

ASUS TUF Gaming A17 (FA706I/Q) series

Service Guide



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.



Disclaimer

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

Safety precautions

- Keep liquids or moisture away from your Notebook PC before installing or removing any components.
- Ensure to place your Notebook PC on a stable surface before installing or removing any components.
- Detach the clip or flap before removing the signal cables to prevent damage.
- Disconnect the power plug by pulling the plug evenly to avoid damage. Ensure to connect the signal cables in the correct orientation.
- Disconnect all power cables and remove the battery pack (if applicable) before cleaning your Notebook PC with liquid detergent to avoid risk of electric shock.
- Disconnect all power cables and remove the battery pack (if applicable) before installing or removing any components. Ensure to read and follow the instructions in the manual.
- 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 Notebook PC to avoid short circuits.
- Hold components by the edges to avoid touching the ICs.
- Ensure to properly install all the 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.
- Ensure to install the correct screw models on your Notebook PC to prevent damage.



Table of Contents

- Service Overview
- ASUS TUF Gaming A17 (FA706I/Q) series Overview
- Components Top View
- Components Top View (For FA706QE/QC)
- Components Bottom View
- Repair Overview
- Appropriate Tools
- Keyparts and Related Parts
- Disassembly steps :
 - BOTTOM CASE
 - BATTERY
 - SSD
 - DDR
 - WIFI CARD
 - SPEAKER
 - USB BOARD
 - FAN (with THERMAL MODULE and MAIN BOARD)
 - THERMAL MODULE
 - MAIN BOARD
 - KEYBOARD MODULE
 - LCD BEZEL
 - LCD PANEL (LCD COVER Metal SKU)
 - LCD PANEL (LCD COVER Plastic SKU)



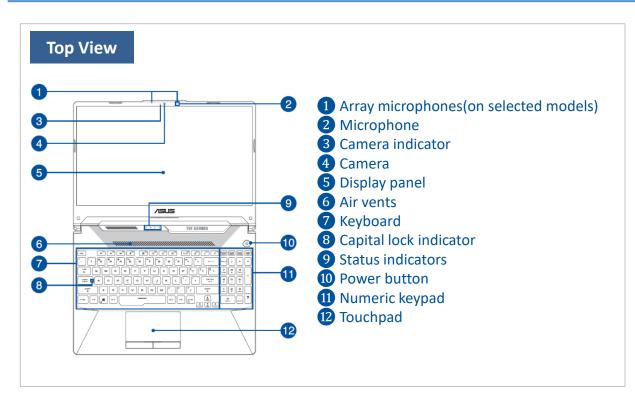
Service Overview

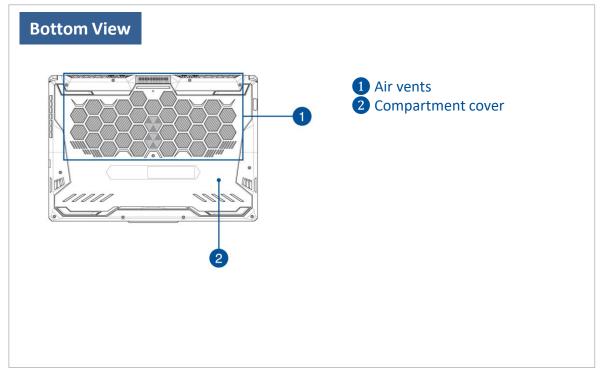
- Carefully read through this Service Guide for a look at various components of the device before performing any service and repairs.
- To provide the best service, we have provided the below information for technicians from distributors and resellers to perform the complete device disassembly and assembly. 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.
- The following contents include all part numbers mentioned in the service guide are used for reference only, if you need the exact part number for ordering, please refer to the OrderBook.
- Due to sales policy difference, the components might have different specifications on the same series product, please refer to E-manual by model.

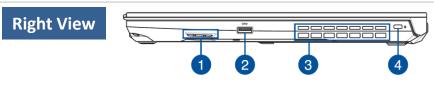
Due to sales policy difference, the components may have different specifications on the same model. If you have any operational issues, please contact the service hotline.



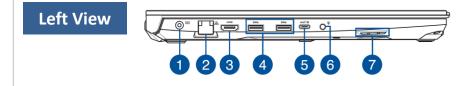
ASUS TUF Gaming A17 (FA706I/Q) series Overview







- 1 Audio speakers
- 2 USB 3.2 Gen 1 port
- 3 Air vents
- 4 Kensington® security slot



- 1 Power (DC) input port
- 2 LAN Port
- 3 HDMI port
- 4 USB 3.2 Gen 1 port

- 5 USB 3.2 Gen 2 Type-C® /DisplayPort combo port
- 6 headphone/Headset/Microphone jack
- 7 Audio speakers



Components Top View

♦ LCD COVER MODULE



♦ LCD BEZEL



♦ 15.6' LCD



♦ BASE CASE



♦ KEYBOARD MODULE



♦ BEZEL COSMETIC MYLAR



♦ MAIN BOARD



♦ LED BOARD



♦ USB BOARD



♦ WIFI CARD



♦ BATTERY



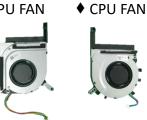
♦ CAMERA



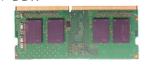
♦ THERMAL MODULE ASSY



♦ GPU FAN



♦ DDR



♦ MB RAM ABSORBER



♦ DIMM COVER MYLAR



♦ SSD



♦ SSD MYLAR



♦ SSD AL FOIL



♦ SSD ABSORBER





♦ TP-MB FFC



♦ USB-MB FFC



♦ LED-MB FFC



♦ HINGE



LIMR

R IMR

THE



♦ SSD GASKET





♦ SPEAKER



♦ BASE BATTERY GASKET





Components Top View (For FA706QE/QC)

♦ SSD MYLAR (Only for FA706QE/QC)





Components Bottom View

♦ LCD COVER MODULE



♦ LCD BEZEL



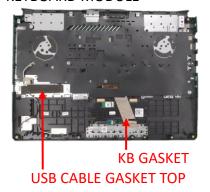
♦ LCD Panel



♦ LED BOARD



♦ KEYBOARD MODULE



♦ BASE CASE



♦ MAIN BOARD



♦ USB BOARD



♦ THERMAL MODULE ASSY





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 °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.



Appropriate Tools

Please prepare and select the appropriate tools to disassemble/assemble for the ASUS TUF Gaming A17 (FA706I/Q) series notebook.

♦ Screwdriver

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



♦ Plastic Blade

♦ Plastic Tweezers

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





♦ Glove



♦ Dust-free Cloth



♦ Thermal Pad



♦ PLASTIC CARD T=0.35mm





♦ NB LCD MYLAR *6pcs



♦ FCR-AS Thermal Grease



Use it to align panel position.





BOTTOM CASE

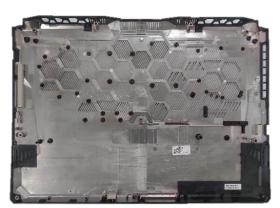
Disassembly Notice

Step 1 : Remove screws *10pcs.

Step 2: Use plastic blade to pry the bottom case.

Screws	QTY	Spec	Torque (kgf-cm)
10	9	M2.5*12L	2.5
10	1	M2.5*5.5L	2.5
10	1	SCREW M2.5*2.5L+3.5 (4.5,0.8)	2.5









BATTERY

Disassembly Notice

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

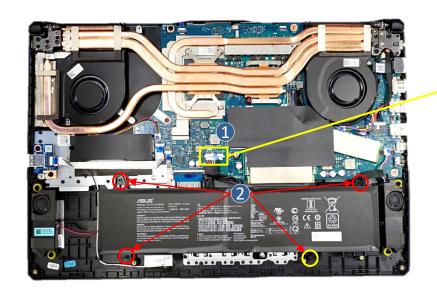


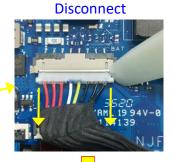
Before disassembly battery connector, please be sure to pull out adapter and disconnect the battery more than ten seconds in order to IC damage.

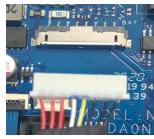
Step 1 : Disconnect the battery connector.

Step 2: Remove screws *4pcs.

Step 3: Remove BATTERY.





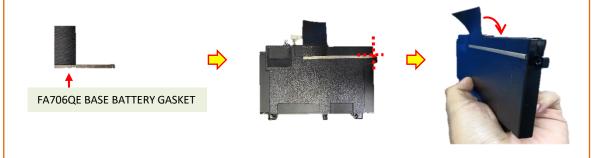




9	Screws	QTY	Spec	Torque(kgf-cm)
		1	M2.5*4.5L	2.0~2.2
•	10	3	M2.5*5.5L	2.5

Assembly Notice

For FA706Q: Replacing the 48W Battery notice. Please paste FA706QE BASE BATTERY GASKET on the 48W Battery as illustrated.







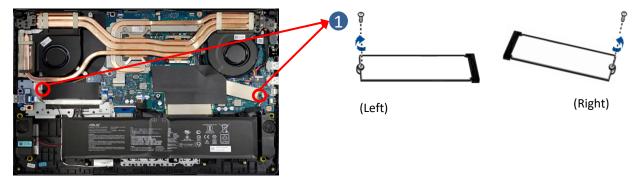
SSD (FOR FA706QM_QR_IM_IR)

Disassembly Notice

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

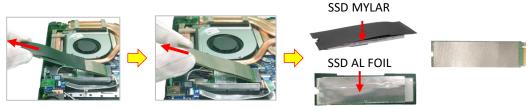
- Step 1: Remove the screws *2pcs.
- Step 2: Remove SSD Mylar and AL Foil at left side, and remove SSD.
- Step 3: Remove SSD at right side. Step 4: Tear off ABSORBER from SSD.

Screws	QTY	Spec	Torque (kgf-cm)
TO	2	M2*3L	2.0



4 Tear off









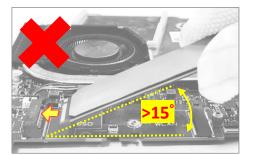


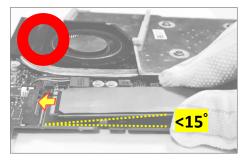
Assembly Notice

A Please make sure to paste ABSORBER before assembling SSD.



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





A Please use this SSD slot as first priority.





SSD (FOR FA706QC/QE/IHR/IC/IE)

Disassembly Notice

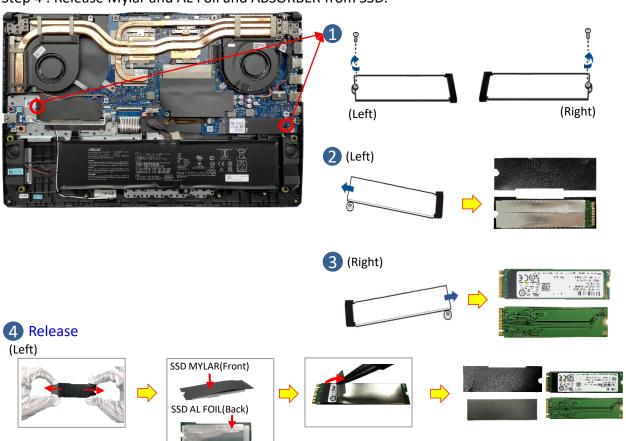
Please be sure to pull out adapter and disconnect the battery.

Step 1: Remove the screws *2pcs.

Step 2: Remove SSD with Mylar and AL Foil at left side.

Step 3: Remove SSD at right side.

Step 4: Release Mylar and AL Foil and ABSORBER from SSD.



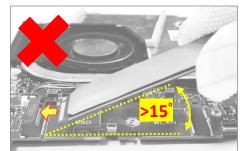
Screws	QTY	Spec	Torque (kgf-cm)
TO	2	M2*3L	2.0

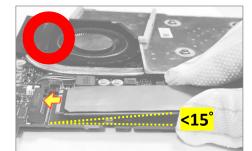
Assembly Notice

Please make sure to paste ABSORBER before assembling on the left side SSD.



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





Please use this SSD slot as first priority.





DDR

Disassembly Notice

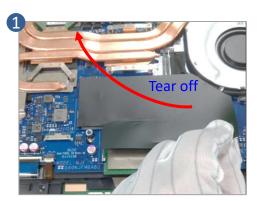
Please be sure to pull out adapter and disconnect the battery.

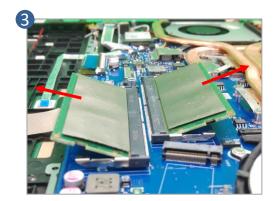


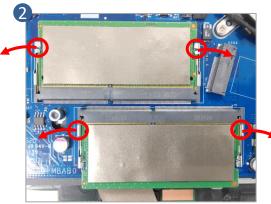
Step 1 : Remove the Mylar.

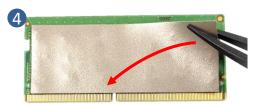
Step 2 : Unlock DDR. Step 3: Remove DDR.

Step 4: Tear off ABSORBER on the front and back of DDR.

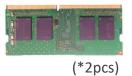


















WIFI CARD

Disassembly Notice

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



- Step 1 : Disconnect the RF CABLE connector *2pcs.
- Step 2 : Remove the screw *1pcs.
- Step 3: Remove WIFI CARD.

Screws	QTY	Spec	Torque (kgf-cm)
TO	1	M2*3L	2.0

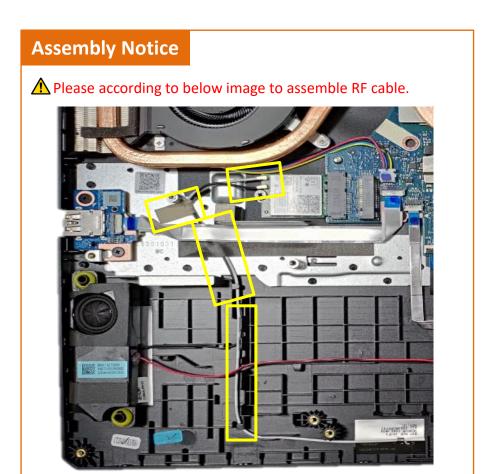














SPEAKER

Disassembly Notice

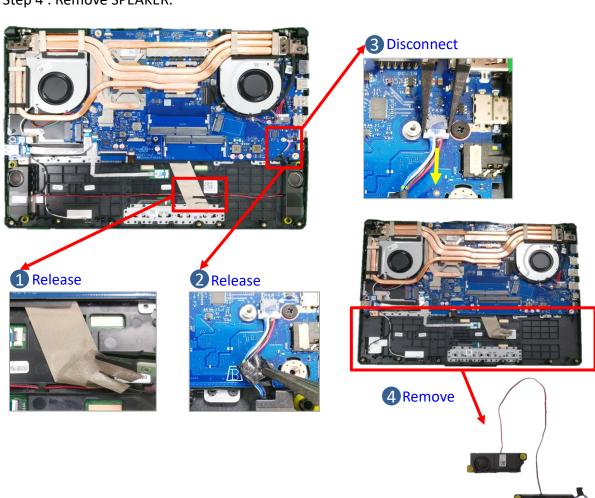
Please be sure to pull out adapter and disconnect the battery.



Step 1 : Release the tape. Step 2: Release the tape.

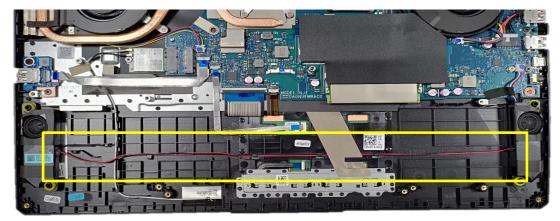
Step 3: Disconnect the SPEAKER connector.

Step 4 : Remove SPEAKER.



Assembly Notice

For Speaker assembly, please follow the mark below to tidy cable.





USB BOARD

Disassembly Notice

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

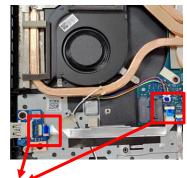


Step 1: Disconnect the FFC connector.

Step 2: Remove USB-MB FFC.

Step 3: Remove screw *1pcs and remove USB BOARD.

Screws	QTY	Spec	Torque (kgf-cm)
TO	2	M2*3L	2.0























Assembly Notice

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











FAN (with THERMAL MODULE and MAIN BOARD)

Disassembly Notice

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



Step 1 : Disconnect (yellow mark) connector *9pcs.

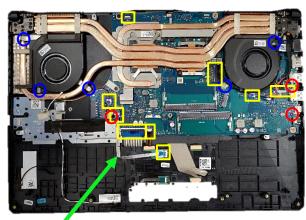
Step 2 : Remove TP-MB FFC. Step 3 : Remove screws *8pcs.

Step 4: Remove MB and Thermal and FAN module.

Step 5 : Remove FAN *2pcs.

Screws	QTY	Spec	Torque (kgf-cm)
TO	3	M2*3L	2.0
	5	M2*4L	2.0

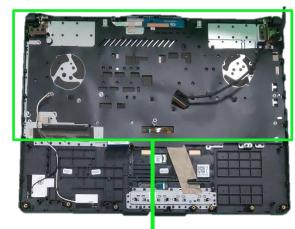
1 Disconnect (Yellow mark)







4 Remove module (MB+Thermal+FAN)





6 Remove FAN







Assembly Notice

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









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







THERMAL MODULE

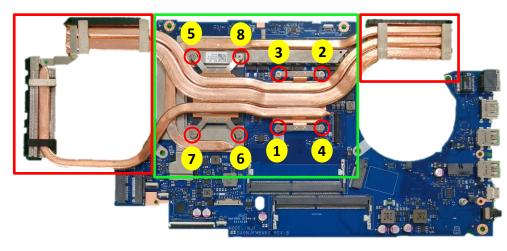
Disassembly Notice

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

Step 1: Please follow the reverse screws numbers to remove screws *8pcs.

Step 2: Remove the THERMAL MODULE from MB.

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





Screws	QTY	Spec	Torque (kgf-cm)
	8	M2*4L	2.0

Assembly Notice



Step-1

THERMAL MODULE Location:[VRAM/CHOKE/MOS] Material: FCR-AS Grease

MB Location:[GPU/CPU] Material: TH PAD PTM7958)

Step-2

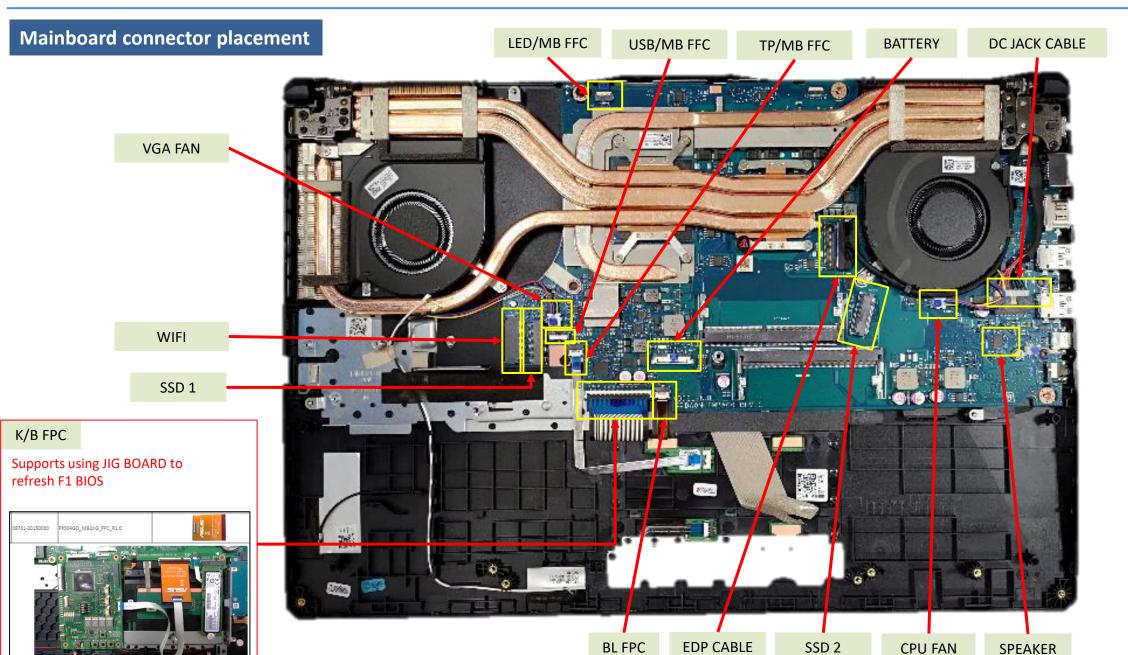
Please follow the screws numbers to lock screws *8pcs.

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.

WARNING! The heat sink contains liquid metal and should only be removed by authorized service personnel. Significant damage may occur to motherboard components if the heat sink is improperly removed.



MAIN BOARD

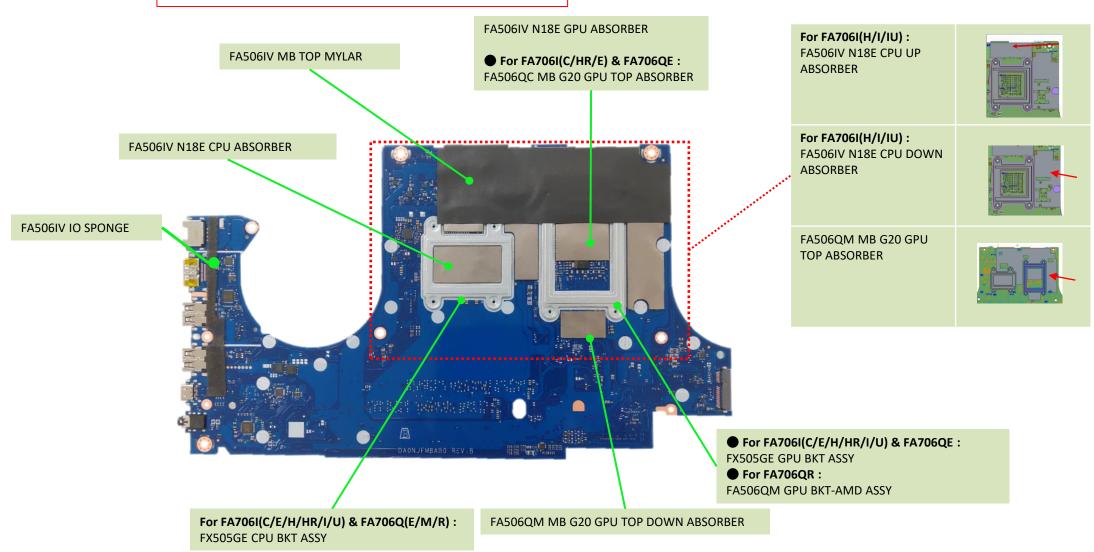




MAIN BOARD

Materials on mainboard

Parts marked in yellow can be ordered/replaced separately at L2 repair level. When L3/L4 repair finished, no need to paste new one if shortage of this material on the MB.





MAIN BOARD

Materials on mainboard

Parts marked in yellow can be ordered/replaced separately at L2 repair level. When L3/L4 repair finished, no need to paste new one if shortage of this material on the MB.

Chose the Mylar according to AMD CPU model (Cezanne FA506QM APU KAPTON FILM) (Renoir FA506IV AMD APU MYLAR)

Cezanne

Renoir

FA506QM G20 GPU ABSORBER

For FA706IU: FA506IV N18E GPU BOT ABSORBER



For FA706II/H:

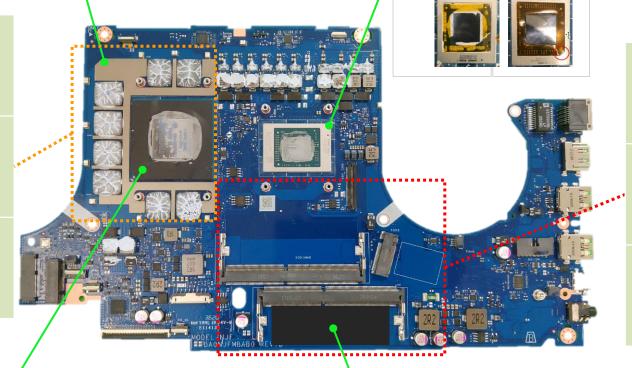
FA506II N18P GPU BOT ABSORBER



For FA706QE:

FA506QC MB G20 GPU BOT ABSORBER





For FA706I(C/E/HR) & FA706QE:

FA506QE DIMM MYLAR



For FA706I(H/I/U) & FA706QE:

FA506IV DIMM COVER MYLAR



For FA706Q(M/R):

FA506QM DIMM COVER MYLAR



Chose the Mylar according to GPU model

For FA706QR:

FA506QM N18E G20 GPU MYLAR

● For FA706IC/E/H/HR/IU:

FA506IV N18P GPU MYLAR

• For FA706QM:

FA506QM N18E G20 GPU MYLAR-E3

For FA706IC/HR/E & FA706QM: FX507ZE RAM UNDERSIDE MYLAR



KEYBOARD MODULE

Disassembly Notice

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



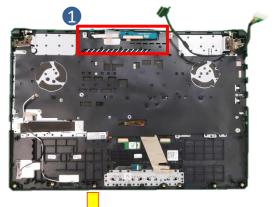
Step 1: Remove the LED BD and FFC.

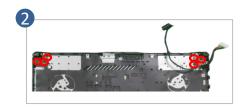
Step 2: Remove screws *4pcs.

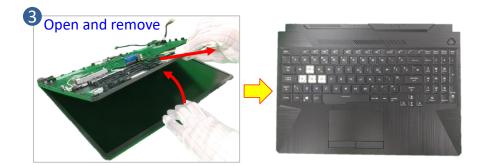
Step 3: Remove the KEYBOARD MODULE.

Step 4: Remove the DC JACK CABLE.

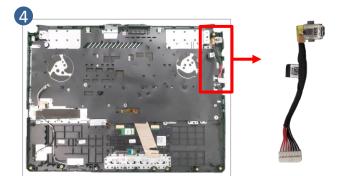
Screws	QTY	Spec	Torque (kgf-cm)
10	6	M2.5*5.5L	2.5

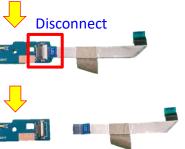








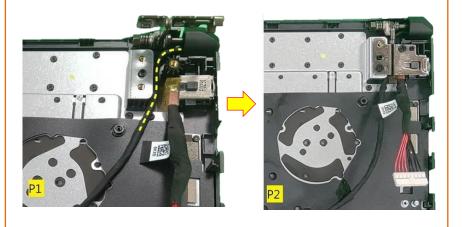




Assembly Notice

Please refer below picture to organize EDP cable while repair device, it's to keep device safety.

- P1. EDP cable need to following yellow dotted line to organize EDP cable, DO NOT pass through hinge.
- P2. After assemble hinge as picture.





LCD BEZEL

Disassembly Notice

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

Step 1: Remove BEZEL COSMETIC MYLAR *2pcs.

Step 2: Remove screws *2pcs. Step 3: Remove LCD BEZEL.

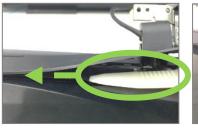
Screws	QTY	Spec	Torque (kgf-cm)
	2	M2.5*4.5L	2.5



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..

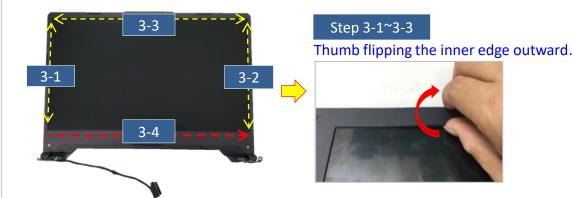








Step 3-1~3-3, Start from the middle area of each side of bezel, Using the forefinger to hold the outer edge firmly and the thumb flipping the bezel inner edge outward to release the hooks as indicated in the diagram shown. (It can be helpful, if holding the bezel outer edge firmly with forefinger.)



Assembly Notice



When reuse the LCD BEZEL:

Please paste new LCD BEZEL ADHESIVE before assembly BEZEL.

(New LCD BEZEL already contains LCD BEZEL ADHESIVE *1pcs)





LCD PANEL (LCD COVER Metal SKU)

Disassembly Notice

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

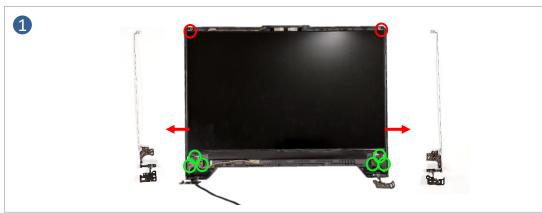


For ID : 2A/2E	(LCD COVER Metal SKU)
----------------	-----------------------

Step 1 : Remove screws *6pcs, and remove hinges *2pcs.

Step 2 : Pull out LCD adhesive *2pcs.

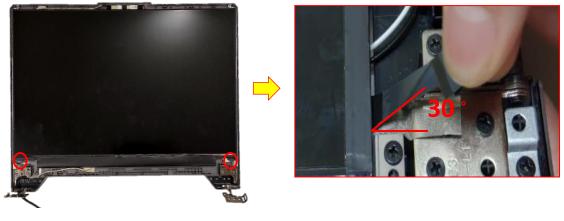
Step 3 : Remove LCD PANEL.



3	Flip up the panel, and disconnect the EDP cable.	
	3-1	

Screws	QTY	Spec	Torque (kgf-cm)
	6	M2.5*3.5mm	2.5
TO	2	M2*4Lmm	2

Please pull the adhesive up about 30 degree slowly, and don't pull out the tape in vertical direction!





LCD PANEL (LCD COVER Plastic SKU)

Disassembly Notice

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



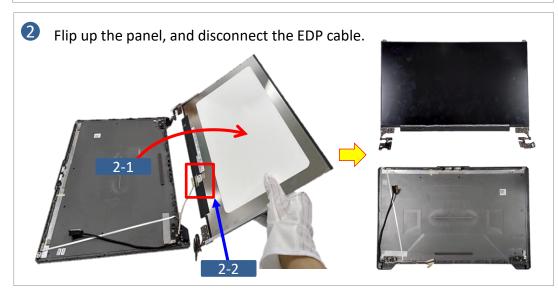
For ID: 2B	(LCD COVER	Plastic SKU)
------------	------------	--------------

Step 1: Remove screws *8pcs.

Step 2: Flip up the panel, and disconnect the EDP cable.

Step 3: Pull out LCD COVER TAPE *2pcs and remove LCD PANEL.





Screws	QTY	Spec	Torque (kgf-cm)
	6	M2.5*3L	2.5
TO	2	M2*4L	2.0





LCD PANEL

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



When reuse the LCD PANEL:

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



When replace the LCD:

Please paste new LCD COVER TAPE *2pcs.

•For LCD COVER Metal SKU, LCD COVER TAPE*2pcs paste on LCD COVER. New LCD COVER already contains LCD COVER TAPE *2pcs.

LCD COVER TAPE



Please follow the green mark to tidy EDP cable.



When assembly the LCD PANEL: (The following is an operation example)

Step 1~2: Paste NB LCD MYLAR *4pcs on LCD COVER. (Positions are as below)



Step 3: Remove release paper of LCD Adhesive *2pcs.

Step 4: Assembly and align the LCD to the upper side of the LCD Cover.

Step 5: Remove Mylar *4pcs and complete the Panel assembly.

