

**TravelMate P6 14 AI
TMP614-54 / TMP614-54T /
TMP614-54-TCO / TMP614-54T-TCO**

Lifecycle Extension Guide

Table of Contents

Self-Repair 1

Disassembly Procedures..... 2

System Block Diagram..... 39

BIOS Setup Utility..... 40

Troubleshooting 74

Exploded Diagrams 89

FRU (Field Replaceable Unit) List..... 95

Software Update 104

Personal Data Removal 105

Self-Repair

This product 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

Please refer to the chapter "[Disassembly Procedures](#)" for step by step disassembly instructions.

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 tools are required to perform maintenance on the notebook:

- Wrist grounding strap and conductive mat
- Flat screwdriver
- Philips screwdriver
- Pointed plastic pry or similar object
- Tweezers
- Torx screwdriver

WEEE Annex VII Component

These components are classified as requiring selective treatment:

- SSD module
- Battery
- WLAN module
- RTC battery
- Touchpad
- USB board
- Mainboard
- LCD panel

Getting Started

Perform the following prior to performing any maintenance procedures:

1. Place the system on a flat work surface.
2. Make sure the system is completely powered down.
 - a. If the device is in powered up mode, shut down the system normally.
 - b. If the device is in sleep mode, wait for the Home Screen to clear. Then, shut down normally.
3. Disconnect the power adapter and remove all cables from the system and its peripherals.

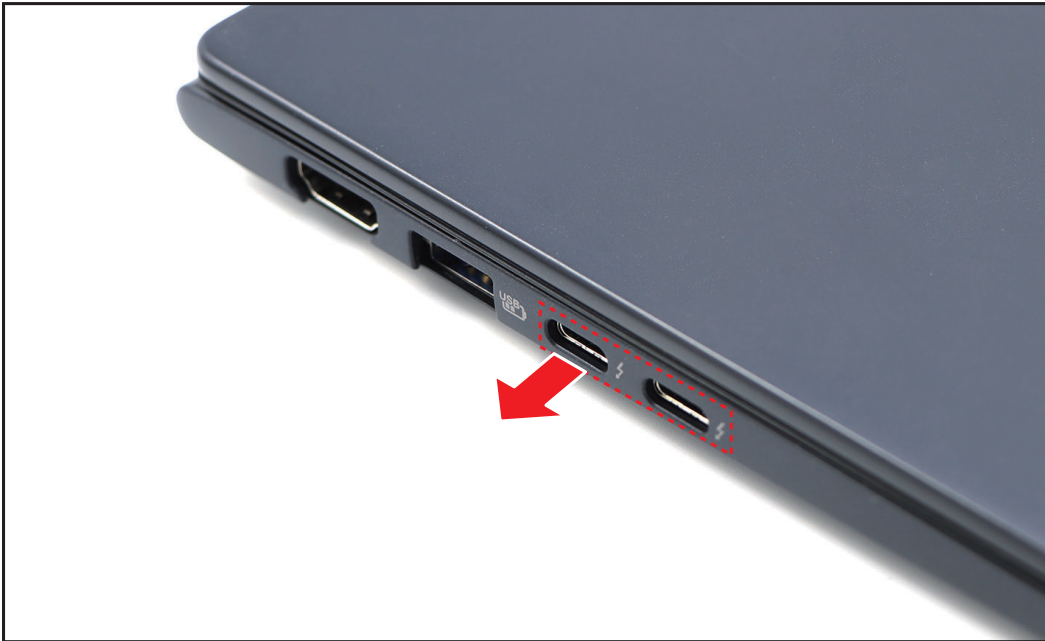


Figure 1-1. Disconnecting the Power Adapter

AC Adapter Removal

1. Disconnect the AC adapter from the system.



Figure 1-2. Disconnecting the AC Adapter

2. Disconnect the power cord from the AC adapter.



Figure 1-3. Disconnecting the Power Cord

Lower Case Removal

1. Remove the nine (9) Torx screws securing the lower case to the upper case.



Figure 1-4. Removing the Screws

2. By holding the lower case assembly upright, partially open the device. Then pry the upper case downward to release the bottom latches.



Figure 1-5. Releasing the Bottom Latches

3. Continue releasing the remaining latches. Then remove the lower case.

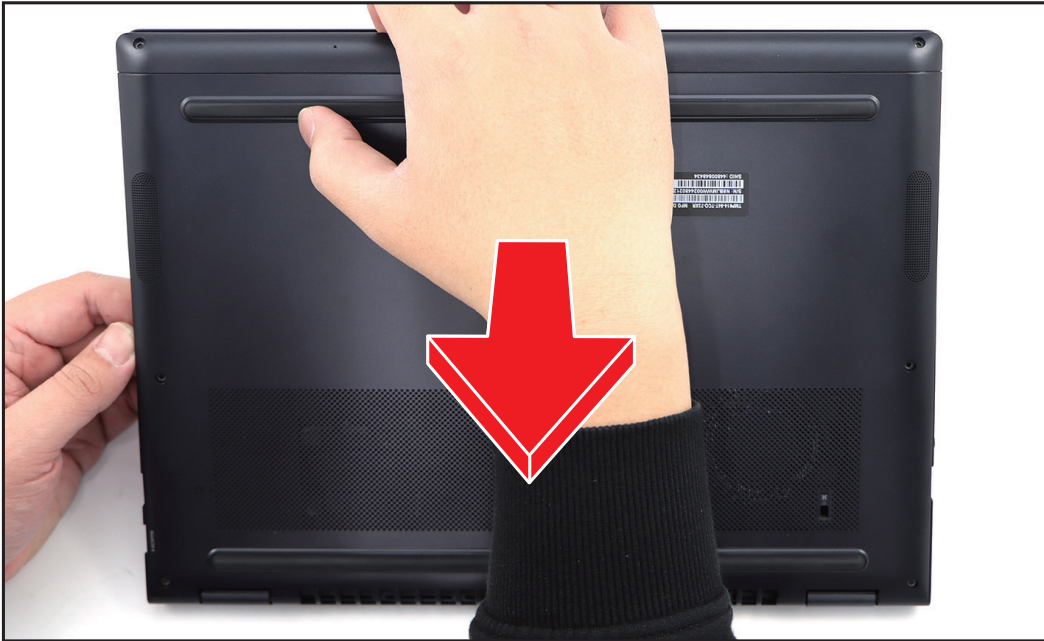


Figure 1-6. Removing the Lower Case

4. Detach the tapes securing the battery cable.

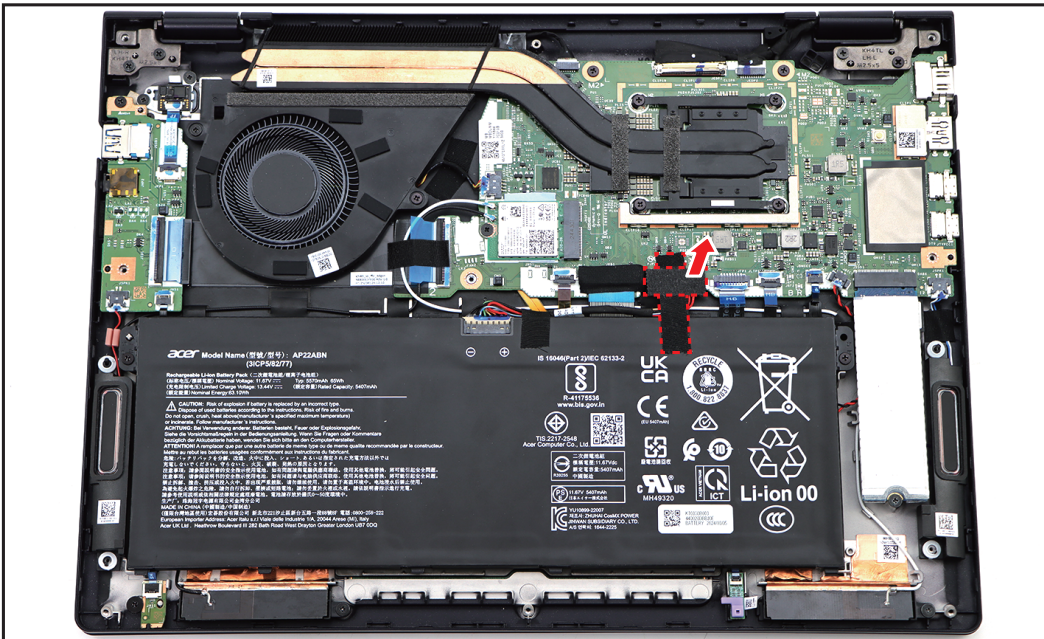


Figure 1-7. Detaching the Tapes

- Disconnect the battery cable from the mainboard connector.

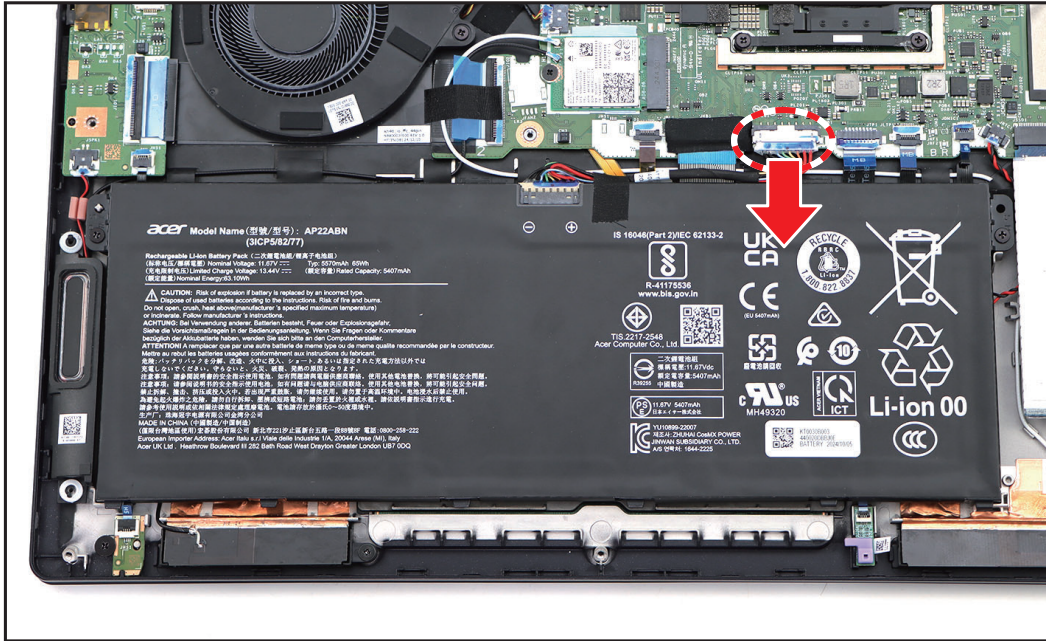



Figure 1-8. Disconnecting the Battery Cable

Table 1-1. Lower Case Screws

Screw Name	Screw Type	Torque	Quantity
M 2.0 x 5.5		1.8~2.2kgf.cm	9

SSD Module Removal

Prerequisite:

※ [Lower Case Removal](#) on page 1-6

1. Remove the screw securing the SSD module to the upper case.

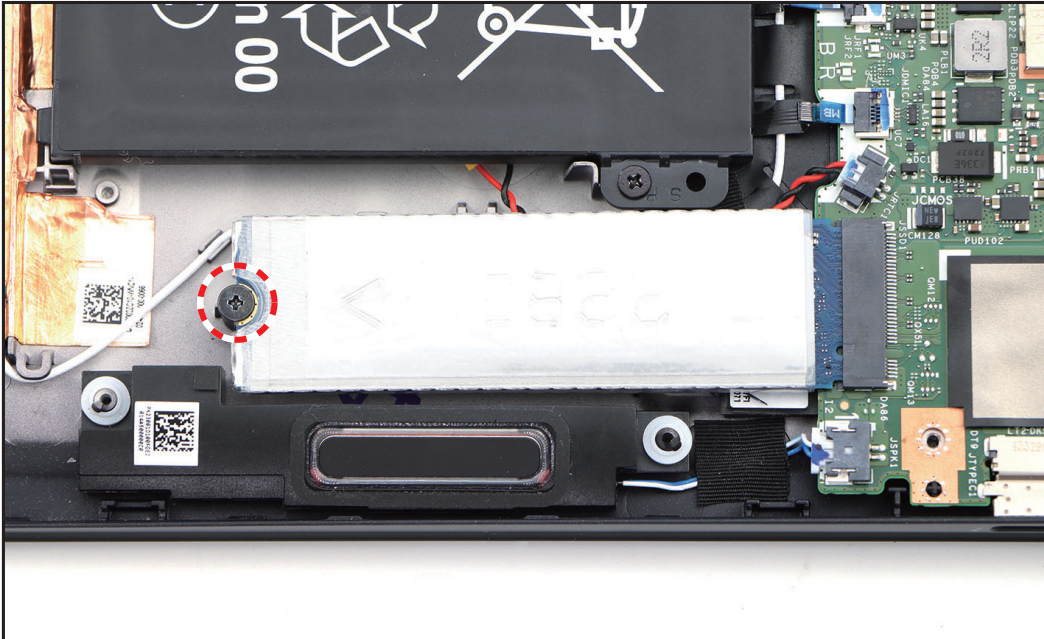


Figure 1-9. Removing the Screw

2. Pull to disconnect the SSD module from the mainboard connector. Then remove the SSD module.

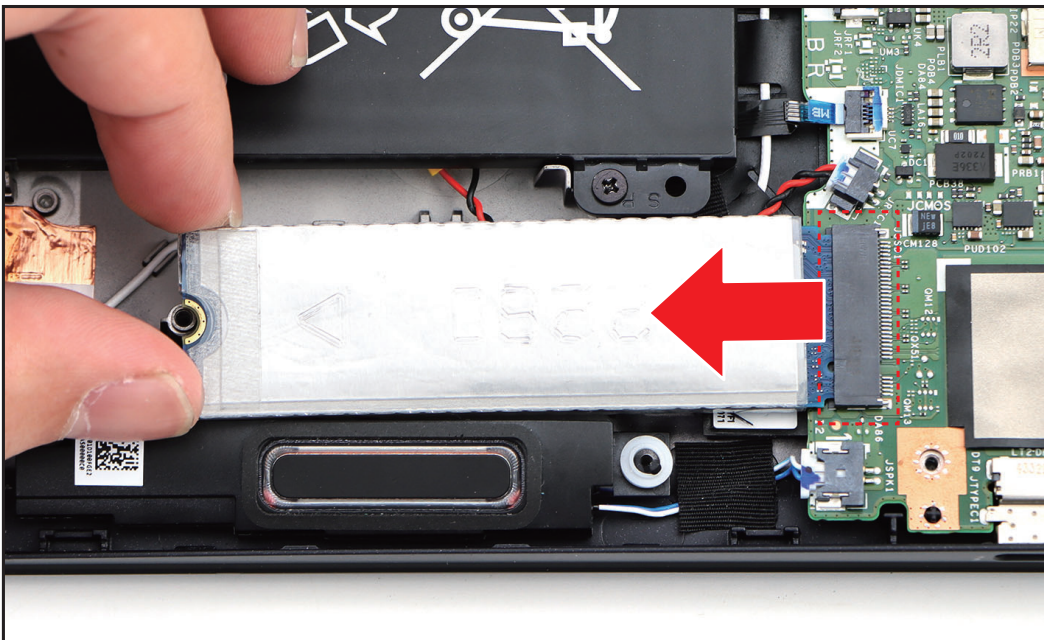



Figure 1-10. Removing the SSD Module

3. Remove the SSD foil shielding from the SSD module.



Figure 1-11. Removing the SSD Foil Shielding

Table 1-2. SSD Module Screw

Screw Name	Screw Type	Torque	Quantity
M 2.0 x 2.5		1.8~2.2kgf.cm	1

Battery Removal

Prerequisite:

※ **Lower Case Removal** on page 1-6

1. Remove the two (2) screws securing the battery to the upper case.

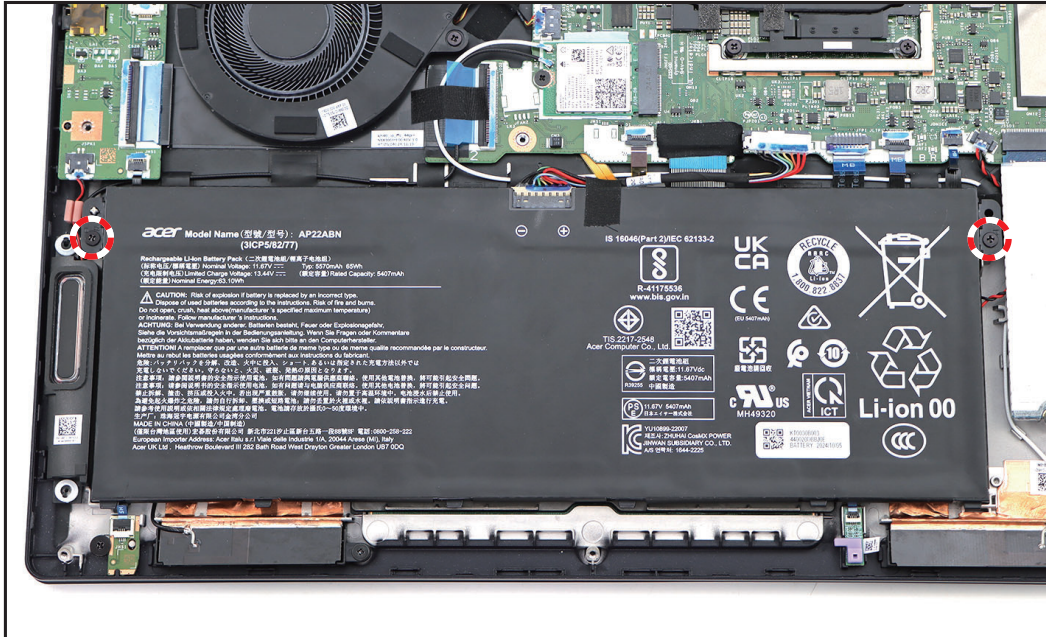


Figure 1-12. Removing the Screws

2. Lift the battery to release it from the guide pin and the compartment studs. Then remove the battery from the upper case.

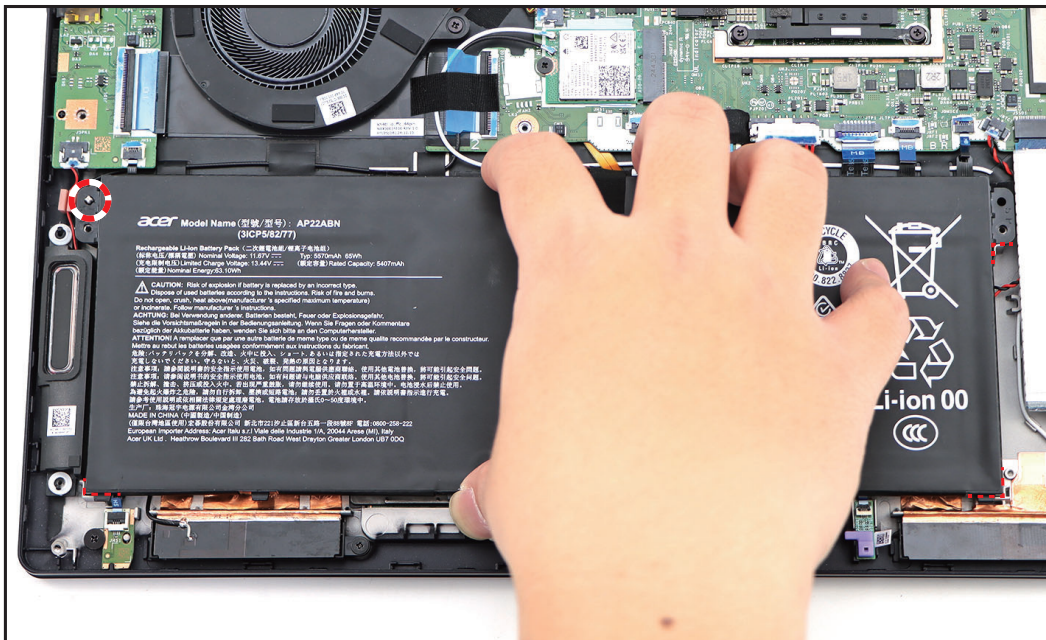


Figure 1-13. Removing the Battery

- Detach the tape securing the battery cable to the battery.



Figure 1-14. Detaching the Tape

- Disconnect the battery cable from the battery connector. Then remove the battery cable.

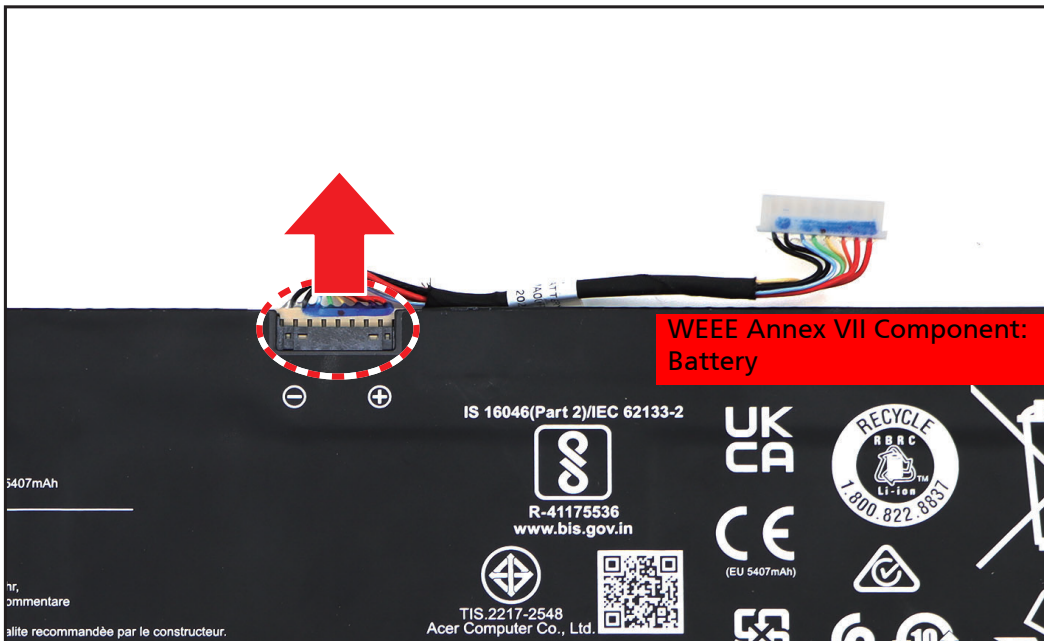



Figure 1-15. Removing the Battery Cable

Table 1-3. Battery Screws

Screw Name	Screw Type	Torque	Quantity
M 2.0 x 4.0		1.8~2.2kgf.cm	2

WLAN Module Removal

Prerequisite:

※ **Lower Case Removal** on page 1-6

1. Disconnect the WLAN antenna cables.

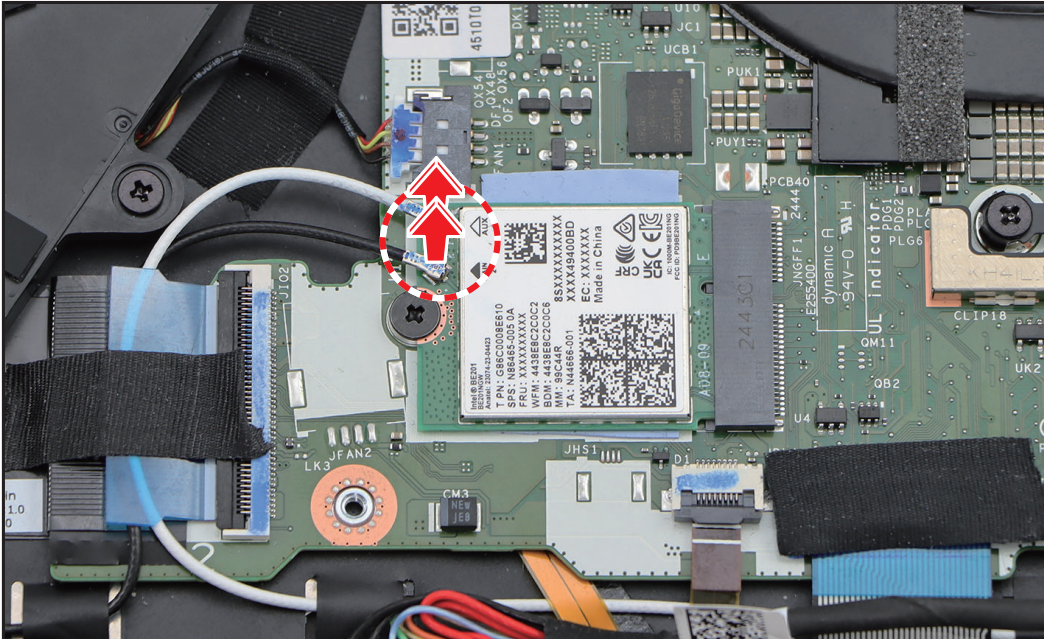


Figure 1-16. Disconnecting the WLAN Antenna Cables

2. Remove the screw securing the WLAN module.

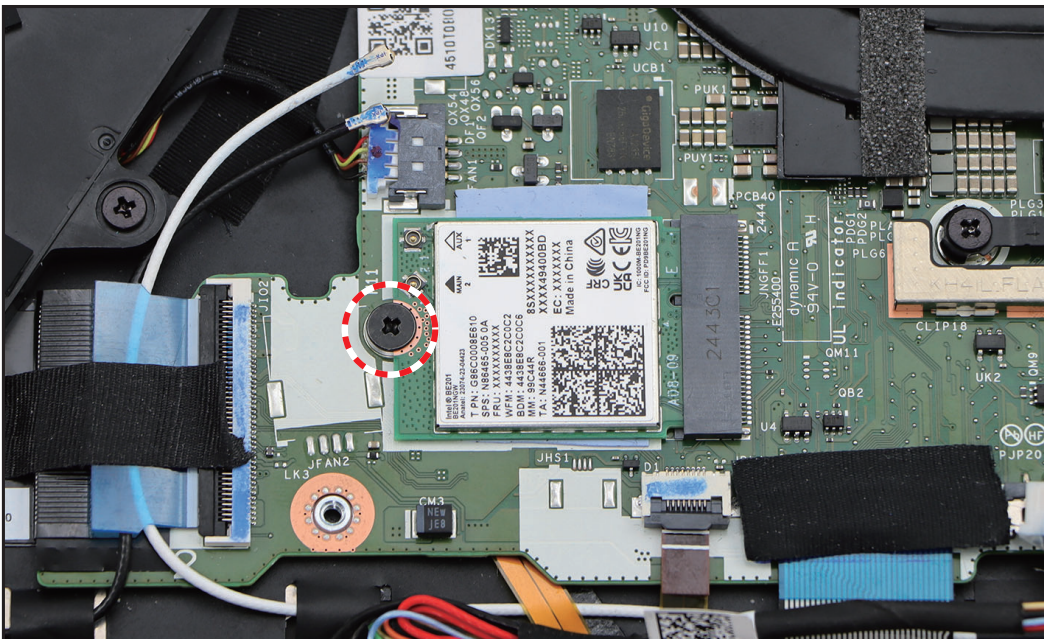



Figure 1-17. Removing the Screw

3. Pull to disconnect the WLAN module from the mainboard connector. Then remove the WLAN module.



Figure 1-18. Removing the WLAN Module

Table 1-4. WLAN Module Screw

Screw Name	Screw Type	Torque	Quantity
M 2.0 x 2.5		1.8~2.2kgf.cm	1

RTC Battery Removal

Prerequisite:

- ※ [SSD Module Removal](#) on page 1-9
- ※ [Battery Removal](#) on page 1-11

1. Detach the tape securing the RTC battery cable.
2. Release the latch and disconnect the microphone FFC from the mainboard connector. Then carefully detach the FFC from its underneath adhesive (marked with **red dashed lines** as shown in the below illustration).

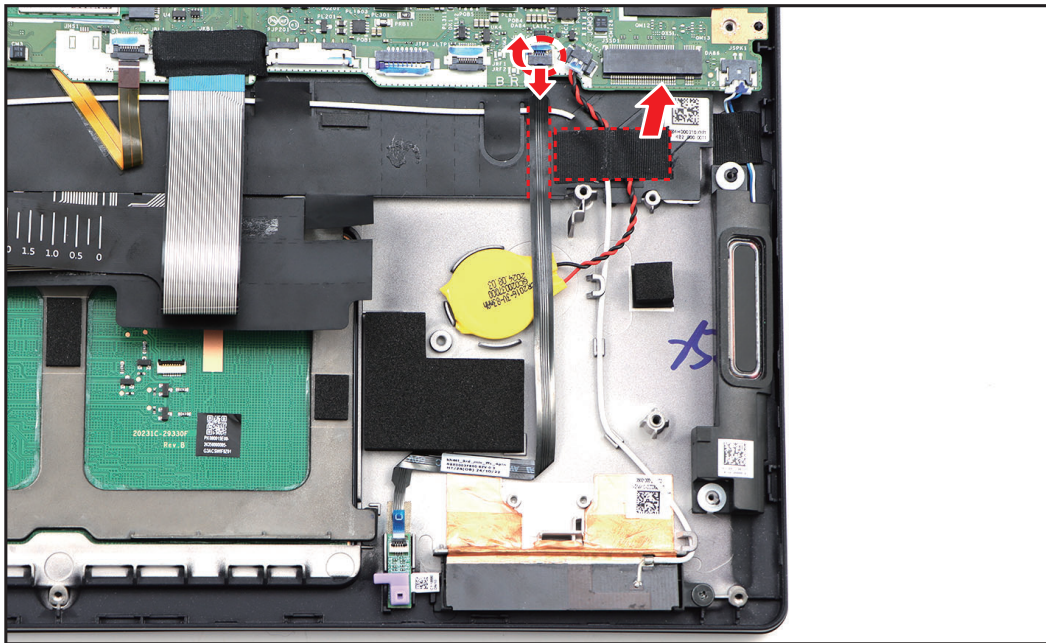


Figure 1-19. Detaching the Tape and Disconnecting the Microphone FFC

3. Disconnect the RTC battery cable from the mainboard connector.
4. Pry to detach the adhesive tape underneath the RTC battery. Then remove the RTC battery.

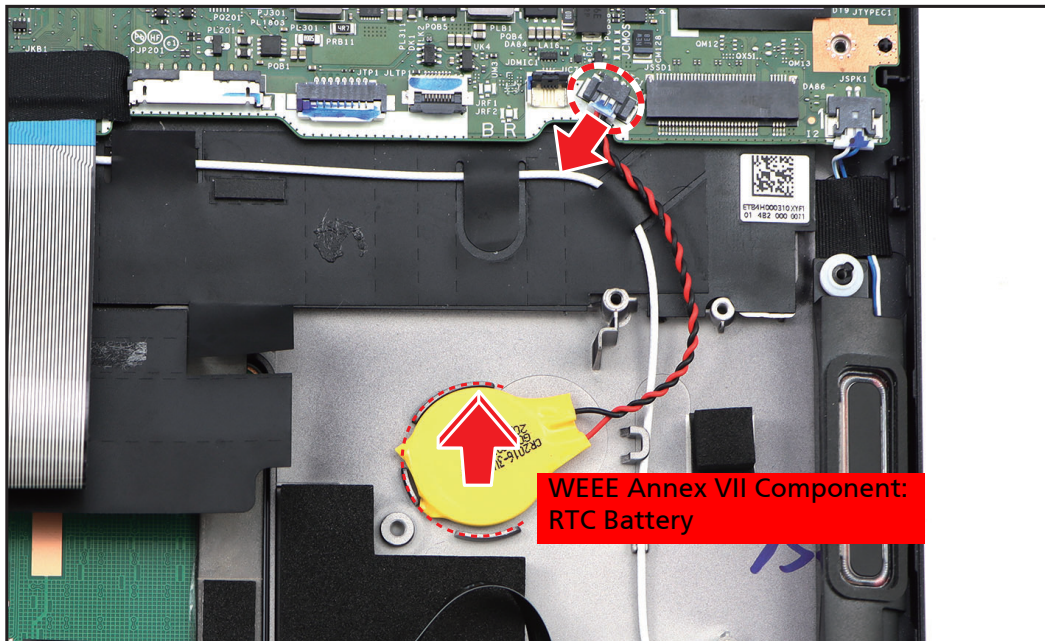


Figure 1-20. Disconnecting the RTC Battery Cable and Removing the RTC Battery

Touchpad Removal

Prerequisite:

※ [Battery Removal](#) on page 1-11

⇒ **NOTE:**

Slightly lift the keyboard mylar for easy access to FFCs, conductive tape, cable routing, screws, or screw holes.

1. Release the latches and disconnect the touchpad lighting FFC (A) from the mainboard and touchpad connectors. Then remove the touchpad lighting FFC.
2. Release the latches and disconnect the touchpad FFC (B) from the mainboard and touchpad connectors. Then remove the touchpad FFC.

⇒ **NOTE:** When removing the FFCs, carefully lift the portions of the touchpad FFC/touchpad lighting FFC (marked with **red dashed lines** as shown in the below illustration) to detach it from the adhesive tape underneath.

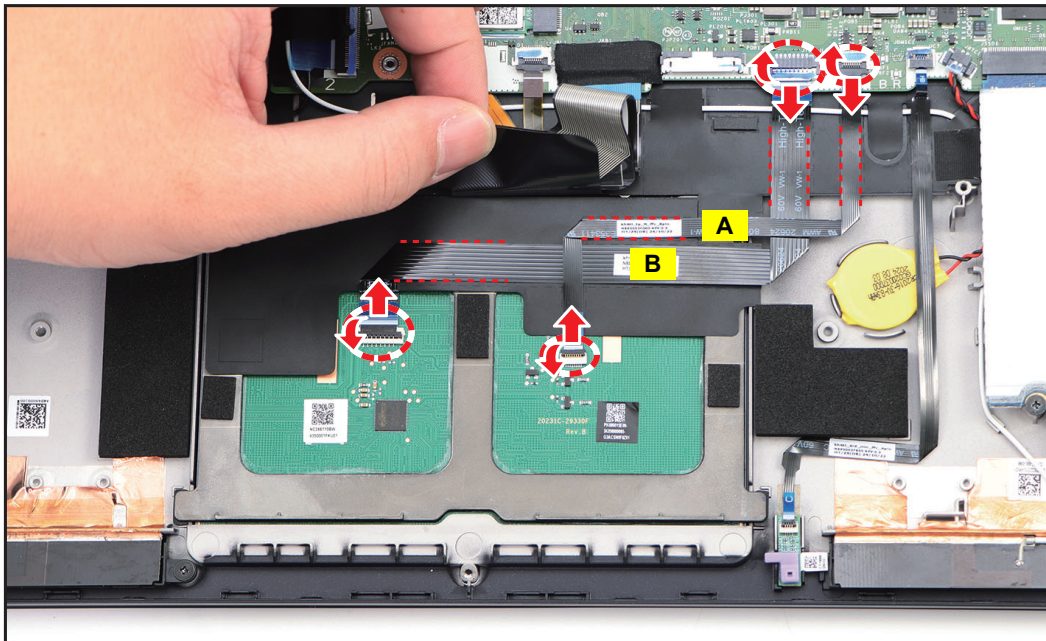


Figure 1-21. Removing the FFCs

3. Slightly lift the keyboard mylar. Then remove the three (3) screws securing the touchpad to the upper case.

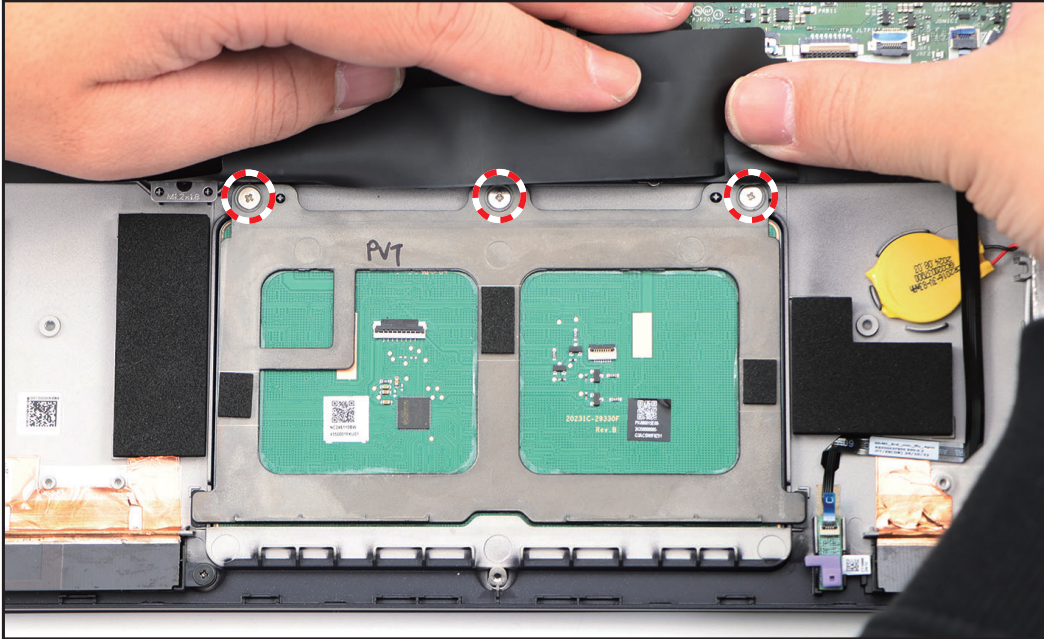


Figure 1-22. Removing the Screws

4. Push the upper part of the touchpad to release it from the screw hole studs. Then slide the bottom part of the touchpad forward to disengage it from the bottom tabs. Remove the touchpad from the upper case.

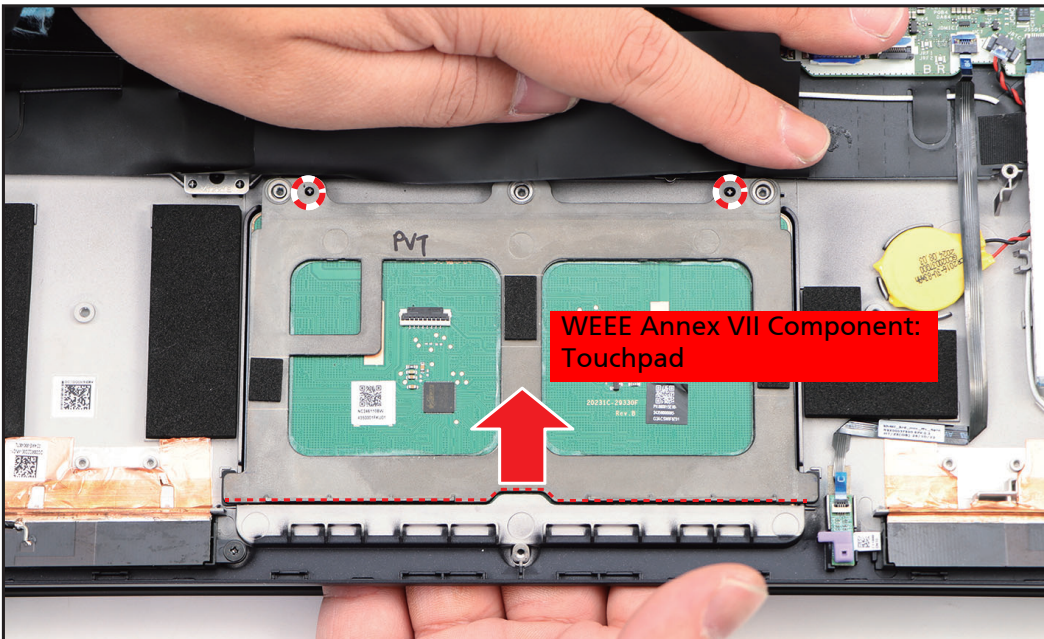



Figure 1-23. Removing the Touchpad

Table 1-5. Touchpad Screws

Screw Name	Screw Type	Torque	Quantity
M 2.0 x 2.0		1.8~2.2kgf.cm	3

USB Board Removal

Prerequisite:

- ※ [Battery Removal](#) on page 1-11
 - ※ Fan Module Removal
1. Detach the tapes securing the WLAN antenna cables.
 2. Disconnect the WLAN antenna cables from the WLAN module connectors.

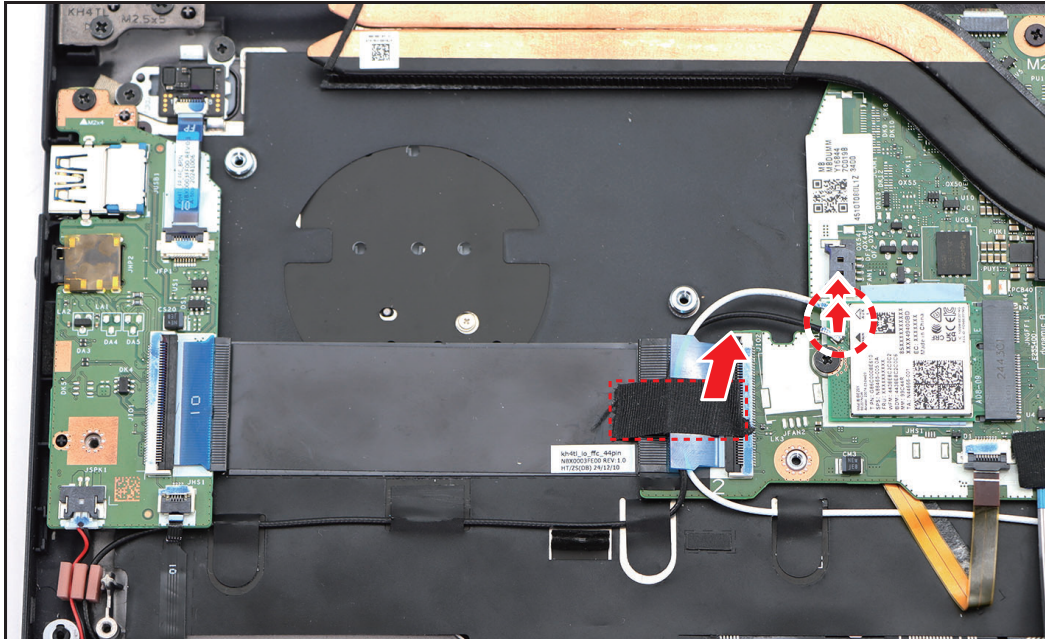


Figure 1-24. Detaching the Tape and Disconnecting the WLAN Antenna Cables

3. Release the latches and disconnect the USB board FFC (A) from the mainboard and USB board connectors. Then remove the USB board FFC.
⇒ NOTE: When removing the FFC, carefully lift the portion of the USB board FFC (marked with red dashed lines as shown in the below illustration) to detach it from the adhesive tape underneath.
4. Disconnect the right speaker cable from the USB board connector (B).
5. Release the latch and disconnect the hall sensor board FFC from the USB board connector (C).
6. Release the latch and disconnect the fingerprint FFC from the USB board connector (D).

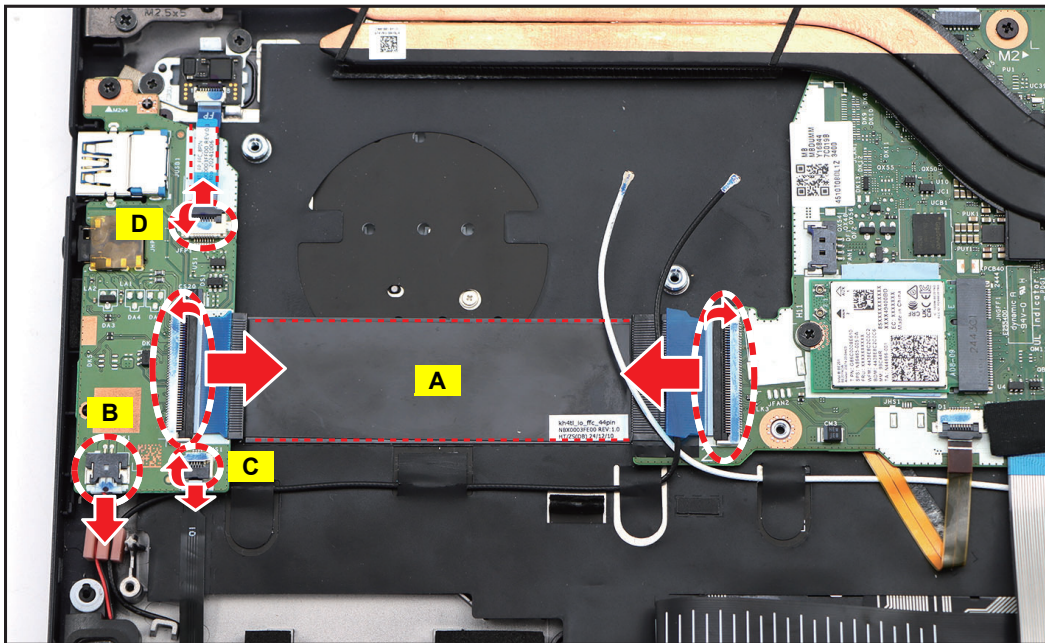


Figure 1-25. Disconnecting the Cables

- Remove the screw securing the USB board to the upper case.

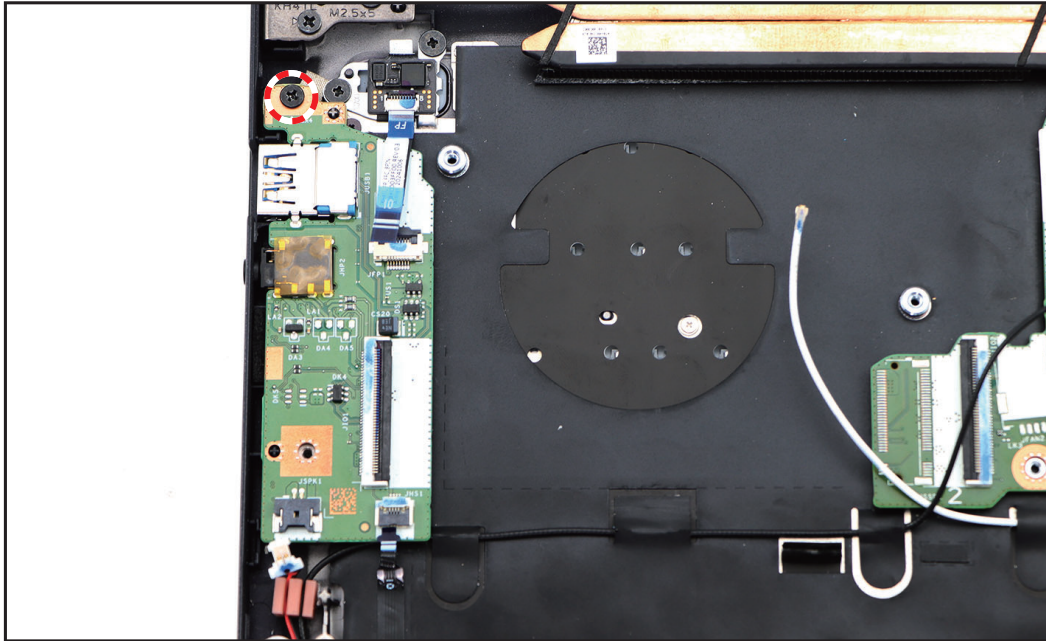


Figure 1-26. Removing the Screw

- Release the USB board from the I/O port slots and the guide pins on the upper case. Then remove the USB board.

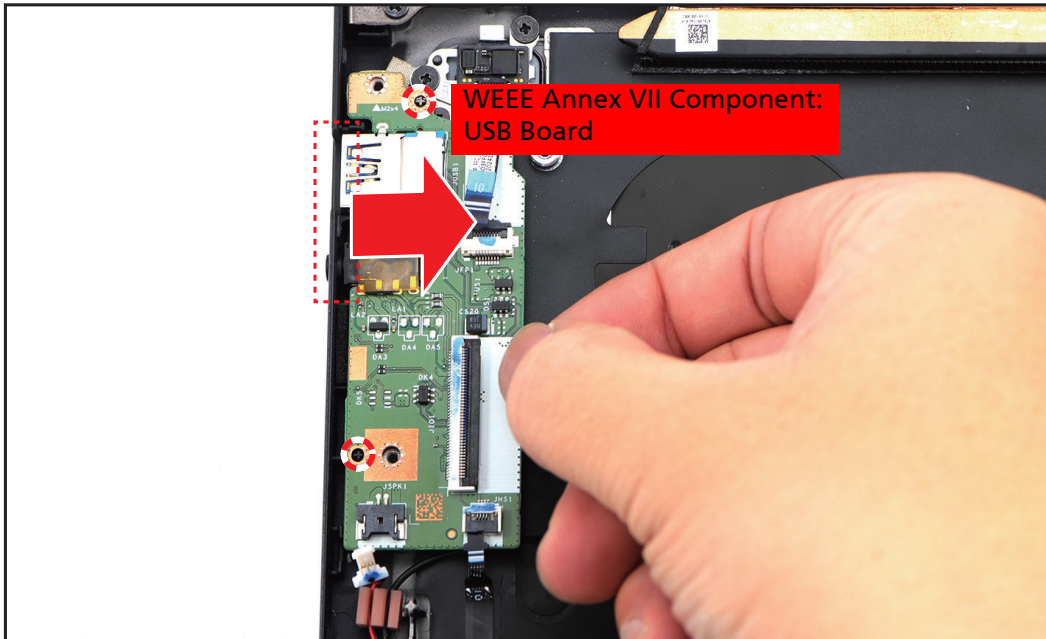



Figure 1-27. Removing the USB Board

Table 1-6. USB Board Screw

Screw Name	Screw Type	Torque	Quantity
M 2.0 x 4.0		1.8~2.2kgf.cm	1

Mainboard Removal

Prerequisite:

- ✦ [SSD Module Removal](#) on page 1-9
- ✦ [Battery Removal](#) on page 1-11
- ✦ Fan Module Removal
- ✦ [WLAN Module Removal](#) on page 1-13
- ✦ Thermal Module Removal

1. Remove the two (2) screws securing the LCD hinge to the upper case.

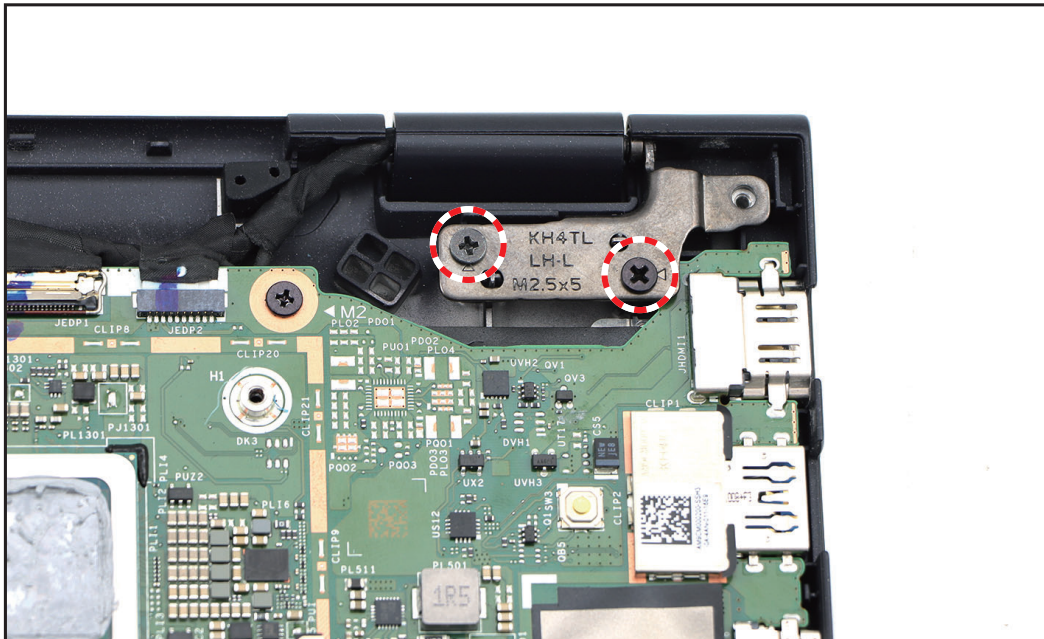


Figure 1-28. Removing the Screws

2. Lift the upper case until it is fully open.

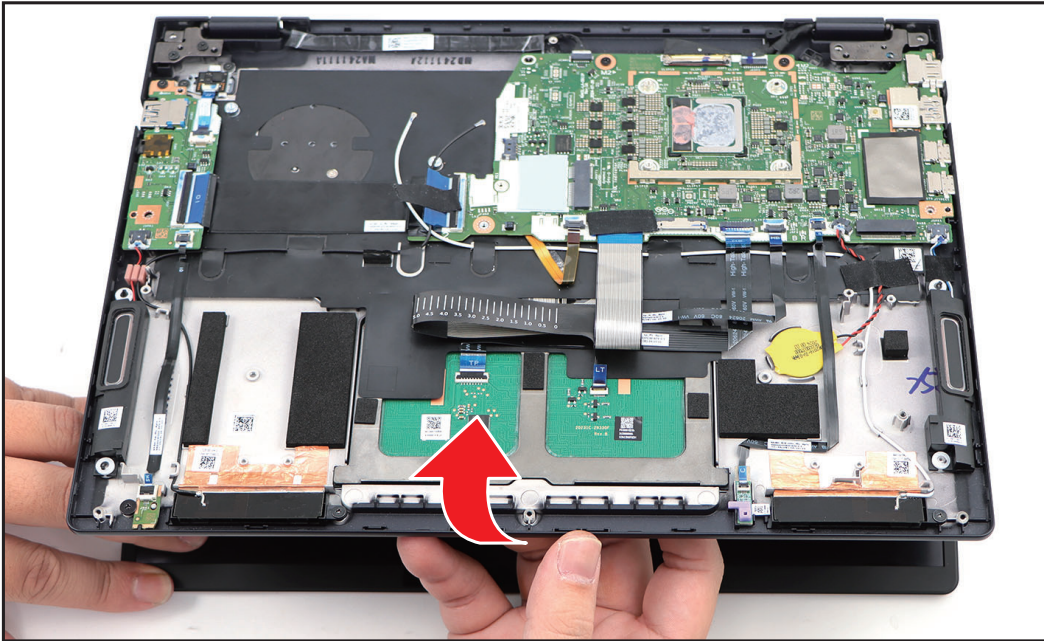


Figure 1-29. Lifting the Upper Case

3. Close the upper case. Then lift the LCD hinge until it is fully extended.

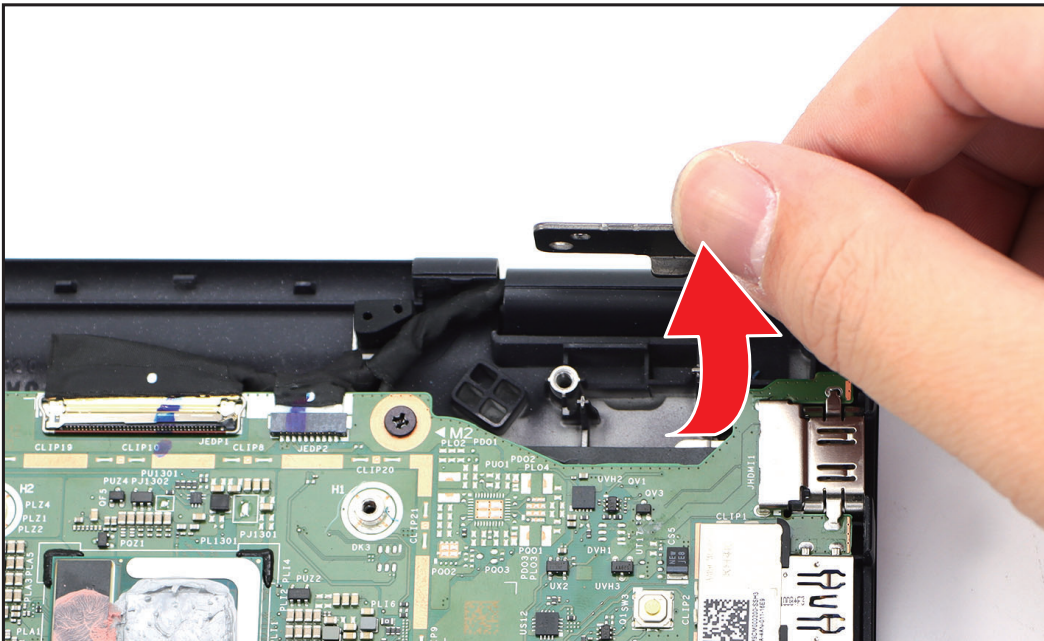


Figure 1-30. Extending the LCD Hinge

4. Detach the tapes securing the WLAN antenna cables, keyboard FPC, RTC battery cable, and left speaker cable.

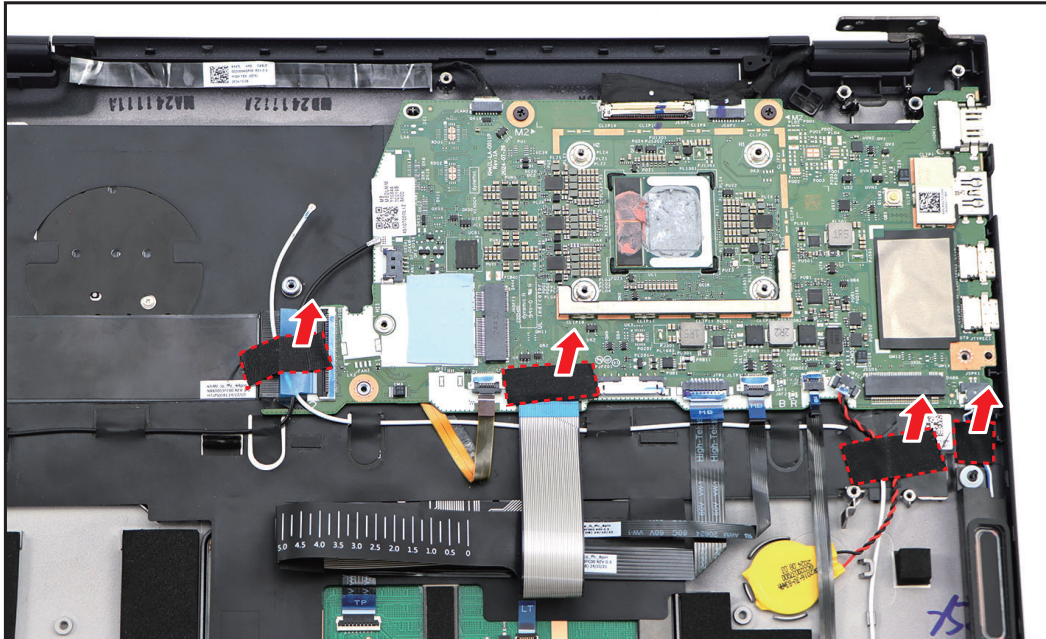


Figure 1-31. Detaching the Tapes

5. Release the latch (if necessary) and disconnect the following cables from the mainboard connectors:
 - USB board FFC (A)
 - Keyboard backlight FPC (B)
 - Keyboard FPC (C)
 - Touchpad FFC (D)
 - Touchpad lighting FFC (E)
 - Microphone FFC (F)
 - Left speaker cable (G)
 - eDP cable (JEDP2) (H)
 - eDP cable (JEDP1) (I)
 - HPD sensor cable (J)

⇒ **NOTE:** After disconnecting the microphone FFC, carefully lift the portion of the FFC (marked with **red dashed lines** as shown in the below illustration) to detach it from the adhesive tape underneath.

6. Carefully pry to detach the adhesive tape underneath the RTC battery (K). Remove the RTC battery from its compartment.

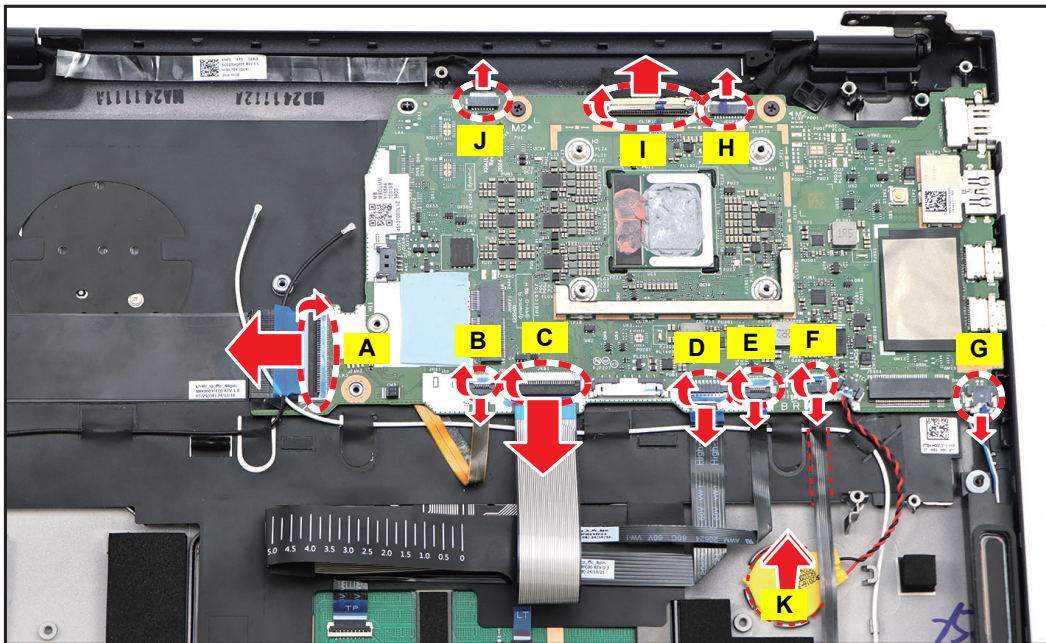


Figure 1-32. Disconnecting the Cables and Removing the RTC Battery

7. Release the mainboard from the I/O port slots and the guide pins on the upper case. Then remove the mainboard.

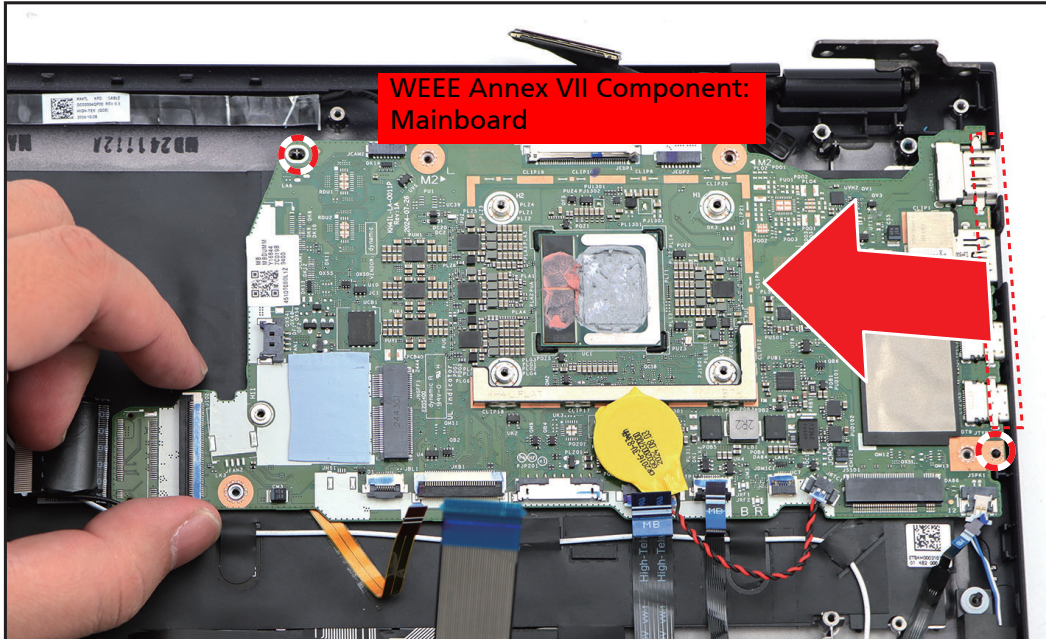




Figure 1-33. Removing the Mainboard

Table 1-7. Mainboard & LCD Hinge Screws

Screw Name	Screw Type	Torque	Quantity
M 2.0 x 4.0		1.8~2.2kgf.cm	2 (mainboard)
M 2.5 x 5.0		2.55~3.45kgf.cm	2 (LCD hinge)

LCD Module Removal

Prerequisite:

- ※ Thermal Module Removal

1. Disconnect the HPD sensor cable from the mainboard connector. Then carefully detach the cable from its underneath adhesive (marked with **red dashed lines** as shown in the below illustration).

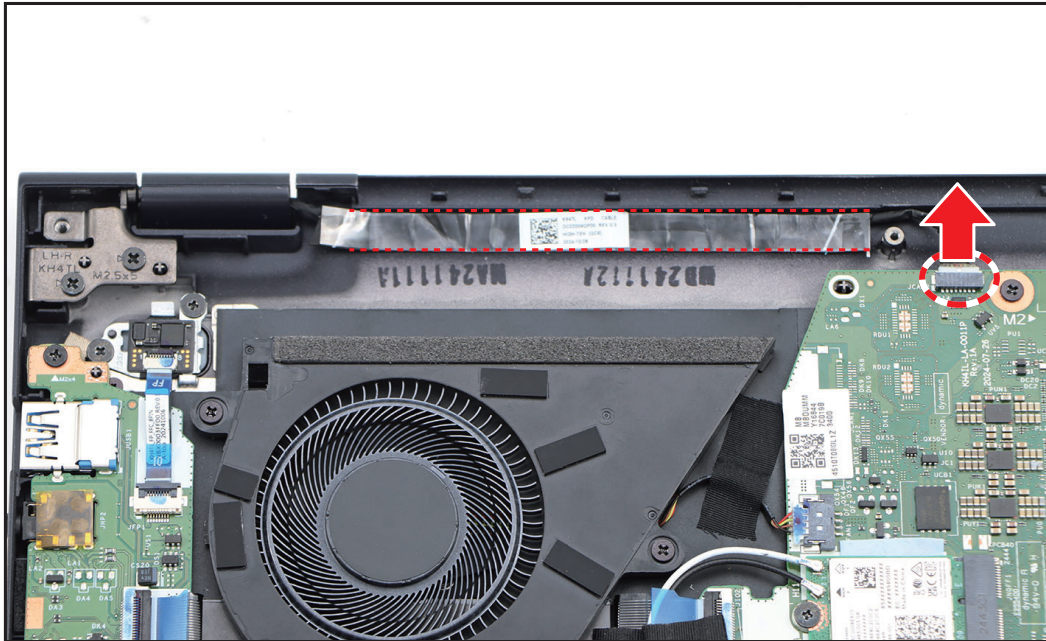


Figure 1-34. Disconnecting the HPD Sensor Cable

2. Lift to open the latch securing the eDP cable. Then disconnect the eDP cable from the mainboard connector (A).
3. Disconnect another eDP cable from the mainboard connector (B). Then unroute the eDP cable from the cable guides as shown in the illustration below.

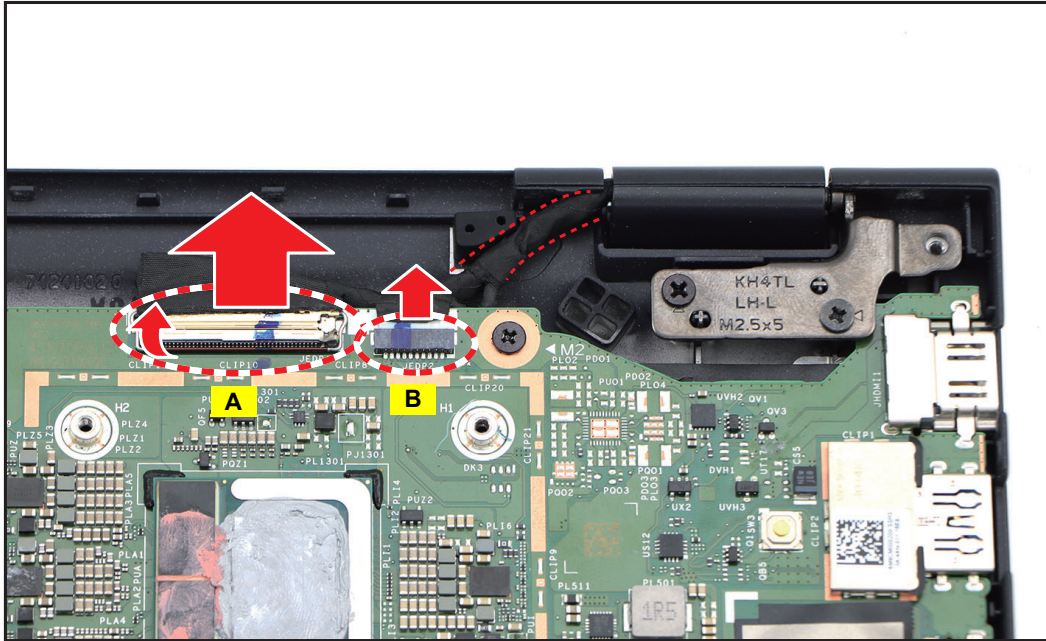


Figure 1-35. Disconnecting the eDP Cables

4. Remove the four (4) screws securing the hinges and LCD module to the upper case.

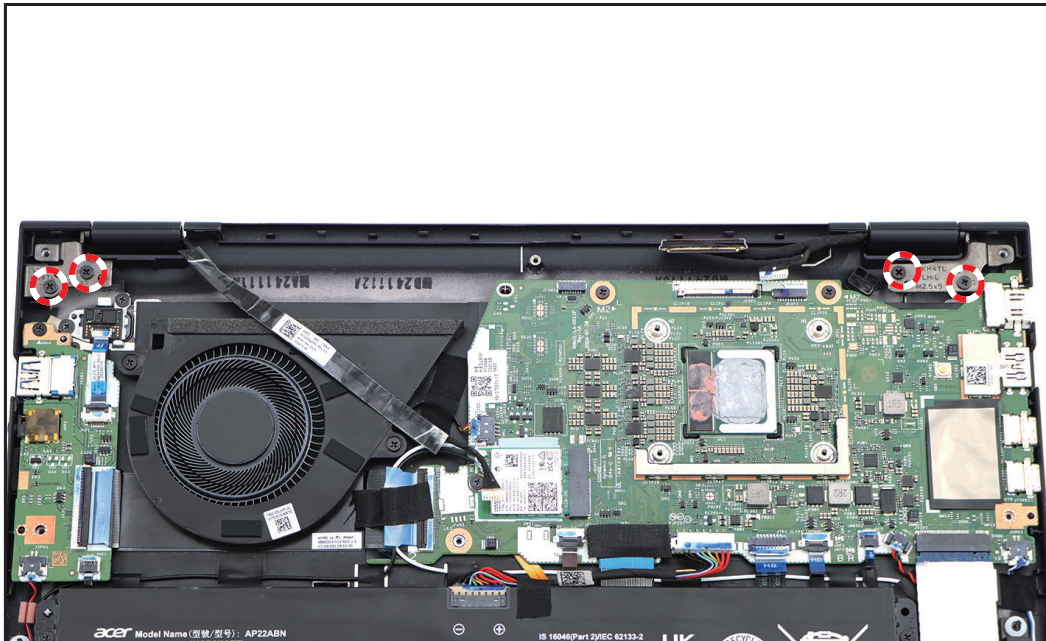


Figure 1-36. Removing the Screws

5. Fully open the notebook lid. Then disengage the LCD hinges from their respective slots and remove the LCD module away from the upper case.

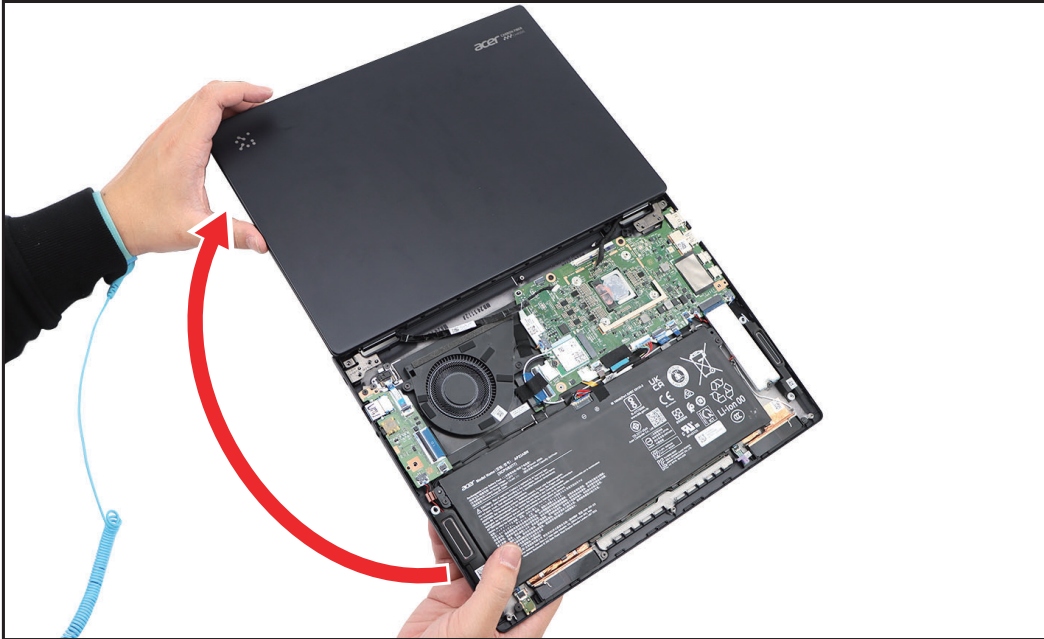



Figure 1-37. Removing the LCD Module

Table 1-8. Hinges Screws

Screw Name	Screw Type	Torque	Quantity
M 2.5 x 5.0		2.55~3.45kgf.cm	4

LCD Bezel Removal

Prerequisite:

※ [LCD Module Removal](#) on page 1-28

1. Starting from the upper-left edge side, pry the inner part of the LCD bezel and pull the bezel (upper side) inward to release the latches.



Figure 1-38. Releasing the Upper Side Latches (1 of 2)

2. Repeat the same procedure to release the remaining upper side latches as shown in the below illustration.

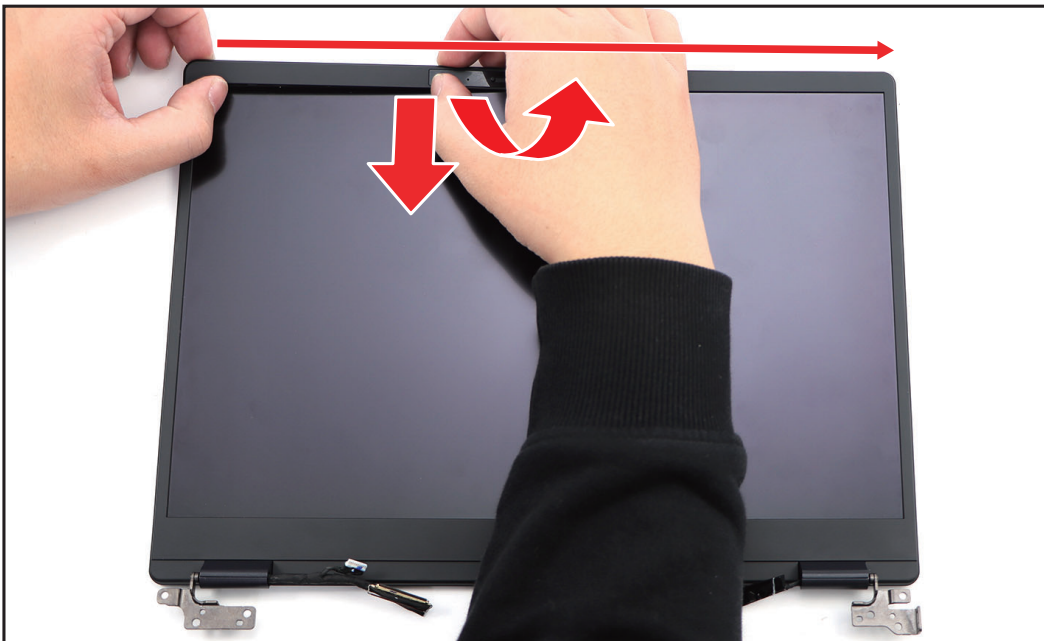


Figure 1-39. Releasing the Upper Side Latches (2 of 2)

3. From the right-upper edge side, continue to pry the inner part of the LCD bezel (right side) and pull the bezel inward to release the latches. Then repeat the same procedure to release the remaining right side latches as shown in the below illustration.

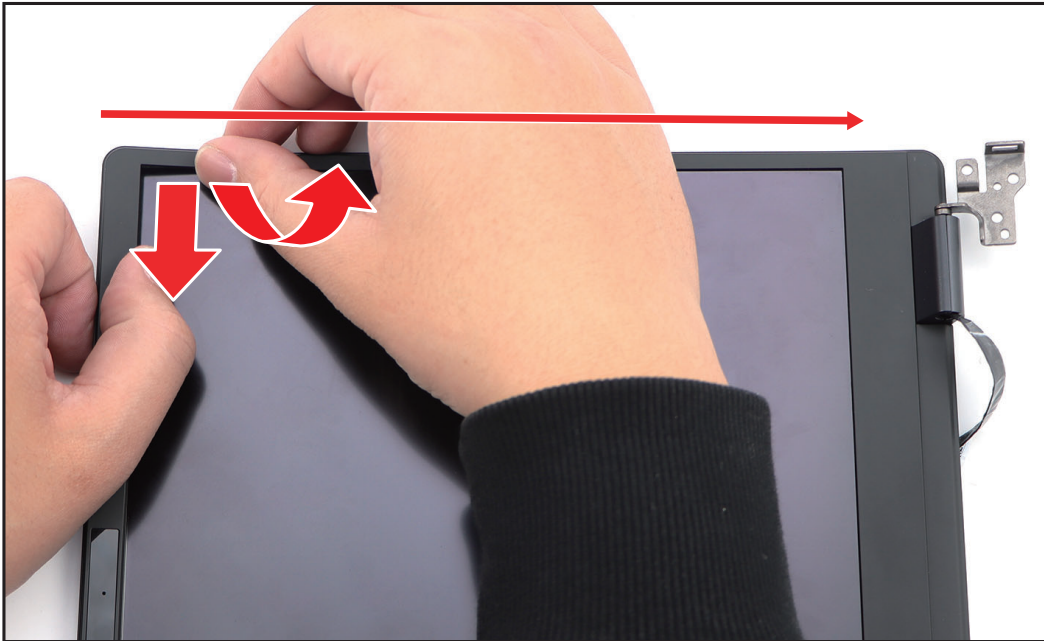


Figure 1-40. Releasing the Right Side Latches

4. From the left-upper edge side, continue to pry the inner part of the LCD bezel (left side) and pull the bezel inward to release the latches. Then repeat the same procedure to release the remaining left side latches as shown in the below illustration.



Figure 1-41. Releasing the Left Side Latches

- From the bottom-left side, continue to pry the inner part of the LCD bezel (left hinge portion) and pull the bezel inward to release the latches.



Figure 1-42. Releasing the Bottom Side Latches (1 of 3)

- Pry slightly the bottom-left side of the bezel to access the adhesive tape underneath the LCD bezel. Then, using tweezers, carefully pull to detach a portion of the adhesive tape as shown in the below illustration.

⚠ IMPORTANT: It is recommended to put a protective film on the sharp point of the tweezers to prevent scratching the LCD panel.

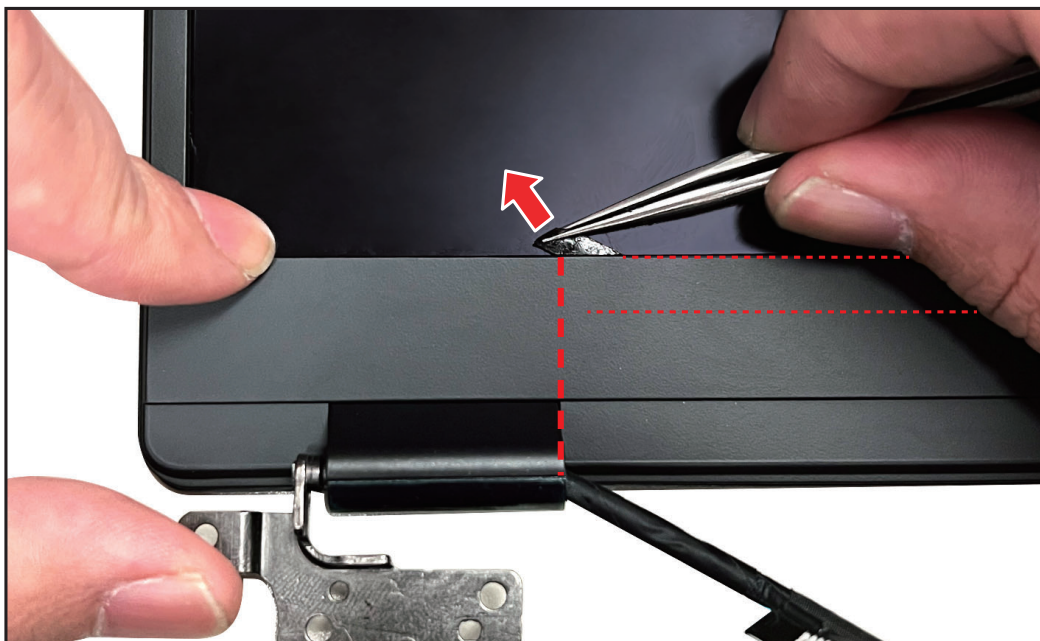


Figure 1-43. Removing the Adhesive Tape (1 of 3)

- Put down the tweezers and gently pull out the easy-pull adhesive with your hand at a small angle against the LCD surface as shown in the below illustration.

IMPORTANT: Do not pull at a large angle or using excessive force to avoid breaking the tape.



Figure 1-44. Removing the Adhesive Tape (2 of 3)



Figure 1-45. Removing the Adhesive Tape (3 of 3)

8. From the bottom-center side, continue to pry the inner part of the LCD bezel and pull the bezel inward to release the latches.



Figure 1-46. Releasing the Bottom Side Latches (2 of 3)

9. From the bottom-right side, continue to pry the inner part of the LCD bezel (right hinge portion) and pull the bezel inward to release the latches. Then remove the LCD bezel.

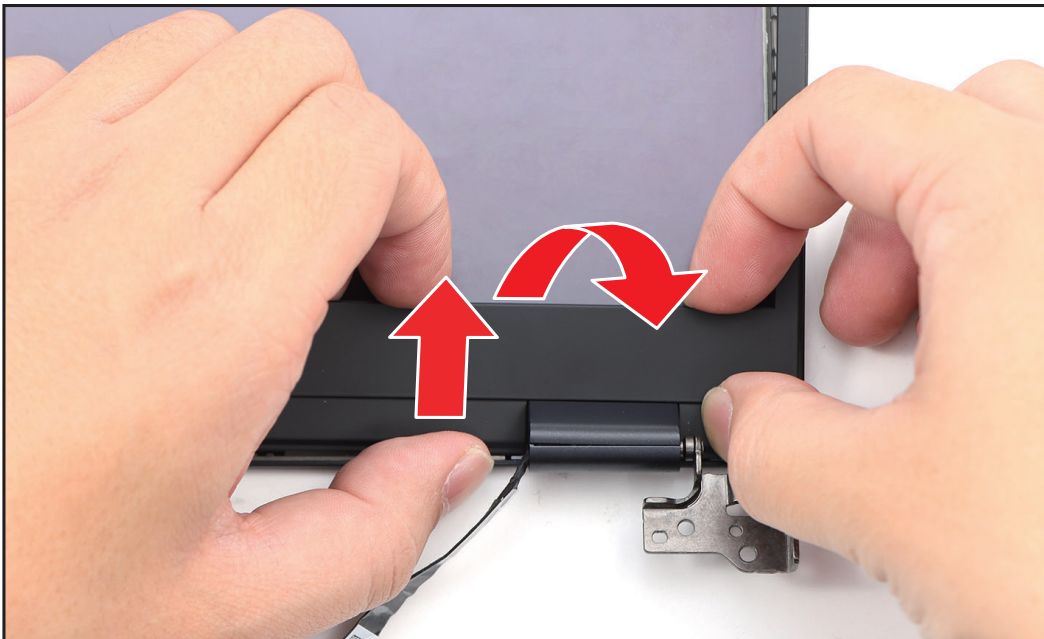


Figure 1-47. Releasing the Bottom Side Latches (3 of 3) and Removing the LCD Bezel

LCD Panel Removal

Prerequisite:

※ [LCD Bezel Removal](#) on page [1-31](#)

1. Unroute the eDP cable from the cable guides on the bottom side of the LCD cover and hinge as shown in the below illustration.

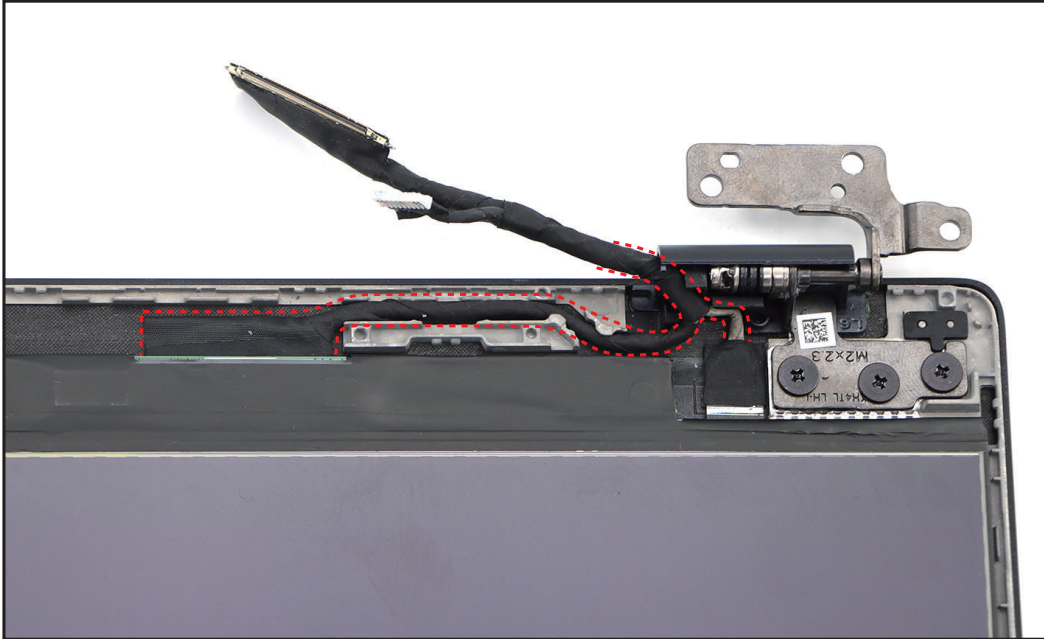


Figure 1-48. Unrouting the eDP Cable

2. Pry slightly to access the double-sided mounting tape underneath the LCD panel. Then carefully 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.

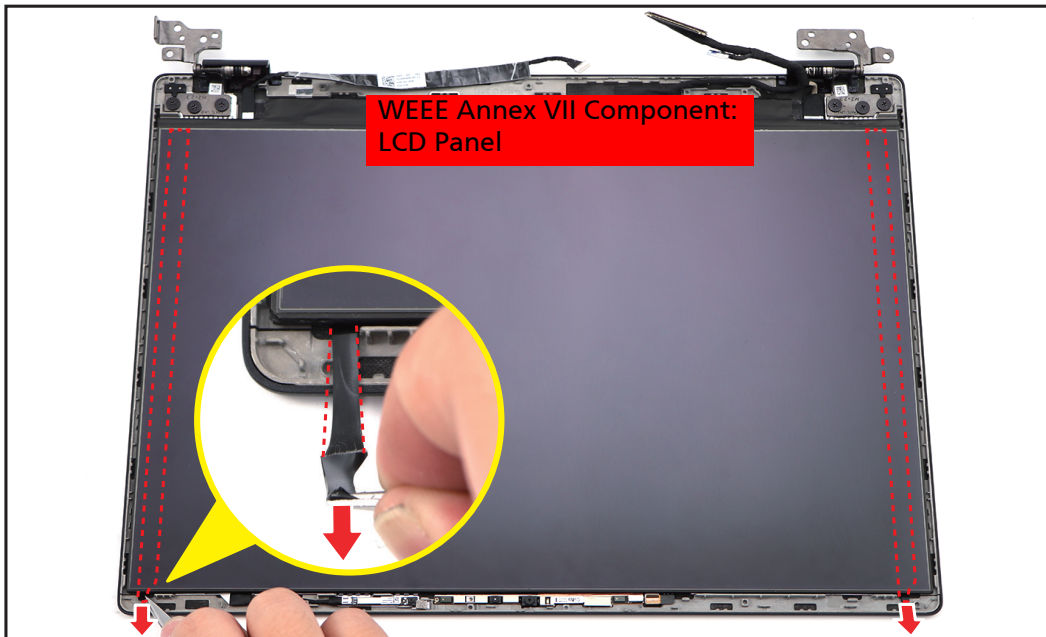


Figure 1-49. Detaching the Double-sided Mounting Tapes

3. Remove the LCD panel. Then carefully flip the LCD panel to access its connector.
4. Detach the mylar securing the eDP cable to the LCD panel connector.

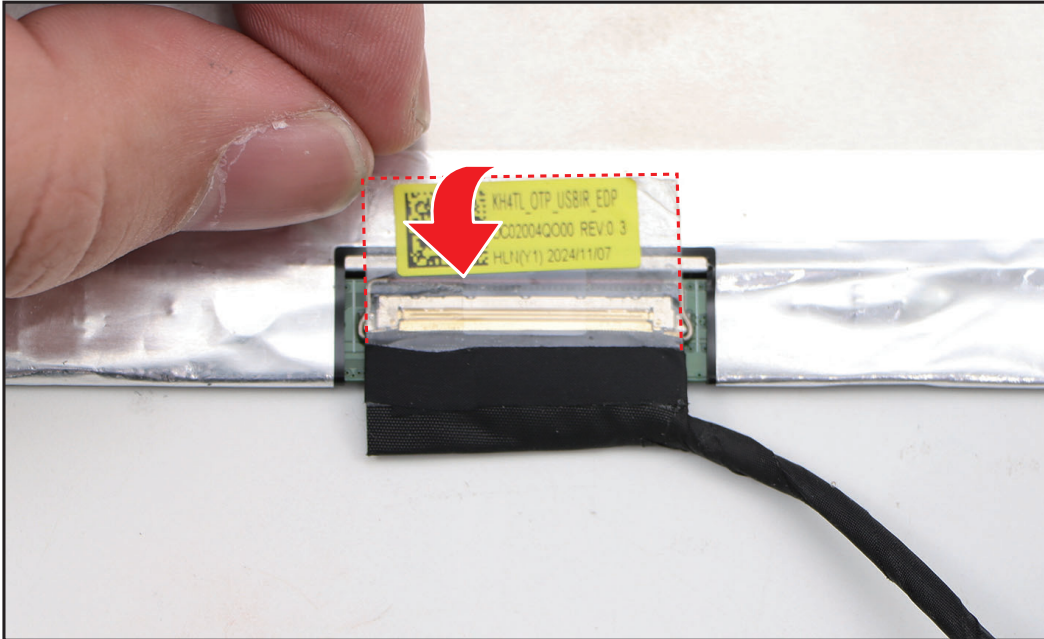


Figure 1-50. Detaching the Mylar

5. Lift the latch securing the eDP cable.

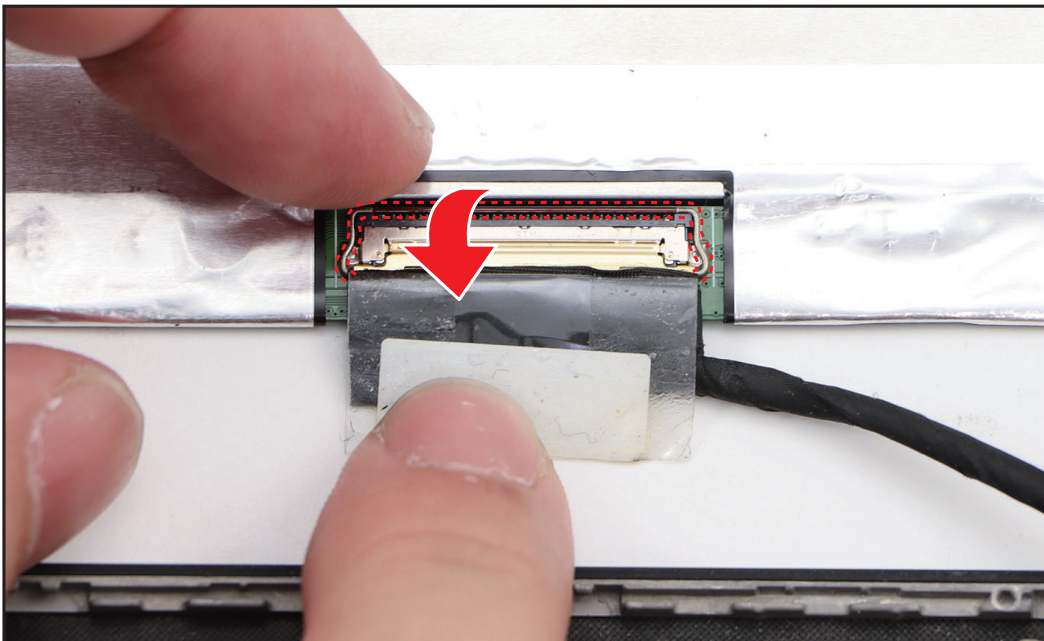


Figure 1-51. Lifting the Latch

6. Disconnect the eDP cable from the LCD panel connector. Then remove the eDP cable.

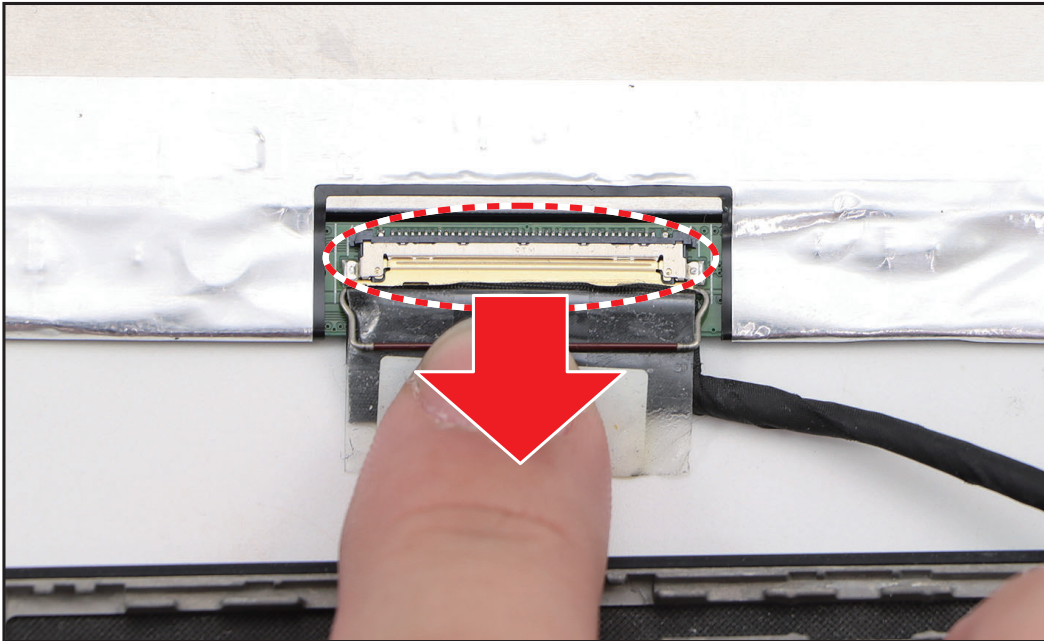
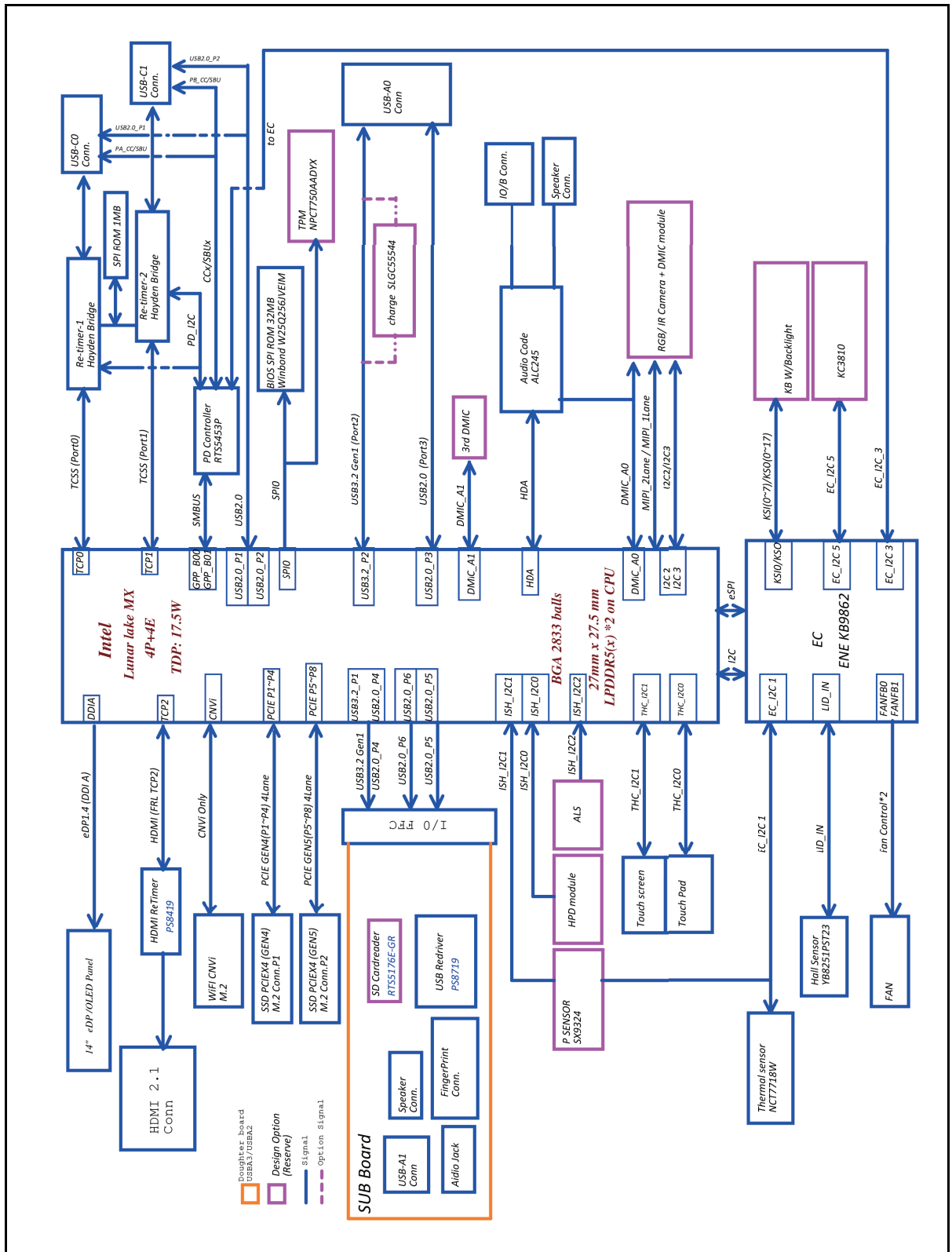


Figure 1-52. Disconnecting the eDP Cable

System Block Diagram



BIOS Setup Utility

The *BIOS Setup Utility* is a hardware configuration program built into a computer's BIOS (Basic Input/Output System).

The BIOS utility is pre-configured and optimized so most users do not need to run this utility. However, if configuration problems occur, you may need to run the BIOS utility.

To activate the BIOS Utility, press **F2** during POST (power-on-self-test) when **Vero Sense** logo appears in the middle of the screen.

To change the boot device without entering the BIOS utility, press **F12** during POST to enter the multi-boot menu. In this menu, users can change the boot device without entering *BIOS Setup Utility*.

Navigating the Bios Setup Utility

The BIOS utility has six menu options: **Information**, **Main**, **Advanced**, **Security**, **Boot**, and **Exit**.

To navigate through the menus options, perform the following:

- To choose a menu or item, use the up and down arrow keys.
- Press **Enter** or right arrow key to expand selected item.
- To switch the item status or change the value of a parameter, press **Enter** or right arrow key.
- Press **Esc** while you are in any of the menu options to go to the Exit menu.
- In any menu, you can load default settings by pressing **F9**. You can also press **F10** to save any changes made and exit the *BIOS Setup Utility*.

⇒ NOTE:

- Parameter values can be changed if enclosed in square brackets []. Navigation keys for a particular menu are shown on the bottom of the screen. Help for parameters are found in the Item Specific Help part of the screen. Read this carefully when making changes to parameter values.
- System information is subject to specific models.

The succeeding sections are descriptions of the menu tabs found on the *InsydeH20 BIOS Setup Utility* screen.

⇒ NOTE:

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

Information Tab

The Information tab displays a summary of the computer hardware information.



Figure 1-53. BIOS Information (1 of 2)



Figure 1-54. BIOS Information (2 of 2)

Table 1-9. BIOS Information Tab Parameters

Product Information	Remark
CPU Info	Should be same with processor brand string, BIOS can get processor brand string by calling CPUID instruction.
Core Frequency	Display Processor Base Core Frequency.
System BIOS Version	Should be same with SMBIOS Type 0 Offset 05h.
GOP Version	GOP Version will only be shown when Boot Mode is [UEFI].
HDD Model Name	<ul style="list-style-type: none"> • This item show the model name of HDD installed. • The hard disk model name is automatically detected by the system. If there is no hard disk present or unknown type, "None" should be shown on this field. • For multiple storage, add a number after HDD starting from 0. • If the storage leverage OPAL protocol, add (OPAL) for identification.
HDD Serial Number	<ul style="list-style-type: none"> • This item will show the serial number of HDD installed. • If no hard disk or other devices are installed, "None" should be shown on this field. • If system has more than 1 device, the item should be listed as below: <ul style="list-style-type: none"> • HDD0 Model Name • HDD0 Serial Number • HDD1 Model Name • HDD1 Serial Number • If the storage leverage OPAL protocol, add (OPAL) for identification.
SATA Mode	<ul style="list-style-type: none"> • Display SATA Mode setting. Mapping to BIOS setup option. • If the platform supports VMD, the SATA mode item should be hidden.
Total Memory	The field reports the system total installed memory.
On Board Memory Vendor	<ul style="list-style-type: none"> • Show the vendor of memory manufacturer. • Also show the information of the memory type. • If there is no on board memory design, hide this item.
On Board Memory Size	<ul style="list-style-type: none"> • Should same as the summary of all Type 17 which the form factor (offset 0x0E) is 0x0B in SMBIOS. • If there is no on board memory design, hide this item.
On Board Memory Speed	<ul style="list-style-type: none"> • Identifies the configured speed of the memory device. • If there is no on board memory design, hide this item.
On Board Memory Voltage	<ul style="list-style-type: none"> • Identifies the configured voltage of the memory device. • # means memory's number. If there is only one memory on board, hide this item.
Serial Number	Should be the same with SMBIOS Type 1 Offset 07h.
Asset Tag Number	Should be same with SMBIOS Type 3 Offset 08h.
Ownership Tag	Should be same with SMBIOS Type 11 string 02h.

Product Information	Remark
Product Name	<ul style="list-style-type: none"> • Should be same with SMBIOS Type 1 Offset 05h. • Product Name is defined by project POR. • The string is case sensitive and the maximum length is 50 bytes.
Manufacturer Name	<ul style="list-style-type: none"> • Should be same with SMBOS Type 1 Offset 04h. • The string is case sensitive.
UUID	<ul style="list-style-type: none"> • It is required for all systems. • Display format: xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx (follow UUID Standard)
LAN MAC Address	<ul style="list-style-type: none"> • Shows LAN MAC address. • If system have no on board LAN, BIOS has to save one MAC address that applied at IEEE OUI and shows the virtual LAN MAC address.
DFCI/ABST support	<ul style="list-style-type: none"> • This item default should be hidden. • Only visible after user presses the “Service” key in this page (Information Tab). • This item just reminds the user whether the system supports DFCI or ABST. • The default value is ABST.
Manufacture Date	This item should be the battery Manufacturing Date.
Health	<ul style="list-style-type: none"> • The battery health indicator. • This item required with a help string under line "Battery health may rise or fall depending on the state of the last charge/discharge cycle."
Battery Temperature	Show the temperature of battery.
Cycle Count	<ul style="list-style-type: none"> • Show the battery charge cycle count. • This item required with a help string under line "Due to quality inspection before shipping, the figure may not be zero on first use."

Main Tab

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



Figure 1-55. BIOS Main

Table 1-10. BIOS Main Tab Parameters

Item Name	Example	Remark
System Time	HH:MM:SS	<ul style="list-style-type: none"> The format is the number of string. The hours are displayed in 24-hour format. The values set in the two fields take effect immediately.
System Date	MM/DD/YY	
Network Boot	[Enabled] / [Disabled]	<ul style="list-style-type: none"> Enable/Disable PXE boot to LAN. The default value is [Disabled].
F12 Boot Menu	[Enabled] / [Disabled]	<ul style="list-style-type: none"> This function enables or disables the ability that user can press F12 while POST to quickly select the boot device. Modification to the boot device order apply only for the current session. The next time your computer is rebooted it will use again the boot device sequence as set in the BIOS Setup Utility > Boot menu. The default value is [Disabled].

Item Name	Example	Remark
SATA Mode	[AHCI]	<ul style="list-style-type: none"> This item default should be hidden. Only visible after user presses Ctrl+S in this page (Main Tab). Default is set to [AHCI] if the project doesn't require Optane or RAID support.
USB/TBT Wake from S4 Support	[Enabled] / [Disabled]	<ul style="list-style-type: none"> Support USB/TBT Wake from S4. The default value is [Disabled].
Function key behavior	[Function Key] / [Media Key]	<ul style="list-style-type: none"> [Media Key]: Perform the media function by default. Hold Fn to activate F1 to F12. [Function Key]: Activate F1 to F12 by default. Hold Fn to perform the media function. Media functions are only active under Windows. F1 to F12 act as normal function keys during device boot or while in BIOS. Default setting depends on the product line definition. The built-in USB keyboard / 5 ROW keyboard layout follow keyboard's design and no need to add BIOS switch.
Wake on USB while lid closed	[Enabled] / [Disabled]	<ul style="list-style-type: none"> If enabled, USB devices can wake the system, even if the lid is closed. The option grey out on modern standby supported system when the "USB wake from S4 Support" is disabled. The default value is [Disabled].
D2D Recovery	[Enabled] / [Disabled]	<ul style="list-style-type: none"> This function enables/disables Acer disc-to-disc Recovery. To do Acer disc-to-disc system recovery, press Alt+F10 key during POST.
Keyboard backlight timeout	[Enabled] / [Disabled]	<ul style="list-style-type: none"> The option only exists for the product support keyboard backlight and controlled by EC (USB keyboard not support) When the option is set to [Disabled], the keyboard backlight stay on no matter AC/DC. The default value is [Enabled].
Fast Boot	[Enabled] / [Disabled]	<ul style="list-style-type: none"> Enable/Disable Fast Boot. Skip timeout variable when the Fast Boot is enabled. The default value is [Enabled].
Customization Key	[Normal] / [Customized]	<ul style="list-style-type: none"> Show Normal or Customized in this field. Only visible if the platform supports the function after user presses Ctrl+D in this page (Main Tab).

Item Name	Example	Remark
Display Language	[English]	<ul style="list-style-type: none"> • BIOS display language. • BIOS supports 12 languages, which are English / Spanish / Chinese / German / Dutch / Brazilian Portuguese / Danish / Italian / Norwegian / Swedish / Russian / France / Kazakh / Ukrainian. • The default display language is [English].
Keyboard	[HID I2C] / [PS2]	<ul style="list-style-type: none"> • The option is only support while the project supporting HID I2C Keyboard. The purpose is to switch HID I2C and PS2 interface. • The default value is [HID I2C] mode. • This option is always hidden, and only visible after pressing the “Service” key.

Advanced Tab

The Advanced tab allows the user to set the Virtualization and other advanced settings configurations.

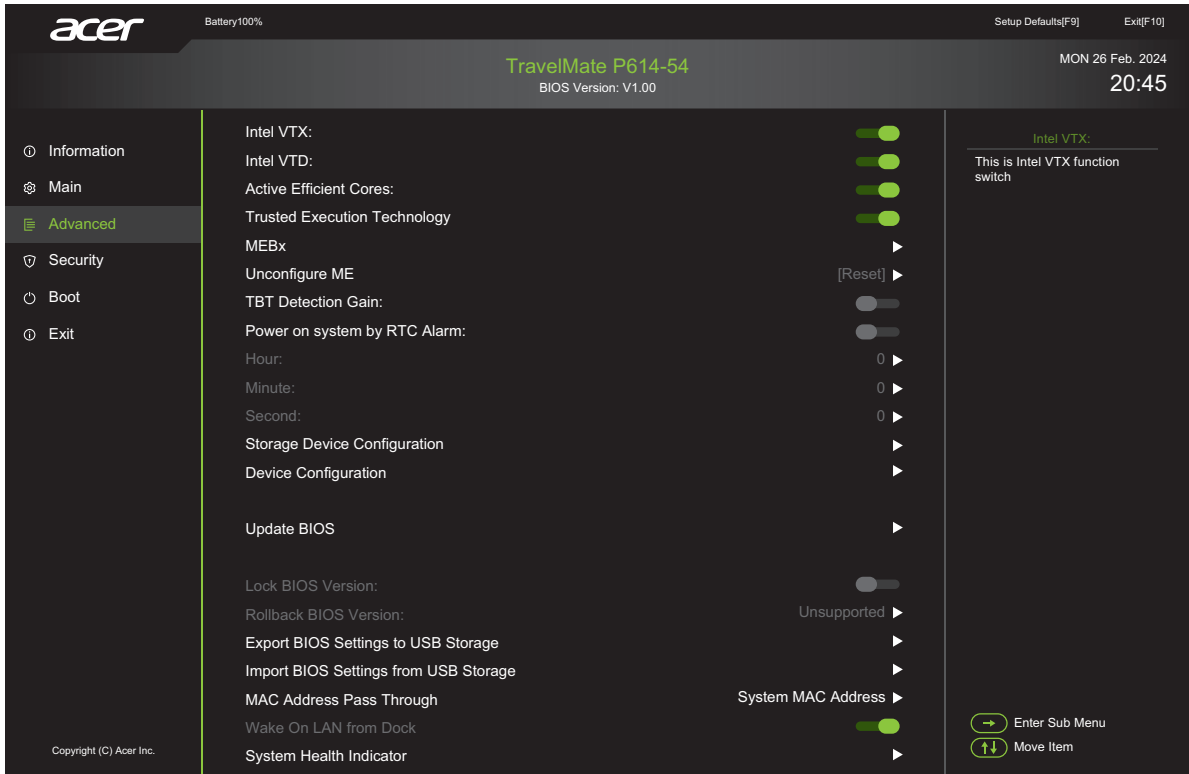


Figure 1-56. BIOS Advanced

Table 1-11. BIOS Advanced Tab Parameters

Item Name	Example	Remark
Intel VTX	[Enabled] / [Disabled]	<ul style="list-style-type: none"> This is Intel VTX function switch. Only appear if the platform supports the function. The default value is [Enabled].
Intel VTD	[Enabled] / [Disabled]	<ul style="list-style-type: none"> This is Intel VTD function switch. Only appear if the platform supports the function. The default value is [Enabled].
Active Efficient Cores	[Enabled] / [Disabled]	<ul style="list-style-type: none"> With Intel Hybrid CPU architecture, "Active Efficient Cores" appears for E-Core(Small Core). It can control all Efficient Cores to active or inactive. The default value is [Enabled].

Item Name	Example	Remark
Trusted Execution Technology	[Enabled] / [Disabled]	<ul style="list-style-type: none"> This option only appears when the system is vPro SKU. The default value is [Disabled]. If the system is configured as MSFT Security Level 3, set this option to [Enabled] by default.
MEBx		<ul style="list-style-type: none"> Only vPro SKU appears this sub-page. Add MEBx sub-page and all the options in the MEBx page follow Intel CRB settings.
Unconfigure ME	[Reset]	<ul style="list-style-type: none"> Only visible after Supervisor set with vPro SKU. Unconfigure ME with resetting MEBx password to default on next boot.
TBT Detection Gain	[Enabled] / [Disabled]	<ul style="list-style-type: none"> This item default should be hidden. Only visible after user presses Ctrl+S in this page (Advanced Tab). For all the tuning settings to support multiple layer TBT devices detection, combined all settings into this option. When it is set to [Enabled], all settings take effect. Display when the platform supports Thunderbolt. The default value is [Disabled].
Power on system by RTC Alarm	[Enabled] / [Disabled]	<ul style="list-style-type: none"> Enable/Disable RTC wake from S3/S4/S5 function. The default value is [Disabled].
Hour	[0~23]	<ul style="list-style-type: none"> Setup wake up hour (ISO 8601), allow 0~23. Grey out if "Power on system by RTC Alarm" is set to [Disabled].
Minute	[0~59]	<ul style="list-style-type: none"> Setup wake up minute, allow 0~59. Grey out if "Power on system by RTC Alarm" is set to [Disabled].
Second	[0~59]	<ul style="list-style-type: none"> Setup wake up second, allow 0~59. Grey out if "Power on system by RTC Alarm" is set to [Disabled].
Storage Device Configuration		<ul style="list-style-type: none"> Enter to configure the storage device port enable/disable (such as SATA/PCIE storage device port). Only visible if the system is set to [AHCI].
Device Configuration		Configure the device enable/disable setting.

Item Name	Example	Remark
Update BIOS	[Enter]	<ul style="list-style-type: none"> • This action allows user to update BIOS via USB storage. • This action will follow below method: <ul style="list-style-type: none"> • List available USB storages for user to select BIOS location. • List supported files in the device root directory and allow user to select intended file. And the interface will allow users to go back or enter directory. • If “Yes” is selected and the intended file product name is matched, it will exit the dialog and prepare to update BIOS. If the selected file product name is not matched, it will do not allow user to continue. • If the Lock BIOS Version is set to [Enabled], BIOS Update option status is grayed out.
Lock BIOS Version	[Enabled] / [Disabled]	<ul style="list-style-type: none"> • BIOS flash function switch option. When the setting is set to [Enabled], it does not allow user to do BIOS flash and the BIOS version is fixed, but Crisis Recovery is not within this limit. • Lock BIOS Version is default gray out and could only be modified by following actions: Supervisor password had been set. • The default value is [Disabled].
Rollback BIOS Version	[Supported] / [Unsupported]	<ul style="list-style-type: none"> • BIOS flash function switch option. When the setting is set to [Supported], it allows user to rollback BIOS to the previous version. • If the Lock BIOS Version is set to [Enabled], the Rollback BIOS Version option status is grayed out, and shows [Unsupported]. • Rollback BIOS Version is default gray out and could only be modified by following actions: Supervisor password had been set. • The default value is [Unsupported].
Export BIOS Settings to USB Storage	[Enter]	<ul style="list-style-type: none"> • This action allows user to save the current BIOS settings to the USB storage. • This action will follow below method: <ul style="list-style-type: none"> • Display the available USB storage for users to save the settings file. • The interface will allow users to go up or enter the directory. • If “Yes” is selected, it will save current BIOS settings as a file, and exit the dialog box.

Item Name	Example	Remark
Import BIOS Settings from USB Storage	[Enter]	<ul style="list-style-type: none"> • This action allows user to restore the BIOS settings from the USB storage. • Only profile with same project name can be imported. If the project name is not same, the pop up warning message to inform user. • This action will follow below method: <ul style="list-style-type: none"> • Display the available USB storage for users to select the settings file location. • Display all files in the device and allow user to select the intended file (only supported file can be loaded), and the interface will allow users to go up or enter directory. • If “Yes” is selected, the file will load into BIOS, then exit the dialog box.
MAC Address Pass Through	[System MAC Address] / [Customized MAC Address] / [Disabled]	<ul style="list-style-type: none"> • [System MAC Address]: Clone the on board LAN MAC address to Acer Type-docking. <ul style="list-style-type: none"> • If the system has no on board LAN, BIOS has to save one MAC address that applied at IEEE OUI. • The details implementation, please refer to Acer USB-C Docking Station Firmware Implementation Guide. • [Customized MAC Address]: Allow user to manually enter MAC address. <ul style="list-style-type: none"> • The input rule as below: <ul style="list-style-type: none"> • Valid characters: Alphabets A through F and numerical characters 0-9. • The second Byte must be even digit, either 0, 2, 4, 6, 8, A, C or E. • The default setting is [System MAC Address].
Wake On LAN from Dock	[Enabled] / [Disabled]	<ul style="list-style-type: none"> • If support Acer VDM (Vendor Define Message) Type C docking, BIOS has to support this option. • This option allow to be adjusted when the docking is inserted. Otherwise gray out this option. • Enable/Disable WOL from Dock function. • If it is set to [Enabled], the system allows WOL event triggered from Dock to wake the system. • The default value is [Enabled].
System Health Indicator		Enter the System Health Indicator page.

The following advanced settings are for commercial product only and only displayed when device is existed. It should be protected by supervisor password.

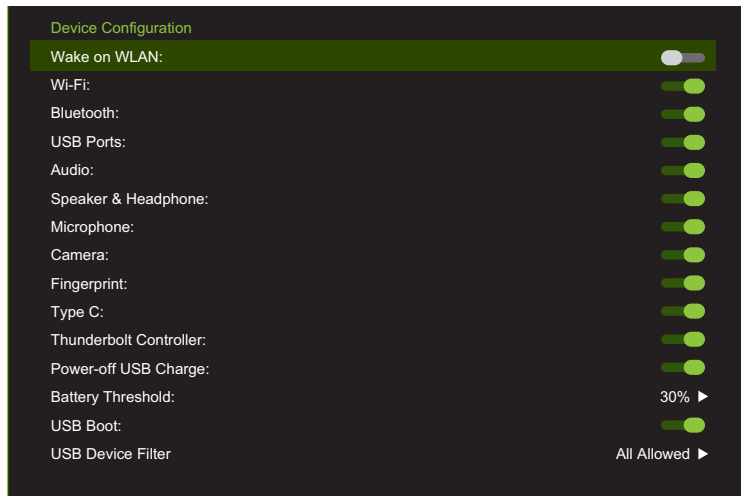


Figure 1-57. BIOS Advanced (Device Configuration)

Table 1-12. BIOS Advanced (Device Configuration) Parameters

Item Name	Example	Remark
Wake On WLAN	[Enabled] / [Disabled]	<ul style="list-style-type: none"> This is Commercial vPro Feature Only. Wake on WLAN feature allows the system to woken by Wireless LAN. The default value is [Disabled]. Panel is off when Wake on WLAN is enabled.
Wi-Fi	[Enabled] / [Disabled]	<ul style="list-style-type: none"> This option allows user to enable or disable Wi-Fi device in BIOS Setup Utility. If Wi-Fi device is disabled, the device can't be utilized until enable it in BIOS. The default value is [Enabled].
Bluetooth	[Enabled] / [Disabled]	<ul style="list-style-type: none"> This option allows user to enable or disable Bluetooth device in BIOS Setup Utility. If Bluetooth device is disabled, the device can't be utilized until enable it in BIOS. The default value is [Enabled].
USB Ports	[Enabled] / [Disabled]	<ul style="list-style-type: none"> This option allows user to enable or disable the external USB ports for both USB 2.0 and USB 3.0. It is included USB Port in Port Replicator and Dock. If USB Ports is disabled, all external USB Ports can't be utilized until enable it in BIOS Setup Utility. The default value is [Enabled].

Item Name	Example	Remark
Audio	[Enabled] / [Disabled]	<ul style="list-style-type: none"> • This option allows user to enable or disable Audio device, including Audio Port in Port Replicator and Dock. • If Audio device is disabled, the audio device can't be utilized until enable it in BIOS Setup Utility. • The default value is [Enabled].
Speaker & Headphone	[Enabled] / [Disabled]	<ul style="list-style-type: none"> • This option allows user to enable or disable Speaker & Headphone • When Audio device is disabled, this will grey out the option but leave the setting no change. • If Speaker & Headphone are disabled, those devices can't be utilized until enable it in BIOS Setup Utility. • The default value is [Enabled].
Microphone	[Enabled] / [Disabled]	<ul style="list-style-type: none"> • This option allows user to enable or disable Microphone. • When Audio device is disabled, it will grey out the option but leave the setting no change. • If Microphone is disabled, the device can't be utilized until enable it in BIOS Setup Utility. • The default value is [Enabled].
Camera	[Enabled] / [Disabled]	<ul style="list-style-type: none"> • This option allows user to enable or disable the camera device. • If the camera device is disabled, the camera device can't be utilized until enable it in BIOS Setup Utility. • The default value is [Enabled].
Fingerprint	[Enabled] / [Disabled]	<ul style="list-style-type: none"> • This option allows user to enable or disable the fingerprint device. • If the finger print device is disabled, the fingerprint device can't be utilized until enable it in BIOS Setup Utility. • The default value is [Enabled].

Item Name	Example	Remark
Type C	[Enabled] / [Disabled]	<ul style="list-style-type: none"> • This option allows user to enable or disable the devices connected through Type C (DP not included). • If Type C is disabled, any devices connected through Type C can't be utilized until enable it in BIOS Setup Utility. (DP not included) • The default value is [Enabled]. • Item Specific Help wording: Enable/Disable device connected through Type C (Display Port not included).
Thunderbolt Controller	[Enabled] / [Disabled]	<ul style="list-style-type: none"> • This option allows user to enable or disable the devices connected through TBT. • If TBT is disabled, any devices connected through TBT can't be utilized until enable it in BIOS Setup Utility. • The default value is [Enabled]. • Item Specific Help wording: Enable/Disable device connected through Thunderbolt Controller.
Power-off USB Charge	[Enabled] / [Disabled]	<ul style="list-style-type: none"> • This option allow user to enable or disable USB charge function when system is off or in Sleep mode. • Add below description for item specific help: Enables you to charge mobile devices when your computer is off or in Sleep mode. • The default value is [Enabled].
Battery Threshold	[10%] / [20%] / [30%]	<ul style="list-style-type: none"> • If Power-off USB Charge is enabled, when battery power lower than battery threshold, Power-off USB Charge won't charge the external USB device. • If Power-off USB Charge is disabled, the battery threshold is grayed out. • The string of "Battery Threshold" should indent one character. • Add below description for item specific help: Set a computer battery charge limit, below which charging stops. • The default value is [30%].
System Diagnose		Enter to select 3rd HDD Test and Memory test sub menu.
Disk Sanitizer		Enter to select 3rd Disk Sanitizer function.

Item Name	Example	Remark
USB Boot	[Enabled] / [Disabled]	<ul style="list-style-type: none"> • When USB Boot is disabled, under Boot priority order, USB boot device type is displayed but no device detected. No USB bootable device shows on F12 Boot Manager. • The default value is [Enabled].
USB Device Filter	[All Allowed]	<ul style="list-style-type: none"> • Enter to select USB filtered devices on USB Ports 3 types: <ul style="list-style-type: none"> - All Allowed - Keyboard/Mouse Only - Read-Only • Don't take effective on interior devices. • The default value is [All Allowed].

Security Tab

The Security tab allows the user to configure and protect the computer from unauthorized usage.

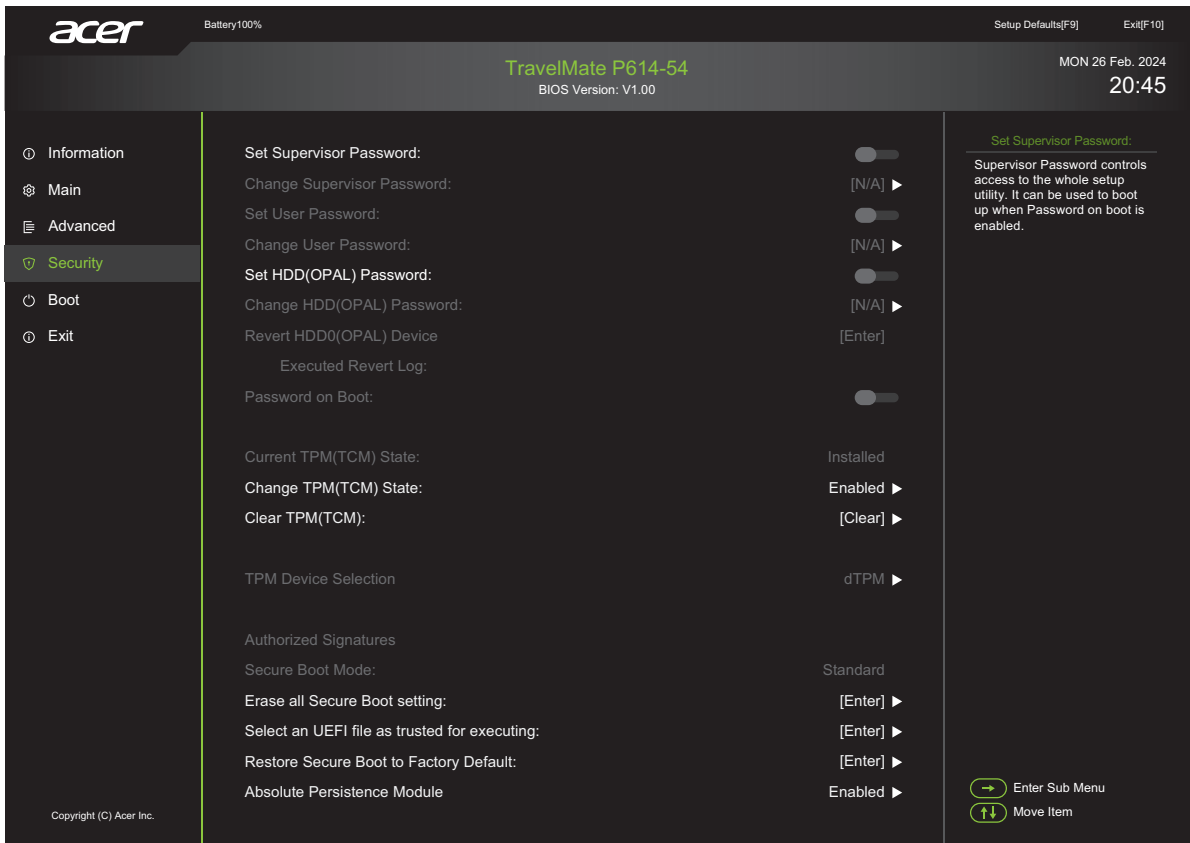
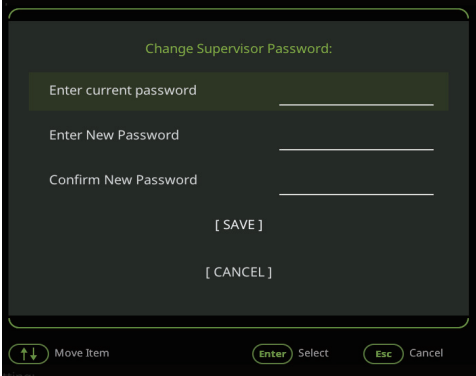


Figure 1-58. BIOS Security

Table 1-13. BIOS Security Tab Parameters

Item Name	Example	Remark
Set Supervisor Password		<ul style="list-style-type: none"> • [Disabled] means password is not set. After the password has been set, the setting will be change to [Enabled].
Set User Password		<ul style="list-style-type: none"> • If Supervisor Password is not set, Set User Password should be a grayed out item.
Set HDD(OPAL) Password	[Enabled] / [Disabled]	<ul style="list-style-type: none"> • After pressing [Disabled], a pop up a window to ask user to enter new password. • Refer to following picture: <div data-bbox="782 516 1259 846" data-label="Image"> </div> • If there is an old password, pop up a window to ask user to enter the old password first. If the password entered does not match old password, a pop-up warning message "Invalid password". If the password entered match the old password, the password will be cleared and the setting will be change to [Disabled]. • For the password format, refer to Page 1-64.

Item Name	Example	Remark
Change Supervisor Password		<ul style="list-style-type: none"> [N/A] means the password is not set. After the password has been set, the setting will be change to [Change].
Change User Password		<ul style="list-style-type: none"> After pressing [Change], a pop up a window to ask user to enter the current password. Refer to following picture:
Change HDD(OPAL) Password	[N/A] / [Change]	 <ul style="list-style-type: none"> User should enter the current password first and then type the new password in the field "Enter New Password", and re-enter the password in the field "Confirm New Password" for verification. <ul style="list-style-type: none"> If the verification is OK, the password setting is complete after user presses Enter. If the current password entered does not match the actual current password, a pop-up warning message "Invalid password". If the new password and confirm new password do not match, a pop-up warning message "Password do not match". For the password format, refer to Page 1-64. If system has more than 1 HDD, HDD password items that listed on the Security Menu should be as below: <ul style="list-style-type: none"> Set HDD0 Password Change HDD0 Password Set HDD1 Password Change HDD1 Password

Item Name	Example	Remark
Revert HDD (OPAL) Device	[Enter]	<ul style="list-style-type: none"> • This field always show default value [Enter]. • Only available for the storage leverage OPAL protocol. • If Supervisor Password is not set, the option should be a grayed out item. • User requires entering PSID printed on storage label. It reverts the OPAL Device to the factory default and erase all data. • A caution message must pop up to let end user reconfirm the unrecoverable action. <ul style="list-style-type: none"> • "Caution: Revert device will erase all data and can't be recovered. Do you really want to proceed? [Y/N]" • Naming rule following storage display.
Executed Revert Log	Executed Date + HDD(OPAL) Device name	<ul style="list-style-type: none"> • This item default should be hidden. • Only visible after user presses the "Service" key in this page (Security Tab). • The Date format should be MM/DD/YY and get from CMOS date. • This option will keep the latest five data.
Password on Boot	[Enabled] / [Disabled]	<ul style="list-style-type: none"> • Defines whether a password is required or not when the events defined in this group take place. • Password on Boot option requires the Supervisor Password. During login, this should be grayed out if the User Password was used to enter BIOS Setup Utility. • Allows user to specify whether or not a password is required for boot. • The default value is [Disabled].
Current TPM (TCM) State (For TPM 2.0)		<ul style="list-style-type: none"> • This field indicates current TPM State. • The current TPM or TCM State description is according the current TPM or TCM is connected. • The current TPM State is displayed on BIOS Setup Utility no matter Supervisor /User Password is set or not and is grayed out item that can't be modified manually.

Item Name	Example	Remark
Change TPM (TCM) State (For TPM 2.0)	[Enabled] / [Disabled]	<ul style="list-style-type: none"> • Change TPM State is displayed on BIOS Setup Utility no matter Supervisor / User Password is set or not. If Supervisor Password is not set, it should be a grayed out item. • Default TPM state for UEFI Mode is set to [Enabled] and requires Supervisor Password to change the state. • [Disabled]: BIOS don't initial TPM 2.0 device and hide the TPM 2.0 device in ACPI table, it makes no TPM device in Windows device manager. • Change TPM state will support the items list in left.
Clear TPM (TCM)	[Clear]	Change TPM State is displayed on BIOS Setup Utility no matter the Supervisor / User Password is set or not. If the Supervisor Password is not set, it should be a grayed out item.
TPM Device Selection	[iPTT] / [dTPM]	<ul style="list-style-type: none"> • [iPTT]: Intel PTT. • [dTPM]: Discrete TPM only. • If the project region is for WW, the default value is [dTPM]. • If the project region is for China, the default value is [iPTT]. • This item should permanently gray out and cannot be load default.
Secure Boot Mode	[Standard] / [Custom]	<p>Displays the current Secure Boot Mode status:</p> <ul style="list-style-type: none"> • [Standard]: No manual change has been done to Secure Boot setting or user has previous restore Secure Boot to Factory Default. • [Custom]: Contents of the Secure Boot signature database has been previously modified with "Erase all Secure Boot Setting" or "Select an UEFI file as trusted executing". • The default value is [Standard].
Authorized Signatures	[Enabled] / [Disabled]	<ul style="list-style-type: none"> • This item default should be hidden. • Only visible after the Secured-core PC identifier variable "BuiltAsSecuredCorePC" be set to non-zero value. • [Enabled]: Load MSFT 3rd Party UEFI CA. • [Disabled]: Do not load MSFT 3rd Party UEFI CA and gray out "Select and UEFI file as trusted" option.

Item Name	Example	Remark
Erase all Secure Boot Setting	[Enter]	<ul style="list-style-type: none"> • Erase all contents in secure four variables PK, KEK, DB, and DBX. • A confirmation dialog will pop up to confirm user's action.
Select an UEFI file as trusted for executing	[Enter]	<ul style="list-style-type: none"> • This action allows user to select all available UEFI files in FAT32 partition and add the UEFI hash into secure DB. • This action will follow below method: <ul style="list-style-type: none"> • Display available device for users to select the UEFI file location. • Display all files in the device and allow user to select the intended file (Only efi file can be added to the signature database) and the interface will allow user to go up or enter directory. • If "Yes" is selected, the file hash will be added to the signature database and return to Security Menu. If "No" is selected, it will return back to the previous file selection menu. • Added efi file's Boot description will be added into boot device order list's last place, a maximum of 5 entries are allowed.
Restore Secure Boot to Factory Default	[Enter]	<ul style="list-style-type: none"> • Restore the setting back to the factory settings. When save and exit the BIOS Setup Utility, the default Secure Boot factory settings will be restored. • By executing this action, the Secure Boot Mode will be reset to [Standard] upon next entry to the BIOS Setup Utility.

Item Name	Example	Remark
Absolute Persistence Module	Enabled] / [Disabled] / [Permanently Disabled]	<ul style="list-style-type: none"> • This field indicates the state of Absolute Persistence Module. • [Enabled]: 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 pop up one "red" warning dialog box and describe "Absolute Persistence Module will be disabled permanently and cannot be enabled again, are you sure?" • The default value is [Enabled]. • If the Supervisor Password is not set, it should be a grayed out item. • If the setting is set [Permanently Disabled], it should be always grayed out. (Also cannot be changed by Load Default)

⇒ NOTE:

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

Selecting a UEFI File as Trusted

Perform the following to select a UEFI file as trusted for execution:

1. Use the \uparrow and \downarrow keys to highlight the desired parameter and press **Enter**. The Select the UEFI file location dialog box appears.



Figure 1-59. Select UEFI File Location

2. Use the \uparrow and \downarrow keys to select a location, then press **Enter**. The Select an UEFI File as trusted for executing dialog box appears.

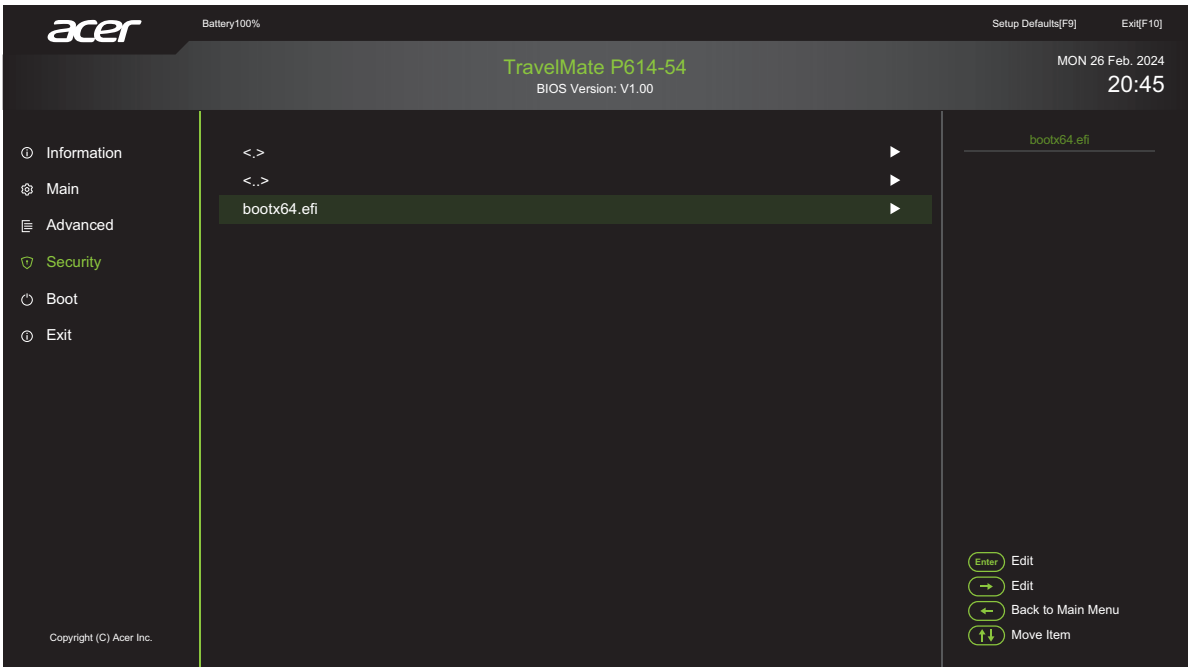


Figure 1-60. Select UEFI File

3. Select the *.efi file to execute (only *.efi files can be added to the signature database).
4. Select "Yes" to add the signature database and return to the security section. The boot description will be added in the end of the Boot device order list (maximum of 5 entries are allowed).

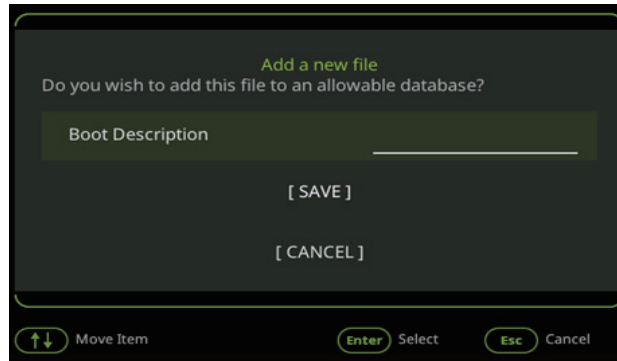


Figure 1-61. Add New File

Setting a Password

Perform the following to set the supervisor password:

1. Use the \uparrow and \downarrow keys to highlight the `Set Supervisor Password` parameter and press **Enter**. The `Set Supervisor Password` dialog box appears.

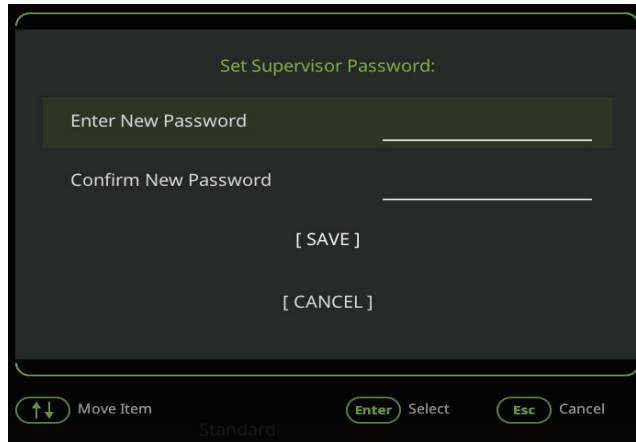


Figure 1-62. Set Supervisor Password

2. Type the password in the `Enter New Password` field.

⇒ NOTE:

Passwords are not case sensitive and the length must not exceed 16 characters. The following characters may be used in a password.

Symbol Character	Symbol Name
A - Z	Alphabets A through Z
a - z	Alphabets a through z
0 - 9	Numerical Characters
-	HYPHEN-MINUS
=	Equal Sign
[Left Bracket
]	Right Bracket
.	Period
,	Comma
;	Semi-colon
/	Slash
\	Back-slash
`	Grave Accent
~	TILDE
!	EXCLAMATION MARK
@	COMMERCIAL AT
#	NUMBER SIGN
\$	Dollar Sign
%	Percent Sign

Symbol Character	Symbol Name
^	CIRCUMFLEX ACCENT
&	AMPERSAND
*	ASTERISK
(LEFT PARENTHESIS
)	RIGHT PARENTHESIS
_	LOW LINE
+	PLUS SIGN
{	LEFT CURLY BRACKET
}	Right CURLY BRACKET
	VERTICAL LINE
:	COLON
"	QUOTATION MARK
<	LESS-THAN SIGN
>	GREATER-THAN SIGN
?	QUESTION MARK
'	APOSTROPHE

IMPORTANT:

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

3. Retype the password in the `Confirm New Password` field.
4. Press **Enter**. The `Setup Notice` dialog box appears.

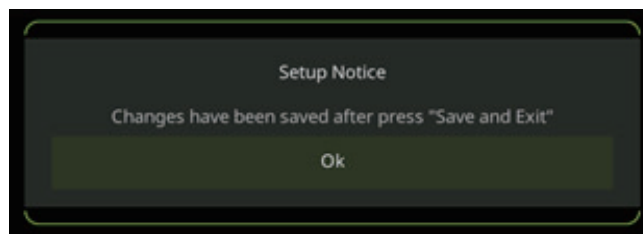


Figure 1-63. Setup Notice

5. Press **Enter** to complete the password setting. After the setting the supervisor password, the computer sets the `Supervisor Password Is` parameter to `Set`.
6. Press **F10** to save changes and exit *BIOS Setup Utility*.

NOTE:

The same procedures apply in setting the user password and HDD password.

When the supervisor password is set, the `Set User Password` and `Password on Boot` parameters are enabled for users to configure.

Changing a Password

Perform the following to change a password:

⇒ NOTE:

Below are the procedures for changing the supervisor password. The same procedures apply in changing the user and HDD passwords.

1. Use the **↑** and **↓** keys to highlight the **Change Supervisor Password** parameter and press **Enter**. The **Change Supervisor Password** dialog box appears.

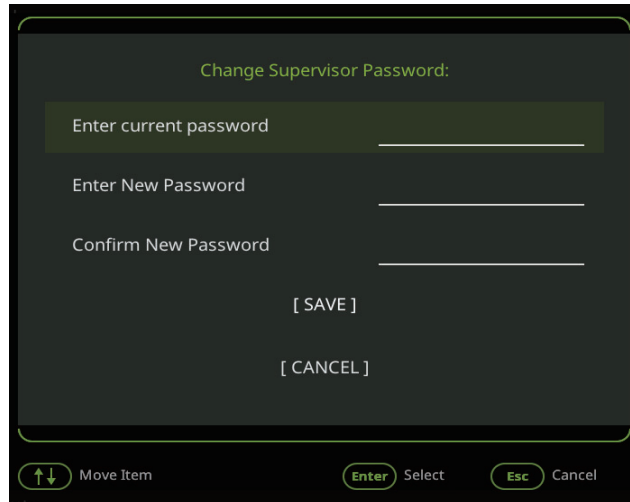


Figure 1-64. Change Supervisor Password

2. Type the current password in the **Enter current password** field and press **Enter**.
3. Type the new password in the **Enter New Password** field and press **Enter**.
4. Retype the new password in the **Confirm New Password** field.
5. Press **Enter**. If the passwords match, the **Setup Notice** dialog box appears.

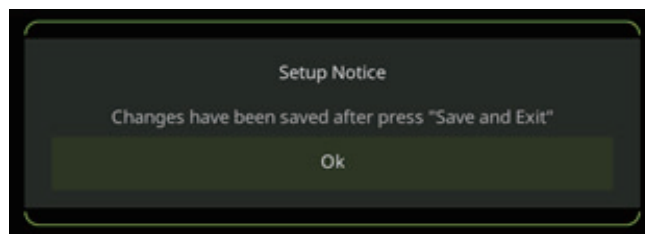


Figure 1-65. Setup Notice

6. Press **Enter** to complete the password setting. The computer sets the **Supervisor Password Is** parameter to **Set**.
7. Press **F10** to save changes and exit **BIOS Setup Utility**.

Removing a Password

Perform the following to remove a password:

⇒ NOTE:

Below are the procedures for removing the supervisor password. The same procedures apply in removing the user and HDD passwords.

When the supervisor password is removed, the user password is automatically removed.

1. Use the **↑** and **↓** keys to highlight the `Set Supervisor Password` parameter and press **Enter**. The `Set Supervisor Password` dialog box appears.

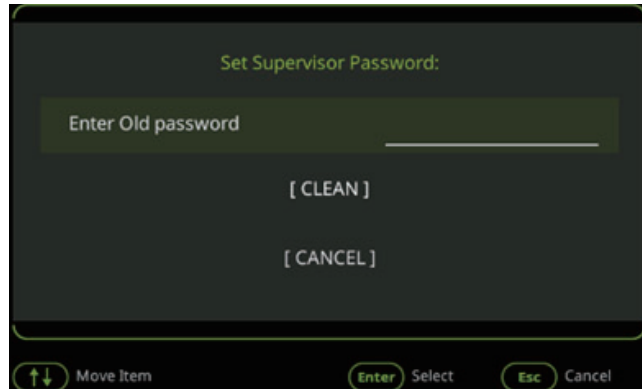


Figure 1-66. Set Supervisor Password

2. Type the current password in the `Enter Old password` field and press **Enter**.
3. Press **Enter** twice without typing anything in the `Enter New Password` and `Confirm New Password` fields. The `Setup Notice` dialog box appears.

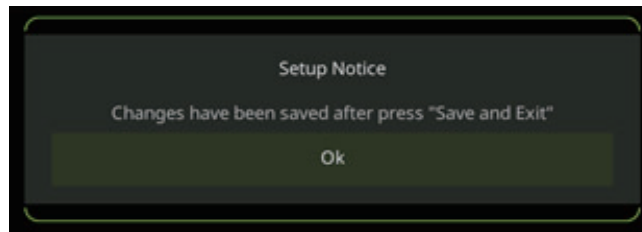


Figure 1-67. Setup Notice

4. Press **Enter** to complete the password setting. The computer sets the `Supervisor Password Is` parameter to `Clear`.
5. Press **F10** to save changes and exit *BIOS Setup Utility*.

Boot Tab

The Boot tab allows the user to configure the order of boot devices used to load the operating system.

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

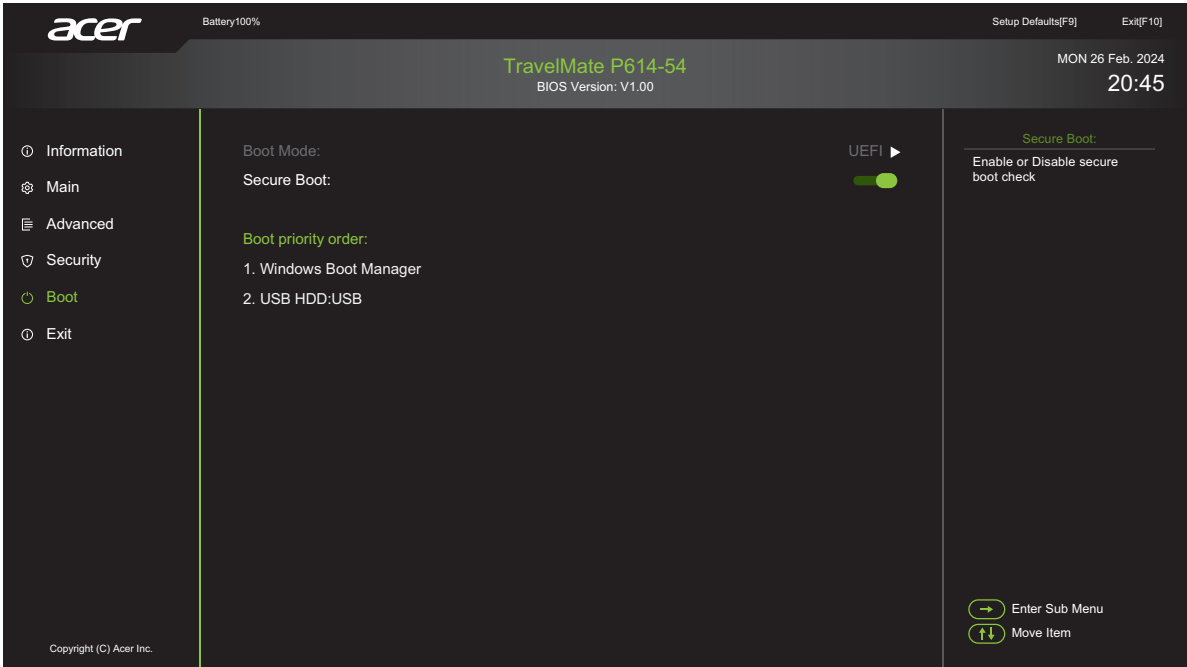


Figure 1-68. BIOS Boot

Table 1-14. BIOS Boot Tab Parameters

Item Name	Example	Remark
Boot Mode	[UEFI]	<ul style="list-style-type: none"> After user flashes BIOS or loads the Setup Defaults, the Boot Mode should return to its factory default value. The default value is [UEFI]. If IHV doesn't support legacy in the platform, hide the legacy option and gray out the Boot Mode option.

Item Name	Example	Remark
Secure Boot	[Enabled] / [Disabled]	<ul style="list-style-type: none"> • If the default Boot Mode is [UEFI], then the default Secure Boot status is [Enabled] and CSM module can't be loaded during boot. • If the user sets the Secure Boot to [Disabled], the firmware will bypass secure boot verification. • The Secure Boot status is only available on [UEFI] Boot Mode and it is hidden under [Legacy] Boot Mode. • In [UEFI] Boot Mode, Secure Boot following actions will gray out while below condition Supervisor password had been set and Setup Config. Utility was log in by User Password. • When BIOS "Load Setup Defaults" is executed, if the default Boot Mode is [UEFI], the Secure Boot status will reset to [Enabled]. On the contrary, if the default Boot Mode is [Legacy], the Secure Boot will be disabled and hidden in the Boot Menu. • When user changes the Boot Mode from [Legacy] to [UEFI], Secure Boot status will be set to [Enabled] and shown in the Boot Menu.
Boot Priority Order		<ul style="list-style-type: none"> • If the Boot Mode has changed, the Boot Priority Order will not be refreshed until the next BIOS Setup Utility entry. • When the Boot Mode is [UEFI] or [Legacy] (UEFI+CSM), and users enable Windows To GO Startup Options under OS, an USB class boot entry name "USB Entry for Windows To GO" will be inserted into the top of the Boot Priority Order and Boot Option Menu. • If the "USB Entry for Windows To Go" is present, and BIOS "Load Setup Defaults" is executed, "USB Entry for Windows To Go" will be set to 1st Boot Device in Boot Priority Order. • For legacy boot mode, if eMMc and HDD exist in the same time, eMMc is set as the default boot device. • Only display the bootable devices. • If the Network Boot device is USB External LAN, it should add an "External" string in option. Should take effect on Boot Priority Order and Boot Option Menu.

⇒ NOTE:

- Wired connection will display `Network Boot-IPV4` and `Network Boot-IPV6` as two separate network boot devices.
- After Windows 8 OS is installed, a `Windows Boot Manager` will be generated and displayed on top of the boot device priority.
- Non-physical boot devices can be deleted in the Boot Priority Order List, this includes `A trusted boot entry` and `Windows Boot Manager`.
- If two (2) HDD is configured as RAID, only HDD0 is presented.

Exit Tab

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

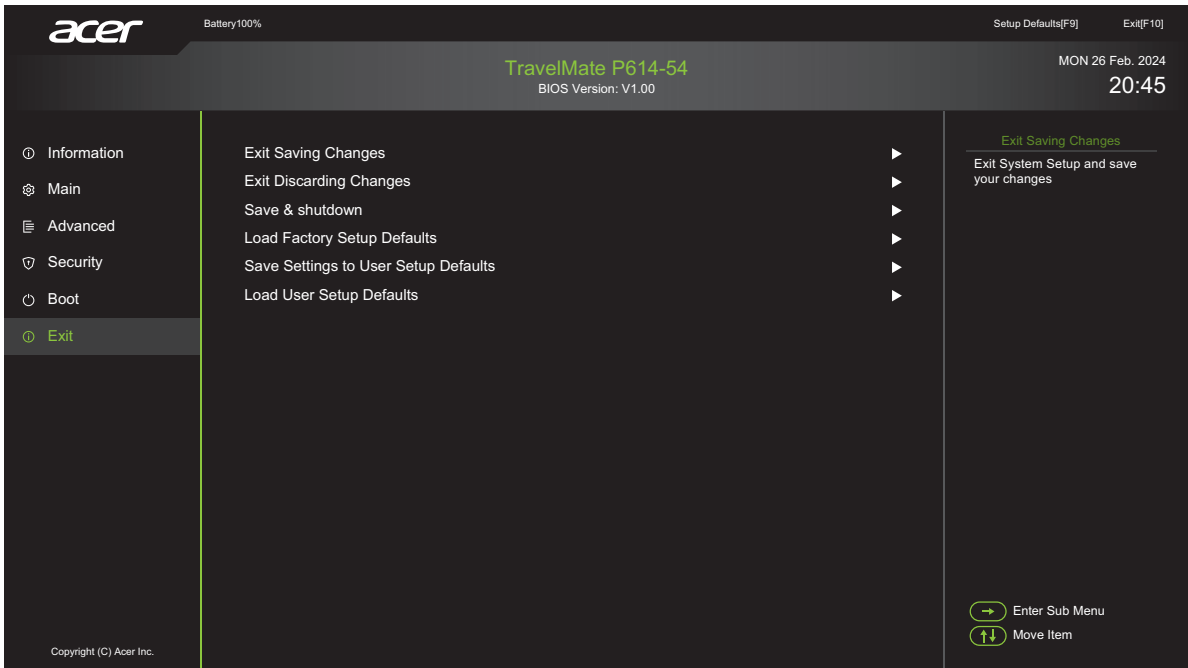

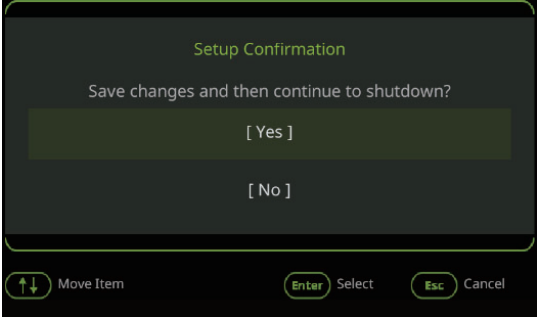
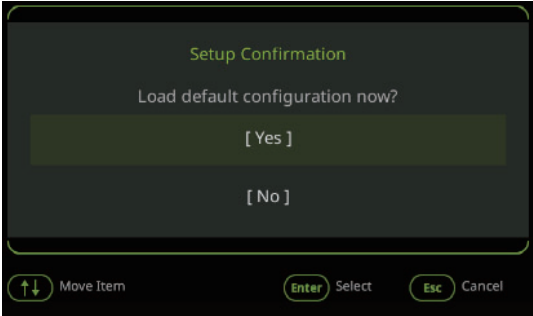
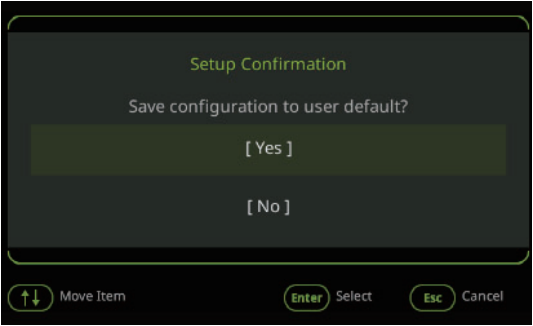
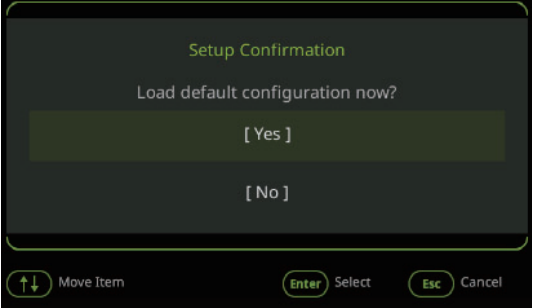


Figure 1-69. BIOS Exit

Table 1-15. BIOS Exit Tab Parameters

Item Name	Description
Exit Saving Changes	<ul style="list-style-type: none"> • Allow user to save the changes and reboot the system. • A confirmation message will pop up as below when user executes this item. The system will save the changes and then continue to reboot if "Yes" is selected or will stay in Setup Utility if "No" is selected. <div data-bbox="639 1278 1172 1600" style="text-align: center; border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <p>Setup Confirmation</p> <p>Save configuration changes and exit now?</p> <p>[Yes]</p> <p>[No]</p> <p>↑↓ Move Item Enter Select Esc Cancel</p> </div>

Item Name	Description
Exit Discarding Changes	<ul style="list-style-type: none"> • Allow user to discard the changes before exiting Setup Utility. • A confirmation message will pop up as below when user executes this item. The system will discard the changes then continue to reboot if "Yes" is selected or will stay in Setup Utility if "No" is selected. 
Save & shutdown	<ul style="list-style-type: none"> • Allow user to save the changes and shutdown the system. • A confirmation message will pop up as below when user executes this item. The system will save changes and then continue to shutdown if "Yes" is selected or will stay in Setup Utility if "No" is selected. 
Load Factory Setup Defaults	<ul style="list-style-type: none"> • Allow user to load the factory default configurations in the Setup Utility. • A confirmation message will pop up as below when user executes this item. The system will stay in the Setup Utility after either selection. 

Item Name	Description
<p>Save Settings to User Setup Defaults</p>	<p>Allow user to save the settings to user setup default.</p> 
<p>Load User Setup Defaults</p>	<ul style="list-style-type: none"> • Allow user to load the user default configurations in the Setup Utility. • A confirmation message will pop up as below when user executes this item. The system will stay in the Setup Utility after either selection. 

Troubleshooting

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

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 to test only Acer products. Non-Acer products, prototype cards, or modified options can give false errors and invalid system responses.
 - Do not replace a non-defective FRU.
1. Obtain as much detail as possible about the problem.
 2. If possible, verify the symptoms by re-creating the failure through diagnostic tests or by repeating the operation that led to the problem.
 3. Use [Table 1-16](#) with the verified symptom(s) to determine the solution.

Table 1-16. Verified Symptoms

Symptoms	See
Power on Issues	Figure 1-70. Power On Issues
No Display Issues	Figure 1-71. No Display Issues
LCD Picture Failure	Figure 1-72. LCD Picture Failure
Internal Keyboard Failure	Figure 1-73. Internal Keyboard Failure
Touchpad Failure	Figure 1-74. Touchpad Failure
Internal Speaker Failure	Figure 1-75. Internal Speaker Failure
Internal Microphone Failure	Figure 1-76. Internal Microphone Record Failure
USB3.0 Failure	Figure 1-77. USB3.0 Failure
Wireless Function Failure	Figure 1-78. Wireless Function Test Failure
Bluetooth Function Failure	Figure 1-79. Bluetooth Function Test Failure
Units Thermal Failure	Figure 1-80. Units Thermal Failure
Cosmetic Failure	Figure 1-81. Cosmetic Failure
Other Functions Failure	Page 1-87

Power On Issues

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

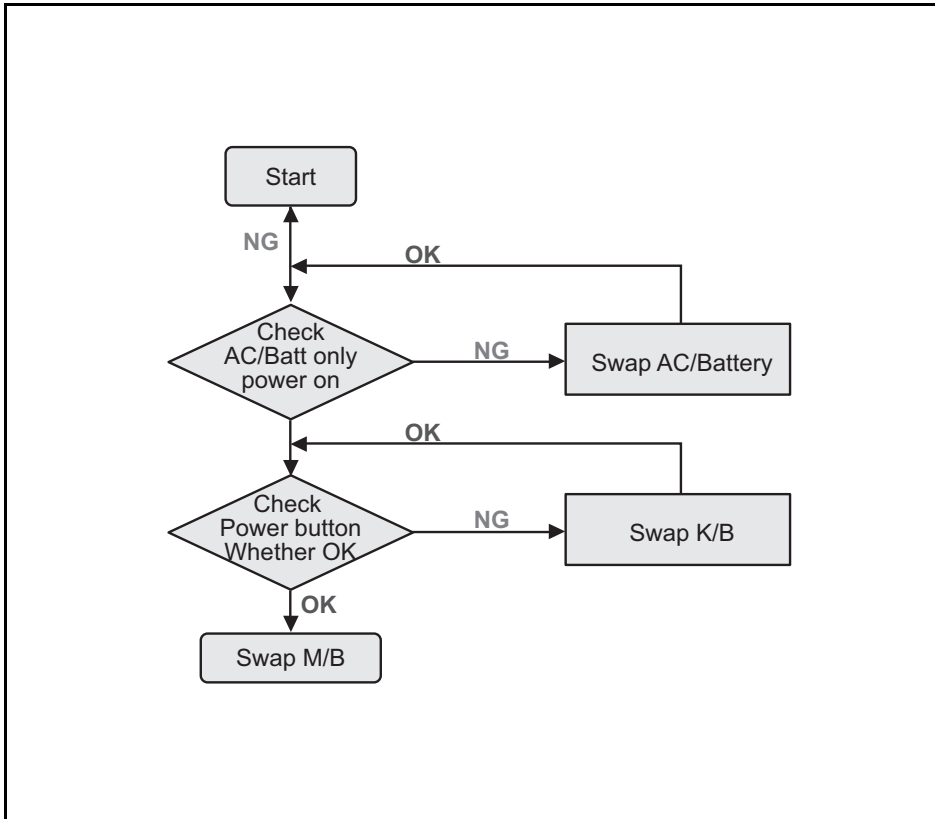


Figure 1-70. Power On Issues

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. Remove all external and non-essential hardware connected to the computer that are not necessary to boot the computer to the failure point.
5. Remove any recently installed software.

No Display Issues

If the system does not display, perform the following:

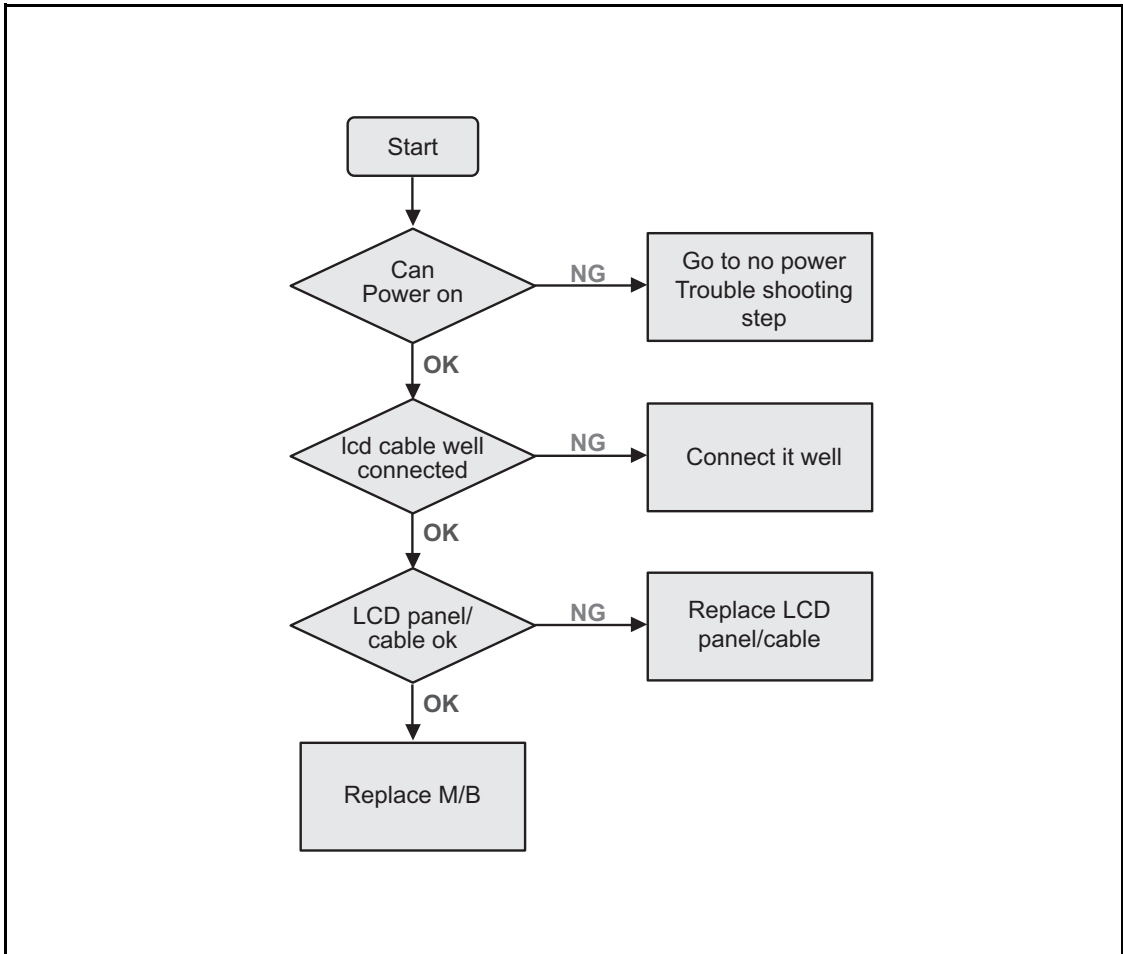


Figure 1-71. No Display Issues

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
3. If there is no power, refer to [Power On Issues](#) on page [1-75](#). Otherwise, continue to the next step.
4. If there is power, drain the stored power by removing the power cable. Hold the power button for 10 seconds.
5. Connect the power and reboot the computer.

6. Connect an external monitor to the computer and switch between the internal display and the external display.
7. If the POST or video appears on the external display only, refer to [LCD Picture Failure](#) on page 1-78. Otherwise, continue to the next step.
8. Disconnect the power and all external devices including port replicators or docking stations.
9. Remove any memory cards.
10. Start the computer. If the computer boots correctly, add the devices one by one until the failure point is discovered.

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.
 - 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.
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. Run the *Windows Memory Diagnostic* from the operating system DVD and follow the on-screen prompts.

LCD Picture Failure

If the LCD picture fails, perform the following:

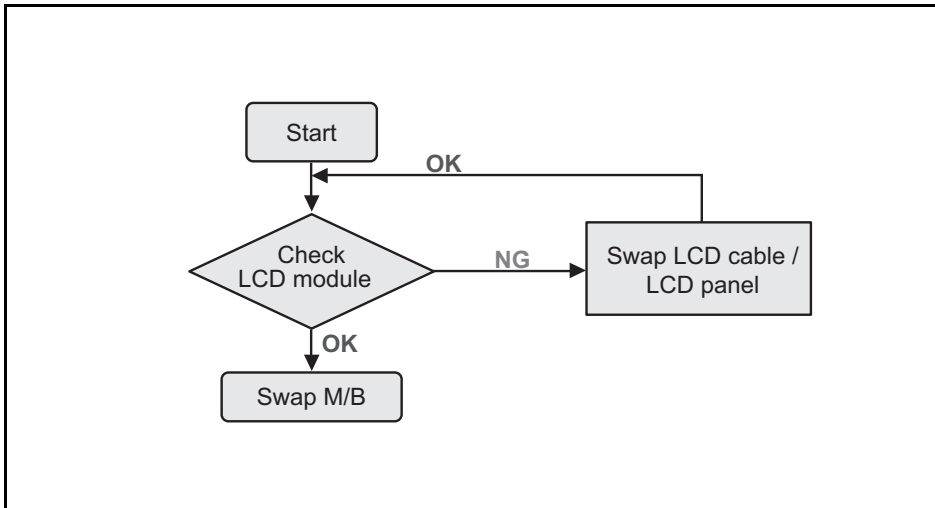


Figure 1-72. LCD Picture Failure

Internal Keyboard Failure

If the internal keyboard function fails, perform the following:

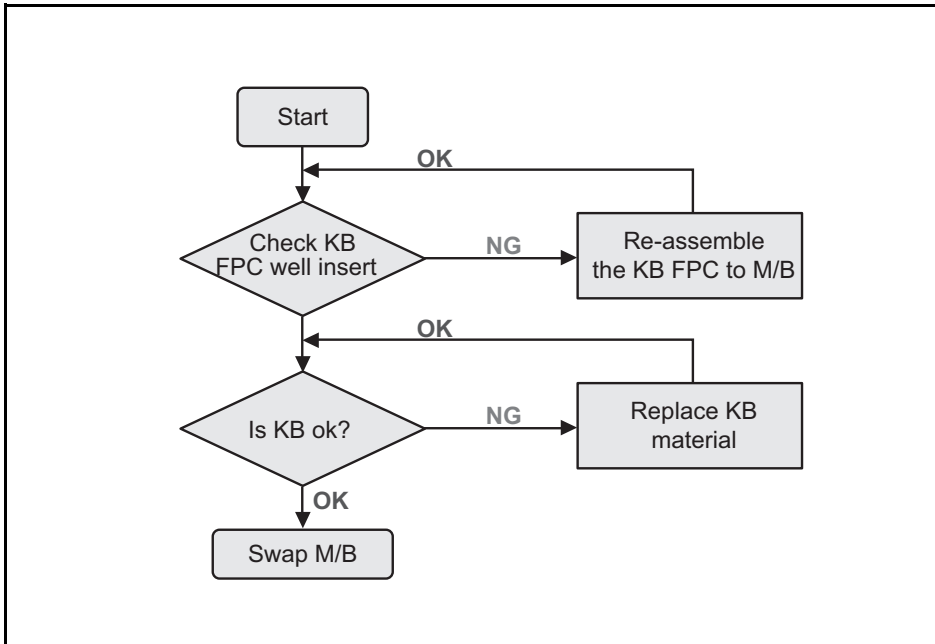


Figure 1-73. Internal Keyboard Failure

Touchpad Failure

If the touchpad fails, perform the following:

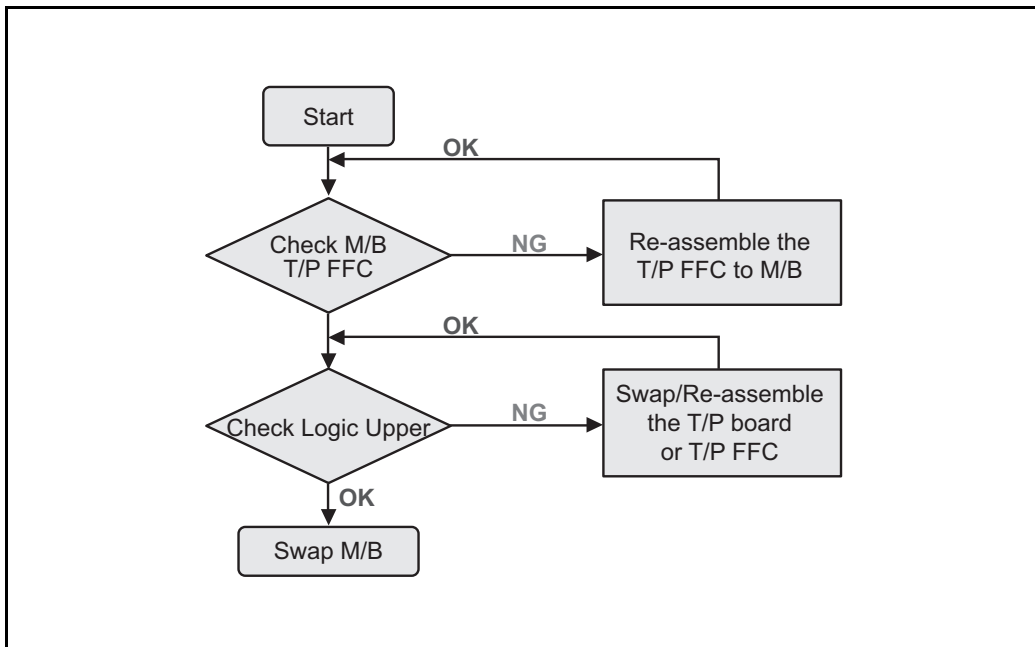


Figure 1-74. Touchpad Failure

Internal Speaker Failure

If the internal speaker fails, perform the following:

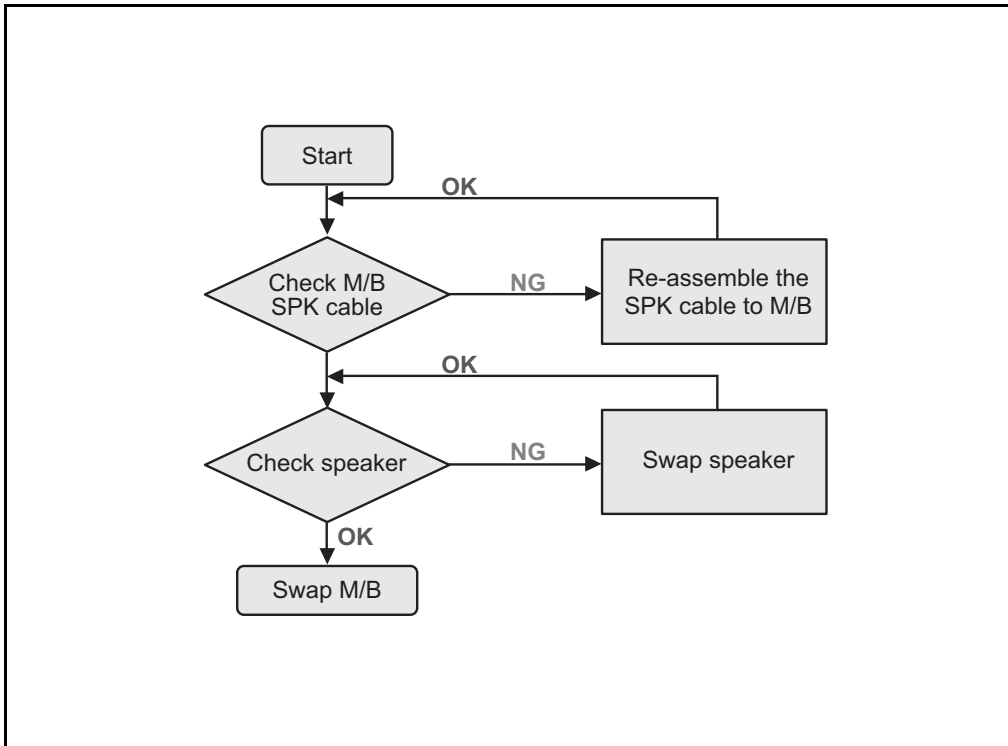


Figure 1-75. Internal Speaker Failure

Sound Problems

Perform the following:

1. Boot the computer.
2. 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
3. If updated recently, roll back the audio driver to the previous version.
4. Remove and reinstall the audio driver.
5. 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.
6. Confirm that Speakers is selected as the default audio device (green check mark) in the Control Panel.

⇒ **NOTE:**

If **Speakers** is not shown, right-click on the **Playback** tab and select **Show Disabled Devices** (clear by default).

7. Select **Speakers** and click **Configure** to start **Speaker Setup**. Follow the on-screen prompts to configure the speakers.
8. Remove any recently installed hardware or software.
9. Restore system and file settings from a known good date using **System Restore**.
10. If the issue remains, repeat step 9, selecting an earlier time and date.
11. Reinstall the Operating System.

Internal Microphone Record Failure

If the internal microphone fails to record, perform the following:

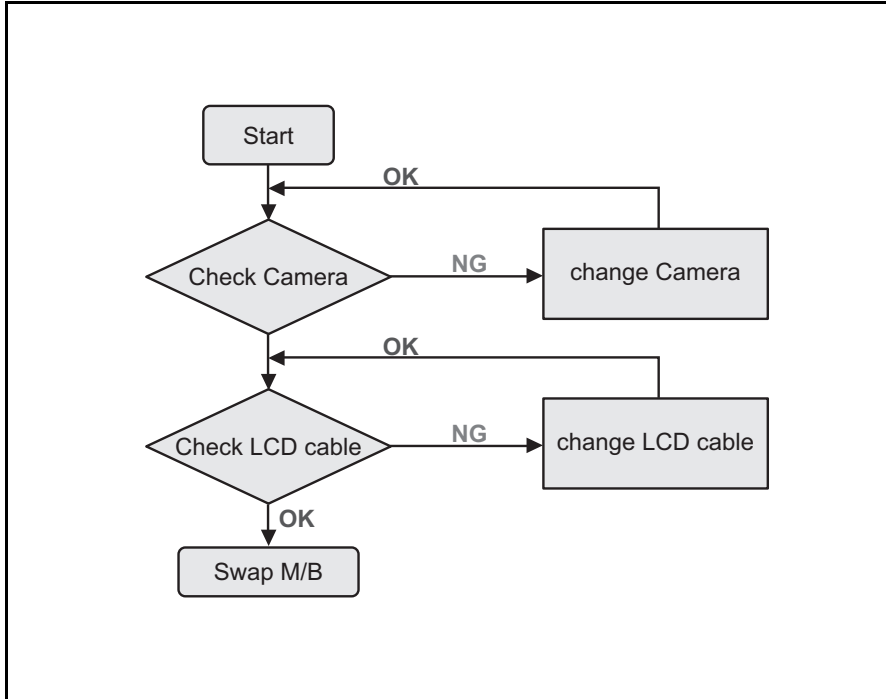


Figure 1-76. Internal Microphone Record Failure

USB3.0 Failure

If the USB function fails, perform the following:

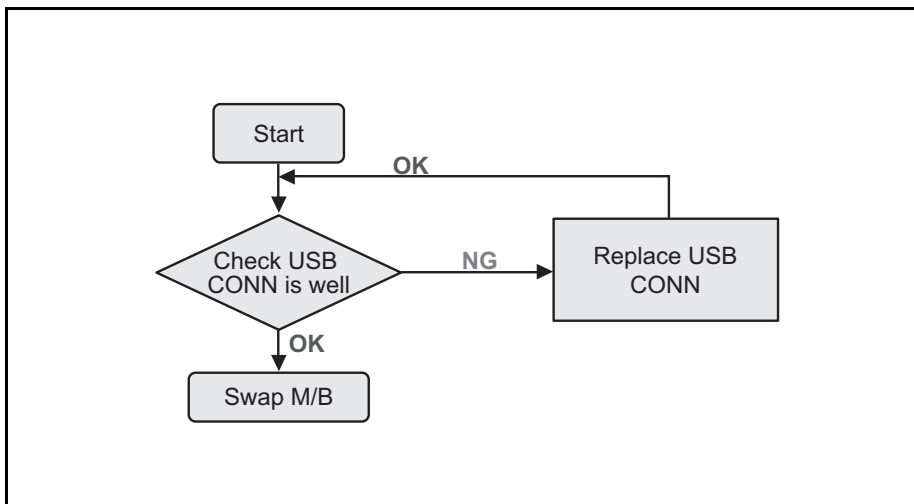


Figure 1-77. USB3.0 Failure

Wireless Function Test Failure

If the wireless function test fails, perform the following:

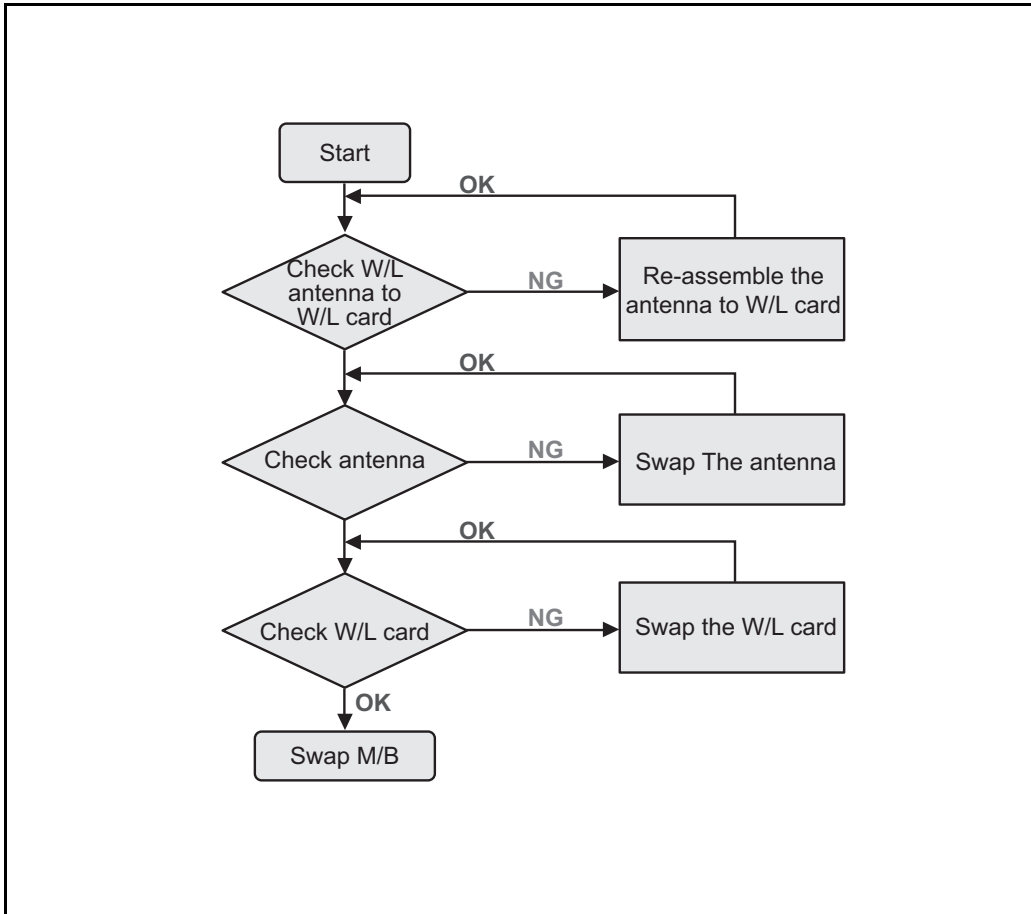


Figure 1-78. Wireless Function Test Failure

Bluetooth Function Test Failure

If the Bluetooth function test fails, perform the following:

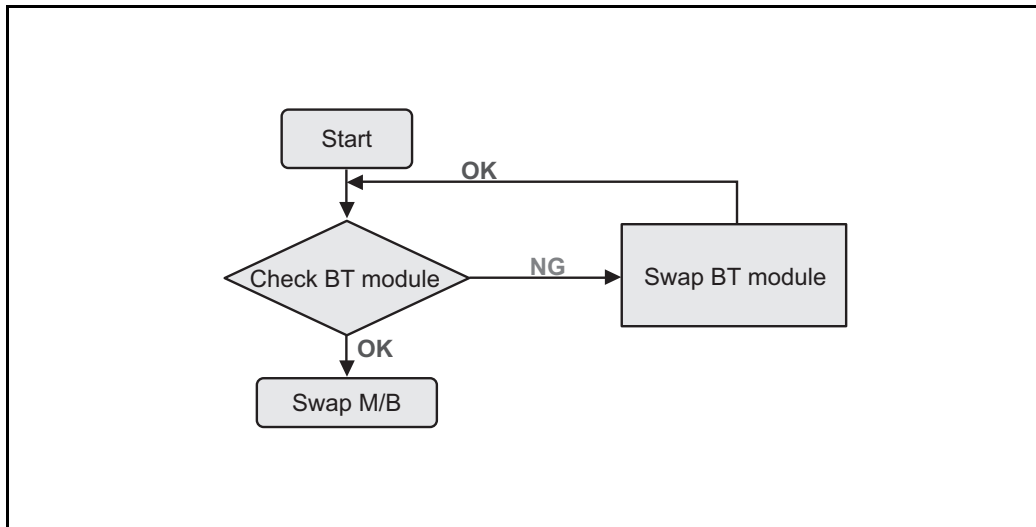


Figure 1-79. Bluetooth Function Test Failure

Units Thermal Failure

If the units thermal fails, perform the following:

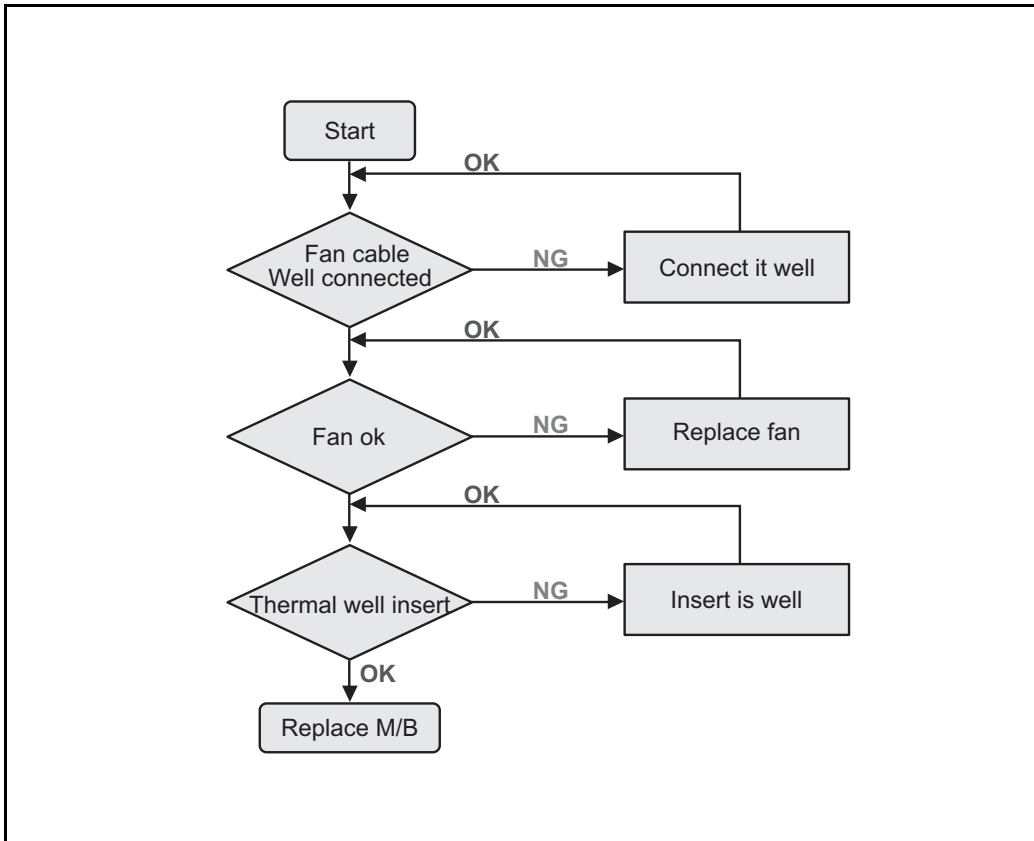


Figure 1-80. Units Thermal Failure

Cosmetic Failure

If the cosmetic fails, perform the following:

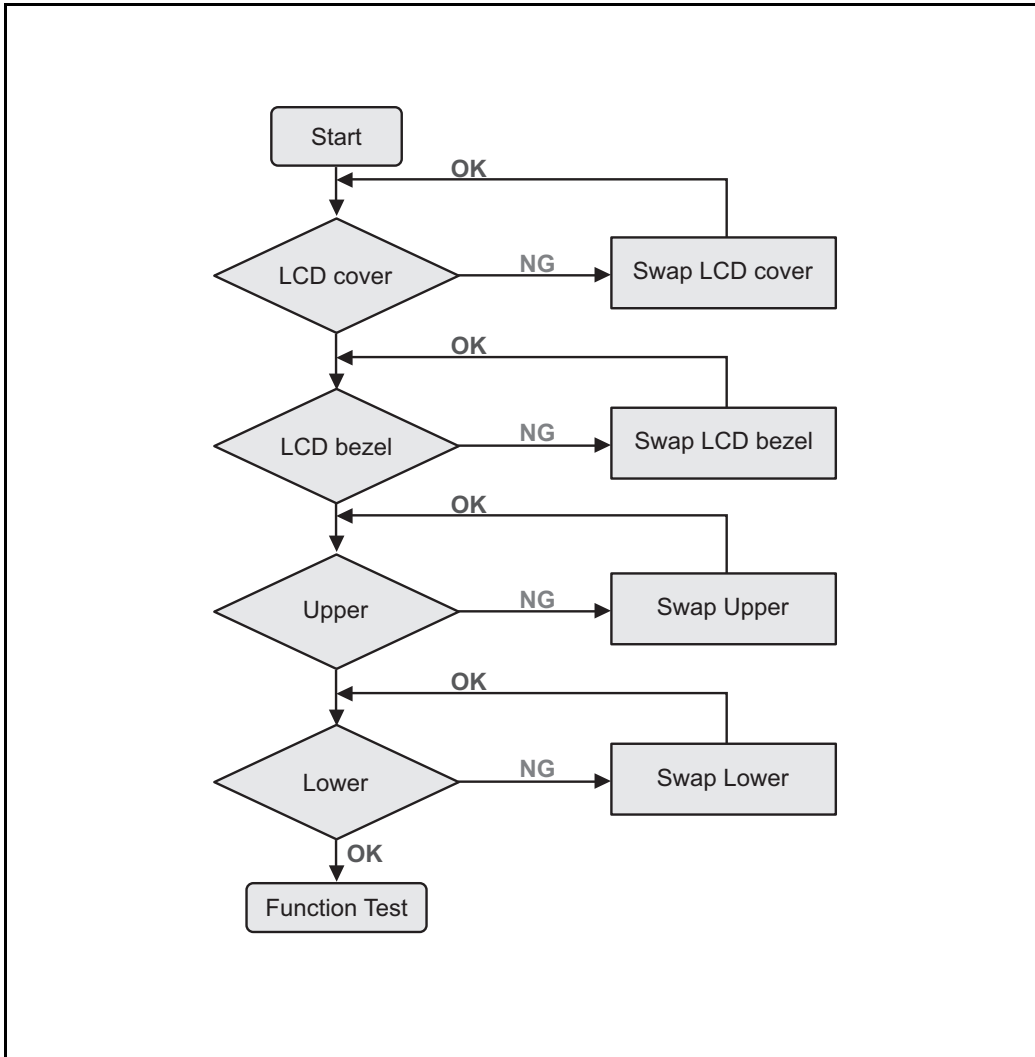


Figure 1-81. Cosmetic Failure

Other Functions Failure

If other functions such as the HDMI switch, extend MIC, extend speaker fail, perform the following:

1. Check if the Drive is working properly.
2. Check if the test fixture is ok.
3. Swap the mainboard.

Mainboard CMOS Discharge

If there is a wrong CMOS setting, such as password, CMOS data will be cleaned to default setting by discharging (short pads): **CLRP1**.

The discharge location is shown in the following illustration.

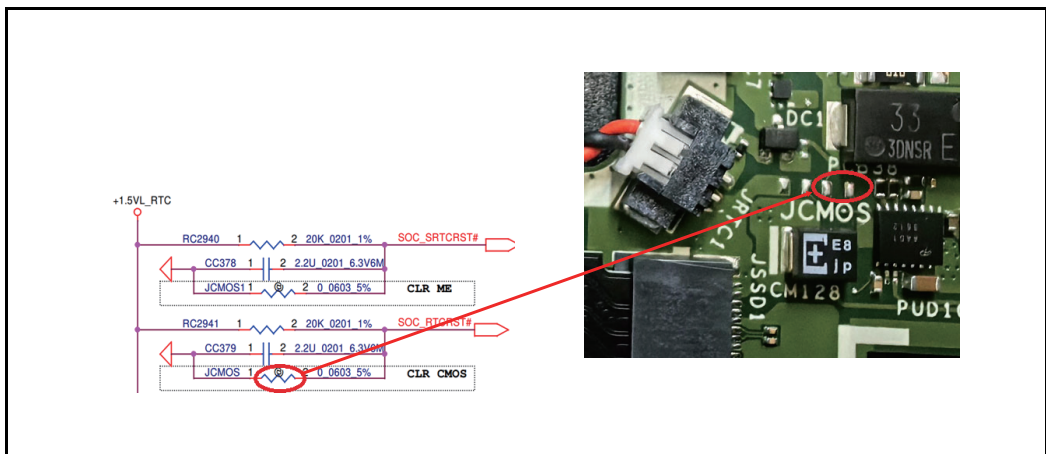


Figure 1-82. Location of CLRP1

Random Loss of BIOS Settings

If the computer is experiencing intermittent loss of BIOS information, perform the following:

1. If the computer is more than one year old, replace the CMOS battery.
2. Run a complete virus scan using up to date software to confirm the computer is virus free.
3. If the computer is experiencing HDD information loss, disconnect and reconnect the power.
4. If the BIOS settings are still lost, replace the cables.
5. If HDD information is missing from the BIOS, the drive may be defective and should be replaced.
6. Replace the mainboard.

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.

⇒ NOTE:

- Verify that all attached devices are supported by the computer.
- Verify that the power supply being used at the time of the failure is operating correctly. (refer to [Power On Issues](#) on page [1-75](#)).

Perform the following procedures to isolate the failing FRU:

1. Remove power from the computer.
2. Visually check FRUs 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
 - Hard disk drive
 - DIMM
 - 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 until failing FRU is found.
7. If the problem remains, replace the following:
 - System board
 - LCD assembly

Exploded Diagrams

Main Assembly

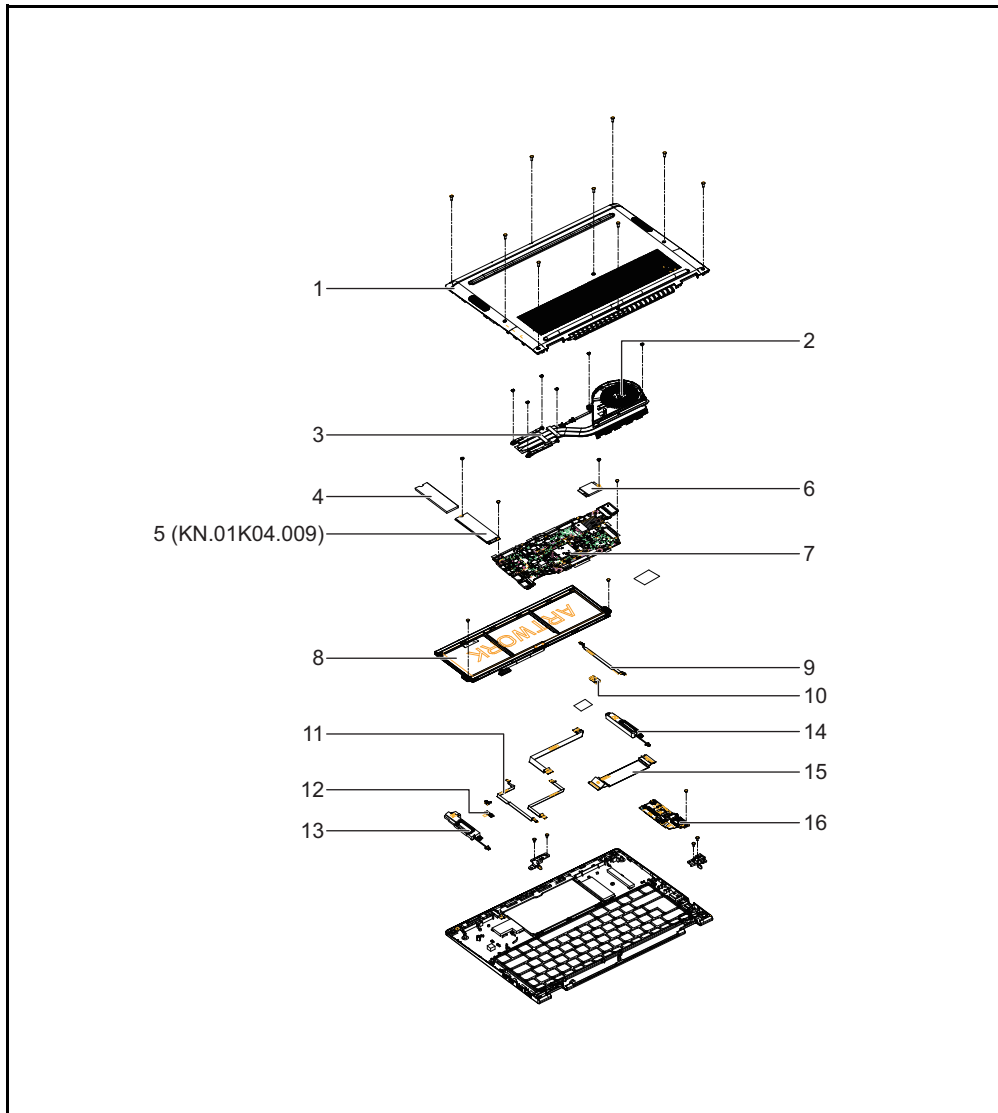


Figure 1-83. Main Assembly Exploded Diagram

Table 1-17. Main Assembly Exploded Diagram

No.	Acer Description
1	LOWER CASE BLACK
2	FAN
3	HEATSINK UMA
4	MYLAR SSD FOIL 2280

Table 1-17. Main Assembly Exploded Diagram (Continued)

No.	Acer Description
5	Flash Disk MICRON SSD NAND 1024GB Micron 2500 QLC 1024GB MTFDKBA1T0QGN-1BN15ABYY LF+HF
6	Wireless LAN Intel Wi-Fi 7 BT5.4 BE201.NGWG.NV Intel 2x2 M.2 2230 CNVi
7	Mainboard TMP614-54-TCO Intel U5226V 16GB UMA dTPM
8	Battery CosMx Typ.65Wh 5570mAh 3S1P AP22ABN 248x90x5.5(mm) AP22A 11.67V 75W Li-Ion with SMT type connector
9	FFC HALL SENSOR BOARD
10	BOARD HALL SENSOR
11	FFC 3RD MIC BOARD
12	BOARD 3RD MIC
13	SPEAKER L + R
14	
15	FFC IO BOARD
16	BOARD IO

Upper Case Assembly

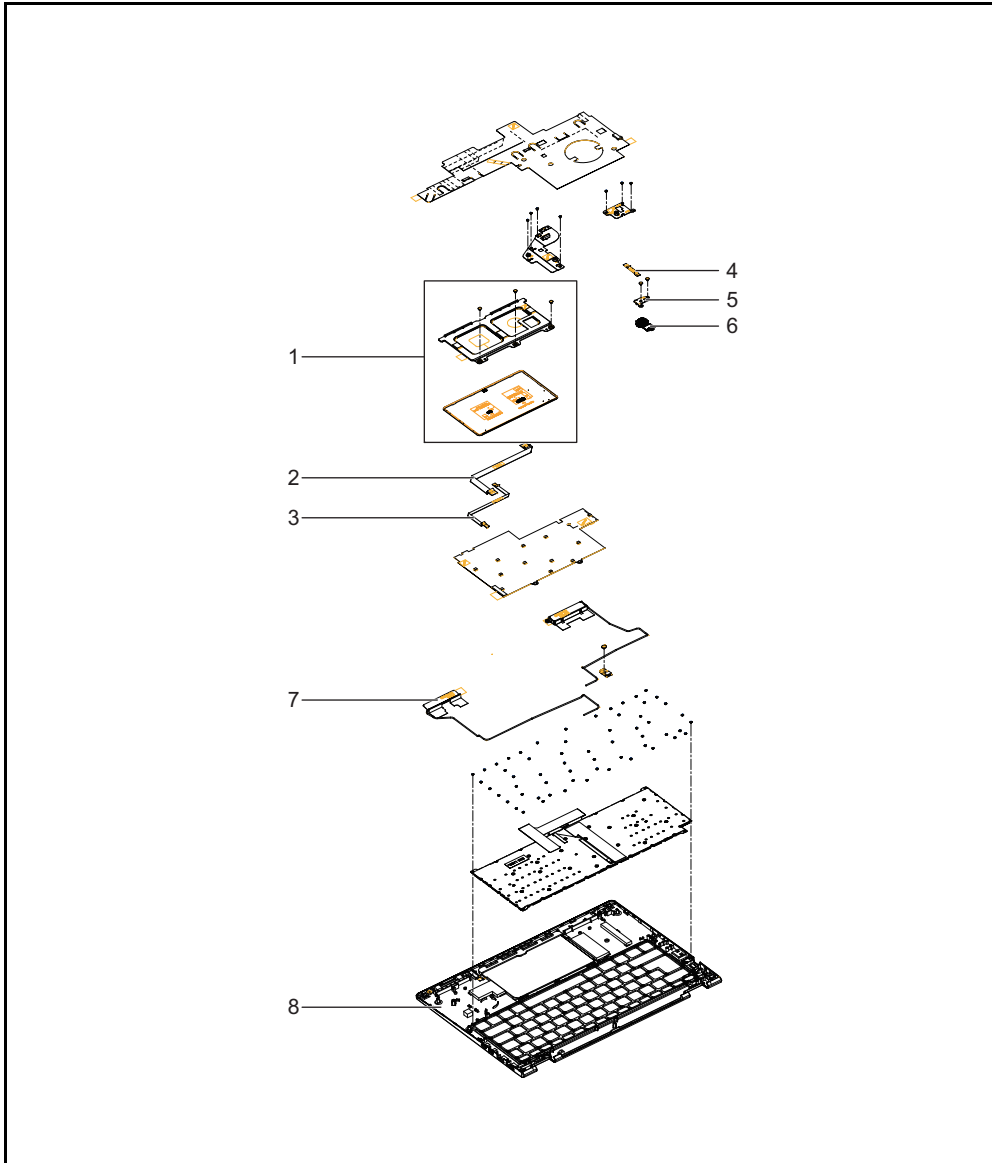


Figure 1-84. Upper Case Assembly Exploded Diagram

Table 1-18. Upper Case Assembly Exploded Diagram

No.	Acer Description
1	TOUCHPAD MODULE BLACK NC.24611.0BW
2	FFC TOUCHPAD
3	FFC TOUCHPAD LIGHTING
4	FFC FINGERPRINT
5	BRACKET FINGERPRINT
6	Elan FP on power key LCC-2447-20 Elan LCC-2447-20 MOC on power key.Black coating.2.4N.Module maker: Ofilm

Table 1-18. Upper Case Assembly Exploded Diagram (Continued)

No.	Acer Description
7	ANTENNA WLAN MAIN
	ANTENNA WLAN AUX
8	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 79KS US International NK.I1313.3FZ

LCD Assembly

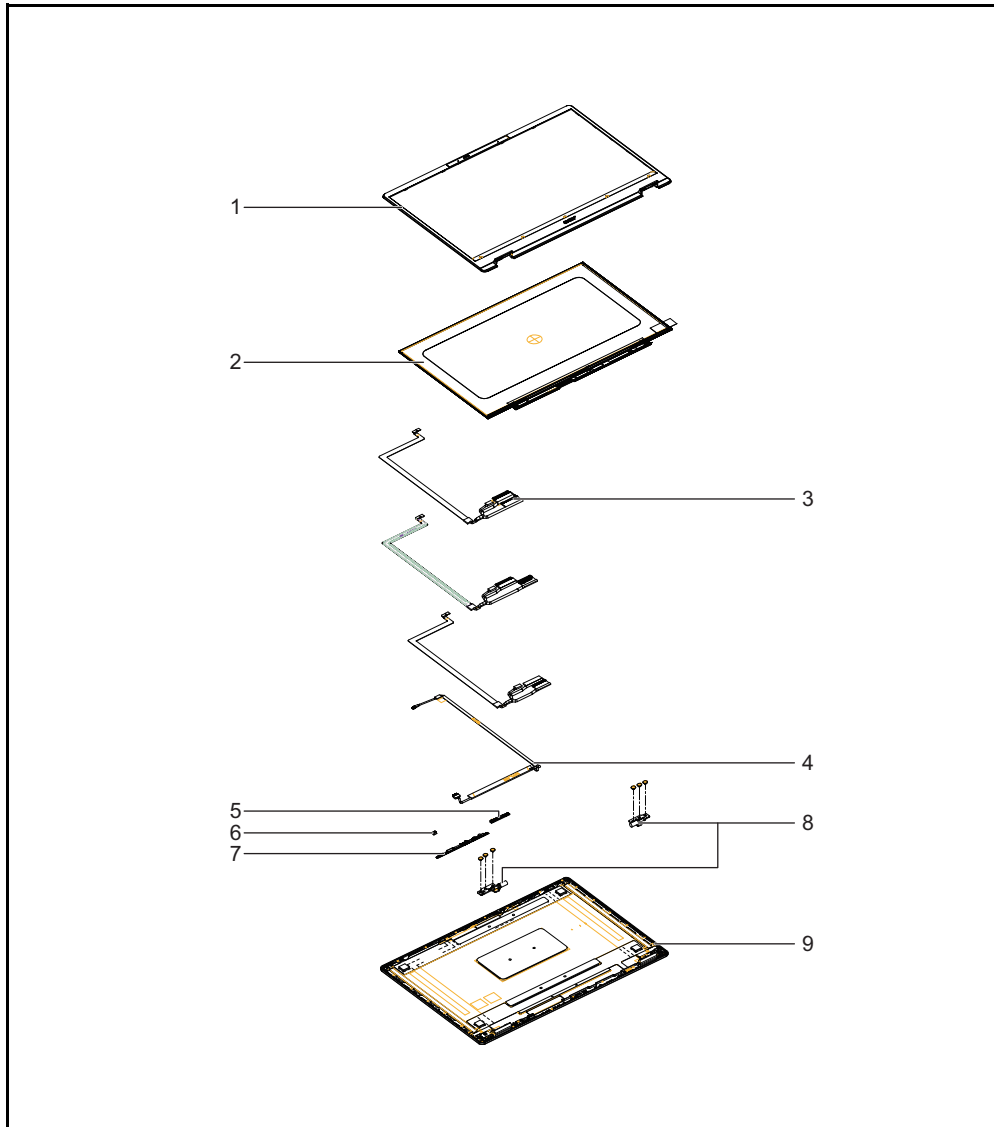


Figure 1-85. LCD Assembly Exploded Diagram

Table 1-19. LCD Assembly Exploded Diagram

No.	Acer Description
1	LCD BEZEL BLACK
2	LED LCD Panel AUO 14" WQXGA+ IPS None Glare B140QAN08.M H/W 0A 400nit sRGB 100% 120Hz 25ms 1200:1 (140g, Narrow 1.85/2.15t(flat), LRR2.5/PSR)
3	EDP CABLE FHD
4	CABLE HPD SENSOR
5	Vision Sensor - Egis Vision EK006B-1A
6	BRACKET CAMERA

Table 1-19. LCD Assembly Exploded Diagram (Continued)

No.	Acer Description
7	Camera CHICONY 5M FF CKFOE71 OV05C10 (COB) RTS5867 PS-45233A1B6(w/ BG) ZTS6534SA USB IR-HM1092(940nm),sHDR
8	HINGE L+R KIT FOR FHD, OTP
9	LCD COVER BLACK FOR FHD&OTP

FRU (Field Replaceable Unit) List

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

FRU List

Table 1-20. FRU List








Category	Acer Description
BOARD	
	BOARD IO
	BOARD HALL SENSOR
	BOARD 3RD MIC
	Elan FP on power key LCC-2447-20 Elan LCC-2447-20 MOC on power key.Black coating.2.4N.Module maker: Ofilm
	Egis FP on power key Egis ETU905JS-SF2 MOC solution on power key. Black coating.
CABLE	
	FFC IO BOARD
	FFC HALL SENSOR BOARD
	FFC 3RD MIC BOARD

Table 1-20. FRU List (Continued)







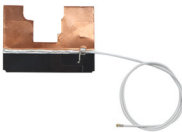

Category	Acer Description
	FFC TOUCHPAD
	FFC TOUCHPAD LIGHTING
	FFC FINGERPRINT
	CABLE BATTERY
	CABLE HPD SENSOR
	ANTENNA WLAN MAIN
	ANTENNA WLAN AUX
	EDP CABLE FHD
	EDP CABLE QHD
	EDP CABLE OTP

Table 1-20. FRU List (Continued)




Category	Acer Description
CAMERA	
	Vision Sensor - Egis Vision EK006B-1A
	Vision Sensor- Egis Vision- BNVGF3079-B
FAN	
	FAN
KB ASSEMBLY	
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 79KS US International NK.I1313.3FZ
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 79KS Greek NK.I1313.3FT
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 79KS Arabic NK.I1313.3FR
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 79KS Traditional Chinese NK.I1313.3FS
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 79KS Russian NK.I1313.3FV
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 79KS US International w/ Hebrew NK.I1313.3G0
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 79KS Thailand NK.I1313.3FY
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 79KS Korean NK.I1313.3FU
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 79KS Ukrainian NK.I1313.3FW
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 79KS Persian NK.I1313.3FX
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 79KS US International w/ Canadian French NK.I1313.3G1
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 79KS US International w/ Bulgaria NK.I1313.3G2
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 80KS UK NK.I1313.3GM
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 80KS German NK.I1313.3GA

Table 1-20. FRU List (Continued)


Category	Acer Description
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 80KS Swiss/G NK.I1313.3GK
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 80KS Belgium NK.I1313.3G4
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 80KS Danish NK.I1313.3G7
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 80KS Italian NK.I1313.3GC
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 80KS French NK.I1313.3G9
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 80KS Hungarian NK.I1313.3GB
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 80KS Norwegian NK.I1313.3GE
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 80KS Portuguese NK.I1313.3GF
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 80KS Spanish NK.I1313.3GH
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 80KS Turkish NK.I1313.3GL
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 80KS Sweden NK.I1313.3GJ
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 80KS FR/Arabic NK.I1313.3G8
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 80KS Nordic NK.I1313.3GD
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 80KS SLO/CRO NK.I1313.3GG
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 80KS CZ/SK NK.I1313.3G6
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 80KS Brazilian Portuguese NK.I1313.3G5
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 80KS ALA-Spanish NK.I1313.3G3
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B45BWL 83KS Japanese NK.I1313.3GN
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 79KS US International NK.I1313.3NV

Table 1-20. FRU List (Continued)


Category	Acer Description
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 79KS Greek NK.I1313.3NP
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 79KS Arabic NK.I1313.3NM
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 79KS Traditional Chinese NK.I1313.3NN
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 79KS Russian NK.I1313.3NR
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 79KS US International w/ Hebrew NK.I1313.3NW
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 79KS Thailand NK.I1313.3NU
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 79KS Korean NK.I1313.3NQ
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 79KS Ukrainian NK.I1313.3NS
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 79KS Persian NK.I1313.3NT
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 79KS US International w/ Canadian French NK.I1313.3NX
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 79KS US International w/ Bulgaria NK.I1313.3NY
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 80KS UK NK.I1313.3PH
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 80KS German NK.I1313.3P6
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 80KS Swiss/G NK.I1313.3PF
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 80KS Belgium NK.I1313.3P0
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 80KS Danish NK.I1313.3P3
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 80KS Italian NK.I1313.3P8
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 80KS French NK.I1313.3P5
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 80KS Hungarian NK.I1313.3P7

Table 1-20. FRU List (Continued)




Category	Acer Description
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 80KS Norwegian NK.I1313.3PA
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 80KS Portuguese NK.I1313.3PB
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 80KS Spanish NK.I1313.3PD
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 80KS Turkish NK.I1313.3PG
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 80KS Sweden NK.I1313.3PE
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 80KS FR/Arabic NK.I1313.3P4
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 80KS Nordic NK.I1313.3P9
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 80KS SLO/CRO NK.I1313.3PC
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 80KS CZ/SK NK.I1313.3P2
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 80KS Brazilian Portuguese NK.I1313.3P1
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 80KS ALA-Spanish NK.I1313.3NZ
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE VF03P_B47BWL 83KS Japanese NK.I1313.3PJ
	LCD BEZEL
	LCD BEZEL BLACK
LCD COVER	
	LCD COVER BLACK FOR FHD&OTP
	LCD COVER BLACK FOR QHD

Table 1-20. FRU List (Continued)


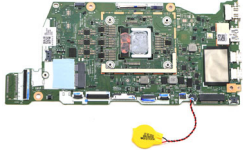



Category	Acer Description
LOWER CASE	
	LOWER CASE BLACK
MAINBOARD	
	Mainboard TMP614-54-TCO Intel U5226V 16GB UMA dTPM
	Mainboard TMP614-54-TCO Intel U7256V 16GB UMA dTPM
	Mainboard TMP614-54-TCO Intel U7258V 32GB UMA dTPM
	Mainboard TMP614-54-TCO Intel U7266V 16GB UMA dTPM_vProE
	Mainboard TMP614-54-TCO Intel U7268V 32GB UMA dTPM_vProE
	Mainboard TMP614-54T-TCO Intel U5226V 16GB UMA dTPM_Touch
	Mainboard TMP614-54T-TCO Intel U7256V 16GB UMA dTPM_Touch
	Mainboard TMP614-54T-TCO Intel U7258V 32GB UMA dTPM_Touch
	Mainboard TMP614-54T-TCO Intel U7266V 16GB UMA dTPM_vProE_Touch
Mainboard TMP614-54T-TCO Intel U7268V 32GB UMA dTPM_vProE_Touch	
METAL	
	HINGE L+R KIT FOR FHD, OTP
	HINGE L+R KIT FOR QHD
	BRACKET CAMERA
	BRACKET FINGERPRINT
POWER CORD	
	POWER CORD 1M BLACK SOUTH AFRICA -NEW
	POWER CORD 1M BLACK BLACK AUSTRALIA
	POWER CORD 1M BLACK EUROPE

Table 1-20. FRU List (Continued)












Category	Acer Description
	POWER CORD 1M BLACK DENMARK
	POWER CORD 1M BLACK ISRAEL
	POWER CORD 1M BLACK ITALIAN
	POWER CORD 1M BLACK JAPAN
	POWER CORD 1M BLACK CHINA
	POWER CORD 1M BLACK INDIA
	POWER CORD 1M BLACK SWISS
	POWER CORD 1M BLACK UK
	POWER CORD 1M BLACK TWN
	POWER CORD 1M BLACK ARGENTINA - NEW
	POWER CORD 1M BLACK KOREA
	POWER CORD 1M BLACK US
	POWER CORD 1M BLACK BRAZIL
SPEAKER/MICROPHONE	
	SPEAKER L + R
THERMAL	
	HEATSINK UMA
TOUCHPAD	
	TOUCHPAD MODULE BLACK NC.24611.0BW
	TOUCHPAD MODULE BLACK NC.24611.0C2
MISCELLANEOUS	
	MYLAR SSD FOIL 2280

Table 1-20. FRU List (Continued)

Category	Acer Description
	LCD ADHESIVE
	LCD ALIGNMENT MYLAR 10x5x0.4mm
SCREW	
	SCREW 2.0D 2L K 5D 0.3T NI NL
	SCREW 2.0D 2.3L K 6.0D 0.8T ZK NL
	SCREW 2.0D 2.5L K 5D ZK NL
	SCREW 2D 4L K 4.6D .8T ZK NL R-BRN
	SCREW 2.5D 5.0L K 4.6D ZK NL CR3
	SCREW M2.0L5.5D3.5T0.8KT6_N1P7C3BK

Software Update

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

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.

Personal Data Removal

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**.