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10/100 EtherJet CardBus Adapter

Installation and User's Guide

OPTIONS
by IBM

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Note: Before using this information and the product it supports, be sure to read the general information in Appendix C.

First Edition (May 1998)

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Safety Information

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

Gevarr: Voodrat 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 electrische apparatuur op een veilige manier moet bekabelen en aansluiten

Danger: Avant de procéder à l'nstallation 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.

Perigo: Antes de começar a instaler deste produto, leia as informações de segurança contidas em *Cuidado: Informações Sobre Segurança–Leia Primeiro*, SD21-0030. Esse folheto descreve procedimentos de segurança para a instalação de cabos e conexões em equipamentos elétricos.

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。

Opasnost: Prije nego sto počnete sa instalacijom produkta, pročitajte naputak o pravilima o sigurnom rukovanju u Upozorenje: Pravila o sigurnom rukovanju - Prvo pročitaj ovo, SD21-0030. Ovaj privitak opisuje sigurnosne postupke za priključivanje kabela i priključivanje na električno napajanje.

Upozornění: než zahájíte instalaci tohoto produktu, přečtěte s nejprve bezpečnostní informace v pokynech „Bezpečnostní informace“ č. SD21-0030. Tato brožurka popisuje bezpečnost opatření pro kabeláž a zapojení elektrického zařízení.

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.

Gevarr: 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 appratuur.

VARRA: 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.

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 équipments électriques en toute sécurité.

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

Κίνδυνος: Πριν ξεκινήσετε την εγκατάσταση αυτού του προϊόντος, διαβάστε τις πληροφορίες ασφάλειας στο φυλλάδιο *Caution: Safety Information-Read this first,* SD21-0030. Στο φυλλάδιο αυτό περιγράφονται οι ασφαλείς διαδικασίες για την καλωδίωση των ηλεκτρικών συσκευών και τη σύνδεσή τους στην πρίζα.

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

Pericolo: prima di iniziare l'installazione di questo prodotto, leggere le informazioni relatie 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.

危険： 導入作業を開始する前に、安全に関する
小冊子SD21-0030 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。

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

ОПАСНОСТ
Пред да почнете да го инсталирате овој продукт, прочитајте
ја информацијата за безбедност:
"Предупредување: Информација за безбедност: Прочитајте го
прво ова", SD21-0030.
Оваа брошура опишува безбедносни процедури за каблирање
и вклучување на електрична опрема.

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

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.

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.

ОСТОРОЖНО: Прежде чем инсталлировать этот продукт, прочтите Инструкцию по технике безопасности в документе "Внимание: Инструкция по технике безопасности -- Прочесть в первую очередь", SD21-0030. В этой брошюре описаны безопасные способы каблирования и подключения электрического оборудования.

Nebezpečenstvo: Pred inštaláciou výrobku si prečítajte bezpečnosté predpisy v
Výstraha: Bezpeč osté predpisy - Prečítaj ako prvé, SD21 – 0030. V tejto brožúrke sú opísané bezpečnosté postupy pre pripojenie elektrických zariadení.

Pozor: Preden zaènete z instalacijo tega produkta preberite poglavje: 'Opozorila: Informacije o varnem rokovanju-preberi pred uporabo," SD21-0030. To poglavje opisuje praviine postopke za kabliranje,

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.

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

在安裝此產品之前，請先閱讀安全資訊。

請閱讀 - 安全資訊 SD21-0030

以下子說明插接電器設備之電纜線的安全程序。

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About This Manual

This manual contains instructions for installing and configuring the IBM 10/100 EtherJet CardBus Adapter under Microsoft Windows 95, Windows 98, and Windows NT and general diagnostics and troubleshooting information.

Who Should Read This Manual

This manual is intended for both the end-user and network administrator of the EtherJet CardBus Adapter.

How This Manual Is Organized

This manual contains the following chapters and appendixes:

- Chapter 1, “Hardware Installation,” lists the equipment and system requirements and describes the hardware installation procedure.
- Chapter 2, “Windows 95 and Windows 98 Installation,” provides information on the drivers supplied for installation under Windows 95.
- Chapter 3, “Windows NT Installation,” provides information on the drivers supplied for installation under Windows NT.
- Chapter 4, “Diagnostics and Troubleshooting,” contains supplementary diagnostics and troubleshooting information for the EtherJet CardBus Adapter.
- Appendix A, “Product Support Services,” list the services available for the EtherJet CardBus Adapter.
- Appendix B, “Specifications,” list the general and physical specifications for the EtherJet CardBus Adapter.
- Appendix C, “Notices,” contains any notices associated with EtherJet CardBus Adapter.

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Additional Information

For information on IBM OS/2, 32-bit ODI drivers, and Windows 3.x, and supplementary information on Windows 95, see the Windows Help file **HELPDOCS.HLP** on the DOS, Windows 3.x, and NetWare Installation Diskette. Also view the **README.TXT** file on the DOS, Windows 3.x, and NetWare Installation Diskette.

For software updates and troubleshooting information, visit the IBM web site at:

`http://www.networking.ibm.com/support/ejetcardbus`

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Chapter 1. Hardware Installation

Follow the instructions in this chapter to install the IBM 10/100 EtherJet CardBus Adapter hardware and network cabling. Then proceed to the software installation chapter for your operating system environment, as follows:

- Chapter 2, “Windows 95 and Windows 98 Installation”
- Chapter 3, “Windows NT Installation”
- Chapter 4, “Diagnostics and Troubleshooting”

The EtherJet CardBus Adapter provides access to both 10-Mbps and 100-Mbps networks with a single adapter cable, and auto-negotiates 10-Mbps or 100-Mbps network speed.

Notes:

1. Some computers may require that you configure the built-in system setup or control program to enable the use of Card-Bus adapters. Refer to your computer’s User’s Guide for configuration information.
2. Category 5 (data grade) unshielded twisted pair (UTP) cabling is required for 100 Mbps or Category 3 or 5 for 10 Mbps.

Viewing HELPDOCS.HLP

For information on Windows 3.x, IBM OS/2, and 32-bit ODI installation and troubleshooting, and supplementary information for other operating systems, see the Windows Help file HELPDOCS.HLP on the DOS, Windows 3.x, and NetWare Installation Diskette.

You can view the `HELPDOCS.HLP` file in one of the following ways:

- From Windows 3.x:
  1. Click **File** from the Program Manager.
  2. Click **Run**.
  3. In the **Run** window, enter `a:\helpdocs.hlp`.
  4. Click **OK** to view the help file.

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- From OS/2:
  1. Click **OS/2 System** icon.
  2. Click **Command Prompts** icon.
  3. Click **Win-OS/2 Full Screen** icon or **Windows/3.1**icon. This opens Windows' Program Manager.
  4. Click **File** from the Program Manager.
  5. Click **Run**.
  6. In the **Run** window, enter `a:\helpdocs.hlp`.
  7. Click **OK** to view the help file.

Before Installing Hardware

Check that the package contains the following items, in addition to this publication:

- EtherJet CardBus Adapter
- LAN adapter cable with 16-pin PC Card connector at one end and a female RJ-45 connector at the other
- Diskette 1 containing DOS, Windows 3.x, and NetWare Installation and Diskette 2 containing Windows 95, 98, and NT Network Drivers
- *Caution: Safety information—Read This First* booklet.

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

Verify Other Required Equipment

To install the EtherJet CardBus Adapter, you need the following equipment:

1. A portable PC with a CardBus PC Card slot.
2. A local area network supporting 10- or 100-Mbps Ethernet, as required, and a network operating system supported by the EtherJet CardBus Adapter.

   Note: Because the EtherJet CardBus Adapter automatically detects the speed of the network to which it is connected, it may be safely connected to either a 100BASE-TX or 10BASE-T network, as specified in items 3 and 4 below.
3. For connection to a 100BASE-TX 100-Mbps Ethernet network, a **Category 5** (data grade) unshielded twisted pair (UTP) network cable terminating in a male RJ-45 connector and connected to a 100-Mbps hub or switch.
4. For connection to a 10BASE-T twisted pair Ethernet network, a network cable terminating in a male RJ-45 connector and connected to a 10-Mbps hub or switch.

Determine System Requirements

During installation of the EtherJet CardBus Adapter hardware, the computer should be ON and your standard operating software should be loaded. If configured to do so, your system will detect the EtherJet CardBus Adapter. For details on how to install driver software, see the chapter for your operating system environment.

Note: The EtherJet CardBus Adapter hardware is compatible with Types II and III PC Card slots that support CardBus technology. Installation and removal procedures may vary on different computers.

Installing the Hardware

To install the EtherJet CardBus Adapter use the following instructions.

Inserting the EtherJet CardBus Adapter

1. Grasp the EtherJet CardBus Adapter by the edges with the IBM label facing upward and the wide PC Card connector next to the insert slot.
2. Insert the card into a CardBus slot and push it in until it is firmly seated.

   Note: The EtherJet CardBus Adapter can be used only in CardBus-compliant PC Card slots.

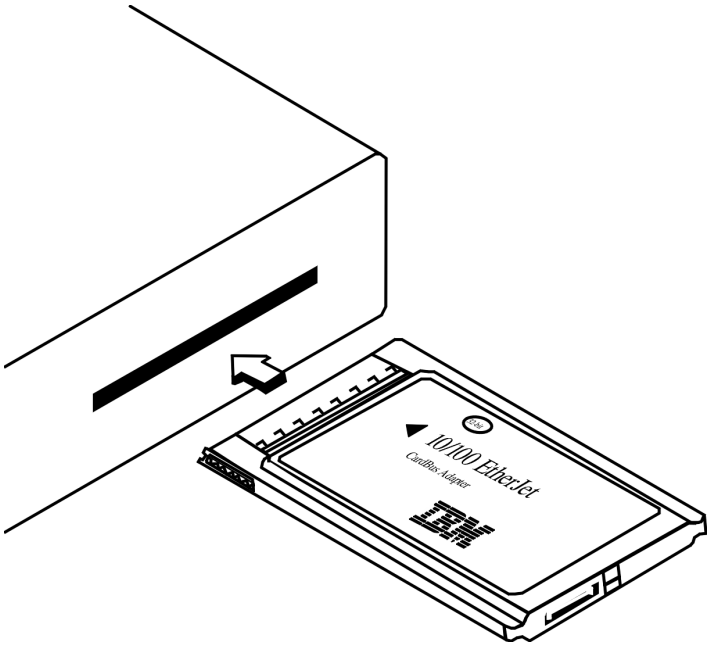

Figure 1-1. Inserting the EtherJet CardBus Adapter into the Computer

Connecting the LAN Adapter Cable to the Card

Attach the 16-pin connector at the end of the IBM adapter cable to the mating connector on the end of the EtherJet CardBus Adapter. Press the cable connector gently into the connector on the card until it is firmly in place. Do not force the connection.

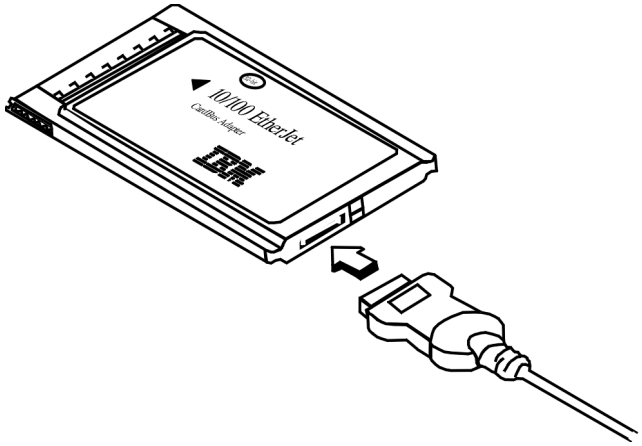

Figure 1-2. Connecting the LAN Adapter Cable to the EtherJet CardBus Adapter

Connecting the Network Cable to the LAN Adapter Cable

Plug the network cable into the female RJ-45 connector on the LAN adapter cable, as shown in the Figure 1-3.

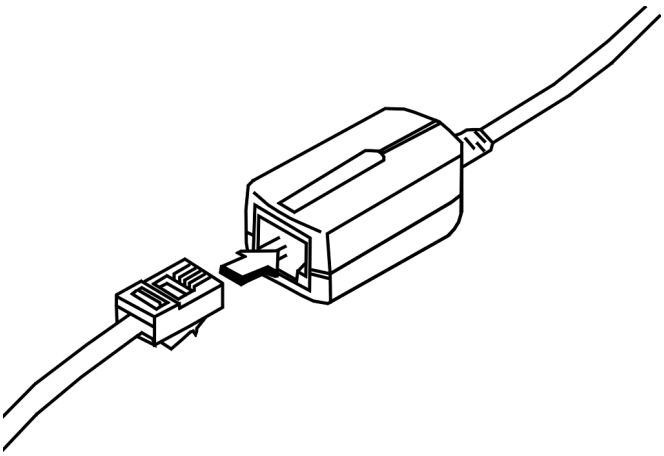

Figure 1-3. Connecting to the Network Cable to the LAN Adapter Cable

Power-Saving Mode

The EtherJet CardBus Adapter is designed for very low-power consumption, minimizing the computer's battery drain. The Ether-Jet CardBus Adapter automatically senses when the LAN cable is detached and reattached, and it goes in or out of a lower power mode accordingly. This maximizes battery life.

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Chapter 2. Windows 95 and Windows 98 Installation

Plug and Play Installation

Most CardBus-enabled computers support plug and play installation of the EtherJet CardBus Adapter under Windows 95. However, early versions of Windows 95 (950 or 950a) require manual installation. Both types of installation are described in this chapter. Troubleshooting and keyword information is also provided.

Drivers Available

The following drivers for Windows 98 and Windows 95 are supplied with the EtherJet CardBus Adapter:

- An NDIS3 driver (IBMC.SYS)
- An NDIS4 driver (IBMCN4.SYS)
- A 32-bit ODI driver (IBMC.LAN) with promiscuous support

To install the NDIS3 driver IBMC.SYS, use the procedures described in this chapter.

For NDIS4 instructions, see the README.TXT file on the Windows 95, 98, and NT Network Drivers Diskette.

If your environment requires use of the 32-bit ODI client driver under Windows 95 (as indicated by your network administrator), see the Windows Help file HELPDOCS.HLP on the DOS, Windows 3.x, and NetWare Installation Diskette.

Installing under Windows 98

See the `README.TXT` file on the Windows 95, 98, and NT Network Drivers Diskette.

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Installing under Windows 95

1. With Windows 95 running, insert the EtherJet CardBus Adapter into the CardBus PC Card slot and connect cables as shown in Chapter 1.
   - For plug and play installation, continue with step 2.
   - For manual installation, go to step 3.

Plug and Play Installation (Versions 950b OSR2 and later)

2. If Windows 95 displays the New Hardware Found window, follow the instructions on the screen to complete the installation. No further steps are necessary.

   If the New Hardware Found window does ***not*** appear, go to step 3.

   Notes:

   1. If the New Hardware Found window appears, but the EtherJet CardBus Adapter does not initialize or shows conflicts in Device Manager, see Windows 95 Troubleshooting on page 2-3.
   2. If you are installing on a Toshiba portable computer and the New Hardware Found window does not appear, see the Windows Help file HELPDOCS.HLP on the DOS, Windows 3.x, and NetWare Installation Diskette for instructions.

Manual Installation (Windows 95 versions 950 or 950a)

3. Click **Start**, select Settings, then click **Control Panel**.
4. In the **Control Panel**, double-click **Network**.
5. In the Network window, Configuration tab, click **Add**.
6. In the Select Network Component Type window, double-click **Adapter**.
7. In the Select Network Adapter window, click **Have Disk**.
8. Insert the Windows 95, 98, and NT Network Drivers Diskette.
9. With A:\ in the input box, click **OK** (or type the correct path and click **OK**).
10. Select **IBM 10/100 EtherJet CardBus Adapter** Manual Load and click **OK**.

11. In the Network window, click **OK**.

    The IBM dialog box displays various settings. An asterisk (*) in any field indicates that the current setting is incorrect. Use the Up or Down arrow to adjust the setting until the asterisk disappears.

12. Click **OK**. The Copying Files window opens.

13. Insert your original Windows 95 CD or diskette (identify the drive that holds the CD or diskette) and click **OK**. The System Settings window opens.

    Note: If Windows 95 was preinstalled, the necessary files are located in the following directory:

    `c:\windows\options\cabs`

14. Click **Yes** when prompted to restart the computer.

    Note: If you hear a Windows 95 “error” beep on reboot, ignore it.

Windows 95 Troubleshooting

The EtherJet CardBus Adapter is detected by Windows 95 Version 950b (OSR2), but does not initialize or shows errors in Device Manager.

The EtherJet CardBus Adapter may need to be installed manually under Windows 95 version 950b and later even if it was detected (as indicated by the message `New Hardware Found`). Manual installation instructions follow.

Manual Installation under Windows 95 Version 950b (OSR2) and Later

1. Click the **Start** button in the lower left corner of the screen.
2. Choose the menu item: **Settings**.
3. Choose the menu item: **Control Panel**.
4. Double-click the System icon.
5. In the System Properties window, view the Device Manager tab.
6. In the Device Manager window, click **PCMCIA socket**.

There will be two CardBus controllers listed under PCMCIA socket. “Top” and “bottom” designations may vary in different machines.

- If the EtherJet CardBus Adapter is in the top slot, click the top CardBus controller to select it.
- If the Adapter is in the bottom slot, click the bottom Card-Bus controller to select it (make a note of which slot the adapter was in).

7. Click **Properties**. Check the box **Disable** in this hardware profile.
8. Click **OK**. You will see a red X on the CardBus controller that was disabled.
9. Click **OK** on the Device Manager tab.
10. Open a DOS session in Windows 95 OSR2 and delete the following files:

    ```
    \WINDOWS\INF\*.BIN
    \WINDOWS\INF\SX*.INF
    \WINDOWS\SYSTEM\IBMC.SYS
    ```

11. Rename the files CONFIG.SYS and AUTOEXEC.BAT to ensure that Windows 95 OSR2 runs in 32-bit protected mode.

    Windows 95 OSR2 does not support the use of real-mode and protected-mode drivers simultaneously. This combination may cause unpredictable results. If these drivers are of mixed types, the computer might stall or the network might not work. The following commands can be used to rename the AUTOEXEC.BAT and CONFIG.SYS:

    ```
    REN C:\AUTOEXEC.BAT C:\AUTOEXEC.XOX
    REN C:\CONFIG.SYS C:\CONFIG.XOX
    ```

12. Shut down Windows 95 OSR2 and power off the machine. Remove the EtherJet CardBus Adapter physically from the PC Card slot (make a note of whether the adapter was in the top or bottom PC Card slot).
13. Restart Windows 95 OSR2. When all disk drive activity has stopped, reinsert the Adapter in the PC Card slot from which you removed it in step 12.

14. Click **Start** button, select **Settings**, and then **Control Panel**. Double-click **Add New Hardware**. When asked,

    `Do you want Windows to search for your new hardware?,`

    select **NO** and click **Next**.

15. Select **Network adapters** and click **Next**. Under Manufacturers, select **IBM** and click the **Have Disk** button.

16. Insert the Windows 95, 98, and NT Network Drivers Diskette in the diskette drive and make sure **A:** is selected in the Copy Manufacturers files from box. Click **OK**.

17. Select **IBM 10/100 EtherJet CardBus Adapter manual load**, click **OK**, click **OK** again, click **Next**, and then **Finish**.

    The PC Card (PCMCIA) Wizard appears. A copy of the Windows 95 OSR2 CAB files should already be on the machine.

18. When asked,

    `Are you using a PC card to install Windows?,`

    select **No**.

19. When asked,

    `Do you want to review your system files ..?,`

    select **No**. Click **Next** and then **Finish**.

20. Select **Yes** to shut down the computer. Windows 95 OSR2 will add the IBM Adapter in Device Manager and under Network components. Depending on the installation, you might be prompted for the Windows 95 OSR2 diskettes or CD to set up a basic Microsoft network.

Windows 95 OSR2 includes 32-bit Clients for:

1. Microsoft Networks
2. NetWare Networks

For instructions on installation of the 32-bit ODI driver, see the Windows Help file HELPDOCS.HLP on the DOS, Windows 3.x, and NetWare Installation Diskette.

Note: For supplementary information on version 950a of Windows 95, see Windows Help file HELPDOCS.HLP on the DOS, Windows 3.x, and NetWare Installation Diskette.

Windows 95 Driver Parameters Reference

IBMC.SYS (NDIS3) and IBMCN4.SYS (NDIS4) Driver Settings

IBMC.SYS is an NDIS3 driver. IBMCN4.SYS is an NDIS4 driver. Both conform to the Microsoft Network Driver Interface Specification (NDIS).

The files necessary for using IBMC.SYS with Windows 95 include:

NETIBMC.INF Installation file for Windows 95

IBMC.SYS NDIS3 driver for Windows 95

You can modify user-configurable parameters to the IBMC.SYS and IBMCN4.SYS drivers using the Network Control Panel built into Windows 95. This applet queries you for parameter selections and sets the corresponding parameters in the registry. The user-configurable parameters are as follows:

Parameter	Default	Valid Values	Reg. Value
DirectEnable	AutoDetect	OFF ON AutoDetect	1 2 0
EarlyTransmit	ON	OFF ON	0 1
InterruptStyle	0	AutoDetect PCI-IRQ ISA-IRQ	0 1 2
LineSpeed	Auto	AutoDetect 10 Mbps 100 Mbps	0 1 2
LineMode	0	AutoDetect Half-Duplex Full-Duplex	0 1 2
Network Address	See Network Administrators, note below.		
Socket	0	Autodetect 1, 2, 3, 4	0 0, 1, 2, 3, 4
CableDetect	ON	On Off	1 0

For network administrators only: The network node address can be modified by specifying a value for Network Address such as 0080C7112233. If the user does ***not*** specify a Network Address, then the IBMC.SYS driver uses the network node address contained in the EtherJet CardBus Adapter Information Structure.

Note: For definitions of the keywords above, see the Keyword Reference in Chapter 4, “Diagnostics and Troubleshooting”.

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Chapter 3. Windows NT Installation

The EtherJet CardBus Adapter supports manual installation under Microsoft Windows NT 3.51 and NT 4.0. Plug and Play installation and hot swapping of CardBus adapters are not directly supported by Windows NT, but may be supported through third-party Card and Socket services software.

When the EtherJet CardBus Adapter is installed, the other PC Card slot is available for use by another PC Card.

Drivers Available

The following drivers for Windows NT are on the Windows 95, 98, and NT Network Drivers Diskette **noted:**

- IBMC.SYS - NDIS3 driver
- IBMCNT.SYS - Card and Socket Services driver
- IBMCN4.SYS - NDIS4 driver

The NDIS3 driver IBMC.SYS and the IBMCNT.SYS driver are described in this chapter. For NDIS4 instructions, see the README.TXT file on the Windows 95, 98, and NT Network Drivers Diskette.

Note: For the latest information on CardBus support in Windows NT, review the README.TXT file on the Windows 95, 98, and NT Network Drivers Diskette.

Card and Socket Services Software

Some Windows NT 4.0 installations include third-party Card and Socket Services software designed to improve PC Card installation and to support hot swapping. In addition to the standard NDIS3 and NDIS4 drivers, IBM has developed IBMCNT.SYS to provide additional support for certain Card and Socket Services software.

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The EtherJet CardBus Adapter supports the following Windows NT 4.0 Card and Socket Services software:

CardExecutive for NT 4.0 from Phoenix Technologies
Support for Phoenix CardExecutive is provided by the special Card and Socket Services driver IBMCNT.SYS.

CardWare for Windows NT 4.0 from Award Software
For instructions on using Award CardWare, see the README.TXT file on the Windows 95, 98, and NT Network Drivers Diskette.

CardWizard for NT 4.0 from SystemSoft Corporation
Support for SystemSoft CardWizard is provided in the NDIS3 driver IBMC.SYS.

PC Card Controller for NT from Softex Incorporated
Softex PC Card Controller for NT provides functionality similar to Phoenix CardExecutive. If you are using Softex, follow the instructions for Phoenix CardExecutive.

Which Driver to Use

Use the following information to determine which driver to use in your environment.

IBMC.SYS
For use under NT 3.51 and 4.0 without Card and Socket Services, and for use under NT 4.0 with SystemSoft CardWizard for NT 4.0

IBMCNT.SYS
For use under NT 4.0 with Phoenix CardExecutive and Softex PC Card Controller for NT.

IBMCN4.SYS
See the README.TXT file on the Windows 95, 98, and NT Network Drivers Diskette.

Installing under NT 4.0

Insert the EtherJet CardBus Adapter into the CardBus PC Card slot.

- **Adapter detected:** If the EtherJet CardBus Adapter is detected, go to the section "Installation under NT 4.0 Using Card and Socket Services."
- **Adapter not detected:** If the EtherJet CardBus Adapter is not detected, go to "Installation under NT 4.0 without Card and Socket Services."

Installation under NT 4.0 Using Card and Socket Services

1. Once the Card Services software has detected the adapter, follow the on screen installation instructions for your Card and Socket Services software. Use of default resource settings is recommended.
2. If the Card Services software includes a driver for the EtherJet CardBus Adapter, install that driver. To verify that you have the latest Windows 95, 98, and NT Network Drivers Diskette, visit the IBM web site. Otherwise, follow the guidelines below:
   - **SystemSoft CardWizard** Card Services software will display a CardWizard icon on the task bar when you insert the adapter. Use the driver **IBMC.SYS**, located in the root of the Windows 95, 98, and NT Network Drivers Diskette.
   - **Phoenix CardExecutive** and **Softex PC Card Controller** use the driver **IBMCNT.SYS**, located in the \IBMCNT directory on the Windows 95, 98, and NT Network Drivers Diskette. When the Card Services software prompts for the driver diskette, enter the path **A:\IBMCNT**.
   - **Award CardWare** instructions are in the **README.TXT** file on the Windows 95, 98, and NT Network Drivers Diskette.

Installation under NT 4.0 without Card and Socket Services

Use these instructions if the EtherJet CardBus Adapter was not detected upon insertion, indicating that no Card and Socket Services software is in use.

1. With the EtherJet CardBus Adapter in the PC Card slot, click **Start**, click **Settings**, and select **Control Panel**. The Control Panel opens.
2. Double-click the **Network** icon. The Network Settings window opens.
3. Click the **Adapters** tab. The Network Adapters window opens.
4. Click **Add**. The Select Network Adapter window opens.
5. Click **Have Disk** and insert the Windows 95, 98, and NT Network Drivers Diskette.
6. Click **OK**. The Select OEM Option window opens.
7. Click **OK**. The Windows NT Setup window briefly displays.
8. EtherJet CardBus Adapter Settings window opens, displaying the default settings.

   Note: In most circumstances, the default settings will operate the CardBus correctly. However, consult the README.TXT file on the Windows 95, 98, and NT Network Drivers Diskette for the latest recommendations.
9. Click **OK**. The Network Settings window redisplays.
10. Click **Close**. If any dialog boxes appear related to setting up network protocols, click **Cancel** and contact your Network Administrator.
11. When the Network Settings Change window opens, click **Yes** to restart the computer.

Installing under NT 3.51

1. Insert the EtherJet CardBus Adapter.
2. Double-click the **Control Panel**. The Control Panel opens.
3. Double-click the **Network** icon. Network Settings opens.

4. Click **Add Adapter**. The Add Network Adapters window opens.
5. Scroll to select **Other (requires disk from manufacturer)**.
6. Click **Continue**. The Insert Disk windows opens.
7. Insert the Windows 95, 98, and NT Network Drivers Diskette.
8. Click **OK**. The Select OEM Option window opens.
9. Click **OK**.
10. The EtherJet CardBus Adapter Setup window opens, displaying the default settings.
11. Click **OK**. The Network Settings window reopens.
12. Click **OK**. The Network Settings Change window opens.
13. Click **Restart Now** to restart your computer.

Removing the CardBus Adapter from NT 3.51

1. Double-click the **Control Panel**. The Control Panel opens.
2. Double-click the **Network** icon. Network Settings opens.
3. Choose the **IBM 10/100 EtherJet CardBus Adapter**.
4. Click **Remove**.
5. Click **Yes** to confirm.

Windows NT Driver Parameters

IBMC.SYS, IBMCNT.SYS, and IBMCN4.SYS driver parameters can be modified using the Windows NT Network Control Panel. This applet uses the OEMSETNT.INF file to set the corresponding parameters in the registry.

Note: For definitions of the keywords listed, see the section Keyword Reference in Chapter 4, “Diagnostics and Troubleshooting”.

Parameter	Default	Valid Values	Registry Value
DirectEnable	0	AutoDetect OFF ON	0 1 2
EarlyTransit	0	OFF ON	0 1
InterruptNumber	11	3 - 15	same
InterruptStyle	0	AutoDetect PCI IRQ ISA IRQ	0 1 2
IOBaseAddress	0xF800	0x1000-0xF800	same
LineMode	0	AutoDetect Half-Duplex Full-Duplex	0 1 2
LineSpeed	0	AutoDetect 10 Mbps 100Mbps	0 1 2
LinkIntegrity	1	OFF ON	0 1
MemoryMapped BaseAddress	5B80000	0xC0000- B000C000	same
Socket	0	AutoDetect 1 2 3	0 1 2 3
CableDetect	On	ON OFF	1 0

For network administrators only:

The network node address can be modified manually.

1. Using the Run command, type `regedit` and press **Return**.
2. Select HKEY_LOCAL_MACHINE, System, CurrentControlSet, Services, IBMC.
3. Click on the **Edit** menu, select **New**, press **String Value**.
4. Rename the new value Network Address (no spaces, case sensitive) and press **Enter**.

5. Then double click **NetworkAddress** and enter the 12 digit address (no spaces) in the "Value Data" box and click **OK**.

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Chapter 4. Diagnostics and Troubleshooting

This chapter contains supplementary diagnostics and troubleshooting information for the EtherJet CardBus Adapter. For troubleshooting information specific to your operating environment, see the appropriate installation chapter. This supplementary information is intended for users or network administrators who are already familiar with the EtherJet CardBus Adapter and its user documentation, and who have run into difficulties after having completed the appropriate installation and troubleshooting procedures for their operating environment.

Note: For additional troubleshooting information, see the Windows Help file HELPDOCS.HLP on the DOS, Windows 3.x, and NetWare Installation Diskette.

The following topics are covered in this chapter:

- LED Indicators
- Diagnostic Test
- Troubleshooting Checklist
- Keyword Reference (All Drivers)

Additional Sources of Information

Consult your computer and network documentation as needed. For the latest technical notes on the EtherJet CardBus Adapter, see the **README.TXT** file on the DOS, Windows 3.x, and NetWare Installation Diskette.

See Appendix A for IBM support services access information.

LED Indicators

The LED indicators on the EtherJet CardBus Adapter media module operate under the following conditions: (1) the card is inserted into a PC Card slot and (2) connected to the network, (3) computer is powered on, and (4) network driver has been loaded.

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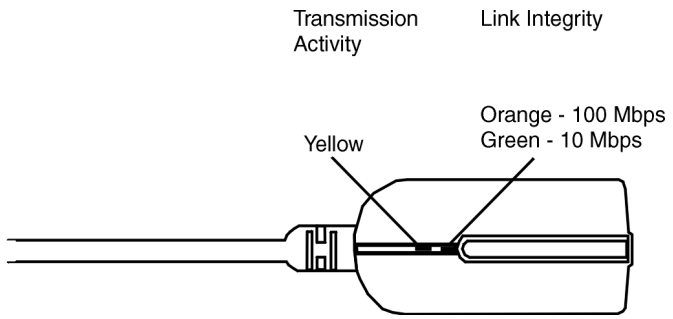

Figure 4-1. LAN Adapter Cable (100BASE-TX/10BASE-T)

Diagnostic Self Test

IBM provides both a DOS-based and Windows based self-test diagnostics program. The programs test several EtherJet Card-Bus Adapter functions. It also reports test results, the serial number of the unit, and the node address.

Program	For Use With	Diskette Found On
IBMCTEST.EXE	DOS, Win 3.X	DOS, Windows 3.x, and NetWare Installation Diskette
EJETDIAG.EXE	Win 95, 98, NT	Windows 95, 98, and NT Network Drivers Diskette

Note: IBMCTEST can be run only from the MS-DOS command line. It cannot be run from a DOS box within Windows.

Executing the DOS Diagnostic Program

Use the following steps to execute the self-test.

1. Install the EtherJet CardBus Adapter according to the instructions contained in Chapter 1.
2. Power down and restart the computer from MS-DOS. Do not load a network driver.

Note: Do not run IBMCTEST with a network driver loaded. Loading a network driver before running IBMCTEST may cause unpredictable results when exiting the test utility.

3. Type **IBMCTEST** at the MS-DOS prompt and press **Enter**.

Main Screen

The program consists of several function buttons and a view pane. Pressing or invoking a function will bring up the corresponding panel in the view pane. This view remains until another is selected. To exit IBMCTEST type **x** or push the **Exit** button.

When a function is active, the button appears to remain down or pushed. Once the button pops up, the function is completed and the screen is a passive results display.

Nine functions can be invoked by pushing the associated button on the main panel, using the highlighted letter indicated on the button, or the left mouse button. Online help is provided.

Note: Write down the EtherJet CardBus Adapter model and serial numbers for reference.

Executing the Windows Diagnostic Program

1. Make sure the EtherJet CardBus Adapter is installed and has been configured to work in your version of Windows.
2. Insert the Windows 95, 98, and NT Network Drivers diskette.
3. Select **File, Run, a:\EJETDIAG.EXE**.
4. Navigate through the diagnostic program by clicking on the appropriate tab. When finished, click **OK** to exit.

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Troubleshooting Checklist

- For Windows 3.x installation and troubleshooting information, see HELPDOCS.HLP on the DOS, Windows 3.x, and NetWare Installation Diskette.
- Review the README.TXT file on the DOS, Windows 3.x, and NetWare Installation Diskette.
- Be sure you have the current drivers for your adapter. You can check the version numbers on the IBM web site at:

  `http://www.networking.ibm.com/support/ejetcardbus`
- When loading drivers or running the test utility, keep the LAN adapter cable attached to the EtherJet CardBus Adapter.
- Under Novell, ensure that the FRAME TYPE you are using is the same as that of the file server. The server frame type should be specified as the first frame type in the NET.CFG.
- In a twisted pair environment, try plugging directly into the hub or concentrator.
- Plug in to a known working network connection.
- Try using the EtherJet CardBus Adapter on a different computer.
- Try another IBM adapter if available.
- If your computer has multiple PC Card sockets, move the adapter to another socket.
- If you have more than one PC Card device in your computer, remove the non-IBM PC Card devices.
- Test the IBM adapter without loading Card and Socket Services to prevent conflicts between the IBM adapter and Card and Socket Services. The interrupt, memory address location, and I/O address for Card and Socket service drivers must match the IBM configurations in NET.CFG or PROTOCOL.INI (if used).
- Make sure that the IBM interrupt, memory address, and I/O address do not conflict with other installed hardware (such as sound cards, CD-ROM drives, or PEN devices).

- Try loading the CardBus drivers at different memory locations (for example, C800, CC00, D400, D800).
- Try using different interrupt locations (for example, 5, 10, 11).
- Try using different port addresses (for example, 280, 290, 310, 320).

Keyword Reference (All Drivers)

Note: Configuration keywords for all EtherJet CardBus Adapter drivers are listed in alphabetical order. See the information on each operating system for keywords specific to that environment. For Windows 3.x, IBM OS/2, and 32-bit ODI, see the file HELPDOCS.HLP on the DOS, Windows 3.x, and NetWare Installation Diskette.

CableDetect turns the cable detect feature on or off. When on, cable detect puts the adapter in a low power mode when it senses there is no LAN cable attached.

CACHE sets system cache line size on the CardBus bridge. Values are system-dependent and may include only 0 (cache disabled), 4, 8, 16, or 32. Changes could affect network performance.

DIRECTENABLE (32-bit NDIS3 Driver IBMC.SYS) forces method used by driver to determine if a EtherJet CardBus Adapter is present. Valid parameters are AutoDetect, Off, and On. AutoDetect allows the driver to determine if the CardBus bridge has already been set up by another enabler such as Socket and Card Services. If so, the driver will use the current configuration. On forces the driver to enable the CardBus bridge without checking its current state.

DRIVERNAME=IBMC$ required as first item in the IBM section of the PROTOCOL.INI file for the IBMCNDIS driver.

EARLYRECEIVE see NOEARLYRX.

EARLYTRANSMIT see NOEARLYTX.

ERT specifies Advanced Look-ahead Pipelining threshold. Valid settings are LOW, MEDIUM, and HIGH. Changing this value affects network performance, depending on the computer system.

INT, INTERRUPTNUMBER see IRQ.

INTERRUPTSTYLE (For 32-bit NDIS3 Driver IBMC.SYS only) forces the driver to use ISA IRQ routing or PCI IRQ routing. Some CardBus bridges have the capability of supporting both PCI and ISA style IRQ routing. Valid parameters are AutoDetect, PCI-IRQ, and ISA-IRQ. The default keyword is AutoDetect.

IOADDRESS, IOBASEADDRESS specifies the base I/O address of the EtherJet CardBus Adapter I/O ports, in hexadecimal notation. The EtherJet CardBus Adapter requires 128 contiguous I/O addresses if run in I/O mode. If using memory-mapped I/O mode, no I/O ports are necessary. If this parameter is not specified the driver detects an I/O port automatically.

I/O PORT see IOADDRESS

IRQ specifies a hardware interrupt for the adapter. If PCI interrupts are used on the CardBus bridge, this parameter is ignored (unless the ISAIRQ keyword is used as an override). If this parameter is not specified the driver detects an IRQ automatically.

ISAIRQ use this keyword to force the driver to use ISA IRQ routing. Some CardBus bridges support both PCI and ISA style IRQ routing. The driver automatically determines the best choice for this option unless this keyword is used as an override.

LATENCY specifies the latency timer for the CardBus Bridge. This parameter affects the bus mastering capabilities of the EtherJet CardBus Adapter. Changing this parameter may affect system performance. The range is a decimal number from 1 to 255. The default is 32. The latency should be lowered if more than one peripheral device, such as a modem, is being used. If the EtherJet CardBus Adapter is the only peripheral being used, use a higher latency, such as 255.

LINEMODE (for 16-bit DOS drivers) selects either half-duplex or full-duplex mode for the network. Valid parameters are AUTO, HALF or FULL. Selecting full-duplex enables the EtherJet CardBus Adapter to send and receive data simultaneously when connected to a full-duplex hub. Default is AUTO.

LINEMODE (for 32-bit NDIS3 driver IBMC.SYS) selects either half-duplex or full-duplex mode for the network. Valid parameters are AutoDetect, Half Duplex, and Full-Duplex. Selecting full-duplex enables the EtherJet CardBus Adapter to send and

receive data simultaneously when connected to a full-duplex hub. Default is keyword is AutoDetect.

LINESPEED (for 16-bit DOS drivers) forces operation to 10 or 100 Mbps. If the keyword is not present the line speed is automatically detected (default).

LINESPEED (for 32-bit NDIS3 driver IBMC.SYS) forces operation to 10 or 100 Mbps. Valid parameters are AutoDetect, 10 Mbps, and 100 Mbps. Default is AutoDetect.

LINKDISABLE disables link integrity for non-IEEE 10BASE-T networks such as StarLAN 10. Without this keyword in the driver command line, the driver defaults to link integrity ENABLED.

MEM, MEMORY specifies the host PC memory location for the IBM adapter in hexadecimal notation, when MODE MEMORY (memory-mapped I/O) is being used (see MODE). The memory block occupies 4 KB of host memory.

MODE when set to IO disables requests for memory-mapped mode on systems that only support an I/O-driven card. The MEMORY setting provides increased performance on computers that allow simultaneous availability of memory and I/O resources.

NETWORKADDRESS allows you to override adapter's unique network node address by specifying a different node address.

NOBURST disables burst mode reads on the EtherJet CardBus Adapter. Using this keyword forces the adapter to initiate a bus-master request for each read, negatively impacting performance.

NOCHECK disables verification of adapter resources. If the driver detection and verification code is causing problems when loading, this keyword can be used to turn the feature off.

NODEADDRESS see NETWORKADDRESS.

NOEARLYRX disables Advanced Look-ahead Pipelining features of the EtherJet CardBus Adapter. This keyword can be used to troubleshoot systems that have inexplicable network problems. Using this keyword could negatively impact performance.

NOEARLYTX disables early transmit capability of the EtherJet CardBus Adapter. This keyword can be used to troubleshoot systems with inexplicable network problems. Using this keyword could negatively impact performance.

NOLED turns off LED indicators to conserve power.

NOPREFETCH disables prefetching in memory-mapped I/O mode by turning off this capability on the CardBus bridge. Using this keyword could negatively impact performance.

NOWRITEPOST disables prefetching in memory-mapped I/O mode by turning off this capability on the CardBus bridge. Using this keyword could negatively impact performance.

PCIIRQ forces the driver to use PCI IRQ routing. Some CardBus bridges have the capability of supporting both PCI and ISA style IRQ routing. The driver automatically determines the best choice for this option unless this keyword is used as an override.

PORT (ODI driver) see IOADDRESS.

RXBUFFERSIZE sets size of the adapter receive packet buffer. This is a number in decimal in the range 1 - 30 for 16-bit drivers and 1 - 100 for the 32-bit ODI driver. Each packet adds approximately 1520 bytes to the resident size of the driver. The default is 15 packets.

SINT (Packet Driver) is a number from hexadecimal 60 to 80 designating a software interrupt. Default is 60.

SOCKET (16-bit DOS Drivers) identifies number of host computer PC Card slot into which the IBM CardBus adapter is inserted. If a socket number is specified, only the specified socket is checked for the IBM adapter. If no socket is specified, all sockets are searched until the IBM adapter is found.

SOCKET (For 32-bit NDIS3 Driver IBMC.SYS) identifies the number of the host computer's PC slot or socket into which the EtherJet CardBus Adapter is inserted. Valid parameters are AutoDetect, 1, 2, 3, and 4. If a socket number is specified, only the specified socket is checked for the EtherJet CardBus Adapter. The default keyword is AutoDetect, and the driver automatically checks all slots for the EtherJet CardBus Adapter.

TXBUFFERSIZE sets the size of the adapter transmit packet buffer. This is the number of transmit packets in decimal in the range 1 - 10 for 16-bit drivers and 1 - 100 for the 32-bit ODI driver. Each packet adds approximately 1520 bytes to the resident size of the driver. The default is 2 packets.

VERBOSE displays additional configuration information when the driver loads, including information about the CardBus controller on the PCI to CardBus bridge on the host computer.

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Appendix A. Product Support Services

Help Files

The HELPDOCS.HLP file, contained on the DOS, Windows 3.x, and NetWare Installation Diskette, provides detailed information about the EtherJet CardBus Adapter.

Topics include:

- Windows 95 Help
- IBM OS/2 Help
- 32-Bit OD1 Help
- Windows 3.x Help
- IBM Product Support

IBM Product Support

The following IBM product support is available:

- Download the code from the **Internet** or the IBM Bulletin Board System.

  You can download the latest drivers and related code from the IBM web site or the BBS. If you are outside the United States or Canada, contact your IBM marketing representative for BBS information.

- **World Wide Web**:
  - On a Web Browser:
    1. Open
       `http://www.networking.ibm.com/support/ejet-cardbus`
    2. You now have access to all the latest drivers, technical tips, and product information.
  - For more information regarding other IBM Networking Products go to the IBM Networking Home page:

    `http://www.networking.ibm.com`

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  - FTP as Anonymous to **lansupport.raleigh.ibm.com**, directory **/pub/products/lanprods/ethernet**

Note: At the date of this publication, the BBS telephone number and the Internet Server address are current. If you find that either the telephone number or the Internet address is not available, check the README file to see whether a new number or address is available. (Help Files on page A-1 describes how to access this information.)

- IBM PC Company Bulletin Board System (BBS). For a new or updated version of the installation code or the drivers:
  - 1-919-517-0001 (Directory 32) for the United States
  - 1-604-664-6464 for Vancouver
  - 1-416-956-7877 for Toronto
  - 1-514-938-3022 for Montreal
  - 1-905-316-4255 for Markham
- IBM product support:
  - 1-800-772-2227 for IBM HelpCenter
  - 1-800-565-3344 for HelpPC (Canada)

Warranty Service Procedures

For details about warranty coverage and service, see Appendix C, “Notices”.

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Appendix B. Specifications

General Specifications

Model EtherJet CardBus Adapter

Cable: 100BASE-TX-unshielded twisted pair for use on Category 5 (data grade) cabling; 10BASE-T-unshielded twisted pair (UTP) Category 3 or better cabling

Connector: RJ-45

Operating Distance: 328 ft (100 m)

Ethernet Specifications

Ethernet IEEE 802.3 for 10 Mbps, 802.3u for 100 Mbps

Type II CardBus PC Card

10/100 Mbps full-duplex

Size: 3.37 in (86 mm) x 2.13 in (54.0 mm) x 0.20 in (5.0 mm) excluding adapter cable and network connection

Weight: 0.85 oz (24 g)

Power Requirements:

10BASE-T	3.3 V dc, 50 mA idle, 105 mA active, 80 mA typical
100BASE-TX	3.3 V dc, 125 mA idle, 135mA active, 130mA typical

Power Management:

Supports ACPI, CardBus Power Management

Specification, Magic Packet, and Wake on LAN

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Temperature Range:

Operating:	32°F to 131°F (0°C to 55°C)
Storage:	-4°F to 149°F (-20°C to 65°C)
Humidity:	95% max. noncondensing
LEDs:	Link integrity, transmission activity
Certification:	FCC Part 15, Class B

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Appendix C. Notices

References in this publication to IBM products, programs, or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM product, program, or service in this publication is not intended to state or imply that only IBM's product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any of IBM's intellectual property rights may be used instead of the IBM product, program, or service. Evaluation and verification of operation in conjunction with other products, programs, or services, except those expressly designated by IBM, are the user's responsibility.

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Safety Notices

Telecommunications Safety Requirements in the United Kingdom

This IBM product is made to high safety standards. It complies inherently with telecommunications safety standard BS 6301. It is not designed to provide protection from excessive voltages appearing externally at its interfaces. Therefore, when this product is connected to a public telecommunications network via any other equipment, and you connect to this product items not supplied by IBM United Kingdom Ltd., you must comply with mandatory telecommunications safety requirements.

Statement of Compliance with the United Kingdom Telecommunications Act 1984

This apparatus is approved under approval number NS/G/1234/J/100003 for indirect connections to the public telecommunications systems in the United Kingdom.

Electronic Emission Notices

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.

Responsible Party:

International Business Machines Corporation
New Orchard Road
Armonk, NY 10504
Telephone 1-919-543-2193

Industry Canada Class B Emission Compliance Statement

This Class B digital apparatus complies with Canadian ICES-003.

Avis de conformité aux normes d'Industrie Canada

Cet appareil numérique de la classe B est conform à la norme NMB-003 du Canada.

European Norm (EN) 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 an 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.

Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) vom 30. August 1995 (bzw. der EMC EG Richlinie 89/336).

Dieses Gerät ist berechtigt in Übereinstimmung mit dem deutschen EMVG das EG-Konformitätszeichen - CE - zu führen.

Verantwortlich für die Konformitätserklärung nach Paragraph 5 des EMVG ist die IBM Deutschland Informationssysteme GmbH, 70548 Stuttgart.

Informationen in Hinsicht EMVG Paragraph 3 Abs. (2) 2:

Das Gerät erfüllt die Schutzanforderungen nach EN 50082-1 und EN 55022 Klasse B.

EN 50082-1 Hinweis
"Wird dieses Gerät in einer industriellen Umgebung betrieben (wie in EN 50082-2 festgelegt), dann kann es dabei eventuell gestört werden. In solch einem Fall ist der Abstand bzw. die Abschirmung zu der industriellen Störquelle zu vergrößern."

Anmerkung
Um die Einhaltung des EMVG sicherzustellen sind die Geräte, wie in den IBM Handbüchern angegeben, zu installieren und zu betreiben.

Japanese Voluntary Control Council for Interference (VCCI) Statement

This product is a Class B Information Technology Equipment and conforms to the standards set by the Voluntary Control Council for Interference by Technology Equipment (VCCI). This product is aimed to be used in a domestic environment. When used near a radio or TV receiver, it may become the cause of radio interference. Read the instructions for correct handling.

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Machine IBM 10/100 EtherJet CardBus Adapter

Warranty Period* Lifetime

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3. be responsible for loss of, or damage to, a Machine in transit when you are responsible for the transportation charges.

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