

User Guide

Lenovo
ThinkCentre



ThinkCentre neo 50a 24 Gen 6 LNL, ThinkCentre neo 50a 27 Gen 6
LNL

About this documentation

This documentation applies to the Lenovo product models listed below.

Model name	Machine types (MT)
ThinkCentre neo 50a 24 Gen 6 LNL	13QG, 13QH
ThinkCentre neo 50a 27 Gen 6 LNL	13QE, 13QF

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/dc_191404.html
 - For computers purchased outside mainland China: https://pcsupport.lenovo.com/docs/generic_notices
- *Setup Guide (if provided with your computer)*

Notes:

- 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/dc_191404.html
 - For computers purchased outside mainland China
Regulatory Notice at https://support.lenovo.com/docs/common_commercial_rnhttps://support.lenovo.com/docs/common_consumer_dt_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 As a result, some information in this documentation might become outdated.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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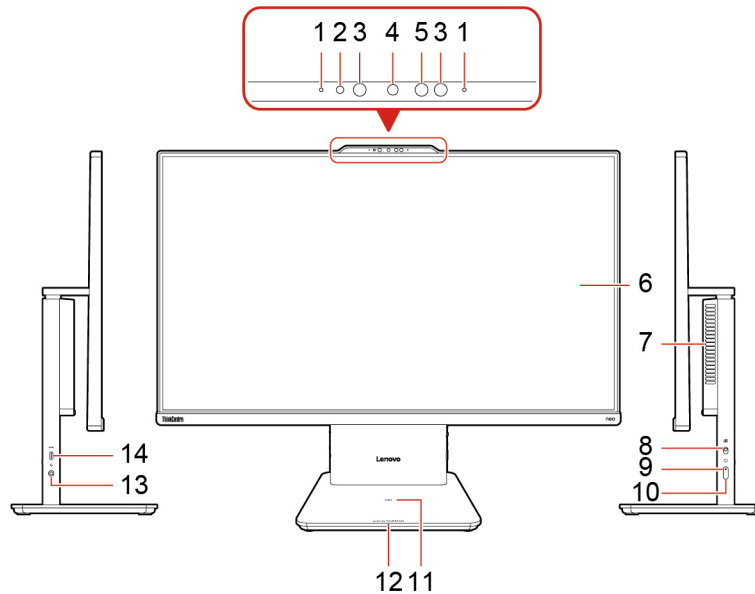
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Chapter 1. Meet your computer

Overview



Item	Description	Item	Description
1	Microphones	2	Integrated camera activity indicator
3	Infrared LED*	4	Integrated camera
5	Infrared camera*	6	Multi-touch screen*
7	Air vent	8	Camera switch
9	Power button indicator	10	Power button
11	Wireless charging pad*	12	Wireless charging indicator*
13	Combo audio jack	14	USB-C connector (USB 10Gbps)

* for selected models

Notes:

- 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 Appendix A “Supplementary information” on page 22.

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

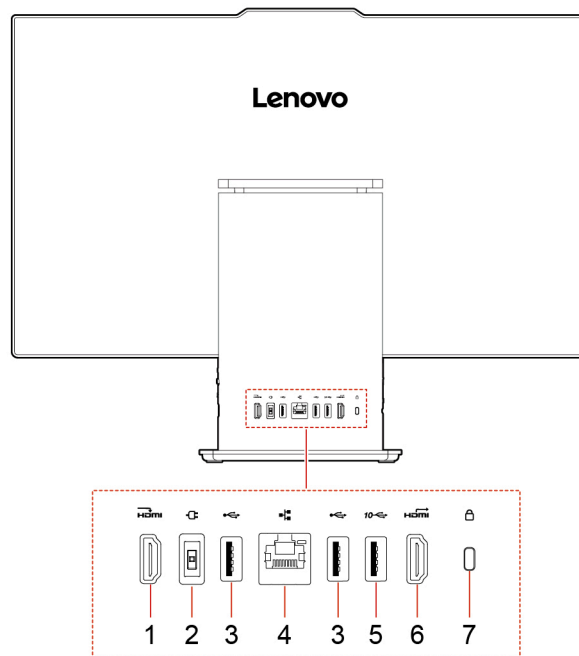
Show the system status of your computer.

- **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

- “Use the touch screen (for selected models)” on page 8.
- “USB specifications” on page 5.

Rear



Item	Description	Item	Description
1	HDMI™ in connector	2	Power connector
3	USB-A connector (Hi-Speed USB)	4	Ethernet connector
5	USB-A connector (USB 10Gbps)	6	HDMI 2.1 TMDS out connector
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

- “Lock the computer” on page 12.
- “Change display settings” on page 8.
- “USB specifications” on page 5.

Specifications

Specification	Description
Dimensions	ThinkCentre neo 50a 24 Gen 6 LNL <ul style="list-style-type: none">• Width: 539.5 mm (21.2 inches)• Height: 431.2 mm (17.0 inches)• Depth: 192.1 mm (7.6 inches)
	ThinkCentre neo 50a 27 Gen 6 LNL <ul style="list-style-type: none">• Width: 611.7 mm (24.1 inches)• Height: 471.7 mm (18.6 inches)• Depth: 192.1 mm (7.6 inches)
Weight (without packaging)	Maximum configuration as shipped: <ul style="list-style-type: none">• ThinkCentre neo 50a 24 Gen 6 LNL : 6 kg (13.2 lb)• ThinkCentre neo 50a 27 Gen 6 LNL : 7.1 kg (15.7 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	<ul style="list-style-type: none">• 90-watt automatic voltage-sensing power supply*• 135-watt automatic voltage-sensing power supply*
Electrical input	<ul style="list-style-type: none">• Input voltage: From 100 V ac to 240 V ac• Input frequency: 50/60 Hz
Memory	Memory type: Low-power double data rate 5X (LPDDR5X)
	Maximum memory capacity: 16GB
Storage device	<ul style="list-style-type: none">• 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.
Display	Maximum resolution: 100 Hz
	Note: The display refresh rate is set to 60 Hz by default to reduce power consumption. You can change the refresh rate to 100 Hz in the display settings.
Video features	Maximum resolution: <ul style="list-style-type: none">• HDMI out connector: 4096 × 2160 pixels, 60Hz• HDMI in connector: 1920 × 1080 pixels, 100 Hz
Expansion	M.2 slot × 2 (1 for Wireless LAN card, 1 for SSD)
Network features	<ul style="list-style-type: none">• 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

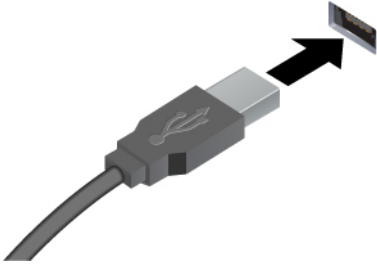


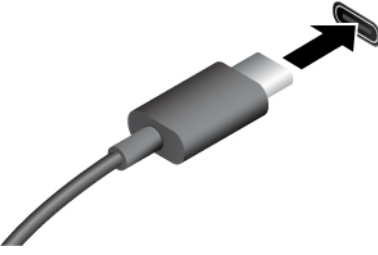

- Operating: From 5°C (41°F) to 35°C (95°F)
- Storage:
 - For common desktop computers: From -40°C (-40°F) to 60°C (140°F)
 - For all-in-one desktop computers: From -20°C (-4°F) to 60°C (140°F)

Relative humidity

- Operating: 20%-80% (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
 <ul style="list-style-type: none">•  USB-A connector (Hi-Speed USB)•  USB-A connector (USB 10Gbps)	<p>Connect USB-A compatible devices, such as a USB-A keyboard, USB-A mouse, USB-A storage device, or USB-A printer.</p>
 <ul style="list-style-type: none">•  USB-C connector (USB 10Gbps)	<ul style="list-style-type: none">• 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.

Notes:

- 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

Set up the computer

Step 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:
 - DisplayPort out connector
 - HDMI out connector
 - VGA-out connector (for selected models)
 - USB-C connector (USB 5Gbps), on the rear panel (for selected models)
- **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 8.

Step 2. Connect the following peripheral devices on the computer if any.

- Keyboard and mouse
- Dust shield
- Air deflector
- Vertical stand

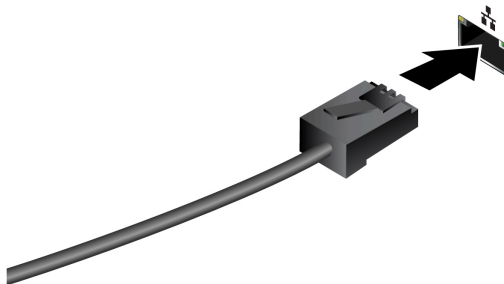
Step 3. Connect the power cord to the power cord connector on the computer and then connect it to a properly-grounded electrical outlet.


Step 4. Press the power button to turn on the computer.

Step 5. Follow the on-screen instructions to complete the setup procedures.

Step 6. Connect to a wired or wireless network.

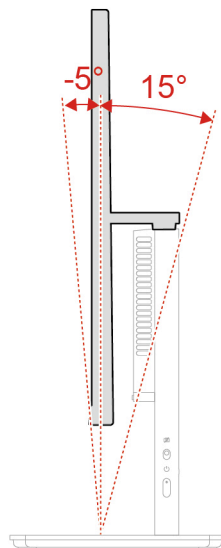
- **Wired network:** Connect Ethernet cable of local network to the Ethernet connector on the computer.



- **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 (for selected models)



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.


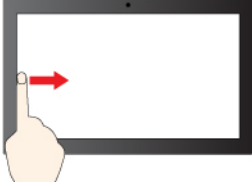

Use the touch screen (for selected models)

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.

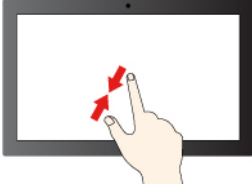
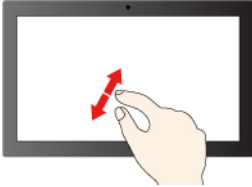
Notes:

- 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.

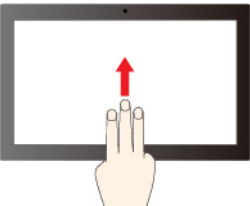
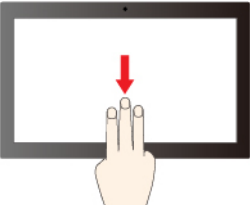
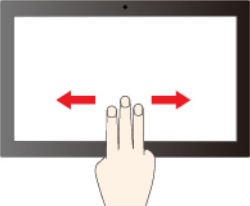
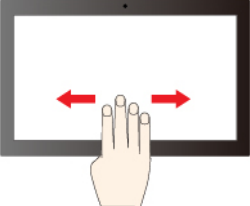
One finger touch gesture

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. 

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. 
Switch desktops.	Swipe with four fingers to the left or right. 

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

Step 1. Type **touch gesture** in the Windows search box and then press Enter.

Step 2. Turn on the **Three- and four-finger touch gestures** switch.

Notes: 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.

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.

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

Notes: 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:

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

Notes: 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.

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:

- Step 1. Restart the computer. When the logo screen is displayed, press F1 or Fn+F1.
- Step 2. Select **Power → Intelligent Cooling** and press Enter.
- Step 3. Select **Performance Mode** and press Enter.
- Step 4. Set the performance mode as desired.
- Step 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

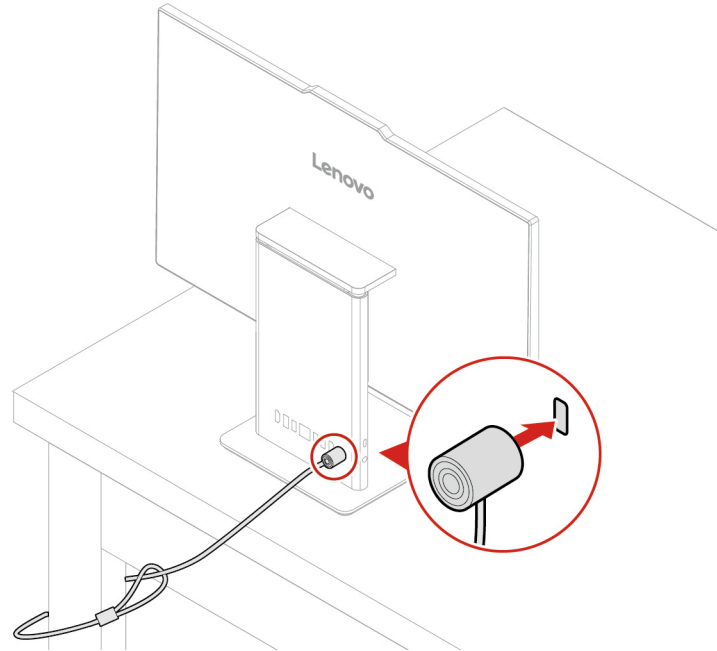
This computer offers a wealth of security measures to protect both the device and data safety.

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.

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** or **Set Power-On 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.

Chapter 3. 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.

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:

Step 1. Restart the computer. When the logo screen is displayed, press F1 or Fn+F1.

- Step 2. Select **Power → Enhanced Power Saving Mode** and press Enter.
- Step 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.

- Step 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.

- Step 1. Open the Vantage app, and then click **Device → System Update**.
- Step 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.

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.

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

Chapter 4. CRU replacement

What is CRU

Important: For users in mainland China, the information provided in this chapter is for reference by professional maintenance service providers or technicians authorized by Lenovo only. Users shall not perform maintenance on their own. Any faults or damage due to improper operation, modification, or failure to use parts provided by Lenovo are not covered by the warranty for this product. For product warranty information, refer to the warranty document provided with the product or go to the official Lenovo website at <https://newsupport.lenovo.com.cn>.

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

* for selected models

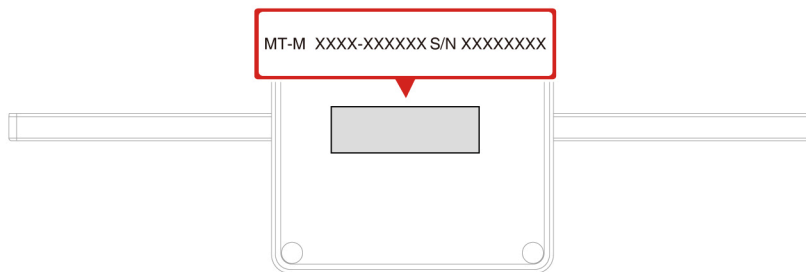
Chapter 5. Help and support

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
- Serial number and machine type label of your computer (shown as below illustration)



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	<ul style="list-style-type: none">• 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.

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.

Notes:

- 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:

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

Notes:

- 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.

- Step 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>.

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

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	https://pcsupport.lenovo.com
Tips	https://www.lenovo.com/tips
Lenovo Community	https://forums.lenovo.com
Accessibility information	https://www.lenovo.com/accessibility
Windows help information	<ul style="list-style-type: none">• 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:

<https://www.lenovo.com/accessories>

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 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

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>

En ce qui concerne l'article 79.18 du Règlement d'application de la Loi sur la protection du consommateur du Québec, Lenovo ne garantit en aucune façon la disponibilité des éléments suivants: (a) les pièces de rechange; (b) les services de réparation; et (c) les renseignements nécessaires à l'entretien à la réparation du bien. Pour obtenir des renseignements à jour sur le soutien technique et les pièces disponibles pour votre achat, veuillez consulter <https://support.lenovo.com/ca/fr>.

Appendix C. Notices and trademarks

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