Legion Y540 Series
User Guide

Read this first

Before using this documentation and the product it supports, ensure that you read and understand the following:

- Appendix A "Important safety information" on page 33
- *Safety and Warranty Guide*
- *Setup Guide*

Contents

About this documentation

- Illustrations in this documentation might look different from your product.
- Depending on the model, some optional accessories, features, and software programs might not be available on your computer.
- Depending on the version of operating systems, some user interface instructions might not be applicable to your computer.
- Documentation content is subject to change without notice. Lenovo makes constant improvements on the documentation of your computer, including this *User Guide*. To get the latest documentation, go to https://support.lenovo.com.
- Microsoft® makes periodic feature changes to the Windows® operating system through Windows Update. As a result, some information in this documentation might become outdated. Refer to Microsoft resources for the latest information.
- This documentation applies to the following product models.

Model name	Machine type
Legion Y540-15ICH	81NR
Legion Y540-15IRH	81SX
Legion Y540-15IRH-PG0	81SY
Legion Y540-17IRH	81Q4
Legion Y540-17IRH-PG0	81T3

Chapter 1. Meet your computer

Front view
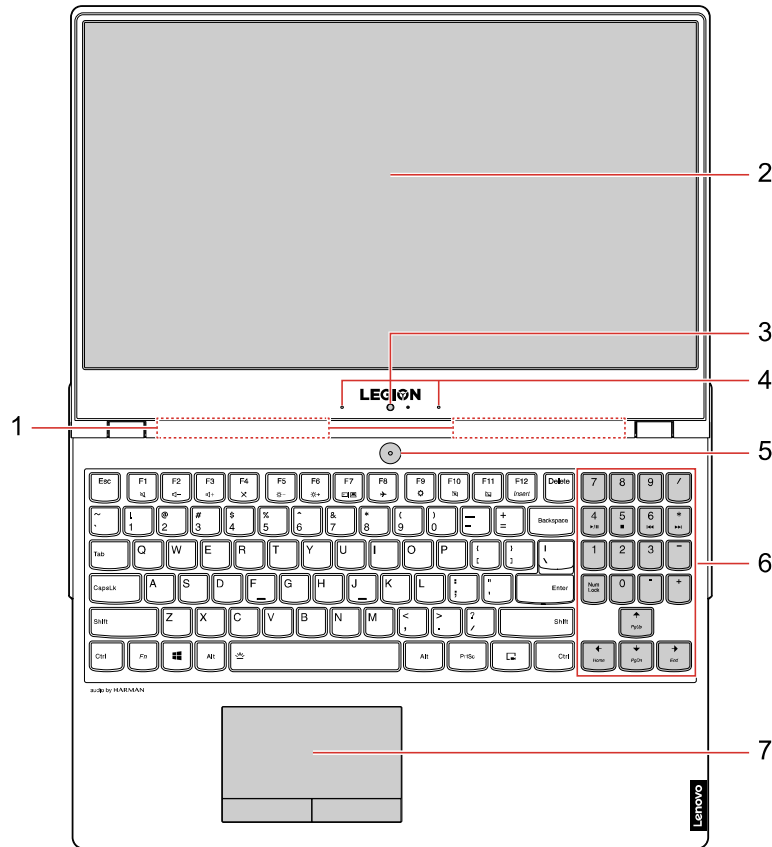
Figure 1. Legion Y540-15 series - front view
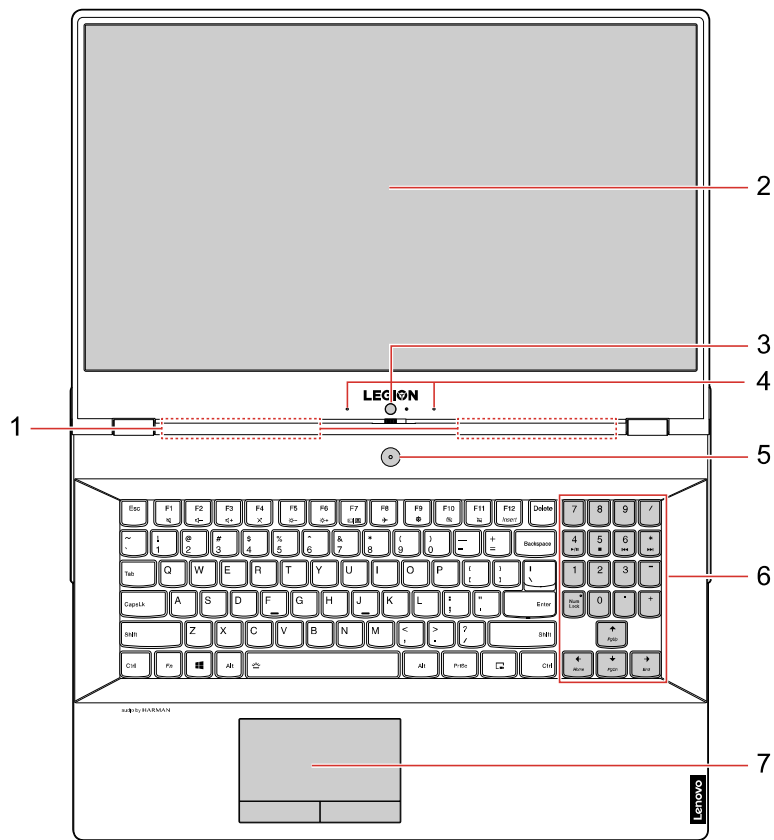
Figure 2. Legion Y540-17 series - front view

1. Wireless LAN/Bluetooth antennas	Send and receive radio waves for the wireless LAN/Bluetooth module. **Note:** The antennas are not visible from the outside of the computer.
2. Screen	Display text, graphics, and videos. **Note:** The screen can be rotated up to 180 degrees. Do not rotate the screen with too much force, or apply too much force to the upper-right or upper-left corner of the screen. Otherwise, the screen or hinges might get damaged.
3. Camera	Take pictures or record videos by clicking **Camera** from the Start menu. The indicator next to the camera is on when the camera is in use. If you use other apps that support photographing, video chatting, and video conference, the camera starts automatically when you enable the camera-required feature from the app.
4. Microphones	Capture or record sound and voice.
5. Power button	Press to turn on the computer or put the computer to sleep mode. To turn off the computer, open the Start menu, click ⏻ **Power**, and then select **Shut down**. The indicator on the power button shows the system status of your computer. • **Solid blue:** The computer is on. • **Slow blinking blue:** The computer is in sleep mode. • **Off:** The computer is off or in hibernation mode.

6. Numeric keypad	Quickly input numbers.
7. Touchpad	Perform finger touch and all the functions of a traditional mouse.

Left view
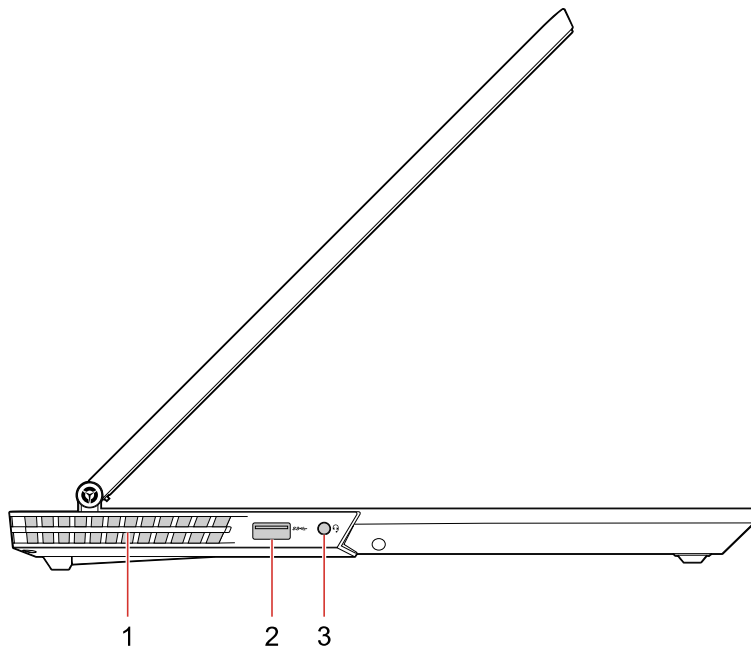
Figure 3. Legion Y540 series - left view

1. Ventilation slots (outlet)	Maintain the outgoing airflow to dissipate internal heat. **Note:** Do not block the ventilation slots. Otherwise, the computer might overheat.
2. Always On USB 3.1 connector Gen 1	To charge the USB-compatible devices when your computer is off, in sleep mode, or in hibernation mode, enable the Always On USB feature on your computer. To configure the Always On USB settings: 1. Start Lenovo Vantage. See "Use Lenovo Vantage" on page 14. 2. Select **Hardware Settings** ➙ **Power**. 3. Locate the **Always On USB** section and follow the on-screen instructions to select options of your preference. **Note:** The Always On USB 3.1 connector Gen 1 does not work if you click **Charge from Sleep** and your computer is off without connecting to ac power.
3. Audio connector	Connect headphones or a headset with a 3.5-mm (0.14-inches) and 4-pole plug to listen to the sound from the computer. **Note:** The conventional microphone is not supported.

Right view
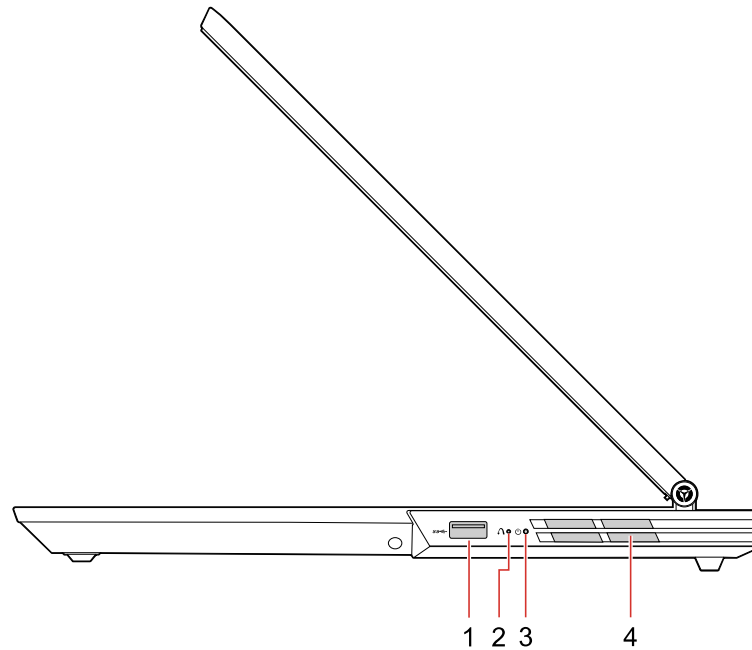
Figure 4. Legion Y540 series - right view

1. USB 3.1 connector Gen 1	Connect USB-compatible devices, such as a USB keyboard, USB mouse, USB storage device, or USB printer.
2. Novo button	When the computer is off, press this button to go to Novo button menu.
3. Power indicator	The indicator shows the system status of your computer. • **Solid blue:** The computer is on. • **Slow blinking blue:** The computer is in sleep mode. • **Off:** The computer is off or in hibernation mode.
4. Ventilation slots (outlet)	Maintain the outgoing airflow to dissipate internal heat. **Note:** Do not block the ventilation slots. Otherwise, the computer might overheat.

Rear view

Figure 5. Legion Y540-15 series - rear view
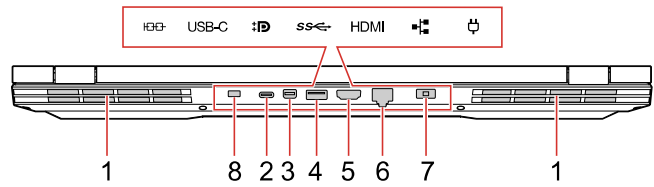
Figure 6. Legion Y540-17 series - rear view

1. Ventilation slots (outlet)	Maintain the outgoing airflow to dissipate internal heat. **Note:** Do not block the ventilation slots. Otherwise, the computer might overheat.

2. USB-C™ connector	• Charge your computer.
	• Charge USB-C compatible devices with the output voltage and current of 5 V and 3 A.
	• Transfer data at USB 3.1 speed, up to 10 Gbps.
	• Connect to an external display.
	   – USB-C to VGA: 1900 × 1200 pixels, 60 Hz
	   – USB-C to DP: 3840 × 2160 pixels, 60 Hz
	• Connect to USB-C accessories to expand computer functionality. To purchase USB-C accessories, go to https://www.lenovo.com/accessories
	
	Note: When the battery power is below 10%, the connected USB-C accessories might not work correctly.

3. Mini DisplayPort® connector	Connect to a compatible projector, external monitor, or high-definition television (HDTV).
4. USB 3.1 connector Gen 1	Connect USB-compatible devices, such as a USB keyboard, USB mouse, USB storage device, or USB printer.
5. HDMI™ connector	Connect to a compatible digital audio device or video monitor, such as an HDTV.
6. Ethernet connector	Connect to a local area network (LAN). When the green indicator is on, the computer is connected to a LAN. When the yellow indicator blinks, data is being transmitted.
7. Power connector	Connect to ac power through an ac power adapter.
8. Mini security-lock slot	Lock your computer to a desk, table, or other fixtures through a compatible security cable lock.

Bottom view
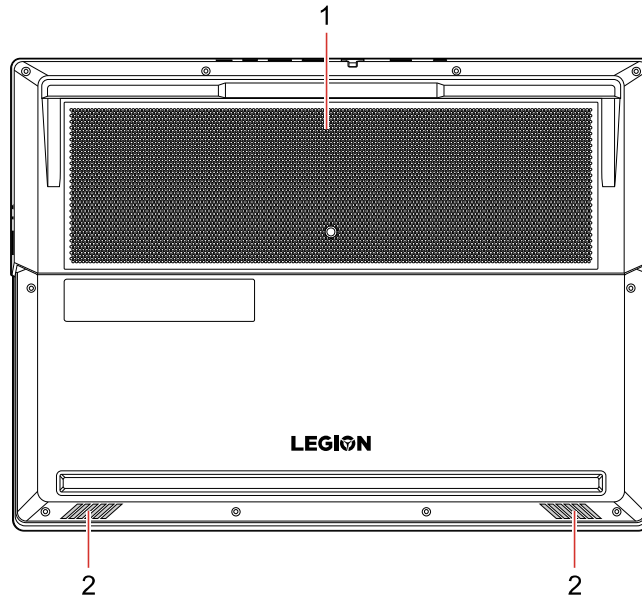
Figure 7. Legion Y540-15 series - bottom view
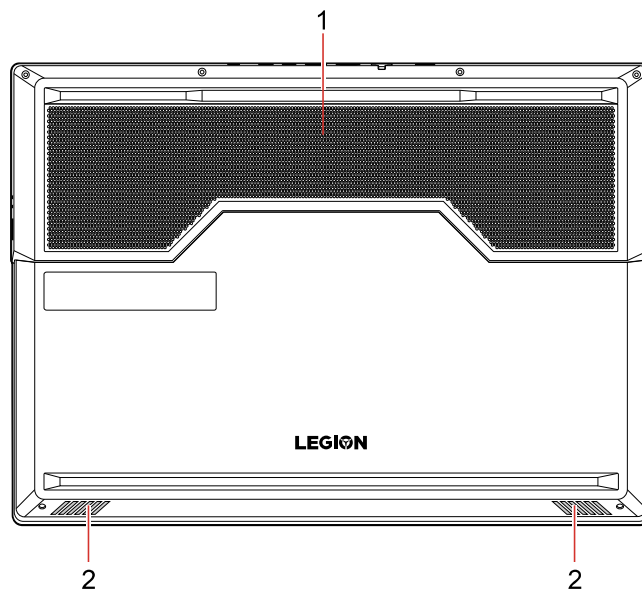
Figure 8. Legion Y540-17 series - bottom view

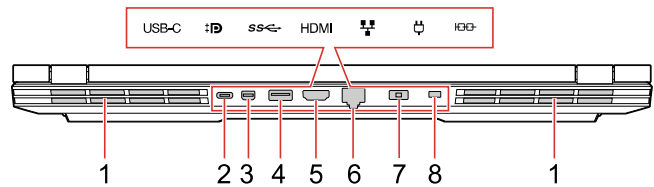|	
1. Ventilation slots (inlet)	Maintain the incoming airflow to dissipate internal heat.
	Note: Do not block the ventilation slots. Otherwise, the computer might overheat.
2. Speakers	Produce sound.

Features and specifications

Dimensions	• Legion Y540-15 series
	   – Width: 360 mm (14.17 inches)
	   – Depth: 267 mm (10.51 inches)
	   – Thickness: 25.9 mm (1.02 inches)
	• Legion Y540-17 series
	   – Width: 399.8 mm (15.74 inches)
	   – Depth: 290 mm (11.42 inches)
	   – Thickness: 26.3 mm (1.04 inches)

Power source (ac power adapter)	• Sine-wave input at 50 Hz to 60 Hz • Input rating of the ac power adapter: 100 V to 240 V ac • Output: 20 V dc
Battery pack	• 57 Wh • 3 Cells **Note:** The battery capacity is the typical or average capacity as measured in a specific test environment. Capacities measured in other environments may differ but are no lower than the rated capacity (see product label).
Microprocessor	To view the microprocessor information of your computer, right-click the **Start** button and then click **System.**
Memory	Double data rate 4 (DDR4) small outline dual in-line memory module (SODIMM)
Storage device	• 2.5-inch form factor, 7-mm (0.28-inch) height hard disk drive • M.2 solid-state drive • Intel® Optane™ memory*

Display	• Display size:
	   – Legion Y540-15 series: 396.24 mm (15.6 inches)
	   – Legion Y540-17 series: 439.42 mm (17.3 inches)
	• Display resolution: 1920 x 1080 pixels

Keyboard	• Function keys • Numeric keypad • Six-row keyboard (with backlight)
Connectors and slots	• ac power connector • Audio connector • Ethernet connector • Always On USB 3.1 connector Gen 1 • Two USB 3.1 connectors Gen 1 • USB-C connector • HDMI connector • Mini DisplayPort connector

Security features	• Password • Mini security-lock slot
Wireless features	• Bluetooth • Wireless LAN
Others	• Camera • Microphones

* for selected models

Chapter 2. Get started with your computer

Get started with Windows 10

Learn the basics of Windows 10 and start working with it right away. For more information about Windows 10, see the Windows help information.

Windows account

To use the Windows operating system, a user account is required. It can either be a Windows user account, or a Microsoft account.

Windows user account

When you start Windows for the first time, you are prompted to create a Windows user account. This first account you created is of the "Administrator" type. With an Administrator account, you can create additional user accounts or change account types by doing the following:

1. Open the Start menu and select **Settings ➙ Accounts ➙ other people**.
2. Follow the on-screen instructions.

Microsoft account

You can also log in to the Windows operating system with a Microsoft account.

To create a Microsoft account, go to the Microsoft sign-up page at https://signup.live.com and follow the on-screen instructions.

With a Microsoft account, you can:

- Enjoy one-time signing in if you are using other Microsoft services, such as OneDrive, Skype, and Outlook. com.
- Sync personalized settings across other Windows-based devices.

Windows user interface

1. Account ⊗	Change account settings, lock the computer, or sign out from the current account.
2. Settings ⚙	Launch Settings.
3. Power ⏻	Shut down, restart, or put the computer into sleep.
4. Start button ⊞	Open the Start menu.
5. Windows search ○	Type what you are looking for in the search box and get search results from your computer and the Web.
6. Task View ⬚	Display all opened apps and switch among them.
7. Windows notification area	Display notifications and status of some features.
8. Battery status icon	Display power status and change battery or power settings. When your computer is not connected to ac power, the icon changes to ▣.
9. Network icon	Connect to an available wireless network and display the network status. When connected to a wired network, the icon changes to ⊡.
10. Action center ⊟	Display the latest notifications from apps and provide quick access to some features.

Open the Start menu

- Click the **Start** button.
- Press the Windows logo key on the keyboard.

Access Control Panel

- Open the Start menu and click **Windows System → Control Panel**.
- Use Windows search.

Launch an app

- Open the Start menu and select the app you want to launch.
- Use Windows search.

Windows label

Your computer might have a Windows 10 Genuine Microsoft label affixed to its cover depending on the following factors:

- Your geographic location
- Edition of Windows 10 that is preinstalled

Go to https://www.microsoft.com/en-us/howtotell/Hardware.aspx for illustrations of the various types of Genuine Microsoft labels.

- In the People's Republic of China, the Genuine Microsoft label is required on all computer models preinstalled with any version of Windows 10.
- In other countries and regions, the Genuine Microsoft label is required only on computer models licensed for Windows 10 Pro.

The absence of a Genuine Microsoft label does not indicate that the preinstalled Windows version is not genuine. For details on how to tell whether your preinstalled Windows product is genuine, refer to the information provided by Microsoft at https://www.microsoft.com/en-us/howtotell/default.aspx.

There are no external, visual indicators of the Product ID or Windows version for which the computer is licensed. Instead, the Product ID is recorded in the computer firmware. Whenever a Windows 10 product is installed, the installation program checks the computer firmware for a valid, matching Product ID to complete the activation.

In some cases, an earlier Windows version might be preinstalled under the terms of the Windows 10 Pro license downgrade rights.

Connect to networks

Your computer helps you connect to the world through a wired or wireless network.

Connect to wired networks

If your computer includes an Ethernet (RJ-45) connector, you can use an Ethernet cable to connect your computer to a wired network.

Connect to Wi-Fi networks

1. Click the network icon in the Windows notification area. A list of available wireless networks is displayed.
2. Select a network to connect. Provide required information if needed.

Use Lenovo Vantage

The preinstalled Lenovo Vantage is a customized one-stop solution to help you maintain your computer with automated updates and fixes, configure hardware settings, and get personalized support.

Access Lenovo Vantage

Open the Start menu and click **Lenovo Vantage.** You also can type `Lenovo Vantage` in the search box.

To download the latest version of Lenovo Vantage, go to Microsoft Store and search by the app name.

Key features

Lenovo Vantage makes periodic updates of the features to keep improving your experience with your computer.

Note: The available features vary depending on the computer model.

* **System Update**

    Download and install firmware and driver updates to keep your computer up-to-date. You can configure the options to install updates automatically when available.

* **Hardware Settings**

    Configure intelligent settings of the following hardware to make your computer smarter to use:

    – Always On USB
    – Battery
    – Camera
    – Computer display
    – Keyboard
    – Microphone
    – Speakers
    – Touchpad

* **Health & Support**

    Monitor your computer health and get personalized support of your computer. You can:

    – Scan the computer hardware.
    – Look up computer warranty status (online).
    – Access *User Guide.*
    – Read tips and tricks articles customized for your computer.

* **Lenovo Wi-Fi Security**
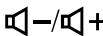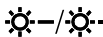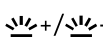
    Protect your computer from malicious Wi-Fi networks.

Interact with your computer

Your computer provides you various ways to navigate the screen.

Hotkeys

Some keys on the keyboard are printed with icons. These keys are called hotkeys and can be pressed alone or in combination with the Fn key to access certain Windows functions or settings quickly. The functions of hotkeys are symbolized by the icons printed on them.

Hotkey	Function
⊠	Mute/Unmute sound.
◁−/◁+	Decrease/Increase volume.
✕	Enable/Disable the microphones.
☼−/☼+	Decrease/Increase the screen brightness.
▱|▤	Switch display devices.
✈	Turn on/off airplane mode.
⚙	Start the **Settings** app.
▨	Enable/Disable the camera.
▨	Enable/Disable the touchpad.
PrtSc	Enable/Disable the print screen function.
Insert	Switch between insert mode and overtype mode.
⬚	Start/End screen recording. **Note:** This function is available only when you are playing games.
☀+/☀−	Increase/Decrease the keyboard backlight.

Hotkey mode

Some hotkeys share keys with functions keys (F1 to F12). The hotkey mode is a UEFI/BIOS setting that changes how hotkeys (or function keys) are used.

Hotkey mode setting	How to use hotkeys	How to use function keys
Disabled	Hold down the Fn key and press one of the hotkeys.	Press the function keys directly.
Enabled	Press the hotkeys directly.	Hold down the Fn key and press one of the function keys.

Note: Hotkeys that do not share keys with function keys are not affected by the hotkey mode setting. They should always be used with the Fn key.

Hidden keys

Some numeric and character keys on your keyboard can be used with the Fn key to enable certain settings. These keys are called hidden keys.

Hidden keys	Function
Fn + 4	Enter sleep mode.
Fn + B	Activate the break function.
Fn + P	Activate the pause function.
Fn + K	Enable/Disable scroll lock.
Fn + S	Activate system request.
Fn + Q	Adjust fans speed.(Normal-Fast)

Use multimedia

Use your computer for business or entertainment with the built-in components (camera, speakers, and audio features) or connected external devices (an external projector, monitor, and HDTV).

Use audio

To enhance your listening experience, connect speakers, headphones, or a headset with a 3.5-mm (0.14-inches) and 4-pole plug to the audio connector.

Change the sound settings

1. Go to Control Panel and view by category.
2. Click **Hardware and Sound → Sound**.
3. Change the settings as you prefer.

Use the camera

You can use the built-in camera to take photos or record videos. The indicator next to the camera turns on when the camera is activated.

To take photos or record a video:

1. Open the Start menu and click **Camera**.
2. To take a photo, click the camera icon. If you want to record video, click the video icon to switch to video mode.

If you use other programs that provide features such as photographing, video capturing, and video conference, the camera starts automatically when you enable the camera-required feature.

To configure the camera settings, open the Start menu and then click **Lenovo Vantage → Hardware Settings → Audio/Visual**. Locate the **Camera** section and then follow the on-screen instructions to configure the camera settings.

Connect to an external display

Connect your computer to a projector or a monitor to give presentations or expand your workspace.

Connect a wired display

1. Connect the external display to an appropriate video connector on your computer, such as the HDMI connector or Mini DisplayPort connector.
2. Connect the external display to an electrical outlet.
3. Turn on the external display.

If your computer cannot detect the external display, right-click a blank area on the desktop, and then click **Display settings → Detect**.

Supported resolution

Your computer supports the following video resolution, if the external display also supports that resolution.

Connect the external display to	Supported resolution
the USB-C connector or the Mini DisplayPort connector	Up to 3840 x 2160 pixels / 60 Hz
the HDMI connector	Up to 3840 x 2160 pixels / 60 Hz

Connect a wireless display (for computers and external displays supporting Miracast®)

- Open the Start menu, and then click **Settings → Devices → Connected devices → Add a device.**
- Click the action center icon ▤ in the Windows notification area and click **Connect.** Select the wireless display and follow the on-screen instructions.

Set the display mode

Press ▱|▨ and then select a display mode of your preference.

- **PC screen only**: Displays the video output only on your computer screen.

  Note: Depending on the situation, you might see **Disconnect**, **PC screen only**, **Computer only**, or **Disconnect projector.**
- **Duplicate**: Displays the same video output on both your computer screen and an external display.
- **Extend**: Extends the video output from your computer display to an external display. You can drag and move items between the two displays.
- **Second screen only**: Displays the video output only on an external display.

  Note: Depending on the situation, you might see **Projector only** or **Second screen only**.

If you show programs using DirectDraw or Direct3D® in full-screen mode, only the main display shows the video output.

Change display settings

1. Right-click a blank area on the desktop and select **Display settings.**
2. Select the display that you want to configure.
3. Change display settings of your preference.

You can change the settings for both the computer display and the external display. For example, you can define which one is the main display and which one is the secondary display. You also can change the resolution and orientation.

Note: If you set a higher resolution for the computer display than the external display, only part of the screen can be displayed on the external display.

Chapter 3. Explore your computer

Manage power

Use the information in this section to achieve the best balance between performance and power efficiency.

Check the battery status

The battery status icon ▣ or ▣ is in the Windows notification area. You can check the battery status, view the current power plan, and access battery settings quickly.

Click the battery status icon to display the percentage of battery power remaining and change the power mode. A warning message is displayed when the battery is low.

Charge the battery

When the battery power is low, charge your battery by connecting your computer to ac power.

The battery is fully charged in about four to eight hours. The actual charging time depends on the battery size, the physical environment, and whether you are using the computer.

Battery charging is also affected by its temperature. The recommended temperature range for charging the battery is between 10°C (50°F) and 35°C (95°F).

Notes:

- To maximize the life of the battery, the computer does not start recharging the battery if the remaining power is greater than 95%.
- If the power adapter shipped with your computer supports the rapid charge function, the battery is xx% charged in about xx hour when the computer is turned off.

Check the battery temperature

1. Open the Start menu and click Lenovo Vantage.
2. Click **Hardware Settings → Power**.
3. Locate the **Power Status** section and then click **Show Details** to view the battery temperature.

Maximize the battery life

- Lower the brightness of the computer display.
- Turn off the wireless features when not in use.
- Use the battery until the charge is depleted.
- Recharge the battery completely before using it.

Set power button behaviors

You can define what the power button does according to your preference. For example, by pressing the power button, you can turn off the computer or put the computer to sleep or hibernation mode.

To change what the power button does:

1. Right-click the battery status icon in the Windows notification area.

2. Click **Power Options** → **Choose what the power button does.**

3. Change the settings as you prefer.

Set the power plan

For ENERGY STAR® compliant computers, the following power plan takes effect when your computers have been idle for a specified duration:

Table 1. Default power plan (when plugged into ac power)

- Turn off the display: After 10 minutes
- Put the computer to sleep: After 30 minutes

To reset the power plan to achieve the best balance between performance and power saving:

1. Right-click the battery status icon and select **Power Options.**

2. Choose or customize a power plan of your preference.

Transfer data

Quickly share your files using the built-in Bluetooth among devices with the same features.

Connect a Bluetooth-enabled device

You can connect all types of Bluetooth device to your computer, such as a keyboard, a mouse, a smartphone, or speakers. The devices must be within a short distance, usually 10 meters (33 feet), from the computer.

1. Open the Start menu, and then click **Settings** → **Devices** → **Bluetooth & other devices.** Turn on the **Bluetooth** switch.

2. Click **Add Bluetooth or other device** → **Bluetooth.**

3. Select a Bluetooth device, and then follow the on-screen instructions.

Your Bluetooth-enabled device and computer will automatically connect the next time if the two devices are in range of each other with Bluetooth turned on. You can use Bluetooth for data transfer or remote control and communication.

Airplane mode

When the Airplane mode is enabled, all wireless features are disabled.

To enable or disable the Airplane mode:

1. Open the Start menu.

2. Click **Settings** → **Network & Internet** → **Airplane mode.**

3. Turn on or turn off the **Airplane mode** switch.

Chapter 4.   Secure your computer and information

Lock the computer

Lock your computer to a desk, table, or other fixtures through a compatible security cable lock.

Note: The slot supports cable locks that conform to the Kensington MiniSaver® lock standards using Cleat™ locking technology. Do not attempt to use other types of cable locks that use a rotating T-bar™ locking mechanism.You are responsible for evaluating, selecting, and implementing the locking device and security feature. Lenovo makes no comments, judgments, or warranties about the function, quality, or performance of the locking device and security feature. Cable locks for your product are available from Lenovo at https://www.lenovoquickpick.com.

Use passwords

This section introduces types of passwords in UEFI (Unified Extensible Firmware Interface) or BIOS (Basic Input/Output System) and how to set, change, and remove a password.

Password types

You can set various passwords in the UEFI/BIOS setup utility.

Password type	Pre-requisite	When set
Administrator password	No	You must enter it to start the setup utility.
User password	The administrator password must be set.	You can use the user password to start the setup utility.

Password type	Pre-requisite	When set
Master hard disk password	No	You must enter it to start the operating system.
User hard disk password	The master hard disk password must be set.	You can use the user hard disk password to start the operating system.

Notes:

- All passwords set in the setup utility consist of alphanumeric characters only.
- If you start the setup utility using the user password, you can only change a few settings.

Set administrator password

You set the administrator password to prevent unauthorized access to the UEFI/BIOS setup utility.

Attention: If you forget the administrator password, a Lenovo authorized servicer cannot reset your password. You must take your computer to a Lenovo authorized service personnel 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.

Step 1. Start the UEFI/BIOS setup utility.

Step 2. Select **Security → Set Administrator Password** and press Enter.

Step 3. Enter a password string that contains only letters and numbers. Then, press Enter.

Step 4. Enter the password again and press Enter.

Step 5. Select **Exit → Exit Saving Changes**.

Next time you start the computer, you must enter the administrator password to start the setup utility. If **Power on Password** is enabled, you must enter the administrator password or the user password to start the computer.

Change or remove administrator password

Only the administrator can change or remove the administrator password.

Step 1. Start the UEFI/BIOS setup utility using the administrator password.

Step 2. Select **Security → Set User Password** and press Enter.

Step 3. Enter the current password.

Step 4. In the **Enter New Password** text box, enter the new password.

Step 5. In the **Confirm New Password** text box, enter the new password again.

> **Note:** If you want to remove the password, press Enter in both text boxes and do not enter any character.

Step 6. Select **Exit → Exit Saving Changes**.

If you removes the administrator password, the user password is also removed.

Set user password

Before you can set up user password, the administrator password must be set.

The administrator of the setup utility might need to set up a user password for use by others.

Step 1.　Start the UEFI/BIOS setup utility using the administrator password.

Step 2.　Select **Security → Set User Password** and press Enter.

> **Note:** The user password must be different from the administrator password.

Step 3.　Enter a password string that contains only letters and numbers. Then, press Enter.The user password must be different from the administrator password.

Step 4.　Enter the password again and press Enter.

Step 5.　Select **Exit → Exit Saving Changes**.

Enable power-on password

If the administrator password has been set, you can enable power-on password to enforce greater security.

Step 1.　Start the UEFI/BIOS setup utility.

Step 2.　Select **Security → Power on Password** and press Enter.

> **Note:** The administrator password must be set in advance.

Step 3.　Change the setting to **Enabled.**

Step 4.　Select **Exit → Exit Saving Changes**.

If power-on password is enabled, a prompt appears on the screen every time you turn on the computer. You must enter the administrator or user password to start the computer.

Set hard disk password

You can set a hard disk password in the setup utility to prevent unauthorized access to your data.

Attention: Be extremely careful when setting a hard disk password. If you forget the hard disk password, a Lenovo authorized service personnel cannot reset your password or recover data from the hard disk. You must take your computer to a Lenovo authorized service personnel 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.

Step 1.　Start the UEFI/BIOS setup utility.

Step 2.　Select **Security → Set Hard Disk Password** and press Enter.

> **Note:** If you start the setup utility using the user password, you cannot set hard disk password.

Step 3.　Follow on-screen instructions to set both the master and the user passwords.

> **Note:** The master and user hard disk passwords must be set at the same time.

Step 4.　Select **Exit → Exit Saving Changes**.

If the hard disk password is set, you must enter the correct password to start the operating system.

Change or remove hard disk password

Step 1.　Start the UEFI/BIOS setup utility.

Step 2.　Select **Security.**

Step 3.　Change or remove the hard disk password.

> To change or remove master password, select **Change Master Password** and press Enter.

Note: If you remove the master hard disk password, the user hard disk password is also removed.

To change user password, select **Change User Password** and press Enter.

Note: The user hard disk password cannot be removed separately.

Step 4. Select **Exit → Exit Saving Changes.**

Use firewalls and antivirus programs

Your computer might be preinstalled with a firewall program. The firewall protects against computer Internet security threats, unauthorized access, intrusions, and Internet attacks. It also protects your privacy.

A full version of antivirus program is provided with a free 30-day subscription. After 30 days, you must renew the license to continue receiving the antivirus program updates.

For more information, see the help system of the program.

Chapter 5. Configure advanced settings

This chapter provides information about UEFI/BIOS, recovery, operating system installation, and system management.

UEFI/BIOS

This section introduces what is UEFI/BIOS and the operations you can perform in UEFI/BIOS.

What is UEFI/BIOS setup utility

UEFI/BIOS is the first program that the computer runs when the computer is turned on. UEFI/BIOS initializes the hardware components and loads the operating system and other programs. Your computer may include a setup program (setup utility) with which you can change UEFI/BIOS settings.

Start the UEFI/BIOS setup utility

Step 1. Turn on or restart the computer.

Step 2. When the Lenovo logo appears on the screen, press F2 repeatedly.

Note: For computers with hotkey mode enabled, press Fn + F2.

Navigate in the BIOS interface

You can navigate in the BIOS interface by pressing the following keys:

F1	Displays the General Help screen.
F9	Restores to the default settings.
F10	Saves your configuration and exit.
F5	Changes to a lower value.
F6	Changes to a higher value.
↑↓	Locates an item.
←→	Selects a tab.
Esc	Exits the submenu and return to the parent menu.
Enter	Enters the selected tab or submenu.

Change the startup sequence

1. Start the UEFI/BIOS setup utility.
2. Select **Startup** → **Boot**. Then press Enter. The default device order list is displayed.

   Note: The **Boot** menu is displayed if the computer cannot start from any devices or the operating system cannot be found.

3. Set the startup sequence as desired.
4. Press F10 to save the changes and restart the computer.

To change the startup sequence temporarily:

1. Restart the computer. When the logo screen is displayed, press F12.
2. Select the device that you want the computer to start from and press Enter.

Set the system date and time

1. Start the UEFI/BIOS setup utility.
2. Select **Date/Time** and set the system date and time as desired.
3. Press F10 to save changes and exit.

Change hotkey mode

Step 1. Start the UEFI/BIOS setup utility.

Step 2. Select **Configuration → Hotkey Mode** and press Enter; change the setting to **Disabled** or **Enabled**.

Step 3. Select **Exit → Exit Saving Changes**.

Enable/Disable always-on

For some Lenovo computers with always-on connectors, the always-on function can be enabled/disabled in the UEFI/BIOS setup utility.

Step 1. Start the UEFI/BIOS setup utility.

Step 2. Select **Configuration → Always On USB** and press Enter; change the setting to **Disabled** or **Enabled**.

Step 3. Select **Exit → Exit saving changes**.

Note: If Lenovo Vantage (software) is pre-installed on your computer, you can also enable/disable always-on in it.

Update UEFI/BIOS

When you install a new program, device driver, or hardware component, you might need to update UEFI/BIOS.

Download and install the latest UEFI/BIOS update package by one of the following methods:

- From Lenovo Vantage:
    1. Open Lenovo Vantage. See "Use Lenovo Vantage" on page 14.
    2. Click **System Update**. In the **Lenovo System Update** section, click **Check For Updates**. The available update packages are displayed and categorized by critical, recommended, or optional.
    3. If the latest UEFI/BIOS update package is available, select the package and click **Install selected**. Then, the update package will be downloaded and installed automatically.
- From the Lenovo Support Web site:

    Go to https://support.lenovo.com and select the entry for your computer. Then, follow the on-screen instructions to download and install the latest UEFI/BIOS update package.

Recovery information

This section introduces the recovery information of the Windows 10 operating system. Ensure that you read and follow the on-screen recovery instructions. The data on your computer might be deleted during the recovery process. To avoid data loss, make a backup copy of all the data that you want to keep.

Reset your computer

In the resetting process, you can choose to keep your files or remove them when you reinstall the operating system.

Note: The items in the graphical user interface (GUI) might change without notice.
1. Open the Start menu, and then click **Settings → Update & Security → Recovery.**
2. In the **Reset this PC** section, click **Get started.**
3. Follow the on-screen instructions to reset your computer.

Use advanced options

Note: The items in the graphical user interface (GUI) might change without notice.
1. Open the Start menu, and then click **Settings → Update & security → Recovery.**
2. In the **Advanced startup** section, click **Restart now → Troubleshoot → Advanced options.**
3. Select a preferred option from the following list, and then follow the on-screen instructions.

- Restore the Windows operating system from a restore point recorded on your computer
- Restore the Windows operating system from a specific system image
- Fix problems that prevent the Windows operating system from loading
- Use the Command Prompt for advanced troubleshooting
- Change the UEFI firmware settings on your computer
- Change the startup settings of the Windows operating system
- Go back to the previous build

Windows automatic recovery

Note: Ensure that your computer is connected to ac power during the recovery process.

The Windows recovery environment on your computer operates independently from the Windows 10 operating system. It enables you to recover or repair the operating system even if the Windows 10 operating system fails to start.

After two consecutive failed boot attempts, the Windows recovery environment starts automatically. Then you can choose repair and recovery options by following the on-screen instructions.

Create and use a recovery USB device

It is recommended that you create a recovery USB drive as early as possible as a backup for the Windows recovery programs. With the recovery USB drive, you can troubleshoot and fix the problems even if the preinstalled Windows recovery programs are damaged. If you did not create a recovery USB drive as a precautionary measure, you can contact Lenovo Customer Support Center and purchase one from Lenovo. For a list of the Lenovo Support phone numbers for your country or region, go to:

https://pcsupport.lenovo.com/supportphonelist

Create a recovery USB drive

Attention: The creation process deletes anything stored on the USB drive. To avoid data loss, make a backup copy of all the data that you want to keep.

1. Ensure that your computer is connected to ac power.

2. Prepare a USB drive with at least 16 GB of storage capacity. The actual USB capacity required depends on the size of the recovery image.

3. Connect the prepared USB drive to the computer.

4. Type recovery in the search box. Then click **Create a recovery drive.**

5. Click **Yes** in the User Account Control window to allow the Recovery Media Creator program to start.

6. In the Recovery Drive window, follow the on-screen instructions to create a recovery USB drive.

Use the recovery USB drive

1. Ensure that your computer is connected to ac power.

2. Connect the recovery USB drive to the computer.

3. Turn on or restart the computer. When the logo screen is displayed, press F12. The Boot Menu window opens.

4. Select the recovery USB drive as the boot device.

5. Click **Troubleshoot** to display optional recovery solutions.

6. Select a recovery solution as desired. Then follow the on-screen instructions to complete the process.

Chapter 6. Help and support

Frequently asked questions

How do I access Control Panel?	• Open the Start menu and click **Windows System** ➙ **Control Panel**. • Use Windows Search.
How do I turn off my computer?	Open the Start menu and click ⏻ **Power**. Then click **Shut down**.
How do I partition my storage drive?	https://support.lenovo.com/solutions/ht503851
What do I do if my computer stops responding.	Press and hold the power button until the computer turns off. Then restart the computer.
What do I do if I spill liquid on the computer?	1. Carefully unplug the ac power adapter and turn off the computer immediately. The more quickly you stop the current from passing through the computer the more likely you will reduce damage from short circuits. **Attention:** Although you might lose some data or work by turning off the computer immediately, leaving the computer on might make your computer unusable. 2. Do not try to drain out the liquid by turning over the computer. If your computer has keyboard drainage holes on the bottom, the liquid will be drained out through the holes. 3. Wait until you are certain that all the liquid is dry before turning on your computer.
How do I enter the BIOS menu?	Restart the computer. When the logo screen is displayed, press F2 to enter the BIOS menu.
Where can I get the latest device drivers and UEFI/BIOS?	• From Lenovo Vantage. See "Use Lenovo Vantage" on page 14. • Download from Lenovo Support Web site at https://support.lenovo.com.

Self-help resources

Use the following self-help resources to learn more about the computer and troubleshoot problems.

Resources	How to access?
Use Lenovo Vantage to: • Download and install the latest drivers and firmware. • Configure hardware settings. • Diagnose computer hardware problems. • Check the computer warranty status. • Protect you computer from malicious Wi-Fi networks.	• Open the Start menu and click **Lenovo Vantage**. • Use Windows Search.
Product documentation: • *Safety and Warranty Guide* • *Setup Guide* • This *User Guide* • *Regulatory Notice*	1. Go to https://support.lenovo.com. 2. Detect your computer or select computer model manually. 3. Select **Documentation** and filter out the documentation you want.
Lenovo Support Web site with the latest support information of the following: • Drivers and software • Diagnostic solutions • Product and service warranty • Product and parts details • Knowledge base and frequently asked questions	https://support.lenovo.com
Windows help information	• Open the Start menu and click **Get Help** or **Tips**. • Use Windows Search or the Cortana® personal assistant. • Microsoft support Web site: https://support.microsoft.com

Call Lenovo

If you have tried to correct the problem yourself and still need help, you can call Lenovo Customer Support Center.

Before you contact Lenovo

Prepare the following before you contact Lenovo:

1. Record the problem symptoms and details:

   - What is the problem? Is it continuous or intermittent?
   - Any error message or error code?
   - What operating system are you using? Which version?
   - Which software applications were running at the time of the problem?
   - Can the problem be reproduced? If so, how?

2. Record the system information:

   - Product name
   - Machine type and serial number

     The following illustration shows where to find the machine type and serial number of your computer.

Lenovo Customer Support Center

During the warranty period, you can call Lenovo Customer Support Center for help.

Telephone numbers

For a list of the Lenovo Support phone numbers for your country or region:

- Go to https://pcsupport.lenovo.com/supportphonelist for the latest phone numbers.
- Refer to the *Safety and Warranty Guide* that comes with your computer.

Note: Phone numbers are subject to change without notice. If the number for your country or region is not provided, contact your Lenovo reseller or Lenovo marketing representative.

Services available during the warranty period

- Problem determination - Trained personnel are available to assist you with determining if you have a hardware problem and deciding what action is necessary to fix the problem.
- Lenovo hardware repair - If the problem is determined to be caused by Lenovo hardware under warranty, trained service personnel are available to provide the applicable level of service.

- Engineering change management - Occasionally, there might be changes that are required after a product has been sold. Lenovo or your reseller, if authorized by Lenovo, will make selected Engineering Changes (ECs) that apply to your hardware available.

Services not covered

- Replacement or use of parts not manufactured for or by Lenovo or nonwarranted parts
- Identification of software problem sources
- Configuration of UEFI/BIOS as part of an installation or upgrade
- Changes, modifications, or upgrades to device drivers
- Installation and maintenance of network operating systems (NOS)
- Installation and maintenance of programs

For the terms and conditions of the Lenovo Limited Warranty that apply to your Lenovo hardware product, see "Warranty information" in the *Safety and Warranty Guide* that comes with your computer.

Purchase additional services

During and after the warranty period, you can purchase additional services from Lenovo at https:// www.lenovo.com/services.

Service availability and service name might vary by country or region.

Appendix A. Important safety information

Safety notices

This information can help you safely use your computer. Follow and retain all information included with your computer. The information in this document does not alter the terms of your purchase agreement or the Limited Warranty. For more information, see "Warranty Information" in the *Safety and Warranty Guide* that comes with your computer.

Customer safety is important. Our products are developed to be safe and effective. However, personal computers are electronic devices. Power cords, power adapters, and other features can create potential safety risks that can result in physical injury or property damage, especially if misused. To reduce these risks, follow the instructions included with your product, observe all warnings on the product and in the operating instructions, and review the information included in this document carefully. By carefully following the information contained in this document and provided with your product, you can help protect yourself from hazards and create a safer computer work environment.

Note: This information includes references to power adapters and batteries. In addition, some products (such as speakers and monitors) ship with external power adapters. If you have such a product, this information applies to your product. In addition, computer products contain a coin-sized internal battery that provides power to the system clock even when the computer is unplugged, so the battery safety information applies to all computer products.

Important information about using your computer

Ensure that you follow the important tips given here to get the most use and enjoyment out of your computer. Failure to do so might lead to discomfort or injury, or cause the computer to fail.

Protect yourself from the heat that your computer generates.

When your computer is turned on or the battery is charging, the base, the palm rest, and some other parts may become hot. The temperature they reach depends on the amount of system activity and the level of charge in the battery.

Extended contact with your body, even through clothing, could cause discomfort or even a skin burn.

- Avoid keeping your hands, your lap, or any other part of your body in contact with a hot section of the computer for any extended time.
- Periodically take hands from using the keyboard by lifting your hands from the palm rest.

Protect yourself from the heat generated by the ac power adapter.

When the ac power adapter is connected to an electrical outlet and your computer, it generates heat.

Extended contact with your body, even through clothing, may cause a skin burn.

- Do not place the ac power adapter in contact with any part of your body while it is in use.
- Never use it to warm your body.
- Do not wrap the cords around the ac power adapter while in use.

Prevent your computer from getting wet.

To avoid spills and the danger of electrical shock, keep liquids away from your computer.

Protect the cables from being damaged.
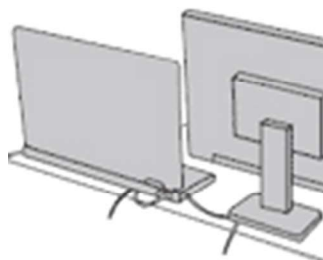
Applying strong force to cables may damage or break them.

Route communication lines, or the cables of an ac power adapter, a mouse, a keyboard, a printer, or any other electronic device, so that they cannot be walked on, tripped over, pinched by your computer or other objects, or in any way subject to treatment that could interfere with the operation of your computer.

Protect your computer and data when moving it.

Before moving a computer equipped with a hard disk drive, do one of the following:

- Turn it off.
- Put it in sleep mode.
- Put it in hibernation mode.

This helps to prevent damage to the computer, and possible loss of data.

Handle your computer gently.

Do not drop, bump, scratch, twist, hit, vibrate, push, or place heavy objects on your computer, display, or external devices.
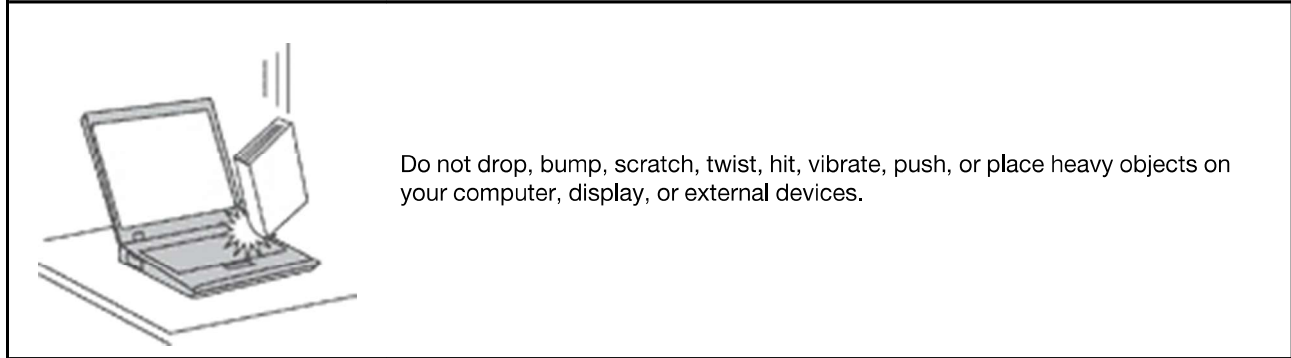
Carry your computer carefully.

- Use a quality carrying case that provides adequate cushioning and protection.
- Do not pack your computer in a tightly packed suitcase or bag.
- Before putting your computer in a carrying case, make sure that it is off, in sleep mode, or in hibernation mode. Do not put a computer in a carrying case while it is turned on.
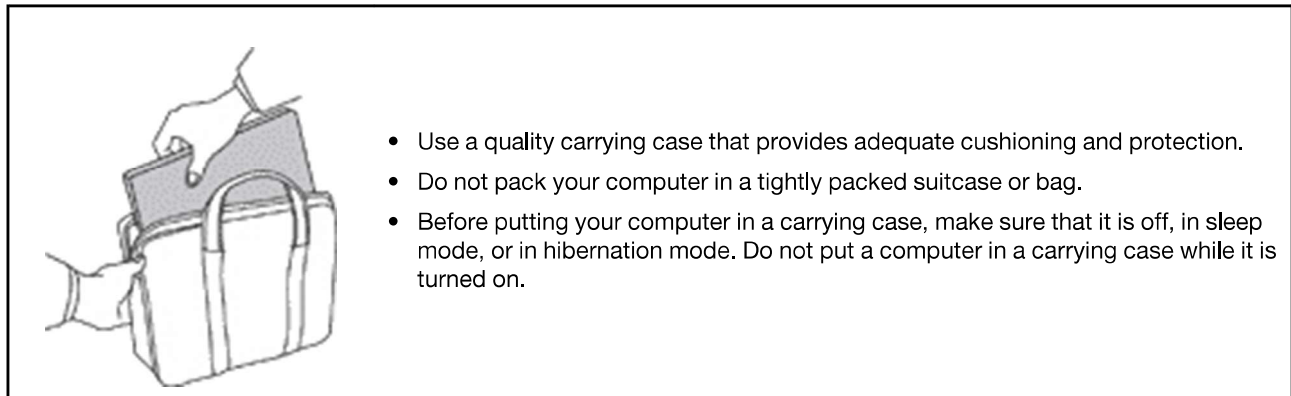
Conditions that require immediate action

Products can become damaged due to misuse or neglect. Some product damage is serious enough that the product should not be used again until it has been inspected and, if necessary, repaired by an authorized servicer.

As with any electronic device, pay close attention to the product when it is turned on.

On very rare occasions, you might notice an odor or see a puff of smoke or sparks vent from your product. Or you might hear sounds like popping, cracking, or hissing. These might merely mean that an internal electronic component has failed in a safe and controlled manner. Or, they might indicate a potential safety issue. Do not take risks or attempt to diagnose the situation yourself. Contact the Customer Support Center for further guidance. For a list of Service and Support phone numbers, see the following Web site:

https://pcsupport.lenovo.com/supportphonelist

Frequently inspect your computer and its components for damage or wear or signs of danger. If you have any question about the condition of a component, do not use the product. Contact the Customer Support Center or the product manufacturer for instructions on how to inspect the product and have it repaired, if necessary.

In the unlikely event that you notice any of the following conditions, or if you have any safety concerns with your product, stop using the product and unplug it from the power source and telecommunication lines until you can speak to the Customer Support Center for further guidance.

- Power cords, plugs, power adapters, extension cords, surge protectors, or power supplies that are cracked, broken, or damaged.
- Signs of overheating, smoke, sparks, or fire.
- Damage to a battery (such as cracks, dents, or creases), discharge from a battery, or a buildup of foreign substances on the battery.
- A cracking, hissing, or popping sound, or strong odor that comes from the product.
- Signs that liquid has been spilled or an object has fallen onto the computer product, the power cord, or power adapter.
- The computer product, power cord, or power adapter has been exposed to water.
- The product has been dropped or damaged in any way.
- The product does not operate normally when you follow the operating instructions.

Note: If you notice these conditions with a product (such as an extension cord) that is not manufactured for or by Lenovo, stop using that product until you can contact the product manufacturer for further instructions, or until you get a suitable replacement.

Service and upgrades

Do not attempt to service a product yourself unless instructed to do so by the Customer Support Center or your documentation. Only use a Service Provider who is approved to repair your particular product.

Note: Some computer parts can be upgraded or replaced by the customer. Upgrades typically are referred to as options. Replacement parts approved for customer installation are referred to as Customer Replaceable Units, or CRUs. Lenovo provides documentation with instructions when it is appropriate for customers to install options or replace CRUs. You must closely follow all instructions when installing or replacing parts. The Off state of a power indicator does not necessarily mean that voltage levels inside a product are zero. Before you remove the covers from a product equipped with a power cord, always ensure that the power is turned off and that the product is unplugged from any power source. If you have any questions or concerns, contact the Customer Support Center.

Although there are no moving parts in your computer after the power cord has been disconnected, the following warnings are required for your safety.

Keep fingers and other parts of your body away from hazardous, moving parts. If you suffer an injury, seek medical care immediately.

Avoid contact with hot components inside the computer. During operation, some components become hot enough to burn the skin. Before you open the computer cover, turn off the computer, disconnect power, and wait approximately 10 minutes for the components to cool.

After replacing a CRU, reinstall all protective covers, including the computer cover, before connecting power and operating the computer. This action is important to help prevent unexpected electrical shock and help ensure the containment of an unexpected fire that could happen under extremely rare conditions.

When replacing CRUs, be cautious of sharp edges or corners that might cause injury. If you suffer an injury, seek medical care immediately.

Power cords and power adapters

DANGER

Use only the power cords and power adapters supplied by the product manufacturer.

The power cords shall be safety approved. For Germany, it shall be H03VV-F, 3G, 0.75 mm², or better. For other countries, the suitable types shall be used accordingly.

Never wrap a power cord around a power adapter or other object. Doing so can stress the cord in ways that can cause the cord to fray, crack, or crimp. This can present a safety hazard.

Always route power cords so that they will not be walked on, tripped over, or pinched by objects.

Protect power cords and power adapters from liquids. For instance, do not leave your power cord or power adapter near sinks, tubs, toilets, or on floors that are cleaned with liquid cleansers. Liquids can cause a short circuit, particularly if the power cord or power adapter has been stressed by misuse. Liquids also can cause gradual corrosion of power cord terminals and/or the connector terminals on a power adapter, which can eventually result in overheating.

Ensure that all power cord connectors are securely and completely plugged into receptacles.

Do not use any power adapter that shows corrosion at the ac input pins or shows signs of overheating (such as deformed plastic) at the ac input pins or anywhere on the power adapter.

Do not use any power cords where the electrical contacts on either end show signs of corrosion or overheating or where the power cord appears to have been damaged in any way.

To prevent possible overheating, do not cover the power adapter with clothing or other objects when the power adapter is plugged into an electrical outlet.

Extension cords and related devices

Ensure that extension cords, surge protectors, uninterruptible power supplies, and power strips that you use are rated to handle the electrical requirements of the product. Never overload these devices. If power strips are used, the load should not exceed the power strip input rating. Consult an electrician for more information if you have questions about power loads, power requirements, and input ratings.

Plugs and outlets

⚠️**DANGER**

> If a receptacle (power outlet) that you intend to use with your computer equipment appears to be damaged or corroded, do not use the outlet until it is replaced by a qualified electrician.
>
> Do not bend or modify the plug. If the plug is damaged, contact the manufacturer to obtain a replacement.
>
> Do not share an electrical outlet with other home or commercial appliances that draw large amounts of electricity; otherwise, unstable voltage might damage your computer, data, or attached devices.
>
> Some products are equipped with a three-pronged plug. This plug fits only into a grounded electrical outlet. This is a safety feature. Do not defeat this safety feature by trying to insert it into a non-grounded outlet. If you cannot insert the plug into the outlet, contact an electrician for an approved outlet adapter or to replace the outlet with one that enables this safety feature. Never overload an electrical outlet. The overall system load should not exceed 80 percent of the branch circuit rating. Consult an electrician for more information if you have questions about power loads and branch circuit ratings.
>
> Be sure that the power outlet you are using is properly wired, easily accessible, and located close to the equipment. Do not fully extend power cords in a way that will stress the cords.
>
> Be sure that the power outlet provides the correct voltage and current for the product you are installing.
>
> Carefully connect and disconnect the equipment from the electrical outlet.

Power supply statement

Never remove the cover on a power supply or any part that has the following label attached.

Hazardous voltage, current, and energy levels are present inside any component that has this label attached. There are no serviceable parts inside these components. If you suspect a problem with one of these parts, contact a service technician.

External devices

CAUTION:
Do not connect or disconnect any external device cables other than Universal Serial Bus (USB) and 1394 cables while the computer power is on; otherwise, you might damage your computer. To avoid possible damage to attached devices, wait at least five seconds after the computer is shut down to disconnect external devices.

General battery notice

⚠️DANGER

Batteries supplied by Lenovo for use with your product have been tested for compatibility and should only be replaced with approved parts. A battery other than the one specified by Lenovo, or a disassembled or modified battery is not covered by the warranty.

Battery abuse or mishandling can cause overheat, liquid leakage, or an explosion. To avoid possible injury, do the following:

- Do not open, dissemble, or service any battery.
- Do not crush or puncture the battery.
- Do not short-circuit the battery, or expose it to water or other liquids.
- Keep the battery away from children.
- Keep the battery away from fire.

Stop using the battery if it is damaged, or if you notice any discharge or the buildup of foreign materials on the battery leads.

Store the rechargeable batteries or products containing the rechargeable batteries at room temperature, charged to approximately 30 to 50% of capacity. We recommend that the batteries be charged about once per year to prevent overdischarge.

Do not put the battery in trash that is disposed of in landfills. When disposing of the battery, comply with local ordinances or regulations.

Notice for removable rechargeable battery

⚠️DANGER

Only recharge the battery strictly according to instructions included in the product documentation.

If the battery is incorrectly replaced, there is danger of an explosion. The battery contains a small amount of harmful substances.

Notice for built-in rechargeable battery

⚠️DANGER

Do not attempt to remove or replace the built-in rechargeable battery. Replacement of the battery must be done by a Lenovo-authorized repair facility or technician.

Only recharge the battery strictly according to instructions included in the product documentation.

The Lenovo-authorized repair facilities or technicians recycle Lenovo batteries according to local laws and regulations.

Lithium coin-cell battery notice

⚠️DANGER

Danger of explosion if battery is incorrectly replaced.

If the coin-cell battery is not a CRU, do not attempt to replace the coin-cell battery. Replacement of the battery must be done by a Lenovo-authorized repair facility or technician.

The Lenovo-authorized repair facilities or technicians recycle Lenovo batteries according to local laws and regulations.

⚠️

When replacing the lithium coin-cell battery, use only the same type or equivalent type that is recommended by the manufacturer. The battery contains lithium and can explode if not properly used, handled, or disposed of. Swallowing the lithium coin-cell battery will cause chocking or severe internal burns in just two hours and might even result in death.

Keep batteries away from children. If the lithium coin-cell battery is swallowed or placed inside any part of the body, seek medical care immediately.

Do not:
- Throw or immerse into water
- Heat to more than 100 °C (212°F).
- Repair or disassemble
- Leave in an extremely low air pressure environment
- Leave in an extremely high-temperature environment
- Crush, puncture, cut, or incinerate

Dispose of the battery as required by local ordinances or regulations.

The following statement applies to users in the state of California, U.S.A.

California Perchlorate Information:

Products containing manganese dioxide lithium coin-cell batteries may contain perchlorate.

Perchlorate Material - special handling may apply, see https://www.dtsc.ca.gov/hazardouswaste/perchlorate/.

Heat and product ventilation

⚠️**DANGER**

Computers, ac power adapters, and many accessories can generate heat when turned on and when batteries are charging. Notebook computers can generate a significant amount of heat due to their compact size. Always follow these basic precautions:

- When your computer is turned on or the battery is charging, the base, the palm rest, and some other parts may become hot. Avoid keeping your hands, your lap, or any other part of your body in contact with a hot section of the computer for any extended length of time. When you use the keyboard, avoid keeping your palms on the palm rest for a prolonged period of time. Your computer generates some heat during normal operation. The amount of heat depends on the amount of system activity and the battery charge level. Extended contact with your body, even through clothing, could cause discomfort or even a skin burn. Periodically take breaks from using the keyboard by lifting your hands from the palm rest; and be careful not to use the keyboard for any extended length of time.

- Do not operate your computer or charge the battery near flammable materials or in explosive environments.

- Ventilation slots, fans and/or heat sinks are provided with the product for safety, comfort, and reliable operation. These features might inadvertently become blocked by placing the product on a bed, sofa, carpet, or other flexible surface. Never block, cover, or disable these features.

- When the ac power adapter is connected to an electrical outlet and your computer, it generates heat. Do not place the adapter in contact with any part of your body while using it. Never use the ac power adapter to warm your body. Extended contact with your body, even through clothing, may cause a skin burn.

For your safety, always follow these basic precautions with your computer:

- Keep the cover closed whenever the computer is plugged in.

- Regularly inspect the outside of the computer for dust accumulation.

- Remove dust from vents and any perforations in the bezel. More frequent cleanings might be required for computers in dusty or high-traffic areas.

- Do not restrict or block any ventilation openings.

- Do not operate your computer inside furniture, as this might increase the risk of overheating.

- Airflow temperatures into the computer should not exceed 35°C (95°F).

Electrical current safety information

⚠ DANGER

> **Electric current from power, telephone, and communication cables is hazardous.**
>
> **To avoid a shock hazard:**
>
> - **Do not use your computer during a lightning storm.**
> - **Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.**
> - **Connect all power cords to a properly wired and grounded electrical outlet.**
> - **Connect properly wired outlets to any equipment that will be attached to this product.**
> - **Whenever possible, use one hand only to connect or disconnect signal cables.**
> - **Never turn on any equipment when there is evidence of fire, water, or structural damage.**
> - **Disconnect the attached power cords, battery, and all the cables before you open the device covers, unless instructed otherwise in the installation and configuration procedures.**
> - **Do not use your computer until all internal parts enclosures are fastened into place. Never use the computer when internal parts and circuits are exposed.**

⚠ DANGER

> **Connect and disconnect cables as described in the following procedures when installing, moving, or opening covers on this product or attached devices.**
>
> **To connect:**
> 1. **Turn everything OFF.**
> 2. **First, attach all cables to devices.**
> 3. **Attach signal cables to connectors.**
> 4. **Attach power cords to outlets.**
> 5. **Turn devices ON.**
>
> **To disconnect:**
> 1. **Turn everything OFF.**
> 2. **First, remove power cords from outlets.**
> 3. **Remove signal cables from connectors.**
> 4. **Remove all cables from devices.**

The power cord must be disconnected from the wall outlet or receptacle before installing all other electrical cables connected to the computer.

The power cord may be reconnected to the wall outlet or receptacle only after all other electrical cables have been connected to the computer.

⚠ DANGER

> **During electrical storms, do not perform any replacement and do not connect the telephone cable to or disconnect it from the telephone outlet on the wall.**

Liquid crystal display (LCD) notice

CAUTION:
The liquid crystal display (LCD) is made of glass, and rough handling or dropping the computer can cause the LCD to break. If the LCD breaks and the internal fluid gets into your eyes or on your hands, immediately wash the affected areas with water for at least 15 minutes; if any symptoms are present after washing, get medical care.

Note: For products with mercury-containing fluorescent lamps (for example, non-LED), the fluorescent lamp in the liquid crystal display (LCD) contains mercury; dispose of according to local, state, or federal laws.

Using headphones or earphones

Excessive sound pressure from earphones and headphones can cause hearing loss. Adjustment of the equalizer to maximum increases the earphone and headphone output voltage and the sound pressure level. Therefore, to protect your hearing, adjust the equalizer to an appropriate level.

Excessive use of headphones or earphones for a long period of time at high volume can be dangerous if the output of the headphone or earphone connectors do not comply with specifications of EN 50332-2. The headphone output connector of your computer complies with EN 50332-2 Sub clause 7. This specification limits the computer's maximum wide band true RMS output voltage to 150 mV. To help protect against hearing loss, ensure that the headphones or earphones you use also comply with EN 50332-2 (Clause 7 limits) for a wide band characteristic voltage of 75 mV. Using headphones that do not comply with EN 50332-2 can be dangerous due to excessive sound pressure levels.

If your Lenovo computer came with headphones or earphones in the package, as a set, the combination of the headphones or earphones and the computer already complies with the specifications of EN 50332-1. If different headphones or earphones are used, ensure that they comply with EN 50332-1 (Clause 6.5 Limitation Values). Using headphones that do not comply with EN 50332-1 can be dangerous due to excessive sound pressure levels.

Choking hazard notice

CHOKING HAZARD – Product contains small parts.

Keep away from children under three years.

Plastic bag notice

DANGER

Plastic bags can be dangerous. Keep plastic bags away from babies and children to avoid danger of suffocation.