

ThinkCentre®

ThinkCentre M625q User Guide and Hardware Maintenance Manual

Think



Energy Star Machine Types: 10TF, 10TG, 10TH, 10TJ, 10TK, 10TL, 10UY, 10V0, 10V1, and 10V2

Note: Before using this information and the product it supports, be sure to read and understand the *Important Product Information Guide* and Appendix A “Notices” on page 67.

First Edition (July 2018)

© Copyright Lenovo 2018.

LIMITED AND RESTRICTED RIGHTS NOTICE: If data or software is delivered pursuant to a General Services Administration “GSA” contract, use, reproduction, or disclosure is subject to restrictions set forth in Contract No. GS-35F-05925.

Contents

Chapter 1. Overview 1

Front view	1
Rear view	2
System board	4
Machine type and model label	6

Chapter 2. Specifications 7

Chapter 3. Computer locks 9

Attaching a Kensington-style cable lock	9
---	---

Chapter 4. Replacing hardware 11

Before replacing hardware	11
Knowing FRUs (including CRUs)	11
Locating FRUs (including CRUs)	13
Replacing the keyboard or wireless keyboard	16
Replacing the mouse or wireless mouse	17
Replacing the power adapter	21
Replacing the vertical stand	24
Replacing the VESA mount bracket	25
Replacing the power adapter bracket	26
Removing the computer cover	28

Replacing the storage drive for 10TF, 10TG, 10TH, 10TJ, and 10TK models	30
Replacing the storage drive cable for 10TF, 10TG, 10TH, 10TJ, and 10TK models	33
Replacing the system fan for 10TF, 10TG, 10TH, 10TJ, and 10TK models.	34
Replacing the heat sink	36
Replacing the internal speaker	39
Replacing the Wi-Fi card	40
Replacing the Wi-Fi antennas	45
Replacing the antenna bracket	50
Replacing the coin-cell battery	54
Replacing the bottom cover	56
Replacing the memory module	58
Replacing the M.2 storage drive	59
Replacing the system board and chassis	61
Completing the parts replacement	64

Appendix A. Notices 67

Appendix B. Trademarks 69

Chapter 1. Overview

This chapter provides basic information to help you get familiar with your computer.

Front view

Note: Your computer model might look slightly different from the illustration.

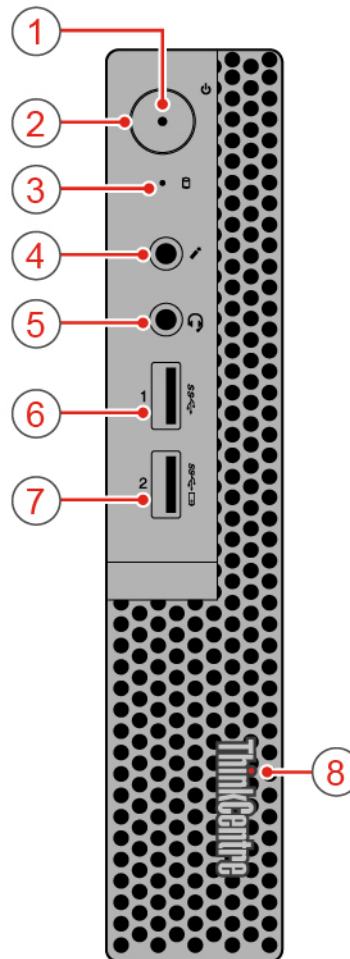


Figure 1. Front view

1 Power indicator	2 Power button
3 Storage drive status indicator	4 Microphone connector
5 Headset connector	6 USB 3.0 connector
7 Always On USB 3.0 connector	8 Illuminated red dot

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 on.

Rear view

Note: Your computer model might look slightly different from the illustration.

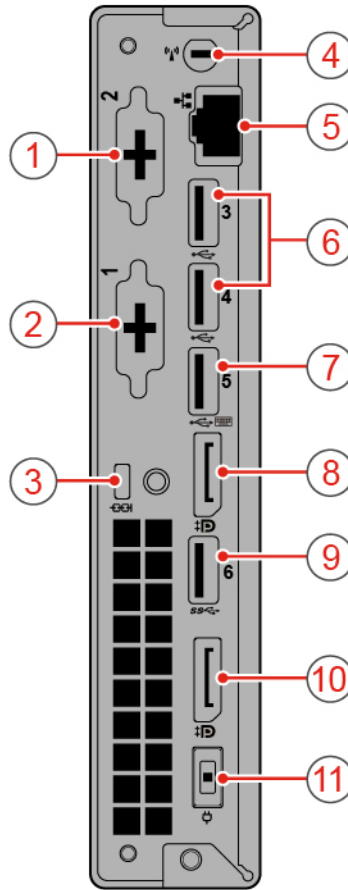


Figure 2. Rear view

1 Optional connector 1	2 Optional connector 2
3 Security-lock slot	4 Wi-Fi antenna slot
5 Ethernet connector	6 USB 2.0 connectors
7 USB 2.0 connector	8 DisplayPort® connector
9 USB 3.0 connector	10 DisplayPort connector
11 Power adapter connector	

1 Optional connector 1

Depending on the computer model, the connector might vary.

2 Optional connector 2

Depending on the computer model, the connector might vary.

3 Security-lock slot

Used to secure a Kensington-style cable lock.

4 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.

5 Ethernet connector

Used to connect an Ethernet cable for network access.

6 USB 2.0 connector

Used to connect a USB-compatible device. For optimal data transfer, connect a USB 2.0 device to a USB 2.0 connector.

7 USB 2.0 connector

Used to connect a USB-compatible device. For optimal data transfer, connect a USB 2.0 device to a USB 2.0 connector.

8 DisplayPort connector

Used to send audio and video signals from the computer to another audio or video device, such as a high-performance monitor.

9 USB 3.0 connector

Used to connect a USB-compatible device. For optimal data transfer, connect a USB 3.0 device to a USB 3.0 connector instead of a USB 2.0 connector.

10 DisplayPort connector

Used to send audio and video signals from the computer to another audio or video device, such as a high-performance monitor.

11 Power adapter connector

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

System board

Note: See “Front view” on page 1 and “Rear view” on page 2 for additional component descriptions.

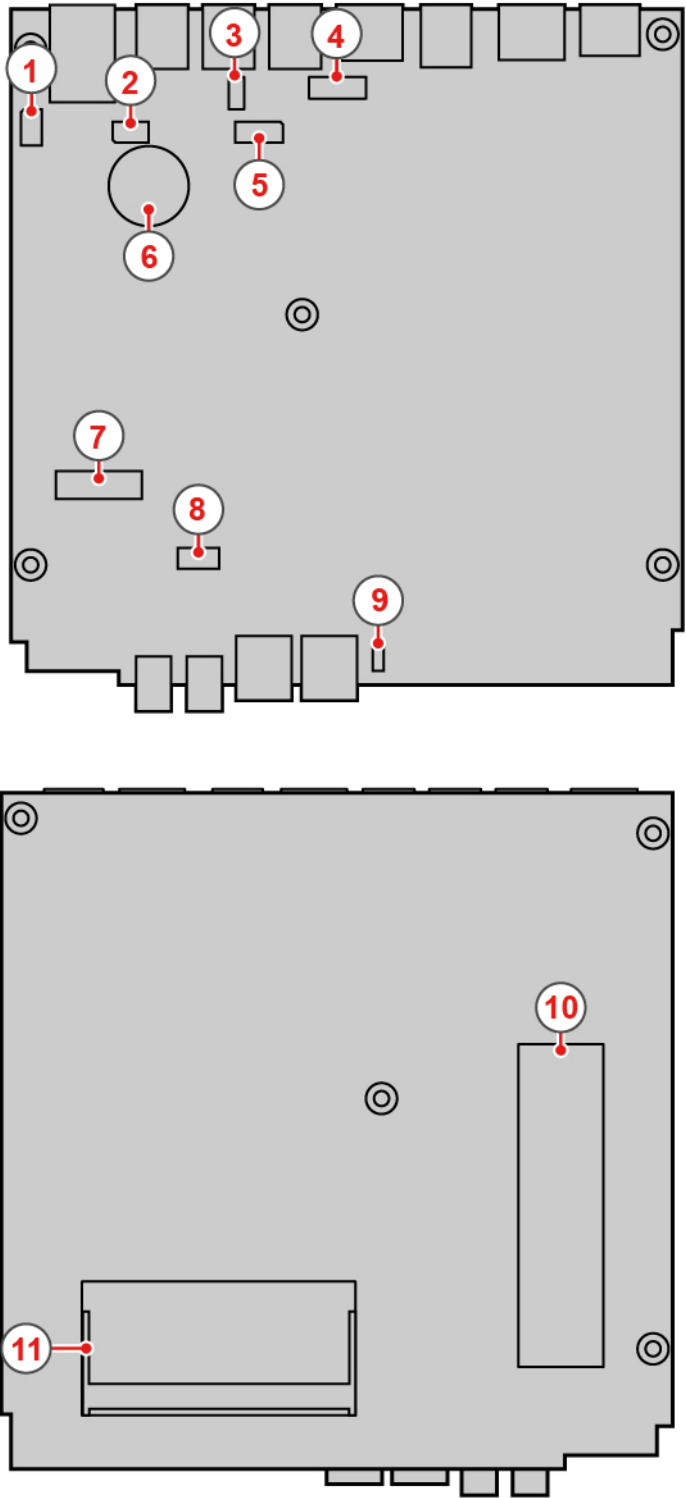


Figure 3. System board

1 Serial connector 1	2 Serial connector 2
3 USB 2.0 connector	4 DisplayPort connector
5 System fan connector	6 Coin-cell battery
7 M.2 Wi-Fi card slot	8 Storage drive slot
9 Internal speaker connector	10 M.2 storage drive slot
11 Memory slot	

Machine type and model label

The machine type and model label identifies the computer. When you contact Lenovo for help, the machine type and model information helps support technicians to identify the computer and provide faster service. The machine type and model label is attached on the top of the computer as shown.

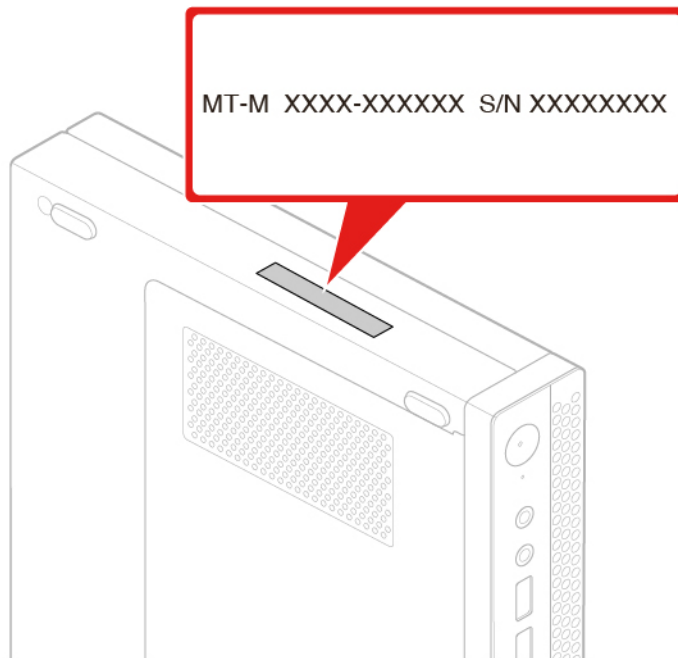


Figure 4. Machine type and model label

Chapter 2. Specifications

Power supply

- 65-watt automatic voltage-sensing power supply

Storage drives

- 2.5-inch storage drive
- M.2 storage drive

Video features

- The integrated graphics card supports the following:
 - DisplayPort connector

Audio features

- The integrated audio card supports the following:
 - Headset connector
 - Internal speaker

Input/Output (I/O) features

- Audio connectors (headset and microphone)
- DisplayPort connector
- Ethernet connector
- Serial connector (optional)
- Type-C USB connector (optional)
- USB connector
- VGA connector (optional)

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: 1.1 kg (2.4 lb)

Chapter 3. Computer locks

This chapter provides instructions on how to lock your computer with the locking devices to keep your computer safe.

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>

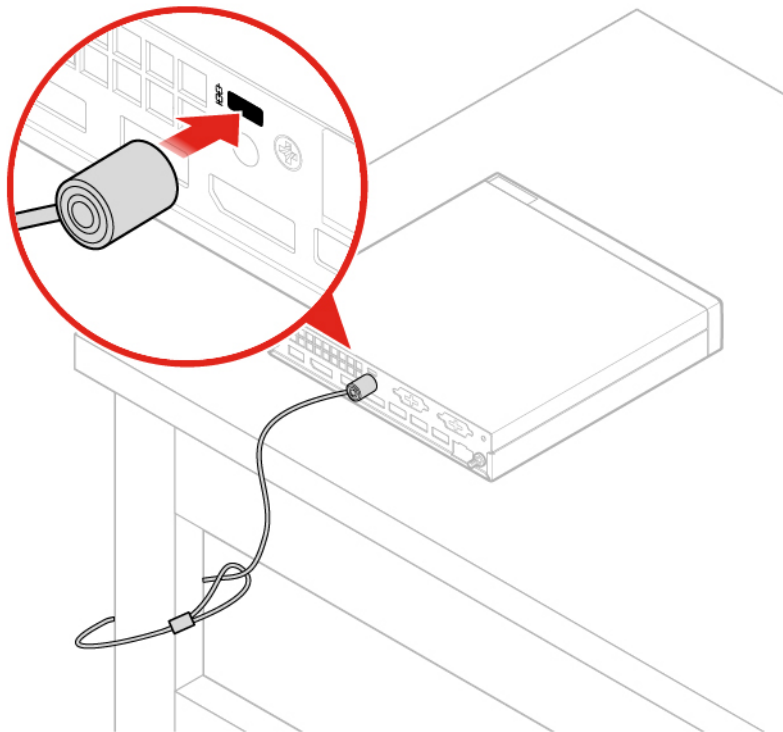


Figure 5. Attaching a Kensington-style cable lock

Chapter 4. Replacing hardware

This chapter provides instructions on how to replace hardware for your computer.

Before replacing hardware

Attention: Do not open your computer or attempt any repairs before reading this section and the *Important Product Information Guide*.

Notes before replacing hardware

- 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. 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 part until the defective part has been removed and you are ready to install the new part. Static electricity, although harmless to you, can seriously damage computer components and options.

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

- Limit your movement. Movement can cause static electricity to build up around you.
- Always handle options and other computer components carefully. Handle PCI/PCIe cards, memory modules, system boards, and microprocessors by the edges. Never touch any exposed circuitry.
- Prevent others from touching the options 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 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 FRUs (including CRUs)

- Field Replaceable Units (FRUs) are computer parts that a trained technician can upgrade or replace. FRUs include all CRUs. For detailed FRU information, such as the FRU part numbers and supported computer models, go to:
<http://www.lenovo.com/serviceparts-lookup>
- Customer Replaceable Units (CRUs) are computer parts that a user can upgrade or replace.
 - Self-service CRUs: You can install self-service CRUs easily. These CRUs might be stand-alone, latched, or secured by up to two screws. Examples of self-service CRUs include the keyboard, mouse, any USB device. You 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.

Before replacing FRUs

Before replacing any FRU, 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.

- 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.

Locating FRUs (including CRUs)

Locating FRUs (including CRUs) for 10TF, 10TG, 10TH, 10TJ, and 10TK models

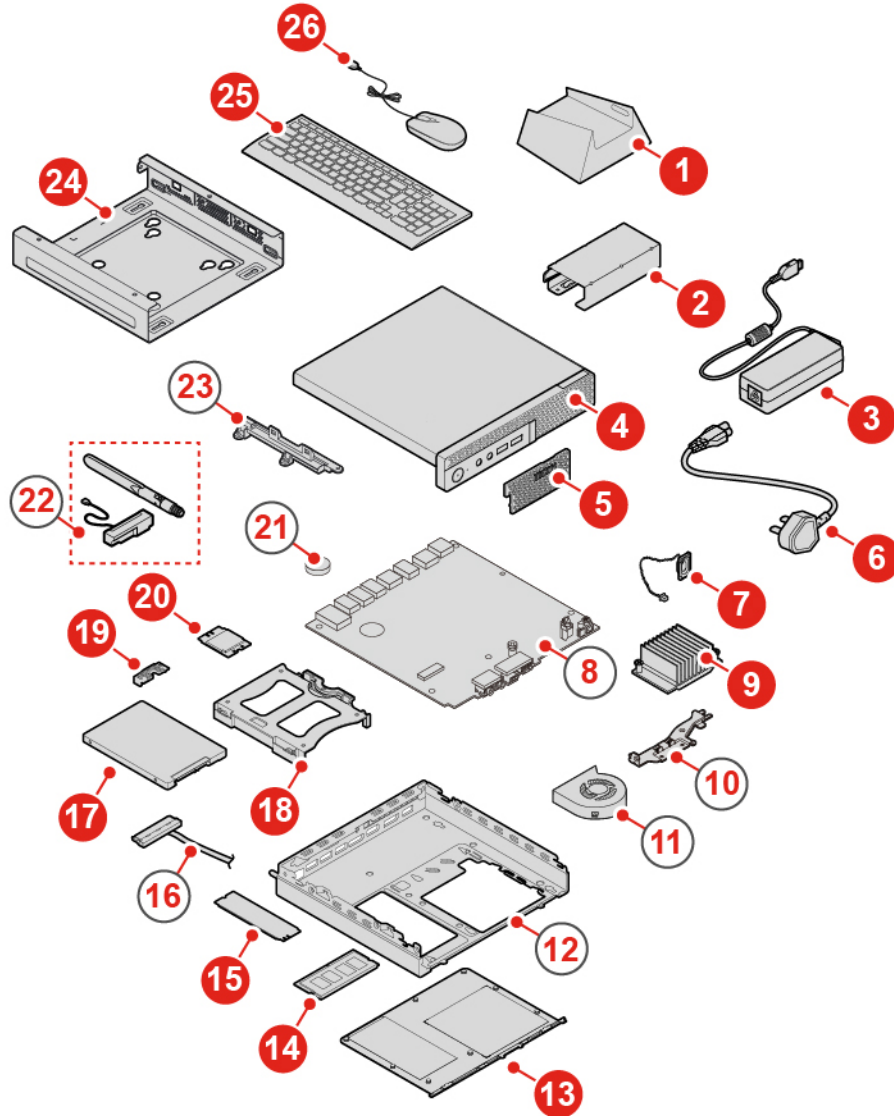


Figure 6. Locating FRUs (including CRUs)

Notes:

- Some of the components are optional.
- To replace a component that is not in the list below, contact a Lenovo service technician. For a list of Lenovo Support phone numbers, go to: <http://www.lenovo.com/serviceparts-lookup>

Number	FRU description	Self-service CRU	Optional-service CRU
1	Vertical stand	Yes	No
2	Power adapter bracket	Yes	No
3	Power adapter	Yes	No
4	Computer cover	Yes	No
5	Dust shield	Yes	No
6	Power cord	Yes	No
7	Internal speaker	Yes	No
8	System board	No	No
9	Heat sink	No	Yes
10	Antenna bracket	No	No
11	System fan	No	No
12	Chassis	No	No
13	Bottom cover	Yes	No
14	Memory module	Yes	No
15	M.2 storage drive	Yes	No
16	Storage drive cable	No	No
17	Storage drive	No	Yes
18	Storage drive bracket	No	Yes
19	Wi-Fi card shield	No	Yes
20	Wi-Fi card	No	Yes
21	Coin-cell battery	No	No
22	Wi-Fi antennas	No	No
23	Storage drive assembly bracket	No	No
24	VESA® mount bracket	Yes	No
25	Keyboard or wireless keyboard	Yes	No
26	Mouse or wireless mouse	Yes	No

Locating FRUs (including CRUs) for 10TL, 10UY, 10V0, 10V1, and 10V2 models

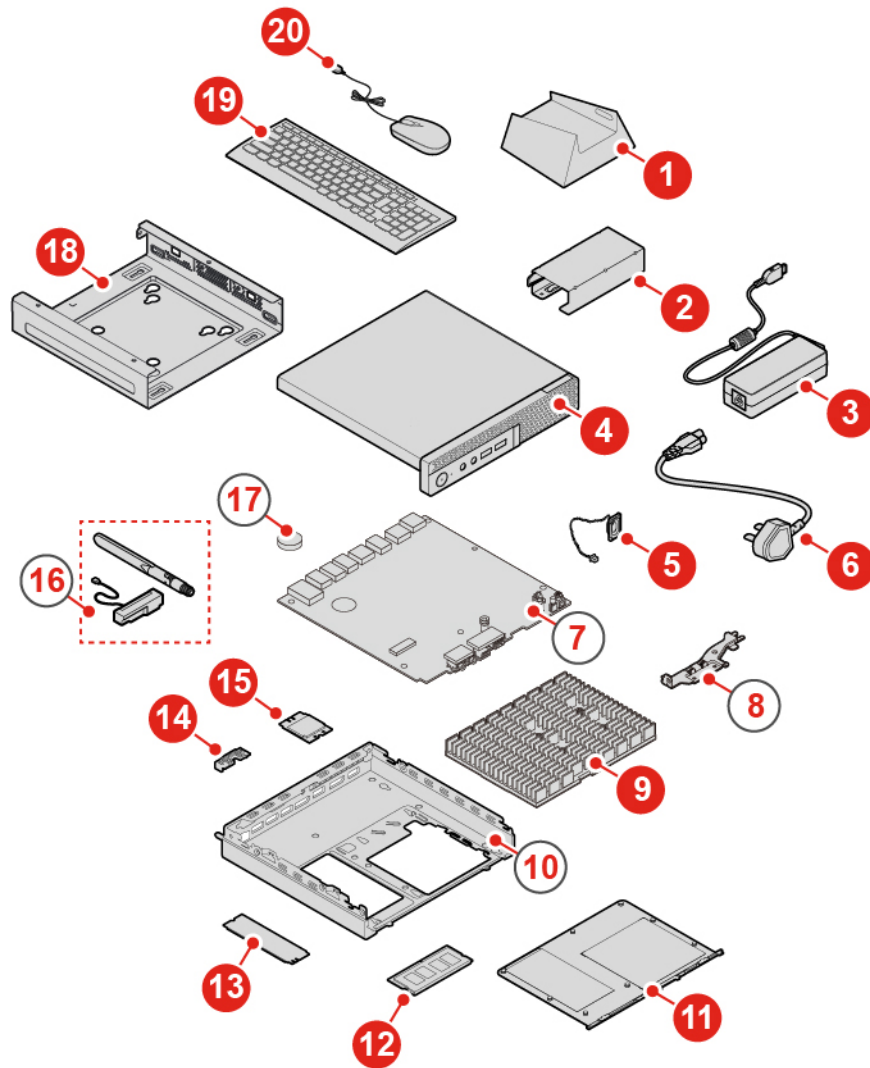


Figure 7. Locating FRUs (including CRUs)

Notes:

- Some of the components are optional.
- To replace a component that is not in the list below, contact a Lenovo service technician. For a list of Lenovo Support phone numbers, go to: <http://www.lenovo.com/support/phone>

Number	FRU description	Self-service CRU	Optional-service CRU
1	Vertical stand	Yes	No
2	Power adapter bracket	Yes	No
3	Power adapter	Yes	No

Number	FRU description	Self-service CRU	Optional-service CRU
4	Computer cover	Yes	No
5	Internal speaker	Yes	No
6	Power cord	Yes	No
7	System board	No	No
8	Antenna bracket	No	No
9	Heat sink	No	Yes
10	Chassis	No	No
11	Bottom cover	Yes	No
12	Memory module	Yes	No
13	M.2 storage drive	Yes	No
14	Wi-Fi card shield	No	Yes
15	Wi-Fi card	No	Yes
16	Wi-Fi antennas	No	No
17	Coin-cell battery	No	No
18	VESA mount bracket	Yes	No
19	Keyboard or wireless keyboard	Yes	No
20	Mouse or wireless mouse	Yes	No

Replacing the keyboard or wireless keyboard

Note: The wireless keyboard is available only on some models.

Replacing the keyboard

1. Turn off the computer and disconnect all power cords from electrical outlets.
2. Disconnect the old keyboard cable from the computer.
3. Connect a new keyboard to the appropriate connector on the computer.

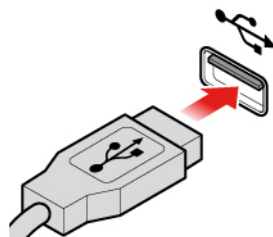


Figure 8. Replacing the keyboard

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.

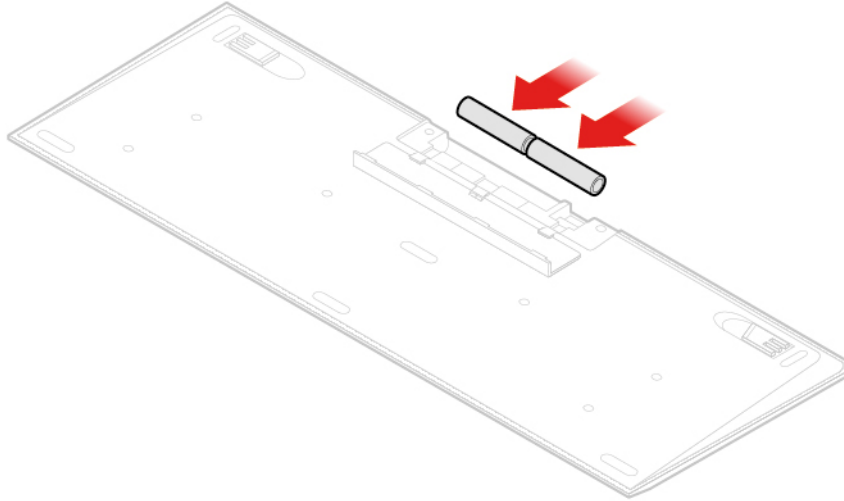


Figure 9. Replacing the wireless keyboard

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.

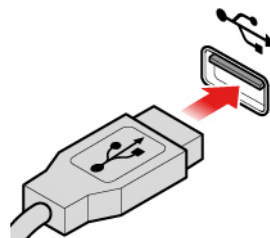


Figure 10. Replacing the mouse

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. Open the battery compartment cover, and install two AAA batteries according to the polarity indicators.
 - a. Open the battery compartment.

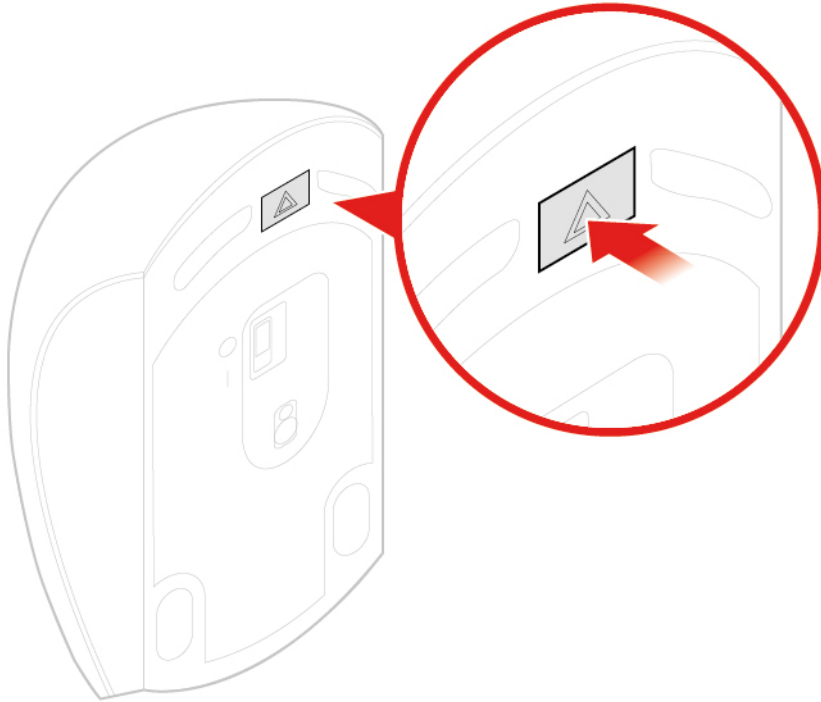


Figure 11. Opening the battery compartment

- b. Take out the USB dongle.

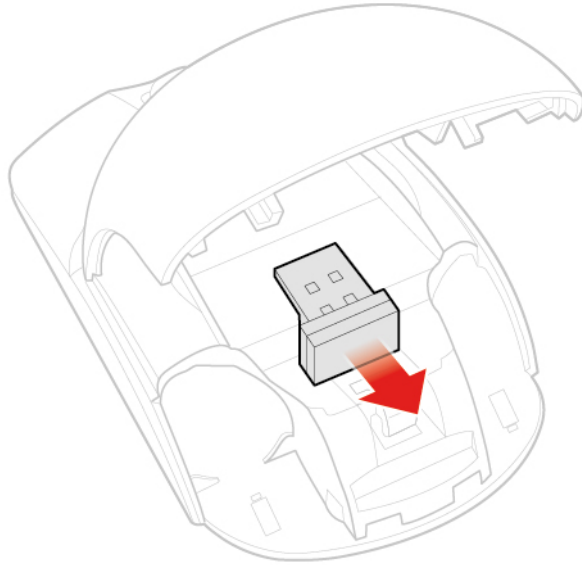


Figure 12. Taking out the USB dongle

- c. Connect the USB dongle to a USB connector.

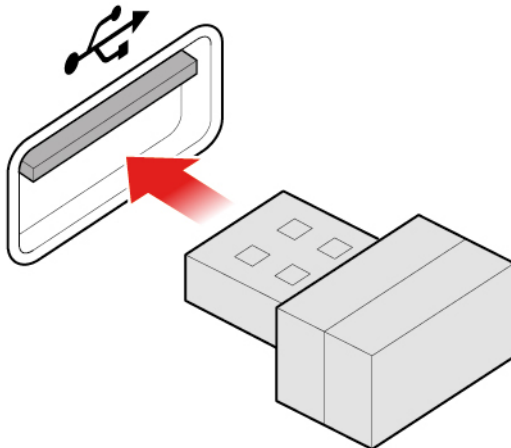


Figure 13. Connecting the USB dongle to a USB connector

- d. Install the mouse batteries.

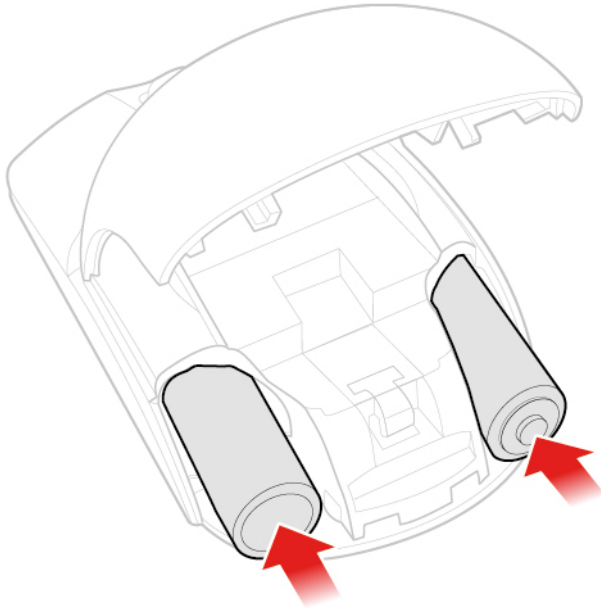


Figure 14. Installing the mouse batteries

- e. Close the battery compartment cover.

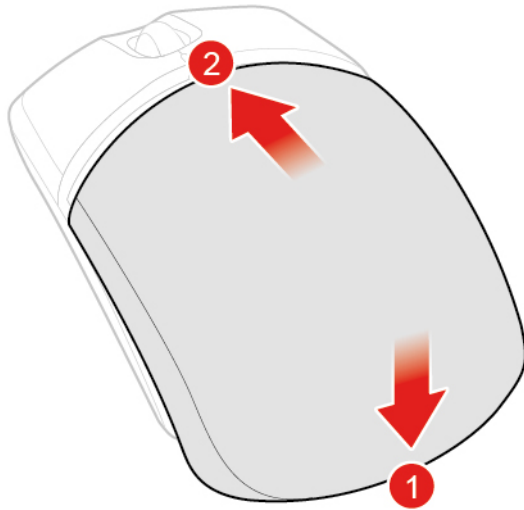


Figure 15. Closing the battery compartment cover

- f. Push the power switch to the on position.

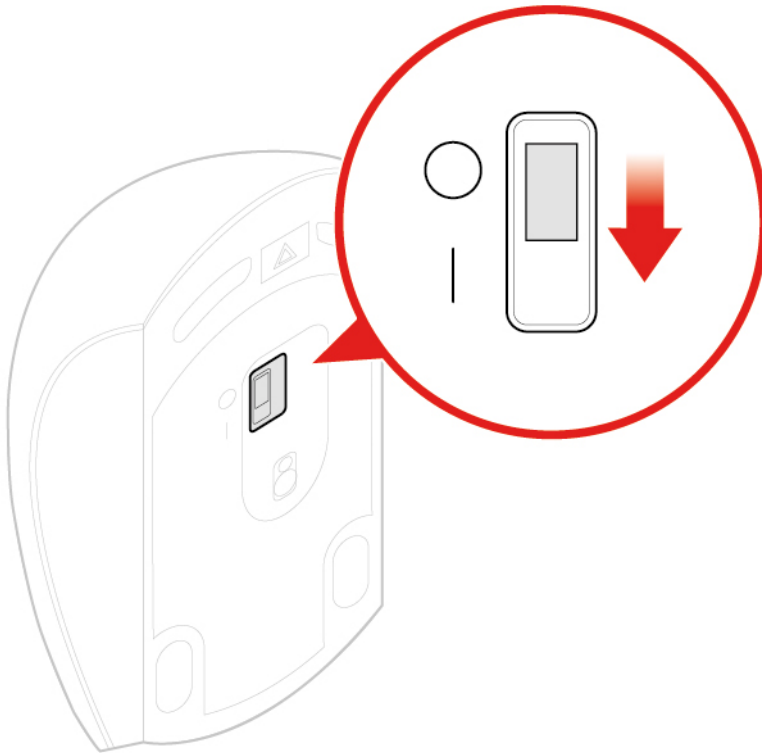


Figure 16. Pushing the power switch to the on position

Notes:

- 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.

- a. Remove the power adapter.

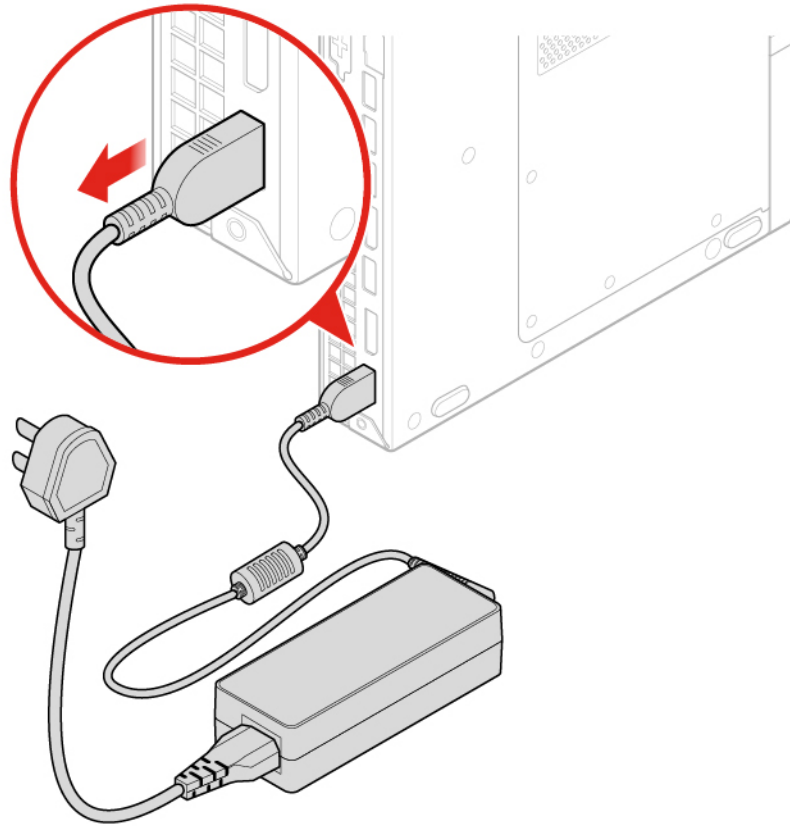


Figure 17. Removing the power adapter

- b. Remove the power cord.

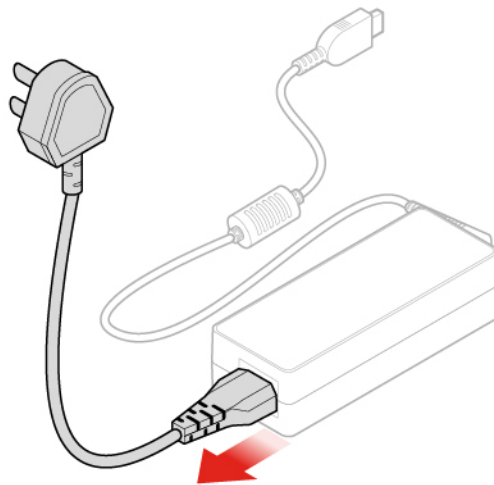


Figure 18. Removing the power cord

- c. Install the power cord.

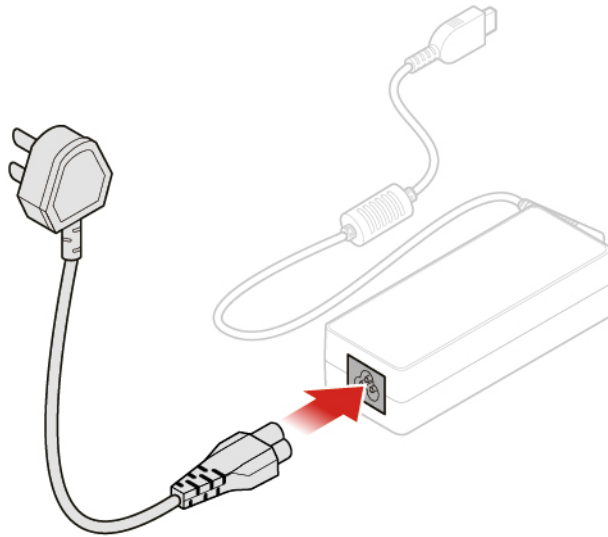


Figure 19. Installing the power cord

d. Install the power adapter.

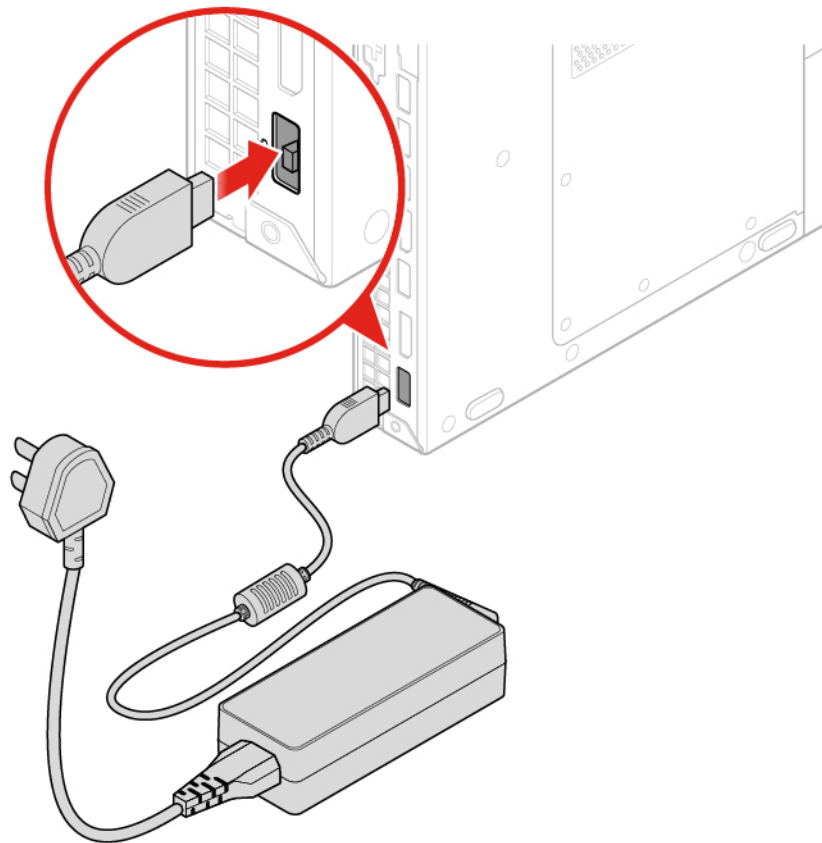


Figure 20. Installing the power adapter

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.
 - a. Remove the vertical stand.

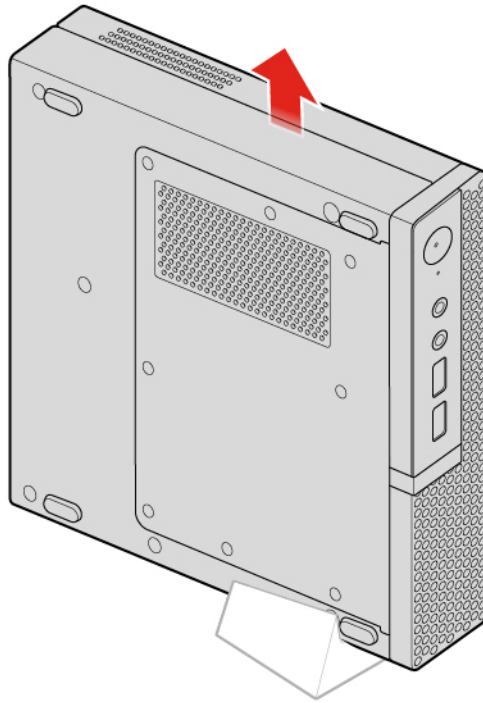


Figure 21. Removing the vertical stand

- b. Install the vertical stand.

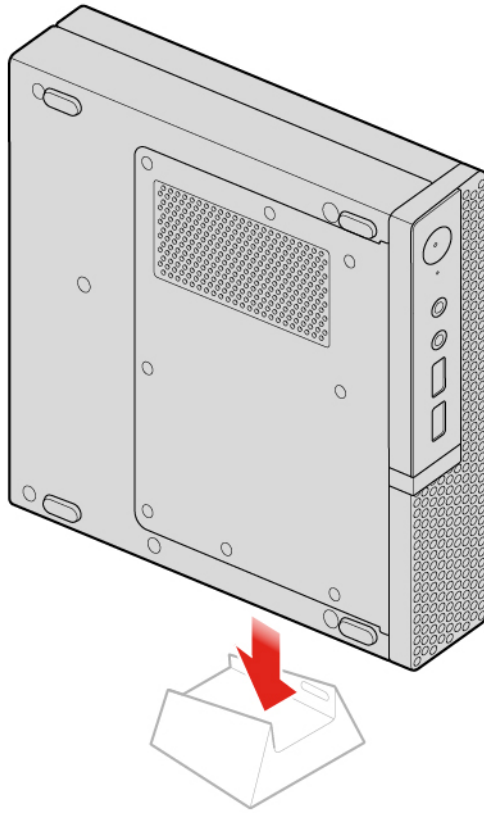


Figure 22. Installing the vertical stand

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.
 - a. Remove the VESA mount bracket.

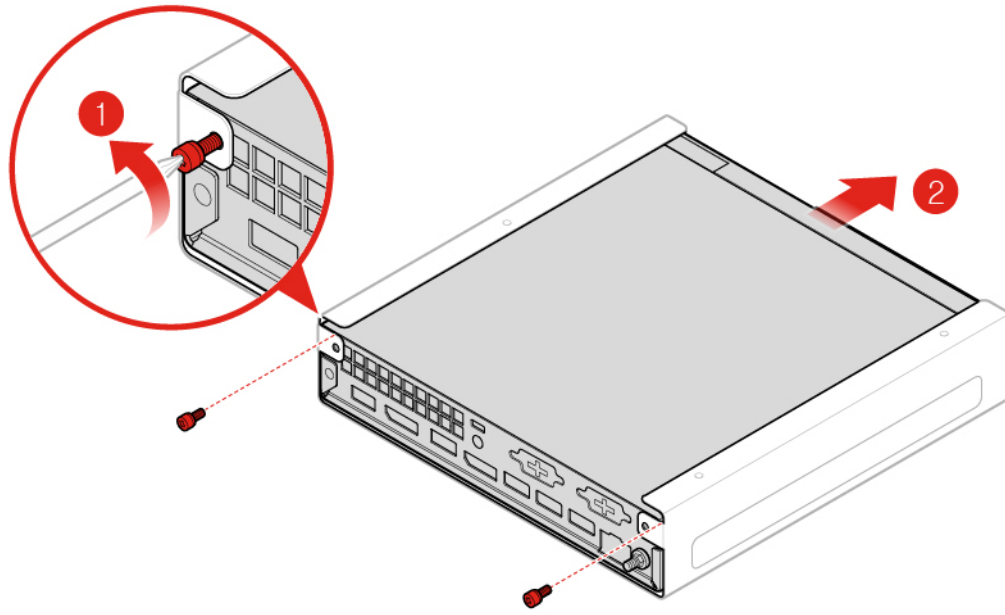


Figure 23. Removing the VESA mount bracket

- b. Install the VESA mount bracket.

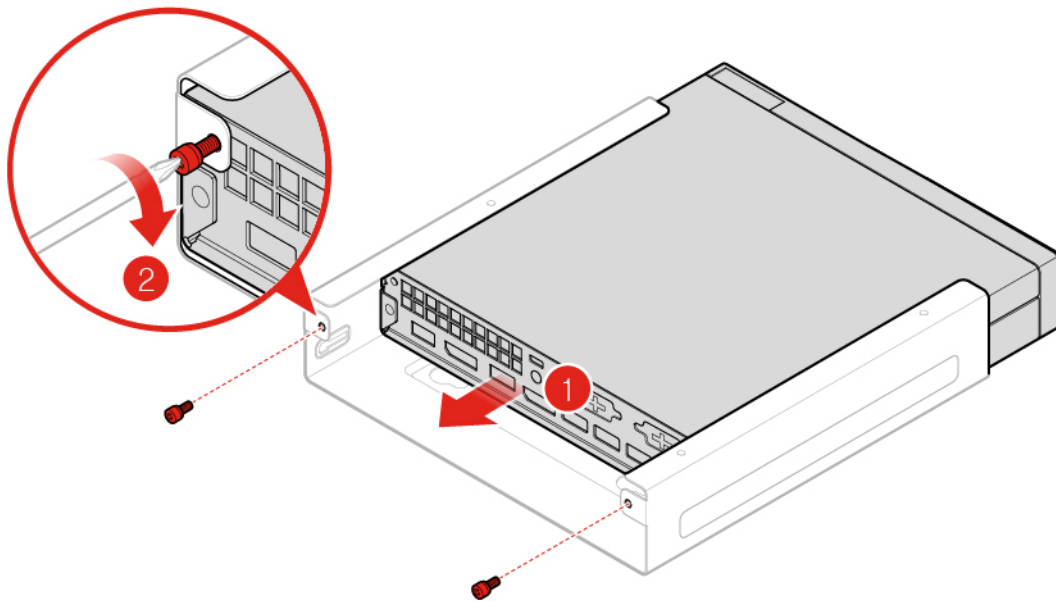


Figure 24. Installing the VESA mount bracket

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.
 - a. Remove the power adapter bracket.

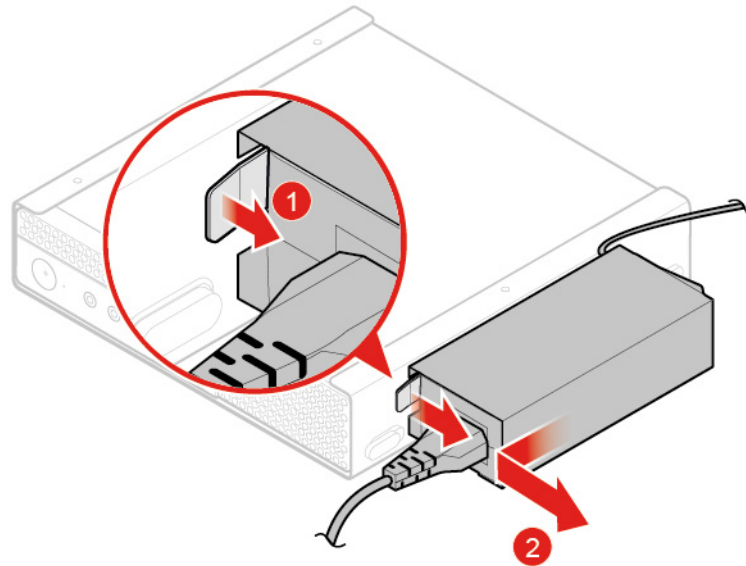


Figure 25. Removing the power adapter bracket

- b. Install the power adapter bracket.

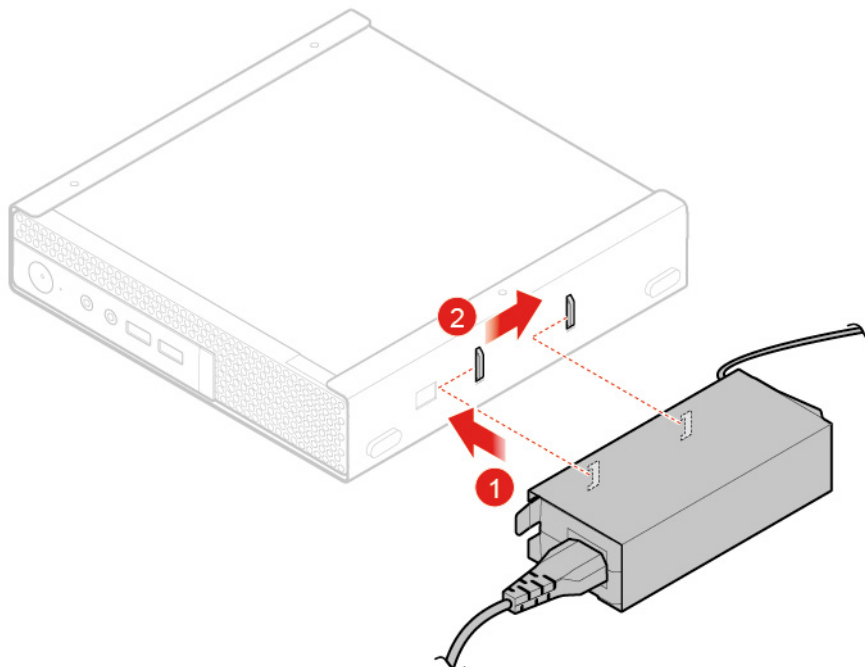


Figure 26. Installing the power adapter bracket

Removing the computer cover

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

Removing the computer cover for 10TF, 10TG, 10TH, 10TJ, and 10TK models

CAUTION:



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

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 dust shield.

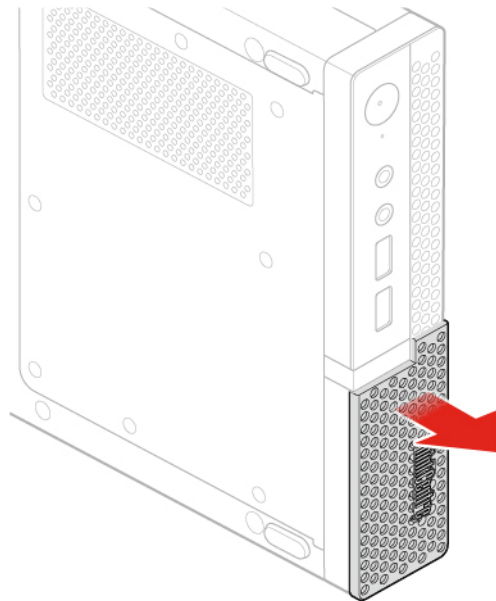


Figure 27. Removing the dust shield

4. Remove the computer cover.

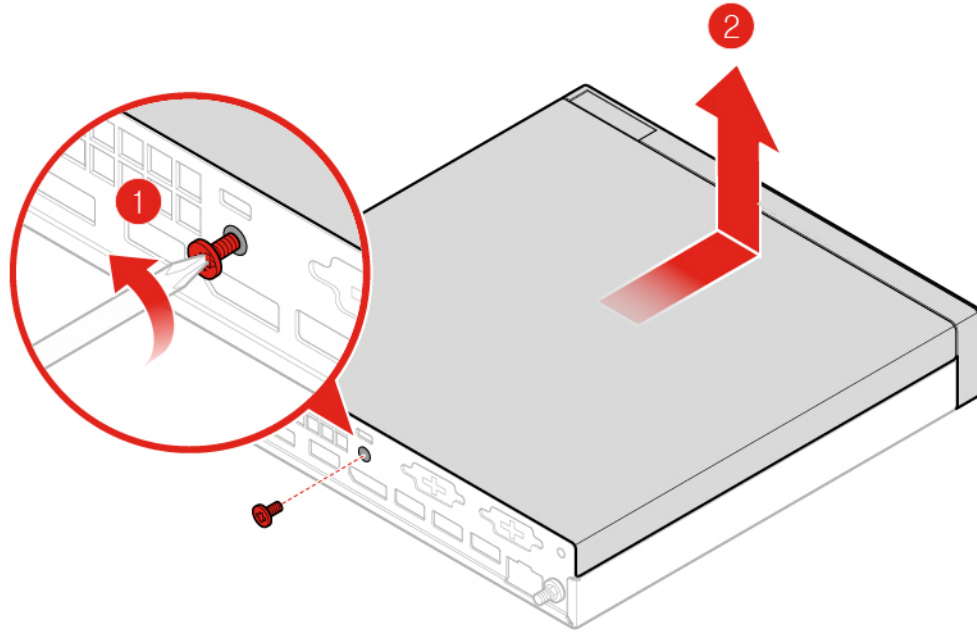


Figure 28. Removing the computer cover

Removing the computer cover for 10TL, 10UY, 10V0, 10V1, and 10V2 models

CAUTION:



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

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.

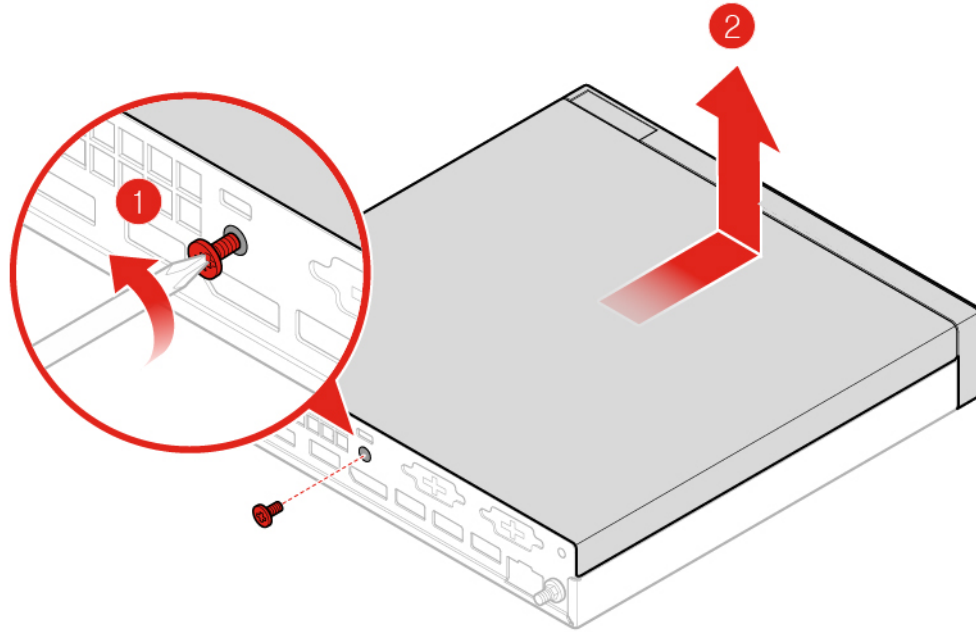


Figure 29. Removing the computer cover

Replacing the storage drive for 10TF, 10TG, 10TH, 10TJ, and 10TK 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. For details, see “Removing the computer cover” on page 28.
4. Replace the storage drive.
 - a. Remove the storage drive.

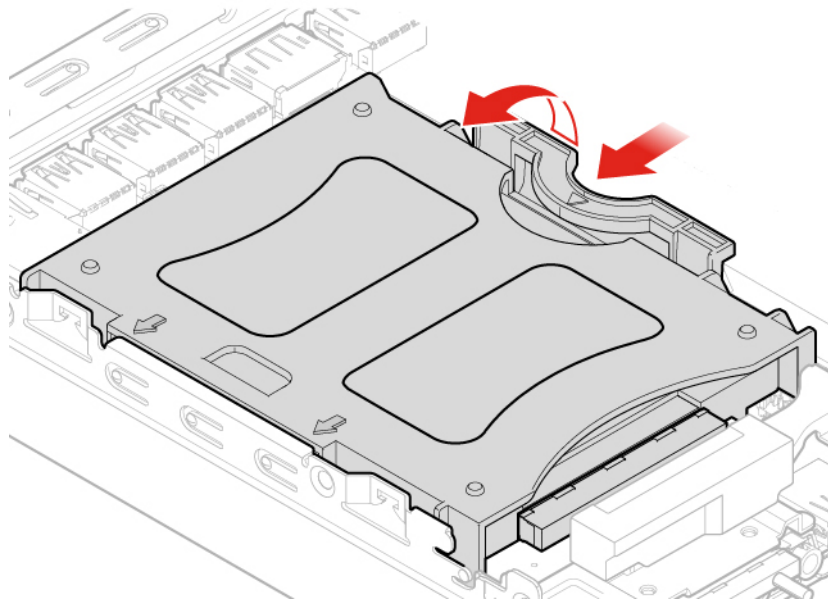


Figure 30. Removing the storage drive

- b. Disconnect the storage drive cable from the system board.
- c. Remove the storage drive bracket.

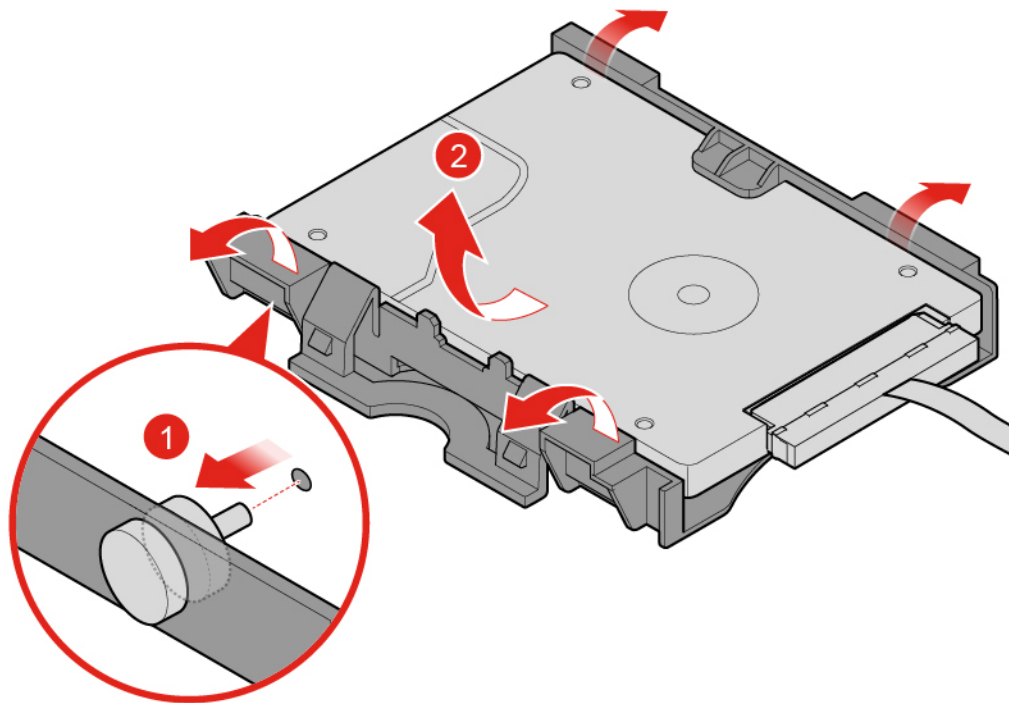


Figure 31. Removing the storage drive bracket

- d. Install the storage drive bracket.

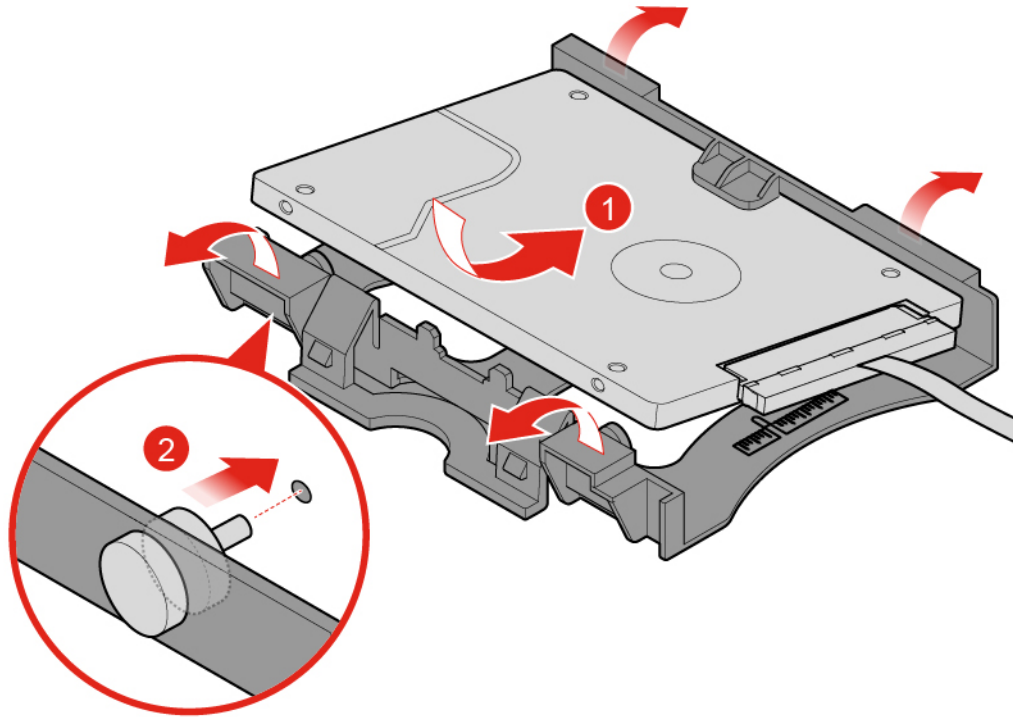


Figure 32. Installing the storage drive bracket

- e. Connect the storage drive cable to the system board.
- f. Install the storage drive.

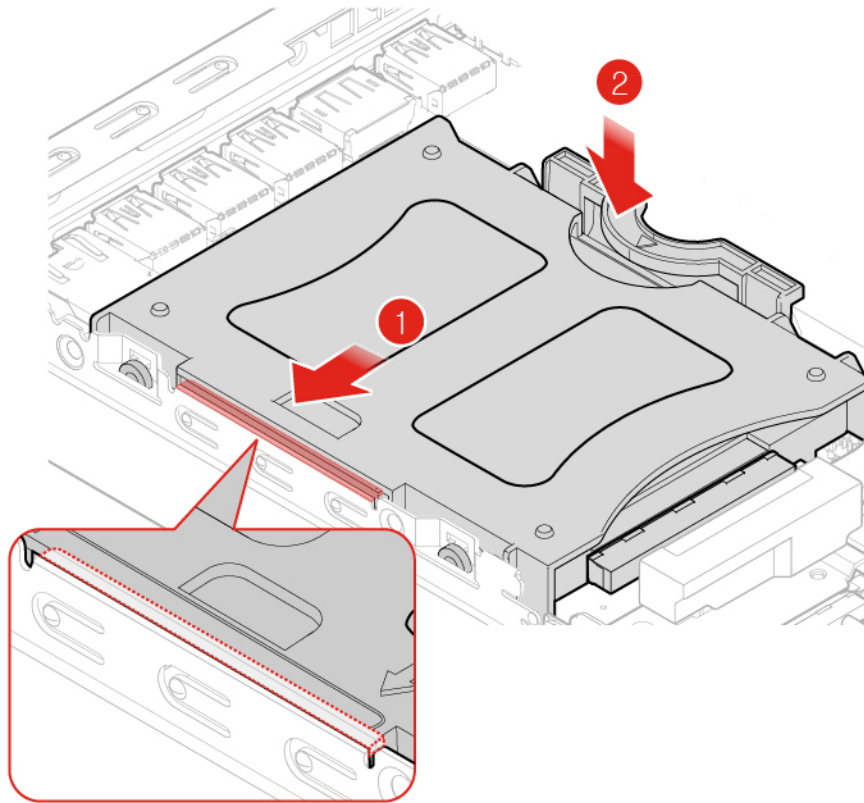


Figure 33. Installing the storage drive

5. Reinstall the computer cover and reconnect the cables. For details, see “Completing the parts replacement” on page 64.

Replacing the storage drive cable for 10TF, 10TG, 10TH, 10TJ, and 10TK 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. For details, see “Removing the computer cover” on page 28.
4. Remove the storage drive. For details, see “Replacing the storage drive for 10TF, 10TG, 10TH, 10TJ, and 10TK models” on page 30.
5. Replace the storage drive cable.
 - a. Remove the storage drive cable.

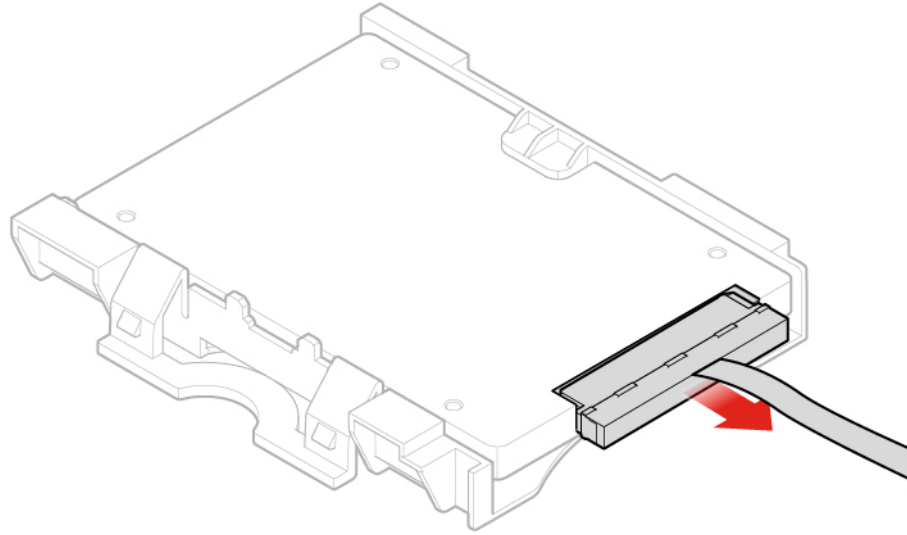


Figure 34. Removing the storage drive cable

- b. Install the storage drive cable.

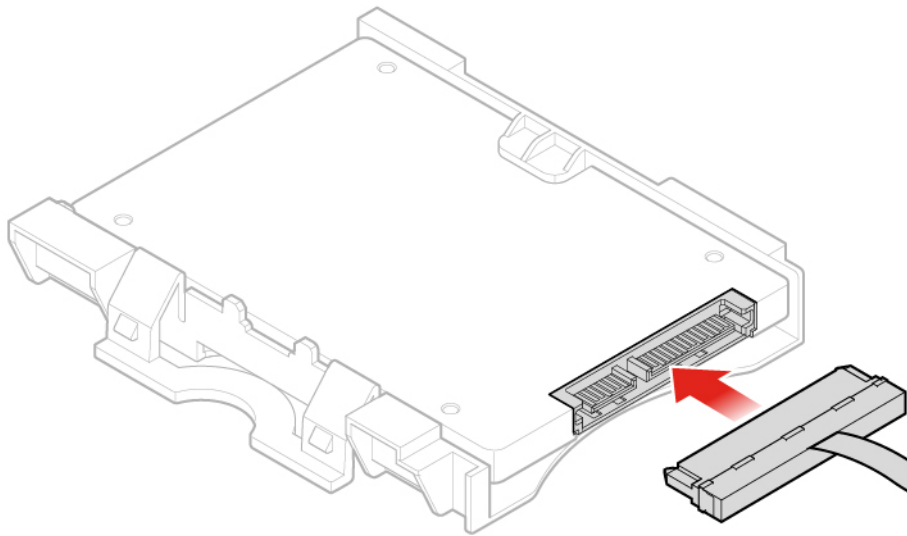


Figure 35. Installing the storage drive cable

6. Reinstall the computer cover and reconnect the cables. For details, see “Completing the parts replacement” on page 64.

Replacing the system fan for 10TF, 10TG, 10TH, 10TJ, and 10TK 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. For details, see “Removing the computer cover” on page 28.
4. Disconnect the system fan cable from the system fan connector on the system board. See “System board” on page 4.
5. Replace the system fan.
 - a. Remove the system fan.

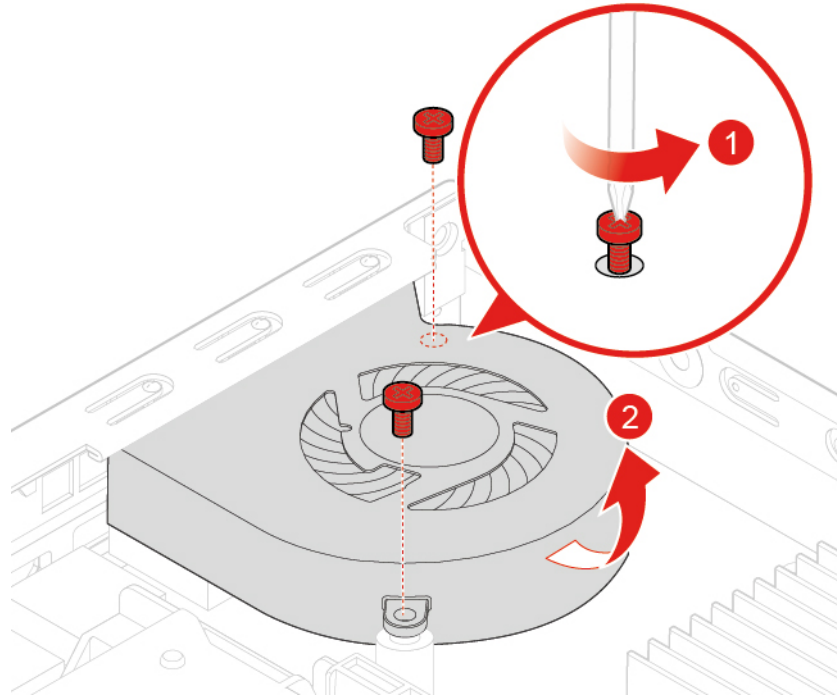


Figure 36. Removing the system fan

- b. Install the system fan.

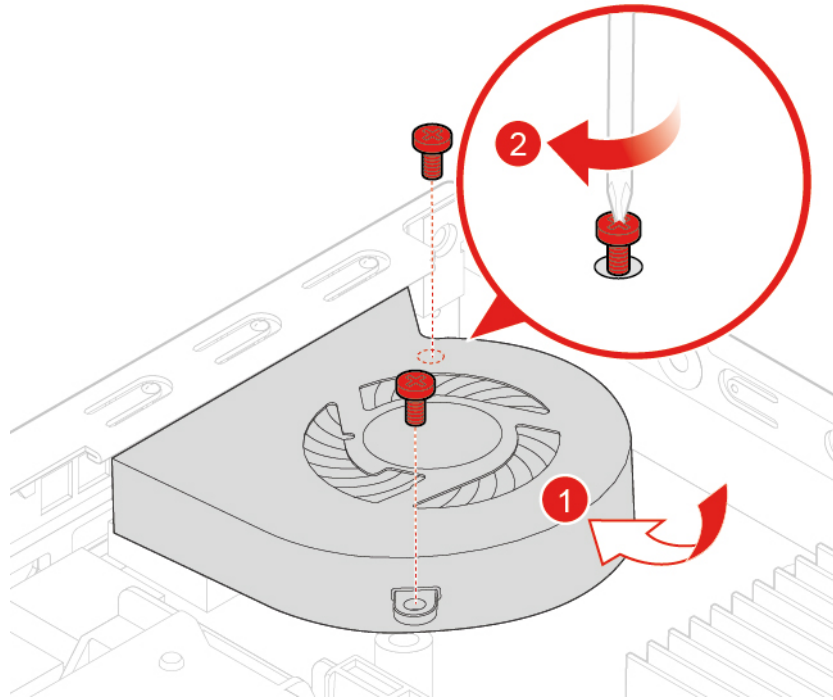


Figure 37. Installing the system fan

6. Connect the system fan cable to the system fan connector on the system board. See “System board” on page 4.
7. Reinstall the computer cover and reconnect the cables. For details, see “Completing the parts replacement” on page 64.

Replacing the heat sink

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

Replacing the heat sink for 10TF, 10TG, 10TH, 10TJ, and 10TK models

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” on page 28.
4. Replace the heat sink.
 - a. Remove the heat sink.

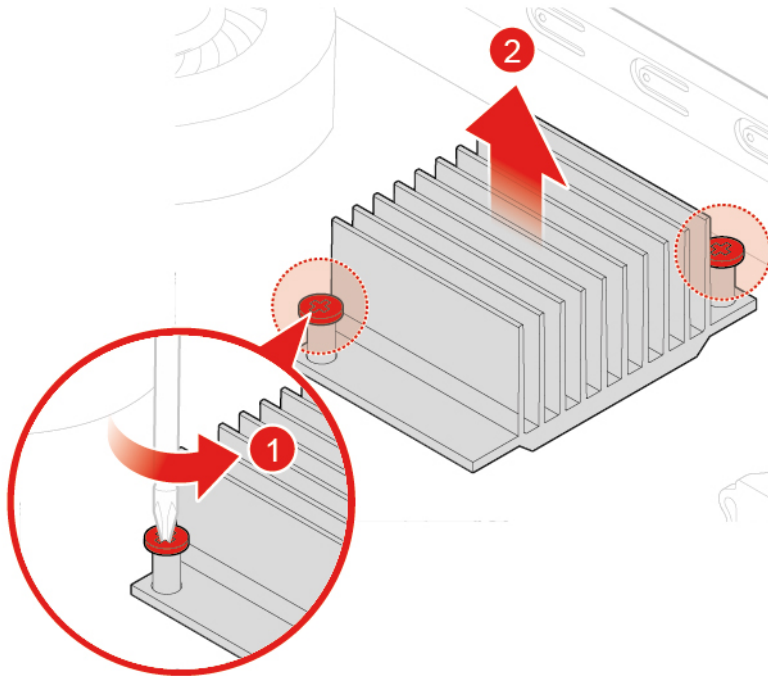


Figure 38. Removing the heat sink

b. Install the heat sink.

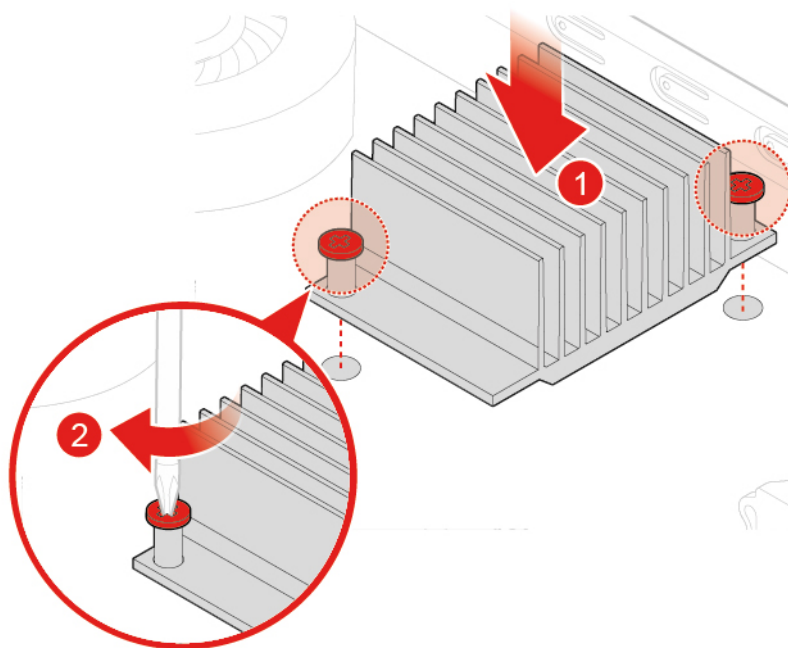


Figure 39. Installing the heat sink

5. Reinstall the computer cover and reconnect the cables. For details, see “Completing the parts replacement” on page 64.

Replacing the heat sink for 10TL, 10UY, 10V0, 10V1, and 10V2 models

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” on page 28.
4. Replace the heat sink.
 - a. Remove the heat sink.

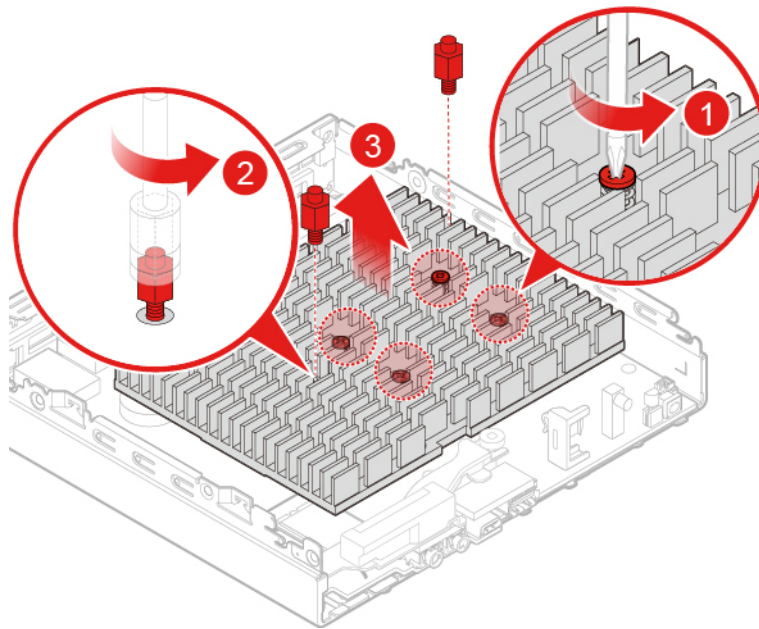


Figure 40. Removing the heat sink

- b. Install the heat sink.

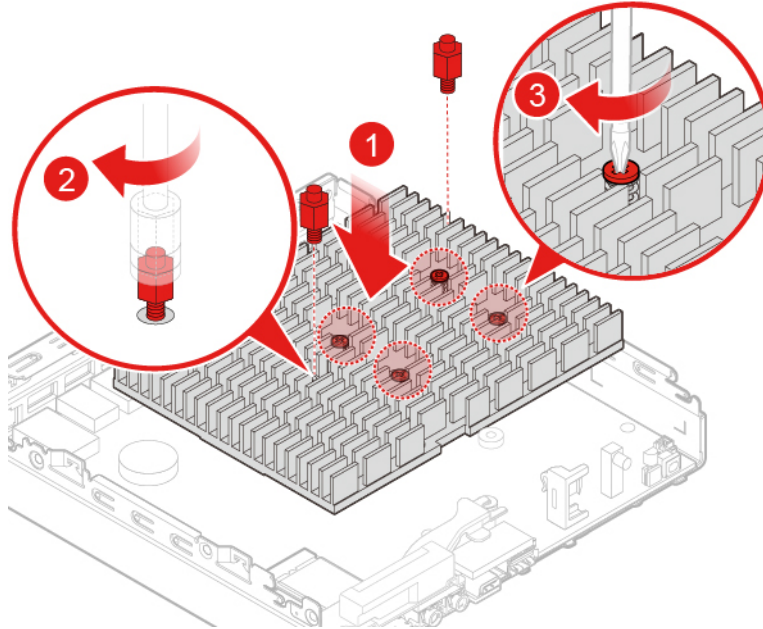


Figure 41. Installing the heat sink

5. Reinstall the computer cover and reconnect the cables. For details, see “Completing the parts replacement” on page 64.

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” on page 28.
4. Disconnect the internal speaker cable from the internal speaker connector on the system board.
5. Replace the internal speaker.
 - a. Remove the internal speaker.

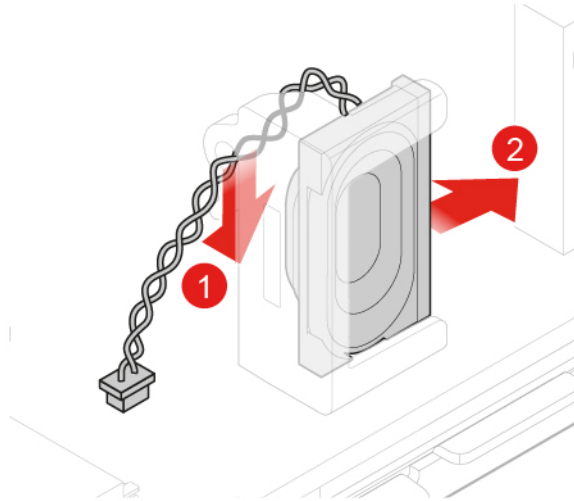


Figure 42. Removing the internal speaker

- b. Install the internal speaker.

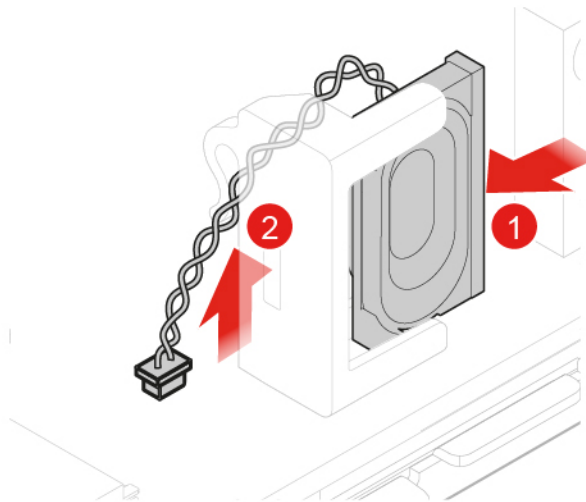


Figure 43. Installing the internal speaker

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” on page 64.

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” on page 28.
4. Remove the storage drive if necessary. For details, see “Replacing the storage drive for 10TF, 10TG, 10TH, 10TJ, and 10TK models” on page 30.
5. Remove the heat sink if necessary. For details, see “Replacing the heat sink” on page 36.
6. Depending on your computer model, refer to one of the following to replace the Wi-Fi card.
 - Type 1
 - a. Remove the Wi-Fi card shield.

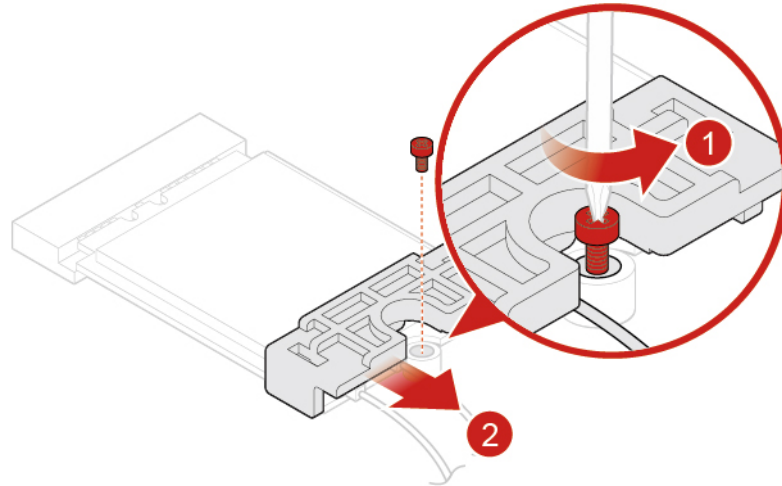


Figure 44. Removing the Wi-Fi card shield

- b. Disconnect the Wi-Fi antennas.

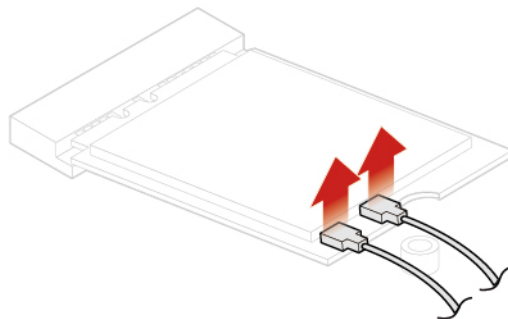


Figure 45. Disconnecting the Wi-Fi antennas

- c. Remove the Wi-Fi card.

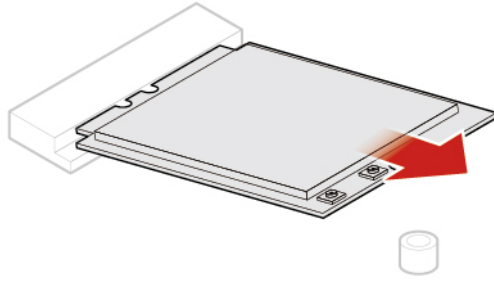


Figure 46. Removing the Wi-Fi card

- d. Install the Wi-Fi card.

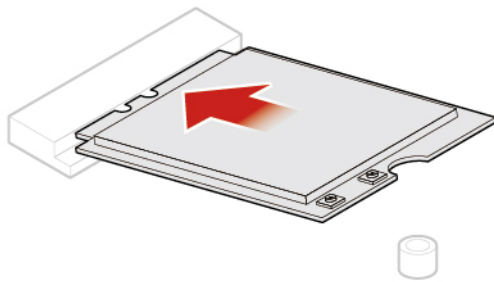


Figure 47. Installing the Wi-Fi card

- e. Connect the Wi-Fi antennas.

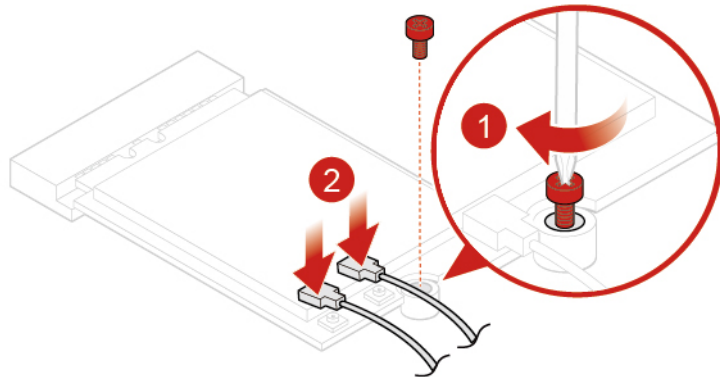


Figure 48. Connecting the Wi-Fi antennas

- f. Install the Wi-Fi card shield.

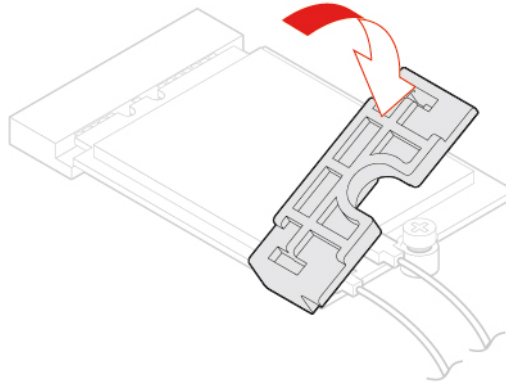


Figure 49. Install the Wi-Fi card shield

- Type 2
 - a. Remove the Wi-Fi card shield.

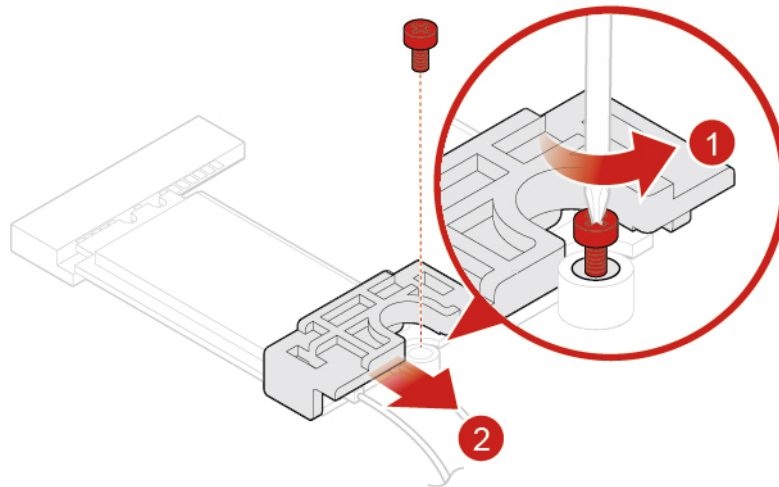


Figure 50. Removing the Wi-Fi card shield

- b. Disconnect the Wi-Fi antennas.

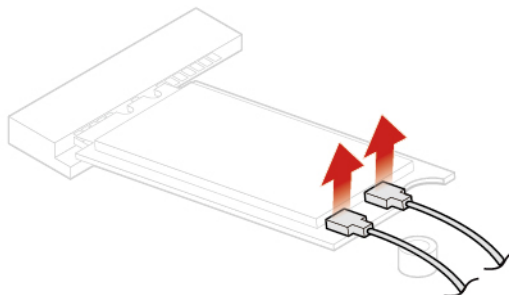


Figure 51. Disconnecting the Wi-Fi antennas

- c. Remove the Wi-Fi card.

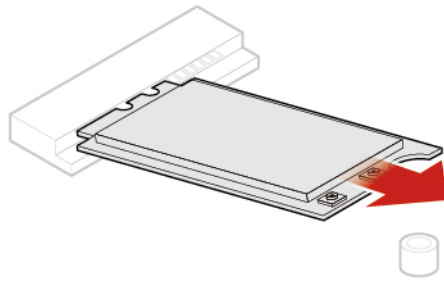


Figure 52. Removing the Wi-Fi card

- d. Install the Wi-Fi card.

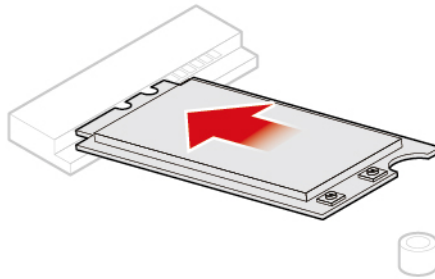


Figure 53. Installing the Wi-Fi card

- e. Connect the Wi-Fi antennas.

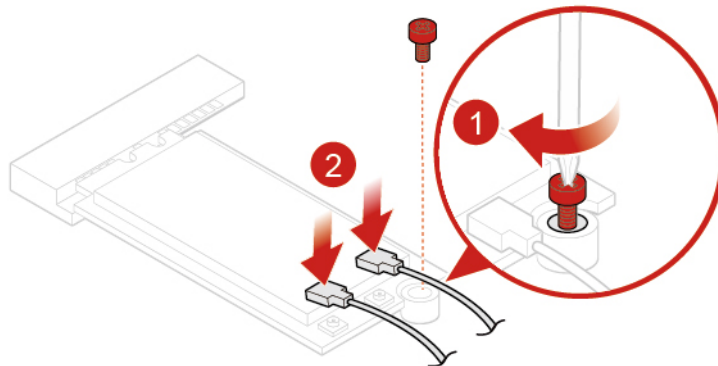


Figure 54. Connecting the Wi-Fi antennas

- f. Install the Wi-Fi card shield.

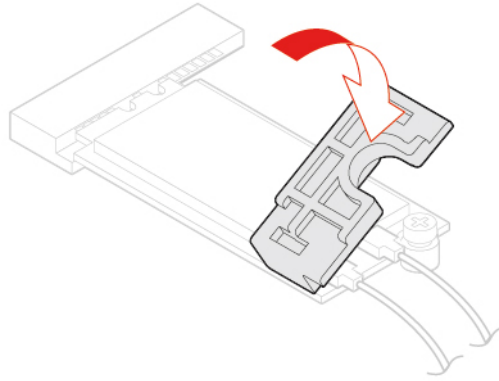


Figure 55. Install the Wi-Fi card shield

7. Reinstall the computer cover and reconnect the cables. For details, see “Completing the parts replacement” on page 64.

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 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” on page 28.
4. Remove the storage drive if necessary. For details, see “Replacing the storage drive for 10TF, 10TG, 10TH, 10TJ, and 10TK models” on page 30.
5. Replace the front Wi-Fi antenna.
 - a. Disconnect the front Wi-Fi antenna cable from the Wi-Fi card.

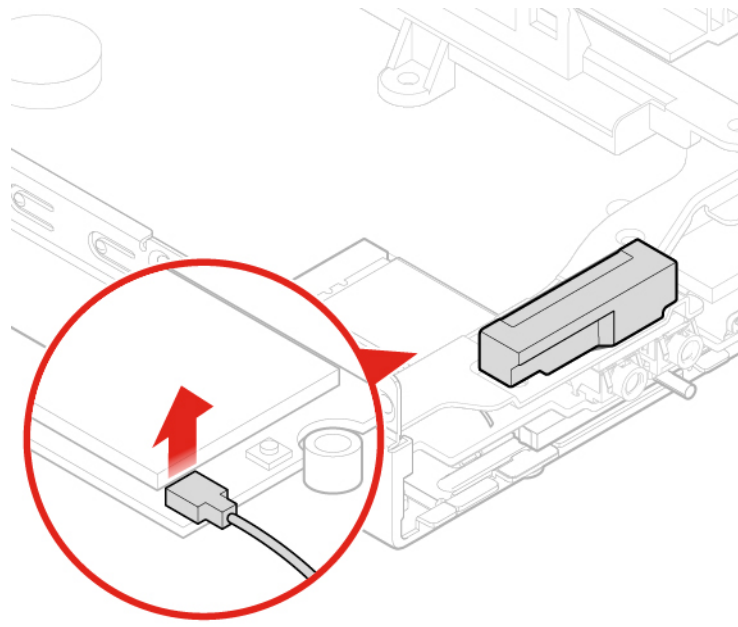


Figure 56. Disconnecting the front Wi-Fi antenna cable from the Wi-Fi card

- b. Remove the front Wi-Fi antenna.

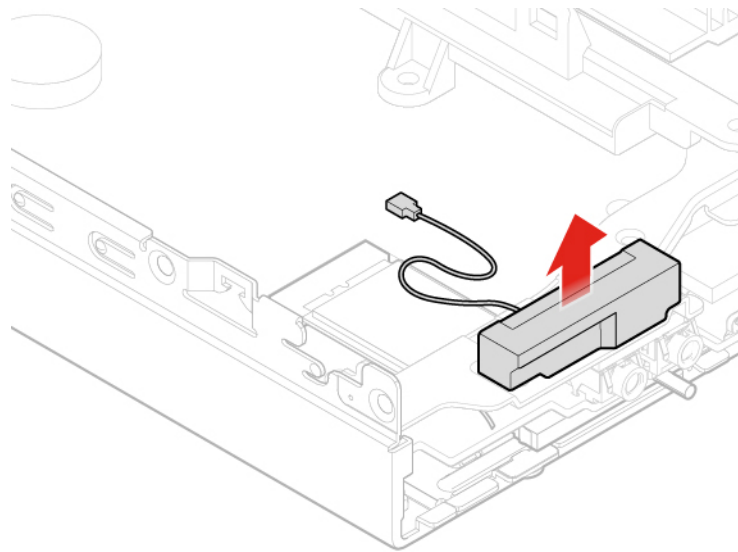


Figure 57. Removing the front Wi-Fi antenna

- c. Install the front Wi-Fi antenna.

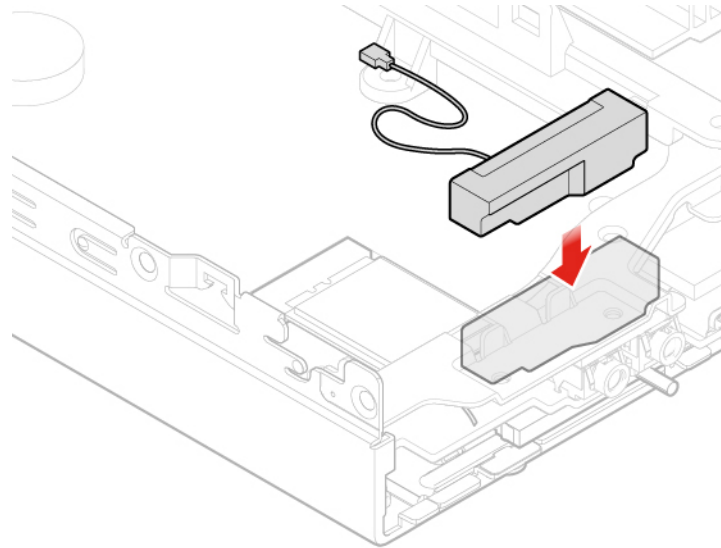


Figure 58. Installing the front Wi-Fi antenna

- d. Connect the front Wi-Fi antenna cable to the Wi-Fi card.

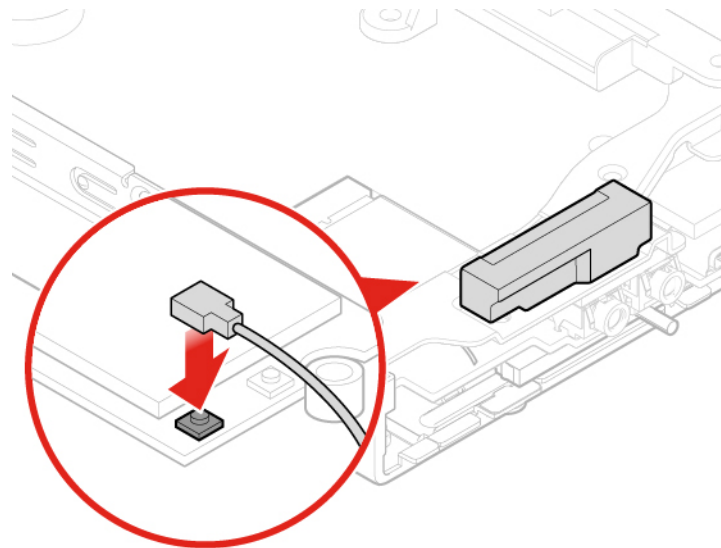


Figure 59. Connecting the front Wi-Fi antenna cable to the Wi-Fi card

6. Reinstall the computer cover and reconnect the cables. For details, see “Completing the parts replacement” on page 64.

Replacing the rear Wi-Fi antenna

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” on page 28.

4. Remove the storage drive if necessary. For details, see “Replacing the storage drive for 10TF, 10TG, 10TH, 10TJ, and 10TK models” on page 30.
5. Disconnect the rear Wi-Fi antenna cable from the Wi-Fi card.
6. Replace the rear Wi-Fi antenna.

Note: Record the cable routing before removing the rear Wi-Fi antenna cable.

- a. Remove the rear Wi-Fi antenna.

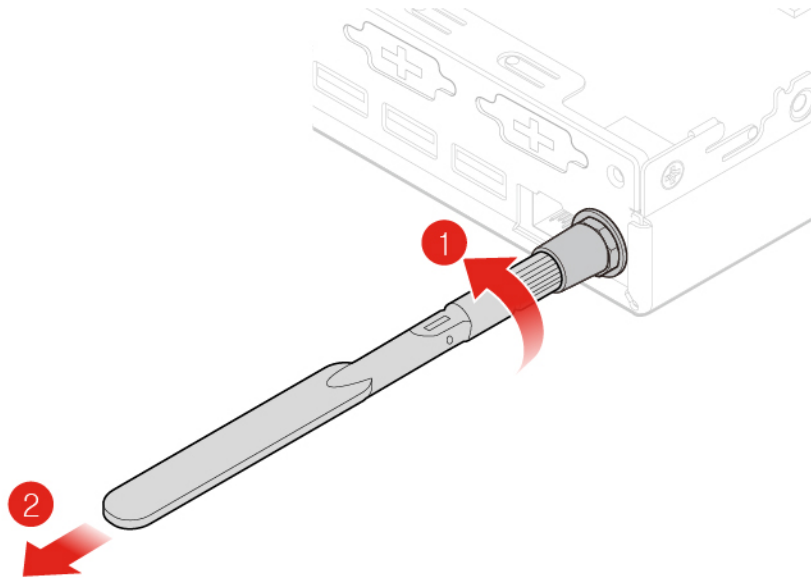


Figure 60. Removing the rear Wi-Fi antenna

- b. Remove the screw cover that secures the rear Wi-Fi antenna cable.

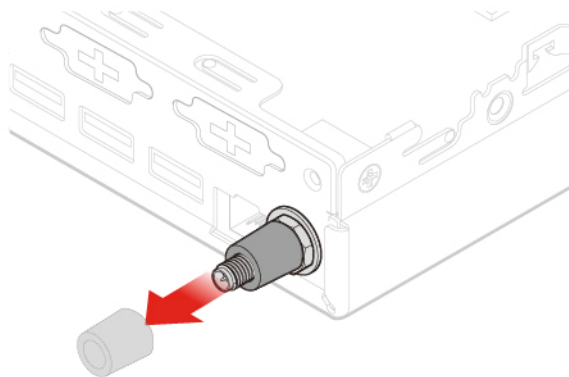


Figure 61. Removing the screw cover that secures the rear Wi-Fi antenna cable

- c. Remove the rear Wi-Fi antenna cable.

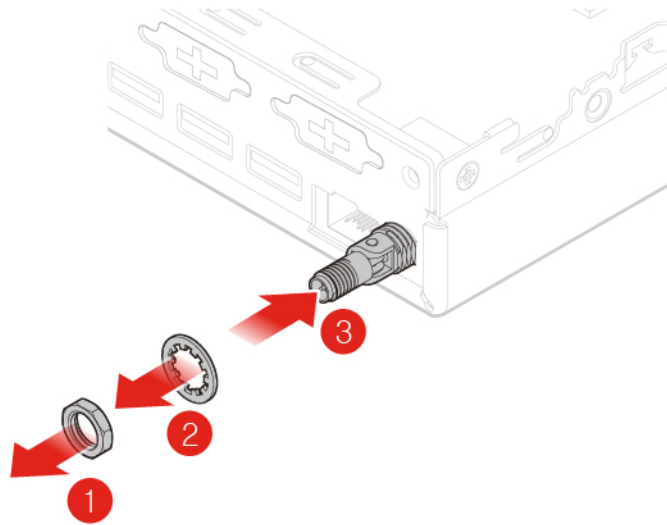


Figure 62. Removing the rear Wi-Fi antenna cable

- d. Install the rear Wi-Fi antenna cable.

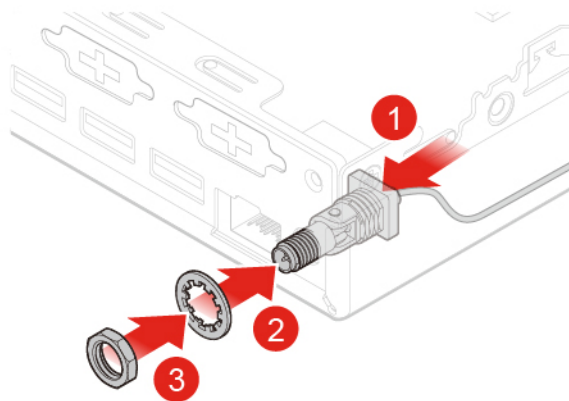


Figure 63. Installing the rear Wi-Fi antenna cable

- e. Install the screw cover to secure the rear Wi-Fi antenna cable.

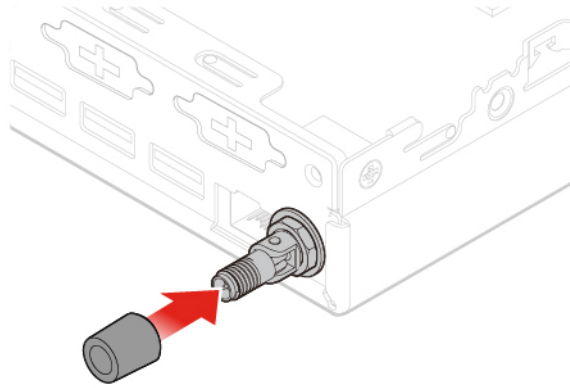


Figure 64. Installing the screw cover to secure the rear Wi-Fi antenna cable

- f. Install the rear Wi-Fi antenna.

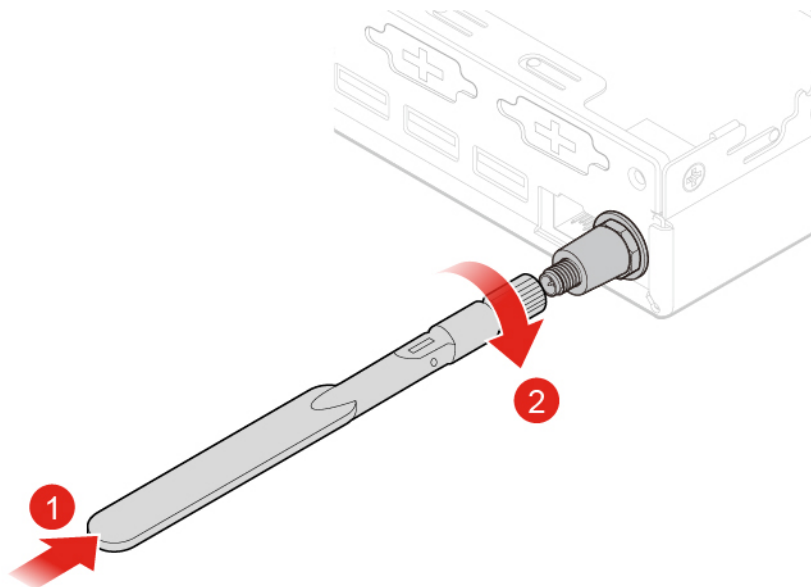


Figure 65. Installing the rear Wi-Fi antenna

7. Connect the rear Wi-Fi antenna cable to the Wi-Fi card.
8. Reinstall the computer cover and reconnect the cables. For details, see “Completing the parts replacement” on page 64.

Replacing the antenna bracket

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

Replacing the antenna bracket for 10TF, 10TG, 10TH, 10TJ, and 10TK models

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” on page 28.
4. Remove the storage drive. For details, see “Replacing the storage drive for 10TF, 10TG, 10TH, 10TJ, and 10TK models” on page 30.
5. Remove the front Wi-Fi antennas. For details, see “Replacing the Wi-Fi antennas” on page 45.
6. Replace the antenna bracket.
 - a. Remove the storage drive assembly bracket.

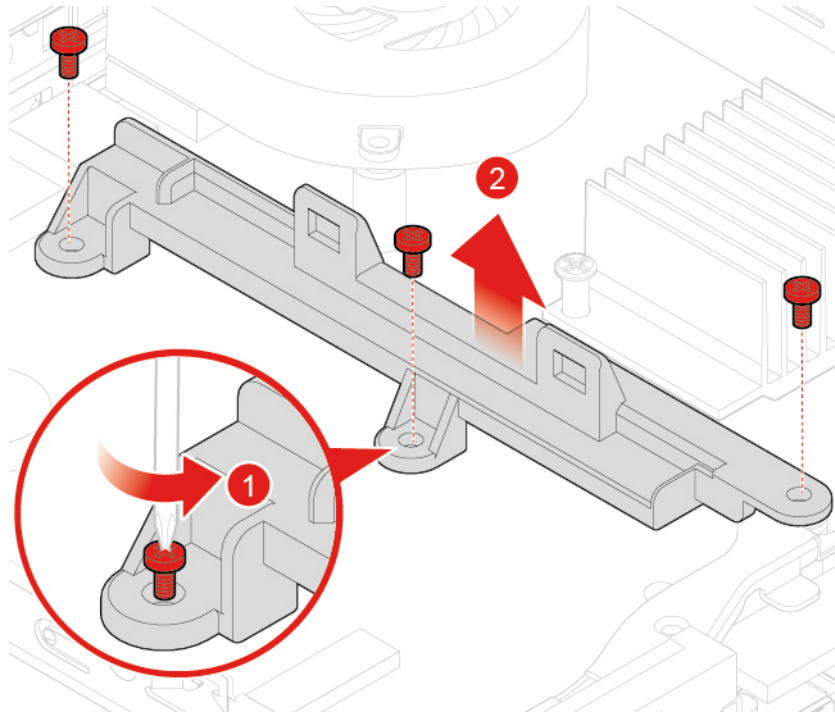


Figure 66. Removing the storage drive assembly bracket

- b. Remove the antenna bracket.

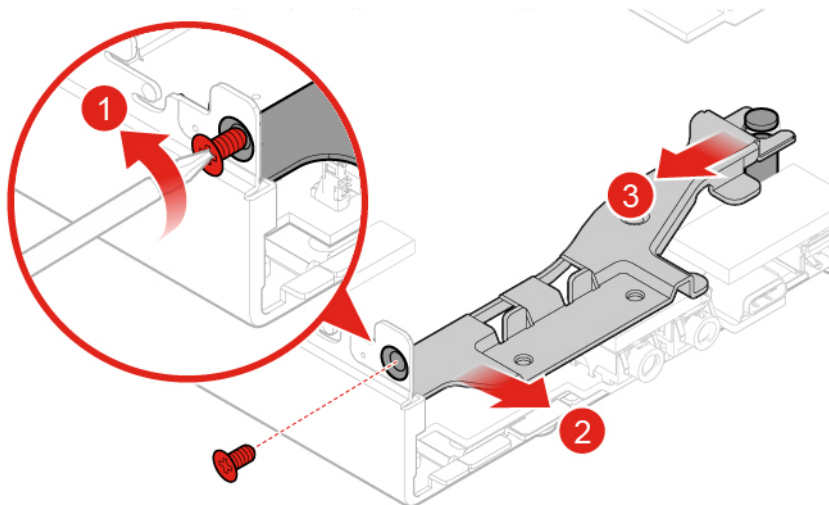


Figure 67. Removing the antenna bracket

c. Install the antenna bracket.

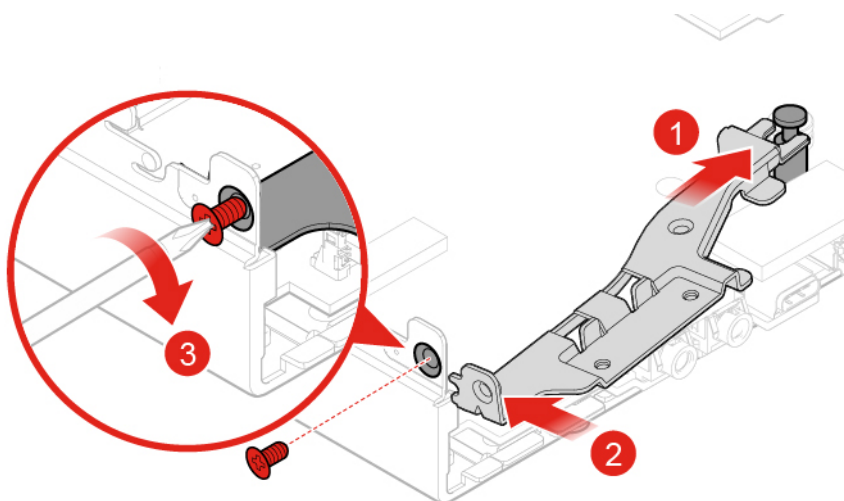


Figure 68. Installing the antenna bracket

d. Install the storage drive assembly bracket.

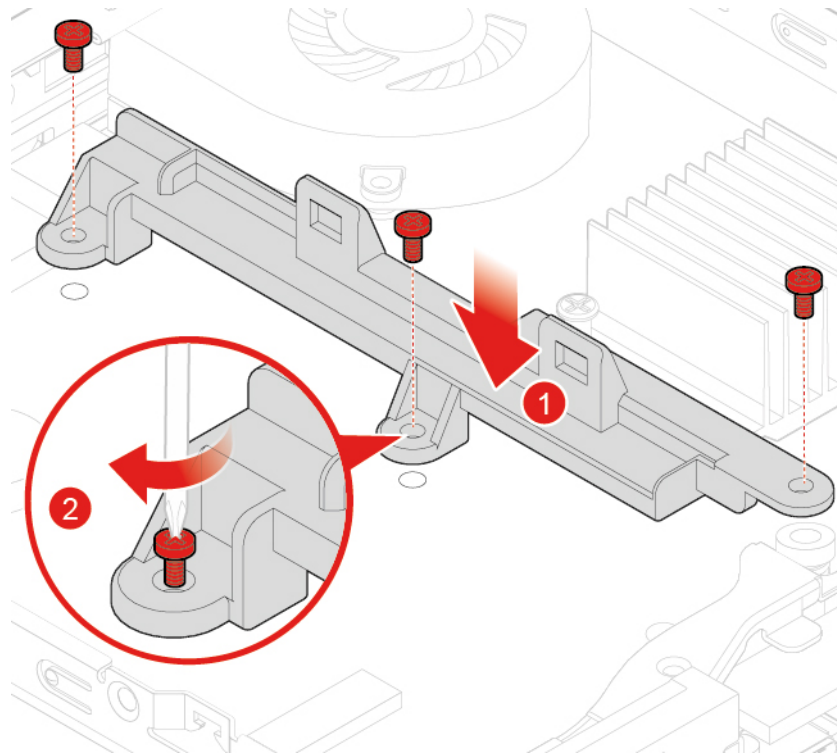


Figure 69. Installing the storage drive assembly bracket

7. Reinstall the computer cover and reconnect the cables. For details, see “Completing the parts replacement” on page 64.

Replacing the antenna bracket for 10TL, 10UY, 10V0, 10V1, and 10V2 models

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” on page 28.
4. Remove the front Wi-Fi antenna. For details, see “Replacing the Wi-Fi antennas” on page 45.
5. Replace the antenna bracket.
 - a. Remove the antenna bracket.

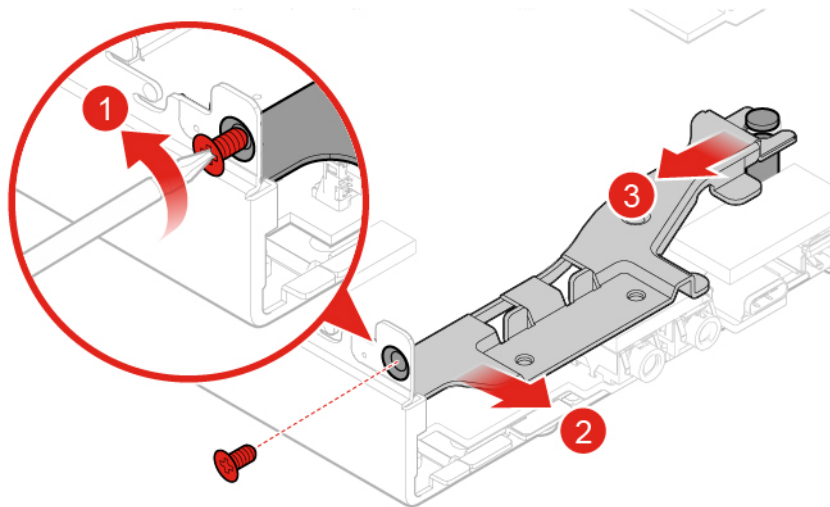


Figure 70. Removing the antenna bracket

- b. Install the antenna bracket.

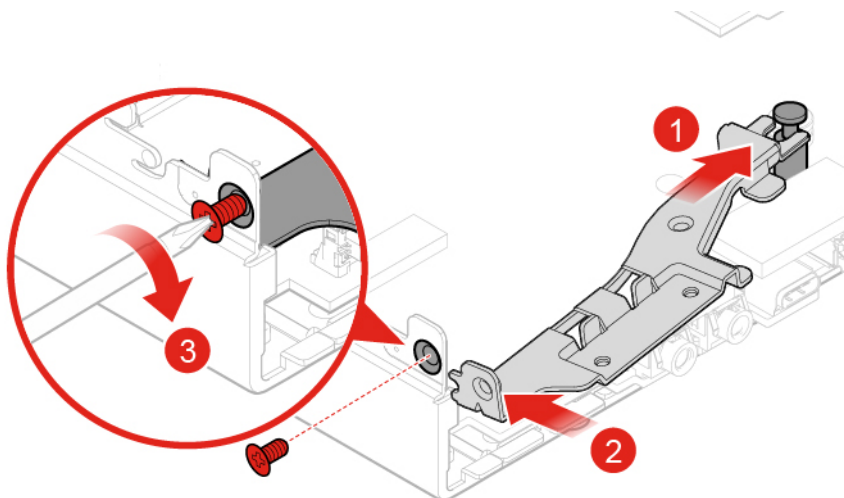


Figure 71. Installing the antenna bracket

6. Reinstall the computer cover and reconnect the cables. For details, see “Completing the parts replacement” on page 64.

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.

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” on page 28.
4. Remove the storage drive if necessary. For details, see “Replacing the storage drive for 10TF, 10TG, 10TH, 10TJ, and 10TK models” on page 30.
5. Remove the heat sink if necessary. For details, see “Replacing the heat sink” on page 36.
6. Replace the coin-cell battery.
 - a. Press the metallic tab as shown.

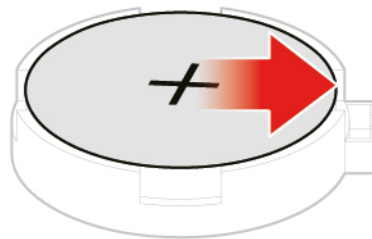


Figure 72. Unlocking the microprocessor socket retainer

- b. Remove the coin-cell battery.

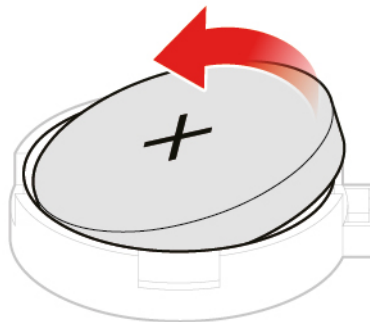


Figure 73. Pivoting the microprocessor socket upward

- c. Install the coin-cell battery.

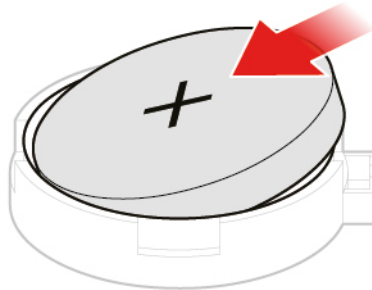


Figure 74. Removing the microprocessor

- d. Press the coin-cell battery downward until it snaps into position.

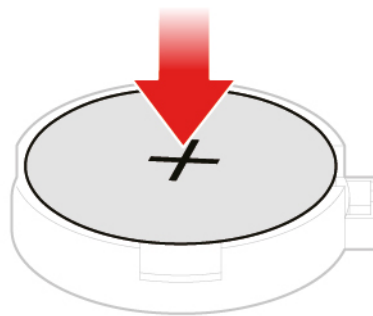


Figure 75. Installing the microprocessor

7. Reinstall the computer cover and reconnect the cables. For details, see “Completing the parts replacement” on page 64.

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

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” on page 28.
4. Replace the bottom cover.
 - a. Remove the bottom cover.

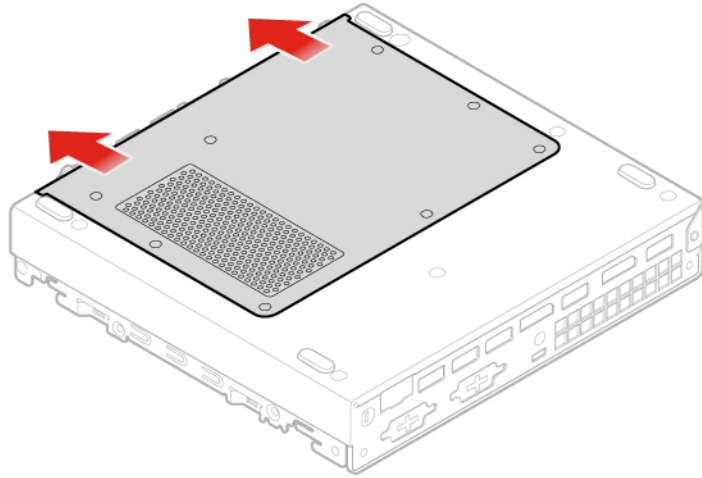


Figure 76. Removing the bottom cover

- b. Install the bottom cover.

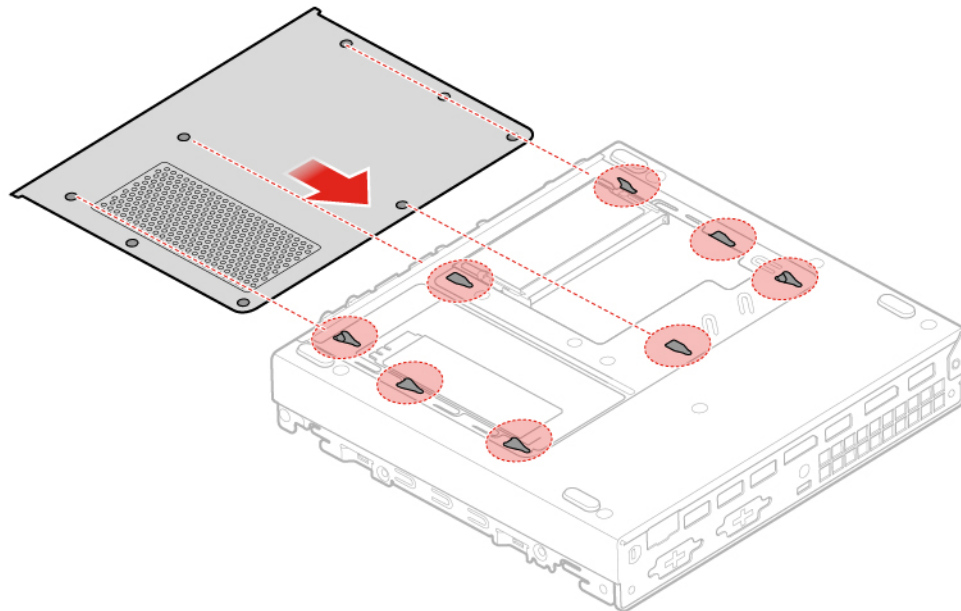


Figure 77. Installing the bottom cover

5. Reinstall the computer cover and reconnect the cables. For details, see “Completing the parts replacement” on page 64.

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” on page 28.
4. Remove the bottom cover. For details, see “Replacing the bottom cover” on page 56.
5. Replace the memory module.
 - a. Open the memory module retainer.

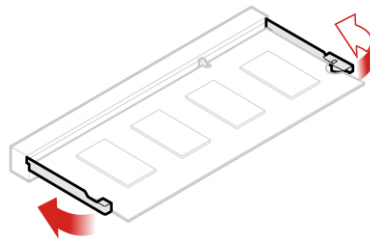


Figure 78. Opening the memory module retainer

- b. Remove the memory module.

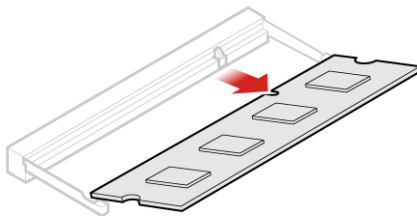


Figure 79. Removing the memory module

- c. Install the memory module.

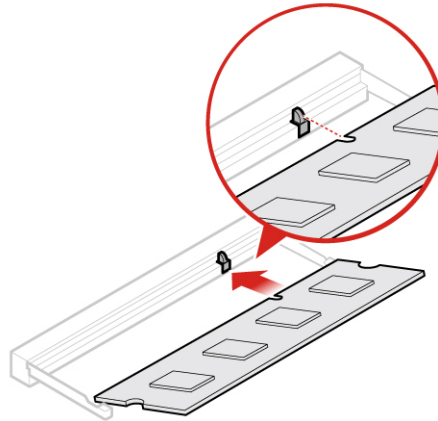


Figure 80. Installing the memory module

- d. Close the memory module retainer.

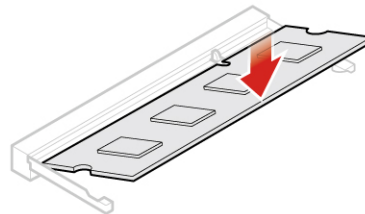


Figure 81. Closing the memory module retainer

6. Reinstall the computer cover and reconnect the cables. For details, see “Completing the parts replacement” on page 64.

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” on page 28.
4. Remove the bottom cover. For details, see “Replacing the bottom cover” on page 56.
5. Replace the M.2 storage drive.
 - a. Unlock the M.2 storage drive clip.

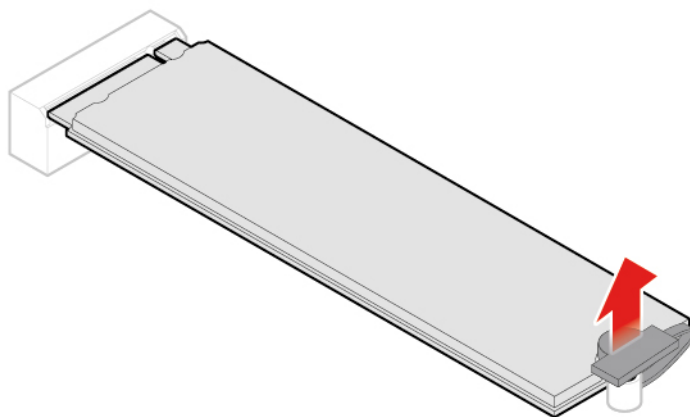


Figure 82. Unlocking the M.2 storage drive clip

- b. Remove the M.2 storage drive.

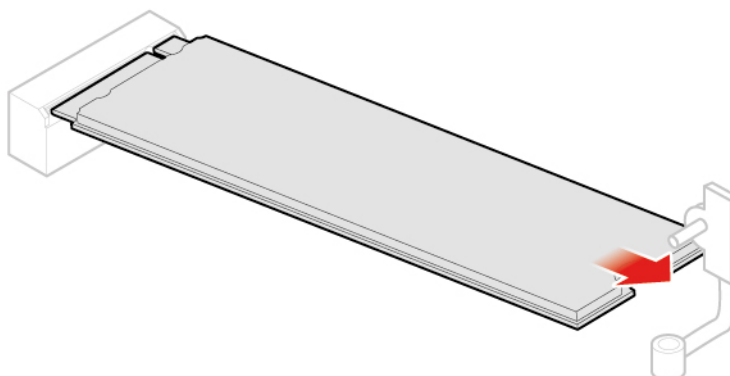


Figure 83. Removing the M.2 storage drive

- c. Install the M.2 storage drive.

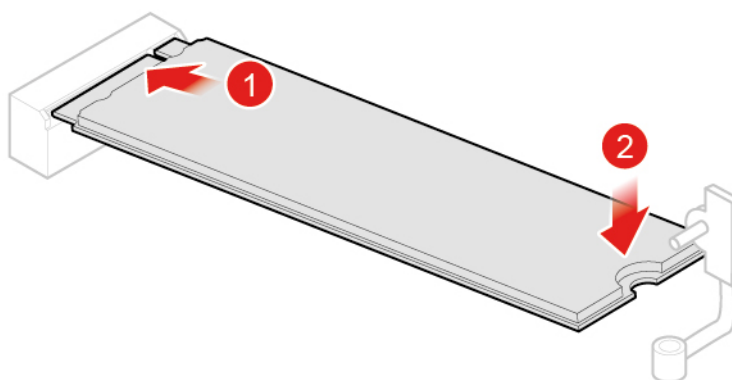


Figure 84. Installing the M.2 storage drive

- d. Lock the M.2 storage drive clip.

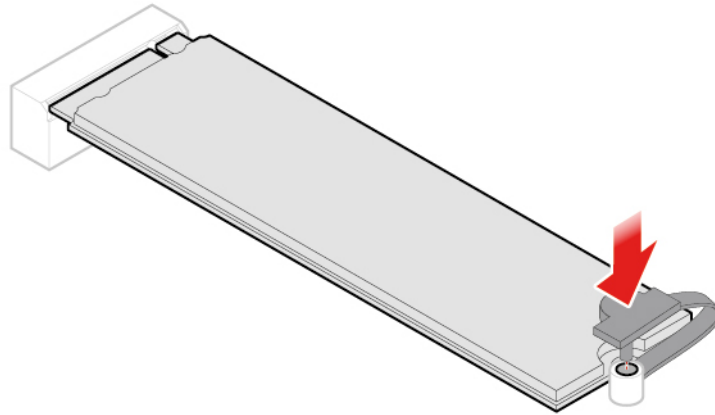


Figure 85. Locking the M.2 storage drive clip

6. Reinstall the computer cover and reconnect the cables. For details, see “Completing the parts replacement” on page 64.

Replacing the system board and chassis

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” on page 28.
4. Remove the storage drive if necessary. For details, see “Replacing the storage drive for 10TF, 10TG, 10TH, 10TJ, and 10TK models” on page 30.
5. Remove the system fan if necessary. For details, see “Replacing the system fan for 10TF, 10TG, 10TH, 10TJ, and 10TK models” on page 34.
6. Remove the heat sink. For details, see “Replacing the heat sink” on page 36.
7. Remove the internal speaker. For details, see “Replacing the internal speaker” on page 39.
8. Remove the Wi-Fi card. For details, see “Replacing the Wi-Fi card” on page 40.
9. Remove the Wi-Fi antennas. For details, see “Replacing the Wi-Fi antennas” on page 45.
10. Remove the antenna bracket. For details, see “Replacing the antenna bracket” on page 50.
11. Remove the bottom cover. For details, see “Replacing the bottom cover” on page 56.
12. Remove the memory module. For details, see “Replacing the memory module” on page 58.
13. Remove the M.2 storage drive. For details, see “Replacing the M.2 storage drive” on page 59.
14. Record the cable routing and cable connections, and then disconnect all cables from the system board. See “System board” on page 4.
15. Replace the system board and chassis.

- Note:** Carefully handle the system board by its edges.
- a. Remove the screws that secure the system board.

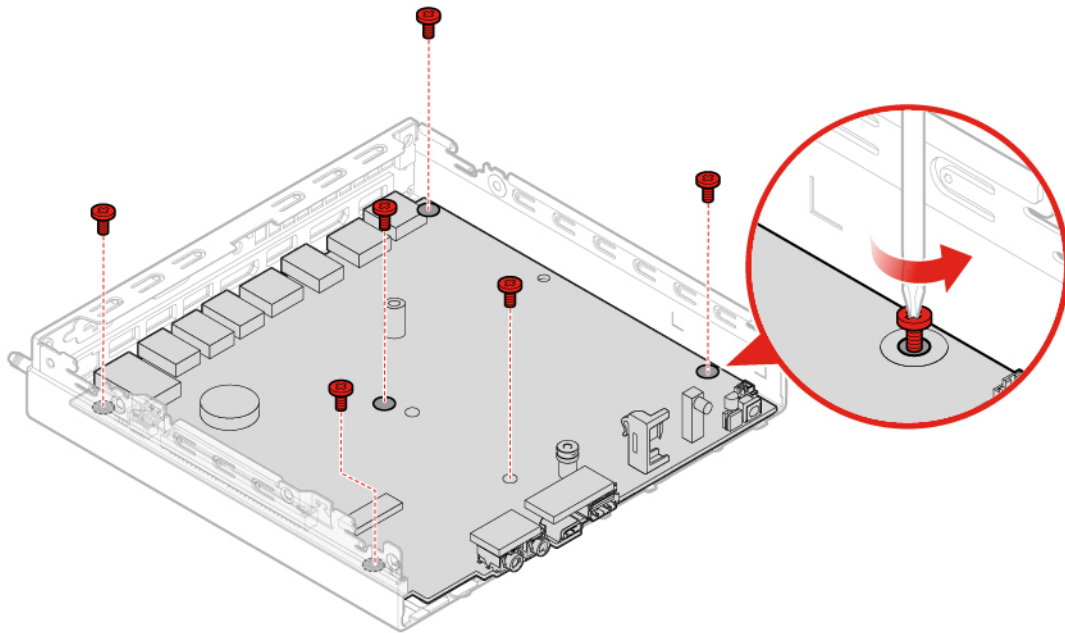


Figure 86. Removing the screws that secure the system board

b. Remove the system board.

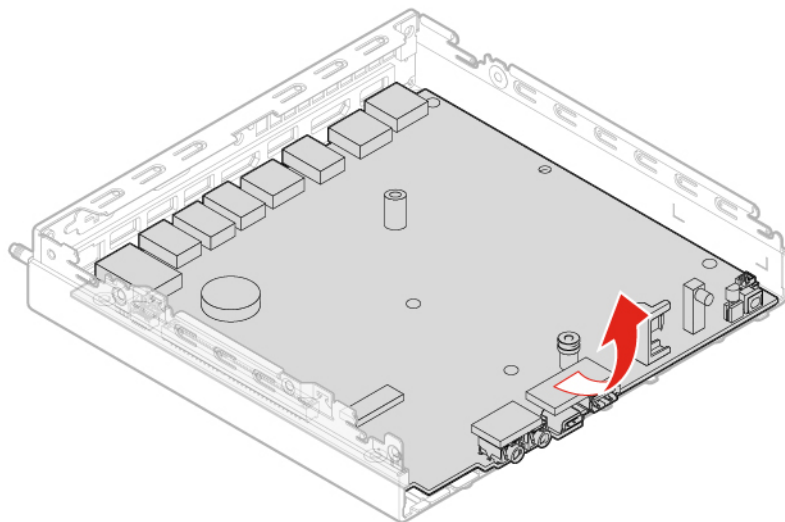


Figure 87. Removing the system board

c. Install the system board.

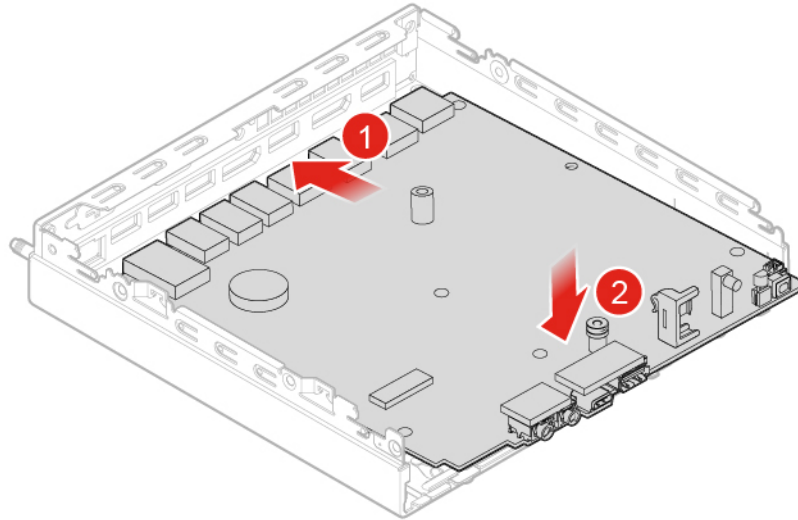


Figure 88. Installing the system board

- d. Install the screws to secure the system board.

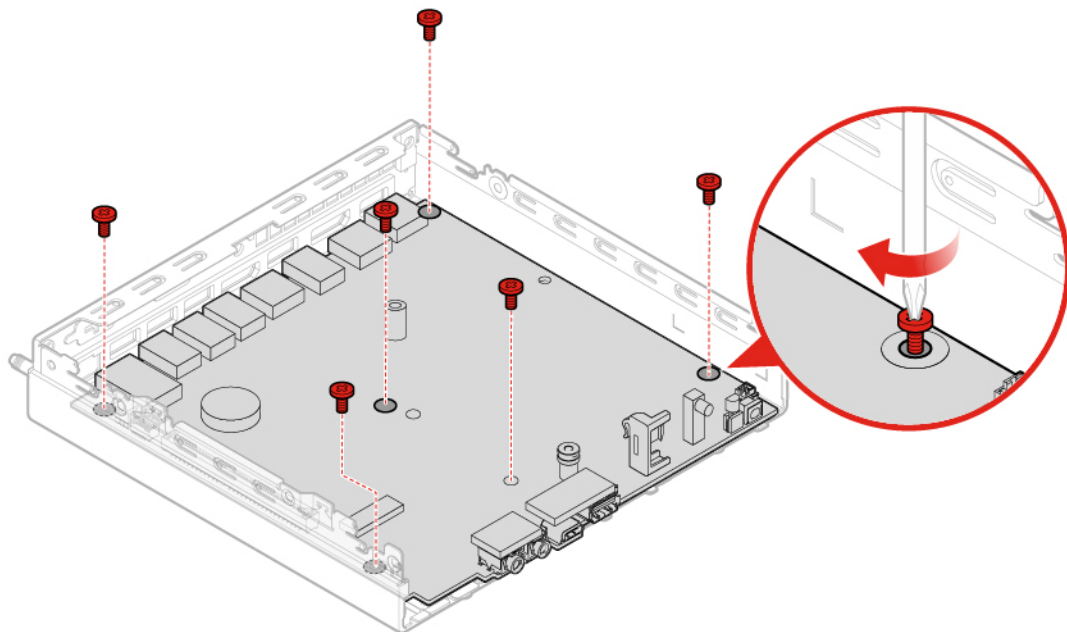


Figure 89. Installing the screws to secure the system board

16. 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” on page 4.
17. Reinstall the computer cover and reconnect the cables. For details, see “Completing the parts replacement” on page 64.

Completing the parts replacement

Completing the parts replacement for 10TF, 10TG, 10TH, 10TJ, and 10TK models

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.
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. Reinstall the computer cover.

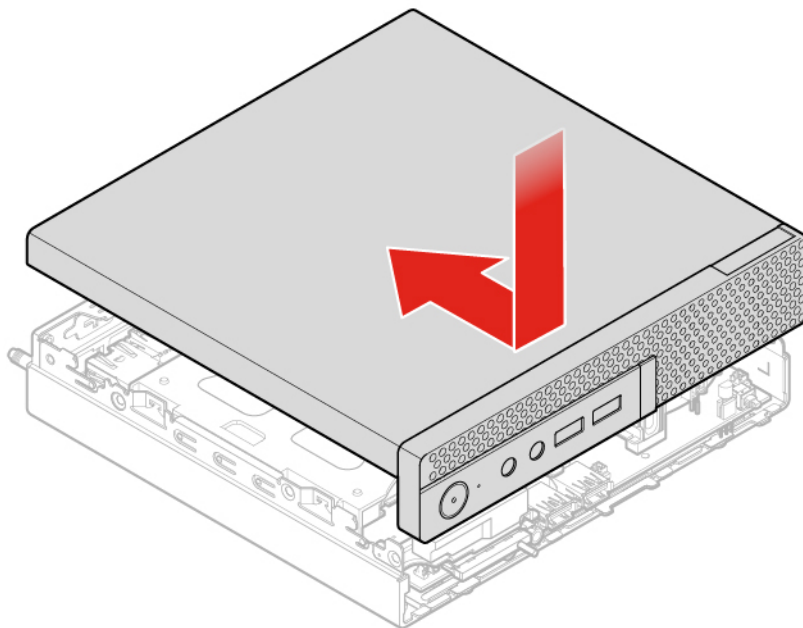


Figure 90. Reinstalling the computer cover

4. Install the screw to secure the computer cover.
5. Reinstall the dust shield.

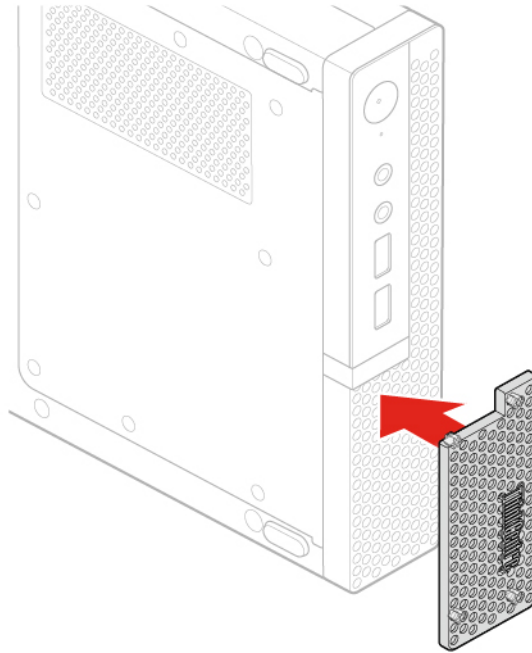


Figure 91. Reinstalling the dust shield

6. Place the computer in an upright position.
7. If a locking device is available, use it to lock the computer.
8. Reconnect the external cables and power cords to the corresponding connectors on the computer.

Completing the parts replacement for 10TL, 10UY, 10V0, 10V1, and 10V2 models

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.
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. Reinstall the computer cover.

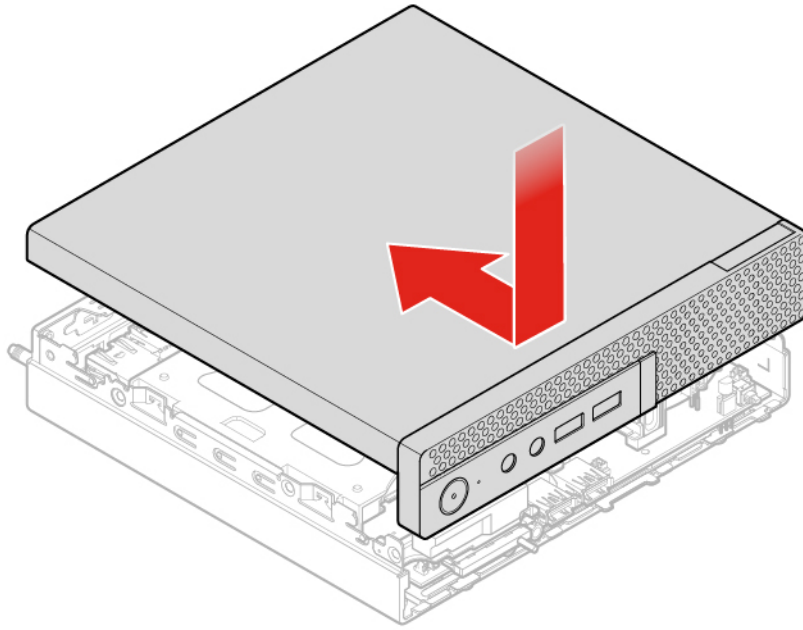


Figure 92. Reinstalling the computer cover

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.
7. Reconnect the external cables and power cords to the corresponding connectors on the computer.

Appendix A. Notices

Lenovo may not offer the products, services, or features discussed in this document in all countries. Consult your local Lenovo representative for information on the products and services currently available in your area. Any reference to a Lenovo product, program, or service is not intended to state or imply that only that Lenovo product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any Lenovo intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any other product, program, or service.

Lenovo may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

*Lenovo (United States), Inc.
1009 Think Place - Building One
Morrisville, NC 27560
U.S.A.
Attention: Lenovo Director of Licensing*

LENOVO PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. Lenovo may make improvements and/or changes in the products and/or the programs described in this publication at any time without notice.

The products described in this document are not intended for use in implantation or other life support applications where malfunction may result in injury or death to persons. The information contained in this document does not affect or change Lenovo product specifications or warranties. Nothing in this document shall operate as an express or implied license or indemnity under the intellectual property rights of Lenovo or third parties. All information contained in this document was obtained in specific environments and is presented as an illustration. The result obtained in other operating environments may vary.

Lenovo may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Any references in this publication to non-Lenovo Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this Lenovo product, and use of those Web sites is at your own risk.

Any performance data contained herein was determined in a controlled environment. Therefore, the result obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Appendix B. Trademarks

The following terms are trademarks of Lenovo in the United States, other countries, or both:

- Lenovo
- The Lenovo logo
- ThinkCentre

DisplayPort is a trademark of the Video Electronics Standards Association.

VESA is a trademark of the Video Electronics Standards Association.

Other company, product, or service names may be trademarks or service marks of others.

