**IBM**

# Bluetooth PC Card II from IBM

*User's Guide*

**OPTIONS**
*by IBM*

**Note:** Before using this information and the product it supports, read the information under "Appendix B. Warranty information" on page B-1.

# Contents

# About this book

This *User's Guide* contains instructions for installing and using the Bluetooth™ PC Card II from IBM®.

Chapters 1 of this guide contains the product description, installation instructions, getting started, and access to online help in the following languages:
- English
- French
- German
- Spanish
- Italian
- Brazilian Portuguese
- Traditional Chinese
- Japanese

The appendixes contain troubleshooting, help and service information, IBM warranty, and regulatory notices.

## Contents of your option package

This OPTIONS by IBM package contains:
- one Bluetooth PC Card II from IBM
- one *Bluetooth PC Card II CD* for the Bluetooth PC Card II from IBM
- one *User's Guide*

This option package is shipped to IBM resellers complete and in good faith. If any of these items are missing or damaged, contact your place of purchase.

## 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.

# Installing and using the Bluetooth PC Card II from IBM

This section contains the features and benefits, hardware and software requirements, operating system information, installation, and use instructions for the Bluetooth PC Card II from IBM.

## Features and benefits

Bluetooth is named after King Harald Bluetooth, who unified Denmark and Norway in the tenth century. Named in honor of King Harald's gift for communicating with and unifying his people, Bluetooth today is a standard for unifying wireless communications between different devices.[1]

The Bluetooth PC Card II from IBM provides computing professionals with short-range wireless connectivity on IBM ThinkPad® computers to other Bluetooth-enabled devices such as computers, personal digital assistants (PDAs), fax machines, printers, and so on.

The following are features and benefits of the Bluetooth PC Card II:

- Point-to-point or point-multipoint radio link for up to eight Bluetooth-enabled devices.
- Operation within the 2.4 GHz ISM unlicensed radio spectrum
- Maximum data transfer rate of 721 Kilobits per second (Kbps)
- Range of up to 10 meters (30 feet)
- Data-transfer support
- Low power consumption
- Authentication and encryption support
- Certified Bluetooth Interoperability by the Bluetooth Special Interest Group

Some key capabilities of the Bluetooth PC Card II from IBM are:

- **Generic Serial** - Establishes a wireless connection between your computer and another Bluetooth-enabled device. This connection uses a temporary serial-port connection.
- **LAN Access Using point-to-point protocol (PPP)** - Establishes a Bluetooth wireless network connection between your computer and another Bluetooth-enabled device connected to a a traditional local area network (LAN) server. This connection provides access to all the applications and data on the LAN server to your computer.

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1. More information on the development of Bluetooth is on the World Wide Web at http://www.bluetooth.com.

- **Dialup Networking** - Establishes a Bluetooth wireless connection from your computer to a modem or another Bluetooth-enabled device.
- **OBEX (Object Exchange) Object Push** - Enables your computer to send items from its personal information manager (PIM) to the personal information manager on another Bluetooth-enabled device.
- **OBEX File Transfer** -Enables your computer to perform file-system actions on another Bluetooth-enabled device.
- **Fax** - Faxes documents from one Bluetooth-enabled device to another.
- **OBEX IrMC Sync** - Synchronizes the contacts on your computer with the contacts on another Bluetooth-enabled device.

## Minimum computer requirements

Be sure that your computer meets the following minimum requirements before installing the product and software:

- At least 25 MB of free hard disk space
- CD-ROM or DVD-ROM drive
- Intel® Pentium® series microprocessor or equivalent
- 64 MB minimum RAM
- One of the following operating systems: Microsoft® Windows® 98 Second Edition (SE), Windows Millennium Edition (ME), or Windows 2000 Professional

## Installing the Bluetooth PC Card II from IBM

This section contains information about using and installing the Bluetooth PC Card II from IBM. This section also includes information on installing software from the *Bluetooth PC Card II CD*.

**Note:** If you purchased the Bluetooth UltraPort™ Module from IBM previously, you must *completely remove all parts of this device and uninstall the software* before you install the Bluetooth PC Card II from IBM and the new software. If you do not uninstall the Bluetooth UltraPort Module before installing the Bluetooth PC Card II, the Card will not work.

## Understanding the Bluetooth PC Card II antenna

The following illustration defines the LED indicators on the antenna. The antenna is at the left in the illustration below, and contains the LED indicators.
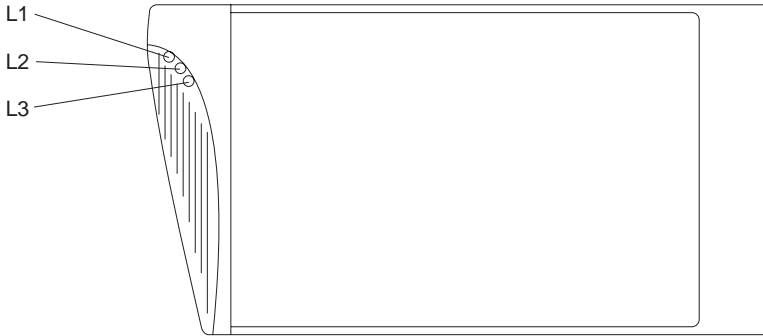


| Indicator | Function |
|-----------|----------|
| L1 | This indicator is normally on. When data is transferred between your computer and another Bluetooth-enabled device, the L1 indicator flashes on and off. |
| L2 | This indicator shows that the Bluetooth PC Card II is inserted properly and the power is on. |
| L3 | This indicator is on when:<br>• your computer searches for other Bluetooth-enabled devices.<br>• other Bluetooth-enabled devices have located your computer.<br><br>If there is no search activity, or your computer is set to undiscoverable, this indicator will remain off. |

## Installing the software and Bluetooth PC Card II from IBM

Use the following procedure for the Windows 98 Second Edition, Windows Millennium Edition, or Windows 2000 Professional operating system:

1. Turn on your computer.
2. Click **Start-->Run.**
3. Type *e* :\SETUP.EXE where *e* corresponds to the letter of your CD-ROM or DVD-ROM drive.
4. Click **OK.** The installation program starts.

   **Note:** On some Microsoft Windows 98 computers, the IBM Bluetooth Installation wizard might need to update the Microsoft Windows Installer. If the Windows Installer is updated, shut down and restart your computer before continuing with the installation of the IBM Bluetooth PC Card II software.

5. Follow the instructions in the installation wizard (for default installation options, click **Next** until the Install Shield Wizard Complete window opens).
6. Click **Finish.**
7. Click **OK** to restart your computer.
8. Insert the PC card into the PCMCIA slot of your computer and wait until the Found New Hardware process is completed.
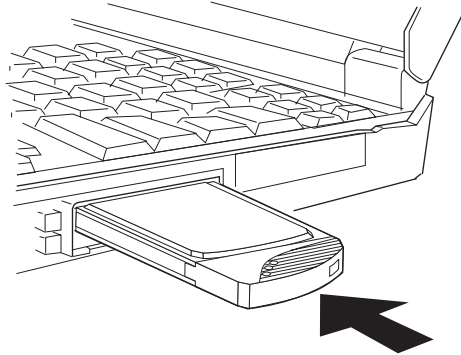


9. The new hardware and software are ready for use with Windows 2000 Professional. If you are using Windows 98 Second Edition or Windows Millennium Edition, shut down and restart the computer.

## Using the Bluetooth application

To start using the Bluetooth application, click **Start→Programs→ IBM Bluetooth→Bluetooth Neighborhood.**

From the **Bluetooth Neighborhood** window you can:

- Double-click **Search for other devices**. This function will locate and connect to other Bluetooth-enabled devices within 30 feet of your computer.
- Double-click **Local Device.** This function will display all the tasks you can perform using Bluetooth connectivity**.**
- Get help. Click **Help** in the menu bar at the top of the **Bluetooth Neighborhood** application window, or press the F1 function key while your mouse pointer is within the active **Bluetooth Neighborhood** window.

  The online help contains information about using the IBM PC Card II from IBM and more advanced troubleshooting.

If you have problems with either the card or the software, refer to the online help documentation. For basic troubleshooting, see "Appendix A. Bluetooth PC Card II troubleshooting" on page A-1.

# Installation et utilisation de la carte PC Card II Bluetooth IBM

Cette section présente les fonctions et les avantages, la configuration matérielle et logicielle requise, diverses informations concernant le système d'exploitation, ainsi que des instructions d'installation et d'utilisation de la carte PC Card II Bluetooth IBM.

## Fonctions et avantages

Le terme Bluetooth ("dent bleue") a été choisi en hommage au roi Harald Blaatand qui a unifié le Danemark et la Norvège au dixième siècle. Comme le roi Harald dont le talent a permis la communication et l'unification de deux peuples, Bluetooth est aujourd'hui une norme reconnue de communication sans fil entre différents périphériques.[1]

La carte PC Card II Bluetooth IBM offre aux professionnels de l'informatique la possibilité de connecter sans fil, et à courte portée, des ordinateurs ThinkPad à d'autres périphériques Bluetooth, qu'ils s'agissent d'ordinateurs, d'assistants personnel, de télécopieurs ou d'imprimantes.

La carte PC Card II Bluetooth réunit les fonctions et les avantages suivants :

- Connexion point à point ou point à multipoint entre au plus huit périphériques équipés d'un module Bluetooth.
- Fonctionnement dans la bande de fréquences publique ISG 2,4 GHz.
- Débit maximal de 721 kilobits par seconde (kbits/s.)
- Portée maximale de 10 mètres.
- Prise en charge du transfert de données.
- Faible consommation électrique.
- Prise en charge de l'authentification et du cryptage.
- Certifié conforme à la technologie Bluetooth par le SIG (groupe d'intérêt spécial).

Les principales caractéristiques de la carte PC Card II Bluetooth IBM sont les suivantes :

- **Série générique** - Etablit une connexion sans fil entre votre ordinateur et un autre périphérique Bluetooth. Cette connexion est de type série temporaire.

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1. Pour plus d'informations sur le développement de la norme Bluetooth, visitez le site Web correspondant, à l'adresse http://www.bluetooth.com.

- **Accès au réseau local via le protocole PPP** - Etablit une connexion Bluetooth sans fil entre votre ordinateur et un autre périphérique Bluetooth relié à un serveur de réseau local standard. Cette connexion fournit à votre ordinateur un accès à toutes les applications et données situées sur le serveur de réseau local.
- **Réseau commuté** - Etablit une connexion Bluetooth sans fil entre votre ordinateur et un modem ou un autre périphérique Bluetooth.
- **Fonction Object Push OBEX** - Active votre ordinateur pour qu'il envoie des éléments de son gestionnaire PIM vers le gestionnaire PIM d'un autre périphérique Bluetooth.
- **Transfert de fichiers OBEX** - Active votre ordinateur pour qu'il puisse effectuer des opérations liées au système de fichiers sur un autre périphérique Bluetooth.
- **Télécopie** - Permet de faxer des documents entre deux périphériques Bluetooth.
- **Synchronisation IrMC OBEX** - Synchronise les contacts pris sur votre ordinateur avec ceux d'un autre périphérique Bluetooth.

## Configuration matérielle requise

Assurez-vous que votre ordinateur présente les équipements obligatoires suivants avant d'installer le produit et le logiciel :

- Un espace disque de 25 Mo.
- Une unité de CD-ROM ou de DVD-ROM.
- Un microprocesseur Intel Pentium ou équivalent.
- 64 Mo minimum de mémoire vive.
- L'un des systèmes d'exploitation suivants : Microsoft Windows 98 Second Edition (SE), Windows Millennium Edition (ME) ou Windows 2000 Professional.

## Installation d'une carte PC Card II Bluetooth IBM

La présente section contient des informations sur l'utilisation et l'installation de la carte PC Card II Bluetooth. Elle indique également comment installer le logiciel correspondant, situé sur le CD-ROM*PC Card II Bluetooth*.

**Remarque :** Si vous aviez acheté auparavant le module Bluetooth UltraPort IBM, vous devez *retirer toutes les parties de ce périphérique et entièrement désinstaller le périphérique* avant d'installer la carte PC Card II Bluetooth et son nouveau programme. Si vous omettez cette opération, la carte PC Card Bluetooth ne fonctionnera pas.

## Description de l'antenne de la carte PC Card II Bluetooth

L'illustration suivante présente les voyants lumineux de l'antenne. Celle-ci se trouve sur le côté gauche de la figure ci-dessous, et est dotée de plusieurs voyants.

| Voyant | Fonction |
|--------|----------|
| L1 | Normalement, ce voyant est allumé. Il clignote lorsque des données sont transférées entre votre ordinateur et un autre périphérique Bluetooth. |
| L2 | Ce voyant indique que la carte PC Card II Bluetooth est correctement insérée et alimentée. |
| L3 | Ce voyant est allumé dans les cas suivants : <br> • votre ordinateur essaie de localiser d'autres périphériques Bluetooth ; <br> • d'autres périphériques Bluetooth ont localisé votre ordinateur. <br> En l'absence d'activité de recherche ou si votre ordinateur ne peut pas être identifié, ce voyant reste éteint. |

## Installation du logiciel et de la carte PC Card II Bluetooth IBM

Utilisez la procédure suivante pour les systèmes d'exploitation Windows 98 Second Edition, Windows Millennium Edition ou Windows 2000 Professional :
1. Mettez l'ordinateur sous tension.
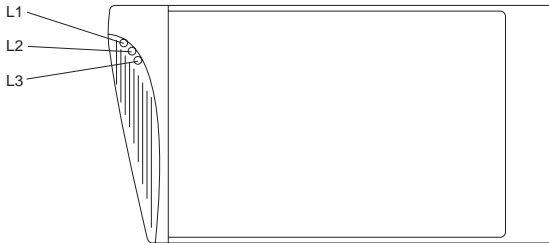2. Cliquez sur **Démarrer-->Exécuter.**
3. Tapez *e* **:\SETUP.EXE** où *e* correspond à la lettre de votre unité de CD-ROM ou de DVD-ROM.
4. Cliquez sur **OK.** Le programme d'installation démarre.

   **Remarque :** Sur certains ordinateurs Microsoft Windows 98, l'Assistant Bluetooth IBM devra peut-être mettre à jour le programme d'installation de Microsoft Windows. Si cette mise à jour a eu lieu, arrêtez et relancez votre ordinateur avant de procéder à l'installation du logiciel PC Card II Bluetooth.
5. Suivez les instructions fournies par l'Assistant d'installation (pour accepter les options par défaut, cliquez sur **Suivant** jusqu'à l'affichage de la fenêtre de fin d'installation).

6. Cliquez sur **Fin**.
7. Cliquez sur **OK** pour relancer votre ordinateur.
8. Insérez la carte PC dans l'emplacement PCMCIA de l'ordinateur et attendez la fin du processus associé à la détection d'un nouveau matériel.
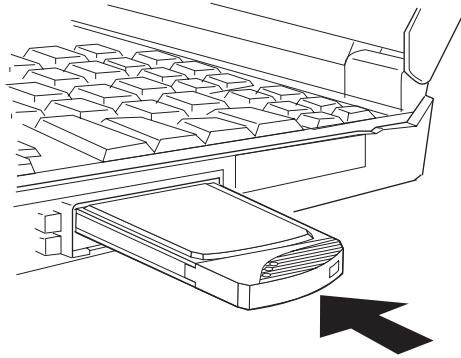
9. Le nouveau matériel et le logiciel sont prêts à être utilisés avec Windows 2000 Professional. Si vous comptez exploiter Windows 98 Second Edition ou Windows Millennium Edition, arrêtez, puis relancez l'ordinateur.

## Utilisation de l'application Bluetooth

Pour lancer l'application Bluetooth, cliquez sur **Démarrer→Programmes→ IBM Bluetooth→Bluetooth Neighborhood.**

A partir de la fenêtre **Bluetooth Neighborhood**, vous pouvez :

- Cliquer deux fois sur **Search for other devices**. Cette fonction localise les autres périphériques Bluetooth et s'y connecte dans un rayon de 10 mètres autour de votre ordinateur.
- Cliquer deux fois sur **Local Device.** Toutes les tâches réalisables par le biais de la connectivité Bluetooth s'affichent**.**
- Afficher l'aide. Cliquez sur **Help** dans la barre de menus en haut de la fenêtre **Bluetooth Neighborhood**, ou appuyez sur la touche de fonction F1 lorsque le pointeur se trouve dans cette fenêtre.

  L'aide en ligne contient des informations sur l'utilisation de la carte PC Card II IBM, ainsi que d'autres indications concernant l'identification et la résolution des incidents.

En cas d'incident de fonctionnement de la carte ou du logiciel, reportez-vous à la documentation en ligne. Pour obtenir des renseignements de base quant à l'identification et la résolution des incidents, reportez-vous à l'«Annexe A. Bluetooth PC Card II troubleshooting» à la page A-1.n des incidents.

# Installation und Verwendung der IBM Bluetooth PC-Karte II

In diesem Abschnitt finden Sie Informationen zu den Funktionen und Vorteilen des Produkts, Systemvoraussetzungen für Hard- und Software, Informationen zum Betriebssystem sowie Hinweise zur Installation und Verwendung der IBM Bluetooth PC-Karte II.

## Funktionen und Vorteile

Die Bezeichnung 'Bluetooth' ist abgeleitet von König Harald Blåtand (d. h. Blauzahn, engl. Bluetooth), der im 10. Jahrhundert Dänemark und Norwegen vereinigte. Benannt nach der besonderen Fähigkeit des Königs, eine Verständigung und Vereinigung zwischen den beiden Nationen zu erzielen, ist Bluetooth heute ein Standard zur Herstellung einer drahtlosen Kommunikation zwischen verschiedenen Einheiten.[1]

Die IBM Bluetooth PC-Karte II bietet Computerbenutzern eine drahtlose Verbindungsmöglichkeit im Nahbereich von IBM ThinkPad® -Computern zu anderen Einheiten mit Bluetooth-Funktion, wie z. B. Computern, PDAs (Personal Digital Assistant), Faxgeräten, Druckern usw.

Die IBM Bluetooth PC-Karte II bietet Ihnen folgende Funktionen und Vorteile:

- Point-to-Point- bzw. Point-Multipoint-Funkverbindungen für bis zu acht Einheiten mit Bluetooth-Funktion
- Übertragung im 2,4 GHz ISM-Band
- Maximale Datentransferrate von 721 Kilobits pro Sekunde (Kbps)
- Reichweite von bis zu 10 m
- Unterstützung von Datenübertragung
- Geringer Stromverbrauch
- Untzerstützung von Authentifizierung und Verschlüsselung
- Bluetooth-Interoperabilität, zertifiziert durch die Bluetooth Special Interest Group

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1. Weitere Informationen zur Entwicklung von Bluetooth erhalten Sie auf folgender Website: http://www.bluetooth.com.

Zu den Hauptfunktionen der IBM Bluetooth PC-Karte II zählen:

- **Serieller Anschluss** - Herstellung einer drahtlosen Verbindung zwischen Ihrem Computer und einer anderen Einheit mit Bluetooth-Funktion. Für diese Verbindung wird eine temporäre Verbindung mit einem seriellen Anschluss genutzt.

- **Zugang zu einem LAN über Point-to-Point Protocol (PPP)** - Herstellen einer drahtlosen Bluetooth-Netzwerkverbindung zwischen Ihrem Computer und einer anderen Einheit mit Bluetooth-Funktion über einen herkömmlichen lokalen Netzwerkserver (LAN). Durch diese Verbindung erhalten Sie Zugriff auf alle Anwendungen und Daten auf dem LAN.

- **DFÜ-Netzwerk** - Herstellen einer drahtlosen Bluetooth-Netzwerkerbindung zwischen Ihrem Computer und einem Modem bzw. einer anderen Einheit mit Bluetooth-Funktion.

- **OBEX (Object Exchange) Object Push** - Ihr Computer kann damit Einträge aus seinem Personal Information Manager (PIM) zum PIM einer anderen Einheit mit Bluetooth-Funktion senden.

- **OBEX-Dateitransfer** - Ihr Computer kann damit Dateisystemvorgänge auf einer anderen Einheit mit Bluetooth-Funktion ausführen.

- **Fax** - Es können Dokumente von einer Einheit mit Bluetooth-Funktion zu einer anderen gefaxt werden.

- **OBEX IrMC Sync** - Die Kontakte auf Ihrem Computer werden mit denen einer anderen Einheit mit Bluetooth-Funktion synchronisiert.

## Mindestsystemanforderungen

Vergewissern Sie sich vor der Installation des Produkts und der Software, dass Ihr Computer die folgenden Mindestanforderungen erfüllt:

- mindestens 25 MB freier Festplattenspeicher
- CD-ROM- oder DVD-ROM-Laufwerk
- Intel® Pentium®-Prozessor oder ein entsprechendes Äquivalent
- mindestens 64 MB RAM
- Betriebssystem: Microsoft® Windows® 98 Second Edition (SE), Windows Millennium Edition (ME) oder Windows 2000 Professional

## Installation der IBM Bluetooth PC-Karte II

In diesem Abschnitt finden Sie Informationen zur Installation und Verwendung der IBM Bluetooth PC-Karte II. Zusätzlich erhalten Sie Informationen zur Installation der Software mit Hilfe der CD zur Bluetooth PC-Karte II.

**Anmerkung:** Wenn Ihr Computer bereits über ein IBM UltraPort™-Modul verfügt, müssen Sie *alle Komponenten dieser Einheit entfernen und die Software deinstallieren*, bevor Sie die IBM Bluetooth PC-Karte II und die neue Software installieren können. Wenn Sie das Bluetooth UltraPort-Modul vor der Neuinstallation der Bluetooth PC-Karte II nicht deinstallieren, wird die PC-Karte nicht funktionieren.

## Antenne der Bluetooth PC-Karte II

In der Grafik sind die LED-Anzeigen dargestellt. Die Antenne ist links in der Grafik zu sehen.



| Anzeige | Funktion |
|---------|----------|
| L1 | Diese Anzeige leuchtet im Normalfall. Wenn Daten zwischen dem Computer und einer anderen Einheit mit Bluetooth-Funktion übertragen werden, blinkt die Anzeige. |
| L2 | Diese Anzeige zeigt an, dass die Bluetooth PC-Karte II richtig eingesteckt ist und Netzstrom anliegt. |
| L3 | Diese Anzeige leuchtet, wenn:<br>• Ihr Computer nach anderen Einheiten mit Bluetooth-Funktion sucht.<br>• andere Einheiten mit Blutooth-Funktion Ihren Computer lokalisiert haben.<br><br>Wenn keine Suchvorgänge laufen oder wenn Ihr Computer so eingestellt ist, dass er von anderen Einheiten nicht lokalisiert werden kann, ist die Anzeige ausgeschaltet. |

## Installation der IBM Software und Bluetooth PC-Karte II

Unter Windows 98 Second Edition, Windows Millennium Edition oder Windows 2000 Professional verfahren Sie wie folgt:

1. Schalten Sie Ihren Computer ein.
2. Klicken Sie auf **Start-->Ausführen.**
3. Geben Sie *e* **:\SETUP.EXE** ein. Der eingegebene Buchstabe (z. B. *e*) muss dem Buchstaben Ihres CD-ROM- oder DVD-ROM-Laufwerks entsprechen.
4. Klicken Sie auf **OK.** Das Installationsprogramm wird gestartet.

   **Anmerkung:** Auf einigen Computern mit dem Betriebssystem Microsoft Windows 98 könnte der IBM Bluetooth-Installationsassistent eine Aktualisierung des Microsoft Windows Installationsprogramms erfordern. Wenn das Windows Installationsprogramm aktualisiert ist, schalten Sie Ihren Computer aus und führen Sie einen Neustart durch, bevor Sie die Software für die IBM Bluetooth PC-Karte II installieren.

5. Folgen Sie den Anweisungen des Installationsassistenten (für die Standardinstallation klicken Sie auf **Weiter**, bis das Fenster 'Installation beendet' geöffnet wird).
6. Klicken Sie auf **Beenden**.
7. Klicken Sie auf **OK**, um den Computer neu zu starten.
8. Stecken Sie die PC-Karte in den PCMCIA-Steckplatz Ihres Computers ein und warten Sie, bis die neue Hardware von Ihrem Computer erkannt wird.
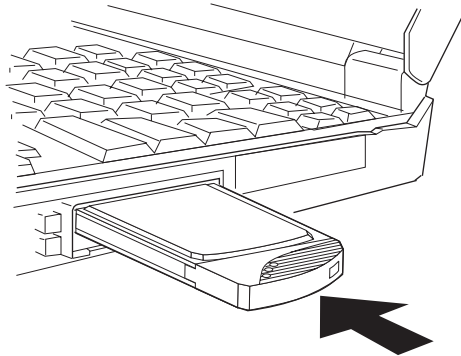


9. Die neue Hard- und Software kann nun unter Windows 2000 Professional verwendet werden. Wenn Sie Windows 98 Second Edition oder Windows Millennium Edition verwenden, müssen Sie den Computer herunterfahren und neu starten.

## Verwendung von Bluetooth

Um Bluetooth zu starten, klicken Sie auf **Start→ Programme→ IBM Bluetooth→ Bluetooth-Umgebung.**

Im Fenster **Bluetooth-Umgebung** können Sie:

- Doppelklicken auf **Nach anderen Einheiten suchen**. Mit dieser Funktion können Sie andere Einheiten mit Bluetooth-Funktion im Umkreis von 10 m lokalisieren und eine Verbindung mit ihnen herstellen.
- Doppelklicken auf **Lokale Einheit.** Mit dieser Funktion werden alle Funktionen angezeigt, die Sie über die Bluetooth-verbindung ausführen können.
- Hilfe anfordern. Klicken Sie auf **Hilfe** in der oberen Menüleiste im Fenster **Bluetooth-Umgebung** oder drücken Sie F1, während sich der Mauszeiger im aktiven Fenster **Bluetooth-Umgebung** befindet.

  In der Online-Hilfefunktion finden Sie Informationen zur Verwendung der IBM Bluetooth PC-Karte II und zur Fehlerbehebung.

Sollten bei der PC-Karte oder bei der Software Fehler auftreten, informieren Sie sich bitte in der Online-Hilfedokumentation. Für die Behebung sonstiger Fehler siehe „Anhang A. Fehlerbehebung für die Bluetooth PC-Karte II" auf Seite A-1.

# Instalación y utilización de la Tarjeta PC II de Bluetooth PC de IBM

Esta sección contiene las características y los ventajas, los requisitos de hardware y de software, la información del sistema operativo y las instrucciones de instalación y utilización para la Tarjeta PC II de Bluetooth PC de IBM.

## Características y ventajas

Bluetooth recibe este nombre por el Rey Harald Bluetooth, que unificó Dinamarca y Noruega en el siglo X. Nombrado en honor del regalo del Rey Harald de comunicarse con su pueblo y unificarlo, actualmente Bluetooth es un estándar para unificar las comunicaciones inalámbricas entre varios dispositivos.[1]

La Tarjeta PC II Bluetooth de IBM proporciona a los profesionales de la informática conectividad inalámbrica de corto alcance en sistemas IBM ThinkPad® con otros dispositivos habilitados para Bluetooth como sistemas PC, asistentes digitales personales (PDA), máquinas de fax, impresoras, etc.

Éstas son las características y beneficios de la Tarjeta PC II Bluetooth:
- Enlace de radio punto a punto o punto a multipunto para un máximo de ocho dispositivo habilitados para Bluetooth.
- Funcionamiento en un espectro de radio sin licencia ISM de 2,4 GHz
- Velocidad máxima de transferencia de datos de 721 Kilobits por segundo (Kbps)
- Alcance de hasta 10 metros (30 pies)
- Soporte de transferencia de datos
- Bajo consumo de energía
- Soporte de autentificación y cifrado
- Interoperatividad certificada de Bluetooth del grupo de intereses especiales de Bluetooth

Algunas funciones clave de la Tarjeta PC II Bluetooth de IBM son:
- **Serie genérica** - Establece una conexión inalámbrica entre el sistema y otro dispositivo habilitado para. Esta conexión utiliza una conexión temporal de puerto serie.

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1. Encontrará más información acerca del desarrollo de Bluetooth en la World Wide Web en la dirección http://www.bluetooth.com.

- **Acceso a la LAN utilizando protocolo punto a punto (PPP)** - Establece una conexión de red inalámbrica Bluetooth entre el sistema y otro dispositivo habilitado para Bluetooth conectado a un servidor de red de área local tradicional (LAN). Esta conexión proporciona acceso a todas las aplicaciones y los datos del servidor de la LAN al sistema.
- **Red de marcado** - Establece una conexión inalámbrica Bluetooth del sistema a un módem o a otro dispositivo habilitado para Bluetooth.
- **OBEX (Object Exchange) Object Push** - Habilita el sistema para enviar elementos del gestor de información personal (PIM) a otro dispositivo habilitado para Bluetooth.
- **Transferencia de archivos OBEX** -Permite que el sistema realice acciones de sistema de archivos en otro dispositivo habilitado para Bluetooth.
- **Fax** - Envía por fax documentos de un dispositivo habilitado para Bluetooth a otro.
- **Sinc OBEX IrMC** - Sincroniza los contactos del sistema con los contactos del otro dispositivo habilitado para Bluetooth.

## Requisitos mínimos del sistema

Asegúrese de que el sistema cumpla los siguientes requisitos mínimos antes de instalar el producto y el software:
- Como mínimo 25 MB de espacio libre de disco duro
- Unidad de CD-ROM o DVD-ROM
- Microprocesador Intel® Pentium® series o equivalente
- RAM mínima de 64 MB
- Uno de los sistemas operativos siguientes: Microsoft ® Windows® 98 Segunda Edición (SE), Windows Millennium Edition (ME) o Windows 2000 Professional

## Instalación de la Tarjeta PC II Bluetooth de IBM

Esta sección contiene información sobre la utilización e instalación de la Tarjeta PC II Bluetooth de IBM. Esta sección también incluye información sobre la instalación del software desde el *CD de la Tarjeta PC II Bluetooth*.

**Nota:** Si ha adquirido el Módulo UltraPort™ Bluetooth de IBM anteriormente, debe *extraer completamente todas las piezas de este dispositivo y desinstalar el software* antes de instalar la Tarjeta PC II Bluetooth de IBM y el nuevo software. Si no desinstala el Módulo UltraPort Bluetooth antes de instalar la Tarjeta PC II Bluetooth, la Tarjeta no funcionará.

## Comprensión de la antena de la Tarjeta PC II Bluetooth

La figura siguiente define los indicadores LED de la antena. La antena está situada a la izquierda de la figura siguiente y contiene los indicadores LED.



| Indicador | Función |
|-----------|---------|
| L1 | Este indicador está normalmente encendido. Cuando se están transfiriendo datos entre el sistema y otro dispositivo habilitado para Bluetooth, el indicador L1 parpadea. |
| L2 | Este indicador muestra que la Tarjeta PC II Bluetooth está insertada correctamente y que la alimentación está activada. |
| L3 | Este indicador está encendido cuando: <br> • el sistema busca otros dispositivos habilitados para Bluetooth. <br> • otros dispositivos habilitados para Bluetooth han localizado el sistema. <br><br> Si no hay ninguna actividad de búsqueda o si el sistema está establecido como no descubrible, este indicador permanecerá apagado. |

## Instalación del software y de la Tarjeta PC II Bluetooth de IBM

Utilice el procedimiento siguiente para los sistemas operativos Windows 98 Segunda Edición, Windows Millennium Edition o Windows 2000 Professional:
1. Encienda el sistema.
2. Pulse **Inicio-->Ejecutar.**
3. Escriba *e* :\SETUP.EXE donde *e* es la letra de la unidad de CD-ROM o DVD-ROM.
4. Pulse **Aceptar.** Se iniciará el programa de instalación.

> **Nota:** En algunos sistemas Microsoft Windows 98, es posible que el asistente de instalación de IBM Bluetooth necesite actualizar el programa de instalación de Microsoft Windows. Si el programa de

instalación de Windows está actualizado, cierre el sistema e inícielo
de nuevo antes de continuar con la instalación del software de la
Tarjeta PC II de IBM Bluetooth.

5. Siga las instrucciones del asistente de instalación (para las opciones de
   instalación por omisión, pulse **Siguiente** hasta que se abra la ventana
   Asistente de Install Shield completado).
6. Pulse **Finalizar.**
7. Pulse **Aceptar** para reiniciar el sistema.
8. Inserte la Tarjeta PC en la ranura PCMCIA del sistema y espere hasta que
   el proceso Nuevo hardware encontrado haya finalizado.
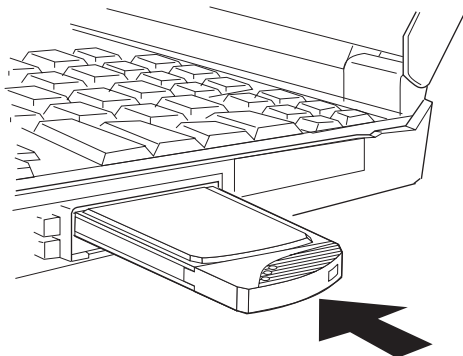


9. El nuevo hardware y software está disponible para se utilizado con
   Windows 2000 Professional. Si está utilizando Windows 98 Segunda Edición
   o Windows Millennium Edition, cierre el sistema e inícielo de nuevo.

## Utilización de la aplicación Bluetooth

Para empezar a utilizar la aplicación Bluetooth, pulse **Inicio→Programas→ IBM
Bluetooth→Bluetooth Neighborhood.**

Desde la ventana **Bluetooth Neighborhood** puede:

- Efectuar una doble pulsación en **Search for other devices** (Buscar otros
  dispositivos). Este función localizará otros dispositivos habilitados para
  Bluetooth situados a una distancia no superior a 9 metros (30 pies) del
  sistema y se conectará con estos dispositivos.

- Efectuar una doble pulsación en **Local Device.** (Dispositivo local) Esta
  función mostrará todas las tareas que puede realizar utilizando la
  conectividad Bluetooth**.**

- Obtener ayuda. Pulse **Ayuda** en la barra de menús situada en la parte
  superior de la ventana de la aplicación **Bluetooth Neighborhood** o pulse la
  tecla de función F1 mientras el puntero del ratón esté en la ventana activa
  **Bluetooth Neighborhood**.

La ayuda en línea contiene información sobre la utilización de la Tarjeta PC
II Bluetooth de IBM y resolución de problemas avanzada.

Si tiene problemas con la tarjeta o el software, consulte la documentación de la
ayuda en línea. Para ver la resolución de problemas básica, consulte el
"Apéndice A. Resolución de problemas de la Tarjeta PC II Bluetooth" en la
página A-1.

# Installazione e utilizzo della scheda PC II Bluetooth IBM

Questa sezione contiene le funzioni e i servizi, i requisiti sull'hardware e sul software, le informazioni sul sistema operativo, l'installazione e l'utilizzo delle istruzioni relative alla scheda PC II Bluetooth IBM.

## Funzioni e servizi

Bluetooth viene definita dopo che il re Harald Bluetooth unificò la Danimarca e la Norvegia nel X secolo. Definita in onore del dono di Re Harald per la comunicazione e l'unificazione del proprio popolo, oggi Bluetooth è lo standard per l'unificazione delle comunicazioni senza fili tra le diverse unità.[1]

La scheda PC II Bluetooth IBM consente connessione senza fili short range degli elaboratori IBM ThinkPad® ad altri dispositivi abilitati Bluetooth, quali elaboratori, PDA (Personal Digital Assistant), macchine fax, stampanti e così via.

Di seguito vengono riportate le funzioni e i servizi della scheda PC II Bluetooth:
- Collegamento radio punto-multipunto o punto-punto sino a otto dispositivi abilitati Bluetooth.
- Funzionamento con frequenze radio 2,4 GHz ISM senza brevetto
- Velocità massima di trasferimento dati di 721 Kilobit al secondo (Kbp)
- Raggio di azione fino a 10 metri (30 piedi)
- Supporto trasferimento dati
- Basso consumo di forza motrice
- Supporto per autenticazione e codifica
- Certificato Bluetooth Interoperability da specialisti Bluetooth

Alcune capacità chiavi della scheda PC II Bluetooth IBM sono le seguenti:
- **Seriale generica** - Stabilisce una connessione senza fili tra il proprio elaboratore e altri dispositivi abilitati Bluetooth. Questa connessione utilizza una connessione di porta seriale temporanea.
- **Accesso LAN mediante PPP (Point-to-Point Protocol)** - Stabilisce una connessione di rete Bluetooth senza fili tra il proprio elaboratore e altri dispositivi abilitati Bluetooth o a una rete LAN (Local Area Network)

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1. Ulteriori informazioni sullo sviluppo di Bluetooth sono disponibili sul sito Web all'indirizzo: http://www.bluetooth.com.

collegata al server. Questa connessione fornisce l'accesso a tutte le
applicazioni e a tutti i dati del server LAN all'elaboratore.

- **Intercomunicazione a linea commutata** - Stabilisce una connessione
  Bluetooth senza fili del proprio elaboratore ad un modem o un altro
  dispositivo abilitato Bluetooth.
- **Invio di elementi OBEX (Object Exchange)** - Consente all'elaboratore di
  inviare elementi dal suo PIM (Personal Information Manager) ad un altro
  PIM o ad un altro dispositivo abilitato Bluetooth.
- **Trasferimento file OBEX** - Consente all'elaboratore di eseguire le azioni del
  sistema di file ad un altro dispositivo abilitato Bluetooth.
- **Fax** - Rende disponibile una connessione per inviare documenti mediante fax
  da un dispositivo abilitato Bluetooth ad un altro.
- **OBEX IrMC Sync** - Sincronizza i contatti del proprio elaboratore con quelli
  di un altro dispositivo abilitato Bluetooth.

## Requisiti minimi dell'elaboratore

Prima di installare il prodotto e il software, verificare che l'elaboratore soddisfi
i seguenti requisiti del sistema:

- Minimo spazio disponibile su disco fisso di 25 MB
- Unità CD-ROM o DVD-ROM
- Microprocessore Intel® Pentium® o equivalente
- 64 MB RAM minimo
- Uno dei seguenti sistemi operativi: Microsoft ® Windows® 98 SE (Second
  Edition), Windows ME (Millennium Edition) o Windows 2000 Professional

## Installazione della scheda PC II Bluetooth IBM

Questa sezione contiene le informazioni sull'utilizzo e l'installazione della
scheda PC II Bluetooth IBM. Questa sezione include anche le informazioni
sull'installazione del software dal *CD scheda PC II Bluetooth*.

**Nota:** se è stato acquistato il modulo Bluetooth UltraPort™ IBM
precedentemente, è necessario *rimuovere tutte le parti di questo dispositivo
completamente e disinstallare il software* prima di installare la scheda PC II
Bluetooth IBM e il nuovo software. Prima di installare la scheda PC II
Bluetooth, se non viene disinstallato il modulo Bluetooth UltraPort, la
scheda non funzionerà.

## Nozioni dell'antenna della scheda PC II Bluetooth

La seguente figura definisce gli indicatori LED dell'antenna. L'antenna è posta a sinistra nella seguente figura e contiene gli indicatori LED.



| Indicatore | Funzione |
|---|---|
| L1 | Di solito, questo indicatore è acceso. Quando i dati vengono trasferiti tra l'elaboratore e un altro dispositivo abilitato Bluetooth, l'indicatore L1 lampeggia. |
| L2 | Questo indicatore indica che la scheda PC II Bluetooth viene inserita e funziona correttamente. |
| L3 | Questo indicatore è acceso quando: <br> • l'elaboratore ricerca altri dispositivi abilitati Bluetooth. <br> • altri dispositivi abilitati Bluetooth rilevano l'elaboratore. <br><br> Se non è presente alcuna attività di ricerca oppure l'elaboratore non viene rilevato, questo indicatore resta spento. |

## Installazione del software e della scheda PC II Bluetooth IBM

Utilizzare la seguente procedura per il sistema operativo Windows 98 SE (Second Edition), Windows ME (Millennium Edition) o Windows 2000 Professional:
1. Avviare l'elaboratore.
2. Fare clic su **Start-->Esegui.**
3. Immettere *e* :\SETUP.EXE dove *e* corrisponde alla lettera identificativa dell'unità CD-ROM o DVD-ROM.
4. Fare clic su **OK.** Viene avviato il programma di installazione.

> **Nota:** su alcuni elaboratori Microsoft Windows 98, la procedura guidata all'installazione di IBM Bluetooth necessita di aggiornare Microsoft Windows Installer. Se Windows Installer è aggiornato, spegnere e riavviare l'elaboratore prima di proseguire con l'installazione del software della scheda PC II Bluetooth IBM.

5. Seguire le istruzioni, contenute nella procedura guidata all'installazione (pr le opzioni di installazione predefinite, fare clic su **Avanti** fino a quando non viene visualizzata la finestra di completamento di Install Shield Wizard).
6. Fare clic su **Fine**.
7. Fare clic su **OK** per riavviare l'elaboratore.
8. Inserire la scheda PC nell'alloggiamento PCMCIA dell'elaboratore ed attendere fino a quando viene completato il processo Nuovo componente hardware rilevato.
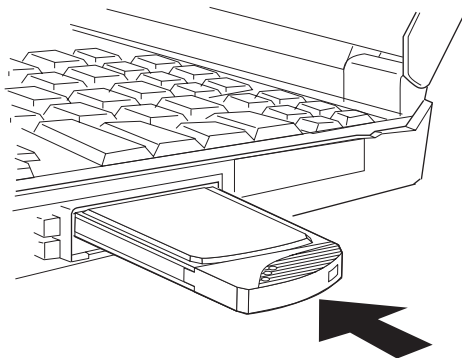


9. E' possibile utilizzare il nuovo hardware e il software con il sistema operativo Windows 2000 Professional. Se si sta utilizzando Windows 98 SE (Second Edition) o Windows Me (Millennium Edition), spegnere e riavviare l'elaboratore.

## Utilizzo dell'applicazione Bluetooth

Per effettuare l'avvio mediante l'applicazione Bluetooth, fare clic su **Start→Programmi→ IBM Bluetooth→Bluetooth Neighborhood.**

Nella finestra **Bluetooth Neighborhood**, è possibile:

- Fare doppio clic su **Cerca altre periferiche**. Tale funzione verrà individuata e collegata ad altri dispositivi abilitati Bluetooth entro 30 piedi dell'elaboratore.
- Fare doppio clic su **Rileva periferica.** Questa funzione visualizzerà tutte le attività da poter eseguire mediante la connessione Bluetooth**.**
- Richiedere supporto. Fare clic su **?** nella barra di menu, posta nella parte superiore della finestra di applicazione **Bluetooth Neighborhood** oppure premere il tasto funzione F1 mentre il puntatore del mouse è compreso nella finestra **Bluetooth Neighborhood** attiva.

  L'aiuto in linea contiene le informazioni sull'utilizzo della scheda PC II IBM e ulteriori informazioni avanzate sulla risoluzione dei problemi.

Se si verificano problemi con la scheda o il software, consultare la documentazione dell'aiuto in linea. Per le informazioni basilari sulla risoluzione dei problemi, consultare la sezione "Appendice A. Risoluzione dei problemi della scheda PC II Bluetooth" a pagina A-1.

# Instalando e Utilizando o Bluetooth PC Card II da IBM

Esta seção contém recursos e benefícios, requisitos de hardware e de software, informações sobre o sistema operacional e instruções sobre uso e instalação do Bluetooth PC Card II da IBM.

## Recursos e Benefícios

Bluetooth é proveniente do nome do Rei Harald Bluetooth, que unificou a Dinamarca e a Noruega no século dez. Escolhido em homenagem ao talento do Rei Harald em informar e unificar seu povo, Bluetooth, atualmente, é o modelo da unificação da comunicação sem fio entre diferentes dispositivos.[1]

O Bluetooth PC Card II da IBM fornece aos profissionais de computação conectividade sem fio de pequeno alcance em computadores ThinkPad® da IBM a outros dispositivos ativados pelo Bluetooth como computadores, PDAs (assistentes pessoais digitais), máquinas de fax, impressoras e outros.

A seguir, estão os recursos e benefícios do Bluetooth PC Card II:

- Link de rádio ponto-a-ponto ou ponto-a-multiponto para até oito dispositivos ativados pelo Bluetooth.
- Operação dentro do espectro de rádio sem licença ISM de 2,4 GHz.
- Taxa de transferência de dados máxima de 721 Kilobits por segundo (Kbps)
- Alcance de até 10 metros (30 pés).
- Suporte de transferência de dados.
- Baixo consumo de energia.
- Suporte à autenticação e criptografia.
- Interoperabilidade Bluetooth certificada pelo Bluetooth Special Interest Group.

Algumas das capacidades chave do Bluetooth PC Card II da IBM são:

- **Serial Genérico** - Estabelece uma conexão sem fio entre seu computador e outro dispositivo ativado pelo Bluetooth. Essa conexão utiliza uma conexão de porta serial temporária.
- **Acesso a LAN Utilizando o PPP (Protocolo Ponto-a-Ponto)** - Estabelece uma conexão de rede sem fio do Bluetooth entre seu computador e outro dispositivo ativado pelo Bluetooth conectado a um servidor tradicional da

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1. Há mais informações sobre o desenvolvimento do Bluetooth na World Wide Web em http://www.bluetooth.com.

LAN (Rede Local). Essa conexão fornece acesso a todos os aplicativos e dados no servidor da LAN do seu computador.

- **Rede Dial-up** - Estabelece uma conexão sem fio do Bluetooth de seu computador a um modem ou a outro dispositivo ativado pelo Bluetooth.
- **Envio de Objetos OBEX (Troca de Objetos)** - Ativa seu computador a enviar itens de seu PIM (Gerenciador de Informações Pessoais) ao gerente de informações pessoais em outro dispositivo ativado pelo Bluetooth.
- **Transferência de Arquivos OBEX** - Ativa seu computador a realizar ações de sistema de arquivos em outro dispositivo ativado pelo Bluetooth.
- **Fax** - Envia documentos por fax de um dispositivo ativado pelo Bluetooth para outro.
- **Sincronização IrMC OBEX** - Sincroniza os contatos em seu computador com os contatos em outro dispositivo ativado pelo Bluetooth.

## Requisitos Mínimos do Computador

Certifique-se de que seu computador atenda os seguintes requisitos mínimos antes de instalar o produto e o software:

- Pelo menos 25 MB de espaço disponível em disco rígido
- Unidade de CD-ROM ou de DVD-ROM
- Microprocessador da série Intel® Pentium® ou equivalente
- Mínimo de 64 MB de RAM
- Um dos seguintes sistemas operacionais: Microsoft® Windows® 98 Second Edition (SE), Windows Millennium Edition (ME) ou Windows 2000 Professional

## Instalando o Bluetooth PC Card II da IBM

Esta seção contém informações sobre o uso e a instalação do Bluetooth PC Card II da IBM. Esta seção também inclui informações sobre a instalação do software a partir do *CD do Bluetooth PC Card II*.

**Nota:** Se você já adquiriu o Módulo Bluetooth UltraPort™ da IBM, deverá *remover completamente todas as partes desse dispositivo e remover a instalação do software* antes de instalar o Bluetooth PC Card II da IBM e o novo software. Se você não remover a instalação do Módulo Bluetooth UltraPort antes de instalar o Bluetooth PC Card II, a placa não funcionará.

## Entendendo a Antena do Bluetooth PC Card II

A ilustração a seguir define os indicadores do LED na antena. A antena está à esquerda na ilustração abaixo e contém os indicadores do LED.



| Indicador | Função |
|-----------|--------|
| L1 | Normalmente esse indicador está aceso. Quando os dados são transferidos entre seu computador e outro dispositivo ativado pelo Bluetooth, o indicador L1 acende e apaga. |
| L2 | Esse indicador mostra que o Bluetooth PC Card II está adequadamente inserido e aceso. |
| L3 | Esse indicador acende quando:<br>• seu computador pesquisa por outros dispositivos ativados pelo Bluetooth.<br>• há outros dispositivos ativados pelo Bluetooth em seu computador.<br><br>Se não houver atividade de pesquisa ou seu computador não estiver configurado para fazer pesquisa, esse indicador permanecerá apagado. |

## Instalando o Software e o Bluetooth PC Card II da IBM

Utilize o procedimento a seguir para o sistema operacional Windows 98 Second Edition, Windows Millennium Edition ou Windows 2000 Professional:

1. Ligue o computador.
2. Clique em **Iniciar**-->**Executar.**
3. Digite *e* :\SETUP.EXE onde *e* corresponde à letra da unidade de CD-ROM ou DVD-ROM.
4. Clique em **OK.** O programa de instalação é iniciado.

>   **Nota:** Em alguns computadores com o Microsoft Windows 98, o assistente de instalação Bluetooth da IBM precisa atualizar o Instalador do Microsoft Windows. Se o Instalador do Windows estiver atualizado, desligue e reinicie seu computador antes de continuar com a instalação do software do Bluetooth PC Card II da IBM.

5. Siga as instruções do assistente de instalação (para as opções de instalação padrão, clique em **Avançar** até que a janela Instalação do Assistente de Proteção Concluída abra).
6. Clique em **Concluir.**
7. Clique em **OK** para iniciar novamente o computador.
8. Insira a placa PC no slot PCMCIA de seu computador e aguarde até que o processo de Novo Hardware Localizado seja concluído.
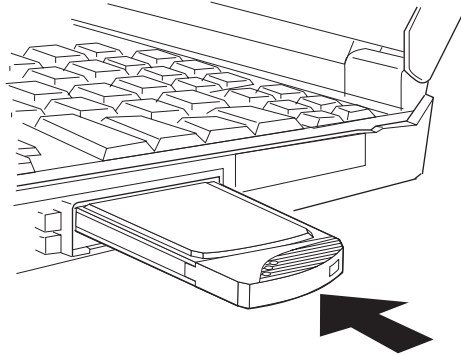


9. O novo hardware e software estão prontos para ser utilizados com o Windows 2000 Professional. Se você estiver utilizando o Windows 98 Second Edition ou o Windows Millennium Edition, desligue e reinicie o computador.

## Utilizando o Aplicativo Bluetooth

Para começar a utilizar o aplicativo Bluetooth, clique em **Iniciar→Programas→ Bluetooth da IBM→Ambiente Bluetooth.**

A partir da janela **Ambiente Bluetooth**, você pode:

- Dar um clique duplo em **Pesquisar por outros dispositivos**. Esta função localizará e conectará dispositivos a uma distância de 10 metros (30 pés) do seu computador.
- Dê um clique duplo em **Dispositivo Local.** Esta função exibirá todas as tarefas que você poderá realizar utilizando a conectividade Bluetooth**.**
- Obter auxílio. Clique em **Ajuda** na barra de menus na parte superior da janela do aplicativo **Ambiente Bluetooth** ou pressione a tecla de função F1 enquanto o ponteiro do mouse estiver na janela **Ambiente Bluetooth** ativa.

   A ajuda online contém informações sobre uso do PC Card II da IBM e detecção de problemas mais avançada.

Se você tiver problemas com a placa ou com o software, consulte a documentação da ajuda online. Para detecção de problemas básica, consulte o "Apêndice A. Bluetooth PC Card II troubleshooting" na página A-1.

# 安裝和使用 IBM Bluetooth PC Card II

本節包含了 IBM Bluetooth PC Card II 的功能和優點、硬體和軟體需求、作業系統資訊以及安裝和使用說明。

## 功能和優點

藍芽 (Bluetooth) 的由來是取自於在西元十世紀統一丹麥和挪威的 Harald Bluetooth 君王。如同 Harald 君王使他的人民相互了解而成為一體,今日的藍芽 (Bluetooth) 已是在不同裝置間進行無線通訊的一致標準。[1]

IBM Bluetooth PC Card II 可讓電腦專業人士在 IBM ThinkPad® 電腦和其他具有藍芽 (Bluetooth) 功能的裝置(例如電腦、個人數位助理 (PDA)、傳真機、印表機等等)之間進行短距離無線連接。

以下為 Bluetooth PC Card II 的功能和優點:
- 點對點或最多可連接八個藍芽 (Bluetooth) 裝置的多點無線鏈結。
- 使用不需 ISM 授權的 2.4 GHz 無線頻譜來運作
- 最大資料傳輸速率為每秒 721 千位元 (KBps)
- 最長距離為 10 公尺(30 英呎)
- 資料傳輸支援
- 低耗電量
- 支援鑑識和暗碼化
- 互運性已通過 Bluetooth Special Interest Group 的認證

IBM Bluetooth PC Card II 的部份主要功能如下:
- **一般序列** - 在電腦和具有藍芽 (Bluetooth) 功能的裝置間建立無線連接。這種連接方式會使用暫時性的序列埠連接。
- **使用點對點通信協定 (PPP) 來存取 LAN** - 在您的電腦和其他連接至傳統區域網路 (LAN) 伺服器而具有藍芽 (Bluetooth) 功能的裝置間,建立藍芽 (Bluetooth) 無線網路連接。此種連接方式可讓您在電腦上存取 LAN 伺服器上的所有應用程式和資料。
- **撥接式網路** - 在您的電腦和數據機,或其他具有藍芽 (Bluetooth) 功能的裝置間,建立藍芽 (Bluetooth) 無線連接。
- **OBEX(物件交換)物件推送** - 可讓電腦將個人資訊管理程式 (PIM) 中的項目,傳送至其他藍芽 (Bluetooth) 裝置上的個人資訊管理程式。
- **OBEX 檔案轉送** -讓您的電腦可對其他具有藍芽 (Bluetooth) 功能的裝置進行檔案系統的動作。

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1. 您可以在以下的網站:http://www.bluetooth.com 取得其他關於藍芽 (Bluetooth) 發展的資訊。

- **傳真** - 在藍芽裝置上將文件傳真至其他的裝置。
- **OBEX IrMC Sync** - 使電腦中的聯絡人資料和其他藍芽裝置中的聯絡人資料同步。

## 基本電腦需求

請先確定您的電腦符合以下的最小需求,再安裝產品和軟體:

- 最少有 25 MB 可用硬碟機空間
- CD 光碟機或 DVD 光碟機
- Intel® Pentium® 系列微處理器或同級品
- RAM 最少為 64 MB
- 以下任一作業系統:Microsoft ® Windows® 98 Second Edition (SE)、Windows Millennium Edition (ME) 或 Windows 2000 Professional

## 安裝 IBM Bluetooth PC Card II

本節包含了使用和安裝 IBM Bluetooth PC Card II 的相關資訊。本節也包含了使用 *Bluetooth PC Card II CD* 來安裝軟體的資訊。

**註:** 如果您先前已向 IBM 購買了「Bluetooth UltraPort™ 模組」,您必須先完全移除所有的裝置零件並且解除安裝其軟體,再安裝 IBM Bluetooth PC Card II 以及新軟體。如果您未先解除安裝「Bluetooth UltraPort 模組」,就安裝了 Bluetooth PC Card II,則卡會無法運作。

## 瞭解 Bluetooth PC Card II 天線

以下圖例定義了天線的 LED 指示燈。天線是在以下圖例的左側,並且包含了 LED 指示燈。
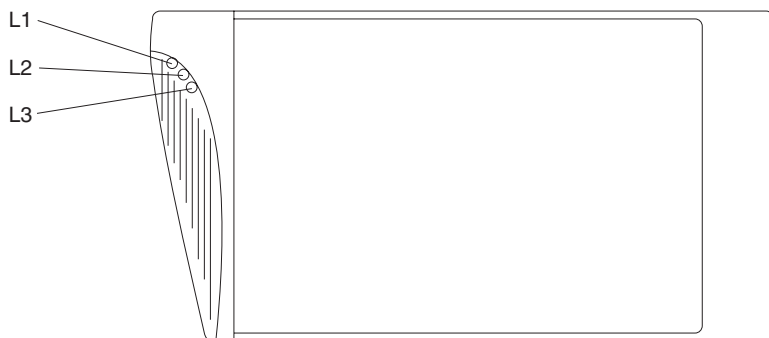


| 指示燈 | 功能 |
|--------|------|
| L18 | 此指示燈正常時會亮起。當電腦在和其他藍芽裝置進行資料轉送時,L1 指示燈會閃爍。 |

| 指示燈 | 功能 |
|---|---|
| L2. | 此指示燈會指示 Bluetooth PC Card II 已正確地插入，並且已啓動電源。 |
| L3. | 此指示燈會在以下狀況中亮起：<br>• 電腦正在搜尋其他的藍芽裝置。<br>• 其他的藍芽裝置找到了您的電腦。<br><br>如果沒有搜尋活動，或電腦已設定爲不回應，則此指示燈將不會亮起。 |

## 安裝軟體和 IBM Bluetooth PC Card II

請對 Windows 98 Second Edition、Windows Millennium Edition 或 Windows 2000 Professional 作業系統使用以下程序：

1. 開啓電腦。
2. 按一下**開始-->執行**。
3. 鍵入 *e* :\SETUP.EXE；其中 *e* 是指 CD 光碟機或 DVD 光碟機的字母代號。
4. 按一下**確定**。安裝程式隨即啓動。

   **註:** 在部份的 Microsoft Windows 98 電腦中，「IBM Bluetooth Installation」精靈可能會要更新 Microsoft Windows Installer。如果更新了 Windows Installer，請先關閉然後重新啓動電腦，再繼續安裝 IBM Bluetooth PC Card II 軟體。

5. 請遵循安裝精靈中的說明（若要使用預設安裝選項，請一直按**下一步**直到開啓 Install Shield Wizard Complete 視窗爲止）。
6. 按一下**完成**。
7. 按一下**確定**以便重新啓動電腦。
8. 請將 PC 卡插入電腦的 PCMCIA 插槽，然後等到「找到新硬體」程序完成爲止。
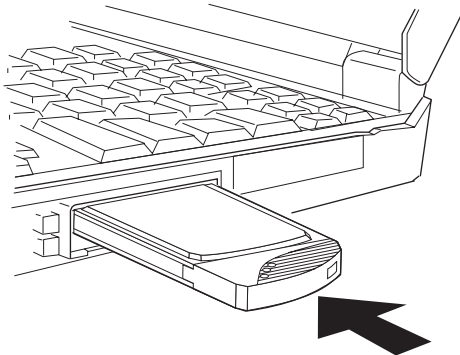


9. 您可以在 Windows 2000 Professional 中使用新硬體和軟體。如果您是使用 Windows 98 Second Edition 或 Windows Millennium Edition，請關閉然後重新啓動電腦。

## 使用藍芽 (Bluetooth) 應用程式

若要開始使用藍芽 (Bluetooth) 應用程式，請按一下**開始→程式集→ IBM Bluetooth→Bluetooth Neighborhood**。

在 **Bluetooth Neighborhood** 視窗中，您可以：

- 按兩下 **Search for other devices**。此功能可以找出和連接與電腦距離 30 英呎以內的其他藍芽裝置。
- 按兩下 **Local Device**。此功能會顯示您可以使用藍芽 (Bluetooth) 連接功能來執行的所有作業。
- 取得說明。按一下 **Bluetooth Neighborhood** 應用程式視窗頂端功能表列中的 **Help**，或在滑鼠指標停留於作用中的 **Bluetooth Neighborhood** 視窗時按下 F1 功能鍵。

  線上說明包含了使用 IBM PC Card II 和其他進階疑難排解的相關資訊。

如果您有卡或軟體的問題，請參照線上說明文件。關於基本疑難排解，請參閱第 A-1頁的『附錄A. Bluetooth PC Card II troubleshooting』。

# Bluetooth PC カード II のインストールおよび使用

このセクションには、Bluetooth PC カード II についての機能と特長、ハードウェアとソフトウェア要件、オペレーティング・システム情報、インストール、および使用手順が含まれています。

## 機能および特長

Bluetooth は、10 世紀にデンマークとノルウェーを統一した Harald Bluetooth 王の名前を採って命名されました。国民と意思を通じ合い、統一した Harald 王の天賦の才に敬意を表して命名された Bluetooth は、今日では、異なるデバイス間でのワイヤレス通信を統一するための規格になっています。[1]

Bluetooth PC カード II は、IBM ThinkPad® コンピューター上で他の Bluetooth 利用可能デバイス (コンピューター、パーソナル・ディジタル・アシスタント (PDA)、FAX 装置、プリンター、など) に短距離のワイヤレス接続ができるようにします。

以下は、Bluetooth PC カード II の機能と特長です。
- 最大 8 台の Bluetooth 利用可能デバイスに Point-to-Point または point-multipoint でワイヤレス・リンク。
- 2.4 GHz ISM の免許不要な電波帯域での操作
- 721 キロビット/秒 (Kbps) の最大データ転送速度
- 最大 10 メートルの範囲
- データ転送サポート
- 低い電力消費量
- 認証と暗号化サポート
- Bluetooth Special Interest Group (Bluetooth SIG) による相互接続性の認証

Bluetooth PC カード II の基本的な機能をいくつか挙げます。
- **汎用シリアル** - お使いのコンピューターと別の Bluetooth 利用可能デバイス間でワイヤレス接続を確立します。この接続は、一時的なシリアル・ポート接続を使用します。
- **Point-to-Point プロトコル (PPP) を使用した LAN アクセス** - お使いのコンピューターと従来のローカル・エリア・ネットワーク (LAN) サーバーに接続された別の Bluetooth 利用可能デバイスとの間で Bluetooth ワイヤレス ネットワーク接続を確立します。この接続を介して、お使いのコンピューターは LAN にアクセスできるようになります。

---

1. Bluetooth の開発についての詳しい情報は、 WWW の http://www.bluetooth.com にあります。

- **ダイヤルアップ・ネットワーク** - お使いのコンピューターからモデムまたは別の Bluetooth 利用可能デバイスへの Bluetooth ワイヤレス接続を確立します。
- **OBEX (オブジェクト交換) オブジェクト・プッシュ** - お使いのコンピューターが個人情報マネージャー (PIM) から別の Bluetooth 利用可能デバイス上の個人情報マネージャーに項目を送信できるようにします。
- **OBEX ファイル転送** - お使いのコンピューターが別の Bluetooth 利用可能デバイス上でファイル・システムの操作を実行できるようにします。
- **FAX** - ある Bluetooth 利用可能デバイスから別のデバイスに文書をファックスで送ります。
- **OBEX IrMC Sync** - お使いのコンピューター上の連絡先を別の Bluetooth 利用可能デバイス上の連絡先と同期します。

## 最低限のコンピューター要件

製品およびソフトウェアをインストールする前に、コンピューターが以下の最低限の要件を満たしているか確認してください。
- 少なくとも 25 MB の空きハードディスク・スペース
- CD-ROM または DVD-ROM ドライブ
- Intel® Pentium® シリーズまたはそれと同等のマイクロプロセッサーまたはそれと同等品
- 64 MB の最小 RAM
- 次のオペレーティング・システムのいずれか: Microsoft ® Windows® 98 Second Edition (SE)、Windows Millennium Edition (ME)、または Windows 2000 Professional

## Bluetooth PC カード II のインストール

このセクションには、 Bluetooth PC カード II を使用およびインストールすることについての情報が含まれます。このセクションには、*Bluetooth PC Card II CD* からソフトウェアをインストールすることについての情報も含まれます。

**注:** ウルトラポート Bluetooth アダプターを既にインストールしてある場合は、ウルトラポート Bluetooth アダプターを取り外し、関連するソフトウェアをアンインストールしてから、Bluetooth PC カード II のインストールを始めてください。ウルトラポート Bluetooth アダプターをアンインストールしないで、Bluetooth PC カード II をインストールした場合、正常に動作しない可能性があります。

## Bluetooth PC カード II アンテナについて

次の図は、アンテナ上の LED インディケーターを示しています。アンテナは、下の図の左側にあり、LED インディケーターを含んでいます。

L1
L2
L3
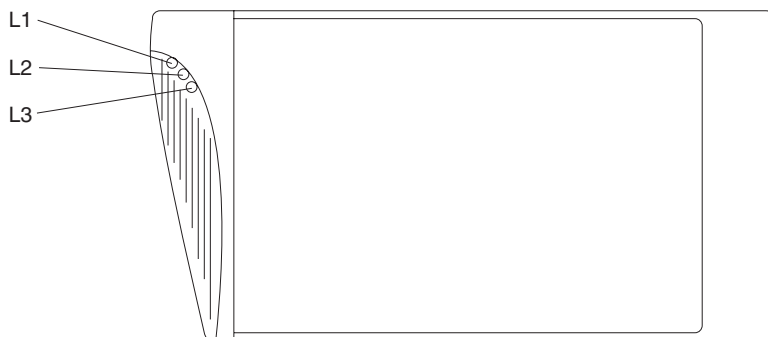
| インディケーター | 機能 |
|---|---|
| L1 | このインディケーターは通常オンになっています。お使いのコンピューターと別の Bluetooth 利用可能デバイス間でデータが転送されるときは、L1 インディケーターが点滅します。 |
| L2 | このインディケーターは、Bluetooth PC カード II が正しく挿入されており、電源がオンになっていることを示します。 |
| L3 | このインディケーターがオンになるのは、次のときです。<br>• お使いのコンピューターが、他の Bluetooth 利用可能デバイスを検索中のとき。<br>• 他の Bluetooth 利用可能デバイスが、お使いのコンピューターを見付けたとき。<br><br>検索アクティビティーがないか、お使いのコンピューターが発見できないように設定されている場合、このインディケーターはオフのままになります。 |

## ソフトウェアおよび Bluetooth PC カード II のインストール

Windows 98 Second Edition、Windows Millennium Edition、または Windows 2000 Professional オペレーティング・システムの場合は、次の手順を使用してください。
1. コンピューターの電源をオンにします。
2. 「スタート」→「ファイル名を指定して実行」 の順にクリックします。
3. *e* :¥SETUP.EXE と入力します。ここで、*e* は、お使いの CD-ROM または DVD-ROM ドライブの文字です。
4. 「**OK**」をクリックします。インストール・プログラムが起動します。

**注:** 一部の Microsoft Windows 98 コンピューターでは、IBM Bluetooth Installation ウィザードが、Microsoft Windows Installer を更新することが必要な場合があります。Windows Installer が更新される場合、 IBM Bluetooth PC Card II ソフトウェアのインストールを続行する前に、コンピューターをシャットダウンして、再起動してください。

5. インストール・ウィザードの指示に従います (デフォルトの設定のままインストールする場合は、「次へ」または「インストール」をクリックして行きます)。
6. 「InstallShield ウィザードを完了しました」の画面が開いたら、「完了」をクリックします。
7. 「はい **(Y)**」をクリックして、コンピューターを再起動します。
8. コンピューターの PCMCIA スロットに PC カードを挿入し、「新しいハードウェアが見つかりました」の処理が完了するまで待ちます。
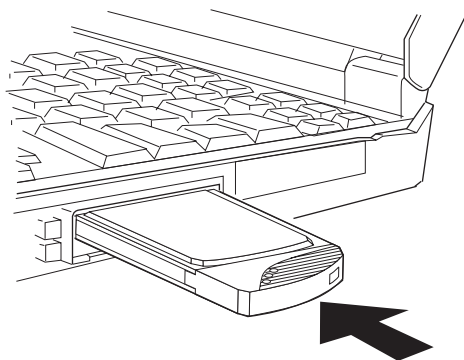


9. 新しいハードウェアとソフトウェアは、Windows 2000 Professional で使用する準備ができました。Windows 98 Second Edition または Windows Millennium Edition を使用している場合は、コンピューターをシャットダウンし、再起動してください。

## Bluetooth アプリケーションの使用

Bluetooth アプリケーションの使用を開始するには、「スタート」→「プログラム」→「**IBM Bluetooth**」→「**Bluetooth Neighborhood**」の順にクリックします。

「**Bluetooth Neighborhood**」ウィンドウから次のことができます。

- 「デバイスの検索」をダブルクリックします。この機能は、お使いのコンピューターから 9.14 m (30 フィート) 内にある他の Bluetooth 利用可能デバイスを見付けて、接続します。
- 「ローカル デバイス」をダブルクリックします。この機能は、 Bluetooth 接続を使用して実行できるすべてのタスクを表示します。

- ヘルプを表示します。「**Bluetooth Neighborhood**」アプリケーション・ウィンドウの上部のメニュー・バーで「**ヘルプ**」をクリックするか、マウス・ポインターがアクティブな「**Bluetooth Neighborhood**」ウィンドウ内にある間に F1 機能キーを押します。

  オンライン・ヘルプには、IBM PC カード II の使用およびさらに詳細な問題判別についての情報が含まれています。

カードまたはソフトウェアで問題がある場合は、オンライン・ヘルプ資料を参照してください。基本的問題判別については、A-5ページの『付録A. Bluetooth PC カード II の問題判別』を参照してください。

# Appendix A. Bluetooth PC Card II troubleshooting

This appendix contains specific help and troubleshooting information for your Bluetooth PC Card II from IBM.

Computer problems can be caused by hardware, software, or user error. Using the information in this section, you might be able to solve problems yourself or gather helpful information that you can pass on to a service technician. You might also need to refer to your computer or operating-system documentation.

Review the following table for any problem description that might fit your situation.

| Problem | Solution |
| --- | --- |
| The L2 light is not on. | • Make sure that the Bluetooth PC Card II is securely inserted into the computer. |
| A search for devices has no results. | • Make sure that all connections are secure.<br>• Make sure that other devices are turned on and active, not in energy-conserving mode.<br>• Make sure that no other Bluetooth device is searching for the same device.<br>• Restart your computer, and try searching again. |
| The computer is connected to a device, but you cannot use any services on that device. | • Search for the device again. If the device is not found, it might have stopped responding. If it is found, reconnect to the device, and try using the services again.<br>• Check the connection, and ensure that the remote computer is not trying to search for the device or connect to any of the services on your computer.<br>• If you are sure that the device is responding, restart your computer, and try connecting again. |

| Problem | Solution |
|---|---|
| You could not pull a business card from the remote computer. | • Ensure that the remote computer has a default business card created and selected.<br><br>• Ensure that the security settings on the remote computer allow you to connect and download a business card.<br><br>• Check the connection, and ensure that the remote computer is not trying to search for the device or connect to any of the services on your computer. |
| You could not send a business card to the remote computer. | • Ensure that your computer has a default business card created and selected.<br><br>• Ensure that the security settings on the remote computer allow you to connect and upload the business card.<br><br>• Check the connection, and ensure that the remote computer is not trying to search for the device or connect to any of the services on your computer. |
| Your computer is connected to the public folder, but no files are visible. | • Go to the Bluetooth Neighborhood menu and click **View** and then **Update**. The status window opens. Check for newly shared files, and then list any that exist.<br><br>• Ensure that the shared folder in the remote computer contains the files or folders that you are looking for.<br><br>• Ensure that the security settings on the remote computer allow you to connect and view the shared files.<br><br>• Check the connection, and ensure that the remote computer is not trying to search for the device or connect to any of the services on your computer. |

| Problem | Solution |
|---|---|
| Your computer is connected to a remote computer, but you cannot gain network access. | • Ensure that the remote computer is connected to the network.<br><br>• Ensure that the remote computer has been set up to share its network connectivity and that the security settings allow you to connect and establish remote network access.<br><br>• Check the connection, and ensure that the remote computer is not trying to search for the device or connect to any of the services on your computer. |
| Your computer cannot connect to a remote computer using the Bluetooth serial port. | • Re-establish a connection with the remote computer, and try the serial connection again.<br><br>• Check the connection, and ensure that the remote computer is not trying to search for the device or connect to any of the services on your computer. |
| Your Bluetooth adapter cannot connect to any device. | • Ensure that both devices are turned on and their Bluetooth antennas are enabled.<br><br>• Restart your computer, and attempt to re-establish your connection to the device.<br><br>• Install the Bluetooth software again and attempt to re-establish your connection to the device. |

# 付録A. Bluetooth PC カード II の問題判別

この付録には、Bluetooth PC カード II 用のヘルプと問題判別情報が含まれています。

コンピューターの問題は、ハードウェア、ソフトウェア、または、設定や使用法など、さまざまな要因で発生します。このセクションでは、問題を解決する助けになったり、または、サービス技術員の参考になる情報を収集する助けになることを目的としています。また、お使いのコンピューターや OS の資料を参照する必要がある場合もあります。

次の表を検討して、状態に合うような問題記述がないか調べてください。

| 問題 | 解決法 |
|------|--------|
| L2 ライトがオンになっていない。 | • Bluetooth PC カード II がコンピューターにしっかりと挿入されていることを確認します。 |
| デバイスを検索したが、見付からなかった。 | • すべての接続がしっかりしていることを確認します。<br>• 他のデバイスの電源がオンになっており、アクティブであること、省電力モードになっていないことを確認します。<br>• 他の Bluetooth デバイスが同じデバイスを検索していないことを確認します。<br>• コンピューターを再起動し、検索を再試行します。 |
| コンピューターがデバイスに接続されているが、そのデバイス上でサービスを利用できない。 | • デバイスを再び検索します。デバイスが見付からない場合は、応答を停止した可能性があります。デバイスが見付かった場合は、そのデバイスに再接続し、サービスを再び利用してみます。<br>• 接続を検査し、リモート・コンピューター (接続する相手のパソコンなど) がそのデバイスを検索しようとしていないか、お使いのコンピューター上のサービスに接続しようとしていないことを確認します。<br>• デバイスが応答しているかわからない場合は、お使いのコンピューターを再起動し、再び接続してみます。 |

| 問題 | 解決法 |
|---|---|
| リモート・コンピューター (接続する相手のパソコン等) からビジネス・カードをプルすること (相手のパソコン内のファイルをダウンロードすること) ができなかった。 | • リモート・コンピューターがデフォルトのビジネス・カードを作成および選択したことを確認します。<br>• リモート・コンピューター上のセキュリティー設定が、お客様が接続してビジネス・カードをダウンロードできるようになっていることを確認します。<br>• 接続を検査し、リモート・コンピューターがデバイスを検索しようとしていないか、お使いのコンピューターのサービスに接続しようとしていないことを確認します。 |
| リモート・コンピューターにビジネス・カードを送信できなかった。 | • お使いのコンピューターがデフォルトのビジネス・カードを作成および選択したことを確認します。<br>• リモート・コンピューター上のセキュリティー設定が、お客様が接続してビジネス・カードをアップロードできるようになっていることを確認します。<br>• 接続を検査し、リモート・コンピューターがそのデバイスを検索しようとしていないか、お使いのコンピューター上のサービスに接続しようとしていないことを確認します。 |
| お使いのコンピューターが共用フォルダーに接続されているが、ファイルが見えません。 | • 「Bluetooth Neighborhood」メニューに進み、**「表示」**、次いで**「最新の情報に更新」**をクリックします。ステータス・ウィンドウが開きます。新しく共用されたファイルがあるかチェックし、存在するものをすべてリストします。<br>• リモート・コンピューターにある共用フォルダーに、探しているファイルまたはフォルダーが含まれていることを確認します。<br>• リモート・コンピューター上のセキュリティー設定が、お客様が接続して共用ファイルを表示できるようになっているか確認します。<br>• 接続を検査し、リモート・コンピューターがそのデバイスを検索しようとしていないか、お使いのコンピューター上のサービスに接続しようとしていないことを確認します。 |

| 問題 | 解決法 |
|---|---|
| お使いのコンピューターがリモート・コンピューターに接続されているが、ネットワークにアクセスすることができない。 | • リモート・コンピューターがネットワークに接続されていることを確認します。<br>• リモート・コンピューターがそのネットワーク接続を共用するようにセットアップされていること、セキュリティー設定が、お客様が接続してリモート・ネットワーク・アクセスを確立できるようになっているか確認します。<br>• 接続を検査し、リモート・コンピューターがデバイスを検索しようとしていないか、お使いのコンピューターのサービスに接続しようとしていないことを確認します。 |
| お使いのコンピューターが、 Bluetooth シリアル・ポートを使用してリモート・コンピューターに接続できない。 | • リモート・コンピューターとの接続を再確立し、シリアル接続を再試行します。<br>• 接続を検査し、リモート・コンピューターがデバイスを検索しようとしていないか、お使いのコンピューターのサービスに接続しようとしていないことを確認します。 |
| お使いの Bluetooth アダプターがデバイスに接続できない。 | • 両方のデバイスの電源がオンになっていること、それらの Bluetooth アンテナが使用可能になっていることを確認します。<br>• お使いのコンピューターを再起動し、デバイスへの再接続を試みます。<br>• Bluetooth ソフトウェアを再インストールし、デバイスへの再接続を試みます。 |

# Appendix B. Warranty information

This section contains the warranty period for your product, information about obtaining warranty service and support, and the IBM Statement of Limited Warranty.

## Warranty period

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

**Machine** - Bluetooth PC Card II from IBM

**Warranty period** - One year

## Service and support

The following information describes the technical support that is available for your product, during the warranty period or throughout the life of the product. Refer to your IBM Statement of Limited Warranty for a full explanation of IBM warranty terms.

### 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.

| Online technical support | |
|---|---|
| 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 IBM 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. If the number for your country or region is not listed, contact your IBM reseller or IBM marketing representative. Response time may vary depending on the number and nature of the calls received.

| Support 24 hours a day, 7 days a week | |
| --- | --- |
| 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 and regions | Go to http://www.ibm.com/pc/support/, and click **Support Phone List**. |

# IBM Statement of Limited Warranty Z125-4753-06 8/2000

This warranty statement consists of two parts: Part 1 and Part 2. Be sure to read Part 1 and the country-unique terms in Part 2 that apply to your country or region.

## 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

<u>AMERICAS</u>

**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.

<u>NORTH AMERICA</u>

**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.

# Appendix C. Notices

This publication was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

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*IBM Corporation*
*North Castle Drive*
*Armonk, NY 10504-1785*
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>   ThinkPad

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Intel and Pentium are trademarks of Intel Corporation in the United States, other countries, or both.

Bluetooth and Bluetooth logos are trademarks of Bluetooth SIG, Inc., U.S.A. and licensed to IBM.

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

## Electronic emission notices

Bluetooth PC Card II from IBM

## 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

FC  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 conformite a la reglementation d'Industrie Canada**

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

**Deutsche EMV-Direktive (electromagnetische Verträglichkeit)**

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

Dieses Gerät ist berechtigt in Übereinstimmungmit 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 festgetlegt), dann kann es dabei eventuell gest÷rt werden. In solch einem FA11 ist der Abstand bzw. die Abschirmungzu der industriellen St÷rquelle zu vergr÷$\beta$ern."

Anmerkung:

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

**European Union - emission directive**

This product is in conformity with the protection requirements of EU Council Directive 89/336/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 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 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 électromagnética)**

Este producto satisface los requisitos de protección del Consejo de la UE, Directiva 89/336/CEE en lo que a la legislatura 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 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 le apparecchiature di informatica Classe B ai sensi del 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.

이 기기는 가정용으로 전자파 적합등록을 기기로서

주거지역에서는 물론 모든 지역에서 사용 할 수 있습니다.

```
　この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に
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と、受信障害を引き起こすことがあります。
　取扱説明書に従って正しい取り扱いをして下さい。
```

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

# 高調波ガイドライン適合品

## Regulatory information for wireless communications

The device must be installed and used in strict accordance with the instructions as described hereafter. This product complies with the following radio frequency and safety standards:

**USA - Federal Communications Commission (FCC)**

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.

**Canada - Industry Canada (IC)**

Low Power License-Exempt Radio communication Devices (RSS-210). Operation is subject to the following two conditions:

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Permis dÀemission a faible puissance - Cas des appareils de communications radio (CNR-210).

Le fonctionnement de ce type dÀappareil est soumis aux deux conditionssuivantes:

1. Cet appareil peut perturber les communications radio, et
2. Cet appareil doit supporter toute perturbation, y compris les perturbations qui pourraient provoquer un dysfonctionnement.

**Europe - CE Declaration of Conformity**

• Hereby IBM declares that the Bluetooth device integrated in this product is in conformity with the essential requirements and other relevant provisions of Directive 1999/5/EC. IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product.

• IBM declare par la presente que le dispositif Bluetooth integre a ce produit est en conformite avec les prescriptions essentielles et autres dispositions appropriees de la Directive 1999/5/EC. IBM decline toute responsabilite en cas de non-respect de cette directive resultant d'une modification non recommandee du produit.

• IBM erklart hiermit, dass die in diesem Produkt integrierte drahtlose Bluetooth-Einheit die Voraussetzungen sowie alle wichtigen Anforderungen der Richtlinie 1999/5/EC erfullt. IBM ubernimmt keine Verantwortung fur Fehler, die sich aus einer nicht empfohlenen, unsachgemassen Modifizierung an diesem Produkt zur Erfullung der Sicherheitsanforderungen ergeben.

### ⨂TDK®

## DECLARATION OF CONFORMITY

We
*[Manufacturer's name and address]*

**TDK Systems Europe Ltd.**
**126 Colindale Avenue**
**Colindale**
**London NW9 5HD**
**United Kingdom**

declare under our sole responsibility ther the product:
*[Brandname, name andmodel]*

brandname:    **IBM**
model name:    **Bluetooth PC card II from IBM**

To which this declaration relates is in conformity with the following standard(s) or other normative document(s):

**ETS 300 328-1 V1.2.2 (2000-07)**
**ETS 300 826 11/1997**
**EN 60950:1992 + A1:1993, A2:1993, A3:1995, A4:1997, A11:1997**
**EU recommendation 1999/519/EC**

following the provisions of **Directive 1999/5/EC**, also known as the "R&TTE Directive".

City:    **London**                                Date:    **August 23, 2001**

Name : **Peter de Wit**                        Title:    **Approvals Manager**

Signature:

CE 0700 ①

*Table C-1.*

| France F | L'utilisation de cet appareil est restreint a un usage interne. |
|----------|----------------------------------------------------------------|
| France F | Only indoor operation permitted. |
| Italia I | E' necessaria la concessione ministeriale anche per l'uso. Verificare con i rivenditori la procedura da seguire. |
| Italy I | License required for use. |

電波干渉についての注意

　この機器の使用周波数帯では、電子レンジ等の産業・科学・医療用機器のほか工場の製造ライン等で使用されている移動体識別用の構内無線局（免許を要する無線局）及び特定小電力無線局（免許を要しない無線局）が運用されています。

● この機器を使用する前に、近くで移動体識別用の構内無線局及び特定小電力無線局が運用されていないことを確認してください。

● 万一、この機器から移動体識別用の構内無線局に対して電波干渉の事例が発生した場合には、速やかに使用周波数を変更するか又は電波の発射を停止した上、下記連絡先にご連絡頂き、混信回避のための処置等（例えば、パーティションの設置など）についてご相談して下さい。

● その他、この機器から移動体識別用の特定小電力無線局に対して電波干渉の事例が発生した場合など何かお困りのことが起きたときには、次の連絡先へお問い合わせ下さい。

　連絡先： PC ヘルプセンター http://www.ibm.com/jp/pc/support/pchelpctr/

　　　　（お客様登録後、センター電話番号を確認頂けます。また、製品同梱の「IBMサービスのご案内」にも記述がございます）

**2.4FH1** この機器が、2.4 GHz周波数帯(2400～2483.5MHz)を使用する周波数ホッピング(FH)方式の無線装置であり、干渉距離が約 10 m（定格出力： 1 mW)であることを意味します。

上記の内容は「社団法人　電波産業界」ARIB STD－T66 の主旨に基づくものです。

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Part Number: 09N4140

(1P) P/N: 09N4140