

User Guide

Lenovo
ThinkBook

Lenovo

ThinkBook 16 Gen 7

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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About this guide

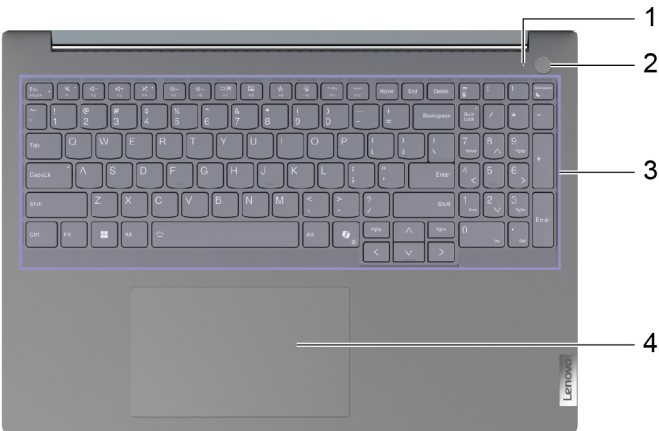
- This guide applies to Lenovo product model(s) listed below. Illustrations in this guide may look slightly different from your product model.

Model name	Machine type (MT)
ThinkBook 16 G7 QOY	21NH

- 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 PC

Top view



No.	Description
1	Power light
2	Power button (fingerprint sensor)
3	Keyboard
4	Touchpad

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 1. Power light status and description

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

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.

Fingerprint sensor

The fingerprint sensor scans your finger to unlock your PC or verify your identity.

Note: You need to enroll one or more fingerprints before using them for identity verification. On a Windows PC, go to **Settings → Accounts → Sign-in options** to enroll your fingerprints.

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.

Related topics

“Shortcut keys” on page 19

Touchpad

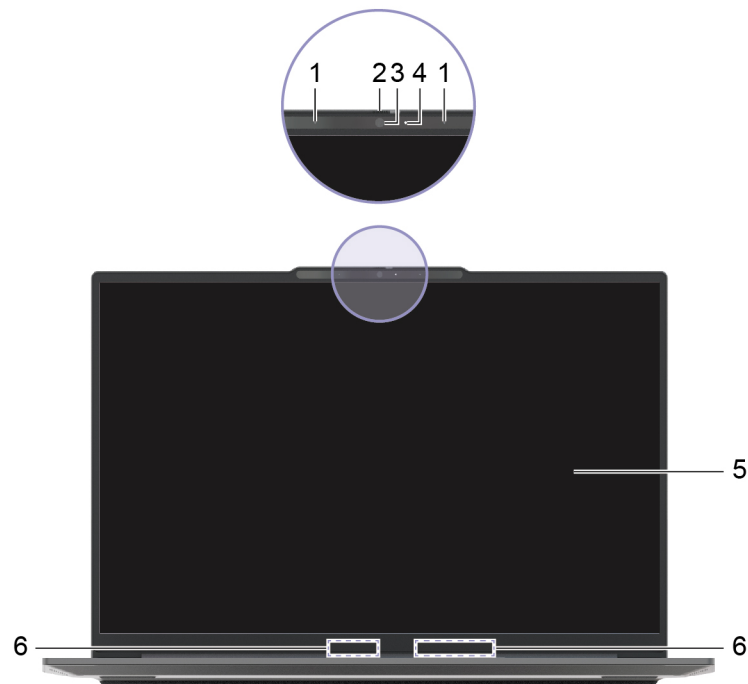
The touchpad is the PC's built-in pointing device. Slide your finger on the touchpad to move the pointer on the screen and tap or double-tap to select or execute a screen item.

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.

Related topics

“Touchpad gestures” on page 22

Front view



No.	Description
1	Microphones
2	Camera shutter
3	Camera
4	Camera light
5	Screen
6	Antennas

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.

Camera shutter

The camera shutter is a sliding cap that you can move to block the camera lens.

Note: The camera shutter is designed for privacy protection. When the camera lens is blocked, the camera function is disabled.

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 2. 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.

The screen is touch-enabled, allowing you to interact with your PC by intuitively touching buttons, icons, and menu items displayed on the screen. Touch-enabled screens also support multi-finger gestures.

Related topics

“The display device” on page 17

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.

Left view



No.	Description
1	HDMI™ connector
2	Multi-purpose USB Type-C® connector
3	Charging light
4	Multi-purpose USB Type-C connector
5	Combo audio jack

HDMI connector

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

Multi-purpose USB Type-C connector

This USB Type-C® connector is the PC's power input connector. Use the included power adapter and this 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.

Related topics

“Connecting external displays” on page 18

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 3. Charging light statuses and descriptions

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

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.

Related topics

“Connecting external displays” on page 18

Combo audio jack

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

Right view



No.	Description
1	State light
2	SD card slot
3	USB Standard-A connector
4	USB Standard-A connector (always-on connector)
4	Security lock

State light

The state 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, the color of the state light helps you determine whether the battery is running low.

Note: The status of the state light is synchronized with that of the power light. The state light is usually located on the right or left side of the PC and is visible when the LCD lid is closed.

Table 4. State light status and description

Light status	Power state	Battery charge level
White (solid on)	Powered on	21%–100%
Amber (solid on)	Powered on	1%–20%

Table 4. State light status and description (continued)

Light status	Power state	Battery charge level
White (blinking)	In sleep mode	/
Off	Powered off or in hibernation mode	/

SD card slot

The SD card slot is used to insert an SD, SDHC, or SDXC memory card to transfer data between the memory card and your PC.

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

Bottom view



No.	Description
1	Air vents (intake)
2	Speakers
3	Novo button hole

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.

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.

Specifications

Dimensions

Width	355.6 mm
Depth	253 mm
Thickness	16.7–18.3 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	84 Wh
Cell type	Li-Polymer
Number of cells	4

Memory

Type	LPDDR5X
Installation	Onboard
Number of DIMM slots	0

Mass storage device

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

Display

Size	16 inches
Type	LCD
Resolution	2.5 K

Connectors

Multi-purpose USB Type-C connector	<ul style="list-style-type: none">• Quantity: 2• Maximum power output: 5 V, 3 A• Maximum power input: 20 V, 3.25 A• Protocols:<ul style="list-style-type: none">– USB 2.0 480 Mbps– SuperSpeed USB 5 Gbps– SuperSpeed USB 10 Gbps– DisplayPort™ 1.4
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Note: Data transmission rates are presented as maximum theoretical values in compliance with applicable specifications. The actual data transmission rates depend on various factors, including the performance of the connected devices and the quality of the cables being used. These rates are typically slower than the maximum theoretical values listed.

Networking

Wi-Fi standards	<ul style="list-style-type: none">• 802.11 a/b/g• 802.11n• 802.11ac wave 2• Wi-Fi 6 (802.11ax)• Wi-Fi 6E• Wi-Fi 7 <p>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 6E and Wi-Fi 7 on this PC are disabled in some countries or regions in accordance with local regulations.</p>
Bluetooth	Bluetooth 5.3

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)
3.2 Gen 1	5
3.2 Gen 2	10

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. Explore your PC

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.

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 5. 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 Lenovo Smart Key ☆ 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.

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 included in 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 using it in a short while, 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 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 6. Default timeouts

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

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

Switch the PC's active power mode

The Windows operating system provides three preset power modes for easy management of the PC's power usage. You can switch the PC's active power mode according to your preferences for using your PC.

Step 1. Select **Settings → System → Power & battery**.

Step 2. Under **Power mode**, choose a power mode that best match your current pattern of PC usage.

If your PC is plugged in and you want the best performance, select **Best Performance**. If your PC is running on battery power and you want it to last as long as possible, select **Best 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, Lenovo PC Manager, or Lenovo Smart Engine.

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 (for selected models)

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 7. 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

Note: If your computer comes with a 71 Wh battery and a 65 W adapter, rapid charge mode is not supported.

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.

Nighttime 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 nighttime charge optimization for the battery.

Nighttime 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%. Nighttime charge optimization ensures safe charging during the night and is beneficial to the long-term health of the battery.

Note: With nighttime 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 nighttime charge optimization, it can be enabled in Lenovo Vantage, Lenovo PC Manager, or Lenovo Smart Engine.

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%.~~

Set up Internet access

In your home or office, Internet access is typically provided through Wi-Fi-enabled networks. You can connect to such a network to access the Internet. The Windows operating system provides utilities that assist in searching, connecting to, and managing wireless networks within range.

- Step 1. Select the Network, Sound, and Battery icons (  ) on the right side of the taskbar to open quick settings.
- Step 2. On the quick settings pane, select the > symbol next to the network icon. Wireless networks within range should be displayed.
- Step 3. Select the network you want to connect to and then select **Connect**.
- Step 4. Enter the network security key when prompted.

Interact effectively with your PC

You interact with your PC through its input and output devices. You spend a significant amount of time looking at the screen, where the user interface and content are displayed. The speakers produce sound, allowing you to listen to music or a voice recording. You type with the keyboard and navigate with the touchpad. You can join and participate in a web conference using the built-in camera and microphone.

Apart from the built-in devices, you can connect both wired and wireless external devices to enhance your interaction with your PC.

The display device

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

Turn on night light

Night light is a switch in Windows that you can turn on and off. When it is turned on, your screen shows warmer colors and the amount of emitted blue light is reduced. Enabling night light reduces the chances of developing eye fatigue or eye strain.

Step 1. Click the notification icon in the Windows notification area.

Step 2. Click the **Night light** icon to turn it on or off.

Note: Click **Expand** if you cannot find the night light icon.

For more guidance on reducing eye fatigue or eye strain, go to <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**.

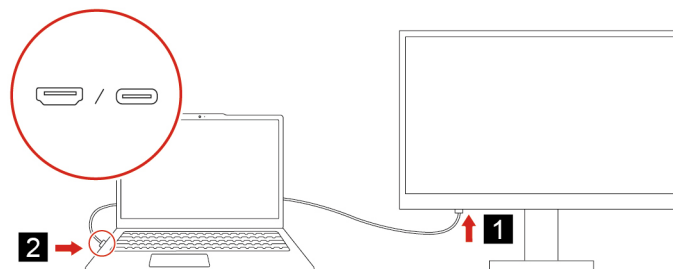
Step 3. Move the slider to adjust the color temperature.

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

Connecting external displays

You can use the HDMI connector and two USB Type-C connectors on your PC to connect external display devices directly.

- HDMI connector: Use a double-sided HDMI cable to connect the display to the HDMI connector on the left side of your PC.
- USB Type-C connector: 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.



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.

Keyboard

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

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 the emoji panel.
	Opens the Calculator app.
	Opens Lenovo Vantage or Lenovo PC Manger.

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.

The FnLock switch

The FnLock 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 FnLock switch.



Figure 1. Locations of the FnLock 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

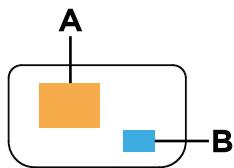


Figure 2. The layout of a dual-function key

Table 9. **FnLock** and dual-function keys

FnLock (Esc) LED	FnLock 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 certain keys to adjust device settings or activate additional functions.

Table 10. *fn-based key combinations*

Key combination	Function
fn + M	Enables/disables the touchpad
fn + N	Shows key device information
fn + Space	Adjust keyboard backlight
fn + B	Break
fn + P	Pause


Table 10. fn-based key combinations (continued)

Key combination	Function
fn + S	SysRq
fn + K	ScrLk
fn + I	Insert
fn + T	PrtScr
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 11. 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. If Copilot in Windows is not available or is disabled, pressing the Copilot key opens the Recall app.

Note: If both Copilot in Windows and Recall are disabled, pressing the Copilot key opens Windows search.

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 12. 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	Shows all open windows
Swipe down with three 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

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.

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 mice 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 apps

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

Type Lenovo Smart Meeting in the Windows search box and then press Enter.

Explore key features

- **Smart appearance**

- **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.



- **Dual Camera Fusion:** Show the image of any participant that is visible from the front or rear of the camera on the screen when collaborating with a Lenovo Magic Bay 4K Webcam.



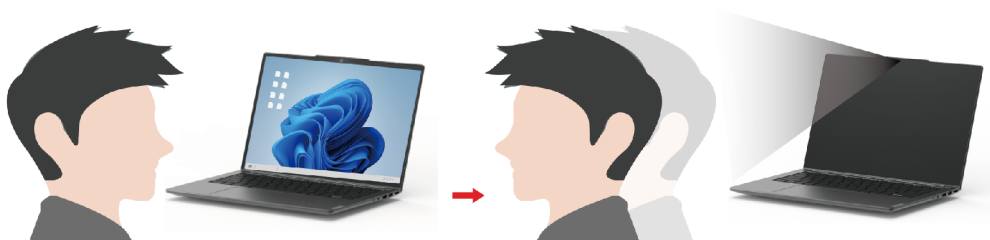
Note: You can purchase the Lenovo Magic Bay 4K Webcam from Lenovo at <https://www.lenovo.com/accessories>.

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



- **Intelligent sensing**

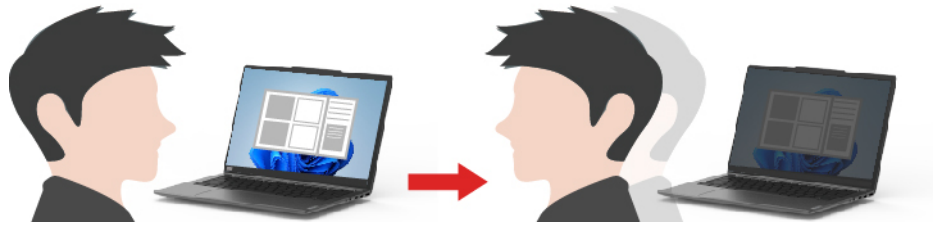
- **Presence detection:** Keep your computer awake when you are facing the screen and lock the computer screen automatically when you leave. You can customize the screen-off time from 10 to 60 seconds.



- **Privacy protection:** Blur your screen and display a warning message when a shoulder surfer is detected.



- **Adaptive dimming:** Track your face movements to recognize your focus of attention. When you are facing away, the display dims to conserve power. You can customize the brightness value and screen dimming timer.

**Notes:**

- 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.

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.

The utility program for the PC's firmware

Lenovo PCs typically come with a setup utility for their firmware. Within the setup utility, you can:

- 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 in 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.

There are several ways to open the utility program:

- Utilize the Advanced startup feature of the Windows operating system
- Use the Novo button menu
- Start or restart your PC and press an interrupt key (F1 or F2)

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
Supervisor password	No	You must enter it to start the setup utility.
User password	The Supervisor 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.

Note: If you start the setup utility using the user password, you can only change a few settings.

Set supervisor password

You set the supervisor password to prevent unauthorized access to the firmware setup utility.

Attention: If you forget the supervisor 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 → Password → Set Supervisor 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 **Restart → Exit Saving Changes**.

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

Change or remove supervisor password

Only the administrator can change or remove the supervisor password.

- Step 1. Open the firmware setup utility using the supervisor password.
- Step 2. Select **Security → Password → Set Supervisor 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 **Restart → Exit Saving Changes**.

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

Set user password

You must set the supervisor 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 supervisor password.
- Step 2. Select **Security → Password → 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 supervisor password.
- Step 4. Enter the password again and press Enter.
- Step 5. Select **Restart → Exit Saving Changes**.

Enable power-on password

If the supervisor 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 → Password → Power on Password** and press Enter.

Note: The supervisor password must be set in advance.
- Step 3. Change the setting to **Enabled**.
- Step 4. Select **Restart → 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 → Password → 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 **Restart → 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 → Password**.
- 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 **Restart → Exit Saving Changes**.

Set strong password

You can set a strong password to strengthen the password security.

Step 1. Open the firmware setup utility.

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

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

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

If the strong password is enabled, supervisor password, user password, and hard disk password lengths must range between eight and 128 characters. Each password must include at least one uppercase character, one lowercase character, and one number.

Chapter 3. 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 firmware

Go to Lenovo Vantage or Lenovo PC Manager.

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

Resources	How to access?
Reset or restore Windows	<ul style="list-style-type: none"> Use Lenovo recovery options. <ol style="list-style-type: none"> Go to https://support.lenovo.com/HowToCreateLenovoRecovery. Follow the on-screen instructions. Use Windows recovery options. <ol style="list-style-type: none"> Go to https://pcsupport.lenovo.com. Detect your computer or manually select your computer model. Click Diagnostics → Operating System Diagnostics and then follow the on-screen instructions.
<p>Use Lenovo Vantage or Lenovo PC Manager to:</p> <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.
<p>Product documentation:</p> <ul style="list-style-type: none"> Generic Safety and Compliance Notices Safety and Warranty Guide Setup Guide This <i>User Guide</i> Regulatory Notice 	<ol style="list-style-type: none"> Go to https://support.lenovo.com. Detect your computer or select computer model manually. Select Documentation and filter out the documentation you want.
<p>Lenovo Support Web site with the latest support information of the following:</p> <ul style="list-style-type: none"> 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 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, must be done by a Lenovo-authorized repair facility or technician. Go to <https://support.lenovo.com/partnerlocation> 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 nameMachine 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/supportphonenumberlist>.

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

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