TravelMate P416-53/P416-53-TCO
Clarinet_MTU

LIFECYCLE EXTENSION GUIDE

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
- Torx screwdriver

WEEE Annex VII Component

These components are classified as requiring selective treatment:

- Battery pack
- LTE module
- WLAN module
- DIMM modules
- SSD modules
- Touchpad module
- LTE board
- LED board
- 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 AC adapter from the DC-in jack (A) or the power adapter from the USB Type-C port (B) as shown in Figure 1-1.
3. Remove all cables from system.

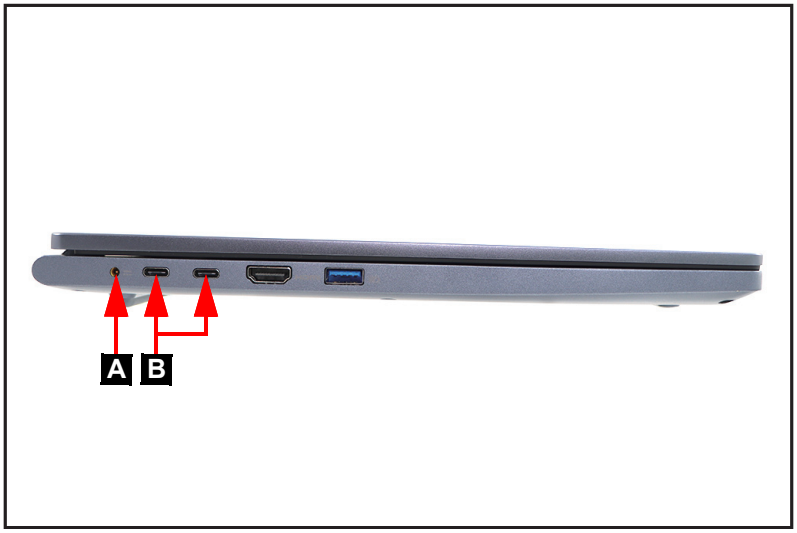


Figure 1-1. Adapter Outlet

4. Remove the SD card from the SD card slot (C). Then remove the smart card from the smart card slot (D) (Figure 1-2).

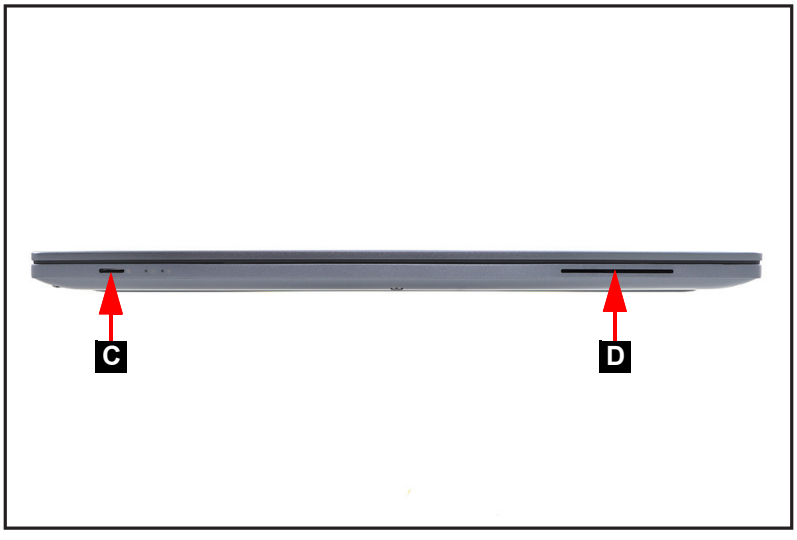


Figure 1-2. SD Card and Smart Card Removal

5. Insert the eject tool into the hole on the SIM card tray (E). Then push to eject the card tray and remove the SIM card (LTE SKU only) (Figure 1-3).

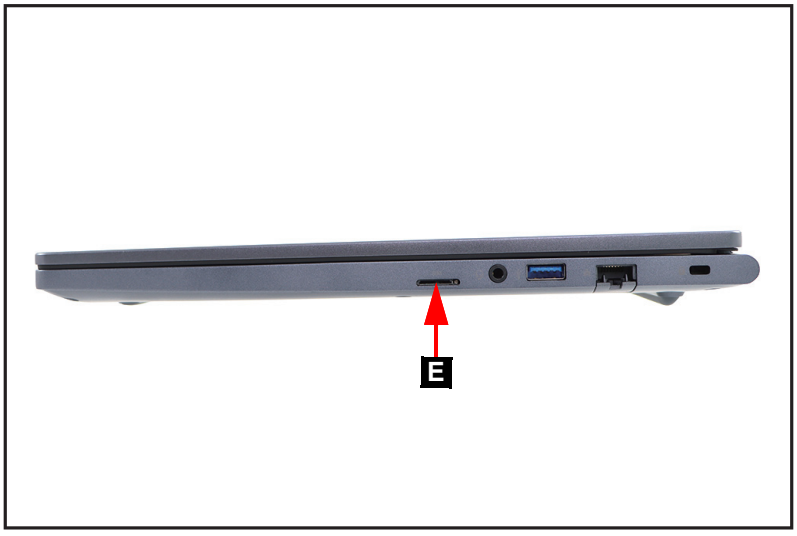


Figure 1-3. SIM Card Removal

NOTE:

Make sure the system is completely powered off.

Base Cover Removal

1. Remove ten (10) Torx screws from the base cover (Figure 1-4).

Figure 1-4. Base Cover Removal

2. Carefully pry up the base cover starting from the upper side closer to the hinge caps to release the latches. Then continue releasing the remaining latches on the left, right, and bottom sides (Figure 1-5).

Figure 1-5. Base Cover Removal

3. Grasp and remove the base cover from the system (Figure 1-6).

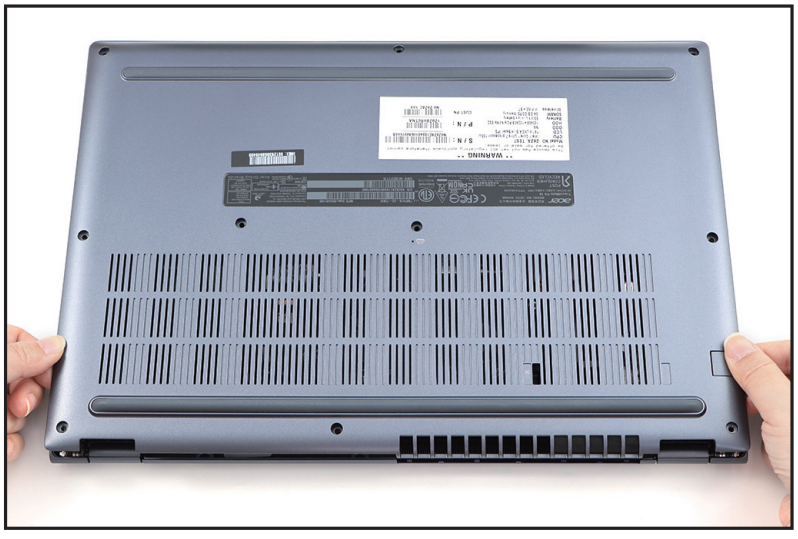


Figure 1-6. Base Cover Removal

Battery Pack Removal

Prerequisite:

Base Cover Removal

1. Detach the mylar (A) as shown in Figure 1-7.

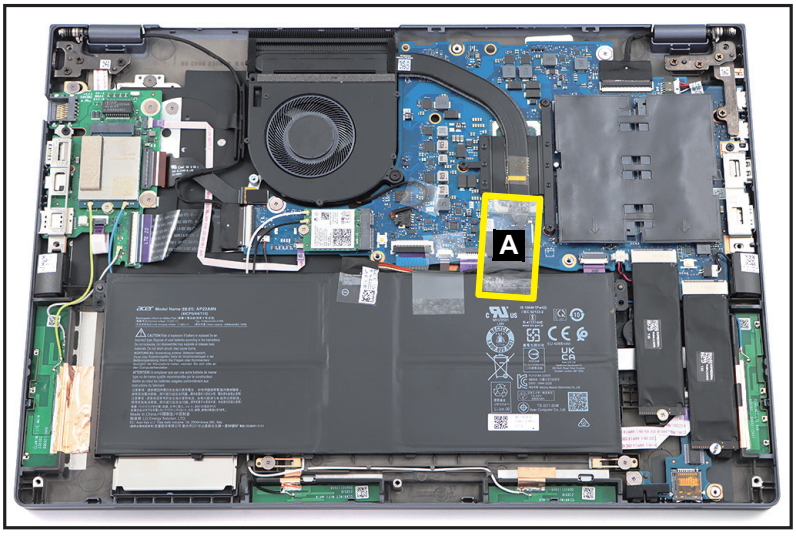


Figure 1-7. Battery Pack Removal

2. Detach the tape (B) securing the battery cable connection (Figure 1-8).

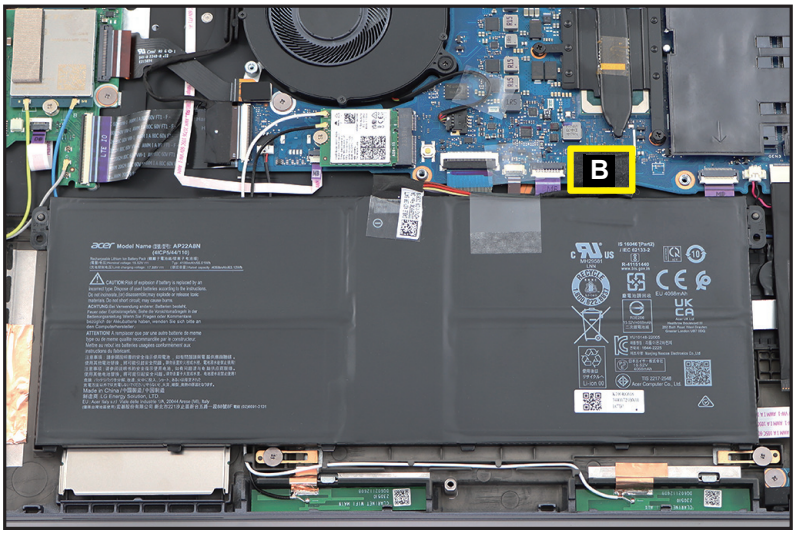


Figure 1-8. Battery Pack Removal

3. Disconnect the battery cable from the mainboard connector (C) (Figure 1-9).

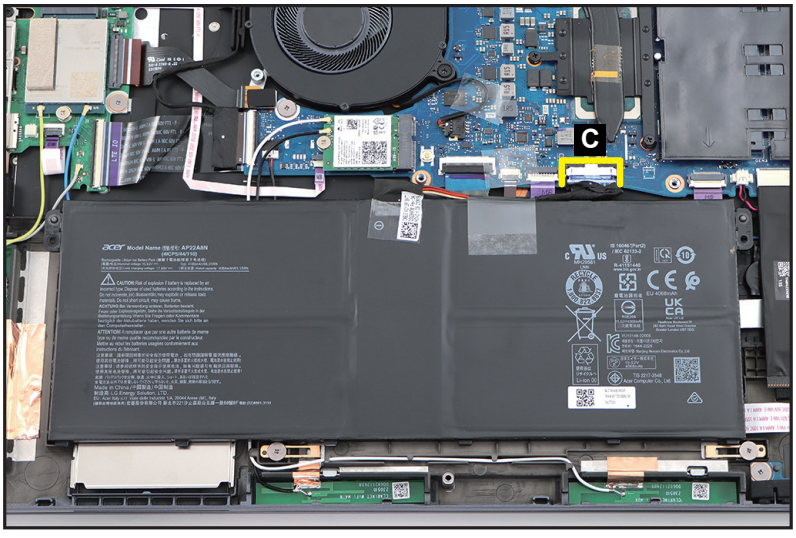


Figure 1-9. Battery Pack Removal

4. Lift to release the battery pack (D) from the guide pins (E) and compartment studs (highlighted with the green lines) (Figure 1-10). Then remove the battery pack.

Figure 1-10. Battery Pack Removal

5. Detach the mylar (F) securing the battery cable to the battery pack. Then detach another mylar (G) securing the battery cable connection (Figure 1-11).

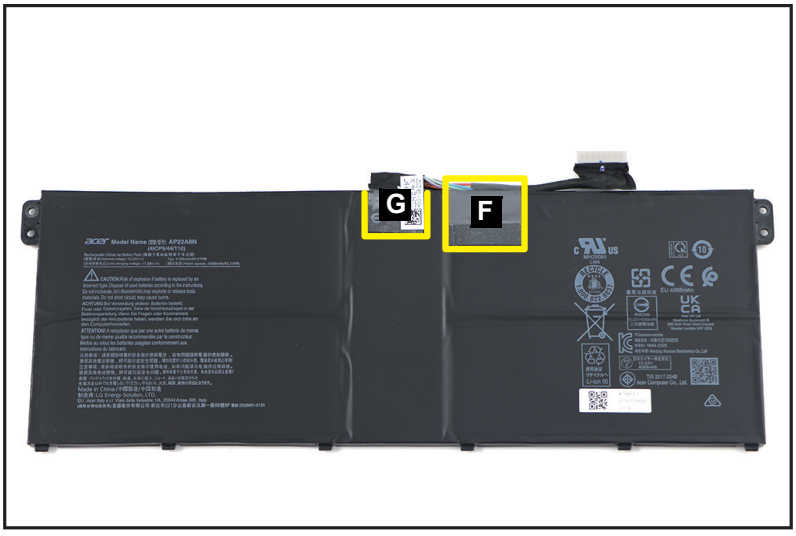


Figure 1-11. Battery Pack Removal

6. Disconnect the battery cable from the battery connector (H) (Figure 1-12). Then remove the battery cable.

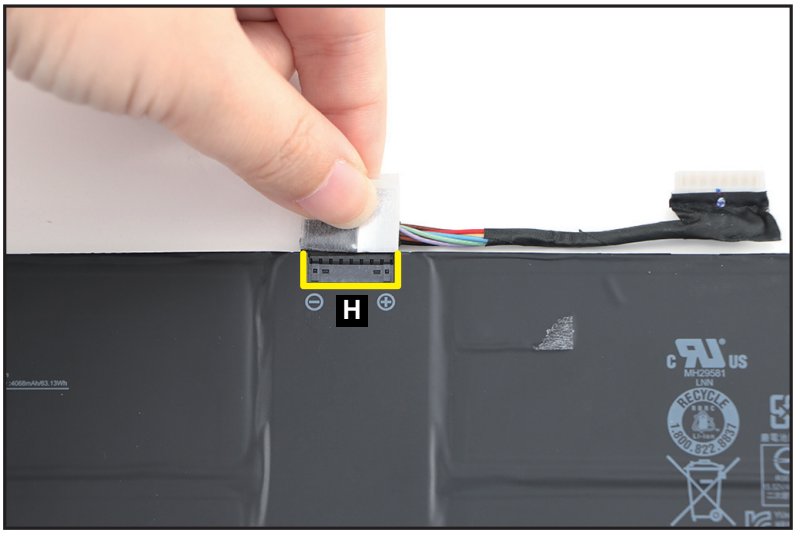


Figure 1-12. Battery Pack Removal

IMPORTANT:

Follow local regulations for battery disposal.

LCD Module Removal

Prerequisite:

Battery Pack Removal

1. Disconnect the sensor cable from the mainboard connector (A). Then detach the tape (B)and unroute the cable from the cable guides as shown in Figure 1-13.

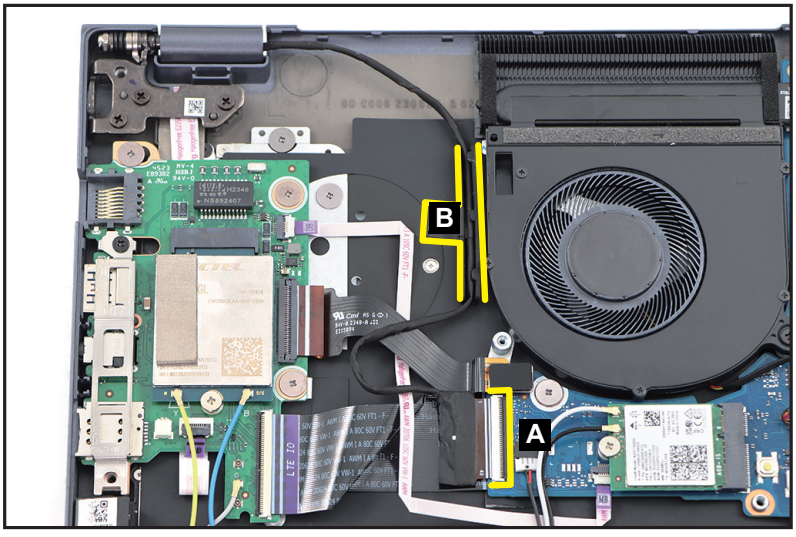


Figure 1-13. LCD Module Removal

2. Disconnect the LCD cable from the mainboard connector (B) (Figure 1-14).

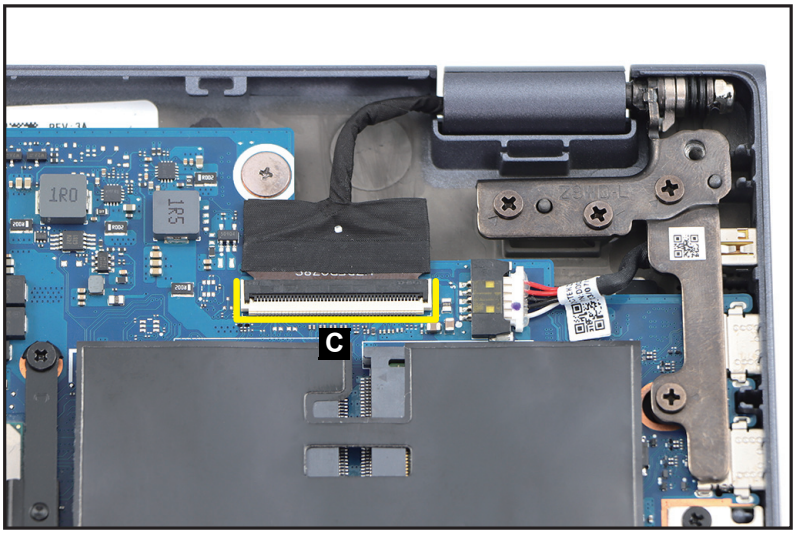


Figure 1-14. LCD Module Removal

3. Remove seven (7) screws securing the LCD hinges (Figure 1-15).

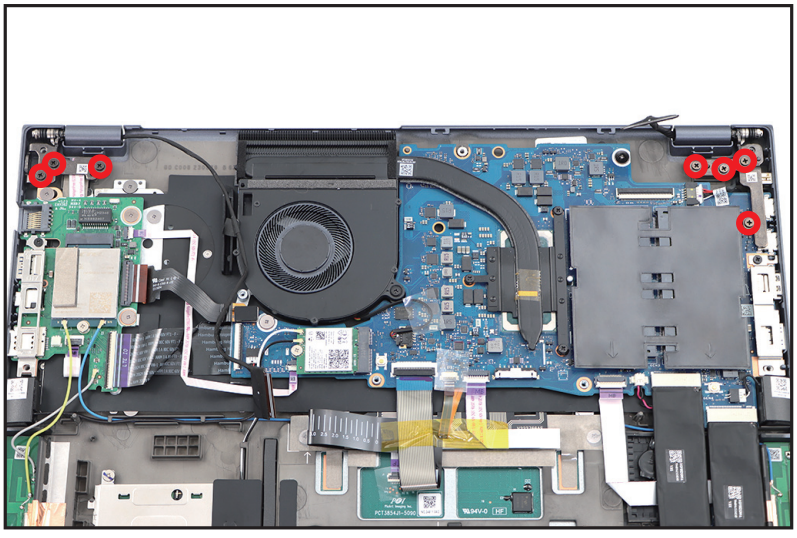


Figure 1-15. LCD Module Removal

4. Lift the top assembly until it is fully open (Figure 1-16).

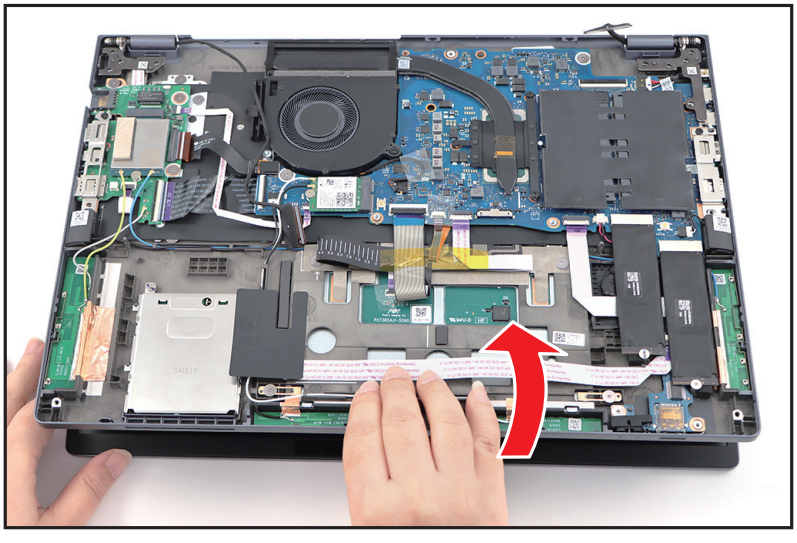


Figure 1-16. LCD Module Removal

5. Close the top assembly and lift both LCD hinges until they are fully extended (Figure 1-17).

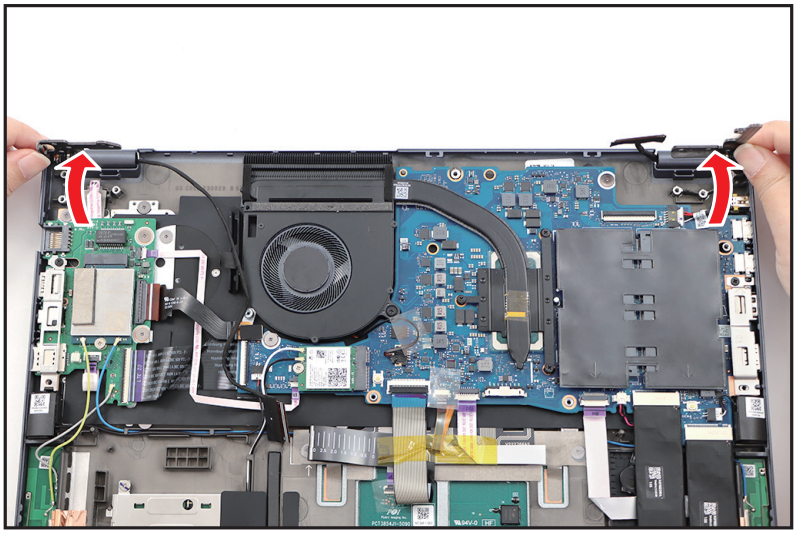


Figure 1-17. LCD Module Removal

6. Open the top assembly again. Then remove the LCD module (D) away from the top assembly (Figure 1-18).

⚠ CAUTION:

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

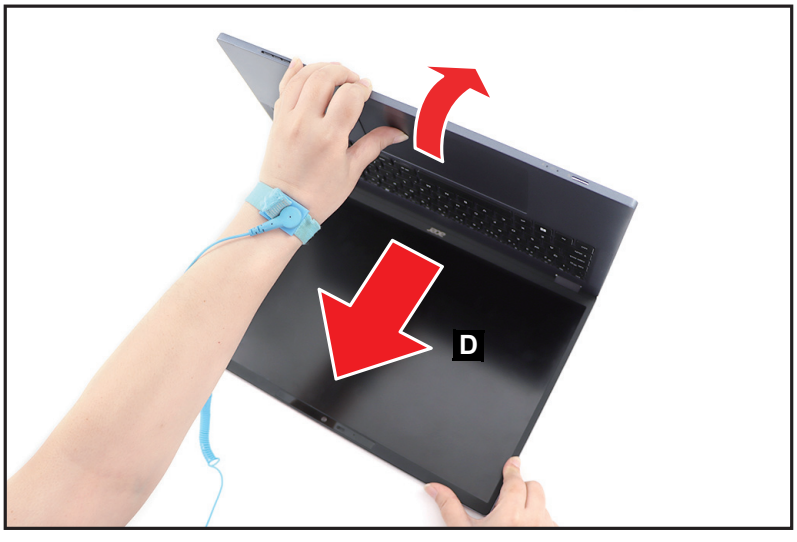


Figure 1-18. LCD Module Removal

LTE Module Removal (LTE SKU Only)

Prerequisite:

Battery Pack Removal

1. Detach the gasket (A) from the LTE module (Figure 1-19).

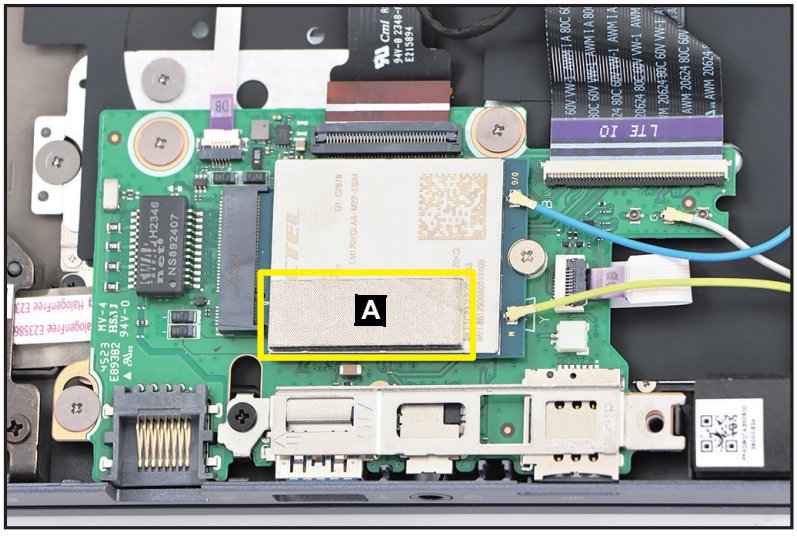


Figure 1-19. LTE Module Removal

2. Disconnect the LTE antennas cables from the LTE module connectors (B) (Figure 1-20).
3. Remove one (1) screw securing the LTE module (Figure 1-20).

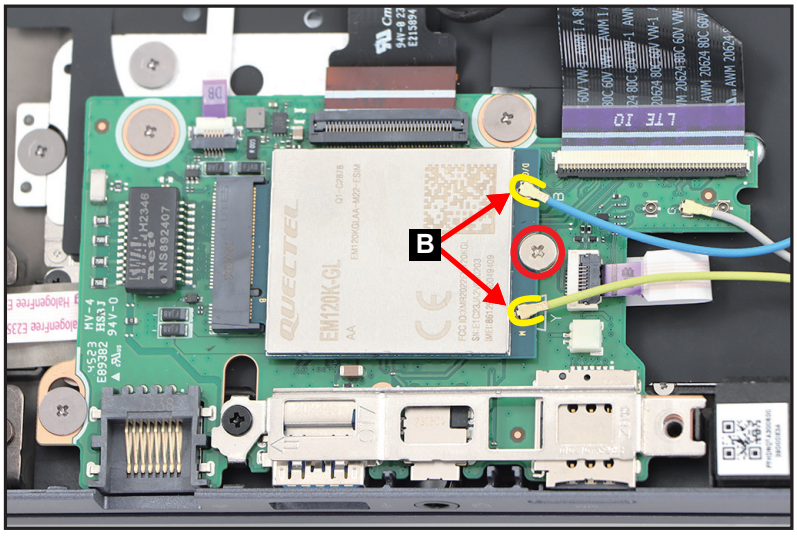


Figure 1-20. LTE Module Removal

4. Disconnect the LTE module (C) from the mainboard connector (D) (Figure 1-21). Then remove the LTE module.

Figure 1-21. LTE Module Removal

WLAN Module Removal

Prerequisite:

Battery Pack Removal

1. Find the WLAN module (A) on the top assembly (Figure 1-22).

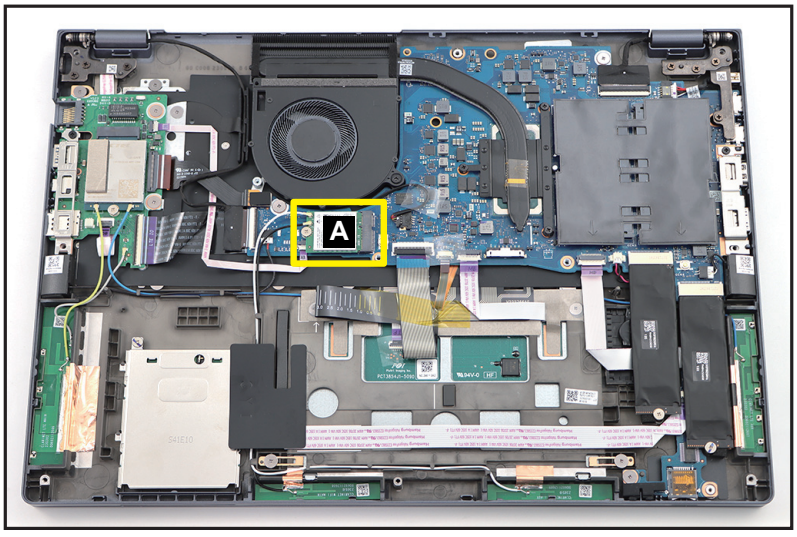


Figure 1-22. WLAN Module Location

2. Disconnect the WLAN antennas cables from the WLAN module connectors (B) (Figure 1-23).
3. Remove one (1) screw securing the WLAN module in place (Figure 1-23).

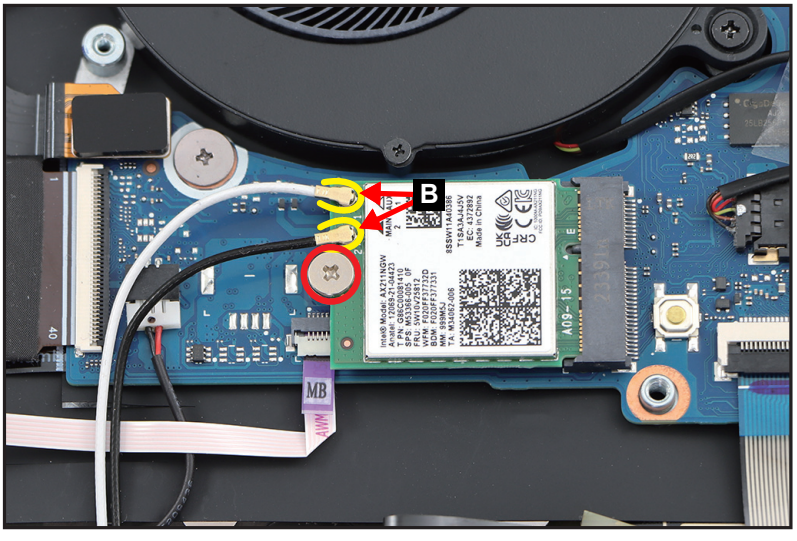


Figure 1-23. WLAN Module Removal

4. Disconnect the WLAN module from the mainboard connector (C) (Figure 1-24). Then remove the WLAN module.

Figure 1-24. WLAN Module Removal

DIMM Modules Removal

Prerequisite:

Battery Pack Removal

1. Detach the absorber with mylar (A) covering the DIMM modules (Figure 1-25).

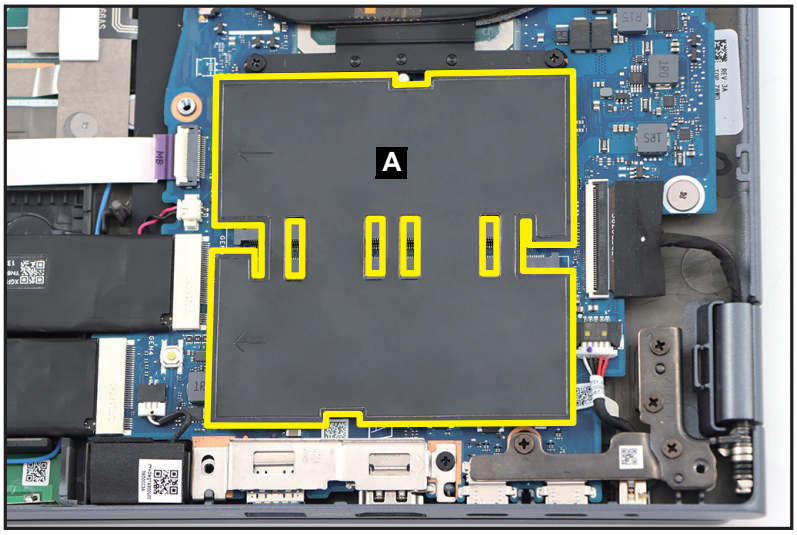


Figure 1-25. DIMM Module Removal

2. Push the DIMM module clips (B) outwards (Figure 1-26).

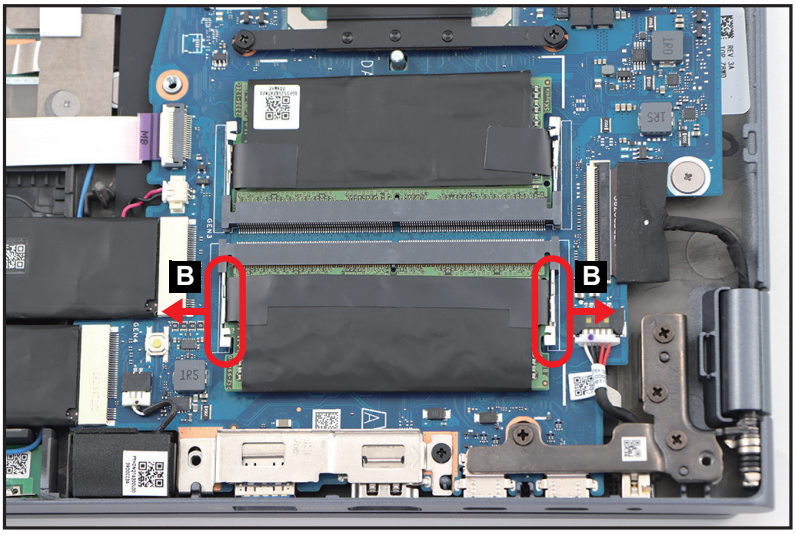


Figure 1-26. DIMM Module Removal

3. Disconnect the DIMM module (C) from the mainboard connector (D) (Figure 1-27). Then remove the DIMM module.

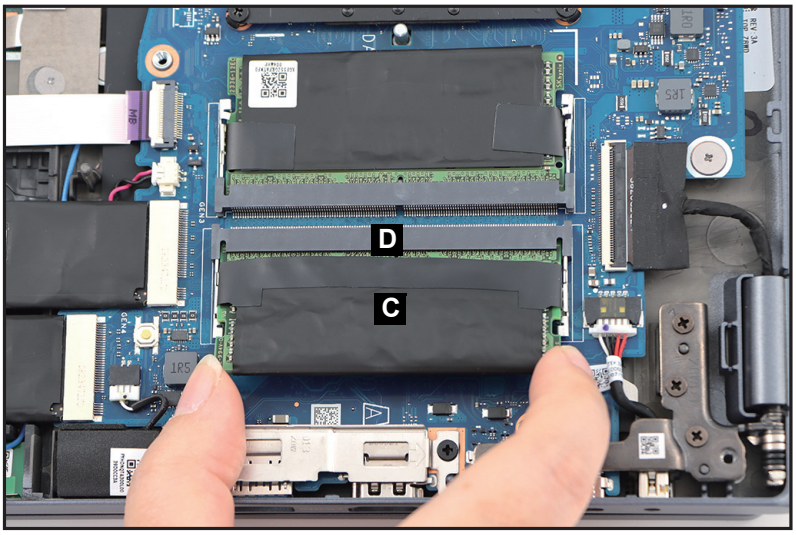


Figure 1-27. DIMM Module Removal

4. Repeat steps 2~3 to remove another DIMM module.
5. Detach the tabs (E) of the composite foil with thermal pad from the DIMM module as shown in Figure 1-28.

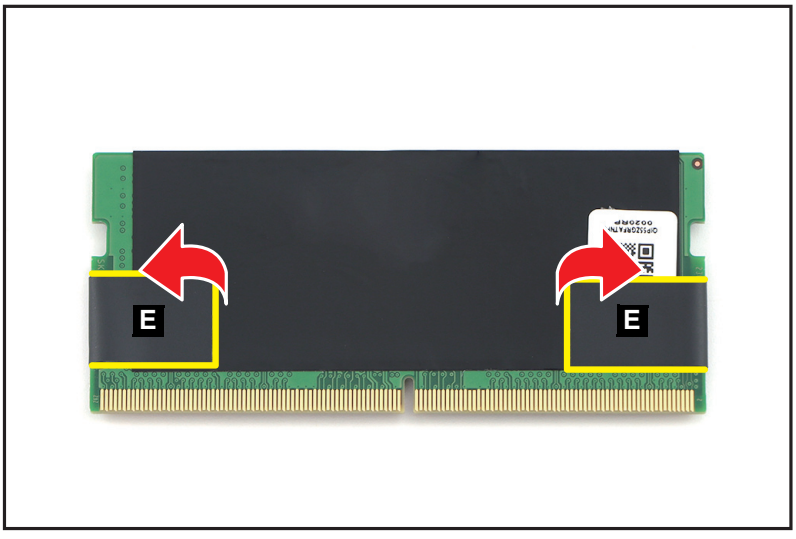


Figure 1-28. DIMM Module Removal

6. Peel off the composite foil with thermal pad (F) from the DIMM module (Figure 1-29).

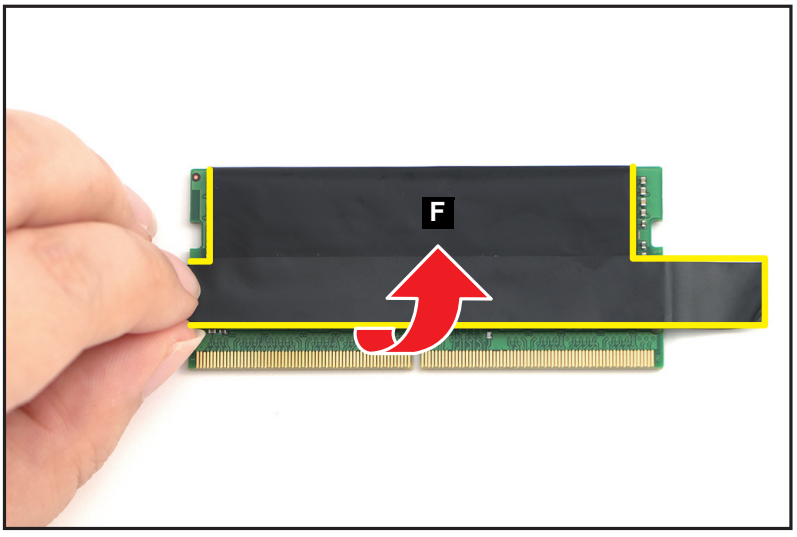


Figure 1-29. DIMM Module Removal

7. Detach the DIMM module from the adhesive graphite strip (marked with yellow dashed line) as shown in Figure 1-30.

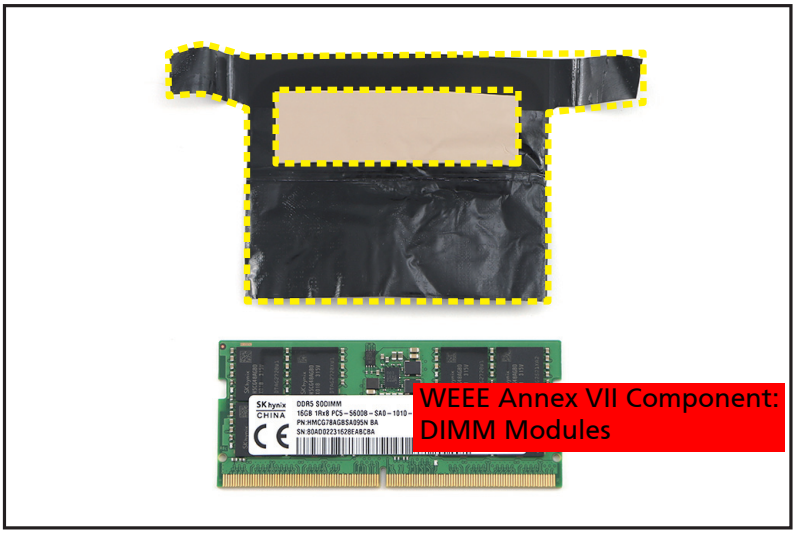


Figure 1-30. DIMM Module Removal

8. Repeat steps 5~7 to remove the composite foil with thermal pad from another DIMM module.

SSD Modules Removal

Prerequisite:

Battery Pack Removal

1. Find the SSD modules (A) on the top assembly (Figure 1-31).

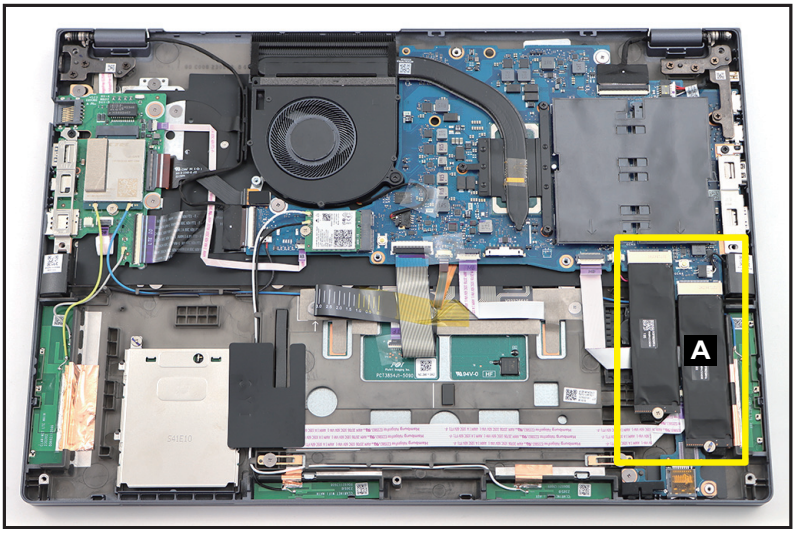


Figure 1-31. SSD Modules Location

2. Remove one (1) screw securing the SSD module (Figure 1-32).

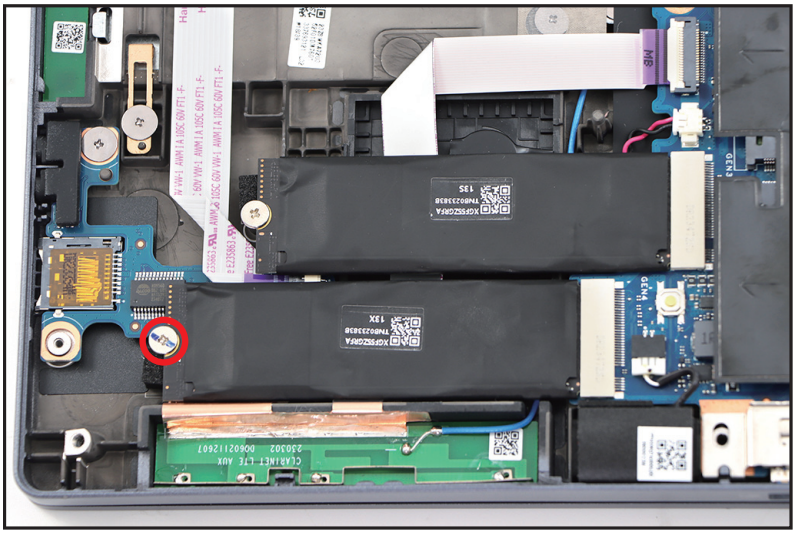


Figure 1-32. SSD Module Removal

3. Disconnect the SSD module from the mainboard connector (B) (Figure 1-33). Then remove the SSD module.

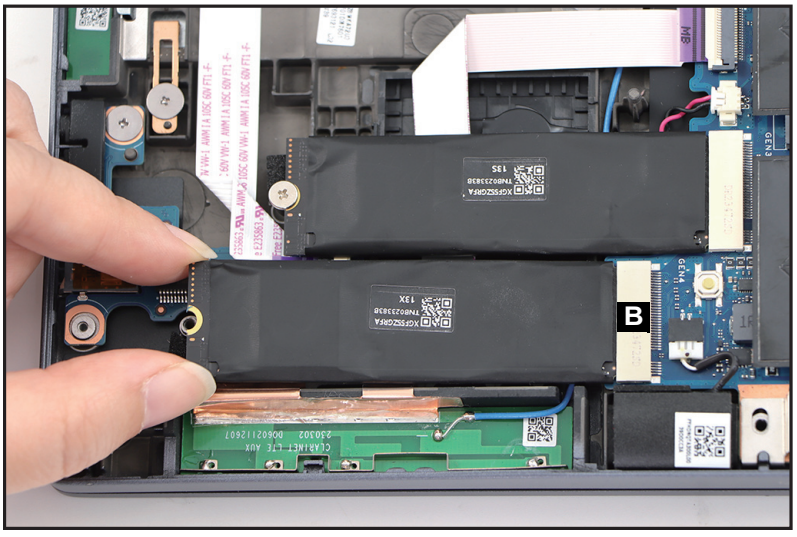


Figure 1-33. SSD Module Removal

4. Repeat steps 2~3 to remove another SSD module.
5. By holding the upper edge of the copper foil with mylar (C), unfold and detach it from the SSD module as shown in Figure 1-34 and Figure 1-35 but DO NOT remove yet!

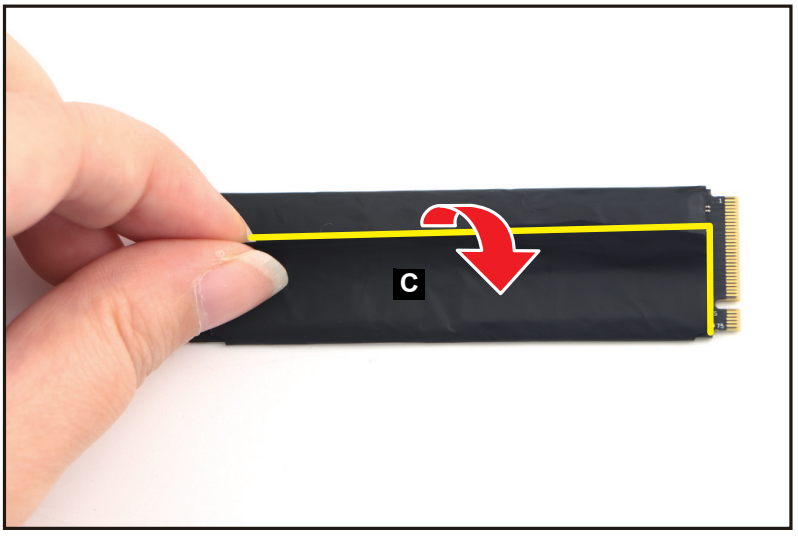


Figure 1-34. SSD Module Removal

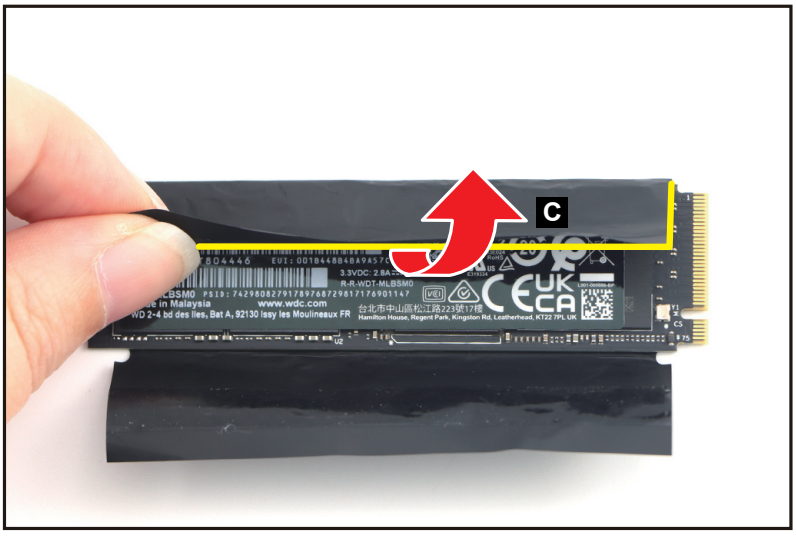


Figure 1-35. SSD Module Removal

6. Detach the SSD module from the adhesive graphite strip (marked with yellow dashed line) as shown in Figure 1-36.

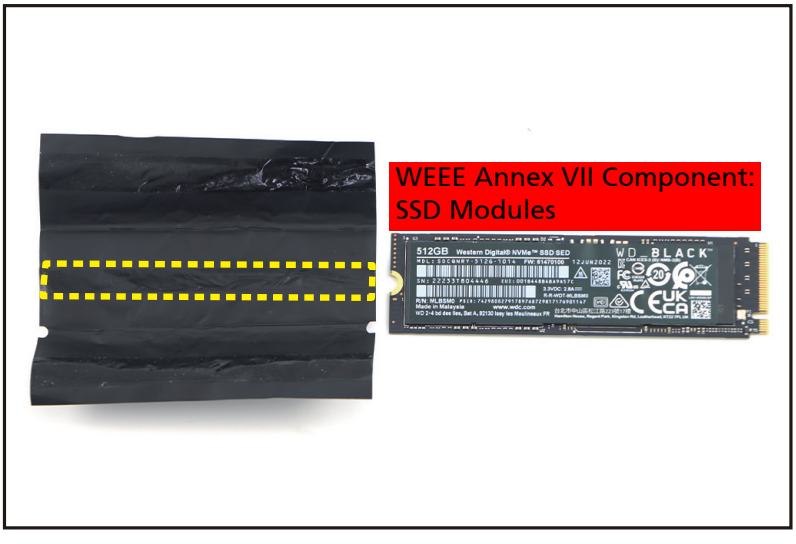


Figure 1-36. SSD Module Removal

7. Repeat steps 5~6 to remove the copper foil with mylar from another SSD module.

Touchpad Module Removal

Prerequisite:

Battery Pack Removal

1. Detach the kapton tape (A) and the mylar (B) securing the cables in place (Figure 1-37).

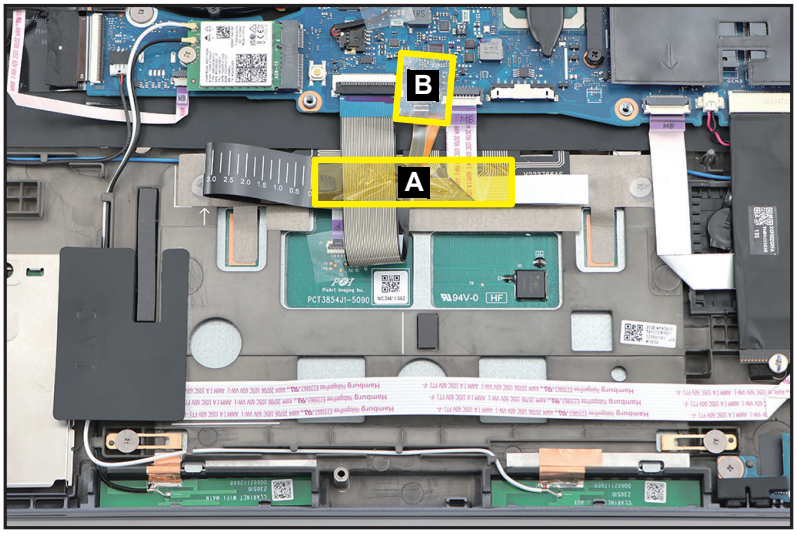


Figure 1-37. Touchpad Module Removal

2. Disconnect the touchpad FFC from the mainboard connector (C) (Figure 1-38).

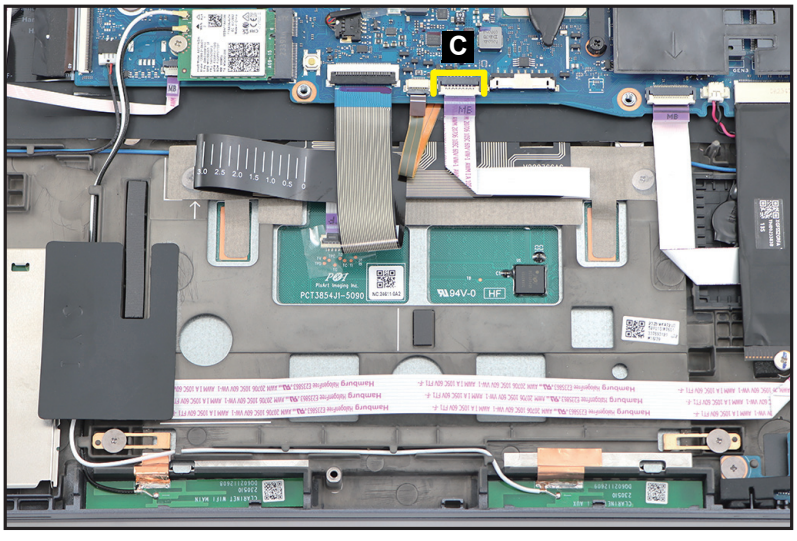


Figure 1-38. Touchpad Module Removal

⚠ CAUTION:

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

3. Slightly detach and lift the mylar. Then detach the mylar (D) securing the touchpad FFC connection (Figure 1-39).

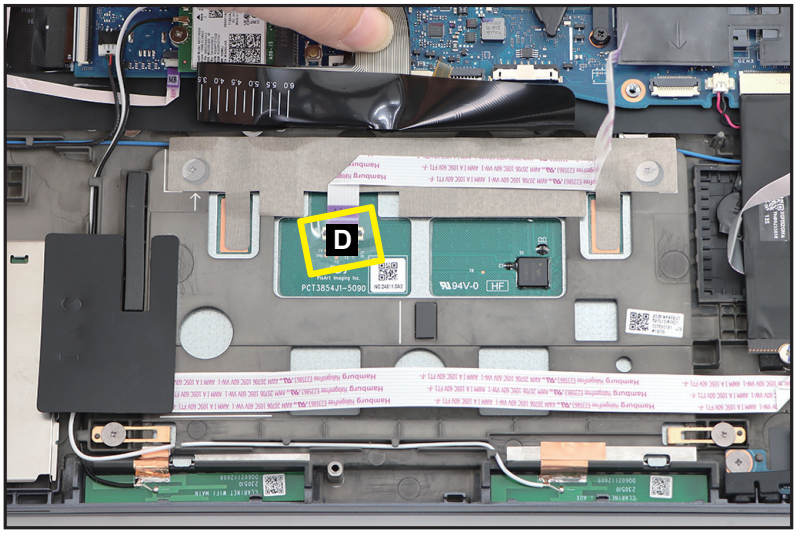


Figure 1-39. Touchpad Module Removal

4. Disconnect the touchpad FFC from the touchpad module connector (E). Then detach the middle portion (highlighted with the yellow lines) of the touchpad FFC from its underneath adhesive (Figure 1-40). Remove the FFC.

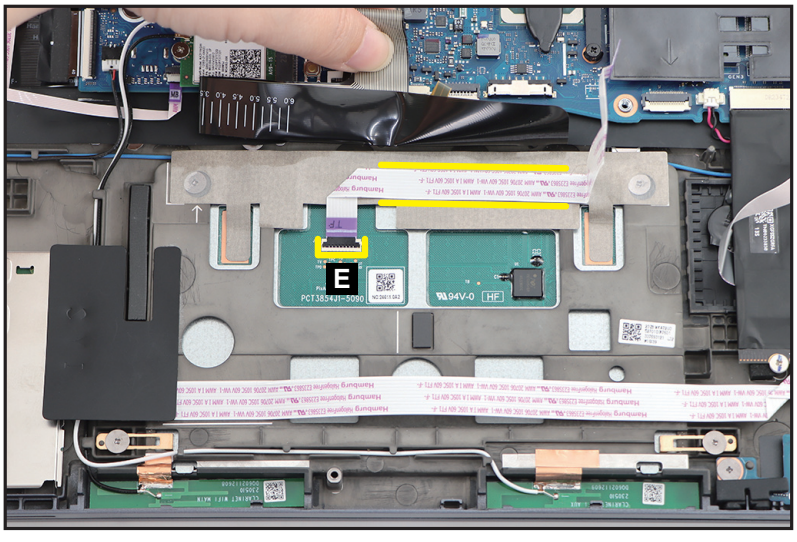


Figure 1-40. Touchpad Module Removal

⚠ CAUTION:

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

5. Detach the conductive tape (F) from the touchpad module and top assembly (Figure 1-41).

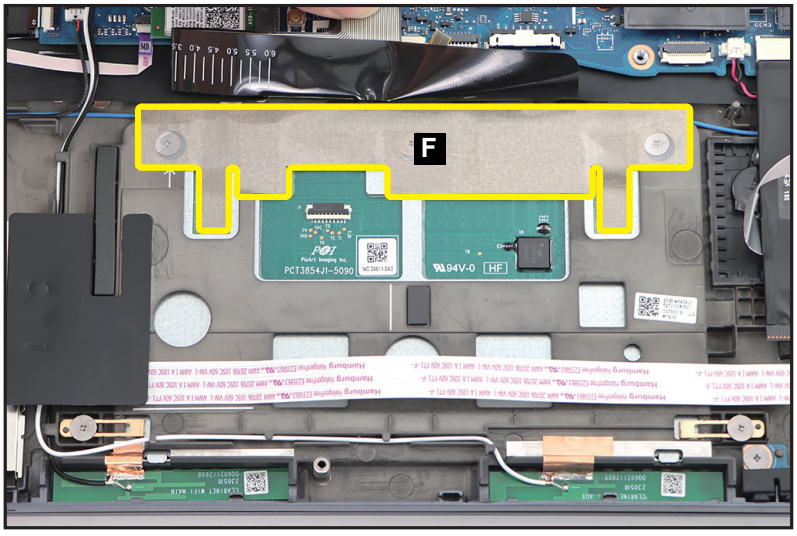


Figure 1-41. Touchpad Module Removal

6. Remove three (3) screws securing the touchpad module (Figure 1-42).

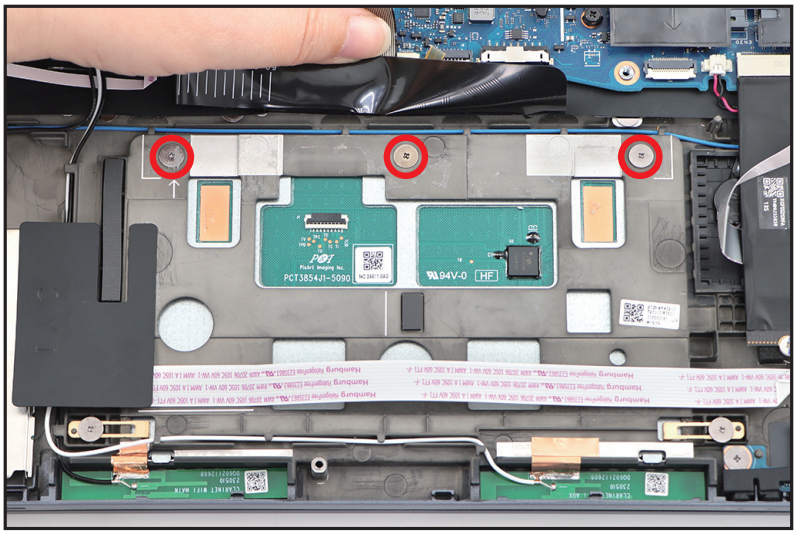


Figure 1-42. Touchpad Module Removal

7. Push the upper part of the touchpad module (G) and slide the touchpad module slightly to disengage it from the bottom latches (H) (Figure 1-43). Then remove the touchpad module from the top assembly.

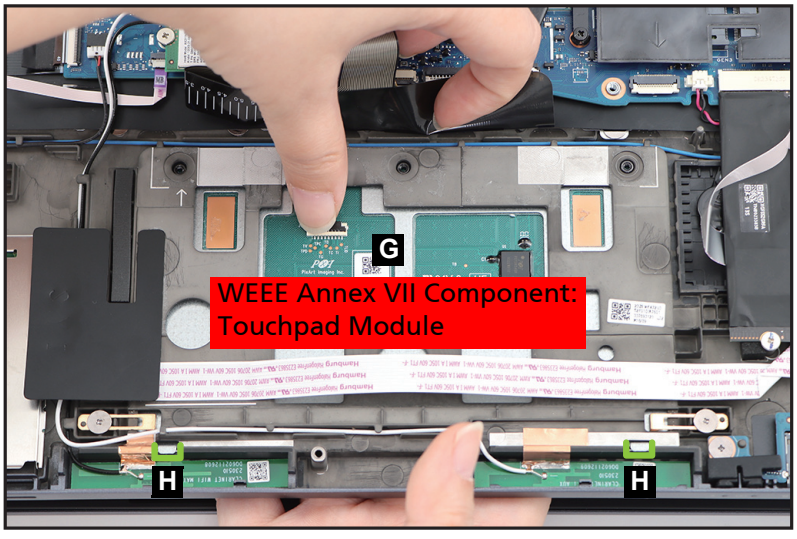


Figure 1-43. Touchpad Module Removal

LTE Board Removal (LTE SKU Only)

Prerequisite:

LTE Module Removal (LTE SKU Only) and WLAN Module Removal

1. Remove one (1) screw (A) securing the right I/O bracket in place (Figure 1-44).

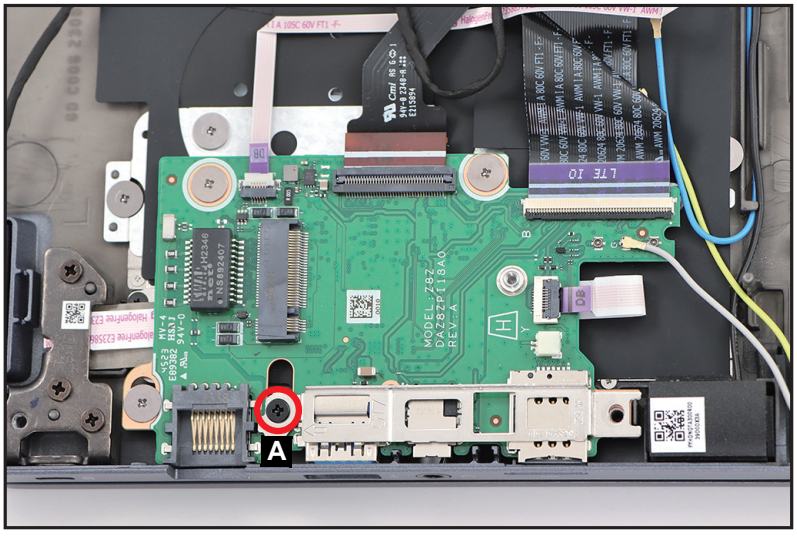


Figure 1-44. LTE Board Removal

2. Lift to release the I/O bracket (B) from the compartment studs (highlighted with the green line and circle) (Figure 1-45). Then remove the bracket.

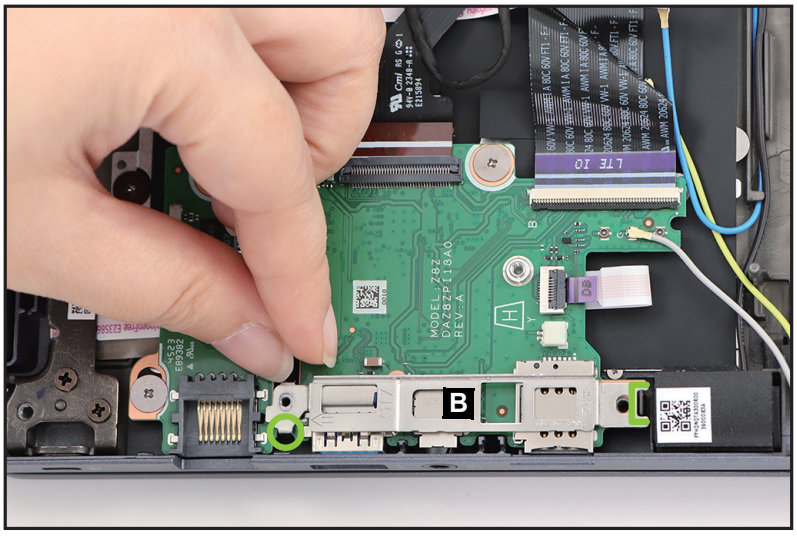


Figure 1-45. LTE Board Removal

3. Disconnect the sensor cable from the mainboard connector (C) (Figure 1-46).
4. Disconnect the LTE board FFC from the LTE board connector (D) (Figure 1-46).
5. Disconnect the fingerprint FFC from the LTE board connector (E) (Figure 1-46).
6. Disconnect the LTE antenna cable from the LTE board connector (F) (Figure 1-46).

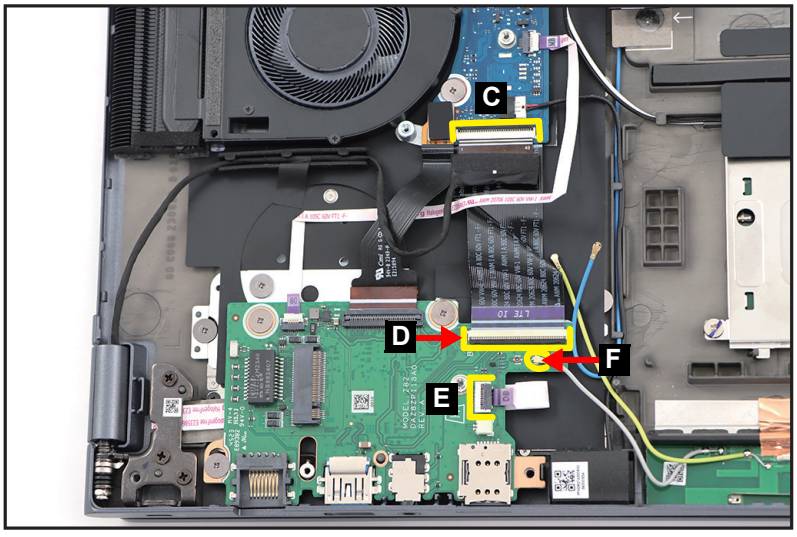


Figure 1-46. LTE Board Removal

⚠ CAUTION:

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

7. Disconnect the LTE board FPC (G) from the LTE board and mainboard connectors (Figure 1-47). Then remove the LTE board FPC.

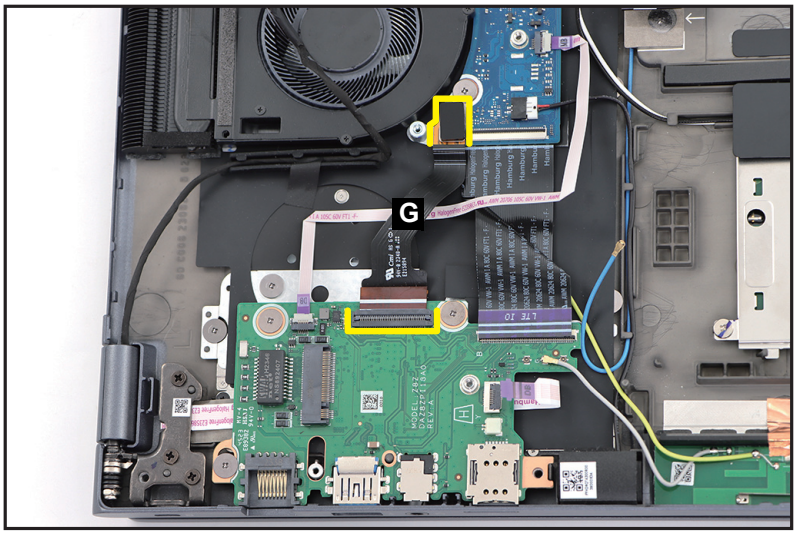


Figure 1-47. LTE Board Removal

⚠ CAUTION:

LTE board FPC (Flexible Printed Circuit) can be damaged if removed while the LTE board and mainboard connectors are locked.

8. Disconnect the P-sensor FFC (H) from the LTE board and mainboard connectors. Then carefully detach the FFC from its underneath adhesive (highlighted by the yellow lines) (Figure 1-48). Remove the P-sensor FFC.
9. Remove three (3) screws (I) securing the LTE board (Figure 1-48).

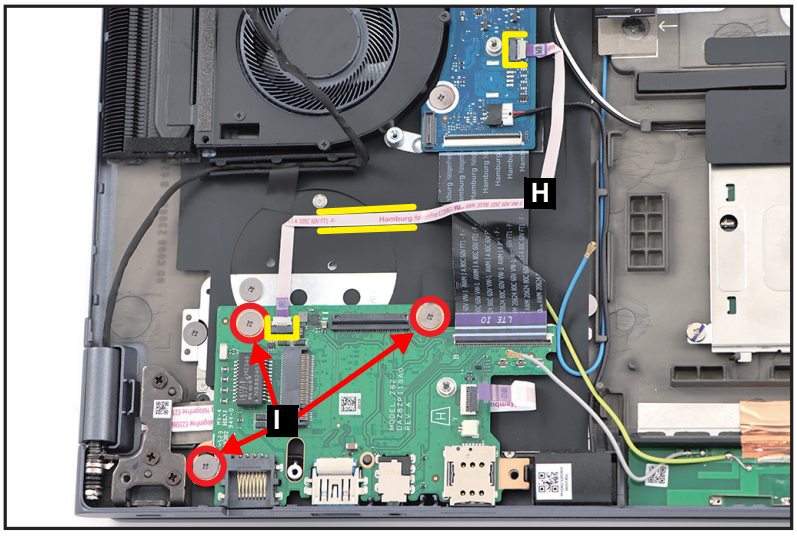


Figure 1-48. LTE Board Removal

⚠ CAUTION:

P-sensor FFC FFC (Flexible Flat Circuit) can be damaged if removed while the LTE board and mainboard connectors are locked.

10. Release the LTE board (J) from the I/O port slots, guide pin (K), and guide stud (highlighted by purple line, closer to the speaker) (Figure 1-49). Then remove the LTE board.

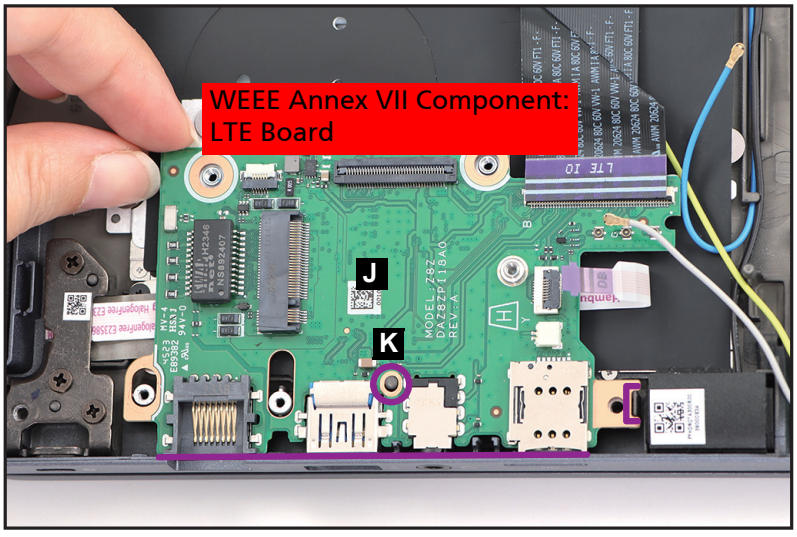


Figure 1-49. LTE Board Removal

LED Board Removal

Prerequisite:

SSD Modules Removal

1. Detach the rubber (A) from the LED board (Figure 1-50).

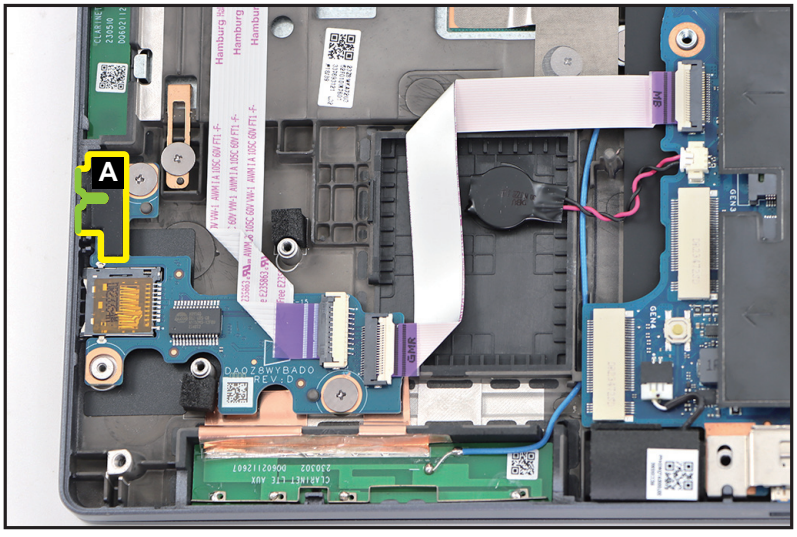


Figure 1-50. LED Board Removal

2. Disconnect the smart card reader FFC from the LED board connector (B) (Figure 1-51).
3. Disconnect the LED board FFC (C) from the LED board and mainboard connectors (Figure 1-51). Then remove the FFC.
4. Remove two (2) screws securing the LED board (Figure 1-51).

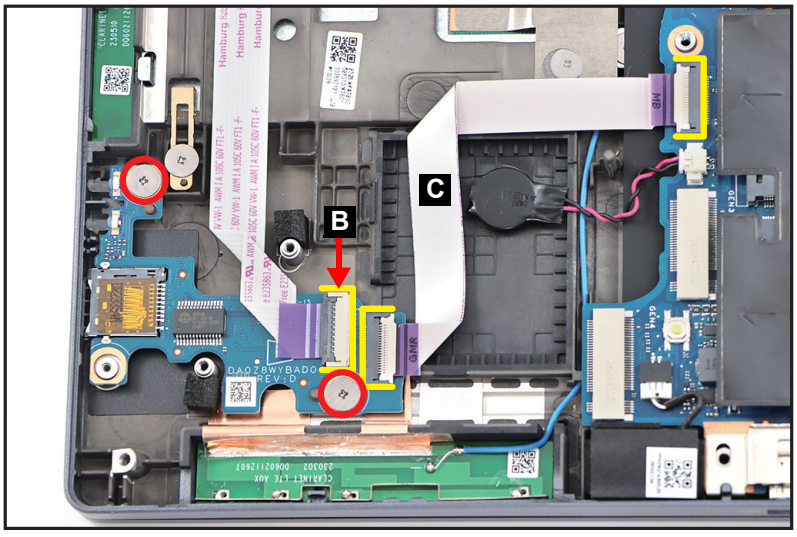


Figure 1-51. LED Board Removal

⚠ CAUTION:

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

5. Release the LED board (D) from the card reader slot and guide pins (E) (Figure 1-52). Then remove the LED board.

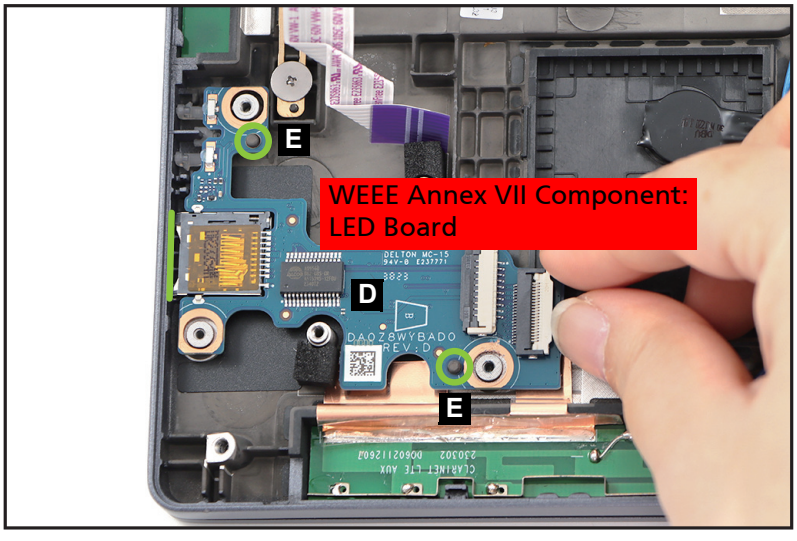


Figure 1-52. LED Board Removal

RTC Battery Removal

Prerequisite:

SSD Modules Removal

1. Disconnect the RTC battery cable from the mainboard connector (A) (Figure 1-53).
2. Using plastic tweezers, carefully pry to detach the adhesive tape underneath the RTC battery (B) (Figure 1-53). Then remove the RTC battery.

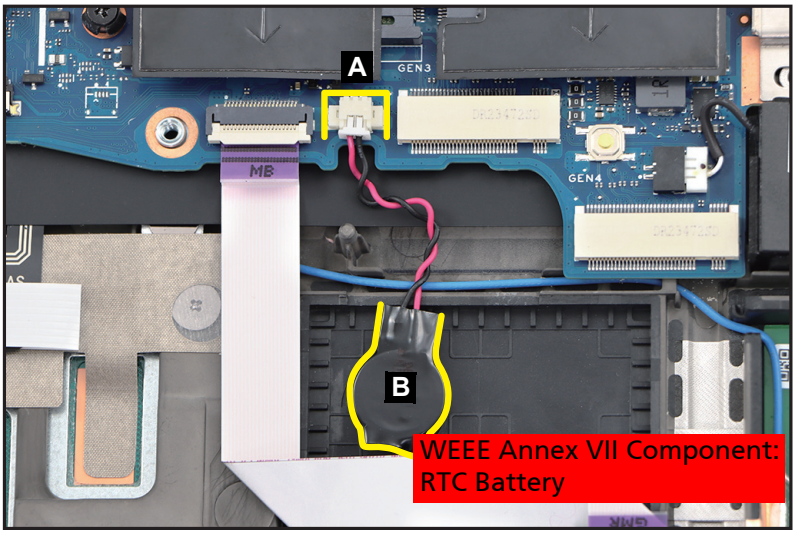


Figure 1-53. RTC Battery Removal

IMPORTANT:

Follow local regulations for battery disposal.

Mainboard Removal

Prerequisite:

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

1. Detach the kapton tape (A) and the mylar (B) securing the cables in place (Figure 1-54).

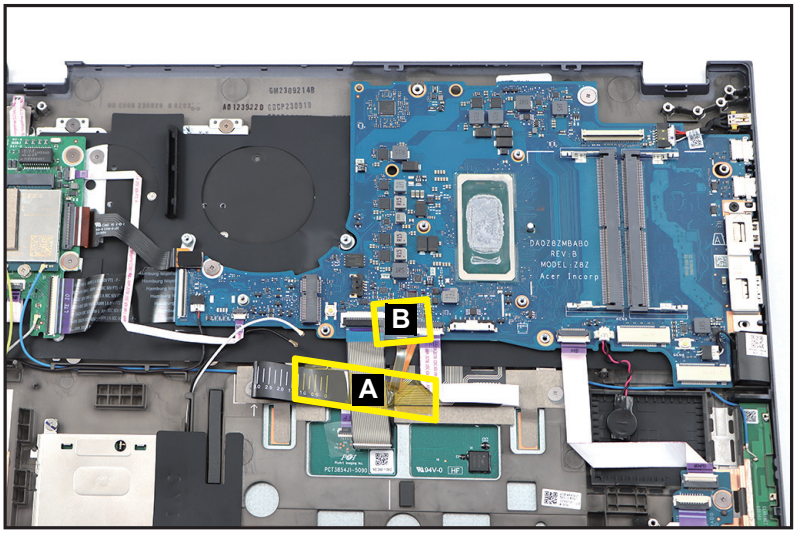


Figure 1-54. Mainboard Removal

2. Disconnect the LTE board FFC from the LTE board connector (C) (Figure 1-55).
3. Disconnect the LTE board FPC from the mainboard connector (D) (Figure 1-55).
4. Disconnect the right speaker cable from the mainboard connector (E) (Figure 1-55).
5. Disconnect the P-sensor FFC from the mainboard connector (F) (Figure 1-55).
6. Disconnect the keyboard FPC from the mainboard connector (G) (Figure 1-55).
7. Disconnect the keyboard backlight FPC from the mainboard connector (H) (Figure 1-55).
8. Disconnect the touchpad FFC from the mainboard connector (I) (Figure 1-55).
9. Disconnect the LED board FFC from the mainboard connector (J) (Figure 1-55).
10. Pry to detach the adhesive tape underneath the RTC battery (K) (Figure 1-55).
11. Disconnect the left speaker cable from the mainboard connector (L) (Figure 1-55).
12. Disconnect the DC-IN cable from the mainboard connector (M) (Figure 1-55).

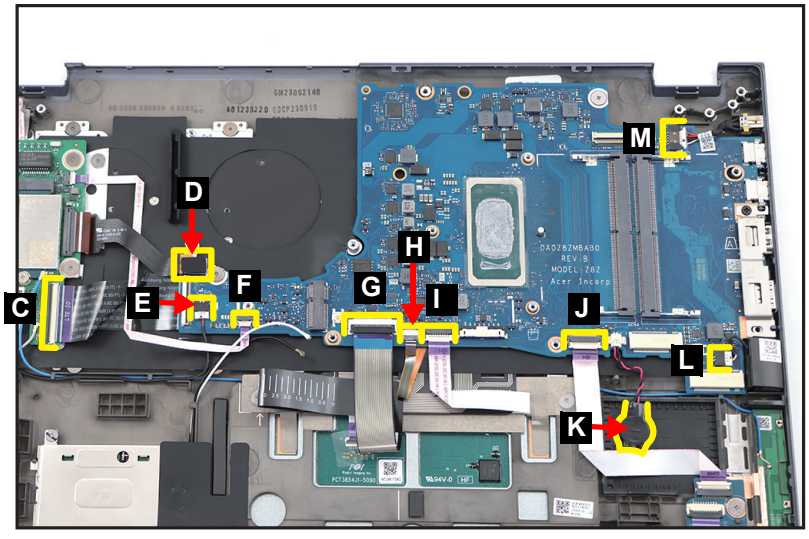


Figure 1-55. Mainboard Removal

⚠ CAUTION:

LTE board FFC (Flexible Flat Circuit), P-sensor FFC, touchpad FFC, LED board FFC, LTE board FPC (Flexible Printed Circuit), keyboard FPC, and keyboard backlight FPC, can be damaged if removed while the mainboard and LTE board connectors are locked.

13. Remove one (1) screw (K) securing the left I/O bracket (Figure 1-56).

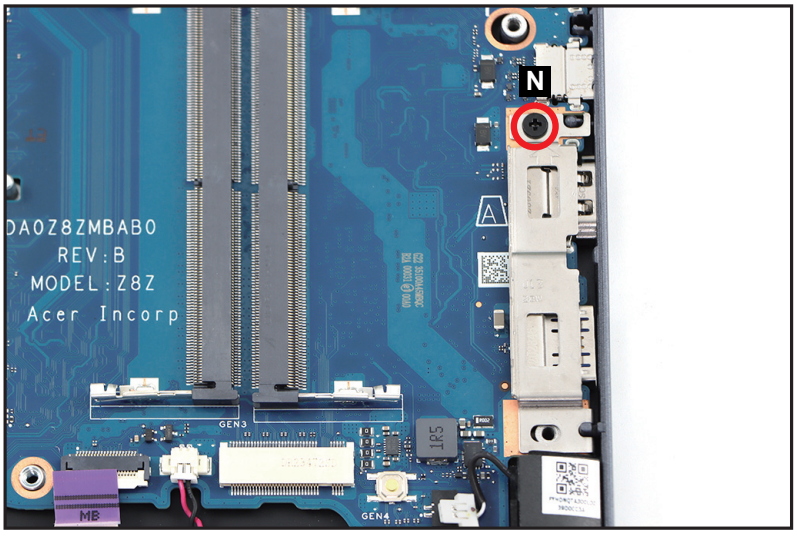


Figure 1-56. Mainboard Removal

14. Lift to release the left I/O bracket (O) from the compartment studs (highlighted with the green line and circle) (Figure 1-57). Then remove the bracket.

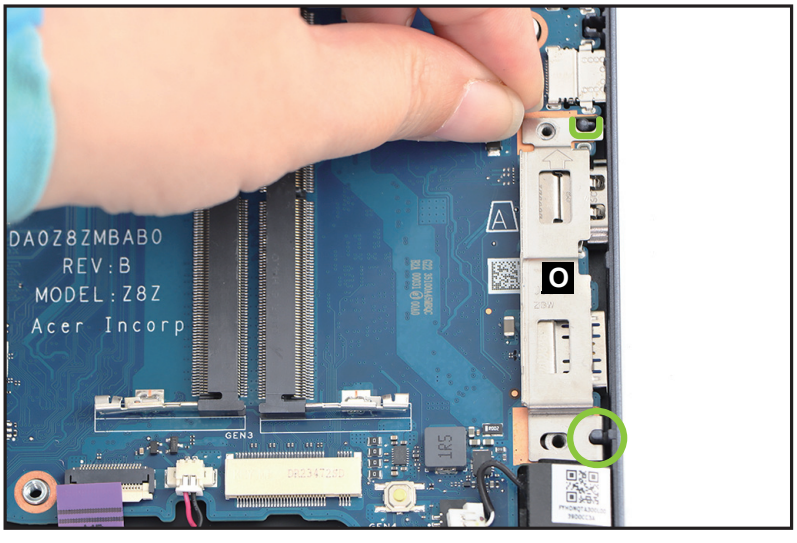


Figure 1-57. Mainboard Removal

15. Remove two (2) screws (P) securing the mainboard in place (Figure 1-58).

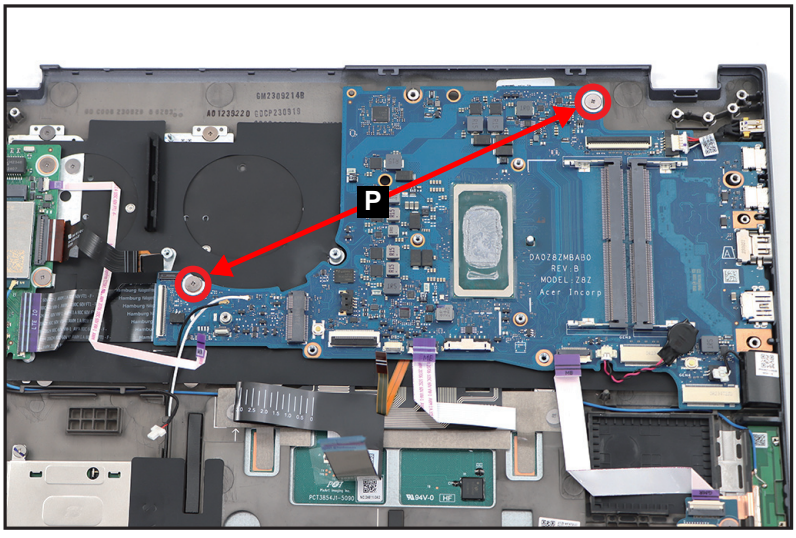


Figure 1-58. Mainboard Removal

16. Release the mainboard (Q) from the I/O ports slots and guide pin (R) on the top assembly (Figure 1-59). Then remove the mainboard.

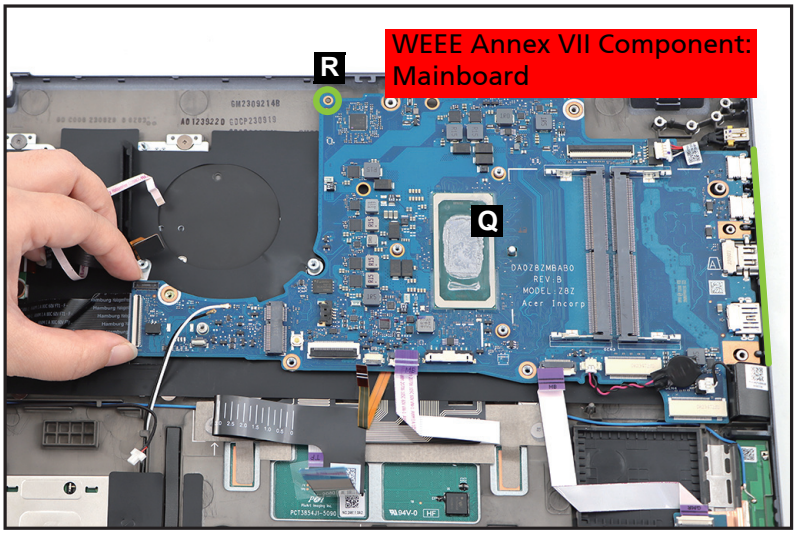


Figure 1-59. Mainboard Removal

17. Flip the mainboard. Then detach the tape (S) securing the LTE board FFC connection (Figure 1-60).

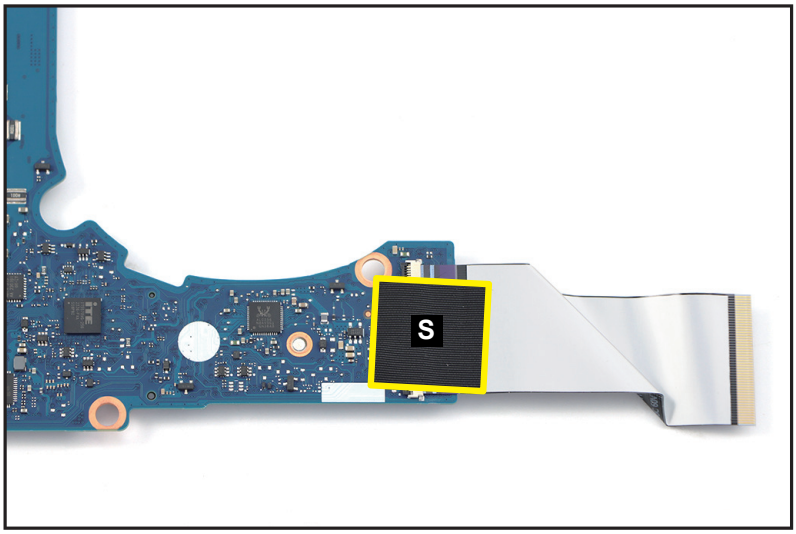


Figure 1-60. Mainboard Removal

18. Disconnect the other end of the LTE board FFC from the mainboard connector (T) (Figure 1-61). Remove the FFC.

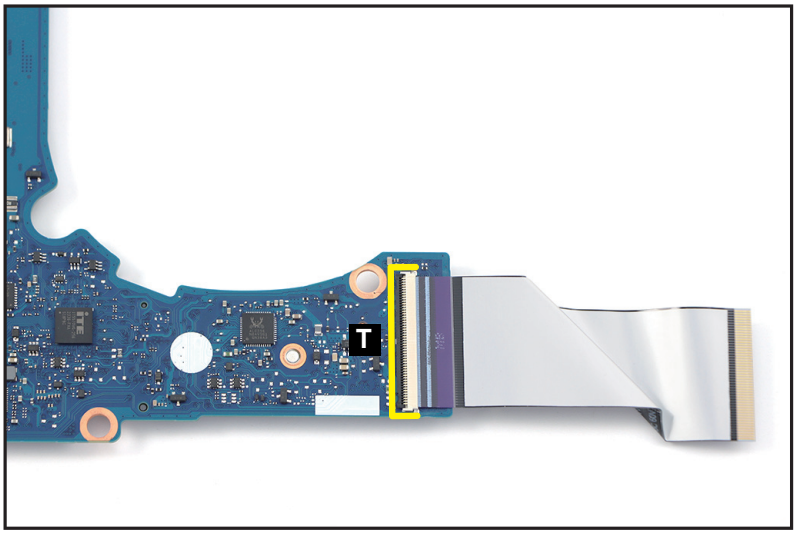


Figure 1-61. Mainboard Removal

⚠ CAUTION:

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

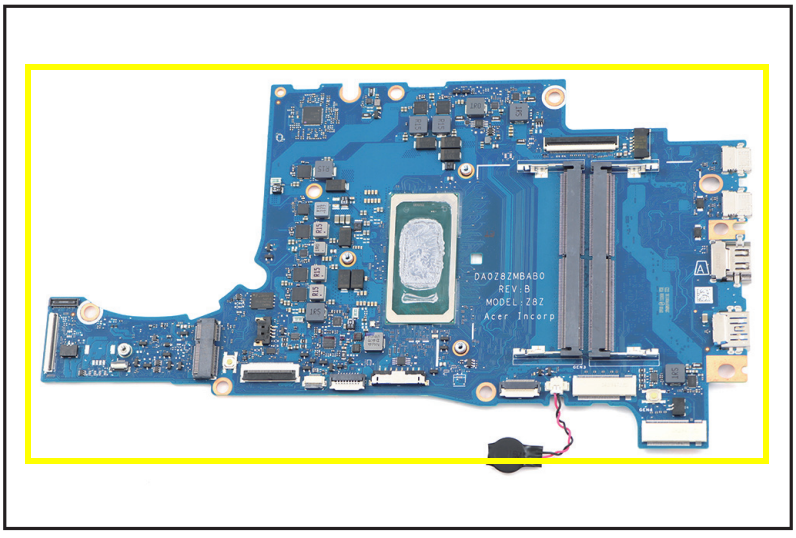


Figure 1-62. Mainboard

IMPORTANT:

Circuit boards >10 cm² have been highlighted with a yellow rectangle as shown in Figure 1-62. 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 1-63).

Figure 1-63. LCD Bezel Removal

2. Pry the LCD bezel from the right side to release the latches (Figure 1-64).

Figure 1-64. LCD Bezel Removal

3. Continue prying along the left side of the bezel (Figure 1-65).

Figure 1-65. LCD Bezel Removal

4. Pry both LCD hinge caps as shown in Figure 1-66.

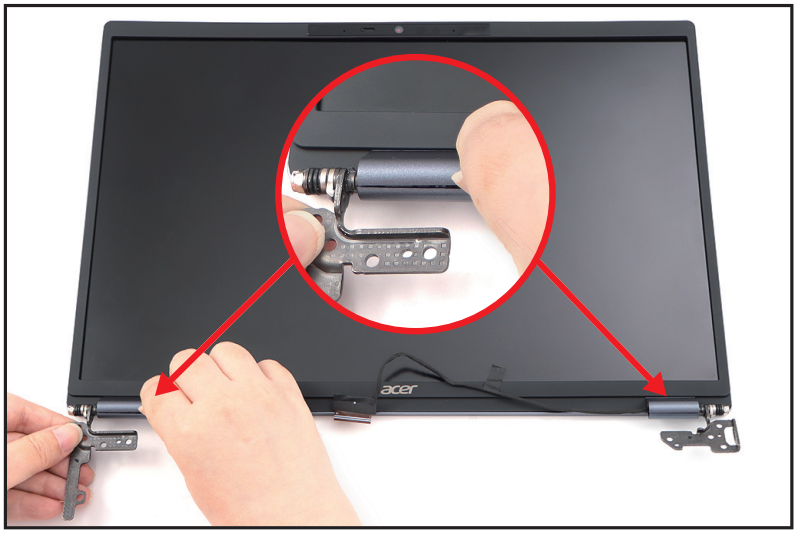


Figure 1-66. LCD Bezel Removal

5. Continue prying along the bottom side of the bezel until all the latches have been released (Figure 1-67). Then lift and remove the bezel from LCD module.

Figure 1-67. LCD Bezel Removal

LCD Panel Removal

Prerequisite:

LCD Bezel Removal

1. Unroute the LCD cable (A) from the bottom side of the cable guides on the LCD cover as shown in Figure 1-68.

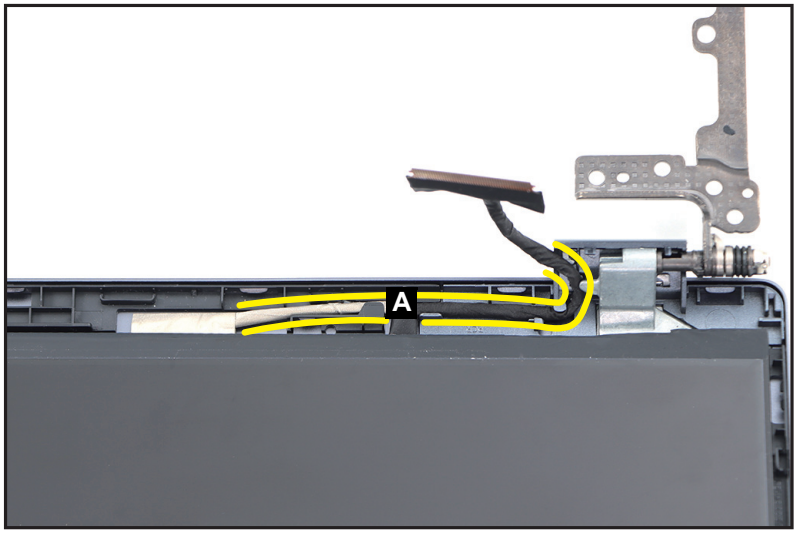


Figure 1-68. LCD Panel Removal

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 1-69).

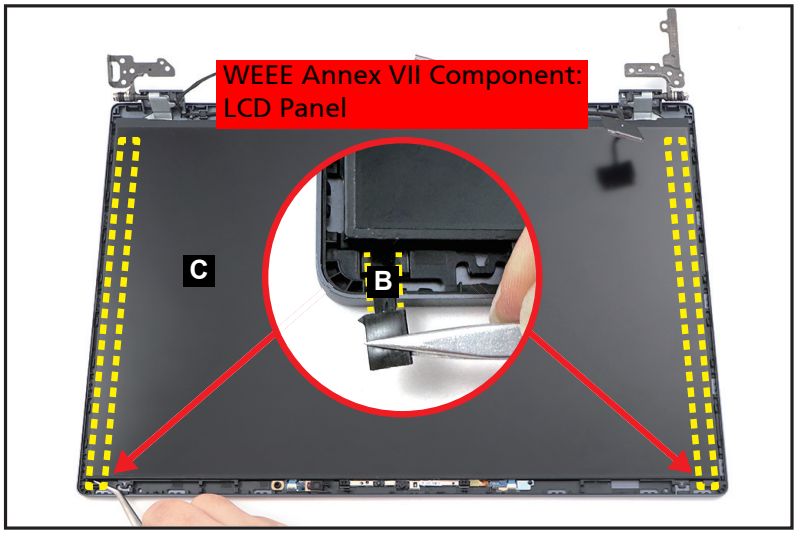


Figure 1-69. LCD Panel Removal

3. Carefully turn the LCD panel over so that the display panel is facing down on a flat surface. Then detach the mylar tape (D) securing the LCD cable to the LCD panel (Figure 1-70).

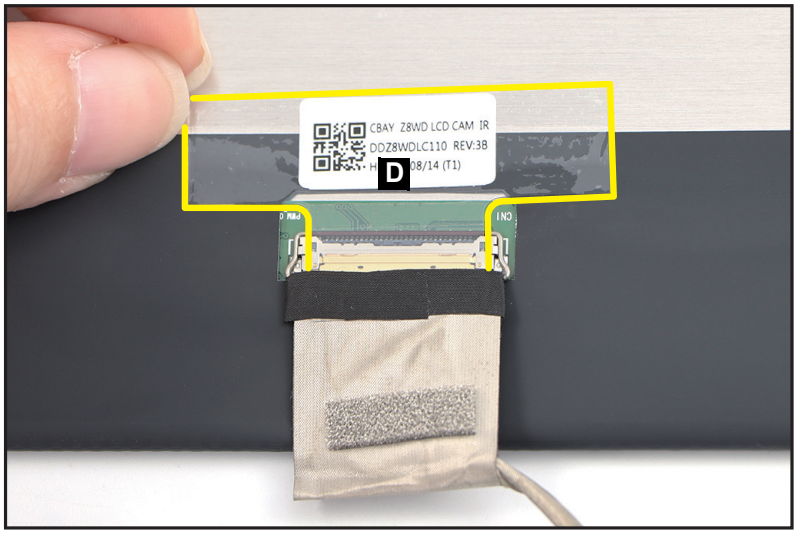


Figure 1-70. LCD Panel Removal

4. Lift the latch (E) securing the LCD cable (Figure 1-71).

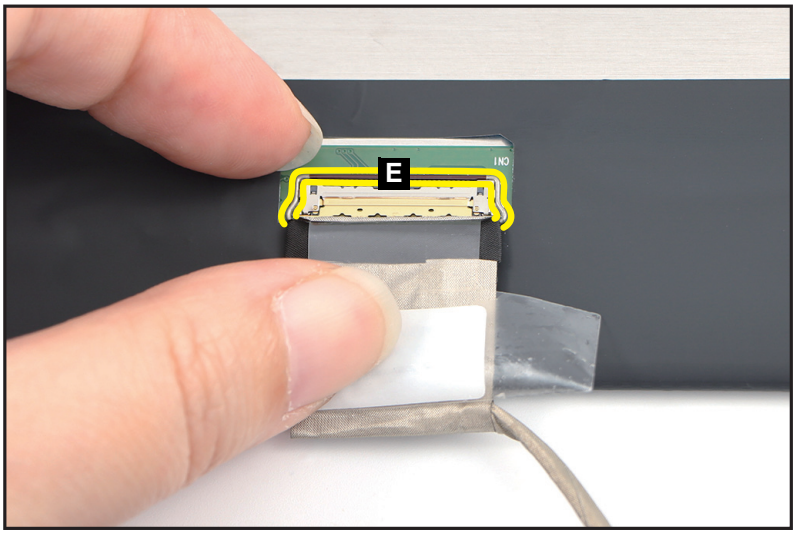


Figure 1-71. LCD Panel Removal

5. Disconnect the LCD cable from the LCD panel connector (F) (Figure 1-72). Then remove the LCD panel.

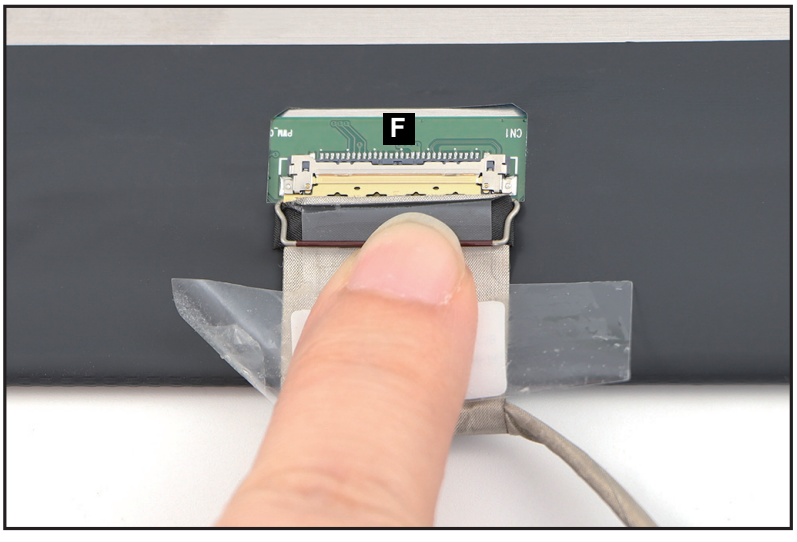


Figure 1-72. LCD Panel Removal

Top Assembly Removal (Keyboard Removal)

Prerequisite:

Ensure that the **Right Speaker**, **Left Speaker**, **Touchpad Module**, **DC-IN Cable**, **Smart Card Reader**, **LED Board**, **Fingerprint Module**, 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.

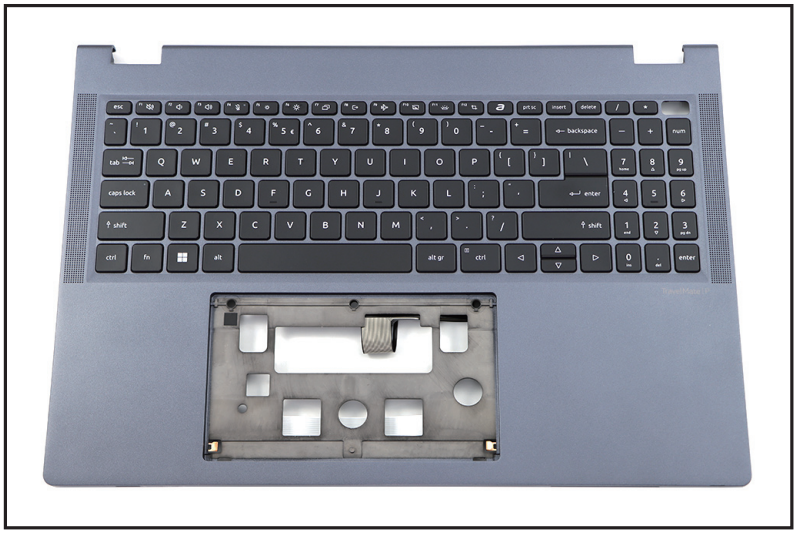
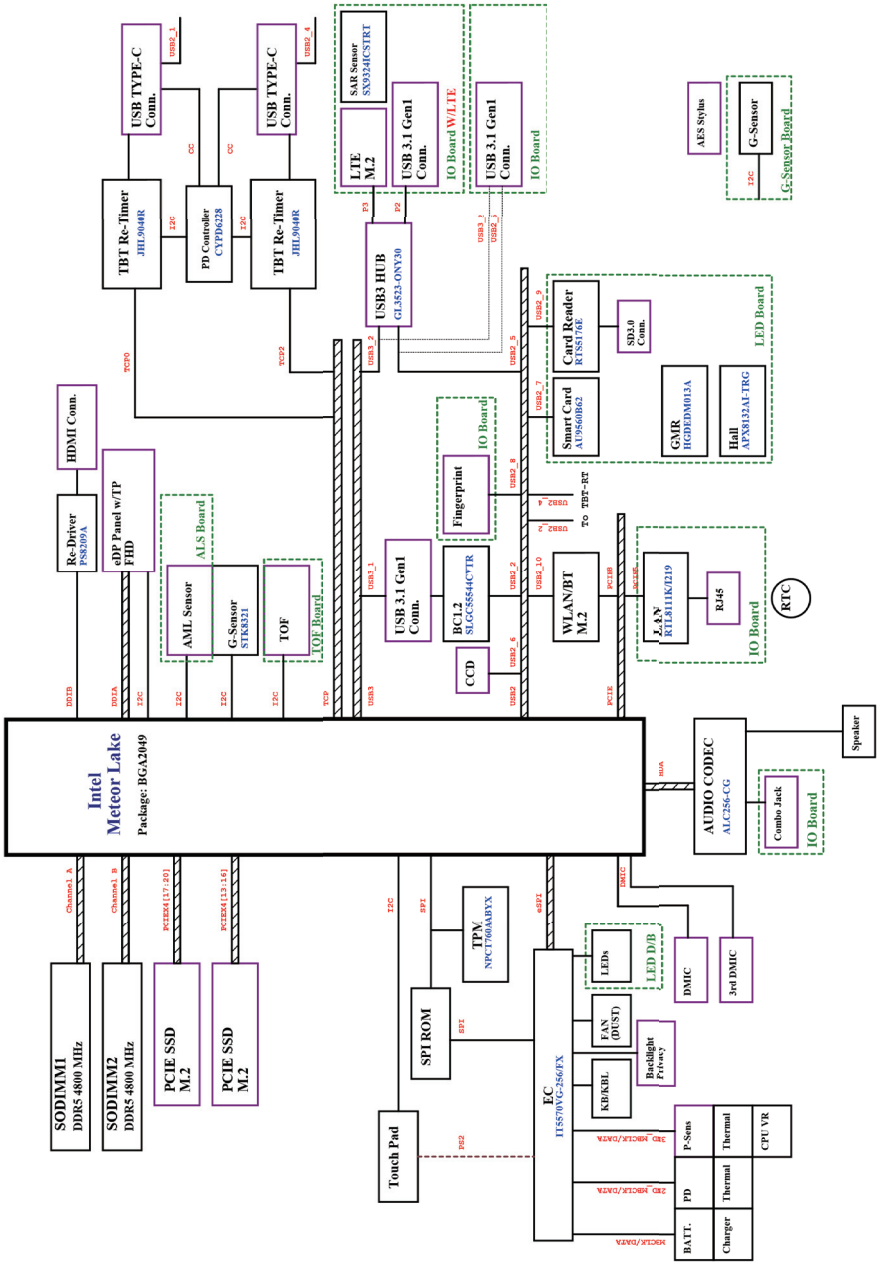


Figure 1-73. Top Assembly (Keyboard)

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.

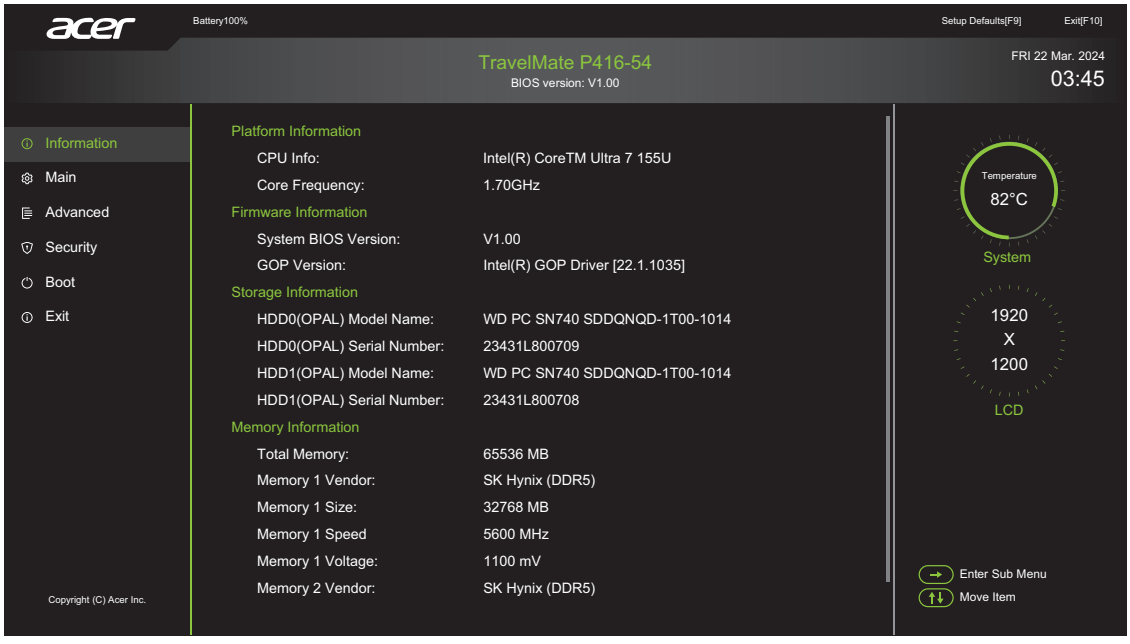


Figure 1-74. BIOS Information

Table 1-1 describes the parameters shown in Figure 1-74.

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

Table 1-1. BIOS Information (Continued)

Parameter	Description
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
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

Main

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

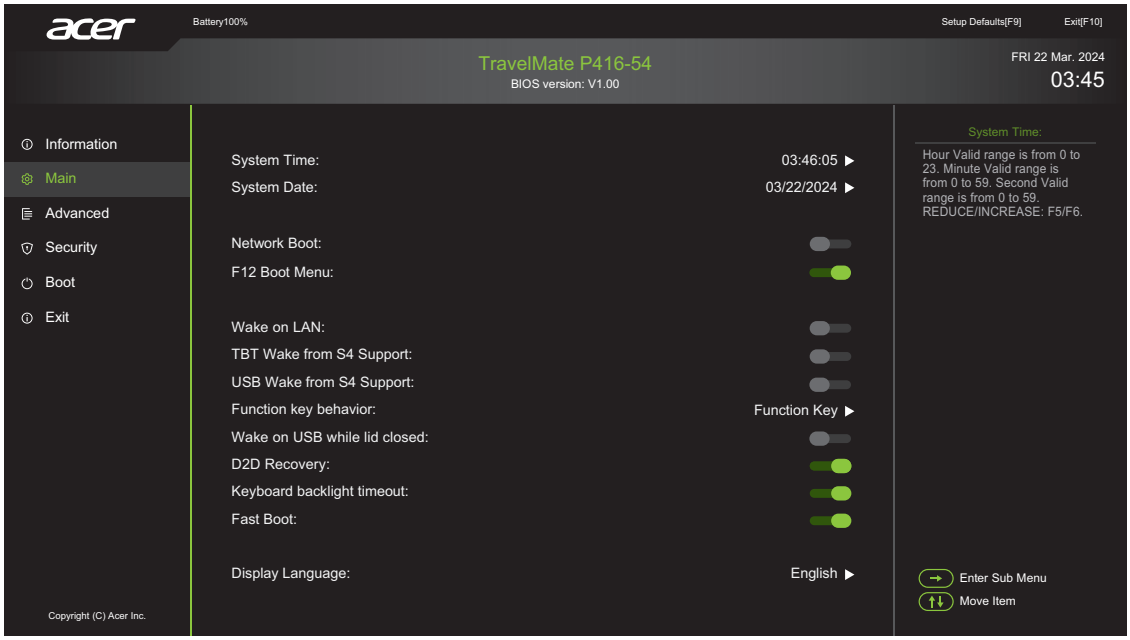


Figure 1-75. BIOS Main

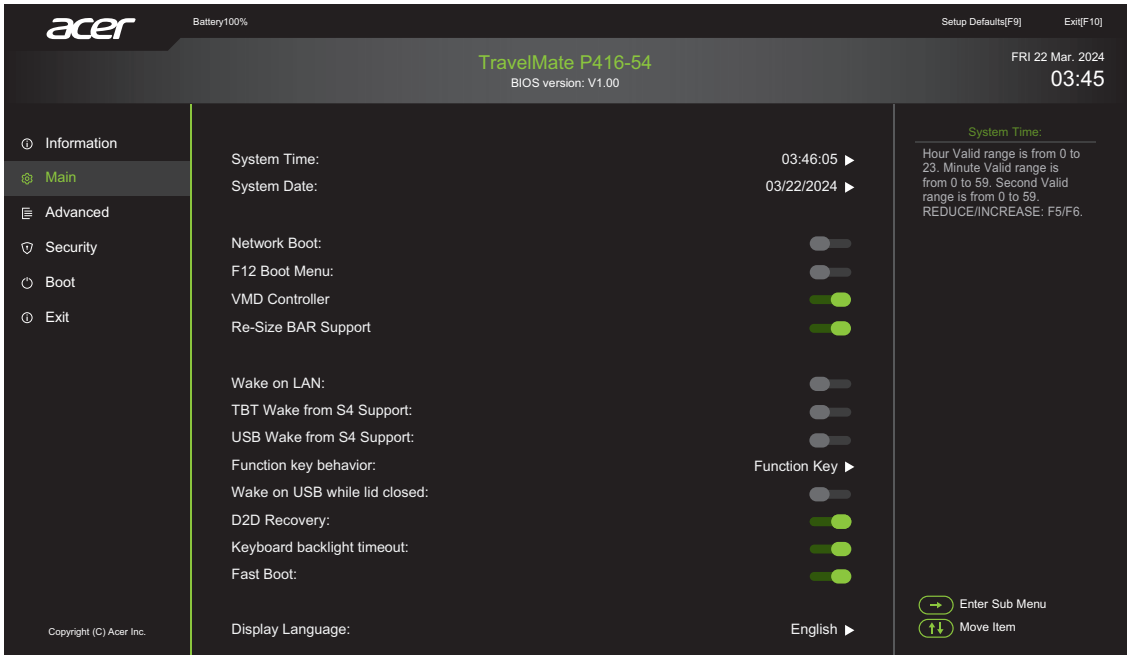


Figure 1-76. BIOS Main (All Options)

Table 1-2 describes the parameters shown in Figure 1-75 and Figure 1-76.

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
Re-Size BAR support (hidden option)	Option to set Re-Size BAR support	Option: Enabled or Disabled
Wake on LAN	Option to use Wake-on-LAN feature	Option: Enabled or Disabled
TBT Wake from S4 Support	Option to enable/disable support TBT wake from S4	Option: Enabled or Disabled
USB Wake from S4 Support	Option to enable/disable support USB wake from S4	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
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
Display Language	Select the display language	

Press *Ctrl* +**S** keys to show the hidden options.

Advanced

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

Figure 1-77. BIOS Advanced

Table 1-3 describes the parameters shown in Figure 1-77.

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
GNA Device	Option to use GNA plugin 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	
Update BIOS	Option to update BIOS via USB storage	

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. 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. If Yes is selected, the system will save the current BIOS settings as a file, and exit the dialog box.	
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. 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. If Yes is selected, the system will load the file into BIOS, then exit the dialog box.	
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.	
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.	

Security

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

Figure 1-78. BIOS Security

Table 1-4 describes the parameters shown in Figure 1-78.

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 password	Disabled or Enabled
Change HDD(OPAL) Password	Change HDD password	N/A
Revert HDD(OPAL) Device	Revert HDD device	N/A

Table 1-4. BIOS Security (Continued)

Parameter	Description	Option
Password on Boot	Shows if password is required during system boot ⚠ **CAUTION:** If Password-on-Boot authentication is enabled, the BIOS password can only be cleared by initiating the Crisis Disk Recovery procedure.	Disabled or Enabled
Secure Boot Mode	Display the current Secure Boot Mode status. • **Standard**: Default Option. No manual change has been done to secure boot setting or users have previous restored security boot to factory default. • **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
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
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	N/A

Table 1-4. BIOS Security (Continued)

Parameter	Description	Option
Absolute Persistence Module	Indicate the Absolute Persistence Module state. • **Enabled**: Default Option. The Persistence interface is enabled. Persistence may now be activated or deactivated. • **Disabled**: The Persistence interface is disabled. The Persistence Module does not run and Persistence is deactivated. • **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

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.

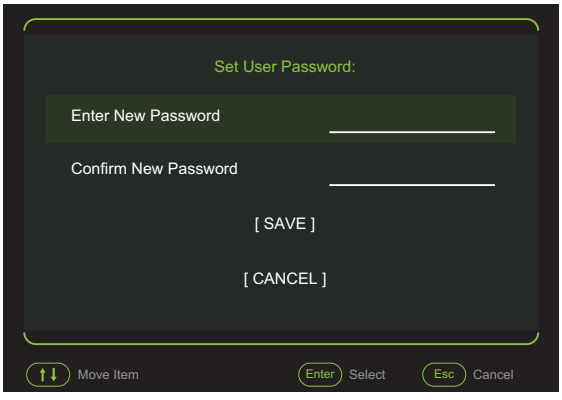


Figure 1-79. Set User Password

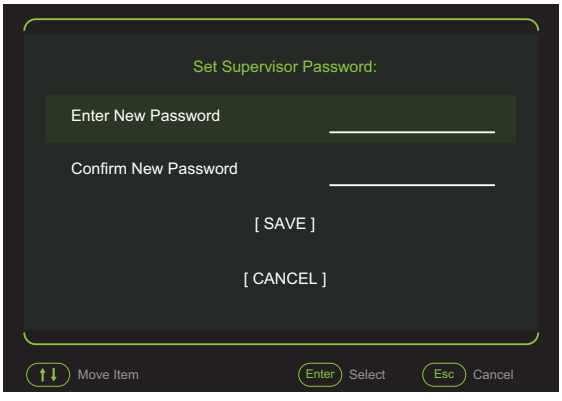


Figure 1-80. Set Supervisor Password

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

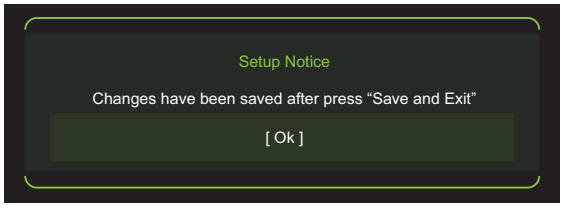


Figure 1-81. Setup Notice

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*.

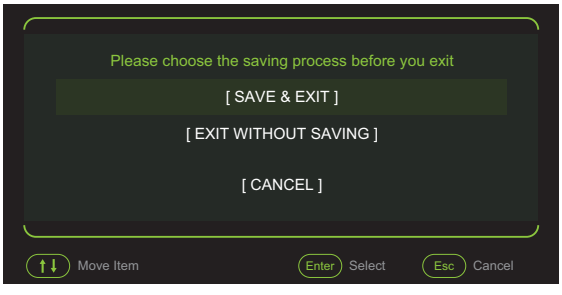


Figure 1-82. Save Configuration Changes and Exit

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.

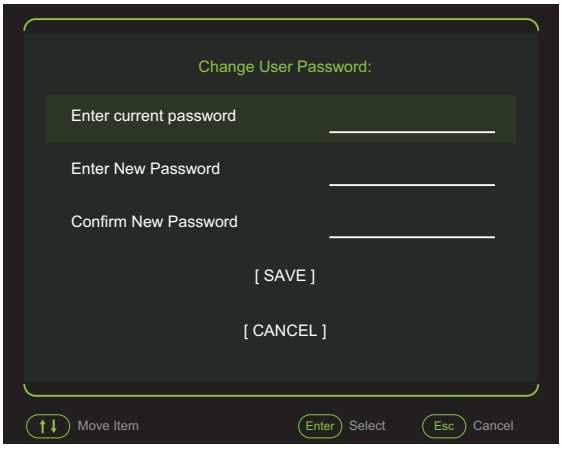


Figure 1-83. Change User Password

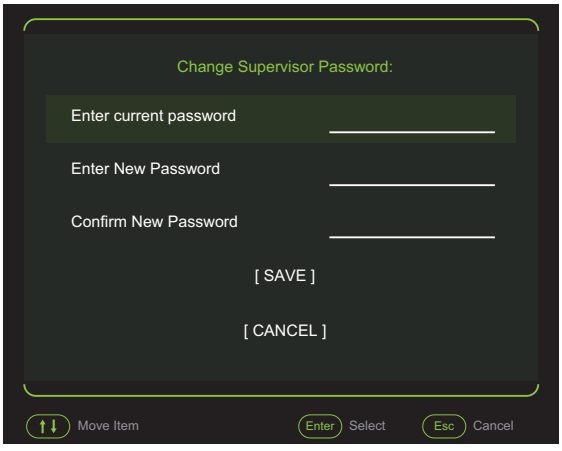


Figure 1-84. Change Supervisor Password

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

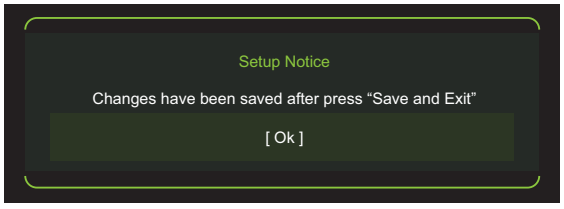


Figure 1-85. Setup Notice

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

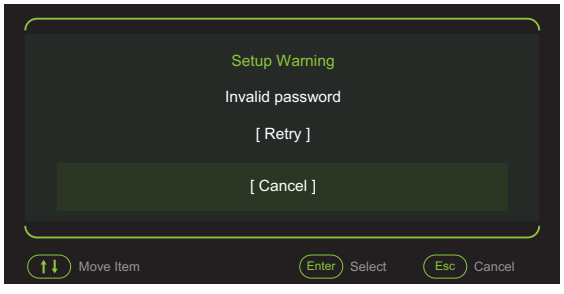


Figure 1-86. Setup Warning

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*.

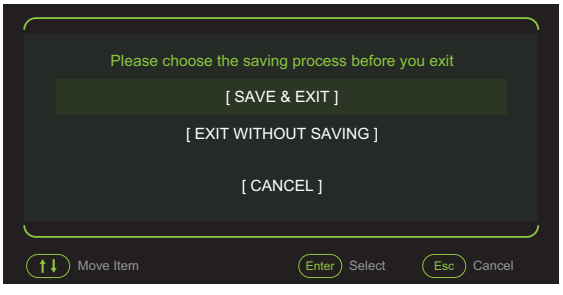


Figure 1-87. Save Configuration Changes and Exit

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***.

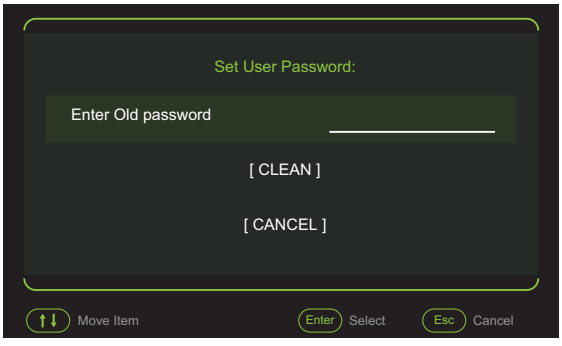


Figure 1-88. Remove User Password

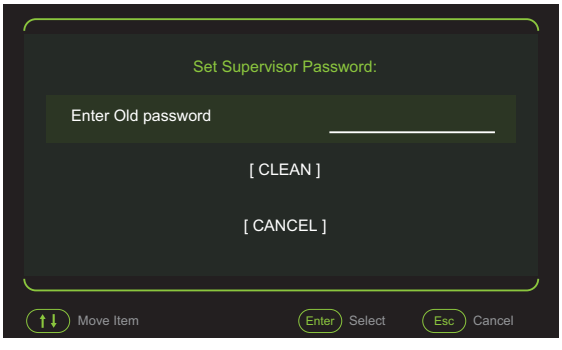


Figure 1-89. Remove Supervisor Password

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

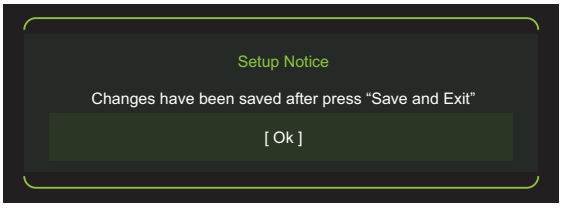


Figure 1-90. Setup Notice

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*.

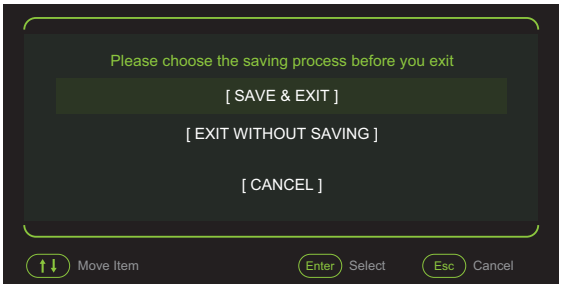


Figure 1-91. Save Configuration Changes and Exit

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.

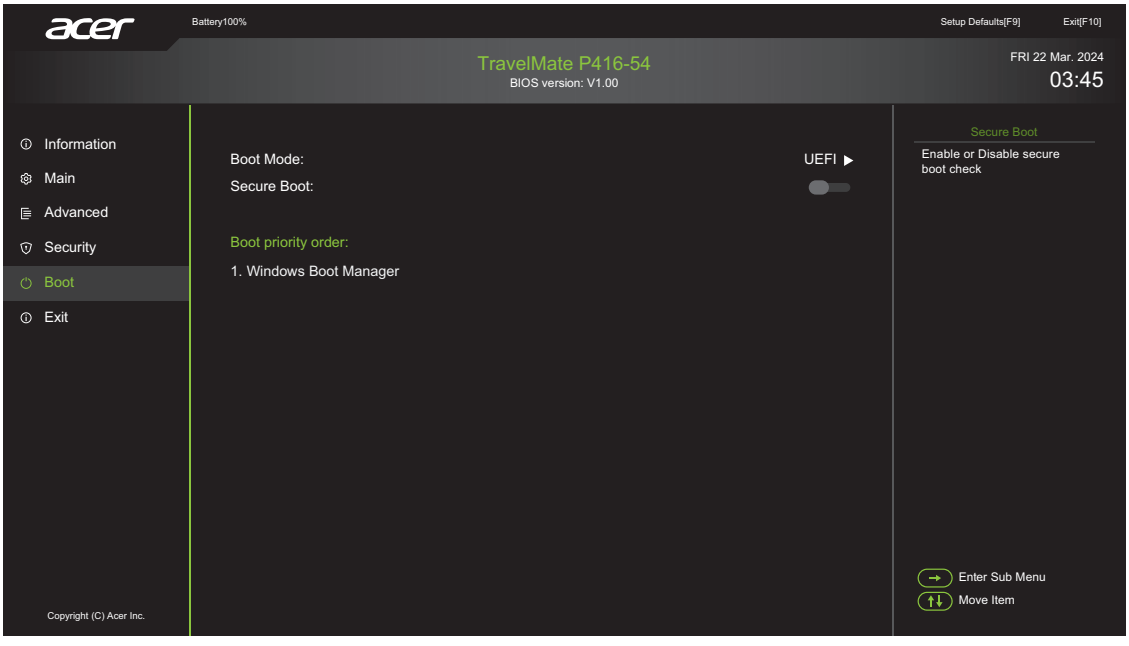


Figure 1-92. BIOS Boot

Table 1-5 describes the parameters in Figure 1-92.

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 1-93. BIOS Exit

Table 1-6 describes the parameters in Figure 1-93.

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:

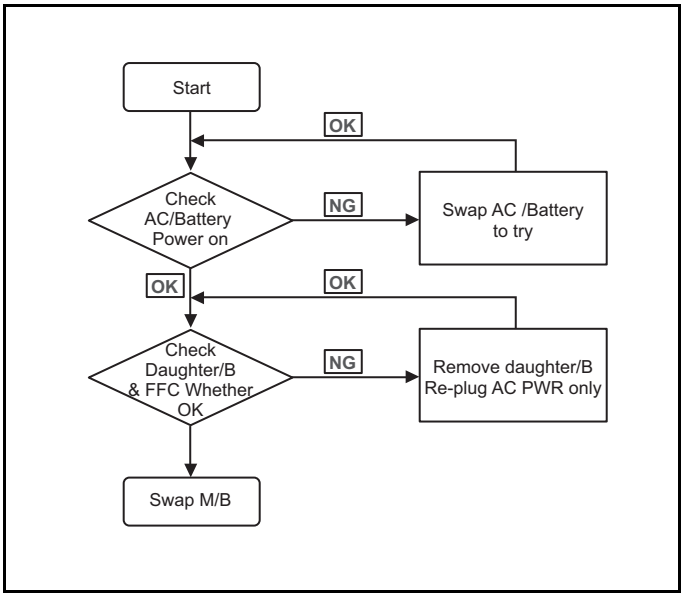


Figure 1-94. Power On Issue

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:

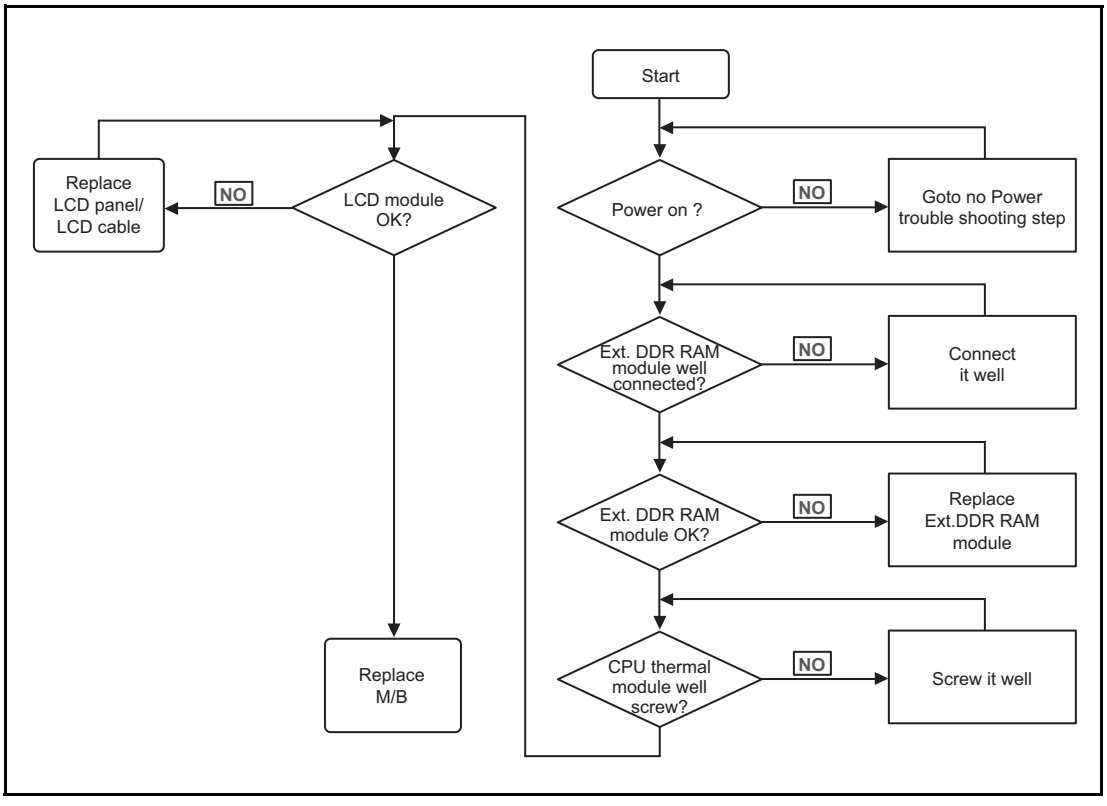


Figure 1-95. No Display Issue

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 Process.
   - 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 Process*.
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:

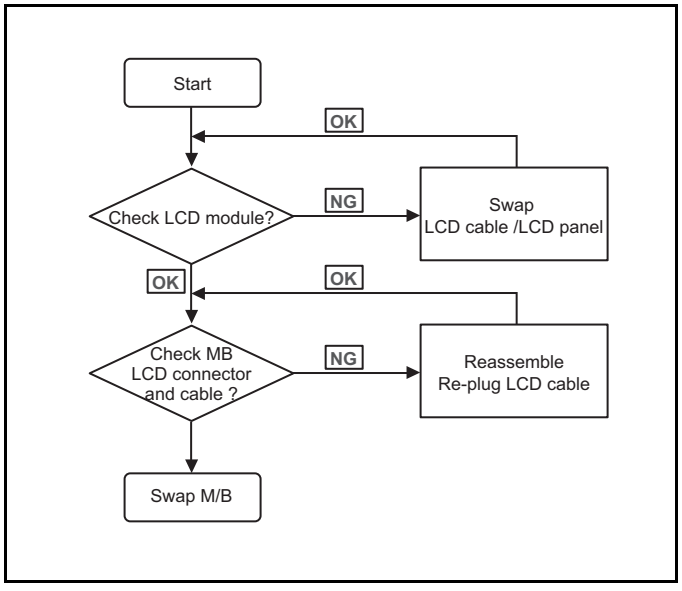


Figure 1-96. LCD Failure

Internal Keyboard Failure

If the internal keyboard fails, perform the following:

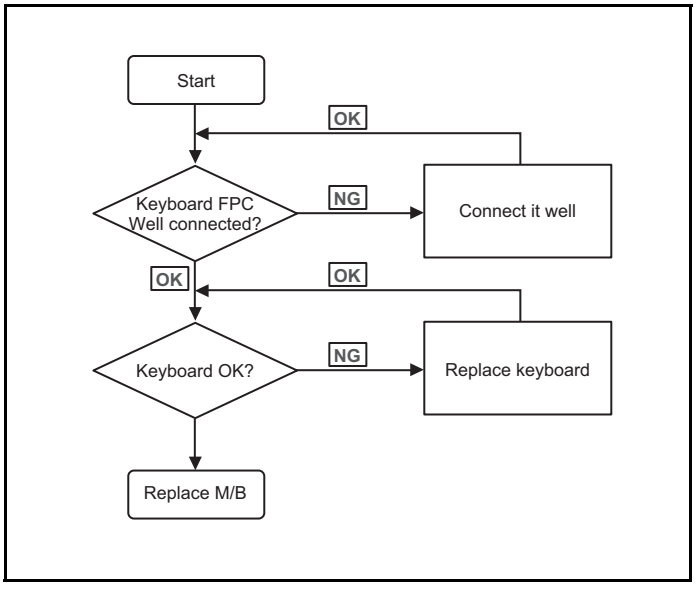


Figure 1-97. Internal Keyboard Failure

Touch Pad Failure

If the touch pad fails, perform the following:

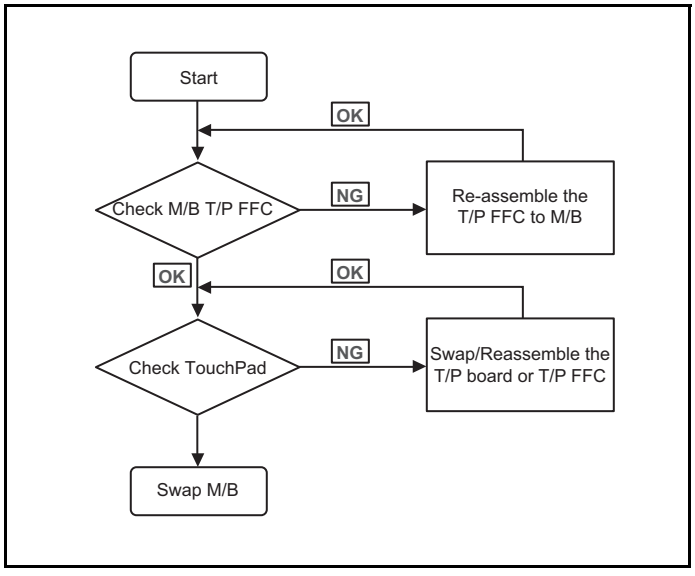


Figure 1-98. Touch Pad Failure

Internal Speaker Failure

If the internal speakers fail, perform the following:

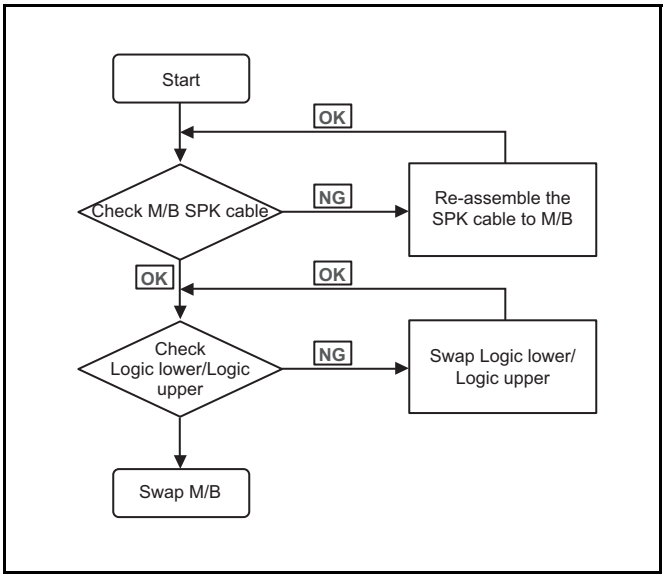


Figure 1-99. Internal Speaker Failure

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:

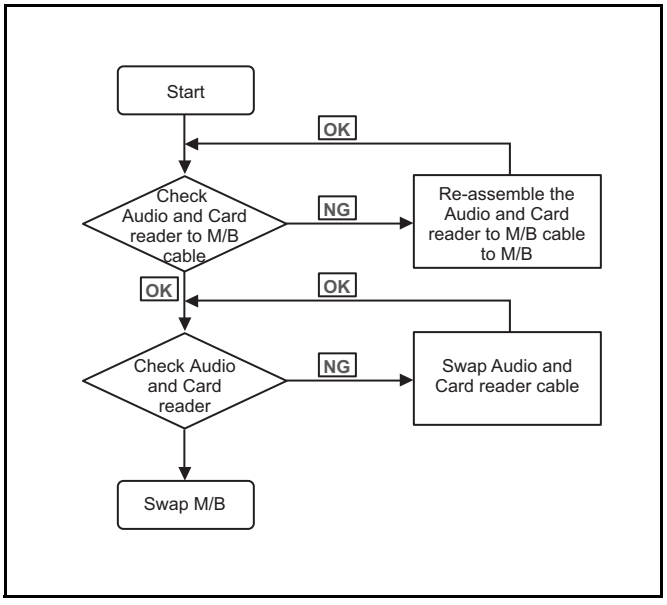


Figure 1-100. Audio and Card Reader Failure

Other Functions Failure

1. Check if the drives are functioning correctly.
2. Check if the external modules are functioning correctly.
3. Change the mainboard to check if 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

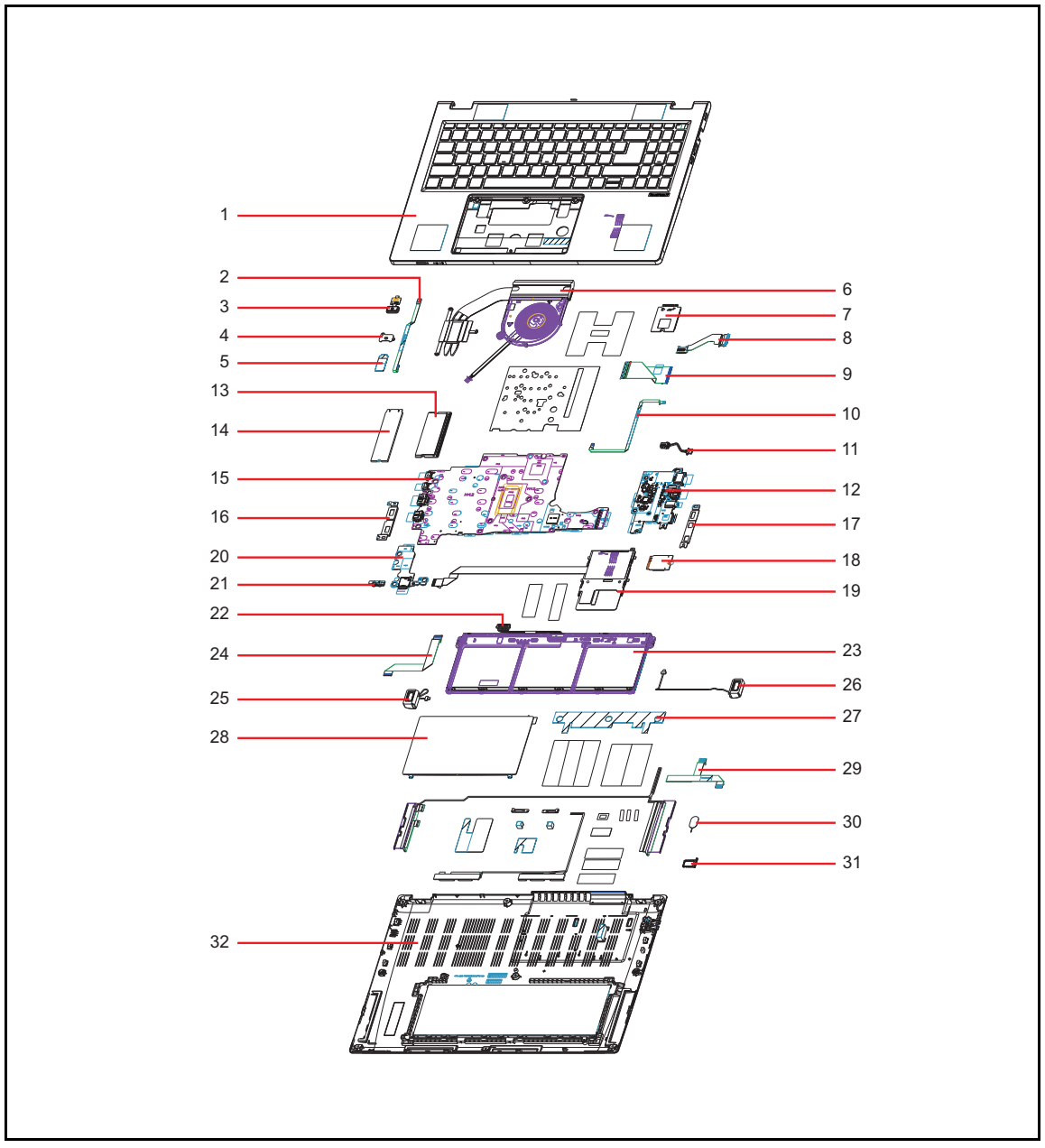


Figure 1-101. System Exploded Diagram

Table 1-8. System Exploded Diagram

No.	Description
1	KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS ALA-Spanish NK.I1513.3BE/NK.I151S.18N
2	CABLE FINGERPRING MODULE

Table 1-8. System Exploded Diagram (Continued)

No.	Description
3	FINGERPRINT MODULE Carewe FP on power key FPC12XXDP MOC on power key.Black coating
4	BRACKET FINGERPRING MODULE
5	CONDUCTIVE FABRIC W/MYLAR ASSY FP
6	THERMAL MODULE ASSY
7	LTE Quectel LTE EM120K-GL EM120K-GL
8	CABLE FPC IO BOARD FOR LTE
9	CABLE IO BOARD FOR LTE(50P 70MM)
10	CABLE IO BOARD FOR LTE(6P 175MM)
11	CABLE DC-IN 65W
12	BOARD IO FOR LTE
13	Memory MICRON SO-DIMM DDRV 5600 8GB MTC4C10163S1SC56BD1 LF+HF 1Rx16, 1b Y52K, D-die
14	Flash Disk WD SSD NAND 512GB SN740 SDDQNQD-512G-1014 LF+HF
15	Mainboard TMP416-53 CU5125U UMA _ToF
16	BRACKET IO L
17	BRACKET IO R
18	Wireless LAN Intel Wi-Fi 6E BT5.2 AX211.NGWG Intel 2x2 M.2 2230 CNVi GFP2 vPro
19	BOARD SMARTCARD W/ FFC CABLE
20	BOARD LED W/ HALL SENSOR
21	RUBBER FOR LED BOARD
22	CABLE BATTERY
23	Battery CosMx Typ.53Wh 3S1P AP20CBL 248x84.4x5.5(mm) AP20C 11.55V 65W Li-Ion TI BQ40Z555 FW5.09
24	CABLE LED BOARD
25	SPEAKER LEFT
26	SPEAKER RIGHT
27	CONDUCTIVE FABRIC W/MYLAR ASSY TP
28	TOUCHPAD MODULE NC.24611.0A2
29	CABLE TOUCHPAD
30	PRIMETEK PRIMETEK Sim Card Ejector with Packing
31	NANO SIM TRY
32	LOWER CASE

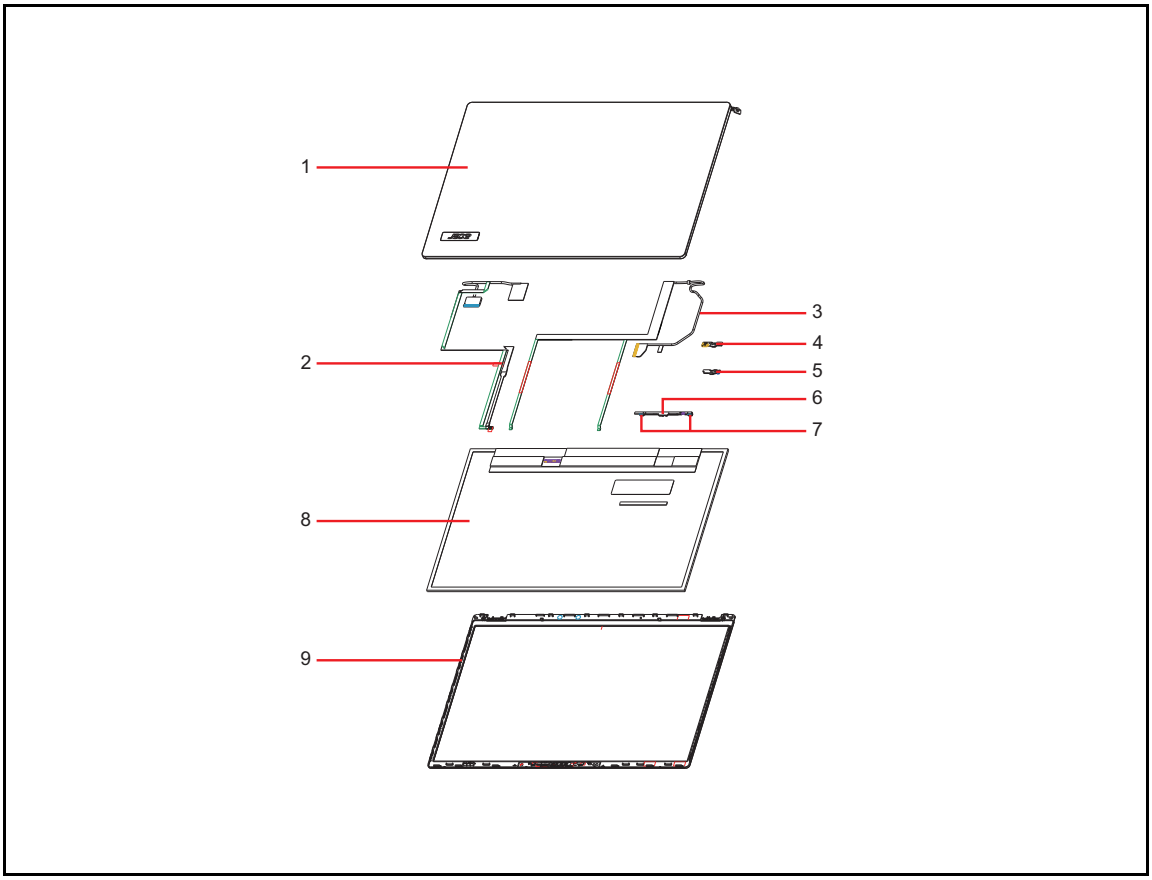


Figure 1-102. LCD Assembly Exploded Diagram

Table 1-9. LCD Assembly Exploded Diagram

No.	Description
1	LCD COVER N16WUXGASUPILB3
2	CABLE LCD IR
3	CABLE AMBIENT LIGHT & TOF SENSOR BOARD
4	TOF SENSOR BOARD
5	BOARD AMBIENT LIGHT SENSOR
6	Camera CHICONY FHD FF CKFNE34 OV2740 RTS5861 1L4C066F2(BG) ZTS6234A USB IR-HM1092(940nm)
7	RUBBER FOR IR
8	LED LCD Panel AUO 16' WUXGA None Glare B160UAN01.H LF 400nit 30ms 1200:1 (eDP, IPS, narrow, 2.6/4.6t, low power)
9	LCD BEZEL FOR TOF

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 A065RP86P 65W Type C Brick 5V/3A_9V/3A_12V/3A_15V/3A_20V_3.25A Black PCR 50%, TCO9.0
		Adapter DELTA ADP-100XB BB 100W Type C Brick 5V/3A_9V/3A_12V/3A_15V/3A_20V/5A Black PCR 50%, TCO9.0
		Adapter Chicony Power A22-100P2A 100W Type C Brick 5V/3A_9V/3A_12V/3A_15V/3A_20V/5A Black PCR 50%, TCO9.0
		Adapter DELTA 65W 5V/3A_9V/3A_12V/3A_15V/3A_20V_3.25A Type C ADP-65KE BB LF Meet CoC Tier2 & IEC-62368-1 2nd version
		Adapter LITE-ON PA-1650-58AP 65W Type C Brick 5V/3A_9V/3A_12V/3A_15V/3A_20V_3.25A Black PCR 50%, TCO9.0
BATTERY		Battery CosMx Typ.53Wh 3S1P AP20CBL 248x84.4x5.5(mm) AP20C 11.55V 65W Li-Ion TI BQ40Z555 FW5.09
		Battery LGES Typ.53Wh 4700mAh 3S1P AP23A8L 248x84.4x5.5(mm) AP23A 11.28V 70W Li-Ion
		Battery SIMPLO Typ.53Wh 4700mAh 3S1P AP23A7L 248x84.4x5.5(mm) AP23A 11.25V 70W Li-Ion TI BQ40Z555 FW5.09
		Battery LGES Typ.65Wh 4180mAh 4S1P AP22A8N 248x90x5.5(mm) AP22A 11.52V 75W Li-Ion
		Battery CosMx Typ.65Wh 5570mAh 3S1P AP22ABN 248x90x5.5(mm) AP22A 11.67V 75W Li-Ion

Table 1-10. FRU List (Continued)

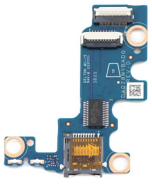
Category	Pictures	Description
BOARD		BOARD IO
		BOARD IO FOR LTE
		BOARD IO FOR WIFI/VPRO
		BOARD AMBIENT LIGHT SENSOR
		TOF SENSOR BOARD
		BOARD LED W/ HALL SENSOR
		BOARD SMARTCARD W/ FFC CABLE
		FINGERPRINT MODULE Carewe FP on power key FPC12XXDP MOC on power key.Black coating
		FINGERPRINT MODULE Egis FP on power key Egis ETU905JS MOC solution on power key. Black coating
CABLE		CABLE DC-IN 65W
		CABLE BATTERY

Table 1-10. FRU List (Continued)

Category	Pictures	Description
CABLE		CABLE LED BOARD
		CABLE TOUCHPAD
		CABLE FINGERPRING MODULE
		CABLE AMBIENT LIGHT SENSOR BOARD
		CABLE AMBIENT LIGHT & TOF SENSOR BOARD
		CABLE FPC IO BOARD FOR LTE
		CABLE IO BOARD FOR LTE(50P 70MM)
		CABLE IO BOARD

Table 1-10. FRU List (Continued)

Category	Pictures	Description
CABLE		CABLE IO BOARD FOR LTE(6P 175MM)
		CABLE LCD
		CABLE LCD IR
CAMERA		Camera CHICONY HD Camera C7FMH12 GC1009 RTS5855 1L3B059G1(BG) SPG18P4HM4H-1 TNR
		Camera Tech-Front HD Camera YHVC-1 OV9734 SPCA2112N 1L3B059F1(BG) SPG18P4HM4H-1 TNR
		Camera CHICONY FHD FF CKFNE34 OV2740 RTS5861 1L4C066F2(BG) ZTS6234A USB IR-HM1092(940nm)
HDD		Flash Disk WD SSD NAND 512GB SN740 SDDQNQD-512G-1014 LF+HF
		Flash Disk WD SSD NAND 256GB SN740 SDDQNQD-256G-1014 LF+HF
		Flash Disk WD SSD NAND 1024GB SN740 SDDQNQD-1T00-1014 LF+HF
		Flash Disk KINGSTON SSD NAND 256GB OM8PGP4256Q-AA LF+HF
		Flash Disk SAMSUNG SSD NAND 1024GB M.2 2280 PM9C1 MZVL81T0HELB-00BTW LF+HF
		Flash Disk SAMSUNG SSD NAND 1024GB M.2 2280 PM9C1 MZVL81T0HELB-00BTW new FW#KXJ72W1Q LF+HF

Table 1-10. FRU List (Continued)

Category	Pictures	Description
KB ASSEMBLY		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS ALA-Spanish NK.I1513.3BE/NK.I151S.18N
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Arabic NK.I1513.3B2/NK.I151S.18A
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Belgium NK.I1513.3BF/NK.I151S.18P
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Brazilian Portuguese NK.I1513.3BG/NK.I151S.18Q
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS CZ/SK NK.I1513.3BH/NK.I151S.18R
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Danish NK.I1513.3BJ/NK.I151S.18S
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS FR/Arabic NK.I1513.3BK/NK.I151S.18T
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS French NK.I1513.3BL/NK.I151S.18U
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS German NK.I1513.3BM/NK.I151S.18V
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Greek NK.I1513.3B4/NK.I151S.18C
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Hungarian NK.I1513.3BN/NK.I151S.18W

Table 1-10. FRU List (Continued)

Category	Pictures	Description
KB ASSEMBLY		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Italian NK.I1513.3BP/NK.I151S.18X
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 102KS Japanese NK.I1513.3BZ
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Korean NK.I1513.3B5/NK.I151S.18D
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Nordic NK.I1513.3BQ/NK.I151S.18Y
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Norwegian NK.I1513.3BR/NK.I151S.18Z
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Persian NK.I1513.3B8/NK.I151S.18G
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Portuguese NK.I1513.3BS/NK.I151S.190
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Russian NK.I1513.3B6/NK.I151S.18E
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS SLO/CRO NK.I1513.3BT/NK.I151S.191
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Spanish NK.I1513.3BU/NK.I151S.192
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Sweden NK.I1513.3BV/NK.I151S.193

Table 1-10. FRU List (Continued)

Category	Pictures	Description
KB ASSEMBLY		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Swiss/G NK.I1513.3BW/NK.I151S.194
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Thailand NK.I1513.3B9/NK.I151S.18H
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Traditional Chinese NK.I1513.3B3/NK.I151S.18B
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Turkish NK.I1513.3BX/NK.I151S.195
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS UK NK.I1513.3BY/NK.I151S.196
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Ukrainian NK.I1513.3B7/NK.I151S.18F
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL US International NK.I1513.3BA/NK.I151S.18J
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL US International w/ Bulgaria NK.I1513.3BD/NK.I151S.18M
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL US International w/ Canadian French NK.I1513.3BC/NK.I151S.18L
		KEYBOARD ASSY LTE/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL US International w/ Hebrew NK.I1513.3BB/NK.I151S.18K
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS ALA-Spanish NK.I1513.3BE/NK.I151S.18N

Table 1-10. FRU List (Continued)

Category	Pictures	Description
KB ASSEMBLY		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Arabic NK.I1513.3B2/NK.I151S.18A
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Belgium NK.I1513.3BF/NK.I151S.18P
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Brazilian Portuguese NK.I1513.3BG/NK.I151S.18Q
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS CZ/SK NK.I1513.3BH/NK.I151S.18R
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Danish NK.I1513.3BJ/NK.I151S.18S
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS FR/Arabic NK.I1513.3BK/NK.I151S.18T
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS French NK.I1513.3BL/NK.I151S.18U
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS German NK.I1513.3BM/NK.I151S.18V
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Greek NK.I1513.3B4/NK.I151S.18C
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Hungarian NK.I1513.3BN/NK.I151S.18W
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Italian NK.I1513.3BP/NK.I151S.18X

Table 1-10. FRU List (Continued)

Category	Pictures	Description
KB ASSEMBLY		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 102KS Japanese NK.I1513.3BZ
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Korean NK.I1513.3B5/NK.I151S.18D
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Nordic NK.I1513.3BQ/NK.I151S.18Y
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Norwegian NK.I1513.3BR/NK.I151S.18Z
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Persian NK.I1513.3B8/NK.I151S.18G
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Portuguese NK.I1513.3BS/NK.I151S.190
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Russian NK.I1513.3B6/NK.I151S.18E
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS SLO/CRO NK.I1513.3BT/NK.I151S.191
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Spanish NK.I1513.3BU/NK.I151S.192
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Sweden NK.I1513.3BV/NK.I151S.193
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Swiss/G NK.I1513.3BW/NK.I151S.194

Table 1-10. FRU List (Continued)

Category	Pictures	Description
KB ASSEMBLY		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Thailand NK.I1513.3B9/NK.I151S.18H
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Traditional Chinese NK.I1513.3B3/NK.I151S.18B
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Turkish NK.I1513.3BX/NK.I151S.195
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS UK NK.I1513.3BY/NK.I151S.196
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Ukrainian NK.I1513.3B7/NK.I151S.18F
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL US International NK.I1513.3BA/NK.I151S.18J
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL US International w/ Bulgaria NK.I1513.3BD/NK.I151S.18M
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL US International w/ Canadian French NK.I1513.3BC/NK.I151S.18L
		KEYBOARD ASSY WIFI/SMARTCARD SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL US International w/ Hebrew NK.I1513.3BB/NK.I151S.18K
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS ALA-Spanish NK.I1513.3BE/NK.I151S.18N
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Arabic NK.I1513.3B2/NK.I151S.18A

Table 1-10. FRU List (Continued)

Category	Pictures	Description
KB ASSEMBLY		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Belgium NK.I1513.3BF/NK.I151S.18P
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Brazilian Portuguese NK.I1513.3BG/NK.I151S.18Q
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS CZ/SK NK.I1513.3BH/NK.I151S.18R
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Danish NK.I1513.3BJ/NK.I151S.18S
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS FR/Arabic NK.I1513.3BK/NK.I151S.18T
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS French NK.I1513.3BL/NK.I151S.18U
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS German NK.I1513.3BM/NK.I151S.18V
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Greek NK.I1513.3B4/NK.I151S.18C
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Hungarian NK.I1513.3BN/NK.I151S.18W
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Italian NK.I1513.3BP/NK.I151S.18X
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 102KS Japanese NK.I1513.3BZ

Table 1-10. FRU List (Continued)

Category	Pictures	Description
KB ASSEMBLY		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Korean NK.I1513.3B5/NK.I151S.18D
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Nordic NK.I1513.3BQ/NK.I151S.18Y
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Norwegian NK.I1513.3BR/NK.I151S.18Z
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Persian NK.I1513.3B8/NK.I151S.18G
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Portuguese NK.I1513.3BS/NK.I151S.190
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Russian NK.I1513.3B6/NK.I151S.18E
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS SLO/CRO NK.I1513.3BT/NK.I151S.191
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Spanish NK.I1513.3BU/NK.I151S.192
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Sweden NK.I1513.3BV/NK.I151S.193
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Swiss/G NK.I1513.3BW/NK.I151S.194
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Thailand NK.I1513.3B9/NK.I151S.18H

Table 1-10. FRU List (Continued)

Category	Pictures	Description
KB ASSEMBLY		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Traditional Chinese NK.I1513.3B3/NK.I151S.18B
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS Turkish NK.I1513.3BX/NK.I151S.195
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL 99KS UK NK.I1513.3BY/NK.I151S.196
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL Ukrainian NK.I1513.3B7/NK.I151S.18F
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL US International NK.I1513.3BA/NK.I151S.18J
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL US International w/ Bulgaria NK.I1513.3BD/NK.I151S.18M
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL US International w/ Canadian French NK.I1513.3BC/NK.I151S.18L
		KEYBOARD ASSY WIFI SKU W/ANTENA & UPPER CASE COPILOT BL Keyboard VF05P_B41BWL US International w/ Hebrew NK.I1513.3BB/NK.I151S.18K
LCD		LED LCD Panel AUO 16' WUXGA None Glare B160UAN01.H LF 400nit 30ms 1200:1 (eDP, IPS, narrow, 2.6/4.6t, low power)
		LED LCD Panel INNOLUX 16" WUXGA IPS None Glare N160JCA-EEK C1 300nit NTSC 45% 60Hz 25ms 1000:1 (Narrow border, 3.0t/5.0t)
		LED LCD Panel AUO 16" WUXGA IPS None Glare B160UAN04.4 H/W 2A 300nit NTSC 45% 60Hz 25ms 1000:1 (Narrow border, 3t/5t)

Table 1-10. FRU List (Continued)

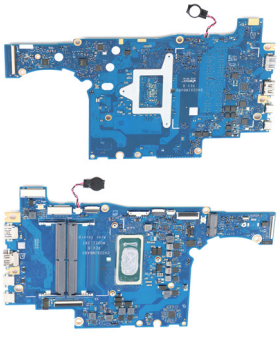
Category	Pictures	Description
LCD		LED LCD Panel LPL 16" WUXGA IPS None Glare LP160WU3-SPD2 300nit NTSC 45% 60Hz 25ms 1000:1 (Narrow border, 3.0t/5.0t)
LCD BEZEL		LCD BEZEL FOR TOF
		LCD BEZEL
LCD COVER		LCD COVER N16WUXGASUPILB3
		LCD COVER N16WUXGASSRIB3
LOWER CASE		LOWER CASE
MAINBOARD		Mainboard TMP416-53 CU5125U UMA _ToF
MEMORY		Memory MICRON SO-DIMM DDRV 5600 8GB MTC4C10163S1SC56BD1 LF+HF 1Rx16, 1b Y52K, D-die
		Memory HYNIX SO-DIMM DDRV 5600 8GB HMCG66AGBSA LF+HF 1anm, A-die 1Rx16
		Memory MICRON SO-DIMM DDRV 5600 16GB MTC8C1084S1SC56BD1 LF+HF 1Rx8, Y52K D-die
		Memory HYNIX SO-DIMM DDRV 5600 16GB HMCG78AGBSA LF+HF 1anm, A-die 1Rx8

Table 1-10. FRU List (Continued)

Category	Pictures	Description
MEMORY		Memory HYNIX SO-DIMM DDRV 5600 32GB HMCG88AGBSA LF+HF 1anm, A-die 2Rx8
METAL		BRACKET IO L
		BRACKET IO R
		BRACKET FINGERPRING MODULE
		PRIMETEK PRIMETEK Sim Card Ejector with Packing
PLASTICS		HOLDER BATTERY SUPPORT
POWER CORD		POWER CORD 1M 125V EUR+KOR BLACK
		POWER CORD 1M 125V US BLACK
		POWER CORD 1M 125V JAP BLACK
		POWER CORD 1M 125V TAIWAN BLACK
		POWER CORD 1M 125V ARG BLACK
		POWER CORD 1M 125V AUS BLACK
		POWER CORD 1M 125V BRAZIL BLACK
		POWER CORD 1M 125V CHINA BLACK
		POWER CORD 1M 125V DENMARK BLACK
		POWER CORD 1M 125V INDIA BLACK
		POWER CORD 1M 125V ISRAEL BLACK
		POWER CORD 1M 125V ITL BLACK
		POWER CORD 1M 125V S.AFRICA BLACK
		POWER CORD 1M 125V SWISS BLACK
		POWER CORD 1M 125V UK BLACK

Table 1-10. FRU List (Continued)

Category	Pictures	Description
SIM		LTE Quectel LTE EM120K-GL EM120K-GL
SPEAKER/ MICROPHONE		SPEAKER LEFT
		SPEAKER RIGHT
THERMAL		THERMAL MODULE ASSY
TOUCHPAD		TOUCHPAD MODULE NC.24611.0A2
WIRELESS LAN		Wireless LAN Intel Wi-Fi 6E BT5.2 AX211.NGWG Intel 2x2 M.2 2230 CNVi GFP2 vPro
		Wireless LAN Intel Wi-Fi 6E BT5.2 AX211.NGWG.NV Intel 2x2 M.2 2230 CNVi GFP2 No vPro
MISCELLANEOUS		LCD ADHESIVE W/MYLAR ASSY FOR LCD N16WUXGASUPILB3
		LCD ADHESIVE W/MYLAR ASSY FOR LCD N16WUXGASSRIB3
		CONDUCTIVE FABRIC W/MYLAR ASSY TP
		CONDUCTIVE FABRIC W/MYLAR ASSY FP
		RUBBER FOR LED BOARD

Table 1-10. FRU List (Continued)

Category	Pictures	Description
MISCELLANEOUS		RUBBER FOR IR
		RUBBER FOR CCD
		MYLAR SMARTCARD
		MYLAR LTE
		ABSORBER W/INS MYLAR ASSY MB TOP SP
		ABSORW/ALFOIL/INS ASSY FOR DDR
		FOIL CU W/ MYLAR,GRAPHITE SHEET
		FOIL COMPOSITE W/ PAD
		NANO SIM TRY
		RUBBER FOR TOF SENSOR BOARD
		ACETATE TAPE FOR BATTERY(21*21mm)

Table 1-10. FRU List (Continued)

Category	Pictures	Description
MISCELLANEOUS		MYLAR FFC COONECTOR
		KAPTON TAPE MB KB
		INSULATOR MYLAR ON BATTERY CABLE
		MYLAR FOR FINGER PRINT BOARD
		LCD ALIGNMENT MYLAR
SCREW		SCREW W/WASHER KIT (M2.5*7.0)
		SCREW M2.0*2.0-I(NI,NYLOK)STL
		SCREW M2.5*5.0-I(BNI)(NYLOK) IRON
		SCREW M2.0*2.0- I(BNI)(NY)IRON
		SCREW M2.0*4.0-I(BZN)(NYLOK)(IRON)
		SCREW M1.4*1.6-I STL

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**.