

TravelMate
P216-51/P216-51G/P216-51-TCO

LIFECYCLE EXTENSION GUIDE

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Self-Repair

This chapter highlights the limited self-repair capabilities of the product.

Prior performing self-repair, familiarize yourself with the Safety Guidelines and Recommended Equipment sections first as described in the chapter "[Disassembly Procedures](#)".

Depending on model, the following key components are eligible for self-repair (if applicable);

- Battery pack
- HDD / SSD module
- DIMM module(s)
- WLAN module
- LTE module

If a particular key component is listed and thus would be eligible for self-repair, but is not described in the "[Disassembly Procedures](#)" section, then this component is either not present on the respective model, or it is present but embedded on the motherboard and therefore not eligible for self-repair.

⇒ **NOTE:**

Do not attempt to replace other components than those listed above.

⇒ **NOTE:**

For replacement parts, always use only Acer certified components in order to safeguard quality, optimum system performance, stability and reliability of the product.

⇒ **NOTE:**

Any damage to the product that occur during self-repair, or which has occurred as a result of a careless or unsuccessful self-repair attempt, is not covered by the standard product warranty.

System BIOS & Driver Updates

Visit <http://www.acer.com/support> to discover the available system BIOS and Drivers for this product. After selecting the desired country/language, either enter the model name or product serial number, or select the product from the list of suggested models in order to get access to product-specific software and documentation.

To update the system BIOS:

- Download the desired system BIOS version from the website
- Unzip the downloaded file to your computer
- Double-click the extracted file in order to initiate the update process
- The update process itself is fully automated and its progress is visualized by means of a progress indicator
- A visual notification is shown when the update is complete

⇒ **NOTE:**





Upgrading the system BIOS incorrectly, or intermittence of the system BIOS update process could harm the product.

⇒ **NOTE:**

System BIOS upgrades or downgrades, if not performed by an Acer Service Center or authorized Service Partner, are at own risk.

To update Drivers:

Run Windows Update in order to get the latest drivers from Acer:

- Select the Start  button
- Go to **Settings**  > **Update & Security**  > **Windows Update** 
- Available Drivers will automatically be listed on the screen. Press **Download** to start the download of the respective driver
- Installation of the driver will start automatically once the download is completed

Software Recovery

This product has embedded software recovery tools which can be used to either perform a partial or full software recovery, but also to create a Factory Default recovery media.

For more information about the software recovery options, how to perform a software recovery or creating a Factory Default recovery media, please refer to the chapter "Recovery" which is available in the User Manual of the product.

⇒ **NOTE:**

In the event of not being able to create a Factory Default recovery media, it is possible to obtain a copy of the recovery media through Acer Customer Service (<http://www.acer.com/support>)

This is not a free of charge service.

Disassembly Procedures

Safety Guidelines

This chapter contains step by step procedures on how to remove and de-install components from the computer. Use the following safety guidelines to ensure your personal safety. Each procedure included in this chapter assumes that you are preparing your computer for recycling and disposal. **By performing any of these procedures you acknowledge that any remaining warranty applicable to your computer will be voided. Before you start any of the procedures in this chapter, make sure to read the following safety guidelines and the respective instructions within the chapter.**

CAUTION!

- Turn off your computer and disconnect all power sources before opening the computer cover or panels.
- To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface at the same time as touching a connector on the back of the computer.
- Take off any metal objects on your arms or fingers such as bracelets, rings or watches and make sure your hands are completely dry. Even if your unit is unplugged, there may still be some remaining electric charge.
- If a component does not come out easily, do not forcefully remove it. Instead, check that you are removing it correctly and that no wires or other parts are in the way.
- When you disconnect a cable, pull on its connector or on its pull-tab, not on the cable itself. Some cables have connectors with locking tabs; if you are disconnecting this type of cable, press in on the locking tabs before you disconnect the cable.

Recommended Equipment

The following equipment are recommended to do the following maintenance procedures:

- Wrist grounding strap and conductive mat
- Flat screwdriver
- Philips screwdriver
- Polydrive screwdriver
- Plastic tweezers
- Flat plastic pry

WEEE Annex VII Component

These components are classified as requiring selective treatment:

- Battery pack
- SSD module
- WLAN module
- DIMM modules
- RTC battery
- USB board
- Card reader board
- Mainboard
- Touchpad module
- LCD panel

Pre-disassembly Instructions

Do the following prior to starting any maintenance procedures:

1. Place the system on a stable work surface.
2. Remove the AC adapter from the DC-in jack (A) or the power adapter from the USB Type-C port (B) as shown in [Figure 1-1](#).
3. Remove all cables from system.



Figure 1-1. Adapter Outlet

4. Remove the microSD card from the microSD card slot (C). Then remove the smart card from the smart card slot (D) ([Figure 1-2](#)).

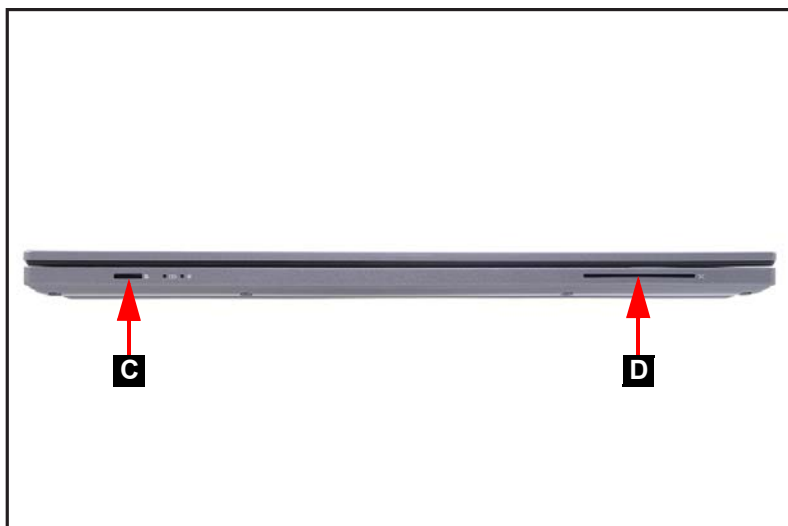


Figure 1-2. microSD Card and Smart Card Removal

⇒ **NOTE:**

Make sure the system is completely powered off.

Base Cover Removal

1. Remove thirteen (13) screws from the base cover ([Figure 1-3](#)).



Figure 1-3. Base Cover Removal

2. Carefully pry up the base cover starting from the upper side to release the latches. Then continue to release the remaining latches on the left and right bottom sides ([Figure 1-4](#)).



Figure 1-4. Base Cover Removal

3. Release the remaining latches on the bottom side. Then grasp and remove the base cover from the system ([Figure 1-5](#)).



Figure 1-5. Base Cover Removal

Battery Pack Removal

Prerequisite:

Base Cover Removal

1. Find the battery pack (A) in the system ([Figure 1-6](#)).
2. Detach the acetate tape (B) securing the battery cable to the mainboard connector ([Figure 1-6](#)).
3. Detach the transparent mylar (C) securing the battery cable ([Figure 1-6](#)).

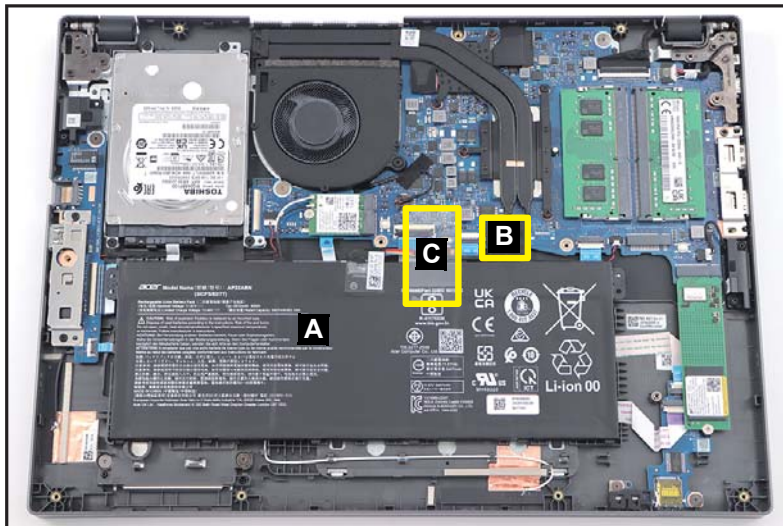


Figure 1-6. Battery Pack Removal

4. Disconnect the battery cable from the mainboard connector (D) (Figure 1-7).

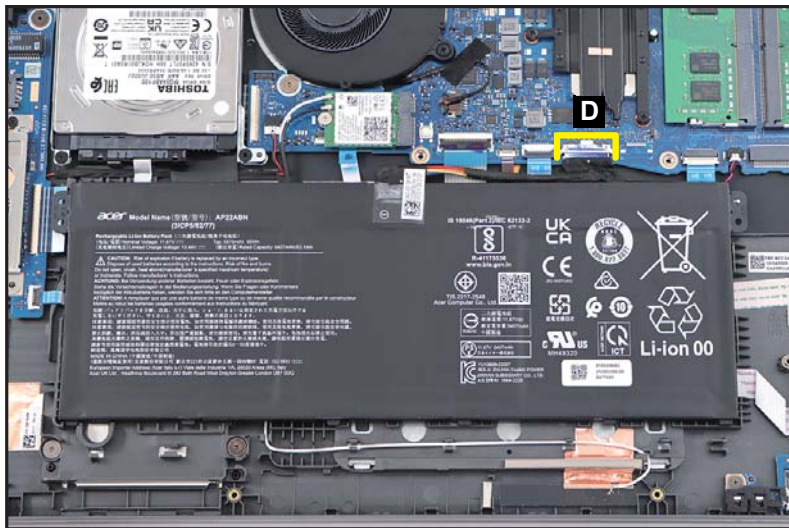


Figure 1-7. Battery Pack Removal

5. Lift to release the battery pack from the guide pin (E) and guide studs (highlighted by green lines) (Figure 1-8). Then remove the battery pack from the top assembly.

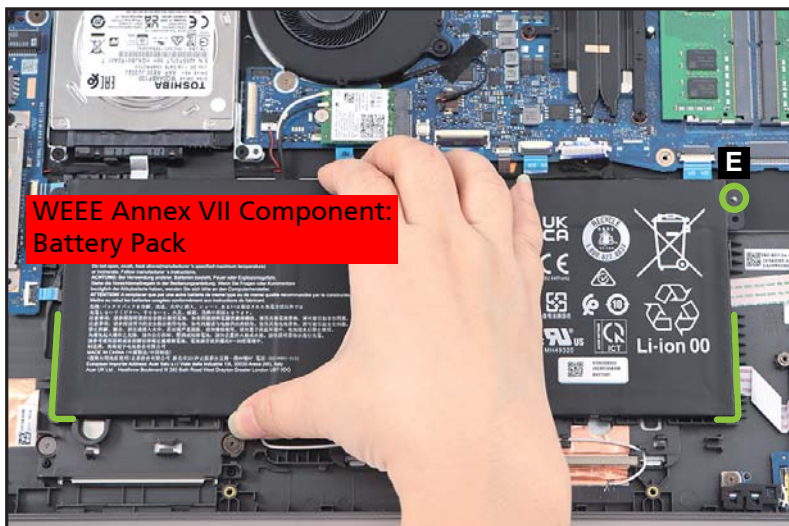


Figure 1-8. Battery Pack Removal

6. Detach the mylar (F) securing the battery cable connection (Figure 1-9).



Figure 1-9. Battery Pack Removal

7. Disconnect the battery cable from the battery connector (G) (Figure 1-10). Then remove the cable.

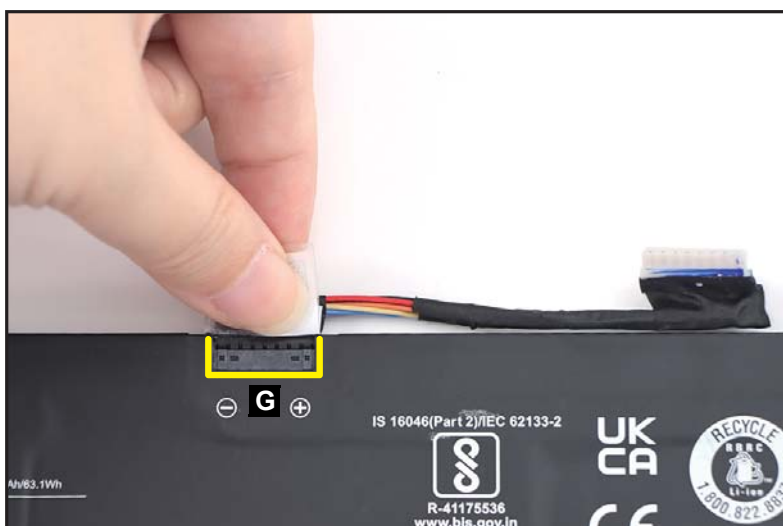


Figure 1-10. Battery Pack Removal

- + **IMPORTANT:**
Follow local regulations for battery disposal.

SSD Module Removal

Prerequisite:

Battery Pack Removal

1. Remove one (1) screw securing the SSD module (Figure 1-11).



Figure 1-11. SSD Module Removal

2. Disconnect the SSD module (A) from the mainboard connector (B) (Figure 1-12). Then remove the SSD module.

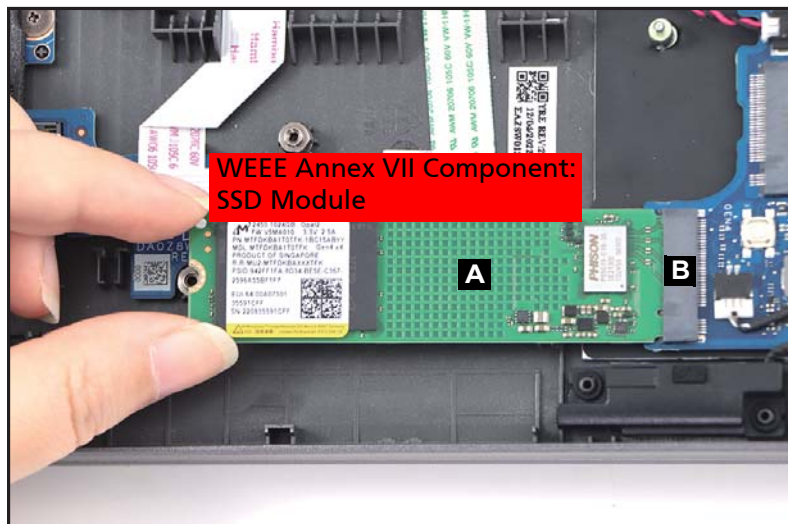


Figure 1-12. SSD Module Removal

WLAN Module Removal

Prerequisite:

Battery Pack Removal

1. Find the WLAN module (A) on the top assembly (Figure 1-13).

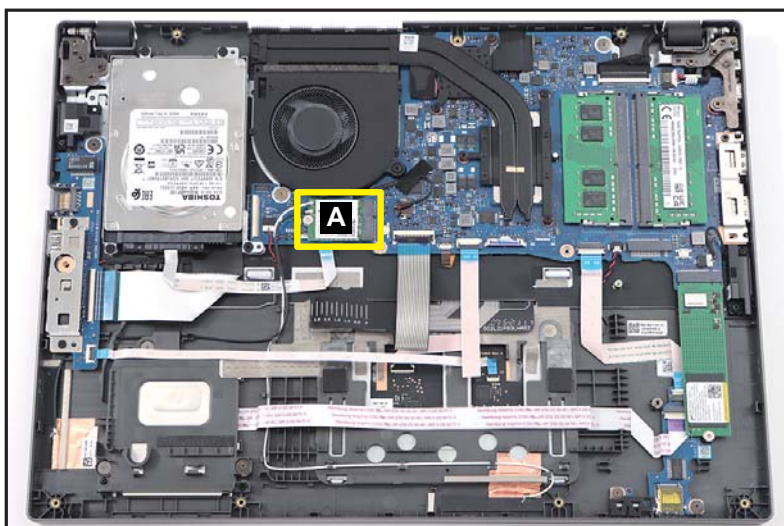


Figure 1-13. WLAN Module Location

2. Disconnect the WLAN antennas cables from the WLAN module connectors (B) (Figure 1-14).
3. Remove one (1) screw securing the WLAN module in place (Figure 1-14).

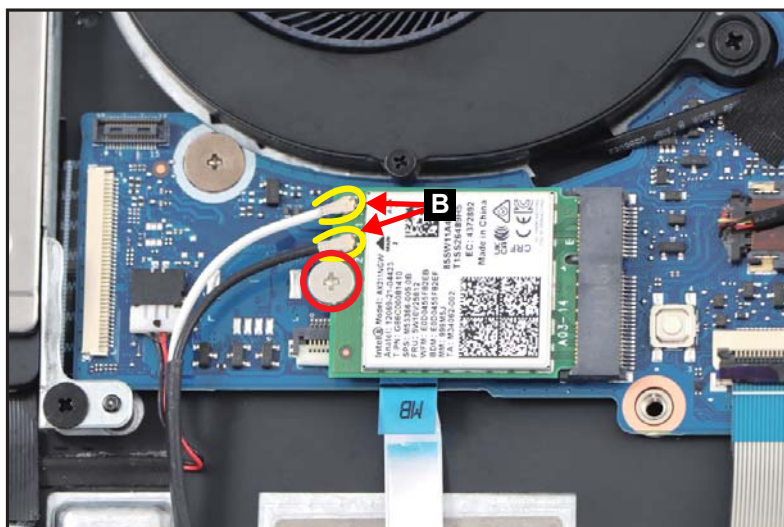


Figure 1-14. WLAN Module Removal

4. Disconnect the WLAN module from the mainboard connector (C) (Figure 1-15). Then remove the WLAN module.



Figure 1-15. WLAN Module Removal

DIMM Modules Removal

Prerequisite:

Battery Pack Removal

1. Find the DIMM module (A) in the system. Then push the DIMM module clips (B) outwards (Figure 1-16).

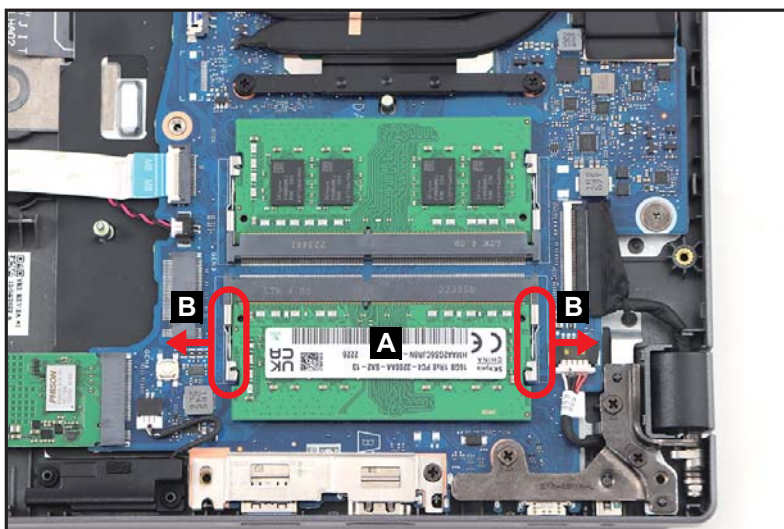


Figure 1-16. DIMM Module Removal

2. Remove the DIMM module from the mainboard connector (C) (Figure 1-17).

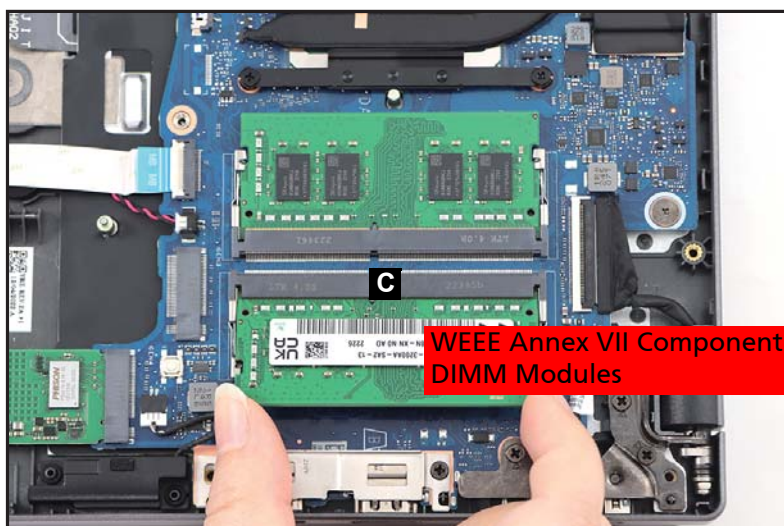


Figure 1-17. DIMM Module Removal

3. Repeat steps 1~2 to remove another DIMM module.

LCD Module Removal

Prerequisite:

Battery Pack Removal

1. Disconnect the LVDS cable from the mainboard connector (A). Then unrout the cable from the cable guides as shown in [Figure 1-18](#).

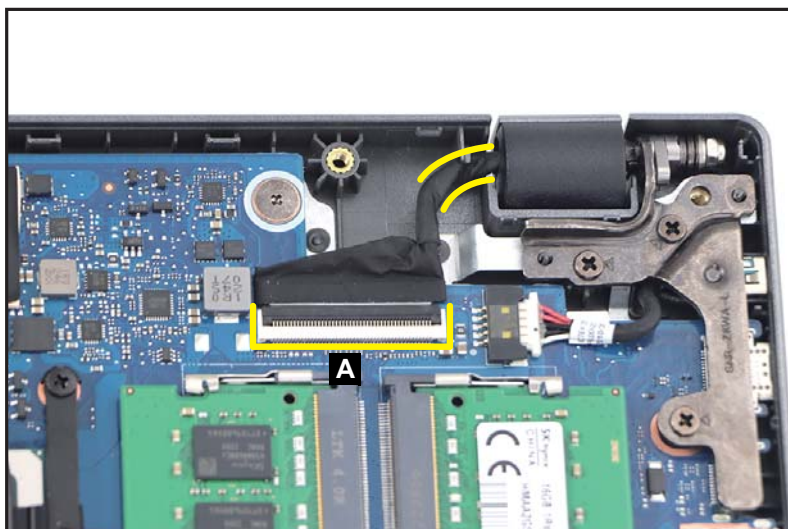


Figure 1-18. LCD Module Removal

2. Open the LCD module to 90°. Then remove six (6) screws securing the LCD hinges ([Figure 1-19](#)).



Figure 1-19. LCD Module Removal

3. Remove the LCD module (B) away from the top assembly ([Figure 1-20](#)).

⚠ CAUTION:

Make sure all cables are moved away from the device to avoid damage during removal.

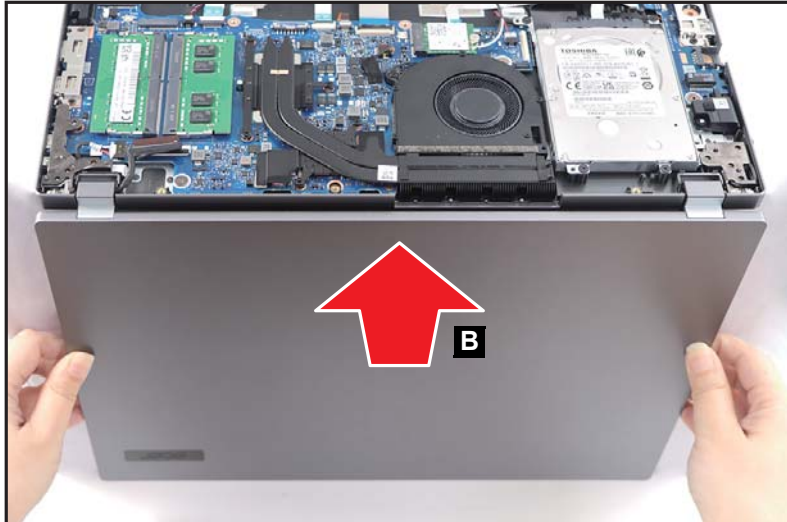


Figure 1-20. LCD Module Removal

RTC Battery Removal

Prerequisite:

Battery Pack Removal

1. Disconnect the card reader board FFC from the mainboard connector (A) (Figure 1-21).

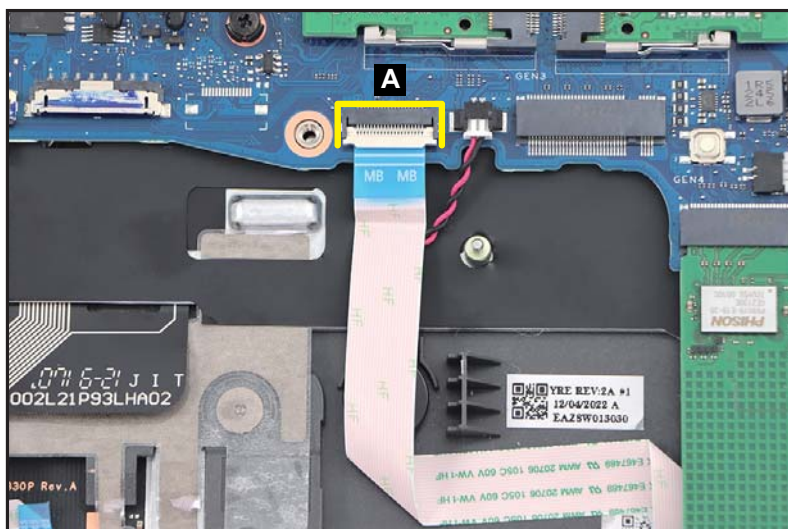


Figure 1-21. RTC Battery Removal

⚠ CAUTION:

Card reader board FFC (Flexible Flat Circuit) can be damaged if removed while the mainboard connector is locked.

2. Disconnect the RTC battery cable from the mainboard connector (B) (Figure 1-22).
3. Using plastic tweezers, carefully pry to detach the adhesive tape underneath the RTC battery (C) (Figure 1-22). Then remove the RTC battery.

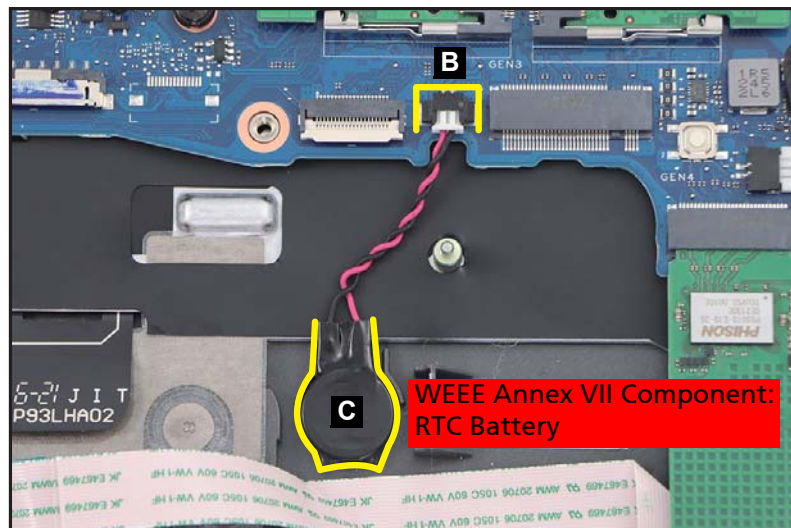


Figure 1-22. RTC Battery Removal

- + **IMPORTANT:**
Follow local regulations for battery disposal.

USB Board Removal

Prerequisite:

Battery Pack Removal

1. Remove three (3) screws securing the USB board and left IO bracket (Figure 1-23).



Figure 1-23. USB Board Removal

2. Lift the left IO bracket (A) to release it from the guide pins (B) (Figure 1-24). Then remove the bracket.

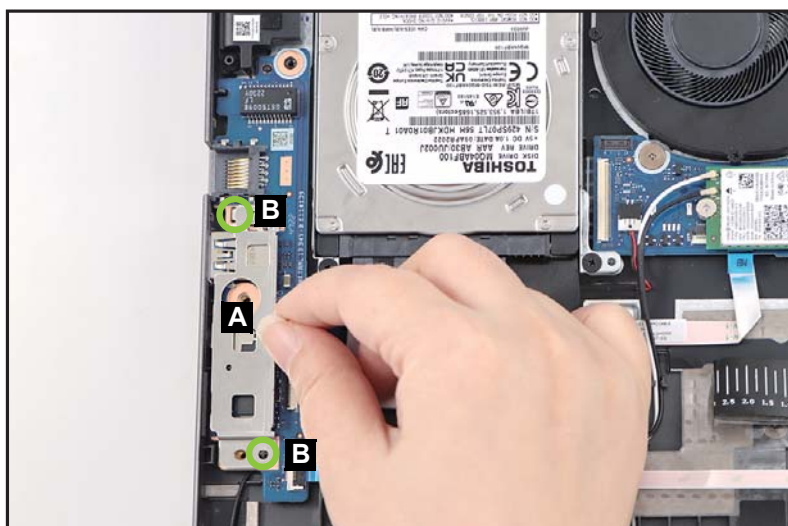


Figure 1-24. USB Board Removal

3. Disconnect the USB board FFC from the USB board connector (C) (Figure 1-25).
4. Disconnect the fingerprint FFC from the USB board connector (D) (Figure 1-25).

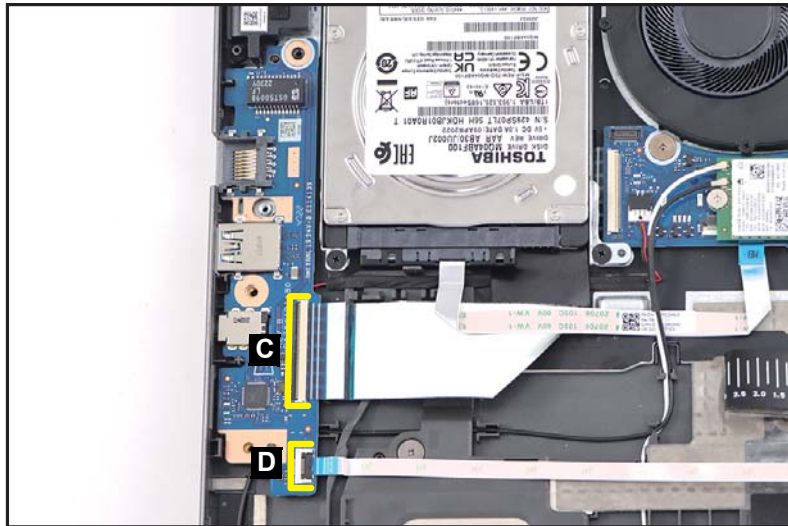


Figure 1-25. USB Board Removal

⚠ CAUTION:

USB board FFC (Flexible Flat Circuit) and fingerprint FFC can be damaged if removed while the USB board connectors are locked.

5. Release the USB board (E) from the I/O port slots and guide pins (F) on the top assembly (Figure 1-26). Then remove the USB board.

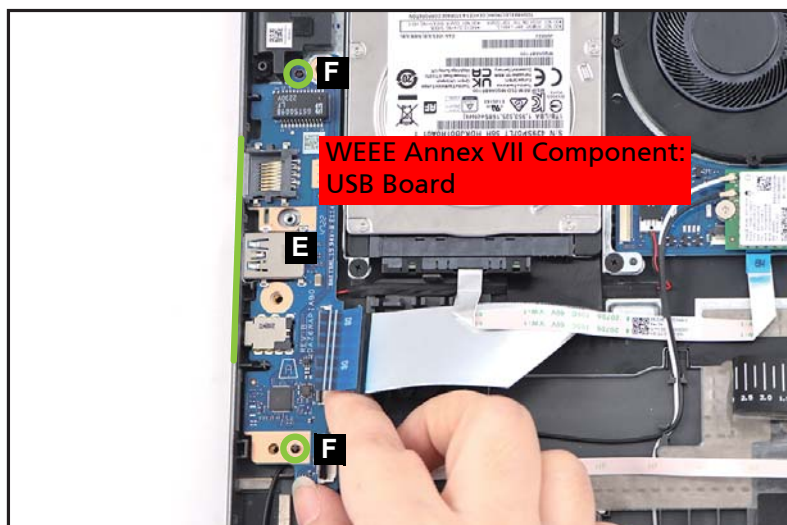


Figure 1-26. USB Board Removal

HDD Module Removal

Prerequisite:

WLAN Module Removal

1. Disconnect the HDD cable from the mainboard connector (A). Then carefully detach the FFC from its underneath adhesive as shown in [Figure 1-27](#).
2. Remove four (4) screws (B) securing the HDD bracket ([Figure 1-27](#)).

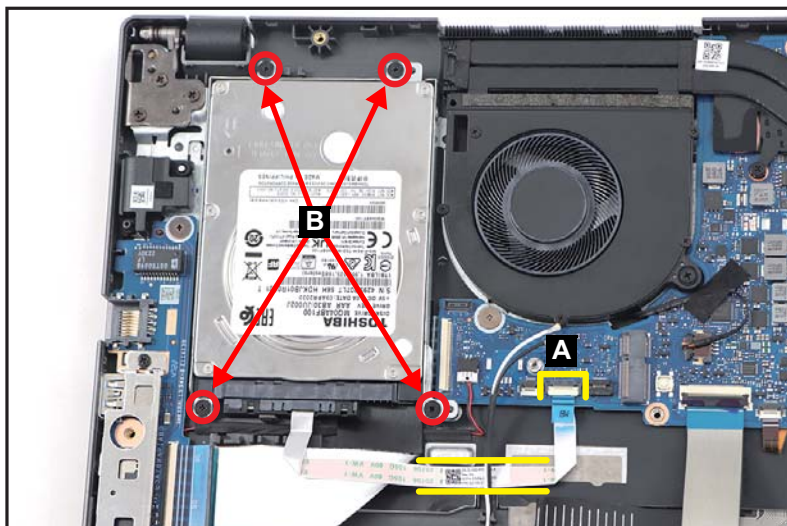


Figure 1-27. HDD Module Removal

⚠ CAUTION:

HDD cable can be damaged if removed while the mainboard connector is locked.

3. Lift the HDD module assembly (C) to release it from the guide pins (D) on the top assembly (Figure 1-28). Then remove it from its compartment.

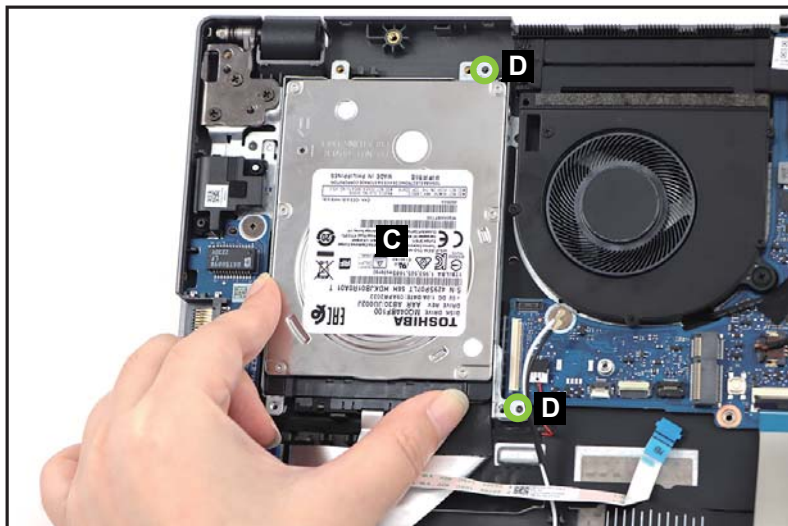


Figure 1-28. HDD Module Removal

4. Disconnect the HDD cable from the HDD module connector (E) (Figure 1-29).

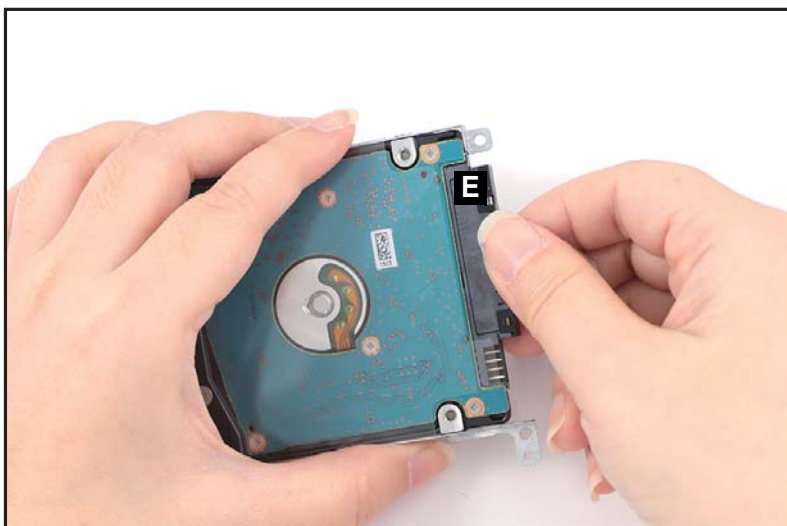


Figure 1-29. HDD Module Removal

5. Remove four (4) screws (F) from the HDD bracket ([Figure 1-30](#)).

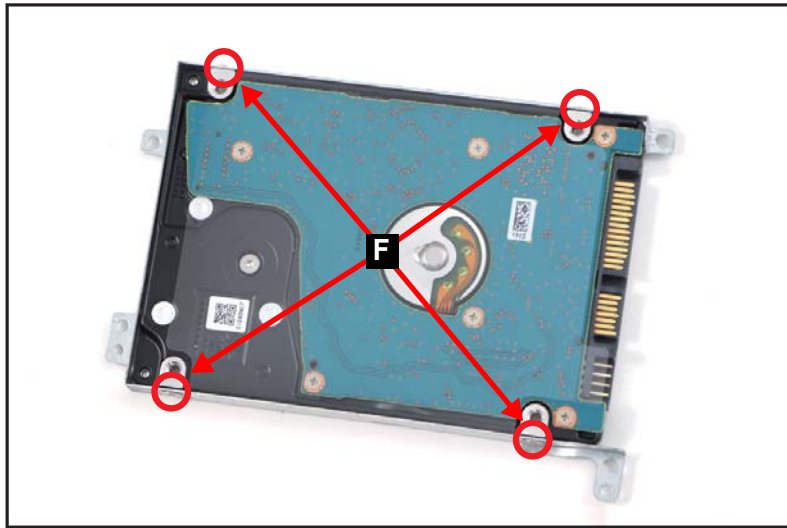


Figure 1-30. HDD Module Removal

6. Remove the HDD module (G) from its bracket ([Figure 1-31](#)).



Figure 1-31. HDD Module Removal

Card Reader Board Removal

Prerequisite:

SSD Module Removal

1. Detach the sponge (A) from the card reader board (Figure 1-32).
2. Disconnect the smart card reader FFC from the card reader board connector (B) (Figure 1-32).
3. Disconnect the card reader board FFC (C) from the card reader board and mainboard connectors (Figure 1-32). Then remove the FFC.

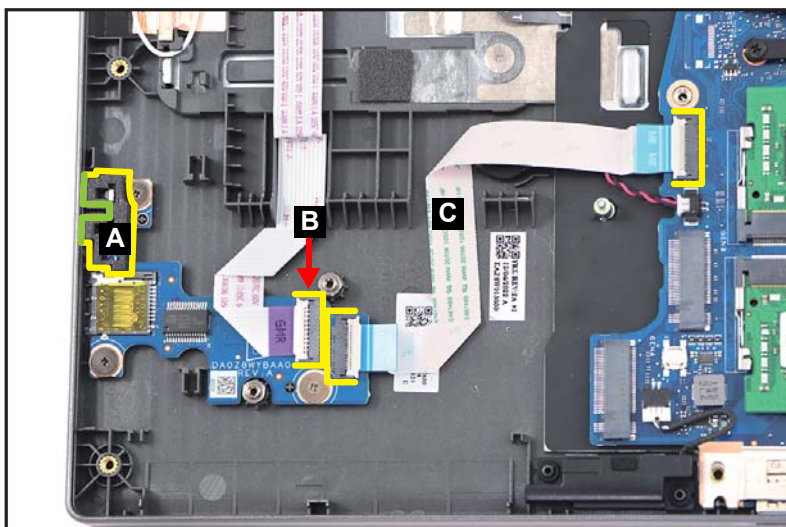


Figure 1-32. Card Reader Board Removal

⚠ CAUTION:

Smart card reader FFC (Flexible Flat Circuit) and card reader board FFC can be damaged if removed while the card reader board and mainboard connectors are locked.

4. Remove three (3) screws securing the card reader board (Figure 1-33).

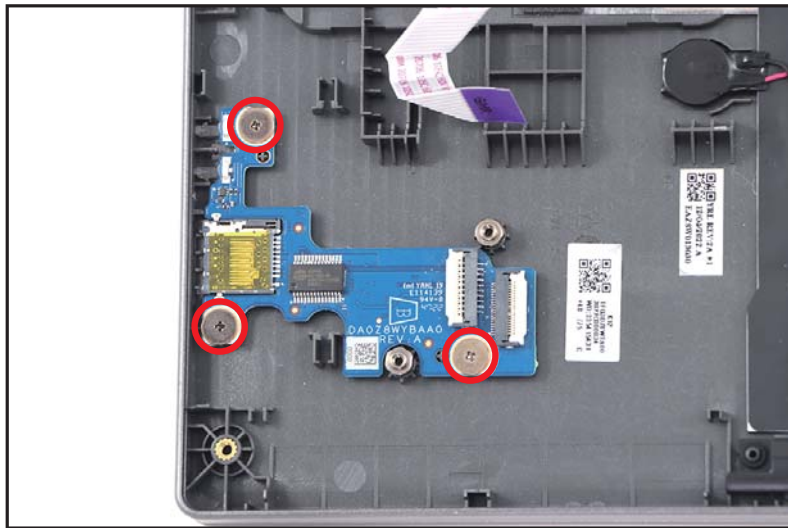


Figure 1-33. Card Reader Board Removal

5. Release the card reader board (D) from the card reader slot and guide pins (E) (Figure 1-34). Then remove the card reader board.

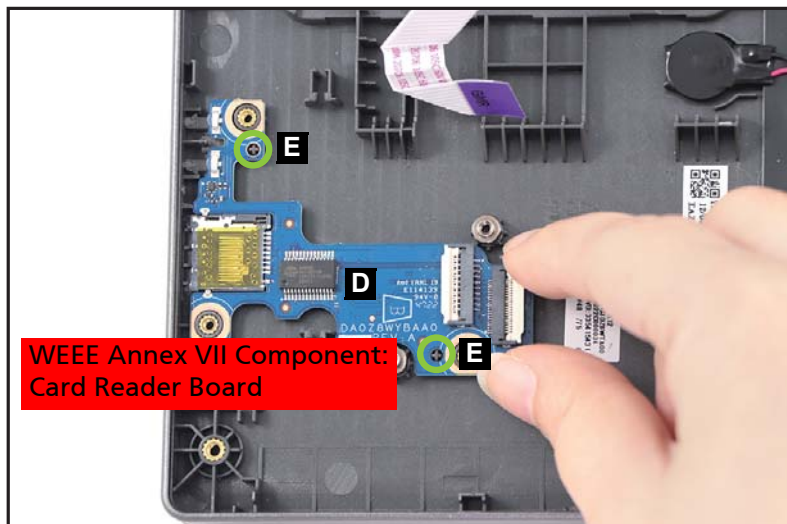


Figure 1-34. Card Reader Board Removal

Mainboard Removal

Prerequisite:

Ensure that the **SSD Module**, **DIMM Modules**, **Thermal Module**, **LCD Module**, and **HDD Module** have been disassembled prior removing the mainboard.

1. Remove two (2) screws (A) securing the left IO bracket ([Figure 1-35](#)).

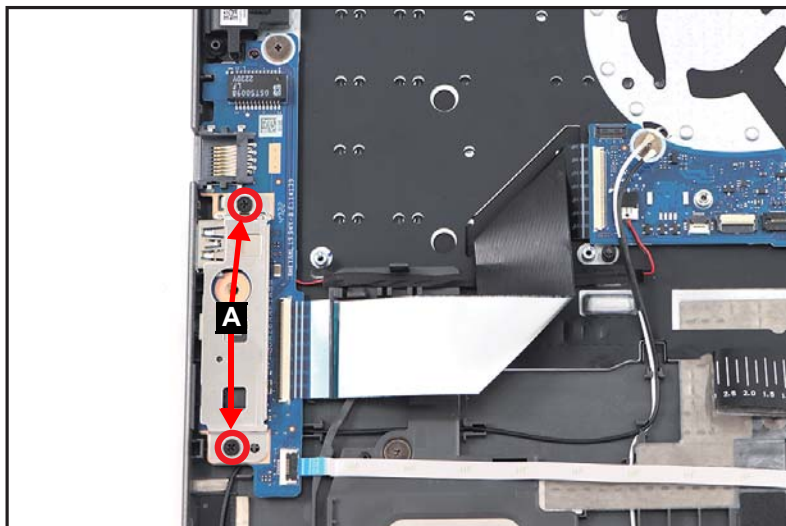


Figure 1-35. Mainboard Removal

2. Lift the left IO bracket (B) to release it from the guide pins (C) ([Figure 1-36](#)). Then remove the bracket.

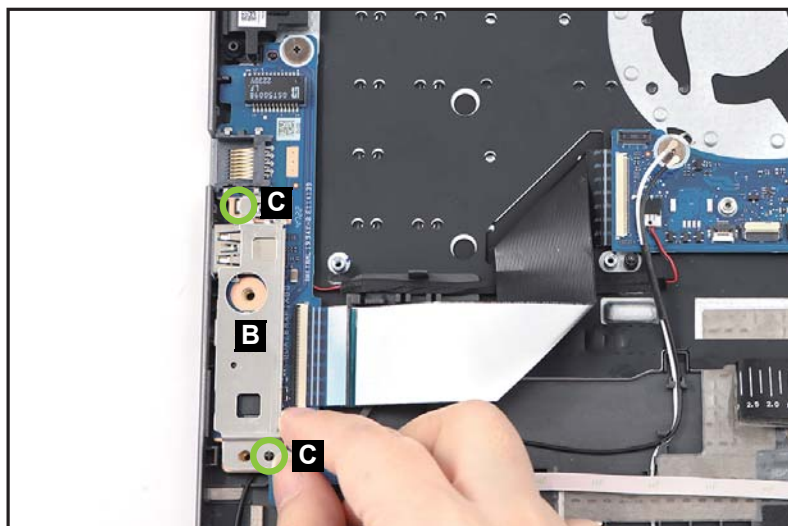


Figure 1-36. Mainboard Removal

3. Disconnect the USB board FFC from the USB board connector (D) (Figure 1-37).
4. Disconnect the right speaker cable from the mainboard connector (E) (Figure 1-37).
5. Disconnect the keyboard FPC from the mainboard connector (F) (Figure 1-37).
6. Disconnect the keyboard backlight FPC from the mainboard connector (G) (Figure 1-37).
7. Disconnect the touchpad FFC from the mainboard connector (H) (Figure 1-37).
8. Disconnect the card reader board FFC from the mainboard connector (I) (Figure 1-37).
9. Disconnect the left speaker cable from the mainboard connector (J) (Figure 1-37).
10. Disconnect the DC-IN cable from the mainboard connector (K) (Figure 1-37).

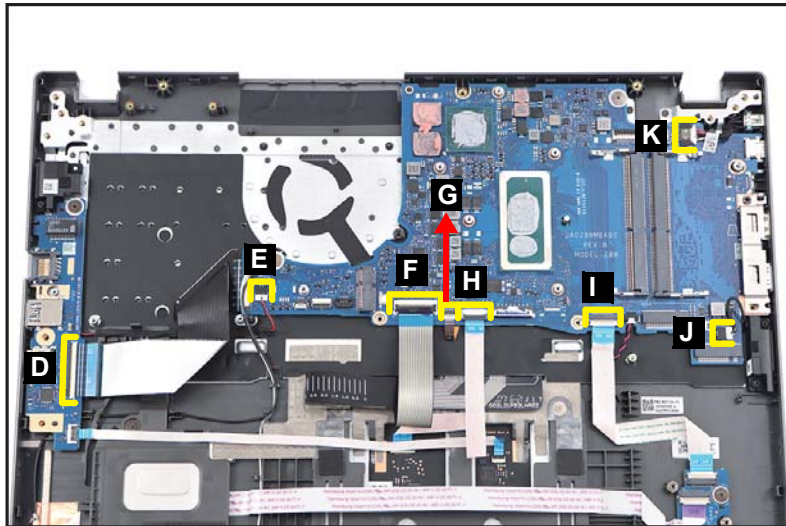


Figure 1-37. Mainboard Removal

⚠ CAUTION:

USB board FFC (Flexible Flat Circuit), touchpad FFC, card reader board FFC, keyboard FPC (Flexible Printed Circuit), and keyboard backlight FPC, can be damaged if removed while the USB board and mainboard connectors are locked.

11. Pry to detach the adhesive tape underneath the RTC battery (L) (Figure 1-38).
12. Remove one (1) screw (M) securing the right IO bracket. Then remove another two (2) screws (N) securing the mainboard (Figure 1-38).

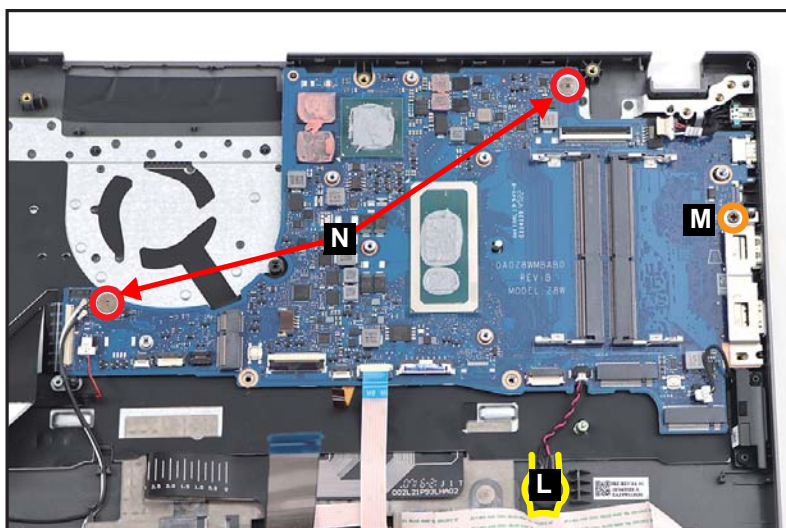


Figure 1-38. Mainboard Removal

13. Lift the right IO bracket (O) to release it from the guide pin (P) (Figure 1-39). Then remove the bracket.

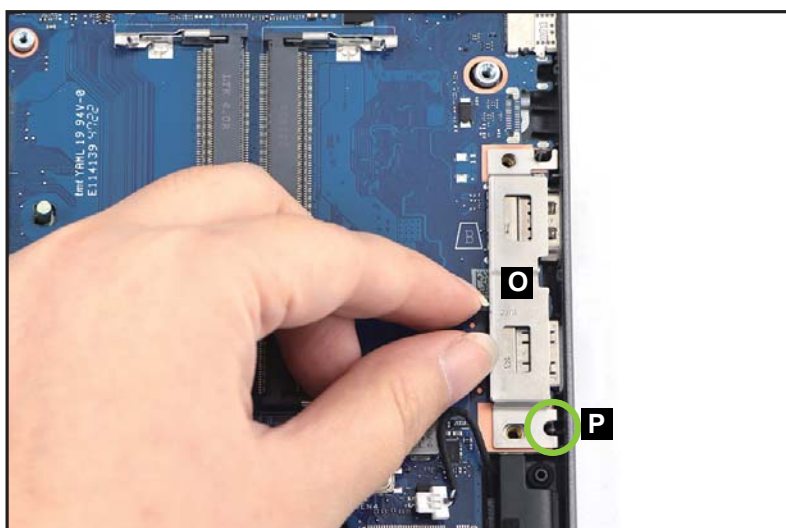


Figure 1-39. Mainboard Removal

14. Release the mainboard (Q) from the I/O ports slots and guide pins (R) on the top assembly (Figure 1-40). Then remove the mainboard.

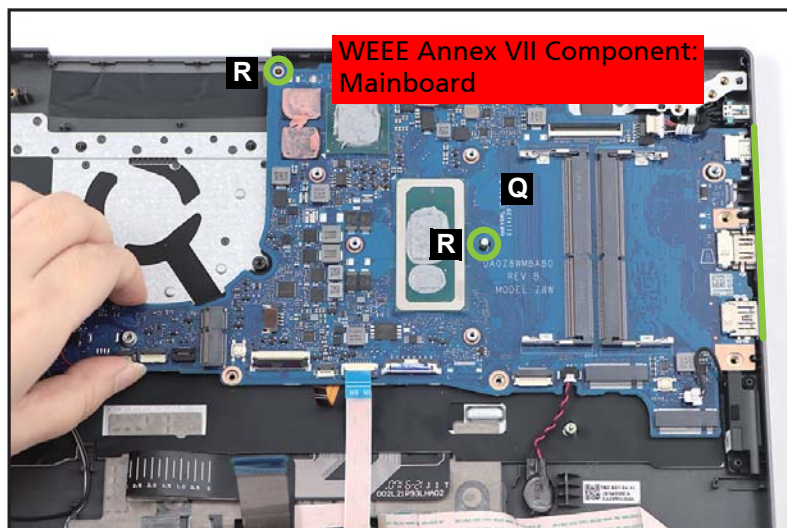


Figure 1-40. Mainboard Removal

15. Detach the tape (S) securing the FFC connection (Figure 1-41).

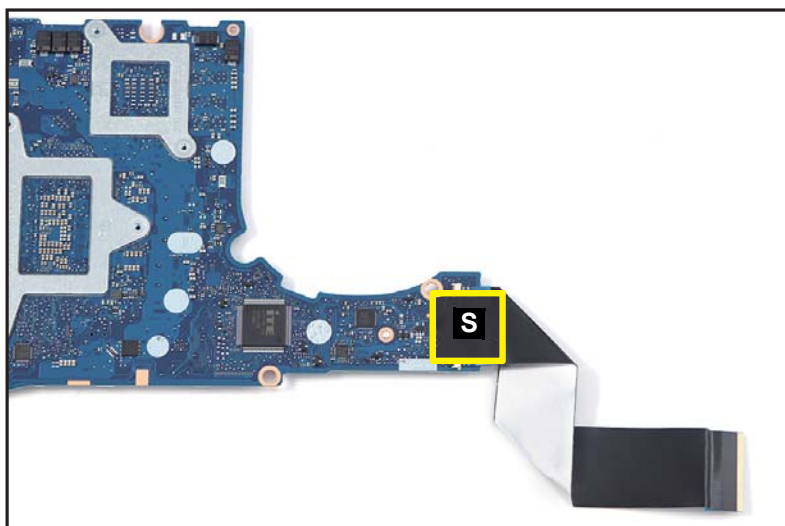


Figure 1-41. Mainboard Removal

16. Disconnect the other end of the USB board FFC from the mainboard connector (T) (Figure 1-42). Remove the FFC.

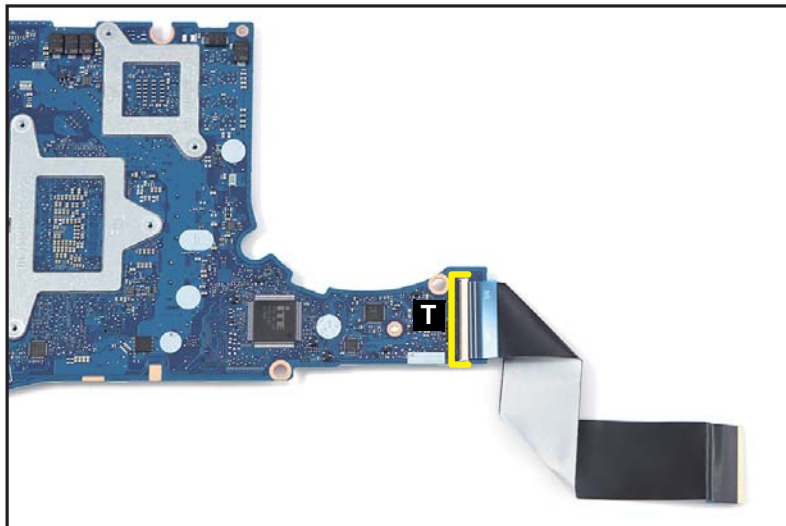


Figure 1-42. Mainboard Removal

⚠ CAUTION:

USB board FFC (Flexible Flat Circuit) can be damaged if removed while the mainboard connector is locked.

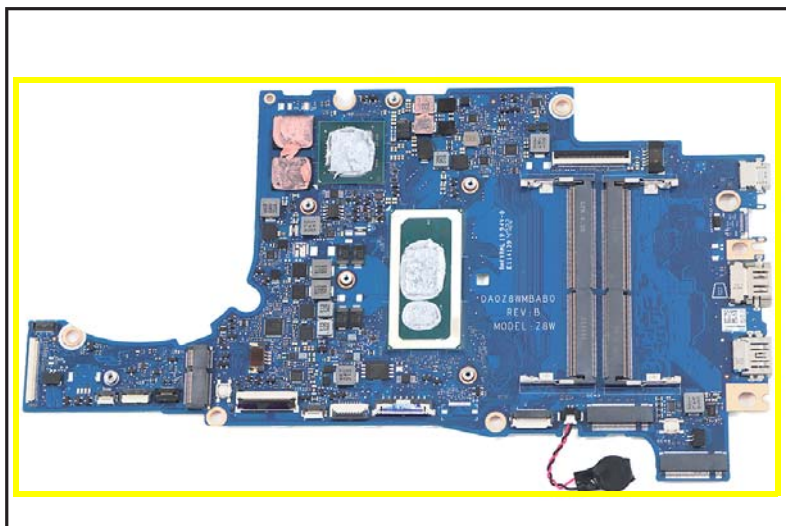


Figure 1-43. Mainboard

+ IMPORTANT:

Circuit boards >10 cm² have been highlighted with a yellow rectangle as shown in Figure 1-43. Remove the circuit board and follow local regulations for disposal.

Touchpad Module Removal

Prerequisite:

Mainboard Removal

1. Disconnect the fingerprint FFC (A) from the USB board and touchpad module connectors. Then carefully detach the FFC from its underneath adhesive (highlighted by the yellow lines) and remove the fingerprint FFC (Figure 1-44).

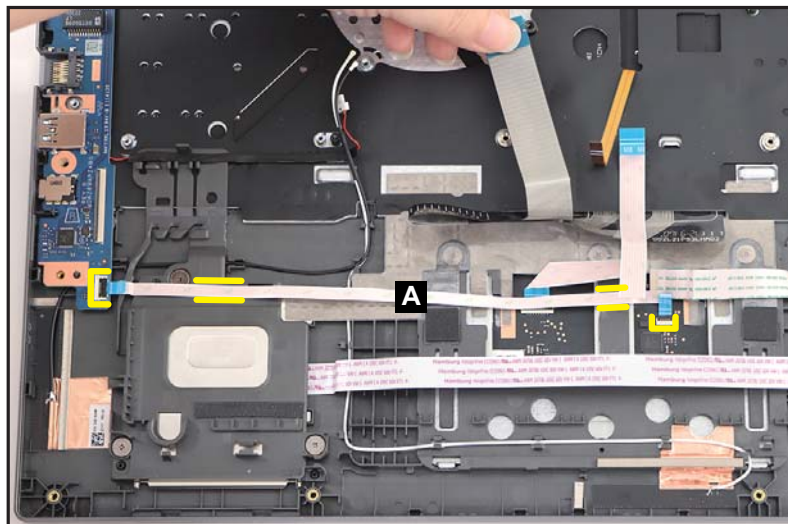


Figure 1-44. Touchpad Module Removal

⚠ CAUTION:

Fingerprint FFC (Flexible Flat Circuit) can be damaged if removed while the USB board and touchpad module connectors are locked.

2. Lift the keyboard FPC. Then disconnect the touchpad FFC from the touchpad module connector (B) (Figure 1-45).

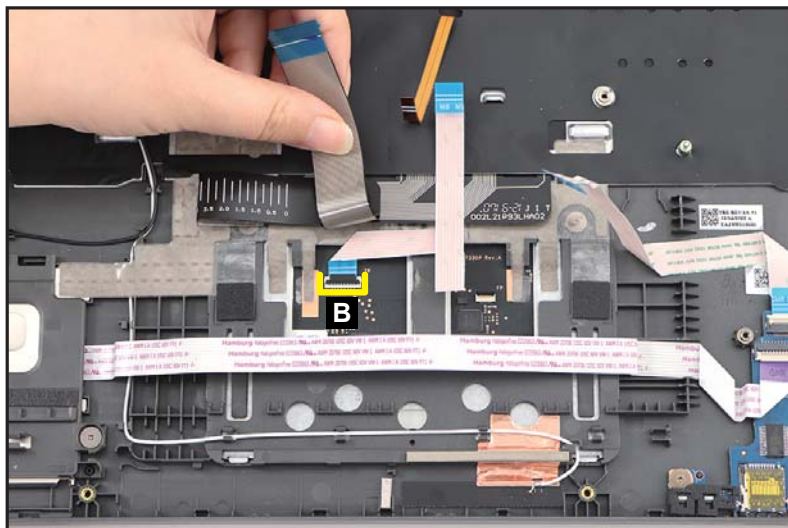


Figure 1-45. Touchpad Module Removal

⚠ CAUTION:

Touchpad FFC (Flexible Flat Circuit) can be damaged if removed while the touchpad module connector is locked.

3. Slightly detach and lift the mylar. Then detach the conductive tape (C) from the touchpad module and top assembly (Figure 1-46).

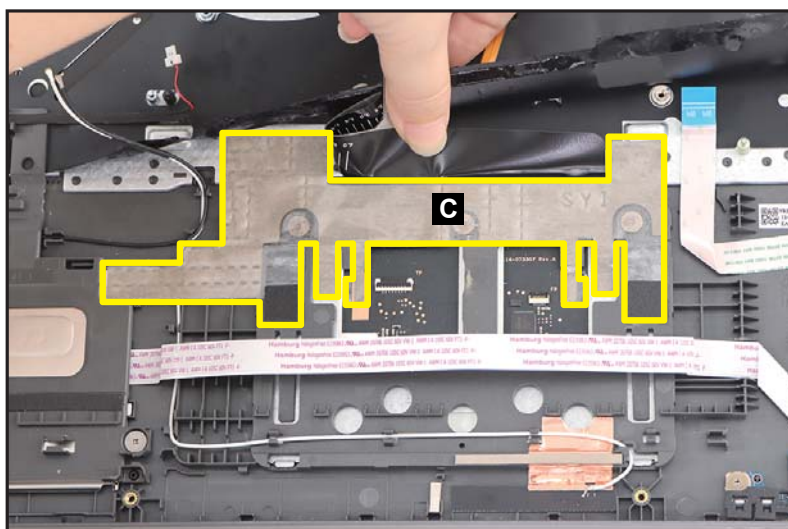


Figure 1-46. Touchpad Module Removal

4. Remove three (3) screws securing the touchpad module (Figure 1-47).

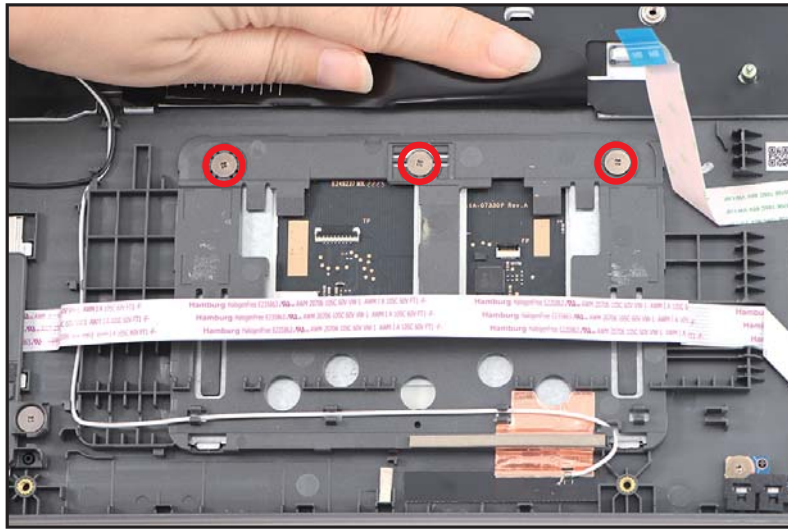


Figure 1-47. Touchpad Module Removal

5. Using the screwdriver, push the guide pin (D) firmly to release it from the top assembly (Figure 1-48).
6. Slide the touchpad module slightly to disengage it from the bottom latches (E), and then remove the touchpad module (F) from the top assembly (Figure 1-48).

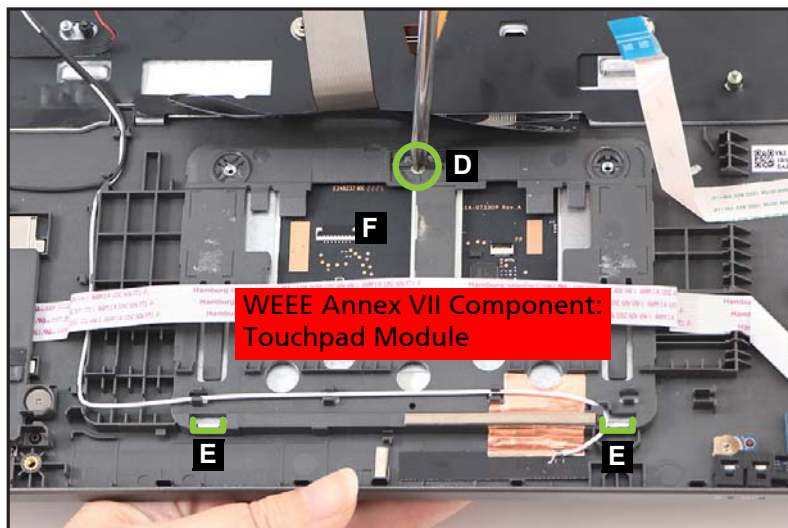


Figure 1-48. Touchpad Module Removal

LCD Bezel Removal

Prerequisite:

[LCD Module Removal](#)

1. Pry the LCD bezel from the upper side to release the latches ([Figure 1-49](#)).



Figure 1-49. LCD Bezel Removal

2. Pry the LCD bezel from the right side to release the latches ([Figure 1-50](#)).



Figure 1-50. LCD Bezel Removal

3. Continue prying along the left side of the bezel ([Figure 1-51](#)).

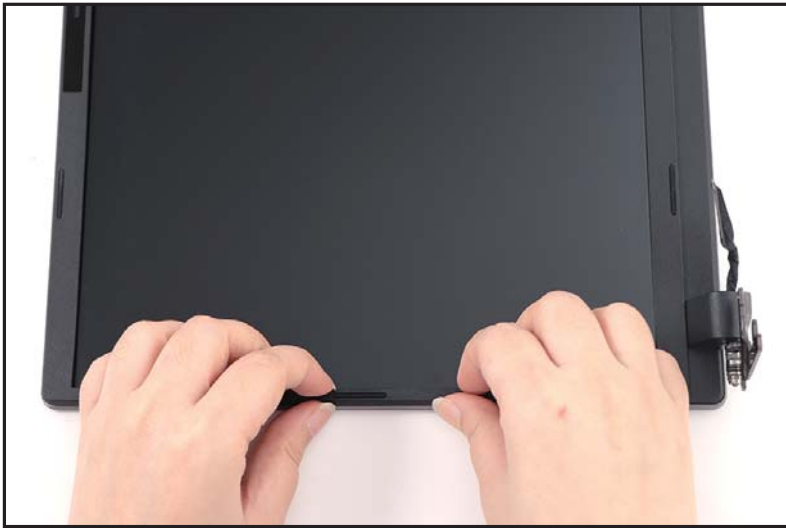


Figure 1-51. LCD Bezel Removal

4. Continue prying along the bottom side of the bezel until all the latches have been released ([Figure 1-52](#)). Then lift and remove the bezel from LCD module.



Figure 1-52. LCD Bezel Removal

LCD Panel Removal

Prerequisite:

[LCD Bezel Removal](#)

1. Unroute the LVDS cable (A) from the bottom side of the cable guides on the LCD cover as shown in [Figure 1-53](#).

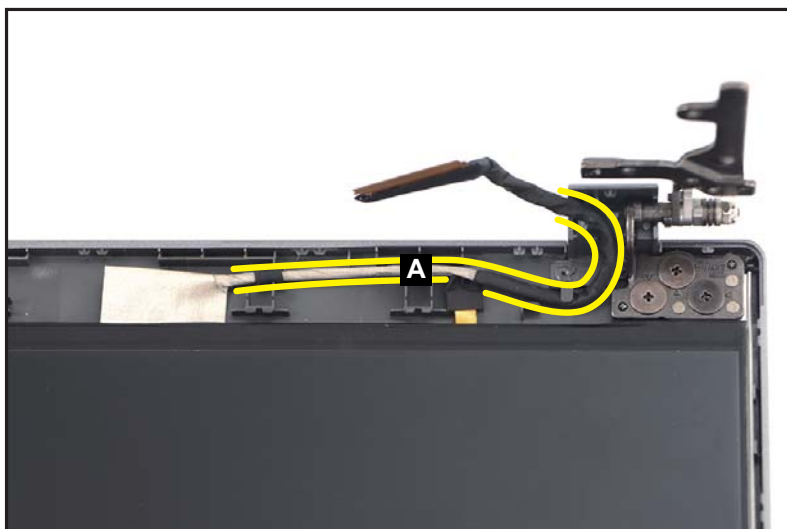


Figure 1-53. LCD Panel Removal

2. Pry slightly to access the double-sided mounting tape (B) underneath the LCD panel (C). Then pull to detach the double-sided mounting tape. Repeat the same procedure to remove the double-sided mounting tape on another side of the LCD panel (Figure 1-54).

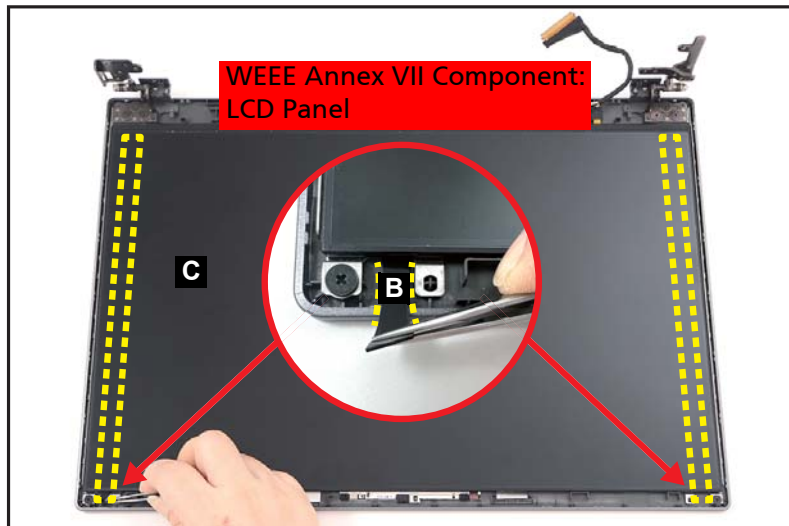


Figure 1-54. LCD Panel Removal

3. Carefully turn the LCD panel over so that the display panel is facing down on a flat surface. Then detach the mylar tape (D) securing the LVDS cable to the LCD panel (Figure 1-55).

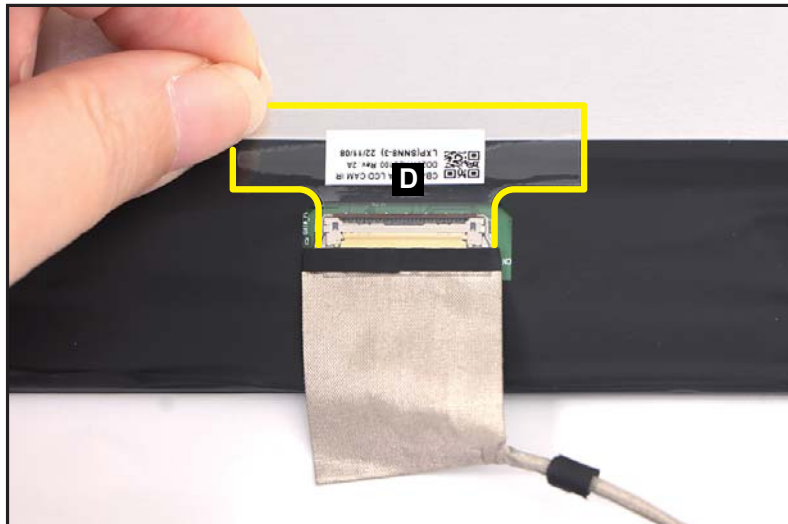


Figure 1-55. LCD Panel Removal

4. Lift the latch (E) securing the LVDS cable ([Figure 1-56](#)).

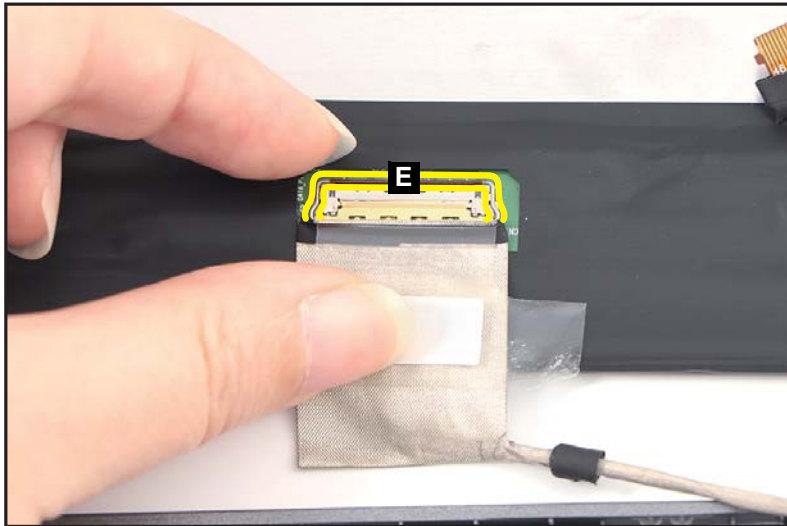


Figure 1-56. LCD Panel Removal

5. Disconnect the LVDS cable from the LCD panel connector (F) ([Figure 1-57](#)).

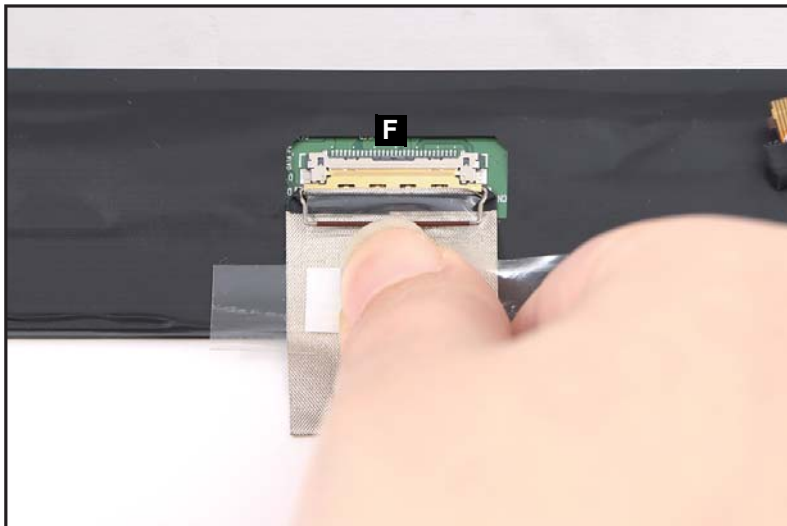


Figure 1-57. LCD Panel Removal

6. Remove the LCD panel.

⚠ CAUTION:

Make sure the LVDS cable is moved away from the device to avoid damage during the LCD panel removal.

Top Assembly Removal (Keyboard Removal)

Prerequisite:

Ensure that the **Left Speaker**, **DC-IN Cable**, **Right Speaker**, **Smart Card Reader**, **Card Reader Board**, and **Touchpad Module** have been disassembled prior removing the top assembly.

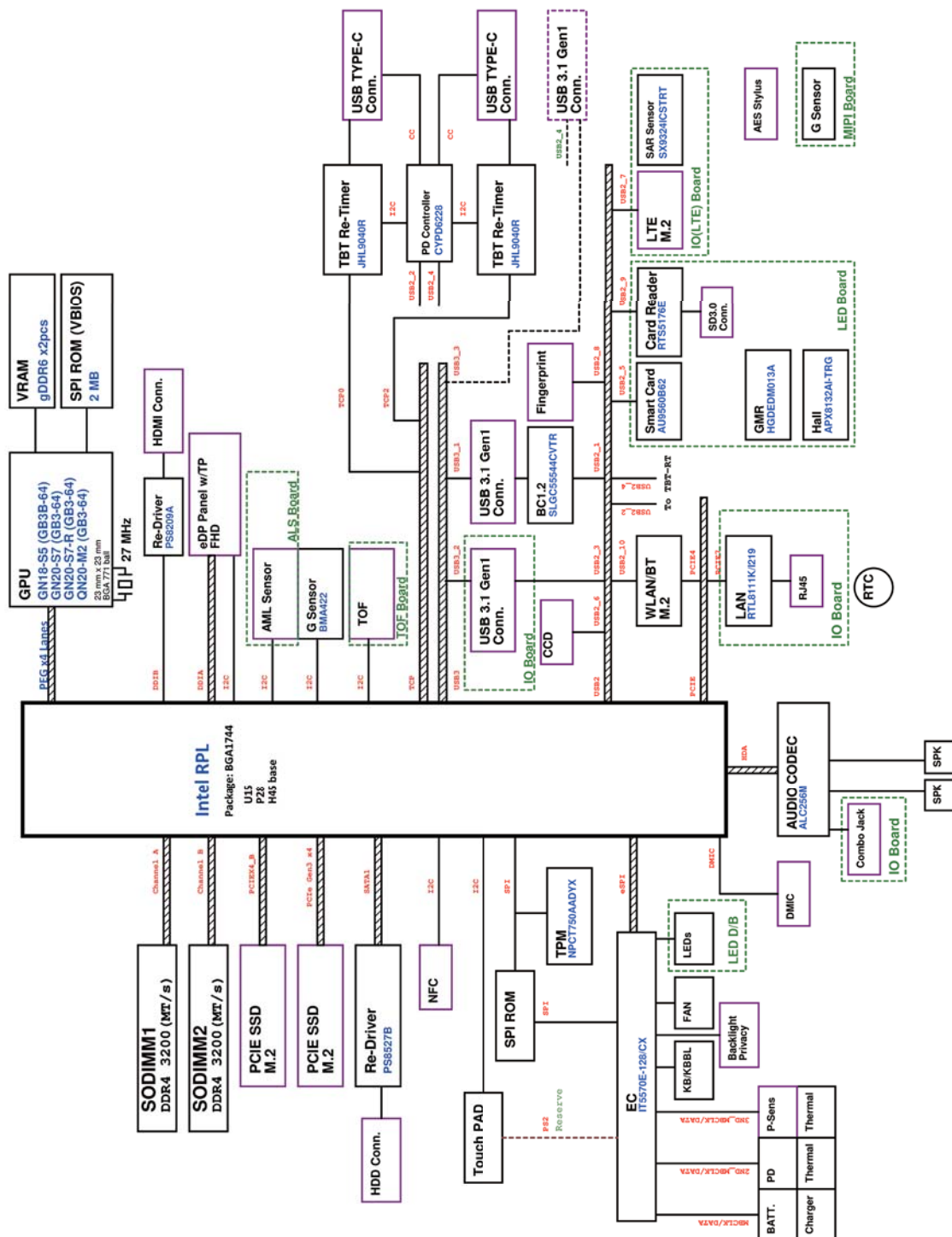
⇒ NOTE:

The keyboard is included as part of the top assembly and can not be disassembled. In the event that the keyboard can no longer be used, replace the entire top assembly.



Figure 1-58. Top Assembly (Keyboard)

Electronic Boards Diagrams



Troubleshooting

This chapter shows you how to deal with common system problems. Read it before calling a technician if a problem occurs. Solutions to more serious problems require opening up the computer. Do not attempt to open the computer yourself; contact your dealer or authorized service center for assistance.

Troubleshooting tips

This computer incorporates an advanced design that delivers on-screen error message reports to help you solve problems.

If the system reports an error message or an error symptom occurs, see “Error messages” below. If the problem cannot be resolved, contact your dealer.

Error messages

If you receive an error message, note the message and take the corrective action. The following table lists the error messages in the alphabetical order together with the recommended course of action.

Table 1-1. Error Messages

Error Messages	Corrective Action
CMOS battery bad	Contact your dealer or an authorized service center.
CMOS checksum error	Contact your dealer or an authorized service center.
Disk boot failure	Insert a system (bootable) disk, then press Enter to reboot.
Equipment configuration error	Press F2 (during POST) to enter BIOS utility, then press Exit in the BIOS utility to reboot.
Hard disk 0 error	Contact your dealer or an authorized service center.
Hard disk 0 extended type error	Contact your dealer or an authorized service center.
I/O parity error	Contact your dealer or an authorized service center.
Keyboard error or no keyboard connected	Contact your dealer or an authorized service center.
Keyboard interface error	Contact your dealer or an authorized service center.
Memory size mismatch	Press F2 (during POST) to enter BIOS utility, then press Exit in the BIOS utility to reboot.

If you still encounter problems after going through the corrective measures, please contact your dealer or an authorized service center for assistance.

FRU (Field Replaceable Unit) List

Please contact your local service center to find out how to obtain the part or replace your device.

Exploded Diagrams

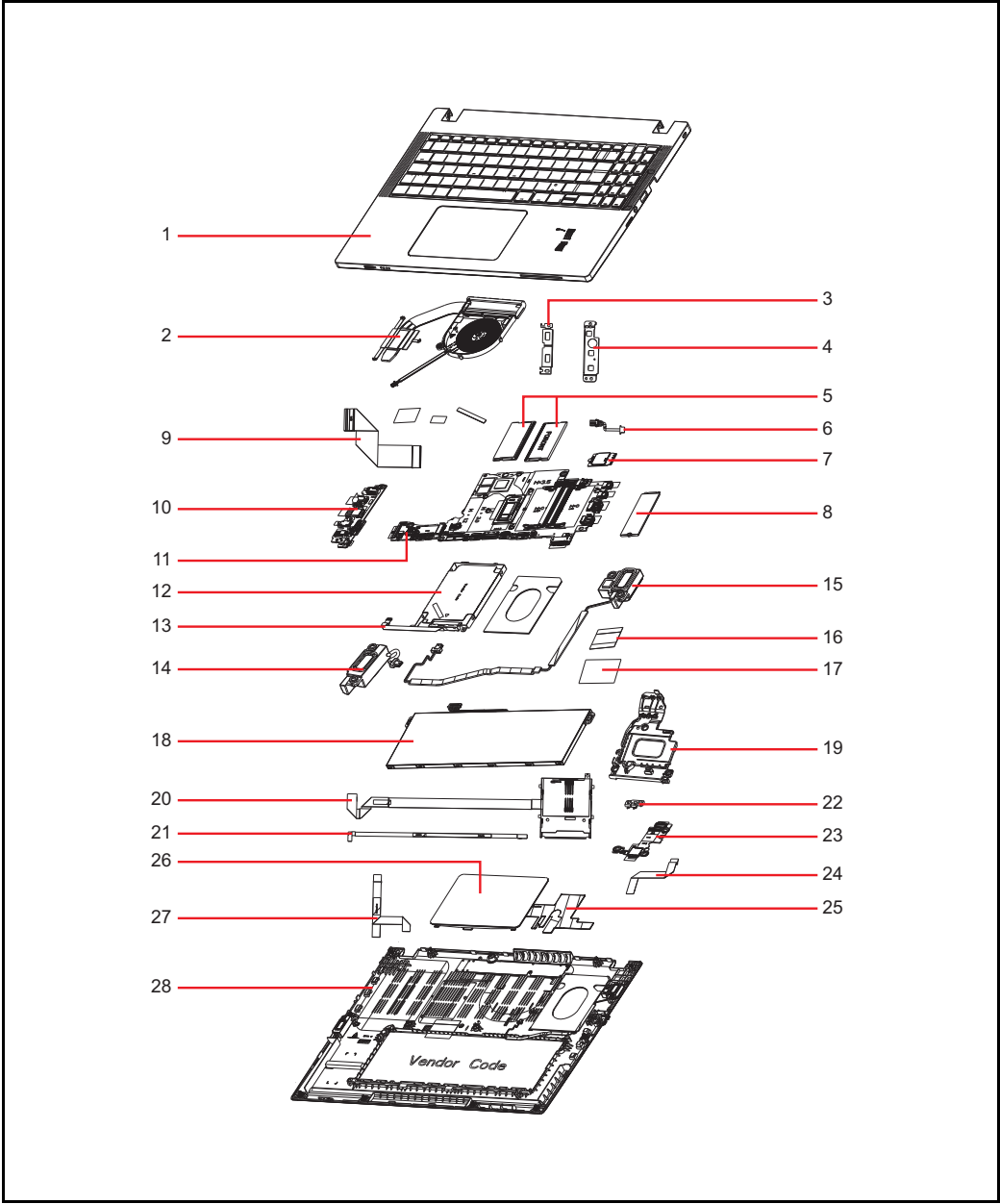


Figure 1-60. System Exploded Diagram

Table 1-2. System Exploded Diagram

No.	Description
1	Top Assembly
2	Thermal Module
3	Right IO Bracket (mainboard)

Table 1-2. System Exploded Diagram (Continued)

No.	Description
4	Left IO Bracket (USB board)
5	DIMM Modules
6	DC-IN Cable
7	WLAN Module
8	SSD Module
9	USB Board FFC
10	USB Board
11	Mainboard
12	HDD Module
13	HDD Cable
14	Left Speaker
15	Right Speaker
16	Transparent Mylar
17	Acetate Tape
18	Battery Pack
19	Smart Card Holder
20	Smart Card Reader FFC
21	Fingerprint FFC
22	Sponge (card reader board)
23	Card Reader Board
24	Card Reader Board FFC
25	Conductive Tape
26	Touchpad Module
27	Touchpad FFC
28	Base Cover

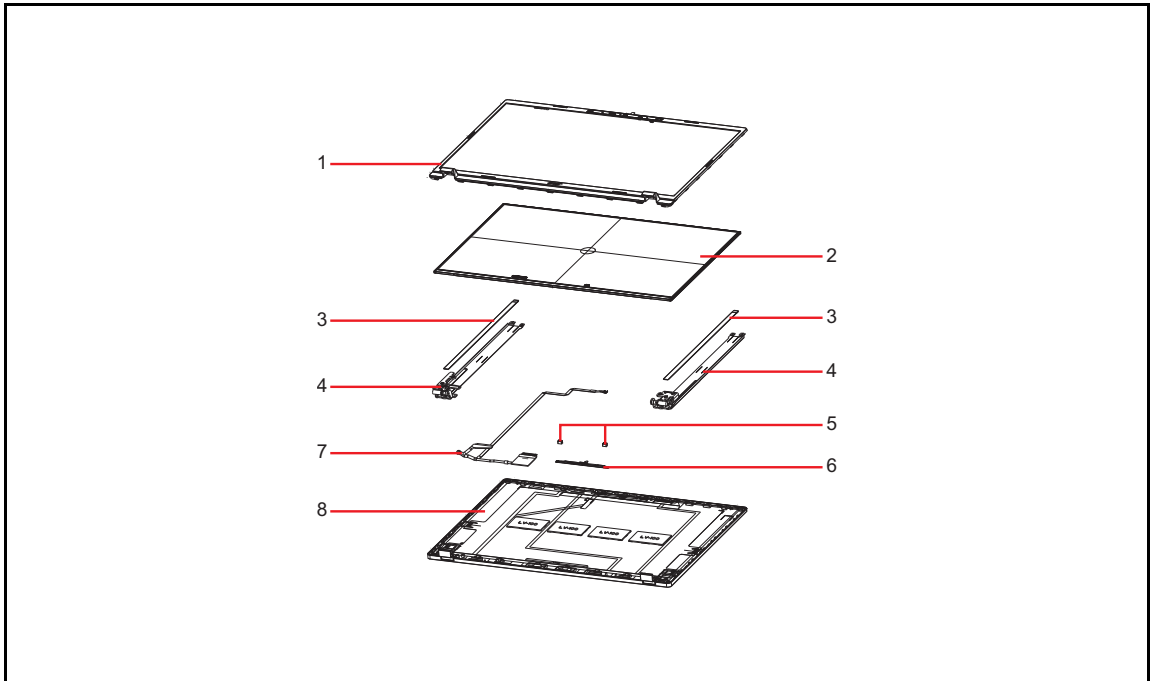


Figure 1-61. LCD Assembly Exploded Diagram

Table 1-3. LCD Assembly Exploded Diagram

No.	Description
1	LCD Bezel
2	LCD Panel
3	Adhesive Mounting Tapes
4	LCD Hinge L
	LCD Hinge R
5	Microphone Rubbers
6	Camera Module
7	LVDS Cable
8	LCD Cover

Software Update







Updating your software

Please visit <http://go.acer.com/?id=17883>

Personal Data Removal

Removing your personal data

There are three options to choose from:

- Option 1: Select **Start**  > **Settings**  > **Update & Security**  > **Recovery**. Under **Reset this PC**, select **Get started**. Open **Recovery settings**.
- Option 2: Restart your PC to get to the sign-in screen, then press and hold down the **Shift key** while you select the **Power**  icon > **Restart** in the lower-right corner of the screen. After your computer restarts, select **Troubleshoot** > **Reset this PC**.
- Option 3: Select **Start** , then press and hold down the **Shift key** while you select the **Power**  icon > **Restart** to restart your computer into Recovery Mode. After your computer restarts, select **Troubleshoot** > **Reset this PC**.