

lenovo[®]

Lenovo

User Guide



Read the safety notices and important tips in the included manuals before using your computer.

Notes

- Before using the product, be sure to read *Lenovo Safety and General Information Guide* first.
- The features described in this guide are common to most models. Some features might not be available on your computer and/or your computer might include features that are not described in this user guide.
- The illustrations used in this manual are for the Lenovo M5400 unless otherwise stated.
- The illustrations in this manual may differ from the actual product. Please refer to the actual product.

Regulatory Notice

- For details, refer to **Guides & Manuals** at <http://support.lenovo.com>.

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Lenovo

User Guide

Instructions and technical information in this manual are applicable to the following Lenovo notebook computers unless otherwise stated.

Model name	MT
Lenovo B5400/B5400 Touch	20278, 80B6
Lenovo M5400/M5400 Touch	20281, 80B5

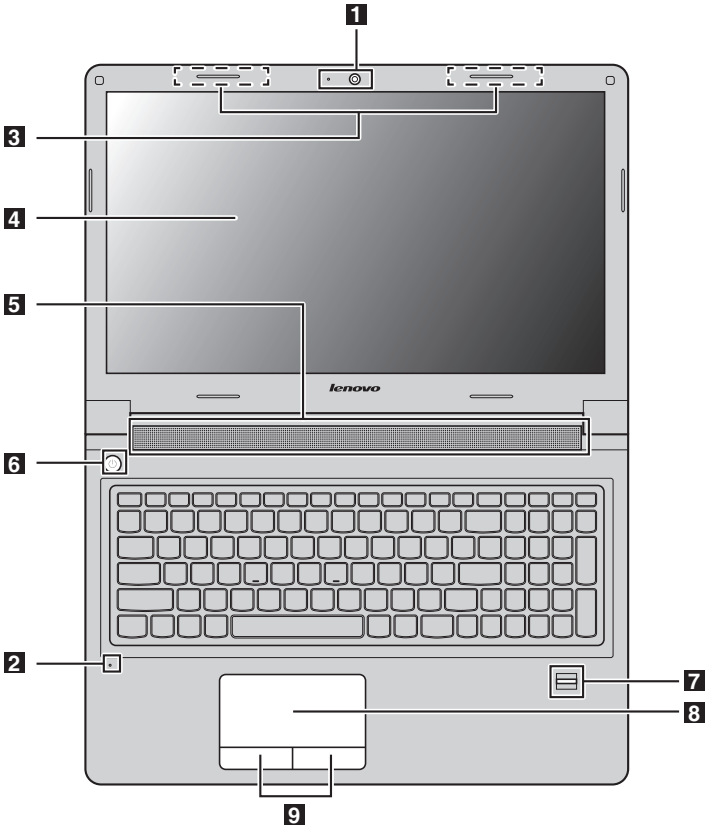
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Chapter 1. Getting to know your computer

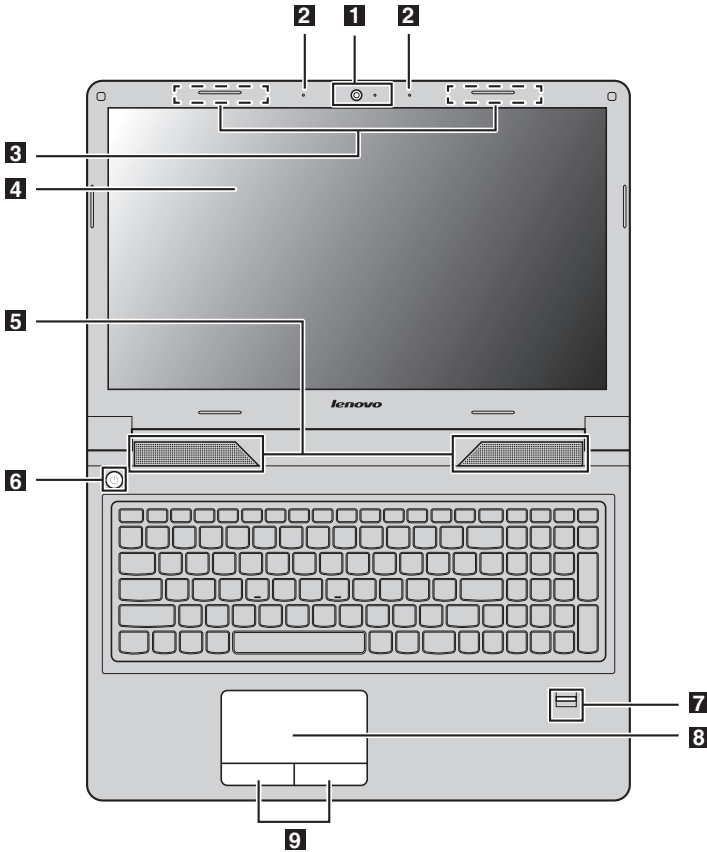
■ ■ Top view

■ B5400/B5400 Touch



Chapter 1. Getting to know your computer

■ M5400/M5400 Touch



Notes:

- The dashed areas indicate parts that are invisible from outside.
- The illustrations may differ from the actual product. Please refer to the actual product.

ⓘ Attention:

- Do *not* open the display panel beyond 130 degrees. When closing the display panel, be careful *not* to leave pens or any other objects in between the display panel and the keyboard. Otherwise, the display panel can be damaged.

Chapter 1. Getting to know your computer

- 1 Integrated camera (on select models)** Used for video communication or taking photos.
- 2 Built-in microphone** Captures sound which can be used for video conferencing, voice narration, or audio recording.
- 3 Wireless antennas** Connect to a wireless adapter to receive and send wireless radio signals.
- 4 Display** Provides brilliant visual output.
- 5 Speakers** Provide audio output.
- 6 Power button** Press this button to turn on the computer.
- 7 Fingerprint reader (on select models)** Registers fingerprints that can be used as passwords to secure your computer.
- 8 Touchpad** The touchpad functions as a conventional mouse. To move the cursor on the screen, slide your fingertip over the pad in the direction in which you want the cursor to move.
- 9 Touchpad buttons** The functions of the left and right buttons correspond to those of the left and right buttons on a conventional mouse.

Note: You can enable or disable the touchpad and the touchpad buttons by pressing **Fn+F6**.

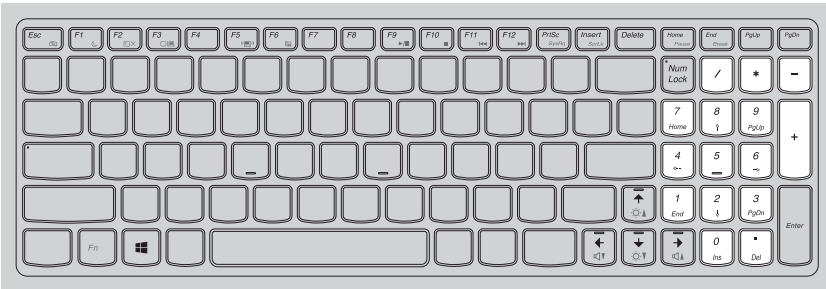
Chapter 1. Getting to know your computer

■ Using the keyboard

Your computer has a numeric keypad and function keys incorporated in its standard keyboard.

Numeric keypad

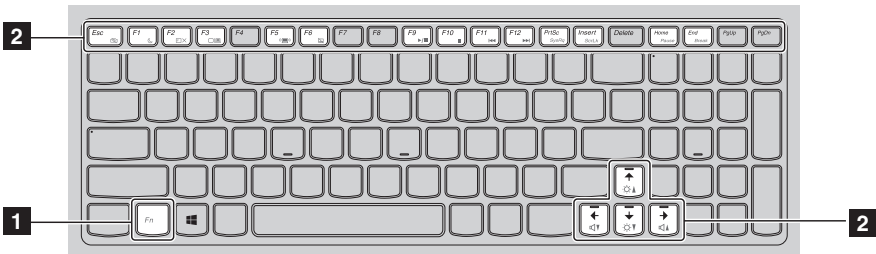
The keyboard has a separate numeric keypad. To enable or disable the keypad, press the Numeric Lock key (**Num Lock**).



Note: The numeric lock indicator is on when the numeric keypad is enabled.

Function key combinations

To use the function key combinations, press the Fn key **1**, then press one of the function keys **2**.



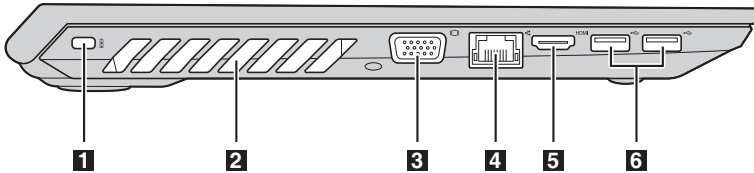
Chapter 1. Getting to know your computer

The following is a brief introduction to the function key combinations.

Fn+Esc:	<ul style="list-style-type: none">• On the Windows 7 operating system: Press Fn+Esc to open the camera and audio settings window. The camera preview is turned on. Change the camera and audio settings as desired.• On the Windows 8 operating system: Press Fn+Esc to enable or disable the camera.
Fn+F1:	Enters sleep mode.
Fn+F2:	Turns on/off the backlight of the LCD screen.
Fn+F3:	Opens the display device switch interface. Select this notebook or an external display.
Fn+F5:	Enables/Disables wireless devices.
Fn+F6:	Enables/Disables the touchpad and touchpad buttons.
Fn+F9:	Starts/Pauses playback of Windows Media Player.
Fn+F10:	Stops playback of Windows Media Player.
Fn+F11:	Skips to the previous track.
Fn+F12:	Skips to the next track.
Fn+PrtSc:	Activates the system request.
Fn+Insert:	Enables/Disables the scroll lock.
Fn+Home:	Activates the pause function.
Fn+End:	Activates the break function.
Fn+ ↑ / ↓:	Increases/Decreases display brightness.
Fn+ → / ←:	Increases/Decreases sound volume.

Chapter 1. Getting to know your computer

■ ■ Left-side view



- 1 Kensington lock slot** Attach a security lock (not supplied) here to help protect your computer from theft and unauthorized use. You can attach a security lock to your computer to help prevent it from being removed without your permission. For details on installing the security lock, please refer to the instructions shipped with the security lock that you have purchased.

Notes:

- Before purchasing any security product, verify that it is compatible with this type of security keyhole.
- You are responsible for evaluating, selecting, and implementing the locking devices and security features. Lenovo offers no comment, judgment, or warranty regarding the function, quality, or performance of locking devices and security features.

- 2 Ventilation slots** Dissipate internal heat.

ⓘ Attention:

- Make sure that none of the ventilation slots are blocked or else overheating of the computer may occur.

- 3 VGA port** Connects to external display devices.

- 4 RJ-45 port** Connects the computer to an Ethernet network.

* Danger:

- To avoid the risk of electrical shock, do not connect a telephone cable to the Ethernet port. You can only connect an Ethernet cable to this port.

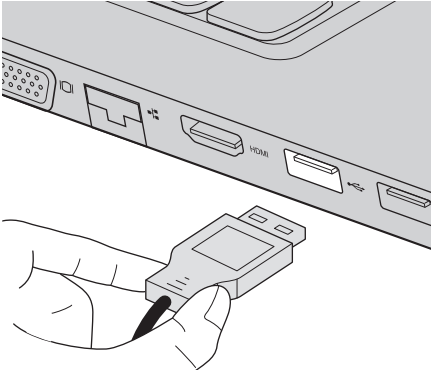
- 5 HDMI port** Connects to devices with HDMI input such as a TV or a display.

- 6 USB 3.0 ports** Connect to USB devices. For details, see “Connecting USB devices” on page 7.

Note: The USB 3.0 connector is compatible with USB 1.1, 2.0, and 3.0.

■ Connecting USB devices

You can connect a USB device to your computer by inserting its USB plug (Type A) into the USB port on your computer.



The first time you plug a USB device into a particular USB port on your computer, Windows automatically installs a driver for that device. After the driver is installed, you can disconnect and reconnect the device without performing any additional steps.

Note: Typically, Windows detects a new device after connecting it and then installs the driver automatically. However, some devices might require you to install the driver before connecting. Check the documentation provided by the manufacturer of the device before connecting.

Before disconnecting a USB storage device, make sure your computer has finished transferring data with it. Click the **Safely Remove Hardware and Eject Media** icon in the notification area of the Windows desktop screen to remove the device before disconnecting.

Notes:

- If your USB device uses a power cord, connect the device to a power source before connecting it. Otherwise, the device may not be recognized.
- When in sleep mode, you can only use the keyboard instead of the mouse to wake up the computer.

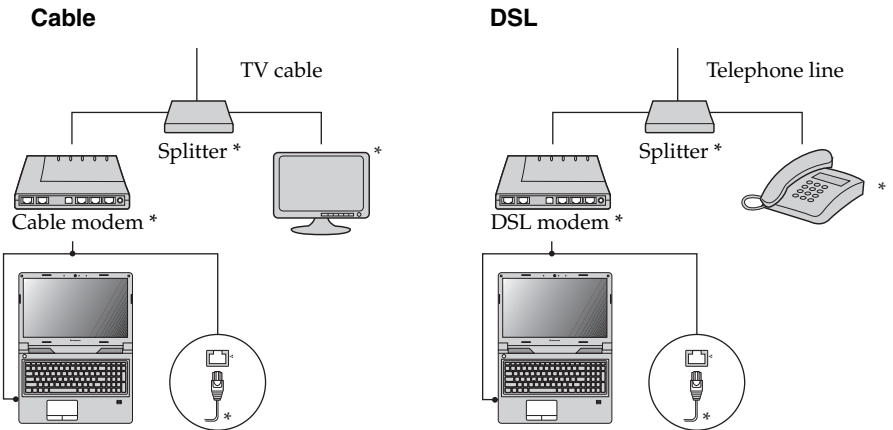
Chapter 1. Getting to know your computer

■ Connecting to a wired network

Wired connections are a reliable and safe way to connect the computer to the Internet.

Cable	Cable Internet services use a cable modem connected to the residential cable TV line.
DSL	DSL is a family of related technologies that bring highspeed network access to homes and small businesses over ordinary telephone lines.

Hardware connection:



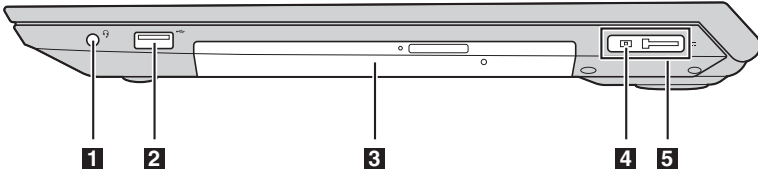
* Not supplied.

Note: The above diagrams are for reference only. Actual connection method may vary.

Software configuration

Consult your Internet Service Provider (ISP) for details on how to configure your computer.

Right-side view



- 1 Combo audio jack** Connects to headsets.

Notes:

- The combo audio jack does not support conventional microphones.
- The recording function might not be supported if third-party headphones or headsets are connected due to different industry standards.

- 2 USB port** Connects to USB devices. For details, see “Connecting USB devices” on page 7.

- 3 Optical drive (on select models)** Reads/Burns optical discs.

- 4 AC power adapter jack**

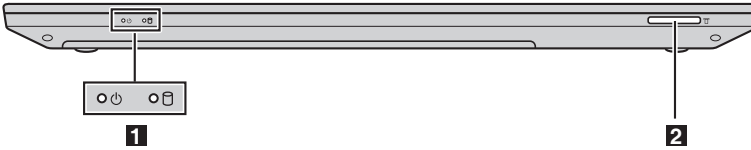
- 5 Lenovo OneLink connector** When the AC power adapter is connected to the AC power adapter jack, it provides power to the computer and charges the battery. When a supported ThinkPad OneLink Dock is connected to the Lenovo OneLink connector, it can not only extend the computer capabilities, but also provide AC power to the computer and charge the battery.

To use the Lenovo OneLink connector, you need to remove the connector cover from the Lenovo OneLink connector first.

Note: Ensure that you keep the connector cover. Reattach it to the Lenovo OneLink connector when you are not using the Lenovo OneLink connector.

Chapter 1. Getting to know your computer

■ ■ Front view



- 1 System status indicators** For details, see “System status indicators” on page 10.
- 2 Memory card slot** Accepts memory cards (not supplied). For details, see “Using memory cards (not supplied)” on page 11.

■ System status indicators

The system status indicators show the current status of your computer.

Power and battery status indicator

- **Green:** The battery has a charge between 20% and 100% and the computer is powered on.
- **Blinking green:** The battery has a charge between 20% and 100% and the computer is in sleep or hibernate mode.
- **Amber:** The battery has a charge of 20% or less and the computer is powered on.
- **Blinking amber:** The battery has a charge of 20% or less and the AC power adapter is connected to the computer.
- **Off:** The battery is detached or the computer is powered off.

Hard disk drive indicator

When this indicator is on, the hard disk drive is reading or writing data.

⊙ Attention:

- When the indicator is on, do not put the computer into sleep mode or turn off the computer.
- When the indicator is on, do not move the computer. Sudden physical shock might cause hard disk drive errors.

■ Using memory cards (not supplied)

Your computer supports the following types of memory card:

- Secure Digital (SD) card
- Secure Digital High Capacity (SDHC) card
- SD eXtended Capacity (SDXC) card
- MultiMediaCard (MMC)

⦿ **Attention:**

- Insert *only* one card in the slot at a time.
- This card reader does not support SDIO devices (e.g., SDIO Bluetooth, etc.).

Inserting a memory card

Slide a memory card in until it clicks into place.

Note: If a dummy card is shipped with the computer, push the dummy card and then remove it before inserting a memory card.

Removing a memory card

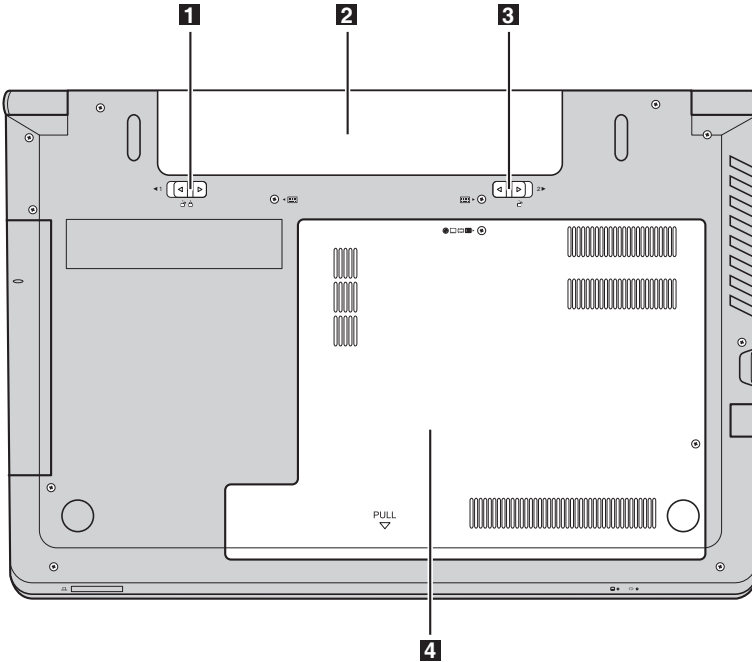
- ① Push the memory card in until you hear a click.
- ② Gently pull the memory card out of the memory card slot.

⦿ **Attention:**

- Before removing a memory card, disable it through **Safely Remove Hardware and Eject Media** to avoid data corruption.

Chapter 1. Getting to know your computer

■ ■ Bottom view



1 Battery latch - manual

Keeps the battery pack secured in place.

2 Battery pack

3 Battery latch - spring loaded

Keeps the battery pack secured in place.

4 Bottom slot cover

The hard disk drive, memory module, and mini-PCI Express Card are placed underneath.

Chapter 2. Learning the basics

■ ■ **Configuring the operating system for the first time** ———

You need to configure the operating system when it is first used. The configuration process may include the procedures below:

- Accepting the end user license agreement
- Configuring the Internet connection
- Registering the operating system
- Creating a user account

■ ■ **Putting the computer to sleep or shutting it down** ———

When you have finished working with your computer, you can put it to sleep or shut it down.

■ **Putting your computer to sleep**

If you will be away from your computer for only a short time, put the computer to sleep. When the computer is in sleep mode, you can quickly wake it to resume use, bypassing the startup process.

To put the computer to sleep:

- **For the Windows 7 operating system:**

- Click **Start**. Then select **Sleep** from the **Shut down** menu options.
- Press **Fn+F1**.

- **For the Windows 8 operating system:**

- Move your cursor to the lower-right corner of the screen to open the charms bar, then select **Settings** → **Power** → **Sleep**.
- Press **Fn+F1**.

- ◎ **Attention:**

- Wait until the power and battery status indicator light starts blinking green (indicating that the computer is in sleep mode) before you move your computer. Moving your computer while the hard disk drive is spinning can damage the hard disk, causing loss of data.

To wake the computer, do one of the following:

- Press the power button.
- Press the Fn key on the keyboard.

Chapter 2. Learning the basics

■ Shutting down the computer

If you are not going to use your computer for a long time, shut it down.

To shut down your computer:

- **For the Windows 7 operating system:** Click **Start** → **Shut down**.
- **For the Windows 8 operating system:**
Move your cursor to the lower-right corner of the screen to open the charms bar, then select **Settings** → **Power** → **Shut down**.

■ ■ Connecting to a wireless network

■ Enabling wireless connection

To enable wireless communications, press **Fn+F5**.



Note: Some networks require a network security key or passphrase for connection. To connect to one of those networks, ask the network administrator or the Internet service provider (ISP) for the security key or passphrase.

■ Software configuration

Consult your Internet Service Provider (ISP) and search the Windows Help and Support Center for details on how to configure your computer.

■ ■ Help and support


If you have questions about using the Windows operating system, refer to Windows Help and Support. To access Windows Help and Support:

- **For the Windows 7 operating system:**
 - From the Windows desktop, click **Start** and then click **Help and Support**.
 - Press the Windows key  + **F1**.
- **For the Windows 8 operating system:**
 - Open the charms bar and select **Settings**; select **Help** on the Settings menu.
 - Press the Windows key  + **F1**.


■ ■ Operating system interfaces (for the Windows 8 operating system)

Windows 8 comes with two main user interfaces: the Start screen and the Windows desktop.

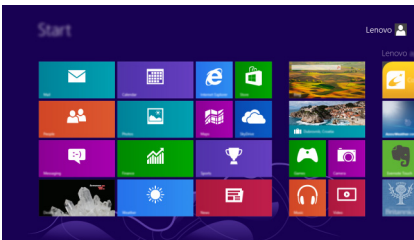
To switch from the Start screen to the Windows desktop, do one of the following:

- Select the Desktop tile on the Start screen.
- Press the Windows key  + D.

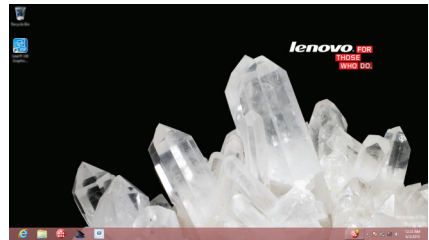
To switch from the desktop to the Start screen, do one of the following:

- Select **Start**  from the charms bar.
- Move the cursor to the lower-left corner, then select the Start screen thumbnail when it is displayed.

Start screen




Desktop

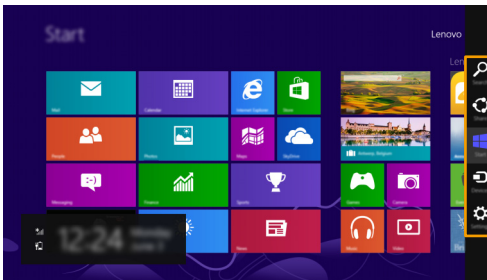


Chapter 2. Learning the basics

■ Charms and the charms bar (for the Windows 8 operating system)

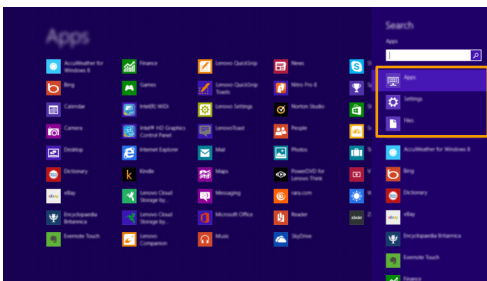
Charms are navigation buttons that let you access basic tasks quickly. Charms include: Search, Share, Start, Devices, and Settings. The **charms bar** is the menu that contains the charms. To display the charms bar, do one of the following:

- Move the cursor to the upper-right or lower-right corner until the charms bar is displayed.
- Press the Windows key  + C.



Search charm

The **Search** charm enables you to find what you are looking for, including apps, settings and files.



Share charm

The **Share** charm lets you send links, photos, and more to your friends and social networks without leaving the app you are in.

Start charm

The **Start** charm is a fast way to go to the Start screen.

Devices charm

The **Devices** charm enables you to connect or send files to connected external devices, including digital cameras, TVs, and printers.

Settings charm

The **Settings** charm lets you perform basic tasks, such as setting the volume or shutting down the computer. Also, you can get to the Control Panel through the **Settings** charm when on the Desktop screen.



Chapter 3. Recovery system

■ ■ Using the OneKey Recovery Pro program on the Windows 7 operating system

On the Windows 7 operating system, the OneKey[®] Recovery Pro program enables you to do the following:

- Performing backup and recovery operations
The OneKey Recovery Pro program enables you to back up all your hard disk drive contents including the operating system, data files, software programs, and personal settings. You can designate where the OneKey Recovery Pro program stores the backup.
- Using the OneKey Recovery Pro workspace
The OneKey Recovery Pro workspace resides in a protected, hidden area of your hard disk drive that operates independently from the Windows operating system. This enables you to perform recovery operations even if you cannot start the Windows operating system. You can perform the following recovery operations from the OneKey Recovery Pro workspace.
- Creating and using a rescue medium
With a rescue medium, such as a disc or a USB hard disk drive, you can recover the computer from failures that prevent you from gaining access to the OneKey Recovery Pro workspace on your hard disk drive.

For more information, refer to the help information system of the OneKey Recovery Pro program.

■ Solving recovery problems on the Windows 7 operating system

To reinstall the Windows 7 operating system, do one of the following:

- Start the computer. When the Lenovo logo is displayed, press **F11** and then follow the on-screen instructions to start the Product Recovery program.
- Start the computer. After you enter the Windows operating system, click the Lenovo Solution Center to launch this program. Then click the Recovery option.

Notes:

- You can choose to restore your system partition to the original factory state or to a previously generated backup.
- The recovery process is irreversible. Ensure that you back up your critical data before using the recovery feature.

If you are unable to access the OneKey Recovery Pro workspace or the Windows environment, do one of the following:

- Use a rescue medium to start the OneKey Recovery Pro workspace.
- Use recovery media if all other methods of recovery have failed and you need to restore the hard disk drive to the factory default settings.

Note: If you are unable to access the OneKey Recovery Pro workspace or the Windows environment from a rescue medium or recovery medium, you might not have the rescue device (an internal hard disk drive, a disc, a USB hard disk drive, or other external devices) set as the first boot device in the startup device sequence. You must first make sure that your rescue device is set as the first boot device in the startup device sequence in the BIOS program. Go to the **Startup → Boot** menu to temporarily or permanently change the startup device sequence.

It is important to create a rescue medium and a set of recovery media as early as possible and store them in a safe place for future use.

■ ■ Using the Windows recovery program on the Windows 8 operating system

Your computer comes with a built-in recovery program provided by Windows. On the Windows 8 operating system, the program enables you to do the following:

- **Refreshing your computer settings**

Refreshing enables you to restore your computer settings to factory contents only, without removing all the personal data and applications that you have installed from the Windows Store.

To refresh your computer settings, do the following:

- ➊ Move your cursor to the bottom right corner of the screen to bring up the charms. Then click **Settings** → **Change PC settings** → **General**.
- ➋ In the **Refresh your PC without affecting your files** section, click **Get started**. Then follow the on-screen instructions to refresh your computer settings.

- **Resetting your computer settings**

When you use the recovery program to reset your computer settings, all the data you have stored on the hard disk drive will be deleted and the computer settings will be restored to the factory default settings.

- ⦿ **Attention:**

- To avoid data loss, back up all the data that will be in use later.

To reset your computer settings, do the following:

- ➊ Move your cursor to the bottom right corner of the screen to bring up the charms. Then click **Settings** → **Change PC settings** → **General**.
- ➋ In the **Remove everything and reinstall Windows** section, click **Get started**. Then follow the on-screen instructions to reset your computer settings.

Note: After restoring your computer settings to the factory contents, you might need to reinstall the drivers for some devices.

- **Advanced startup options**

Advanced startup options enable you to start up from an external drive or disc, change your computer settings, change the startup settings of the Windows operating system, or restore the Windows operating system from a system image.

To use the advanced startup option, do the following:

- ① Move your cursor to the bottom right corner of the screen to bring up the charms. Then click **Settings** → **Change PC settings** → **General**.
- ② In the **Advanced startup** section, click **Restart now** → **Troubleshoot** → **Advanced options**. Then follow the on-screen instructions to change the settings as desired.

For more information about the recovery solutions provided on your computer, refer to the online help information system of the Windows 8 operating system.

Chapter 4. Troubleshooting

■ ■ Frequently asked questions

This section lists frequently asked questions by category.

■ Finding information

What safety precautions should I follow when using my computer?

The *Lenovo Safety and General Information Guide* which came with your computer contains safety precautions for using your computer. Read and follow all the precautions when using your computer.

Where can I find the hardware specifications for my computer?

You can find hardware specification for your computer from the printed flyers which came with your computer.

Where can I find warranty information?

For the warranty applicable to your computer, including the warranty period and type of warranty service, see the Lenovo limited warranty flyer that came with your computer.

■ Drivers and preinstalled software

Where are the installation discs for Lenovo preinstalled software (desktop software)?

Your computer did not come with installation discs for Lenovo preinstalled software. If you need to reinstall preinstalled software, you can find the installation program on the D partition of your hard disk. If you cannot find the installation program there, download it from the Lenovo consumer support Web site.

Where can I find drivers for the various hardware devices of my computer?

If your computer is preinstalled with a Windows operating system, Lenovo provides drivers for the hardware devices that you need on the D partition of your hard disk. You can also download the latest device drivers from the Lenovo consumer support Web site.

■ Recovery system

Where are the recovery discs?

Your computer did not come with recovery discs. Use the recovery system if you need to restore the system to its factory status.

What can I do if the back-up process fails?

If you can start the backup but it fails during the back-up process, try the following steps:

- ❶ Close all open programs, and then restart the back-up process.
- ❷ Check to see if the destination media is damaged. Select another path and then try again.

When do I need to restore the system to its factory status?

Use this feature when the operating system fails to start up. If there is critical data on the system partition, back it up before starting recovery.

■ BIOS setup utility

What is the BIOS setup utility?

The BIOS setup utility is ROM-based software. It communicates basic computer information and provides options for setting boot devices, security, hardware mode, and other preferences.

How can I start the BIOS setup utility?

To start the BIOS setup utility:

- ❶ Shut down the computer.
- ❷ Press and hold **F1** while the computer is starting up.

How can I change the boot mode?

There are two boot modes: **UEFI** and **Legacy Support**. To change the boot mode, start the **BIOS** setup utility and set boot mode to **UEFI** or **Legacy Support** on the boot menu.

■ Getting help

How can I contact the customer support center?

See “Chapter 3. Getting help and service” of *Lenovo Safety and General Information Guide*.

■ ■ Troubleshooting

Display problems

When I turn on the computer, nothing appears on the screen.

- If the screen is blank, make sure that:
 - The AC power adapter is connected to the computer, and the power cord is plugged into a working electrical outlet.
 - The computer power is on. Press the power button again for confirmation.
 - If you are using the AC power adapter or the battery, and the power and battery status indicator is on, press **Fn+↑** to make the screen brighter.
- If these items are set correctly, and the screen remains blank, have the computer serviced.

When I turn on the computer, only a white cursor appears on a blank screen.

- Restore backed-up files to your Windows environment or the entire contents of your hard disk to its original factory contents using the recovery system. If you still see only the cursor on the screen, have the computer serviced.

My screen goes blank while the computer is on.

- Your screen saver or power management might be enabled. Do one of the following to exit from the screen saver or to resume from sleep mode:
 - Touch the touchpad.
 - Press Fn key on the keyboard.
 - Press the power button.
 - Press **Fn+F2** to confirm whether the backlight for the LCD screen has been turned off.
 - If the problem persists, follow the solution in the next problem "The screen is unreadable or distorted."

The screen is unreadable or distorted.

- Make sure that:
 - The display device driver is installed correctly.
 - The screen resolution and color quality are set correctly.
 - The monitor type is correct.

Incorrect characters appear on the screen.

- Is the operating system or programs installed correctly? If they are installed and configured correctly, have the computer serviced.

BIOS password problems

I forgot my password.

- If you forget your user password, you must ask the system administrator to reset your user password.
- If you forget your HDD password, a Lenovo authorized servicer cannot reset your password or recover data from the hard disk. You must take your computer to a Lenovo authorized servicer or a marketing representative to have the hard disk drive replaced. Proof of purchase is required, and a fee will be charged for parts and service.
- If you forget your Supervisor password, a Lenovo authorized servicer cannot reset your password. You must take your computer to a Lenovo authorized servicer or a marketing representative to have the system board replaced. Proof of purchase is required, and a fee will be charged for parts and service.

Sleep problems

The critical low-battery error message appears, and the computer immediately turns off.

- The battery power is getting low. Connect the AC power adapter to the computer, or replace the battery with a fully charged one.

The computer enters sleep mode immediately after Power-on self-test (POST).

- Make sure that:
 - The battery is charged.
 - The operating temperature is within the acceptable range. See “Chapter 2. Use and care Information” in the *Lenovo Safety and General Information Guide*.

Note: If the battery is charged and the temperature is within range, have the computer serviced.

The computer does not return from sleep mode, and the computer does not work.

- If your computer is in sleep mode, connect the AC power adapter to the computer and then press the Fn key or the power button.
- If the system still does not return from sleep mode, stops responding, or cannot be turned off, reset the computer. Unsaved data may be lost. To reset the computer, press and hold the power button for 4 seconds or more.

Chapter 4. Troubleshooting

Sound problems

No sound can be heard from the speakers even when the volume is turned up.

- Make sure that:
 - The mute function is off.
 - The combo audio jack is not used.
 - The speakers are selected as the playback device.

Battery problems

Your computer shuts down before the power and battery status indicator shows empty.

-or-

Your computer operates after the power and battery status indicator shows empty.

The computer does not operate with a fully charged battery.

- Reset the battery gauge using Lenovo Energy Management. If the problem persists, replace with a new battery pack.
- The surge protector in the battery might be active. Turn off the computer for one minute to reset the protector; then turn on the computer again.

A hard disk drive problem

The hard disk drive does not work.

- Make sure that the hard disk drive is included in the **Boot Menu** in the BIOS setup utility correctly.

Other problems

Your computer does not respond.

- To turn off your computer, press and hold the power button for 4 seconds or more. If the computer still does not respond, remove the battery pack and the AC power adapter.
- Your computer might lock when it enters sleep mode during a communication operation. Disable the sleep timer when you are working on the network.

I need to start the computer from a connected device, but the device does not appear on the boot device list.

- Check the boot mode setting in the BIOS setup utility. If **Boot Mode** is set to **UEFI**, make sure that the device or the medium in the device supports UEFI boot. If the device or the medium in the device does not support UEFI boot, set **Boot Mode** to **Legacy Support**. If the device still does not appear in the boot device list, replace with a new device or medium.

The connected external device does not work.

- Do not connect or disconnect any external device cables other than USB while the computer power is on; otherwise, you might damage your computer.
- When using a high power consumption external device such as an external USB optical disk drive, use an external device power adapter. Otherwise, the device might not be recognized, or system shut down might result.

Appendix A. CRU instructions

Customer Replaceable Units (CRUs) are parts that can be upgraded or replaced by the customer. If a CRU is determined to be defective during the warranty period, a replacement CRU will be provided to the customer. Customers are responsible for installing the self-service CRUs for this product. Customers also can install optional-service CRUs, which might require some technical skills or tools, or request that a technician install the optional-service CRU under the terms of the applicable warranty service type for your country or region.

Notes:

- The illustrations used in this chapter are of the Lenovo M5400, unless otherwise stated.
- The illustrations in this manual might differ from the actual product. Please refer to the actual product.

■ ■ Replacing the battery pack

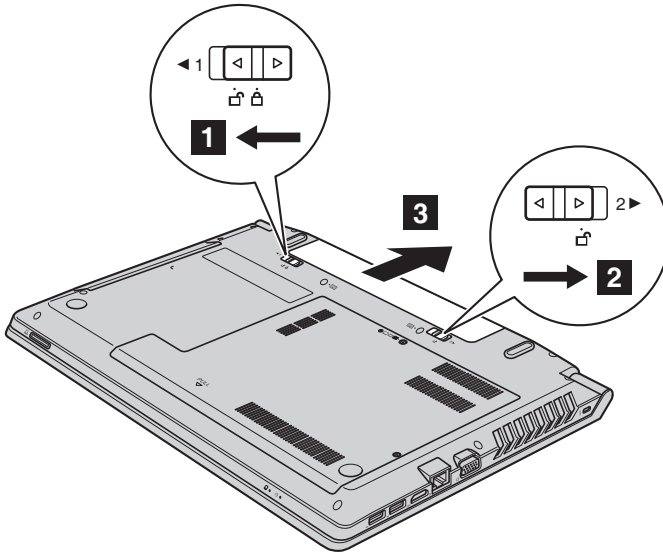
Note: Use only the battery provided by Lenovo. Any other battery could ignite or explode.

To replace the battery pack, do the following:

- ① Turn off the computer. Disconnect the AC power adapter and all cables from the computer.
- ② Close the computer display, and turn the computer over.

Appendix A. CRU instructions

- 3 Unlock the manual battery latch **1** . While holding the spring-loaded battery latch in the unlocked position **2** , remove the battery pack in the direction shown by the arrow **3** .



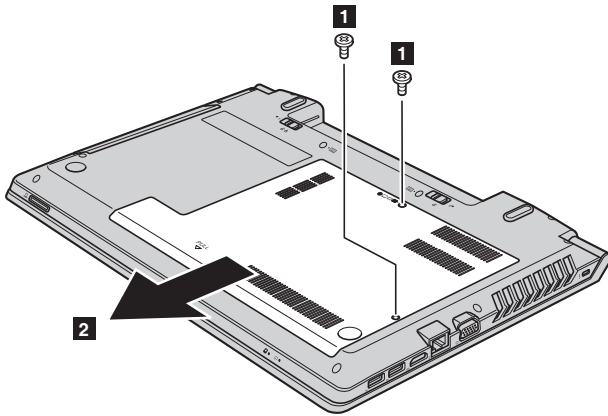
- 4 Install a fully charged battery pack.
- 5 Slide the manual battery latch to the locked position.
- 6 Turn the computer over and reconnect the AC power adapter.

Appendix A. CRU instructions

■ ■ Replacing the backup battery

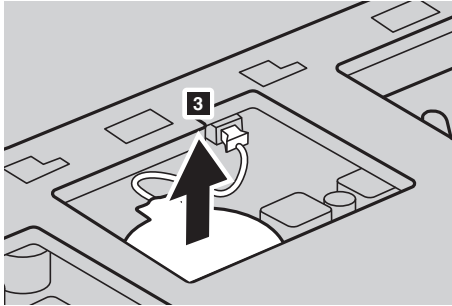
To replace the backup battery, do the following:

- ❶ Turn off the computer. Disconnect the AC power adapter and all cables from the computer. Wait three to five minutes to let the computer cool.
- ❷ Close the computer display, and turn the computer over.
- ❸ Remove the battery. For details, see “Replacing the battery pack” on page 28.
- ❹ Remove the screws **1**, and then remove the cover **2**.



Appendix A. CRU instructions

- 6 Unplug the backup battery connector, and then remove the backup battery **3** .



- 6 Install a new backup battery. Insert the backup battery connection firmly.
- 7 Reinstall the computer cover, and then reinstall the screws.
- 8 Reinstall the battery. For details, see “Replacing the battery pack” on page 28.
- 9 Turn the computer over again. Reconnect the AC power adapter and all cables.

Appendix A. CRU instructions

■ ■ Replacing the hard disk drive

You can increase the storage capacity of your computer by replacing the hard disk drive with one of greater capacity. You can purchase a new hard disk drive from your reseller or Lenovo marketing representative.

Notes:

- Replace the hard disk drive only for upgrades or repair. The connectors and bay of the hard disk drive were not designed for frequent changes, or drive swapping.
- The preinstalled software are not included on an optional hard disk drive.

Handling a hard disk drive

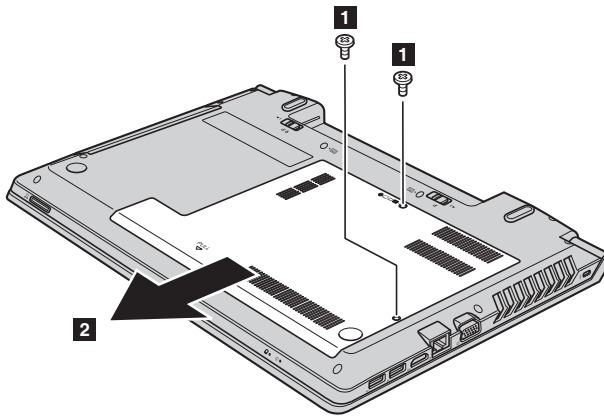
- Do not drop the drive or subject it to physical shock. Put the drive on a material, such as soft cloth, that absorbs any physical shock.
- Do not apply pressure to the cover of the drive.
- Do not touch the connector.

The hard disk drive is very sensitive. Incorrect handling can cause damage and permanent loss of data on the hard disk. Before removing the hard disk drive, make a backup copy of all the information on the hard disk, and then turn the computer off. Never remove the hard disk drive while the system is operating or in sleep mode.

Appendix A. CRU instructions

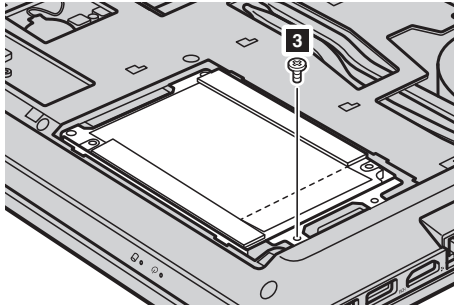
To replace the hard disk drive, do the following:

- 1 Turn off the computer; then disconnect the AC power adapter and all cables from the computer.
- 2 Close the computer display, and then turn the computer over.
- 3 Remove the battery pack. For details, see “Replacing the battery pack” on page 28.
- 4 Remove the screws **1**, and then remove the bottom slot cover **2**.

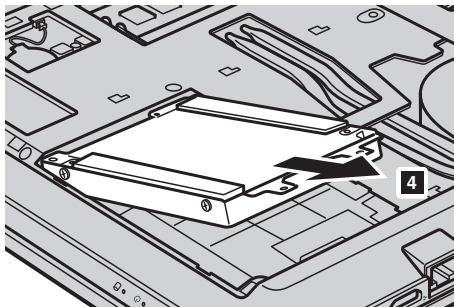


Appendix A. CRU instructions

- 5 Remove the frame fixing screw **3**.



- 6 Remove the hard disk drive by gently pulling in the direction of the arrow **4**.



- 7 Remove the screws and detach the metal frame from the hard disk drive.
- 8 Attach the metal frame to a new hard disk drive and tighten the screws.
- 9 Slide the new hard disk drive firmly into place, and then reinstall the frame fixing screw to secure the drive.
- 10 Reinstall the bottom slot cover and tighten the screws.
- 11 Reinstall the battery pack. For details, see "Replacing the battery pack" on page 28.
- 12 Turn the computer over again. Reconnect the AC power adapter and the cables to the computer.

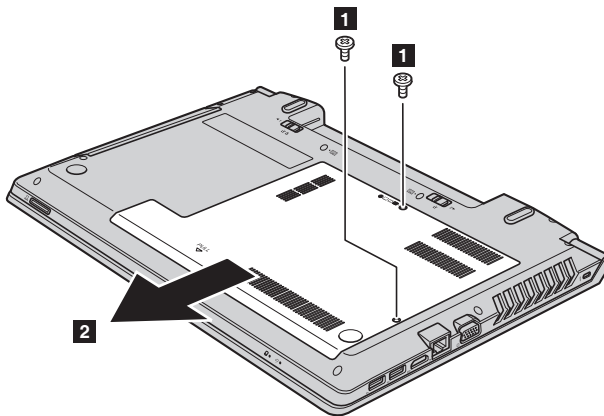
■ ■ Replacing memory

You can increase the amount of memory in your computer by installing double data rate three synchronous dynamic random access memory (DDR3 SDRAM)-available as an option-in the memory slot of your computer. DDR3 SDRAM modules are available in various capacities.

Note: Use only the memory types supported by your computer. If you incorrectly install optional memory, or install an unsupported memory type, a warning beep will sound when you try to start the computer.

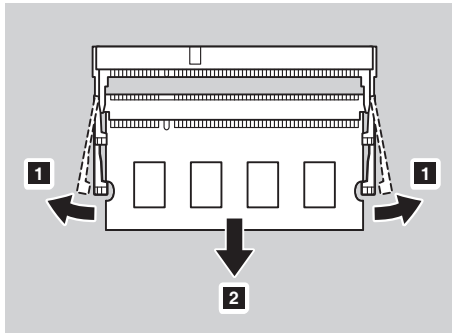
To install a DDR3 SDRAM module, do the following:

- 1 Touch a metal table or a grounded metal object to reduce any static electricity in your body, which could damage the DDR3 SDRAM. Do not touch the contact edge of the DDR3 SDRAM module.
- 2 Turn off the computer. Disconnect the AC power adapter and all cables from the computer.
- 3 Close the computer display, and turn the computer over.
- 4 Remove the battery pack. For details, see “Replacing the battery pack” on page 28.
- 5 Remove the screws **1** , and then remove the bottom slot cover **2** .

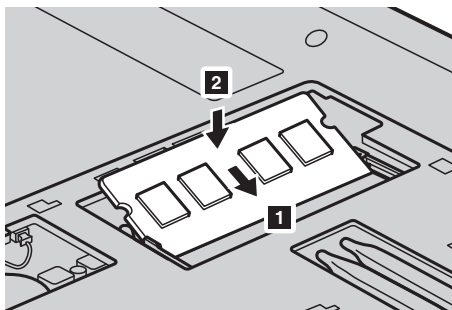


Appendix A. CRU instructions

- 6 If two DDR3 SDRAM modules are already installed in the memory slot, remove one of them to make room for the new one by pressing out on the latches on both edges of the socket at the same time. Be sure to save the old DDR3 SDRAM for future use.



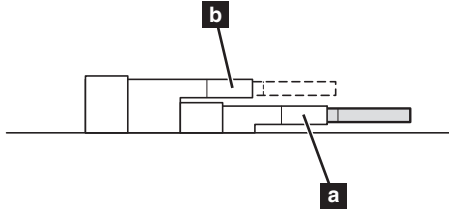
- 7 Align the notch of the DDR3 SDRAM module with the protrusion of the socket and gently insert at a 30-45° angle.
- 8 Push the DDR3 SDRAM module down until the latches on both sides of the socket lock into place.



- 9 After aligning the attachment clips with their matching gaps, reinstall the bottom slot cover.
- 10 Reinstall and tighten the screw.
- 11 Reinstall the battery pack. For details, see “Replacing the battery pack” on page 28.
- 12 Turn the computer over again. Reconnect the AC power adapter and the cables to the computer.

Appendix A. CRU instructions

Note: If only one DDR3 SDRAM module is installed in the computer you are servicing, the card must be installed in SLOT-0 (**a** : lower slot), and not in SLOT-1 (**b** : upper slot).



To make sure that the DDR3 SDRAM module is installed correctly, do as follows:

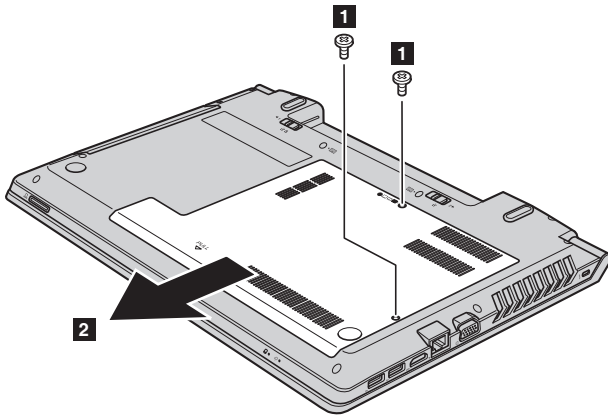
- 1 Turn the computer on.
- 2 Hold **F1** during startup. The BIOS setup utility screen opens. The **Installed memory** item shows the total amount of memory installed in your computer.

Appendix A. CRU instructions

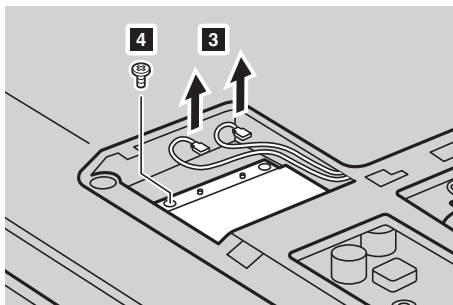
■ ■ Replacing the wireless LAN card

To replace the wireless LAN card, do the following:

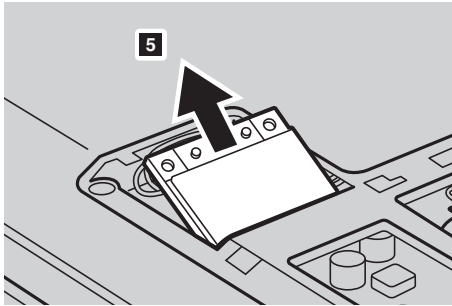
- 1 Turn off the computer; then disconnect the AC power adapter and all cables from the computer.
- 2 Close the computer display, and then turn the computer over.
- 3 Remove the battery pack. For details, see “Replacing the battery pack” on page 28.
- 4 Remove the screws **1**, and then remove the bottom slot cover **2**.



- 5 Disconnect the two wireless LAN cables (one black, one white) **3**. Remove the screw that secures the wireless LAN card **4**.



- 6 Remove the wireless LAN card **5**.



- 7 Install the new wireless LAN card.
- 8 Reinstall and tighten the screw.
- 9 Reconnect the two wireless LAN cables (one black, one white).

Note: When installing or reinstalling the wireless LAN card, make sure to plug the black cable into the jack labeled **AUX** and the white cable into the jack labeled **MAIN**.

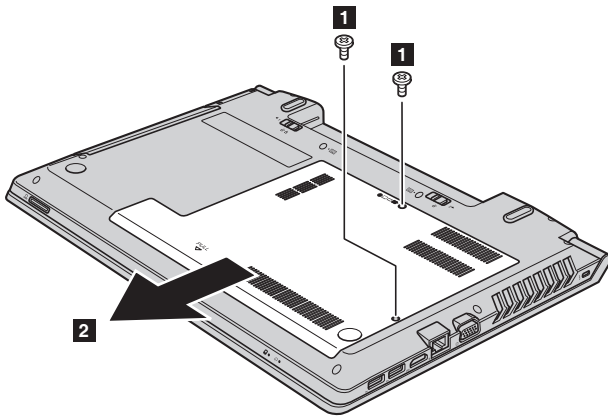
- 10 Reinstall the bottom slot cover and tighten the screws.
- 11 Reinstall the battery pack. For details, see “Replacing the battery pack” on page 28.
- 12 Turn the computer over again. Reconnect the AC power adapter and the cables to the computer.

Appendix A. CRU instructions

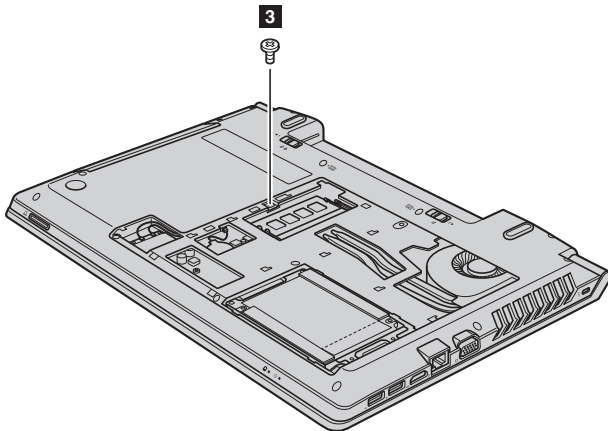
■ ■ Replacing the optical drive

To replace the optical drive, do the following:

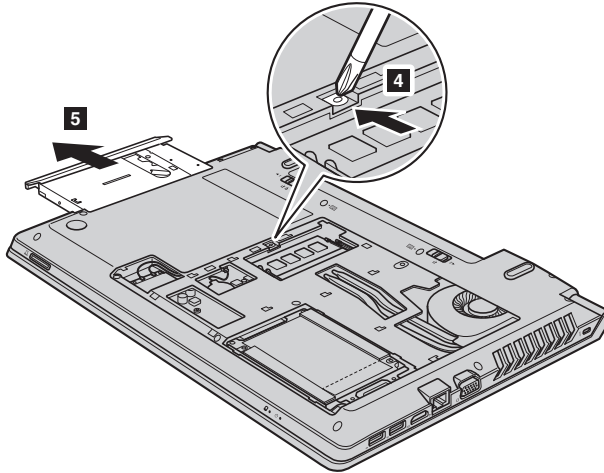
- ❶ Turn off the computer; then disconnect the AC power adapter and all cables from the computer.
- ❷ Close the computer display, and then turn the computer over.
- ❸ Remove the battery pack. For details, see “Replacing the battery pack” on page 28.
- ❹ Remove the screws **❶**, and then remove the bottom slot cover **❷**.



- ❺ Remove the screw shown in the illustration **❸**.



- 6 Gently pull the optical drive out **4** **5** .



- 7 Insert a new optical drive, and then reinstall the screw to secure the drive.
- 8 Reinstall the bottom slot cover, and then reinstall the screws to secure the cover.
- 9 Reinstall the battery pack. For details, see “Replacing the battery pack” on page 28.
- 10 Turn the computer over again. Reconnect the AC power adapter and the cables to the computer.

Appendix A. CRU instructions

The following table provides a list of CRUs for your computer, and informs you of where to find replacement instructions.

Self-service CRUs

	Setup Poster	User Guide
AC power adapter	×	
Power cord for AC adapter	×	
Battery pack	×	×
Backup battery		×
Memory		×
Optical drive		×

Optional-service CRUs

	Setup Poster	User Guide
Hard disk drive		×
Wireless LAN card		×

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