TravelMate
P414-56/P414-56-TCO/P414-76/P414-76-TCO
Bell_PTB

# LIFECYCLE EXTENSION GUIDE

Self-Repair . . . . . 1-1
Disassembly Procedures . . . . . 1-2
Electronic Boards Diagrams . . . . . 1-43
BIOS Setup Utility . . . . . 1-44
Troubleshooting . . . . . 1-65
Exploded Diagrams . . . . . 1-76
FRU List . . . . . 1-80
Software Update . . . . . 1-92
Personal Data Removal . . . . . 1-94

# Self-Repair

This chapter offers limited customer self-repair capabilities.

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

Due to the complexity of circuit boards, electronic components which are embedded to the motherboard or daughterboard(s) are strongly not advised to self-repair.

**NOTE:**

Before handling components, wear anti-static gloves to avoid damaging them due to static electricity.

**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

## Safety Guidelines

This chapter contains step by step procedures on how to remove and de-install components from the computer. Use these 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 if any damage is done to the unit or components during the repair. 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
- DIMM modules
- USB board
- LED board
- Touchpad module
- RTC battery
- Mainboard
- 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.
3. Remove all cables from the system.

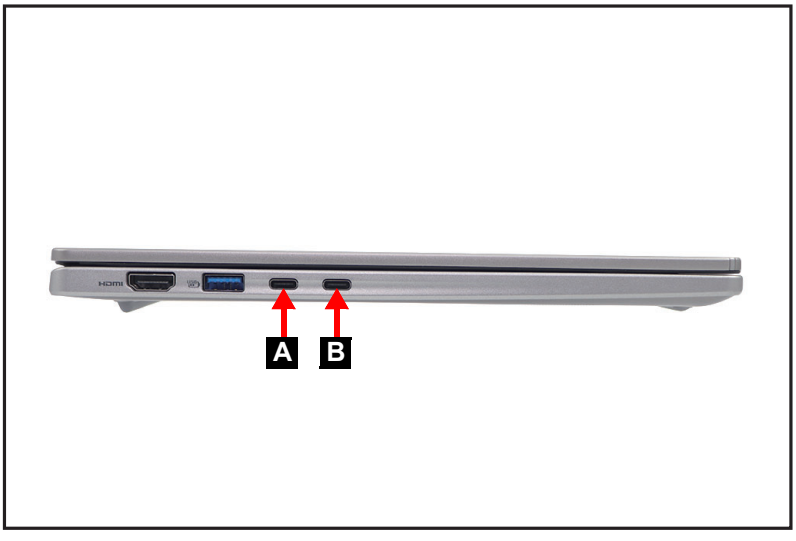



**Figure 1-1. Adapter Outlet**

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

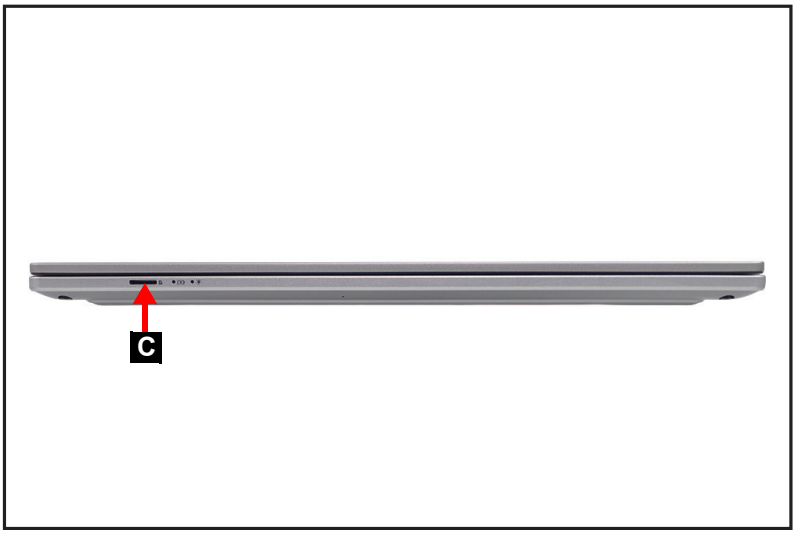



**Figure 1-2. microSD Card Removal**

**NOTE:**

Make sure the system is completely powered off.

# Base Cover Removal

1. Remove seven (7) screws from the base cover (Figure 1-3).



**Figure 1-3. Base Cover Removal**

2. Carefully pry the base cover starting from the bottom-right edge first, then following with bottom-left edge to release the bottom edges latches as shown in Figure 1-4.



**Figure 1-4. Base Cover Removal**

3. Continue to release the remaining latches. Then grasp and remove the base cover from the system (Figure 1-5).

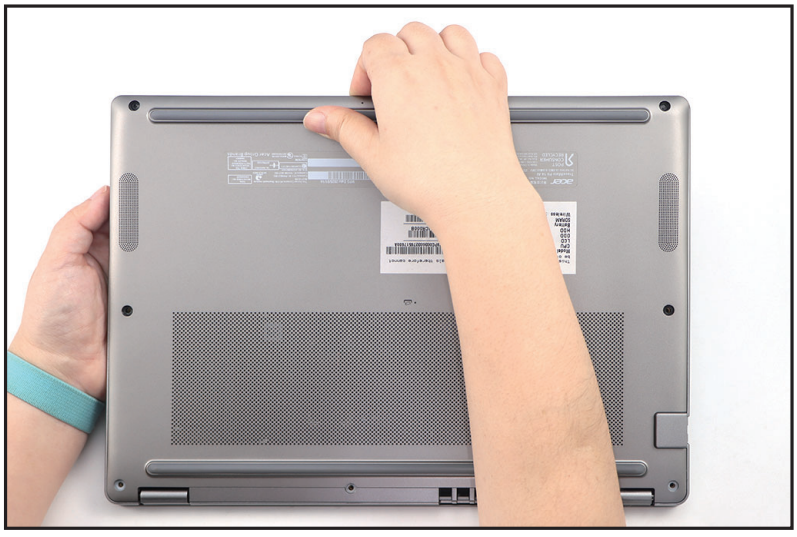


**Figure 1-5. Base Cover Removal**

**IMPORTANT:**

Chassis Intrusion Alert:
If both A (short pad on the mainboard with conductive rubber on the base cover) and B (metal spring on the mainboard with conductive foam on the base cover) (as shown in Figure 1-6) are released simultaneously, an intrusion alert prompt will be triggered.

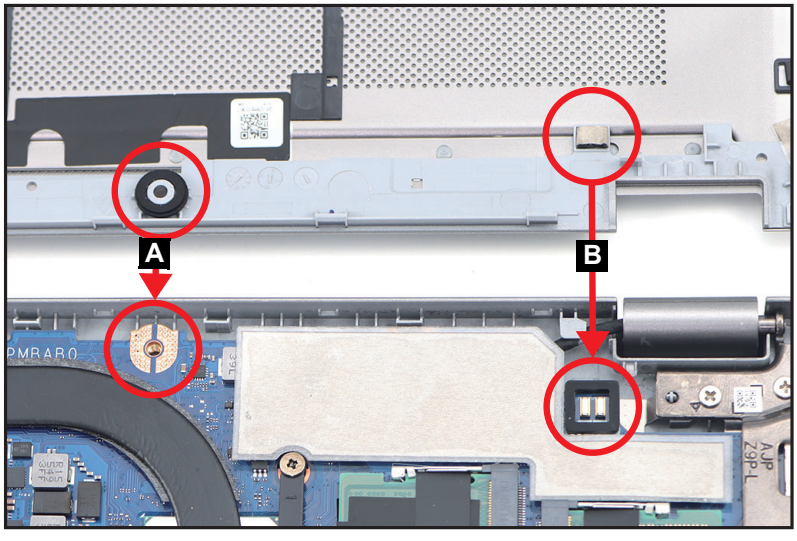



**Figure 1-6. Chassis Intrusion Alert**

# Battery Pack Removal

## Prerequisite:

Base Cover Removal

1. Detach the tape (A) securing the battery cable connection (Figure 1-7).

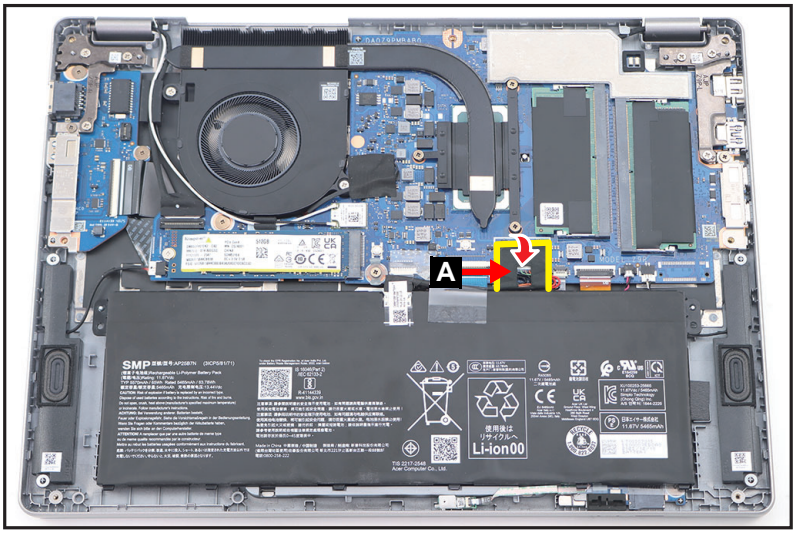



**Figure 1-7. Battery Pack Removal**

2. Disconnect the battery cable from the mainboard connector (B) (Figure 1-8).

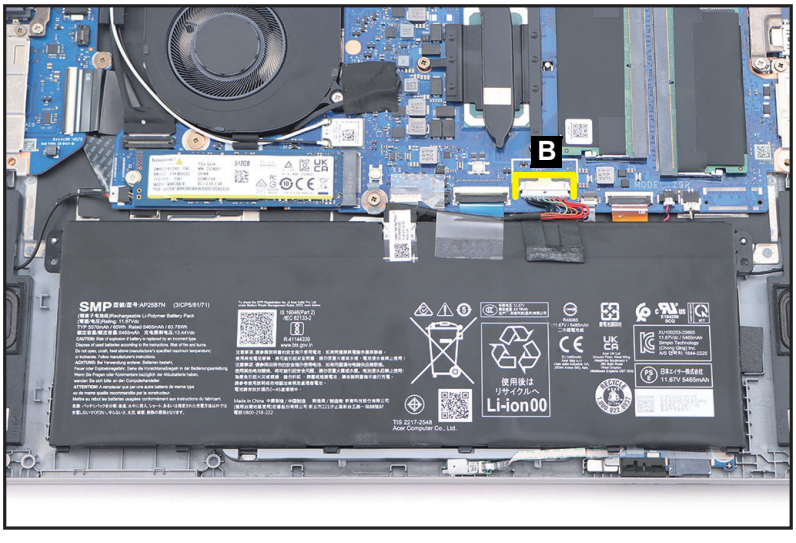



**Figure 1-8. Battery Pack Removal**

3. Lift to release the battery pack (C) from the guide pins (D) (Figure 1-9). Then remove the battery pack.

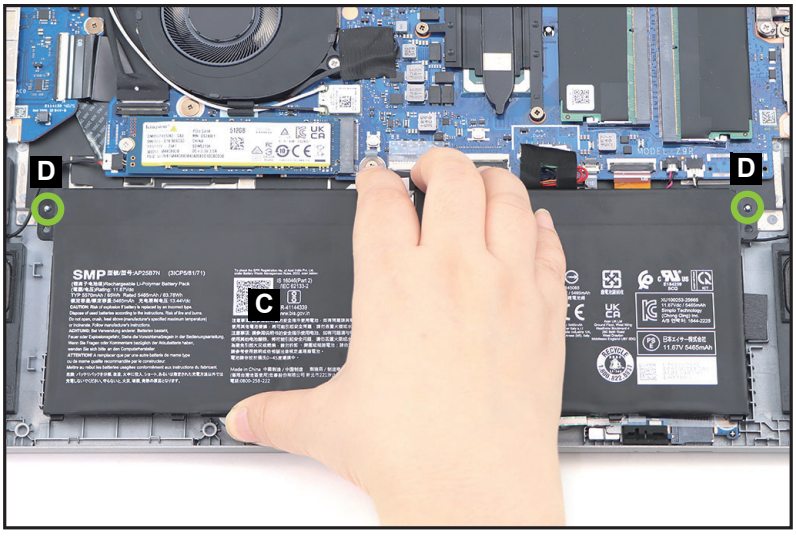



**Figure 1-9. Battery Pack Removal**

4. Detach the mylar (E) securing the battery cable in place (Figure 1-10).

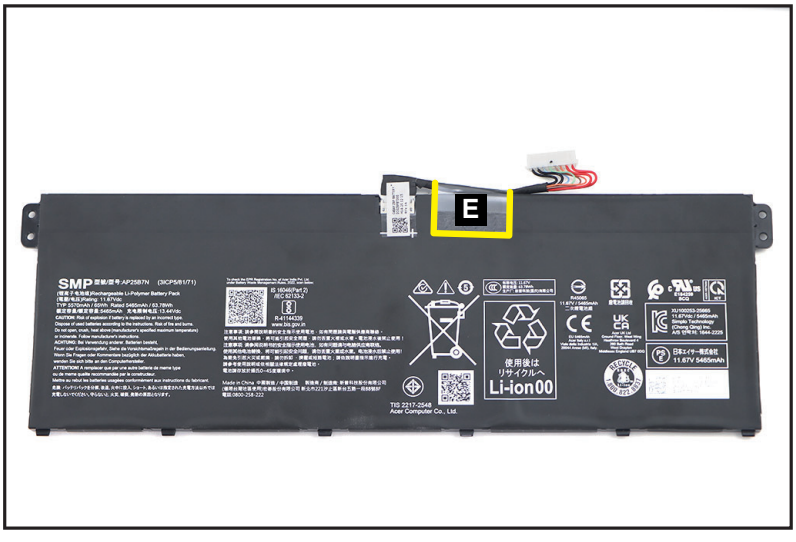



**Figure 1-10. Battery Pack Removal**

5. Detach the mylar (F) securing the battery cable connection. Then disconnect the battery cable from the battery connector (G) (Figure 1-11). Remove the battery cable.

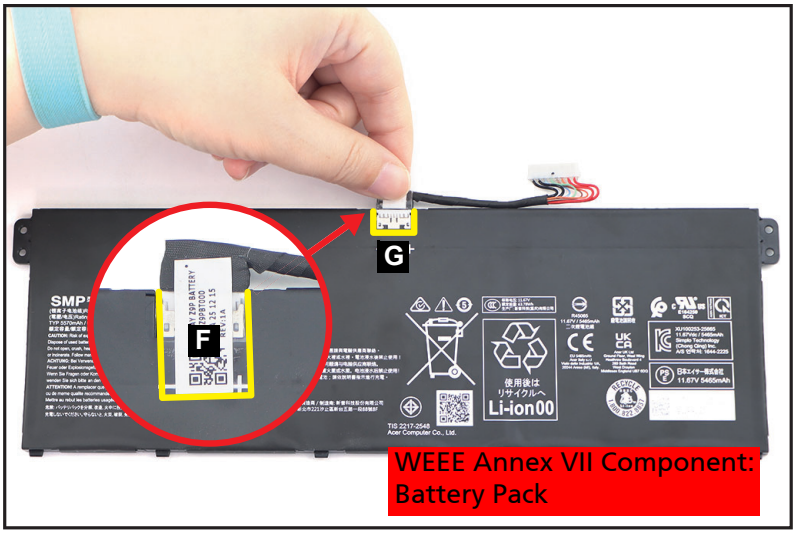



**Figure 1-11. Battery Pack Removal**

**IMPORTANT:**

Follow local regulations for battery disposal.

# SSD Module Removal

## Prerequisite:

Battery Pack Removal

1. Remove one (1) screw securing the SSD module (Figure 1-12).




**Figure 1-12. SSD Module Removal**

2. Disconnect the SSD module (A) from the mainboard connector (B) (Figure 1-13). Then remove the SSD module.

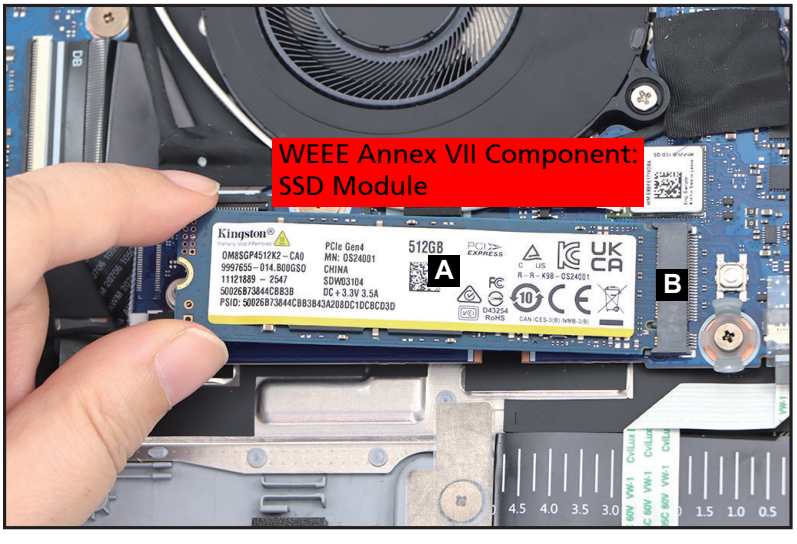



**Figure 1-13. SSD Module Removal**

# DIMM Modules Removal

## Prerequisite:

Battery Pack Removal

1. Push the DIMM module clips (A) outwards (Figure 1-14).

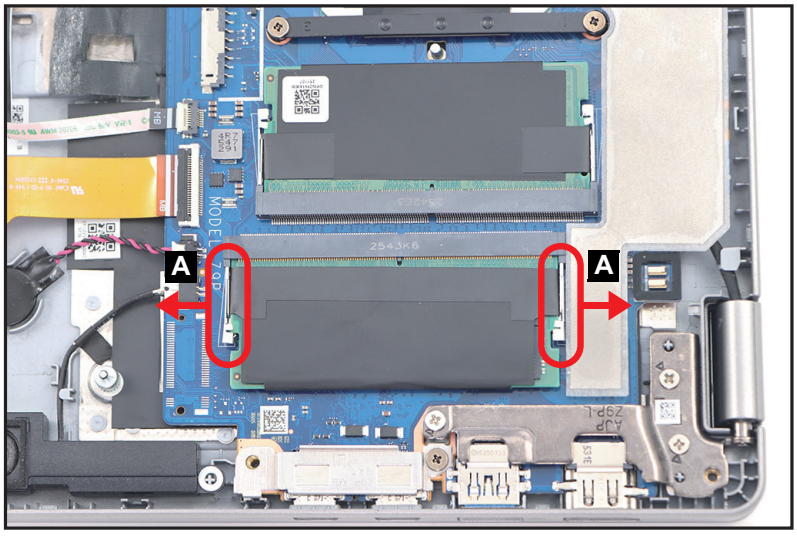



**Figure 1-14. DIMM Module Removal**

2. Disconnect the DIMM module (B) from the mainboard connector (C) (Figure 1-15). Then remove the DIMM module.

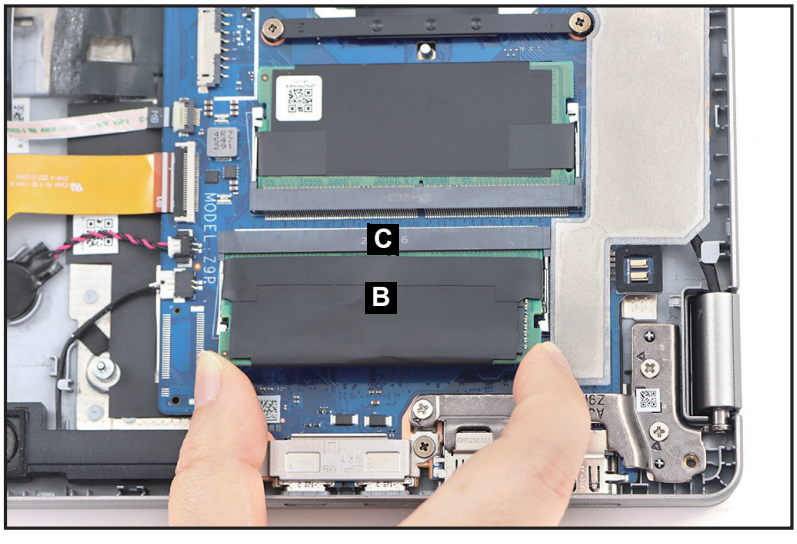



**Figure 1-15. DIMM Module Removal**

3. Repeat steps 1~2 to remove another DIMM module.
4. Detach the tabs (D) of the composite foil with thermal pad from the DIMM module as shown in Figure 1-16.

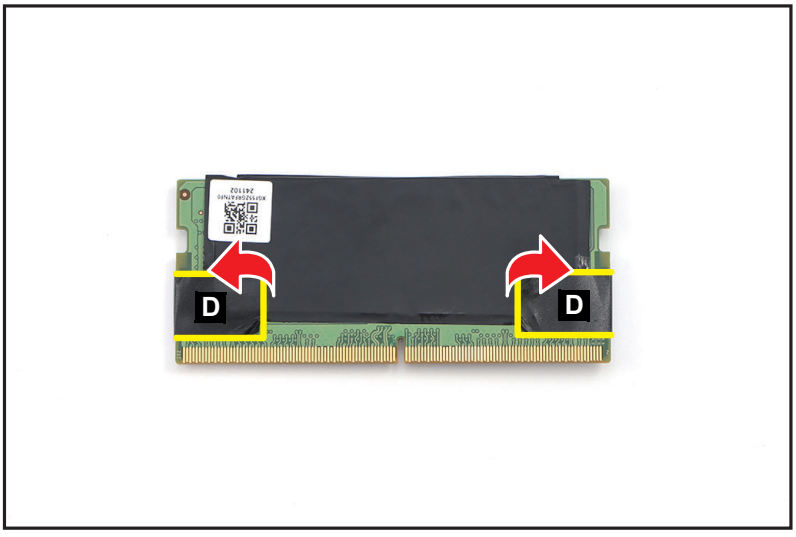



**Figure 1-16. DIMM Module Removal**

5. Peel off the composite foil with thermal pad (E) from the DIMM module (Figure 1-17).

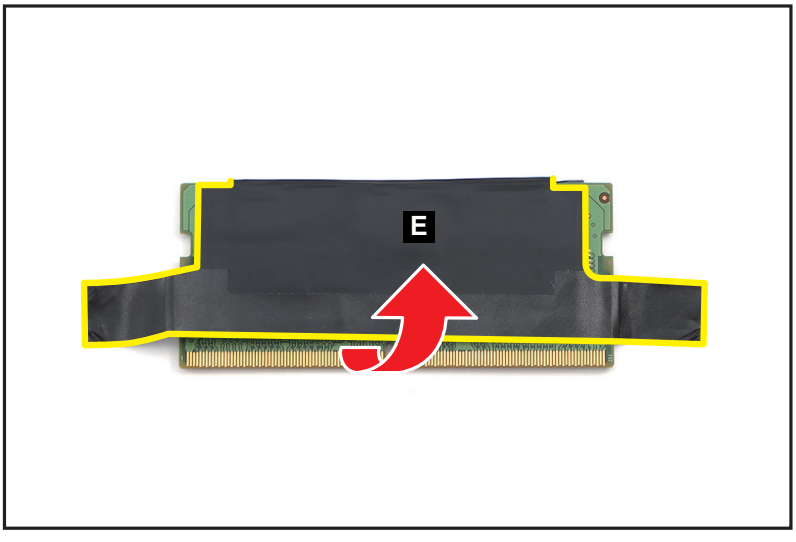



**Figure 1-17. DIMM Module Removal**

6. Detach the DIMM module from the adhesive graphite strip (marked with yellow dashed line) as shown in Figure 1-18.




**Figure 1-18. DIMM Module Removal**

7. Repeat steps 4~6 to remove the composite foil with thermal pad from another DIMM module.

# USB Board Removal

## Prerequisite:

Battery Pack Removal

1. Remove three (3) screws securing the LCD hinge (Figure 1-19).

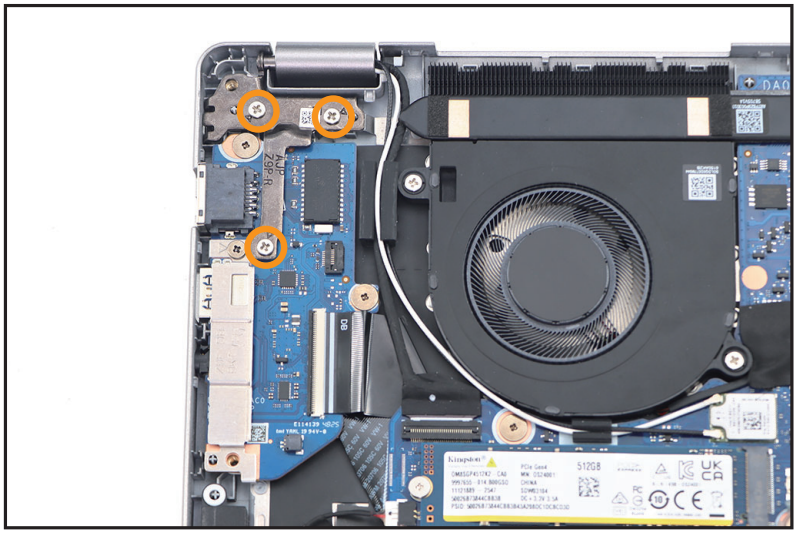


**Figure 1-19. USB Board Removal**

2. Lift the LCD hinge until it is fully extended (Figure 1-20).

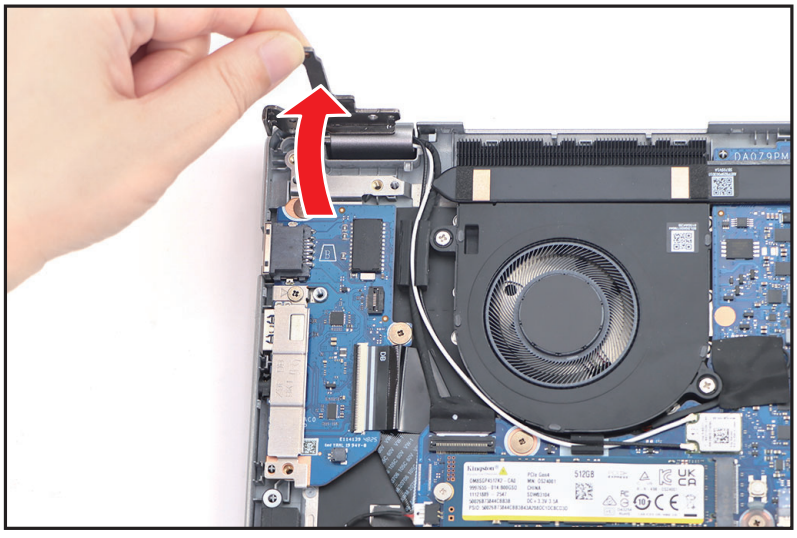


**Figure 1-20. USB Board Removal**

3. Remove one (1) screw securing the I/O bracket. Then disconnect the USB board FFC from the USB board connector (A) (Figure 1-21).

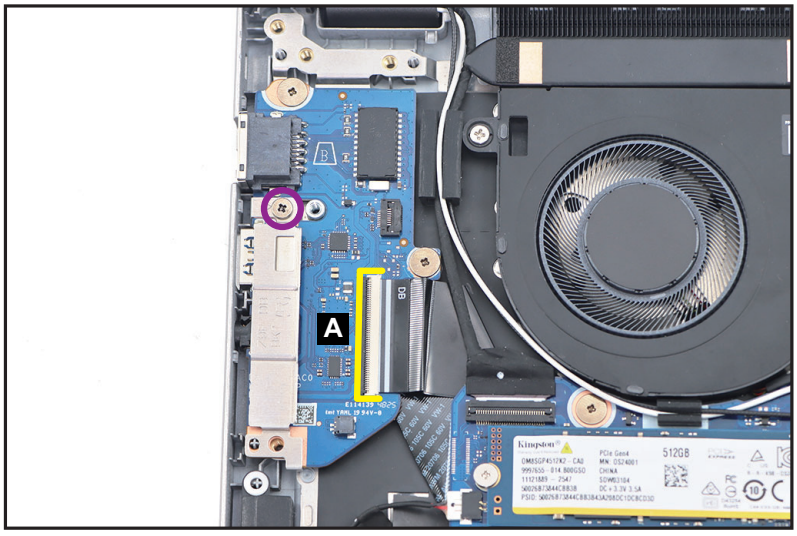



Figure 1-21. USB Board Removal

**⚠ CAUTION:**

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

4. Lift the I/O bracket (B) to release it from the guide pin (C) and guide stud (highlighted with the green frame) on the top assembly (Figure 1-22). Then remove the I/O bracket.

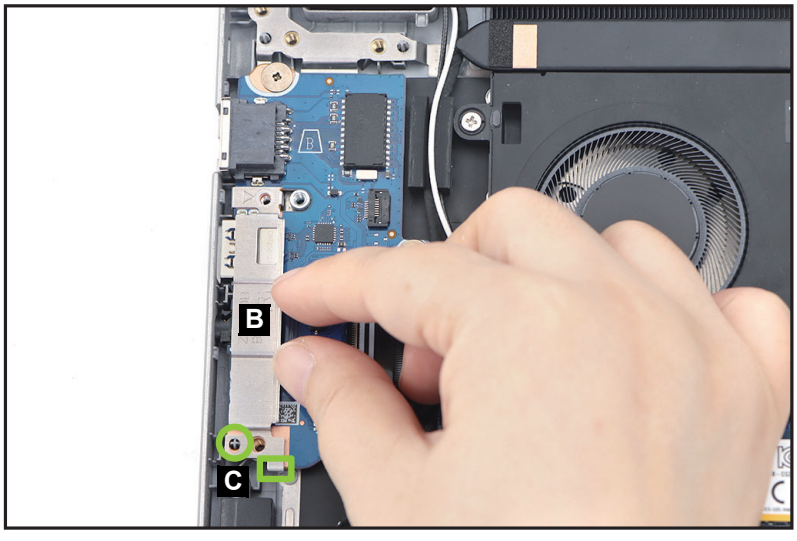



Figure 1-22. USB Board Removal

5. Remove two (2) screws securing the USB board (Figure 1-23).

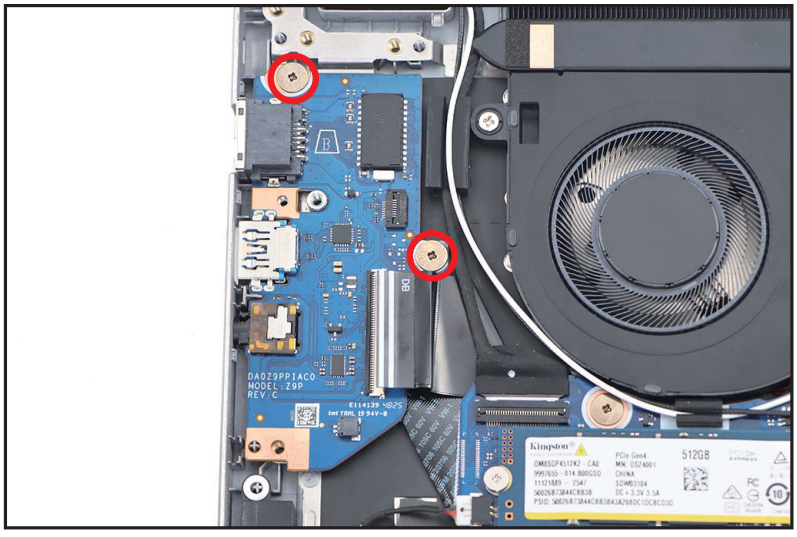


**Figure 1-23. USB Board Removal**

6. Release the USB board (D) from the I/O port slots and guide pin (E) on the top assembly (Figure 1-24). Then remove the USB board.

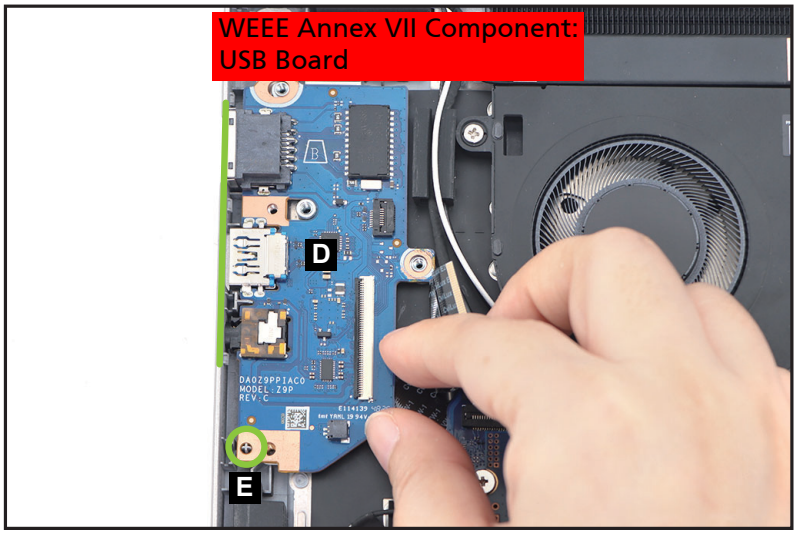



**Figure 1-24. USB Board Removal**

# LCD Module Removal

## Prerequisite:

Battery Pack Removal

1. Detach the absorber (A) from the mainboard (Figure 1-25).

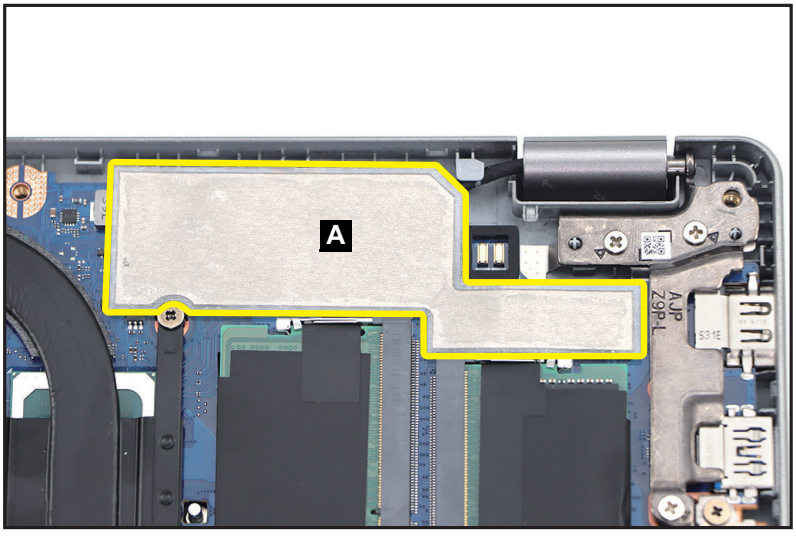



**Figure 1-25. LCD Module Removal**

2. Disconnect the LCD cable from the mainboard connector (B). Then unroute the cable from the cable guides as shown in Figure 1-26.

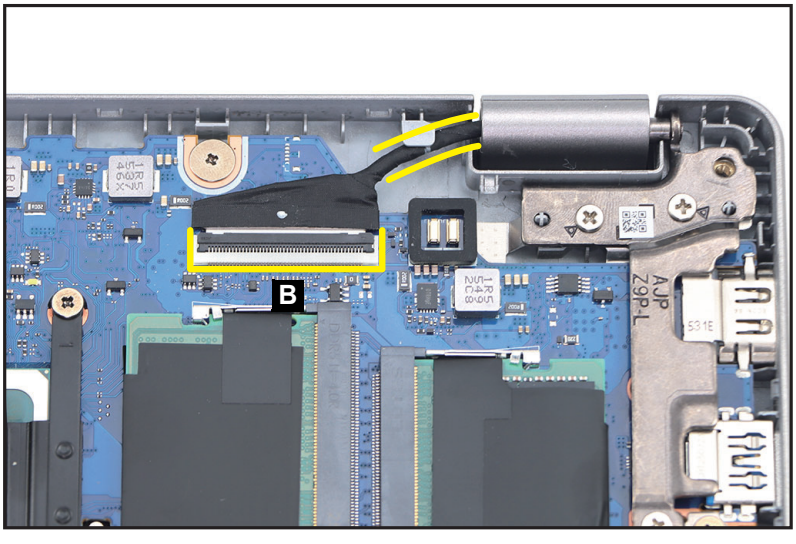



**Figure 1-26. LCD Module Removal**

3. Disconnect the WLAN antennas cables from the WLAN module connectors (C). Then unroute the antennas cables and release it from the cable routing rubber and cable guides as shown in Figure 1-27.

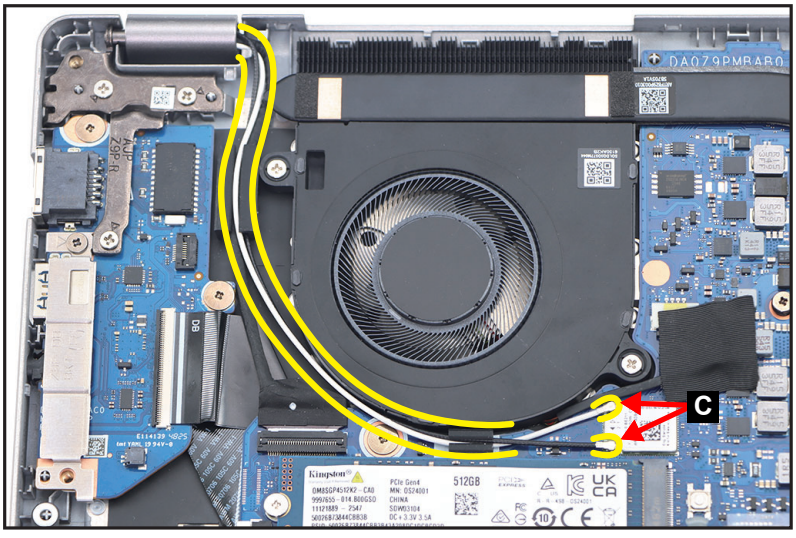



**Figure 1-27. LCD Module Removal**

4. Disconnect the camera HPD cable from the mainboard connector (D). Then unroute the camera HPD cable and release it from the heatsink fin and cable guides as shown in Figure 1-28.

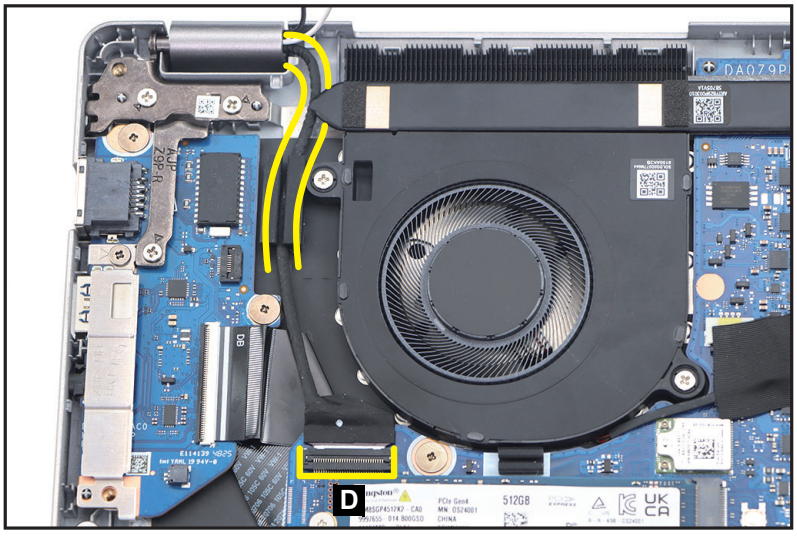



**Figure 1-28. LCD Module Removal**

5. Remove six (6) screws securing the LCD hinges (Figure 1-29).

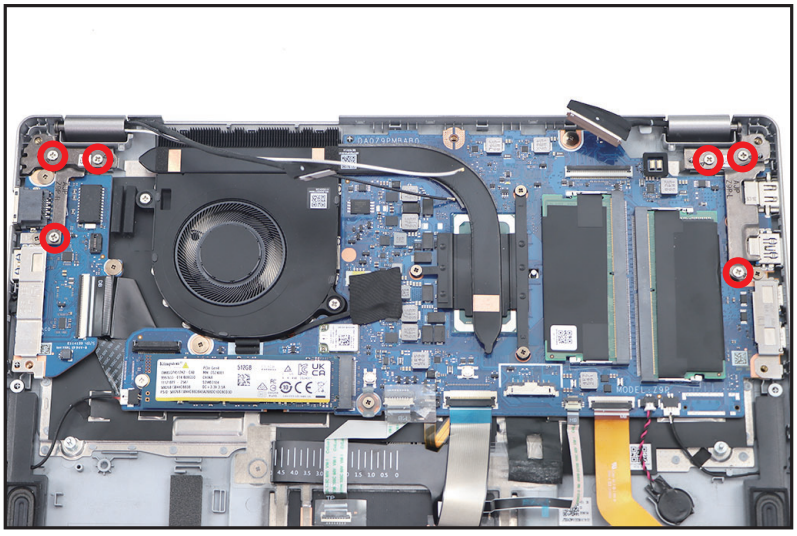


**Figure 1-29. LCD Module Removal**

6. Lift both LCD hinges until they are fully extended (Figure 1-30).

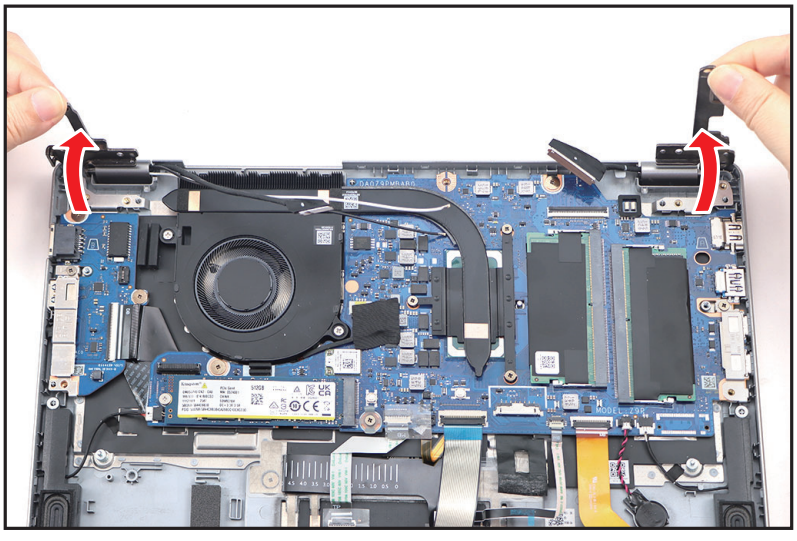


**Figure 1-30. LCD Module Removal**

7. Open the top assembly. Then remove the LCD module (E) away from the top assembly (Figure 1-31).

**⚠ CAUTION:**

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

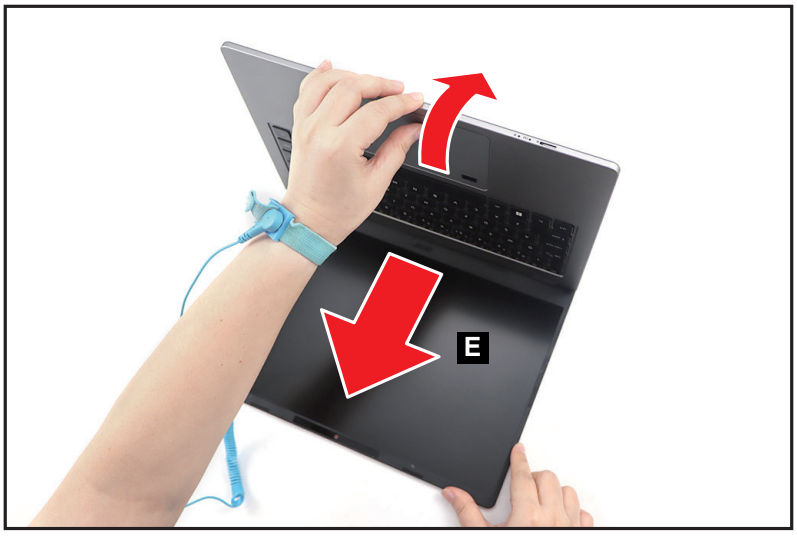



**Figure 1-31. LCD Module Removal**

# LED Board Removal

## Prerequisite:

Battery Pack Removal

1. Remove the rubber (A) from the LED board (Figure 1-32).

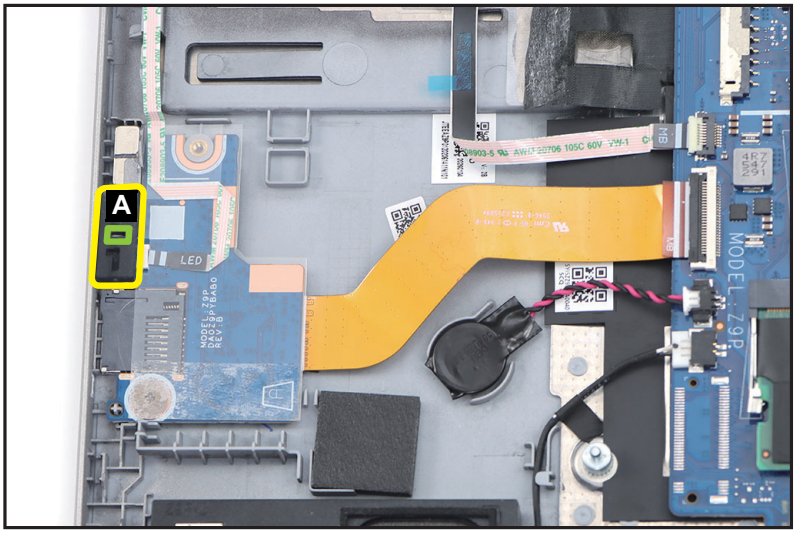



**Figure 1-32. LED Board Removal**

2. Detach the mylar (B) from the LED board (Figure 1-35).

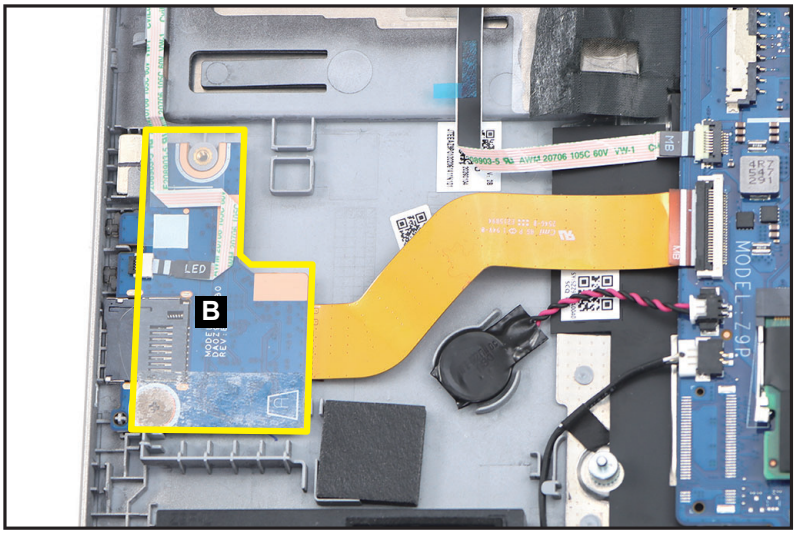



**Figure 1-33. LED Board Removal**

3. Remove one (1) screw securing the LED board (Figure 1-34).
4. Disconnect the LED board FPC from the mainboard connector (C) (Figure 1-34).
5. Disconnect the microphone FFC from the LED board connector (D) (Figure 1-34).

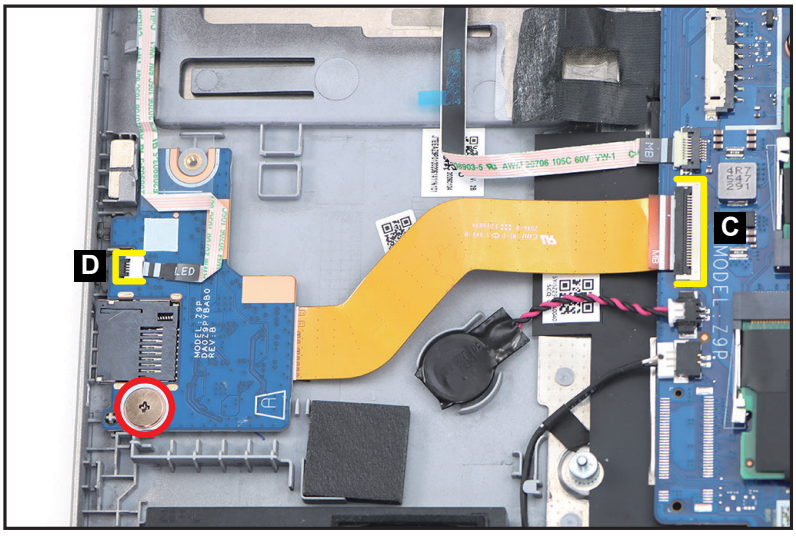



**Figure 1-34. LED Board Removal**

**⚠ CAUTION:**

LED board FPC (Flexible Printed Circuit) and microphone FFC (Flexible Flat Circuit) can be damaged if removed while the mainboard or LED board connector is locked.

6. Lift to release the LED board (E) from the guide pins (F) (Figure 1-35). Then remove the LED board.

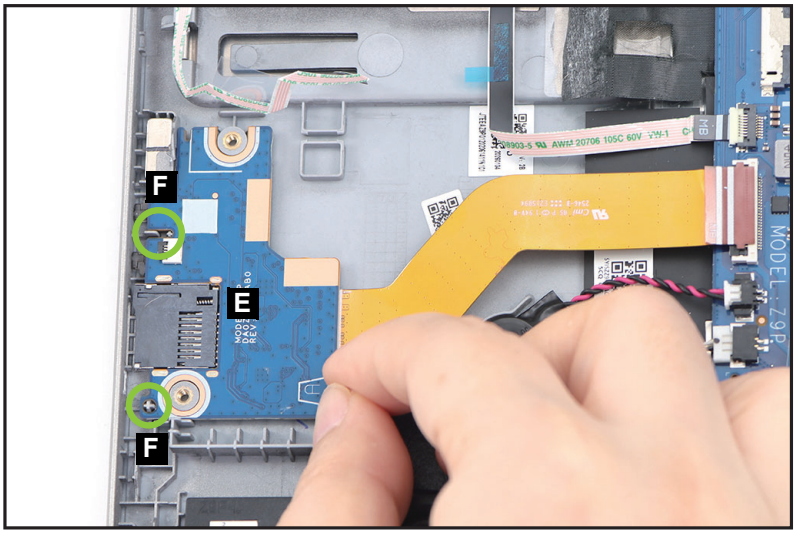



**Figure 1-35. LED Board Removal**

7. Disconnect the LED board FPC from the LED board connector (G) (Figure 1-36).

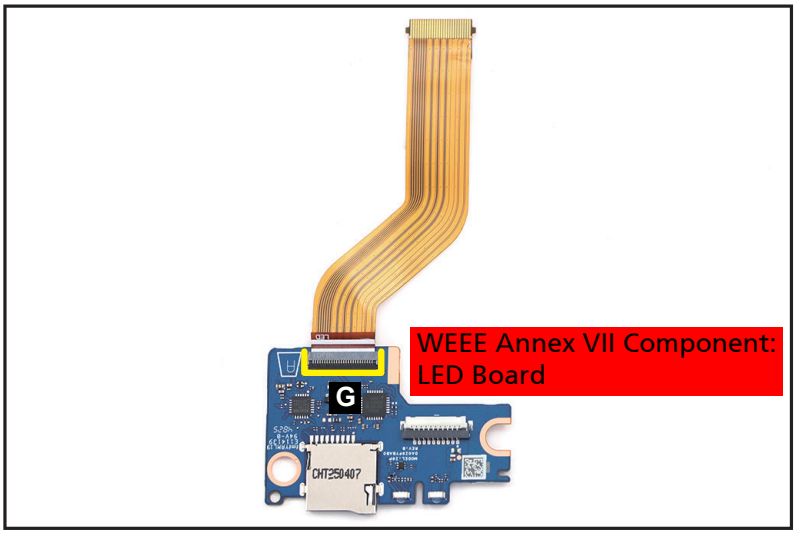



**Figure 1-36. LED Board Removal**

**⚠ CAUTION:**

LED board FPC (Flexible Printed Circuit) can be damaged if removed while the LED board connector is locked.

# Touchpad Module Removal

## Prerequisite:

Battery Pack Removal

1. Detach the mylars (A) securing the touchpad FFC, keyboard backlight FPC, and fingerprint FFC connections (Figure 1-37).

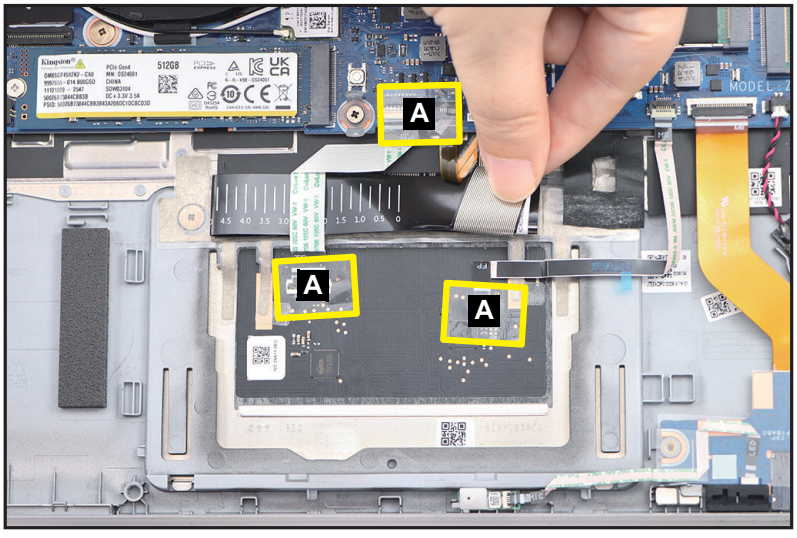



**Figure 1-37. Touchpad Module Removal**

2. Disconnect the touchpad FFC (B) from the touchpad module and mainboard connectors (Figure 1-38). Then remove the FFC.
3. Disconnect the fingerprint FFC (C) from the touchpad module and mainboard connectors (Figure 1-38). Then remove the FFC.

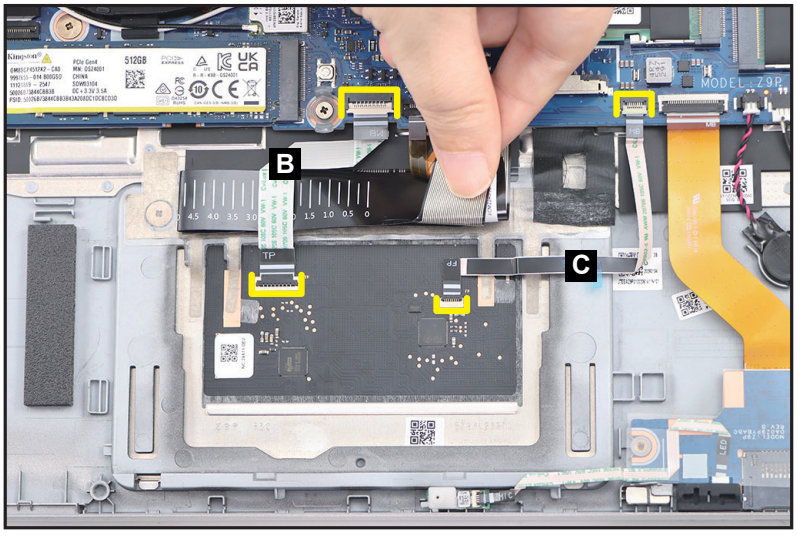



**Figure 1-38. Touchpad Module Removal**

**⚠ CAUTION:**

Touchpad FFC (Flexible Flat Circuit) and fingerprint FFC can be damaged if removed while the touchpad module and mainboard connectors are locked.

4. Slightly detach and lift the keyboard FPC. Then detach the conductive tape (D) from the touchpad module and top assembly (Figure 1-39).

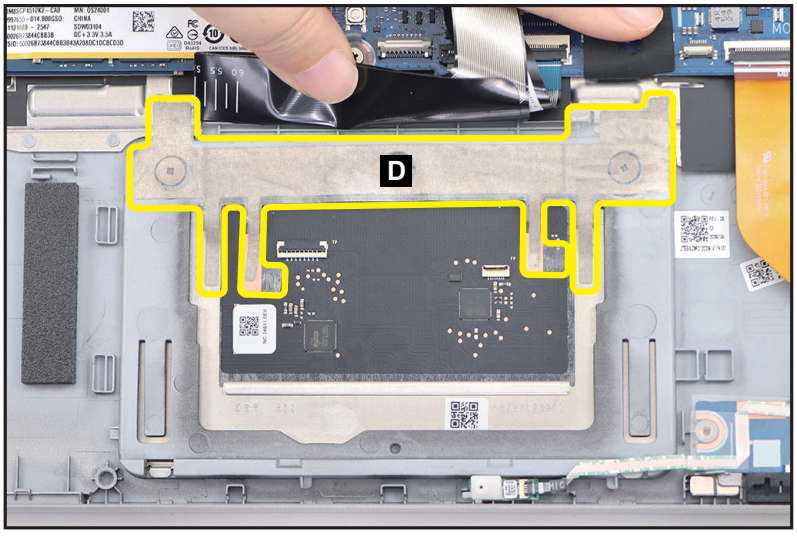



**Figure 1-39. Touchpad Module Removal**

5. Remove three (3) screws securing the touchpad module (Figure 1-40).

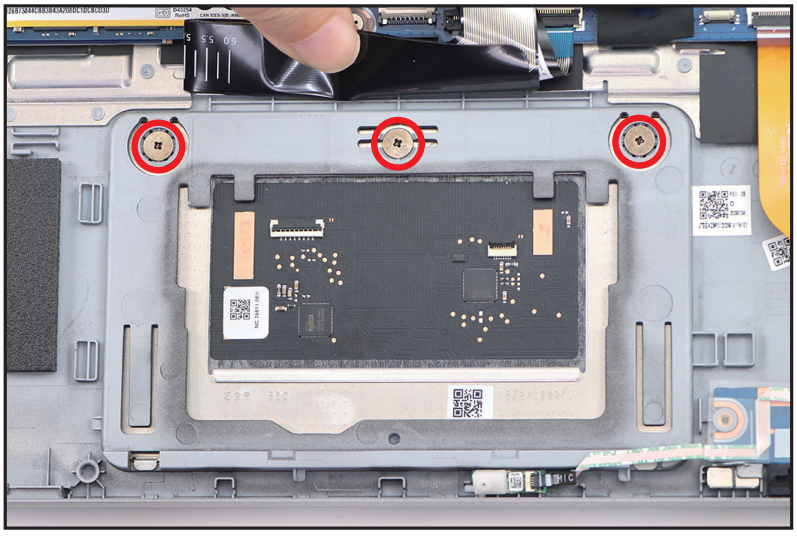


**Figure 1-40. Touchpad Module Removal**

6. Push the upper side of the touchpad module (E) to release it from the screw hole studs (F) (Figure 1-41).
7. Slide the touchpad module slightly to disengage it from the bottom latches (G) (Figure 1-41). Then remove the touchpad module from the top assembly.

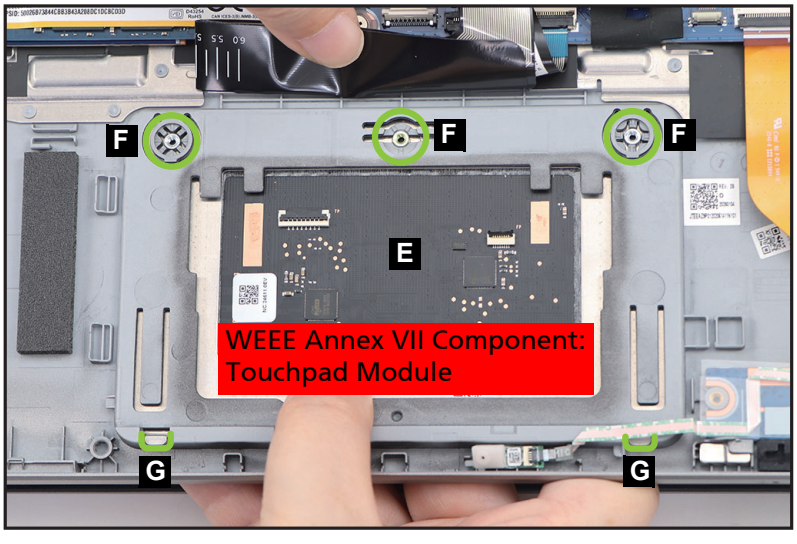



**Figure 1-41. Touchpad Module Removal**

# RTC Battery Removal

## Prerequisite:

Battery Pack Removal

1. Disconnect the RTC battery cable from the mainboard connector (A) (Figure 1-42).
2. Carefully pry to detach the adhesive tape underneath the RTC battery (B) (Figure 1-42). Then remove the RTC battery.

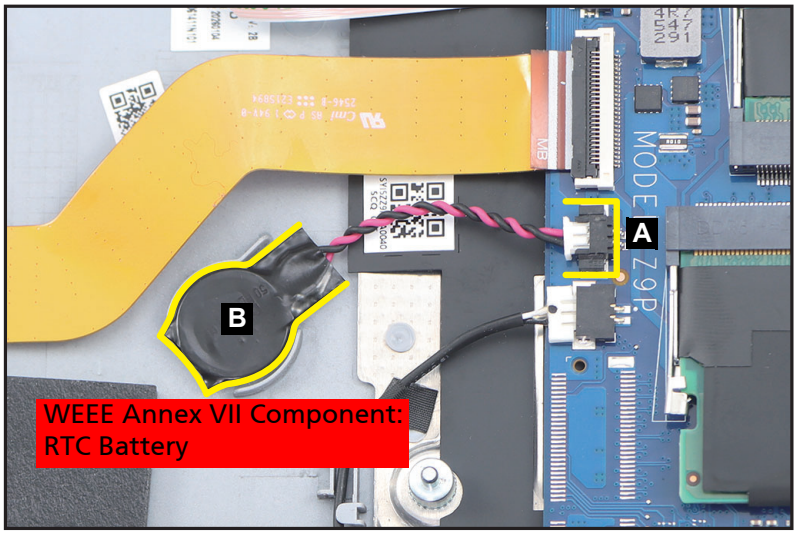



**Figure 1-42. RTC Battery Removal**

**IMPORTANT:**

Follow local regulations for battery disposal.

# Mainboard Removal

## Prerequisite:

Ensure that the **SSD Module**, **Fan Module**, **DIMM Modules**, **Heatsink**, **USB Board**, and **LCD Module** have been disassembled prior removing the mainboard.

1. Detach the mylar (A) securing the touchpad FCC and keyboard backlight FPC connections (Figure 1-43).
2. Detach the adhesive tape underneath the RTC battery (B) (Figure 1-43). Then remove the RTC battery from its compartment.

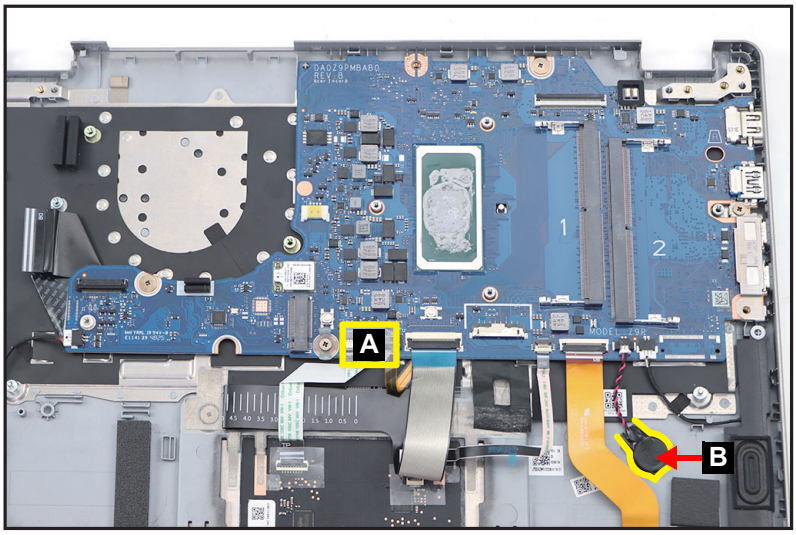



**Figure 1-43. Mainboard Removal**

3. Disconnect the right speaker cable from the mainboard connector (C) (Figure 1-44).
4. Disconnect the touchpad FFC from the mainboard connector (D) (Figure 1-44).
5. Disconnect the keyboard backlight FPC from the mainboard connector (E) (Figure 1-44)
6. Disconnect the keyboard FPC from the mainboard connector (F) (Figure 1-44).
7. Disconnect the fingerprint FFC from the mainboard connector (G) (Figure 1-44).
8. Disconnect the LED board FPC from the mainboard connector (H) (Figure 1-44).
9. Disconnect the left speaker cable from the mainboard connector (I) (Figure 1-44).

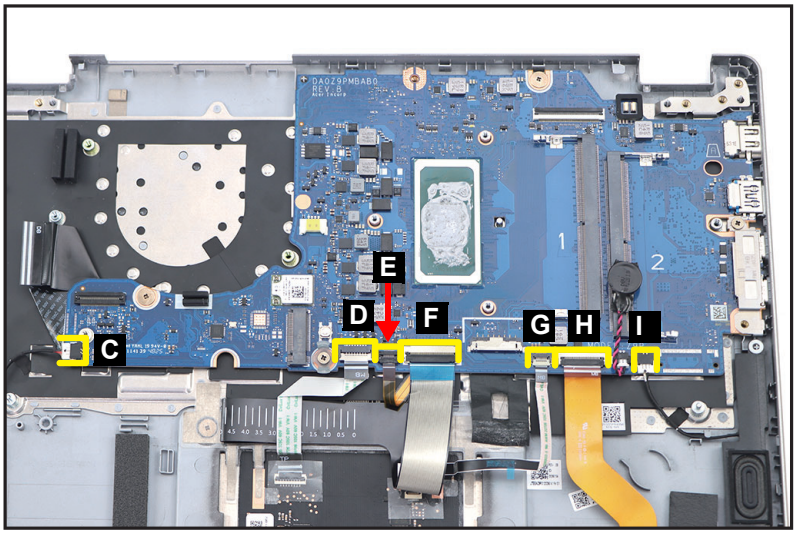



**Figure 1-44. Mainboard Removal**

**⚠ CAUTION:**

Touchpad FFC (Flexible Flat Circuit), keyboard backlight FPC (Flexible Printed Circuit), keyboard FPC, fingerprint FFC, and LED board FPC can be damaged if removed while the mainboard connectors are locked.

10. Remove one (1) screw securing the I/O bracket (Figure 1-45).

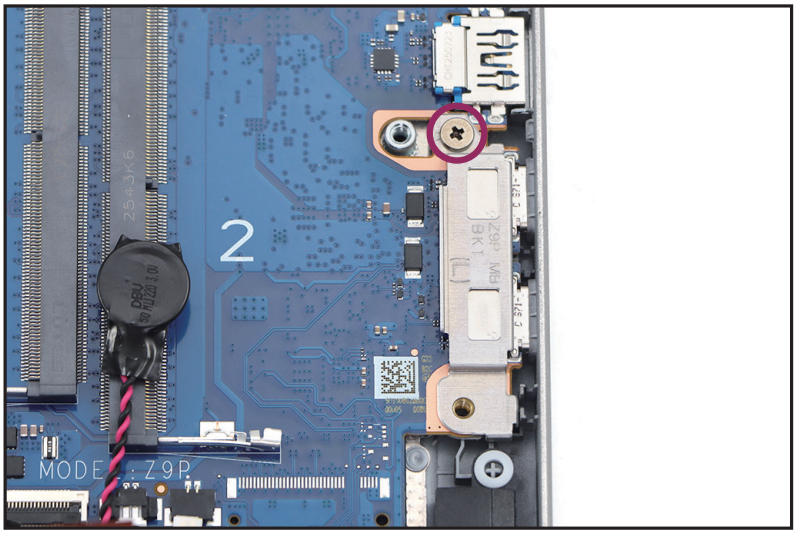



**Figure 1-45. Mainboard Removal**

11. Lift the I/O bracket (J) to release it from the guide stud (highlighted with the green frame) (Figure 1-46). Then remove the I/O bracket.

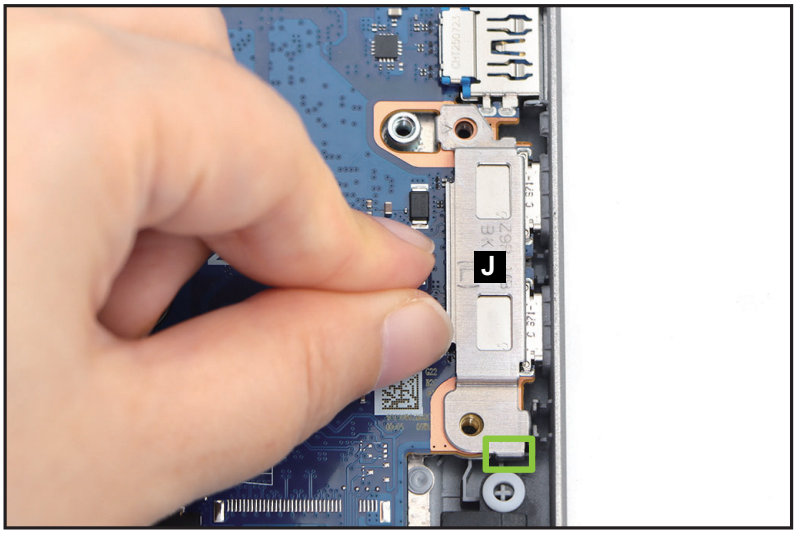



**Figure 1-46. Mainboard Removal**

12. Remove two (2) screws securing the mainboard and the system hook (Figure 1-47).

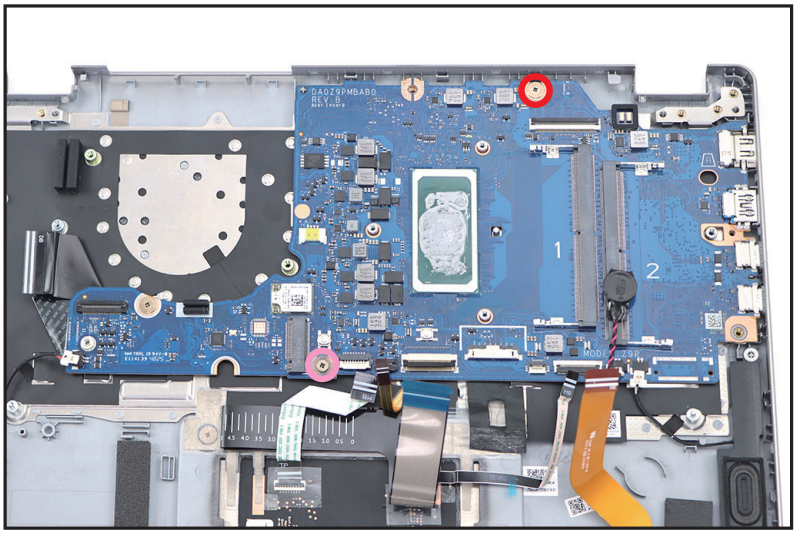


**Figure 1-47. Mainboard Removal**

13. Release the mainboard (K) from the I/O ports slots and guide pin (L) on the top assembly (Figure 1-48). Then remove the mainboard.

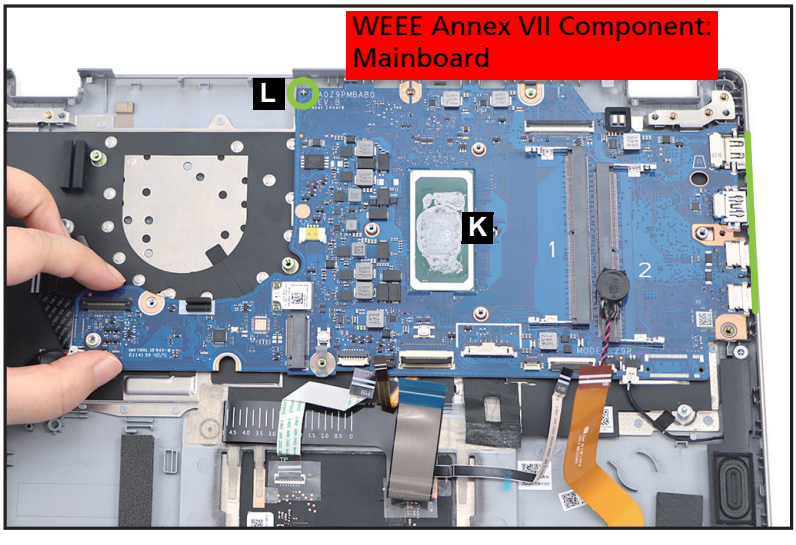



**Figure 1-48. Mainboard Removal**

14. Flip the mainboard. Then disconnect the other end of the USB board FFC from the mainboard connector (M) (Figure 1-49). Remove the FFC.

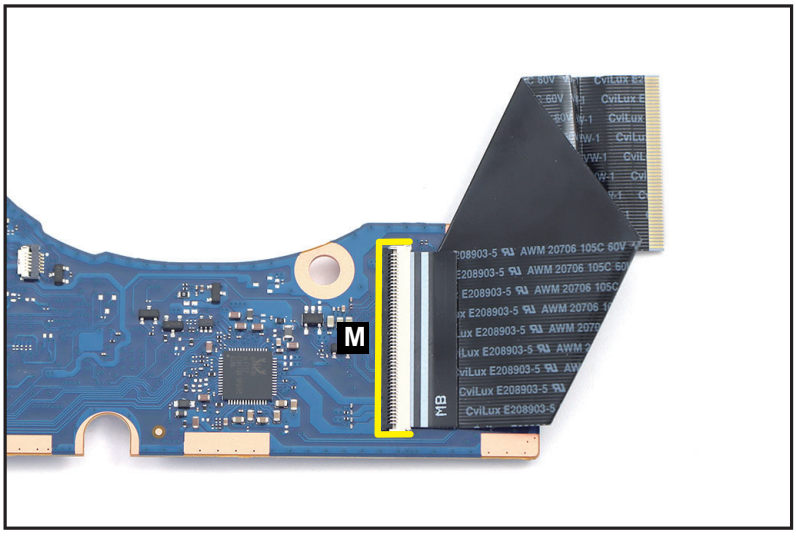



**Figure 1-49. Mainboard Removal**

**⚠ CAUTION:**

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

15. Remove the cable routing rubber (N) from the mainboard (Figure 1-50).
16. Push the bottom of the system hook (O) to release it from its slot. Then remove the system hook from the mainboard (Figure 1-50).

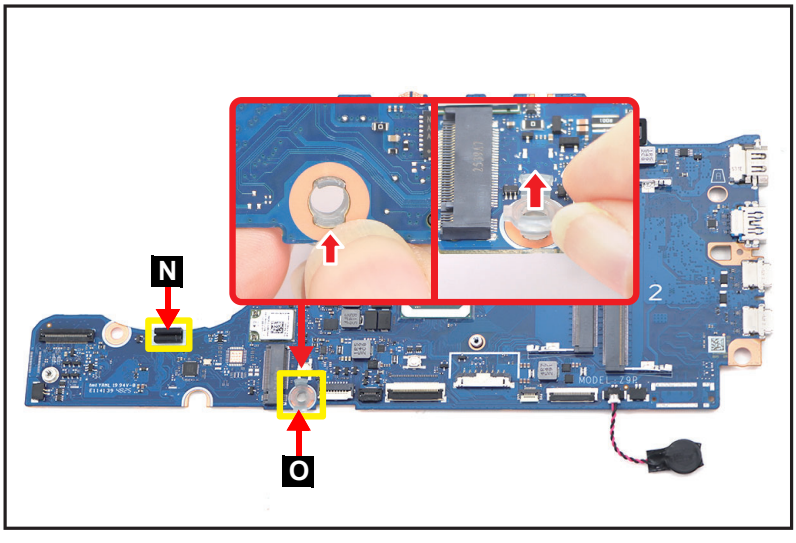



**Figure 1-50. Mainboard Removal**

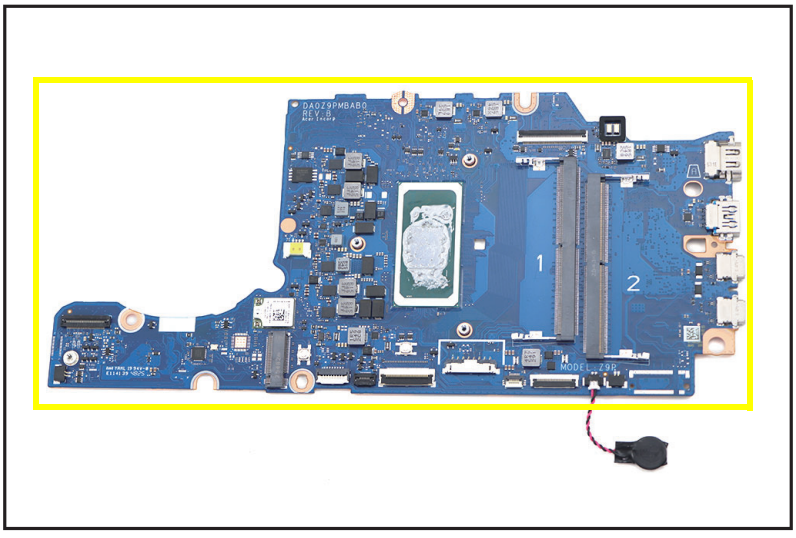



**Figure 1-51. Mainboard**

**IMPORTANT:**

Circuit boards >10 cm² have been highlighted with a yellow rectangle as shown in Figure 1-51. Remove the circuit board and follow local regulations for disposal.

# LCD Bezel Removal

## Prerequisite:

LCD Module Removal

1. Pry the LCD bezel from the upper side to release the latches (Figure 1-52).



**Figure 1-52. LCD Bezel Removal**

2. Continue prying along the left and right sides of the LCD bezel to disengage the latches as shown in Figure 1-53.



**Figure 1-53. LCD Bezel Removal**

3. Continue prying the bottom-right edge of the LCD bezel to disengage the latches (Figure 1-54).



**Figure 1-54. LCD Bezel Removal**

4. There is a tape behind the lower edge of the LCD bezel. Use a pry tool to slowly detach the LCD bezel away from the LCD panel as shown in Figure 1-55. While detaching the LCD bezel, ensure to follow the direction from right to left as shown in Figure 1-56.

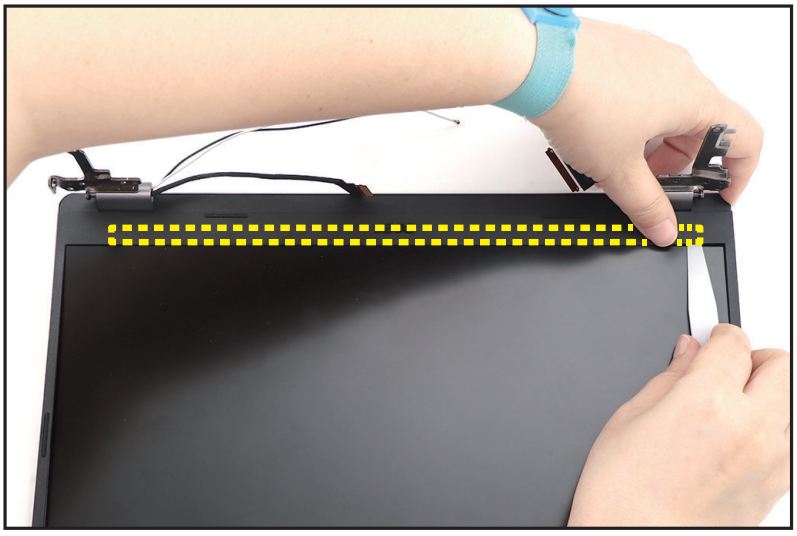


**Figure 1-55. LCD Bezel Removal**

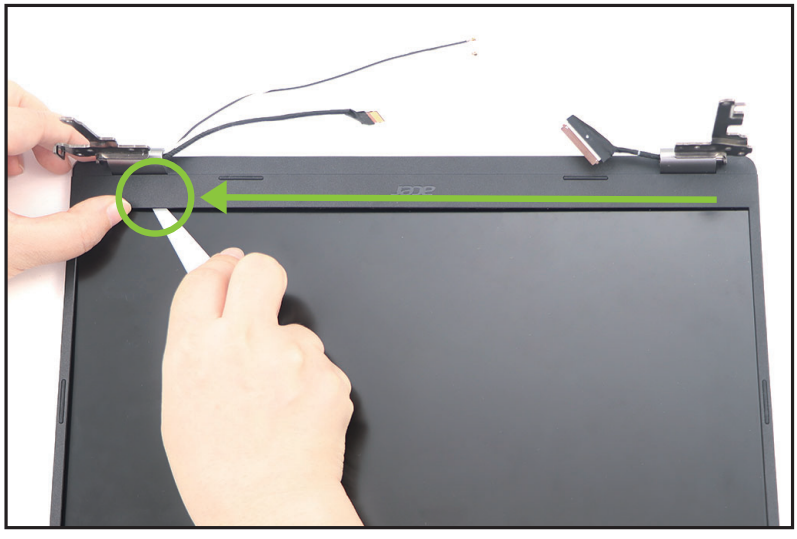


Figure 1-56. LCD Bezel Removal

5. Continue prying the bottom-left edge of the LCD bezel to disengage the latches. Then remove the LCD bezel from the LCD cover (Figure 1-57).

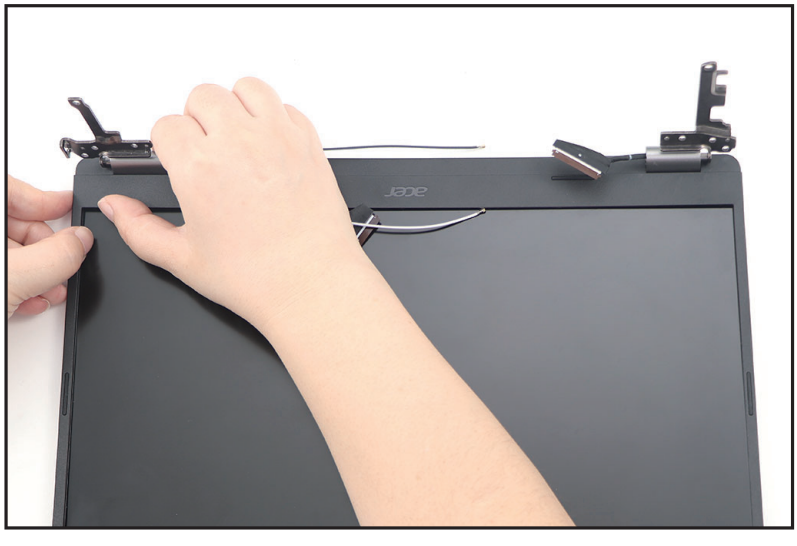


Figure 1-57. LCD Bezel Removal

# Hinge Caps Removal

## Prerequisite:

LCD Bezel Removal

1. Remove two (2) screws securing the LCD hinge caps (Figure 1-58).

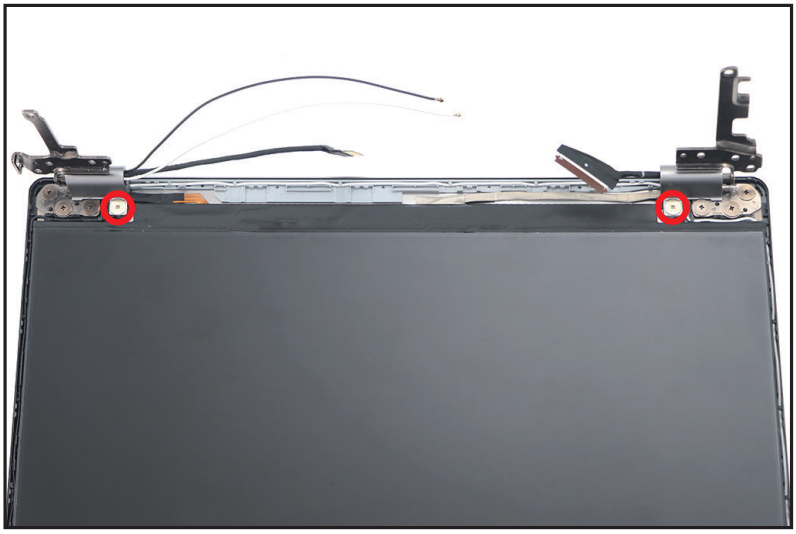


**Figure 1-58. Hinge Caps Removal**

2. Lift the right hinge cap (A) to release it from the LCD cover latch (Figure 1-59). Then remove the right hinge cap.

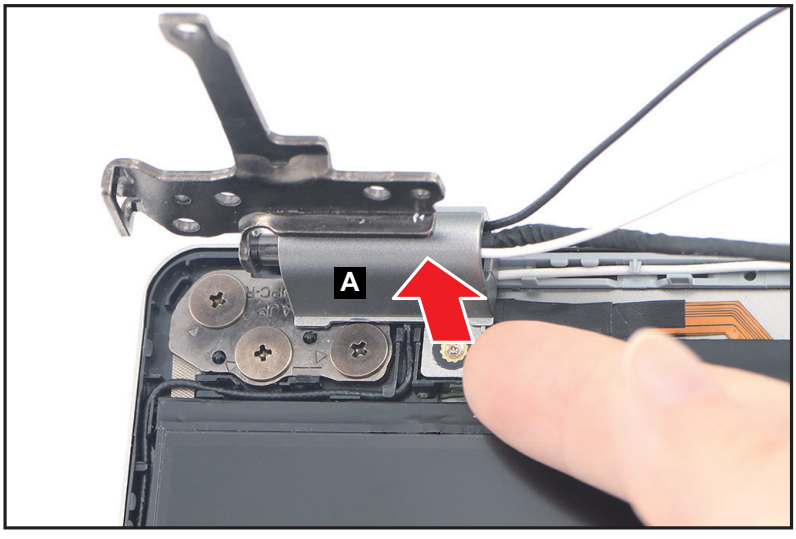



**Figure 1-59. Hinge Caps Removal**

3. Lift the left hinge cap (B) to release it from the LCD cover latch (Figure 1-60). Then remove the left hinge cap.

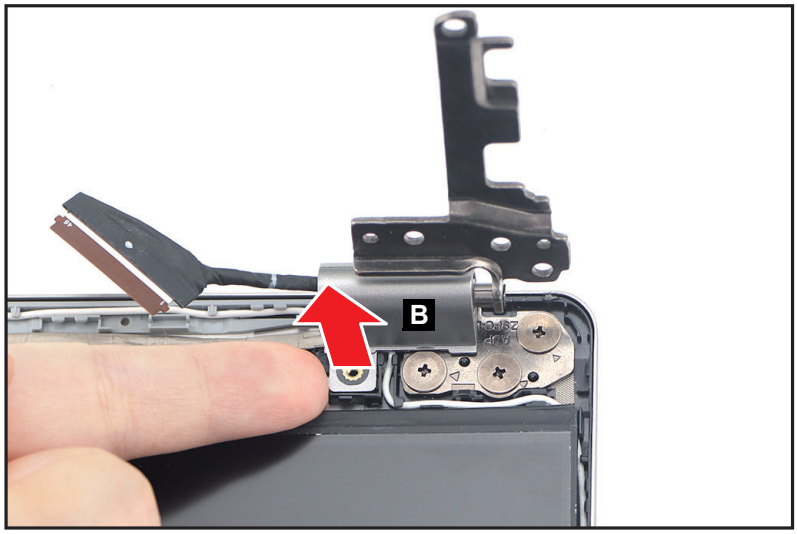



**Figure 1-60. Hinge Caps Removal**

# LCD Panel Removal

## Prerequisite:

Hinge Caps Removal

1. Unroute and release the LCD cable from the LCD hinge and the cable guides on the LCD cover as shown in Figure 1-61.

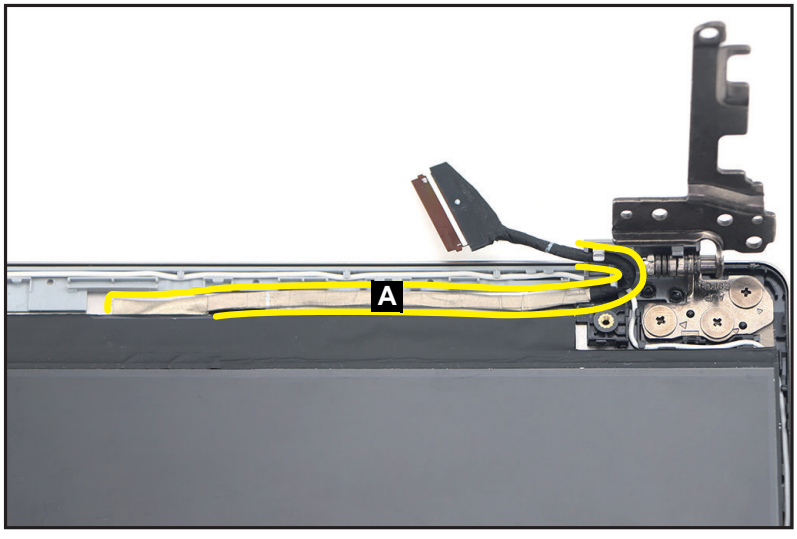



**Figure 1-61. LCD Panel Removal**

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 1-62).

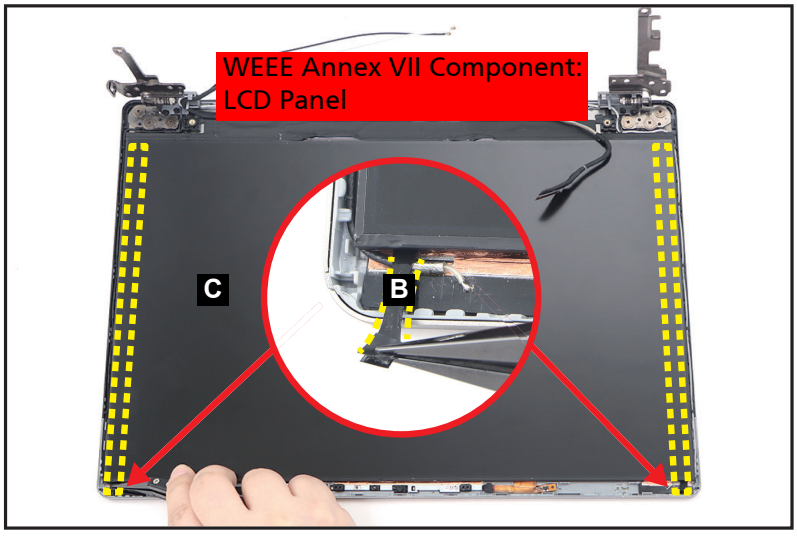



**Figure 1-62. LCD Panel Removal**

3. Carefully turn the LCD panel over so that the display panel is facing down on a flat surface. Then detach the mylar (D) securing the LCD cable to the LCD panel (Figure 1-63).

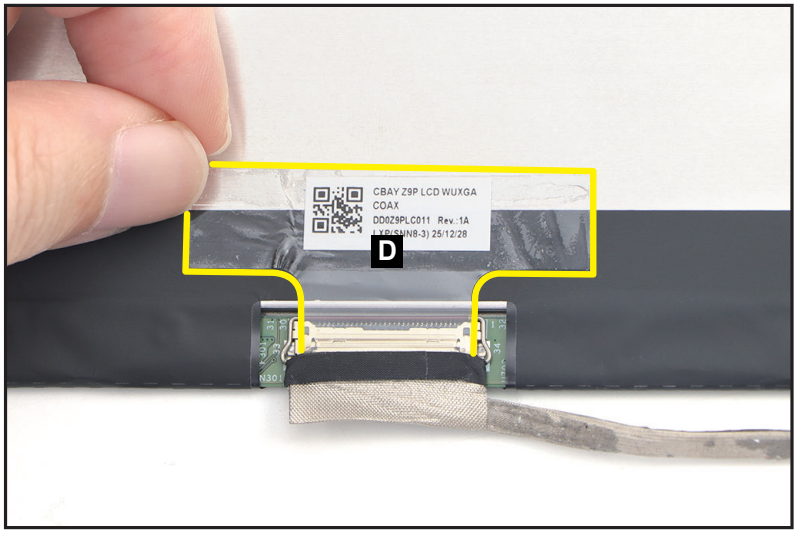



**Figure 1-63. LCD Panel Removal**

4. Lift the latch (E) securing the LCD cable (Figure 1-64).

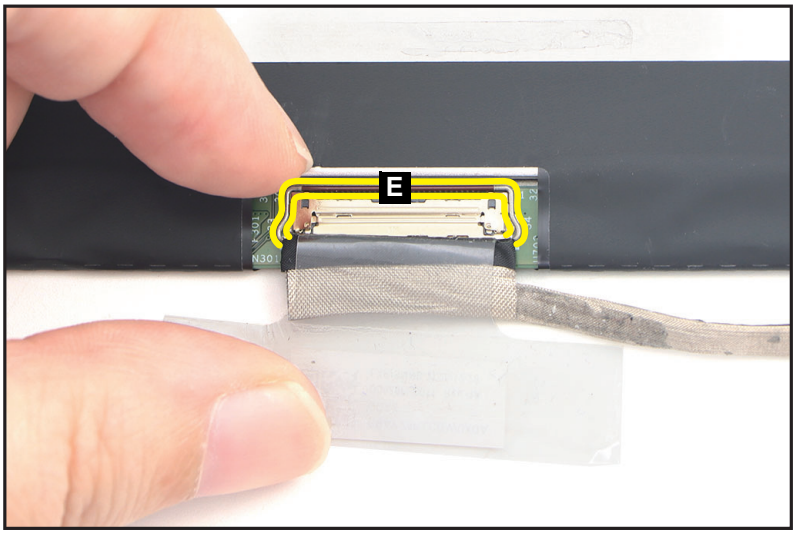



**Figure 1-64. LCD Panel Removal**

5. Disconnect the LCD cable from the LCD panel connector (F) (Figure 1-65). Then remove the LCD panel.

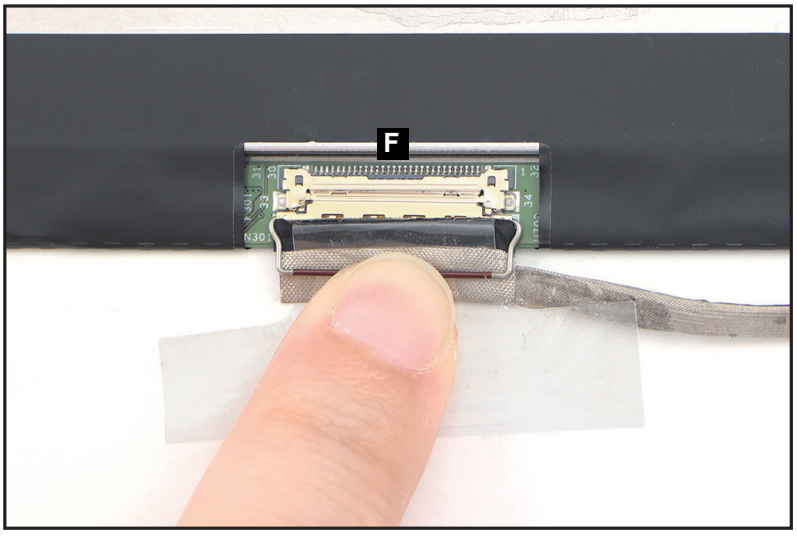



**Figure 1-65. LCD Panel Removal**

# Top Assembly Removal (Keyboard Removal)

## Prerequisite:

Ensure that the **Right Speaker**, **Left Speaker**, **LED Board**, **Touchpad Module**, **3rd Microphone Board**, and **Mainboard** have been disassembled prior removing the top assembly.

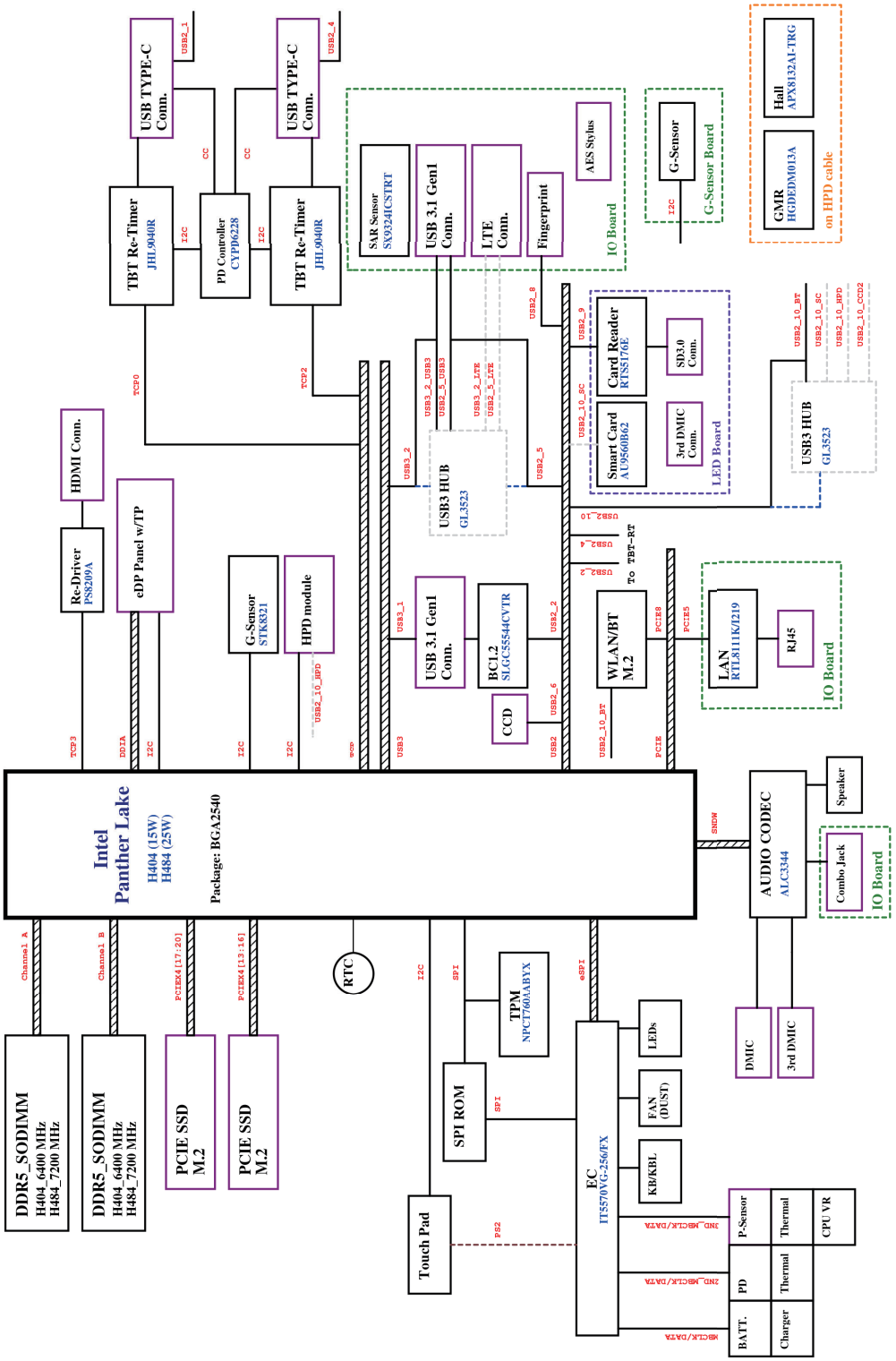
**NOTE:**

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 1-66. Top Assembly (Keyboard)**

# Electronic Boards Diagrams



# BIOS Setup Utility

This utility is a hardware configuration program built into a computer's BIOS (Basic Input/Output System).

The utility is pre-configured and optimized so most users do not need to run it. If configuration problems occur, the setup utility may need to be run. Refer to *Troubleshooting* when a problem arises.

To activate the utility, press ***F2*** during POST (power-on self-test) when prompted at the bottom of screen.

The default parameter of `F12 Boot Menu` is set to `Disabled`. To change the boot device without entering *BIOS Setup Utility*, set the parameter to `Enabled`.

To change the boot device without entering the BIOS SETUP, press ***F12*** during POST to enter the multi-boot menu.

## Navigating the BIOS Utility

Six menu options are:

- Information
- Main
- Advanced
- Security
- Boot
- Exit

To navigate on the non-touchscreen models through the following:

- Menu or item- use the up and down arrow keys
- Expand selected item- press **Enter** or right arrow key.
- To switch item status or change the value of a parameter- press **Enter** or right arrow key.
- Exit - Press ***Esc***
- Load default settings - press ***F9***.
- Save changes and exit BIOS Setup Utility - press ***F10***.

To navigate on the touchscreen panel models through the following:

- Menu - click or tab on the option with the fingertip
- Item - scroll through the screen by moving one finger in a vertical direction or swiping two fingers up-and-down
- Change parameter value - use the on-screen keyboard or tab on the option.

**NOTE:**

Parameter values can be changed if enclosed in square brackets open the DIMM door open the DIMM door[ ]. Navigation keys appear at the bottom of the screen. Read parameter help carefully when making changes to parameter values. Parameter help is found in the Item Specific Help area of the screen.

**IMPORTANT:**

Be careful when changing any settings in the BIOS. Incorrect settings can cause your PC to malfunction or crash. Please make sure all important data is backed up before changing anything in the BIOS.

**NOTE:**

System information is subject to specific models.

# BIOS

The following is a description of the tabs found on the InsydeH20 *BIOS Setup Utility* screen:

**NOTE:**

The screens provided are for reference only. Actual values may differ by model.

## Information

The Information tab shows a summary of computer hardware information.

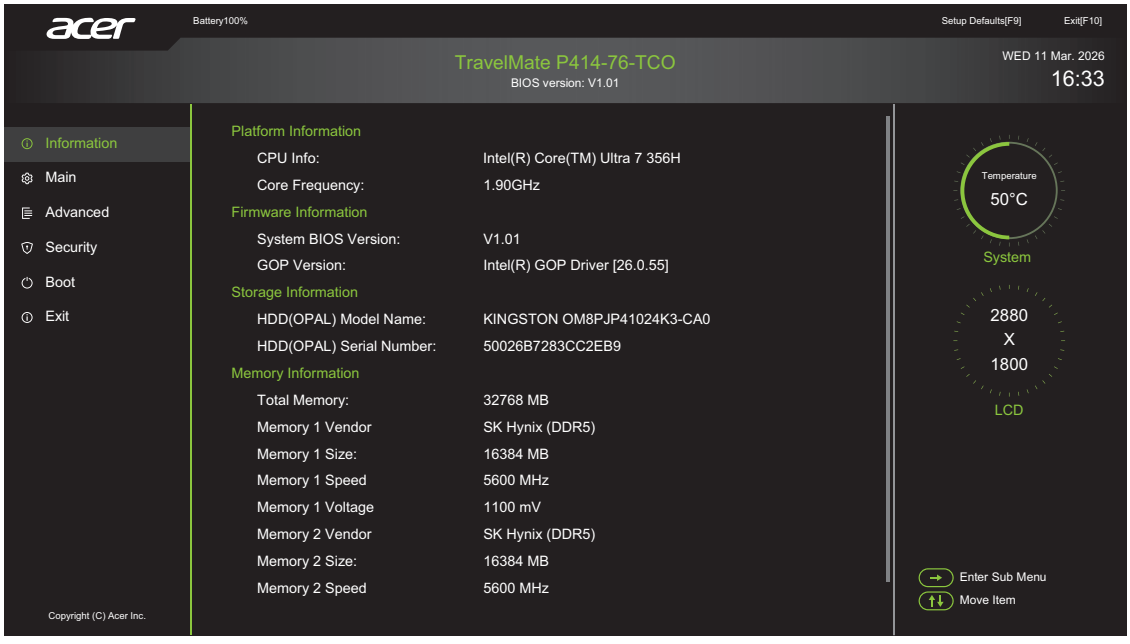



**Figure 1-67. BIOS Information (1 of 2)**




**Figure 1-68. BIOS Information (2 of 2)**

Table 1-1 describes the parameters shown in Figure 1-67 and Figure 1-68.

**Table 1-1. BIOS Information**

| Parameter | Description |
|---|---|
| CPU Info | CPU (central processing unit) type and speed of the system |
| Core Frequency | CPU core frequency |
| System BIOS Version | System BIOS version |
| GOP Version | GOP (graphics output protocol) firmware version of the system |
| HDD(OPAL) Model Name | Model name of HDD (hard disk drive) installed on the primary IDE master |
| HDD(OPAL) Serial Number | Serial number of HDD installed on the primary IDE master |
| Total Memory | Total memory installed |
| Memory Vendor | Manufacturer of the installed memory |
| Memory Size | Size of the installed memory |
| Memory Speed | Configured speed of the installed memory |
| Memory Voltage | Voltage of the installed memory |
| Serial Number | Serial number of the unit |
| Asset Tag Number | Asset tag number of the system |
| Ownership Tag | Ownership tag of the system |

Table 1-1. BIOS Information (Continued)

| Parameter | Description |
|---|---|
| Product Name | Product name of the system |
| Manufacturer Name | Manufacturer of the system |
| UUID | Universally Unique Identifier |
| LAN MAC Address | LAN MAC address of the system |
| Manufacture Date | Battery manufacture date |
| Battery Temperature | Battery current temperature |
| Cycle Count | Number of times your device has used the battery capacity |

# Main

The Main tab allows the user to set system time and date, enable or disable boot option and enable or disable recovery.




**Figure 1-69. BIOS Main**




**Figure 1-70. BIOS Main (All Options - Press Ctrl +S keys)**




**Figure 1-71. BIOS Main (All Options - Press Ctrl +S keys & Press Ctrl +D keys)**

Table 1-2 describes the parameters shown in Figure 1-69, Figure 1-70, and Figure 1-71.

**Table 1-2. BIOS Main**

| Parameter | Description | Format/Option |
|---|---|---|
| System Time | BIOS system time in 24-hour format | Format: HH:MM:SS (hour:minute:second) |
| System Date | BIOS system date | Format MM/DD/YYYY (month/day/year) |
| Network Boot | Option to boot system from LAN (local area network) | Option: Enabled or Disabled |
| F12 Boot Menu | Option to use boot menu during POST | Option: Enabled or Disabled |
| VMD Controller (hidden option) | Option to set VMD controller | Option: Enabled or Disabled |
| Wake on LAN | Option to use Wake-on-LAN feature | Option: Enabled or Disabled |
| USB Wake Support | Option to enable/disable support wake from USB device | Option: Enabled or Disabled |
| Function key behavior | Option to specify the *F1* to *F12* key behavior | Option: Function Key or Media Key |
| Wake on USB while lid closed | Option to enable/disable the USB devices can wake the system, even if the lid is closed | Option: Enabled or Disabled |

Table 1-2. BIOS Main (Continued)

| Parameter | Description | Format/Option |
|---|---|---|
| D2D Recovery | Option to use D2D Recovery feature | Option: Enabled or Disabled |
| Keyboard backlight timeout | Option to enable/disable the keyboard backlight timeout function | Option: Enabled or Disabled |
| Fast Boot | Option to enable/disable Fast boot | Option: Enabled or Disabled |
| Customization Key (hidden option) | Keyboard type status | |
| Display Language | Select the display language | |
| Keyboard (hidden option) | Option to switch HID I2C and PS2 interface | Option: HID I2C or PS2 |

**NOTE:**

To show the hidden options:

- Press ***Ctrl*** +**S** keys to show the “VMD Controller” option.
- Press ***Ctrl*** +**D** keys to show the “Customization Key” and “Keyboard” options.

# Advanced

The Advanced tab allows users to set VTX/VTD function switch configurations and other advanced setting.

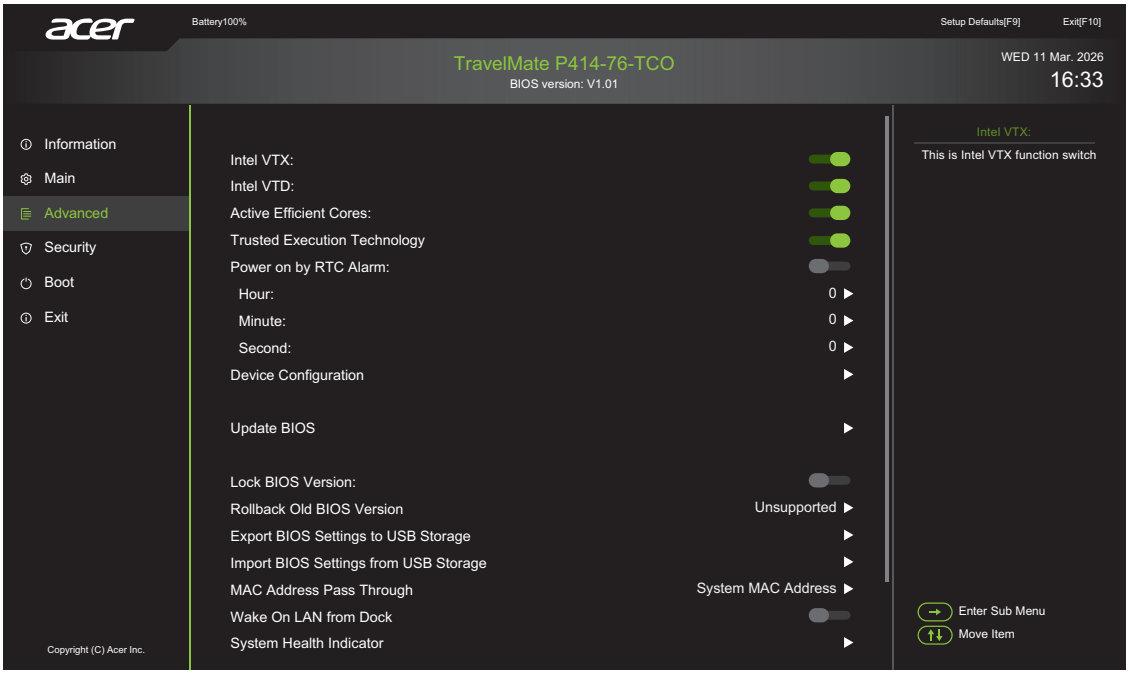



**Figure 1-72. BIOS Advanced**

Table 1-3 describes the parameters shown in Figure 1-72.

**Table 1-3. BIOS Advanced**

| Parameter | Description | Option |
|---|---|---|
| Intel VTX | Option to use Intel VTX function switch | Enabled or Disabled |
| Intel VTD | Option to use Intel VTD function switch | Enabled or Disabled |
| Active Efficient Cores | Option to use efficiency cores feature | Enabled or Disabled |
| Trusted Execution Technology | Option to use Trusted Execution Technology feature | Enabled or Disabled |
| Power on system by RTC Alarm | Option to enable/disable the RTC wake from S3/S4/S5 function | Enabled or Disabled |
| Device Configuration | Option to enable/disable the device or function | N/A |
| Update BIOS | Option to update BIOS via USB storage | N/A |

Table 1-3. BIOS Advanced (Continued)

| Parameter | Description | Option |
|---|---|---|
| Lock BIOS Version | Option to enable/disable the Lock BIOS Version function. If the setting is set to Enabled, the system cannot update/rollback the BIOS, and the BIOS version is fixed. | Enabled or Disabled |
| Rollback Old BIOS Version | Option to enable/disable the Rollback Old BIOS Version function. If the setting is set to Supported, the system can rollback the BIOS to its older version. | Supported or Unsupported |
| Export BIOS Settings to USB Storage | Option to save the current BIOS settings to the USB storage.<br>To perform this action: The system will display the available USB storage for users to save the settings file. Users will also have options either to go up or enter the directory.<br>If Yes is selected, the system will save the current BIOS settings as a file, and exit the dialog box. | N/A |
| Import BIOS Settings from USB Storage | Option to restore the BIOS settings from the USB storage. Only profile with same project name can be imported. Otherwise, a warning message will appear on the screen.<br>To perform this action: The system will display the available USB storage for users to select the settings file location. Once selected, it displays all files in the device and allow users to choose the intended file (only supported file can be loaded), and users will have options either to go up or enter the directory.<br>If Yes is selected, the system will load the file into BIOS, then exit the dialog box. | N/A |
| MAC Address Pass Through | Option to enable/disable the MAC address pass through function. If the setting is set to Enabled, it will clone system MAC address to Dock. | N/A |
| Wake On LAN from Dock | Option to enable/disable the WOL from Dock function. If the setting is set to Enabled, it will allow the WOL event triggered from Dock to wake the system. | Enabled or Disabled |
| System Health Indicator | When an abnormality is detected, the system health indicator will flash the indicator to immediately notify the user and remind the user to properly check the system. | N/A |

# Security

The Security tab shows parameters that safeguard and protect the computer from unauthorized use.

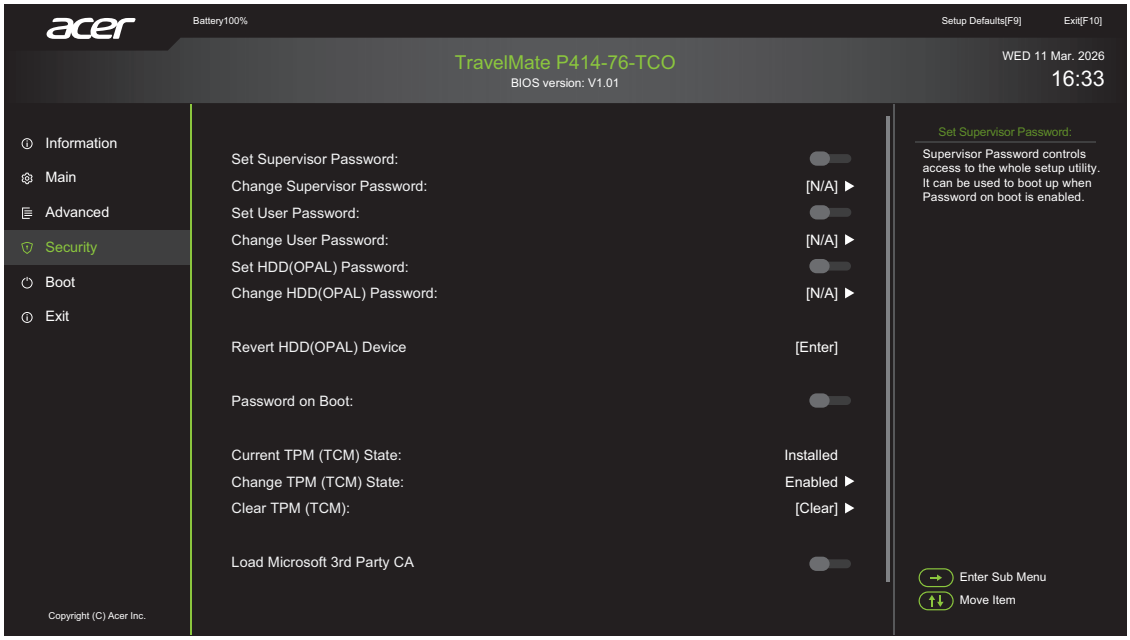



**Figure 1-73. BIOS Security (1 of 2)**

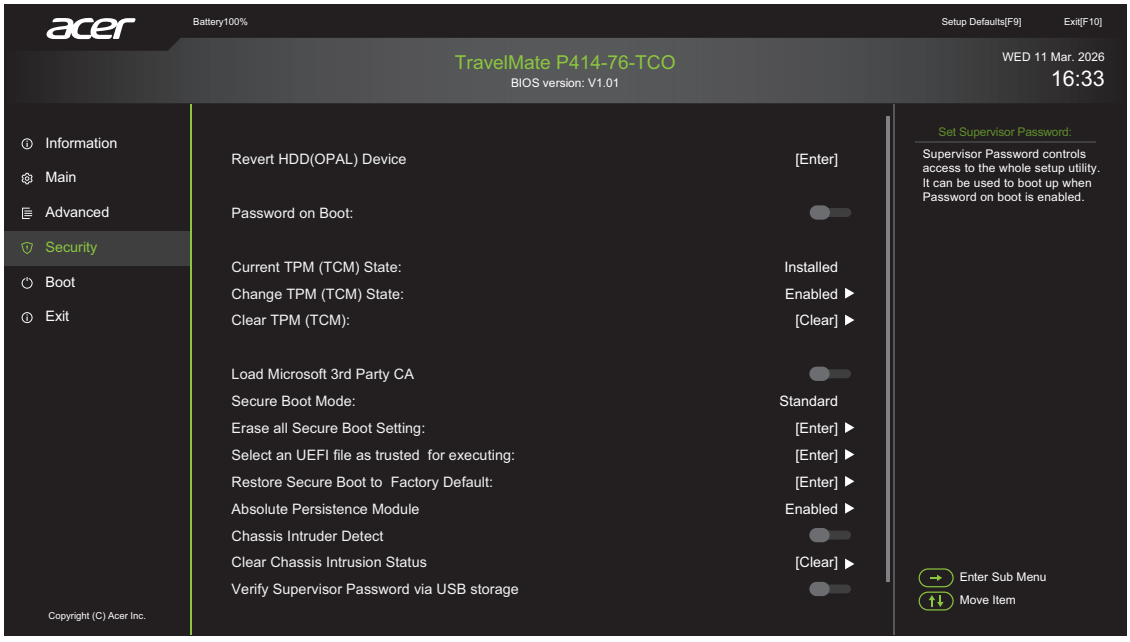



**Figure 1-74. BIOS Security (2 of 2)**

Table 1-4 describes the parameters shown in Figure 1-73 and Figure 1-74.

**Table 1-4. BIOS Security**

| Parameter | Description | Option |
|---|---|---|
| Set Supervisor Password | Option to set supervisor password | Disabled or Enabled |
| Change Supervisor Password | Change supervisor password | N/A |
| Set User Password | Option to set user password | Disabled or Enabled |
| Change User Password | Change user password | N/A |
| Set HDD(OPAL) Password | Option to set HDD(OPAL) password | Disabled or Enabled |
| Change HDD(OPAL) Password | Change HDD(OPAL) password | N/A |
| Revert HDD(OPAL) Device | Revert HDD device | N/A |
| Password on Boot | Shows if password is required during system boot<br>⚠ **CAUTION:**<br>If Password-on-Boot authentication is enabled, the BIOS password can only be cleared by initiating the Crisis Disk Recovery procedure. | Disabled or Enabled |
| Current TPM (TCM) State | Display the TPM status | N/A |
| Change TPM (TCM) State | Option to use the TPM function | Disabled or Enabled |
| Clear TPM (TCM) | Remove all TPM context associated with a specific owner | Clear |
| Load Microsoft 3rd Party CA | Option to load Microsoft's third-party UEFI Certificate Authority (CA) | Disabled or Enabled |
| Secure Boot Mode | Display the current Secure Boot Mode status.<br>• **Standard**: Default Option. No manual change has been done to secure boot setting or users have previous restored security boot to factory default.<br>• **Custom**: Contents of the Secure Boot signature database has been modified with “Erase All Secure Boot Setting” or “Select an UEFI File as Trusted Executing”. | Standard or Custom |

Table 1-4. BIOS Security (Continued)

| Parameter | Description | Option |
|---|---|---|
| Erase all Secure Boot Setting | Option to erase all secure boot setting | N/A |
| Select an UEFI file as trusted for executing | Option to select an UEFI file as trusted for executing | N/A |
| Restore Secure Boot to Factory Default | Option to restore secure boot to factory default | N/A |
| Absolute Persistence Module | Indicate the Absolute Persistence Module state.<br>• **Enabled**: Default Option. The Persistence interface is enabled. Persistence may now be activated or deactivated.<br>• **Disabled**: The Persistence interface is disabled. The Persistence Module does not run and Persistence is deactivated.<br>• **Permanently Disabled**: Persistence is disabled and can only be enabled via a full reset at the factory. If user chooses Permanently Disabled, a "red" warning dialog box will appear on the screen with the message "Absolute Persistence Module will be disabled permanently and cannot be enabled again, are you sure?". | Disabled, Enabled, or Permanently Disabled |
| Chassis Intruder Detect | Option to control the chassis intrusion detection mechanism.<br>This option is available on certain SKUs. | Disabled or Enabled |
| Clear Chassis Intrusion Status | Clear the intrusion detection status(#INTRUDER HW PIN) in the system.<br>This option is available on certain SKUs. | Clear |
| Verify Supervisor Password via USB storage | Option to verify the Supervisor Password via USB storage. | Disabled or Enabled |

**NOTE:**

When prompted to enter password, three attempts are allowed before system halts. Resetting BIOS password may require computer be returned to dealer.

## Setting a Password

Perform the following to set the password:

1. Use the ↑ and ↓ keys to highlight the `Set User Password` or `Set Supervisor Password` parameter and press ***Enter***. The dialog box appears.
2. Enter a new password in the `Enter New Password` field. Passwords are not case sensitive and the length must not exceed 12 alphanumeric characters (A-Z, a-z, 0-9). Enter the password again in the `Confirm New Password` field.

**IMPORTANT:**

Use care when typing a password. Characters do not appear on the screen.

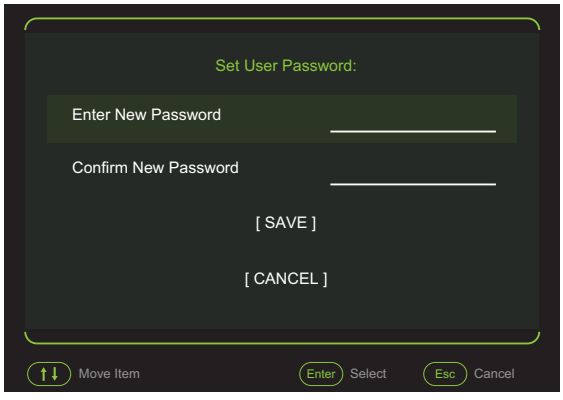



**Figure 1-75. Set User Password**

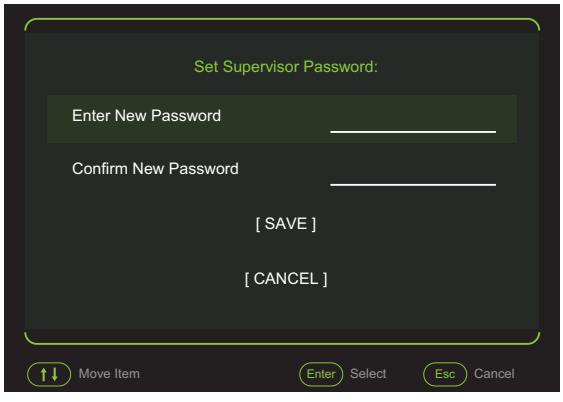



**Figure 1-76. Set Supervisor Password**

3. Select "SAVE" and press ***Enter***. The Setup Notice dialog box appears.

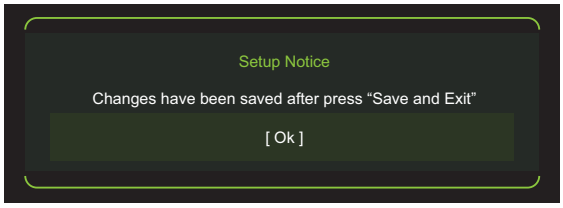



**Figure 1-77. Setup Notice**

**NOTE:**

Password on Boot must be set to Enabled to activate password feature.

4. Press ***Enter*** to complete the password setting. After the password has been set, the computer enables to change the password.

**NOTE:**

To change an existing password, refer to *Changing a Password*.

5. Press ***F10*** and select "SAVE & EXIT". Then press ***Enter*** to save changes and exit *BIOS Setup Utility*.

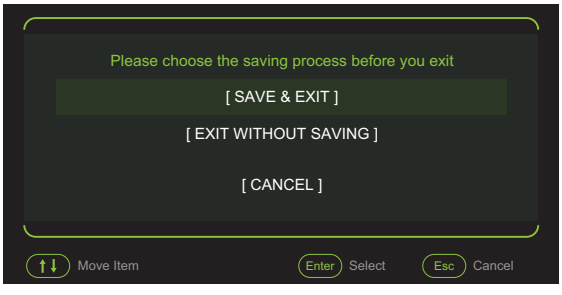



**Figure 1-78. Save Configuration Changes and Exit**

## Changing a Password

Perform the following:

1. Use the ↑ and ↓ keys to highlight `Change User Password` or `Change Supervisor Password` and press ***Enter***. The dialog box appears.
2. Enter the current password in the `Enter current password` field and press ***Enter***.
3. Enter the new password in the `Enter New Password` and `Confirm New Password` fields.

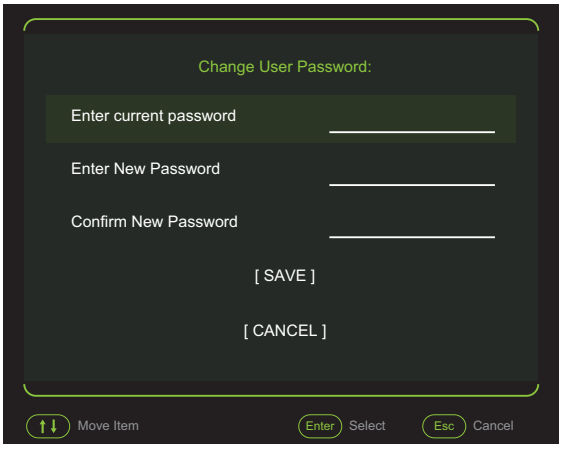



**Figure 1-79. Change User Password**

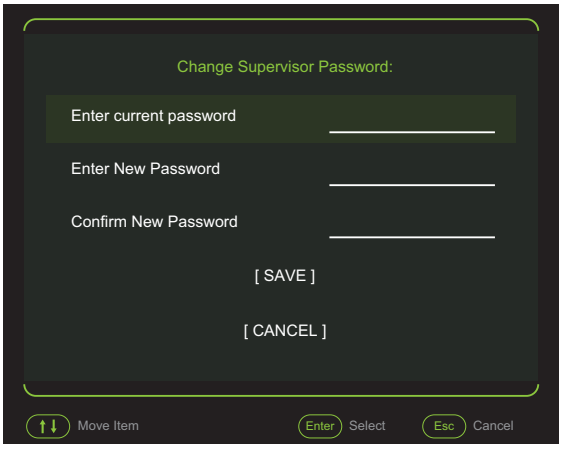



**Figure 1-80. Change Supervisor Password**

4. Select "SAVE" and press ***Enter***. If passwords match, the Setup Notice dialog box appears.

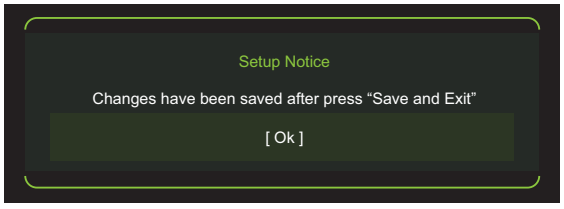



**Figure 1-81. Setup Notice**

**NOTE:**
If passwords do not match, the Setup Warning dialog box appears. Retype passwords.

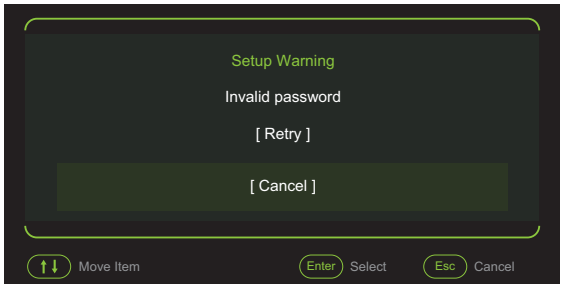



**Figure 1-82. Setup Warning**

5. Press ***Enter*** to complete the password modification.
6. Press ***F10*** and select "SAVE & EXIT". Then press ***Enter*** to save changes and exit *BIOS Setup Utility*.

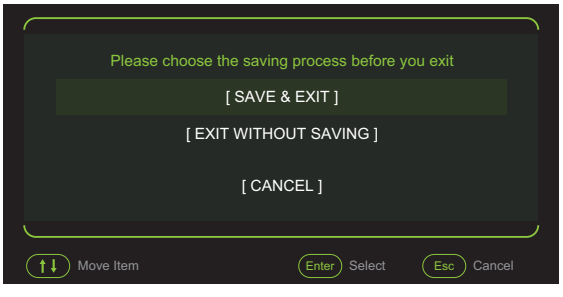



**Figure 1-83. Save Configuration Changes and Exit**

## Removing a Password

1. Use the ↑ and ↓ keys to highlight `Set User Password` or `Set Supervisor Password` and press ***Enter***. The dialog box appears.
2. Enter the current password in the `Enter Old password` field and press ***Enter***.

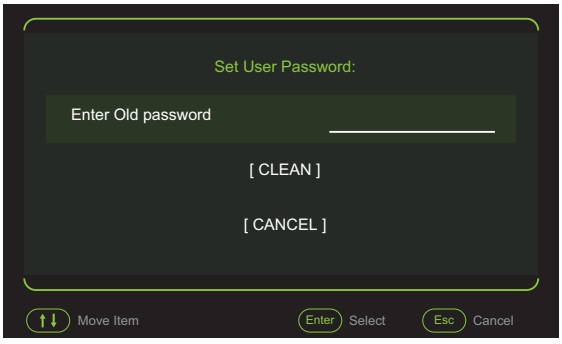



**Figure 1-84. Remove User Password**

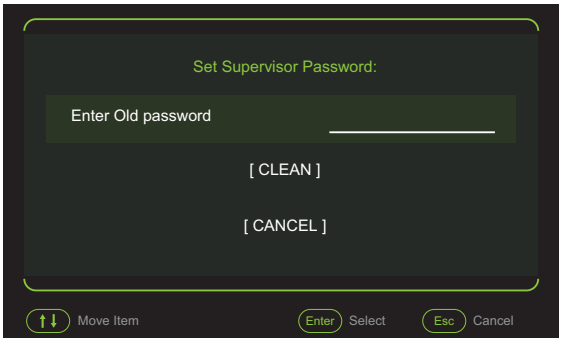



**Figure 1-85. Remove Supervisor Password**

3. Select "`CLEAN`" and press ***Enter***. The `Setup Notice` dialog box appears.

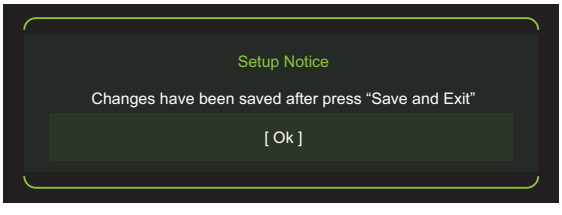



**Figure 1-86. Setup Notice**

4. Press ***Enter*** to complete the password removal.

5. Press ***F10*** and select "`SAVE & EXIT`". Then press ***Enter*** to save changes and exit *BIOS Setup Utility*.

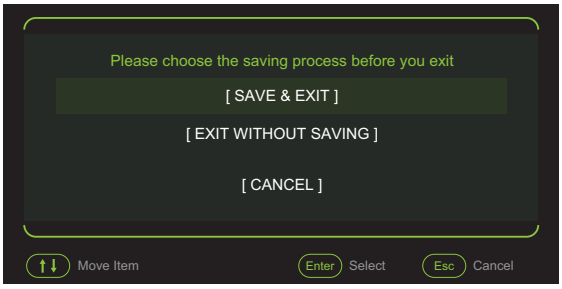



**Figure 1-87. Save Configuration Changes and Exit**

# Boot

The Boot tab allows changes to the order of boot devices used to load the operating system. Bootable devices include the:

- Windows Boot Manager
- Onboard hard disk drive
- USB diskette drive
- IPv4 network drive
- USB hard disk drive
- USB CD-ROM drive
- IPv6 network drive

Use ↑ and ↓ keys to select a device and press ***F5*** or ***F6*** to sort the order.

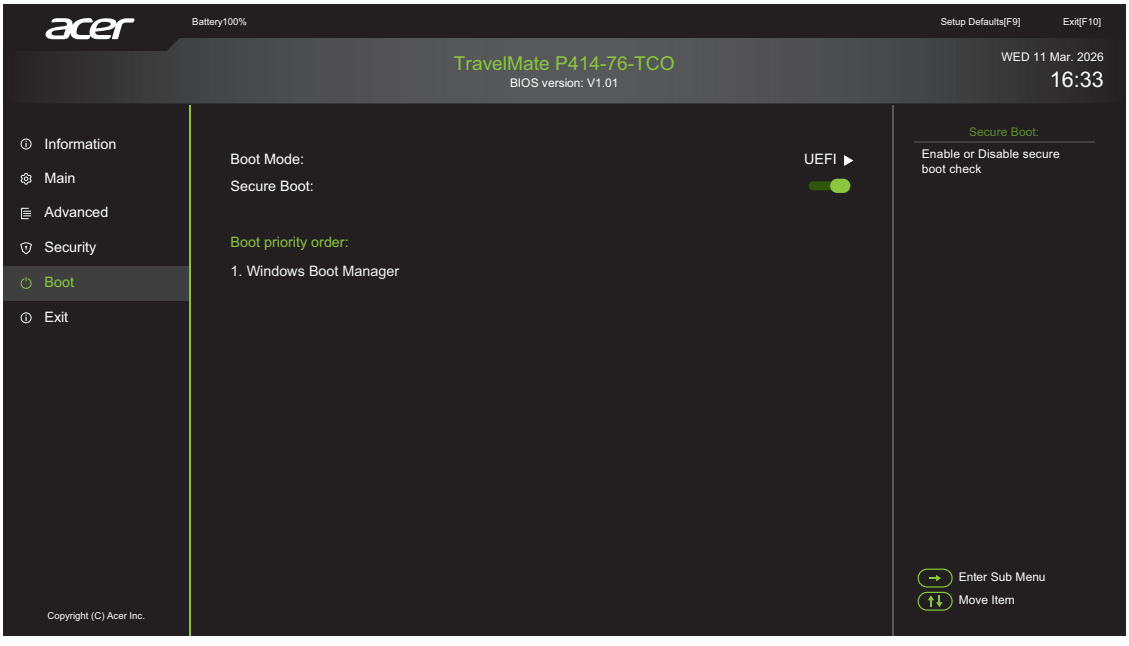



**Figure 1-88. BIOS Boot**

Table 1-5 describes the parameters in Figure 1-88.

**Table 1-5. BIOS Boot**

| Parameter | Description |
|---|---|
| Boot Mode | Set the system Boot Mode. |
| Secure Boot | Enable or Disable Secure Boot check. |

# Exit

The Exit tab allows users to save or discard changes and quit the *BIOS Setup Utility*.




**Figure 1-89. BIOS Exit**

Table 1-6 describes the parameters in Figure 1-89.

**Table 1-6. BIOS Exit**

| Parameter | Description |
|---|---|
| Exit Saving Changes | Exit BIOS utility and save setup item changes to system. |
| Exit Discarding Changes | Exit BIOS utility without saving setup item changes to system. |
| Save & Shutdown | Save the changes and shutdown the system. |
| Load Factory Setup Defaults | Load setup default values for all setup items. |
| Save Settings to User Setup Defaults | Save the current settings as the user-defined default settings. |
| Load User Setup Defaults | Load the user-defined default settings. |

# 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. **By performing any of these procedures you acknowledge that any remaining warranty applicable to your computer will be voided if any damage is done to the unit or components during the repair.**

## Introduction

This chapter contains information about troubleshooting common problems associated with the notebook.

## General Information

The following procedures are a guide for troubleshooting computer problems. The step by step procedures are designed to be performed as described.

**NOTE:**

The diagnostic tests are intended for Acer products only. Non-Acer products, prototype cards, or modified options can give false errors and invalid system responses.

1. Obtain as much detailed information as possible about the problem.
2. If possible, verify the symptoms by re-creating the failure through diagnostic tests or repeating the operation that led to the problem.
3. Use Table 1-7 with the verified symptom to determine the solution.

**Table 1-7. Common Problems**

| Symptoms (Verified) |
|---|
| Power On Issues |
| No Display Issues |
| LCD Picture Failure |
| Internal Keyboard Failure |
| Touch Pad Failure |
| Internal Speaker Failure |
| Audio and Card Reader Failure |
| Other Functions Failure |
| Intermittent Problems |
| Undetermined Problems |

4. If the Issue is still not resolved, please contact Acer local service.

**NOTE:**

Do not replace non-defective FRU parts.

# Power On Issues

If the system does not power on, perform the following:

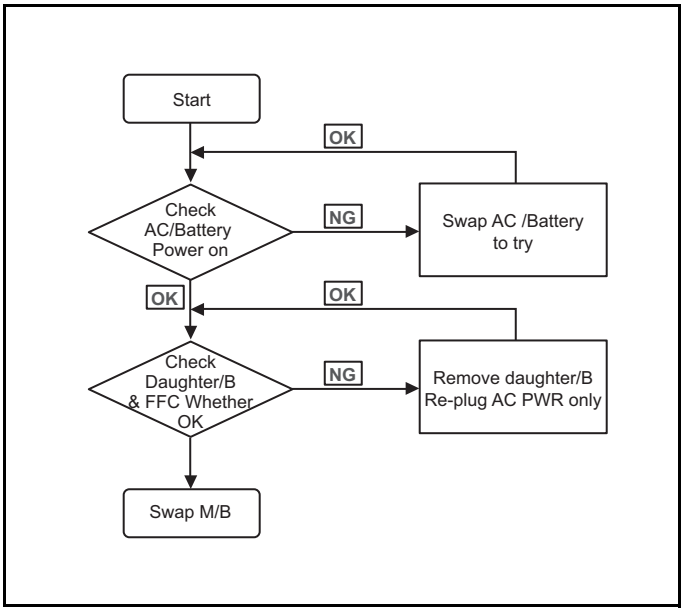



**Figure 1-90. Power On Issue**

## Computer Shuts Down Intermittently

If the system powers off at intervals, perform the following.

1. Makes sure the power cable is properly connected to the computer and the electrical outlet.
2. Remove all extension cables between the computer and the outlet.
3. Remove all surge protectors between the computer and the electrical outlet. Plug the computer directly into a known serviceable electrical outlet.
4. Disconnect the power and open the casing to check the thermal unit and fan airways are free of obstructions.
5. Remove all external and non-essential hardware connected to the computer that are not necessary to boot the computer to the failure point.
6. Remove any recently installed software.
7. If the Issue is still not resolved, please contact Acer local service.

# No Display Issues

If the Display does not work, perform the following:

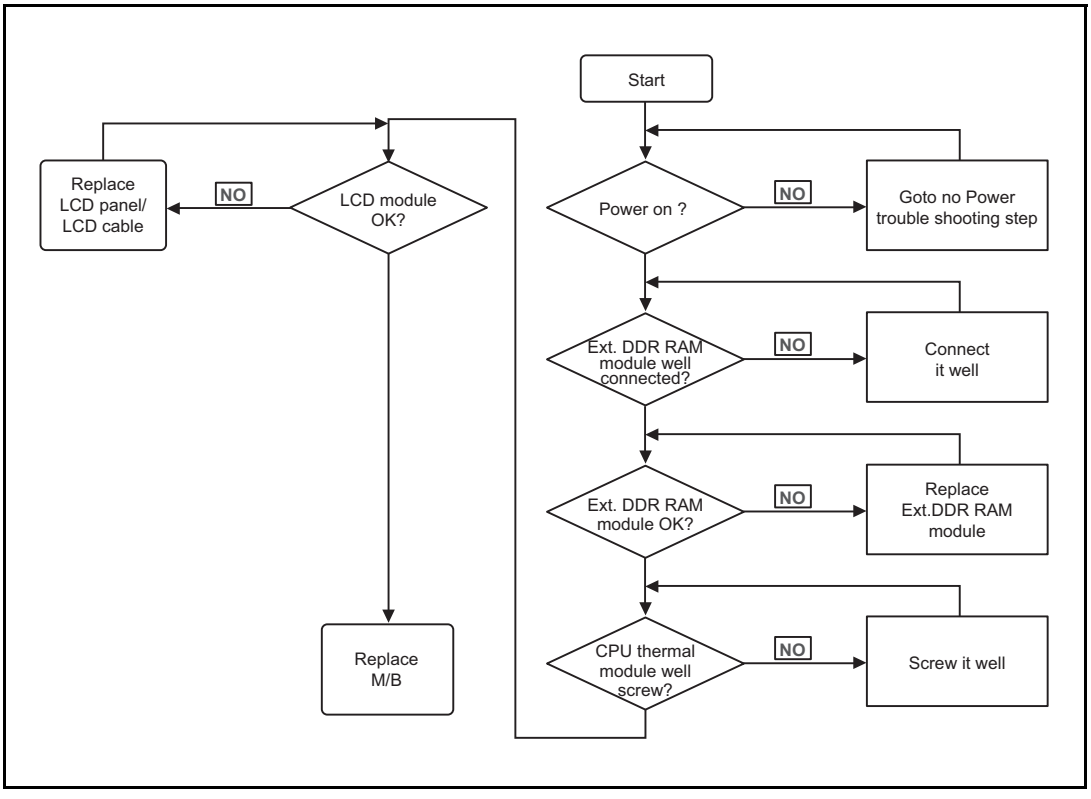



**Figure 1-91. No Display Issue**

## No POST or Video

If the POST or video does not appear, perform the following:

1. Make sure that internal display is selected. Then switch between the internal display and the external display. Reference product pages for specific model procedures.
2. Make sure the computer has power by checking for one of the following:
   - Fans start up
   - Status LEDs illuminate

If no power, refer to *Power On Issues*.

3. Drain stored power by removing the power cable and battery. Hold the power button for 10 seconds.
4. Connect the power and reboot the computer.
5. Connect an external monitor to the computer and switch between the internal display and the external display.
6. If the POST or video appears on the external display only, refer to *LCD Picture Failure*.
7. Disconnect power and all external devices including port replicators or docking

stations. Remove any memory cards and CD/DVD discs.

8. Start the computer. If the computer boots correctly, add the devices one by one until the failure point is discovered.
9. Reseat the memory modules.
10. Remove the drives (refer to *Disassembly Procedures*).
11. If the Issue is still not resolved, please contact Acer local service.

## Abnormal Video

If the video appears abnormal, perform the following:

1. Boot the computer.
   - If permanent vertical/horizontal lines or dark spots appear in the same location, the LCD is faulty and should be replaced. Refer to *Disassembly Procedures*.
   - If extensive pixel damage is present (different colored spots in the same locations on the screen), the LCD is faulty and should be replaced.

**NOTE:**

Make sure that the computer is not running on battery alone as this may reduce display brightness.

2. Adjust the brightness to its highest level. Refer to the User Manual for instructions on adjusting the settings. If the display is too dim at the highest brightness setting, the LCD is faulty and should be replaced. Refer to *Disassembly Procedures*.
3. Check the display resolution is correctly configured:
   - Minimize or close all Windows.
   - If display size is only abnormal in an application, check the view settings and control/mouse wheel zoom feature in the application.
   - If desktop display resolution is not normal, right-click on the desktop and select `Personalize Display Settings`.
   - Click and drag the Resolution slider to the desired resolution.
   - Click ***Apply*** and check the display. Readjust if necessary.
4. Roll back the video driver to the previous version if updated.
5. Remove and reinstall the video driver.
6. Check the Device Manager to determine that:
   - The device is properly installed. There are no red Xs or yellow exclamation marks
   - There are no device conflicts
   - No hardware is listed under `Other Devices`
7. If the Issue is still not resolved, please contact Acer local service.
8. Run the *Windows Memory Diagnostic* from the operating system DVD and follow the on-screen prompts.
9. If the issue is still not resolved, please contact Acer local service.

# LCD Picture Failure

If the LCD fails, perform the following:

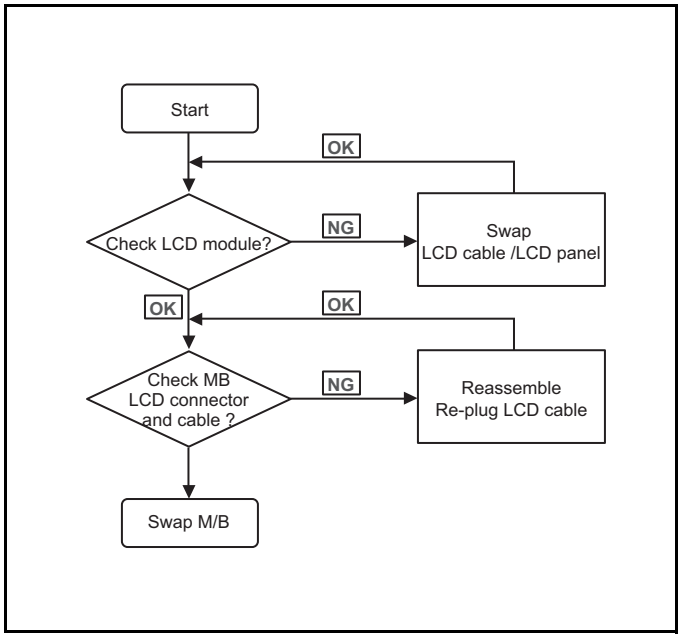



**Figure 1-92. LCD Failure**

# Internal Keyboard Failure

If the internal keyboard fails, perform the following:

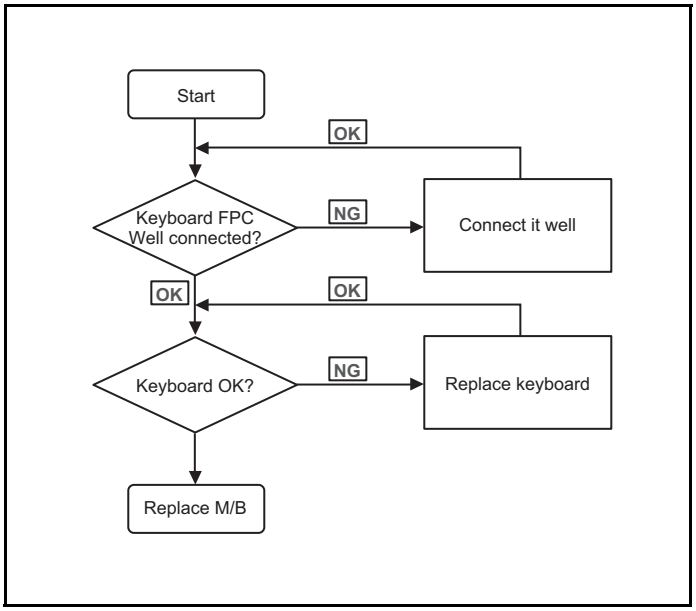



**Figure 1-93. Internal Keyboard Failure**

# Touch Pad Failure

If the touch pad fails, perform the following:

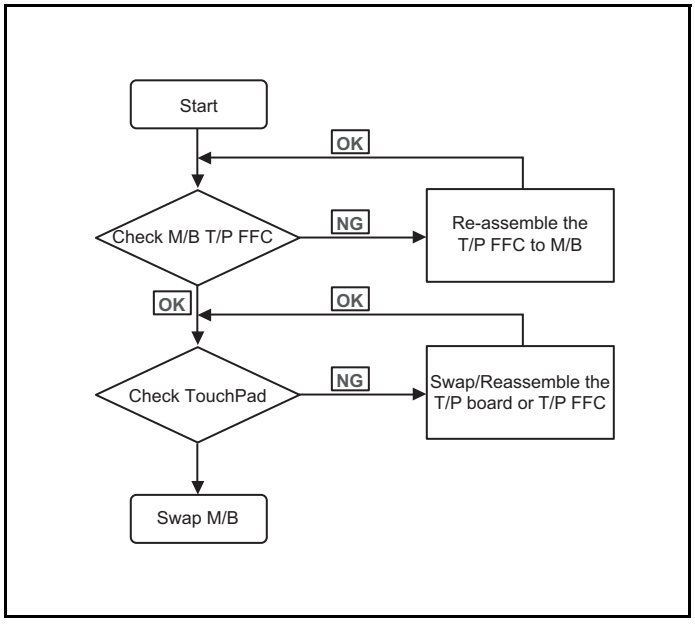



**Figure 1-94. Touch Pad Failure**

# Internal Speaker Failure

If the internal speakers fail, perform the following:

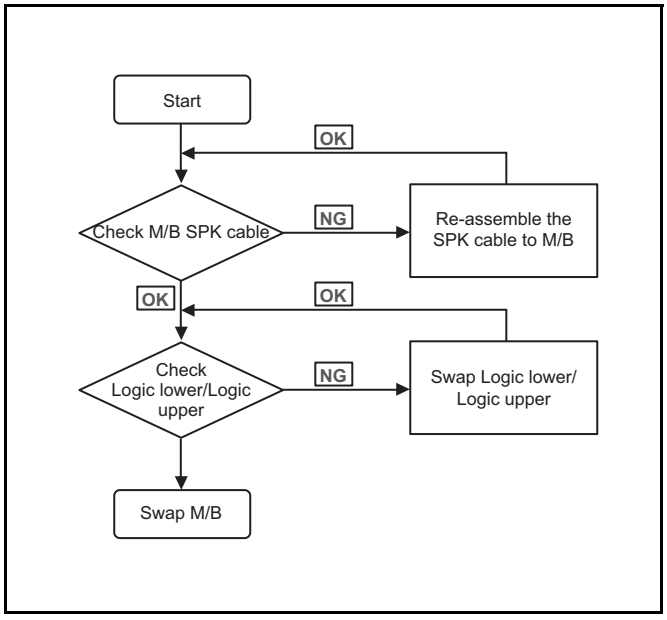



**Figure 1-95. Internal Speaker Failure**

## Sound Problems

Perform the following, one at a time.

1. Boot the computer.
2. If updated recently, roll back the audio driver to the previous version. Remove and reinstall the audio driver.
3. Make sure that all volume controls are set mid range:
   - Click the volume icon on the taskbar.
   - Drag the slider to 50. Confirm that the volume is not muted.
   - Click Mixer to verify that other audio applications are set to 50 and not muted.
4. Remove any recently installed hardware or software.
5. Restore system and file settings from a known good date using `System Restore`.
6. Reinstall the operating system.
7. If the issue is still not resolved, please contact Acer local service.

# Audio and Card Reader Failure

If the audio and card reader fail, perform the following:

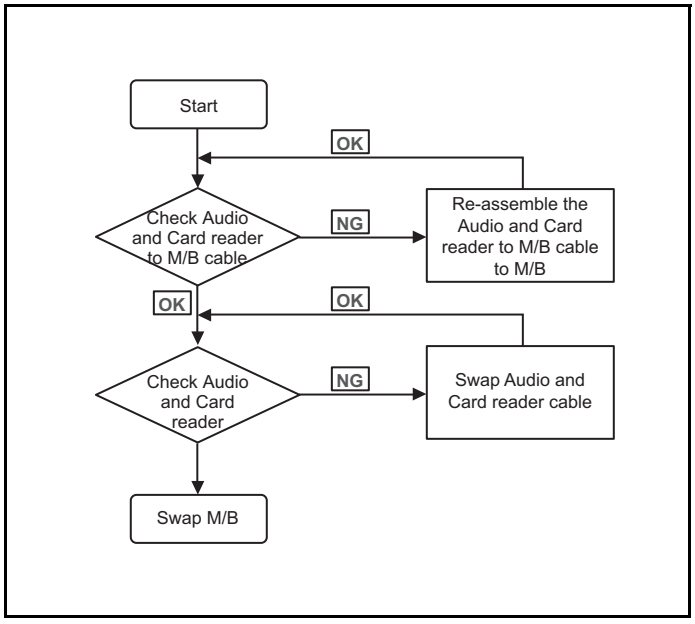



**Figure 1-96. Audio and Card Reader Failure**

## Other Functions Failure

1. Check if the drives are functioning correctly.
2. Check if the test fixtures are functioning correctly.
3. Change the mainboard to check if the current one is defective.

# Intermittent Problems

Intermittent system hang problems can be caused by a variety of reasons that have nothing to do with a hardware defect, such as: cosmic radiation, electrostatic discharge, or software errors. FRU replacement should be considered only when a recurring problem exists.

When analyzing an intermittent problem, perform the following:

1. Run the advanced diagnostic test for the system board in loop mode at least 10 times.
2. If no error is detected, do not replace any FRU.
3. If an error is detected, replace the FRU. Rerun the test to verify that there are no more errors.

# Undetermined Problems

The diagnostic problems do not identify which adapter or device failed, which installed devices are incorrect, whether a short circuit is suspected, or whether the system is inoperative.

Perform the following procedures to isolate the failing FRU (do not isolate non-defective FRU).

**NOTE:**
Verify that all attached devices are supported by the computer.

**NOTE:**
Verify that the power supply being used at the time of the failure is operating correctly. (Refer to *Power On Issues*).

1. Remove power from the computer.
2. Visually check components for damage. If any problems are found, replace the FRU.
3. Remove or disconnect all of the following devices:
   - Non-Acer devices
   - Printer, mouse, and other external devices
   - Battery pack
   - Hard disk drive
   - DIMM
   - BD/CD-ROM/Diskette drive Module
   - PC Cards
4. Apply power to the computer.
5. Determine if the problem has changed.
6. If the problem does not recur, connect the removed devices one at a time until failing FRU is found.
7. If the problem remains, replace the following FRUs:
   - System board
   - LCD assembly

# Exploded Diagrams

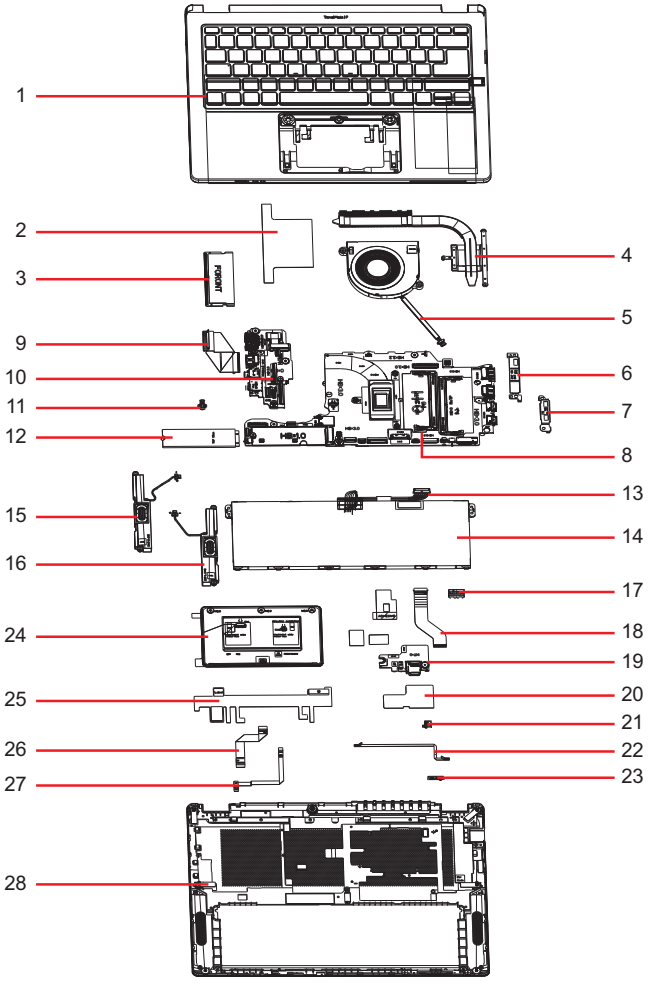



**Figure 1-97. System Exploded Diagram**

**Table 1-8. System Exploded Diagram**

| No. | Description |
|---|---|
| 1 | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 80KS ARABIC NK.I1313.3AV/NK.I1317.0UP |
| 2 | FOIL COMPOSITE W/ MYLAR FOR DDR5 |

Table 1-8. System Exploded Diagram (Continued)

| No. | Description |
|---|---|
| 3 | Memory SAMSUNG SO-DIMM DDRV 5600 8GB M425R1GB4PB0-CWM LF+HF 14nm P die |
| 4 | HEATSINK 19W UMA |
| 5 | FAN |
| 6 | BRACKET IO BOARD |
| 7 | BRACKET MB |
| 8 | Mainboard TMP414-56 Intel CU5322 UMA dTPM_CN |
| 9 | CABLE IO BOARD |
| 10 | BOARD IO ASSY |
| 11 | HOOK SUPT MB NUT |
| 12 | Flash Disk APACER SSD NAND 256GB 3D TLC AP2JPB4480E-O301 LF+HF |
| 13 | CABLE BATTERY |
| 14 | Battery CosMx Typ.53Wh 4661mAh 3S1P AP23ABL 248x84.4x5.5(mm) AP23A 11.37V 65W Li-Ion TI BQ40Z555 FW5.12 |
| 15 | SPEAKER R |
| 16 | SPEAKER L |
| 17 | RUBBER SI FOR LENS |
| 18 | CABLE LED BOARD |
| 19 | BOARD LED ASSY |
| 20 | INS MYLAR FOR LED/B TOP |
| 21 | RUBBER SI FOR UPPER CASE MICROPHONE |
| 22 | FFC CABLE MICROPHONE |
| 23 | MICROPHONE |
| 24 | TOUCHPAD MODULE HR FINGERPRINT STG |
| 25 | COND FABRIC W/INS MYLAR ASSY TP |
| 26 | CABLE TOUCHPAD |
| 27 | CABLE FINGERPRINT |
| 28 | LOWER CASE ASSY STG |

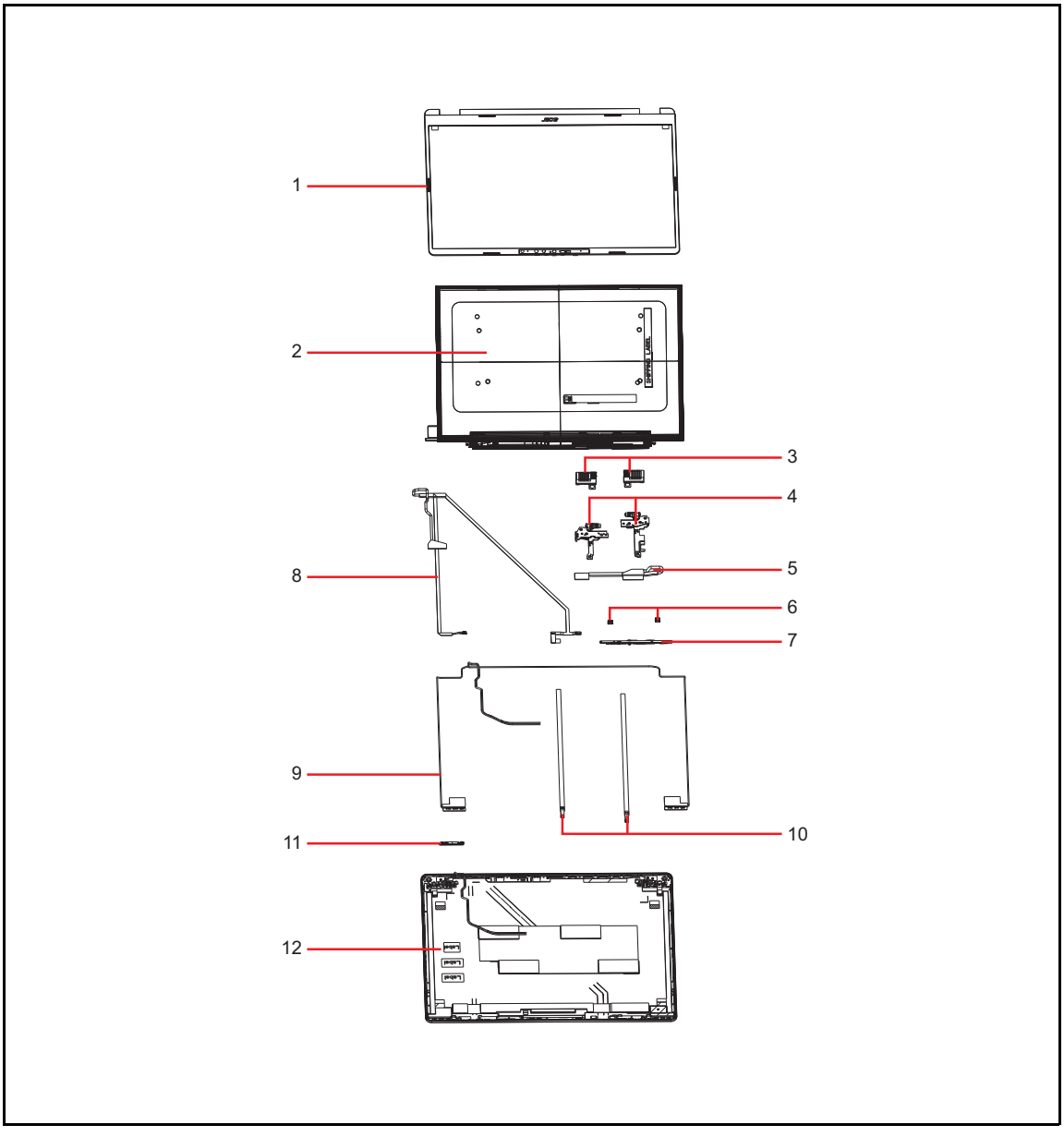



Figure 1-98. LCD Assembly Exploded Diagram

Table 1-9. LCD Assembly Exploded Diagram

| No. | Description |
|---|---|
| 1 | LCD BEZEL |
| 2 | LED LCD Panel AUO 14" WQXGA+ IPS None Glare B140QAN08.M 1A 400nit sRGB 100% 60Hz 25ms 1200:1 (140g, 60hz, Narrow 1.85/2.15t(flat), LRR2.5/PSR) |
| 3 | CAP FOR LCD BEZEL R STG |
| | CAP FOR LCD BEZEL L STG |

Table 1-9. LCD Assembly Exploded Diagram (Continued)

| No. | Description |
|---|---|
| 4 | HINGE R |
| | HINGE L |
| 5 | CABLE LCD EDP WQXGA |
| 6 | RUBBER SI FOR LCD MIC |
| 7 | Camera Supreme FHD FF BNFDF5007-A GC2607 RTS5853N TA-2281A MSM261DGT001 USB ,4.2T, BPO |
| 8 | CABLE CAMERA IR HPD |
| 9 | ANTENNA CABLE MAIN AUX |
| 10 | ADHESIVE TAPE W/ MYLAR ASSY COVER 3.0T |
| 11 | Vision Sensor - Egis Vision EK006B-1A |
| 12 | LCD COVER ASSY STG 3.0T |

# FRU List

This list is for reference only, please contact Acer local service to order the correct replacement part and availability.

**Table 1-10. FRU List**

| Category | Pictures | Description |
|---|---|---|
| ADAPTER |  | Adapter Chicony Power A065RPB5P 65W Type C Brick 5V/3A_9V/3A_12V/3A_15V/3A_20V_3.25A Black TCO10, PCR50%,with LOGO and paper sleeve |
| | | Adapter LITE-ON PA-1650-58A8 65W Type C Brick 5V/3A_9V/3A_12V/3A_15V/3A_20V_3.25A Black TCO10, PCR50%,with LOGO and paper sleeve |
| | | Adapter Chicony Power A100AP32P 100W Type C Brick 5V/3A_9V/3A_12V/3A_15V/3A_20V/5A Black TCO10, PCR50%,with LOGO and paper sleeve |
| | | Adapter DELTA ADP-100XB BN 100W Type C Brick 5V/3A_9V/3A_12V/3A_15V/3A_20V/5A Black TCO10, PCR50%,with LOGO and paper sleeve |
| BATTERY |  | Battery CosMx Typ.53Wh 4661mAh 3S1P AP23ABL 248x84.4x5.5(mm) AP23A 11.37V 65W Li-Ion TI BQ40Z555 FW5.12 |
| | | Battery ATL Typ.53Wh 4700mAh 3S1P AP24CAL 248x84.4x5.5(mm) AP24C 11.25V 70W Li-Ion Renesas FW2.10 |
| | | Battery SIMPLO Typ.65Wh 5570mAh 3S1P AP25B7N 248x84.4x5.5(mm) AP25B 11.67V 75W Li-Ion with SMT type connector |
| | | Battery ATL Typ.65Wh 5570mAh 3S1P AP25BAN 248x84.4x5.5(mm) AP25B 11.67V 75W Li-Ion with SMT type connector |
| BOARD |  | Vision Sensor - Egis Vision EK006B-1A |
| | | Vision Sensor- Egis Vision- BNVGF3079-B |

Table 1-10. FRU List (Continued)

| Category | Pictures | Description |
|---|---|---|
| BOARD |  | BOARD IO ASSY |
| | | BOARD IO ASSY W/ VPRO |
| |  | BOARD LED ASSY |
| CABLE |  | CABLE BATTERY |
| |  | CABLE LED BOARD |
| |  | CABLE TOUCHPAD |
| |  | CABLE FINGERPRINT |
| |  | CABLE IO BOARD |
| |  | FFC CABLE MICROPHONE |
| |  | ANTENNA CABLE MAIN AUX |

Table 1-10. FRU List (Continued)

| Category | Pictures | Description |
|---|---|---|
| CABLE |  | CABLE LCD EDP WQXGA |
| | | CABLE LCD |
| |  | CABLE CAMERA FHD |
| |  | CABLE CAMERA IR HPD |
| CAMERA |  | Camera Supreme FHD FF BNFDF5007-A<br>GC2607 RTS5853N TA-2281A<br>MSM261DGT001 USB ,4.2T, BPO |
| | | Camera Supreme FHD FF BNFDF5051-A<br>GC2607 RTS5853N TA-2281A<br>MSM261DGPB10 USB ,4.2T, BPO |
| | | Camera Tech-Front 5M FF YHWM-1<br>OV05C10 (COB) SPCV6502<br>DS-41169A(w/BG) ZTS6534SA USB<br>IR-HM1092(940nm),sHDR |
| | | Camera CHICONY 5M FF CKFOE71-1<br>OV05C10 (COB) RTS5867<br>PS-45233A1B6(w/BG) ZTS6534SA USB<br>IR-HM1092(940nm),sHDR |
| FAN |  | FAN |
| HDD |  | Flash Disk APACER SSD NAND 256GB 3D TLC<br>AP2JPB4480E-O301 LF+HF |
| | | Flash Disk KINGSTON SSD NAND 256GB<br>OM8SGP4256K2-CA0 LF+HF |
| | | Flash Disk KINGSTON SSD NAND 512GB<br>OM8SGP4512K2-CA0 LF+HF |

Table 1-10. FRU List (Continued)

| Category | Pictures | Description |
|---|---|---|
| HDD |  | Flash Disk SAMSUNG SSD NAND 512GB M.2 2280 PM9C1b MZVL8512HFLU 00BTW LF+HF |
| | | Flash Disk KINGSTON SSD NAND 1024GB OM8PJP41024K3-CAX LF+HF |
| | | Flash Disk SAMSUNG SSD NAND 1024GB M.2 2280 PM9C1b MZVL81T0HFLB-00BTW LF+HF |
| KB ASSEMBLY |  | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 80KS ARABIC NK.I1313.3AV/NK.I1317.0UP |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 81KS FR/ARABIC NK.I1313.3BC/NK.I1317.0V6 |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 81KS BELGIUM NK.I1313.3B8/NK.I1317.0V2 |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 81KS BRAZILIAN PORTUGUESE NK.I1313.3B9/NK.I1317.0V3 |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 80KS US INTERNATIONAL W/ BULGARIA NK.I1313.3B6/NK.I1317.0V0 |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 80KS US INTERNATIONAL W/ CANADIAN FRENCH NK.I1313.3B5/NK.I1317.0UZ |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 81KS SLO/CRO NK.I1313.3BL/NK.I1317.0VE |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 81KS CZ/SK NK.I1313.3BA/NK.I1317.0V4 |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 81KS DANISH NK.I1313.3BB/NK.I1317.0V5 |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 81KS FRENCH NK.I1313.3BD/NK.I1317.0V7 |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 81KS GERMAN NK.I1313.3BE/NK.I1317.0V8 |

Table 1-10. FRU List (Continued)

| Category | Pictures | Description |
|---|---|---|
| KB ASSEMBLY |  | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 80KS GREEK NK.I1313.3AX/NK.I1317.0UR |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 80KS US INTERNATIONAL W/ HEBREW NK.I1313.3B4/NK.I1317.0UY |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 81KS HUNGARIAN NK.I1313.3BF/NK.I1317.0V9 |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 80KS PERSIAN NK.I1313.3B1/NK.I1317.0UV |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 81KS ITALIAN NK.I1313.3BG/NK.I1317.0VA |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 84KS JAPANESE NK.I1313.3BS |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 80KS KOREAN NK.I1313.3AY/NK.I1317.0US |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 81KS ALA-SPANISH NK.I1313.3B7/NK.I1317.0V1 |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 81KS NORWEGIAN NK.I1313.3BJ/NK.I1317.0VC |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 81KS PORTUGUESE NK.I1313.3BK/NK.I1317.0VD |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 80KS RUSSIAN NK.I1313.3AZ/NK.I1317.0UT |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 81KS NORDIC NK.I1313.3BH/NK.I1317.0VB |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 81KS SPANISH NK.I1313.3BM/NK.I1317.0VF |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 81KS SWEDEN NK.I1313.3BN/NK.I1317.0VG |

Table 1-10. FRU List (Continued)

| Category | Pictures | Description |
|---|---|---|
| KB ASSEMBLY |  | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 81KS SWISS/G NK.I1313.3BP/NK.I1317.0VH |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 80KS THAILAND NK.I1313.3B2/NK.I1317.0UW |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 81KS TURKISH NK.I1313.3BQ/NK.I1317.0VJ |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 80KS TRADITIONAL CHINESE NK.I1313.3AW/NK.I1317.0UQ |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 80KS US INTERNATIONAL NK.I1317.0UX/NK.I1313.3B3 |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 81KS UK NK.I1313.3BR/NK.I1317.0VK |
| | | KEYBOARD ASSY W/ UPPER CASE COPILOT BL BLACK VP03P_B40BWL 80KS UKRAINIAN NK.I1313.3B0/NK.I1317.0UU |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 80KS ARABIC NK.I1313.31X |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 81KS FR/ARABIC NK.I1313.32E |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 81KS BELGIUM NK.I1313.32A |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 81KS BRAZILIAN PORTUGUESE NK.I1313.32B |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 80KS US INTERNATIONAL W/ BULGARIA NK.I1313.328 |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 80KS US INTERNATIONAL W/ CANADIAN FRENCH NK.I1313.327 |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 81KS SLO/CRO NK.I1313.32N |

Table 1-10. FRU List (Continued)

| Category | Pictures | Description |
|---|---|---|
| KB ASSEMBLY |  | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 81KS CZ/SK NK.I1313.32C |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 81KS DANISH NK.I1313.32D |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 81KS FRENCH NK.I1313.32F |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 81KS GERMAN NK.I1313.32G |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 80KS GREEK NK.I1313.31Z |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 80KS US INTERNATIONAL W/ HEBREW NK.I1313.326 |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 81KS HUNGARIAN NK.I1313.32H |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 80KS PERSIAN NK.I1313.323 |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 81KS ITALIAN NK.I1313.32J |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 84KS JAPANESE NK.I1313.32U |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 80KS KOREAN NK.I1313.320 |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 81KS ALA-SPANISH NK.I1313.329 |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 81KS NORWEGIAN NK.I1313.32L |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 81KS PORTUGUESE NK.I1313.32M |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 80KS RUSSIAN NK.I1313.321 |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 81KS NORDIC NK.I1313.32K |

Table 1-10. FRU List (Continued)

| Category | Pictures | Description |
|---|---|---|
| KB ASSEMBLY |  | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 81KS SPANISH NK.I1313.32P |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 81KS SWEDEN NK.I1313.32Q |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 81KS SWISS/G NK.I1313.32R |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 80KS THAILAND NK.I1313.324 |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 81KS TURKISH NK.I1313.32S |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 80KS TRADITIONAL CHINESE NK.I1313.31Y |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 80KS US INTERNATIONAL NK.I1313.325 |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 81KS UK NK.I1313.32T |
| | | KEYBOARD ASSY W/ UPPER CASE BL BLACK VP03P_B30BWL 80KS UKRAINIAN NK.I1313.322 |
| LCD |  | LED LCD Panel AUO 14" WQXGA+ IPS None Glare B140QAN08.M 1A 400nit sRGB 100% 60Hz 25ms 1200:1 (140g, 60hz, Narrow 1.85/2.15t(flat), LRR2.5/PSR) |
| | | LED LCD Panel CSOT 14" WUXGA IPS None Glare MNE007QS3-B 300nit NTSC 45% 120Hz 30ms 1200:1 (Narrow, Flat 3.0) |
| | | LED LCD Panel BOE 14" WUXGA IPS None Glare NE140WUM-N6X 300nit NTSC 45% 120Hz 20ms 1200:1 (Narrow, Flat 3.0) |
| LCD BEZEL |  | LCD BEZEL |
| | | LCD BEZEL ASSY BK IR,HPD |

Table 1-10. FRU List (Continued)

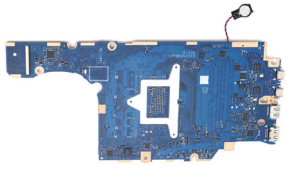
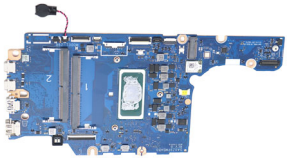
| Category | Pictures | Description |
|---|---|---|
| LCD COVER |  | LCD COVER ASSY STG 3.0T |
| | | LCD COVER ASSY STG 1.8T |
| LOWER CASE |  | LOWER CASE ASSY STG |
| MAINBOARD |  | Mainboard TMP414-56 Intel CU5322 UMA dTPM_CN |
| |  | Mainboard TMP414-56 Intel CU7355 UMA dTPM_CN |
| MEMORY |  | Memory SAMSUNG SO-DIMM DDRV 5600 8GB M425R1GB4PB0-CWM LF+HF 14nm P die |
| | | Memory HYNIX SO-DIMM DDRV 5600 8GB HMCG66AGBSA LF+HF 1anm, A-die 1Rx16 |
| | | Memory HYNIX SO-DIMM DDRV 5600 16GB HMCG78AGBSA LF+HF 1anm, A-die 1Rx8 |
| | | Memory SAMSUNG SO-DIMM DDRV 5600 16GB M425R2GA3EB0-CWM LF+HF 1bnm E-die |
| METAL |  | HINGE R |
| | | HINGE L |
| |  | BRACKET MB |

Table 1-10. FRU List (Continued)

| Category | Pictures | Description |
|---|---|---|
| METAL |  | BRACKET IO BOARD |
| PLASTICS |  | CAP FOR LCD BEZEL R STG |
| | | CAP FOR LCD BEZEL L STG |
| |  | HOOK SUPT MB NUT |
| POWER CORD |  | POWER CORD 1M 125V TAIWAN BLACK TCO10 |
| | | POWER CORD 1M 250V KOR BLACK TCO10 |
| | | POWER CORD 1M 250V EUR BLACK TCO10 |
| | | POWER CORD 1M 250V AUS BLACK TCO10 |
| | | POWER CORD 1M 125V JAP BLACK TCO10 |
| | | POWER CORD 1M 250V CHINA BLACK TCO10 |
| | | POWER CORD 1M 250V ITL BLACK TCO10 |
| | | POWER CORD 1M 250V S.AFRICA BLACK TCO10 |
| | | POWER CORD 1M 250V INDIA BLACK TCO10 |
| | | POWER CORD 1M 250V BRAZIL BLACK TCO10 |
| | | POWER CORD 1M 250V UK BLACK TCO10 |
| | | POWER CORD 1M 250V ARG BLACK TCO10 |
| | | POWER CORD 1M 250V DENMARK BLACK TCO10 |
| | | POWER CORD 1M 250V SWISS BLACK TCO10 |
| | | POWER CORD 1M 250V ISRAEL BLACK TCO10 |
| | | POWER CORD 1M 125V US BLACK TCO10 |
| | | POWER CORD 1M 250V EUR+KOR BLACK TCO10 |

Table 1-10. FRU List (Continued)

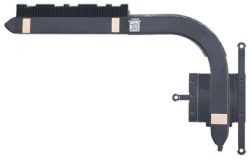
| Category | Pictures | Description |
|---|---|---|
| SPEAKER/ MICROPHONE |  | SPEAKER L |
| |  | SPEAKER R |
| |  | MICROPHONE |
| THERMAL |  | HEATSINK 19W UMA |
| TOUCHPAD |  | TOUCHPAD MODULE HR FINGERPRINT STG |
| | | TOUCHPAD MODULE CF FINGERPRINT STG |
| | | TOUCHPAD MODULE 200 STG |
| | | TOUCHPAD MODULE C5R STG |
| MISCELLANEOUS |  | ADHESIVE TAPE W/ MYLAR ASSY COVER 3.0T |
| | | ADHESIVE TAPE W/ MYLAR ASSY COVER 1.8T |
| |  | LCD ADHESIVE TAPE FOR LCD BEZEL |
| |  | RUBBER SI FOR UPPER CASE MICROPHONE |
| |  | COND FABRIC W/INS MYLAR ASSY TP |
| |  | INS MYLAR FOR LED/B TOP |

Table 1-10. FRU List (Continued)

| Category | Pictures | Description |
|---|---|---|
| MISCELLANEOUS |  | RUBBER SI FOR LCD MIC |
| |  | FOIL COMPOSITE W/ MYLAR FOR DDR5 |
| |  | ACETATE TAPE FOR BATTERY(21*21mm) |
| |  | RUBBER SI FOR LENS |
| |  | INSULATOR MYLAR ON BATTERY CABLE |
| |  | MYLAR FFC COONECTOR |
| |  | INS MYLAR FOR LCD PANEL |
| SCREW |  | SCREW M2.0*2.0- I(BNI)(NY)IRON |
| |  | SCREW M2.0*2.0-I(NI,NYLOK)STL |
| |  | SCREW M2.0*4.0-IBNINYLOKD5.0T0.8)STL |
| |  | SCREW M2.5*4.5-I IRON |
| |  | SCREWM2.0*1.8-IBNINYLOKD7.0,T0.4STLSP |
| |  | SCREW M2.0*5.5 W/ WASHER KIT |
| |  | SCREW M2.5*7.5 W/ WASHER KIT |
| |  | SCREW M2.0*2.0- I(BZN)(NYLOK)IRON |
| |  | SCREWM2.5*2.3-IBZNNYLOKD7.5T0.6 IRON |

# Software Update

## 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.

# 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**.