

ASUS VIVOBOOK M1605YA

Repair Manual



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Service Overview

- ASUS is not responsible for direct, indirect, intentional o unintentional damages resulting from improper installation and operation.
- Carefully read through this Service Guide for a look at various components of the device before performing any service and repairs.
- To provide the best service, we have provided the below information for technicians from distributors and resellers to perform the complete device disassembly and assembly. Before performing the procedures, please be sure to read through the overview in this service guide for component overview to avoid any unwarranted damages to the device hardware.
- Due to sales policy difference, the components might have different specifications on the same series product, please refer to E-manual by model.

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.
- Use the correct screw models on your device to prevent damage.
- 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!

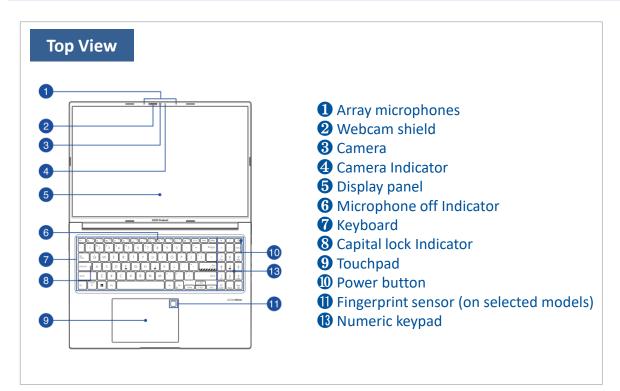
- If you are uncertain about performing the described service procedures,
 stop and contact an authorized service center for assistance.
- Purchase replacement components from authorized retailers of this device to ensure maximum compatibility and reliability.

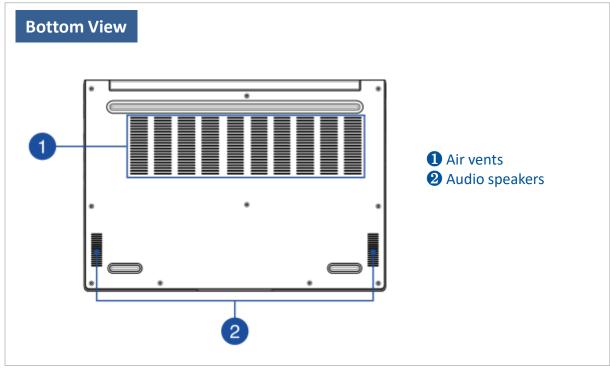
NOTE

- The illustration are for reference only.
- The service procedures described in this document depend on the model configuration and may not reflect the entire servicing process. To service components that are not covered in this document, 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 reassembling.

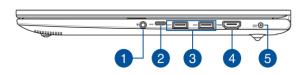


ASUS VIVOBOOK M1605 Series Overview



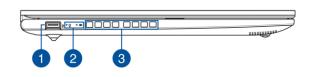






- Headphone/Headset/Microphone Jack
- 2 USB 3.2 Gen 1 Type-C port/Power Delivery combo port
- **3** USB 3.2 Gen 1 port
- 4 HDMI output port
- **5** Power(DC) input port

Left View



- USB 2.0 port
- Status indicators
- **3** Air vents



Components Top View

♦ LCD COVER



♦ LCD BEZEL



♦ OLED LCD PANEL



♦ KEYBOARD MODULE



♦ BOTTOM CASE



♦ IPS PANEL



♦ MAIN BOARD



♦ SSD



♦ HINGE CAP

♦ THERMAL MODULE



♦ SPEAKER



♦ HINGE (IPS)



♦ MEMORY



♦ ABSORBER



♦ ANTENNA

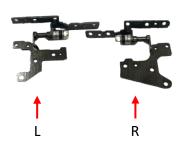


AXU

♦ TOUCHPAD MODULE



♦ HINGE (OLED)



♦ FP FFC (BY SKU)



♦ IO FFC



♦ CAMERA



♦ FAN



♦ IO BOARD



♦ THERMAL DUCT



♦ TP FFC



♦ PMIC BD



♦ WIFI CARD



♦ 50W BATTERY (WITH BATTERY CABLE)



♦ 42W BATTERY and BATTERY CABLE)





♦ IPS EDP CABLE



♦ OLED EDP CABLE





Components Bottom View

♦ LCD COVER (OLED PANEL)



♦ LCD BEZEL



♦ OLED BKT BENT ASSY



♦ OLED LCD PANEL



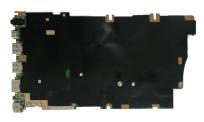
♦ BOTTOM CASE



♦ KEYBOARD MODULE



♦ MAIN BOARD



♦ LCD COVER (IPS PANEL)



♦ THERMAL MODULE



♦ TOUCHPAD MODULE



♦ IPS LCD PANEL



♦ IO BOARD





Repair Overview

This chapter describes disassembly and assembly (Assemble document please look up from the last page), please follow the information provided in this section to perform the complete disassembly procedure.

♦ Precautions:

Before you perform any service or repair on the notebook, please pay special attention to the cautions prevent any damages to the notebook.

- 1. Be sure that the notebook is powered down.
- 2. Before disassembling any part, please disconnect all power source. ex: AC plug/Battery connector/Power protect screw etc.
- 3. Remove all rings, watches and any other metal objects from your hands.





- 4. Always wear a ground strap on your hand to protect the notebook from static discharge.
- 5. Please refer to "ANSI ESD S20.20" about ESD protection measure.
- 6. Put the disassembled parts in the functional PE BAG to avoid any damages of the







- 7. The maintenance environment temperature is 20-30 $^{\circ}\text{C}$ and humidity is 40% 70%.
- 8. To avoid scratching on the surface of machine; please use anti-static and soft materials to put on desk in repair environment as below photo.

9. Screw Appearance Criteria:

If the screws have the following damaged appearance, please do not use.

- a. Shape deformed.
- b. Damaged head unable to drive in or the stripped screw.
- c. Damaged unable to securely tighten.
- d. Paint scratched off.
- e. Rusty











- 10. The following chapter includes all part numbers mentioned in service guide are used for reference only, actual part name depends on different SKU, if you need the exact part number for ordering, please refer to the Orderbook.
- 11. Due to sales policy difference, the components may have different specifications on the same model. Please note that all pictures and components shown on Service Guide are for disassembly/assembly description purpose only, so please refer to the actual product for disassemble/assemble.



ASUS VIVOBOOK M1605YA Appropriate Tools

♦ Screwdriver

Please accord to different screw specification to choose different screwdriver and head.





♦ Alcohol 95%



♦ Glove



♦ Dust-free Cloth



♦ Plastic Blade



◆ Tweezers (Tweezer material: Metal and Plastic)

Use a pair of tweezers to remove/insert/tidy cables.



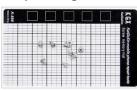
♦ Thickness Gauge

Thickness compass specification 0.05mm-1.5mm. Use it to measure the gap.



♦ Magnetism Board

Suggest local buy magnetism board to place screw, avoid mix different type screw to cause assembly damage.



♦ GA500 Thermal Grease

Thermal Pad





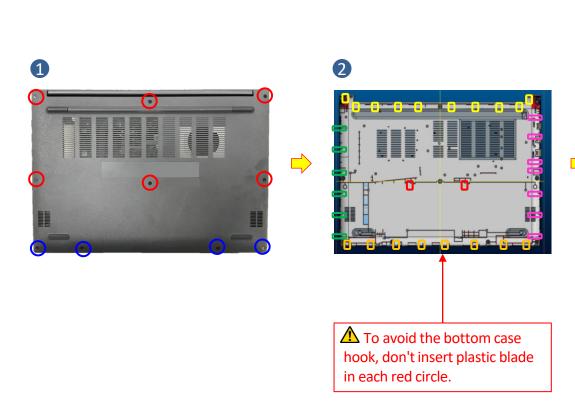
BOTTOM CASE

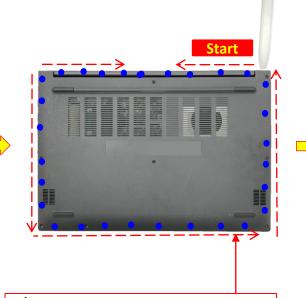
Disassembly Notice

Step 1 : Remove screw *10pcs.

Step 2: Use plastic blade to pry the BOTTOM CASE.

| Screws | QTY | Spec | Torque(kgf-cm) |
|--------|-----|--------------------------------|----------------|
| TO | 6 | SCREW M2*7L (4.5,0.8) (K) #1 | 3.0±0.2 |
| TO | 4 | SCREW M2*3.5L (4.5,0.8) (K) #1 | 3.0±0.2 |





Please follow above arrow direction with using plastic blade to pry bottom case in each blue circle location.

(To avoid the bottom case hook, please prying at each blue circle location.)





Assembly Notice

Please keep pace with the color of screws when you change them.



DISCONNECT BATTERY CONNECTOR

Disassembly Notice

Please be sure to pull out adapter and disconnect the battery.



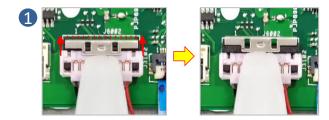


Before disassembly battery connector, please be sure to pull out adapter and disconnect the battery more than ten seconds in order to IC damage.

- Step 1: Use the non-conductive pry tool to push iron sheet.
- Step 2: Use the non-conductive pry tool to disconnect battery connector.

Note: Please disconnect the red cable side first.

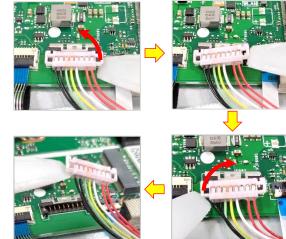












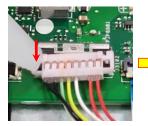
Assembly Notice

To prevent getting a short circuit or an electric shock accident, please follow the below steps to connect the battery connector.

Step 1: Use the non-conductive pry tool to connect the black cable side first, then connect the red cable side.

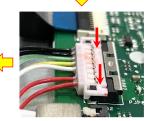
Step 2: Use the non-conductive pry tool to push the iron sheet.

















Disassembly Notice

Please be sure to pull out adapter and disconnect the battery.

Step 1 : Remove the screw *1pc.

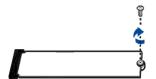
Step 2: Remove the SSD.

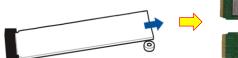
| Screws | QTY | Spec | Torque (kgf-cm) |
|-----------|-----|----------------------|-----------------|
| TO | 1 | M2*2L (5,0.8) (K) #1 | 2.0 ± 0.2 |













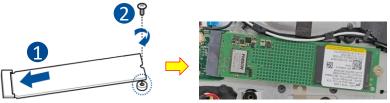




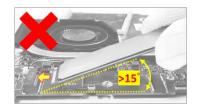
Assembly Notice

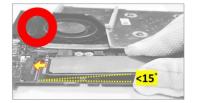


- 1. Align and insert the new M.2 card into the module slot.
- 2. Secure the M.2 card in place by fastening the screw.



When installing the SSD, please keep the SSD less then 15 degrees with motherboard, and then insert the SSD.





⚠ When you assembly 1T SSD, please add new THM SSD PAD. The THM SSD PAD is attached to the chart below and must not interfere with other materials. EN-0391715



M1702QA THM SSD PAD 3.5T



MEMORY

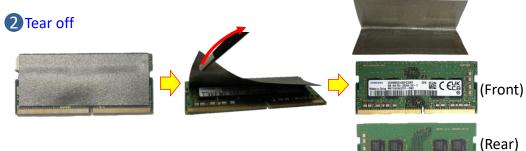
Disassembly Notice

Please be sure to pull out adapter and disconnect the battery.



- Step 1: Remove the MEMORY *1pc (red mark).
- Step 2: Tear off the ABSORBER from MEMORY.



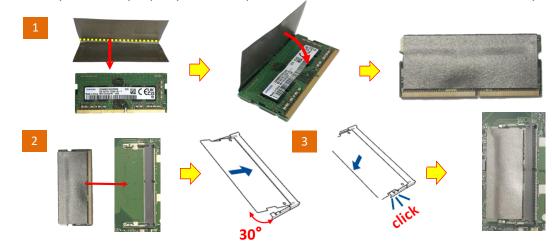


Please check and remove the spec label from the ABSORBER, and paste it back to the old RAM.



Assembly Notice

- - Step 1 : Paste ABSORBER*1pc on the new RAM.
 - Step 2 : Align and insert the new RAM module at 30° into the memory slot.
 - Step 3: Once properly inserted, push down the RAM module until it clicks in place.











BATTERY

Disassembly Notice

Please be sure to pull out adapter and disconnect the battery.



⚠ Before disassembly battery connector, please be sure to pull out adapter and disconnect the battery more than ten seconds in order to avoid IC damage.

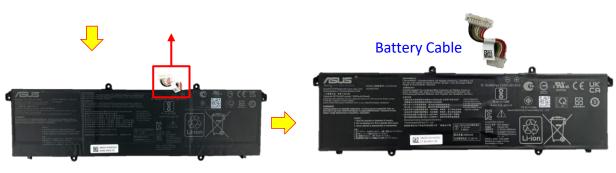
Step 1 : Remove the screw (red mark) *4pcs.

Step 2: Remove the BATTERY and Battery Cable (FOR 42W BATTERY SKU). Remove the BATTERY with Battery Cable (FOR 50W BATTERY SKU).

| Screws | QTY | Spec | Torque(kgf-cm) |
|--------|-----|--------------------------------|----------------|
| | 4 | SCREW M2.0*4.0L(4.6,0.8) (K)#1 | 2.0 ± 0.2 |







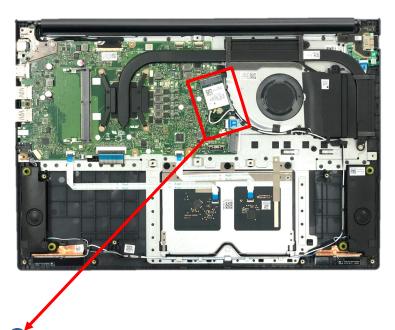


WLAN CARD

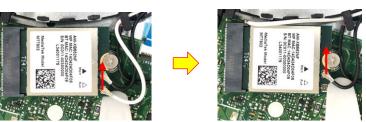
Disassembly Notice Please be sure to pull out adapter and disconnect the battery.

Step 1: Disconnect the Antenna connector *2pcs.

Step 2 : Remove the screw *1pc. Step 3: Remove the WLAN CARD.





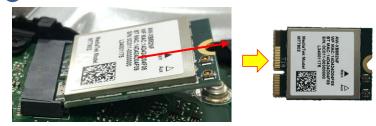


| Screws | QTY | Spec | Torque(kgf-cm) |
|--------|-----|----------------------------|----------------|
| | 1 | SCREW M2*2L (5,0.8) (K) #1 | 2.0 ± 0.2 |



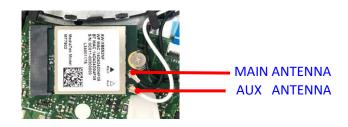


3 Remove



Assembly Notice

A Please according to below picture to assemble Antenna cable.





SPEAKER

Disassembly Notice

Please be sure to pull out adapter and disconnect the battery. 💢



Step 1: Disconnect the Speaker connector(red mark) and then remove the Speaker.



1 Disconnect and remove





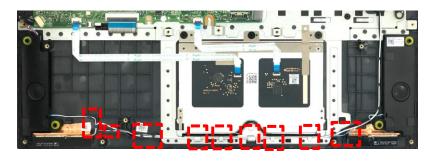
Assembly Notice

For Speaker assembly, please follow the below steps.

1. Put the speaker into the positioning column and fix it.



2. Please follow the below mark to tidy speaker cable.





ANTENNA

Disassembly Notice

Please be sure to pull out adapter and disconnect the battery.

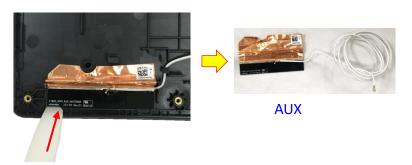


Step 1: Tear off the FOIL and then remove the ANTENNA AUX.

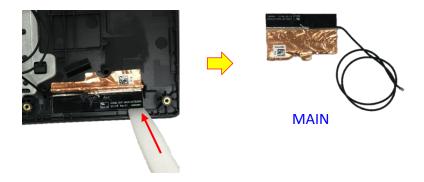
Step 2: Tear off the FOIL and then remove the ANTENNA_MAIN.



1 Tear off and then Remove

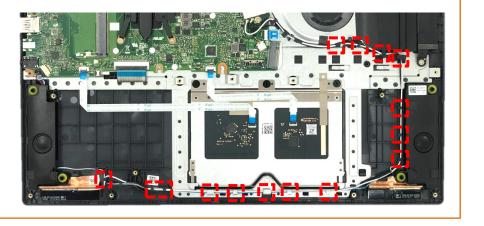


Tear off and then Remove



Assembly Notice

For ANTENNA assembly, please follow the picture below to paste the new one and tidy cable.





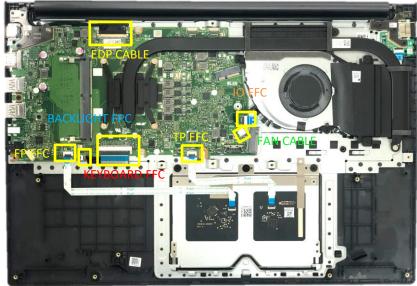
MAIN BOARD (with Thermal module) and FAN

Disassembly Notice

Please be sure to pull out adapter and disconnect the battery.

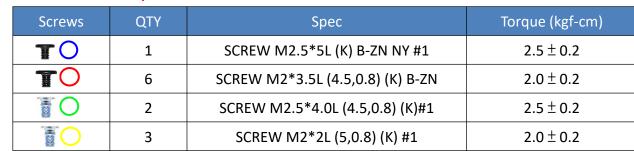
- Step 1: Disconnect the connector *7pcs (yellow mark).
- Step 2: Remove screw (red, green, blue and yellow mark) *12pc.
- Step 3: Lift up and put down KB (with Thermal, MB, Touchpad and FAN).
- Step 4: Remove the MB (with Thermal module) and FAN (with THERMAL DUCT).
- Step 5: Tear off the Mylar and then remove the FAN.

1 Disconnect















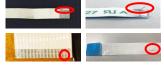






Assembly Notice

⚠ If FFC is damage during disassembly, please replace new one. Here are some samples of FFC damage:



A Please use the correct technique to take fans off to avoid getting out of shape.







THERMAL MODULE

Disassembly Notice

Please be sure to pull out adapter and disconnect the battery.

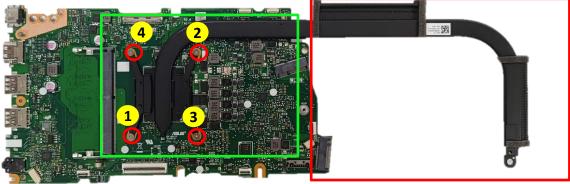
Step 1 : Remove the screw *4pcs.

Step 2: Remove the THERMAL MODULE.

| Screws | QTY | Spec | Torque(kgf-cm) |
|--------|-----|----------------------------|----------------|
| TO | 4 | SCREW M2*2L (5,0.8) (K) #1 | 2.0 ± 0.2 |

Recommend that the force point is at green block, pull up thermal module to take it out. Do not pull up at red block and note the thermal pipe should not have deformation.





2 Remove



Assembly Notice



Step-1

Please refer Repair Notice:RN201907120* SOP for thermal material rework when reassemble thermal module before.

• MB Location:[CPU]

Material: GA500 Grease



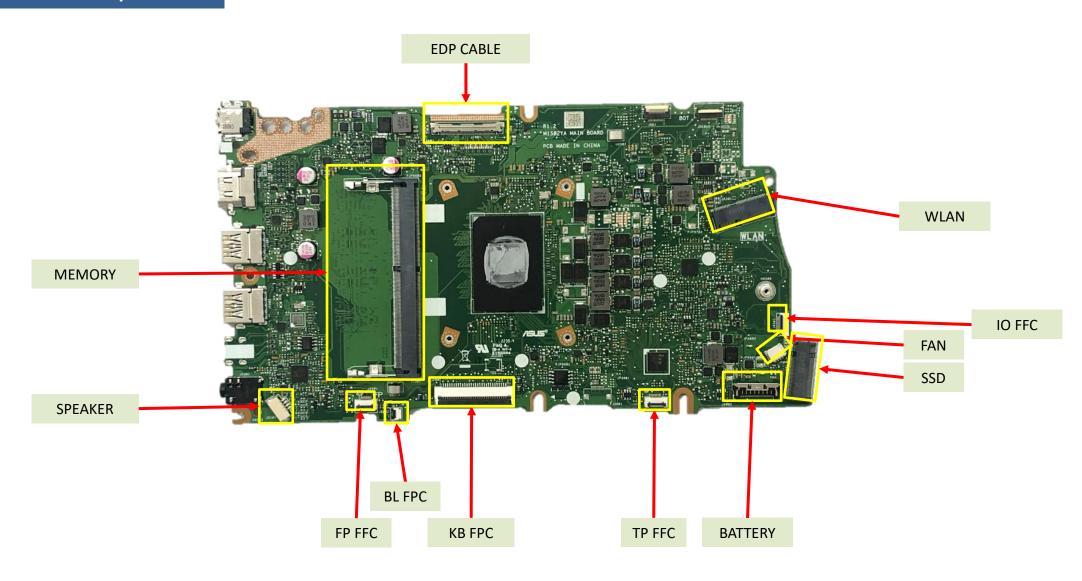
Step-2

Please follow the screw numbers to lock screw *4pcs.



MAIN BOARD CONNECTOR

Mainboard connector placement

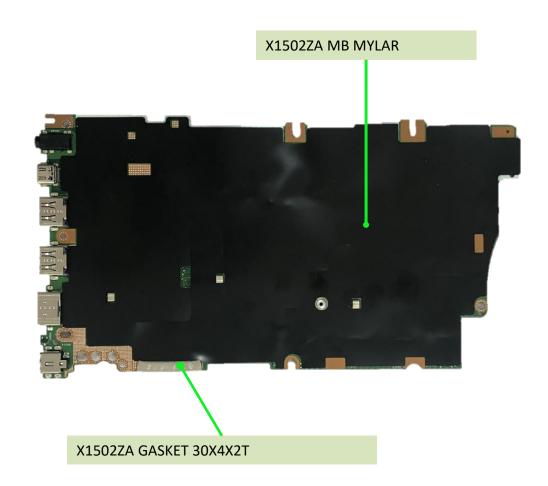




MAIN BOARD

Materials on mainboard







IO BOARD

Disassembly Notice

Please be sure to pull out adapter and disconnect the battery.

Step 1: Disconnect IO FFC connector (red mark) and then remove the IO FFC.

Step 2: Remove the screw *3pcs.

Step 3: Remove the IO Board.

| Screws | QTY | Spec | Torque(kgf-cm) |
|--------|-----|------------------------------|----------------|
| TO | 3 | SCREW M2.5*5L (K) B-ZN NY #1 | 2.5 ± 0.2 |















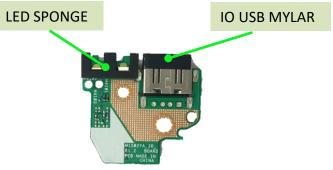








A Please make sure to paste materials before assembling on the IO BD.



If FFC is damage during disassembly, please replace new one. Here are some samples of FFC damage:











3 Remove

TOUCHPAD MODULE

Disassembly Notice

Please be sure to pull out adapter and disconnect the battery.



| | Step 1 | : Tear | off the m | ylar (| (red mark). |
|--|--------|--------|-----------|--------|-------------|
|--|--------|--------|-----------|--------|-------------|

Step 2: Disconnect & remove the FP FFC and TP FFC.

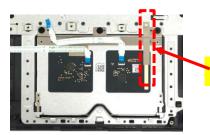
Step 3: Remove the CONTROL BOARD GASKET、tape and the screw *3pcs.

Step 4: Remove the TOUCHPAD MODULE.

| Screws | QTY | Spec | Torque (kgf-cm) |
|--------|-----|----------------------------------|-----------------|
| TO | 3 | SCREW M2*2L (7,0.55) (K) B-ZN #1 | 2.0 ± 0.2 |

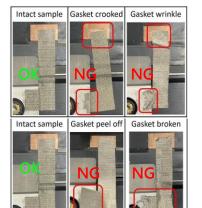
Assembly Notice

For TOUCHPAD MODULE assembly, please paste the new CONTROL BOARD GASKET.

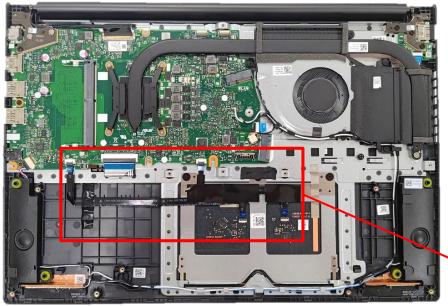


CONTROL BOARD GASKET

⚠ If the CONDUCTIVE TAPE is removed or it is crooked, wrinkle, Peel off, broken during disassembly, please paste a new one. Here are some examples of conductive tapes that need to be replaced with new ones:









2 Disconnect and remove



TP FFC

FP FFC (BY SKU)

Remove

CONTROL BOARD GASKET





KEYBOARD MODULE

Disassembly Notice Please be sure to pull out adapter and disconnect the battery.



Step 1 : Remove the KEYBOARD MODULE.













LCD BEZEL

Disassembly Notice

Please be sure to pull out adapter and disconnect the battery.

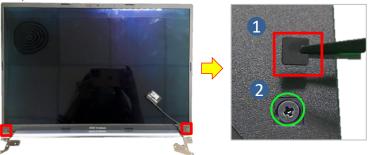
Remove

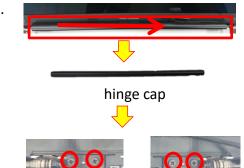
Step 1 : Remove BEZEL SCREW MYLAR *2pcs.

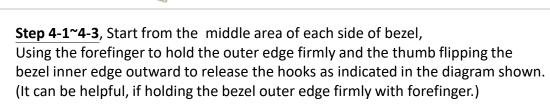
Step 2 : Remove screw *2pcs.

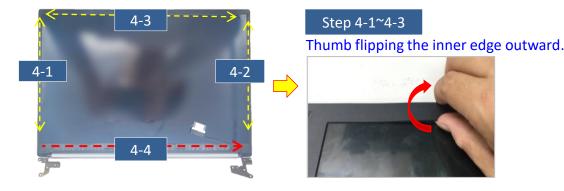
Step 3: Remove the hinge cap *1pc and the screw *4pcs.

Step 4: Remove LCD BEZEL.









| Screws | QTY | Spec | Torque (kgf-cm) |
|--------|-----|---------------------------------------|-----------------|
| | 2 | SCREW M2.5*3.5L (4.5,0.5) (K) B-ZN #1 | 2.5 ± 0.2 |
| TO | 4 | SCREW M2.5*5L (K) B-ZN NY #1 | 2.5 ± 0.2 |

Step 4-4 Due to some tapes behind the lower edge of bezel, please using plastic blade to teardown the bezel.

Please follow the direction shown in the red arrow, to move plastic blade from left to right and peel the bezel away slowly. While peeling, please move the blade in the parallel direction to the panel and **pressing the black Mylar downward** (As circled in green) to ensure the black Mylar and the tape behind the bezel are well separated.

Please move blade slowly to separate the bezel away, and must press the black Mylar downward with panel parallel direction..







Assembly Notice

When reuse the LCD BEZEL:

Please paste new BEZEL ADHESIVE FB before assembly BEZEL. (New LCD BEZEL already contains LCD BEZEL ADHESIVE.)



Please change new BEZEL SCREW MYLAR after you disassemble it.





LCD PANEL & CAMERA FOR OLED PANEL

Disassembly Notice

Please be sure to pull out adapter and disconnect the battery.

Step 1: Remove the screw *4pcs. Step 2: Remove the hinge *2pcs.

Step 3: Disconnect the Camera & PMIC BD connector then remove it.

Step 4: Pull out the OLED COVER ADHESIVE*2pcs.

Step 5: Remove LCD PANEL (with Bracket) and EDP Cable.

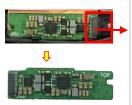
Step 6: Pull out the OLED BKT ADHESIVE *2pcs and remove the panel.

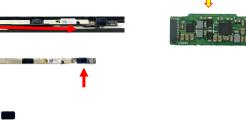
| Screws | QTY | Spec | Torque (kgf-cm) |
|--------|-----|---------------------------------------|-----------------|
| | 4 | SCREW M2.5*3.5L (4.5,0.5) (K) B-ZN #1 | 2.5 ± 0.2 |

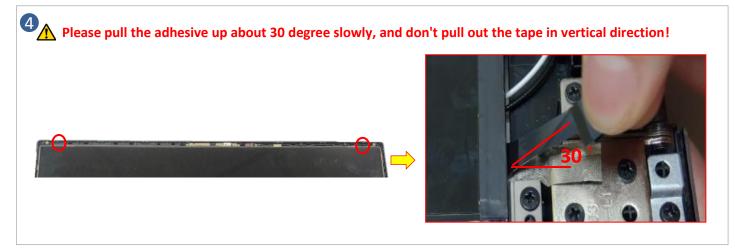


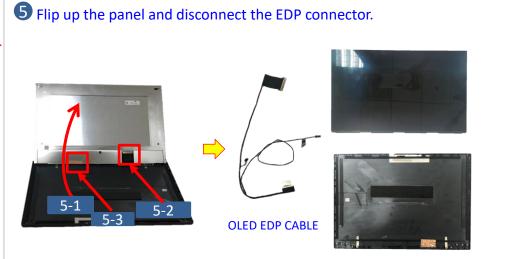
















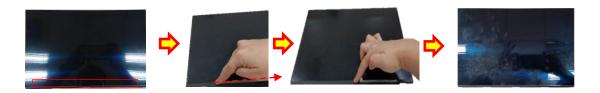
OLED PANEL ASSEMBLY NOTICE

Assembly Notice Please be sure to pull out adapter and disconnect the battery.





Please use the fingertip to clean the residual glue on PANEL or BEZEL.

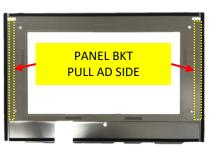


When reuse the OLED PNL BKT and assembly the OLED PNL:

Step 1 : Please paste new BKT ADHESIVE *2pcs, then release paper of BKT ADHESIVE *2pcs.

Step 2: Align the up and left site.





B-2



When reuse the LCD COVER:

Step 1: Please paste new ADHESIVE *2pcs, then release paper of ADHESIVE *2pcs.

Step 2: Align the up and left site.

C-1





Please follow the green mark to tidy EDP cable.





LCD PANEL & CAMERA FOR IPS PANEL

Disassembly Notice

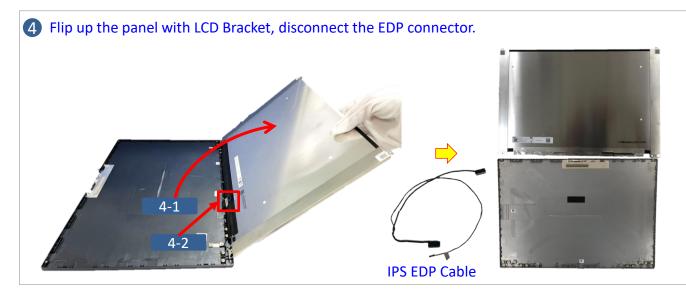
Please be sure to pull out adapter and disconnect the battery.

Step 1: Remove the screw *6pcs. Step 2: Remove the hinge *2pcs.

Step 3: Disconnect the Camera connector and remove it. Step 4: Remove the panel (with brackets) and EDP cable.

| Screws | QTY | Spec | Torque (kgf-cm) |
|--------|-----|---------------------------------------|-----------------|
| TO | 4 | SCREW M2.5*3.5L (4.5,0.5) (K) B-ZN #1 | 2.5 ± 0.2 |
| | 2 | SCREW M1.6*2.2L (3.05,0.4) (K) W-NI | 1.6 ± 0.2 |





S Place the LCD panel on a clean soft material to avoid scratches, fix the LCD Panel and bend the brackets on the left and right sides of the LCD Panel, then remove bracket from LCD Panel.







LCD PANEL

Right bracket

⚠ The Brackets cannot be reused.



ASSEMBLY NOTICE (FOR IPS PANEL)

Assembly Notice Please be sure to pull out adapter and disconnect the battery.



Please follow the steps bellow to assemble the brackets and LCD Panel.

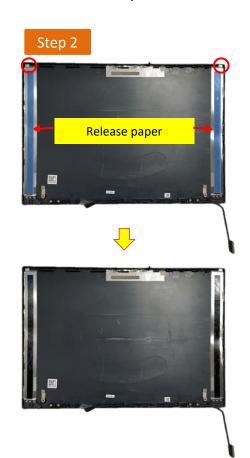
Step 1: Place the new brackets *2pcs on LCD COVER.

Step 2 : Lock screw *2pc(red mark), then remove the release paper *2pcs

Step 3: Connect and tidy the EDP CABLE.

Step 4: Align the LCD panel with the upper side of the LCD COVER and place the LCD PANEL.





When reuse the LCD PANEL:

Please use the fingertip to clean the residual glue on PANEL or BEZEL.

