

IBM CP20 Workstation Connection Device



# Installation Instructions



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**Note:**

Before using this information and the product it supports, be sure to read the general information in Appendix B, "IBM Statement of Limited Warranty Z125-4753-09 08/2006," on page 21 and Appendix C, "Notices," on page 39.

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## Safety

Before installing this product, read the Safety Information.

قبل تركيب هذا المنتج، يجب قراءة الملاحظات الأمنية

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

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

安裝本產品之前，請先閱讀「安全資訊」。

Prije instalacije ovog produkta obavezno pročitajte Sigurnosne Upute.

Před instalací tohoto produktu si přečtěte příručku bezpečnostních instrukcí.

Læs sikkerhedsforskrifterne, før du installerer dette produkt.

Lees voordat u dit product installeert eerst de veiligheidsvoorschriften.

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

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

Vor der Installation dieses Produkts die Sicherheitshinweise lesen.

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

לפני שתתקינו מוצר זה, קראו את הוראות הבטיחות.

A termék telepítése előtt olvassa el a Biztonsági előírásokat!

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

製品の設置の前に、安全情報をお読みください。

본 제품을 설치하기 전에 안전 정보를 읽으십시오.

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

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

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

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

Перед установкой продукта прочтите инструкции по технике безопасности.

Pred inštaláciou tohto zariadenia si pečítajte Bezpečnostné predpisy.

Pred namestitvijo tega proizvoda preberite Varnostne informacije.

Antes de instalar este producto, lea la información de seguridad.

Läs säkerhetsinformationen innan du installerar den här produkten.

**Statement 1:**



**DANGER**

**Electrical current from power, telephone, and communication cables is hazardous.**

**To avoid a shock hazard:**

- **Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.**
- **Connect all power cords to a properly wired and grounded electrical outlet.**
- **Connect to properly wired outlets any equipment that will be attached to this product.**
- **When possible, use one hand only to connect or disconnect signal cables.**
- **Never turn on any equipment when there is evidence of fire, water, or structural damage.**
- **Disconnect the attached power cords, telecommunications systems, networks, and modems before you open the device covers, unless instructed otherwise in the installation and configuration procedures.**
- **Connect and disconnect cables as described in the following table when installing, moving, or opening covers on this product or attached devices.**

**To Connect:**

1. Turn everything OFF.
2. First, attach all cables to devices.
3. Attach signal cables to connectors.
4. Attach power cords to outlet.
5. Turn device ON.

**To Disconnect:**

1. Turn everything OFF.
2. First, remove power cords from outlet.
3. Remove signal cables from connectors.
4. Remove all cables from devices.





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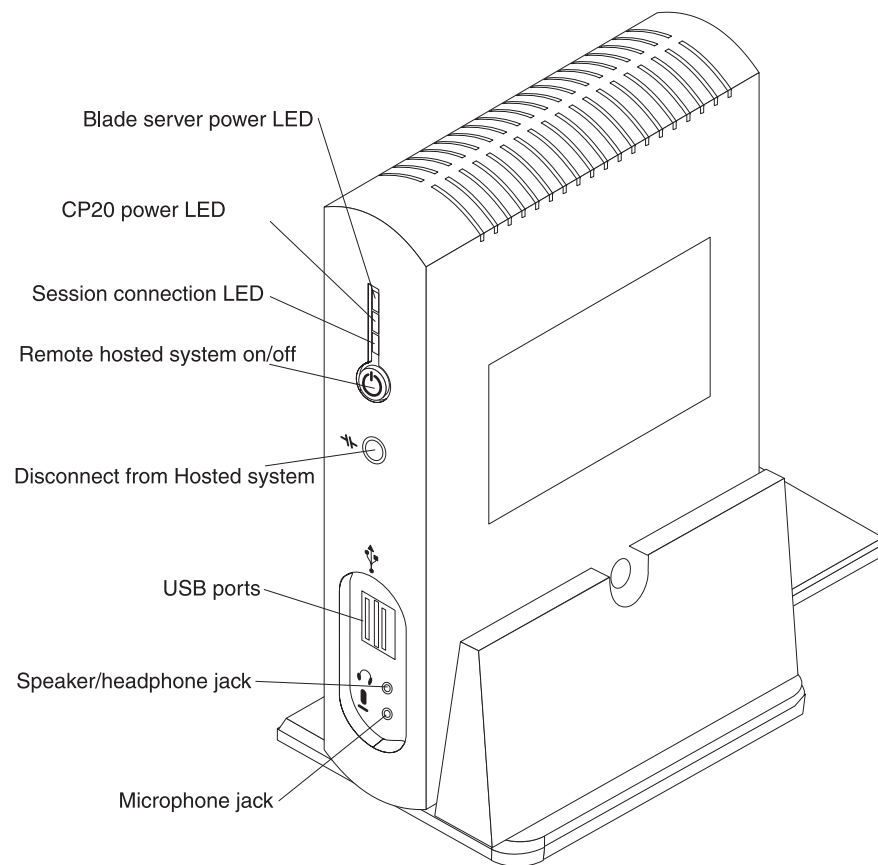


## Chapter 1. Introduction

The IBM® CP20 Workstation Connection Device Type 3096 is intended for use with a host system, such as the IBM BladeCenter HC10 Type 7996 host system. The following illustration shows the light emitting diodes (LEDs), controls, and connectors on the front of the connection device.

**Note:** The illustrations in this document might differ slightly from your hardware. See the documentation that comes with your system for additional instructions.

**Attention:** The connection device is designed to operate in a vertical orientation, as shown in the illustrations. Operating it in any other orientation might cause damage to the connection device.



**Blade server power LED:** When this LED is lit, it indicates that the hosted blade server is powered on.

**Note:** When the blade server power LED is blinking, the IBM CP20 Workstation Connection Device is connected to the hosted blade server, but the blade server might be in standby or hibernation mode.

**CP20 power LED:** When this LED is lit, it indicates that the IBM CP20 Workstation Connection Device is on.

**Session connection LED:** This LED indicates the status of the session between the CP20 workstation and the host system. When this LED is:

- **On:** A session has been established with the host system.
- **Off:** Indicates that no session has been established.

**Remote host system on/off:** Press this button to power-on and connect to the host system or to power-off the host system when a session is connected.

**Disconnect from the host system button:** Press this button to disconnect the IBM CP20 Workstation Connection Device from the host system.

**Note:** *Host system* refers to a remote workstation such as the BladeCenter HC10, Type 7996, that the workstation connection device is designed to be used with.

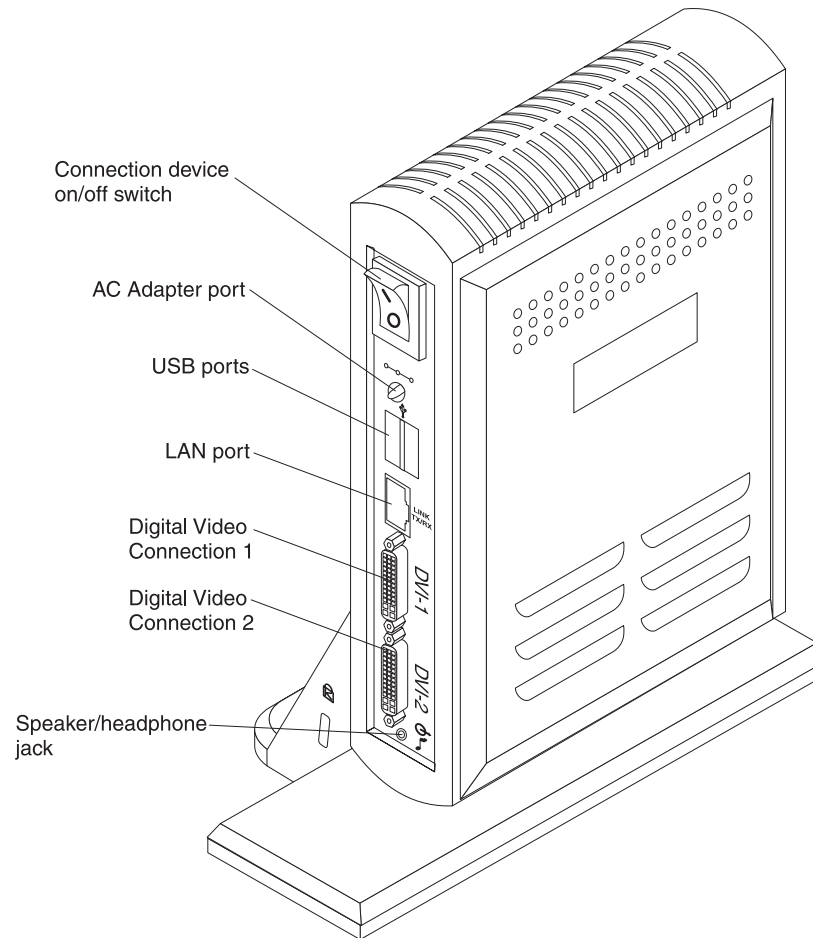
**USB ports:** Connector for a USB device, such as a mouse or keyboard.

**Speaker/headphone:** Connect a speaker or headphones to this connector.

**Microphone:** Connect a microphone to this connector.

**Note:** Audio function is disabled by default. To enable audio, see “Enabling HD audio” on page 14.

The following illustration shows the connectors on the rear of the connection device.



**Connection device on/off switch:** Press this switch to power-on or power-off the IBM CP20 Workstation Connection Device.

**AC Adapter port:** Connect the AC adapter to this connector to supply power to the IBM CP20 Workstation Connection Device.

**USB ports:** Connector for a USB device, such as a mouse or keyboard.

**LAN port:** Connect your local area network cable to this connector.

**Digital Video Connection 1:** Connect a monitor to this connector. This connector is the primary video connector.

**Digital Video Connection 2:** Connect a monitor to this connector.

**Speaker/headphone:** Connect a speaker or headphones to this connector.



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## Chapter 2. Installing the CP20 Workstation Connection Device

1. Connect a monitor to the workstation connection device. The workstation connection device can support up to two monitors.
  - **Single monitor:** If you will be using a single monitor, connect the monitor to DVI connector 2. DVI connector 2 is towards the bottom of the rear of the workstation connection device.
  - **Dual monitors:** If you will be connecting two monitors to the workstation connection device, the monitor connected to DVI connector 1 will be the primary monitor.

**Note:** See “Configuring single and dual monitor support” on page 6 for additional information about configuring monitors on the workstation connection device.

2. Connect a USB keyboard and mouse to any of the USB connectors on the front or on the rear of the workstation connection device. There are four USB ports on the workstation connection device, including two on the front and two on the back.

**Note:** The keyboard and mouse sensitivity can be changed. See “Adjusting keyboard and mouse sensitivity” on page 14 for information on how to change the keyboard and mouse sensitivity.

3. Connect an Ethernet cable to the LAN connector on the back of the connection device. Complete the connection at the switch module associated with the compression card Network Interface Controller (NIC) in the host system. The compression card is also known as the I/O graphics and transmission adapter.

**Note:** By default, the connection device communicates with the host system through the switch module installed in I/O bay 2 of the BladeCenter unit. To use a switch module in I/O bay 1, change that setting by booting the host system, then press **F1** to enter the Configuration/Setup Utility. Select **Advanced Setup**, then **Ethernet I/O Module Configuration**. Use the arrow keys to change which I/O module should interface with the compression card in the host system.

4. Connect any optional devices:
  - Connect any other USB devices to any of the USB connectors on the front or rear of the connection device.

**Note:** Audio function is disabled by default. To enable audio, see “Enabling HD audio” on page 14.

- Connect speakers to the speaker or headphone jacks on the front or the rear of the connection device.
  - Connect a headphone to the speaker or headphone jack on the front or the rear of the connection device.
5. Connect the monitor power cord to an ac power source.
  6. Connect the connection device power cord to a properly grounded ac power source.
  7. Turn on the monitor; then, turn on the connection device by pressing the connection device on/off switch to the on position.

---

## Configuring single and dual monitor support

Your connection device features two digital video interface (DVI) connectors. See the tables below that apply for your connection device to determine which connectors you want to use, then connect the monitor or monitors to the connection device. If the signal cable on your monitor has a VGA-type connector, you can use a DVI-to-VGA cable connector to connect the monitor to the connection device DVI connector.

**Note:** When using a CRT monitor, the maximum video resolution for the connection device is 1280x1024 at 85Hz.

When using dual monitors, you can use both monitors to display an extended desktop. You will need to configure the video driver in the operating system on the host system for dual monitor support. For more information on configuring the video driver to use dual monitors, see the documentation for the operating system that is installed on the host system.

**Note:** Enabling dual monitor configuration disables video redirection from a host blade workstation to the management module on the BladeCenter unit. This affects using KVM on the host blade workstation for remote control and for using a console attached to the management module on the BladeCenter unit.

The following three tables describe the functionality of the connection device when connecting to a host system with the NVIDIA FX 1600M graphics adapter.

Connection Device with NVIDIA FX 1600M			
Single monitor connected to the top DVI connector (See note 1)	Top DVI Connector	Bottom DVI Connector	AMM KVM Management Capability
On screen display	Video	No video	N/A
POST	Video	No video	No video
Desktop	Video	No video	No video

Connection Device with NVIDIA FX 1600M			
Single monitor connected to the bottom DVI connector (See note 1)	Top DVI Connector	Bottom DVI Connector	AMM KVM Management Capability
On screen display	No video	Video	N/A
POST	No video	Video	No video
Desktop	No video	Video	Video (see note 2)

Connection Device with NVIDIA FX 1600M			
Dual monitors connected (See note 1)	Top DVI Connector	Bottom DVI Connector	AMM KVM Management Capability
On screen display	Video	No video	N/A
POST	Video	No video	Not supported
Desktop	Video	Video (See note 2)	Not supported



The following three tables describe the functionality of the connection device when connecting to a host system with the NVIDIA NVS 120M graphics adapter.

Connection Device with NVIDIA NVS 120M			
Single monitor connected to the top DVI connector (See note 1)	Top DVI Connector	Bottom DVI Connector	AMM KVM Management Capability
On screen display	Video	No video	N/A
POST	Video	No video	No video
Desktop	Video	No video	No video

Connection Device with NVIDIA NVS 120M			
Single monitor connected to the bottom DVI connector (See note 1)	Top DVI Connector	Bottom DVI Connector	AMM KVM Management Capability
On screen display	No video	Video	N/A
POST	No video	Video	Video
Desktop	No video	Video	Video (see note 2)

Connection Device with NVIDIA NVS 120M			
Dual monitors connected (See note 1)	Top DVI Connector	Bottom DVI Connector	AMM KVM Management Capability
On screen display	Video	No video	N/A
POST	Video		Not supported
Desktop	Video	Video (See note 2)	Not supported

**Notes:**

1. Monitor emulation must be enabled in the compression card settings on the host system. Monitor emulation is enabled when configuring a session, for more information see Chapter 3, "Setting up the connection between the connection device and the host system," on page 9. When monitor emulation is enabled, KVM access for the host system is not available.
2. When using dual monitors, the primary video connector is the top DVI connector. You must configure the desktop to support dual monitors through the video driver settings in the operating system.
3. The bottom DVI connector must be used when administrator access is also required through remote control or KVM. For remote control and KVM access, note the supported resolutions listed in the remote control session. See the "IBM BladeCenter Management Module User's Guide" for a list of supported resolutions when accessing the BladeCenter unit using remote control through the management module.



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## Chapter 3. Setting up the connection between the connection device and the host system

It is recommended to update the firmware on the host system and on the connection device before setting up the connection. For more information, see "Updating the IBM CP20 Workstation Connection Device firmware" on page 16 and "Updating the compression card firmware" in the *"Installation and User's Guide"* for your host system.

By default, the connection device is configured to use DHCP. To use static IP addresses, follow the instructions in "Setting up the connection using static IP addresses" on page 10.

---

### Setting up the connection using DHCP

To set up a remote session using DHCP, complete the following steps:

1. Turn on the host system and press **F1** to start the Configuration/Setup Utility program.  
  
**Note:** Use the keyboard, video, and mouse connected to the management module in the BladeCenter unit to configure the host system.
2. Select **Advanced Setup→ Compression Card Network Configuration**.
3. Note the MAC address and IP address of the compression card.
4. Press and hold the power-control button on the host system for more than 5 seconds to turn it off.
5. Turn on the connection device. The workstation interface, On Screen Display (OSD), will load.
6. In the workstation interface, select **Options→ Configuration**.
7. Note the IP address of the connection device.
8. Click the **Session** tab; then, click **Unlock** and type your password. The default password is PASSWORD, with all uppercase letters and the numeral zero.
9. Type the IP address and MAC address of the compression card, and click **Apply**.
10. Click the **Discovery** tab; then, clear the **Enable Host Discovery** check box and click **OK**.
11. Click **Options**, Information. Note the MAC address of the connection device. The MAC address is also available from a label on the connection device.
12. Turn off and turn on the connection device.
13. On a system (other than the blade server to which you are connecting the connection device) that is on the same subnet as the compression card, open a Web browser.
14. Direct the Web browser to the IP address of the compression card. The compression card Web interface opens.
15. In the compression card Web interface, type your password and click **Log In**; then, click **Configuration→ Session**.
16. Clear the **Accept Any Peer** check box.
17. Type the MAC address of the connection device, and click **Apply**.

18. Click **Configuration**; then, click **Monitor Emulation**.

**Note:** When monitor emulation is enabled, KVM access for the host system is not available.

19. Enable monitor emulation for each DVI connector in use on the connection device.
20. Click **Apply**.
21. Click **Reset**.
22. If the host system is on, shut down the host system.
23. Go to the workstation connection device and click **Connect**. This will power on the host system and allow you to see the system as it goes through POST.

---

## Setting up the connection using static IP addresses

To set up a remote session using static IP addresses, complete the following steps:

1. Turn on the host system and press **F1** to start the Configuration/Setup Utility program.

**Note:** Use the keyboard, video, and mouse connected to the management module in the BladeCenter unit to configure the host system.
2. Select **Advanced Setup → Compression Card Network Configuration**.
3. Change the compression card IP address to static.
4. Type the IP address, subnet mask, and gateway of the compression card.
5. Select **Save Network Settings in Compression Card** and press **Enter**. Then, press **Enter** again to continue.
6. Note the MAC address and IP address of the compression card.
7. Exit the Configuration/Setup Utility program and save the settings.
8. Press and hold the power-control button on the host system for more than 5 seconds to turn it off.
9. Turn on the connection device. The workstation interface, On Screen Display (OSD), will load.
10. Go to the workstation connection device; then, click **Options, Configuration**, then **Unlock**.
11. Type your password. The default password is **PASSW0RD**, with all uppercase letters and the numeral zero.
12. Clear the **Enable DHCP** check box.
13. Type the IP address, subnet mask, and gateway of the connection device.

**Important:** Make sure that the IP addresses of the compression card on the host system and the connection device are on the same network. If they are not, the connection will fail. Use the PING utility on the workstation connection device to verify that the IP address of the compression card on the host system is accessible. For more information, see “Ping tool” on page 15.

14. Type the IP address and MAC address of the compression card, and click **Apply**.
15. Click the **Discovery** tab; then, clear the **Enable Host Discovery** check box and click **OK**.
16. Click **Options**, then **Information**. Note the MAC address of the connection device. The MAC address is also available from a label on the connection device.

17. Turn off and turn on the connection device.
18. On a system (other than the blade server to which you are connecting the connection device) that is on the same subnet as the compression card, open a Web browser.
19. Direct the Web browser to the IP address of the compression card. The compression card Web interface opens.
20. In the compression card Web interface, type your password and click **Log In**; then, click **Configuration Session**.
21. Clear the **Accept Any Peer** check box.
22. Type the MAC address of the connection device, and click **Apply**.
23. Click **Configuration**; then, click **Monitor Emulation**.

**Note:** When monitor emulation is enabled, KVM access for the host system is not available.

24. Enable monitor emulation for each DVI connector in use on the connection device.
25. Click **Apply**.
26. Click **Reset**.
27. If the host system is on, shut down the host system.
28. Go to the workstation connection device and click **Connect**. This will power on the host system and allow you to see the system as it goes through POST.



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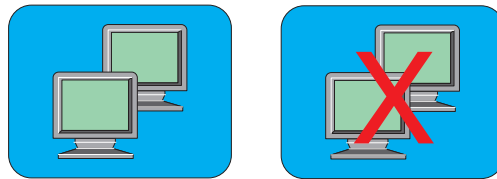
## Chapter 4. Using the connection device

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### Starting a remote session

After the a session has been setup, the workstation connection device is ready to connect to the host system. For more information on setting up a session, see Chapter 3, "Setting up the connection between the connection device and the host system," on page 9.

Turn on the workstation connection device by pressing the connection device on/off switch to the on position. Once the IBM workstation connection device boot process is finished, the workstation interface is displayed. When a network connection has been established, the network icon in the lower-right corner of the user interface is displayed without a red X. If the network icon is displayed with a red "X", the network connection has not been established.



For information about solving connection problems, see Chapter 5, "Solving problems," on page 15.

Press the remote host system on/off button on the front of the connection device to turn the host system on or off. To start a session between the connection device and a host system, click **Connect** in the workstation interface. To disconnect the connection device from the host system, press the disconnect button.

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## Adjusting keyboard and mouse sensitivity

The keyboard and mouse sensitivity for the workstation-connection-device interface may be changed. These changes do not affect the keyboard and mouse sensitivity once a remote session is started. See the documentation for the operating system on the host system for information on how to change the keyboard and mouse sensitivity when connected to the host system.

To change the keyboard sensitivity in the workstation-connection-device interface:

1. Click **Options**, **User Settings**, then click the **Keyboard** tab.
2. Use the mouse to slide the arrow to change the keyboard repeat delay and the keyboard repeat rate.
3. Click **Apply** to activate the new setting.

To change the mouse sensitivity in the workstation-connection-device interface:

1. Click **Options**, then **User Settings**.
2. Use the mouse to slide the arrow to change the mouse speed.
3. Click **Apply** to activate the new setting.

---

## Enabling HD audio

Audio is disabled by default. To use HD audio, you must enable it in both the connection device and the compression card.

1. Turn on the connection device and the host system.
2. On a system (other than the host system to which you are connecting the connection device) that is on the same subnet as the compression card and connection device, open a Web browser.
3. Direct the Web browser to the IP address of the connection device. The connection device Web interface opens.
4. In the connection device Web interface, type your password and click **Log In**; then, click **Permissions** → **Audio**.
5. Select the check box to enable HD audio.
6. Select the check box to enable audio compression.
7. Click **Apply**; then, click **Reset**.
8. Direct the Web browser to the IP address of the compression card. The compression card Web interface opens.
9. In the compression card Web interface, type your password and click **Log In**, **Permissions**; then, click **Audio**.
10. Select the check box to enable HD audio.
11. Select the check box to enable audio compression.
12. Click **Apply**; then, click **Reset**.
13. Restart the host system to apply the changes.



---

## Chapter 5. Solving problems

The workstation interface has diagnostic tools to help you solve connection problems. To use the diagnostic tools in the workstation interface, click **Options**, **Diagnostics**; then, click the **Event log** tab or the **Ping** tab.

**Note:** The workstation interface consists of the On Screen Display (OSD) utility which runs when the connection device is turned on.

---

### Event log

Scroll to the bottom of the event log to view the most recent events. For example, the event log might indicate that the IP address could not be assigned because of a DHCP lease error. In that case, refer to the DHCP server to verify that a sufficient number of IP addresses are available. To view the event log for the workstation connection device, click **Options**, **Diagnostics**, then **Event Log**.

---

### Ping tool

The Ping tool can be very helpful in isolating a network connectivity problem between the connection device and the host system. You can use the ping tool to verify that the host system is online and reachable from the network segment that the connection device is on. In the ping tool, type the IP address of the compression card in the host system and click **Start** to send ICMP request packets to the host system. If the host system is online, it responds and the responses are recorded in the ping tool. To stop the ping tool, click **Stop**. If pinging the compression card in the host system fails, the compression card may not be on the same subnet as the workstation connection device or the host system is not operating correctly. See the "Installation and User Guide" for the host system for information on troubleshooting the compression card.

You can also ping the IP address of the gateway or another device within the same subnet to test if the LAN cable or network issue exists. If pinging the gateway or another device on the subnet fails, reseal the LAN cable. If pinging the gateway or another device still fails, contact your network administrator.

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## USB peripherals

If a keyboard, mouse, or other USB peripheral is not working, use the following steps to troubleshoot the problem.

1. If the USB device has an on/off switch, turn the device off and then turn it back on.
2. Reseat the USB device.
3. Install the USB device into another USB port on the workstation connection device. If the USB device works in another USB port, the original USB port might be failing.
4. Configure the USB permissions on the workstation connection device to enable support for all USB devices.
  - a. Open a Web browser from another system on the same subnet as the workstation connection device.
  - b. Direct the Web browser to the IP address of the workstation connection device.
  - c. Login to the workstation-connection-device interface.
  - d. Click **Permissions**, then **USB**.
  - e. Configure the first row of the USB device list:
    - 1) To configure the "Entry Type" select **Class**.
    - 2) To configure the "Device Class" select **Any**.
    - 3) To configure the "Sub Class" select **Any**.
    - 4) To configure the "Protocol" select **Any**.
    - 5) Click **Apply** to use the new settings.
5. Install the USB device on another system.
  - If it does not work, replace the USB device.
  - If the USB device works on another system, the workstation connection device might need to be replaced.

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## Updating the IBM CP20 Workstation Connection Device firmware

The following section gives information on how to update the firmware for the IBM CP20 Workstation Connection Device.

### Notes:

1. The workstation connection device and the compression card on the host system must be at the same firmware levels. For information on how to verify the firmware level and update the firmware of the compression card, see the *"Installation and User's Guide"* for your host system.
2. Changes are made periodically to the IBM Web site. The actual procedure might vary slightly from what is described in this document.

Follow the steps below to update the firmware for your IBM CP20 Workstation Connection Device:

1. Go to <http://www.ibm.com/systems/support/>.
2. Under **Product support**, click **BladeCenter**.
3. From the **Product family** menu, select **CP20 Workstation Connection Device**, and click **Go**.
4. Download the firmware update to a management workstation such as a laptop.

5. Connect the management workstation directly to the IBM CP20 Workstation Connection Device using an Ethernet cable.
6. Open a Web browser on the management workstation.
7. Direct the Web browser to the IP address of the connection device. The connection device Web interface opens.
8. In the connection device Web interface, type your password and click **Log In**; then, click **Upload → Firmware** and follow the on screen instructions to finish the firmware update.
9. If the bootloader code is also available, click **Upload Bootloader** and follow the on screen instructions to finish the bootloader update.

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## Optional parts

Part	Part number
DVI to VGA cable connector	25R9042
1.8m, 2.5A/125V, NEMA 5-15P (US/Canada) Line Cord	43W6307
1.8m, 2.5A/250V, IRAM 2073 (Argentina) Line Cord	43W6308
1.8m, 2.5A/250V, AS/NZS 3112 (Australia) Line Cord	43W6309
1.8m, 2.5A/250V, CEE(7)-VII (Europe) Line Cord	43W6310
1.8m, 2.5A/250V, SABS 164 (S.Africa) Line Cord	43W6311
1.8m, 2.5A/250V, BS 1363/A (UK) Line Cord	43W6312
1.8m, 2.5A/250V, JIS C-8303 (Japan) Line Cord	43W6313
1.8m, 2.5A/250V, GB 2099.1 (China) Line Cord	43W6314
1.8m, 2.5A/250V, KSC 8305 (Korea) Line Cord	43W6315
1.8m, 2.5A/250V, IS 6538 (India) Line Cord	43W6316
1.8m, 2.5A/125V, NBR 6147 (Brazil) Line Cord	43W6317
1.8m, 2.5A/125V, CNS 10917-3 Taiwan Line Cord	43W6318
1.8m, 2.5A/250V, DK2-5a (Denmark) Line Cord	43W6345
1.8m, 2.5A/250V, 1011-S2 4507 (Switzerland) Line Cord	43W6346
1.8m, 2.5A/250V, CEI 23-15 (Chile/Italy) Line Cord	43W6347
1.8m, 2.5A/250V, SI 32 (Israel) Line Cord	43W6348



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## Appendix A. Getting help and technical assistance

If you need help, service, or technical assistance or just want more information about IBM products, you will find a wide variety of sources available from IBM to assist you. This section contains information about where to go for additional information about IBM and IBM products, what to do if you experience a problem with your system, and whom to call for service, if it is necessary.

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### Before you call

Before you call, make sure that you have taken these steps to try to solve the problem yourself:

- Check all cables to make sure that they are connected.
- Check the power switches to make sure that the system and any optional devices are turned on.
- Use the troubleshooting information in your system documentation, and use the diagnostic tools that come with your system. Information about diagnostic tools is in the *Problem Determination and Service Guide* on the IBM Documentation CD that comes with your system.
- Go to the IBM support Web site at <http://www.ibm.com/systems/support/> to check for technical information, hints, tips, and new device drivers or to submit a request for information.

You can solve many problems without outside assistance by following the troubleshooting procedures that IBM provides in the online help or in the documentation that is provided with your IBM product. The documentation that comes with IBM systems also describes the diagnostic tests that you can perform. Most systems, operating systems, and programs come with documentation that contains troubleshooting procedures and explanations of error messages and error codes. If you suspect a software problem, see the documentation for the operating system or program.

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### Using the documentation

Information about your IBM system and preinstalled software, if any, or optional device is available in the documentation that comes with the product. That documentation can include printed documents, online documents, readme files, and help files. See the troubleshooting information in your system documentation for instructions for using the diagnostic programs. The troubleshooting information or the diagnostic programs might tell you that you need additional or updated device drivers or other software. IBM maintains pages on the World Wide Web where you can get the latest technical information and download device drivers and updates. To access these pages, go to <http://www.ibm.com/systems/support/> and follow the instructions. Also, some documents are available through the IBM Publications Center at <http://www.ibm.com/shop/publications/order/>.

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### Getting help and information from the World Wide Web

On the World Wide Web, the IBM Web site has up-to-date information about IBM systems, optional devices, services, and support. The address for IBM System x<sup>®</sup> and xSeries<sup>®</sup> information is <http://www.ibm.com/systems/x/>. The address for IBM BladeCenter<sup>®</sup> information is <http://www.ibm.com/systems/bladecenter/>. The address for IBM IntelliStation<sup>®</sup> information is <http://www.ibm.com/intellistation/>.

You can find service information for IBM systems and optional devices at <http://www.ibm.com/systems/support/>.

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## Software service and support

Through IBM Support Line, you can get telephone assistance, for a fee, with usage, configuration, and software problems with System x and xSeries servers, BladeCenter products, IntelliStation workstations, and appliances. For information about which products are supported by Support Line in your country or region, see <http://www.ibm.com/services/sl/products/>.

For more information about Support Line and other IBM services, see <http://www.ibm.com/services/>, or see <http://www.ibm.com/planetwide/> for support telephone numbers. In the U.S. and Canada, call 1-800-IBM-SERV (1-800-426-7378).

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## Hardware service and support

You can receive hardware service through your IBM reseller or IBM Services. To locate a reseller authorized by IBM to provide warranty service, go to <http://www.ibm.com/partnerworld/> and click **Find a Business Partner** on the right side of the page. For IBM support telephone numbers, see <http://www.ibm.com/planetwide/>. In the U.S. and Canada, call 1-800-IBM-SERV (1-800-426-7378).

In the U.S. and Canada, hardware service and support is available 24 hours a day, 7 days a week. In the U.K., these services are available Monday through Friday, from 9 a.m. to 6 p.m.

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## IBM Taiwan product service

台灣 IBM 產品服務聯絡方式：  
台灣國際商業機器股份有限公司  
台北市松仁路 7 號 3 樓  
電話：0800-016-888

IBM Taiwan product service contact information:

IBM Taiwan Corporation  
3F, No 7, Song Ren Rd.  
Taipei, Taiwan  
Telephone: 0800-016-888

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## Appendix B. IBM Statement of Limited Warranty Z125-4753-09 08/2006

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### Part 1 - General Terms

#### Part 1 - General Terms

This Statement of Limited Warranty includes Part 1 - General Terms, Part 2 - Country-unique Terms, and Part 3 - Warranty Information. 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. 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. **NOTHING IN THIS STATEMENT OF LIMITED WARRANTY AFFECTS ANY STATUTORY RIGHTS OF CONSUMERS THAT CANNOT BE WAIVED OR LIMITED BY CONTRACT.**

This Statement of Limited Warranty is available, in multiple languages, at the following IBM Internet website: [http://www.ibm.com/servers/support/machine\\_warranties/](http://www.ibm.com/servers/support/machine_warranties/).

#### What this Warranty Covers

IBM warrants that each Machine is free from defects in materials and workmanship and conforms to its Specifications. "Specifications" is information specific to a Machine in a document entitled "Official Published Specifications" which is available upon request.

During the warranty period, IBM provides repair and exchange service for the Machine under the type of warranty service IBM designates for the Machine. The warranty period for the Machine is a fixed period starting on its original Date of Installation. The date on your purchase invoice or sales receipt is the Date of Installation unless IBM or your reseller informs you otherwise. The warranty period, type of warranty, and service level that apply to your Machine are designated in Part 3.

Many features, conversions, or upgrades involve the removal of parts and their return to IBM. An IBM part that replaces a removed part will assume the warranty service status of the removed part. An IBM part that is added to a Machine without replacing a previously-installed part is subject to warranty effective on its Date of Installation. Unless IBM specifies otherwise, the warranty period, type of warranty, and service level of such part is the same as the Machine on which it is installed.

Unless IBM specifies otherwise, these warranties apply only in the country or region in which you purchased the Machine.

**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. SOME STATES OR JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF EXPRESS OR IMPLIED WARRANTIES, SO THE ABOVE**

**EXCLUSION MAY NOT APPLY TO YOU. IN THAT EVENT, SUCH WARRANTIES ARE LIMITED IN DURATION TO THE WARRANTY PERIOD. NO WARRANTIES APPLY AFTER THAT PERIOD. SOME STATES OR JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.**

#### **What this Warranty Does not Cover**

This warranty does not cover the following:

1. failure or damage resulting from misuse (including but not limited to use of any Machine capacity or capability, other than that authorized by IBM in writing), accident, modification, unsuitable physical or operating environment, or improper maintenance by you;
2. failure caused by a product for which IBM is not responsible;
3. any non-IBM products, including those provided with, or installed on, an IBM Machine at your request;
4. accessories, supply items and consumables (e.g. batteries and printer cartridges), and structural parts (e.g. frames and covers);
5. service of Machine alterations; and
6. service of a Machine on which you are using capacity or capability, other than that authorized by IBM in writing.

The warranty is voided by removal or alteration of identification labels on the Machine or its parts.

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 with “how-to” questions and those regarding Machine set-up and installation, is provided **WITHOUT WARRANTIES OF ANY KIND**.

#### **How to Obtain Warranty Service**

If the Machine does not function as warranted during the warranty period, contact IBM or your reseller to obtain warranty service. Contact information for IBM is provided in Part 3. If you do not register the Machine with IBM, you may be required to present proof of purchase as evidence of your entitlement to warranty service.

#### **What IBM Will Do to Correct Problems**

IBM will attempt to diagnose and resolve your problem over the telephone or electronically by access to an IBM Internet website. Certain Machines contain remote support capabilities for direct problem reporting, remote problem determination and resolution with IBM. When you contact IBM for service, you must follow the problem determination and resolution procedures that IBM specifies. Following problem determination, if IBM determines on-site service is required, a service technician will be scheduled for service at your location.

You are responsible for downloading or obtaining from IBM, and installing designated Machine Code (microcode, basic input/output system code (called “BIOS”), utility programs, device drivers, and diagnostics delivered with an IBM Machine) and other software updates in a timely manner from an IBM Internet



website or from other electronic media, and following the instructions that IBM provides. You may request IBM to install Machine Code changes, however, you may be charged for that service.

Some parts of IBM Machines are designated as Customer Replaceable Units ("CRUs"). If your problem can be resolved with a CRU (e.g., keyboard, memory, hard disk drive), IBM will ship the CRU to you for you to install.

If the Machine does not function as warranted during the warranty period and your problem cannot be resolved over the telephone or electronically, through your application of Machine Code or software updates, or with a CRU, IBM or its subcontractor or a reseller that has been approved by IBM to provide warranty service, will either, at its discretion, 1) repair it to make it function as warranted, or 2) replace it with one that is at least functionally equivalent. If IBM or its subcontractor or the reseller is unable to do either, you may return the Machine to your place of purchase and your money will be refunded.

IBM or its subcontractor or the reseller will also manage and install selected engineering changes that apply to the Machine.

### **Exchange of a Machine or Part**

When the warranty service involves the exchange of a Machine or part, the item IBM or its subcontractor or the reseller replaces becomes IBM's 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.

### **Your Additional Responsibilities**

You agree:

1. before IBM or its subcontractor or the reseller exchanges a Machine or part, to remove all features, parts, options, alterations, and attachments not under warranty service and ensure that the Machine is free of any legal obligations or restrictions that prevent its exchange;
2. to obtain authorization from the owner to have IBM or its subcontractor or the reseller service a Machine that you do not own;
3. where applicable, before service is provided:
  - a. follow the service request procedures that IBM or its subcontractor or its reseller provides;
  - b. backup and secure all programs, data, and funds contained in the Machine; and
  - c. inform IBM or its subcontractor or the reseller of changes in the Machine's location;
4. to provide IBM or its subcontractor or the reseller with sufficient and safe access to your facilities to permit IBM to fulfill its obligations;
5. to allow IBM or its subcontractor or the reseller to install mandatory engineering changes, such as those required for safety;
6. when the type of warranty service requires that you deliver a failing Machine to IBM, you agree to ship it suitably packaged, as IBM specifies, to a location IBM designates. After the Machine has been repaired or exchanged, IBM will return the repaired Machine or provide a replacement Machine to you at its expense, unless IBM specifies otherwise. IBM is responsible for loss of, or damage to, your Machine only while it is 1) in IBM's possession or 2) in transit in those cases where IBM is responsible for the transportation charges; and

7. to securely erase from any Machine you return to IBM for any reason all programs not provided by IBM with the Machine, and data, including without limitation the following: 1) information about identified or identifiable individuals or legal entities ("Personal Data") and 2) your confidential or proprietary information and other data. If removing or deleting Personal Data is not possible, you agree to transform such information (e.g., by making it anonymous or encrypting it) so that it no longer qualifies as Personal Data under applicable law. You also agree to remove all funds from Machines returned to IBM. IBM is not responsible for any funds, programs not provided by IBM with the Machine, or data contained in a Machine that you return to IBM. You acknowledge that, to perform its responsibilities under this Statement of Limited Warranty, IBM may ship all or part of the Machine or its software to other IBM or third party locations around the world, and you authorize IBM to do so.

### **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 ("LIC").

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

**UNDER NO CIRCUMSTANCES IS IBM OR ITS SUPPLIERS, SUBCONTRACTORS, OR RESELLERS LIABLE FOR ANY OF THE FOLLOWING EVEN IF INFORMED OF THEIR POSSIBILITY: 1) THIRD PARTY CLAIMS AGAINST YOU FOR DAMAGES (OTHER THAN THOSE UNDER THE FIRST ITEM LISTED ABOVE); 2) LOSS OF, OR DAMAGE TO, DATA; 3) SPECIAL, INCIDENTAL, OR INDIRECT DAMAGES OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES; OR 4) LOST PROFITS, BUSINESS REVENUE, GOODWILL OR ANTICIPATED SAVINGS. SOME STATES OR 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 Statement of Limited Warranty, without regard to conflict of law principles.

**THESE WARRANTIES GIVE YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE OR JURISDICTION TO JURISDICTION.**

## Jurisdiction

All of our rights, duties, and obligations are subject to the courts of the country in which you acquired the Machine.

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## Part 2 - Country-unique Terms

### AMERICAS

**Jurisdiction:** *The following sentence is added to this section as it applies to countries in bold print below:*

Any litigation arising from this Statement of Limited Warranty will be settled exclusively by 1) in **Argentina**; the Ordinary Commercial Court of the city of Buenos Aires; 2) in **Bolivia**; the courts of the city of La Paz; 3) in **Brazil**; court of Rio de Janeiro, RJ; 4) in **Chile**; the Civil Courts of Justice of Santiago; 5) in **Colombia**; the Judges of the Republic of Colombia; 6) in **Ecuador**; the civil judges of Quito for executory or summary proceedings (as applicable); 7) in **Mexico**; the courts located in Mexico City, Federal District; 8) in **Paraguay**; the courts of the city of Asuncion; 9) in **Peru**; the judges and tribunals of the judicial district of Lima, Cercado; 10) in **Uruguay**; the courts of the city of Montevideo; 11) in **Venezuela**; the courts of the metropolitan area of the city of Caracas.

### **BRAZIL**

**Exchange of a Machine or Part:** *Delete the last sentence:*

The replacement assumes the warranty service status of the replaced item.

### **CANADA**

**What this Warranty Covers:** *The following replaces the 2<sup>nd</sup> paragraph to this section:*

During the warranty period, IBM provides repair and exchange service for the Machine under the type of warranty service IBM designates for the Machine. The warranty period for the Machine is a fixed period starting on its original Date of Installation. The date on your purchase invoice or sales receipt is the Date of Installation unless IBM informs you otherwise. The warranty period, type of warranty, and service level that apply to your Machine are designated in Part 3.

**Limitation of Liability:** *The following replaces item 1 and item 2 of this section:*

1. damages for bodily injury (including death) or physical harm to real property and tangible personal property caused by IBM's negligence; and
2. the amount of any other actual direct damages, up to the greater of \$100,000.00 or 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 ("LIC").

**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.

## PERU

**Limitation of Liability:** *The following is added at the end of this section:*

In accordance with Article 1328 of the Peruvian Civil Code the limitations and exclusions specified in this section will not apply to damages caused by IBM's willful misconduct ("dolo") or gross negligence ("culpa inexcusable").

## 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

**What this Warranty Covers:** *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 AND LAOS

**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, United States of America

### CAMBODIA, INDONESIA, AND LAOS

**Arbitration:** *The following is added under this heading:*

Disputes arising out of or in connection with this Statement of Limited Warranty shall be finally settled by arbitration which shall be held in Singapore in accordance with the Arbitration Rules of Singapore International Arbitration Center ("SIAC Rules") then in effect. The arbitration award shall be final and binding for the parties without appeal and shall be in writing and set forth the findings of fact and the conclusions of law.

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 who shall act as chairman of the proceedings. Vacancies in the post of chairman shall be filled by the president of the SIAC. 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.

All proceedings shall be conducted, including all documents presented in such proceedings, in the English language. The English language version of this Statement of Limited Warranty prevails over any other language version.

### **HONG KONG S.A.R.**

As applies to transactions initiated and performed in Hong Kong S.A.R., phrases throughout this Agreement containing the word “country” (for example, “country of purchase” and “country of Installation”) are replaced with “Hong Kong S.A.R.”

### **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; and
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, the charge paid by you for the individual Machine that is the subject of the claim. For purposes of this item, the term “Machine” includes Machine Code and Licensed Internal Code (“LIC”).

**Arbitration:** *The following is added under this heading:*

Disputes arising out of or in connection with this Statement of Limited Warranty shall be finally settled by arbitration which shall be held in Bangalore, India in accordance with the laws of India then in effect. The arbitration award shall be final and binding for the parties without appeal and shall be in writing and set forth the findings of fact and the conclusions of law.

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 who shall act as chairman of the proceedings. Vacancies in the post of chairman shall be filled by the president of the Bar Council of India. 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.

All proceedings shall be conducted, including all documents presented in such proceedings, in the English language. The English language version of this Statement of Limited Warranty prevails over any other language version.

## JAPAN

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

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

## MACAU S.A.R.

As applies to transactions initiated and performed in Macau S.A.R., phrases throughout this Agreement containing the word “country” (for example, “country of purchase” and “country of Installation”) are replaced with “Macau S.A.R.”

## MALAYSIA

**Limitation of Liability:** *The word “**SPECIAL**” in item 3 of the fifth paragraph is deleted.*

## NEW ZEALAND

**What this Warranty Covers:** *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 “laws of the country in which you acquired the Machine” in the first sentence:*

laws of the State of New York, United States of America (except when local law requires otherwise).

## PHILIPPINES

**Limitation of Liability:** *Item 3 in the fifth paragraph is replaced by the following:*

**SPECIAL (INCLUDING NOMINAL AND EXEMPLARY DAMAGES), MORAL, INCIDENTAL, OR INDIRECT DAMAGES FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES; OR**

**Arbitration:** *The following is added under this heading:*

Disputes arising out of or in connection with this Statement of Limited Warranty shall be finally settled by arbitration which shall be held in Metro Manila, Philippines in accordance with the laws of the Philippines then in effect. The arbitration award

shall be final and binding for the parties without appeal and shall be in writing and set forth the findings of fact and the conclusions of law.

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 who shall act as chairman of the proceedings. Vacancies in the post of chairman shall be filled by the president of the Philippine Dispute Resolution Center, Inc. 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.

All proceedings shall be conducted, including all documents presented in such proceedings, in the English language. The English language version of this Statement of Limited Warranty prevails over any other language version.

## **SINGAPORE**

**Limitation of Liability:** *The words “**SPECIAL**” and “**ECONOMIC**” in item 3 in the fifth paragraph are deleted.*

## **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.

#### **How to Obtain Warranty Service:**

*Add the following paragraph in **Western Europe** (Andorra, Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Netherlands, Norway, Poland, Portugal, San Marino, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom, Vatican State, and any country subsequently added to the European Union, as from the date of accession):*

The warranty for Machines acquired in Western Europe shall be valid and applicable in all Western Europe countries provided the Machines have been announced and made available in such countries.

If you purchase a Machine in one of the Western European countries, as defined above, 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, provided the Machine has been announced and made available by IBM in the country in which you wish to obtain service.

If you purchase a Machine in a Middle East 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 approved service provider. You are responsible for transportation costs for Machines located outside 50 kilometers of an IBM approved service provider.



**Governing Law:** *The phrase “the laws of the country in which you acquired the Machine” is replaced by:*

1) “the laws of Austria” in **Albania, Armenia, Azerbaijan, Belarus, Bosnia-Herzegovina, Bulgaria, Croatia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, FYR Macedonia, Moldova, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan;** 2) “the laws of France” in **Algeria, Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Comoros, Congo Republic, Djibouti, Democratic Republic of Congo, Equatorial Guinea, French Guiana, French Polynesia, Gabon, Gambia, Guinea, Guinea-Bissau, Ivory Coast, Lebanon, Libya, Madagascar, Mali, Mauritania, Mauritius, Mayotte, Morocco, New Caledonia, Niger, Reunion, Senegal, Seychelles, Togo, Tunisia, Vanuatu, and Wallis & Futuna;** 3) “the laws of Finland” in **Estonia, Latvia, and Lithuania;** 4) “the laws of England” in **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, the United Kingdom, West Bank/Gaza, Yemen, Zambia, and Zimbabwe;** and 5) “the laws of South Africa” in **South Africa, Namibia, Lesotho and Swaziland.**

**Jurisdiction:** *The following exceptions are added to this section:*

1) **In Austria** the choice of jurisdiction for all disputes arising out of this Statement of Limited Warranty and relating thereto, including its existence, will be the competent court of law in Vienna, Austria (Inner-City); 2) **in 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** all disputes arising out of this Statement of Limited Warranty or related to its execution, including summary proceedings, will be submitted to the exclusive jurisdiction of the English courts; 3) **in Belgium and Luxembourg**, all disputes arising out of this Statement of Limited Warranty or related to its interpretation or its execution, the law, and the courts of the capital city, of the country of your registered office and/or commercial site location only are competent; 4) **in France, Algeria, Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Comoros, Congo Republic, Djibouti, Democratic Republic of Congo, Equatorial Guinea, French Guiana, French Polynesia, Gabon, Gambia, Guinea, Guinea-Bissau, Ivory Coast, Lebanon, Libya, Madagascar, Mali, Mauritania, Mauritius, Mayotte, Morocco, New Caledonia, Niger, Reunion, Senegal, Seychelles, Togo, Tunisia, Vanuatu, and Wallis & Futuna** all disputes arising out of this Statement of Limited Warranty or related to its violation or execution, including summary proceedings, will be settled exclusively by the Commercial Court of Paris; 5) **in South Africa, Namibia, Lesotho and Swaziland**, both of us agree to submit all disputes relating to this Statement of Limited Warranty to the jurisdiction of the High Court in Johannesburg; 6) **in Turkey** all disputes arising out of or in connection with this Statement of Limited Warranty shall be resolved by the Istanbul Central (Sultanahmet) Courts and Execution Directorates of Istanbul, the Republic of Turkey; 8) in each of the following specified countries, any legal claim arising out of this Statement of Limited Warranty will be brought before, and settled exclusively by, the competent court of a) Athens for **Greece**, b) Tel Aviv-Jaffa for **Israel**, c) Milan for **Italy**, d) Lisbon for **Portugal**, and e) Madrid for **Spain**; and 8) **in the United Kingdom**, both of us agree to submit all disputes relating to this Statement of Limited Warranty to the jurisdiction of the English courts.



**Arbitration:** *The following is added under this heading:*

**In Albania, Armenia, Azerbaijan, Belarus, Bosnia-Herzegovina, Bulgaria, Croatia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Libya, FYR Macedonia, Moldova, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan** all disputes arising out of this Statement of Limited Warranty or related to its violation, termination or nullity will be finally settled under the Rules of Arbitration and Conciliation of the International Arbitral Center of the Federal Economic Chamber in Vienna (Vienna Rules) by three arbitrators appointed in accordance with these rules. The arbitration will be held in Vienna, Austria, and the official language of the proceedings will be English. The decision of the arbitrators will be final and binding upon both parties. Therefore, pursuant to paragraph 598 (2) of the Austrian Code of Civil Procedure, the parties expressly waive the application of paragraph 595 (1) figure 7 of the Code. IBM may, however, institute proceedings in a competent court in the country of installation.

**In Estonia, Latvia and Lithuania** all disputes arising in connection with this Statement of Limited Warranty will be finally settled in arbitration that will be held in Helsinki, Finland in accordance with the arbitration laws of Finland then in effect. Each party will appoint one arbitrator. The arbitrators will then jointly appoint the chairman. If arbitrators cannot agree on the chairman, then the Central Chamber of Commerce in Helsinki will appoint the chairman.

#### **EUROPEAN UNION (EU)**

##### ***THE FOLLOWING TERMS APPLY TO ALL EU COUNTRIES:***

The warranty for Machines acquired in EU countries is valid and applicable in all EU countries provided the Machines have been announced and made available in such countries.

#### **DENMARK, FINLAND, GREECE, ITALY, NETHERLANDS, NORWAY, PORTUGAL, SPAIN, SWEDEN AND SWITZERLAND**

**Limitation of Liability:** *The following replaces the terms of this section in its entirety:*

Except as otherwise provided by mandatory law:

1. IBM's liability for any damages and losses that may arise as a consequence of the fulfillment of its obligations under or in connection with this Statement of Limited Warranty or due to any other cause related to this Statement of Limited Warranty is limited to the compensation of only those damages and losses proved and actually arising as an immediate and direct consequence of the non-fulfillment of such obligations (if IBM is at fault) or of such cause, for a maximum amount equal to the charges you paid for the Machine. For purposes of this item, the term "Machine" includes Machine Code and Licensed Internal Code ("LIC").

The above limitation shall not apply to damages for bodily injuries (including death) and damages to real property and tangible personal property for which IBM is legally liable.

2. **UNDER NO CIRCUMSTANCES IS IBM, OR ITS SUPPLIERS, SUBCONTRACTORS, OR RESELLERS LIABLE FOR ANY OF THE FOLLOWING, EVEN IF INFORMED OF THEIR POSSIBILITY: 1) LOSS OF, OR DAMAGE TO, DATA; 2) INCIDENTAL OR INDIRECT DAMAGES, OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES; 3) LOST PROFITS, EVEN IF THEY ARISE AS AN IMMEDIATE CONSEQUENCE OF THE EVENT THAT**

**GENERATED THE DAMAGES; OR 4) LOSS OF BUSINESS, REVENUE, GOODWILL, OR ANTICIPATED SAVINGS.**

## **FRANCE AND BELGIUM**

**Limitation of Liability:** *The following replaces the terms of this section in its entirety:*

Except as otherwise provided by mandatory law:

1. IBM's liability for any damages and losses that may arise as a consequence of the fulfillment of its obligations under or in connection with this Statement of Limited Warranty is limited to the compensation of only those damages and losses proved and actually arising as an immediate and direct consequence of the non-fulfillment of such obligations (if IBM is at fault), for a maximum amount equal to the charges you paid for the Machine that has caused the damages. For purposes of this item, the term "Machine" includes Machine Code and Licensed Internal Code ("LIC").

The above limitation shall not apply to damages for bodily injuries (including death) and damages to real property and tangible personal property for which IBM is legally liable.

2. **UNDER NO CIRCUMSTANCES IS IBM, OR ITS SUPPLIERS, SUBCONTRACTORS, OR RESELLERS LIABLE FOR ANY OF THE FOLLOWING, EVEN IF INFORMED OF THEIR POSSIBILITY: 1) LOSS OF, OR DAMAGE TO, DATA; 2) INCIDENTAL OR INDIRECT DAMAGES, OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES; 3) LOST PROFITS, EVEN IF THEY ARISE AS AN IMMEDIATE CONSEQUENCE OF THE EVENT THAT GENERATED THE DAMAGES; OR 4) LOSS OF BUSINESS, REVENUE, GOODWILL, OR ANTICIPATED SAVINGS.**

## **THE FOLLOWING TERMS APPLY TO THE COUNTRY SPECIFIED:**

### **AUSTRIA AND GERMANY**

**What this Warranty Covers:** *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 twelve months. In case IBM or your reseller is unable to repair an IBM Machine, you can alternatively ask for a price reduction 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.

*The second paragraph does not apply.*

**What IBM Will Do to Correct Problems:** *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.

## **IRELAND**

**What this Warranty Covers:** *The following is added to this section:*

Except as expressly provided in these terms and conditions or Section 12 of the Sale of Goods Act 1893 as amended by the Sale of Goods and Supply of Services Act, 1980 ("the 1980 Act"), all conditions or warranties (express or implied, statutory or otherwise) are hereby excluded including, without limitation, any warranties implied by the Sale of Goods Act 1893 as amended by the 1980 Act (including, for the avoidance of doubt, section 39 of the 1980 Act).

**Limitation of Liability:** *The following replaces the terms of this section in its entirety:*

For the purposes of this section, a "Default" means any act, statement, omission, or negligence on the part of IBM in connection with, or in relation to, the subject matter of this Statement of Limited Warranty in respect of which IBM is legally liable to you, whether in contract or tort. A number of Defaults which together result in, or contribute to, substantially the same loss or damage will be treated as one Default occurring on the date of occurrence of the last such Default.

Circumstances may arise where, because of a Default, you are entitled to recover damages from IBM.

This section sets out the extent of IBM's liability and your sole remedy.

1. IBM will accept unlimited liability for death or personal injury caused by the negligence of IBM.
2. Subject always to the **Items for Which IBM is Not Liable** below, IBM will accept unlimited liability for physical damage to your tangible property resulting from the negligence of IBM.
3. Except as provided in items 1 and 2 above, IBM's entire liability for actual damages for any one Default will not in any event exceed the greater of 1) EUR 125,000, or 2) 125% of the amount you paid for the Machine directly relating to the Default.

### **Items for Which IBM is Not Liable**

Save with respect to any liability referred to in item 1 above, under no circumstances is IBM, its suppliers or resellers liable for any of the following, even if IBM or they were informed of the possibility of such losses:

1. loss of, or damage to, data;
2. special, indirect, or consequential loss; or
3. loss of profits, business, revenue, goodwill, or anticipated savings.

## **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.

## **SWITZERLAND**

**Your Additional Responsibilities:** *The following sentence is added to this section:*

Personal Data also includes information about you as a legal entity.

## **TURKEY**

**What this Warranty Covers:** *The following is added to this section:*

The minimum warranty period for Machines is 2 years.

## **UNITED KINGDOM**

**Limitation of Liability:** *The following replaces the terms of this section in its entirety:*

For the purposes of this section, a "Default" means any act, statement, omission, or negligence on the part of IBM in connection with, or in relation to, the subject matter of this Statement of Limited Warranty in respect of which IBM is legally liable to you, whether in contract or tort. A number of Defaults which together result in, or contribute to, substantially the same loss or damage will be treated as one Default.

Circumstances may arise where, because of a Default, you are entitled to recover damages from IBM.

This section sets out the extent of IBM's liability and your sole remedy.

1. IBM will accept unlimited liability for:
  - a. death or personal injury caused by the negligence of IBM; and
  - b. any breach of its obligations implied by Section 12 of the Sale of Goods Act 1979 or Section 2 of the Supply of Goods and Services Act 1982, or any statutory modification or re-enactment of either such Section.
2. IBM will accept unlimited liability, subject always to the **Items for Which IBM is Not Liable** below, for physical damage to your tangible property resulting from the negligence of IBM.
3. IBM's entire liability for actual damages for any one Default will not in any event, except as provided in items 1 and 2 above, exceed the greater of 1) Pounds Sterling 75,000, or 2) 125% of the total purchase price payable or the charges for the Machine directly relating to the Default.

These limits also apply to IBM's suppliers and resellers. They state the maximum for which IBM and such suppliers and resellers are collectively responsible.

## Items for Which IBM is Not Liable

Save with respect to any liability referred to in item 1 above, under no circumstances is IBM or any of its suppliers or resellers liable for any of the following, even if IBM or they were informed of the possibility of such losses:

1. loss of, or damage to, data;
2. special, indirect, or consequential loss;
3. loss of profits, business, revenue, goodwill, or anticipated savings; or
4. third party claims against you for damages.

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## Part 3 - Warranty Information

### IBM CP20 Workstation Connection Device

Country or Region of Purchase	Warranty Period	Type of Warranty Service*	Service Level*
Worldwide	1 year	Machine exchange	Not applicable

\* See “Types of Warranty Service” and “Service Levels” for explanations of warranty-service types and service levels.

Scheduling of a warranty service will depend upon the following: 1) the time your request for service is received, 2) Machine technology, and 3) availability of parts. Contact your local IBM representative or the subcontractor or reseller performing services on behalf of IBM for country and location specific information.

### Types of Warranty Service

#### 1. Customer Replaceable Unit (“CRU”) Service

IBM provides replacement CRUs to you for you to install. CRU information and replacement instructions are shipped with your Machine and are available from IBM at any time on your request. CRUs are designated as being either Tier 1 or a Tier 2 CRU. Installation of Tier 1 CRUs is your responsibility. If IBM installs a Tier 1 CRU at your request, you will be charged for the installation. You may install a Tier 2 CRU yourself or request IBM to install it, at no additional charge, under the type of warranty service designated for your Machine. IBM specifies in the materials shipped with a replacement CRU whether a defective CRU must be returned to IBM. When return is required, 1) return instructions and a container are shipped with the replacement CRU, and 2) you may be charged for the replacement CRU if IBM does not receive the defective CRU within 15 days of your receipt of the replacement.

#### 2. On-site Service

IBM or your reseller will either repair or exchange the failing Machine at your location and verify its operation. You must provide suitable working area to allow disassembly and reassembly of the IBM Machine. The area must be clean, well lit and suitable for the purpose. For some Machines, certain repairs may require sending the Machine to an IBM service center.

#### 3. Courier or Depot Service

You will disconnect the failing Machine for collection arranged by IBM. IBM will provide you with a shipping container for you to return your Machine to a designated service center. A courier will pick up your Machine and deliver it to

the designated service center. Following its repair or exchange, IBM will arrange the return delivery of the Machine to your location. You are responsible for its installation and verification.

4. **Customer Carry-In or Mail-In Service**

You will deliver or mail as IBM specifies (prepaid unless IBM specifies otherwise) the failing Machine suitably packaged to a location IBM designates. After IBM has repaired or exchanged the Machine, IBM will make it available for your collection or, for Mail-in Service, IBM will return it to you at IBM's expense, unless IBM specifies otherwise. You are responsible for the subsequent installation of the Machine and verification of its operation.

5. **CRU and On-site Service\***

This type of Warranty Service is a combination of Type 1 and Type 2 (see above).

6. **CRU and Courier or Depot Service\***

This type of Warranty Service is a combination of Type 1 and Type 3 (see above).

7. **CRU and Customer Carry-In or Mail-In Service\***

This type of Warranty Service is a combination of Type 1 and Type 4 (see above).

8. **Machine Exchange Service**

IBM will initiate shipment of a replacement Machine to your location. You are responsible for its installation and verification of its operation. You must pack the failing Machine into the shipping container that contained the replacement Machine and return the failing Machine to IBM. Transportation charges, both ways, are paid by IBM. You may be charged for the replacement Machine if IBM does not receive the failing Machine within 15 days of your receipt of the replacement Machine.

**(\*) When a 5, 6, or 7 type of warranty service is listed, IBM will determine which type of warranty service is appropriate for the repair.**

### **Service Levels**

Service levels specified below are response-time objectives only and are not guarantees. The specified service level may not be available in all worldwide locations. Charges may apply outside IBM's normal service area. Certain Machines with a Same Day On-site response-time objective may require the installation and use of remote connectivity tools and equipment for direct problem reporting, remote problem determination and resolution.

1. **Next Business Day (NBD), 9X5**

After we receive your call, following problem determination, if IBM determines on-site service is required, a service technician will be scheduled to arrive at your location on the next business day. Service will be provided from 8:00 a.m. to 5:00 p.m. in your local time zone, Monday through Friday, excluding holidays.

2. **Same Business Day (SBD), 9X5**

After we receive your call, following problem determination, if IBM determines on-site service is required, a service technician will be scheduled to arrive at your location within four hours. Service will be provided from 8:00 a.m. to 5:00 p.m. in your local time zone, Monday through Friday, excluding local IBM holidays. If after 1:00 p.m. it is determined that on-site service is required, a service technician will be scheduled to arrive the morning of the following business day.

### 3. **Same Day (SD), 24X7**

After we receive your call, following problem determination, if IBM determines on-site service is required, a service technician will be scheduled to arrive at your location within four hours. This type of service will be provided 24 hours a day, every day, including holidays.

### **IBM Contact Information**

For IBM in Canada or the United States, call 1-800-IBM-SERV (or 1-800-426-7378). For IBM in the European Union (EU), Asia Pacific, and Latin America countries, contact IBM in that country or visit the following IBM Internet website:  
[http://www.ibm.com/servers/support/machine\\_warranties/](http://www.ibm.com/servers/support/machine_warranties/).





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## Appendix C. Notices

This information 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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AIX	PowerExecutive	XA-32
Alert on LAN	Predictive Failure Analysis	XA-64
BladeCenter	ServeRAID	X-Architecture
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## Important notes

Processor speed indicates the internal clock speed of the microprocessor; other factors also affect application performance.

CD or DVD drive speed is the variable read rate. Actual speeds vary and are often less than the possible maximum.

When referring to processor storage, real and virtual storage, or channel volume, KB stands for 1024 bytes, MB stands for 1 048 576 bytes, and GB stands for 1 073 741 824 bytes.

When referring to hard disk drive capacity or communications volume, MB stands for 1 000 000 bytes, and GB stands for 1 000 000 000 bytes. Total user-accessible capacity can vary depending on operating environments.

Maximum internal hard disk drive capacities assume the replacement of any standard hard disk drives and population of all hard disk drive bays with the largest currently supported drives that are available from IBM.

Maximum memory might require replacement of the standard memory with an optional memory module.

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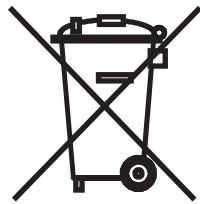
Some software might differ from its retail version (if available) and might not include user manuals or all program functionality.

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## Product recycling and disposal

This unit must be recycled or discarded according to applicable local and national regulations. IBM encourages owners of information technology (IT) equipment to responsibly recycle their equipment when it is no longer needed. IBM offers a variety of product return programs and services in several countries to assist equipment owners in recycling their IT products. Information on IBM product recycling offerings can be found on IBM's Internet site at <http://www.ibm.com/ibm/environment/products/index.shtml>.

Esta unidad debe reciclarse o desecharse de acuerdo con lo establecido en la normativa nacional o local aplicable. IBM recomienda a los propietarios de equipos de tecnología de la información (TI) que reciclen responsablemente sus equipos cuando éstos ya no les sean útiles. IBM dispone de una serie de programas y servicios de devolución de productos en varios países, a fin de ayudar a los propietarios de equipos a reciclar sus productos de TI. Se puede encontrar información sobre las ofertas de reciclado de productos de IBM en el sitio web de IBM <http://www.ibm.com/ibm/environment/products/index.shtml>.



**Notice:** This mark applies only to countries within the European Union (EU) and Norway.

This appliance is labeled in accordance with European Directive 2002/96/EC concerning waste electrical and electronic equipment (WEEE). The Directive determines the framework for the return and recycling of used appliances as applicable throughout the European Union. This label is applied to various products to indicate that the product is not to be thrown away, but rather reclaimed upon end of life per this Directive.

注意: このマークは EU 諸国およびノルウェーにおいてのみ適用されます。

この機器には、EU 諸国に対する廃電気電子機器指令 2002/96/EC(WEEE) のラベルが貼られています。この指令は、EU 諸国に適用する使用済み機器の回収とリサイクルの骨子を定めています。このラベルは、使用済みになった時に指令に従って適正な処理をする必要があることを知らせるために種々の製品に貼られています。

**Remarque :** Cette marque s'applique uniquement aux pays de l'Union Européenne et à la Norvège.

L'étiquette du système respecte la Directive européenne 2002/96/EC en matière de Déchets des Equipements Electriques et Electroniques (DEEE), qui détermine les dispositions de retour et de recyclage applicables aux systèmes utilisés à travers l'Union européenne. Conformément à la directive, ladite étiquette précise que le produit sur lequel elle est apposée ne doit pas être jeté mais être récupéré en fin de vie.

In accordance with the European WEEE Directive, electrical and electronic equipment (EEE) is to be collected separately and to be reused, recycled, or recovered at end of life. Users of EEE with the WEEE marking per Annex IV of the WEEE Directive, as shown above, must not dispose of end of life EEE as unsorted municipal waste, but use the collection framework available to customers for the return, recycling, and recovery of WEEE. Customer participation is important to minimize any potential effects of EEE on the environment and human health due to the potential presence of hazardous substances in EEE. For proper collection and treatment, contact your local IBM representative.

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## Electronic emission notices

IBM CP20 Workstation Connection Device

## Federal Communications Commission (FCC) statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

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

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

## Industry Canada Class B emission compliance statement

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

## Avis de conformité à la réglementation d'Industrie Canada

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

## European Union EMC Directive conformance statement

This product is in conformity with the protection requirements of EU Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility. IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a nonrecommended modification of the product, including the fitting of non-IBM option cards.

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

European Community contact:

IBM Technical Regulations  
Pascalstr. 100, Stuttgart, Germany 70569  
Telephone: 0049 (0)711 785 1176  
Fax: 0049 (0)711 785 1283  
E-mail: tjahn@de.ibm.com

## Notice for South Korea and translations (MIC)

이 기기는 가정용으로 전자파적합등록을 한 기기로서 주거 지역에서는 물론 모든 지역에서 사용할 수 있습니다.

As this equipment has obtained EMC registration for household use, it can be used in any area including residential area.

## Japanese Voluntary Control Council for Interference (VCCI) statement

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、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。

This is a Class B product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use equipment according to the instruction manual.







Part Number: 44R5264

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