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Lenovo

IdeaCentre B5 Series

Hardware Replacement Guide

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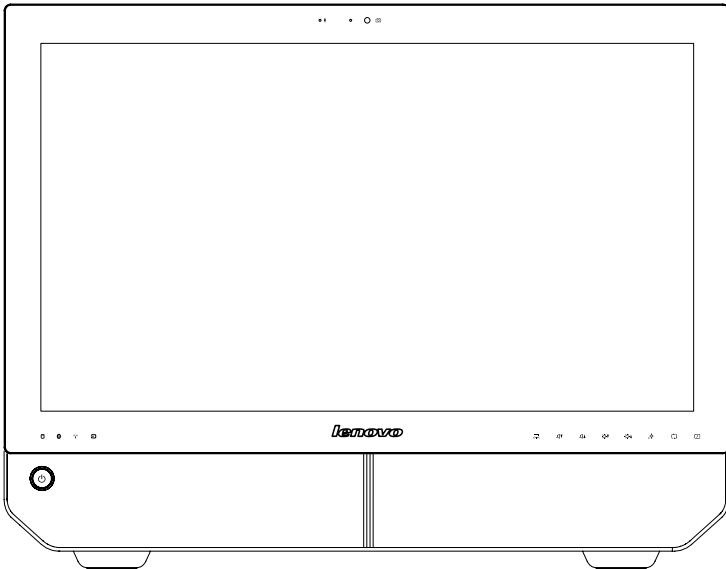
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Hardware Replacement Guide



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Contents

Overview.....	1
Chapter 1 Locations	5
Locating components and connectors.....	5
Chapter 2 Replacing hardware.....	9
General information.....	9
Removing the computer cover.....	9
Mounting the computer onto a wall.....	11
Replacing a memory module	13
Replacing the optical drive	15
Replacing the hard disk drive.....	17
Replacing the keyboard	19
Replacing the mouse.....	20
Replacing the power cord.....	21
Chapter 3 Appendix	23

Overview

This guide is intended to be used by customers who are replacing Customer Replaceable Units (CRUs) as well as trained service personnel who are replacing Field Replaceable Units (FRUs). In this guide, CRUs and FRUs will often be referred to as parts.



Note: Trained service personnel should refer to the *Hardware Maintenance Manual* (HMM) for parts ordering information.

This guide does not include procedures for all parts. It is expected that cables, switches, and certain mechanical parts can be replaced by trained service personnel without the need for step-by-step procedures.



Note: Use only parts provided by Lenovo®.

The description of the TV-Tuner card in this manual applies only to those computer models that have the TV-Tuner card installed. It does not apply to those computer models that do not have the TV-Tuner card installed.

This guide contains procedures for replacing the following parts:

- Memory modules
- Hard disk drive
- Optical drive
- Keyboard, Mouse (wired)
- Power cord

Safety information for replacing CRUs

Do not open your computer or attempt any repairs before reading the “Important safety information” in the *Safety and Warranty Guide* that was included with your computer. If you no longer have this copy of the *Safety and Warranty Guide*, you can obtain one online from the Support Web site at <http://consumersupport.lenovo.com>.

Additional information resources

If you have Internet access, the most up-to-date information for your computer is available from the World Wide Web.

You can find the following information:

- CRU removal and installation information
- Publications
- Troubleshooting information
- Parts information
- Links to other useful sources of information

To access this information, go to: <http://consumersupport.lenovo.com>

Tools required

To disassemble the computer, you need the following tools:

- Wrist grounding strap and conductive mat for preventing electrostatic discharge
- Flat screwdriver
- Phillips screwdriver
- Hex screwdriver
- Plastic flat screwdriver
- Plastic tweezers



Note: The screws for the different components vary in size. During the disassembly procedure, group the screws with their corresponding components to avoid a mismatch when replacing the components.

Handling static-sensitive devices

Static electricity, although harmless to you, can seriously damage computer components.

When you are replacing a part, do *not* open the static-protective package containing the new part until the defective part has been removed from the computer and you are ready to install the new part.

When you handle parts and other computer components, take these precautions to avoid static-electricity damage:

- Limit your movement. Movement can cause static-electricity to build up around you.

- Always handle parts and other computer components carefully. Handle adapters, memory modules, system boards, and microprocessors by the edges. Never touch any exposed circuitry.
- Prevent others from touching the parts and other computer components.
- Before you replace a new part, touch the static-protective package containing the part to a metal expansion-slot cover or other unpainted metal surface on the computer for at least two seconds. This reduces static electricity in the package and your body.
- When possible, remove the new part from the static-protective packaging, and install it directly in the computer without setting the part down. When this is not possible, place the static-protective package that the part came in on a smooth, level surface and place the part on it.
- Do not place the part on the computer cover or other metal surface.

1

Chapter

Locations

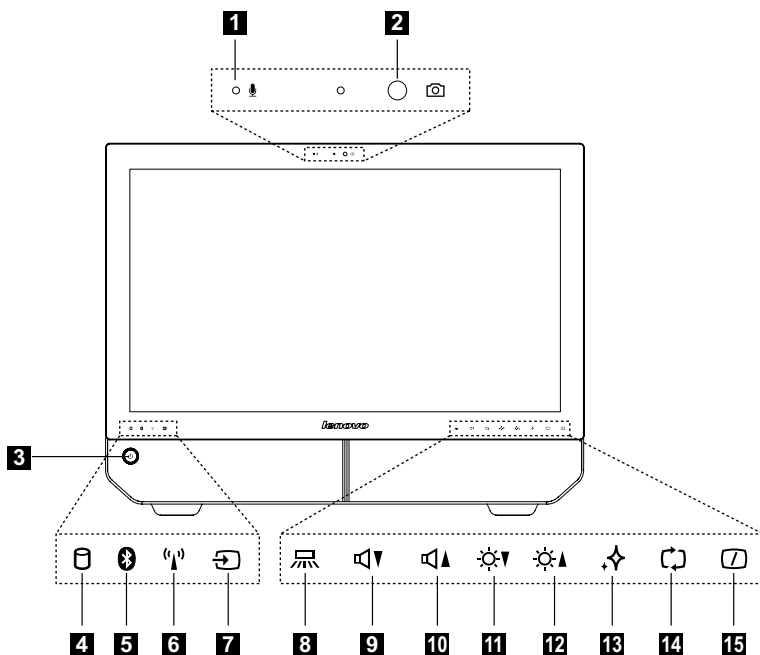
This chapter provides illustrations to help locate the various connectors, controls and components of the computer.

Locating components and connectors

The following illustrations will help you to locate the various components and connectors in your computer.

Font view

The following illustrations show the location of connectors on the front of the computer.



- | | |
|---|--|
| 1 Built-in microphone | 9 Volume down |
| 2 Camera | 10 Volume up |
| 3 Power button | 11 Brightness down |
| 4 Hard Disk Drive Indicator | 12 Brightness up |
| 5 Bluetooth status indicator | 13 Novo Vision button |
| 6 WIFI status indicator | 14 PC mode / HDMI-in / AV-in switch |
| 7 AV-in / HDMI-in indicator | 15 Monitor On/Off |
| 8 Indicator lights ON/OFF button | |

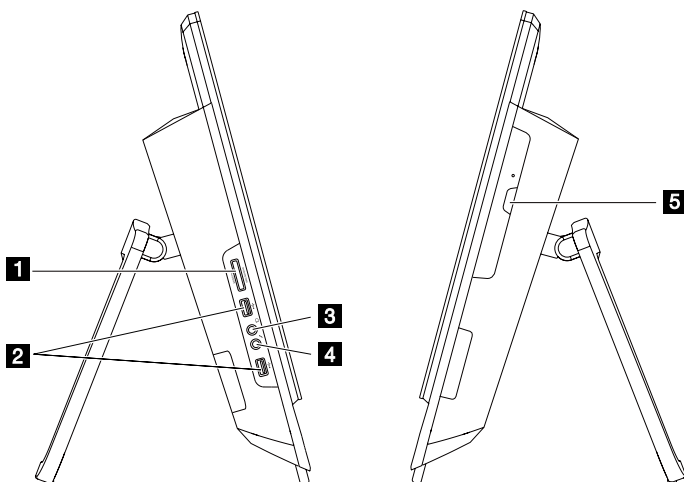
! **Note:** The quality of video output will be affected accordingly due to the restriction of the actual bandwidth used by users and the limitation of data transmission speed of the video communication software.

Left and right view

The following illustrations show the location of connectors on the left and right side of the computer.



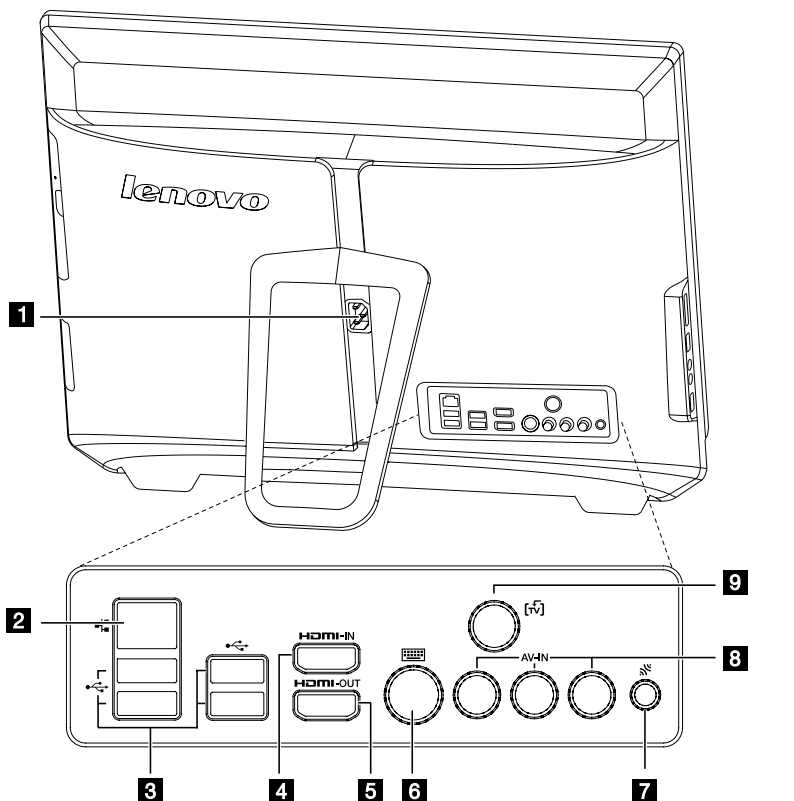
Attention: Be sure not to block any air vents on the computer. Blocked air vents may cause thermal problems.



- | | |
|------------------------------|-------------------------------|
| 1 Memory card reader | 4 Microphone connector |
| 2 USB connector | 5 Optical drive |
| 3 Headphone connector | |

Rear view

The following illustration shows the location of connectors on the rear of the computer.



- | | |
|--|---|
| 1 Power socket | 6 PS/2 keyboard port |
| 2 Ethernet port | 7 Bluetooth reset button (Only some models are functional) |
| 3 USB ports (4) | 8 AV-IN ports (Selected models only) |
| 4 HDMI in port (Selected models only) | 9 TV tuner connector (Selected models only) |
| 5 HDMI out port | |

2

Chapter

Replacing hardware



Attention:

Do not remove the computer cover or attempt any repairs before reading the “Important safety information” in the *Safety and Warranty Guide* that was included with your computer or in the *Hardware Maintenance Manual* (HMM) for the computer. To obtain copies of the *Safety and Warranty Guide* or *HMM*, go to the Support Web site at: <http://consumersupport.lenovo.com>



Note: Use only parts provided by Lenovo.

General information

Pre-disassembly instructions

Before proceeding with the disassembly procedure, make sure that you do the following:

1. Turn off the power to the system and all peripherals.
2. Unplug all power and signal cables from the computer.
3. Place the system on a flat, stable surface.

Removing the computer cover



Attention:

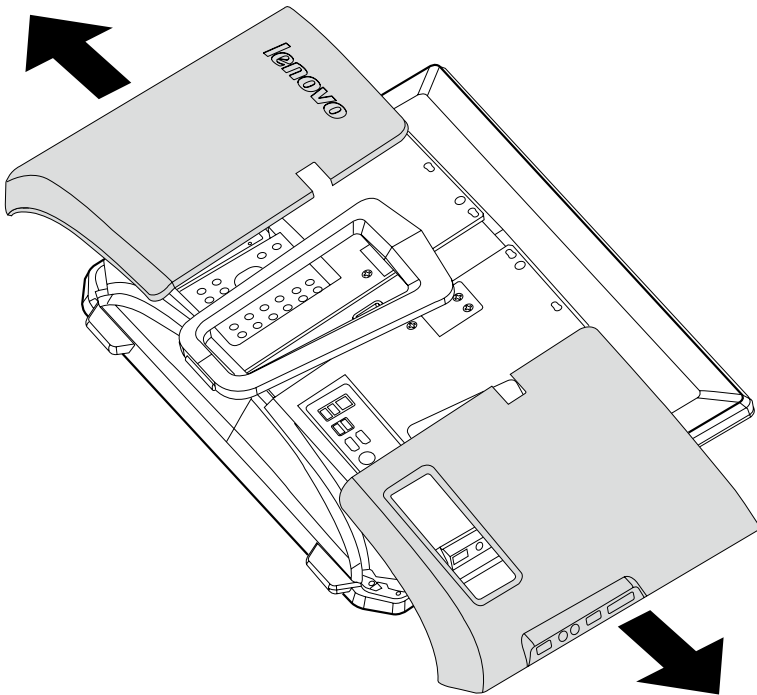
Turn off the computer and wait 3 to 5 minutes to let the computer cool down before removing the computer cover.



Note: It may be helpful to place the computer face-down on a soft flat surface for this procedure. Lenovo recommends that you use a blanket, towel, or other soft cloth to protect the computer screen from scratching or other damage.

To remove the computer cover

1. Remove any media (disks, CDs, or memory cards) from the drives, shut down the operating system, and turn off the computer and all attached devices.
2. Unplug all power cords from electrical outlets.
3. Disconnect all cables attached to the computer. This includes power cords, input/output (I/O) cables, and any other cables that are connected to the computer. Refer to “Left and right view” and “Rear view” for help with locating the various connectors.
4. Remove the 2 cover pieces by sliding them in opposite directions as shown.



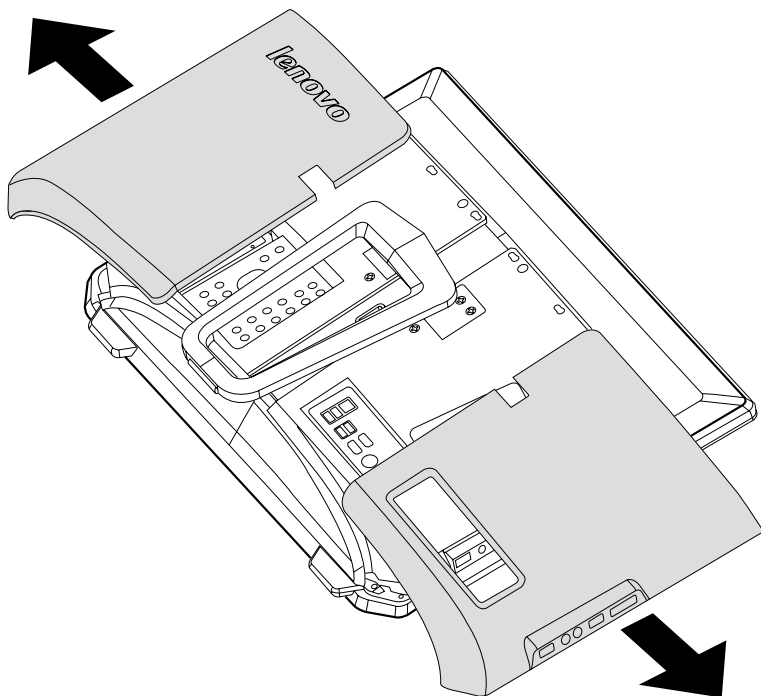
Mounting the computer onto a wall

The computer can be mounted onto a wall. Before doing this, you will first need to install a wall mount **VESA bracket adapter*** (some models are shipped with this part) onto the back of the computer. The bracket adapter can then be used with a UL listed standard wall mount (to be purchased separately) to mount the computer onto a wall.

To install a wall mount bracket adapter

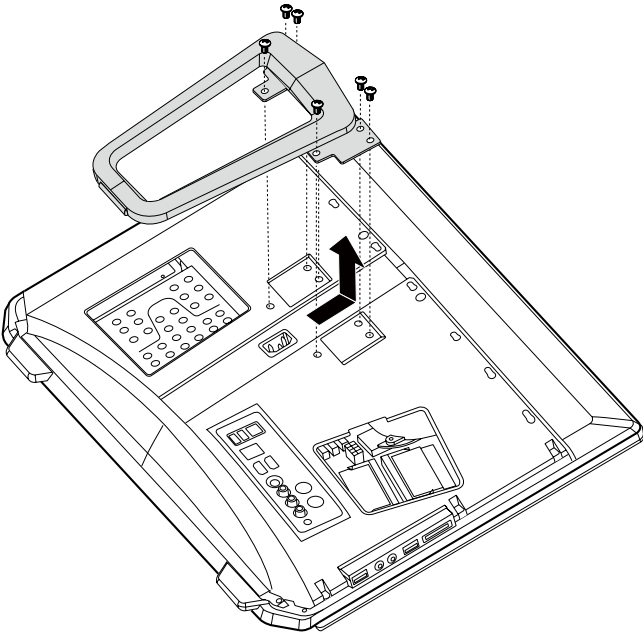
! **Note:** It may be helpful to place the computer face-down on a soft flat surface for this procedure. Lenovo recommends that you use a blanket, towel, or other soft cloth to protect the touch screen from scratching or other damage.

1. Remove the 2 cover pieces by sliding them in opposite directions as shown.

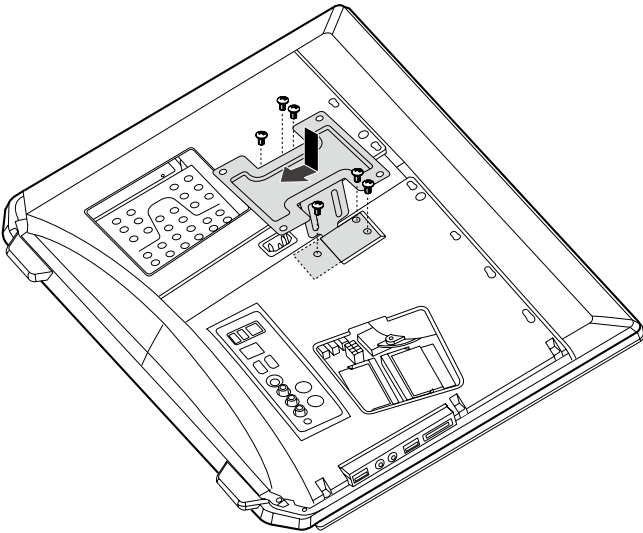


* **VESA bracket adapter spec:** VESA100, 100mm x 100mm, M4 bolts.

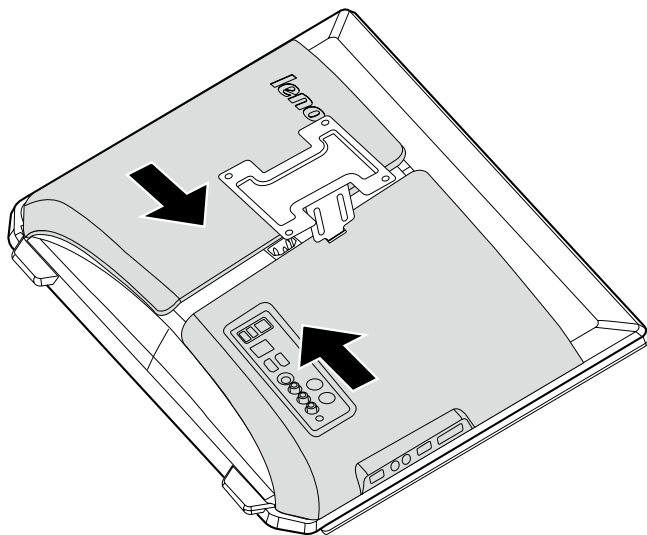
2. Remove the 6 screws that secure the stand to the computer, and then slide the stand out.



3. Align the wall mount bracket adapter and slide into place as shown, and then secure the adapter to the computer with the 6 screws.



4. Slide both cover pieces back into position.



Replacing a memory module



Attention:

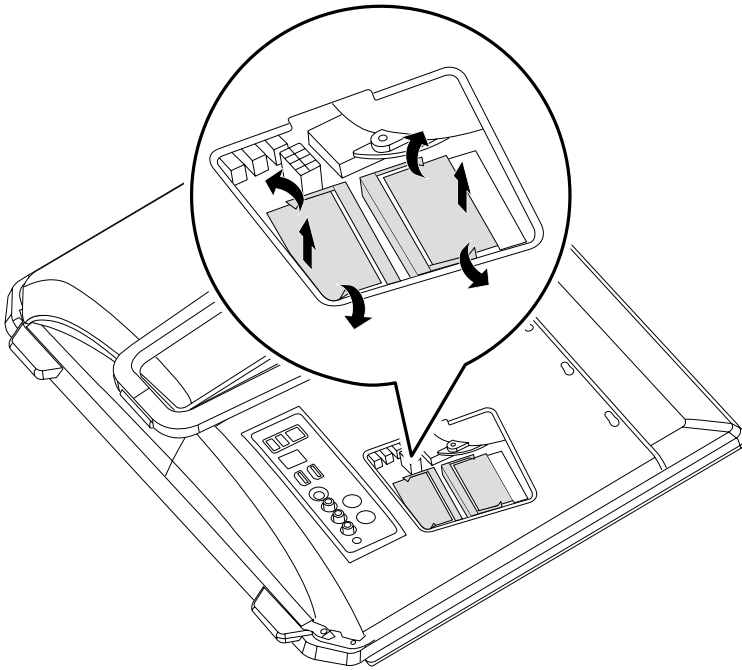
Turn off the computer and wait 3 to 5 minutes to let the computer cool down before removing the computer cover.



Note: It may be helpful to place the computer face-down on a soft flat surface for this procedure. Lenovo recommends that you use a blanket, towel, or other soft cloth to protect the touch screen from scratching or other damage.

1. Remove any media (disks, CDs, or memory cards) from the drives, shut down the operating system, and turn off the computer and all attached devices.
2. Unplug all power cords from electrical outlets.
3. Disconnect all cables attached to the computer. This includes power cords, input/output (I/O) cables, and any other cables that are connected to the computer. Refer to “Left and right view” and “Rear view” for help with locating the various connectors.
4. Remove the computer cover. Refer to “Removing the computer cover”.

5. Push out the latches on both sides of the memory socket to release the memory module and gently pull the memory module upward to remove it from its socket. All of the memory modules can be removed by using the same procedure.



6. Align then insert the new memory module into the socket and push down on the top edge of the memory module. Make sure the latches lock the memory module in place.
7. Align then slide the computer cover back into position.

Replacing the optical drive



Attention:

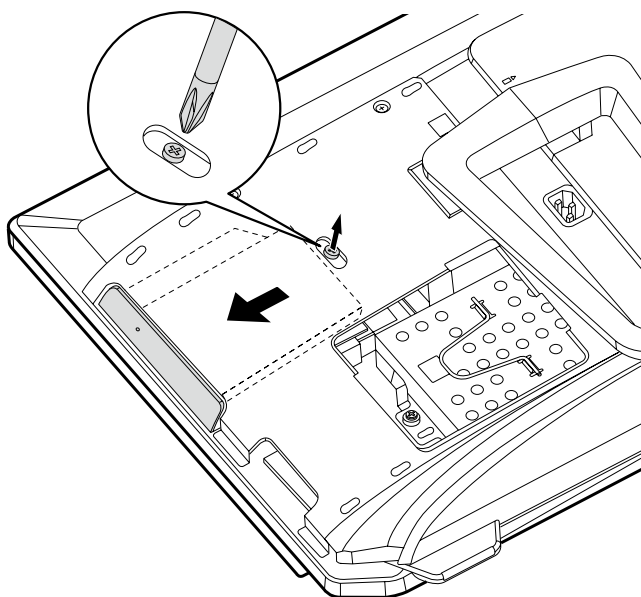
Turn off the computer and wait 3 to 5 minutes to let the computer cool down before replacing the optical drive.

To remove the optical drive:

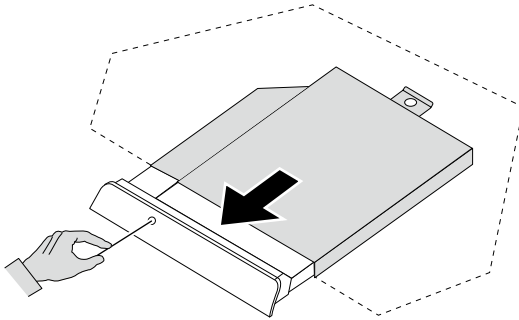


Note: It may be helpful to place the computer face-down on a soft flat surface for this procedure. Lenovo recommends that you use a blanket, towel, or other soft cloth to protect the screen from scratching or other damage.

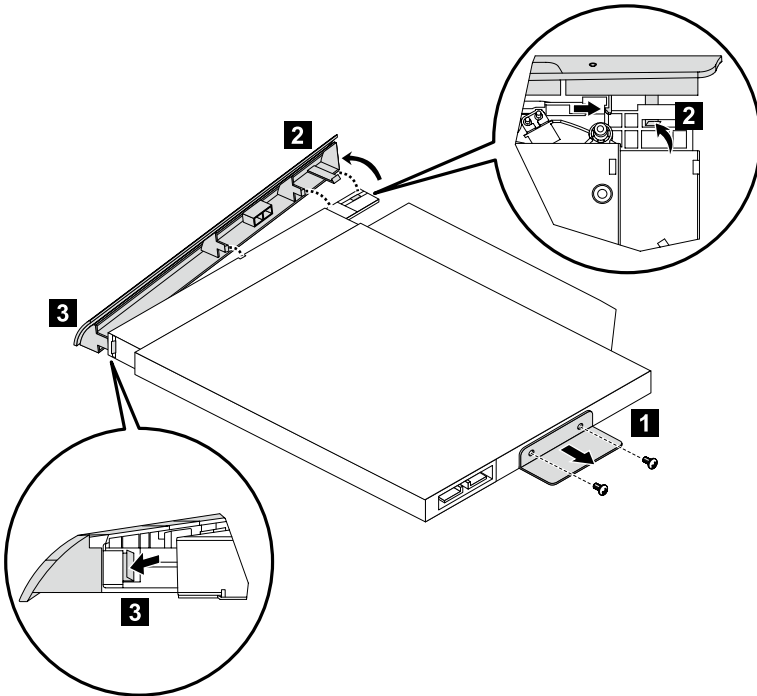
1. Remove any media (disks, CDs, or memory cards) from the drives, shut down the operating system, and turn off the computer and all attached devices.
2. Unplug all power cords from electrical outlets.
3. Disconnect all cables attached to the computer. This includes power cords, input/output (I/O) cables, and any other cables that are connected to the computer. Refer to “Left and right view” and “Rear view” for help with locating the various connectors.
4. Remove the computer cover. Refer to “Removing the computer cover”.
5. Loosen the screw that secures the optical drive to the chassis.
6. Push the optical drive so that it slides out of the drive bay.



7. Push a small iron stick (paper clip) into the small hole on the optical drive cover so that the disk springs out as shown.



8. Remove the 2 screws that secure the optical drive to the metal bracket. **1**
9. Use a small flat head screwdriver to press and push out the pins that secure the cover to the disk. **2 3**
10. Separate the cover from the defective optical drive.



11. Install the new optical drive as follows:

- (1) Align the new optical drive with the cover, and then push the cover back into position.
 - (2) Screw the metal bracket back onto the new optical drive.
 - (3) Slide the new optical drive into the drive bay.
12. Screw the new optical drive back onto the chassis.
13. Slide the computer cover back into position.

Replacing the hard disk drive



Attention:

Turn off the computer and wait 3 to 5 minutes to let the computer cool down before replacing the hard disk drive.

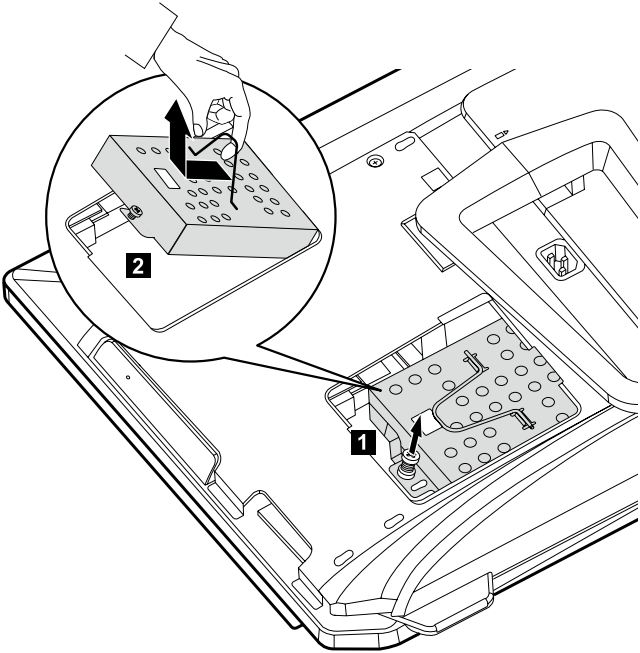
To replace the hard disk drive:



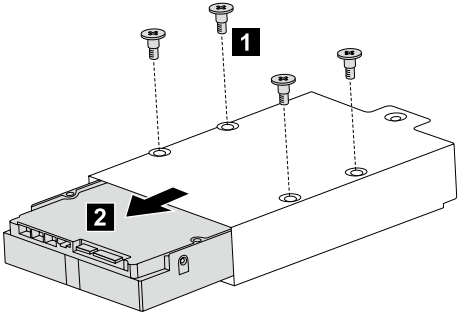
Note: It may be helpful to place the computer face-down on a soft flat surface for this procedure. Lenovo recommends that you use a blanket, towel, or other soft cloth to protect the screen from scratching or other damage.

1. Remove the computer cover. Refer to “Removing the computer cover”.
2. Loosen the screw that secures the hard disk drive bay to the chassis.

3. Spring up the handle on the hard disk drive bay, and then slide the hard disk drive bay out of the chassis as shown.



4. Remove the 4 screws that secure the hard disk drive to the disk bay and slide the defective hard disk drive out of the bay.



5. Install the new hard disk drive as follows:
- (1) Slide the new hard disk drive into the drive bay.
 - (2) Screw the 4 screws back onto the drive bay.
6. Slide the hard disk drive bay back into position.

7. Secure the hard disk drive bay to the chassis with the remaining screw.
8. Install the computer cover back into position.

Replacing the keyboard



Attention:

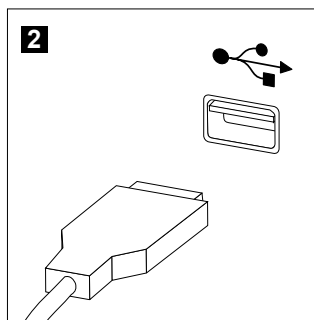
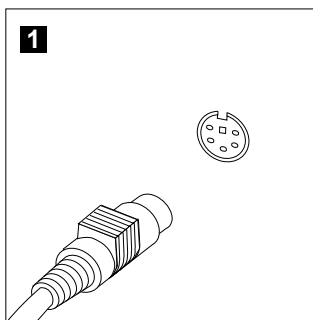
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To replace the keyboard:

1. Remove any media (disks, CDs, or memory cards) from the drives, shut down the operating system, and turn off the computer and all attached devices.
2. Unplug all power cords from electrical outlets.
3. Locate the connector for the keyboard. Refer to "Left and right view" and "Rear view".



Note: Your keyboard may be connected to the standard keyboard connector **1** at the rear of the computer, or to a USB connector **2** at either side or at the rear of the computer.



4. Disconnect the defective keyboard cable from the computer and connect the new keyboard cable to the same connector.

Replacing the mouse



Attention:

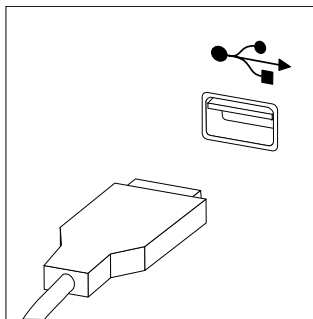
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To replace the mouse:

1. Remove any media (disks, CDs, or memory cards) from the drives, shut down the operating system, and turn off the computer and all attached devices.
2. Unplug all power cords from electrical outlets.
3. Locate the connector for the mouse. Refer to “Left and right view” and “Rear view”.



Note: Your mouse will be connected to the USB connector at either side or at the rear of the computer.



4. Disconnect the defective mouse cable from the computer and connect the new mouse cable to the same connector.

Replacing the power cord

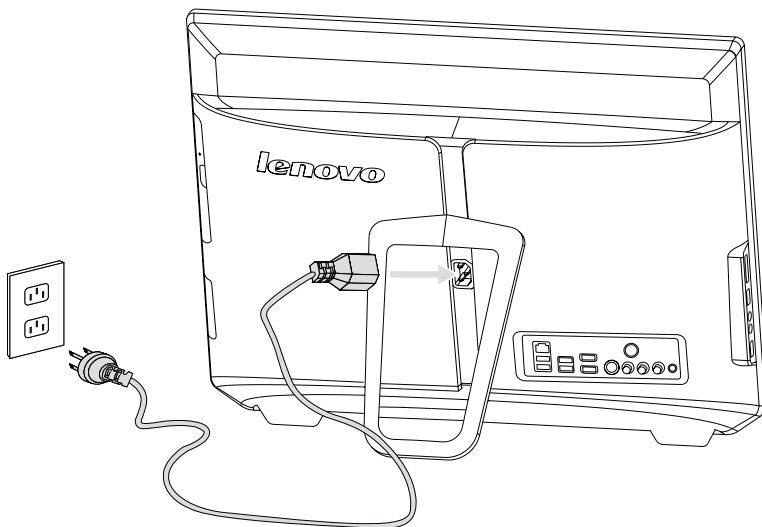


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To replace the power cord

1. Remove any media (disks, CDs, or memory cards) from the drives, shut down the operating system, and turn off the computer and all attached devices.
2. Locate the connector for the power cord. Refer to "Rear view".



3. Disconnect the defective power cord from the computer and connect the new power cord to the same connector.

3

Chapter

Appendix

Declaration

Thank you for using Lenovo products.

Carefully read all documents shipped with your computer before you install and use the product for the first time. Lenovo is not responsible for any loss except when caused by installation and operations performed by Lenovo professional service personnel. You are responsible if you fail to operate the product according to instructions and requirements in the manuals included with your computer, or operate the product inappropriately.

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