lenovo

Lenovo USB 2.0 Port Replicator with Digital Video User Guide

i http://www.lenovo.com/safety

Note: Before installing the product, be sure to read the warranty information in Appendix B "Lenovo Limited Warranty" on page 19.

Contents

Chapter 1. About the port replicator

This chapter contains product description and system requirements for the Lenovo® USB 2.0 Port Replicator with Digital Video (hereafter called the port replicator).

Product description

The port replicator is a portable expansion module that enables you to easily connect your notebook computer to multiple devices, such as a monitor or a Universal Serial Bus (USB) printer. That is, you can set up your work area by connecting your notebook computer to the port replicator with the provided USB cable, connecting multiple devices to the port replicator, and setting the port replicator on your notebook computer; then, you are ready to use the multiple devices each time you connect your notebook computer to the port replicator.

The option package includes:

- Lenovo USB 2.0 Port Replicator with Digital Video
- ac power adapter
- USB cable
- DVI-I to VGA adapter
- *Software and User Guide CD*
- Warranty poster

Contact your place of purchase if any item is missing or damaged. Be sure to retain your proof of purchase and packing material. They might be required to receive warranty service.

Locating the controls

The following figure shows the locations of controls on the port replicator.
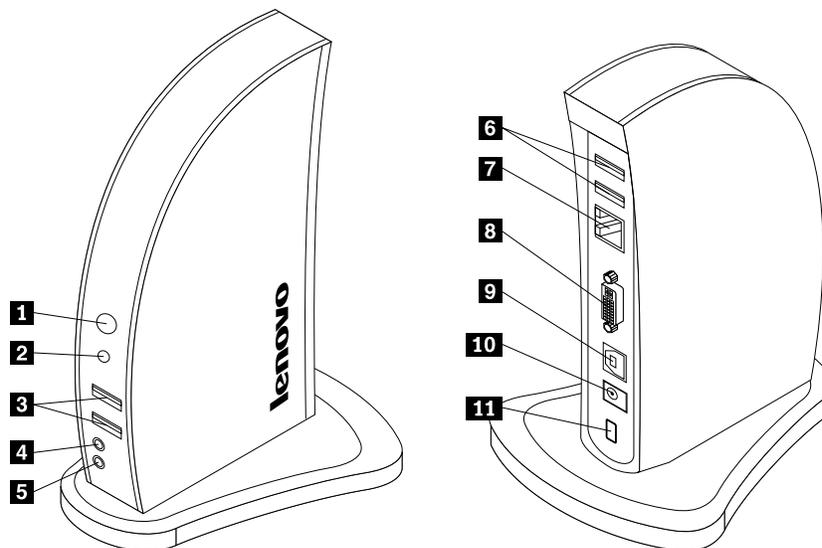
1 Power and connection indicator		When the power and connection indicator is on in blue, the port replicator is successfully connected to the ac power adapter.
2 USB connector indicator		When the USB connector indicator is on in green, the port replicator is successfully connected to a notebook computer and USB device.
3 USB connectors (2)		Used to connect USB devices (USB 1.0, USB 1.1, and USB 2.0 compatible)
4 Headphone connector		Used to connect a speaker or headphone.
5 Microphone connector		Used to connect a microphone.
6 USB connectors (2)		Used to connect USB devices (USB 1.0, USB 1.1, and USB 2.0 compatible)
7 Ethernet connector		Used to connect a local area network (LAN) cable. The Ethernet connector provides the speed up to 10 Mbps / 100 Mbps.
8 DVI-I video output connector		Used to connect an external monitor with a DVI cable. You can also connect the DVI-I to VGA adapter to the DVI-I video output connector and connect the external monitor with VGA cable to the DVI-I to VGA adapter.
9 USB B receptacle connector		Used to connect a notebook computer.
10 dc in connector		Used to connect the ac power adapter.
11 Security keyhole		Used to secure the port replicator.

System requirements

To use the port replicator, it is recommended that your computer meets the following system requirements:

- Microsoft® Windows® XP, Microsoft Windows Vista®, or Microsoft Windows 7 operating system
- NVIDIA, ATI, or Intel® graphics card
- Minimum 1.6 GHz of dual core CPU
- Minimum 1 GB of memory
- CD or DVD drive
- Minimum 10 MB of free disk space on the hard disk drive
- An available USB 2.0 connector

Chapter 2. Installing the port replicator

This chapter provides information on how to connect the port replicator to your notebook computer and how to install and uninstall the device driver.

Connecting the port replicator to your notebook computer

This topic provides instructions on how to connect the port replicator to your notebook computer with the provided ac power adapter and USB cable.
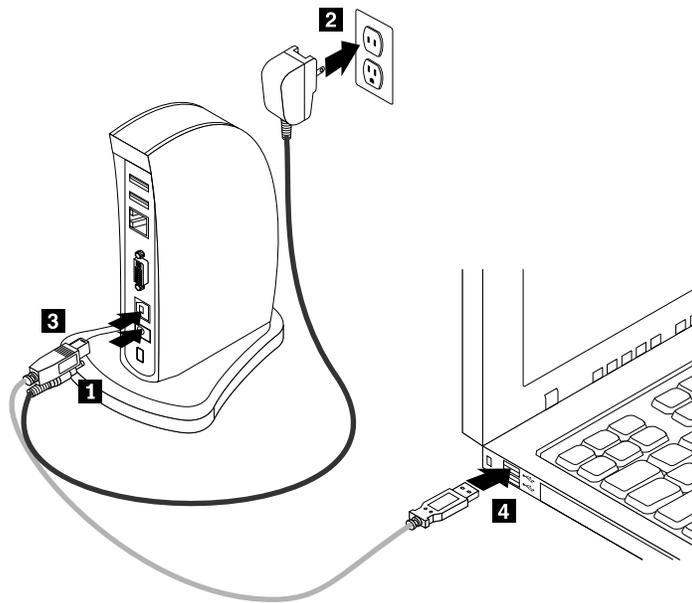
To connect the port replicator to your notebook computer, do the following:

1. Connect the dc connector of the ac power adapter to the port replicator.
2. Connect the power plug of the ac power adapter to a wall outlet. The power and connection indicator is on in blue.

   Note: Be sure to correctly connect the port replicator to the ac power adapter. If the port replicator is not powered on, you will not be able to use the port replicator.
3. Connect the USB B plug of the USB cable to the USB B receptacle connector on the port replicator.
4. Connect the USB A plug of the USB cable to an available USB connector on the notebook computer.

Note: The port replicator does not power up the notebook computer when it is connected.

Installing the device driver on Windows operating systems

After you have connected the port replicator to your notebook computer, you can install the device driver on the *Software and User Guide CD*.

To install the device driver on the Windows XP, Windows Vista, or Windows 7 operating system, do the following:

1. Save any open documents and exit all applications.
2. Insert the *Software and User Guide CD* and do one of the following:
   - If the CD starts automatically, go to step 3.
   - If the AutoPlay window opens, click **Run start.bat**. Then, go to step 3.
   - If the CD does not start automatically, go into **My Computer** or **Computer**, browse the CD/DVD drive, and double-click **Start.bat**.
3. Select your language.
4. On the left side of the window, click **Software**.
5. Follow the instructions on the screen.
6. Restart your computer after the completion message is displayed. The system will automatically identify and configure the port replicator. The video output function of the port replicator will be automatically enabled after the configuration is completed.

Uninstalling the device driver from Windows operating systems

This topic provides instructions for uninstalling the device driver from the Windows XP, Windows Vista, or Windows 7 operating system.

To uninstall the device driver, do the following:

1. Exit all applications that use the port replicator.
2. Click **Start ➙ All Programs ➙ Lenovo USB 2.0 Port Replicator with Digital Video ➙ Uninstall**.
3. Click **Uninstall** to uninstall the device driver.
4. Restart your computer if necessary.

Chapter 3. Using the port replicator

This chapter provides information on how to use the audio connectors, USB connectors, DVI-I video output connector, DVI-I to VGA adapter, and Ethernet connector on the port replicator.

You can connect devices to the appropriate connectors on the port replicator while your notebook computer is turned on. Normally it will take several seconds for the notebook computer to recognize the new device.

Using the audio connectors

The audio connectors on the port replicator consist of one microphone connector (red) and one headphone connector (green).

To use the audio connectors on the port replicator, do the following:

1. Connect your microphone to the microphone connector on the port replicator.
2. Connect your headphone or speaker to the headphone connector on the port replicator.

Note: The audio connectors on the port replicator are automatically enabled when you have successfully connected the port replicator and installed the device driver. However, if you cannot hear anything from the headphone or speaker connected to the audio connectors on the port replicator, you can manually enable the audio connectors on the port replicator. See "Manually enabling the audio connectors" on page 11.

Using the USB 2.0 connectors

Connect a USB device to any of the four USB connectors on the port replicator with a USB cable.

When the device is correctly connected to the USB connector on the port replicator, an information window will be displayed in the taskbar notification area on your computer screen, indicating that the USB device has been connected to the system.

Using the DVI-I video output connector

Connect the DVI cable of an external monitor to the DVI-I video output connector on the port replicator.

You do not have to disconnect the port replicator from your notebook computer each time you connect the DVI monitor to the DVI-I video output connector on the port replicator.

Using the DVI-I to VGA adapter

The port replicator includes a DVI-I to VGA adapter, which supports a connection to an external monitor with a VGA connector.
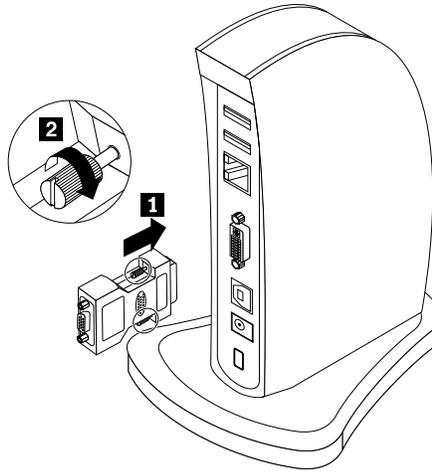
To use the DVI-I to VGA adapter with an external monitor, do the following:

1. Connect the DVI-I to VGA adapter to the DVI-I video output connector on the port replicator.
2. Tighten the two screws on the DVI-I to VGA adapter.
3. Connect the VGA connector of the external monitor to the DVI-I to VGA adapter.

You can adjust video settings to customize the use of the port replicator. See "Working with the port replicator utility" on page 8.

Note: For the best results, adjust the external monitor occasionally to realign its settings with the video output of the port replicator. For more information about the adjustment procedure, refer to the documentation that comes with your external monitor.

Using the Ethernet connector

Connect a standard 10 Mbps / 100 Mbps Ethernet cable to the Ethernet connector on the port replicator, and wait until the device is fully configured by the Windows operating system.

The two light-emitting diodes (LEDs) on the port replicator indicate the status of Ethernet connectivity.

LED	Color	Description
Active	Green	When the LED is on, an Ethernet cable is connected to the Ethernet connector and the network.
Speed	Yellow	When the LED is on, the transmission speed is 100 Mbps. When the LED is off, the transmission speed is 10 Mbps.

Chapter 4. Working with the port replicator

This chapter provides information about the video output function of the port replicator and instructions on how to work with the port replicator utility, which enables you to configure the port replicator to your needs.

Understanding the video output modes

The port replicator works in two video output modes:

- Extend mode
- Mirror mode

By default, the port replicator uses Extend mode to output the video.

Extend mode

Extend mode splits your display across two monitors. In the Windows XP or Windows Vista operating system, there are two options when you are using Extend mode:

- **Extend To:** In this mode, your notebook computer monitor will be the primary display and the external monitor will be the secondary display. You can give each monitor its own frame buffer through the submenu options **Right**, **Left**, **Above** and **Below** and through drag operations. The display space will be a continuous area, allowing windows and objects to be moved between, or even straddled across both displays.
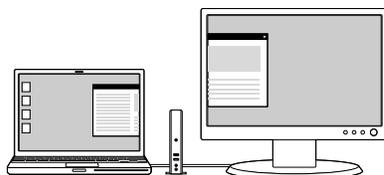
- **Set as Main Monitor:** In this mode, the external monitor will be the primary display and the notebook computer monitor will be the secondary display.
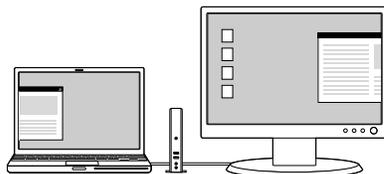
In Extend mode, you can drag and drop windows from one display to the other. Also, you can increase your productivity by doing the following:

- Read e-mails on one display and open the attachments on the other.
- Expand a spreadsheet across both displays.
- For graphics editing, increase your work area by putting all the palette and toolbars on the second display.
- Keep the desktop on one display and watch a DVD on the other.

Mirror mode

Mirror mode clones the display of your notebook computer monitor to the external monitor.
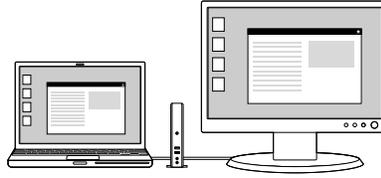
The port replicator automatically selects the settings (screen resolution, color quality, and refresh rate) for the external monitor, which will enable the best resolution based on your notebook computer settings.

In the Windows XP or Windows Vista operating system, there are two options when you are using Mirror mode:

- **Notebook Monitor Off:** In this mode, the display of the notebook computer monitor will be off and the display of the external monitor will be on.
- **Off:** In this mode, the display of the notebook computer monitor will be on and the display of external monitor will be off. When this mode is enabled, though the display is off, the other functions such as Ethernet, audio, and USB can still work.

Working with the port replicator utility

The utility enables you to switch between Extend mode and Mirror mode, set the resolution of the external monitor in Extend mode, change the display settings, and disable the video output of the port replicator.

Note: The settings you have configured for the port replicator will be retained each time you connect the notebook computer to the port replicator. This feature is useful when you use your notebook computer with multiple port replicators. For example, if you use a notebook computer both at home and at work, you can set up both work areas with port replicators. Then, you just connect your notebook computer to the port replicator at either location, and you are ready to work.

Switching video output modes

To switch video output modes, depending on the operating system you are using, do one of the following:

For the Windows XP or Windows Vista operating system:

1. Click the **Lenovo USB 2.0 Port Replicator with Digital Video** icon in the taskbar notification area. The pop-up menu opens.
2. Select **Extend** or **Mirror**.

Note: If you want to use Extend mode, decide which monitor you are to set as primary and which the secondary. Then, select **Extend To** or **Set as Main Monitor**. You can also give each monitor its own frame buffer through the **Right**, **Left**, **Above**, and **Below** options under the **Extend To** option and through drag operations. If you want to use Mirror mode, decide which monitor is on and which is off. Then, select **Notebook Monitor Off** or **Off**.

For the Windows 7 operating system:

1. Click the **Lenovo USB 2.0 Port Replicator with Digital Video** icon in the taskbar notification area.
2. Select **Advanced...**.
3. In the **Multiple displays** drop-down list box, you can select **Duplicate these displays** to use Mirror mode or select **Extend these displays** to use Extend mode.

   Note: You can also select **Show desktop only on 1** or **Show desktop only on 2** to display your desktop only on one target screen.

Setting the resolution of the external monitor

In Mirror mode, you can adjust the resolution of your notebook computer, and the settings will apply to both your notebook computer monitor and the external monitor. In Extend mode, you can only set the resolution of the external monitor.

To set the resolution of the external monitor, depending on the operating system you are using, do one of the following:

For the Windows XP or Windows Vista operating system:

1. Click the **Lenovo USB 2.0 Port Replicator with Digital Video** icon in the taskbar notification area. The pop-up menu opens.
2. Select **Screen Resolution** and select one of the options for the external monitor. For example, "1920 x 1200" means that the video output resolution will be 1920 pixels by 1200 pixels.

For the Windows 7 operating system:

1. Click the **Lenovo USB 2.0 Port Replicator with Digital Video** icon in the taskbar notification area.
2. Select **Advanced…**.
3. In the **Resolution** drop-down list box, move the slider up to increase or down to decrease the resolution of the external monitor.

Setting the color quality of the external monitor

The port replicator enables you to select a target color quality for the external monitor display. Two options could be selected: 16-bit or 32-bit. Bit means the color depth of the display. The default setting is 32-bit, which is recommended.

To set the color quality of the external monitor, depending on the operating system you are using, do one of the following:

For the Windows XP or Windows Vista operating system:

1. Click the **Lenovo USB 2.0 Port Replicator with Digital Video** icon in the taskbar notification area. The pop-up menu opens.
2. Select **Color Quality → Medium (16-bit)** or **Highest (32-bit)**.

For the Windows 7 operating system:

1. Click the **Lenovo USB 2.0 Port Replicator with Digital Video** icon in the taskbar notification area.
2. Select **Advanced…**.
3. Click **Advanced settings**, and then click the **Monitor** tab.
4. In the **Colors** drop-down list box, select **High Color (16 bit)** or **True Color (32 bit)**.

Rotating the external monitor display

The port replicator enables you to rotate your external monitor display as you want to.

To rotate the external monitor display, depending on the operating system you are using, do one of the following:

For the Windows XP or Windows Vista operating system:

1. Click the **Lenovo USB 2.0 Port Replicator with Digital Video** icon in the taskbar notification area. The pop-up menu opens.

2. Select **Screen Rotation**, and then select one of the options:

- **Normal:** The external monitor display will remain the same as your notebook computer monitor display.

- **Rotated Left:** The external monitor display will be rotated 90 degrees to the left.

- **Rotated Right:** The external monitor display will be rotated 90 degrees to the right.

- **Upside-Down:** The external monitor display will be upside-down.

   Note: You can click **Rotated Left** or **Rotated Right** continually until the display becomes upside-down.

For the Windows 7 operating systems:
1. Click the **Lenovo USB 2.0 Port Replicator with Digital Video** icon in the taskbar notification area. The pop-up menu opens.

2. Select **Advanced...**.

3. In the **Orientation** drop-down list box, select one of the options:

- **Landscape:** The external monitor display will remain the same as your notebook computer monitor display.

- **Portrait:** The external monitor display will be rotated 90 degrees to the left.

- **Landscape (flipped):** The external monitor display will be upside-down.

- **Portrait (flipped):** The external monitor display will be rotated 90 degrees to the right.

4. Click **Apply**.

5. Select **Keep changes** to apply the rotation.

Note: The rotation function can only work on the external monitor display. That is, when you enable the rotation function in Mirror mode, only the external monitor display can be rotated and the notebook computer monitor display remains unchanged.

Optimizing the video playback quality

In the Windows Vista or Windows 7 operating system, the port replicator enables you to optimize the video playback quality when there are some quality issues, such as a tear or split, and the display will be smoother and clearer.

To optimize the video playback quality, do the following:
1. Click the **Lenovo USB 2.0 Port Replicator with Digital Video** icon in the taskbar notification area.

2. Select **Optimize for Video**.

Note: This setting is not supported by the Windows XP operating system.

Advanced settings

The port replicator enables you to change the display settings.

To change the display settings, do the following:
1. Click the **Lenovo USB 2.0 Port Replicator with Digital Video** icon in the taskbar notification area. The pop-up menu opens.

2. Select **Advanced...** to open the window for display settings. The window enables you to activate the display and do other appropriate settings to customize the video output.

Note: For more information about advanced settings, see "Working with the port replicator utility" on page 8.

Manually enabling the audio connectors

To manually enable the audio connectors on the port replicator, depending on the operating system you are using, do one of the following:

For the Windows XP operating system:

1. Right-click the volume icon in the taskbar notification area.
2. Select **Adjust Audio Properties**. The **Sound and Audio Devices Properties** window opens.
3. Click the **Audio** tab.
4. Select a USB audio line-out device from the **Sound playback** panel, and then select a USB audio line-in device from the **Sound recording** panel.

For the Windows Vista or Windows 7 operating system:

1. Right-click the volume icon in the taskbar notification area.
2. Select **Sounds**. The **Sound** window opens.
3. Click the **Playback** tab to select a USB audio line-out device, and then click the **Recording** tab to select a USB audio line-in device.

Disabling the video output function

To disable the video output function of the port replicator, do the following:

1. Click the **Lenovo USB 2.0 Port Replicator with Digital Video** icon in the taskbar notification area. The pop-up menu opens.
2. For users of the Windows XP or Windows Vista operating system, select **Off** to disable the video output function of the port replicator. For users of the Windows 7 operating system, select **Advanced...**, and then in the **Multiple displays** drop-down list box, select **Show desktop only on 1** or **Show desktop only on 2** to display your desktop on one target screen.

Supported refresh rates

The table below displays the refresh rates supported at various resolutions and color depth for the port replicator video output.

SN	Resolution	Refresh rates (Unit: Hz)
1	640 x 480	60, 72, 75, 85
2	720 x 400	70, 85
3	800 x 600	56, 60, 72, 75, 85
4	832 x 624	75
5	800 x 480	60
6	848 x 480	60
7	1024 x 768	60, 70, 75, 85
8	1152 x 864	75
9	1152 x 870	75
10	1280 x 720	60
11	1280 x 768	60, 75, 85
12	1280 x 800	60
13	1280 x 960	60, 85

SN	Resolution	Refresh rates (Unit: Hz)
14	1280 x 1024	60, 75, 85
15	1360 x 768	60
16	1366 x 768	60
17	1368 x 768	60
18	1440 x 900	60
19	1400 x 1050	60, 75, 85
20	1600 x 1200	60
21	1680 x 1050	60
22	1920 x 1080	60
23	1920 x 1200	60
24	2048 x 1152	60

Notes:

1. Resolution refers to the number of pixels horizontally and vertically displayed on the screen.

2. Color depth defines the number of different colors that can be shown on the screen at the same time. The greater the color depth is, the better the picture quality is.

3. Refresh rate (also called vertical frequency) measures the speed that the entire screen is rescanned.

Chapter 5. Troubleshooting

This chapter provides some troubleshooting hints and tips to assist you if you experience any problems with the port replicator. Check the following items first to try to correct the problem.

General

1. **The power and connection indicator of the port replicator is not on.**

   Ensure that the ac power adapter included with the port replicator is correctly connected to the port replicator and a working electrical outlet. Do not use any adapters other than the one supplied with the port replicator.

2. **Your notebook computer does not recognize the port replicator, and the power and connection indicator stays blue.**

   Disconnect the USB cable from your notebook computer, wait at least five seconds, and reinsert it into the USB connector of your notebook computer. If the problem persists, try connecting the USB cable to a different USB connector of your notebook computer.

3. **You connect the port replicator to a computer with the USB cable, but it does not work.**

   a. Ensure that the port replicator is well powered by its ac power adapter. The port replicator always needs external power supply for operation, because it does not take power from the USB connector attached to your notebook computer.

   b. Ensure that the device driver of the port replicator is well installed and restart the computer if necessary.

   c. Make sure that the USB connector on your computer works well; if not, replace with other USB connectors.

Video output

1. **The monitor display is blank.**

   - Ensure that the notebook computer connected to the port replicator is running correctly and is not in standby or hibernation mode. When the notebook computer is in standby or hibernation mode, the monitor display is always blank.

   - Ensure that the device drivers are installed following the installation steps and the icon for the port replicator is visible in the taskbar notification area.

   - Ensure that the video output function is not disabled.

   - Ensure the following connections:

     – The USB cable is correctly connected to your notebook computer.

     – The USB cable is correctly connected to the port replicator.

     – The ac power adapter is correctly connected to the port replicator and a working electrical outlet.

     – The video cable is correctly connected to the DVI-I video output connector. For the connection of the VGA connector, the DVI-I to VGA adapter is also secured by the screws on both sides of it.

   - If the problem persists, disconnect all connections of the port replicator, and uninstall the port replicator device drivers. Then, reinstall the device drivers.

2. **When you are using Extend mode and playing back video clips, only one video clip is visible.**

   When you are using Extend mode, only one video playback application can be used at a time. If multiple video clips are played back, only one video clip is visible to the user. This also applies to Web pages with embedded video clips. To view these Web pages, move one page to the notebook computer monitor and the other to the external monitor.

3. **You cannot play back the DVD on your external monitor but can play it back on your notebook computer monitor.**

   Some notebook computers do not support the Certified Output Protection Protocol (COPP), and you will not be able to play back the protected DVD on the external monitor connected to the port replicator.

   To play back the DVD on the external monitor, you can connect the external monitor to the VGA connector on your notebook computer, and extend the display to the external monitor. For more information about changing the display settings, see "Working with the port replicator utility" on page 8.

4. **You could not drag an application window to the other monitor in the Windows XP or Windows Vista operating system.**

   In the Windows XP or Windows Vista operating system, you cannot drag a maximized window unless you reduce the window to a smaller size.

   To drag a window from one monitor to the other, do the following:

   a. On the window that you want to drag, click the **Restore Down** button or double-click the title bar to make the window exit from its maximized status.

   b. Drag the title bar of the window to the monitor that you want it to be displayed.

5. **The images on the external monitor flutter.**

   To solve the problem, do the following:

   a. Make sure that the external monitor is well connected to the DVI-I video output connector of the port replicator.

   b. Check the display resolution setting of the computer and make sure that the resolution is supported by the port replicator.

6. **The images on the external monitor are not in correct colors.**

   To solve the problem, do the following:

   a. Make sure that the external monitor is well connected to the DVI-I video output connector of the port replicator.

   b. Check the display resolution setting of the computer and make sure that the resolution is supported by the port replicator.

7. **You cannot play back videos using the Corel WinDVD 10 program in the Windows XP environment.**

   You will encounter one of the following symptoms:

   • In Extend mode, you play back a video using the Corel WinDVD 10 program and drag the playback window to the external monitor, but the playback window is distorted and the playback process cannot continue.

   • In Notebook Monitor Off mode, after you run the Corel WinDVD 10 program, an error message is displayed, prompting you to install the VGA driver due to a device error.

   To solve the problem, use the Windows Media® Player or Corel WinDVD 8 program to play back videos in the Windows XP environment.

Audio

You cannot hear anything through your notebook computer speakers or you cannot use the audio connectors on the notebook computer.

By default, ThinkPad® and other Lenovo notebook computers use the audio connectors on the port replicator and disable their built-in audio connectors when the port replicator is connected.

To enable the built-in audio connectors on your notebook computer, do the following:

1. Right-click the volume icon in the taskbar notification area.

2. For users of the Windows XP operating system, select **Adjust Audio Properties** and the **Sound and Audio Devices Properties** window opens. For users of the Windows Vista or Windows 7 operating system, select **Sounds** and the **Sound** window opens.

3. Depending on the operating system you are using, do one of the following:

   - For the Windows XP operating system:

      a. Click the **Audio** tab.

      b. Select a built-in audio device from the **Sound playback** panel, and then select another built-in audio device from the **Sound recording** panel.

   - For the Windows Vista or Windows 7 operating system:

      Click the **Playback** tab to select a built-in audio device, and then click the **Recording** tab to select another built-in audio device.

Notes:

1. To apply the new settings, restart the application currently using the audio device.

2. The settings you have adjusted will remain until you make changes to them next time.

Appendix A. 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 your product. Refer to the Lenovo Limited Warranty for a full explanation of Lenovo warranty terms.

Online technical support

Online technical support is available during the lifetime of a product at:
http://www.lenovo.com/support

Product replacement assistance or exchange of defective components also is available during the warranty period. In addition, if your option is installed in a Lenovo computer, you might be entitled to service at your location. A Lenovo technical support representative can help you determine the best alternative.

Telephone technical support

Installation and configuration support through the Customer Support Center will be available until 90 days after the option has been withdrawn from marketing. After that time, the support is cancelled, or made available for a fee, at Lenovo's discretion. Additional support is also available for a nominal fee.

Before contacting a Lenovo technical support representative, please have the following information available: option name and number, proof of purchase, computer manufacturer, model, serial number and manual, the exact wording of any error message, description of the problem, and the hardware and software configuration information for your system.

Your technical support representative might want to walk you through the problem while you are at your computer during the call.

Telephone numbers are subject to change without notice. The most up-to-date telephone list for Lenovo Support is always available at http://www.lenovo.com/support/phone. If the telephone number for your country or region is not listed, contact your Lenovo reseller or Lenovo marketing representative.

Appendix B. Lenovo Limited Warranty

L505-0010-01 04/2008

This Lenovo Limited Warranty applies only to Lenovo branded hardware products you purchased for your own use and not for resale. This Lenovo Limited Warranty is available in other languages at www.lenovo.com/warranty.

What this Warranty Covers

Lenovo warrants that each hardware product that you purchase is free from defects in materials and workmanship under normal use during the warranty period. The warranty period for the product starts on the original date of purchase specified on your sales receipt or invoice unless Lenovo informs you otherwise in writing. The warranty period and type of warranty service that apply to your product are designated below under the section titled "**Warranty Information**."

THIS WARRANTY IS YOUR EXCLUSIVE WARRANTY AND REPLACES 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 APPLY ONLY TO THE EXTENT REQUIRED BY LAW AND 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 ON DURATION MAY NOT APPLY TO YOU.

How to Obtain Warranty Service

If the product does not function as warranted during the warranty period, you may obtain warranty service by contacting Lenovo or an approved service provider. Each of them is referred to as a "Service Provider." A list of Service Providers and their telephone numbers is available at www.lenovo.com/support/phone.

Warranty service may not be available in all locations and may differ from location to location. Charges may apply outside a Service Provider's normal service area. Contact a local Service Provider for location-specific information.

What Your Service Provider Will Do to Correct Problems

When you contact a Service Provider, you must follow the problem determination and resolution procedures specified.

Your Service Provider will attempt to diagnose and resolve your problem over the telephone, e-mail, or through remote assistance. Your Service Provider may direct you to download and install designated software updates.

Some problems can be resolved with a replacement part that you can install yourself called a "Customer Replaceable Unit" or "CRU." If so, your Service Provider will ship the CRU to you for you to install.

If your problem cannot be resolved over the telephone or remotely, through your application of software updates or the installation of a CRU by you, your Service Provider will arrange for service under the type of warranty service designated for the product under the section titled "**Warranty Information**."

If your Service Provider determines that it is unable to repair your product, your Service Provider will replace it with one that is at least functionally equivalent.

If your Service Provider determines that it is unable to either repair or replace your product, your sole remedy is to return the product to your place of purchase or to Lenovo for a refund of your purchase price.

Replacement of a Product or Part

When the warranty service involves the replacement of a product or part, the replaced product or part becomes Lenovo's property and the replacement product or part becomes your property. Only unaltered Lenovo products and parts are eligible for replacement. The replacement product or part provided by Lenovo may not be new, but it will be in good working order and at least functionally equivalent to the original product or part. The replacement product or part shall be warranted for the balance of the period remaining on the original product.

Before your Service Provider replaces a product or part, you agree to:
1. remove all features, parts, options, alterations, and attachments not under warranty service;
2. ensure that the product or part is free of any legal obligations or restrictions that prevent its replacement; and
3. obtain authorization from the owner to have your Service Provider service a product or part if you do not own it.

Your Additional Responsibilities

Where applicable, before service is provided, you agree to:
1. follow the service request procedures that your Service Provider specifies;
2. backup or secure all programs and data contained in the product;
3. provide your Service Provider with all system keys or passwords and sufficient, free, and safe access to your facilities to perform service; and
4. ensure that all information about identified or identifiable individuals ("Personal Data") is deleted from the product or that, with respect to any Personal Data that you did not delete, you are in compliance with all applicable laws.

Use of Personal Information

If you obtain service under this warranty, Lenovo will store, use, and process information about your warranty service and your contact information, including name, phone numbers, address, and e-mail address. Lenovo will use this information to perform service under this warranty and to improve our business relationship with you. We may contact you to inquire about your satisfaction regarding our warranty service or to notify you about any product recalls or safety issues. In accomplishing these purposes, we may transfer your information to any country where we do business and may provide it to entities acting on our behalf. We may also disclose it where required by law.

What this Warranty Does not Cover

This warranty does not cover the following:
• uninterrupted or error-free operation of a product;
• loss of, or damage to, your data;
• any software programs, whether provided with the product or installed subsequently;
• failure or damage resulting from misuse, accident, modification, unsuitable physical or operating environment, natural disasters, power surges, or improper maintenance by you;
• damage caused by a non-authorized service provider;
• failure of, or damage caused by, any third party products, including those that Lenovo may provide or integrate into the Lenovo product at your request; and
• any technical or other support, such as assistance with "how-to" questions and those regarding product set-up and installation.

This warranty is voided by removal or alteration of identification labels on the product or its parts.

Limitation of Liability

Lenovo is responsible for loss or damage to your product only while it is: 1) in your Service Provider's possession; or 2) in transit in those cases where the Service Provider is responsible for the transportation.

Neither Lenovo nor your Service Provider is responsible for any of your data including confidential, proprietary, or personal data contained in a product. You should remove and/or backup all such information from the product prior to its service or return.

Circumstances may arise where, because of a default on Lenovo's part or other liability, you may be entitled to recover damages from Lenovo. In each such instance, regardless of the basis of your claim against Lenovo (including breach, negligence, misrepresentation, or other contract or tort claim), except and to the extent that liability cannot be waived or limited by applicable laws, Lenovo shall not be liable for more than the amount of actual direct damages suffered by you, up to the amount you paid for the product. This limit does not apply to damages for bodily injury (including death) and damage to real property or tangible personal property for which Lenovo is liable under law.

This limit also applies to Lenovo's suppliers, resellers, and your Service Provider. It is the maximum amount for which Lenovo, its suppliers, resellers, and your Service Provider are collectively responsible.

UNDER NO CIRCUMSTANCES SHALL LENOVO, ITS SUPPLIERS, RESELLERS, OR SERVICE PROVIDERS BE LIABLE FOR ANY OF THE FOLLOWING EVEN IF INFORMED OF THEIR POSSIBILITY: 1) THIRD PARTY CLAIMS AGAINST YOU FOR DAMAGES; 2) LOSS OR DAMAGE TO YOUR DATA; OR 3) SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS, BUSINESS REVENUE, GOODWILL OR ANTICIPATED SAVINGS. AS SOME STATES OR JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

Dispute Resolution

If you acquired the product in **Cambodia, Indonesia, Philippines, Vietnam or Sri Lanka**, disputes arising out of or in connection with this warranty shall be finally settled by arbitration held in Singapore and this warranty shall be governed, construed and enforced in accordance with the laws of Singapore, without regard to conflict of laws. If you acquired the product in **India**, disputes arising out of or in connection with this warranty shall be finally settled by arbitration held in Bangalore, India. Arbitration in Singapore shall be held in accordance with the Arbitration Rules of Singapore International Arbitration Center ("SIAC Rules") then in effect. Arbitration in India shall be held in accordance with the laws of India then in effect. The arbitration award shall be final and binding on the parties without appeal. Any award shall be in writing and set forth the findings of fact and the conclusions of law. All arbitration proceedings, including all documents presented in such proceedings, shall be conducted in the English language, and the English language version of this warranty prevails over any other language version in such proceedings.

Other Rights

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE OR JURISDICTION TO JURISDICTION. YOU MAY ALSO HAVE OTHER RIGHTS UNDER APPLICABLE LAW OR WRITTEN AGREEMENT WITH LENOVO. NOTHING IN THIS WARRANTY AFFECTS STATUTORY RIGHTS, INCLUDING RIGHTS OF CONSUMERS UNDER NATIONAL LEGISLATION GOVERNING THE SALE OF CONSUMER GOODS THAT CANNOT BE WAIVED OR LIMITED BY CONTRACT.

European Economic Area (EEA)

Customers in the EEA may contact Lenovo at the following address: EMEA Service Organisation, Lenovo (International) B.V., Floor 2, Einsteinova 21, 851 01, Bratislava, Slovakia. Service under this warranty for Lenovo hardware products purchased in EEA countries may be obtained in any EEA country in which the product has been announced and made available by Lenovo.

Warranty Information

Product Type	Country or Region of Purchase	Warranty Period	Type of Warranty Service
Lenovo USB 2.0 Port Replicator with Digital Video	Worldwide	1 year	1, 4

If required, your Service Provider will provide repair or exchange service depending on the type of warranty service specified for your product and the available service. Scheduling of service will depend upon the time of your call, parts availability, and other factors.

A warranty period of three (3) years on parts and one (1) year on labor means that Lenovo will provide warranty service without charge for:

a. parts and labor during the first year of the warranty period (or a longer period as required by law); and

b. parts only, on an exchange basis, in the second and third years of the warranty period. Your Service Provider will charge you for any labor provided in performance of the repair or replacement in the second and third years of the warranty period.

Types of Warranty Service

1. Customer Replaceable Unit ("CRU") **Service**

Under CRU Service, your Service Provider will ship CRUs to you for installation by you. CRU information and replacement instructions are shipped with your product and are available from Lenovo at any time upon request. CRUs that are easily installed by you are called Self-service CRUs, while Optional-service CRUs may require some technical skill and tools. Installation of Self-service CRUs is your responsibility. You may request that a Service Provider install Optional-service CRUs under one of the other types of warranty service designated for your product. An optional service offering may be available for purchase from Lenovo to have Lenovo install Self-service CRUs for you. You may find a list of CRUs and their designation in the publication that ships with your product or at www.lenovo.com/CRUs. The requirement to return a defective CRU, if any, will be specified in the materials shipped with a replacement CRU. When return is required: 1) return instructions, a prepaid return shipping label, and a container will be included with the replacement CRU; and 2) you may be charged for the replacement CRU if your Service Provider does not receive the defective CRU within thirty (30) days of your receipt of the replacement.

2. On-site Service

Under On-Site Service, your Service Provider will either repair or exchange the product at your location. You must provide a suitable working area to allow disassembly and reassembly of the Lenovo product. For some products, certain repairs may require your Service Provider to send the product to a designated service center.

3. Courier or Depot Service

Under Courier or Depot Service, your product will be repaired or exchanged at a designated service center, with shipping arranged by your Service Provider. You are responsible for disconnecting the product. A shipping container will be provided to you for you to return your product to a designated service center. A courier will pick up your product and deliver it to the designated service center. Following its repair or exchange, the service center will arrange the return delivery of the product to you.

4. Customer Carry-In or Mail-In Service

Under Customer Carry-In or Mail-In Service, your product will be repaired or exchanged at a designated service center, with delivery or shipping arranged by you. You are responsible to deliver or mail, as your Service Provider specifies, (prepaid by you unless specified otherwise) the product, suitably packaged to a designated location. After the product has been repaired or exchanged, it will be made available for your collection. Failure to collect the product may result in your Service Provider disposing of the product as it sees fit. For Mail-in Service, the product will be returned to you at Lenovo's expense, unless your Service Provider specifies otherwise.

5. Product Exchange Service

Under Product Exchange Service, Lenovo will ship a replacement product to your location. You are responsible for its installation and verification of its operation. The replacement product becomes your property in exchange for the failed product, which becomes the property of Lenovo. You must pack the failed product in the shipping carton used to ship the replacement product and return it to Lenovo. Transportation charges, both ways, are paid by Lenovo. Failure to use the carton in which the replacement product was received may result in your responsibility for damage to the failed product during shipment. You may be charged for the replacement product if Lenovo does not receive the failed product within thirty (30) days of your receipt of the replacement product.

Suplemento de Garantía para México

Este Suplemento se considera parte integrante de la Garantía Limitada de Lenovo y será efectivo única y exclusivamente para los productos distribuidos y comercializados dentro del Territorio de los Estados Unidos Mexicanos. En caso de conflicto, se aplicarán los términos de este Suplemento.

Todos los programas de software precargados en el equipo sólo tendrán una garantía de treinta (30) días por defectos de instalación desde la fecha de compra. Lenovo no es responsable de la información incluida en dichos programas de software y/o cualquier programa de software adicional instalado por Usted o instalado después de la compra del producto.

Los servicios no cubiertos por la garantía se cargarán al usuario final, previa obtención de una autorización.

En el caso de que se precise una reparación cubierta por la garantía, por favor, llame al Centro de soporte al cliente al 001-866-434-2080, donde le dirigirán al Centro de servicio autorizado más cercano. Si no existiese ningún Centro de servicio autorizado en su ciudad, población o en un radio de 70 kilómetros de su ciudad o población, la garantía incluirá cualquier gasto de entrega razonable relacionado con el transporte del producto a su Centro de servicio autorizado más cercano. Por favor, llame al Centro de servicio autorizado más cercano para obtener las aprobaciones necesarias o la información relacionada con el envío del producto y la dirección de envío.

Para obtener una lista de los Centros de servicio autorizados, por favor, visite:
http://www.lenovo.com/mx/es/servicios

Importado por:
Lenovo México S. de R.L. de C.V.
Av. Santa Fe 505, Piso 15
Col. Cruz Manca
Cuajimalpa, D.F., México
C.P. 05349
Tel. (55) 5000 8500

Appendix C. Electronic emission notices

The following information refers to the Lenovo USB 2.0 Port Replicator with Digital Video.

Federal Communications Commission Declaration of Conformity

Lenovo USB 2.0 Port Replicator with Digital Video - 0A34183

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 authorized dealer or service representative for help.

Lenovo is not responsible for any radio or television interference caused by using other than specified or 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:
   Lenovo (United States) Incorporated
   1009 Think Place - Building One
   Morrisville, NC 27560
   Phone Number: 919-294-5900

Industry Canada Class B emission compliance statement

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

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

European Union - Compliance to the Electromagnetic Compatibility Directive

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. Lenovo cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the installation of option cards from other manufacturers.

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.

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German Class B compliance statement

Deutschsprachiger EU Hinweis:

Hinweis für Geräte der Klasse B EU-Richtlinie zur Elektromagnetischen Verträglichkeit
Dieses Produkt entspricht den Schutzanforderungen der EU-Richtlinie 2004/108/EG (früher 89/336/EWG) zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit in den EU-Mitgliedsstaaten und hält die Grenzwerte der EN 55022 Klasse B ein.

Um dieses sicherzustellen, sind die Geräte wie in den Handbüchern beschrieben zu installieren und zu betreiben. Des Weiteren dürfen auch nur von der Lenovo empfohlene Kabel angeschlossen werden. Lenovo übernimmt keine Verantwortung für die Einhaltung der Schutzanforderungen, wenn das Produkt ohne Zustimmung der Lenovo verändert bzw. wenn Erweiterungskomponenten von Fremdherstellern ohne Empfehlung der Lenovo gesteckt/eingebaut werden.

Deutschland:

Einhaltung des Gesetzes über die elektromagnetische Verträglichkeit von Betriebsmitteln
Dieses Produkt entspricht dem „Gesetz über die elektromagnetische Verträglichkeit von Betriebsmitteln" EMVG (früher „Gesetz über die elektromagnetische Verträglichkeit von Geräten"). Dies ist die Umsetzung der EU-Richtlinie 2004/108/EG (früher 89/336/EWG) in der Bundesrepublik Deutschland.

Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Betriebsmitteln, EMVG vom 20. Juli 2007 (früher Gesetz über die elektromagnetische Verträglichkeit von Geräten), bzw. der EMV EG Richtlinie 2004/108/EC (früher 89/336/EWG), für Geräte der Klasse B.

Dieses Gerät ist berechtigt, in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen. Verantwortlich für die Konformitätserklärung nach Paragraf 5 des EMVG ist die Lenovo (Deutschland) GmbH, Gropiusplatz 10, D-70563 Stuttgart.

Informationen in Hinsicht EMVG Paragraf 4 Abs. (1) 4:
Das Gerät erfüllt die Schutzanforderungen nach EN 55024 und EN 55022 Klasse B.

Korea Class B compliance statement

B급 기기 (가정용 방송통신기자재)
이 기기는 가정용(B급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다

Japan VCCI Class B compliance statement

この装置は，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。 VCCI-B

Japan compliance statement for products which connect to the power mains with rated current less than or equal to 20 A per phase

日本の定格電流が 20A/相 以下の機器に対する高調波電流規制
高調波電流規格 JIS C 61000-3-2 適合品

Lenovo product service information for Taiwan

台灣 Lenovo 產品服務資訊如下：
荷蘭商聯想股份有限公司台灣分公司
台北市信義區信義路五段七號十九樓之一
服務電話：0800-000-702

Appendix D. Notices

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

Lenovo may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

Lenovo (United States), Inc.
1009 Think Place - Building One
Morrisville, NC 27560
U.S.A.
Attention: Lenovo Director of Licensing

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Lenovo
The Lenovo logo
ThinkPad

Microsoft, Windows, Windows Media, and Windows Vista are trademarks of the Microsoft group of companies.

Intel is a trademark of Intel Corporation in the United States, other countries, or both.

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

Recycling information

Lenovo encourages owners of information technology (IT) equipment to responsibly recycle their equipment when it is no longer needed. Lenovo offers a variety of programs and services to assist equipment owners in recycling their IT products. For information on recycling Lenovo products, go to:
http://www.lenovo.com/social_responsibility/us/en/product_recycling_program.html

Recycling and disposal information for Japan is available at:
http://www.lenovo.com/social_responsibility/us/en/sustainability/ptb_japan.html

Appendix E. Restriction of Hazardous Substances Directive (RoHS)

China RoHS

The information in the following table is applicable for products manufactured on or after March 1, 2007 for sale in the People's Republic of China.

Lenovo 电脑选件	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
扩展坞	X	O	O	O	O	O

O：表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T 11363-2006标准规定的限量要求以下。
X：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T 11363-2006标准规定的限量要求。
对于销往欧盟的产品，标有"X"的项目均符合欧盟指令2002/95/EC 豁免条款。

在中华人民共和国境内销售的电子信息产品上将印有"环保使用期" (EPuP)符号。圆圈中的数字代表产品的正常环保使用年限。

Turkish statement of compliance

The Lenovo product meets the requirements of the Republic of Turkey Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (EEE).

Türkiye EEE Yönetmeliğine Uygunluk Beyanı

Bu Lenovo ürünü, T.C. Çevre ve Orman Bakanlığı'nın "Elektrik ve Elektronik Eşyalarda Bazı Zararlı Maddelerin Kullanımının Sınırlandırılmasına Dair Yönetmelik (EEE)" direktiflerine uygundur.

EEE Yönetmeliğine Uygundur.

Ukraine RoHS

Цим підтверджуємо, що продукція Леново відповідає вимогам нормативних актів України, які обмежують вміст небезпечних речовин

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