User Guide



ThinkCentre neo 50a 24 Gen 7, ThinkCentre neo 50a 27 Gen 7

About this documentation

This documentation applies to the Lenovo product models listed below.

Model name	Machine types (MT)
ThinkCentre neo 50a 24 Gen 7	13RV, 13RW
ThinkCentre neo 50a 27 Gen 7	13RT, 13RU

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

- *Safety and Warranty Guide*
- *Generic Safety and Compliance Notices*
  - For computers purchased in mainland China: https://iknow.lenovo.com.cn/detail/191404
  - For computers purchased outside mainland China: https://pcsupport.lenovo.com/docs/generic_notices
- *Setup Guide (if provided with your computer)*

Note:

- Illustrations in this documentation may look slightly different from your product model.
- For more compliance information, refer to:
  - For computers purchased in mainland China

    Generic Safety and Compliance Notices at https://iknow.lenovo.com.cn/detail/191404
  - For computers purchased outside mainland China

    Regulatory Notice at https://support.lenovo.com/docs/common_commercial_rn and *Generic Safety and Compliance Notices* at https://www.lenovo.com/compliance
- Depending on the model, some optional accessories, features, and software programs might not be available on your computer.
- Depending on the version of the operating systems and programs, some user interface instructions might not be applicable to your computer.
- Documentation content is subject to change without notice. Lenovo makes constant improvements to the documentation of your computer, including this *User Guide* . To get the latest documentation, go to:
  - For computers purchased in mainland China: https://newsupport.lenovo.com.cn
  - For computers purchased outside mainland China: https://pcsupport.lenovo.com
- Microsoft® makes periodic feature changes to the Windows® operating system through Windows Update. As a result, some information in this documentation might become outdated. Refer to Microsoft resources for the latest information.

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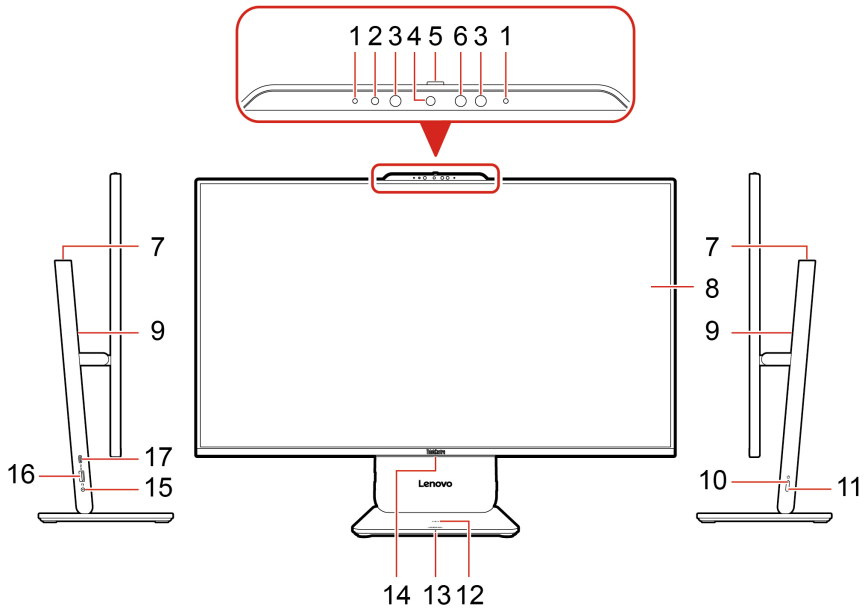
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Chapter 1 Meet your computer

Overview



Item	Description	Item	Description
1	Microphones	2	Integrated camera activity indicator
3	Infrared LED*	4	Integrated camera
5	Camera switch	6	Infrared camera*
7	Air vents (outlet)	8	Multi-touch screen*
9	Air vents (intake)	10	Power indicator
11	Power button	12	Wireless charging pad*
13	Wireless charging indicator*	14	Adaptive lighting
15	Combo audio jack	16	USB-A connector (USB 10Gbps)
17	USB-C® connector (USB 20Gbps)		

* for selected models

Note:

- Ensure that the air vents remain unobstructed.
- Place the phone horizontally on the center of the wireless charging pad to activate wireless charging.
- For more information about the USB connector name update, see Supplementary information on page 40.

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 in the connector name or below for each corresponding device.

USB device	Data rate (Gbit/s)
Thunderbolt 3	40
Thunderbolt 4	40

Power indicator

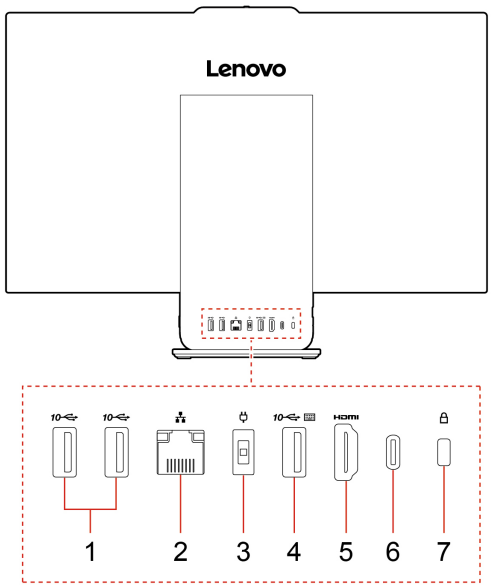
Show the system status of your computer.

- **On:** The computer is starting up or working.
- **Off:** The computer is off or in hibernation mode.
- **Blinking slowly:** The computer is in sleep mode.

Related topics

- USB specifications on page 5
- Use the touch screen (for selected models) on page 22

Rear



Item	Description	Item	Description
1	USB-A connectors (USB 10Gbps)	2	Ethernet connector (1 Gbps)
3	Power connector	4	USB-A connector (USB 10Gbps)
5	HDMI™ 2.1 TMDS in/out connector (1080P/120Hz for input) (4K/60Hz for output)	6	USB-C connector (USB 20Gbps)
7	Security-lock slot		

Note:

The actual resolution of external displays may vary by the connected display device and the cable being used.

Related topics

- USB specifications on page 5
- Change display settings on page 10
- Lock the computer on page 13

Specifications

Specification	Description
Dimensions	• ThinkCentre neo 50a 24 Gen 7: - Width: 539.2 mm (21.2 inches) - Height: 471.8 mm (18.6 inches) - Depth: 172 mm (6.8 inches) • ThinkCentre neo 50a 27 Gen 7: - Width: 611.3 mm (24.1 inches) - Height: 512.3 mm (20.2 inches) - Depth: 172 mm (6.8 inches)
Weight (without packaging)	Maximum configuration as shipped: • ThinkCentre neo 50a 24 Gen 7: 4.23 kg (9.3 lb) • ThinkCentre neo 50a 27 Gen 7: 5.39 kg (11.9 lb)
Hardware configuration	Type **Device Manager** in the Windows search box and then press Enter. Type the administrator password or provide confirmation, if prompted.
Power supply	• 90-watt automatic voltage-sensing power supply* • 135-watt automatic voltage-sensing power supply*
Electrical input	• Input voltage: From 100 V ac to 240 V ac • Input frequency: 50/60 Hz
Memory	Memory type: on-board low-power double data rate 5X (LPDDR5X) Maximum memory capacity: 32 GB
Storage device	M.2 solid-state drive To view the storage drive capacity of your computer, type **Disk Management** in the Windows search box and then press Enter. **Note:** The storage drive capacity indicated by the system is less than the nominal capacity.
Video features	• Color display with In-Plane Switching (IPS) technology • Display size:

Specification	Description
	- 604.52 mm (23.8 inches) (for ThinkCentre neo 50a 24 Gen 7) - 685.8 mm (27 inches) (for ThinkCentre neo 50a 27 Gen 7) • Display resolution: 1920 x 1080 pixels • Multi-touch technology* • The integrated graphics card supports the following connectors: - HDMI 2.1 TMDS in/out connector - USB-C connector
Expansion	M.2 solid-state drive slot x 3 (one for Wireless LAN card, two for solid-state drive) **Note:** One slot for solid-state drive supports universal flash storage (UFS).
Network features	• Bluetooth • Ethernet LAN • Wireless LAN

* for selected models

Operating environment

Maximum altitude (without pressurization)

- Operating: From 0 m (0 ft) to 3048 m (10 000 ft)
- Storage: From 0 m (0 ft) to 12192 m (40 000 ft)

Temperature

- Operating: From 0°C (32°F) to 40°C (104°F)
- Storage: From -20°C (-4°F) to 60°C (140°F)

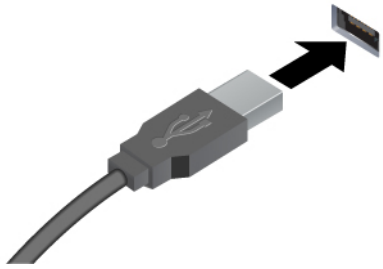
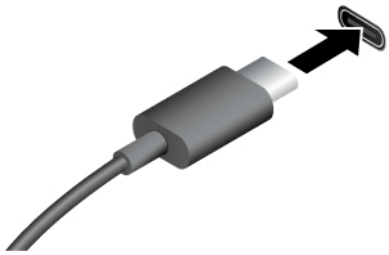
Relative humidity

- Operating: 10%-90% (non-condensing)
- Storage: 10%-90% (non-condensing)

USB specifications

Note:

Depending on the model, some USB connectors might not be available on your computer.

Connector name	Description
 USB-A connector (USB 10Gbps)	Connect USB-A compatible devices, such as a USB-A keyboard, USB-A mouse, USB-A storage device, or USB-A printer.
 USB-C connector (USB 20Gbps)	• Charge USB-C compatible devices with the output voltage and current of 5 V and 3 A. • Connect to USB-C accessories to help expand your computer functionality. To purchase USB-C accessories, go to https://www.lenovo.com/accessories.

The Vantage app

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

To access the Vantage app, type **Vantage** in the Windows search box.

Note:

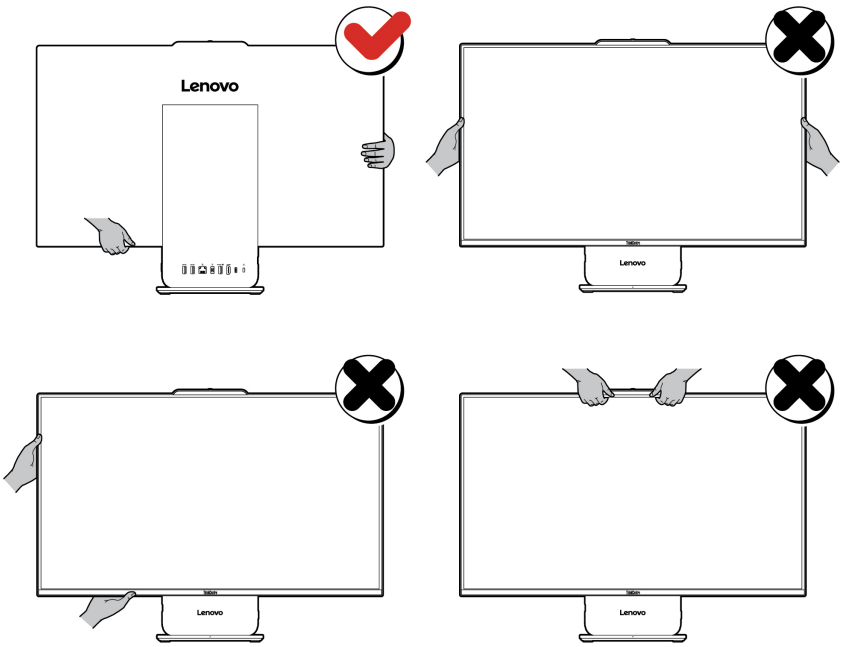
- The available features vary depending on the computer model.
- The Vantage app makes periodic updates of the features to keep improving your experience with your computer. The description of features might be different from that on your actual user interface. You can download the latest version of Vantage app from Microsoft Store.

The Vantage app enables you to:

- Know the device status easily and customize device settings.
- Download and install UEFI BIOS, firmware, and driver to keep your computer up-to-date.
- Monitor your computer health, and secure your computer against outside threats.
- Scan your computer hardware and diagnose hardware problems.
- Look up warranty status (online).
- Access *User Guide* and helpful articles.

Chapter 2 Get started with your computer

Carry the computer



Note:

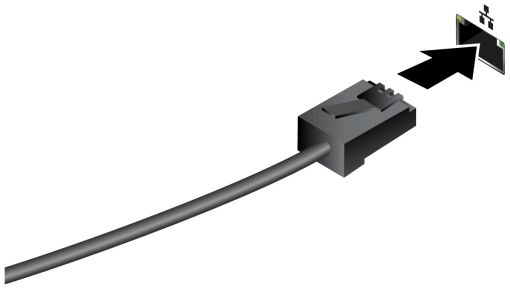
- Hold the computer firmly while carrying it.
- Keep the computer upright.

Set up the computer

1. Connect wired or wireless external displays on the computer.
   - **Wired external displays:** Connect the cables of wired external displays to any of the following connectors on the computer:
     - HDMI 2.1 TMDS in/out connector
     - USB-C connector (USB 20Gbps), on the left and rear side
   - **Wireless external displays:** Press Windows logo key + K and then select a wireless display to connect. Ensure that both your computer and the wireless display support Miracast®.

   To change display settings, refer to Change display settings on page 10.
2. Connect the following peripheral devices on the computer if any.
   - Keyboard and mouse
   - Dust shield
   - Air deflector
   - Vertical stand

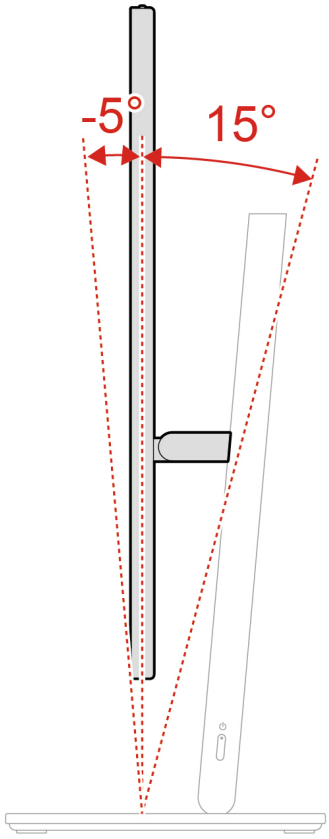
3. Connect the power cord to the power cord connector on the computer and then connect it to a properly-grounded electrical outlet.
4. Press the power button to turn on the computer.
5. Follow the on-screen instructions to complete the setup procedures.
6. Connect to a wired or wireless network.
   - **Wired network:** Connect Ethernet cable of local network to the Ethernet connector on the computer.



   - **Wireless network:** Click on the bottom right of your display to connect to an available network. Provide required information if needed.

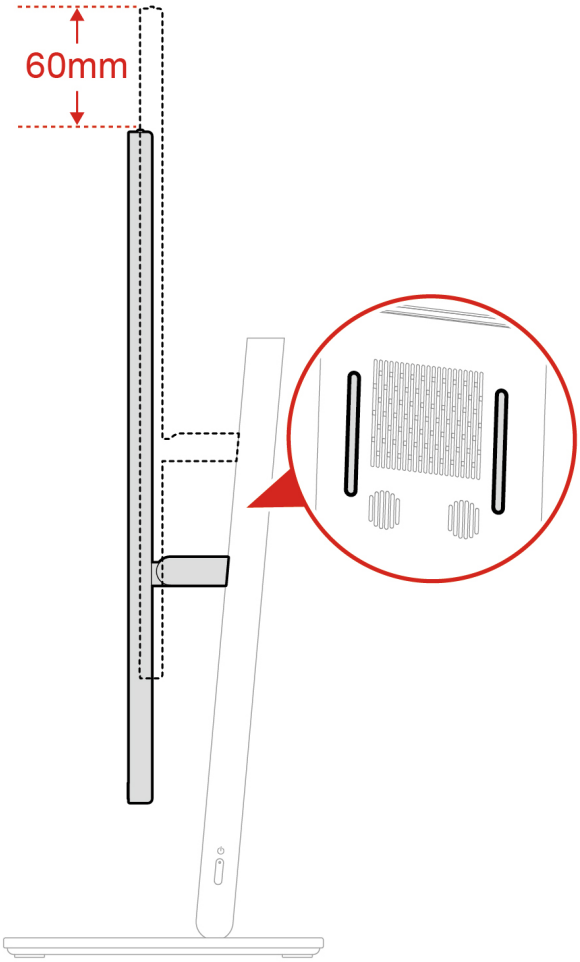
> **Note:**
>
> The wireless LAN module on your computer may support different standards. For some countries or regions, use of 802.11ax may be disabled according to local regulations.

Adjust the computer stand



Note:

Actual tilt range may vary by ±2°.



Note:

- Actual height adjustment range may vary by ±3 mm.
- When moving the computer or adjusting its height, keep your fingers away from the slide rail gaps to avoid the risk of pinching.

Shut down the computer

To prevent damage to hardware/software systems or loss of data, do not arbitrarily use the power button to shut down the computer. Instead, shut down the computer as follows.

1. Click > > **Shut down**.
2. Wait for the computer to shut down and then turn off the monitor and other peripheral devices.

Note:

After you turn off the system, please wait at least 20 seconds before turning the computer back on to avoid hardware faults.

Change display settings

1. Right-click a blank area on the desktop and select display settings.

2. Select the display that you want to configure and change display settings of your preference.

Connect to a Bluetooth device

You can connect all types of Bluetooth-enabled devices to your computer, such as a keyboard, a mouse, a smartphone, or speakers. To ensure successful connection, place the devices at most 10 meters (33 feet) from the computer.

Conventional pair

This topic helps you connect to a Bluetooth device by conventional pair.

1. Type **Bluetooth** in the Windows search box and then press Enter.
2. Turn on both the Bluetooth on your computer and the Bluetooth device. Make sure the device is discoverable.
3. Select the device when it is displayed on the **Add a device** list, and then follow the on-screen instructions.

Note:

If the Bluetooth connection failed, do the following:

1. Type **Device Manager** in the Windows search box and then press Enter.
2. Locate the Bluetooth adapter. Right-click and select **Update driver**.
3. Select **Search automatically for drivers**, and then follow the on-screen instructions.

Swift pair

This topic helps you connect to a Bluetooth device by swift pair.

If your Bluetooth device supports swift pair, do the following:

1. Enable swift pair notification on Bluetooth settings page.
2. Turn on both the Bluetooth on your computer and the Bluetooth device. Make sure the device is discoverable.
3. Click **Connect** when a swift pair notification appears on your computer.

Note:

If the Bluetooth connection failed, do the following:

1. Type **Device Manager** in the Windows search box and then press Enter.
2. Locate the Bluetooth adapter. Right-click and select **Update driver**.
3. Select **Search automatically for drivers**, and then follow the on-screen instructions.

Connect a keyboard and a mouse

You can connect keyboards and mice to your PC using the USB cables, wireless USB receivers or Bluetooth.

Wired connection

Use the cable to connect the USB keyboard or mouse to your PC. Ensure that your PC has USB connectors available, or use a hub with extra connectivity options.

After the keyboard or the mouse is connected, it should automatically be detected and installed. If the keyboard or the mouse has customizable features, you may need to install the its software or drivers.

Wireless connection

You can connect the keyboard or mouse to your PC using the Bluetooth connectivity.

Before you connect the keyboard or mouse, ensure that the Bluetooth feature is enabled on your PC. Navigate to **Start** > **Bluetooth & devices**. Switch Bluetooth to **On**.

To connect the keyboard or mouse:

1. Enable the pairing mode of your keyboard or mouse and ensure it is ready to pair.
2. On your PC, select **Connect** if a notification appears, then wait for it to get set up.

> **Note:**
>
> If no notification appears, navigate to **Start** > **Bluetooth & devices** > **Add a device** > **Bluetooth**, then select your device from the list.

If your keyboard or mouse uses a wireless USB receiver for connection, follow the instructions of the correspondent product to connect it to your PC:

https://support.lenovo.com/us/en/manuals/UM931139

ICE performance mode

The ICE performance mode helps you adjust the acoustic and thermal performance of your computer. Three options are available:

- **Balance mode**: The computer works at the balance mode with balanced noise and better performance.
- **Performance mode** (default setting): The computer works at the best performance with normal acoustic level.

  > **Note:**
  >
  > The term “best” only refers to the best effect among different settings of the product itself.

- **Full Speed**: All fans in the computer will run at full speed.

Change the ICE performance mode

To change the ICE performance mode:

1. Restart the computer. When the logo screen is displayed, press F1 or fn+F1.
2. Select **Power** > **Intelligent Cooling** and press Enter.
3. Select **Performance Mode** and press Enter.
4. Set the performance mode as desired.
5. Press F10 or fn+F10 to save the changes and exit.

Set the power plan

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

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

To awaken the computer from Sleep mode, press any key on your keyboard.

To set the power plan:

1. Type **Power Options** in the Windows search box and then press Enter.
2. Choose or customize a power plan of your preference.

Security

This computer offers a wealth of security measures to protect both the device and data safety.

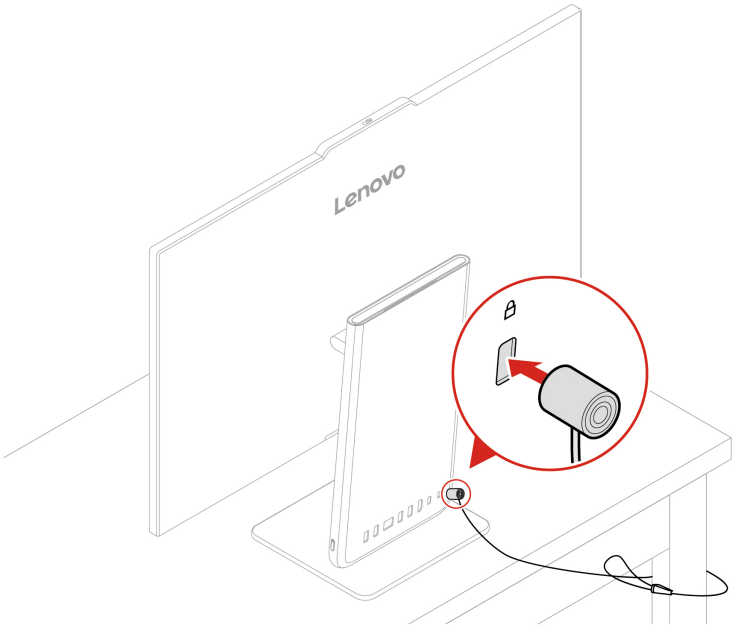
Lock the computer

Note:

Lenovo makes no comments, judgments, or warranties about the function, quality, or performance of the locking device and security feature. You can purchase computer locks from Lenovo.

Security lock

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



Use software security solutions

The following software solutions help secure your computer and information.

- **Windows Security**

  Windows Security is a software built-in to the operating system. It continually scans for malicious software, viruses, and other security threats. Besides, Windows updates are downloaded automatically to help keep your computer safe. Windows Security also enables you to manage tools including firewall, account protection, application and browser control, and so on.

- **Antivirus programs (for selected models)**

  Lenovo preinstalls a full-version antivirus software on selected models of computer. It helps defend the computer against viruses, safeguard your identity, and keep your personal information secured.

> **Note:**
>
> For more information about how to use these software solutions, refer to their help systems respectively.

UEFI BIOS passwords

You can set passwords in UEFI (Unified Extensible Firmware Interface) BIOS (Basic Input/Output System) to strengthen the security of your computer.

Password types

You can set a power-on password, supervisor password, or hard disk password in UEFI BIOS to prevent unauthorized access to your computer. However, you are not prompted to enter any UEFI BIOS password when your computer resumes from sleep mode.

- Power-on password

  When a power-on password is set, you are prompted to enter a valid password each time the computer is turned on.
- Supervisor password

  Setting a supervisor password deters unauthorized users from changing configuration settings. If you are responsible for maintaining the configuration settings of several computers, you might want to set a supervisor password.

  When a supervisor password is set, you are prompted to enter a valid password each time you try to enter the BIOS menu.

  If both the power-on password and supervisor password are set, you can enter either password. However, you must use your supervisor password to change any configuration settings.
- Hard disk password

  Setting a hard disk password prevents unauthorized access to the data on the storage drive. When a hard disk password is set, you are prompted to enter a valid password each time you try to access the storage drive.

  > **Note:**
  >
  > After you set a hard disk password, your data on the storage drive is protected even if the storage drive is removed from one computer and installed in another.

Set, change, and remove a password

Before you start, print these instructions.

1. Restart the computer. When the logo screen is displayed, press F1 or fn+F1.
2. Select **Security**.
3. Depending on the password type, select **Set Supervisor Password**, **Set Power-On Password**, or **Hard Disk Password** and press Enter.
4. Follow the on-screen instructions to set, change, or remove a password.
5. Press F10 or fn+F10 to save the changes and exit.

You should record your passwords and store them in a safe place. If you forget the passwords, contact a Lenovo-authorized service provider.

Note:

If the hard disk password is forgotten, Lenovo cannot remove the password or recover data from the storage drive.

Chapter 3 Explore your computer

Adaptive lighting

Adaptive lighting controls system lighting effects across different usage states. It supports personalized lighting preferences for different environments, enhancing intelligent interaction and ambient experience for work and entertainment. Adaptive lighting can be managed through Lenovo AI Turbo Engine or Windows Dynamic Lighting, depending on the system configuration.

Lighting effects

Adaptive lighting provides visual feedback through the lighting located below the display of the computer. Experience the various lighting effects that enrich the visual experience and cater to diverse needs. When the computer is idle and CPU usage is low, the lighting automatically turns off.

- **Boot up lighting**

  The boot up lighting appears when you lightly press the power button. This lighting effect provides a soft, ambient glow during system startup, enhancing visual feedback and indicating that the device is powering on.
- **Default lighting**

  The default lighting is active when no specific lighting event is triggered. The lighting appears at the bottom area below the display of the computer, providing a continuous ambient glow during idle or general use. This effect creates a low-intensity lighting environment suitable for everyday use without distraction.

Usage recommendations

You can use this feature in many situations where you need adaptive visual feedback. Here are some examples:

- Enable the boot up lighting to enhance the user experience when the computer is starting up.
- Enable the default lighting to create an immersive experience during office work.

Access the feature

In the UEFI BIOS, you can configure the lighting using one of the following options: **Application** (default) or **Windows Dynamic Lighting**. The **Application** option allows you to configure the lighting settings in Lenovo AI Turbo Engine:

To set the lighting in Lenovo AI Turbo Engine:

1. Open the Lenovo AI Turbo Engine application from the Start menu.
2. Select **Lighting Setting**.
3. Customize the lighting setting to your preference.

Note:

- This feature is available in Lenovo AI Turbo Engine version 1.0.432.0 and later versions.
- To check the version of Lenovo AI Turbo Engine:

  1. Open the Lenovo AI Turbo Engine application.
  2. Select **About** in the navigation pane.
  3. Check the version number next to **AI Turbo Engine Version**.

- You can also press fn+L with the included keyboard to quickly turn all lighting on or off.

If you want to change the lighting configuration option or configure lighting using another method, refer to the following steps:

1. Turn on or restart the computer.
2. Press F1 or Enter repeatedly to enter the UEFI BIOS menu.
3. Select **Devices** > **Lighting Setup** > **Lighting Control**.
4. Select either **Application** (default) or **Windows Dynamic Lighting** to control the lighting:
   - When **Application** is selected, you can further turn all lighting on or off:

     Select **Lighting Status** and then select **Enabled** (default) or **Disabled**.
   - When **Windows Dynamic Lighting** is selected, you can further turn the boot up lighting on or off:

     Select **Boot Up Lighting Control** and then select **Enabled** (default) or **Disabled**.

To set the default lighting in Windows Dynamic Lighting:

1. Open the Settings application from the Start menu
2. Select **Personalization** > **Dynamic Lighting**.
3. Customize the default lighting to your preference.

Note:

- If **Windows Dynamic Lighting** is not selected during UEFI BIOS configuration, no Dynamic Lighting-compatible devices will be detected when the user opens the **Dynamic Lighting** settings in Windows.
- If **Windows Dynamic Lighting** is selected during UEFI BIOS configuration, the fn+L shortcut is unavailable for turning all lighting on or off.

E-book mode

E-book mode converts all on-screen content in black and white. This effect applies system-wide, including applications, web pages, and video playback.

Usage recommendations

When the e-book mode is enabled, all visual content is displayed without color to create a simplified viewing experience:

- **Reading long articles or documents:**

  E-book mode reduces color distraction, helping users focus on text-heavy content and improving reading concentration.
- **Focused work or editing tasks:**

  A simplified visual environment supports distraction-free work, especially when color information is not required.

Access the feature

To enable or disable the e-book mode through fn shortcuts:

Press fn+E with the included keyboard to quickly turn the e-book mode on or off.

To enable or disable the e-book mode in Lenovo AI Turbo Engine:

1. Open the Lenovo AI Turbo Engine application from the Start menu.

2. Select **Care Center** > **E-Book Mode**.
3. Toggle the switch to turn the e-book mode on or off.

> **Note:**
>
> This feature is available in Lenovo AI Turbo Engine version 1.0.432.0 and later versions.

To enable or disable the e-book mode in UEFI BIOS:

1. Turn on or restart the computer.
2. Press F1 or Enter repeatedly to enter the UEFI BIOS menu.
3. Select **Devices** > **E-Book Mode**.
4. Select **Enabled** or **Disabled** (default) to turn the e-book mode on or off.

Monitor mode

Monitor mode allows the computer to function either as a standalone computer or as an external display for another device. This dual-mode design enables flexible switching between computing and display-only usage without requiring additional hardware.

Usage recommendations

When switched to the monitor mode, the display shows input from a connected external device:

- **Laptop extension usage:**

  Use the computer as a larger external display to improve productivity and multitasking.
- **Shared workspace environments:**

  Display content from a connected device for presentations or collaboration.

Access the feature

1. Use a compatible HDMI cable to connect the computer to the other device.
2. The monitor mode starts automatically.
3. The system switches to display input from the connected device.

> **Note:**
>
> When the HDMI cable is connected, press fn+H with the included keyboard to enable or disable the monitor mode. The monitor mode can also be enabled or disabled automatically by plugging in or unplugging the HDMI cable.

Lenovo Smart Meeting

Lenovo Smart Meeting is a video conferencing app for working scenarios. It integrates multiple features to help enhance your professional image, protect your privacy, and reduce power consumption.

If you want your configurations of the app also take effect on other mainstream video call 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

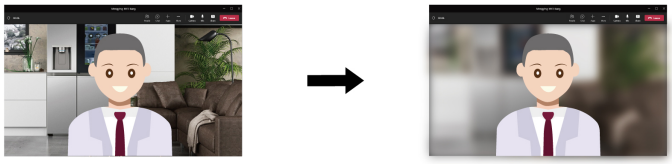
- **Smart appearance**
  - **Video enhancer**: Adjust the brightness automatically for better image quality in the video call.



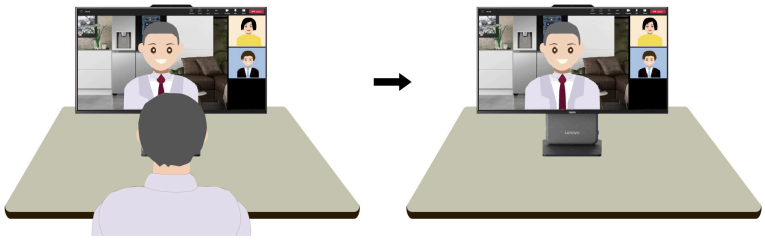
  - **Face framing**: Keep your face centered in the video call automatically when you move around.



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



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



Note:

- 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 with your computer. The description described here might be different from that on your actual user interface.

Lenovo AI Turbo Engine

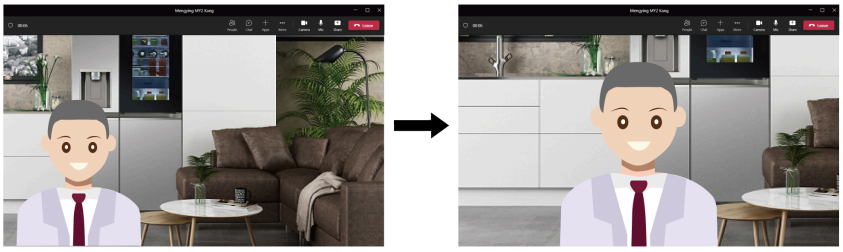
Lenovo AI Turbo Engine is a smart audio and video enhancement software. Powered by plentiful sensing and computing adaption technologies, it can optimize your experience in video and audio capture and playback.

Access the app

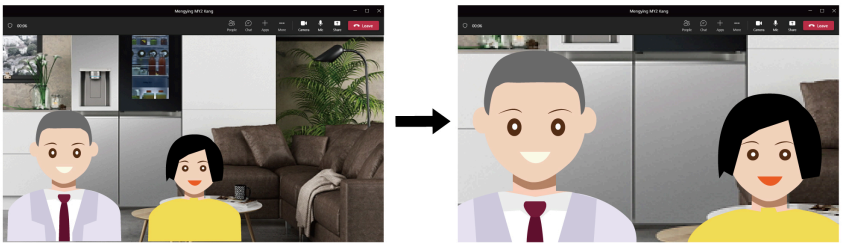
- Use the Lenovo AI Turbo Engine icon if present on the Start menu.
- Or type the app name in the Windows search box and press Enter.

Explore key features

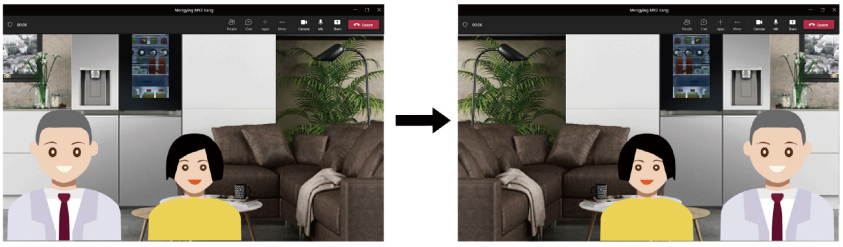
- **Video enhancement**
  - **Auto framing mode:**
    - **For a single person:** Automatically track and keep your face centered in the video.



    - **For multiple persons:** Automatically crop the video to capture all persons' faces.

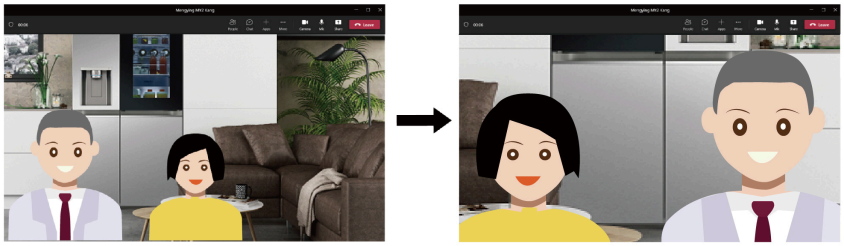


  - **Video mirror:** Adjust the angle of the video background to deliver a more natural visual presentation.

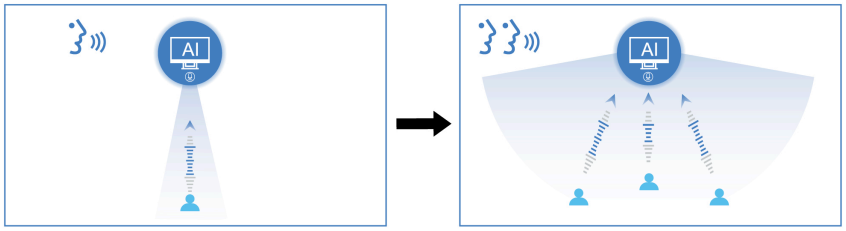


Usage recommendations:

During video conferences, you can enable **Auto framing mode** and **Video mirror** simultaneously to ensure that the output video is always natural and user-centered.



- **Audio enhancement**
  - **Adaptive capture effect:** The microphone capture scope can change based on the number of persons captured by the camera.



> **Note:**
>
> You can also manually switch between personal, shared, or music modes based on your needs.

  - **Adaptive playback effect:** The speaker playback effect can change depending on the audio type.



> **Note:**
>
> You can also manually switch between voice, music, game, or movie modes based on your needs.

  - **Smart call mute**: The microphone will be automatically muted if the camera detects that the user is on a phone call.



Usage recommendations:

In a meeting:

- Enable **Adaptive playback effect** when multiple participants share a single device to ensure optimal voice input quality.
- Enable **Adaptive playback effect** and select your preferred audio type to achieve optimal sound performance.
- Enable **Smart call mute** to avoid privacy leaks.

Note:

- The available features vary depending on computer models.
- This app might not be available in your country or region.
- This app makes periodic updates of the features. Explore this app on your actual user interface.

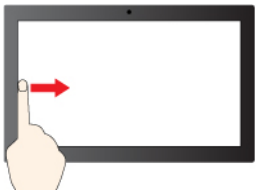
Use the touch screen (for selected models)

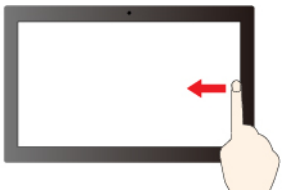
For computers with a touch-enabled screen, you can touch the screen directly with your fingers and interact with computer in a simple way. The following sections introduce frequently used touch gestures.

Note:

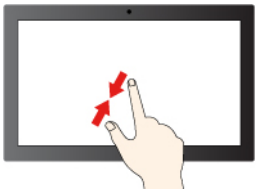
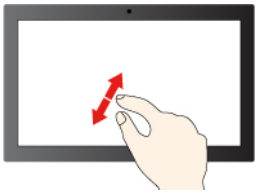
- Some gestures might not be available when you are using certain apps.
- Do not use gloved fingers or incompatible pens for input on the screen. Otherwise, the touch screen might be not sensitive or does not respond.
- The touch screen is delicate. Do not apply pressure on the screen or touch the screen with anything hard or sharp. Otherwise, the touch panel might malfunction or get damaged.

One finger touch gesture

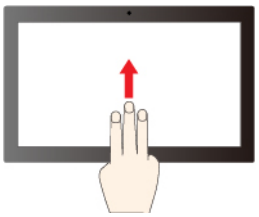
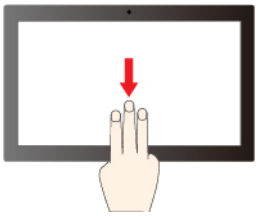
To do this	Gesture
Open a shortcut menu.	Tap and hold. 
Open the widget panel.	Swipe from the left. 
Open notification center.	Swipe from the right.

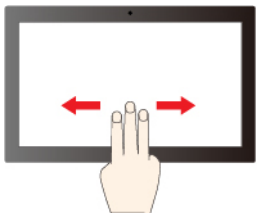
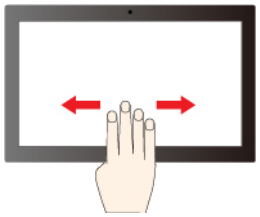
To do this	Gesture
	

Two-finger touch gesture

To do this	Gesture
Zoom out.	Move two fingers towards. 
Zoom in.	Spread two fingers apart. 

Three- and four-finger touch gesture

To do this	Gesture
Show all open windows.	Swipe with three fingers up. 
Show the desktop.	Swipe with three fingers down. 
Switch apps.	Swipe with three fingers to the left or right.

To do this	Gesture
	
Switch desktops.	Swipe with four fingers to the left or right. 

To enable three- and four-finger touch gestures, do the following:

1. Type **touch gesture** in the Windows search box and then press Enter.
2. Turn on the **Three- and four-finger touch gestures** switch.

Note:

If the touch screen is not sensitive or does not respond, do the following:

1. Turn off the computer.
2. Use a dry, soft, and lint-free cloth or a piece of absorbent cotton to remove fingerprints or dust from the touch screen. Do not apply solvents to the cloth.
3. Restart the computer and check if the touch screen works normally.
4. If the touch screen cannot work normally, type **Windows Update** in the Windows search box and then press Enter.
5. Follow the on-screen instructions to update Windows.
6. After updating Windows, check if the touch screen works normally.
7. If the touch screen still cannot work normally, the touch screen might get damaged. You can call Lenovo Customer Support Center to get further help.

Face authentication (for selected models)

Create your face ID and unlock your computer by scanning your face:

1. Type **Sign-in options** in the Windows search box and then press Enter.
2. Select the face ID setting and then follow the on-screen instruction to create your face ID.

Chapter 4 UEFI BIOS

Enter the UEFI BIOS menu

Turn on or restart the computer. When the logo screen is displayed, press F1 or fn+F1 to enter the UEFI BIOS menu.

Note:

If you have set UEFI BIOS passwords, enter the correct passwords when prompted. You also can select **No** or press Esc to skip the password prompt and enter the UEFI BIOS menu. However, you cannot change the system configurations that are protected by passwords.

Navigate the UEFI BIOS menu

Follow the on-screen instructions to navigate in the UEFI BIOS menu.

The table below introduces the available settings of the UEFI BIOS menu. You can follow the on-screen instruction to navigate in the UEFI BIOS menu.

Note:

The UEFI BIOS menu might vary depending on system configurations.

Menu	Introduction
Main	This category provides the general product-related and firmware information including system summary, machine type, product serial number, UUID number, etc.
Devices	This category introduces how to configure various devices such as USB ports and audio controllers.
Advanced	This category provides advanced information about the computer such as the CPU features.
Power	This category introduces power and thermal management solutions.
Security	This category introduces various passwords, locks, and software to protect your computer.
Startup	This category introduces how to set the boot priority order.
Exit	This category introduces how to exit as you prefer.

To explore the detailed settings:

- For computers purchased in mainland China

  You can contact Lenovo Customer Support Center as shown at https://newsupport.lenovo.com.cn/contacts.html.
- For computers purchased outside mainland China

  You can go to Lenovo BIOS Simulator Center https://download.lenovo.com/bsco/index.html to explore the detailed settings by your product name.

  > **Note:**
  >
  > The Lenovo BIOS Simulator Center makes periodic updates of the settings. The UEFI BIOS simulator interface and description of settings might be different from that on your actual user interface.

Enable or disable the ErP LPS compliance mode

Lenovo computers meet the eco-design requirements of the ErP Lot 3 regulation. Follow the instruction to enable or disable the ErP LPS compliance mode.

For more information about the eco-design requirements, go to: https://www.lenovo.com/us/en/compliance/eco-declaration.

You can enable the ErP LPS compliance mode to reduce the consumption of electricity when the computer is off. To enable or disable the ErP LPS compliance mode:

1. Restart the computer. When the logo screen is displayed, press F1 or fn+F1.
2. Select **Power** > **Enhanced Power Saving Mode** and press Enter.
3. Enable or disable the feature as desired.

   > **Note:**
   >
   > Please note that when the Enhanced Power Saving Mode is disabled, the power consumption might be increased when the computer is off.
4. Press F10 or fn+F10 to save the changes and exit.

When the ErP LPS compliance mode is enabled, you can wake up the computer by doing one of the following:

- Press the power button.
- Enable the Wake Up on Alarm feature to make the computer wake up at a set time.

To meet the off mode requirement of ErP compliance, you need to disable the Fast Startup function.

1. Go to **Control Panel** and view by large icons or small icons.
2. Click **Power Options** > **Choose what the power buttons do** > **Change settings that are currently unavailable**.
3. Clear the **Turn on fast startup (recommended)** option from the **Shutdown settings** list.

Update the UEFI BIOS

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

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

From the Vantage app

Follow the instructions to update the UEFI BIOS from the Vantage app.

1. Open the Vantage app, and then click **System Update**.
2. If the latest UEFI BIOS update package is available, follow the on-screen instructions to download and install the package.

From the Lenovo Support Web site

Follow the instructions to update the UEFI BIOS from the Lenovo Support Web site.

For computers purchased in mainland China

1. Go to https://newsupport.lenovo.com.cn.
2. Click **Download drivers and software**, and select or search product.
3. Follow the on-screen instructions to download and install the latest UEFI BIOS update package.

For computers purchased outside mainland China

1. Go to https://pcsupport.lenovo.com and select the entry for your computer.
2. Click **Drivers & Software** > **Manual Update** > **BIOS/UEFI**.
3. Follow the on-screen instructions to download and install the latest UEFI BIOS update package.

From the Windows Update

Follow the instructions to update the UEFI BIOS from the Windows Update.

1. Type **Settings** in the Windows search box and press Enter.
2. Click **Windows Update** > **Check for Updates**.
3. If a BIOS update package appears in your update list, click **Download or Install** to initiate the update.

Chapter 5 Hardware replacement

What is CRU

Customer Replaceable Units (CRUs) are parts that can be replaced by the customer. Lenovo computers contain the following types of CRUs:

- **Self-service CRUs:** Refer to parts that can be replaced easily by customer themselves or by trained service technicians at an additional cost.
- **Optional-service CRUs:** Refer to 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 on installing the CRU, Lenovo will ship the CRU to you. CRU information and replacement instructions are shipped with your product and are available from Lenovo at any time upon request. 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 documentation at:

https://www.lenovo.com/warranty/llw_02

CRU list

The following is the CRU list of your computer.

Self-service CRUs

- ac power adapter
- Keyboard*
- Mouse*
- Power cord

Optional-service CRUs

- M.2 solid-state drive
- Stand rear cover
- Stand top cover
- System board shield

* for selected models

Power cord and ac power adapter

Prerequisite

Before you start, read *Generic Safety and Compliance Notices* , and print the following instructions.

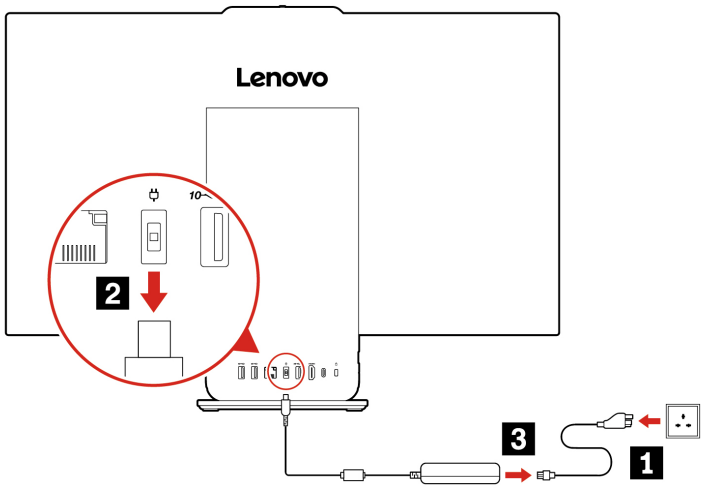
Note:

Do not remove the power cord when the computer is connected to ac power. Otherwise, there might be a risk of short circuits.

For access, turn off the computer and remove all connected devices and cables.

Removal steps

1. Remove the power plug of the power cord from the grounded ac power outlet.
2. Remove the ac power adapter from the computer.
3. Remove the power cord from the ac power adapter.



Stand top cover

Prerequisite

Before you start, read *Generic Safety and Compliance Notices* , and print the following instructions.

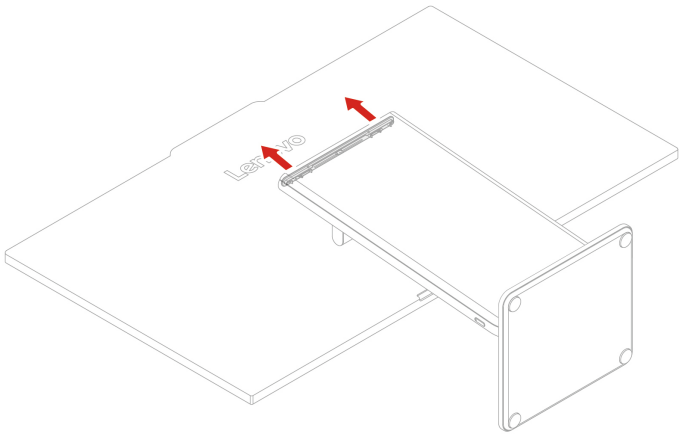
Before you open the stand top cover, turn off the computer and wait several minutes until the computer is cool.

For access, do the following:

1. Turn off the computer and disconnect the computer from all connected cables, devices, and ac power.
2. Unlock any locking device that secures the stand top cover.
3. Place a soft, clean towel or cloth on the desk or surface. Hold the computer sides and gently lay it down so that the display cover is facing up.

Removal step

Remove the stand top cover.



Stand rear cover

Prerequisite

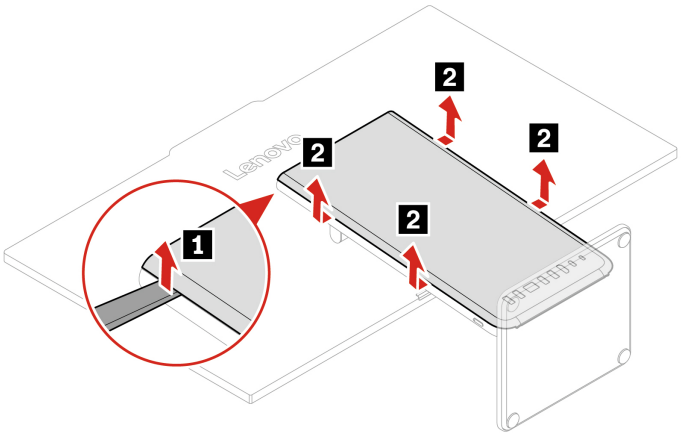
Before you start, read *Generic Safety and Compliance Notices* , and print the following instructions.

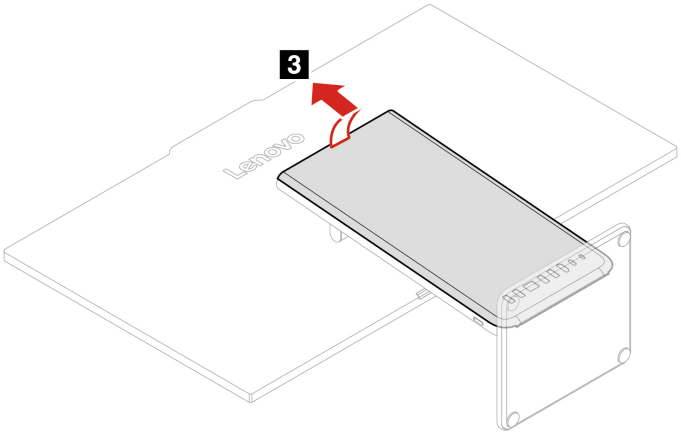
Before you open the stand rear cover, turn off the computer and wait several minutes until the computer is cool.

For access, remove the stand top cover. See Stand top cover on page 29.

Removal steps

1. Insert the pry tool into the gap between the stand rear cover and the computer from the left side.
2. Release all latches.
3. Pivot the stand rear cover outward from the top edge. Then, lift the stand rear cover upward to remove it.





Note:

If a locking device is available, use it to lock the computer after installing the stand rear cover.

System board shield

Prerequisite

Before you start, read *Generic Safety and Compliance Notices* , and print the following instructions.

The system board shield might be very hot. Before you open the computer cover, turn off the computer and wait several minutes until the computer is cool.

For access, remove these parts in order:

- Stand top cover on page 29

- Stand rear cover on page 30

Removal steps

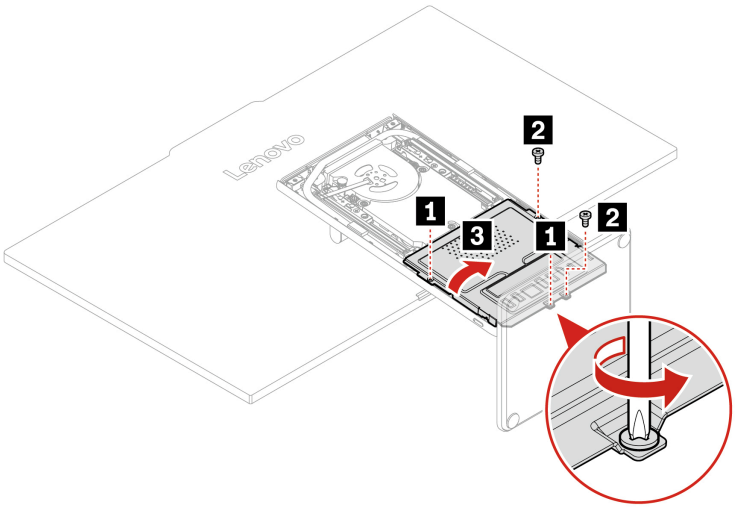
1. Loosen two captive screws. Find screw specification like torque in the following screw table.

Screw (quantity)	Color	Torque
M3 x 4 mm, Ni coated (2)	Black	5.2 ± 0.2 lbf·in

2. Remove two screws. Find screw specification like torque in the following screw table.

Screw (quantity)	Color	Torque
M3 x 4 mm, Ni coated (2)	Black	5.2 ± 0.2 lbf·in

3. Remove the system board shield.



M.2 solid-state drive

Prerequisite

Before you start, read *Generic Safety and Compliance Notices* , and print the following instructions.

The M.2 solid-state drive might be very hot. Before you open the computer cover, turn off the computer and wait several minutes until the computer is cool.

Attention:

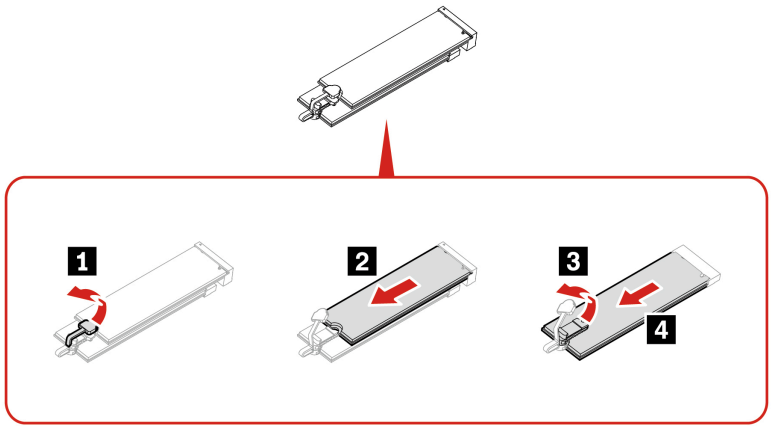
- The internal storage drive is sensitive. Inappropriate handling might cause damage and permanent loss of data. When handling the internal storage drive, observe the following guidelines:
  - Replace the internal storage drive only for repair. The internal storage drive is not designed for frequent changes or replacement.
  - Before replacing the internal storage drive, make a backup copy of all the data that you want to keep.
  - Do not touch the contact edge of the internal storage drive. Otherwise, the internal storage drive might get damaged.
  - Do not apply pressure to the internal storage drive.
  - Do not make the internal storage drive subject to physical shocks or vibration. Put the internal storage drive on a soft material, such as cloth, to absorb physical shocks.

For access, remove these parts in order:

- Stand top cover on page 29
- Stand rear cover on page 30
- System board shield on page 31

Removal steps

1. Open the upper clip that secures the first M.2 solid-state drive to the system board.
2. Remove the first M.2 solid-state drive and thermal pad (if any) depending on the computer model.
3. Open the lower clip that secures the second M.2 solid-state drive to the system board.
4. Remove the second M.2 solid-state drive and thermal pad (if any) depending on the computer model.



Note:

- Remove the film that covers the thermal pad (if any) when installing the M.2 solid-state drive.
- If the new Gen 4 M.2 solid-state drive is double-sided, remove the 1.5-mm thick thermal pad upward first.

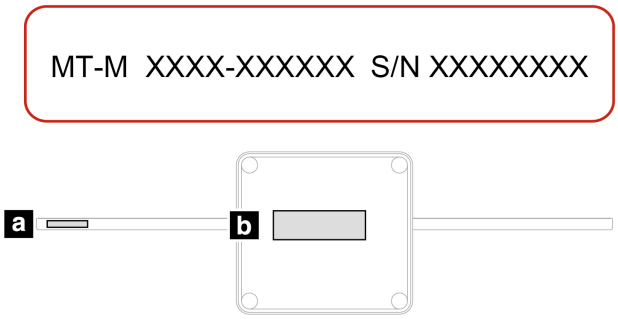
Chapter 6 Help and support

Find your serial number

This topic helps you find computer serial number.

You can find your serial number via:

- **Dashboard** or **Device** in the **Vantage** app
- The far right of the bottom edge of the display (location a) or the bottom of your computer stand (location b)



Diagnose and troubleshoot your computer

This section provides introduction to a set of diagnostics and troubleshooting tools at Lenovo Support Web site and the Vantage app. They can help you diagnose common software and hardware issues.

The following table lists these diagnostics tools and the recommended conditions for each tool.

Diagnostics tool	**Recommended scenario**
Troubleshoot and diagnose at Lenovo Support Web site	You want to have an online troubleshooting or scan of hardware and drivers on your computer.
Hardware scan	• Your computer is installed with the Vantage app. • You want to perform basic examinations of the hardware components.

Troubleshoot and diagnose at Lenovo Support Web site

Lenovo provides two different diagnosing solutions to help you identify and resolve problems on your computer.

For computers purchased in mainland China

1. Go to https://newsupport.lenovo.com.cn/.

2. Enter the troubleshooting section and find the question you are encountering.

For computers purchased outside mainland China

1. Go to https://www.pcsupport.lenovo.com/ and enter your product name in the search box.
2. Click **Troubleshoot & Diagnose** and select the option that fits your need.

> **Note:**
>
> - Before launching any automatic diagnosing process, a pop-up window will be prompted to install Lenovo Service Bridge. Lenovo Service Bridge helps to connect your computer with Lenovo diagnosing tools.
> - Lenovo Support Web site makes periodic updates of the sections to keep improving your experience with your computer. The Web site interface and descriptions of sections might be different from that on your actual interface.

- If you are unaware of what problem your computer goes with, it is recommended that you select **Easy** and follow on-screen instructions to get your firmware updated and obtain the hardware status.
- If you have identified the problem on your computer, you can select **Custom** and follow on-screen instructions to resolve the problem.

If solutions can not resolve problems on your computer, you can follow on-screen instructions to submit an e-ticket or contact Lenovo for professional assistance.

Hardware scan

Hardware scan is an effective hardware testing tool to help you identify existing hardware issues.

To run the Hardware scan:

1. Type **Vantage** in the Windows search box and then press Enter.
2. Click **Hardware scan** or **Support** > **Hardware scan**.
3. Select **QUICK SCAN** or **CUSTOMIZE** and then follow the on-screen instructions to run the hardware scan.

> **Note:**
>
> - The Quick Scan tool contains a pre-selected suite of tests that performs basic examinations of the hardware components found in the system. The Customize tool enables you to select one or several hardware components to perform the examinations.
> - Before selecting **QUICK SCAN**, click **Refresh Modules** to ensure that the list of hardware components is the components currently available for the computer.

4. If any hardware failure is detected, the result varies depending on the warranty status and varies by country or region. Follow the on-screen instructions to resolve the issue.

Recover your Windows operating system

When you encounter some unexpected issues with your operating system, you can choose to recover your operating system by yourself or call Lenovo Customer Support Center.

Note:

Microsoft constantly makes updates to the Windows operating system. Before installing a particular Windows version, check the compatibility list for the Windows version. For details, go to https://support.lenovo.com/us/en/solutions/ht512575.

For computers purchased in mainland China

Go to https://iknow.lenovo.com.cn/detail/199198_1.html.

For computers purchased outside mainland China

To recover your operating system to...	See.
Factory defaults	Refer to the instructions in https://support.lenovo.com/HowToCreateLenovoRecovery
A previous system point	Refer to the instructions in Popular Topics: https://support.lenovo.com/solutions/ht118590

Reset your computer

Resetting your computer in Windows is a powerful feature that allows you to restore your device to its original state. It can be useful if you're experiencing performance issues, software problems, or simply want a fresh start. This feature is designed to provide you several options to suit your specific needs.

Note:

Resetting a computer will remove all installed applications, drivers, and settings changes that were made to the computer, while personal files such as photos and documents can be removed or kept according to your circumstances.

Reset options

- **Keep my files:** Also known as Refresh. This option reinstalls Windows while keeping your personal files intact. It removes apps and settings but preserves your documents, photos, and other personal data.
- **Remove everything:** Also known as Reset. This option reinstalls Windows and removes all your personal files, apps, and settings. It's ideal for a fresh start or when you are giving away or selling your computer.

Before resetting your computer

To reset your computer, you'll need to:

- Ensure your computer is plugged into power.
- Ensure your computer is connected to a stable network.

Steps to reset your computer

You can reset your computer when you are signed in to Windows or from the Windows Recovery Environment.

- Reset your computer from settings:
  1. Go to **Settings** > **System** > **Recovery**.
  2. Under the **Reset this PC** option, click **Reset PC**.
  3. Choose an option in the reset options table.
- Reset your computer from Windows RE:

  Note:

  If you've encrypted your device, you'll need your BitLocker key to complete this task. If you don't know your BitLocker key, see Find your BitLocker recovery key.

  1. Restart your computer. When the logo screen is displayed, press F11 to enter the Windows Recovery Environment.
  2. Select **Troubleshoot** > **Reset this PC**.
  3. Choose an option in the reset options table.

Call Lenovo

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

Before you contact Lenovo

Prepare the needed information before you contact Lenovo.

1. Record the problem symptoms and details:
   - What is the problem? Is it continuous or intermittent?
   - Any error message or error code?
   - What operating system are you using? Which version?
   - Which software applications were running at the time of the problem?
   - Can the problem be reproduced? If so, how?
2. Record the system information:
   - Product name
   - Machine type and serial number.

Self-help resources

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

Resources	How to access?
Lenovo Support Web Site	• For computers purchased in mainland China https://newsupport.lenovo.com.cn • For computers purchased outside mainland China

Resources	How to access?
	https://pcsupport.lenovo.com
Tips	• For computers purchased in mainland China https://iknow.lenovo.com.cn • For computers purchased outside mainland China https://www.lenovo.com/tips
Lenovo Community	• For computers purchased in mainland China https://iknow.lenovo.com.cn • For computers purchased outside mainland China https://forums.lenovo.com
Accessibility information (for computers purchased outside China)	https://www.lenovo.com/accessibility
Windows help information	• Open the Start menu and click **Get Help** or **Tips**. • Use Windows Search. • Microsoft support Web site: https://support.microsoft.com

Purchase accessories or additional services

This topic provides instructions on how to purchase accessories or additional services.

Accessories

Lenovo has a number of hardware accessories and upgrades to help expand the functionalities of your computer. Accessories include memory modules, storage devices, network cards, power adapters, keyboards, mice, and so on.

To shop at Lenovo, go to:

- For computers purchased in mainland China

  https://www.lenovo.com.cn
- For computers purchased outside mainland China

  https://www.lenovo.com/accessories

Additional services

During and after the warranty period, you can purchase additional services from Lenovo at:

- For computers purchased in mainland China

https://newsupport.lenovo.com.cn

- For computers purchased outside mainland China

  https://pcsupport.lenovo.com/warrantyupgrade

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

Accessibility features

Lenovo is committed to making information technology accessible to everyone, including individuals with hearing, vision, mobility, cognitive, or speech disabilities. To get the most up-to-date and detailed accessibility features information for the product, go to **https://support.lenovo.com/docs/product_accessibility_features**.

Appendix A Supplementary information

This section contains the notice for USB connector name update. The USB Implementers Forum published a revision of the guideline for USB connector names in September, 2022. Lenovo follows the revised guideline and updates USB connector names accordingly. You can refer to the table below for naming update details.

Notice for USB connector name update

Current name	**Previous name**
USB-A connector (Hi-Speed USB)	USB-A 2.0 connector
USB-A connector (USB 5Gbps)	USB-A 3.2 Gen 1 connector
USB-A connector (USB 10Gbps)	USB-A 3.2 Gen 2 connector
USB-A connector (USB 5Gbps, Always On USB)	Always on USB-A 3.2 Gen 1 connector
USB-A connector (USB 10Gbps, Always On USB)	Always on USB-A 3.2 Gen 2 connector
USB-C connector (USB 5Gbps)	USB-C (3.2 Gen 1) connector
USB-C connector (USB 10Gbps)	USB-C (3.2 Gen 2) connector
USB-C connector (USB 20Gbps)	USB 3.2 Gen 2x2
USB-C connector (USB4 20Gbps)	USB 4 Gen 2x2
USB-C connector (USB4 40Gbps)	USB-C (USB 4) connector
USB-C connector (Thunderbolt 3)	USB-C (Thunderbolt 3) connector
USB-C connector (Thunderbolt 4)	USB-C (Thunderbolt 4) connector

효율관리기자재 소비전력량

모델명	컴퓨터 유형	연간소비 전력량 (kWh)	슬립모드 소비전력 (W)	오프모드 소비전력 (W)
ThinkCentre neo 50a 24 Gen 7	D	7.4	1.46	0.35
ThinkCentre neo 50a 27 Gen 7	D	8.5	1.67	0.4

Appendix B Important notice for Quebec consumers

In regard to section 79.18 of Quebec's Regulation respecting the application of the Consumer Protection Act, Lenovo in no way guarantees the availability of (a) replacement parts; (b) repair services; and (c) information necessary to maintain or repair the goods. For up-to-date information on the technical support and parts available for your purchase, please consult **https://support.lenovo.com/ca/en**.

Appendix C Notices and trademarks

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  https://newsupport.lenovo.com.cn
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  https://pcsupport.lenovo.com

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