Acer Nitro V 16S
ANV16S-71

Lifecycle Extension Guide

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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

WEEE Annex VII Component

These components are classified as requiring selective treatment:

- Battery
- WLAN module
- DIMM modules
- SSD modules
- 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.

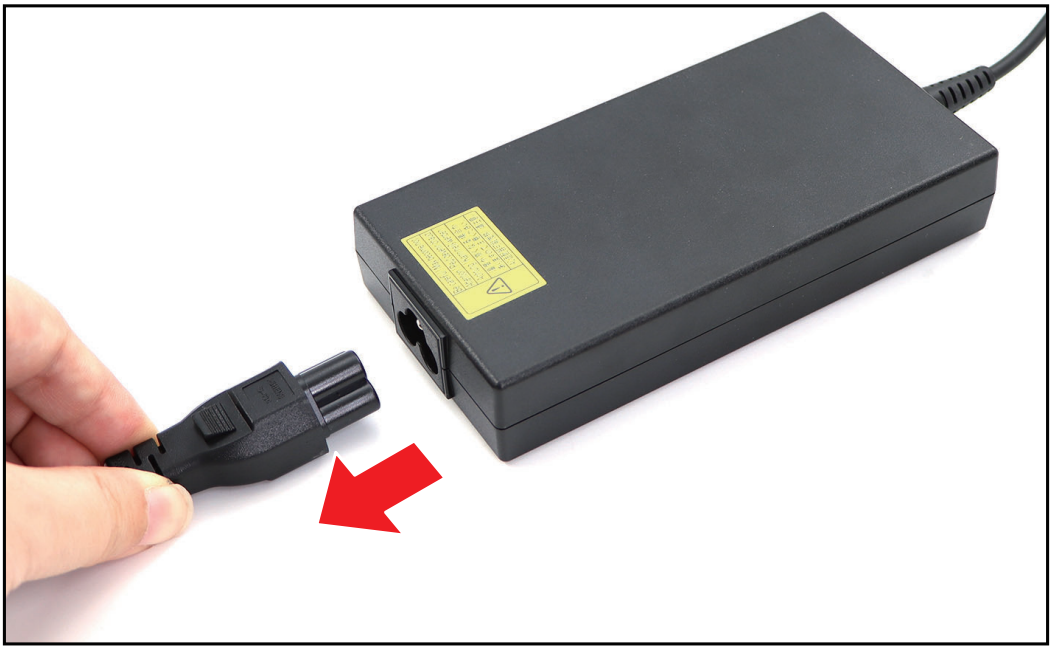


Figure 1-3. Disconnecting the Power Cord

Lower Case Removal

1. Remove the ten (10) screws securing the lower case to the upper case.

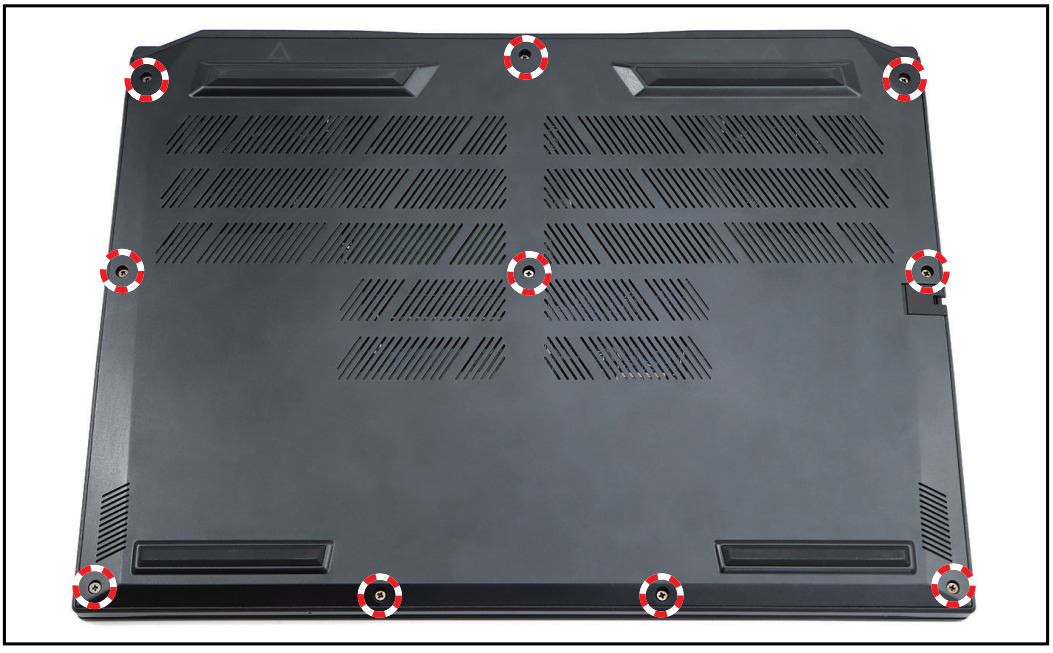


Figure 1-4. Removing the Screws

2. Starting from the upper side, pry the lower case to release the latches.

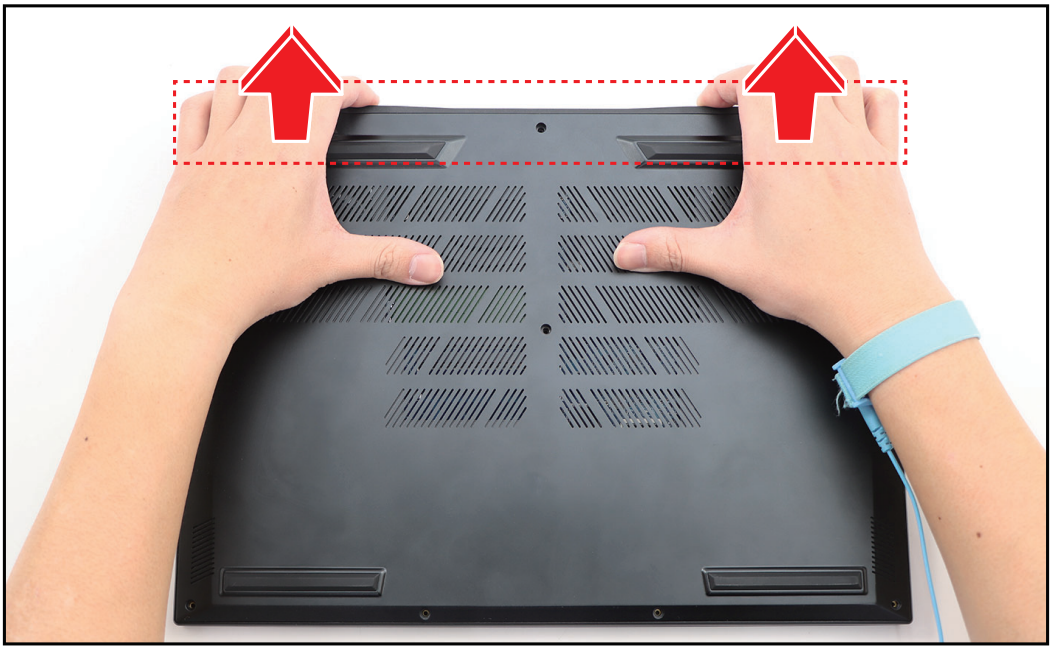


Figure 1-5. Releasing the Lower Case

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

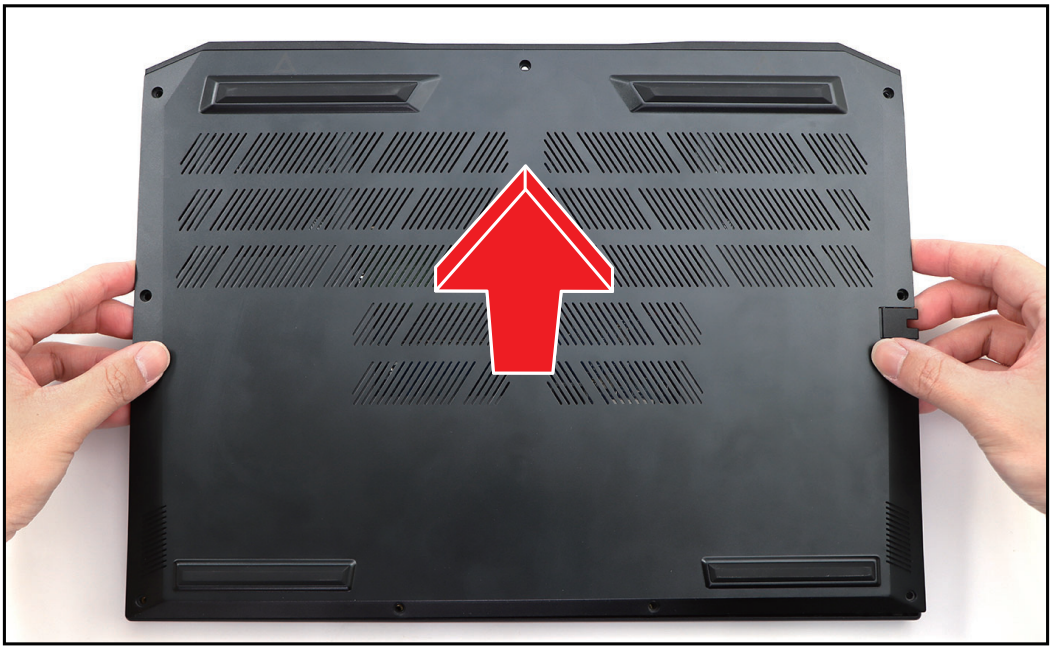


Figure 1-6. Removing the Lower Case

4. Detach the tape securing the battery cable.

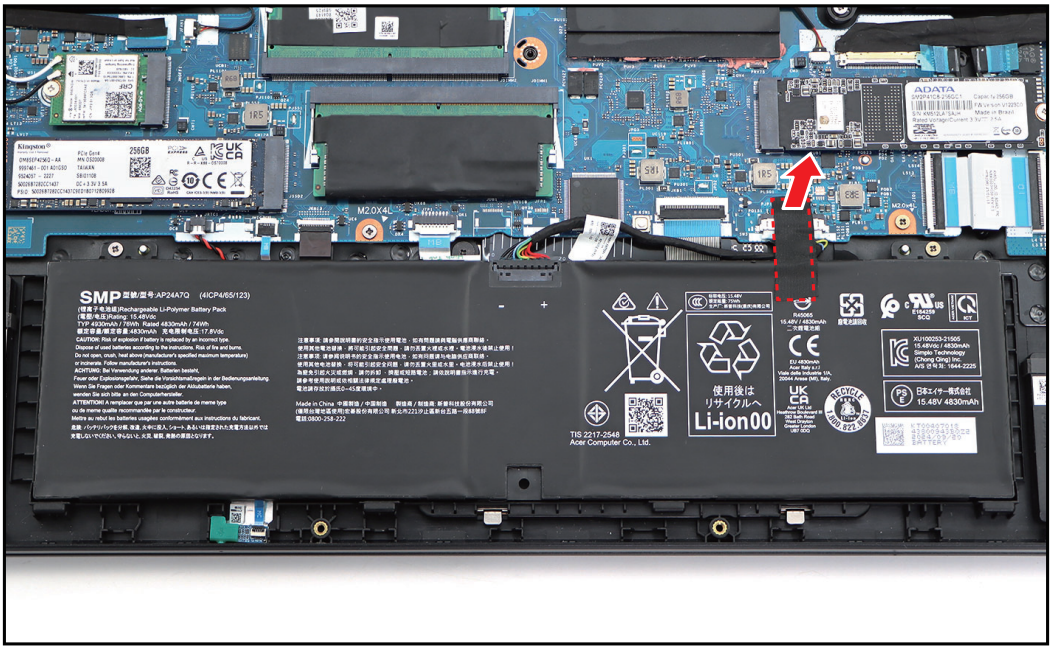


Figure 1-7. Detaching the Tape

5. Disconnect the battery cable from the mainboard connector.

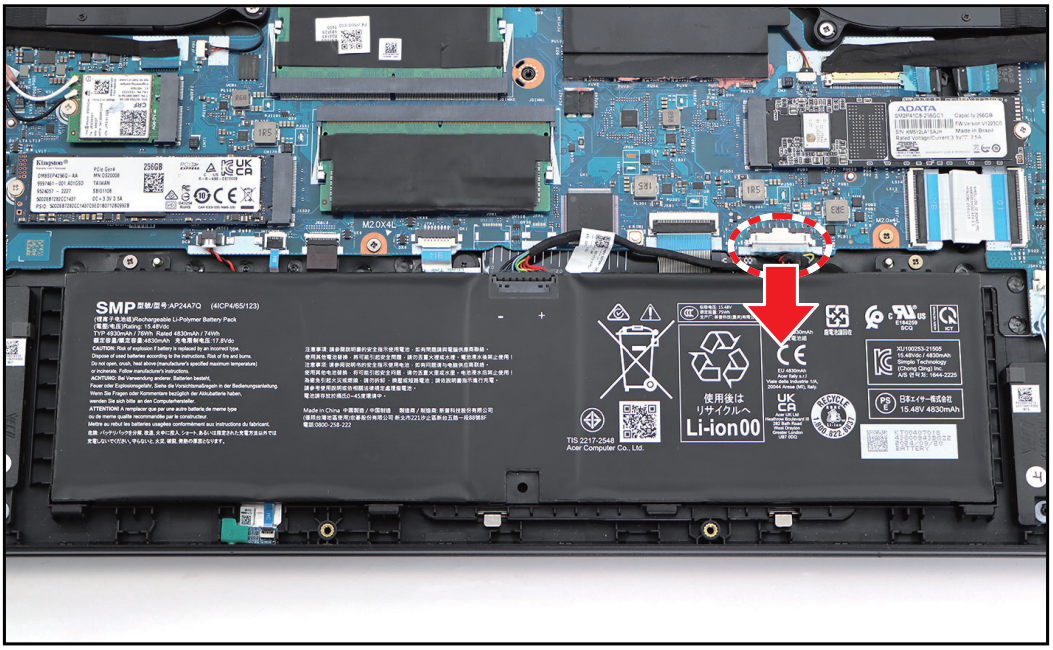


Figure 1-8. Disconnecting the Battery Cable

Table 1-1. Lower Case Screws

Screw Name	Screw Type	Torque	Quantity
M 2.5 x 6.0		2.65~3.45kgf.cm	10

Battery Removal

Prerequisite:

- **Lower Case Removal** on page **1-6**

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

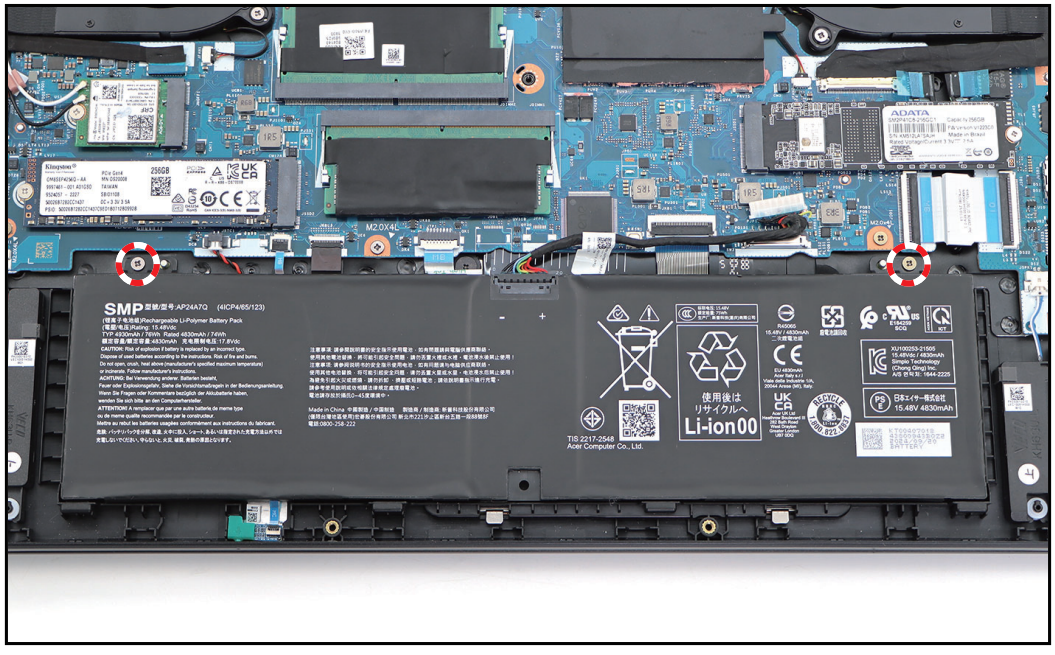


Figure 1-9. Removing the Screws

2. Lift the battery to release it from the guide pins. Then remove the battery from the upper case.

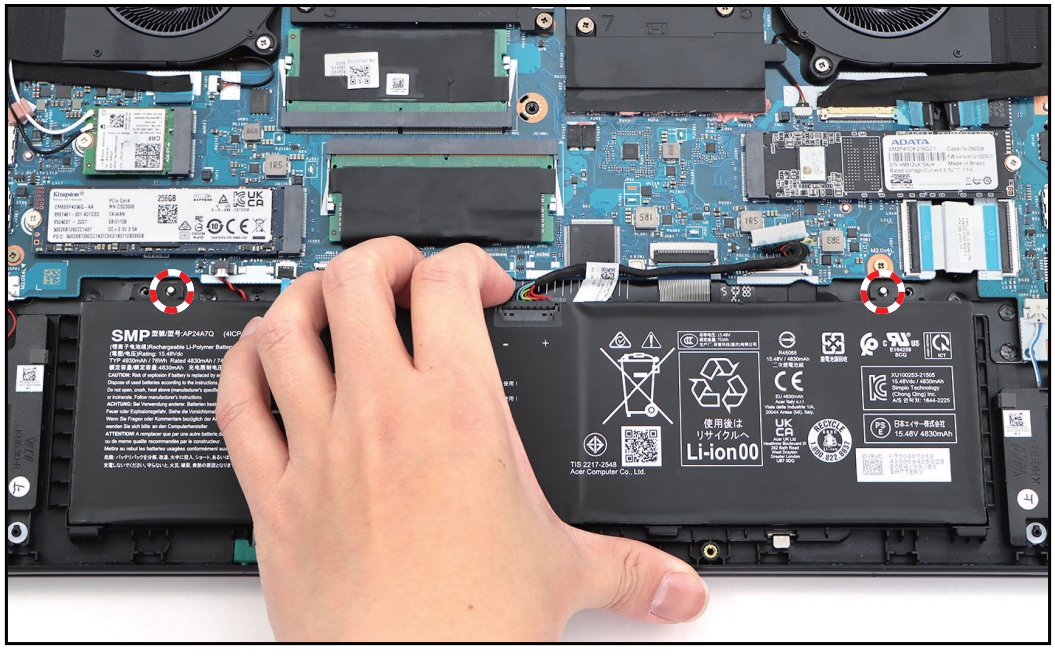


Figure 1-10. Removing the Battery

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

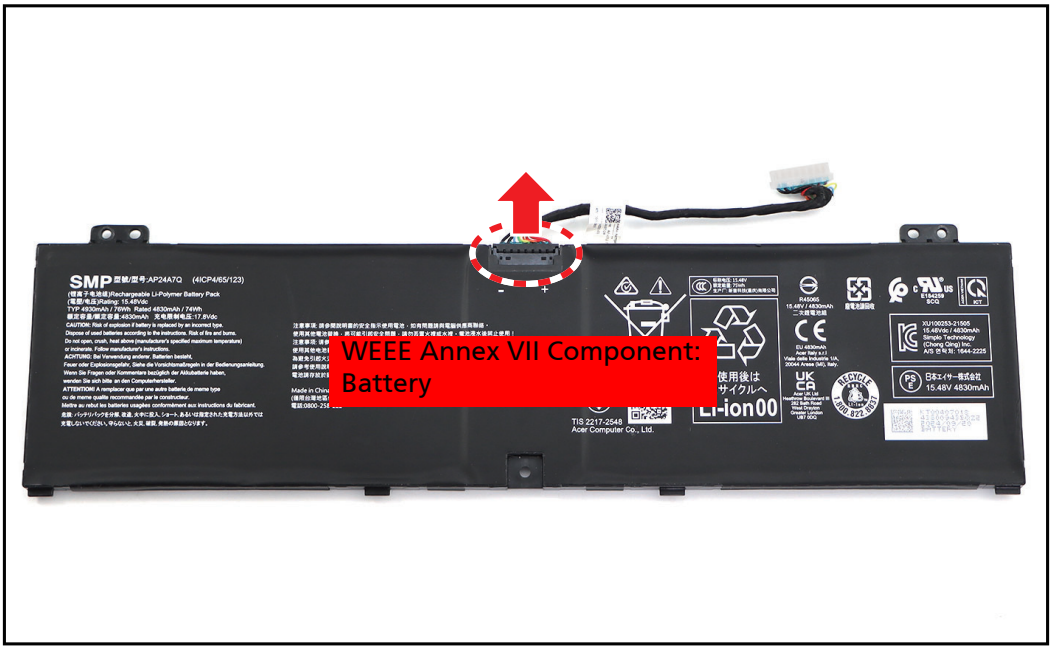


Figure 1-11. Removing the Battery Cable

Table 1-2. 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.

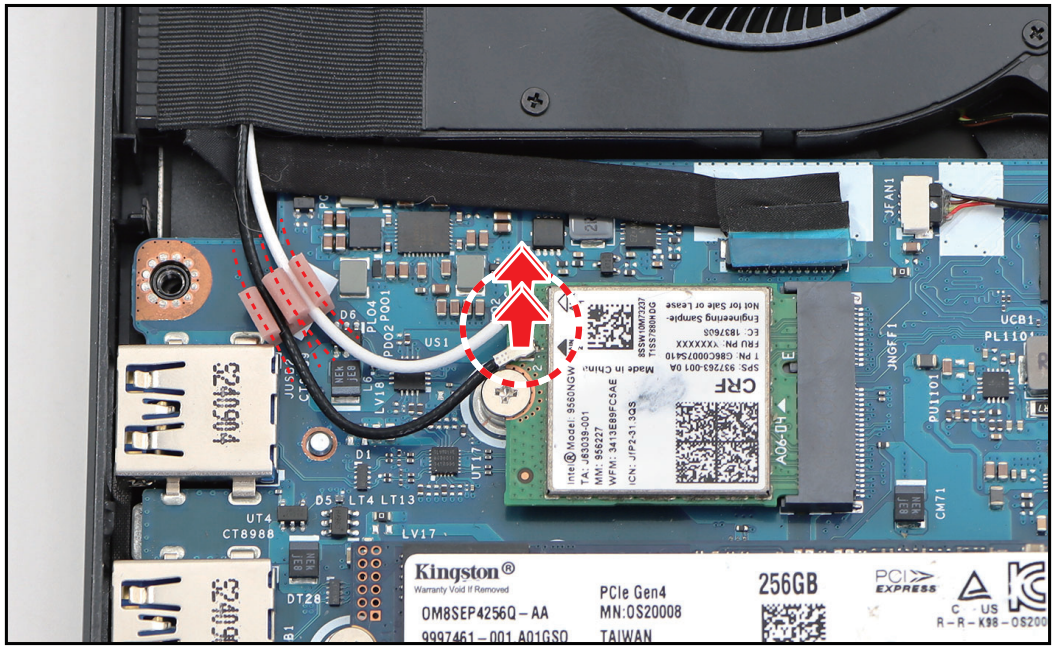


Figure 1-12. Disconnecting the WLAN Antenna Cables

2. Remove the screw securing the WLAN module.

Figure 1-13. Removing the Screw

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

Figure 1-14. Removing the WLAN Module

Table 1-3. WLAN Module Screw

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

DIMM Modules Removal

Prerequisite:

- **Lower Case Removal** on page **1-6**

1. Push the module clips outwards.

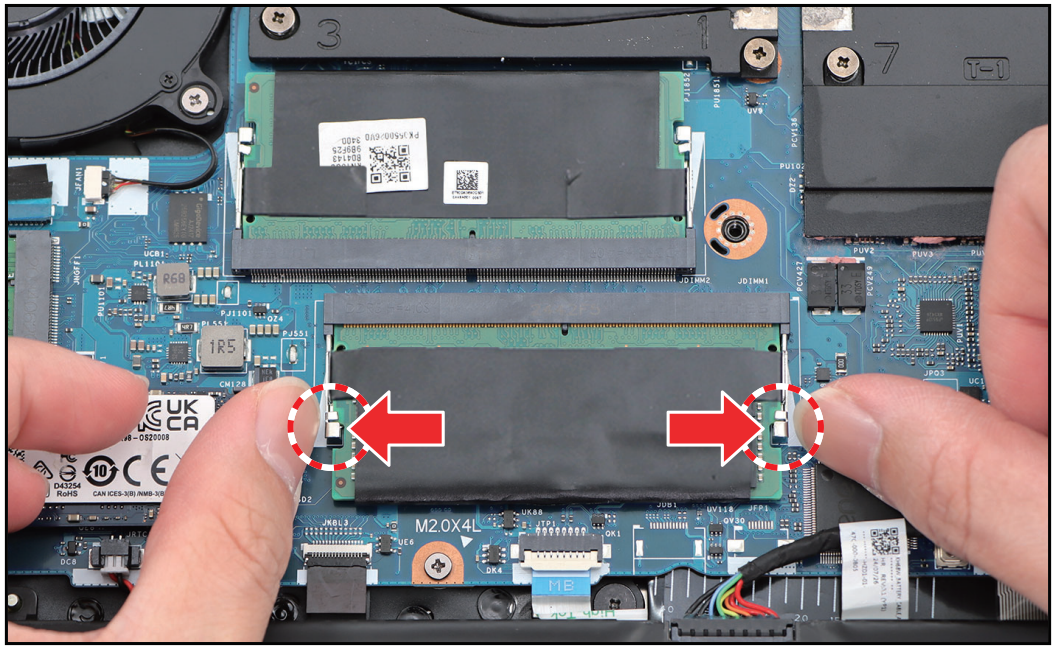


Figure 1-15. Unclipping the Module Clips

2. Pull to remove the memory module from the mainboard connector. Then remove the memory module.

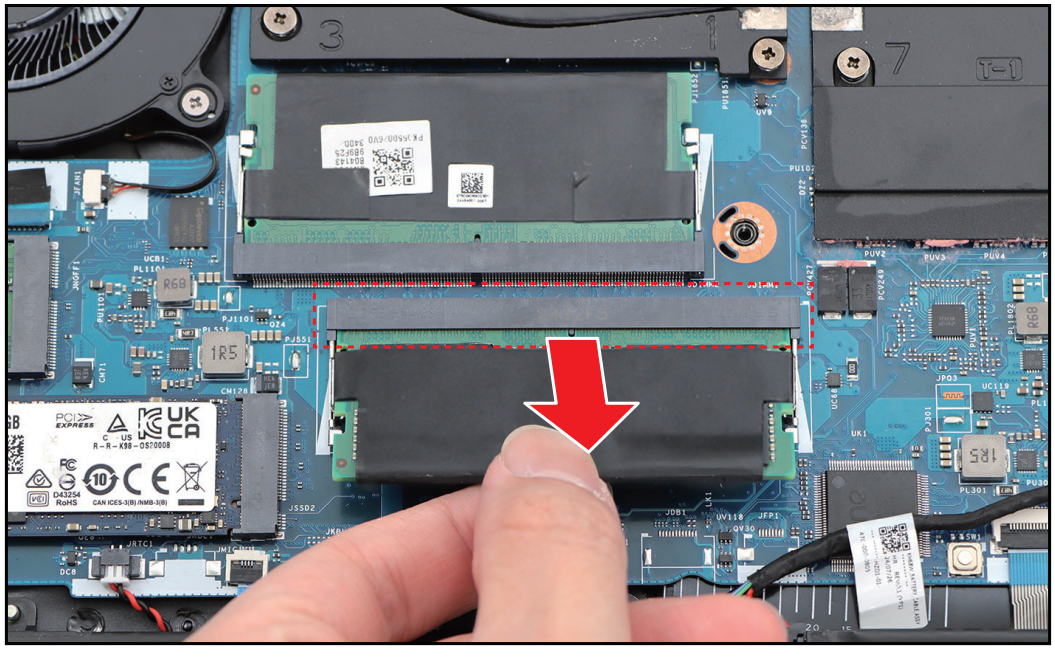


Figure 1-16. Removing the DIMM Module

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

4. Detach the tabs of the composite foil with thermal pad from the DIMM module as shown in the illustration below.

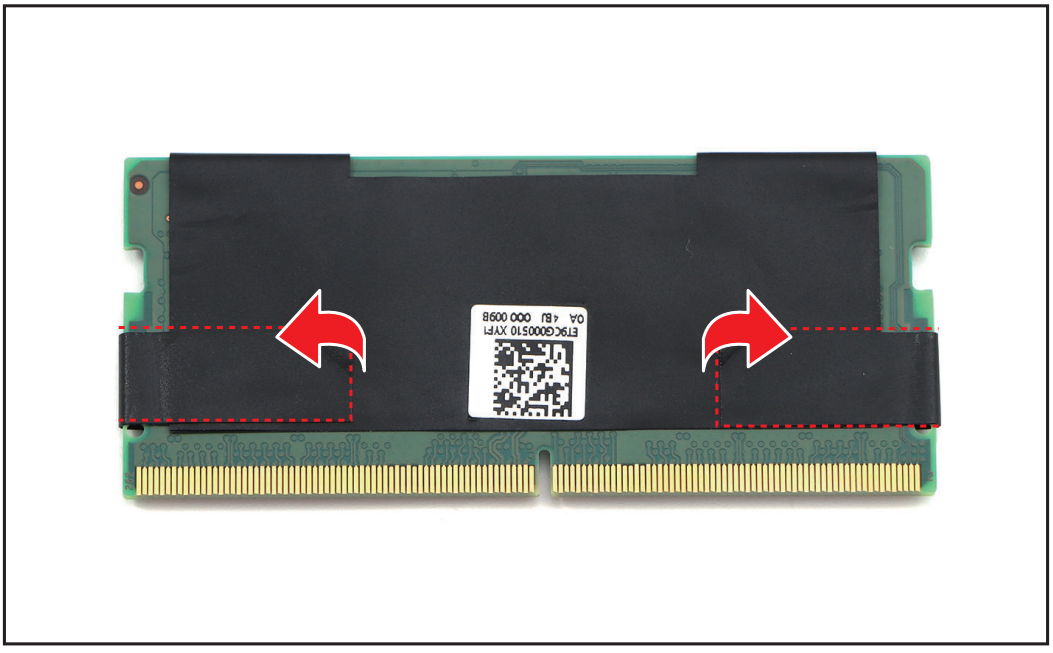


Figure 1-17. Detaching the Composite Foil (1 of 3)

5. Peel off the composite foil with thermal pad from the DIMM module, but DO NOT remove yet!

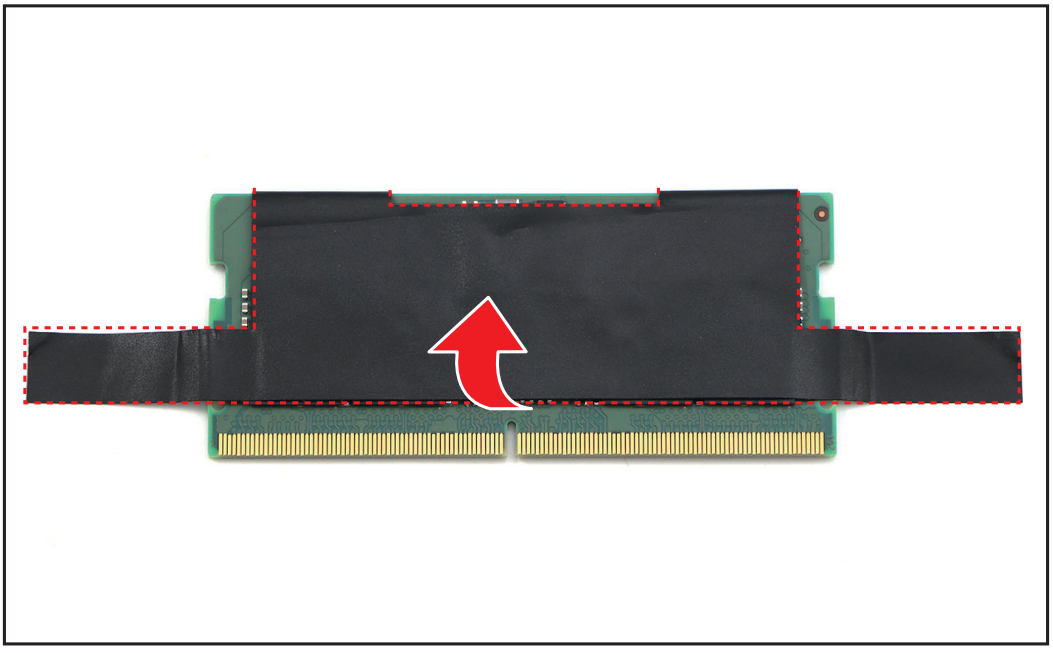


Figure 1-18. Detaching the Composite Foil (2 of 3)

6. Detach the DIMM module from the adhesive graphite strip (marked with red dashed lines) as shown in the illustration below.

Figure 1-19. Detaching the Composite Foil (3 of 3)

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

SSD 1 Module Removal

Prerequisite:

- **Lower Case Removal** on page **1-6**

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

Figure 1-20. Removing the Screw

2. Pull to disconnect the SSD 1 module from the mainboard connector. Then remove the SSD 1 module.

Figure 1-21. Removing the SSD 1 Module

Table 1-4. SSD 1 Module Screw

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

SSD 2 Module Removal

Prerequisite:

- **Lower Case Removal** on page **1-6**

1. Remove the screw securing the SSD 2 module to the upper case.

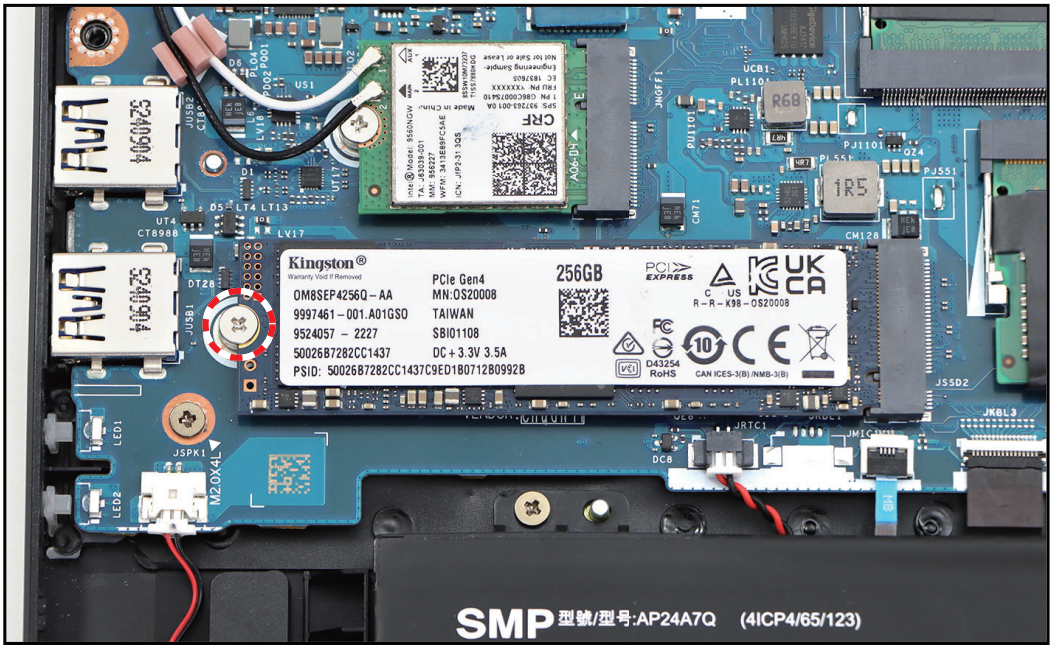


Figure 1-22. Removing the Screw

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

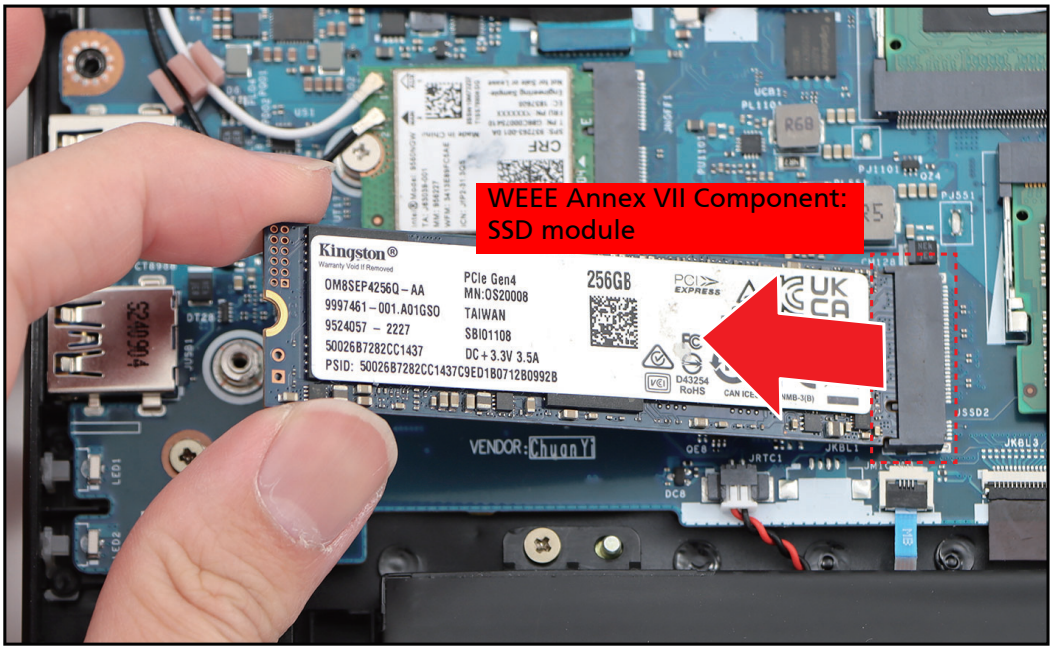


Figure 1-23. Removing the SSD 2 Module

Table 1-5. SSD 2 Module Screw

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

RTC Battery Removal

Prerequisite:

- **Battery Removal** on page **1-9**

1. Lift the mylar covering the RTC battery as shown in the below illustration.

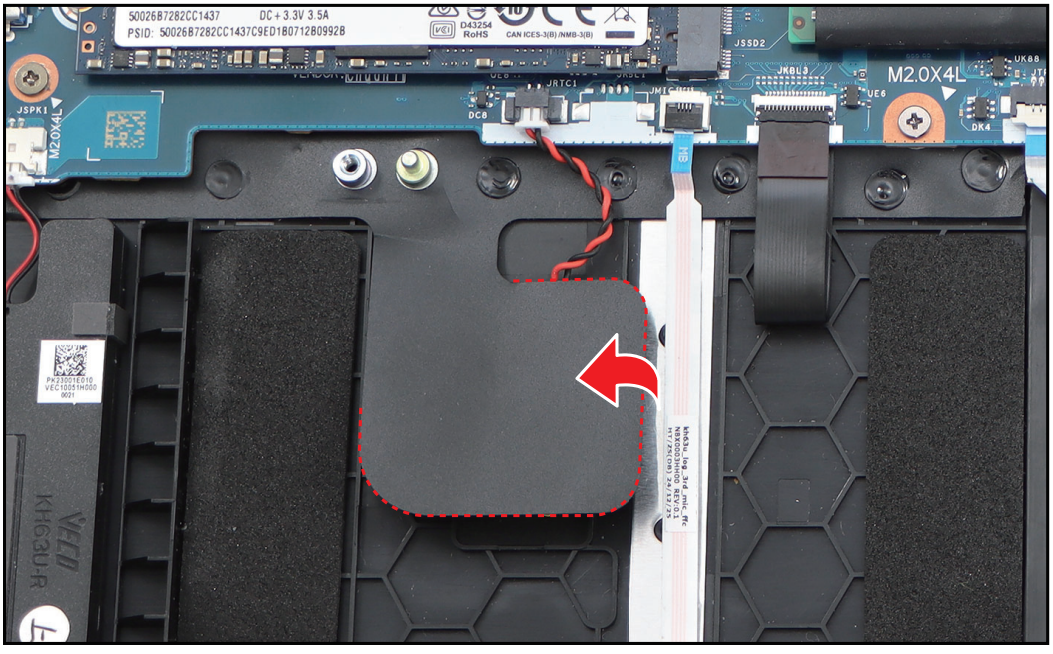


Figure 1-24. Lifting the Mylar

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

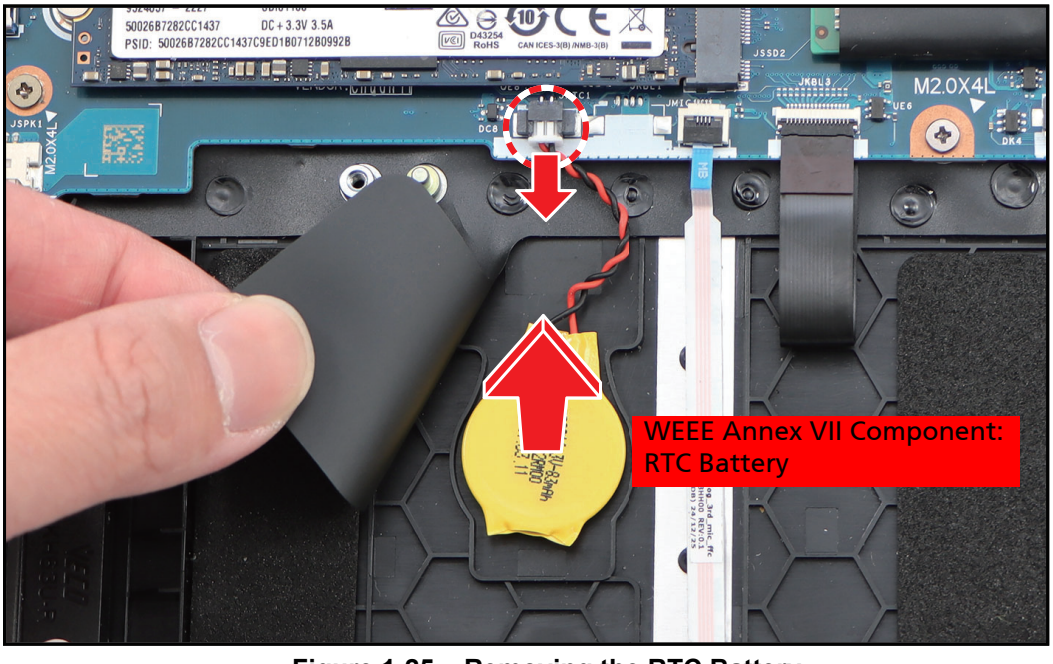


Figure 1-25. Removing the RTC Battery

Touchpad Removal

Prerequisite:

- **Battery Removal** on page **1-9**

NOTE:

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

1. Lift the keyboard mylar to access the touchpad connector.
2. Release the latches and disconnect the touchpad FFC from the mainboard and touchpad connectors. Then remove the touchpad FFC.

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

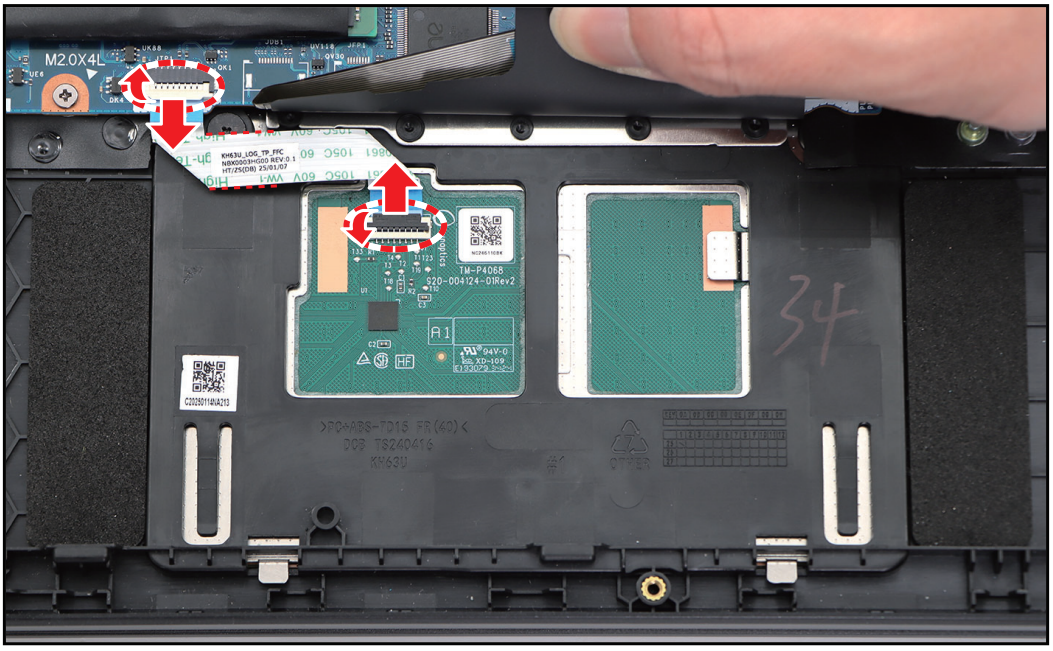


Figure 1-26. Removing the Touchpad FFC

3. Slightly lift the mylar covering the screw hole stud. Then remove the two (2) screws securing the touchpad to the upper case.

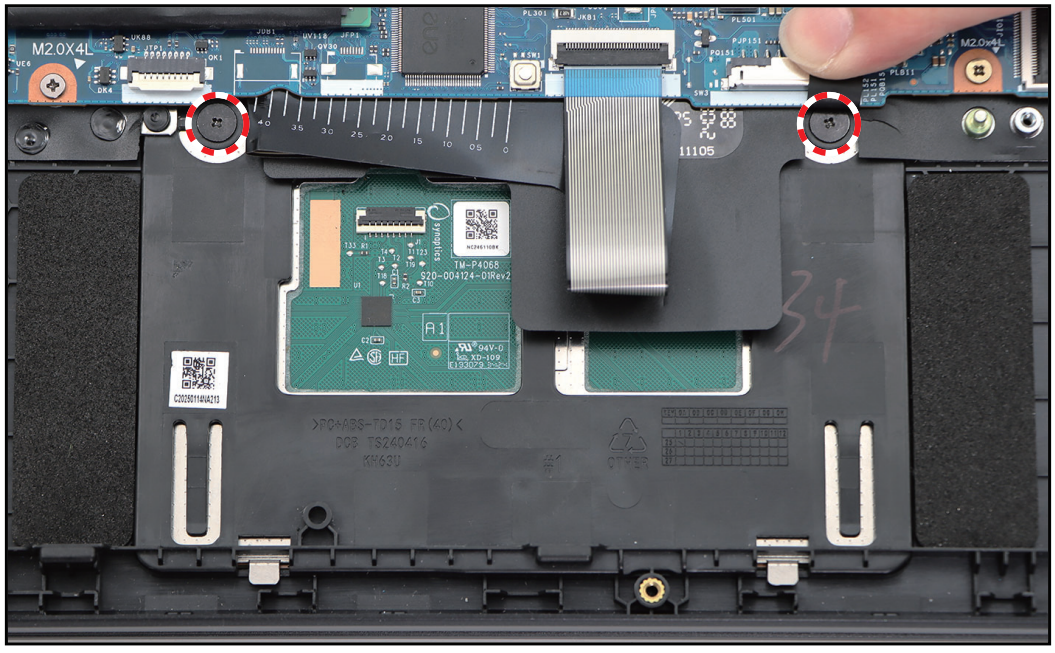


Figure 1-27. Removing the Screws

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.

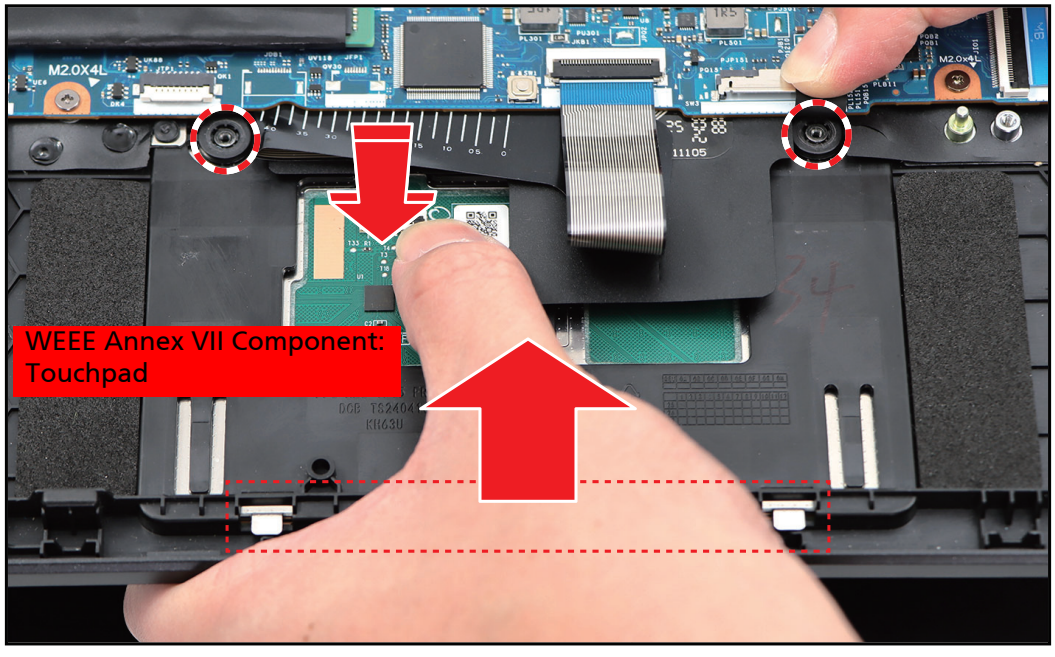


Figure 1-28. Removing the Touchpad

Table 1-6. Touchpad Screws

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

USB Board Removal

Prerequisite:

- **SSD 2 Module Removal** on page **1-18**

1. Release the latch and disconnect the eDP cable from the mainboard connector. Then detach the cable from the mainboard and USB board as shown in the below illustration.

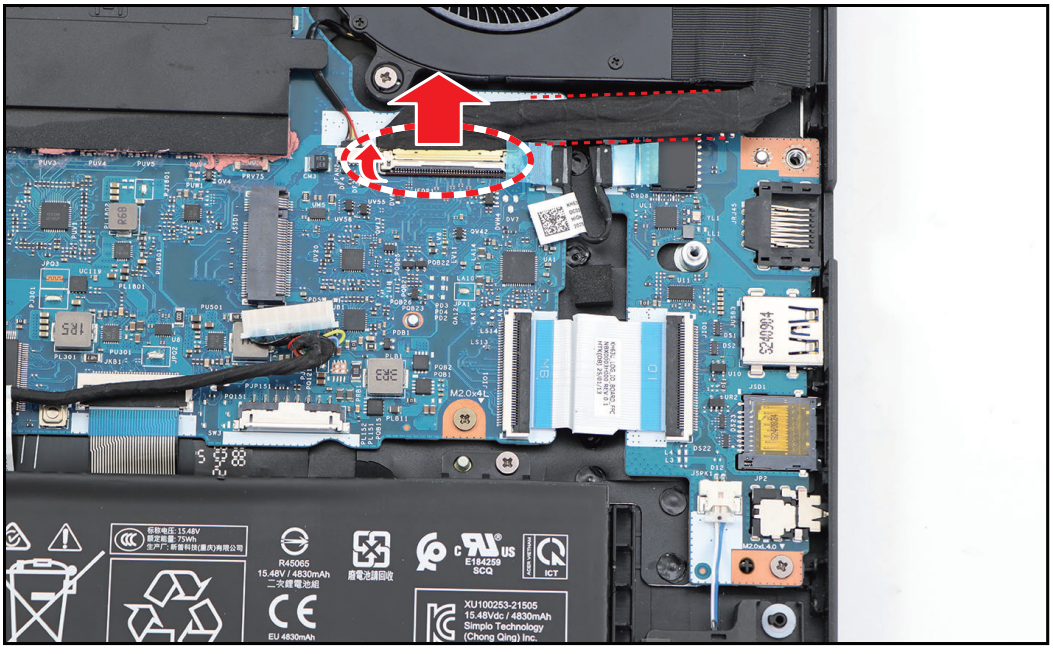


Figure 1-29. Disconnecting the eDP Cable

2. Disconnect the left speaker cable from the USB board connector (A).
3. Release the latches and disconnect the USB board FFC (B) from the USB board and mainboard connectors. Then remove the USB board FFC.
4. Detach the mylars and disconnect the wire cable (C) from the mainboard and USB board connectors. Then remove the wire cable.

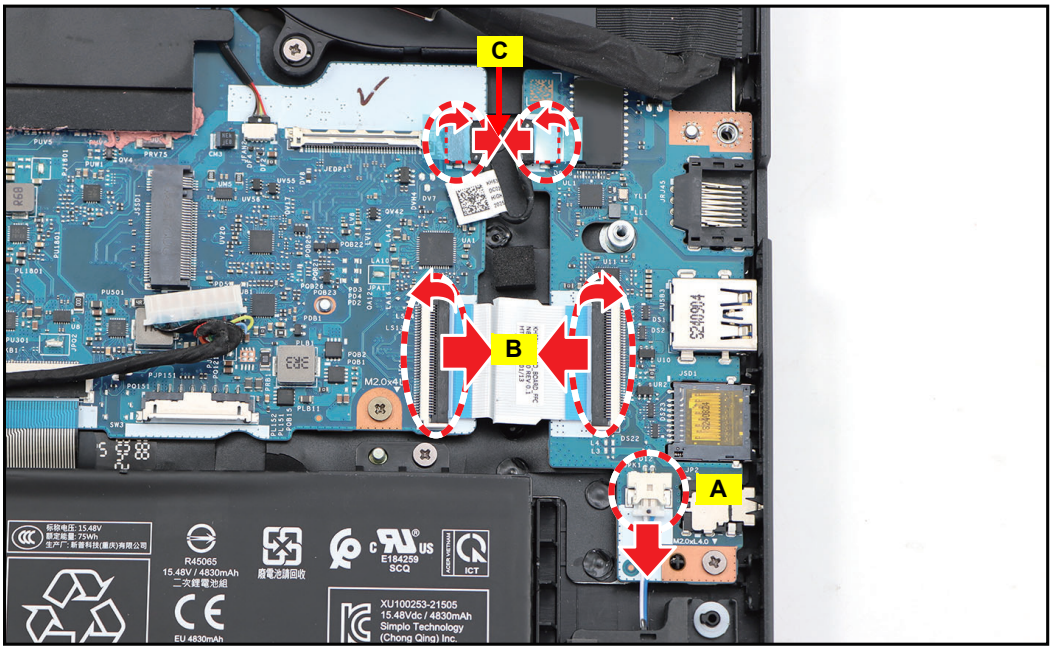


Figure 1-30. Disconnecting the Cables

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

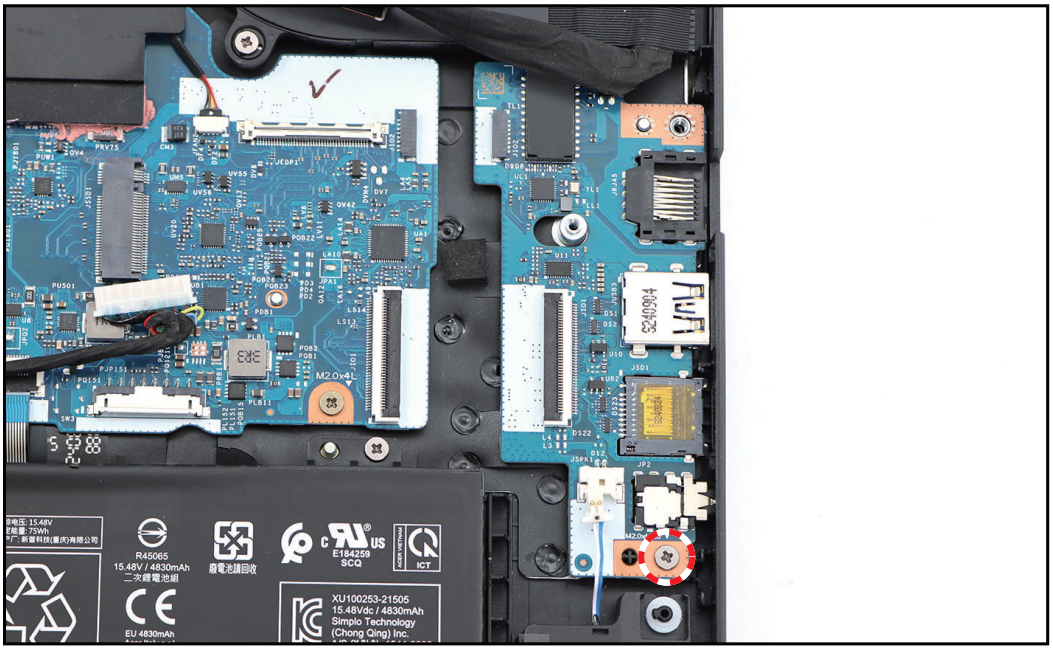


Figure 1-31. Removing the Screw

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

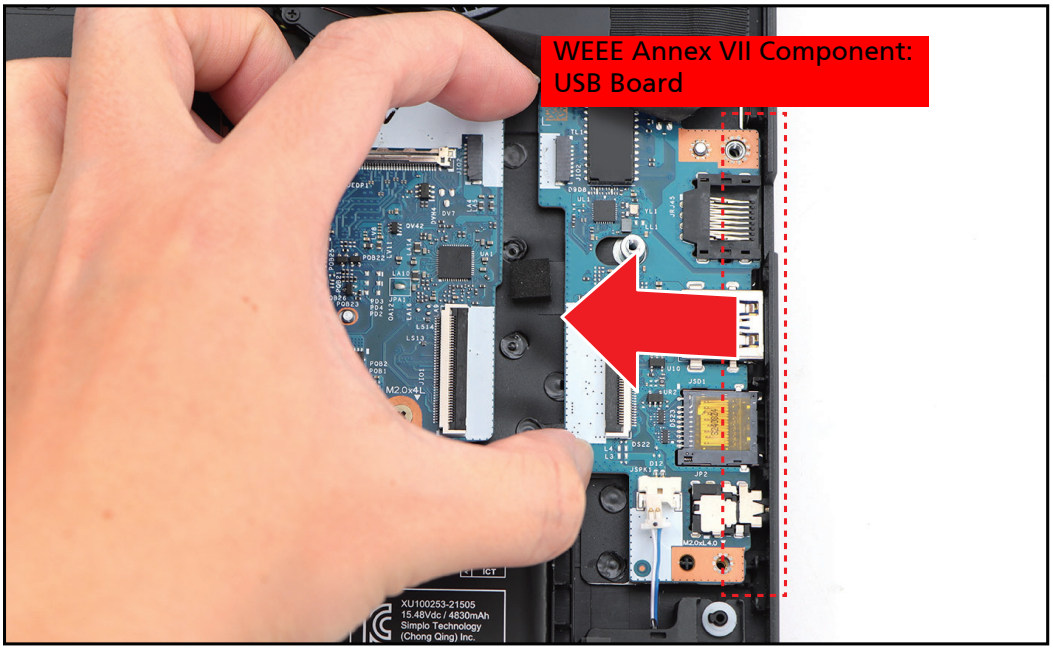


Figure 1-32. Removing the USB Board

Table 1-7. USB Board Screw

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

LCD Module Removal

Prerequisite:

- Thermal Module Removal

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

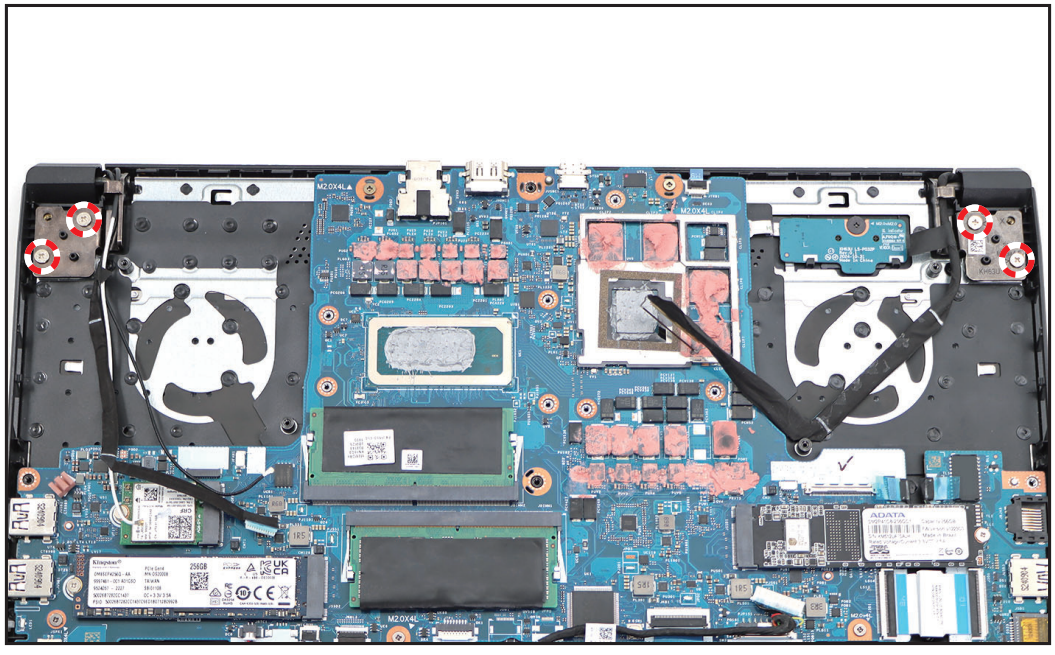


Figure 1-33. Removing the Screws

2. Open the upper case. Then remove the LCD module away from the upper case..

Figure 1-34. Removing the LCD Module

Table 1-8. Hinges Screws

Screw Name	Screw Type	Torque	Quantity
M 2.5 x 4.5		2.65~3.45kgf.cm	4

Mainboard Removal

Prerequisite:

- **WLAN Module Removal** on page **1-11**
- **DIMM Modules Removal** on page **1-13**
- **SSD 1 Module Removal** on page **1-16**
- **SSD 2 Module Removal** on page **1-18**
- Thermal Module Removal

1. Release the latch (if necessary) and disconnect the following cables from the mainboard connectors:
   - Right speaker cable (A)
   - Microphone FFC (B)
   - Keyboard backlight FPC (C)
   - Touchpad FFC (D)
   - Keyboard FPC (E)
   - Mode Key board FFC (F)
2. Carefully pry to detach the adhesive tape underneath the RTC battery (G). Then remove the RTC battery from its compartment.
3. Release the latches and disconnect the USB board FFC (H) from the USB board and mainboard connectors. Then remove the USB board FFC.
4. Detach the mylars and disconnect the wire cable (I) from the mainboard and USB board connectors. Then remove the wire cable.

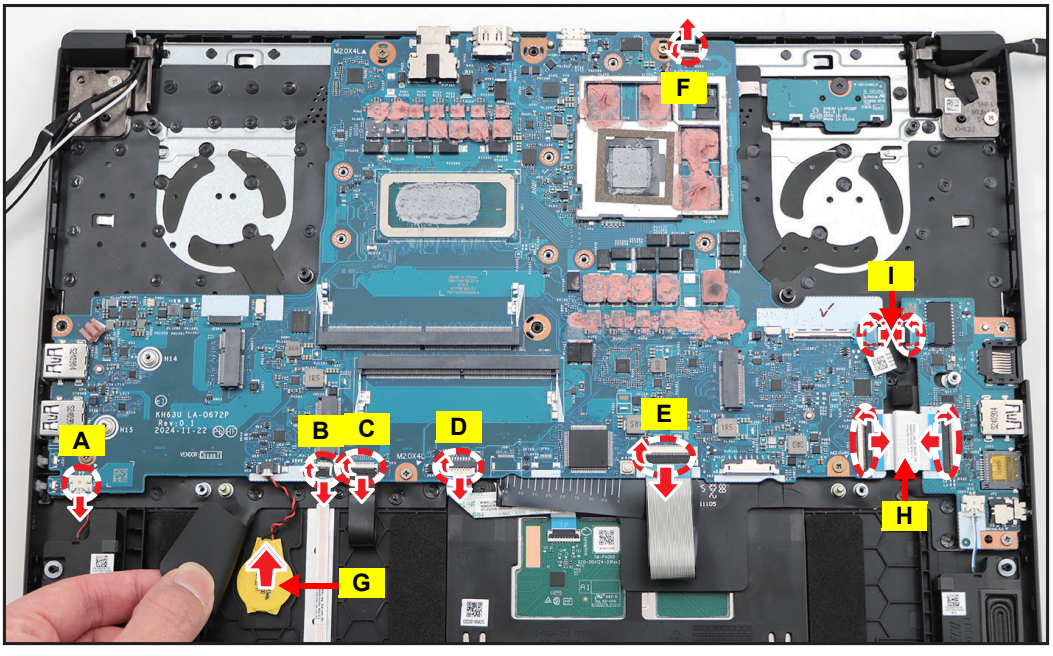


Figure 1-35. Disconnecting the Cables and Removing the RTC Battery

5. Remove the five (5) screws securing the mainboard to the upper case.

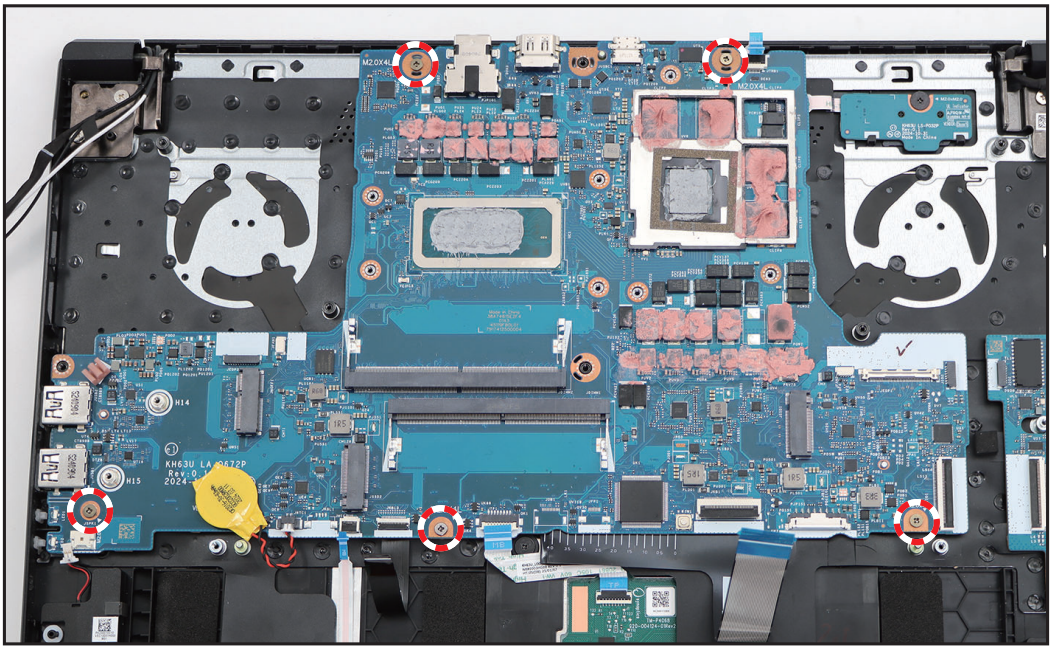


Figure 1-36. Removing the Screws

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

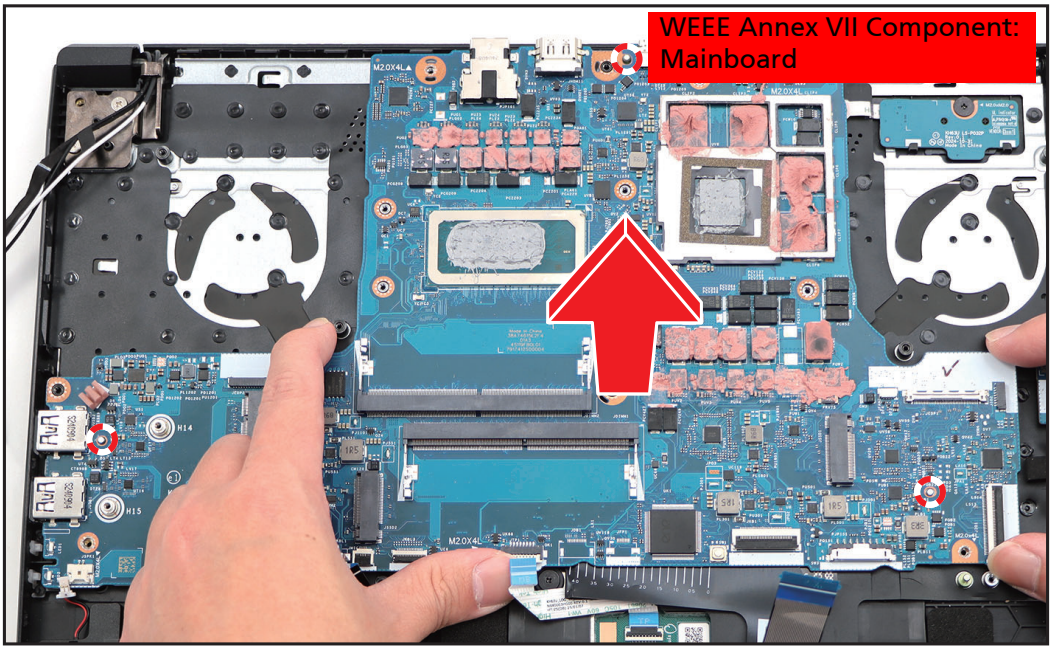


Figure 1-37. Removing the Mainboard

Table 1-9. Mainboard Screws

Screw Name	Screw Type	Torque	Quantity
M 2.0 x 4.0		1.8~2.2kgf.cm	5

LCD Bezel Removal

Prerequisite:

- **LCD Module Removal** on page **1-27**

1. Pry the LCD bezel from the bottom side to release the latches.

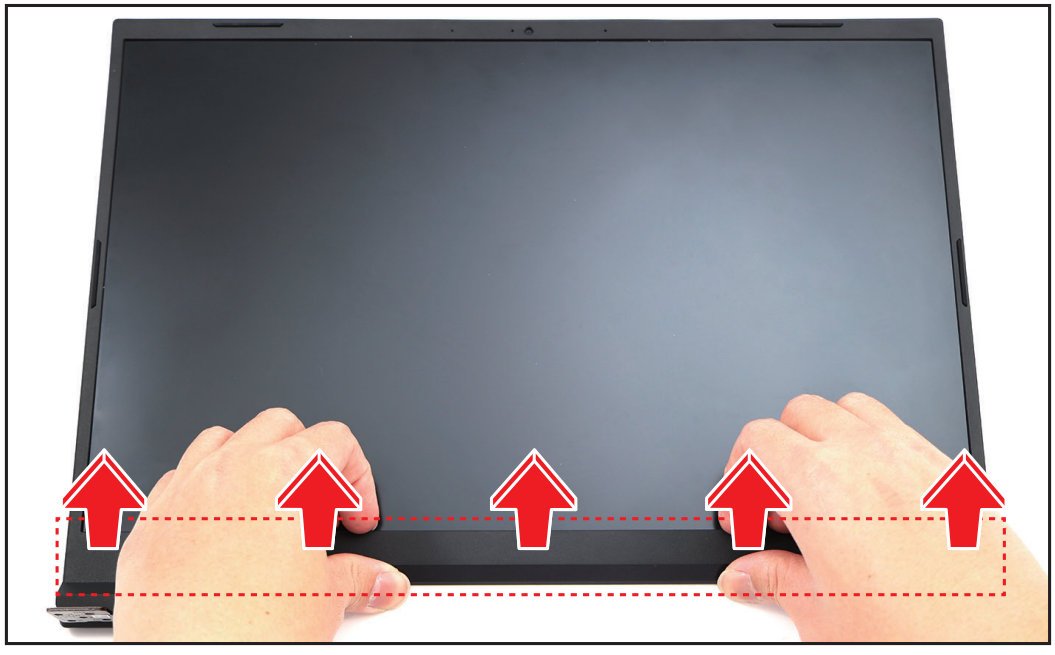


Figure 1-38. Removing the LCD Bezel (1 of 3)

2. Continue to release the left and right sides latches.

Figure 1-39. Removing the LCD Bezel (2 of 3)

3. Continue to release the upper side latches. Then remove the LCD bezel.

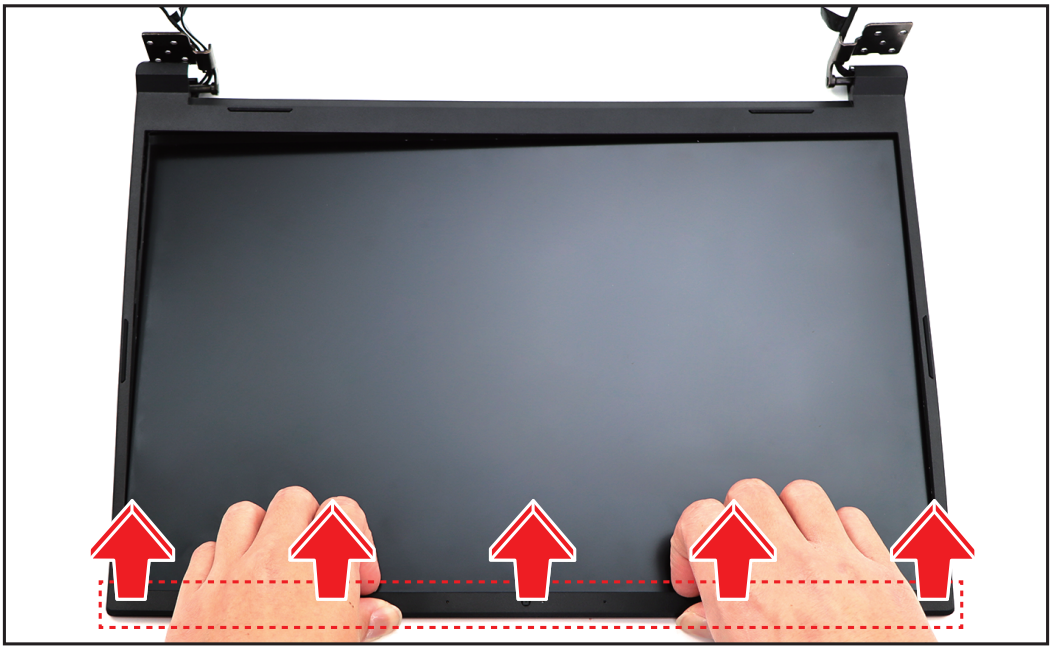


Figure 1-40. Removing the LCD Bezel (3 of 3)

LCD Hinges Removal

Prerequisite:

- **LCD Bezel Removal** on page **1-31**

1. Lift and push the LCD hinges to upright position. Then release the WLAN antenna cables and the eDP cable from the LCD hinges as shown in the below illustration.

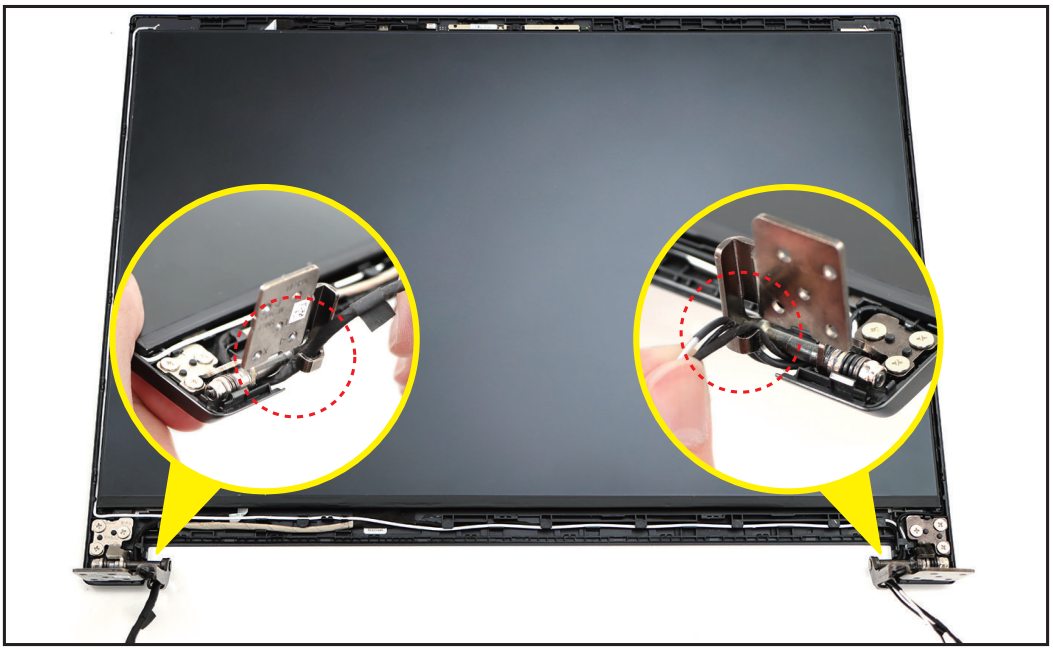


Figure 1-41. Adjusting the LCD Hinges Position and Releasing Cables

2. Remove the six (6) screws securing the LCD hinges to the LCD cover.

Figure 1-42. Removing the Screws

3. Lift the LCD hinges to release them from the guide pins. Then remove the LCD hinges from the LCD cover.

Figure 1-43. Removing the LCD Hinges

Table 1-10. LCD Hinges Screws

Screw Name	Screw Type	Torque	Quantity
M 2.5 x 4.0		2.65~3.45kgf.cm	6

LCD Panel Removal

Prerequisite:

- **LCD Hinges Removal** on page **1-33**

1. Disconnect the eDP cable from the CMOS and dual microphone module connector.

Figure 1-44. Disconnecting the eDP Cable

2. Unroute the main antenna cable from the cable guides on the bottom-edge side first, and then following with the right side of the LCD cover as shown in the below illustration.

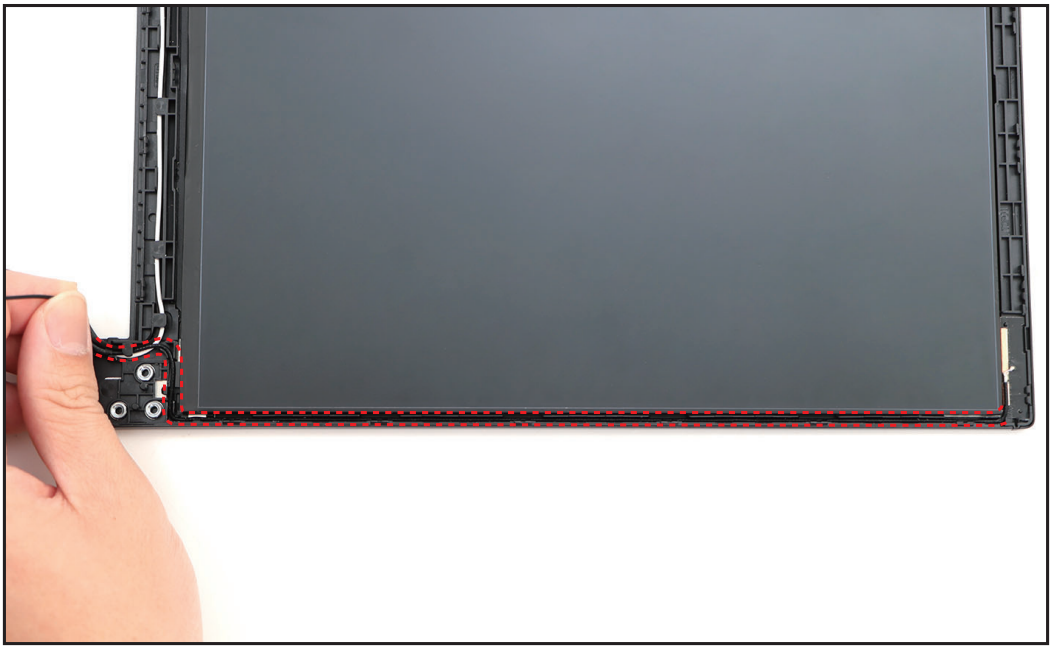


Figure 1-45. Unrouting the Main Antenna Cable

3. Unroute the auxiliary antenna cable from the cable guides on the bottom side of the LCD cover as shown in the below illustration.

Figure 1-46. Unrouting the Auxiliary Antenna Cable (1 of 2)

4. Unroute the auxiliary antenna cable from the cable guides on the left sides of the LCD cover as shown in the below illustration.

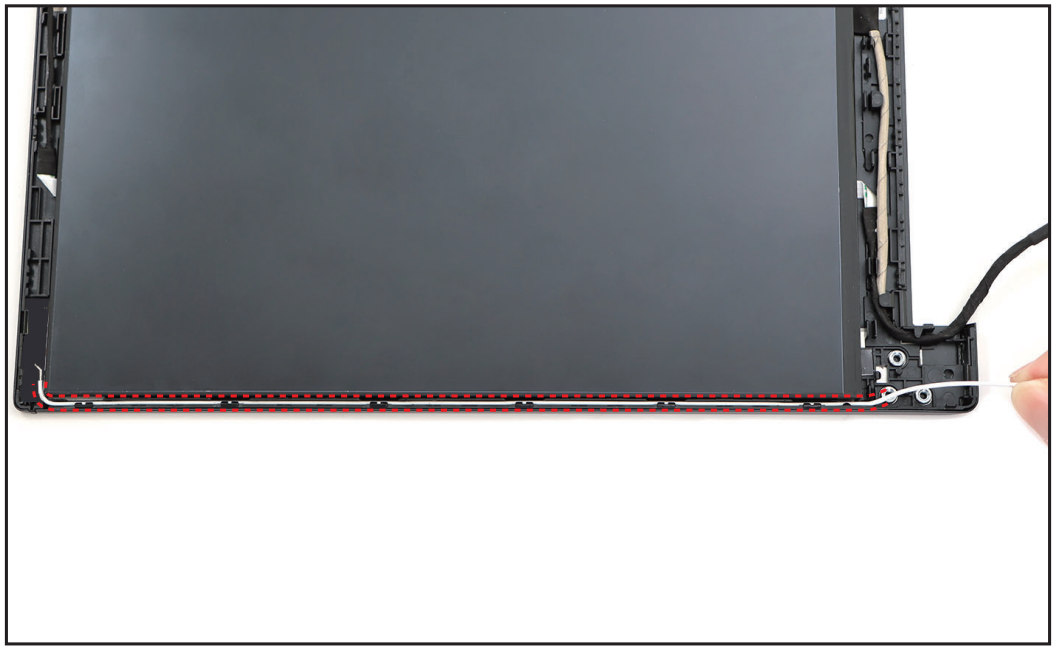


Figure 1-47. Unrouting the Auxiliary Antenna Cable (2 of 2)

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

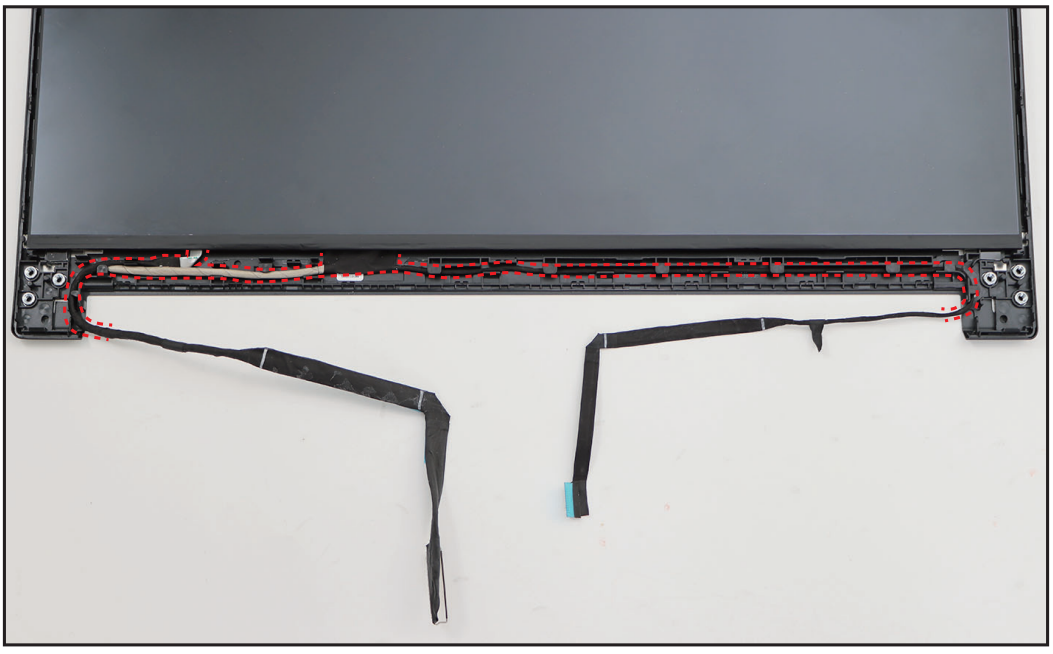


Figure 1-48. Unrouting the eDP Cable

6. 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.

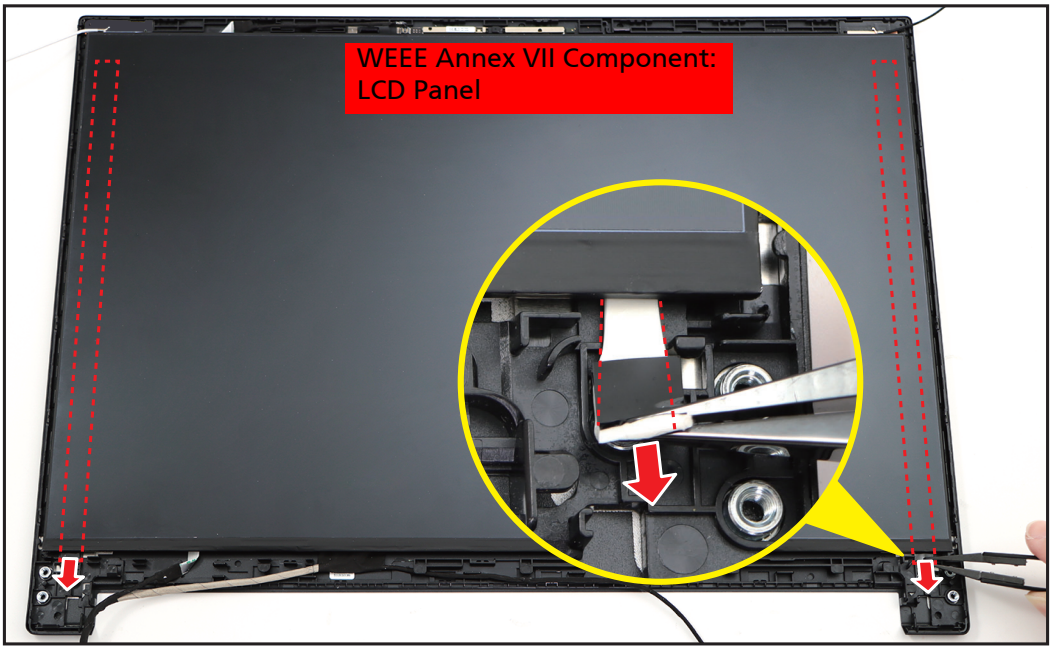


Figure 1-49. Detaching the Double-sided Mounting Tapes

7. Unroute and detach the eDP cable from the guides on the cable routing channel on the LCD panel as shown in the below illustration.

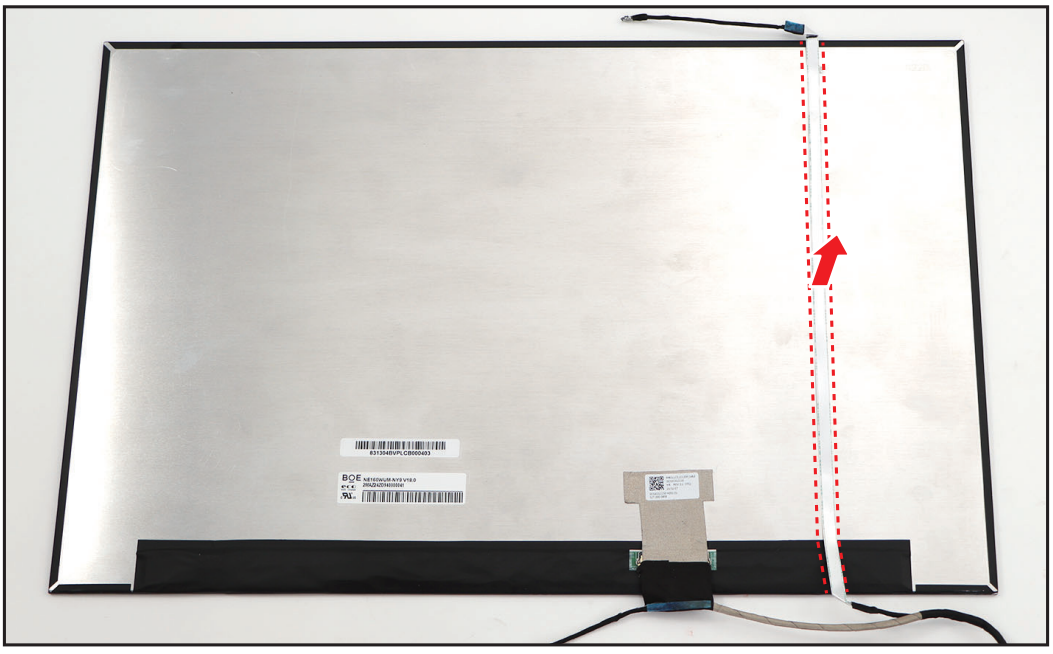


Figure 1-50. Unrouting and Detaching the eDP Cable

8. Detach the conductive tape securing the eDP cable to the LCD panel connector.

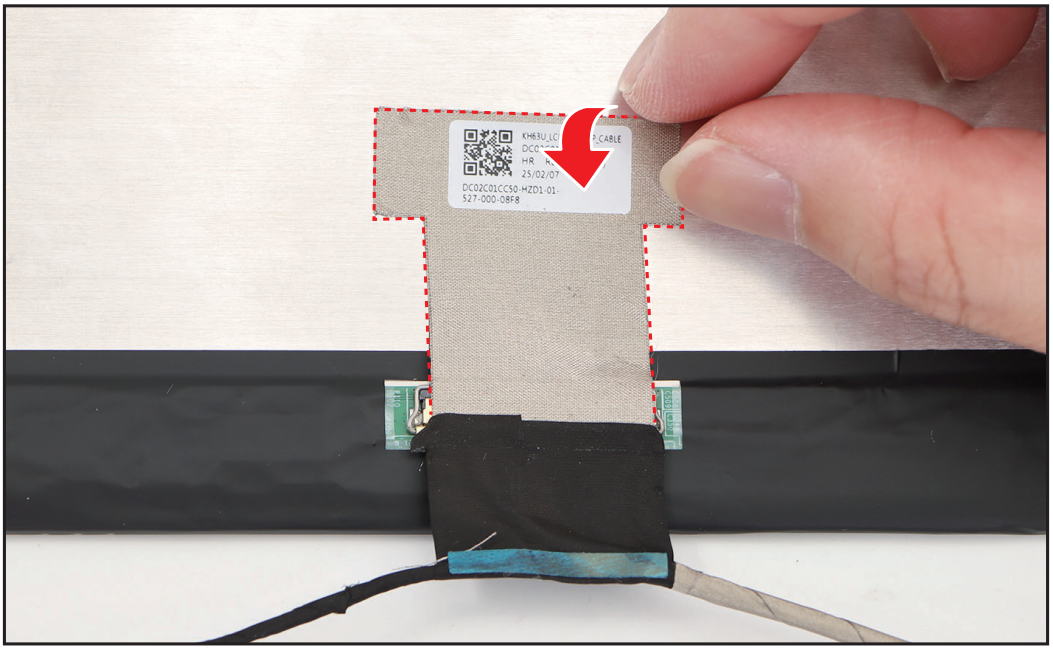


Figure 1-51. Detaching the Conductive Tape

9. Lift the latch securing the eDP cable.

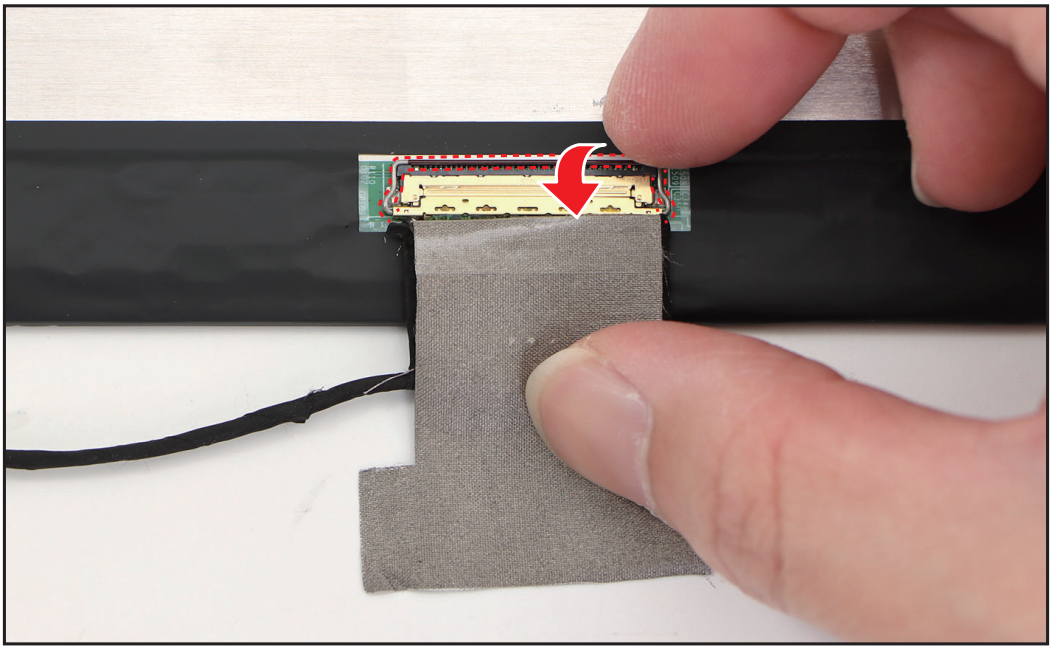


Figure 1-52. Lifting the Latch

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

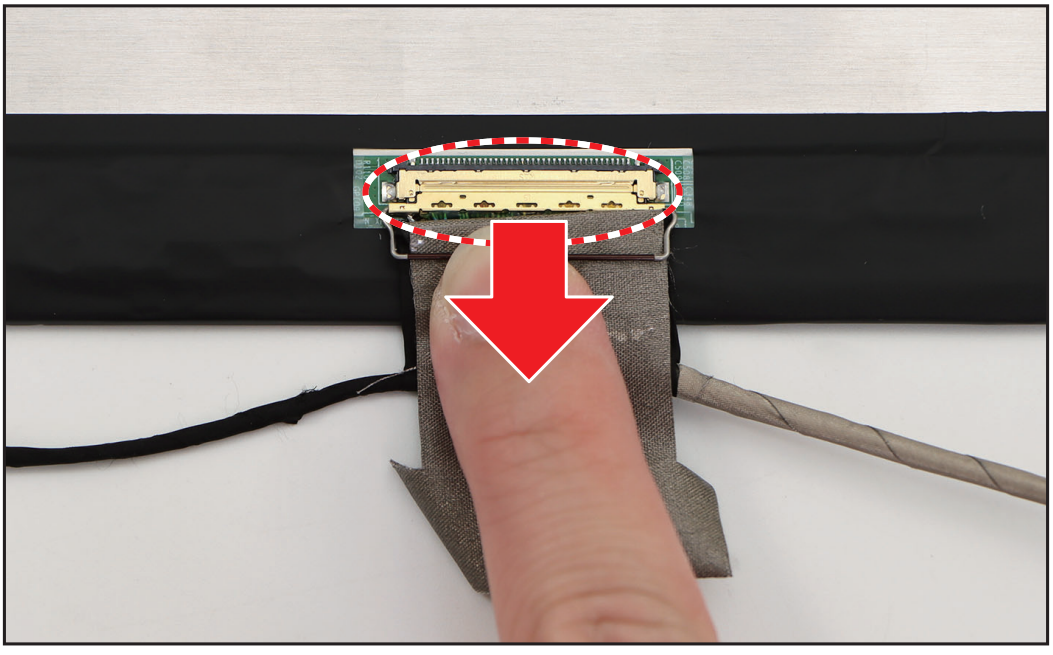
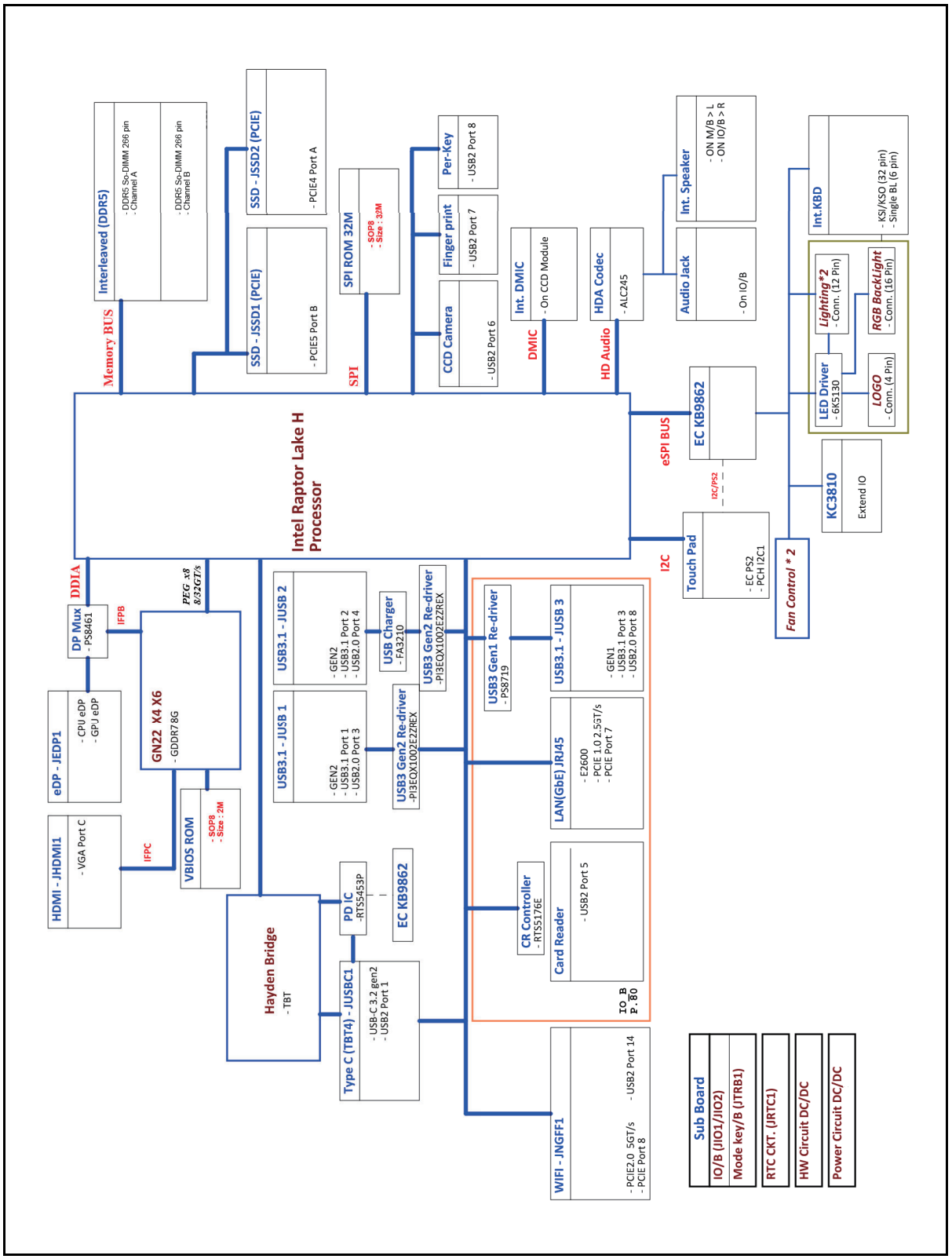


Figure 1-53. Disconnecting the eDP Cable

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 1-54. BIOS Information

Table 1-11. BIOS Information Tab Parameters

Product Information	Remark
CPU Info	Should be same with processor brand string.
Core Frequency	Display the 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]. • dGPU doesn't support GOP version display.

Product Information	Remark
HDD Model Name	• 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 storage leverage OPAL protocol, add (OPAL) for identification.

HDD Serial Number	• 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:
	  • HDD0 Model Name
	  • HDD0 Serial Number
	  • HDD1 Model Name
	  • HDD1 Serial Number
	• If storage leverage OPAL protocol, add (OPAL) for identification.

Total Memory	The field reports the system total installed memory.
Memory # Vendor	• Show the vendor of memory manufacturer • Also show the information of the memory type. • # means memory's number. If there is only have on board memory, hide this item.
Memory # Size	• Shows each size of onboard/installed memory. • # means memory's number. If there is only have on board memory, hide this item.
Memory # Speed	• Identifies the configured speed of the memory device. • # means memory's number. If there is only one memory on board, hide this item.
Memory # Voltage	• 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.
Product Name	• 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	• Should be same with SMBOS Type 1 Offset 04h. • The string is case sensitive.
UUID	• It is required for all systems. • Display format: xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx (follow UUID Standard)

Product Information	Remark
DFCI/ABST support	• This item default should be hidden. • Only visible after user press 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.
Maximum Capacity	• The battery health indicator. • This item required with a help string under line “This measures the battery's capacity compared to its original state when it was new. A lower capacity can lead to reduced usage time between charges.”
Battery Temperature	Show the temperature of the battery.
Cycle Count	• 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 1-12. BIOS Main Tab Parameters

Item Name	Example	Remark
System Time	HH:MM:SS	• 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]	• Default Network Boot value in different Boot Mode:
		  • [UEFI] Boot Mode: [Disabled]
		  • [Legacy] Boot Mode: [Enabled]

F12 Boot Menu	[Enabled] / [Disabled]	• 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
VMD Controller	[Enabled] / [Disabled]	• This item default should be hidden. • Only visible if the platform supports the function after user presses **Ctrl**+***S*** in this page (Main Tab). • VMD stands for Intel Volume Manage Device Bootcamp. • The detail VMD configuration should depends on actual HW layout. • The default value is [Enabled].
Wake On LAN	[Enabled] / [Disabled]	• Wake on LAN feature allows someone to turn on a network computer remotely by sending Magic Packet even if the system is in off state. • The panel is off when wake on LAN is activated. • The default value is [Disabled].
USB/TBT Wake from S4 Support	[Enabled] / [Disabled]	• Support USB/TBT wake from S4. • The default value is [Disabled].
Function key behavior	[Function Key] / [Media Key]	• [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]	• If enabled, USB devices can wake the system, even if the lid is closed. • The option grey out on modern standby supported system when "USB wake from S4 Support" disabled. • The default value is [Disabled].
D2D Recovery	[Enabled] / [Disabled]	• This function enables/disables Acer disc-to-disc Recovery. • To do Acer disc-to-disc system recovery, press **Alt**+***F10*** key during POST.

Item Name	Example	Remark
Keyboard backlight timeout	[Enabled] / [Disabled]	• The option only exists for the product that supports the keyboard backlight and controlled by EC (USB keyboard not support). • If the option set to [Disabled], the keyboard backlight is on despite the AC/DC power option. • The default value is [Enabled].
Fast Boot	[Enabled] / [Disabled]	• Enable/Disable Fast Boot. • Skip timeout variable when the Fast Boot enabled. • The default value is [Enabled].
Display Language	[English]	• BIOS display language. • BIOS supports 14 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]	• 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 Virtualization configuration and other advanced settings.

Figure 1-56. BIOS Advanced

Table 1-13. BIOS Advanced Tab Parameters

Item Name	Example	Remark
Intel VTX	[Enabled] / [Disabled]	• This is Intel VTX function switch. • Only appear if the platform supports the function. • The default value is [Enabled].
Intel VTD	[Enabled] / [Disabled]	• This is Intel VTD function switch. • Only appear if the platform supports the function. • The default value is [Enabled].
Active Efficient Cores	[Enabled] / [Disabled]	• With Intel Hybrid CPU architecture, appears “Active Efficient Cores” for E-Core(Small Core). It can control all Efficient Cores to active or inactive. • The default value is [Enabled].
GNA Device	[Enabled] / [Disabled]	• This option only appears when system is Intel CPU which supports GNA device. • The default value is [Enabled].

Item Name	Example	Remark
TBT Detection Gain	[Enabled] / [Disabled]	• 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].
Display mode	[Auto Select] / [Optimus] / [Nvidia GPU only]	• This is for Nvidia discrete GPU. • The default value is [Auto Select] if project SKU supports Nvidia DDS function. Otherwise the default value is [Optimus] and [Auto Select] option should be hidden. • If user selects [Nvidia GPU only], a pop up warning message to inform user, and message should be "Type-C DisplayPort could not be available in this mode." (This message is not required if all Type-C DisplayPort works under Nvidia GPU only mode.)

Security Tab

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

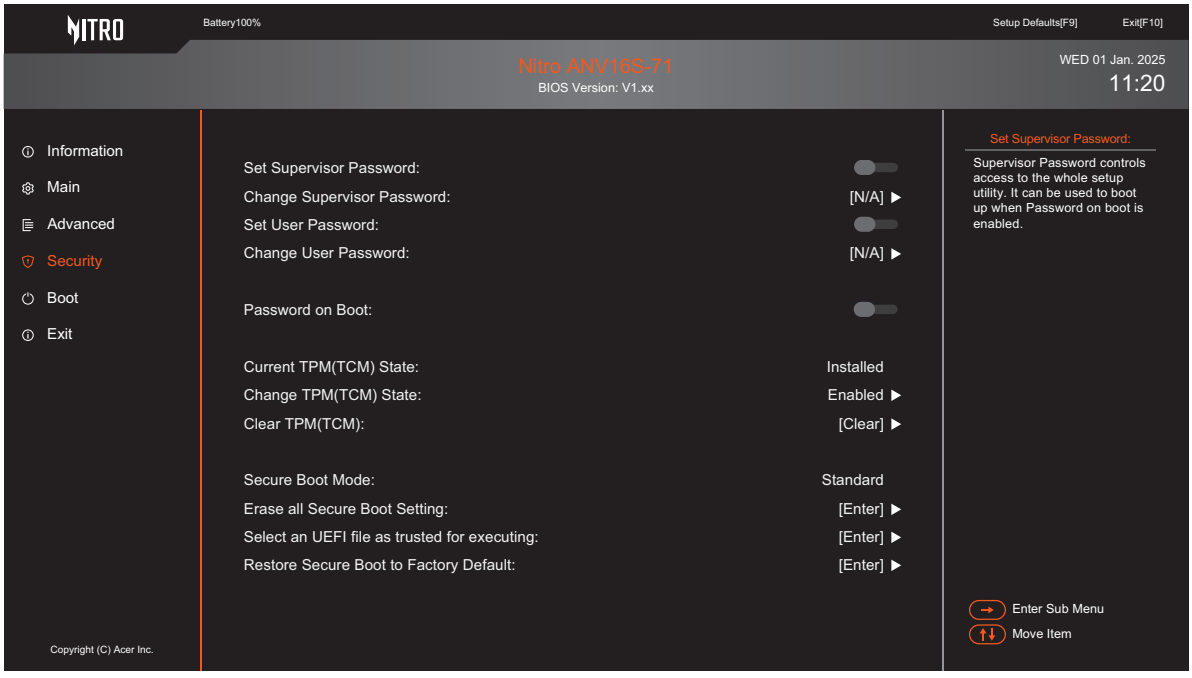


Figure 1-57. BIOS Security

Table 1-14. BIOS Security Tab Parameters

Item Name	Example	Remark
Set Supervisor Password	[Enabled] / [Disabled]	• [Disabled] means password is not set. After the password has been set, the setting will be change to [Enabled]. • If Supervisor Password is not set, Set User Password should be a grayed out item. • After pressing [Disabled], a pop up a window to ask user to enter new password. • 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 1-56.
Set User Password		

Item Name	Example	Remark

Change Supervisor Password	[N/A] / [Change]	• [N/A] means the password is not set. After the password has been set, the setting will be change to [Change].
		• After pressing [Change], a pop up a window to ask user to enter the current password.
		• 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.
		• 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 **1-56**.
		• If the system has more than 1 HDD, HDD password items that listed on the Security Menu should be as below:
		  • Set HDD0 Password
		  • Change HDD0 Password
		  • Set HDD1 Password
		  • Change HDD1 Password

Change User Password		
Password on Boot	[Enabled] / [Disabled]	• 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)		• 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]	• 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.
Secure Boot Mode	[Standard] / [Custom]	Displays the current Secure Boot Mode status. • [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].
Erase all Secure Boot Setting	[Enter]	• Erase all contents in secure four variables PK, KEK, DB, and DBX. • A confirmation dialog will pop up to confirm user's action.

Item Name	Example	Remark

Select an UEFI file as trusted for executing	[Enter]	• 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:
		  • 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]	• 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.

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 ↑ and ↓ keys to highlight the `Select an UEFI File as trusted for executing` parameter and press ***Enter***. The `Select the UEFI file location` dialog box appears.

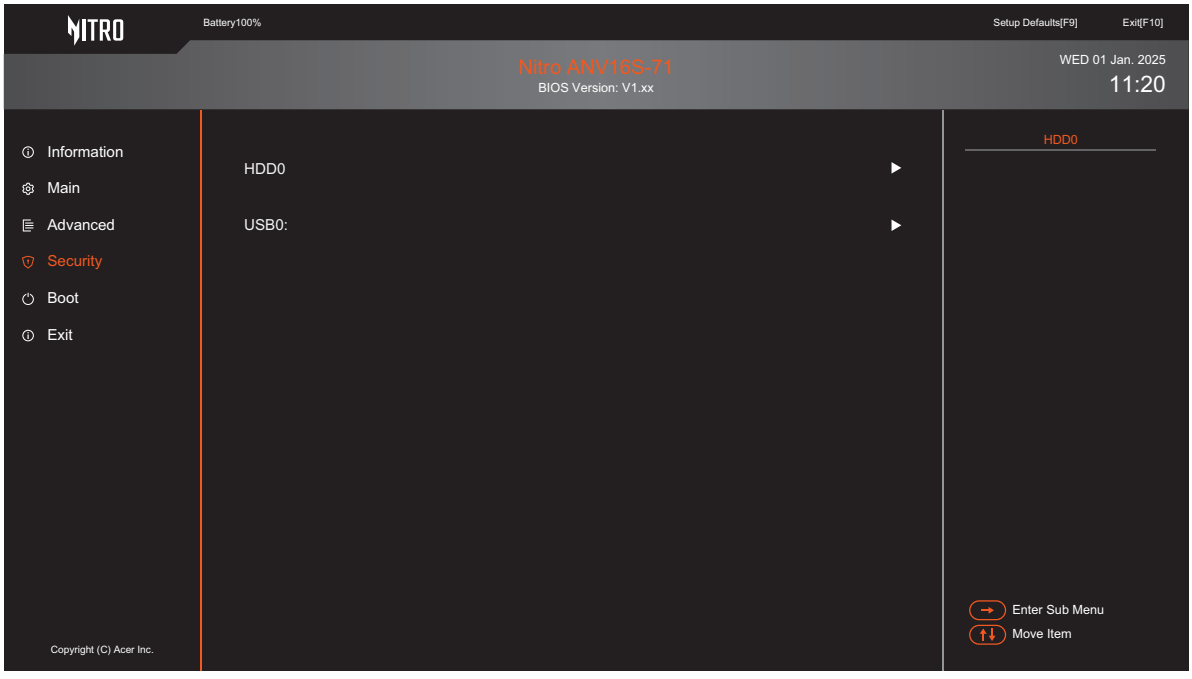


Figure 1-58. Select UEFI File Location

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

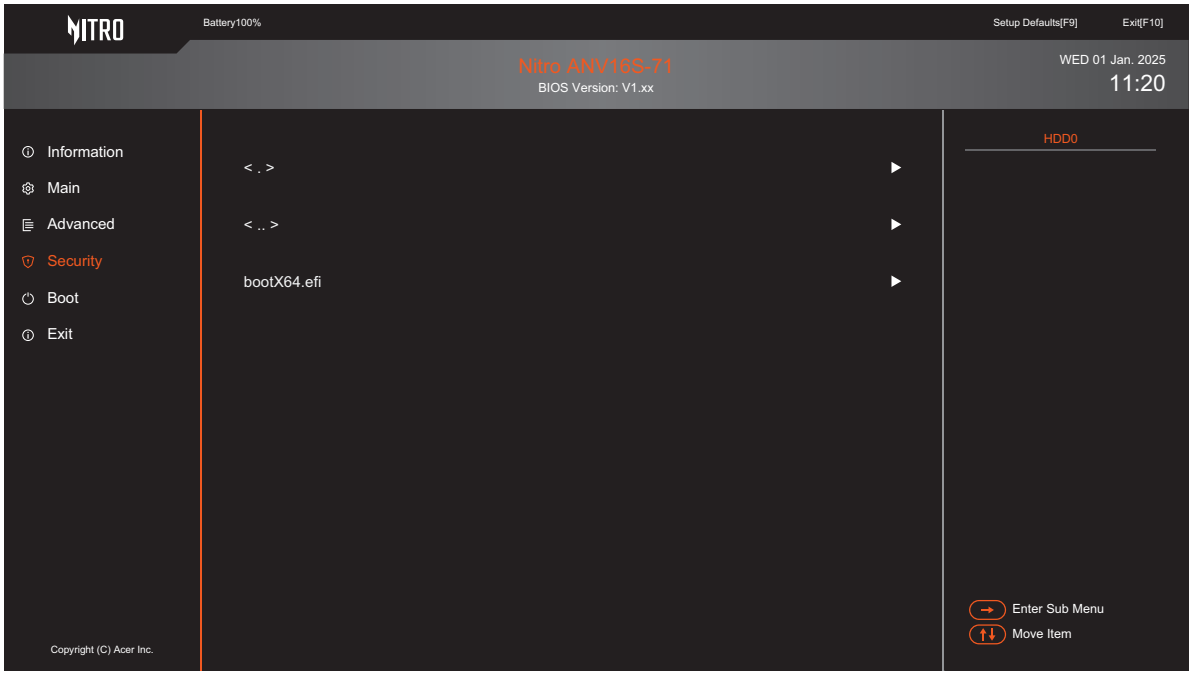


Figure 1-59. Select UEFI File

3. Select the *.efi file to execute (only *.efi files can be added to the signature database).

4. Select SAVE to add the signature database and return to the security section. Boot description will be added in the end of the Boot device order list (maximum of 5 entries are allowed).

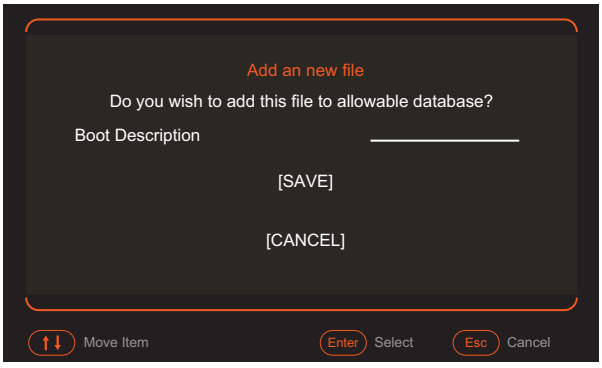


Figure 1-60. Add New File

Setting a Password

Perform the following to set the supervisor password:

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

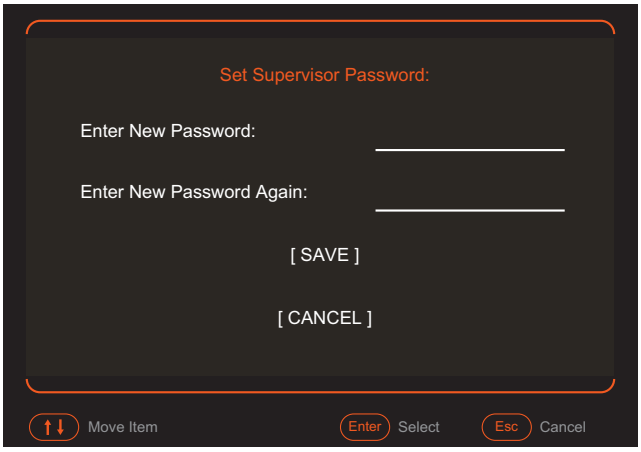


Figure 1-61. Set Supervisor Password

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

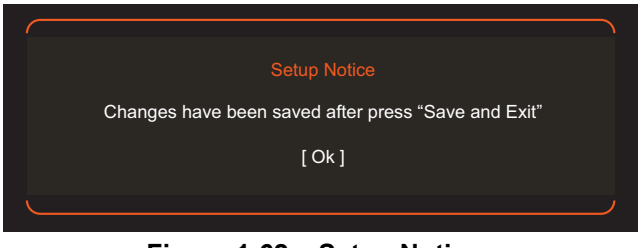


Figure 1-62. Setup Notice

5. Press ***Enter*** to complete the password setting. After the password has been set, the computer enables to change the password.
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 User Password` or `Change Supervisor Password` parameter and press ***Enter***. The dialog box appears.

Figure 1-63. Change Supervisor Password

2. Type the current password in the `Enter Old 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. Select `SAVE` and press ***Enter***. If the passwords match, the `Setup Notice` dialog box appears.

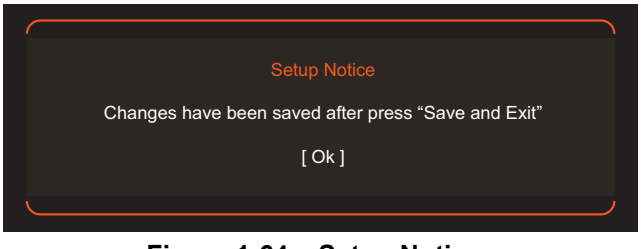


Figure 1-64. Setup Notice

6. Press ***Enter*** to complete the password setting.
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 dialog box appears.
2. Enter the old password in the `Enter Old password` field and press ***Enter***.

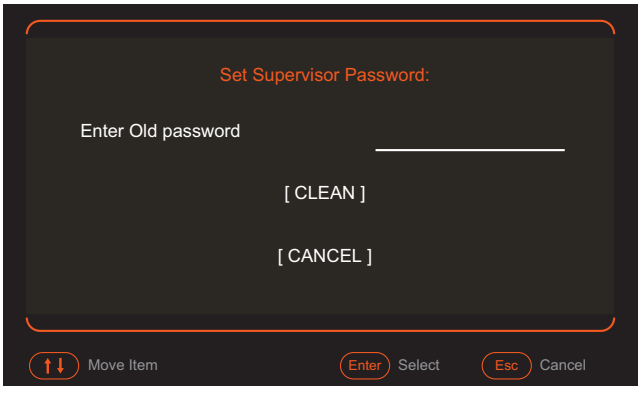


Figure 1-65. Remove Supervisor Password

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

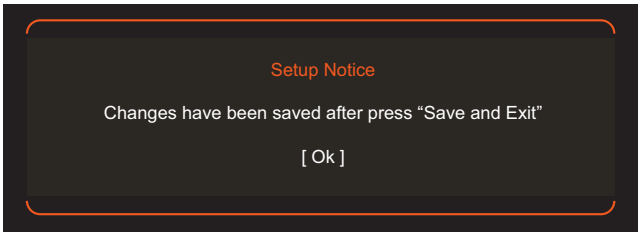


Figure 1-66. Setup Notice

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

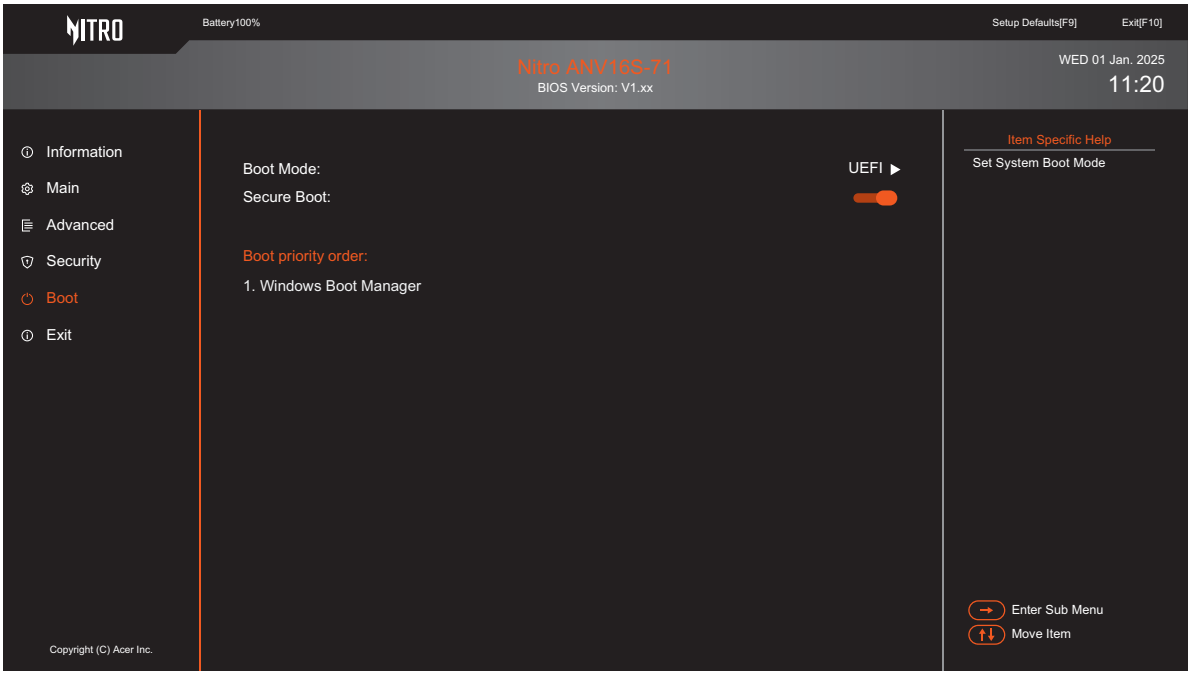


Figure 1-67. BIOS Boot

Table 1-15. BIOS Boot Tab Parameters

Item Name	Example	Remark
Boot Mode	[UEFI] / [Legacy]	• Default Boot Mode: BIOS need to check OS type for this default setting. Win7 default: [Legacy]/Other OS(including Win8) default: [UEFI]. • When [Legacy] Boot Mode has been set, Secure Boot will be disabled, Items related to Secure Boot feature in Boot Menu and Security Menu will be hidden. Firmware will be able to load CSM module during boot. • When Boot Mode changed, a confirmation message that confirm with user's decision and info user the boot device list won't be refresh to different boot mode until next BIOS Setup Utility entry and the change of Boot Mode will not take effect until next boot. • After user flash BIOS or load Setup Defaults, Boot Mode should return to factory default value. • If IHV doesn't support legacy in the platform, hide the legacy option and gray out the Boot Mode option.
Secure Boot	[Enabled] / [Disabled]	• When default Boot Mode is [UEFI], default Secure Boot status is [Enabled] and CSM module can't be loaded during boot. • If user sets Secure Boot to [Disabled], firmware will bypass secure boot verification. • The Secure Boot status is only available on [UEFI] Boot Mode but hid 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 default Boot Mode is [UEFI], Secure Boot will reset to [Enabled], on the contrary, if default Boot Mode is [Legacy], Secure Boot will be disable and hid in Boot Menu. • When user change Boot mode from [Legacy] to [UEFI], Secure Boot will be set to [Enabled] and shown on Boot Menu.

Item Name	Example	Remark
Boot Priority Order		• When Boot Mode has changed, the Boot Priority Order won't be refreshed until next BIOS Setup Utility entry. • When 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 "USB Entry for Windows To Go" presents, 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, when eMMc plus HDD exist in the same time, eMMc is the default boot device. • Only display bootable devices. • If the Network Boot device is USB External LAN, itnshould 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*.

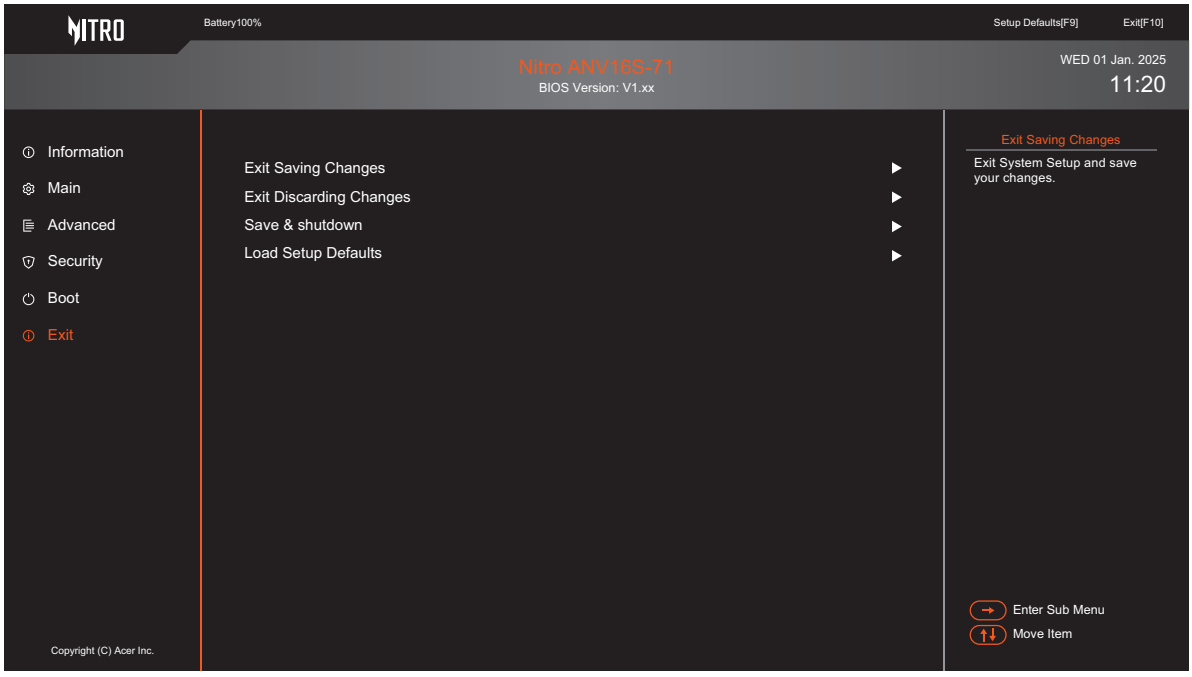


Figure 1-68. BIOS Exit

Table 1-16. BIOS Exit Tab Parameters

Item Name	Description
Exit Saving Changes	Allow users to save changes and reboot the system.
Exit Discarding Changes	Allow users to discard changes before exiting Setup Utility.
Save & shutdown	Allow users to save changes and shutdown the system.
Load Setup Defaults	Allow user to load factory default configurations in Setup Utility.

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 1-17** with the verified symptom(s) to determine the solution.

Table 1-17. Verified Symptoms

Symptoms	See
Power on Issues	**Figure 1-69. Power On Issues**
No Display Issues	**Figure 1-70. No Display Issues**
LCD Picture Failure	**Figure 1-71. LCD Picture Failure**
Internal Keyboard Failure	**Figure 1-72. Internal Keyboard Failure**
Touchpad Failure	**Figure 1-73. Touchpad Failure**
Internal Speaker Failure	**Figure 1-74. Internal Speaker Failure**
Internal Microphone Failure	**Figure 1-75. Internal Microphone Record Failure**
USB3.0 Failure	**Figure 1-76. USB3.0 Failure**
Wireless Function Failure	**Figure 1-77. Wireless Function Test Failure**
Bluetooth Function Failure	**Figure 1-78. Bluetooth Function Test Failure**
Units Thermal Failure	**Figure 1-79. Units Thermal Failure**
Cosmetic Failure	**Figure 1-80. Cosmetic Failure**
Other Functions Failure	Page **1-78**

Power On Issues

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

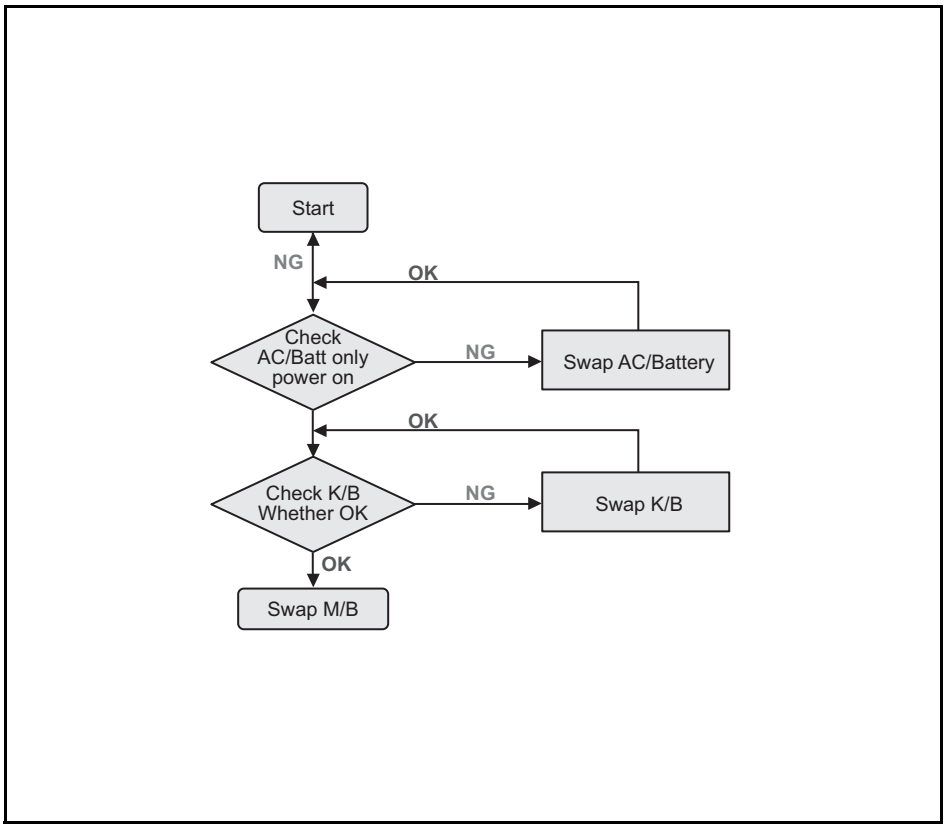


Figure 1-69. Power On Issues

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:

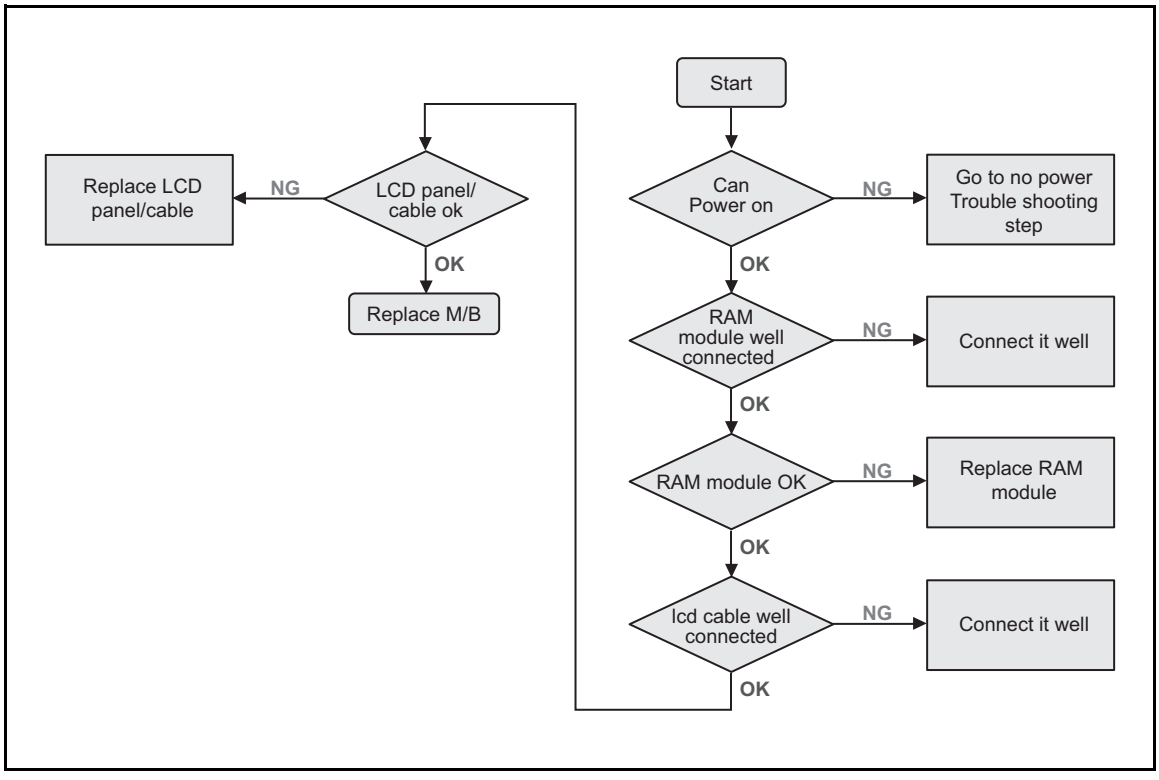


Figure 1-70. No Display Issues

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 **1-65**. 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 **1-68**. 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:

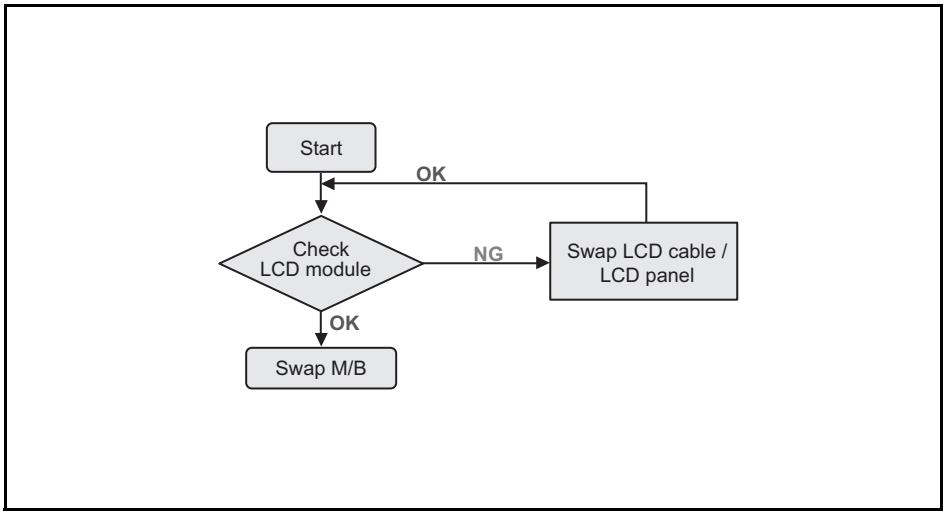


Figure 1-71. LCD Picture Failure

Internal Keyboard Failure

If the internal keyboard function fails, perform the following:

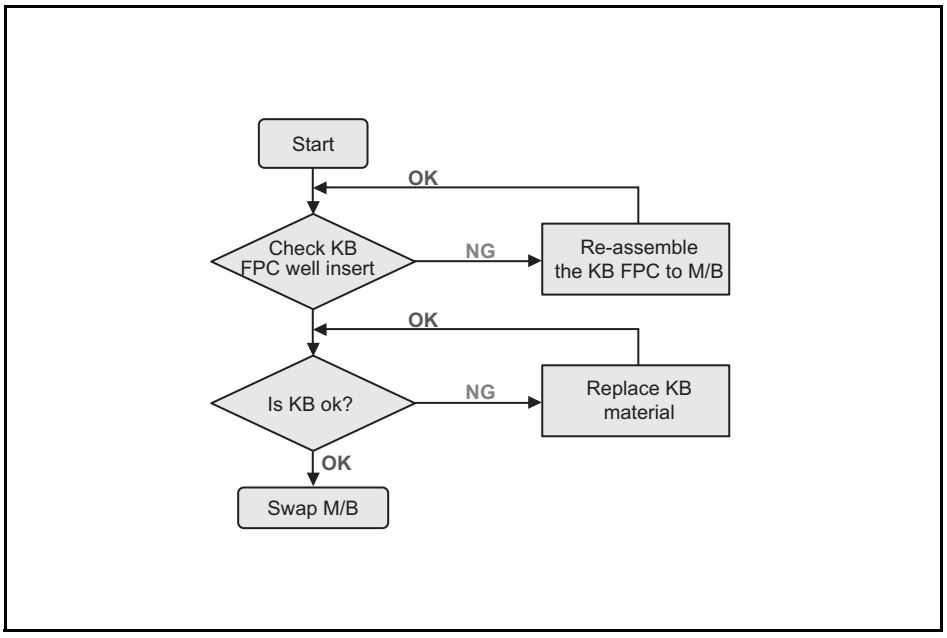


Figure 1-72. Internal Keyboard Failure

Touchpad Failure

If the touchpad fails, perform the following:

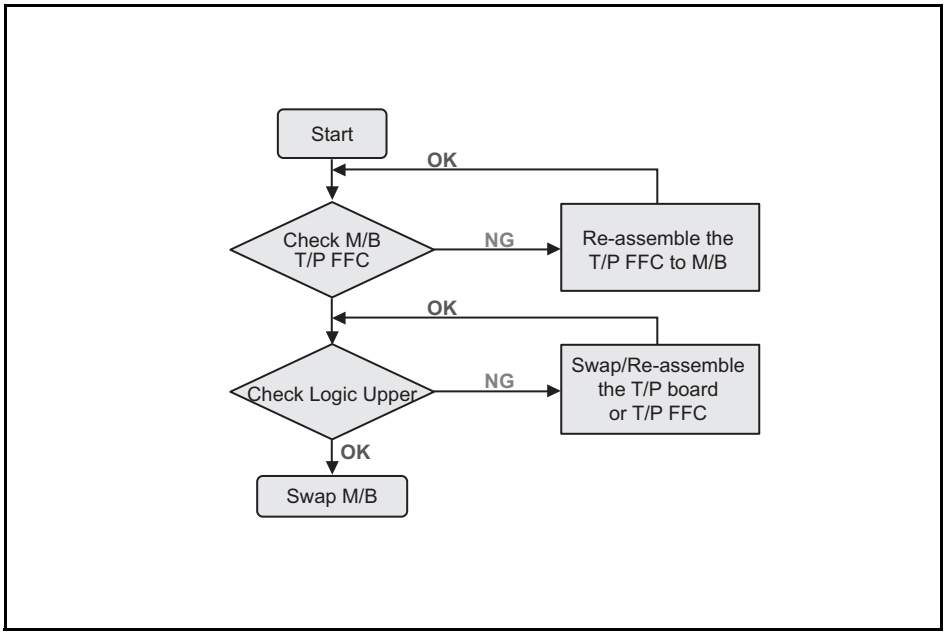


Figure 1-73. Touchpad Failure

Internal Speaker Failure

If the internal speaker fails, perform the following:

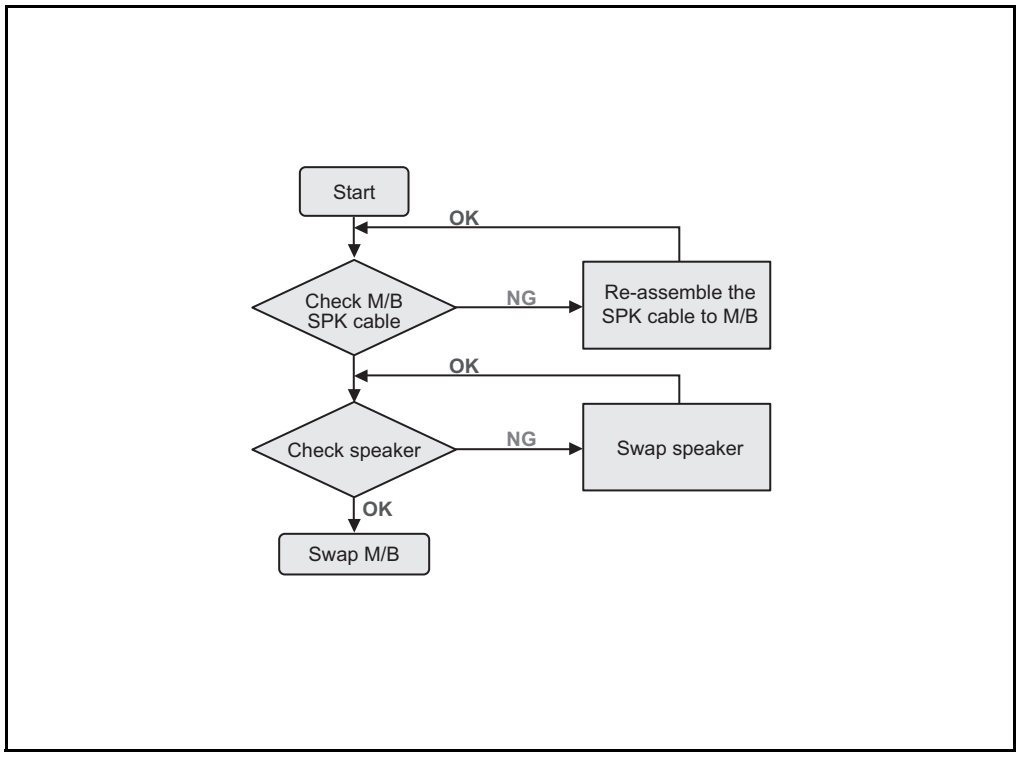


Figure 1-74. Internal Speaker Failure

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 is 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:

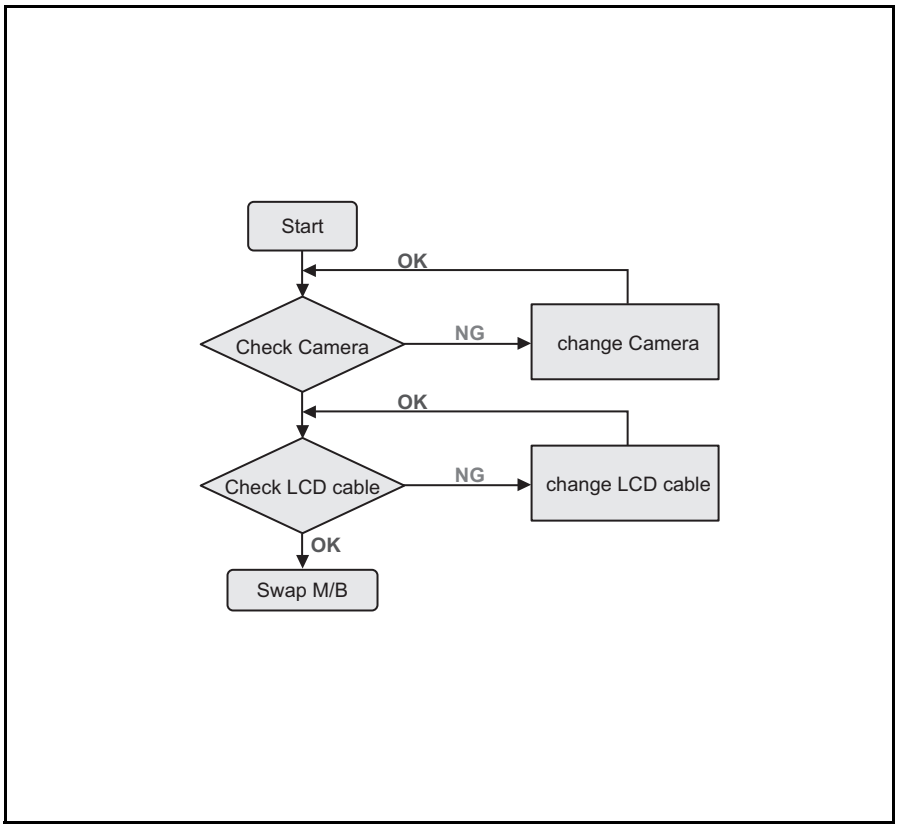


Figure 1-75. Internal Microphone Record Failure

USB3.0 Failure

If the USB function fails, perform the following:

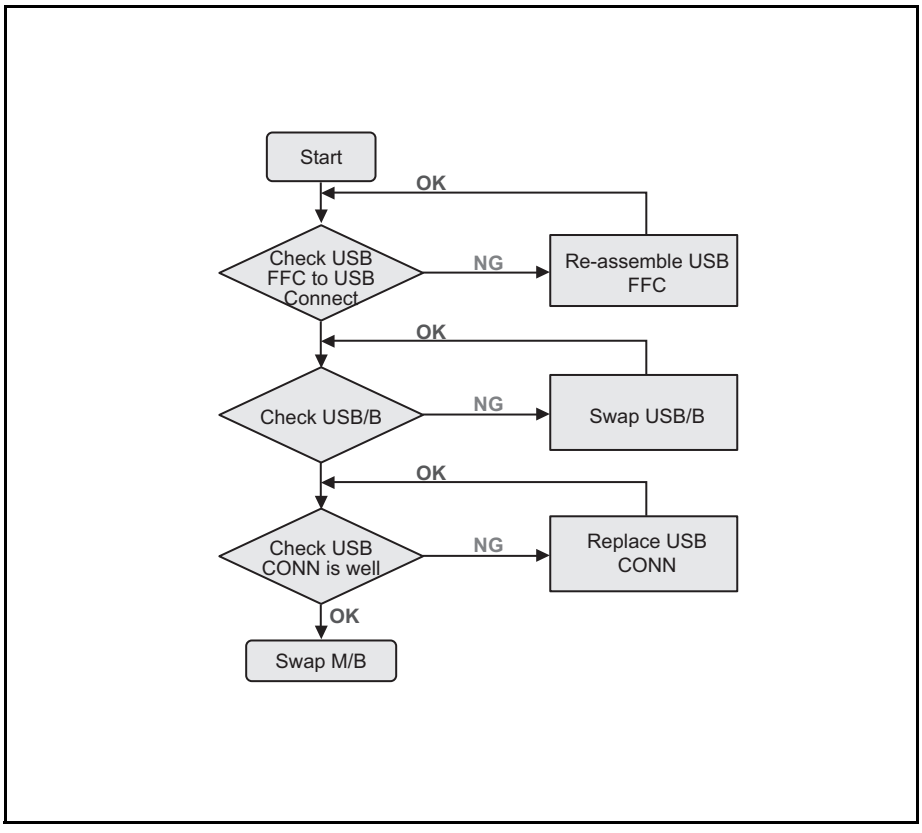


Figure 1-76. USB3.0 Failure

Wireless Function Test Failure

If the wireless function test fails, perform the following:

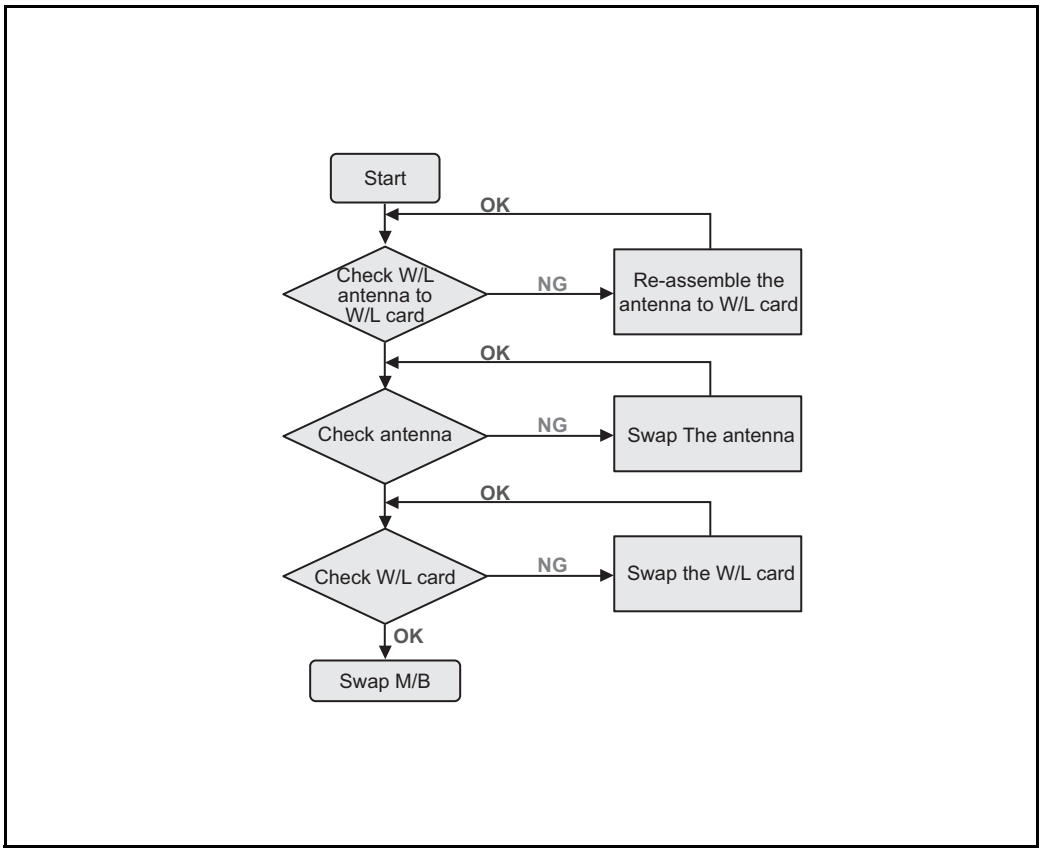


Figure 1-77. Wireless Function Test Failure

Bluetooth Function Test Failure

If the Bluetooth function test fails, perform the following:

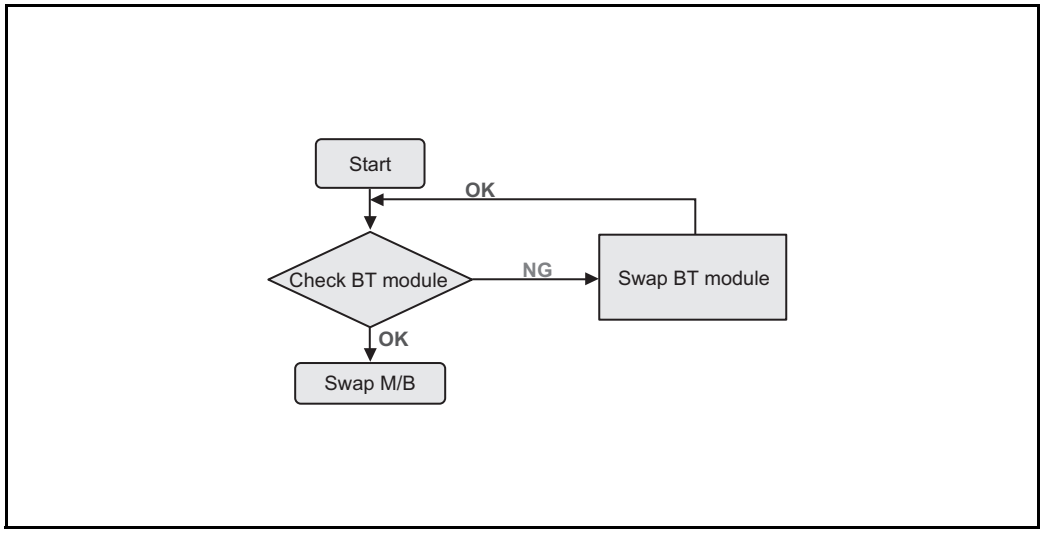


Figure 1-78. Bluetooth Function Test Failure

Units Thermal Failure

If the units thermal fails, perform the following:

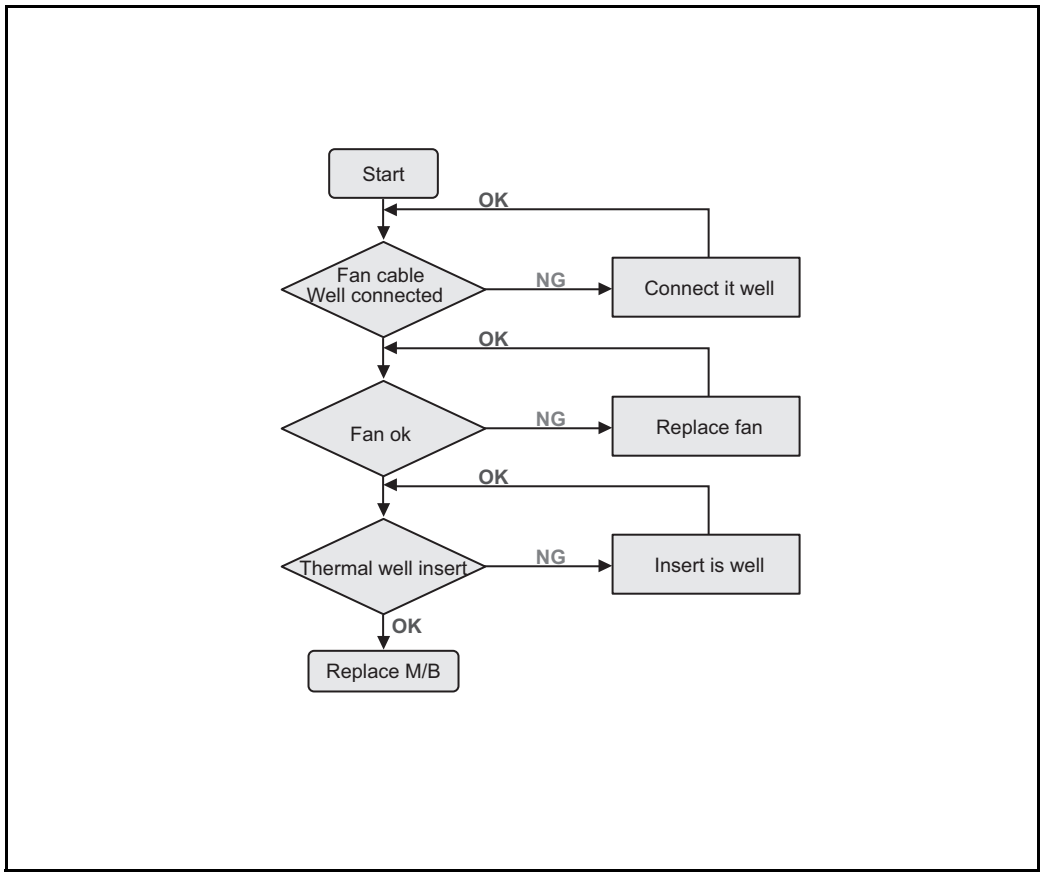


Figure 1-79. Units Thermal Failure

Cosmetic Failure

If the cosmetic fails, perform the following:

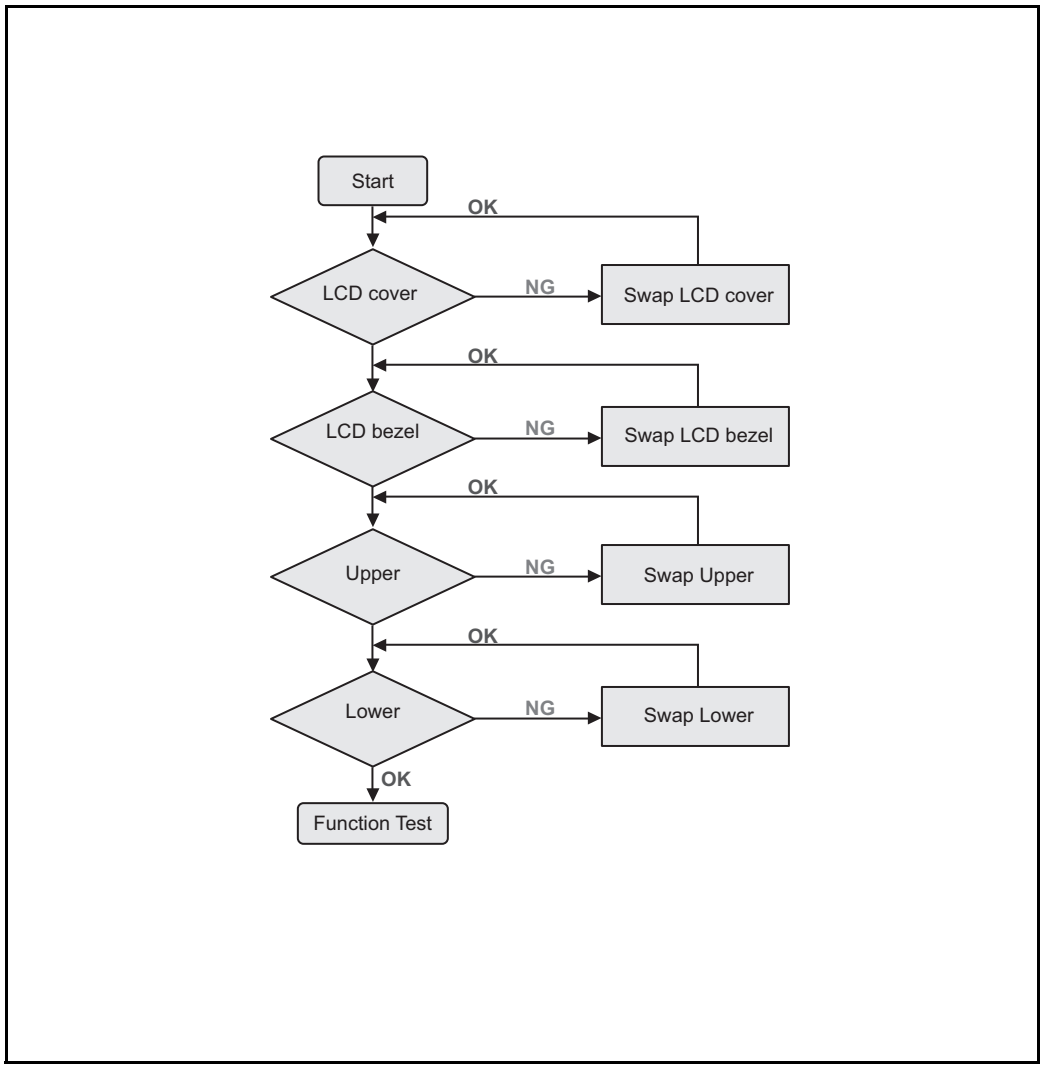


Figure 1-80. Cosmetic Failure

Other Functions Failure

If other functions such as the HDMI switch, LAN connect, 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): **JCMOS1**.

The discharge location is shown in the following illustration.

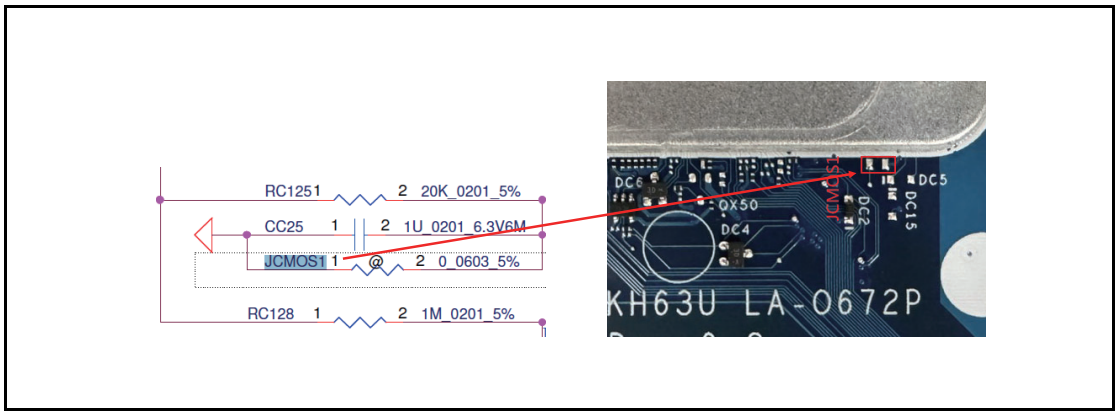


Figure 1-81. Location of JCMOS1

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 **1-65**).

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

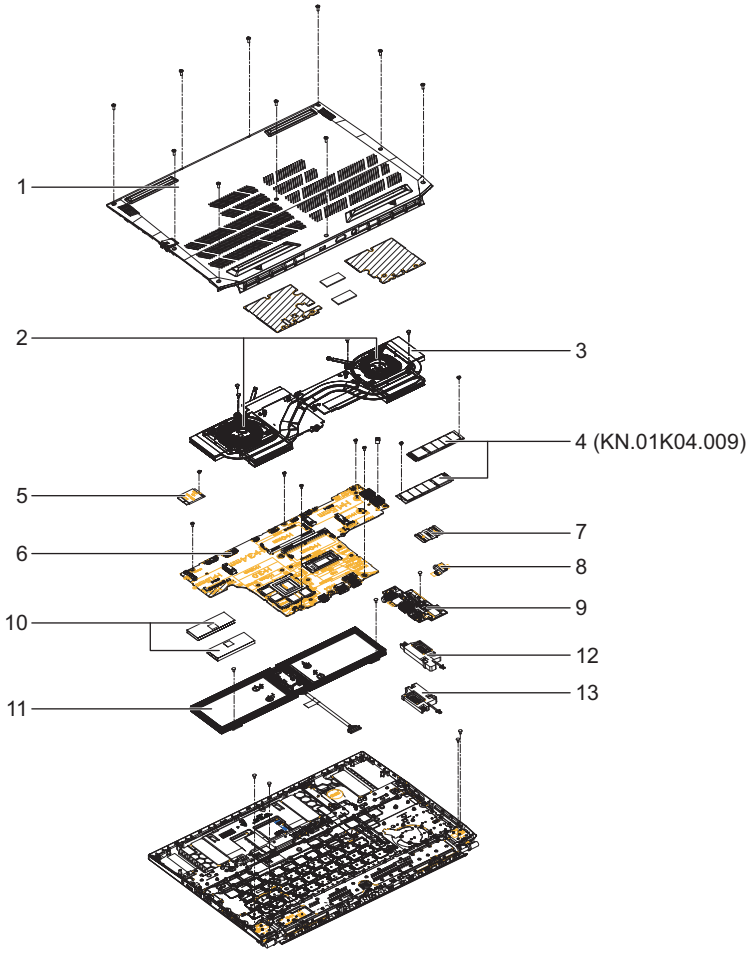


Figure 1-82. Main Assembly Exploded Diagram

Table 1-18. Main Assembly Exploded Diagram

No.	Acer Description
1	LOWER CASE BLACK

Table 1-18. Main Assembly Exploded Diagram (Continued)

No.	Acer Description
2	FAN CPU
	FAN GPU
3	HEATSINK
4	Flash Disk MICRON SSD NAND 1024GB Micron 2500 QLC 1024GB MTFDKBA1T0QGN-1BN15ABYY LF+HF
5	Wireless LAN Intel 802.11ax (Wi-Fi 6) Bluetooth Killer 1650i INTEL AX201.NGWG.NXXW Intel 2x2 M.2 2230 CNVi WiFi 6 AX 2x2 HrP2 M.2+BT5.2 2230 CNVi NewOTP SKU
6	Mainboard ANV16S-71 Intel C5210H GN22-X2 8GB_CN
7	FFC I/O BOARD
8	WIRE CABLE I/O BOARD
9	BOARD I/O
10	Memory MICRON SO-DIMM DDRV 5600 16GB MTC8C1084S1SC56BD1 LF+HF 1Rx8, Y52K D-die
11	Battery SIMPLO Typ.76Wh 4930mAh 4S1P AP24A7Q 274x68x7.80(mm) AP24A 15.48V 90W Li-Ion SMT connector . without cable
12	SPEAKER L/R KIT
13	

Upper Case Assembly

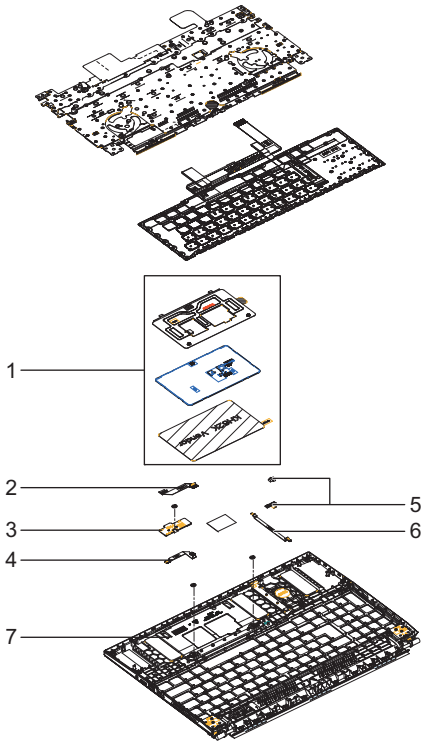


Figure 1-83. Upper Case Assembly Exploded Diagram

Table 1-19. Upper Case Assembly Exploded Diagram

No.	Acer Description
1	TOUCHPAD MODULE BLACK SUPREME NC.24611.09F
2	FFC TOUCHPAD
3	BOARD MODE KEY
4	FFC MODE KEY BOARD
5	BOARD 3RD MIC
6	FFC 3RD MIC BOARD
7	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 103KS US International NK.I151S.1PZ,NK.I1517.1P3

LCD Assembly

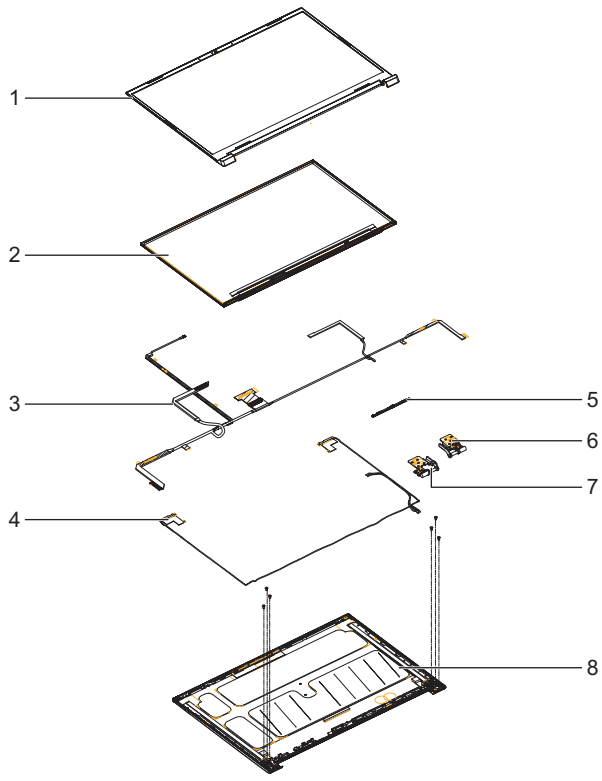


Figure 1-84. LCD Assembly Exploded Diagram

Table 1-20. LCD Assembly Exploded Diagram

No.	Acer Description
1	LCD BEZEL BLACK
2	LED LCD Panel CSOT 16" WQXGA IPS None Glare MNG007DA5-5 V01 400nit sRGB 100% 180Hz 9ms 1200:1 (Narrow border, 2.6t/4.6t, 3ms by OD, DDS)
3	CABLE LCD
4	ANTENNA MAIN
	ANTENNA AUX
5	Camera CHICONY FHD FF CKFMF12 GC2607 RTS5856W 1L4C089A3 (BG) ZTS6735 TNR (3.2mm)
6	HINGE L/R
7	

Table 1-20. LCD Assembly Exploded Diagram (Continued)

No.	Acer Description
8	LCD COVER BLACK

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 1-21. FRU List

Category	Acer Description
BOARD	
	BOARD I/O
	BOARD MODE KEY
	BOARD 3RD MIC
CABLE	
	FFC I/O BOARD
	FFC MODE KEY BOARD
	FFC TOUCHPAD
	FFC 3RD MIC BOARD
	WIRE CABLE I/O BOARD

Table 1-21. FRU List (Continued)

Category	Acer Description
	CABLE BATTERY
	ANTENNA MAIN
	ANTENNA AUX
	CABLE LCD
CAMERA	
	Camera CHICONY FHD FF CKFMF12 GC2607 RTS5856W 1L4C089A3 (BG) ZTS6735 TNR (3.2mm)
	Camera Tech-Front HD Camera YHVJ-1 OV9734 SPCA2112N DS31036E(BG) ZTS6735 TNR for Windows
FAN	
	FAN CPU
	FAN GPU
KB ASSEMBLY	
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 103KS US International NK.I151S.1PZ,NK.I1517.1P3
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 103KS Greek NK.I151S.1PT,NK.I1517.1NX
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 103KS Arabic NK.I151S.1PR,NK.I1517.1NV

Table 1-21. FRU List (Continued)

Category	Acer Description
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 103KS Traditional Chinese NK.I151S.1PS,NK.I1517.1NW
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 103KS Russian NK.I151S.1PV,NK.I1517.1NZ
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 103KS US International w/ Hebrew NK.I151S.1Q0,NK.I1517.1P4
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 103KS Thailand NK.I151S.1PY,NK.I1517.1P2
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 103KS Korean NK.I151S.1PU,NK.I1517.1NY
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 103KS Ukrainian NK.I151S.1PW,NK.I1517.1P0
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 103KS Persian NK.I151S.1PX,NK.I1517.1P1
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 103KS US International w/ Canadian French NK.I151S.1Q1,NK.I1517.1P5
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 103KS US International w/ Bulgaria NK.I151S.1Q2,NK.I1517.1P6
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 104KS UK NK.I151S.1QM,NK.I1517.1PR
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 104KS German NK.I151S.1QA,NK.I1517.1PE
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 104KS Swiss/G NK.I151S.1QK,NK.I1517.1PP
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 104KS Belgium NK.I151S.1Q4,NK.I1517.1P8
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 104KS Danish NK.I151S.1Q7,NK.I1517.1PB
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 104KS Italian NK.I151S.1QC,NK.I1517.1PG
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 104KS French NK.I151S.1Q9,NK.I1517.1PD
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 104KS Hungarian NK.I151S.1QB,NK.I1517.1PF
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 104KS Norwegian NK.I151S.1QE,NK.I1517.1PJ

Table 1-21. FRU List (Continued)

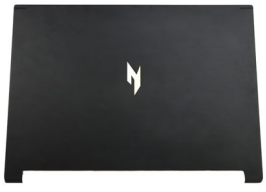
Category	Acer Description
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 104KS Portuguese NK.I151S.1QF,NK.I1517.1PK
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 104KS Spanish NK.I151S.1QH,NK.I1517.1PM
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 104KS Turkish NK.I151S.1QL,NK.I1517.1PQ
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 104KS Sweden NK.I151S.1QJ,NK.I1517.1PN
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 104KS FR/Arabic NK.I151S.1Q8,NK.I1517.1PC
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 104KS Nordic NK.I151S.1QD,NK.I1517.1PH
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 104KS SLO/CRO NK.I151S.1QG,NK.I1517.1PL
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 104KS CZ/SK NK.I151S.1Q6,NK.I1517.1PA
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 104KS Brazilian Portuguese NK.I151S.1Q5,NK.I1517.1P9
	KEYBOARD ASSY BLACK BL COPILOT W/ UPPER CASE CG05P_N40B3L 104KS ALA-Spanish NK.I151S.1Q3,NK.I1517.1P7
LCD BEZEL	
	LCD BEZEL BLACK
LCD COVER	
	LCD COVER BLACK

Table 1-21. FRU List (Continued)

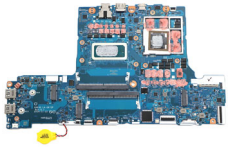
Category	Acer Description
LOWER CASE	
	LOWER CASE BLACK
MAINBOARD	
	Mainboard ANV16S-71 Intel C5210H GN22-X2 8GB_CN
	Mainboard ANV16S-71 Intel C7240H GN22-X2 8GB_CN
	Mainboard ANV16S-71 Intel C5210H GN22-X4 8GB_CN
	Mainboard ANV16S-71 Intel C7240H GN22-X4 8GB_CN
	Mainboard ANV16S-71 Intel C7240H GN22-X6 8GB_CN
	Mainboard ANV16S-71 Intel C9270H GN22-X6 8GB_CN
METAL	
	HINGE L/R
POWER CORD	
	POWER CORD 1M BLACK SOUTH AFRICA -NEW
	POWER CORD 1M BLACK BLACK AUSTRALIA
	POWER CORD 1M BLACK EUROPE
	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

Table 1-21. FRU List (Continued)

Category	Acer Description
	POWER CORD 1M BLACK US
	POWER CORD 1M BLACK BRAZIL
SPEAKER/MICROPHONE	
	SPEAKER L/R KIT
THERMAL	
	HEATSINK
TOUCHPAD	
	TOUCHPAD MODULE BLACK SUPREME NC.24611.09F
	TOUCHPAD MODULE BLACK SYNAPTICS NC.24611.0BK
MISCELLANEOUS	
	GRAPHITE MEM
	LCD ADHESIVE A COVER
	ALIGNMENT MYLAR FOR EDP CABLE
	LCD ALIGNMENT - MYLAR 10x5x0.4mm
SCREW	
	SCREW M M 2.0D 4.0L K 4.6D BNI NL
	SCREW 2.0D 2.5L K 5D 0.5T NI NL
	SCREW 2.5D 4.0L K 4.6D ZK NL CR3
	SCREW 2.5D 4.5L K 5.5D NI NL

Table 1-21. FRU List (Continued)

Category	Acer Description
	SCREW M M 2 2.0D 2L K 7D ZK NL CR3
	SCREW 2.5D 6L K 4.6D ZK NL

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**.