

TURBOWAYS 25 ATM PCI Adapter

Hardware Installation Guide



TURBOWAYS 25 ATM PCI Adapter

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Note

Before using this information and the product it supports, be sure to read the general information under "Notices" on page A-4.

First Edition (June 1996)

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Safety Notices



Danger: Before you begin to install this product, read the safety information in *Caution: Safety Information—Read This First*, SD21-0030. This booklet describes safe procedures for cabling and plugging in electrical equipment.



Varning — livsfara: Innan du börjar installera den här produkten bör du läsa säkerhetsinformationen i dokumentet *Varning: Säkerhetsföreskrifter— Läs detta först*, SD21-0030. Där beskrivs hur du på ett säkert sätt ansluter elektrisk utrustning.



Fare: Før du begynner å installere dette produktet, må du lese sikkerhetsinformasjonen i *Advarsel: Sikkerhetsinformasjon — Les dette først*, SD21-0030 som beskriver sikkerhetsrutinene for kabling og tilkobling av elektrisk utstyr.



Fare! Før du installerer dette produkt, skal du læse sikkerhedsforskrifterne i *NB: Sikkerhedsforskrifter—Læs dette først* SD21-0030. Vejledningen beskriver den fremgangsmåde, du skal bruge ved tilslutning af kabler og udstyr.



Gevaar: Voordat u begint met de installatie van dit produkt, moet u eerst de veiligheidsinstructies lezen in de brochure *PAS OP! Veiligheidsinstructies—Lees dit eerst*, SD21-0030. Hierin wordt beschreven hoe u elektrische apparatuur op een veilige manier moet bekabelen en aansluiten.



Gevaar Voordat u begint met het installeren van dit produkt, dient u eerst de veiligheidsrichtlijnen te lezen die zijn vermeld in de publikatie *Caution: Safety Information - Read This First*, SD21-0030. In dit boekje vindt u veilige procedures voor het aansluiten van elektrische apparatuur.



Vorsicht: Bevor mit der Installation des Produktes begonnen wird, die Sicherheitshinweise in *Achtung: Sicherheitsinformationen—Bitte zuerst lesen*, IBM Form SD21-0030. Diese Veröffentlichung beschreibt die Sicherheitsvorkehrungen für das Verkabeln und Anschließen elektrischer Geräte.



危険： 導入作業を開始する前に、安全に関する小冊子SD21-0030-02の「最初にお読みください」(Read This First)の項をお読みください。この小冊子は、電気機器の安全な配線と接続の手順について説明しています。



Danger : Avant d'installer le présent produit, consultez le livret *Attention : Informations pour la sécurité — Lisez-moi d'abord*, SD21-0030, qui décrit les procédures à respecter pour effectuer les opérations de câblage et brancher les équipements électriques en toute sécurité.



Danger: Avant de procéder à l'installation de ce produit, lisez d'abord les consignes de sécurité dans la brochure *ATTENTION: Consignes de sécurité—A lire au préalable*, SD21-0030. Cette brochure décrit les procédures pour câbler et connecter les appareils électriques en toute sécurité.



Pericolo: prima di iniziare l'installazione di questo prodotto, leggere le informazioni relative alla sicurezza riportate nell'opuscolo *Attenzione: Informazioni di sicurezza — Prime informazioni da leggere* in cui sono descritte le procedure per il cablaggio ed il collegamento di apparecchiature elettriche.



Perigo: Antes de iniciar a instalação deste produto, leia as informações de segurança *Cuidado: Informações de Segurança — Leia Primeiro*, SD21-0030. Este documento descreve como efectuar, de um modo seguro, as ligações eléctricas dos equipamentos.



Peligro: Antes de empezar a instalar este producto, lea la información de seguridad en *Atención: Información de Seguridad — Lea Esto Primero*, SD21-0030. Este documento describe los procedimientos de seguridad para cablear y enchufar equipos eléctricos.



Perigo: Antes de começar a instalar este produto, leia as informações de segurança contidas em *Cuidado: Informações Sobre Segurança—Leia Isto Primeiro*, SD21-0030. Esse folheto descreve procedimentos de segurança para a instalação de cabos e conexões em equipamentos eléctricos.



VAARA: Ennen kuin aloitat tämän tuotteen asennuksen, lue julkaisussa *Varoitus: Turvaohjeet—Lue tämä ensin*, SD21-0030, olevat turvaohjeet. Tässä kirjasessa on ohjeet siitä, miten sähkölaitteet kaapeloidaan ja kytketään turvallisesti.



위험: 이 제품을 설치하기 전에 반드시
"주의: 안전 정보-시작하기 전에"
(SD21-0030-02)에 있는 안전 정보를
읽으십시오.



危險：安裝本產品之前，請先閱讀
"Caution: Safety Information—Read
This First" SD21-0030 手冊中所提
供的安全注意事項。這本手冊將會說明
使用電器設備的纜線及電源的安全程序。



Uwaga:
Przed rozpoczęciem instalacji produktu należy zapoznać się z instrukcją:
"Caution: Safety Information - Read This First", SD21-0030.
Zawiera ona warunki bezpieczeństwa przy podłączaniu do sieci elektrycznej
i eksploatacji.



Upozornění: než zahájíte instalaci tohoto produktu, přečtěte si
nejprve bezpečnostní informace v pokynech „Bezpečnostní
informace“ č. 21-0030. Tato brožurka popisuje bezpečnostní
opatření pro kabeláž a zapojení elektrického zařízení.



Vigyázat: Mielőtt megkezdi a berendezés üzembe helyezését,
olvassa el a "Caution: Safety Information— Read This First,
SD21-0030 könyvecskében leírt biztonsági információkat. Ez a
könyv leírja, milyen biztonsági intézkedéseket kell megtenni az
elektromos berendezés huzalozásakor illetve csatlakoztatásakor.



Pozor: Preden začnete z instalacijo tega produkta
preberite poglavje: "Opozorilo: Informacije
o varnem rokovanju-preberi pred uporabo,"
SD21-0030. To poglavje opisuje pravilne
postopke za kabliranje,

About This Manual

You should start your installation of the IBM TURBOWAYS 25 ATM PCI Adapter (TURBOWAYS 25 Adapter) by using this manual.

This manual contains information you need to know to do the physical installation of the TURBOWAYS 25 Adapter. Device driver installation, adapter configuration, adapter testing, and problem determination can be done using the STARTCD program on the TURBOWAYS 25 CD-ROM for ISA and PCI Adapters (CD-ROM). The *TURBOWAYS 25 ATM PCI Adapter Installation and Testing Instructions* manual is available on the CD-ROM in both viewable and printable format. The STARTCD program directs you to those parts of the manual that relate to your installation environment.

Related Publications

If you need further information about ATM Forum-compliant LAN emulation, you should consult the ATM Forum. Publications discussing this and other ATM topics and issues are available for a fee from the ATM Forum. Address requests for information about these publications to:

The ATM Forum
Worldwide Headquarters
2570 West El Camino Real
Suite 304
MOUNTAIN VIEW CA 94040-1313

Tel 1-415-949-6716
Fax 1-415-949-6705
Internet e-mail info@atm.com
Internet World Wide Web (WWW) <http://www.atmforum.com>

Chapter 1. Introduction

You should start your installation and configuration of the TURBOWAYS 25 Adapter by using this manual.

This manual contains the information you need to do the physical installation of the TURBOWAYS 25 Adapter. It also contains instructions on how to access the CD-ROM where you can either install the device drivers directly or you can make diskettes of the device drivers and the ATM installation and diagnostics program. The CD-ROM contains:

- The STARTCD program (which directs you through the device driver installation tasks)
- Device driver diskette images
- ATMAID diskette
- Viewable and printable documentation

The *TURBOWAYS 25 ATM PCI Adapter Installation and Testing Instructions* manual can be viewed or printed from the CD-ROM. See "Accessing the CD-ROM" on page 4-3.

If you do not have a CD-ROM drive installed on your machine, you can use another machine that does have a CD-ROM drive installed and create the necessary diskettes and documentation. See "Accessing the CD-ROM" on page 4-3.

If no CD-ROM drive is available, you can obtain diskette images and documentation from IBM through the Internet, the IBM FTP server, or the IBM Bulletin Board System. See "Obtaining Information from Sources Other Than the CD-ROM" on page 4-3.

You should be familiar with the personal computer in which the adapter will be installed and the computer's operating system and network software.

The TURBOWAYS 25 ATM PCI Adapter

The TURBOWAYS 25 Adapter provides a communications connection for a personal computer system to an Asynchronous Transfer Mode (ATM) network. It allows personal computer systems to communicate with other devices over the ATM network at a rate of 25.6 Mbps.

The TURBOWAYS 25 Adapter is designed to operate in a Peripheral Component Interconnect (PCI) bus personal computer equipped with the following hardware:

- A 486 or higher processor
- An available 32-bit, PCI expansion slot with bus master capability
- 8 MB to 32 MB of memory, depending on your operating system

Special features of the TURBOWAYS 25 Adapter include:

- Easy-to-use configuration and diagnostics
- Support for up to 32 active virtual circuits through the IBM 8285 Nway ATM Workgroup Switch, or a switch, or a concentrator using the 25.6-Mbps interface

Chapter 2. Preparing to Install the Adapter

This chapter contains information on how to prepare to install your IBM TURBOWAYS 25 Adapter in your personal computer. After you have completed the physical installation, store this manual with the instruction manual supplied with your computer for future reference.

Use the following checklist for installation of the adapter.

Adapter Installation Checklist

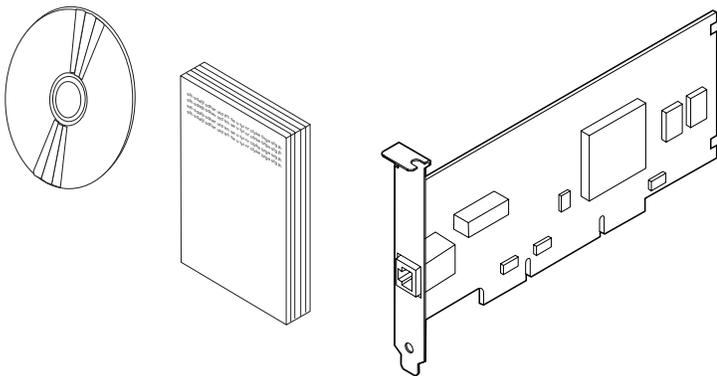
- ___ **1** Verify that you have the items listed under “Contents of the Adapter Kit” on page 2-2.
- ___ **2** Read “Collecting the Materials and Information That You Need” on page 2-3 and ensure that you have everything for the physical installation of the adapter.
- ___ **3** If you do not already know, contact your network administrator for the type of device driver you want to install or for any special addresses. (For example, Forum-Compliant LAN Emulation driver, Classical IP driver, LES ATM address, or the ARP server ATM address.) The *TURBOWAYS 25 ATM ISA Adapter Installation and Testing Instructions* manual on the CD-ROM contains a complete description of device drivers and special addresses. (For information on how to access the CD-ROM, see “Accessing the CD-ROM” on page 4-3.)
- ___ **4** Follow the instructions under “Placing the Adapter in an Expansion Slot” on page 3-3.
- ___ **5** Follow the instructions under “Connecting the TURBOWAYS 25 Adapter to the Network” on page 3-3.

- 6 Use the STARTCD program to access the appropriate diskette images on the CD-ROM. Which diskette images you use depends on your operating system environment. The STARTCD program steps you through this process. For more information see “Accessing the CD-ROM” on page 4-3.

Notes:

- a. If you do not have a CD-ROM drive, the appropriate device drivers can be downloaded from the Internet, the IBM FTP server, or the IBM Bulletin Board System. See “Obtaining Information from Sources Other Than the CD-ROM” on page 4-3.
- b. For information about testing the adapter and problem solving refer to the *TURBOWAYS 25 ATM ISA Adapter Installation and Testing Instructions* manual on the CD-ROM.

Contents of the Adapter Kit



Along with this manual, the TURBOWAYS 25 Adapter kit consists of the following items:

- IBM TURBOWAYS 25 ATM PCI Adapter
- TURBOWAYS 25 CD-ROM for ISA and PCI Adapters which contains:
 - The STARTCD program used for navigating through the CD-ROM
 - Device Driver Code
 - ATMAID code
 - Online *TURBOWAYS 25 TURBOWAYS 25 ATM PCI Adapter Installation and Testing Instructions* (viewable and printable)
- *Safety Information* manual

If any item is missing or damaged, contact your place of purchase.

Collecting the Materials and Information That You Need

In addition to the TURBOWAYS 25 Adapter kit, you will need other materials and information to install the adapter and the drivers that are required for communication with the adapter. The following sections describe the materials you need and the prerequisites you need to meet. Ensure that you have everything you need before you begin the installation procedures.

Hardware Prerequisites

To install the adapter, you need to meet certain hardware prerequisites. You need:

- A PCI bus personal computer equipped with a 486 or higher processor.
- An available 32-bit, PCI expansion slot with bus master capability
- 8 MB to 32 MB of memory, depending on your operating system.
- A 3.5-inch, 1.44-MB diskette drive or a CD-ROM drive.
- A VGA or better monitor.

- A hard disk with at least 2 MB of available storage.
- Connection to an IBM 8285 Nway ATM Workgroup Switch, or a switch, or a concentrator using the 25.6-Mbps interface or equivalent.
- UTP or STP cabling with the appropriate connectors on either end. (See “Adapter Cables” for more information.)
- If you want to run the wrap test and you are using UTP cabling, you will need an RJ-45 ATM wrap plug (P/N 42H0540) or equivalent. (Refer to the “RJ-45 ATM Wrap Plug Specifications” in the *TURBOWAYS 25 ATM PCI Adapter Installation and Testing Instructions* manual on the CD-ROM for the specifications of the ATM wrap plug. See “Accessing the CD-ROM” on page 4-3 for information on how to read the online manual.)

Adapter Cables

Note: The TURBOWAYS 25 Adapter conforms to ATM Forum RJ-45 wiring standards. The following sections discuss cabling needs for the TURBOWAYS 25 Adapter when you are connecting it to a device (such as a switch) that also conforms to the ATM Forum wiring standards. For a fuller discussion of wiring standards and cabling specifications for both the current and earlier TURBOWAYS 25s, refer to “ATM 25-Mbps Interface Wiring Standards and Cable Specifications” in the *TURBOWAYS 25 ATM PCI Adapter Installation and Testing Instructions* manual on the CD-ROM.

To connect the TURBOWAYS 25 Adapter to an ATM network, you will need one or more of the cables described in the following sections.

UTP Cables

If you are connecting a TURBOWAYS 25 in a UTP cabling system, you must obtain a UTP cable (see Figure 2-1).

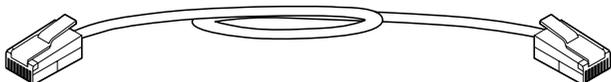


Figure 2-1. UTP Adapter Cable

Table 2-1 on page 2-5 describes the UTP pin assignment.

Table 2-1. ATM Forum UTP Pin Assignment

Twisted Pair	Pin	ATM Workstation	ATM Switch/Concentrator
3	Pin 1	Transmit+	Receive+
3	Pin 2	Transmit-	Receive-
2	Pin 3	Unused	Unused
1	Pin 4	Unused	Unused
1	Pin 5	Unused	Unused
2	Pin 6	Unused	Unused
4	Pin 7	Receive+	Transmit+
4	Pin 8	Receive-	Transmit-

Note: The minimum UTP cable quality must meet EIA/TIA-568 Specification for category 3 or equivalent UTP wiring. For additional information on how cable wires are terminated, refer to “Cable Systems” in the *TURBOWAYS 25 ATM PCI Adapter Installation and Testing Instructions* manual on the CD-ROM.

STP Cables

If you are connecting a TURBOWAYS 25 Adapter in an STP cabling system, you must use an IBM RJ-45 STP cable (P/N 42H0544) or equivalent (see Figure 2-2). This IBM STP cable uses the ATM Forum pin assignments and is identified by an *orange* dot on the tag of the cable. (Note that the TURBOWAYS 25 Adapter also has an orange dot on its bracket.)

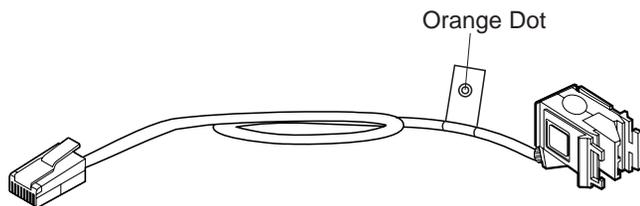


Figure 2-2. IBM RJ-45 STP Adapter Cable (ATM Forum Pin Assignment)

Table 2-2 on page 2-6 describes the STP cable.

Table 2-2. STP Adapter Cable

Name	Description
IBM RJ-45 STP Adapter cable (ATM Forum pin assignment)	IBM P/N 42H0544 or equivalent. Eight-position, RJ-45 modular plug and IBM Cabling System Data Connector.

Attention: Do not use the UTP Conversion cable (P/N 10H3904) or any other unshielded cable in an STP cable system. To do so will cause an impedance discontinuity and loss of the STP cable shield connection.

Other Manuals

In addition to this manual and the *Safety Information* manual, which are shipped with the TURBOWAYS 25 Adapter, you will need:

- The *TURBOWAYS 25 ATM PCI Adapter Installation and Testing Instructions* manual, which is located on the CD-ROM (The STARTCD program on the CD-ROM directs you to the appropriate sections of the manual depending on your operating system.)
- The manual provided with your computer
- The manual provided with your network operating system or network application

Chapter 3. Physical Installation of the Adapter

This chapter contains instructions for physical installation of the adapter in your personal computer.

Installing the Adapter

In the following spaces, record the part number, serial number, and date code listed on the paper label located on the side of the adapter (Figure 3-1 is an example). You might need to know this information at some future time.

Part Number _____

Serial Number _____

Date Code _____



Part Number Serial Number Date Code

Figure 3-1. Example of an Adapter Label

Understanding the Adapter Labels

Figure 3-2 on page 3-2 illustrates the two labels on the bracket of the TURBOWAYS 25 Adapter.

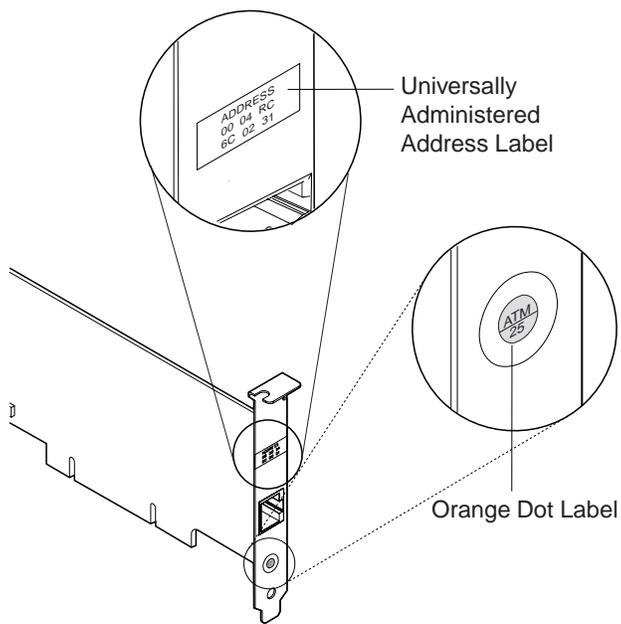


Figure 3-2. The Adapter Labels

The *orange dot label* indicates that the adapter can communicate at 25 (25.6) Mbps over an ATM Forum-compliant cabling system network.

The *universally administered address label* displays the adapter's universally administered address. This is the MAC address that was encoded in the adapter memory at the factory. This 12-digit, hexadecimal address is recorded on the label in 2-digit increments from left to right, starting on the first row. In the illustration, the universally administered address is X'0004 AC2C 0001' in noncanonical format, most significant bit (MSB) first. The universally administered address is unique and is used by network software to distinguish the adapter from others on the network.

Placing the Adapter in an Expansion Slot

- 1** Ensure that the computer is switched off and unplugged. Refer to the computer's instruction manual for directions on installing adapters.
- 2** Install the adapter in any available 32-bit, PCI expansion slot with bus master capability.
Note: Once you have installed the adapter, each time you switch on your computer the PCI network basic input/output system (BIOS) allocates system resources to the adapter by assigning it configuration settings. In order to remove the configuration settings and release the system resources, you must remove the adapter physically from the computer.
- 3** After you have replaced all of your computer's covers, plug your computer's power cord into an electrical outlet.
- 4** Continue with "Connecting the TURBOWAYS 25 Adapter to the Network."

Connecting the TURBOWAYS 25 Adapter to the Network

- 1** To attach the TURBOWAYS 25 Adapter to the network, you will need one of the cables listed in "Adapter Cables" on page 2-4.
Connect one end of the cable to the adapter (see Figure 3-3 on page 3-4).

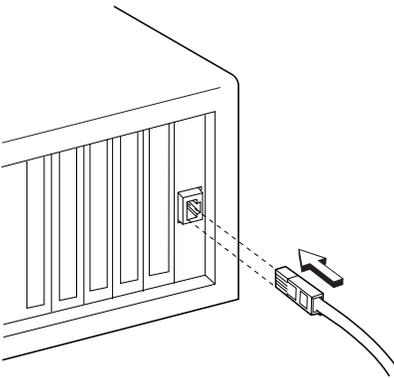


Figure 3-3. Connecting the Cable to the Adapter

- 2** Connect the other end of the cable to the network.
- 3** Connection to the network is complete. Continue with Chapter 4, "Instructions to Complete Installation" to complete the physical installation of the adapter.

Note: For information about testing the adapter or about problem-solving, refer to the *TURBOWAYS 25 ATM PCI Adapter Installation and Testing Instructions* manual on the CD-ROM. (The STARTCD program directs you to the appropriate sections in the manual depending on your operating system.)

Chapter 4. Instructions to Complete Installation

This chapter contains instructions to complete the installation of the adapter. It also contains information on how to obtain assistance and service for your adapter.

To complete the hardware and software installations of the TURBOWAYS 25 Adapter, choose one of the following options:

- Access the CD-ROM: See “Accessing the CD-ROM” on page 4-3.
- If you do not have a CD-ROM drive installed on your machine but have access to one: See “Accessing the CD-ROM” on page 4-3.
- If you do not have access to a CD-ROM drive, use the Internet, the IBM FTP server, or the IBM Bulletin Board System to obtain device driver diskettes images and documentation: See “Obtaining Information from Sources Other Than the CD-ROM” on page 4-3.

Contents of the CD-ROM

The CD-ROM contains the STARTCD program, device driver code, ATMAID code, and supporting documentation. From the CD-ROM you can access required device driver diskette images to install your software and view (or print) supporting online documentation. The CD-ROM includes viewable BookManager files and printable PostScript and ASCII files.

The README.1ST Files

The STARTCD program helps you create the diskettes needed for your operating system. Before configuring the adapter and installing the device drivers for the TURBOWAYS 25 Adapter, consult the README.1ST files in the root directories of your TURBOWAYS 25 diskettes:

For the ATMAID diskette, you can select the README button on the first panel of the ATMAID program.

For the device driver diskettes, you can use any text editor to access the README file.

The files contain important information that was not available when this manual was published. You might want to print the README.1ST files so that you can refer to them while you are installing the adapter.

You will find the following information in the README.1ST files:

- Any limitations and restrictions
- Last-minute information updates

The README.1ST files also contain a summary of the directories and files on the diskette.

Files on the CD-ROM

The TURBOWAYS 25 ATM ISA Adapter CD-ROM contains the following files:

- The STARTCD program, which is in the Root directory
- The code:
 - Individual directories for all platforms supported by the TURBOWAYS 25 ATM ISA Adapter, for example, <DOS> and <WINNT> directories
 - The <DISKETTE> Directory contains all the diskette images supported by the TURBOWAYS 25 ATM ISA Adapter, for example, TURBOWAYS 25 ATM ISA Adapter Classical IP driver Diskette.
- The viewable and printable documentation, which is in the <PUBS18> Directory
 - The <SHELVES> Subdirectory, containing the master bookshelf and bookshelf search index
 - The <BOOKS> Subdirectory, containing all the viewable books

- The <PUBPRINT> Subdirectory, containing all PostScript and ASCII printable files

Accessing the CD-ROM

To access the CD-ROM, perform the following steps:

1. Insert the CD-ROM in your CD-ROM drive.
2. Go to a Windows DOS box or to native DOS. At the DOS prompt, type **d:startcd** (where d is the CD-ROM drive). Press **Enter**. This will activate the STARTCD program.
3. The Welcome panel appears. Select PCI for the bus.
4. The Main panel appears. From this panel you can select the following action items:
 - [1] Create install programs for various operating systems
 - [2] List diskette images for the adapter
 - [V] View the documents
 - [P] Print the documents

From the Main panel select Action Item [1], **Create install programs for various operating systems**, and continue with the following panels to complete the installation of the TURBOWAYS 25 Adapter.

If you are having any problems with the installation, see “Help and Service Information” on page 4-5.

Obtaining Information from Sources Other Than the CD-ROM

If no CD-ROM drive is available, you can download device driver diskette images and printable PostScript or ASCII files for documentation from either the Internet, the IBM FTP server, or the IBM Bulletin Board System.

Obtaining Information from the Internet

Device driver diskette images for the IBM TURBOWAYS 25 ATM ISA Adapter can be obtained through the World Wide Web or anonymous file transfer protocol (FTP).

World Wide Web

Use the following Universal Resource Locator (URL) to obtain a listing of available diskettes and documentation:

<http://www.raleigh.ibm.com/nes/nesatm.htm>

You can then copy any of the listed files to your disk.

Note: The TURBOWAYS 25 Adapter's Information file contains descriptions of the available files.

By anonymous FTP:

From the FTP site:

`lan.support.raleigh.ibm.com`

Change to the subdirectory `/pub/products/lanprods/atm`. Read the **index.txt** file for information on this directory. You can then get any of the listed diskette images.

Note: All of these files must be downloaded as binary files.

Bulletin Board System

For versions of the installation code, device drivers, and documentation call 24-hours per day.

- United States (919) 517-0001
- Canada
 - Vancouver (604) 664-6464
 - Toronto (416) 946-4244
 - Montreal (514) 938-3022
 - Winnipeg (204) 934-2798
 - Markham (905) 316-4255
 - Halifax (902) 420-0300

Help and Service Information

During the warranty period, you can get toll-free technical support 24 hours a day, 7 days a week, to answer any questions about your new IBM adapter. If you need warranty service, return or exchange is available. In addition, if your IBM adapter is installed in an IBM computer, you might be entitled to service at your location. Your technical support representative can help you determine the best alternative.

Before calling, please prepare for your call by following these steps.

Step 1: Troubleshooting

You might be able to solve the problem yourself. Here are some things you might want to try:

Install the adapter in a different slot, if one is available.

Inspect the adapter for damage.

Check the computer manual for instructions about the installation of upgrades. Look for a section about system setup or system configuration. Follow all procedures.

Step 2: Preparing for the Call

To assist the technical support representative, have available as much of the following information as possible:

- Part number, serial number, and date code listed on the paper label located on the side of the adapter (this is the information that you recorded on page 3-1)
- Proof of purchase
- Computer manufacturer, model, serial number (if IBM), and manual
- Exact wording of the error message and error code (if any)
- Description of the problem
- Hardware and software configuration information for your system

If possible, be at your computer. Your technical support representative might want to walk you through the problem during the call.

Step 3: Placing the Call to IBM

Use one of the following numbers:

- Within the United States, call IBM at 1-800-426-7378.
- Within Canada
 - For support, call HelpPC at 1-800-565-3344.
 - For more information or to place an order, call 1-800-465-7999.
- Outside the United States and Canada, contact your IBM HelpWare number, your place of purchase, or your local branch office.

Obtaining TURBOWAYS 25 Corrective Service Diskettes

As updated versions of the diskettes described in this book are produced, they will be made available for you in several ways.

- From the World Wide Web:

On the World Wide Web, use the following URL to obtain a listing of available diskettes:

<http://www.raleigh.ibm.com/nes/nesatm.htm>

You can then copy any of the listed files to your local disk.

Note: The TURBOWAYS 25's Information file contains descriptions of the available files.

- By anonymous FTP:

From the FTP site:

`lan.support.raleigh.ibm.com`

Change to the subdirectory `/pub/products/lanprods/atm`. Read the **index.txt** file for information on this directory. You can then get any of the listed diskette images.

Note: All of these files must be downloaded as binary files.

- From the IBM Bulletin Board System:

You can access the IBM BBS by dialing 919-517-0001. Go to directory 32, where you can download any of the listed files.

Appendix A. Product Warranties, Notices, and Trademarks

International Business Machines Corporation

Armonk, New York, 10504

Statement of Limited Warranty

The warranties provided by IBM in this Statement of Limited Warranty apply only to Machines you originally purchase for your use, and not for resale, from IBM or your reseller. The term "Machine" means an IBM machine, its features, conversions, upgrades, elements, or accessories, or any combination of them. Unless IBM specifies otherwise, the following warranties apply only in the country where you acquire the Machine. If you have any questions, contact IBM or your reseller.

Machine: IBM TURBOWAYS 25 ATM PCI Adapter

Warranty Period*: Lifetime

**Contact your place of purchase for warranty service information.*

Production Status

Each Machine is manufactured from new parts, or new and used parts. In some cases, the Machine may not be new and may have been previously installed. Regardless of the Machine's production status, IBM's warranty terms apply.

The IBM Warranty for Machines

IBM warrants that each Machine 1) is free from defects in materials and workmanship and 2) conforms to IBM's Official Published Specifications. The warranty period for a Machine is a specified, fixed period commencing on its Date of Installation. The date on your receipt is the Date of Installation, unless IBM or your reseller informs you otherwise.

During the warranty period IBM or your reseller, if authorized by IBM, will provide warranty service under the type of service designated for the Machine and will manage and install engineering changes that apply to the Machine.

For IBM or your reseller to provide warranty service for a feature, conversion, or upgrade, IBM or your reseller may require that the Machine on which it is installed be 1) for certain Machines, the designated, serial-numbered Machine and 2) at an engineering-change level compatible with the feature, conversion, or upgrade. Many of these transactions involve the removal of parts and their return to IBM. You represent that all removed parts are genuine and unaltered. A part that replaces a removed part will assume the warranty service status of the replaced part.

If a Machine does not function as warranted during the warranty period, IBM or your reseller will repair it or replace it with one that is at least functionally equivalent, without charge. The replacement may not be new, but will be in good working order.

If IBM or your reseller is unable to repair or replace the Machine, you may return it to your place of purchase and your money will be refunded.

If you transfer a Machine to another user, warranty service is available to that user for the remainder of the warranty period. You should give your proof of purchase and this Statement to that user. However, for Machines which have a life-time warranty, this warranty is not transferable.

Warranty Service

To obtain warranty service for the Machine, you should contact your reseller or call IBM. In the United States, call IBM at **1-800-IBM-SERV (426-7378)**. In Canada, call IBM at **1-800-565-3344**. You may be required to present proof of purchase.

IBM or your reseller will provide certain types of repair and exchange service, either at your location or at IBM's or your reseller's service center, to restore a Machine to good working order.

When a type of service involves the exchange of a Machine or part, the item IBM or your reseller replaces becomes its property and the replacement becomes yours. You represent that all removed items are genuine and unaltered. The replacement may not be new, but will be in good working order and at least functionally equivalent to the item replaced. The replacement assumes the warranty service status of the replaced item. Before IBM or your reseller exchanges a Machine or part, you agree to remove all features, parts, options, alterations, and attachments not under warranty service. You also agree to ensure that the Machine is free of any legal obligations or restrictions that prevent its exchange.

You agree to:

1. obtain authorization from the owner to have IBM or your reseller service a Machine that you do not own; and
2. where applicable, before service is provided —
 - a. follow the problem determination, problem analysis, and service request procedures that IBM or your reseller provide,
 - b. secure all programs, data, and funds contained in a Machine, and
 - c. inform IBM or your reseller of changes in a Machine's location.

IBM is responsible for loss of, or damage to, your Machine while it is 1) in IBM's possession or 2) in transit in those cases where IBM is responsible for the transportation charges.

Extent of Warranty

IBM does not warrant uninterrupted or error-free operation of a Machine.

The warranties may be voided by misuse, accident, modification, unsuitable physical or operating environment, improper maintenance by you, removal or alteration of Machine or parts identification labels, or failure caused by a product for which IBM is not responsible.

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TO, THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THESE WARRANTIES GIVE YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM JURISDICTION TO JURISDICTION. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF EXPRESS OR IMPLIED WARRANTIES, SO THE ABOVE EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU. IN THAT EVENT SUCH WARRANTIES ARE LIMITED IN DURATION TO THE WARRANTY PERIOD. NO WARRANTIES APPLY AFTER THAT PERIOD.

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Circumstances may arise where, because of a default on IBM's part or other liability you are entitled to recover damages from IBM. In each such instance, regardless of the basis on which you are entitled to claim damages from IBM (including fundamental breach, negligence, misrepresentation, or other contract or tort claim), IBM is liable only for:

1. damages for bodily injury (including death) and damage to real property and tangible personal property; and
2. the amount of any other actual direct damages or loss, up to the greater of U.S. \$100,000 or the charges (if recurring, 12 months' charges apply) for the Machine that is the subject of the claim.

UNDER NO CIRCUMSTANCES IS IBM LIABLE FOR ANY OF THE FOLLOWING: 1) THIRD-PARTY CLAIMS AGAINST YOU FOR LOSSES OR DAMAGES (OTHER THAN THOSE UNDER THE FIRST ITEM LISTED ABOVE); 2) LOSS OF, OR DAMAGE TO, YOUR RECORDS OR DATA; OR 3) SPECIAL, INCIDENTAL, OR INDIRECT DAMAGES OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS OR SAVINGS), EVEN IF IBM OR YOUR RESELLER IS INFORMED OF THEIR POSSIBILITY. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU.

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Electronic Emission Notices

The following statements apply to this IBM product. The statement for other IBM products intended for use with this product will appear in their accompanying manuals.

Federal Communications Commission (FCC) Statement

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the 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 the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does 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:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an IBM authorized dealer or service representative for help.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Proper cables and connectors are available from IBM authorized dealers. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Industry Canada Class B Emission Compliance Statement

This Class B digital apparatus meets the requirements of the Canadian Interference-Causing Equipment Regulations.

Avis de conformité aux normes d'Industrie Canada

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Union (EU) Mark of Conformity Statement

This product is in conformity with the protection requirements of EU Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility. IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-IBM option cards.

This product has been tested and found to comply with the limits for Class B Information Technology Equipment according to CISPR 22 / European Standard EN 55022. The limits for Class B equipment were derived for typical residential environments to provide reasonable protection against interference with licensed communication devices.

Dieses Gerät ist berechtigt in Übereinstimmung mit dem deutschen EMVG vom 9.Nov.92 das EG-Konformitätszeichen zu führen. Der Aussteller der Konformitätserklärung ist die IBM United Kingdom Laboratories Limited, Mail Point 147, Hursley Park Winchester, Hampshire SO21 2JN, England.

Dieses Gerät erfüllt die Bedingungen der EN 55022 Klasse B.

Japanese Voluntary Control Council for Interference (VCCI) Statement

This equipment is in the 1st Class category (information equipment to be used in commercial and/or industrial areas) and conforms to the standards set by the Voluntary Control Council for Interference by Information Technology Equipment aimed at preventing radio interference in commercial and industrial areas.

Consequently, when used in a residential area or in an adjacent area thereto, radio interference may be caused to radios and TV receivers, etc.

Read the instructions for correct handling.

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**TURBOWAYS 25 ATM PCI Adapter
Hardware Installation Guide
Part Number 72H4627**

We hope you find this publication useful, readable, and technically accurate, but only you can tell us! Your comments and suggestions will help us improve our technical publications. Please take a few minutes to let us know what you think by completing this form. If you are in the U.S.A., you can mail this form postage free or fax it to us at 1-800-253-3520. Elsewhere, your local IBM branch office or representative will forward your comments or you may mail them directly to us.

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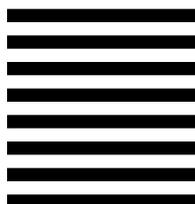
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