä on "ENSIMMÄISEN LUOKAN VALODIODITUOTE"
- 🌀 7 **Variotus:** Älä katso säteeseen.
- 🌀 8 **Salamaniskuvaara**  
**Hengenvaara:** Älä työskentele laitteiden tai kaapeleiden kanssa salamoinnin aikaan.
- 🌀 9  **Käyttölämpötila:** Tämä tuote on suunniteltu ympäröivän ilman maksimilämpötilalle 50°C.
- 🌀 10 **Kaikki Maat:** Asenna tuote paikallisten ja kansallisten sähköturvallisuusmääräysten mukaisesti.




**Standard:** questo prodotto soddisfa i seguenti standard di sicurezza.

- 🌀 1 Emissione RFI (interferenza di radiofrequenza) EN55022 Classe B
- 🌀 2  **Avvertenza:** in ambiente domestico questo prodotto potrebbe causare radio interferenza. In questo caso potrebbe richiedersi all'utente di prendere gli adeguati provvedimenti.
- 🌀 3 Immunità EN55024
- Norme Di Sicurezza**
- 🌀 4 Sicurezza elettrica TUV-EN60950, UL1950, CSA 950
- 🌀 5 Laser EN60825
- 🌀 6  Questo è un "PRODOTTO CON LED DI CLASSE 1"
- 🌀 7 **Avvertenza:** Non fissare il raggio con gli occhi.
- 🌀 8 **Pericolo Di Fulmini**  
**Pericolo:** Non lavorare sul dispositivo o sui CAVI durante precipitazioni temporalesche.
- 🌀 9  **Temperatura Di Funzionamento:** Questo prodotto è concepito per una temperatura ambientale massima di 50 gradi centigradi.
- 🌀 10 **Tutti I Paesi:** installare il prodotto in conformità delle vigenti normative elettriche nazionali.




**Sikkerhetskrav:** Dette produktet oppfyller følgende sikkerhetskrav:

- 1 RFI stråling EN55022 Klasse B
- 2  **Advarsel:** Hvis dette produktet benyttes til privat bruk, kan produktet forårsake radioforstyrrelse. Hvis dette skjer, må brukeren ta de nødvendige forholdsregler.
- 3 Immunitet EN55024
- Sikkerhet**
- 4 Elektrisk sikkerhet TUV-EN60950, UL1950, CSA 950
- 5 Laser EN60825
- 6  Dette er et "KLASSE 1 LED PRODUKT"
- 7 **Advarsel:** Stirr ikke på strålen.
- 8 **Fare For Lynnedslag**  
**Fare:** Arbeid ikke på utstyr eller kabler i tordenvær.
- 9  **Driftstemperatur:** Dette produktet er konstruert for bruk i maksimum romtemperatur på 50 grader celsius.
- 10 **Alle Land:** Produktet må installeres i samsvar med de lokale og nasjonale elektriske koder.




**Padrões:** Este produto satisfaz os seguintes padrões de segurança:

- 1 Emissão de interferência de radiofrequência EN55022 Classe B
- 2  **Aviso:** Num ambiente doméstico este produto pode causar interferência na radiorrecepção e, neste caso, pode ser necessário que o utente tome as medidas adequadas.
- 3 Imunidade EN55024
- Segurança**
- 4 Segurança Eléctrica TUV-EN60950, UL1950, CSA 950
- 5 Laser EN60825
- 6  Este é um "PRODUTO CLASSE 1 LED"
- 7 **Aviso:** Não olhe fixamente para o raio.
- 8 **Perigo De Choque Causado Por Raio**  
**Perigo:** Não trabalhe no equipamento ou nos cabos durante períodos suscetíveis a quedas de raio.
- 9  **Temperatura De Funcionamento:** Este produto foi projetado para uma temperatura ambiente máxima de 50 graus centígrados.
- 10 **Todos Os Países:** Instale o produto de acordo com as normas nacionais e locais para instalações elétricas.

**Normas:** este producto cumple con las siguientes normas de seguridad.

- 1 Emisión RFI EN55022 Clase B
- 2  **Advertencia:** en un entorno doméstico, este producto puede causar radiointerferencias, en cuyo caso, puede requerirse del usuario que tome las medidas que sean convenientes al respecto.
- 3 Inmunidad EN55024
- Seguridad**
- 4 Seguridad eléctrica TUV-EN60950, UL1950, CSA 950
- 5 Laser EN60825
- 6  Este es un "PRODUCTO DE DIODO LUMINISCENTE (LED) CLASE 1"
- 7 **¡Advertencia!** No mirat fijamente el haz.
- 8 **Peligro De Rayos**  
**Peligro:** No realice ningún tipo de trabajo o conexión en los equipos o en los cables durante tormentas eléctricas.
- 9  **Temperatura Requerida Para La Operación:** Este producto está diseñado para una temperatura ambiental máxima de 50 grados C.
- 10 **Para Todos Los Países:** Monte el producto de acuerdo con los Códigos Eléctricos locales y nacionales.

**Normer:** Denna produkt uppfyller följande säkerhetsnormer.

- 1 Radiostörning EN55022 Klass B
  - 2  **Varning:** Denna produkt kan ge upphov till radiostörningar i hemmet, vilket kan tvinga användaren till att vidtaga erforderliga åtgärder.
  - 3 Immunitet EN55024
- Säkerhet**
- 4 Elsäkerhet TUV-EN60950, UL1950, CSA 950
  - 5 Laser EN60825
  - 6  Detta är en "KLASS 1 LYSDIODPRODUKT"
  - 7 **Varning!** Laserstrålning när enheten är öppen.
  - 8 **Fara För Blixtnedslag**  
**Fara:** Arbeta ej på utrustningen eller kablarna vid åskväder.
  - 9  **Driftstemperatur:** Denna produkt är konstruerad för rumstemperatur ej överstigande 50 grader Celsius.
  - 10 **Alla Länder:** Installera produkten i enlighet med lokala och statliga bestämmelser för elektrisk utrustning.