Aspire Go 15
AG15-72P

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 Module
- SSD Module
- USB Board
- Touchpad
- Mainboard
- RTC Battery
- 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.

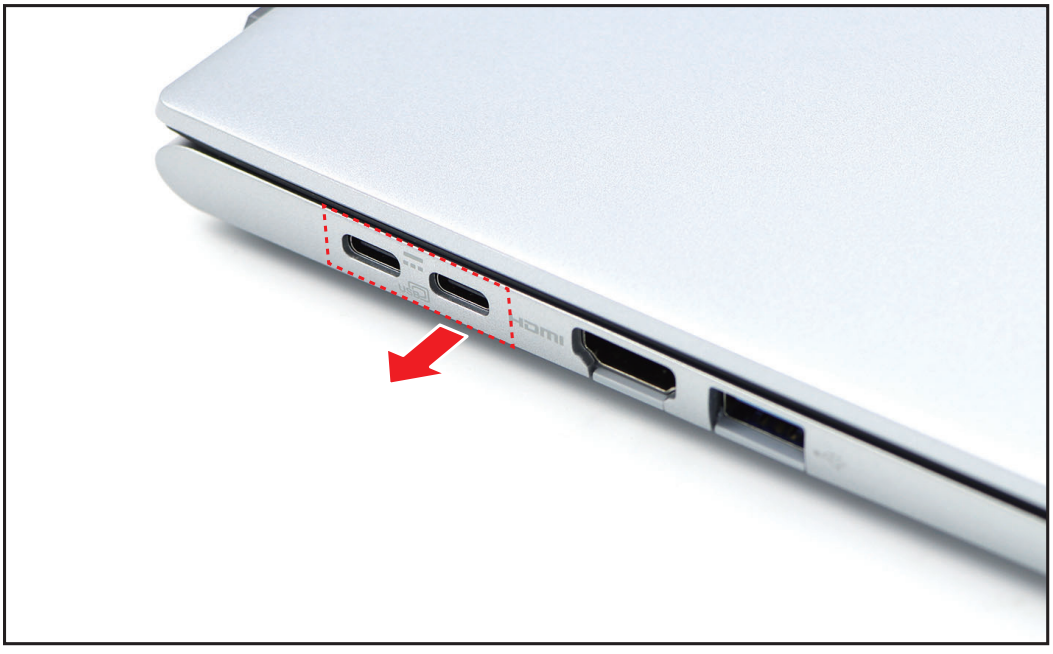


Figure 1-1. Disconnecting the Power Adapter

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 seven (7) screws securing the lower case to the upper case.



Figure 1-4. Removing the Screws

2. Pry the lower case from the bottom side to release the latches.

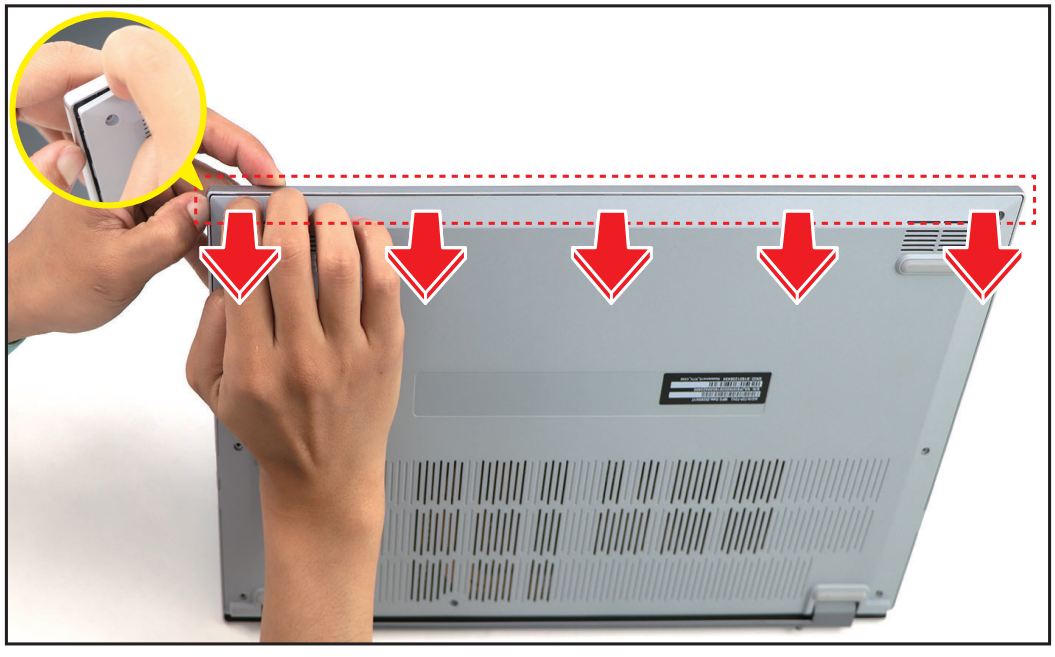


Figure 1-5. Releasing the Lower Case

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

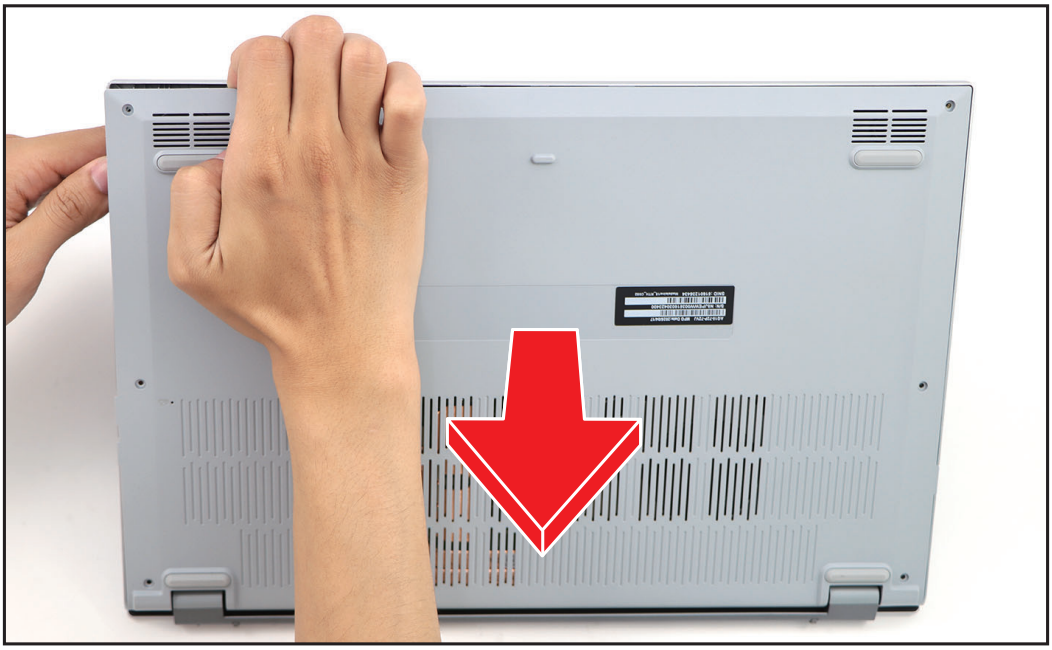


Figure 1-6. Removing the Lower Case

4. Detach the tape securing the battery cable connection.

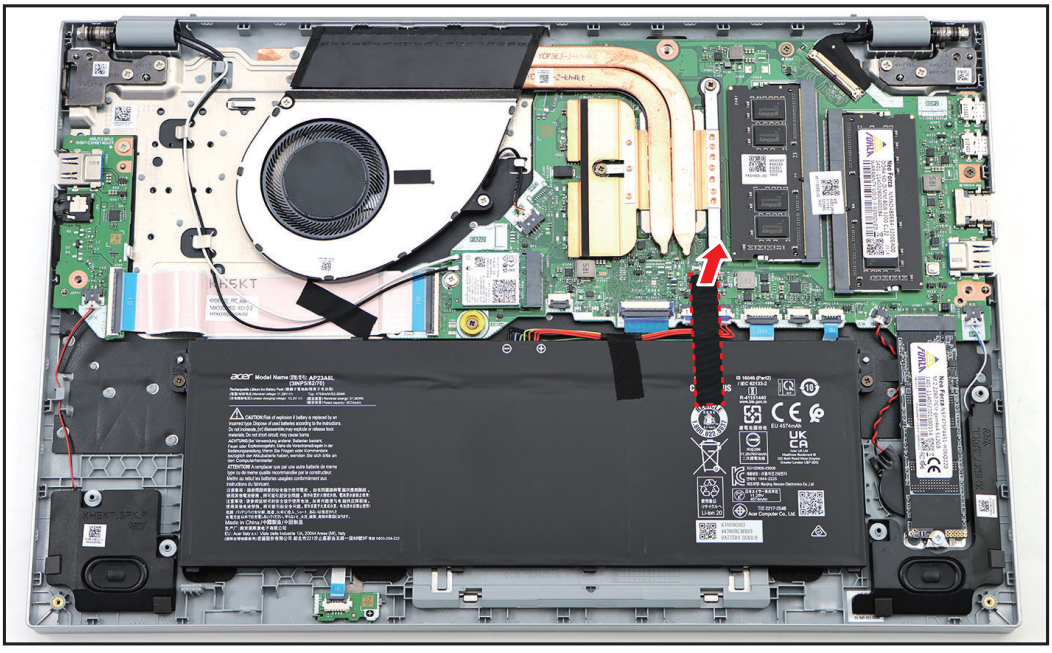


Figure 1-7. Detaching the Tape

5. Disconnect the battery cable from the mainboard connector.

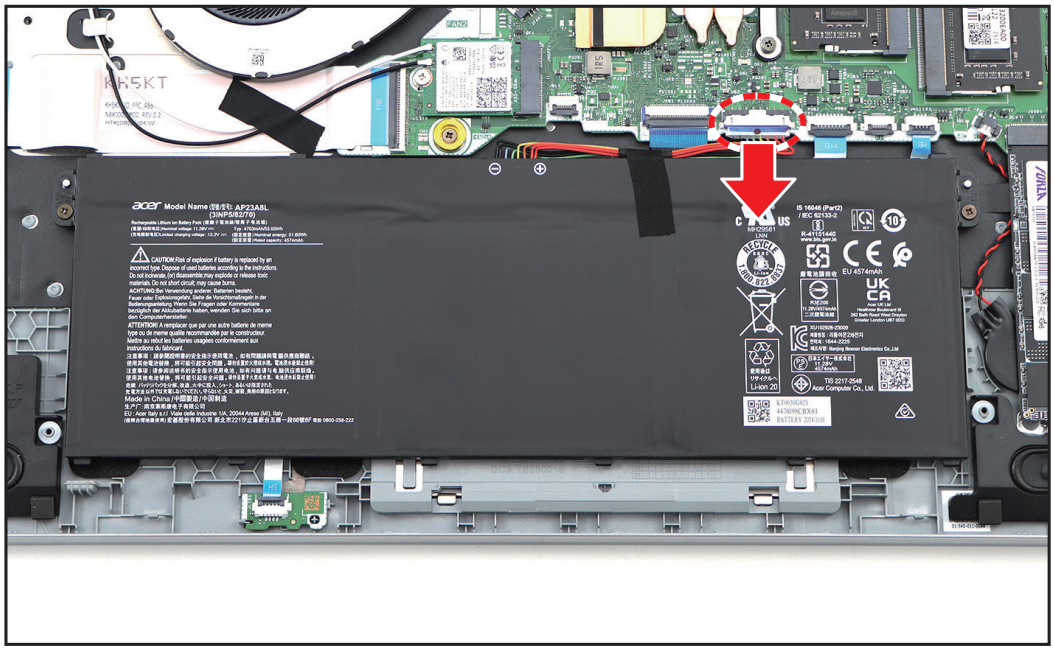


Figure 1-8. Disconnecting the Battery Cable

Table 1-1. Lower Case Screws

Screw Name	Screw Type	Torque	Quantity
M 1.6 x 4.0		1.3~1.9kgf.cm	2
M 2.0 x 7.0		2.0~2.2kgf.cm	5

Battery Removal

Prerequisite:

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

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

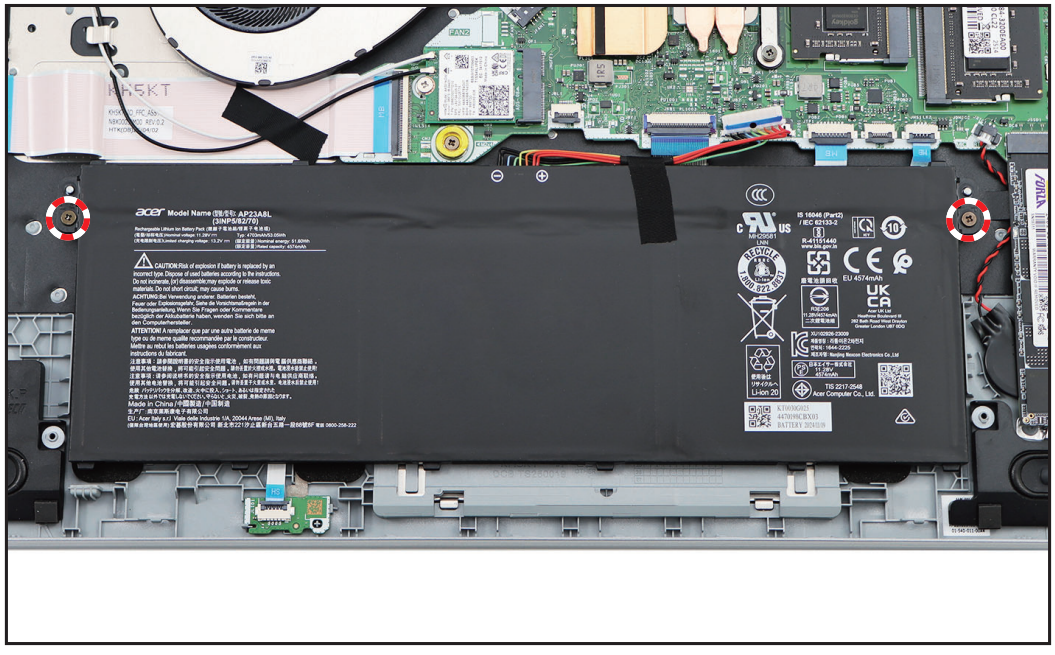


Figure 1-9. Removing the Screws

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

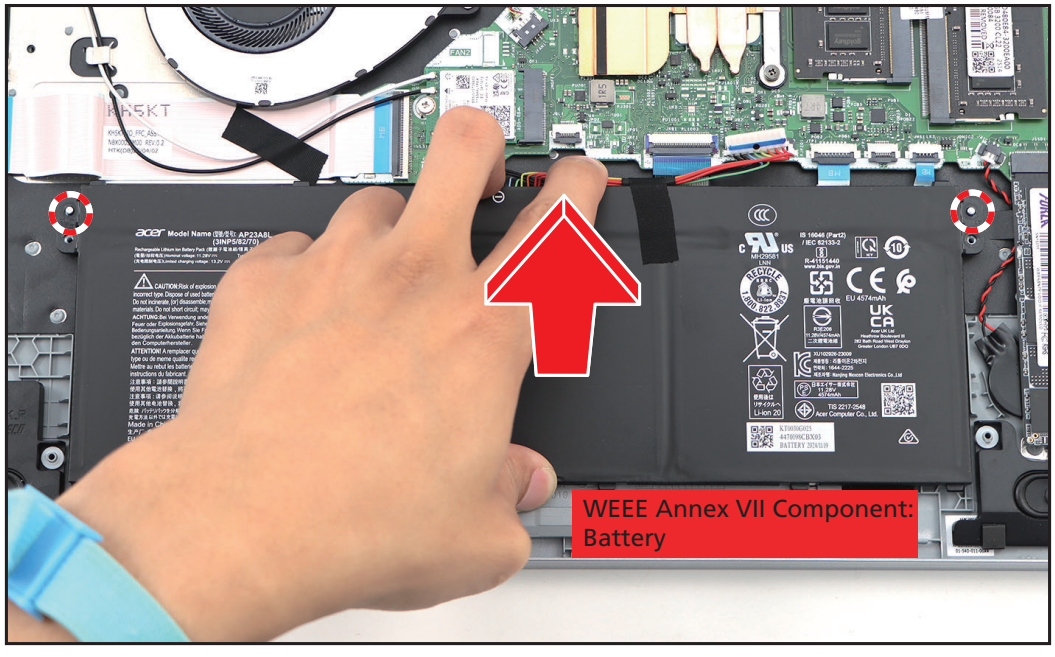


Figure 1-10. Removing the Battery

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. Detach the tape from the WLAN antenna cables. Then, disconnect the WLAN antenna cables from the WLAN module connectors.

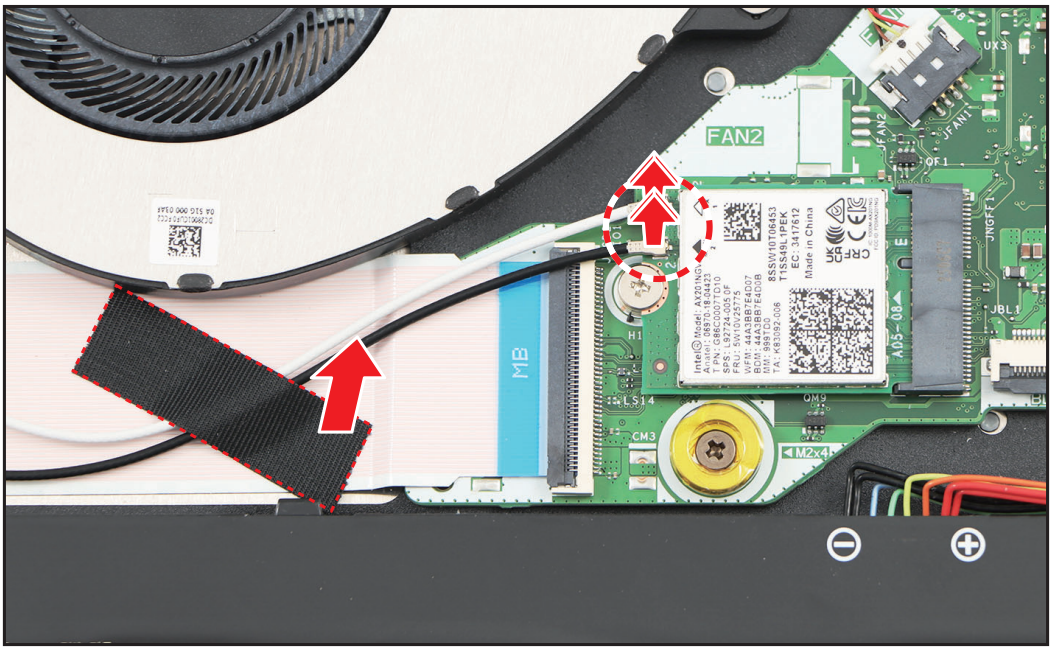


Figure 1-11. Disconnecting the WLAN Antenna Cables

2. Remove the screw securing the WLAN module to the mainboard.

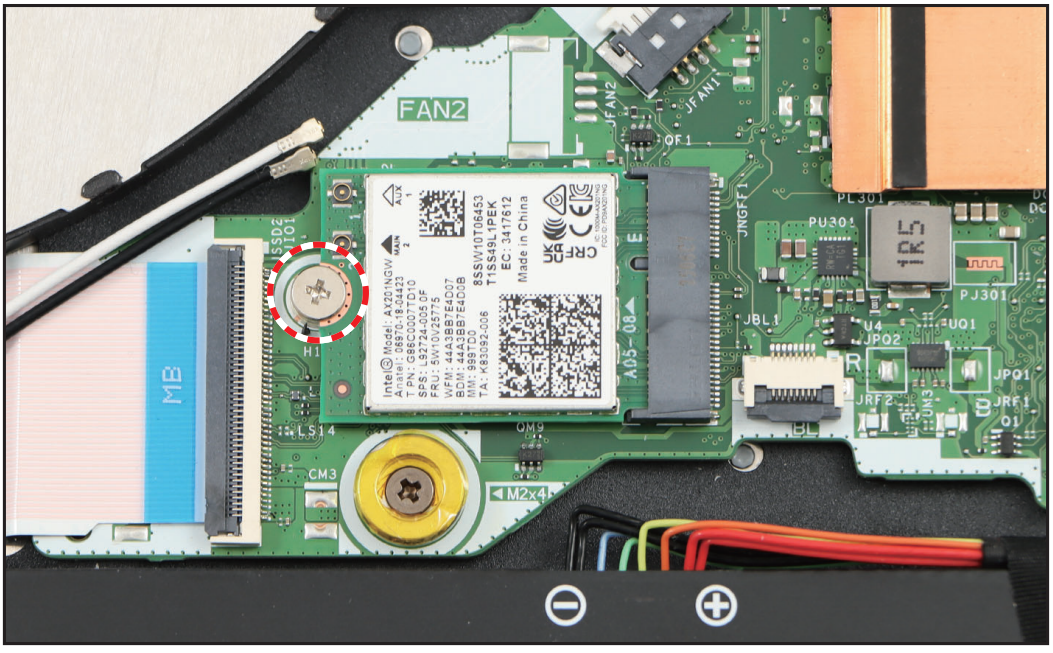


Figure 1-12. Removing the Screw

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

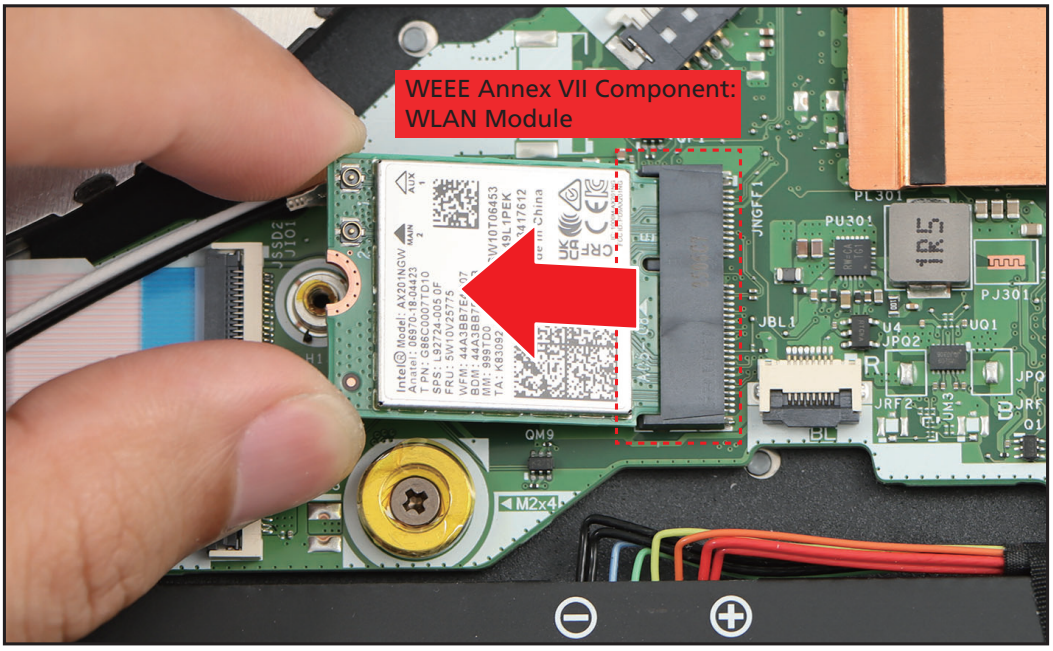


Figure 1-13. Removing the WLAN Module

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 Module Removal

Prerequisite:

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

1. Push the module clips outwards.

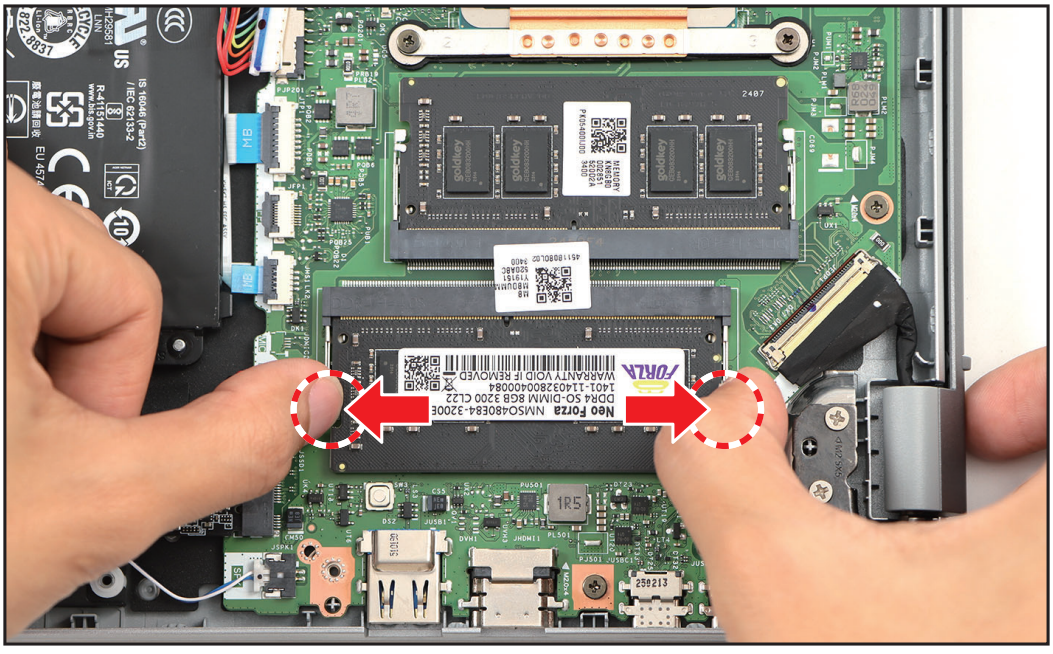


Figure 1-14. Unclipping the Module Clips

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

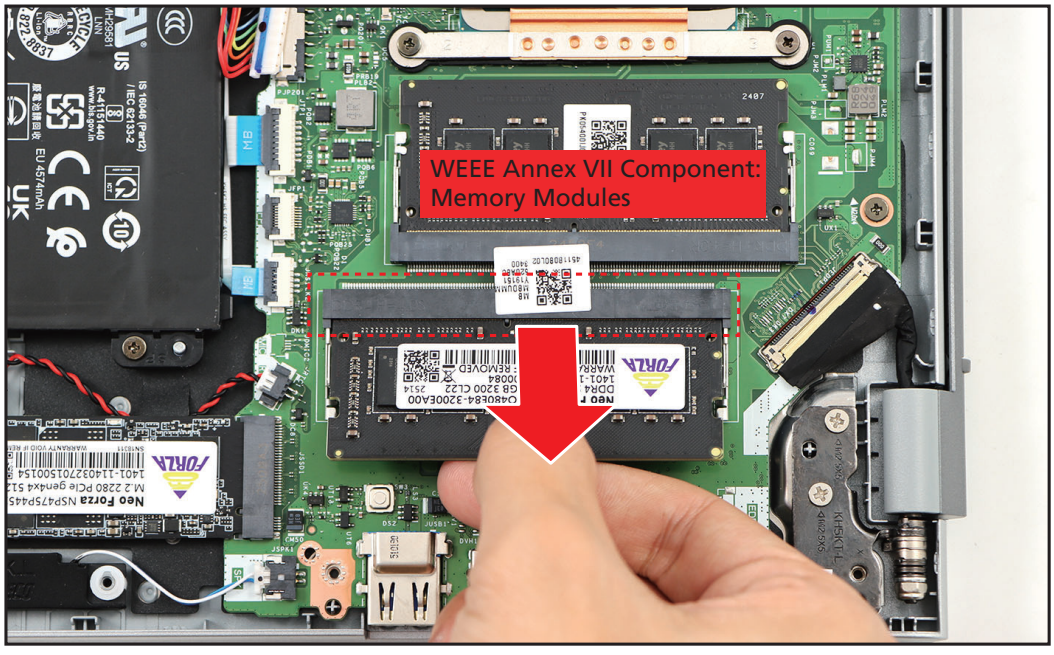


Figure 1-15. Removing the DIMM Module

SSD Module Removal

Prerequisite:

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

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

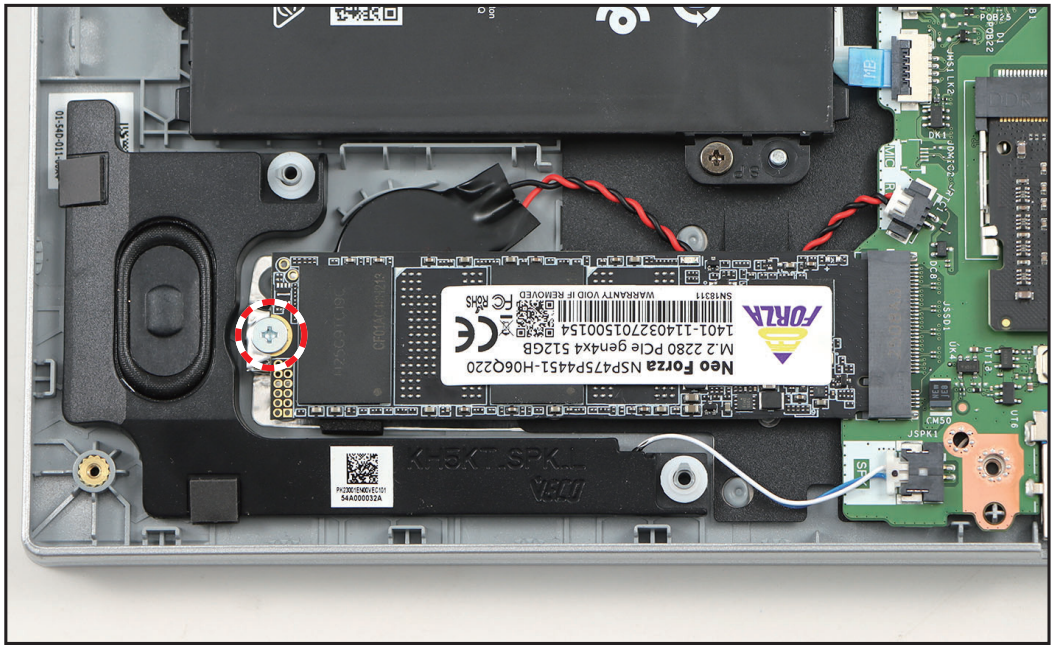


Figure 1-16. Removing the Screw

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

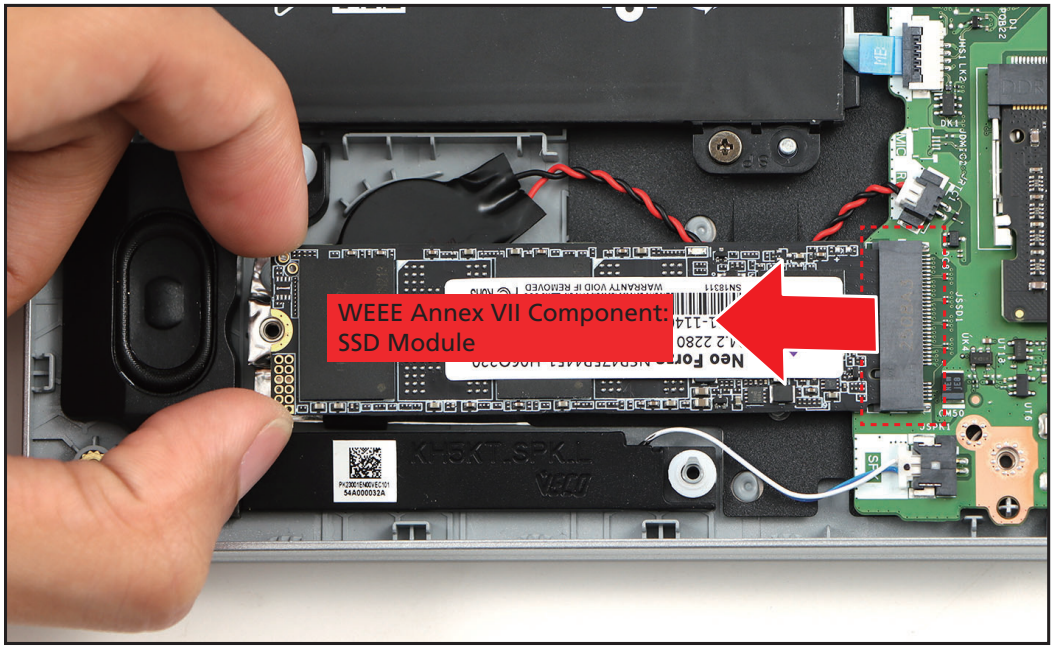


Figure 1-17. Removing the SSD Module

Table 1-4. SSD Module Screw

Screw Name	Screw Type	Torque	Quantity
M 2.0 x 3.0 (1.15)		1.8~2.2kgf.cm	1

USB Board Removal

Prerequisite:

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

1. Release the latch and disconnect the USB board FFC from the USB board connector (A).
2. Disconnect the right speaker cable from the USB board connector (B).
3. Release the latch and disconnect the hall sensor board FFC from the USB board connector (C).

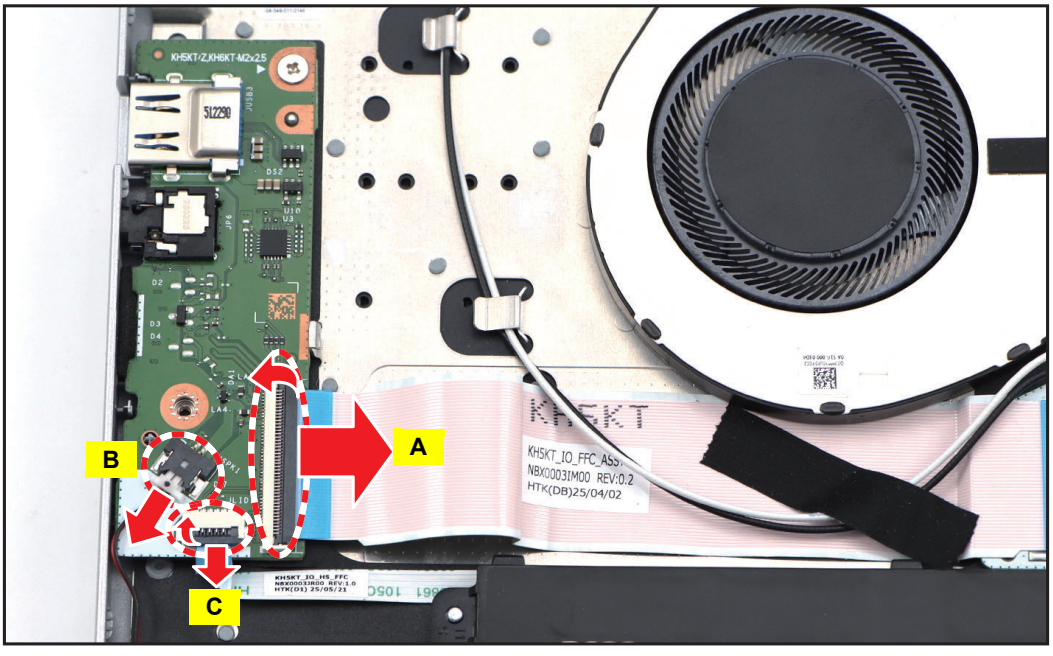


Figure 1-18. Disconnecting the Cables

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

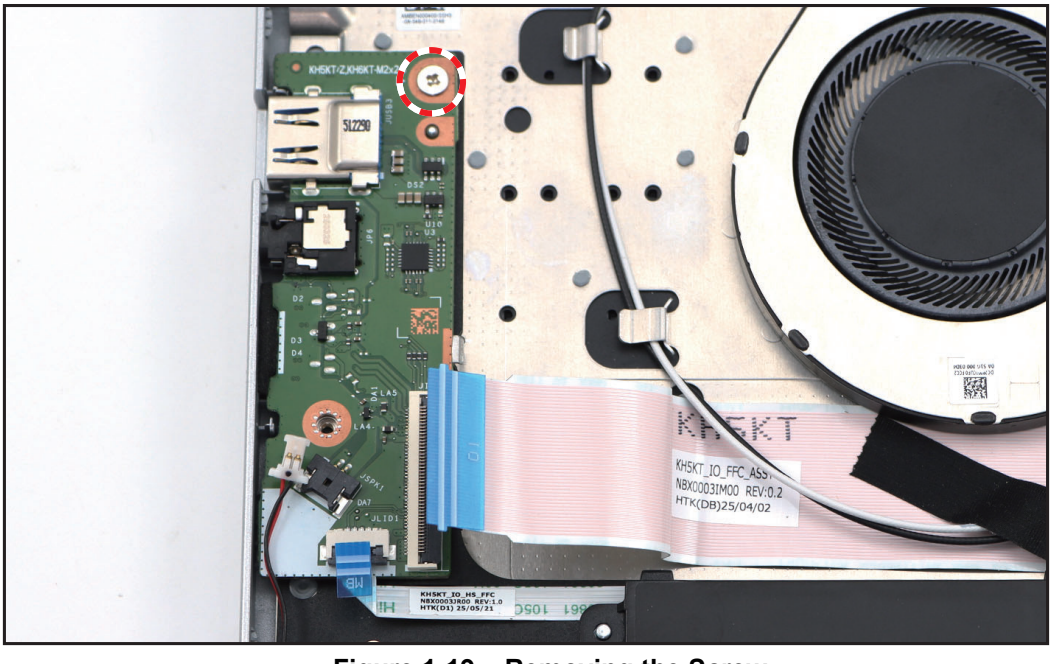


Figure 1-19. Removing the Screw

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

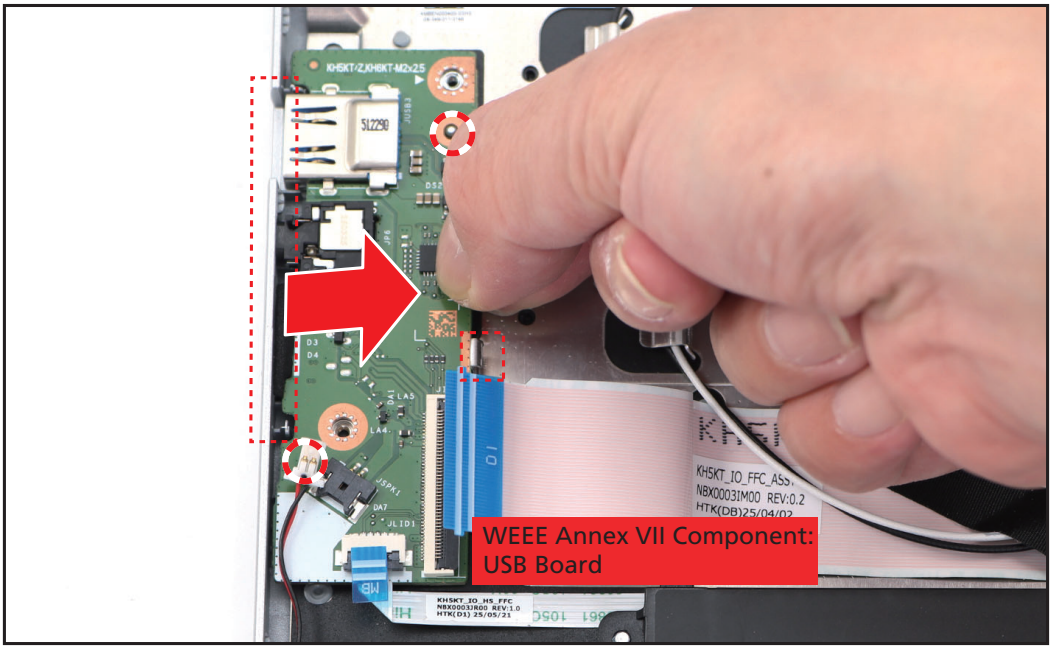


Figure 1-20. Removing the USB Board

Table 1-5. USB Board Screw

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

LCD Module Removal

Prerequisite:

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

1. Detach the tape securing the WLAN antenna cables in place.

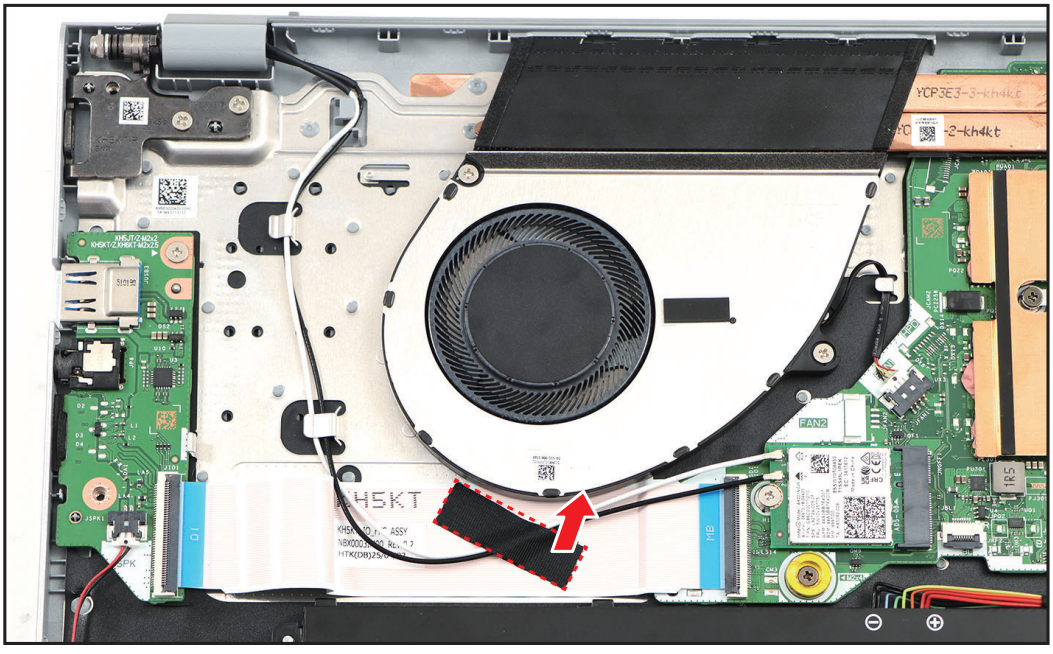


Figure 1-21. Detaching the Tape

2. Disconnect the WLAN antenna cables from the WLAN module connectors.

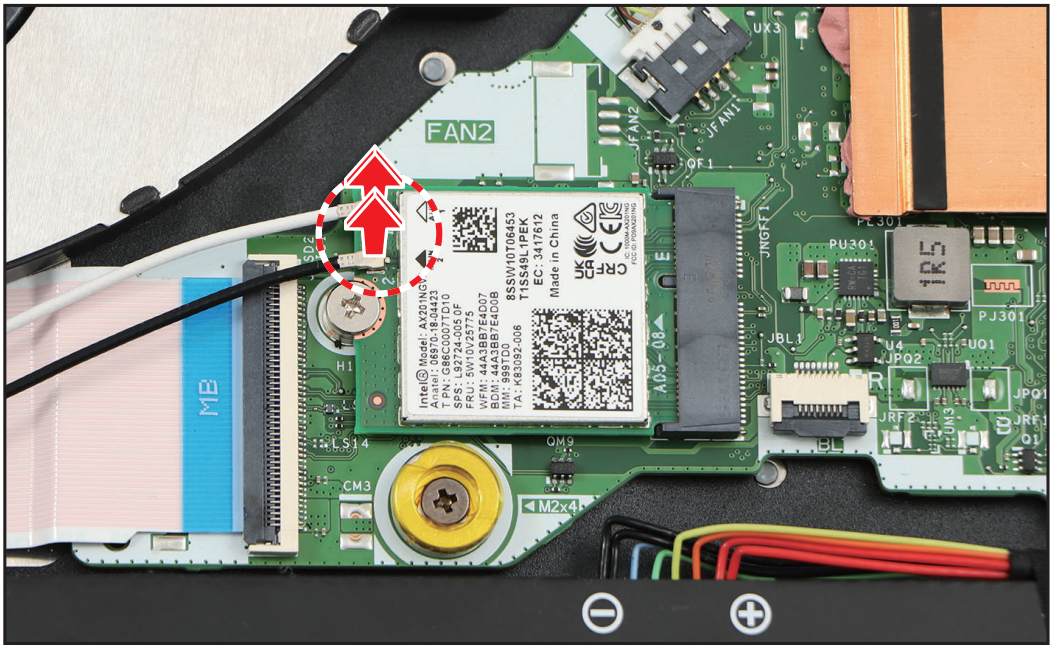


Figure 1-22. Disconnecting the WLAN Antenna Cables

3. Unroute the WLAN antenna cables from the cable guides on the upper case. While unrouting, release the cables from the cable clips.

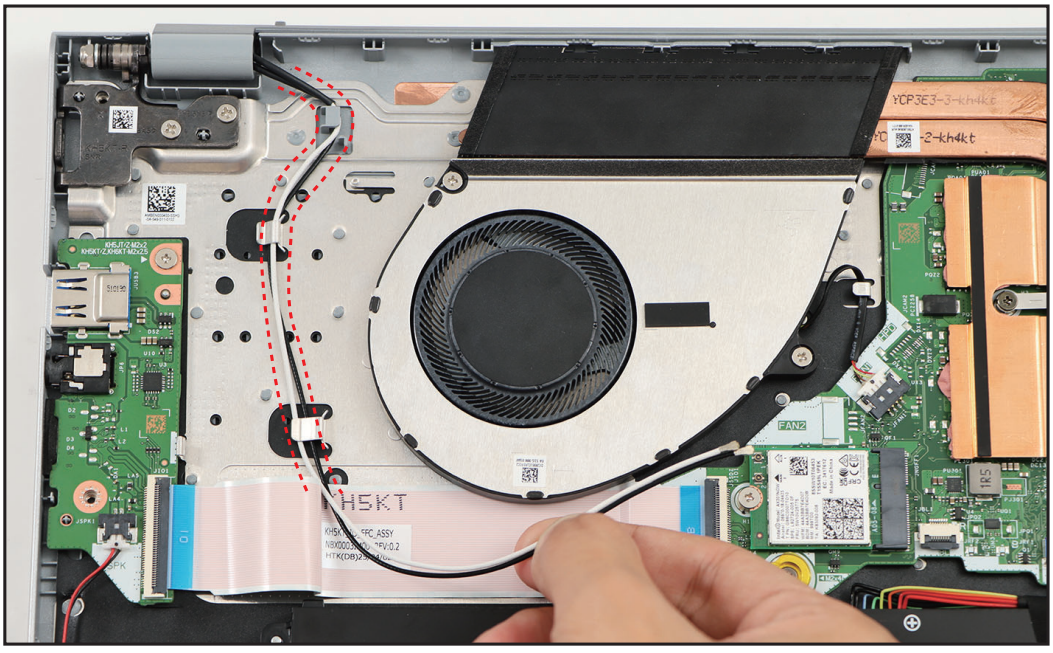


Figure 1-23. Unrouting the WLAN Antenna Cables

4. Release the latch and disconnect the eDP cable from the mainboard connector.

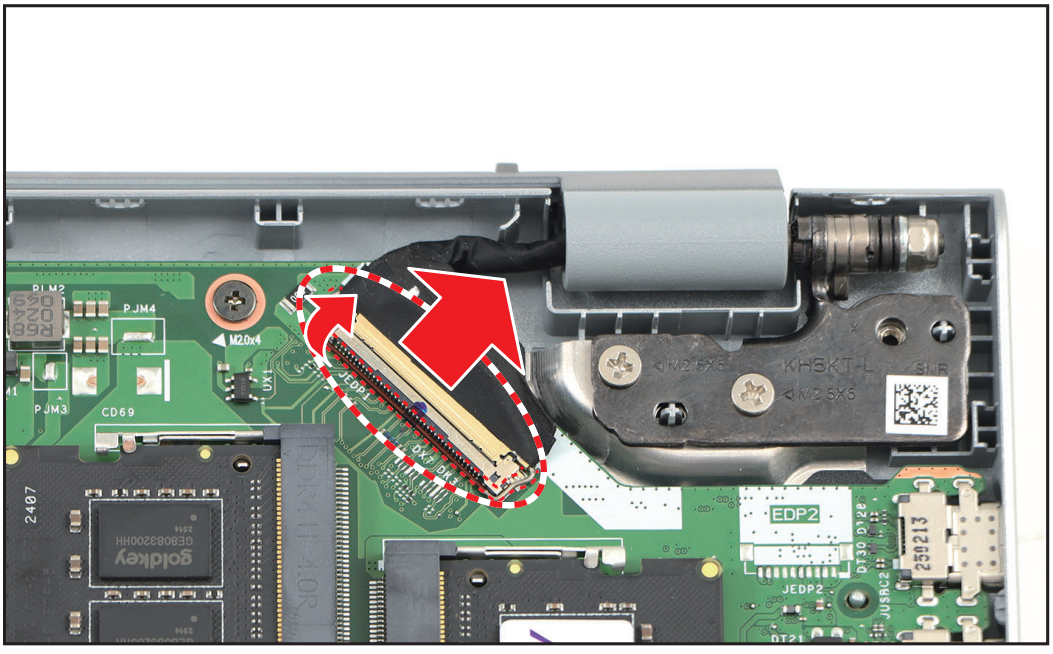


Figure 1-24. Disconnecting the eDP Cable

5. Open the LCD module more than 90°. Then remove the four (4) screws securing the LCD hinges and LCD module to the upper case.

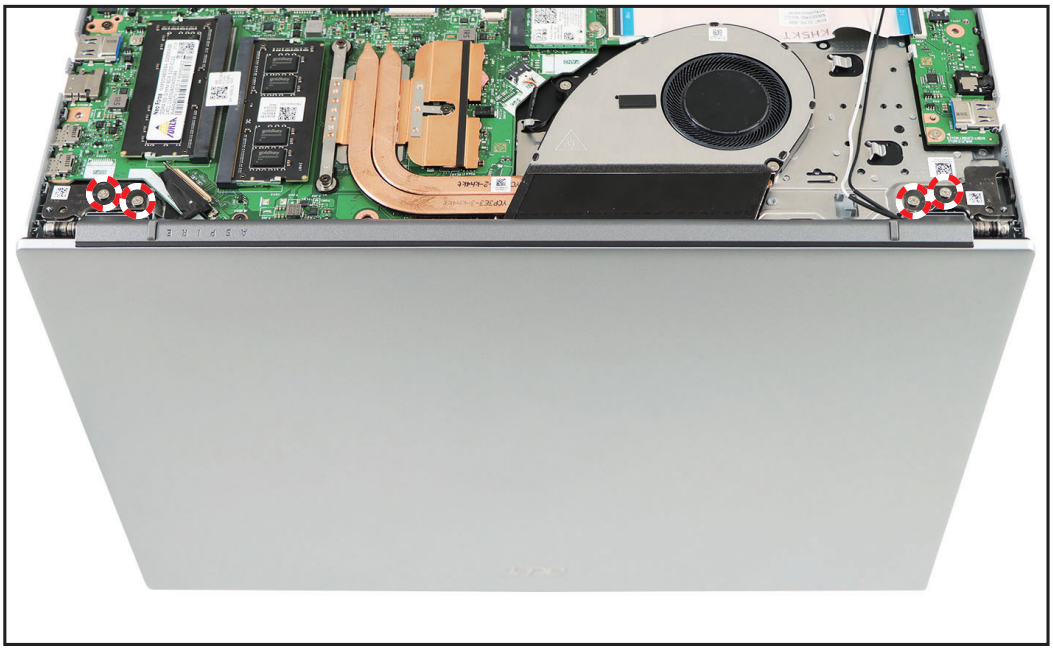


Figure 1-25. Removing the Screws

6. Release the LCD module from the guide pins and remove it away from the upper case.

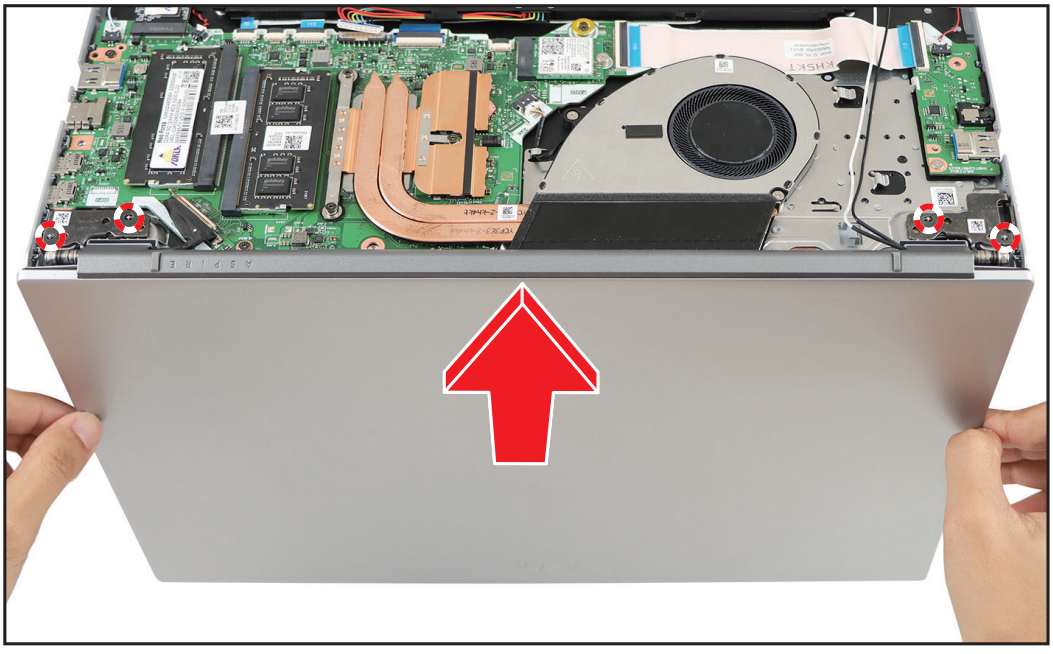


Figure 1-26. Removing the LCD Module

Table 1-6. Hinges Screws

Screw Name	Screw Type	Torque	Quantity
M 2.5 x 5.0		2.65~3.45kgf.cm	4

Touchpad Removal

Prerequisite:

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

1. Release the latch and disconnect the keyboard FPC from the mainboard connector.

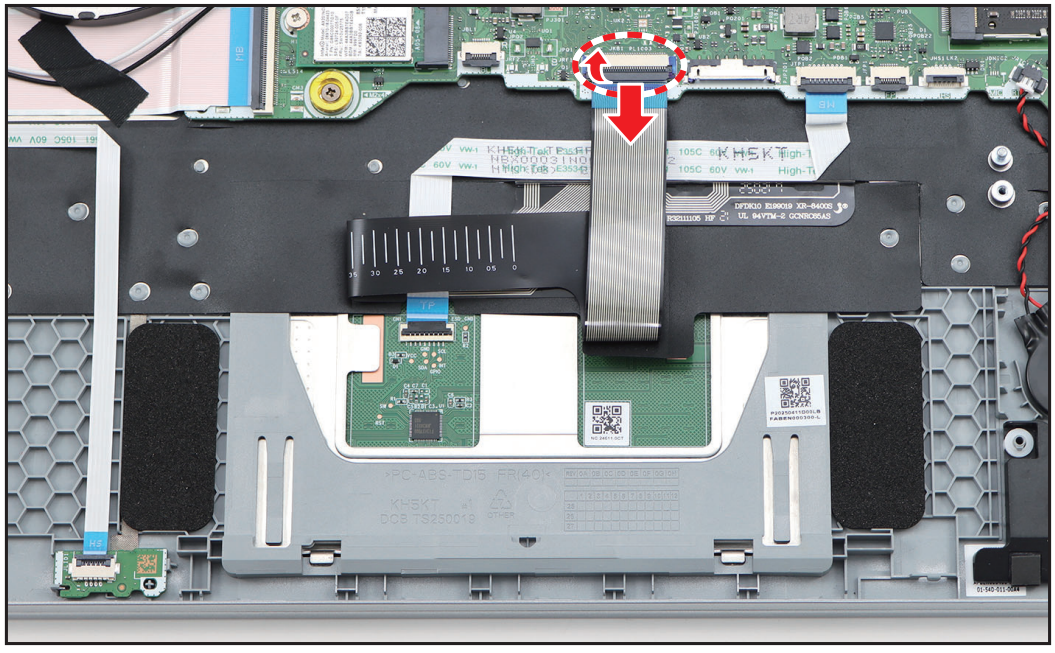


Figure 1-27. Disconnecting the Keyboard FPC

2. Lift the portion of the keyboard FPC (marked with red dashed frame as shown in the below illustration) to detach it from the adhesive tape underneath.

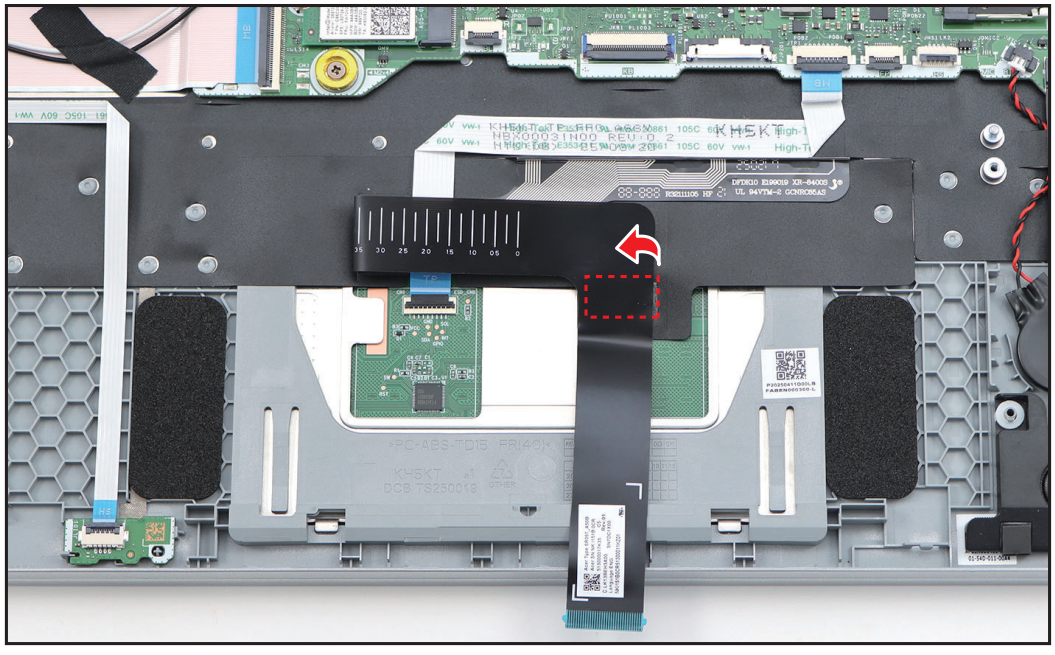


Figure 1-28. Unfolding the Keyboard Membrane

3. Release the latch and disconnect the touchpad FFC from the mainboard connector. Then 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.

4. Release the latch and disconnect the touchpad FFC from the touchpad connector. Then, remove the touchpad FFC.

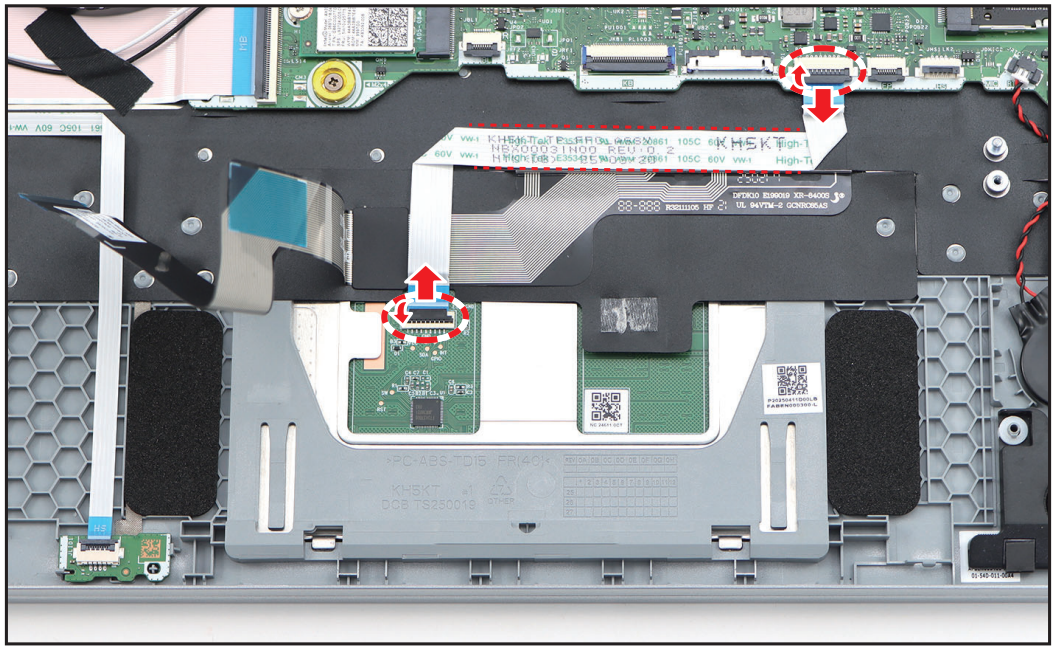


Figure 1-29. Removing the Touchpad FFC

5. Partially detach the conductive tape from the touchpad and upper case as marked with red dashed line as shown in the below illustration.

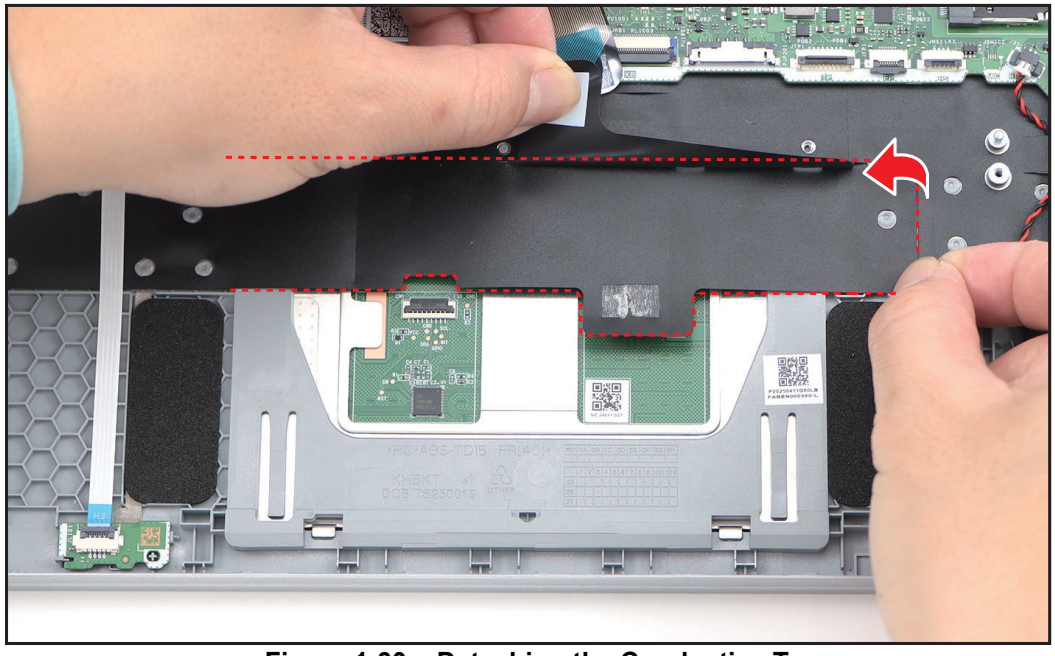


Figure 1-30. Detaching the Conductive Tape

6. Remove the two (2) screws securing the touchpad to the upper case.

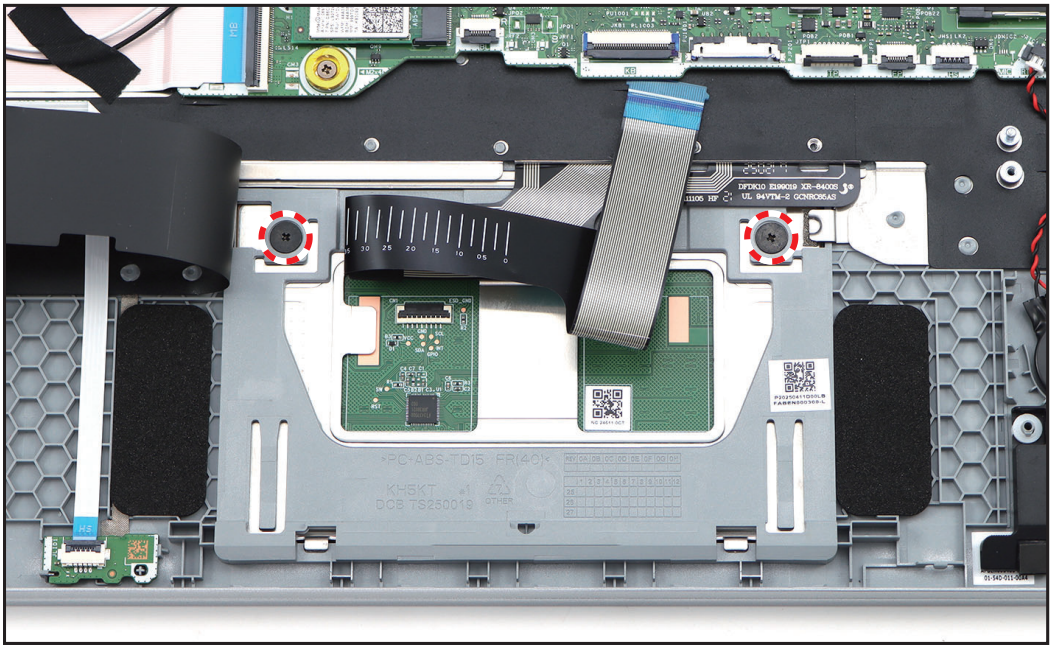


Figure 1-31. Removing the Screws

7. Lift 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.

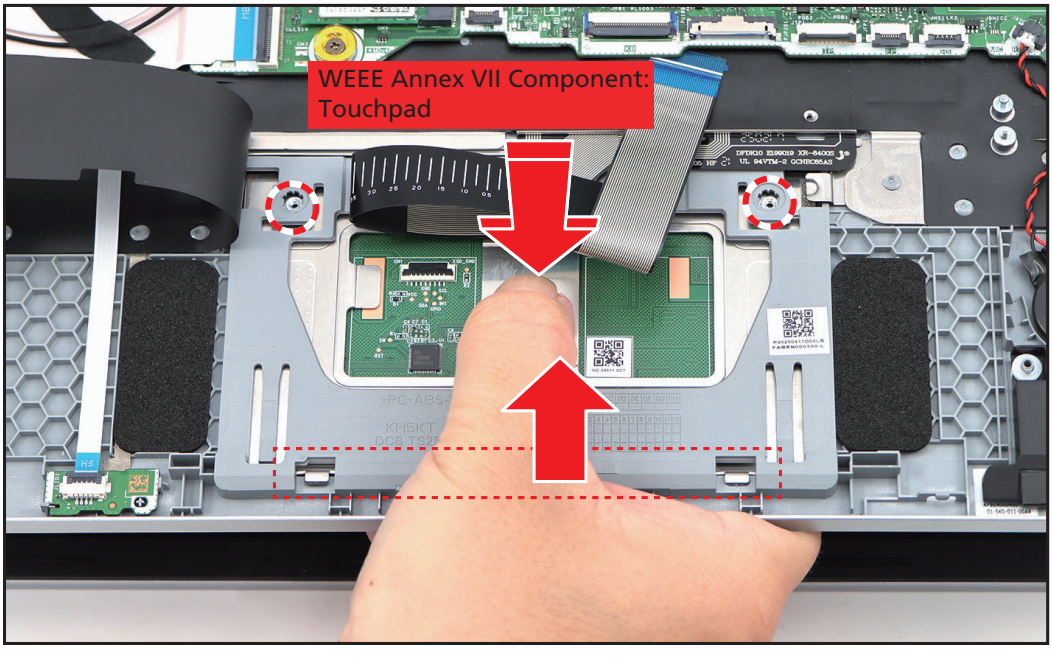


Figure 1-32. Removing the Touchpad

Table 1-7. Touchpad Screws

Screw Name	Screw Type	Torque	Quantity
M 2.0 x 1.7		1.8~2.2kgf.cm	2

Mainboard Removal

Prerequisite:

- **Battery Removal** on page **1-9**
- Fan Module Removal
- Thermal Module Removal
- **WLAN Module Removal** on page **1-11**
- **DIMM Module Removal** on page **1-13**
- **SSD Module Removal** on page **1-14**

1. Release the latches and disconnect the USB board FFC (A) from the USB board and mainboard connectors. 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 and then remove the FFC.

2. Release the latch (if necessary) and disconnect the following cables from the mainboard connectors:
   - Keyboard backlight FFC (B) (optional)
   - Keyboard FPC (C)
   - Touchpad FFC (D)
   - Left speaker cable (E)
   - eDP cable (F)

3. Partially detach the mylar securing the RTC battery cable. Then carefully pry to detach the adhesive tape underneath the RTC battery (G). Remove the RTC battery from its compartment.

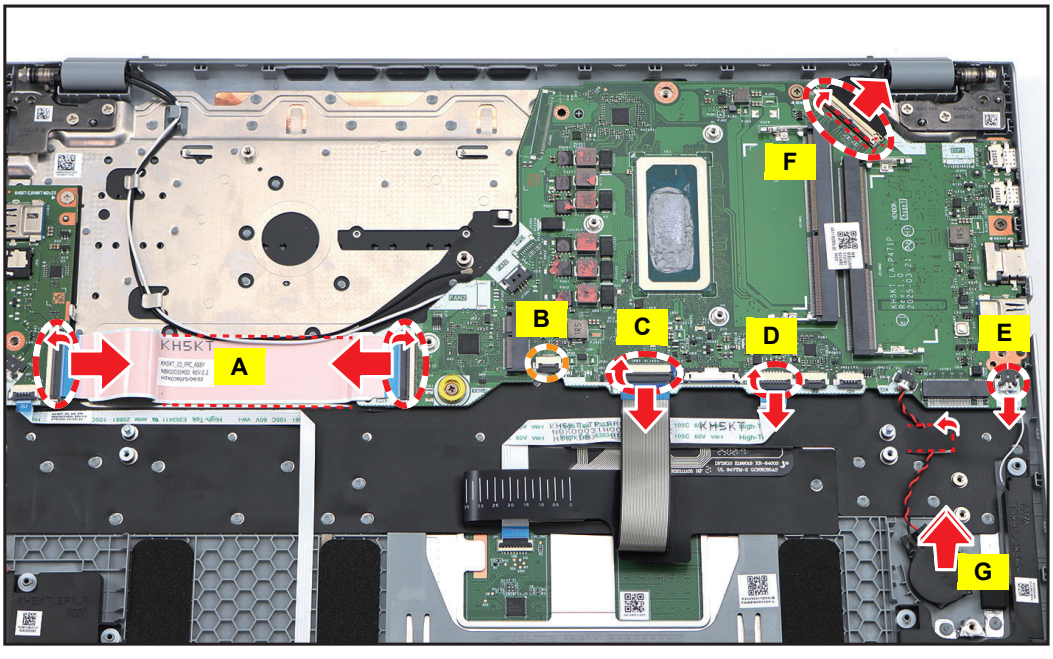


Figure 1-33. Detaching the Tape

4. Remove the three (3) screws securing the mainboard to the upper case.

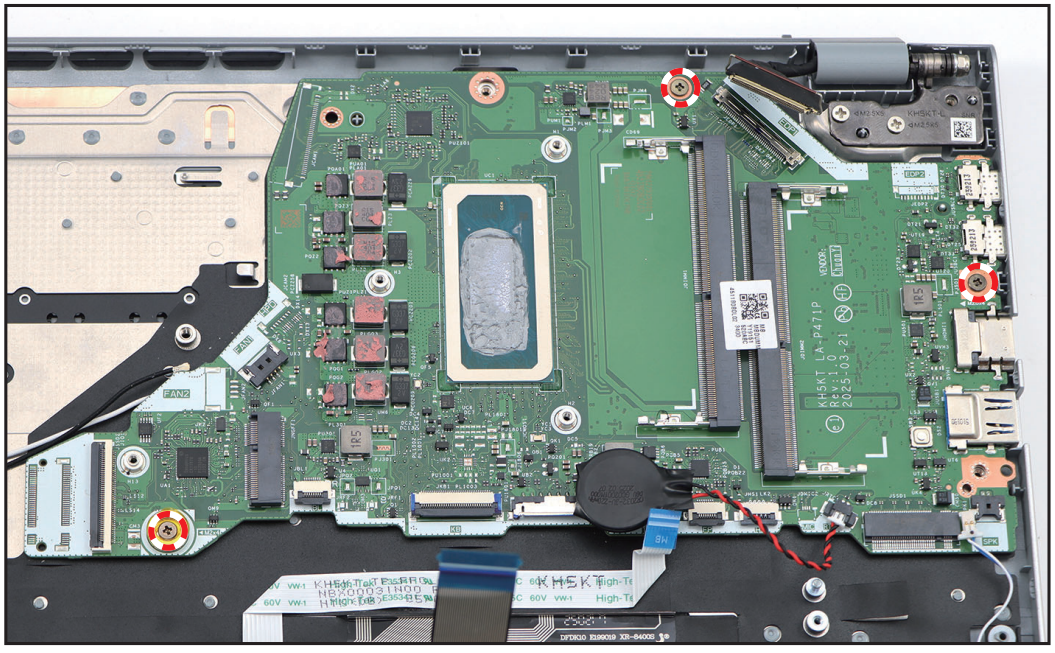


Figure 1-34. Removing the Screw

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

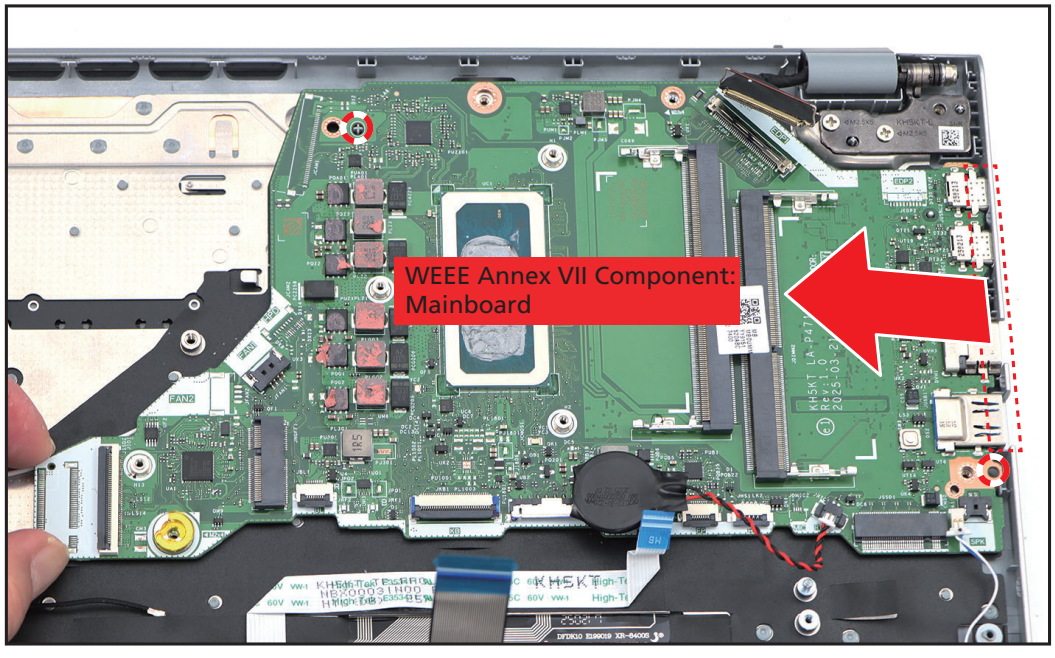


Figure 1-35. Removing the Mainboard

Table 1-8. Mainboard Screws

Screw Name	Screw Type	Torque	Quantity
M 2.0 x 4.0		1.8~2.2kgf.cm	3

RTC Battery Removal

Prerequisite:

- **SSD Module Removal** on page **1-14**

1. Partially detach the mylar. Then disconnect the RTC battery cable from the mainboard connector.

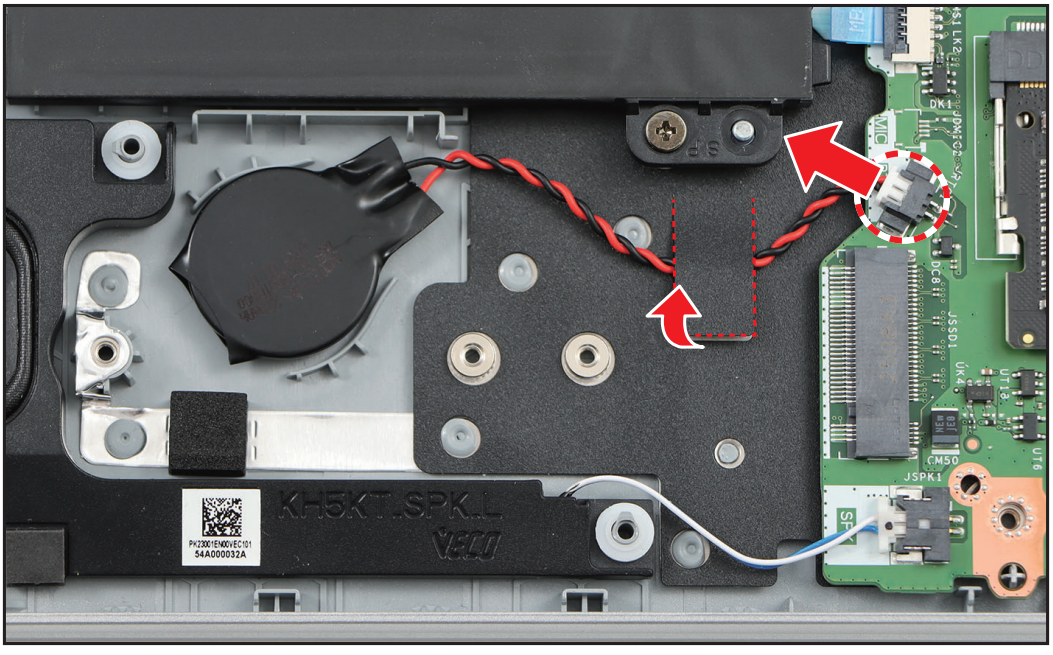


Figure 1-36. Disconnecting the RTC Battery Cable

2. Pry to detach the adhesive tape underneath the RTC battery. Then remove the RTC battery.

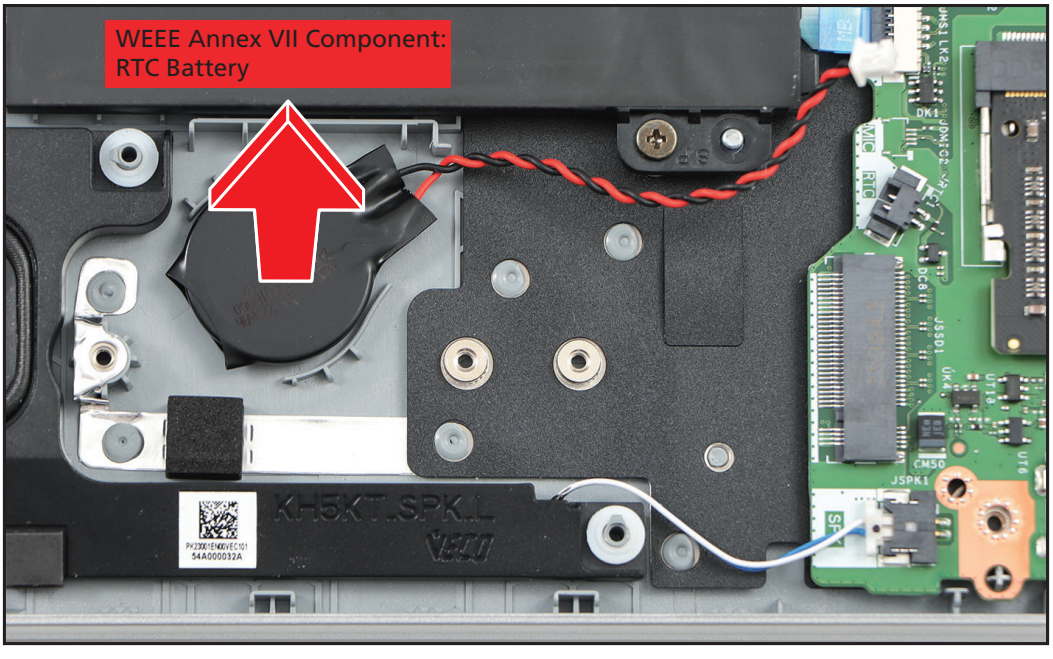


Figure 1-37. Removing the RTC Battery

LCD Bezel Removal

Prerequisite:

- **LCD Module Removal** on page **1-18**

1. Flatten both hinges.



Figure 1-38. Flattening the Hinges

2. Pry the LCD bezel from the upper side to release latches.

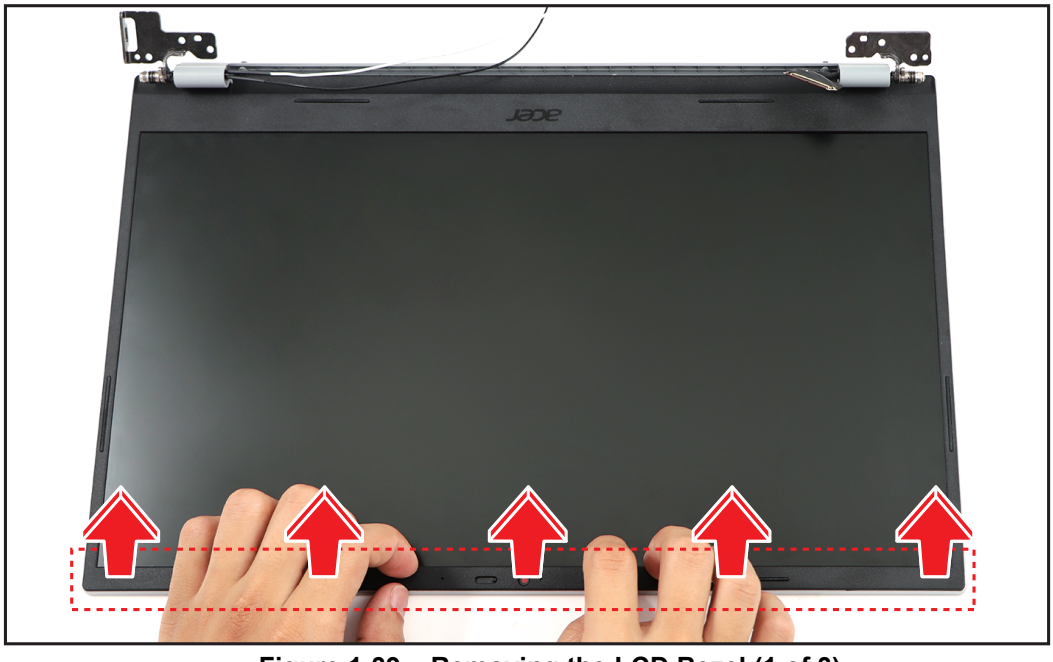


Figure 1-39. Removing the LCD Bezel (1 of 3)

3. Release the right and left side latches.



Figure 1-40. Removing the LCD Bezel (2 of 3)

4. Continue to pry the bottom side latches. Then remove the LCD bezel.

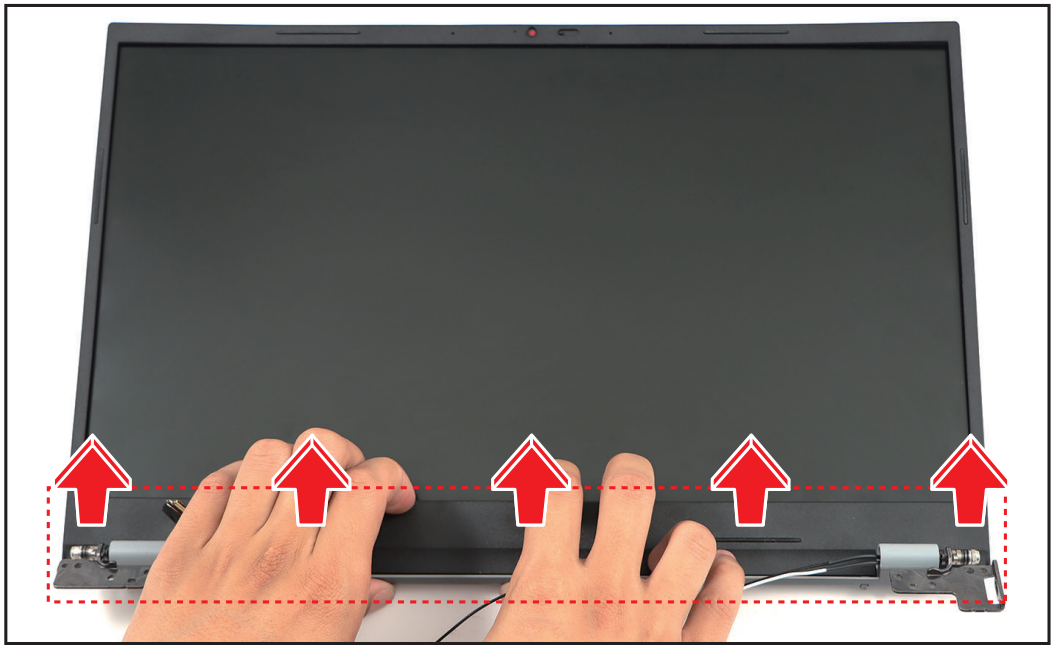


Figure 1-41. Removing the LCD Bezel (3 of 3)

LCD Panel Removal

Prerequisite:

- LCD Hinges Removal

1. Disconnect the eDP cable from the CMOS and dual microphone module connector. Then unroute the cable from the cable guides on the upper side of the LCD cover.

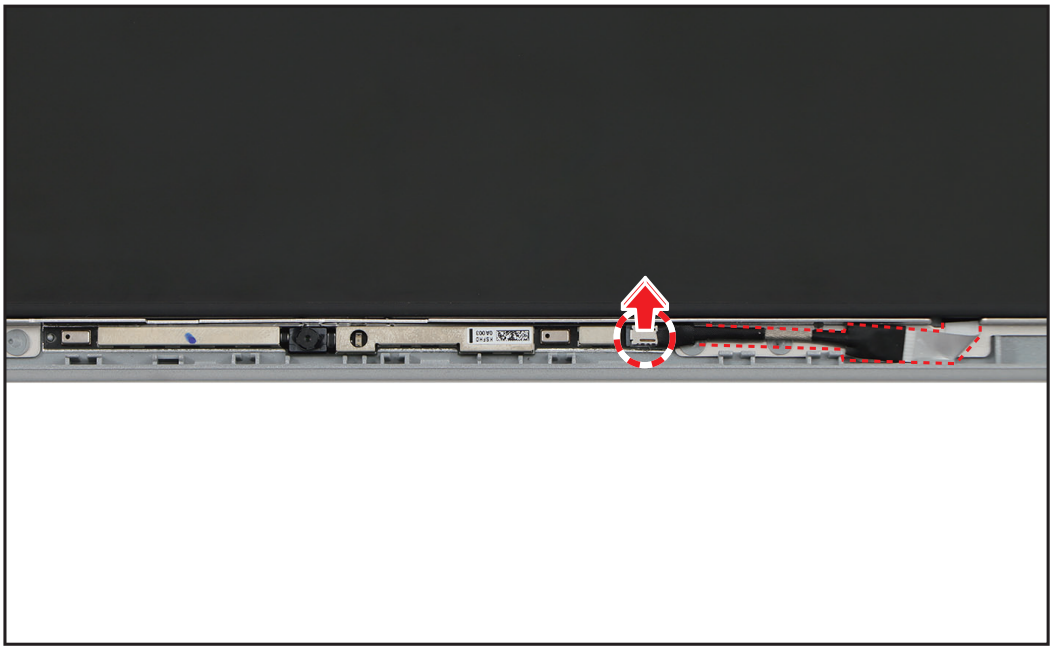


Figure 1-42. Disconnecting and Unrouting the eDP Cable

2. Continue to unroute the eDP cable from the cable guides on the left and bottom sides of the LCD cover as shown in the below illustration.

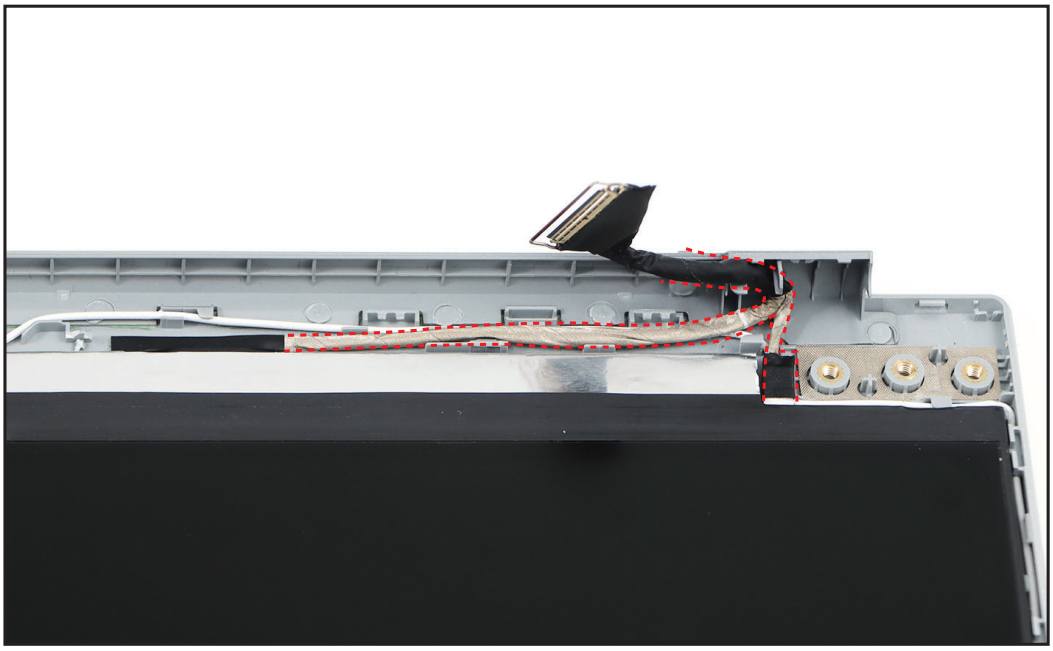


Figure 1-43. Unrouting the eDP Cable

3. Unroute the main antenna cable from the cable guides on the bottom and right sides of the LCD cover as shown in the below illustration.

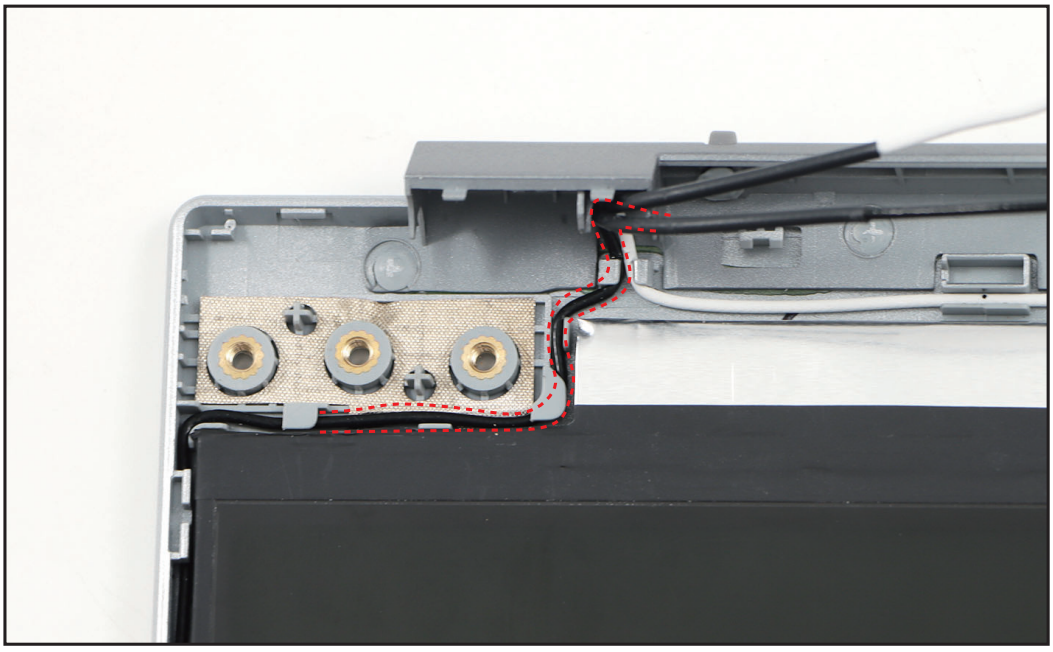


Figure 1-44. Unrouting the Main Antenna Cable

4. Unroute the auxiliary antenna cable from the bottom and right side cable guides on the LCD cover.

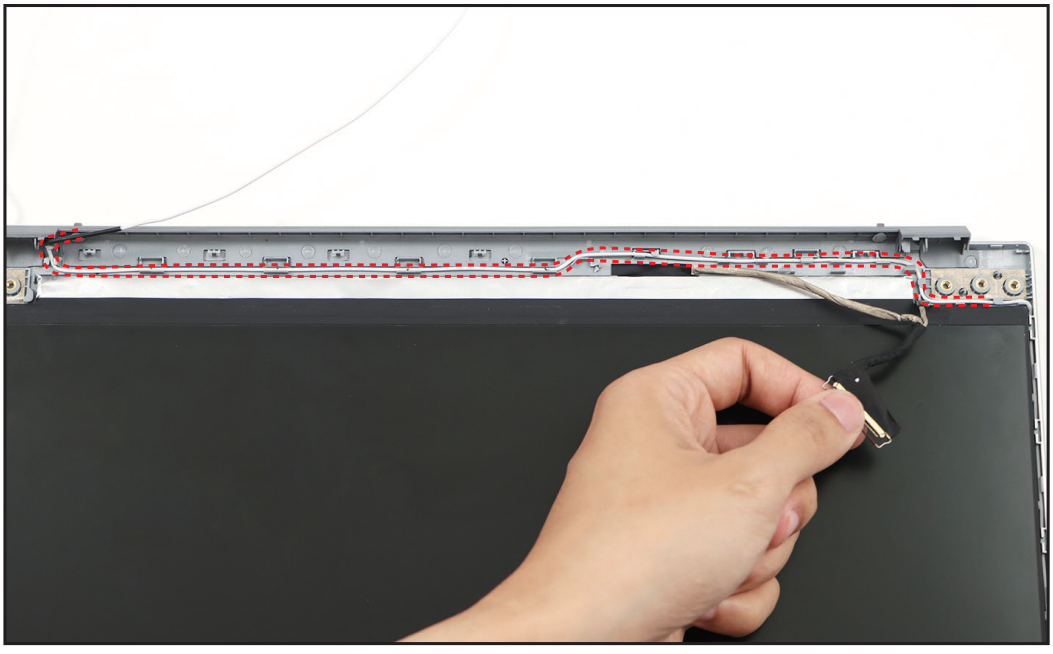


Figure 1-45. Unrouting the Auxiliary Antenna Cable

5. 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.

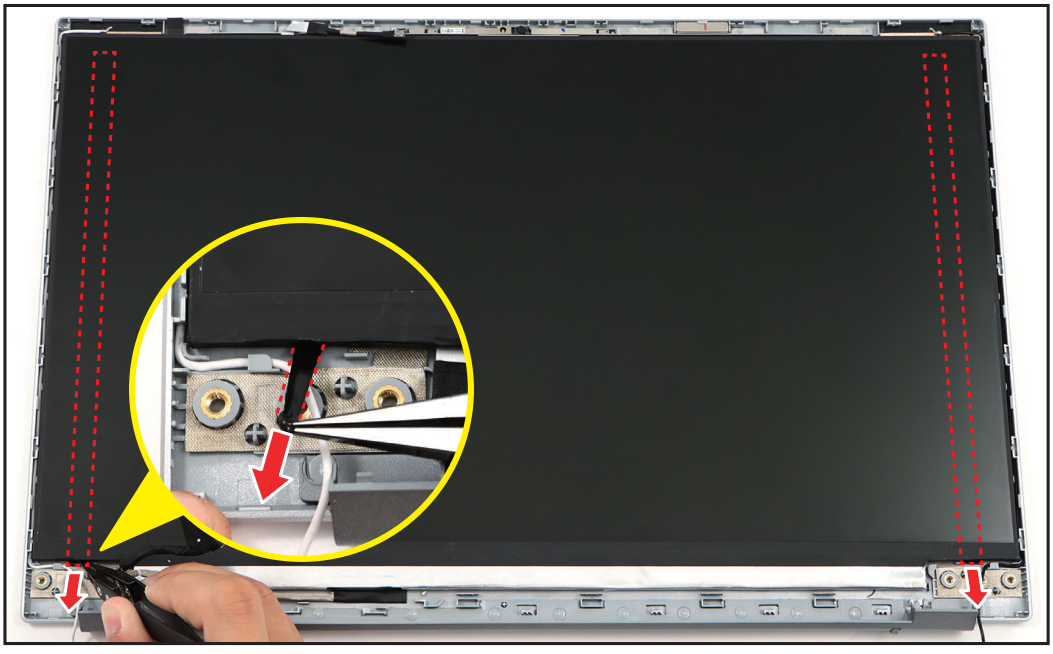


Figure 1-46. Detaching the Double-sided Mounting Tapes

6. Carefully flip the LCD panel. Then, detach the portions (marked with red dashed lines as shown in the below illustration) of the eDP cable from the LCD panel but DO NOT remove the cable.



Figure 1-47. Detaching the eDP Cable

7. Detach the tape securing the eDP cable to the LCD panel connector.

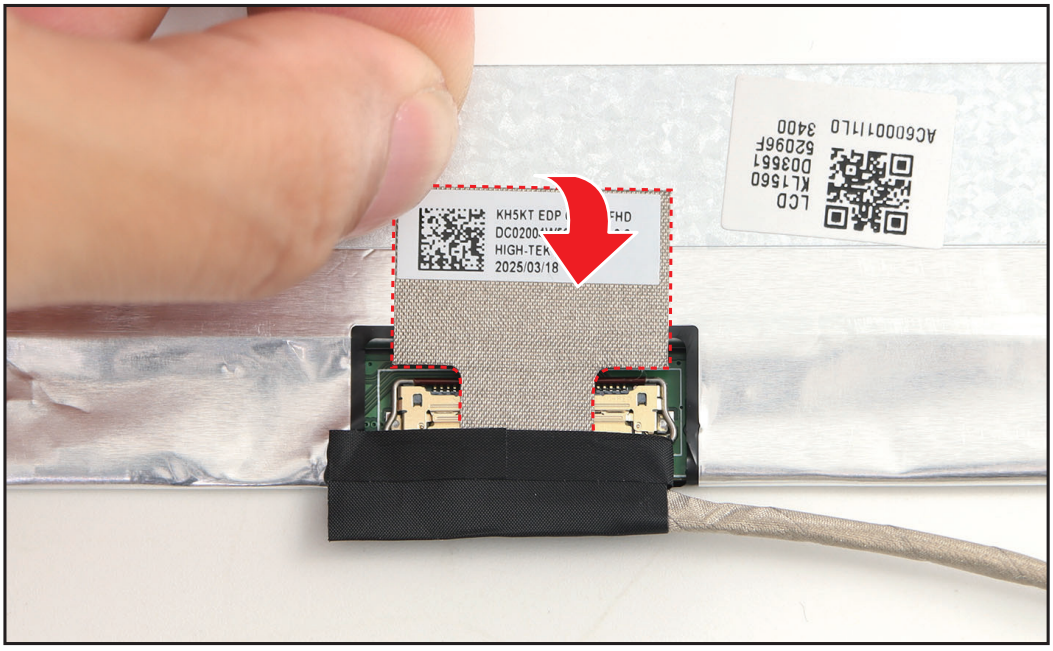


Figure 1-48. Detaching the Tape

8. Lift the latch securing the eDP cable.

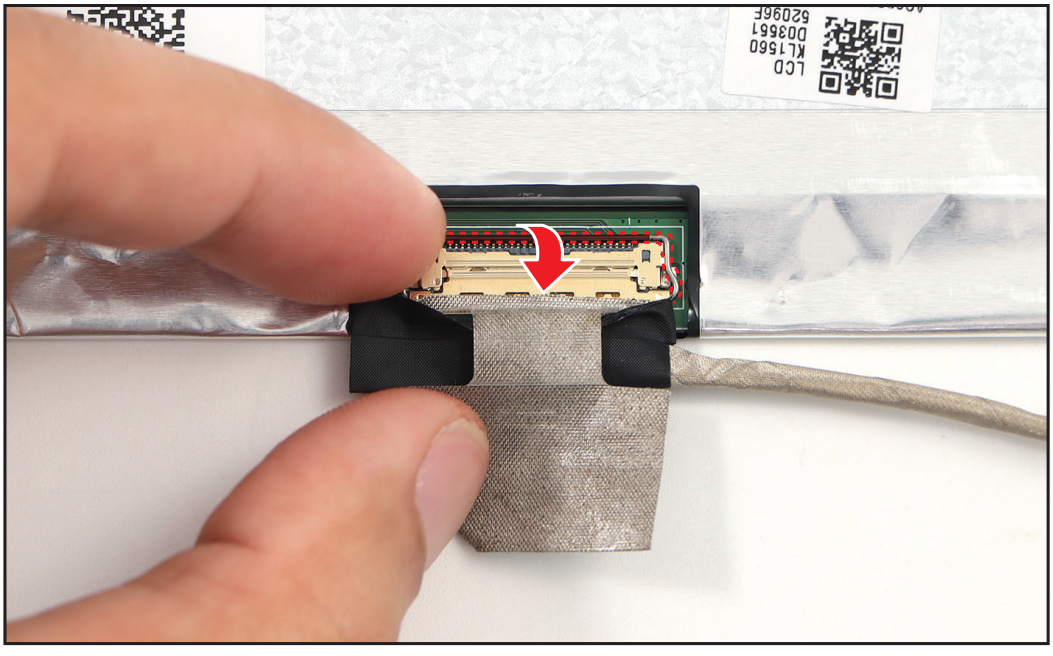


Figure 1-49. Lifting the Latch

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

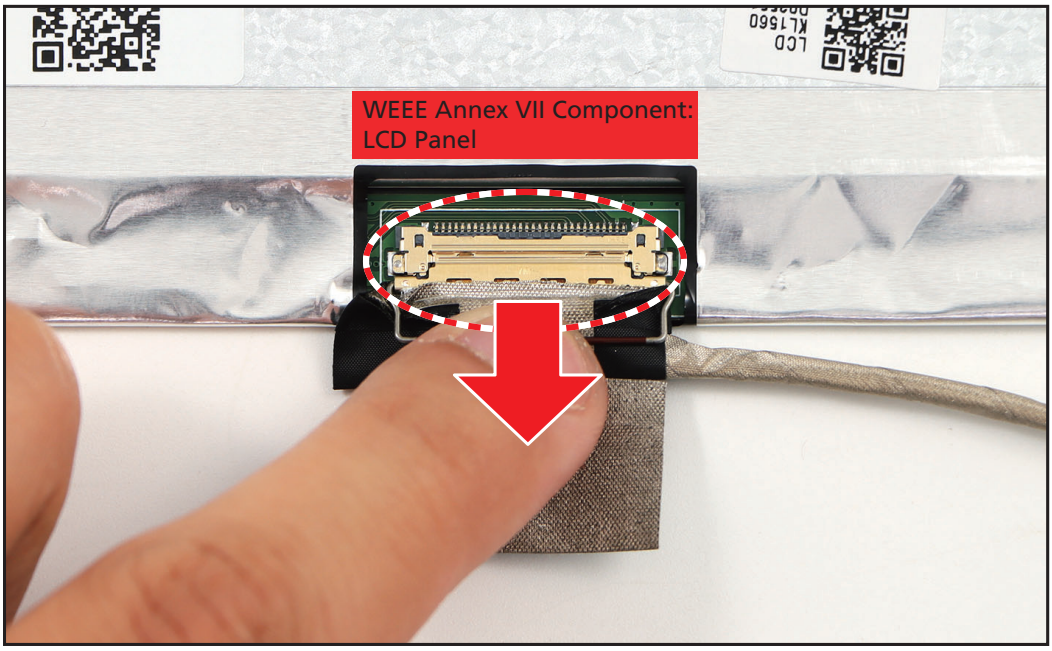
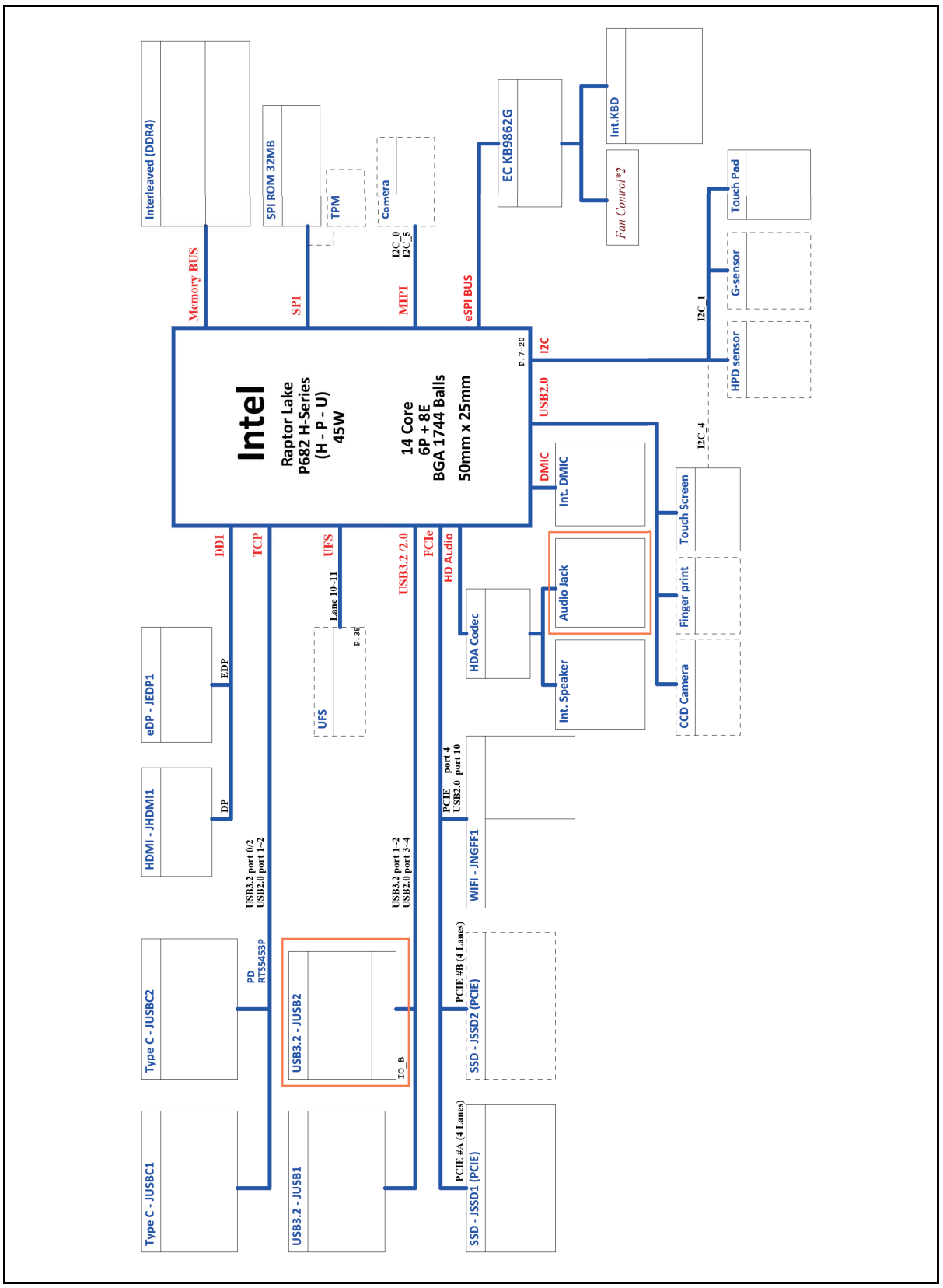


Figure 1-50. Disconnecting the eDP Cable

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 the "`Press <F2> to enter Setup.`" message is prompted on the bottom 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 an item, use the ***UP*** and ***DOWN*** arrow keys.
- Press ***Enter*** or ***RIGHT*** arrow key to expand selected item.
- To switch an 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.

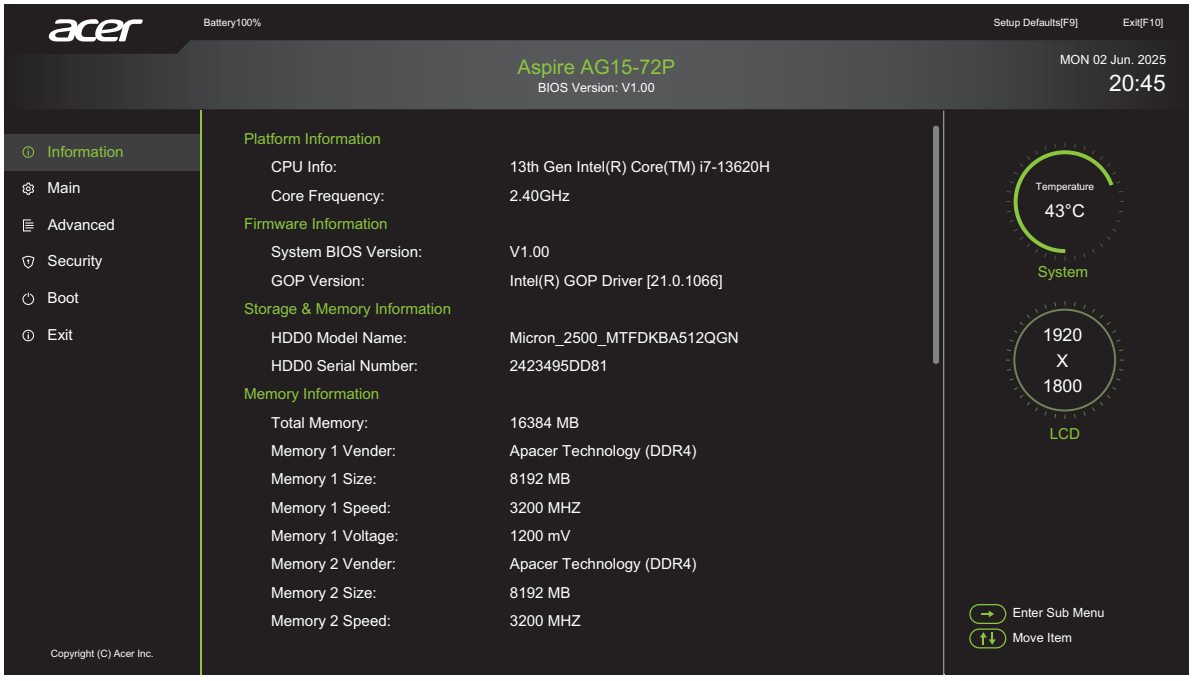


Figure 1-1. BIOS Information (page 1)

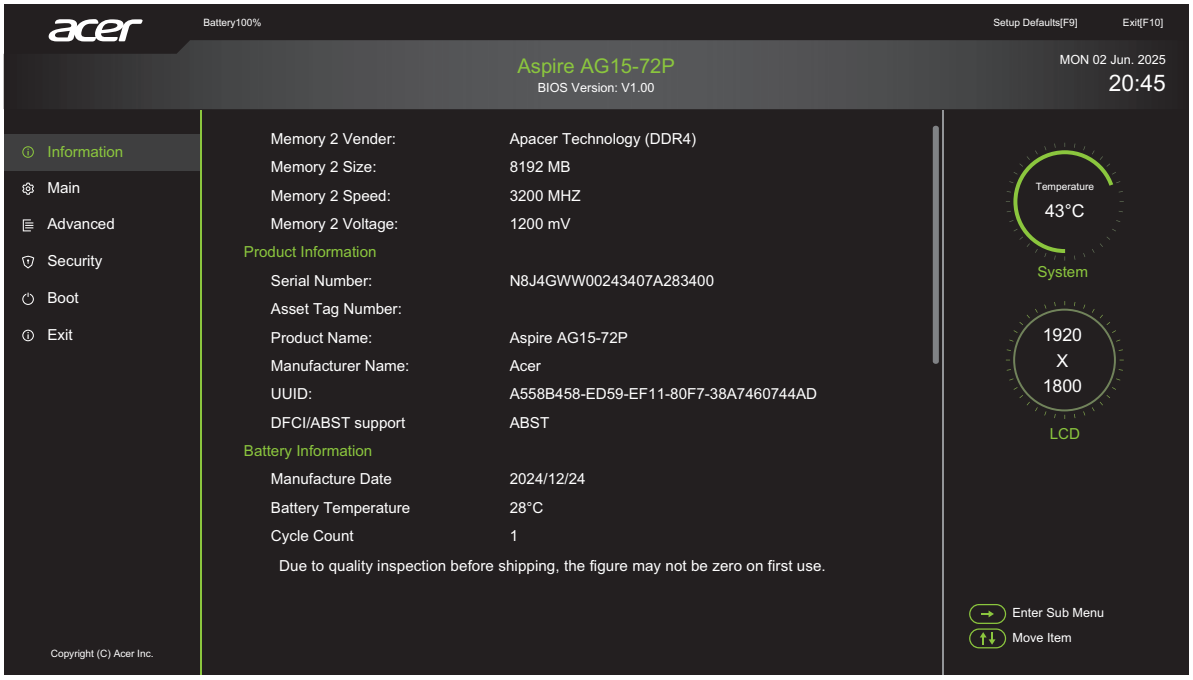


Figure 1-2. BIOS Information (page 2)

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	• This item shows the model name of HDD installed. • The hard disk mode 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 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: Ex: 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	• Should show the vendor of memory manufacturer. • Also shows the memory type.
Memory # Size	• Shows each size of onboard/installed memory. • “#” means memory's number. If the system supports only onboard memory, then this item is hidden.
Memory # Speed	• Identifies the configured speed of the memory device. • “#” indicates memory number. If the system supports only onboard memory, then this item is hidden.
Memory # Voltage	• Identifies the configured voltage of the memory device. • "#” indicates the memory number. If the system supports only onboard memory, then this item is hidden.
Serial Number	Should be 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.

Table 1-9. BIOS Information Tab Parameters

Product Information	Remark
UUID	• It is required for all systems. • Display format: xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx (follow UUID Standard)
DFCI/ABST Support	• This item default should be hidden. • Only visible after user press "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.
Battery Temperature	Show the temperature of battery.
Cycle Count	Show the battery charge cycle count.

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.

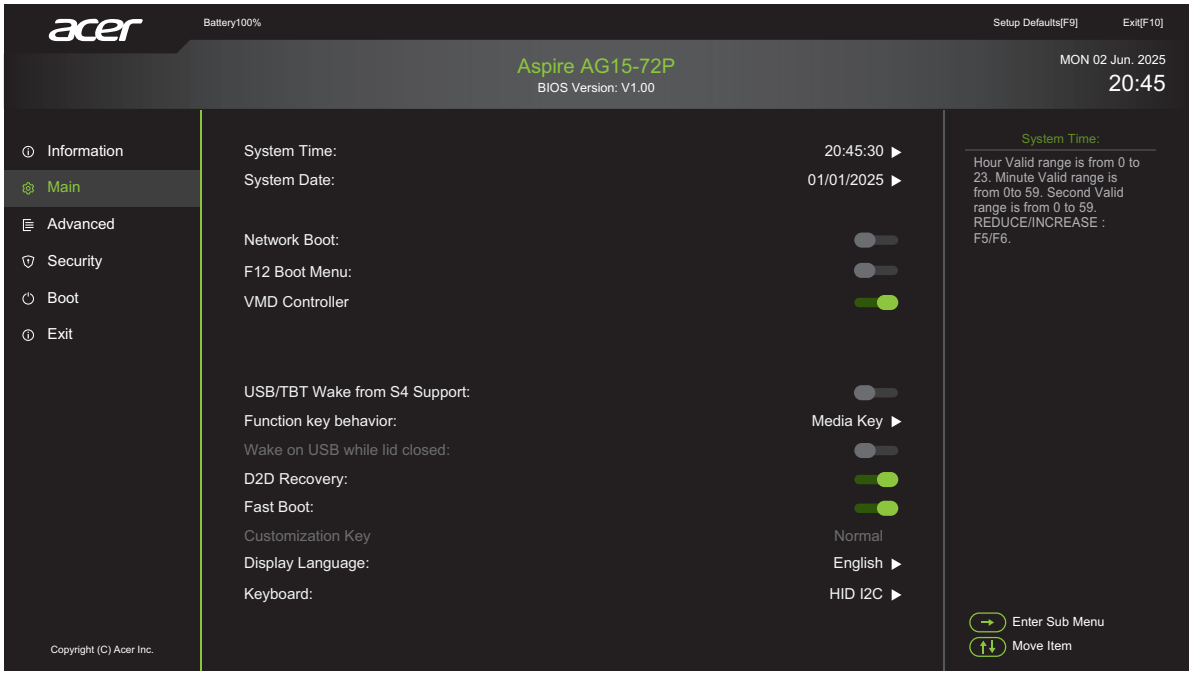


Figure 1-51. BIOS Main

Table 1-10. BIOS Main Tab Parameters

Product Information	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]	• Enable/Disable PXE boot to LAN. • The default value is [Disabled].
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. • The boot device change is only for one time change. In other words, the next time system reboots, the boot device sequence will be the same as the one defined in the **BIOS Setup Utility** > **Boot Menu**. • The default value is [Disabled].
VMD Controller	[Enabled] / [Disabled]	• This item default should be hidden. • Only visible if the platform support the function after user press "***Ctrl***" + "***S***" in this page (Main Tab). • The default value is [Disabled].

Table 1-10. BIOS Main Tab Parameters

Product Information	Example	Remark
USB/TBT Wake from S4 Support	[Enabled] / [Disabled]	• Support USB/TBT wake S4. • The default value is [Disabled].
Function Key behavior	[Function Key] / [Media Key]	• [Media Key]: Function keys perform the media function by default. Hold ***Fn*** to activate ***F1*** to ***F12***. • [Function Key]: Function keys activate ***F1*** to ***F12*** by default. Hold ***Fn*** to perform media functions. • Media functions are only active under Windows. ***F1*** to ***F12*** acts as the normal function keys during device boot or while in BIOS. • Default setting depends on product line definition. • 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 via ***Alt***+***F10*** key during POST.
Fast Boot	[Enabled] / [Disabled]	• Enable/Disable Fast Boot. When Fast Boot is enabled, it'll skip the timeout variable. • The default value is [Enabled].
Customization Key	[Normal] / [Customized]	• Show Normal indicate the default key usage. • Show Customized indicate a different key than the KB printing. • BIOS show the Keyboard status on SCU. (Hidden item).
Display Language	[English]	• BIOS display language. • BIOS supports 12 languages, which are English / Spanish / Chinese / German / Dutch / Brazilian Portuguese / Danish / Italian / Norwegian / Swedish / Russian / French. • The default display language is [English].

Table 1-10. BIOS Main Tab Parameters

Product Information	Example	Remark
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 press service key.

Advanced Tab

The Advanced tab allows the user to set Virtualization and SATA port configuration.

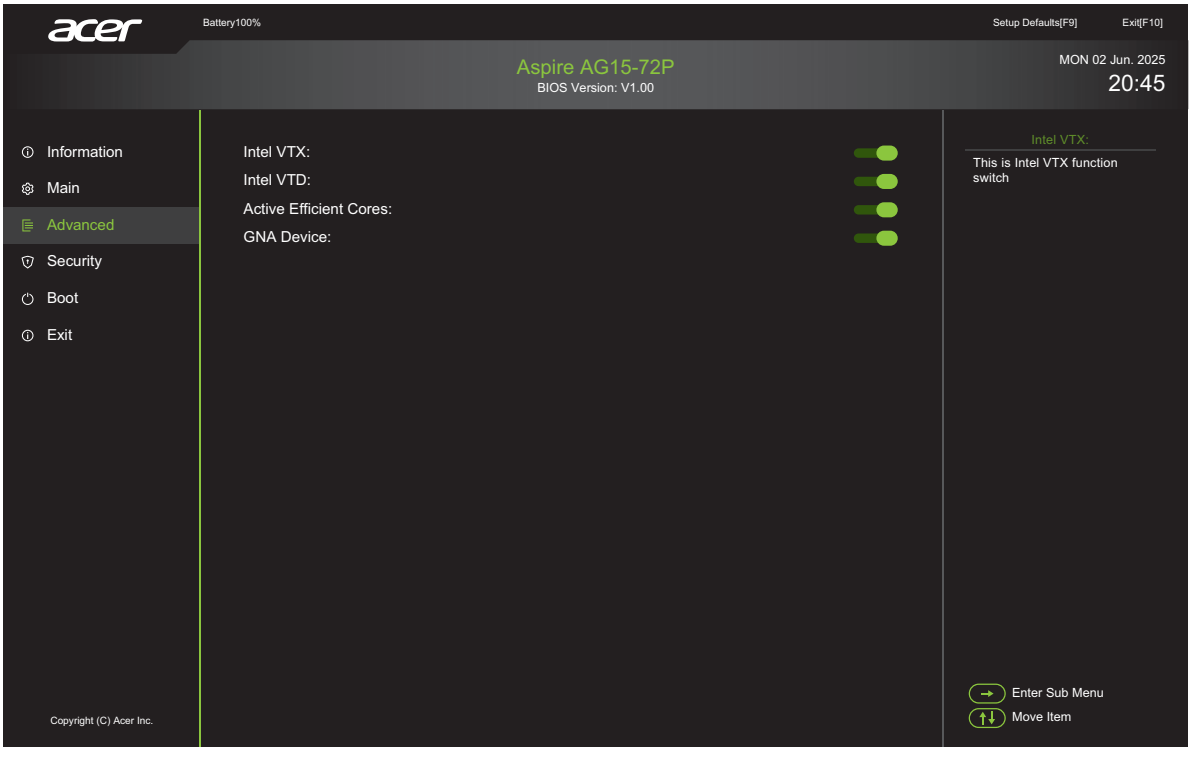


Figure 1-52. BIOS Advanced

Table 1-11. BIOS Advanced Tab Parameters (Windows 11)

Product Information	Example	Remark
Intel VTX	[Enabled] / [Disabled]	• This is Intel VTX function switch. • Display when platform support the function. • The default value is [Enabled].
Intel VTD	[Enabled] / [Disabled]	• This is Intel VTD function switch. • Display when platform support 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 support GNA device. • The default value is [Enabled].

Security Tab

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

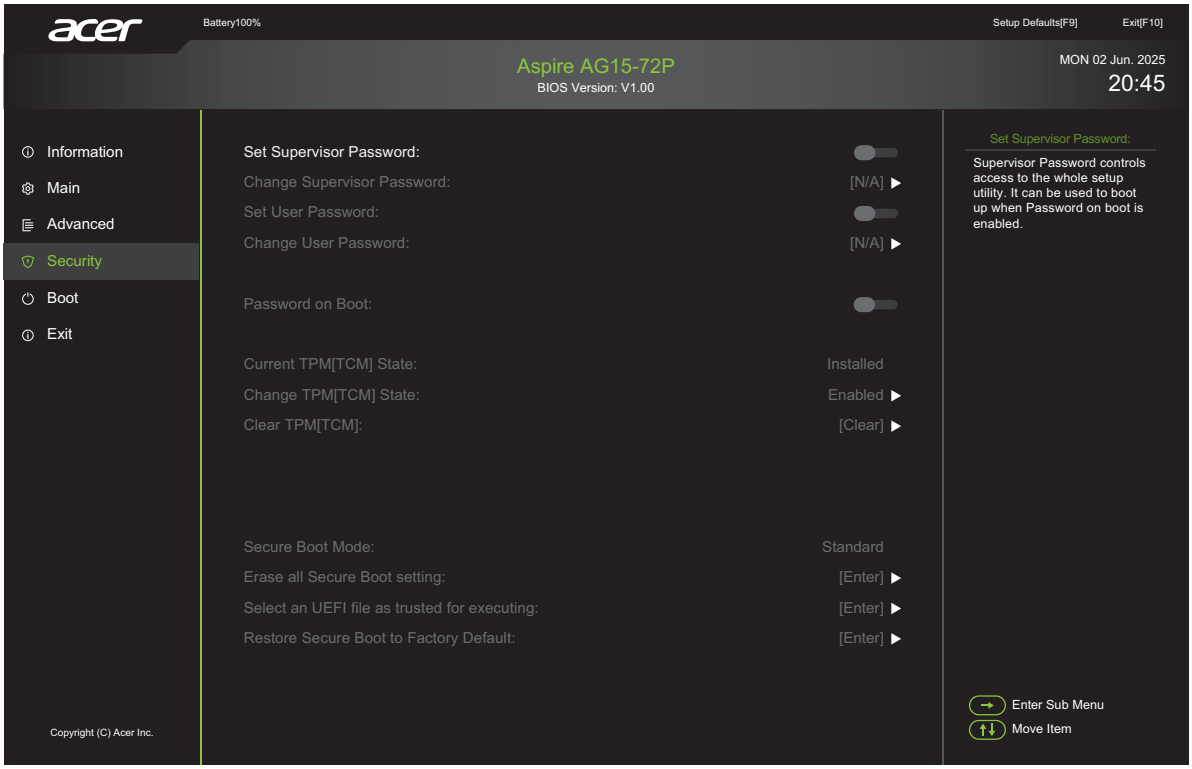


Figure 1-53. BIOS Security

Table 1-12. BIOS Security Tab Parameters

Product Information	Example	Remark
Set Supervisor Password:	[Enabled] / [Disabled]	This field indicates if Supervisor Password is set or not. • [Enabled]: Supervisor Password is set. • [Disabled]: Supervisor Password is not set. • The default is [Disabled]
Set User Password:	[Enabled] / [Disabled]	This field indicates if User Password is set or not. • [Enabled]: User Password is set. • [Disabled]: User Password is not set. • The default is [Disabled]

Table 1-12. BIOS Security Tab Parameters

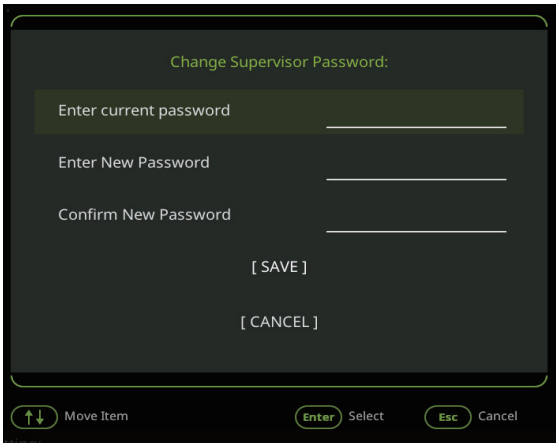
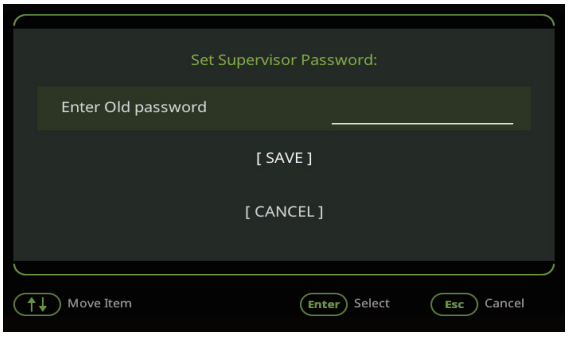
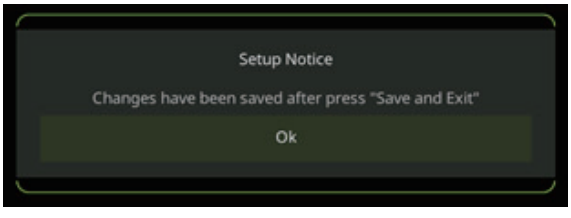
Product Information	Example	Remark
Change Supervisor Password	[N/A] / [Change]	If Password is not set, this field always show default value [N/A]. If Supervisor Password is not set, User Password should be a grayed out item. While these fields are highlighted and press [Change], a window similar to the following is shown:  If there is an old password, then setup will prompt with the following windows instead and a current password will be required to be entered at first:  User can now type password in field "Enter New Password", and re-enter password in field "Confirm New Password" for verification. If the verification is OK and password setting is complete after user pressed enter. 
Change User Password	[N/A] / [Change]	

Table 1-12. BIOS Security Tab Parameters

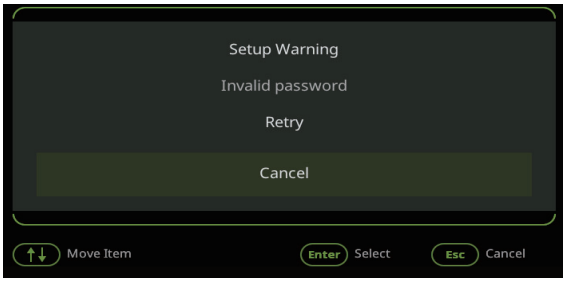
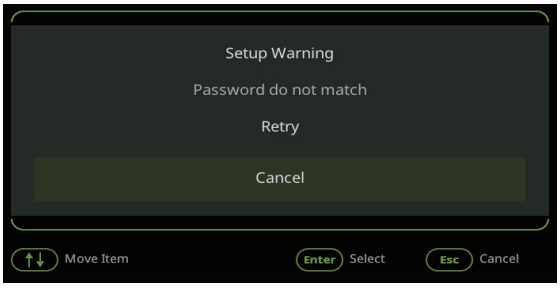
Product Information	Example	Remark
Change User Password *(continued)*	[N/A] / [Change]	If the current password entered does not match the actual current password.
Change User Password *(continued)*	[N/A] / Change	 If the new password and confirm new password do not match.  For the format of the password, please refer "Valid Password Characters" in Security Feature - Password section.
Password on Boot	[Enabled] / [Disabled]	• Defines whether a password is required or not while the events defined in this group happened. • 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 to boot. • The default value is [Disabled].
Secure Boot Mode	[Standard] / [Custom]	• Displays the current Secure Boot Mode Status: • [Standard]: With Standard Secure Boot, no change has been manually done to Secure boot setting or users have previously restored security 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].

Table 1-12. BIOS Security Tab Parameters

Product Information	Example	Remark
Erase all Secure Boot Setting	[Enter]	Erases all contents in secure four variables PK, KEK, DB, and DBX. When this option is selected, a confirmation will pop up to confirm the user's action.
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 UEFI file location. • Display all files in the device and allow user to select intended file (Only efi file can be added to the signature database) and interface will allow users to go up or enter directory. • If **Yes** is selected, the file hash will be added to signature database and return to Security Menu. If **No** is selected, it returns to the previous file selection menu. Added efi file's Boot description will be added into the boot device order list's last place, max. 5 entries are allowed.
Restore Secure Boot to Factory Default	[Enter]	Restores the settings back to the factory default setting. After saving and exiting the menu, the default factory settings will be restored and Secure Boot mode will be reset back to [Standard] upon the next entry to the BIOS Setup Utility menu.
Current TPM(TCM) State (For TPM 2.0)		• This field indicates current TPM State. • Current TPM or TCM State description is according current TPM or TCM is connected. • 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.

Table 1-12. BIOS Security Tab Parameters

Product Information	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 Supervisor / User Password is set or not. If Supervisor Password is not set, it should be a grayed out item.

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` and press ***Enter***. The `Select the UEFI file location` dialog box appears.

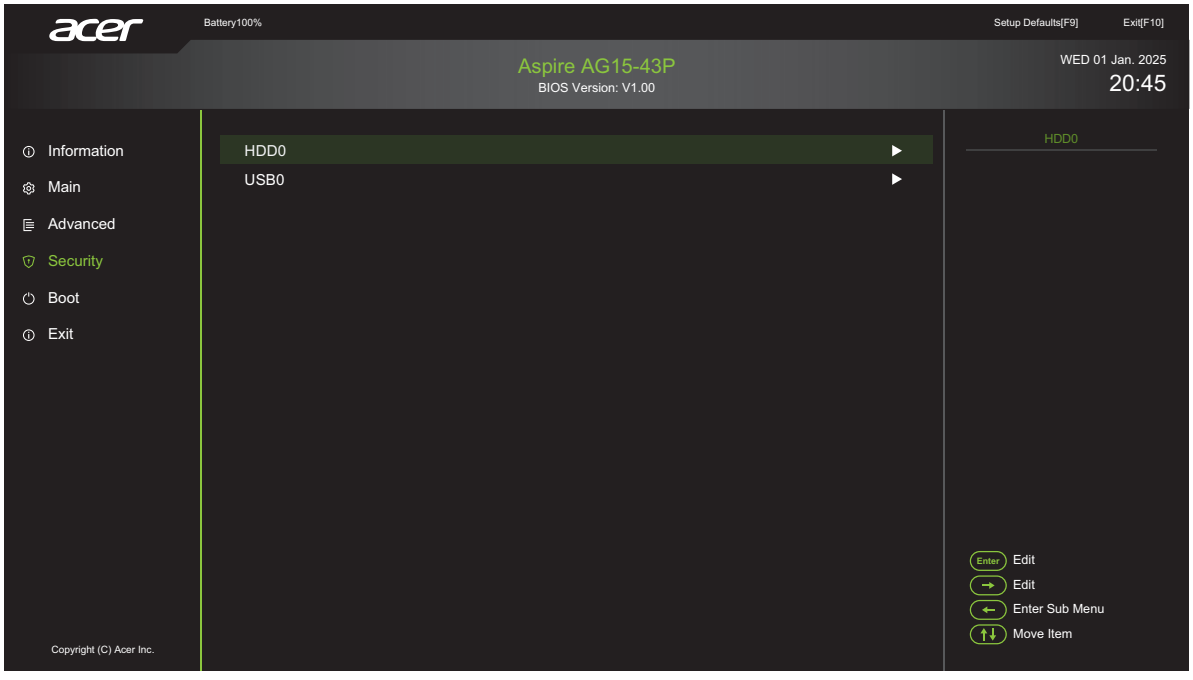


Figure 1-3. Select UEFI File Location

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

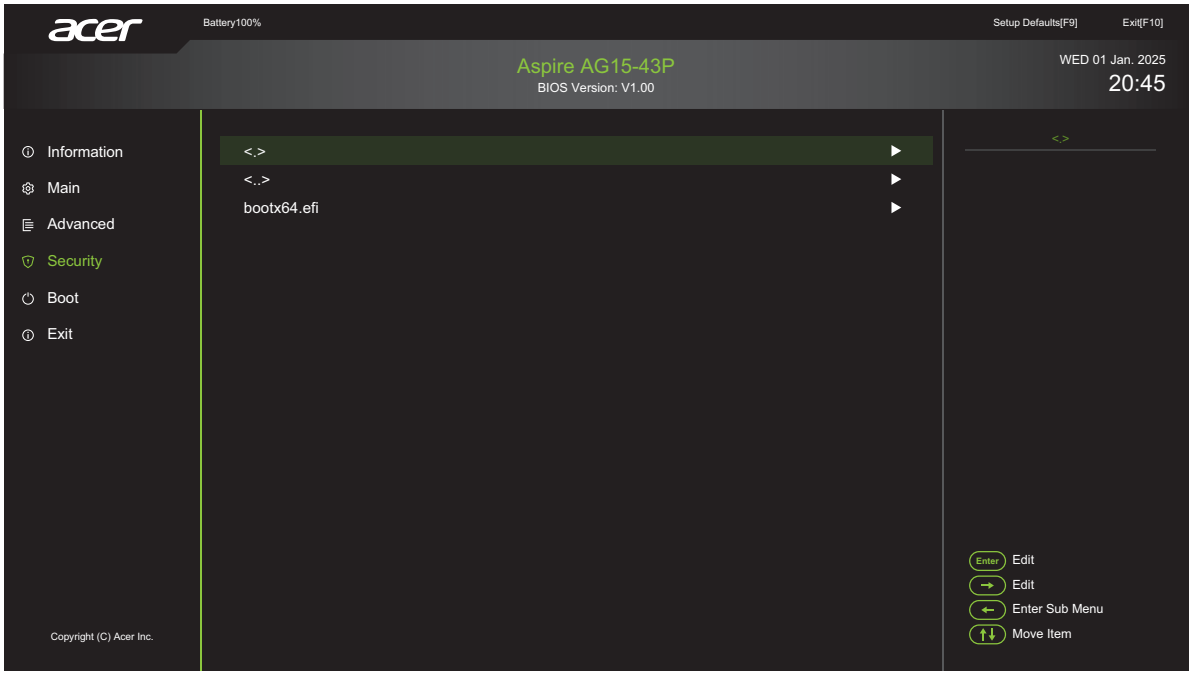


Figure 1-4. Select UEFI File

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. The boot description will be added in the end of the Boot device order list (maximum of 5 entries are allowed).

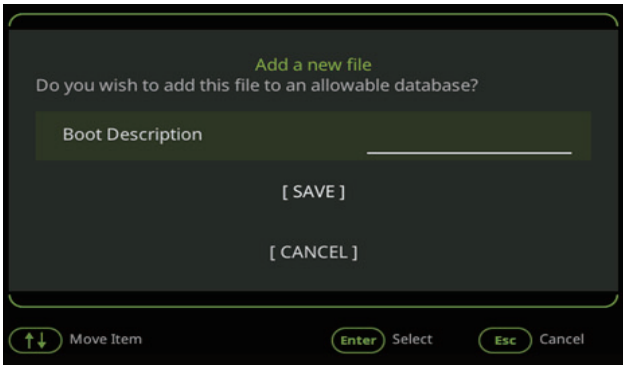


Figure 1-5. Add New File

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 `Set Supervisor Password` dialog box appears.

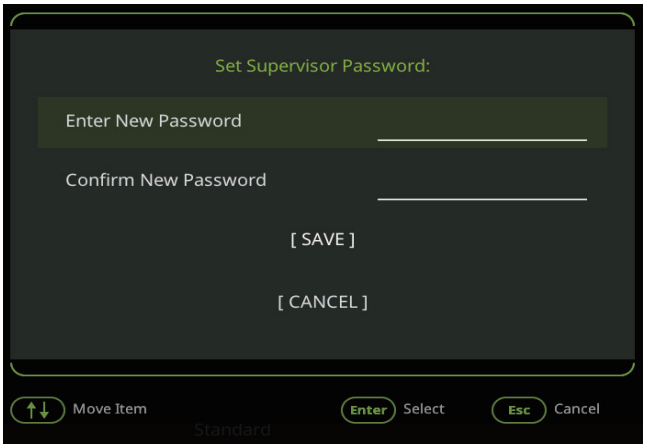


Figure 1-6. Set Supervisor Password

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.

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
^	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.

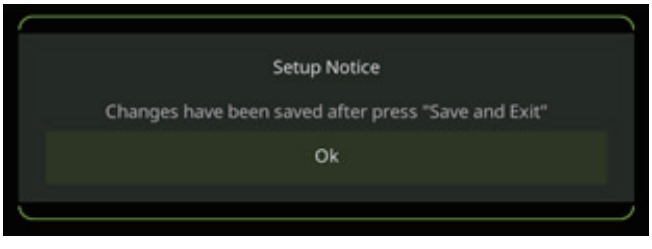


Figure 1-7. Setup Notice

5. Press ***Enter*** to complete the password setting. After setting the supervisor password, the computer sets the `Supervisor Password Is` parameter to `Enabled`.

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.

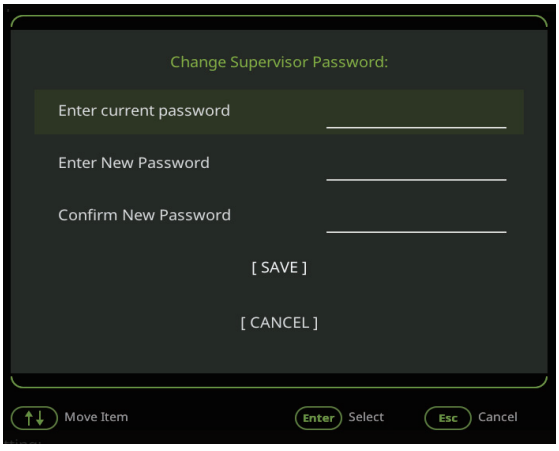


Figure 1-8. Change Supervisor Password

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.

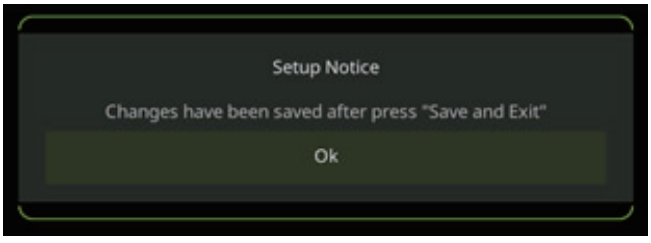


Figure 1-9. Setup Notice

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.

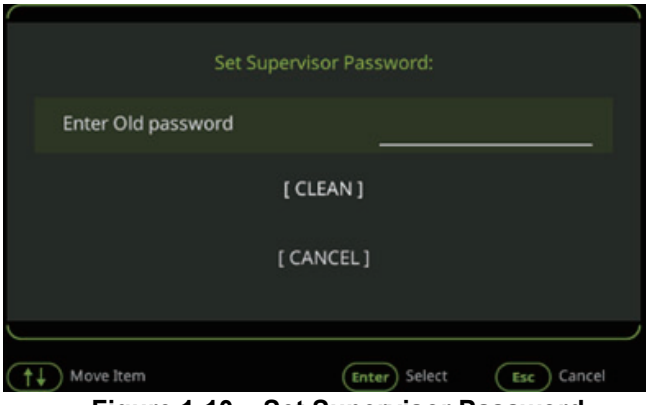


Figure 1-10. Set Supervisor Password

2. Type the current password in the `Enter Old Password` field and press ***Enter***.

3. Press [CLEAN] to clean the password. The `Setup Notice` dialog box appears.



Figure 1-11. 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 to change the value.

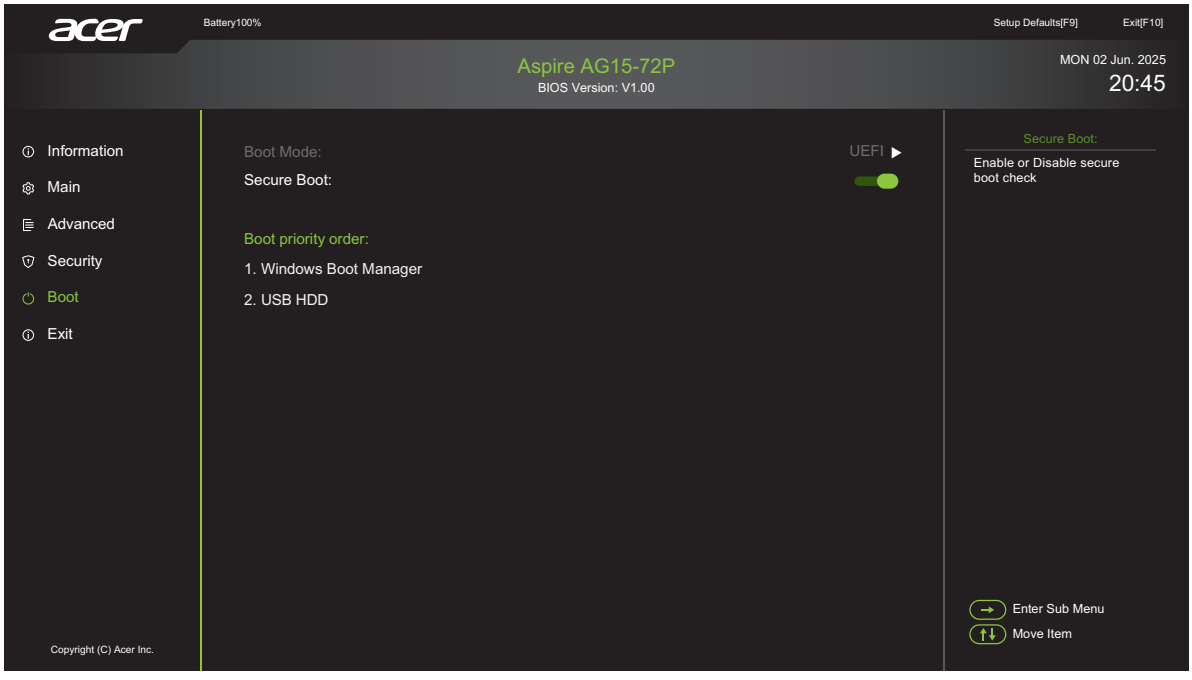


Figure 1-54. BIOS Boot

Table 1-13. BIOS Boot Tab Parameters

Product Information	Example	Remark
Boot Mode	[UEFI]	• Default Boot Mode: [UEFI]. • After user flashes BIOS or loads Setup Defaults, Boot Mode should return to the factory default value.

Table 1-13. BIOS Boot Tab Parameters

Product Information	Example	Remark
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 status is default gray out and could only be modified by following actions: • Supervisor password had been set. • 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.
Boot Priority Order		• When Boot Mode 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" 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. • If eMMc plus HDD exist in the same time, eMMc is the default boot device.

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*.

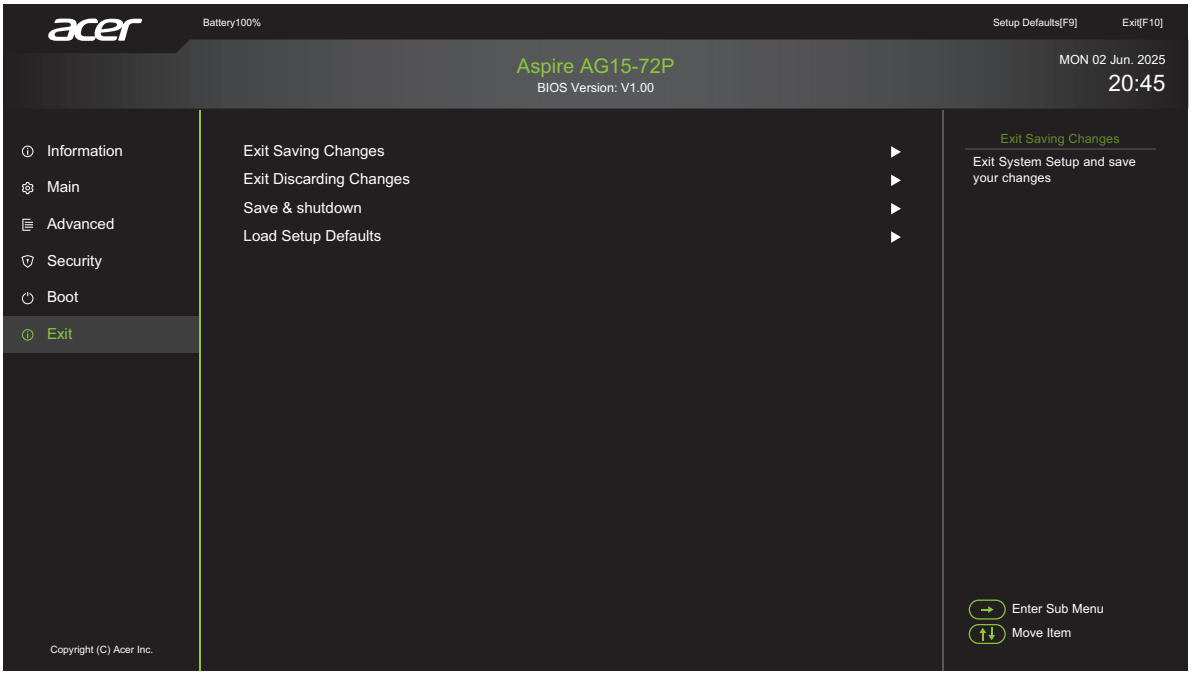


Figure 1-55. BIOS Exit

Table 1-14. BIOS Exit Tab Parameters

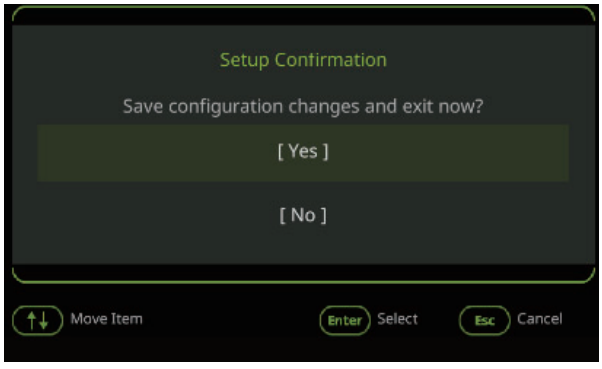
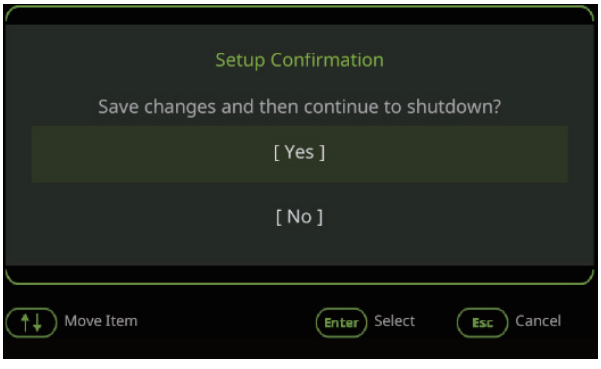
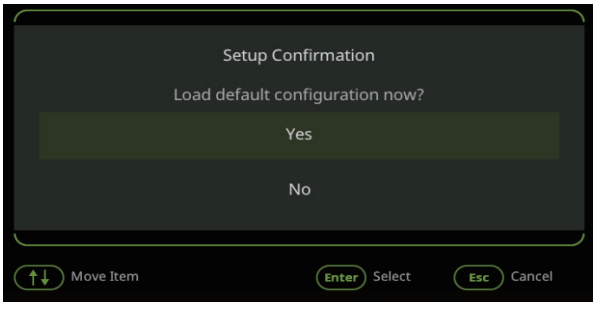
Parameter	Description
Exit Saving Changes	• Save the changes and exit the BIOS utility. • A confirmation message will pop up as below when user executes this item. System will save changes and then continue to reboot if "Yes" is selected or will stay in Setup Utility if “No” is selected. 

Table 1-14. BIOS Exit Tab Parameters

Parameter	Description
Exit Discarding Changes	• Exit the BIOS utility without saving the changes to the system. • A confirmation message will pop up as below when user executes this item. System will discard changes then continue to reboot if "Yes" is selected or will stay in Setup Utility if “No” is selected. 
Save & shutdown	• Save changes and shutdown the system. • A confirmation message will pop up as below when user executes this item. System will save changes and then continue to shutdown if "Yes" is selected or will stay in Setup Utility if "No" is selected. 
Load Setup Defaults	• Allow user to load factory default configurations in Setup Utility. • A confirmation message will pop up as below when user executes this item. System will stay in 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 1-15** with the verified symptom(s) to determine the solution.

Table 1-15. Verified Symptoms

Symptoms	See
Power on Issues	**Figure 1-56. Power On Issues**
No Display Issues	**Figure 1-57. No Display Issues**
LCD Picture Failure	**Figure 1-58. LCD Picture Failure**
Internal Keyboard Failure	**Figure 1-59. Internal Keyboard Failure**
Touchpad Failure	**Figure 1-60. Touchpad Failure**
Internal Speaker Failure	**Figure 1-61. Internal Speaker Failure**
Internal Microphone Failure	**Figure 1-62. Internal Microphone Record Failure**
USB3.0 Failure	**Figure 1-63. USB3.0 Failure**
Wireless Function Failure	**Figure 1-64. Wireless Function Test Failure**
Bluetooth Function Failure	**Figure 1-65. Bluetooth Function Test Failure**
Units Thermal Failure	**Figure 1-66. Units Thermal Failure**
Cosmetic Failure	**Figure 1-67. Cosmetic Failure**
Other Functions Failure	Page **1-73**

Power On Issues

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

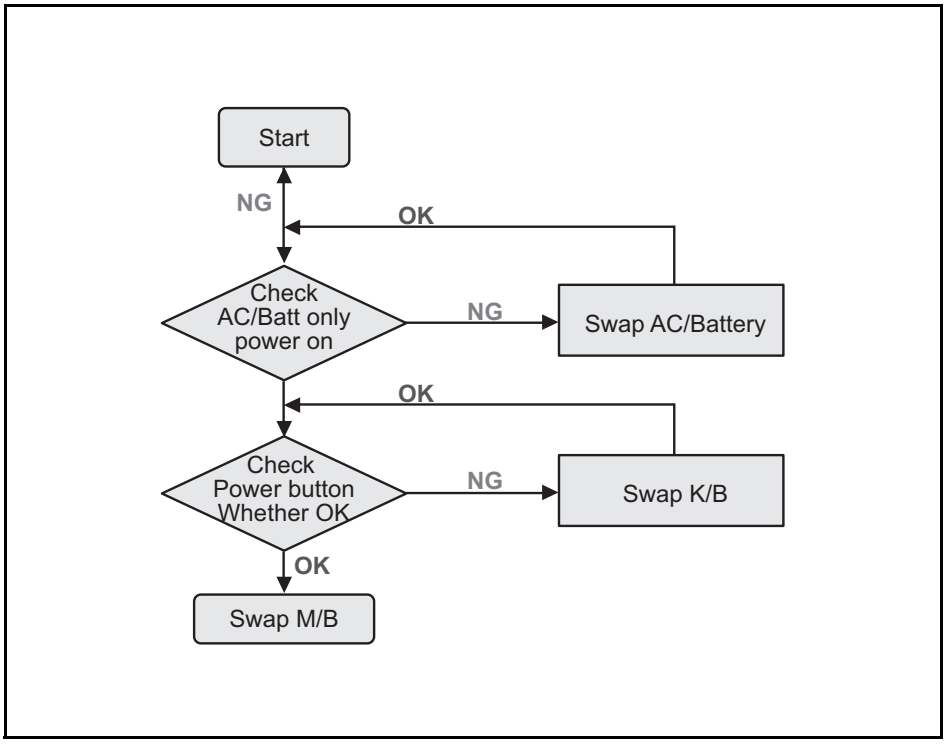


Figure 1-56. Power On Issues

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:

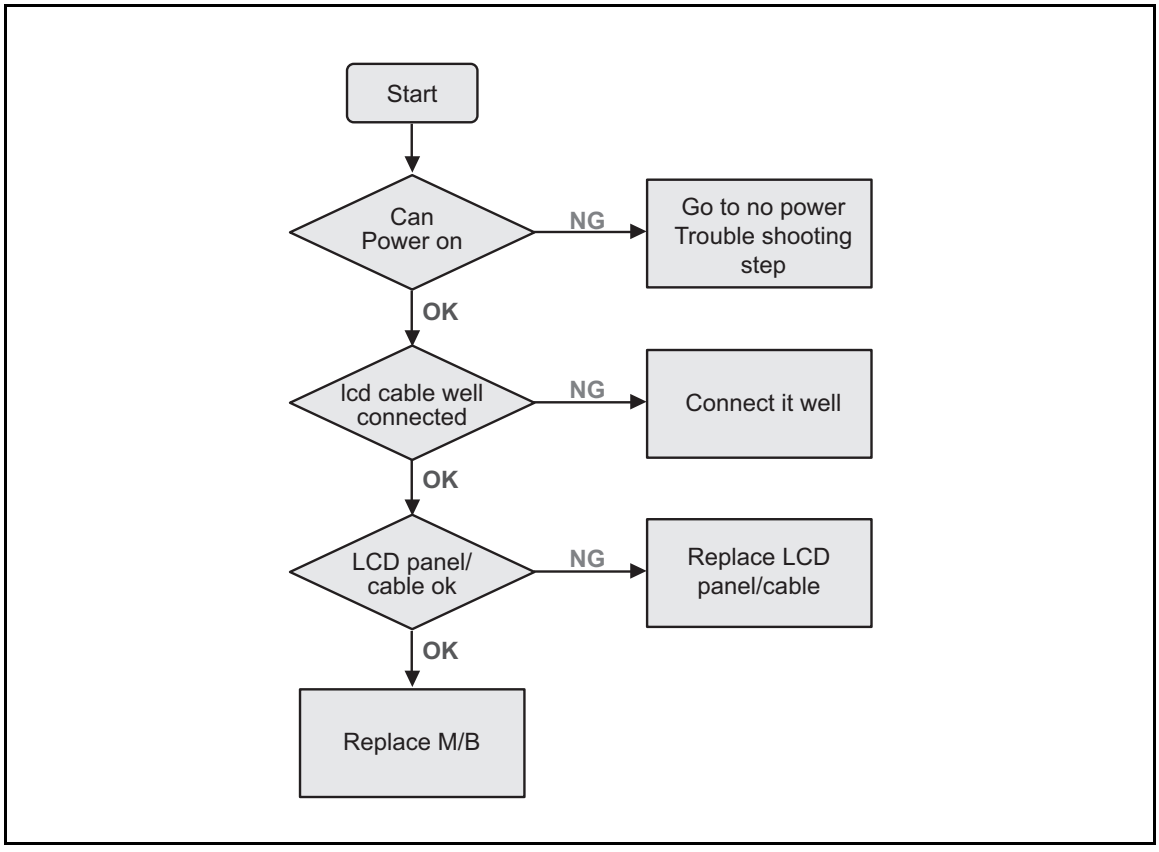


Figure 1-57. No Display Issues

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 **1-60**. 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 **1-63**. 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:

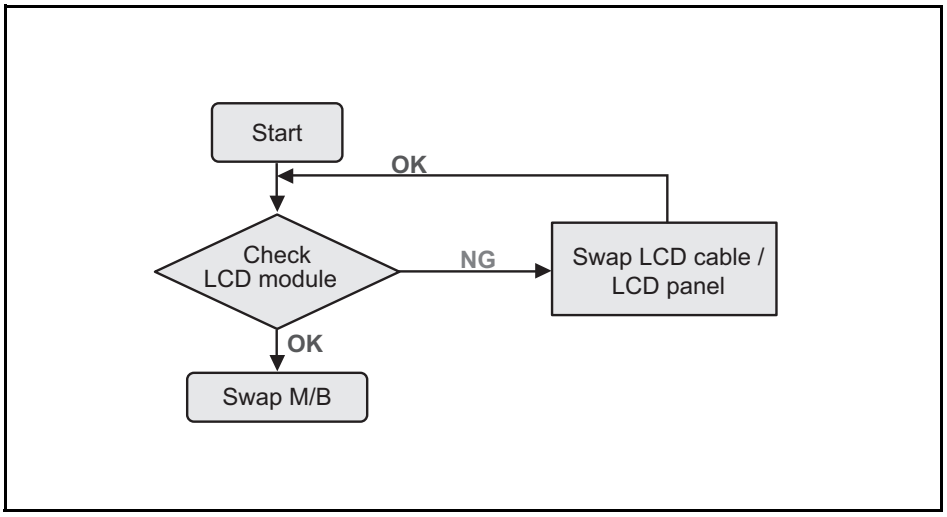


Figure 1-58. LCD Picture Failure

Internal Keyboard Failure

If the internal keyboard function fails, perform the following:

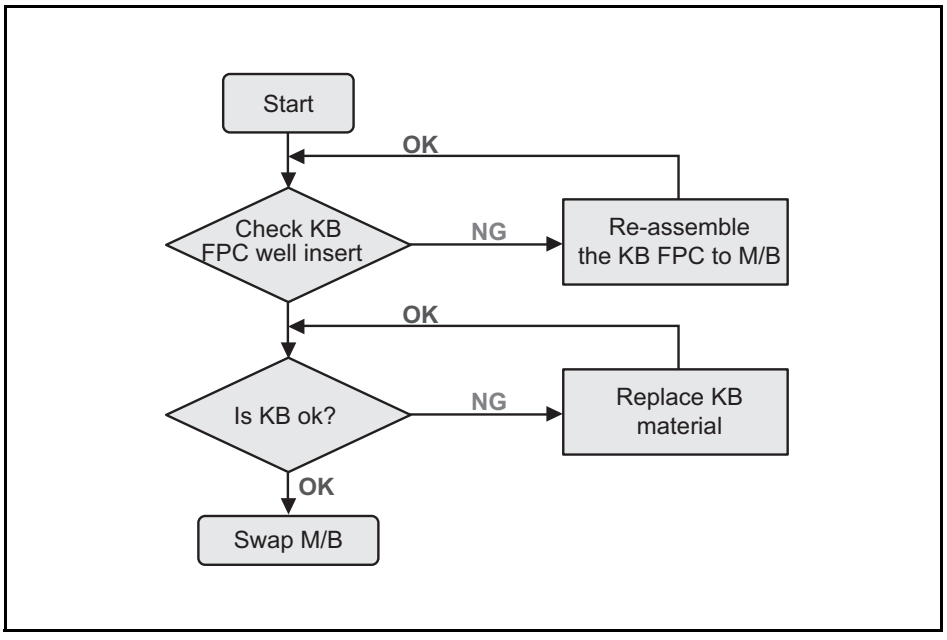


Figure 1-59. Internal Keyboard Failure

Touchpad Failure

If the touchpad fails, perform the following:

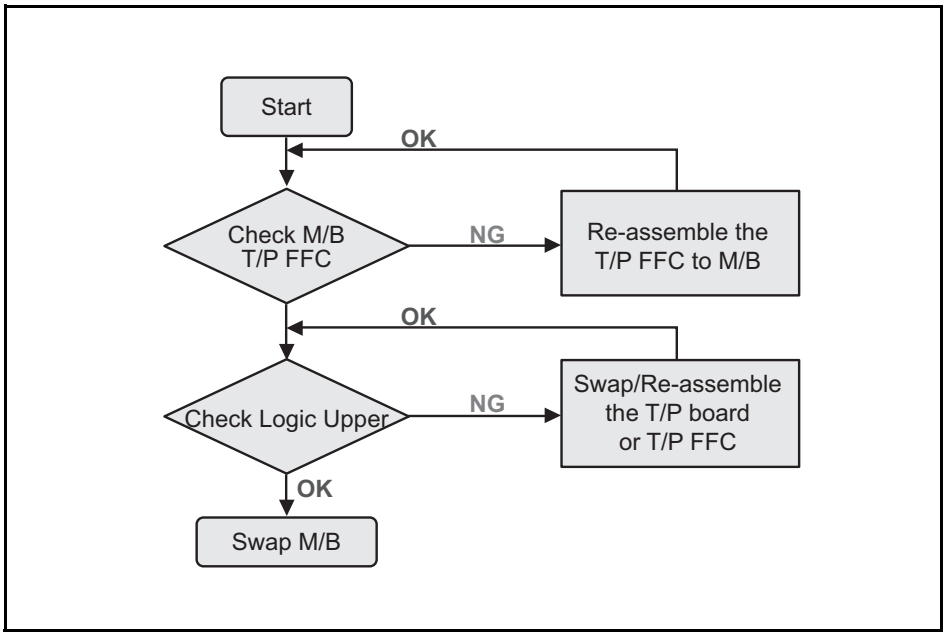


Figure 1-60. Touchpad Failure

Internal Speaker Failure

If the internal speaker fails, perform the following:

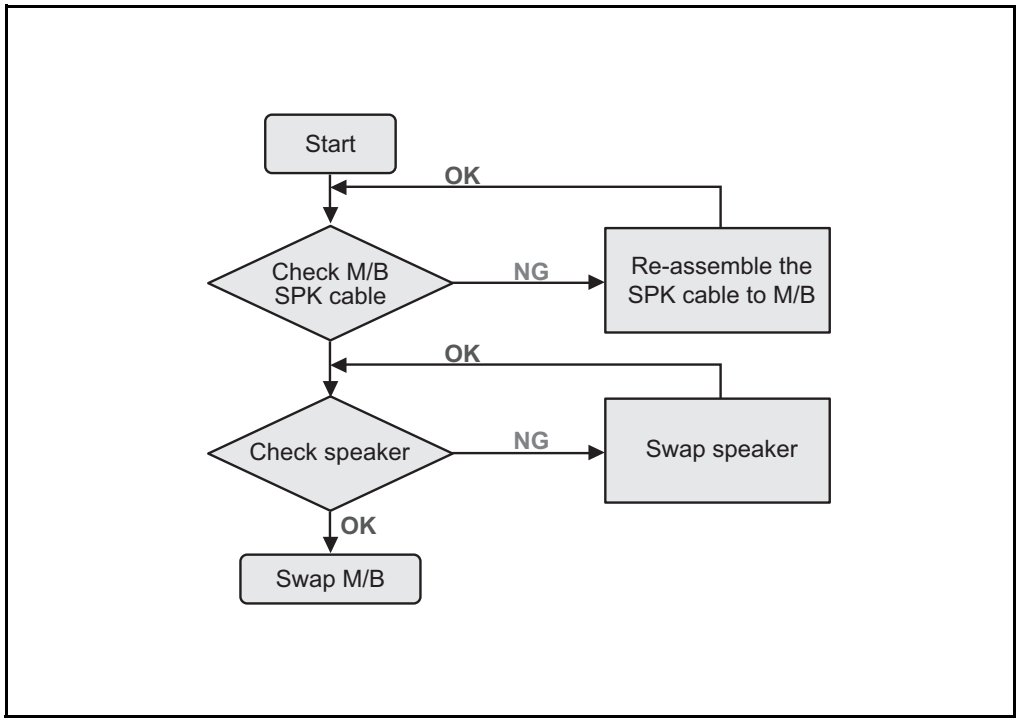


Figure 1-61. Internal Speaker Failure

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:

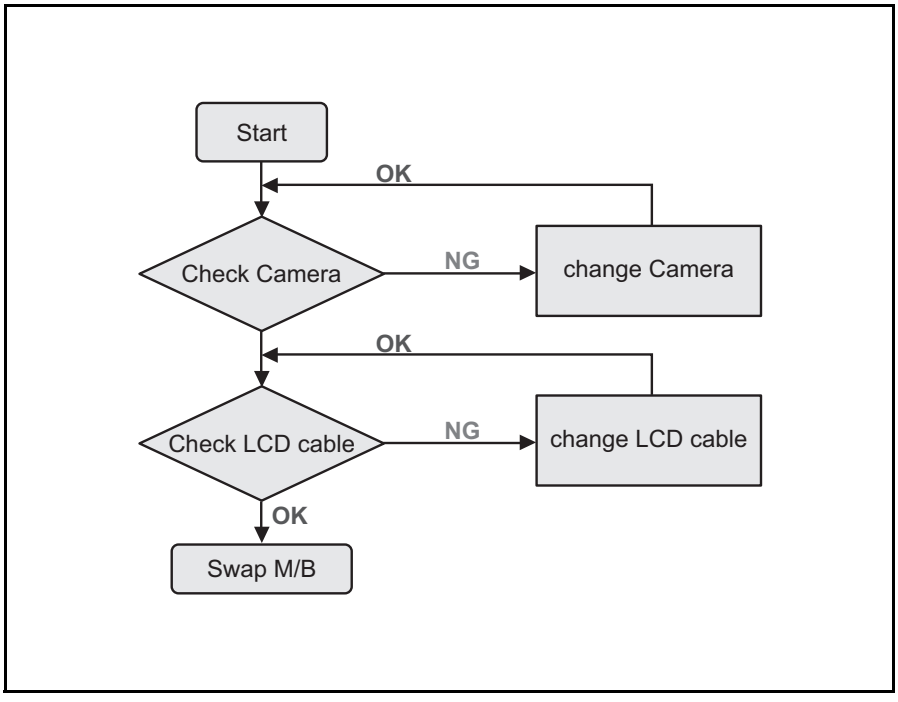


Figure 1-62. Internal Microphone Record Failure

USB3.0 Failure

If the USB function fails, perform the following:

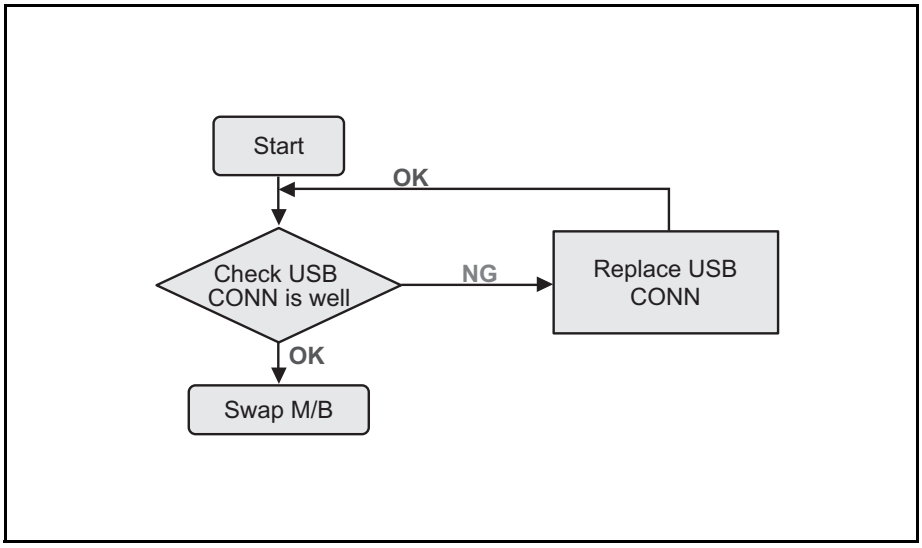


Figure 1-63. USB3.0 Failure

Wireless Function Test Failure

If the wireless function test fails, perform the following:

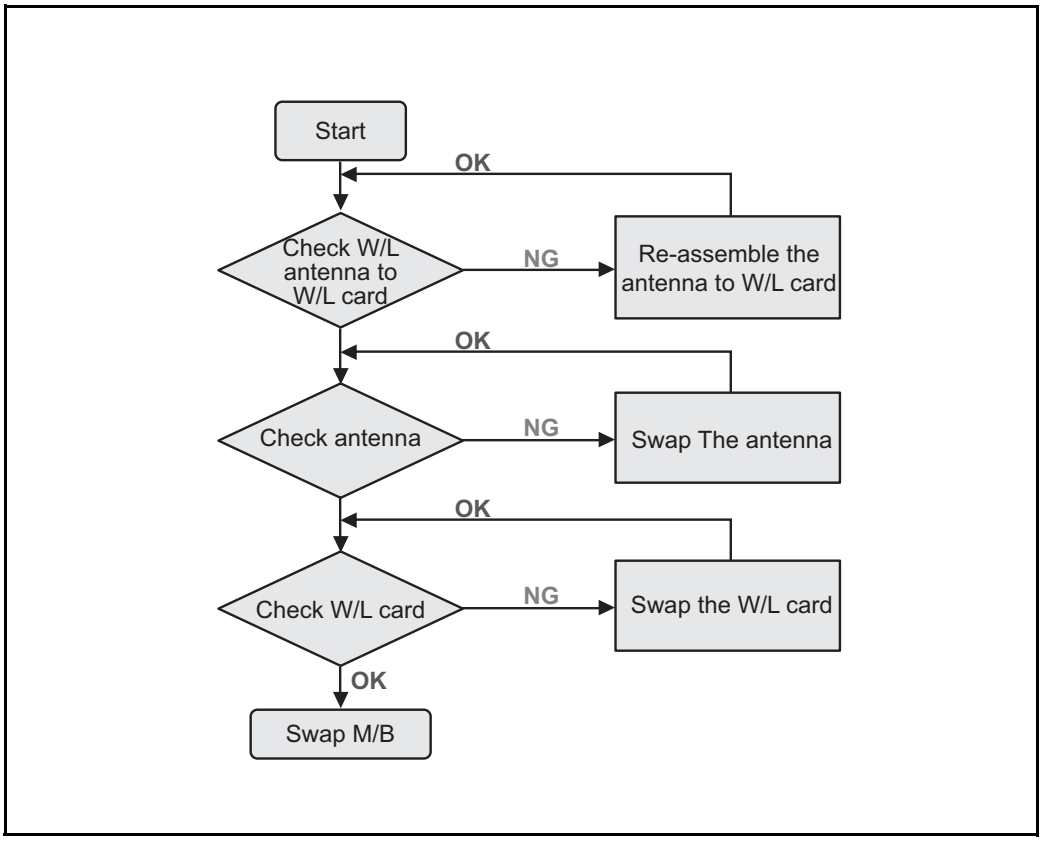


Figure 1-64. Wireless Function Test Failure

Bluetooth Function Test Failure

If the Bluetooth function test fails, perform the following:

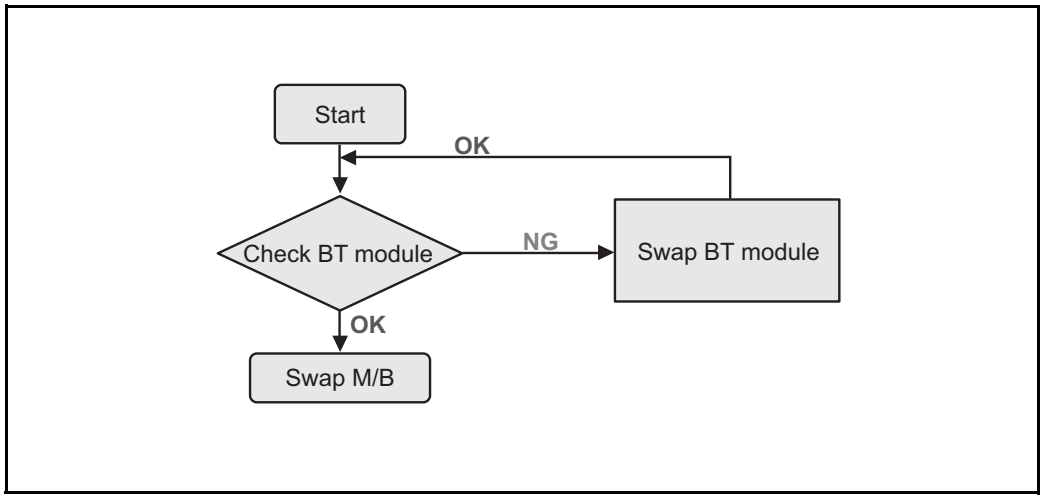


Figure 1-65. Bluetooth Function Test Failure

Units Thermal Failure

If the units thermal fails, perform the following:

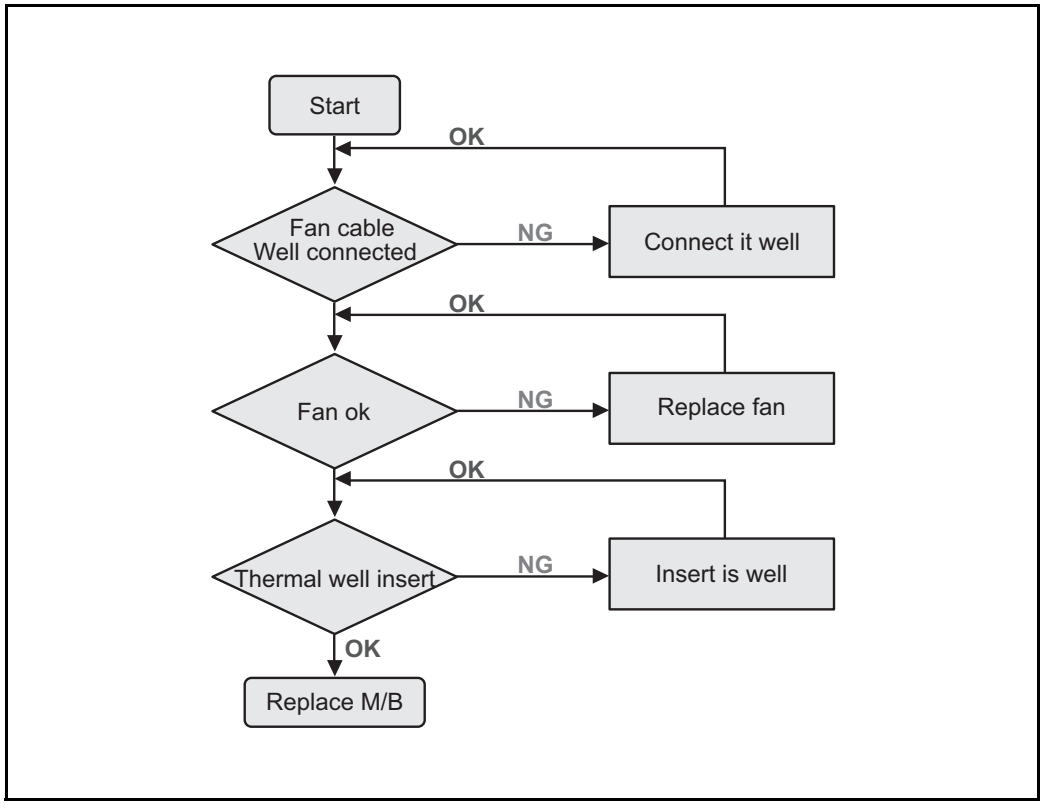


Figure 1-66. Units Thermal Failure

Cosmetic Failure

If the cosmetic fails, perform the following:

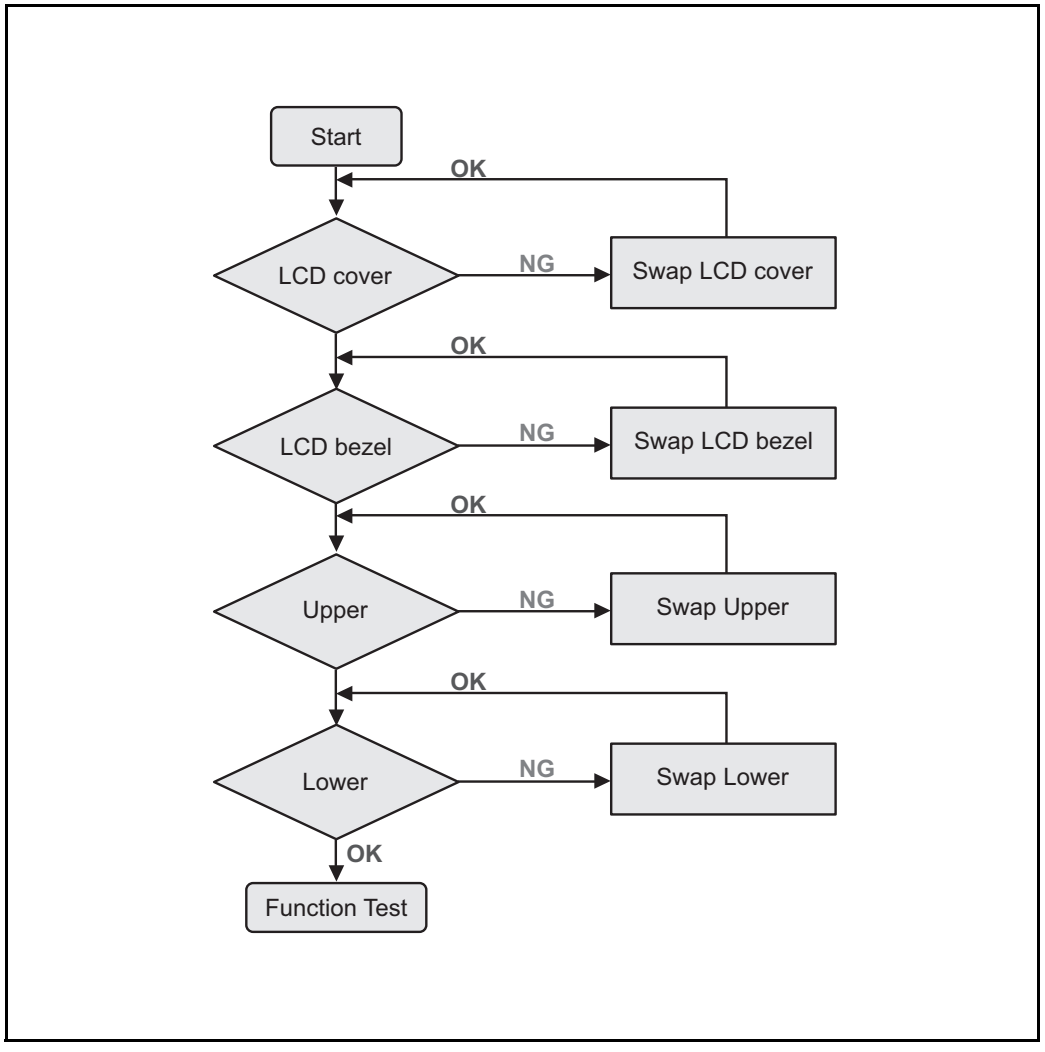


Figure 1-67. Cosmetic Failure

Other Functions Failure

If other functions such as the HDMI switch, extend MIC, extend speaker fail, USB3.0 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 near RAM connector as shown on the following illustration.

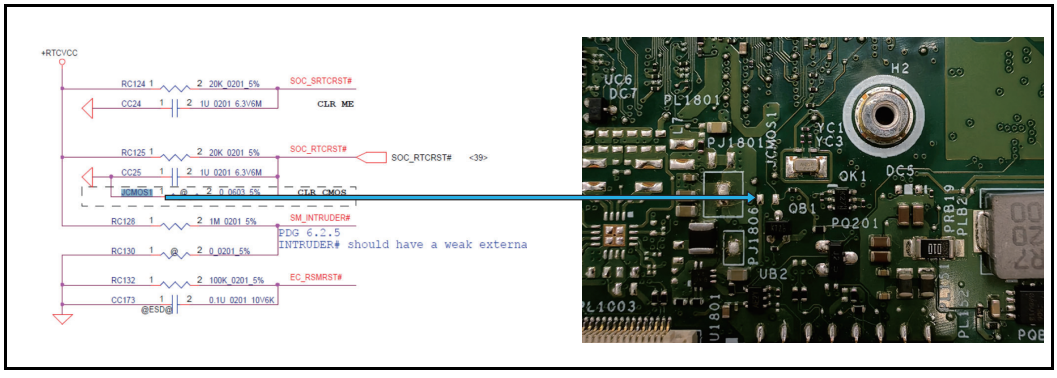


Figure 1-1. Location of CLRP1

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 **1-60**).

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

Main Assembly

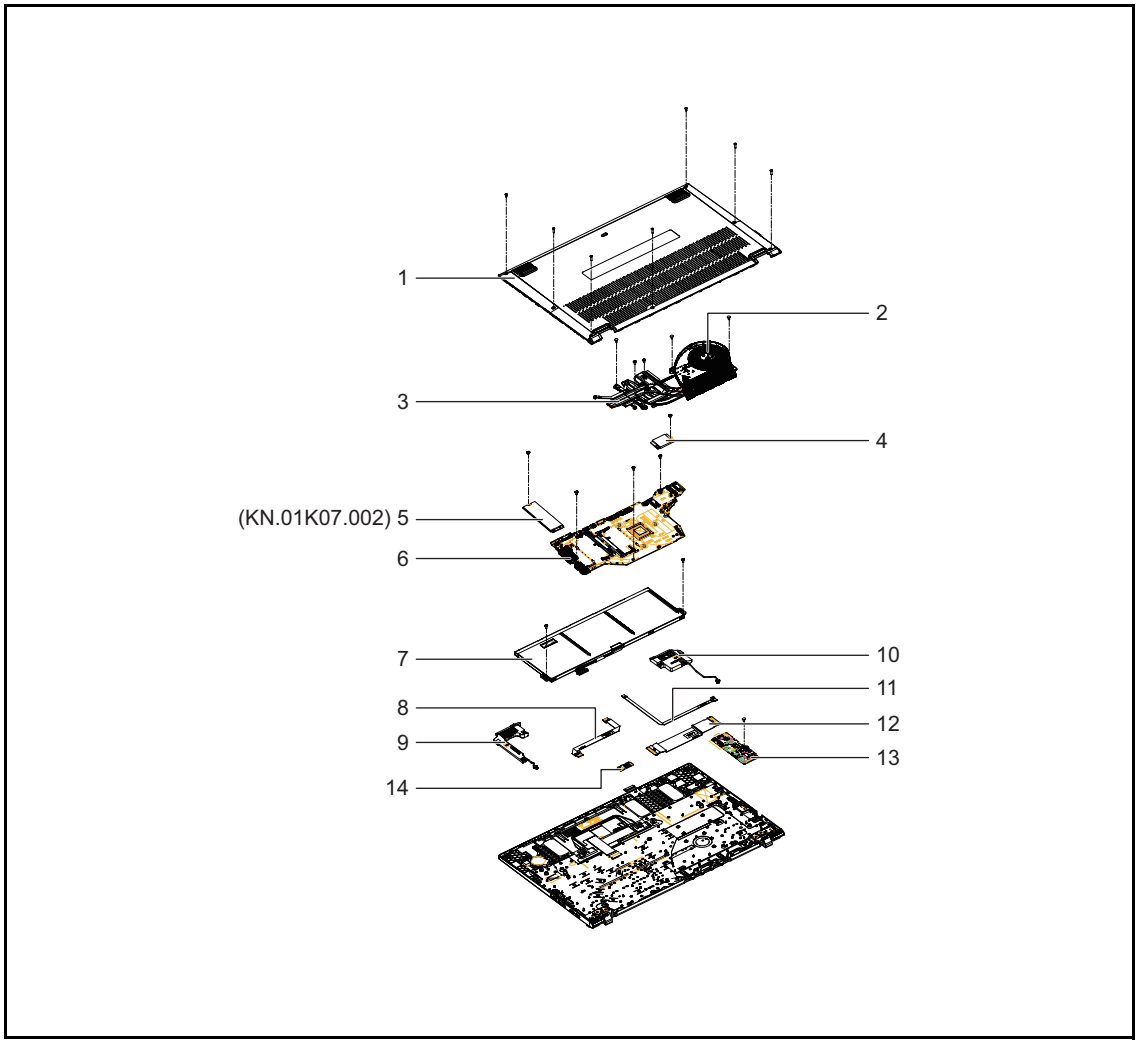


Figure 1-68. Main Assembly Exploded Diagram

Table 1-16. Assembly Exploded Diagram

No.	Acer Description
1	LOWER CASE SILVER
2	FAN FOR H CPU
3	THERMAL MODULE UMA W/O FAN CPU H
4	Wireless LAN Intel 802.11ax (Wi-Fi 6) BT5.2 AX201.NGWG.NVW Intel 2x2 M.2 2230 CNVi NewOTP
5	Flash Disk KINGSTON SSD NAND 1024GB OM8PGP41024Q-AA LF+HF
6	Mainboard AG15-72P Intel CI31315U UMA_CN

Table 1-16. Assembly Exploded Diagram (Continued)

No.	Acer Description
7	Battery PANASONIC Typ.53Wh 4590mAh 3S1P AP23A5L 248x84.4x5.5(mm) AP23A 11.55V 70W Polymer (production by PECSZ)
8	FFC CABLE FOR TP
9	SPEAKER L+R KIT
10	
11	FFC CABLE FOR HALL SENSOR BOARD
12	FFC CABLE FOR IO BOARD
13	BOARD IO
14	BOARD HALL SENSOR

Upper Case Assembly

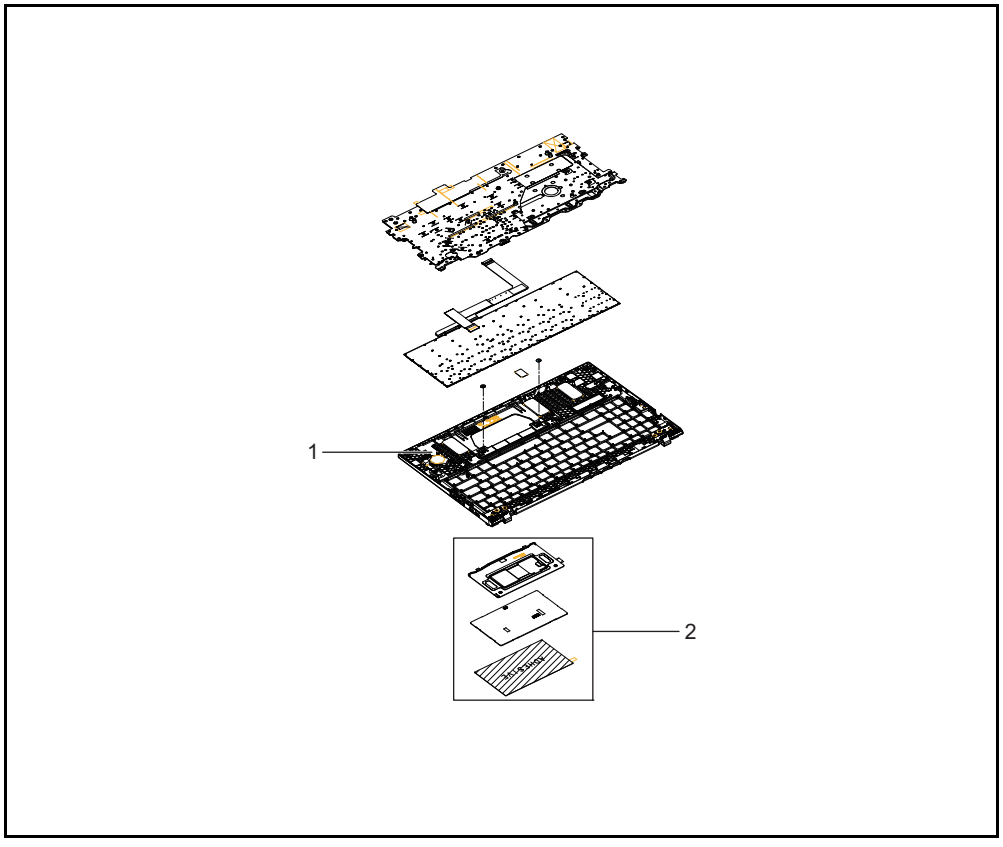


Figure 1-69. Upper Case Assembly Exploded Diagram

Table 1-17. Upper Case Assembly Exploded Diagram

No.	Description
1	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 99KS US International NK.I151S.22R
2	TOUCH PAD ASSY SILVER FOCALTECH NC.24611.0CT

LCD Assembly

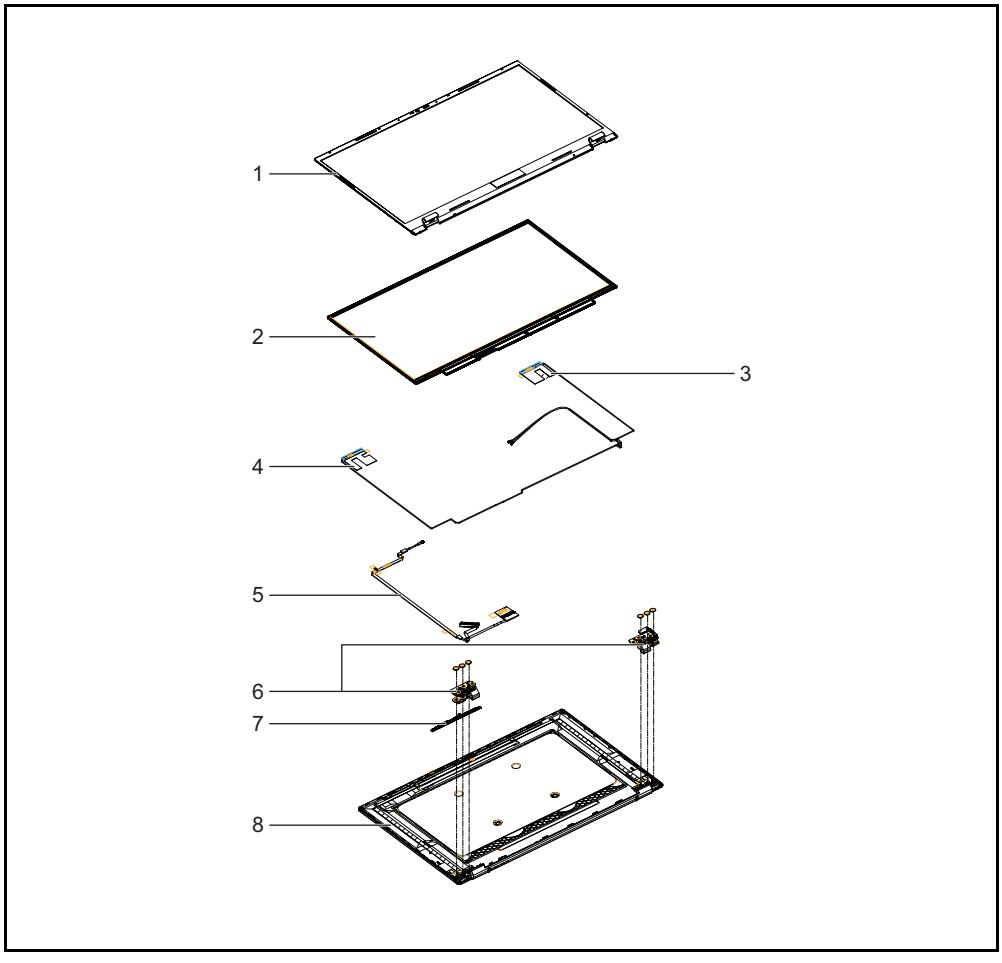


Figure 1-70. LCD Assembly Exploded Diagram

Table 1-18. LCD Assembly Exploded Diagram

No.	Description
1	LCD BEZEL BLACK
2	LED LCD Panel AUO 15.6"W FHD IPS None Glare B156HAN02.1 H/W JA 300nit NTSC 45% 60Hz 25ms 800:1 (Narrow border, 3.2t max)
3	ANTENNA WLAN MAIN
4	ANTENNA WLAN AUX
5	CABLE LCD EDP
6	LCD HINGE L+R KIT
7	Camera CHICONY FHD FF C7FOF10 OV02E (CSP) SPCV6200A 1L4C170A1(w/BG) ZTS6534SAC USB , sHDR,4.2T
8	LCD COVER SILVER

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 1-19. FRU List

Category	Acer Description
ACCESSORY	
	C to C 100W Charging Cable Acer C to C 100W Charging Cable 1M ACB510
	Acer Acer 2.4G Mouse AMR100 Black; with acer logo (Bulk Pack)(Bubble Mouse)
	Acer PROTECTIVE SLEEVE PROTECTIVE SLEEVE ABG7F0 DUAL TONE DARK GRAY WITH FRONT POCKET FOR 15.6" E/F n CHROMEBOOK SERIES (PE BAG)
ADAPTER	
	Adapter Chicony Power A065RPB9P 65W Type C Brick 5V/3A_9V/ 3A_12V/3A_15V/3A_20V_3.25A Black 100cc
	Adapter DELTA ADP-65KE DA 65W Type C Brick 5V/3A_9V/ 3A_12V/3A_15V/3A_20V_3.25A Black TCO9.0, PCR 50%, with LOGO
	Adapter LITE-ON PA-1650-58AA 65W Type C Brick 5V/3A_9V/ 3A_12V/3A_15V/3A_20V_3.25A Black TCO9.0, PCR 50%, with LOGO
	Adapter Chicony Power A065RP99P 65W Type C Brick 5V/3A_9V/ 3A_12V/3A_15V/3A_20V_3.25A Black TCO9.0, PCR 50%, with LOGO
BATTERY	
	Battery PANASONIC Typ.53Wh 4590mAh 3S1P AP23A5L 248x84.4x5.5(mm) AP23A 11.55V 70W Polymer (production by PECSZ)
	Battery CosMx Typ.53Wh 4661mAh 3S1P AP23ABL 248x84.4x5.5(mm) AP23A 11.37V 65W Li-Ion TI BQ40Z555 FW5.12
	Battery Atemitech Typ.53Wh 4700mAh 3S1P AP23A7L 248x84.4x5.5(mm) AP23A 11.25V 70W Li-Ion
	Battery ATL Typ.53Wh 4700mAh 3S1P AP24CAL 248x84.4x5.5(mm) AP24C 11.25V 70W Li-Ion Renesas FW2.10
	Battery LGES Typ.53Wh 4700mAh 3S1P AP23A8L 248x84.4x5.5(mm) AP23A 11.28V 70W Li-Ion

Table 1-19. FRU List

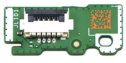
Category	Acer Description
BOARD	
	BOARD IO
	BOARD HALL SENSOR
CABLE	
	FFC CABLE FOR IO BOARD
	FFC CABLE FOR HALL SENSOR BOARD
	FFC CABLE FOR TP
	ANTENNA WLAN MAIN
	ANTENNA WLAN AUX
	CABLE LCD EDP
CAMERA	
	Camera CHICONY FHD FF C7FOF10 OV02E (CSP) SPCV6200A 1L4C170A1(w/BG) ZTS6534SAC USB , sHDR,4.2T

Table 1-19. FRU List

Category	Acer Description
	Camera Tech-Front FHD FF YHIA OV02E (CSP) RTS5859 DS41131C (BG) SPG01R8HT4H-1 USB , sHDR,4.2T
	Camera Supreme FHD FF BNFDF5007-A GC2607 RTS5853N TA-2281A MSM261DGT001 USB ,4.2T, BPO
	Camera AzureWave FHD FF AM-5SF52DE-A SC200PC SPCA2093N2 HX-F0255A MSM261DGT006 USB 4.2T
FAN	
	FAN FOR H CPU
	FAN FOR U CPU
HDD	
	Flash Disk KINGSTON SSD NAND 1024GB OM8PGP41024Q-AA LF+HF
	Flash Disk HYNIX SSD NAND 1024GB M.2 2280 PVC10 1024G HFS001TEM9X170N LF+HF
	Flash Disk SSD NAND 1024GB Turnkey PM4 LF+HF
	Flash Disk APACER SSD NAND 256GB 3D TLC AP2JPB4480E-O301 LF+HF
	Flash Disk KINGSTON SSD NAND 256GB OM8PGP4256Q-AA LF+HF
	Flash Disk SSD NAND 256GB Turnkey PM4 LF+HF
	Flash Disk KINGSTON SSD NAND 512GB OM8PGP4512Q-AA LF+HF
	Flash Disk HYNIX SSD NAND 512GB M.2 2280 PVC10 512G HFS512GEM9X170N LF+HF
	Flash Disk SSD NAND 512GB Turnkey PM4 LF+HF
KEYBOARD ASSEMBLY	
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 99KS US International NK.I151S.22R
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 99KS Greek NK.I151S.22K
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 99KS Arabic NK.I151S.22H
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 99KS Traditional Chinese NK.I151S.22J

Table 1-19. FRU List

Category	Acer Description
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 99KS Russian NK.I151S.22M
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 99KS US International w/ Hebrew NK.I151S.22S
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 99KS Thailand NK.I151S.22Q
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 99KS Korean NK.I151S.22L
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 99KS Ukrainian NK.I151S.22N
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 99KS Persian NK.I151S.22P
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 99KS US International w/ Canadian French NK.I151S.22T
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 99KS US International w/ Bulgaria NK.I151S.22U
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 100KS UK NK.I151S.23D
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 100KS German NK.I151S.232
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 100KS Swiss/G NK.I151S.23B
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 100KS Belgium NK.I151S.22W
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 100KS Danish NK.I151S.22Z
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 100KS Italian NK.I151S.234
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 100KS French NK.I151S.231
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 100KS Hungarian NK.I151S.233
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 100KS Norwegian NK.I151S.236
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 100KS Portuguese NK.I151S.237
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 100KS Spanish NK.I151S.239

Table 1-19. FRU List

Category	Acer Description
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 100KS Turkish NK.I151S.23C
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 100KS Sweden NK.I151S.23A
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 100KS FR/Arabic NK.I151S.230
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 100KS Nordic NK.I151S.235
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 100KS SLO/CRO NK.I151S.238
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 100KS CZ/SK NK.I151S.22Y
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 100KS Brazilian Portuguese NK.I151S.22X
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 100KS ALA-Spanish NK.I151S.22V
	KEYBOARD ASSY SILVER ESHELL NBL W/ UPPER CASE SR05T_A30B 103KS Japanese NK.I151S.23E
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 99KS US International NK.I151S.1VX/NK.I1513.3M3/ NK.I151B.0CR/NK.I1517.1J9
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 99KS Greek NK.I151S.1VR/NK.I1513.3LX/ NK.I151B.0CK/NK.I1517.1J3
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 99KS Arabic NK.I151S.1VP/NK.I1513.3LV/ NK.I151B.0CH/NK.I1517.1J1
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 99KS Traditional Chinese NK.I151S.1VQ/ NK.I1513.3LW/NK.I151B.0CJ/NK.I1517.1J2
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 99KS Russian NK.I151S.1VT/NK.I1513.3LZ/ NK.I151B.0CM/NK.I1517.1J5
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 99KS US International w/ Hebrew NK.I151S.1VY/ NK.I1513.3M4/NK.I151B.0CS/NK.I1517.1JA
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 99KS Thailand NK.I151S.1VW/NK.I1513.3M2/ NK.I151B.0CQ/NK.I1517.1J8

Table 1-19. FRU List

Category	Acer Description
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 99KS Korean NK.I151S.1VS/NK.I1513.3LY/ NK.I151B.0CL/NK.I1517.1J4
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 99KS Ukrainian NK.I151S.1VU/NK.I1513.3M0/ NK.I151B.0CN/NK.I1517.1J6
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 99KS Persian NK.I151S.1VV/NK.I1513.3M1/ NK.I151B.0CP/NK.I1517.1J7
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 99KS US w/ Canadian French NK.I151S.1VZ/ NK.I1513.3M5/NK.I151B.0CT/NK.I1517.1JB
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 99KS US International w/ Bulgaria NK.I151S.1W0/ NK.I1513.3M6/NK.I151B.0CU/NK.I1517.1JC
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 100KS UK NK.I151S.1WK/NK.I1513.3MR/ NK.I151B.0DD/NK.I1517.1JX
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 100KS German NK.I151S.1W8/NK.I1513.3ME/ NK.I151B.0D2/NK.I1517.1JL
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 100KS Swiss/G NK.I151S.1WH/NK.I1513.3MP/ NK.I151B.0DB/NK.I1517.1JV
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 100KS Belgium NK.I151S.1W2/NK.I1513.3M8/ NK.I151B.0CW/NK.I1517.1JE
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 100KS Danish NK.I151S.1W5/NK.I1513.3MB/ NK.I151B.0CZ/NK.I1517.1JH
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 100KS Italian NK.I151S.1WA/NK.I1513.3MG/ NK.I151B.0D4/NK.I1517.1JN
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 100KS French NK.I151S.1W7/NK.I1513.3MD/ NK.I151B.0D1/NK.I1517.1JK
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 100KS Hungarian NK.I151S.1W9/NK.I1513.3MF/ NK.I151B.0D3/NK.I1517.1JM
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 100KS Norwegian NK.I151S.1WC/NK.I1513.3MJ/ NK.I151B.0D6/NK.I1517.1JQ

Table 1-19. FRU List

Category	Acer Description
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 100KS Portuguese NK.I151S.1WD/NK.I1513.3MK/ NK.I151B.0D7/NK.I1517.1JR
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 100KS Spanish NK.I151S.1WF/NK.I1513.3MM/ NK.I151B.0D9/NK.I1517.1JT
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 100KS Turkish NK.I151S.1WJ/NK.I1513.3MQ/ NK.I151B.0DC/NK.I1517.1JW
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 100KS Sweden NK.I151S.1WG/NK.I1513.3MN/ NK.I151B.0DA/NK.I1517.1JU
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 100KS FR/Arabic NK.I151S.1W6/NK.I1513.3MC/ NK.I151B.0D0/NK.I1517.1JJ
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 100KS Nordic NK.I151S.1WB/NK.I1513.3MH/ NK.I151B.0D5/NK.I1517.1JP
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 100KS SLO/CRO NK.I151S.1WE/NK.I1513.3ML/ NK.I151B.0D8/NK.I1517.1JS
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 100KS CZ/SK NK.I151S.1W4/NK.I1513.3MA/ NK.I151B.0CY/NK.I1517.1JG
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 100KS Brazilian Portuguese NK.I151S.1W3/ NK.I1513.3M9/NK.I151B.0CX/NK.I1517.1JF
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 100KS ALA-Spanish NK.I151S.1W1/NK.I1513.3M7/ NK.I151B.0CV/NK.I1517.1JD
	KEYBOARD ASSY SILVER COPILOT NBL W/ UPPER CASE SR05T_A50B 103KS Japanese NK.I151S.1WL
LCD BEZEL	
	LCD BEZEL BLACK

Table 1-19. FRU List

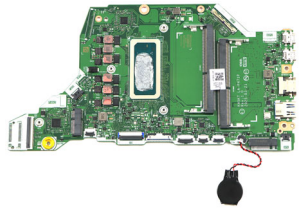
Category	Acer Description
LCD COVER	
	LCD COVER SILVER
LCD PANEL	
	LED LCD Panel AUO 15.6"W FHD IPS None Glare B156HAN02.1 H/W JA 300nit NTSC 45% 60Hz 25ms 800:1 (Narrow border, 3.2t max)
	LED LCD Panel CSOT 15.6"W FHD IPS None Glare MNF601BS1-1 V02 300nit NTSC 45% 60Hz 25ms 1200:1 (Narrow border, 3.2t max)
	LED LCD Panel HKC 15.6"W FHD IPS None Glare MB156CS01-A Ver 1.0 300nit NTSC 45% 60Hz 25ms 600:1 (Narrow, 3.2t max)
	LED LCD Panel 15.6"W FHD IPS None Glare KD156N29-30NI-A010 300nit NTSC 45% 60Hz 30ms 1200:1
	LED LCD Panel AUO 15.6"W FHD TN None Glare B156HTN06.1 H/W 7A 220nit NTSC 45% 60Hz 8ms 400:1 (Narrow border, 3.2t max)
	LED LCD Panel INNOLUX 15.6"W FHD TN None Glare N156HGA-EA3 C1 220nit NTSC 45% 60Hz 10ms 500:1 (narrow, 3.2t max)
	LED LCD Panel BOE 15.6"W FHD TN None Glare NT156FHM-N61 V8.0 220nit NTSC 45% 60Hz 10ms 500:1 (Narrow border, 3.2t max)
LOWER CASE	
	LOWER CASE SILVER
MAINBOARD	
	Mainboard AG15-72P Intel CI31315U UMA_CN
	Mainboard AG15-72P Intel C5120U UMA_CN
	Mainboard AG15-72P Intel C7150U UMA_CN

Table 1-19. FRU List

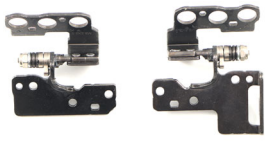
Category	Acer Description
MEMORY	
	Memory KINGSTON SO-DIMM DDRIV 3200 16GB ACR32D4S2S8MF-16 LF+HF MI-F16
	Memory HYNIX SO-DIMM DDRIV 3200 16GB HMAG78DXNSB097N LF+HF RG Prime 1znm D-die 1Rx8
	Memory Goldkey SO-DIMM DDRIV 3200 16GB NMSO416E84-3200EA00 LF+HF GK-SS
	Memory KINGSTON SO-DIMM DDRIV 3200 8GB ACR32D4S2S1MF-8 LF+HF MI-F16
	Memory HYNIX SO-DIMM DDRIV 3200 8GB HMAG66DXNSB097N LF+HF 1024*16 RG Prime 1znm D-die
	Memory Goldkey SO-DIMM DDRIV 3200 8GB NMSO480E84-3200EA00 LF+HF GK-SS
METAL	
	LCD HINGE L+R KIT
MISCELLANEOUS	
	LCD COVER PANEL ADHESIVE
	EDP CABLE ALIGNMENT MYLAR TOP FRU
	EDP CABLE ALIGNMENT MYLAR BTM FRU
	LCD ALIGNMENT MYLAR 10x5x0.4mm
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

Table 1-19. FRU List

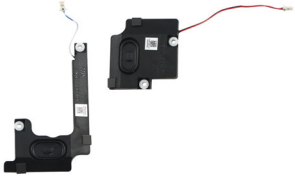
Category	Acer Description
	POWER CORD 1M BLACK JAPAN
	POWER CORD 1M BLACK CHINA
	POWER CORD 1M BLACK INDIA
	POWER CORD 1M BLACK SWISS
	POWER CORD 1M BLACK UK
	POWER CORD 1M BLACK TWN
	POWER CORD 1M BLACK ARGENTINA - NEW
	POWER CORD 1M BLACK KOREA
	POWER CORD 1M BLACK US
	POWER CORD 1M BLACK BRAZIL
SPEAKER/MICROPHONE	
	SPEAKER L+R KIT
THERMAL	
	THERMAL MODULE UMA W/O FAN CPU H
	THERMAL MODULE UMA W/O FAN CPU U
TOUCHPAD	
	TOUCH PAD ASSY SILVER FOCALTECH NC.24611.0CT
	TOUCH PAD ASSY SILVER PIXART NC.24611.0CW
WIRELESS LAN	
	Wireless LAN Intel 802.11ax (Wi-Fi 6) BT5.2 AX201.NGWG.NVW Intel 2x2 M.2 2230 CNVi NewOTP
	Wireless LAN AZUREWAVE 802.11ax (Wi-Fi 6) BT5.4 MT7920_AW-XB647NF: E key Mediatek 2x2 M.2 2230 PCIe
	Wireless LAN Liteon 802.11ax (Wi-Fi 6) BT5.4 MT7920_WCBN807R-AA: E key Mediatek 2x2 M.2 2230 PCIe

Table 1-19. FRU List

Category	Acer Description
SCREWS	
	SCREW 2.5D 5.0L K 4.6D NI NL
	SCREW M M 2.0D 4.0L K 4.6D BNI NL
	SCREW M2.0L7.0D3.5T0.8K#1 N3PAC1
	SCREW M1.6L4.0D3.5T0.8K#1 N1PAC1
	SCREW 2.5D 2.5L K 8D 0.6T ZK NL
	SCREW 2D 1.7L K 7D 0.4T ZK NL
	SCREW 2.0D 2.5L K 5D 0.5T NI 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**.