

E23844

Revised Edition V2 / July 2024

IN SEARCH OF INCREDIBLE



Service Manual

ASUS

COPYRIGHT INFORMATION

No part of this manual, including the products and software described in it, may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form or by any means, except documentation kept by the purchaser for backup purposes, without the express written permission of ASUSTeK COMPUTER INC. ("ASUS").

ASUS PROVIDES THIS MANUAL "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL ASUS, ITS DIRECTORS, OFFICERS, EMPLOYEES OR AGENTS BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (INCLUDING DAMAGES FOR LOSS OF PROFITS, LOSS OF BUSINESS, LOSS OF USE OR DATA, INTERRUPTION OF BUSINESS AND THE LIKE), EVEN IF ASUS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES ARISING FROM ANY DEFECT OR ERROR IN THIS MANUAL OR PRODUCT.

Products and corporate names appearing in this manual may or may not be registered trademarks or copyrights of their respective companies, and are used only for identification or explanation and to the owners' benefit, without intent to infringe.

SPECIFICATIONS AND INFORMATION CONTAINED IN THIS MANUAL ARE FURNISHED FOR INFORMATIONAL USE ONLY, AND ARE SUBJECT TO CHANGE AT ANY TIME WITHOUT NOTICE, AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY ASUS. ASUS ASSUMES NO RESPONSIBILITY OR LIABILITY FOR ANY ERRORS OR INACCURACIES THAT MAY APPEAR IN THIS MANUAL, INCLUDING THE PRODUCTS AND SOFTWARE DESCRIBED IN IT.

Copyright © 2024 ASUSTeK COMPUTER INC. All Rights Reserved.

LIMITATION OF LIABILITY

Circumstances may arise where because of a default on ASUS' part or other liability, you are entitled to recover damages from ASUS. In each such instance, regardless of the basis on which you are entitled to claim damages from ASUS, ASUS is liable for no more than damages for bodily injury (including death) and damage to real property and tangible personal property; or any other actual and direct damages resulted from omission or failure of performing legal duties under this Warranty Statement, up to the listed contract price of each product.

ASUS will only be responsible for or indemnify you for loss, damages or claims based in contract, tort or infringement under this Warranty Statement.

This limit also applies to ASUS' suppliers and its reseller. It is the maximum for which ASUS, its suppliers, and your reseller are collectively responsible.

UNDER NO CIRCUMSTANCES IS ASUS LIABLE FOR ANY OF THE FOLLOWING: (1) THIRD-PARTY CLAIMS AGAINST YOU FOR DAMAGES; (2) LOSS OF, OR DAMAGE TO, YOUR RECORDS OR DATA; OR (3) SPECIAL, INCIDENTAL, OR INDIRECT DAMAGES OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS OR SAVINGS), EVEN IF ASUS, ITS SUPPLIERS OR YOUR RESELLER IS INFORMED OF THEIR POSSIBILITY.

SERVICE AND SUPPORT

Visit our multi-language website at <https://www.asus.com/support/>

Table of Contents

Chapter 1: Introduction

Disclaimer	8
Safety precautions.....	8
Pre-repair checklist	10
Installation tools.....	11
Diagnostic tools	11
Major components.....	12

Chapter 2: Service Procedures

Rear cover	16
Removal	17
Installation	20
HDD module (on selected models).....	23
Removal	24
Installation	27
Optical drive (on selected models)	30
Removal	31
Installation	33
Optical drive dummy (on selected models).....	35
Removal	36
Installation	37

Motherboard shield	38
Removal	39
Installation	40
M.2 SSD module	41
Removal	42
Installation	43
RAM module.....	44
Removal	45
Installation	46
Subwoofer (on selected models)	48
Removal	49
Installation	52
WLAN module.....	56
Removal	57
Installation	58
Fan module	59
Removal	60
Installation	61
Heat sink	62
Removal	63
Installation	64
Motherboard	66
Removal	67
Installation	71

Middle cover.....	75
Removal	76
Installation	79
Camera module.....	82
Removal	83
Installation	86
WLAN antenna.....	90
Removal	91
Installation	92
Speakers.....	93
Removal	94
Installation	95
Display panel.....	96
Removal	98
Installation	102

Appendix

Wiring and connection diagrams	108
--------------------------------------	-----

Chapter 1: ***Introduction***

Disclaimer

ASUS is not responsible for direct, indirect, intentional or unintentional damages resulting from improper installation and operation.

Safety precautions

- Before handling components, use a grounded wrist strap or touch a safely grounded object to avoid damaging them due to static electricity.
- Keep liquids or moisture away from your device to avoid short circuits.
- Remove rings, watches, and any other metal objects from your hands.
- Hold components by the edges to avoid touching the ICs.
- Properly install all components before connecting the AC power.
- Do not use power adapters or batteries from other devices to reduce the risk of injury to persons due to fire or explosion. Use only certified power adapters or batteries supplied by the manufacturer or authorized retailers.
- Detach all clips or flaps before removing cables to prevent damage.

- Disconnect cables, connectors, and power plugs by pulling the plug evenly to avoid damage.
- Use the correct screw models on your device to prevent damage.
- Confirm that the cable orientation is correct before connecting any cables.
- Fully remove all adhesive residue after removing and before installing any components.
- Photograph the appearance of cables, cable routing, connectors, and screws for later reference before proceeding with each step.

Pre-repair checklist

- Read the entire manual before starting any service procedures and follow all instructions.
 - Back up the data on your device.
 - Place your device on a clean and stable surface.
 - Turn off your device.
 - Disconnect all connected peripherals and cables.
 - Disconnect all power cables and remove the battery pack (if applicable).
-

IMPORTANT!

- If you are uncertain about performing the described service procedures, stop and contact an authorized service center for assistance.
 - Purchase replacement components from authorized retailers of this device to ensure maximum compatibility and reliability.
-

NOTE:

- The illustrations are for reference only.
 - The service procedures described in this manual depend on the model configuration and may not reflect the entire servicing process. To service components that are not covered in this manual, please visit an authorized service center for further assistance.
 - Keep all adhesive tape, insulating materials, screws, and other removable items in a safe place until the service procedure is completed, as they may be needed during installation.
-

Installation tools



Screwdriver



Plastic blade



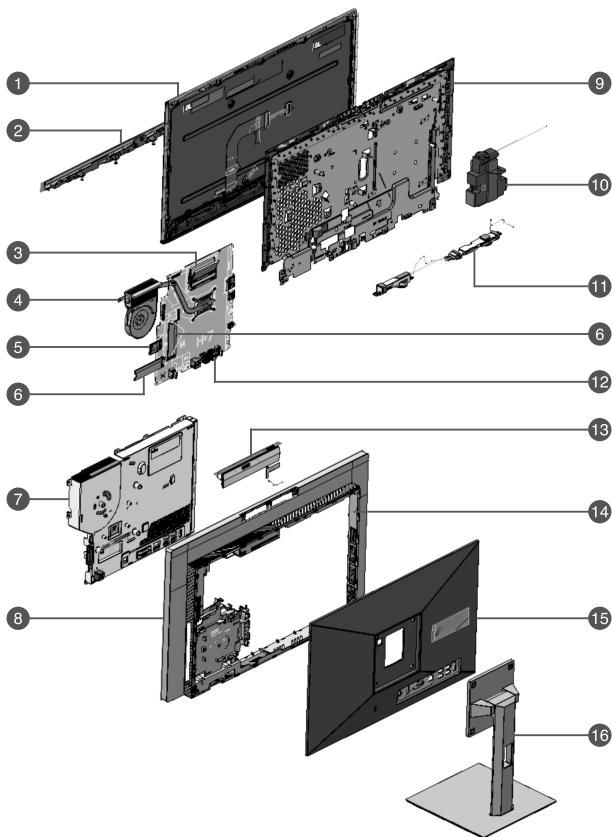
Tweezers

Diagnostic tools

Use ASUS System Diagnostics after completing any service procedures to ensure that all components are working properly.

For more information, visit www.asus.com/support/FAQ/1048490/.

Major components

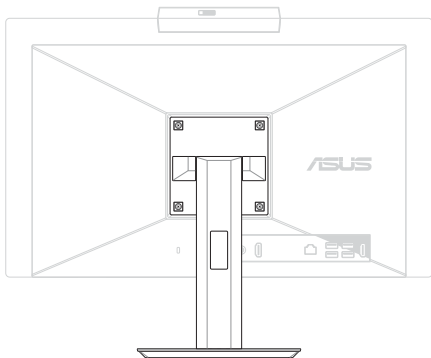


1. Display panel
2. Bezel
3. RAM module
4. Fan and heat sink
5. WLAN module
6. M.2 SSD module
7. Motherboard shield
8. Middle cover
9. Display bracket
10. Subwoofer*
11. Speakers
12. Motherboard
13. Camera module
14. WLAN antenna
15. Rear cover
16. Stand

**On selected models*

Chapter 2: ***Service Procedures***

Rear cover



Before you begin

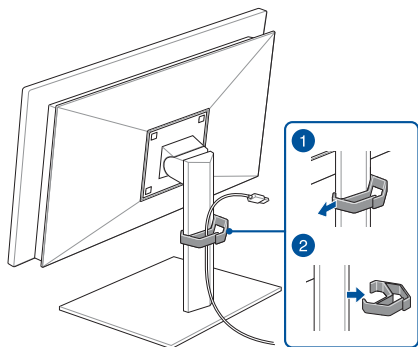
Read the **Safety Precautions** and complete the **Pre-repair Checklist**.

Screw list

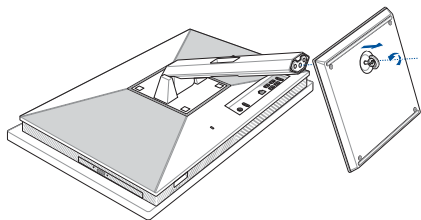
- ⊕ M4.0 X 10.0L (4pcs)

Removal

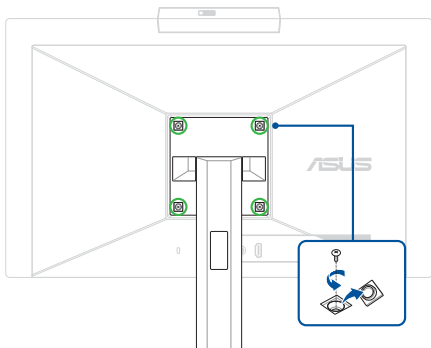
1. Remove the cable organizer (if available).



2. Loosen the screw without removing the screw from the base plate, then remove the base plate.

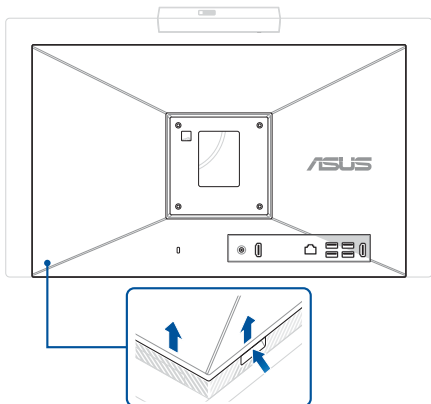


3. Remove the screw cover(s) and remove the screw(s), then remove the stand.



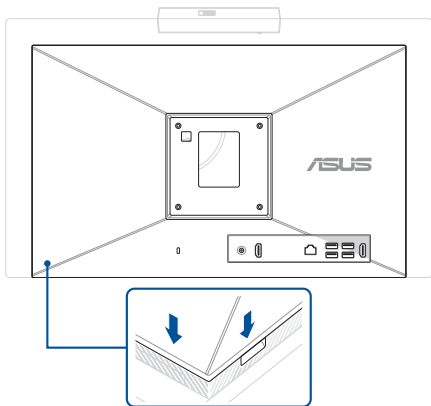
4. Pry open the indicated area of the rear cover as shown in the illustration below, then remove the rear cover.

IMPORTANT! Avoid sliding the plastic blade along the side of your device or air vents to prevent damage.

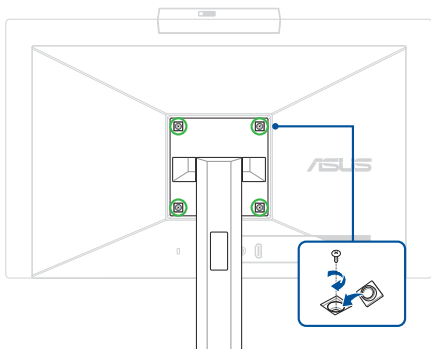


Installation

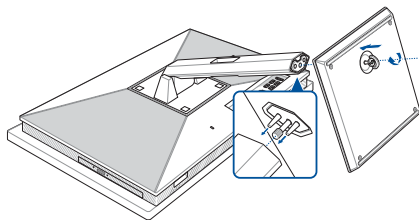
1. Install the rear cover.
2. Gently press down on the rear cover until it clicks into place.



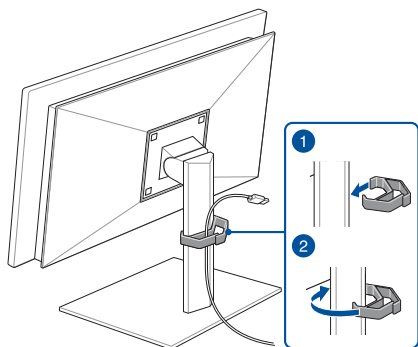
3. Install the stand, then secure the stand using the screw(s) you removed earlier and reattach the screw cover(s).



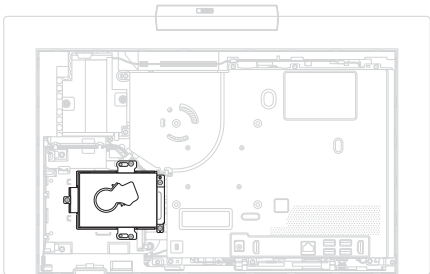
4. Align and install the base plate, then secure the base plate using the screw.



5. Install the cable organizer (if available).



HDD module (on selected models)



Before you begin

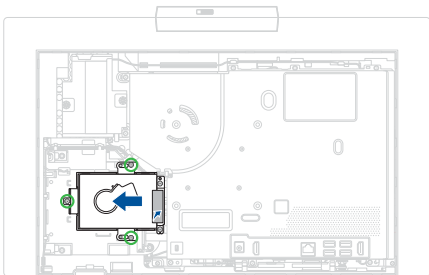
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
 - Rear cover

Screw list

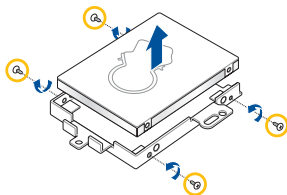
- ⊕ M3.0 X 4.0L (5pcs)
- ⊕ M3.0 X 2.7L (4pcs)

Removal

1. Remove the tape and remove the screw(s), then remove the HDD from the chassis.

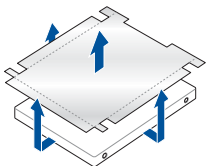


2. Remove the screw(s), then remove the HDD bracket from the HDD.

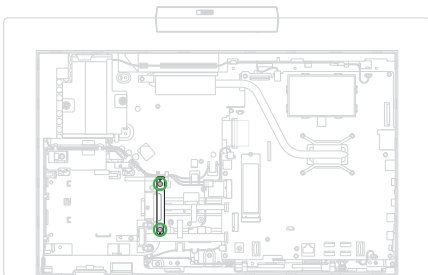


3. Remove the foil from the HDD.

NOTE: The foil cannot be reused. Use new foil when reinstalling components.

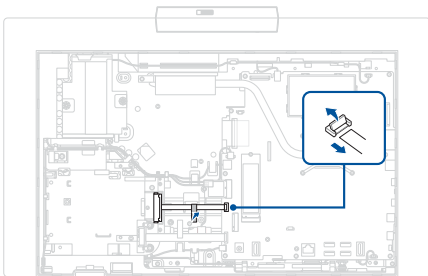


4. Remove the screw(s), then remove the HDD connector bracket.

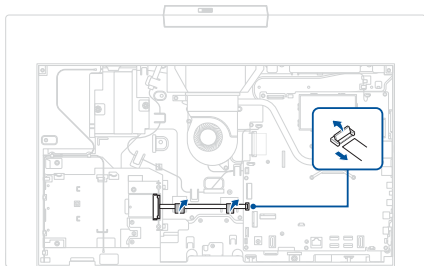


5. Remove the tape, then disconnect the HDD connector.

24" models



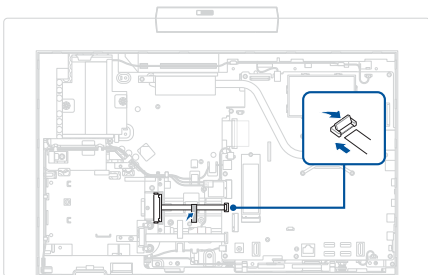
27" models



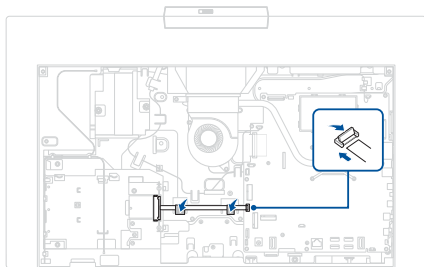
Installation

1. Reconnect the HDD connector, then reattach the tape.

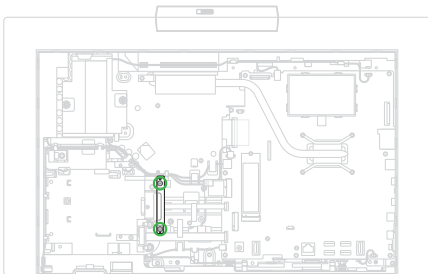
24" models



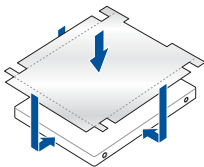
27" models



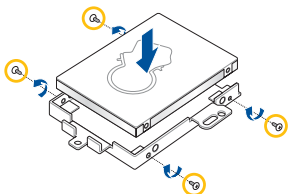
2. Install the HDD connector bracket, then secure the HDD connector bracket using the screw(s) you removed earlier.



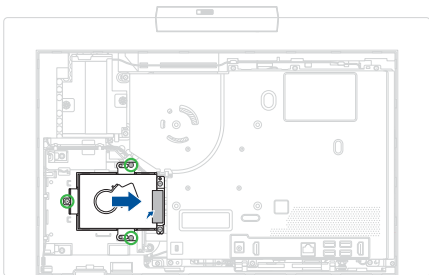
3. Reattach the foil to the HDD.



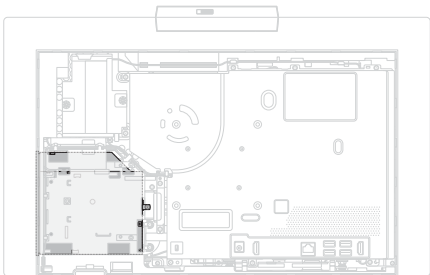
4. Reattach the HDD bracket to the HDD, then secure the HDD bracket using the screw(s) you removed earlier.



5. Install the HDD, then secure the HDD using the screw(s) you removed earlier and reattach the tape.
6. Install the components you removed in the *Before you begin* section.



Optical drive (on selected models)



Before you begin

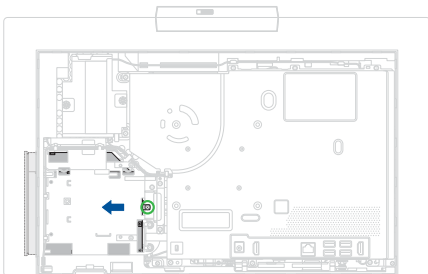
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
 - Rear cover
 - HDD module (on selected models)

Screw list

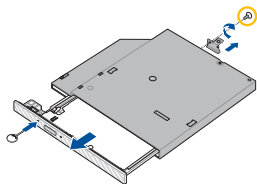
- ⊕ M3.0 X 4.0L (3pcs)
- ⊕ M2.0 X 2.3L (1pc)

Removal

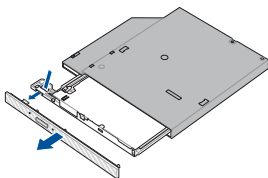
1. Remove the screw(s), then remove the optical drive from the chassis.



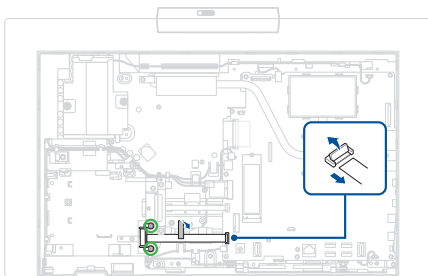
2. Remove the screw and remove the bracket from the optical drive, then insert a pin to eject the optical drive tray.



3. Release the latch and remove the optical drive bezel.

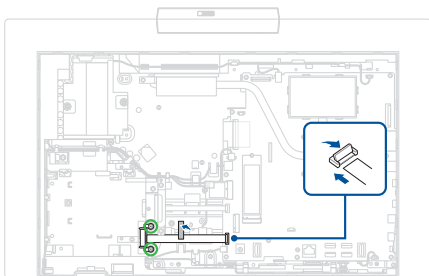


4. Remove the screw(s) and remove the tape, then disconnect and remove the optical drive connector.

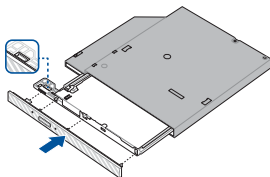


Installation

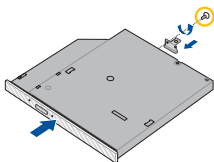
1. Install and reconnect the optical drive connector, then reattach the tape and secure the optical drive connector using the screw(s) you removed earlier.



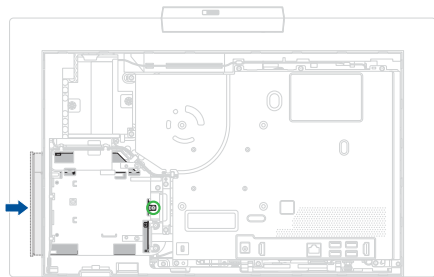
2. Install the optical drive bezel.



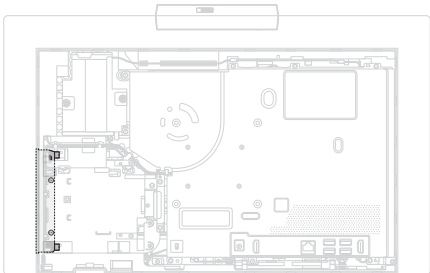
3. Close the optical drive tray, then install the bracket and secure the bracket using the screw you removed earlier.



4. Install the optical drive, then secure the optical drive using the screw(s) you removed earlier.
5. Install the components you removed in the *Before you begin* section.



Optical drive dummy (on selected models)



Before you begin

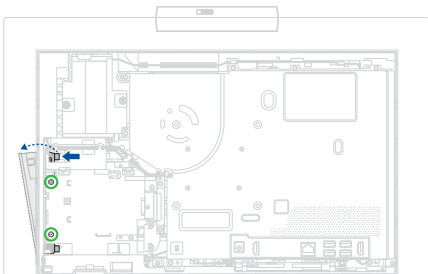
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
 - Rear cover

Screw list

- ⊕ M3.0 X 4.0L (2pcs)

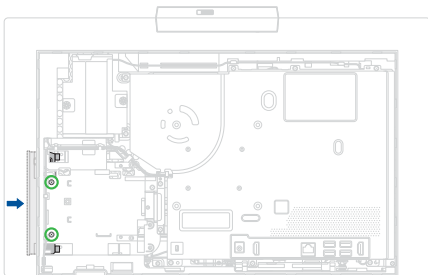
Removal

Remove the screw(s), then remove the optical drive dummy from the chassis.

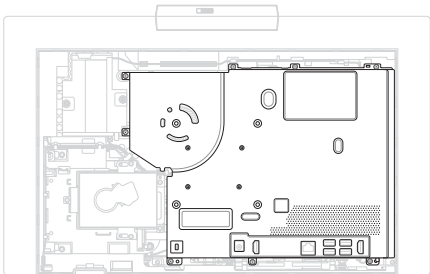


Installation

1. Install the optical drive dummy, then secure the optical drive dummy using the screw(s) you removed earlier.
2. Install the components you removed in the *Before you begin* section.



Motherboard shield



Before you begin

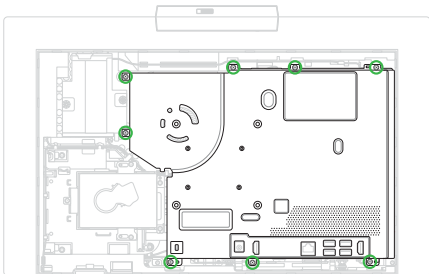
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
 - Rear cover

Screw list

- ⊕ M3.0 X 4.0L (8pcs)

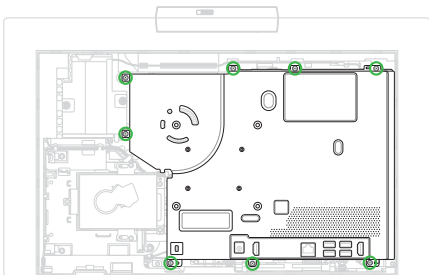
Removal

Remove the screw(s), then remove the motherboard shield.

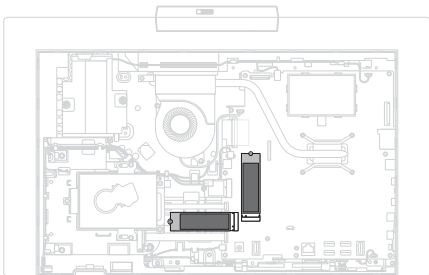


Installation

1. Install the motherboard shield, then secure the motherboard shield using the screw(s) you removed earlier.
2. Install the components you removed in the *Before you begin* section.



M.2 SSD module



Before you begin

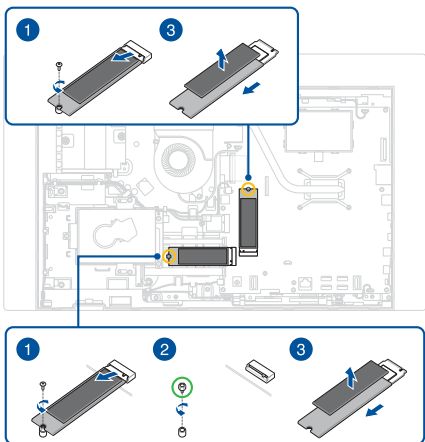
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
 - Rear cover
 - Motherboard shield

Screw list

- ☉ #4-40 X 5.1L standoff screw (1pc)
- ⊕ M3.0 X 4.0L (1-2pcs)

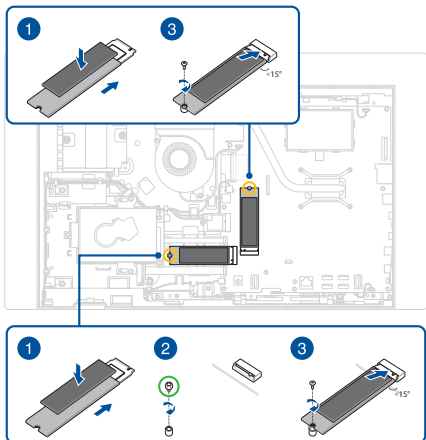
Removal

1. Remove the screw(s), then remove the M.2 SSD module(s) from the motherboard.
2. Remove the standoff screw (if available).
3. Remove the thermal pad(s) and cover(s) from the M.2 SSD module(s).

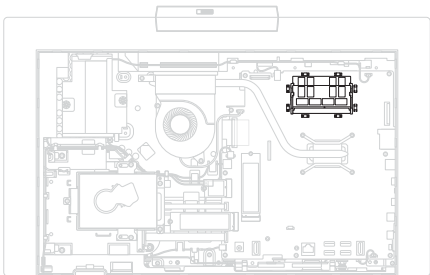


Installation

1. Place the M.2 SSD module(s) inside the cover(s) and reattach the thermal pad(s).
2. Install the standoff screw (if available).
3. Align and insert the M.2 SSD module(s) into the M.2 connector(s) on the motherboard, then secure the M.2 SSD module(s) using the screw(s) you removed earlier.
4. Install the components you removed in the *Before you begin* section.



RAM module

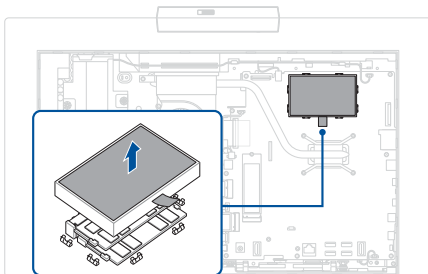


Before you begin

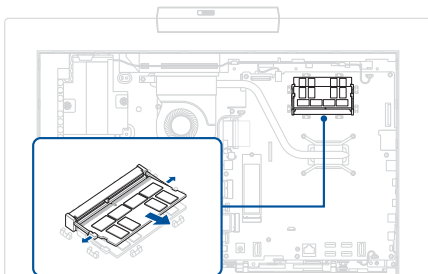
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
 - Rear cover
 - Motherboard shield

Removal

1. Remove the RAM shield.

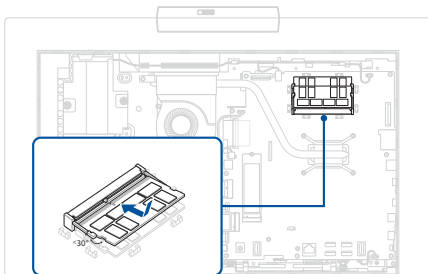


2. Push the clips outwards to remove the RAM module.

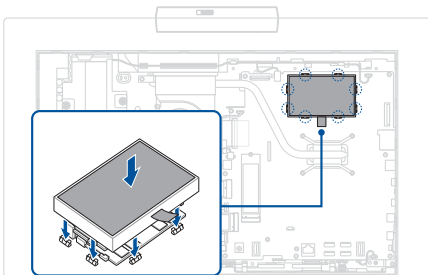


Installation

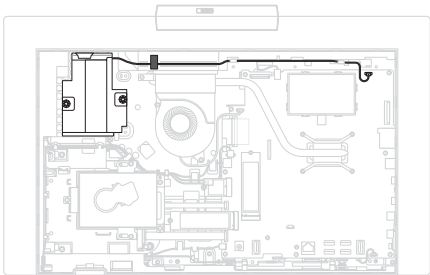
1. Align and insert the RAM module into the RAM module slot.



2. Install the RAM shield.
3. Install the components you removed in the *Before you begin* section.



Subwoofer (on selected models)



Before you begin

IMPORTANT! Thermal paste, thermal pads, liquid metal, or other thermal interface materials must be thoroughly removed and replaced if this component is removed. Ensure that replacement materials are available before proceeding, or contact an authorized service center for assistance.

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
 - Rear cover
 - Motherboard shield

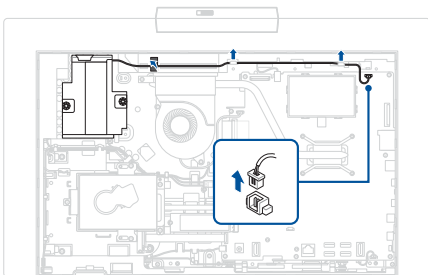
Screw list

- ⊕ M3.0 X 4.0L (1pc)
- ⊕ Captive screw (4pcs)

Removal

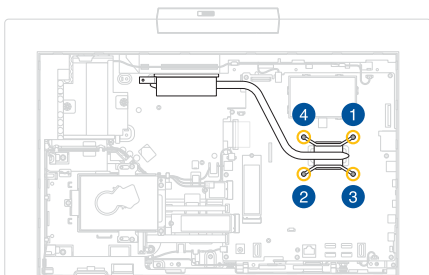
24" models

1. Disconnect the cable.
2. Remove the tape, then remove the cable from the cable guide(s).
3. Remove the subwoofer.



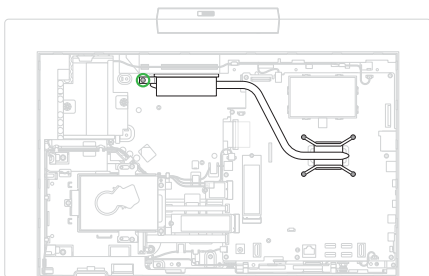
27" models

1. Loosen the captive heat sink screw(s) one by one in the sequence shown in the illustration below without removing the screw(s).

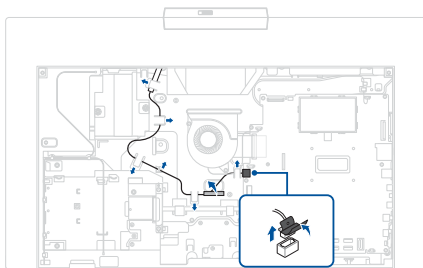


2. Remove the screw, then remove the heat sink.

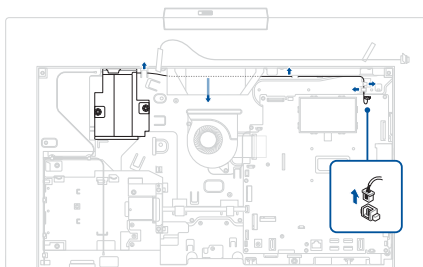
IMPORTANT! Vertically lift the heat sink to prevent damage.



3. Remove the tape, then disconnect the cable and remove the cable from the cable guide(s).



4. Disconnect the cable and remove the cable from the cable guide(s), then remove the subwoofer.



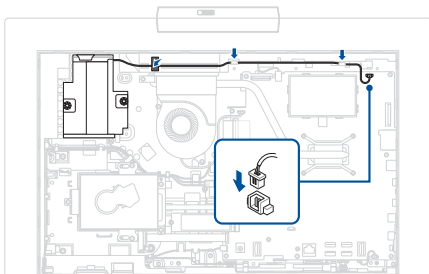
Installation

24" models

1. Install the subwoofer.
2. Route the cable through the cable guide(s), then reattach the tape.

IMPORTANT! Damage may occur if cables are not properly routed through the cable guides. Confirm that all cables are routed through each of the indicated cable guides before proceeding.

3. Reconnect the cable.
4. Install the components you removed in the *Before you begin* section.

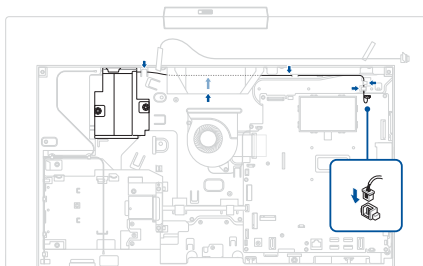


27" models

1. Install the subwoofer.
2. Route the cable through the cable guide(s), then reattach the tape.

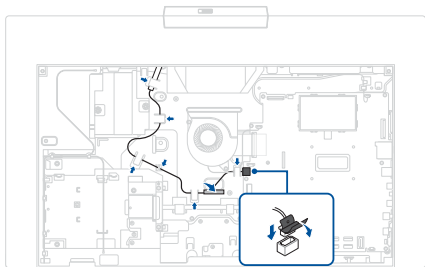
IMPORTANT! Damage may occur if cables are not properly routed through the cable guides. Confirm that all cables are routed through each of the indicated cable guides before proceeding.

3. Reconnect the cable.

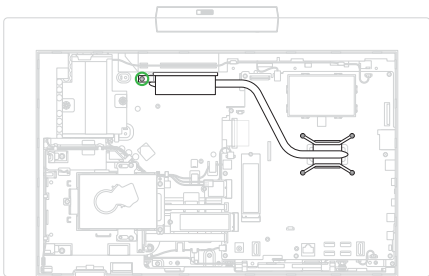


4. Reconnect the cable and route the cable through the cable guide(s), then reattach the tape.

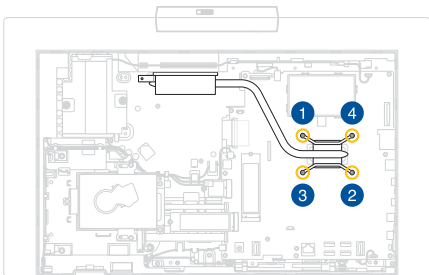
IMPORTANT! Damage may occur if cables are not properly routed through the cable guides. Confirm that all cables are routed through each of the indicated cable guides before proceeding.



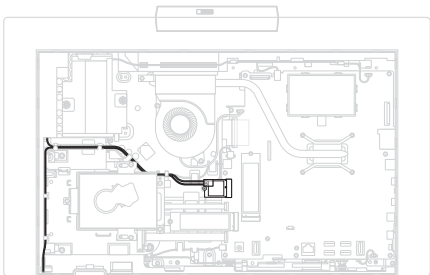
5. Install the heat sink, then secure the heat sink using the screw you removed earlier.



- Secure the captive heat sink screw(s) one by one in the sequence shown in the illustration below.
- Install the components you removed in the *Before you begin* section.



WLAN module



Before you begin

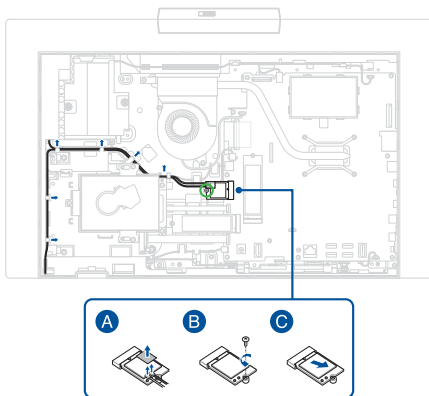
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
 - Rear cover
 - Motherboard shield

Screw list

- ⊕ M3.0 X 4.0L (1pc)

Removal

1. Remove the polyester film and disconnect the antenna cable(s), then remove the screw and remove the WLAN module.
2. Remove the antenna cable(s) from the cable guide(s).

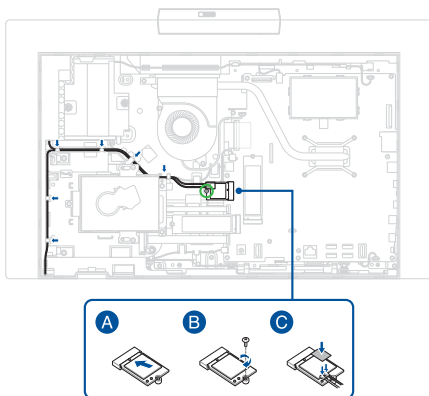


Installation

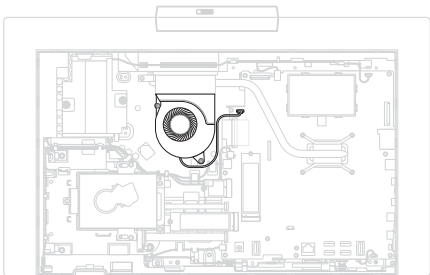
1. Route the antenna cable(s) through the cable guide(s).

IMPORTANT! Damage may occur if cables are not properly routed through the cable guides. Confirm that all cables are routed through each of the indicated cable guides before proceeding.

2. Install the WLAN module and secure the WLAN module using the screw you removed earlier, then reconnect the antenna cable(s) and reattach the polyester film.
3. Install the components you removed in the *Before you begin* section.



Fan module



Before you begin

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
 - Rear cover
 - Motherboard shield

Screw list

24" models

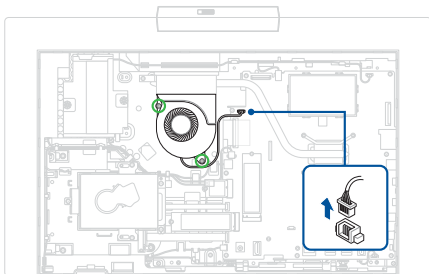
- ⊕ M3.0 X 4.0L (2pcs)

27" models

- ⊕ M2.0 X 4.0L (2pcs)

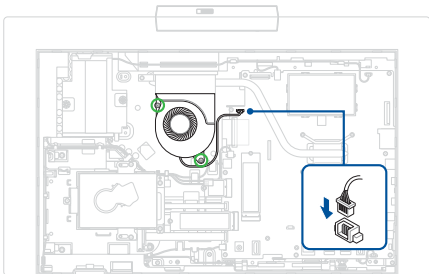
Removal

1. Disconnect the fan connector.
2. Remove the screw(s).
3. Remove the fan.

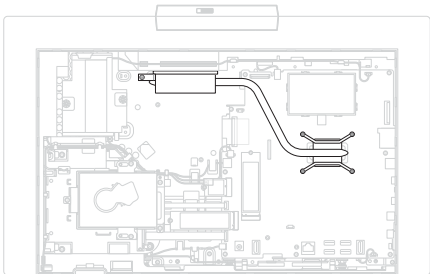


Installation

1. Install the fan.
2. Secure the fan using the screw(s) you removed earlier.
3. Reconnect the fan connector.
4. Install the components you removed in the *Before you begin* section.



Heat sink



Before you begin

IMPORTANT! Thermal paste, thermal pads, liquid metal, or other thermal interface materials must be thoroughly removed and replaced if this component is removed. Ensure that replacement materials are available before proceeding, or contact an authorized service center for assistance.

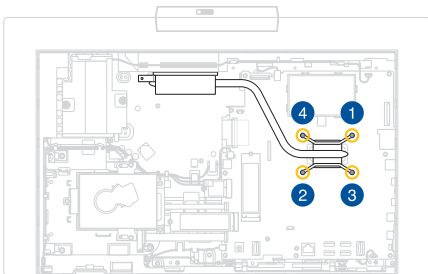
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
 - Rear cover
 - Motherboard shield

Screw list

- ⊕ M3.0 X 4.0L (1pc)
- ⊕ Captive screw (4pcs)

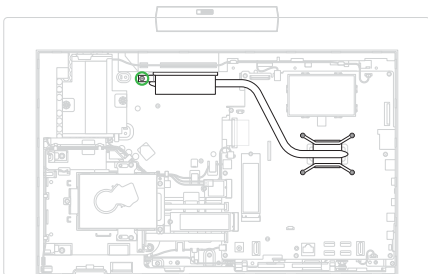
Removal

1. Loosen the captive heat sink screw(s) one by one in the sequence shown in the illustration below without removing the screw(s).



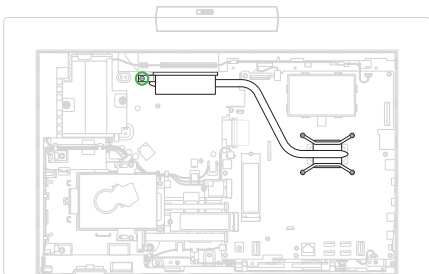
2. Remove the screw, then remove the heat sink.

IMPORTANT! Vertically lift the heat sink to prevent damage.

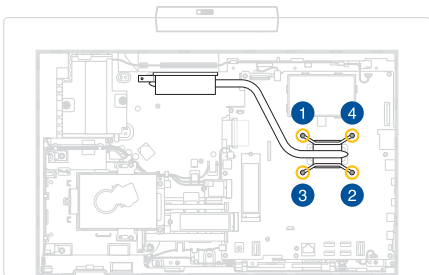


Installation

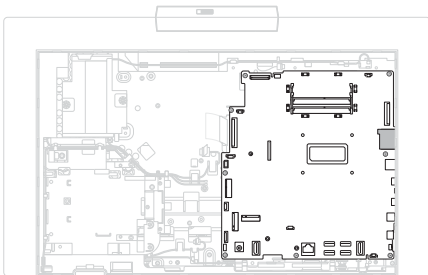
1. Install the heat sink, then secure the heat sink using the screw you removed earlier.



2. Secure the captive heat sink screw(s) one by one in the sequence shown in the illustration below.
3. Install the components you removed in the *Before you begin* section.



Motherboard



Before you begin

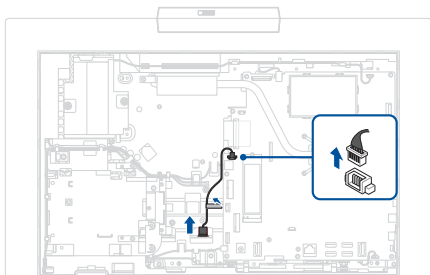
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
 - Rear cover
 - HDD module (on selected models)
 - Optical drive (on selected models)
 - Optical drive dummy (on selected models)
 - Motherboard shield
 - M.2 SSD module
 - Subwoofer (on selected models)
 - WLAN module
 - Fan module
 - Heat sink

Screw list

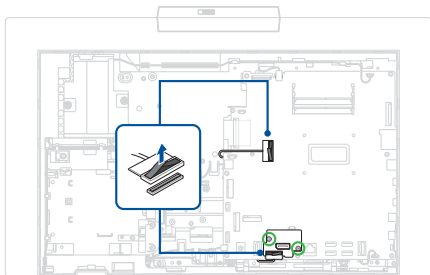
- ⊕ M3.0 X 4.0L (8-10pcs)

Removal

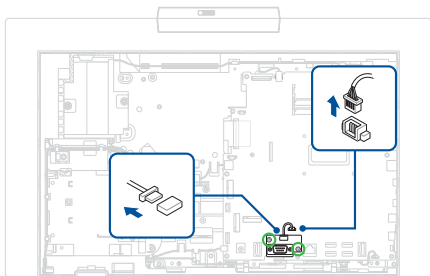
1. Remove the tape, then disconnect the cable.



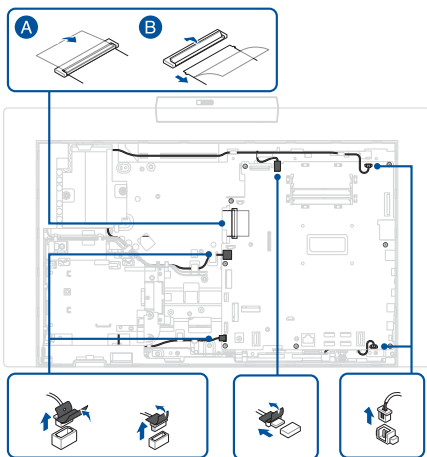
2. Disconnect the cable and remove the DP board (if available).



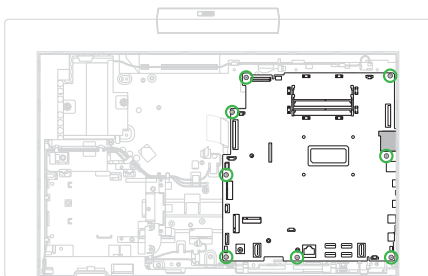
3. Disconnect the cable and remove the RS232 board (if available).



4. Disconnect the cable(s) from the motherboard.

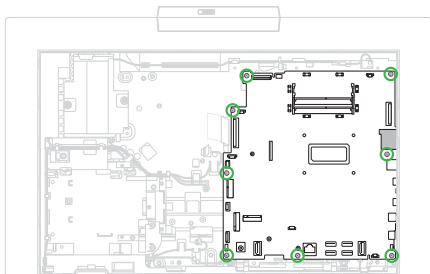


5. Remove the screw(s), then remove the motherboard from the chassis.

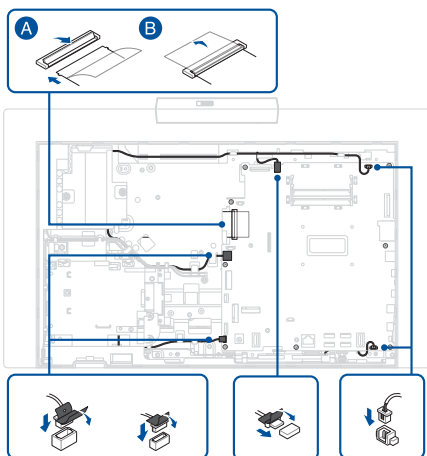


Installation

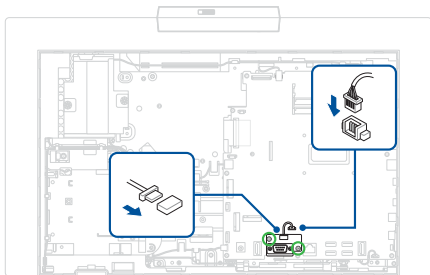
1. Align and install the motherboard, then secure the motherboard using the screw(s) you removed earlier.



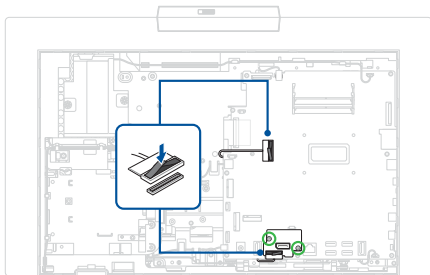
2. Reconnect the cable(s) to the motherboard.



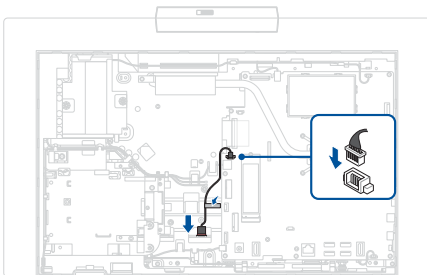
3. Install the RS232 board and reconnect the cable (if available).



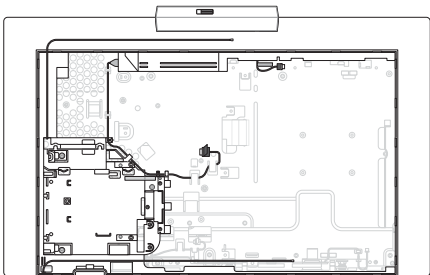
4. Install the DP board and reconnect the cable (if available).



5. Reconnect the cable and reattach the tape.
6. Install the components you removed in the *Before you begin* section.



Middle cover



Before you begin

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
 - Rear cover
 - HDD module (on selected models)
 - Optical drive (on selected models)
 - Optical drive dummy (on selected models)
 - Motherboard shield
 - M.2 SSD module
 - Subwoofer (on selected models)
 - WLAN module

- Fan module
- Heat sink
- Motherboard

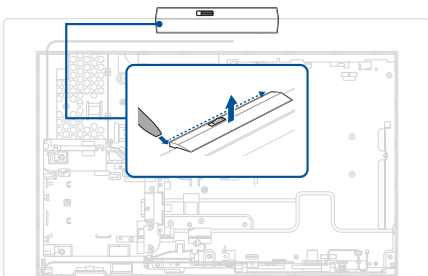
Screw list

- ⊕ M3.0 X 4.0L (5-9pcs)

Removal

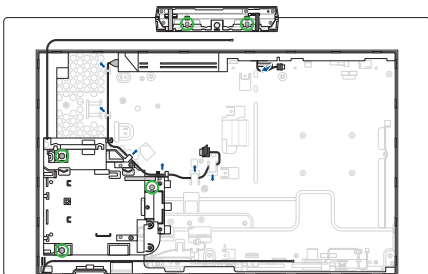
1. Use the plastic blade to pry open the indicated area of the rear camera cover as shown in the illustration below, then remove the rear camera cover.

IMPORTANT! Avoid sliding the plastic blade along the side of your device or air vents to prevent damage.

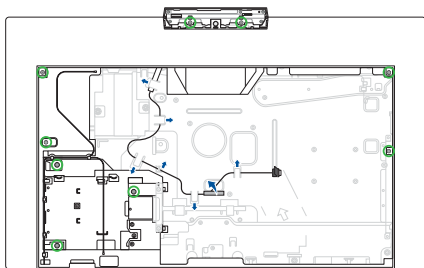


2. Remove the screw(s), then remove the cable from the cable guide(s).

24" models

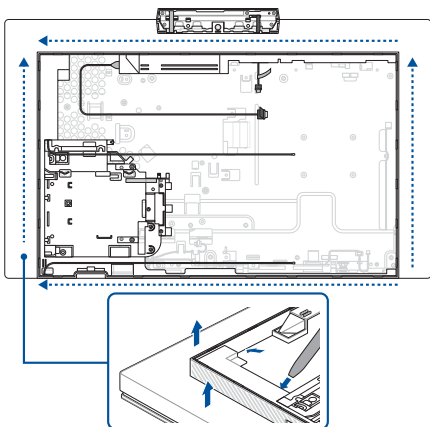


27" models



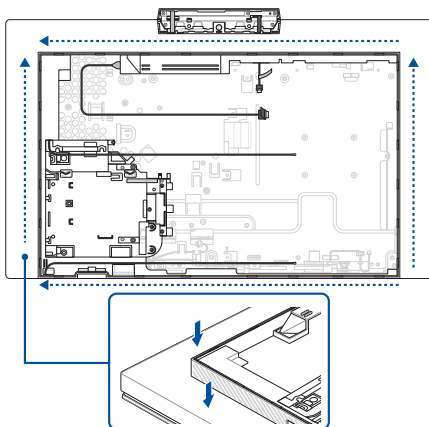
3. Pry open the middle cover as shown in the illustration below, then remove the middle cover.

IMPORTANT! Avoid sliding the plastic blade along the side of your device or air vents to prevent damage.



Installation

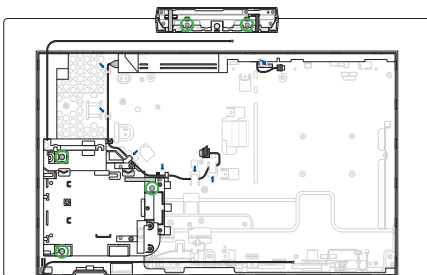
1. Install the middle cover.
2. Gently press down on the middle cover until it clicks into place.



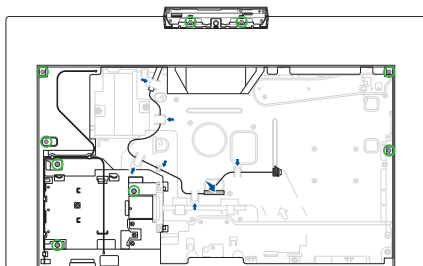
3. Route the cable through the cable guide(s), then secure the middle cover using the screw(s) you removed earlier.

IMPORTANT! Damage may occur if cables are not properly routed through the cable guides. Confirm that all cables are routed through each of the indicated cable guides before proceeding.

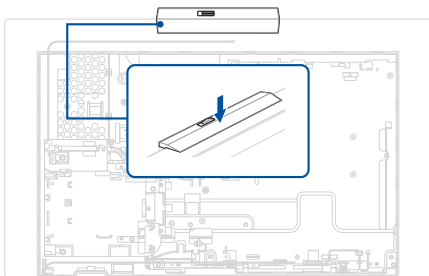
24" models



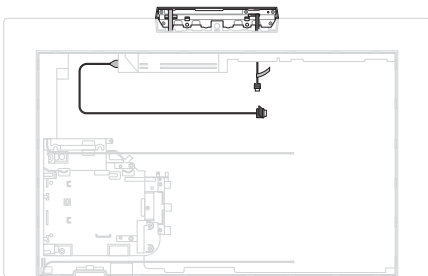
27" models



4. Install the rear camera cover.
5. Install the components you removed in the *Before you begin* section.



Camera module



Before you begin

IMPORTANT! This component is fragile. Damage may occur if the service procedure is performed incorrectly. If you are uncertain about proceeding, stop and contact an authorized service center for assistance.

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
 - Rear cover
 - HDD module (on selected models)
 - Optical drive (on selected models)
 - Optical drive dummy (on selected models)
 - Motherboard shield
 - M.2 SSD module

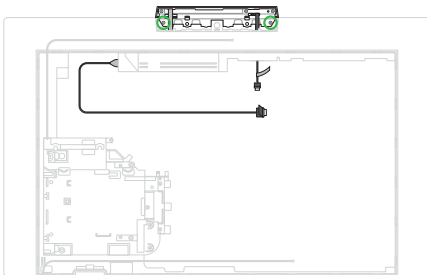
- Subwoofer (on selected models)
- WLAN module
- Fan module
- Heat sink
- Motherboard
- Middle cover

Screw list

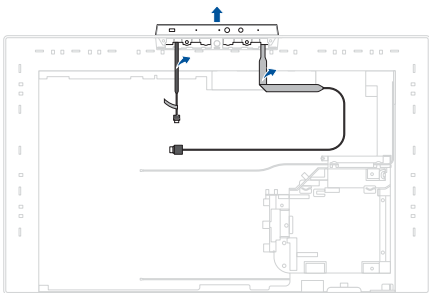
- ⊕ M2.0 X 4.0L (5pcs)

Removal

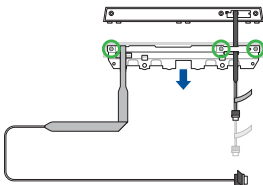
1. Remove the screw(s).



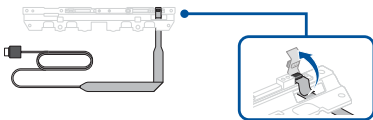
2. Flip the display cover over, then remove the cable(s) and remove the camera module.



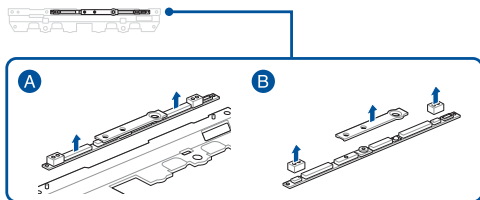
3. Flip the camera module over, then remove the screw(s) and remove the camera bracket from the front camera cover.



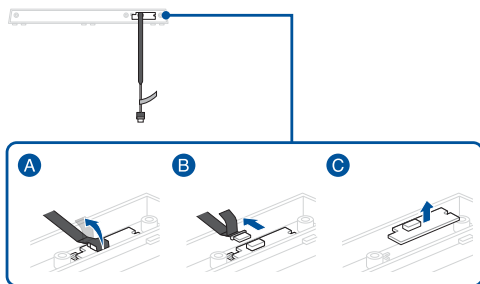
4. Flip the camera bracket over, then remove the cable.



5. Carefully remove the camera module from the camera bracket, then remove the rubber caps from the camera module.

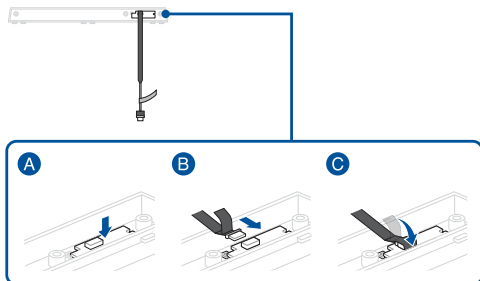


6. Remove the proximity sensor board from the front camera cover (if available).

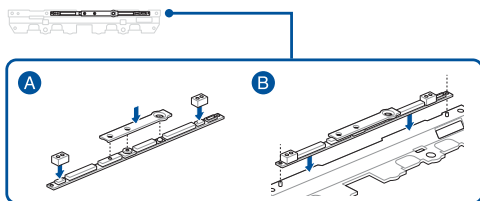


Installation

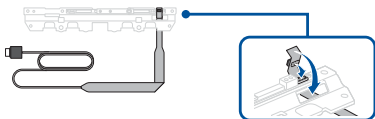
1. Install the proximity sensor board onto the front camera cover (if available).



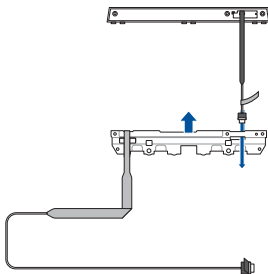
2. Attach the rubber caps to the camera module, then install the camera module onto the camera bracket.



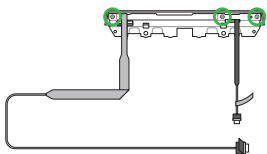
3. Flip the camera bracket over, then reconnect the cable.



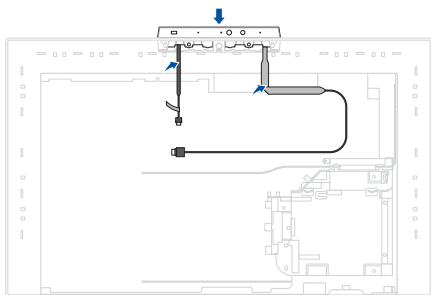
4. Flip the camera bracket over, then insert the cable through the hole and install the camera bracket into the front camera cover.



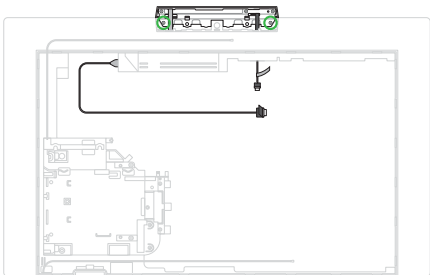
5. Secure the camera bracket using the screw(s) you removed earlier.



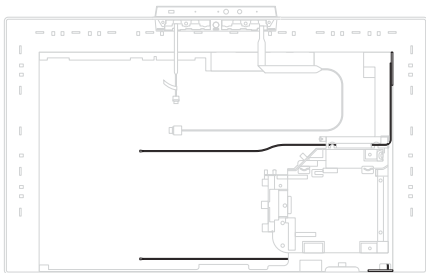
6. Flip the display cover over, then install the camera module and reconnect the cable(s).



7. Flip the display cover over, then secure the camera module using the screw(s) you removed earlier.
8. Install the components you removed in the *Before you begin* section.



WLAN antenna



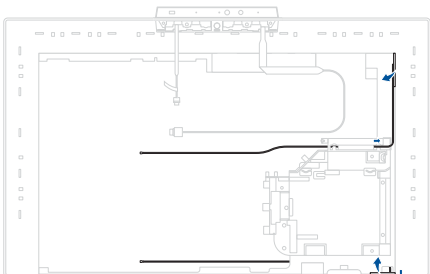
Before you begin

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
 - Rear cover
 - HDD module (on selected models)
 - Optical drive (on selected models)
 - Optical drive dummy (on selected models)
 - Motherboard shield
 - M.2 SSD module
 - Subwoofer (on selected models)
 - WLAN module

- Fan module
- Heat sink
- Motherboard
- Middle cover

Removal

Remove the antenna cable(s) from the cable guide(s), then remove the antenna cable(s).

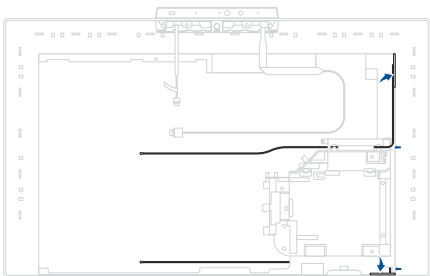


Installation

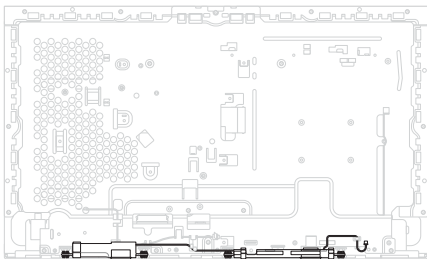
1. Install the antenna cable(s) and route the antenna cable(s) through the cable guide(s).

IMPORTANT! Damage may occur if cables are not properly routed through the cable guides. Confirm that all cables are routed through each of the indicated cable guides before proceeding.

2. Install the components you removed in the *Before you begin* section.



Speakers



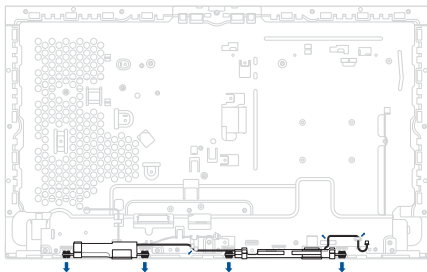
Before you begin

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
 - Rear cover
 - HDD module (on selected models)
 - Optical drive (on selected models)
 - Optical drive dummy (on selected models)
 - Motherboard shield
 - M.2 SSD module
 - Subwoofer (on selected models)
 - WLAN module

- Fan module
- Heat sink
- Motherboard
- Middle cover

Removal

1. Remove the speaker cable from the cable guide(s).
2. Remove the speakers.



3. Remove the rubber pieces from the speakers.



Installation

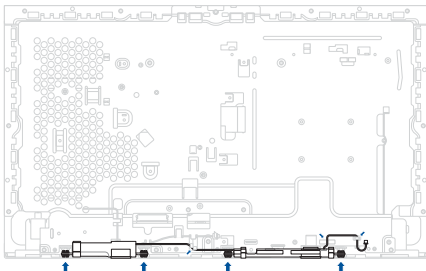
1. Reattach the rubber pieces to the speakers.



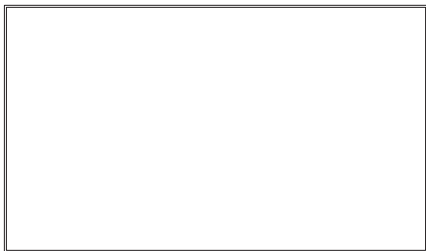
2. Install the speakers.
3. Route the speaker cable through the cable guide(s).

IMPORTANT! Damage may occur if cables are not properly routed through the cable guides. Confirm that all cables are routed through each of the indicated cable guides before proceeding.

4. Install the components you removed in the *Before you begin* section.



Display panel



Before you begin

IMPORTANT!

- This component is fragile. Damage may occur if the service procedure is performed incorrectly. If you are uncertain about proceeding, stop and contact an authorized service center for assistance.
 - Do not bend the display panel in any way to avoid risk of display panel leakage.
-

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
 - Rear cover
 - HDD module (on selected models)
 - Optical drive (on selected models)
 - Optical drive dummy (on selected models)

- Motherboard shield
- M.2 SSD module
- Subwoofer (on selected models)
- WLAN module
- Fan module
- Heat sink
- Motherboard
- Middle cover
- Speakers

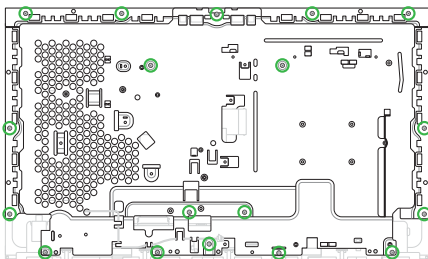
Screw list

- ⊕ M3.0 X 3.0L (18-19pcs)

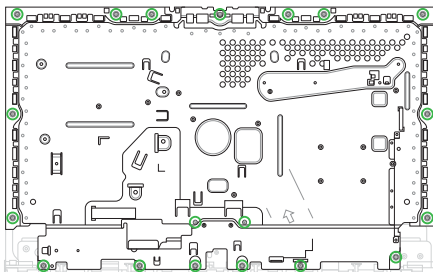
Removal

1. Remove the screw(s).

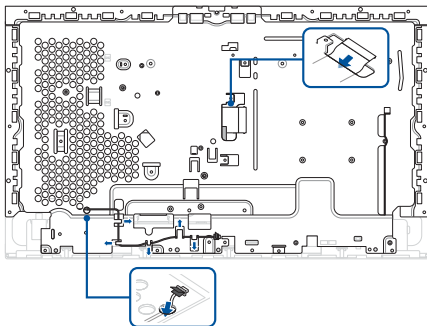
24" models



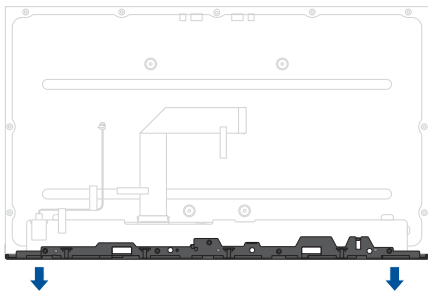
27" models



2. Remove the cable(s) from the cable guide(s), then remove the display bracket.

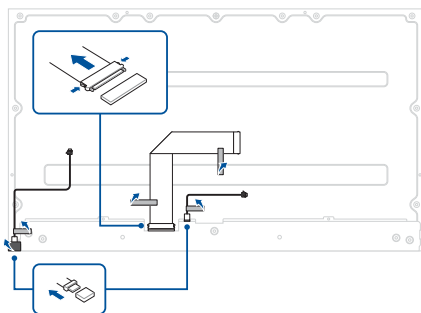


3. Remove the display bezel.

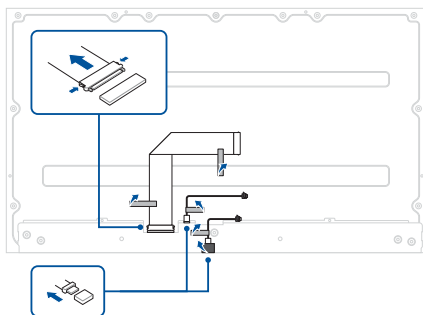


4. Remove the tape, then disconnect the cable(s).

Non-touch models



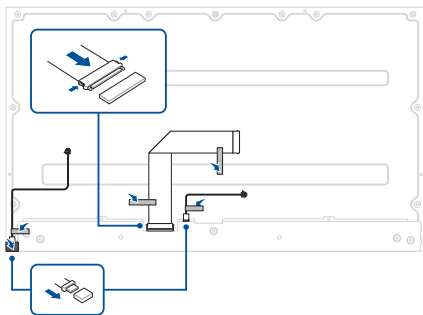
Touch models



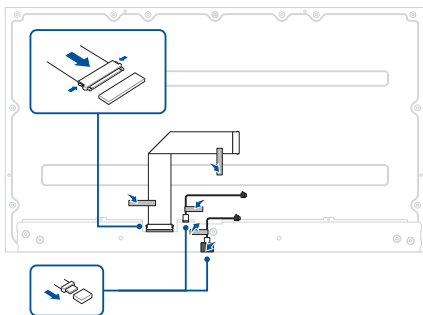
Installation

1. Reconnect the cable(s), then reattach the tape.

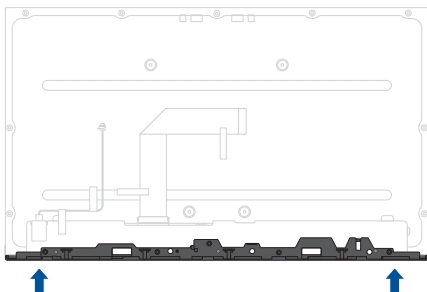
Non-touch models



Touch models

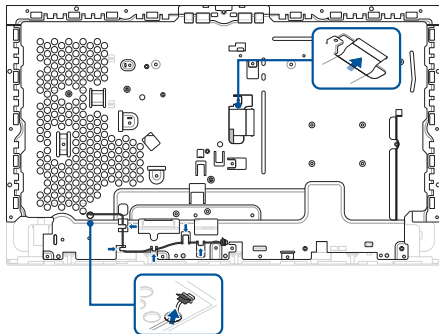


2. Install the display bezel.



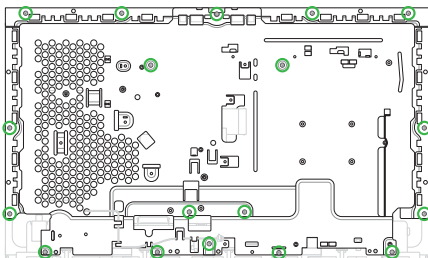
3. Insert the cable(s) through the holes, then install the display bracket and route the cable(s) through the cable guide(s).

IMPORTANT! Damage may occur if cables are not properly routed through the cable guides. Confirm that all cables are routed through each of the indicated cable guides before proceeding.

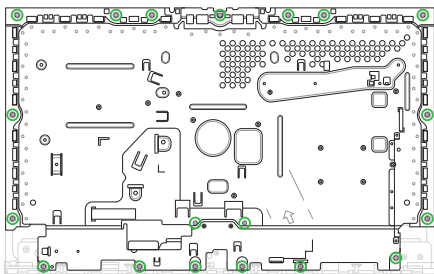


4. Secure the display bracket using the screw(s) you removed earlier.
5. Install the components you removed in the *Before you begin* section.

24" models

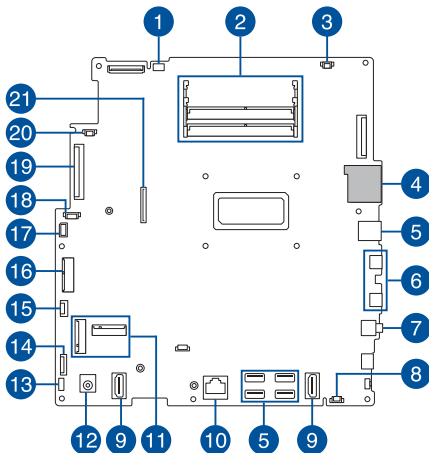


27" models



Appendix

Wiring and connection diagrams



- | | |
|--------------------------|---------------------------------|
| 1. IR camera connector | 12. Power supply connector |
| 2. RAM module slot | 13. Display backlight connector |
| 3. Subwoofer connector | 14. Optical drive connector |
| 4. microSD card slot | 15. HDD connector |
| 5. USB Type-A connector | 16. WLAN connector |
| 6. USB Type-C® connector | 17. Camera connector |
| 7. Audio connector | 18. Touch panel connector |
| 8. Speaker connector | 19. LVDS connector |
| 9. HDMI connector | 20. Fan connector |
| 10. LAN connector | 21. eDP connector |
| 11. M.2 SSD connector | |