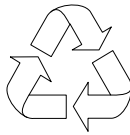


Aspire TC-780

Desktop Computer Service Guide



100% Recycled Paper

Service guide files and updates are available on the
Acer/CSD web site; for more information, go to
http://gcsd.acer.com.tw/GCSD_Portal/

Revision History

Refer to the table below for changes made on this version of the Aspire TC-780 Desktop Computer Service Guide.

Date	Version	Chapter	Updates
05-09-2016	First Draft		
05-17-2016	V1.00		
09-07-2016	V1.01	1	Page 1 - Removed Win7x64 driver in " System Features ".
01-11-2017	V1.02	1	Page 1 - Added Kaby Lake information in " System Features ". Page 5 - Added Kaby Lake information in " Hardware Specifications ".
		5	Page 103 - Added Kaby Lake information in " Block Diagram ".
		6	Page 107 - Added Kaby Lake information in " Aspire TC-780 FRU List ".
		Appendix A	Page 119 - Added Kaby Lake information in " Approved Vendor List (AVL) ".
01-20-2017	V1.03	1	Page 5 - Updated DDR4 UDIMM number of pins in " Hardware Specifications ".

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Conventions

The following textual conventions are used in this service guide.

SCREEN MESSAGES	Denotes actual messages that appear on screen.
NOTE	Gives additional information related to the current topic.
WARNING	Alerts you to any physical risk or system damage that might result from doing or not doing specific actions.
CAUTION	Gives precautionary measures to avoid possible hardware or software problems.
IMPORTANT	Reminds you to do specific actions relevant to the accomplishment of procedures.

Service Guide Coverage

This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for our "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.

FRU Information

Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed service guide. For AUTHORIZED SERVICE PROVIDERS, your office may have a DIFFERENT part number code to those given in the FRU list of this printed service guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

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Features and Specifications

This chapter lists the features and specifications of the Aspire TC-780 Desktop Computer.

NOTE The items listed in this section are for reference only. The exact configuration of your PC depends on the model purchased.

System Features

Component	Description
Operating system support	• Microsoft Windows 10 ML x64 • Microsoft Windows 10 SL x64 • FreeDOS • Linpus
Processor	• LGA 1151 socket type • Supports the following Intel Kaby Lake/Skylake-S processors: – Intel Core i7 7700 3.6G 8M 2133 Quad Core 65W Kaby Lake – Intel Core i7 6700 4.0G 8M 2133 Quad Core 91W Skylake-S – Intel Core i5 7400 3.0G 6M 2133 Quad Core 65W Kaby Lake – Intel Core i5 6400 2.7G 6M 2133 Quad Core 65W Skylake-S – Intel Core i3 7100 3.9G 3M 2133 Quad Core 51W Kaby Lake – Intel Core i3 6100 3.7G 3M 2133 Dual Core 47W Skylake-S – Intel Pentium G4400 3.3G 3M 2133 Dual Core 47W Skylake-S – Intel Celeron G3900 2.8G 2M 2133 Dual Core 51W Skylake-S
Chipset	PCH: Intel Skylake H110
Graphics controller	One PCIe x16 graphics card
Hardware monitor	Super I/O
Memory	Support DDR4 1.2V 2133 unbuffered DIMMs (4GB, 8GB or 16GB) dual channel up to 32GB total memory
PCI expansion options	• One PCI Express x16 slot (reserved for GPU card installation) • One PCI Express x1 slot • Two M.2 slots
Display	• Dual independent display support • Maximum resolution - HDMI: 1920 x 1080 @ 60 Hz
Audio	Realtek ALC662VD 6-Channel High Definition Audio Codec
I/O ports	• Front panel – Two USB 3.0 ports – One Headphone jack – One Microphone jack – One SD card reader slot • Rear panel – Two HDMI ports – One USB 3.0 port – Four USB 2.0 ports – One Ethernet jack (RJ45)

Component	Description
I/O ports (Cont.)	– One Microphone jack – One line-out jack – One line-in jack – One power connector
Hard disk drive (HDD)	• One HDD bay supporting 3.5-inch SATA HDD • Support 7200 rpm SATA HDD in 500GB/1TB/2TB/3TB/4TB capacities
Solid state drive (SSD)	• One SSD bay supporting M.2 type SSD modules • Supports SATA 3.0 SSD in 96/128/256/512GB capacities
Optical disc drive (ODD)	• One ODD bay supporting 9mm tray type SATA ODD • Supports DVD-R/RW drive or DVD-Super Multi double-layer drive
Card reader	SD card reader
Connectivity	• Wired LAN: Onboard 10/100/1000 Ethernet (Realtek RTL8111GA) • WLAN option: Intel Stone Peak Wireless LAN+BT (802.11 a/b/g/n)
Power supply	• PFC 220W power supply unit (Active PFC) • Non-PFC 300W power supply unit (Non-PFC) • FR 300W power supply unit (Active PFC) • FR 500W power supply unit (Active PFC)
Security	• BIOS-based user and supervisor passwords • Kensington lock
LED display and buttons	• Power LED • Power button • ODD eject button
System BIOS	• AMI BIOS with 8 MB SPI Flash ROM • Supports ACPI revision 5.0 standard • Supports Plug and Play, STR(S3)/STD(S4), hardware monitor, Multi Boot, and DMI protocols

Physical Specifications

Aspect	Description
Chassis dimension (W x H x D)	247mm x 530mm x 520mm (9.72in x 20.87in x 20.47in)
System weight	10.74 kg (23.68lb)
Mainboard form factor	DTX
Mainboard dimensions (W × H)	244mm*200mm, 4 Layers

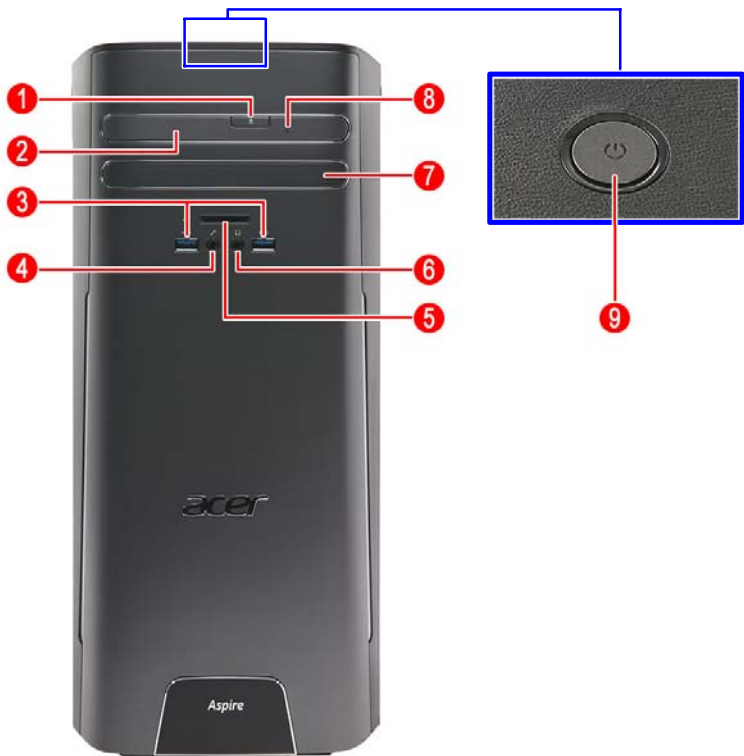
Environmental Requirements

Aspect	Description
Operating temperature	5 to 35 °C (41 to 95 °F)
Non-operating temperature	Packed: -20 to 60 °C (-4 to 140 °F) Unpacked: -10 to 60 °C (14 to 140 °F)
Operating humidity	-15% to 80% RH non-condensing
Non-operating humidity	-10% to 90% RH non-condensing at 40 °C

System Tour

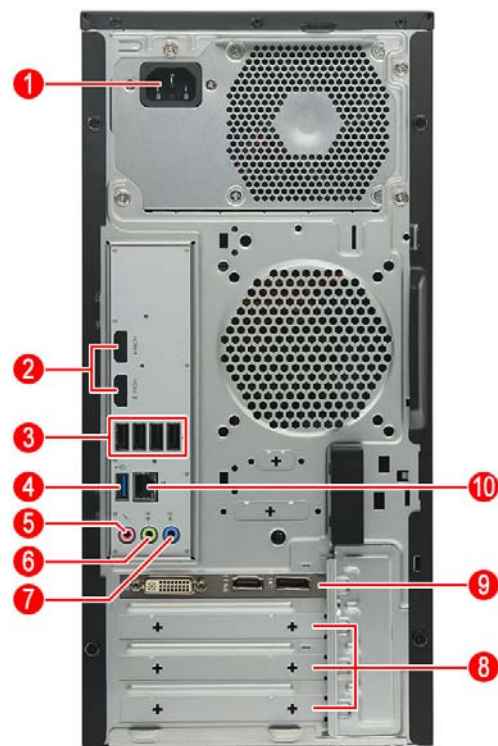
The pictures and tables in this section illustrate the physical outlook of the computer.

Front View



Item	Component
1	ODD eject button
2	ODD
3	USB 3.0 ports
4	Microphone-in jack
5	SD card reader
6	Headphone jack
7	Dummy ODD bezel
8	ODD emergency eject hole
9	Power button/LED

Rear View



Item	Component
1	Power connector
2	HDMI ports
3	USB 2.0 ports
4	USB 3.0 port
5	Microphone jack
6	Line-in jack
7	Line-out jack
8	Expansion card slots
9	Expansion card
10	LAN connector

Hardware Specifications

Processor

Item	Specification
Socket	LGA 1151 socket type
Package type	14 nm
CPU type	• Supports the following Intel Kaby Lake/Skylake-S processors: – Intel Core i7 7700 3.6G 8M 2133 Quad Core 65W Kaby Lake – Intel Core i7 6700 4.0G 8M 2133 Quad Core 91W Skylake-S – Intel Core i5 7400 3.0G 6M 2133 Quad Core 65W Kaby Lake – Intel Core i5 6400 2.7G 6M 2133 Quad Core 65W Skylake-S – Intel Core i3 7100 3.9G 3M 2133 Quad Core 51W Kaby Lake – Intel Core i3 6100 3.7G 3M 2133 Dual Core 47W Skylake-S – Intel Pentium G4400 3.3G 3M 2133 Dual Core 47W Skylake-S – Intel Celeron G3900 2.8G 2M 2133 Dual Core 51W Skylake-S

Chipset

Item	Specification
System chipset	Intel Skylake H110
Hardware monitor	Super I/O IT8772

Memory

Item	Specification
Controller	Integrated in the Intel Kaby Lake/Skylake-S processors
Number of DIMM slot	2
Maximum memory	32GB (using two 16GB modules)
Data rate	2133 MT/s
DIMM type	288-pin DDR4 1.2V UDIMM
Supported capacities	4GB, 8GB, 16GB
Vendor and models	• HYNIX – 4GB HMA451U6AFR8N / 8GB HMA41GU6AFR8N / 16GB HMA82GU6MFR8N • SAMSUNG – 4GB M378A5143DB0 / 8GB M378A1G43DB0 / 16GB M378A2K43BB1
Population rule	Please refer to “Reinstalling the Memory Modules” on page 65 for Memory Population Matrix Table.

Hard Disk Drive

Item	Specification
Controller	Integrated in the Intel Skylake H110 chipset
Number of HDD bays	1
Form factor	3.5-inch
Interface	SATA 3.0
Supported capacities	500GB, 1TB, 2TB, 3TB, 4TB
Vendor and models	- Seagate – 500GB/1TB Pharaoh Oasis; ST1000DX001 / ST2000DX001 Grenada BP2H-8GSSHD; ST4000DM000 Lombard - Toshiba – 1TB/2TB/3TB Mars - Western Digital – WD20EZRX-22D8PB0 / WD30EZRX-22D8PB0 GP1000A

Solid State Drive (SSD)

Item	Specification
Controller	Integrated in the Intel Skylake H110 chipset
Number of SSD bays	1
Form factor	M.2 2280
Interface	SATA 3.0
Supported capacities	96GB, 128GB, 256GB, 512GB
Vendor and models	- Kingston – 96GB RBU-SNS8151S3 - Lite-On – 128GB CV1-8B128 / 256GB CV1-8B256 / 512GB CV1-8B512 - Toshiba – 128GB THNSNJ128G8NY / 256GB CV1-8B256

Optical Disc Drive

Item	Specification
Controller	Integrated in the Intel Skylake H110 chipset
Type	DVD ROM/SuperMulti
Number of ODD bays	1
Form factor	Slim type, 9mm
Interface	SATA 3.0
Write/read speed	8x
Vendor and models	- HLDS – GUE1N - PLDS – DA-8A6SH

Card Reader

Item	Specification
Controller	RTS5143
Type	SD card reader
Card compatibility	• SDHC - Kingston 4GB SDHC card • SDXC - Kingston 64GB SDXC card • micro-SD - Kingston 2GB micro-SD card • micro-SDHC - SanDisk 4GB micro-SDHC card • mini-SD - SanDisk 1GB Mini-SD card • mini-SDHC - SanDisk 4GB Mini-SDHC card

Ethernet

Item	Specification
Controller	Realtek RTL8111GA
LAN protocol	10/100/1000 Mbps
LAN connector type	RJ-45

Wireless LAN

Item	Specification
WLAN module	• Intel Stone Peak 3165/7265 • LiteOn QCA9377A
Form factor	M.2 2230
Protocol	WLAN 802.11ac/a/b/g/n/M.2/2T2R+BT

Audio

Item	Specification
Controller	Realtek ALC662-VD 6 Channel High Definition Audio Codec
Connectors	Three audio jacks

SATA Interface

Item	Specification
SATA Controller	Integrated in the Intel Skylake H110 chipset
Connectors	Two SATA 3.0 ports

PCIe Interface

Item	Specification
Controller	Integrated in the Intel Skylake H110 chipset
Connectors	• One PCI Express x16 slot (PCIe V3.0) • One PCI Express x1 slot (PCIe V2.0) • Two mini-PCIe M.2 slot (PCIe V3.0)

Keyboard and Input Devices

Item	Specification
Controller	Super I/O IT8772
Connectors	Seven USB ports (two on front and five on rear)

HDMI

Item	Specification
Controller	Integrated in the Intel Kaby Lake/Skylake-S processors
Version	HDMI 1.4b
Maximum Resolution	1920 x 1080 @ 60 Hz

Power Supply Unit

Item	Specification
Type	• PFC 220W power supply unit (Active PFC) • Non-PFC 300W power supply unit (Non-PFC) • FR 300W power supply unit (Active PFC) • FR 500W power supply unit (Active PFC)
Input	100-240V
Output (max.)	220W, 300W, 500W
Vendor and models	• Chicony Power D220A007L-AC01 (D14-220P1A) 220W Active PFC • FSP FSP220-50AANA 220W Active PFC 220v-240V • FSP FSP300-60THA(1) 300W None PFC (A01003) 100-127V/220-240V • FSP FSP300-60EP(1) 300W Active PFC (A01007) 100-127v/220v-240V • LITE-ON PS-6301-18A4 300W None PFC 100-127V/220-240V • LITE-ON PS-7501-5AE 500W Active PFC 100-127V/220-240V

System Utilities

This chapter lists the system utilities installed in Aspire TC-780 Desktop Computer.

CMOS Setup Utility

CMOS Setup Utility is a hardware configuration program built into the system ROM. Since most systems are already properly configured and optimized, there is normally no need to run this utility.

You will need to run this utility under the following conditions:

- When changing the system configuration including:
 - Setting the system time and date
 - Configuring the system drives and peripherals
 - Specifying the boot device sequence
 - Configuring the power management modes
 - Setting up system passwords or making other changes to the security setup
- When trying to resolve IRQ conflicts
- When a configuration error is detected by the system and you are prompted ("**Run Setup**" message) to make changes to the BIOS settings.

The Setup Utility loads the configuration values in a battery-backed nonvolatile memory called CMOS RAM. This memory area is not part of the system RAM, which allows configuration data to be retained when power is turned off. The values take effect when the system is booted. POST uses these values to configure the hardware. If the values and the actual hardware do not agree, POST generates an error message. You must run this utility to change the hardware settings from the default or current configuration.

IMPORTANT If you repeatedly receive "**Run Setup**" messages, the RTC battery located on the mainboard (BT1) may be defective. In this case, the system cannot retain configuration values in CMOS. Replace the RTC battery with a new one.

NOTE For ease of reading, CMOS Setup Utility will be simply referred to as "Setup" or "Setup Utility" in this Service Guide.

Accessing the Setup Utility

1. Turn on the computer.

If the computer is already turned on, save your data and close all open applications, then restart the computer.

2. During POST, press **Delete**.

If you fail to press **Delete** before POST is completed, you will need to restart the computer.



Use the **Left/Right/Up/Down** arrow keys to move between the menu screens, then press **Enter** to view that menu tab.

Some options lead to pop-up dialog boxes that prompt you to verify that you wish to execute that option. Other options lead to dialog boxes that prompt you for information.

Some options (marked with a **▶**) lead to submenus that enable you to change the values for the option. Use the **Up/Down/Left/Right** arrow keys to scroll through the items in the submenu

Navigating through the Setup Utility

Use the keys listed in the legend bar on the bottom of the Setup screen to work your way through the various menu and submenu screens of the Setup Utility. The table below lists these legend keys and their respective functions.

Key	Function
Left/Right arrow keys	Move the cursor to the menu screen you want. The currently selected screen will be highlighted and the items it contain will be shown.
Up/Down arrow keys	Move the cursor to the item you want. The currently selected field will be highlighted.
Enter	• To open the page for the currently selected menu/submenu • To apply a field value.
+ / - / space bar	To select a value for the currently selected field (only if it is user-configurable). Press these keys repeatedly to display all possible entries. A parameter that is enclosed in square brackets [] is user-configurable. Black font parameters are not user-configurable for one of the following reasons: • The field value is auto-configured or auto-detected. • The field value is informational only. • The field is password-protected.
F1	To bring up the <u>General Help</u> window. The <u>General Help</u> window describes other Setup navigation keys that are not displayed on the legend bar.
F7	Restore the saved User Default settings.
F8	Save the current menu settings as User Default settings.
F9	Press to load default system values.
F10	Press to save changes and close the Setup Utility.
Esc	If you press this key: • On one of the primary menu screens, the <u>Exit</u> menu displays. • On a submenu screen, the previous screen displays. • When you are making selections from a pop-up menu, closes the pop-up without making a selection.

Setup Utility Menus

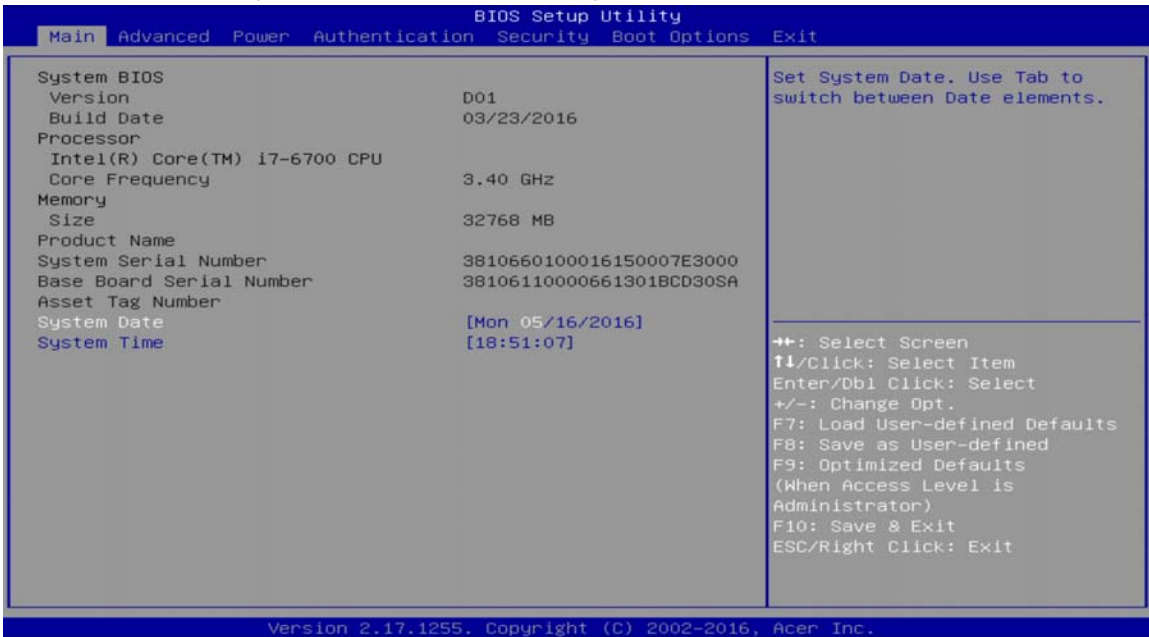
The Setup Utility has seven menus for configuring the various system functions. These include:

Main	Advanced	Power	Authentication	Security	Boot Options	Exit
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- NOTES**
- The screenshots used in this section are for illustration only. The values displayed may not be the same as those in your computer.
 - In the descriptive tables following each of the menu screen illustrations, settings in **boldface** are the default and suggested settings.

Main

The Main menu displays basic information about the system.



Parameter	Description
System BIOS	
Version	Current system BIOS version
Build Date	Date when the system BIOS was built.
Processor	
<model>	Processor model installed
Core Frequency	Core frequency of the installed processor
Memory	
Size	Size of system memory detected during boot-up
Product Name	Official model name of the computer.
System Serial Number	System serial number.
Base Board Serial Number	Base board serial number.
Asset Tag Number	System asset tag number
System Date	Sets the system date.
System Time	Sets the system time.

Advanced



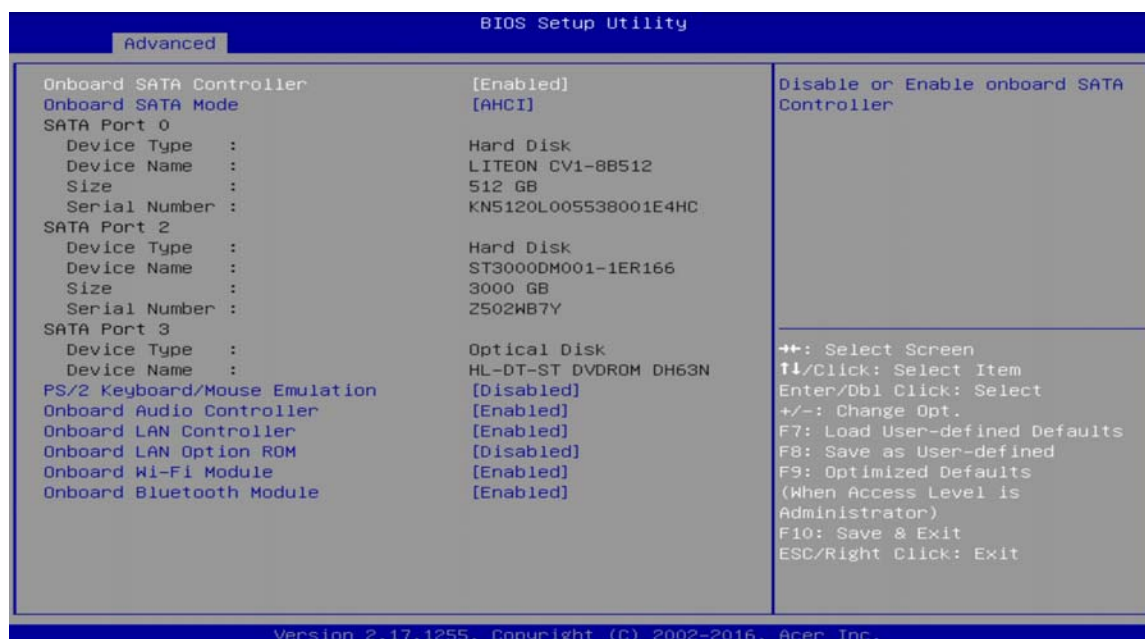
Parameter	Description
CPU and Chipset Configuration	Access this submenu to enable or disable various Intel technology functions and configure video memory settings.
Integrated Peripherals	Access this submenu to enable or disable operation modes for the onboard I/O controllers.
PC Health Status	Access this submenu to view current level of system/processor/PCH temperature, voltages, and fan speed.

Advanced Chipset Configuration



Parameter	Description	Option
Intel AES-NI	Select whether to enable or disable the Intel Advanced Encryption Standard New Instructions.	Enabled Disabled
Video Output	Select which display device the system will use when the system boots.	Discrete Onboard
Onboard Graphics Controller	Select whether to enable or disable the onboard video controller when the system boots.	Enabled Disabled

Integrated Peripherals



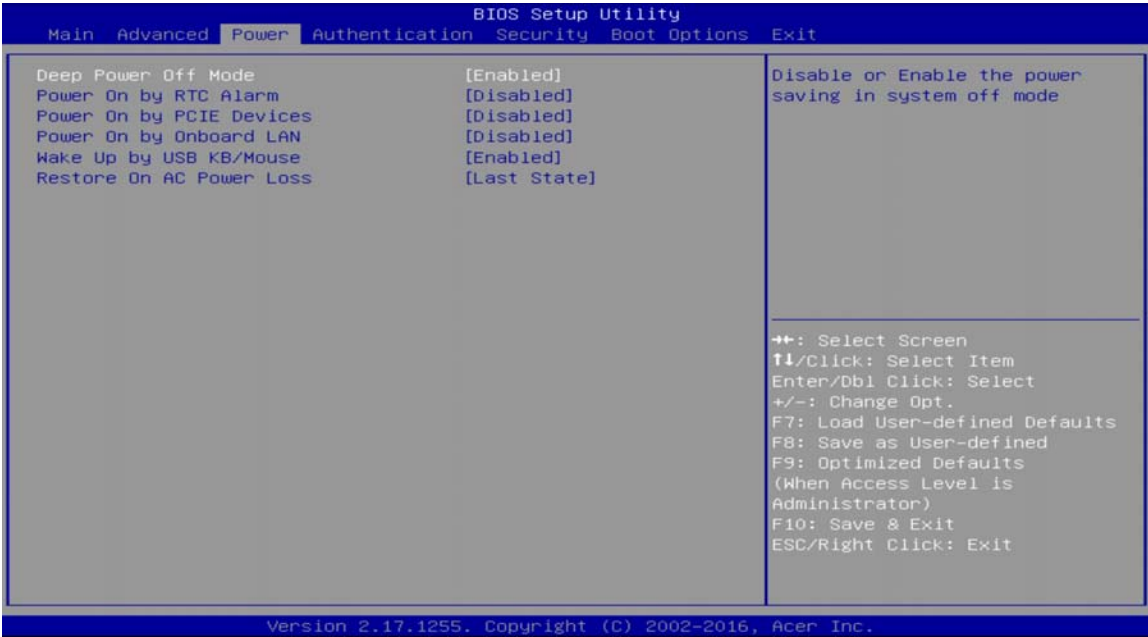
Parameter	Description	Option
Onboard SATA Controller	Enables or disables the onboard SATA controller.	Enabled Disabled
Onboard SATA Mode	Select an operating mode for the onboard SATA.	AHCI Native IDE
SATA Port 0/2/3	Shows information on devices connected to the SATA ports.	
PS/2 Keyboard/Mouse Emulation	Enables or disables the PS/2 keyboard/mouse emulation function.	Enabled Disabled
Onboard Audio Controller	Enables or disables the onboard audio controller.	Enabled Disabled
Onboard LAN Controller	Enables or disables the onboard LAN controller.	Enabled Disabled
Onboard LAN Option ROM	Enables or disables the load of embedded option ROM for onboard network controller.	Enabled Disabled
Onboard Wi-Fi module	Enables or disables the onboard Wi-Fi module.	Enabled Disabled
Onboard Bluetooth module	Enables or disables the onboard Bluetooth module.	Enabled Disabled

PC Health Status



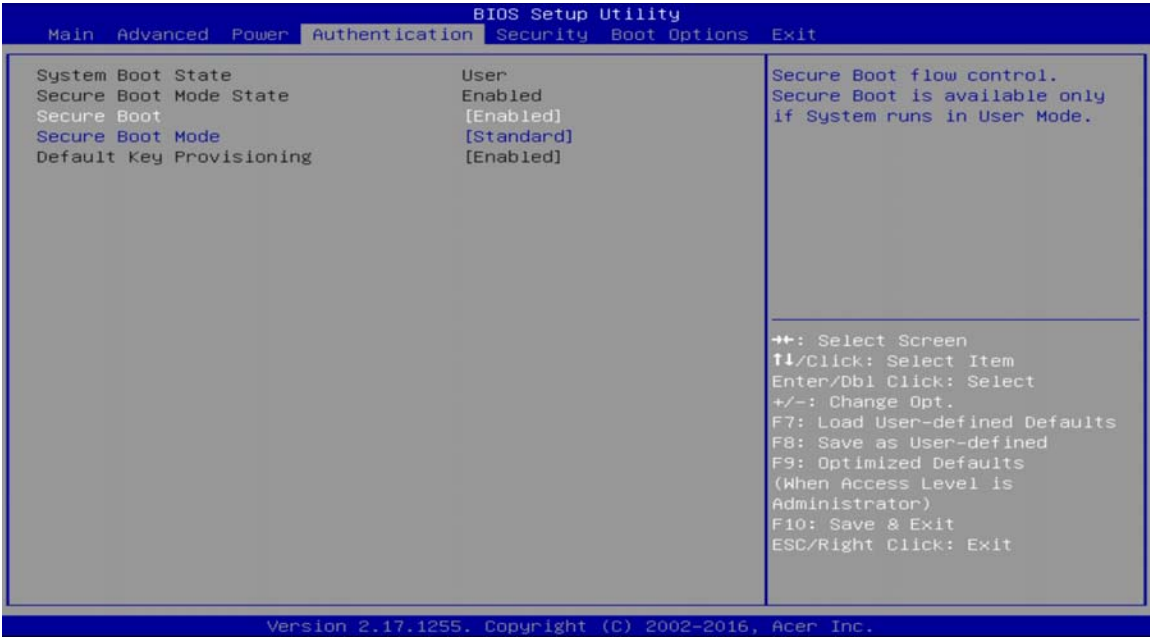
Parameter	Description	Option
CPU Temperature System Temperature VRD Temperature CPU Fan Speed System Fan Speed Vcore DIMM Voltage 12V 5V 3.3V	These items lets you monitor the parameters for critical voltages, temperatures and fan speeds.	
System Shutdown Temperature	Enables or disables the System Shutdown Temperature function.	Enabled Disabled
VRD Shutdown Temperature	Enables or disables the VRD Shutdown Temperature function.	Enabled Disabled
Smart Fan	Enables or disables the smart system fan control function.	Enabled Disabled

Power



Parameter	Description	Option
Deep Power Off Mode	Enables or disables the deep power off mode.	Enabled Disabled
Power On by RTC Alarm	Enables or disables real time clock (RTC) to generate a wake event.	Enabled Disabled
Power On by PCIE Devices	Enables or disables to wake up the system from a power saving mode through an event on a PCI Express device.	Enabled Disabled
Power On by Onboard LAN	Enables or disables the system to wake up from a power-saving mode when an onboard LAN card received an incoming call.	Enabled Disabled
Wake Up by USB KB/ Mouse	Enables or disables to wake up the system from a power saving mode using a USB keyboard or mouse.	Enabled Disabled
Restore On AC Power Loss	Enables or disables the system to reboot after a power failure or interrupt occurs.	Power Off Power On Last State

Authentication



Field	Description	Option
System Boot State	Displays the current system boot status. • <i>Setup</i> - Secure keys not installed. • <i>User</i> - Secure keys installed	Setup User
Secure Boot Mode State	Displays the current system boot mode status.	Enabled Disabled
Secure Boot	Enables or disables the secure boot function.	Enabled Disabled
Secure Boot Mode	Select the secure boot mode when secure boot is enabled.	Standard Custom
Default Key Provisioning	Enables or disables the default key provisioning function.	Enabled Disabled

Security



Parameter	Description	Option
Supervisor Password	Displays the supervisor password status. When set to <i>Installed</i> , this password will allow the user to access and change all settings in the Setup Utility.	Installed Not Installed
User Password	Displays the user password status. Only the following menus will be accessible when this password is used to logged in: • System Date and System Time • Exit Without Saving The F9 key (Load Default Settings) will also be unavailable.	
Change Supervisor Password	Press Enter to change the supervisor password.	
Change User Password	Press Enter to change the user password. Note that this field: • is only accessible when a supervisor password is set; • is cleared when the supervisor password is cleared.	
TPM Device Selection	Displays supported TPM device.	PTT
TPM Support	Enables or disables the Trusted Platform Module (TPM) function.	Enabled Disabled
TPM Operation	Displays the current Trusted Platform Module (TPM) operation.	None Enable Take Ownership Disable Take Ownership Clear
Hash Policy	Displays supported hash policy	SHA-1

Note the following before you define a system password:

- The maximum length of password contains 8 alphanumeric characters. The following keys are valid:
 - A-Z, a-z (case-insensitive)
 - 0-9
 - ` - + [] \ ; ' , . / ,
 - Special keypad characters: 0-9 / * - +
- When you are prompted to enter a password, you have three tries before the system halts. Do not forget your password. If you forget your password, you may have to return your computer to your dealer to reset it.

To set a system password:

NOTE You need to set a supervisor password first before setting the user password.

1. Select Change Supervisor Password or Change User Password, then press **Enter**.

The password box appears.

2. Type a password then press **Enter**.

IMPORTANT Be very careful when typing your password because the characters do not appear on the screen. Only shaded blocks representing each typed character are visible.

3. Retype the password to verify the first entry, then press **Enter**.

You will be prompted to save the new password.

4. Press **Enter**.
5. Press **F10** to save the password and close the Setup Utility.

To change a system password:

1. Select Change Supervisor Password or Change User Password, then press **Enter**.

The password box appears.

2. Type the original password, then press **Enter**.
3. Type a new password, then press **Enter**.
4. Retype the new password to verify the first entry, then press **Enter**.

You will be prompted to save the new password.

5. Press **Enter**.
6. Press **F10** to save the password and close the Setup Utility.

To remove a system password:

NOTE When the supervisor password is removed, the user password will also be remove.

1. Select Change Supervisor Password or Change User Password, then press **Enter**.

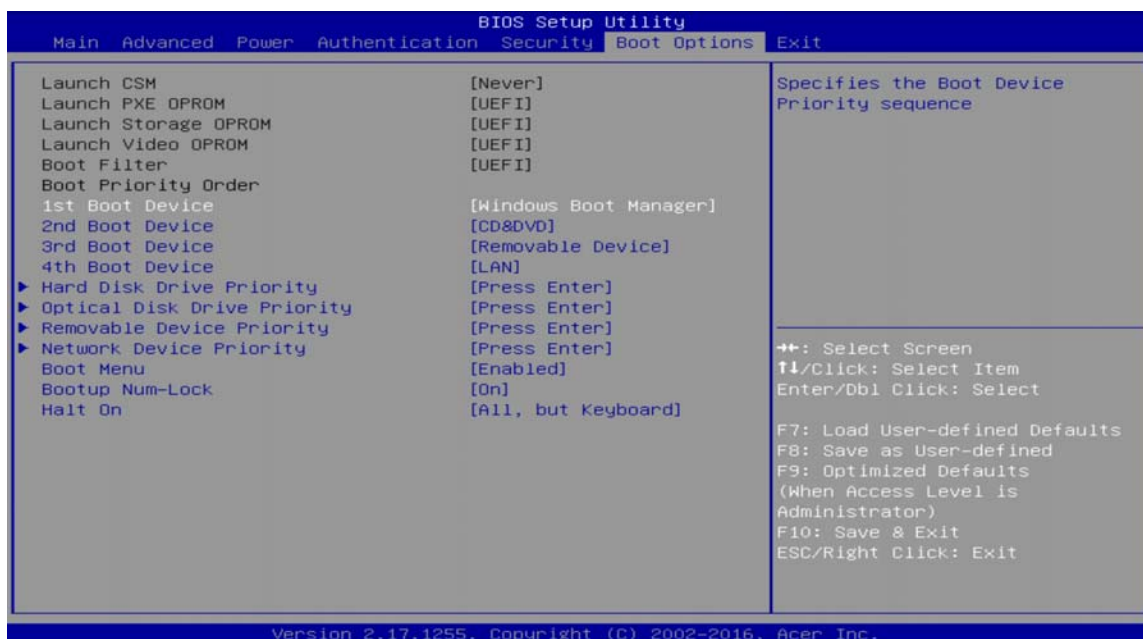
The password box appears.

2. Type the original password, then press **Enter**.
3. Press **Enter** twice without entering anything in the new and confirm password fields.

You will be prompted to confirm the password removal.

4. Press **Enter**.
5. Press **F10** to save the changes you made and close the Setup Utility.

Boot Options



Parameter	Description	Option
Launch CSM	Controls the launching the Compatibility Support Module function when booting.	Never Always
Boot Priority Order 1st Boot Device 2nd Boot Device 3rd Boot Device 4th Boot Device	Displays the device assigned to the specified boot sequence. The Setup Utility attempts to boot the operating system in this order. By default, the computer searches for boot devices in the following order: - Windows Boot Manager - Optical drive (CD/DVD) - Removable device - Network boot (LAN)	
Hard Disk Drive Priority	Press Enter to set the boot priority for the hard drive.	
Optical Disc Drive Priority	Press Enter to set the boot priority for the optical drive.	
Removable Device Priority	Press Enter to set the boot priority for a removable USB drive.	
Network Device Priority	Press Enter to set the boot priority for a network boot.	
Boot Menu	Enable or disable the boot menu function.	Enabled Disabled
Bootup Num-Lock	Enables or disables the Num-Lock key during boot.	On Off
Halt On	Determines whether the system will stop for an error during the POST. Options include: - All, but Keyboard – If a keyboard error is detected, BIOS will pause the system. - All Errors — Any error detected will pause the system. - No Errors – BIOS will ignore any errors detected during POST	All, But Keyboard All Errors No Errors

Exit



Parameter	Description
Save & Exit Setup	When you have completed the system configuration changes, select this option to leave the BIOS Setup Utility and reboot the computer, so the new system configuration parameters can take effect. Select Save & Exit Setup from the Exit menu and press Enter .
Discard Changes and Exit Setup	Select this option to quit the BIOS Setup Utility without making any permanent changes to the system configuration, and reboot the computer. Select Discard Changes and Exit Setup from the Exit menu and press Enter .
Save Changes	Select this option and press Enter to save all the changes and return to the BIOS Setup Utility.
Discard Changes	Select this option and press Enter to discard all the changes and return to the BIOS Setup Utility.
Load Default Settings	To set this feature, select Load Default Settings from the Exit menu and press Enter . Then, select OK to allow the BIOS to automatically load optimal defaults to the BIOS settings. The Optimal settings are designed for maximum system performance, but may not work best for all computer applications.
Save as User Default Settings	Select this option and press Enter to save changes that you have made as user defaults.
Load User Default Settings	Select this option and press Enter to restore user defaults.

System Disassembly and Reassembly

This chapter provides step-by-step instructions on how to disassemble the computer for maintenance and troubleshooting purposes.

Disassembly Tools

In performing the disassembly process, you will need the following tools:

- Wrist-grounding strap and conductive mat for preventing electrostatic discharge
- Philips screwdriver
- Hex screwdriver
- Flat screwdriver
- Scissors (for cutting cable ties)

NOTES The screws for the different components vary in size. During the disassembly process, group the screws with their corresponding components to avoid mismatches when putting back the components.

Pre-disassembly Procedure

Before proceeding with the disassembly procedure, perform the steps listed below:

1. Make sure that the optical disc drive and the card reader slot are empty.
2. Turn off the power to the computer and all peripherals.
3. Unplug the power cord from the computer.
4. Unplug the network cable and all connected peripheral devices from the computer.
5. Place the computer on a flat, steady surface with the rear cover facing upward.

Disassembly Procedures

Removing the Side Panel

- 1. Put the computer on a flat surface.
- 2. Remove the two screws securing the side panel to the chassis.



Quantity	Color	Torque	Part Number	Screw Type
2	Black	6.0 ± 0.5 kgf-cm	86.SR2D1.001	

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



- 4. Detach the side panel from the unit and put it aside for re-installation later.

Removing the Front Bezel

1. Force eject the ODD tray by inserting a thin metal object into the ODD emergency eject hole.



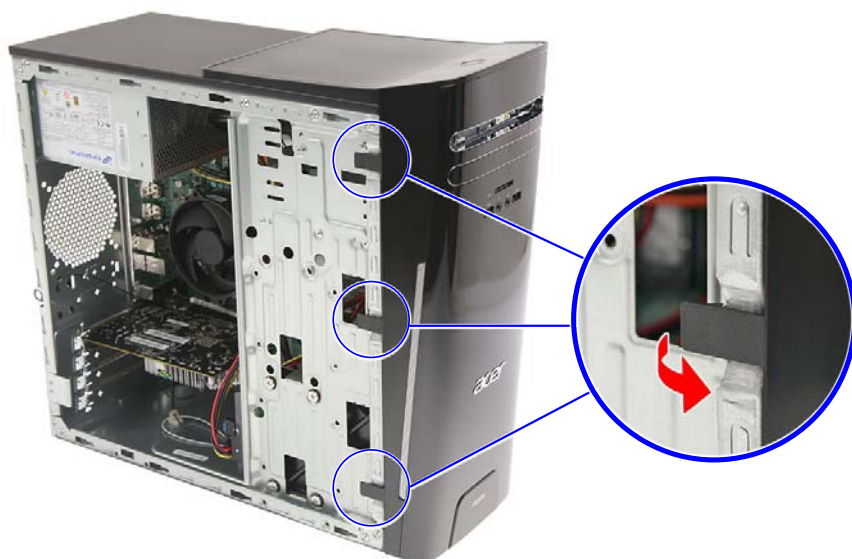
2. Disengage the latch securing the ODD bezel to the ODD tray, then detach the ODD bezel.



-
3. Push back the ODD tray until it latches into place.



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

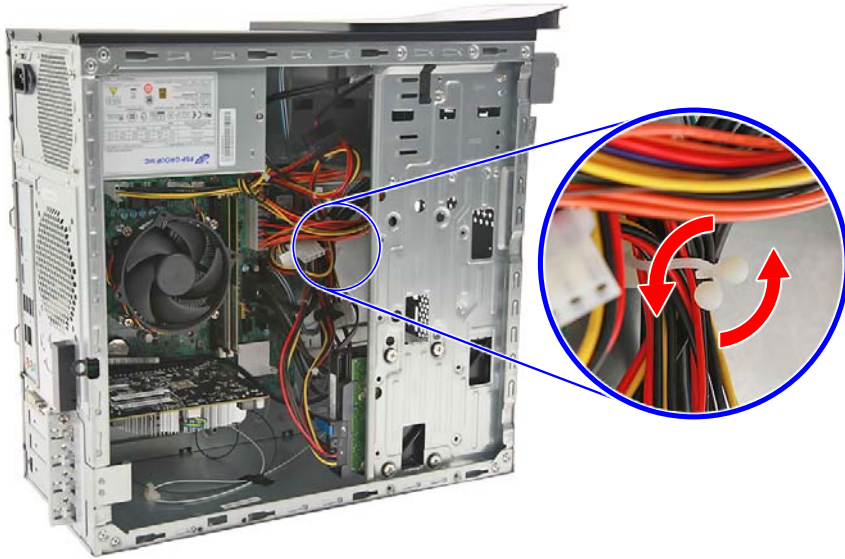


-
5. Pull the front bezel away from the chassis.



Removing the ODD Module

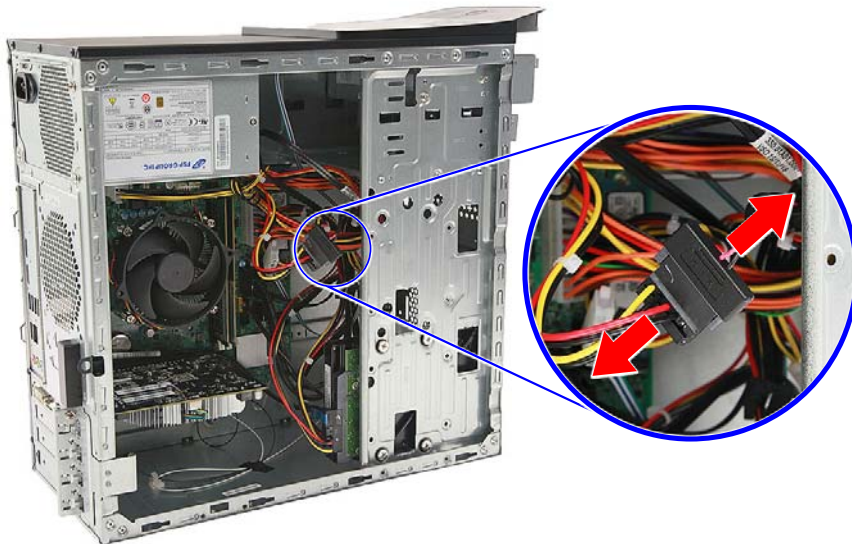
1. Release all the cables from the twist wire tie securing them to the chassis.



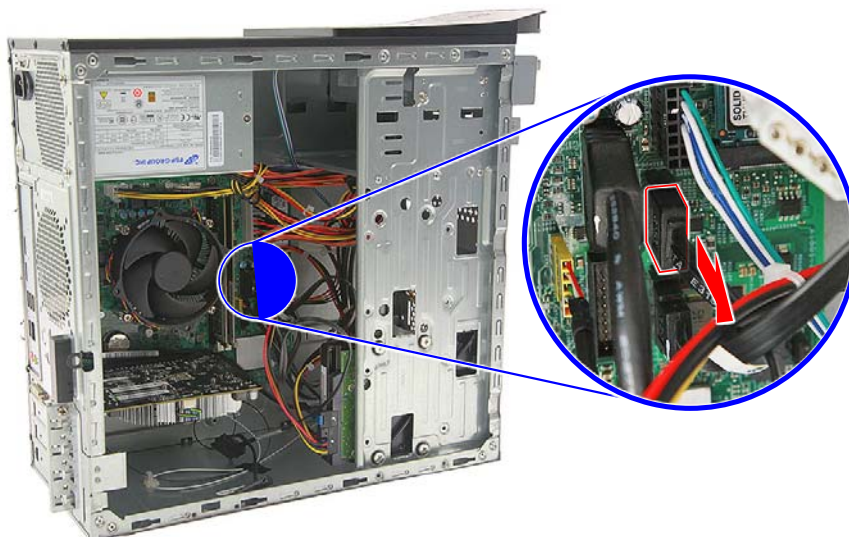
2. Disconnect the power and data combo cable from the ODD module.



-
3. Disconnect the power and data combo cable from the power supply cable.



4. Disconnect the ODD data cable from the mainboard.



5. Remove the two screws securing the ODD module to the chassis.



Quantity	Color	Torque	Part Number	Screw Type
2	Silver	6.0 ± 0.5 kgf-cm	86.B1HD1.001	

6. Slide the ODD module out of the chassis.

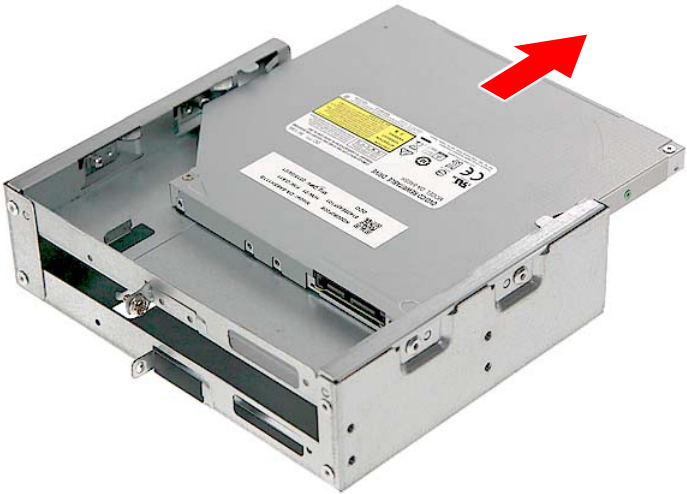


7. Remove the two screws securing the ODD to the ODD bracket.



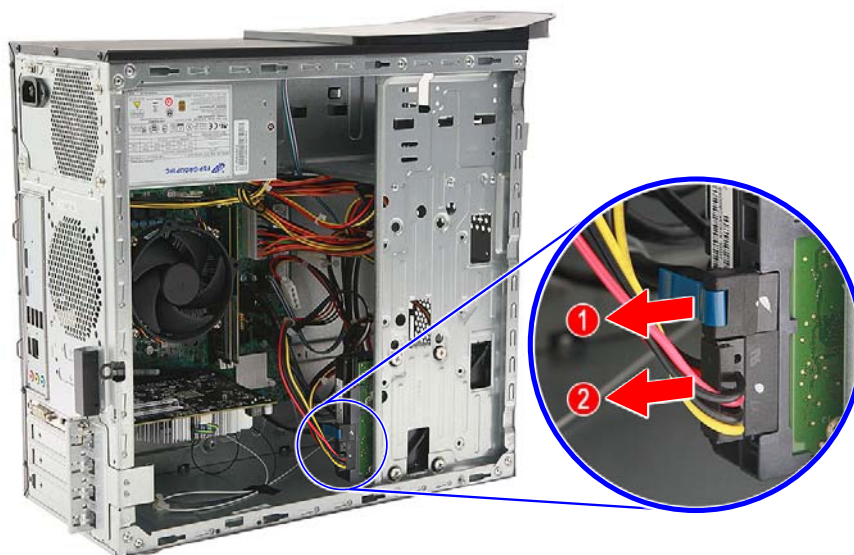
Quantity	Color	Torque	Part Number	Screw Type
2	Silver	1.5 ± 0.3 kgf-cm	86.SXLD1.001	

8. Pull the ODD out of the ODD carrier.



Removing the HDD Module

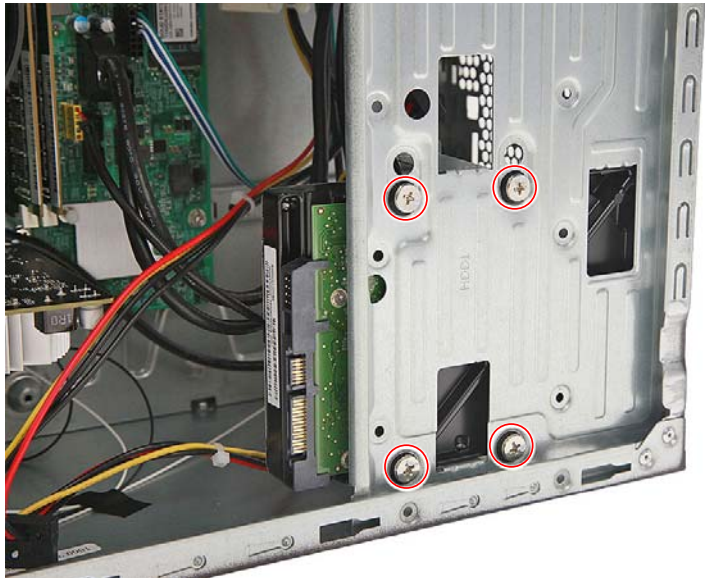
1. Disconnect the data and power cables from the HDD module.



2. Disconnect the HDD data cable from the mainboard.

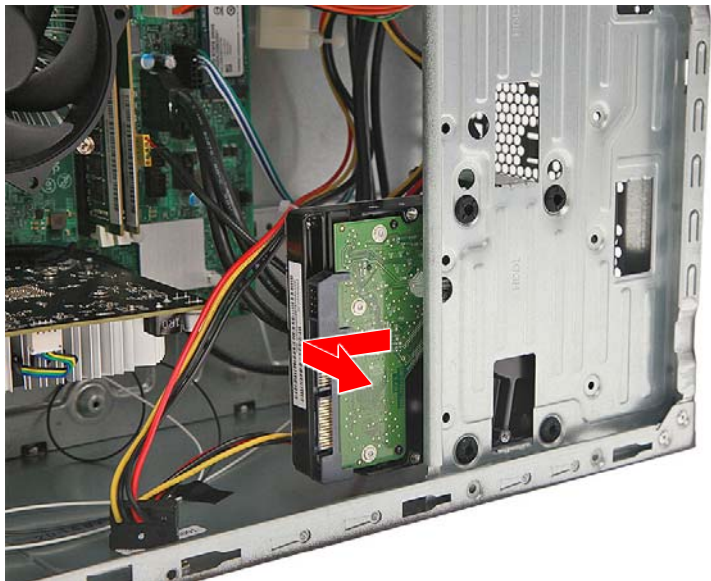


3. Remove the four screws securing the HDD module to the chassis.



Quantity	Color	Torque	Part Number	Screw Type
4	Silver	6.0 ± 0.5 kgf-cm	86.SXHD1.001	

4. Slide the HDD module out of the chassis.



Removing the Thermal Module

WARNING: The heatsink becomes very hot when the system is on. NEVER touch the heatsink with any metal or with your hands.

- 1. Disconnect the heatsink fan cable from the mainboard.



- 2. Loosen the four captive screws securing the thermal module to the mainboard.



Quantity	Color	Torque	Part Number	Screw Type
4	Silver	6.0 ± 0.5 kgf-cm	Thermal Screws	N/A

-
3. Remove the thermal module from the mainboard.

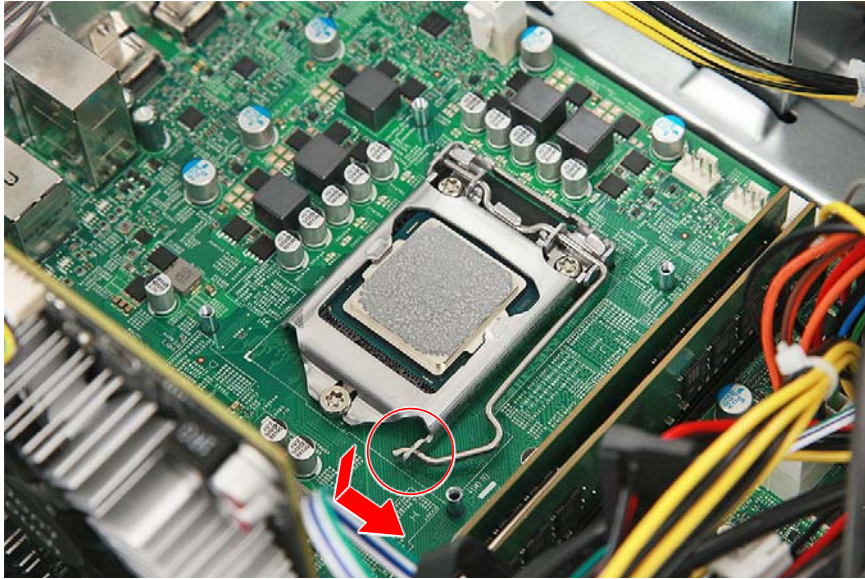


Removing the Processor

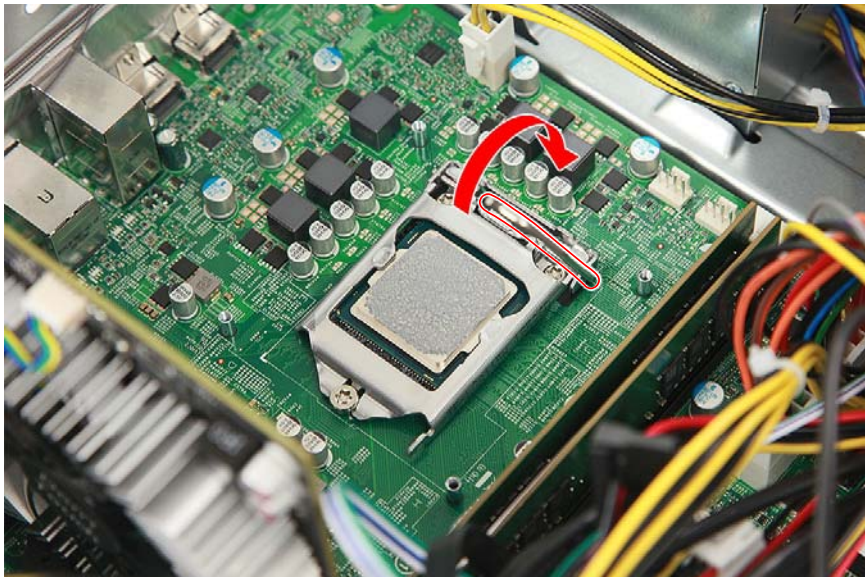
IMPORTANT: Before removing a processor from the mainboard, make sure to create a backup file of all important data.

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

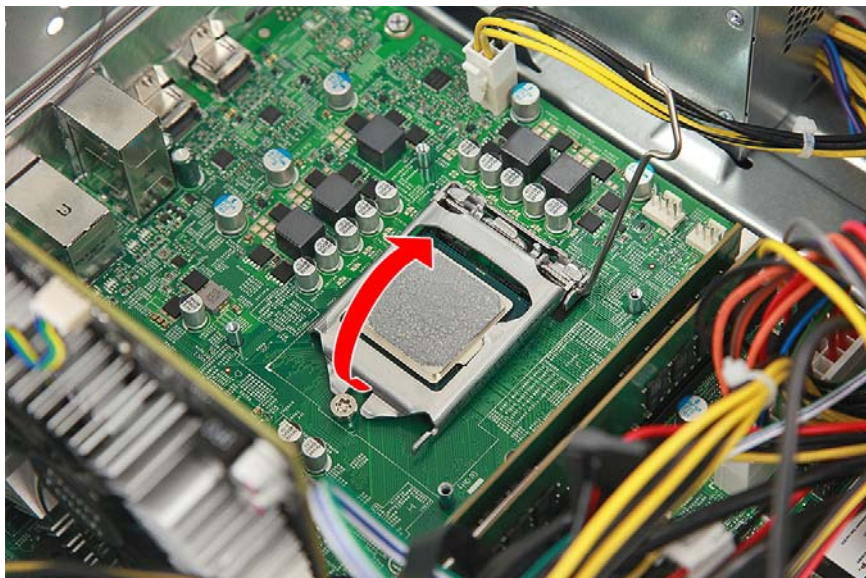
1. Press the load lever and move it to the right to release the load lever from the retention tab.



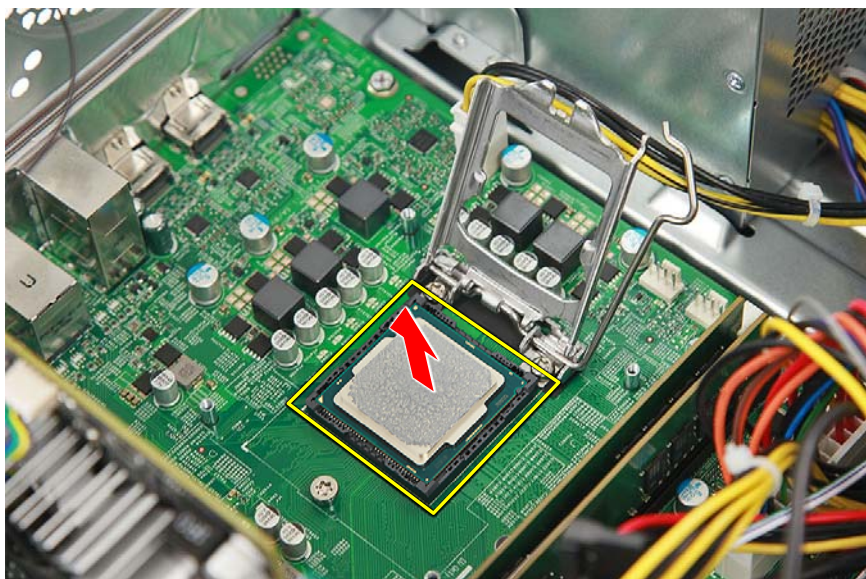
2. Pull the load lever to release the CPU cover plate from the retaining post.



3. Open the CPU cover plate.



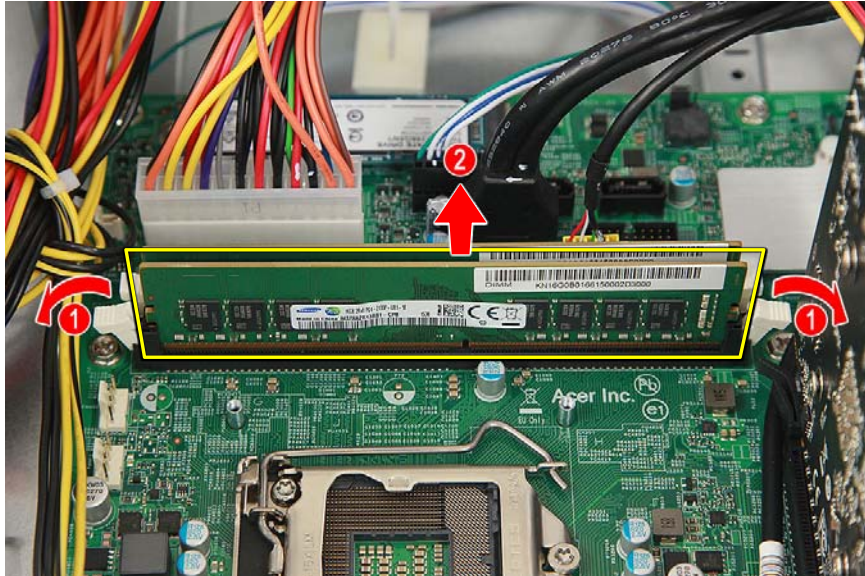
4. Lift the processor from the socket.



Note: WEEE Annex VII component. A circuit board that is $>10 \text{ cm}^2$ has been highlighted with a yellow rectangle as shown in the above image. Follow local regulations for disposing this type of circuit board.

Removing the Memory Modules

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.

2. Repeat Step 1 to remove the remaining memory module.

Removing the Expansion Board

1. Remove the screw securing the expansion board bracket to the chassis.

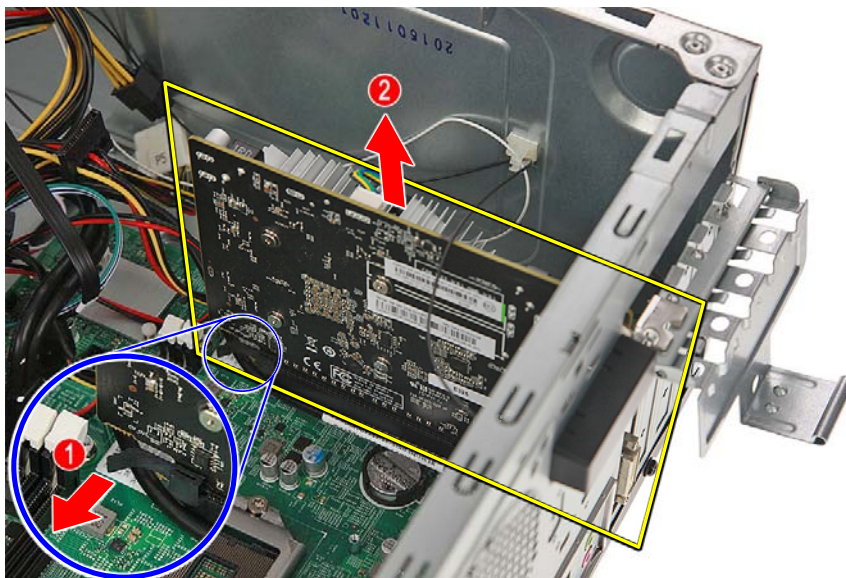


Quantity	Color	Torque	Part Number	Screw Type
1	Silver	6.0 ± 0.5 kgf-cm	86.SPZD1.003	

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



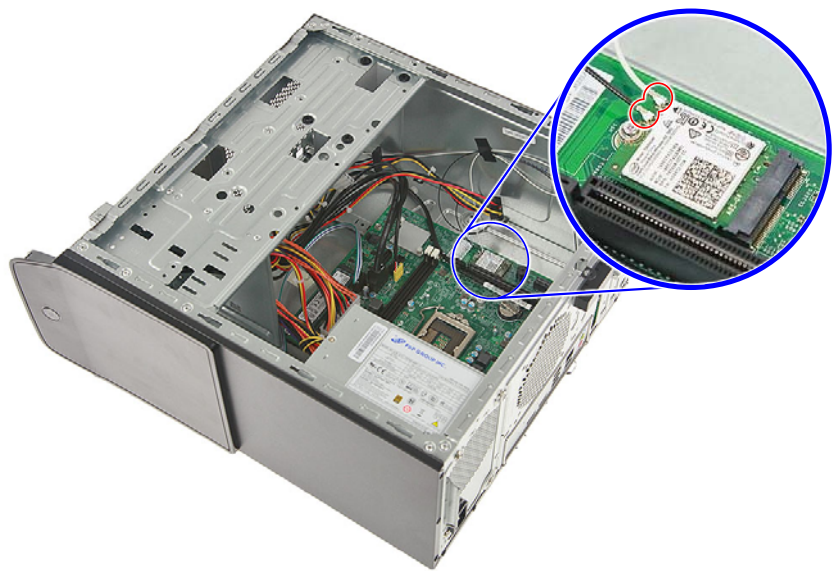
3. Remove the PCIe x16 expansion board from its slot.



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.

Removing the WLAN Module

- 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.

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



Quantity	Color	Torque	Part Number	Screw Type
1	Silver	1.5 ± 0.3 kgf-cm	86.NBY01.003	

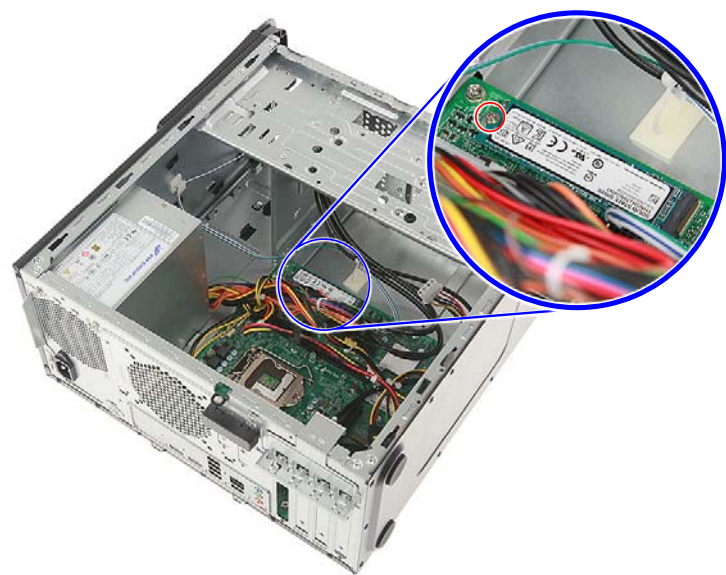
3. Remove the WLAN module from the mainboard.



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.

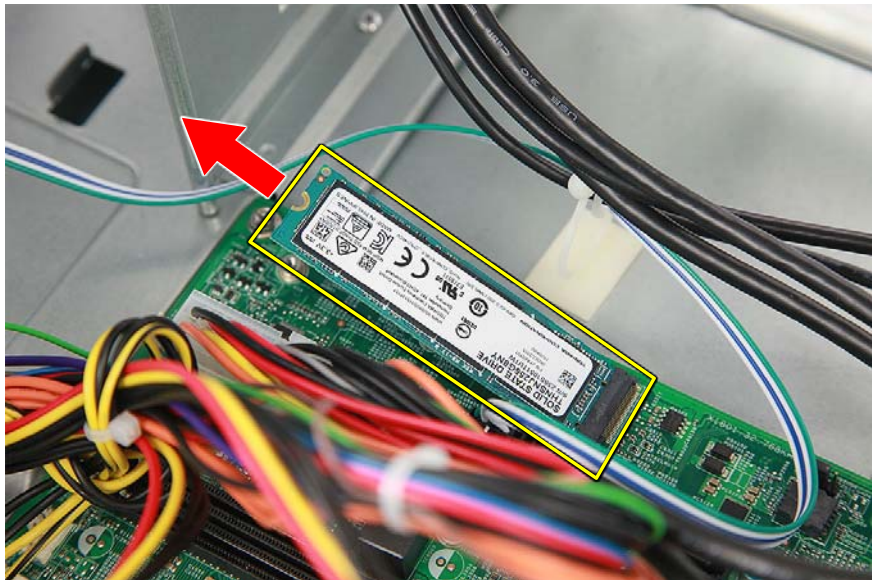
Removing the SSD Module

- 1. Remove the screw securing the SSD module to the mainboard.



Quantity	Color	Torque	Part Number	Screw Type
1	Silver	1.5 ± 0.3 kgf-cm	86.NBY01.003	

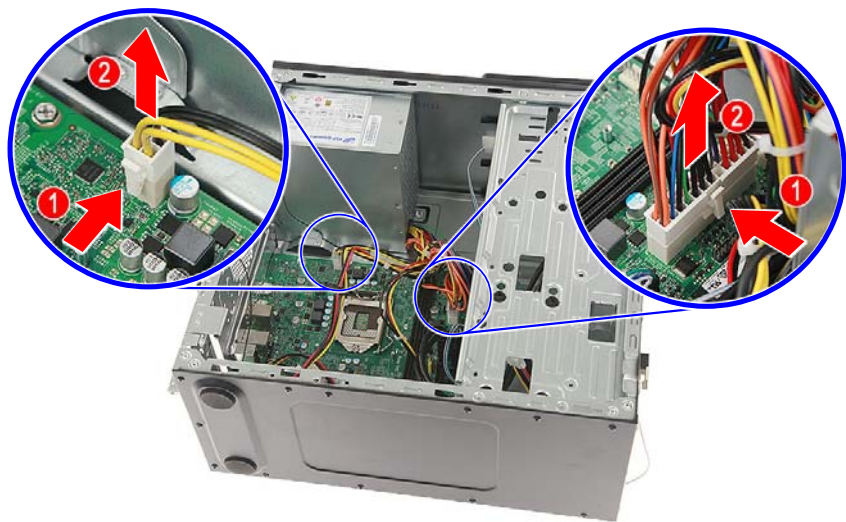
- 2. Remove the SSD module from the mainboard.



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.

Removing the Power Supply Module

- 1. Disconnect the power supply cables from the mainboard.



- 2. Remove the four screws securing the rear end of the power supply module to the chassis.



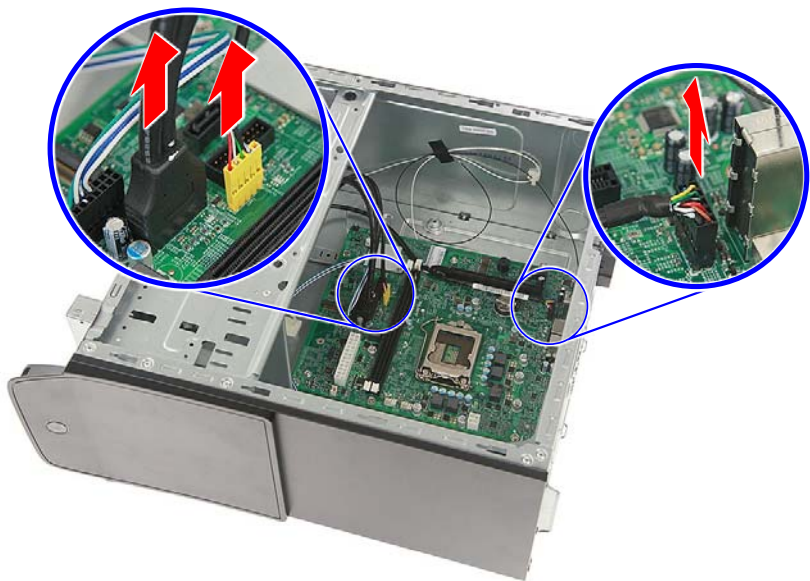
Quantity	Color	Torque	Part Number	Screw Type
4	Silver	6.0 ± 0.5 kgf-cm	86.SPZD1.003	

-
3. Pull the power supply module out of the chassis.



Removing the Front I/O and Card Reader Assembly

- 1. Disconnect the front I/O board and card reader board cables from the mainboard.



- 2. Remove the screw securing the front I/O and card reader bracket to the chassis.



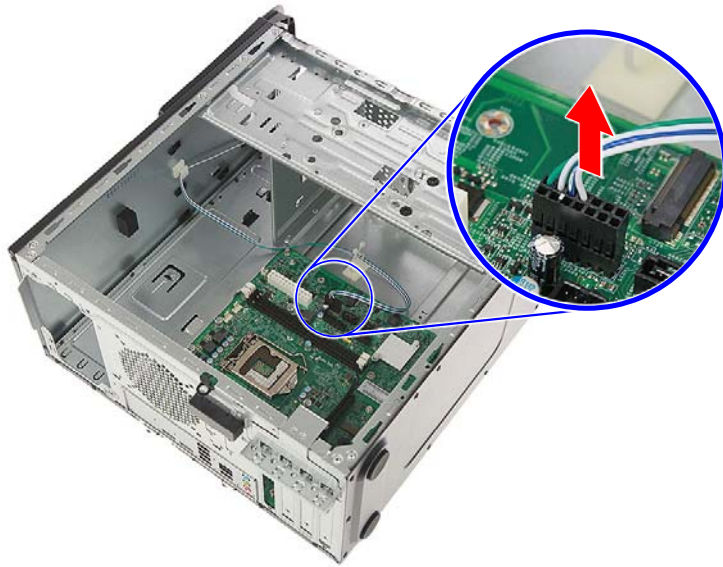
Quantity	Color	Torque	Part Number	Screw Type
1	Silver	6.0 ± 0.5 kgf-cm	86.SPZD1.003	

-
3. Pull the bracket with the cables out of the chassis.

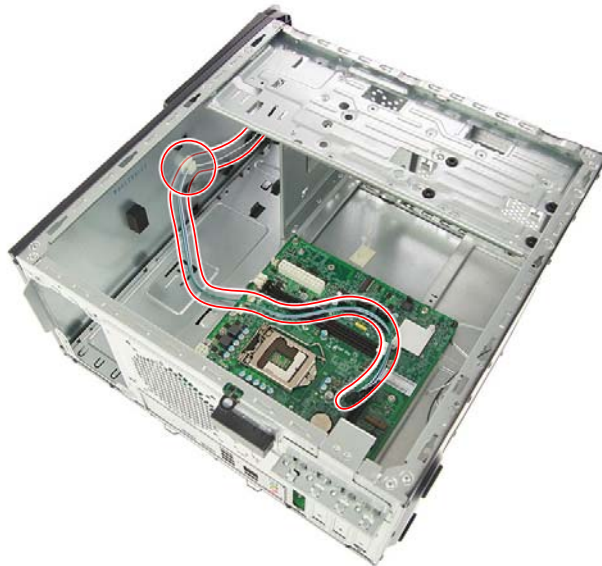


Removing the Power Button Module

1. Disconnect the power button and LED cable from the mainboard.



2. Release the power button cable from the plastic clip securing it to the chassis.



-
3. Slide the top cover to disengage the latches securing it to the chassis, then remove the top cover.

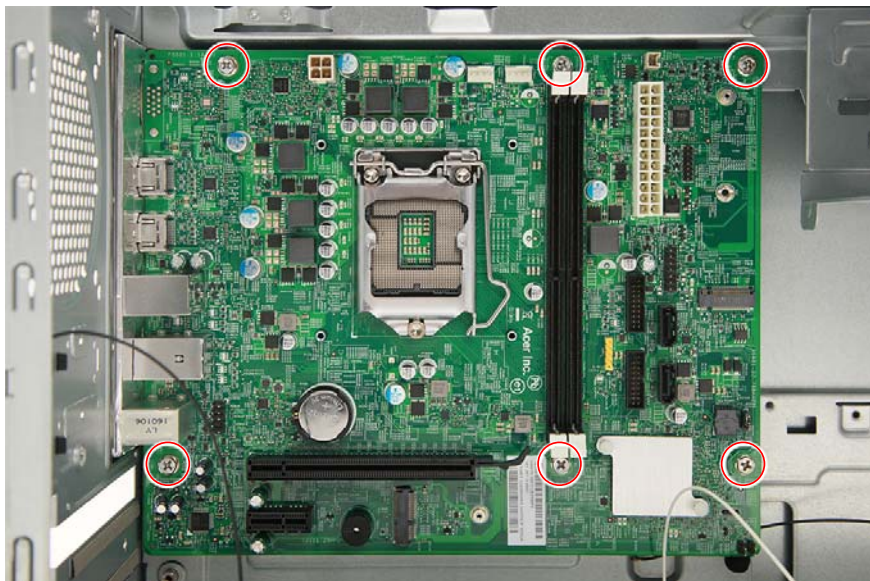


4. Pull the power button cable out of the chassis.



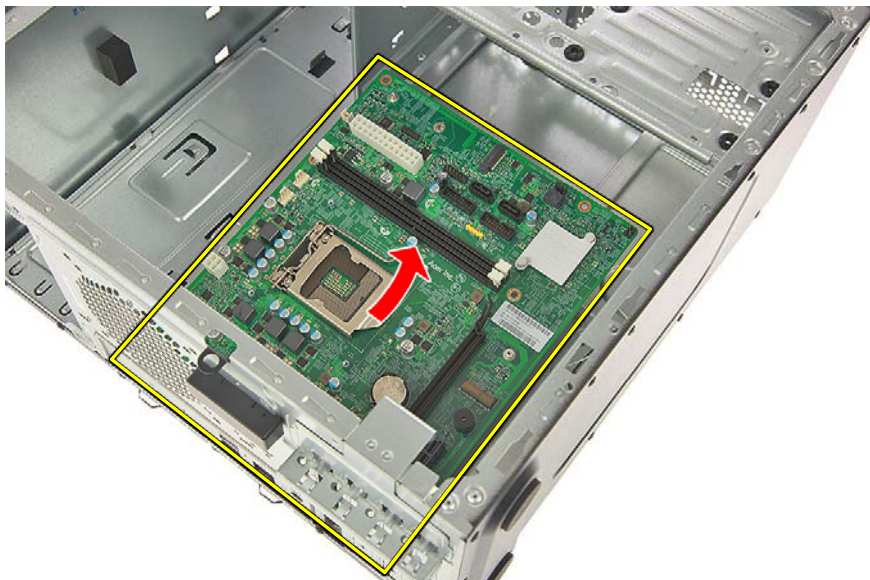
Removing the Mainboard

- 1. Remove the six screws securing the mainboard to the chassis.



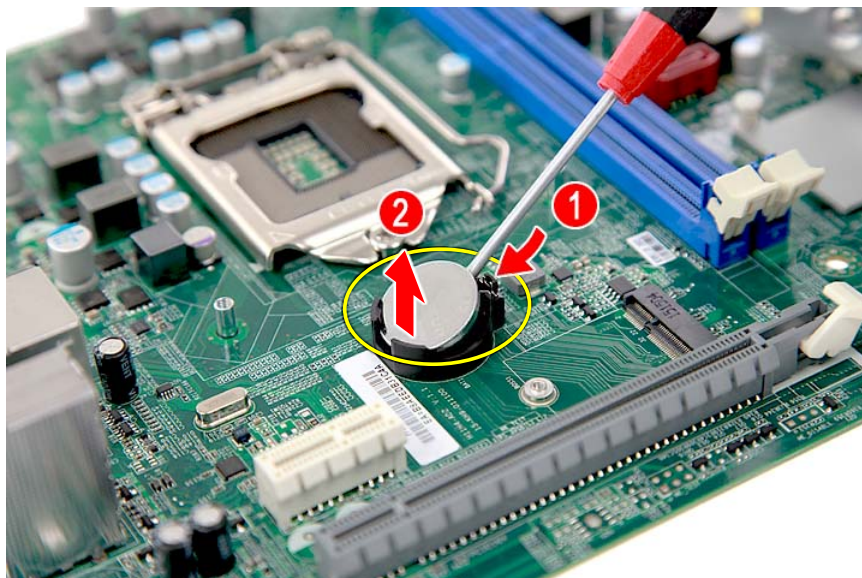
Quantity	Color	Torque	Part Number	Screw Type
6	Silver	6.0 ± 0.5 kgf-cm	86.SPZD1.003	

- 2. 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.

-
3. 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.

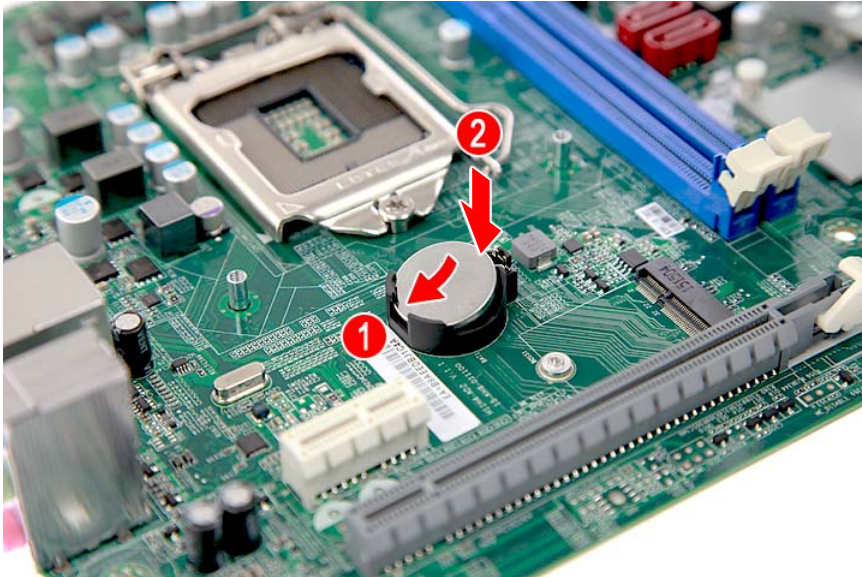


Caution: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

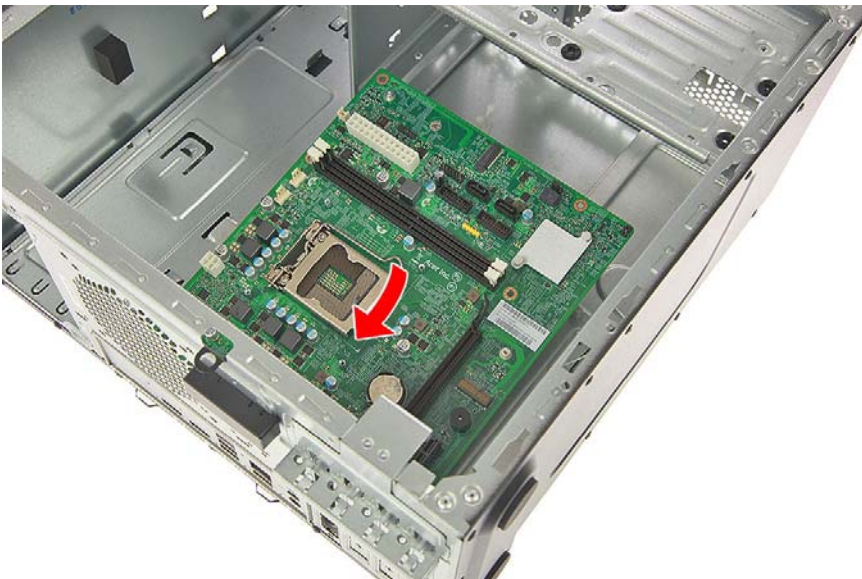
Reassembly Procedures

Reinstalling the Mainboard

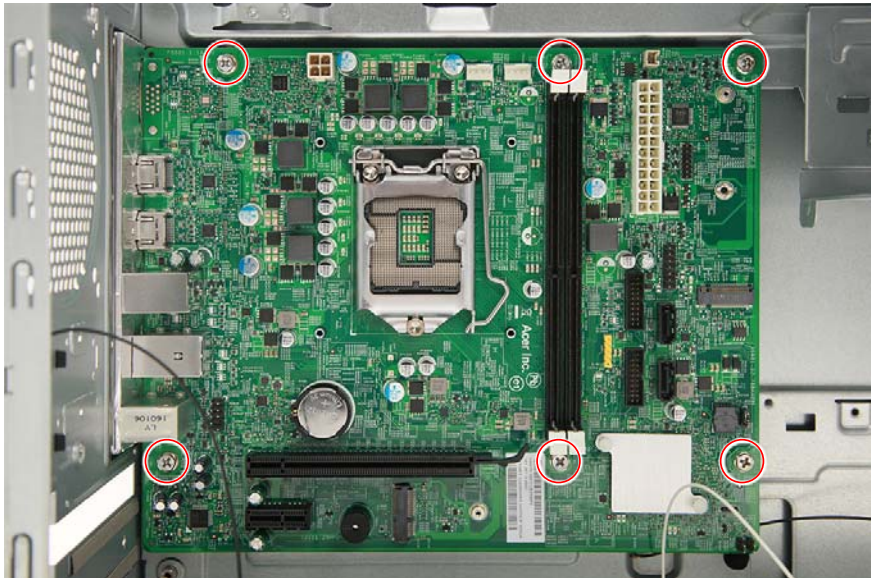
1. Slide the RTC battery into its socket in the mainboard (1) then push it down (2) until it latches into place.



2. Slide the mainboard into the chassis, with the I/O ports of the mainboard extruding from their port holes, then lower the mainboard in place.



3. Secure the mainboard to the chassis using six screws.



Quantity	Color	Torque	Part Number	Screw Type
6	Silver	6.0 ± 0.5 kgf-cm	86.SPZD1.003	

Reinstalling the Power Button Module

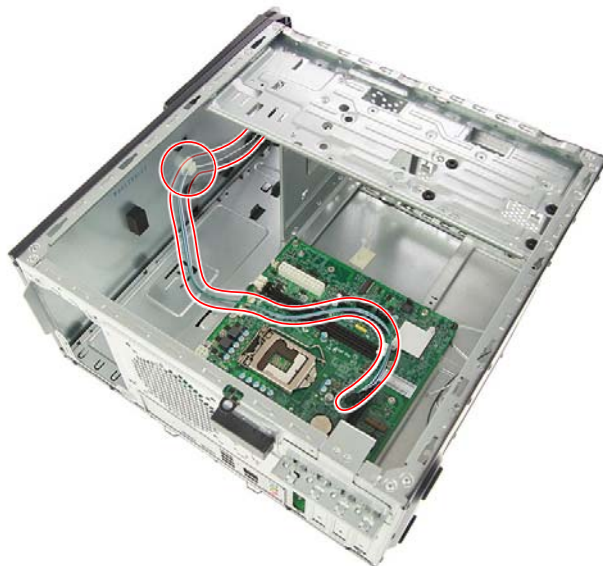
1. Insert the power button cable into the chassis.



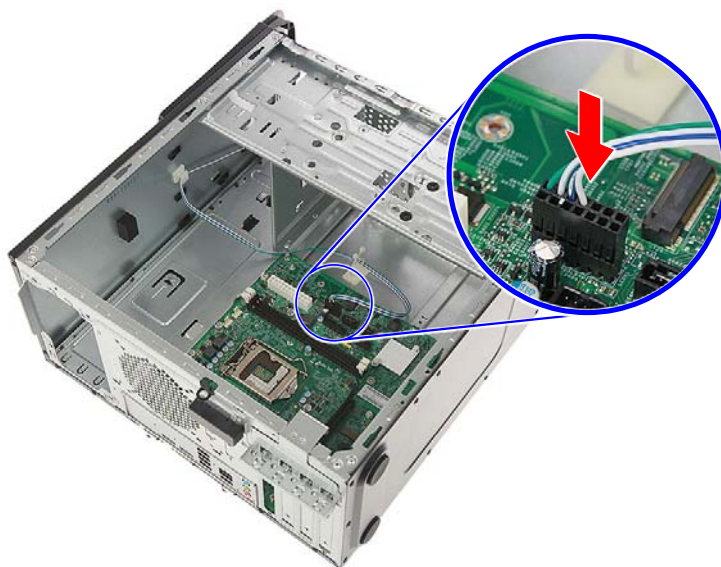
2. Place the top cover into its socket in the chassis and push until it latches into place.



-
3. Use the plastic clip to secure the power button cable to the chassis.



4. Connect the power button and LED cable to the mainboard.



Reinstalling the Front I/O and Card Reader Assembly

- 1. Insert the cables and place the front I/O and card reader assembly in its socket.

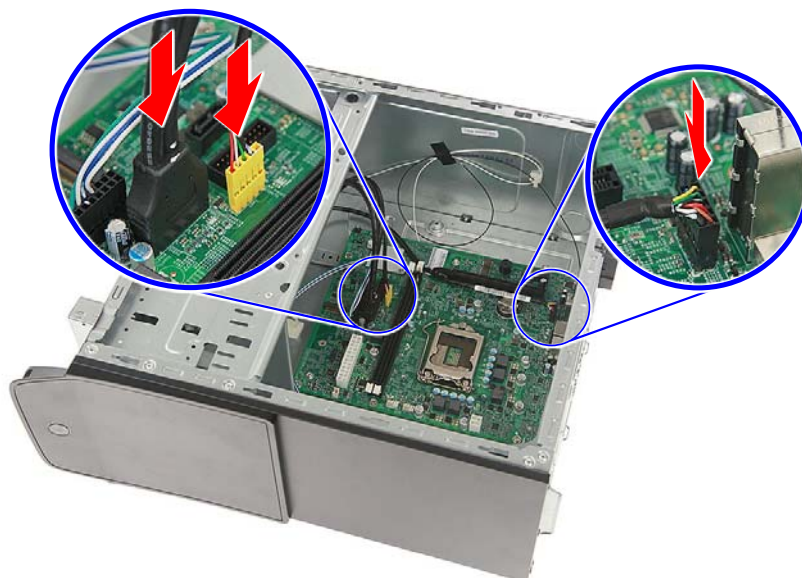


- 2. Secure the front I/O and card reader bracket to the chassis using one screw.



Quantity	Color	Torque	Part Number	Screw Type
1	Silver	6.0 ± 0.5 kgf-cm	86.SPZD1.003	

-
3. Connect the front I/O and card reader board cables to the mainboard.

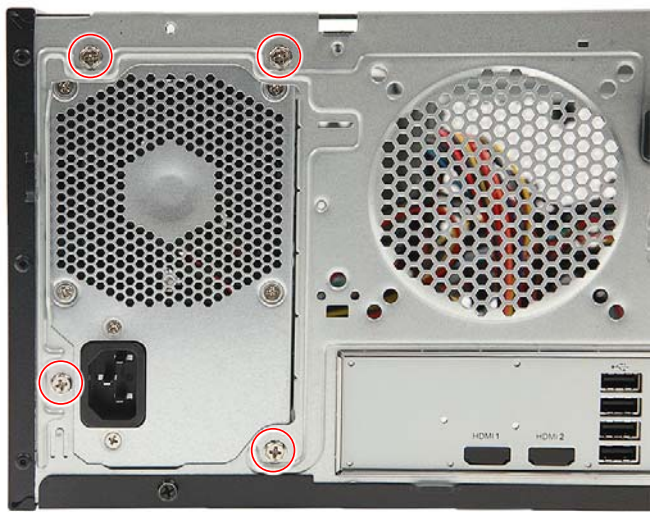


Reinstalling the Power Supply Module

- 1. Slide the power supply module into its socket in the chassis.

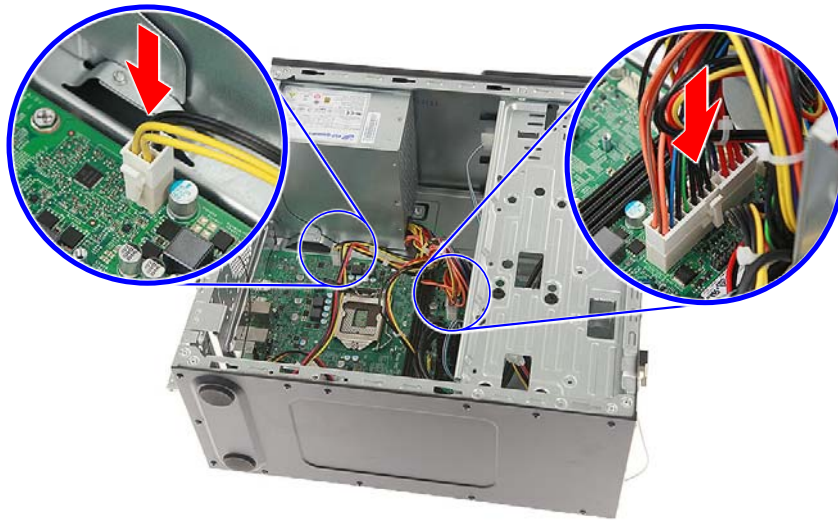


- 2. Secure the rear end of the power supply module to the chassis using four screws.



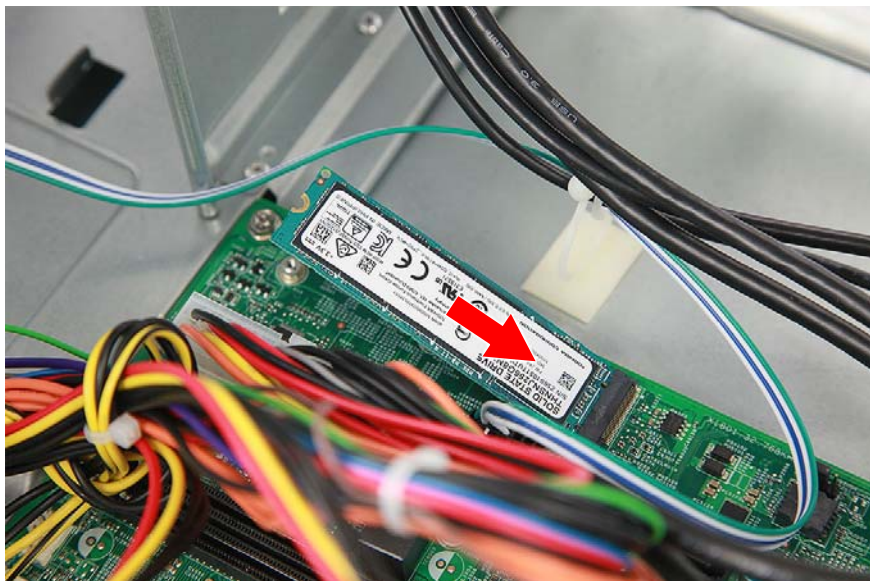
Quantity	Color	Torque	Part Number	Screw Type
4	Silver	6.0 ± 0.5 kgf-cm	86.SPZD1.003	

-
3. Connect the power supply cables to the mainboard.

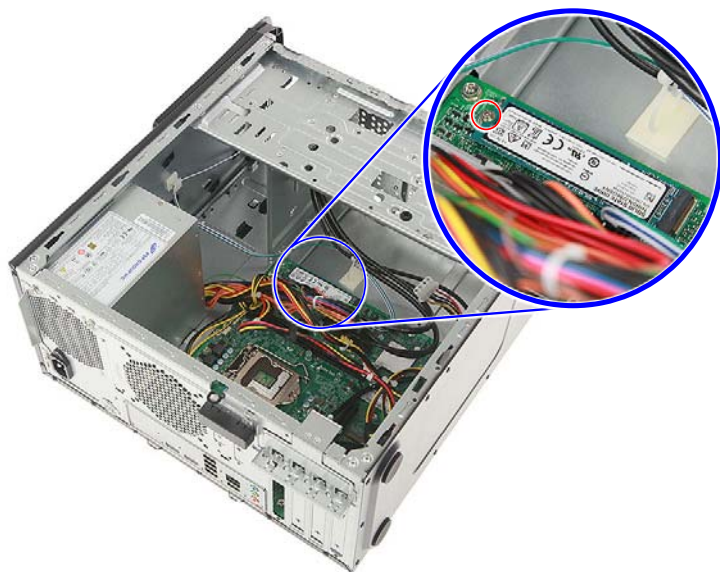


Reinstalling the SSD Module

- 1. Insert the SSD module into the mainboard.



- 2. Secure the SSD module to the mainboard using one screw.



Quantity	Color	Torque	Part Number	Screw Type
1	Silver	1.5 ± 0.3 kgf-cm	86.NBY01.003	

Reinstalling the WLAN Module

- 1. Insert the WLAN module into the mainboard.

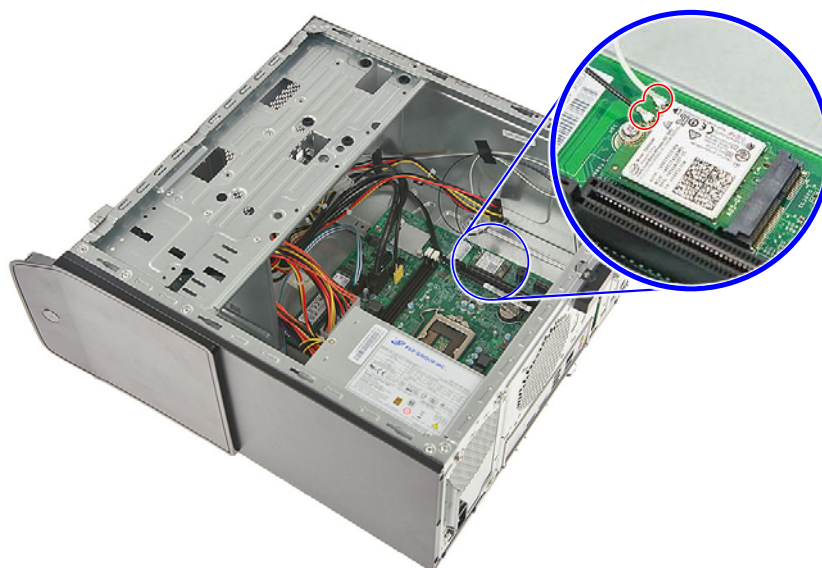


- 2. Secure the WLAN module to the mainboard using one screw.



Quantity	Color	Torque	Part Number	Screw Type
1	Silver	1.5 ± 0.3 kgf-cm	86.NBY01.003	

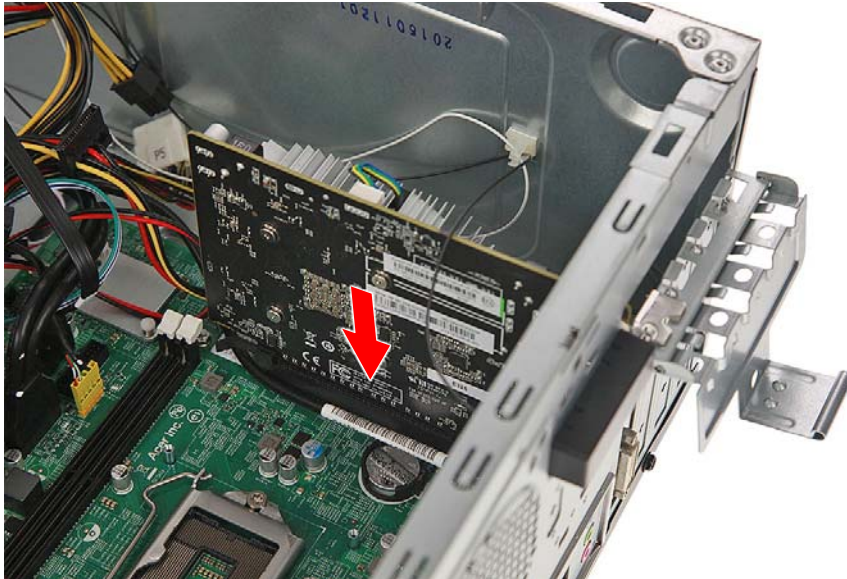
-
3. Connect the WLAN antenna cables to the WLAN module.



NOTE: Refer to your machine disassembly note to determine which cable color corresponds to the main and auxiliary connectors.

Reinstalling the Expansion Board

1. Insert the PCIe x16 expansion board into its slot, then press it down until it latches into place.



2. Press the metal clip securing the expansion board bracket to the chassis until it latches into place.



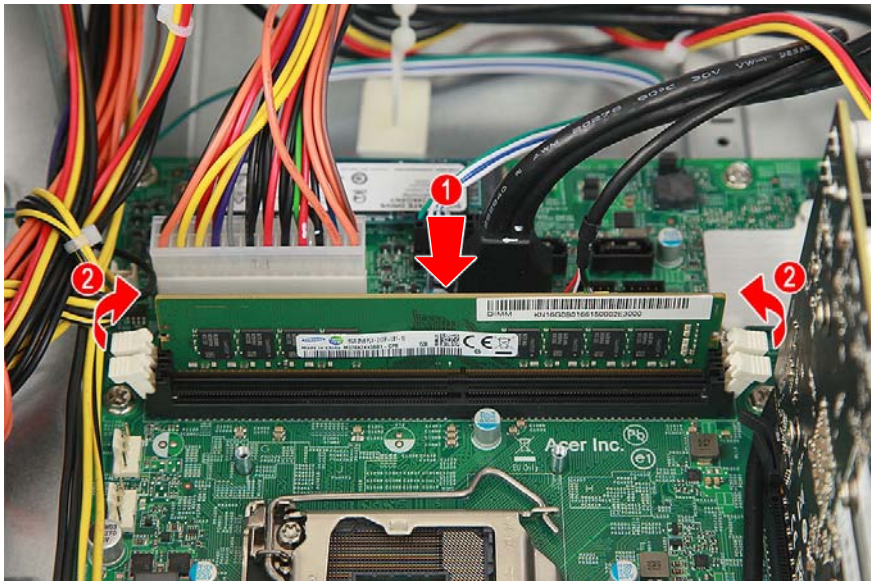
3. Secure the expansion board bracket to the chassis using one screw.



Quantity	Color	Torque	Part Number	Screw Type
1	Silver	6.0 ± 0.5 kgf-cm	86.SPZD1.003	

Reinstalling the Memory Modules

- 1. Insert the memory module into the DIMM slot (1) then press it down until it latches into place (2).



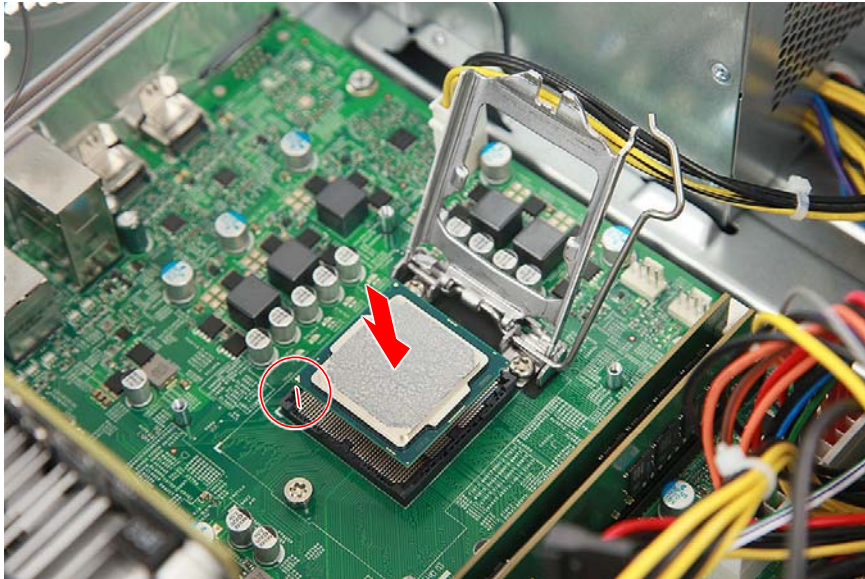
- 2. Repeat Step 1 to install the remaining memory module.

IMPORTANT When installing DIMM modules, populate the DIMM slots according to the table below:

Size	DIMM1	DIMM2
2G	N/A	2G
4G	2G	2G
4G	N/A	4G
6G	2G	4G
8G	4G	4G
8G	N/A	8G
10G	2G	8G
12G	4G	8G
16G	8G	8G
18G	2G	16G
20G	4G	16G
24G	8G	16G
32G	16G	16G

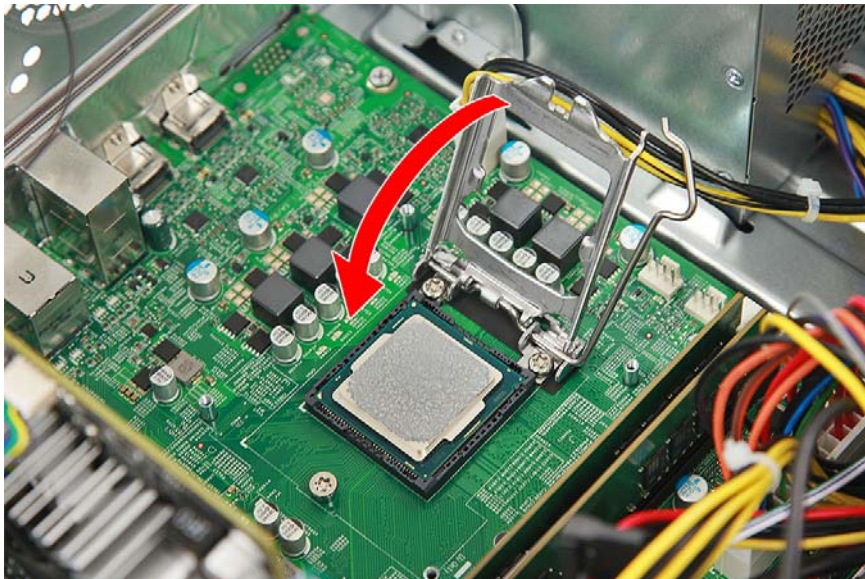
Reinstalling the Processor

1. Place the processor into its socket.

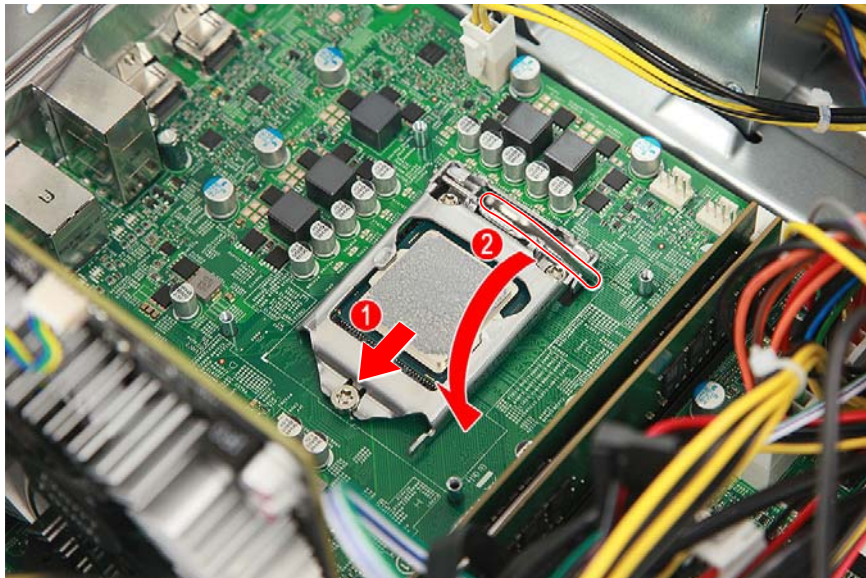


NOTE: Make sure the gold arrow on the corner of the processor is aligned with the beveled corner of the socket. The processor will easily fit into the socket if it is properly oriented.

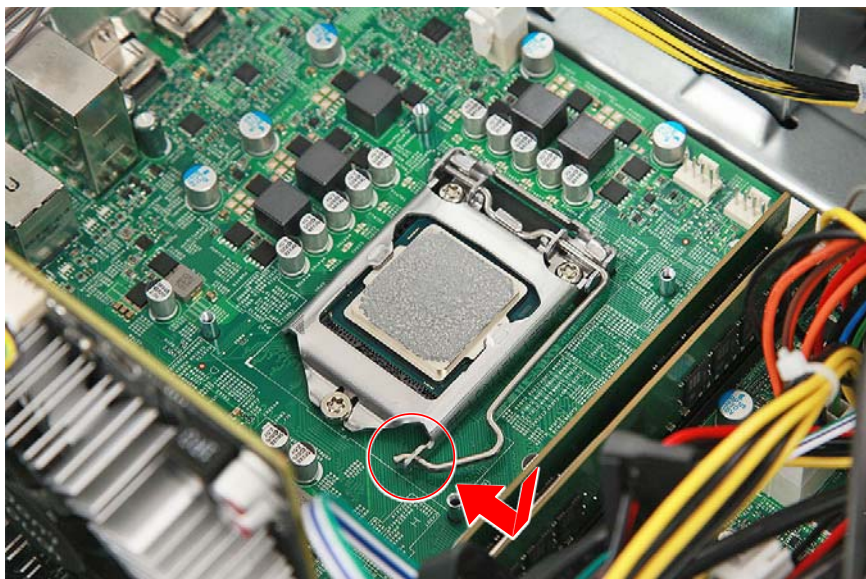
2. Replace the CPU cover plate.



3. Pull down the load lever, making sure the cover plate latch into the retaining post.

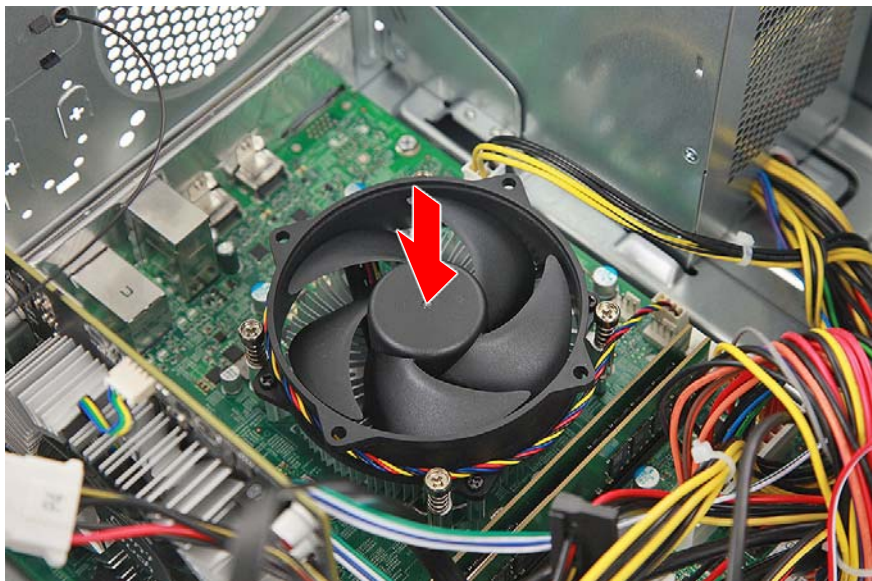


4. Slide the load lever to the left until it latches into the retention tab.



Reinstalling the Thermal Module

- 1. Place the thermal module into the mainboard.

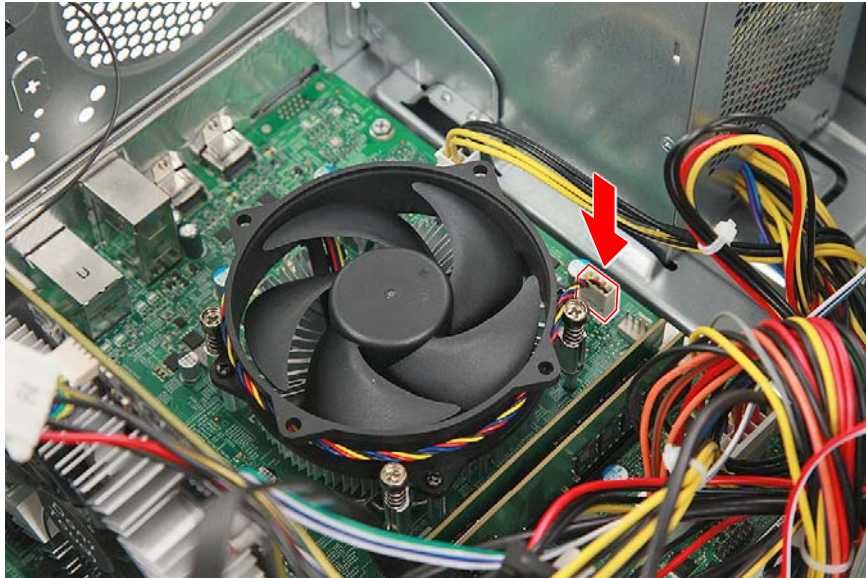


- 2. Tighten the four captive screws to secure the thermal module to the mainboard.



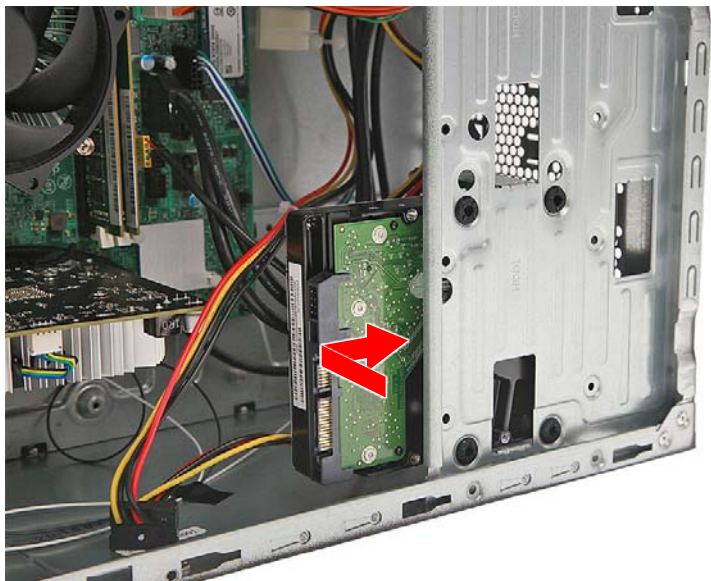
Quantity	Color	Torque	Part Number	Screw Type
4	Silver	6.0 ± 0.5 kgf-cm	Thermal Screws	N/A

-
3. Connect the thermal module fan cable to the mainboard.

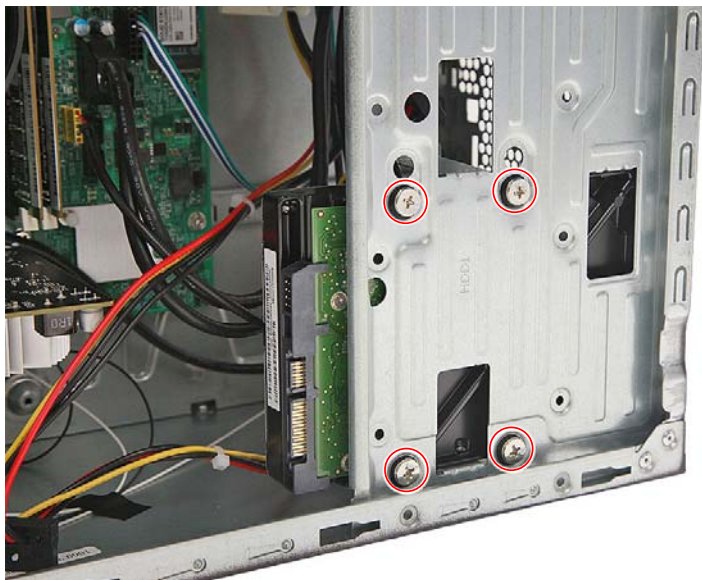


Reinstalling the HDD Module

- 1. Slide the HDD module into the chassis.

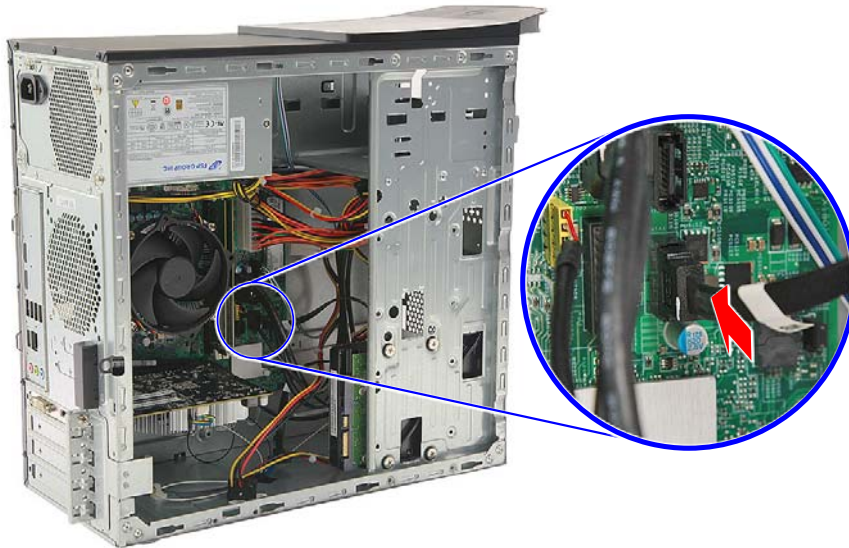


- 2. Secure the HDD module to the chassis using four screws.

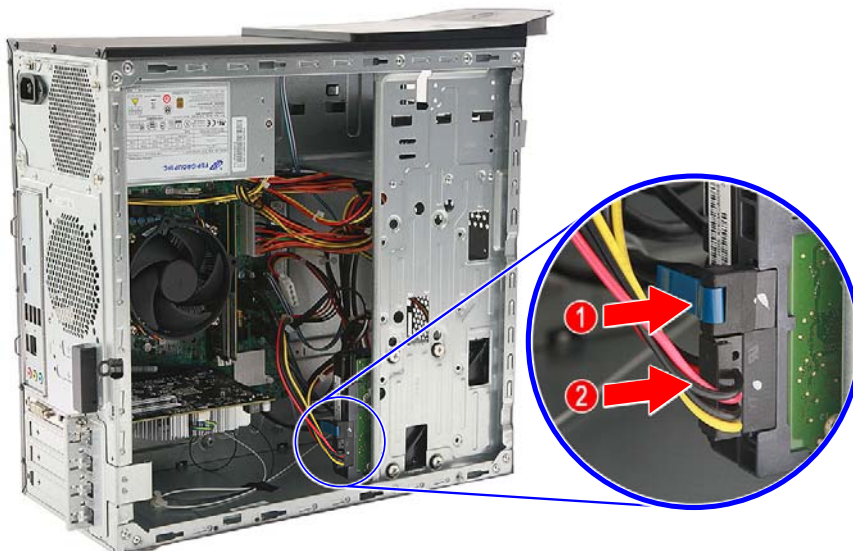


Quantity	Color	Torque	Part Number	Screw Type
4	Silver	6.0 ± 0.5 kgf-cm	86.SXHD1.001	

-
3. Connect the HDD data cable to the mainboard.

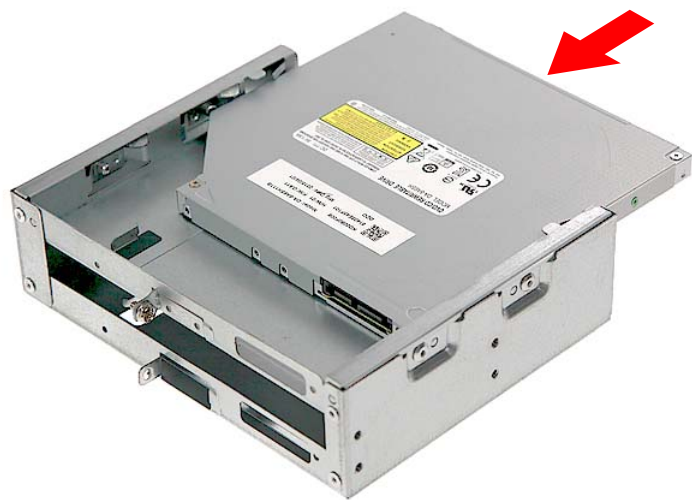


4. Connect the data and power cables to the HDD module.



Reinstalling the ODD Module

- 1. Place the ODD into the ODD bracket.



- 2. Secure the ODD to the ODD bracket using two screws.



Quantity	Color	Torque	Part Number	Screw Type
2	Silver	1.5 ± 0.3 kgf-cm	86.SXLD1.001	

3. Slide the ODD module into the chassis.

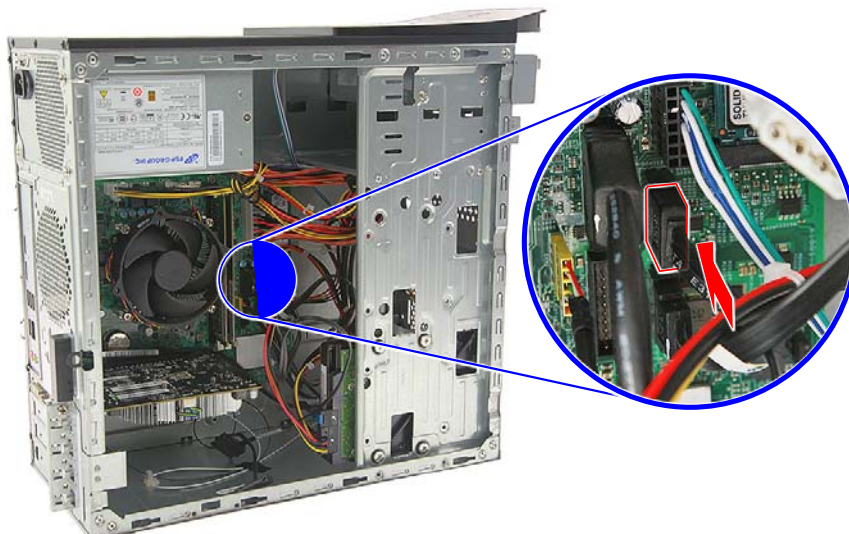


4. Secure the ODD module to the chassis using two screws.

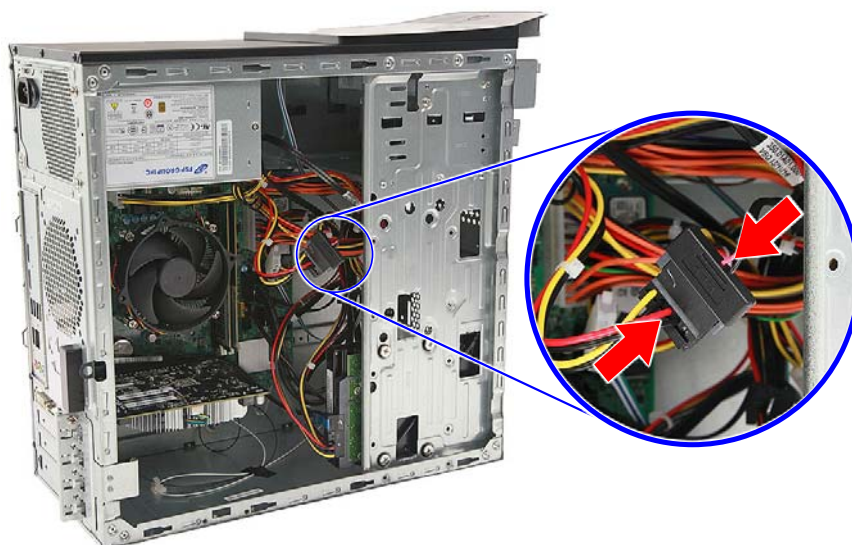


Quantity	Color	Torque	Part Number	Screw Type
2	Silver	6.0 ± 0.5 kgf-cm	86.B1HD1.001	

-
5. Connect the ODD data cable to the mainboard.



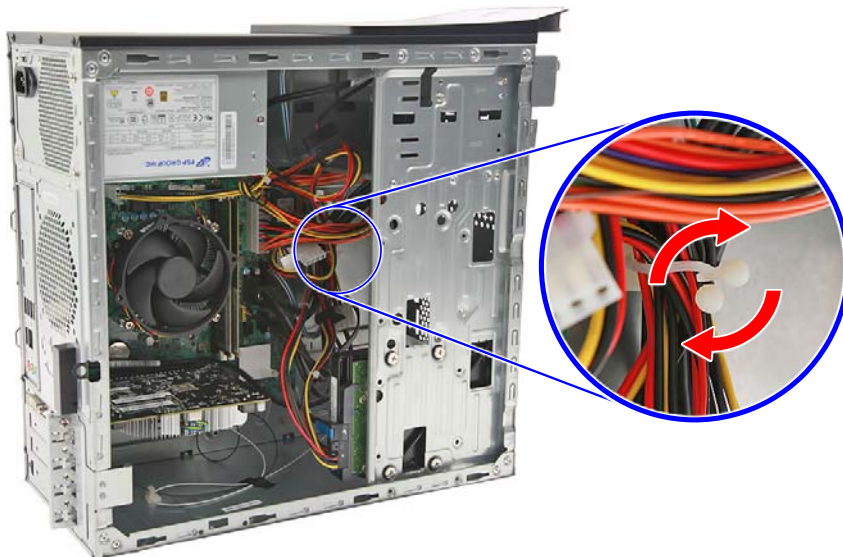
6. Connect the power and data combo cable to the power supply cable.



-
7. Connect the power and data combo cable to the ODD module.

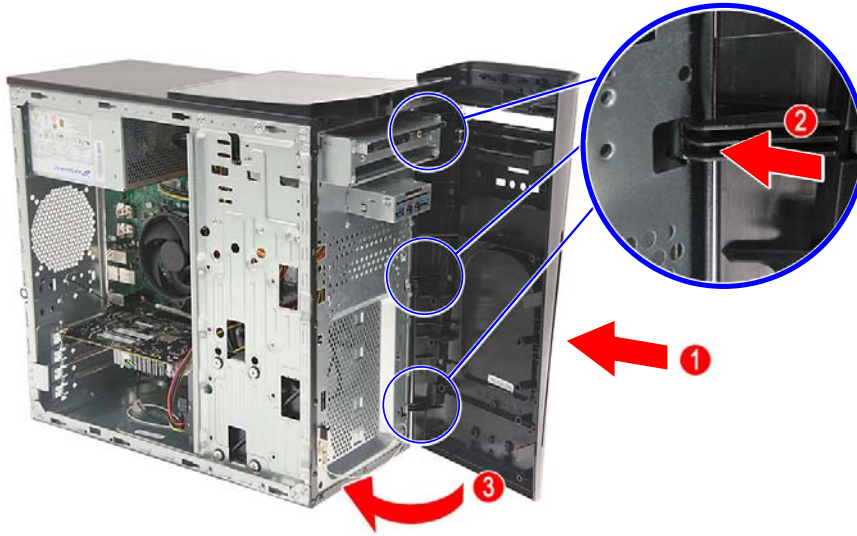


8. Use the twist wire tie to secure all the cables to the chassis.



Reinstalling the Front Bezel

1. Insert the tabs on the front bezel into the notches on the right side of the chassis, then rotate the front bezel in the direction indicated.



2. Push the front bezel until the retention tabs latch into place and are securely fastened to the chassis interior.



-
3. Force eject the ODD tray by inserting a thin metal object into the ODD emergency eject hole.



4. Place the bezel into the ODD tray (1), then press until the latches lock into place (2).

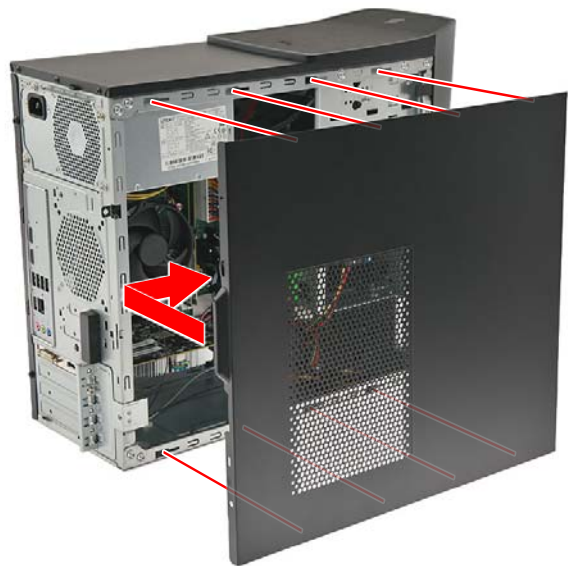


-
5. Push back the ODD module into its slot until it latches into place.



Reinstalling the Side Panel

- 1. Slide the side panel toward the front of the chassis until the tabs on the side panel engage with the slots on the chassis.



- 2. Secure the side panel to the chassis using two screws.



Quantity	Color	Torque	Part Number	Screw Type
2	Black	6.0 ± 0.5 kgf-cm	86.SR2D1.001	

Troubleshooting

This chapter provides instructions on how to troubleshoot system hardware problems.

Hardware Diagnostic Procedure

IMPORTANT The diagnostic tests described in this chapter are only intended to test Acer products. Non-Acer products, prototype cards, or modified options can give false errors and invalid system responses.

1. Obtain the failing symptoms in as much detail as possible.
2. Verify the symptoms by attempting to recreate the failure by running the diagnostic tests or repeating the same operation.
3. Refer to “Power System Check” and “Beep Codes” to determine which corrective action to perform.

System Check Procedures

Power System Check

If the system can be powered on, skip this section. Proceed to the “System Internal Inspection” procedure on the next page.

If the system will not power on, do the following:

- Check if the power cable is properly connected to the AC power jack and a functional AC power source.
- Check if the voltage selector switch is set to the correct voltage setting.

System External Inspection

1. Inspect the power and LED indicators on the front panel. Go to “Front View” section on page 3 for the location and description of the LED behaviour.
2. Make sure that the ventilation slots on the rear panel are not blocked.
3. Make sure that there is no point of contact in the system that can cause a power short.
4. If the cause of the failure is still can not be determined, perform the “System Internal Inspection” procedure described on the next page.

System Internal Inspection

1. Turn off the power to the computer and all peripherals.
2. Unplug the power cord from the computer.
3. Unplug the network cable and all connected peripheral devices from the computer.
4. Place the computer on a flat, steady surface.
5. Remove the side panel as described in page 24.
6. Verify that the processor, memory module(s), and expansion board(s) are properly seated.
7. Verify that all power and data cables are firmly and properly attached to the installed drives.
8. Verify that all cable connections inside the system are firmly and properly attached to their appropriate mainboard connectors.
9. Verify that all components are Acer-qualified and supported.
10. Reinstall the side panel.
11. Power on the system.

If the cause of the failure is still can not be determined, review the POST messages and BIOS checkpoints during the system startup.

Checkpoints

A checkpoint is either a byte or word value output to I/O port 80h. The BIOS outputs checkpoints during bootblock and Power-On Self Test (POST) to indicate the task the system is currently executing. Checkpoints are very useful in aiding software developers or technicians in debugging problems that occur during the pre-boot process.

Viewing BIOS Checkpoints

Viewing all checkpoints generated by the BIOS requires a checkpoint card, also referred to as a POST card or POST diagnostic card. These are ISA or PCI add-in cards that show the value of I/O port 80h on a LED display. Checkpoints may appear on the bottom right corner of the screen during POST. This display method is limited, since it only displays checkpoints that occur after the video card has been activated.

NOTE: Please note that checkpoints may differ between different platforms based on system configuration. Checkpoints may change due to vendor requirements, system chipset or option ROMs from add-in PCI devices.

Boot Block Initialization Code Checkpoints

The boot block initialization code sets up the chipset, memory, and other components before system memory is available. The following table describes the type of checkpoints that may occur during the boot block initialization portion of the BIOS.

Checkpoint	Description
Before D1	Early chipset initialization is done. Early super I/O initialization is done including RTC and keyboard controller. NMI is disabled.
D1	Perform keyboard controller BAT test. Check if waking up from power management suspend state. Save power-on CPUID value in scratch CMOS.
D0	Go to flat mode with 4GB limit and GA20 enabled. Verify the bootblock checksum.
D2	Disable CACHE before memory detection. Execute full memory sizing module. Verify that flat mode is enabled.
D3	If memory sizing module not executed, start memory refresh and do memory sizing in bootblock code. Do additional chipset initialization. Re-enable CACHE. Verify that flat mode is enabled.
D4	Test base 512 KB memory. Adjust policies and cache first 8 MB. Set stack.
D5	Bootblock code is copied from ROM to lower system memory and control is given to it. BIOS now executes out of RAM.

Checkpoint	Description
D6	Both key sequence and OEM specific method is checked to determine if BIOS recovery is forced. Main BIOS checksum is tested. If BIOS recovery is necessary, control flows to checkpoint E0. See the "BIOS Recovery" section for more information.
D7	Restore CPUID value back into register. The Bootblock Runtime interface module is moved to system memory and control is given to it. Determine whether to execute serial flash.
D8	The Runtime module is uncompressed into memory. CPUID information is stored in memory.
D9	Store the Uncompressed pointer for future use in PMM. Copying Main BIOS into memory. Leaves all RAM below 1 MB Read-Write including E000 and F000 shadow areas but closing SMRAM.
DA	Restore CPUID value back into register. Give control to BIOS POST (ExecutePOSTKernel). See the "POST Code Checkpoints" section for more information.

Boot Block Recovery Code Checkpoints

The boot block recovery code gets control when the BIOS determines that a BIOS recovery is required because the user has forced the update or the BIOS checksum is corrupt. Refer to "BIOS Recovery" section on page 97 for more information. The following table describes the type of checkpoints that may occur during the boot block recovery portion of the BIOS.

Checkpoint	Description
E0	Initialize the floppy controller in the super I/O. Some interrupt vectors are initialized. DMA controller is initialized. 8259 interrupt controller is initialized. L1 cache is enabled.
E9	Set up floppy controller and data. Attempt to read from floppy.
EA	Enable ATAPI hardware. Attempt to read from ARMD and ATAPI CDROM.
EB	Disable ATAPI hardware. Jump back to checkpoint E9.
EF	Read error occurred on media. Jump back to checkpoint EB.
E9 or EA	Determine information about root directory of recovery media.
F0	Search for pre-defined recovery file name in root directory.
F1	Recovery file not found.
F2	Start reading FAT table and analyze FAT to find the clusters occupied by the recovery file.
F3	Start reading the recovery file cluster by cluster.
F5	Disable L1 cache.
FA	Check the validity of the recovery file configuration to the current configuration of the flash part.
FB	Make flash write enabled through chipset and OEM specific method. Detect proper flash part. Verify that the found flash part size equals the recovery file size.
F4	The recovery file size does not equal the found flash part size.
FC	Erase the flash part.
FD	Program the flash part.
FF	The flash has been updated successfully. Make flash write disabled. Disable ATAPI hardware. Restore CPUID value back into register. Give control to F000 ROM at F000:FFF0h.

POST Code Checkpoints

The POST code checkpoints are the largest set of checkpoints during the BIOS preboot process. The following table describes the type of checkpoints that may occur during the POST portion of the BIOS.

Checkpoint	Description
03	Disable NMI, Parity, video for EGA, and DMA controllers. Initialize BIOS, POST, Runtime data area. Also initialize BIOS modules on POST entry and GPNV area. Initialize CMOS as mentioned in the Kernel Variable "wCMOSFlags."
04	Check CMOS diagnostic byte to determine if battery power is OK and CMOS checksum is OK. Verify CMOS checksum manually by reading storage area. If the CMOS checksum is bad, update CMOS with power-on default values and clear passwords. Initialize status register A. Initializes data variables that are based on CMOS setup questions. Initializes both the 8259 compatible PICs in the system
05	Initializes the interrupt controlling hardware (generally PIC) and interrupt vector table.
06	Do R/W test to CH-2 count reg. Initialize CH-0 as system timer. Install the POSTINT1Ch handler. Enable IRQ-0 in PIC for system timer interrupt. Traps INT1Ch vector to "POSTINT1ChHandlerBlock."
08	Initializes the CPU. The BAT test is being done on KBC. Program the keyboard controller command byte is being done after Auto detection of KB/MS using AMI KB-5.
0A	Initializes the 8042 compatible Key Board Controller.
0B	Detects the presence of PS/2 mouse.
0C	Detects the presence of Keyboard in KBC port.
0E	Testing and initialization of different Input Devices. Also, update the Kernel Variables. Traps the INT09h vector, so that the POST INT09h handler gets control for IRQ1. Uncompress all available language, BIOS logo, and Silent logo modules.
13	Early POST initialization of chipset registers.
24	Uncompress and initialize any platform specific BIOS modules. GPNV is initialized at this checkpoint.
30	Initialize System Management Interrupt.
2A	Initializes different devices through DIM. See DIM Code Checkpoints section for more information.
2C	Initializes different devices. Detects and initializes the video adapter installed in the system that have optional ROMs.
2E	Initializes all the output devices.
31	Allocate memory for ADM module and uncompress it. Give control to ADM module for initialization. Initialize language and font modules for ADM. Activate ADM module.
33	Initializes the silent boot module. Set the window for displaying text information.
37	Displaying sign-on message, CPU information, setup key message, and any OEM specific information.
38	Initializes different devices through DIM. See DIM Code Checkpoints section for more information. USB controllers are initialized at this point.
39	Initializes DMAC-1 & DMAC-2.
3A	Initialize RTC date/time.
3B	Test for total memory installed in the system. Also, Check for DEL or ESC keys to limit memory test. Display total memory in the system.
3C	Mid POST initialization of chipset registers.
40	Detect different devices (Parallel ports, serial ports, and coprocessor in CPU, ... etc.) successfully installed in the system and update the BDA, EBDA...etc.

Checkpoint	Description
50	Programming the memory hole or any kind of implementation that needs an adjustment in system RAM size if needed.
52	Updates CMOS memory size from memory found in memory test. Allocates memory for Extended BIOS Data Area from base memory. Programming the memory hole or any kind of implementation that needs an adjustment in system RAM size if needed.
60	Initializes Num-Lock status and programs the KBD typematic rate.
75	Initialize Int-13 and prepare for IPL detection.
78	Initializes IPL devices controlled by BIOS and option ROMs.
7A	Initializes remaining option ROMs.
7C	Generate and write contents of ESCD in NVRam.
84	Log errors encountered during POST.
85	Display errors to the user and gets the user response for error.
87	Execute BIOS setup if needed / requested. Check boot password if installed.
8C	Late POST initialization of chipset registers.
8E	Program the peripheral parameters. Enable/Disable NMI as selected.
90	Late POST initialization of system management interrupt.
A0	Check boot password if installed.
A1	Clean-up work needed before booting to OS.
A2	Takes care of runtime image preparation for different BIOS modules. Fill the free area in F000h segment with 0FFh. Initializes the Microsoft IRQ Routing Table. Prepares the runtime language module. Disables the system configuration display if needed.
A4	Initialize runtime language module. Display boot option popup menu.
A7	Displays the system configuration screen if enabled. Initialize the CPU's before boot, which includes the programming of the MTRR's.
A8	Prepare CPU for OS boot including final MTRR values.
A9	Wait for user input at config display if needed.
AA	Uninstall POST INT1Ch vector and INT09h vector. Deinitializes the ADM module.
AB	Prepare BBS for Int 19 boot.
AC	End of POST initialization of chipset registers.
B1	Save system context for ACPI.
00	Passes control to OS Loader (typically INT19h).

DIM Code Checkpoints

The Device Initialization Manager (DIM) gets control at various times during BIOS POST to initialize different system busses. The following table describes the main checkpoints where the DIM module is accessed.

Checkpoint	Description
2A	Initialize different buses and perform the following functions: Reset, Detect, and Disable (function 0); Static Device Initialization (function 1); Boot Output Device Initialization (function 2). Function 0 disables all device nodes, PCI devices, and PnP ISA cards. It also assigns PCI bus numbers. Function 1 initializes all static devices that include manual configured onboard peripherals, memory and I/O decode windows in PCI-PCI bridges, and noncompliant PCI devices. Static resources are also reserved. Function 2 searches for and initializes any PnP, PCI, or AGP video devices.
38	Initialize different buses and perform the following functions: Boot Input Device Initialization (function 3); IPL Device Initialization (function 4); General Device Initialization (function 5). Function 3 searches for and configures PCI input devices and detects if system has standard keyboard controller. Function 4 searches for and configures all PnP and PCI boot devices. Function 5 configures all onboard peripherals that are set to an automatic configuration and configures all remaining PnP and PCI devices.

POST Error Indicators

When a system error is detected during POST (Power On Self Test), the Setup utility will switch to diagnostic mode and will either:

- Displays a POST error message, or
- Emits a series of beep codes

POST Error Messages

POST error messages tell users what failure the system has detected. Some error messages could be related to a hardware device. Others may indicate a problem with a device configuration. In some cases an error message may include recommendations for troubleshooting or require that you press the **Enter** key to display recommendations. Follow the instructions on the screen. It is recommended that you correct the error before proceeding, even if the computer appears to boot successfully.

IMPORTANT: If your system fails after you make changes in the Setup menus, reboot the computer, enter Setup again and load Setup defaults to correct the error.

Memory

Message	Description
Gate20 Error	The BIOS is unable to properly control the mainboard's Gate A20 function, which controls access of memory over 1 MB. This may indicate a problem with the mainboard.
Multi-Bit ECC Error	This message will only occur on systems using ECC enabled memory modules. ECC memory has the ability to correct single-bit errors that may occur from faulty memory modules. A multiple bit corruption of memory has occurred, and the ECC memory algorithm cannot correct it. This may indicate a defective memory module.
Parity Error	Fatal Memory Parity Error. System halts after displaying this message.
RAM R/W test failed	This message is displayed by the AMIBIOS8 when the RAM read/write test fails.
CMOS Memory Size Wrong	The base memory (memory below 1MB) size that is reported in the CMOS (offset 15h) mismatches with the actual size detected. This condition may occur when the hole is set at 512K base memory or when CMOS is corrupted.

Boot

Message	Description
Boot Failure...	This is a generic message indicating the BIOS could not boot from a particular device. This message is usually followed by other information concerning the device.
Invalid Boot Diskette	A diskette was found in the drive, but it is not configured as a bootable diskette.
Drive Not Ready	The BIOS was unable to access the drive because it indicated it was not ready for data transfer. This is often reported by drives when no media is present.
A: Drive Error	The BIOS attempted to configure the A: drive during POST, but was unable to properly configure the device. This may be due to a bad cable or faulty diskette drive.
B: Drive Error	The BIOS attempted to configure the B: drive during POST, but was unable to properly configure the device. This may be due to a bad cable or faulty diskette drive.
Insert BOOT diskette in A:	The BIOS attempted to boot from the A: drive, but could not find a proper boot diskette. Reboot and Select proper Boot device or Insert Boot Media in selected Boot device BIOS could not find a bootable device in the system and/or removable media drive does not contain media.
Reboot and select proper boot device or Insert boot media in selected boot device	BIOS could not find a bootable device in the system and/or removable media drive does not contain media.
NO ROM BASIC	This message occurs on some systems when no bootable device can be detected.

Storage Device

Message	Description
Primary Master Hard Disk Error	The IDE/ATAPI device configured as Primary Master could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
Primary Slave Hard Disk Error	The IDE/ATAPI device configured as Primary Slave could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
Secondary Master Hard Disk Error	The IDE/ATAPI device configured as Secondary Master could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.

Message	Description
Secondary Slave Hard Disk Error	The IDE/ATAPI device configured as Secondary Slave could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
3rd Master Hard Disk Error	The IDE/ATAPI device configured as Master in the 3rd IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
3rd Slave Hard Disk Error	The IDE/ATAPI device configured as Slave in the 3rd IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
4th Master Hard Disk Error	The IDE/ATAPI device configured as Master in the 4th IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
4th Slave Hard Disk Error	The IDE/ATAPI device configured as Slave in the 4th IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
5th Master Hard Disk Error	The IDE/ATAPI device configured as Master in the 5th IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
5th Slave Hard Disk Error	The IDE/ATAPI device configured as Slave in the 5th IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
6th Master Hard Disk Error	The IDE/ATAPI device configured as Master in the 6th IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
6th Slave Hard Disk Error	The IDE/ATAPI device configured as Slave in the 6th IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
Primary Master Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Primary Master failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
Primary Slave Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Primary Slave failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
Secondary Master Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Secondary Master failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
Secondary Slave Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Secondary Slave failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
3rd Master Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Master in the 3rd IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
3rd Slave Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Slave in the 3rd IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
4th Master Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Master in the 4th IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
4th Slave Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Slave in the 4th IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.

Message	Description
5th Master Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Master in the 5th IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
5th Slave Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Slave in the 5th IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
6th Master Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Master in the 6th IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
6th Slave Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Slave in the 6th IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
S.M.A.R.T. Capable but Command Failed	The BIOS tried to send a S.M.A.R.T. message to a hard disk, but the command transaction failed. This message can be reported by an ATAPI device using the S.M.A.R.T. error reporting standard. S.M.A.R.T. failure messages may indicate the need to replace the hard disk.
S.M.A.R.T. Command Failed	The BIOS tried to send a S.M.A.R.T. message to a hard disk, but the command transaction failed. This message can be reported by an ATAPI device using the S.M.A.R.T. error reporting standard. S.M.A.R.T. failure messages may indicate the need to replace the hard disk.
S.M.A.R.T. Status BAD, Backup and Replace	A S.M.A.R.T. capable hard disk sends this message when it detects an imminent failure. This message can be reported by an ATAPI device using the S.M.A.R.T. error reporting standard. S.M.A.R.T. failure messages may indicate the need to replace the hard disk.
S.M.A.R.T. Capable and Status BAD	A S.M.A.R.T. capable hard disk sends this message when it detects an imminent failure. This message can be reported by an ATAPI device using the S.M.A.R.T. error reporting standard. S.M.A.R.T. failure messages may indicate the need to replace the hard disk.

Virus-related

Message	Description
BootSector Write!!	The BIOS has detected software attempting to write to a drive's boot sector. This is flagged as possible virus activity. This message will only be displayed if Virus Detection is enabled in AMIBIOS setup.
VIRUS: Continue (Y/N)?	If the BIOS detects possible virus activity, it will prompt the user. This message will only be displayed if Virus Detection is enabled in AMIBIOS setup.

System Configuration

Message	Description
DMA-1 Error	Error initializing primary DMA controller. This is a fatal error, often indication a problem with system hardware.
DMA-2 Error	Error initializing secondary DMA controller. This is a fatal error, often indication a problem with system hardware.
DMA Controller Error	POST error while trying to initialize the DMA controller. This is a fatal error, often indication a problem with system hardware.
Checking NVRAM... Update Failed	BIOS could not write to the NVRAM block. This message appears when the FLASH part is write-protected or if there is no FLASH part (System uses a PROM or EPROM).
Microcode Error	BIOS could not find or load the CPU Microcode Update to the CPU. This message only applies to INTEL CPUs. The message is most likely to appear when a brand new CPU is installed in a mainboard with an outdated BIOS. In this case, the BIOS must be updated to include the Microcode Update for the new CPU.
NVRAM Checksum Bad, NVRAM Cleared	There was an error in while validating the NVRAM data. This causes POST to clear the NVRAM data.
Resource Conflict	More than one system device is trying to use the same non-shareable resources (Memory or I/O).
NVRAM Ignored	The NVRAM data used to store Plug'n'Play (PnP) data was not used for system configuration in POST.
NVRAM Bad	The NVRAM data used to store Plug'n'Play (PnP) data was not used for system configuration in POST due to a data error.
Static Resource Conflict	Two or more Static Devices are trying to use the same resource space (usually Memory or I/O).
PCI I/O conflict	A PCI adapter generated an I/O resource conflict when configured by BIOS POST.
PCI ROM conflict	A PCI adapter generated an I/O resource conflict when configured by BIOS POST.
PCI IRQ conflict	A PCI adapter generated an I/O resource conflict when configured by BIOS POST.
PCI IRQ routing table error	BIOS POST (DIM code) found a PCI device in the system but was unable to figure out how to route an IRQ to the device. Usually this error is causing by an incomplete description of the PCI Interrupt Routing of the system.
Timer Error	Indicates an error while programming the count register of channel 2 of the 8254 timer. This may indicate a problem with system hardware.
Refresh timer test failed	BIOS POST found that the refresh timer hardware failed to pass the Refresh Retrace Test.
Interrupt Controller-1 error	BIOS POST could not initialize the Master Interrupt Controller. This may indicate a problem with system hardware.
Interrupt Controller-2 error	BIOS POST could not initialize the Slave Interrupt Controller. This may indicate a problem with system hardware.

CMOS

Message Displayed	Description
CMOS Date/Time Not Set	The CMOS date and/or time are invalid. This error can be resolved by readjusting the system time in AMIBIOS Setup.
CMOS Battery Low	CMOS battery is low. This message usually indicates that the CMOS battery needs to be replaced. It could also appear when the user intentionally discharges the CMOS battery.
CMOS Settings Wrong	CMOS settings are invalid. This error can be resolved by using AMIBIOS Setup.

Message Displayed	Description
CMOS Checksum Bad	CMOS contents failed the Checksum check. Indicates that the CMOS data has been changed by a program other than the BIOS or that the CMOS is not retaining its data due to malfunction. This error can typically be resolved by using AMIBIOS Setup.

Miscellaneous

Message Displayed	Description
KBC BAT Test failed	Keyboard controller BAT test failed. This may indicate a problem with keyboard controller initialization.
Keyboard Error	Keyboard is not present or the hardware is not responding when the keyboard controller is initialized.
PS/2 Keyboard not found	PS/2 keyboard support is enabled in the BIOS setup but the device is not detected.
PS/2 Mouse not found	PS/2 mouse support is enabled in the BIOS setup but the device is not detected.
Keyboard/Interface Error	Keyboard controller failure. This may indicate a problem with system hardware.
Unlock Keyboard	PS/2 keyboard is locked. User needs to unlock the keyboard to continue the BIOS POST.
System Halted	The system has been halted. A reset or power cycle is required to reboot the machine. This message appears after a fatal error has been detected.
<INS> Pressed	Indicates that <INS> key is pressed during the BIOS POST. The POST will load and use default CMOS settings.
Password check failed	The password entered does not match the password set in the setup. This condition may occur for both Supervisor and User password verification.
Unknown BIOS error. Error code = 004Ah	This message is displayed when ADM module is not present in the AMIBIOS8 ROM.
Unknown BIOS error. Error code = 004Bh	This message is displayed when language module is not present in the AMIBIOS8 ROM.
Floppy Controller Failure	Error in initializing legacy Floppy Controller.

Index of Symptom-to-FRU Error Messages

To use the information in this section to diagnose a problem:

1. Find the error symptom in the left column.
2. If directed to a check procedure, replace the FRU indicated in the check procedure.
If no check procedure is indicated, the first Action/FRU item listed in the right column is the most likely cause.

NOTE: If you cannot find a symptom or an error in this list and the problem remains, see “Undetermined Problems” on page 80.

Symptom/Error	Action/FRU
Processor fan does not run but power supply fan runs.	• Ensure the system is not in power saving mode. • With the system powered on, measure the voltage of the processor fan connector. Its reading should be +12Vdc. If the reading shows normal, but the fan still does not work, then replace the heat sink fan. • Mainboard
Processor test failed.	• Processor • Mainboard

NOTE: Normally, the processor fan should be operative, and the processor clock setting should be exactly set to match its speed requirement before diagnosing any processor problems.

Symptom/Error	Action/FRU
Memory test failed.	• Memory module • Mainboard
Incorrect memory size shown or repeated during POST.	• Insert the memory modules in the DIMM sockets properly, then reboot the system. • Memory module • Mainboard
System works but fails to enter power saving mode when the Power Management Mode is set to Enabled.	• Enter CMOS Setup and load the default settings. In Windows systems, check settings in Power Management Property of the Control Panel. • Reload software from Recovery CD.
Blinking cursor only; system does not work.	• IDE drive connection/cables • IDE disk drives • See “Undetermined Problems”. • Mainboard

NOTE: Ensure the memory modules are installed properly and the contact leads are clean before diagnosing any system problems.

Symptom/Error	Action/FRU
Hard disk drive test failed.	• Enter CMOS Setup and load the default settings. • Hard disk drive cable • Hard disk drive • Mainboard
Hard disk drive cannot format completely.	• Enter CMOS Setup and load the default settings. • Hard disk drive cable • Hard disk drive • Mainboard
Hard disk drive has write error.	• Enter CMOS Setup and load the default settings. • Hard disk drive
Hard disk drive LED fails to light, but system operates normally.	• With the system power on, measure the voltage of the HDD LED connector. • HDD LED cable

NOTE: Make sure the hard disk drive is configured correctly in CMOS Setup and that cable/jumper are set correctly before diagnosing any hard disk drive problems. (If only one drive is installed, please make sure the drive is connected to master connector or the drive is set to master.)

Symptom/Error	Action/FRU
CD/DVD-ROM drive LED doesn't come on but works normally.	• Enter CMOS Setup and load the default settings. • DIMM • Mainboard
CD/DVD-ROM drive LED flashes for more than 30 seconds before LED shutting off. Software asks to reinstall disc. Software displays a reading CD/DVD error.	• CD/DVD-ROM may have dirt or foreign material on it. Check with a known good disc. • CD/DVD-ROM is not inserted properly. • CD/DVD-ROM is damaged.
CD/DVD-ROM drive cannot load or eject when the system is turned on and its eject button is pressed and held.	• Disconnect all cables from CD/DVD-ROM drive except power cable, then press the eject button to try to unload the disc. • CD/DVD-ROM drive power cable • CD/DVD-ROM drive
CD/DVD-ROM drive does not read and there are no messages are displayed.	• CD may have dirt or foreign material on it. Check with a known good disc. • Ensure the CD/DVD-ROM driver is installed properly. • CD/DVD-ROM drive.
CD/DVD-ROM drive can play audio CD but no sound output.	• Ensure the headphone jack of the CD/DVD-ROM has an output. • Turn up the sound volume. • Speaker power/connection/cable. • CD/DVD-ROM drive.

NOTE: Make sure the optical disc drive is configured correctly in CMOS Setup, the cable/jumper are set correctly and the drive's optical lens is clean before diagnosing any optical drive problems.

Symptom/Error	Action/FRU
Real-time clock is inaccurate.	• Ensure the information in the Standard CMOS Feature of BIOS Setup is set correctly. • RTC battery • Mainboard

Symptom/Error	Action/FRU
Audio software program invoked but no sound comes from speakers.	• Speaker power/connection/cable

Symptom/Error	Action/FRU
Modem ring cannot wake up system from suspend mode.	• For an external modem, make sure Power on By Ring in BIOS Setup or Power Management is set to Enabled. For the PCI modem, make sure Wake up by PCI card is set to Enabled. • If a PCI modem card is used, reinsert the modem card to the PCI slot firmly or replace the modem card. • In Windows OS, ensure the telephone application is configured correctly for your modem and set to receive messages and/or fax.
Data/fax modem software program invoked but cannot receive/send data/fax	• Ensure the modem card is installed properly.
Fax/voice modem software program invoked but has no sound output. (Data files are received normally; voice from modem cannot be produced, but system sound feature works normally.)	• Ensure the modem voice-in cable from modem adapter card is connected to the mainboard

Symptom/Error	Action/FRU
Video memory test failed.Video adapter failed.	• Remove all non-factory-installed cards. • Load default settings (if screen is readable). • Mainboard
Display problem • Incorrect colors • No high intensity • Missing, broken, or incorrect characters • Blank monitor (dark) • Blank monitor (bright) • Distorted image • Unreadable monitor	• Monitor signal connection/cable • Monitor • Video adapter card • Mainboard
Display changing colors.	• Monitor signal connection/cable • Video adapter card • Mainboard

Symptom/Error	Action/FRU
Printing failed.	• Ensure the printer driver is properly installed. Refer to the printer service manual. • Printer • Printer cable • Mainboard.
Printer problems.	• Refer to the service manual for the printer.

Symptom/Error	Action/FRU
Some or all keys on keyboard do not work.	• Keyboard

Symptom/Error	Action/FRU
Pressing the power button does not turn off the system. (Only unplugging the power cord from electrical outlet can turn off the system.)	• Ensure the Soft-off by PWR-BTTN in CMOS Setup (under Power Management) is not set to Instant-off. • Power switch cable assembly
Pressing the power button does not turn on the system	• Ensure the power override switch (located at the back of the computer, just above the connector for the power cable) is not set to OFF. • Power switch cable assembly.
Executing software shutdown from Windows Start menu does not turn off the system. (Only pressing power button can turn off the system).	• Enter CMOS Setup and load the default settings. • Reload software from Recovery CD.
No system power, or power supply fan is not running.	• Power supply • Mainboard

Beep Codes

When no error message is displayed but the computer stops during POST, listen for beep codes.

Beep	Status	Possible Causes
One short beep.	System ready	System is OK.
Continuous one long beep	Memory not installed or memory error	• Something is wrong with the memory installed • There is problem accessing the memory (i.e., mainboard problem)
One long beep, then two short beeps and repeat	VGA not installed or VGA error	• The mainboard can not access the video card for some reasons. Either the video card is not working, its memory is not accessible, or its BIOS may be corrupt. • Something is wrong with the mainboard.
One long beep, then one short beep	BIOS failure	• BIOS damaged. Processor jump to boot block to execute the default procedure.
Two short beeps.	CMOS failure	• CMOS checksum error

Undetermined Problems

- NOTE**
- Verify that all attached devices are supported by the computer.
 - Verify that the power supply being used at the time of the failure is operating correctly. (See "Power System Check" on page 81)

Follow the procedures below to isolate the failing FRU. Do not isolate non-defective FRU.

1. Power off the computer.
 2. Visually check them for damage. If any problems are found, replace the FRU.
 3. Remove or disconnect all of the following devices:
 - Non-Acer devices
 - Printer, mouse, and other external devices
 - Hard disk drive
 - DIMM
 - CD/DVD-ROM drive
 - Expansion boards
 4. Power on the computer.
 5. Determine if the problem has been resolved.
 6. If the problem does not recur, reconnect the removed devices one at a time until you find the failed FRU.
- If the problem persists, replace the mainboard, and then LCD assembly (one at a time). Do not replace a non-defective FRU.

BIOS Recovery

When you boot up the computer and you hear one long beep, followed by a shorter one, the system BIOS is damaged. This may be caused by an interruption during a BIOS flash procedure (e.g. a power outage) or a corrupted BIOS code, which will cause the system to go into an unbootable state. You need to access and execute the boot block program to reboot the computer and recover the regular BIOS code.

Note the following when restoring the BIOS settings:

- Make sure the computer is connected to a UPS unit during the BIOS recovery process.
- The BIOS recovery media should be prepared in a computer running the Windows OS. A USB flash drive can be used.

Creating the BIOS Crisis Recovery Disk

1. Set up a computer running the Windows operating system and connect the BIOS recovery media.
2. Copy the target BIOS ROM file to the BIOS recovery media and rename it as "RCVBOOT.CAP".
3. Eject the BIOS recovery media from the computer.

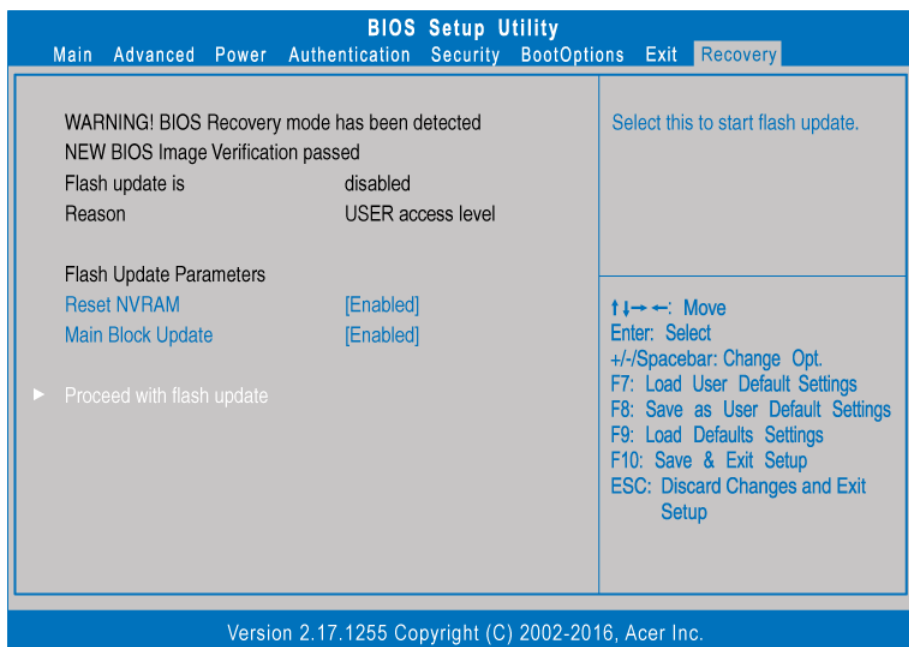
Performing a BIOS Recovery

NOTE This procedure is only applicable when the boot block section is still valid.

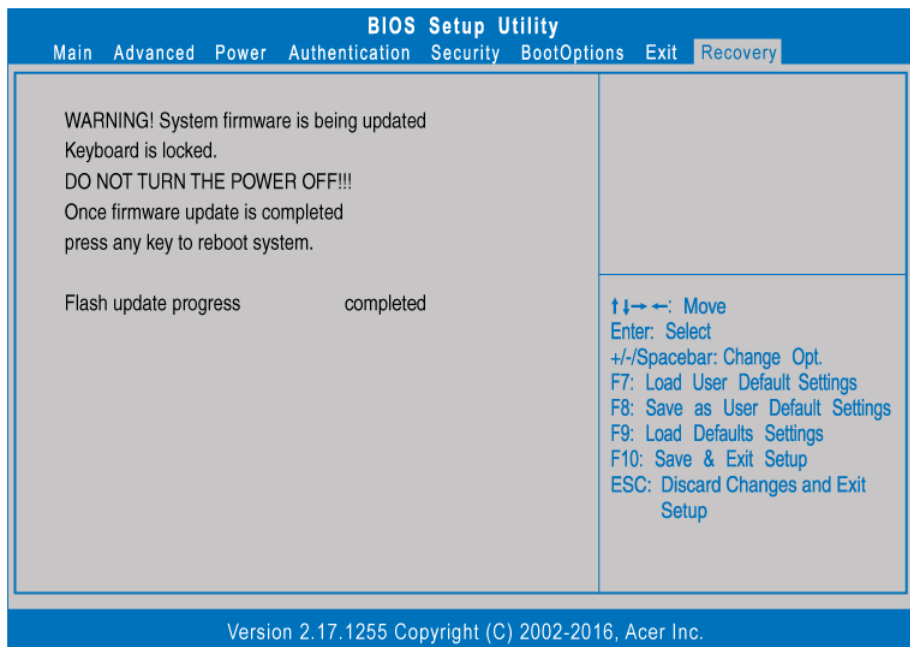
1. Shut down the system with failed BIOS.
2. Put the BIOS ROM file (it may exist at \ROM\xxx.CAP) to a USB storage.
3. Rename BIOS ROM file to RCVBOOT.CAP (i.e. P11-A0.CAP to RCVBOOT.CAP)
4. Plug the USB storage to the system.
5. Press the power button to turn on the system.

The system will now execute the BIOS recovery process. You will hear a long beep followed by a short beep.

6. Select **Proceed with flash update** to start recovery.



7. Wait for the program to finish with the recovery.
8. Flash update completed.



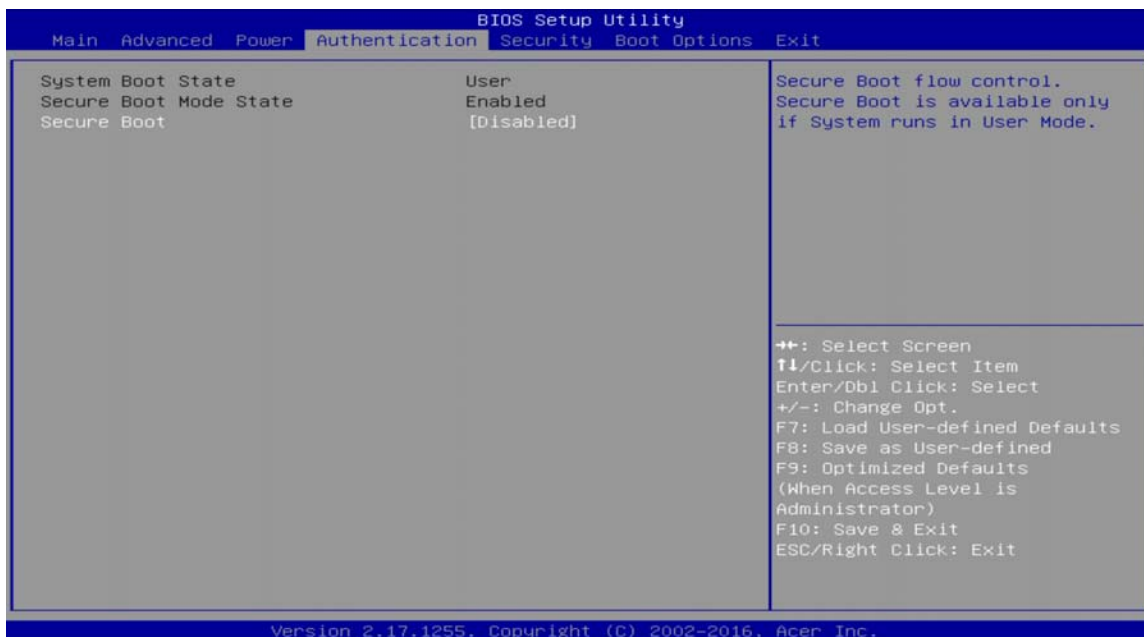
9. Press any key to reboot system.
10. The BIOS recovery is now completed.

BIOS Update

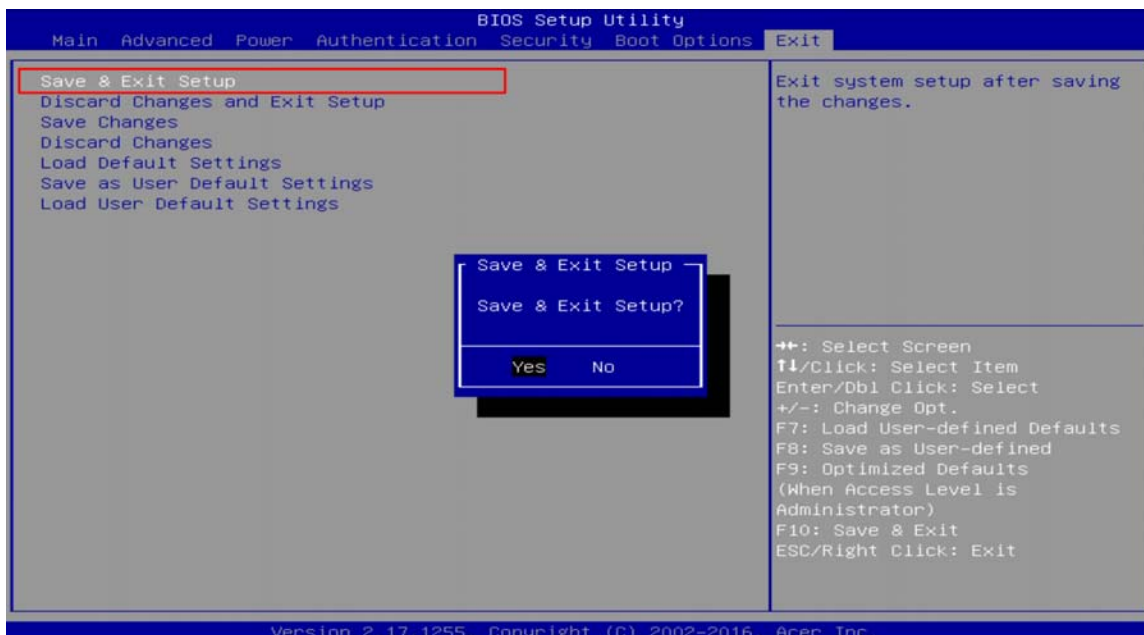
Updating the BIOS

Perform the following to use the DOS Flash Utility:

1. Copy BIOS folder to USB storage then plug the USB storage to the system.
2. Press the power button to turn on the system.
3. Press Delete when the company logo is displayed on the screen to enter BIOS Setup Menu.
4. Go to the **Authentication** page, select **Secure Boot** and press **Enter**. Select **Disabled** to disable Secure Boot.



5. Go to the **Exit** page, select **Save and Exit Setup** and press **Enter**.



6. Select **Yes** to Restart.
7. Press the **F12** hot key to enter Boot Menu, then select USB thumbdrive.
8. Press **Enter** to boot system using USB thumbdrive.
9. Enter BIOS folder.

```
C:\>dir

Volume in drive C has no label
Volume Serial Number is A6E4-56AB
Directory of C:\

P01-A0          <DIR>          11-24-11 11:51a
               0 file(s)         0 bytes
               1 dir(s)       7,630.19 MB free

C:\>cd P01-A0
C:\P01-A0>
```

10. Enter "DOS" folder.

```
C:\P01-A0>dir

Volume in drive C has no label
Volume Serial Number is A6E4-56AB
Directory of C:\P01-A0

.                <DIR>          11-24-11 11:51a
..               <DIR>          11-24-11 11:51a
ROM              <DIR>          11-24-11 11:51a
WIN              <DIR>          11-24-11  4:53p
APPENDIX         <DIR>          11-24-11  4:53p
DOS              <DIR>          11-24-11  4:53p
UMI_TOOL         <DIR>          11-24-11  5:12p
               0 file(s)         0 bytes
```

11. Execute "BIOS_DOS.bat" file.

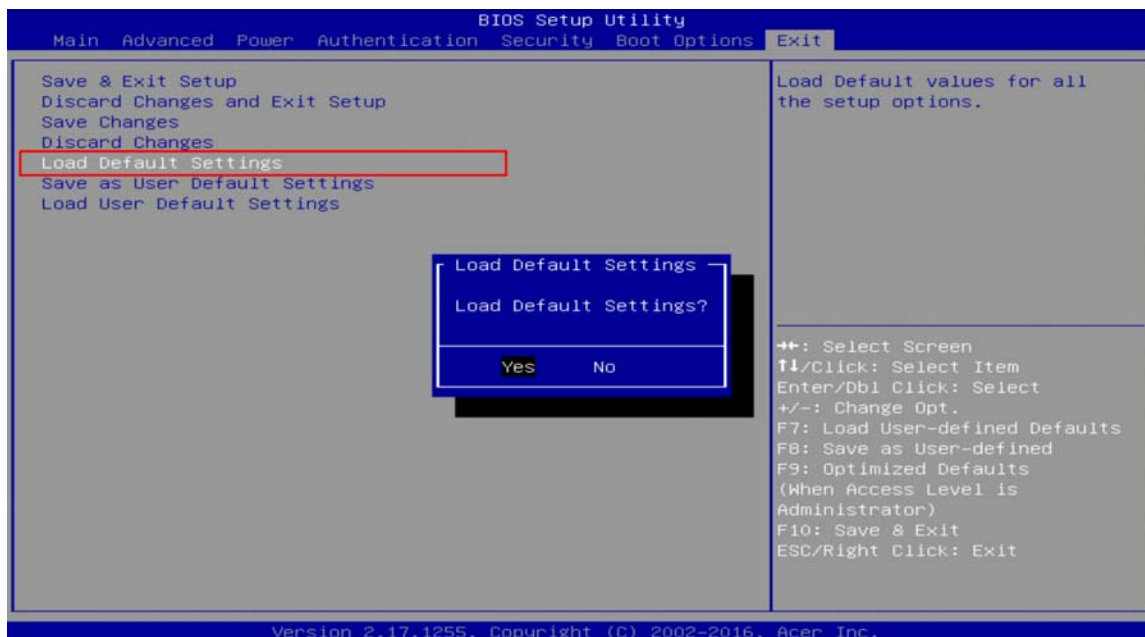
```
C:\P01-A0\DOS>dir

Volume in drive C has no label
Volume Serial Number is A6E4-56AB
Directory of C:\P01-A0\DOS

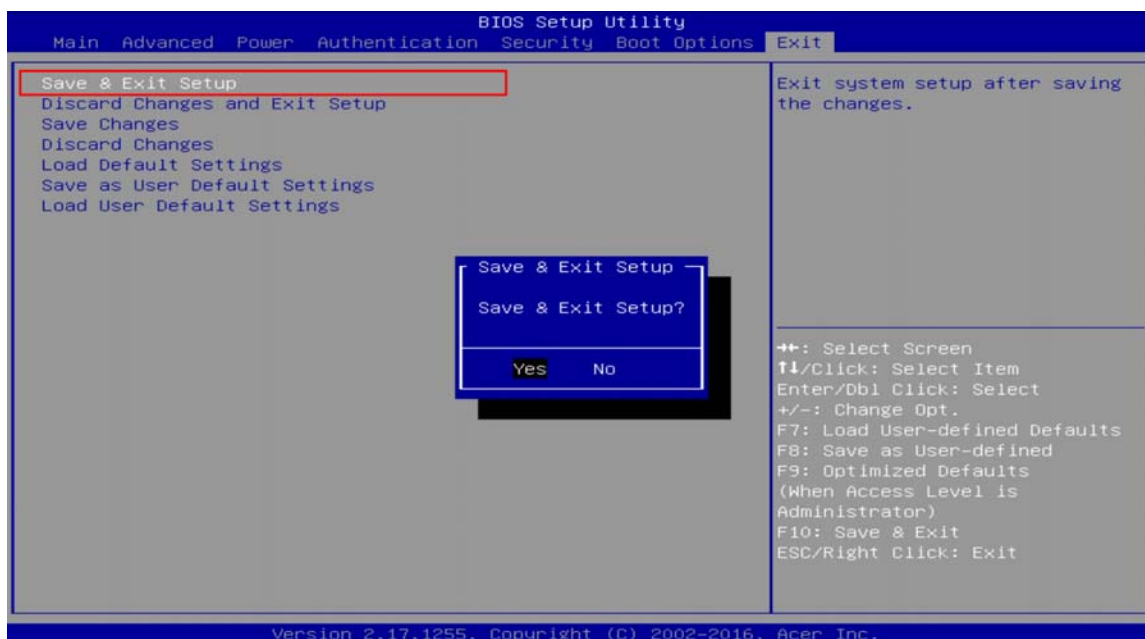
.                <DIR>          11-24-11  4:53p
..               <DIR>          11-24-11  4:53p
AFUDOS   EXE      201,056  09-14-11  2:48p
AFUDOS   TXT        6,716  02-17-11 11:27a
BIOS_DOS BAT        33  11-22-11  9:45p
               3 file(s)      207,805 bytes
               2 dir(s)       7,630.11 MB free
```

12. Process to flash BIOS (don't reset).
 13. Press the power button to shut down the system.
 14. Press the power button to turn on the system.
- The system will now execute the BIOS update process.
15. Press Delete when the company logo is displayed on the screen to enter BIOS Setup Menu.

16. Go to the **Exit** page, select **Load Default Setting** and press **Enter**. Select **Yes** to load default setting.



17. Select **Save and Exit Setup** and press **Enter**.



18. Select **Yes** to Restart.

Clearing CMOS

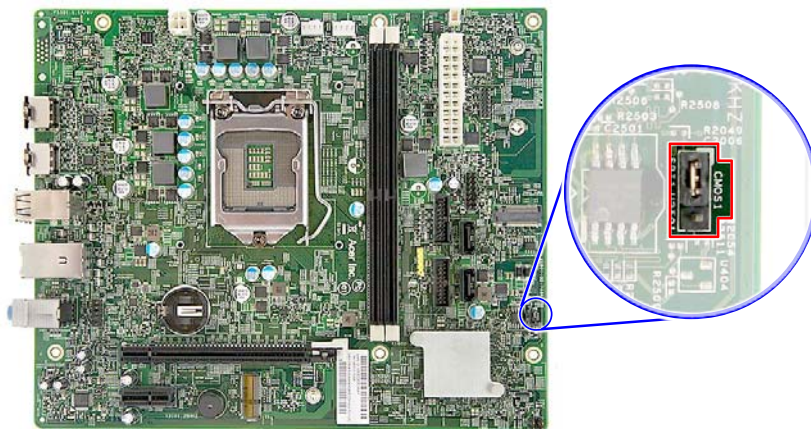
You may need to clear the Setup configuration values (CMOS) if the configuration has been corrupted, or if incorrect settings made in the Setup Utility caused error messages to be unreadable. This procedure will clear the BIOS supervisor password as well.

Use the CMOS1 jumper to clear the CMOS data.

- 1-2 position: Normal operation (default)
- 2-3 position: Clear CMOS data

To clear the CMOS data:

1. Turn off the power to the computer and all peripherals.
2. Unplug the power cord from the computer.
3. Unplug the network cable and all connected peripheral devices from the computer.
4. Place the computer on a flat, steady surface.
5. Remove the side panel.
6. If necessary, remove any expansion cards, assemblies or cables that prevent access to the CMOS clear jumper.
7. Locate the CLR_CMOS jumper on the mainboard.



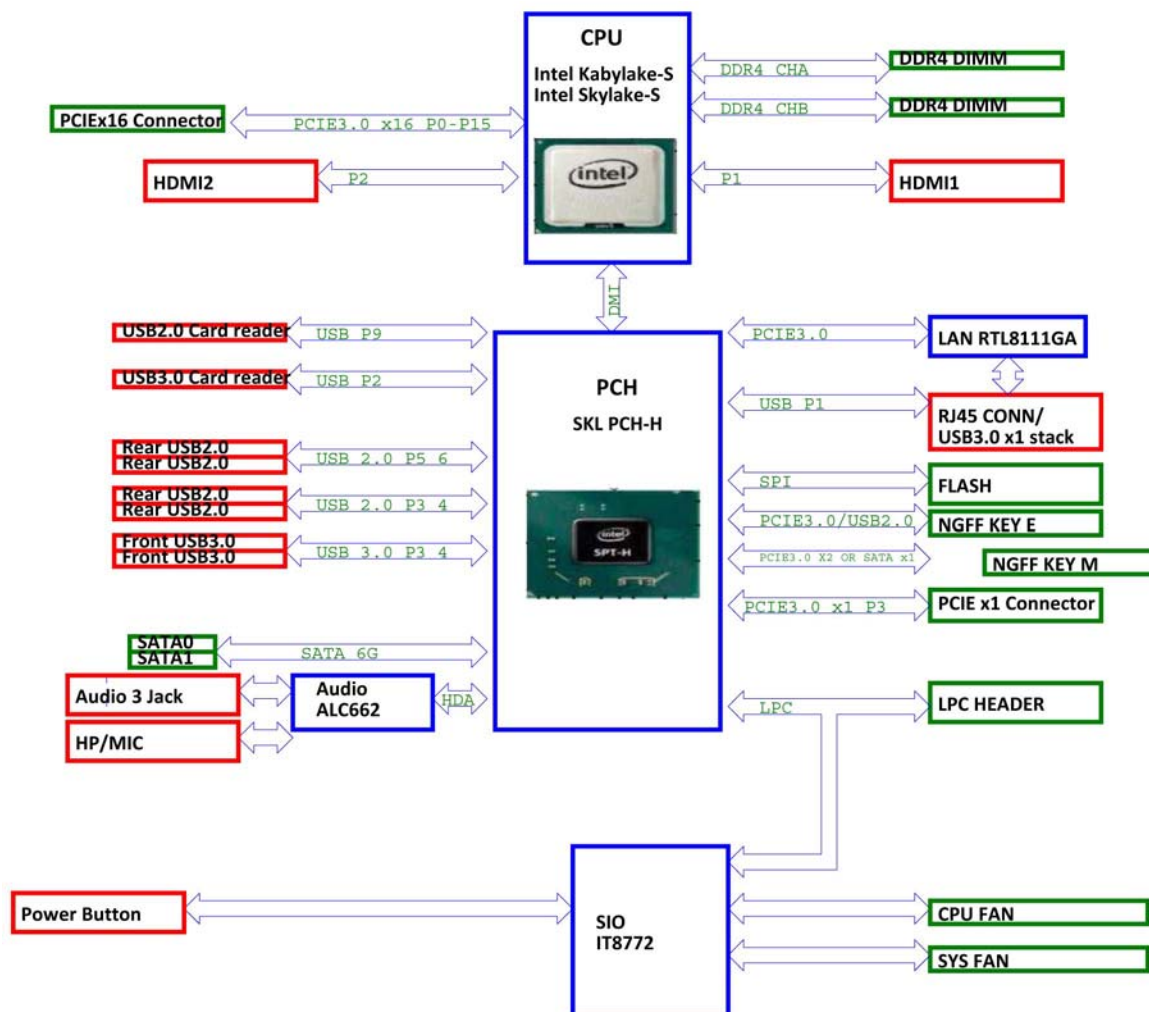
8. Remove the jumper block and set it over the 2-3 pins for 20 to 30 seconds.
9. Return the jumper block to its default 1-2 position.
10. Reinstall any expansion card, peripheral, and system cables that have previously been removed.
11. Reinstall the side panel.
12. Connect the AC power cord to the system.
13. Press the power button  to turn on the computer.
14. During POST, press **Delete** to access the Setup Utility.
15. Press **F9** to load the system default values.
16. Press **F10** to save the changes you made and close the Setup Utility.

System Architecture

This chapter shows the block diagram and board layout of the Aspire TC-780 Desktop Computer.

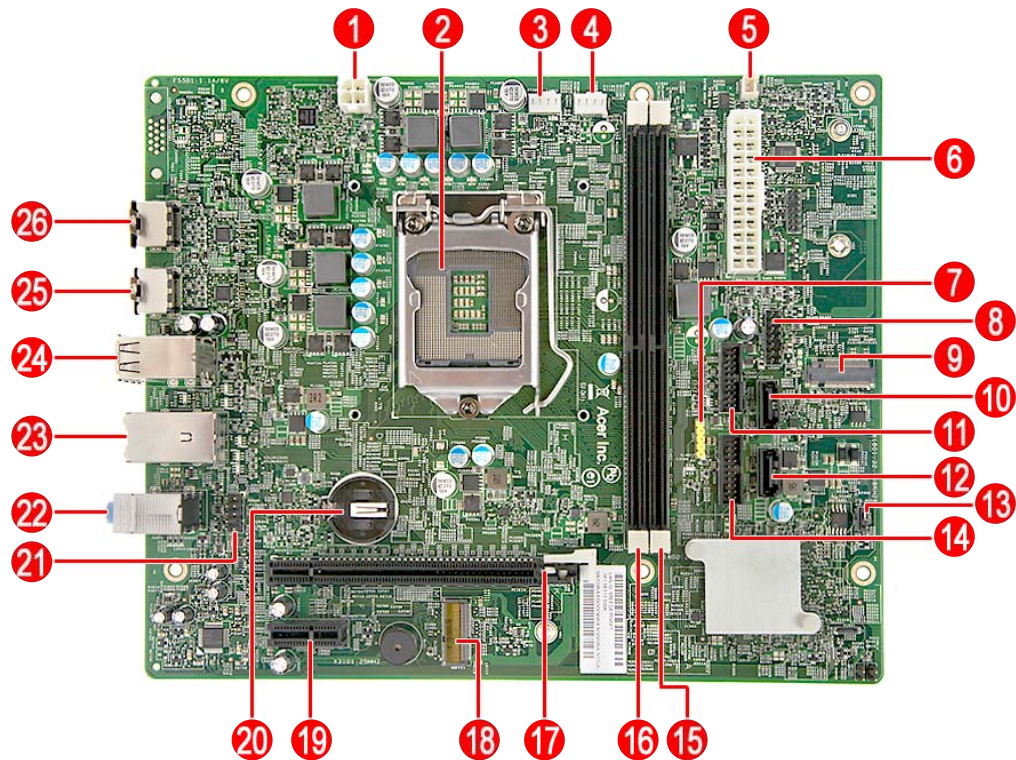
Block Diagram

The core subsystems of the Aspire TC-780 computer are depicted in the following block diagram:



Mainboard Layout

This section shows the major mainboard components.



No.	Label	Description	No.	Label	Description
1	ATX2	4-Pin ATX power connector	14	CRF2	Front panel USB 3.0 connector 2
2	CPU	CPU socket	15	DIMM1	DDR4 slot 1
3	FANC1	CPU fan connector	16	DIMM2	DDR4 slot 2
4	FANS2	System fan connector	17	PCIE16	PCIe x16 Slot
5	WPWR1	Wireless charger connector	18	NGFFE1	M.2 WLAN connector
6	ATX1	Standard 24-Pin ATX power connector	19	PCI1	PCIe x1 Slot
7	CRF1	Front panel USB 3.0 connector 3	20	BT1	Battery slot
8	LEDH1	Power button/LED connector	21	AUDF1	Front panel audio connector
9	NGFFM1	M.2 SSD connector	22	AUDR1	Rear panel audio ports
10	SATA1	SATA 6Gb/s connector	23	U3RJ1	RJ45 + USB 3.0 ports
11	USB3F1	Front panel USB 3.0 connector 1	24	USB2R1	Rear USB2.0 ports
12	SATA0	SATA 6Gb/s connector	25	HDMI2	HDMI port
13	CMOS1	Clear CMOS jumper	26	HDMI1	HDMI port

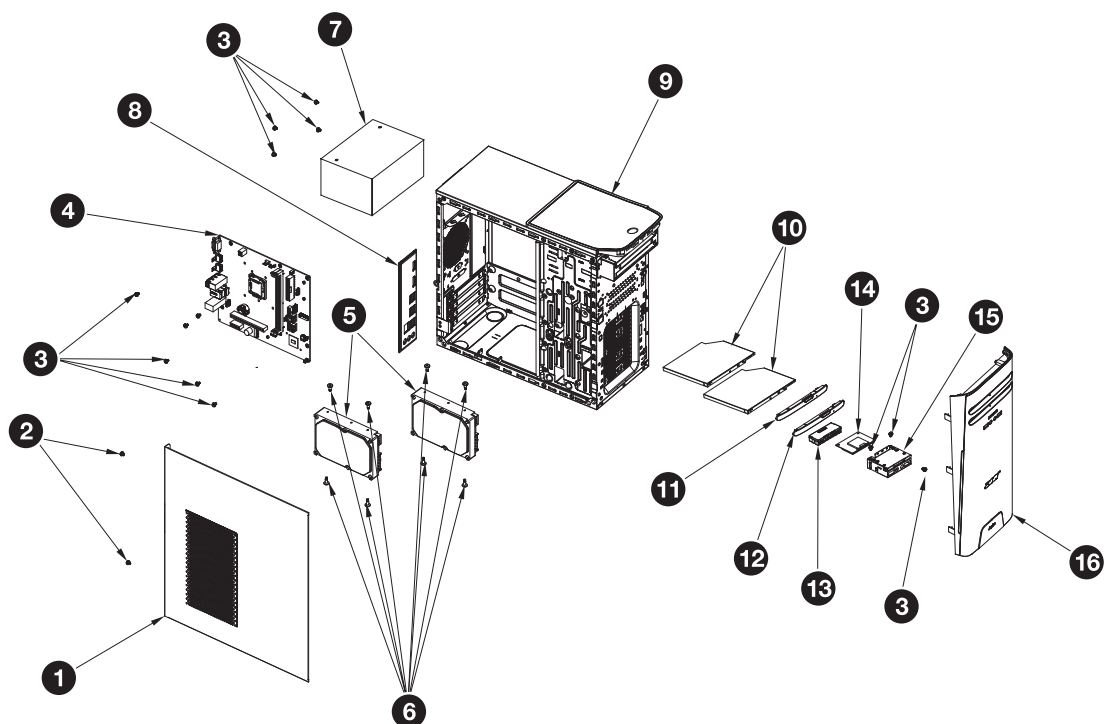
Field Replaceable Unit (FRU) List

This chapter gives you the FRU (Field Replaceable Unit) listing of the Aspire TC-780 Desktop Computer global configurations. Refer to this list when ordering for repair parts or for RMA (Return Merchandise Authorization).

IMPORTANT Part number changes will not be noted in this printed Service Guide. The part numbers listed in this Service Guide may differ from those given to regional AUTHORIZED SERVICE PROVIDERS. You **MUST** use the local FRU list provided by your regional office to order FRU parts for repair and service of customer machines. Make sure that you are using the most up-to-date information available on your regional web site or channel when ordering FRU parts.

NOTE Follow the local government regulations, or the rules set by your regional office on how to return or dispose of defective parts.

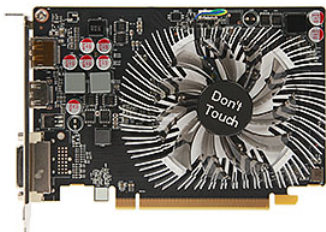
Exploded Diagram



Number	Part Name	Part No.	Quantity
1	Side Panel	334.05Y02.0001	1
2	Hex Machine Screw 6-32 L5	86.00U96.B60	2
3	Hex Machine Screw M3 x L5	86.00U0S.0B60	13
4	Mainboard	DB.B5711.001	1
5	HDD	KH.01K08.031	2
6	Hex Machine Screw 6-32 L12	086.00U97.B60	8
7	Power Supply Unit	DC.2201B.006	1
8	Rear I/O Cover	360.05Z08.0001	1
9	Main Chassis	DC.13111.05E	1
10	ODD	KO.0080D.019	1
11	ODD Top Bezel	360.05Y07.0001	1
12	ODD Bottom Bezel	360.05Y06.0001	1
13	Front I/O Board	DA.13711.007	1
14	Card Reader	DC.10411.01A	1
15	Front I/O Bracket	360.02E07.0001	1
16	Front Bezel	360.05Y05.0001	1

Aspire TC-780 FRU List

ACER_ATC-780_W_SONIAH_2 (NO: D9.B59SW.002)

Category	Description	Acer Part No.
ACCESSORY		
	DVI TO DSUB ADAPTER CONNECTOR W/EMI SHIELDING IMPROVE	DP.13411.026
BOARDS		
	F-IO BOARD U3 450MM AUDIO 600MM HD AUDIOX2, U3X2, CPUSER 3160260007	DA.13711.006
	F-IO BOARD U3 450MM AUDIO 600MM HD AUDIOX2, U3X2, MINGJI 9086-0100014RII	DA.13711.007
	F-IO BOARD FIO01_M_U3X2 L43F1024-DT-R U3=450MM, AUDIO=600MM, HD AUDIO X2, U3X2	DA.13711.00S
	VGA CARD AMD R5-310 DDRIII 2GB ATX PCI-EX16 UEFI DVI HDMI 288-6E225-X01A8	DA.31011.001
	VGA CARD AMD R7-340 DDRIII 2GB ATX PCI-EX16 UEFI DVI HDMI 288-1E318-X00A8	DA.34011.001
	VGA CARD AMD R9-360 GDDRV 2GB ATX PCI-EX16 UEFI DVI HDMI DP 288-1E325-X00A8	DA.36011.001
	VGA CARD NVIDIA GT705 DDRIII 1024M ATX 64BIT UEFI VGA DVI-I HDMI 288-BN214-X60A8	DA.70511.005
	VGA CARD NVIDIA GT720 DDRIII 2GB ATX UEFI DVI-I HDMI 288-5N326-X01A8	DA.72011.001
	VGA CARD NVIDIA GT730 DDRIII 2GB ATX PCI-EX16 UEFI DVI HDMI 288-6N326-X01A8	DA.73011.001
	VGA CARD NVIDIA GTX745 DDRIII 4GB ATX UEFI DVI-I HDMI BL 288-1N249-X04A8	DA.74511.001
	VGA CARD NV GTX745 DDRIII 4GB ATX UEFI DVI HDMI MEM 288-1N249-X04A8	DA.74511.003
	CR01_SD_M 331317201014 530MM, USB 2.0, RTS5143	DC.10411.01F
	CR01_SD_M 9143-0700007RII 530MM, USB 2.0, RTS5143	DC.10411.01G
	CARD READER BOARD CR01_SD_M L43CR006-DT-R 530MM, USB 2.0, RTS5143	DC.10411.01H
	WIRELESS LAN & BLUETOOTH BOARD LITEON 802.11AC BLUETOOTH FM 3RD WIFI 1X1 AC+ BT M.2 QCA9377A QCA NFA435A, REV 1.1	KE.11A0L.001
	WIRELESS LAN & BLUETOOTH BOARD WLAN INTEL WLAN 7265.NGWG.W D0 STONEPEAK M.2 2X2 AC + BT 2230	KI.STN01.008
	WIRELESS LAN BOARD INTEL WLAN INT3165.NGWG C0 STONE PEAK 1X1 AC + BT M.2	KI.STN01.101
CABLES		
	POWER CORD 110V 3PIN UL USA	27.01518.0I1
	POWER CORD 1800MM 250V EURO	27.01518.0J1
	POWER CORD 250V CCC 1800MM PRC	27.01518.0K1

Category	Description	Acer Part No.
Power Cord (Cont.)	POWER CORD 250V SWISS	27.01518.0L1
	POWER CORD 1830MM BLACK TW I-SHENG	27.01518.0M1
	POWER CORD AUSTRALIA WITH TESTED TAG	27.01518.0N1
	POWER CORD 250V 3PIN INDIA	27.01518.0P1
	POWER CORD 1800MM BLACK S.AFRICA	27.01518.0Q1
	POWER CORD 230V DENMARK	27.01518.0S1
	POWER CORD 125V 7A 3G JAPAN	27.01518.181
	POWER CORD 125V 10A BLACK MEXICO	27.01518.A01
	POWER CORD 1800MM BLACK BRAZIL	27.01518.I01
	POWER CORD 250V 3PIN 1830MM BLACK THAILAND	27.01518.I51
	POWER CORD 250V 3PIN 1800MM UK	27.03118.031
	POWER CORD 7A 250V KOREA	27.SLSD1.001
	POWER CORD ARGENTINE,10A 250V 1.8M BK	27.SLSD1.002
	POWER CORD 16A 250V 1800MM ISRAEL BLACK	27.VEHD1.001
	POWER CORD 250V 10A 1800MM ITALY	27.VG6D1.001
	POWER SWITCH CABLE	50.B1HD1.001
	HDD SATA CABLE FOR BLACK	50.SLAD1.002
	ODD CABLE (ODD TO MB+ODD TO POWER)	50.SXND1.001
CASE/COVER/BRACKET ASSEMBLY		
	VGA HOLDER	42.B1DD1.001
	CRT COVER	42.SF601.001
	HDMI DUMMY COVER	42.SF601.002
	WIFI COVER	42.SXLD1.001
	FRONT IO BRACKET	60.B1HD1.003
	ODD BRACKET	60.B1HD1.011
	DUMMY ODD BRACKET	60.B1HD1.013
	IO SHIELDING	60.B57D1.001
	IO SHIELDING -FOR VGA HDMI*2 WITH QUARD PORT USB2.0	60.B57D1.008

Category	Description	Acer Part No.
	IO SHIELDING -FOR VGA HDMI*1 WITH QUARD PORT USB2.0	60.B57D1.009
	ASSEMBLY MAIN CHASSIS W/FRONT BKT & REAR BKT & BOTTOM BKT & MB BKT & PSU BKT & HDD BKT & IO LOCK & POWER SWITCH CABLE & TOP COVER & SIDE COVER & ODD CAGE	60.B57D1.002
	ASSEMBLY MAIN CHASSIS W/FRONT BKT & REAR BKT & BOTTOM BKT & MB BKT & PSU BKT & HDD BKT & IO LOCK & POWER SWITCH CABLE & TOP COVER & SIDE COVER	60.B57D1.004
	ASSEMBLY FRONT BEZEL W/ODD COVER & FRONT COVER & ASPIRE LOGO COVER & DOWN DUMMY ODD BEZEL	60.B57D1.003
	ASSEMBLY UP ODD BEZEL	60.B57D1.005
	ASSEMBLY DOWN ODD BEZEL	60.B57D1.006
	DUMMY ODD BEZEL	60.B57D1.007
COMMUNICATION MODULE		
	ANTENNA WLAN AUX	50.SZLD1.002
	ANTENNA WLAN MAIN	50.SZLD1.003
CPU/PROCESSOR		
	CPU(PGA) INTEL CELERON G3900 LGA 2.8G 2M 2133 1151 65W SKYLAKE	KC.39001.CDG
	CPU(PGA) INTEL PENTIUM G4400 LGA 3.3G 3M 2133 1151 65W SKYLAKE	KC.44001.DEG
	CPU(PGA) INTEL CORE I3 6100 LGA 3.7G 3M 2133 1151 65W SKYLAKE	KC.61001.CI3
	CPU(PGA) INTEL CORE I5 6400 LGA 2.7G 6M 2133 1151 65W SKYLAKE	KC.64A01.CI5
	CPU(PGA) INTEL CORE I5 6400 LGA 2.7G 6M 2133 1151 65W R0 SKYLAKE	KC.64B01.CI5
	CPU(PGA) INTEL CORE I7 6700 LGA 3.4G 8M 2133 1151 65W SKYLAKE	KC.67001.CI7
	CPU(PGA) INTEL CORE I7 6700 LGA 3.4G 8M 2133 1151 65W R0 SKYLAKE	KC.67B01.CI7
	CPU(PGA) Intel Core i3 7100 LGA 3M 2400 1151 51W Kaby Lake 3.9G	KC.71001.CI3
	CPU(PGA) Intel Core i5 7400 LGA 3.0G 6M 2133 1151 65W Kaby Lake	KC.74001.CI5
	CPU(PGA) Intel Core i7 7700 LGA 3.6G 8M 2133 1151 65W Kaby Lake	KC.77A01.CI7
DVD-RW DRIVE		
	ODD PANASONIC BD RW 9.0MM TRAY 6X UJ272QBAA2-B LF+HF W/O BEZEL SATA	KO.00607.010
	SUPER-MULTI DRIVE HLDS SUPER-MULTI DRIVE 9.0MM TRAY 8X GUE1N LF+HF W/O BEZEL SATA	KO.0080D.019

Category	Description	Acer Part No.
DVD-RW Drive (Cont.)	SUPER-MULTI DRIVE PLDS SUPER-MULTI DRIVE 9.0MM TRAY 8X DA-8A6SH LF+HF W/O BEZEL SATA	KO.0080F.008
	SUPER-MULTI DRIVE PLDS SUPER-MULTI DRIVE 9.0MM TRAY 8X DA-8AESH LF+HF W/O BEZEL SATA	KO.0080F.011
HDD/HARD DISK DRIVE		
	HDD SEAGATE 3.5" 7200RPM 1000GB ST1000DX001 (GRENADA BP2H) SATA III 64MB LF F/W:CC41	KH.01K01.050
	HDD SEAGATE 3.5" 7200RPM 1000GB ST1000DM003 (PHARAOH OASIS) SATA III 64MB LF F/W:CC42	KH.01K01.051
	HDD TOSHIBA 3.5" 7200RPM 1000GB DT01ACA100 (MARS) SATA III 32MB LF F/W:750	KH.01K04.010
	HDD WD 3.5" 7200RPM 1000GB WD10EZEX-21WN4A0 (XL1000C) SATA III 64MB LF F/W:01.01A01	KH.01K08.031
	HDD SEAGATE 3.5" 7200RPM 2000GB ST2000DX001 (GRENADA BP2H) SATA III 64MB LF F/W:CC41	KH.02K01.021
	HDD SEAGATE 3.5" 7200RPM 2000GB ST2000DM001 (GRENADA BP2 REFRESH) SATA III 64MB LF F/W:CC26	KH.02K01.026
	HDD TOSHIBA 3.5" 7200RPM 2000GB DT01ACA200 (MARS) SATA III 64MB LF F/W:750	KH.02K04.002
	HDD WD 3.5" 5400RPM 2000GB WD20EZR-22D8PB0 (GP1000A,4K) SATA III 64MB LF F/W:80.00A80	KH.02K08.012
	HDD SEAGATE 3.5" 7200RPM 3000GB ST3000DM001 (GRENADA BP2 REFRESH) SATA III 64MB LF F/W:CC26	KH.03K01.010
	HDD TOSHIBA 3.5" 7200RPM 3000GB DT01ACA300 (MARS) SATA III 64MB LF F/W:BS0	KH.03K04.001
	HDD WD 3.5" 5400RPM 3000GB WD30EZR-22D8PB0 (GP1000A,4K) SATA III 64MB LF F/W:80.00A80	KH.03K08.005
	HDD SEAGATE 3.5" 5900RPM 4000GB ST4000DM000 (LOMBARD) SATA III 64MB LF F/W:CC54	KH.04K01.003
	HDD WD 3.5" 7200RPM 500GB WD5000AZLX-21K2TA0 (XL1000C) SATA III 32MB LF F/W:01.01A01	KH.50008.052
SOLID STATE DRIVE		
	FLASH DISK KINGSTON SSD NAND 96GB RBU-SNS8151S3/96GG LF+HF	KN.09607.001
	FLASH DISK TOSHIBA SSD NAND 128GB THNSNJ128G8NY LF+HF	KN.1280A.008
	FLASH DISK LITE-ON SSD NAND 128GB CV1-8B128 LF+HF	KN.1280L.013

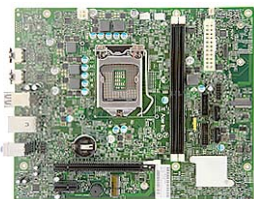
Category	Description	Acer Part No.
Solid State Drive (Cont.)	FLASH DISK TOSHIBA SSD NAND 256GB THNSNJ256G8NY LF+HF	KN.2560A.008
	FLASH DISK LITE-ON SSD NAND 256GB CV1-8B256 LF+HF	KN.2560L.012
	FLASH DISK LITE-ON SSD NAND 512GB CV1-8B512 LF+HF	KN.5120L.005
HEATSINK		
	CPU HEATSINK AIR COOLER LGA1155/1150 65W CM	DC.10811.012
	ASSEMBLY COOLER LGA115X 65W AURAS AVAP	DC.10811.016
KEYBOARD		
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK US W/DK.RF41B.045 & DC.11211.00W	6K.SUYD1.001
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK TRADITIONAL CHINESE W/DK.RF41B.046 & DC.11211.00W	6K.SUYD1.002
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK US INTERNATIONAL W/DK.RF41B.047 & DC.11211.00W	6K.SUYD1.003
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK ARABIC/ENGLISH NEW LAYOUT FOR EMEA W/ DK.RF41B.048 & DC.11211.00W	6K.SUYD1.004
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK THAILAND W/DK.RF41B.049 & DC.11211.00W	6K.SUYD1.005
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK SPANISH W/DK.RF41B.04A & DC.11211.00W	6K.SUYD1.006
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK PORTUGUESE W/DK.RF41B.04B & DC.11211.00W	6K.SUYD1.007
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK BRAZILIAN PORTUGUESE W/DK.RF41B.04C & DC.11211.00W	6K.SUYD1.008
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK JAPANESE W/DK.RF41B.04D & DC.11211.00W	6K.SUYD1.009
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK GERMAN W/DK.RF41B.04E & DC.11211.00W	6K.SUYD1.010
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK ITALIAN W/DK.RF41B.04F & DC.11211.00W	6K.SUYD1.011
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK FRENCH W/DK.RF41B.04G & DC.11211.00W	6K.SUYD1.012
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK SWEDISH W/DK.RF41B.04H & DC.11211.00W	6K.SUYD1.013
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK UK W/DK.RF41B.04J & DC.11211.00W	6K.SUYD1.014
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK DUTCH W/DK.RF41B.04K & DC.11211.00W	6K.SUYD1.015
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK SWISS/G W/DK.RF41B.04L & DC.11211.00W	6K.SUYD1.016

Category	Description	Acer Part No.
Keyboard (Cont.)	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK BELGIUM W/DK.RF41B.04M & DC.11211.00W	6K.SUYD1.017
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK NORWEGIAN W/DK.RF41B.04P & DC.11211.00W	6K.SUYD1.018
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK HEBREW NEW LAYOUT FOR EMEA W/ DK.RF41B.04Q & DC.11211.00W	6K.SUYD1.019
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK POLISH W/DK.RF41B.04R & DC.11211.00W	6K.SUYD1.020
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK SLOVENIAN W/DK.RF41B.04S & DC.11211.00W	6K.SUYD1.021
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK SLOVAK W/DK.RF41B.04T & DC.11211.00W	6K.SUYD1.022
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK RUSSIAN NEW LAYOUT FOR EMEA W/ DK.RF41B.04U & DC.11211.00W	6K.SUYD1.023
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK HUNGARIAN W/DK.RF41B.04V & DC.11211.00W	6K.SUYD1.024
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK GREEK NEW LAYOUT FOR EMEA W/ DK.RF41B.04W & DC.11211.00W	6K.SUYD1.025
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK DANISH W/DK.RF41B.04X & DC.11211.00W	6K.SUYD1.026
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK CZECH NEW LAYOUT FOR EMEA W/ DK.RF41B.04Y & DC.11211.00W	6K.SUYD1.027
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK ROMANIAN W/DK.RF41B.04Z & DC.11211.00W	6K.SUYD1.028
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK TURKISH W/DK.RF41B.050 & DC.11211.00W	6K.SUYD1.029
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK TURKISH-Q W/DK.RF41B.051 & DC.11211.00W	6K.SUYD1.030
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK ARABIC/FRENCH W/DK.RF41B.052 & DC.11211.00W	6K.SUYD1.031
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK KAZAKH W/DK.RF41B.053 & DC.11211.00W	6K.SUYD1.032
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK NORDIC W/DK.RF41B.055 & DC.11211.00W	6K.SUYD1.033
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK ENGLISH/CANADIAN FRENCH W/DK.RF41B.056 & DC.11211.00W	6K.SUYD1.034
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK CZECH/SLOVAK W/DK.RF41B.057 & DC.11211.00W	6K.SUYD1.035
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK SWISS/FR W/DK.RF41B.058 & DC.11211.00W	6K.SUYD1.036
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK KOREAN W/DK.RF41B.059 & DC.11211.00W	6K.SUYD1.037

Category	Description	Acer Part No.
Keyboard (Cont.)	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK SPANISH LATIN W/DK.RF41B.05A & DC.11211.00W	6K.SUYD1.038
	KEYBOARD KIT LITE-ON SK-9662 RF2.4 BLACK US INTERNATIONAL NEW LAYOUT FOR EMEA W/ DK.RF41B.05D & DC.11211.00W	6K.SUYD1.040
	KEYBOARD LITE-ON SK-9626 USB BLACK US	DK.USB1B.06S
	KEYBOARD LITE-ON SK-9626 USB BLACK TRADITIONAL CHINESE	DK.USB1B.06T
	KEYBOARD LITE-ON SK-9626 USB BLACK US INTERNATIONAL	DK.USB1B.06V
	KEYBOARD LITE-ON SK-9626 USB BLACK ARABIC/ENGLISH NEW LAYOUT FOR EMEA	DK.USB1B.06W
	KEYBOARD LITE-ON SK-9626 USB BLACK THAILAND	DK.USB1B.06X
	KEYBOARD LITE-ON SK-9626 USB BLACK SPANISH	DK.USB1B.06Y
	KEYBOARD LITE-ON SK-9626 USB BLACK PORTUGUESE	DK.USB1B.06Z
	KEYBOARD LITE-ON SK-9626 USB BLACK BRAZILIAN PORTUGUESE	DK.USB1B.070
	KEYBOARD LITE-ON SK-9626 USB BLACK JAPANESE	DK.USB1B.071
	KEYBOARD LITE-ON SK-9626 USB BLACK GERMAN	DK.USB1B.072
	KEYBOARD LITE-ON SK-9626 USB BLACK ITALIAN	DK.USB1B.073
	KEYBOARD LITE-ON SK-9626 USB BLACK FRENCH	DK.USB1B.074
	KEYBOARD LITE-ON SK-9626 USB BLACK SWEDISH	DK.USB1B.075
	KEYBOARD LITE-ON SK-9626 USB BLACK UK	DK.USB1B.076
	KEYBOARD LITE-ON SK-9626 USB BLACK DUTCH	DK.USB1B.077
	KEYBOARD LITE-ON SK-9626 USB BLACK SWISS/G	DK.USB1B.078
	KEYBOARD LITE-ON SK-9626 USB BLACK BELGIUM	DK.USB1B.079
	KEYBOARD LITE-ON SK-9626 USB BLACK ICELANDIC	DK.USB1B.07A
	KEYBOARD LITE-ON SK-9626 USB BLACK NORWEGIAN	DK.USB1B.07B
	KEYBOARD LITE-ON SK-9626 USB BLACK HEBREW NEW LAYOUT FOR EMEA	DK.USB1B.07C
	KEYBOARD LITE-ON SK-9626 USB BLACK POLISH	DK.USB1B.07D
	KEYBOARD LITE-ON SK-9626 USB BLACK SLOVENIAN	DK.USB1B.07E
	KEYBOARD LITE-ON SK-9626 USB BLACK SLOVAK	DK.USB1B.07F

Category	Description	Acer Part No.
Keyboard (Cont.)	KEYBOARD LITE-ON SK-9626 USB BLACK RUSSIAN NEW LAYOUT FOR EMEA	DK.USB1B.07G
	KEYBOARD LITE-ON SK-9626 USB BLACK HUNGARIAN	DK.USB1B.07H
	KEYBOARD LITE-ON SK-9626 USB BLACK GREEK NEW LAYOUT FOR EMEA	DK.USB1B.07J
	KEYBOARD LITE-ON SK-9626 USB BLACK DANISH	DK.USB1B.07K
	KEYBOARD LITE-ON SK-9626 USB BLACK CZECH NEW LAYOUT FOR EMEA	DK.USB1B.07L
	KEYBOARD LITE-ON SK-9626 USB BLACK ROMANIAN	DK.USB1B.07M
	KEYBOARD LITE-ON SK-9626 USB BLACK TURKISH	DK.USB1B.07N
	KEYBOARD LITE-ON SK-9626 USB BLACK TURKISH-Q	DK.USB1B.07P
	KEYBOARD LITE-ON SK-9626 USB BLACK ARABIC/FRENCH	DK.USB1B.07Q
	KEYBOARD LITE-ON SK-9626 USB BLACK KAZAKH	DK.USB1B.07R
	KEYBOARD LITE-ON SK-9626 USB BLACK TURKMEN NEW LAYOUT FOR EMEA	DK.USB1B.07S
	KEYBOARD LITE-ON SK-9626 USB BLACK NORDIC	DK.USB1B.07T
	KEYBOARD LITE-ON SK-9626 USB BLACK ENGLISH/CANADIAN FRENCH	DK.USB1B.07U
	KEYBOARD LITE-ON SK-9626 USB BLACK CZECH/SLOVAK	DK.USB1B.07V
	KEYBOARD LITE-ON SK-9626 USB BLACK SWISS/FR	DK.USB1B.07W
	KEYBOARD LITE-ON SK-9626 USB BLACK KOR	DK.USB1B.07X
	KEYBOARD LITE-ON SK-9626 USB BLACK SPANISH LATIN	DK.USB1B.07Y
	KEYBOARD LITE-ON SK-9626 USB BLACK US WITH RUPEE SYMBOL FOR INDIA	DK.USB1B.07Z
	KEYBOARD LITE-ON SK-9626 USB BLACK US INTERNATIONAL NEW LAYOUT FOR EMEA	DK.USB1B.080
	KEYBOARD PRIMAX KBAY211 USB BLACK US	DK.USB1P.0CA
	KEYBOARD PRIMAX KBAY211 USB BLACK TRADITIONAL CHINESE	DK.USB1P.0CB
	KEYBOARD PRIMAX KBAY211 USB BLACK US	DK.USB1P.0CC
	KEYBOARD PRIMAX KBAY211 USB BLACK THAILAND	DK.USB1P.0CD
	KEYBOARD PRIMAX KBAY211 USB BLACK SPANISH	DK.USB1P.0CE
	KEYBOARD PRIMAX KBAY211 USB BLACK PORTUGUESE	DK.USB1P.0CF
	KEYBOARD PRIMAX KBAY211 USB BLACK BRAZILIAN PORTUGUESE	DK.USB1P.0CG

Category	Description	Acer Part No.
Keyboard (Cont.)	KEYBOARD PRIMAX KBAY211 USB BLACK JAPANESE	DK.USB1P.0CH
	KEYBOARD PRIMAX KBAY211 USB BLACK GERMAN	DK.USB1P.0CJ
	KEYBOARD PRIMAX KBAY211 USB BLACK ITALIAN	DK.USB1P.0CK
	KEYBOARD PRIMAX KBAY211 USB BLACK FRENCH	DK.USB1P.0CL
	KEYBOARD PRIMAX KBAY211 USB BLACK SWEDISH	DK.USB1P.0CM
	KEYBOARD PRIMAX KBAY211 USB BLACK UK	DK.USB1P.0CN
	KEYBOARD PRIMAX KBAY211 USB BLACK DUTCH	DK.USB1P.0CP
	KEYBOARD PRIMAX KBAY211 USB BLACK SWISS/G	DK.USB1P.0CQ
	KEYBOARD PRIMAX KBAY211 USB BLACK BELGIUM	DK.USB1P.0CR
	KEYBOARD PRIMAX KBAY211 USB BLACK ICELANDIC	DK.USB1P.0CS
	KEYBOARD PRIMAX KBAY211 USB BLACK NORWEGIAN	DK.USB1P.0CT
	KEYBOARD PRIMAX KBAY211 USB BLACK POLISH	DK.USB1P.0CU
	KEYBOARD PRIMAX KBAY211 USB BLACK SLOVENIAN	DK.USB1P.0CV
	KEYBOARD PRIMAX KBAY211 USB BLACK SLOVAK	DK.USB1P.0CW
	KEYBOARD PRIMAX KBAY211 USB BLACK HUNGARIAN	DK.USB1P.0CX
	KEYBOARD PRIMAX KBAY211 USB BLACK DANISH	DK.USB1P.0CY
	KEYBOARD PRIMAX KBAY211 USB BLACK ROMANIAN	DK.USB1P.0CZ
	KEYBOARD PRIMAX KBAY211 USB BLACK TURKISH	DK.USB1P.0D0
	KEYBOARD PRIMAX KBAY211 USB BLACK TURKISH-Q	DK.USB1P.0D1
	KEYBOARD PRIMAX KBAY211 USB BLACK ARABIC/FRENCH	DK.USB1P.0D2
	KEYBOARD PRIMAX KBAY211 USB BLACK KAZAKH	DK.USB1P.0D3
	KEYBOARD PRIMAX KBAY211 USB BLACK NORDIC	DK.USB1P.0D4
	KEYBOARD PRIMAX KBAY211 USB BLACK ENGLISH/CANADIAN FRENCH	DK.USB1P.0D5
	KEYBOARD PRIMAX KBAY211 USB BLACK ARABIC/ENGLISH NEW LAYOUT FOR EMEA	DK.USB1P.0DC
	KEYBOARD PRIMAX KBAY211 USB BLACK TURKMEN NEW LAYOUT FOR EMEA	DK.USB1P.0DD

Category	Description	Acer Part No.
Keyboard (Cont.)	KEYBOARD PRIMAX KBAY211 USB BLACK GREEK NEW LAYOUT FOR EMEA	DK.USB1P.0DE
	KEYBOARD PRIMAX KBAY211 USB BLACK CZECH NEW LAYOUT FOR EMEA	DK.USB1P.0DF
	KEYBOARD PRIMAX KBAY211 USB BLACK RUSSIAN NEW LAYOUT FOR EMEA	DK.USB1P.0DG
	KEYBOARD PRIMAX KBAY211 USB BLACK HEBREW NEW LAYOUT FOR EMEA	DK.USB1P.0DH
MAINBOARD		
	MAIN BOARD KIT ASPIRE TC-760 INTEL H110 N N RTL8111GA N ACER LOGO DTX W/O 1394 V1.0 LF+HF	DB.B4M11.002
MEMORY		
	MEMORY SAMSUNG UNB-DIMM DDRIV 2133 16GB M378A2K43BB1-CPB LF+HF 1024*8 25NM MONO	KN.16G0B.016
	MEMORY HYNIX UNB-DIMM DDRIV 2133 16GB HMA82GU6MFR8N-TF LF+HF 1024*8 25NM, POLARIS	KN.16G0G.022
	MEMORY SAMSUNG UNB-DIMM DDRIV 2133 4GB M378A5143DB0-CPB LF+HF 512*8 25NM	KN.4GB0B.038
	MEMORY HYNIX UNB-DIMM DDRIV 2133 4GB HMA451U6AFR8N-TF LF+HF 512*8 25NM POLARIS	KN.4GB0G.037
	MEMORY SAMSUNG UNB-DIMM DDRIV 2133 8GB M378A1G43DB0-CPB LF+HF 512*8 D25	KN.8GB0B.033
	MEMORY HYNIX UNB-DIMM DDRIV 2133 8GB HMA41GU6AFR8N-TF LF+HF 512*8 25NM POLARIS	KN.8GB0G.038
MISCELLANEOUS		
	HDD RUBBER	47.B57D1.001
POINTING DEVICE		
	LITE-ON USB MOUSE SM-9023 A WITH ACER LOGO,BLACK,PHASE IN THE SINGLE MODE_USB	DC.11211.01C
POWER SUPPLY		
	PSU FSP FSP220-50AABA 220W ACTIVE PFC 220V-240V, CHANGE TO DD DESIGN (8A)	DC.22018.008
	PSU FSP FSP220-50AANA 220W ACTIVE PFC 220V-240V, CHANGE TO MOS LINEAR DESIGN	DC.22018.009
	PSU LITE-ON PE-5221-01AB 220W ACTIVE PFC CCC 5000M 220V-240V	DC.2201B.009
	PSU CHICONY POWER D220A007L-AC01 (D14-220P1A) 220W ACTIVE PFC REV.03 220V-240V	DC.2201H.005

Category	Description	Acer Part No.
Power Supply (Cont.)	PSU FSP FSP300-60THA(1) 300W NONE PFC (A01003) 100-127V/220-240V, CHANGE TO MOS LINEAR DESIGN	DC.30018.005
	PSU FSP FSP300-60EP(1) 300W ACTIVE PFC (A01007) 100-127V/220V-240V, CHANGE TO DD DESIGN (16A)	DC.30018.006
	PSU LITE-ON PS-6301-09AB 300W ACTIVE PFC 100-127V/220V-240V (4SATA1PATA)	DC.3001B.002
	PSU LITE-ON PS-6301-18A4 300W NONE PFC 100-127V/220-240V, P7/P9=120+15/-0MM	DC.3001B.003
SCREWS		
	SCREW WAFER STEP 6-32 L12 NI 3NOD	86.B1DD1.001
	SCREW M3 L5 NI 3NOD	86.B1HD1.001
	SCREW M2 CAP L4 NI	86.NBY01.003
	SCREW MA HEX M3 L5 NI 3NOD	86.SPZD1.002
	SCREW MA HEX 6-32 L5 NI 3NOD	86.SPZD1.003
	SCREW MA HEX 6-32 L5 BLACK 3NOD	86.SR2D1.001
	SCREW M2 L2.5 NI JF	86.SXLD1.001
	SCREW MACH PAN M3*L4 NI NYLOK	86.VBK01.003
SPEAKER		
	JS SPEAKER USB MS1238UA WITH NEW ACER LOGO (MEET AJC SPEC.)	SP.10600.049

Test Compatible Components

This computer's compatibility is tested and verified by Acer's internal testing department. All of its system functions are tested for both the Home Basic and Home Premium editions of Microsoft's Windows 10 operating system.

Refer to the following lists for components, adapter cards, and peripherals which have passed these tests. Regarding configuration, combination and test procedures, please refer to the Aspire TC-780 Windows 10 Compatibility Test Report released by the Acer Mobile System Testing Department.

Approved Vendor List (AVL)

Components	Vendor	Model Name or Key Spec.	Acer Part No.
Bezel	3NOD	3NOD Aspire TC3 Bezel BAM16A w/i USB x2, w/i audio port x2, w/i MCR, w/i slim type ODD, for CM16A chassis	DC.11911.09S
Card Reader (30L)	CPUSER	CR01_SD_M 331317201014 530mm, USB 2.0, RTS5143	DC.10411.01F
Card Reader (30L)	Luxshare	CR01_SD_M L43CR006-DT-R 530mm, USB 2.0, RTS5143	DC.10411.01H
Card Reader (30L)	Mingji	CR01_SD_M 9143-0700007RII 530mm, USB 2.0, RTS5143	DC.10411.01G
Chassis	3NOD	3NOD TC3 Chassis MicroATX w/i HDD x2, w/i slim type ODD, for BAM16A bezel	DC.13111.05B
Cooler	Auras	15Q2 Intel 65W cooler Auras first cooler Rev 1.0	DC.10811.016
Cooler	CM	COOLER..(BUY-ACER).12V.4700rpm..DEL-00095-R3-GP2.CPU.92*92*45.4mm L250mm(4P)	DC.10811.012
CPU	Intel	Celeron G3900 (2.8G 2M LGA1151)	KC.39001.CDG
CPU	Intel	Core i3-6100 (3.7G 3M 2133FSB)	KC.61001.CI3
CPU	Intel	Core i5-6400 (2.7G 6M 2133FSB)	KC.64A01.CI5
CPU	Intel	Core i7-6700 (3.4G 8M 2133FSB)	KC.67001.CI7
CPU	Intel	Pentium Dual Core G4400 (3.3G 3M 1600FSB)	KC.44001.DEG
CPU	Intel	CPU(PGA) Intel Core i3 7100 LGA 3M 2400 1151 51W Kaby Lake 3.9G	KC.71001.CI3
CPU	Intel	CPU(PGA) Intel Core i5 7400 LGA 3.0G 6M 2133 1151 65W Kaby Lake	KC.74001.CI5
CPU	Intel	CPU(PGA) Intel Core i7 7700 LGA 3.6G 8M 2133 1151 65W Kaby Lake	KC.77A01.CI7
Daughter board (30L)	CPUSER	U3=450mm, Audio=600mm, HD audio x2, U3x2, vendor p/n: 3160260007	DA.13711.006

Components	Vendor	Model Name or Key Spec.	Acer Part No.
Daughter board			
(30L)	Luxshare	U3=450mm, Audio=600mm, HD audio x2, U3x2, vendor p/n: L43F1024-DT-R	DA.13711.00S
Daughter board			
(30L)	Mingji	U3=450mm, Audio=600mm, HD audio x2, U3x2, vendor p/n: 9143-0100009RII	DA.13711.007
External Speaker	JS	JS speaker USB MS1238UA with new acer logo	SP.10600.049
HDD	SEAGATE	HDD SEAGATE 3.5" 5900rpm 4000GB ST4000DM000 (Lombard) SATA III 64MB LF F/W:CC54	KH.04K01.003
HDD	SEAGATE	HDD SEAGATE 3.5" 7200rpm 1000GB (Pharaoh Oasis) SATA III 64MB LF F/W:CC42	KH.01K01.051
HDD	SEAGATE	HDD SEAGATE 3.5" 7200rpm 1000GB ST1000DX001 (Grenada BP2H 8G-SSHD) SATA III 64MB LF F/W:CC41	KH.01K01.050
HDD	SEAGATE	HDD SEAGATE 3.5" 7200rpm 2000GB (Grenada BP2 Refresh) SATA III 64MB LF F/W:CC26	KH.02K01.026
HDD	SEAGATE	HDD SEAGATE 3.5" 7200rpm 2000GB ST2000DX001 (Grenada BP2H-8GSSHD) SATA III 64MB LF F/W:CC41	KH.02K01.021
HDD	SEAGATE	HDD SEAGATE 3.5" 7200rpm 3000GB (Grenada2 Refresh) SATA III 64MB LF F/W:CC26	KH.03K01.010
HDD	Toshiba	HDD Toshiba 3.5" 7200rpm 1000GB (Mars) SATA III 64MB LF F/W:750	KH.01K04.010
HDD	Toshiba	HDD Toshiba 3.5" 7200rpm 2000GB (Mars) SATA III 64MB LF F/W:750	KH.02K04.002
HDD	Toshiba	HDD Toshiba 3.5" 7200rpm 3000GB (Mars) SATA III 64MB LF F/W:750	KH.03K04.001
HDD	WD	HDD WD 3.5" 5400rpm 2000GB WD20EZRX-22D8PB0 (GP1000A,4K) SATA III 64MB LF F/W:80.00A80	KH.02K08.012
HDD	WD	HDD WD 3.5" 5400rpm 3000GB WD30EZRX-22D8PB0 (GP1000A,4K) SATA III 64MB LF F/W:80.00A80	KH.03K08.005
HDD	WD	HDD WD 3.5" 7200rpm 1000GB WD(XL1000C) SATA III 64MB LF F/W:01.01A01	KH.01K08.031
HDD	WD	HDD WD 3.5" 7200rpm 500GB SATA III 32MB LF F/W:01.01A01	KH.50008.052
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Arabic/English new layout for EMEA	DK.USB1B.06W
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Arabic/French	DK.USB1B.07Q
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Belgium	DK.USB1B.079

Components	Vendor	Model Name or Key Spec.	Acer Part No.
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Brazilian Portuguese	DK.USB1B.070
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Czech new layout for EMEA	DK.USB1B.07L
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Czech/Slovak	DK.USB1B.07V
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Danish	DK.USB1B.07K
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Dutch	DK.USB1B.077
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black English/Canadian French	DK.USB1B.07U
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black French	DK.USB1B.074
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black German	DK.USB1B.072
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Greek new layout for EMEA	DK.USB1B.07J
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Hebrew new layout for EMEA	DK.USB1B.07C
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Hungarian	DK.USB1B.07H
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Icelandic	DK.USB1B.07A
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Italian	DK.USB1B.073
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Japanese	DK.USB1B.071
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Kazakh	DK.USB1B.07R
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Korean	DK.USB1B.07X
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Nordic	DK.USB1B.07T
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Norwegian	DK.USB1B.07B
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Polish	DK.USB1B.07D
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Portuguese	DK.USB1B.06Z
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Romanian	DK.USB1B.07M
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Russian new layout for EMEA	DK.USB1B.07G
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Slovak	DK.USB1B.07F
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Slovenian	DK.USB1B.07E
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Spanish	DK.USB1B.06Y

Components	Vendor	Model Name or Key Spec.	Acer Part No.
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Spanish Latin	DK.USB1B.07Y
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Swedish	DK.USB1B.075
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Swiss/FR	DK.USB1B.07W
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Swiss/G	DK.USB1B.078
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Thailand	DK.USB1B.06X
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Traditional Chinese	DK.USB1B.06T
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Turkish	DK.USB1B.07N
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Turkish-Q	DK.USB1B.07P
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black Turkmen new layout for EMEA	DK.USB1B.07S
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black UK	DK.USB1B.076
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black US	DK.USB1B.06S
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black US International	DK.USB1B.06V
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black US International new layout for EMEA	DK.USB1B.080
Keyboard	Lite-On	Keyboard LITE-ON SK-9626 USB Black US with Rupee Symbol for India	DK.USB1B.07Z
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Arabic/English new layout for EMEA	DK.RF41B.048
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Arabic/French	DK.RF41B.052
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Belgium	DK.RF41B.04M
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Brazilian Portuguese	DK.RF41B.04C
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Czech new layout for EMEA	DK.RF41B.04Y
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Czech/Slovak	DK.RF41B.057
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Danish	DK.RF41B.04X
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Dutch	DK.RF41B.04K
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black English/Canadian French	DK.RF41B.056
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black French	DK.RF41B.04G
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black German	DK.RF41B.04E
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Greek new layout for EMEA	DK.RF41B.04W

Components	Vendor	Model Name or Key Spec.	Acer Part No.
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Hebrew new layout for EMEA	DK.RF41B.04Q
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Hungarian	DK.RF41B.04V
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Icelandic	DK.RF41B.04N
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Italian	DK.RF41B.04F
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Japanese	DK.RF41B.04D
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Kazakh	DK.RF41B.053
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Korean	DK.RF41B.059
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Nordic	DK.RF41B.055
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Norwegian	DK.RF41B.04P
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Polish	DK.RF41B.04R
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Portuguese	DK.RF41B.04B
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Romanian	DK.RF41B.04Z
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Russian new layout for EMEA	DK.RF41B.04U
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Slovak	DK.RF41B.04T
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Slovenian	DK.RF41B.04S
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Spanish	DK.RF41B.04A
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Spanish Latin	DK.RF41B.05A
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Spanish Latin without battery	DK.RF41B.05C
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Swedish	DK.RF41B.04H
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Swiss/FR	DK.RF41B.058
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Swiss/G	DK.RF41B.04L
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Thailand	DK.RF41B.049
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Traditional Chinese	DK.RF41B.046
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Turkish	DK.RF41B.050
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Turkish-Q	DK.RF41B.051

Components	Vendor	Model Name or Key Spec.	Acer Part No.
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black Turkmen new layout for EMEA	DK.RF41B.054
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black UK	DK.RF41B.04J
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black US	DK.RF41B.045
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black US International	DK.RF41B.047
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black US International new layout for EMEA	DK.RF41B.05D
Keyboard	Lite-On	Keyboard LITE-ON SK-9662 RF2.4 Black US with Rupee Symbol for India	DK.RF41B.05B
MB Kit	Wistron	MB Kit Aspire T3-780; Aspire X3-780 Intel H110 N N RTL8111GA Acer Logo DTX W/O 1394 V1.0 LF+HF	DB.B5711.001
MB Kit	Wistron	MB Kit Aspire TC-760 Intel H110 N N RTL8111GA N Acer Logo DTX W/O 1394 V1.0 LF+HF	DB.B4M11.002
MEM	Hynix	Memory HYNIX UNB-DIMM DDRIV 2133 16GB HMA82GU6MFR8N-TF LF+HF 1024*8 25nm DDP, Polaris	KN.16G0G.022
MEM	Hynix	Memory HYNIX UNB-DIMM DDRIV 2133 4GB HMA451U6AFR8N-TF LF+HF 512*8 25nm Polaris	KN.4GB0G.037
MEM	Hynix	Memory HYNIX UNB-DIMM DDRIV 2133 8GB HMA41GU6AFR8N-TF LF+HF 512*8 25nm Polaris	KN.8GB0G.038
MEM	Samsung	Memory SAMSUNG UNB-DIMM DDRIV 2133 16GB M378A2K43BB1-CPB LF+HF 1024*8 25nm Mono	KN.16G0B.016
MEM	Samsung	Memory SAMSUNG UNB-DIMM DDRIV 2133 4GB M378A5143DB0-CPB LF+HF 512*8 25nm	KN.4GB0B.038
MEM	Samsung	Memory SAMSUNG UNB-DIMM DDRIV 2133 8GB M378A1G43DB0-CPB LF+HF 512*8 D25	KN.8GB0B.033
Mouse	Lite-On	Lite-on RF2.4 mouse SM-9662 black,with receiver new F/W v0016a,without battery	DC.11211.00X
Mouse	Lite-On	Lite-on RF2.4 mouse SM-9662 black,with receiver,new F/W v0016a	DC.11211.00W
Mouse	Lite-On	Lite-on USB mouse SM-9023 A with acer logo,black,phase in the single mode_USB	DC.11211.01C
ODD	HLDS	Super-Multi DRIVE HLDS Super-Multi DRIVE 9.0mm Tray 8X GUE1N LF+HF W/O bezel SATA	KO.0080D.019
ODD	PLDS	Super-Multi DRIVE PLDS Super-Multi DRIVE 9.0mm Tray 8X DA-8A6SH LF+HF W/O bezel SATA	KO.0080F.008
Optional Accessories	WNC	all Wlan M.2 Main& AUX Antenna for 25L WlanM.2 Main& AUX Antenna for 25L 2 pcs M.2 PIFA Antenna	DP.13411.04D

Components	Vendor	Model Name or Key Spec.	Acer Part No.
PSU (30L)	Chicony Power	PSU Chicony Power D220A007L-AC01 (D14-220P1A) 220W Active PFC Rev.03 220v-240V,no anti-fold design on O/P cable side	DC.2201H.005
PSU (30L)	FSP	PSU FSP FSP220-50AABA 220W Active PFC 220v-240V, change to DD design (8A)	DC.22018.008
PSU (30L)	FSP	PSU FSP FSP220-50AANA 220W Active PFC 220v-240V, change to MOS Linear design	DC.22018.009
PSU (30L)	FSP	PSU FSP FSP300-60EP(1) 300W Active PFC (A01007) 100-127v/220v-240V, change to DD design (16A)	DC.30018.006
PSU (30L)	FSP	PSU FSP FSP300-60THA(1) 300W None PFC (A01003) 100-127V/220-240V, change to MOS Linear design	DC.30018.005
PSU (30L)	Lite-On	PSU LITE-ON PE-5221-01AB 220W Active PFC CCC 5000m 220v-240V	DC.2201B.009
PSU (30L)	Lite-On	PSU LITE-ON PS-6301-09AB 300W Active PFC 100-127v/220v-240V (4SATA1PATA)	DC.3001B.002
PSU (30L)	Lite-On	PSU LITE-ON PS-6301-18A4 300W None PFC 100-127V/220-240V, P7/P9=120+15/-0mm	DC.3001B.003
PSU (30L)	Lite-On	PSU LITE-ON PS-7501-5AE 500W Active PFC 100-127V/220-240V, P8/P10 = 120+15/-0mm, 2015 rev	DC.5001B.003
SSD	Kingston	Flash Disk KINGSTON SSD NAND 96GB RBU-SNS8151S3/96GG LF+HF	KN.09607.001
SSD	Lite-On	Flash Disk LITE-ON SSD NAND 128GB CV1-8B128 LF+HF	KN.1280L.013
SSD	Lite-On	Flash Disk LITE-ON SSD NAND 256GB CV1-8B256 LF+HF	KN.2560L.012
SSD	Lite-On	Flash Disk LITE-ON SSD NAND 512GB CV1-8B512 LF+HF	KN.5120L.005
SSD	Toshiba	15nm Toshiba NAND	KN.1280A.008
SSD	Toshiba	15nm Toshiba NAND	KN.2560A.008
VGA card (30L)	PCP	VGA Card AMD R5-310 DDRIII 2GB ATX PCI-Ex16 UEFI DVI HDMI 288-6E225-X01A8	DA.31011.001
VGA card (30L)	PCP	VGA Card AMD R7-340 DDRIII 2GB ATX PCI-Ex16 UEFI DVI HDMI	DA.34011.001
VGA card (30L)	PCP	VGA Card AMD R9-360 GDDR5 2GB ATX PCI-Ex16 UEFI DVI HDMI DP 288-1E325-X00A8 v2	DA.36011.002
VGA card (30L)	PCP	VGA Card nVidia GT705 DDRIII 1024M ATX 64bit UEFI VGA DVI-I HDMI 288-BN214-X60A8	DA.70511.005
VGA card (30L)	PCP	VGA Card nVidia GT720 DDRIII 2GB ATX UEFI DVI-I HDMI 288-5N326-X01A8	DA.72011.001
VGA card (30L)	PCP	VGA Card nVidia GT730 DDRIII 2GB ATX PCI-Ex16 UEFI DVI HDMI 288-6N326-X01A8	DA.73011.001
VGA card (30L)	PCP	VGA Card nVidia GTX745 DDRIII 4GB ATX PCI-Ex16 UEFI DVI HDMI MEM 288-1N249-X04A8	DA.74511.003

Components	Vendor	Model Name or Key Spec.	Acer Part No.
VGA card (30L)	PCP	VGA Card nVidia GTX950 GDDR5 2GB ATX PCI-Ex16 UEFI DVI DVI HDMI DP 288-3N376-X00A8	DA.95011.001
WLAN/BT	Intel	Wireless LAN Intel WLAN INT3165.NGWW C0 Stone Peak 1x1 AC + BT M.2	KI.STN01.101
WLAN/BT	Intel	WLAN Intel WLAN 7265.NGWW.W D0 Stonepeak M.2 2X2 AC + BT 2230	KI.STN01.008
WLAN/BT	Lite-On	Wireless LAN Liteon 802.11ac Bluetooth FM 3rd WiFi 1x1 AC+ BT M.2 QCA9377A QCA NFA435A, Rev 1.1	KE.11A0L.001

Online Support Information

This appendix describes online technical support services available to help you repair your Acer products.

If you are a distributor, dealer, ASP or TPM, please refer your technical queries to your local Acer branch office. Acer branch offices and regional business units can access our website. However some information sources will require a user ID and password. These can be obtained directly from Acer CSD Taiwan.

Acer's website offers you convenient and valuable support resources whenever you need them.

In the Technical Information section you can download information on all Acer notebook, desktop, All-In-One (AIO) and server models including:

- Service guides for all models
- User's manuals
- Training materials
- BIOS updates
- Software utilities
- Spare parts lists
- TABs (Technical Announcement Bulletin)

For these purposes, we have included a PDF file to facilitate the problem-free downloading of our technical material.

Also available on this website are:

- Detailed information on Acer's International Traveler's Warranty (ITW)
- Returned material authorization procedures
- An overview of all the support services we offer, accompanied by a list of telephone, fax and email contacts for all your technical queries.

We are always looking for ways to optimize and improve our services, so if you have any suggestions or comments, please do not hesitate to communicate these to us.

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