Acer Chromebook
CP514-1H/CP514-1HH/CP514-1W/CP514-1WH

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.

Disassembly Procedures

Please refer to the chapter "Disassembly Procedures" for step by step disassembly instructions.

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
- Touchpad module
- Mainboard
- USB board
- 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 power adapter from the USB Type-C port (A or B) as shown in Figure 1-1 or Figure 1-2.
3. Remove all cables from system.

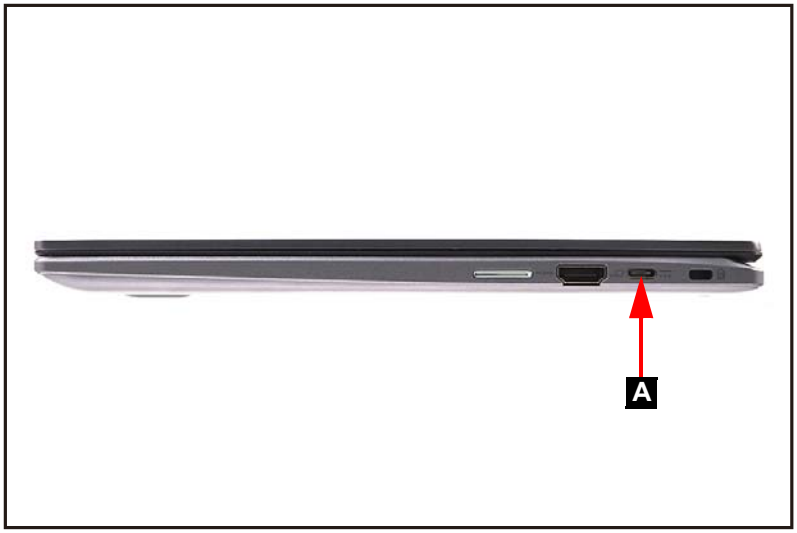

Figure 1-1. AC Adapter Outlet

4. Remove the microSD card from the microSD card slot (C) (Figure 1-2).

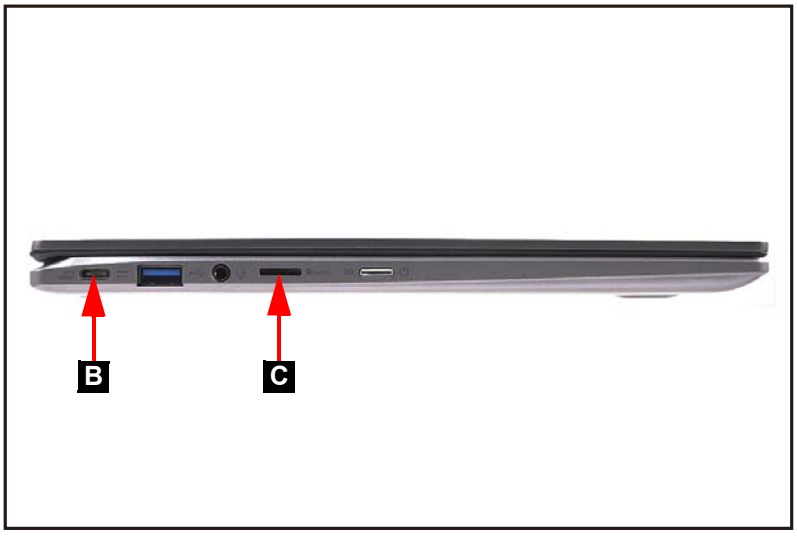

Figure 1-2. MicroSD Card Removal

NOTE:

Make sure the system is completely powered off.

Base Cover Removal

1. Remove ten (10) 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 releasing the remaining latches on the left, right, and bottom sides (Figure 1-4).

Figure 1-4. Base Cover Removal

3. Grasp and remove the base cover from the system (Figure 1-5).

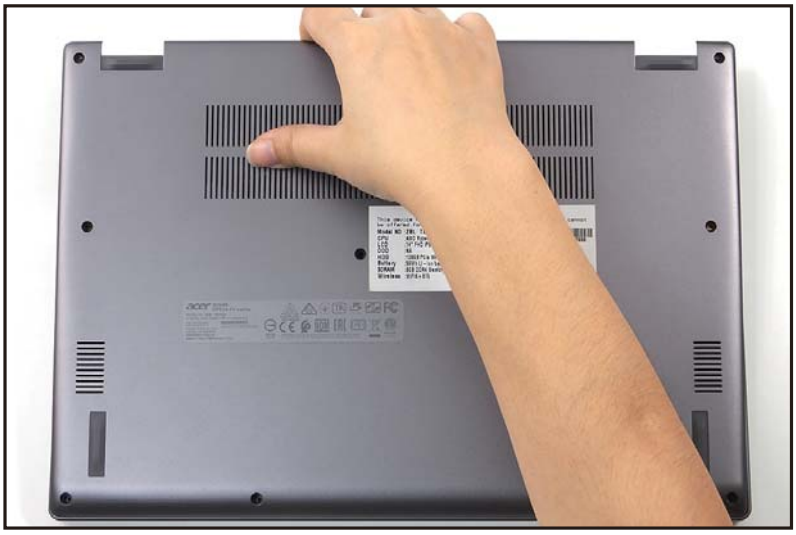

Figure 1-5. Base Cover Removal

Battery Pack Removal

Prerequisite:

Base Cover Removal

1. Find the battery pack (A) on the top assembly (Figure 1-6).
2. Detach the tape (B) securing the battery cable to the mainboard connector (Figure 1-6).
3. Detach the transparent mylar (C) securing the battery cable and keyboard FPC (Figure 1-6).

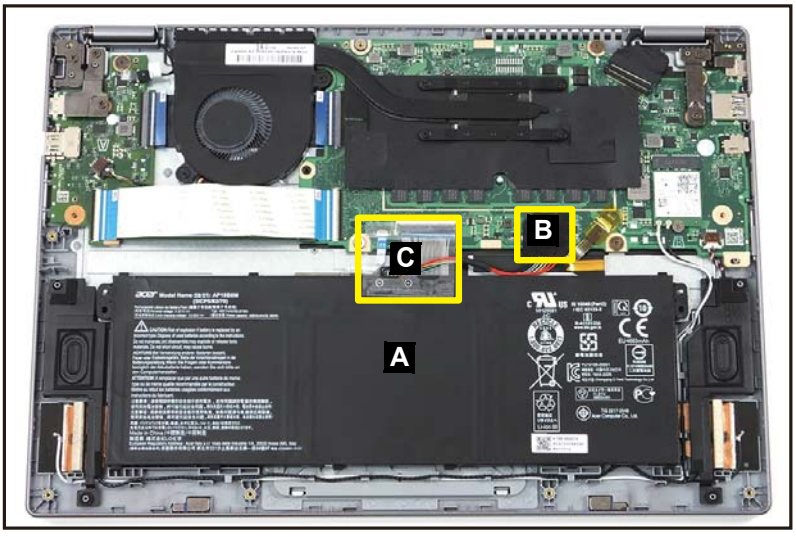

Figure 1-6. Battery Pack Removal

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

Figure 1-7. Battery Pack Removal

5. Remove the battery pack from the top assembly (Figure 1-8).

Figure 1-8. Battery Pack Removal

IMPORTANT:

Follow local regulations for battery disposal.

SSD Module Removal

Prerequisite:

Battery Pack Removal

1. Disconnect the 45-pin USB board FFC from the USB board connector (A) and the mainboard connector (B). Then remove the 45-pin USB board FFC (Figure 1-9).

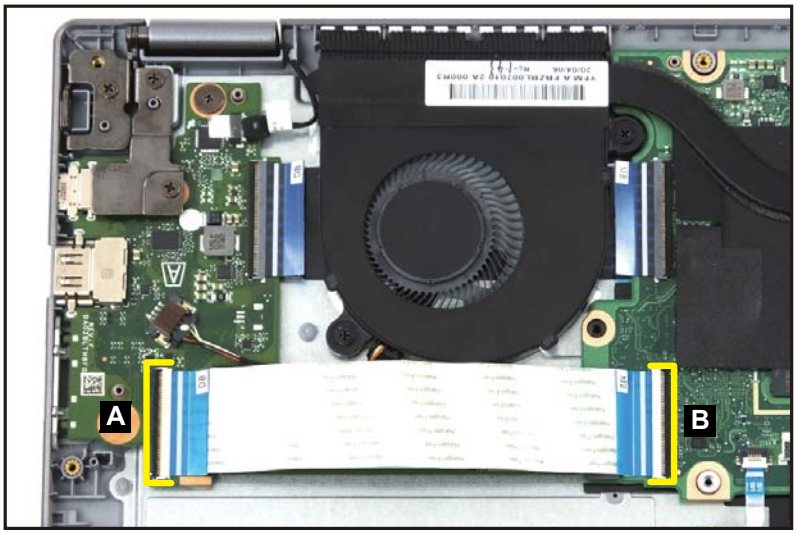

Figure 1-9. SSD Module Removal

2. Remove one (1) screw securing the SSD module in place (Figure 1-10).

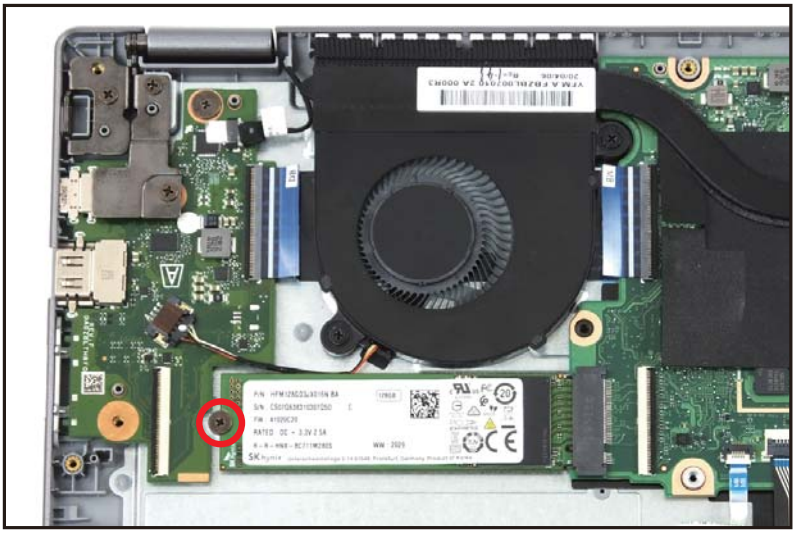

Figure 1-10. SSD Module Removal

3. Remove the SSD module (C) from the mainboard connector (D) (Figure 1-11).

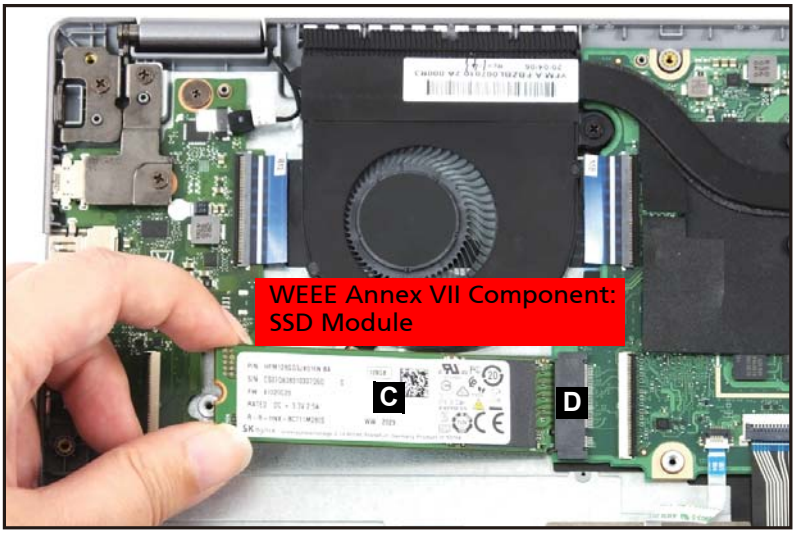

Figure 1-11. SSD Module Removal

WLAN Module Removal

Prerequisite:

Battery Pack Removal

1. Find the WLAN module (A) on the top assembly (Figure 1-12).

Figure 1-12. WLAN Module Removal

2. Disconnect the WLAN antennas cables from the WLAN module connectors (B) (Figure 1-13).
3. Remove one (1) screw securing the WLAN module in place (Figure 1-13).

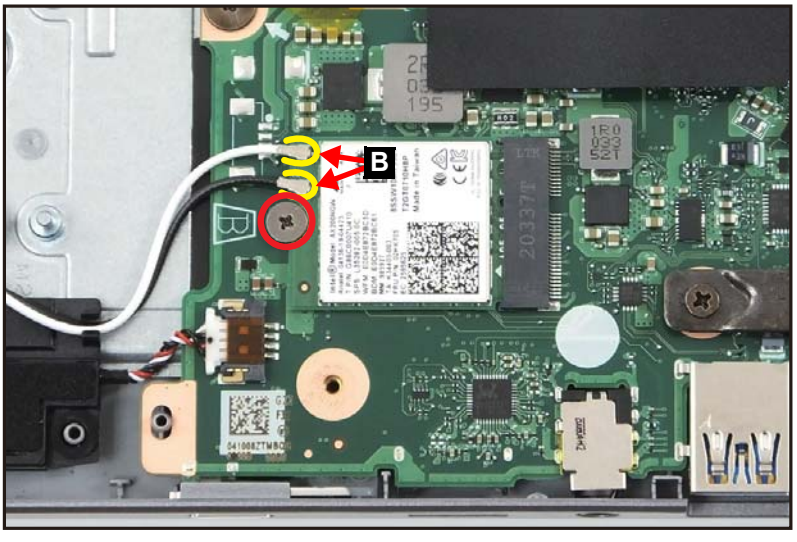

Figure 1-13. WLAN Module Removal

4. Remove the WLAN module from the mainboard connector (C) (Figure 1-14).

Figure 1-14. WLAN Module Removal

LCD Module Removal

Prerequisite:

Battery Pack Removal

1. Detach the transparent tape (A) securing the G-sensor cable. Then disconnect the G-sensor cable from the mainboard connector (Figure 1-15).
2. Unroute the G-sensor cable from the cable guide (B) (Figure 1-15).

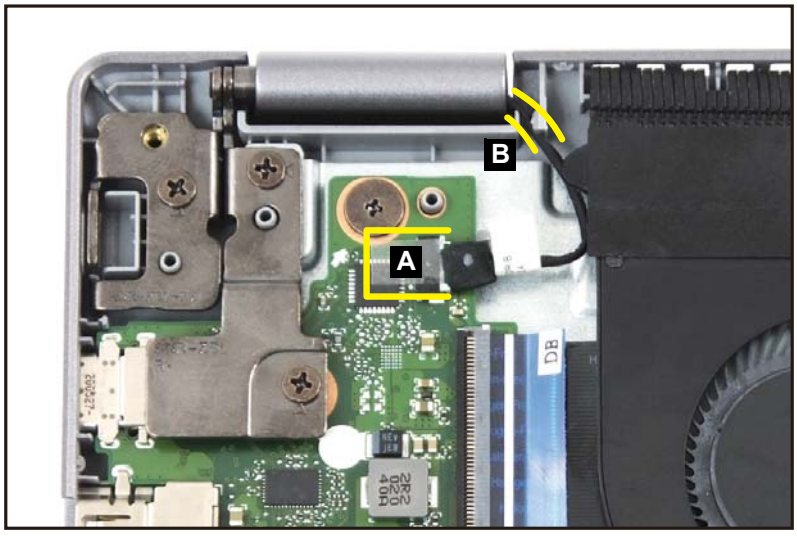

Figure 1-15. LCD Module Removal

3. Disconnect the eDP cable from the mainboard connector (C). Then unroute it from the cable guide (Figure 1-16).

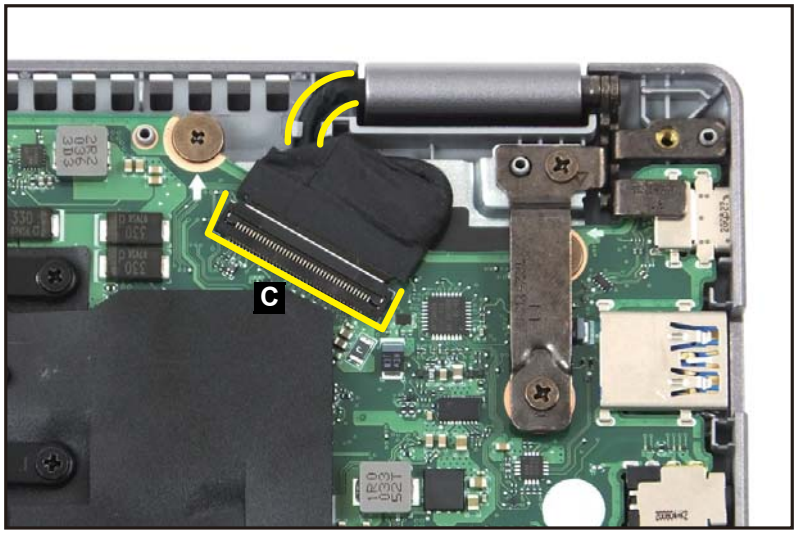

Figure 1-16. LCD Module Removal

4. Remove five (5) screws securing the LCD hinges in place (Figure 1-17).

Figure 1-17. LCD Module Removal

5. Lift the top assembly until it is fully open (Figure 1-18).

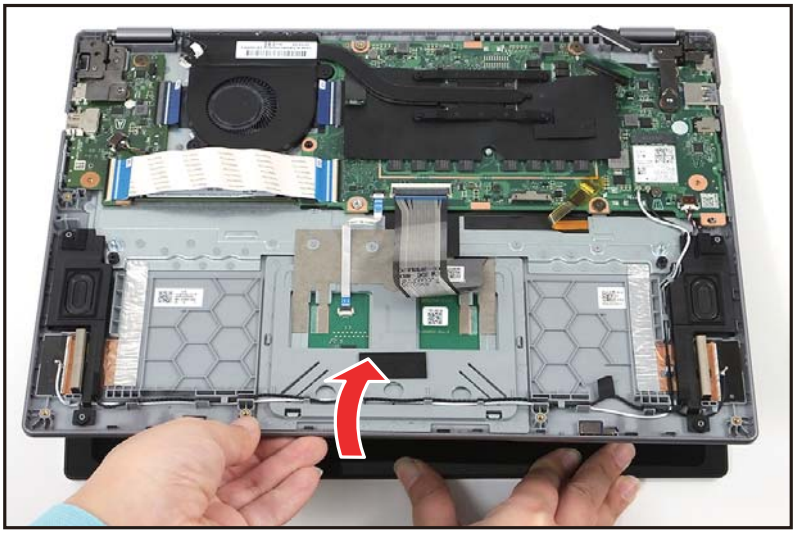

Figure 1-18. LCD Module Removal

6. Close the top assembly and lift both LCD hinges until they are fully extended (Figure 1-19).

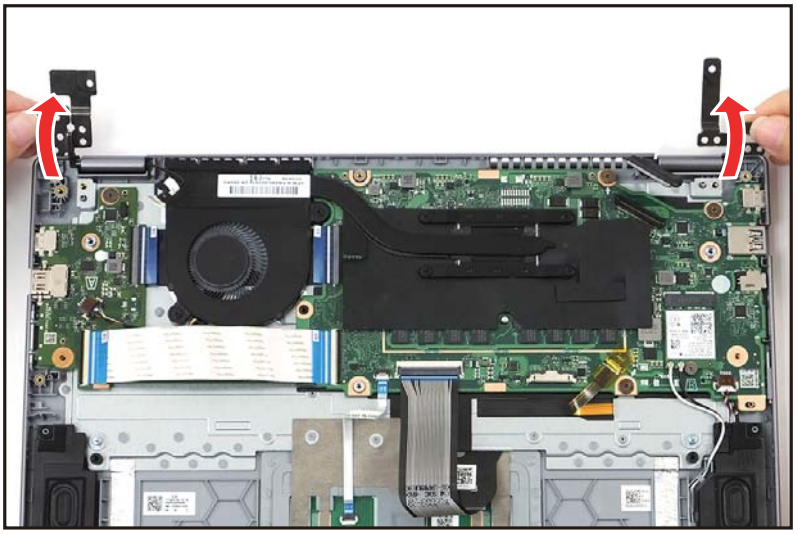

Figure 1-19. LCD Module Removal

7. Open the top assembly again, and then pull it backwards to remove the top assembly away from the LCD module (Figure 1-20).

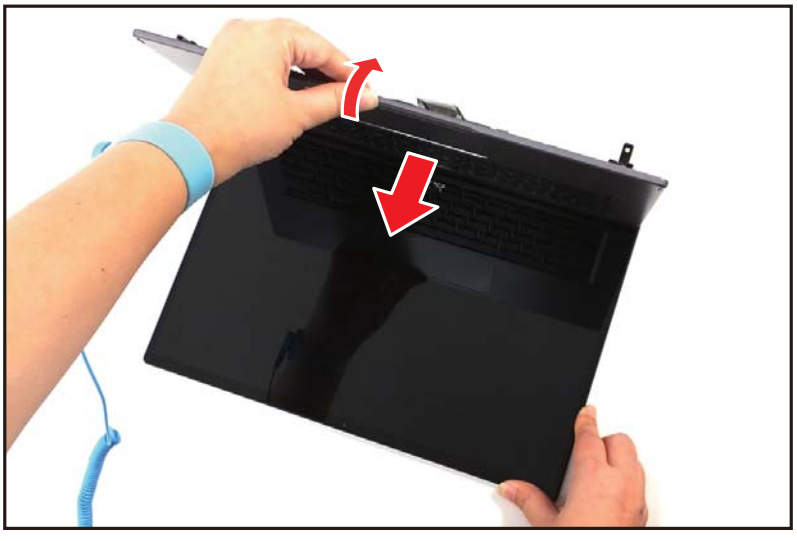

Figure 1-20. LCD Module Removal

Touchpad Module Removal

Prerequisite:

Battery Pack Removal

1. Disconnect the touchpad FFC from the mainboard connector (A) and the touchpad connector (B). Then remove the touchpad FFC from the top assembly (Figure 1-21).

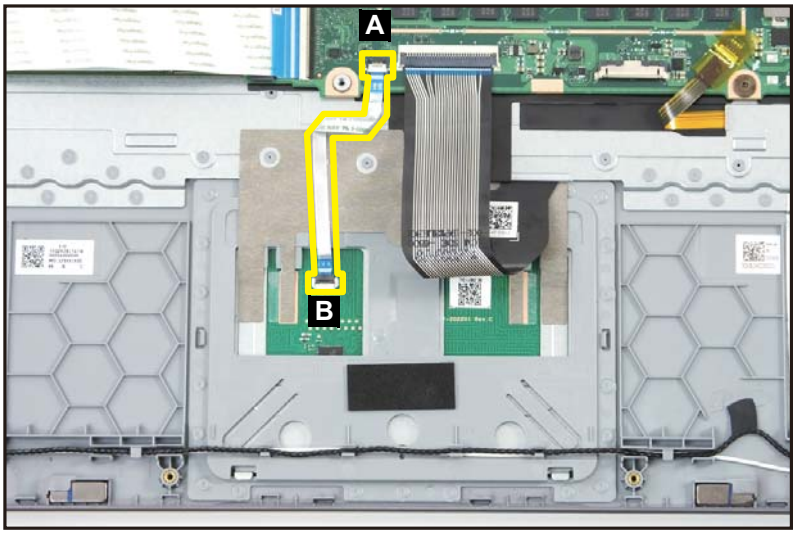

Figure 1-21. Touchpad Module Removal

2. Lift the keyboard FPC (C) and gently peel off the conductive tape (D) from the touchpad module (Figure 1-22).

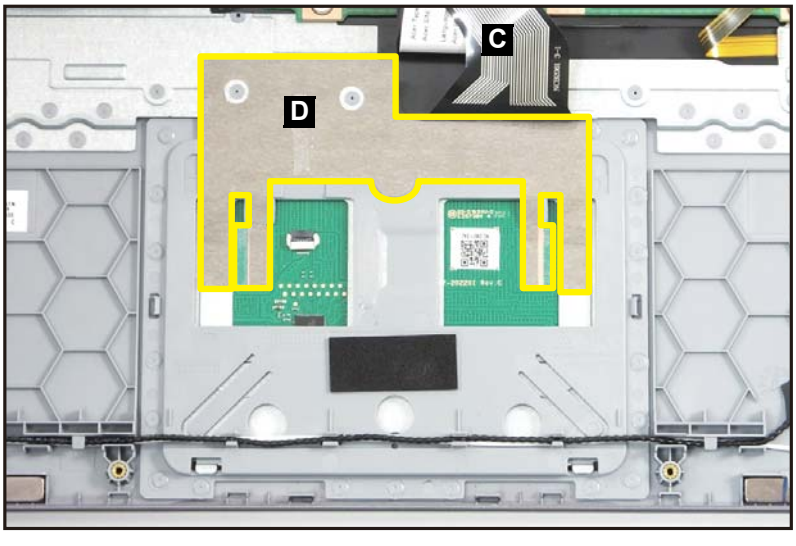

Figure 1-22. Touchpad Module Removal

3. Remove three (3) screws securing the touchpad module in place (Figure 1-23).

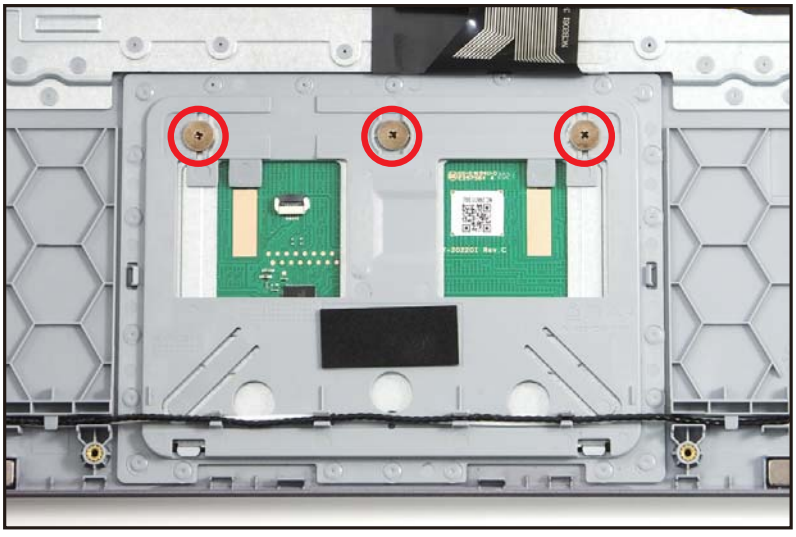

Figure 1-23. Touchpad Module Removal

4. Using the screwdriver, push the guide pins (E) firmly to release them from the top assembly (Figure 1-24).
5. With one hand is placed underneath the touchpad module, push the touchpad module slightly to disengage it from the bottom latches (F), and then remove the touchpad module (G) from the top assembly (Figure 1-24).

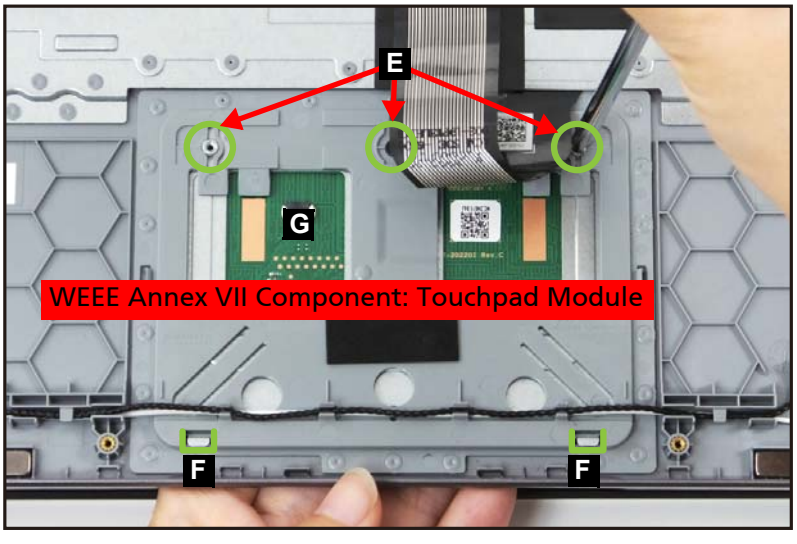

Figure 1-24. Touchpad Module Removal

Mainboard Removal

Prerequisite:

Ensure that the **SSD Module**, **WLAN Module**, **Heatsink**, **Fan**, and **LCD Module** have been disassembled prior removing the mainboard.

1. Detach the adhesive tape (A) securing the keyboard backlight FPC (Figure 1-25).

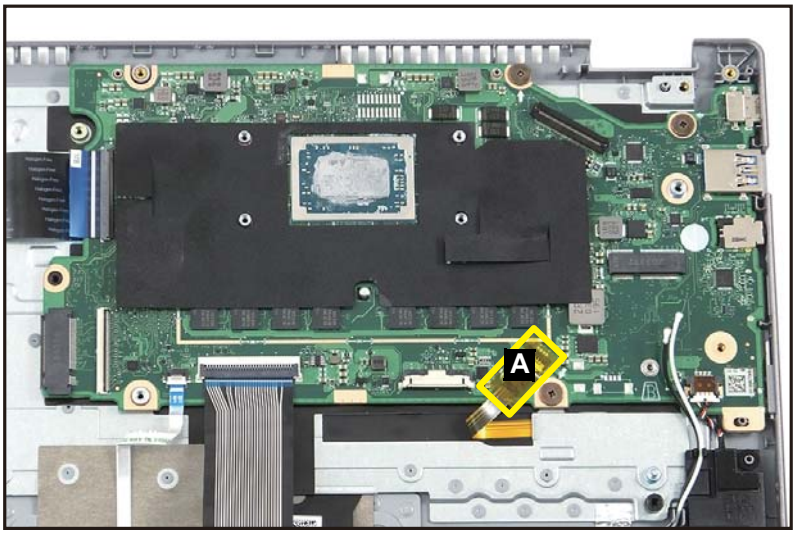

Figure 1-25. Mainboard Removal

2. Disconnect the 50-pin USB board FFC to the mainboard connector (B) (Figure 1-26).
3. Disconnect the touchpad FFC from the mainboard connector (C) (Figure 1-26).
4. Disconnect the keyboard FPC from the mainboard connector (D) (Figure 1-26).
5. Disconnect the keyboard backlight FPC from the mainboard connector (E) (Figure 1-26).
6. Disconnect the speaker cable from the mainboard connector (F) (Figure 1-26).

⚠ CAUTION:

Make sure all cables, FFCs, and FPC are disconnected from the connectors on the mainboard to avoid damage during removal.

7. Remove three (3) screws securing the mainboard in place (Figure 1-26).

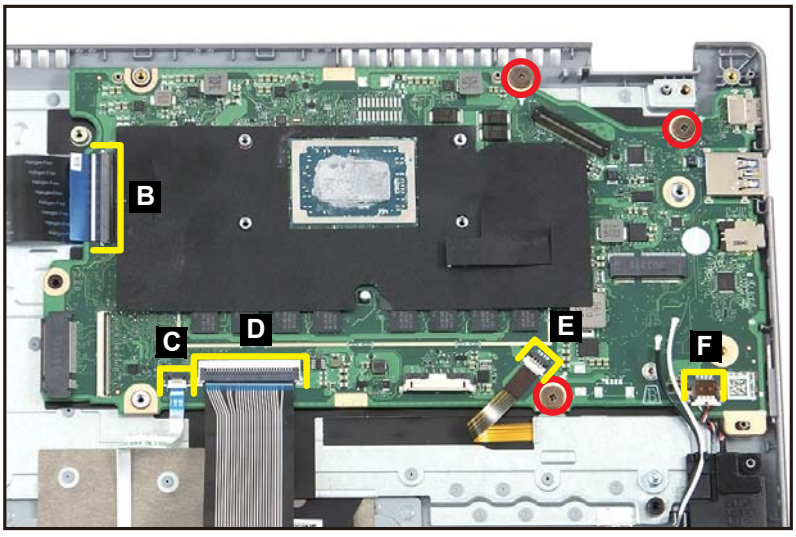

Figure 1-26. Mainboard Removal

8. Release the mainboard (G) from the I/O ports slots on the top assembly. Then remove the mainboard (Figure 1-27).

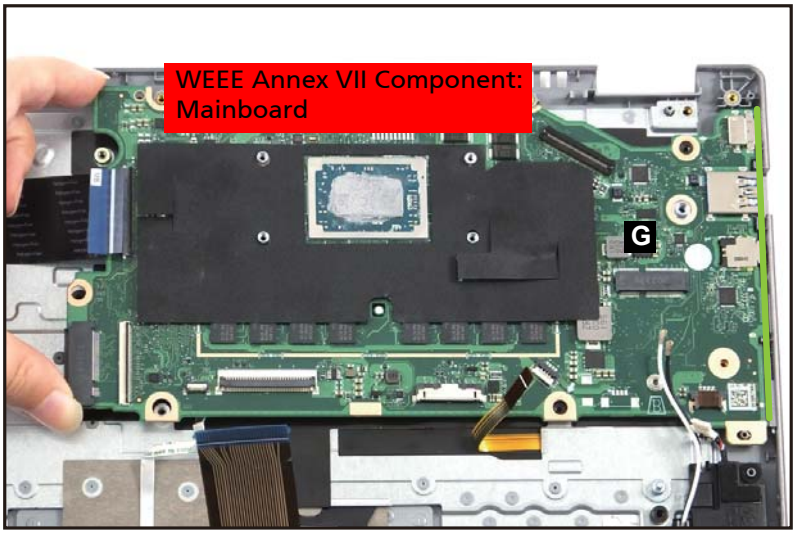

Figure 1-27. Mainboard Removal

9. Gently peel off the mylar (H) from the mainboard. While detaching the mylar, be careful to release it from the guide pins (I) (Figure 1-28).

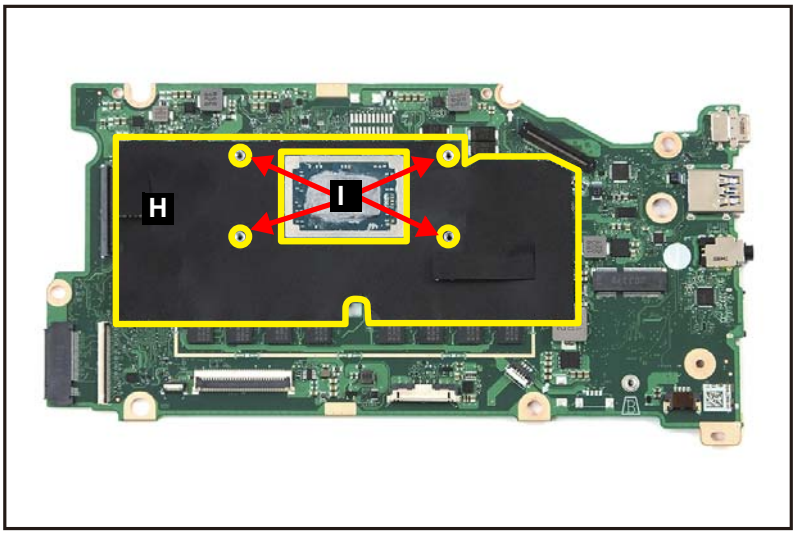

Figure 1-28. Mainboard Removal

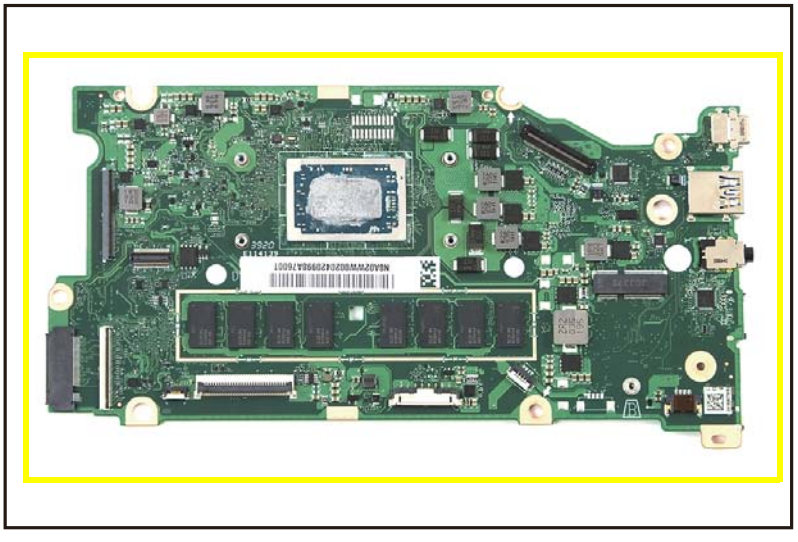

Figure 1-29. Mainboard

+ **IMPORTANT:**

Circuit boards >10 cm² have been highlighted with a yellow rectangle as shown in Figure 1-29. Remove the circuit board and follow local regulations for disposal.

USB Board Removal

Prerequisite:

Ensure that the **Fan** and **LCD Module** have been disassembled prior removing the USB board.

1. Disconnect the 50-pin USB board FFC (A) from the mainboard and USB board connectors (Figure 1-30). Then carefully lift to detach the adhesive underneath the 50-pin USB board FFC.
2. Disconnect the 45-pin USB board FFC (B) from the mainboard and USB board connectors (Figure 1-30).
3. Remove one (1) screw (E) securing the USB board in place (Figure 1-30).

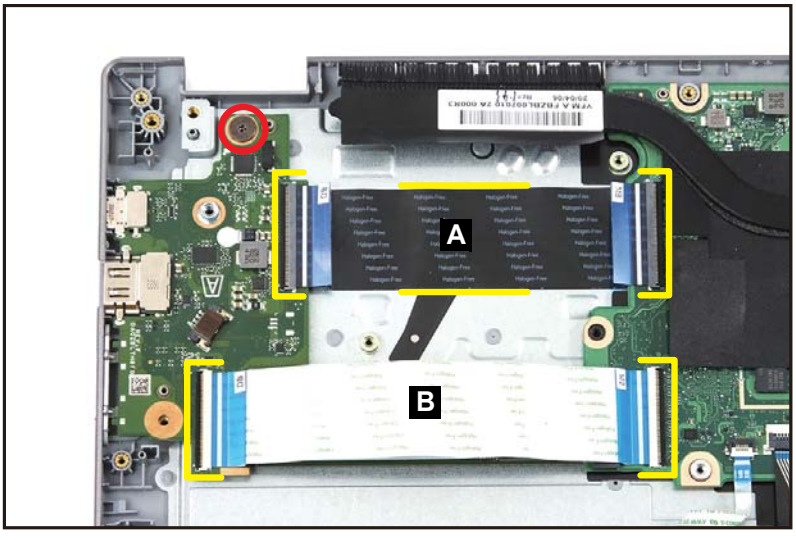

Figure 1-30. USB Board Removal

4. Release the USB board (C) from the USB port slot on the top assembly. Then remove the USB board (Figure 1-31).

Figure 1-31. USB Board Removal

LCD Panel Removal

Prerequisite:

LCD Module Removal

1. Flatten the LCD hinge caps for easy access for the cable unrouting (Figure 1-32).

Figure 1-32. LCD Panel Removal

2. Pry the LCD bezel from the bottom side to release latches (Figure 1-33).

Figure 1-33. LCD Panel Removal

3. Continue along the upper side of the LCD bezel (Figure 1-34).

Figure 1-34. LCD Panel Removal

4. Hold the LCD panel assembly upright. Then pry slightly the upper edge to grab the front tip of the double-sided mounting tape (A) using the tweezers (Figure 1-35).
5. Carefully pull to detach the double-sided mounting tape from the LCD cover (Figure 1-35).
6. Repeat the same procedures (Step 4 and 5) to remove the double-sided mounting tape on another side of the LCD panel (Figure 1-35).

⚠ CAUTION:

Do not remove the LCD panel yet because the eDP cable has not been released from the LCD hinge.

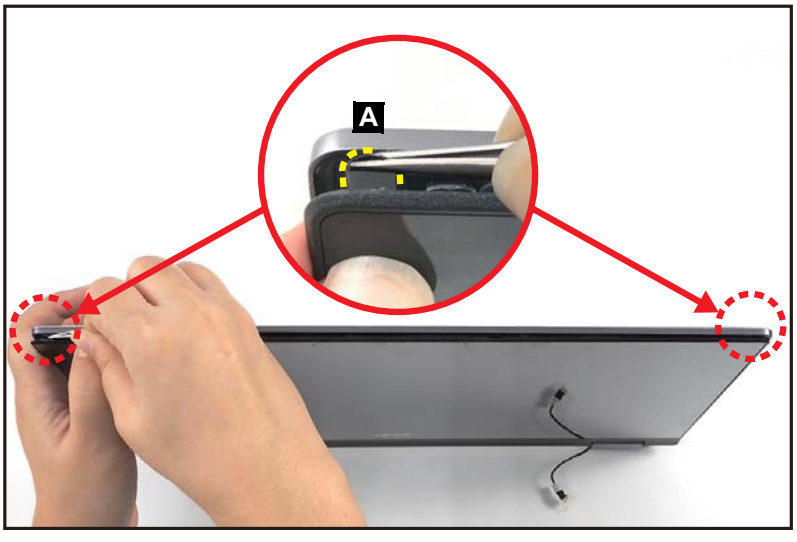

Figure 1-35. LCD Panel Removal

7. Release the eDP cable from the rubber (B) inside the left LCD hinge cap (Figure 1-36).

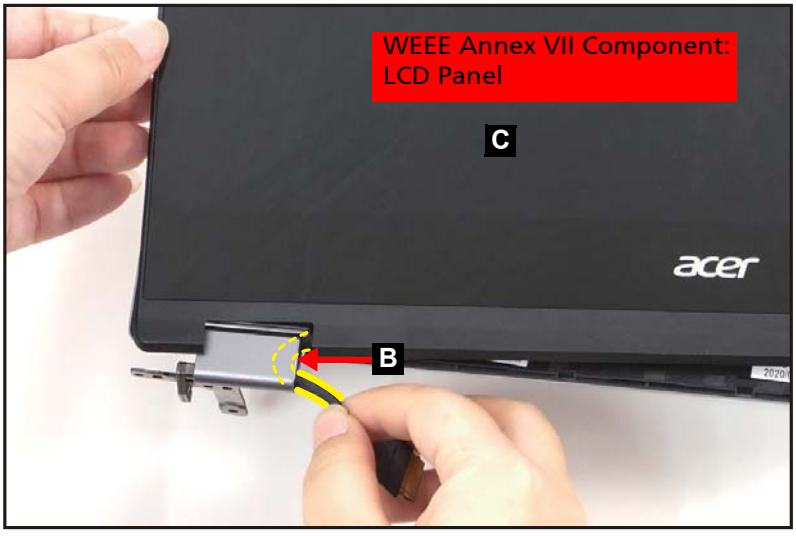

Figure 1-36. LCD Panel Removal

8. Remove the LCD panel (C).

Top Assembly Removal (Keyboard Removal)

Prerequisite:

Ensure that the **Touchpad Module**, **Mainboard**, **USB Board**, and **WLAN Antenna** 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 1-37. Top Assembly (Keyboard)

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

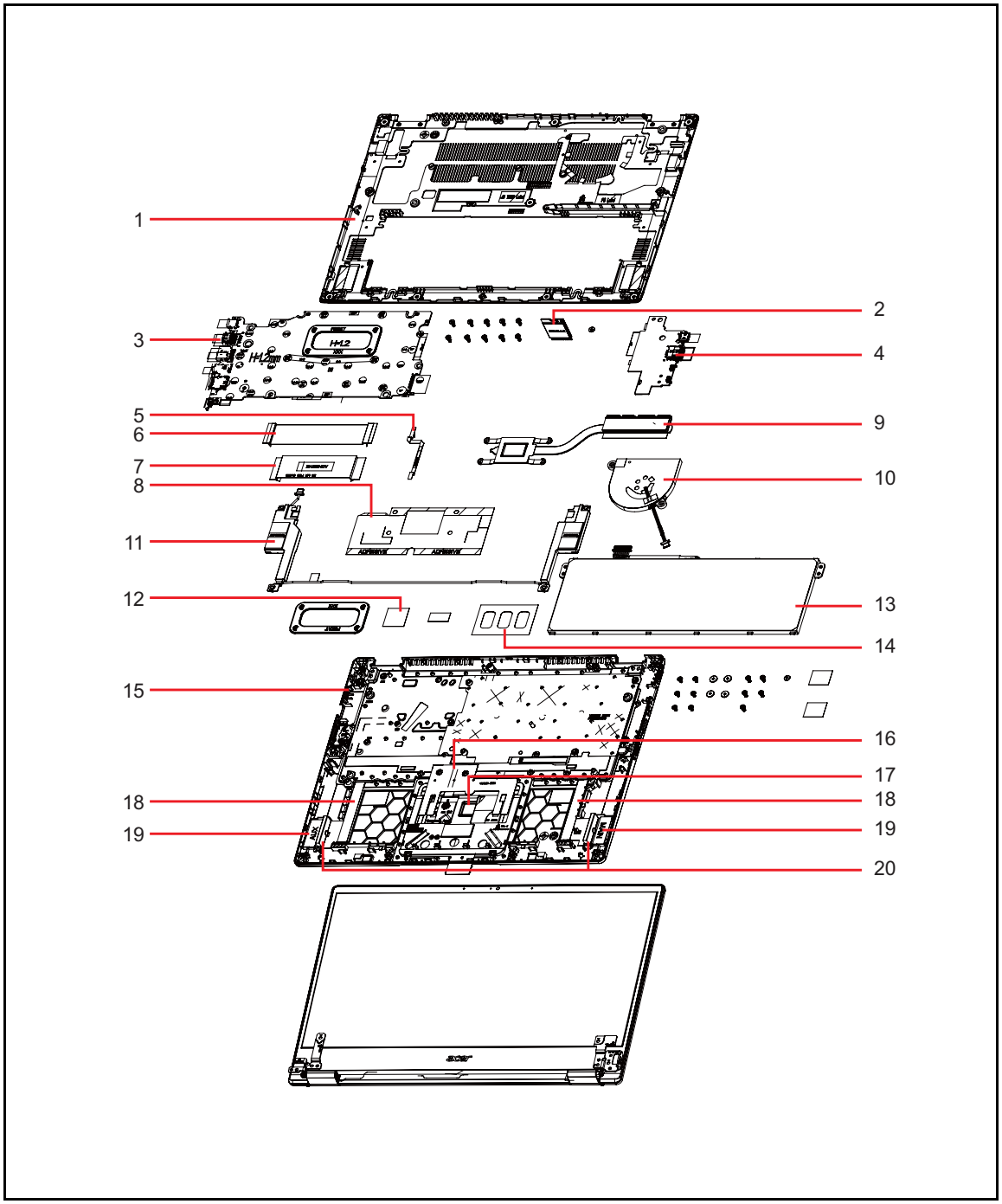

Figure 1-38. System Exploded Diagram

Table 1-2. System Exploded Diagram

No.	Description	Acer Part No.
1	Top Assembly	6B.A3UN7.001
2	WLAN Module	KE.11A0L.010
3	Mainboard	NB.A4A11.001
4	USB Board	55.HX7N7.001
5	Touchpad FFC	50.HX7N7.001
6	USB Board FFC (H)	50.HX7N7.003
7	USB Board FFC (L)	50.HX7N7.002
8	Mylar (on mainboard)	47.HX7N7.002
9	Heatsink	24.HX7N7.001
10	Fan	23.HQBN7.002
11	Speakers	23.HX7N7.001
12	Acetate Tape (for battery)	47.HKKN7.001
13	Battery Pack	KT.0030G.024
14	Mylar (on uppercase)	47.HX7N7.003
15	Base Cover	60.HX7N7.001
16	Conductive Tape	47.HX7N7.001
17	Touchpad	55.HX7N7.004
18	Foils	N/A
19	WLAN Antenna (MAIN+AUX)	N/A
20	Gaskets (on antennas)	N/A

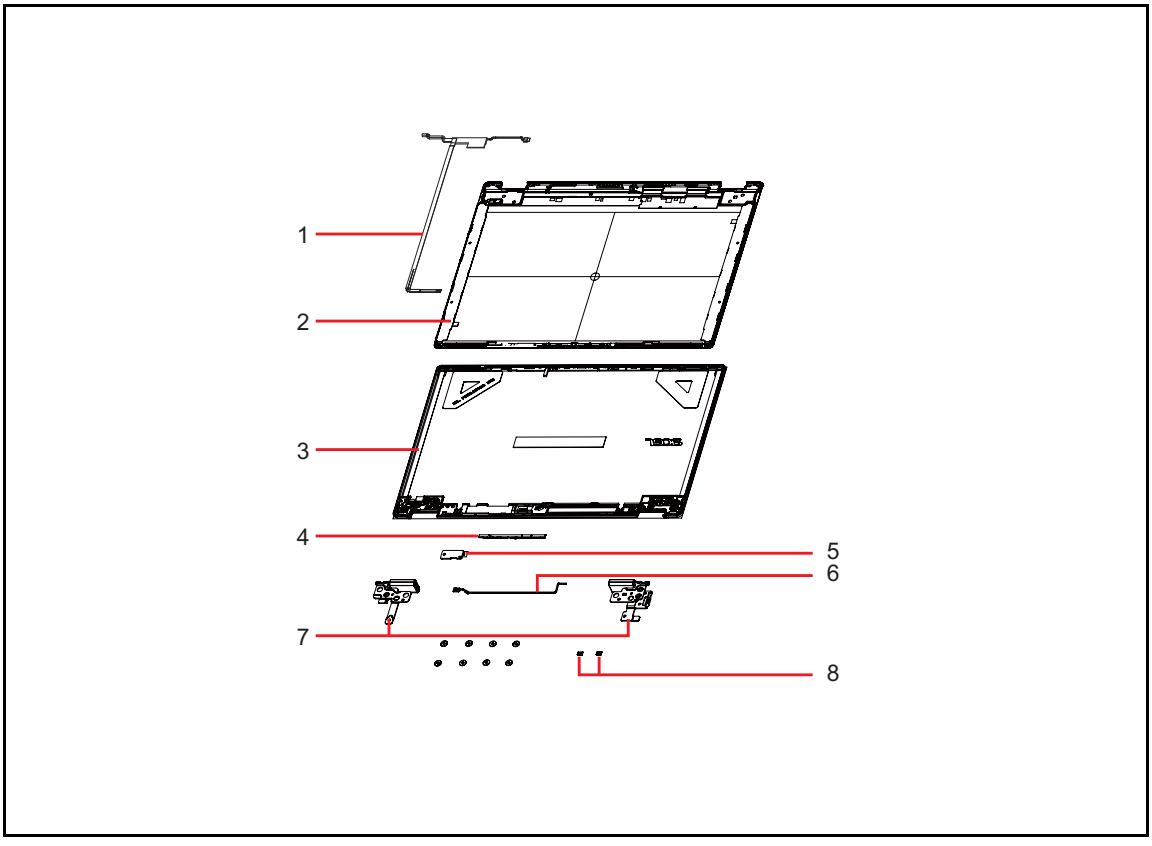

Figure 1-39. LCD Assembly Exploded Diagram

Table 1-3. LCD Assembly Exploded Diagram

No.	Description	Acer Part No.
1	eDP Cable	50.HX7N7.005
2	LCD Module with LCD Bezel	6M.HX4N7.001
3	LCD Cover	60.HX7N7.002
4	Camera Module	KS.0HD0Q.008
5	G-Sensor Board	55.HX7N7.003
6	G-Sensor Cable	50.HX7N7.004
7	LCD Hinge L	33.HX7N7.001
	LCD Hinge R	33.HX7N7.002
8	Microphone Rubbers	47.A9WN7.001

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**.