Predator PHN16-I31
MacanS_RTX

LIFECYCLE EXTENSION GUIDE

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Self-Repair

This chapter offers limited customer self-repair capabilities.

Prior performing self-repair, familiarize yourself with the Safety Guidelines and Recommended Equipment sections first as described in the chapter "Disassembly Procedures".

Due to the complexity of circuit boards, electronic components which are embedded to the motherboard or daughterboard(s) are strongly not advised to self-repair.

NOTE:

Before handling components, wear anti-static gloves to avoid damaging them due to static electricity.

NOTE:

For replacement parts, always use only Acer certified components in order to safeguard quality, optimum system performance, stability and reliability of the product.

NOTE:

Any damage to the product that occur during self-repair, or which has occurred as a result of a careless or unsuccessful self-repair attempt, is not covered by the standard product warranty.

Disassembly Procedures

Safety Guidelines

This chapter contains step by step procedures on how to remove and de-install components from the computer. Use these safety guidelines to ensure your personal safety. Each procedure included in this chapter assumes that you are preparing your computer for recycling and disposal. **By performing any of these procedures you acknowledge that any remaining warranty applicable to your computer will be voided if any damage is done to the unit or components during the repair. Before you start any of the procedures in this chapter, make sure to read the following safety guidelines and the respective instructions within the chapter.**

CAUTION!

- Turn off your computer and disconnect all power sources before opening the computer cover or panels.
- To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface at the same time as touching a connector on the back of the computer.
- Take off any metal objects on your arms or fingers such as bracelets, rings or watches and make sure your hands are completely dry. Even if your unit is unplugged, there may still be some remaining electric charge.
- If a component does not come out easily, do not forcefully remove it. Instead, check that you are removing it correctly and that no wires or other parts are in the way.
- When you disconnect a cable, pull on its connector or on its pull-tab, not on the cable itself. Some cables have connectors with locking tabs; if you are disconnecting this type of cable, press in on the locking tabs before you disconnect the cable.

Recommended Equipment

The following equipment are recommended to do the following maintenance procedures:

- Wrist grounding strap and conductive mat
- Flat screwdriver
- Philips screwdriver
- Polydrive screwdriver
- Plastic tweezers
- Flat plastic pry
- Torx screwdriver

WEEE Annex VII Component

These components are classified as requiring selective treatment:

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

Pre-disassembly Instructions

Do the following prior to starting any maintenance procedures:

1. Place the system on a stable work surface.
2. Remove the power adapter from the DC-in jack (A) as shown in Figure 1-1.
3. Remove all cables from the system.

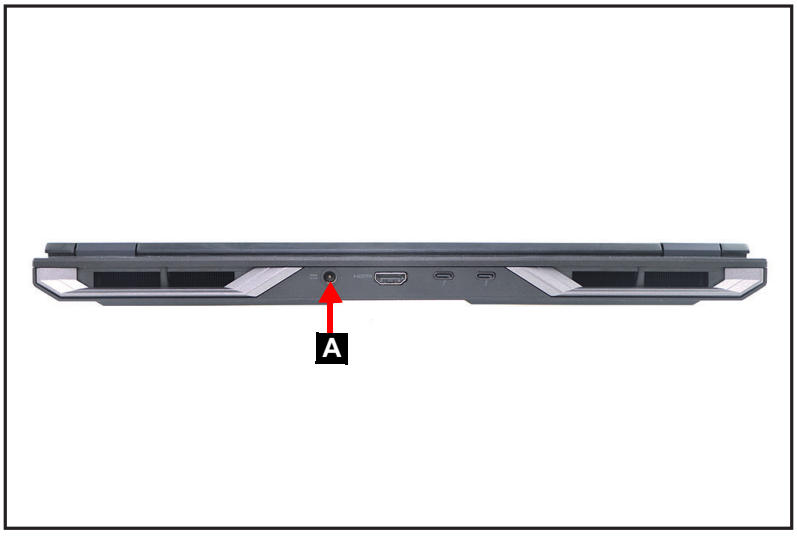


Figure 1-1. AC Adapter Outlet

4. Remove the microSD card from the microSD card slot (B) (Figure 1-2).

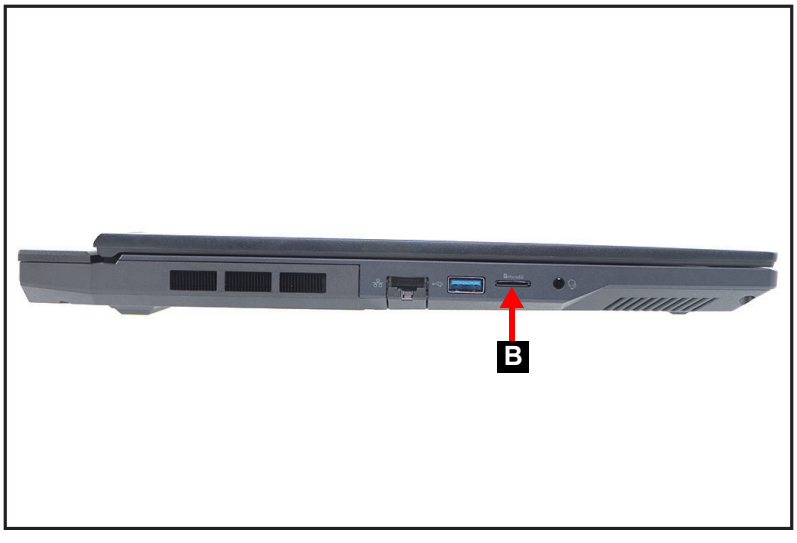


Figure 1-2. Memory Card Removal

NOTE:

Make sure the system is completely powered off.

Base Cover Removal

1. Remove nine (9) Torx screws from the base cover (Figure 1-3).

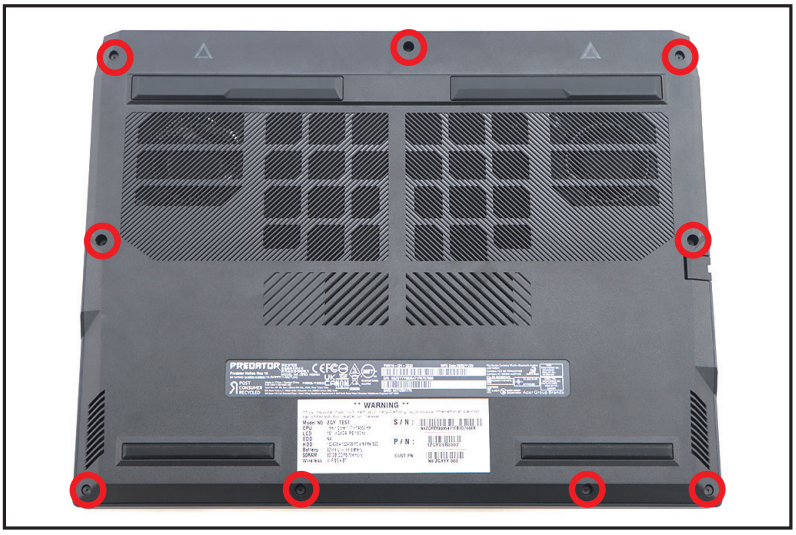


Figure 1-3. Base Cover Removal

2. Carefully flip the notebook. Then, starting from the upper side, carefully pry the strip cover to disengage the bottom-center latches as shown in Figure 1-4.



Figure 1-4. Base Cover Removal

3. Lift the bottom side of the strip cover to release the remaining bottom latches (Figure 1-5).

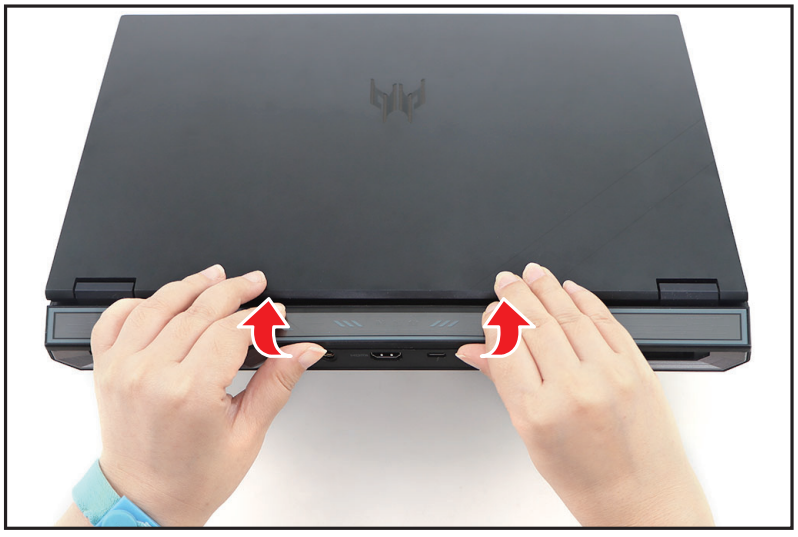


Figure 1-5. Base Cover Removal

4. Continue to release the remaining latches on the upper side (highlighted with the green line) (Figure 1-6). Then remove the strip cover.



Figure 1-6. Base Cover Removal

5. Carefully flip the notebook again. Then, carefully pry the base cover starting from the bottom-right edge first, then following with bottom-left edge to release the latches as shown in Figure 1-7.

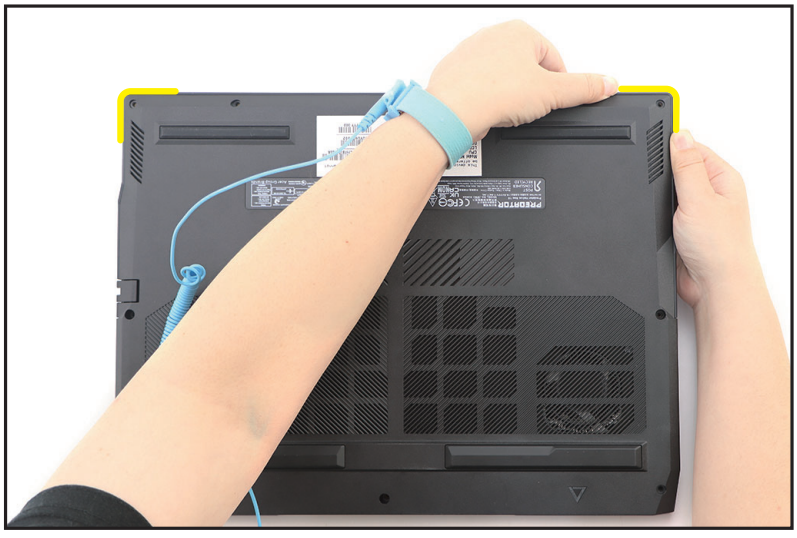


Figure 1-7. Base Cover Removal

6. Lift the bottom side of the base cover to continue releasing the remaining latches on the left, right, and upper sides (Figure 1-8).



Figure 1-8. Base Cover Removal

7. Remove the base cover (Figure 1-9).

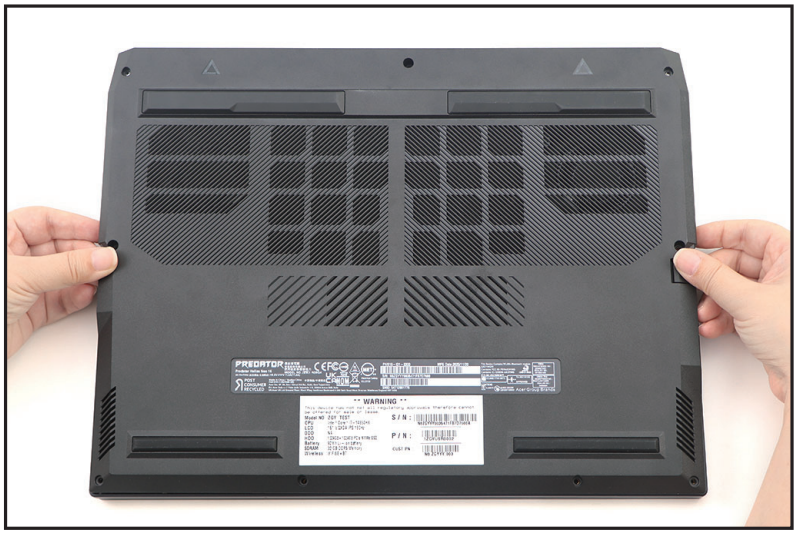


Figure 1-9. Base Cover Removal

Battery Pack Removal

Prerequisite:

Base Cover Removal

1. Detach the tape (A) securing the battery cable connection (Figure 1-10).

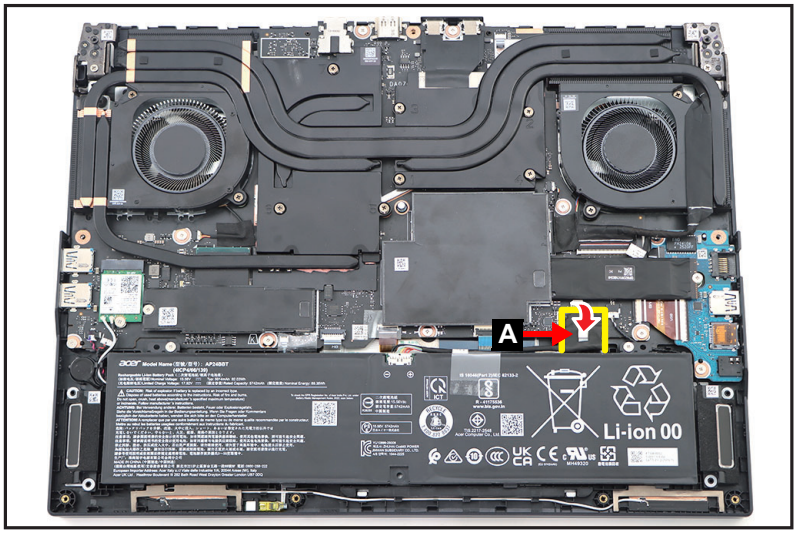


Figure 1-10. Battery Pack Removal

2. Disconnect the battery cable from the mainboard connector (B) (Figure 1-11).

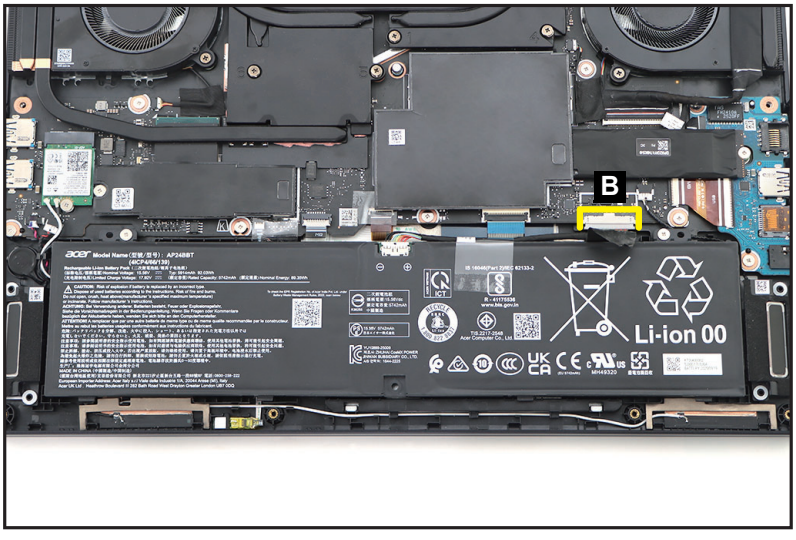


Figure 1-11. Battery Pack Removal

3. Remove two (2) screws from the battery pack (Figure 1-12).

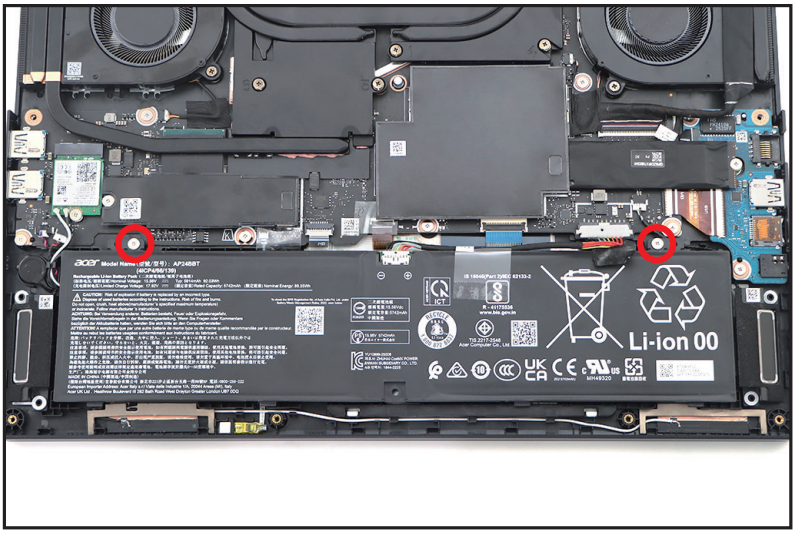


Figure 1-12. Battery Pack Removal

4. Lift the battery pack (C) to release it from the compartment studs (highlighted with the green lines) (Figure 1-13). Then remove the battery pack.

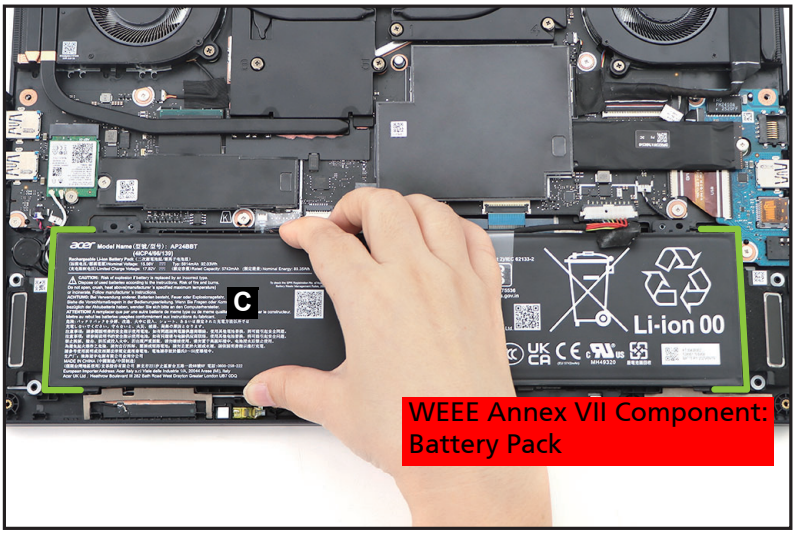


Figure 1-13. Battery Pack Removal

5. Detach the mylar (D) securing the battery cable in place (Figure 1-14).
6. Disconnect the battery cable from the battery connector (E) (Figure 1-14). Then remove the battery cable.

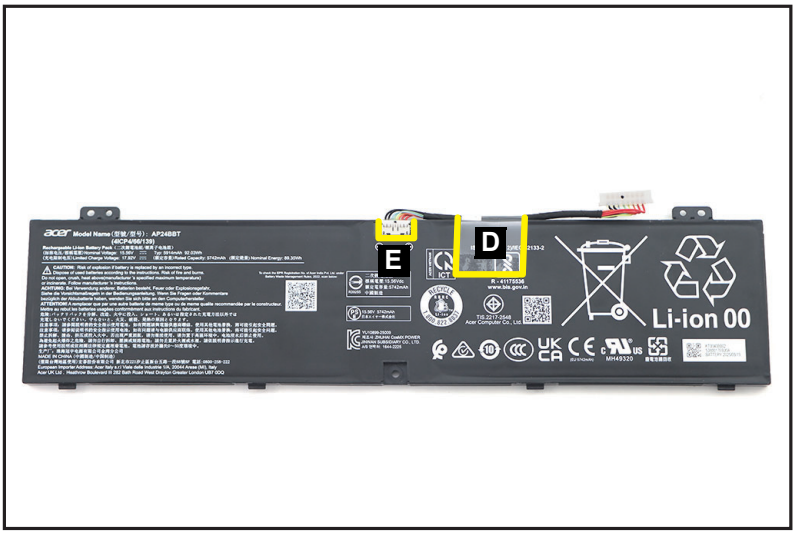


Figure 1-14. Battery Pack Removal

IMPORTANT:

Follow local regulations for battery disposal.

SSD Modules Removal

Prerequisite:

Battery Pack Removal

1. Find the SSD modules (A) on the top assembly (Figure 1-15).

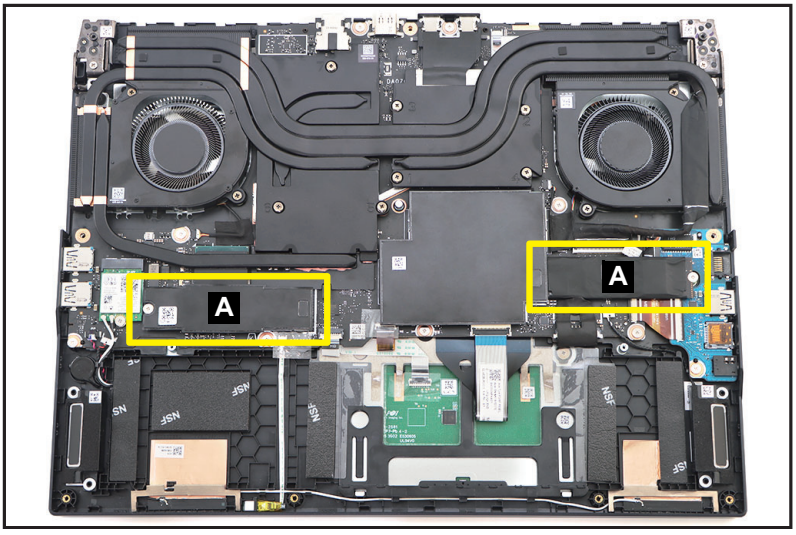


Figure 1-15. SSD Modules Location

2. Detach the absorber with insulator mylar (B) covering the SSD module (**closer to the WLAN module**) (Figure 1-16).

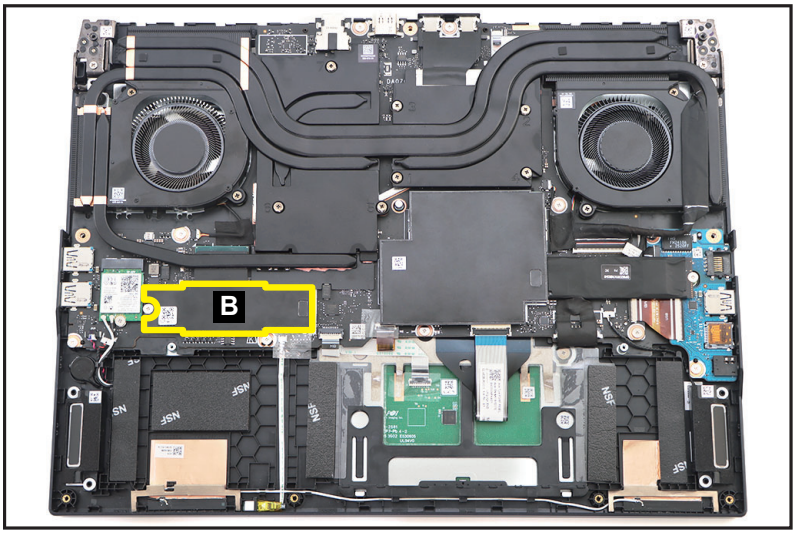


Figure 1-16. SSD Module Removal

3. Remove one (1) screw securing the SSD module (Figure 1-17).

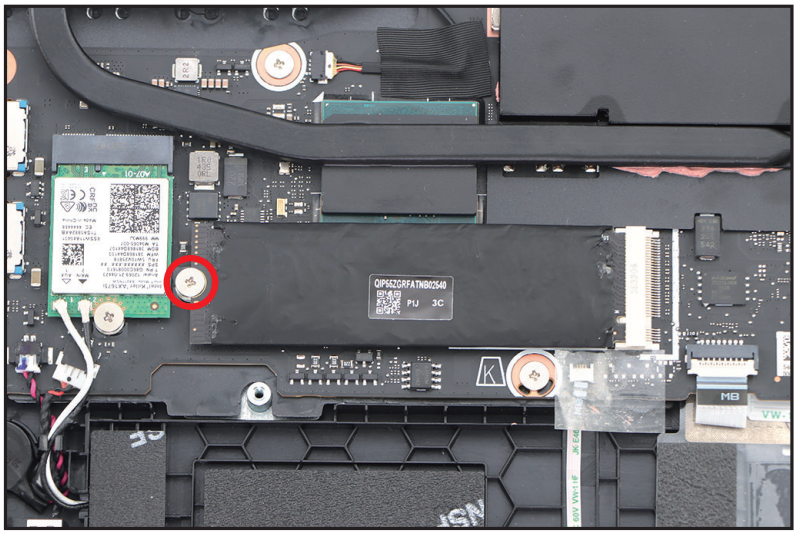


Figure 1-17. SSD Module Removal

4. Disconnect the SSD module from the mainboard connector (C) (Figure 1-18). Then remove the SSD module.

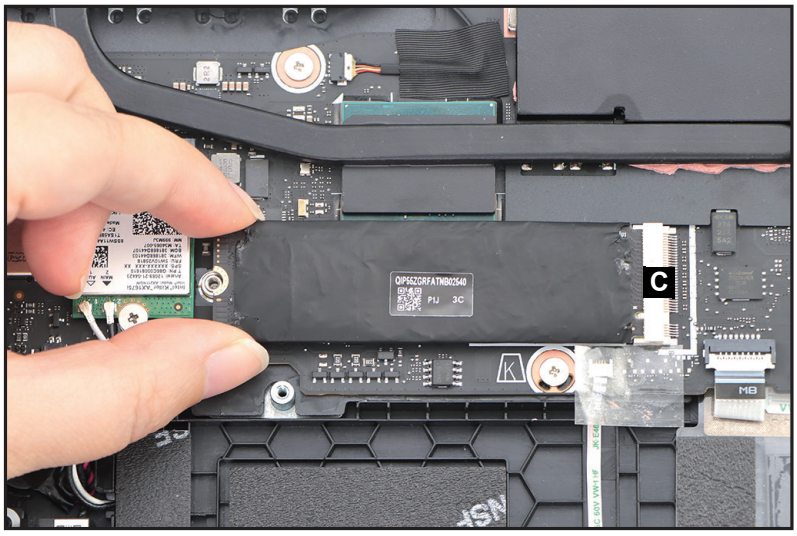


Figure 1-18. SSD Module Removal

5. Repeat steps 3~4 to remove another SSD module.

6. By holding the upper edge of the copper foil with mylar (D), unfold and detach it from the SSD module as shown in Figure 1-19 and Figure 1-20 but DO NOT remove yet!

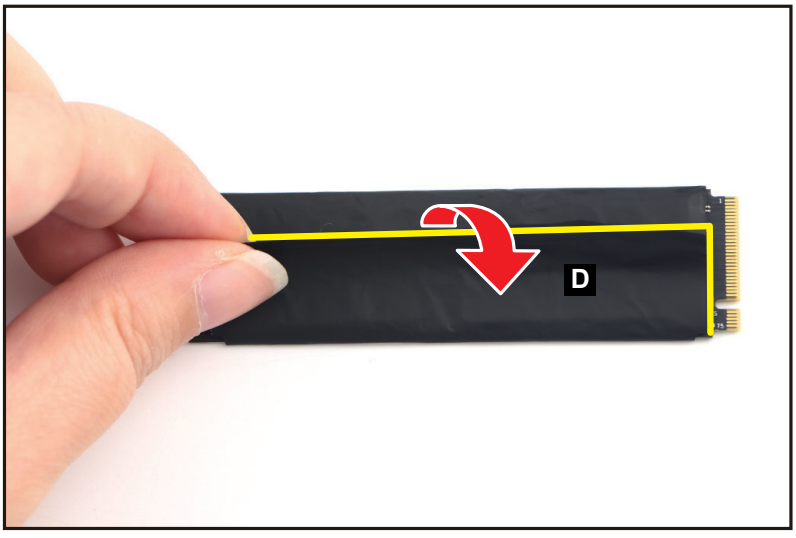


Figure 1-19. SSD Module Removal

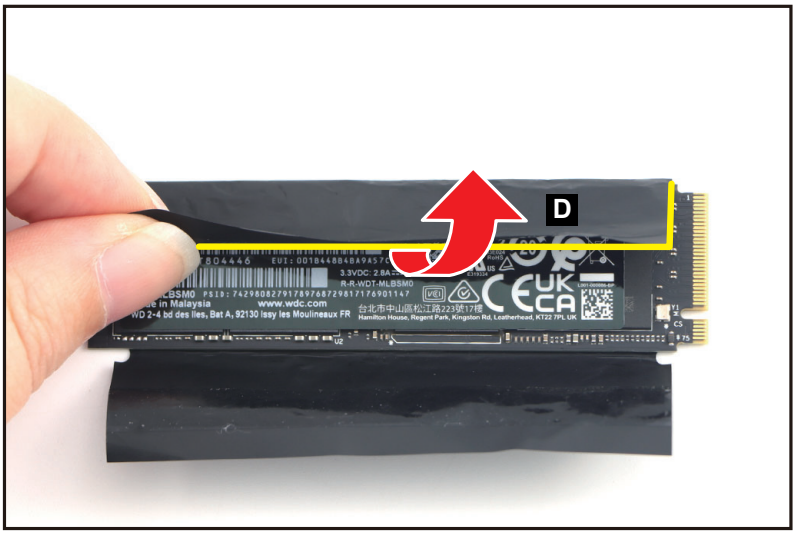


Figure 1-20. SSD Module Removal

7. Detach the SSD module from the adhesive graphite sheet (highlighted with the yellow dashed line) as shown in Figure 1-21.

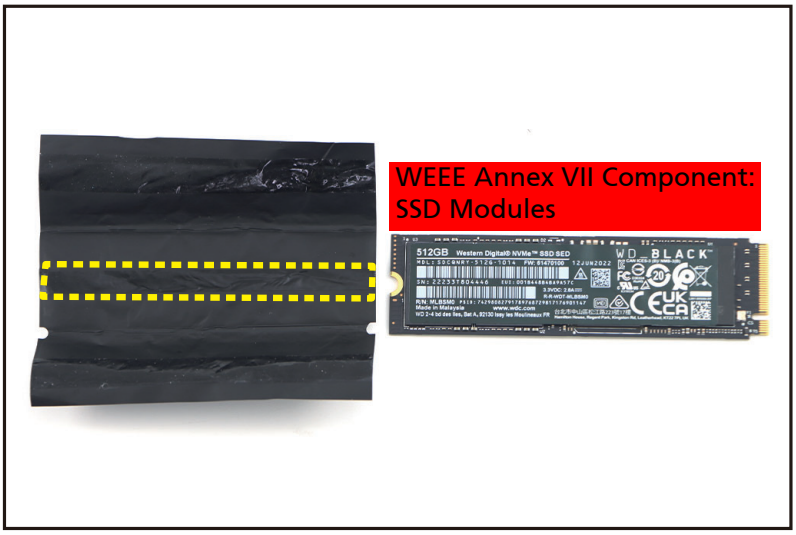


Figure 1-21. SSD Module Removal

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

DIMM Modules Removal

Prerequisite:

Battery Pack Removal

1. Detach the absorber with insulator mylar (A) covering the DIMM modules (Figure 1-22).

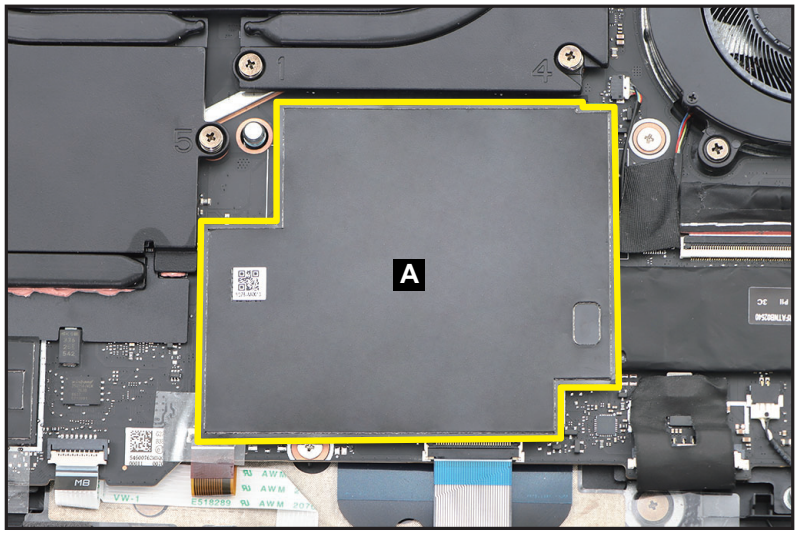


Figure 1-22. DIMM Module Removal

2. Push the DIMM module clips (B) outwards (Figure 1-23).

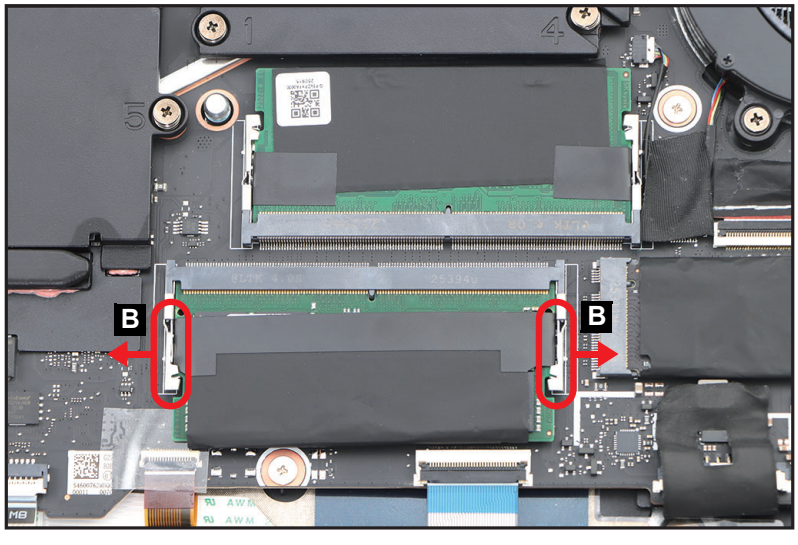


Figure 1-23. DIMM Module Removal

3. Disconnect the DIMM module (C) from the mainboard connector (D) (Figure 1-24). Then remove the DIMM module.

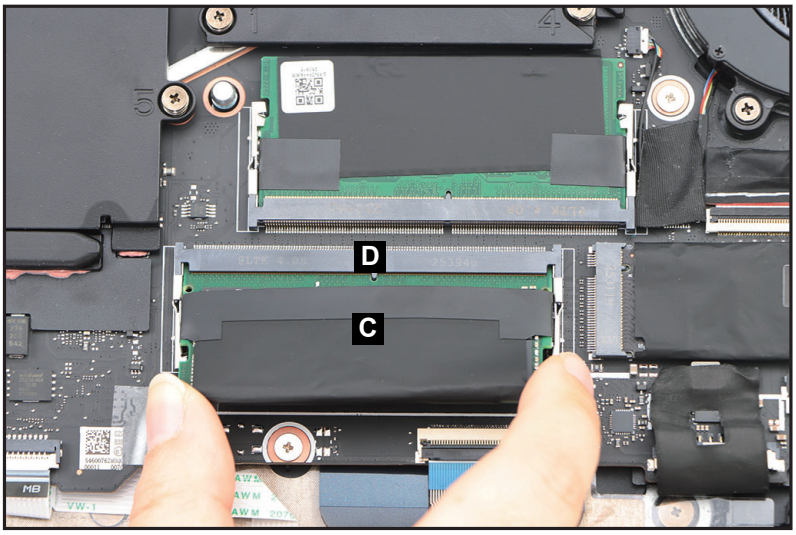


Figure 1-24. DIMM Module Removal

4. Repeat steps 2~3 to remove another DIMM module.
5. Detach the tabs (E) of the composite foil with mylar from the DIMM module as shown in Figure 1-25.

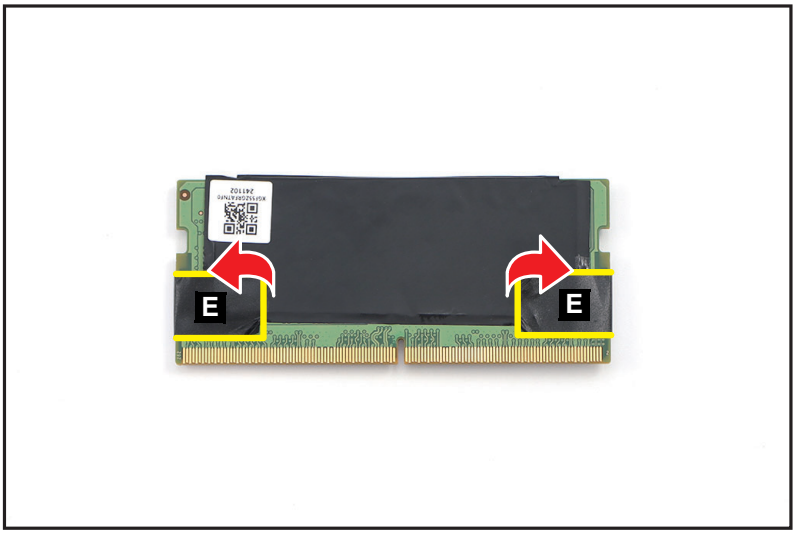


Figure 1-25. DIMM Module Removal

6. Peel off the composite foil with mylar (F) from the DIMM module (Figure 1-26).

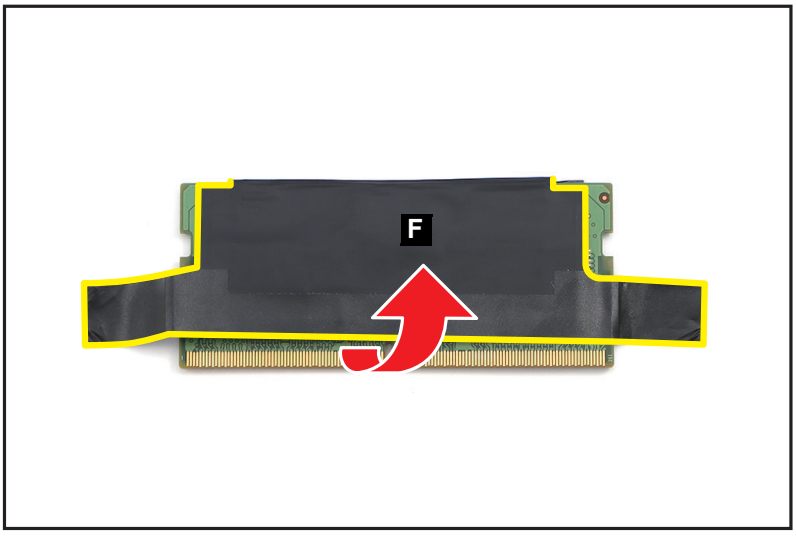


Figure 1-26. DIMM Module Removal

7. Detach the DIMM module from the adhesive graphite sheet (highlighted with the yellow dashed line) as shown in Figure 1-27.



Figure 1-27. DIMM Module Removal

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

WLAN Module Removal

Prerequisite:

Battery Pack Removal

1. Find the WLAN module (A) on the top assembly (Figure 1-28).

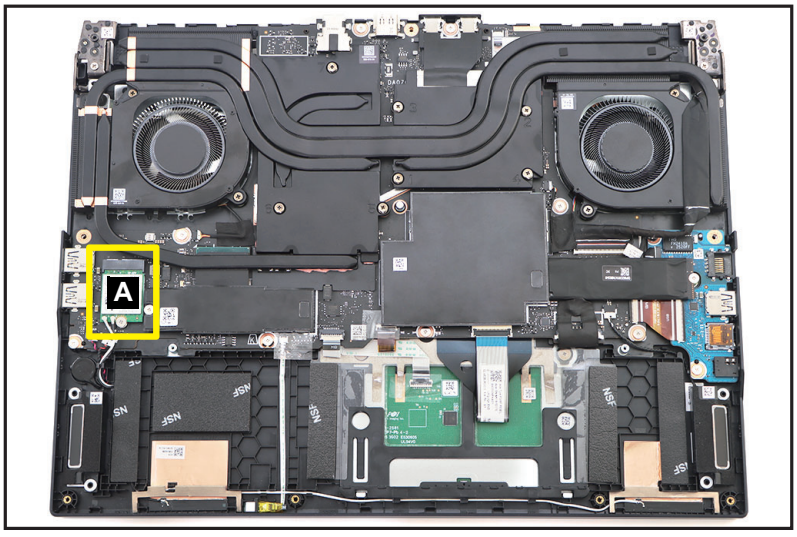


Figure 1-28. WLAN Module Location

2. Disconnect the WLAN antennas cables from the WLAN module connectors (B). Then release the antennas cables from the cable guide as shown in Figure 1-29.
3. Remove one (1) screw securing the WLAN module (Figure 1-29).

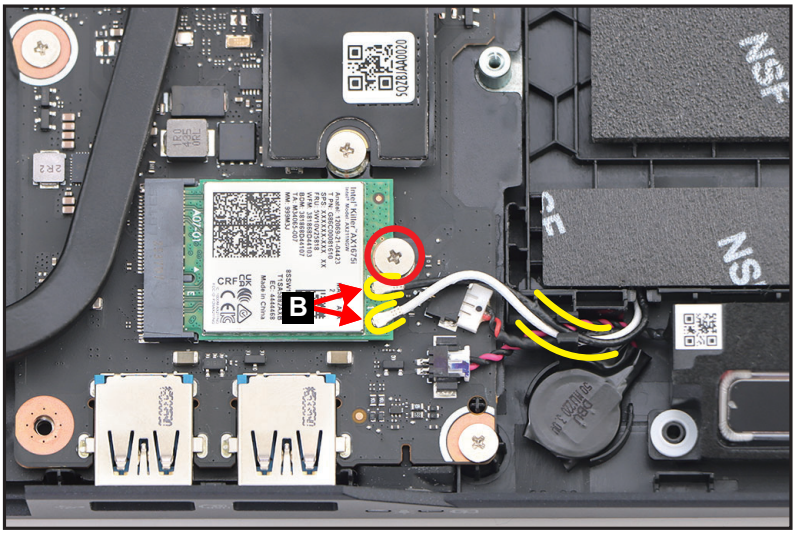


Figure 1-29. WLAN Module Removal

4. Disconnect the WLAN module from the mainboard connector (C) (Figure 1-30). Then remove the WLAN module.

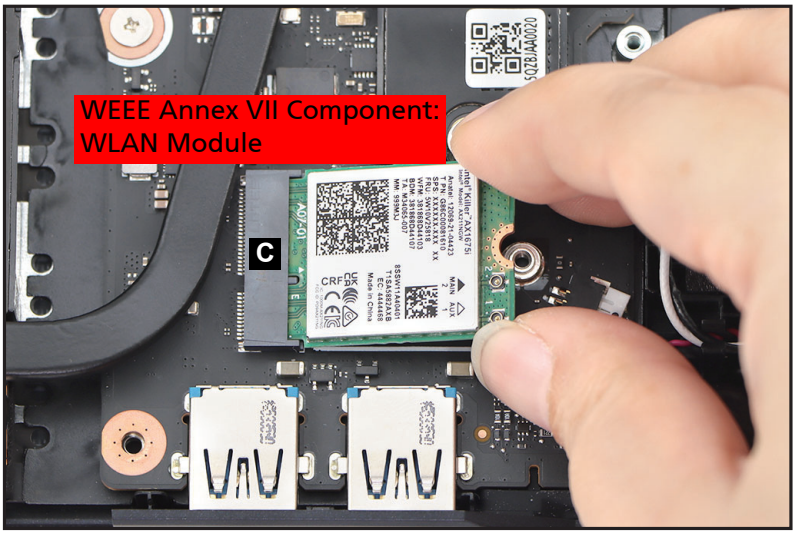


Figure 1-30. WLAN Module Removal

RTC Battery Removal

Prerequisite:

Ensure that the **Right Speaker** has been disassembled prior removing the RTC battery.

1. Disconnect the RTC battery cable from the mainboard connector (A). Then release the RTC battery cable from the cable guide as shown in Figure 1-31.
2. Carefully pry to detach the adhesive tape underneath the RTC battery (B) (Figure 1-31). Then remove the RTC battery.

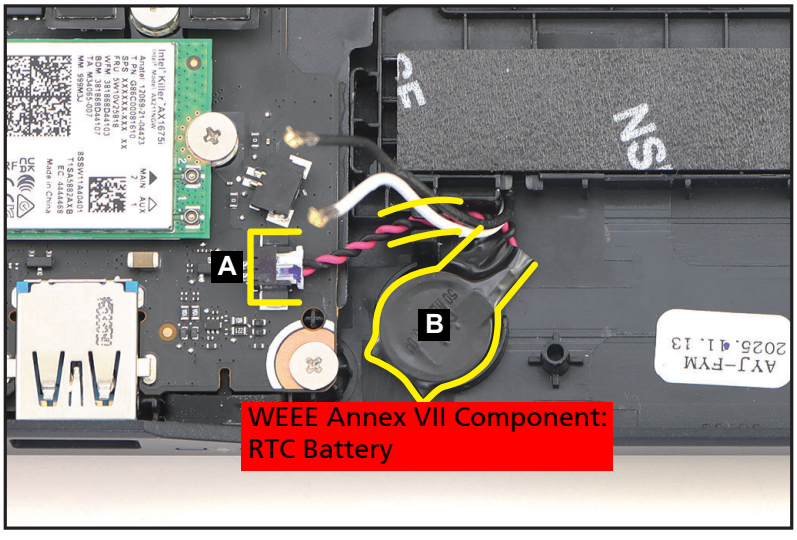


Figure 1-31. RTC Battery Removal

IMPORTANT:

Follow local regulations for battery disposal.

USB Board Removal

Prerequisite:

SSD Modules Removal

1. Disconnect the LCD cable from the mainboard connector (A) (Figure 1-32).

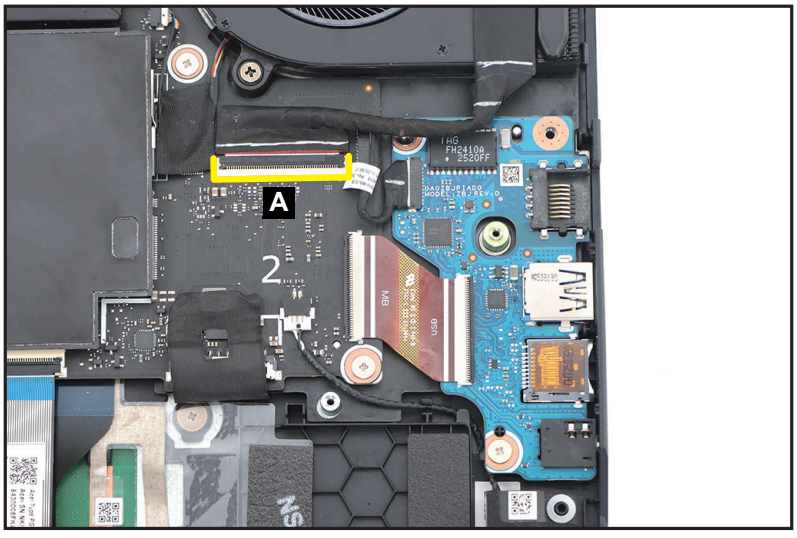


Figure 1-32. USB Board Removal

2. Disconnect the USB power cable (B) from the mainboard and USB board connectors (Figure 1-33). Then remove the cable.
3. Disconnect the USB board FPC (C) from the mainboard and USB board connectors (Figure 1-33). Then remove the FPC.

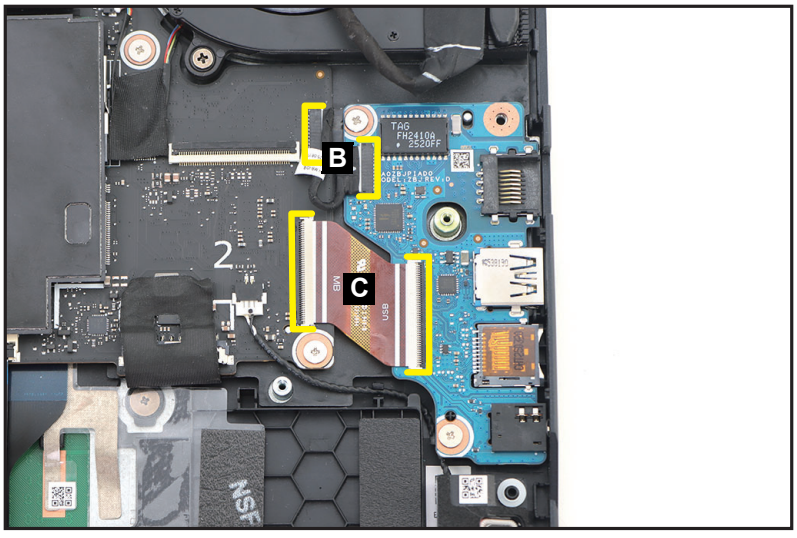


Figure 1-33. USB Board Removal

⚠ CAUTION:

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

4. Remove two (2) screws securing the USB board (Figure 1-34).

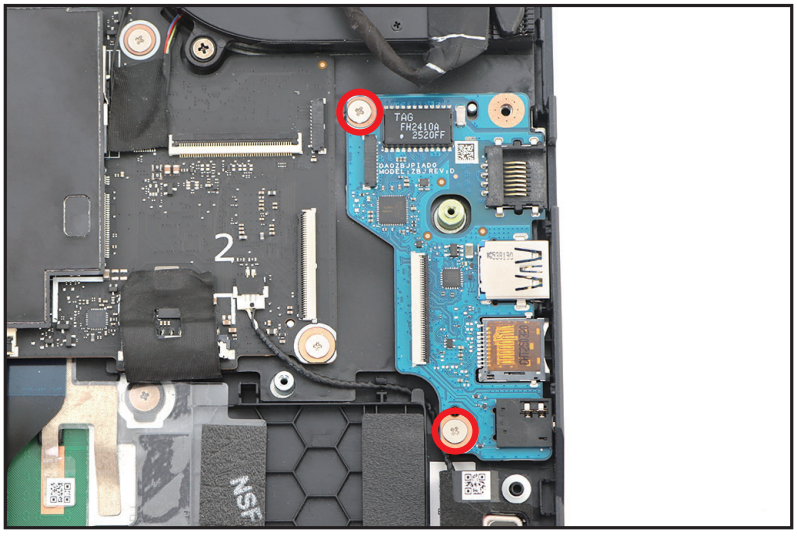


Figure 1-34. USB Board Removal

5. Release the USB board (D) from the I/O port slots and guide pins (E) on the top assembly (Figure 1-35). Then remove the USB board.

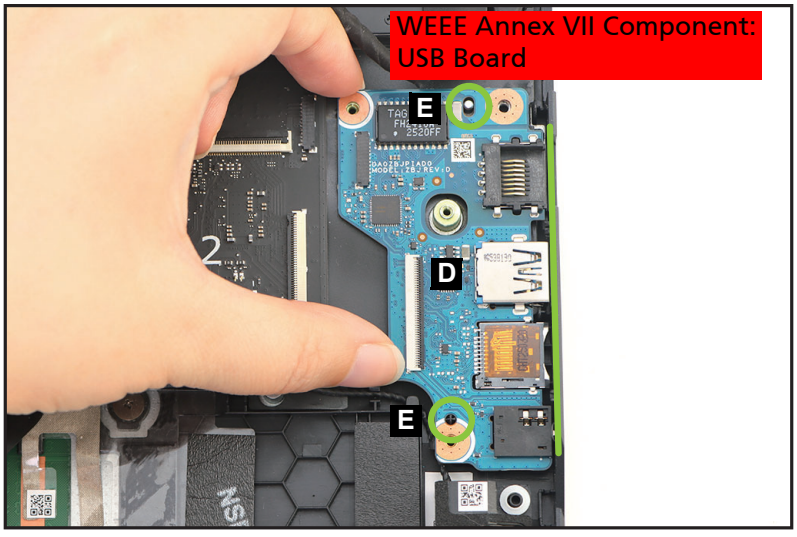


Figure 1-35. USB Board Removal

LCD Module Removal

Prerequisite:

Ensure that the **Left Fan** has been disassembled prior removing the LCD module.

1. Detach the mylar (A) and disconnect the A-cover LED cable from mainboard connector (B). Then carefully detach the cable from its underneath adhesive (highlighted with the yellow lines) as shown in Figure 1-36.

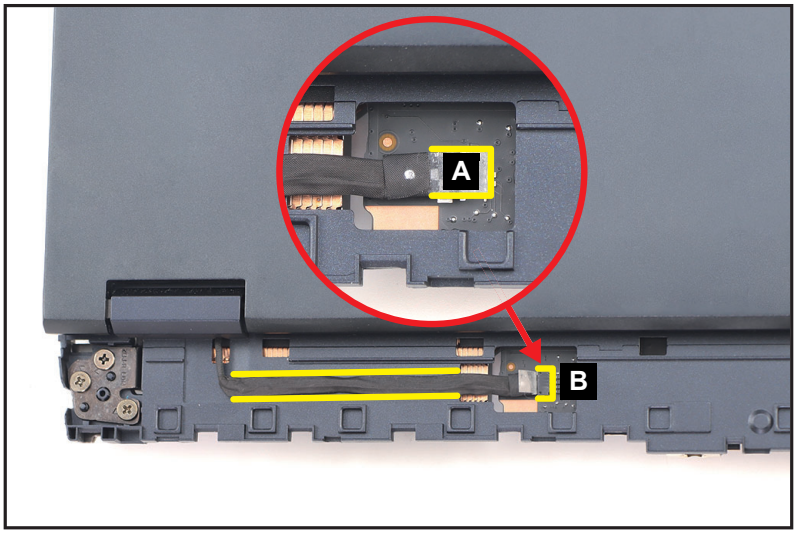


Figure 1-36. LCD Module Removal

2. Remove six (6) screws securing the LCD hinges (Figure 1-37).



Figure 1-37. LCD Module Removal

3. Lift the LCD module (C) to release it from the guide pins (D) (on the hinges slots) but DO NOT remove yet! (Figure 1-38).

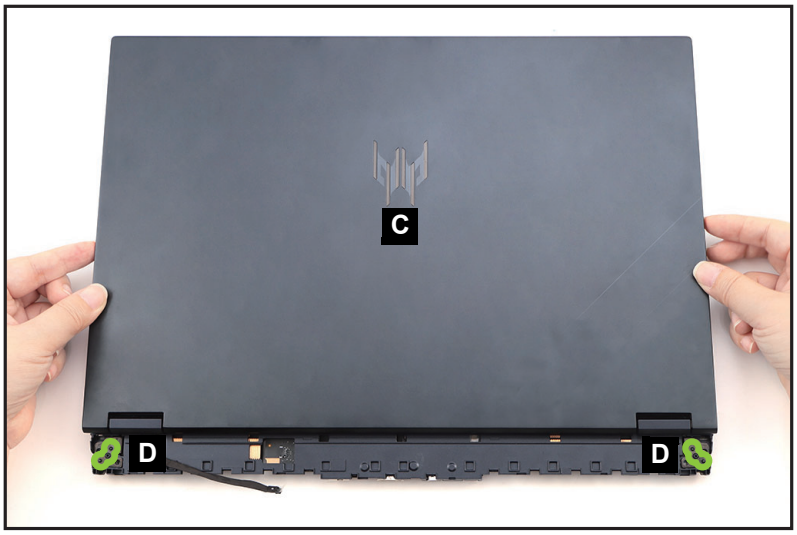


Figure 1-38. LCD Module Removal

4. Unroute the LCD cable (E) from the opening on the top assembly and LCD hinge as shown in Figure 1-39. Then remove the LCD module away from the top assembly.

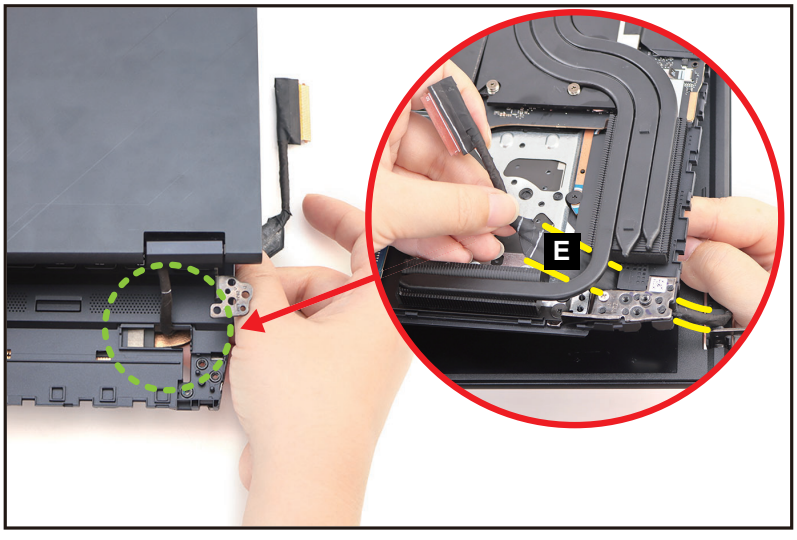


Figure 1-39. LCD Module Removal

Mainboard Removal

Prerequisite:

Ensure that the **Right Speaker**, **SSD Modules**, **DIMM Modules**, **WLAN Module**, and **Heatsink** have been disassembled prior removing the mainboard.

1. Detach the mylar (A) and disconnect the A-cover LED cable from mainboard connector (B). Then carefully detach the cable from its underneath adhesive (highlighted with the yellow lines) as shown in Figure 1-40.

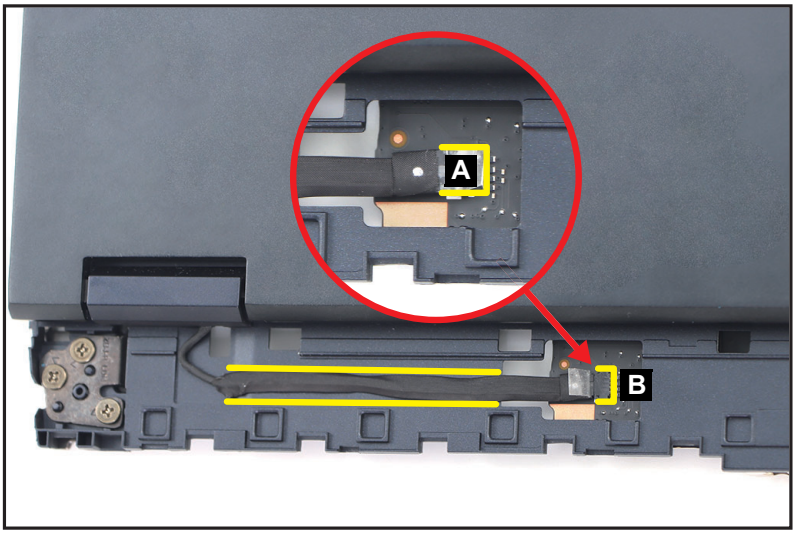


Figure 1-40. Mainboard Removal

2. Detach the mylars (C) securing the cables connection (Figure 1-41).
3. Carefully pry to detach the adhesive tape underneath the RTC battery (C). Then remove the RTC battery from its compartment and release the RTC battery cable from the cable guide (Figure 1-41).

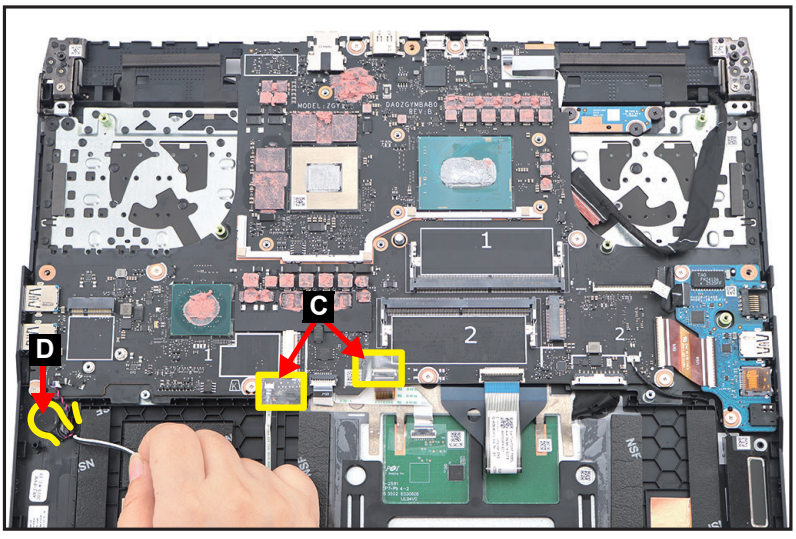


Figure 1-41. Mainboard Removal

4. Disconnect the microphone FFC from the mainboard connector (E) (Figure 1-42).
5. Disconnect the touchpad FFC from the mainboard connector (F) (Figure 1-42).
6. Disconnect the keyboard backlight FPC from the mainboard connector (G) (Figure 1-42).
7. Disconnect the keyboard FPC from the mainboard connector (H) (Figure 1-42).
8. Disconnect the left speaker cable from the mainboard connector (I) (Figure 1-42).
9. Disconnect the USB board FPC (J) from the mainboard and USB board connectors (Figure 1-42).
10. Disconnect the USB power cable (K) from the mainboard and USB board connectors (Figure 1-42).
11. Disconnect the mode key board FFC from the mainboard connector (L) (Figure 1-42).

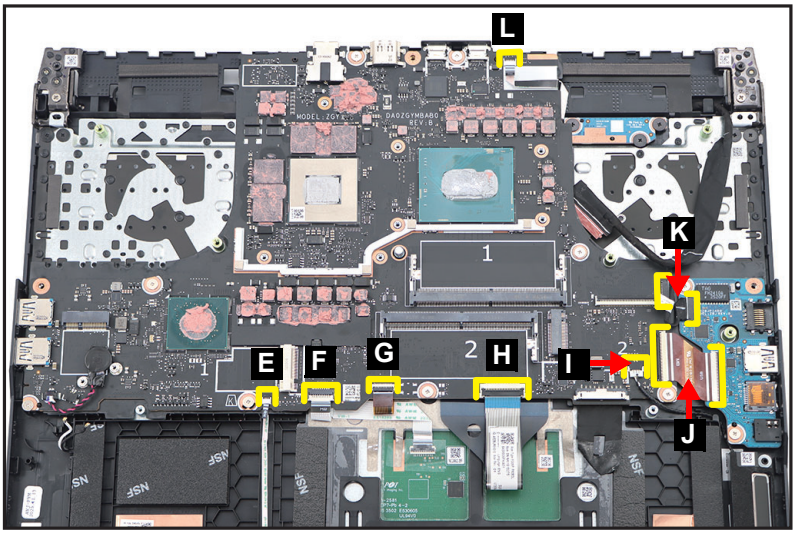


Figure 1-42. Mainboard Removal

⚠ CAUTION:

Microphone FFC (Flexible Flat Circuit), touchpad FFC, mode key board FFC, keyboard backlight FPC (Flexible Printed Circuit), keyboard FPC, and USB board FPC can be damaged if removed while the mainboard or/and USB board connectors are locked.

12. Remove eight (8) screws securing the mainboard (Figure 1-43).

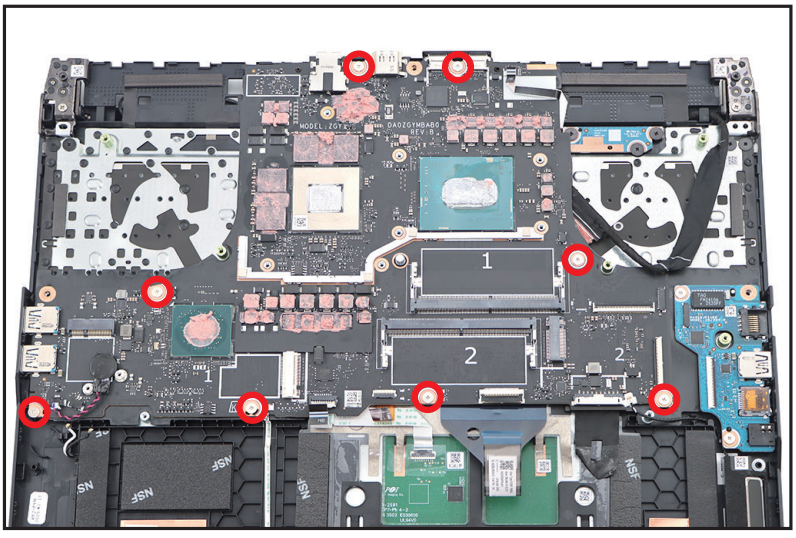


Figure 1-43. Mainboard Removal

13. Release the mainboard (M) from the I/O ports slots and guide pins (N) on the top assembly (Figure 1-44). Then remove the mainboard.

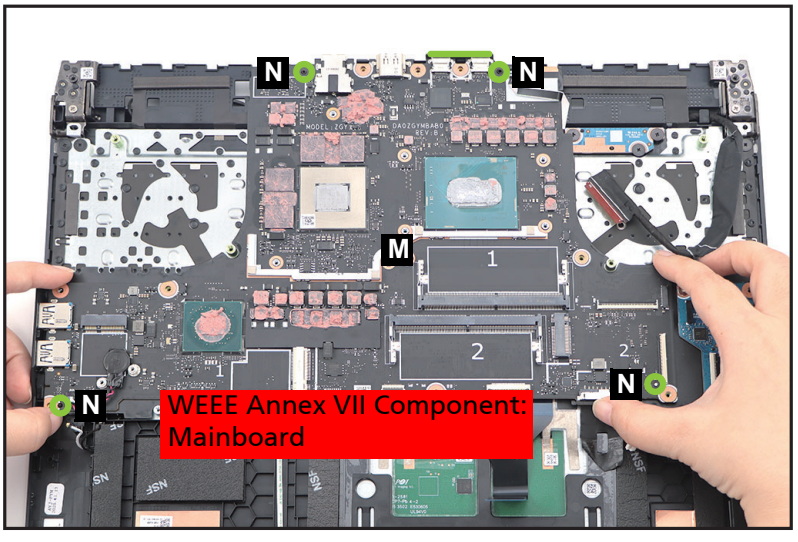


Figure 1-44. Mainboard Removal

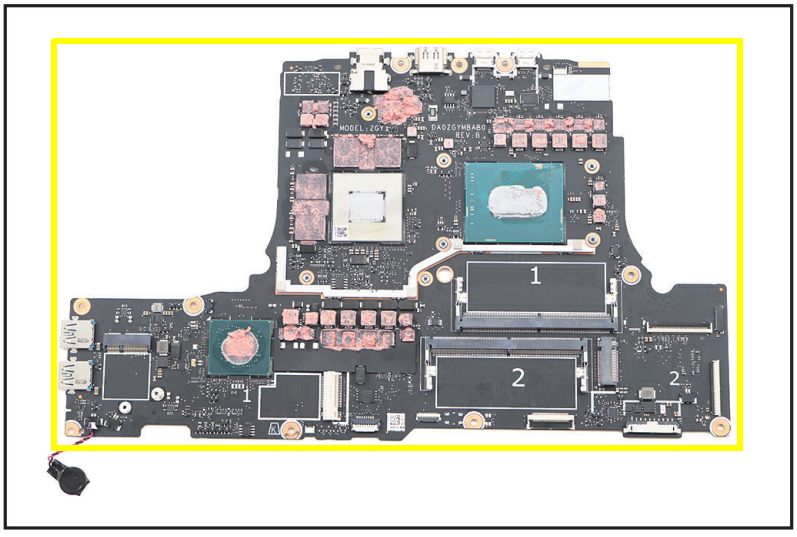


Figure 1-45. Mainboard

IMPORTANT:

Circuit boards >10 cm² have been highlighted with a yellow rectangle as shown in Figure 1-45. Remove the circuit board and follow local regulations for disposal.

Touchpad Module Removal

Prerequisite:

Mainboard Removal

1. Detach the mylar (A) securing the touchpad FFC connection. Then carefully detach the keyboard backlight FPC (B) from its underneath adhesive (highlighted with the yellow lines) as shown in Figure 1-46.

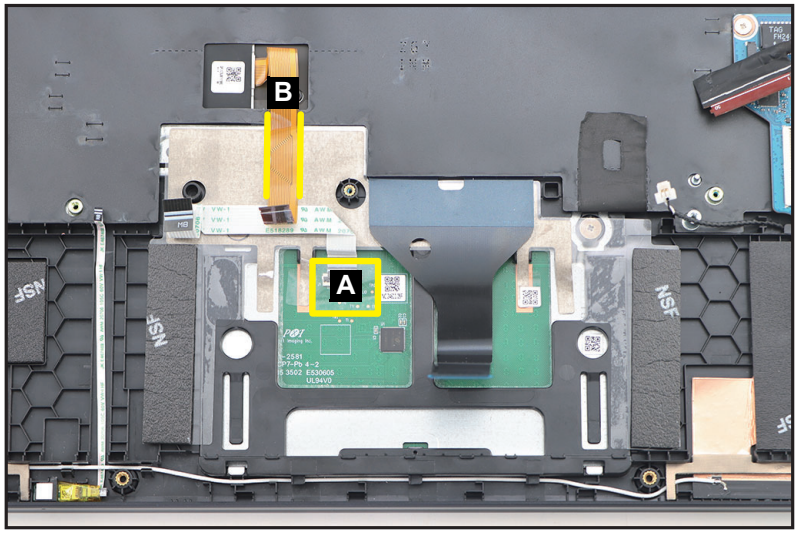


Figure 1-46. Touchpad Module Removal

2. Disconnect the touchpad FFC from the touchpad module connector (C) (Figure 1-47). Then remove the FFC.

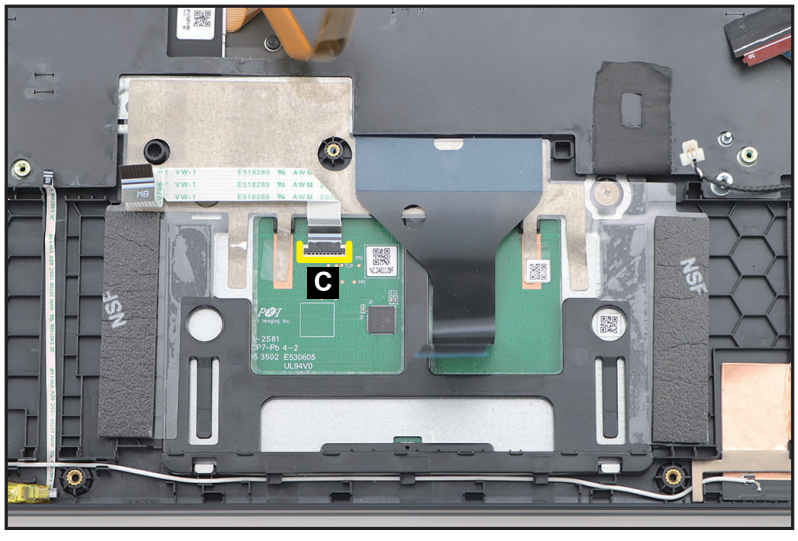


Figure 1-47. Touchpad Module Removal

⚠ CAUTION:

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

3. Lift and hold the mylar and keyboard FPC. Then detach the conductive tape with mylar (D) from the touchpad module and top assembly (Figure 1-48).

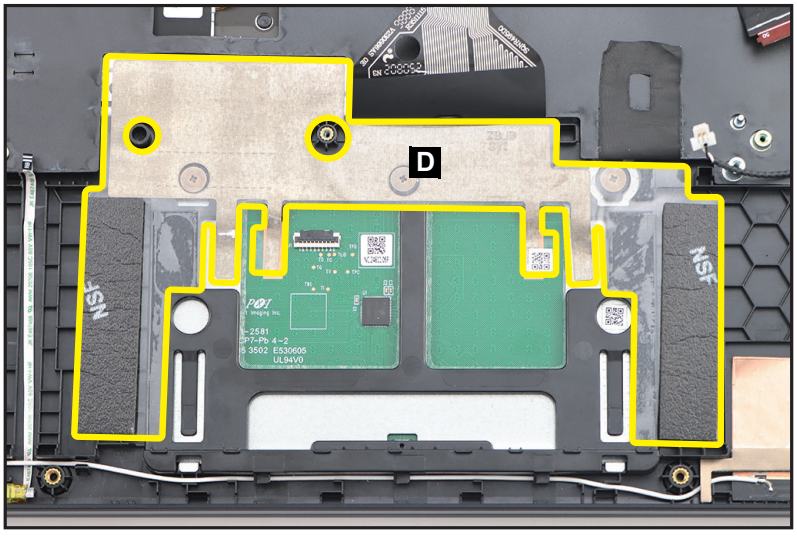


Figure 1-48. Touchpad Module Removal

4. Remove three (3) screws securing the touchpad module (Figure 1-49).

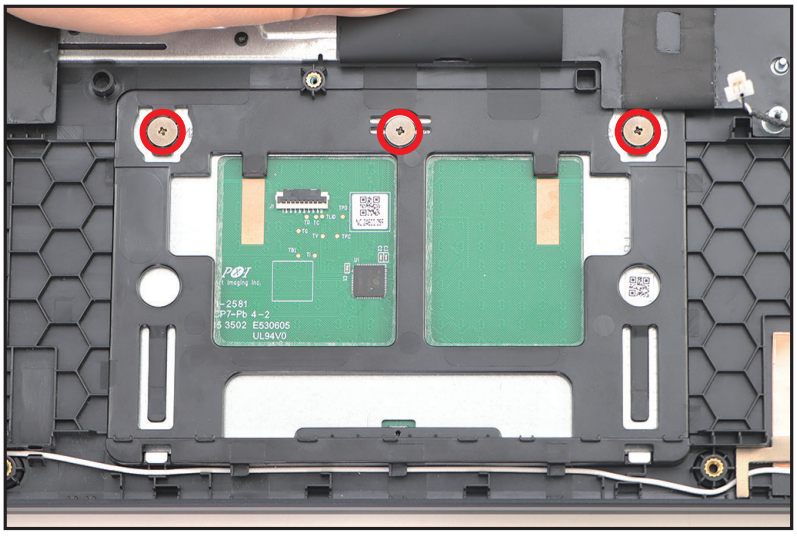


Figure 1-49. Touchpad Module Removal

5. Push the upper side of the touchpad module (E) to release it from the screw hole studs (F) (Figure 1-50).
6. Slide the touchpad module slightly to disengage it from the bottom latches (G) (Figure 1-50). Then remove the touchpad module from the top assembly.

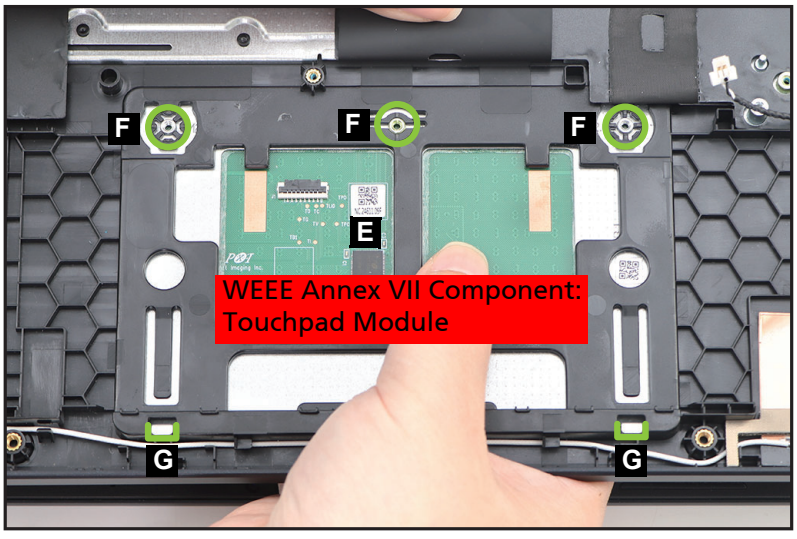


Figure 1-50. Touchpad Module Removal

LCD Bezel Removal

Prerequisite:

LCD Module Removal

1. Pry the LCD bezel from the upper side to release the latches (Figure 1-51).



Figure 1-51. LCD Bezel Removal

2. Continue prying along the left and right sides of the LCD bezel to disengage the latches as shown in Figure 1-52.



Figure 1-52. LCD Bezel Removal

3. Continue prying the bottom-right edge of the LCD bezel to disengage the latches (Figure 1-53).



Figure 1-53. LCD Bezel Removal

4. There is a tape behind the lower edge of the LCD bezel. Use a pry tool to slowly detach the LCD bezel away from the LCD panel as shown in Figure 1-54. While detaching the LCD bezel, ensure to follow the direction from right to left as shown in Figure 1-55.

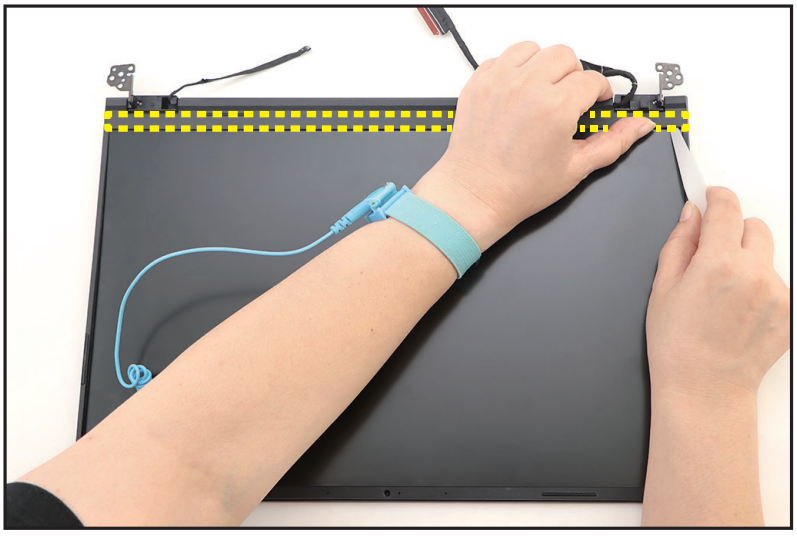


Figure 1-54. LCD Bezel Removal



Figure 1-55. LCD Bezel Removal

5. Continue prying the bottom-left edge of the LCD bezel to disengage the latches. Then remove the LCD bezel from the LCD cover (Figure 1-56).



Figure 1-56. LCD Bezel Removal

LCD Panel Removal

Prerequisite:

LCD Bezel Removal

NOTE:
The LCD cable includes the LCD panel cable and the camera cable.

1. Unroute and detach the LCD cable (A) from the cable guides on the LCD cover as shown in Figure 1-57.

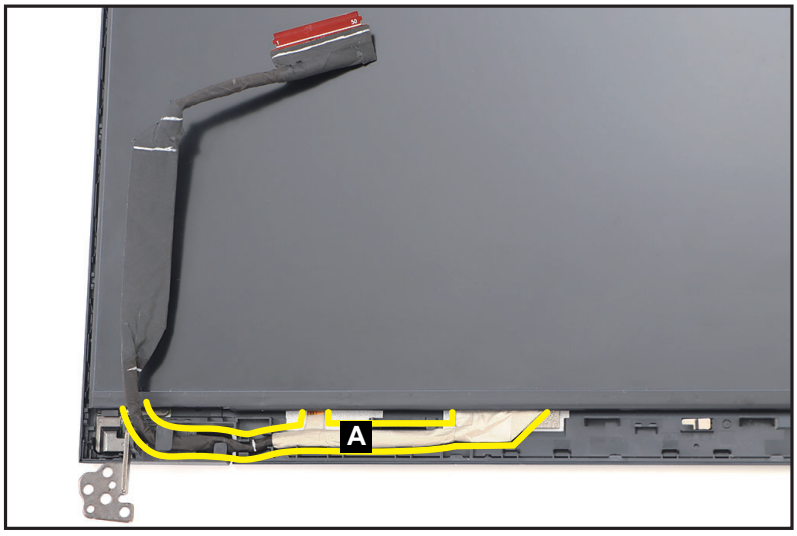


Figure 1-57. LCD Panel Removal

2. Pry slightly to access the double-sided mounting tape (B) underneath the LCD panel (C). Then pull to detach the double-sided mounting tape.
Repeat the same procedure to remove the double-sided mounting tape on another side of the LCD panel (Figure 1-58).

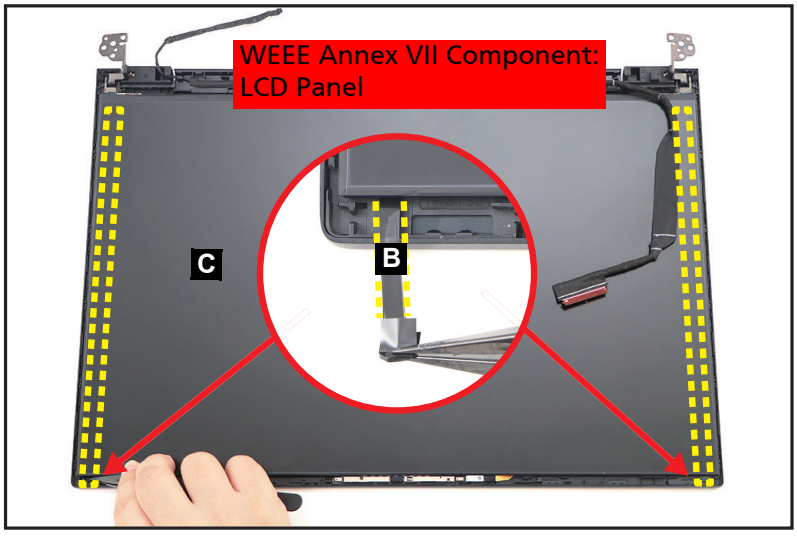


Figure 1-58. LCD Panel Removal

3. Carefully turn the LCD panel over so that the display panel is facing down on a flat surface. Then detach the mylar (D) securing the LCD cable to the LCD panel (Figure 1-59).

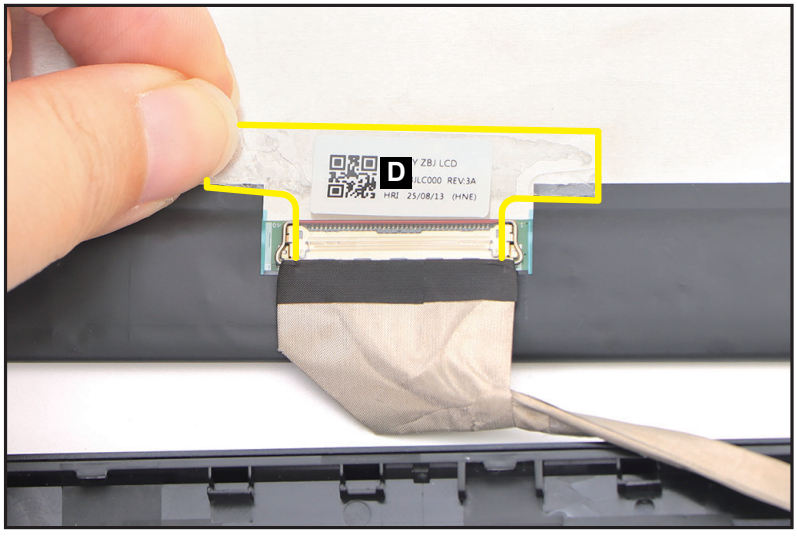


Figure 1-59. LCD Panel Removal

4. Lift the latch (E) securing the LCD cable (Figure 1-60).

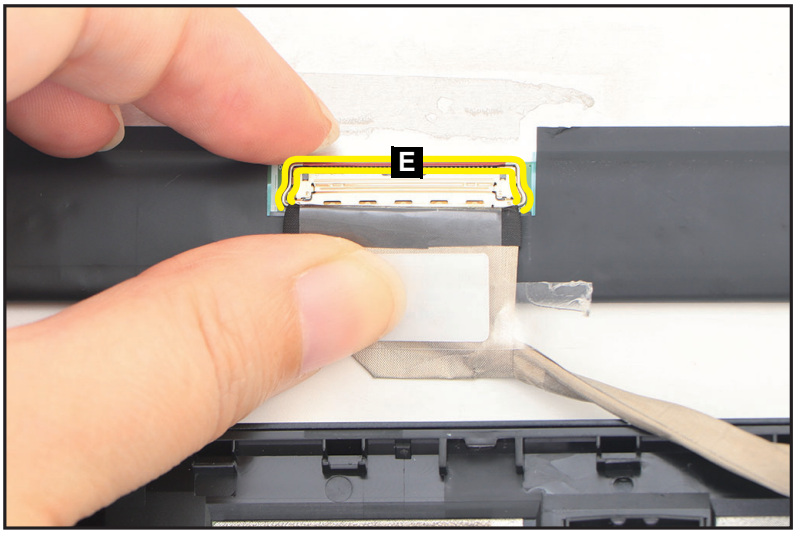


Figure 1-60. LCD Panel Removal

5. Disconnect the LCD cable from the LCD panel connector (F) (Figure 1-61). Then remove the LCD panel.

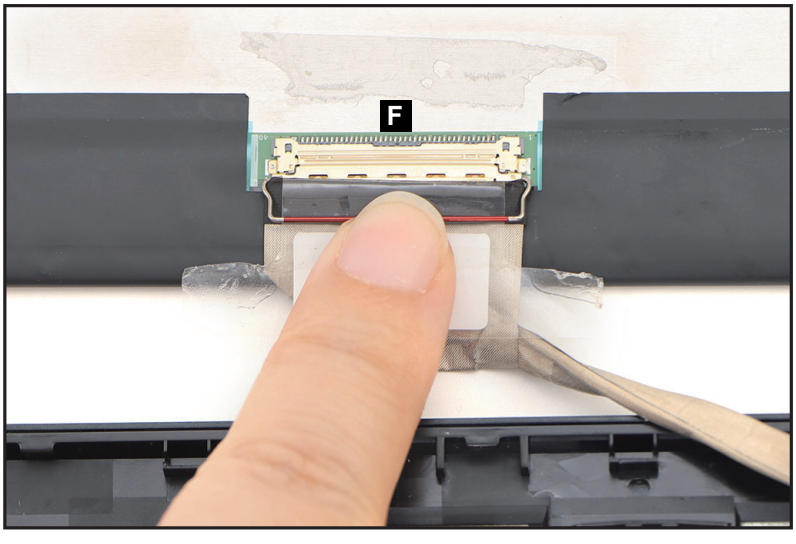


Figure 1-61. LCD Panel Removal

Top Assembly Removal (Keyboard Removal)

Prerequisite:

Ensure that the **3rd Microphone Board**, **Left Speaker**, **USB Board**, **LCD Module**, **Touchpad Module**, and **Mode Key Board** have been disassembled prior removing the top assembly.

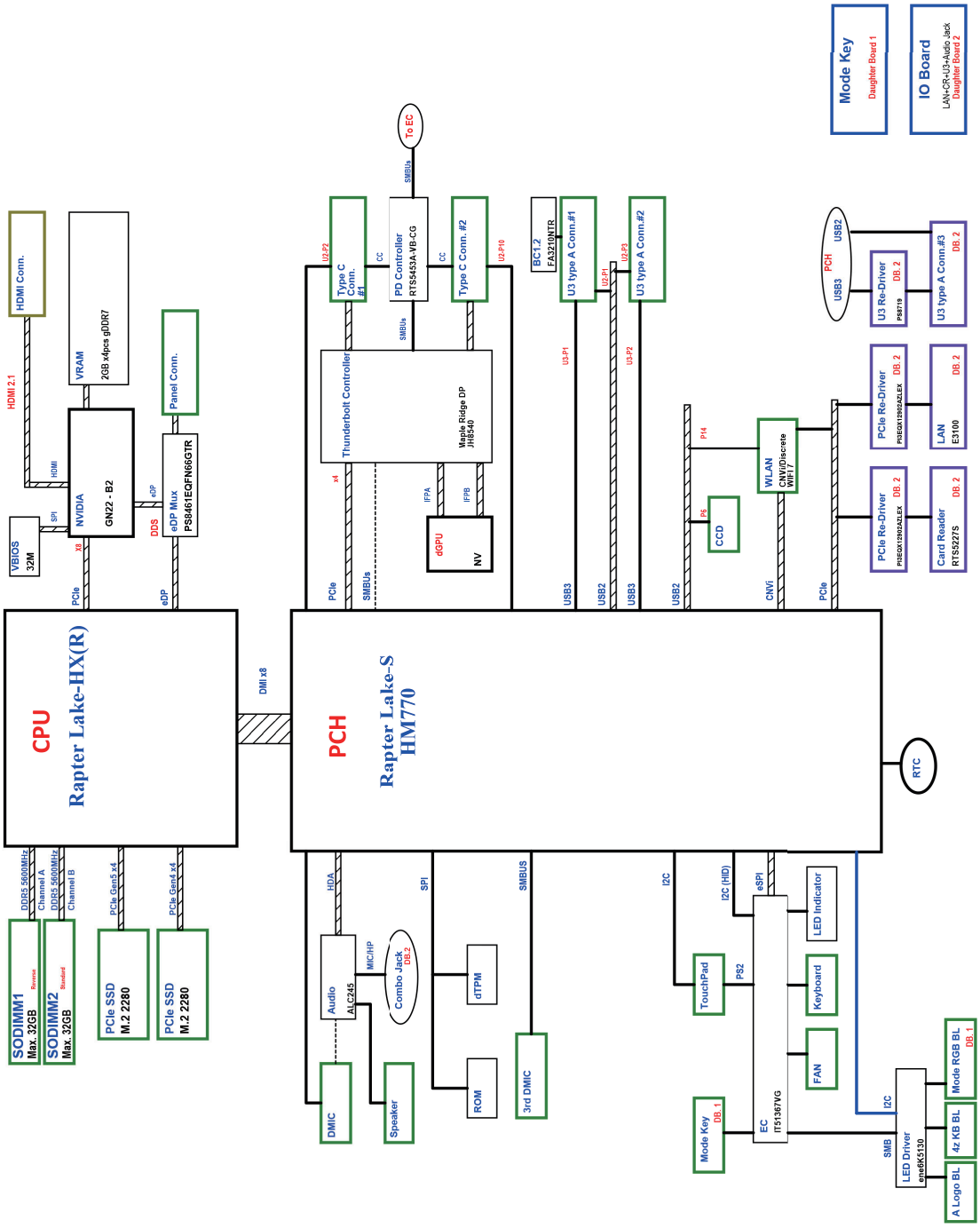
NOTE:

The keyboard is included as part of the top assembly and can not be disassembled. In the event that the keyboard can no longer be used, replace the entire top assembly.



Figure 1-62. Top Assembly (Keyboard)

Electronic Boards Diagrams



BIOS Setup Utility

This utility is a hardware configuration program built into a computer's BIOS (Basic Input/Output System).

The utility is pre-configured and optimized so most users do not need to run it. If configuration problems occur, the setup utility may need to be run. Refer to *Troubleshooting* when a problem arises.

To activate the utility, press ***F2*** during POST (power-on self-test) when **Predator Sense** logo is prompted in the middle of the screen.

The default parameter of `F12 Boot Menu` is set to `Disabled`. To change the boot device without entering *BIOS Setup Utility*, set the parameter to `Enabled`.

To change the boot device without entering the BIOS SETUP, press ***F12*** during POST to enter the multi-boot menu.

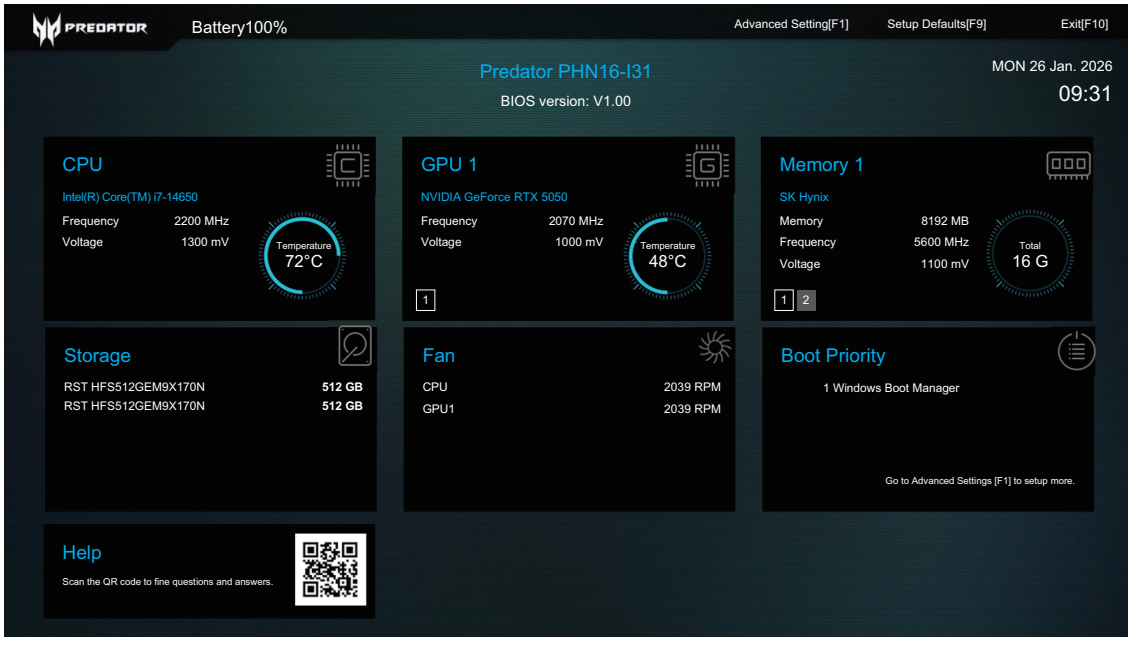


Figure 1-63. BIOS Setup Utility EZ Mode

To enter the Advanced Settings page, press ***F1***.

The BIOS utility has six menu options in Advanced Setting page as follows:

- Information
- Main
- Advanced
- Security
- Boot
- Exit

To navigate on the non-touchscreen models through the following:

- Menu or item- use the up and down arrow keys
- Expand selected item- press **Enter** or right arrow key.
- To switch item status or change the value of a parameter- press **Enter** or right arrow key.
- Exit - Press ***Esc***
- Load default settings - press ***F9***.
- Save changes and exit BIOS Setup Utility - press ***F10***.

To navigate on the touchscreen panel models through the following:

- Menu - click or tab on the option with the fingertip
- Item - scroll through the screen by moving one finger in a vertical direction or swiping two fingers up-and-down
- Change parameter value - use the on-screen keyboard or tab on the option.

⇛ NOTE:

Parameter values can be changed if enclosed in square brackets open the DIMM door open the DIMM door[ ]. Navigation keys appear at the bottom of the screen. Read parameter help carefully when making changes to parameter values. Parameter help is found in the Item Specific Help area of the screen.

+ IMPORTANT:

Be careful when changing any settings in the BIOS. Incorrect settings can cause your PC to malfunction or crash. Please make sure all important data is backed up before changing anything in the BIOS.

⇛ NOTE:

System information is subject to specific models.

BIOS

The following is a description of the tabs found on the InsydeH20 *BIOS Setup Utility* screen:

NOTE:

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

Information

The Information tab shows a summary of computer hardware information.

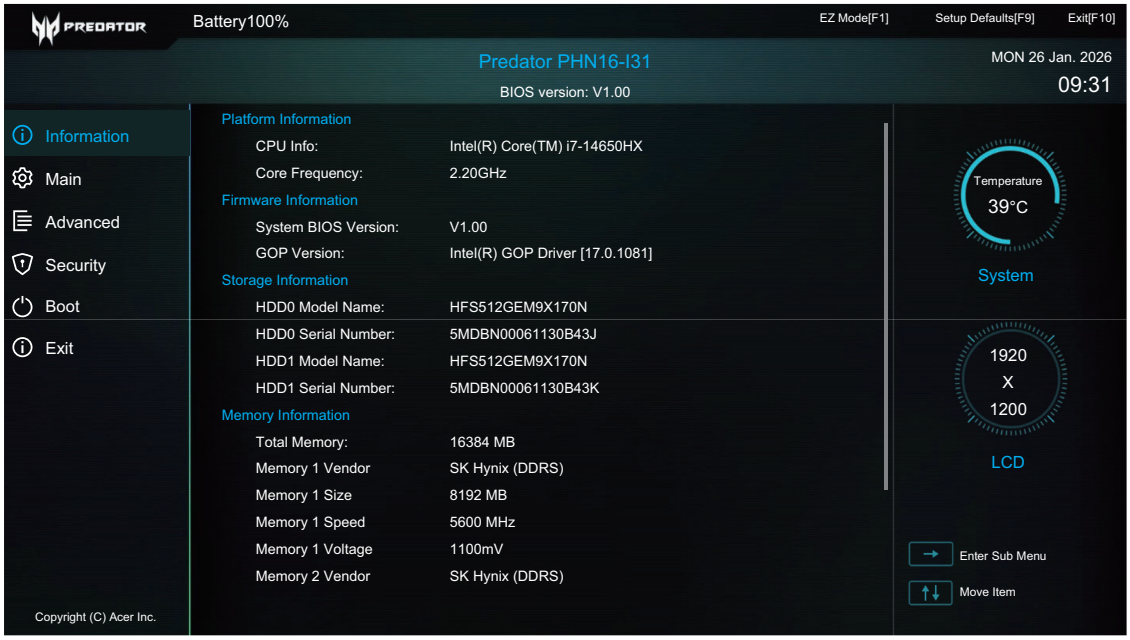


Figure 1-64. BIOS Information (1 of 2)

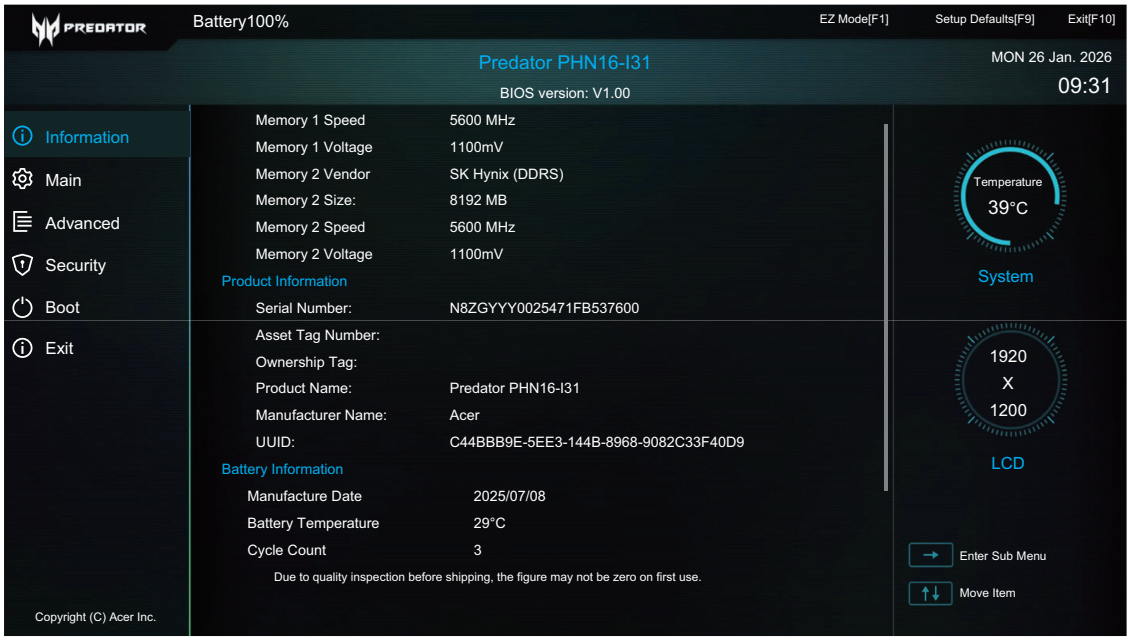


Figure 1-65. BIOS Information (2 of 2)

Table 1-1 describes the parameters shown in Figure 1-64 and Figure 1-65.

Table 1-1. BIOS Information

Parameter	Description
CPU Info	CPU (central processing unit) type and speed of the system
Core Frequency	CPU core frequency
System BIOS Version	System BIOS version
GOP Version	GOP (graphics output protocol) firmware version of the system
HDD Model Name	Model name of HDD (hard disk drive) installed on the primary IDE master
HDD Serial Number	Serial number of HDD installed on the primary IDE master
Total Memory	Total memory installed
Memory Vendor	Manufacturer of the installed memory
Memory Size	Size of the installed memory
Memory Speed	Configured speed of the installed memory
Memory Voltage	Voltage of the installed memory
Serial Number	Serial number of the unit
Asset Tag Number	Asset tag number of the system
Ownership Tag	Ownership tag of the system

Table 1-1. BIOS Information (Continued)

Parameter	Description
Product Name	Product name of the system
Manufacturer Name	Manufacturer of the system
UUID	Universally Unique Identifier
Manufacture Date	Battery manufacture date
Battery Temperature	Battery current temperature
Cycle Count	Number of times your device has used the battery capacity

Main

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



Figure 1-66. BIOS Main



Figure 1-67. BIOS Main (All Options - Press Ctrl +S keys)

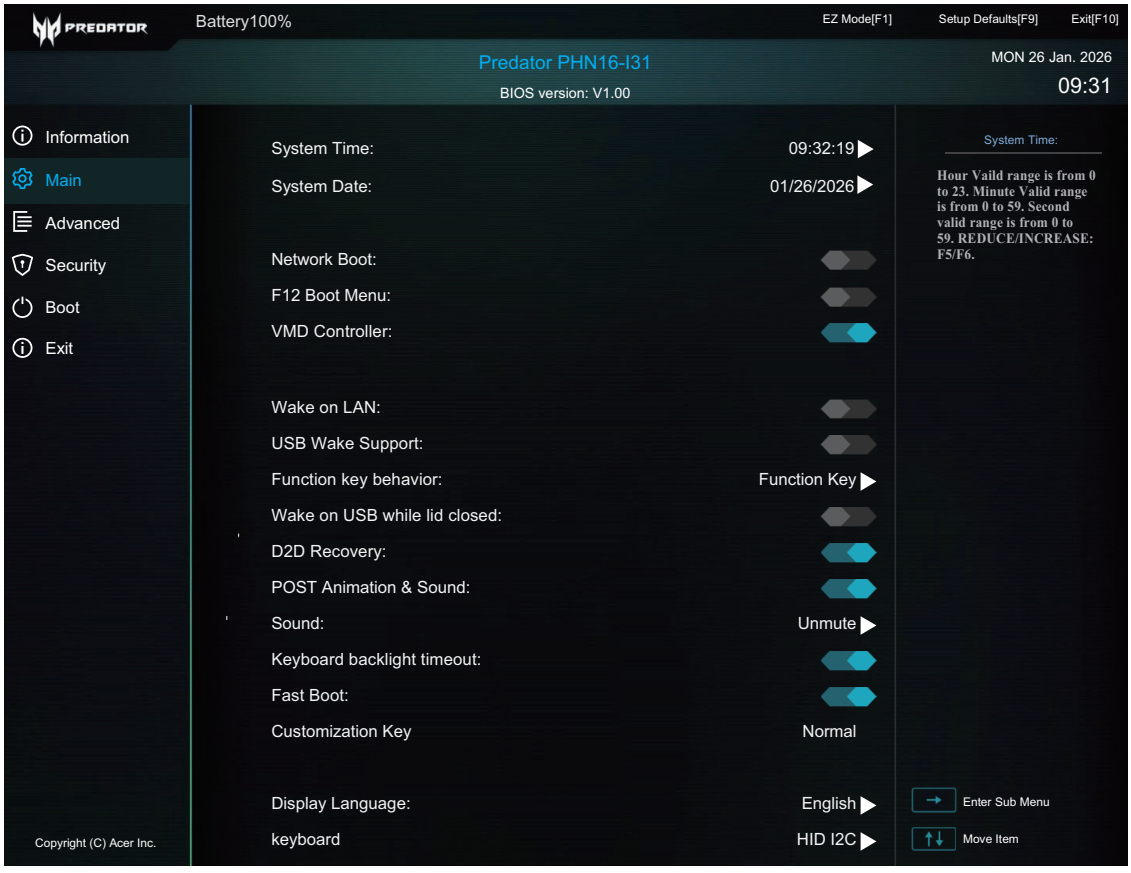


Figure 1-68. BIOS Main (All Options - Press Ctrl +S keys & Press Ctrl +D keys)

Table 1-2 describes the parameters shown in Figure 1-66, Figure 1-67, and Figure 1-68.

Table 1-2. BIOS Main

Parameter	Description	Format/Option
System Time	BIOS system time in 24-hour format	Format: HH:MM:SS (hour:minute:second)
System Date	BIOS system date	Format MM/DD/YYYY (month/day/year)
Network Boot	Option to boot system from LAN (local area network)	Option: Enabled or Disabled
F12 Boot Menu	Option to use boot menu during POST	Option: Enabled or Disabled
VMD Controller (hidden option)	Option to set VMD controller	Option: Enabled or Disabled
Wake on LAN	Option to use Wake-on-LAN feature	Option: Enabled or Disabled

Table 1-2. BIOS Main (Continued)

Parameter	Description	Format/Option
Wake from S4 Support	Option to enable/disable support wake from S4	Option: Enabled or Disabled
Wake on USB while lid closed	Option to enable/disable the USB devices can wake the system, even if the lid is closed	Option: Enabled or Disabled
D2D Recovery	Option to use D2D Recovery feature	Option: Enabled or Disabled
POST Animation & Sound	Option to enable POST animation sound effect	Option: Enabled or Disabled
Sound	Option to use mute feature	Option: Unmute or Mute
Keyboard backlight timeout	Option to enable/disable the keyboard backlight timeout function	Option: Enabled or Disabled
Fast Boot	Option to enable/disable Fast boot	Option: Enabled or Disabled
Customization Key (hidden option)	Keyboard type status	
Display Language	Select the display language	
Keyboard (hidden option)	Option to switch HID I2C and PS2 interface	Option: HID I2C or PS2

NOTE:

To show the hidden options:

- Press ***Ctrl*** +**S** keys to show the "VMD Controller" option.
- Press ***Ctrl*** +**D** keys to show the "Customization Key" and "Keyboard" options.

Advanced

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

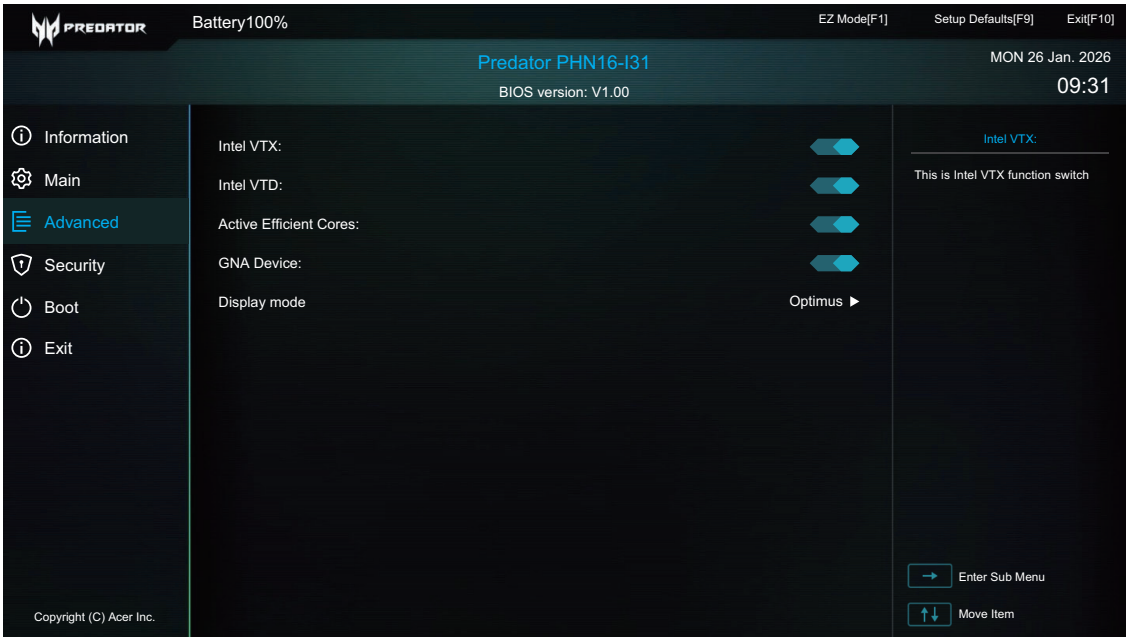


Figure 1-69. BIOS Advanced

Table 1-3 describes the parameters shown in Figure 1-69.

Table 1-3. BIOS Advanced

Parameter	Description	Option
Intel VTX	Option to use Intel VTX function switch	Enabled or Disabled
Intel VTD	Option to use Intel VTD function switch	Enabled or Disabled
Active Efficient Cores	Option to use efficiency cores feature	Enabled or Disabled
GNA Device	Option to use GNA plugin feature	Enabled or Disabled
Display mode	Option to select the display mode	Option: Optimus, Nvidia GPU only, or Auto Select

Security

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

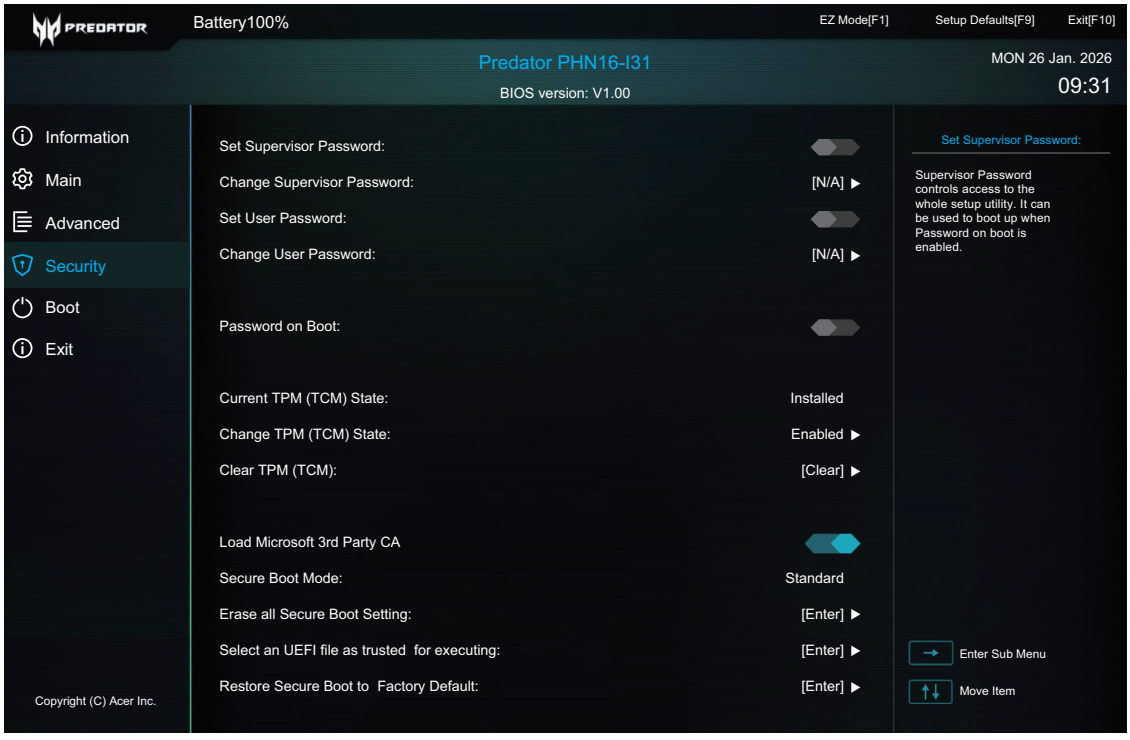


Figure 1-70. BIOS Security

Table 1-4 describes the parameters shown in Figure 1-70.

Table 1-4. BIOS Security

Parameter	Description	Option
Set Supervisor Password	Option to set supervisor password	Disabled or Enabled
Change Supervisor Password	Change supervisor password	N/A
Set User Password	Option to set user password	Disabled or Enabled
Change User Password	Change user password	N/A
Password on Boot	Shows if password is required during system boot **⚠ CAUTION:** If Password-on-Boot authentication is enabled, the BIOS password can only be cleared by initiating the Crisis Disk Recovery procedure.	Disabled or Enabled

Table 1-4. BIOS Security (Continued)

Parameter	Description	Option
Current TPM (TCM) State	Display the TPM status	N/A
Change TPM (TCM) State	Option to use the TPM function	Disabled or Enabled
Clear TPM (TCM)	Remove all TPM context associated with a specific owner	N/A
Load Microsoft 3rd Party CA	Option to load Microsoft's third-party UEFI Certificate Authority (CA)	Disabled or Enabled
Secure Boot Mode	Display the current Secure Boot Mode status. • **Standard**: Default Option. No manual change has been done to secure boot setting or users have previous restored security boot to factory default. • **Custom**: Contents of the Secure Boot signature database has been modified with “Erase All Secure Boot Setting” or “Select an UEFI File as Trusted Executing”.	Standard or Custom
Erase all Secure Boot Setting	Option to erase all secure boot setting	N/A
Select an UEFI file as trusted for executing	Option to select an UEFI file as trusted for executing	N/A
Restore Secure Boot to Factory Default	Option to restore secure boot to factory default	N/A

NOTE:

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

Setting a Password

Perform the following to set the password:

1. Use the ↑ and ↓ keys to highlight the `Set User Password` or `Set Supervisor Password` parameter and press ***Enter***. The dialog box appears.
2. Enter a new password in the `Enter New Password` field. Passwords are not case sensitive and the length must not exceed 12 alphanumeric characters (A-Z, a-z, 0-9). Enter the password again in the `Confirm New Password` field.

IMPORTANT:

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

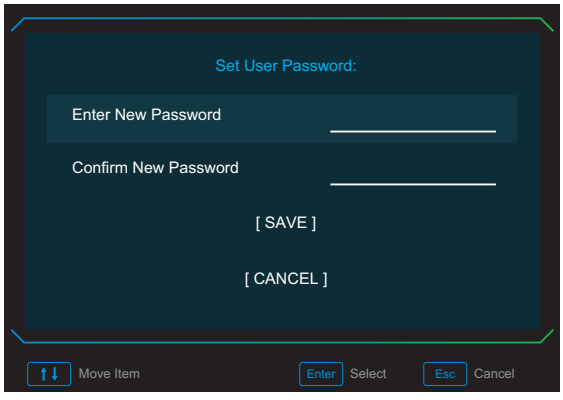


Figure 1-71. Set User Password

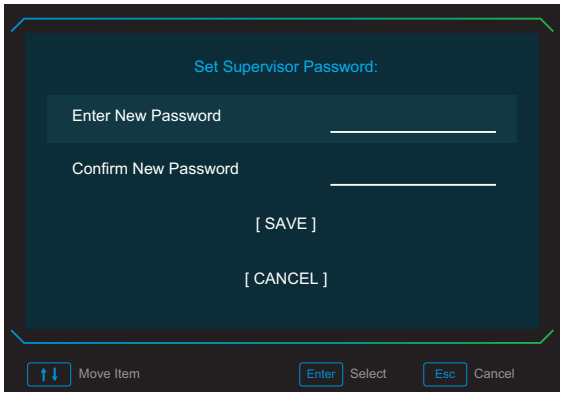


Figure 1-72. Set Supervisor Password

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

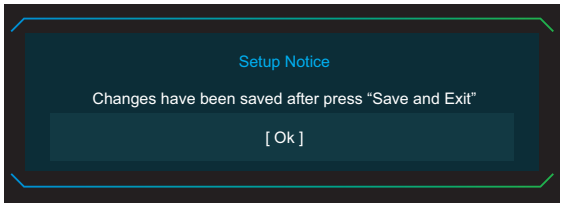


Figure 1-73. Setup Notice

NOTE:

Password on Boot must be set to Enabled to activate password feature.

4. Press ***Enter*** to complete the password setting. After the password has been set, the computer enables to change the password.

NOTE:

To change an existing password, refer to *Changing a Password*.

5. Press ***F10*** and select "SAVE & EXIT". Then press ***Enter*** to save changes and exit *BIOS Setup Utility*.

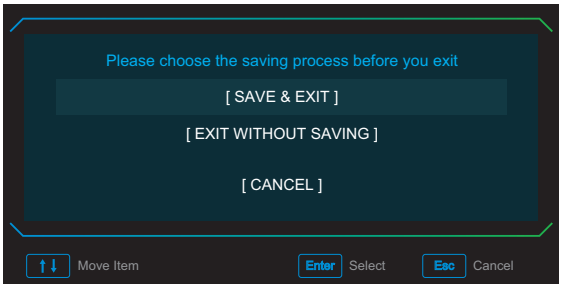


Figure 1-74. Save Configuration Changes and Exit

Changing a Password

Perform the following:

1. Use the ↑ and ↓ keys to highlight `Change User Password` or `Change Supervisor Password` and press ***Enter***. The dialog box appears.
2. Enter the current password in the `Enter current password` field and press ***Enter***.
3. Enter the new password in the `Enter New Password` and `Confirm New Password` fields.

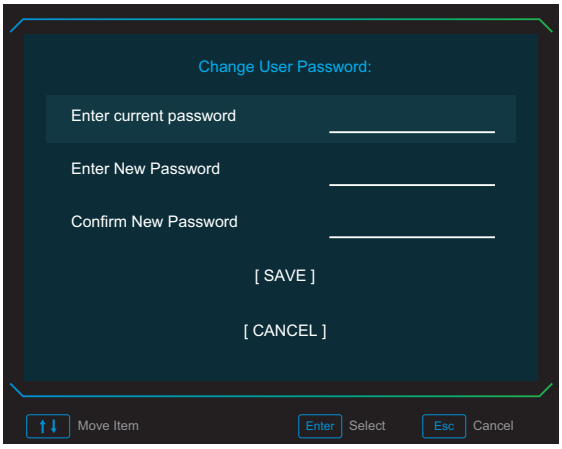


Figure 1-75. Change User Password

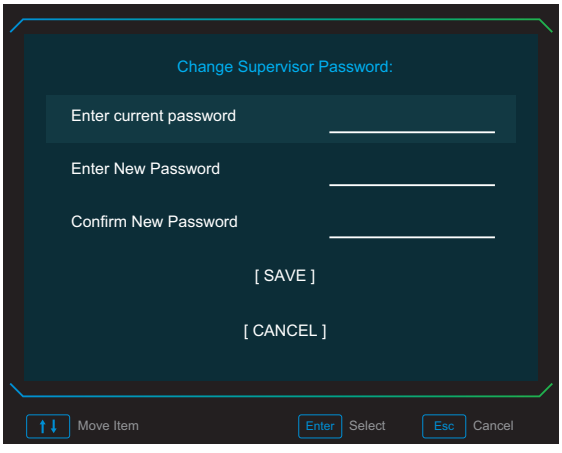


Figure 1-76. Change Supervisor Password

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

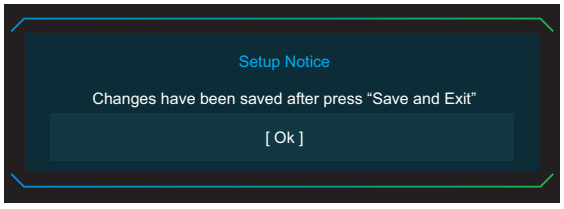


Figure 1-77. Setup Notice

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

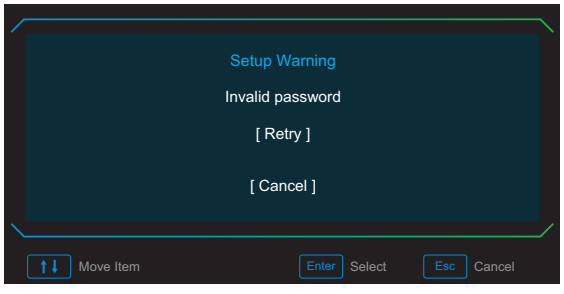


Figure 1-78. Setup Warning

5. Press ***Enter*** to complete the password modification.
6. Press ***F10*** and select "SAVE & EXIT". Then press ***Enter*** to save changes and exit *BIOS Setup Utility*.

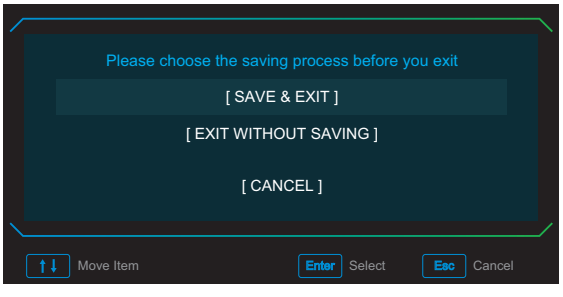


Figure 1-79. Save Configuration Changes and Exit

Removing a Password

1. Use the ↑ and ↓ keys to highlight `Set User Password` or `Set Supervisor Password` and press ***Enter***. The dialog box appears.
2. Enter the current password in the `Enter Old password` field and press ***Enter***.

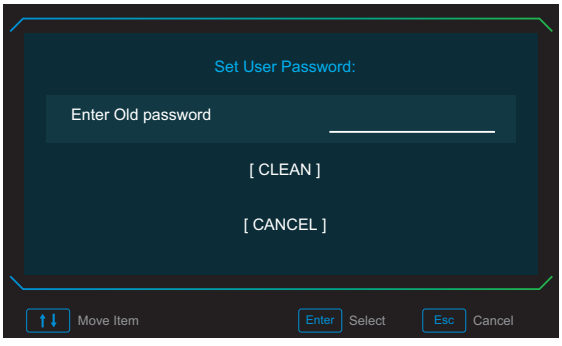


Figure 1-80. Remove User Password

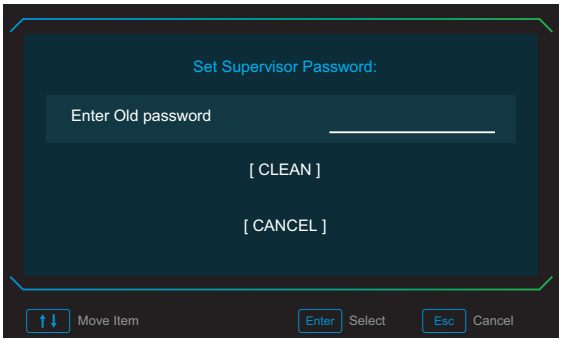


Figure 1-81. Remove Supervisor Password

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

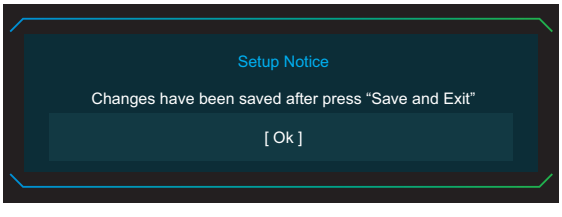


Figure 1-82. Setup Notice

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

5. Press ***F10*** and select "`SAVE & EXIT`". Then press ***Enter*** to save changes and exit *BIOS Setup Utility*.

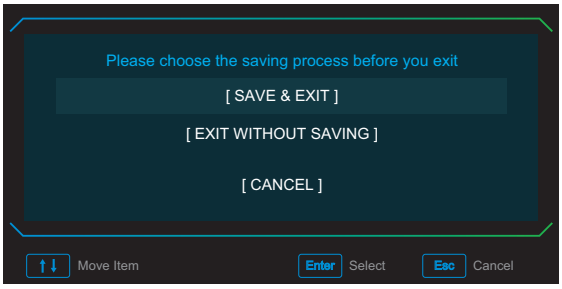


Figure 1-83. Save Configuration Changes and Exit

Boot

The Boot tab allows changes to the order of boot devices used to load the operating system. Bootable devices include the:

- Windows Boot Manager
- Onboard hard disk drive
- USB diskette drive
- IPv4 network drive
- USB hard disk drive
- USB CD-ROM drive
- IPv6 network drive

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

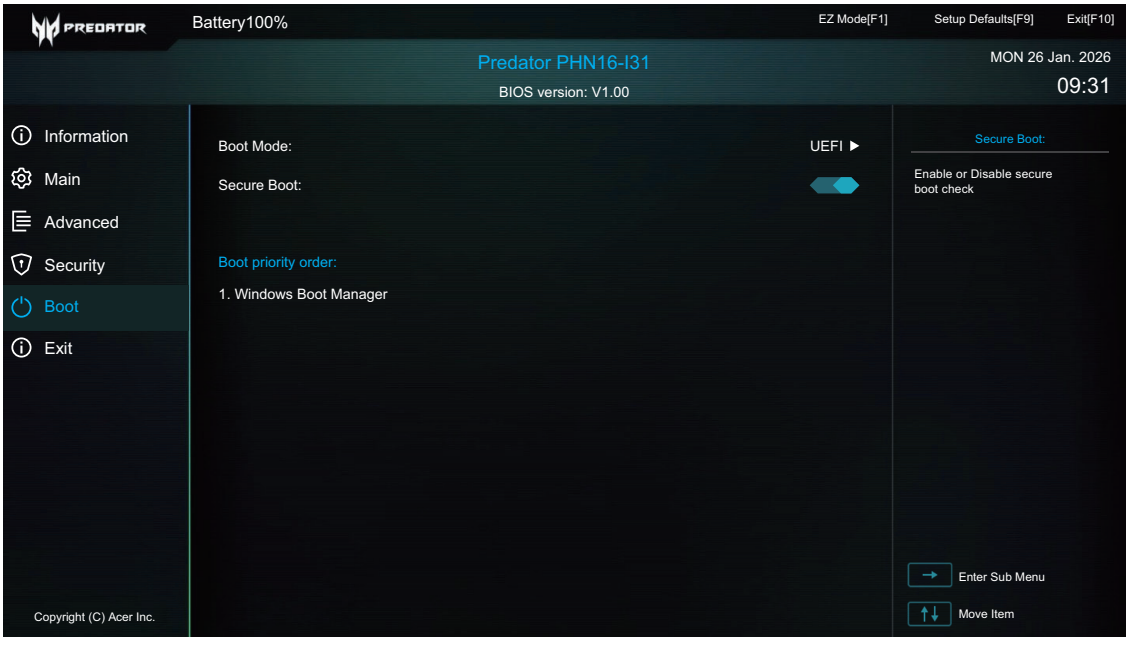


Figure 1-84. BIOS Boot

Table 1-5 describes the parameters in Figure 1-84.

Table 1-5. BIOS Boot

Parameter	Description
Boot Mode	Set the system Boot Mode.
Secure Boot	Enable or Disable Secure Boot check.

Exit

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

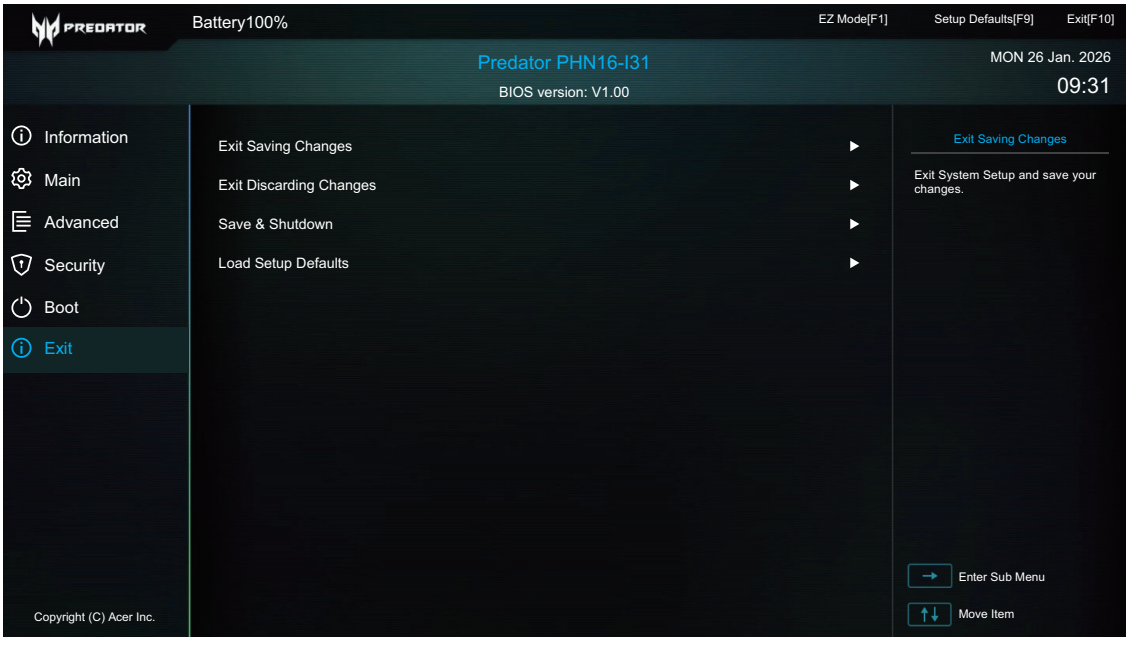


Figure 1-85. BIOS Exit

Table 1-6 describes the parameters in Figure 1-85.

Table 1-6. BIOS Exit

Parameter	Description
Exit Saving Changes	Exit BIOS utility and save setup item changes to system.
Exit Discarding Changes	Exit BIOS utility without saving setup item changes to system.
Save & Shutdown	Save the changes and shutdown the system.
Load Setup Defaults	Load setup default values for all setup items.

Troubleshooting

This chapter shows you how to deal with common system problems. Read it before calling a technician if a problem occurs. Solutions to more serious problems require opening up the computer. **By performing any of these procedures you acknowledge that any remaining warranty applicable to your computer will be voided if any damage is done to the unit or components during the repair.**

Introduction

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

General Information

The following procedures are a guide for troubleshooting computer problems. The step by step procedures are designed to be performed as described.

NOTE:

The diagnostic tests are intended for Acer products only. Non-Acer products, prototype cards, or modified options can give false errors and invalid system responses.

1. Obtain as much detailed information as possible about the problem.
2. If possible, verify the symptoms by re-creating the failure through diagnostic tests or repeating the operation that led to the problem.
3. Use Table 1-7 with the verified symptom to determine the solution.

Table 1-7. Common Problems

Symptoms (Verified)
Power On Issues
No Display Issues
LCD Picture Failure
Internal Keyboard Failure
Touch Pad Failure
Internal Speaker Failure
Other Functions Failure
Intermittent Problems
Undetermined Problems

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

NOTE:

Do not replace non-defective FRU parts.

Power On Issues

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

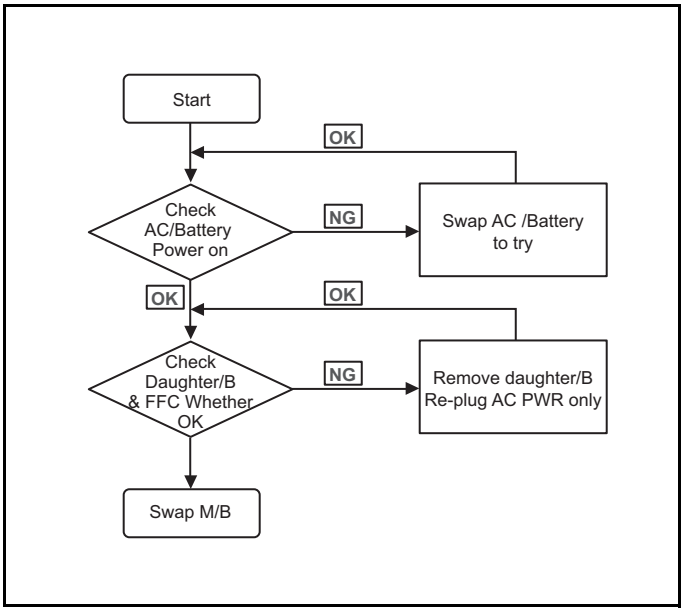


Figure 1-86. Power On Issue

Computer Shuts Down Intermittently

If the system powers off at intervals, perform the following.

1. Makes sure the power cable is properly connected to the computer and the electrical outlet.
2. Remove all extension cables between the computer and the outlet.
3. Remove all surge protectors between the computer and the electrical outlet. Plug the computer directly into a known serviceable electrical outlet.
4. Disconnect the power and open the casing to check the thermal unit and fan airways are free of obstructions.
5. Remove all external and non-essential hardware connected to the computer that are not necessary to boot the computer to the failure point.
6. Remove any recently installed software.
7. If the Issue is still not resolved, please contact Acer local service.

No Display Issues

If the Display does not work, perform the following:

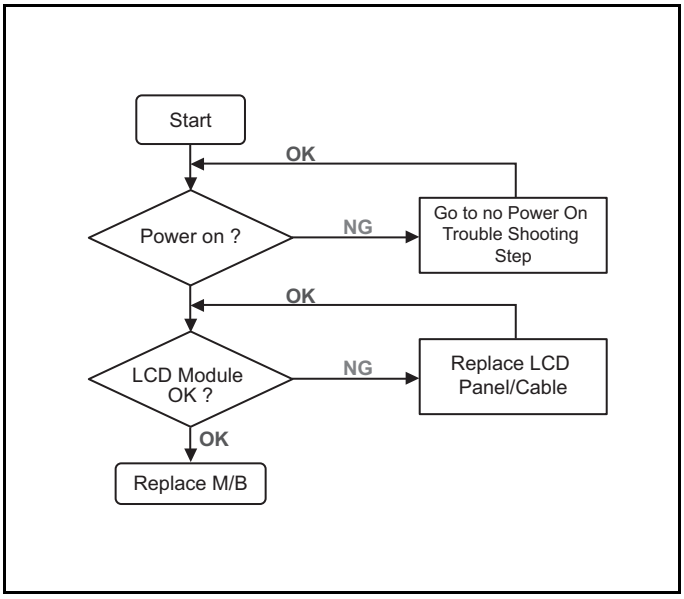


Figure 1-87. No Display Issue

No POST or Video

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

1. Make sure that internal display is selected. Then switch between the internal display and the external display. Reference product pages for specific model procedures.
2. Make sure the computer has power by checking for one of the following:
   - Fans start up
   - Status LEDs illuminate

If no power, refer to *Power On Issues*.

3. Drain stored power by removing the power cable and battery. Hold the power button for 10 seconds.
4. Connect the power and reboot the computer.
5. Connect an external monitor to the computer and switch between the internal display and the external display.
6. If the POST or video appears on the external display only, refer to *LCD Picture Failure*.
7. Disconnect power and all external devices including port replicators or docking stations. Remove any memory cards and CD/DVD discs.
8. Start the computer. If the computer boots correctly, add the devices one by one until the failure point is discovered.
9. Reseat the memory modules.
10. Remove the drives (refer to *Disassembly Procedures*).

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

Abnormal Video

If the video appears abnormal, perform the following:

1. Boot the computer.
   - If permanent vertical/horizontal lines or dark spots appear in the same location, the LCD is faulty and should be replaced. Refer to *Disassembly Procedures*.
   - If extensive pixel damage is present (different colored spots in the same locations on the screen), the LCD is faulty and should be replaced.

NOTE:
Make sure that the computer is not running on battery alone as this may reduce display brightness.

2. Adjust the brightness to its highest level. Refer to the User Manual for instructions on adjusting the settings. If the display is too dim at the highest brightness setting, the LCD is faulty and should be replaced. Refer to *Disassembly Procedures*.
3. Check the display resolution is correctly configured:
   - Minimize or close all Windows.
   - If display size is only abnormal in an application, check the view settings and control/mouse wheel zoom feature in the application.
   - If desktop display resolution is not normal, right-click on the desktop and select `Personalize Display Settings`.
   - Click and drag the Resolution slider to the desired resolution.
   - Click ***Apply*** and check the display. Readjust if necessary.
4. Roll back the video driver to the previous version if updated.
5. Remove and reinstall the video driver.
6. Check the Device Manager to determine that:
   - The device is properly installed. There are no red Xs or yellow exclamation marks
   - There are no device conflicts
   - No hardware is listed under `Other Devices`
7. If the Issue is still not resolved, please contact Acer local service.
8. Run the *Windows Memory Diagnostic* from the operating system DVD and follow the on-screen prompts.
9. If the issue is still not resolved, please contact Acer local service.

LCD Picture Failure

If the LCD fails, perform the following:

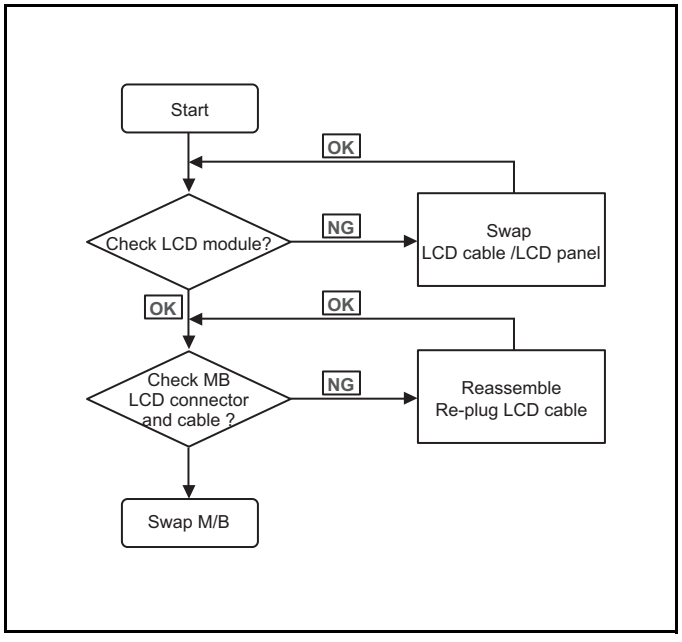


Figure 1-88. LCD Failure

Internal Keyboard Failure

If the internal keyboard fails, perform the following:

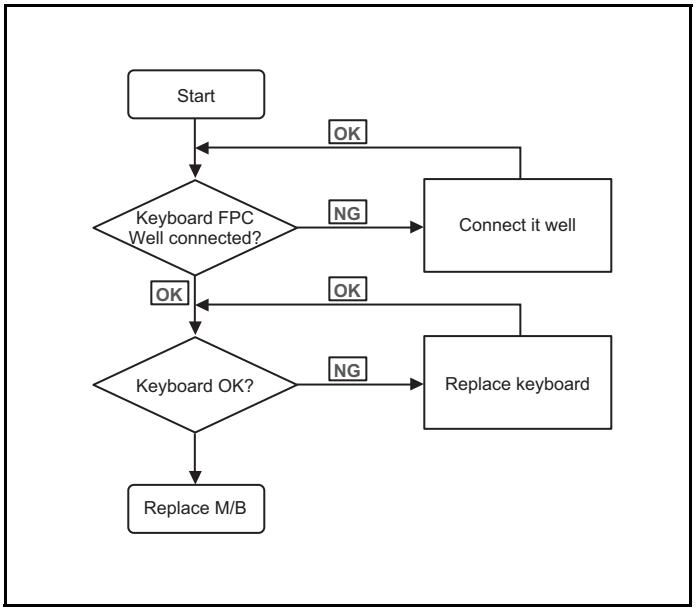


Figure 1-89. Internal Keyboard Failure

Touch Pad Failure

If the touch pad fails, perform the following:

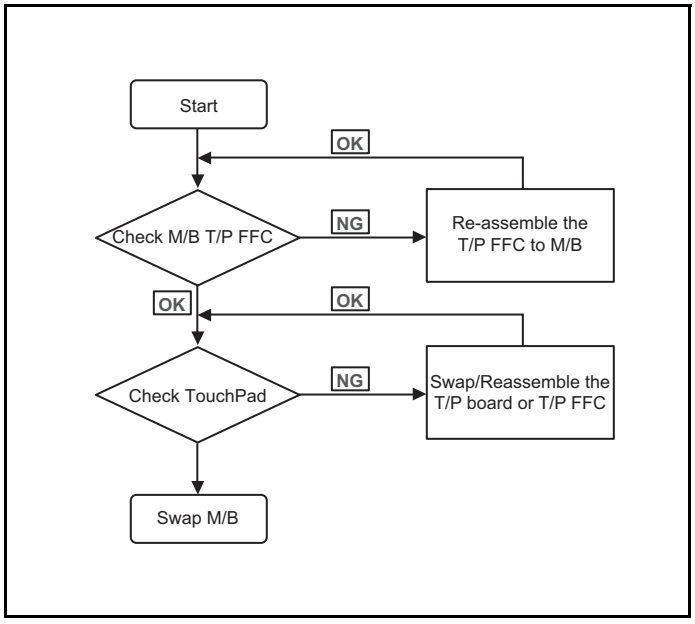


Figure 1-90. Touch Pad Failure

Internal Speaker Failure

If the internal speakers fail, perform the following:

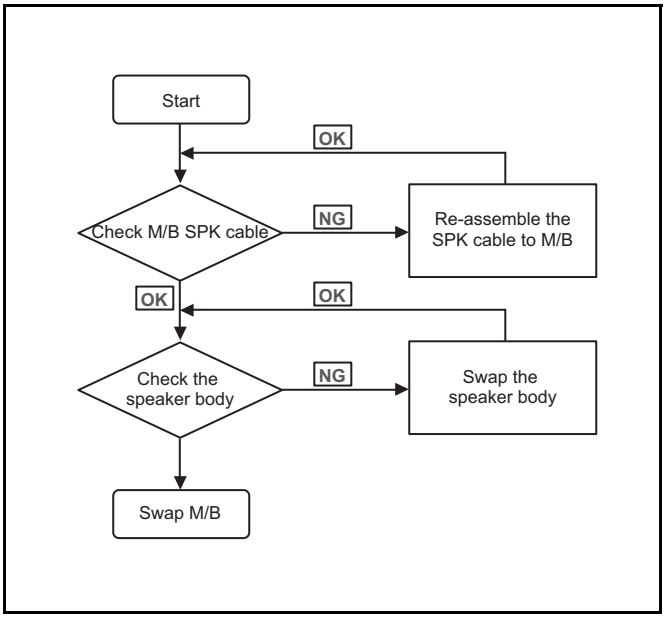


Figure 1-91. Internal Speaker Failure

Sound Problems

Perform the following, one at a time.

1. Boot the computer.
2. If updated recently, roll back the audio driver to the previous version. Remove and reinstall the audio driver.
3. Make sure that all volume controls are set mid range:
   - Click the volume icon on the taskbar.
   - Drag the slider to 50. Confirm that the volume is not muted.
   - Click Mixer to verify that other audio applications are set to 50 and not muted.
4. Remove any recently installed hardware or software.
5. Restore system and file settings from a known good date using `System Restore`.
6. Reinstall the operating system.
7. If the issue is still not resolved, please contact Acer local service.

Other Functions Failure

1. Check if the drives are functioning correctly.
2. Check if the test fixtures are functioning correctly.
3. Change the mainboard to check if the current one is defective.

Intermittent Problems

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

When analyzing an intermittent problem, perform the following:

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

Undetermined Problems

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

Perform the following procedures to isolate the failing FRU (do not isolate non-defective FRU).

NOTE:
Verify that all attached devices are supported by the computer.

NOTE:
Verify that the power supply being used at the time of the failure is operating correctly. (Refer to *Power On Issues*).

1. Remove power from the computer.
2. Visually check components for damage. If any problems are found, replace the FRU.
3. Remove or disconnect all of the following devices:
   - Non-Acer devices
   - Printer, mouse, and other external devices
   - Battery pack
   - Hard disk drive
   - DIMM
   - BD/CD-ROM/Diskette drive Module
   - PC Cards
4. Apply power to the computer.
5. Determine if the problem has changed.
6. If the problem does not recur, connect the removed devices one at a time until failing FRU is found.
7. If the problem remains, replace the following FRUs:
   - System board
   - LCD assembly

Exploded Diagrams

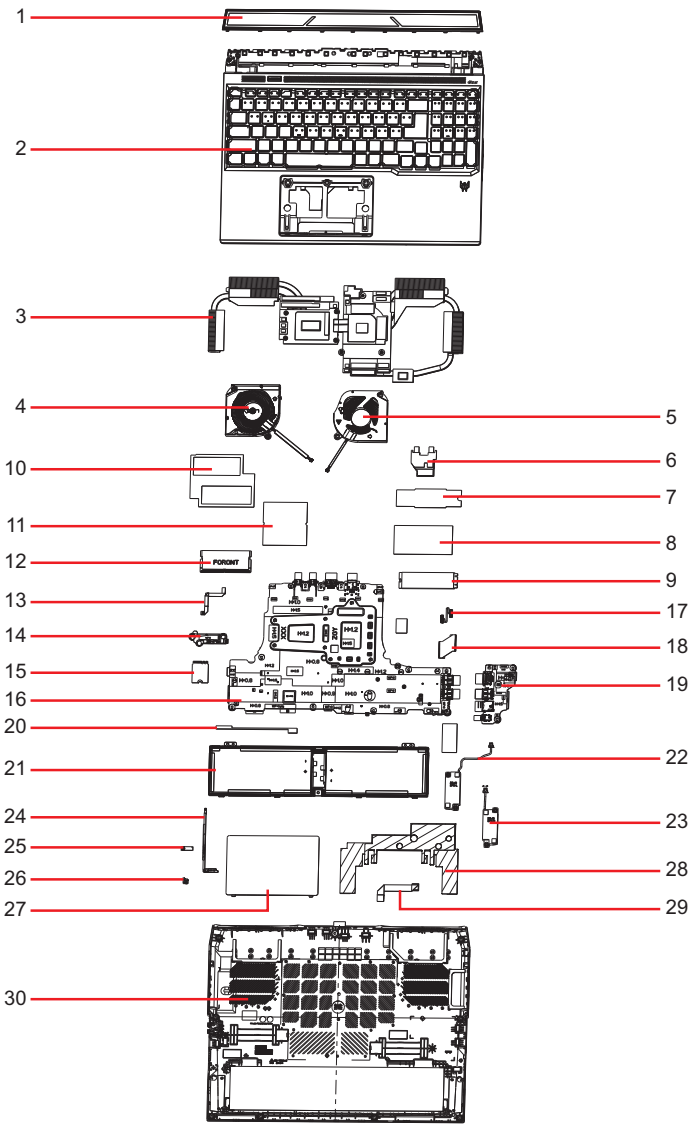


Figure 1-92. System Exploded Diagram

Table 1-8. System Exploded Diagram

No.	Description
1	STRIP COVER ASSY

Table 1-8. System Exploded Diagram (Continued)

No.	Description
2	KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 103KS Arabic NK.I151S.27J,NK.I1517.1T0
3	HEAT SINK
4	FAN CPU GN22-X7
5	FAN GPU GN22-X7
6	CONDUCTIVE TAPE W/ INS MYLAR FOR MAINBOARD & THERMAL
7	ABSORBER W/ INS MYLAR SSD
8	FOIL CU W/ MYLAR,GRAPHITE SHEET
9	Flash Disk HYNIX SSD NAND 1024GB M.2 2280 PVC10 1024G HFS001TEM9X170N LF+HF
10	ABSORBER W/ INS MYLAR DDR
11	FOIL COMPOSITE W/ MYLAR FOR DDR5
12	Memory SAMSUNG SO-DIMM DDRV 5600 8GB M425R1GB4PB0-CWM LF+HF 14nm P die
13	FFC CABLE MODE KEY BOARD
14	BOARD MODE KEY - GN22-X4 & X6
15	Wireless LAN Intel Wi-Fi 6E BT5.2 Killer 1675i AX211.NGWG.NVX Intel 2x2 M.2 2230 CNVi GFP2 No vPro
16	Mainboard PHN16-I31 Intel GN22-X2 8GB Ci514450HX/DDR5/GN22-X2_CN
17	CABLE IO BOARD
18	FPC CABLE IO BOARD
19	BOARD IO - GN22-X4 & X6
20	CABLE BATTERY 92W
21	Battery SIMPLO Typ.92Wh 5900mAh 4S1P AP24B7T 300x68x7.6(mm) AP24 15.6V Li-Ion
22	SPEAKER L
23	SPEAKER R
24	FFC CABLE MIC
25	MICROPHONE
26	RUBBER 3RD MIC
27	TOUCHPAD MODULE ELANTEC NC.24611.09K
28	CONDUCTIVE TAPE W/ INS MYLAR FOP TP
29	FFC CABLE TOUCHPAD
30	LOWER CASE ASSY

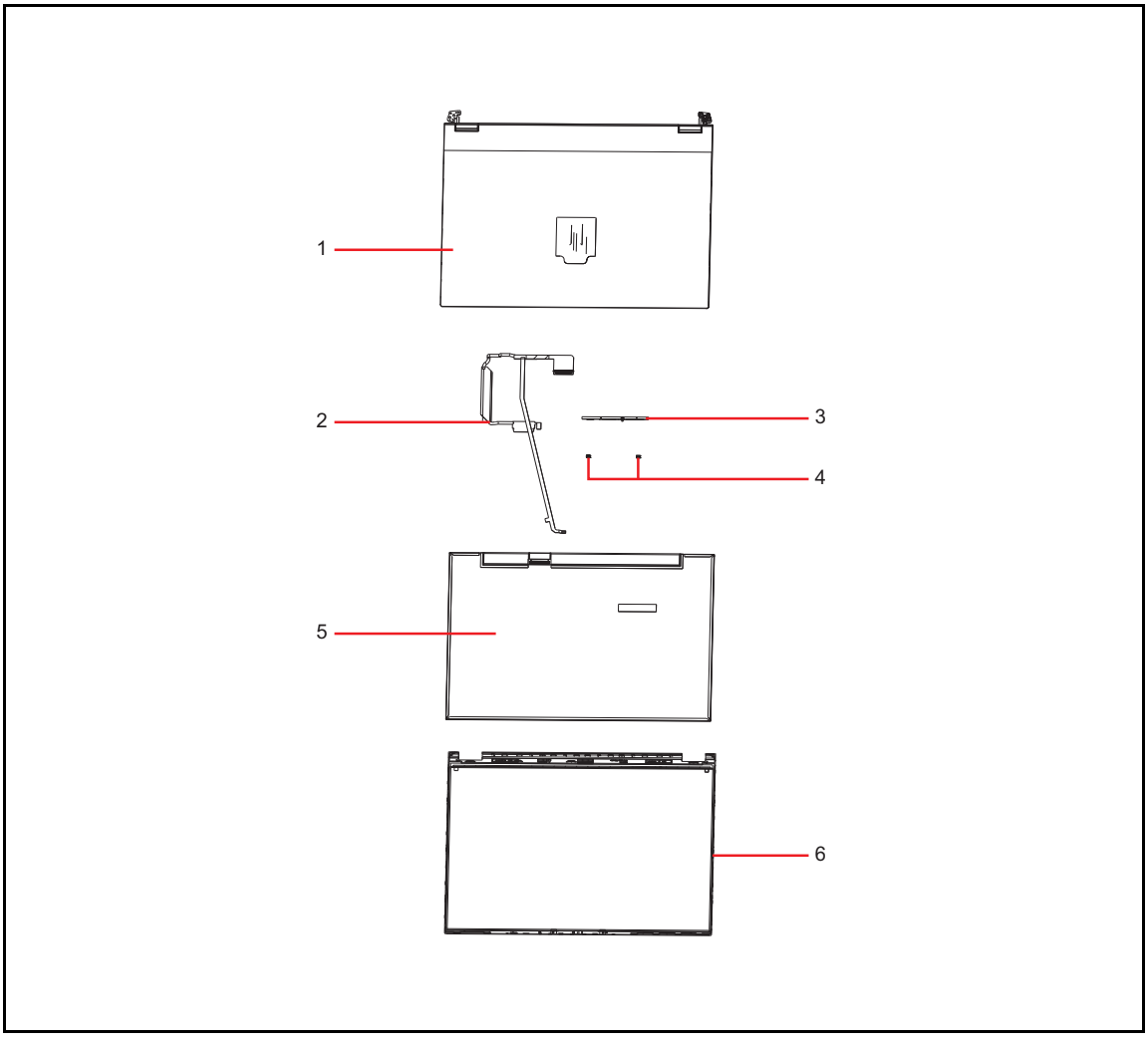


Figure 1-93. LCD Assembly Exploded Diagram

Table 1-9. LCD Assembly Exploded Diagram

No.	Description
1	LCD COVER ASSY AL BLACK
2	LCD EDP CABLE
3	Camera Supreme FHD FF BNFDF5032-A GC2607 SPCA2093N2 42158A1NA6 MSM261DGT006 RTC1.9
4	RUBBER FOR MIC & CAMERA
5	LED LCD Panel CSOT 16" WUXGA IPS None Glare MNG007QA1-2 V01 400nit sRGB 100% 180Hz 9ms 1200:1 (Narrow border, 2.6t/4.6t, 3ms by OD, DDS)
6	LCD BEZEL

FRU List

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

Table 1-10. FRU List

Category	Pictures	Description
ADAPTER		Adapter DELTA ADP-230JB DY 230W High power 5.5PHY (1.7x5.5x11) Brick 19.5V/11.8A Black PCR50%, with LOGO
		Adapter LITE-ON PA-1231-16A1 230W High power 5.5PHY (1.7x5.5x11) Brick 19.5V/11.8A Black PCR50%, with LOGO
		Adapter Chicony Power A230A073P 230W High power 5.5PHY (1.7x5.5x11) Brick 19.5V/11.8A Black PCR50%,with LOGO
BATTERY		Battery SIMPLO Typ.92Wh 5900mAh 4S1P AP24B7T 300x68x7.6(mm) AP24 15.6V Li-Ion
		Battery CosMx Typ.92Wh 5914mAh 4S1P AP24BBT 300x68x7.6(mm) AP24 15.6V Li-Ion
BOARD		BOARD IO - GN22-X4 & X6
		BOARD MODE KEY - GN22-X4 & X6
CABLE		FFC CABLE TOUCHPAD
		FFC CABLE MIC
		FPC CABLE IO BOARD

Table 1-10. FRU List (Continued)

Category	Pictures	Description
CABLE		FFC CABLE MODE KEY BOARD
		CABLE IO BOARD
		CABLE BATTERY 92W
		LCD EDP CABLE
CAMERA		Camera Supreme FHD FF BNFDF5032-A GC2607 SPCA2093N2 42158A1NA6 MSM261DGT006 RTC1.9
		Camera CHICONY FHD FF CKFPF15 GC2607 RTS5856A 42158A1NA6 ADEASJ264211C-01-V3 RTC1.9
		Camera CHICONY FHD FF CKFOE24-1 GC2607 SPCV6202A DS-41161A (BG) ZTS6534SAC TNR USB IR-HM1092(940nm) (3.2mm) ,sHDR
FAN		FAN GPU GN22-X7
		FAN CPU GN22-X7
HDD		Flash Disk HYNIX SSD NAND 1024GB M.2 2280 PVC10 1024G HFS001TEM9X170N LF+HF
		Flash Disk SANDISK SSD NAND 1024GB SN5100s SDFQNSM-1T00-1014 LF+HF

Table 1-10. FRU List (Continued)

Category	Pictures	Description
HDD		Flash Disk KINGSTON SSD NAND 512GB OM8SGP4512K2-CA0 LF+HF
		Flash Disk HYNIX SSD NAND 512GB M.2 2280 PVC10 512G HFS512GEM9X170N LF+HF
KB ASSEMBLY		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 103KS Arabic NK.I151S.27J,NK.I1517.1T0
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 104KS FR/Arabic NK.I151S.281,NK.I1517.1TH
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 104KS Belgium NK.I151S.27X,NK.I1517.1TD
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 104KS Brazilian Portuguese NK.I151S.27Y,NK.I1517.1TE
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 103KS US International w/ Bulgaria NK.I151S.27V,NK.I1517.1TB
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 103KS US International w/ Canadian French NK.I151S.27U,NK.I1517.1TA
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 104KS SLO/CRO NK.I151S.289,NK.I1517.1TR
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 104KS CZ/SK NK.I151S.27Z,NK.I1517.1TF
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 104KS Danish NK.I151S.280,NK.I1517.1TG
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 104KS French NK.I151S.282,NK.I1517.1TJ
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 104KS German NK.I151S.283,NK.I1517.1TK
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 103KS Greek NK.I151S.27L,NK.I1517.1T2

Table 1-10. FRU List (Continued)

Category	Pictures	Description
KB ASSEMBLY		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 103KS US International w/ Hebrew NK.I151S.27T,NK.I1517.1T9
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 104KS Hungarian NK.I151S.284,NK.I1517.1TL
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 103KS Persian NK.I151S.27Q,NK.I1517.1T6
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 104KS Italian NK.I151S.285,NK.I1517.1TM
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 107KS Japanese NK.I151S.28F,NK.I1517.1TX
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 103KS Korean NK.I151S.27M,NK.I1517.1T3
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 104KS ALA-Spanish NK.I151S.27W,NK.I1517.1TC
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 104KS Norwegian NK.I151S.287,NK.I1517.1TP
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 104KS Portuguese NK.I151S.288,NK.I1517.1TQ
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 103KS Russian NK.I151S.27N,NK.I1517.1T4
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 104KS Nordic NK.I151S.286,NK.I1517.1TN
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 104KS Spanish NK.I151S.28A,NK.I1517.1TS
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 104KS Sweden NK.I151S.28B,NK.I1517.1TT
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 104KS Swiss/G NK.I151S.28C,NK.I1517.1TU

Table 1-10. FRU List (Continued)

Category	Pictures	Description
KB ASSEMBLY		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 103KS Thailand NK.I151S.27R,NK.I1517.1T7
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 104KS Turkish NK.I151S.28D,NK.I1517.1TV
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 103KS Traditional Chinese NK.I151S.27K,NK.I1517.1T1
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 103KS US International NK.I151S.27S,NK.I1517.1T8
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 104KS UK NK.I151S.28E,NK.I1517.1TW
		KEYBOARD ASSY BLACK COPILOT BL W/ UPPER CASE PG05P_P50B3L 103KS Ukrainian NK.I151S.27P,NK.I1517.1T5
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 103KS Arabic NK.I151S.2G7
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 104KS FR/Arabic NK.I151S.2GQ
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 104KS Belgium NK.I151S.2GL
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 104KS Brazilian Portuguese NK.I151S.2GM
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 103KS US International w/ Bulgaria NK.I151S.2GJ
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 103KS US International w/ Canadian French NK.I151S.2GH
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 104KS SLO/CRO NK.I151S.2GY

Table 1-10. FRU List (Continued)

Category	Pictures	Description
KB ASSEMBLY		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 104KS CZ/SK NK.I151S.2GN
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 104KS Danish NK.I151S.2GP
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 104KS French NK.I151S.2GR
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 104KS German NK.I151S.2GS
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 103KS Greek NK.I151S.2G9
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 103KS US International w/ Hebrew NK.I151S.2GG
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 104KS Hungarian NK.I151S.2GT
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 103KS Persian NK.I151S.2GD
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 104KS Italian NK.I151S.2GU
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 103KS Korean NK.I151S.2GA
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 104KS ALA-Spanish NK.I151S.2GK
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 104KS Norwegian NK.I151S.2GW
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 104KS Portuguese NK.I151S.2GX
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 103KS Russian NK.I151S.2GB

Table 1-10. FRU List (Continued)

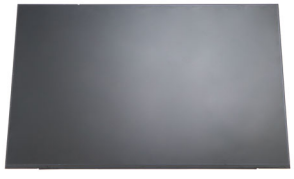
Category	Pictures	Description
KB ASSEMBLY		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 104KS Nordic NK.I151S.2GV
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 104KS Spanish NK.I151S.2GZ
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 104KS Sweden NK.I151S.2H0
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 104KS Swiss/G NK.I151S.2H1
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 103KS Thailand NK.I151S.2GE
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 104KS Turkish NK.I151S.2H2
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 103KS Traditional Chinese NK.I151S.2G8
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 103KS US International NK.I151S.2GF
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 104KS UK NK.I151S.2H3
		KEYBOARD ASSY BLACK ESHELL BL W/ UPPER CASE PG05P_P34B3L 103KS Ukrainian NK.I151S.2GC
LCD		LED LCD Panel CSOT 16" WUXGA IPS None Glare MNG007QA1-2 V01 400nit sRGB 100% 180Hz 9ms 1200:1 (Narrow border, 2.6t/4.6t, 3ms by OD, DDS)
		LED LCD Panel Tianma 16" WQXGA IPS None Glare TL160 ADMP37-00 400nit sRGB 100% 180Hz 9ms 1200:1 (Narrow, 2.6t/4.6t, 3ms by OD, DDS)
		LED LCD Panel AUO 16" WQXGA IPS None Glare B160QAN03.T H/W 1A 400nit sRGB 100% 180Hz 9ms 1000:1 (Narrow, 2.6t/4.6t, 3ms by OD, DDS)

Table 1-10. FRU List (Continued)

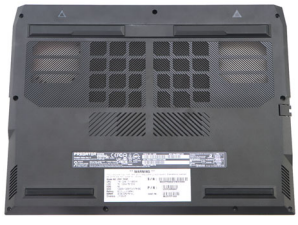
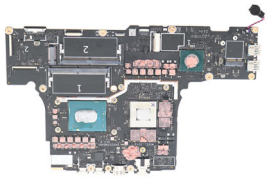
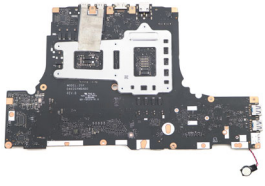
Category	Pictures	Description
LCD		LED LCD Panel BOE 16" WUXGA IPS None Glare NE160WUM-NY9 V18.0 400nit sRGB 100% 180Hz 9ms 1200:1 (Narrow border,2.6t/4.6t, 3ms by OD, DDS)
LCD BEZEL		LCD BEZEL
LCD COVER		LCD COVER ASSY AL BLACK
LOWER CASE		LOWER CASE ASSY
MAINBOARD	 	Mainboard PHN16-I31 Intel GN22-X2 8GB Ci514450HX/DDR5/GN22-X2_CN Mainboard PHN16-I31 Intel GN22-X4 8GB Ci714650HX/DDR5/GN22-X4_CN
MEMORY		Memory SAMSUNG SO-DIMM DDRV 5600 8GB M425R1GB4PB0-CWM LF+HF 14nm P die Memory HYNIX SO-DIMM DDRV 5600 8GB HMCG66AGBSA LF+HF 1anm, A-die 1Rx16 Memory KINGSTON SO-DIMM DDRV 5600 16GB ACR56S46BS8KA-16KM LF+HF NA-A16 1Rx8

Table 1-10. FRU List (Continued)

Category	Pictures	Description
MEMORY		Memory HYNIX SO-DIMM DDRV 5600 16GB HMCG78AGBSA LF+HF 1anm, A-die 1Rx8
PLASTICS		STRIP COVER ASSY
POWER CORD		POWER CORD 2.5A 125V US BK 1.8M
		POWER CORD 2.5A 250V UK BK 1.8M
		POWER CORD 2.5A 250V CHINA PRC BK 1.8M
		POWER CORD 2.5A 250V #Continental BK 1.8M
		POWER CORD 2.5A 250V #AF BK 1.8M
		POWER CORD 2.5A 250V Danish/Continental BK 1.8M
		POWER CORD 2.5A 125V INDIA BK 1.8M
		POWER CORD 2.5A 250V #Australia BK 1.8M
		POWER CORD 250V 1.8M BLACK FOR Argentine
		POWER CORD 2.5A 250V Swiss BK 1.8M
		POWER CORD 2.5A 125V JAPANESE BK 1.8M
		POWER CORD 2.5A 125V TWN BK 1.8M
		POWER CORD 2.5A 250V #Italian BK 1.8M
		POWER CORD 250V Hebrew 1.8M BLACK
		POWER CORD 2.5A 250V Brazil BK 1.8M
		POWER CORD 2.5A 250V South Africa-S (India) BK 1.8M
SPEAKER/ MICROPHONE		SPEAKER L
		SPEAKER R

Table 1-10. FRU List (Continued)

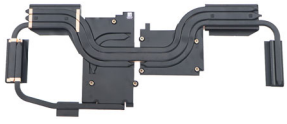
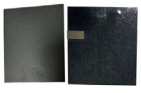
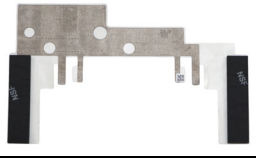
Category	Pictures	Description
SPEAKER/ MICROPHONE		MICROPHONE
THERMAL		HEAT SINK
TOUCHPAD		TOUCHPAD MODULE ELANTEC NC.24611.09K
		TOUCHPAD MODULE PIXART NC.24611.09F
WIRELESS LAN		Wireless LAN Intel Wi-Fi 6E BT5.2 Killer 1675i AX211.NGWG.NVX Intel 2x2 M.2 2230 CNVi GFP2 No vPro
MISCELLANEOUS		CONDUCTIVE TAPE W/ MYLAR - PREDATOR LOGO
		LIGHT MODULE - PREDATOR LOGO
		ABSORBER W/ INS MYLAR DDR
		ABSORBER W/ INS MYLAR SSD
		RUBBER 3RD MIC
		RUBBER FOR MIC & CAMERA
		FOIL COMPOSITE W/ MYLAR FOR DDR5

Table 1-10. FRU List (Continued)

Category	Pictures	Description
MISCELLANEOUS		FOIL CU W/ MYLAR,GRAPHITE SHEET
		INSULATOR MYLAR ON BATTERY CABLE
		MYLAR FFC COONECTOR
		ACETATE TAPE BATTERY
		TAPE KAPTON TOP MIC
		CONDUCTIVE TAPE W/ INS MYLAR FOR MAINBOARD & THERMAL
		MYLAR LCD UPPER 6*6*0.5MM
		CONDUCTIVE TAPE W/ INS MYLAR FOP TP
SCREW		SCREW M2.5*5.0-IBNINYLOKD5.0T0.8)STL
		SCREW M2.5*6.0-I(BK ZN-NI)STL
		SCREW M2.0*2.0- I(BZN)(NYLOK)IRON
		SCREW M2.0*3.5-I(NI)(NYLOK)IRON
		SCREWM2.0*1.8-IBNINYLOKD7.0,T0.4STLSP

Software Update

System BIOS & Driver Updates

Visit http://www.acer.com/support to discover the available system BIOS and Drivers for this product. After selecting the desired country/language, either enter the model name or product serial number, or select the product from the list of suggested models in order to get access to product-specific software and documentation.

To update the system BIOS:

- Download the desired system BIOS version from the website
- Unzip the downloaded file to your computer
- Double-click the extracted file in order to initiate the update process
- The update process itself is fully automated and its progress is visualized by means of a progress indicator
- A visual notification is shown when the update is complete

NOTE:
Upgrading the system BIOS incorrectly, or intermittence of the system BIOS update process could harm the product.

NOTE:
System BIOS upgrades or downgrades, if not performed by an Acer Service Center or authorized Service Partner, are at own risk.

To update Drivers:

Run Windows Update in order to get the latest drivers from Acer:

- Select the Start button
- Go to **Settings** > **Update & Security** > **Windows Update**
- Available Drivers will automatically be listed on the screen. Press **Download** to start the download of the respective driver
- Installation of the driver will start automatically once the download is completed

Software Recovery

This product has embedded software recovery tools which can be used to either perform a partial or full software recovery, but also to create a Factory Default recovery media.

For more information about the software recovery options, how to perform a software recovery or creating a Factory Default recovery media, please refer to the chapter "Recovery" which is available in the User Manual of the product.

NOTE:
In the event of not being able to create a Factory Default recovery media, it is possible to obtain a copy of the recovery media through Acer Customer Service (http://www.acer.com/support)

This is not a free of charge service.

Updating your software

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

Personal Data Removal

Removing your personal data

There are three options to choose from:

- Option 1: Select **Start** > **Settings** > **Update & Security** > **Recovery**. Under **Reset this PC**, select **Get started**. Open **Recovery settings**.
- Option 2: Restart your PC to get to the sign-in screen, then press and hold down the **Shift key** while you select the **Power** icon > **Restart** in the lower-right corner of the screen. After your computer restarts, select **Troubleshoot** > **Reset this PC**.
- Option 3: Select **Start** , then press and hold down the **Shift key** while you select the **Power** icon > **Restart** to restart your computer into Recovery Mode. After your computer restarts, select **Troubleshoot** > **Reset this PC**.