



IBM UltraPort IrDA

User's Guide

OPTIONS
by IBM

Note: Before using this information and the product it supports, read the information under Appendix C, “Product warranties and notices” on page C-1.

UltraPort IrDA User's Guide

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About this book

This manual contains instructions for installing, configuring, and troubleshooting the IBM® UltraPort™ IrDA. The manual is divided into two parts:

Part 1: Installation and user's guide

This guide contains abbreviated installation instructions.

This guide also contains the product description and expanded installation instructions in the following languages:

- English
- French
- Spanish
- Italian
- Brazilian Portuguese
- Traditional Chinese
- Japanese

Part 2: Appendixes

The appendixes contain technical specifications, help and service information, and product warranties and notices.

Note: The illustrations in this manual might be slightly different from your hardware.

Registering your option

Thank you for purchasing OPTIONS by IBM. Please take a few moments to register your product and provide us with information that will help IBM to better serve you in the future. Your feedback is valuable to us in developing products and services that are important to you, as well as in developing better ways to communicate with you. Register your option on the IBM Web site at

<http://www.ibm.com/pc/register>

IBM will send you information and updates on your registered product unless you indicate on the Web site questionnaire that you do not want to receive further information.

Safety: Read first

Before installing this product, read the Safety Information.

مج، يجب قراءة دات السلامة

Antes de instalar este produto, leia as Informações de Segurança.

在安装本产品之前，请仔细阅读 **Safety Information** (安全信息)。

Prije instalacije ovog produkta obavezno pročitajte Sigurnosne Upute.

Před instalací tohoto produktu si přečtete příručku bezpečnostních instrukcí.

Læs sikkerhedsforskrifterne, før du installerer dette produkt.

Ennen kuin asennat tämän tuotteen, lue turvaohjeet kohdasta Safety Information.

Avant d'installer ce produit, lisez les consignes de sécurité.

Vor der Installation dieses Produkts die Sicherheitshinweise lesen.

Πριν εγκαταστήσετε το προϊόν αυτό, διαβάστε τις πληροφορίες ασφάλειας (safety information).

לפני שתתקינו מוצר זה, קראו את הוראות הבטיחות.

A termék telepítése előtt olvassa el a Biztonsági előírásokat!

Prima di installare questo prodotto, leggere le Informazioni sulla Sicurezza.

製品の設置の前に、安全情報をお読みください。

본 제품을 설치하기 전에 안전 정보를 읽으십시오.

Пред да се инсталира овој продукт, прочитајте информацијата за безбедност.

Lees voordat u dit product installeert eerst de veiligheidsvoorschriften.

Les sikkerhetsinformasjonen (Safety Information) før du installerer dette produktet.

Przed zainstalowaniem tego produktu, należy zapoznać się z książką "Informacje dotyczące bezpieczeństwa" (Safety Information).

Antes de instalar este produto, leia as Informações sobre Segurança.

Перед установкой продукта прочтите инструкции по технике безопасности.

Pred inštaláciou tohto zariadenia si pečítajte Bezpečnostné predpisy.

Pred namestitvijo tega proizvoda preberite Varnostne informacije.

Antes de instalar este producto lea la información de seguridad.

Läs säkerhetsinformationen innan du installerar den här produkten.

安裝本產品之前，請先閱讀「安全資訊」。

Part 1: Installation and user's guide

With the UltraPort IrDA, IBM brings infrared wireless connectivity to any ThinkPad® X Series computer UltraPort connector or to any computer with a Universal Serial Bus (USB). Operating at a maximum range of one meter, the UltraPort IrDA module can communicate with other IrDA devices at speeds up to 4 Mbps. In addition, the infrared transceiver swivels from front to back for a greater view field, further extending system flexibility.

This technology means less unsightly cords on a desk and no extra cables to carry around, and it enables reliable connections with IrDA-capable printers, digital cameras, or personal digital assistants (PDAs) at any time.

Product description



In addition to this book, the option package includes:

- **1** IBM UltraPort IrDA
- **2** Interposer
- **3** Tripod
- **4** UltraPort connector cover
- **5** USB-UltraPort adapter
- USB cable
- Windows device drivers CD

Contact your place of purchase if an item is missing or damaged. Be sure to retain your proof of purchase. It might be required to receive warranty service.

System requirements

Before you begin installing the IrDA, be sure your computer meets the following system requirements.

- UltraPort connector (ThinkPad X series only) or USB port
- CD-ROM or DVD-ROM drive (for use with the Windows CD)
- One of the following operating systems:
 - Microsoft® Windows® 98
 - Microsoft Windows 2000
 - Microsoft Windows Millennium Edition (Me)

Hardware installation

The UltraPort IrDA can be connected to your computer through either the UltraPort connection or the USB port.

UltraPort connection (ThinkPad X Series only)

1. Remove the rubber plug from the UltraPort connector on your ThinkPad computer.
2. Place the appropriate interposer on the UltraPort connector and secure it by using the two screws.
3. Attach the UltraPort IrDA to the UltraPort.

USB connection

1. Attach the USB-to-UltraPort adapter to the tripod.
2. Connect the UltraPort IrDA to the USB-to-UltraPort adapter.
3. Connect the USB cable to the USB-to-UltraPort adapter.
4. Connect the opposite end of the USB cable to the USB port of the computer.

When transporting the UltraPort IrDA, place the UltraPort connector cover over the connector of the IrDA.

Software installation

After installing the UltraPort IrDA, you are prompted to install the device drivers. Follow the instructions for your operating system.

Windows 98, Windows Millennium Edition, and Windows 2000 Professional

Make sure that the IBM UltraPort IrDA adapter is not plugged in before installing this software.

1. Double click on the **IBM UltraPort IrDA** icon found on the CD.
2. Click **Next** when the Install Shield Wizard appears.
3. Confirm the Destination Directory and click **Next** to proceed.
4. Confirm the Target Folder and click **Next**.
5. The Add Infrared Device Wizard appears on the screen, simply click **Next**.
6. Highlight the IBM Corp under manufacturer list and select the IBM USB IrDA Adapter under infrared devices. Choose the appropriate file which corresponds to your operating system.
7. The device drivers will now be successfully loaded and it is important to restart your computer.

You can now plug in your IBM UltraPort IrDA adapter once your system is restarted. The blinking LED on the unit indicates that the unit is working properly.

Un-Installation for Windows 98, Windows Millennium Edition, and Windows 2000 Professional

1. Click on **Add/Remove Programs** from the Windows Control Panel.
2. Select **IBM USB IrDA Adapter** and click **Remove**.
3. Go into Windows Device Manager and remove IBM UltraPort IrDA and Infrared Communication Device under the Infrared Devices category.
4. Select **IBM USB IrDA Adapter** under the Network Adapters category and click **Remove**.

You have now successfully uninstalled your IBM UltraPort IrDA Adapter. Please remove the IBM UltraPort IrDA Adapter and restart your computer to finalize the settings.

Initiating the Ir Transfer Link program

Follow the instructions for the appropriate operating system.

Windows 98

1. Double click **My Computer** (Infrared recipient should be showing).
2. Double click **Control Panel**.
3. Double click **Infrared**.
4. Click the **Options** tab.
5. Select the **Enable infrared communications** check box.
6. Click **Identification** tab.
7. Enter your Computer Name (what will be seen by other infrared users around).
8. Click **Apply**.

9. Click **OK**.

Windows 2000 Professional

1. Double click **My Computer**.
2. Double click **Control Panel**.
3. Double click **Wireless Link** icon.
4. Select everything on file transfer and image transfer.
5. Click **Apply** and Close.

Windows Millennium Edition

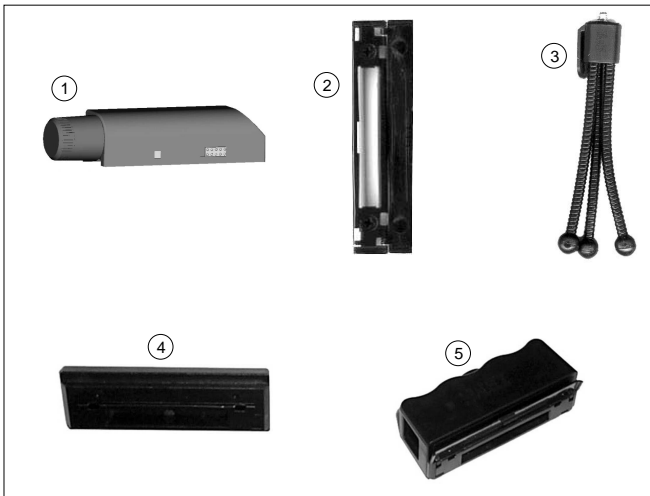
1. Double click **My Computer**.
2. Double click **Control Panel**.
3. Double click **Wireless Link**.
4. Make sure everything is selected.
5. Click **Apply** and Close.

Partie 1 : Installation et guide de l'utilisateur

Avec l'UltraPort IR (InfraRouge), IBM apporte la connectivité sans fil par infrarouge à tout ThinkPad X Series disposant d'un connecteur UltraPort ou à tout ordinateur disposant d'un port USB. Doté d'une portée maximale d'un mètre, le module UltraPort IR est capable de communiquer avec tout autre dispositif IrDA, à des vitesses allant jusqu'à 4 Mo/s. De plus, l'émetteur-récepteur infrarouge peut basculer d'avant en arrière. Cela permet un angle de vue plus important, qui améliore encore la flexibilité du système.

Cette technologie permet de diminuer le nombre de câbles disgracieux sur le bureau, et permet de ne pas avoir à transporter de câbles supplémentaires. Elle permet à tout instant de connecter de manière fiable une imprimante, un appareil photo numérique ou un assistant électronique (PDA) à connexion IrDA.

Description du produit



En plus du présent manuel, l'option comprend :

- **1** Un UltraPort IR IBM
- **2** Un Adaptateur
- **3** Un trépied
- **4** Un cache-connecteur UltraPort
- **5** Un adaptateur USB-UltraPort
- Un câble USB

- Un CD de gestionnaire de périphériques pour Windows

Prenez contact avec le lieu de vente si un de ces éléments est manquant ou endommagé. Conservez la preuve d'achat. Vous pouvez être amené à la fournir pour obtenir un service de garantie.

Configuration requise

Avant d'installer le port IrDA, assurez-vous que l'ordinateur dispose des éléments suivants :

- Un connecteur UltraPort (ThinkPad X series uniquement) ou un port USB
- Une unité de CD-ROM ou de DVD-ROM (pour l'utilisation du CD pour Windows)
- Un des systèmes d'exploitation suivants :
 - Microsoft Windows 98
 - Microsoft Windows 2000
 - Microsoft Windows Millennium Edition (Me)

Installation matérielle

L'UltraPort IR peut être connecté à l'ordinateur via une connexion UltraPort ou via un port USB.

Connexion UltraPort (ThinkPad X Series uniquement)

1. Retirez le capuchon de caoutchouc du connecteur UltraPort sur le ThinkPad.
2. Mettez l'adaptateur approprié en place sur le connecteur UltraPort et fixez-le à l'aide des deux vis.
3. Connectez l'UltraPort IR à l'UltraPort du ThinkPad.

Connexion USB

1. Montez l'adaptateur USB-UltraPort sur le trépied.
2. Connectez l'UltraPort IR à l'adaptateur USB-UltraPort.
3. Connectez le câble USB à l'adaptateur USB-UltraPort.
4. Connectez l'autre extrémité du câble USB au port USB de l'ordinateur.

Quand vous transportez l'UltraPort IR, mettez le cache-connecteur en place sur le connecteur de l'UltraPort IR.

Installation logicielle

Une fois l'UltraPort IR installé, vous êtes invité à installer les pilotes de périphérique. Suivez les instructions qui correspondent à votre système d'exploitation.

Windows 98, Windows Millennium Edition, et Windows 2000 Professional

Assurez-vous que l'UltraPort IR IBM n'est pas branché avant d'installer ce logiciel.

1. Cliquez deux fois sur l'icône correspondant à l'**UltraPort IR IBM** qui se trouve sur le CD.
2. Cliquez sur **Suivant** lorsque l'assistant Install Shield s'affiche.
3. Confirmez le répertoire de destination puis cliquez sur **Suivant** pour continuer.
4. Confirmez le répertoire cible puis cliquez sur **Suivant**.
5. L'Assistant Ajout de périphérique infrarouge s'affiche à l'écran, cliquez sur **Suivant**.
6. Mettez IBM Corp en évidence dans la liste des fabricants, puis sélectionnez l'adaptateur IBM USB IrDA Adapter dans la liste des périphériques infrarouge. Choisissez le fichier qui correspond à votre système d'exploitation.
7. Le pilote de périphérique va maintenant être chargé, il est important de redémarrer l'ordinateur.

Une fois que le système est redémarré, vous pouvez brancher votre adaptateur UltraPort IR IBM. La diode qui clignote indique que l'unité fonctionne correctement.

Désinstallation sous Windows 98, Windows Millennium Edition, et Windows 2000 Professional

1. Cliquez sur **Ajout/Suppression de programmes** dans le panneau de configuration de Windows.
2. Sélectionnez **IBM USB IrDA Adapter** puis cliquez sur **Supprimer**
3. Allez dans le Gestionnaire de périphériques de Windows et retirez IBM UltraPort IR et Infrared Communication Device de la catégorie Périphériques infrarouge.
4. Sélectionnez **IBM USB IrDA Adapter** dans la catégorie Cartes réseau, puis cliquez sur **Supprimer**

Vous avez désinstallé l'UltraPort IR IBM. Déconnectez l'UltraPort IR de l'ordinateur et redémarrez le système pour terminer la configuration.

Initialisation du programme Ir Transfer Link

Suivez les instructions qui correspondent à votre système d'exploitation.

Windows 98

1. Cliquez deux fois sur **Poste de travail** (le destinataire infrarouge doit s'afficher).
2. Cliquez deux fois sur **Panneau de configuration**.
3. Cliquez deux fois sur **Infrarouge**.
4. Cliquez sur l'onglet **Options**.
5. Cochez la case **Enable infrared communications** (Activation des communications par infrarouge).
6. Cliquez sur l'onglet **Identification**.
7. Saisissez le nom de l'ordinateur (qui sera vu par les autres utilisateurs infrarouge à portée).
8. Cliquez sur **Appliquer**.
9. Cliquez sur **OK**.

Windows 2000 Professional

1. Cliquez deux fois sur **Poste de travail**.
2. Cliquez deux fois sur **Panneau de configuration**.
3. Cliquez deux fois sur l'icône **Wireless Link** (Connexion sans fil).
4. Sélectionnez tout dans transfert de fichiers et transfert d'images.
5. Cliquez sur **Appliquer** et Fermer.

Windows Millennium Edition

1. Cliquez deux fois sur **Poste de travail**.
2. Cliquez deux fois sur **Panneau de configuration**.
3. Cliquez deux fois sur **Wireless Link** (Connexion sans fil).
4. Assurez-vous que tout est sélectionné.
5. Cliquez sur **Appliquer** et Fermer.

Parte 1: Guía del usuario y de instalación

Con el adaptador UltraPort IrDA, IBM habilita la conectividad sin cables por infrarrojos para cualquier conector UltraPort de un sistema ThinkPad[®] Series o para cualquier sistema con un bus serie universal (USB). Funcionando a un rango máximo de un metro, el módulo UltraPort IrDA se puede conectar con otros dispositivos IrDA a velocidades de hasta 4 Mbps. Además, el módulo transceptor de infrarrojos va girando de adelante a atrás para conseguir un campo de visión mayor y, de esta manera, se aumenta la flexibilidad del sistema.

Esta tecnología hace que no hayan tantos cables en el escritorio o ni que se tengan que llevar de un lugar a otro y permite, en cualquier momento, conexiones seguras con impresoras, cámaras digitales o sistemas de bolsillo (PDA) capaces de IrDA.

Descripción del producto



Además de este manual, el paquete incluye:

- **1** Adaptador IBM UltraPort IrDA
- **2** Intermediario
- **3** Trípode
- **4** Cubierta del conector de UltraPort
- **5** Adaptador USB-UltraPort
- Cable USB

- CD de controladores de dispositivos de Windows

Póngase en contacto con el establecimiento de compra si falta algún elemento o se observan daños. Conserva la prueba de compra. Puede ser necesario para disfrutar de la garantía.

Requisitos del sistema

Antes de instalar el IrDA, asegúrese de que el sistema reúna los siguientes requisitos:

- Conector UltraPort (sólo ThinkPad X series) o puerto USB
- Unidad de CD-ROM o DVD-ROM (para utilizar el CD de Windows)
- Uno de los sistemas operativos siguientes:
 - Microsoft Windows® 98
 - Microsoft Windows 2000
 - Microsoft Windows Millennium Edition (Me)

Instalación del hardware

El adaptador UltraPort IrDA se puede conectar al sistema a través de la conexión UltraPort o a través del puerto USB.

Conexión UltraPort (sólo ThinkPad X Series)

1. Extraiga el enchufe de plástico del conector UltraPort del sistema ThinkPad.
2. Coloque el intermediario apropiado en el conector UltraPort y asegúrelo utilizando los dos tornillos.
3. Conecte el adaptador UltraPort IrDA al UltraPort.

Conexión USB

1. Coloque el adaptador USB-a-UltraPort en el trípode.
2. Conecte el adaptador UltraPort IrDA al adaptador USB-a-UltraPort.
3. Conecte el cable USB al adaptador USB-a-UltraPort.
4. Conecte el otro extremo del cable USB al puerto USB del sistema.

Al transportar el adaptador UltraPort IrDA, coloque la cubierta del conector UltraPort sobre el conector del IrDA.

Instalación del software

Después de instalar el adaptador UltraPort IrDA, se le solicitará instalar los controladores de dispositivos. Siga las instrucciones correspondientes a su sistema operativo.

Windows 98, Windows Millennium Edition y Windows 2000 Professional

Asegúrese de que el adaptador UltraPort IrDA de IBM no esté conectado antes de instalar este software.

1. Efectúe una doble pulsación sobre el icono **UltraPort IrDA de IBM** que se encuentra en el CD.
2. Pulse en **Siguiente** cuando aparezca el Asistente InstallShield.
3. Confirme el Directorio de destino y pulse en **Siguiente** para continuar.
4. Confirme la Carpeta de destino y pulse en **Siguiente**.
5. Aparece en la pantalla el Asistente y Añadir dispositivo de infrarrojos (Add Infrared Device Wizard). Pulse en **Siguiente**.
6. En la lista de fabricantes, seleccione IBM Corporation y en la lista de dispositivos de infrarrojos, seleccione el adaptador USB IrDA de IBM. Elija el archivo apropiado que se corresponda a su sistema operativo.
7. Se cargarán satisfactoriamente los controladores de dispositivos. A continuación, reinicie el sistema.

Una vez se haya reiniciado el sistema, podrá conectar el adaptador UltraPort IrDA de IBM. Si el LED de la unidad parpadea, significa que está funcionando correctamente.

Cómo desinstalar el adaptador en Windows 98, Windows Millennium Edition y Windows 2000 Professional

1. Pulse en **Agregar o quitar programas** en el Panel de control de Windows.
2. Seleccione el adaptador **USB IrDA de IBM** y pulse en **Quitar**.
3. Vaya al Administrador de dispositivos de Windows y, en la categoría Dispositivos de infrarrojos, elimine el adaptador UltraPort IrDA de IBM y el Dispositivo de comunicación por infrarrojos.
4. En la categoría Adaptadores de red, seleccione el adaptador **USB IrDA de IBM** y pulse en **Quitar**.

Ahora se ha desinstalado satisfactoriamente el adaptador UltraPort IrDA de IBM. Reinicie el sistema para acabarlo.

Cómo iniciar el programa Ir Transfer Link

Siga las instrucciones del sistema operativo correspondiente.

Windows 98

1. Efectúe una doble pulsación en **Mi PC** (el dispositivo de infrarrojos debería aparecer).
2. Efectúe una doble pulsación en **Panel de control**.
3. Efectúe una doble pulsación en **Infrarrojos**.

4. Pulse la pestaña **Opciones**.
5. Seleccione el recuadro de selección **Habilitar comunicaciones por infrarrojos**.
6. Pulse en la pestaña **Identificación**.
7. Entre el Nombre del sistema (es el que verán otros usuarios de infrarrojos alrededor).
8. Pulse en **Aplicar**.
9. Pulse en **Aceptar**.

Windows 2000 Professional

1. Efectúe una doble pulsación en **Mi PC**.
2. Efectúe una doble pulsación en **Panel de control**.
3. Efectúe una doble pulsación en el icono **Enlace sin cables**.
4. Seleccione todo lo que esté relacionado con la transferencia de archivos e imágenes.
5. Pulse en **Aplicar** y Cerrar.

Windows Millennium Edition

1. Efectúe una doble pulsación en **Mi PC**.
2. Efectúe una doble pulsación en **Panel de control**.
3. Efectúe una doble pulsación en **Enlace sin cables**.
4. Asegúrese de que todo esté seleccionado.
5. Pulse en **Aplicar** y Cerrar.

Parte 1: Guida per l'utente e all'installazione

Con UltraPort IrDA, l'IBM fornisce la connettività senza fili a infrarossi a qualsiasi connettore e UltraPort per elaboratori ThinkPad[®] Series e a qualsiasi elaboratore e dotato di un USB (Universal Serial Bus). Funzionando a una distanza massima di un metro, il modulo UltraPort IrDA è in grado di comunicare e con altre periferiche IrDA a velocità di 4 Mbps. Inoltre, il ricetrasmittitore a infrarossi si sposta avanti e indietro per ottenere un maggior campo di visualizzazione, potenziando ulteriormente la flessibilità del sistema.

Questa tecnologia permette di avere pochi cavi e consente collegamenti affidabili con stampanti compatibili con IrDa, fotocamere digitali o PDA (Personal Digital Assistants) in qualsiasi momento.

Descrizione del prodotto



Oltre a questo manuale, il pacchetto di opzione include:

- **1** IBM UltraPort IrDA
- **2** Adattatore
- **3** Cavalletto
- **4** Coperchio del connettore e UltraPort
- **5** Adattatore USB-UltraPort
- Cavo USB
- CD dei driver di periferiche Windows

Se un componente è mancante o danneggiato, contattare il punto di vendita. Conservare la ricevuta d'acquisto. E' possibile che venga richiesta per ricevere l'assistenza tecnica.

Requisiti del sistema

Prima di iniziare l'installazione di IrDA, assicurarsi che l'elaboratore soddisfi i requisiti di sistema di seguito riportati.

- Connettore UltraPort (solo ThinkPad X series) o porta USB
- Unità CD-ROM o DVD-ROM (da utilizzare col CD di Windows)
- Uno dei seguenti sistemi operativi:
 - Microsoft® Windows® 98
 - Microsoft Windows 2000
 - Microsoft Windows Millennium Edition (Me)

Installazione dell'hardware

UltraPort IrDA può essere collegato all'elaboratore mediante la connessione UltraPort o la porta USB.

Connessione UltraPort (solo ThinkPad X Series)

1. Rimuovere la spina in gomma dal connettore UltraPort presente sull'elaboratore ThinkPad.
2. Collocare l'adattatore appropriato sul connettore UltraPort e assicurarlo con le due viti.
3. Collegare UltraPort IrDA a UltraPort.

Connessione USB

1. Collegare l'adattatore USB-to-UltraPort al cavalletto.
2. Collegare UltraPort IrDA all'adattatore USB-to-UltraPort.
3. Collegare il cavo USB all'adattatore USB-to-UltraPort.
4. Collegare l'estremità opposta del cavo USB alla porta USB dell'elaboratore.

Quando si trasporta UltraPort IrDA, collocare il coperchio del connettore UltraPort sul connettore IrDA.

Installazione del software

Una volta installato UltraPort IrDA, viene visualizzata la richiesta di installare i driver delle periferiche. Seguire le istruzioni relative al proprio sistema operativo.

Windows 98, Windows Millennium Edition e Windows 2000 Professional
Assicurarsi che l'adattatore IBM UltraPort IrDA non sia collegato prima di installare questo software.

1. Fare doppio clic sull'icona **IBM UltraPort IrDA** presente sul CD.
2. Quando viene visualizzato il wizard di Install Shield, fare clic su **Avanti**.
3. Confermare la directory di destinazione e fare clic su **Avanti**.
4. Confermare la cartella di destinazione e fare clic su **Avanti**.
5. Viene visualizzata la finestra Installazione guidata dispositivo a infrarossi. Fare clic su **Avanti**.
6. Selezionare IBM Corp nell'elenco di case produttrici e l'adattatore IBM USB IrDA nell'elenco di periferiche a infrarossi. Scegliere il file appropriato che corrisponde al sistema operativo utilizzato.
7. A questo punto, i driver di periferiche sono stati caricati. Riavviare l'elaboratore.

Una volta riavviato il sistema, è possibile collegare l'adattatore IBM UltraPort IrDA. Il LED lampeggiante presente sull'unità indica che essa funziona correttamente.

Disinstallazione per Windows 98, Windows Millennium Edition e Windows 2000 Professional

1. Fare clic su **Installazione applicazioni** nel pannello di controllo di Windows.
2. Selezionare **IBM USB IrDA Adapter** e fare clic su **Rimuovi**.
3. Passare a Gestione periferiche di Windows e rimuovere IBM UltraPort IrDA e Periferica di comunicazione per Supporto a infrarossi dalla categoria di periferiche a infrarossi.
4. Selezionare **IBM USB IrDA Adapter** nella categoria di adattatori di rete e fare clic su **Rimuovi**.

A questo punto l'adattatore IBM UltraPort IrDA è stato disinstallato. Rimuovere l'adattatore e riavviare l'elaboratore per ultimare le impostazioni.

Avvio del programma Ir Transfer Link

Seguire le istruzioni relative al proprio sistema operativo.

Windows 98

1. Fare doppio clic su **Risorse del computer** (dovrebbe essere visualizzato Ricevente a infrarossi).
2. Fare doppio clic su **Pannello di controllo**.
3. Fare doppio clic su **Supporto a infrarossi**.

4. Fare clic sul separatore **Opzioni**.
5. Selezionare la casella di spunta **Attiva comunicazione a infrarossi**.
6. Fare clic sul separatore **Identificazione**.
7. Immettere il nome dell'elaboratore (che sarà visto da altri utenti di comunicazioni a infrarossi).
8. Fare clic su **Applica**.
9. Fare clic su **OK**.

Windows 2000 Professional

1. Fare doppio clic su **Risorse del computer**.
2. Fare doppio clic su **Pannello di controllo**.
3. Fare doppio clic sull'icona **Collegamento senza fili**.
4. Selezionare tutto sul trasferimento file e immagini.
5. Fare clic su **Applica** e Chiudi.

Windows Millennium Edition

1. Fare doppio clic su **Risorse del computer**.
2. Fare doppio clic su **Pannello di controllo**.
3. Fare doppio clic su **Collegamento senza fili**.
4. Assicurarsi che tutto sia selezionato.
5. Fare clic su **Applica** e Chiudi.

Parte 1: Guia de Instalação e do Usuário

Com o UltraPort IrDA, a IBM traz a conectividade sem fio infravermelha a qualquer conector ThinkPad® X Series computer UltraPort ou a qualquer computador com um Universal Serial Bus (USB). Operando em um intervalo máximo de um metro, o módulo UltraPort IrDA pode se comunicar com outros dispositivos IrDA a velocidades de até 4 Mbps. Além disso, o transceptor infravermelho gira da parte frontal para a parte traseira para um campo de maior exibição, estendendo mais a flexibilidade do sistema.

Esta tecnologia significa menos cabos disformes em uma mesa e nenhum cabo extra a carregar e possibilita conexões confiáveis com impressoras com capacidade IrDA, câmeras digitais ou personal digital assistants (PDAs) a qualquer momento.

Descrição do Produto



Além deste manual, o pacote de opcionais inclui:

- **1** IBM UltraPort IrDA
- **2** Mediador
- **3** Tripé
- **4** Tampa do conector UltraPort
- **5** Adaptador USB-UltraPort
- Cabo USB

- CD dos drivers de dispositivos do Windows

Entre em contato com o fornecedor se algum item estiver faltando ou danificado. Certifique-se de guardar o comprovante de compra. Ele pode ser necessário para a solicitação do serviço de garantia.

Requisitos do Sistema

Antes de começar a instalar o IrDA, certifique-se de que o seu computador atenda aos seguintes requisitos do sistema.

- Conector UltraPort (série ThinkPad X apenas) ou porta USB
- Unidade de CD-ROM ou DVD-ROM (para utilização com o CD do Windows)
- Um dos seguintes sistemas operacionais:
 - Microsoft® Windows® 98
 - Microsoft Windows 2000
 - Microsoft Windows Millennium Edition (Me)

Instalação do Hardware

O UltraPort IrDA pode ser conectado ao seu computador através da conexão UltraPort ou da porta USB.

Conexão UltraPort (Série ThinkPad X apenas)

1. Remova o plugue de borracha do conector UltraPort no seu computador ThinkPad.
2. Coloque o mediador apropriado no conector UltraPort e prenda-o utilizando os dois parafusos.
3. Conecte o UltraPort IrDA ao UltraPort.

Conexão USB

1. Conecte o adaptador USB-para-UltraPort ao tripé.
2. Conecte o UltraPort IrDA ao adaptador USB-para-UltraPort.
3. Conecte o cabo USB ao adaptador USB-para-UltraPort.
4. Conecte a extremidade oposta do cabo USB à porta USB do computador.

Ao transportar o UltraPort IrDA, coloque a tampa do conector UltraPort sobre o conector do IrDA.

Instalação do Software

Depois de instalar o UltraPort IrDA, será solicitado que você instale os drivers de dispositivos. Siga as instruções para o seu sistema operacional.

Windows 98, Windows Millennium Edition e Windows 2000 Professional
Certifique-se de que o adaptador IBM UltraPort IrDA não esteja conectado antes de instalar este software.

1. Dê um clique duplo sobre o ícone **IBM UltraPort IrDA** encontrado no CD.
2. Clique em **Avançar** quando o Assistente Install Shield aparecer.
3. Confirme o Diretório de Destino e clique em **Avançar** para continuar.
4. Confirme a Pasta de Destino e clique em **Avançar**.
5. O Assistente Add Infrared Device aparece na tela, simplesmente clique em **Avançar**.
6. Destaque a IBM Corp na lista de fabricantes e selecione o Adaptador IBM USB IrDA nos dispositivos infravermelhos. Escolha o arquivo apropriado que corresponda ao seu sistema operacional.
7. Os drivers de dispositivos agora serão carregados com êxito e é importante reiniciar o computador.

Você pode, agora, conectar o adaptador IBM UltraPort IrDA uma vez que o seu sistema está reiniciado. O LED piscando na unidade indica que a unidade está funcionando apropriadamente.

Desinstalação do Windows 98, Windows Millennium Edition e Windows 2000 Professional

1. Clique em **Incluir/Remover Programas** no Painel de Controle do Windows.
2. Selecione **Adaptador IBM USB IrDA** e clique em **Remover**.
3. Vá para o Gerenciador de Dispositivos do Windows e remova o IBM UltraPort IrDA e o Dispositivo de Comunicação Infravermelho na categoria Dispositivos Infravermelhos.
4. Selecione **Adaptador IBM USB IrDA** na categoria Adaptadores de Rede e clique em **Remover**.

Você, agora, desinstalou com êxito o Adaptador IBM UltraPort IrDA. Remova o Adaptador IBM UltraPort IrDA e reinicie o computador para finalizar as definições.

Iniciando o Programa Ir Transfer Link

Siga as instruções para o sistema operacional apropriado.

Windows 98

1. Dê um clique duplo em **Meu Computador** (O destinatário infravermelho deve estar sendo exibido).
2. Dê um clique duplo em **Painel de Controle**.
3. Dê um clique duplo em **Infravermelho**.

4. Clique na guia **Opções**.
5. Selecione a caixa de opções **Permitir comunicações infravermelhas**.
6. Clique na guia **Identificação**.
7. Digite o Nome do Computador (que será visto por outros usuários infravermelhos ao redor).
8. Clique em **Aplicar**.
9. Clique em **OK**.

Windows 2000 Professional

1. Dê um clique duplo em **Meu Computador**.
2. Dê um clique duplo em **Painel de Controle**.
3. Dê um clique duplo no ícone **Link Sem Fio**.
4. Selecione tudo na transferência de arquivos e na transferência de imagens.
5. Clique em **Aplicar** e Fechar.

Windows Millennium Edition

1. Dê um clique duplo em **Meu Computador**.
2. Dê um clique duplo em **Painel de Controle**.
3. Dê um clique duplo em **Link Sem Fio**.
4. Certifique-se de que tudo esteja selecionado.
5. Clique em **Aplicar** e Fechar.

第一部份：安裝與使用手冊

透過 UltraPort IrDA，IBM 將紅外線的無線連通性賦予任何 ThinkPad® X 系列電腦的 UltraPort 接頭或任何具備通用序列匯流排（USB）的電腦。UltraPort IrDA 模組可以在最大至一公尺的作業距離內，以最高至 4 Mbps 的速度，與其他的 IrDA 裝置通訊。此外，紅外線收發器可前後旋轉而涵蓋更大的區域，並進一步地延伸了系統的彈性。

此技術可讓您的桌面減少礙眼的電線，而且不再需要攜帶額外的接線；它可隨時與具備 IrDA 的印表機、數位相機或個人數位助理（PDA）建立可靠的通訊。

產品說明



除了本書以外，本選用設備套件包含了：

- **1** IBM UltraPort IrDA
- **2** 固定器
- **3** 三向接頭
- **4** UltraPort 接頭外殼
- **5** USB-UltraPort 轉接器
- USB 接線
- Windows 裝置驅動程式 CD

當任何項目發生缺少或損壞的情形時，請連絡原經銷商。請務必保留購買證明。您需要具有此證明才能接受保證服務。

系統需求

在您開始安裝 IrDA 之前，請確定電腦符合下列系統需求。

- UltraPort 接頭（僅限 ThinkPad X 系列）或 USB 連接埠
- CD-ROM 或 DVD-ROM 光碟機（以便使用 Windows CD）
- 下列作業系統其中之一：
 - Microsoft® Windows® 98
 - Microsoft Windows 2000
 - Microsoft Windows Millennium Edition (Me)

硬體安裝

UltraPort IrDA 可以透過 UltraPort 或 USB 連接埠來連接至電腦。

UltraPort 連接（僅限 ThinkPad X 系列）

1. 請移除 ThinkPad 電腦上 UltraPort 接頭的橡皮蓋。
2. 請將適當的固定器裝置於 UltraPort 接頭，然後用兩顆螺絲固定它。
3. 將 UltraPort IrDA 連接至 UltraPort。

USB 連接

1. 將 USB-to-UltraPort 轉接器連接至三向接頭。
2. 將 UltraPort IrDA 連接至 USB-to-UltraPort 轉接器。
3. 將 USB 接線連接至 USB-to-UltraPort 轉接器。
4. 將 USB 接線的另一端連接至電腦的 USB 連接埠。

在運送 UltraPort IrDA 時，請將 UltraPort 接頭外殼置於 IrDA 接頭之上。

軟體安裝

在安裝 UltraPort IrDA 之後，您會被提示要安裝裝置驅動程式。請遵循作業系統的說明。

Windows 98、Windows Millennium Edition 以及 Windows 2000 Professional 在安裝此軟體前，請確定尚未插入 IBM UltraPort IrDA 轉接器。

1. 請按兩下 CD 中的 **IBM UltraPort IrDA** 圖示。
2. 請在 Install Shield Wizard 出現的時候，按一下 **Next**。
3. 請在確認目標目錄（Destination Directory）之後，按一下 **Next** 繼續。
4. 請在確認目標資料夾（Target Folder）之後，按一下 **Next**。
5. 當「新增紅外線裝置精靈」出現在螢幕上時，請按下 **Next**。
6. 請在製造廠商清單中標示 **IBM Corp**，然後在紅外線裝置下選取 **IBM USB IrDA Adapter**。請依照作業系統，選取適當的檔案。

7. 裝置驅動程式現已成功載入，並且務必重新啓動電腦。

在系統重新啓動後，您就可以插入 IBM UltraPort IrDA 轉接器。裝置上的 LED 不停閃爍即表示裝置已正常運作。

在 Windows 98、Windows Millennium Edition 以及 Windows 2000 Professional 中解除安裝

1. 在 Windows 的「控制台」中，按兩下**新增/移除程式**。
2. 請選取 **IBM USB IrDA Adapter** 然後按一下**新增/移除**。
3. 進入 Windows 的「裝置管理員」，然後移除「紅外線裝置」類別中的 IBM UltraPort IrDA 及「紅外線通訊裝置」。
4. 請在「網路配接卡」類別中選取 **IBM USB IrDA Adapter**，然後按一下**移除**。

您已成功地解除安裝 IBM UltraPort IrDA Adapter。請移除 IBM UltraPort IrDA Adapter 然後重新啓動電腦以便完成設定。

起始 Ir Transfer Link 程式

請遵循正確作業系統的說明。

Windows 98

1. 按兩下**我的電腦**（應會顯示「紅外線接收端」）。
2. 按兩下**控制台**。
3. 按兩下**紅外線**。
4. 按一下**選項標籤**。
5. 選取**啓用紅外線通訊**勾選框。
6. 按一下**識別標籤**。
7. 輸入您的電腦名稱（可供其他紅外線使用者辨識）。
8. 按一下**套用**。
9. 按一下**確定**。

Windows 2000 Professional

1. 按兩下**我的電腦**。
2. 按兩下**控制台**。
3. 按兩下**無線連結**圖示。
4. 選取**檔案轉送及影像轉送**之中的所有項目。
5. 按兩下**套用**以及「關閉」。

Windows Millennium Edition

1. 按兩下**我的電腦**。
2. 按兩下**控制台**。

3. 按兩下**無線連結**。
4. 請確定已選取所有項目。
5. 按兩下**套用**以及「關閉」。

第 1 部: インストールおよびユーザズ・ガイド

ウルトラポート IrDA アダプターを使用すると、ThinkPad® X シリーズのコンピューターのウルトラポート・コネクタまたは USB を装備したコンピューターで、赤外線ワイヤレス接続が可能になります。最大 1 m の範囲で動作するウルトラポート IrDA モジュールは、他の IrDA デバイスと最高 4 Mbps までの速度で通信できます。そのほかに、赤外線トランシーバー部は、前面から背面に 180 度回転させて使用することが可能なため、システムの柔軟性をさらに拡張することができます。

このテクノロジーによって、デスク上の接続コードを減らし、余分のケーブルを持ち運ぶ必要がなくなります。また、IrDA 機能を備えるプリンター、デジタル・カメラ、または Personal Digital Assistants (PDA) との信頼性の高い接続をいつでも使用可能にします。

製品説明



本書のほかに、オプション・パッケージには、以下の品目が含まれています。

- **1** IBM ウルトラポート IrDA アダプター
- **2** インターポーザー (変換コネクタ)
- **3** 三脚
- **4** ウルトラポート・コネクタ・カバー
- **5** USB-ウルトラポート・アダプター
- USB ケーブル

- Windows デバイス・ドライバー CD

不足または破損している品目がある場合は、ご購入先にご連絡ください。購入を証明するものは必ず保管しておいてください。保証サービスを受けるのに、それが必要になる場合があります。

システム要件

IrDA アダプターのインストールを開始する前に、コンピューターが以下のシステム要件に適合することを確認してください。

- ウルトラポート・コネクタ (ThinkPad X シリーズのみ) または USB ポート
- CD-ROM または DVD-ROM ドライブ (Windows CD と一緒に使用)
- 以下のオペレーティング・システムのいずれか 1 つ:
 - Microsoft Windows[®] 98
 - Microsoft Windows 2000
 - Microsoft Windows Millennium Edition (Me)

ハードウェアの取り付け

ウルトラポート IrDA アダプターは、ウルトラポート接続または USB ポートを通じてコンピューターに接続できます。

ウルトラポート接続 (ThinkPad X シリーズのみ)

1. ThinkPad 上のウルトラポート・コネクタからゴムのプラグを取り外します。
2. ウルトラポート・コネクタに該当するインターポーザー (変換コネクタ) をはめ、2 つのねじを使用して固定します。
3. ウルトラポート IrDA アダプターをウルトラポートに接続します。

USB 接続

1. USB-ウルトラポート・アダプターを三脚に取り付けます。
2. ウルトラポート IrDA アダプターを USB-ウルトラポート・アダプターに接続します。
3. USB ケーブルを USB-ウルトラポート・アダプターに接続します。
4. USB ケーブルの反対側の端をコンピューターの USB ポートに接続します。

ウルトラポート IrDA アダプターを持ち運ぶときは、ウルトラポート・コネクタ・カバーを IrDA アダプターのコネクターの部分に取り付けてください。

ソフトウェアのインストール

ウルトラポート IrDA アダプターを取り付けた後、デバイス・ドライバーをインストールするようプロンプトが表示されます。お使いのオペレーティング・システムについての指示に従ってください。

Windows 98、Windows Millennium Edition、および Windows 2000 Professional へのインストール

このソフトウェアをインストールする前に、IBM ウルトラポート IrDA アダプターのプラグが差し込まれていないことを確認してください。

1. CD に入っている「**IBM UltraPort IrDA**」アイコンをダブルクリックします。
2. 「Install Shield Wizard」が表示されたら「**次へ**」をクリックします。
3. 「Destination Directory」(導入先ディレクトリ)を確認し、「**次へ**」をクリックして進みます。
4. 「Target Folder」(フォルダ)を確認し、「**次へ**」をクリックします。
5. 画面に「Add Infrared Device Wizard」(赤外線デバイスの追加ウィザード)が表示されたら、単に「**次へ**」をクリックします。
6. 製造元リストの下で「**IBM Corp**」を強調表示し、赤外線デバイスの下で「**IBM USB IrDA Adapter**」を選択します。お使いのオペレーティング・システムに対応する該当するファイルを選択します。
7. これで、デバイス・ドライバーは正常にロードされるので、コンピューターを再起動することが重要です。

システムが再起動したら、ここで IBM ウルトラポート IrDA アダプターを接続します。ユニット上の明滅する LED は、ユニットが正しく動作していることを示します。

Windows 98、Windows Millennium Edition、および Windows 2000 Professional からのアンインストール

1. Windows の「コントロール パネル」から「**アプリケーションの追加と削除**」をクリックします。
2. 「**IBM USB IrDA Adapter**」を選択し、「**削除**」をクリックします。
3. Windows の「デバイス マネージャ」を表示し、「赤外線」カテゴリーの下で「**IBM UltraPort IrDA**」および「**Infrared Communication Device**」を削除します。
4. 「ネットワーク・アダプター」カテゴリーの下で「**IBM USB IrDA Adapter**」を選択し、「**削除**」をクリックします。

これで、「**IBM UltraPort IrDA Adapter**」を正常にアンインストールしました。「**IBM UltraPort IrDA Adapter**」を除去し、コンピューターを再起動し、設定値を確定します。

「Ir 転送リンク」プログラムの開始

該当するオペレーティング・システムについての指示に従ってください。

Windows 98 の場合

1. 「マイ コンピュータ」をダブルクリックします (赤外線受信側が表示されているはずです)。
2. 「コントロール パネル」をダブルクリックします。
3. 「赤外線」をダブルクリックします。
4. 「オプション」タブをクリックします。
5. 「赤外線通信を使用可能にする」チェック・ボックスを選択します。
6. 「ユーザー情報」タブをクリックします。
7. お客様の「コンピュータ名」を入力します (これは、回りにある他の赤外線ユーザーのところにも表示されます)。
8. 「適用」をクリックします。
9. 「OK」をクリックします。

Windows 2000 Professional の場合

1. 「マイ コンピュータ」をダブルクリックします。
2. 「コントロール パネル」をダブルクリックします。
3. 「Wireless Link」アイコンをダブルクリックします。
4. ファイル転送およびイメージ転送ですべてを選択します。
5. 「適用」をクリックし閉じます。

Windows Millennium Edition の場合

1. 「マイ コンピュータ」をダブルクリックします。
2. 「コントロール パネル」をダブルクリックします。
3. 「Wireless Link」をダブルクリックします。
4. すべてが選択されていることを確認します。
5. 「適用」をクリックし閉じます。

Appendix A. Technical specifications

The technical specifications for your UltraPort IrDA are as follows:

- Fully compliant with USB specification 1.1 and IrDA specification 1.1
- Full-speed (12 Mbps) USB device operation
- Support for FIR (4 Mbps) and all SIR speeds (9.6, 19.2, 38.4, 57.6, and 115.2 Kbps)
- Communication speed and distance:
 - IrDA 1.0 (9.6, 19.2, 38.4, 57.6, 115.2 Kbps): 3 - 100 cm
 - IrDA 1.1 (4 Mbps): 3 - 100 cm

Appendix B. Help and service information

This section contains information on how to obtain warranty information on the World Wide Web and online and telephone technical support.

Warranty information on the World Wide Web

The IBM Machine Warranties Web site at http://www.ibm.com/servers/support/machine_warranties/ contains a worldwide overview of the IBM Limited Warranty for IBM Machines, a glossary of terms used in the Statement of Limited Warranty, Frequently Asked Questions (FAQ), and links to Product Support Web pages. The IBM Statement of Limited Warranty is available from this Web site in 29 languages in Portable Document Format (PDF).

Online technical support

Online technical support is available during the life of your product. Online assistance can be obtained through the Personal Computing Support Web site and the IBM Automated Fax System.

<i>Online technical support</i>	
IBM Personal Computing Support Web site	http://www.ibm.com/pc/support
IBM Automated Fax System	1-800-426-3395 (U.S. and Canada)

During the warranty period, assistance for replacement or exchange of defective components is available. In addition, if your IBM option 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.

Telephone technical support

Installation and configuration support through the HelpCenter will be withdrawn or made available for a fee, at IBM's discretion, 90 days after the option has been withdrawn from marketing. Additional support offerings, including step-by-step installation assistance, are available for a nominal fee.

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

- Option name
- Option number
- Proof of purchase
- Computer manufacturer, model, serial number (if IBM), and manual

- Exact wording of the error message (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.

For the support telephone number and support hours by country, refer to the following table or to the enclosed technical support insert. If the number is not provided, contact your IBM reseller or IBM marketing representative. Response time may vary depending on the number and nature of the calls received.

<i>Support 24 hours a day, 7 days a week</i>	
Canada (Toronto only)	416-383-3344
Canada (all other)	1-800-565-3344
U.S.A. and Puerto Rico	1-800-772-2227
All other countries	Go to http://www.ibm.com/pc/support/ , and click HelpCenter Phone List .

Appendix C. Product warranties and notices

This section contains the warranty period for your product and the IBM Statement of Limited Warranty.

Machine - IBM UltraPort IrDA

Warranty period* - One Year

** Contact your place of purchase for warranty service information. Some IBM Machines are eligible for on-site warranty service depending on the country where service is performed.*

IBM Statement of Limited Warranty

Part 1 - General Terms

This Statement of Limited Warranty includes Part 1 - General Terms and Part 2 - Country-unique Terms. The terms of Part 2 replace or modify those of Part 1. The warranties provided by IBM in this Statement of Limited Warranty apply only to Machines you 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. The term "Machine" does not include any software programs, whether pre-loaded with the Machine, installed subsequently or otherwise. Unless IBM specifies otherwise, the following warranties apply only in the country where you acquire the Machine. Nothing in this Statement of Limited Warranty affects any statutory rights of consumers that cannot be waived or limited by contract. If you have any questions, contact IBM or your reseller.

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 ("Specifications"). The warranty period for a Machine is a specified, fixed period commencing on its Date of Installation. The date on your sales receipt is the Date of Installation unless IBM or your reseller informs you otherwise.

If a Machine does not function as warranted during the warranty period, and IBM or your reseller are unable to either 1) make it do so or 2) replace it with one that is at least functionally equivalent, you may return it to your place of purchase and your money will be refunded.

Extent of Warranty

The warranty does not cover the repair or exchange of a Machine resulting from misuse, accident, modification, unsuitable physical or operating environment, improper maintenance by you, or failure caused by a product for which IBM is not responsible. The warranty is voided by removal or alteration of Machine or parts identification labels.

THESE WARRANTIES ARE YOUR EXCLUSIVE WARRANTIES AND REPLACE ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED 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.

Items Not Covered by Warranty

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

Any technical or other support provided for a Machine under warranty, such as assistance via telephone with “how-to” questions and those regarding Machine set-up and installation, will be provided **WITHOUT WARRANTIES OF ANY KIND.**

Warranty Service

To obtain warranty service for a Machine, contact IBM or your reseller. If you do not register your Machine with IBM, you may be required to present proof of purchase.

During the warranty period, IBM or your reseller, if approved by IBM to provide warranty service, provides without charge certain types of repair and exchange service to keep Machines in, or restore them to, conformance with their Specifications. IBM or your reseller will inform you of the available types of service for a Machine based on its country of installation. At its discretion, IBM or your reseller will 1) either repair or exchange the failing Machine and 2) provide the service either at your location or a service center. IBM or your reseller will also manage and install selected engineering changes that apply to the Machine.

Some parts of IBM Machines are designated as Customer Replaceable Units (called “CRUs”), e.g., keyboards, memory, or hard disk drives. IBM ships CRUs

to you for replacement by you. You must return all defective CRUs to IBM within 30 days of your receipt of the replacement CRU. You are responsible for downloading designated Machine Code and Licensed Internal Code updates from an IBM Internet Web site or from other electronic media, and following the instructions that IBM provides.

When warranty 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. Many features, conversions, or upgrades involve the removal of parts and their return to IBM. A part that replaces a removed part will assume the warranty service status of the removed part.

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

1. ensure that the Machine is free of any legal obligations or restrictions that prevent its exchange;
2. obtain authorization from the owner to have IBM or your reseller service a Machine that you do not own; and
3. where applicable, before service is provided:
 - a. follow the problem determination, problem analysis, and service request procedures that IBM or your reseller provides;
 - b. secure all programs, data, and funds contained in a Machine;
 - c. provide IBM or your reseller with sufficient, free, and safe access to your facilities to permit them to fulfill their obligations; and
 - d. 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.

Neither IBM nor your reseller is responsible for any of your confidential, proprietary or personal information contained in a Machine which you return to IBM or your reseller for any reason. You should remove all such information from the Machine prior to its return.

Limitation of Liability

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), except for any liability that cannot be waived or limited by applicable laws, IBM is liable for no more than

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, up to the charges (if recurring, 12 months' charges apply) for the Machine that is subject of the claim. For purposes of this item, the term "Machine" includes Machine Code and Licensed Internal Code.

This limit also applies to IBM's suppliers and your reseller. It is the maximum for which IBM, its suppliers, and your reseller are collectively responsible.

UNDER NO CIRCUMSTANCES IS IBM LIABLE FOR ANY OF THE FOLLOWING: 1) THIRD-PARTY CLAIMS AGAINST YOU FOR 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, LOST PROFITS OR LOST SAVINGS, EVEN IF IBM, ITS SUPPLIERS 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 LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

Governing Law

Both you and IBM consent to the application of the laws of the country in which you acquired the Machine to govern, interpret, and enforce all of your and IBM's rights, duties, and obligations arising from, or relating in any manner to, the subject matter of this Agreement, without regard to conflict of law principles.

Part 2 - Country-unique Terms

AMERICAS

BRAZIL

Governing Law: *The following is added after the first sentence:*

Any litigation arising from this Agreement will be settled exclusively by the court of Rio de Janeiro.

NORTH AMERICA

Warranty Service: *The following is added to this Section:*

To obtain warranty service from IBM in Canada or the United States, call 1-800-IBM-SERV (426-7378).

CANADA

Governing Law: *The following replaces “laws of the country in which you acquired the Machine” in the first sentence:*

laws in the Province of Ontario.

UNITED STATES

Governing Law: *The following replaces “laws of the country in which you acquired the Machine” in the first sentence:*

laws of the State of New York.

ASIA PACIFIC

AUSTRALIA

The IBM Warranty for Machines: *The following paragraph is added to this Section:*

The warranties specified in this Section are in addition to any rights you may have under the Trade Practices Act 1974 or other similar legislation and are only limited to the extent permitted by the applicable legislation.

Limitation of Liability: *The following is added to this Section:*

Where IBM is in breach of a condition or warranty implied by the Trade Practices Act 1974 or other similar legislation, IBM’s liability is limited to the repair or replacement of the goods or the supply of equivalent goods. Where that condition or warranty relates to right to sell, quiet possession or clear title, or the goods are of a kind ordinarily acquired for personal, domestic or household use or consumption, then none of the limitations in this paragraph apply.

Governing Law: *The following replaces “laws of the country in which you acquired the Machine” in the first sentence:*

laws of the State or Territory.

CAMBODIA, LAOS, AND VIETNAM

Governing Law: *The following replaces “laws of the country in which you acquired the Machine” in the first sentence:*

laws of the State of New York.

The following is added to this Section:

Disputes and differences arising out of or in connection with this Agreement

shall be finally settled by arbitration which shall be held in Singapore in accordance with the rules of the International Chamber of Commerce (ICC). The arbitrator or arbitrators designated in conformity with those rules shall have the power to rule on their own competence and on the validity of the Agreement to submit to arbitration. The arbitration award shall be final and binding for the parties without appeal and the arbitral award shall be in writing and set forth the findings of fact and the conclusions of law.

All proceedings shall be conducted, including all documents presented in such proceedings, in the English language. The number of arbitrators shall be three, with each side to the dispute being entitled to appoint one arbitrator.

The two arbitrators appointed by the parties shall appoint a third arbitrator before proceeding upon the reference. The third arbitrator shall act as chairman of the proceedings. Vacancies in the post of chairman shall be filled by the president of the ICC. Other vacancies shall be filled by the respective nominating party. Proceedings shall continue from the stage they were at when the vacancy occurred.

If one of the parties refuses or otherwise fails to appoint an arbitrator within 30 days of the date the other party appoints its, the first appointed arbitrator shall be the sole arbitrator, provided that the arbitrator was validly and properly appointed.

The English language version of this Agreement prevails over any other language version.

HONG KONG AND MACAU

Governing Law: *The following replaces "laws of the country in which you acquired the Machine" in the first sentence:*

laws of Hong Kong Special Administrative Region.

INDIA

Limitation of Liability: *The following replaces items 1 and 2 of this Section:*

1. liability for bodily injury (including death) or damage to real property and tangible personal property will be limited to that caused by IBM's negligence;
2. as to any other actual damage arising in any situation involving nonperformance by IBM pursuant to, or in any way related to the subject of this Statement of Limited Warranty, IBM's liability will be limited to the charge paid by you for the individual Machine that is the subject of the claim.

JAPAN

Governing Law: *The following sentence is added to this Section:*

Any doubts concerning this Agreement will be initially resolved between us in good faith and in accordance with the principle of mutual trust.

NEW ZEALAND

The IBM Warranty for Machines: *The following paragraph is added to this Section:*

The warranties specified in this Section are in addition to any rights you may have under the Consumer Guarantees Act 1993 or other legislation which cannot be excluded or limited. The Consumer Guarantees Act 1993 will not apply in respect of any goods which IBM provides, if you require the goods for the purposes of a business as defined in that Act.

Limitation of Liability: *The following is added to this Section:*

Where Machines are not acquired for the purposes of a business as defined in the Consumer Guarantees Act 1993, the limitations in this Section are subject to the limitations in that Act.

PEOPLE'S REPUBLIC OF CHINA (PRC)

Governing Law: *The following replaces this Section:*

Both you and IBM consent to the application of the laws of the State of New York (except when local law requires otherwise) to govern, interpret, and enforce all your and IBM's rights, duties, and obligations arising from, or relating in any manner to, the subject matter of this Agreement, without regard to conflict of law principles.

Any disputes arising from or in connection with this Agreement will first be resolved by friendly negotiations, failing which either of us has the right to submit the dispute to the China International Economic and Trade Arbitration Commission in Beijing, the PRC, for arbitration in accordance with its arbitration rules in force at the time. The arbitration tribunal will consist of three arbitrators. The language to be used therein will be English and Chinese. An arbitral award will be final and binding on all the parties, and will be enforceable under the Convention on the Recognition and Enforcement of Foreign Arbitral Awards (1958).

The arbitration fee will be borne by the losing party unless otherwise determined by the arbitral award.

During the course of arbitration, this Agreement will continue to be performed except for the part which the parties are disputing and which is undergoing arbitration.

EUROPE, MIDDLE EAST, AFRICA (EMEA)

THE FOLLOWING TERMS APPLY TO ALL EMEA COUNTRIES:

The terms of this Statement of Limited Warranty apply to Machines purchased from IBM or an IBM reseller.

Warranty Service:

If you purchase an IBM Machine in Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland or United Kingdom, you may obtain warranty service for that Machine in any of those countries from either (1) an IBM reseller approved to perform warranty service or (2) from IBM. If you purchase an IBM Personal Computer Machine in Albania, Armenia, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Georgia, Hungary, Kazakhstan, Kirghizia, Federal Republic of Yugoslavia, Former Yugoslav Republic of Macedonia (FYROM), Moldova, Poland, Romania, Russia, Slovak Republic, Slovenia, or Ukraine, you may obtain warranty service for that Machine in any of those countries from either (1) an IBM reseller approved to perform warranty service or (2) from IBM.

If you purchase an IBM Machine in a Middle Eastern or African country, you may obtain warranty service for that Machine from the IBM entity within the country of purchase, if that IBM entity provides warranty service in that country, or from an IBM reseller, approved by IBM to perform warranty service on that Machine in that country. Warranty service in Africa is available within 50 kilometers of an IBM authorized service provider. You are responsible for transportation costs for Machines located outside 50 kilometers of an IBM authorized service provider.

Governing Law:

The applicable laws that govern, interpret and enforce rights, duties, and obligations of each of us arising from, or relating in any manner to, the subject matter of this Statement, without regard to conflict of laws principles, as well as Country-unique terms and competent court for this Statement are those of the country in which the warranty service is being provided, except that in 1) Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Hungary, Former Yugoslav Republic of Macedonia, Romania, Slovakia, Slovenia, Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan, the laws of Austria apply; 2) Estonia, Latvia, and Lithuania, the laws of Finland apply; 3) Algeria, Benin, Burkina Faso, Cameroon, Cape Verde, Central African Republic, Chad, Congo, Djibouti, Democratic Republic of Congo, Equatorial Guinea, France, Gabon, Gambia, Guinea, Guinea-Bissau, Ivory Coast, Lebanon, Mali, Mauritania, Morocco, Niger, Senegal, Togo, and Tunisia, this Agreement will be construed and the legal relations between the parties will be determined in accordance with the French laws and all disputes arising out of this Agreement or related to its

violation or execution, including summary proceedings, will be settled exclusively by the Commercial Court of Paris; 4) Angola, Bahrain, Botswana, Burundi, Egypt, Eritrea, Ethiopia, Ghana, Jordan, Kenya, Kuwait, Liberia, Malawi, Malta, Mozambique, Nigeria, Oman, Pakistan, Qatar, Rwanda, Sao Tome, Saudi Arabia, Sierra Leone, Somalia, Tanzania, Uganda, United Arab Emirates, United Kingdom, West Bank/Gaza, Yemen, Zambia, and Zimbabwe, this Agreement will be governed by English Law and disputes relating to it will be submitted to the exclusive jurisdiction of the English courts; and 5) in Greece, Israel, Italy, Portugal, and Spain any legal claim arising out of this Statement will be brought before, and finally settled by, the competent court of Athens, Tel Aviv, Milan, Lisbon, and Madrid, respectively.

THE FOLLOWING TERMS APPLY TO THE COUNTRY SPECIFIED:

AUSTRIA AND GERMANY

The IBM Warranty for Machines: *The following replaces the first sentence of the first paragraph of this Section:*

The warranty for an IBM Machine covers the functionality of the Machine for its normal use and the Machine's conformity to its Specifications.

The following paragraphs are added to this Section:

The minimum warranty period for Machines is six months. In case IBM or your reseller is unable to repair an IBM Machine, you can alternatively ask for a partial refund as far as justified by the reduced value of the unrepaired Machine or ask for a cancellation of the respective agreement for such Machine and get your money refunded.

Extent of Warranty: *The second paragraph does not apply.*

Warranty Service: *The following is added to this Section:*

During the warranty period, transportation for delivery of the failing Machine to IBM will be at IBM's expense.

Limitation of Liability: *The following paragraph is added to this Section:*

The limitations and exclusions specified in the Statement of Limited Warranty will not apply to damages caused by IBM with fraud or gross negligence and for express warranty.

The following sentence is added to the end of item 2:

IBM's liability under this item is limited to the violation of essential contractual terms in cases of ordinary negligence.

EGYPT

Limitation of Liability: *The following replaces item 2 in this Section:*

as to any other actual direct damages, IBM's liability will be limited to the total amount you paid for the Machine that is the subject of the claim. For purposes of this item, the term "Machine" includes Machine Code and Licensed Internal Code.

Applicability of suppliers and resellers (unchanged).

FRANCE

Limitation of Liability: *The following replaces the second sentence of the first paragraph of this Section:*

In such instances, regardless of the basis on which you are entitled to claim damages from IBM, IBM is liable for no more than: *(items 1 and 2 unchanged).*

IRELAND

Extent of Warranty: *The following is added to this Section:*

Except as expressly provided in these terms and conditions, all statutory conditions, including all warranties implied, but without prejudice to the generality of the foregoing all warranties implied by the Sale of Goods Act 1893 or the Sale of Goods and Supply of Services Act 1980 are hereby excluded.

Limitation of Liability: *The following replaces items one and two of the first paragraph of this Section:*

1. death or personal injury or physical damage to your real property solely caused by IBM's negligence; and
2. the amount of any other actual direct damages, up to 125 percent of the charges (if recurring, the 12 months' charges apply) for the Machine that is the subject of the claim or which otherwise gives rise to the claim.

Applicability of suppliers and resellers (unchanged).

The following paragraph is added at the end of this Section:

IBM's entire liability and your sole remedy, whether in contract or in tort, in respect of any default shall be limited to damages.

ITALY

Limitation of Liability: *The following replaces the second sentence in the first paragraph:*

In each such instance unless otherwise provided by mandatory law, IBM is liable for no more than:

1. *(unchanged)*
2. as to any other actual damage arising in all situations involving

nonperformance by IBM pursuant to, or in any way related to the subject matter of this Statement of Warranty, IBM's liability, will be limited to the total amount you paid for the Machine that is the subject of the claim.

Applicability of suppliers and resellers (unchanged).

The following replaces the third paragraph of this Section:

Unless otherwise provided by mandatory law, IBM and your reseller are not liable for any of the following: *(items 1 and 2 unchanged)* 3) indirect damages, even if IBM or your reseller is informed of their possibility.

SOUTH AFRICA, NAMIBIA, BOTSWANA, LESOTHO AND SWAZILAND

Limitation of Liability: *The following is added to this Section:*

IBM's entire liability to you for actual damages arising in all situations involving nonperformance by IBM in respect of the subject matter of this Statement of Warranty will be limited to the charge paid by you for the individual Machine that is the subject of your claim from IBM.

UNITED KINGDOM

Limitation of Liability: *The following replaces items 1 and 2 of the first paragraph of this Section:*

1. death or personal injury or physical damage to your real property solely caused by IBM's negligence;
2. the amount of any other actual direct damages or loss, up to 125 percent of the charges (if recurring, the 12 months' charges apply) for the Machine that is the subject of the claim or which otherwise gives rise to the claim;

The following item is added to this paragraph:

3. breach of IBM's obligations implied by Section 12 of the Sale of Goods Act 1979 or Section 2 of the Supply of Goods and Services Act 1982.

Applicability of suppliers and resellers (unchanged).

The following is added to the end of this Section:

IBM's entire liability and your sole remedy, whether in contract or in tort, in respect of any default shall be limited to damages. This publication was developed for products and services offered in the U.S.A.

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Other company, product, and service names may be trademarks or service marks of others.

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



Tested To Comply
With FCC Standards

FOR HOME OR OFFICE USE

Industry Canada Class B emission compliance statement

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

Avis de conformité a la réglementation d'Industrie Canada

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

Deutsche EMV-Direktive (electromagnetische Verträglichkeit)

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 UK, Greenock.

Dieses Gerät erfüllt die Bedingungen der EN 55022 Klasse B.

European Union - emission directive

This product is in conformity with the protection requirements of EU Council Directive 89/366/ECC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

IBM can not 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.

Union Européenne - Directive Conformité électromagnétique

Ce produit est conforme aux exigences de protection de la Directive 89/336/EEC du Conseil de l'UE sur le rapprochement des lois des États membres en matière de compatibilité électromagnétique.

IBM ne peut accepter aucune responsabilité pour le manquement aux exigences de protection résultant d'une modification non recommandée du produit, y compris l'installation de cartes autres que les cartes IBM.

Ce produit a été testé et il satisfait les conditions de l'équipement informatique de Classe B en vertu de CISPR22/Standard européen EN 55022. Les conditions

pour l'équipement de Classe B ont été définies en fonction d'un contexte résidentiel ordinaire afin de fournir une protection raisonnable contre l'interférence d'appareils de communication autorisés.

Unione Europea - Directiva EMC (Conformidad electromagnética)

Este producto satisface los requisitos de protección del Consejo de la UE, Directiva 89/336/CEE en lo que a la legislación de los Estados Miembros sobre compatibilidad electromagnética se refiere.

IBM no puede aceptar responsabilidad alguna si este producto deja de satisfacer dichos requisitos de protección como resultado de una modificación no recomendada del producto, incluyendo el ajuste de tarjetas de opción que no sean IBM.

Este producto ha sido probado y satisface los límites para Equipos Informáticos Clase B de conformidad con el Estándar CISPR22 y el Estándar Europeo EN 55022. Los límites para los equipos de Clase B se han establecido para entornos residenciales típicos a fin de proporcionar una protección razonable contra las interferencias con dispositivos de comunicación licenciados.

Union Europea - Normativa EMC

Questo prodotto è conforme alle normative di protezione ai sensi della Direttiva del Consiglio dell'Unione Europea 89/336/CEE sull'armonizzazione legislativa degli stati membri in materia di compatibilità elettromagnetica.

IBM non accetta responsabilità alcuna per la mancata conformità alle normative di protezione dovuta a modifiche non consigliate al prodotto, compresa l'installazione di schede e componenti di marca diversa da IBM.

Le prove effettuate sul presente prodotto hanno accertato che esso rientra nei limiti stabiliti per le apparecchiature di informatica Classe B ai sensi del CISPR 22/Norma Europea EN 55022. I limiti delle apparecchiature della Classe B sono stati stabiliti al fine di fornire ragionevole protezione da interferenze mediante dispositivi di comunicazione in concessione in ambienti residenziali tipici.

Korean B급 규격 증명서

이 장치는 옥내용으로 보증되었으며 모든 환경에서 사용할 수 있습니다.

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Japanese statement of compliance for products less than or equal to 20 A per phase

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