C24 & C27

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 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 Procedure

Safety Guidelines

This chapter contains step by step procedures on how to remove and de-install components from the computer. Use the following 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 conductivemat
- Flat screwdriver
- Philips screwdriver
- Polydrive screwdriver
- Plastic tweezers
- Flat plastic pry

WEEE Annex VII Component

These components are classified as requiring selective treatment.

Predisassembly Instructions

Do the following prior to starting any maintenance procedures:

1. Place the system on a stable work surface.
2. Remove AC power cord from the system and peripherals
3. Remove all cables from the system.

Make sure the system is completely powered off.

Rear Cover Removal

1. Remove the Rear Cover

1.1 Remove the three screws from the bottom shell



1.2 Remove the two screws at the bottom

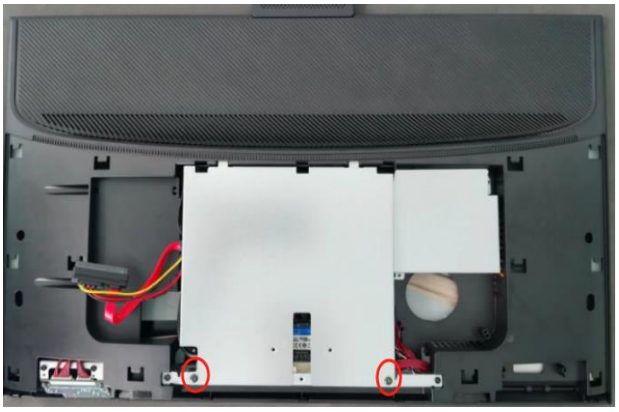


1.3 Push down the Rear Cover with your hand in the direction of the arrow, so that the Rear Cover and the middle frame hook and buckle are removed



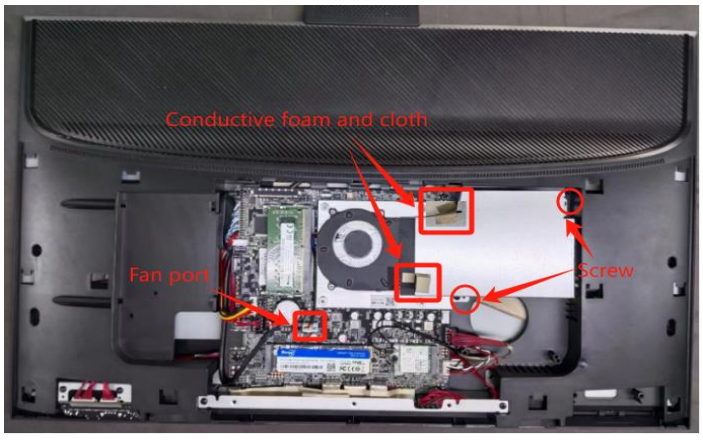
Motherboard Shield Removal

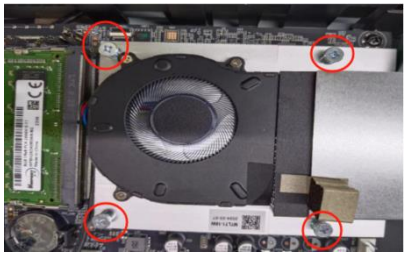
2. Remove the Motherboard Shield
   2.1 Remove two screws, then remove the Shield



THERMAL MODULE Removal

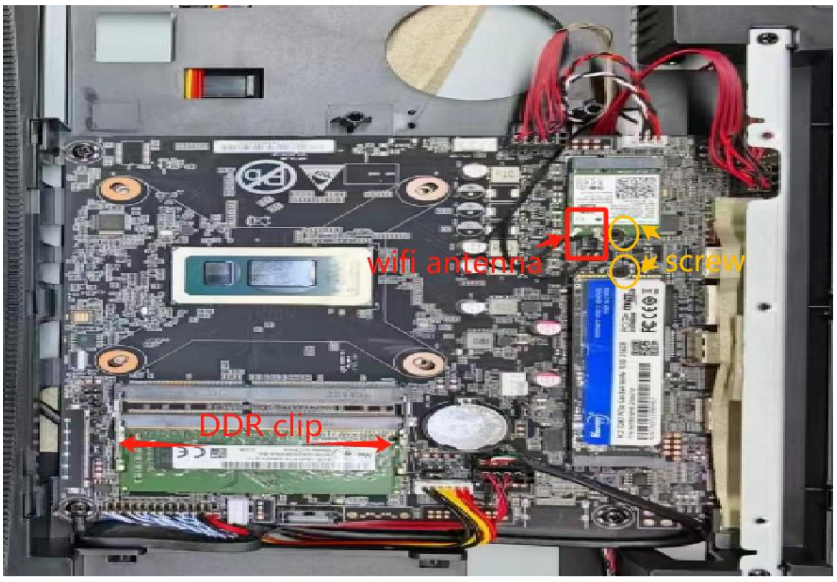
3. Remove THERMAL MODULE
   3.1 Pull out the fan port，and remove the conductive foam and cloth
   3.2 Remove two screws，then remove the outlet cowl
   3.3 Loosen the four screws and remove the THERMAL MODULE





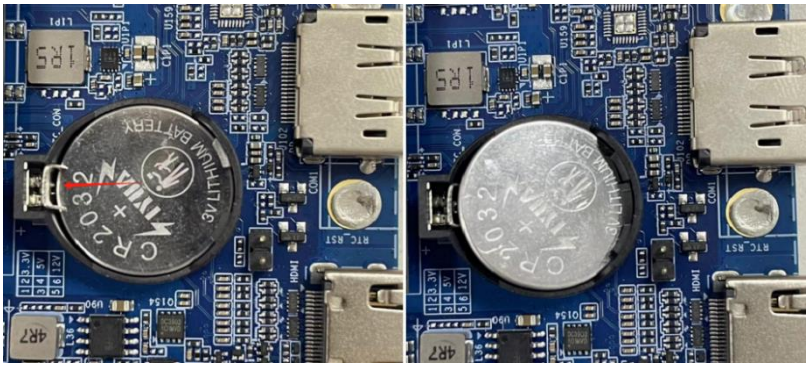
DDR/SSD/WLAN module Removal

4. Remove DDR/SSD/WLAN module
   4.1 Remove DDR
      4.1.1 Open the DDR clip in the direction of the arrow
      4.1.2 Remove the DDR according to the Angle of the DDR bounce
   4.2 Remove SSD
      4.2.1 Remove the screws holding the SSD in place
      4.2.2 Remove the SSD according to the Angle of the SSD bounce
   4.3 Remove WLAN module
      4.3.1 Remove the antenna and the screws holding the WiFi in place
      4.3.2 Remove the WLAN module according to the Angle of the WLAN module bounce



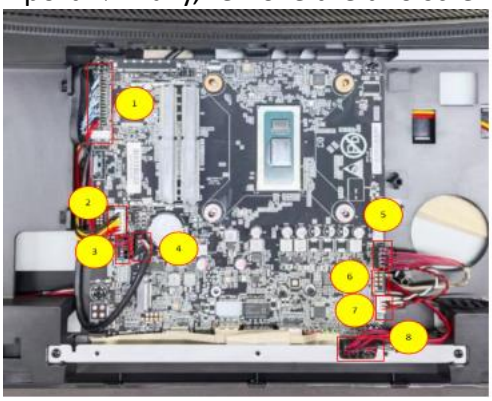
Battery Removal

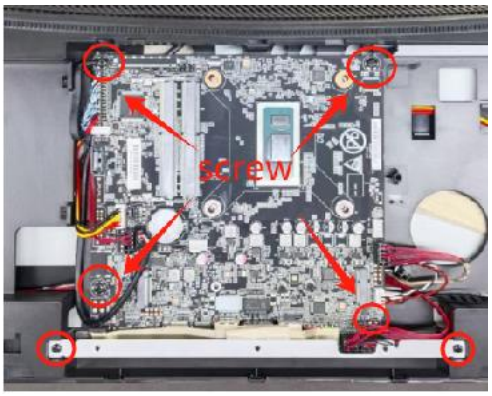
5. Remove Battery
   5.1 Find the position of the button battery on the motherboard and press the button at the position indicated by the red arrow
   5.2 Take out the battery latch after it springs up on the side



MAIN BOARD Removal

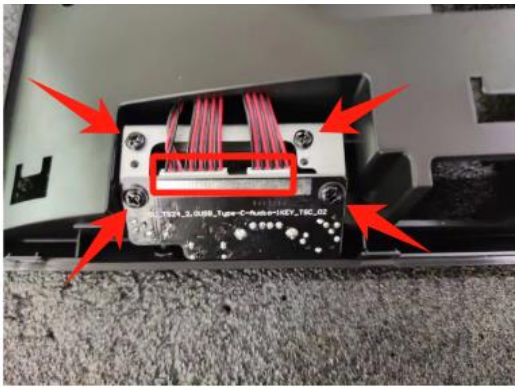
6. Remove MAIN BOARD
   6.1 Hold the female seat of the cable and pull out the port .Remove the eight cable port from positions 1 to 8. Do not pull the cable directly to avoid damaging the cable.
   6.2 Remove the four screws from the corners of the motherboard
   (Note:There is a ground cable on the upper left)
   6.3 Slowly lift the upper side of the Main Board, and then slowly remove the lower side of the I/O port（Finally, remove the two screws of the baffle and remove the baffle）

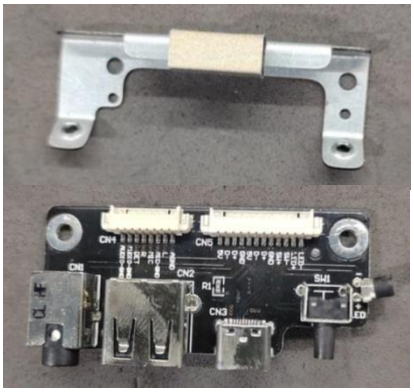




Side I/O board & Bracket Removal

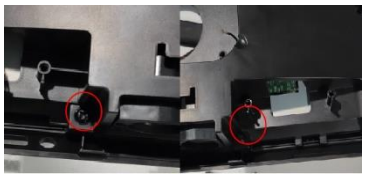
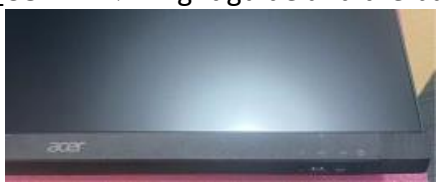
7. Remove Side I/O board & Bracket
   7.1 Pull out the two ports and remove the two screws on the board， then remove the board
   7.2 Remove the two screws on the bracket， then remove the bracket





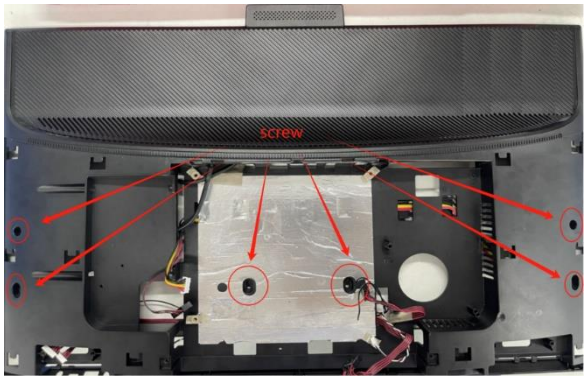
Decoration_COVER Removal

8. Remove Decoration_COVER
   8.1 Remove the two screws from Middle Shell
   8.2 Remove the Decoration_COVER 、 Light guide and the button cover

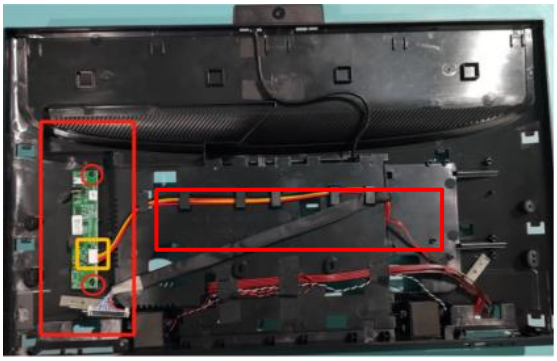

Middle Shell Removal

9. Remove Middle Shell
   9.1 Remove 6 M3*L4*D6.5*T1.9<mm>screws from the middle shell
   9.2 Remove the middle shell from the LCD assembly



Constant Current Board Removal

10. Remove Constant Current Board
    10.1 Remove two screws and cable port
    10.2 Remove Constant Current Board and cable

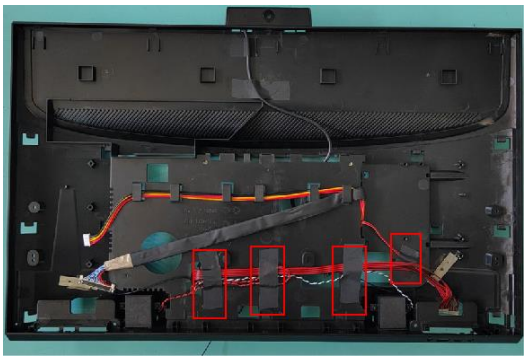
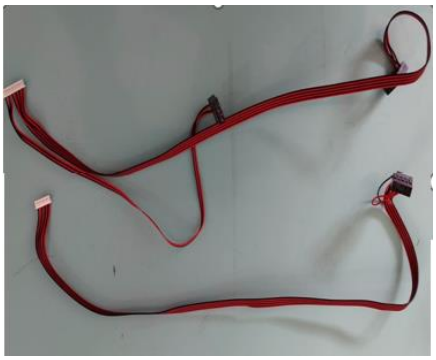




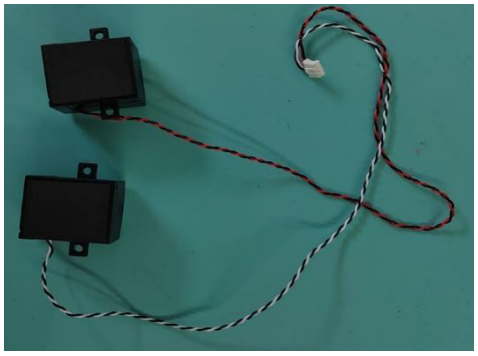
Audio Cable\Speaker \ Antenna Removal

11. Remove Audio Cable\Speaker \ Antenna

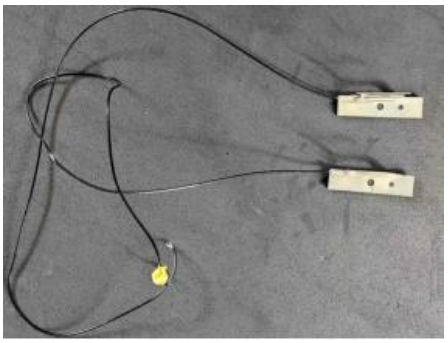
11.1 Remove the acetate cloth ， and remove the I0 Audio Cable

11.2 Remove the four screws from the speakers on both sides， then remove the speakers

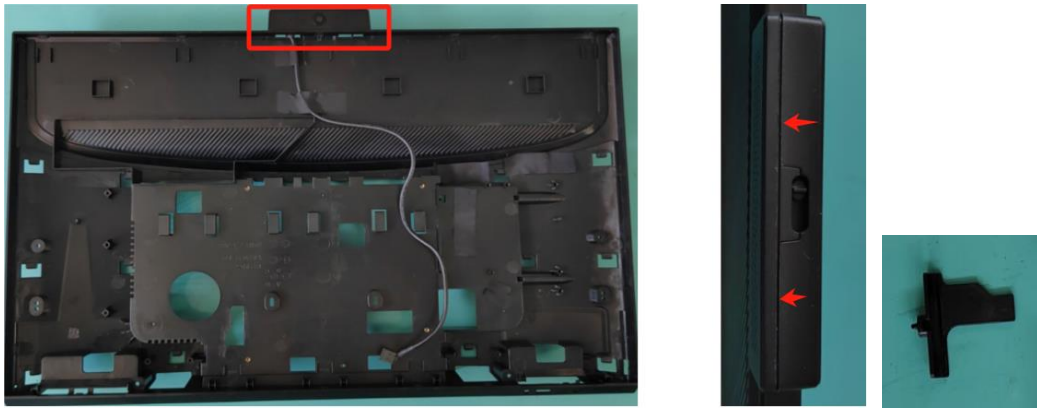
11.3 Gently uncover the corresponding antenna to separate the antenna backing from the middle frame，The remove the antenna

Camera Module Removal

12. Remove Camera Module

12.1 Remove the rear cover of the camera from the gap between the rear cover and the middle frame in the direction of the red arrow in the above figure ，remove the camera pick



12.2 Remove the two screws and cable port from Camera Module

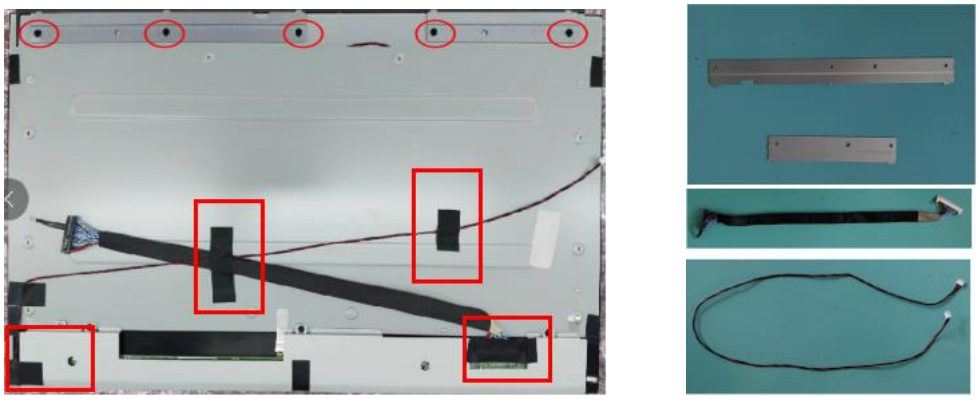


Back bracket \ LCD Cable\LED Cable Removal

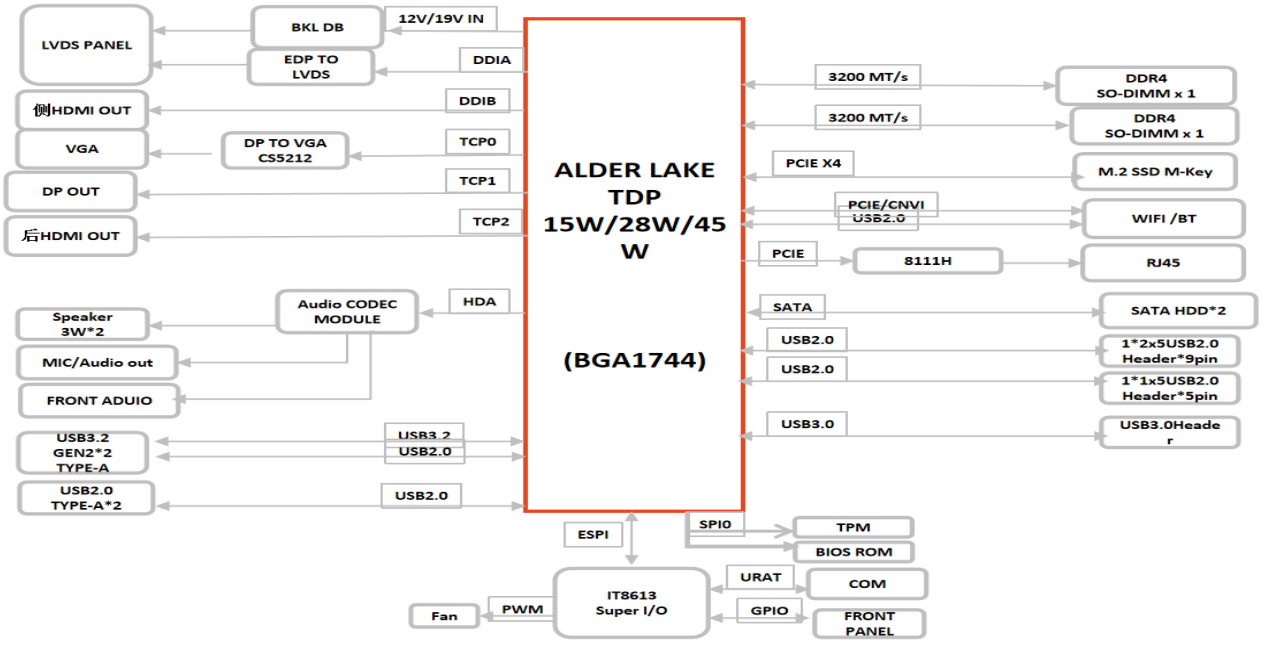
13. Remove Back bracket

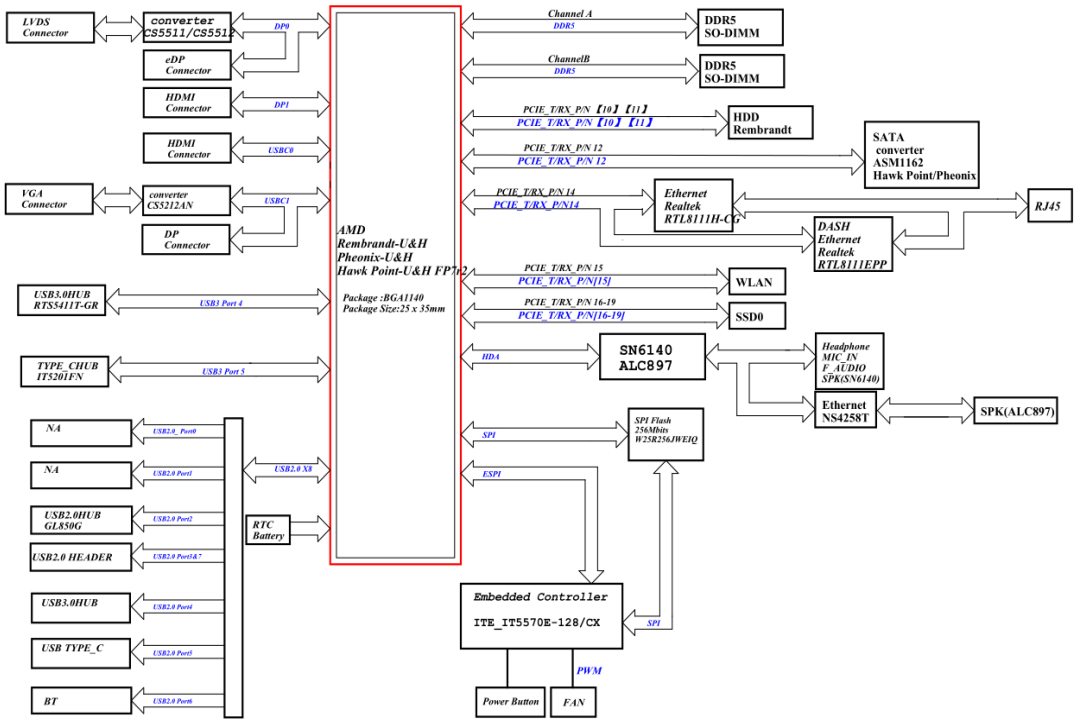
13.1 Remove five screws ， then remove the Back brackets

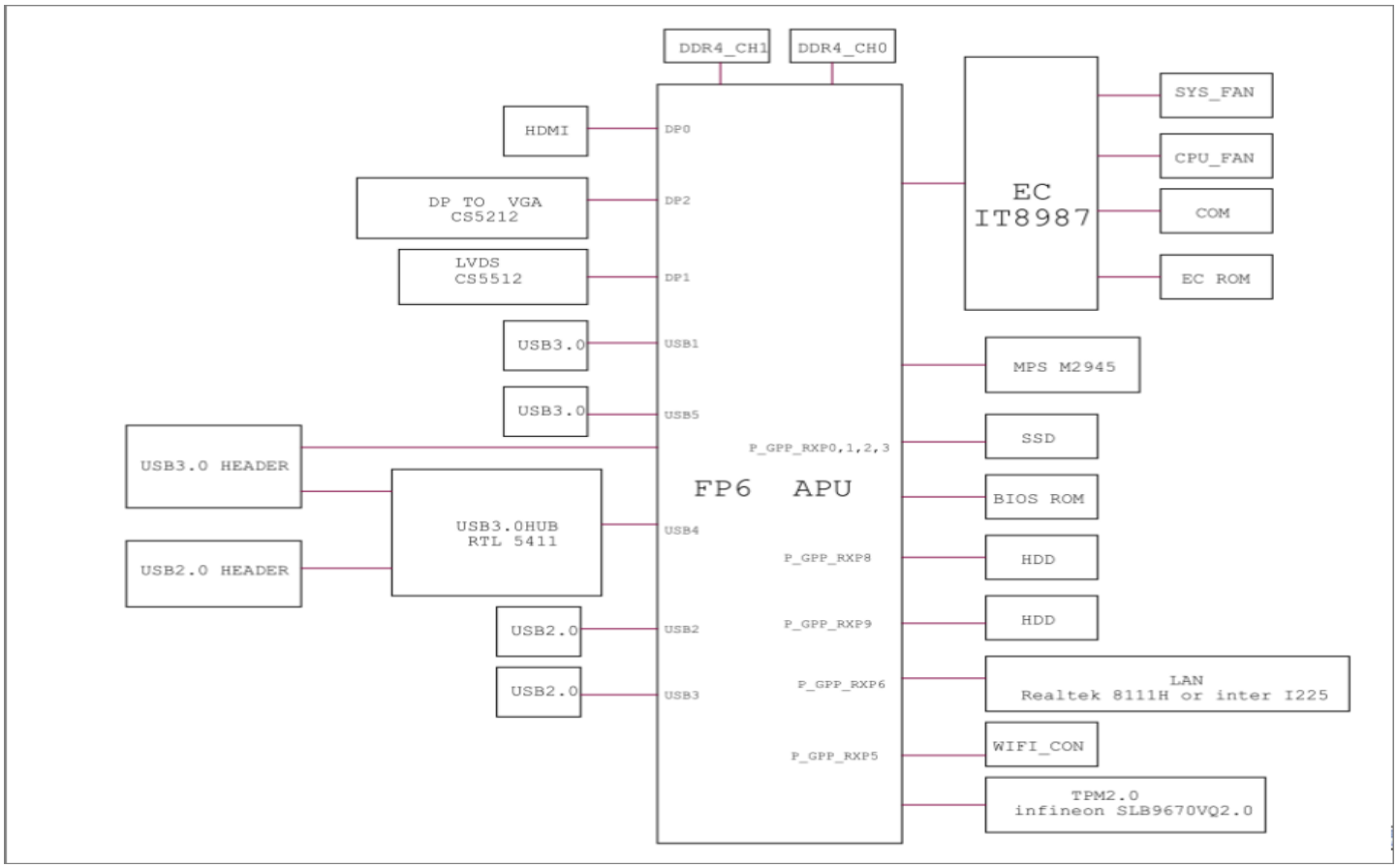
13.2 Remove the acetate cloth and unplug the cable port， then remove the cables



Electronic Boards Diagrams





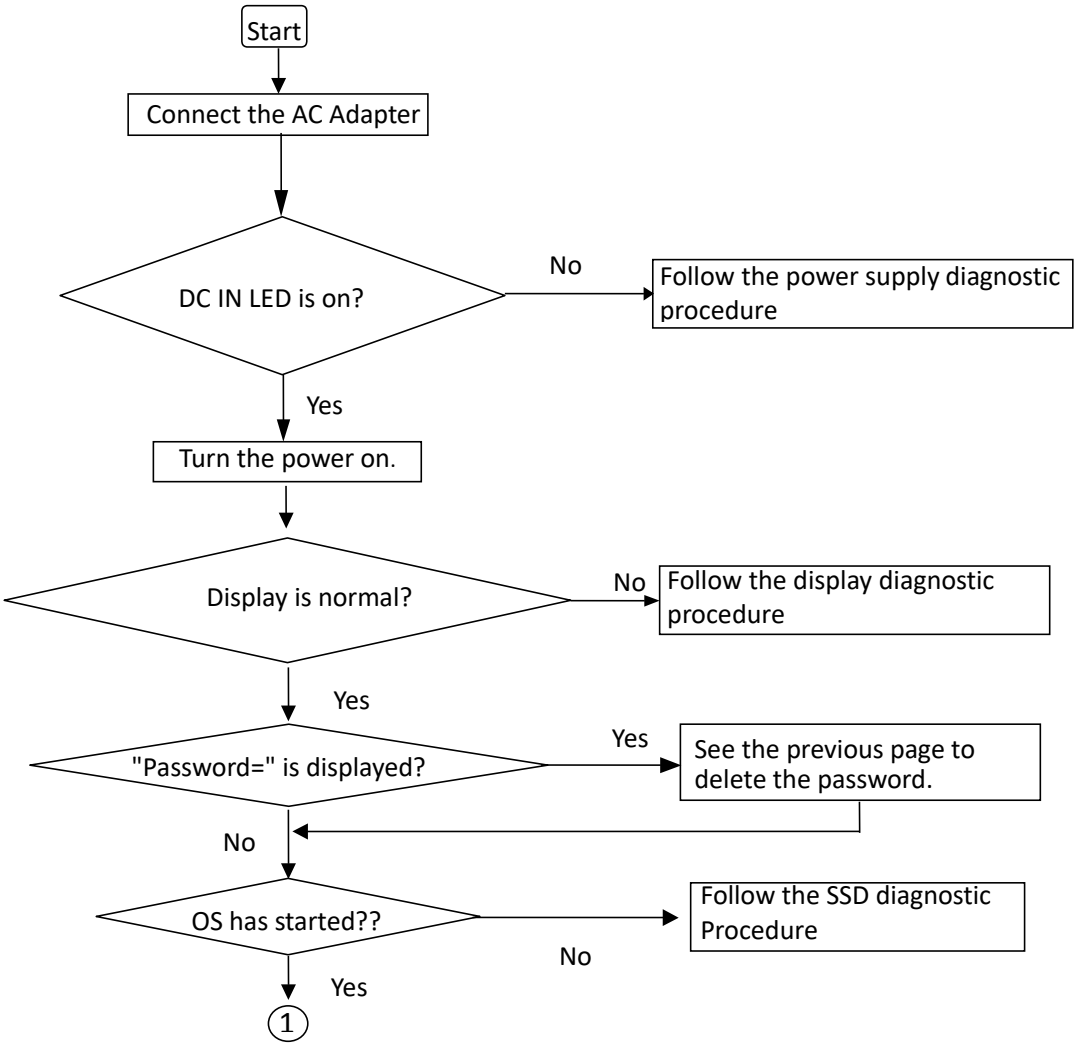

DDR4_CH1
DDR4_CH0
HDMI
DP0
DP TO VGA
CS5212
DP2
LVDS
CS5512
DP1
USB3.0
USB1
USB3.0
USB5
USB3.0 HEADER
USB3.0HUB
RTL 5411
USB4
USB2.0 HEADER
USB2.0
USB2
USB2.0
USB3
FP6 APU
P_GPP_RXP0,1,2,3
P_GPP_RXP8
P_GPP_RXP9
P_GPP_RXP6
P_GPP_RXP5
EC
IT8987
SYS_FAN
CPU_FAN
COM
EC ROM
MPS M2945
SSD
BIOS ROM
HDD
HDD
LAN
Realtek 8111H or inter I225
WIFI_CON
TPM2.0
infineon SLB9670VQ2.0

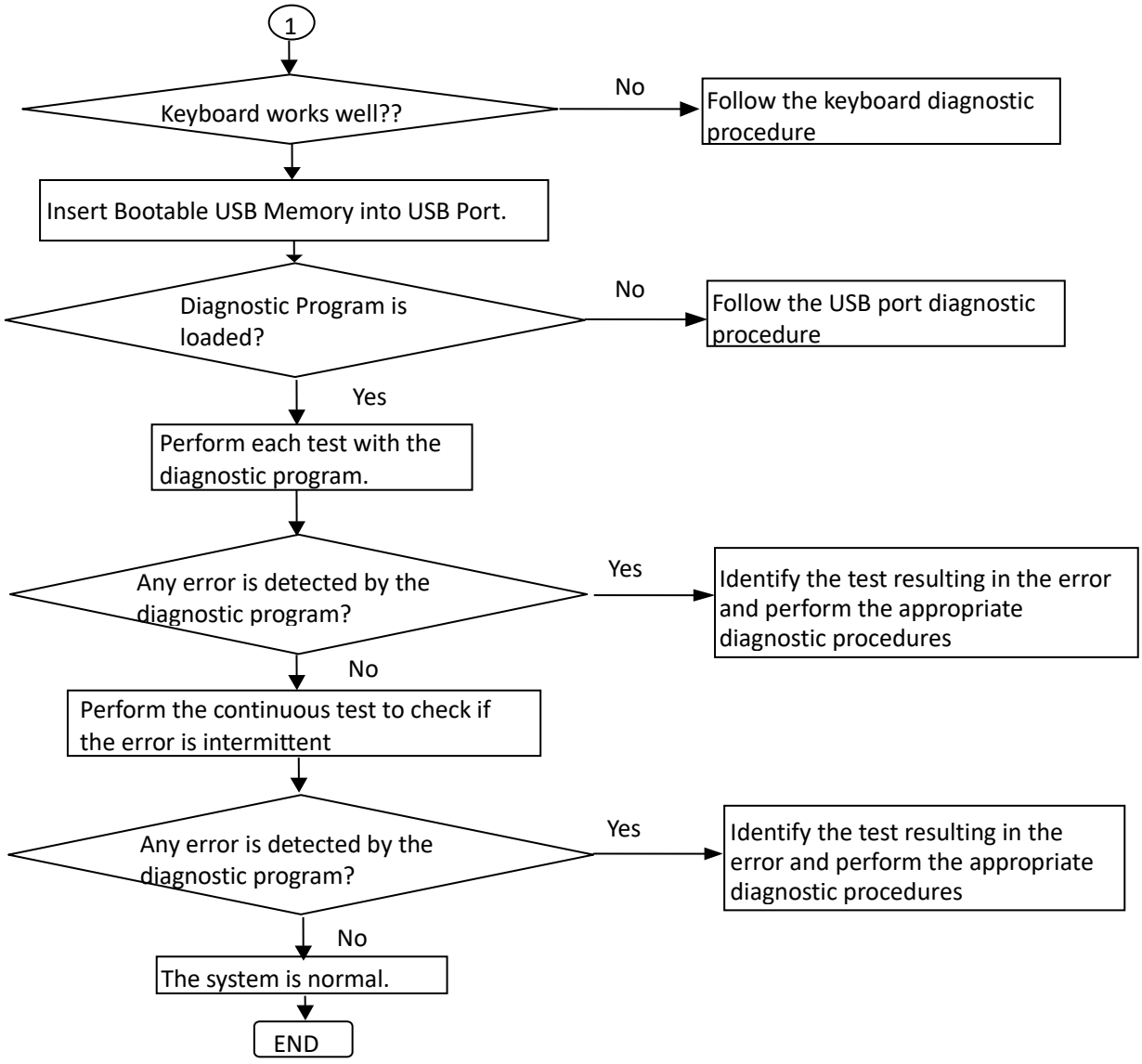
Troubleshooting

Basic Flowchart

The basic flowchart serves as a guide for identifying a possibly faulty FRU.Before going through the diagnostic flowchart steps, verify the following:

- ❑ Ask the user if a password has been registered and, if so, ask him or her to enter the password. If the user has forgotten the system password, please delete or reset the password
- ❑ Make sure Windows® 11 has been installed on the HDD. Any other operating system can cause the computer to malfunction.




1
Keyboard works well??
No
Follow the keyboard diagnostic procedure
Insert Bootable USB Memory into USB Port.
Diagnostic Program is loaded?
No
Follow the USB port diagnostic procedure
Yes
Perform each test with the diagnostic program.
Any error is detected by the diagnostic program?
Yes
Identify the test resulting in the error and perform the appropriate diagnostic procedures
No
Perform the continuous test to check if the error is intermittent
Any error is detected by the diagnostic program?
Yes
Identify the test resulting in the error and perform the appropriate diagnostic procedures
No
The system is normal.
END

Power Supply

The power supply in the computer controls many functions and components. To check if the power supply is defective or malfunctioning, follow the troubleshooting procedures below as instructed.

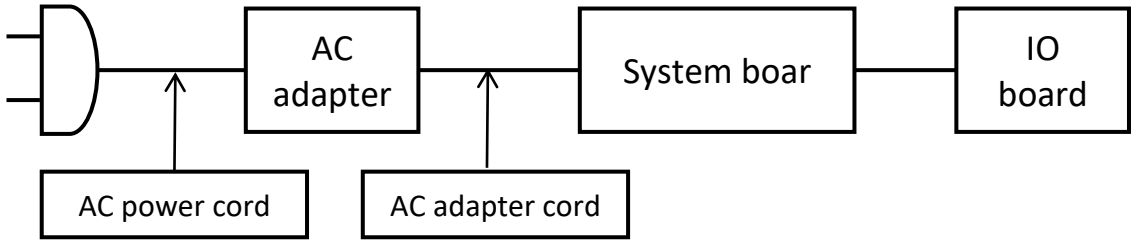
Procedure 1: Power LED Check

Check the AC adaptor power indicator is on. (Optional adapters for individual models may not come with indicator light.)

Press the power SW to Turn on your computer and make sure the Power LED color is white. If it does not, go to Procedure 2.

Procedure 2: Connection Check

Power is supplied to the system board as illustrated below:



Follow the steps below to check whether each connector has been connected correctly:

Check 1 Make sure the AC adaptor and AC power cord have been firmly plugged into the DC IN socket and wall outlet, respectively. When they have been connected correctly, perform Check 2.

Check 2 Connect a new AC adaptor and AC power cord.

Check 3 Make sure the AC adapter cord is properly attached to your computer. If the Power LED does not light when the AC adapter cord is properly installed, go to Procedure 3.

Procedure 3 Replacement Check

The main board may be defective. Disassemble the computer and replace the main board with a new one.

Display

To check if the computer's display is defective or malfunctioning, follow the troubleshooting procedures below as instructed.

Procedure 1: External Monitor Check

Connect an external monitor to the computer's external monitor port, then boot the computer. The computer automatically detects the external monitor even if resume mode is enabled.If the external monitor works correctly, the internal LCD, or LCD cable may be faulty. Go to Procedure 3.If the external monitor appears to have the same problem as the internal monitor, the system board may be faulty. Go to Procedure 2.

Procedure 2: Test Program Check

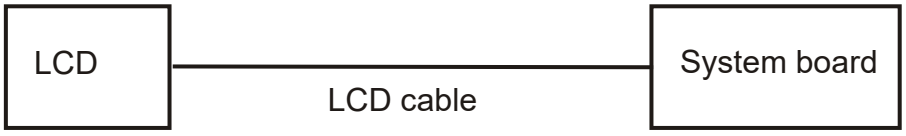
Insert the diagnostics USB Memory into the computer's USB Port, turn on the computer and run the test. If an error is detected in the test, go to Procedure 3. If no error is detected, the display itself is normal.

Procedure 3: Connector Check and Replacement Check

The display unit has an LCD module, LED Backlight module, panel close switch. Any of the components or their connections may be defective. Disassemble the computer and then perform the following checks:

(1) If the FL does not light, perform Check 1.
(2) If characters or graphics are not displayed normally, perform Check 5.
(3) If the FL remains lit when the display is closed, the panel close switch may be defective. Perform Check 5.

Check 1 Make sure the following cables have been firmly connected to the system board. If any of the cables is loose or off, reconnect it firmly and return to Procedure 3. If there is still an error, perform Check 2.



Check 2 The LCD cable may be faulty. Replace it with a new one and return to Procedure 3. If there is still an error, perform Check 3.

Check 3 Make sure the LCD cable has been firmly connected to the system board and LCD module, if the cable is loose or off, reconnect it firmly and return to Procedure 3. If there is still an error, perform Check 4.

Check 4 The LCD module may be faulty. Replace it with a new one and return to Procedure 3. If there is still an error, perform Check 5.

Check 5 The System board may be faulty. Replace it with a new one. If there is still an error, perform Check 1.

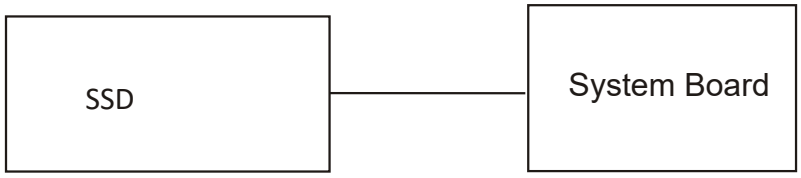
SSD

To check if the SSD is defective or malfunctioning, follow the troubleshooting procedures below as instructed.

NOTE: The contents of the SSD will be erased when the SSD diagnostic test or formatting is executed. Save the required contents of the SSD to other storage drive in advance.

Procedure 1: Connection Check

Disassemble the computer following Disassemble Procedure,remove the SSD card, clean the gold finger, and make sure that the slot is free of foreign matters, then plug SSD back in.If the OS still starts abnormally,go to Procedure 2.



Procedure 2: Replacement Check for SSD

Check 1 The SSD may be faulty. Replace it with a new one. If the problem persists, perform Check 2.

Check 2 The System board may be faulty. Replace it with a new one .

DDR

To check if the computer's DDR is defective or malfunctioning, follow the troubleshooting procedures below as instructed.

Procedure 1: Test Program Check

Execute Memory Test Program available as part of the maintenance test program. This test program checks the memory module. Insert the diagnostics USB Memory into the computer's USB Port, turn on the computer and run the test. See Chapter 3 for information on how to perform the test.

Procedure 2: Replacement Check for DDR

Check 1 The DDR may be faulty. Replace it with a new one. If the problem persists, perform Check 2.

Check 2 The System board may be faulty. Replace it with a new one .

Keyboard

To check if the computer's keyboard is defective or malfunctioning, follow troubleshooting procedures below as instructed.

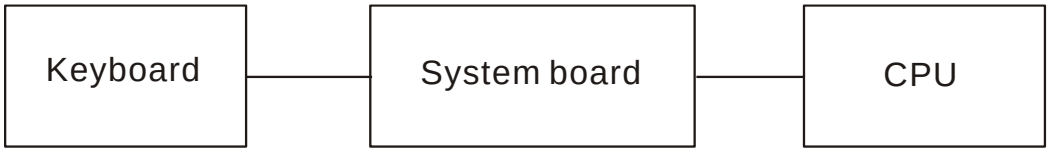
Procedure 1: Test Program Check

Execute the Keyboard test available as part of the maintenance test program.Some Keyboard have support Illumination (Backlit) function, check this function during Keyboard test when press any key. If an error is detected in the test, go to Procedure 2. If no error is detected, the keyboard itself is normal.

Procedure 2: Connector Check and Replacement Check

The keyboard or system board may be disconnected or faulty. Disassemble the computer and perform the following checks:

Check 1 Make sure the keyboard cable has been firmly connected to the system board.



If the cable is loose or off, reconnect it firmly and return to Procedure 1. If there is still an error, perform Check 2.

Check 2 The keyboard may be faulty. Replace it with a new one. If the problem persists, perform Check 3.

Check 3 The System board may be faulty. Replace it with a new one . If the keyboard is still not functioning properly, perform Procedure 1

USB Port

To determine if the computer's USB Port is functioning properly or malfunctions, perform following procedures. Start with Procedure 1 and continue with the other procedure as instruction below.

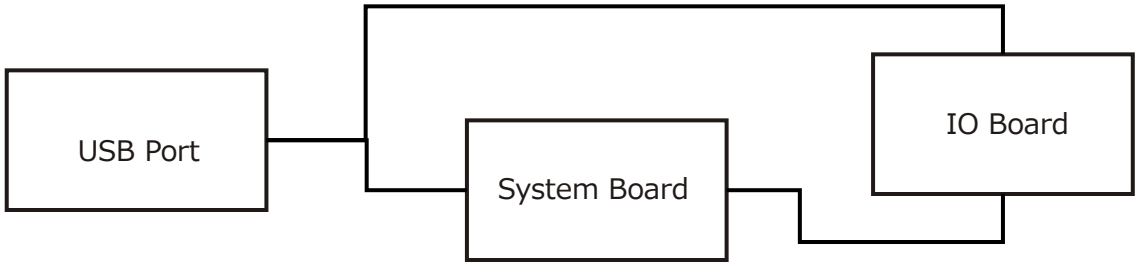
Procedure 1: Test Program Check

Run the test program stored on the maintenance test program disk for test items. If an error is detected during the test, go to Procedure 2.

Procedure 2: Connector Check and Replacement Check

If USB Port on System or IO Board malfunctions, there may be a bad connection between USB device and System or IO Board, or either of System or IO Board might be faulty. Disassemble the computer and perform the following checks:

Check 1 Make sure USB device cable has been firmly connected to USB Port of System Board. Also make sure USB Port on System Board is free of foreign matters.And if the connector is disconnected, connect it firmly to the system or IO board and return to Procedure 1. If a foreign matter is found on USB Port of System or IO Board, remove it and then return to Procedure 1. If the problem persists, perform Check 2.



Check 2 System or IO Board may be faulty. Replace it with a new one.

Audio Test

To check if the computer's Speaker is defective or malfunctioning, follow troubleshooting procedures below as instructed.

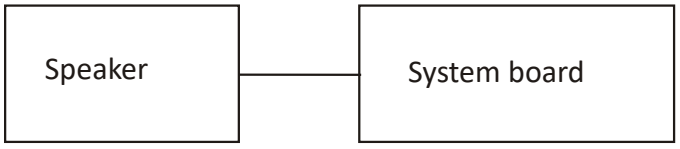
Procedure 1: Windows Application Test

Speakers are connected to System Board through cable. Please power on the computer into Windows. The computer will automatically detect these speakers.
If an error is detected in the test, go to Procedure 2. If no error is detected, the Audio itself is normal.

Procedure 2: Connector Check and Replacement Check

The system board may be disconnected or faulty. Disassemble the computer and perform the following checks:

Check 1 Make sure the Speaker cable has been firmly connected to the system board.
If the cable is loose or off, reconnect it firmly and return to Procedure 1. If there is still an error, perform Check 2.



Check 2 The Speaker may be faulty. Replace it with a new one . If the problem persists, perform Check 3.

Check 3 The System board may be faulty. Replace it with a new one . If the Audio is still not functioning properly, perform Procedure 1.

Headphone/Microphone Port

To determine if the computer's Headphone Port is functioning properly or malfunctions, perform following procedures. Start with Procedure 1 and continue with the other procedure as instruction below.

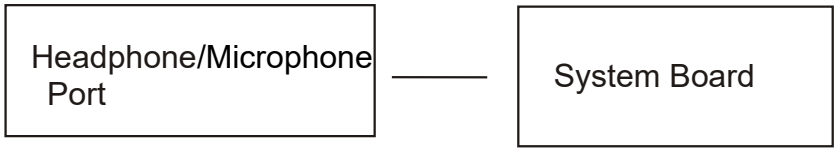
Procedure 1: Windows Application Test

Headphone/Microphone Port Connector is mounted on System Board. Connect external Headphone/Microphone with Headphone Jack interface to the computer's Headphone/Microphone Port, then power on the computer into Windows. The computer will automatically detect this Headphone device through Headphone/Microphone Port. Execute Function Programs in Windows, if the Headphone device appears to have a certain problem, go to Procedure 2. If an error is not located, Headphone/Microphone Port is functioning properly.

Procedure 2: Connector Check and Replacement Check

If Headphone/Microphone Port on System Board malfunctions, there may be a bad connection between Headphone/Microphone device and System Board, or either of System Board might be faulty. Disassemble the computer and perform the following checks:

Check 1 Make sure Headphone/Microphone device cable has been firmly connected to Headphone/Microphone Port of System Board. Also make sure Headphone/Microphone Port on System Board is free of foreign matters.



And if the connector is disconnected, connect it firmly to the system board and return to Procedure 1. If a foreign matter is found on Headphone Port of System Board, remove it and then return to Procedure 1. If the problem persists, perform Check 2.

Check 2 System Board may be faulty. Replace it with a new one .

HDMI \DP Port

To determine if the computer's HDMI\DP Port is functioning properly or malfunctions, perform following procedures. Start with Procedure 1 and continue with the other procedure as instruction below

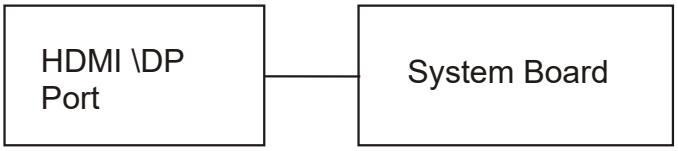
Procedure 1: Windows Application Test

The HDMI\DP Port Connector is mounted on System Board. Connect an external monitor with HDMI\DP interface to the computer's HDMI\DP port, then power on the computer into Windows. The computer will automatically detect this external monitor through HDMI\DP Port. If the external monitor appears to have a certain problem, go to Procedure 2. If an error is not located, HDMI\DP Port is functioning properly.

Procedure 2: Connector Check and Replacement Check

If HDMI\DP Port on System Board malfunctions, there may be a bad connection between External Monitor and System Board. Or System Board might be faulty. Disassemble the computer and perform the following checks:

Check 1 Make sure External Monitor HDMI\DP Cable has been firmly connected to HDMI\DP Port on System Board. Also make sure HDMI\DP Port on System Board is free offoreign matters.



And if the connector is disconnected, connect it firmly to the system board and return to Procedure 1. If a foreign matter is found on HDMI\DP Port of System Board, remove it and then return to Procedure 1. If the problem persists, perform Check 2.

Check 2 System Board may be faulty. Replace it with a new one.

Camera

Camera Module or System Board may be the reason of Camera fault. Either of these two components may be damaged. To determine if the computer's Camera is functioning properly, perform following procedures. Start with Procedure 1 and continue with the other procedure as instruction below.

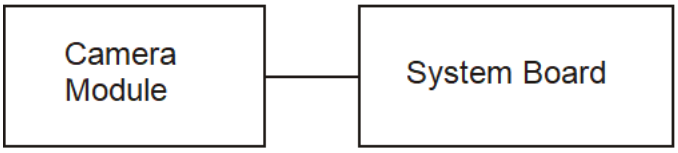
Procedure 1: Windows Application Test

Execute Function Programs in Windows, LED of Camera Module should be turned on when Camera is working, if Camera Module is not functioning properly, go to Procedure 2. If an error is not located, Camera system is functioning properly.

Procedure 2: Connector Check and Replacement Check

Camera Module is connected to System Board through FPC Cable. If Camera malfunctions, there may be a bad connection between Camera Module and System Board, or either of these two components might be faulty. Disassemble the computer and perform the following checks:

Check 1 Make sure Camera Module FPC Cable has been firmly connected to the connector on System Board. Also make sure Camera Module is free of foreign matters.



And if the connector is disconnected, connect it firmly to the system board and return to Procedure 1. If a foreign matter is found on Camera Module, remove it and then return to Procedure 1. If the problem persists, perform Check 2.

Check 2 Camera Module may be faulty. Replace it with a new one. If Camera Module replaced is still not functioning properly, perform Check 3.

Check 3 System Board may be defective. Replace System Board with a new one .

Wireless LAN

Wireless Module or system board may be the reason of Wireless LAN fault. Either of these two components may be damaged. To determine if the computer's Wireless LAN module is functioning properly, perform following procedures. Start with Procedure 1 and continue with the other procedures as instruction below.

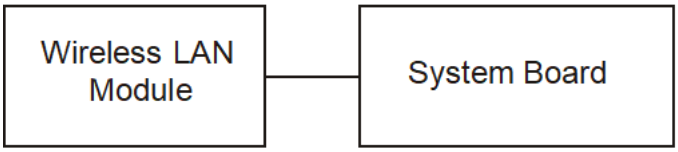
Procedure 1: Windows Application Test

Place unit to location near wifi hotspot. Execute wifi applications in Windows, then active wireless connection. Check whether unit can normally connect to wifi hotspot. If connection is fail, go to Procedure 2. If error is not located, Wireless LAN system is functioning properly.

Procedure 2: Connector Check and Replacement Check

Wireless LAN Module is connected to the system board. If Wireless LAN malfunctions, there may be a bad connection between Wireless LAN Module and the system board, or either might be faulty. Disassemble the computer and perform the following checks:

Check 1 Make sure Wireless LAN module has been firmly connected to the connector on the system board. Also make sure Wireless LAN module is free of foreign matters.



And if the connector is disconnected, connect it firmly to the system board and return to Procedure 1. If a foreign matter is found on Wireless LAN Module, remove it and then return to Procedure 1. If there is still an error, perform Check 2.

Check 2 Wireless LAN Module may be faulty. Replace it with a new one . If Wireless LAN Module replaced is still not functioning properly, perform Check 3.

Check 3 System Board may be defective. Replace System Board with a new one .

Bluetooth

Bluetooth is combo module with Wireless LAN on this model. Bluetooth Module or system board may be the reason of Bluetooth fault. Either of these two components may be damaged. To determine if the computer's Bluetooth module is functioning properly, perform following procedures. Start with Procedure 1 and continue with the other procedures as instruction below.

Procedure 1: Windows Application Test

Procedure 2: Connector Check and Replacement Check

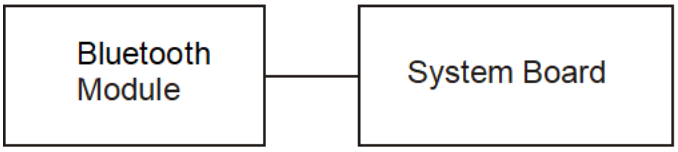
Procedure 1: Windows Application Test

Place unit to location near Bluetooth device. Execute Bluetooth applications in Windows, then active Bluetooth connection. Check whether unit can normally connect to Bluetooth device. If connection is fail, go to Procedure 2. If error is not located, Bluetooth is functioning properly.

Procedure 2: Connector Check and Replacement Check

Bluetooth Module is connected to the system board. If Bluetooth malfunctions, there may be a bad connection between Bluetooth Module and the system board, or either might be faulty. Disassemble the computer and perform the following checks:

Check 1 Make sure Bluetooth module has been firmly connected to the connector on the system board. Also make sure Bluetooth module is free of foreign matters.



And if the connector is disconnected, connect it firmly to the system board and return to Procedure 1. If a foreign matter is found on Bluetooth Module, remove it and then return to Procedure 1. If there is still an error, perform Check 2.

Check 2 Bluetooth Module may be faulty. Replace it with a new one. If Bluetooth Module replaced is still not functioning properly, perform Check 3.

Check 3 System Board may be defective. Replace System Board with a new one .

LAN Port

To determine if the computer's LAN Port is functioning properly or malfunctions, perform following procedures. Start with Procedure 1 and continue with the other procedure as instruction below.

Procedure 1: Windows Application Test

Procedure 2: Connector Check and Replacement Check

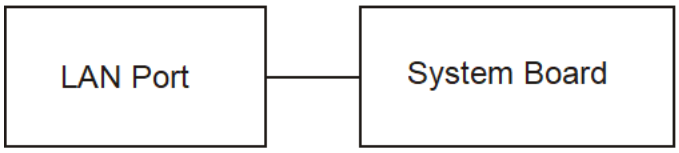
Procedure 1: Windows Application Test

The LAN Port Connector is mounted on System Board. Connect an LAN Cable with Internet interface to the computer's LAN port, then power on the computer into Windows. Execute Function Programs in Windows, which will display the LAN Test Result. If the test and diagnostics result is abnormal, go to Procedure 2. If an error is not located, LAN system is functioning properly.

Procedure 2: Connector Check and Replacement Check

If LAN Port on System Board malfunctions, there may be a bad connection between LAN Cable and System Board. Or System Board might be faulty. Disassemble the computer and perform the following checks:

Check 1 Make sure LAN Cable has been firmly connected to LAN Port on System Board. Also make sure LAN Port on System Board is free of foreign matters.



And if the connector is disconnected, connect it firmly to the system board and return to Procedure 1. If a foreign matter is found on LAN Port on System Board, remove it and then return to Procedure 1. If the problem persists, perform Check 2.

Check 2 System Board may be faulty. Replace it with a new one .

RTC Battery

If the system time is delayed or stopped, the RTC battery may be defective.

Procedure 1: Check the System date and time

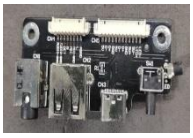
If the system time is delayed or stopped, go to Procedure 2.

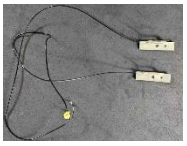
Procedure 2: Connector Check and Replacement Check

The RTC battery is connected to the system board. If the RTC battery malfunctions, the connection between the RTC battery and the system board may be poor or the RTC battery may be defective. Disassemble the computer and replace them.

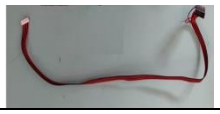
FRU (Field Replaceable Unit) List

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

ITEMS	PART NAME & DESCRIPTION
	Adapter - . 65W TURNKEY PN for DT CTE
	PCBA For Acer 23.8_ADPT1L_Main board
	I/O board
	PCBA(BLK DB)_BLK Board
	WIFI+BT COMBO Module
	Memory SO-DIMM DDR
	Flash Disk SSD
	THERMAL MODULE W/ FAN

ITEMS	PART NAME & DESCRIPTION
	FAN
	Speaker_4Ω_3W_84±3dB_L37.5*W24*H35.3mm_L340mm_R340mm_002.GS24LB001_XB
	Antenna Main/AUX
	CAMERA MODULE
	POWER CORD
	LCM module
	Keyboard
	Mouse
	MID_COVER_ASSY Black_ABS_hot melting

	BACK_COVER BLACK_ABS_texture
ITEMS	**PART NAME & DESCRIPTION**
	Decoration_COVER Black_ABS
	button cover ∅7.5*H3.95<mm>_
	Light guide
	Hinge_Black_SECC_T2.0_Torque_ 1-3kg
	Machine bracket_black_ADC12
	bottom bracket_black_ADC12
	Back bracket1
	Back bracket2

	Shieldingcover
	BOTTOM_IO_assy_
ITEMS	**PART NAME & DESCRIPTION**
	Side IO bracket
	FAN bracket
	USB cable
	AUD IO cable
	CPP cable
	lcd cable
	LED cable
	CAM Bottom cover
	CAM lever

	Camera lens
	CAM CABLE_
	Top cover hook_White_PC

Exploded Diagrams

