

User Guide



Lenovo LOQ Tower 17IRB8

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*

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Contents

About this documentationiii	CRU list	13
Chapter 1. Meet your computer	1	Remove or replace a CRU	13
Front	1	Power cord	14
Rear	2	Computer cover	14
Features and specifications	3	Front bezel	15
USB specifications	3	3.5-inch storage drive	16
Operating environment	5	Memory module	17
Chapter 2. Get started with your computer	7	M.2 solid-state drive	18
Work with Windows	7	PCI-Express card	19
Windows help information	7	Power supply assembly	20
Chapter 3. Explore your computer	9	Chapter 5. Help and support	23
Lock the computer (for selected models)	9	Frequently asked questions	23
Lenovo Vantage	9	Self-help resources	23
Set the power plan	10	Call Lenovo	25
Transfer data	10	Before you contact Lenovo	25
Connect to a Bluetooth-enabled device (for selected models)	10	Lenovo Customer Support Center	25
Purchase accessories	11	Purchase additional services	26
Chapter 4. CRU replacement	13	Appendix A. Notices and trademarks	27

About this documentation

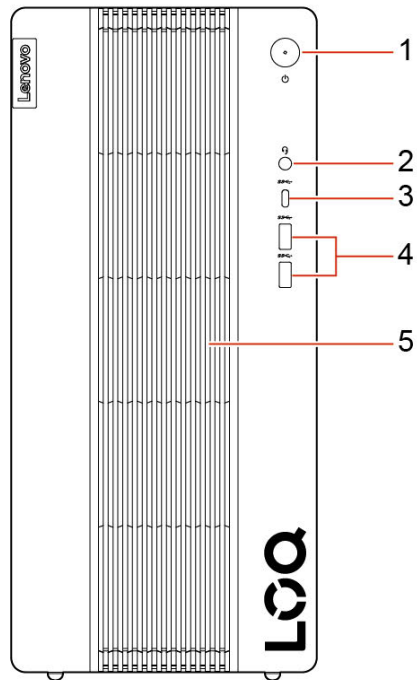
- This guide applies to the Lenovo product models listed below. Illustrations in this guide may look slightly different from your product model.

Model name	Machine types (MT)
LOQ 17IRB8	90VG, 90VH

- For further compliance information, refer to the *Generic Safety and Compliance Notices* at https://pcsupport.lenovo.com/docs/generic_notices.
- 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 <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.

Chapter 1. Meet your computer

Front



1. Power button	2. Headset connector
3. USB-C® (3.2 Gen 1) connector	4. USB-A 3.2 Gen 1 connectors (2)
5. Ventilation slots	

Power indicator

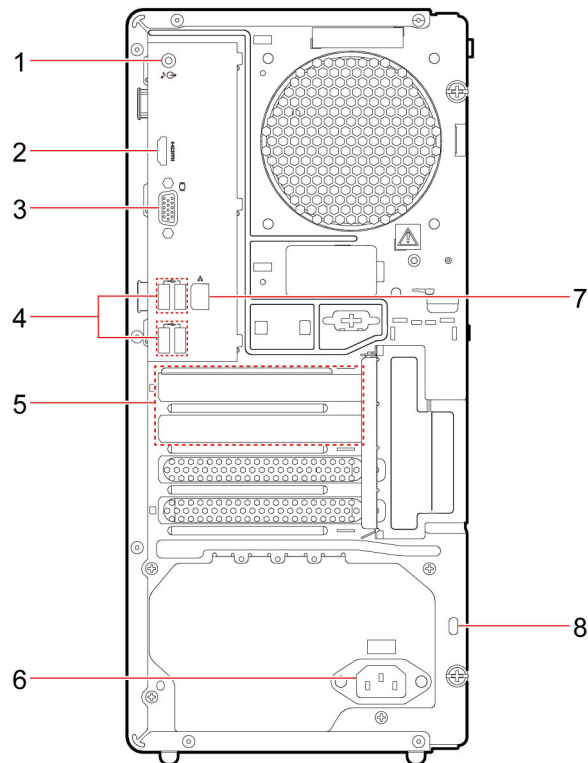
Show the system status of your computer.

- **Blinking for three times:** The computer is initially connected to power.
- **On:** The computer is on.
- **Off:** The computer is off or in hibernation mode.
- **Blinking rapidly:** The computer is entering sleep or hibernation mode.
- **Blinking slowly:** The computer is in sleep mode.

Related topics

- “USB specifications” on page 3.

Rear



1. Audio line-out connector	2. HDMI™ 1.4 out connector
3. VGA-out connector	4. USB-A 2.0 connectors (4)
5. PCI-Express card area	6. Power cord connector
7. Ethernet connector (2.5G)	8. Security-lock slot

Related topics

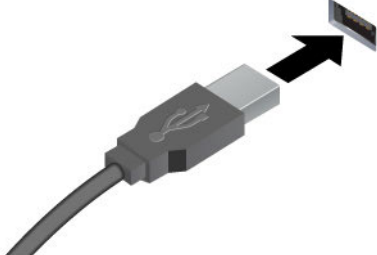



- “USB specifications” on page 3.
- “Work with Windows” on page 7.
- “Lock the computer” on page 9.

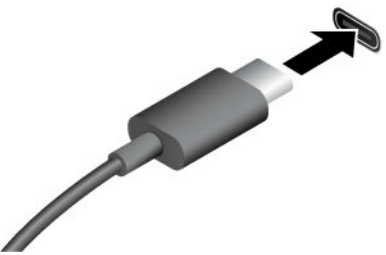




Features and specifications

Hardware	To view the hardware information of your computer, type device manager in the Windows search box and then press Enter.
Power supply	<ul style="list-style-type: none">• 310-watt automatic voltage-sensing power supply• 380-watt automatic voltage-sensing power supply• 500-watt automatic voltage-sensing power supply
Microprocessor	To view the microprocessor information of your computer, type system information in the Windows search box and then press Enter.
Memory	Double data rate 4 (DDR4) dual in-line memory module (DIMM)
Storage device	<p>To view the storage drive capacity of your computer, type disk management in the Windows search box and then press Enter.</p> <p>Note: The storage drive capacity indicated by the system is less than the nominal capacity.</p>
Expansion	<ul style="list-style-type: none">• 3 SATA 3.0 ports• 2 DDR4 DIMM slots• 2 M.2 slots (1 for WIFI and BT, 1 for PCIE SSD)• 2 storage drive bays (3.5-inch storage drive bay) <p>Notes:</p> <ul style="list-style-type: none">– Supports 1 solid state drive (SSD) and 1 storage drive when connecting to 310W / 380W power supply.– Supports 1 solid state drive (SSD) and 2 storage drives when connecting to 500W power supply. <ul style="list-style-type: none">• PCI Express slots: PCIe16 (1), PCIe1 (1)
Network features	<ul style="list-style-type: none">• Bluetooth• Ethernet LAN• Wireless LAN

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 2.0 connector •  USB-A 3.2 Gen 1 connector or USB-A 3.2 Gen 2 connector •  USB-A 3.2 Gen 2 connector 	<p>Connect USB-compatible devices, such as a USB keyboard, USB mouse, USB storage device, or USB printer.</p>

 <ul style="list-style-type: none"> •  USB-C (3.2 Gen 1) connector •  USB-C (3.2 Gen 2) connector •  Thunderbolt 3 (USB-C) connector •  Thunderbolt 4 (USB-C) connector 	<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 an external display: <ul style="list-style-type: none"> – USB-C to VGA: 1900 x 1200 pixels, 60 Hz – USB-C to DP: 3840 x 2160 pixels, 60 Hz • Connect to USB-C accessories to help expand your computer functionality. To purchase USB-C accessories, go to https://www.lenovo.com/accessories.
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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 / 3.1 Gen 1	5
3.2 Gen 2 / 3.1 Gen 2	10
3.2 Gen 2 × 2	20
Thunderbolt 3 (USB-C)	40
Thunderbolt 4 (USB-C)	40

Operating environment

Temperature

- Operating: From 5°C (41°F) to 35°C (95°F)
- Storage or transportation:
 - 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)

Altitude

- Operating: -15.2 m (-50 ft) to 3048 m (10,000 ft)
- Storage: -15.2 m (-50 ft) to 12192 m (40,000 ft)

Chapter 2. Get started with your computer

Work with Windows

The following table contains Windows frequently used settings. You can learn the basics and start working with Windows right away.

To configure settings, type the corresponding keywords in the Windows search box and select the best match. Follow the on-screen instructions to customize settings.

Table 1. Basic settings

Functions	Descriptions	Search by keywords
Control Panel	View or change Windows settings, including hardware and software setup and configuration.	Control Panel
Connect to Wi-Fi networks	For models with a wireless LAN module, you can connect your computer to a Wi-Fi® network. Click the network icon in the Windows notification area, and then select a network for connection. 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.	Wi-Fi
Connect to wired networks	For models with an Ethernet (RJ-45) connector, you can use an Ethernet cable to connect your computer to a wired network.	—
Airplane mode	Airplane mode is a convenient setting to turn all wireless communications of your computer on and off. You may need to turn it on when boarding an airplane.	Airplane mode
Windows Updates	Microsoft periodically releases feature and security updates to the Windows operating system. Updates that are applicable to your Windows version are downloaded automatically when your computer is connected to the Internet. When updates are downloaded, you are prompted to restart the computer to install these updates. You can also manually check if there are available updates for the installed version of Windows. Attention: Only use Windows Update to download and install updates. Updates downloaded from other sources may include security risks.	Windows Updates

Windows help information

If the on-screen instructions cannot solve your problem, refer to the following to get the online Windows help information.

- Type Get Help or Tips in the Windows search box and then press Enter. When the app opens, type the problem description and select the matched result.
- Visit Microsoft support Web site: <https://support.microsoft.com>. Enter what you are looking for in the search box and get search results.

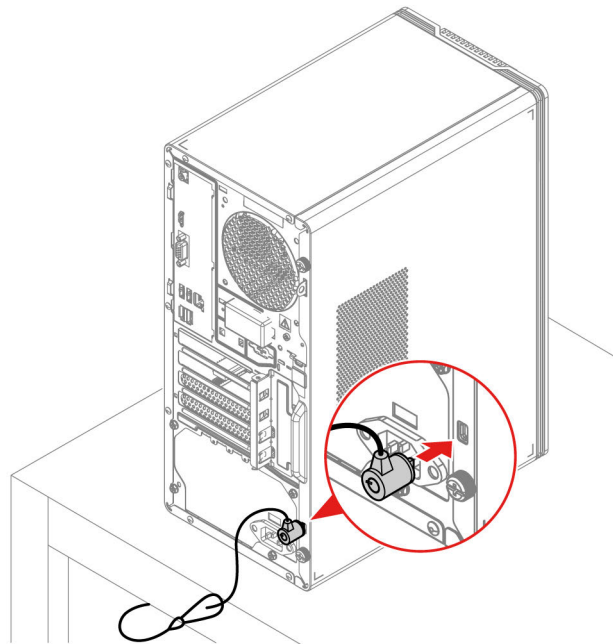
Chapter 3. Explore your computer

Lock the computer (for selected models)

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.



Lenovo Vantage



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

Access Lenovo Vantage

Type Lenovo Vantage in the search box and then press Enter.

To download the latest version of Lenovo Vantage, go to Microsoft Store and search by the app name.

Key features

Lenovo Vantage 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.
- Lenovo Vantage 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.

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 25 minutes

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

To change or customize a power plan:

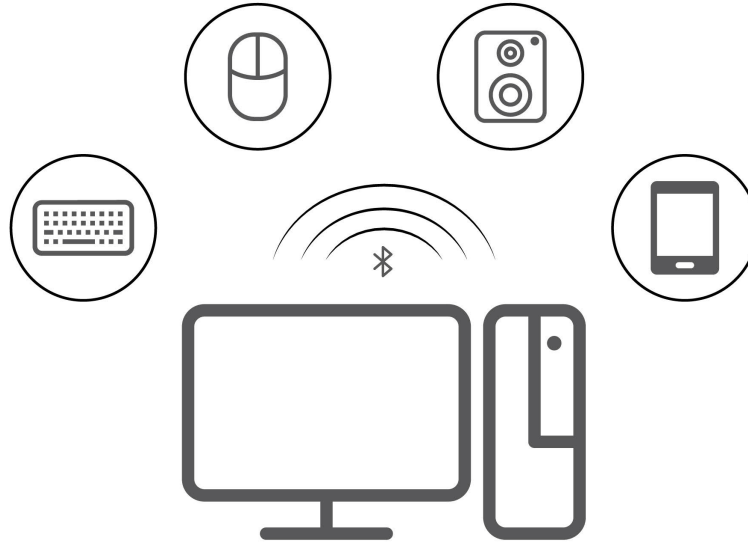
1. Type power plan in the Windows search box and then press Enter.
2. Customize a power plan of your preference.

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. To ensure that the connection is successful, place the devices 10 meters (33 feet), at most, from the computer.



1. Click the action center icon in the Windows notification area. Enable the Bluetooth feature.
2. Click the bluetooth options to add a bluetooth device, and then follow the on-screen instructions.

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://pcsupport.lenovo.com/warrantyupgrade>.

Chapter 4. CRU replacement

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 customers 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

- Power cord
- Computer cover
- Keyboard *
- Mouse *
- Front bezel
- Memory modules
- M.2 solid-state drive
- 3.5-inch storage drive
- 3.5-inch storage drive bracket

Optional-service CRUs

- Power supply assembly
- PCI-Express card

* for selected models

Remove or replace a CRU

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

Power cord

Prerequisite

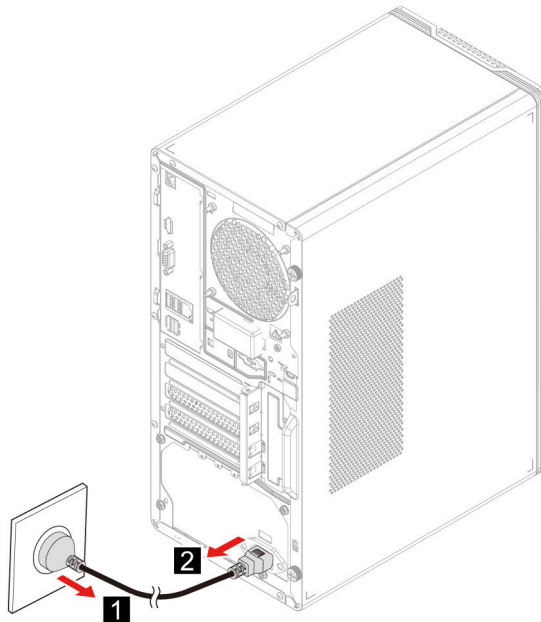
Before you start, read *Generic Safety and Compliance Notices*, and print the following instructions.



Before you remove the power cord, turn off the computer and wait several minutes until the computer is cool.

For access, do the following: Turn off the computer and remove all connected devices and cables.

Removal steps



Computer cover

Prerequisite

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

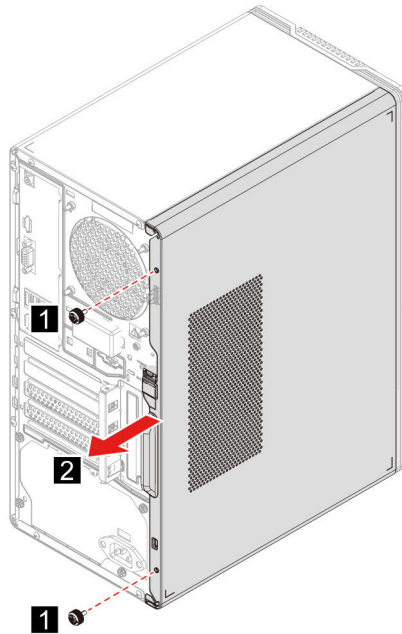


Before you open the computer cover, turn off the computer and wait several minutes until the computer is cool.

For access, do the following:

1. Turn off the computer and remove all connected devices and cables.
2. Unlock any locking device that secures the computer cover. See “Lock the computer” on page 9.
3. Remove the power cord. See “Power cord” on page 14.

Removal steps



Front bezel

Prerequisite

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

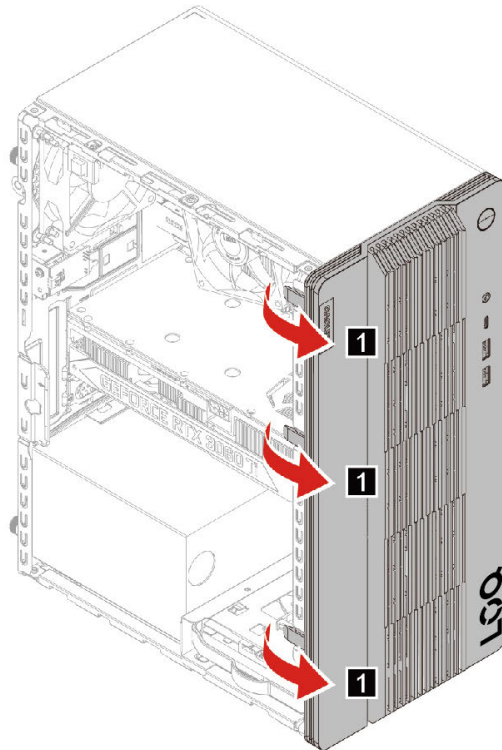


Before you open the computer cover, turn off the computer and wait several minutes until the computer is cool.

For access, remove the following parts in order:

1. Remove the power cord. See “Power cord” on page 14.
2. Remove the computer cover. See “Computer cover” on page 14.

Removal steps



3.5-inch storage drive

Prerequisite

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

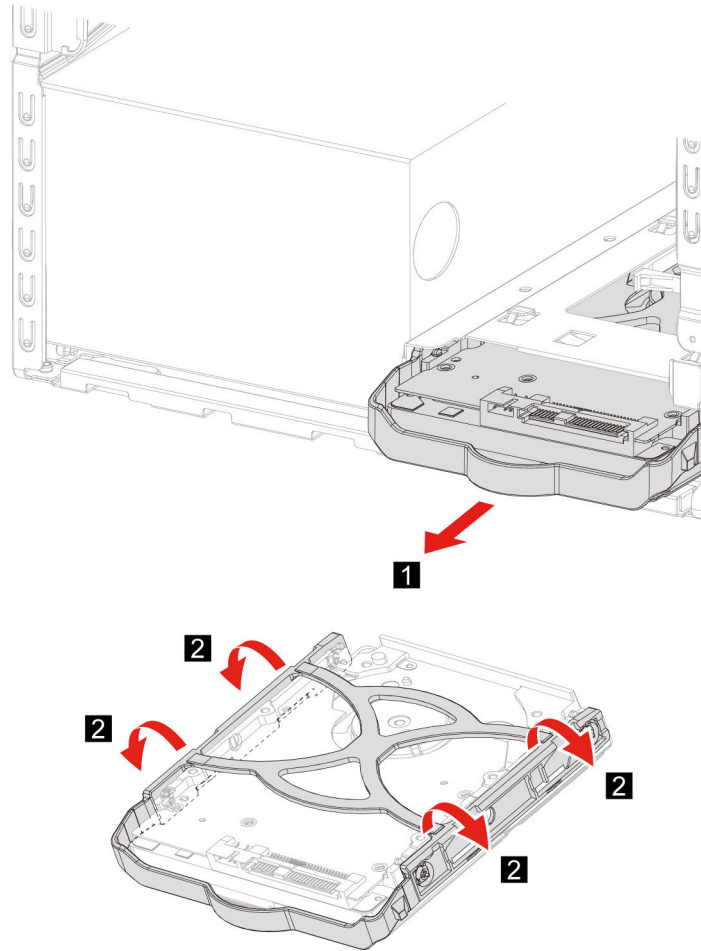
Attention: The internal storage drive is sensitive. Inappropriate handling might cause damage and permanent loss of data. When handling the internal storage drive, observe the following guidelines:

- Replace the internal storage drive only for upgrade or 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, do the following:

1. Remove the power cord. See “Power cord” on page 14.
2. Remove the computer cover. See “Computer cover” on page 14.
3. Disconnect the signal cable and the power cable from the storage drive.

Removal steps



Memory module

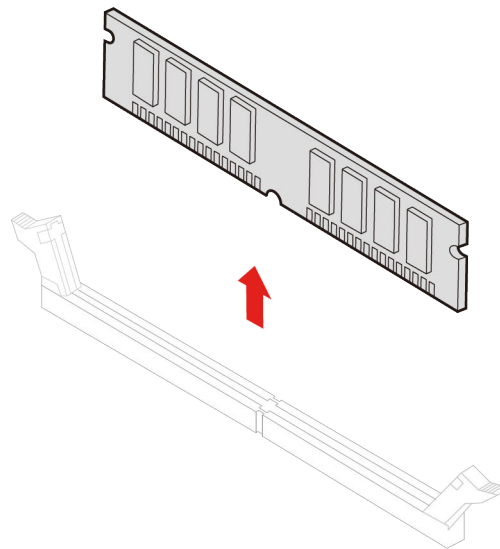
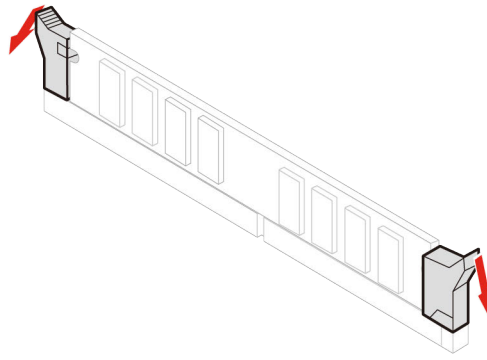
Prerequisite

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

For access, remove the following parts in order:

- Remove the power cord. See “Power cord” on page 14.
- Remove the computer cover. See “Computer cover” on page 14.

Replacement procedure



M.2 solid-state drive

Prerequisite

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

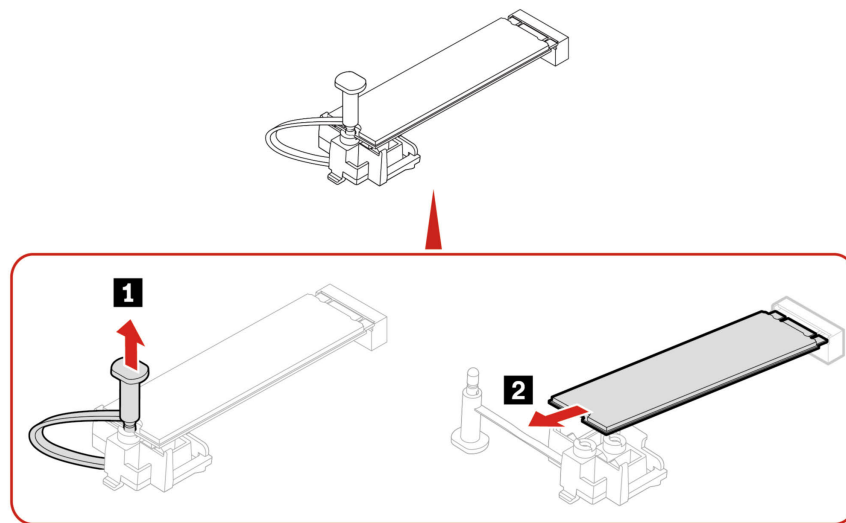
Attention: The M.2 solid-state drive is sensitive. Inappropriate handling might cause damage and permanent loss of data. When handling M.2 solid-state drive, observe the following guidelines:

- Replace the M.2 solid-state drive only for upgrade or repair. The M.2 solid-state drive is not designed for frequent changes or replacement.
- Before replacing the M.2 solid-state drive, make a backup copy of all the data that you want to keep.
- Do not touch the contact edge of the M.2 solid-state drive. Otherwise, M.2 solid-state drive might get damaged.
- Do not apply pressure to the M.2 solid-state drive.
- Do not make the M.2 solid-state drive subject to physical shocks or vibration. Put the M.2 solid-state drive on a soft material, such as cloth, to absorb physical shocks.

For access, remove the following parts in order:

1. Remove the power cord. See “Power cord” on page 14.
2. Remove the computer cover. See “Computer cover” on page 14.

Removal steps



PCI-Express card

Prerequisite

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

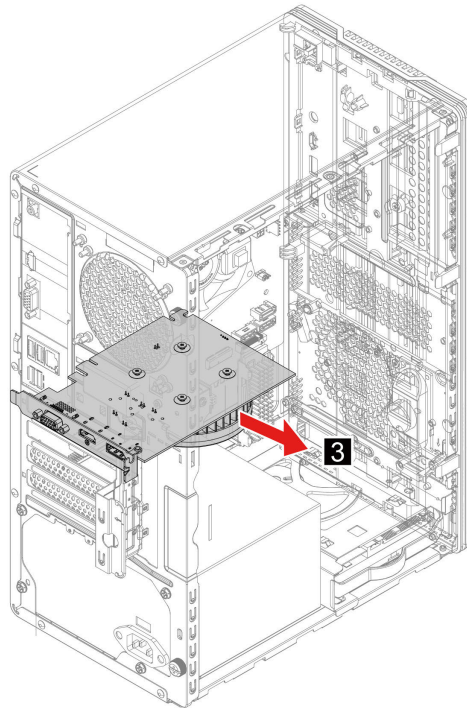
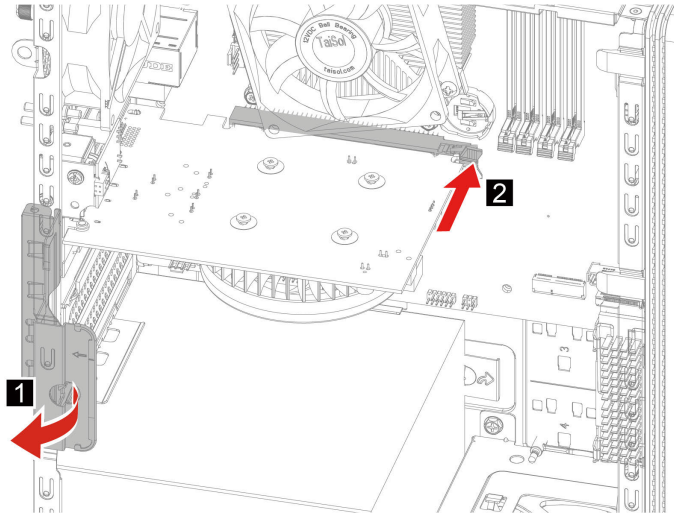


The PCI-Express card might be very hot. Before you open the computer cover, turn off the computer and wait several minutes until the computer is cool.

For access, do the following:

1. Remove the power cord. See “Power cord” on page 14.
2. Remove the computer cover. See “Computer cover” on page 14.
3. Remove the side system fan cable (if any) from the system board.

Removal steps



Power supply assembly

Prerequisite

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

Although there are no moving parts in the computer after the power cord has been disconnected, the following warnings are required for your safety.



Keep fingers and other parts of your body away from hazardous, moving parts. If you suffer an injury, seek medical care immediately. Never remove the cover on a power supply or any part that has the following label attached.



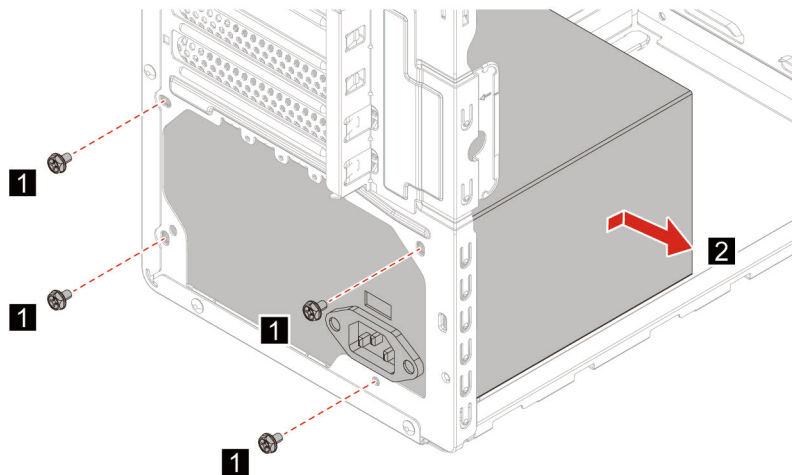
Hazardous voltage, current, and energy levels are present inside any component that has this label attached. There are no serviceable parts inside these components. If you suspect a problem with one of these parts, contact a service technician.

For access, do the following:

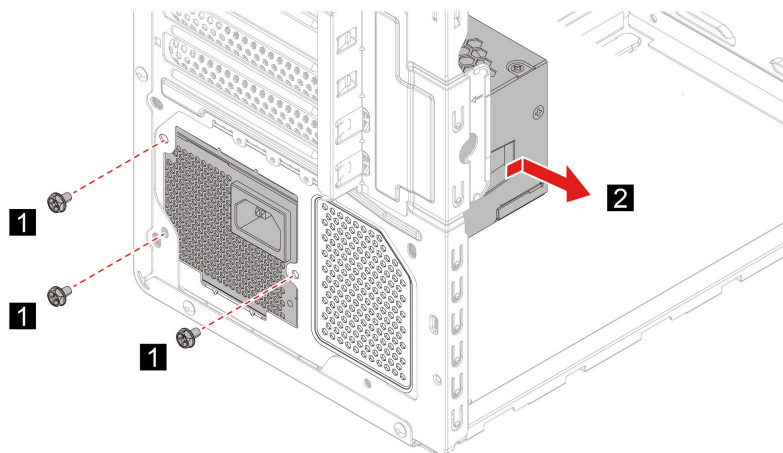
1. Remove the power cord. See “Power cord” on page 14.
2. Remove the computer cover. See “Computer cover” on page 14.
3. Remove the 3.5-inch storage drive. See “3.5-inch storage drive” on page 16.
4. Disconnect the power supply assembly cables from the system board.

Removal steps

- Type 1



- Type 2



Chapter 5. Help and support

Frequently asked questions

Questions	Solutions
How do I partition my storage drive?	Refer to https://support.lenovo.com/solutions/ht503851
What should I do if my computer stops responding.	Press and hold the power button until the computer turns off. Then restart the computer. 1. Carefully unplug the ac power adapter and turn off the computer immediately. The more quickly you stop the current from passing through the computer the more likely you will reduce damage from short circuits. Attention: Although you might lose some data or work by turning off the computer immediately, leaving the computer on might make your computer unusable. 2. Wait until you are certain that all the liquid is dry before turning on your computer. CAUTION: Do not try to drain out the liquid by turning over the computer. If your computer has keyboard drainage holes on the bottom, the liquid will be drained out through the holes.
What should I do if I spill liquid on the computer?	
Where can I get the latest device drivers and UEFI/BIOS?	<ul style="list-style-type: none">• Lenovo Vantage or Lenovo PC Manager• Lenovo Support Web site at https://support.lenovo.com

Self-help resources

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

Resources	How to access?
Troubleshooting and frequently asked questions	<ul style="list-style-type: none">• https://www.lenovo.com/tips• https://forums.lenovo.com
Accessibility information	https://www.lenovo.com/accessibility
Reset or restore Windows	<ul style="list-style-type: none">• Use Lenovo recovery options.<ol style="list-style-type: none">1. Go to https://support.lenovo.com/HowToCreateLenovoRecovery.2. Follow the on-screen instructions.• Use Windows recovery options.<ol style="list-style-type: none">1. Go to https://pcsupport.lenovo.com.2. Detect your computer or manually select your computer model.3. Click Diagnostics → Operating System Diagnostics and then follow the on-screen instructions.

Resources	How to access?
<p>Use Lenovo Vantage to:</p> <ul style="list-style-type: none"> • Configure device settings. • Download and install UEFI BIOS, drivers and firmware updates. • Secure your computer from outside threats. • Diagnose hardware problems. • Check the computer warranty status. • Access <i>User Guide</i> and helpful articles. 	<p>Type Lenovo Vantage in the search box and then press Enter.</p>
<p>Product documentation:</p> <ul style="list-style-type: none"> • Generic Safety and Compliance Notices • <i>Safety and Warranty Guide</i> • <i>Setup Guide</i> • This <i>User Guide</i> • <i>Regulatory Notice</i> 	<p>Go to https://pcsupport.lenovo.com. Then, follow the on-screen instructions to filter out the documentation you want.</p>
<p>Lenovo Support Web site with the latest support information of the following:</p> <ul style="list-style-type: none"> • Drivers and software • Diagnostic solutions • Product and service warranty • Product and parts details • Knowledge base and frequently asked questions 	<p>Go to https://support.lenovo.com.</p>
<p>Windows help information</p>	<ul style="list-style-type: none"> • Use Get Help or Tips. • Use Windows Search or the Cortana® personal assistant. • Go to Microsoft support Web site: https://support.microsoft.com.

Call Lenovo

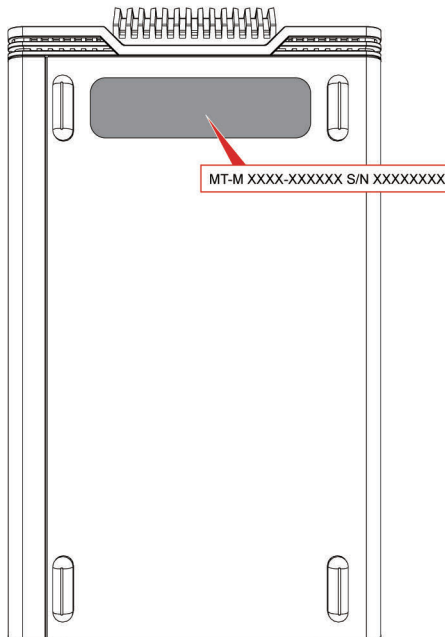
If you have tried to correct the problem yourself and still need help, you can call Lenovo Customer Support Center.

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/supportphonenumberlist>.

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

Services available during the warranty period

- Problem determination - Trained personnel are available to assist you with determining if you have a hardware problem and deciding what action is necessary to fix the problem.
- Lenovo hardware repair - If the problem is determined to be caused by Lenovo hardware under warranty, trained service personnel are available to provide the applicable level of service.
- Engineering change management - Occasionally, there might be changes that are required after a product has been sold. Lenovo or your reseller, if authorized by Lenovo, will make selected Engineering Changes (ECs) that apply to your hardware available.

Services not covered

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

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

Purchase additional services

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

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

Appendix A. Notices and trademarks

Notices

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