User Guide

intel.

Lenovo ThinkBook Plus Gen 6 Rollable

Read this first

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

- *Generic Safety and Compliance Notices*
- *Safety and Warranty Guide*
- *Setup Guide*

First Edition (January 2025)

Contents

About this guide

- This guide applies to Lenovo product model(s) listed below. Illustrations in this guide may look slightly different from your product model.

Model name	Machine type (MT)
ThinkBook Plus G6 Rollable	21TR

- For further compliance information, refer to the *Generic Safety and Compliance Notices* at https://pcsupport.lenovo.com/docs/generic_notices.
- This guide may contain information about accessories, features, and software that are not available on all models.
- This guide contains instructions that are based on the Windows operating system. These instructions are not applicable if you install and use other operating systems.
- Microsoft® makes periodic feature changes to the Windows® operating system through Windows Update. As a result, the operating system related instructions may become outdated. Refer to Microsoft resources for the latest information.
- The content of the guide is subject to change without notice. To obtain the latest version, go to https://support.lenovo.com.

Chapter 1. Meet your computer

Front view

No.	Description
1	Buzzer
2	Time-of-flight sensor
3	Infrared LED
4	Infrared camera
5	Camera
6	Camera light
7	Ambient light sensor
8	Screen

Buzzer

The buzzer is an electrical component that generates sound through the transmission of electrical signals to provide an audible alarm or notification. It is used on your computer to alert you to the incorrect operation during the display rolling process. If you adjust the opening angle of the computer to less than 90 degrees during the display rolling process, the display will stop rolling and the buzzer will produce an audible alarm simultaneously.

Time-of-flight sensor

The time-of-flight sensor (also referred to as a ToF sensor) emits an infrared laser and uses the reflected infrared energy to measure the distance and depth of objects in front of it. The data collected by the sensor can be used to detect human presence or recognize gestures.

Note: The infrared laser emitted by the ToF sensor is invisible to the human eye.

Laser safety information

This device is classified as a Class 1 consumer laser product per *IEC 60825-1:2014*, *EN 60825-1:2014 +A11:2021*, and *EN 50689:2021*. This device complies with FDA performance standards for laser products except for conformance with *IEC 60825-1 Ed. 3*, as described in *Laser Notice No. 56*, dated May 8, 2019.

CAUTION:
This device contains a laser that could be damaged during repair or disassembly, which could result in hazardous exposure to infrared laser emissions. There are no user serviceable parts within the device. Do not attempt to disassemble or service the device.

Infrared LED

The infrared LED generates and emits near-infrared waves that are received and used by a camera (or a dedicated infrared camera) for facial recognition.

Infrared camera

The infrared camera receives near-infrared waves emitted by an infrared LED and reflected by a human face. It is used for facial recognition.

Camera

The built-in camera captures visible light and converts it to digital signals. It is used for video recordings and video conferencing.

Camera light

The camera light indicates whether the camera is activated.

Table 1. Camera light status and description

Camera light status	Description
On	The camera is activated.
Off	The camera is not activated.

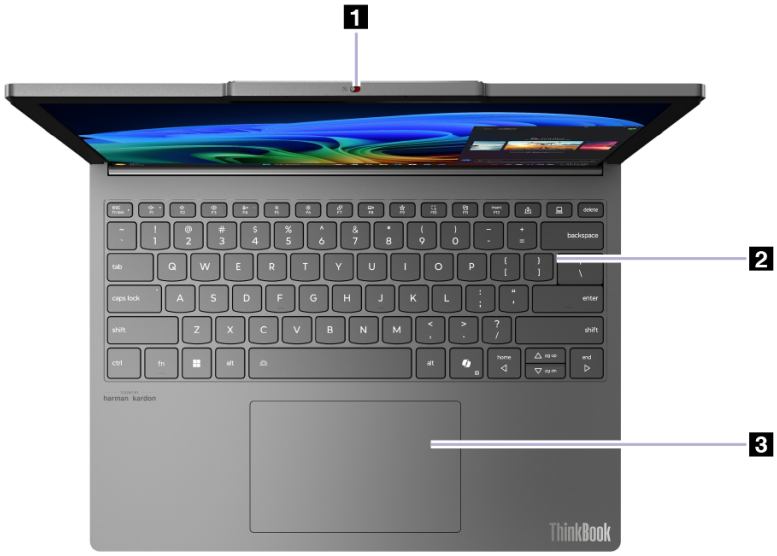
Ambient light sensor

The ambient light sensor detects and measures the intensity of light in the user's environment. The data collected by this sensor can be used to enable adaptive brightness for the PC's built-in display.

Screen

The screen of the built-in display is where text, graphics, and videos are displayed.

Top view



No.	Description
1	Camera switch
2	Keyboard
3	Touchpad

Camera switch

This toggle switch is used to enable or disable the built-in camera.

Note: This switch is designed for privacy protection. The default state of the camera is on. If you don't need to use the camera, slide the switch to the off position to prevent any apps from using the camera.

Keyboard

The keyboard is the PC's built-in input device for typing characters. It also includes keys that can make you more productive when interacting with the PC, apps, and the Windows operating system.

Note: Keyboard layouts vary by language and geographical location. The keyboard on your PC may look slightly different from those depicted in the product illustrations in this publication.

Touchpad

The touchpad is the PC's built-in pointing device. Slide your finger on the touchpad to move the pointer on the screen and tap or double-tap to select or execute a screen item.

The touchpad also supports Windows multi-finger gestures, providing a convenient alternative for switching between app windows and the desktop, activating the search box, or adjusting volumes.

Left view

No.	Description
1	Multi-purpose USB Type-C® connector (Thunderbolt™ 4 enabled)
2	Charging light
3	Combo audio jack

Multi-purpose USB Type-C connector

You can use the included power adapter and this USB Type-C® connector to supply power to the PC.

When this connector is not used by the included power adapter, it can also be used to connect:

- Storage or peripheral devices that follow the universal serial bus (USB) specification for data transfer and device interconnection
- Display devices

  Note: When connecting display devices, you need to use appropriate cables and adapters (if needed) according to the connection capabilities of the display device.
- Thunderbolt™-enabled docks or devices

Charging light

The charging light indicates whether the PC is plugged into an electrical outlet. When the PC is plugged into an electrical outlet, the color of the light indicates whether the battery is fully charged (or will shortly be fully charged).

Table 2. Charging light statuses and descriptions

Light status	Plugged in?	Battery charge level
Off	No	/
On, amber	Yes	1%–90%
On, white	Yes	91%–100%

Combo audio jack

The combo audio jack is used to connect single-plug headsets, headphones, or external speakers.

Right view

No.	Description
1	Power button
2	Power light

Power button

Press the power button to turn on your PC.

Note: By default, on a Windows PC, pressing the power button when the PC is turned on will put the PC into sleep mode.

Power light

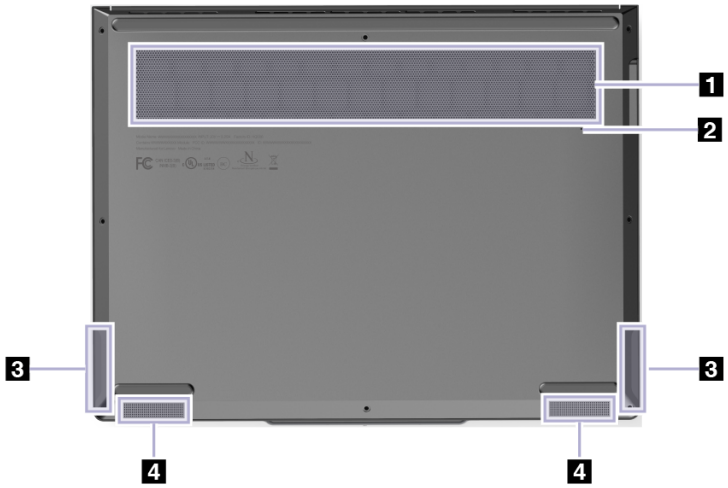
The power light indicates the current power state of the PC: whether it is powered on, powered off, in sleep mode, or in hibernation mode.

When the PC is powered on, this light can also indicate low battery by blinking rapidly.

Table 3. Power light status and description

Light status	Power state	Battery charge level
White (solid on)	Powered on	21%–100%
White (blinking rapidly)	Powered on	1%–20%
White (blinking slowly)	In sleep mode	/
Off	Powered off or in hibernation mode	/

Bottom view



No.	Description
1	Air vents (outlet)
2	Novo button hole
3	Wireless Antennas
4	Speakers

Air vents (outlet)

The air vents allow hot air to be discharged out of the PC.

Important: When the PC is operating, do not place it on a bed, sofa, carpet, or other flexible surfaces. Otherwise, the air vents will be blocked and the PC may overheat, reducing performance or causing the PC to be unresponsive or even shut down.

Novo button hole

When the PC is powered off, you can press the Novo button to display the Novo button menu. From the menu, you can then choose to:

- Open the firmware setup utility
- Display the boot device selection menu
- Display the Windows advanced startup options page

Note: The Novo button is rarely used during normal PC operations. To prevent users from accidentally pressing it, the Novo button is placed in a recessed hole. You can use a straightened paper clip to press this button.

Antennas

The antennas transmit and receive radio waves to allow data to be transferred between your PC and a Wi-Fi network device or a Bluetooth device.

Note: The antennas are hidden inside the PC.

Speakers

The speakers are the PC's built-in sound output devices.

Rear view

No.	Description
1	Air vents (intake)

Air vents (intake)

The air vents allow air to be sucked inside of the PC to cool the internal components.

Important: When the PC is operating, do not place it on a bed, sofa, carpet, or other flexible surfaces. Otherwise, the air vents will be blocked and the PC may overheat, reducing performance or causing the PC to be unresponsive or even shut down.

Specifications

Dimensions

Width	303.5 mm
Depth	230.6 mm
Thickness	19.98–20.38 mm

ac power adapter

Plug type	USB Type-C
Input	100–240 V ac, 50–60 Hz
Output voltage	20 V
Maximum current	3.25 A
Maximum power	65 W

Rechargeable battery pack

Capacity	66 Wh **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).
Cell type	Li-Polymer
Number of cells	3

Microprocessor

To view the microprocessor information of your computer, type system information in the Windows search box and then press Enter.

Memory

Type	LPDDR5X
Installation	Memory on package (MOP)
Number of DIMM slots	0

Mass storage device

Type	SSD
Slot	M.2 (2242)
Interface	PCIe Gen4

Display

Size	• Roll in: 14 inches • Roll out: 16.7 inches
Type	POLED

Resolution	• Roll in: 2000 x 1600 • Roll out: 2000 x 2350
Maximum refresh rate	120 Hz

Connectors

Multi-purpose USB Type-C connector	• Quantity: 2 • Maximum power output: 5 V, 3 A • Maximum power input: 20 V, 3.25 A • Supported signaling protocols: – USB 2.0 480 Mbps – SuperSpeed USB 5 Gbps – SuperSpeed USB 10 Gbps – SuperSpeed USB 20 Gbps – SuperSpeed USB 40 Gbps – Thunderbolt 4 41.25 Gbps – DisplayPort™ Alt Mode (DisplayPort 2.1 compliant) Maximum output resolution: 2×4K @ 60 Hz or 5k @ 60 Hz – USB Power Delivery **Note:** Data rates and performance ratings are dependent on connected devices and cables if they are used. For DisplayPort connection through a USB Type-C connector, the listed maximum output capacity is only available on external displays with a DisplayPort, a Mini DisplayPort, or a USB Type-C connector that supports DisplayPort Alternate Mode. For connections using a converter or an adapter, the actual output resolution may be lower.

Networking

Wi-Fi	Wi-Fi 7 **Note:** Different Wi-Fi standards may operate on different frequency bands. In some countries or regions, certain frequency bands may be prohibited for unlicensed use or may require specific conditions. Wi-Fi 7 on this PC are disabled in some countries or regions in accordance with local regulations.
Bluetooth	Bluetooth 5.4

Statement on USB transfer rate

Depending on many factors such as the processing capability of the host and peripheral devices, file attributes, and other factors related to system configuration and operating environments, the actual transfer rate using the various USB connectors on this device will vary and will be slower than the data rate listed below for each corresponding device.

USB device	Data rate (Gbit/s)
USB 3.2 Gen 1	5
USB 3.2 Gen 2	10
USB4 Gen 2 × 2	20
USB4 Gen 3 × 2	40

Operating environment

Maximum altitude (without pressurization)

3048 m (10 000 ft)

Temperature

- At altitudes up to 2438 m (8000 ft)
  - Operating: 5°C to 35°C (41°F to 95°F)
  - Storage: 5°C to 43°C (41°F to 109°F)
- At altitudes above 2438 m (8000 ft)
  - Maximum temperature when operating under the unpressurized condition: 31.3°C (88°F)

  Note: When you charge the battery, its temperature must be no lower than 10°C (50°F).

Relative humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage: 5% to 95% at wet-bulb temperature 27°C (81°F)

Chapter 2. Get started with your computer

Your PC and its operating system

The operating system is the most important software installed on a PC. The operating system manages the PC's hardware devices, provides utility apps and user interfaces, and allows various apps to be installed so that a PC can be used for different purposes.

Your PC is pre-installed with the Windows 11 operating system.

Initial setup of the Windows operating system

When you turn on your PC for the first time, the Windows operating system will guide you through the initial setup process. Most importantly, you will:

- Create a user account
- Connect to a wireless network that has Internet access
- Select language-related settings

Note: If you choose to set up Windows for personal use, you are required to either use an existing Microsoft account or create a new one as your user account. After the initial setup, you have the option to switch to a local account.

Enroll your fingerprints

You can use the biometric fingerprint option to sign in to Windows quickly if your computer includes a fingerprint sensor. This sign-in option provides a reliable and secure way of identity verification.

Step 1. Select **Start → Settings → Accounts → Sign-in options**.

Step 2. Under **Ways to sign in**, select **Fingerprint recognition (Windows Hello)** to set up sign-in with a fingerprint sensor.

Step 3. Follow the on-screen instructions to enroll your fingerprints.

Notes:

- You need to set up a PIN code before you are allowed to use this sign-in option.
- It is recommended that you enroll multiple fingerprints in case of any injuries to your fingers.

Windows Update

From time to time, your PC receives update notifications. These may include new features, security updates, and new device drivers. While security-related updates are typically downloaded and installed automatically, you can manually control the installation of other available updates.

In Windows Update, you can view available updates, manually check for updates, and configure update-related settings. To navigate to Windows Update, select **Settings → Windows Update**.

Windows recovery options

When using your PC and the operating system, you may encounter problems. Windows provides several recovery options for you to restore it back to normal. The following table will help you decide which option to use for various circumstances.

Table 4. Windows recovery options

Circumstances	Recovery options
Windows runs much slower after you install an app.	Restore Windows from a system restore point.
Windows hasn't been functioning properly for some time.	Reset your PC while keeping your personal files.
Your PC won't start.	Utilize Windows startup repair function.
Your PC won't start and cannot be repaired using Windows startup repair function.	Use a recovery drive to restore Windows.

Reset Windows

Resetting Windows allows you to reinstall the operating system while retaining your personal files. This gives the operating system a fresh start and, in some cases, restores the PC's original performance.

Step 1. Select **Settings → System → Recovery**.

Step 2. Under recovery options, select **Reset PC**.
When prompted, choose between **Keep my files** and **Remove everything**.

Step 3. Follow the on-screen instructions to complete the reset process.

Create a recovery drive

It is a good idea to create a recovery drive when you have finished setting up Windows for the first time. If you experience a major issue and your Windows cannot start, you can use the recovery drive to restore Windows onto your PC.

Step 1. Prepare an empty USB drive with a storage capacity of 16 GB or more.

Step 2. In the search box on the taskbar, type `Create a recovery drive` and select the matched app.

Step 3. Make sure **Back up system files to the recovery drive** checkbox is selected and select **Next**.

Step 4. When prompted, connect the USB drive to your PC, select it, and then select **Next**.

Step 5. Select **Create**.

Restore Windows using a recovery drive

If your Windows won’t start, you can use a previously created recovery drive to restore Windows onto your PC.

Step 1. Shut down your PC.

Step 2. Connect the recovery drive to your PC.

Step 3. Press the Novo button or the hotkey marked with ☆ to open the Novo button menu.

Step 4. Select **Boot Menu**.

Step 5. Select the USB drive as the boot device.
The PC will start to the Windows Recovery Environment.

Step 6. Follow the on-screen instructions to restore Windows on your PC.

Connect to a network

Connect to a Wi-Fi network

Ensure that you have a secure Wi-Fi network account and the required credentials.

Step 1. Select the network icon on the bottom right of your display.

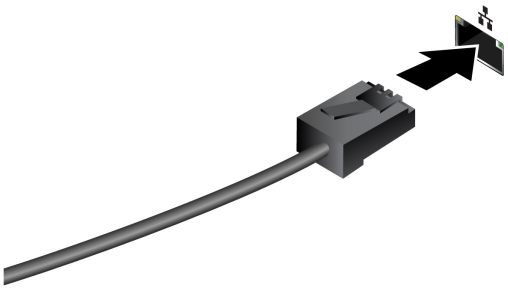
Step 2. Select an available network, and then select **Connect**. If you want to be automatically connected to this Wi-Fi network the next time you start your computer, select **Connect automatically** before selecting **Connect**.

Step 3. Input your credentials if necessary, and then follow the on-screen instructions to connect to the disired Wi-Fi network.

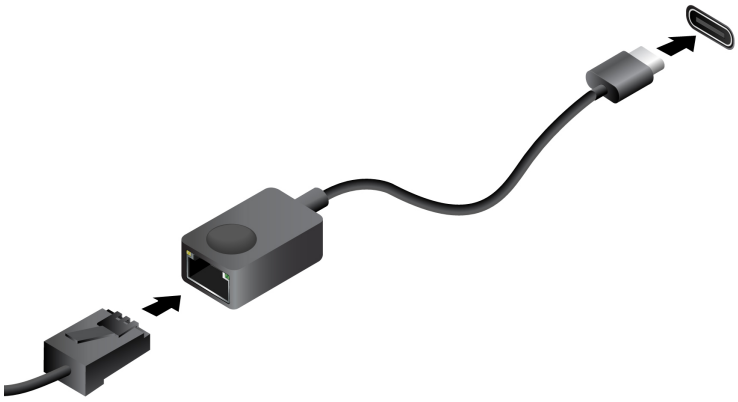
Establish a wired connection

Step 1. Plug an Ethernet cable into the Ethernet connector on your computer.

Step 2. Plug the other end of the Ethernet cable into a network wall jack or a router.



Note: If your computer does not include an Ethernet connector, you can purchase a USB-C to Ethernet adapter from Lenovo at https://www.lenovo.com/accessories.



Use power efficiently

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

Rechargeable battery pack

Your computer includes a built-in, rechargeable battery pack that makes mobile computing a reality. When the computer is plugged into an electrical outlet, the battery charges. If you use the computer when you don't have access to an electrical outlet, the battery discharges to supply electricity that the computer system requires for operation.

You can charge the battery any time you want. The battery packs of Lenovo computers support multiple charging modes that are suitable for different power usage habits. You can switch the battery's active charging mode in Lenovo Vantage or Lenovo PC Manager.

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).

Note:

You can check the battery temperature in Lenovo Vantage.

To maximize the life of the battery, once the battery is fully charged, it must discharge to 94% or lower before it will be allowed to recharge again.

Normal mode

Normal mode is the most basic charging mode. In normal mode, it typically takes 2 to 4 hours for the battery to charge from 0% to 100%.

Rapid charge mode

If you want the battery to be charged faster than in normal mode, switch the battery charging to rapid charge mode.

Conservation mode

If your computer is constantly plugged into an electrical outlet, consider switching the battery charging to conservation mode. In conservation mode, the battery will not be fully charged. Instead, the battery's charge will be kept within 75%–80%. This is beneficial to the long-term health of the battery.

Note: If you want the battery to be fully charged before bringing the computer to work, disable conservation mode by switching the battery charging to normal or rapid charge mode.

Recover full battery capacity

If your computer is constantly plugged in to an electrical outlet and the battery rarely discharges, the battery may not be charged to its full capacity even if the battery meter reports 100% charge. You can recover the battery's full charging potential simply by discharging and re-charging the battery.

Step 1. Unplug the computer and use it until the battery charge drops below 20%.

Step 2. Plug in the computer and charge the battery to 100%.

Shut down your PC

When you have finished using your PC and do not plan to resume using it in a short while, shut it down.

Step 1. Select **Start → Power**.

Step 2. Select **Shut down**.

Set power button behavior

By default, pressing the power button puts the computer to sleep mode. However, you can change the power button behavior in Windows Control Panel.

Step 1. Type `Control Panel` in the Windows search box and then press Enter. Open the control panel and view by large or small icons.

Step 2. Select **Power Options → Choose what the power buttons do** and then set the power button behavior.

Put your PC into sleep mode

If you need to stop using your PC but plan to resume using it shortly, you can put it into sleep mode. Your PC resumes faster from sleep mode and you can return to where you left off with your work.

Step 1. Select **Start → Power**.

Step 2. Select **Sleep**.

Adjust timeouts for sleep and the built-in screen

Setting appropriate timeouts for sleep and the built-in screen is an effective way to save energy. This feature enables the screen and other devices to enter power-saving mode when the PC is left inactive for a specified period of time. The Windows operating system has default timeout settings enabled. You can adjust the settings to suit your preference.

Step 1. Select **Settings → System → Power & battery → Screen, sleep, & hibernation timeouts**.

Step 2. Adjust the settings.
For notebook PCs, you can set separate timeouts for two usage scenarios: when the PC is plugged in and when it is running on battery.

The default timeouts for sleep and the built-in screen

The operating system of your PC has the following timeouts enabled by default. You can adjust them to suit your preference.

Note: Setting appropriate timeouts is an effective way to save energy. Avoid setting excessively long timeouts to effectively disable this power-saving feature.

Table 5. Default timeouts

Power saving action	Power state	Timeout
Turn off the screen	Plugged in	5 minutes
	On battery	3 minutes
Put the PC into sleep mode	Plugged in	5 minutes
	On battery	3 minutes

Note: To wake the PC from sleep mode, press the power button or any key on the keyboard.

System operation modes

Lenovo has preset several modes in which your computer can operate. The maximum attainable performance, power consumption, and speed limit for the heat sink fan vary among the different operation modes. Consider the following conditions when you want to switch operation modes.

- The environment where you use your computer, and
- The tasks running on your computer

You can switch the operation mode in the pre-installed app Lenovo Vantage or Lenovo PC Manager. As a shortcut, you can also use the key combination fn + Q. Three modes are usually available for most Lenovo computers. The following table lists the operation modes and the recommended conditions for each mode.

Note: The operation modes listed in the table are descriptive and may not be the same as those displayed by the app.

Table 6. Operation modes and their recommended usage conditions

Operation mode	Recommended conditions
High Performance	• Your computer is plugged into an electrical outlet. • You want the best performance, and • You don't care if the fan makes a little noise.
Auto (Balance)	You plan to frequently switch between different computer tasks over a period of time.
Power Saving (Quiet)	• Your computer is operating on battery power, or • You want the computer to be as quiet as possible.

Note: In Auto (Balance) mode, the computer dynamically switches between High Performance mode and Power Saving (Quiet) mode depending on the tasks running on the computer.

Chapter 3. Explore your computer

The display device

The built-in display is your PC's primary visual output device. Your PC is equipped with two USB Type-C connectors, all of which support visual output. You can connect up to two external display devices to your PC to enhance productivity.

The built-in display of your PC is touch-enabled. You can tap and swipe directly on the screen. You can also use multi-touch gestures on the screen to navigate within Windows more efficiently.

Enable adaptive brightness

For PCs equipped with an ambient light sensor, you can enable adaptive brightness in the Windows operating system so that they adjust according to ambient lighting conditions.

Step 1. Select **Settings → System → Display**.

Step 2. Under **Brightness**, select the switch for adaptive brightness to turn it on.

Adjustable display refresh rate

Your eyes might not notice it but the content displayed on the computer screen refreshes constantly. Display refresh rate refers to the number of times per second the screen content refreshes itself and is measured in hertz (Hz).

A refresh rate of 60 Hz is adequate for most situations and is energy efficient. However, when viewing videos or playing video games, a higher refresh rate usually provides a smoother viewing experience.

The displays of some Lenovo computers support dual refresh rates. For such a computer, you can manually switch its display to work at either the higher or lower refresh rate. For Windows operation systems, the manual settings are usually found in **Settings → System → Display**. As a shortcut, you can also use the key combination fn + R to switch the display refresh rate.

Note: Not all displays support dual refresh rates. If you cannot find settings to change the display refresh rate, the refresh rate of the display might be fixed or cannot be manually changed.

Turn on night light

The night light feature in Windows 11 enables users to switch to warmer color tones, reducing blue light emission to alleviate eye strain or fatigue.

Step 1. Open the quick settings menu by selecting the network, sound, or battery icons ( ) on the far right of the taskbar or by using the keyboard shortcut ⊞ + A.

Step 2. Select the button for night light to turn it on or off.

> **Note:** Some Windows 11 versions allow users to customize their quick settings. If the night light button is not visible, you can add it to the quick settings menu by selecting the edit button ( ).

For more tips on reducing eye strain or fatigue, visit https://www.lenovo.com/us/en/compliance/visual-fatigue.

Adjust color temperature

If Windows 11 night light mode is turned on, you can adjust the color temperature of the screen.

Step 1. Select **Start → Settings**.

Step 2. Select **System → Display → Night light settings**.

Step 3. Move the slider to adjust the color temperature.

Note: Selected Lenovo PCs are low blue-light certified. These PCs undergo testing with the night light turned on and the color temperature value set at 48 or above.

Connecting external displays

You can use both the USB Type-C connectors on your PC to connect external display devices. Depending on the connection capability of the display device, you have several options for connecting displays.

Direct connection

If the external display is equipped with a USB Type-C connector that is Thunderbolt-enabled or supports DisplayPort™ Alt Mode, you can use a double-sided USB Type-C cable to connect the display to any of the USB Type-C connectors on your PC.

Connection using an adapter

If the display is equipped with a DisplayPort or an HDMI connector, you can use an adapter to connect the display to your PC. The adapter features a USB Type-C connector (plug) on one end and a DisplayPort or an HDMI connector (socket) on the other. Connect the adapter to your PC and then connect the display to the adapter.

Connection using a docking station

A USB4 or Thunderbolt certified docking station can be connected to expand your PC's connectivity capabilities. Use a double-sided USB Type-C cable to connect the PC to the downstream USB Type-C connector on the docking station. You can then connect the display to the DisplayPort or HDMI connector on the docking station.

Change display settings

Step 1. Right-click on a blank area on the desktop, and then select **Display settings**.
Your computer shows the **Display** window.

Step 2. Select the display for which you want to change the settings.

Step 3. Change the display settings as necessary.

Set the display mode

Step 1. Press ⊟ or fn + ⊟.
Your computer shows a list of display modes, with the current mode highlighted.

Step 2. Select a display mode from the list.

Camera

Change camera settings

Step 1. Select **Settings → Bluetooth & devices → Cameras**.

Step 2. Under **Connected cameras**, select the camera in use.

Step 3. Use the controls to adjust various settings and apply effects. You'll see the changes immediately in the displayed camera preview.

Note: Changes will be saved as the new default settings. If you want to reset the settings and effects, select **Reset settings**.

Protect your privacy using the camera switch

The camera switch is a mechanical button that prevents any attempt from capturing your image, thus protecting your privacy. To disable the camera, slide the camera switch to the direction with . When you want to use the camera again, slide the camera switch to the other direction.

If you slide the camera switch to during a video call, people on the video call will not be able to see you. If you slide the camera switch back to the opposite position, they will be able to see you again.

Note: After you slide the camera switch, or is displayed on the screen to indicate that the setting is successful.

Shortcut keys

A Lenovo keyboard usually includes the following shortcut keys that you can use to quickly access apps or adjust settings.

- Functions keys (F1–F12)
- Hotkeys
- Combination keys using the fn key
- Combination keys using the Windows logo key
- The Copilot key

The fn lock switch

The fn lock is an electronic switch that affects how you use hotkey functions. To turn it on and off, press fn + esc.

Note: The esc key is in the upper left corner of the keyboard. It has an LED that indicates the status of the fn lock switch.

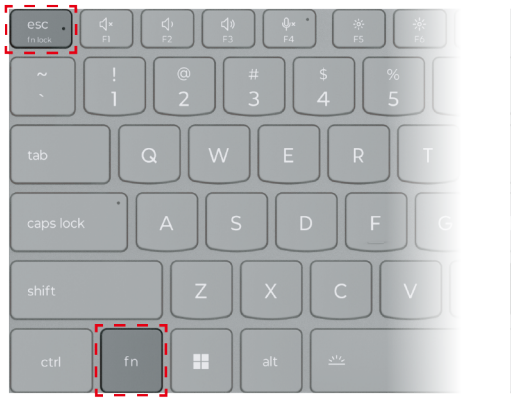


Figure 1. Locations of the fn lock key and the fn key

A Lenovo keyboard usually contains hotkeys in the top row. These hotkeys share keys with the function keys (F1–F12) and other keys. For these dual-function keys, the icons or characters denoting the primary functions are printed on top of the icons and characters denoting the secondary functions.

- A: an icon or character denoting the primary function
- B: an icon or character denoting the secondary function

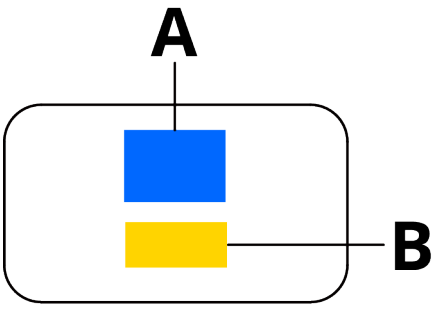


Figure 2. The layout of a dual-function key

Table 7. **fn lock** *and dual-function keys*

fn lock (esc) **LED**	fn lock **status**	**Pressing the hotkey alone**	**Pressing the hotkey while holding down the fn key**
Off	Disabled	Primary function	Secondary function
On	Enabled	Secondary function	Primary function

Hotkeys

Hotkeys provide quick access to settings and apps that you may frequently use. They are located in the top row of the keyboard and usually share keys with function keys (F1–F12) and other keys. The function that each hotkey provides is denoted by the icon printed on the key.

Table 8. Hotkey functions

Hotkey icon	Function description
	Mutes/Unmutes sound.
	Decreases volume.
	Increases volume.
	Enables/Disables the microphone.
	Decreases screen brightness.
	Increases screen brightness.
	Selects and sets up display devices.
	Enables/Disables airplane mode.
	Opens the Settings app.
	Locks the screen.
	Opens Lenovo Smart Connect app.
	Opens the Calculator app.
	Opens Lenovo AI Now app or a quick launch panel.

Note: To use the function keys, hold down the fn key and press the corresponding hotkeys. If you need to use function keys regularly, you may consider turning on the fn lock to set the function keys as the primary function of these dual-function keys.

Combination keys using the fn key

The fn key can be used in combination with certain keys to adjust device settings or activate additional functions.

Table 9. fn-based key combinations

Key combination	Function
fn + Q	Switches the PC's active power mode
fn + R	Switches the refresh rates of the built-in display
fn + M	Enables/disables the touchpad
fn + N	Shows key device information
fn + Space	Adjusts keyboard backlight
fn + Copilot key	Performs the right-click function on the current window
fn + B	Break
fn + P	Pause
fn + S	SysRq
fn + K	ScrLk
fn + I	Insert
fn + T	PrtScr

Table 9. fn-based key combinations (continued)

Key combination	Function
fn + left arrow	Home
fn + right arrow	End
fn + up arrow	PgUp
fn + down arrow	PgDn

Combination keys using the Windows logo key

The Windows logo key is located in the lower-left corner of the keyboard. It can be used alone or in combination with certain keys to quickly change settings and access utilities of the Windows operating system. The following table lists frequently used combination keys. For the complete list of all Windows logo key-based key combinations, please refer to Microsoft online documentation.

Table 10. Windows logo key-based key combinations

Key or key combination	Function
Windows logo key	Opens or closes the Start menu
+ A	Opens or closes Quick Settings
+ D	Returns to the desktop
+ E	Opens File Explorer
+ I	Opens Settings
+ L	Locks the screen
+ M	Minimizes all open windows
+ N	Opens or closes the Notification Area
+ P	Switches multi-screen modes
+ W	Opens or closes Widgets
+ ; (semicolon)	Opens the emoji panel
+ Tab	Opens or closes Task View
+ PrtSc	Takes a full-screen screenshot and saves it to a file

The Copilot key

The era of AI has arrived, and many Lenovo PCs now include a Copilot key on the keyboard. It is located either in the bottom or the top row of the keyboard and is marked with .

For Windows PCs with Copilot in Windows available and enabled, pressing the Copilot key opens Copilot in Windows. Otherwise, pressing the Copilot key opens Windows Search.

Notes:

- Copilot in Windows may not be available in all geographical locations. In regions where Copilot in Windows is available, you may need to update your Windows operating system to version 23H2 or later through Windows Update for Copilot in Windows to become available.
- Pressing fn + The Copilot key simultaneously will perform the right-click function.

Touchpad gestures

The touchpad is your PC's built-in pointing device. You can tap and swipe on the touchpad to navigate within the operating system and within apps. In addition, the Windows operating system also supports multi-finger gestures on the touchpad to enhance productivity while interacting with the operating system.

Table 11. Multi-finger touchpad gestures

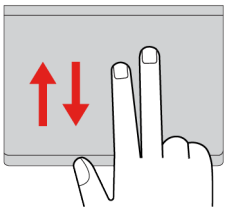
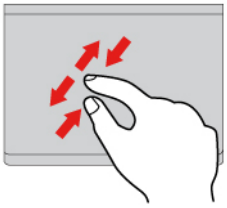
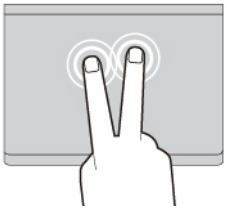
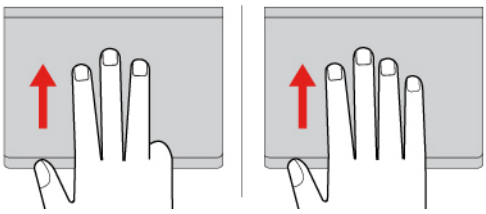
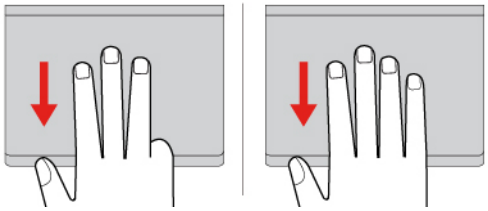
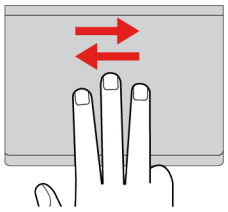
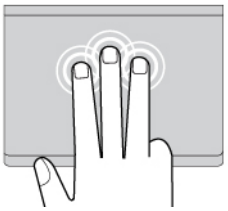
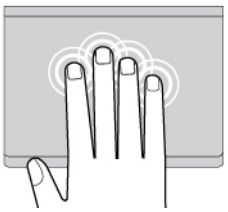
Gesture	Function
Swipe vertically with two fingers 	Scrolls pages
Place two fingers on the touchpad and pinch in or stretch out 	Zooms out / zooms in
Tap two fingers on the touchpad 	Displays the context menu (right-clicking)
Swipe up with three fingers or four fingers 	Shows all open windows

Table 11. Multi-finger touchpad gestures (continued)

Gesture	Function
Swipe down with three fingers or four fingers 	Returns to the desktop
Swipe left or right with three fingers 	Switches between open apps
Tap three fingers on the touchpad 	Opens Windows Search
Tap four fingers on the touchpad 	Opens Notification Center

Modify the default functions for touchpad gestures

The functions for three-finger and four-finger touchpad gestures can be modified in Windows Settings.

Step 1. Select **Settings → Bluetooth & devices → Touchpad**.

Step 2. Under **Three-finger gestures** and **Four-finger gestures**, use the drop-down lists to modify the functions for the swipe or tap gestures.

Bluetooth connectivity

Bluetooth is a short-range wireless technology commonly used for connections between nearby devices. Your PC is equipped with a built-in Bluetooth adapter. You can connect other Bluetooth-enabled devices to

your PC. Bluetooth-enabled headphones, earbuds, loudspeakers, keyboards, and mouses are among the devices you may consider connecting to your PC.

Connect a Bluetooth-enabled device to your PC

Establishing a Bluetooth connection requires actions on both the device and your PC. Turn on the device and make it discoverable before performing any actions on your PC.

Step 1. Select **Settings → Bluetooth & devices → Add device → Bluetooth**.

Step 2. Select the device you want to connect, and then select **Connect**.

Step 3. Depending on the type of device, you may need to either confirm the connection on the device side or enter a pairing code on your PC.

When a Bluetooth-enabled device is connected to your PC, its name and status are displayed under **Bluetooth & devices** on your PC .

Unique Lenovo apps

Lenovo Vantage

Lenovo Vantage is a one-stop solution to help you update your computer, configure hardware settings, and access personalized support.

If your computer is pre-installed with Lenovo Vantage, type `Vantage` in the Windows search box to launch this app.

Notes:

- Available features may vary depending on your computer model.
- You can download the latest version of this app from Microsoft Store.

Smart Connect

Smart Connect is an app that can easily pair your PC with your Motorola smartphone and Lenovo tablet. With Smart Connect, you can:

- Access mobile apps on your PC
- Quickly share content between connected devices
- Mirror your phone display or create a virtual phone screen on your PC
- Copy and paste across connected devices
- Use your phone or tablet camera as the PC webcam
- Control your phone or tablet using your PC keyboard and mouse
- Extend or mirror your PC display on the tablet

To open Smart Connect, you can type `Smart Connect` in the Windows search box and then select the matched result. Alternatively, you can also press the hotkey marked with (F11) as a shortcut.

Note: Smart Connect makes periodic updates to keep improving your experience. Features may be added or modified after updates are installed.

Lenovo AI Now

Lenovo AI Now is your personal and private AI assistant. It enables you to boost your productivity by building your personal knowledge library, helps you with inspiration, writing and summarizing, and provides troubleshooting and quick settings for your PC.

To open Lenovo AI Now, type `Lenovo AI Now` in the Windows search box and select the matched result. Alternatively, you can also press the hotkey marked with ☆ as a shortcut.

Notes:

- Lenovo AI Now is not available on all product models. For those models not pre-installed with this app, pressing the hotkey ☆ will open a quick launch panel.
- Lenovo AI Now makes periodic updates to keep improving your experience. Features may be added or modified after updates are installed.

Lenovo Smart Meeting

Lenovo Smart Meeting is a video conferencing app with multiple features for enhancing your professional image, protecting your privacy, and reducing your computer's power consumption.

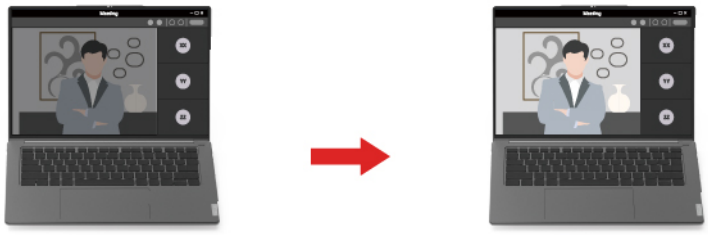
If you want your settings in this app to also take effect on other mainstream video conferencing apps, such as Microsoft Teams and Zoom, ensure that you select Lenovo Virtual Camera in the app.

Access the app

If your computer is pre-installed with Lenovo Smart Meeting, type `Lenovo Smart Meeting` in the Windows search box and then press Enter to open this app.

Explore key features

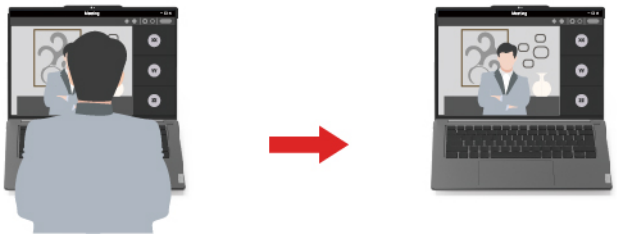
- **Video enhancer**: Adjust the brightness automatically for better image quality during the video call.



- **Face framing**: Keep your face centered automatically during the video call when you move around.

- **Customized background**: Blur or customize your background during the video call to protect your privacy.

- **Temporary Avatar**: Create and display a temporary portrait of you as if you were still in the video conference when you are temporarily away.



Notes:

- Lenovo Smart Meeting may not be available on all product models.
- Lenovo does not collect any personal data from this app.
- The available features vary depending on the computer model.
- Lenovo Smart Meeting makes periodic feature updates to keep improving your experience. The description described here might be different from that on your actual user interface.

Intelligent features

Your computer may be pre-installed with one of Lenovo Vantage or Lenovo PC Manager but not both. Most features described here can be enabled or disabled in one of these apps. Other features may be enabled in a standalone app.

Notes:

- Software features are subject to change. Please refer to your actual product.
- You may need to complete online updates to the apps for the features to take effect.

Dolby Atmos

If your PC is preinstalled with Dolby Atmos, you can set or define Dolby profiles in Lenovo Vantage or Lenovo PC Manager.

Dolby Atmos includes a set of fine-tuned audio processing parameters. You can select a profile that best suits your needs and adjust the profile settings if applicable.

Available profiles are described in the table below.

Table 12. Available profiles for Dolby Atmos

Profile	Description
Dynamic	Dolby technology identifies the content type and performs automatic adjustments.
Movie	Virtualized surround sound and clearer dialogues help you attend to every detail of the story.
Music	Rich, detailed audio optimized for music.
Game	Distinct sound placement makes it easier to locate sounds from any angle.
Voice	Enhances clear and consistent voice quality for virtual meetings and calls.
Custom	More flexibility is available with the audio processing settings. **Note:** You can create multiple custom profiles to best suit your needs for different scenarios.

Smart Noise Cancelling

Smart Noise Cancelling is a noise reduction feature available on some Lenovo product models. By filtering out input and output noises, Smart Noise Cancelling enhances your audio experience.

Function	Description	Remarks
Microphone noise cancelling	**Voice Recognition**: Your computer captures multiple voices in a way that reflects their original spatial positions.	• This function takes effect only when built-in microphones/arrays or 3.5 mm jack wired microphones are used as the input media. • To disable this function, select **Off**.
	Only My Voice: This option requires you to record your voice so that your computer captures this voice only and tries to eliminate other voices. **Note:** To remove your voice record, select **REMOVE MY VOICE**.	
	Normal: Your computer focuses on the voice of the person facing it and reduces ambient sounds.	
	Multiple Voices: Your computer captures multiple voices from an expanded range in front of the computer.	
Speaker noise cancelling	Your computer filters out other sounds to play only human voices.	These functions are not applicable to scenarios like listening to music and watching videos.
Meeting noise cancelling	When this function is selected, your computer uses special algorithms for noise reduction when you are using conferencing applications.	

Notes:

- Depending on its hardware, your computer may not support all the functions and options described above.
- You can view and customize this feature under **Device Settings** in Lenovo Vantage or Lenovo PC Manager.

Super Resolution

By utilizing the capabilities and potentials of Intel processors, Super Resolution helps you play videos with a higher resolution than the original. It works especially well in cases where the source video has poor resolution.

For most players, Super Resolution can be enabled or disabled in Lenovo Vantage or Lenovo PC Manager, but for some specific players, you might need to enable this feature manually.

Eye Care Mode

Eye Care Mode intelligently adjusts the color temperature of the screen and can reduce the chances of developing eye fatigue or eye strain.

The firmware of your PC

When you turn on the power, a series of instructions are executed inside your PC to initiate devices, locate a boot device, and look for a program called bootloader. The bootloader will then find the operating system installed on your PC and hand over control to it. When the operating system is started, your PC is ready for use.

These instructions are stored on a Flash chip on the PC's system board. The Flash chip and the instructions stored on it are referred to as the PC's firmware (UEFI/BIOS).

Firmware setup utility

Lenovo PCs typically include a setup utility in the firmware that allows you to:

- View information about your PC and its devices
- Change device settings
- Change the order of boot devices
- Set passwords for the firmware or the mass storage device

Note: You should rarely need to use the setup utility for your daily PC usage. To view device information, you can use the utilities provided by the operating system or apps provided by Lenovo (Lenovo Vantage or Lenovo PC Manager). You can use the Novo button menu to temporarily change the order of boot devices.

Open the firmware setup utility

There are several ways to open the setup utility:

- Utilize the Advanced startup feature of the Windows operating system
- Use the Novo button menu
- Start or restart your PC, and then press the interrupt key F1 repeatedly when the Lenovo logo appears on the screen

  Note: For computers with hotkey mode enabled, press fn + F1.

Change settings in the firmware setup utility

This section introduces the operations you can perform in the firmware setup utility.

Select boot devices

Normally, the computer starts with a boot manager loaded from the secondary storage device of the computer. Occasionally, you may need to start the computer with a program or boot manager loaded from another device or a network location. After the system firmware initializes all devices, you can press an interruption key to display the boot menu and select a desired boot device.

Step 1. Turn on or restart the computer.

Step 2. Press F12.

Step 3. From the boot device menu, select a boot device to start the computer.

You can make a permanent change on boot devices in the firmware setup utility. Select the **Boot** menu; in the **EFI** section, select the desired boot device and move it to the top of the device list. Save changes and exit the setup utility for the change to take effect.

Change hotkey mode

Step 1. Open the firmware setup utility.

Step 2. Select **Configuration → Hotkey Mode** and press Enter.

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

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

Enable or disable Flip to Start

When Flip to Start is enabled, you can turn on the computer by flipping open the screen.

Step 1. Open the firmware setup utility.

Step 2. Select **Configuration**.

Step 3. Change the setting for **Flip to Start**.

Note: You can also set Flip to Start in Lenovo Vantage or Lenovo PC Manager.

Set passwords in the firmware setup utility

You can set passwords in the firmware setup utility to secure access to the utility program or the mass storage device.

Password types

You can set various types of passwords in the firmware setup utility.

Password type	Pre-requisite	Usage
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	Usage
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.

Note: 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 firmware setup utility.

Attention: If you forget the administrator password, a Lenovo authorized service personnel cannot reset your password. You must take your computer to a Lenovo authorized service personnel to have the system board replaced. Proof of purchase is required and a fee will be charged for parts and service.

Step 1. Open the firmware setup utility.

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

Step 3. Enter a password string that contains only letters and numbers and 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 open 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. Open the firmware setup utility using the administrator password.

Step 2. Select **Security → Set Administrator 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 without entering any character.

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

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

Set user password

You must set the administrator password before you can set the user password.

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

Step 1. Open the firmware setup utility using the administrator password.

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

Step 3. Enter a password string that contains only letters and numbers and 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. Open the firmware 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 passwords for the mass storage device

You can set a hard disk password in the setup utility to secure access to your data storage on the PC's mass storage device.

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 to have the hard disk drive replaced. Proof of purchase is required and a fee will be charged for parts and service.

Step 1. Open the firmware 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 master and 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 provide the correct password to start the operating system.

Change or remove passwords for the mass storage device

Step 1. Open the firmware 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**.

Chapter 4. Help and support

Frequently asked questions

Where can I get the latest device drivers and UEFI/BIOS

- Lenovo Vantage or Lenovo PC Manager
- Lenovo Support Web site at https://support.lenovo.com.
- Windows Update

What should I do if my computer stops responding

Press and hold the power button until the computer turns off. Then restart the computer.

What should 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. Wait until you are certain that all the liquid is dry before turning on your computer.

   CAUTION:
   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.

Why does my computer start automatically when I open the lid

Your computer may have Flip to Start enabled. Many Lenovo notebook computers include a sensor that can detect the angle at which the lid is opened. When you open the lid, the sensor can detect this behavior. If Flip to Start is enabled, the computer will respond by starting up automatically.

If you don’t like this feature, you can disable it. Flip to Start can be enabled or disabled in the setup utility program for the PC’s firmware or the Lenovo Vantage app.

Why does my screen brightness change constantly

Your computer may include an ambient light sensor and the adaptive brightness feature is enabled. The light sensor can detect the intensity of the surrounding light. Using data provided by the sensor, the operating system can dynamically adjust the screen brightness.

The adaptive brightness feature of the operating system can be disabled. For Windows operating systems, adaptive brightness settings are usually found in **Settings → System → Display**.

What should I do if I cannot connect to the network

1. Right-click on the network icon on the right side of the task bar.
2. Select **Diagnose network problems** and then follow the on-screen instructions.

What should I do with blue screen errors

Blue screen errors can occur if a serious problem causes Windows to shut down or restart unexpectedly. To fix the errors, you can take the following steps to use the Blue Screen Troubleshooter in the Get Help app:

Step 1. Type **Get Help** in the Windows search box and then press Enter.

Step 2. In the search box of the Get Help app, type **Troubleshoot BSOD error** and then press Enter.

Step 3. Follow the guided walkthrough.

What should I do if the screen flickers

Screen flickering in Windows is usually caused by a display driver issue or incompatible app. You can first determine whether the problem is caused by a display driver issue or an incompatible app by checking if Task Manager flickers. To open Task Manager, press Ctrl+Alt+Delete or Ctrl+Shift+Esc.

1. If Task Manager also flickers, the display driver is probably causing the problem. In this scenario, roll back your display driver:
   a. Type **device manager** in the Windows search box and then press Enter.
   b. Under **Display adapters**, select a display adapter.
   c. Select the **Driver** tab and then select **Roll Back Driver**.
   d. Click **Yes** to roll back your display driver and restart your computer.

   Note: If the **Roll Back Driver** option is unavailable, Windows does not have a previous driver to roll back to. In this scenario, you can try updating or uninstalling your display driver in the **Driver** tab.
2. If Task Manager does not flicker, an incompatible app is probably causing the problem. In this scenario, update or uninstall an incompatible app:
   a. Check if any app needs to be updated from the Microsoft Store or the manufacturer's site. If yes, update the app.
   b. If step a does not work, uninstall the app:
      1) Select the Start menu on the taskbar and then select **Settings**.
      2) Select **Apps → Installed apps**.
      3) Scroll down the list, find the app you want to uninstall, and then select **Uninstall**.
      4) In the popup window, select **Uninstall**.
      5) If you're asked to confirm your choice, select **Yes**.

      Note: Check in the recently used app if screen flickering usually occurs in a specific app. If yes, prioritize uninstalling that app.

   After uninstalling an app, restart your computer and check if the screen flickering issue is resolved. If the issue retains, uninstall each app one by one until the issue is resolved.

What should I do if my touchpad does not respond

If your touchpad does not respond, it might be because you have disabled the touchpad or your touchpad driver is out-of-date or malfunctioning. To solve the problem, you can try the following solutions.

- Enable the touchpad:
  1. Go to **Start → Settings → Bluetooth & devices → Touchpad**.
  2. Turn on the **Touchpad** toggle.

  Note: Alternatively, you can also press the key combination fn + M to enable or disable the touchpad.
- Update the touchpad driver:

1. Type **Device Manager** in the Windows search box and then press Enter.
2. Click the arrow icon > next to **Human Interface Devices** to expand the section.
3. Right-click the touchpad, select **Update driver**, and follow the on-screen instructions.

- If a touchpad problem occurs after a recent driver update, follow the instructions below to roll back to the previously installed driver:
  1. Type **Device Manager** in the Windows search box and then press Enter.
  2. Click the arrow icon > next to **Human Interface Devices** to expand the section.
  3. Right-click the touchpad, and select **Properties**.
  4. Under **Driver**, select **Roll Back Driver** and follow the on-screen instructions.

What should I do if the audio does not work

If you encounter any audio problems, such as no audio or malfunctioning audio, try the following solutions to troubleshoot and fix the issue:

1. Verify your audio settings:
   a. Go to **Start → Settings → System → Sound**.
   b. Verify that the sound output and input devices are selected correctly.

      Note: If you are using an external audio device, ensure that the device is properly connected to your computer.
   c. Verify that the volume is properly set and your computer is not muted.
2. Run the audio troubleshooter:
   a. Go to **Start → Settings → System → Sound**.
   b. Under **Advanced**, find **Troubleshoot common sound problems**, and click **Output devices** or **Input devices** to troubleshoot and fix the problem.

For more solutions to audio problems, go to https://support.lenovo.com/solutions/ht501860.

What should I do if my camera can’t be launched or found

If your camera can’t be launched or found, try the following solutions one by one to troubleshoot and fix the issue:

1. Ensure that your camera is not disconnected or covered:
   - If you are using an external camera, ensure that you have connected it to a working USB connector on your computer.
   - If you are using an integrated camera, slide the camera shutter or camera switch to the on position.
2. If you are using an integrated camera, it might be disabled. To enable your camera:
   a. Open the **Start** menu, and click **Settings → Bluetooth & devices → Camera**.
   b. Check if the camera is connected or disabled. If it is disabled, enable the camera.
3. The apps you are using might not have access to your camera. To authorize access to your camera:
   a. Open the **Start** menu, and select **Settings → Privacy & security → Camera**.
   b. Turn on **Camera access** switch and **Let apps access your camera** switch.
4. Your antivirus software settings might block access to your camera. Go to your antivirus software settings and unblock the access.
5. Your camera driver might be uninstalled or out-of-date. To update the camera driver:
   a. Type **device manager** in the Windows search box and then press Enter.

b. Click **Device Manager** from the list of results. The Device Manager window opens.
c. Click arrow icon > next to **Camera** to expand the section.
d. Right-click the camera that you would like to update.
e. Select **Update driver** and follow the on-screen instructions.

6. If your camera still does not work, run the automated camera troubleshooter in the Get Help app. To open the Get help app:
   a. Open the **Start** menu, and click **Settings → Privacy & security → Camera**.
   b. Scroll down to the bottom. Click **Get help** and follow the on-screen instructions.

What should I do if my keyboard does not work

If your keyboard does not work or types wrong characters, try the following solutions to troubleshoot and fix the issue:

1. Ensure that the keyboard is well connected.
   - If you are using a wired keyboard, check if it is connected to your computer correctly or try to connect the keyboard to another compatible connector on your computer.
   - If you are using a wireless keyboard, ensure that your keyboard is powered on. Check if the dongle is connected to your computer correctly or the Bluetooth connection with your computer is established.
2. Ensure that the keyboard layout settings are correct. Take the following steps:
   a. Go to **Settings → Time & language → Language & region**.
   b. Under **Preferred languages**, click on the three horizontal dots next to your primary language preference and select **Language options**.
   c. Under **Installed keyboards**, check the keyboard layout and add the corresponding keyboard if you're not using the right one.
3. Ensure that the keyboard is in good status. Take the following steps:
   a. Type **device manager** in the Windows search box and then press Enter.
   b. Click **Device Manager** from the list of results. The Device Manager window opens.
   c. Click arrow icon > next to **Keyboard** to expand the section.
   d. Double-click the keyboard that is not working and check the status.
   e. If it is not working properly, select **Driver** from the tabs on the top and click **Uninstall device** to uninstall the device.
   f. Apply Windows Update to install the latest driver automatically.
4. Ensure that the sticky keys and filter keys are disabled. Take the following steps:
   a. Open the **Start** menu, and click **Settings → Accessibility → Keyboard**.
   b. Disable **Sticky keys** switch and **Filter keys** switch.
5. Restart your computer.

What should I do if my keyboard backlight does not work

If your keyboard backlight does not work, try the following solutions to troubleshoot and fix the issue:

1. Adjust the keyboard backlight by pressing the key combination fn + Space.
2. Open the firmware setup utility and press the key combination fn + Space to check if the keyboard backlight works. If the backlight works in the firmware setup utility, update the UEFI/BIOS to the lastest version.
3. Update the keyboard driver:

a. Type **Device Manager** in the Windows search box and then press Enter.
b. Click the arrow icon next to **Keyboards** to expand the section.
c. Right-click the keyboard you would like to update.
d. Select **Update driver** and follow the on-screen instructions.

How to reset my Windows password

If you forget your Windows password and want to reset one, you can take the following actions.

- Do the following if you have set security questions.
  1. Click **Reset password** on the sign-in screen after you have entered an incorrect password.

     Note: Contact your administrator if you do not see an option to reset your password.
  2. Follow on-screen instructions to reset a new password.
- Do the following if you have created a password reset disk.
  1. Connect a password reset disk to a USB-compatible connector on your computer.
  2. Follow on-screen instructions to reset your password.
- Do the following if you have an administrator account.
  1. Sign in to your computer with the local administrator account.
  2. Follow on-screen instructions to reset your password.

What should I do if the built-in battery cannot be charged

1. Ensure that you use the correct power adapter with the proper wattage. Low-wattage power adapters might cause battery charging problem.
2. Exit the heavy-loading programs and charge the computer again. To check the loads of programs in process, press ctrl + alt + delete and then select **Task Manager → Processes**.
3. Move your computer to a cool and well-ventilated spot. Battery charging may also be affected by its temperature.
4. Update the battery driver or UEFI/BIOS to the latest version. To proceed with a driver update or a BIOS update, select **System Update** in the Lenovo Vantage app. It will automatically check for any updates you may need.

Self-help resources

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

Resources	How to access?
Troubleshooting and frequently asked questions	• https://www.lenovo.com/tips • https://forums.lenovo.com
Accessibility information	https://www.lenovo.com/accessibility
Product documentation: • *Generic Safety and Compliance Notices* • *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 **Guides & Manuals** and filter out the documentation you want.

Resources	How to access?
Lenovo Support Web site with the latest support information of the following: • Product and service warranty • Product and parts details • Knowledge base and frequently asked questions	Visit https://support.lenovo.com
Windows help information	• Use **Get Help** or **Tips**. • Use Windows Search. • Microsoft support Web site: https://support.microsoft.com

What is a CRU?

Customer replaceable units (CRUs) are parts that can be upgraded or replaced by the customer. A Lenovo computer may contain the following types of CRUs:

Self-service CRU	Parts that can be installed or replaced easily by customer themselves or by trained service technicians at an additional cost.
Optional-service CRU	Parts that can be installed or replaced by customers with a greater skill level. Trained service technicians can also provide service to install or replace the parts under the type of warranty designated for the customer's machine.

If you intend to install a CRU, Lenovo will ship the CRU to you. You might be required to return the defective part that is replaced by the CRU. When return is required: (1) return instructions, a prepaid shipping label, and a container will be included with the replacement CRU; and (2) you might be charged for the replacement CRU if Lenovo does not receive the defective CRU within thirty (30) days of your receipt of the replacement CRU. For full details, see the *Lenovo Limited Warranty* at https://www.lenovo.com/warranty/llw_02.

CRUs for your product model

The table below lists the CRUs and CRU types that are defined for your product model.

Part	Self-service CRU	Optional-service CRU
Power cord	X	
ac power adapter	X	

Notes:

- CRU replacement instruction is provided in one or more of the following publications and are available from Lenovo at any time upon your request.

  the product *User Guide*

  the printed publications that came with the product

- Replacement of any parts not listed above, including the built-in rechargeable battery, should be done by a qualified repair technician or by ensuring that you carefully follow all instructions provided by Lenovo.

You can also find Lenovo-authorized repair facilities by going to https://support.lenovo.com/partnerlocator for more information.

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

Record product information and problem details before you contact Lenovo.

Product information	Problem symptoms and details
• Product name • Machine type and serial number	• 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?

Note: The product name and serial number can usually be found on the bottom of the computer, either printed on a label or etched on the cover.

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.

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://pcsupport.lenovo.com/warrantyupgrade.

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

Appendix A. Notices and trademarks

Notices

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For the latest information or any questions or comments, contact or visit the Lenovo Web site:

https://support.lenovo.com

Trademarks

Appendix B. Compliance statements

This appendix provides compliance statements that are applicable to your product and contains model-specific information, such as the model name and values determined as part of the conformity assessment procedures. Compliance statements relevant to your product that do not include model-specific information are available in a separate publication titled *General Safety and Compliance Notices*. The PDF version of this publication can be found on the Lenovo Support website.

Korea minimum energy performance standard (MEPS) value

모델명	컴퓨터 유형	연간소비 전력량 **(kWh)**	슬립모드 소비전력 **(W)**	오프모드 소비전력 **(W)**