ThinkCentre®
M910q

User Guide and Hardware Maintenance Manual

Machine Type (MT):
10MU, 10MV, 10MW, 10MX, 10QN

Energy Star MT:
10MU, 10MV, 10MW, 10MX, 10QN

Lenovo™

Overview ❯

Locations of indicators, connectors, and controls provided on your computer

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Specifications ❯

Specifications of your computer

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Locations of the replaceable parts on your computer

Replacing CRUs ❯

Replacing instructions for customer-replaceable units (CRUs)

Replacing FRUs ❯

Replacing instructions for field-replaceable units (FRUs) (for technicians only)

Contents

Overview

Front view

1 **Power indicator**

This indicator is on when the computer is on.

2 **Power button**

Used to turn on your computer. When you cannot shut down the computer from the operating system, press and hold the power button for four or more seconds to turn off the computer.

3 **Storage drive status indicator**

This indicator is on when the storage drive is in use.

4 **Microphone connector**

Used to connect a microphone to your computer. You can use the microphone to record sounds or interact with the computer using speech-recognition software.

5 **Headset connector**

Used to connect a headset or headphones to your computer.

6 **USB 3.0 connector**

Used to connect a USB-compatible device, such as a USB keyboard, mouse, scanner, printer, or personal digital assistant (PDA). For optimal data transfer, connect a USB 3.0 device to a USB 3.0 connector instead of a USB 2.0 connector.

7 **Always On USB 3.0 connector**

Used to connect a device that requires a USB 2.0 or USB 3.0 connection, such as a keyboard, a mouse, a scanner, a printer, or a personal digital assistant (PDA). With the power adapter connected, you can charge the automatically detected device even when the computer is in hibernation mode or turned off.
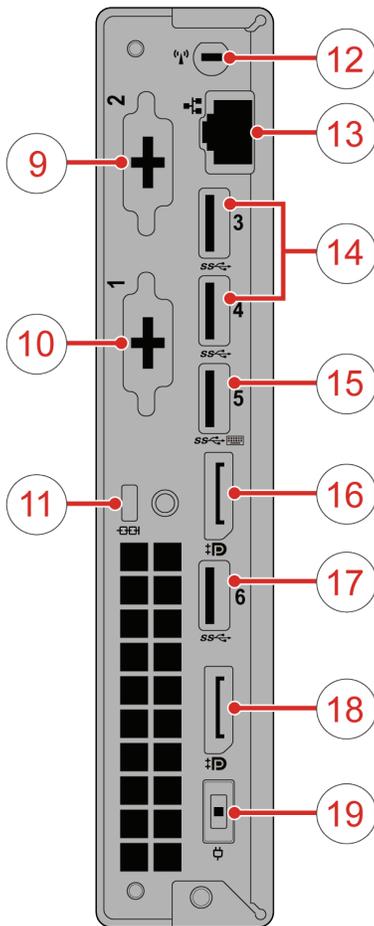
8 **Illuminated red dot**

This indicator is on when the computer is powered on.

Rear view

**9** Optional connector 1

Depending on the computer model, the connector might vary.

10 Optional connector 2

Depending on the computer model, the connector might vary.

11 Security-lock slot

Used to secure a Kensington-style cable lock.

12 Wi-Fi antenna slot

Used to install the rear Wi-Fi antenna cable connector that is available only on some models. The rear Wi-Fi antenna is installed on the rear Wi-Fi antenna cable connector.

13 Ethernet connector

Used to connect an Ethernet cable for network access.

14 USB 3.0 connectors (2)

Used to connect a device that requires a USB 2.0 or USB 3.0 connection.

15 USB 3.0 connector

Used to connect a device that requires a USB 2.0 or USB 3.0 connection.

📝 **Note**   The USB 3.0 connector supports the smart power on feature that enables you to turn on the computer or wake it up from S4 hibernation mode by pressing Alt+P on the keyboard. You can enable or disable the smart power on feature from the Setup Utility program. For detailed information, see *Important Product Information Guide*.
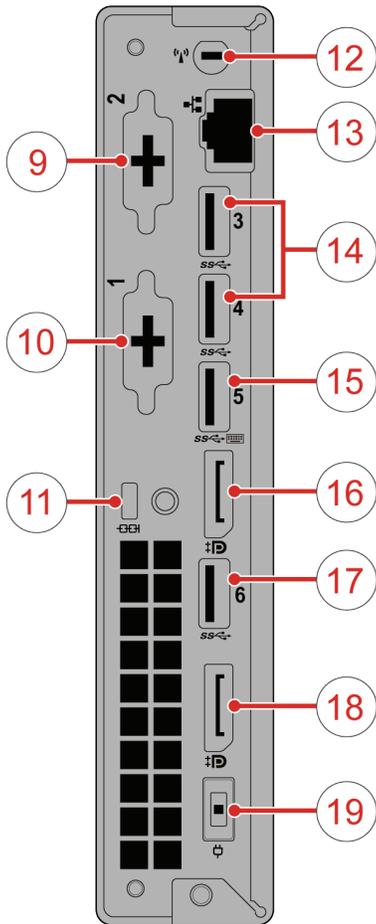
16   DisplayPort® connector

Used to send or receive audio and video signals. You can attach a compatible audio or video device to this connector, such as a high-performance monitor.

17   USB 3.0 connector

Used to connect a device that requires a USB 2.0 or USB 3.0 connection.

18   DisplayPort connector

Used to send or receive audio and video signals. You can attach a compatible audio or video device to this connector, such as a high-performance monitor.
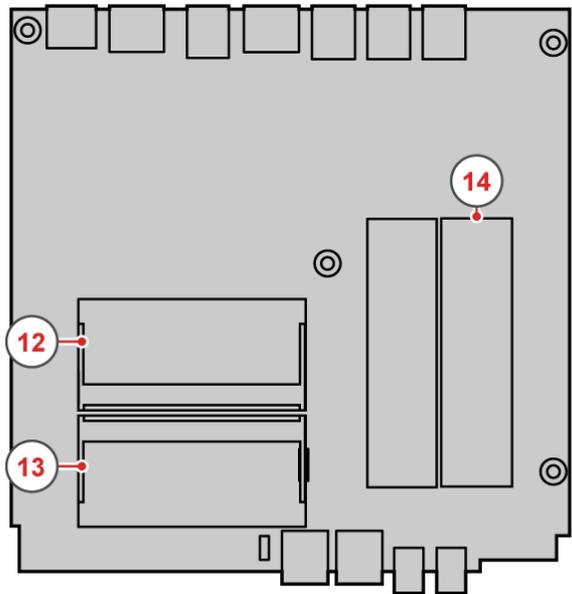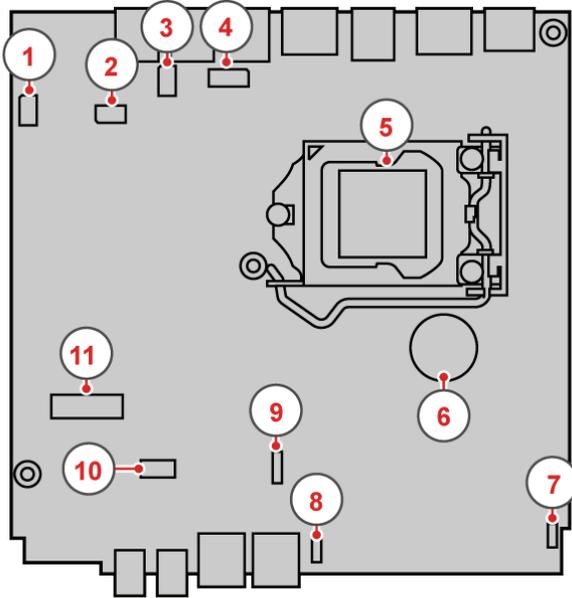
19   Power adapter connector

Used to connect the power adapter to your computer for power supply.

System board

1	Serial connector 1
2	Serial connector 2
3	USB 3.0 connector
4	Storage drive fan connector
5	Microprocessor socket
6	Coin-cell battery
7	Illuminated red dot connector
8	Internal speaker or advanced speaker connector
9	System fan connector
10	SATA storage drive connector
11	M.2 Wi-Fi card slot
12	Memory slot (DIMM1)
13	Memory slot (DIMM2)
14	M.2 storage drive slot

Machine type and model label

The machine type and model label identifies your computer. When you contact Lenovo for help, the machine type and model information helps support technicians to identify your computer and provide faster service.

The machine type and model label is attached on the side of your computer as shown.
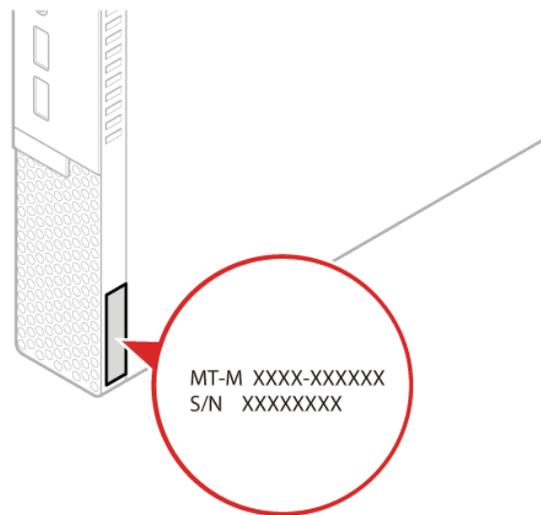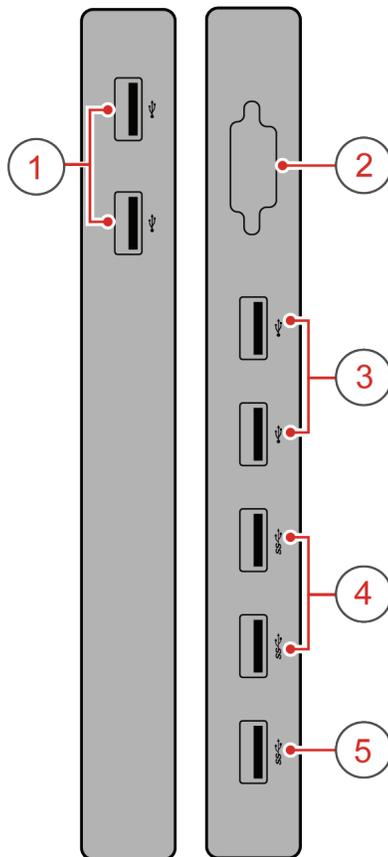
I/O box

Overview

> 📝 **Note**   Depending on your computer model, the I/O box might be optional.

|	
①	**USB 2.0 connectors (2)**
②	**Serial connector (optional)**
③	**USB 2.0 connectors (2)**
④	**USB 3.0 connectors (2)**
⑤	**USB 3.0 connector (for connecting to the computer)**

Using the I/O box

When you use the I/O box with the ThinkCentre tiny computer, note the following:

- The I/O box supports a maximum current rating of 5 A. It is recommended that you connect low-current devices to the I/O box and connect high-current devices directly to the ThinkCentre tiny computer to ensure the best performance of the devices.

- The USB 2.0 connectors and USB 3.0 connectors on the I/O box provide a current of 500 mA and 900 mA current, respectively. When you connect a high-current storage drive to only one USB connector, the system might not recognize the device. You can connect the storage drive to two USB connectors on the I/O box.

- The serial connector does not support hot swapping. Do not connect a device to the connector or remove a device from the connector while the system is running.

- The connectors on the I/O box cannot be enabled or disabled individually. To enable or disable any of the connectors on the I/O box, enable or disable the USB connectors on the rear of the computer.

- The I/O box enables you to wake up the computer from standby mode through operations on devices connected to the I/O box connectors.

Computer locks

Attaching a Kensington-style cable lock

You can use a Kensington-style cable lock to secure your computer to a desk, table, or other nonpermanent fixture. The cable lock connects to the security-lock slot at the rear of your computer. Depending on the type selected, the cable lock can be operated with a key or combination. The cable lock also locks the buttons used to open the computer cover. This is the same type of lock used with many notebook computers. You can order such a cable lock directly from Lenovo by searching for Kensington at: http://www.lenovo.com/support.
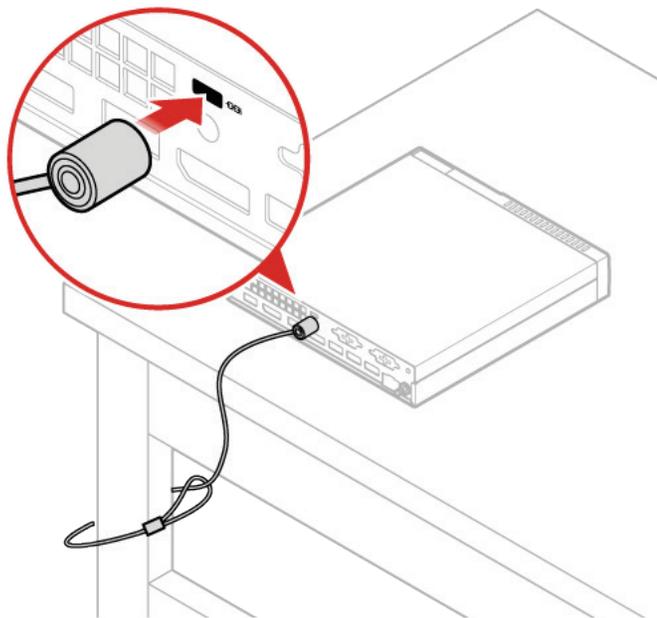
Specifications

Power supply	• 65 watt automatic voltage-sensing power supply • 90 watt automatic voltage-sensing power supply (optional)
Storage drives	Up to two storage drives
Video features	The integrated graphics card supports the following: • DisplayPort connectors
Audio features	The integrated audio card supports the following: • Advanced speaker (optional) • Headset connector • Internal speaker • Microphone connector
Input/Output (I/O) features	• Audio connectors (headset and microphone) • DisplayPort connectors • Ethernet connector • Serial connectors (optional) • USB connectors
Expansion	• External I/O box (optional) • External optical drive box (optional) • Memory slots
Network features	• Ethernet LAN • Wireless LAN (optional) • Bluetooth (optional)
Physical dimensions	• Width: 35 mm (1.4 inches) • Height: 183 mm (7.2 inches) • Depth: 179 mm (7.1 inches)
Weight (without the package)	• Maximum configuration as shipped: 1.3 kg (2.9 lb)

Replacing hardware

Before replacing hardware

> ⚠ **Attention** Do not open your computer or attempt any repairs before reading the *Important Product Information Guide*.

Read these notes before replacing hardware:

- Some of the hardware components explained in this manual are optional.

- Use computer components provided only by Lenovo.

- When installing or replacing an option, use the appropriate instructions explained in this manual along with the instructions that come with the option.

- In most areas of the world, Lenovo requires the return of defective CRUs (Customer Replaceable Units). Information about this will come with the CRU or will come a few days after the CRU arrives.

Handling static-sensitive devices

Do not open the static-protective package containing the new component until the defective component has been removed and you are ready to install the new component. Static electricity, although harmless to you, can seriously damage computer components.

When you handle parts and other computer components, take these precautions to avoid static damage:

- Limit your movement. Movement can cause static electricity to build up around you.

- Always handle parts and other computer components carefully. Handle PCI/PCI-Express cards, memory modules, system boards, and microprocessors by the edges. Never touch any exposed circuitry.

- Prevent others from touching the parts and other computer components.

- Touch the static-protective package containing the part to a metal expansion-slot cover or other unpainted metal surface on the computer for at least two seconds. This reduces static electricity from the package and your body before you install or replace a new part.

- When possible, remove the new part from the static-protective package, and install it directly in the computer without setting the part down. When this is not possible, place the static-protective package that the part came in on a smooth, level surface and place the part on the package.

- Do not place the part on the computer cover or other metal surface.

Knowing replaceable parts

Customer-Replaceable Units (CRUs)

CRUs are computer parts that a user can upgrade or replace. There are two types of CRUs: self-service and optional-service.

Self-service CRUs

You can install self-service CRUs easily. These CRUs might be standalone, latched, or secured by up to two screws.

Examples of self-service CRUs include the keyboard, mouse, any USB device, and the power cord. Other self-service CRUs might include memory modules, adapter cards, hard disk drives, and optical drives.

> **Note** Users are responsible for replacing all self-service CRUs.

Optional-service CRUs

Handling optional-service CRUs requires some technical skills and simple tools (such as a screwdriver).

These CRUs are isolated parts within the computer. They are usually concealed by an access panel that is secured by more than two screws. You must remove the screws and panel to access the specific CRU.

Optional-service CRUs can be removed and installed by users or, during the warranty period, by a Lenovo service technician.

Field-Replaceable Units (FRUs)

FRUs are computer parts that a trained technician can upgrade or replace.
For detailed FRU information, such as the FRU part numbers and supported computer models, go to:
http://www.lenovo.com/serviceparts-lookup

CRUs and FRUs locations

Refer to the following illustrations to check the locations of CRUs and FRUs within the computer.

> 📝 **Note**   Some of the following parts are optional on some models.

Self-service CRU
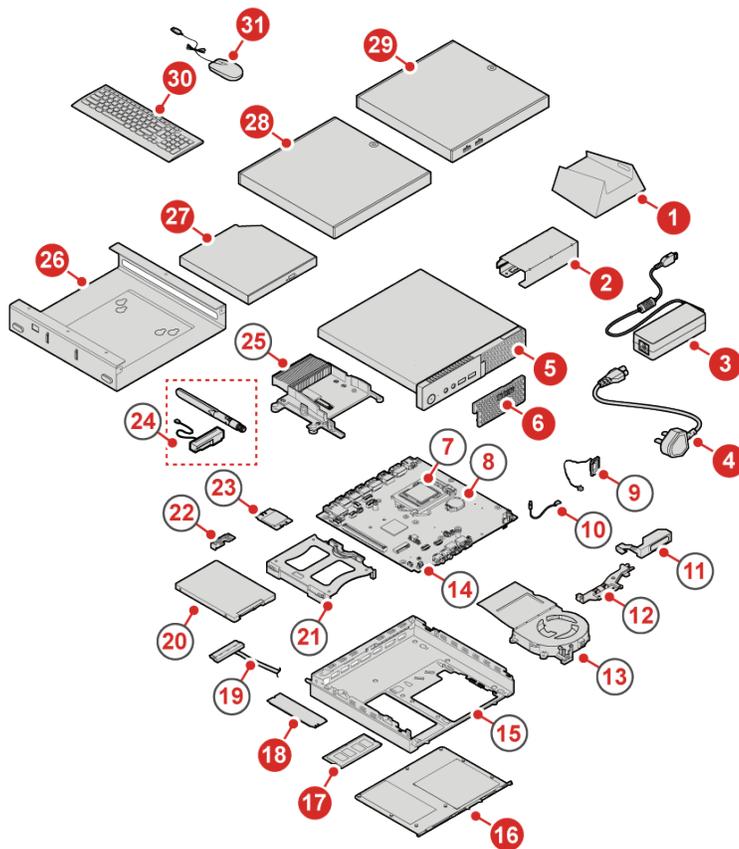
1	Vertical stand `p. 23`
2	Power adapter bracket `p. 27`
3	Power adapter `p. 22`
4	Power cord `p. 22`
5	Computer cover `p. 28`
6	Dust shield `p. 28`
16	Bottom cover `p. 35`
17	Memory module `p. 36`
18	M.2 storage drive `p. 37`
26	VESA® mount bracket `p. 24`
27	External optical drive `p. 25`
28	External optical drive box `p. 25`
29	External I/O box `p. 26`
30	Keyboard or wireless keyboard `p. 19`
31	Mouse or wireless mouse `p. 20`

Optional-service CRU
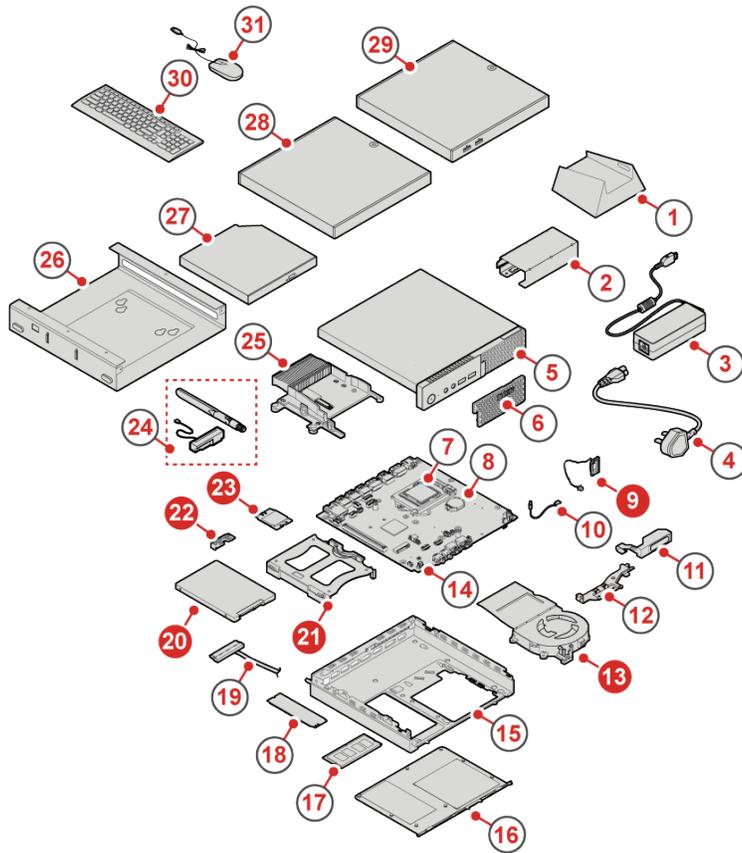
9	Internal speaker	*p. 30*
13	System fan	*p. 31*
20	Storage drive	*p. 29*
21	Storage drive bracket	*p. 29*
22	Wi-Fi card shield	*p. 32*
23	Wi-Fi card	*p. 32*
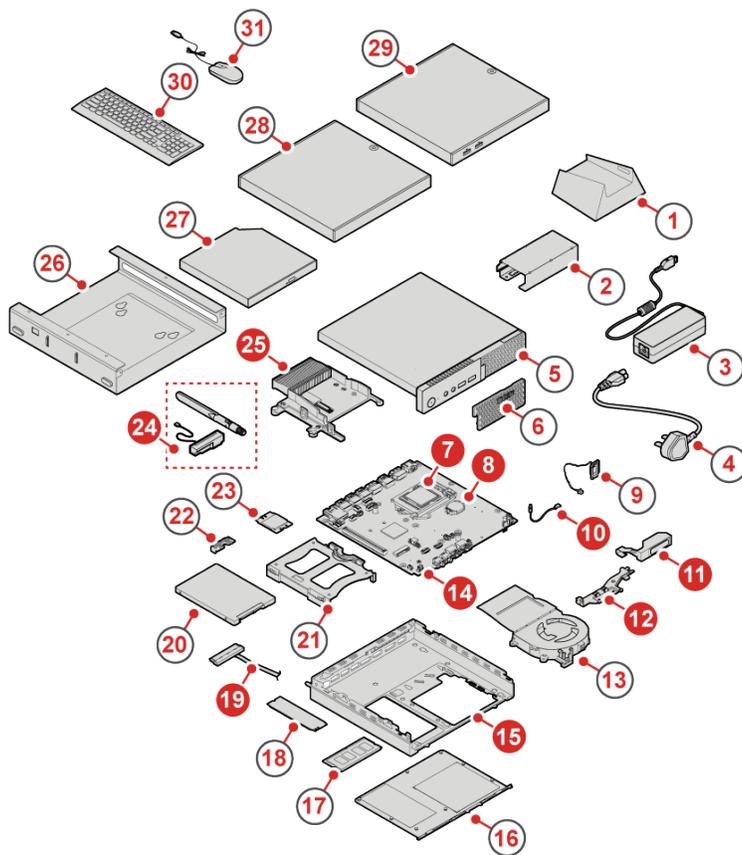
7	Microprocessor *p. 48*
8	Coin-cell battery *p. 50*
10	Illuminated red dot cable *p. 41*
11	Advanced speaker *p. 42*
12	Antenna bracket *p. 52*
14	System board *p. 52*
15	Chassis *p. 52*
19	Storage drive cable *p. 46*
24	Wi-Fi antennas *p. 43*
25	Heat sink *p. 47*

Replacing CRUs

Before replacing CRUs

Customer Replaceable Units (CRUs) are computer parts that a user can upgrade or replace. There are two types of CRUs: self-service and optional-service.

To check the locations of CRUs, see CRUs and FRUs locations.

> ⚠ **Attention**   Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*

Before replacing a CRU, click the illustration of the part to check the brief procedures.

Keyboard or wireless keyboard ⟩	Mouse or wireless mouse ⟩	Power adapter ⟩
Vertical stand ⟩	VESA mount bracket ⟩	External optical drive ⟩
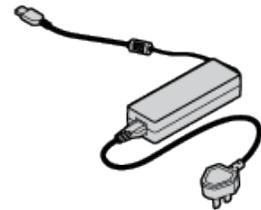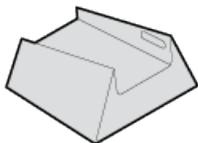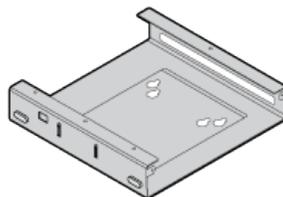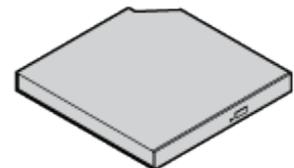
External I/O box ❯
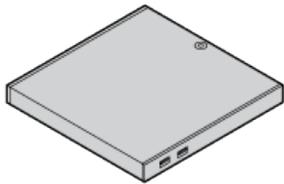
Power adapter bracket ❯
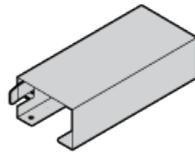
Dust shield ❯

Computer cover ❯
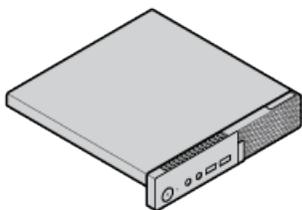
Storage drive ❯
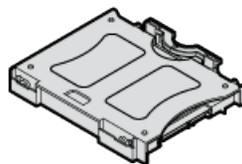
Internal speaker ❯

System fan ❯
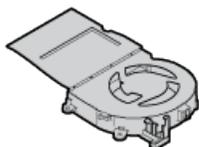
Wi-Fi card ❯
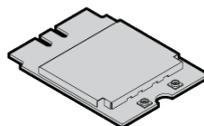
Bottom cover ❯
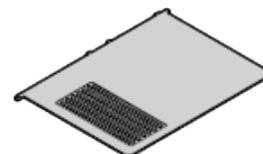
Memory module ❯
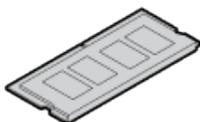
M.2 storage drive ❯
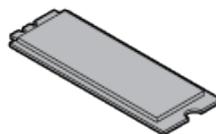
Note To replace a component that is not in the list above, contact a Lenovo service technician. The support phone numbers are available at http://www.lenovo.com/support/phone.

Replacing the keyboard or wireless keyboard

> **Note**   The wireless keyboard is available only on some models.

Replacing the keyboard

1   Disconnect the old keyboard cable from the computer.

2   Connect a new keyboard to the appropriate connector on the computer.
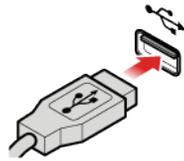
Replacing the wireless keyboard

1   Remove your old wireless keyboard.

2   Take out the new wireless keyboard from the package.

3   Open the battery compartment cover, and install two AAA batteries according to the polarity indicators.
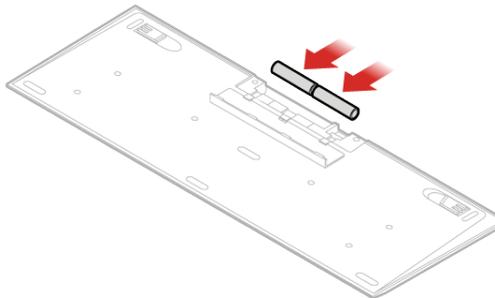
4   Remove the USB dongle from the keyboard compartment or from the wireless mouse compartment and connect it to an available USB connector on the computer.

5   Close the compartment cover. The keyboard is ready for use.

Replacing the mouse or wireless mouse

> **Note**   The wireless mouse is available only on some models.

Replacing the mouse

1 Turn off the computer and disconnect all power cords from electrical outlets.

2 Disconnect the old mouse cable from the computer.

3 Connect a new mouse to the appropriate connector on the computer.
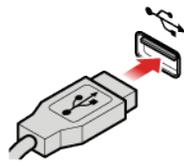
Replacing the wireless mouse

1 Disconnect the USB dongle from your computer. Then, remove your old wireless mouse.

2 Remove the new wireless mouse from the package.

3   Replace the wireless mouse.
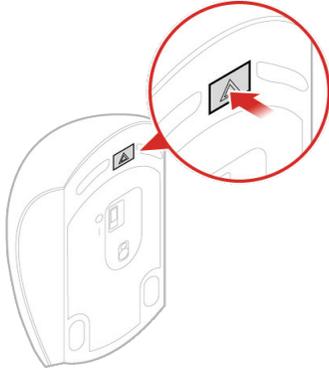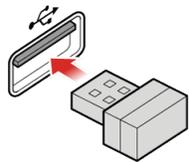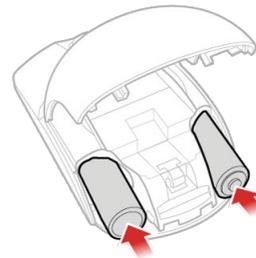
Note
- The green LED indicates that the mouse is ready for use.
- The flashing amber LED indicates a low battery level.
- Push the power switch to the off position when you are not using the mouse to extend the battery life.
- After disconnecting the USB dongle from your computer, store it in the wireless mouse compartment or in the wireless keyboard compartment.

Replacing the power adapter

⚠ **Attention** Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*

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

2 Disconnect all power cords from electrical outlets and disconnect all cables that are connected to the computer.

3 Replace the power adapter.

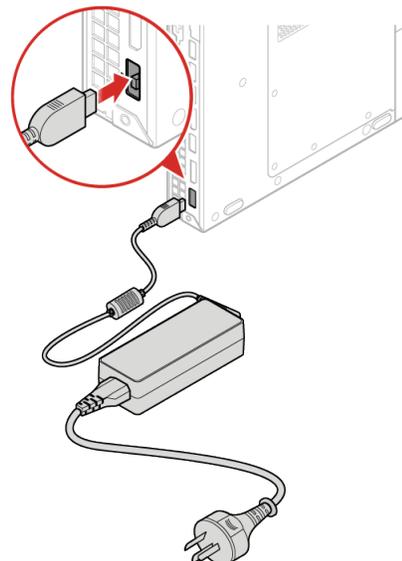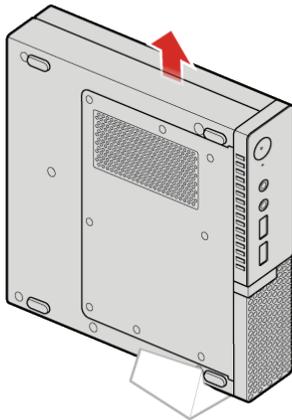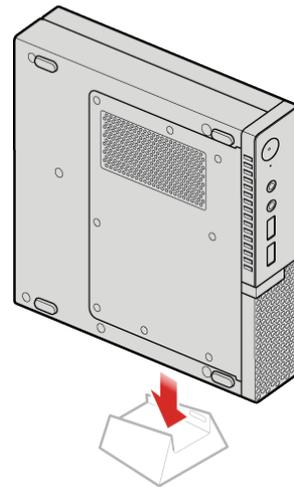📝 **Note** Your power cord might look different from the one illustrated.
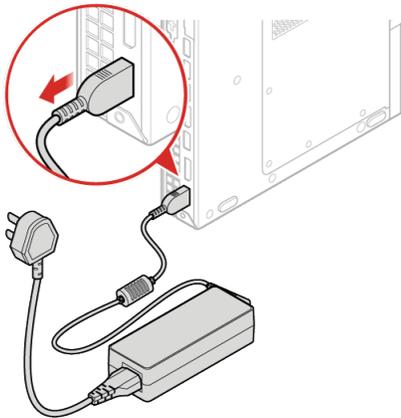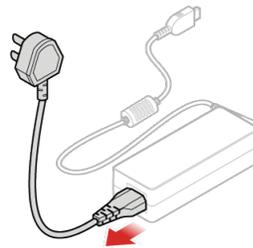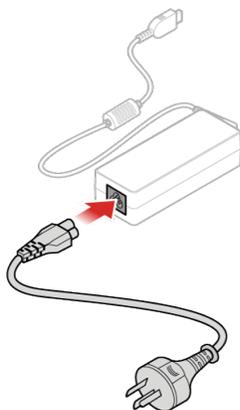
Replacing the vertical stand

> ⚠️ **Attention**   Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*

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

2 Disconnect all power cords from electrical outlets and disconnect all cables that are connected to the computer.

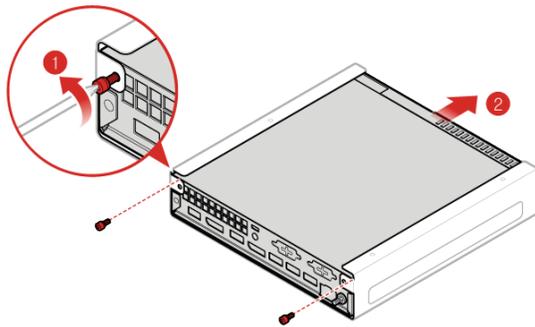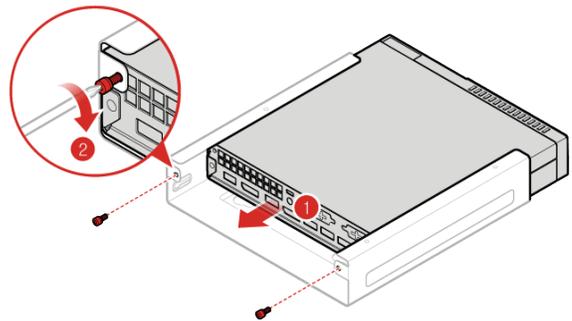*3* Replace the vertical stand.

Replacing the VESA mount bracket

> ⚠️ **Attention**   Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*

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

2   Disconnect all power cords from electrical outlets and disconnect all cables that are connected to the computer.

3   Replace the VESA mount bracket.
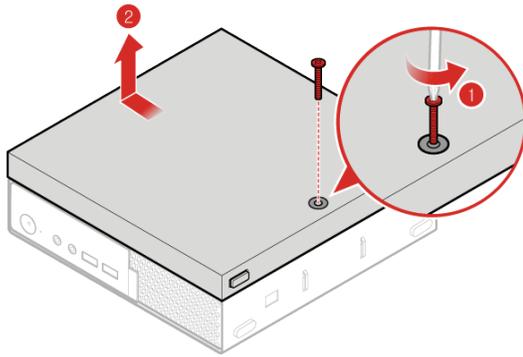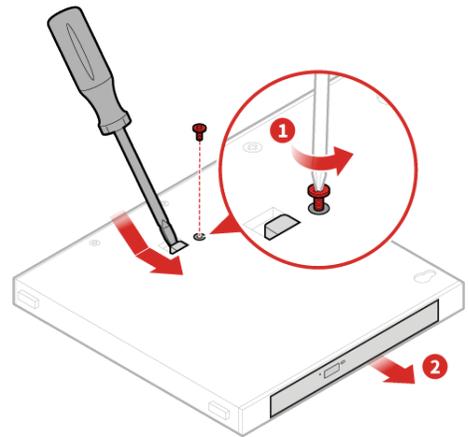
① ②

Replacing the external optical drive box

> ⚠️ **Attention**   Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*

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

2   Disconnect all power cords from electrical outlets and disconnect all cables that are connected to the computer.
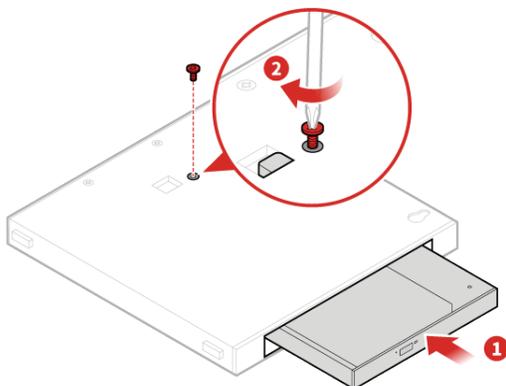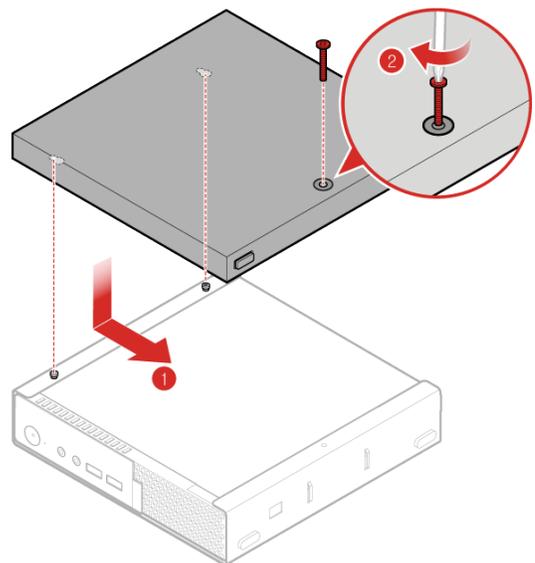
3   Replace the external optical drive box.

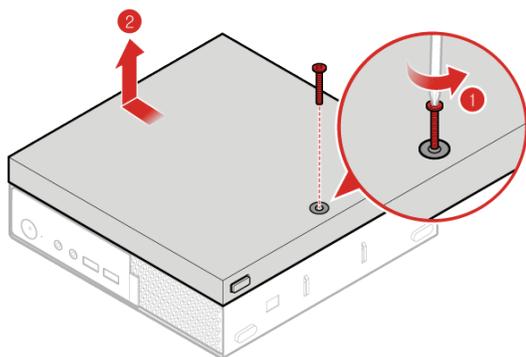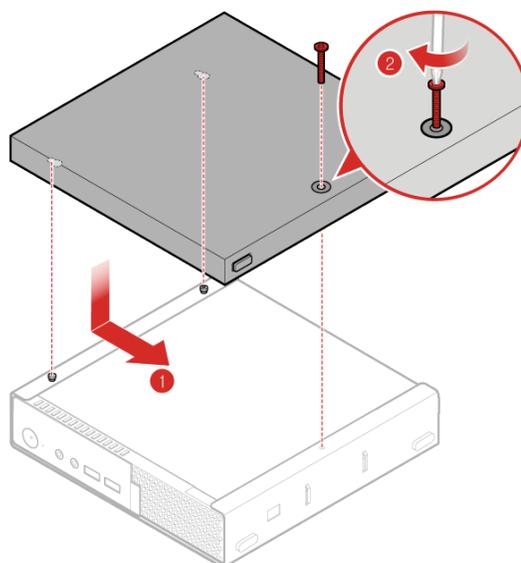# Replacing the external I/O box

> ⚠️ **Attention** Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*

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

2 Disconnect all power cords from electrical outlets and disconnect all cables that are connected to the computer and the external I/O box.

3 Replace the external I/O box.

Replacing the power adapter bracket

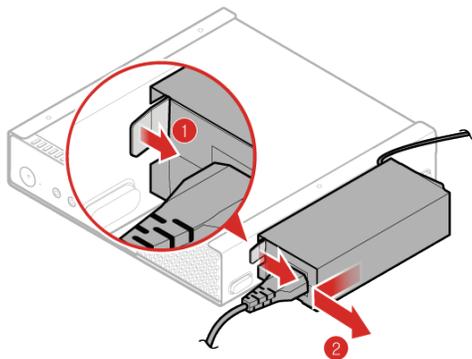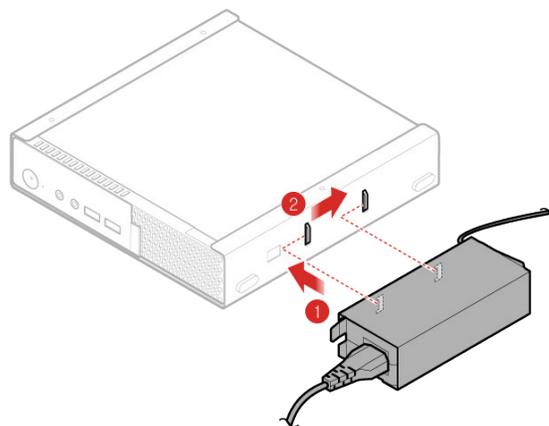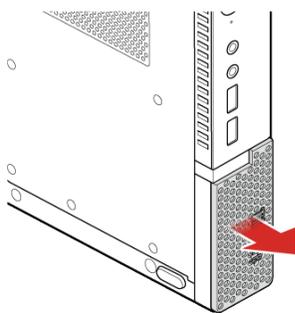> ⚠ **Attention** Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*

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

2 Disconnect all power cords from electrical outlets and disconnect all cables that are connected to the computer.

3 Replace the power adapter bracket.

Removing the computer cover and dust shield

Note   The dust shield is available only on some models.
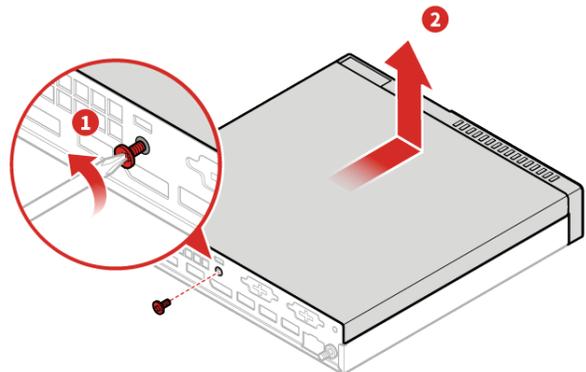
Attention   Do not open your computer or attempt any repairs before reading the *Important Product Information Guide*.

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

2   Disconnect all power cords from electrical outlets and disconnect all cables that are connected to the computer.

3   Remove the computer cover and dust shield.

Replacing the storage drive
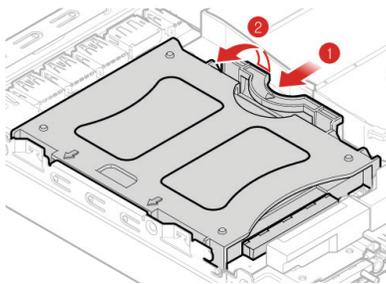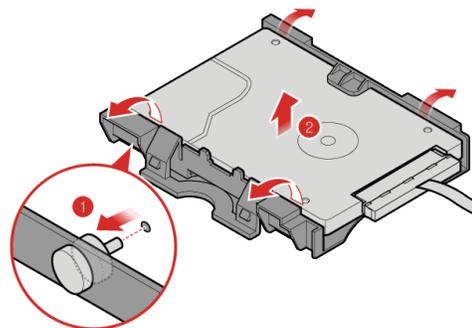
> ⚠️ **Attention**   Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*

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

2.   Disconnect all power cords from electrical outlets and disconnect all cables that are connected to the computer.

3.   If your computer is installed with a front Wi-Fi antenna, disconnect the front Wi-Fi antenna cable from the Wi-Fi card.

4.   Remove the computer cover.   For details, see Removing the computer cover and dust shield.

5.   Disconnect the storage drive cables from the system board.
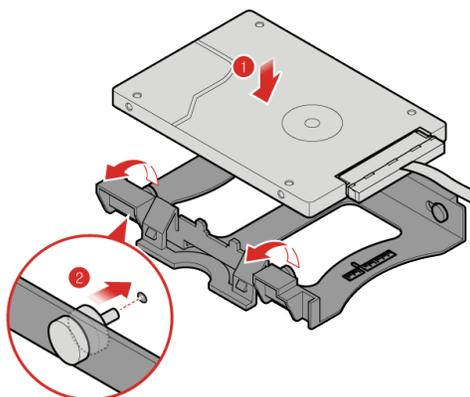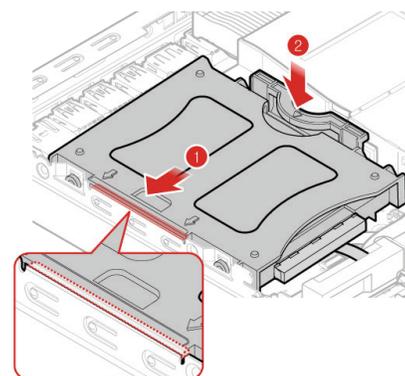
6.   Replace the storage drive.

7.   Connect the storage drive cables to the system board.

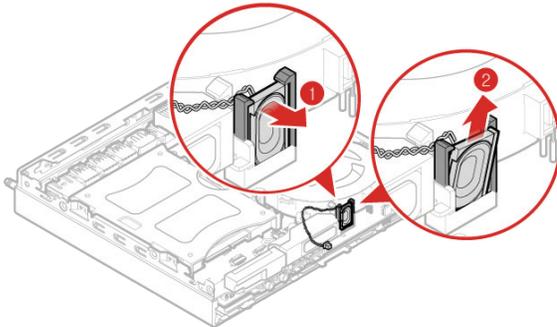8.   Reinstall the computer cover and reconnect the cables. For details, see Completing the parts replacement.
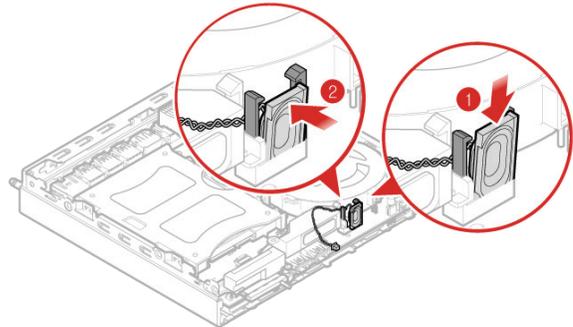
Replacing the internal speaker

> ⊘ **Attention**   Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*

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

2   Disconnect all power cords from electrical outlets and disconnect all cables that are connected to the computer.

3   Remove the computer cover. For details, see Removing the computer cover and dust shield.

4   Disconnect the internal speaker cable from the internal speaker connector on the system board.

5   Replace the internal speaker.

6   Connect the internal speaker cable to the internal speaker connector on the system board.

7   Reinstall the computer cover and reconnect the cables. For details, see Completing the parts replacement.
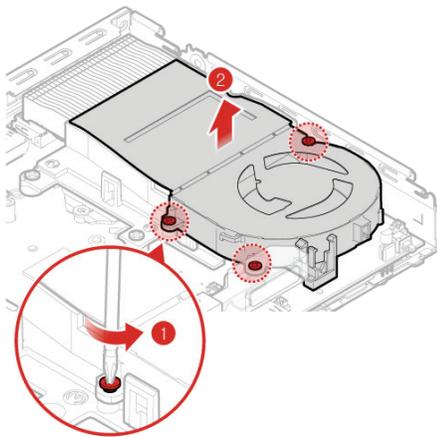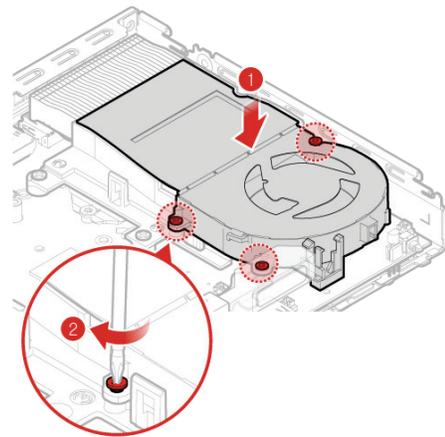
Replacing the system fan

> ⚠️ **Attention** Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*

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

2. Disconnect all power cords from electrical outlets and disconnect all cables that are connected to the computer.

3. Remove the computer cover. For details, see `Removing the computer cover and dust shield.`

4. Remove the storage drive. For details, see `Replacing the storage drive.`

5. Remove the internal speaker. For details, see `Replacing the internal speaker.`

6. Release the illuminated red dot cable from the system fan.

7. Disconnect the system fan cable from the system fan connector on the system board.

8. Replace the system fan.

9. Connect the system fan cable to the system fan connector on the system board.

10. Install the illuminated red dot cable to the new system fan.

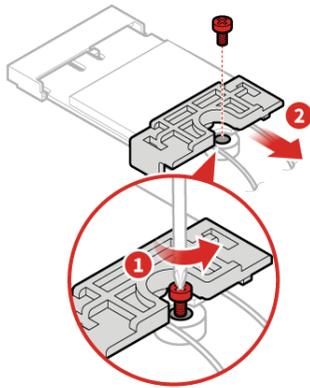11. Reinstall the computer cover and reconnect the cables. For details, see `Completing the parts replacement.`

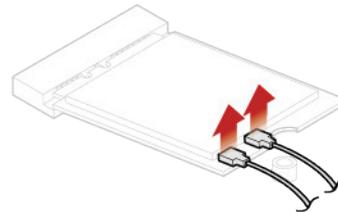# Replacing the Wi-Fi card

> ⚠️ **Attention**   Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*

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

2   Disconnect all power cords from electrical outlets and disconnect all cables that are connected to the computer.

3   Remove the computer cover. For details, see `Removing the computer cover and dust shield.`

4   Remove the storage drive. For details, see `Replacing the storage drive.`

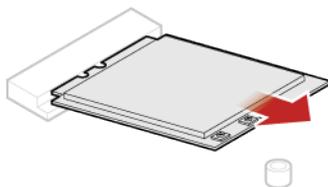*5*   Depending on your computer model, refer to one of the following to replace the Wi-Fi card.
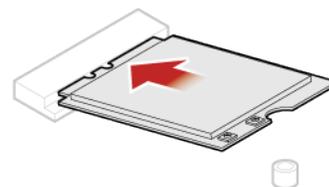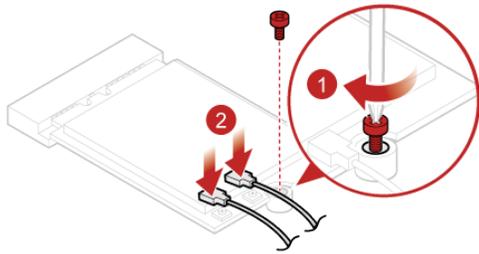
- Type 1

5

6
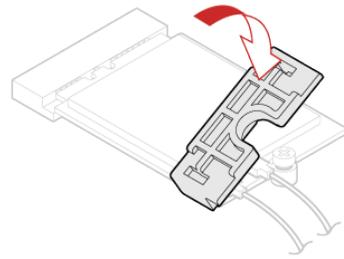
- Type 2

1
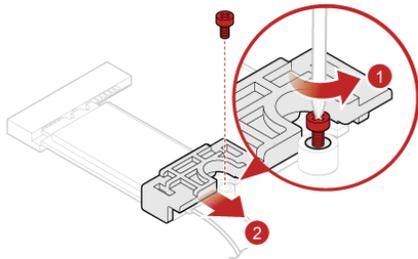
2
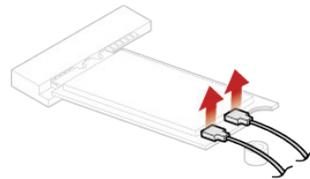
3

4

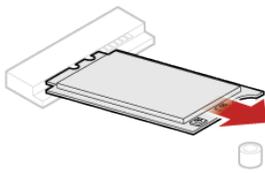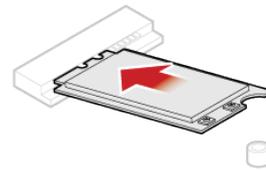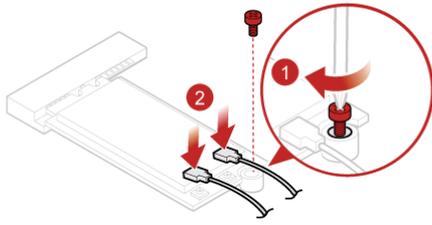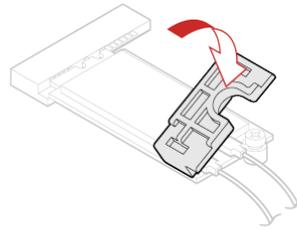5   6

6   Reinstall the computer cover and reconnect the cables. For details, see Completing the parts replacement.
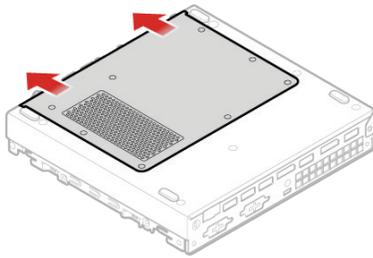
Replacing the bottom cover

> ⚠️ **Attention** Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*

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

2 Disconnect all power cords from electrical outlets and disconnect all cables that are connected to the computer.

3 Remove the computer cover. For details, see `Removing the computer cover and dust shield.`

4 Replace the bottom cover.

5 Reinstall the computer cover and reconnect the cables. For details, see `Completing the parts replacement.`
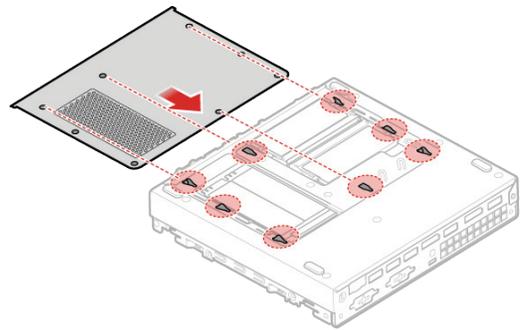
Replacing the memory module

> ⚠️ **Attention** Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*

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

2 Disconnect all power cords from electrical outlets and disconnect all cables that are connected to the computer.

3 Remove the computer cover. For details, see *Removing the computer cover and dust shield.*

4 Remove the bottom cover. For details, see *Replacing the bottom cover.*

5 Replace the memory module.

6 Reinstall the removed parts and computer cover. For details, see *Completing the parts replacement.*
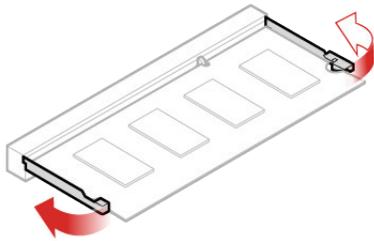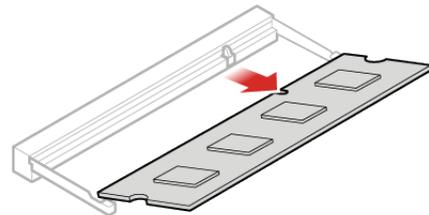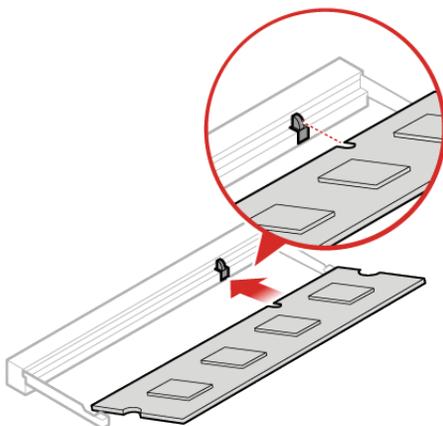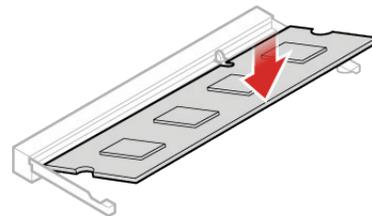
Replacing the M.2 storage drive

> ⚠️ **Attention**   Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*

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

2   Disconnect all power cords from electrical outlets and disconnect all cables that are connected to the computer.

3   Remove the computer cover. For details, see `Removing the computer cover and dust shield.`

4   Remove the bottom cover. For details, see `Replacing the bottom cover.`

5   Replace the M.2 storage drive.
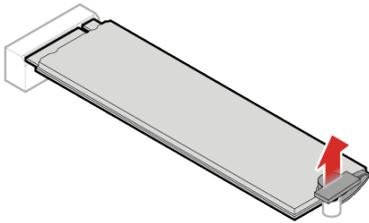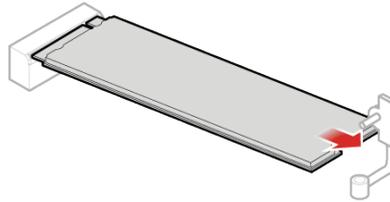
6   Reinstall the removed parts and computer cover. For details, see `Completing the parts replacement.`

Completing the parts replacement

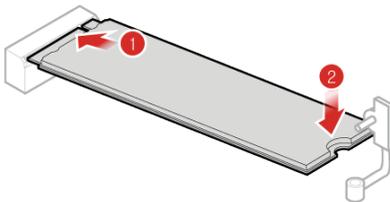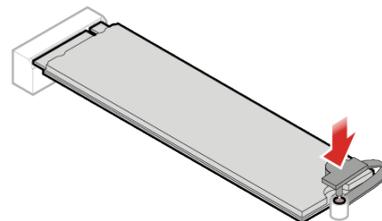After completing the installation or replacement for all parts, reinstall the computer cover and reconnect the cables.
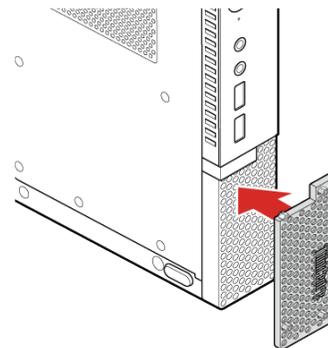
To reinstall the computer cover and reconnect the cables to your computer, do the following:

1 Ensure that all components have been reassembled correctly and that no tools or loose screws are left inside your computer. See System board for the locations of various components in your computer.

2 Ensure that the cables are routed correctly before reinstalling the computer cover. Keep cables clear of the hinges and sides of the computer chassis to avoid interference when reinstalling the computer cover.

3 Install the computer cover and dust shield.
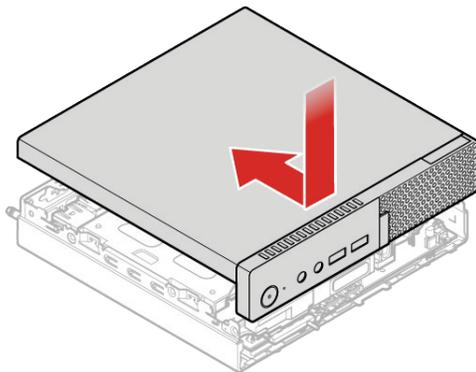
4 Install the screw to secure the computer cover.

5 Place the computer in an upright position.

6 If a locking device is available, use it to lock the computer. See Locking the computer.

7 Reconnect the external cables and power cords to the corresponding connectors on the computer. See Front view or Rear view for the locations of various components in your computer.

Replacing FRUs

Before replacing FRUs

Before replacing any Field Replaceable Units (FRUs), read the following:

- **Only certified and trained personnel can service the computer.**

- **Before replacing an FRU, read the entire section about replacing the part.**

- **Be extremely careful during writing operations such as copying, saving, or formatting.**
  The sequence of the drives in the computer that you are servicing might have been altered. If you select an incorrect drive, data or programs might be overwritten.

- **Replace an FRU only with another FRU of the correct model.**
  When you replace an FRU, ensure that the model of the machine and the FRU part number are correct by referring to the website http://www.lenovo.com/serviceparts-lookup.

- **An FRU should not be replaced because of a single, unreproducible failure.**
  Single failures can occur for a variety of reasons that have nothing to do with a hardware defect, such as cosmic radiation, electrostatic discharge, or software errors. Consider replacing an FRU only when a problem recurs. If you suspect that an FRU is defective, clear the error log and run the test again. If the error does not recur, do not replace the FRU.

- **Only replace a defective FRU.**

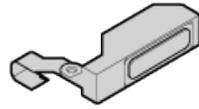To check the locations of FRUs, see CRUs and FRUs locations.

> ⓘ **Attention**　Do not open your computer or attempt any repairs before reading the *Important Product Information Guide*.

Before replacing an FRU, click the illustration of the part to check the brief procedures.

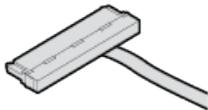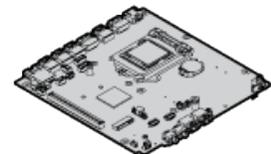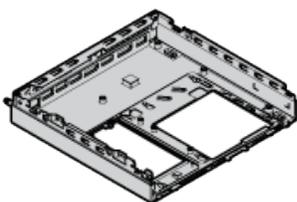|		
Illuminated red dot cable ❯	**Advanced speaker** ❯	**Wi-Fi antennas** ❯
Storage drive cable ❯	**Heat sink** ❯	**Microprocessor** ❯
Coin-cell battery ❯	**Antenna bracket** ❯	**System board** ❯
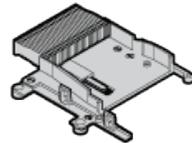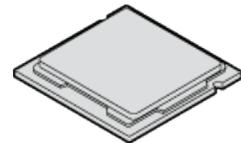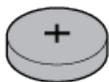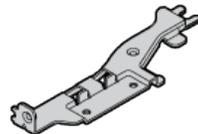
Chassis ❯

📝 **Note** To replace a component that is not in the list above, contact a Lenovo service technician.
The support phone numbers are available at http://www.lenovo.com/support/phone.

Replacing the illuminated red dot cable

> ⚠️ **Attention** Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*

1 Remove the computer cover. For details, see `Removing the computer cover and dust shield.`

2 Disconnect the illuminated red dot cable from the system board. See `System board.`

3 Replace the illuminated red dot cable.

4 Connect the illuminated red dot cable to the system board. See `System board.`

5 Reinstall the removed parts and computer cover. For details, see `Completing the parts replacement.`

Replacing the advanced speaker

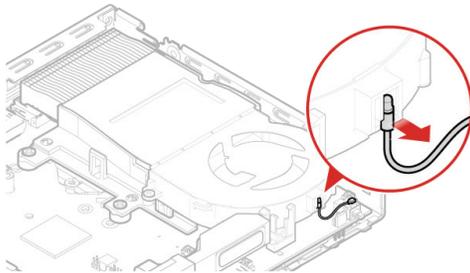> **Note**   The advanced speaker is available only on some models.
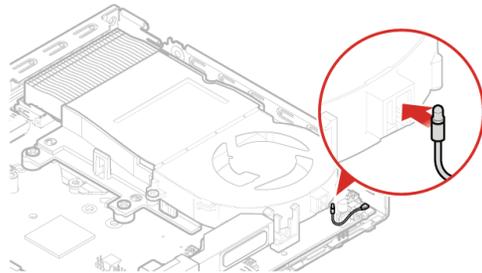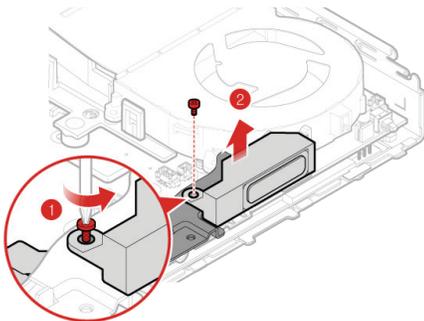
> **Attention**   Do not open your computer or attempt any repairs before reading the *Important Product Information Guide*.

1   Remove the computer cover. For details, see `Removing the computer cover and dust shield.`

2   Remove the storage drive. For details, see `Replacing the storage drive.`

3   Disconnect the advanced speaker cable from the advanced speaker connector on the system board. See `System board.`

4   Replace the advanced speaker.
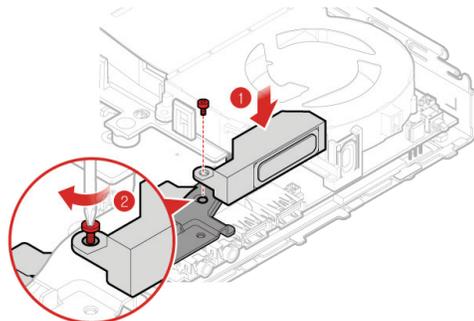
5   Connect the advanced speaker cable to the advanced speaker connector on the system board. For details, see `System board.`

6   Reinstall the removed parts and computer cover. For details, see `Completing the parts replacement.`

Replacing the Wi-Fi antennas

> ⚠️ **Attention**   Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*

Replacing the front Wi-Fi antenna

1   Remove the computer cover. For details, see `Removing the computer cover and dust shield.`

2   Remove the storage drive. For details, see `Replacing the storage drive.`

3   Replace the front Wi-Fi antenna.

4   Reinstall the removed parts and computer cover. For details, see `Completing the parts replacement.`

Replacing the rear Wi-Fi antenna

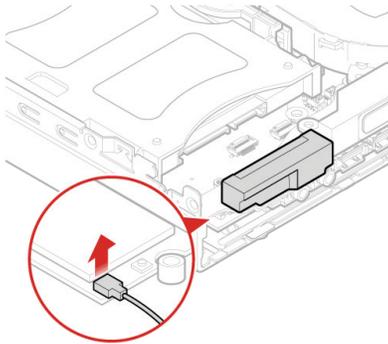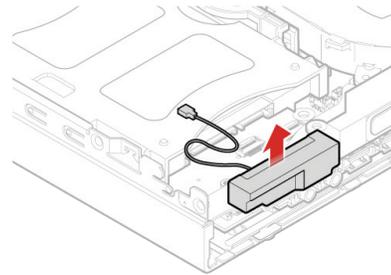1   Remove the computer cover. For details, see `Removing the computer cover and dust shield.`

2   Remove the storage drive. For details, see `Replacing the storage drive.`

3   Disconnect the rear Wi-Fi antenna cable from the Wi-Fi card.

4   Replace the rear Wi-Fi antenna.

> 📝 **Note**   Record the cable routing before removing the rear Wi-Fi antenna cable.
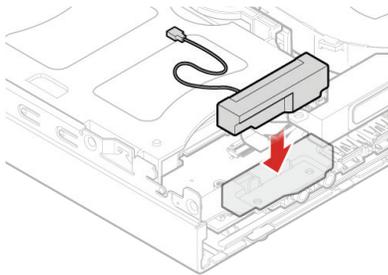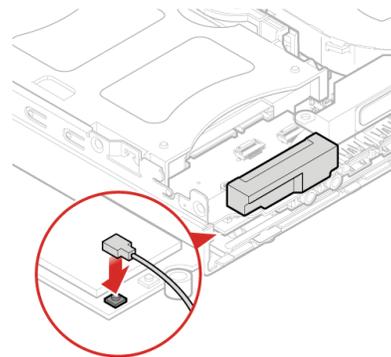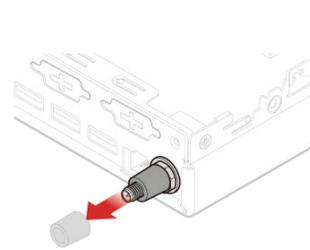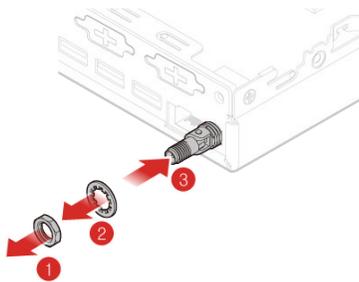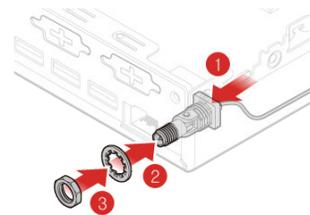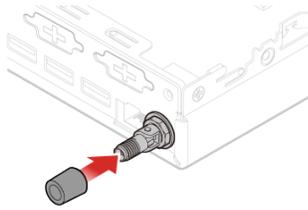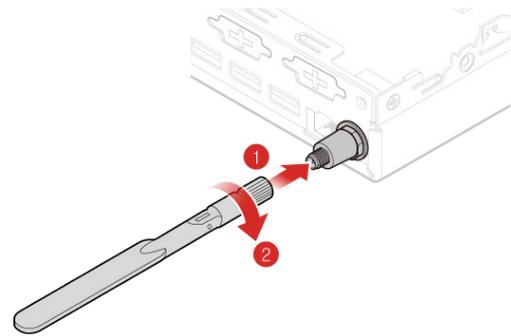
5   Connect the rear Wi-Fi antenna cable to the Wi-Fi card.

6   Reinstall the removed parts and computer cover. For details, see *Completing the parts replacement.*

Replacing the storage drive cable

> ⚠️ **Attention**   Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*
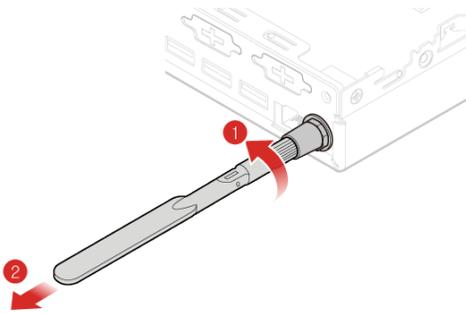
1   Remove the computer cover. For details, see `Removing the computer cover and dust shield.`

2   Remove the storage drive. For details, see `Replacing the storage drive.`

3   Replace the storage drive cable.

4   Reinstall the removed parts and computer cover. For details, see `Completing the parts replacement.`

Replacing the heat sink

> ⚠ **Attention** Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*

1   Remove the computer cover. For details, see `Removing the computer cover and dust shield.`

2   Remove the storage drive. For details, see `Replacing the storage drive.`

3   Remove the internal speaker.For details, see `Replacing the internal speaker.`

4   Remove the system fan.For details, see `Replacing the system fan.`

5   Replace the heat sink.
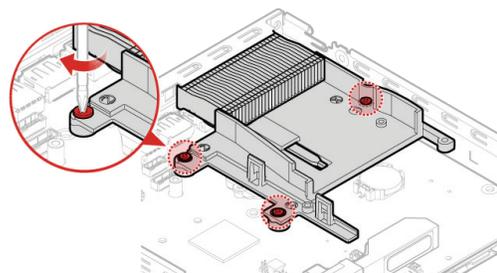
6   Reinstall the computer cover and reconnect the cables. For details, see `Completing the parts replacement.`
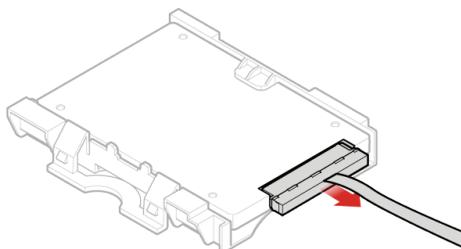
Replacing the microprocessor

ⓘ **Attention**	Do not open your computer or attempt any repairs before reading the *Important Product Information Guide*.

⚠ ☖ **Caution**	The heat sink and microprocessor might be very hot. Before you open the computer cover, turn off the computer and wait several minutes until the computer is cool.

1   Remove the computer cover. For details, see `Removing the computer cover and dust shield.`

2   Remove the storage drive. For details, see `Replacing the storage drive.`

3   Remove the internal speaker. For details, see `Replacing the internal speaker.`

4   Remove the system fan. For details, see `Replacing the system fan.`

5   Remove the heat sink. For details, see `Replacing the heat sink.`

6   Replace the microprocessor.

📝 **Note**	• Your microprocessor and socket might look different from the one illustrated.
	• Touch only the edges of the microprocessor. Do not touch the gold contacts on the bottom.
	• Do not drop anything onto the microprocessor socket while it is exposed. The socket pins must be kept as clean as possible.

①   ②

③

④

⑤

⑥

7   Reinstall the removed parts and computer cover. For details, see *Completing the parts replacement.*
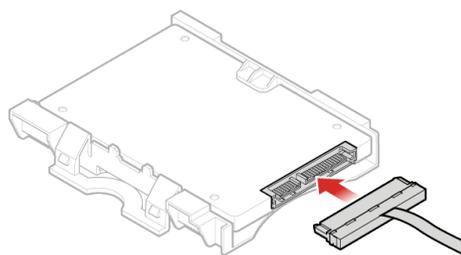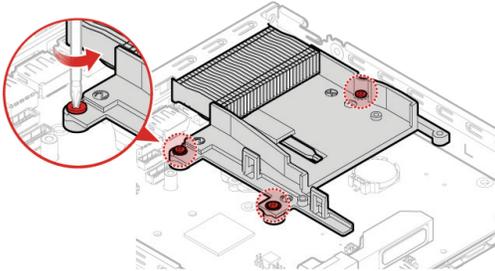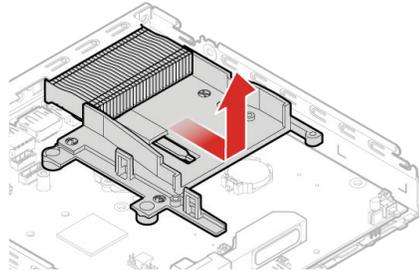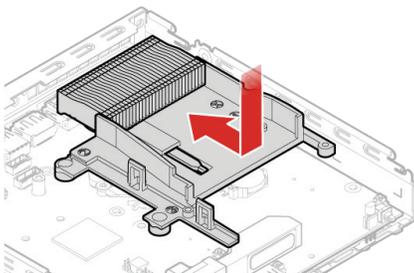
Replacing the coin-cell battery

> ⚠ **Attention** Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*

Your computer has a special type of memory that maintains the date, time, and settings for built-in features, such as parallel connector assignments (configurations). A coin-cell battery keeps this information active when you turn off the computer.

The coin-cell battery normally requires no charging or maintenance throughout its life; however, no coin-cell battery lasts forever. If the coin-cell battery fails, the date, time, and configuration information (including passwords) are lost. An error message is displayed when you turn on the computer.
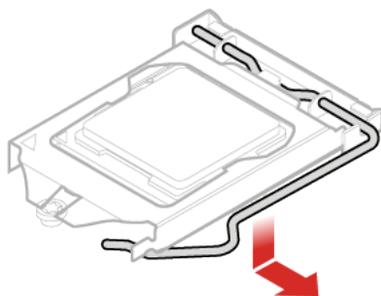
To replace the coin-cell battery,

1. Remove the computer cover. For details, see *Removing the computer cover and dust shield.*

2. Remove the storage drive. For details, see *Replacing the storage drive.*

3. Remove the internal speaker. For details, see *Replacing the internal speaker.*

4. Remove the system fan. For details, see *Replacing the system fan.*

5. Remove the heat sink. For details, see *Replacing the heat sink.*

6   Replace the coin-cell battery.

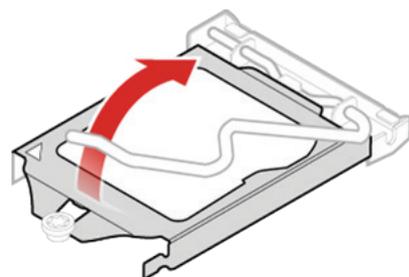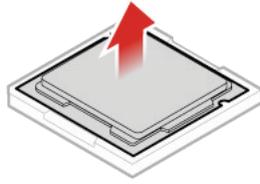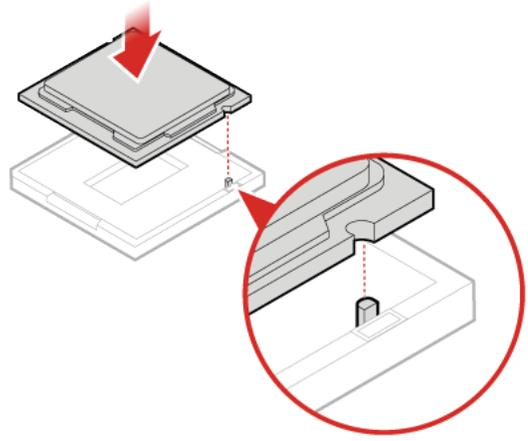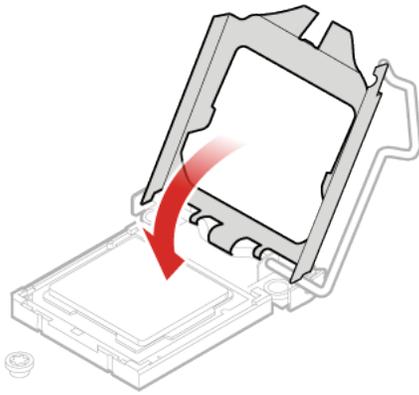①
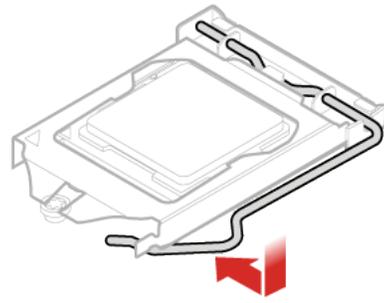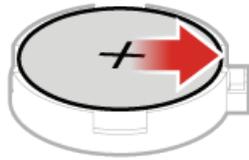
②

③

④

7   Reinstall the removed parts and computer cover. For details, see Completing the parts replacement.

To dispose of the coin-cell battery, refer to the "Lithium coin-cell battery notice" topic in the *Safety and Warranty Guide*.

Replacing the antenna bracket, system board, and chassis

> ⚠️ **Attention** Do not open your computer or attempt any repairs before reading the *Important Product Information Guide.*

1   Remove the computer cover. For details, see `Removing the computer cover and dust shield.`

2   Remove the storage drive. For details, see `Replacing the storage drive.`
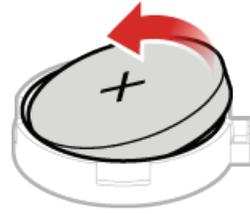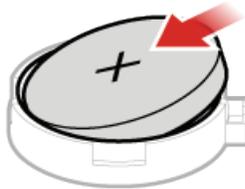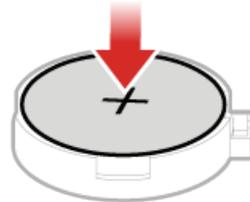
3   Remove the internal speaker. For details, see `Replacing the internal speaker.`

4   Remove the system fan. For details, see `Replacing the system fan.`

5   Remove the heat sink. For details, see `Replacing the heat sink.`

6   Remove the Wi-Fi card. For details, see `Replacing the Wi-Fi card.`

7   Remove the Wi-Fi antennas. For details, see `Replacing the Wi-Fi antennas.`

8   Remove the microprocessor. For details, see `Replacing the microprocessor.`

9   Remove the bottom cover. For details, see `Replacing the bottom cover.`

10   Remove the memory module. For details, see `Replacing the memory module.`

11   Remove the M.2 storage drive. For details, see `Replacing the M.2 storage drive.`

12   Record the cable routing and cable connections, and then disconnect all cables from the system board. See `System board.`

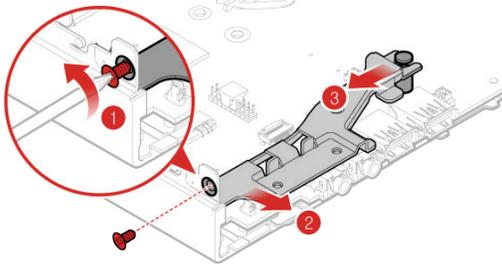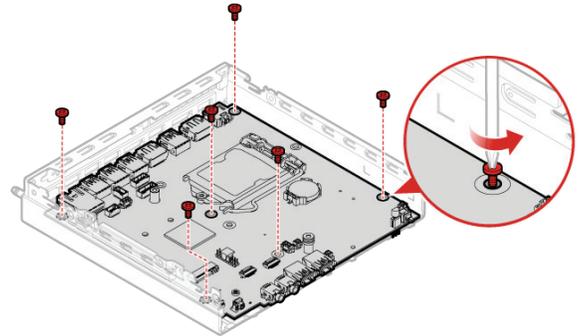13 Replace the antenna bracket, system board, and chassis.

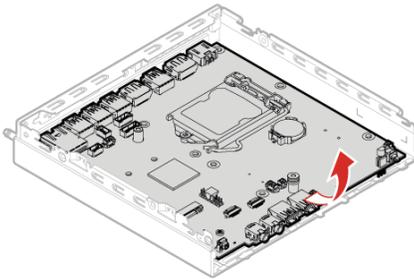> **Note**   Carefully handle the system board by its edges.

1

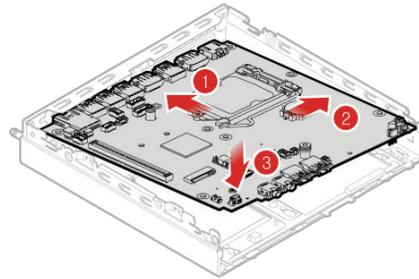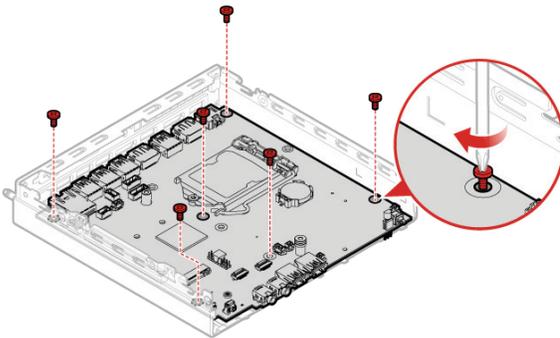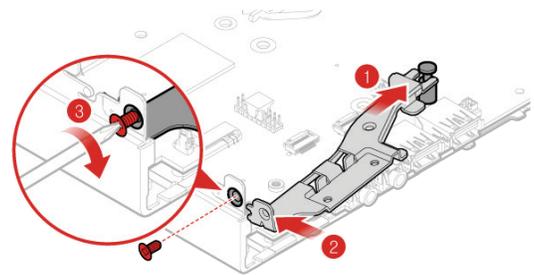2

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14 Route all the cables that you disconnected from the failing system board, and then reconnect the cables to the new system board. See System board.

15 Reinstall the removed parts and computer cover. For details, see Completing the parts replacement.

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