Veriton X4710G Desktop Computer

Lifecycle Extension Guide

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Self-Repair

This chapter highlights the limited self-repair capabilities of the product.

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

Depending on model, the following key components are eligible for self-repair (if applicable):

- PSU module
- HDD / SSD module
- DIMM module(s)
- WLAN module
- ODD module

If a particular key component is listed and thus would be eligible for self-repair, but is not described in the **"Disassembly Procedures"** section, then this component is either not present on the respective model, or it is present but embedded on the motherboard and therefore not eligible for self-repair.

N O T

Do not attempt to replace other components than those listed above.

N O T

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

N O T

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

Disassembly Procedures

Please refer to the **"Disassembly Procedures"** chapter for step by step disassembly instructions.

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.

Updating 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.

Updating the 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 be automatically 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 software recovery options, how to perform a software recovery or creating a Factory Default recovery media, please refer to 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.

Disassembly Procedures

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. 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

WEEE Annex VII Component

These components are classified as requiring selective treatment.

Pre-disassembly 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.

NOTE:

Make sure the system is completely powered off.

Left Side Panel Removal

1. Remove the Left Side Panel

1.1. Remove the two screws securing the left side panel to the chassis..

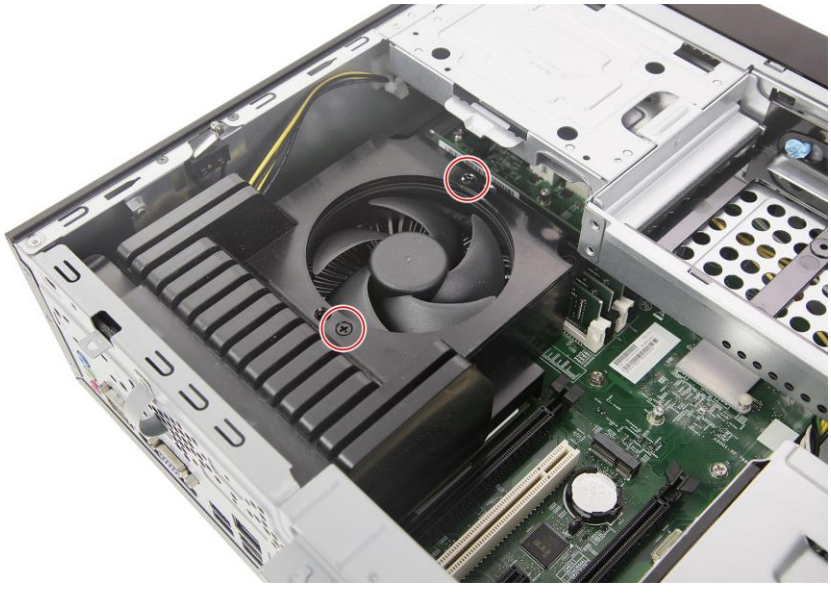


1.2. Slide the side panel toward the back of the chassis until the tabs on the side panel disengage with the slots on the chassis.



2. Remove the Fan Duct

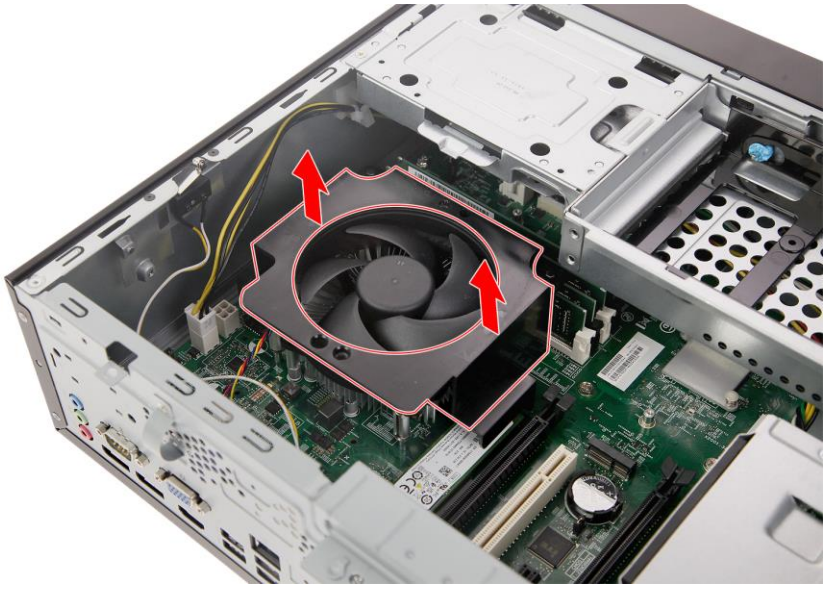
2.1. Remove the two screws securing the fan duct to the thermal module.



2.2. Detach the upper portion of the fan duct from the chassis.

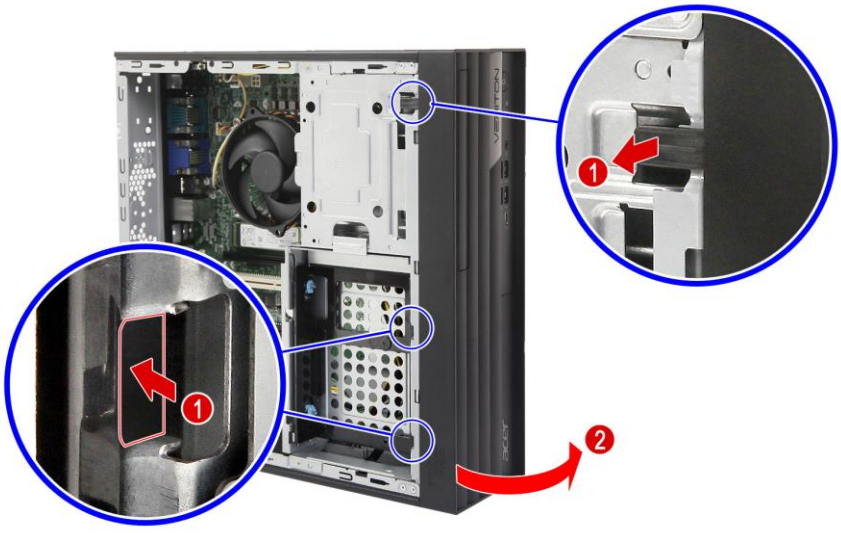


2.3. Detach the lower portion of the fan duct from the chassis.



3. Remove the Front Bezel

3.1. Release the front bezel retention tabs from the chassis interior.



3.2. Pull the front bezel away from the chassis.



HDD/ODD Bracket Removal

4. Remove the HDD/ODD bracket

4.1. Remove the two screws securing the HDD/ODD bracket to the chassis.



4.2. Detach the HDD/ODD bracket from the chassis.



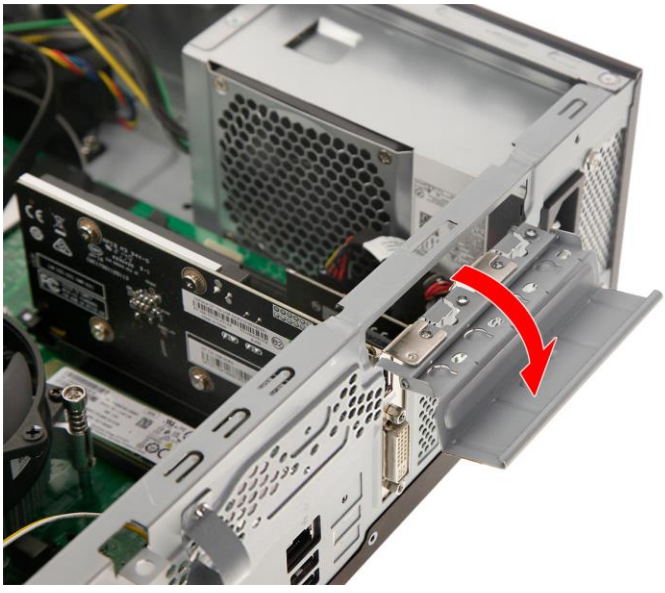
Expansion Board Removal

5. Remove the Expansion Board

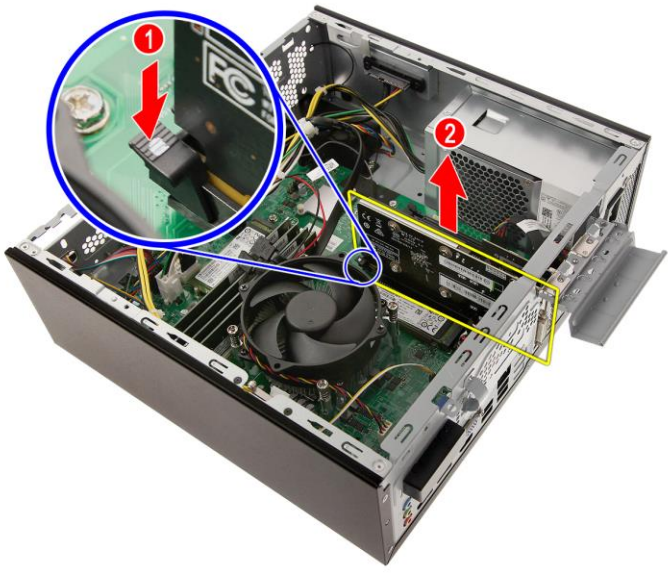
5.1. Remove the two screws securing the expansion board bracket to the chassis.



5.2. Unlatch the metal clip securing the expansion board bracket to the chassis.

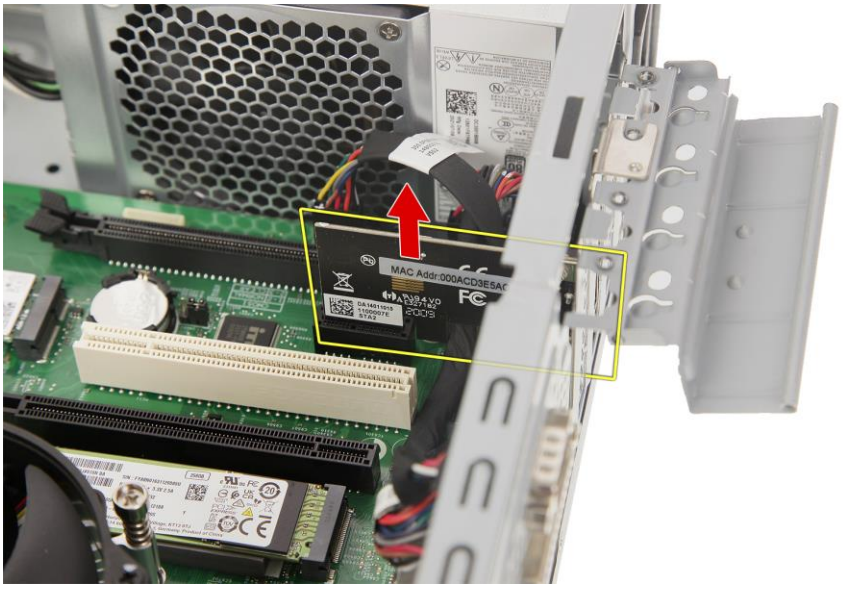


5.3. Remove the PCIe x16 expansion board (VGA card) from its slot.



Note: WEEE Annex VII component. A circuit board >10 cm2 has been highlighted with the yellow rectangle as shown above. Please follow local regulations for disposal of detached circuit boards.

5.4. Remove the PCIe x1 expansion board (VGA card) from its slot.



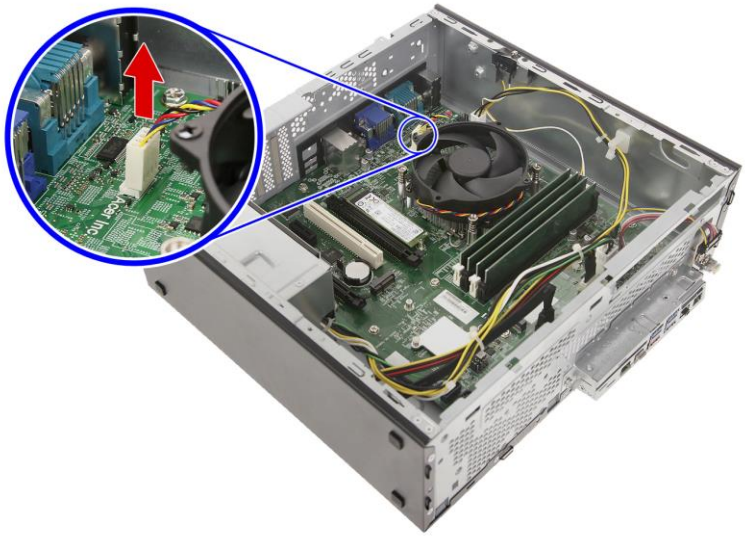
Note: WEEE Annex VII component. A circuit board >10 cm2 has been highlighted with the yellow rectangle as shown above. Please follow local regulations for disposal of detached circuit boards.

Thermal Module Removal

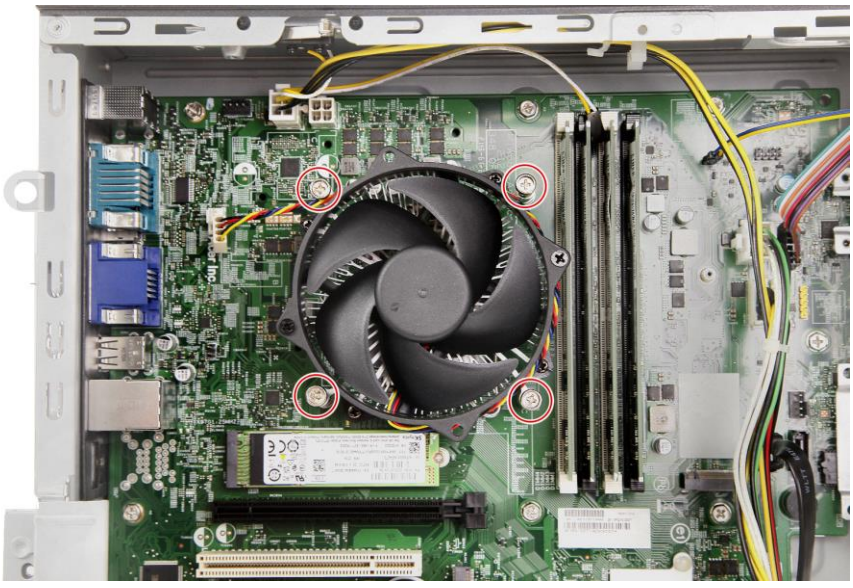
WARNING: The heatsink becomes very hot when the system is on. Wait for the heatsink to cool off before proceeding with below steps.

6. Remove the Thermal Module

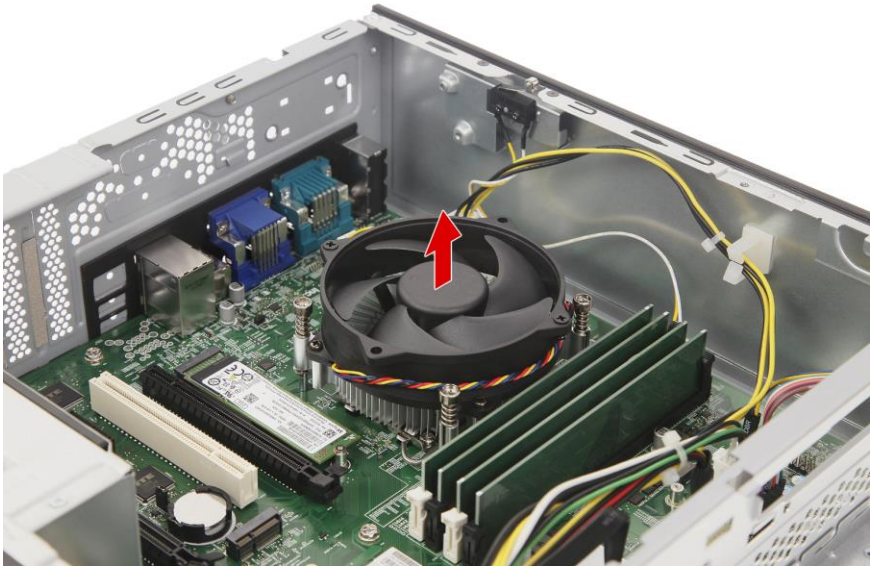
6.1. Disconnect the heatsink fan cable from the mainboard.



6.2. Loosen the four (4) captive screws securing the thermal module to the mainboard.



6.3. Remove the thermal module.



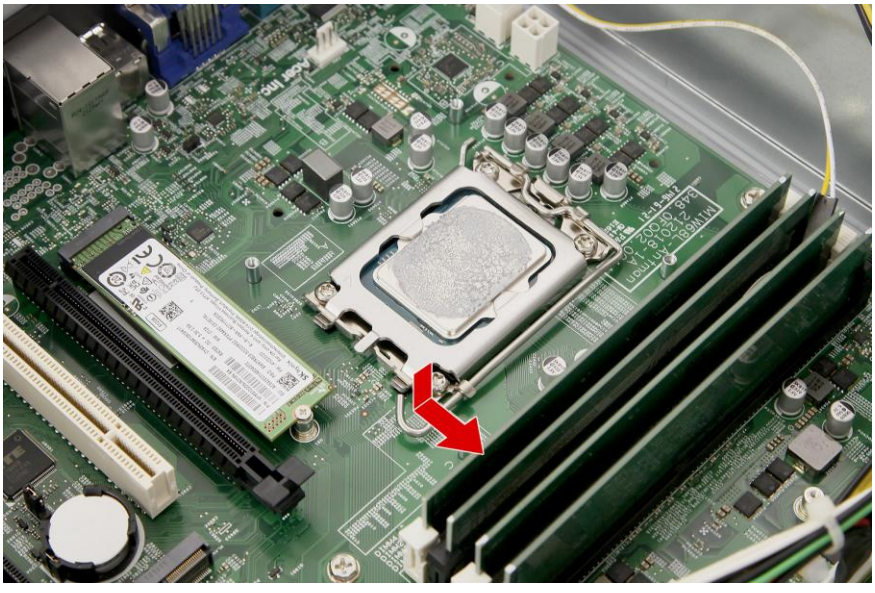
CPU Removal

IMPORTANT: Before removing the CPU from the mainboard, make sure to create a backup file of all important data.

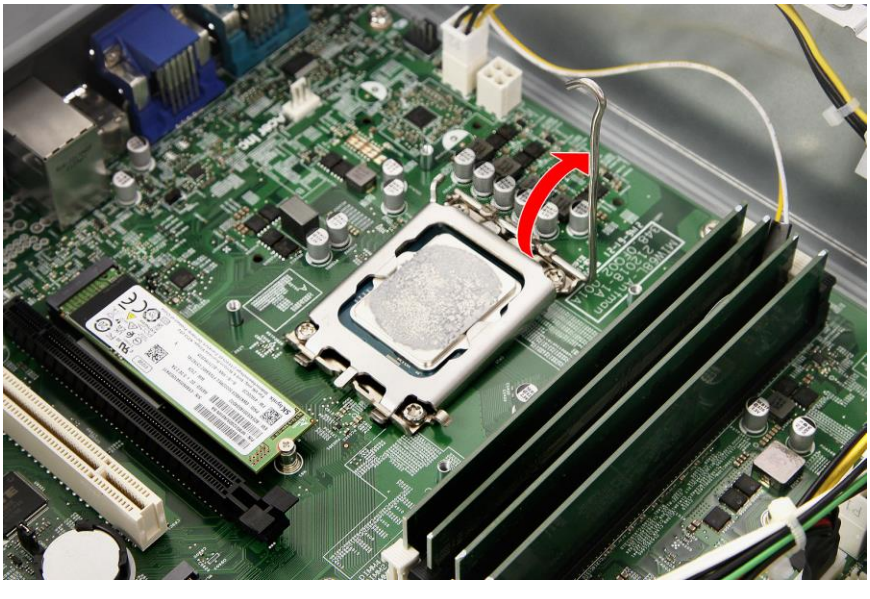
WARNING: The CPU becomes very hot when the system is on. Allow it to cool off first before handling.

7. Remove the CPU

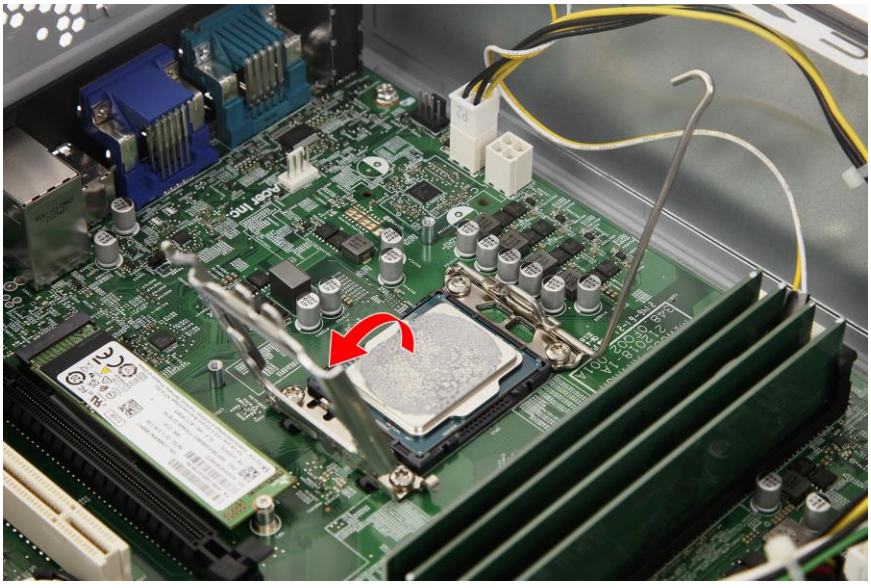
7.1. Press the load lever and move it to the right to release the load lever from the retention tab.



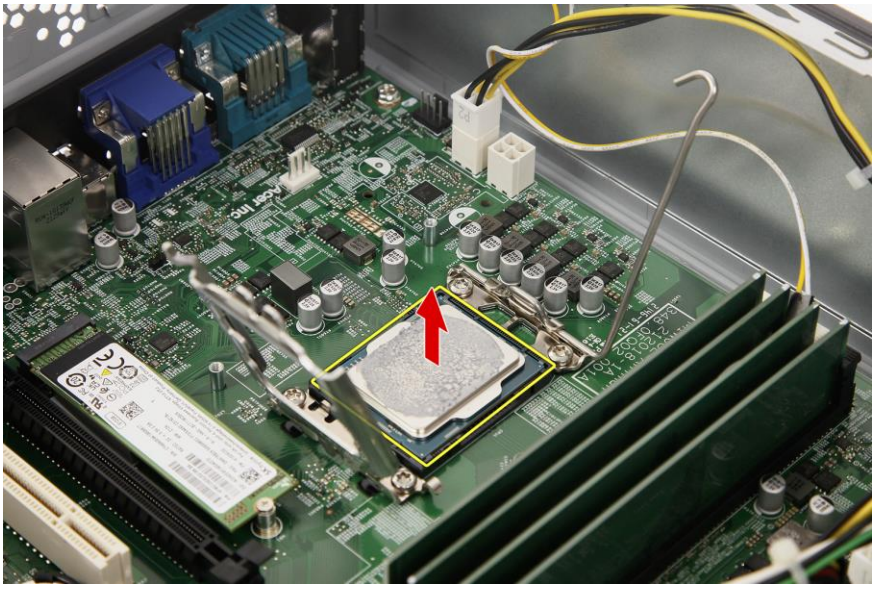
7.2. Pull the load lever to release the CPU cover plate.



7.3. Open the CPU cover plate.



7.4. Lift the CPU from the socket.

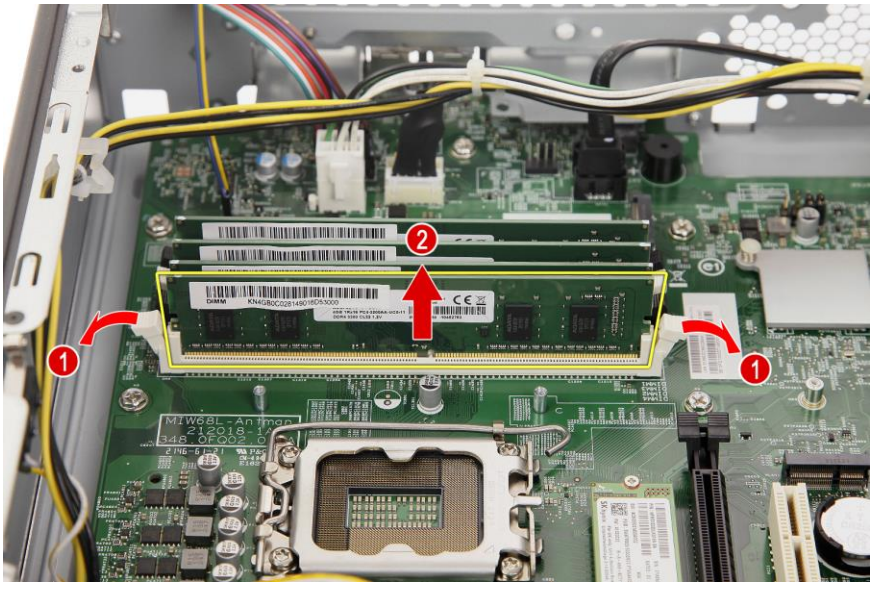


Note: WEEE Annex VII component. A circuit board >10 cm2 has been highlighted with the yellow rectangle as shown above. Please follow local regulations for disposal of detached circuit boards.

Memory Module Removal

8. Remove the Memory modules

8.1. Press outward the holding clips on both sides of the DIMM slot to release the DIMM (**1**), then gently pull the DIMM upward to remove it from the mainboard (**2**).



Note: WEEE Annex VII component. A circuit board >10 cm2 has been highlighted with the yellow rectangle as shown above. Please follow local regulations for disposal of detached circuit boards.

8.2. Repeat Step 8.1 to remove the remaining memory modules.

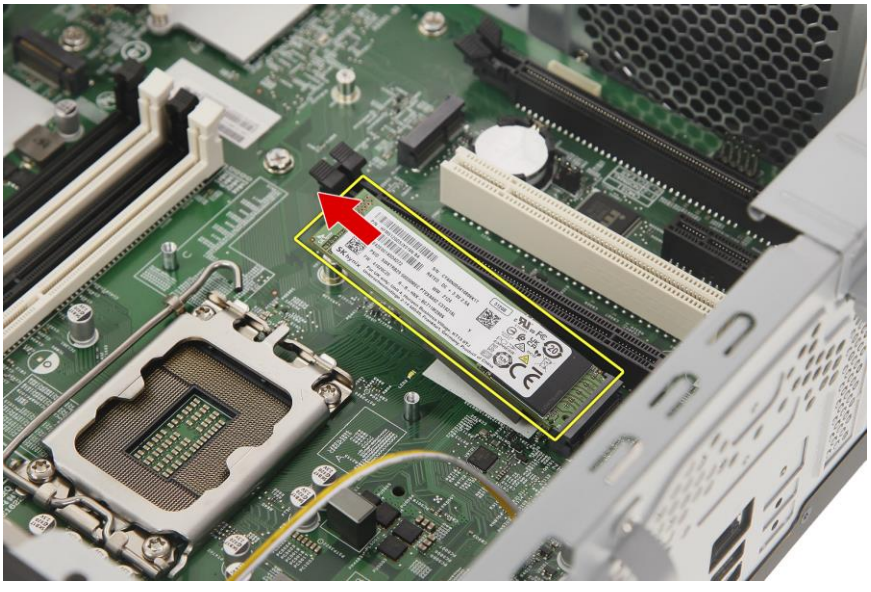
SSD Module Removal

9. Remove the SSD module

9.1. Remove the screw securing the SSD module to the mainboard.

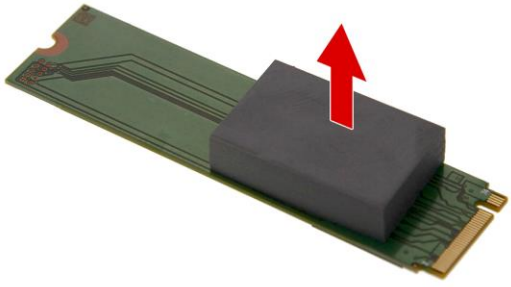


9.2. Remove the SSD module from the mainboard.



Note: WEEE Annex VII component. A circuit board >10 cm2 has been highlighted with the yellow rectangle as shown above. Please follow local regulations for disposal of detached circuit boards.

9.3. Detach the thermal pad from the SSD module.



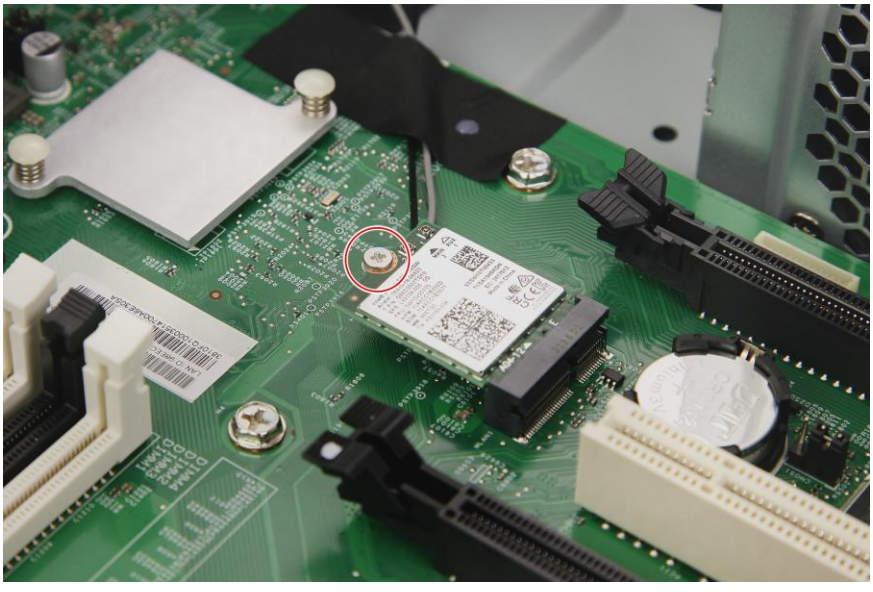
10. Remove the WLAN module

10.1. Disconnect the WLAN antenna cables from the WLAN module.



NOTE: For reference during machine reassembly, note which cable color corresponds to the main and auxiliary connectors.

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



10.3. Remove the WLAN module from the mainboard.

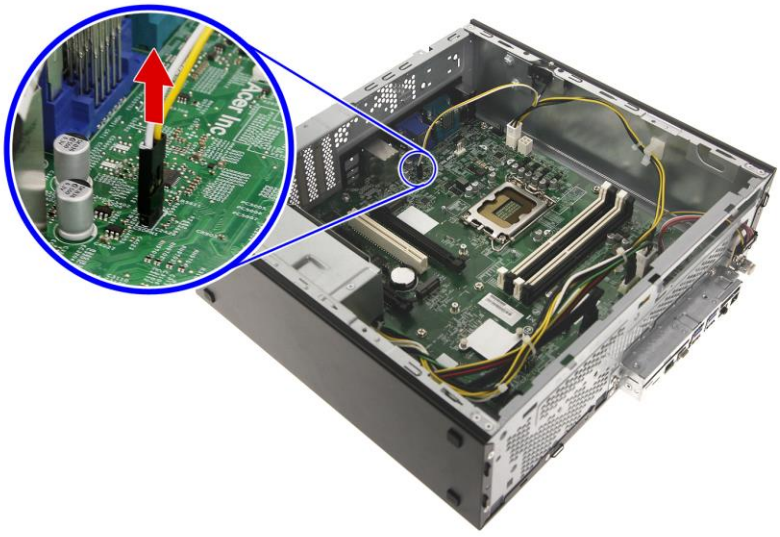


Note: WEEE Annex VII component. A circuit board >10 cm2 has been highlighted with the yellow rectangle as shown above. Please follow local regulations for disposal of detached circuit boards.

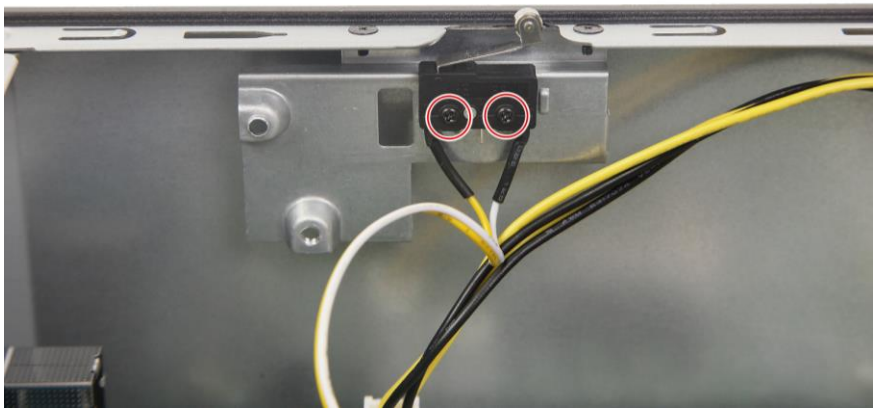
Case Open Module Removal

11. Remove the Case Open Module

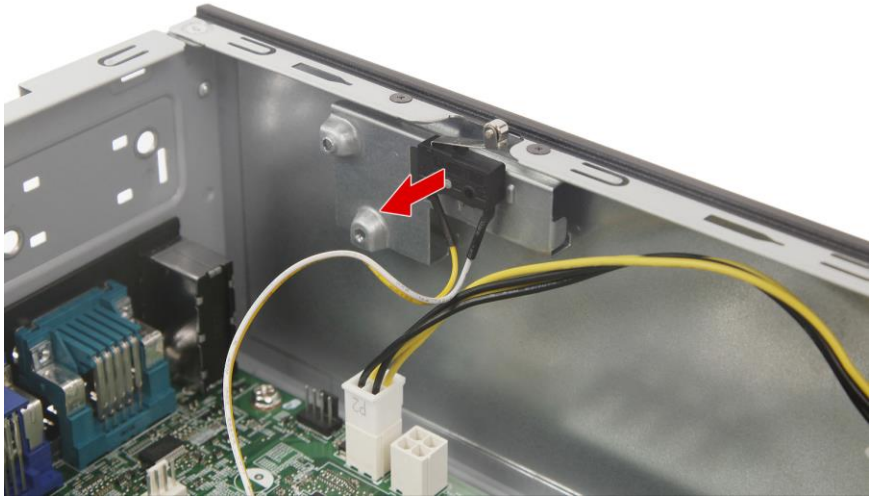
11.1. Disconnect the case open cable from the mainboard.



11.2. Remove the two screws securing the case open module to the chassis.



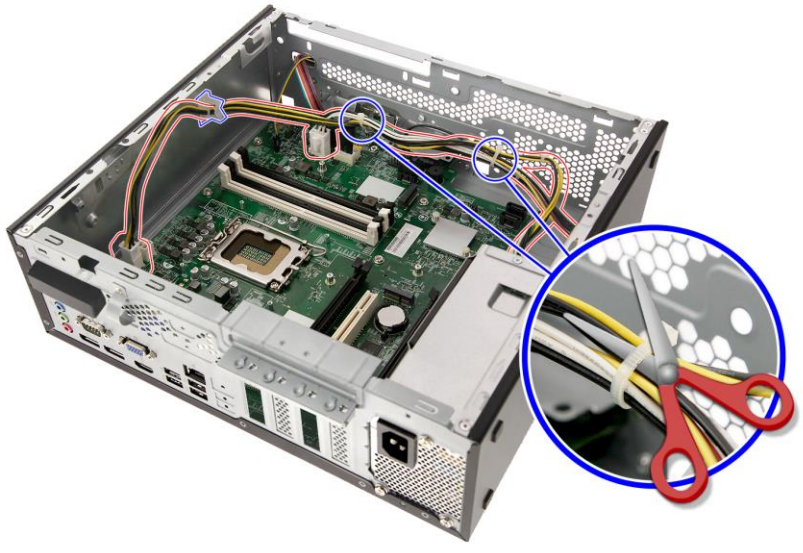
11.3. Detach the case open module from the chassis.



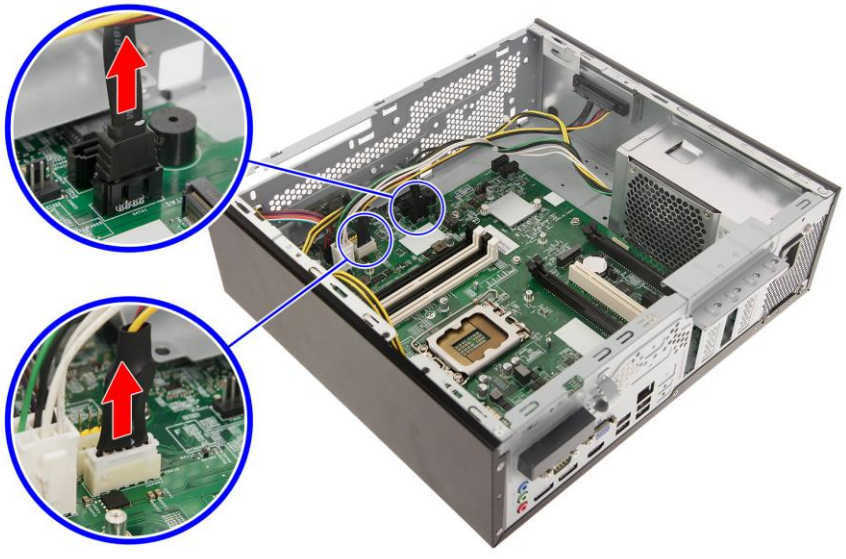
HDD Power and SATA Combo Cable Removal

12. Remove the HDD Power and SATA Combo Cables

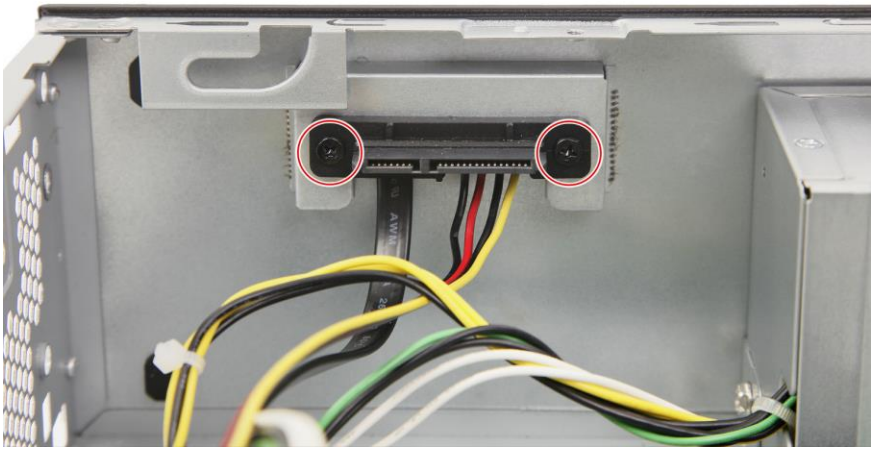
12.1. Release the cables from the cable tie.



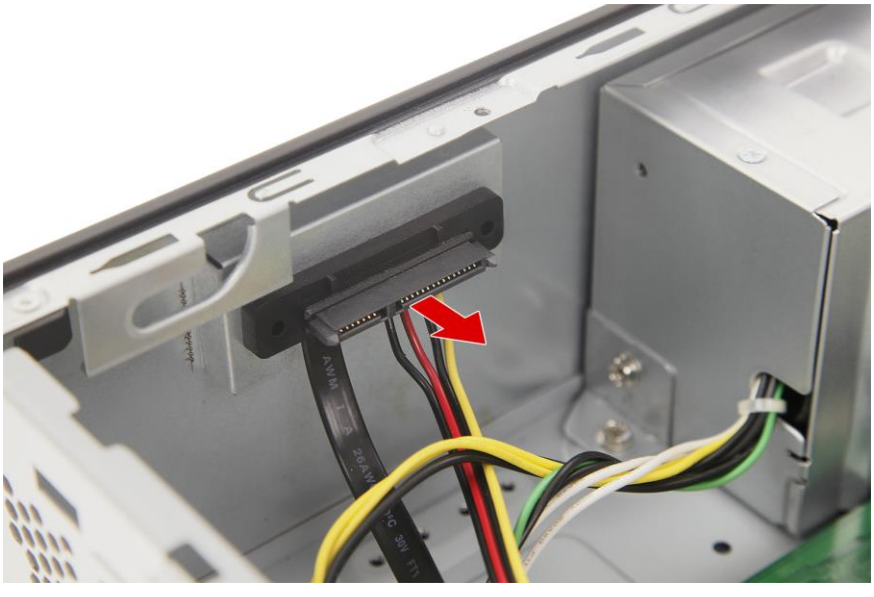
12.2. Disconnect the HDD power and SATA cables from the mainboard.



12.3. Remove the two screws securing the HDD power and SATA combo cable to the chassis.



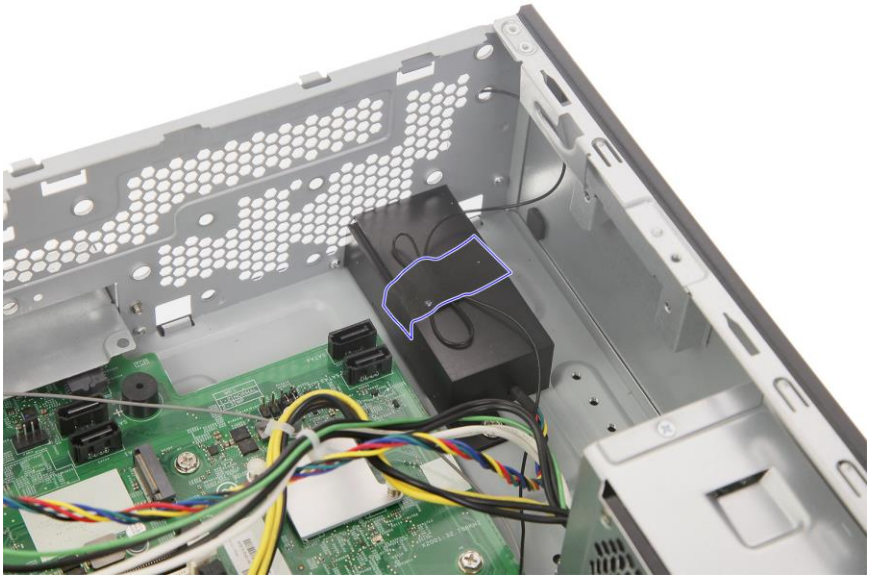
12.4. Detach the HDD power and SATA combo cable from the chassis.



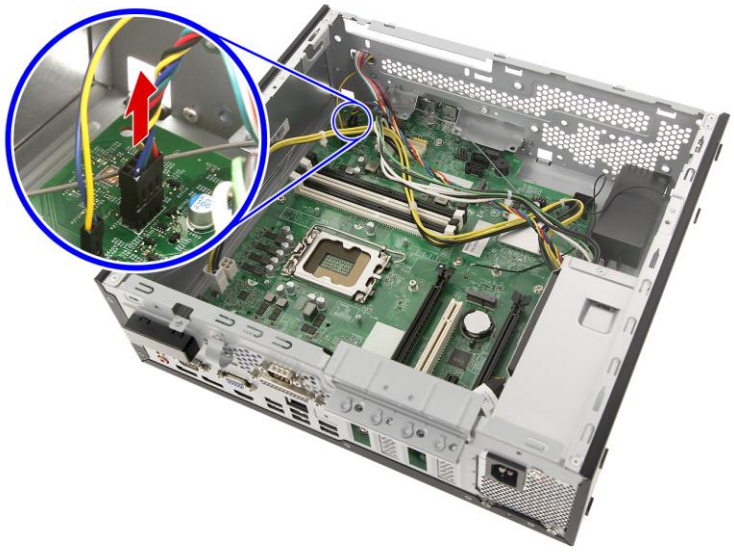
Speaker Removal

13. Remove the Speaker

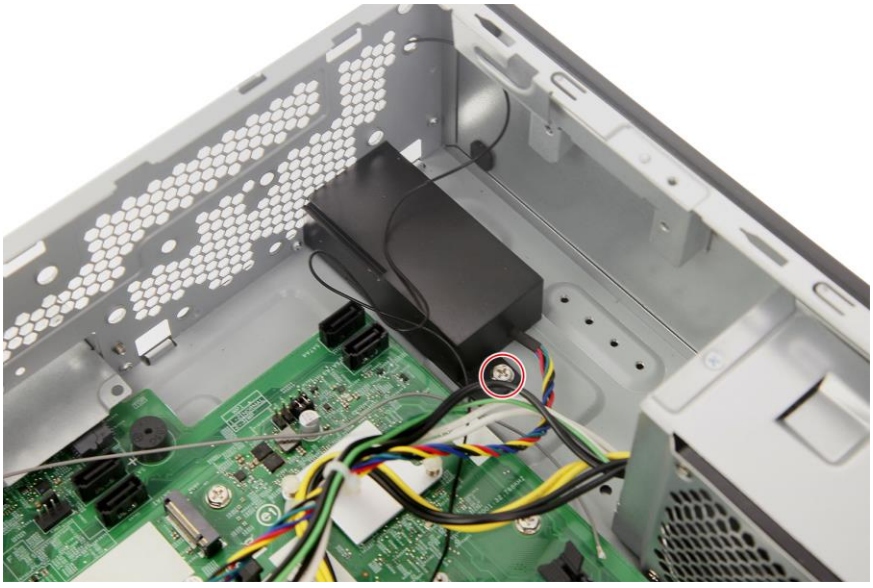
13.1. Remove the adhesive tape securing the WLAN antenna to the speaker.



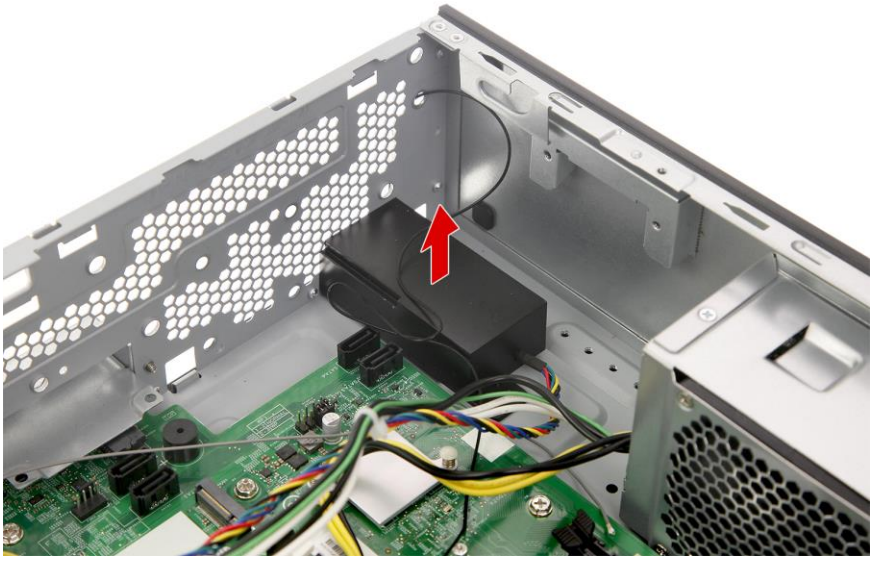
13.2. Disconnect the speaker cable from the mainboard.



13.3. Remove the screw securing the speaker to the chassis.

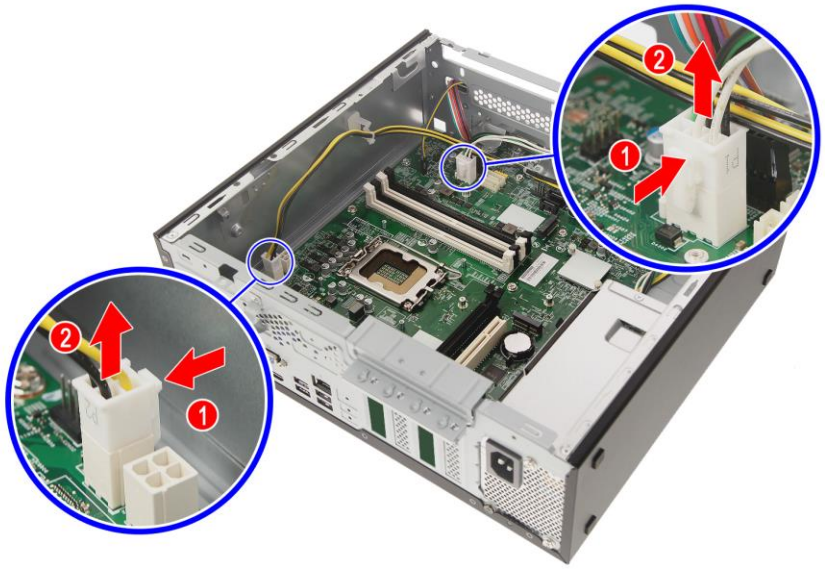


13.4. Detach the speaker from the chassis.



14. Remove the Power Supply Unit

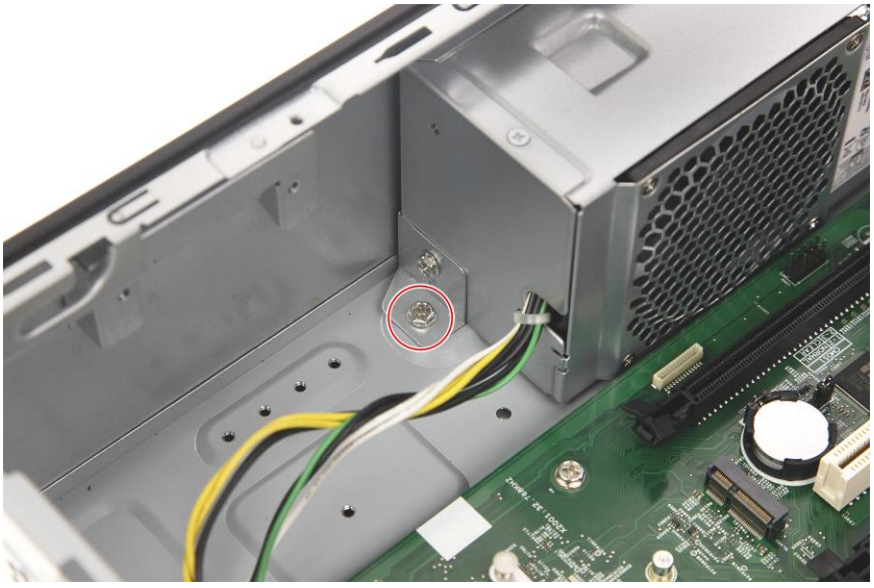
14.1. Disconnect the power supply cables from the mainboard.



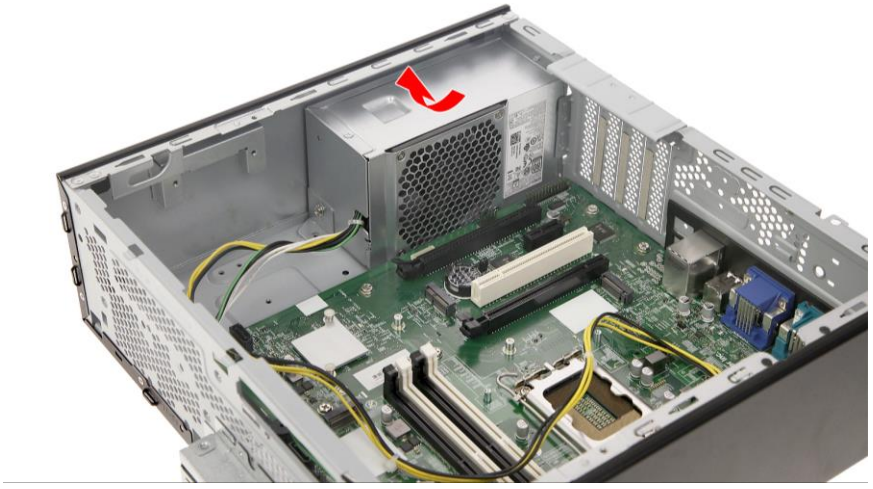
14.2. Remove the three screws securing the rear end of the power supply module to the chassis.



14.3. Remove the screw securing the front end of the power supply module to the chassis.



14.4. Pull out the power supply from the chassis.



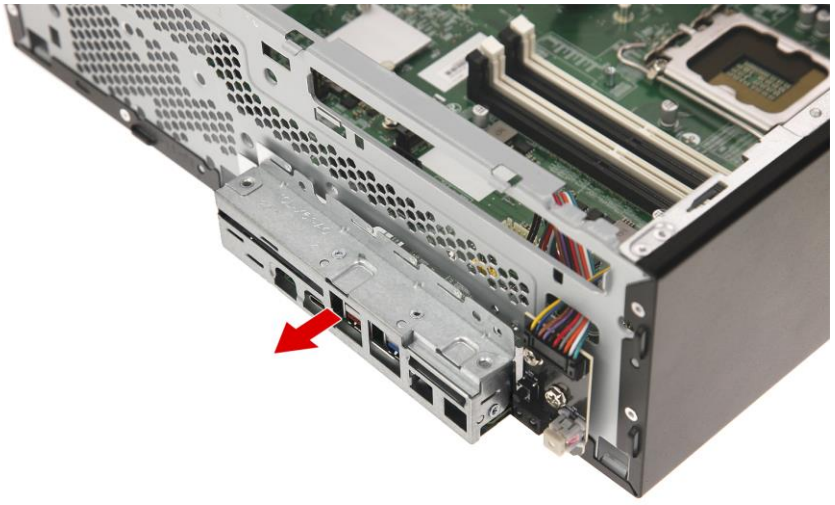
Front I/O Bracket Removal

15. Remove the front I/O bracket

15.1. Remove the two screws securing the front I/O bracket to the chassis.

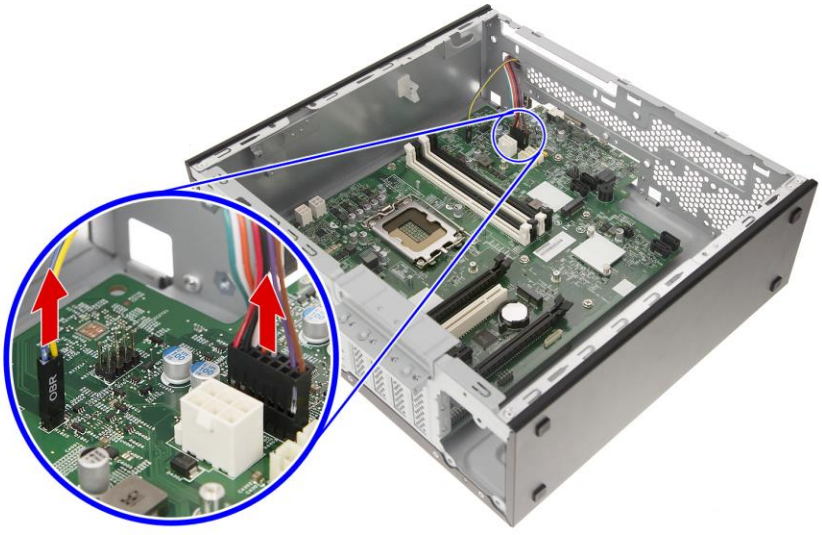


15.2. Detach the bracket from the chassis.

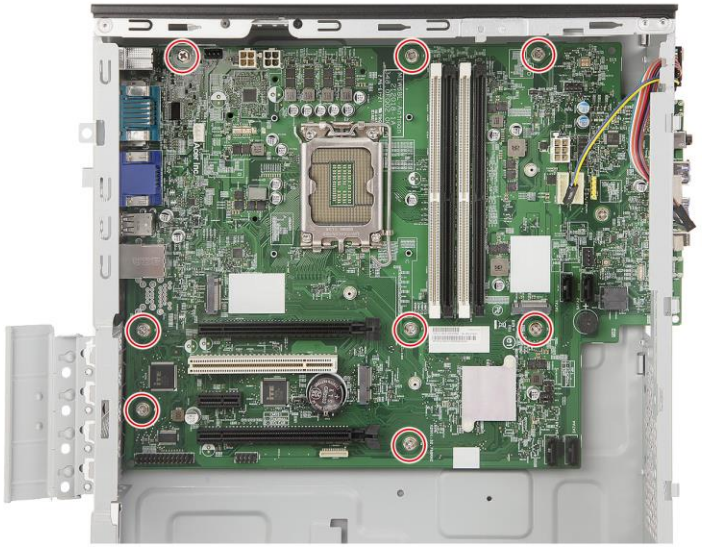


16. Remove the Mainboard

16.1. Disconnect the power button and LED cables from the mainboard.



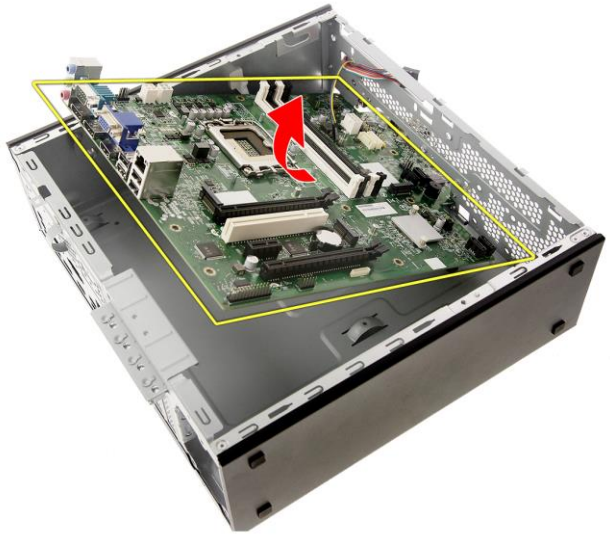
16.2. Remove the nine screws securing the mainboard to the chassis.



16.3. Slide the mainboard towards the front of the system to disengage the ports from the rear I/O bracket.



16.4. Gently lift the mainboard off the chassis.

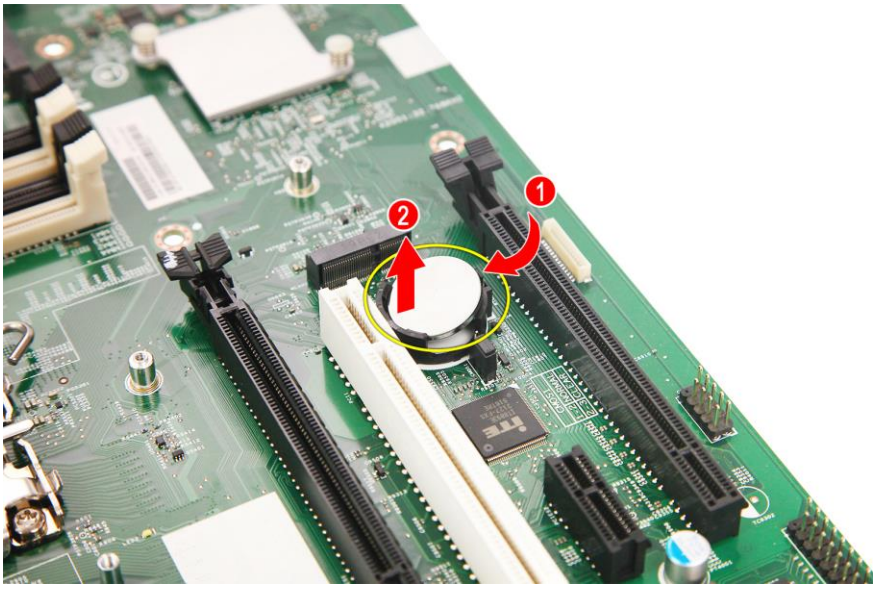


Note: WEEE Annex VII component. A circuit board >10 cm2 has been highlighted with the yellow rectangle as shown above. Please follow local regulations for disposal of detached circuit boards.

RTC Battery Removal

17. Remove the RTC battery

17.1. Gently push the RTC battery sideways (**1**), then lift it off the mainboard (**2**).



Note: WEEE Annex VII component. The RTC battery has been highlighted with the yellow circle as shown above. Please follow local regulations for disposal of used batteries.

Caution: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

Troubleshooting

This chapter provides troubleshooting information for the Veriton X4710G Desktop Computer.

- Power-On Self-Test (POST)
- POST Error Messages List

Power-On Self-Test (POST)

Each time you turn on the system, the Power-on Self Test (POST) is initiated. Several items are tested during POST, but for the most part transparent to the user.

The Power-On Self Test (POST) is a BIOS procedure that boots the system, initializes and diagnoses the system components, and controls the operation of the power-on password option. If POST discovers errors in system operations at power-on, it displays error messages on screen, generates a check point code at port 80h or even halts the system if the error is fatal.

The main components on the main board that must be diagnosed and/or initialized by POST to ensure system functionality are as follows:

- Microprocessor with built-in numeric co-processor and cache memory subsystem
- Direct Memory Access (DMA) controller
- Interrupt system
- Three programmable timers
- ROM subsystem
- RAM subsystem
- CMOS RAM subsystem and real time clock/calendar with battery backup
- Onboard parallel interface controller
- Embedded hard disk interface and one diskette drive interface
- Keyboard and auxiliary device controllers
- I/O ports
    - One parallel port
    - One PS/2-compatible mouse port
    - One PS/2-compatible keyboard port

POST Error Messages List

If you cannot run the diagnostics program tests but did receive a POST error message, use “POST Error Messages List "to diagnose system problems. If you did not receive any error message, look for a description of your error symptoms in “Error Symptoms List”.

If you are unable to correct the problem by using the “BIOS Messages List” table and “Error Symptoms List” table, go to “Undetermined Problems”.

To diagnose a problem, first find the BIOS error messages in the left column. If directed to a check procedure, replace the FRU indicated in the check procedure. If no check procedure is indicated, the first Action/FRU listed in right column is the most likely cause.

BIOS Messages	Action/FRU
BIOS ROM checksum error - System halted	The checksum of the BIOS code in the BIOS chip is incorrect, indicating the BIOS code may have become corrupt. Contact your system dealer to replace the BIOS.
CMOS Battery Failed	The CMOS battery is no longer functional. Contact your system dealer for a replacement the BIOS.
CMOS Checksum Error- defaults loaded	Checksum of CMOS is incorrect, so the system loads the default equipment configuration. A checksum error may indicate that CMOS has become corrupt. A weak battery may have caused this error. Check the battery and replace if necessary.
CPU at run	Displays the running speed of CPU.
Display switch is set incorrectly	The display switch on the motherboard can be set to either monochrome or color. This message indicates the switch is set to a different setting than indicated in Setup. Determine which setting is correct, and then either turn off the system and change the jumper, or enter Setup and change the Video selection.
Press ESC to skip memory test	The user may press Esc to skip the full memory test.
HARD DISK initializing - Please wait a	Some hard drives require extra time to initialize.
HARD DISK INSTALL FAILURE	Cannot find or initialize the hard drive controller or the drive. Make sure the controller is installed correctly. If no hard drives are installed, be sure the Hard Drive Selection in Setup is set to NONE.
Hard disk(s) diagnosis fail	The system may run specific disk diagnostic Routines. This message appears if one or more hard disks return an error when the diagnostics run.
Keyboard Error Or No Keyboard Present	Cannot initialize the keyboard. Make sure the keyboard is attached correctly and no keys are pressed during POST. To purposely configure the system without a keyboard, set the error halt condition in Setup to HALT ON ALL, BUT KEYBOARD. The BIOS then ignores the missing keyboard during POST.
Keyboard is locked out - Unlock the key	This message usually indicates that one or more keys have been pressed during the keyboard tests. Be sure no objects are resting on the keyboard.
Memory Test:	This message displays during a full memory test, counting down the memory areas being tested.

Memory test fail	If POST detects an error during memory testing, additional information appears giving specifics about the type and location of the memory error.
Override enabled - Defaults loaded	If the system cannot boot using the current CMOS configuration, the BIOS can override the current configuration with a set of BIOS defaults designed for the most stable, minimal-performance system operations.
Press TAB to show POST screen	System OEMs may replace the Phoenix Technologies Award BIOS POST display with their own proprietary display. Including this message in the OEM display permits the operator to switch between the OEM display and the default POST display.
Primary master hard disk fail	POST detects an error in the primary master hard drive.
Primary slave hard disk fail	POST detects an error in the secondary master hard drive.
Secondary master hard disk fail	POST detects an error in the primary slave hard drive.
Secondary slave hard disk fail	POST detects an error in the secondary slave hard drive.

Exploded Diagrams

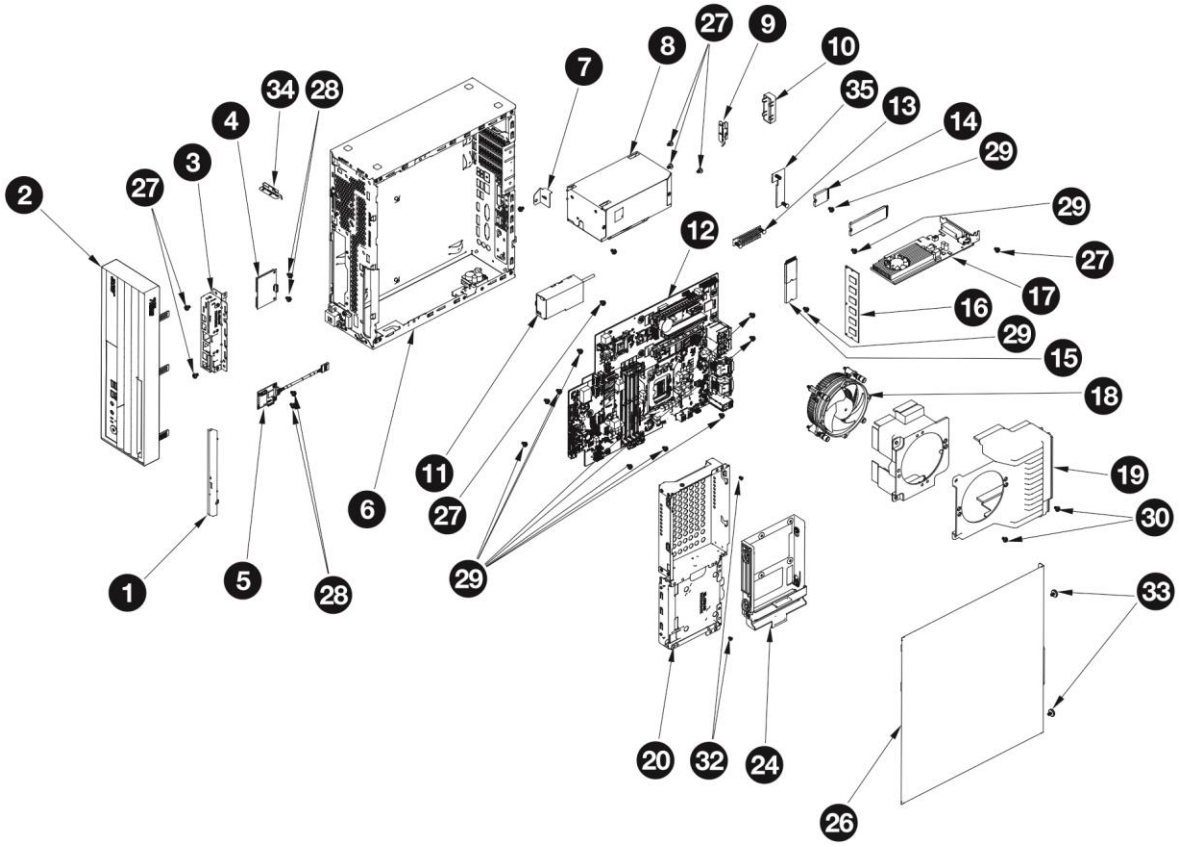


Figure 1 System Exploded Diagram

FRU (Field Replaceable Unit) List

Please contact your local service center to find out how to obtain the part or replace your device

To remove your personal data

- 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**.