

User Guide

Lenovo
ThinkStation



Lenovo

ThinkStation PGX

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About this documentation

This documentation applies to the ThinkStation® product models listed below.

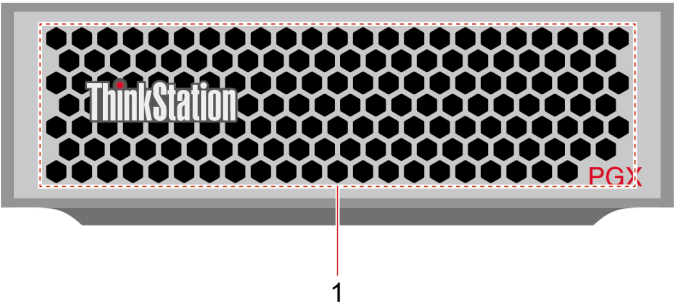
Model name	Machine types (MT)
ThinkStation PGX	30KL, 30KM

Before using this documentation, please read the following information:

- *Setup Guide*
- *Safety and Warranty Guide*
- Compliance information available at the following links:
 - *Generic Safety and Compliance Notices:* https://pcsupport.lenovo.com/docs/generic_notices
 - *Regulatory Notice:* https://support.lenovo.com/docs/common_commercial_rn
 - Additional compliance information: <https://www.lenovo.com/compliance>
- 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.
- Depending on the version of operating systems and programs, some 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://support.lenovo.com/documentation>.

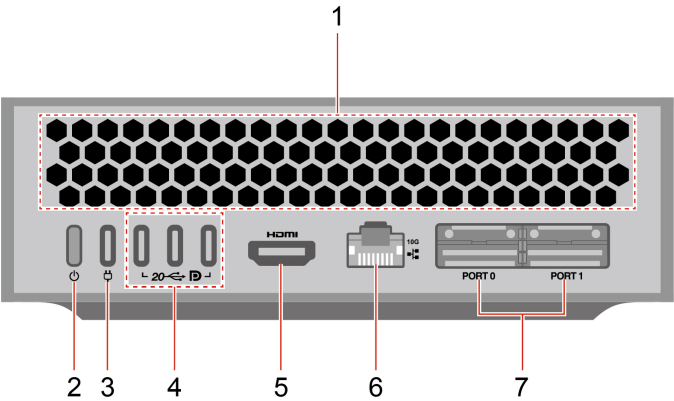
Chapter 1. Overview

Front



Item	Description
1	Air vents (intake)

Rear



Item	Description	Item	Description
1	Air vents (outlet)	2	Power button
3	Power connector / USB-C® connector (USB 20Gbps)	4	USB-C connectors (USB 20Gbps)
5	HDMI™ connector	6	Ethernet (RJ-45) connector (10G)
7	Quad Small Form-factor Pluggable (QSFP) connectors		

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.

QSFP connector

The QSFP connector is a compact, hot-swappable interface designed for high-speed data transmission in networking and storage applications. It supports data rates of up to 200 Gbps. Using a QSFP-to-QSFP cable, you can establish connections between:

- Two PGX devices, or
- A PGX device and a network switch.

Note: Compatible QSFP-to-QSFP cables are available from Lenovo.

Related topics

- “USB specifications” on page 3.
- “Change display settings” on page 6.
- Appendix A “Notice for USB connector name update” on page 23.

Specifications

Specification	Description
Dimensions	• Width: 150 mm (5.91 inches) • Height: 51 mm (2.01 inches, with foot) • Depth: 150 mm (5.91 inches)
Weight (without packaging)	Maximum configuration as shipped: 1.2 kg (2.65 lb)
Hardware configuration	1. Open the system menu from the top-right corner and click . 2. Click System → About.
Power supply	240 W (48 V dc, 5 A)
Electrical input	• Input voltage: From 100 V ac to 240 V ac • Input frequency: 50/60 Hz
Processor	1. Open the system menu from the top-right corner and click . 2. Click System → About.
Memory	• Type: Low Power Double Data Rate 5X (LPDDR5X), unified system memory • Maximum capacity: 128 GB • Maximum bandwidth: 273 GB/s @ 8533 MT/s
Storage device	M.2 solid-state drive Type Disks in the search box and use the Disks application to view the storage drive capacity of your computer. Note: The storage drive capacity indicated by the system is less than the nominal capacity.

Specification	Description
Video features	Maximum output resolution: • USB-C connectors (USB 20Gbps): 7860 × 4320 pixels, 60 Hz (excluding the power connector) • HDMI connector: 7860 × 4320 pixels, 60 Hz Note: The actual resolution of external displays may vary by the connected display device and the cable being used.
Network features	• Bluetooth 5.4 • Wi-Fi 7 • Ethernet via RJ-45 (up to 10G) • Ethernet via QSFP (ConnectX-7) (up to 200G)

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

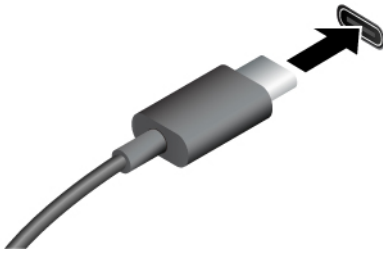
- Operating: From 10°C (50°F) to 35°C (95°F), and optimal performance at 25°C (77°F).
- Storage: From -40°C (-40°F) to 60°C (140°F)

Relative humidity

- Operating: 20% to 80% (non-condensing)
- Storage: 10% to 90% (non-condensing)

USB specifications

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

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

Chapter 2. Get started

Initial setup

This product is pre-installed with the DGX™ operating system (OS), a customized Ubuntu Linux® distribution optimized for AI development and deployment. This section guides you to set up your system for the first time.

Set up with a display

1. Connect a display, mouse, and keyboard to the system.
2. Power on the system.
3. Follow the on-screen instructions to complete the setup process.

Set up over the network

1. Power on the system.
2. Locate the label with the following information on the system's right side and record the information.
 - Hotspot SSID: spark-XXXX
 - Hotspot password: XXXXXXXX
 - System setup page: <http://spark-XXXX.local>
3. On a separate laptop or desktop with wireless capability, connect to the wireless network using the SSID and password recorded above.
4. Use the browser on your laptop or desktop to open the system setup page and follow the instructions to complete the system setup.

After the initial setup is completed, the system will reboot automatically. You can then use it either locally as a standard desktop with a display, or remotely from another computer on the same network using SSH, NVIDIA Sync, or remote desktop tools.

Note: For more system details, refer to <https://docs.nvidia.com/dgx/dgx-spark/>.

Set up a two-system PGX cluster

Enable two PGX systems to work together as a unified compute cluster for accelerated AI workloads.

Before you start, ensure internet access and sudo/root access on both systems.

1. Physically connect the two systems using a QSFP-to-QSFP cable.
2. Configure networking so both systems can communicate over the direct link (either by assigning IP addresses or using the recommended netplan file).
3. Run the provided discovery script to detect the peer system, automate SSH authentication, and verify connectivity.
4. Validate GPU communication and performance using the NCCL tool provided.

Note: Steps 2 to 4 require commands available at: <https://docs.nvidia.com/dgx/dgx-spark/spark-clustering.html>.

Get started with Ubuntu Desktop

Learn the basics of Ubuntu and start working with it right away.

Launch an app

- Press the Super key (with the Windows logo) or open the Activities menu on the top left and type in the name of the application you want to launch.
- Click the **Show Apps** button on the lower left, and select the application you want to launch.

Launch settings

Open the system menu from the top-right corner and click .

Access networks

This section helps you connect to a wireless or wired network.

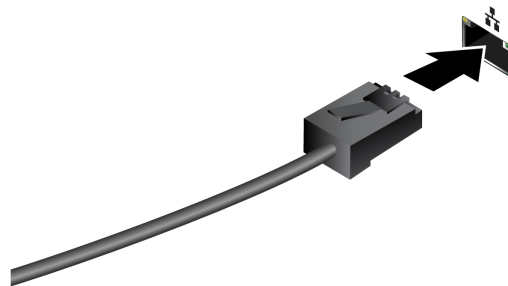
Connect to Wi-Fi networks

1. Open the system menu from the top-right corner and turn on the Wi-Fi by clicking **Wi-Fi** button.
2. Click > to expand the Wi-Fi section of the menu. A list of available wireless networks is displayed. Click **All Networks** to see extra options.
3. Select an available network for connection. Provide required information if needed.

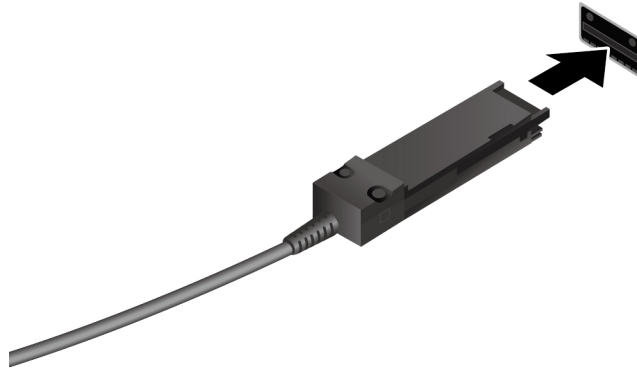
Note: The wireless LAN module on your computer may support different standards. For some countries or regions, the use of 802.11ax and 802.11be may be disabled according to local regulations.

Connect to wired networks

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



- For higher bandwidth, connect your computer to a network switch with a QSFP-to-QSFP cable.



Connect to a Bluetooth-enabled device

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. Open the system menu from the top-right corner and turn on the Bluetooth by clicking **Bluetooth** button.
2. Click > to expand the Bluetooth section of the menu. A list of discoverable devices is displayed.
3. Select a Bluetooth device, and then follow the on-screen instructions.

Set the power plan

The following power plan takes effect when your computers have been idle for a specified duration:

Turn off the display: After 5 minutes

To set the power plan:

1. Go to **Settings → Power**.
2. Choose or customize a power plan of your preference.

Change display settings

Right-click a blank area on the desktop and select **Display settings**. Then, you can change display settings as you prefer.

Unleash AI development power with ThinkStation PGX

The ThinkStation PGX is a compact, out-of-the-box AI desktop designed for advanced AI development and inference.

- **Integrated next-generation superchip:** Delivers 1 PetaFlop AI performance for generative AI models with up to 200 billion parameters.
- **Scalable architecture:** Supports models up to 405 billion parameters by connecting two PGX systems.
- **128 GB unified memory:** Offers ample capacity for developing, testing, fine-tuning, and running inference on the latest AI models.
- **Pre-installed AI software stack:** Includes NVIDIA DGX OS and a comprehensive AI software suite for instant prototyping and deployment without complex setup.

- **Unified AI platform:** Allows seamless model portability from desktop to cloud or data center with minimal code adaptation.

Chapter 3. UEFI BIOS

What is UEFI BIOS

UEFI (Unified Extensible Firmware Interface) BIOS (Basic Input/Output System) is the first program that the computer runs. When the computer turns on, the UEFI BIOS performs a self test to make sure that various devices in the computer are functioning properly.

Enter the UEFI BIOS setup menu

Turn on or restart the computer. When the logo screen is displayed, press the Delete key and select **Setup** to enter the UEFI BIOS setup menu.

Note: If you have set UEFI BIOS passwords, enter the correct passwords when prompted.

Navigate the UEFI BIOS setup menu

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

Note: The UEFI BIOS setup menu might vary depending on system configurations.

Menu	Introduction
Main	This category provides the general product-related and firmware information.
Advanced	This category provides various advanced platform configurations, including after power loss behavior, NVMe configuration, and network configuration.
Security	This category provides passwords, secure boot, and other security functions.
Boot	This category introduces how to set the boot priority order and offers some boot configurations.
Exit	This category introduces how to exit as you prefer.

UEFI BIOS passwords

You can set passwords in UEFI BIOS to strengthen the security of your computer.

Password types

- User password

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

- Administrator password

Setting an administrator 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 an administrator password.

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

If both the user password and administrator password are set, you can enter either password. However, you must use your administrator password to change any configuration settings.

Set, change, and remove a password

1. Restart the computer. When the logo screen is displayed, press the Delete key and select **Setup**.
2. Select **Security**.
3. Depending on the password type, select a password and press Enter.
4. Follow the on-screen instructions to set, change, or remove a password.
5. Press F4 to save the changes and exit.

Note: You should record your passwords and store them in a safe place.

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:

Using the built-in software update service

Ubuntu software update will check the LVFS site for any firmware updates and notify you when updates are available.

From the Lenovo Support Web site

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

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

Lenovo UEFI diagnostic tool

Lenovo UEFI diagnostic tool is available as a bootable package for you to test and diagnose hardware components on your computer.

- Step 1. Prepare a USB flash drive (more than 2 GB) formatted in FAT32.

Note: Back up any important data on the USB drive as it will be erased during the process.

- Step 2. Go to <https://support.lenovo.com/solutions/bootableusb>.
- Step 3. Follow the instructions to download the UEFI (ARM) diagnostic package, create the bootable USB, and run the diagnostic tool from the USB.
- Step 4. When the home screen of the Lenovo UEFI diagnostic tool appears, select a specific hardware module for targeted testing or select **RUN ALL** for a full test.

Note: Some tests may require user interaction. Follow the prompts carefully.

After testing, select **View Log → Export Log** and save the log to your USB drive. You can view the log to find possible solutions or send the log to Lenovo for help.

Chapter 4. CRU replacement

Before CRU replacement

Before replacing the hardware of your computer, read this section first. You will get to know what CRU is, the CRU list, system board connectors, and prerequisites for 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 customers. 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

- ac power adapter
- Power cord
- Rubber foot
- USB-C to USB-A adapters

Optional-service CRUs

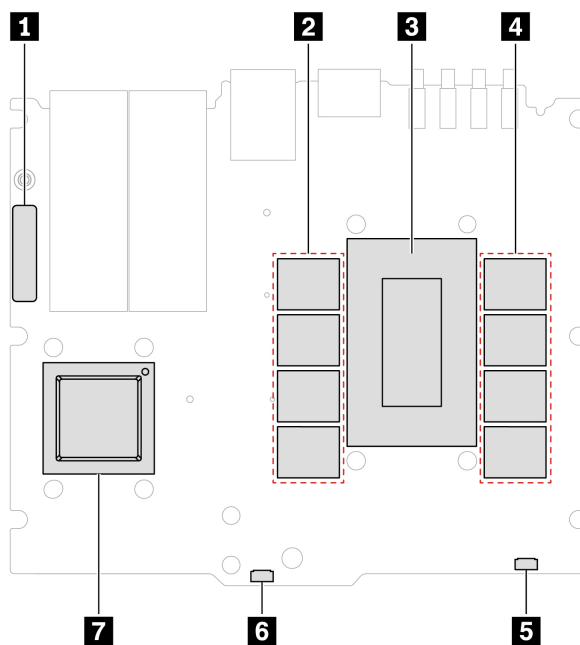
- Bottom cover
- Bottom M.2 SSD thermal pad
- M.2 solid-state drive (SSD)
- Top M.2 SSD thermal pad
- Wi-Fi antennas

- Wi-Fi antenna bracket

System board illustration

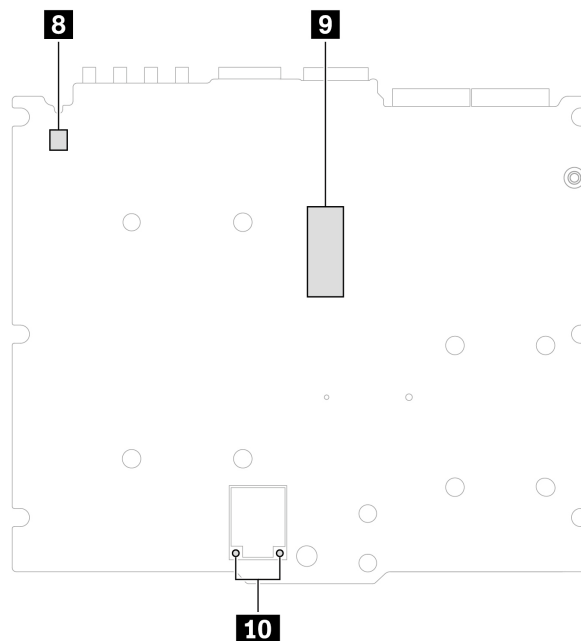
Note: The system board might look slightly different from the illustrations.

Top side



Item	Description	Item	Description
1	Coin-cell battery	2	On-board memory (1-4)
3	SoC (CPU+GPU)	4	On-board memory (5-8)
5	Internal fan connector 2	6	Internal fan connector 1
7	ConnectX-7 Smart Network Interface Card (NIC)		

Bottom side



Item	Description	Item	Description
8	Power button cable connector	9	M.2 Gen 5 SSD slot
10	Wi-Fi antenna connectors		

Prerequisites for hardware replacement

General prerequisites

Before replacing any parts, make sure you have:

- Read *Generic Safety and Compliance Notices* and any safety requirements for hardware maintenance in this manual.
- Installed all software fixes, drivers, and UEFI BIOS downloads (if any).

Prerequisites for opening computer covers



During operation, some components become hot enough to burn the skin. Before you open the computer cover, remove any media from the drives, turn off the computer and connected devices, disconnect power, remove all cables and locking devices, and wait approximately 10 minutes until the computer is cool.

Prerequisites for replacing parts with cables

Before reaching parts with cables, record the cable routing for future reference and then disconnect the cables from the system board.

Prerequisites for replacing internal storage drives

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

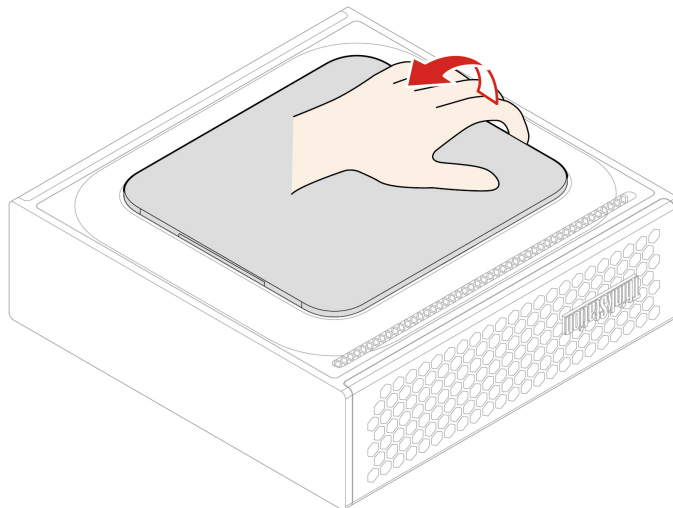
- Replace internal storage drives only for repair. The internal storage drives are not designed for frequent changes or replacement.
- Before replacing an internal storage drive, make a backup copy of all the data that you want to keep, then perform a low-level format to erase all data.
- Be extremely careful during write operations such as copying, saving, or formatting. The drives in the computer you are servicing might have been rearranged or the drive startup sequence changed. If you select an incorrect drive, data or programs might be overwritten.
- Do not touch the contact edge of the internal storage drive. Otherwise, the internal storage drive might get damaged.
- Do not apply pressure or expose the drive to physical shocks or vibration. Place it on a soft surface, such as a cloth, for protection.

Rubber foot

Before you start, read “Prerequisites for hardware replacement” on page 12.

Replacement steps

- Step 1. Turn off the computer and wait several minutes until the computer is cool.
- Step 2. Remove all connected devices and cables.
- Step 3. Gently lay your computer down on a soft, clean towel or cloth on the desk or surface.
- Step 4. Pry open the rubber foot from the middle groove on the left or right side and remove it.



- Step 5. Install the rubber foot in reverse order.

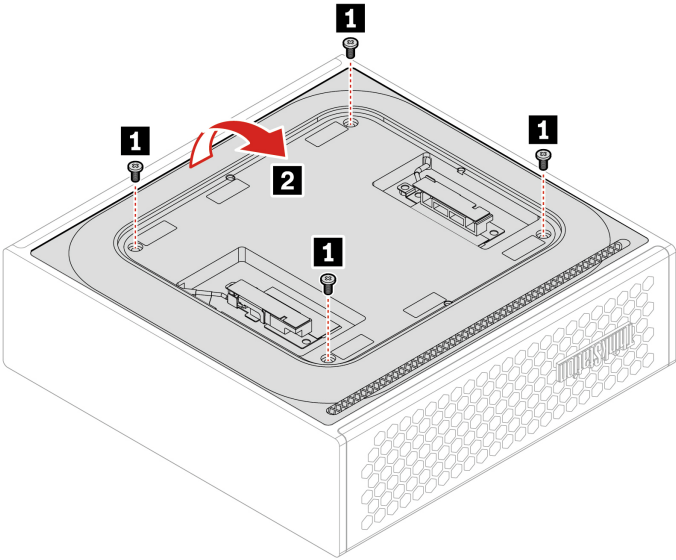
Bottom cover and Wi-Fi antenna bracket

Before you start, read “Prerequisites for hardware replacement” on page 12.

Replacement steps

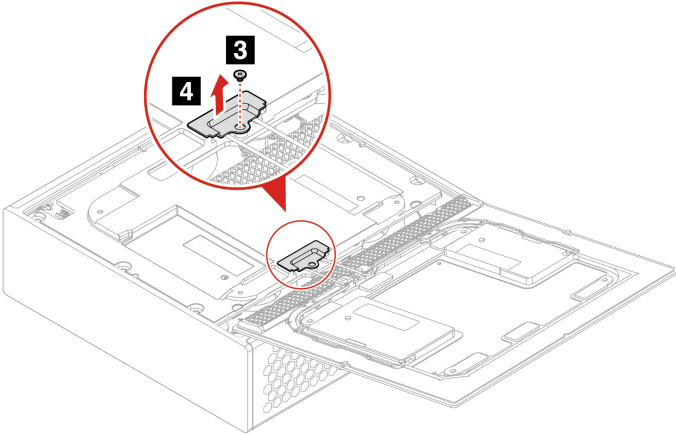
- Step 1. Remove the “Rubber foot” on page 13.

Step 2. Remove four screws from the bottom cover. Use a suction cup (recommended) to open the bottom cover from the rear edge, but do not detach it completely.



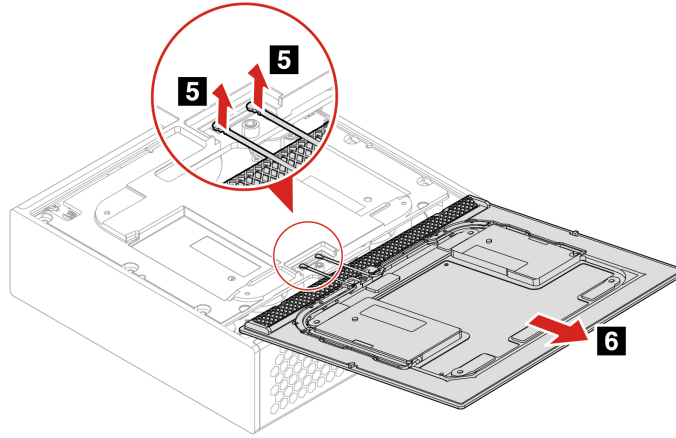
Location	Thread (mm)	Length (mm)	Torque (kgf·cm)	Color	Quantity
1	M2	L4.4	3 ± 0.5	Black	4

Step 3. Remove one screw from the Wi-Fi antenna bracket. Remove the Wi-Fi antenna bracket.



Location	Thread (mm)	Length (mm)	Torque (kgf·cm)	Color	Quantity
3	M2	L2	2 ± 0.2	Black	1

Step 4. Disconnect the Wi-Fi antenna cables. Remove the bottom cover with Wi-Fi antennas.



Step 5. Install the bottom cover and Wi-Fi antenna bracket in reverse order.

Wi-Fi antennas

Before you start, read “Prerequisites for hardware replacement” on page 12.

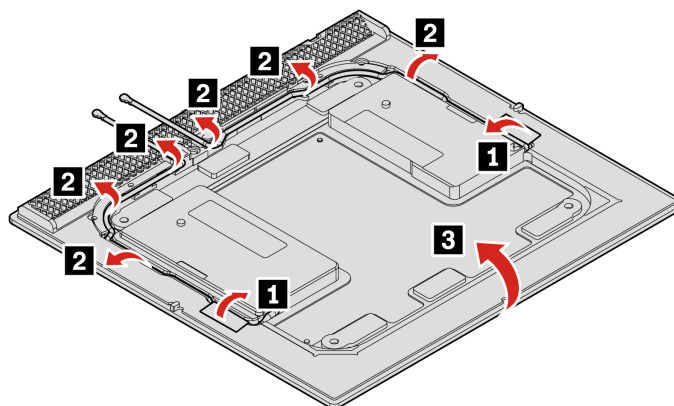
Replacement steps

Step 1. Remove the following parts in order:

- “Rubber foot” on page 13.
- “Bottom cover and Wi-Fi antenna bracket” on page 13.

Step 2. Route the Wi-Fi antenna cables.

1. Peel off the acetate tapes.
2. Remove the Wi-Fi antenna cables from the cable guide.
3. Turn the bottom cover upside down.

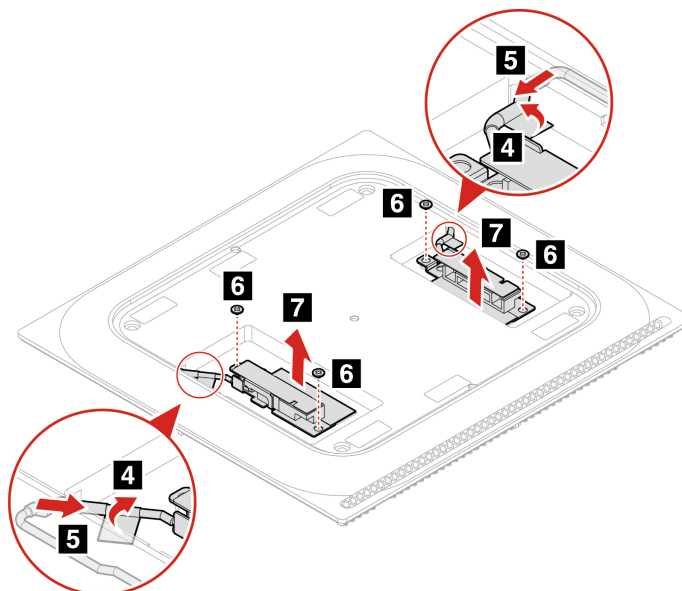


Step 3. Remove the Wi-Fi antennas.

1. Peel off the tapes securing the Wi-Fi antenna cables to the bottom cover.
2. Pull the Wi-Fi antenna cables out from the holes.
3. Remove four screws from the Wi-Fi antennas.

4. Detach the Wi-Fi antennas.

Attention: Carefully detach the Wi-Fi antennas from the bottom to avoid damage, rather than pulling from the top.



Location	Thread (mm)	Length (mm)	Torque (kgf·cm)	Color	Quantity
6	M1.2	L1	0.6 ± 0.15	Black	4

Step 4. Install the Wi-Fi antennas in reverse order.

M.2 SSD and thermal pads

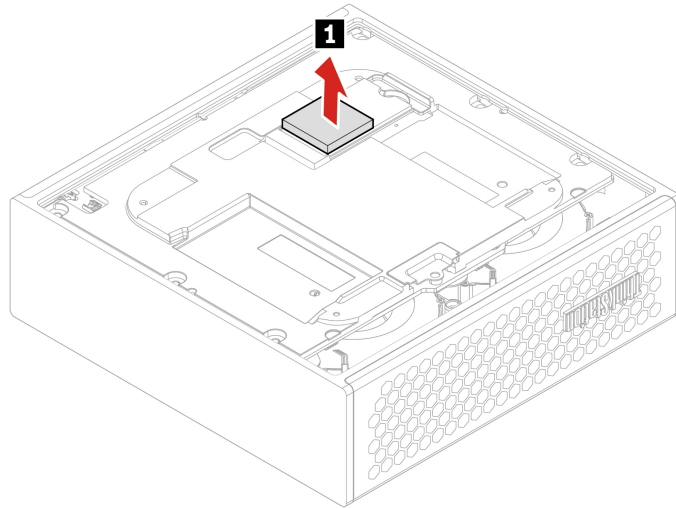
Before you start, read “Prerequisites for hardware replacement” on page 12.

Replacement steps

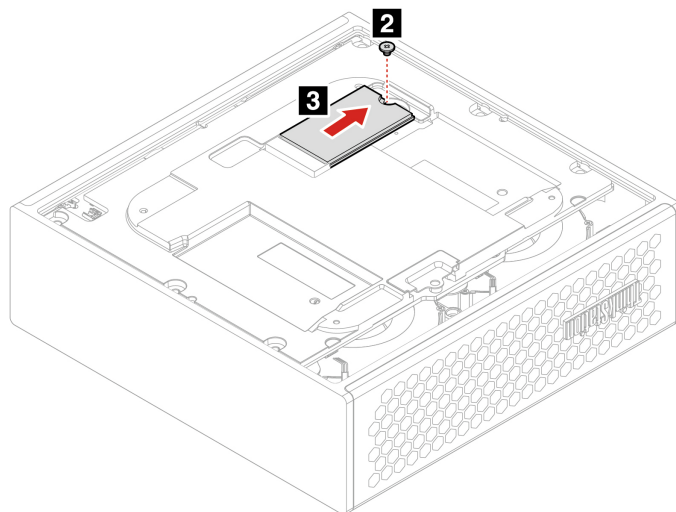
Step 1. Remove the following parts in order:

- “Rubber foot” on page 13.
- “Bottom cover and Wi-Fi antenna bracket” on page 13.

Step 2. Remove the top SSD thermal pad.

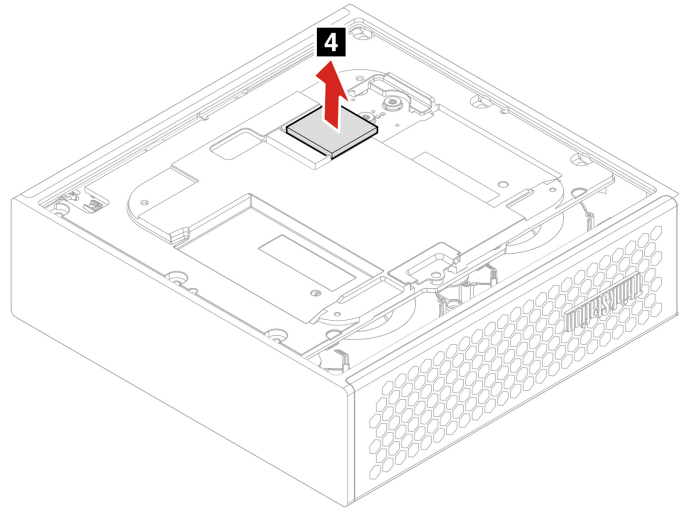


Step 3. Remove one screw securing the SSD. Pull the SSD away from the M.2 slot.



Location	Thread (mm)	Length (mm)	Torque (kgf·cm)	Color	Quantity
2	M2	L2	2 ± 0.2	Black	1

Step 4. Remove the bottom SSD thermal pad.



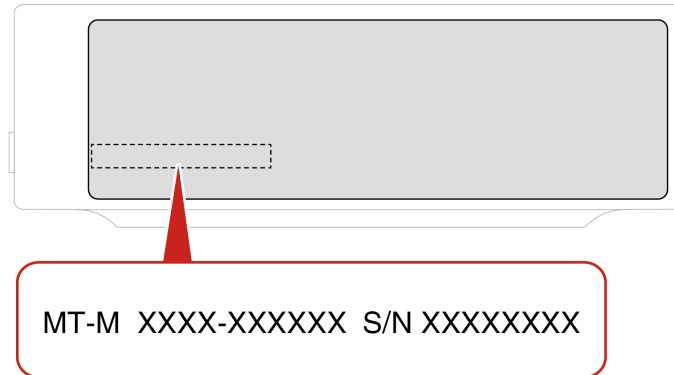
Step 5. Install the M.2 SSD and thermal pad in reverse order.

Chapter 5. Help and support

Find the serial number

You can find the serial number via one of the following.

- Open the Terminal and run `sudo dmidecode -t system | grep Serial`.
- Check the label on the left side of the computer (see illustration below).



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" on page 19.

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 *Safety and Warranty Guide* that comes with your computer.

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
DGX OS information, including system setup, configuration, update, and recovery	https://docs.nvidia.com/dgx/dgx-spark/
General Ubuntu documentation	https://help.ubuntu.com/its/ubuntu-help/index.html
Ubuntu Pro service and support	https://ubuntu.com/pro

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.

Note: The accessibility features described on the provided website offer a general overview for Lenovo computers. Not all features may be available on this model.

Supplemental information about the Ubuntu operating system

In limited countries or regions, Lenovo offers customers an option to order computers with the preinstalled Ubuntu® operating system.

If the Ubuntu operating system is available on your computer, read the following information before you use the computer. Ignore any information related to Windows-based programs, utilities, and Lenovo preinstalled applications in this documentation.

Access the Lenovo Limited Warranty

This product is covered by the terms of the Lenovo Limited Warranty (LLW), version L505-0010-02 08/2011. You can view the LLW in a number of languages from the following Web site. Read the Lenovo Limited Warranty at:
https://www.lenovo.com/warranty/llw_02

The LLW is also preinstalled on the computer. To access the LLW, go to the following directory:

```
/usr/share/doc/Lenovo
```

If you cannot view the LLW either from the Web site or from your computer, contact your local Lenovo office or reseller to obtain a printed version of the LLW.

Access the Ubuntu help system

The Ubuntu help system provides information about how to use the Ubuntu operating system. To access the help system from Home Screen, move your pointer to the Launch bar, and then click the **Help** icon. If you cannot find the **Help** icon from the Launch bar, click the **Search** icon on the bottom left, and type Help to search it.

To learn more about the Ubuntu operating system, go to:
<https://www.ubuntu.com>

Get support information

If you need help, service, technical assistance, or more information about the Ubuntu operating system or other applications, contact the provider of the Ubuntu operating system or the provider of the application. If you need the service and support for hardware components shipped with your computer, contact Lenovo. For more information about how to contact Lenovo, refer to the *User Guide* and *Safety and Warranty Guide*.

To access the latest *User Guide* and *Safety and Warranty Guide*, go to:
<https://pcsupport.lenovo.com>

Access open-source information

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You may send your request in writing to the address below accompanied by a check or money order for \$15 to:

Lenovo Legal Department
Attn: Open Source Team / Source Code Requests
8001 Development Dr.
Morrisville, NC 27560

Please include the version of the OS and the version of the Linux Kernel pre-shipped on this Device as part of your request. Be sure to provide a return address.

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To view additional information regarding licenses, acknowledgments and required copyright notices for the open source software shipped on your Device, go to `/usr/share/doc/*/copyright`.

Appendix A. 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.

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. Notices and trademarks

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