Aspire Go 15
AG15-42P

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 Pack
- SSD Modules
- WLAN Module
- DIMM Modules
- Touchpad
- USB Board
- RTC Battery
- 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 AC Adapter and remove all cables from the system and its peripherals.

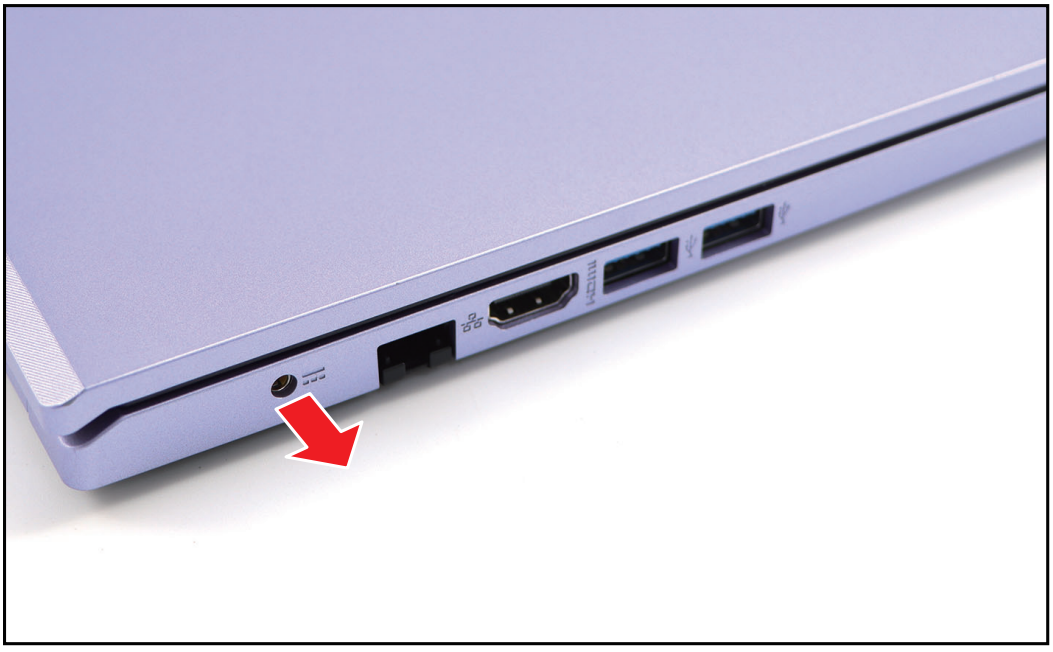


Figure 1-1. Disconnecting the Power Adapter

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.

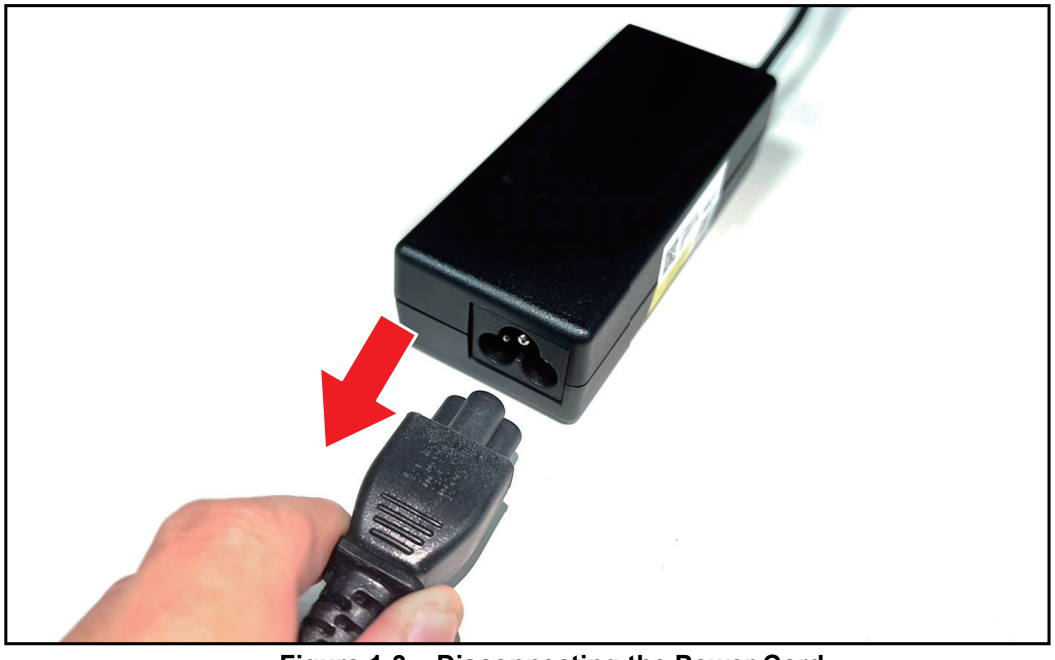


Figure 1-3. Disconnecting the Power Cord

Lower Case Removal

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

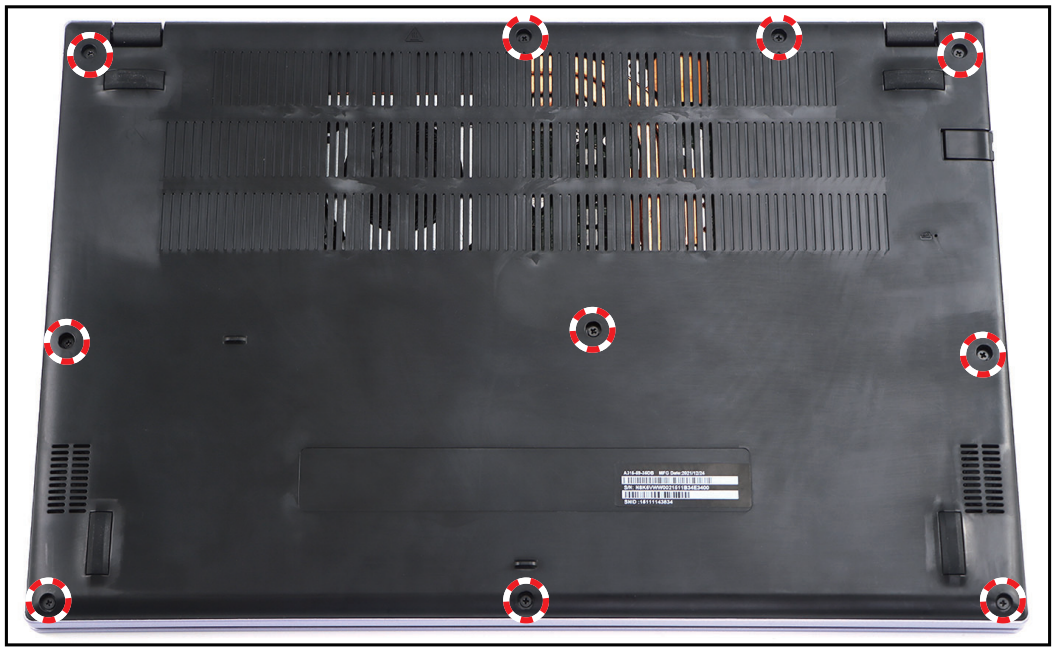


Figure 1-4. Removing the Screws

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

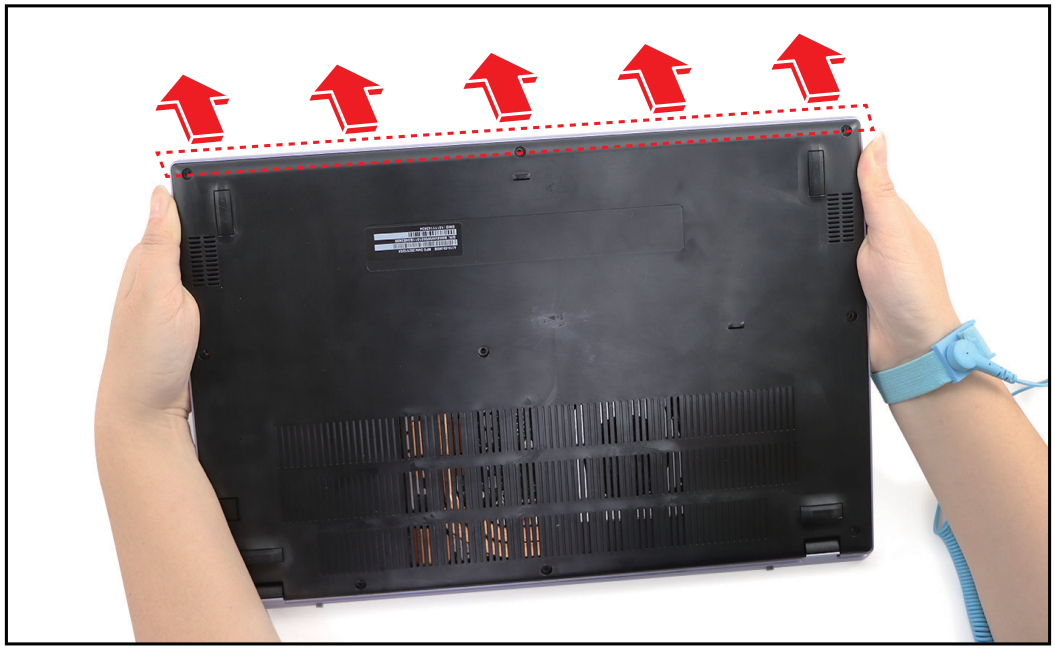


Figure 1-5. Releasing the Lower Case

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



Figure 1-6. Removing the Lower Case

4. Detach the acetate tape from the battery cable connector.

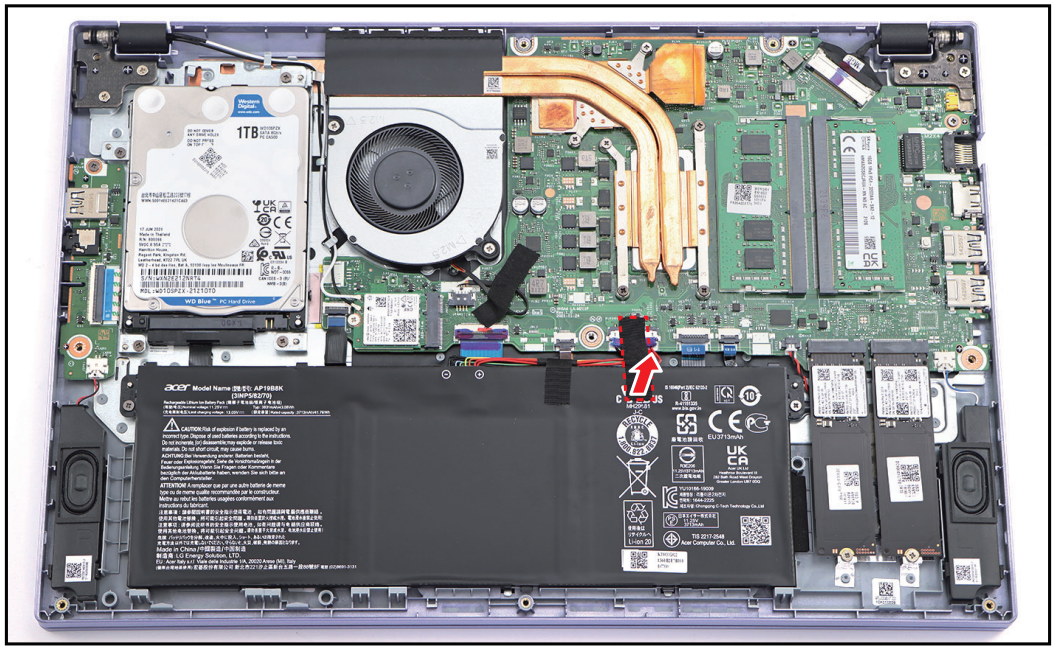


Figure 1-7. Detaching the Acetate Tape

5. Disconnect the battery cable from the mainboard connector.

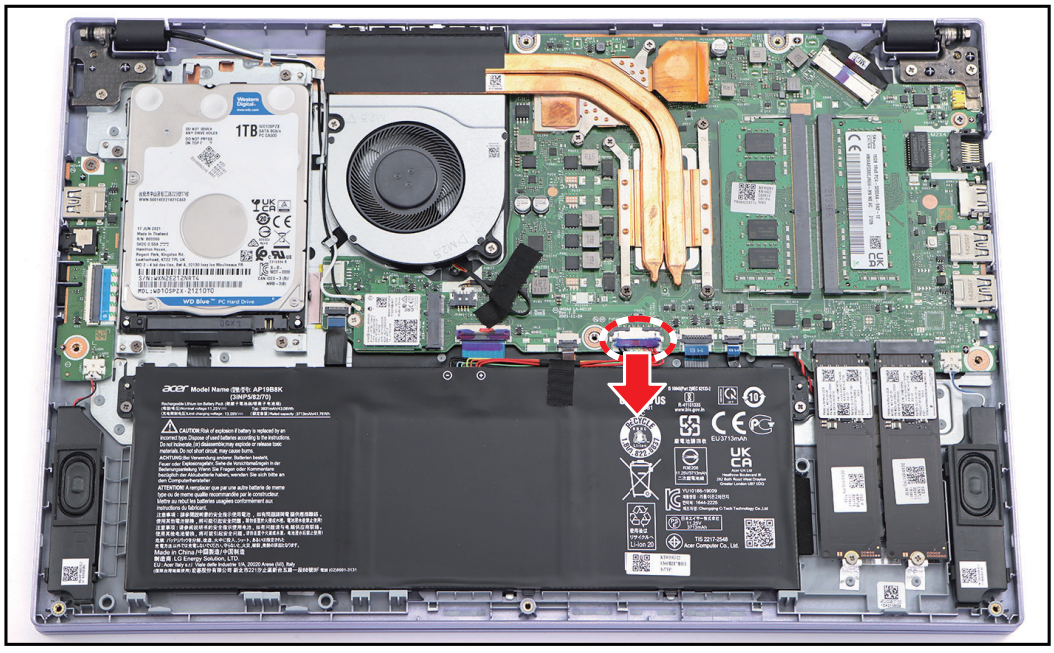


Figure 1-8. Disconnecting the Battery Cable

Table 1-1. Lower Case Screws

Screw Name	Screw Type	Torque	Quantity
M 2.5 x 6.0		2.55~3.0kgf.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.

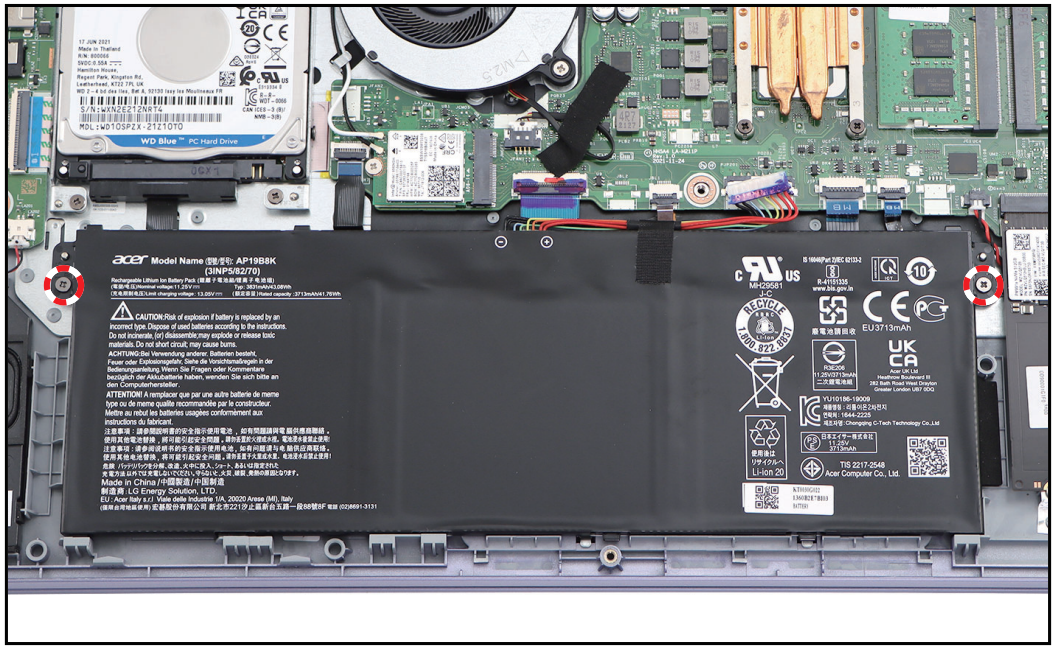


Figure 1-9. Removing the Screws

2. Release the battery latches and then remove the battery from its slot on the upper case.

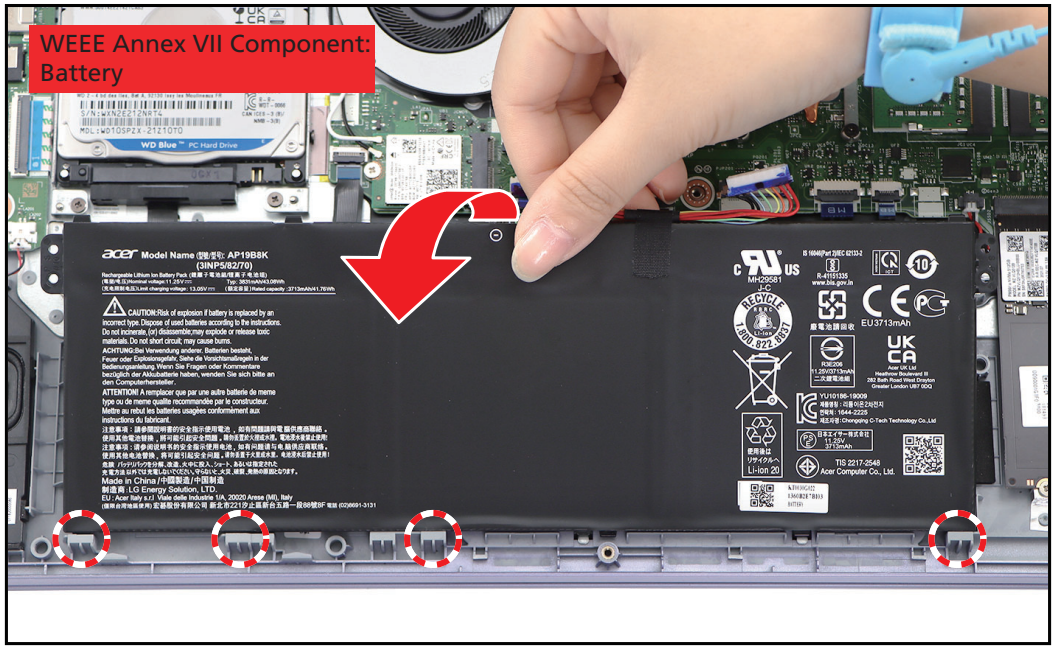


Figure 1-10. Removing the Battery

Table 1-2. Battery Screws

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

SSD1/SSD2 Module Removal

Prerequisite:

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

1. Remove the screw securing the SSD1 module to the upper case.

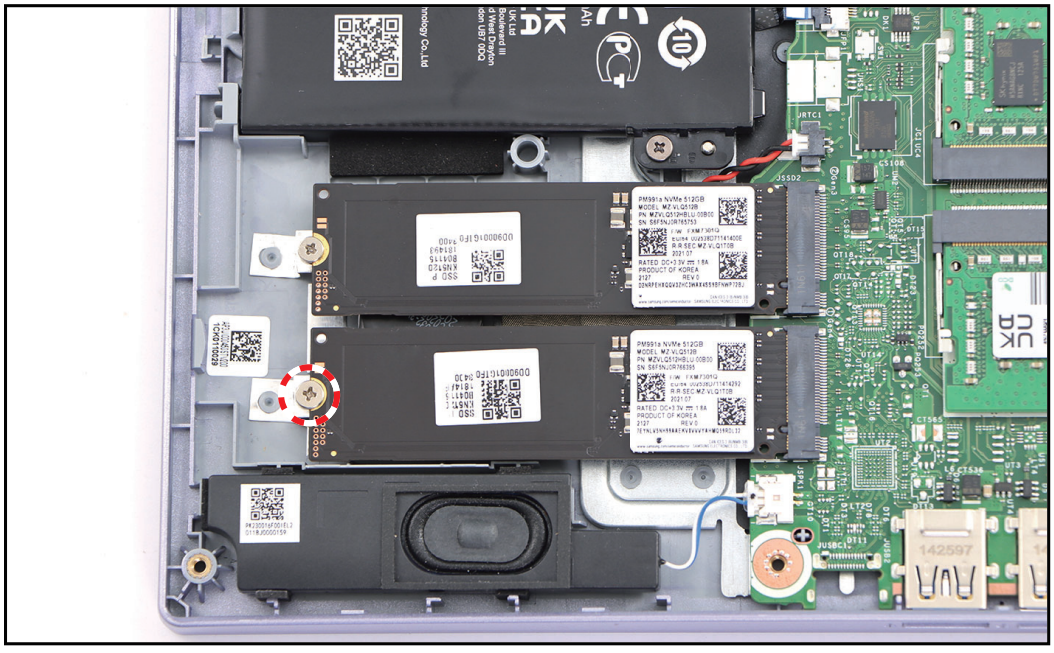


Figure 1-11. Removing the Screw

2. Pull to disconnect the SSD1 module from the mainboard connector. Then remove the SSD1 module.



Figure 1-12. Removing the SSD Module

3. Repeat steps 1~2 to remove the SSD2 module (if applicable).

Table 1-3. SSD Module Screw

Screw Name	Screw Type	Torque	Quantity
M 2.0 x 3.0		1.8~2.0kgf.cm	1

WLAN Module Removal

Prerequisite:

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

1. Disconnect the WLAN antenna cables.

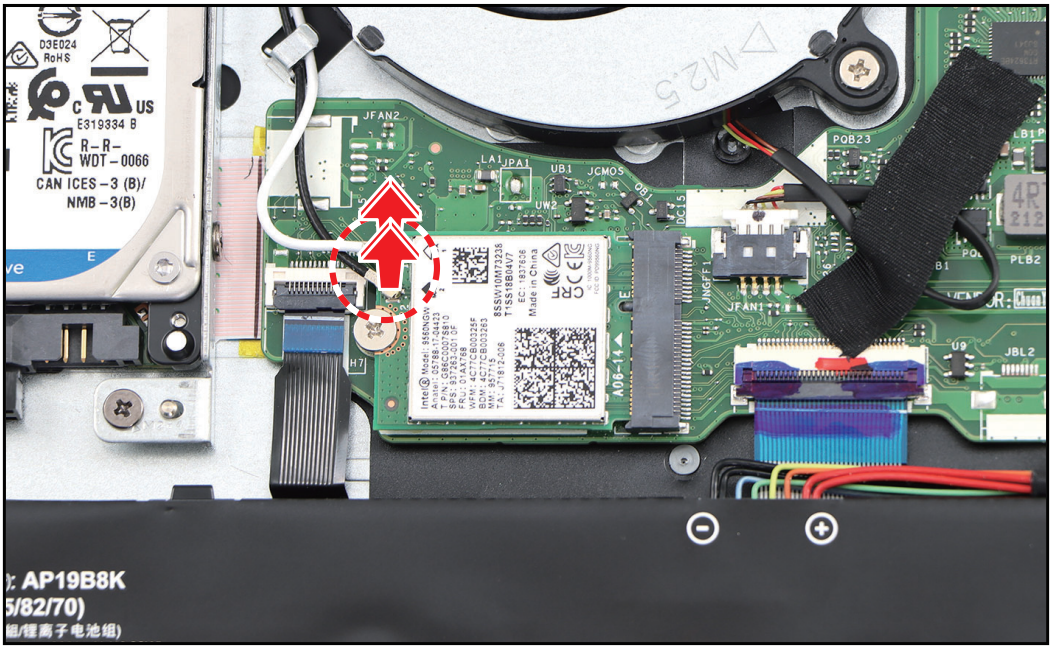


Figure 1-13. Disconnecting the WLAN Antenna Cables

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

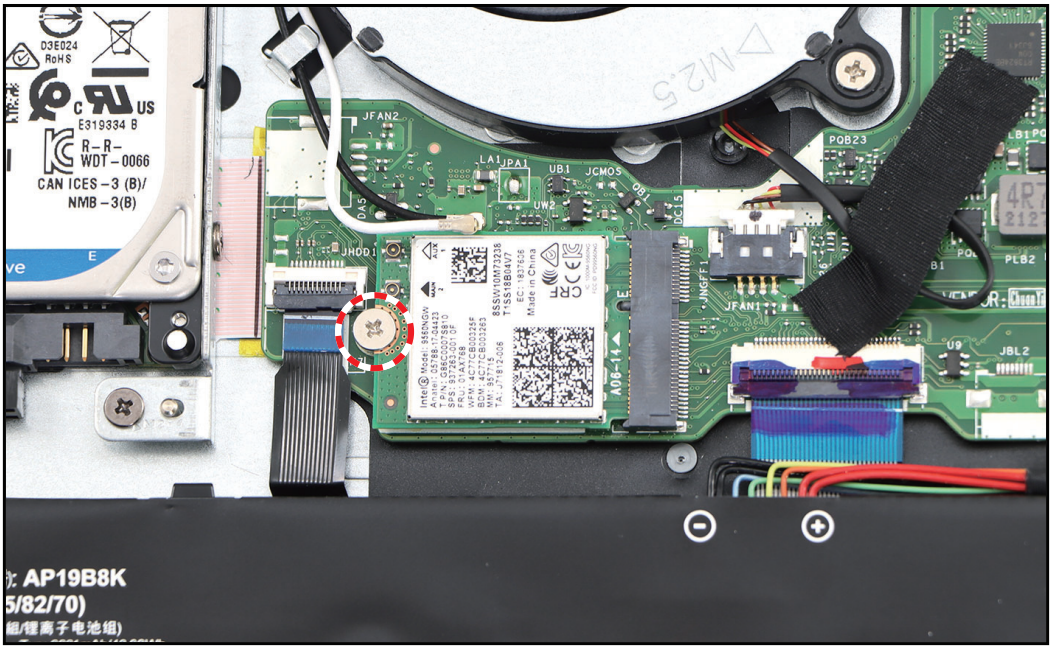


Figure 1-14. Removing the Screw

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

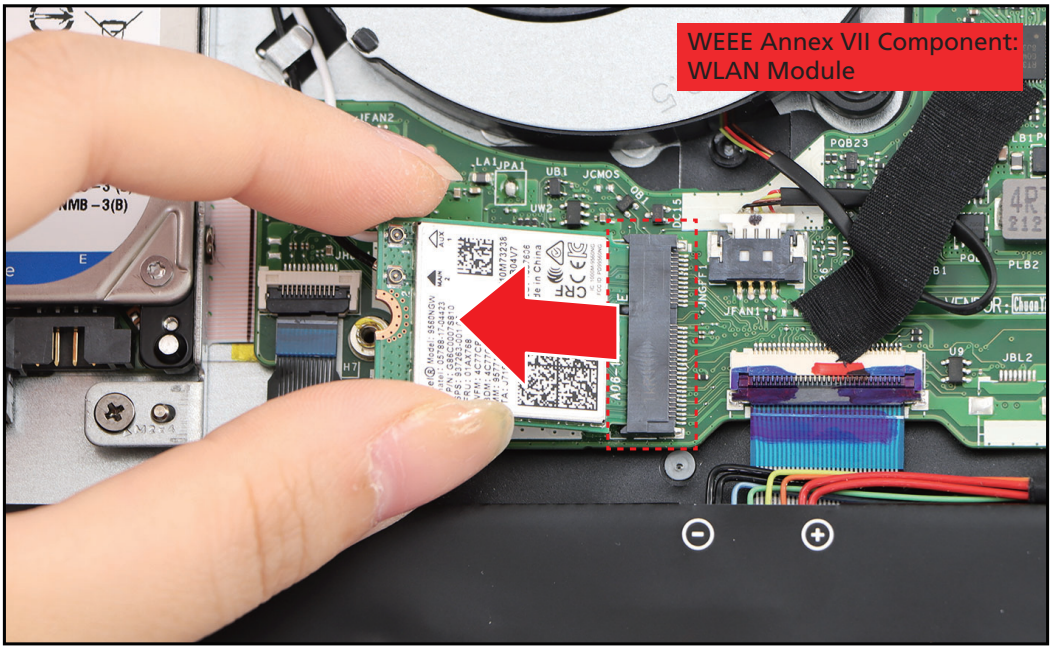


Figure 1-15. Removing the WLAN Module

Table 1-4. WLAN Module Screw

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

DIMM Module Removal

Prerequisite:

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

1. Push the module clips outwards.

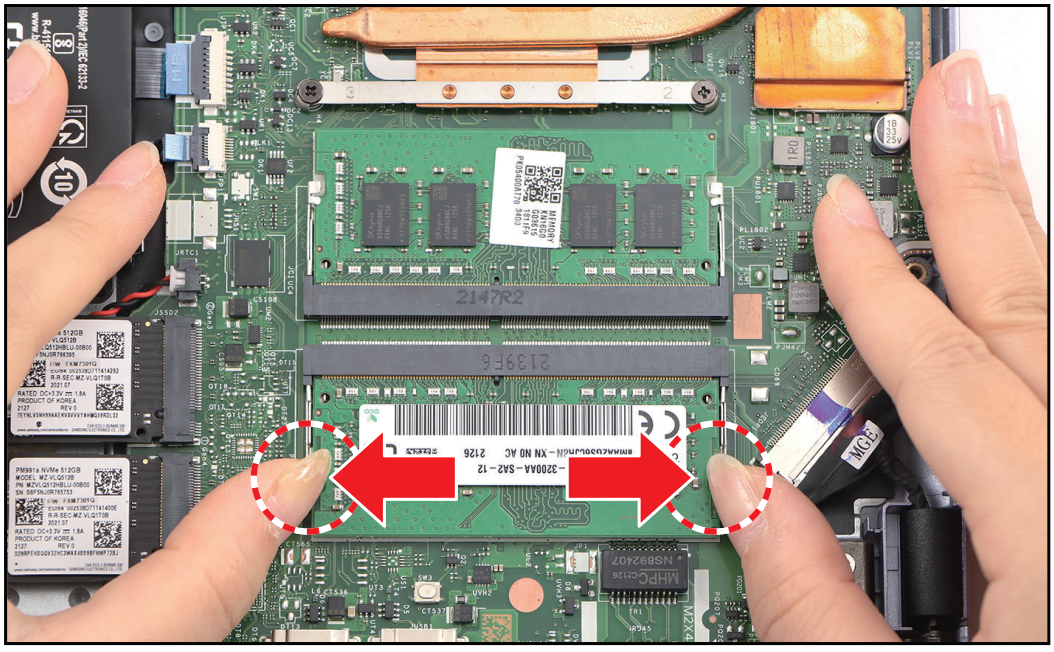


Figure 1-16. Unclipping the Module Clips

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

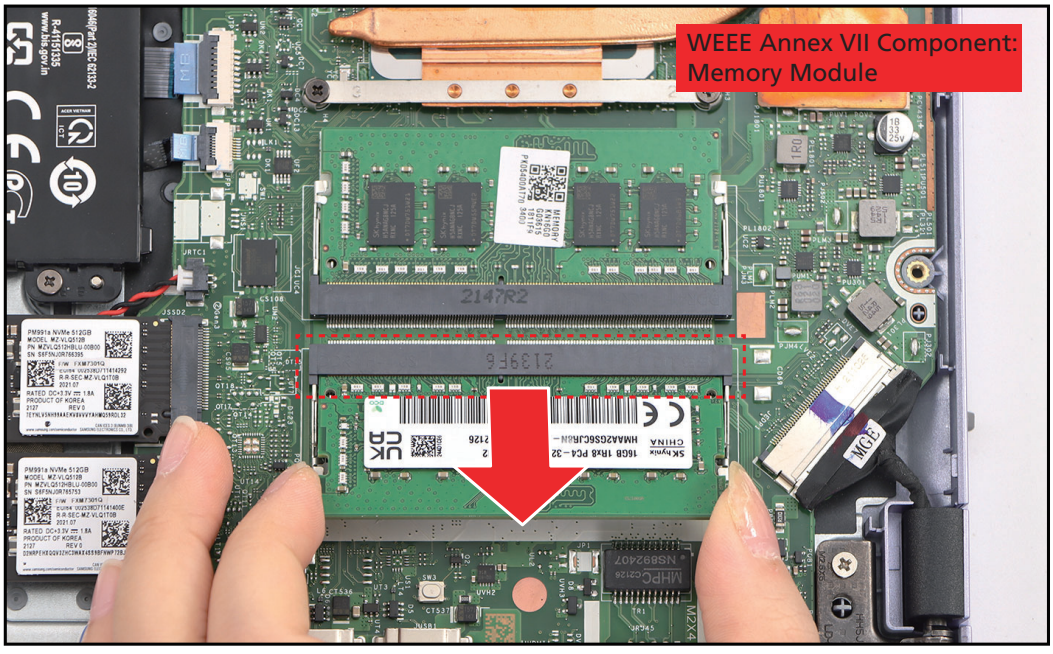


Figure 1-17. Removing the DIMM Module

Touchpad Removal

Prerequisite:

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

1. Release the latches and disconnect the touchpad FFC from the mainboard and touchpad connectors. Then detach the middle portion of the touchpad FFC from the touchpad bracket and remove the touchpad FFC.

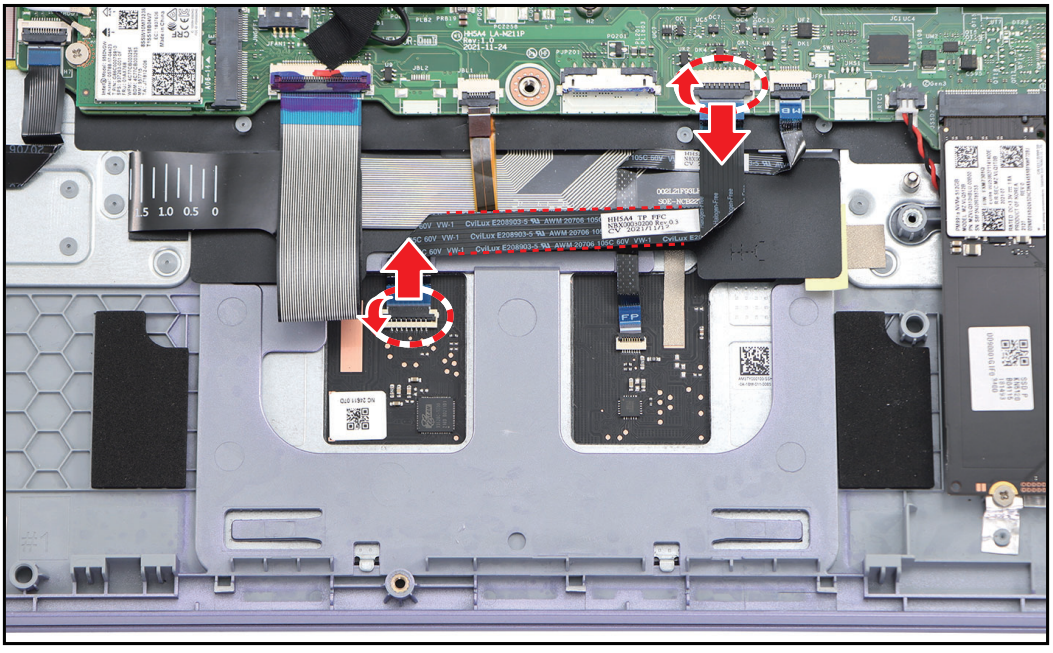


Figure 1-18. Removing the Touchpad FFC

2. Lift the mylar tab for better access of the conductive tape. Then detach the conductive tape from the touchpad and upper case.

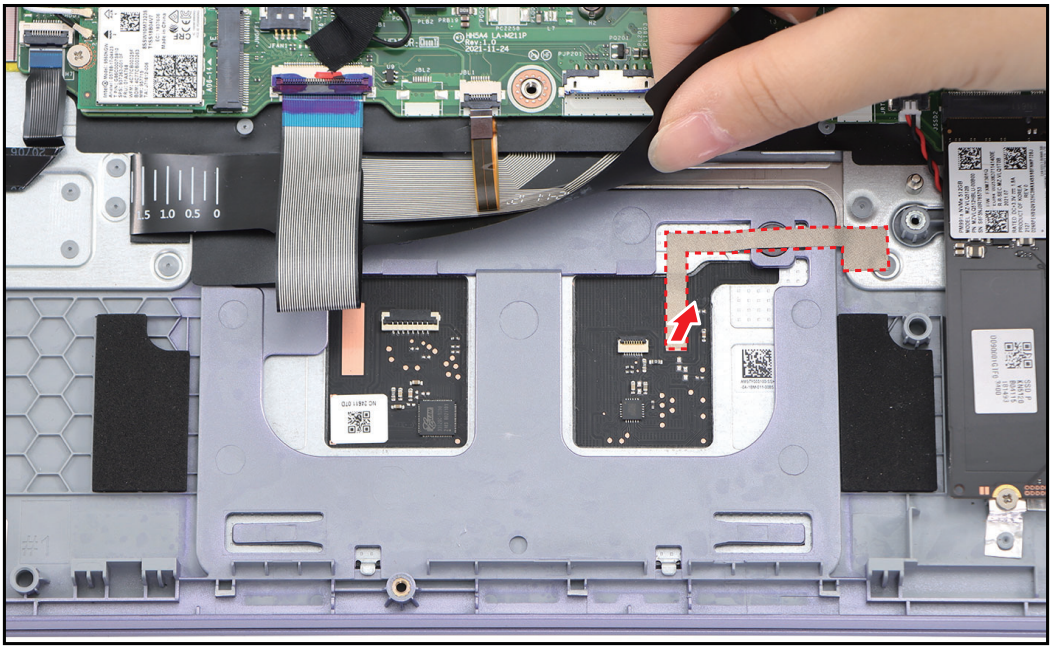


Figure 1-19. Detaching the Conductive Tape

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

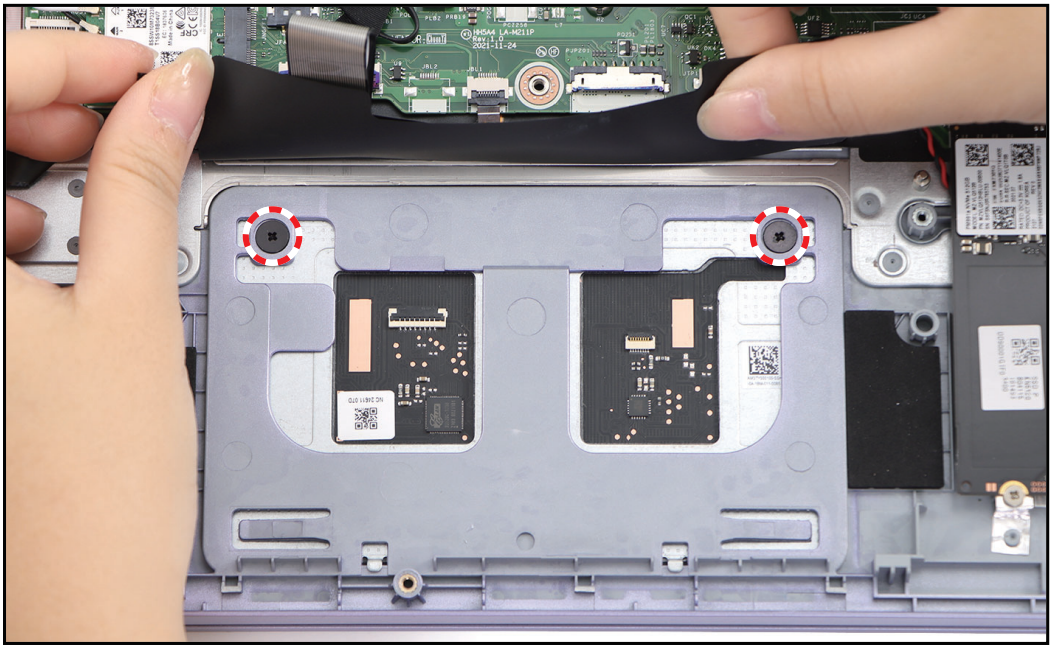


Figure 1-20. Removing the Screws

4. Place one of your hands underneath the touchpad. Use a pointed device to push on the screw holes and then slide the bottom part of the touchpad forward to disengage it from the latches.
5. Remove the touchpad from the upper case.

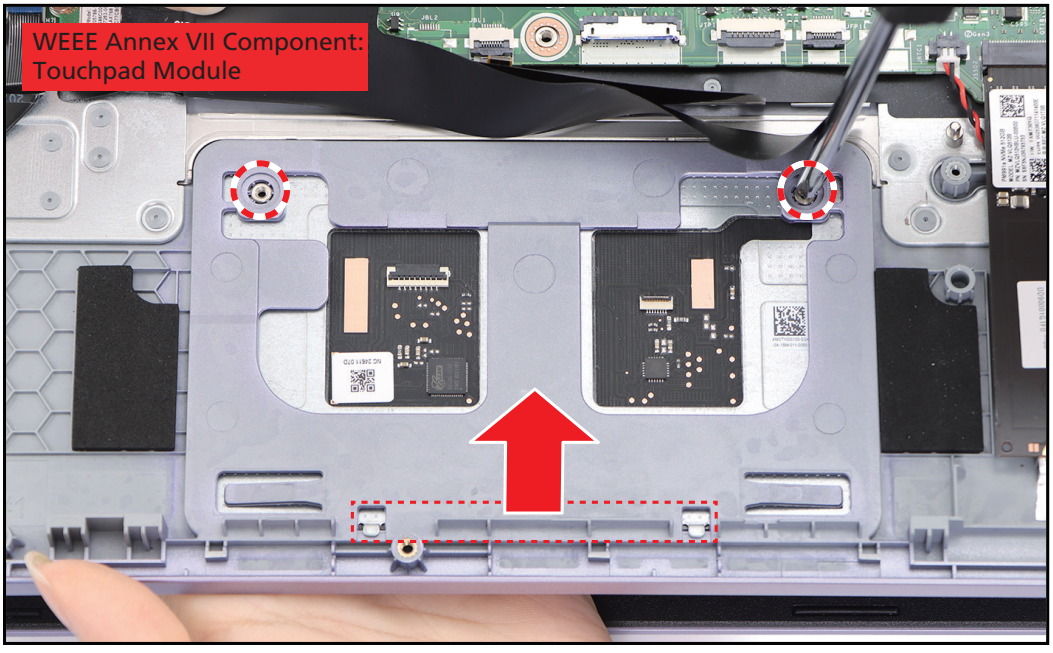


Figure 1-21. Removing the Touchpad

Table 1-5. Touchpad Screws

Screw Name	Screw Type	Torque	Quantity
M 2.0 x 2.3		1.8~2.2kgf.cm	2

RTC Battery Removal

Prerequisite:

- **SSD1/SSD2 Module Removal** on page **1-11**

1. Disconnect the RTC battery cable from the mainboard connector.

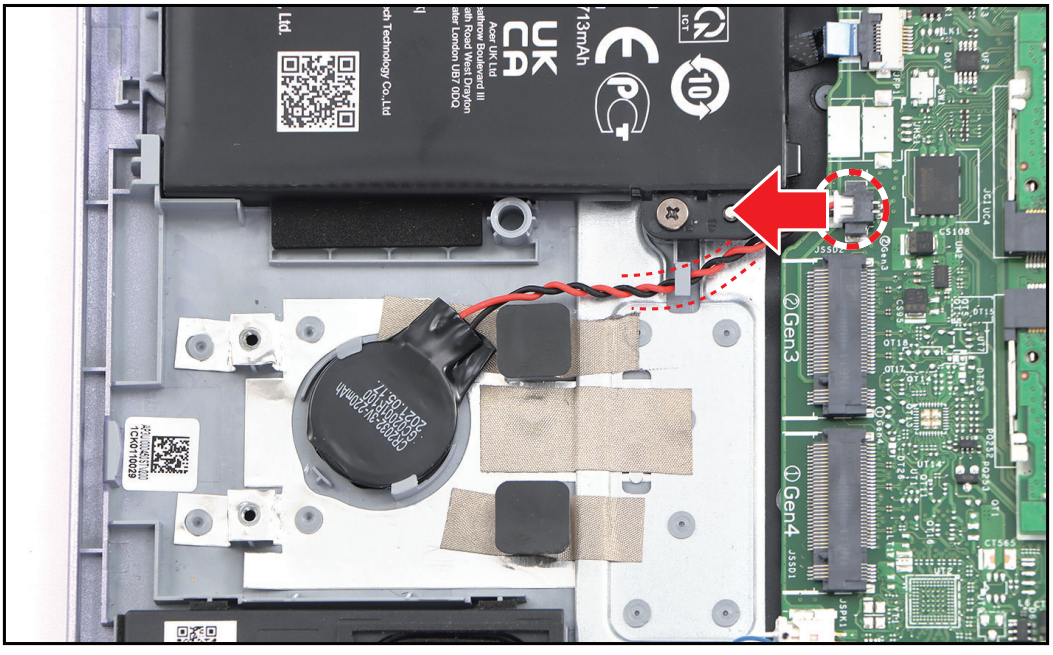


Figure 1-22. Diconnecting the RTC Battery Cable

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

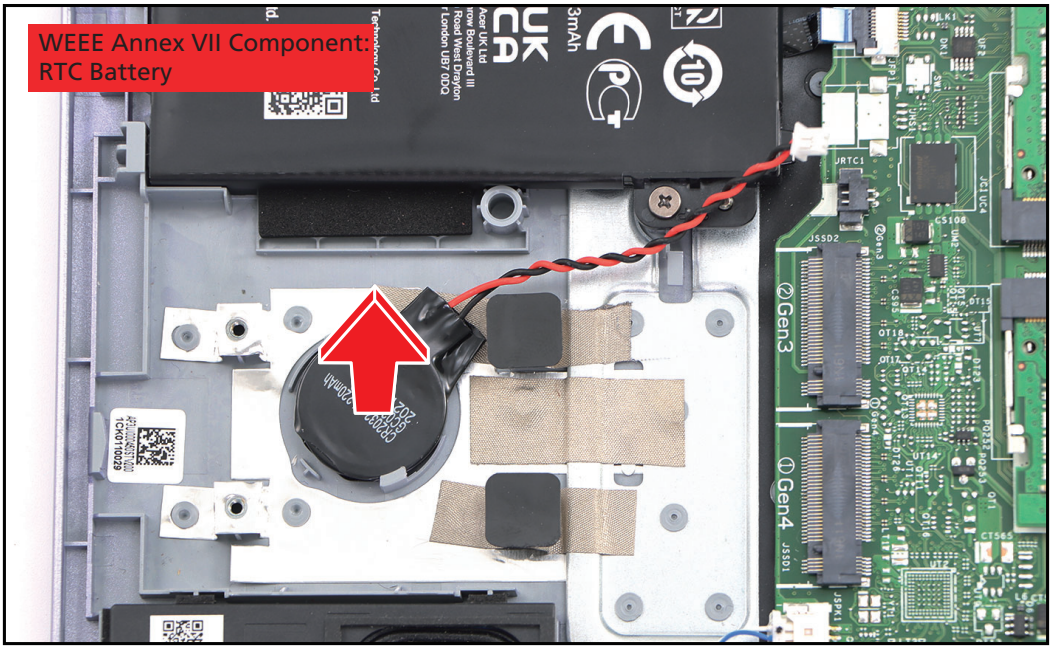


Figure 1-23. Removing the RTC Battery

USB Board Removal

Prerequisite:

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

1. Release the latch and disconnect the USB board FFC from the USB board connector.
2. Disconnect the speaker cable from the USB board connector.

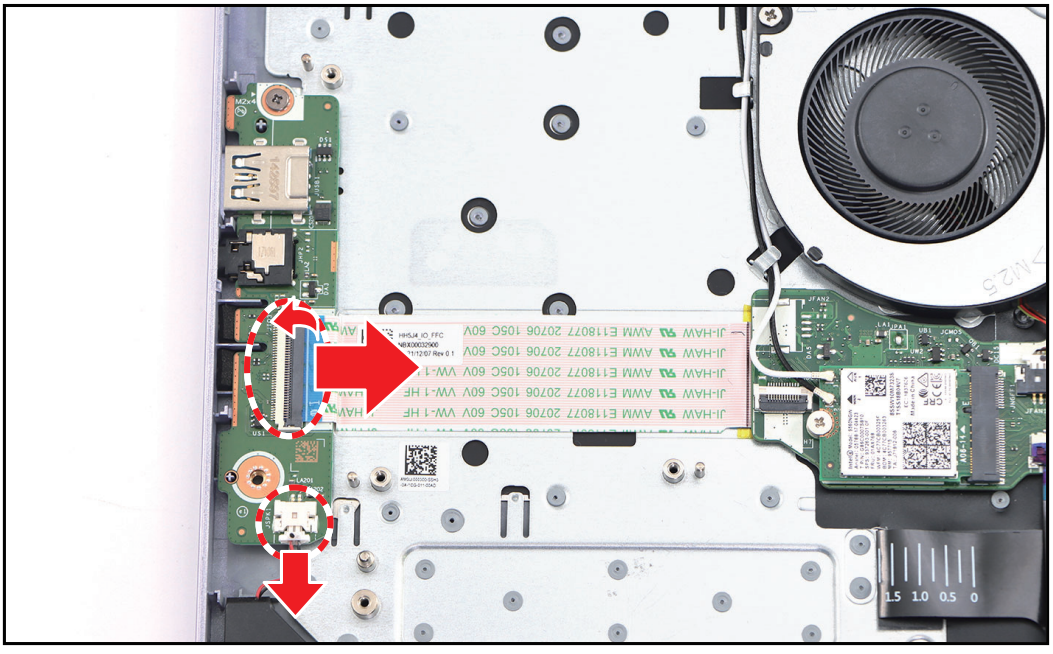


Figure 1-24. Disconnecting the Cables

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

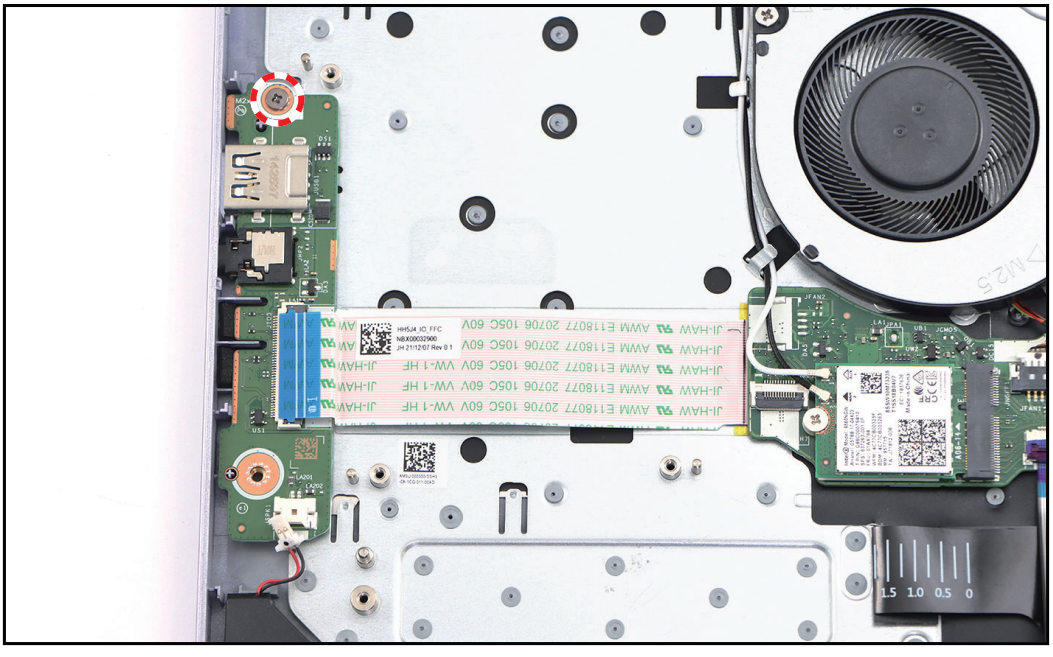


Figure 1-25. Removing the Screw

4. Remove the USB board from the upper case.

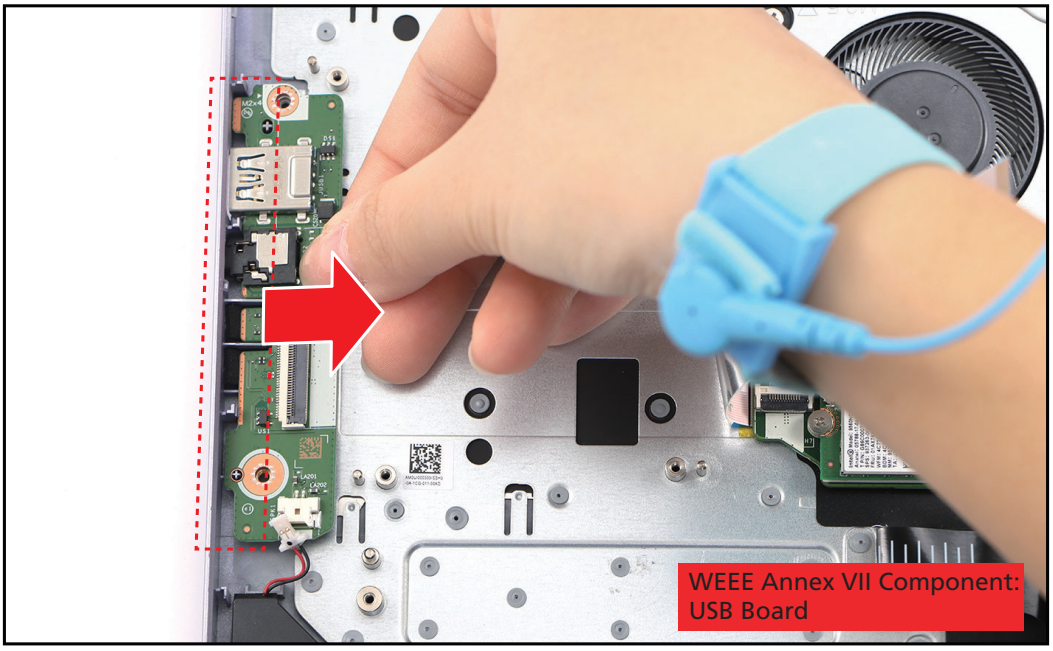


Figure 1-26. Removing the USB Board

Table 1-6. USB Board Screw

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

LCD Module Removal

Prerequisite:

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

1. Disconnect the WLAN antenna cables from the WLAN module connectors and unroute the cables from the cable guides on the upper case.

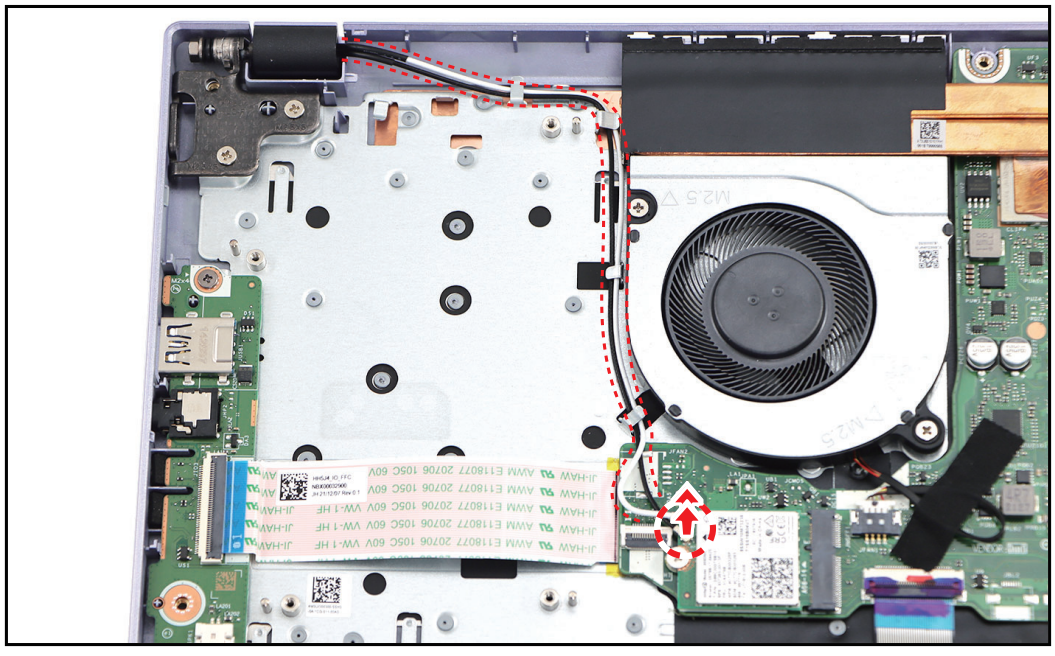


Figure 1-27. Disconnecting the WLAN Antenna Cables

2. Disconnect the eDP cable from the mainboard connector.

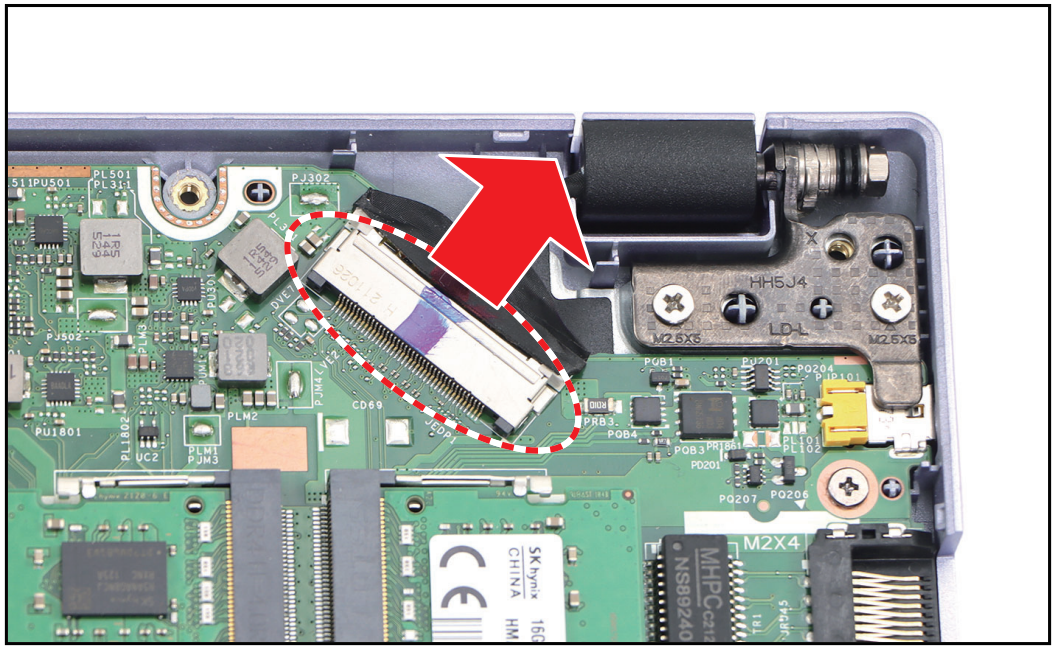


Figure 1-28. Disconnecting the eDP Cable

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

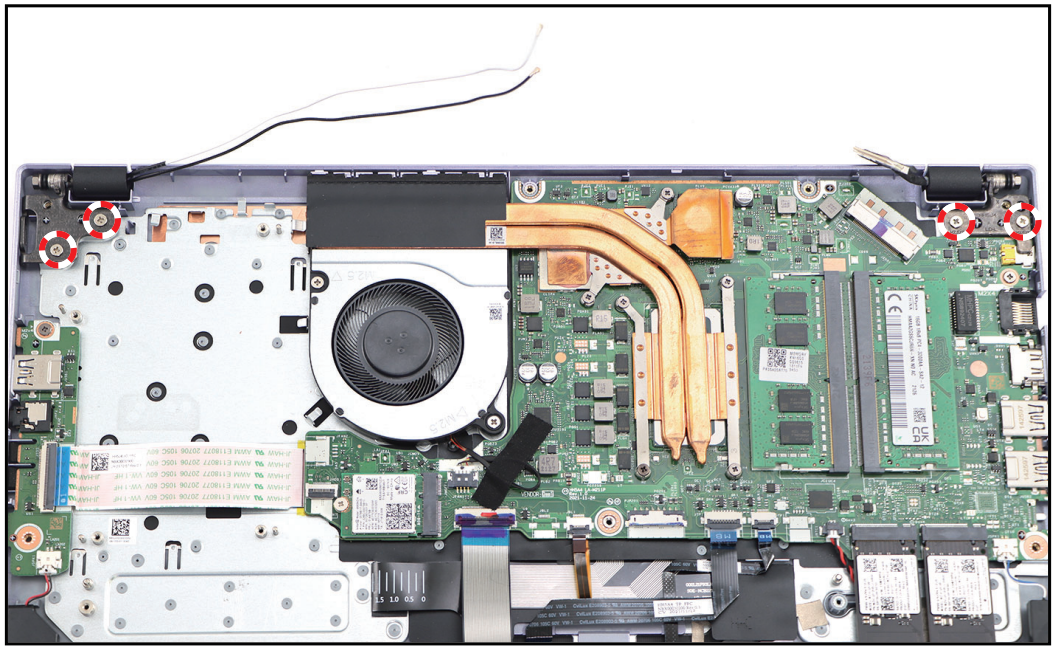


Figure 1-29. Removing the Screws

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

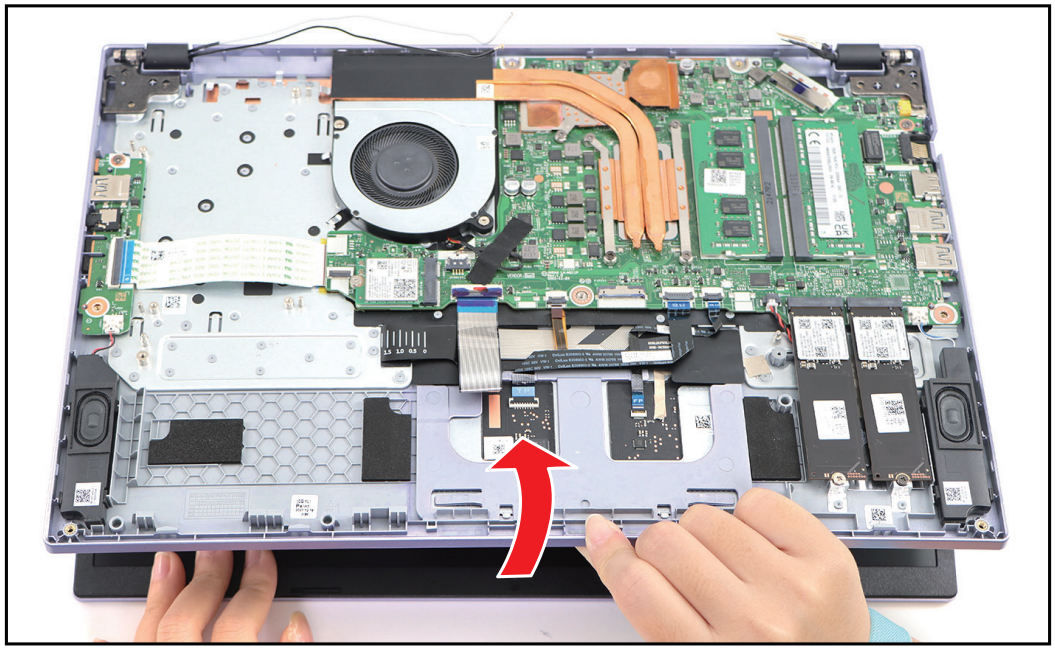


Figure 1-30. Lifting the Upper Case

5. Close the upper case and lift both LCD hinges until they are fully extended.

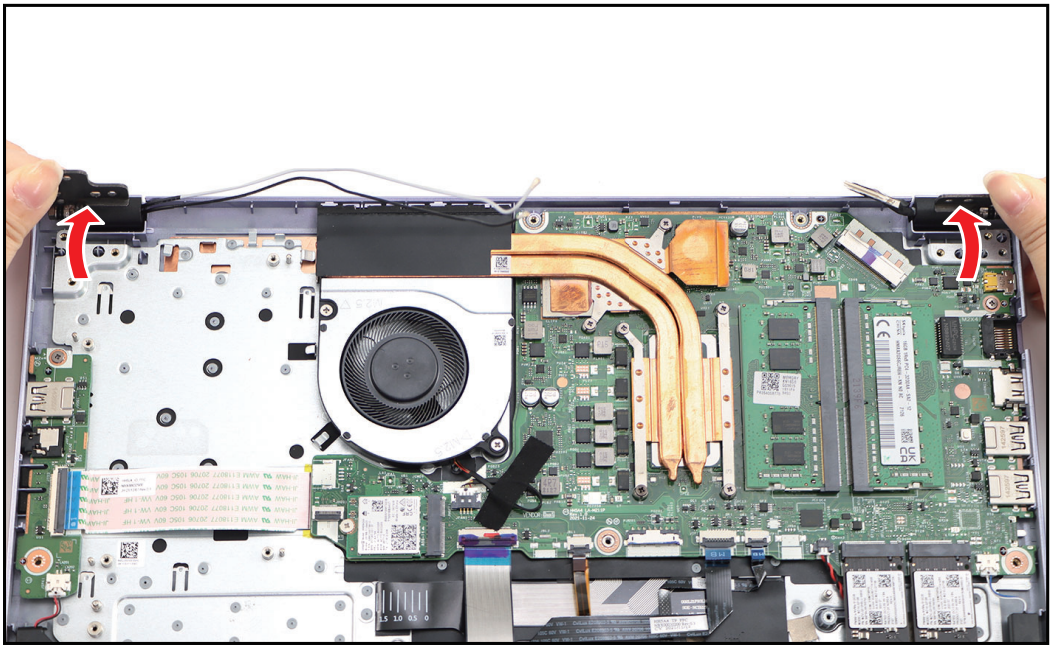


Figure 1-31. Extending the LCD Hinges

6. Open the upper case again. Then remove the LCD module away from the upper case.

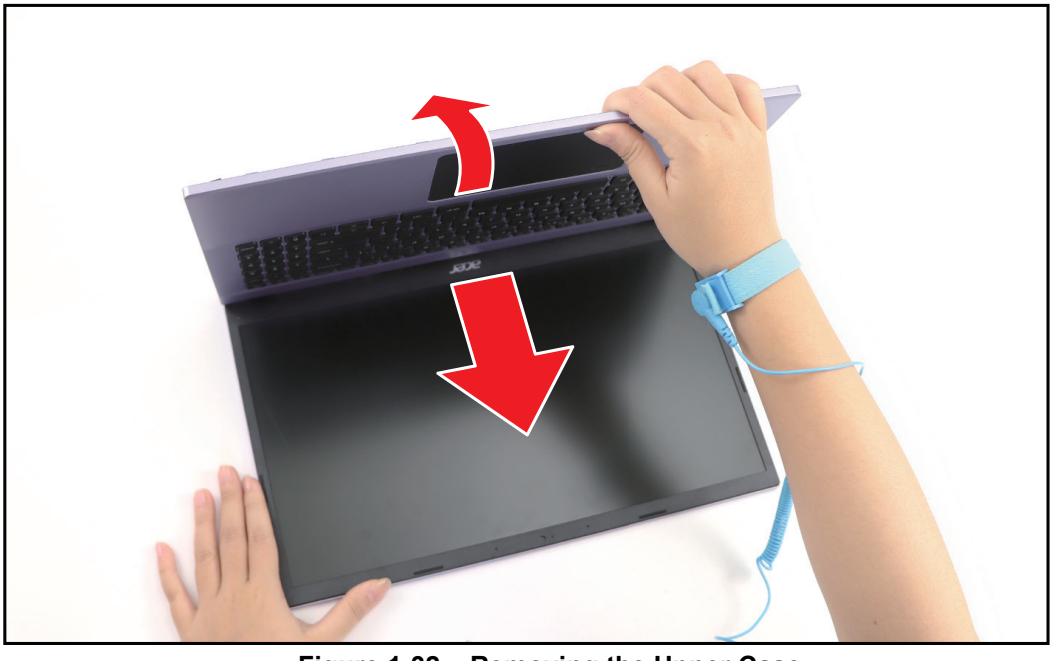


Figure 1-32. Removing the Upper Case

Table 1-7. LCD Module Screws

Screw Name	Screw Type	Torque	Quantity
M 2.5 x 6.0		2.55~3.45kgf.cm	4

Mainboard Removal

Prerequisite:

- **SSD1/SSD2 Module Removal** on page **1-11**
- **WLAN Module Removal** on page **1-13**
- **DIMM Module Removal** on page **1-15**
- Thermal Module Removal
- Fan Module Removal

1. Remove the two (2) screws securing the right side of the LCD hinge.

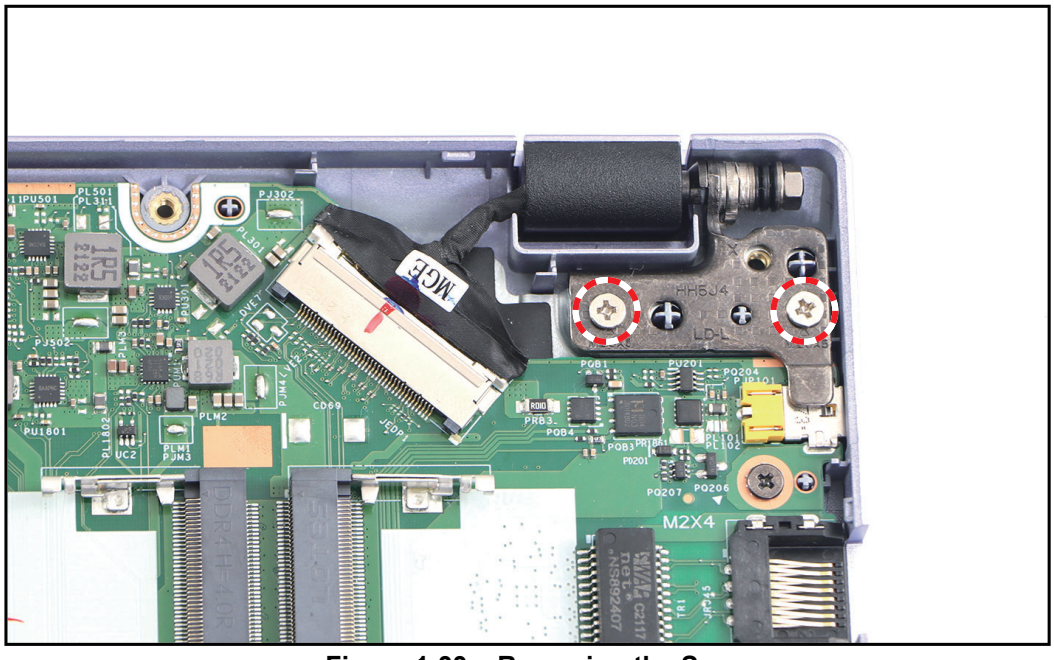


Figure 1-33. Removing the Screws

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

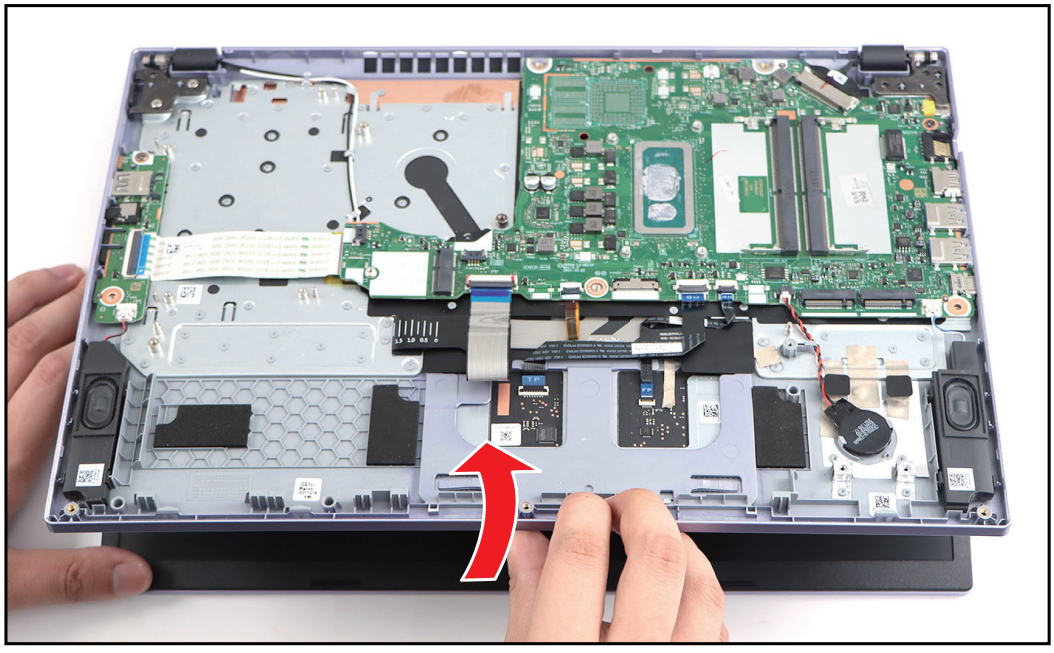


Figure 1-34. Opening the Upper Case

3. Close the upper case and lift the right side of LCD hinge until it is fully extended.

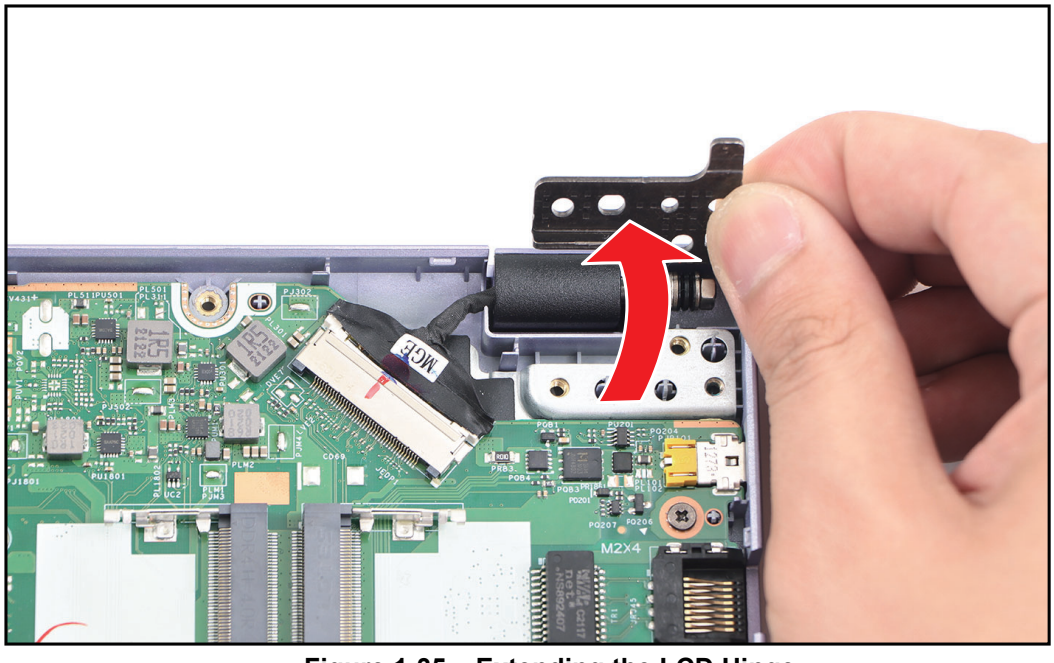


Figure 1-35. Extending the LCD Hinge

4. Release the latch and disconnect the USB board FFC from the USB board connector (A).
5. Release the latch (if necessary) and disconnect the following cables from the mainboard connectors:
    - Keyboard FPC (B)
    - Keyboard backlight FFC (C)
    - Touchpad FFC (D)
    - Fingerprint FFC (E)
    - RTC battery cable (F)
    - Speaker cable (G)
    - eDP cable (H)

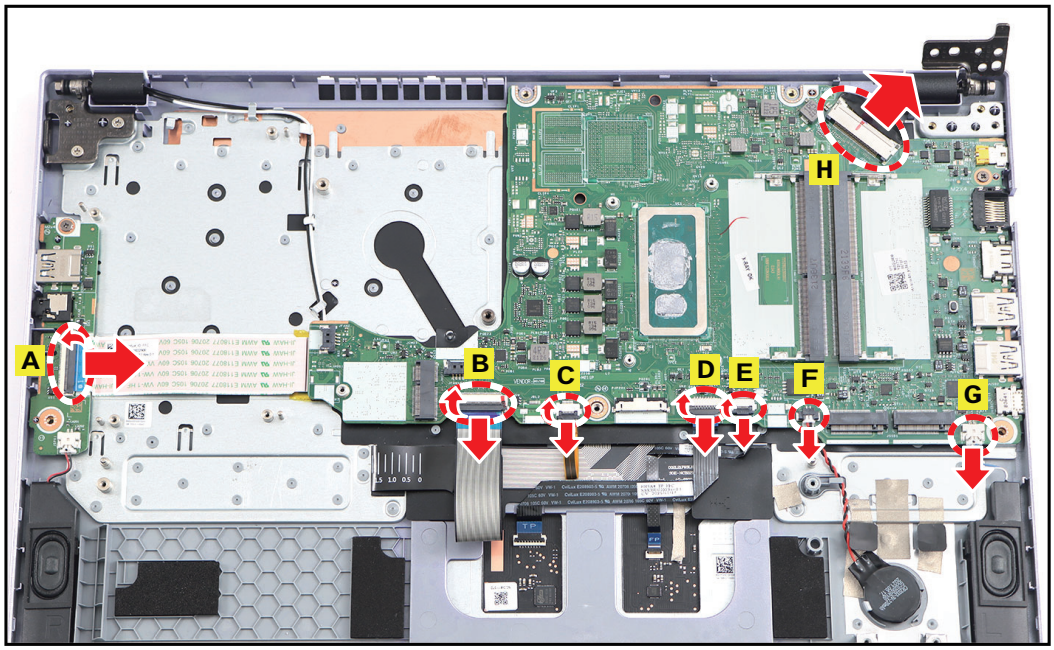


Figure 1-36. Disconnecting the Cables

6. Remove the screw securing the mainboard to the upper case.

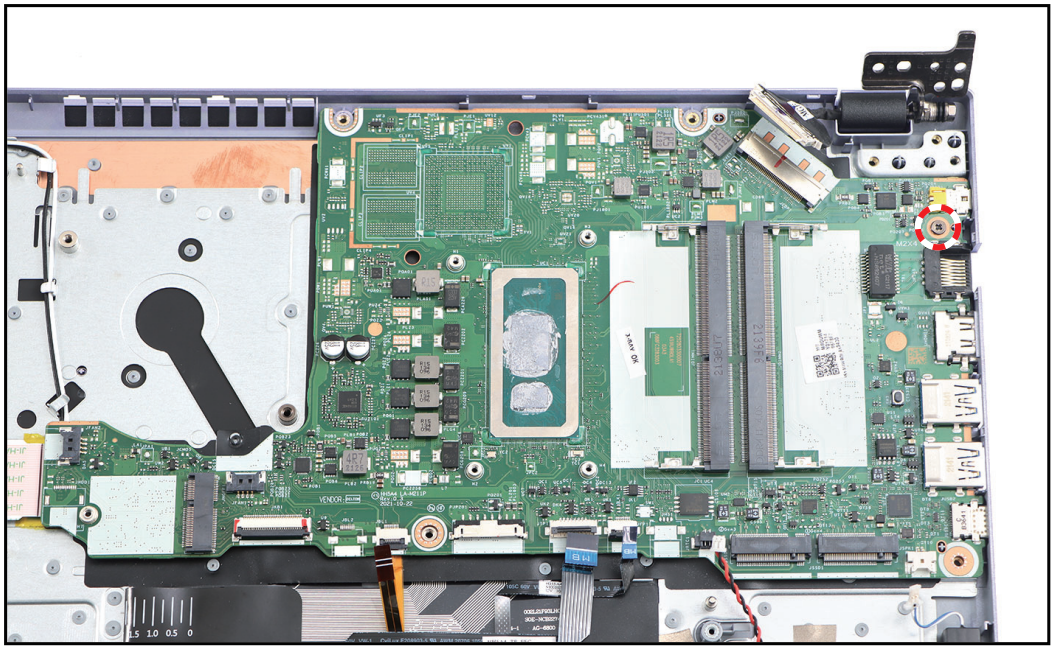


Figure 1-37. Removing the Screw

7. Slide the mainboard to release the I/O connectors from their slots, and then remove the mainboard from the upper case.

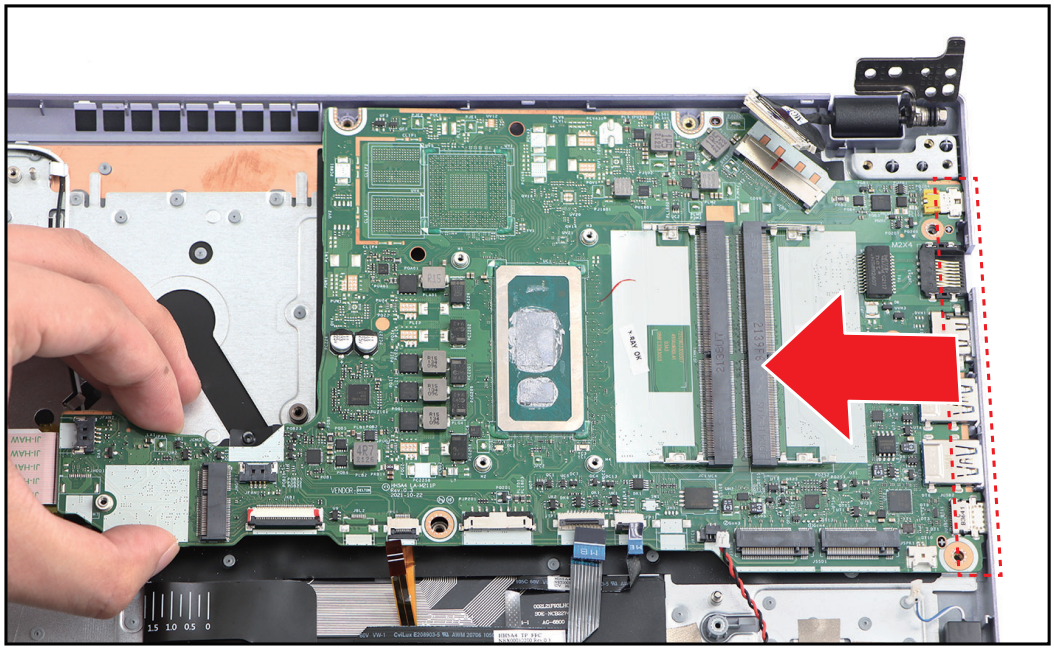


Figure 1-38. Removing the Mainboard

8. Detach the adhesive tape from the USB board FFC connector.

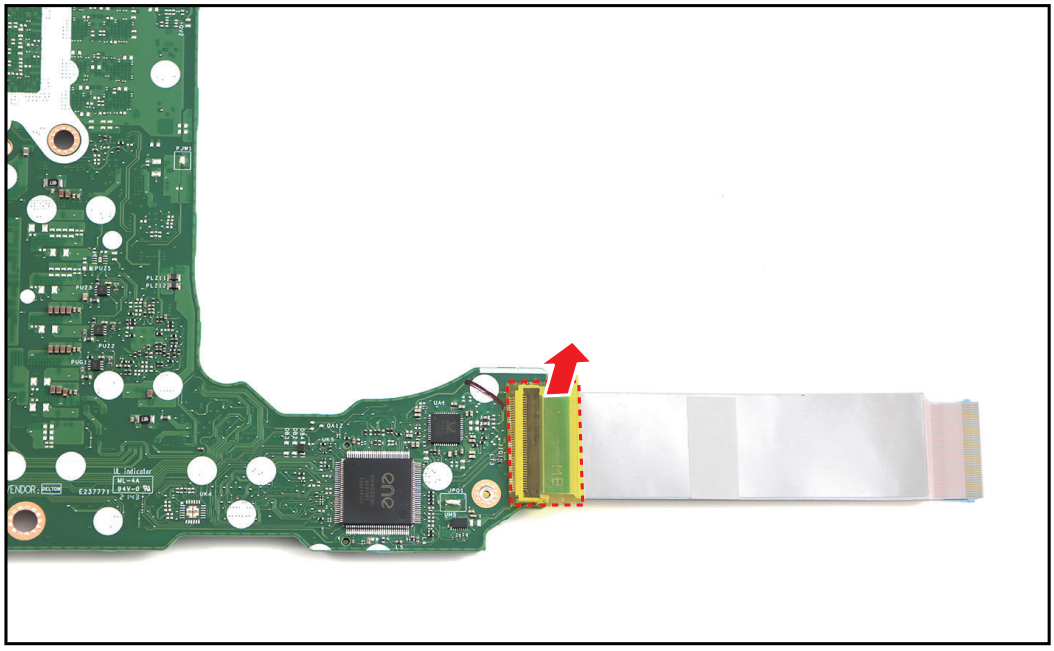


Figure 1-39. Detaching the Adhesive Tape

9. Release the latch and disconnect the USB board FFC from the mainboard connector. Then remove the USB board FFC.

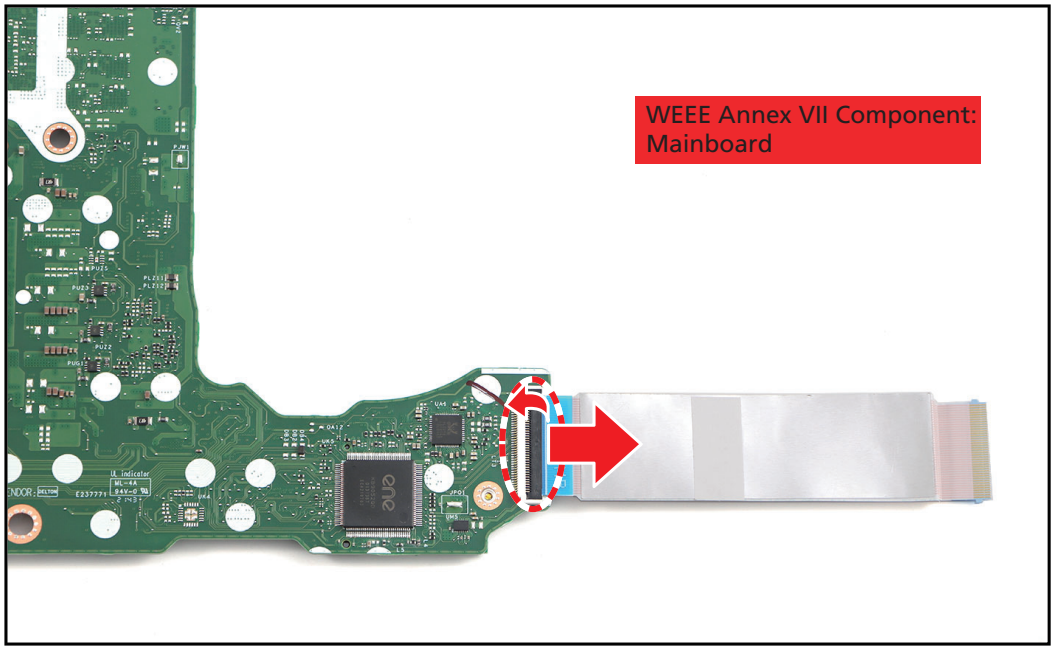


Figure 1-40. Removing the USB Board FFC

Table 1-8. Mainboard Screws

Screw Name	Screw Type	Torque	Quantity
M 2.0 x 4.0		1.8~2.2kgf.cm	1 (Mainboard)
M 2.5 x 6.0		2.55~3.45kgf.cm	2 (LCD Hinge)

LCD Bezel Removal

Prerequisite:

- **LCD Module Removal** on page **1-22**

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

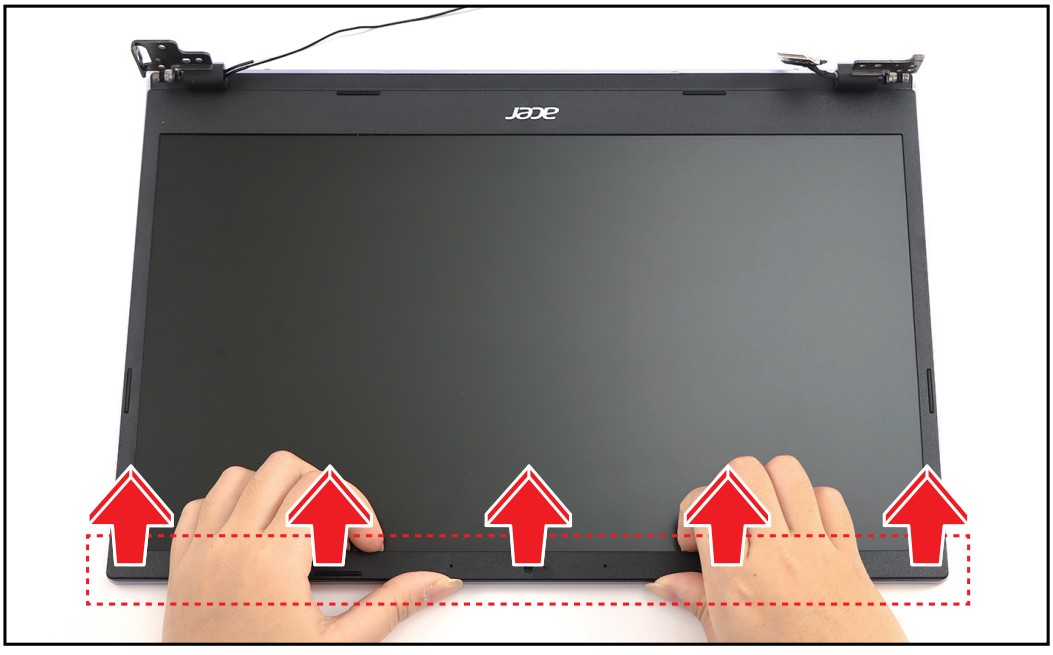


Figure 1-41. Removing the LCD Bezel (1 of 4)

2. While pushing the inner parts of the LCD bezel outwards, slightly bend the outer parts of the LCD bezel inwards to release the right side latches.

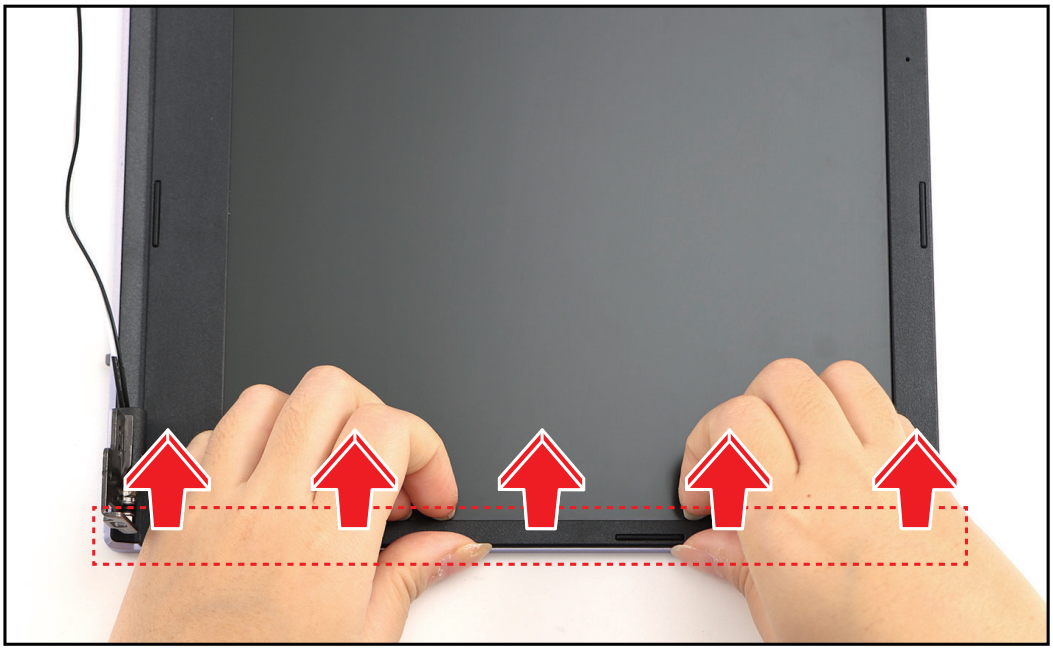


Figure 1-42. Removing the LCD Bezel (2 of 4)

3. While pushing the inner parts of the LCD bezel outwards, slightly bend the outer parts of the LCD bezel inwards to release the left side latches.

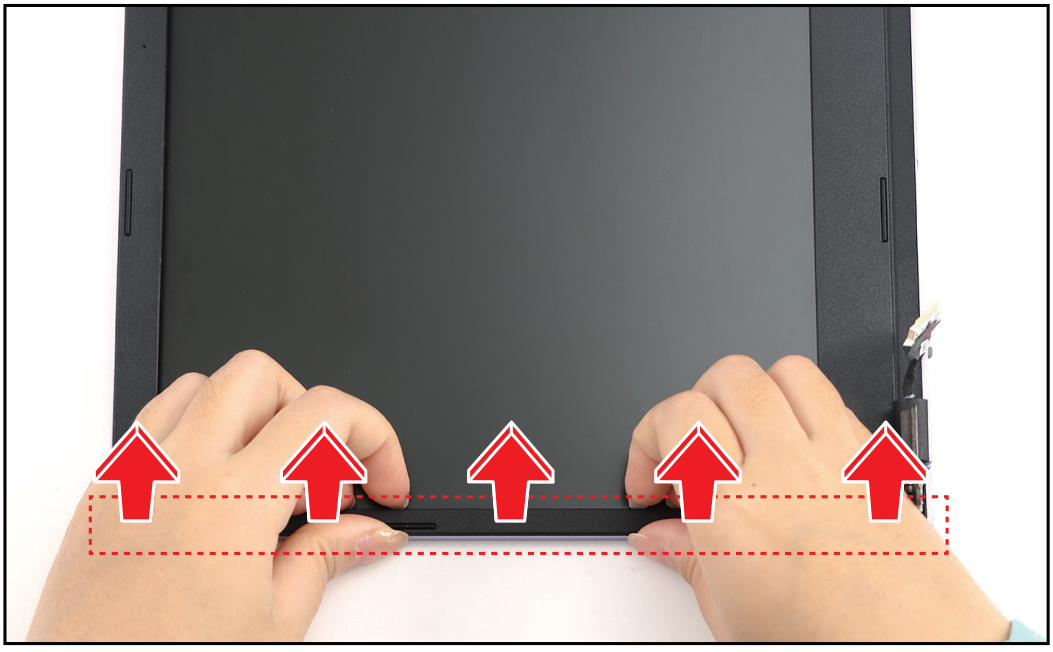


Figure 1-43. Removing the LCD Bezel (3 of 4)

4. Continue to pry the bottom side latches and remove the bezel.

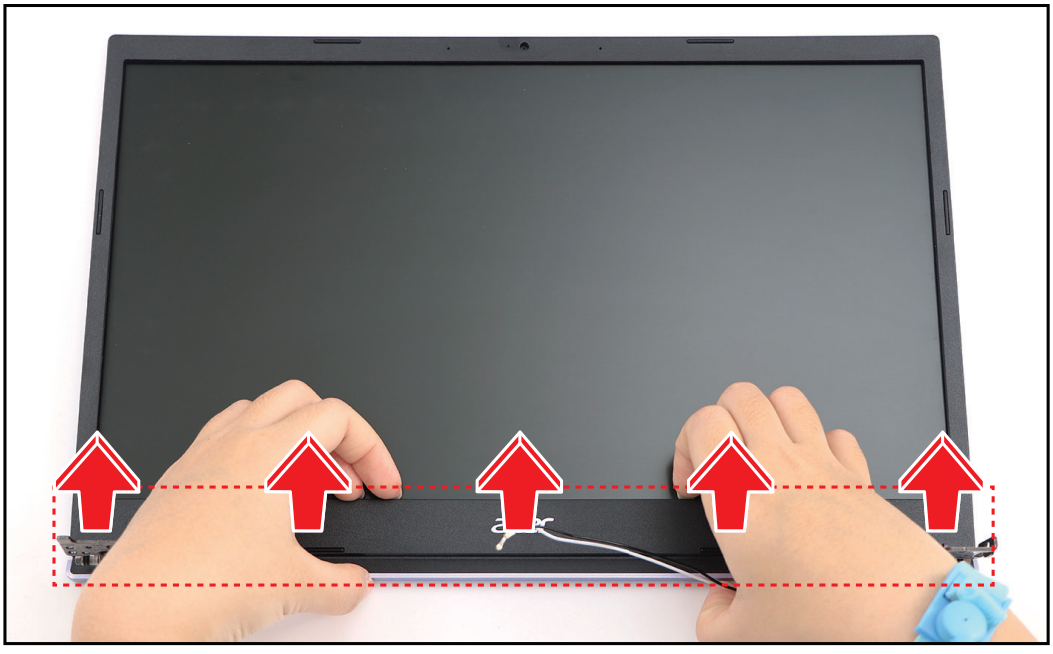


Figure 1-44. Removing the LCD Bezel (4 of 4)

LCD Panel Removal

Prerequisite:

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

1. Unroute the auxiliary antenna cable and the eDP cable from the cable guides on the bottom and left sides of the LCD cover.

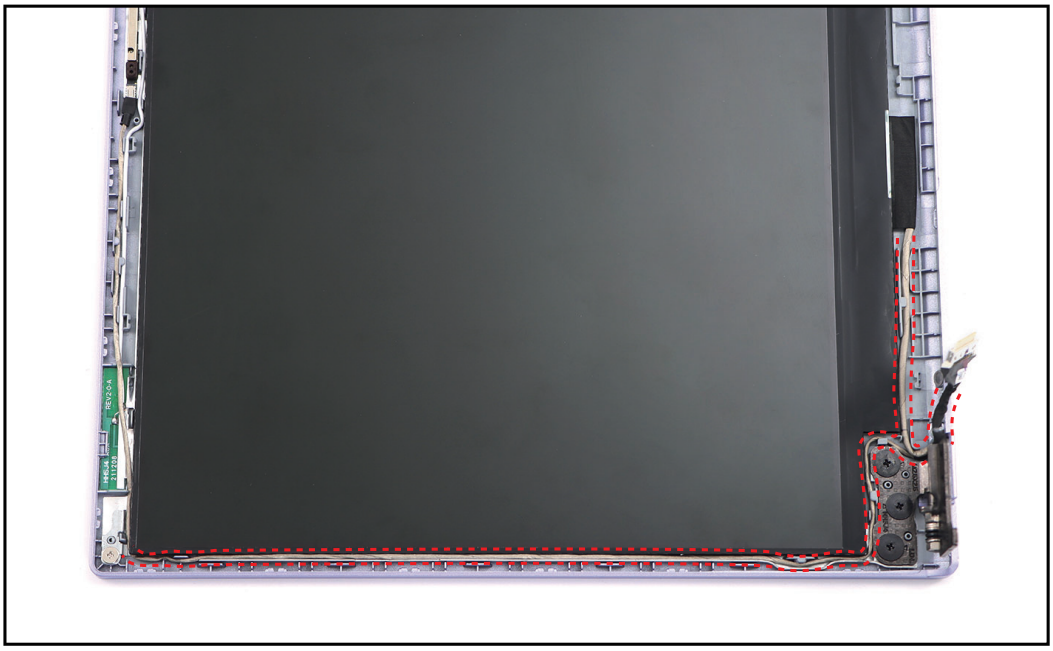


Figure 1-45. Unrouting the Cables

2. Continue unrouting the auxiliary antenna cable and the eDP cable from the top side cable guides.

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

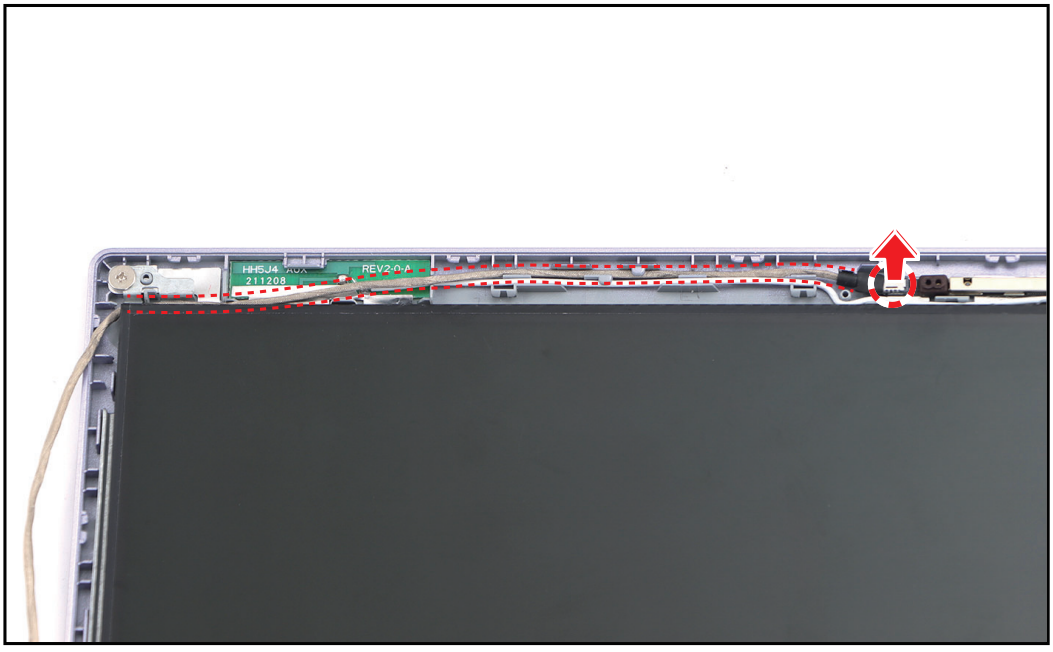


Figure 1-46. Unrouting and Disconnecting Cables

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

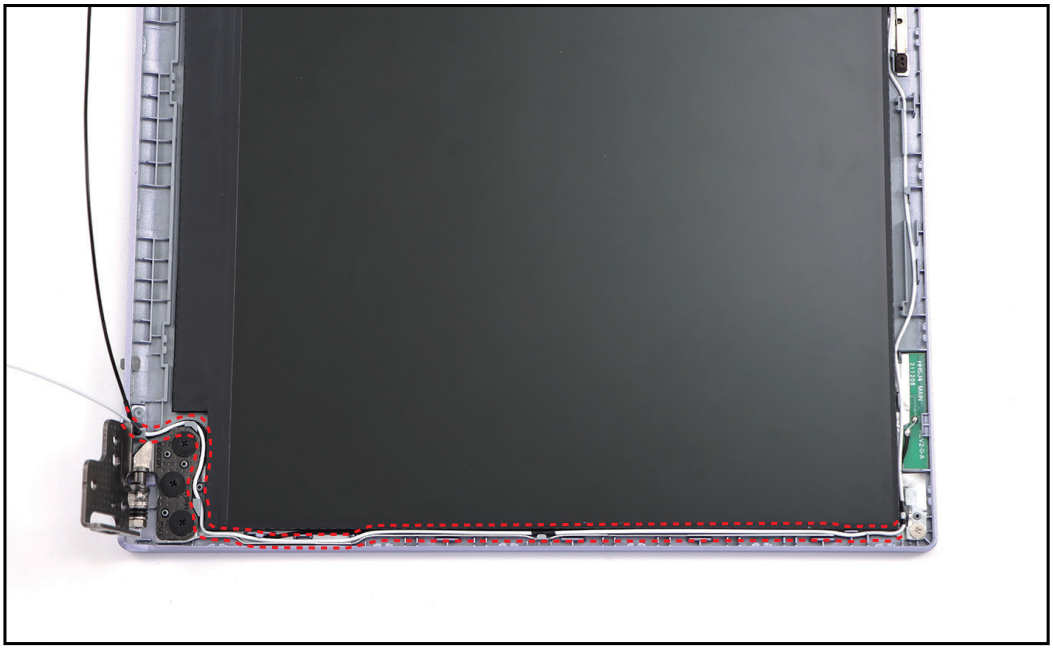


Figure 1-47. Unrouting the Auxiliary Antenna Cable (1 of 2)

5. Unroute the auxiliary antenna cable from the upper side cable guides.



Figure 1-48. Unrouting the Auxiliary Antenna Cable (2 of 2)

6. Unroute the main antenna cable from the bottom and left side cable guides.

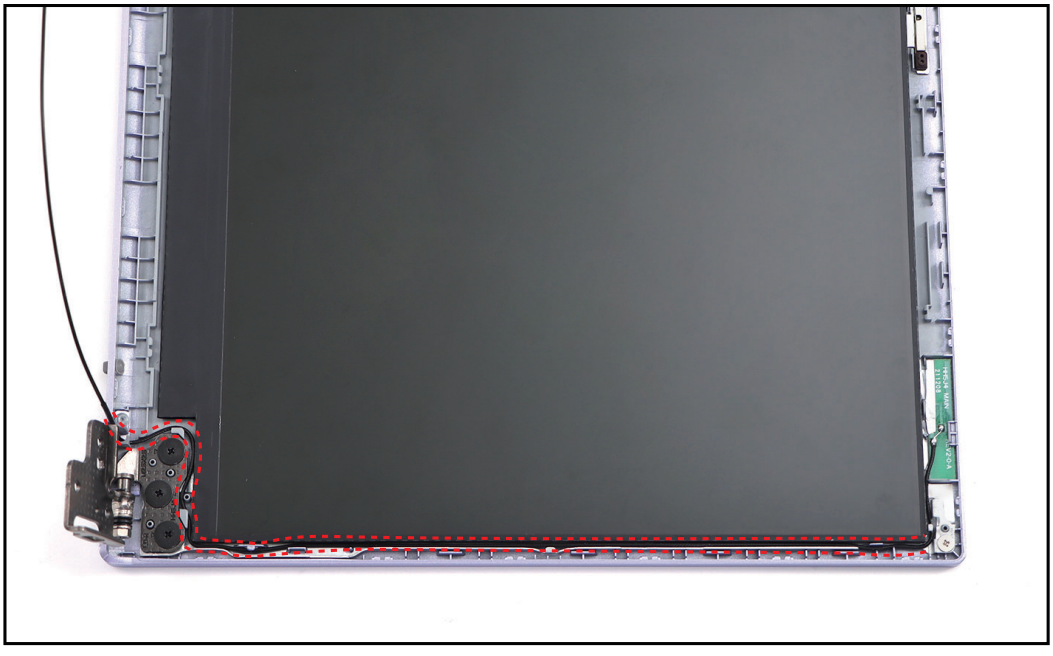


Figure 1-49. Unrouting the Main Antenna Cable

7. Remove the six (6) screws from the LCD hinges and two (2) screws from the LCD brackets.



Figure 1-50. Removing the Screws

8. Remove the LCD hinges from the LCD cover.



Figure 1-51. Removing the LCD Hinges

9. Carefully flip the LCD panel to access the eDP cable connector.



Figure 1-52. Flipping the LCD Panel

10. Detach the mylar from the eDP cable connector.

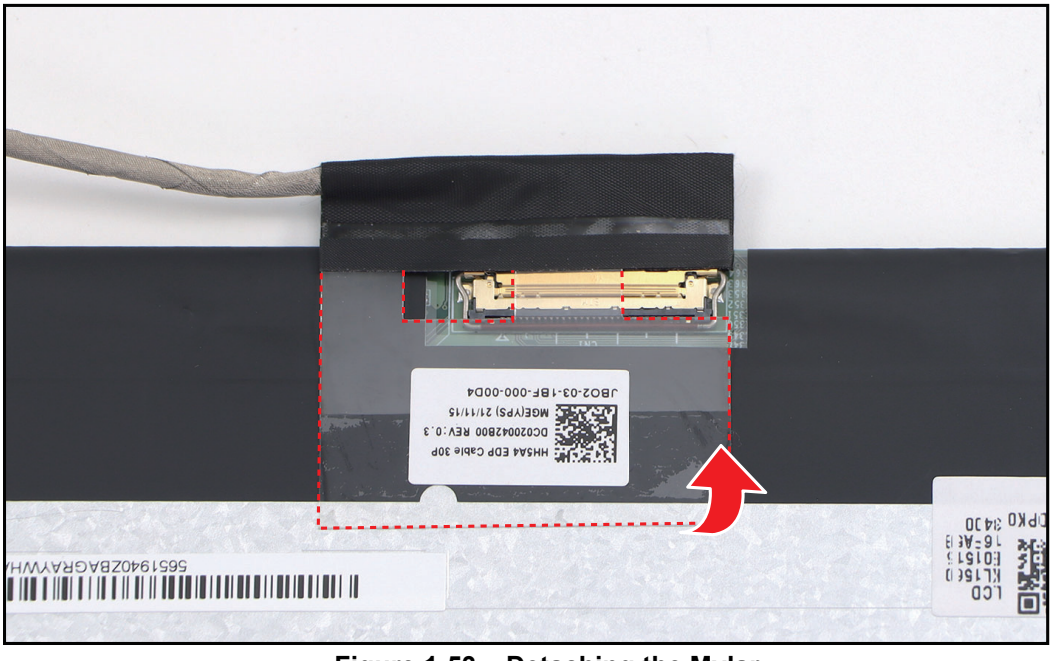


Figure 1-53. Detaching the Mylar

11. Disengage the eDP cable latch.

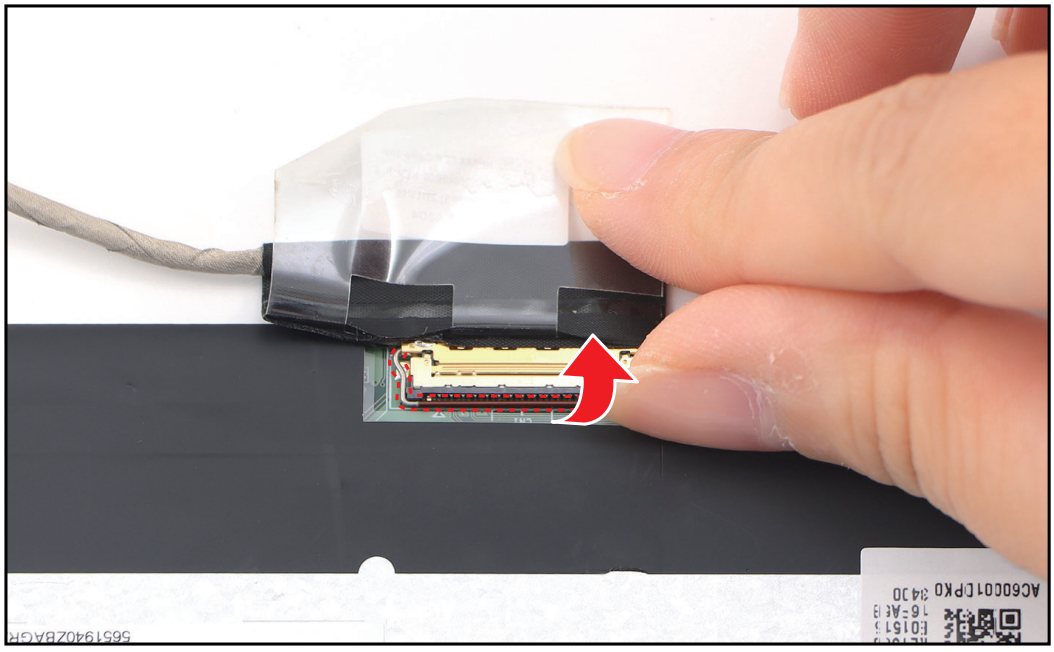


Figure 1-54. Disengaging the Latch

12. Disconnect the eDP cable from the LCD panel connector.

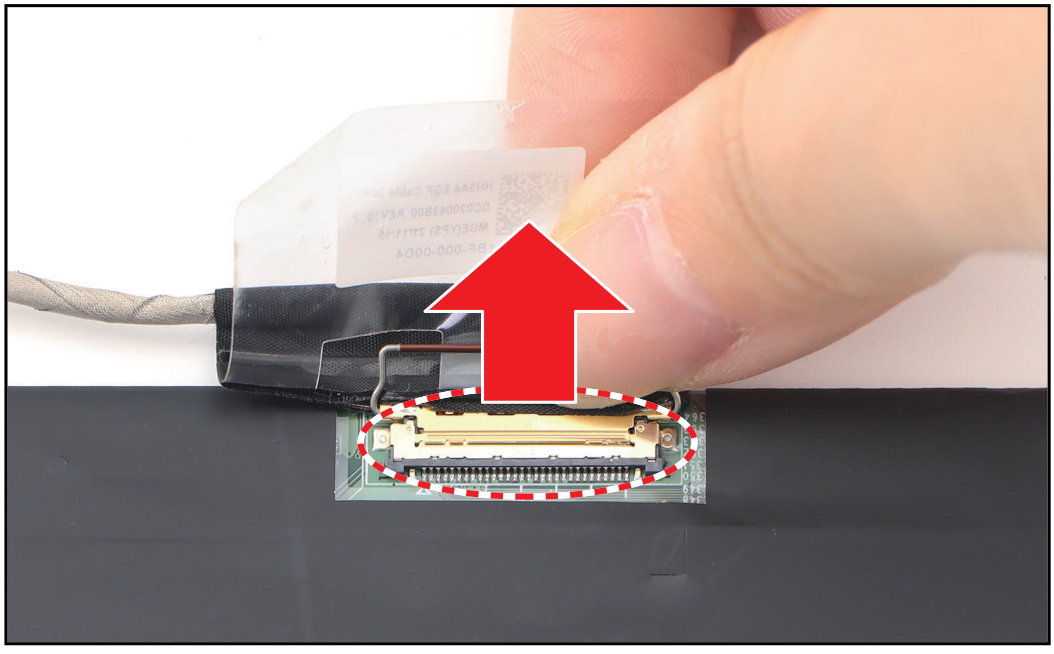


Figure 1-55. Disconnecting the eDP Cable

13. Pry slightly to access the double-sided mounting tape underneath the LCD brackets. Then pull to detach the double-sided mounting tape from the LCD cover. Repeat the same procedure to remove the double-sided mounting tape on another side of the LCD panel.

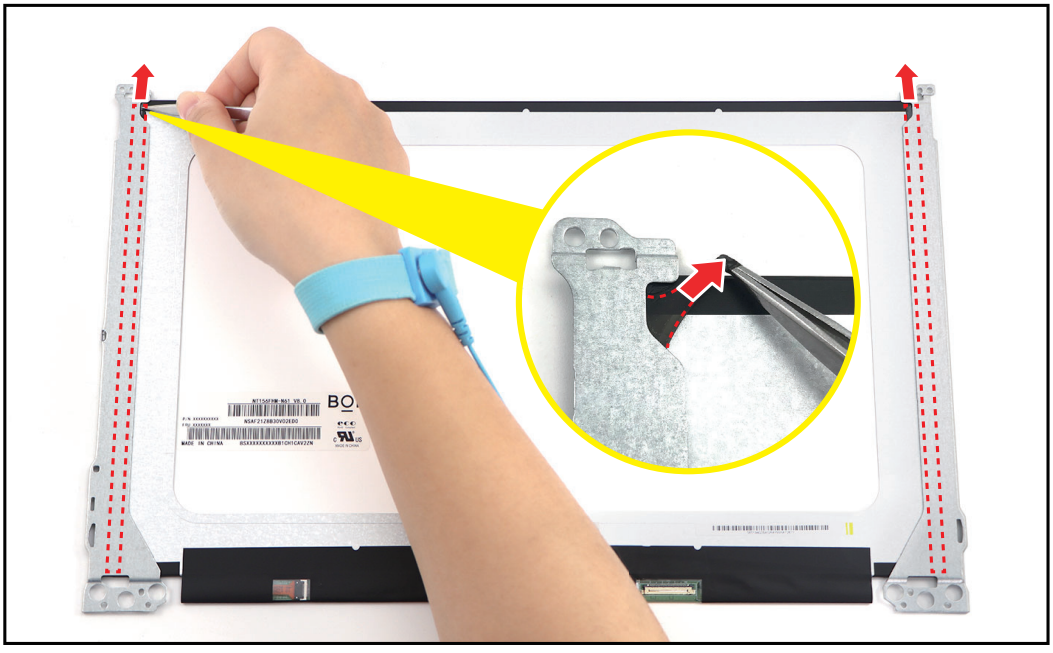


Figure 1-56. Detaching the Double-sided Mounting Tapes

14. Remove the LCD brackets.

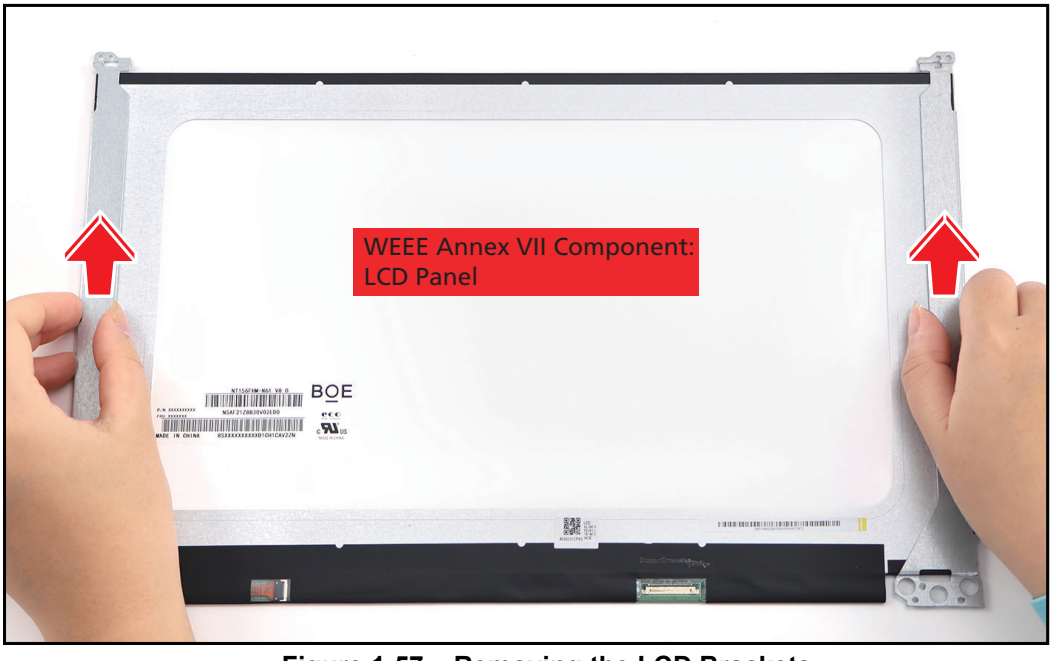
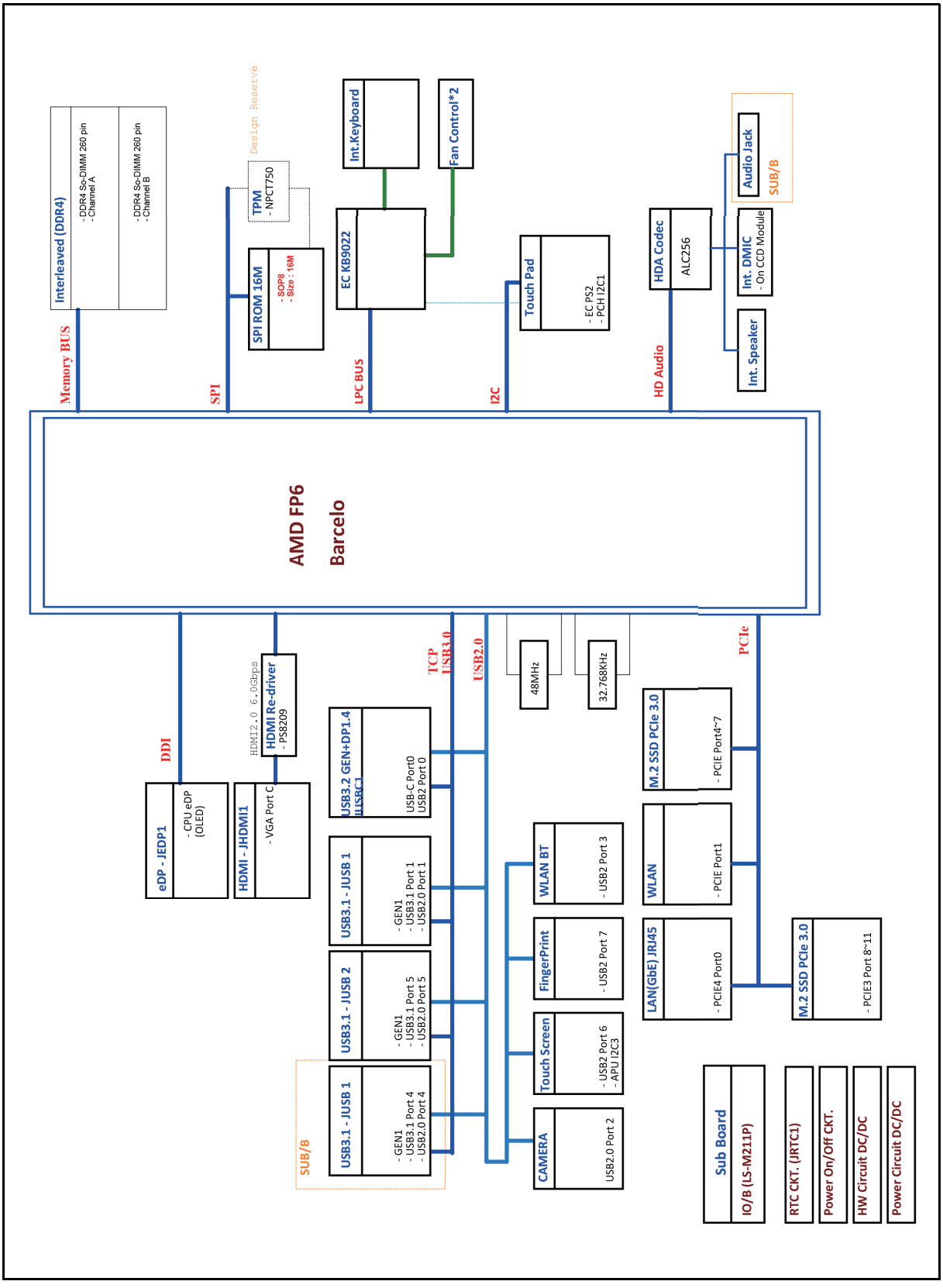


Figure 1-57. Removing the LCD Brackets

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, use the left and right arrow keys.
- To choose an item, use the up and down arrow keys.
- To change the value of a parameter, press ***F5*** or ***F6***.
- A plus sign (+) indicates the item has sub-items.
- Press ***Enter*** to expand this item.
- 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.

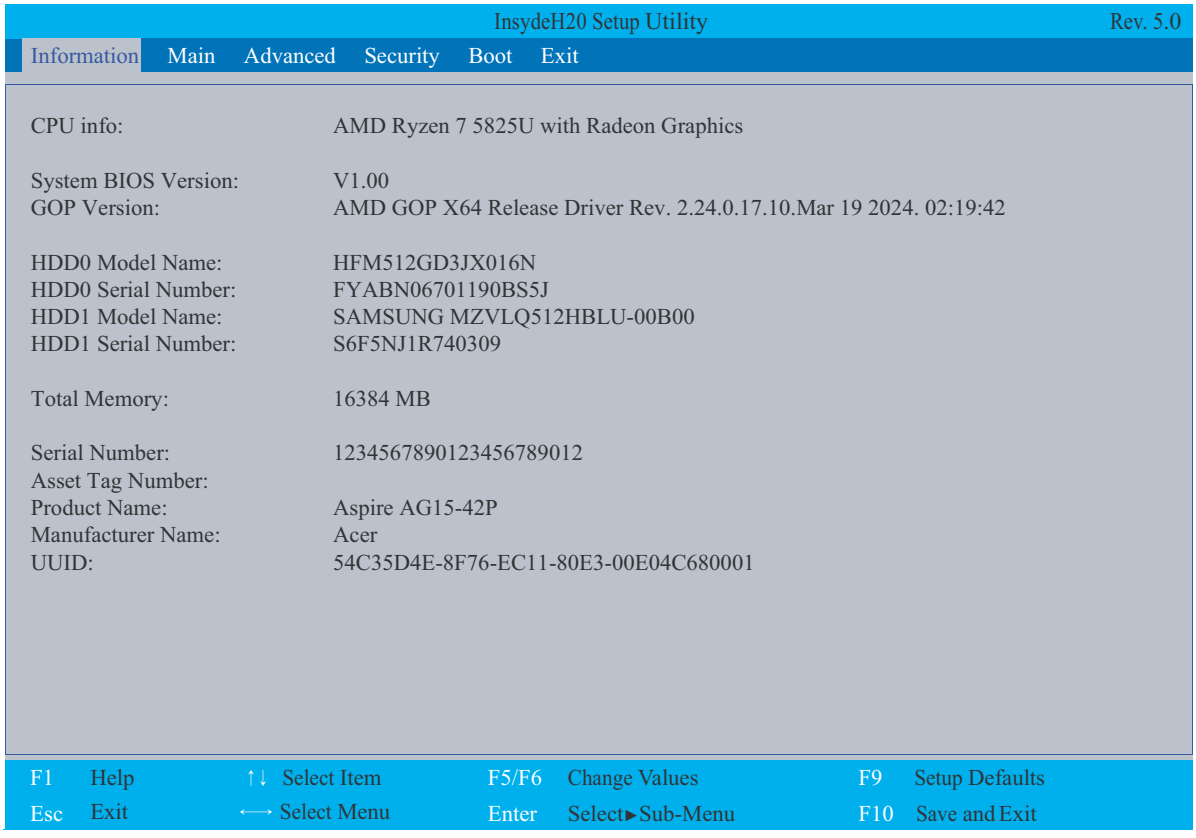


Figure 1-1. BIOS Information (Windows 11)

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

Product Information	Example	Remark
CPU Info	AMD Ryzen 7	Should be same with processor brand string, BIOS can get processor brand string by calling CPUID instruction.
System BIOS Version	V1.00	Should be same with SMBIOS Type 0 Offset 05h.
GOP Version	AMD GOP Driver Rev.2.24.0.17.10	GOP Version will only be shown when Boot Mode is [UEFI].
HDD Model Name	HFM512GD3JX016N	• This item show 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.

Product Information	Example	Remark
HDD Serial Number	FYABN06701190 BS5J	• This item will show the serial number of HDD installed. • If no hard disk or other devices are installed, "None" should be shown in 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
Total Memory	16384 MB	The field reports the system total installed memory.
Serial Number	22 characters	Should be same with SMBIOS Type 1 Offset 07h.
Asset Tag Number	22 characters minimum	Should be same with SMBIOS Type 3 Offset 08h.
Product Name	Acer Brand Example • (Aspire) Aspire XXXX • (TravelMate) TravelMate XXXX • (Aspire One) Aspire One XXX • (Iconia) ICONIA XXXX • (N/A) XXXX Gateway Brand Example • (N/A) XXXX Packard Bell Brand Example • (EasyNote) EasyNote XXXX • (N/A) XXXX	• 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 25 bytes.
Manufacturer Name	Acer/Gateway/ Packard Bell / Founder	• Should be same with SMBOS Type 1 Offset 04h. • The string is case sensitive.
UUID	xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx	• It is required for all systems. • Display format: xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx (follow UUID Standard)

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.

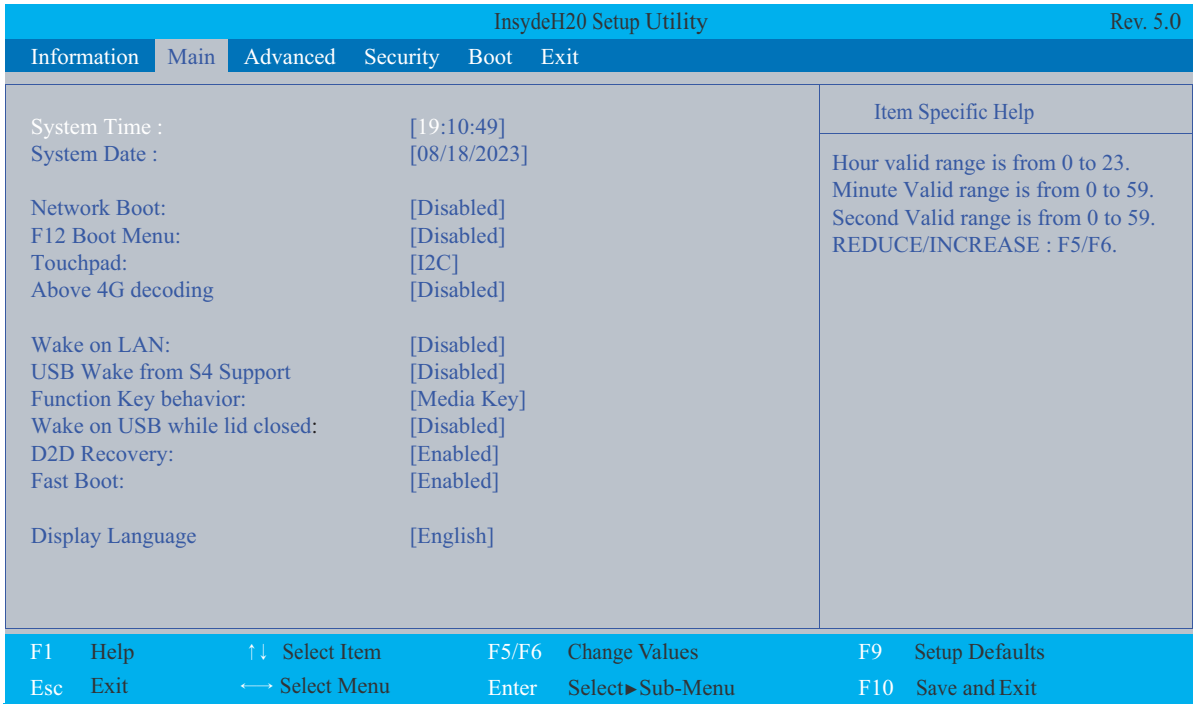


Figure 1-2. BIOS Main (Windows 11)

Table 1-2. BIOS Main Tab Parameters (Windows 11)

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]	Default Network Boot value in different Boot Mode: • [UEFI] Boot Mode: [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. • 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** > **Boot priority order**. • The default value is [Disabled].

Product Information	Example	Remark
Touchpad	[I2C] / [PS2]	• By default, this item is hidden. • Only visible after user press ***Ctrl + S*** in this page. • The default value is [I2C] mode.
Above 4G decoding	[Enabled] / [Disabled]	• By default, this item is hidden. • Only visible after user press ***Ctrl + S*** in this page (Main tab). • Default set as [Enabled] if project requires to support NVIDIA resizable BAR or AMD smart access memory. Otherwise, default set as [Disabled].
Wake On LAN	[Enabled] / [Disabled]	• Wake on LAN feature allows to turn on a network computer remotely by sending Magic Packet even if the system is in off state. • The default value is [Disabled]. • Panel off when wake on LAN.
USB Wake from S4 Support	[Enabled] / [Disabled]	• Support USB wake 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 media function. • Media functions are only active under Windows. ***F1*** to ***F12*** act as normal function keys during device boot or while in BIOS.
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.
Fast Boot	[Enabled] / [Disabled]	• Enable/Disable Fast boot. • The default value is [Enabled].
Display Language	[English]	• BIOS display language. • BIOS supports multi-language. • The default display language is [English].

Advanced Tab

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

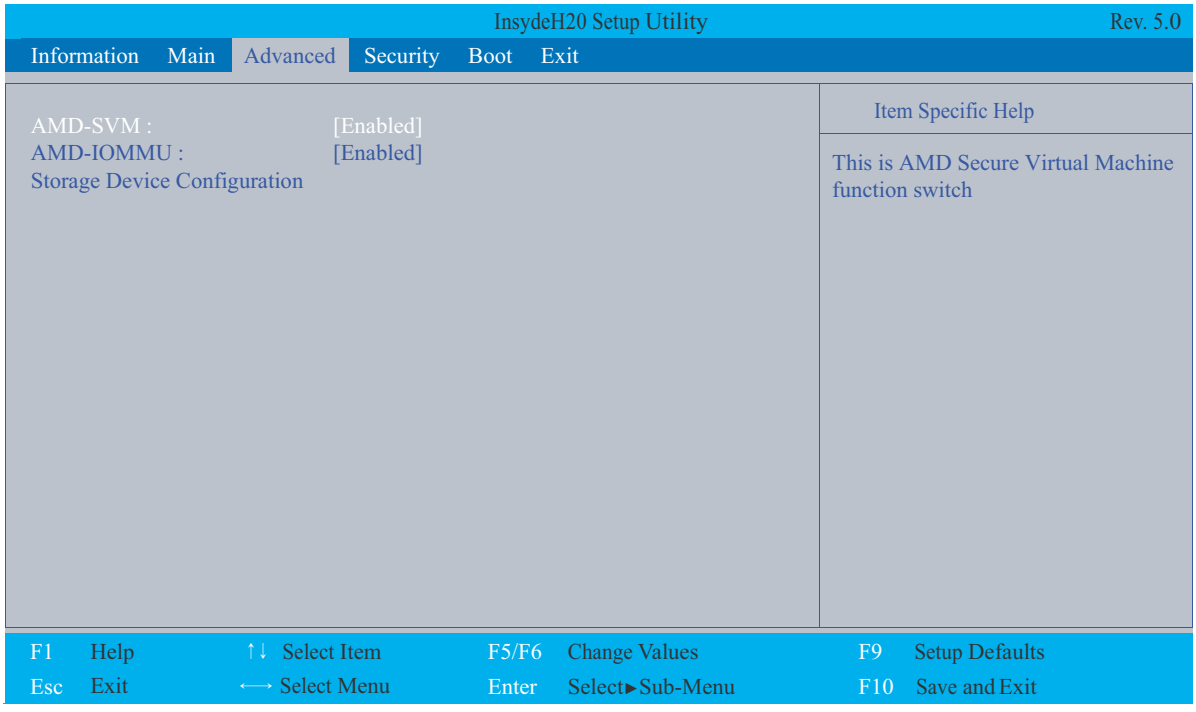


Figure 1-3. BIOS Advanced (Windows 11)

Table 1-3. BIOS Advanced Tab Parameters (Windows 11)

Product Information	Example	Remark
AMD-SVM	[Enabled] / [Disabled]	• This is AMD Secure Virtual Machine function switch. • Display when platform support the function. • The default value is [Enabled].
AMD-IOMMU	[Enabled] / [Disabled]	• This is AMD input/output memory management unit function switch. • Display when platform support the function. • The default value is [Enabled].
Storage Device Configuration	[Enabled] / [Disabled]	• Enter to configure storage device port enable/disable (such as SATA/PCIE storage device port). • Only visible if system set to AHCI.

Security Tab

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

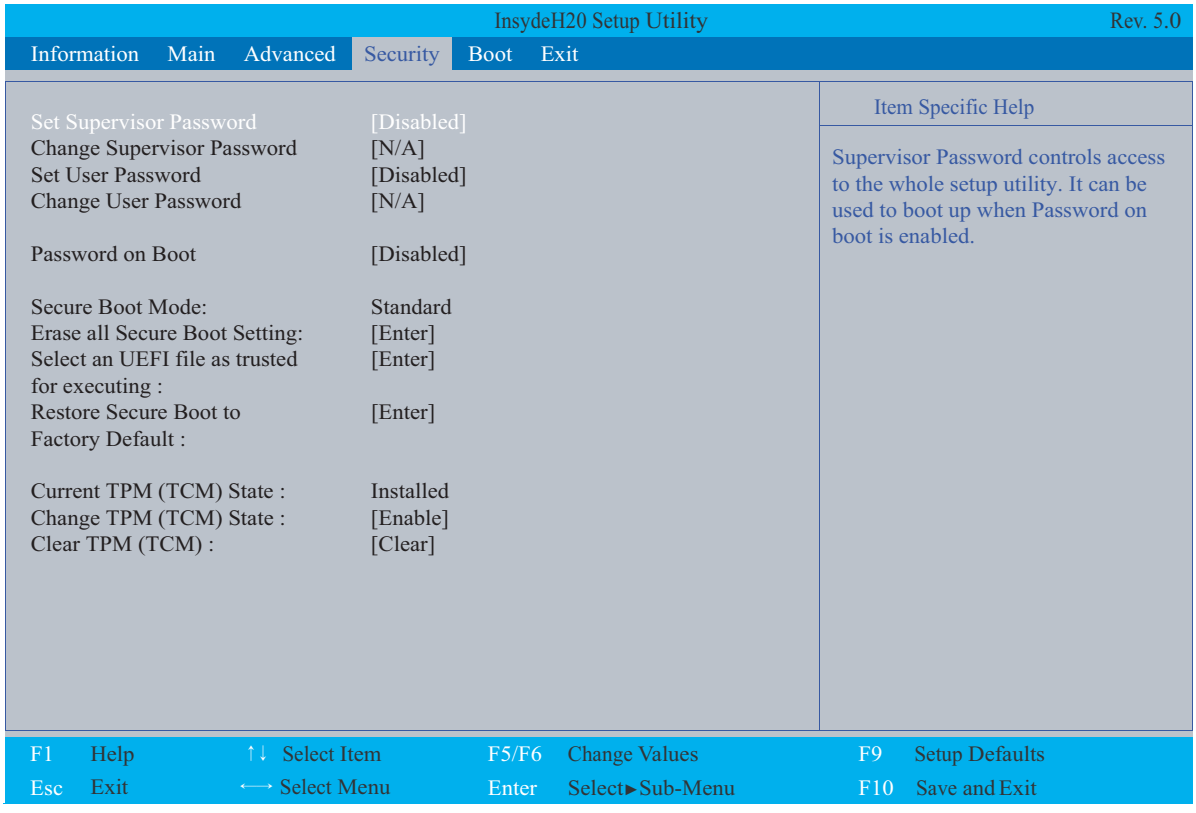
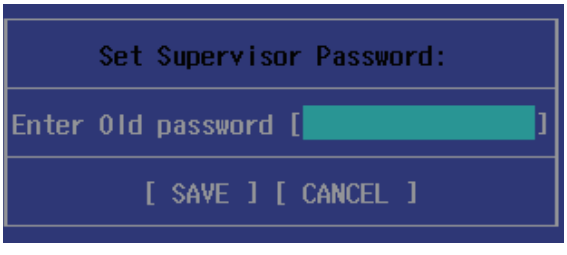


Figure 1-4. BIOS Security (Windows 11)

Table 1-4. BIOS Security Tab Parameters (Windows 11)

Product Information	Example	Remark
Set Supervisor Password	[Enter] / [Disable]	This field indicates if Supervisor / User Password is set or not. [Enabled]: Supervisor / User Password is set. [Disabled]: Supervisor / User Password is not set. If Supervisor Password it not set, User Password should be a grayed out item. When Supervisor / User Password is [Disabled] and press ***Enter***, a window similar to the following is shown:  After Supervisor / User Password is [Enabled] and press [Enter], a window similar to the following is shown for password cleaning:  The default value is [Disabled].
Set User Password	[Enable] / [Disable]	
Change Supervisor Password/ Change User Password	[N/A] / Change	If Supervisor / User Password it not set, these region should be a grayed out item. [N/A]: Supervisor / User password is not set. Change: Supervisor / User Password is set. If an old password set, it then setup will prompt with the following windows instead and a current password will be required to be entered at first. 

Product Information	Example	Remark
Change Supervisor Password/ Change User Password *(continued)*	[N/A] / Change	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. If the current password entered does not match the actual current password.  If the new password and confirm new password do not match.  For the format of the password, please refer to **Setting a Password** on page **1-53**.
Password on Boot	[Enable] / [Disable]	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]	Display 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 Secure Boot signature database had been modified with "Erase all Secure Boot Setting" or "Select an UEFI file as trusted for executing before. • The default value is [Standard].

Product Information	Example	Remark
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.
Select an UEFI file as trusted for executing	[Enter]	• This action allows user to select all available .efi files in FAT32 partition and add the .efi hash into secure DB. • This action will follow below method: • Display available device for users to select .efi 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, file hash will be added to signature database and return to Security Menu. If No is selected, return back to previous file selection menu. • Added efi file's Boot description will be added into boot device order list's last place, max 5 entries are allowed.
Restore Secure Boot to Factory Default	[Enter]	• Restore setting back to factory settings. When save and exit the BIOS Setup Utility, default Secure Boot factory settings will be restored. • By executing this action, Secure Boot Mode will be reset to [Standard] upon next entry to the BIOS Setup Utility.
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.

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

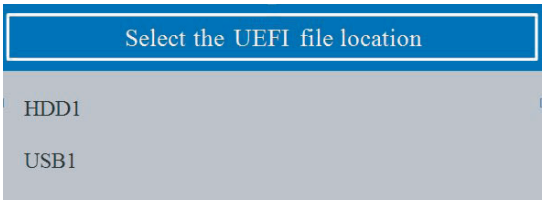


Figure 1-5. Select UEFI File Location

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

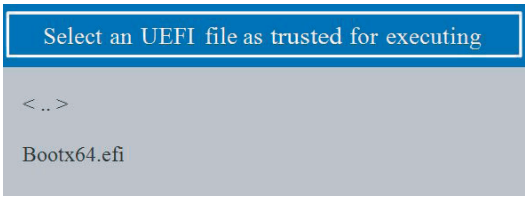


Figure 1-6. Select UEFI File

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

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

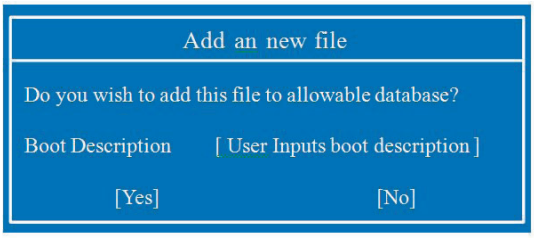


Figure 1-7. Add New File

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.

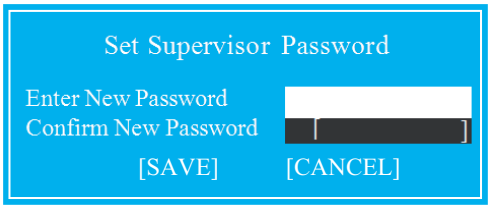


Figure 1-8. Set Supervisor Password

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

NOTE:

Passwords are not case sensitive and the length must not exceed 12 characters. The following characters may be used in a password.

A - Z	Alphabets A through Z (Not Case Sensitive)
0 - 9	Numerical Characters
-	Dash
=	Equal Sign
[	Left Bracket
]	Right Bracket
.	Period
,	Comma
;	Semi-colon
/	Slash
\	Back-slash

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 1-9. Setup Notice

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

6. Press ***F10*** to save changes and exit *BIOS Setup Utility*.

NOTE:

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

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

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. Type in the old password into the `Enter Old Password` dialog box.

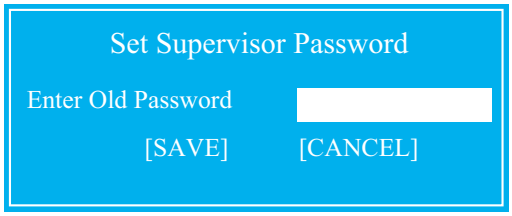


Figure 1-10. Set Supervisor Password

2. Press ***Enter*** to complete the password setting. The computer sets the `Supervisor Password Is` parameter to `Clear`. The `Setup Notice` dialog box appears.



Figure 1-11. Setup Notice

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.

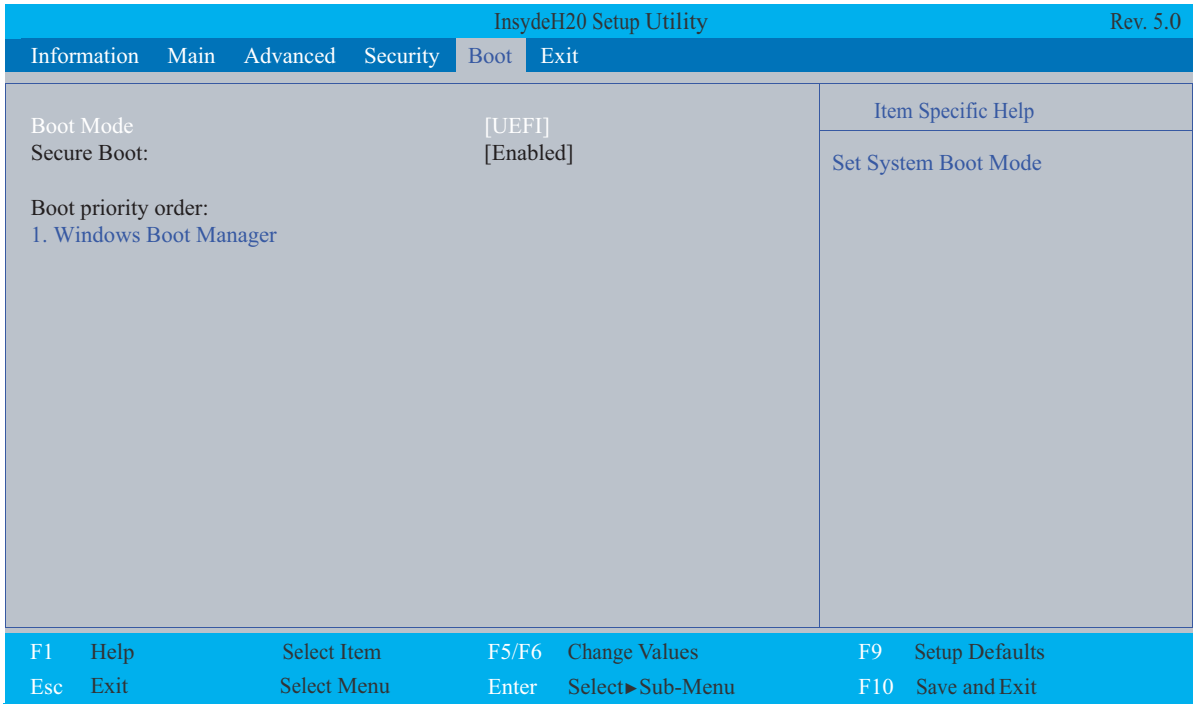


Figure 1-12. BIOS Boot (Windows 11)

Table 1-5. BIOS Boot Tab Parameters (Windows 11)

Product Information	Example	Remark
Boot Mode	[UEFI]	• Default Boot Mode: BIOS need to check OS type for this default setting. • The default value is [UEFI].
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. • 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.

Product Information	Example	Remark
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] 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. • Only display bootable devices.

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 Uitility*.

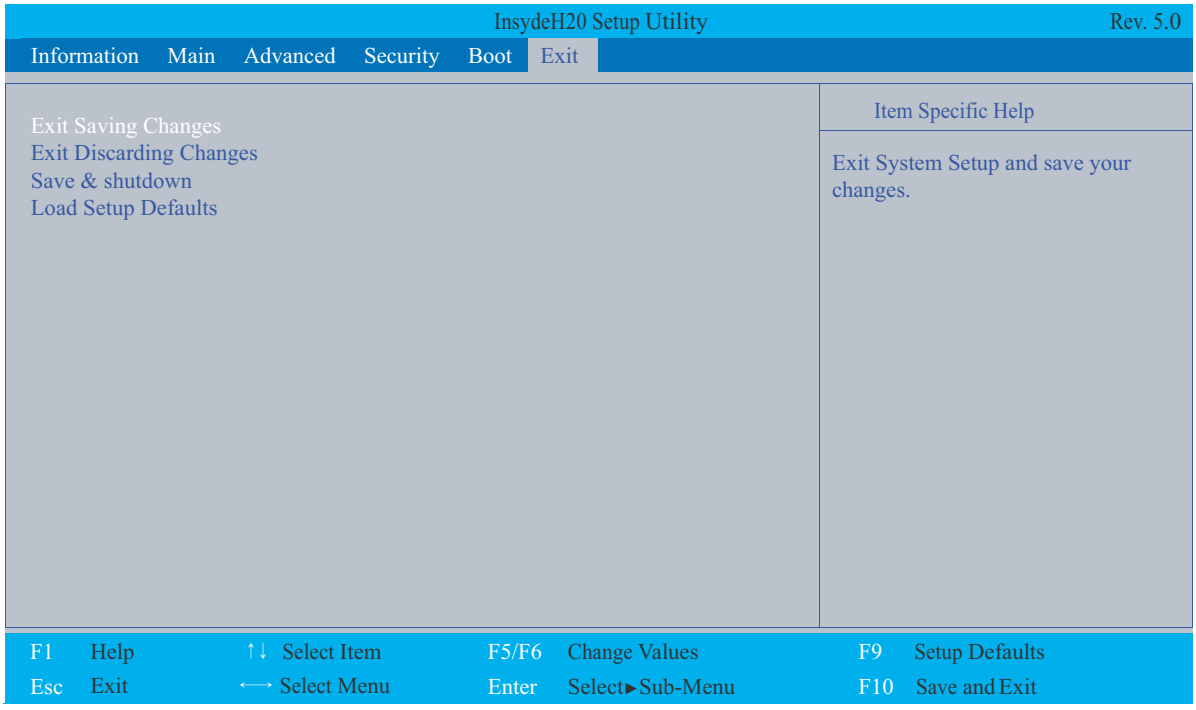
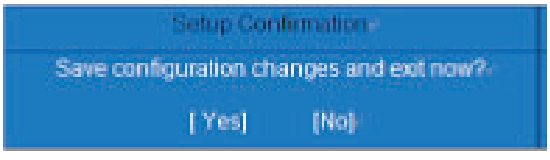


Figure 1-13. BIOS Exit

Table 1-6. BIOS Exit Tab Parameters

Parameter	Description
Exit Saving Changes	• Allow users to save changes and reboot the system. • 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. 
Exit Discarding Changes	• Allow users to discard changes before exiting Setup Utility. • 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. 

Parameter	Description
Save & shutdown	• Allow users to save changes and shutdown the system. • A confirmation message will pop up as below when user executes this item. System will save changes 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 4-1 with the verified symptom(s) to determine the solution.

Table 1-1. Verified Symptoms

Symptoms	See
Power on Issues	**Figure 1-1. Power On Issues**
No Display Issues	**Figure 1-2. No Display Issues**
LCD Picture Failure	**Figure 1-3. LCD Picture Failure**
Internal Keyboard Failure	**Figure 1-4. Internal Keyboard Failure**
Touchpad Failure	**Figure 1-5. Touchpad Failure**
Internal Speaker Failure	**Figure 1-6. Internal Speaker Failure**
Internal Microphone Failure	**Figure 1-7. Internal Microphone Record Failure**
USB3.0 Failure	**Figure 1-8. USB3.0 Failure**
Wireless Function Failure	**Figure 1-9. Wireless Function Test Failure**
Bluetooth Function Failure	**Figure 1-10. Bluetooth Function Test Failure**
Units Thermal Failure	**Figure 1-11. Units Thermal Failure**
Cosmetic Failure	**Figure 1-12. Cosmetic Failure**
Other Functions Failure	Page **1-75**

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

Power On Issues

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

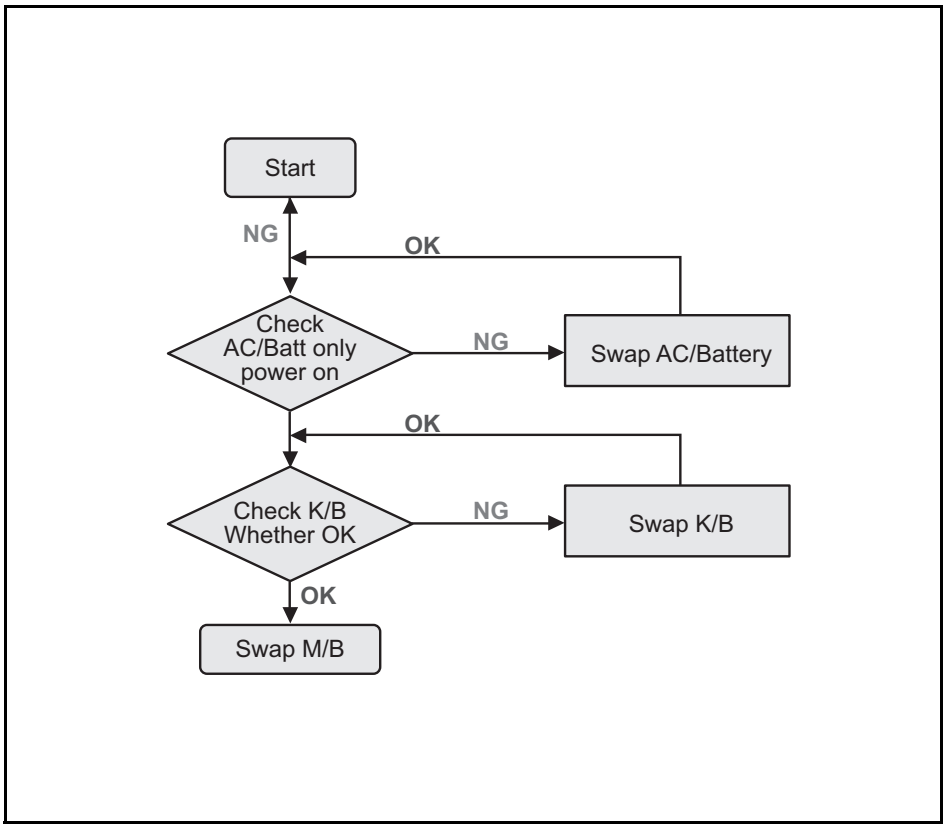


Figure 1-1. Power On Issues

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

No Display Issues

If the system does not display, perform the following:

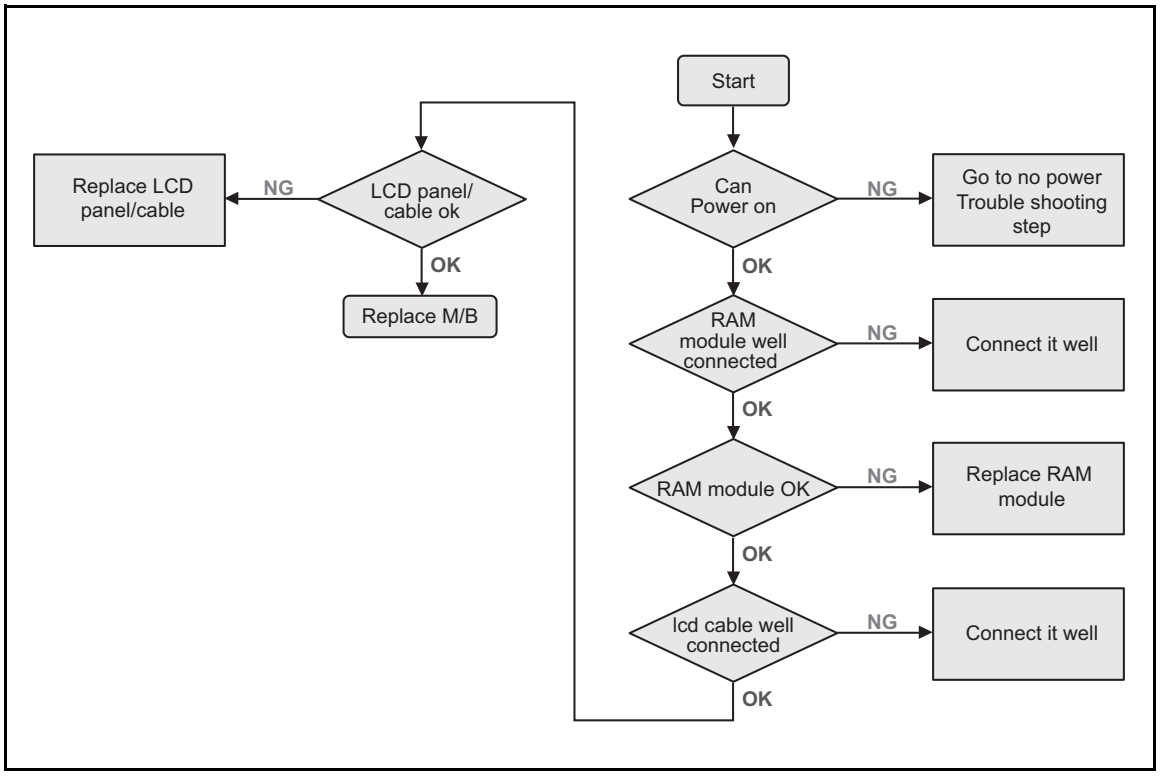


Figure 1-2. No Display Issues

No POST or Video

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

1. Make sure that internal display is selected. Switching between internal and external by pressing Fn+F5. 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 **61**. 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 is by pressing Fn+F5.
7. If the POST or video appears on the external display only, refer to **LCD Picture Failure** on page **64**. 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.
11. If the Issue is still not resolved, please contact Acer local service.

Abnormal Video

If the video appears abnormal, perform the following:

1. Boot the computer.
    - If permanent vertical/horizontal lines or dark spots appear in the same location, the LCD is faulty and should be replaced.
    - 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.
8. If the Issue is still not resolved, please contact Acer local service.

LCD Picture Failure

If the LCD picture fails, perform the following:

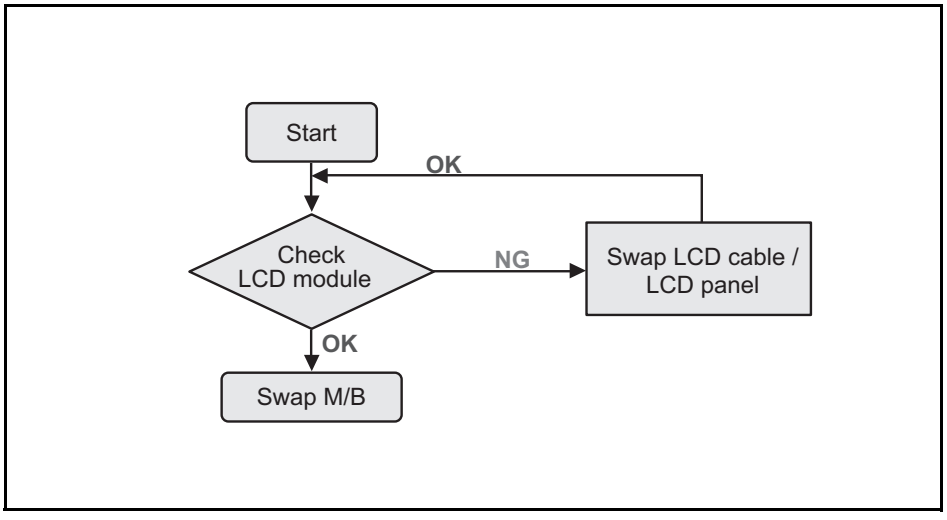


Figure 1-3. LCD Picture Failure

Internal Keyboard Failure

If the internal keyboard function fails, perform the following:

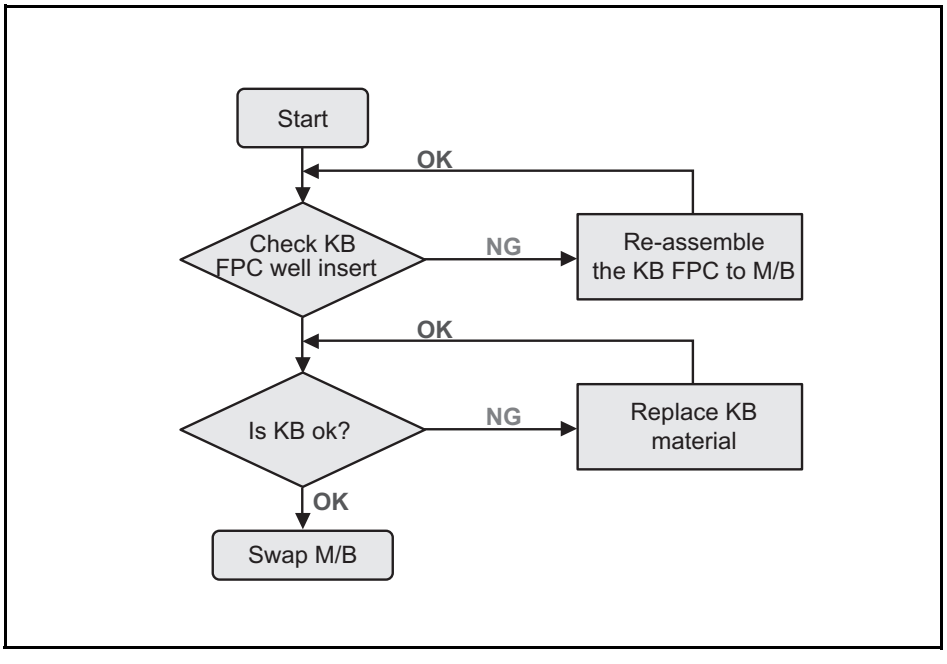


Figure 1-4. Internal Keyboard Failure

Touchpad Failure

If the touchpad fails, perform the following:

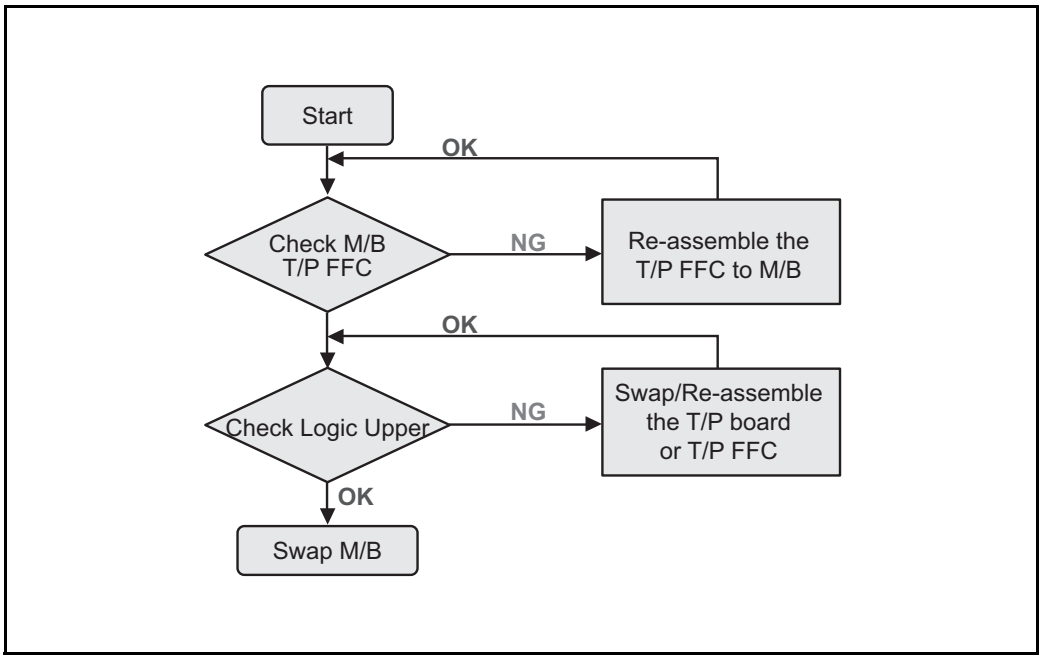


Figure 1-5. Touchpad Failure

Internal Speaker Failure

If the internal speaker fails, perform the following:

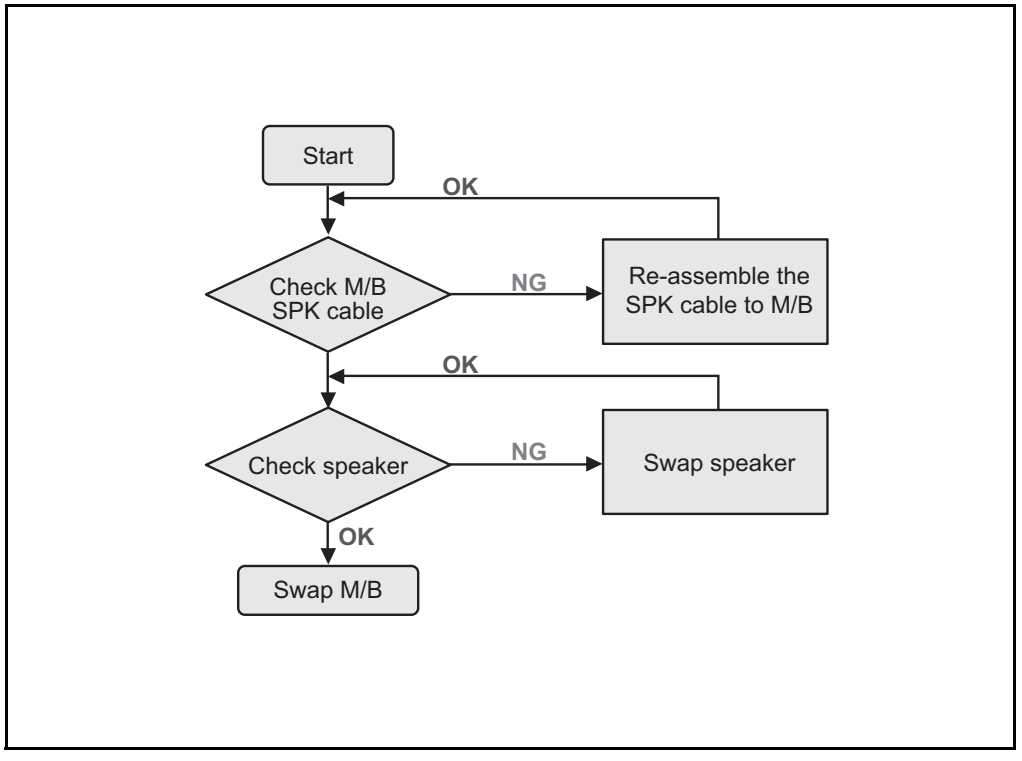


Figure 1-6. Internal Speaker Failure

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

Internal Microphone Record Failure

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

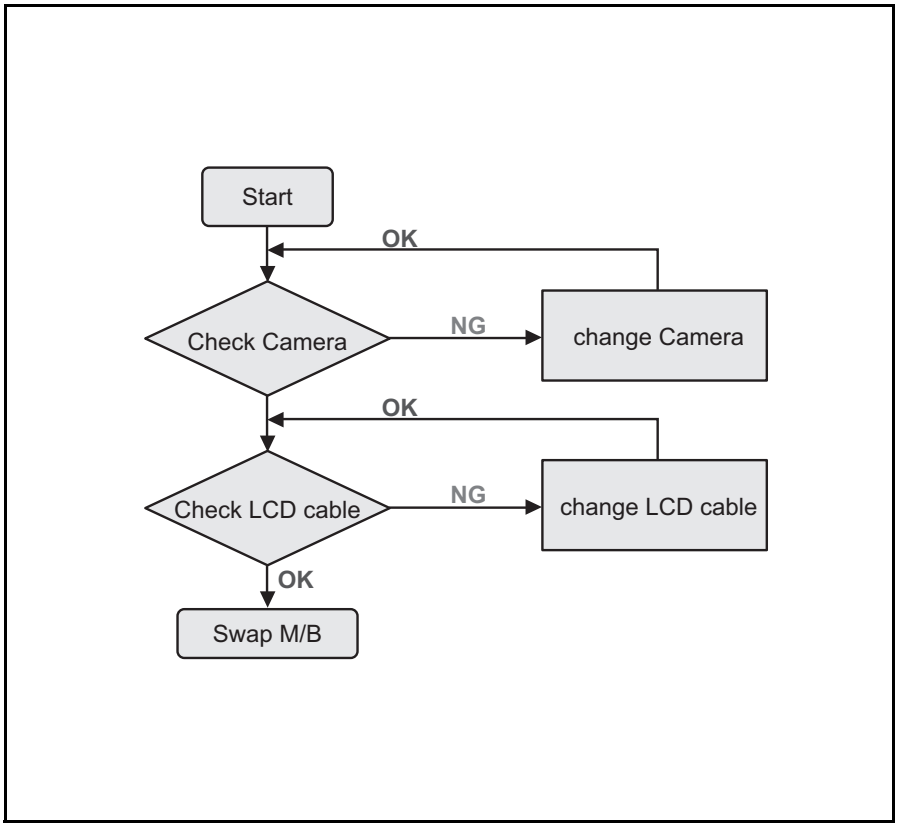


Figure 1-7. Internal Microphone Record Failure

USB Failure (USB3.0)

If the USB3.0 function fails, perform the following:

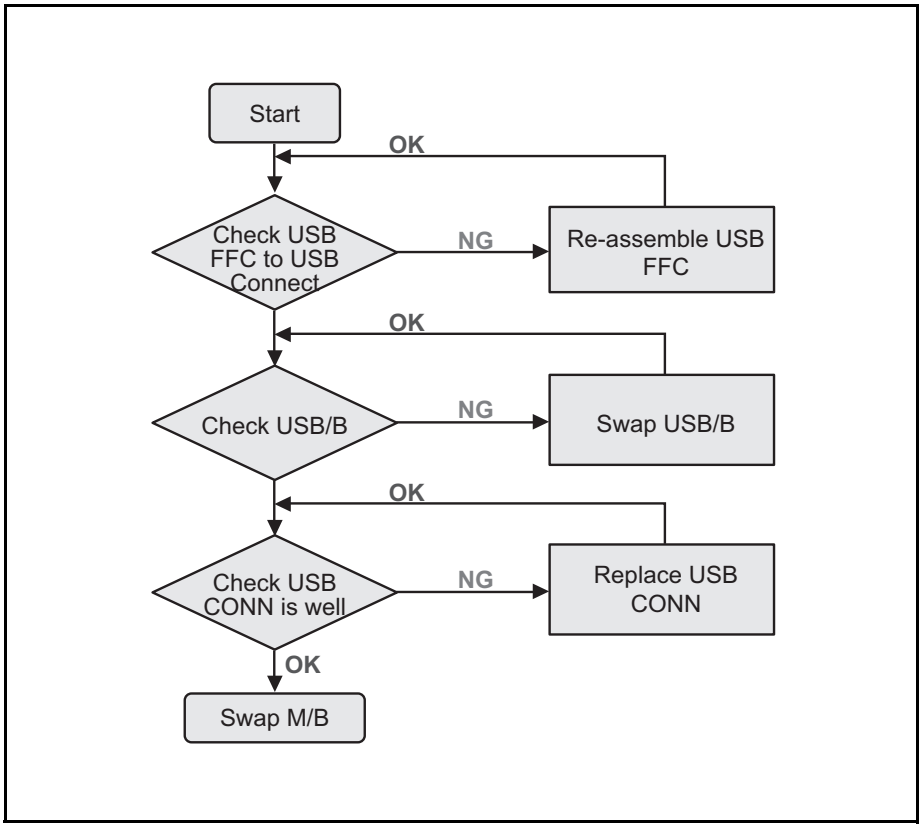


Figure 1-8. USB3.0 Failure

Wireless Function Test Failure

If the wireless function test fails, perform the following:

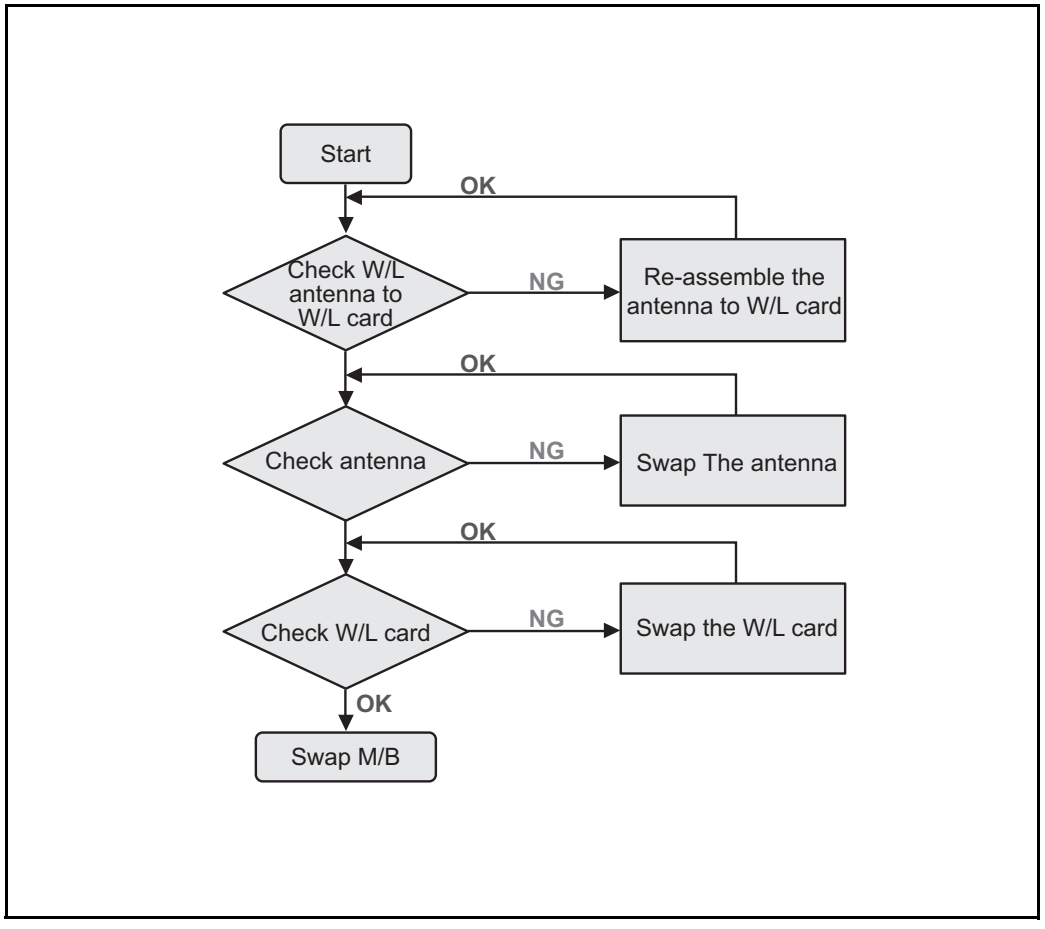


Figure 1-9. Wireless Function Test Failure

Bluetooth Function Test Failure

If the Bluetooth function test fails, perform the following:

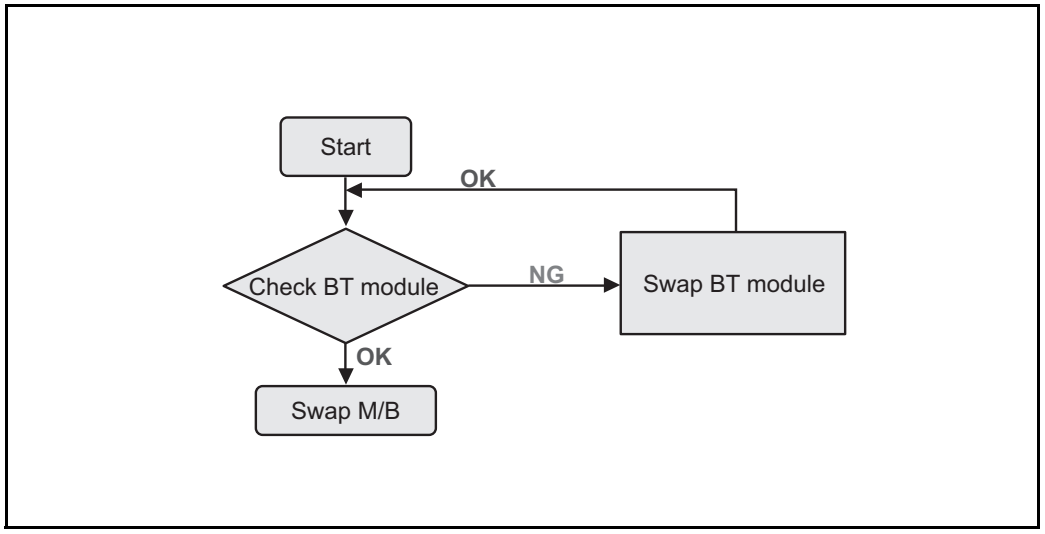


Figure 1-10. Bluetooth Function Test Failure

Units Thermal Failure

If the units thermal fails, perform the following:

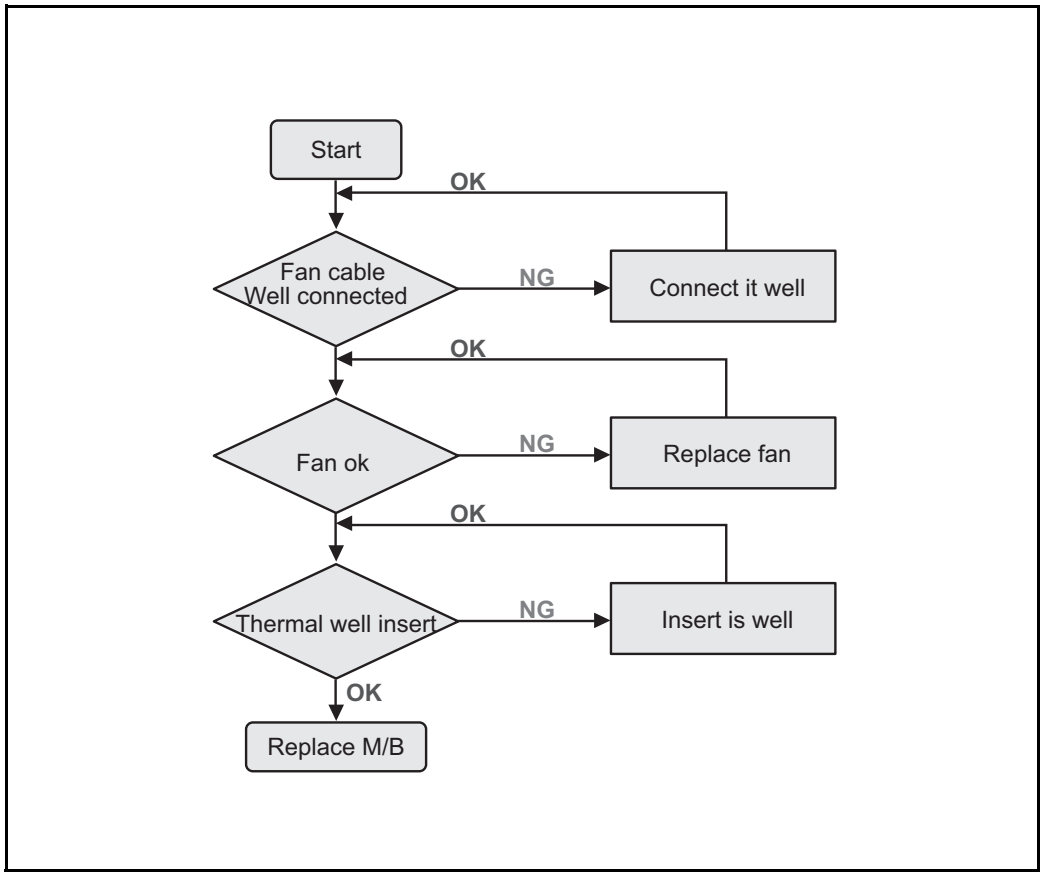


Figure 1-11. Units Thermal Failure

Cosmetic Failure

If the cosmetic fails, perform the following:

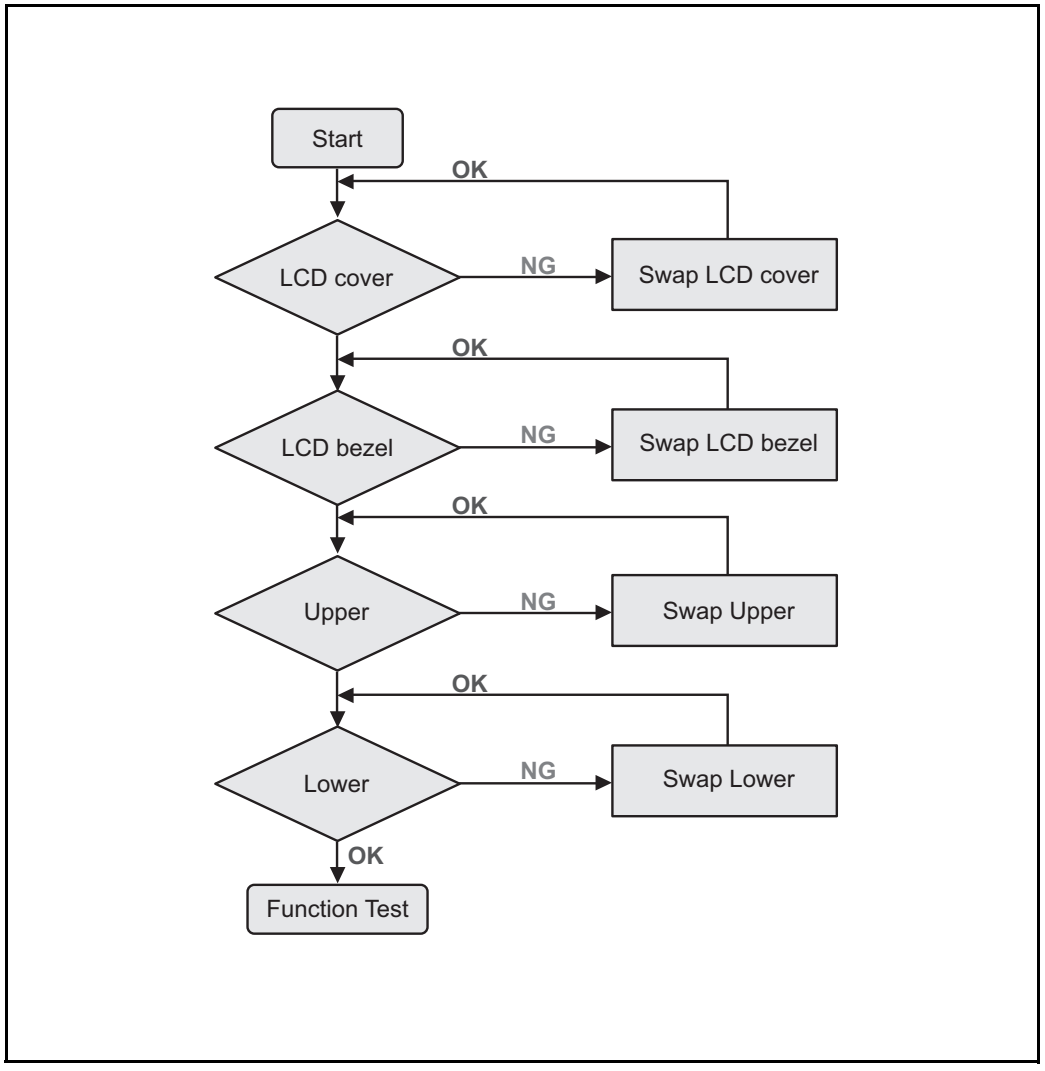


Figure 1-12. Cosmetic Failure

Other Functions Failure

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

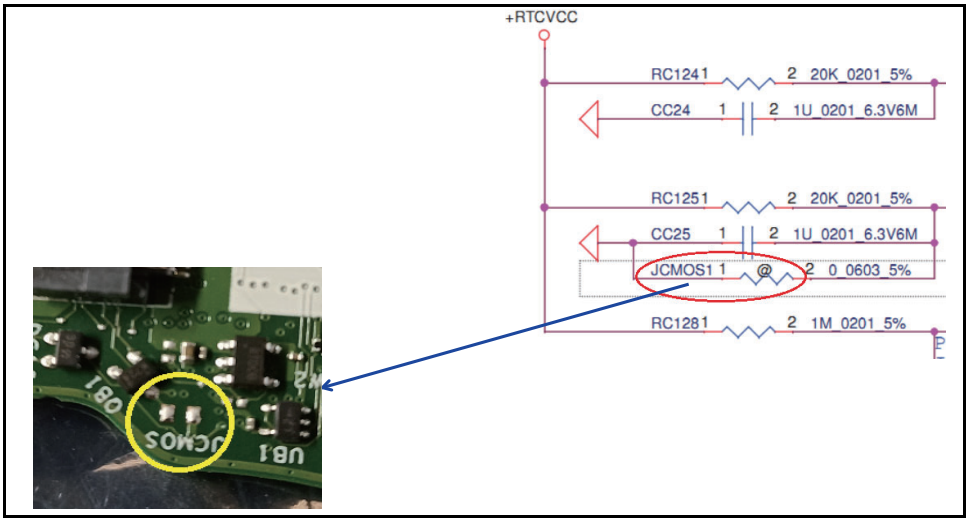


Figure 1-13. Location of JCMOS1

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

Other Functions Failure

If other functions such as the HDMI switch, extend MIC, extend speaker, USB3.0 fail, perform the following:

1. Check if the Drive is working properly.
2. Check if the test fixture is ok.
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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.
7. If the Issue is still not resolved, please contact Acer local service.

Intermittent Problems

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

When analyzing an intermittent problem, perform the following:

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

Undetermined Problems

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

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 **1-61**).

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

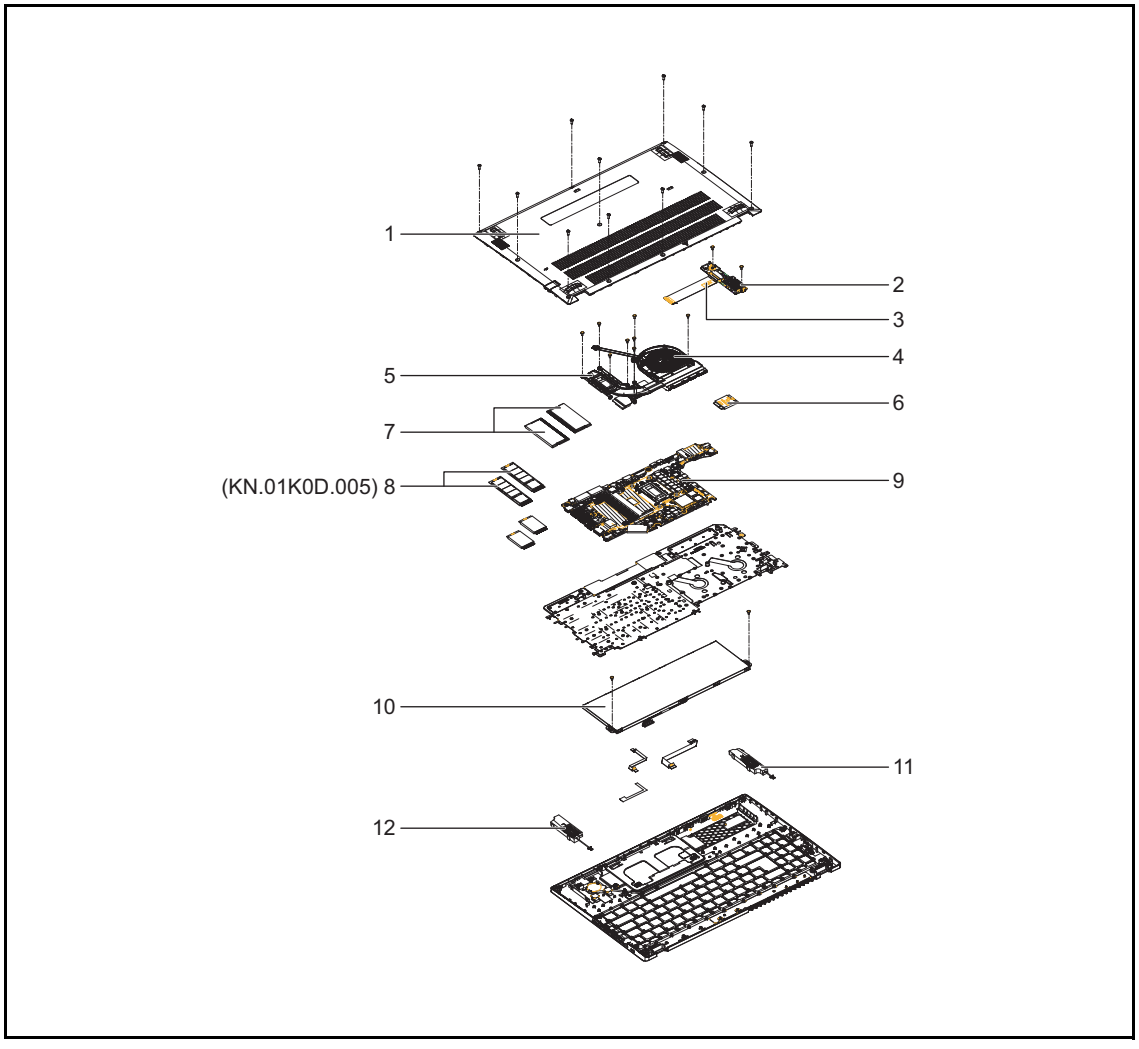


Figure 1-1. Main Assembly Exploded Diagram

Table 1-7. Main Assembly Exploded Diagram

No.	Description
1	LOWER CASE BLACK
2	BOARD IO
3	FFC CABLE FOR IO BOARD
4	FAN
5	THERMAL MODULE - UMA

No.	Description
6	Wireless LAN MEDIATEK 802.11ax Bluetooth FM MT7921LE WiFi 6 2x2 AX+BT M.2 2230
7	Memory MICRON SO-DIMM DDRIV 3200 16GB MTA8ATF2G64HZ-3G2F1 LF+HF Z42B:F, 1anm
8	Flash Disk KINGSTON SSD NAND 1024GB OM8PGP41024Q-AA LF+HF
9	TBD
10	Battery CosMx Typ.53Wh 4661mAh 3S1P AP23ABL 248x84.4x5.5(mm) AP23A 11.37V 65W Li-Ion TI BQ40Z555 FW5.12
11	SPEAKER - R
12	SPEAKER - L

Upper Case Assembly

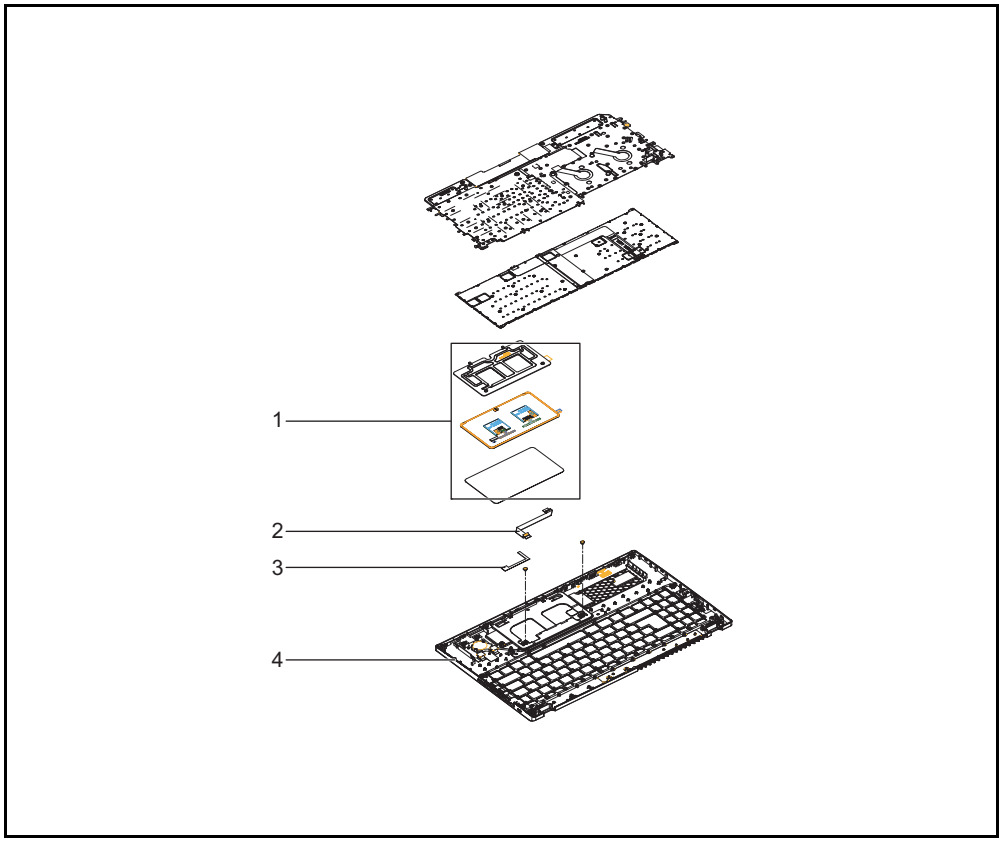


Figure 1-2. Upper Case Assembly Exploded Diagram

Table 1-8. Upper Case Assembly Exploded Diagram

No.	Description
1	TOUCHPAD ASSY SILVER - ELANTECH NC.24611.06Z
2	FFC CABLE FOR TOUCHPAD
3	TOUCHPAD CONDUCTIVE TAPE
4	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B US International (NK.I1513.2RU)

LCD Assembly

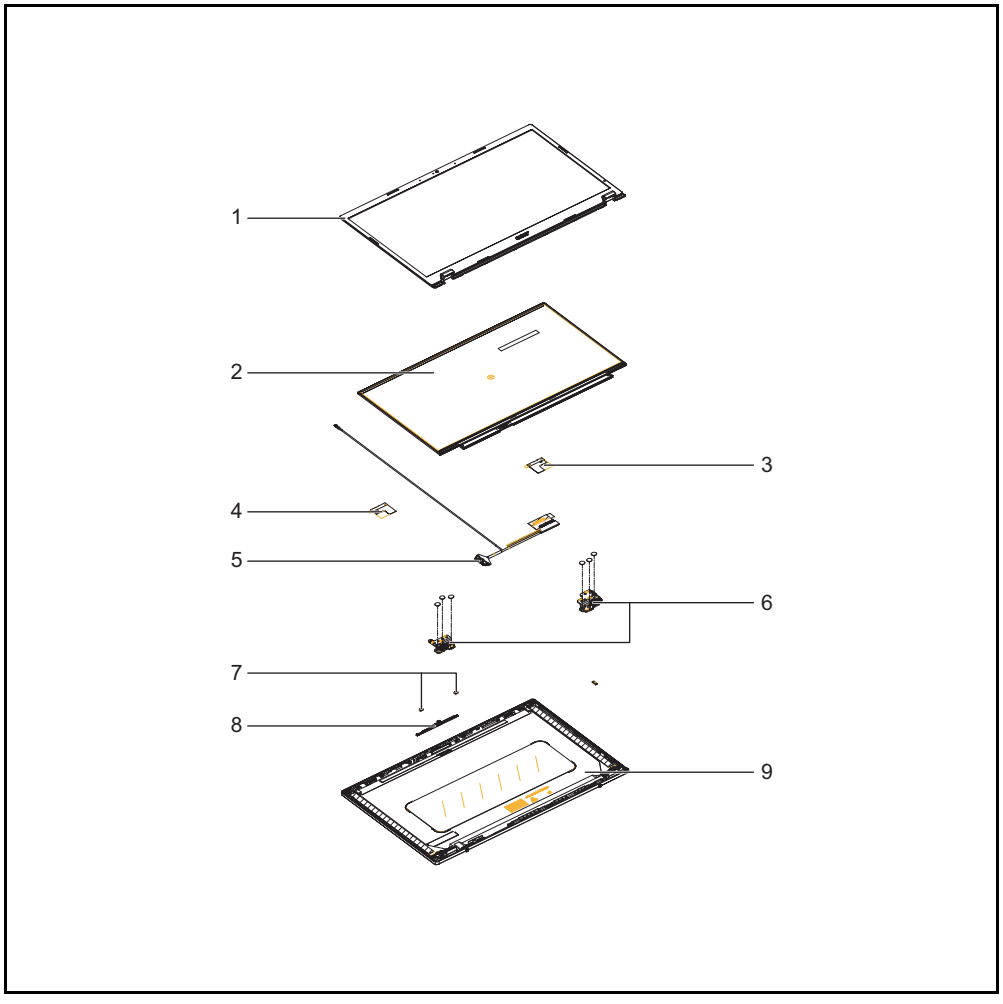


Figure 1-3. LCD Assembly Exploded Diagram

Table 1-9. LCD Assembly Exploded Diagram

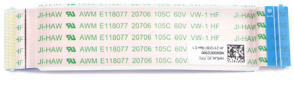
No.	Description
1	LCD BEZEL ASSY - BLACK
2	LED LCD Panel AUO 15.6"W FHD IPS None Glare B156HAN02.1 H/W JA 300nit NTSC 45% 60Hz 25ms 800:1 (Narrow border, 3.2t max)
3	ANTENNA WLAN MAIN
4	ANTENNA WLAN AUX
5	LCD EDP CABLE
6	LCD HINGE - R
	LCD HINGE - L
7	MIC RUBBER

No.	Description
8	Camera CHICONY HD Camera CNFLH34 GC1009 RTS5855 1L3B059F2(BG) ZTS6735 TNR
9	LCD COVER ASSY - SILVER

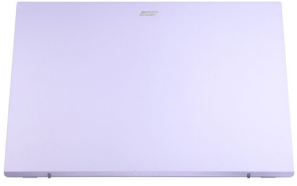
FRU (Field Replaceable Unit) List

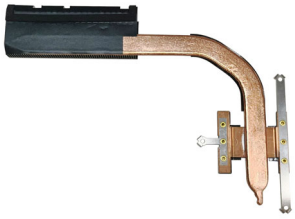
This list is for reference only, please contact Acer local service to order the correct replacement part and availability.

Table 1-10. FRU List

Category	Acer Description
ADAPTER	
	Adapter DELTA ADP-65DE BA 65W 3PHY (1.1x3.0x7.7) Brick 19V/ 3.42A Black
	Adapter LITE-ON PA-1650-50A3 65W 3PHY (1.1x3.0x7.7) Brick 19V/ 3.42A Black
	Adapter Chicony Power A065R178P 65W 3PHY (1.1x3.0x7.7) Brick 19V/3.42A Black
	Adapter DELTA ADP-65DE BH 65W 3PHY (1.1x3.0x7.7) Brick 19V/ 3.42A Black
BATTERY	
	Battery CosMx Typ.53Wh 4661mAh 3S1P AP23ABL 248x84.4x5.5(mm) AP23A 11.37V 65W Li-Ion TI BQ40Z555 FW5.12
	Battery SIMPLO Typ.53Wh 4715mAh 3S1P AP23A7L 248x84.4x5.5(mm) AP23A 11.25V 70W Li-Ion TI BQ40Z555 FW5.09
	Battery LGES Typ.53Wh 4703mAh 3S1P AP23A8L 248x84.4x5.5(mm) AP23A 11.28V 70W Li-Ion Renesas RAJ240045 FW2.09
BOARD	
	BOARD IO
CABLE	
	FFC CABLE FOR IO BOARD
	FFC CABLE FOR TOUCHPAD

Category	Acer Description
	POWER CORD 1M BLACK SOUTH AFRICA -NEW
	POWER CORD 1M BLACK BLACK AUSTRALIA
	POWER CORD 1M BLACK DENMARK
	POWER CORD 1M BLACK ISRAEL
	POWER CORD 1M BLACK ITALIAN
	POWER CORD 1M BLACK JAPAN
	POWER CORD 1M BLACK SWISS
	POWER CORD 1M BLACK ARGENTINA - NEW
	POWER CORD 1M BLACK KOREA
	POWER CORD 1M BLACK BRAZIL
	POWER CORD 1M BLACK EUROPE
	POWER CORD 1M BLACK CHINA
	POWER CORD 1M BLACK INDIA
	POWER CORD 1M BLACK UK
	POWER CORD 1M BLACK TWN
	POWER CORD 1M BLACK US
	ANTENNA WLAN MAIN
	ANTENNA WLAN AUX
	LCD EDP CABLE

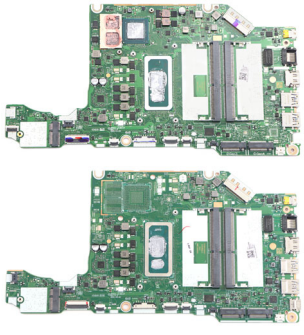
Category	Acer Description
CAMERA	
	Camera CHICONY HD Camera CNFLH34 GC1009 RTS5855 1L3B059F2(BG) ZTS6735 TNR
	Camera Tech-Front HD Camera YHVC OV9734 SPCA2112N 1L3B059F1(BG) ZTS6735 TNR
CASE/COVER/BRACKET ASSEMBLY	
	LOWER CASE BLACK
	LCD COVER ASSY - SILVER
	LCD BEZEL ASSY - BLACK
	LCD HINGE - L
	LCD HINGE - R
	LCD BRACKET - L FOR N15.6FHDSUPILB KL.1560H.009
	LCD BRACKET - R FOR N15.6FHDSUPILB KL.1560H.009
FAN	
	FAN

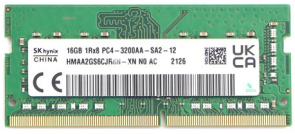
Category	Acer Description
HEATSINK	
	THERMAL MODULE - UMA
HDD	
	Flash Disk KINGSTON SSD NAND 1024GB OM8PGP41024Q-AA LF+HF
	Flash Disk HYNIX SSD NAND 1024GB M.2 2280 BC901 1024G HFS001TEJ9X110N LF+HF
	Flash Disk MICRON SSD NAND 512GB Micron 2500 QLC 512GB MTFDKBA512QGN-1BN15ABYY LF+HF
	Flash Disk KINGSTON SSD NAND 512GB OM8PGP4512Q-AA LF+HF
KEYBOARD ASSEMBLY	
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B US International (NK.I1513.2RU)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Greek (NK.I1513.2RN)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Arabic (NK.I1513.2RL)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Traditional Chinese (NK.I1513.2RM)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Russian (NK.I1513.2RQ)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B US International w/ Hebrew (NK.I1513.2RV)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Thailand (NK.I1513.2RT)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Korean (NK.I1513.2RP)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Ukrainian (NK.I1513.2RR)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Persian (NK.I1513.2RS)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B US International w/ Canadian French (NK.I1513.2RW)

Category	Acer Description
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B US International w/ Bulgaria (NK.I1513.2RX)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B UK (NK.I1513.2SG)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B German (NK.I1513.2S5)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Swiss/G (NK.I1513.2SE)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Belgium (NK.I1513.2RZ)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Danish (NK.I1513.2S2)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Italian (NK.I1513.2S7)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B French (NK.I1513.2S4)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Hungarian (NK.I1513.2S6)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Norwegian (NK.I1513.2S9)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Portuguese (NK.I1513.2SA)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Spanish (NK.I1513.2SC)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Turkish (NK.I1513.2SF)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Sweden (NK.I1513.2SD)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B FR/Arabic (NK.I1513.2S3)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Nordic (NK.I1513.2S8)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B SLO/CRO (NK.I1513.2SB)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B CZ/SK (NK.I1513.2S1)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Brazilian Portuguese (NK.I1513.2S0)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B ALA-Spanish (NK.I1513.2RY)

Category	Acer Description
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A30B Japanese (NK.I1513.2SH)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B US International (NK.I1513.37J, NK.I151S.14R, NK.I1517.19L, NK.I151B.08V)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Greek (NK.I1513.37C, NK.I151S.14K, NK.I1517.19E, NK.I151B.08P)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Arabic (NK.I1513.37A, NK.I151S.14H, NK.I1517.19C, NK.I151B.08M)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Traditional Chinese (NK.I1513.37B, NK.I151S.14J, NK.I1517.19D, NK.I151B.08N)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Russian (NK.I1513.37E, NK.I151S.14M, NK.I1517.19G, NK.I151B.08R)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B US International w/ Hebrew (NK.I1513.37K, NK.I151S.14S, NK.I1517.19M, NK.I151B.08W)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Thailand (NK.I1513.37H, NK.I151S.14Q, NK.I1517.19K, NK.I151B.08U)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Korean (NK.I1513.37D, NK.I151S.14L, NK.I1517.19F, NK.I151B.08Q)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Ukrainian (NK.I1513.37F, NK.I151S.14N, NK.I1517.19H, NK.I151B.08S)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Persian (NK.I1513.37G, NK.I151S.14P, NK.I1517.19J, NK.I151B.08T)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B US International w/ Canadian French (NK.I1513.37L, NK.I151S.14T, NK.I1517.19N, NK.I151B.08X)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B US International w/ Bulgaria (NK.I1513.37M, NK.I151S.14U, NK.I1517.19P, NK.I151B.08Y)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B UK (NK.I1513.386, NK.I151S.15D, NK.I1517.1A8, NK.I151B.09H)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B German (NK.I1513.37V, NK.I151S.152, NK.I1517.19X, NK.I151B.096)

Category	Acer Description
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Swiss/G (NK.I1513.384, NK.I151S.15B, NK.I1517.1A6, NK.I151B.09F)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Belgium (NK.I1513.37P, NK.I151S.14W, NK.I1517.19R, NK.I151B.090)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Danish (NK.I1513.37S, NK.I151S.14Z, NK.I1517.19U, NK.I151B.093)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Italian (NK.I1513.37X, NK.I151S.154, NK.I1517.19Z, NK.I151B.098)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B French (NK.I1513.37U, NK.I151S.151, NK.I1517.19W, NK.I151B.095)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Hungarian (NK.I1513.37W, NK.I151S.153, NK.I1517.19Y, NK.I151B.097)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Norwegian (NK.I1513.37Z, NK.I151S.156, NK.I1517.1A1, NK.I151B.09A)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Portuguese (NK.I1513.380, NK.I151S.157, NK.I1517.1A2, NK.I151B.09B)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Spanish (NK.I1513.382, NK.I151S.159, NK.I1517.1A4, NK.I151B.09D)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Turkish (NK.I1513.385, NK.I151S.15C, NK.I1517.1A7, NK.I151B.09G)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Sweden (NK.I1513.383, NK.I151S.15A, NK.I1517.1A5, NK.I151B.09E)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B FR/Arabic (NK.I1513.37T, NK.I151S.150, NK.I1517.19V, NK.I151B.094)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Nordic (NK.I1513.37Y, NK.I151S.155, NK.I1517.1A0, NK.I151B.099)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B SLO/CRO (NK.I1513.381, NK.I151S.158, NK.I1517.1A3, NK.I151B.09C)

Category	Acer Description
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B CZ/SK (NK.I1513.37R, NK.I151S.14Y, NK.I1517.19T, NK.I151B.092)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Brazilian Portuguese (NK.I1513.37Q, NK.I151S.14X, NK.I1517.19S, NK.I151B.091)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B ALA-Spanish (NK.I1513.37N, NK.I151S.14V, NK.I1517.19Q, NK.I151B.08Z)
	KEYBOARD ASSY W/ SILVER UPPER CASE, NBL KB QV05T_A40B Japanese (NK.I1513.387)
LCD	
	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 INNOLUX 15.6"W FHD IPS None Glare N156HCA-EAB C4 300nit NTSC 45% 60Hz 25ms 800:1 (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 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)
MAINBOARD	
	TBD
	TBD

Category	Acer Description
MEMORY	
	Memory MICRON SO-DIMM DDRIV 3200 16GB MTA8ATF2G64HZ-3G2F1 LF+HF Z42B:F, 1anm
	Memory HYNIX SO-DIMM DDRIV 3200 16GB HMAA2GS6CJR8N-XN LF+HF 1024*16 RG C-die
	Memory MICRON SO-DIMM DDRIV 3200 4GB MTA4ATF51264HZ-3G2R1 LF+HF 1anm, Z41C
	Memory MICRON SO-DIMM DDRIV 3200 8GB MTA8ATF1G64HZ-3G2R1 LF+HF 1anm, Z41C
	Memory SAMSUNG SO-DIMM DDRIV 3200 8GB M471A1K43EB1-CWE LF+HF 1024*8 1znm E-die
	Memory HYNIX SO-DIMM DDRIV 3200 8GB HMAA1GS6CJR6N-XN LF+HF 1024*16 RG C-die
MISCELLANEOUS	
	MIC RUBBER
	TOUCHPAD CONDUCTIVE TAPE
	LCD PANEL ADHESIVE FOR N15.6FHDSUPILB KL.1560H.009
	LCD ALIGNMENT MYLAR 10x5x0.4mm
POINT DEVICE	
	TOUCHPAD ASSY SILVER - ELANTECH NC.24611.06Z
	TOUCHPAD ASSY SILVER - SYNAPTICS NC.24611.070
	TOUCHPAD ASSY SILVER - PIXART NC.24611.08F

Category	Acer Description
SPEAKER	
	SPEAKER - L
	SPEAKER - R
Wireless LAN	
	Wireless LAN MEDIATEK 802.11ax Bluetooth FM MT7921LE WiFi 6 2x2 AX+BT M.2 2230
	Wireless LAN AZUREWAVE 802.11ax (Wi-Fi 6) BT5.2 MT7921_AW-XB468NF Mediatek 2x2 M.2 2230 PCIe
	Wireless LAN AZUREWAVE Wi-Fi 6E BT5.2 MT7902_AW-XB552NF Mediatek 1x1 M.2 2230 PCIe

Screw List

Table 1-11. Screw List

CATEGORY	Description
SCREWS	
	SCREW 2.0D 2.5L K 5D 0.5T NI NL
	SCREW 2.5D 2.5L K 8D 0.6T ZK NL
	SCREW 2.5D 5.0L K 4.6D NI NL
	SCREW M M 2.0D 4.0L K 4.6D BNI NL
	SCREW 2D 2.3L K 7D 0.5T ZK NL
	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**.