

User Guide



Lenovo Legion 5 (15", 10) and Lenovo Legion 5i (15", 10)

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](#)

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Contents

About this guide	iii
Chapter 1. Meet your computer 1	
Front	1
Microphones	1
Infrared LED	1
Camera	1
Camera light	2
Screen	2
Base	3
Power button	3
Power light	3
Keyboard	4
Touchpad	4
Antenna	4
Left	5
Right	11
Combo audio jack	11
USB Standard-A connector	11
Camera switch	11
Bottom	12
Air vents (intake)	12
Speakers	12
Rear	13
Air vents (outlet)	13
HDMI connector	13
Power connector	13
Charging light	13
Features and specifications	14
Statement on USB transfer rate	17
Operating environment	17
Chapter 2. Get started with your computer 19	
Your PC and its operating system	19
Initial setup of the Windows operating system	19
Set up facial recognition (for selected models)	19
Windows recovery options	19
Windows Update	20
Use power efficiently	20
Shut down your PC	20
Put your PC into sleep mode	20
Adjust timeout settings for saving power	20
Connect to a network	21
Establish a wired connection	21
Connect to a Wi-Fi network	22
Unique Lenovo apps	22
Lenovo Vantage	22
The Novo Button menu	22
Open the Novo Button menu	22
Interact with your computer	23
Hotkeys	23
Combination keys using the fn key	24
Combination keys using the Windows logo key	25
The Copilot key	25
Numeric keypad	26
Touchpad gestures	26
Connect to an external display	26
Protect your privacy using the camera switch	27
Turn on night light	28
Adjust color temperature	28
Chapter 3. Explore your computer 29	
Intelligent features	29
Eye Care Mode	29
Super Resolution (for selected models)	29
Smart Noise Cancelling	29
Manage power	30
Rechargeable battery pack	30
Using a Power Delivery compliant USB Type-C charger with the computer	31
Set power button behavior	32
System operation modes	32
Adjustable display refresh rate	33
Change settings in UEFI/BIOS setup utility	33
What is UEFI/BIOS setup utility	33
Open the UEFI/BIOS setup utility	33
Select boot devices	33
Change hotkey mode	34
Enable or disable always-on	34
Set passwords in UEFI/BIOS setup utility	34
Password types	34
Set administrator password	34
Change or remove administrator password	35
Set user password	35
Enable power-on password	35
Set hard disk password	36
Change or remove hard disk password	36
Chapter 4. Help and support 37	

Frequently asked questions	37
How do I partition my storage drive?	37
What should I do if my computer stops responding?	37
What should I do if I spill liquid on the computer?	37
Where can I get the latest device drivers and UEFI/BIOS?	37
Why does my computer start automatically when I open the lid?	37
I pressed the Copilot key on my keyboard, but neither Copilot in Windows nor Windows	
Search opened. What could be the potential cause?	37
Self-help resources	38
What is a CRU?	39
CRUs for your product model	39
Call Lenovo	40
Before you contact Lenovo	40
Lenovo Customer Support Center	40
Purchase additional services.	41
Appendix A. Notices and trademarks.	43

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)
Legion 5 15AHP10	83M0
Legion 5 15AKP10	83F1
Legion 5 15IAX10	83F0
Legion 5 15IRX10	83LY

- 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



No.	Description
1	Microphones
2	Infrared LED*
3	Camera
4	Camera light
5	Screen

* for selected models

Microphones

The microphones are the PC's built-in sound input devices. They capture your voice and ambient sound and convert them into digital form. Microphones are essential components when you use your PC for video conferencing or voice recording.

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.

Camera

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

This camera also receives near-infrared waves emitted by an infrared LED and reflected by a human face, so it can also be used for facial recognition.

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.

Screen

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

Related tasks

[“Turn on night light” on page 28](#)

[“Adjust color temperature” on page 28](#)

Base



No.	Description
1	Power button
2	Power light
3	Keyboard
4	Touchpad
5	Antennas

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.

Table 2. Power light status and description

Light status	Power state
Solid on	Powered on
Blinking slowly	In sleep mode
Off	Powered off or in hibernation mode

The color of the power light can indicate the PC's active operation mode.

Table 3. Power light colors and the PC's active operation modes

Light color	Operation mode
White	Balance mode
Blue	Quiet mode
Red	Performance mode
Purple	Custom mode

Keyboard

The keyboard is the primary input device for a PC, designed for typing characters. A Lenovo keyboard also includes shortcut keys that enhance productivity when interacting with the PC, applications, and the Windows operating system.

Note: Keyboard layouts vary by language and region, so your PC's keyboard may differ from the illustrations in this publication.

Related topics

“Hotkeys” on page 23

Touchpad

The touchpad is the PC's built-in pointing device, which provides the basic functionality of an external mouse. 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, which provide shortcuts to frequently used apps and functions.

Antenna

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.

Left

For Legion 5 15AHP10 and Legion 5 15AKP10



No.	Description
1	Ethernet connector
2	Multi-purpose USB Type-C® connector (USB Power Delivery compliant)
3	Multi-purpose USB Type-C connector (USB4® enabled)
4	USB Standard-A connector (always-on connector)

Ethernet connector

The Ethernet connector connects a cable modem or router to the PC to establish wired Internet access.

Multi-purpose USB Type-C connector

This multi-purpose USB Type-C® connector is 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.

- USB Power Delivery-compliant USB Type-C charger

Multi-purpose USB Type-C connector

This multi-purpose USB Type-C® connector is 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.

- USB4-enabled docks or devices

USB Standard-A connector

The USB Standard-A connector is used to connect storage or peripheral devices that follow the universal serial bus (USB) specification for data transfer and device interconnection.

Always-on connector

A USB connector with a battery icon (⎓) supports the always-on function. The PC can supply power to a USB device connected to this type of connector even when the PC is powered off, in sleep mode, or in hibernation mode.

The always-on function can be turned on and off in:

- The PC's firmware setup utility, or
- Lenovo Vantage or Lenovo PC Manager

For Legion 5 15IAX10



No.	Description
1	Ethernet connector
2	Multi-purpose USB Type-C connector (USB Power Delivery compliant)
3	Multi-purpose USB Type-C connector (Thunderbolt™ 4 enabled)
4	USB Standard-A connector (always-on connector)

Ethernet connector

The Ethernet connector connects a cable modem or router to the PC to establish wired Internet access.

Multi-purpose USB Type-C connector

This multi-purpose USB Type-C® connector is 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.

- USB Power Delivery-compliant USB Type-C charger

Multi-purpose USB Type-C connector

This multi-purpose USB Type-C® connector is 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

USB Standard-A connector

The USB Standard-A connector is used to connect storage or peripheral devices that follow the universal serial bus (USB) specification for data transfer and device interconnection.

Always-on connector

A USB connector with a battery icon (⎓) supports the always-on function. The PC can supply power to a USB device connected to this type of connector even when the PC is powered off, in sleep mode, or in hibernation mode.

The always-on function can be turned on and off in:

- The PC's firmware setup utility, or
- Lenovo Vantage or Lenovo PC Manager

For Legion 5 15IRX10



No.	Description
1	Ethernet connector
2	Multi-purpose USB Type-C connector (USB Power Delivery compliant)
3	Multi-purpose USB Type-C connector
4	USB Standard-A connector (always-on connector)

Ethernet connector

The Ethernet connector connects a cable modem or router to the PC to establish wired Internet access.

Multi-purpose USB Type-C connector

This multi-purpose USB Type-C® connector is 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.

- USB Power Delivery-compliant USB Type-C charger

Multi-purpose USB Type-C connector

This multi-purpose USB Type-C® connector is 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.

USB Standard-A connector

The USB Standard-A connector is used to connect storage or peripheral devices that follow the universal serial bus (USB) specification for data transfer and device interconnection.

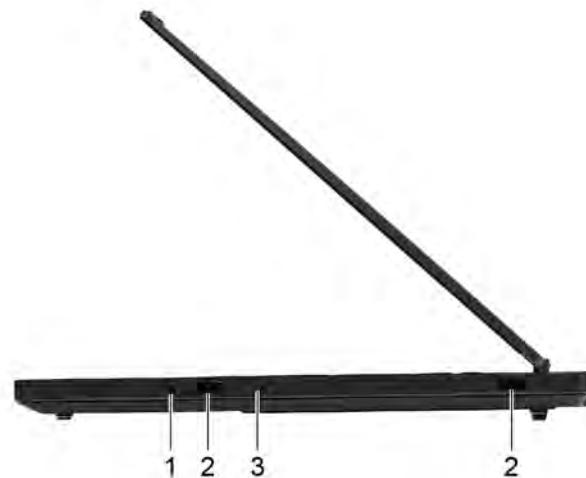
Always-on connector

A USB connector with a battery icon (🔋) supports the always-on function. The PC can supply power to a USB device connected to this type of connector even when the PC is powered off, in sleep mode, or in hibernation mode.

The always-on function can be turned on and off in:

- The PC's firmware setup utility, or
- Lenovo Vantage or Lenovo PC Manager

Right



No.	Description
1	Combo audio jack
2	USB Standard-A connectors
3	Camera switch

Combo audio jack

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

USB Standard-A connector

The USB Standard-A connector is used to connect storage or peripheral devices that follow the universal serial bus (USB) specification for data transfer and device interconnection.

Camera switch

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

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

Bottom



No.	Description
1	Air vents (intake)
2	Speakers

Air vents (intake)

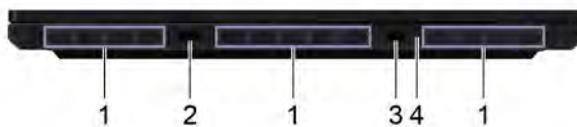
The air vents allow air to be sucked inside of the PC to cool the internal components.

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.

Speakers

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

Rear



No.	Description
1	Air vents (outlet)
2	HDMI™ connector
3	Power connector
4	Charging light

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.

HDMI connector

The HDMI connector is used to connect an external display device, such as a television, a projector, or a monitor.

Power connector

Use this connector and the included ac power adapter to connect your PC to an electrical outlet.

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 4. Charging light statuses and descriptions

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

Features and specifications

Dimensions

Width	344.9 mm (13.6 inches)
Depth	255.4 mm (10.1 inches)
Thickness	<p>For metal models:</p> <ul style="list-style-type: none">• Thinnest: 19.95 mm (0.79 inches)• Thickest: 21.54 mm (0.85 inches) <p>For plastic models:</p> <ul style="list-style-type: none">• Thinnest: 22.5 mm (0.89 inches)• Thickest: 23.99 mm (0.94 inches)

ac power adapter

Input	100 V ac-240 V ac, 50 Hz-60 Hz
Output	<ul style="list-style-type: none">• 20 V dc, 8.5 A, or• 20 V dc, 12.25 A
Power	<ul style="list-style-type: none">• 170 W, or• 245 W

Battery pack

Capacity	<ul style="list-style-type: none">• 60 Wh, or• 80 Wh <p>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).</p>
Number of cells	4

Memory

Type	Small Outline Dual In-line Memory Module Double Data Rate 5 (SO-DIMM DDR5)
Number of physical slots	2

Mass storage device

Type	Solid-state drive
Form factor	<ul style="list-style-type: none">• M.2 (2242), or• M.2 (2280)
Interface	PCIe Gen4

Screen

Size	381 mm (15 inches)
Display resolution	<ul style="list-style-type: none">1920 × 1200 pixels, or2560 × 1600 pixels
Supported refresh rate	<ul style="list-style-type: none">165 Hz, or180 Hz

Keyboard

Backlight color	<ul style="list-style-type: none">White, orRGB
Shortcut keys	<ul style="list-style-type: none">Function keysHotkeys
Modifier keys	<ul style="list-style-type: none">alt keyctrl keyshift keyWindows keyfn key
Special keys or key group	Numeric keypad

Connectors and slots

Combo audio jack	<ul style="list-style-type: none">Diameter: 3.5 mmSupported plugs:<ul style="list-style-type: none">3-pole, TRS4-pole, TRRS (CTIA and OMTP)
Ethernet connector	8P8C jack
HDMI connector	<ul style="list-style-type: none">Supported signaling protocol: Transition minimized differential signaling (TMDS)Maximum output resolution: 7680×4320 @ 30Hz
Power connector	<p>Input:</p> <ul style="list-style-type: none">Direct current20 V

USB Standard-A connector	<ul style="list-style-type: none"> Quantity: 3 Maximum power output: <ul style="list-style-type: none"> 5 V, 0.9 A 5 V, 2 A (for always-on connector) Supported signaling protocols: <ul style="list-style-type: none"> USB 2.0 480 Mbps SuperSpeed USB 5 Gbps
Multi-purpose USB Type-C connector	<ul style="list-style-type: none"> Quantity: 2 Maximum power output: 5 V, 3 A Maximum power input: 170 W Supported signaling protocols: <ul style="list-style-type: none"> USB Power Delivery (with an icon USB-PD next to it) DisplayPort™ Alt Mode: <ul style="list-style-type: none"> DisplayPort 2.1 compliant: Maximum output resolution: <ul style="list-style-type: none"> 7680×4320 @ 60Hz (for USB-PD Type-C connector of all models) 7680×4320 @ 30Hz (for non-USB-PD Type-C connector of Legion 5 15AKP10) DisplayPort 1.4 compliant: Maximum output resolution: <ul style="list-style-type: none"> 7680×4320 @ 30Hz (for non-USB-PD Type-C connector of Legion 5 15AHP10 and Legion 5 15IRX10) 7680×4320 @ 85Hz (for non-USB-PD Type-C connector of Legion 5 15IAX10) USB 2.0 480 Mbps SuperSpeed USB 5 Gbps SuperSpeed USB 10 Gbps USB 40 Gbps (For Legion 5 15AHP10 and Legion 5 15AKP10) Thunderbolt 4 41.25 Gbps (For Legion 5 15IAX10)

Security

UEFI/BIOS passwords	<ul style="list-style-type: none"> Administrator password User password Master hard disk password User hard disk password
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Network

Ethernet	1 Gbps
Wi-Fi	<ul style="list-style-type: none"> Wi-Fi 6, or Wi-Fi 7
Bluetooth	<ul style="list-style-type: none"> Bluetooth 5.3, or 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	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)

Avoid constant body contact with specific hot sections

CAUTION:

When the computer is operating, it should be placed on a hard and flat surface with its bottom area not in contact with user's bare skin. Under normal operating conditions, the temperature of the bottom surface will remain within an acceptable range as defined in IEC 62368-1, but such temperatures can still be high enough to cause discomfort or harm to the user if directly touched for over 10 seconds at a time. As such, it is recommended that users avoid prolonged direct contact with the bottom of the computer.

Chapter 2. Get started with your computer

Your PC and its operating system

The operating system is essential software for a PC. It manages the hardware devices of the PC, provides utility applications and user interfaces, and enables the installation of various applications for a wide range of purposes.

Your PC comes with Windows 11 pre-installed.

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 must either use an existing Microsoft account or create a new one. You can switch to a local account after the initial setup.

Set up facial recognition (for selected models)

Apart from text-based passwords, Windows 11 supports additional user authentication methods for PCs with the required hardware devices. For PCs equipped with a built-in infrared LED and an infrared camera, you can enable facial recognition to sign into Windows using your face.

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

Step 2. Select **Set up** → **Get started** and follow on-screen instructions to enroll your face.

Note: If you are using a local account to sign into Windows, you must set a password for the account before you can enable facial recognition.

Windows recovery options

While using your PC, you may encounter various issues. Windows provides several recovery options to help restore your system to normal functionality. The table below will help you choose the right option for different situations.

Table 5. Windows recovery options

Situations	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.

Table 5. Windows recovery options (continued)

Situations	Recovery options
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.

Windows Update

From time to time, your PC receives update notifications. These notifications may include new features, security updates, and 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 settings related to updates. To navigate to Windows Update, select **Settings** → **Windows Update**.

Use power efficiently

As an electronic device, your PC requires electricity to operate. The Windows operating system provides advanced power management features for the devices within your PC. You can take advantage of these features to use your PC in an energy-efficient manner.

Shut down your PC

When you have finished using your PC and do not plan to resume shortly, shut it down.

- Step 1. Select **Start** → **Power**.
- Step 2. Select **Shut down**.

Put your PC into sleep mode

If you need to stop using your PC but plan to resume shortly, you can put it into sleep mode. Your PC will wake up more quickly from sleep mode, allowing you to return to where you left off with your work.

- Step 1. Select **Start** → **Power**.
- Step 2. Select **Sleep**.

Adjust timeout settings for saving power

Setting appropriate timeouts for your PC to enter sleep mode and for the built-in screen to turn off is an effective method of reducing your PC's power consumption. The Windows operating system comes with default timeout settings for these two items, which you can adjust to better suit your preferences.

- Step 1. Select **Start** → **Settings** → **System** → **Power & battery** → **Screen, sleep, & hibernation timeouts**.
- Step 2. Adjust the settings.
For notebook PCs, you can set distinct timeouts for two usage scenarios: when the PC is plugged in and when it is running on battery power.

Default timeout settings for power saving

The operating system on your PC has the following timeouts enabled by default. You can adjust these settings to better suit your preferences.

Note: Setting appropriate timeouts is an effective method of reducing your PC's power consumption. Avoid setting excessively long timeouts to effectively disable this power-saving feature.

Table 6. Default timeout settings for the PC to enter sleep mode and the screen to turn off

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

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

Connect to a 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>.



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 desired Wi-Fi network.

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.

The Novo Button menu

The Novo Button menu can be displayed before the operating system starts. From the menu, you can choose to

- Open the UEFI/BIOS setup utility
- Open the boot device selection menu
- Open the Windows startup options screen

Note: From the Windows startup options screen, you can then choose to

Start your computer using a recovery drive

Reset your computer

Open the advanced options screen

Open the Novo Button menu

For Lenovo computers with a Novo button, you can press the button to open the Novo Button menu.

- Step 1. Turn off the computer.
- Step 2. Open the LCD screen and press the Novo button.

Note: Alternatively, turn off the computer. Press fn and the power button to open the Novo Button menu.

Interact with your computer

Hotkeys

Hotkeys provide quick access to frequently used settings and applications. Typically located in the top row of the keyboard, they often share keys with the function keys (F1–F12) and several other keys. Each hotkey's function is denoted by the icon printed on the key.

Table 7. Hotkey functions

Hotkey icon	Function description
🔇	Mutes/Unmutes sound.
🔉	Decreases volume.
🔊	Increases volume.
🎙	Enables/Disables the microphone.
☀️	Decreases screen brightness.
☀️	Increases screen brightness.
eyedropper	Selects and sets up display devices.
✈️	Enables/Disables airplane mode.
★	Opens the Lenovo AI Now app or a quick launch panel.
☒	Enables/Disables the touchpad.
📞	Opens the phone link.
💻	Opens the Calculator app.
⎙	Takes a screenshot.

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.

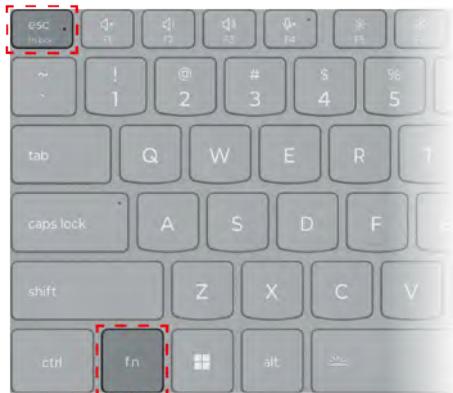


Figure 1. Locations of the fn lock key and the fn key

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

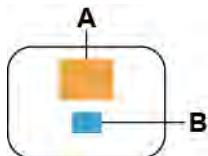


Figure 2. The layout of a dual-function key

Table 8. 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

Combination keys using the fn key

The fn key can be used in combination with specific 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

Table 9. *fn*-based key combinations (continued)

Key combination	Function
fn + Space	Adjusts keyboard backlight
fn + B	Break
fn + P	Pause
fn + S	SysRq
fn + K	ScrLk
fn + I	Insert
fn + T	PrtScr

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 specific keys to quickly change settings and access utilities within the Windows operating system. The table below lists frequently used key combinations. For a complete list of all key combinations that utilize the Windows logo key, please refer to the official Microsoft online documentation.

Table 10. Windows logo 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.

Note: 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.

Related topics

“I pressed the Copilot key on my keyboard, but neither Copilot in Windows nor Windows Search opened. What could be the potential cause?” on page 37

Numeric keypad

Some Lenovo computers include a dedicated numeric keypad on the far right of the keyboard. The keypad is used for entering numbers and operators quickly.

Press the **num lock** key to enable or disable the numeric keypad.

Touchpad gestures

The Windows operating system supports multi-finger gestures on the touchpad, enhancing productivity while interacting with the operating system.

Table 11. Multi-finger touchpad gestures

Number of fingers to use	Gesture	Function
Two	Swipe vertically	Scrolls pages
Two	Pinch in or stretch out	Zooms out / Zooms in
Two	Tap	Displays the context menu (right-clicking)
Three	Swipe up	Shows all open windows
Three	Swipe down	Returns to the desktop
Three	Swipe left or right	Switches between open apps
Three	Tap	Opens Windows Search

Modify the default functions for touchpad gestures

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

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

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

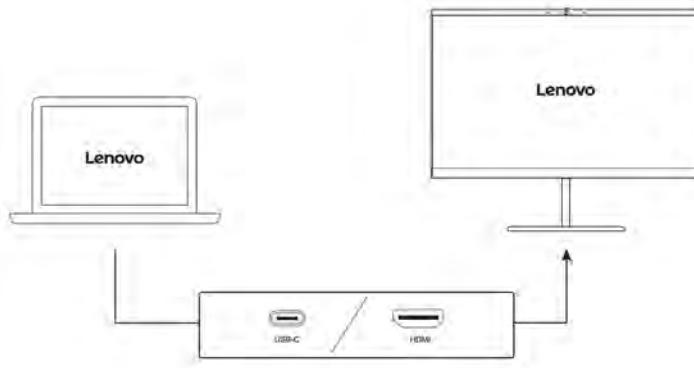
Connect to an external display

Connect to a wired display

Connect your computer to the desired display with an appropriate cable.

Step 1. Connect one end of the display cable to the HDMI connector or a multi-purpose USB Type-C connector on your computer.

Step 2. Connect the other end of the cable to the display.



Connect to a wireless display

Ensure that:

- Both your computer and the display support Miracast® technology.
- The display is connected to the same Wi-Fi network as your computer and is discoverable.

Step 1. Press Windows key + K.

The computer searches for wireless display devices and audio devices and lists the results.

Step 2. Select the display you want to connect to, and then follow the on-screen instructions.

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

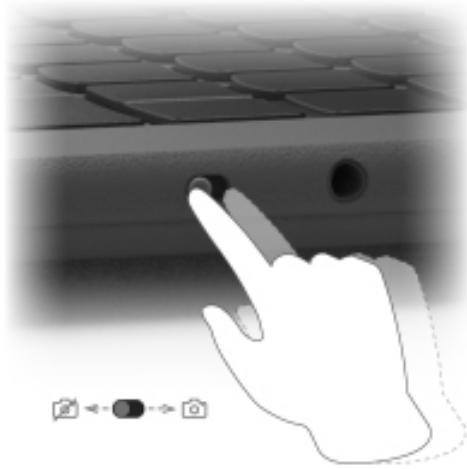
Step 1. Press **Fn** or **fn + F4**.
Your computer shows a list of display modes, with the current mode highlighted.

Step 2. Select a display mode from the list.

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.

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 **Win + 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.

Chapter 3. Explore your computer

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.

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.

Super Resolution (for selected models)

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.

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	<p>Voice Recognition: Your computer captures multiple voices in a way that reflects their original spatial positions.</p> <p>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.</p> <p>Note: To remove your voice record, select REMOVE MY VOICE.</p>	<ul style="list-style-type: none">• 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.

Function	Description	Remarks
	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.

Manage power

Use the information 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. The following table lists the typical time needed for batteries in rapid charge mode to be charged to 80% and 100% respectively.

Table 12. Reference charge time for batteries in rapid charge mode

Mode	Time needed to charge from 0% to 80%	Time needed to charge from 0% to 100%
Rapid charge	Less than 1 hour	Less than 2 hours

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.

Overnight charge optimization

Some people follow a regular pattern when using their computers. They finish their workday with the computer at a low battery charge level. They plug in their computers at night and need the battery to be fully charged the next morning so they can unplug the computer and bring it to work. These activities happen at approximately the same time each day. If this sounds like you, consider enabling overnight charge optimization for the battery.

Overnight charge optimization affects battery charging during the night hours, the time when you're usually asleep. When it is enabled, the computer regularly adapts its charging behavior based on observation of when you plug in the computer at night and unplug it in the morning. During the nighttime, the battery is charged to a particular range and is kept within that range for an extended period, before being further charged to 100%. Overnight charge optimization ensures safe charging during the night and is beneficial to the long-term health of the battery.

Note: With overnight charge optimization enabled, if you break your routine one day by unplugging the computer much earlier than usual in the morning, you may find that the battery is not fully charged.

If the battery pack of your computer supports overnight charge optimization, it can be enabled in Lenovo Vantage or Lenovo PC Manager.

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%.

Using a Power Delivery compliant USB Type-C charger with the computer

The USB Type-C connector (with an icon  next to it) on the left side of the computer conforms to *USB Power Delivery Specification*. If you did not carry the included ac power adapter with your computer, you have the option of using a qualified USB Type-C charger (purchased separately) that is also Power Delivery compliant to charge the computer. Lenovo branded USB Type-C chargers with the following listed maximum ratings are tested to work with the computer. Chargers of other brands with the same ratings should also work but are not thoroughly tested.

- 20 V, 4.75 A
- 20 V, 5 A

- 20 V, 6.75 A
- 20 V, 7 A

The left USB Type-C connector (with an icon USB-PD next to it) is not designed as the primary power input connector. When the computer is operating, the power supplied by the USB Type-C charger may be insufficient. As a result, the computer may not operate at its full capacity and the battery charging may stop or is very slow. Use the included ac power adapter whenever possible.

CAUTION:

When purchasing third-party USB Type-C chargers for use with the computer, choose a product that is safety approved or certified. A disqualified charger may cause damage to your computer or pose an electrical hazard. In many countries and regions, manufacturers or importers of electric chargers can submit their products to a certification authority or approved and recognized testing laboratories. Such a product usually carries a mark if it was tested to pass relevant quality and safety standards. For some countries and regions, this certification process is even mandatory. If you live in mainland China, choose a charger with the “CCC” mark; for users in many European countries, choose one with the “CE” mark; for users in the United States and Canada, choose a Listed charger that carries a mark by one of the Nationally Recognized Testing Laboratories. (For example, the “UL Listed” mark). For people living in other countries and regions, consult a qualified electrical engineer for how to select a safety approved electric charger.

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 the power options and then click to choose what the power button does.

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 between the 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 Legion Zone. As a shortcut, you can also use the key combination **fn + Q**. The following table lists the available operation modes on your computer and the recommended conditions for each mode.

Table 13. Operation modes and their recommended usage conditions

Icon	Operation mode	Recommended conditions
	Performance	<ul style="list-style-type: none"> • 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.
	Balance	You plan to frequently switch between different computer tasks over a period of time.
	Quiet	<ul style="list-style-type: none"> • Your computer is operating on battery power, or • You want the computer to be as quiet as possible

Note: When the computer is operating on battery power or is plugged in using an under-rated power adapter, you may not be able to switch it to Performance mode. In Balance mode, the computer dynamically switches between Performance mode and Quiet mode based on the tasks that are running on the computer.

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.

Change settings in UEFI/BIOS setup utility

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

What is UEFI/BIOS setup utility

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

Open 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. Or enter **Novo Button** menu.
- Step 3. Select UEFI/BIOS Setup.

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 UEFI/BIOS 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 UEFI/BIOS 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 always-on

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

- Step 1. Open the UEFI/BIOS setup utility.
- Step 2. Select **Configuration** → **Always On USB** and press Enter.
- Step 3. Change the setting to **Disabled** or **Enabled**.
- Step 4. Select **Exit** → **Exit Saving Changes**.

Set passwords in UEFI/BIOS setup utility

This section introduces the types of passwords that you can set in the UEFI (Unified Extensible Firmware Interface) or BIOS (Basic Input/Output System) setup utility.

Password types

You can set various types of passwords in the UEFI/BIOS 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.
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 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 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 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 UEFI/BIOS 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 UEFI/BIOS 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 the power-on password to enforce greater security.

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

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 the hard disk password.

Step 3. Follow on-screen instructions to set both master and user hard disk 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 hard disk password

Step 1. Open the UEFI/BIOS setup utility.

Step 2. Select **Security**.

Step 3. Change or remove the hard disk password.

To change or remove the 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 the user hard disk 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

How do I partition my storage drive?

Refer to <https://support.lenovo.com/solutions/ht503851>.

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.

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>.

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 and disabled in:

- Lenovo Vantage or Lenovo PC Manager
- Firmware Setup Utility

I pressed the Copilot key on my keyboard, but neither Copilot in Windows nor Windows Search opened. What could be the potential cause?

Your Windows operating system version is not up to date and does not include the necessary software components. Update your Windows operating system to version 23H2 or later using Windows Update and then try again.

Note: The Version 23H2 update may not be immediately available for your PC. You may need to periodically open Windows Update and manually check for updates to install the 23H2 update when it becomes available for your PC.

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	<ul style="list-style-type: none">• https://www.lenovo.com/tips• https://forums.lenovo.com
Accessibility information	https://www.lenovo.com/accessibility
Reset or restore Windows	<ul style="list-style-type: none">• Use Lenovo recovery options.<ol style="list-style-type: none">1. Go to https://support.lenovo.com/HowToCreateLenovoRecovery.2. Follow the on-screen instructions.• Use Windows recovery options.<ol style="list-style-type: none">1. Go to https://pcsupport.lenovo.com.2. Detect your computer or manually select your computer model.3. Click Troubleshoot & Diagnose → Custom Troubleshooting → Operating System Diagnostics and then follow the on-screen instructions.
Use Lenovo Vantage or Lenovo PC Manager to:	
<ul style="list-style-type: none">• Download and install the latest drivers and firmware.• Configure hardware settings.• Diagnose computer hardware problems.• Check the computer warranty status.	Use Windows Search.
Product documentation:	
<ul style="list-style-type: none">• Generic Safety and Compliance Notices• Safety and Warranty Guide• Setup Guide• This User Guide• Regulatory Notice	<ol style="list-style-type: none">1. Go to https://support.lenovo.com.2. Detect your computer or select your 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 on the following:	
<ul style="list-style-type: none"> • Drivers and software • Diagnostic solutions • Product and service warranty • Product and parts details • Knowledge base and frequently asked questions 	Visit https://support.lenovo.com .
Windows help information	<ul style="list-style-type: none"> • 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 replaced by the customer. A Lenovo computer may contain the following types of CRUs:

Self-service CRU

Parts that can be replaced easily by customers themselves or by trained service technicians at an additional cost.

Optional-service CRU

Parts that can be replaced by customers with a greater skill level. Trained service technicians can also provide service to 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 a 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/lw_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 is available from Lenovo at any time upon your request.
 - the product *User Guide*
 - the printed publications that come 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
<ul style="list-style-type: none">• Product name• Machine type and serial number	<ul style="list-style-type: none">• 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 non-warranted 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>.

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Appendix A. Notices and trademarks

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