E22496
First Edition / November 2023

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 © 2023 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....6
Safety precautions....6
Pre-repair checklist....8
Installation tools....9
Major components....10

Chapter 2: Service Procedures

Display panel module....14
- Removal....15
- Installation....19

Speakers....22
- Removal....23
- Installation....24

Battery....25
- Removal....26
- Installation....28

WLAN module....31
- Removal....32
- Installation....33

LTE module (on selected models)....34
- Removal....35
- Installation....36

Rear camera module 37
Removal 38
Installation 39
Front camera module 40
Removal 41
Installation 42
Motherboard 43
Removal 44
Installation 46
I/O board 48
Removal 49
Installation 51
Bottom cover 53
Removal 54
Installation 58

Appendix

Wiring and connection diagrams 64

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.

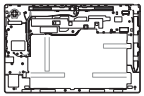
Installation tools

Screwdriver

Plastic blade

Tweezers

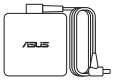
Major components



Bottom cover

Display panel

Keyboard



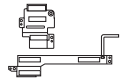
Power adapter

Battery

Battery cable

Motherboard

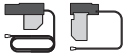
I/O board



Speakers

LTE module*

WLAN module



Antenna cables

FFC cables

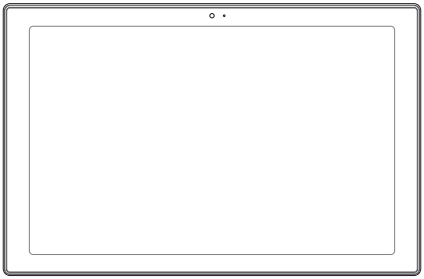
Rear camera module

Front camera module

** On selected models*

Chapter 2: Service Procedures

Display panel module



Before you begin

IMPORTANT! Do not bend the display panel in any way to avoid risk of display panel leakage.

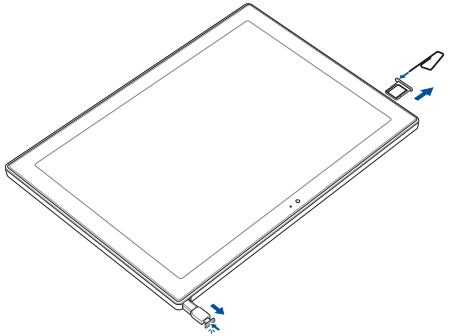
Read the **Safety Precautions** and complete the **Pre-repair Checklist**.

Screw list

- ⊕ M1.6 X 2.0L (1pc)

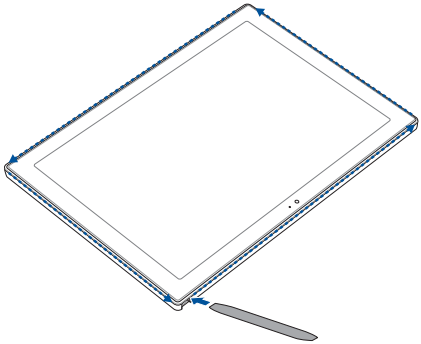
Removal

1. Remove the stylus pen from the stylus storage slot (if available), then insert a pin to remove the SIM card tray (if available).



2. Use the plastic blade to pry open the indicated area of the display panel module as shown in the illustration below.

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

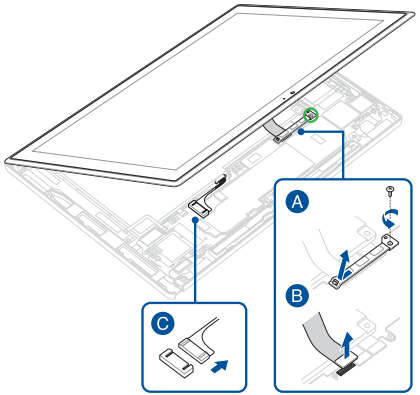


3. Lift the display panel module without removing it completely, then hold it in place above the chassis.

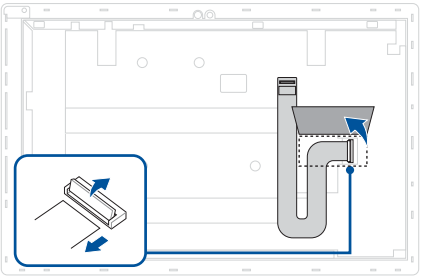
IMPORTANT! Lift the display panel module carefully to avoid damaging the connected cable(s) or connector(s).

4. Disconnect the battery power cable.

5. Remove the screw and remove the cable bracket, then disconnect the cable.

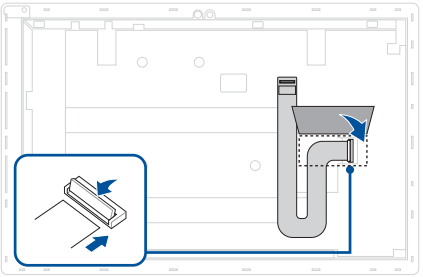


6. Flip the display panel module over, then remove the foil and disconnect the cable.



Installation

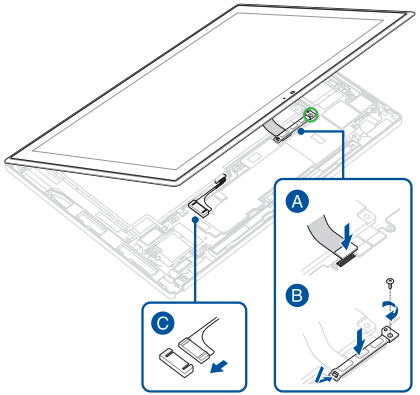
1. Reconnect the cable and reattach the foil.



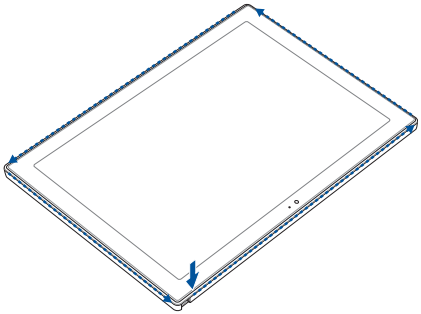
2. Flip the display panel module over, then align the display panel module with the chassis and hold it in place above the chassis.

3. Reconnect the cable, then install the cable bracket and secure the cable bracket with the screw you removed earlier.

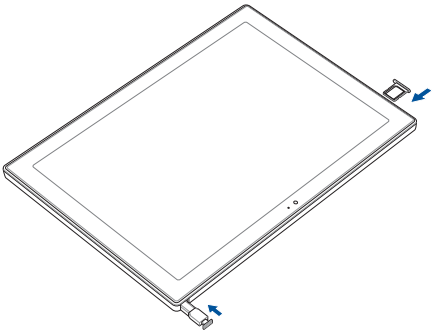
4. Reconnect the battery power cable.



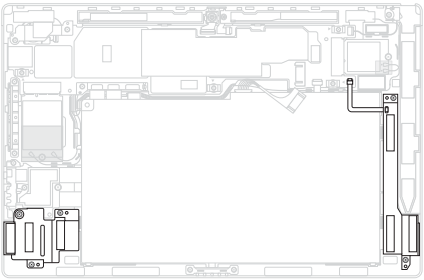
5. Gently press down on the display panel module until it clicks into place.



6. Install the SIM card tray (if available), then insert the stylus pen into the stylus storage slot (if available).



Speakers



Before you begin

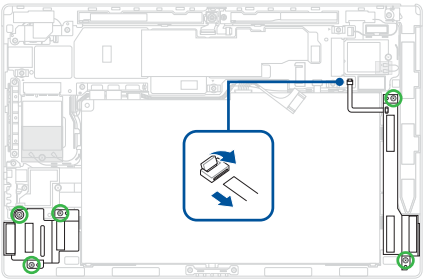
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
   - Display panel module

Screw list

● ⊕ M1.6 X 3.0L (5pcs)

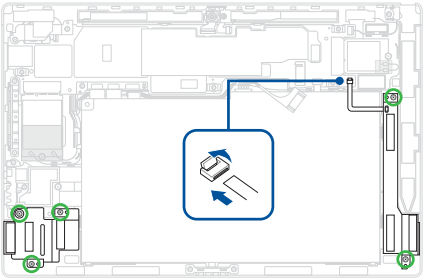
Removal

1. Disconnect the speaker connector.
2. Remove the screw(s), then remove the speakers.

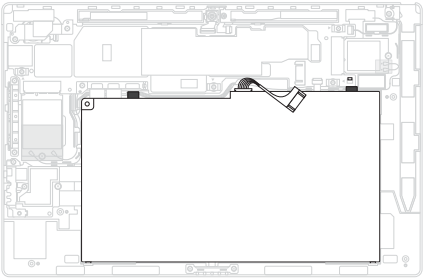


Installation

1. Install the speakers, then secure the speakers using the screw(s) you removed earlier.
2. Reconnect the speaker connector.
3. Install the components you removed in the *Before you begin* section.



Battery



Before you begin

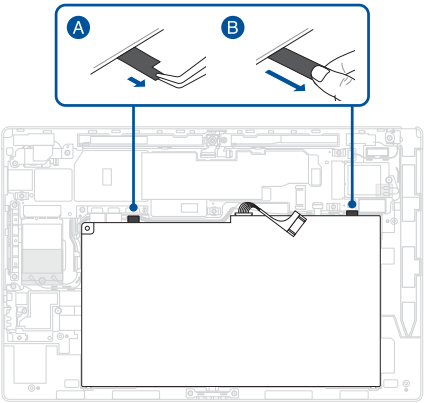
IMPORTANT! Serious risk of fire or explosion may occur if the battery is punctured. If you are uncertain about proceeding, stop and contact an authorized service center for assistance.

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
   - Display panel module
   - Speakers

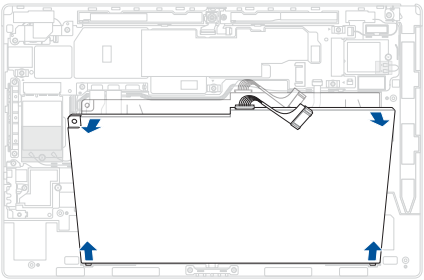
Removal

1. Locate the tip of the stretch release tape, then carefully pull out the stretch release tape as shown in the illustration below.

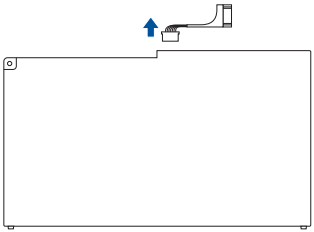
IMPORTANT! Maintain a flat angle and constant speed when pulling the stretch release tape. Excessive force may damage the stretch release tape and prevent removal of the battery.



2. Remove the battery.

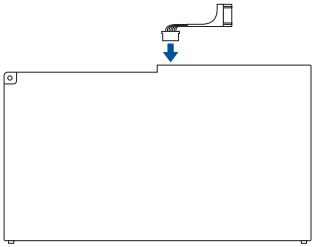


3. Remove the battery power cable.



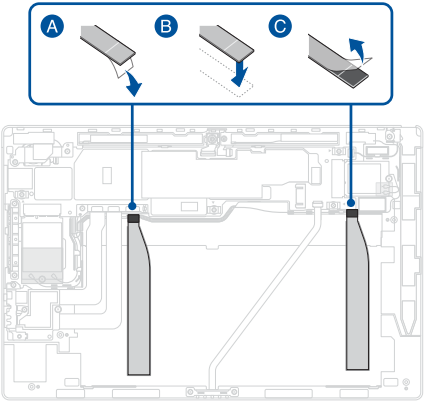
Installation

1. Connect the battery power cable to the battery.



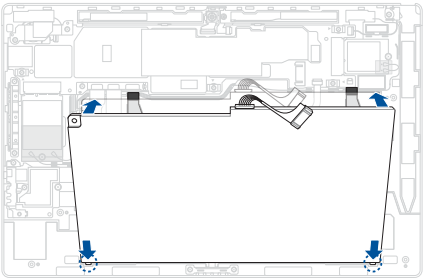
2. Remove the release liner(s) from the bottom side of the stretch release tape.
3. Align and attach the stretch release tape to the chassis.
4. Remove the release liner(s) from the top side of the stretch release tape.

NOTE: The tape cannot be reused. Remove any adhesive residue and use new tape when reinstalling components.

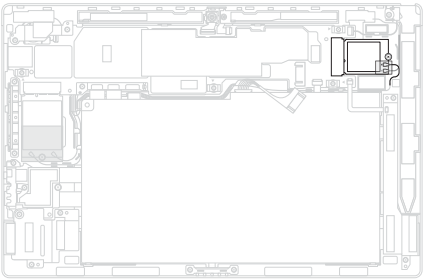


5. Install the battery.

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



WLAN module



Before you begin

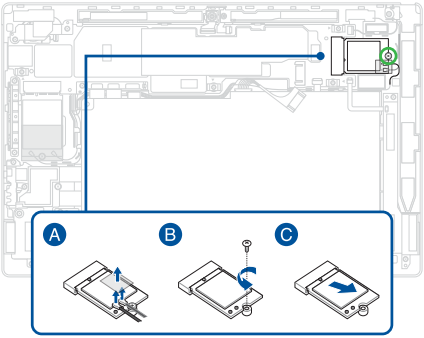
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
   - Display panel module

Screw list

● ⊕ M1.6 X 1.7L (1pc)

Removal

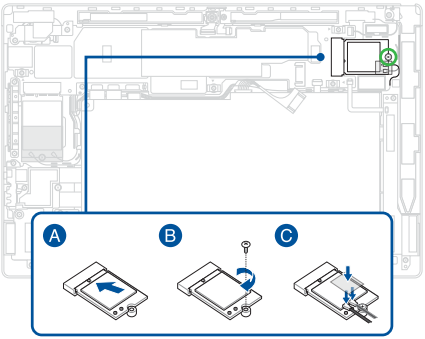
Remove the polyester film and disconnect the antenna cable(s), then remove the screw and remove the WLAN module.



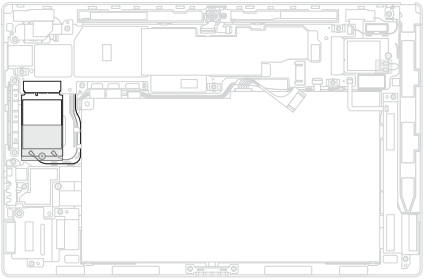
Installation

1. 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.

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



LTE module (on selected models)



Before you begin

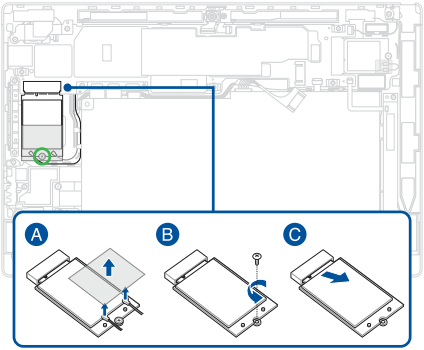
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
   - Display panel module

Screw list

● ⊕ M1.6 X 1.7L (1pc)

Removal

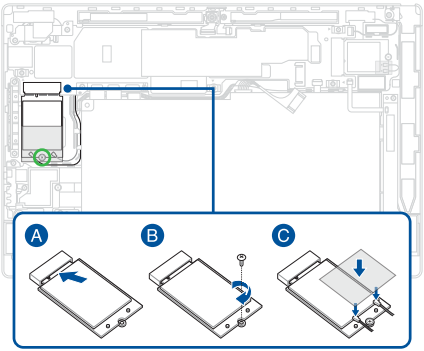
Remove the polyester film and disconnect the antenna cable(s), then remove the screw and remove the LTE module.



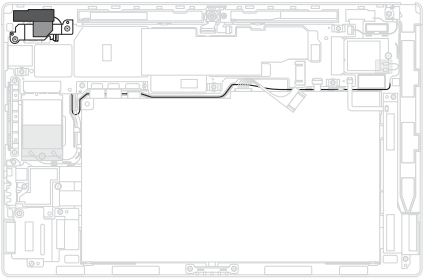
Installation

1. Install the LTE module and secure the LTE module using the screw you removed earlier, then reconnect the antenna cable(s) and reattach the polyester film.

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



Rear camera module



Before you begin

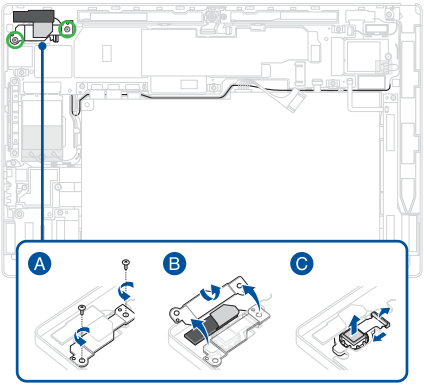
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
   - Display panel module

Screw list

● ⊕ M1.6 X 2.0L (2pcs)

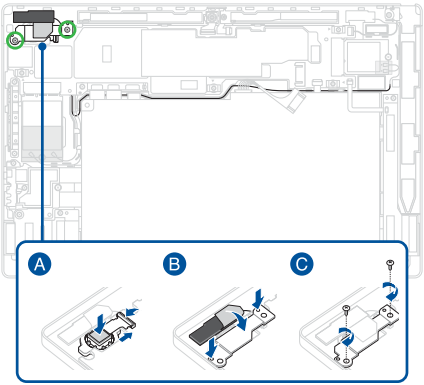
Removal

1. Remove the screw(s).
2. Flip the camera bracket upwards, then remove the camera bracket.
3. Disconnect the camera connector and remove the camera.

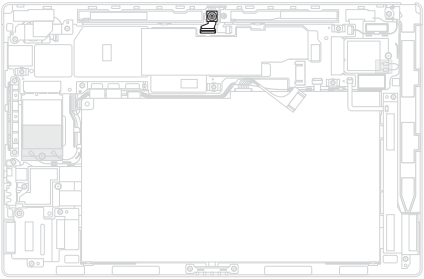


Installation

1. Install the camera and reconnect the camera connector.
2. Install the camera bracket and reattach the foil.
3. Secure the camera bracket using the screw(s) you removed earlier.
4. Install the components you removed in the *Before you begin* section.



Front camera module

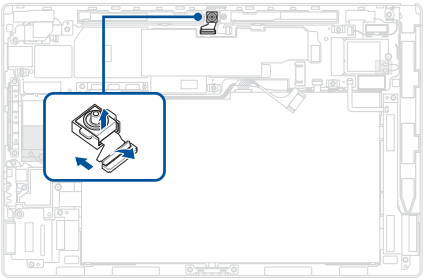


Before you begin

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
   - Display panel module

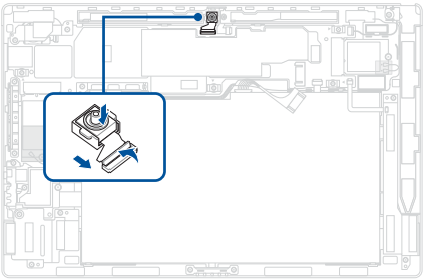
Removal

Disconnect the camera connector and remove the camera.

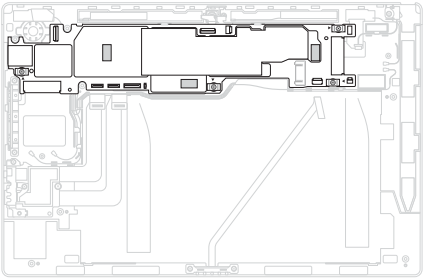


Installation

1. Install the camera and reconnect the camera connector.
2. Install the components you removed in the *Before you begin* section.



Motherboard



Before you begin

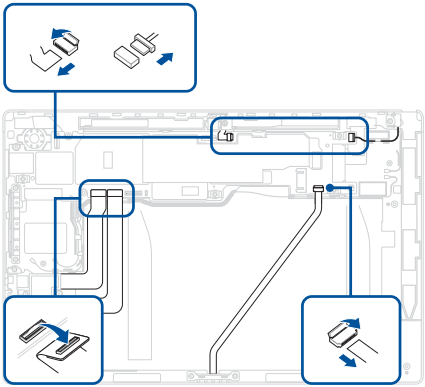
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
   - Display panel module
   - Speakers
   - Battery
   - WLAN module
   - LTE module (if available)
   - Rear camera module
   - Front camera module

Screw list

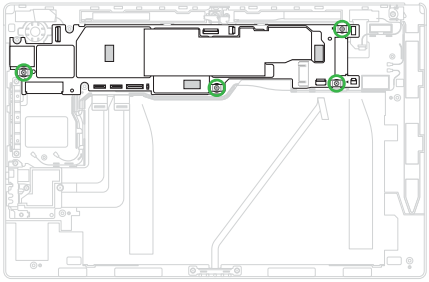
● ⊕ M1.6 X 2.0L (4pcs)

Removal

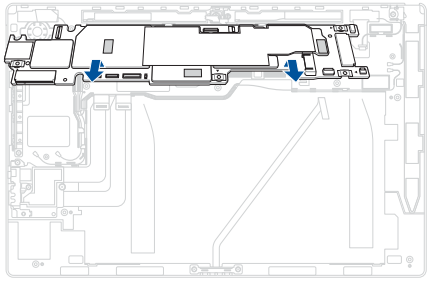
1. Disconnect the cable(s) from the motherboard.



2. Remove the screw(s).

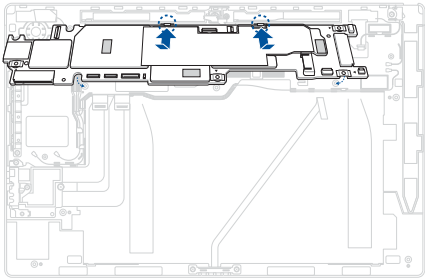


3. Lift and remove the motherboard from the chassis.

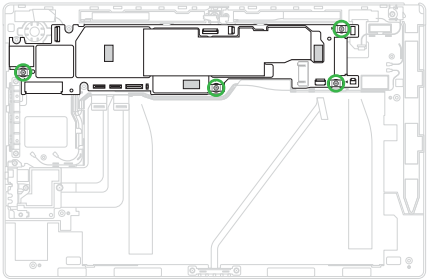


Installation

1. Align and install the motherboard.

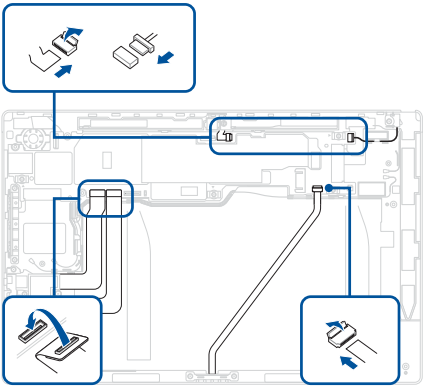


2. Secure the motherboard using the screw(s) you removed earlier.

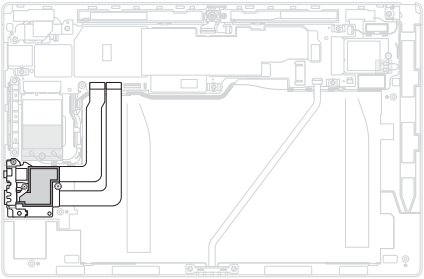


3. Reconnect the cable(s) to the motherboard.

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



I/O board



Before you begin

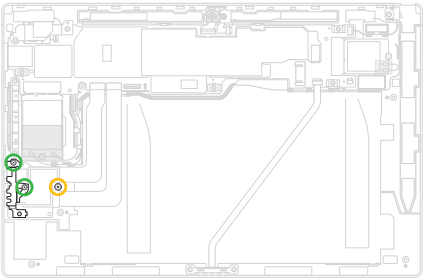
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
   - Display panel module
   - Speakers
   - Battery

Screw list

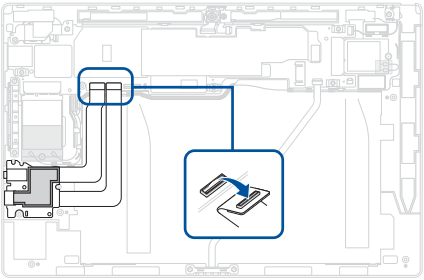
- M1.6 X 3.0L (2pcs)
- M1.6 X 1.7L (1pc)

Removal

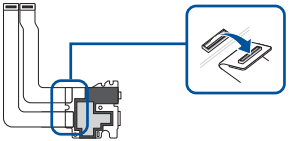
1. Remove the screw(s), then remove the I/O board bracket.



2. Disconnect the cable(s), then remove the I/O board.

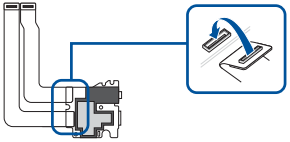


3. Flip the I/O board over, then disconnect the cable(s) from the rear side of the I/O board.

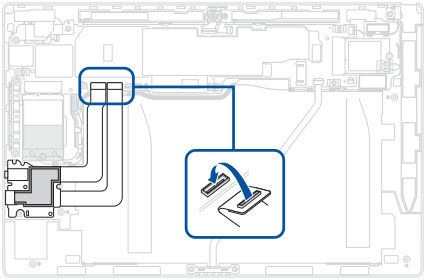


Installation

1. Reconnect the cable(s) to the rear side of the I/O board.

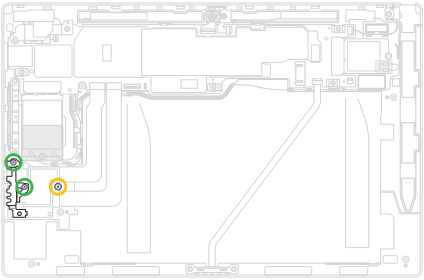


2. Flip the I/O board over, then install the I/O board and reconnect the cable(s).

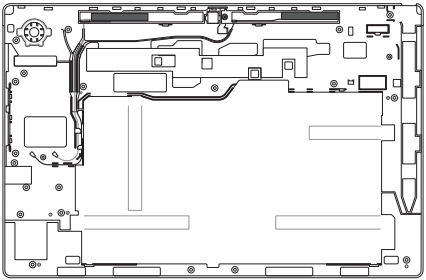


3. Install the I/O board bracket, then secure the I/O board bracket using the screw(s) you removed earlier.

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



Bottom cover



Before you begin

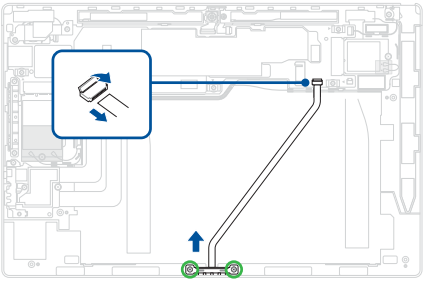
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
   - Display panel module
   - Speakers
   - Battery
   - WLAN module
   - LTE module (if available)
   - Rear camera module
   - Front camera module
   - Motherboard
   - I/O board

Screw list

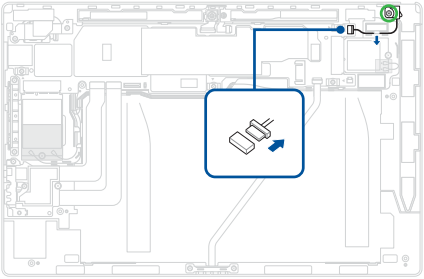
- ⊕ M1.6 X 3.0L (5pcs)

Removal

1. Remove the screw(s) and disconnect the cable, then remove the keyboard connector.

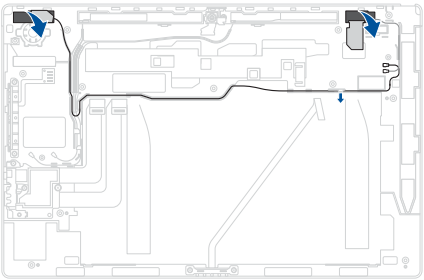


2. Remove the screw and disconnect the cable, then remove the stylus charger.



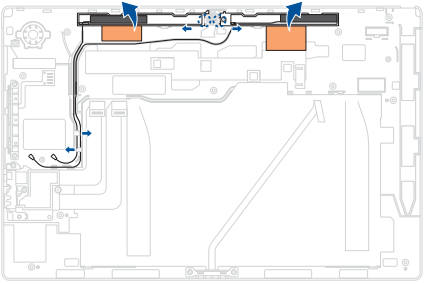
3. Remove the WLAN antenna cable(s).

IMPORTANT! The antenna cable(s) cannot be reused once removed.

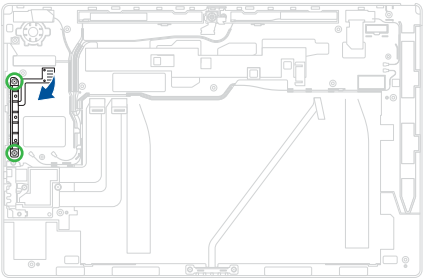


4. Remove the LTE antenna cable(s) (if available).

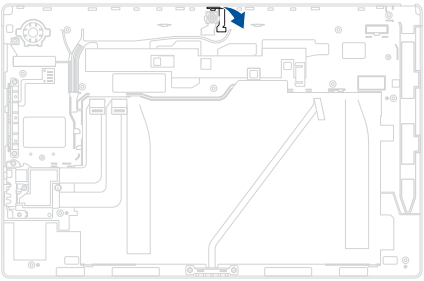
IMPORTANT! The antenna cable(s) cannot be reused once removed.



5. Remove the screw(s), then remove the volume and power button cable.

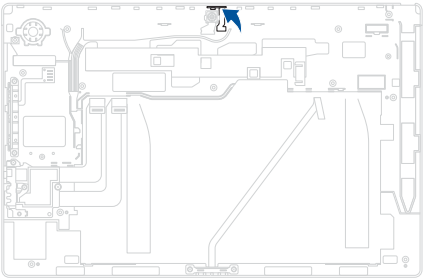


6. Remove the microphone.

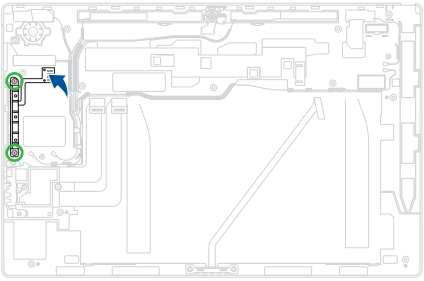


Installation

1. Install the microphone.

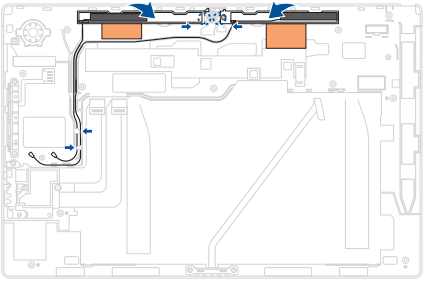


2. Install the volume and power button cable, then secure the volume and power button cable using the screw(s) you removed earlier.



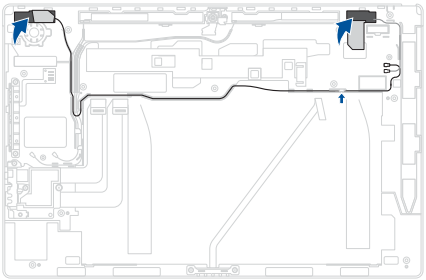
3. Install the LTE antenna cable(s) and route the LTE antenna cable(s) through the cable guide(s) (if available).

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.



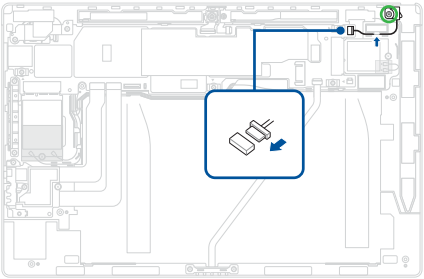
4. Install the WLAN antenna cable(s) and route the WLAN antenna cable(s) through the cable guide(s).

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.



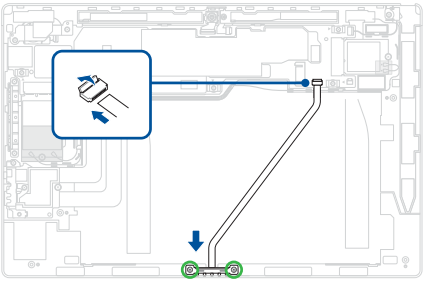
5. Install the stylus charger, then route the cable through the cable guide(s) and secure the stylus charger using the screw you removed earlier.

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.



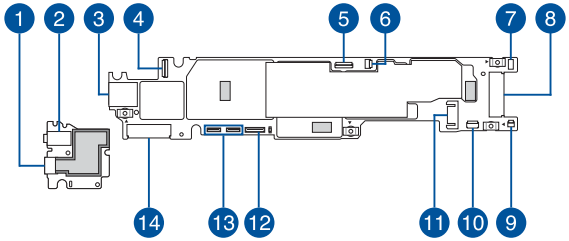
6. Install the keyboard connector and secure the keyboard connector using the screw(s) you removed earlier, then reconnect the cable.

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



Appendix

Wiring and connection diagrams



1. USB Type-C® connector
2. Audio connector
3. SIM card slot
4. Rear camera connector
5. Front camera connector
6. Microphone connector
7. Stylus charger connector
8. WLAN module connector
9. Speaker connector
10. Keyboard connector
11. Battery connector
12. eDP connector
13. I/O board FPC connector
14. LTE module connector