ThinkCentre neo 50a 24 Gen 3
User Guide

ThinkCentre

Think

Lenovo

Read this first

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*
- *Setup Guide*

Contents

Discover your Lenovo computer

Thank you for choosing a Lenovo® computer! We are dedicated to delivering the best solution to you.

Before starting your tour, please read the following information:

- Illustrations in this documentation might look different from your product.
- Depending on the model, some optional accessories, features, software programs, and user interface instructions might not be applicable to your computer.
- Documentation content is subject to change without notice. To get the latest documentation, go to https://pcsupport.lenovo.com.

Chapter 1. Meet your computer

Overview
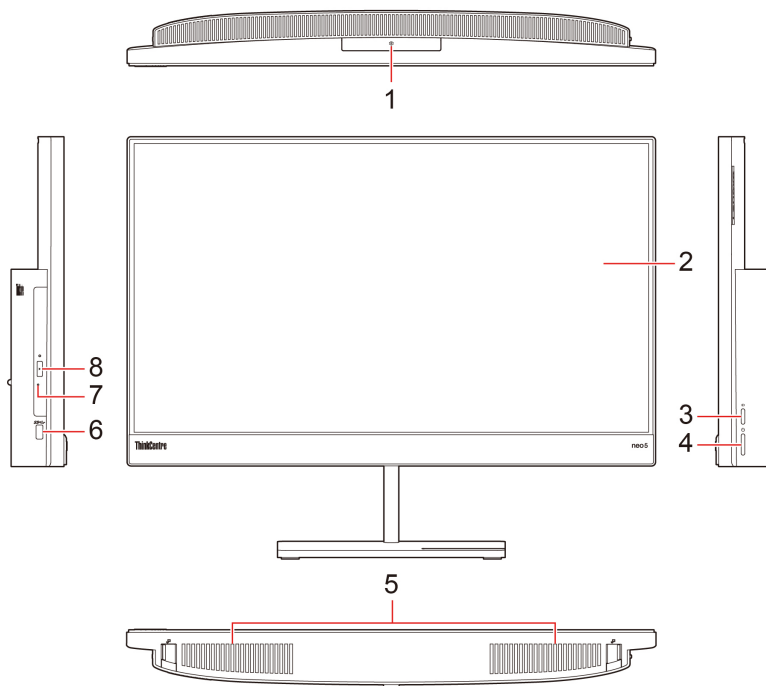
Item	Description	Item	Description
1	Infrared (IR) camera, AI camera or Integrated camera*	2	Multi-touch screen*
3	Switch button	4	Power button
5	Internal speaker	6	USB-A 3.2 Gen 1 connector
7	Optical drive activity indicator*	8	Optical drive eject button*

* for selected models

Statement on USB transfer rate

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

USB device	Data rate (Gbit/s)
3.2 Gen 1	5
3.2 Gen 2	10
3.2 Gen 2 × 2	20
Thunderbolt 3	40
Thunderbolt 4	40

Rear
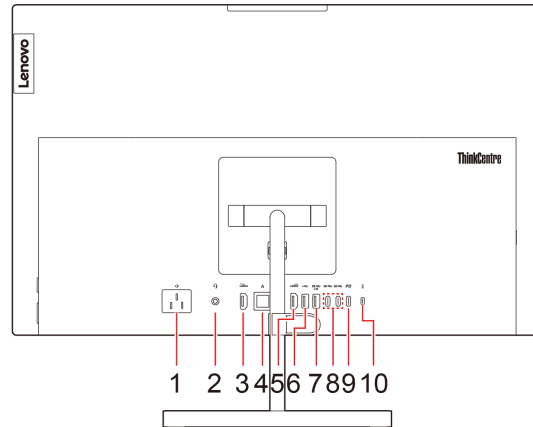
Item	Description	Item	Description
1	Power connector	2	Combo audio jack
3	HDMI™ in connector	4	Ethernet connector
5	HDMI out connector	6	USB-A 2.0 connector
7	Always On USB-A 3.2 Gen 2 connector	8	USB-C® (3.2 Gen 2) connectors
9	USB-C (power) connector (with USB 2.0 data transfer rate)	10	Security-lock slot

Always On USB-A 3.2 Gen 2 connector

With the Always On USB feature enabled, the Always On USB-A 3.2 Gen 2 connector can charge a USB-compatible device when the computer is on, off, in sleep mode, or in hibernation mode.

To enable the Always On USB feature, do the following:

1. Enter the UEFI BIOS menu. See "Enter the BIOS menu" on page 19.
2. Click **Devices** ➙ **USB Setup** ➙ **Front USB Ports** ➙ **USB Port 2** to enable the Always On USB feature.

Related topics

- "Use the optical drive (for selected models)" on page 12.
- "Lock the computer" on page 15.
- "Connect an external display" on page 8.
- "USB specifications" on page 4.

Features and specifications
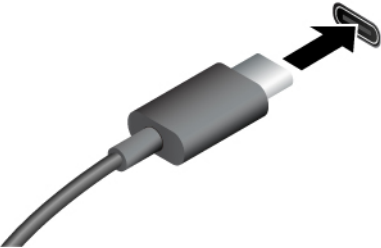
For detailed specifications of your computer, go to https://psref.lenovo.com.

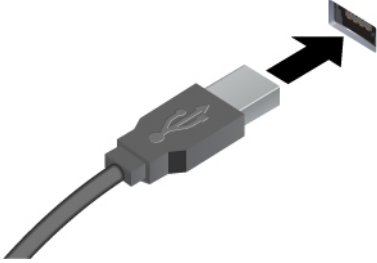| Specification	Description
Dimensions (without stand)	- Width: 541 mm (21.3 inches) - Height: 433.7 mm (17.1 inches) - Depth: 56.6 mm (2.2 inches)
Weight (without packaging)	Maximum configuration as shipped: 7.7 kg (17.0 lb)
Hardware configuration	Type `Device Manager` in the Windows search box and then press Enter. Type the administrator password or provide confirmation, if prompted.
Power supply	180-watt automatic voltage-sensing power supply
Electrical input	- Input voltage: From 100 V ac to 240 V ac - Input frequency: 50/60 Hz
Memory	Up to two double data rate 5 (DDR5) small outline dual in-line memory modules (SODIMMs) Maximum memory capacity: 32 GB
Storage device	2.5-inch form factor height hard disk drive - 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	- Brightness control - Display size: 604.52 mm (23.8 inches) - Display resolution: 1920 x 1080 pixels - Multi-touch technology* - The integrated graphics card supports the following: – HDMI in connector – HDMI out connector - The optional discrete graphics card provides an enhanced video experience and extended capabilities.
Expansion	- Memory slots - M.2 solid-state drive slot - Optical drive - Storage drive bay
Network features	- Bluetooth* - Ethernet LAN - Wireless LAN*

* for selected models

USB specifications

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

Connector name	Description
• <img> USB-A 2.0 connector • SS<img> USB-A 3.2 Gen 1 connector • 10<img> USB-A 3.2 Gen 2 connector	Connect USB-A compatible devices, such as a USB-A keyboard, USB-A mouse, USB-A storage device, or USB-A printer.
• SS<img> USB-C (3.2 Gen 1) connector • 10<img> USB-C (3.2 Gen 2) connector • ⚡ USB-C (Thunderbolt 3) connector • ⚡ USB-C (Thunderbolt 4) connector	• 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.

Chapter 2. Get started with your computer

Adjust the computer stand (for selected models)

Tilt-only stand

- Tilt the screen forward and back.

-5°   25°

- Turn the screen to the left and right.

45°   45°
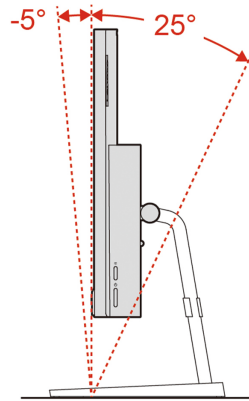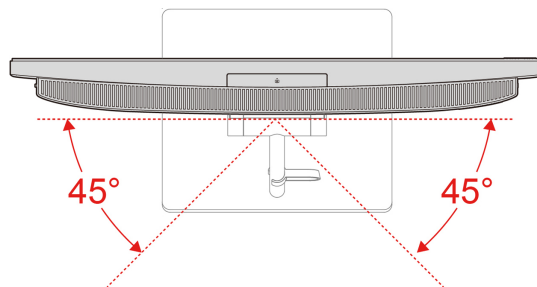
Liftable stand

- Tilt the screen forward and back.

-5°   18°
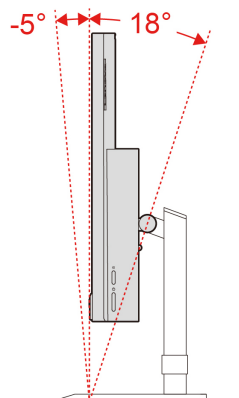
- Move the screen up and down.

- Turn the screen to the left and right.

45°   45°
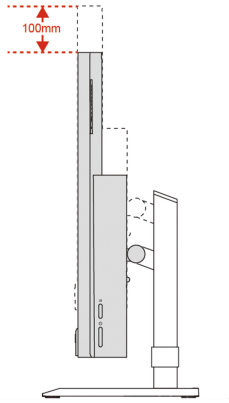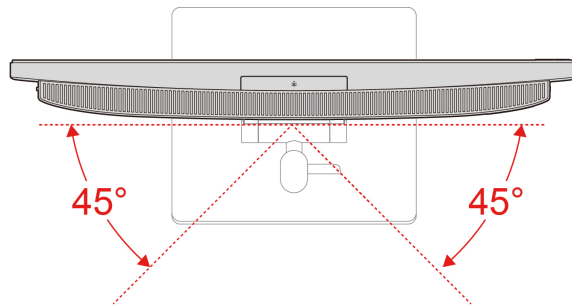
Access networks

This section helps you access networks through connecting to a wired or wireless network.

Connect to the wired Ethernet

Connect your computer to a local network through the Ethernet connector on your computer with an Ethernet cable.

Connect to Wi-Fi networks (for selected models)

Click the network icon in the Windows® notification area, and then select a network for connection. Provide required information, if needed.

XX-XXXXX
Secured
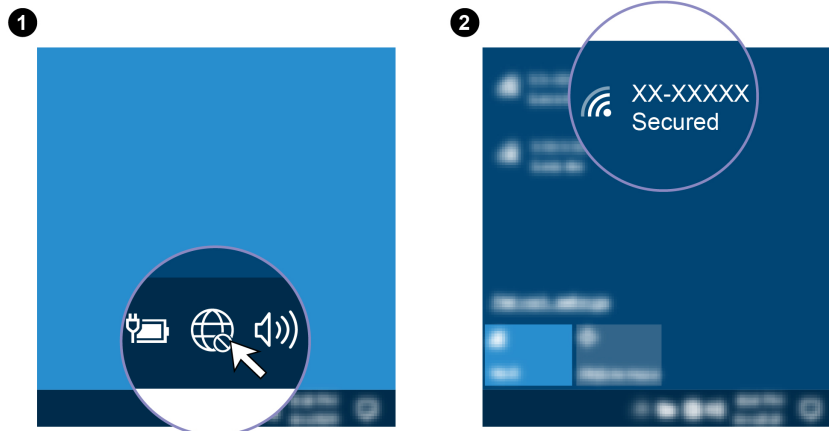
Use the touch screen (for selected models)

If your computer display supports the multi-touch function, you can navigate the screen with simple touch gestures. For more touch gestures, refer to https://support.microsoft.com/windows.

Note: Some gestures might not be applicable when you use certain apps.

Illustration and description	Illustration and description
Tap once to single click	Tap twice quickly to double-click
Tap and hold to right-click	Slide to scroll through items
Zoom in	Zoom out
Swipe from the left: view all open windows (Windows 10) Swipe from the left: open widget panel (Windows 11)	Swipe from the right: open action center (Windows 10) Swipe from the right: open notification center (Windows 11)
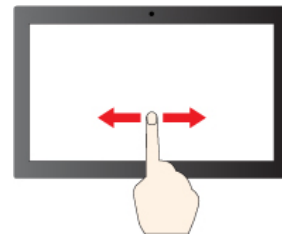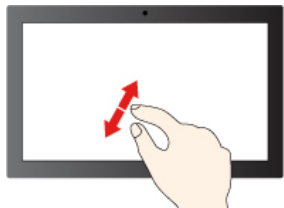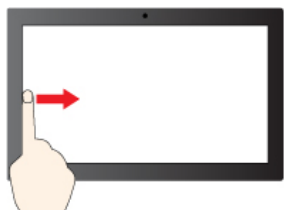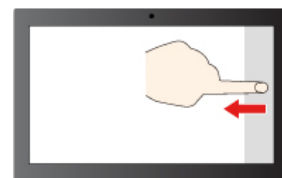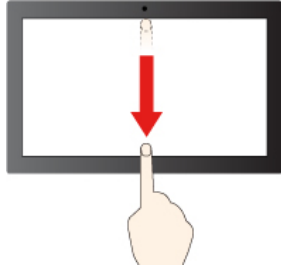
Illustration and description	Illustration and description
Swipe downwards shortly: show title bar Swipe downwards: close the current app	Drag
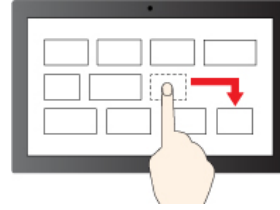
Maintenance tips

- Turn off the computer before cleaning the touch screen.
- 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.
- The touch screen is a glass panel covered with a plastic film. Do not apply pressure or place any metallic object on the screen, which might damage the touch panel or cause it to malfunction.
- Do not use fingernails, gloved fingers, or inanimate objects for input on the screen.
- Regularly calibrate the accuracy of the finger input to avoid a discrepancy.

Connect an external display

Connect a projector or a monitor to your computer to give presentations or expand your workspace.

Connect a wireless display

Ensure that both your computer and the wireless display support Miracast®.

Press Windows logo key + K and then select a wireless display to connect.

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.

Chapter 3. Explore your computer

The Vantage app

The preinstalled 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.

Key features

The Vantage app enables you to:

- Know the device status easily and customize device settings.
- Download and install UEFI BIOS, firmware and driver updates 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.

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.

AI camera (for selected models)

If the camera on your computer is equipped with an AI chip, AI camera enables you to experience the following features. In addition to face beautification and background customization in video calls, **Lenovo Smart Appearance** helps you to protect your privacy data from peeping behavior during a neglected period.

Note: Ensure that you have installed **Lenovo Smart Appearance** on your computer. If **Lenovo Smart Appearance** is not installed, go to the Microsoft Store to download it.

Privacy protection

When peeping behavior is detected, it triggers an alert message to display within seconds and blurs your computer screen to protect your privacy.

Note: If the privacy protection feature is enabled, screen blurring is enabled by default while an alert message needs to be further enabled. You can customize the warning interval based on your preference.
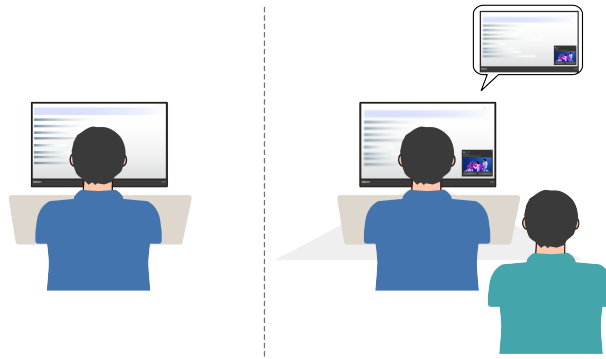
Human presence detection

The AI camera detects user presence. This feature awakens your computer when you are facing the screen. And when you leave, it automatically locks the computer according to the screen-off timer settings, which can be customized. The default screen-off timer is 10 seconds.

Note: Ensure that you have enabled the human presence detection feature and registered your face identification. Lenovo does not collect any personal data.
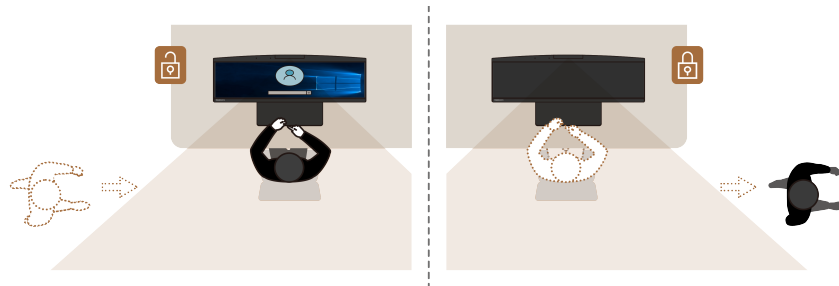
Adaptive dimming

The screen dims automatically to save power when you are facing away. You need to enable adaptive dimming. Brightness value and screen dim timer can both be customized. The default screen dim timer is 10 seconds.

Smart cable (for selected models)

Depending on the model, your device might not come with smart cable.

Prerequisite

Before using smart cable, do the following to ensure that the driver is successfully installed.

- Connect two devices with a smart cable.
- Double-click **This PC → LENOVOLINK Disk Drive**.
- Launch **LenovoLink.exe** to install a driver.
- A pop-up window displays if smart cable is ready to use.

Note: Before connecting a smart cable, connect one of USB 3.2 connectors on **neo 50a 24 Gen 3** for better experience.

File transfer

You can use the keyboard and mouse with a simple drag and drop between two devices via smart cable.
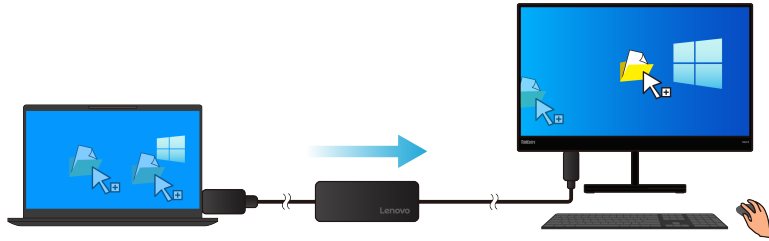
Picture-in-Picture mode

If your office table size is limited to work, smart cable helps you to handle work effectively in one device via Picture-in-Picture mode.
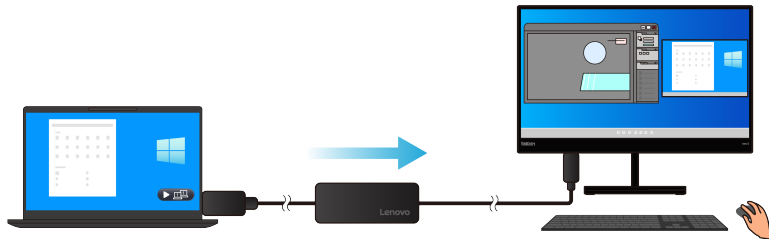
For more information, go to https://pcsupport.lenovo.com/docs/lenovolink_smart_cable.

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 reset the power plan:

1. Right-click the battery status icon and select **Power Options**.
2. Choose or customize a power plan of your preference.

Transfer data

Quickly share your files using the built-in Bluetooth technology among devices with the same features. You also can install a disc or media card to transfer data.

Connect to a Bluetooth-enabled device (for selected models)

You can connect all types of Bluetooth-enabled devices to your computer, such as a keyboard, a mouse, a smartphone, or speakers. Place the device that you are attempting to connect to less than 10 meters (33 feet) from the computer.
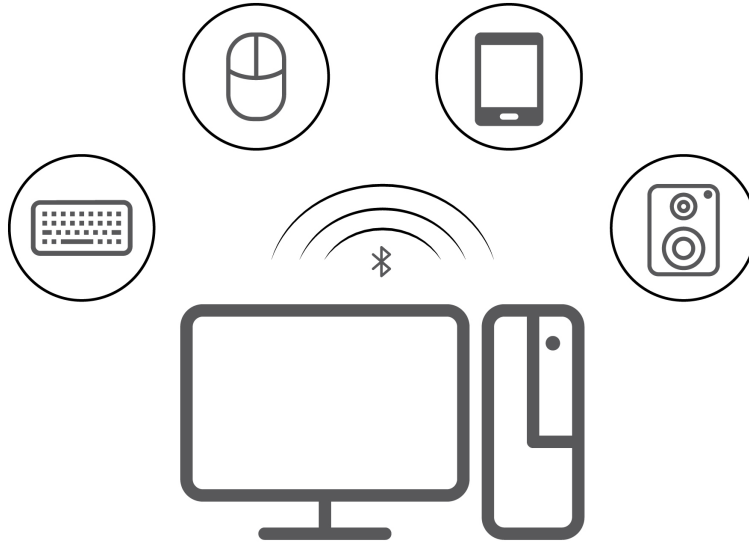
1. Type `Bluetooth` in the Windows search box and then press Enter.
2. Turn on Bluetooth, if it is off.
3. Select a Bluetooth device, and then follow the on-screen instructions.

Use the optical drive (for selected models)

If your computer has an optical drive, read the following information.

Know the type of your optical drive

1. Type `Device Manager` in the Windows search box and then press Enter. Type the administrator password or provide confirmation, if prompted.
2. Select an optical drive, and then follow the on-screen instructions.

Install or remove a disc

1. With the computer on, press the eject button on the optical drive. The tray slides out of the drive.
2. Insert a disc into the tray or remove a disc from the tray, and then push the tray back into the drive.

Note: If the tray does not slide out of the drive when you press the eject button, turn off the computer. Then, insert a straightened paper clip into the emergency-eject hole adjacent to the eject button. Use the emergency eject only in an emergency.

Record a disc

1. Insert a recordable disc into the optical drive that supports recording.
2. Do one of the following:
   - Type `AutoPlay` in the Windows search box and then press Enter. Turn on **Use AutoPlay for all media and devices**.
   - Open Windows Media Player.
   - Double-click the ISO file.
3. Follow the on-screen instructions.

Use a media card (for selected models)

If your computer has a SD-card slot, read the following information.

Install a media card

1. Locate the SD-card slot.
2. Ensure that the metal contacts on the card are facing the ones in the SD-card slot. Insert the card firmly into the SD-card slot until it is secured in place.

Remove a media card

Attention: Before removing the card:

1. Click the triangular icon in the Windows notification area to show hidden icons. Right-click the icon prompting you to safely remove hardware and eject media.
2. Select the corresponding item to eject the card from the Windows operating system.
3. Press the card and remove it from your computer. Store the card safely for future use.

Purchase accessories

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

To shop at Lenovo, go to https://www.lenovo.com/accessories.

Chapter 4. Secure your computer and information

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.

Kensington-style cable lock

Lock your computer to a desk, table, or other fixtures through a Kensington-style cable lock.
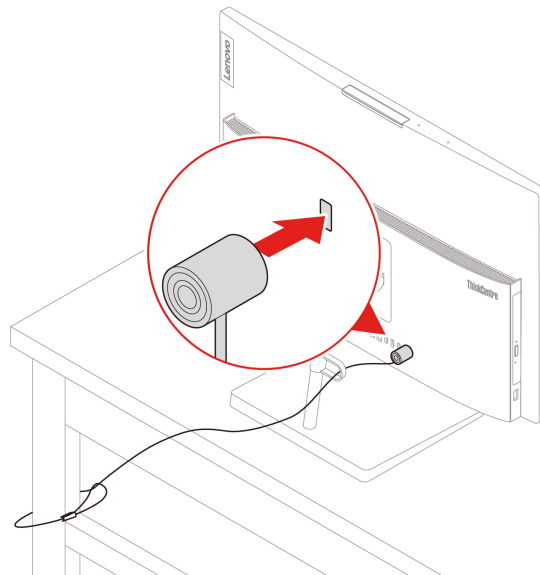
Log in to your computer securely

This section provides secure ways to log in to your computer.

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, and 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**, **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 to have the passwords removed.

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

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.

Use software security solutions

This section provides software solutions to secure your computer and information.

Windows firewalls

A firewall can be hardware, software, or a combination of both depending on the level of security required. Firewalls work on a set of rules to determine which inbound and outbound connections are authorized. If the computer is preinstalled with a firewall program, it helps protect against computer Internet security threats, unauthorized access, intrusions, and Internet attacks. It also protects your privacy. For more information about how to use the firewall program, refer to the help system of your firewall program.

To use Windows firewalls:

1. Type `Control Panel` in the Windows search box and then press Enter. View by large icons or small icons.
2. Click **Windows Defender Firewall**, and then follow the on-screen instructions.

Antivirus programs

The computer is preinstalled with an antivirus program to help you guard against, detect, and eliminate viruses.

Lenovo provides a full version of antivirus software on the computer with a free 30-day subscription. After 30 days, you must renew the license to continue receiving the antivirus software updates.

Note: Virus definition files must be kept up-to-date to guard against new viruses.

For more information about how to use your antivirus software, refer to the help system of your antivirus software.

Use BIOS security solutions

This section provides BIOS solutions to secure your computer and information.

Wipe the storage drive data

It is recommended that you wipe the storage drive data before recycling the storage drive or the computer.

To wipe the storage drive data:
1. Restart the computer. When the logo screen is displayed, press F1 or Fn+F1.
2. Select **Security** ➙ **secure wipe** ➙ **Enabled**.
3. Press F10 or Fn+F10 to save the changes and exit.
4. Restart the computer. When the logo screen is displayed, press F12 or Fn+F12.
5. Select **App Menu** ➙ **secure wipe** and press Enter.
6. Select the storage drive you will wipe and click **NEXT**.
7. Select the entire storage drive or partition to wipe as desired.
8. Select the method as desired and click **NEXT**.
9. Click **Yes** to confirm your option when the prompting window is displayed.
10. If you have set a hard disk password for the storage drive, enter the password. Otherwise, set a temporary password following the on-screen instructions. Then, click **NEXT**. The wiping process begins.

    Note: Duration of the wiping process varies depending on the storage drive capacity.
11. Click **Reboot** when you are prompted to reset the system, and then one of the following will happen:

    - If the system storage drive data is wiped, you will be prompted that no operating system is found.
    - If the non-system storage drive data is wiped, the computer restarts automatically.

Intel BIOS guard

The Intel® BIOS Guard module cryptographically verifies all BIOS updates. This hardware-based security helps prevent software and malware attacks on the computers BIOS.

Smart USB Protection

The Smart USB Protection function is a security function that helps prevent data from being copied from the computer to USB storage devices connected to the computer. You can set the Smart USB Protection function to one of the following modes:

- **Disabled** (default setting): You can use the USB storage devices without limitation.

- **Read Only**: You cannot copy data from the computer to the USB storage devices. However, you can access or modify data on the USB storage devices.
- **No Access**: You cannot access the USB storage devices from the computer.

To configure the Smart USB Protection function:

1. Restart the computer. When the logo screen is displayed, press F1 or Fn+F1.
2. Select **Security ➙ Smart USB Protection** and press Enter.
3. Select the desired setting and press Enter.
4. Press F10 or Fn+F10 to save the changes and exit.

Chapter 5. UEFI BIOS

This chapter provides information about configuring and updating UEFI BIOS, and clearing CMOS.

What is UEFI BIOS

Note: The operating system settings might override any similar settings in UEFI BIOS.

UEFI BIOS is the first program that the computer runs when the computer is turned on. UEFI BIOS initializes the hardware components and loads the operating system and other programs. Your computer comes with a setup program with which you can change UEFI BIOS settings.

Enter the BIOS menu

Restart the computer. When the logo screen is displayed, press F1 or Fn+F1 to enter the BIOS menu.

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

Navigate in the BIOS interface

Attention: The default configurations are already optimized for you in **boldface**. Improper change of the configurations might cause unexpected results.

Depending on your keyboard, you can navigate in the BIOS interface by pressing the following keys, or combinations of Fn and the following keys:

Key	Function
F1 or Fn+F1	General Help
Esc or Fn+Esc	Exit the submenu
↑↓ or Fn+↑↓	Locate an item
← → or Fn+← →	Move keyboard focus
+/− or Fn++/−	Change value
Enter	Enter the submenu
F9 or Fn+F9	Setup Defaults
F10 or Fn+F10	Save and exit

Change the display language of UEFI BIOS

UEFI BIOS supports three or four display languages: English, French, simplified Chinese, and Russian (for selected models).

To change the display language of UEFI BIOS:
1. Select **Main ➙ Language** and press Enter.
2. Set the display language as desired.

Set the system date and time

1. Restart the computer. When the logo screen is displayed, press F1 or Fn+F1.
2. Select **Main** ➙ **System Time & Date** and press Enter.
3. Set the system date and time as desired.
4. Press F10 or Fn+F10 to save the changes and exit.

Change the boot priority order

If the computer does not boot from a device as expected, you can change the boot priority order permanently or select a temporary boot device.

Change the boot priority order permanently

1. Depending on the type of the storage device, do one of the following:
   - If the storage device is internal, go to step 2.
   - If the storage device is a disc, ensure that the computer is on or turn on the computer. Then, insert the disc into the optical drive.
   - If the storage device is an external device other than a disc, connect the storage device to the computer.
2. Restart the computer. When the logo screen is displayed, press F1 or Fn+F1.
3. Select **Startup** ➙ **Boot Priority Order**, and then follow the on-screen instructions to change the boot priority order.
4. You can also select the first priority device group by selecting **Startup** ➙ **First Boot Device**, and then follow the on-screen instructions to select the first boot device within this group. Your computer will boot from the first boot device before trying the boot priority order you set in the previous step.
5. Press F10 or Fn+F10 to save the changes and exit.

Select a temporary boot device

Note: Not all discs and storage drives are bootable.

1. Depending on the type of the storage device, do one of the following:
   - If the storage device is internal, go to step 2.
   - If the storage device is a disc, ensure that the computer is on or turn on the computer. Then, insert the disc into the optical drive.
   - If the storage device is an external device other than a disc, connect the storage device to the computer.
2. Restart the computer. When the logo screen is displayed, press F12 or Fn+F12.
3. Select the storage device as desired and press Enter.

If you want to change the boot priority order permanently, select **Enter Setup** on Startup Device Menu and press Enter to enter the BIOS menu.

Enable or disable the automatic power-on feature

The Automatic Power On item in UEFI BIOS provides various options for you to make your computer start up automatically.

To enable or disable the automatic power-on feature:

1. Restart the computer. When the logo screen is displayed, press F1 or Fn+F1.
2. Select **Power** ➙ **Automatic Power On** and press Enter.
3. Select the feature as desired and press Enter.
4. Enable or disable the feature as desired.
5. Press F10 or Fn+F10 to save the changes and exit.

Enable or disable the smart power-on feature (for selected models)

Ensure that the keyboard is connected to a USB connector supporting the smart power-on feature. With the smart power-on feature enabled, you can start up or wake up the computer from the hibernation mode by pressing Alt+P.

To enable or disable the smart power-on feature:
1. Restart the computer. When the logo screen is displayed, press F1 or Fn+F1.
2. Select **Power** ➙ **Smart Power On** and press Enter.
3. Enable or disable the feature as desired.
4. Press F10 or Fn+F10 to save the changes and exit.

Enable or disable the ErP LPS compliance mode

Lenovo computers meet the eco-design requirements of the ErP Lot 3 regulation. For more information, 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 or in sleep mode.

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. Depending on whether you select **Enabled** or **Disabled**, do one of the following:
   - If you select **Enabled**, press Enter. Then, select **Power** ➙ **Automatic Power On** and press Enter. Check whether the Wake on LAN feature is disabled automatically. If no, disable it.
   - If you select **Disabled**, press Enter. Then, go to the next 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.

Change the ITS performance mode

You can adjust the acoustic and thermal performance of your computer by changing the ITS performance mode. 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.

To change the ITS 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.

Change BIOS settings before installing a new operating system

BIOS settings vary by operating system. Change the BIOS settings before installing a new operating system.

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/windows-support

To change the BIOS settings:

1. Restart the computer. When the logo screen is displayed, press F1 or Fn+F1.
2. From the main interface, select **Security ➙ Secure Boot** and press Enter.
3. Depending on the operating system to be installed, do one of the following:

   - To install a Windows operating system that supports secure boot, select **Enabled** for **Secure Boot**.
   - To install an operating system that does not support secure boot, such as some Linux operating systems, select **Disabled** for **Secure Boot**.
4. Press F10 or Fn+F10 to save the changes and exit.

Update UEFI BIOS

When you install a new program, device driver, or hardware component, you might need to update UEFI BIOS. You can update the BIOS from your operating system or a flash update disc (supported only on selected models).

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

- From the Vantage app:

   Open the Vantage app to check the available update packages. 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:

   1. Go to https://pcsupport.lenovo.com.

2. Download the flash BIOS update driver for the operating system version or the ISO image version (used to create a flash update disc). Then, download the installation instructions for the flash BIOS update driver you have downloaded.

3. Print the installation instructions and follow the instructions to update the BIOS.

Recover from a BIOS update failure

1. Remove all media from the drives and turn off all connected devices.

2. Insert the BIOS update disc into the optical drive, and then turn off the computer.

3. Disconnect all power cords from electrical outlets. Then, remove any parts that impede access to the JCRIS1 pads.

4. Reconnect the power cords for the computer and the monitor to electrical outlets.

5. Short-circuit the JCRIS1 pads, and then turn on the computer and the monitor.

6. Release the JCRIS1 pads when the computer beeps. The recovery process begins.

7. After the recovery process is completed, the computer will be turned off automatically.

   Note: Depending on the computer model, the recovery process will take two to three minutes.

8. Disconnect all power cords from electrical outlets.

9. Reinstall all the parts that have been removed. Then, reconnect the power cords for the computer and the monitor to electrical outlets.

10. Turn on the computer and the monitor. When the logo screen is displayed, press F1 or Fn+F1.

11. To prevent data loss, ensure that BIOS settings are restored to an earlier point.

Clear CMOS

1. Remove all media from the drives and turn off all connected devices and the computer.

2. Disconnect all power cords from electrical outlets. Then, remove any parts that impede access to the JCRIS1 pads.

3. Reconnect the power cords for the computer and the monitor to electrical outlets.

4. Use a flat head screwdriver to short-circuit the JCRIS1 pads. Meanwhile, turn on the computer and the monitor.

5. Release the screwdriver when the computer beeps. Wait for approximately 10 seconds.

6. Turn off the computer by holding the power button for approximately four seconds.

7. Disconnect all power cords from electrical outlets.

8. Reinstall all the parts that have been removed. Then, reconnect the power cords for the computer and the monitor to electrical outlets.

9. Turn on the computer and the monitor. When the logo screen is displayed, press F1 or Fn+F1.

10. To prevent data loss, ensure that BIOS settings are restored to an earlier point.

Chapter 6. Diagnostics

Use diagnostic solutions to test hardware components and report operating-system-controlled settings that interfere with the correct operation of your computer.

Lenovo diagnostic tools

For information about Lenovo diagnostic tools, go to:
https://pcsupport.lenovo.com/lenovodiagnosticsolutions

The Vantage app

The Vantage app is preinstalled on your computer. To diagnose problems with the Vantage app:

1. Type `Vantage` in the Windows search box and press Enter.
2. Follow the on-screen instructions and run a hardware scan.

If you are unable to isolate and resolve the problem after running the Vantage app, save and print the log files created by the program. You might need the log files when you speak to a Lenovo technical support representative.

Chapter 7. CRU replacement

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

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

If you intend 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

- Computer stand*
- Keyboard*
- Mouse*
- Power cord
- Smart cable clip*

* for selected models

Remove or replace a CRU

This section provides instructions on how to remove or replace a CRU.

Computer stand

Prerequisite

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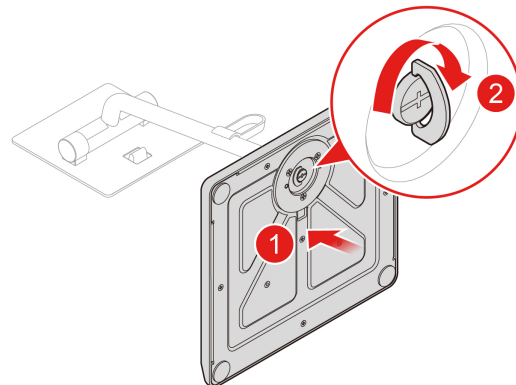
For access, do the following:

1. Turn off the computer and remove all connected devices and cables.
2. Disconnect the computer from ac power and all connected cables.
3. Place a soft, clean towel or cloth on the desk or surface. Hold the sides of your computer and gently lay it down so that the screen is against the surface and the computer cover is facing up.

Replacement procedure

Depending on your computer stand, refer to one of the following to replace the computer stand.

- Tilt-only stand
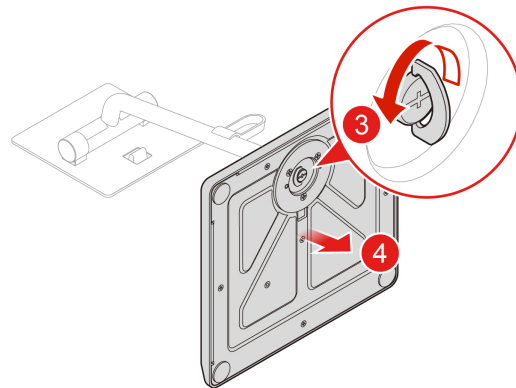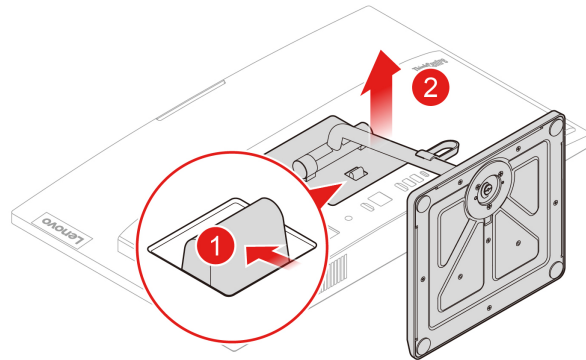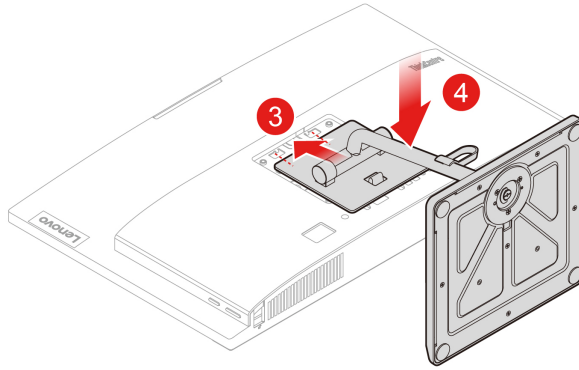
• Liftable stand

Chapter 8. Help and support

Self-help resources

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

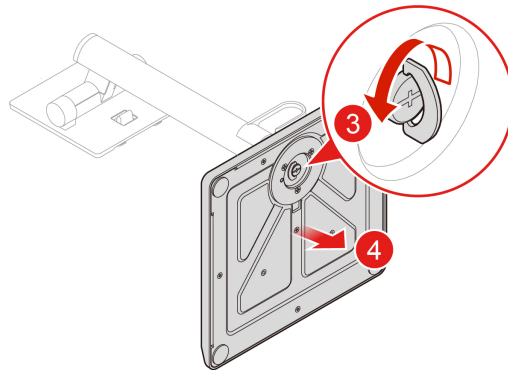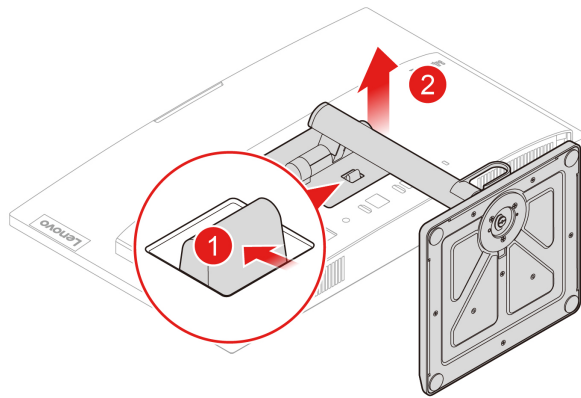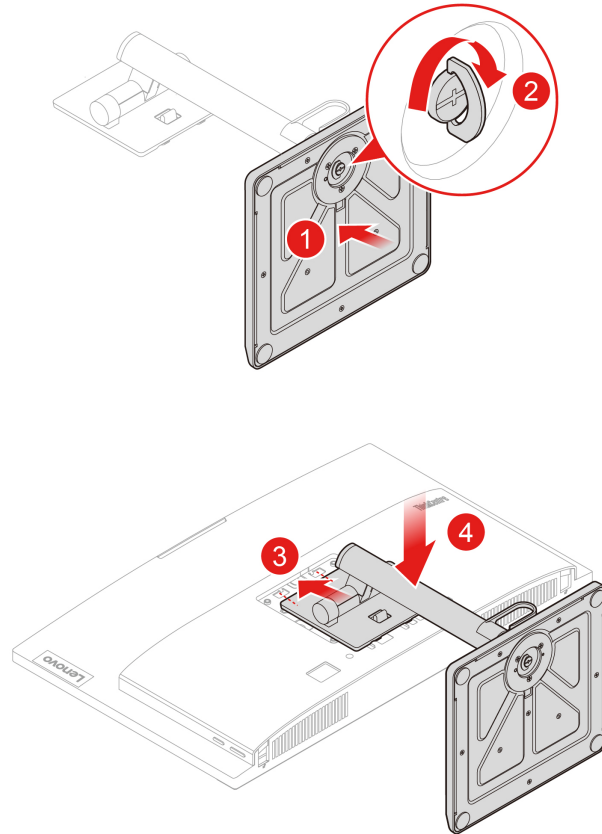| Resources	How to access?
Troubleshooting and frequently asked questions	• https://www.lenovo.com/tips • https://forums.lenovo.com
Accessibility information	https://www.lenovo.com/accessibility

Reset or restore Windows	• Use Lenovo recovery options.
	  1. Go to https://support.lenovo.com/ HowToCreateLenovoRecovery.
	  2. Follow the on-screen instructions.
	 • Use Windows recovery options.
	  1. Go to https://pcsupport.lenovo.com.
	  2. Detect your computer or manually select your computer model.
	  3. Navigate to the troubleshooting menu to diagnose the operating system for recovery instructions.

Use the Vantage app to: • Configure device settings. • Download and install UEFI BIOS, drivers and firmware updates. • Secure you computer from outside threats. • Diagnose hardware problems. • Check the computer warranty status. • Access *User Guide* and helpful articles. **Note:** The available features vary depending on the computer model.	Type `Vantage` in the Windows search box.
Product documentation: • *Safety and Warranty Guide* • *Generic Safety and Compliance Notices* • *Setup Guide* • This *User Guide* • *Regulatory Notice*	Go to https://pcsupport.lenovo.com. Then, follow the on-screen instructions to filter out the documentation you want.

| Resources	How to access?
Lenovo Support Web site with the latest support information of the following: • Drivers and software • Diagnostic solutions • Product and service warranty • Product and parts details • Knowledge base and frequently asked questions	https://pcsupport.lenovo.com
Windows help information	• Open the Start menu and click **Get Help** or **Tips**. • Use Windows Search or the Cortana® personal assistant. • Microsoft support Web site: https://support.microsoft.com

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 following 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

     The following illustration shows where to find the machine type and serial number of your computer.
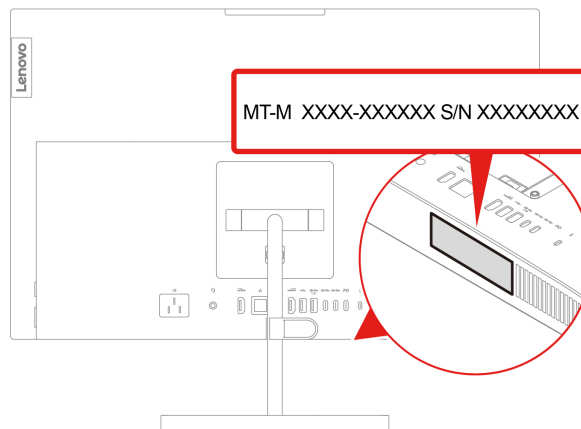
Lenovo Customer Support Center

During the warranty period, you can call Lenovo Customer Support Center for help.

Telephone numbers

For a list of the Lenovo Support phone numbers for your country or region, go to:
https://pcsupport.lenovo.com/supportphonelist

Note: Phone numbers are subject to change without notice. If the number for your country or region is not provided, contact your Lenovo reseller or Lenovo marketing representative.

Services available during the warranty period

- Problem determination - Trained personnel are available to assist you with determining if you have a hardware problem and deciding what action is necessary to fix the problem.
- Lenovo hardware repair - If the problem is determined to be caused by Lenovo hardware under warranty, trained service personnel are available to provide the applicable level of service.

- Engineering change management - Occasionally, there might be changes that are required after a product has been sold. Lenovo or your reseller, if authorized by Lenovo, will make selected Engineering Changes (ECs) that apply to your hardware available.

Services not covered

- Replacement or use of parts not manufactured for or by Lenovo or nonwarranted parts
- Identification of software problem sources
- Configuration of UEFI BIOS as part of an installation or upgrade
- Changes, modifications, or upgrades to device drivers
- Installation and maintenance of network operating systems (NOS)
- Installation and maintenance of programs

For the terms and conditions of the Lenovo Limited Warranty that apply to your Lenovo hardware product, see *Safety and Warranty Guide* that comes with your computer.

Purchase additional services

During and after the warranty period, you can purchase additional services from Lenovo at:
https://pcsupport.lenovo.com/warrantyupgrade

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

Appendix A. Compliance information

For more compliance information, refer to *Regulatory Notice* at https://pcsupport.lenovo.com and *Generic Safety and Compliance Notices* at https://pcsupport.lenovo.com/docs/generic_notices.

Certification-related information

Product name: ThinkCentre neo 50a 24 Gen 3

Machine types: 12B6, 12B7, 12B8 and 12B9

Further compliance information related to your product is available at https://www.lenovo.com/compliance.

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)

Appendix B. Notices and trademarks

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https://pcsupport.lenovo.com

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