

Aspire 5951G

# SERVICE GUIDE

*acer*

## Revision History

Refer to the table below for the updates made to this service guide.

Date	Chapter	Updates

Service guide files and updates are available on the ACER/CSD Website. For more information, go to <http://csd.acer.com.tw>. The information in this guide is subject to change without notice.

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## Disclaimer

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## Conventions

The following conventions are used in this manual:

### **WARNING:**

Indicates a potential for personal injury.

### **CAUTION:**

Indicates a potential loss of data or damage to equipment.

### **+ IMPORTANT:**

Indicates information that is important to know for the proper completion of a procedure, choice of an option, or completing a task.

### **NOTE:**

Follow local regulations for battery and circuit board disposal. Batteries and Circuit Boards >10 cm<sup>2</sup> have been highlighted in yellow.

The following typographical conventions are used in this document:

- Book titles, directory names, file names, path names, and program/process names are shown in *italics*.

Example:

the *DRS5 User's Guide*

*/usr/local/bin/fd*

the */TPH15spool\_M* program

- Computer output (text that represents information displayed on a computer screen, such as menus, prompts, responses to input, and error messages) are shown in constant width.

Example:

```
[01] The server has been stopped
```

- User input (text that represents information entered by a computer user, such as command names, option letters, and words) are shown in constant width bold.

Variables contained within user input are shown in angle brackets (< >).

Example:

At the prompt, type **run <file name> -m**

- Keyboard keys are shown in ***bold italics***.

Example:

After entering data, press ***Enter***.

# General Information

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This service guide provides all technical information relating to the basic configuration for Acer 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 (such as add-on cards, modems, or extra memory capabilities). These localized features are not covered in this generic service guide. In such cases, contact your regional offices or the responsible personnel/channel to provide further technical details.

When ordering FRU parts:

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 may not be noted in this printed service guide.

Acer-authorized Service Providers:

Your Acer office may have a different part number code than those given in the FRU list in this service guide. The list provided by your regional Acer office must be used to order FRU parts for repair and service of customer machines.

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# Hardware Specifications and Configurations

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## Features

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The following is a summary of the computer's many features:

### Operating System

- Genuine Windows® 7 Ultimate 64-bit
- Genuine Windows® 7 Home Premium 64-bit

### CPU and Chipset

- Intel® Core™ i7-2630QM processor (6 MB L3 cache, 2 GHz with Turbo Boost up to 2.90 GHz, DDR3 1600 MHz, 45 W), supporting Intel® 64 architecture, Intel® Smart Cache
- Intel® Core™ i7-2620M processor (4 MB L3 cache, 2.70 GHz with Turbo Boost up to 3.40 GHz, DDR3 1333 MHz, 35 W), supporting Intel® 64 architecture, Intel® Smart Cache
- Intel® Core™ i5-2410M/i5-2520M/i5-2540M processor (3 MB L3 cache, 2.30/2.50/2.60 GHz with Turbo Boost up to 2.90/3.20/3.30 GHz, DDR3 1333 MHz, 35 W), supporting Intel® 64 architecture, Intel® Smart Cache
- Intel® Core™ i3-2310M processor (3 MB L3 cache, 2.10 GHz, DDR3 1333 MHz, 35 W), supporting Intel® 64 architecture, Intel® Smart Cache
- Mobile Intel® HM65 Express Chipset

### Memory

Dual-channel DDR3 SDRAM support:

- Up to 4 GB of DDR3 system memory, upgradable to 16 GB using four soDIMM modules

### Display

- 15.6" HD 1366 x 768 resolution, high-brightness (200-nit), Acer CineCrystal™ LED-backlit TFT LCD
- Mercury-free, environment-friendly
- Frameless super-slim design
- 16:9 aspect ratio

## Graphics

- NVIDIA® GeForce® GT 555M with 2048 MB of dedicated DDR3 VRAM, supporting NVIDIA® CUDA™, PhysX™, PureVideo® HD technology, OpenEXR High Dynamic-Range (HDR) technology, Shader Model 5.0, Microsoft® DirectX® 11
- NVIDIA® GeForce® GT 540M with 1024 MB of dedicated DDR3 VRAM, supporting NVIDIA® CUDA™, PhysX™, PureVideo® HD technology, OpenEXR High Dynamic-Range (HDR) technology, Shader Model 5.0, Microsoft® DirectX® 11
- Dual independent display support
- 16.7 million colors
- External resolution / refresh rates:
  - VGA port up to 2048 x 1536: 85 Hz
  - HDMI® port up to 1920 x 1080: 60 Hz
- MPEG-2/DVD decoding
- WMV9 (VC-1) and H.264 (AVC) decoding
- MPEG-4 Part 2 DivX® decoding
- HDMI® (High-Definition Multimedia Interface) with HDCP (High-bandwidth Digital Content Protection) support

## Audio

- Optimized Dolby® Home Theater® v4 audio enhancement, featuring Audio Optimizer, Audio Regulator, Volume Leveler, Volume Maximizer, Intelligent EQ, Dialogue Enhancer, Surround Virtualizer for Headphones, Surround Virtualizer (for built-in speakers), and Dolby® Digital Output technologies
- Two built-in stereo speakers and the Acer Tuba CineBass booster, supporting low-frequency effects
- True5.1-channel surround sound output
- High-definition audio support
- S/PDIF (Sony/Philips Digital Interface) support for digital speakers
- MS-Sound compatible
- Acer PureZone technology with two built-in stereo microphones, featuring beam forming, echo cancellation, and noise suppression technologies

## Storage

### Hard disk drive

- 320/500/640/750 GB or larger

### Multi-in-1 card reader, supporting:

- Secure Digital™ (SD), SD Extended Capacity (SDXC™) Card, MultiMediaCard™ (MMC), MultiMediaCard Plus (MMCplus™), Memory Stick™ (MS), Memory Stick PRO™ (MS PRO), xD-Picture Card™ (xD)



## Optical Media Drive

- 4X Blu-ray Disc™ writer / DVD-Super Multi double-layer drive:
  - Read: 24X CD-ROM, 24X CD-R, 24X CD-RW, 8X DVD-ROM, 8X DVD-R, 8X DVD+R, 6X DVD-ROM DL, 6X DVD-R DL, 6X DVD+R DL, 8X DVD-RW, 8X DVD+RW, 5X DVD-RAM, 4X BD-ROM, 4X BD-R, 4X BD-RE, 4X BD-ROM DL, 4X BD-R DL
  - Write: 24X CD-R, 10X CD-RW, 8X DVD-R, 8X DVD+R, 6X DVD-RW, 6X DVD+RW, 5X DVD-RAM, 4X DVD+R DL, 4X DVD-R DL, 4X BD-R, 2X BD-RE, 4X BD-R DL
- 4X Blu-ray Disc™ / DVD-Super Multi double-layer drive:
  - Read: 24X CD-ROM, 24X CD-R, 16X CD-RW, 8X DVD-ROM, 8X DVD-R, 8X DVD+R, 4X DVD-ROM DL, 4X DVD-R DL, 4X DVD+R DL, 4X DVD-RW, 4X DVD+RW, 5X DVD-RAM, 4X BD-ROM, 4X BD-R, 4X BD-RE, 4X BD-ROM DL, 4X BD-R DL, 4X BD-RE DL
  - Write: 16X CD-R, 10X CD-RW, 8X DVD-R, 8X DVD+R, 4X DVD-RW, 4X DVD+RW, 5X DVD-RAM, 4X DVD+R DL, 4X DVD-R DL
- 8X DVD-Super Multi double-layer drive:
  - Read: 24X CD-ROM, 24X CD-R, 24X CD-RW, 8X DVD-ROM, 8X DVD-R, 8X DVD+R, 6X DVD-ROM DL, 4X DVD-R DL, 4X DVD+R DL, 6X DVD-RW, 6X DVD+RW, 5X DVD-RAM
  - Write: 24X CD-R, 16X CD-RW, 8X DVD-R, 8X DVD+R, 4X DVD-R DL, 4X DVD+R DL, 6X DVD-RW, 8X DVD+RW, 5X DVD-RAM

## Webcam

Acer Video Conference, featuring:

- Acer Crystal Eye HD webcam with:
  - 1280 x 1024 resolution
  - 720p HD audio/video recording
  - Certified Skype™ HD video streaming
- Acer Video Conference Manager software with Video Quality Enhancement (VQE) technology, supporting online video calls
- Acer PureZone technology

## Wireless and Networking

### WLAN:

- Acer InViLink™ Nplify™ 802.11b/g/n Wi-Fi CERTIFIED™
- Acer InViLink™ 802.11b/g Wi-Fi CERTIFIED™
- Supporting Acer SignalUp™ wireless technology

### WPAN:

- Bluetooth® 3.0+HS

### LAN:

- Gigabit Ethernet, Wake-on-LAN ready

## Privacy Control

- Acer Bio-Protection fingerprint solution, featuring Pre-Boot Authentication, computer protection, Acer FingerLaunch
- BIOS user, supervisor, HDD passwords
- Kensington lock slot

## Dimension and Weight

### Dimensions

- 382 (W) x 269 (D) x 25/30 (H) mm (15 x 10.6 x 0.99/1.18 inches)

### Weight

- 3.3 kg (7.27 lbs.) with embedded 8-cell battery

## Power Adapter and Battery

- ACPI 3.0 CPU power management standard: supports Standby and Hibernation power-saving modes

### Power adapter

- 3-pin 120 W AC adapter:
  - 155 (W) x 67 (D) x 36.5 (H) mm (6.1 x 2.63 x 1.43 inches)
  - 570 g (1.25 lbs.) with 180 cm DC cable
- 3-pin 90 W AC adapter:
  - 126 (W) x 51 (D) x 31 (H) mm (4.96 x 2 x 1.22 inches)
  - 332 g (0.73 lbs.) with 180 cm DC cable

### Embedded battery

- Acer PowerSmart long-life battery, supporting up to 1,000 charge cycles
- 83 Wh 6000 mAh 8-cell Li-ion standard battery pack
- Battery life: 7 hours
- ENERGY STAR®

## Environment

### Temperature

- Operating: 5°C to 35°C
- Non-operating: -20°C to 65°C

### Humidity (non-condensing)

- Operating: 20% to 80%
- Non-operating: 20% to 80%

# Input and Control

## Keyboard

- 103-/104-/107-key backlit back-mounted keyboard with independent standard numeric keypad, international language support

## Touchpad

- Acer MediaRemote detachable touchpad with Media Console mode

## Media keys

- Touch-sensitive Media Console, featuring:
  - Video, music shortcuts
  - Media controls: play/pause, stop, previous, next, volume up, volume down

## Control keys

- Instant-on Acer Arcade™ Deluxe support
- Acer programmable key
- Dedicated keyboard backlight control key
- Communication key
- Acer Bio-Protection fingerprint reader

# Input and Output

- Multi-in-1 card reader (SD™, SDXC™, MMC, MMCplus™, MS, MS PRO, xD)
- USB 3.0 port featuring power-off USB charging
- Three USB 2.0 ports
- eSATA / USB 2.0 port
- IEEE 1394 port
- HDMI® port with HDCP support
- External display (VGA) port
- Headphone/speaker jack with S/PDIF support
- Microphone-in jack
- Line-in jack
- Ethernet (RJ-45) port
- DC-in jack for AC adapter

# Software

## Productivity

- Acer Backup Manager
- Acer ePower Management
- Acer eRecovery Management
- Adobe® Flash® Player 10.1
- Adobe® Reader® 9.1
- AUPEO! (US only)
- Bing™ Bar
- eSobi™
- Kobo™ (Canada only)
- Microsoft® Office 2010 preloaded (purchase a product key to activate)
- Microsoft® Office Starter 2010
- New York Times Reader (US only)
- NOOK for PC (US only)
- Norton™ Online Backup

## Security

- Acer Bio-Protection
- McAfee® Internet Security Suite Trial
- MyWinLocker® (except China, Hong Kong)

## Multimedia

- Acer clear.fi
- Acer InstantOn Arcade
- NTI Media Maker™

## Gaming

- Oberon GameZone (except US, Canada, Hong Kong, Korea)
- WildTangent® (US, Canada only)

## Communication and ISP

- Acer Crystal Eye
- Acer Video Conference Manager
- Microsoft® Silverlight™
- Skype™
- Windows Live™ Essentials 2011

### **Web links and utilities**

- Acer Accessory Store (Belgium, France, Germany, Italy, Netherlands, Spain, Sweden, UK only)
- Acer Identity Card
- Acer Registration
- Acer Updater
- eBay® shortcut 2009 (Canada, France, Germany, Italy, Mexico, Spain, UK, US only)
- Netflix shortcut (US only)

### **Optional Items**

- 1/2/4 GB DDR3 soDIMM module
- 3-pin 120 W AC adapter

### **Warranty**

One-year International Travelers Warranty (ITW)

# Notebook Tour

## Top View

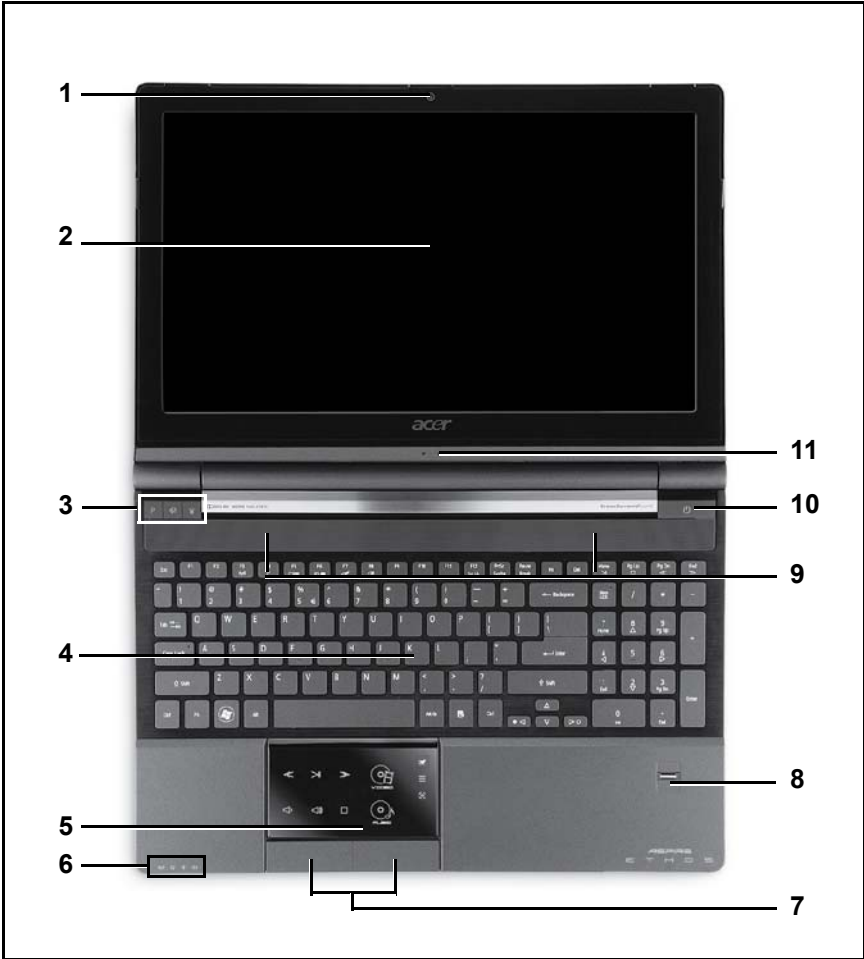










Figure 1-1. Top View

Table 1-1. Top View

No	Icon	Item	Description
1		Acer Crystal Eye webcam	Web camera for video communication (only for certain models).
2		Display screen	Also called Liquid-Crystal Display (LCD), displays computer output (Configuration may vary by model).

**Table 1-1. Top View (Continued)**

No	Icon	Item	Description
3	P	P key / Acer PowerSmart key	Programmable key (configuration may vary by model).
		Arcade key	Starts InstantOn Arcade without booting. Starts clear.fi in Windows.
		Keyboard backlight	Turns the keyboard backlight on or off.
4		Keyboard	For entering data into your computer.
5		Acer MediaRemote (detachable touchpad with media console)	<p>Touch-sensitive pointing device which functions like a computer mouse*.</p> <p>Touch sensitive controls for Acer clear.fi, volume (up, down) and media (play/ pause, previous, next, stop).</p> <p>* Touchpad becomes inactive when media console is active.</p>
6		Communication indicator	Enables/disables the computer's communication devices (communication devices may vary by configuration.)
		HDD indicator	Indicates when the hard disk drive is active.
		Battery indicator	<p>Indicates the computer's battery status.</p> <ul style="list-style-type: none"> <li>• Charging: The light shows amber when the battery is charging.</li> <li>• Fully charged: The light shows blue when in AC mode.</li> </ul>
		Power indicator	Indicates the computer's power status.
7		Click buttons (left and right)	The left and right buttons function like the left and right mouse buttons.
8		Acer Bio-Protection Fingerprint reader	Supports Acer FingerNav 4-way control function (only for certain models).
9		Speakers	Deliver stereo audio output.
10		Power button	Turns the computer on and off.
11		Microphone	Internal microphone for sound recording.
<p>⇒ <b>NOTE:</b></p> <p>The front panel indicators are visible even when the computer cover is closed.</p>			

# Acer MediaRemote

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The detachable touchpad features a media console that allows you to control Acer clear.fi and Windows Media Player.



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**Figure 1-2. Acer MediaRemote**

To detach the touchpad, slide the touchpad release latch and lift the MediaRemote from the touchpad dock.

**⚠ CAUTION:**

The MediaRemote uses magnets to hold it in the touchpad dock. If the MediaRemote has been removed from the dock, do not place it on or near the computer, where it may damage internal components.

## Using the MediaRemote as a touchpad

While the MediaRemote is in touchpad mode, the area indicated with a gray square controls cursor movements. Slide a finger across this surface to control cursor movements and tap the surface twice to make a selection.



---

**Figure 1-3. Media Remote as a Touchpad**



# Preparing the MediaRemote for use

Before using the MediaRemote as a detachable device, ensure the battery is fully charged. The MediaRemote is already paired with your computer.

## Status light

The status light (just above the Touchpad Mode button) indicates connection and battery status.


Table 1-2. Status light

Light	Description
No light	The MediaRemote has not been used for 15 minutes and is in sleep mode.
Blue	The MediaRemote is active and attached to the computer.
Blue flash	The MediaRemote is active and not attached to the computer.
Slow orange flash	Battery power is low (less than 40%).
Quick orange flash	Battery power is very low (less than 20%). The MediaRemote will enter sleep mode after three minutes of inactivity.
Charging	The light shows amber when the battery is charging.
Fully charged	The light shows blue.

## Touchpad commands

The function of the touchpad varies, depending on the current setting.

Table 1-3. Touchpad commands

Icon	Item	Description
	Touchpad mode	Change the function of the touchpad surface: <ul style="list-style-type: none"><li>• Press once to activate clear.fi shortcuts.</li><li>• Press again to activate the media console.</li><li>• Press and hold to turn the MediaRemote on or off.</li></ul>





⇒ **NOTE:**

The Touchpad mode key is illuminated while the MediaRemote touchpad surface is active.

## clear.fi shortcuts

If the clear.fi shortcuts are active, you can easily open the media sections of clear.fi. the blank area of the touchpad can still be used as a pointing device.

**Table 1-4. clear.fi shortcuts**

Icon	Item	Description
	Select	Press to toggle between clear.fi sections: Photo, Video and Music.
	Main menu	Open the main menu in clear.fi.
	Video	Open the Video section of clear.fi.
	Music	Open the Music section of clear.fi.







## Media console

Press the Touchpad Mode button again to activate the media console.

### ⇒ NOTE:

If you play a file when using clear.fi, the media console will turn on automatically. It will turn off when you press the touchpad mode button.

**Table 1-5. Media Console**

Icon	Item	Description
	Previous	Return to the previous media file.
	Play/pause	Play or pause a selected media file.
	Next	Jump to the next media file.
	Reduce volume	Reduce the media playback volume.
	Increase volume	Increase the media playback volume.
	Stop	Stop playing the selected media file.

## G-sensor

While the MediaRemote is detached, you may rotate it from the usual landscape orientation and use the touchpad in portrait mode.

An internal g-sensor will change the orientation of the touchpad controls.

If the touchpad controls do not match the orientation of the MediaRemote, tilt the MediaRemote towards you (at least 30°) for a couple of seconds.



**Figure 1-4. Media Remote G-sensor**

## Pairing the MediaRemote

If the MediaRemote is fully charged but does not work correctly with your computer, you should pair the devices.

- Turn off the MediaRemote (press the mode button for three seconds).
- Press and hold the left and right click buttons for at least three seconds.
- Press the left click button key once.
- Press the mode button on the touchpad.
- The status light will flash to confirm the pairing was successful.






# Front View



Figure 1-5. Front View

Table 1-6. Front View

No	Icon	Item	Description
1		Communication key	Enables/disables the computer's communication devices. (Communication devices may vary by configuration.)
2		Multi-in-1 card reader	Accepts Secure Digital (SD), MultiMediaCard (MMC), Memory Stick PRO (MS PRO), xD-Picture Card (xD). <b>⇒ NOTE:</b> Push to remove/install the card. Only one card can operate at any given time.
3		Touchpad release latch	Lifts the touchpad and allows it to be removed.

# Left View

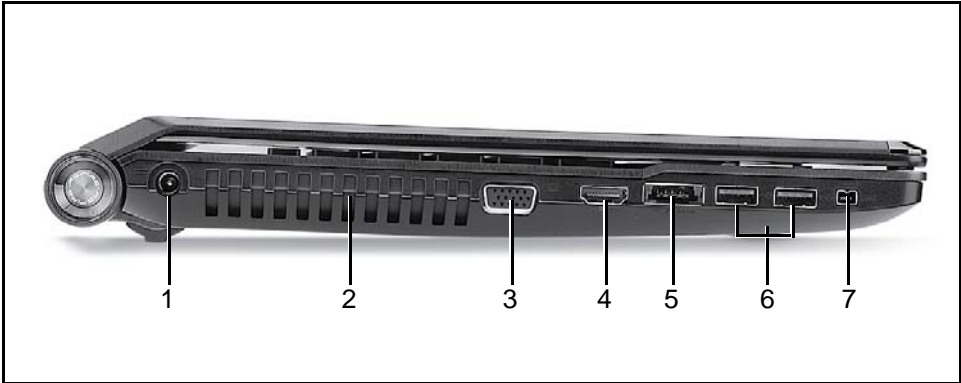



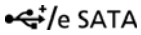




Figure 1-6. Left View

Table 1-7. Left View

No	Icon	Item	Description
1		DC-in jack	Connects to an AC adapter.
2		Ventilation slots	Enable the computer to stay cool, even after prolonged use.
3		External display (VGA) port	Connects to a display device (e.g., external monitor, LCD projector).
4		HDMI port	Supports high-definition digital video connections.
5		USB 2.0 / eSATA port	Connects to USB 2.0 or eSATA devices.
6		USB 2.0 / 3.0 port	Connects to USB devices. A USB 3.0 port can be distinguished by its blue connector.
7		4-pin IEEE 1394 port	Connects to IEEE 1394 devices.

# Right View



Figure 1-7. Right View

Table 1-8. Right View







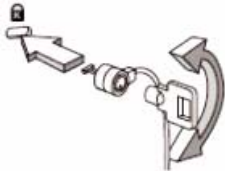
No	Icon	Item	Description
1		Line-in jack	Accepts audio line-in devices (e.g., audio CD player, stereo walkman, mp3 player)
		Microphone-in jack	Accepts inputs from external microphones.
		Headphones / speaker / line-out jack with S/PDIF support.	Connects to audio line-out devices (e.g., speakers, headphones).
2		USB 2.0 ports	Connect to USB 2.0 devices (e.g., USB mouse, USB camera).
3		Optical drive	Internal optical drive; accepts CDs or DVDs.
4		Optical drive eject button / optical disk access indicator	Ejects the optical disk from the drive and lights up when the optical drive is active.
5		Emergency eject hole	Ejects the optical drive tray when the computer is turned off.  ⇒ <b>NOTE:</b> Insert a paper clip to the emergency eject hole to eject the optical drive tray when the computer is off.
6		Ethernet (RJ-45) port	Connects to an Ethernet 10/100/1000-based network.

Table 1-8. Right View (Continued)




No	Icon	Item	Description
7		Kensington lock slot 	Connects to a Kensington-compatible computer security lock.  ⇒ <b>NOTE:</b> Wrap the computer security lock cable around an immovable object such as a table or handle of a locked drawer. Insert the lock into the notch and turn the key to secure the lock. Some keyless models are also available.

# Base View



Figure 1-8. Base View

Table 1-9. Base View

No	Icon	Item	Description
1		Sub woofer	Emits low frequency sound output.
2		Memory compartment	Houses the computer's main memory.
		Hard disk bay- Main	Houses the computer's hard disk (secured with screws)
3		Ventilation slots	Enable the computer to stay cool, even after prolonged use.
4		Battery release latch	<div>Slide to connect the internal battery.</div> <div>⇒ <b>NOTE:</b> The computer battery is embedded and not removable.</div> <div>⇒ <b>NOTE:</b> To completely power off the system (equivalent to removing the battery), slide the battery reset switch to the disconnect battery position. In this position, the computer will only function with the AC adapter connected.</div>



# Touchpad Basics

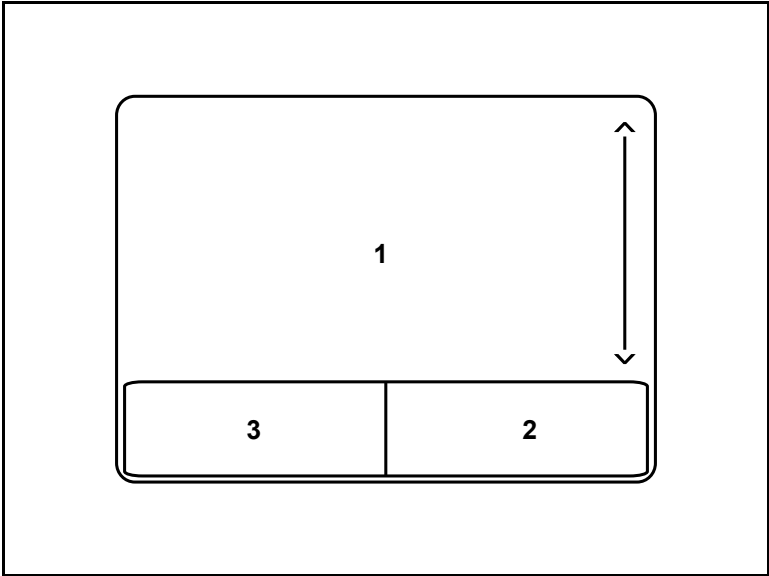


Figure 1-9. Touchpad

- Move finger across the Touchpad (1) to move the cursor.
- Press the left (2) and right (3) buttons located beneath the Touchpad to perform selection and execution functions. These two buttons are the equivalent of the left and right buttons on a mouse. Tapping on the Touchpad is the same as clicking the left button.

Table 1-10. Touchpad

Function	Main TouchPad (1)	Left Button (2)	Right Button (3)
Execute	Tap twice (at the same speed as double-clicking a mouse button).	Quickly click twice.	
Select	Tap once.	Click once.	
Drag	Tap twice (at the same speed as double-clicking a mouse button); rest your finger on the TouchPad on the second tap and drag the cursor.	Click and hold, then use finger on the Touchpad to drag the cursor.	
Access context menu			Click once.
<b>⇒ NOTE:</b> When using the TouchPad, keep it - and fingers - dry and clean. The TouchPad is sensitive to finger movement; hence, the lighter the touch, the better the response. Tapping too hard will not increase the TouchPad’s responsiveness.			

# Using the Keyboard



**Figure 1-10. Keyboard Lock Keys**

The keyboard has three lock keys which can be toggled on and off. (Table 1-11)

**Table 1-11. Keyboard Lock Keys**

Lock key	Description
Caps Lock	When Caps Lock is on, all alphabetic characters typed are in uppercase.
Num Lock	When Num Lock is on, the embedded keypad is in numeric mode. The keys function as a calculator (complete with the arithmetic operators +, -, *, and /). Use this mode when doing a lot of numeric data entry. A better solution would be to connect an external keypad.
Scroll Lock <Fn> + <F12>	When Scroll Lock is on, the screen moves one line up or down when the up or down arrow keys are pressed respectively. Scroll Lock does not work with some applications.

The embedded numeric keypad functions like a desktop numeric keypad. It is indicated by small characters located on the upper right corner of the key caps. To simplify the keyboard legend, cursor-control key symbols are not printed on the keys. (Table 1-12)



**Table 1-12. Embedded Numeric Keypad**

Desired access	Num Lock on	Num Lock off
Number keys on embedded keypad	Type numbers in a normal manner.	
Cursor-control keys on embedded keypad	Hold <Shift> while using cursor-control keys.	Hold <Fn> while using cursor-control keys.
Main keyboard keys	Hold <Fn> while typing letters on embedded keypad.	Type the letters in a normal manner.
















# Windows Keys

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The keyboard has two keys that perform Windows-specific functions.

-  Windows Logo key
-  Application key

**Table 1-13. Windows Keys**

Key	Description
Windows Logo key	<p>Pressed alone, this key has the same effect as clicking on the Windows Start button; it launches the Start menu. It can also be used with other keys to provide a variety of functions.</p> <p>Functions supported by Windows XP, Windows Vista, and Windows 7:</p> <p>: Open or close the Start menu</p> <p> + <b>R</b>: Open the Run dialog box</p> <p> + <b>M</b>: Minimizes all windows</p> <p><b>Shift</b> +  + <b>M</b>: Undo minimize all windows</p> <p> + <b>F1</b>: Show the help window</p> <p> + <b>E</b>: Open Windows Explorer</p> <p> + <b>F</b>: Search for a file or folder</p> <p> + <b>D</b>: Show the desktop</p> <p><b>Ctrl</b> +  + <b>F</b>: Search for computers (if you are on a network)</p> <p> + <b>L</b>: Lock your computer (if you are connected to a network domain), or switch users (if you're not connected to a network domain)</p> <p><b>Ctrl</b> +  + <b>Tab</b>: Moves focus from Start menu, to the Quick Launch toolbar, to the system tray (use → or ← to move focus to items on the Quick Launch toolbar and the system tray)</p> <p> + <b>Tab</b>: Cycle through programs on the taskbar</p> <p> + <b>Break</b>: Display the System Properties dialog box</p> <p>Functions supported by Windows XP:</p> <p> + <b>Break</b>: Show the System Properties dialog box</p> <p> + <b>U</b>: Open Ease of Access Center</p>
Application key	<p>This key has the same effect as clicking the right mouse button; it opens the application's context menu.</p>

# Hotkeys








Hotkeys or key combinations can be used to access most of the computer's controls like screen brightness and volume output.











**Figure 1-11. Keyboard Hotkeys**

To activate hotkeys, press and hold the **Fn** key before pressing the other key in the hotkey combination.

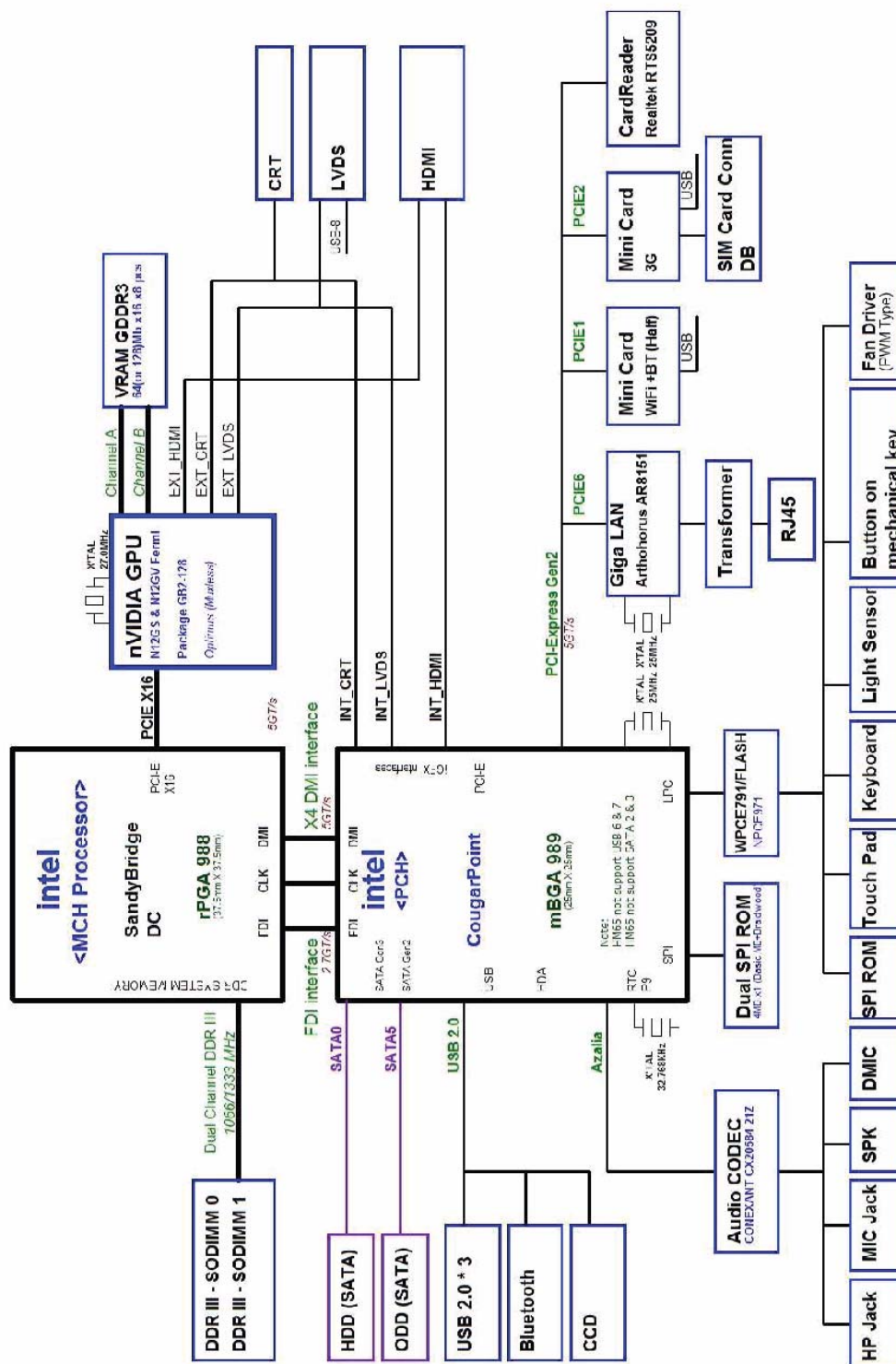
**Table 1-14. Keyboard Hotkeys**

Hotkey	Icon	Function	Description
<Fn> + <F3>		Communication switch	Enables/disables the computer's communication devices. (Communication devices may vary by configuration)
<Fn> + <F4>		Sleep	Puts the computer in Sleep mode
<Fn> + <F5>		Display toggle	Switches display output between the display screen, external monitor (if connected) and both
<Fn> + <F6>		Screen blank	Turns the display screen backlight off to save power. Press any key to return
<Fn> + <F7>		Touchpad toggle	Turns the touchpad on and off
<Fn> + <F8>		Speaker toggle	Turns the speakers on and off
<Fn> + <F9>		Keyboard backlight	Turns the keyboard backlight on and off.

**Table 1-14. Keyboard Hotkeys (Continued)**

Hotkey	Icon	Function	Description
<Fn> + <▷>		Brightness up	Increases the screen brightness
<Fn> + <◁>		Brightness down	Decreases the screen brightness
<Fn> + <△>		Volume up	Increases audio volume
<Fn> + <▽>		Volume down	Decreases audio volume
<Fn> + <Home>		Play/Pause	Plays or pauses media files
<Fn> + <Pg Up>		Stop	Stops media file
<Fn> + <Pg Dn>		Previous	Plays the previous media file in the play sequence
<Fn> + <End>		Next	Plays the next media file in the play sequence

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**Figure 1-12. System Block Diagram**

# Specification Tables

## Computer specifications

Item	Metric	Imperial
Dimensions		
Length	25.4 cm	10.00 in
Width	37.7 cm	14.84 in
Height (front to rear)	3.4 cm	1.34 in
Weight (equipped with optical drive, flash drive, and battery)	2.53 kg	5.6 lbs
Input power		
Operating voltage	19V	
Operating current	90W 120W	
Temperature		
Operating (not writing to optical disc)	0°C ~ 32°C	32°F ~ 95°F
Operating (writing to optical disc)	5°C ~ 35°C	41°F ~ 95°F
Nonoperating	-20°C ~ 65°C	-4°F ~ 140°F
Relative humidity		
Operating	20% to 80%	
Nonoperating	20% to 80%	
Maximum altitude (unpressurized)		
Operating	-15 to 3,048m	-50 to 10,000ft
Nonoperating	-15 to 12,192m	-50 to 40,000ft
Shock		
Operating	105G, 2 ms, half-sine	
Nonoperating	220 G, 2 ms, half-sine	
Random vibration		
Operating	0.6G/5~500HZ/30min per axis	
Nonoperating	1.5G/5~500HZ/30 min per axis	
<b>⇒ NOTE:</b> Applicable product safety standards specify thermal limits for plastic surfaces. The computer operates well within this range of temperatures.		

## System Board Major Chips

Item	Specification
Core logic	Intel® Ibex-Peak (HM65)
VGA	Nvidia N12P-GS/N12E-GE
LAN	Realtek RTL8111EA-VB-GR
USB 2.0	Intel® Ibex-Peak (HM65)/ Integrated with PCH
USB 3.0	NEC UPD720200AF1-DAP-A
Super I/O controller	Nuvoton NPCE791C
Bluetooth	<ul style="list-style-type: none"><li>• Foxconn Bluetooth BRM 2070</li><li>• Foxconn Bluetooth ATH BU12</li></ul>
Wireless	<ul style="list-style-type: none"><li>• Heros HB97</li><li>• Broadcom 43225</li></ul>
PCMCIA	N/A
Audio codec	Realtek ALC669
Card reader	JMB388-QGAZ0A

## Processor

Item	Specification
CPU type	Intel Sandy Bridge (Dual Core) processor
CPU package	989 pins-rPGA socket
Core Logic	<ul style="list-style-type: none"><li>• Two or Four-core processor for mobile with enhanced performance<ul style="list-style-type: none"><li>■ 32-KB instruction and 32 -KB data first-level cache (L1) for each core</li><li>■ 256-KB shared instruction/data second -level cache (L2) for each core</li><li>■ Up to 8-MB shared instruction/data last -level cache (L3), shared among all cores</li></ul></li><li>• Full support of ACPI C -states as implemented by the following processor C -states:<ul style="list-style-type: none"><li>■ C0, C1, C1E, C3, C6, C7</li></ul></li><li>• Enhanced Intel SpeedStep® Technology</li></ul>
Chipset	HM65



## Processor Specifications

Item	CPU Speed (GHz)	Cores/Threads	Bus Speed (FSB/DMI/QBI)	Mfg Tech (nm)	Cache Size	Package	Voltage
i3-2310M	2.1	2	DMI/QBI)	32nm	3MB	rPGA988B	35W
i5-2410M	2.3	2	DMI/QBI)	32nm	3MB	rPGA988B	35W
i5-2520M	2.5	2	DMI/QBI)	32nm	3MB	rPGA988B	35W
i5-2540M	2.6	2	DMI/QBI)	32nm	3MB	rPGA988B	35W
I7-2620M	2.7	2	DMI/QBI)	32nm	4MB	rPGA988B	35W

### CPU Fan True Value Table (Tj=100)

CPU Temp	Fan Speed (RPM)	SPL Spec (dBA)
Fan On = 45°C; Fan Off = 40°C	2850	31
Fan On = 56°C; Fan Off = 50°C	3150	34
Fan On = 70°C; Fan Off = 60°C	3450	37
Fan On = 83°C; Fan Off = 75°C	3800	40
Fan On = 96°C; Fan Off = 85°C	5V	N/A
<ul style="list-style-type: none"> <li>Throttling 50%: On= 97°C; OFF= 90°C</li> <li>OS shut down at 100°C; H/W shut down at 100°C</li> </ul>		

### CPU Fan True Value Table (Tj=85)

CPU Temp	Fan Speed (RPM)	SPL Spec (dBA)
Fan On = 45°C; Fan Off = 40°C	3100	31
Fan On = 55°C; Fan Off = 50°C	3550	34
Fan On = 70°C; Fan Off = 65°C	3900	37
Fan On = 77°C; Fan Off = 74°C	4150	40
Fan On = 82°C; Fan Off = 80°C	N/A	5V
<ul style="list-style-type: none"> <li>Throttling 50%: On= 83°C; OFF= 81°C</li> <li>OS shut down at 85°C; H/W shut down at 85°C</li> </ul>		

### VGA Fan True Value Table

CPU Temp	Fan Speed (RPM)	SPL Spec (dBA)
Fan On = 45°C; Fan Off = 40°C	3100	31
Fan On = 55°C; Fan Off = 50°C	3550	34
Fan On = 68°C; Fan Off = 60°C	3900	37
Fan On = 81°C; Fan Off = 73°C	4150	40
Fan On = 92°C; Fan Off = 86°C	N/A	5V
<ul style="list-style-type: none"> <li>OS shut down at 105°C; H/W shut down at 105°C</li> </ul>		

### System Memory

Item	Specification
Memory controller	Built in at CPU
Memory size	1GB, 2GB, 4GB
DIMM socket number	4
Supports memory size per socket	4GB
Supports maximum memory size	16GB
Supports DIMM type	SODIMM
Supports DIMM Speed	DDRIII
Support DIMM voltage	1.5V
Supports DIMM package	204-pins DDR3-SODIMM

### Memory Combinations

Slot 1 (MB)	Slot 2 (MB)	Slot 3 (MB)	Slot 4 (MB)	Total Memory (MB)
0	0	0	1024	1024
0	0	1024	0	1024
0	1024	0	0	1024
1024	0	0	0	1024
0	0	1024	1024	2048
0	1024	1024	0	2048
1024	1024	0	0	2048
1024	0	0	1024	2048
0	1024	1024	1024	3072
1024	1024	1024	0	3072
1024	1024	0	1024	3072
1024	0	1024	1024	3072

Slot 1 (MB)	Slot 2 (MB)	Slot 3 (MB)	Slot 4 (MB)	Total Memory (MB)
<b>Memory Combinations (continued)</b>				
1024	1024	1024	1024	4096
0	0	0	2048	2048
0	0	2048	0	2048
0	2048	0	0	2048
2048	0	0	0	2048
0	0	2048	2048	4096
0	2048	2048	0	4096
2048	2048	0	0	4096
2048	0	0	2048	4096
0	2048	2048	2048	6144
2048	2048	2048	0	6144
2048	2048	0	2048	6144
2048	0	2048	2048	6144
2048	2048	2048	2048	8192
0	0	0	4096	4096
0	0	4096	0	4096
0	4096	0	0	4096
4096	0	0	0	4096
0	0	4096	4096	8192
0	4096	4096	0	8192
4096	4096	0	0	8192
4096	0	0	4096	8192
0	4096	4096	4096	12288
4096	4096	4096	0	12288
4096	4096	0	4096	12288
4096	0	4096	4096	12288
4096	4096	4096	4096	16384

## Video Interface

Item	Specification
Chipset	Nvidia N12P-GS/ N12E-GE
Package	GB2-128/ GB3-128
Interface	PCIE X 16
Compatibility	<ul style="list-style-type: none"><li>• Fully compliant with PCI Express Base Specification Rev. 2.1</li><li>• Support CRT/LVDS/HDMI/DP interface (concurrent)</li><li>• Dual-channel LVDS interface support: single channel 24 bpp dual link</li><li>• HDCP compliance embed-in</li><li>• Full POWERPLAY™ 8.0 support</li><li>• LVDS / Engine and Memory / DP Spread Spectrum Support</li><li>• H.264 implementation is based on the ISO/IEC 14496-10 specification.</li><li>• VC-1 implementation is based on the SMPTE 421M specification.</li><li>• MPEG2 implementation is based on the ISO 13818 -2</li><li>• Supports top quality DVD and Blue -Ray disc with the lowest CPU usage.</li><li>• Power<ul style="list-style-type: none"><li>• +VGPU_CORE (GPU core power supply)</li><li>• +1.05V_GFX (+1.05V, GPU power supply)</li><li>• +1.5V_GFX (+1.5V, VRAM and memory control power supply)</li><li>• +3V_GFX (+3.3V, Peripheral power supply)</li></ul></li></ul>
Sampling rate	60Hz

## BIOS

Item	Specification
BIOS vendor	Insyde
BIOS Version	1.01
BIOS ROM type	EEPROM
BIOS ROM size	4M
Features	UEFI

## LAN Interface

Item	Specification
LAN Chipset	Realtek RTL8111EA-VB-GR
LAN connector type	RJ-45
LAN connector location	Right side
Features	<ul style="list-style-type: none"><li>• Integrated 10/100/1000base-T transceiver</li><li>• Automatic MDI crossover function</li><li>• PCIe v1.1 compliant</li><li>• 10/100/1000BASE-T full-duplex/half-duplex MAC</li><li>• Receive side scaling (RSS) for multicore processors</li><li>• Complies with IEEE802.3 , 802.3u , 802.3ab and 802.1p</li><li>• Supports iSCSI boot</li><li>• IPv4 and IPv6 large send offload and checksum offload (LSO/TCO)</li><li>• Wake on LAN(WOL) support meeting the ACPI requirements</li><li>• Statistics for SNMP MIB II , Ethernet-like MIB and Ethernet MIB(IEEE 802.3z , Clause 30)</li><li>• SMBus interface supporting Alert Standard Format (ASF) v2.0</li><li>• Self-boot feature , utilizing smaller EEPROM size with ability to use on-chip memory</li><li>• Serial Flash memory support with auto-sensing capability</li><li>• PCI Express CLKREQ# support</li><li>• Integrated switching regulator for improved power consumption</li></ul>

## Keyboard

Item	Specification
Type	ACER AF7B_A10B GF7T keyboard
Total number of keypads	US, UK 129 keys, JP 132 keys
Windows logo key	Yes
Internal & external keyboard work simultaneously	Plug USB keyboard to the USB port directly: Yes
Features	<ul style="list-style-type: none"><li>• Support Application keys for Windows Vista / Windows 7</li><li>• Multi-Langue support</li></ul>

### Hard Disk Drive (AVL components)

Item	Specification			
Vendor & Model Name	Hitachi HTS545032B9A 300, WD WD3200BPVT- 22ZEST0	Hitachi HTS545050B9A 300, WD WD5000BPVT- 22HXZT1	TOSHIBA MK6459GSXP, WD WD6400BPVT- 22HXZT1	Western Digital WD7500BPVT, Toshiba MK7559GSXP
Capacity (GB)	320	500	640	750
Bytes per sector	512	512	512	512, 512
Data heads	3	4, 3	4, 4	4, 4
Drive Format				
Disks	1	2	2	2, 2
Spindle speed (RPM)	5400RPM			
Performance Specifications				
Buffer size	8MB			
Interface	SATA			
Fast data transfer rate (Mbits / sec, max)	3.0, 3.0	3.0, 3.0	3.0, 3.0	3.0, 3.0
Media data transfer rate (Mbytes/sec max)	875, 300	875, 300	875, 300	97, (584.3-1195.5 Mbits/s)
DC Power Requirements				
Voltage tolerance	5V ± 5%			

## Super-Multi Drive

Item	Specification	
Vendor & Model name	TSST TS-L633F	
Performance Specification	With CD Diskette	With DVD Diskette
Transfer rate (KB/sec)	Sustained: Max 3.6 (24x)	Sustained: Max 10.08Mbytes/sec
Buffer Memory	1.5 M	
Interface	SATA	
Applicable disc format	DVD: DVD-ROM (Book 1.02), DVD-Dual DVD-Video (Book 1.1) DVD-R (Book 1.0, 3.9G) DVD-R (Book 2.0, 4.7G) - General & Authoring DVD+R (Version 1.0) DVD+RW DVD-RW (Non CPRM & CPRM) DVD±R Dual DVD-RAM CD: CD-DA (Red Book) - Standard Audio CD & CD-TEXT CD-ROM (Yellow Book Mode1 & 2) - Standard Data CD-ROM XA (Mode2 Form1 & 2) - Photo CD, Multi-Session CD-I (Green Book, Mode2 Form1 & 2, Ready, Bridge) CD-Extra/ CD-Plus (Blue Book) - Audio & Text/Video Video-CD (White Book) - MPEG1 CD-R (Orange Book Part 1 & 2) CD-RW & HSRW (Orange Book Part-V, Volume1 & Volume2) Super Audio CD (SACD) Hybrid type US & US+ RW (US 32X CD-RW Disc recording disable)	
Loading mechanism	Drawer (Solenoid Open)	
Power Requirement		
Input Voltage	DC +5V ± 5%	

Item	Specification	
Super-Multi Drive (continued)		
Vendor & Model name	Panasonic UJ8A0	
Performance Specification	With CD Diskette	With DVD Diskette
Transfer rate (KB/sec)	Sustained: Max 3.6 (24x)	Sustained: Max 10.08 (8x)
Buffer Memory	1 MB	
Interface	SATA	
Applicable disc format	DVD: DVD-VIDEO, DVD-ROM, DVD-R(4.7GB), DVD-R DL DVD-RW(Ver.1.1/1.2) DVD+R, DVD+R DL, DVD+RW DVD-RAM(4.7GB) CD: CD-DA, CD-ROM, CD-ROM XA, PhotoCD (multi session), Video CD, Cd-Extract (CD+), CD-text	
Loading mechanism	<ul style="list-style-type: none"><li>● Electrical Release (Release Button)</li><li>● Release by ATAPI command</li><li>● Emergency Release</li></ul>	
Power Requirement		
Input Voltage	5V +/- 5%	

Item	Specification	
Vendor & Model name	PLDS DS-8A5SH	
Performance Specification	With CD Diskette	With DVD Diskette
Transfer rate (KB/sec)	Sustained: <ul style="list-style-type: none"> <li>• CD-ROM inside:1.45</li> <li>• CD-ROM :outside 3.5</li> </ul>	Sustained: <ul style="list-style-type: none"> <li>• DVD-ROM inside: 3.7</li> <li>• DVD-ROM outside: 10</li> </ul>
Buffer Memory	1.5 MB	
Interface	SATA	



Item	Specification
<b>Super-Multi Drive (continued)</b>	
Applicable disc format	DVD: DVD-ROM (4.7G/8.54G) single layer on single/double side (Read Only), DVD-ROM dual layer (PTP/OTP) on single/double side (Read Only), DVD-RW, DVD+RW, DVD-R (4.7G for General), DVD+R, DVD+R9, DVD-R9, DVD-RAM(4.7G) CD: CD-ROM, CD-R and CD-RW
Loading mechanism	Manual load Plunger system
<b>Power Requirement</b>	
Input Voltage	5V +/- 5%

## BD Drive

Items	Specifications		
Vendor & Model name	HLDS CT30N		
Performance Specification	With CD Diskette	With DVD Diskette	With BD Diskette
Transfer rate (KB/sec)	Sustained: 3600 kB/s (24x) max.	Sustained: 11.08 MB/s (8x) max.	Sustained: 215.79 Mbits/s (6x) max.
Buffer Memory	2 MB		
Interface	SATA		
Applicable disc format	BD: BD-ROM (SL/DL) 25GB / 50GB (Ver.1.2) BD-R (SL/DL) 25GB / 50GB (Ver.1.3) BD-RE (SL/DL) 25GB / 50GB (Ver.2.0) DVD: DVD-ROM (SL/DL): 4.7GB / 8.5GB (Ver.1.1) DVD-R SL: 4.7GB (Ver.2.1) DL: 8.5GB (Ver.3.0) DVD-RW: 4.7GB (Ver.1.2 / Rev 1.0, 2.0, 3.0) DVD-RAM: 1.46GB/side, 4.7GB/side (Ver.2.2) DVD+R SL: 4.7GB (Ver.1.3) DL: 8.5GB (Ver.1.2) DVD+RW: 4.7GB (Vol.1 Ver.1.3, Vol.2 Ver.1.0) CD: CD-ROM Mode-1data disc CD-ROM Mode-2 data disc CD-ROM XA, CD-I, Photo-CD Multi-Session, Video CD CD-Audio Disc Mixed mode CD-ROM disc (data and audio) CD-Extra CD-Text CD-R (Conforming to "Orange Book Part 2": read & write) CD-RW (Conforming to "Orange Book Part 3": read & write)		
Loading mechanism	Drawer type manual load / Electrical release		
Power Requirement			
Input Voltage	5V +/- 5%		

**LED 15.6”**

Item	Specification
Vendor/Model name	AUO B156XW04 V5
Screen Diagonal (mm)	394.9
Active Area (mm)	344.2 X193.5
Display resolution (pixels)	1366(H) x768(V)
Pixel Pitch (mm)	0.252X0.252
Typical White Luminance (cd/m <sup>2</sup> ) also called Brightness	200 typ. (5 points average) 170 min. (5 points average)
Contrast Ratio	500 typ
Response Time (Optical Rise Time/Fall Time) msec	8 typ / 16 Max
Typical Power Consumption (watt)	3.4 max. (Include Logic and Blu power)
Weight (without inverter)	420 max.
Physical Size (mm)	360 x 224.3 x 3.8 (max)
Electrical Interface	1 channel LVDS
Viewing Angle (degree) Horizontal (Right) CR = 10 (Left) Vertical (Upper) CR = 10 (Lower)	45 / 45 / 15 / 35 (typical) 40 / 40 / 10 / 30 (min)

**LCD Inverter (N/A)**

Item	Specification
Vendor & Model name	
Brightness conditions	
Input voltage (v)	
Input current (mA)	
Output voltage (V, RMS)	
Output current (mA, RMS)	
Output voltage frequency (KHz)	

### Display Supported Resolution (LCD)

Resolution	8 bits	16 bits	32 bits	36 bits	48 bits
800x600p/60Hz 16:9	Yes	Yes	Yes	Yes	Yes
1024x768p/60Hz 16:9	Yes	Yes	Yes	Yes	Yes
1280x600/60Hz 16:9	Yes	Yes	Yes	Yes	Yes
1280x720/60Hz 16:9	Yes	Yes	Yes	Yes	Yes
1280x768/60Hz 16:9	Yes	Yes	Yes	Yes	Yes
1360x768/60Hz 16:9	Yes	Yes	Yes	Yes	Yes
1366x768/60Hz 16:9	Yes	Yes	Yes	Yes	Yes

### Graphics Controller

Item	Specification
VGA Chip	Nvidia N12P-GS/N12E-GE
Supports	<p>They support Microsoft® DirectX 11 with shader Model 5.0, PCI Express® Revision 2.0, VESA DisplayPort™ technologies, and integrated HDMI™. The Unified Video Decoder (UVD) enables support for dual-stream decode of High Definition (HD) and Standard Definition (SD) content (H.264, VC -1, or MPEG-2 formats). In addition, support 7.1 channels of compressed HD Audio with Digital Rights Management (DRM).</p> <ul style="list-style-type: none"><li>• Fully compliant with PCI Express Base Specification Rev. 2.1</li><li>• Support CRT/LVDS/HDMI/DP interface (concurrent)</li><li>• Dual-channel LVDS interface support: single channel 24 bpp dual link</li><li>• HDCP compliance embed-in</li><li>• Full POWERPLAY™ 8.0 support</li><li>• LVDS / Engine and Memory / DP Spread Spectrum Support</li><li>• H.264 implementation is based on the ISO/IEC 14496-10 specification.</li><li>• VC-1 implementation is based on the SMPTE 421M specification.</li><li>• MPEG2 implementation is based on the ISO 13818 -2</li><li>• Supports top quality DVD and Blue -Ray disc with the lowest CPU usage.</li></ul>

### Display Supported Resolution (GPU)

Resolution	8 bits	16 bits	32 bits	36 bits	48 bits
800x600p/60Hz 16:9	Yes	Yes	Yes	Yes	Yes
1024x768p/60Hz 16:9	Yes	Yes	Yes	Yes	Yes
1280x600/60Hz 16:9	Yes	Yes	Yes	Yes	Yes
1280x720/60Hz 16:9	Yes	Yes	Yes	Yes	Yes
1280x768/60Hz 16:9	Yes	Yes	Yes	Yes	Yes
1360x768/60Hz 16:9	Yes	Yes	Yes	Yes	Yes
1366x768/60Hz 16:9	Yes	Yes	Yes	Yes	Yes

### Bluetooth Interface

Item	Specifications	
Chipset	Foxconn Bluetooth BRM 2070	Foxconn Bluetooth ATH BU12
Data throughput	<ul style="list-style-type: none"><li>• TX 1.2Mbps/sec</li><li>• RX 1.2Mbps/sec</li></ul>	
Protocol	2.1 + EDR	2.1/3.0+EDR
Interface	USB 2.0	
Connector type	JST SM06B-XSRK-E TB	6 pin narrow pitch connector
Supported protocol	2.1	2.1, 3.0

### Bluetooth Module

Item	Specifications
Controller	Foxconn Bluetooth BRM 2070
Features	<ul style="list-style-type: none"><li>• Bluetooth 3.0 compliant</li><li>• Point-to-multipoint operation</li><li>• External USB interface for data</li><li>• Onboard antenna and SMA RF connector</li><li>• Coexistence support</li></ul>

Item	Specifications
<b>Bluetooth Module (continued)</b>	
Controller	Foxconn Bluetooth ATH BU12
Features	<ul style="list-style-type: none"> <li>• Single-chip Bluetooth v2.1/3.0+EDR integrated solution</li> <li>• USB 2.0 full-speed device interface with support for Device Firmware Upgrade (DFU)</li> <li>• SPI interface supports external serial flash devices</li> <li>• Two on-chip 1.2V linear voltage regulators</li> <li>• Integrated 32-bit CPU with 32KB data RAM and 256KB program RAM</li> <li>• On-board PLL</li> <li>• On-chip low power oscillator (LPO)</li> <li>• Standard USB HCI interface</li> </ul>

### Camera

Item	Specification
Vendor and Model	Suyin 1.3M HD HF1316
Type	1.3M

### Mini Card

Item	Specification
Number supported	2
Features	<ul style="list-style-type: none"> <li>• Mini PCIE card slot for WLAN (half size)</li> <li>• Mini PCIE card slot for WLAN (full size)</li> </ul>

### 3G Card (N/A)

Item	Specification
Features	

## Audio Codec and Amplifier

Item	Specification
Audio Controller	Realtek ALC669X-GR
Features	<ul style="list-style-type: none"> <li>• Meets Microsoft WLP (Windows Logo Program) audio requirements</li> <li>• High performance DACs with digital &gt;110dB and analog 98dB (A-weighting) signal-to-noise</li> <li>• High performance ADCs with digital &gt; 100dB and analog 90dB (A-Weighting) signal-to-noise ratio</li> <li>• Six DAC channels support 16/20/24-bit PCM format for 5.1 sound playback</li> <li>• Two stereo ADCs support 16/20/24-bit PCM format, multiple stereo recording</li> <li>• All DACs supports 44.1k/48k/96k/192kHz sample rate</li> <li>• All ADCs supports 44.1k/48k/96k/192kHz sample rate</li> <li>• Primary 16/20/24-bit SPDIF-OUT supports 32k/44.1k/48k/88.2k/96k/192kHz sample rate</li> <li>• Secondary 16/20/24-bit SPDIF-OUT supports 32k/44.1k/48k/88.2k/96k/192kHz sample rate</li> <li>• Analog jacks (port-A, B, C, E and G) support stereo input and output re-tasking</li> <li>• Support MONO output at port-H</li> <li>• Port-A/D/E/F built in headphone amplifiers</li> <li>• Port-E and Port-F headphone amplifiers can drive earphone directly without DC blocking capacitor</li> <li>• Port-B/C/E/F with software selectable boost gain (+10/+20/+30dB) for analog microphone input</li> <li>• Supports external PCBEEP input and built-in digital BEEP generator</li> <li>• Software selectable 2.5V/3.2V VREFOUT</li> <li>• Supports legacy analog mixer architecture</li> <li>• Four channels of digital microphone array input for voice applications</li> <li>• Two jack detection pins each designed to detect up to 4 jacks plugging</li> <li>• 1.0dB/step playback volume control</li> <li>• 1.5dB/step recording volume control</li> <li>• High pass filter to cancel DC offset from AD converter</li> <li>• Jack detection function is supported when device is in power down mode (D3)</li> <li>• 2 GPIOs (General Purpose Input and Output) for customized applications. GPIO0 and GPIO1 share pin with digital microphone</li> <li>• Supports anti-pop mode when analog power AVDD is on and digital power is off.</li> <li>• Audio Content Protection for Blu-Ray DVD playback (with selected player provided by InterVideo, CyberLink and ArcSoft)</li> </ul>

Item	Specification
<b>Audio Codec and Amplifier (continued)</b>	
Features	<ul style="list-style-type: none"> <li>• Intel low power ECR compliant and power status control for every analog converter and pin widgets</li> <li>• Supports 3.3V digital core power, 1.5V~ 3.3V scalable digital I/O power for HD Audio link, and 3.0~5.0V analog power</li> </ul>
Amplifier	Mono x1, front x1

### Audio Interface

Item	Specification
Audio Controller	Realtek ALC669X-GR
Audio onboard or optional	On board
Mono or Stereo	Stereo
Compatibility	HD audio Interface
Sampling rate	Sample rate up to 192Khz resolution VSR (Variable Sampling Rate)
Internal microphone	Yes
Internal speaker/quantity	YES/2 (2 Watt), Subwoofer (3 Watt)

### Wireless Module 802.11b/g/n

Item	Specification
Chipset	Atheros HB97 Broadcom 43225
Data throughput	11-54 Mbps, up to 300 Mbps for Draft-N
Protocol	b, g, n
Interface	PCI-E

### Battery

Item	Specification
Vendor & Model name	PANASONIC AS11B5E
Battery Type	Li-Ion
Pack capacity	6000mAh
Number of battery cell	8
Package configuration	2P3S



## VRAM

Item	Specification
Chipset	Hynix/Samsung
Memory size	1GB to 2GB
Interface	Standard define

## USB Port

Item	Specification	
USB compliance level	USB 2.0	USB 3.0
EHCI	EHCI, UHCI	xHCI
Number of USB port(s)	2+e-sata	1
Location	1+1 left, 1 right	1 left
Output Current	0.5A, 0.75A(ACER SPEC)	3.3 V and 1.05 V

## HDMI Port

Item	Specification
Compliance level	HDMI1.4a
Data throughput	Up to 16.7 million colors, 5.4 Gbps
Number of HDMI port(s)	1
Location	1 left side

## AC Adapter

Item	Specification
Input rating	100-240V~1.7A(1,7A) 50-60Hz
Maximum input AC current	1.7A(1,7A) 50-60Hz Maximum input AC current 264 Vrms
Inrush current	264 Vac (Cold/Hot start) No damage; meet fuse and bridge Diode I2t de-rating.
Efficiency	Meets EPA 2.0 level V requirement. The adapter efficiency shall be more than 87%, that is the average value of 25%, 50%, 75% and 100% load with both 115Vac/60Hz and 230Vac/50Hz input voltage condition

## System Power Management

Item	Specification
Mech. Off (G3)	All devices in the system are turned off completely.
Soft Off (G2/S5)	OS initiated shutdown. All devices in the system are turned off completely.
Working (G0/S0)	Individual devices such as the CPU and hard disc may be power managed in this state.
Suspend to RAM (S3)	<ul style="list-style-type: none"><li>• CPU set power down</li><li>• VGA Suspend</li><li>• Audio Power Down</li><li>• Hard Disk Power Down</li><li>• CD-ROM Power Down</li><li>• Super I/O Low Power mode</li></ul>
Save to Disk (S4)	Also called Hibernation Mode. System saves all system states and data onto the disc prior to power off the whole system.

## Card Reader

Item	Specification
Chipset	JMB388-QGAZ0A
Package	QFN
Maximum supported size	16G
Features	<ul style="list-style-type: none"> <li>• Compliant with PCI Express Base Spec. Revision 1.1</li> <li>• Compliant with 1394 Open Host Controller Interface (OHCI) Release 1.1</li> <li>• Compliant with SD Spec. Part 1 Physical Layer Spec. Version 3.00</li> <li>• Compliant with SD Spec. Part A2 SD Host Controller Standard Spec. Version 2.00</li> <li>• Compliant with SD Spec. Part E1 SDIO Spec. Version 2.00</li> <li>• Compliant with SD Spec. Part 2 File System Spec. Version 3.00</li> <li>• Compliant with MultiMediaCard System Spec. Version 4.2</li> <li>• Compliant with Memory Stick Standard Format Spec. Version 1.43-00</li> <li>• Compliant with Memory Stick Standard Memory Stick PRO Format Spec. - without security spec. - Version 1.02-00</li> <li>• Compliant with Memory Stick Pro-HG Duo Spec. Version 1.00</li> <li>• Compliant with Memory Stick XC Duo Format Specification ver.1.00-00</li> <li>• Compliant with Memory Stick XC-HG Duo Format Specification ver.1.00-00</li> <li>• Compliant with Memory Stick XC Micro Format Specification ver.1.00-00</li> <li>• Compliant with Memory Stick XC-HG Micro Format Specification ver.1.00-00</li> <li>• Compliant with xD-Picture Card™ Card Spec. Version 1.20</li> <li>• Compliant with xD-Picture Card™ Host Guideline Version 1.20</li> <li>• Compliant with xD-Picture Card™ Host Compliance Design Check Spec. Version 1.20D</li> <li>• Compliant with xD-Picture Card™ Format Spec. Version 1.11</li> <li>• Compliant with System Management Bus Specification Revision 1.1</li> </ul>

### System LED Indicator

Item	Specification
Lock	<ul style="list-style-type: none"><li>• Caps Lock on = Blue</li><li>• Caps Lock on = Blue</li></ul>
System state	<ul style="list-style-type: none"><li>• Blue color on: System on</li><li>• Blue color and amber color off: System off</li><li>• Amber color on: S3</li></ul>
HDD access state	HDD access active = Blue
Wireless state	Wifi on = Amber
Power button backlight	<ul style="list-style-type: none"><li>• Blue color solid on: System on</li><li>• Blue color off: System off</li></ul>
Battery state	<ul style="list-style-type: none"><li>• Full charging = Blue</li><li>• Battery charging = Amber</li></ul>

### System DMA Specification

Legacy Mode	Power Management
DMA0	Not applicable
DMA1	Not applicable
DMA2	Not applicable
DMA3	Not applicable
DMA4	Direct memory access controller
DMA5	Not applicable
DMA6	Not applicable
DMA7	Not applicable
*ExpressCard controller can use DMA 1, 2, or 5.	

## System Interrupt Specification

Hardware IRQ	System Function
IRQ0	System timer
IRQ1	Standard PS/2 Keyboard
IRQ2	Not in use
IRQ3	Not in use
IRQ4*	Direct memory access controller
IRQ5*	Not in use
IRQ6	Not in use
IRQ7*	Not in use
IRQ8	System CMOS/real-time clock
IRQ9*	Not in use
IRQ10*	Not in use
IRQ11*	Not in use
IRQ12	Synaptics PS/2 Port Touchpad
IRQ13	Numeric data processor
IRQ14*	Not in use
IRQ15*	Not in use

## System IO Address Map

I/O address (hex)	System Function (shipping configuration)
000 - 01F	Direct memory access controller
000 - CF7	PCI bus
020 - 021	Programmable interrupt controller
024 - 025	Programmable interrupt controller
028 - 029	Programmable interrupt controller
02C - 02D	Programmable interrupt controller
02E - 02F	Motherboard resources
030 - 031	Programmable interrupt controller
034 - 035	Programmable interrupt controller
038 - 039	Programmable interrupt controller
03C - 03D	Programmable interrupt controller
040 - 043	System timer
04E - 04F	Motherboard resources
050 - 053	System timer
60	Standard PS/2 Keyboard
61	Motherboard resources
62	Microsoft ACPI-Compliant Embedded Controller
63	Motherboard resources
64	Standard PS/2 Keyboard
65	Motherboard resources
66	Microsoft ACPI-Compliant Embedded Controller
67	Motherboard resources
070 - 077	System CMOS/real time clock
80	Motherboard resources
081 - 091	Direct memory access controller
92	Motherboard resources
093 - 09F	Direct memory access controller
0A0 - 0A1	Programmable interrupt controller
0A4 - 0A5	Programmable interrupt controller
0A8 - 0A9	Programmable interrupt controller
0AC - 0AD	Programmable interrupt controller
0B0 - 0B1	Programmable interrupt controller

I/O address (hex)	System Function (shipping configuration)
0B2 - 0B3	Motherboard resources
0B4 - 0B5	Programmable interrupt controller
0B8 - 0B9	Programmable interrupt controller
0BC - 0BD	Programmable interrupt controller
0C0 - 0DF	Direct memory access controller
0F0	Numeric data processor
3B0 - 3BB	Intel® HD Graphics Family
3C0 - 3DF	Intel® HD Graphics Family
400 - 453	Motherboard resources
454 - 457	Motherboard resources
458 - 47F	Motherboard resources
4D0 - 4D1	Programmable interrupt controller
500 - 57F	Motherboard resources
680 - 69F	Motherboard resources
0D00-FFFF	PCI BUS
1000-100F	Motherboard resources
1010-1013	Motherboard resources
164E-164F	Motherboard resources
2000-2FFF	Intel® 6 Series/C200 Series Chipset Family PCI Express Root Port 6-1C1A
3000-3FFF	Intel® 6 Series/C200 Series Chipset Family PCI Express Root Port 5-1C18
4000-4FFF	Intel® 6 Series/C200 Series Chipset Family PCI Express Root Port 2-1C12
5000-50FF	Realtek PCIe GBE Family controller
5000-5FFF	Intel® 6 Series/C200 Series Chipset Family PCI Express Root Port 2-1C10
6000-6FFF	2nd generation Intel® Core™ processor family PCI Express Controller - 0101
6F80-6FFF	NVIDIA GeForce GT 540M
7000-703F	Intel® HD Graphics Family
7040-705F	Intel® 6 Series/C200 Series Chipset Family SMBus Controller - 1C22
7060-707F	Intel® Mobile Express Chipset SATA AHCI Controller
7080-7087	Intel® Mobile Express Chipset SATA AHCI Controller
7088-708F	Intel® Mobile Express Chipset SATA AHCI Controller

I/O address (hex)	System Function (shipping configuration)
7090-7093	Intel® Mobile Express Chipset SATA AHCI Controller
7094-7097	Intel® Mobile Express Chipset SATA AHCI Controller
FFFF	Motherboard resources



## System I/O Address Specifications (N/A)

I/O address (hex)	System Function (shipping configuration)
220 - 22F	
230 - 26D	
26E - 26	
278 - 27F	
280 - 2AB	
2A0 - 2A7	
2A8 - 2E7	
2E8 - 2EF	
2F0 - 2F7	
2F8 - 2FF	
300 - 31F	
320 - 36F	
370 - 377	
378 - 37F	
380 - 387	
388 - 38B	
38C - 3AF	
3B0 - 3BB	
3BC - 3BF	
3C0 - 3DF	
3E0 - 3E1	
3E2 - 3E3	
3E8 - 3EF	
3F0 - 3F7	
3F8 - 3FF	
CF8 - CFB	
(PCIDIVO-1)	
(PCIDIVO-1)	



# CHAPTER 2

## System Utilities

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# System Utilities

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## BIOS Setup Utility

---

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

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

To activate the utility, press **F2** during POST (power-on self-test) when prompted at the bottom of screen.

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

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

## Navigating the BIOS Utility

---

Six menu options are:

- Information
- Main
- Security
- Boot
- Exit

To navigate through the following:

- Menu - use the left and right arrow keys
- Item - use the up and down arrow keys
- Change parameter value - press **F5** or **F6**.
- Exit - Press **Esc**
- Load default settings - press **F9**. Press **F10** to save changes and exit BIOS Setup Utility

### ⇒ NOTE:

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

### ⇒ NOTE:

System information is subject to specific models.

# BIOS

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

## ⇒ NOTE:

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

## Information

InsydeH20 Setup Utility						Rev. 3.5	
Information		Main	Security	Boot	Exit		
CPU Type:		Intel(R) Core(TM)2 Duo CPU T7300					
CPU Speed:		2.00GHz					
HDD Model Name:		ST960821A-(PM)					
HDD Serial Number:		3LF005DB					
ATAPI Model Name:		MATSHITADVD					
System BIOS Version:		V1.00					
VGA BIOS Version:		ATI V008.050I.0-26.00					
Serial Number:		xxxxxxxxxxxxxxxxxxxxxx (Max: 22 Byte)					
Asset Tag Number:		xxxxxxxxxxxxxxxxxxxxxx (Max: 32 Byte)					
Product Name:		xxxxxxxxxxxxxxxxxxxxxx (Max: 16 Byte)					
Manufacturer Name:		xxxxxxxxxxxxxxxxxxxxxx (Max: 16 Byte)					
UUID:		xxxxxxxxxxxxxxxxxxxxxx (Max: 16 Byte)					
F1	Help	↑↓	Select Item	F5/F6	Change Values	F9	Setup Default
ESC	Exit	↔	Select Menu	Enter	Select>SubMenu	F10	Save and Exit

Figure 2-1. BIOS Information

Table 2-1 describes the parameters shown in Figure 2-1.

Table 2-1. BIOS Information

Parameter	Description
CPU Type	CPU (central processing unit) type and speed of system
CPU Speed	Speed of the CPU

**Table 2-1. BIOS Information (Continued)**

Parameter	Description
HDD0 Model Name	Model name of HDD0 (hard disk drive) installed on primary IDE master
HDD0 Serial Number	Serial number of HDD0 installed on primary IDE master
ATAPI Model Name	Model name of Optical device installed in system
System BIOS Version	System BIOS version
VGA BIOS Version	VGA (video graphics array) firmware version of system
Serial Number	Serial number of unit
Asset Tag Number	Asset tag number of system
Product Name	Product name of the system
Manufacturer Name	Manufacturer of system
UUID	Universally Unique Identifier

# Main

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

InsydeH20 Setup Utility						Rev. 3.5	
Information		Main	Security	Boot	Exit		
						Item Specific Help	
System Time		[09:00:00]				F5, F6, or <Enter> selects field	
System Date		[01/01/2003]					
Total Video Memory:		xxxx MB					
Video Memory:		[xMB]					
Quiet Boot		[Enabled]					
Network Boot		[Enabled]					
F12 Boot Menu		[Disabled]					
D2D Recovery		[Enabled]					
SATA Mode		[AHCI Mode]					
*Function key behavior		[Special keys]					
Wi-Fi		[Enabled]					
Bluetooth		[Enabled]					
3G		[Disabled]					
Card Reader		[Enabled]					
USB ports		[Enabled]					
Wired Lan		[Enabled]					
Audio		[Disabled]					
[Camera]		[Enabled]					
Power-off USB Charge		[Enabled]					
Battery Threshold		[20%]					
F1	Help	↑↓	Select Item	F5/F6	Change Values	F9	Setup Default
ESC	Exit	↔	Select Menu	Enter	Select>SubMenu	F10	Save and Exit

Figure 2-2. BIOS Main

Table 2-2 describes the parameters shown in Figure 2-2.



**Table 2-2. BIOS Main**

Parameter	Description	Format/Option
System Time	BIOS system time in 24-hour format	Format: HH:MM:SS (hour:minute:second)
System Date	BIOS system date	Format MM/DD/YYYY (month/day/year)
Total Memory	Total memory available	N/A
Video Memory	Available memory for video	N/A
Quiet Boot	Shows OEM (original equipment manufacturer) screen during system boot instead of traditional POST screen	Option: Enabled or Disabled
Network Boot	Option to boot system from LAN (local area network)	Option: Enabled or Disabled
F12 Boot Menu	Option to use boot menu during POST	Option: Enabled or Disabled
D2D Recovery	Option to use D2D Recovery function	Option: Enabled or Disabled
SATA Mode	Option to set SATA controller mode	Option: AHCI or IDE
Function key behavior	Press <Fn+F1>, <Fn+F2>, ... <Fn+F12> to activate specific function keys.	
Wi-Fi	Option to use Wi-Fi device.	Option: Enabled or Disabled
Bluetooth	Option to use Bluetooth device.	Option: Enabled or Disabled
3G	Option to use 3G device.	Option: Enabled or Disabled
Card Reader	Option to use card reader.	Option: Enabled or Disabled
USB ports	Option to use external USB port.	Option: Enabled or Disabled
Wired LAN	Option to use wired LAN.	Option: Enabled or Disabled
Audio	Option to use audio.	Option: Enabled or Disabled
Camera	Option to use camera.	Option: Enabled or Disabled
Power off USB Charge	Option to use power-off USB charge function.	Option: Enabled or Disabled
Battery Threshold	Option to set the battery threshold level.	Option: 10%, 20% or 30%

# Security

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

InsydeH20 Setup Utility						Rev. 3.5	
Information		Main	Security	Boot	Exit		
<div>Supervisor Password Is: Clear</div> <div>User Password Is: Clear</div> <div>HDD Password Is: Clear</div> <div>Set Supervisor Password [Enter]</div> <div>Set User Password [Enter]</div> <div>Set HDD Password [Enter]</div> <div>Power on Password [Disabled]</div>						Item Specific Help	
						<div>Supervisor Password controls access to the whole setup utility. It can be used to boot up when Password on boot is enabled.</div>	
F1	Help	↑↓	Select Item	F5/F6	Change Values	F9	Setup Default
ESC	Exit	←→	Select Menu	Enter	Select>SubMenu	F10	Save and Exit

Figure 2-3. BIOS Security

Table 2-3 describes the parameters shown in Figure 2-3.

Table 2-3. BIOS Security

Parameter	Description	Option
Supervisor Password Is	Supervisor password setting	Clear or Set
User Password Is	User password setting	Clear or Set
HDD0 Password Is	HDD0 password setting	Clear or Set
Set Supervisor Password	Option to set supervisor password	N/A
Set User Password	Option to set user password	N/A
Set HDD0 Password	Option to set HDD0 password	N/A

**Table 2-3. BIOS Security (Continued)**

Parameter	Description	Option
Password on Boot	<p><b>⚠ CAUTION:</b> If Power-on Password authentication is enabled, the BIOS password can only be cleared by initiating the Crisis Disk Recovery procedure. Refer to <a href="#">BIOS Recovery by Crisis Disk</a>.</p> <p>Shows if password is required during system boot</p>	Disabled or Enabled

⇒ **NOTE:**

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

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

Passwords are not case sensitive.

A password must be alphanumeric (A-Z, a-z, 0-9), not longer than 12 characters.

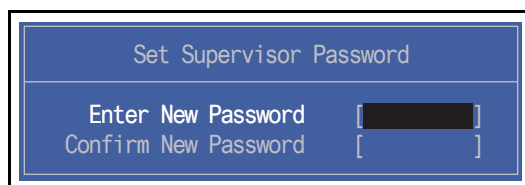
## Setting a Password

Perform the following to set a new user or supervisor password:

1. Use the ↑ and ↓ keys to highlight the Set Supervisor Password parameter and press **Enter**. The Set Supervisor Password dialog box is shown. (Figure 2-4)

⇒ **NOTE:**

To change an existing password, refer to [Changing a Password](#).



The image shows a BIOS dialog box titled "Set Supervisor Password". It has a blue header bar with the title in white. Below the header, there are two input fields. The first field is labeled "Enter New Password" and the second field is labeled "Confirm New Password". Both fields have black rectangular input areas. The dialog box has a thin border and is centered on the screen.

**Figure 2-4. Setting a Password: Set Supervisor Password**

2. Type a new password in the Enter New Password field and press **Enter**.

⇒ **NOTE:**

The following characters may be used in a password:

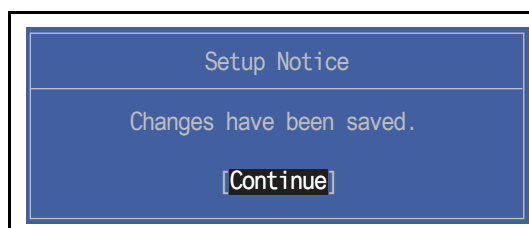
A-Z	Alphabets A through Z (Not Case Sensitive)
0-9	Numerical Characters.
-	Dash
=	Equal Sign
[	Left Bracket

]	Right Bracket
.	Period
,	Comma
;	Semi-colon
/	Slash
\	Back-slash

**+ IMPORTANT:**

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

3. Retype password in the `Confirm New Password` field and press **Enter**.
4. If new password and confirm new password strings match, the `Setup Notice` dialog screen is shown (Figure 2-5). If it is not, go to step 5.




---

**Figure 2-5. Setting a Password Confirmation Notice**

- a. Press **Enter** to return to the *BIOS Setup Utility Security* menu.
- b. The `Supervisor Password` parameter is shown as `Set`.
- c. Press **F10** to save changes and exit *BIOS Setup Utility*.
5. If new password and confirm new password strings do not match, the `Setup Warning` dialog is shown. (Figure 2-6)




---

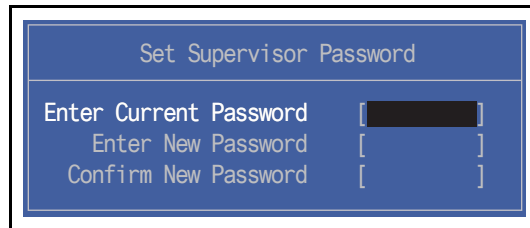
**Figure 2-6. Setting a Password: Passwords Do Not Match**

- a. Press **Enter** to return to the *BIOS Setup Utility Security* menu.
- b. The `Supervisor Password` parameter is shown as `Clear`.
- c. To try to set a new password again, repeat steps 1 through 3.

## Removing a Password

Perform the following:

1. Use the **↑** and **↓** keys to highlight **Set Supervisor Password** and press **Enter**. The **Set Supervisor Password** dialog box is shown. (Figure 2-7)

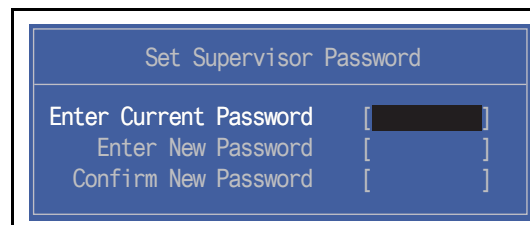


**Figure 2-7. Removing a Password: Set Supervisor Password**

2. Type current password in **Enter Current Password** field and press **Enter**.
3. Press **Enter** twice without typing anything in **Enter New Password** and **Confirm New Password** fields. Computer will set **Supervisor Password** parameter to **Clear**.
4. Press **F10** to save changes and exit the *BIOS Setup Utility*.

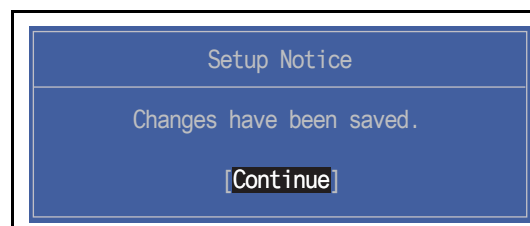
## Changing a Password

1. Use the **↑** and **↓** keys to highlight **Set Supervisor Password** and press **Enter**. The **Set Supervisor Password** dialog is shown. (Figure 2-8)



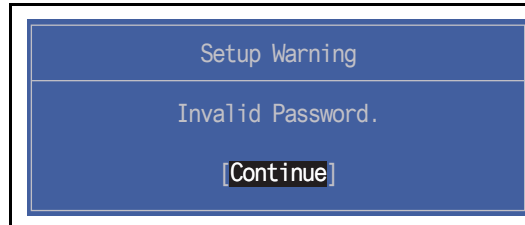
**Figure 2-8. Changing a Password: Set Supervisor Password**

2. Type current password in **Enter Current Password** field and press **Enter**.
3. Type new password in **Enter New Password** field and press **Enter**.
4. Retype new password in **Confirm New Password** field and press **Enter**.
5. If new password and confirm new password strings match, The **Setup Notice** dialog is shown (Figure 2-9). If it is not shown, go to step 6.



**Figure 2-9. Changing a Password: Setup Notice**

- a. Press **Enter** to return to the *BIOS Setup Utility Security* menu.
  - b. The Supervisor Password parameter is shown as Set .
  - c. Press **F10** to save changes and exit *BIOS Setup Utility*.
6. If current password and new password strings do not match, the Setup Warning dialog is shown (Figure 2-10). If it is not shown, go to step 7.



---

**Figure 2-10. Changing a Password: Invalid Password**

- a. Press **Enter** to return to the *BIOS Setup Utility Security* menu.
  - b. The Supervisor Password parameter is shown as Clear .
  - c. To try to change the password again, repeat steps 1 through 4.
7. If new password and confirm new password strings do not match, the Setup Warning dialog is shown (Figure 2-11).



---

**Figure 2-11. Changing a Password: Passwords Do Not Match**

- a. Press **Enter** to return to the *BIOS Setup Utility Security* menu.
  - b. The Supervisor Password parameter is shown as Clear .
  - c. To try to change the password again, repeat steps 1 through 4.

# Boot

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

- USB diskette drives
- Onboard hard disk drive
- DVD drive in the module bay

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

InsydeH20 Setup Utility					Rev. 3.5		
Information		Main	Security	Boot	Exit		
<p>Boot priority order:</p> <p>1. HDD: Hitachi HTS545032B9A300</p> <p>2. ATAPI CDROM: MATSHITADVD-RAM UJ8A2AS</p> <p>3. USB FDD:</p> <p>4. Network Boot: Atheros Boot Agent</p> <p>5. USB HDD:</p> <p>6. USB CDROM:</p>					Item Specific Help		
					<p>Use &lt;↑&gt; or &lt;↓&gt; to select a device, then press &lt;F6&gt; to move it up the List, or &lt;F5&gt; to move it down the list. Press &lt;Esc&gt; to escape the menu</p>		
F1	Help	↑↓	Select Item	F5/F6	Change Values	F9	Setup Default
ESC	Exit	←→	Select Menu	Enter	Select>SubMenu	F10	Save and Exit

Figure 2-12. BIOS Boot

# Exit

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

InsydeH20 Setup Utility						Rev. 3.5			
Information		Main		Security		Boot		Exit	
<div>Exit Saving Changes</div> <div>Exit Discard Changes</div> <div>Load Setup Defaults</div> <div>Discard Changes</div> <div>Save Changes</div>								Item Specific Help	
								Exit System Setup and save your changes.	
F1	Help	↑↓	Select Item	F5/F6	Change Values	F9	Setup Default		
ESC	Exit	←→	Select Menu	Enter	Select>SubMenu	F10	Save and Exit		

Figure 2-13. BIOS Exit

Table 2-4 describes the parameters in Figure 2-13.

Table 2-4. BIOS Exit

Parameter	Description
Exit Saving Changes	Exit BIOS utility and save setup item changes to system.
Exit Discarding Changes	Exit BIOS utility without saving setup item changes to system.
Load Setup Defaults	Load default values for all setup items.
Discard Changes	Load previous values of all setup items.
Save Changes	Save setup item changes to system.



# BIOS Flash Utilities

---

BIOS Flash memory updates are required for the following conditions:

- New versions of system programs
- New features or options
- Restore a BIOS when it becomes corrupted.

Use the Flash utility to update the system BIOS Flash ROM.

⇒ **NOTE:**

If a Crisis Recovery Disc is not available, create one before BIOS Flash utility is used.  
Refer to [BIOS Recovery by Crisis Disk](#).

⇒ **NOTE:**

Do not install memory related drivers (XMS, EMS, DPMI) when BIOS Flash is used.

⇒ **NOTE:**

Use AC adaptor power supply when running BIOS Flash utility. If battery pack does not contain power to finish loading BIOS Flash, do not boot system.

Perform the following to run BIOS Flash.

1. Prepare a bootable USB HDD.
2. Copy Flash utilities to bootable USB HDD.
3. Boot system from bootable USB HDD.

⇒ **NOTE:**

BIOS Flash utility has auto execution function.

# DOS Flash Utility

Perform the following to use the *DOS Flash Utility*:

- 1. Press **F2** during boot to enter Setup Menu.
- 2. Select Boot Menu to modify boot priority order.
- 3. Move USB HDD to position 1 (Figure 2-14). (Refer to *Boot* menu)

InsydeH20 Setup Utility					Rev. 3.5		
Information	Main	Security	Boot	Exit			
<div>Boot priority order:</div> <div><div>1.</div><div>USB HDD:</div><div>USB 2.0 Flash Disk</div></div> <div><div>2.</div><div>IDE0:</div><div>WDC WD 2500BPVT-22ZEST0</div></div> <div><div>3.</div><div>IDE1:</div><div></div></div> <div><div>4.</div><div>USB FDD:</div><div></div></div> <div><div>5.</div><div>Network Boot:</div><div>Atheros Boot Agent</div></div> <div><div>6.</div><div>USB CDROM:</div><div></div></div>				<div>Item Specific Help</div> <div>USE &lt;↑&gt; or &lt;↓&gt; to select a device, then press &lt;F5&gt; to move it down the list, or &lt;F6&gt; to move it up the list. Press &lt;Esc&gt; to escape the menu.</div>			
F1	Help	↑↓	Select Item	F5/F6	Change Values	F9	Setup Default
ESC	Exit	←→	Select Menu	Enter	Select>SubMenu	F10	Save and Exit

Figure 2-14. Change BIOS Boot Priority Order

- 4. Copy `ZRJ_0.08` to USB HDD.
- 5. Insert the USB HDD and reboot computer.
- 6. Execute `ZRJ_0.08` to update BIOS. (Figure 2-15)

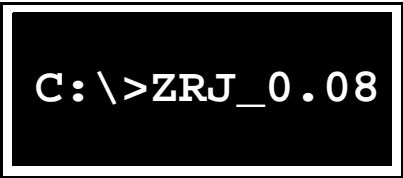
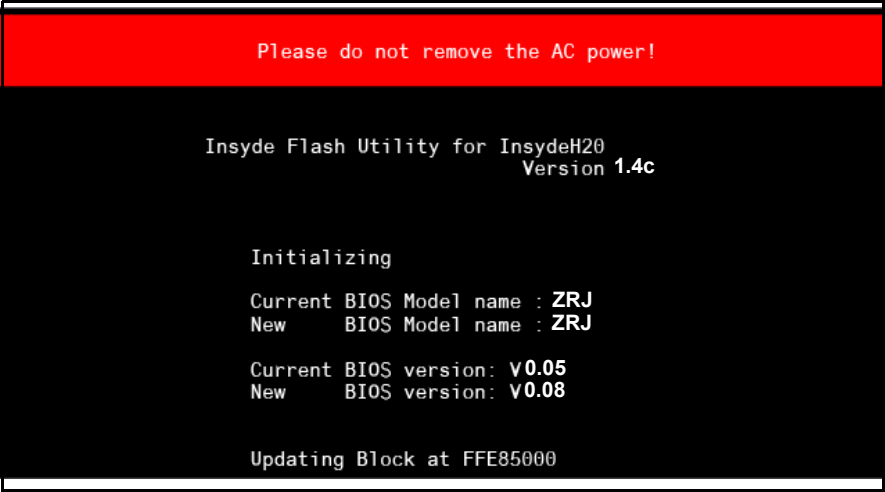


Figure 2-15. Executing `ZRJ_0.08`

BIOS flash process begins. (Figure 2-16)



**Figure 2-16. Updating Flash ROM Blocks**

- Flash is complete when the message, Flash Programming Complete is shown. System will restart automatically when finished.

**⇒ NOTE:**

If AC power is not connected, the following message is shown (Figure 2-17). Plug in the AC power to continue.



**Figure 2-17. AC Power Warning**

## WinFlash Utility

---

Perform the following to use the WinFlash Utility:

1. Double click the WinFlash executable.
2. Click OK to begin the update. A progress screen is shown. (Figure 2-18)



**Figure 2-18. InsydeFlash**

# HDD/BIOS Password Utilities

---

**⚠ CAUTION:**

If Power-on Password authentication is enabled, the BIOS password can only be cleared by initiating the Crisis Disk Recovery procedure. See [BIOS Recovery by Crisis Disk](#).

## Clearing HDD Passwords

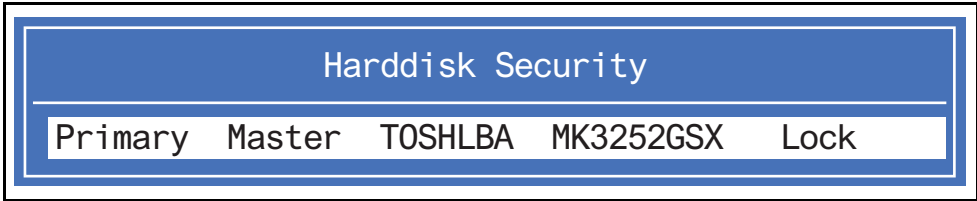
---

This section provides details about removing HDD/BIOS passwords.

Remove HDD Password as follows:

**⇒ NOTE:**

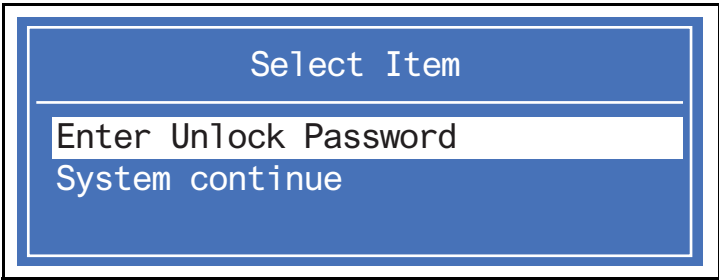
If the HDD password is incorrectly entered three times, an error is generated. (Figure 2-19)



**Figure 2-19. Password Error Status**

To reset the HDD password, perform the following:

1. From Password Error Status dialog shown in Figure 2-20, press **Enter** to continue.



**Figure 2-20. Select Item**

2. Use the **↑** and **↓** keys to highlight Enter Unlock Password and press **Enter**. The Enter Unlock Password dialog (Figure 2-21) is shown.



**Figure 2-21. Enter Unlock Password**

⇒ **NOTE:**

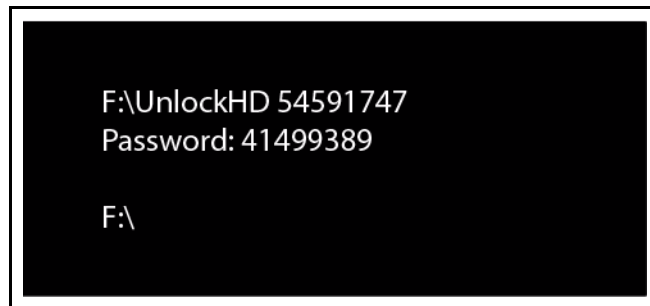
A key code is generated for use with unlocking utility. Make note of this code.

3. On separate, compatible device, boot to DOS.
4. Execute *UnlockHD.exe* (Figure 2-21) to create a password unlock code. Use the format *<UnlockHD [key code]>* with the code noted in Figure 2-21.

Example: **UnlockHD 54591747**

The command generates a password which can be used for unlocking the HDD.

Password: 41499389



---

**Figure 2-22. Unlock Password**

5. On original device, enter password (Figure 2-22) in Enter Unlock Password dialog (Figure 2-23).



---

**Figure 2-23. Unlock Password Dialog**

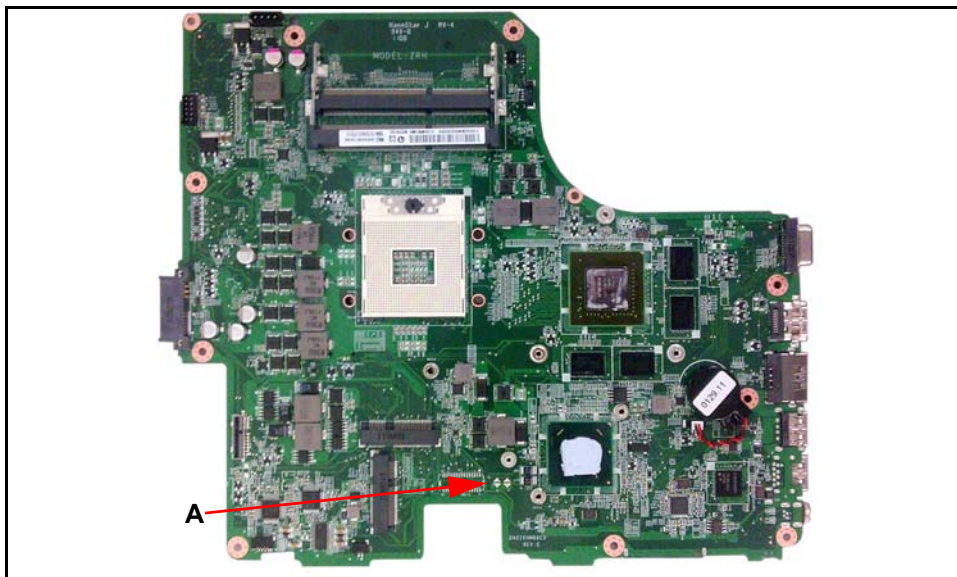
# Clearing BIOS Passwords

---

If a BIOS password (Supervisor Password and/or User Password) is set, the BIOS will prompt for the password at system POST or upon entering the BIOS setup menu. There are two methods for clearing the BIOS password. A hardware method and a software method.

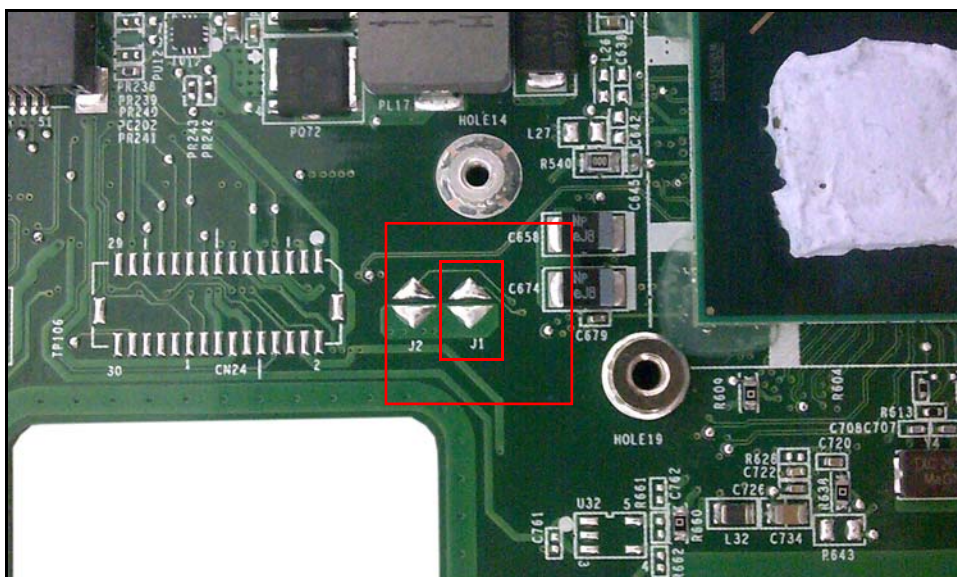
## Hardware Method

1. Remove AC adapter.
2. Locate CMOS jumper on mainboard (A). (Figure 2-24)



**Figure 2-24. CMOS Jumper Overview**

3. Short CMOS jumper point (RTCRST). (Figure 2-25)



**Figure 2-25. CMOS Jumper Point**

**Table 2-5. CMOS Jumper**

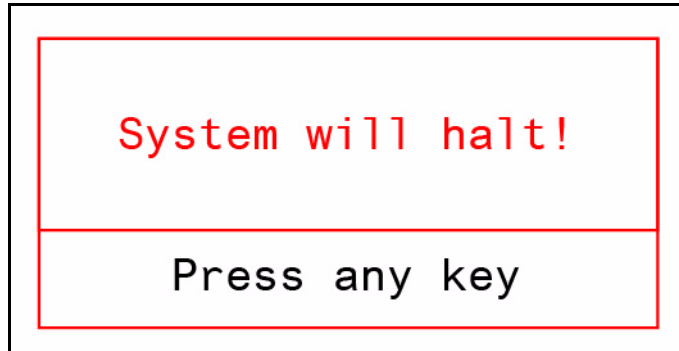
Item	Description
J1 (RTCRST)	Clear CMOS Jumper
J2 (SRTCST)	Clear ME Jumper

4. Plug in AC adapter.
5. Restart the system and press **F2** to enter *BIOS Utility Setup* menu.
6. If no password prompt is shown, BIOS password is cleared.
7. If password prompt is shown, repeat steps 1 through 5.



## Software Method

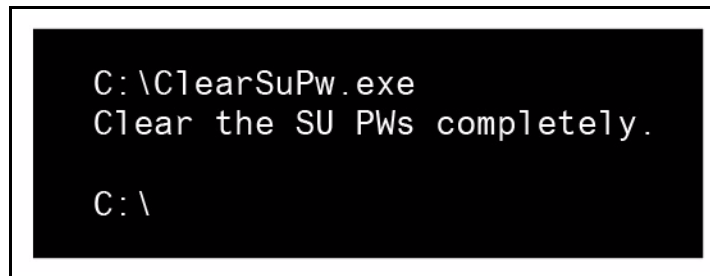
If wrong supervisor password is entered three times, the `System will halt!` dialog is shown. (Figure 2-26)



---

**Figure 2-26. Supervisor Password Error**

1. At a DOS prompt, enter **ClearSuPw.exe**. (Figure 2-27)



---

**Figure 2-27. Clear Supervisor Password Utility**

2. When message `Clear the SU Pws completely` is shown, supervisor password has been removed.

# Miscellaneous Tools

---

## Using Boot Sequence Selector

---

The *Boot Sequence Selector* allows the boot order to be changed without accessing the *BIOS Setup Utility*. To use the *Boot Sequence Selector*, perform the following steps:

1. Boot to DOS.
2. At a DOS prompt, enter **bs <#>** and a boot sequence ID number. A boot sequence ID is a digit from 1 to 4.

```
d:\B00TSEQ>bs

*** Boot Sequence Selector Version 0.03 ***
Create by Rockwell Chuang 10/01/2005.

Usage:
      BS [ 1 | 2 | 3 | 4 ]

BS 1 : [ Floppy ] => [ HardDisk ] => [ CD-ROM ] => [ LAN ]
BS 2 : [ HardDisk ] => [ CD-ROM ] => [ LAN ] => [ Floppy ]
BS 3 : [ CD-ROM ] => [ HardDisk ] => [ LAN ] => [ Floppy ]
BS 4 : [ LAN ] => [ Floppy ] => [ HardDisk ] => [ CD-ROM ]

d:\B00TSEQ>
```

---

**Figure 2-28. Boot Sequence Selector**

**⇒ NOTE:**

Enter **bs <2>** at the command prompt to change the boot sequence to HDD | CD ROM | LAN | Floppy.

## Using DMI Tools

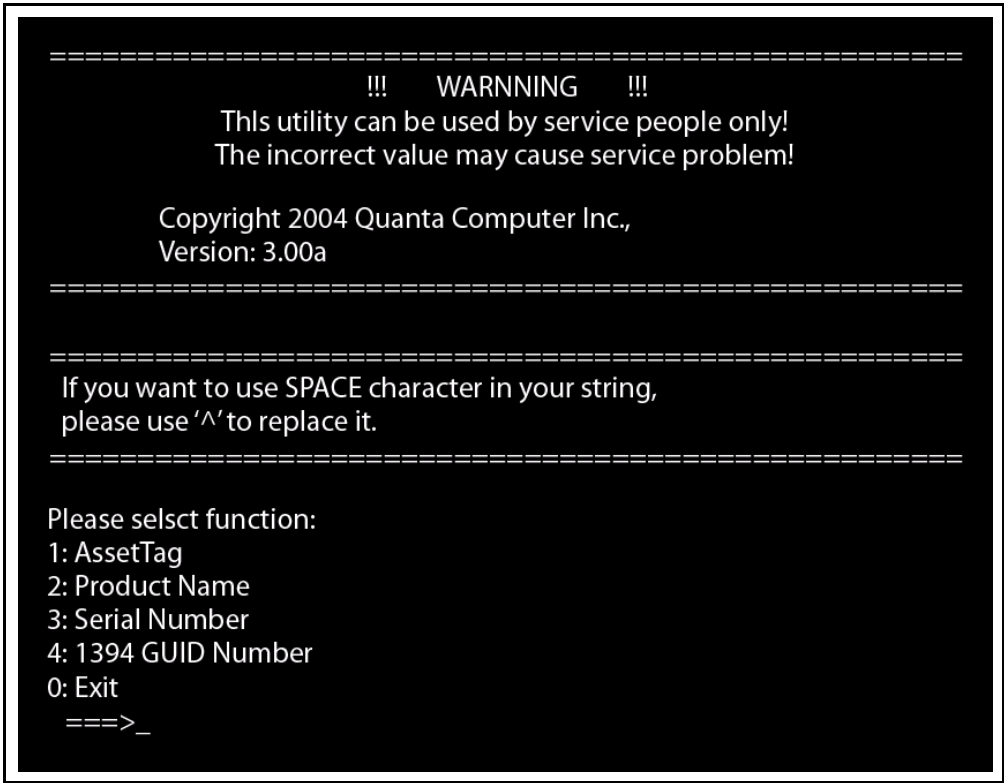
---

The *DMI* (Desktop Management Interface) *Tool* copies BIOS information to EEPROM. Used in the DMI pool for hardware management.

When the BIOS shows `Verifying DMI pool data`, it is checking that the table correlates with the hardware before sending it to the operating system (Windows, etc.).

To update the DMI Pool, perform the following:

1. Boot to DOS.
2. At the prompt, enter `qdm130a.exe`. To execute a specific function, select the associated menu number. (Figure 2-29)



```
=====
                        !!!  WARNING  !!!
                This utility can be used by service people only!
                The incorrect value may cause service problem!

                Copyright 2004 Quanta Computer Inc.,
                Version: 3.00a
=====

=====
If you want to use SPACE character in your string,
please use '^' to replace it.
=====

Please select function:
1: AssetTag
2: Product Name
3: Serial Number
4: 1394 GUID Number
0: Exit
====>_
```

---

**Figure 2-29. DMI Tools Main Menu Screen**

3. Press **1** to modify asset tag key. (Figure 2-30)

```
=====
If you want to use SPACE character in your string,
please use '^' to replace it.
=====

Please select function:
1: AssetTag
2: Product Name
3: Serial Number
4: 1394 GUID Number
0: Exit
==>1
!!! The Max length is 32 characters !!!
      1      2      3
  ---5---0---5---0---5---0---
AssetTag is :12345678901234567890123456789012
```

Figure 2-30. Asset Tag Menu Item

4. Press **2** to modify the product number key. (Figure 2-31)

```
=====
If you want to use SPACE character in your string,
please use '^' to replace it.
=====

Please select function:
1: AssetTag
2: Product Name
3: Serial Number
4: 1394 GUID Number
0: Exit
==>2
!!! The Max length is 15 characters !!!
      1
  ---5---0---5
Product Name is :Aspire^7730
```

Figure 2-31. Product Name Menu Item

5. Press **3** to modify serial number key.

```
=====
If you want to use SPACE character in your string,
please use '^' to replace it.
=====

Please select function:
1: AssetTag
2: Product Name
3: Serial Number
4: 1394 GUID Number
0: Exit
==>3
!!! The Max length is 22 characters !!!
                        1      2
                    ---5---0---5---0---
Serial Number is :1234567890123456789012_
```

Figure 2-32. Serial Number Menu Item

6. Press 4 to modify the 1394 GUID number key.

```
=====
If you want to use SPACE character in your string,
please use '^' to replace it.
=====

Please select function:
1: AssetTag
2: Product Name
3: Serial Number
4: 1394 GUID Number
0: Exit
==>4
!!! The Max length is 8 characters !!!
                        ---5---8
1394 GUID Number is :12345678_
```

Figure 2-33. 1394 GUID Number Menu Item

7. Press 0 to exit.

```
=====
!!!  WARNING  !!!
This utility can be used by service people only!
The incorrect value may cause service problem!

Copyright 2004 Quanta Computer Inc.,
Version: 3.00a
=====

=====
If you want to use SPACE character in your string,
please use '^' to replace it.
=====

Please select function:
1: AssetTag
2: Product Name
3: Serial Number
4: 1394 GUID Number
0: Exit
====>_
```

**Figure 2-34. Exit Menu Item**

8. At the command prompt, type **VEEPROM** to write any changes in the data to the EEPROM.

```
C:\VEEPROM_
```

**Figure 2-35. VEEPROM Command Prompt**

⇒ **NOTE:**

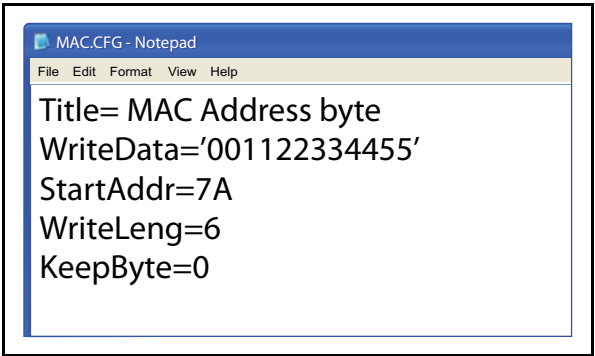
When using any of the write options, restart the system to make the new DMI data effective.

# Using the LAN MAC EEPROM Utility

---

Use MAC.BAT utility to write the MAC.CFG file to EEPROM under DOS mode.

1. Use a text editor (e.g. Notepad) to open and edit the MAC.CFG file. (Figure 2-36)



**Figure 2-36. MAC.CFG File**

**Table 2-6.**

Field Name	Value	Description
Title	MAC Address byte	N/A
WriteData	001122334455	MAC value
StartAddr	7A	MAC address
WriteLeng	6	MAC value length
KeepByte	0	N/A

2. In DOS mode, run **MAC.BAT** to write MAC values to eeprom. (Figure 2-37)



**Figure 2-37. MAC.BAT**

3. Reboot computer when process has completed.





# CHAPTER 3

## Maintenance Procedures

---

<b>Introduction</b> . . . . .	<b>3-5</b>
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# Machine Maintenance Procedures

---

## Introduction

---

This chapter contains general information about the notebook, a list of tools needed to perform the required maintenance and step by step procedures on how to remove and install components from the notebook computer.

## General Information

---

The product previews seen in the following procedures may not represent the final product color or configuration. Cable paths and positioning may also differ from the actual model. During the removal and installation of components, make sure all available cable channels and clips are used and that the cables are installed in the same position. All prerequisites must be performed prior to performing maintenance.

## Recommended Equipment

---

The following tools are required to perform maintenance on the notebook:

- Wrist grounding strap and conductive mat
- Flat screwdriver
- Philips screwdriver

## Screw Table

---

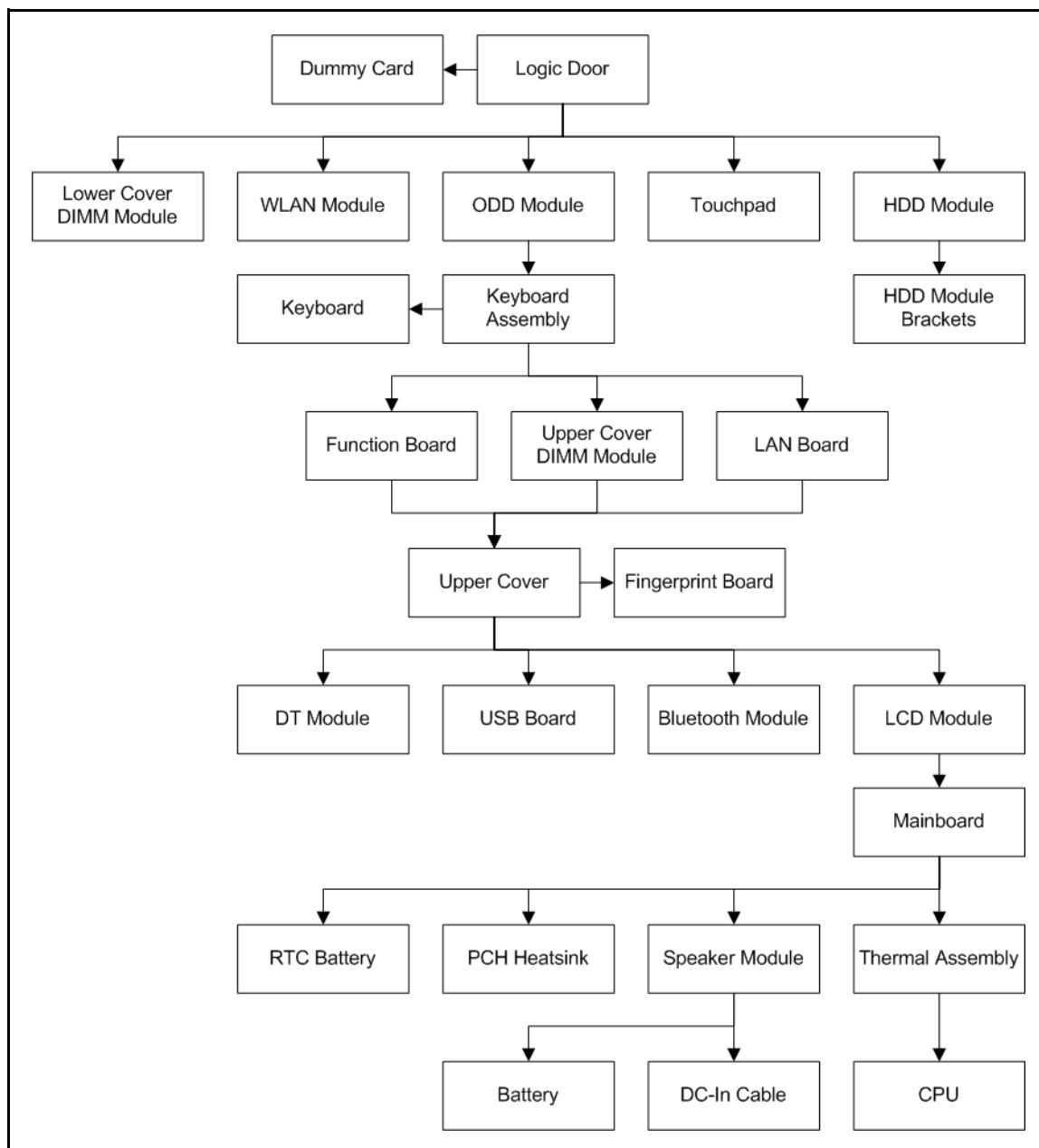
The following screw table provides a list of all required screws to assemble the computer.

**Table 3-1. Main Screw List**

Screw Name	Quantity
M2.0x5.0	18
M3.0x3.0Ni	4
M2.5x3.5	1
M2.5x4.0	8
M1.0x1.5 OD7	3
M1.6x2.0	6
M2.5x3.0	3
M2.0x2.0	4
M2.5x6.5	2
M2.5x2.5	1
M2.0x3.0	2
M2.0x5.0 (Speaker)	2

# Maintenance Flowchart

The flowchart in Figure 3-1 provides a graphic representation of the module removal and installation sequences. It provides information on what components need to be removed and installed during servicing.



**Figure 3-1. Maintenance Flow**

# Getting Started

---

The flowchart ([Figure 3-1](#)) identifies sections illustrating the entire removal and install sequence. Observe the order of the sequence to avoid damage to any of the hardware components.

Perform the following prior to performing any maintenance procedures:

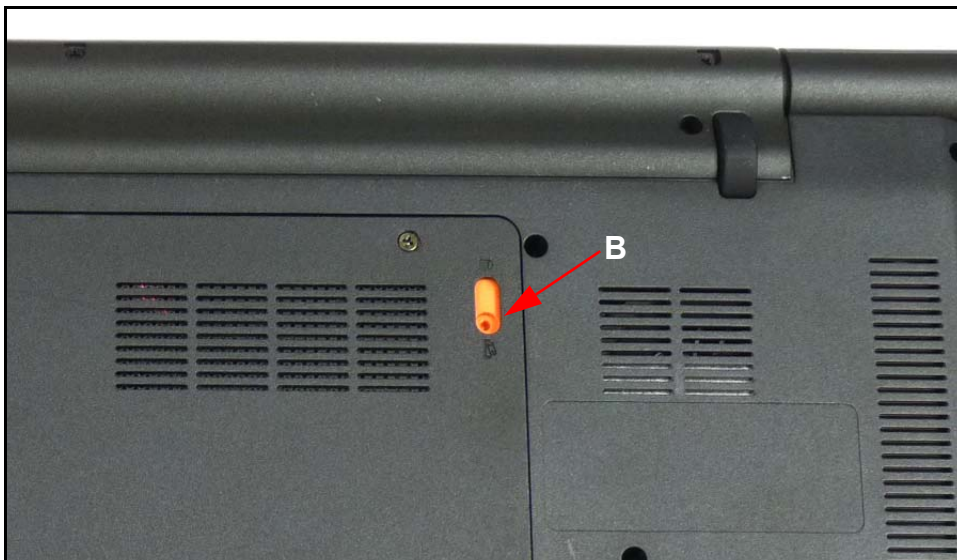
1. Remove external power (A) from the system. (Figure 3-2)
2. Remove all peripherals cables and from system.



---

**Figure 3-2. AC Adapter**

3. Place system on a stable work surface.
4. Move battery disconnect switch (B) on logic door to remove power. (Figure 3-3)



---

**Figure 3-3. Battery Disconnect Switch**

## Dummy Card Removal

---

1. Push in dummy card (A) to release from spring latch. (Figure 3-4)
2. Remove dummy card.



---

**Figure 3-4. Dummy Card**

## Dummy Card Installation

---

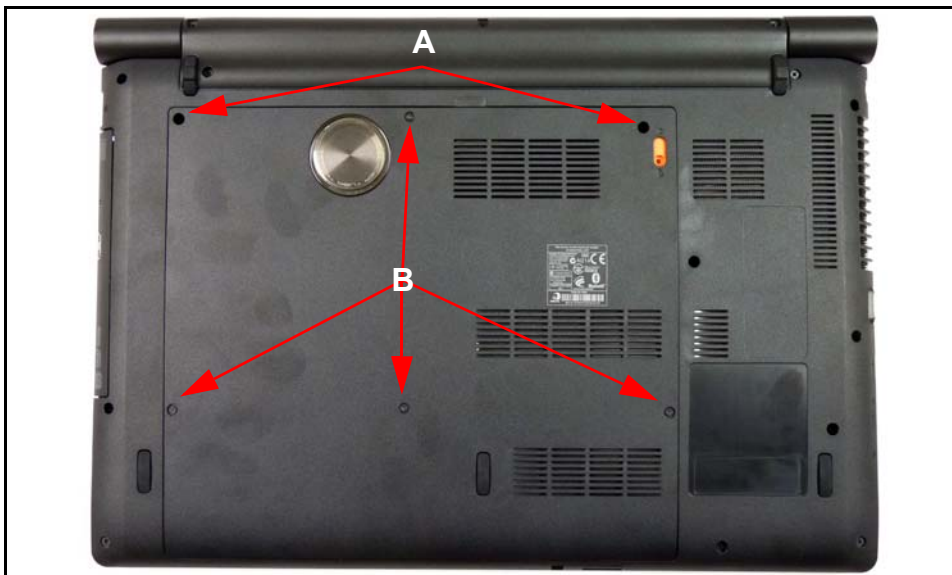
1. Insert dummy card (A). (Figure 3-4)
2. Push in card until spring latch locks.



## Logic Door Removal

---

1. Remove screws (A) from lower cover. (Figure 3-5)



**Figure 3-5. Logic Door**

2. Loosen captive screws (B) from lower cover.
3. Using slot (C), lift and remove logic door from lower cover. (Figure 3-6)

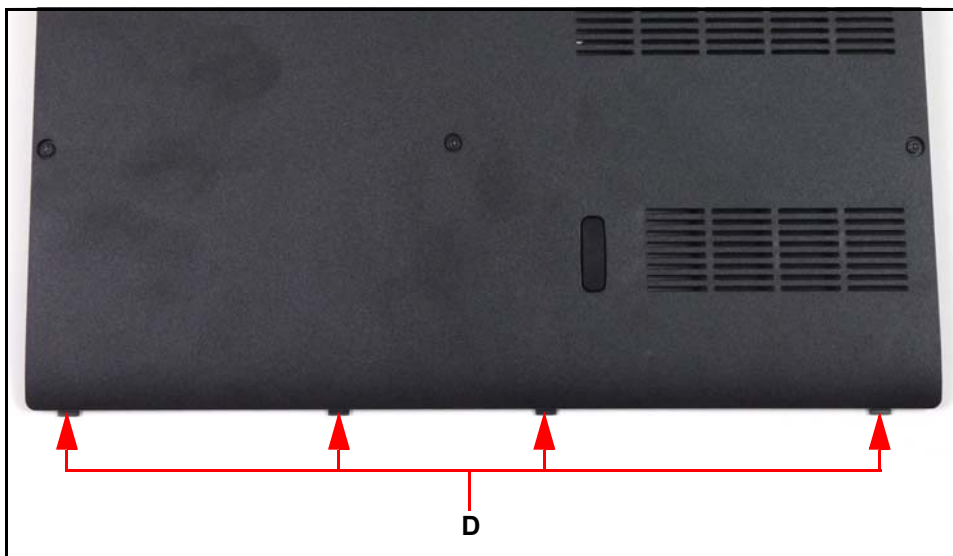


**Figure 3-6. Logic Door Slot**

## Logic Door Installation

---


1. Align logic door flanges (D) into slots on lower cover. (Figure 3-7)



---

**Figure 3-7. Logic Door Flanges**

2. Install logic door.
3. Secure captive screws (B) to lower cover. ([Figure 3-5](#))
4. Install and secure screws (A) to lower cover.

ID	Size	Quantity	Screw Type
A	M2.0x5.0	2	

# Lower Cover DIMM Module Removal

---

## Prerequisite:

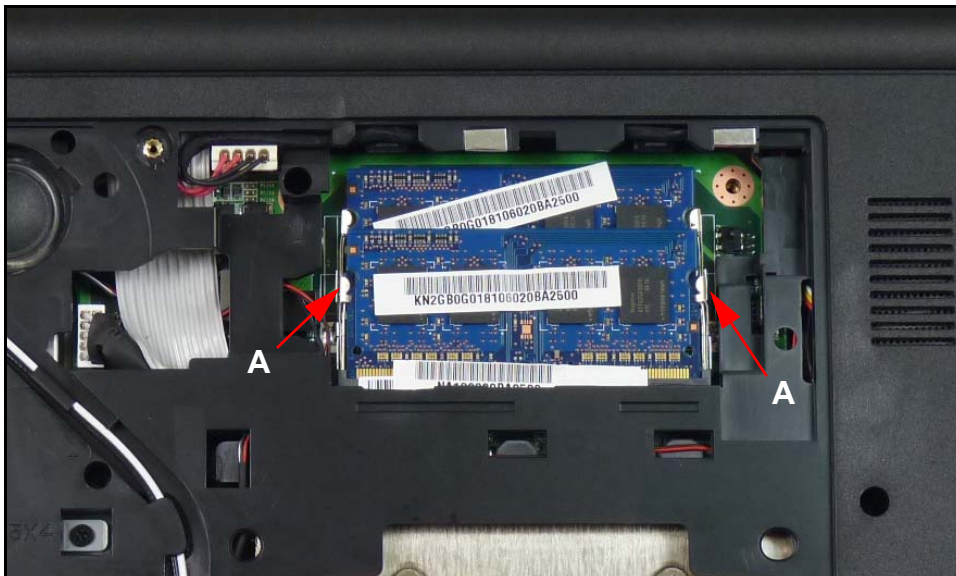
### [Logic Door Removal](#)

1. Locate DIMM (Dual In-Line Memory Module) module (A) on lower cover. ([Figure 3-8](#))



**Figure 3-8. Lower Cover Overview with DIMM Module**

2. Unlock module clips (A). ([Figure 3-9](#))



**Figure 3-9. DIMM Module(s) in Lower Cover**

3. Disconnect DIMM module from mainboard connector.
4. Repeat steps 2 and 3 for remaining DIMM module as required.

## Lower Cover DIMM Module Installation

---

1. Connect DIMM module to mainboard connector. ([Figure 3-9](#))
2. Secure module clips (A).
3. Repeat steps 2 and 3 for DIMM module as required.
4. Install logic door.

# HDD (Hard Disk Drive) Module Removal

---

## Prerequisite:

[Logic Door Removal](#)

1. Locate HDD (A) on lower cover. (Figure 3-10)



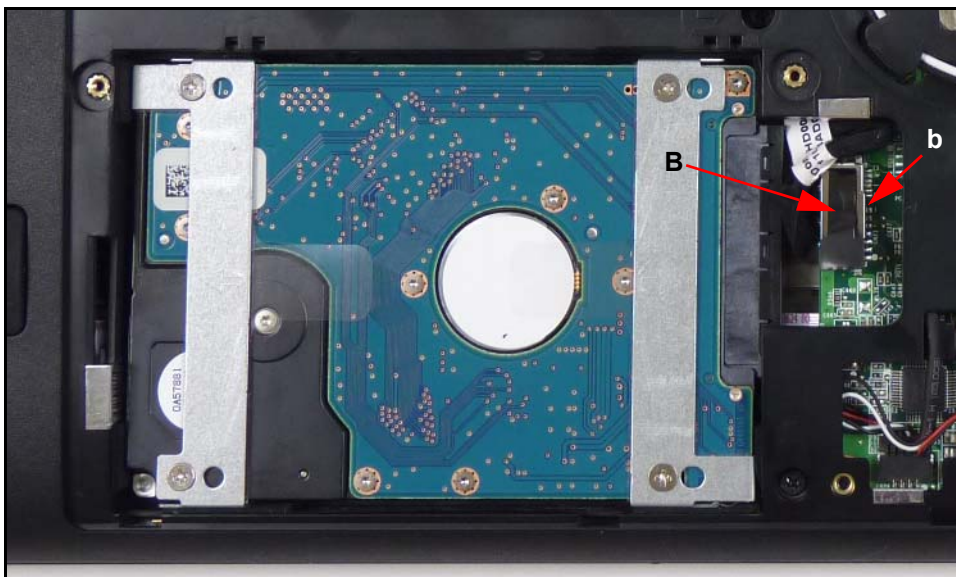
---

**Figure 3-10. Lower Cover Overview with HDD Module**

### **⚠ CAUTION:**

HDD module is connected to mainboard. Use caution when removing module.

2. Disconnect module cable (B) from mainboard connector (b). (Figure 3-11)

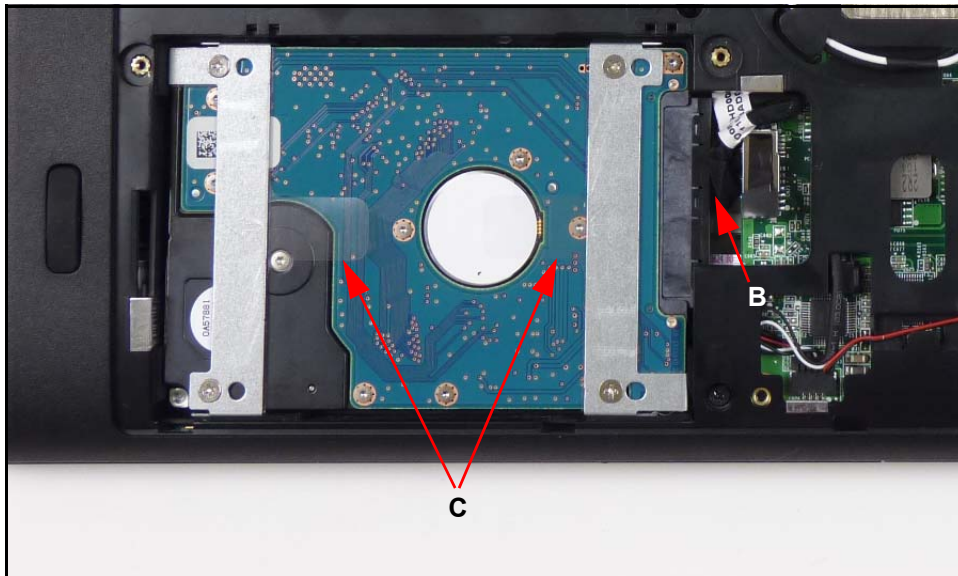


---

**Figure 3-11. Disconnecting HDD Module Cable from Mainboard**

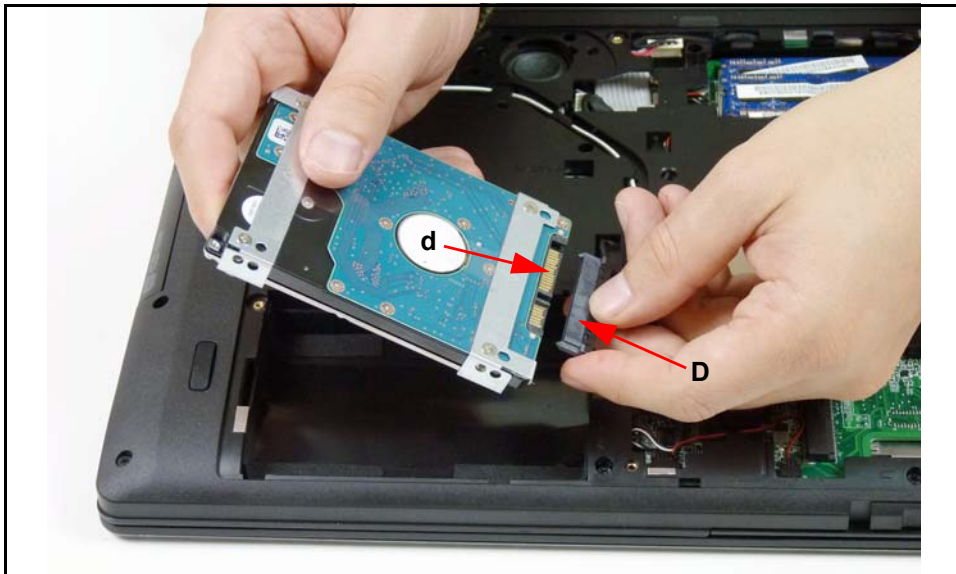


3. Use mylar tabs (C) to lift module until module cable (B) clears lower cover. (Figure 3-12)



**Figure 3-12. Removing HDD Module from Lower Cover**

4. Disconnect module cable (D) from module connector (d). (Figure 3-13)



**Figure 3-13. Disconnecting HDD Module Cable from HDD Module**

5. Remove module and module cable.

## HDD Module Installation

---

1. Connect module cable (D) to module connector (d). ([Figure 3-13](#))
2. Connect module cable (B) to mainboard connector (b). ([Figure 3-11](#))
3. Install HDD module into bay on lower cover. (Figure 3-14)



---

**Figure 3-14. Installing HDD Module on Lower Cover**

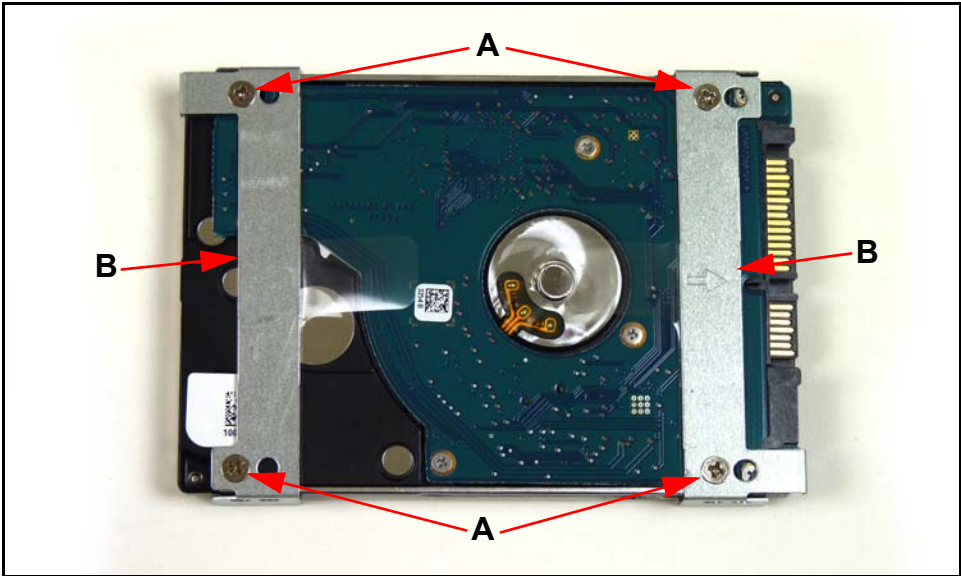
4. Install logic door.

# HDD Brackets Removal

**Prerequisite:**

[HDD \(Hard Disk Drive\) Module Removal](#)

- 1. Remove screws (A) from HDD brackets (B). (Figure 3-15)




**Figure 3-15. HDD Module Brackets**

- 2. Remove brackets (B) from HDD module.

## HDD Carrier Installation

- 1. Install brackets (B) to HDD module. (Figure 3-15)
- 2. Install and secure screws (A) to HDD module (B).
- 3. Install HDD module.

ID	Size	Quantity	Screw Type
A	M3.0x3.0Ni	4	



# WLAN (Wireless Local Area Network) Module Removal

---

## Prerequisite:

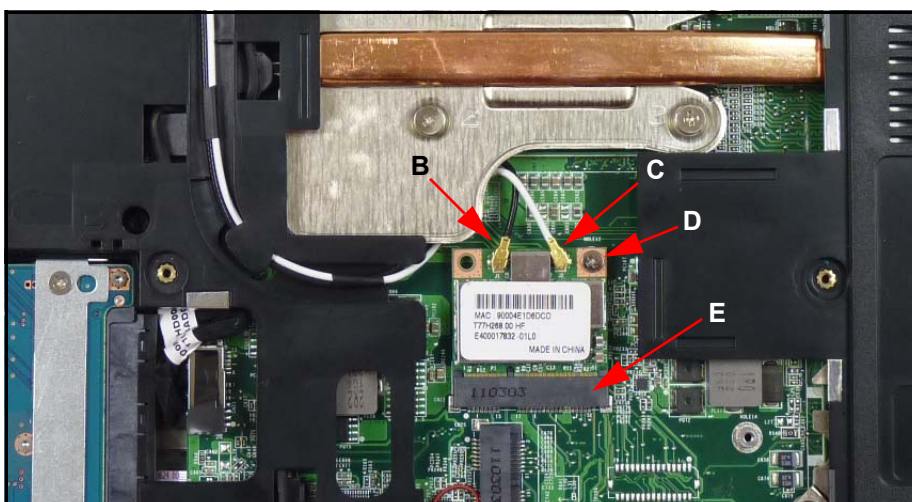
[Logic Door Removal](#)

1. Locate WLAN module (A) on mainboard. (Figure 3-16)



**Figure 3-16. WLAN Module**

2. Disconnect WLAN main (B) and auxiliary (C) antenna cables from WLAN module connectors. (Figure 3-17)




**Figure 3-17. WLAN Module**

3. Remove screw (D) from mainboard.
4. Disconnect WLAN module from mainboard connector (E).

## WLAN Module Installation

---

1. Connect WLAN module to mainboard connector (E). ([Figure 3-17](#))
2. Install and secure screw (D) to mainboard.
3. Connect main (B) and auxiliary (C) antenna cables to WLAN module connectors.
4. Install logic door.

ID	Size	Quantity	Screw Type
D	M2.5x3.5	1	

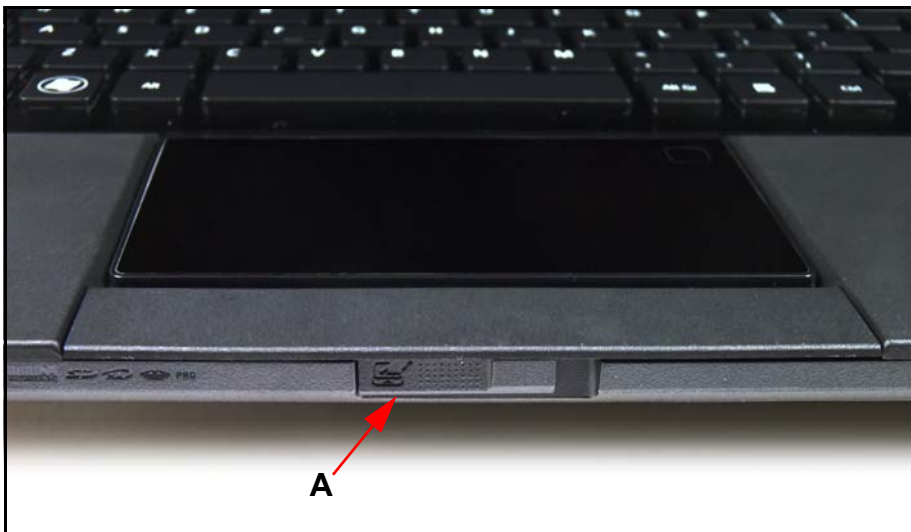
# Touchpad Removal

---

## Prerequisite:

[Logic Door Removal](#)

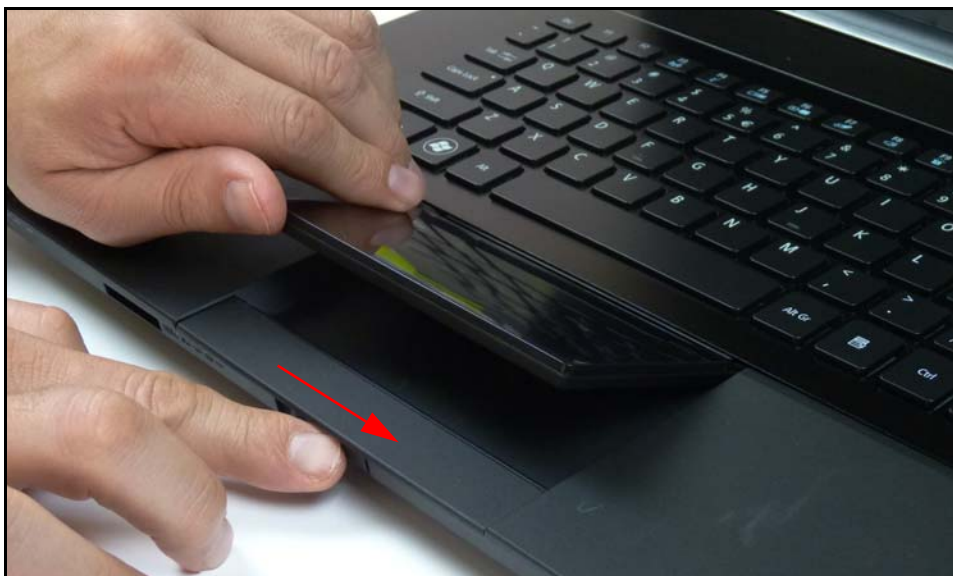
1. Locate touchpad removal switch (A). (Figure 3-18)



---

**Figure 3-18. Touchpad Removal Switch**

2. Move and hold switch as shown in Figure 3-19.



---

**Figure 3-19. Removing Touchpad**

3. Remove touchpad.

## Touchpad Installation

---

1. Locate mainboard connector (A) in touchpad bay. (Figure 3-20)



---

**Figure 3-20. Touchpad Installation**

2. Connect touchpad (B) to mainboard connector.
3. Install logic door.

# ODD (Optical Disk Drive) Module Removal

---

## Prerequisite:

[HDD \(Hard Disk Drive\) Module Removal](#)

1. Locate ODD module (A) on lower cover. (Figure 3-21)



---

**Figure 3-21. Lower Cover Overview with ODD Module**

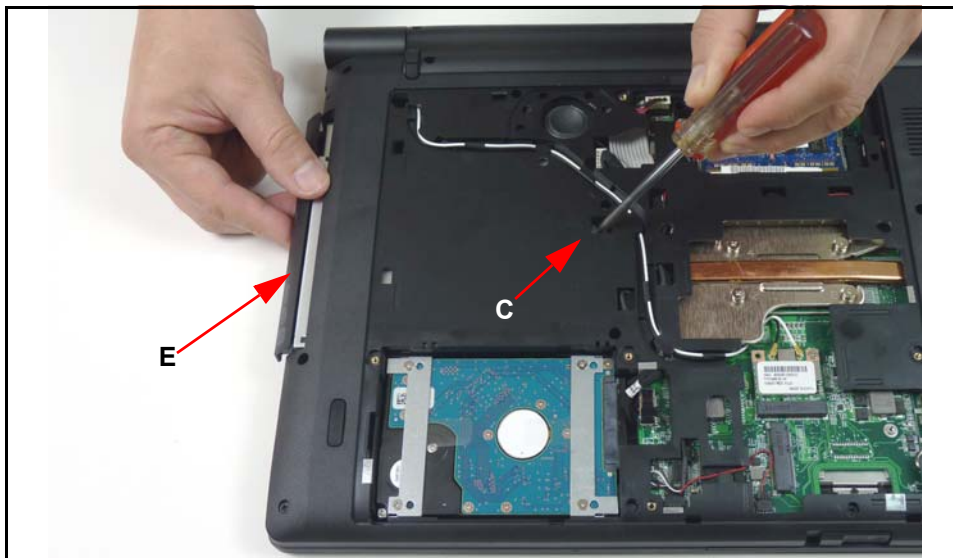
2. Remove screw (B) from lower cover. (Figure 3-22)



---

**Figure 3-22. ODD Module Screws**

3. Push ODD module bracket (C) from ODD slot. (Figure 3-23)



---

**Figure 3-23. Pushing ODD Module through Slot**

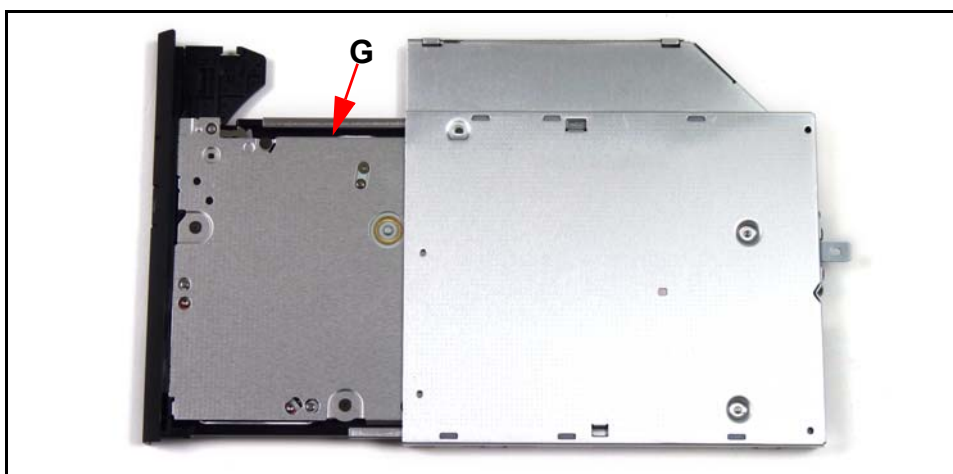
4. Remove ODD module (E).
5. Press ODD tray release button (F) on ODD bezel to eject ODD tray. (Figure 3-24)



---

**Figure 3-24. ODD Eject Button**

6. Slide ODD tray (G) from ODD module. (Figure 3-25)

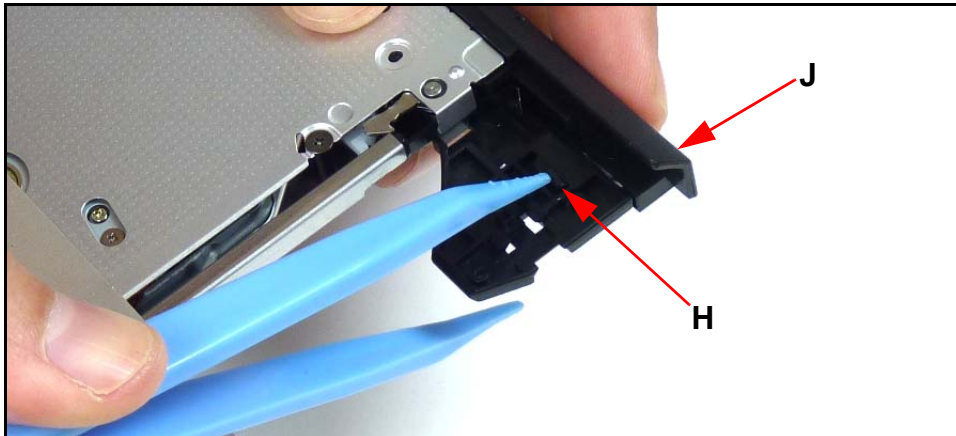


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**Figure 3-25. ODD Bezel Removal**



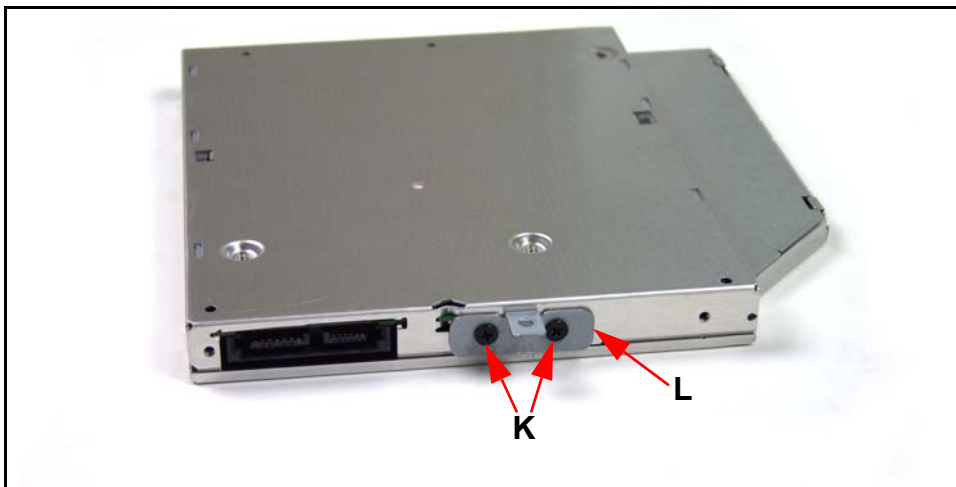
7. Unlock latch (H) to separate ODD bezel (J) from tray. (Figure 3-26)



---

**Figure 3-26. ODD Latch and Bezel**

8. Remove ODD bezel.
9. Remove screws (K) from ODD bracket (L). (Figure 3-27)



---

**Figure 3-27. ODD Bracket**


10. Remove ODD bracket.

## ODD Module Installation

---

1. Install ODD bracket (L) to ODD module. (Figure 3-27)
2. Install and secure screws (K) from ODD bracket to ODD module.
3. Install ODD bezel (J) to ODD tray (G). ([Figure 3-25](#))
4. Install and secure latch (H) to tray.
5. Install ODD tray (G) into ODD module.

6. Install ODD module into slot. ([Figure 3-23](#))
7. Install and secure screw (A) to lower cover. ([Figure 3-22](#))

ID	Size	Quantity	Screw Type
J	M2.5x4.0	1	



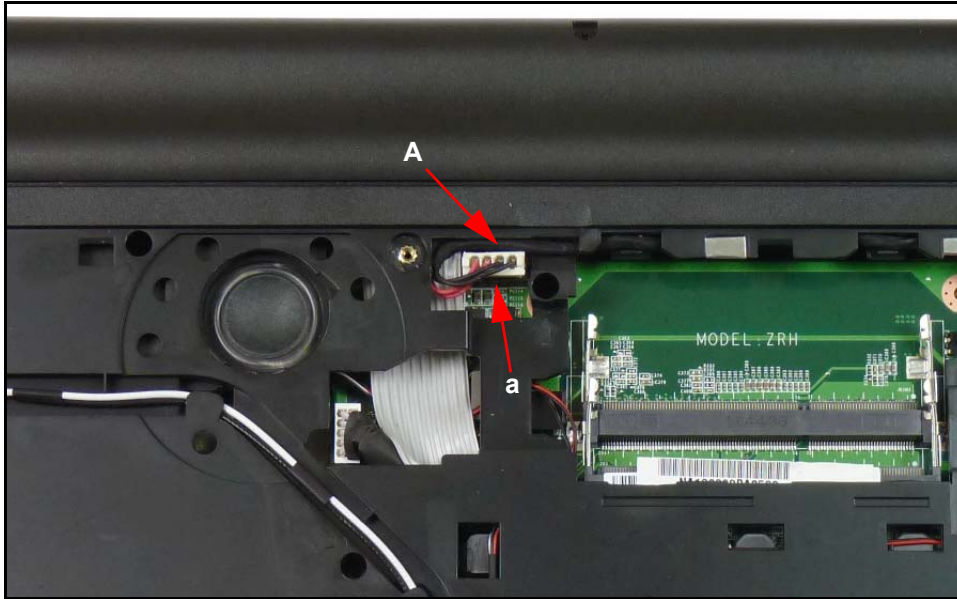
# Keyboard Assembly Removal

---

## Prerequisite:

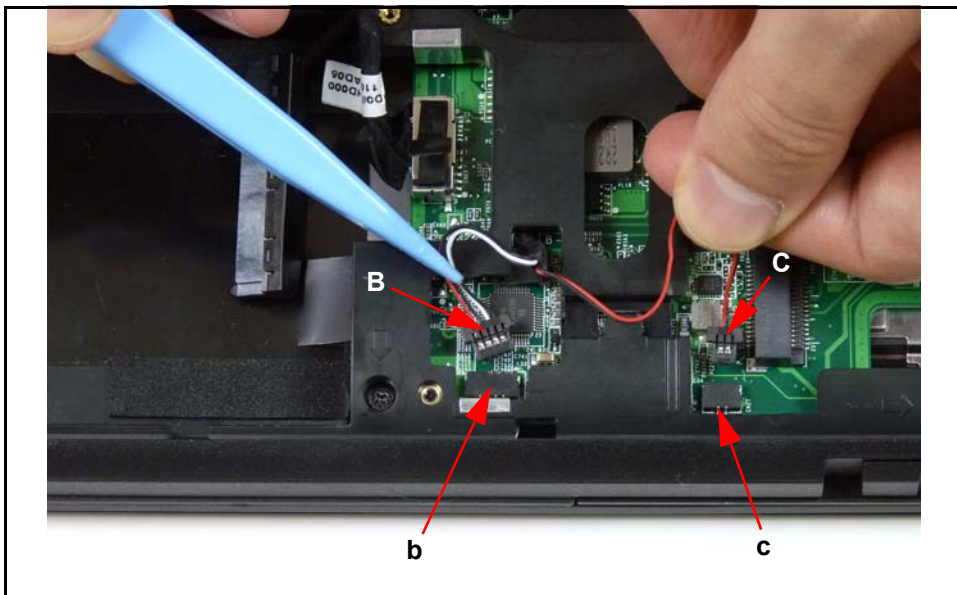
### ODD (Optical Disk Drive) Module Removal

1. Disconnect AC cable (A) from mainboard connector (a). (Figure 3-28)



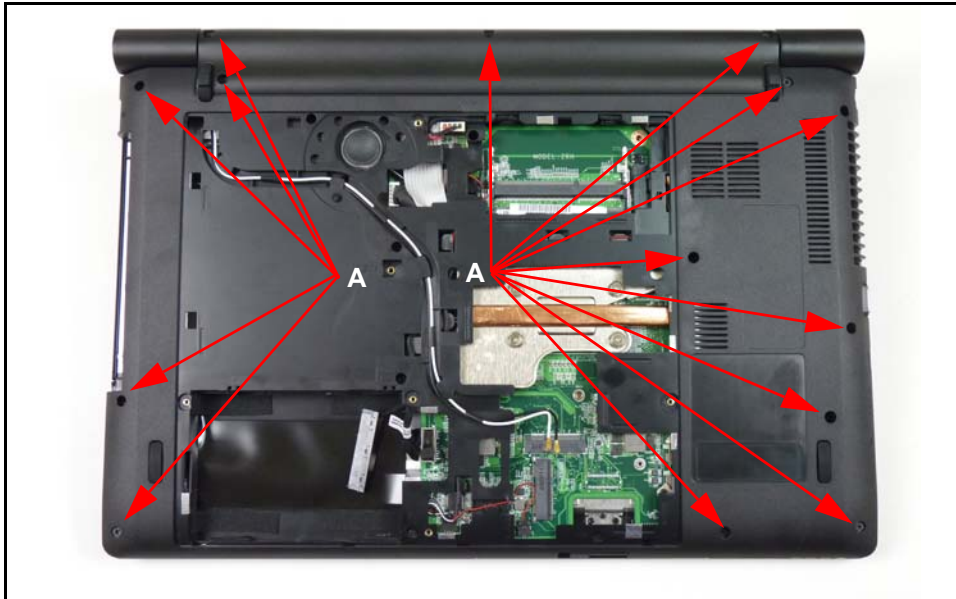
**Figure 3-28. Disconnecting AC Cable**

2. Disconnect speaker (B) and microphone (C) cables from the mainboard connectors (b, c). (Figure 3-29)



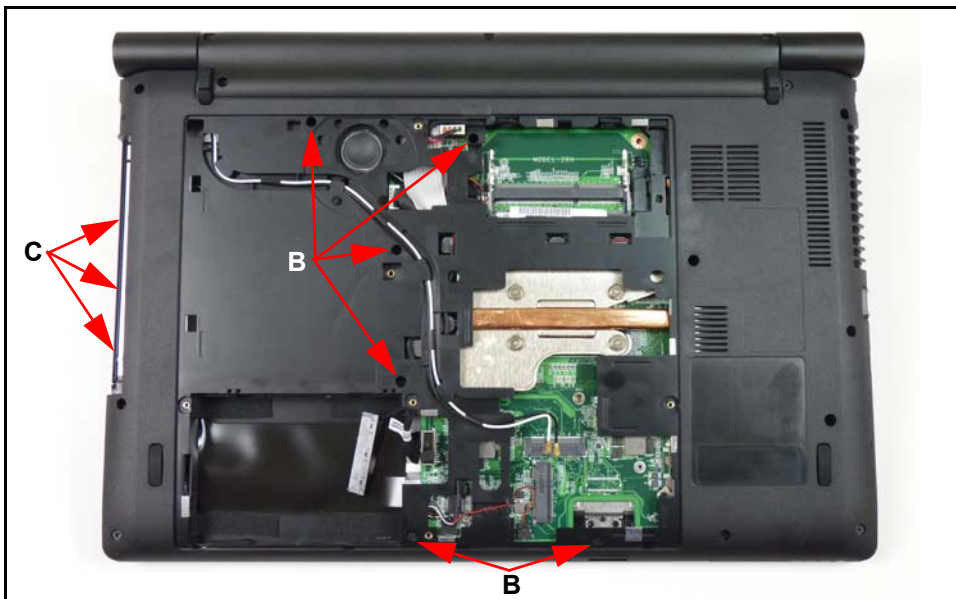
**Figure 3-29. Disconnecting Speaker and Microphone Cables**

3. Remove screws (A) from lower cover. (Figure 3-30)



**Figure 3-30. Lower Cover Screws (1 of 2)**

4. Remove screws (B) from lower cover. (Figure 3-31)



**Figure 3-31. Lower Cover Screws (2 of 2)**

5. Remove screws (C) in ODD bay from lower cover.

**⇒ NOTE:**

Cover LCD panel with cloth or sheet to protect LCD panel.

6. Turn computer and open cover to show top edge of keyboard assembly. (Figure 3-32)

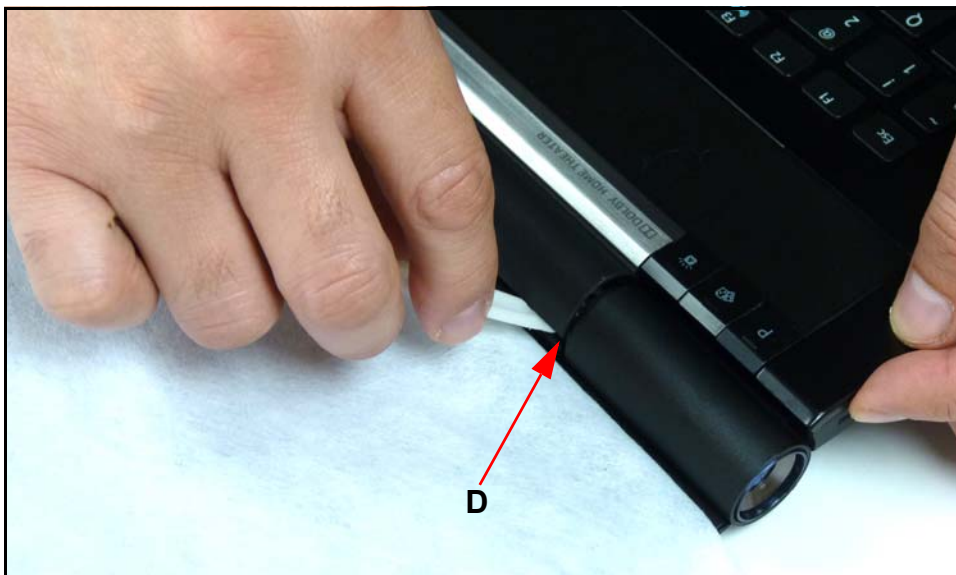


**Figure 3-32. Top of Keyboard Assembly.**

**⚠ CAUTION:**

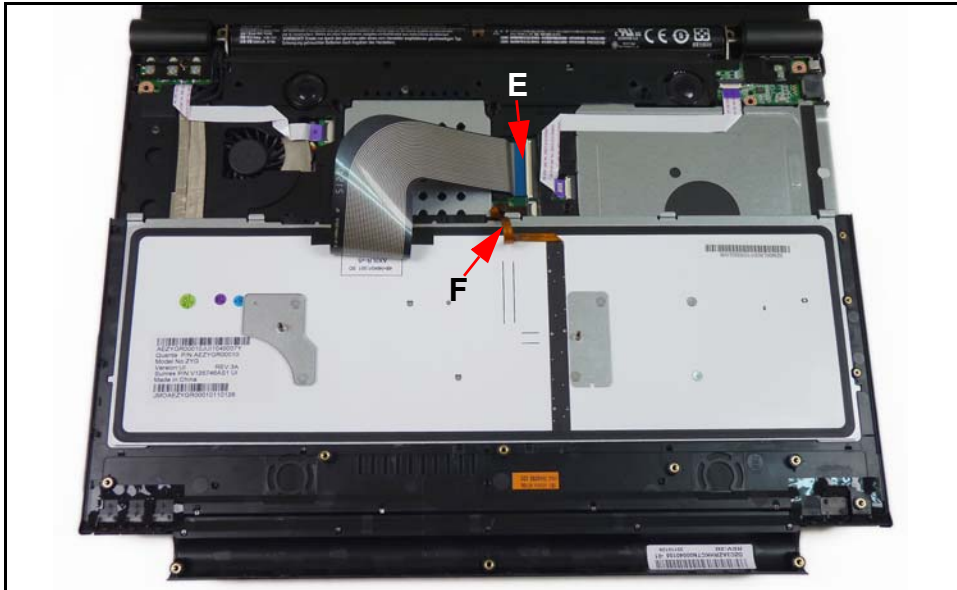
Keyboard FPC and keyboard LED backlight cable are connected to mainboard.  
Use caution when removing keyboard assembly.

7. Separate upper corner (D) of keyboard assembly from upper cover. (Figure 3-33)



**Figure 3-33. Separate Keyboard Assembly**

8. Move along top edge of keyboard assembly until separated from upper cover.
9. Turn keyboard assembly as shown in Figure 3-34.



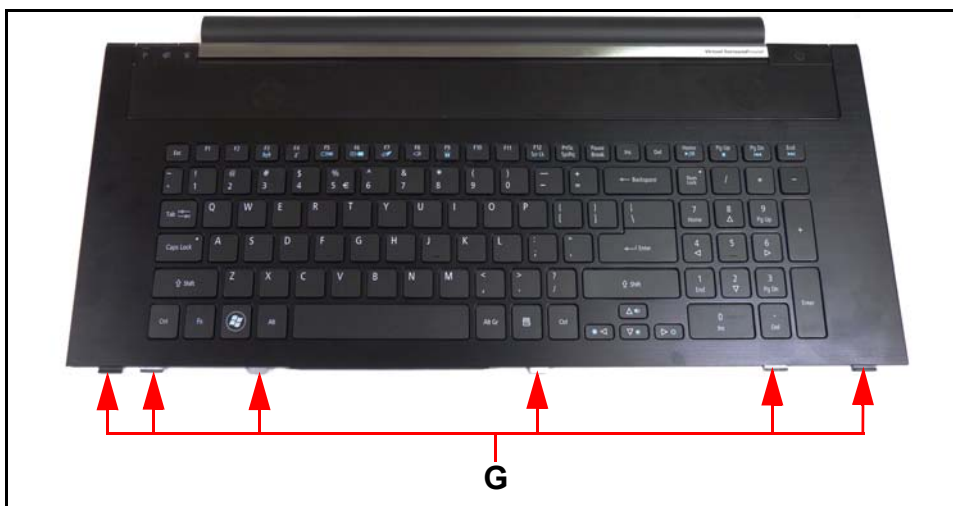
**Figure 3-34. Disconnecting Keyboard FPC**

10. Disconnect keyboard FPC (E) from mainboard connector.
11. Disconnect keyboard LED backlight cable (F) from mainboard connector.
12. Remove keyboard assembly.

# Keyboard Assembly Installation

---

1. Turn keyboard assembly as shown in [Figure 3-34](#).
2. Connect keyboard LED backlight cable (F) to mainboard connector.
3. Connect keyboard FPC (E) to mainboard connector.
4. Locate keyboard assembly flanges (G). (Figure 3-35)

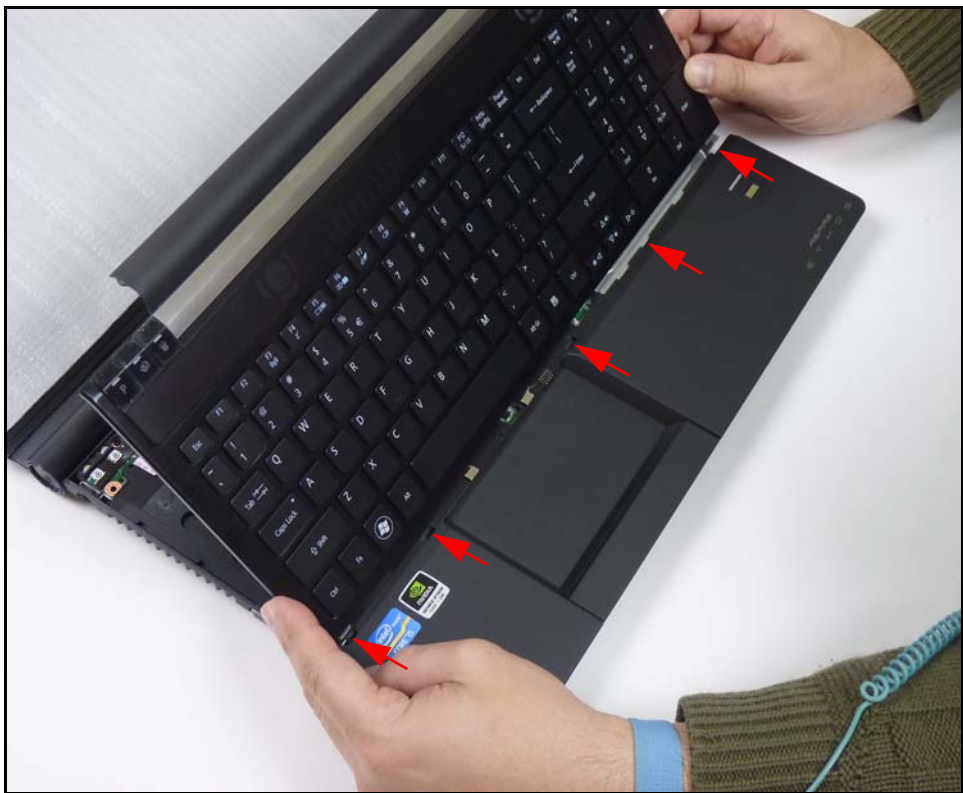


---

**Figure 3-35. Keyboard Assembly Flanges**






5. Insert keyboard assembly flanges into upper cover slots at an angle. (Figure 3-36)



**Figure 3-36. Inserting Keyboard Assembly**

6. Install keyboard assembly flush against the upper cover. (Figure 3-32)
7. Press along edge of keyboard assembly until secure with upper cover.
8. Turn computer over to show bottom of lower cover.
9. Install and secure screws (C) in ODD slot to lower cover. (Figure 3-31)
10. Install and secure screws (B) to lower cover. (Figure 3-31)
11. Install ODD module

ID	Size	Quantity	Screw Type
A	M2.5x5.0	14	
B	M2.5x4.0	6	
C	M1.0x1.5 OD7	3	

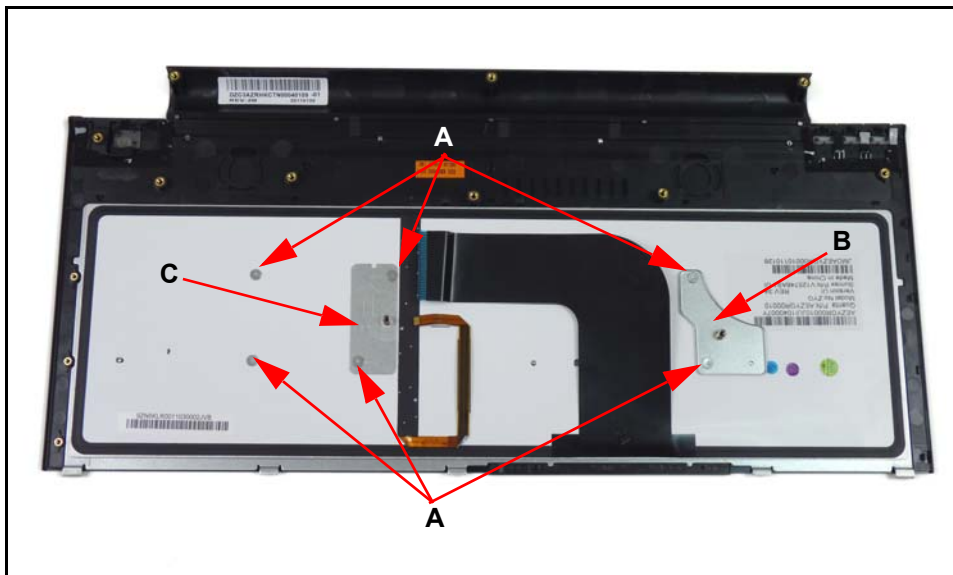
# Keyboard Removal

---

## Prerequisite:

### [Keyboard Assembly Removal](#)

1. Remove screws (A) from keyboard assembly. (Figure 3-37)

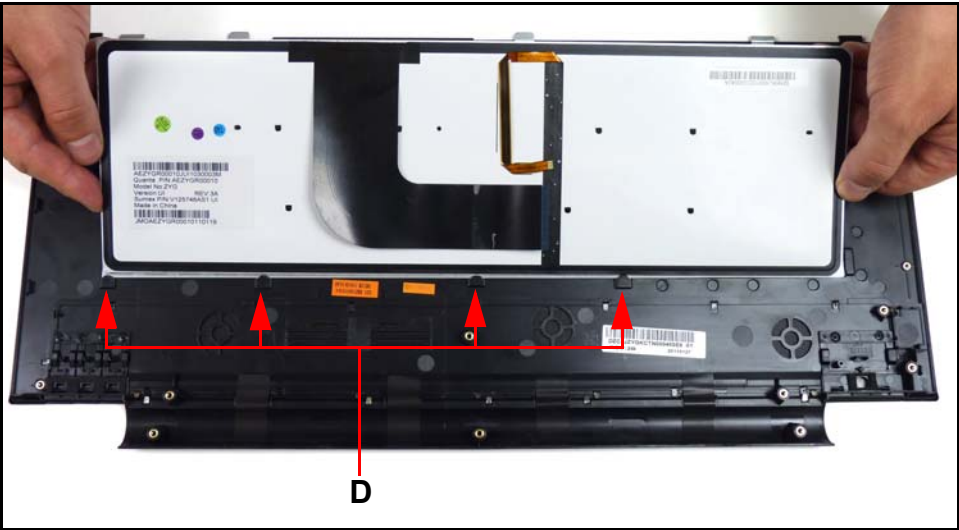


**Figure 3-37. Keyboard Assembly Overview with Screws**

2. Remove left (B) and right (C) brackets from keyboard.
3. Remove keyboard from upper cover.


# Keyboard Installation

1. Locate guides (D) on keyboard assembly. (Figure 3-38)



**Figure 3-38. Inserting Keyboard into Guides**

2. Insert keyboard into guides.
3. Align left (B) and right (C) brackets on keyboard. (Figure 3-37)
4. Install and secure screws (A) to keyboard assembly.
5. Install keyboard assembly.

ID	Size	Quantity	Screw Type
A	Mx1.6x2.0	6	



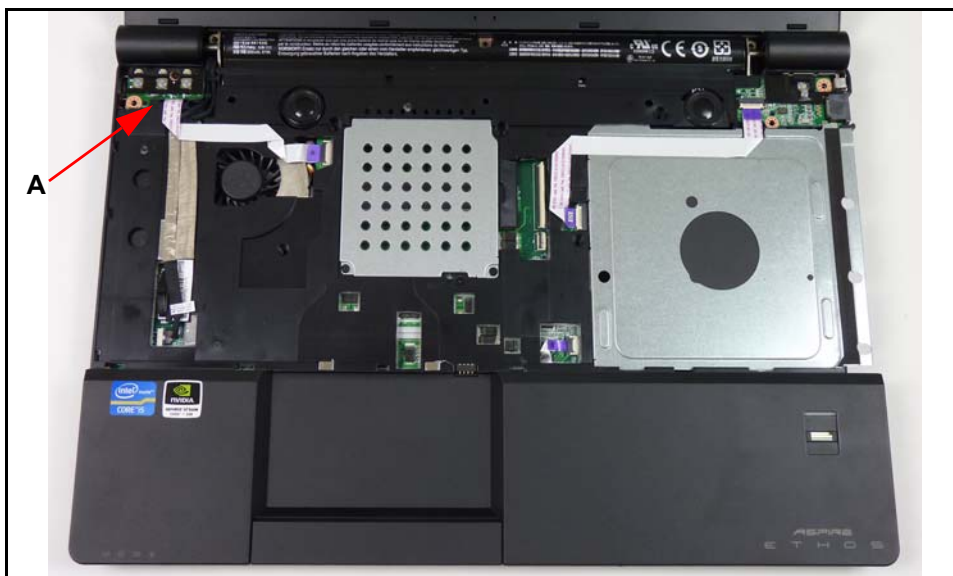
# Function Board Removal

---

## Prerequisite:

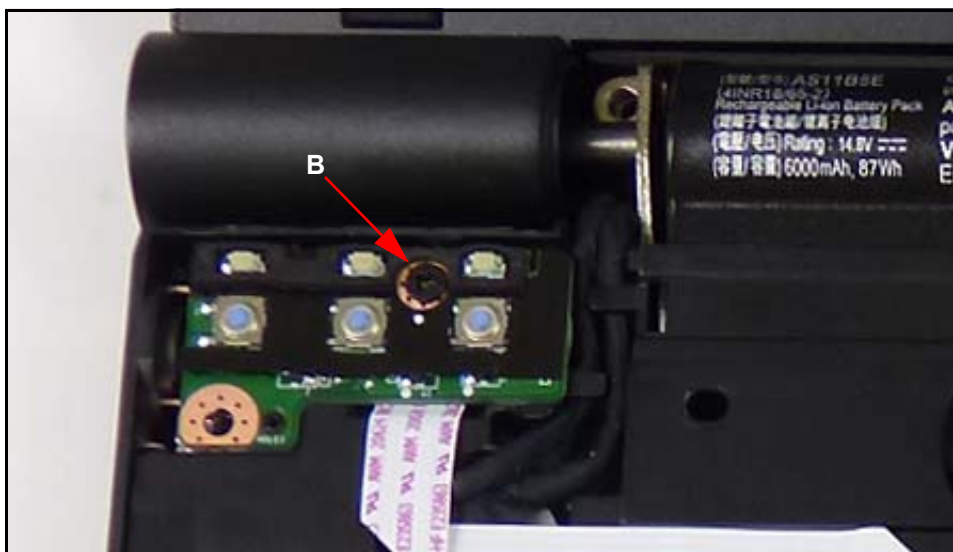
[Keyboard Assembly Removal](#)

1. Locate function board (A) on upper cover. (Figure 3-39)



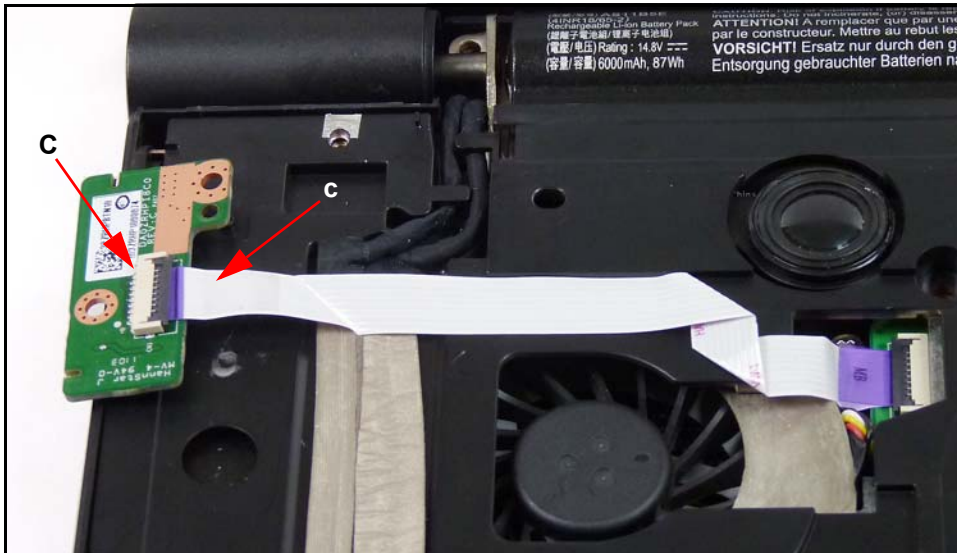
**Figure 3-39. Upper Cover Overview with Function Board**

2. Remove screw (B) from lower cover. (Figure 3-40)



**Figure 3-40. Function Board Screw**

3. Turn board to show board connector (C). (Figure 3-41)

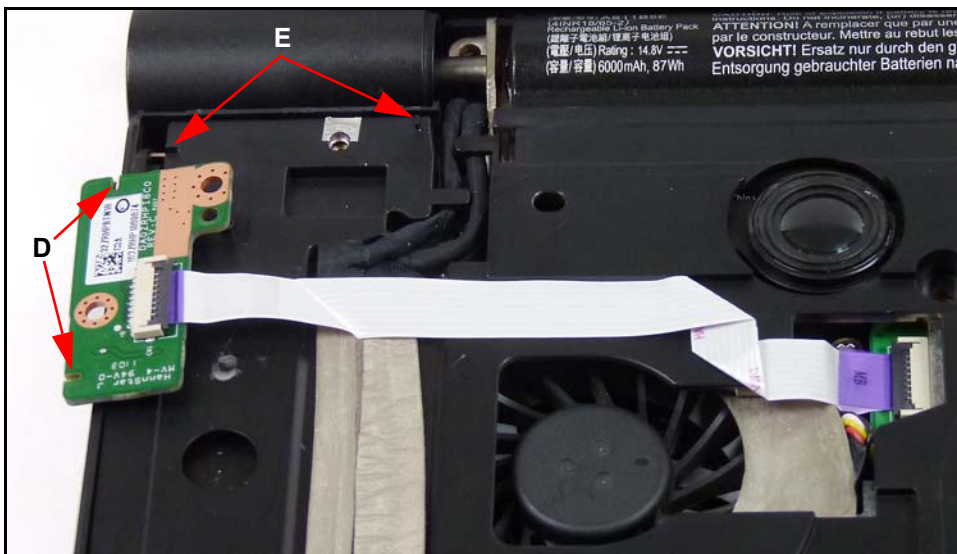


**Figure 3-41. Function Board Connector and FFC**

4. Disconnect board FFC (C) from board connector (c).
5. Remove board from upper cover.

## Function Board Installation


1. Align board slots (D) with lower cover guide pins (E). (Figure 3-42)



**Figure 3-42. Function Board Guide Pins**

2. Connect FFC (C) to board connector (c). (Figure 3-41)
3. Install function board on upper cover. (Figure 3-40)

4. Install and secure screw (B) to upper cover.
5. Install keyboard assembly.

ID	Size	Quantity	Screw Type
B	M2.5x3.0	1	

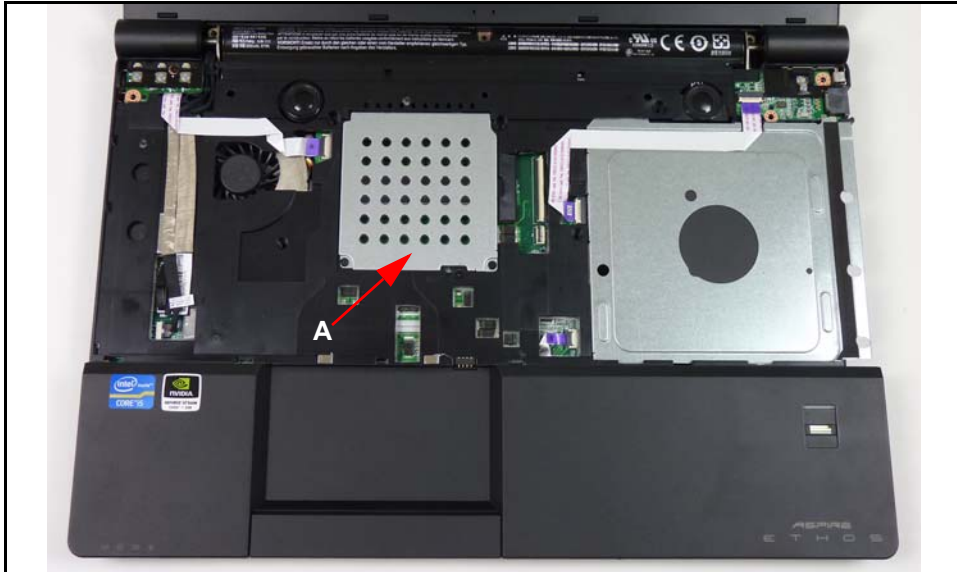
# Upper Cover DIMM Module Removal

---

## Prerequisite:

[Keyboard Assembly Removal](#)

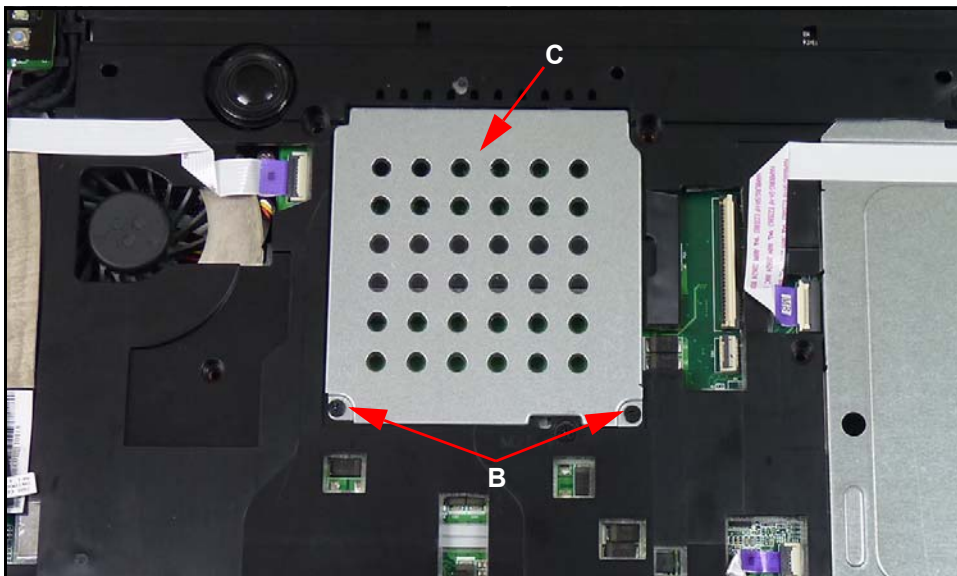
1. Locate DIMM module door (A) on lower cover. (Figure 3-43)



---

**Figure 3-43. Upper Cover Overview with DIMM Module Door**

2. Remove screws (B) from upper cover. (Figure 3-44)

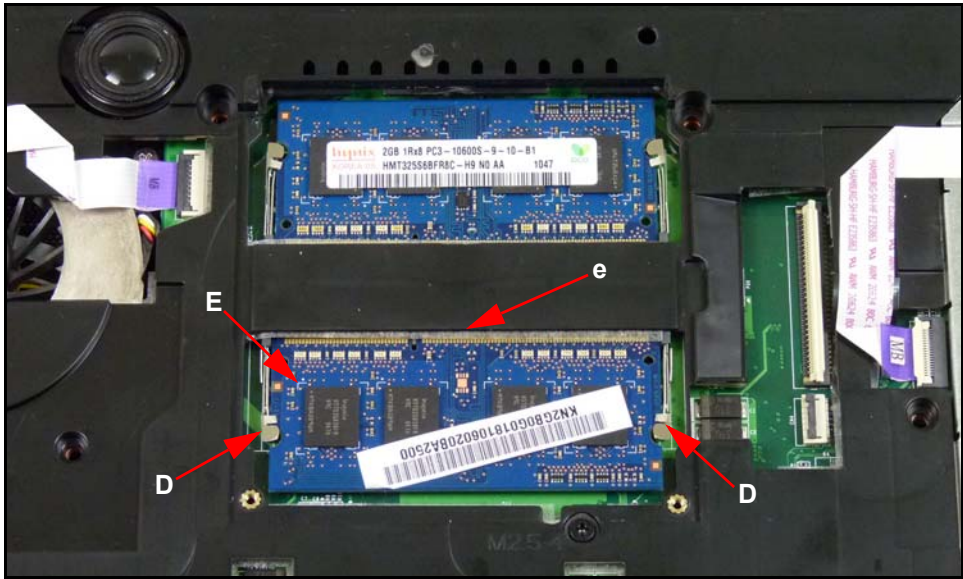


---

**Figure 3-44. DIMM Module Screws**

3. Remove DIMM module door (C) from upper cover.

4. Open module clips (D). (Figure 3-45)




**Figure 3-45. DIMM Module(s) on Upper Cover**

5. Disconnect DIMM module (E) from mainboard connector (e).  
6. Repeat steps 2 and 3 for remaining DIMM module as required.

## Upper Cover DIMM Module Installation

1. Connect DIMM module (E) to mainboard connector (e). (Figure 3-45)  
2. Press on module until clips (D) lock into place.  
3. Repeat steps 2 and 3 for remaining DIMM module as required.  
4. Install DIMM module door (C) on upper cover. (Figure 3-44)  
5. Install and secure screws (B) to upper cover.  
6. Install keyboard assembly.

ID	Size	Quantity	Screw Type
A	M2.0x2.0	2	



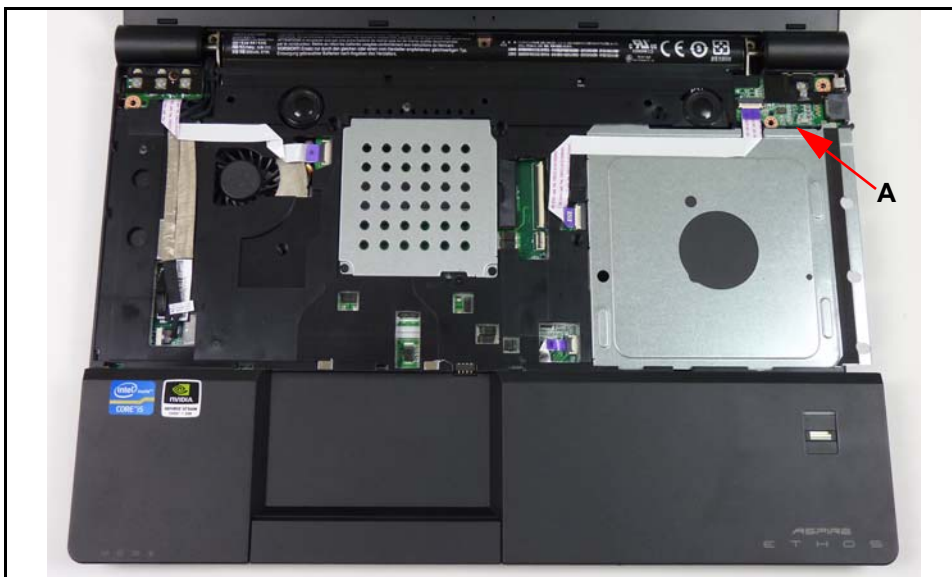
# LAN Board Removal

---

## Prerequisite:

[Keyboard Assembly Removal](#)

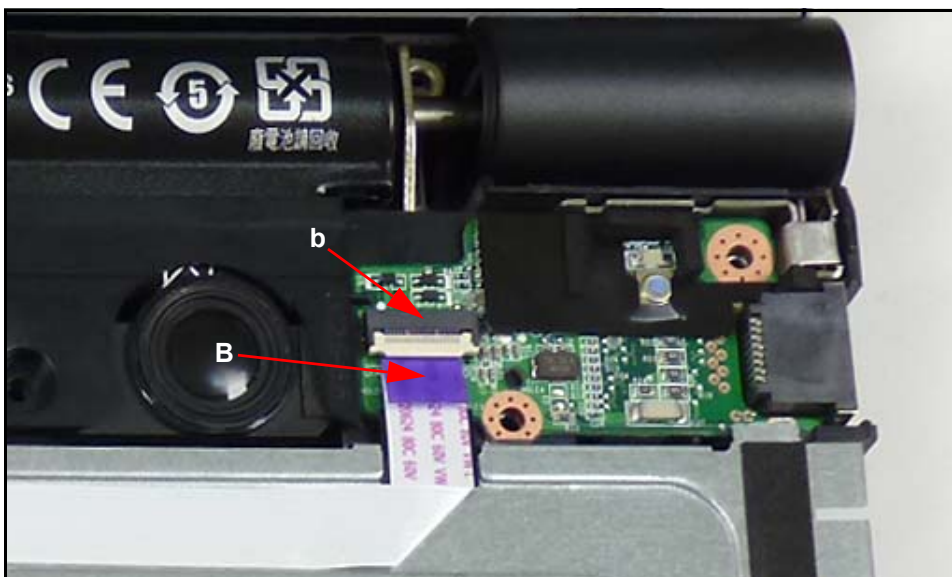
1. Locate LAN board (A) on lower cover. (Figure 3-46)



---

**Figure 3-46. Upper Cover Overview with LAN Board**

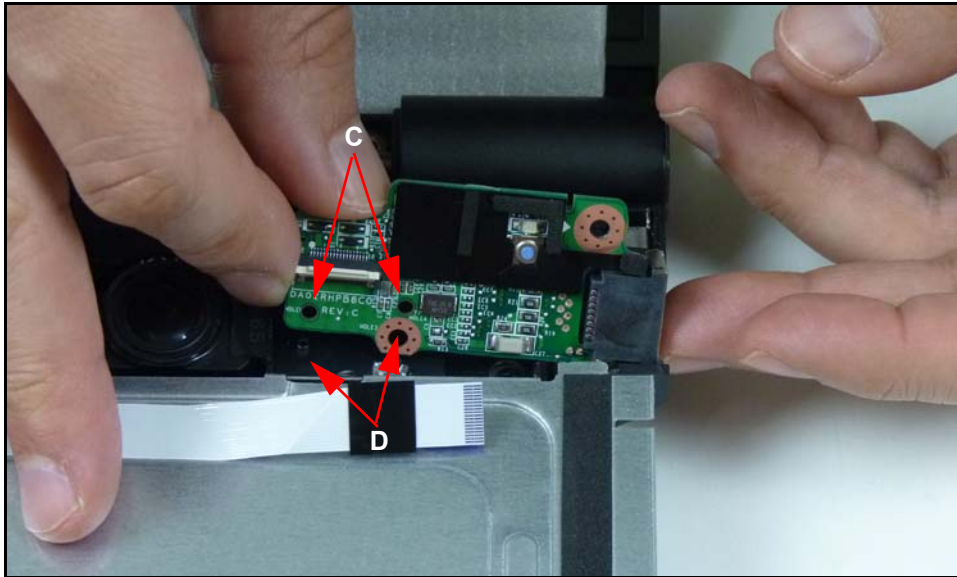
2. Disconnect board FFC (B) from mainboard connector (b). (Figure 3-47)



---

**Figure 3-47. LAN Board Connector and FFC**

3. Lift and remove board from upper cover guide pins (D). (Figure 3-48)



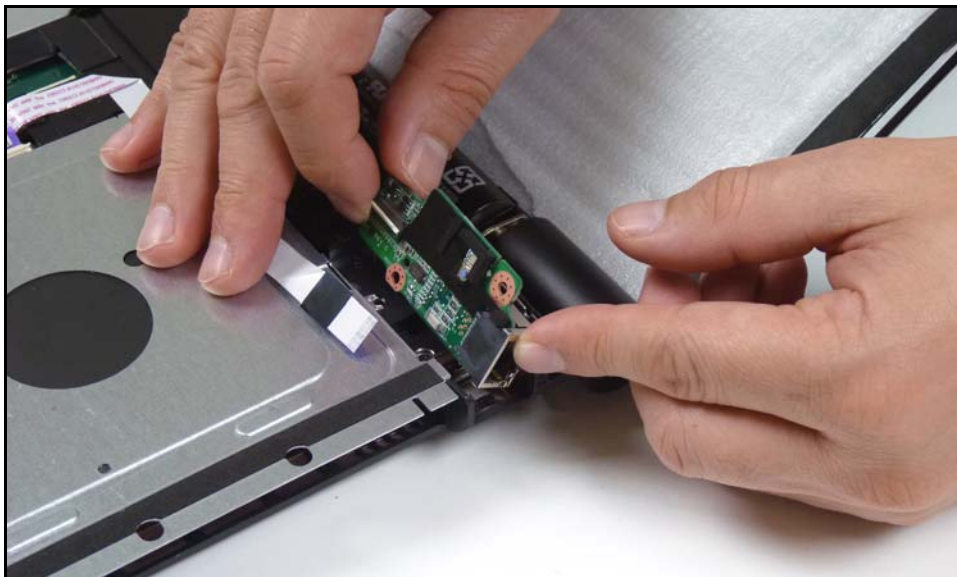
---

**Figure 3-48. Removing LAN Board**

## LAN Board Installation

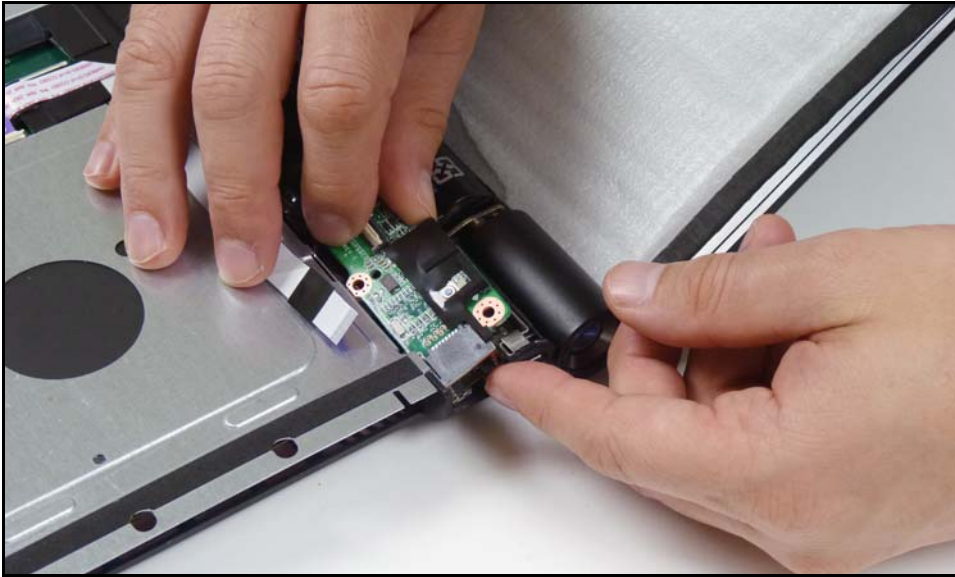
---

1. Install board on lower cover as shown in (Figure 3-49 through [Figure 3-50](#)).



---

**Figure 3-49. Installing LAN Board (1 of 2)**



---

**Figure 3-50. Installing LAN Board (2 of 2)**

2. Align and install board slots (C) on upper cover guide pins (D). ([Figure 3-48](#))
3. Connect FFC (B) to mainboard connector (b). ([Figure 3-47](#))



# Upper Cover Removal

---

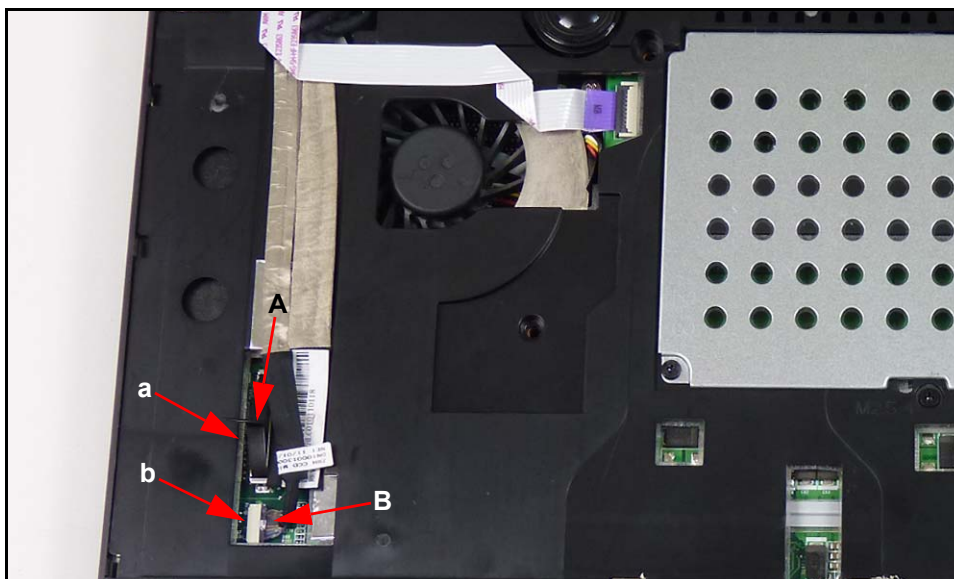
## Prerequisite:

[Function Board Removal](#)

[Upper Cover DIMM Module Removal](#)

[LAN Board Removal](#)

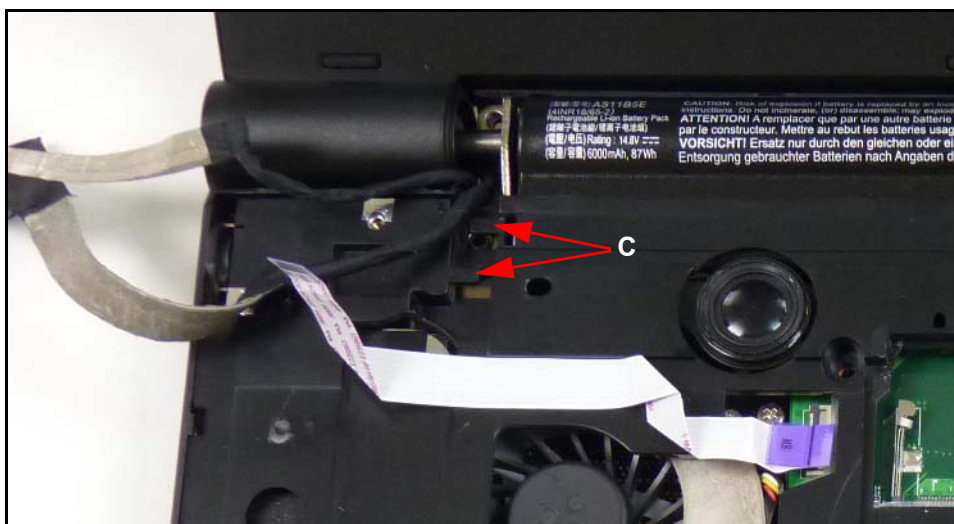
1. Disconnect LVDS cable (A) from mainboard connector (a). (Figure 3-51)



---

**Figure 3-51. Removing Upper Cover Cables (1 of 2)**

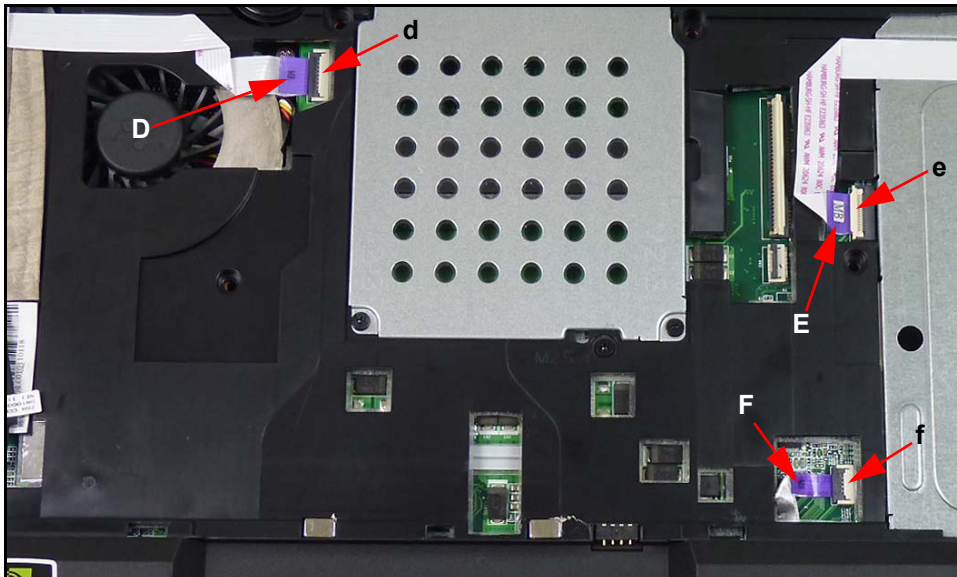
2. Disconnect microphone cable (B) from mainboard connector (b).
3. Remove LVDS and microphone cables from upper cover guides (C). (Figure 3-52)



---

**Figure 3-52. Removing Upper Cover Cables (2 of 2)**

4. Disconnect function board FFC (D) from mainboard connector (d). (Figure 3-53)



**Figure 3-53. Upper Cover FFC Connections**

5. Disconnect LAN board FFC (E) from mainboard connector (e).
6. Disconnect fingerprint scanner FFC (F) from mainboard connector (f).
7. Remove screw (G) and screws (H) from lower cover. (Figure 3-54)

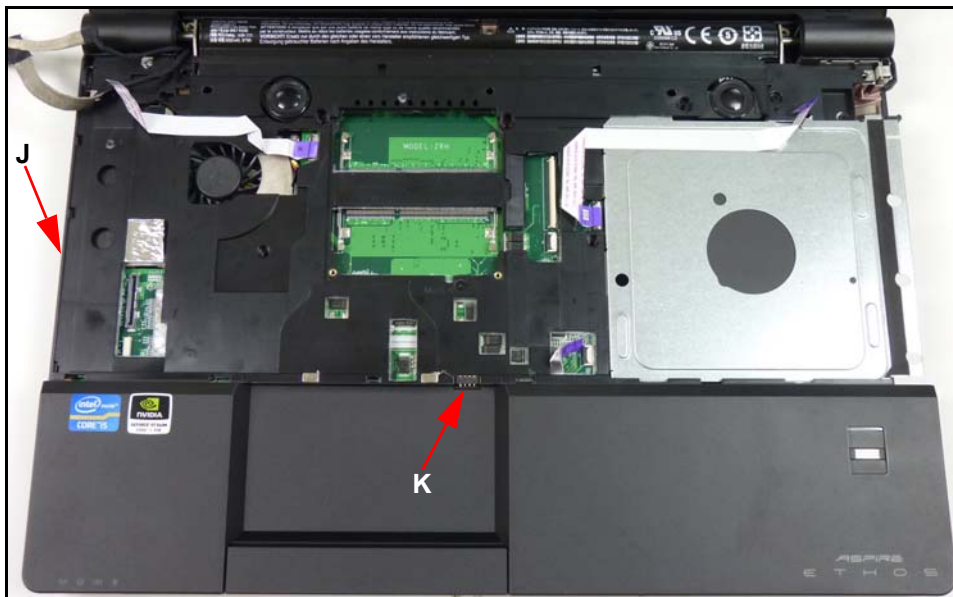


**Figure 3-54. Upper Cover Screws**

**⚠ CAUTION:**

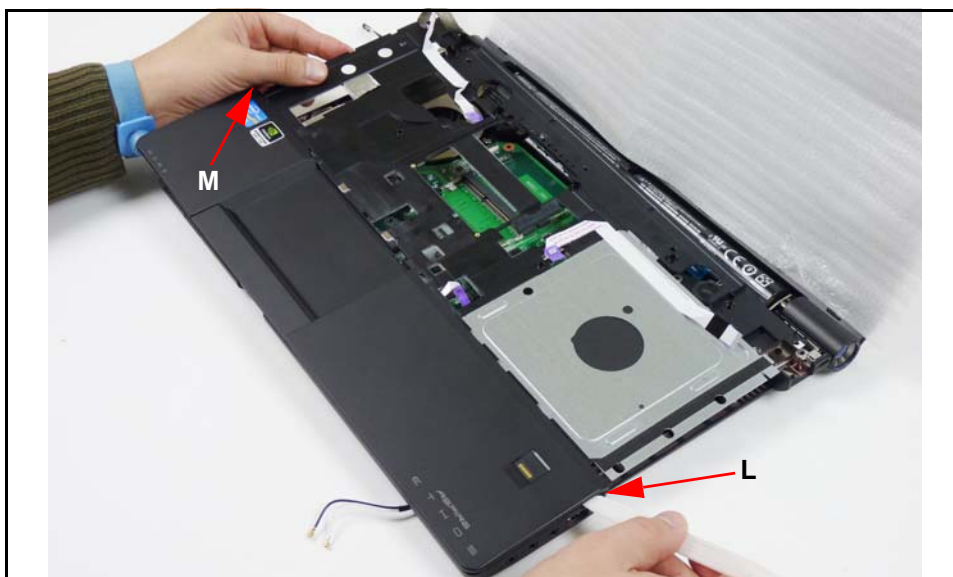
Touchpad connector extends out from upper cover. Use caution when removing upper cover.

8. Lift side (J) of upper cover until separated from lower cover. (Figure 3-55)



**Figure 3-55. Removing Upper Cover (1 of 2)**

9. Rotate upper cover until opening clears touchpad connector (K).
10. Unlock locking latch (L) on right side of upper cover then lift left side (M) to remove from lower cover. (Figure 3-56)

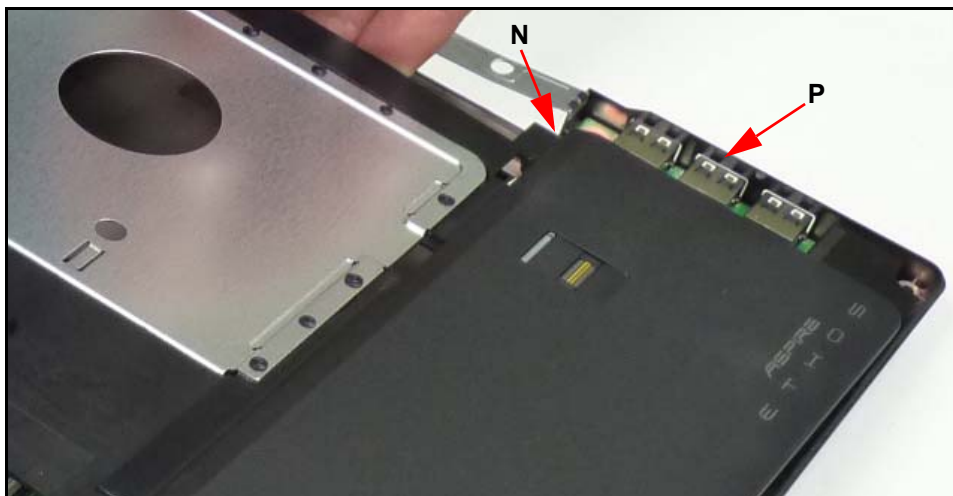


**Figure 3-56. Removing Upper Cover (2 of 2)**

## Upper Cover Installation



---

1. Install and secure right side (N) of upper cover to locking latches (P) on lower cover. (Figure 3-57)



**Figure 3-57. Installing Upper Cover**

2. Install upper cover so touchpad connector (K) is inserted through opening in upper cover. (Figure 3-55)
3. Install and secure side (J) of upper cover to lower cover.
4. Install and secure screw (G) and screws (H) to lower cover. (Figure 3-54)
5. Connect and secure fingerprint scanner FFC (F) to mainboard connector (f). (Figure 3-53)
6. Connect and secure LAN board FFC (E) to mainboard connector (e).
7. Connect and secure function board FFC (D) to mainboard connector (d).
8. Install and secure LVDS and microphone cables in upper cover guides (C). (Figure 3-52)
9. Connect and secure microphone cable (B) to mainboard connector (b). (Figure 3-51)
10. Connect and secure LVDS cable (A) to mainboard connector (a).
11. Install LAN board.
12. Install upper cover DIMM module.
13. Install function board.

ID	Size	Quantity	Screw Type
G	M2.5x4.0	1	
H	M2.5x6.5	2	



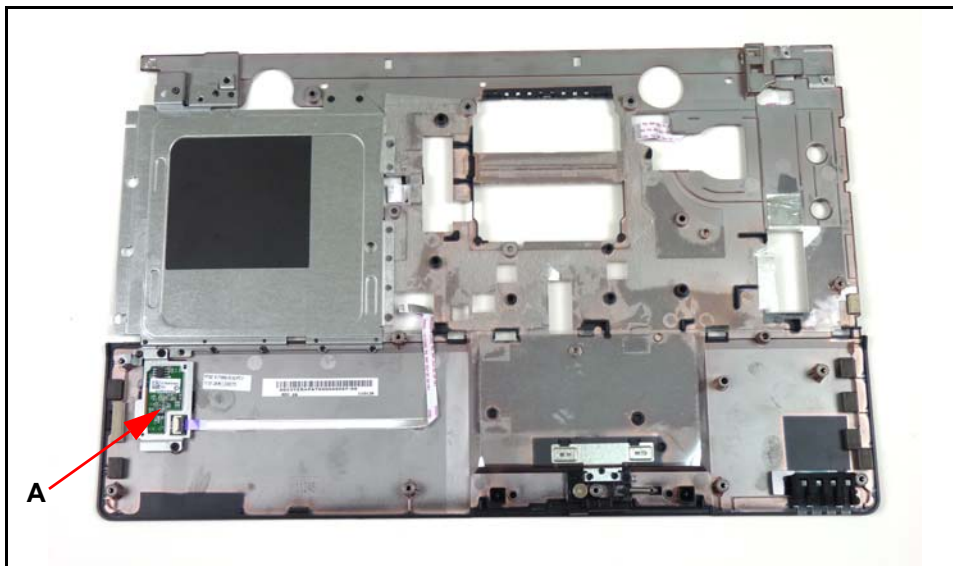
# Fingerprint Scanner Removal

---

## Prerequisite:

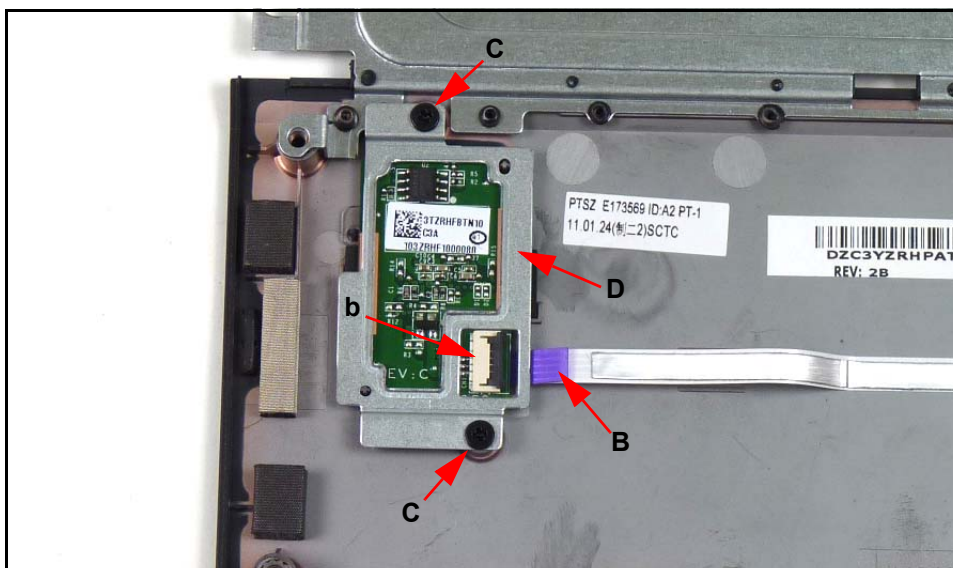
### Upper Cover Removal

1. Locate fingerprint scanner board (A) on bottom side of upper cover. (Figure 3-58)



**Figure 3-58. Upper Cover Overview with Fingerprint Scanner**

2. Disconnect scanner FFC (B) from scanner connector (b). (Figure 3-59)



**Figure 3-59. Fingerprint Scanner**


3. Remove screws (C) from upper cover.

4. Remove bracket (D) from upper cover.
5. Remove fingerprint scanner from upper cover.

## Fingerprint Scanner Installation

---

1. Install scanner board (A) on upper cover. ([Figure 3-58](#))
2. Install scanner bracket (D) on upper cover. ([Figure 3-59](#))
3. Install and secure screws (C) to upper cover.
4. Connect and secure scanner FFC (B) to scanner connector (b).
5. Install upper cover.

ID	Size	Quantity	Screw Type
C	M2.0x2.0	2	

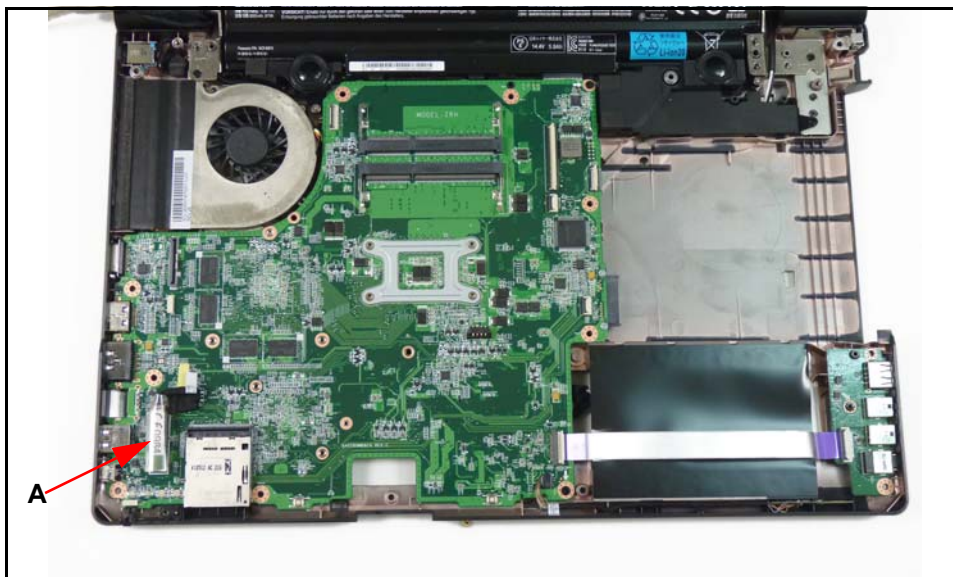
# Bluetooth Module Removal

---

## Prerequisite:

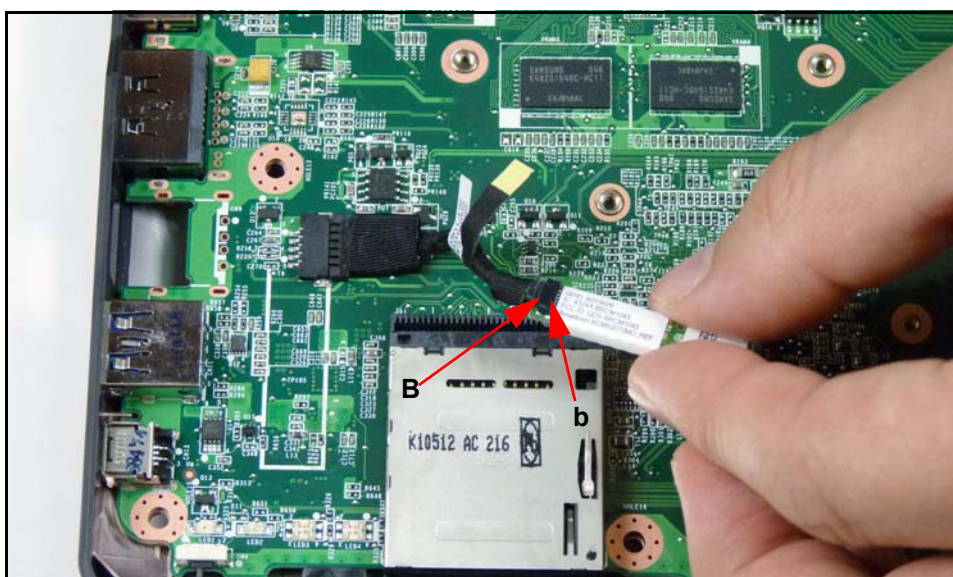
### Upper Cover Removal

1. Locate module (A) on lower cover. (Figure 3-60)



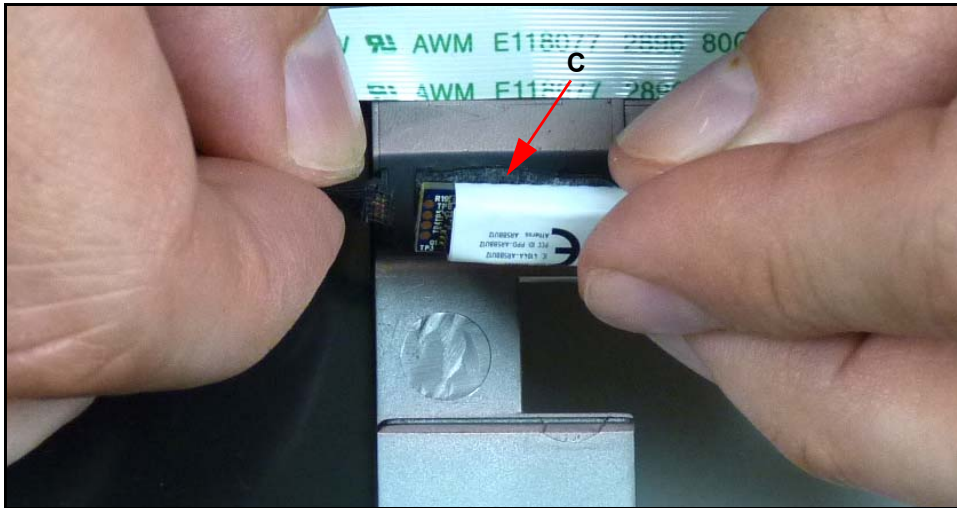
**Figure 3-60. Lower Cover Overview with Bluetooth Module**

2. Remove module and adhesive from lower cover.
3. Disconnect module cable (B) from module connector (b). (Figure 3-61)



**Figure 3-61. Bluetooth Module**

4. Remove adhesive from module. (Figure 3-62)



---

**Figure 3-62. Bluetooth Module Adhesive**

## Bluetooth Module Installation

---

1. Install adhesive (C) to Bluetooth module. ([Figure 3-62](#))
2. Connect Bluetooth cable (B) to Bluetooth module connector. ([Figure 3-61](#))
3. Install Bluetooth module (A) to lower cover. ([Figure 3-60](#))
4. Install upper cover.



# USB Module Removal

---

## Prerequisite:

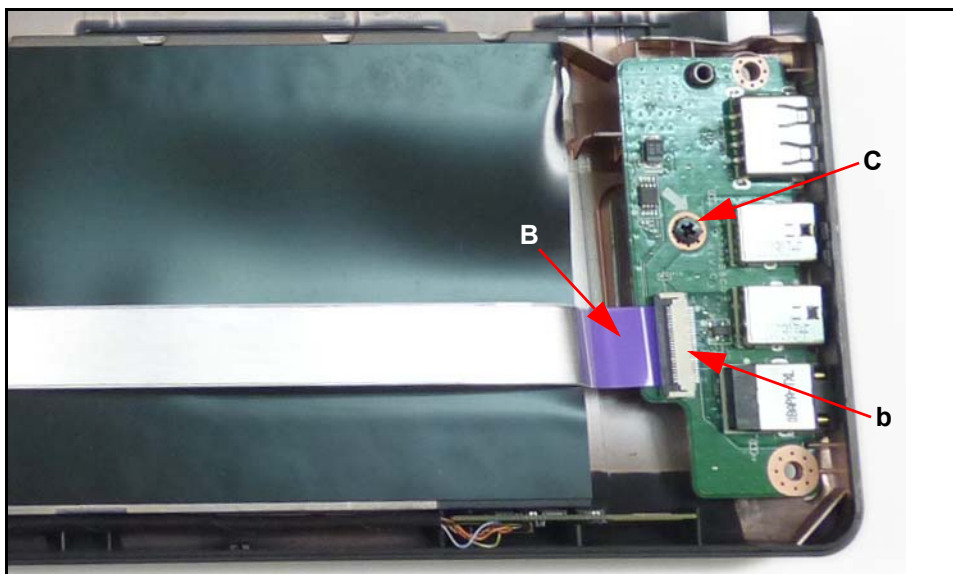
### Upper Cover Removal

1. Locate module (A) on lower cover. (Figure 3-63)



**Figure 3-63. Lower Cover Overview with USB Module**

2. Disconnect module FFC (B) from board connector (b). (Figure 3-64)

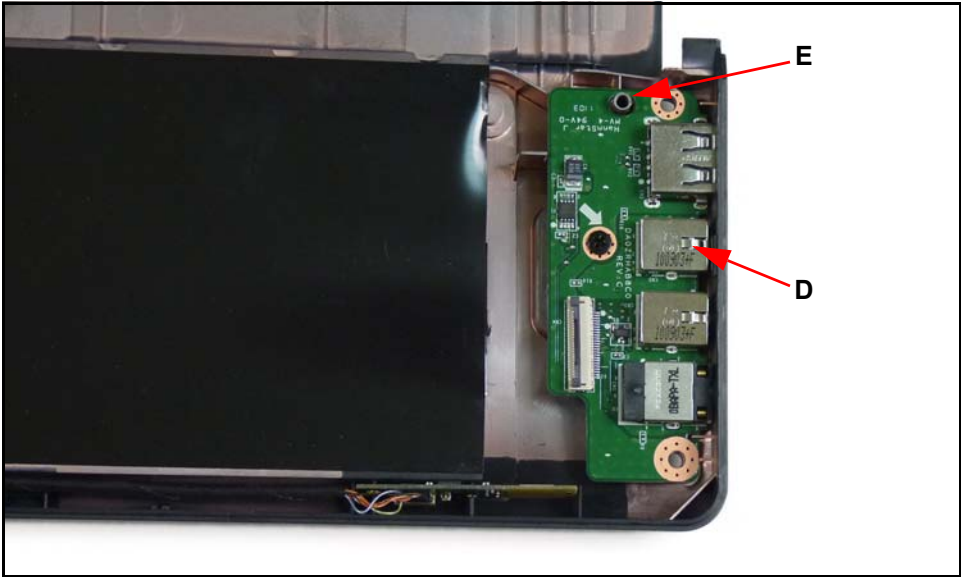


**Figure 3-64. USB Board**

3. Remove screw (C) from lower cover.
4. Remove module from lower cover.


# USB Module Installation

- 1. Align and install module ports (D) to module port slots on lower cover. (Figure 3-65)



**Figure 3-65. Installing USB Module**

- 2. Align USB board to guidepin (E).
- 3. Install USB board on lower cover.
- 4. Install screw (C) to lower cover. (Figure 3-64)
- 5. Connect and secure module FFC (B) to module connector (b).
- 6. Install upper cover.

ID	Size	Quantity	Screw Type
D	M2.5x2.5	1	

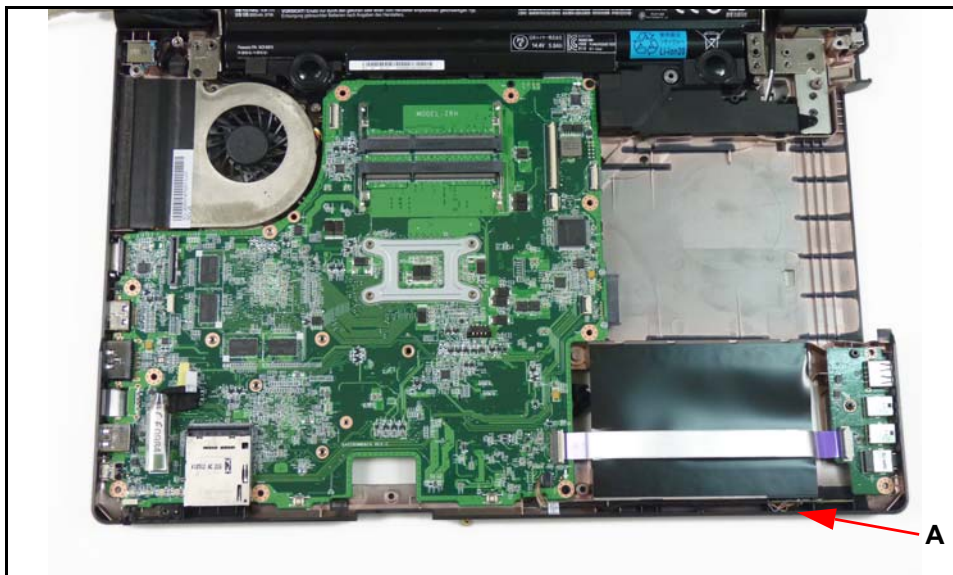
# DT Module Removal

---

## Prerequisite:

### Upper Cover Removal

1. Locate DT module (A) on lower cover. (Figure 3-66)



---

**Figure 3-66. Lower Cover Overview with DT Module**

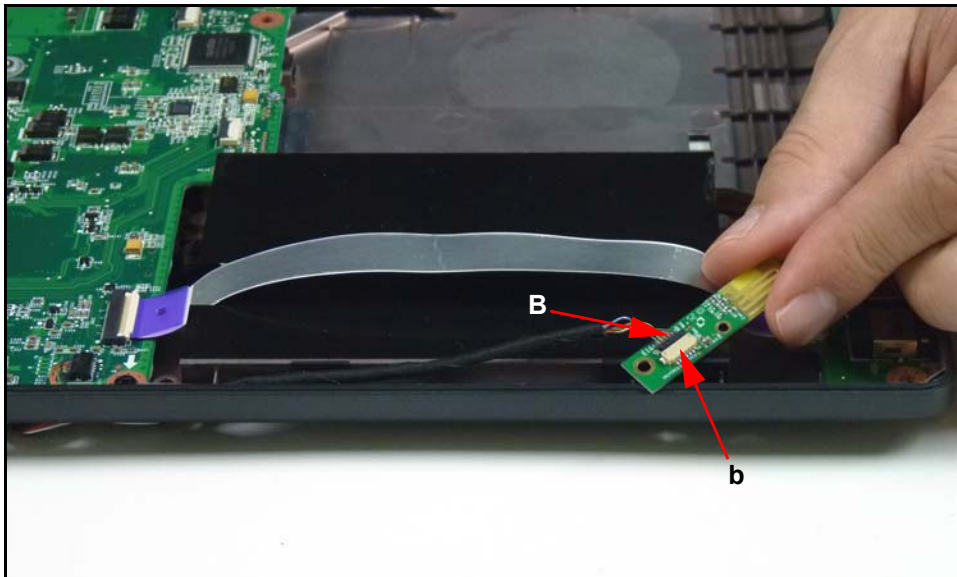
2. Lift module from lower cover as shown in Figure 3-67.



---

**Figure 3-67. Removing DT Module**

3. Disconnect module cable (B) from module connector (b). (Figure 3-68)



---

**Figure 3-68. DT Module**

4. Remove module.

## DT Module Installation

---

1. Connect DT cable (B) to DT module connector (b). (Figure 3-68)
2. Install DT module on lower cover. (Figure 3-67)
3. Install upper cover.

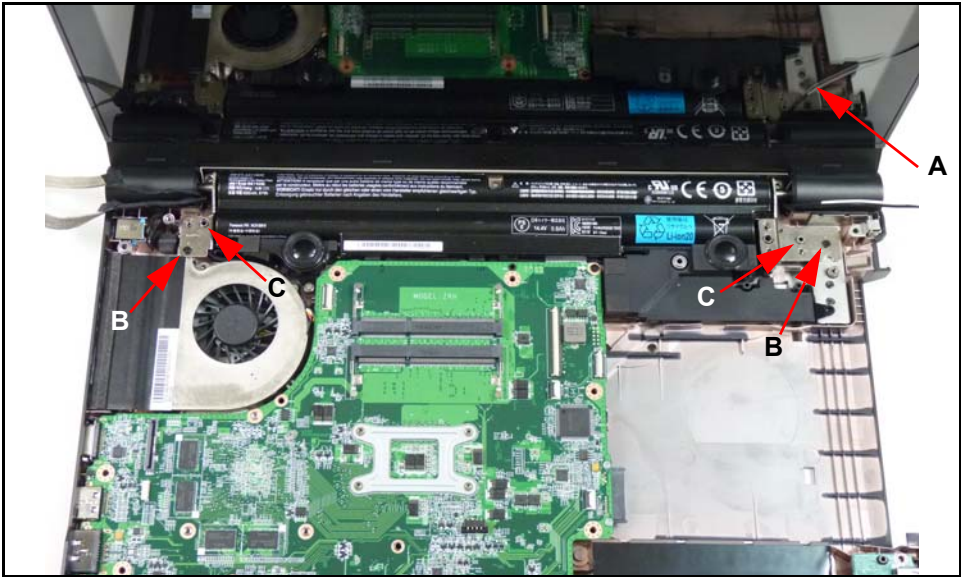
# LCD Module Removal

---

**Prerequisite:**

[Upper Cover Removal](#)

- 1. Locate LCD (Liquid Crystal Display) module (A) on upper cover. ([Figure 3-69](#))




**Figure 3-69. LCD Module on Lower Cover**

- 2. Remove screws (B) from LCD hinges on lower cover.
- 3. Remove module.

# LCD Module Installation

---

- 1. Align and install module hinges to lower cover guide pins (C). ([Figure 3-69](#))
- 2. Install and secure screws (B) to lower cover.
- 3. Install upper cover.

ID	Size	Quantity	Screw Type
B	M2.5x5.0	2	



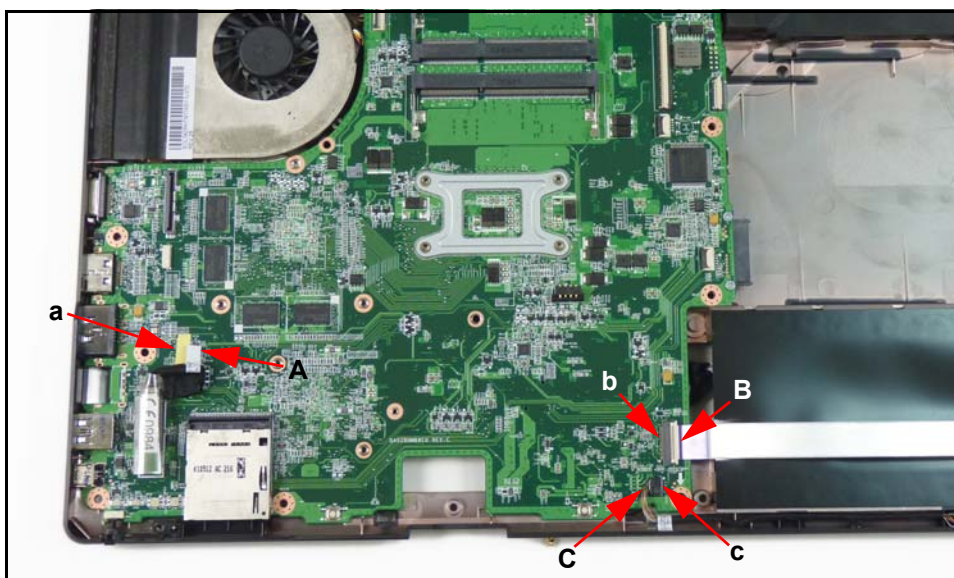
# Mainboard Removal

---

## Prerequisite:

### LCD Module Removal

1. Disconnect the following module cables from the mainboard connectors: (Figure 3-70)
  - Bluetooth module cable (A) from mainboard connector (a)
  - USB module cable (B) from mainboard connector (b)
  - DT board cable (C) from mainboard connector (c)



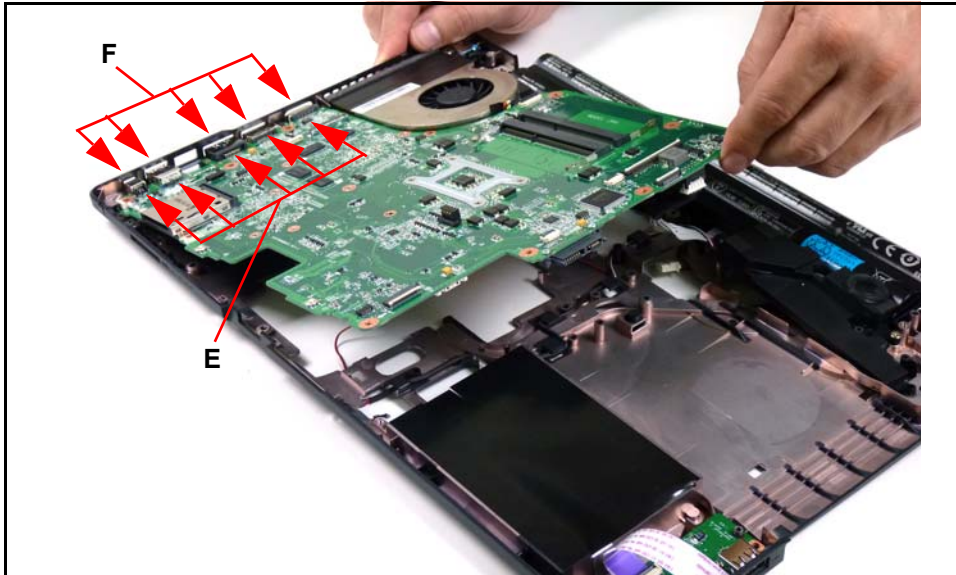
**Figure 3-70. Mainboard Connectors**

2. Remove screws (D) from lower cover. (Figure 3-71)



**Figure 3-71. Mainboard Screws**

3. To free mainboard ports (E) from lower cover slots (F), lift mainboard as shown in Figure 3-72.

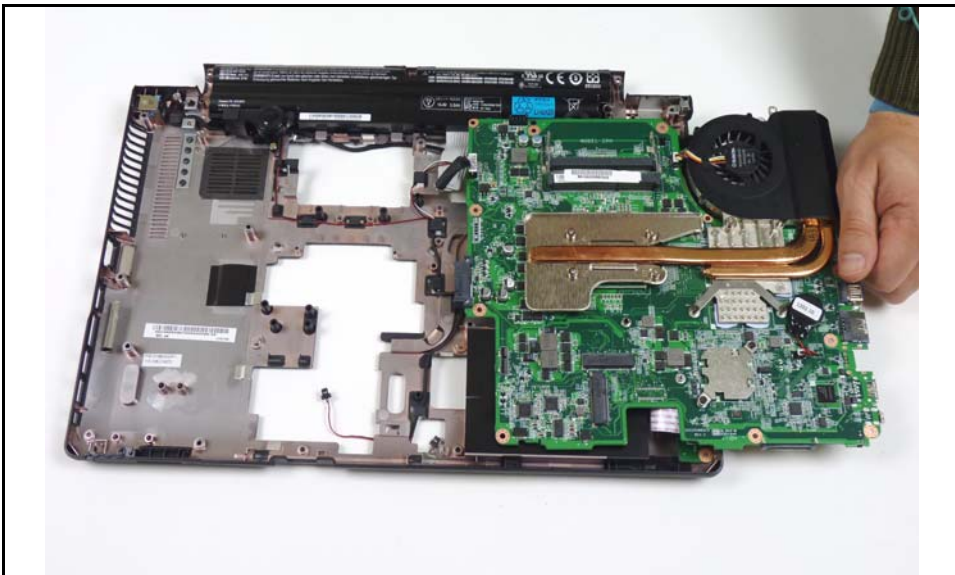


**Figure 3-72. Clearing Mainboard Ports**

**⚠ CAUTION:**

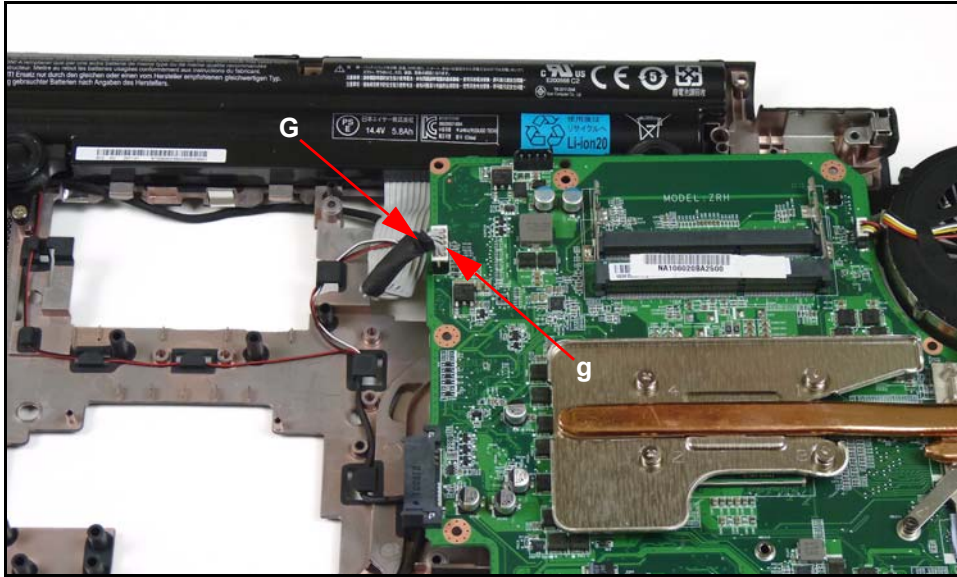
After mainboard removal, use caution not to damage touchpad connector.

4. Turn mainboard to show battery cable and mainboard connector as shown in Figure 3-73.



**Figure 3-73. Mainboard Overview (Bottom) with Battery Cable**

5. Disconnect battery cable (G) from mainboard connector (g). (Figure 3-74)



**Figure 3-74. Disconnecting Battery Cable**

6. Remove mainboard.



# Mainboard Installation

---


## **⚠ CAUTION:**

Use caution when installing mainboard. Forced installation may damage left side connectors.

## **⇒ NOTE:**

Make sure all cables are clear from mainboard during installation.

1. Connect battery cable (G) to mainboard connector (g). ([Figure 3-74](#))
2. Align and install mainboard ports (E) to lower cover slots (F) as shown in [Figure 3-72](#).
3. Install mainboard on lower cover.
4. Install and secure screws (D) to lower cover. ([Figure 3-71](#))
5. Connect and secure the following module cables to mainboard connectors: ([Figure 3-70](#))
  - Bluetooth module cable (A) to mainboard connector (a)
  - USB module cable (B) to mainboard connector (b)
  - DT board cable (C) to mainboard connector (c)
6. Install LCD module.

ID	Size	Quantity	Screw Type
D	M2.5x3.0	2	

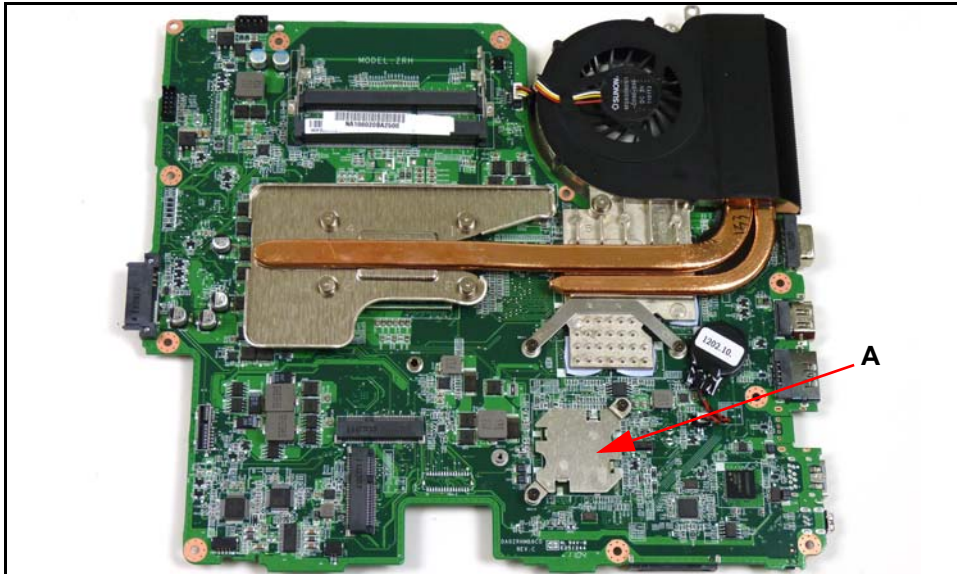
# PCH Heatsink Removal

---

## Prerequisite:

[Mainboard Removal](#)

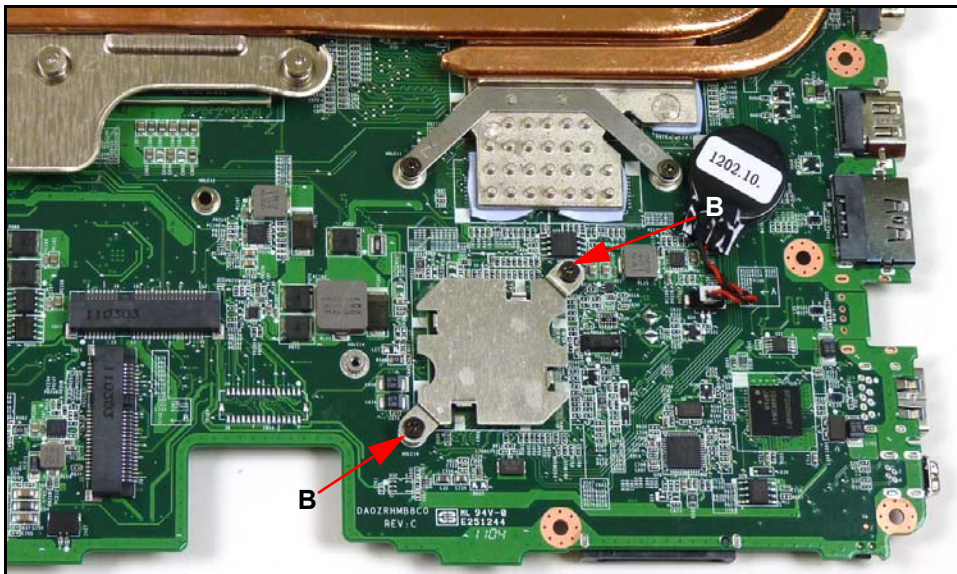
1. Locate heatsink (A) on mainboard. (Figure 3-75)



---

**Figure 3-75. Mainboard Overview (Bottom) with PCH Heatsink**

2. Remove screws (B) from lower cover. (Figure 3-76)



---


**Figure 3-76. PCH Heatsink Screws**

3. Remove heatsink from mainboard.

## PCH Heatsink Installation

---

1. Install heatsink (A) on mainboard ([Figure 3-75](#))
2. Install and secure screws (B) to lower cover. ([Figure 3-76](#))
3. Install mainboard.

ID	Size	Quantity	Screw Type
B	M2.0x3.0	2	

# RTC Battery Removal

---

## Prerequisite:

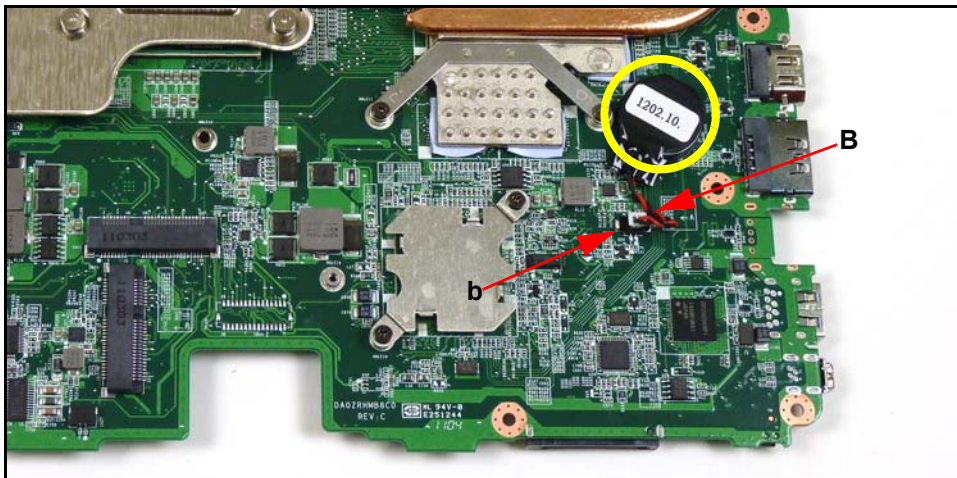
### Mainboard Removal

1. Locate RTC battery (A) on mainboard. (Figure 3-77)



**Figure 3-77. Mainboard Overview (Bottom) with RTC Battery**

2. Disconnect battery cable (B) from mainboard connector (b). (Figure 3-78)



**Figure 3-78. RTC Battery Removal.**

### + IMPORTANT:

Follow local regulations for battery disposal.

3. Remove battery from mainboard adhesive.

## RTC Battery Installation

---

1. Install and connect battery cable (B) to mainboard connector (b). ([Figure 3-78](#))
2. Install and secure battery (A) to mainboard adhesive. ([Figure 3-77](#))
3. Install mainboard.



# Thermal Assembly Removal

---

## Prerequisite:

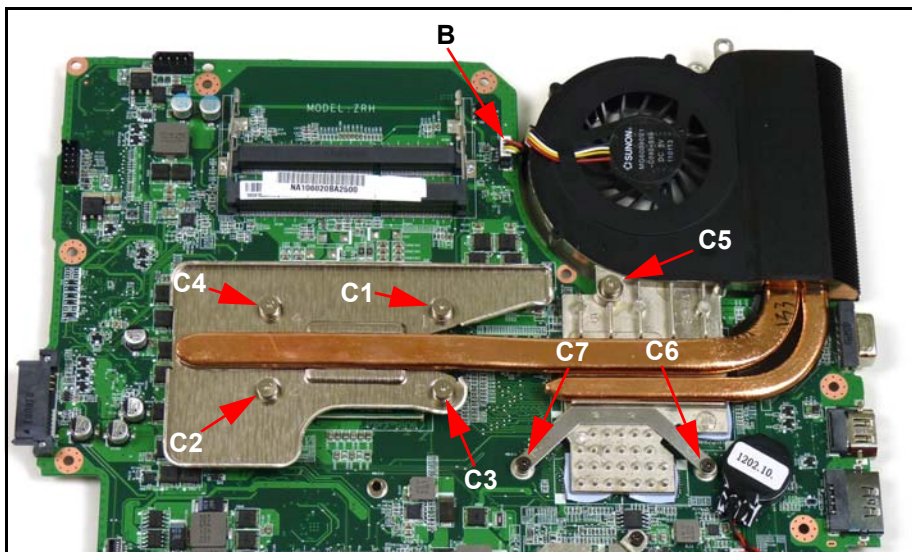
### Mainboard Removal

1. Locate thermal assembly (A) on mainboard. (Figure 3-79)



**Figure 3-79. Mainboard Overview (Bottom) with Thermal Assembly**

2. Disconnect fan cable (B) from mainboard connector. (Figure 3-80)



**Figure 3-80. Thermal Assembly**

3. Loosen captive screws (C1 - C7) on thermal assembly.
4. Remove thermal assembly from mainboard.

# Thermal Assembly Installation

---

## + IMPORTANT:

Apply approved thermal grease and make sure all heat pads are in place before replacing module.

## ⚠ CAUTION:

Thermal grease can damage mainboard. Use caution when applying.

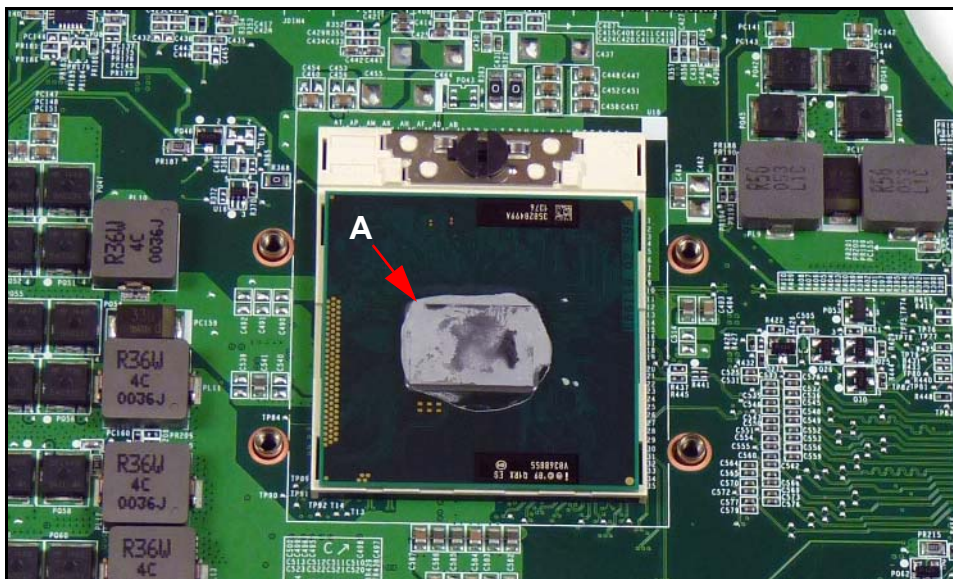
The following thermal grease types are approved for use:

- PSX-D

1. Remove all traces of thermal grease from CPU using a lint-free cloth or cotton swab and Isopropyl Alcohol, Acetone, or other approved cleaning agent.
2. Apply small amount of thermal grease to center of CPU (A). (Figure 3-81)

## ⇒ NOTE:

Force used during installation of thermal module is sufficient to spread grease over CPU top.



**Figure 3-81. Applying Grease to CPU**

3. Align thermal assembly and heatsink to mainboard screw holes. (Figure 3-80)

## ⇒ NOTE:

Captive screws (C1 - C4) must be installed and secured in numerical order for thermal grease to spread evenly.

4. Install and secure captive screws (C1 - C4) to mainboard, in numerical order from one (1) to four (4).
5. Install and secure captive screws (C5 - C7) to mainboard.
6. Connect fan cable (B) to mainboard connector.
7. Install mainboard.

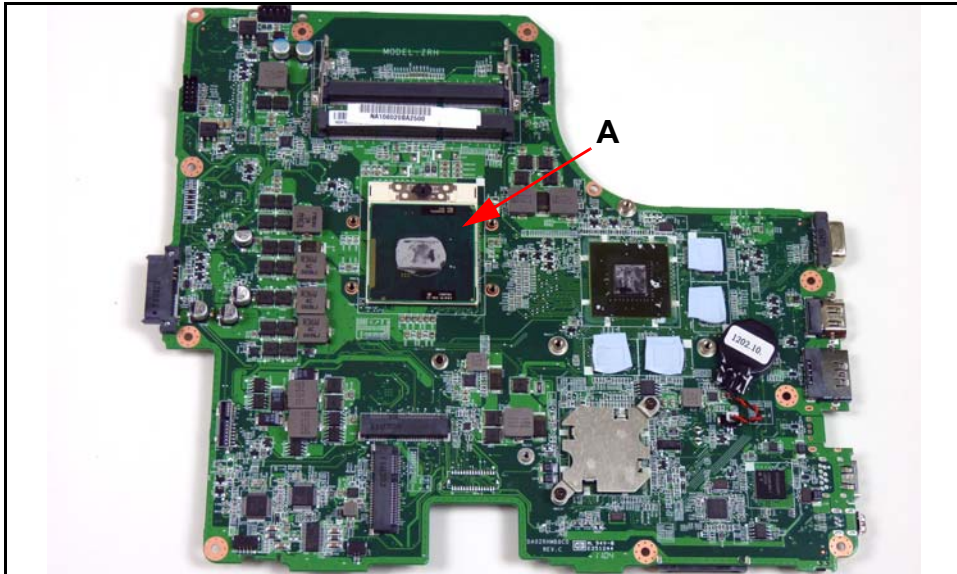
# CPU Removal

---

## Prerequisite:

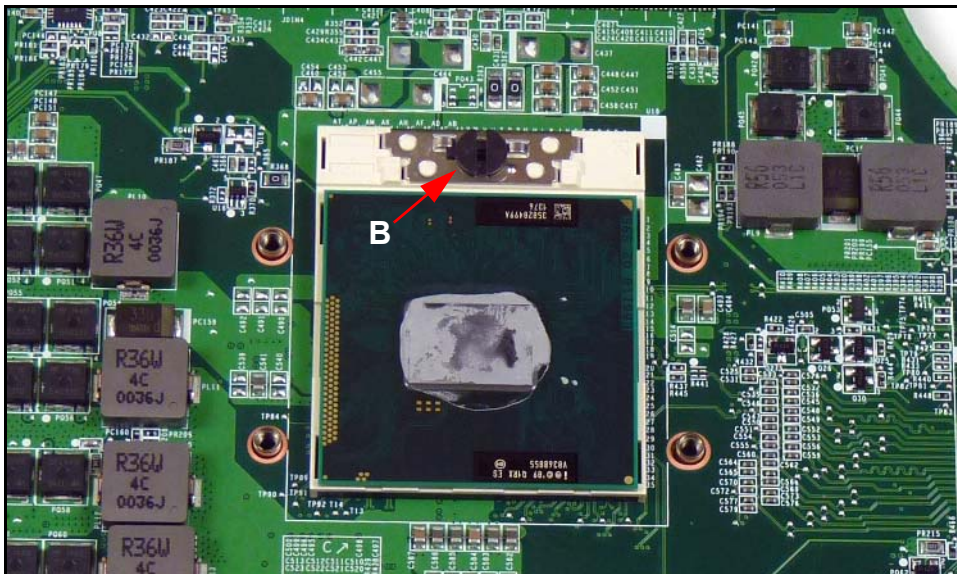
### [Thermal Assembly Removal](#)

1. Locate CPU module (A) on mainboard. (Figure 3-82)



**Figure 3-82. Mainboard Overview (Bottom) with CPU**

2. Turn captive screw (B) left 180° to release module.



**Figure 3-83. CPU**

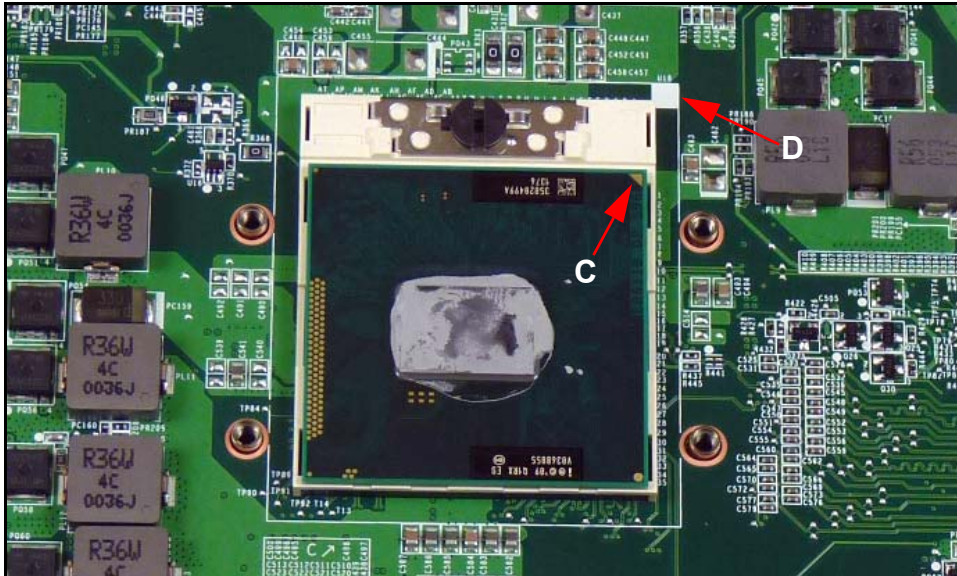
3. Remove CPU module from socket.



# CPU Installation

---

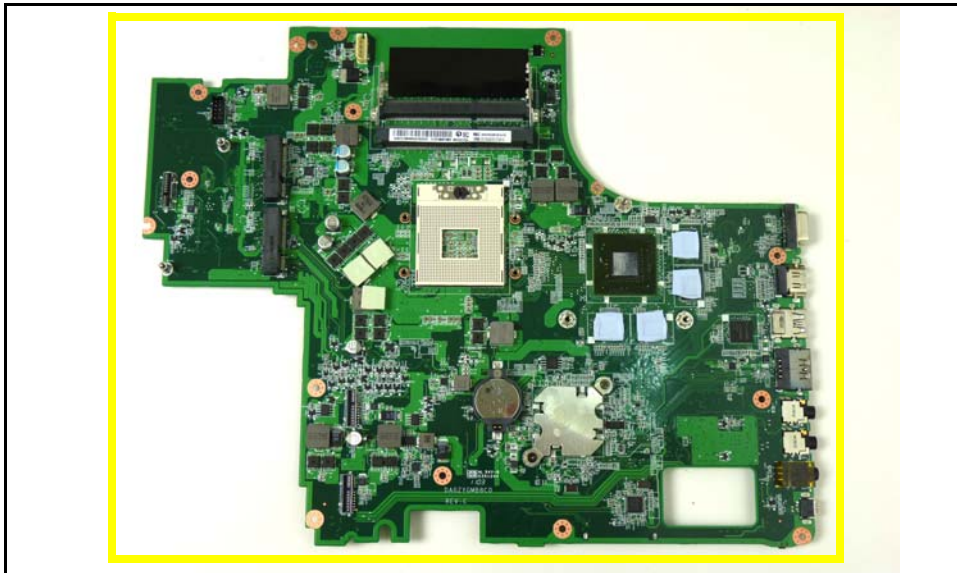
1. Align CPU marker (C) with socket marker (D). (Figure 3-84)



---

**Figure 3-84. Installing CPU in Socket**

2. Install CPU in socket.
3. Turn screw (B) right 180° to secure CPU module. (Figure 3-83)
4. Install thermal assembly.



---

**Figure 3-85. Mainboard Recycling**

## + IMPORTANT:

Follow local regulations for circuit board disposal.

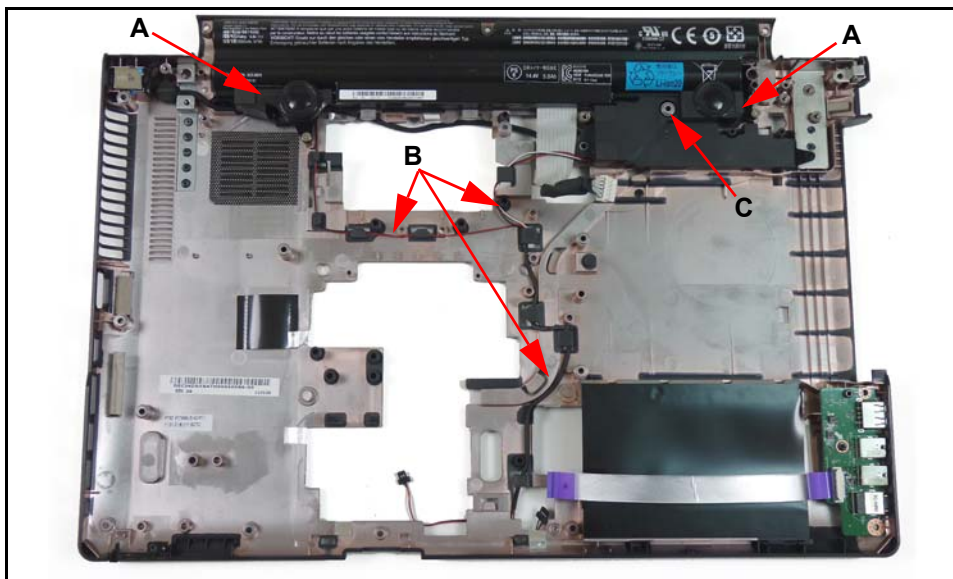
# Speaker Module Removal

---

## Prerequisite:

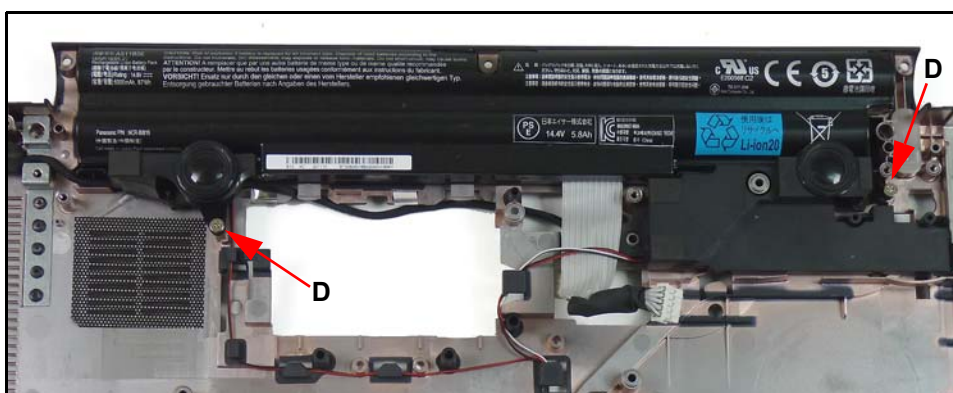
### Mainboard Removal

1. Locate speaker module (A) on upper cover. (Figure 3-86)



**Figure 3-86. Lower Cover Overview with Speaker Module**

2. Remove module cables (B) from lower cover guides.
3. Remove screws (D) from lower cover. (Figure 3-87)




**Figure 3-87. Speaker Module Screws**

4. Remove speaker assemblies.

## Speaker Module Installation

---

1. Align and install speaker module (A) to guide pin (C) on lower cover. ([Figure 3-86](#))
2. Install upper speaker module cable (B) in guides on lower cover.
3. Install and secure screws (D) to lower cover. ([Figure 3-87](#))
4. Install mainboard.

ID	Size	Quantity	Screw Type
D	M2.0x5.0 (Speaker)	2	

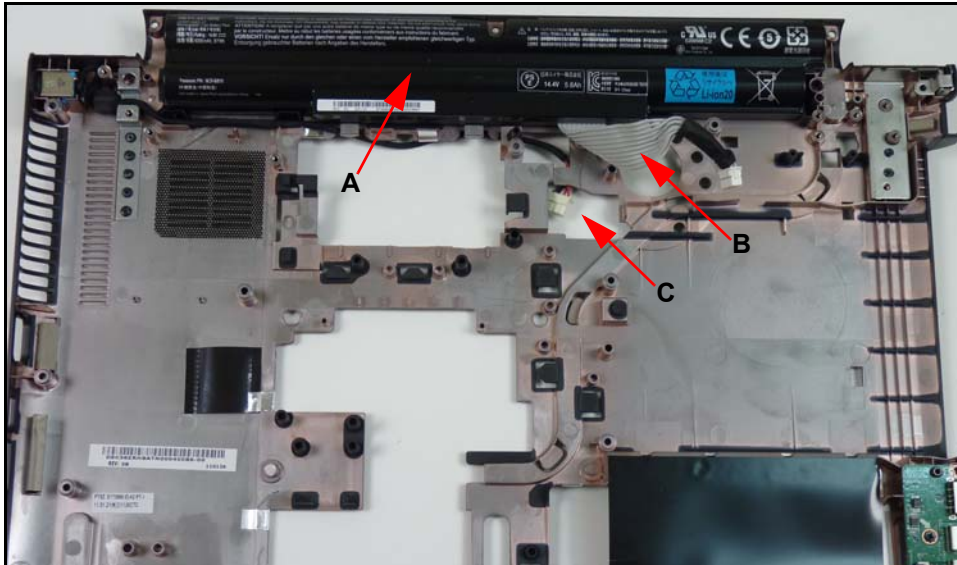
# Battery Removal

---

## Prerequisite:

### [Speaker Module Removal](#)

1. Locate battery (A) on lower cover. (Figure 3-88)



---

**Figure 3-88. Lower Cover Overview with Battery**

2. Make sure battery cable (B) is free from lower cover slot (C).
3. Remove battery.

# Battery Installation

---

1. Install battery (A) on lower cover. (Figure 3-88)
2. Install battery cable (B) through lower cover slot (C).
3. Install speaker module.



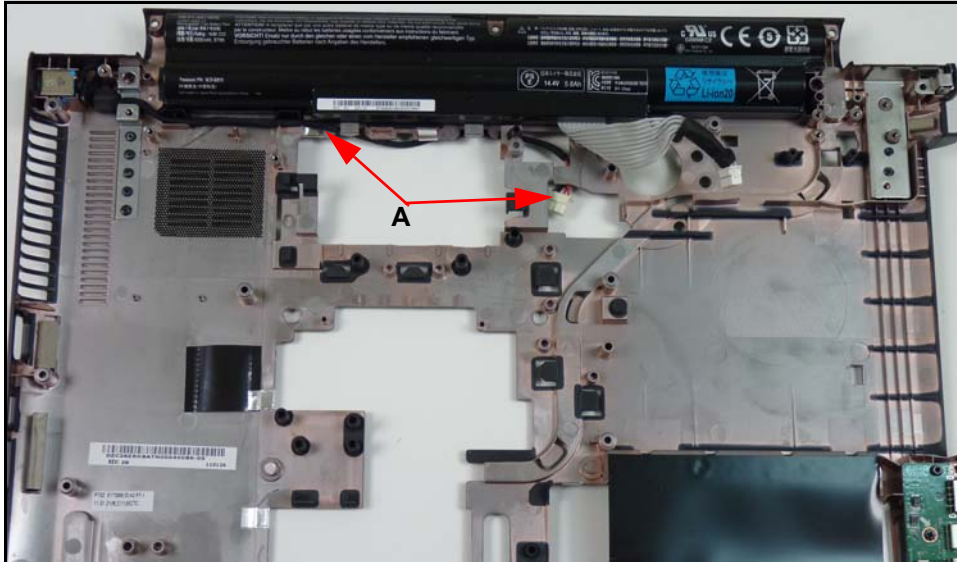
# DC-IN Cable Removal

---

## Prerequisite:

### [Speaker Module Removal](#)

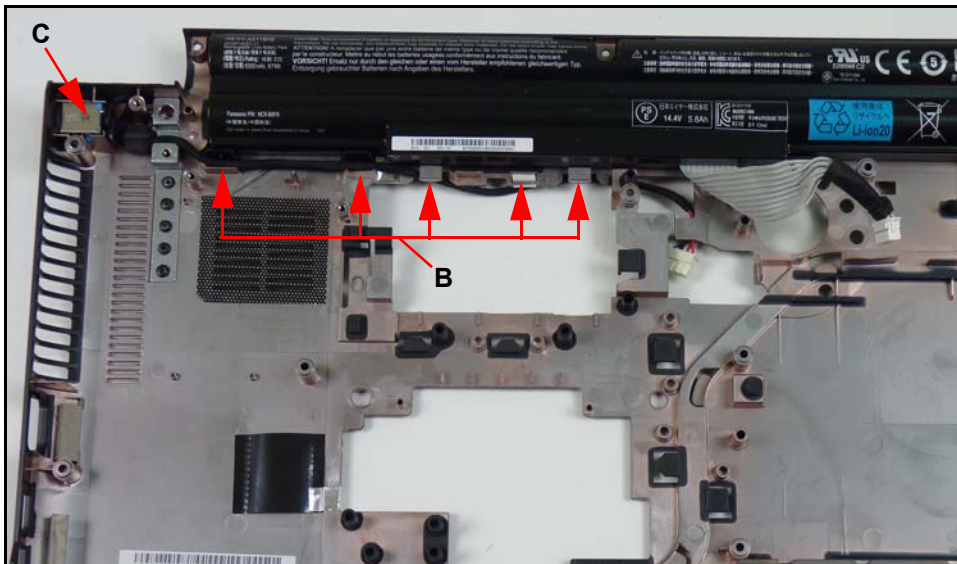
1. Locate DC-In cable (A) on lower cover. (Figure 3-89)



---

**Figure 3-89. Lower Cover Overview with DC-In Cable**

2. Remove DC-In cable from guides (B) on lower cover. (Figure 3-90)



---

**Figure 3-90. DC-In Cable and Guides**

3. Remove DC-In cable connector (C) from lower cover.

## DC-IN Cable Installation

---

1. Install DC-In cable connector (C) in lower cover. ([Figure 3-90](#))
2. Install DC-In cable in guides (B) on lower cover.
3. Install speaker module.

# CHAPTER 4

## Troubleshooting

---

<b>Introduction</b>	<b>4-3</b>
<b>General Information</b>	<b>4-3</b>
Power On Issues	4-4
No Display Issues	4-5
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<b>Post Codes</b>	<b>4-17</b>



# Troubleshooting

---

## Introduction

---

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

## General Information

---

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

⇒ **NOTE:**

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

1. Obtain as much detailed information as possible about the problem.
2. If possible, verify the symptoms by re-creating the failure through diagnostic tests or repeating the operation that led to the problem.
3. Use Table 4-1 with the verified symptom to determine the solution.

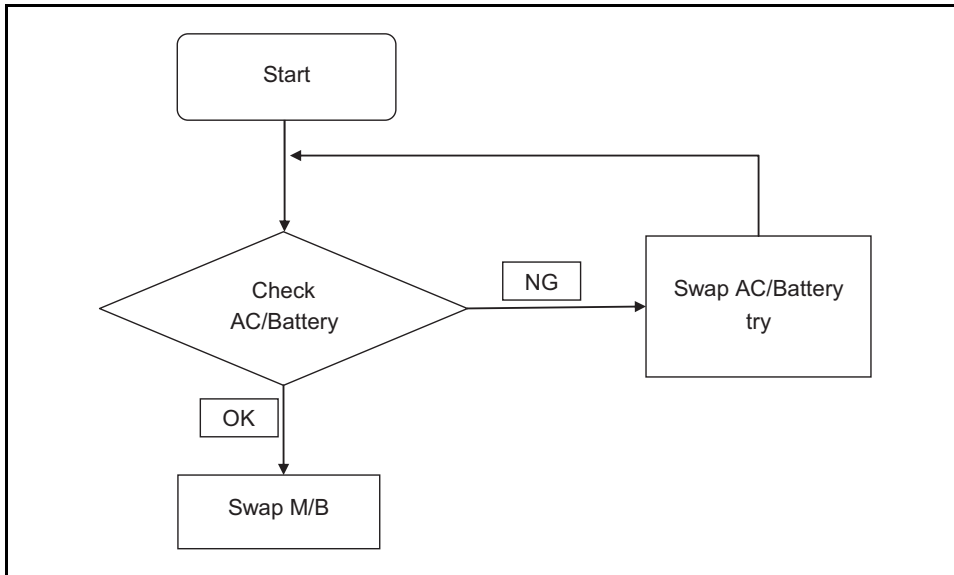
Symptoms (Verified)
<a href="#">Power On Issues</a>
<a href="#">No Display Issues</a>
<a href="#">LCD Failure</a>
<a href="#">Keyboard Failure</a>
<a href="#">Touchpad Failure</a>
<a href="#">Internal Speaker Failure</a>
<a href="#">Microphone Failure</a>
<a href="#">USB Failure</a>
<a href="#">Other Functions Failure</a>
<a href="#">Intermittent Problems</a>
<a href="#">Undetermined Problems</a>

4. If the Issue is still not resolved, refer to [Online Support Information](#).

## Power On Issues

---

If the system doesn't power on, perform the following:



---

**Figure 4-1. Power On Issue**

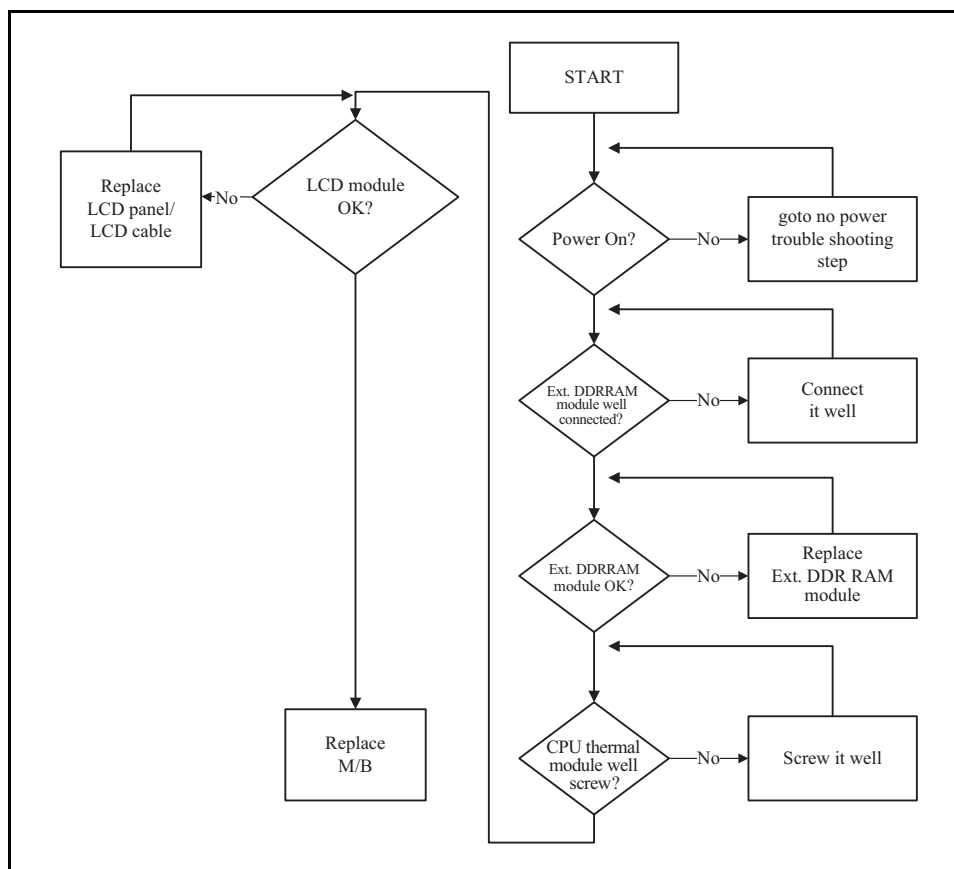
### Computer Shuts Down Intermittently

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

1. Make sure the power cable is properly connected to the computer and the electrical outlet.
2. Remove all extension cables between the computer and the outlet.
3. Remove all surge protectors between the computer and the electrical outlet. Plug the computer directly into a known serviceable electrical outlet.
4. Disconnect the power and open the casing to check the Thermal Unit (refer to *Thermal Unit Failure*) and fan airways are free of obstructions.
5. Remove all external and non-essential hardware connected to the computer that are not necessary to boot the computer to the failure point.
6. Remove any recently installed software.
7. If the Issue is still not resolved, refer to [Online Support Information](#).

# No Display Issues

If the Display doesn't work, perform the following:



**Figure 4-2. No Display Issue**

## No POST or Video

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

1. Make sure that internal display is selected. Switching between internal and external by pressing **Fn+F5**. Reference Product pages for specific model procedures.
2. Make sure the computer has power by checking for one of the following:
  - Fans start up
  - Status LEDs illuminate

If no power, refer to [Power On Issues](#).

3. Drain stored power by removing the power cable and battery. Hold the power button for 10 seconds.
4. Connect the power and reboot the computer.
5. Connect an external monitor to the computer and switch between the internal display and the external display by pressing **Fn+F5**.

6. If the POST or video appears on the external display only, refer to [LCD Failure](#).
7. Disconnect power and all external devices including port replicators or docking stations. Remove any memory cards and CD/DVD discs.
8. Start the computer. If the computer boots correctly, add the devices one by one until the failure point is discovered.
9. Reseat the memory modules.
10. Remove the drives (refer to [Maintenance Flowchart](#)).
11. If the Issue is still not resolved, refer to [Online Support Information](#).

## Abnormal Video

If the video appears abnormal, perform the following:

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

### ⇒ NOTE:

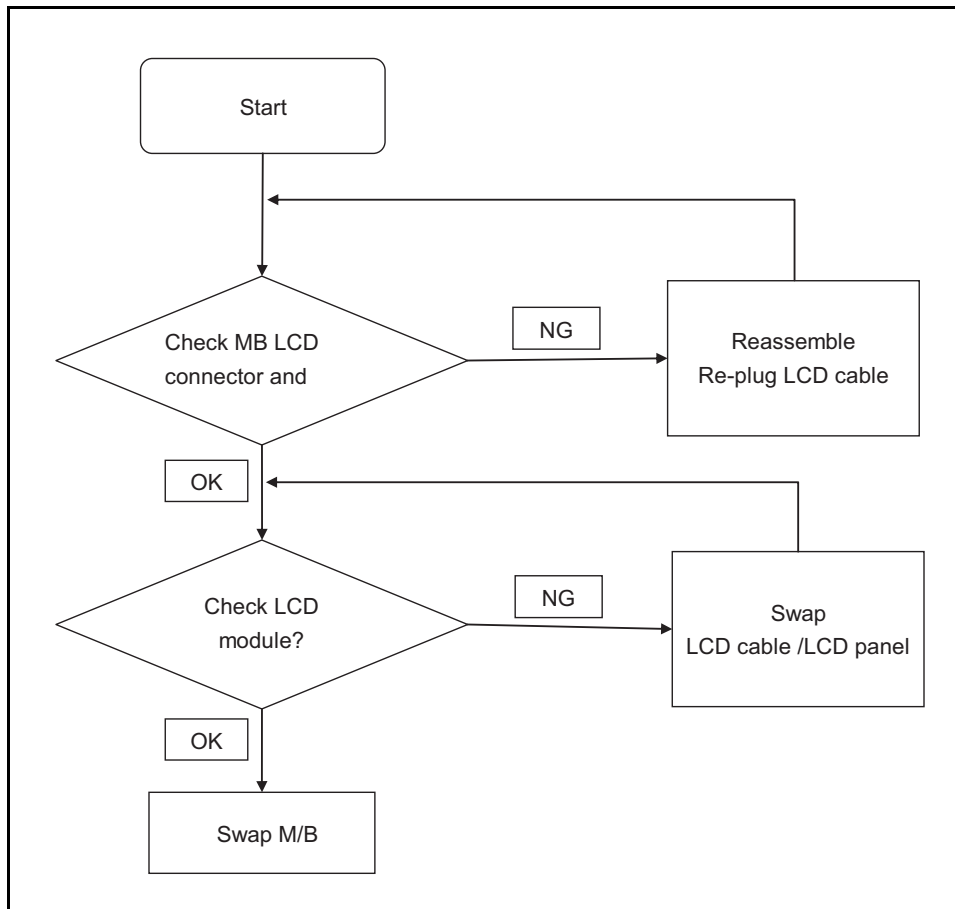
Make sure that the computer is not running on battery alone as this may reduce display brightness.

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

## LCD Failure

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If the LCD fails, perform the following:



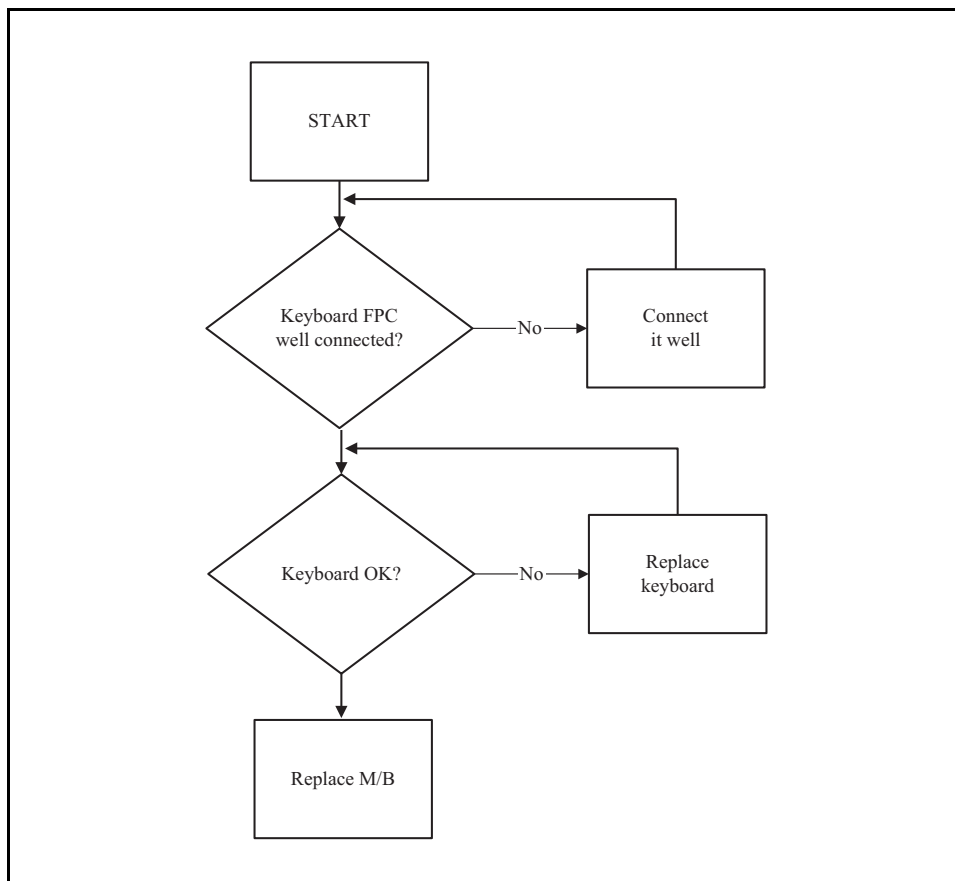
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**Figure 4-3. LCD Failure**

# Keyboard Failure

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If the Keyboard fails, perform the following:



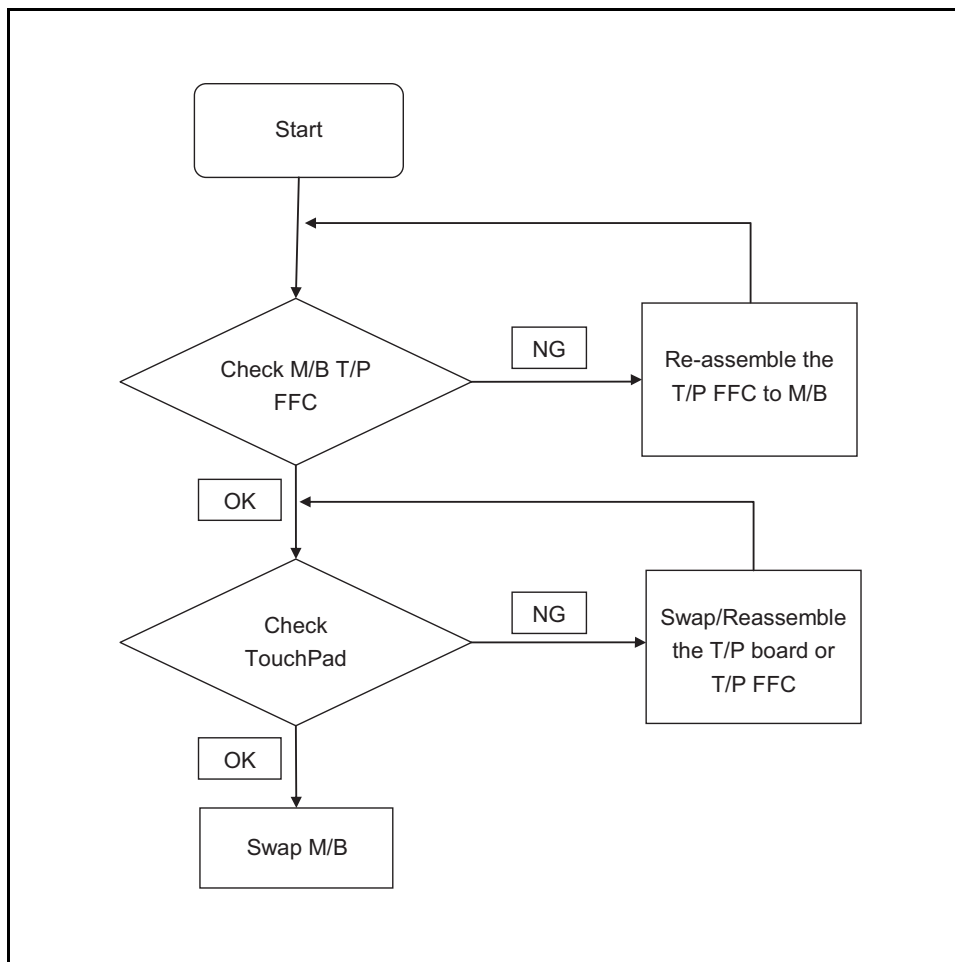
---

**Figure 4-4. Keyboard Failure**

# Touchpad Failure

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If the Touchpad fails, perform the following:



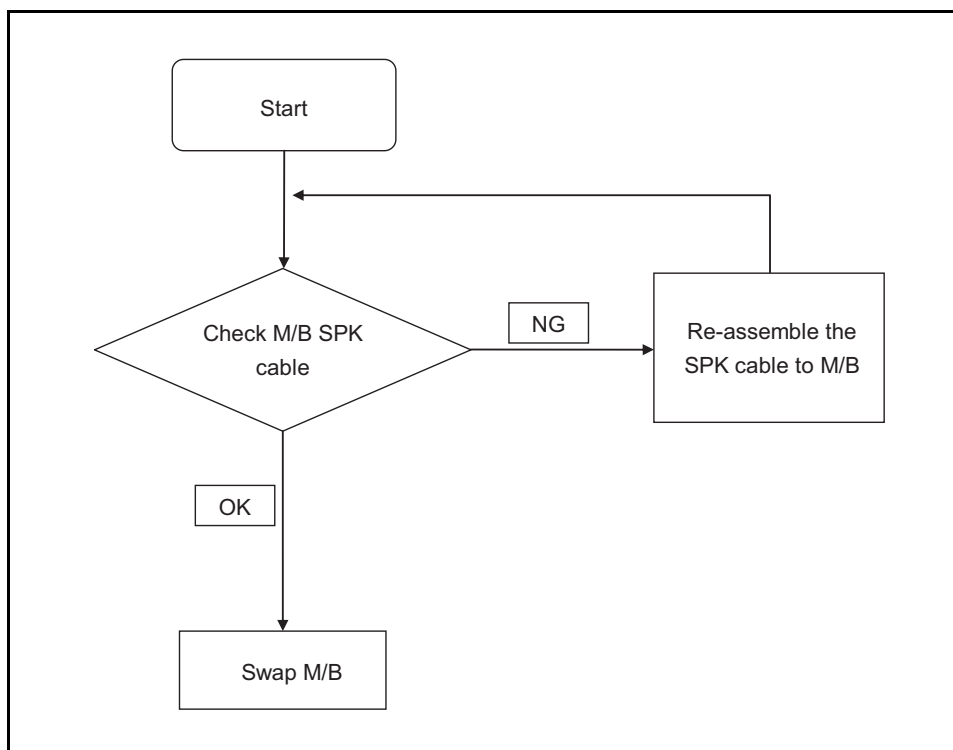
---

**Figure 4-5. Touchpad Failure**

# Internal Speaker Failure

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If internal Speakers fail, perform the following:



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**Figure 4-6. Internal Speaker Failure**

## Sound Problems

Perform the following:

1. Boot the computer.
2. Navigate to **Start** → **Control Panel** → **System and Maintenance** → **System** → **Device Manager**. Check the Device Manager to determine that:
  - The device is properly installed
  - There are no red Xs or yellow exclamation marks
  - There are no device conflicts
  - No hardware is listed under Other Devices
3. If updated recently, roll back the audio driver to the previous version.
4. Remove and reinstall the audio driver.
5. Make sure that all volume controls are set mid range:
  - Click the volume icon on the taskbar
  - Drag the slider to 50. Confirm that the volume is not muted.
  - Click Mixer to verify that other audio applications are set to 50 and not muted.



6. Navigate to **Start**→ **Control Panel**→ **Hardware and Sound**→ **Sound**. Confirm that Speakers are selected as the default audio device (green check mark).

⇒ **NOTE:**

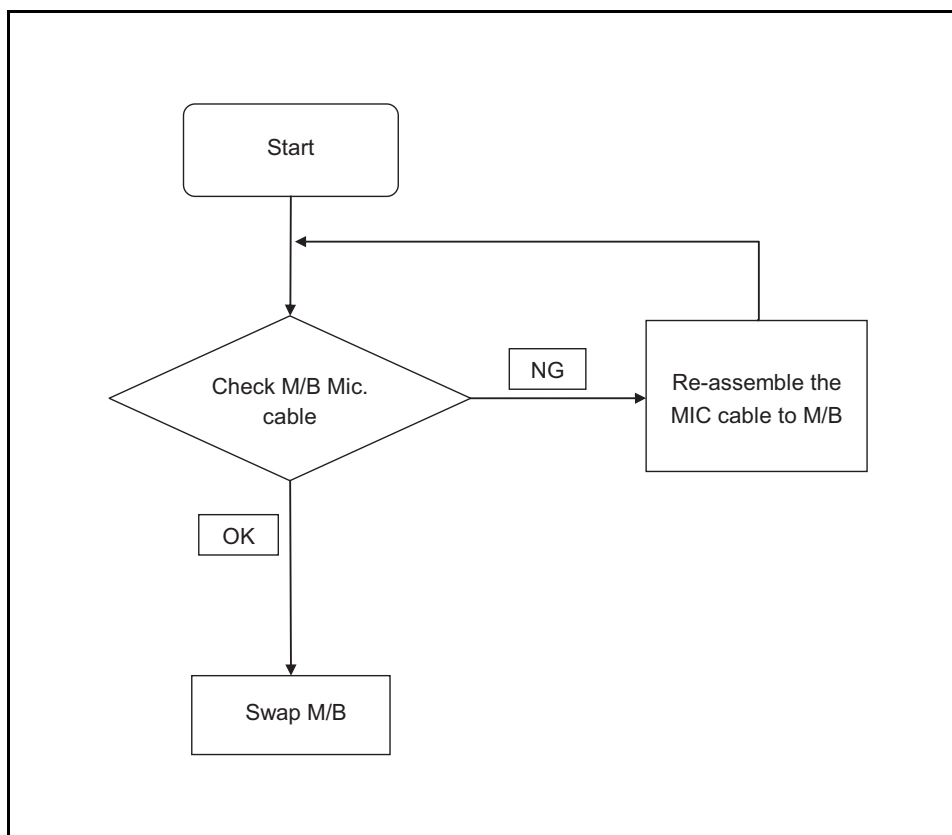
If Speakers does not show, right-click on the Playback tab and select **Show Disabled Devices** (clear by default).

7. Select Speakers and click **Configure** to start Speaker Setup. Follow the on-screen prompts to configure the speakers.
8. Remove any recently installed hardware or software.
9. Restore system and file settings from a known good date using System Restore.
10. If the issue is remains, repeat step 9, selecting an earlier time and date.
11. Reinstall the Operating System.
12. If the Issue is still not resolved, refer to [Online Support Information](#).

# Microphone Failure

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If internal or external Microphones fail, perform the following:



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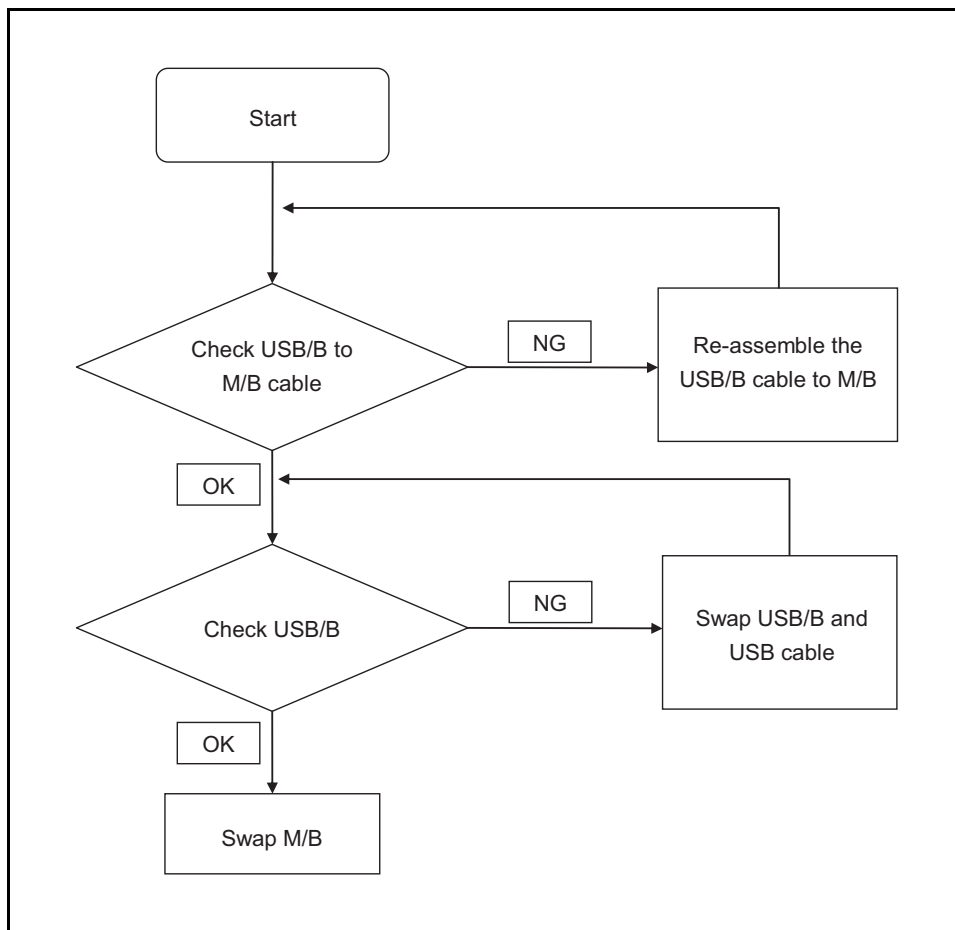
**Figure 4-7. Microphone Failure**

1. Check that the microphone is enabled. Navigate to **Start** → **Control Panel** → **Hardware and Sound** → **Sound** and select the **Recording** tab.
2. Right click on the **Recording** tab and select **Show Disabled Devices** (clear by default). The microphone appears on the **Recording** tab.
3. Right click on the microphone and select **Enable**.
4. Select the microphone then click **Properties**. Select the **Levels** tab.
5. Increase the volume to the maximum setting and click **OK**.
6. Test the microphone hardware:
  - Select the microphone and click **Configure**.
  - Select **Set up microphone**.
  - Select the microphone type from the list and click **Next**.
  - Follow the on-screen prompts to complete the test.
7. If the Issue is still not resolved, refer to [Online Support Information](#).

## USB Failure

---

If the USB fails, perform the following:



---

**Figure 4-8. USB Failure**

## Other Functions Failure

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### HDD Not Operating Correctly

If the **HDD** fails to operate correctly, perform the following:

1. Disconnect all external devices.
2. Run a complete virus scan using up-to-date software to confirm the computer is virus free.
3. Run the *Windows Vista Startup Repair Utility*.
  - a. Insert the Windows Vista Operating System DVD in the ODD and restart the computer.
  - b. When prompted, press any key to start to the operating system DVD.
  - c. When the *Install Windows* screen appears, click **Next**.
  - d. Select **Repair your computer**.
  - e. When the **System Recovery Options** screen appears, click **Next**.
  - f. Select the appropriate operating system, and click **Next**.

⇒ **NOTE:**

Click **Load Drivers** if controller drives are required.

- g. Select **Startup Repair**.

⇒ **NOTE:**

Startup Repair attempts to locate and resolve issues with the computer.

- h. When complete, click **Finish**.

If an issue is discovered, follow the on-screen information to resolve the problem.

1. Run the Windows Memory Diagnostic Tool. For more information see Windows Help and Support.
2. Restart the computer and press F2 to enter the BIOS Utility. Check the BIOS settings are correct and that CD/DVD drive is set as the first boot device on the Boot menu.
3. Confirm all cables and jumpers on the HDD and ODD are set correctly.
4. Remove any recently added hardware and associated software.
5. Run the Windows Disk Defragmenter. For more information see Windows Help and Support.
6. Run Windows Check Disk by entering **chkdsk /r** from a command prompt. For more information see Windows Help and Support.
7. Restore system and file settings from a known good date using **System Restore**.
8. If the issue is not fixed, repeat the preceding steps and select an earlier time and date.
9. Replace the HDD. (Refer to [Maintenance Flowchart](#))

# Intermittent Problems

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

When analyzing an intermittent problem, perform the following:

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

# Undetermined Problems

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

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

⇒ **NOTE:**

Verify that all attached devices are supported by the computer.

⇒ **NOTE:**

Verify that the power supply being used at the time of the failure is operating correctly. (Refer to [Power On Issues](#)).

1. Remove power from the computer.
2. Visually check 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
  - Battery pack
  - Hard disk drive
  - DIMM
  - CD-ROM/Diskette drive Module
  - PC Cards
4. Apply power to the computer.
5. Determine if the problem has changed.
6. If the problem does not recur, connect the removed devices one at a time until failing FRU is found.
7. If the problem remains, replace the following FRUs one at a time. Do not replace a non-defective FRU:
  - System board
  - LCD assembly

# Post Codes

The following are the InsydeH2O™ Functionality POST code tables. The components of the POST code table includes: SEC phase, PEI phase, DXE phase, BDS phase, CSM functions, S3 functions and ACPI functions.

**Table 4-1. POST Code Range**

Phase	POST Code Range
SEC	0x01 - 0x0F
PEI	0x70 - 0x9F
DXE	0x40 - 0x6F
BDS	0x10 - 0x3F
SMM	0xA0 - 0xBF
S3	0xC0 - 0xCF
ASL	0x51 – 0x55 0xE1 – 0xE4
PostBDS	0xF9 – 0xFE
InsydeH2ODDT™ Reserve	0xD0 – 0xD7
OEM Reserve	0xE8 – 0xEB
Reserved	0xD8 – 0xE0 0xE5 – 0xE7 0xEC – 0xF8

**Table 4-2. SEC Phase POST Code Table**

Functionality Name (Include\PostCode.h)	Phase	Post Code	Description
SEC_SYSTEM_POWER_ON	SEC	01	CPU power on and switch to Protected mode
SEC_BEFORE_MICROCODE_PATCH	SEC	02	Patching CPU microcode
SEC_AFTER_MICROCODE_PATCH	SEC	03	Setup Cache as RAM
SEC_ACCESS_CSR*	SEC	04	PCIE MMIO Base Address initial
SEC_GENERIC_MSRINIT*	SEC	05	CPU Generic MSR initialization
SEC_CPU_SPEEDCFG*	SEC	06	Setup CPU speed
SEC_SETUP_CAR_OK	SEC	07	Cache as RAM test
SEC_FORCE_MAX_RATIO*	SEC	08	Tune CPU frequency ratio to maximum level

**Table 4-2. SEC Phase POST Code Table (Continued)**

Functionality Name (Include\PostCode.h)	Phase	Post Code	Description
SEC_GO_TO_SECSTARTUP	SEC	09	Setup BIOS ROM cache
SEC_GO_TO_PEICORE	SEC	0A	Enter Boot Firmware Volume
* 3 <sup>rd</sup> party relate functions – Platform dependence.			

**Table 4-3. PEI Phase POST Code Table**

Functionality Name (Include\PostCode.h)	Phase	Post Code	Description
PEI_SIO_INIT	PEI	70	Super I/O Initialization
PEI_CPU_REG_INIT	PEI	71	CPU Early Initialization
PEI_CPU_AP_INIT*	PEI	72	Multi-processor Early Initial
PEI_CPU_HT_RESET*	PEI	73	HyperTransport Initialization
PEI_PCIE_MMIO_INIT	PEI	74	PCIE MMIO BAR Initialization
PEI_NB_REG_INIT	PEI	75	North Bridge Early Initialization
PEI_SB_REG_INIT	PEI	76	South Bridge Early Initialization
PEI_PCIE_TRAINING*	PEI	77	PCIE Training
PEI_TPM_INIT	PEI	78	TPM Initialization
PEI_SMBUS_INIT	PEI	79	SMBUS Early Initialization
PEI_PROGRAM_CLOCK_GEN	PEI	7A	Clock Generator Initialization
PEI_IGD_EARLY_INITIAL *	PEI	7B	Internal Graphic device early Initialization
PEI_HECI_INIT*	PEI	7C	HECI Initialization
PEI_WATCHDOG_INIT*	PEI	7D	Watchdog timer Initialization
PEI_MEMORY_INIT	PEI	7E	Memory Initial for Normal boot.
PEI_MEMORY_INIT_FOR_CRISIS	PEI	7F	Memory Initial for Crisis Recovery
PEI_MEMORY_INSTALL	PEI	80	Simple Memory test
PEI_TXTPEI*	PEI	81	TXT function early Initialization
PEI_SWITCH_STACK	PEI	82	Start to use Memory
PEI_MEMORY_CALLBACK	PEI	83	Set cache for physical memory
PEI_ENTER_RECOVERY_MODE	PEI	84	Recovery device Initialization
PEI_RECOVERY_MEDIA_FOUND	PEI	85	Found Recovery image
PEI_RECOVERY_MEDIA_NOT_FOUND	PEI	86	Recovery image not found



**Table 4-3. PEI Phase POST Code Table (Continued)**

Functionality Name (Include\PostCode.h)	Phase	Post Code	Description
PEI_RECOVERY_LOAD_FILE_DONE	PEI	87	Load Recovery Image completed
PEI_RECOVERY_START_FLASH	PEI	88	Start Flash BIOS with Recovery image
PEI_ENTER_DXEIPL	PEI	89	Loading BIOS image to RAM
PEI_FINDING_DXE_CORE	PEI	8A	Loading DXE core
PEI_GO_TO_DXE_CORE	PEI	8B	Enter DXE core
* 3 <sup>rd</sup> party relate functions – Platform dependence.			

**Table 4-4. DXE Phase POST Code Table**

Functionality Name (Include\PostCode.h)	Phase	Post Code	Description
DXE_TCGDXE*	DXE	40	TPM initial in DXE
DXE_SB_SPI_INIT*	DXE	41	South bridge SPI initialization
DXE_CF9_RESET*	DXE	42	Setup Reset service
DXE_SB_SERIAL_GPIO_INIT*	DXE	43	South bridge Serial GPIO initialization
DXE_SMMACCESS*	DXE	44	Setup SMM ACCE SS service
DXE_NB_INIT*	DXE	45	North bridge Middle initialization
DXE_SIO_INIT*	DXE	46	Super I/O DXE initialization
DXE_LEGACY_REGION*	DXE	47	Setup Legacy Region service
DXE_SB_INIT*	DXE	48	South Bridge Middle initialization
DXE_IDENTIFY_FLASH_DEVICE	DXE	49	Identify Flash device
DXE_FTW_INIT	DXE	4A	Fault Tolerant Write verification
DXE_VARIABLE_INIT	DXE	4B	Variable Service initialization
DXE_VARIABLE_INIT_FAIL	DXE	4C	Fail to initial Variable Service
DXE_MTC_INIT	DXE	4D	MTC Initial
DXE_CPU_INIT	DXE	4E	CPU Middle Initialization
DXE_MP_CPU_INIT	DXE	4F	Multi-processor MiddleInitialization
DXE_SMBUS_INIT	DXE	50	SMBUS Driver Initialization
DXE_SMART_TIMER_INIT	DXE	51	8259 Initialization

**Table 4-4. DXE Phase POST Code Table (Continued)**

Functionality Name (Include\PostCode.h)	Phase	Post Code	Description
DXE_PCRTC_INIT	DXE	52	RTC Initialization
DXE_SATA_INIT*	DXE	53	SATA Controller EarlyInitialization
DXE_SMM_CONTROLLER_INIT*	DXE	54	Setup SMM Control service
DXE_LEGACY_INTERRUPT*	DXE	55	Setup Legacy Interrupt service
DXE_RELOCATE_SMBASE	DXE	56	Relocate SMM BASE
DXE_FIRST_SMI	DXE	57	SMI test
DXE_VTD_INIT*	DXE	58	VTD Initial
DXE_BEFORE_CSM16_INIT	DXE	59	Legacy BIOS Initialization
DXE_AFTER_CSM16_INIT	DXE	5A	Legacy interrupt function Initialization
DXE_LOAD_ACPI_TABLE	DXE	5B	ACPI Table Initialization
DXE_SB_DISPATCH*	DXE	5C	Setup SB SMM Dispatcher service
DXE_SB_IOTRAP_INIT*	DXE	5D	Setup SB IOTRAP Service
DXE_SUBCLASS_DRIVER*	DXE	5E	Build AMT Table
DXE_PPM_INIT*	DXE	5F	PPM Initialization
DXE_HECIDRV_INIT*	DXE	60	HECIDRV Initialization
* 3 <sup>rd</sup> party relate functions – Platform dependence.			

**Table 4-5. BDS Phase POST Code Table**

Functionality Name (Include\ PostCode.h)	Phase	Post Code	Description
BDS_ENTER_BDS	BDS	10	Enter BDS entry
BDS_INSTALL_HOTKEY	BDS	11	Install Hotkey service
BDS_ASF_INIT*	BDS	12	ASF Initialization
BDS_PCI_ENUMERATION_START	BDS	13	PCI enumeration
BDS_BEFORE_PCIIO_INSTALL	BDS	14	PCI resource assign complete
BDS_PCI_ENUMERATION_END	BDS	15	PCI enumeration complete
BDS_CONNECT_CONSOLE_IN	BDS	16	Keyboard Controller, keyboard and mouse initialization

**Table 4-5. BDS Phase POST Code Table (Continued)**

Functionality Name (Include\ PostCode.h)	Phase	Post Code	Description
BDS_CONNECT_CONSOLE_OUT	BDS	17	Video device initialization
BDS_CONNECT_STD_ERR	BDS	18	Error report device initialization
BDS_CONNECT_USB_HC	BDS	19	USB host controller initialization
BDS_CONNECT_USB_BUS	BDS	1A	USB BUS driver initialization
BDS_CONNECT_USB_DEVICE	BDS	1B	USB device driver initialization
BDS_NO_CONSOLE_ACTION	BDS	1C	Console device initial fail
BDS_DISPLAY_LOGO_SYSTEM_INFO	BDS	1D	Display logo or system information
BDS_START_IDE_CONTROLLER	BDS	1E	IDE controller initialization
BDS_START_SATA_CONTROLLER	BDS	1F	SATA controller initialization
BDS_START_ISA_ACPI_CONTROLLER	BDS	20	SIO controller initialization
BDS_START_ISA_BUS	BDS	21	ISA BUS driver initialization
BDS_START_ISA_FDD	BDS	22	Floppy device initialization
BDS_START_ISA_SEIRAL	BDS	23	Serial device initialization
BDS_START_IDE_BUS	BDS	24	IDE device initialization
BDS_START_AHCI_BUS	BDS	25	AHCI device initialization
BDS_CONNECT_LEGACY_ROM	BDS	26	Dispatch option ROMs
BDS_ENUMERATE_ALL_BOOT_OPTION	BDS	27	Get boot device information
BDS_END_OF_BOOT_SELECTION	BDS	28	End of boot selection
BDS_ENTER_SETUP	BDS	29	Enter Setup Menu
BDS_ENTER_BOOT_MANAGER	BDS	2A	Enter Boot manager
BDS_BOOT_DEVICE_SELECT	BDS	2B	Try to boot system to OS
BDS_EFI64_SHADOW_ALL_LEGACY_ROM	BDS	2C	Shadow Misc Option ROM

**Table 4-5. BDS Phase POST Code Table (Continued)**

Functionality Name (Include\ PostCode.h)	Phase	Post Code	Description
BDS_ACPI_S3SAVE	BDS	2D	Save S3 resume required data in RAM
BDS_READY_TO_BOOT_EVENT	BDS	2E	Last Chipset initial before boot to OS
BDS_GO_LEGACY_BOOT	BDS	2F	Start to boot Legacy OS
BDS_GO_UEFI_BOOT	BDS	30	Start to boot UEFI OS
BDS_LEGACY16_PREPARE_TO_BOOT	BDS	31	Prepare to Boot to Legacy OS
BDS_EXIT_BOOT_SERVICES*	BDS	32	Send END of POST Message to ME via HECI
BDS_LEGACY_BOOT_EVENT	BDS	33	Last Chipset initial before boot to Legacy OS.
BDS_ENTER_LEGACY_16_BOOT	BDS	34	Ready to Boot Legacy OS.
BDS_RECOVERY_START_FLASH	BDS	35	Fast Recovery Start Flash.
* 3 <sup>rd</sup> party relate functions – Platform dependence.			

**Table 4-6. PostBDS POST Code Table**

Functionality Name (Include\ PostCode.h)	Phase	Post Codes	Description
POST_BDS_NO_BOOT_DEVICE	POST_BDS	F9	No Boot Device
POST_BDS_START_IMAGE	POST_BDS	FB	UEFI Boot Start Image
POST_BDS_ENTER_INT19	POST_BDS	FD	Legacy 16 boot entry
POST_BDS_BOOT_SECTOR	POST_BDS	FE	Try to Boot with INT 19

**Table 4-7. S3 Functions POST Code Table**

Functionality Name (Include\ PostCode.h)	Phase	Post Code	Description
S3_RESTORE_MEMORY_CONTROLLER	PEI	C0	Memory initial for S3 resume
S3_INSTALL_S3_MEMORY	PEI	C1	Get S3 resume required data from memory

**Table 4-7. S3 Functions POST Code Table (Continued)**

Functionality Name (Include\ PostCode.h)	Phase	Post Code	Description
S3_SWITCH_STACK	PEI	C2	Start to use memory during S3 resume
S3_MEMORY_CALLBACK	PEI	C3	Set cache for physical memory during S3 resume
S3_ENTER_S3_RESUME_PEIM	PEI	C4	Start to restore system configuration
S3_BEFORE_ACPI_BOOT_SCRIPT	PEI	C5	Restore system configuration stage1
S3_BEFORE_RUNTIME_BOOT_SCRIPT	PEI	C6	Restore system configuration stage2
S3_BEFORE_RELOCATE_SMM_BASE	PEI	C7	Relocate SMM BASE during S3 resume
S3_BEFORE_MP_INIT	PEI	C8	Multi-processor initial during S3 resume
S3_BEFORE_RESTORE_ACPI_CALLBACK	PEI	C9	Start to restore system configuration in SMM
S3_AFTER_RESTORE_ACPI_CALLBACK	PEI	CA	Restore system configuration in SMM complete
S3_GO_TO_FACS_WAKING_VECTOR	PEI	CB	Back to OS

**Table 4-8. ACPI Functions POST Code Table**

Functionality Name (Include\ PostCode.h)	Phase	Post Code	Description
ASL_ENTER_S1	ASL	51	Prepare to enter S1
ASL_ENTER_S3	ASL	53	Prepare to enter S3
ASL_ENTER_S4	ASL	54	Prepare to enter S4
ASL_ENTER_S5	ASL	55	Prepare to enter S5
ASL_WAKEUP_S1	ASL	E1	System wakeup from S1
ASL_WAKEUP_S3	ASL	E3	System wakeup from S3
ASL_WAKEUP_S4	ASL	E4	System wakeup from S4

**Table 4-9. SMM Functions POST Code Table**

Functionality Name (Include\PostCode.h)	Phase	Post Code	Description
SMM_IDENTIFY_FLASH_DEVICE	SMM	0xA0	Identify Flash device in SMM
SMM_SMM_PLATFORM_INIT	SMM	0xA2	SMM service initial
SMM_ACPI_ENABLE_START	SMM	0xA6	OS call ACPI enable function
SMM_ACPI_ENABLE_END	SMM	0xA7	ACPI enable function complete
SMM_S1_SLEEP_CALLBACK	SMM	0xA1	Enter S1
SMM_S3_SLEEP_CALLBACK	SMM	0xA3	Enter S3
SMM_S4_SLEEP_CALLBACK	SMM	0xA4	Enter S4
SMM_S5_SLEEP_CALLBACK	SMM	0xA5	Enter S5
SMM_ACPI_DISABLE_START	SMM	0xA8	OS call ACPI disable function
SMM_ACPI_DISABLE_END	SMM	0xA9	ACPI disable function complete

**Table 4-10. InsydeH2ODDT Debugger POST Code Table**

Functionality Name (Include\ PostCode.h)	Post Code	Description
Used by Insyde debugger	0x0D	Waiting for device connect
Used by Insyde debugger	0xD0	Waiting for device connect
Used by Insyde debugger	0xD1	InsydeH2ODDT Ready
Used by Insyde debugger	0xD2	EHCI not found
Used by Insyde debugger	0xD3	Debug port connect low speed device
Used by Insyde debugger	0xD4	DDT Cable become low speed device
Used by Insyde debugger	0xD5	DDT Cable Transmission Error (Get descriptor fail)
Used by Insyde debugger	0xD6	DDT Cable Transmission Error (Set Debug mode fail)
Used by Insyde debugger	0xD7	DDT Cable Transmission Error (Set address fail)

# CHAPTER 5

## Jumper and Connector Locations

<b>Mainboard</b> .....	<b>5-3</b>
<b>Clearing Password and BIOS Recovery</b> .....	<b>5-6</b>
Clearing Password .....	5-6
BIOS Recovery by Crisis Disk. ....	5-8



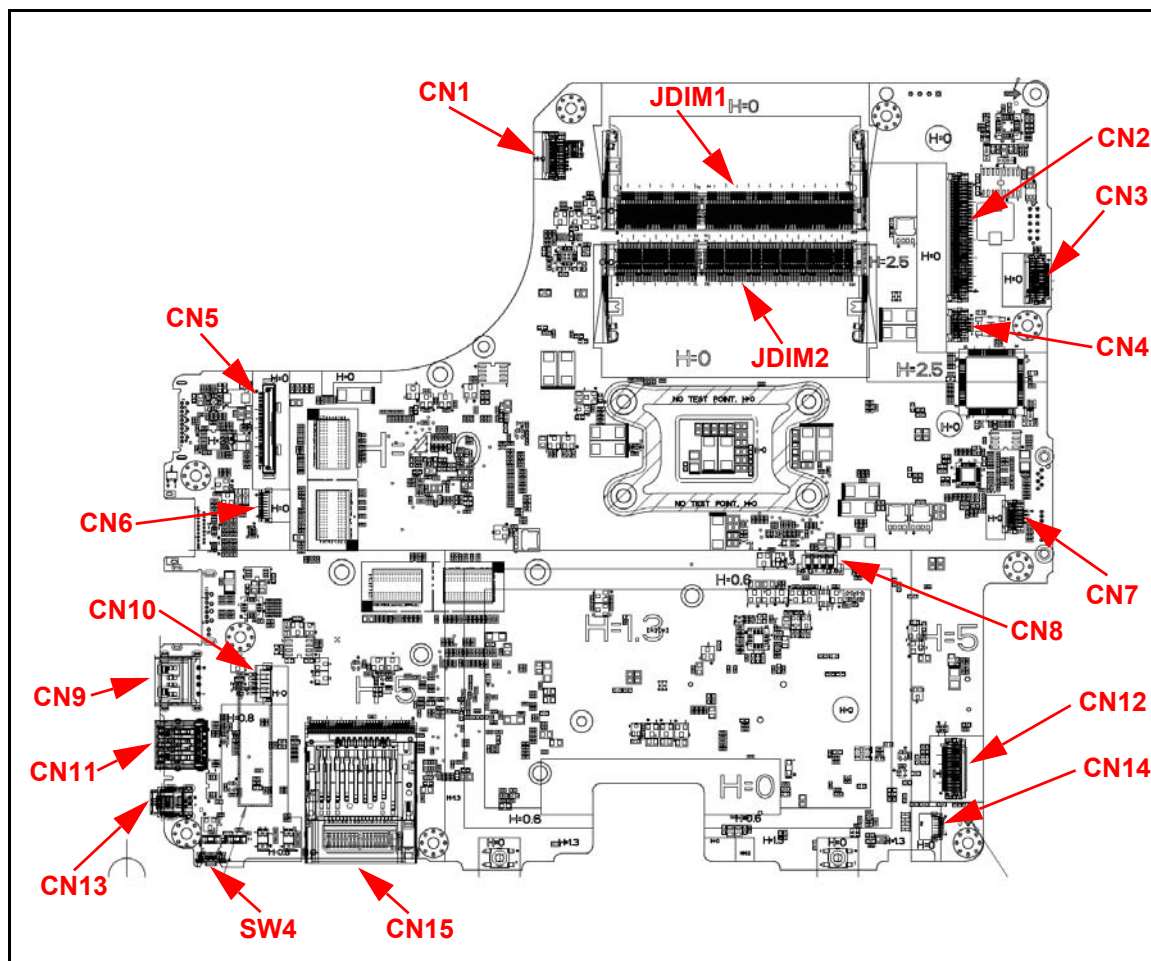
## Mainboard



Item	Description	Item	Description
PJ1	DC Connector	CN21	RTC Connector
JDIM3	DDR3	U23	PCH
JDIM4	DDR3	CN22	MINI PCIE (Wireless)
SW5	BAttery Detect SW	CN25	MINI PCIE (GPS)
CN16	FAN Connector	CN27	Subwoofer Connector

**Table 5-1. Mainboard Top (Continued)**

Item	Description	Item	Description
U18	CPU	CN26	Speaker Connector
U19	GPU (N12E, N12P)	CN23	HDD Connector
CN17	D-SUB	CN18	ODD Connector
CN19	HDMI	PJ2	Battery Connector
CM20	E-SATA/USB		



**Figure 5-2. Mainboard Bottom**

### Table 5-2. Mainboard Bottom

Item	Description	Item	Description
CN1	SW/B Connector	CN14	DT DONGLE Connector
JDIM1	DDR3	SW4	Wireless SW
JDIM2	DDR3	CN15	Card Reader

**Table 5-2. Mainboard Bottom (Continued)**

Item	Description	Item	Description
CN2	Keyboard	CN10	Bluetooth Connector
CN3	PWR/LAN B Connector	CN13	1394
CN4	KB LED Connector	CN11	USB 3.0
CN8	DT Connector	CN9	USB 2.0
CN7	Finger/B Connector	CN6	CCD Connector
CN12	AUDIO/B Connector	CN5	LVDS

# Clearing Password and BIOS Recovery

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This section provides users with the SOP (standard operating procedure) for clearing the BIOS password and recovering the BIOS for the Aspire 5951G.

## Clearing Password

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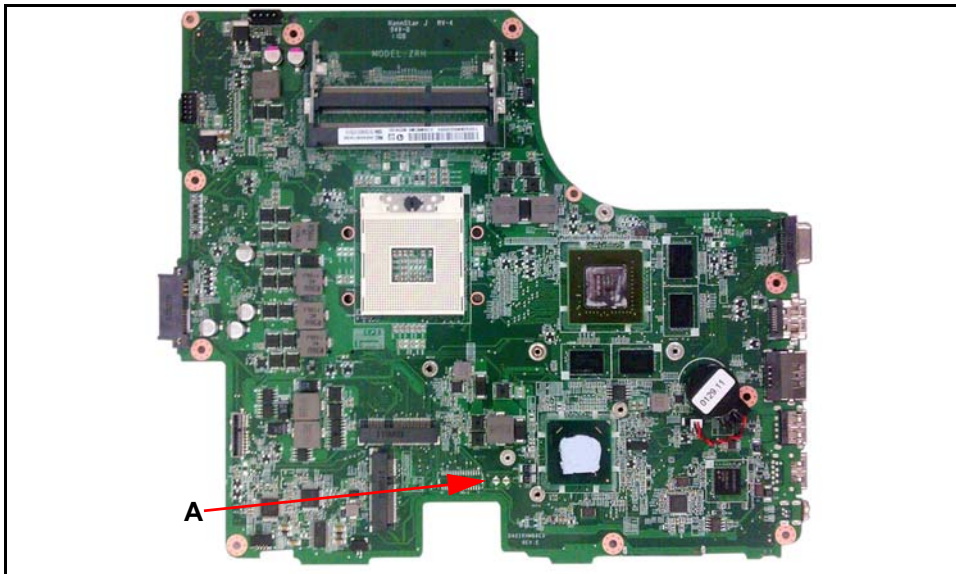
### ⇒ NOTE:

The following procedure is only for clearing BIOS Password (Supervisor Password and User Password).

### Clearing BIOS Password

If a BIOS password (Supervisor Password and/or User Password) is set, the BIOS will prompt for the password at system POST or upon entering the BIOS setup menu. Clear the password check with the following procedure:

1. Remove AC adapter.
2. Locate CMOS jumper on mainboard (A). (Figure 5-3)



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**Figure 5-3. CMOS Jumper Overview**

### Table 5-3. CMOS Jumper

Item	Description
J1 (RTCRST)	Clear CMOS Jumper
J2 (SRTCST)	Clear ME Jumper

- 5-7

# BIOS Recovery by Crisis Disk

---

## BIOS Recovery Boot Block

BIOS Recovery Boot Block is a special block of BIOS. It is used to boot up the system with minimum BIOS initialization. Users can enable this feature to restore the BIOS firmware if a previous BIOS flashing process has failed.

## BIOS Recovery Hotkey

To enable the BIOS Recovery process, use the function hotkey, **Fn + Esc**, during BIOS POST. The AC adapter and battery are required to be installed during this process.

## Steps for BIOS Recovery using USB HDD

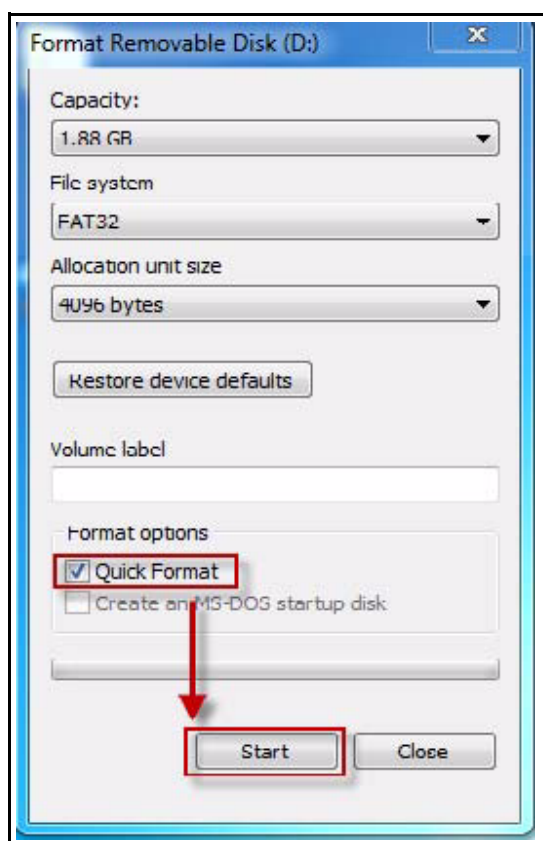
### ⇒ NOTE:

Prior to performing the recovery, prepare a Crisis USB key. The Crisis USB key is created by executing the Crisis Disk program on another system with Windows® 7 OS.

The USB HDD LED will flash for approximately three to seven minutes followed by a system restart.

To Create a Crisis USB key, perform the following:

1. Format USB HDD using the *Quick Format* option (Figure 5-5).



**Figure 5-5. Format HDD**

2. Copy ROM (read-only memory) file, **ZRH.fd**, to root directory of USB HDD. Make sure that there is no other BIOS file is saved in the same directory.
3. Insert USB HDD into USB port.
4. Remove battery and AC adaptor.
5. Press and hold **F~~n~~** + **ESC** buttons.
6. Connect AC power adapter.
7. Press **Power** button to initiate system CRISIS mode.
8. Release **F~~n~~** + **ESC** buttons when power button flashes.
9. When CRISIS is complete, the system auto restarts with a workable BIOS.
10. Update the latest BIOS version for this machine by the regular BIOS flashing process.





# CHAPTER 6

## Field Replacement Unit List

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Exploded Diagrams .....	6-4
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# FRU List

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This chapter provides users with a FRU (Field Replaceable Unit) listing in global configurations for the Aspire 5951G. Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

**⇒ NOTE:**

When ordering FRU parts, check the most up-to-date information available on the regional web or channel. Part number changes will not be noted on the printed Service Guide. For Acer Authorized Service Providers, the Acer office may have a different part number code from those given in the FRU list of this printed Service Guide. Users **MUST** use the local FRU list provided by the regional Acer office to order FRU parts for repair and service of customer machines.

**⇒ NOTE:**

To scrap or to return the defective parts, users should follow the local government ordinance or regulations on how to dispose it properly, or follow the rules set by the regional Acer office on how to return it.

# Exploded Diagrams

## Main Assembly

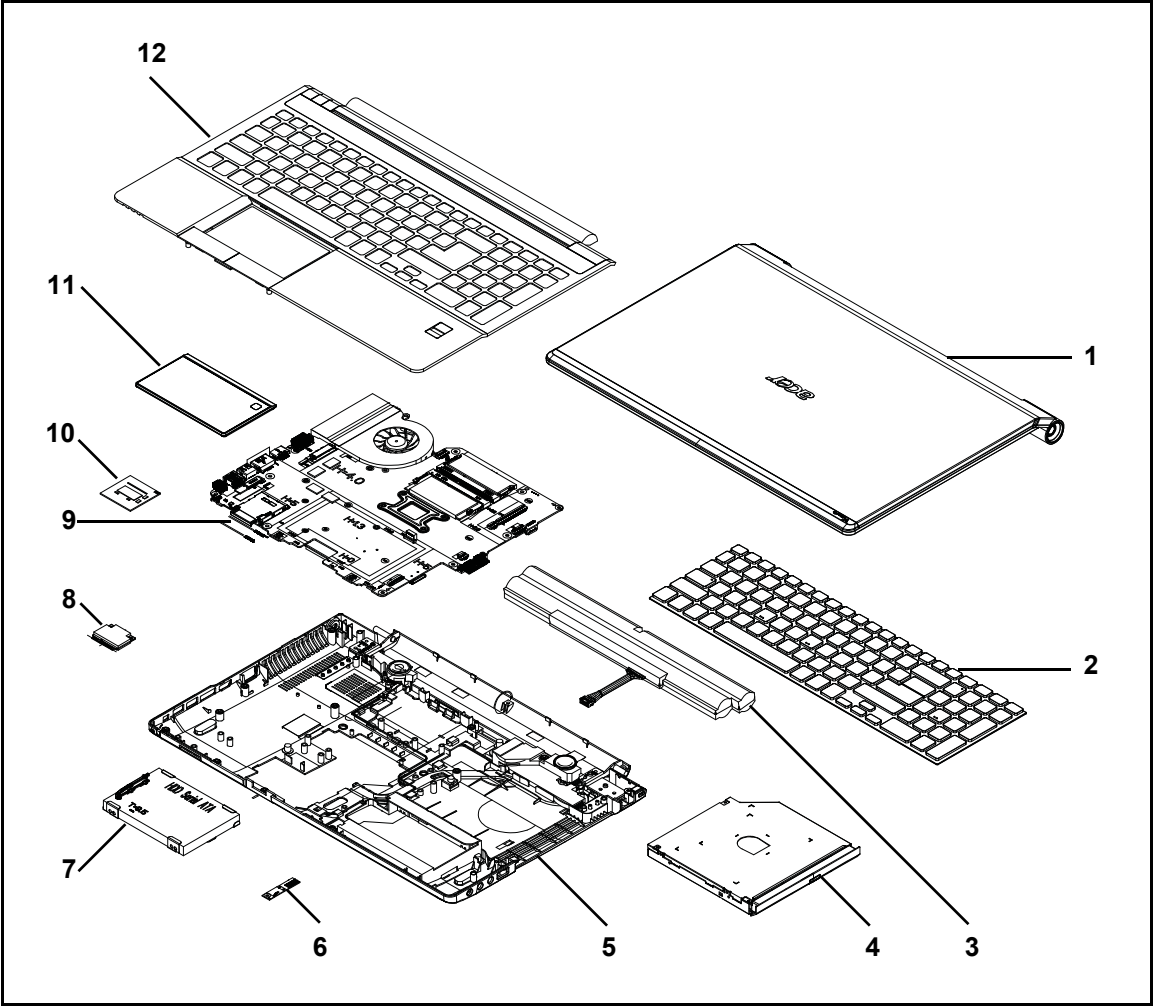


Figure 6-1. Main Assembly Exploded Diagram

Table 6-1. Main Assembly Exploded Diagram

No.	Description	P/N
1	LED LCD FLASH MODULE	6M.RHS07.003
2	Keyboard	KB.I170A.302
3	Battery	BT.00805.018
4	ODD Module	6M.RHS07.001
5	LOWER CASE	60.RHS07.002

**Table 6-1. Main Assembly Exploded Diagram (Continued)**







<b>No.</b>	<b>Description</b>	<b>P/N</b>
6	RF DONGLE	55.RHS07.005
7	HDD Module	KH.32001.019
8	WLAN Module	NI.23600.066
9	MAINBOARD	MB.RH006.001
10	CPU	KC.26301.QMP
11	DETACHABLE TP MODULE	56.RHS07.001
12	UPPER CASE	60.RHS07.001

# FRU List

Table 6-2. FRU List

Category	Description	P/N
<b>ADAPTER</b>		
	Adapter HIPRO 90W 19V 1.7x5.5x11 Blue HP-A0904A3 B1LF, LV5 LED LF	AP.0900A.005
	Adapter DELTA 90W 19V 1.7x5.5x11 Blue ADP-90CD DBH, LV5 LED LF	AP.09001.031
	Adapter LITE-ON 90W 19V 1.7x5.5x11 Blue PA-1900-34AR, LV5 LED LF	AP.09003.021
	Adapter DELTA 120W-DE 19V 1.7x5.5x11 Green ADP-120ZB BBGB, LV5+OBL LED LF	AP.12001.009
	Adapter LITE-ON 120W-DE 19V 1.7x5.5x11 Green PA-1121-04AC, LV5+OBL LED LF	AP.12003.003
<b>BATTERY</b>		
	Battery PANASONIC AS11B Li-Ion 4S2P PANASONIC 8 cell 6000mAh Main COMMON AS11B5E	BT.00805.018
<b>BOARD</b>		
	Foxconn Wireless LAN Broadcom 43225 2x2 BGN (HM) T77H103.00	NI.23600.066
	Foxconn Wireless LAN Atheros HB97 2x2 BGN (HM)	NI.23600.072
	Liteon Wireless LAN Atheros HB97 2x2 BGN (HM) WN6603AH	NI.23600.073
	Foxconn Wireless LAN Atheros HB95BG (HM) T77H121.10	NI.23600.077
	Foxconn Wireless LAN Broadcom 43227 2x2 BGN	NI.23600.087
	Foxconn Bluetooth BRM 2070 (T77H114.01) BT 3.0	BH.21100.010
	Foxconn Bluetooth ATH BU12	BH.21100.011
	Foxconn Bluetooth BRM 2046 BT3.0 (T60H928.33) f/w:861 (Got EOL Letter from FOXNN)	BH.21100.008
	Foxconn Bluetooth ATH AR3011 (BT3.0) (Got EOL Letter from FOXNN)	BH.21100.009
	POWER BOARD	55.RHS07.001

**Table 6-2. FRU List (Continued)**








Category	Description	P/N
	USB BOARD	55.RHS07.002
	FUNCTION BOARD	55.RHS07.003
	FINGER PRINT BOARD	55.RHS07.004
	RF DONGLE	55.RHS07.005
<b>CABLE</b>		
	POWER CORD US 3PIN ROHS	27.TAXV7.001
	POWER CORD PRC 3P Y536B30001218008	27.TATV7.004
	POWER CORD(S.A) 1.8M 3BLACK FZ010008-006	27.T48V7.001
	POWER CORD ARGENTINE 3 PIN BLACK	27.S0207.001
	POWER CORD AU W/LABEL (3 PIN)	27.A50V7.003
	PWR CORD V943B30001218008 DANISH 3P	27.A03V7.006
	PWR CORD(ISR)1.8M 3PBLK FZ010008-038	27.TATV7.005
	POWER CORD JAPAN	27.TAXV7.003
	POWER CORD AF-S (INDIA)	27.A50V7.001
	POWER CORD SWISS 3 PIN	27.A99V7.004
	POWER CORD UK 3PIN	27.A03V7.004
	POWER CORD US-110V (BSMI)	27.A99V7.002
	POWER CORD(EU) 1.8M 3PBLACK FM010008-010	27.TATV7.001
	POWER CORD ITALIAN 3PIN	27.A99V7.005
	POWER CORD BRAZIL IMETRO 3 PIN	27.S0607.001
	DC-IN CABLE 120W	50.RHS07.001
	DC-IN CABLE 90W	50.RHS07.002

**Table 6-2. FRU List (Continued)**









Category	Description	P/N
	BLUETOOTH CABLE (5/6PIN)	50.RHS07.003
	RF DONGLE CABLE	50.RHS07.004
	FFC- USB BOARD TO M/B	50.RHS07.005
	FFC- SWITCH BOARD TO M/B	50.RHS07.006
	FFC- FP BOARD TO M/B	50.RHS07.007
	FFC- POWER BOARD TO M/B	50.RHS07.008
<b>CASE/COVER/BRACKET ASSEMBLY</b>		
	UPPER CASE	60.RHS07.001
	LOWER CASE	60.RHS07.002
	KB FRAME	60.RHS07.003
	DETACHABLE TP MODULE	56.RHS07.001



**Table 6-2. FRU List (Continued)**

Category	Description	P/N
	KB BRACKET - R	33.RHS07.001
	KB BRACKET - L	33.RHS07.002
	FINGER PRINT BRACKET	33.RHS07.003
	DUMMY CARD	42.RHS07.001
	BASE DOOR	42.RHS07.002
	RAM SUPPORT BARKET	33.RHS07.004
<b>CPU/PROCESSOR</b>		
	CPU Intel Core i7 i7-2630QM PGA 2.0G 45W 4/8	KC.26301.QMP
	CPU Intel Core i3 i3-2310M PGA 2.1G 35W 2/4-DC	KC.23101.DMP
	CPU Intel Core i5 i5-2410M PGA 2.3G 35W 2/4-DC	KC.24101.DMP
	CPU Intel Core i5 i5-2520M PGA 2.5G 35W 2/4-DC	KC.25201.DMP
	CPU Intel Core i5 i5-2540M PGA 2.6G 35W 2/4-DC	KC.25401.DMP
<b>DVD RW DRIVE</b>		
	DVD/RW SUPER MULTI MODULE 12.7mm DL 8X	6M.RHS07.001
	ODD HLDS Super-Multi DRIVE 12.7mm Tray DL 8X GT34N LF W/O bezel SATA Zero Power Supported, PCC LD (HF + Windows 7)	KU.0080D.057
	ODD PLDS Super-Multi DRIVE 12.7mm Tray DL 8X DS-8A5SH LF+HF W/O bezel SATA With TI + Rohm Solution (HF + Windows 7)	KU.0080F.014
	ODD PIONEER Super-Multi DRIVE 12.7mm Tray DL 8X DVR-TD10RS LF W/O bezel 1.00 SATA	KU.00805.049





**Table 6-2. FRU List (Continued)**

Category	Description	P/N
	ODD TOSHIBA Super-Multi DRIVE 12.7mm Tray DL 8X TS-L633F LF W/O bezel SATA (HF + Windows 7)	KU.00801.040
	ODD PANASONIC Super-Multi DRIVE 12.7mm Tray DL 8X UJ8A0 LF W/O bezel 1.01 SATA Fix NTI issue in HR platform under ZP	KU.00807.077
	ODD BEZEL - SM	42.RHS07.003
	ODD BRACKET	33.PWC07.002
<b>BD COMBO DRIVE</b>		
	DVD/RW BD COMBO MODULE 12.7mm DL 4X	6M.RHS07.002
	ODD HLDS BD COMBO 12.7mm Tray DL 4X CT30N LF W/O bezel 1.00 SATA (HF + Windows 7 + 3D)	KO.0040D.005
	ODD PLDS BD COMBO 12.7mm Tray DL 4X DS-6E2SH LF W/O bezel SATA (HF + Win7 + 3D)	KO.0040F.006
	Pioneer BD COMBE BDC-TD03RT F/W:1.20 STN BSQ	KO.00405.008
	ODD PANASONIC BD COMBO 12.7mm Tray DL 4X UJ141AJ LF W/O bezel SATA Zero Power + BUS Encryption	KO.00407.006
	ODD BEZEL - BD COMBO	42.RHS07.004
	ODD BRACKET	33.PWC07.002
<b>HDD/HARD DISK DRIVE</b>		
	HDD SEAGATE 2.5" 5400rpm 320GB ST9320310AS,9RN132-188, Cameron 320G/P SATA 8MB LF F/W:0001SDM1	KH.32001.019
	HDD HGST 2.5" 5400rpm 320GB HTS545032B9A300 Panther B SATA LF F/W:C60F Disk imbalance criteria = 0.014g-cm	KH.32007.008



**Table 6-2. FRU List (Continued)**

Category	Description	P/N
	HDD HGST 2.5" 5400rpm 320GB HTS543232A7A384,0J11523, Eagle B7, 320G/P SATA LF+HF F/W:A60W	KH.32007.013
	HDD WD 2.5" 5400rpm 320GB WD3200BPVT-22ZEST0, ML320S, 4K drive SATA 8MB LF F/W: 01.01A01	KH.32008.022
	HDD TOSHIBA 2.5" 5400rpm 320GB MK3259GSXP, Capricorn 3BS, 375G/P, 4K drive SATA 8MB LF+HF F/W:GN003J 4K	KH.32004.005
	HDD SEAGATE 2.5" 5400rpm 500GB ST9500325AS,9HH134-189, Wyatt with new pcb SATA 8MB LF F/W:0001SDM1	KH.50001.017
	HDD HGST 2.5" 5400rpm 500GB HTS545050B9A300 Panther B SATA LF F/W:C60F Disk imbalance criteria = 0.014g-cm	KH.50007.010
	HDD WD 2.5" 5400rpm 500GB WD5000BPVT-22HXZT1,ML375_AF, 4K drive SATA 8MB LF+HF F/W:01.01A01	KH.50008.021
	HDD TOSHIBA 2.5" 5400rpm 500GB MK5059GSXP, Capricron 3BS, 375G/P SATA 8MB LF+HF F/W:GN003J 4K	KH.50004.003
	HDD WD 2.5" 5400rpm 640GB WD6400BPVT-22HXZT1, ML375M SATA 8MB LF F/W: 01.01A01	KH.64008.005
	HDD HGST 2.5" 5400rpm 640GB HTS547564A9E384,Jet B, 375G/P, 0J20012 SATA 8MB LF+HF F/W:DA3872	KH.64007.003
	HDD SEAGATE 2.5" 5400rpm 640GB ST9640320AS,9RN134-189, Cameron, 320G/P SATA 8MB LF F/W:0001SDM1	KH.64001.004
	HDD TOSHIBA 2.5" 5400rpm 640GB MK6459GSXP, Capricron 3BS, 375G/P SATA 8MB LF+HF F/W:GN003J 4K	KH.64004.003
	HDD WD 2.5" 5400rpm 750GB WD7500BPVT-22HXZT1, ML375M, 4K drive SATA 8MB LF F/W:01.01A01	KH.75008.009
	HDD TOSHIBA 2.5" 5400rpm 750GB MK7559GSX, 375G/P, Capricorn BS, 4K drive SATA 8MB LF+HF F/W:GNDD3J	KH.75004.001





**Table 6-2. FRU List (Continued)**

Category	Description	P/N
	HDD SEAGATE 2.5" 5400rpm 750GB ST9750423AS,9ZW14G-188, Desaru5, 375G/P. SATA 8MB LF+HF F/W:0001SDM1	KH.75001.011
	HDD HGST 2.5" 5400rpm 750GB HTS547575A9E384, 0J20013, Jet B, 375G/P SATA 8MB LF F/W:DA3872	KH.75007.004
	HDD BRACKET	33.RHS07.005
	HDD CONN. CABLE	50.RHS07.009
<b>KEYBOARD</b>		
	Keyboard ACER AF7B_A10B GF7T 103KS Black Chinese Texture	KB.I170A.302
	Keyboard ACER AF7B_A10B GF7T 103KS Black Greek Texture	KB.I170A.307
	Keyboard ACER AF7B_A10B GF7T 103KS Black Thailand Texture	KB.I170A.320
	Keyboard ACER AF7B_A10B GF7T 104KS Black Bulgaria Texture	KB.I170A.299
	Keyboard ACER AF7B_A10B GF7T 104KS Black SLO/CRO Texture	KB.I170A.316
	Keyboard ACER AF7B_A10B GF7T 104KS Black CZ/SK Texture	KB.I170A.301
	Keyboard ACER AF7B_A10B GF7T 104KS Black Hungarian Texture	KB.I170A.308
	Keyboard ACER AF7B_A10B GF7T 104KS Black Brazilian Portuguese Texture	KB.I170A.300
	Keyboard ACER AF7B_A10B GF7T 103KS Black Russian Texture	KB.I170A.315
	Keyboard ACER AF7B_A10B GF7T 104KS Black Turkish Texture	KB.I170A.321
	Keyboard ACER AF7B_A10B GF7T 104KS Black Sweden Texture	KB.I170A.318
	Keyboard ACER AF7B_A10B GF7T 104KS Black UK Texture	KB.I170A.322
	Keyboard ACER AF7B_A10B GF7T 104KS Black French Texture	KB.I170A.305

**Table 6-2. FRU List (Continued)**

Category	Description	P/N
	Keyboard ACER AF7B_A10B GF7T 104KS Black German Texture	KB.I170A.306
	Keyboard ACER AF7B_A10B GF7T 104KS Black Italian Texture	KB.I170A.309
	Keyboard ACER AF7B_A10B GF7T 104KS Black US w/ Canadian French Texture	KB.I170A.325
	Keyboard ACER AF7B_A10B GF7T 104KS Black Danish Texture	KB.I170A.303
	Keyboard ACER AF7B_A10B GF7T 104KS Black Nordic Texture	KB.I170A.312
	Keyboard ACER AF7B_A10B GF7T 104KS Black Spanish Texture	KB.I170A.317
	Keyboard ACER AF7B_A10B GF7T 103KS Black Arabic Texture	KB.I170A.298
	Keyboard ACER AF7B_A10B GF7T 104KS Black FR/Arabic Texture	KB.I170A.304
	Keyboard ACER AF7B_A10B GF7T 103KS Black US International Texture	KB.I170A.323
	Keyboard ACER AF7B_A10B GF7T 104KS Black Swiss/G Texture	KB.I170A.319
	Keyboard ACER AF7B_A10B GF7T 104KS Black Portuguese Texture	KB.I170A.314
	Keyboard ACER AF7B_A10B GF7T 103KS Black US International w/ Hebrew Texture	KB.I170A.324
	Keyboard ACER AF7B_A10B GF7T 104KS Black Norwegian Texture	KB.I170A.313
	Keyboard ACER AF7B_A10B GF7T 103KS Black Korean Texture	KB.I170A.311
<b>LCD MODULE</b>		
	LED LCD FLASH MODULE 15.6 WXGA GLARE W/ANTENNA*2	6M.RHS07.003

**Table 6-2. FRU List (Continued)**

Category	Description	P/N
<b>MAINBOARD</b>		
	MAINBOARD HM65 N12EGE 2G,W/O CPU RAM,W/CARD READER RTC BATTERY	MB.RH006.001
	MAINBOARD HM65 N12PGS 1G,W/O CPU RAM,W/CARD READER RTC BATTERY	MB.RGZ06.001
<b>MEMORY</b>		
	Memory KINGSTON SO-DIMM DDRIII 1333 1GB ACR128X64D3S1333C9 LF 128*8 0.065um	KN.1GB07.004
	Memory UNIFOSA SO-DIMM DDRIII 1333 1GB GU672203EP0200 LF 128*8 0.065um	KN.1GB0H.017
	Memory NANYA SO-DIMM DDRIII 1333 2GB NT2GC64B88B0NS-CG LF 256*8 0.055um	KN.2GB03.021
	Memory MICRON SO-DIMM DDRIII 1333 2GB MT8JSF25664HZ-1G4D1 LF 256*8 0.055um	KN.2GB04.017
	Memory SAMSUNG SO-DIMM DDRIII 1333 2GB M471B5773DH0-CH9 LF 256*8	KN.2GB0B.030
	Memory HYNIX SO-DIMM DDRIII 1333 2GB HMT325S6BFR8C-H9 LF 256*8 46nm	KN.2GB0G.018
	Memory SAMSUNG SO-DIMM DDRIII 1066 4GB M471B5273BH1-CF8 LF 256*8 0.055um	KN.4GB0B.007
	Memory MICRON SO-DIMM DDRIII 1333 4GB MT16JSF51264HZ-1G4D1 LF 256*8 0.055um	KN.4GB04.001
	Memory NANYA SO-DIMM DDRIII 1333 4GB NT4GC64B8HB0NS-CG LF 256*8 0.055um	KN.4GB03.005
	Memory ELPIDA SO-DIMM DDRIII 1333 4GB EBJ41UF8BCS0-DJ-F LF 256*8 46nm	KN.4GB09.002
<b>HEATSINK</b>		
	THERMAL MODULE 45W DIS	60.RHS07.004
<b>SPEAKER</b>		
	SPEAKER SET (W/ R/L)	23.RHS07.001
<b>MISCELLANEOUS</b>		

**Table 6-2. FRU List (Continued)**

Category	Description	P/N
	BASE CAP RUBBER	47.RHS07.001

# Screw List

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Table 6-3. Screw List

Category	Description	P/N
<b>SCREW</b>		
	SCREW M3*0.5+3.5I	86.A03V7.006
	SCREW M1.6 * 2.0-I(CLEAR ZN)(NYLOK)	86.RHS07.001
	SCREW M2-0.4*2-I(BNI)(NYLOK)(7,0.6)IRON	86.W4107.002
	SCREW M2.5*6.2-I(NI)(NYLOK)IRON	86.PTN07.002
	SCREW M2.5*6.5-I(BZN(NYLOK-RED)	86.ARE07.001
	SCREW M2.0*3.0-I IRON	86.S0207.001
	SCREW M3*0.5+3.5I	86.TDY07.003



# CHAPTER 7

## Model Definition and Configuration

Aspire 5951G .....	7-3
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# Model Definition and Configuration

## Aspire 5951G

Table 7-1. RO & Description

Model	Country	P/N	RO	Description
AS5951G-2314G64Mnkk	FR	LX.RGZ02.001	EMEA	AS5951G-2314G64Mnkk W7HP64ASFR1 MC N12PGS1GBCFPk_3V3U 2*2G/640/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_FR21
AS5951G-2316G50Mnkk	AL/MK	LX.RGZ02.018	EMEA	AS5951G-2316G50Mnkk W7HP64ASAL1 MC N12PGS1GBCFPk_3V3U 4G+2G/500_L/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_A111
AS5951G-2316G50Mnkk	RS/BA	LX.RGZ02.019	EMEA	AS5951G-2316G50Mnkk W7HP64ASBA1 MC N12PGS1GBCFPk_3V3U 4G+2G/500_L/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_A151
AS5951G-2316G50Mnkk	SI/HR	LX.RGZ02.020	EMEA	AS5951G-2316G50Mnkk W7HP64ASSI1 MC N12PGS1GBCFPk_3V3U 4G+2G/500_L/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_SL11
AS5951G-2412G75Mnkk	CN	LX.RGZ02.003	CHINA	AS5951G-2412G75Mnkk W7HP64SCASCN1 MC N12PGS1GBCFPk_3V3U 1*2G/750/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_SC11
AS5951G-2414G50Mnkk	BE	LX.RGZ02.016	EMEA	AS5951G-2414G50Mnkk W7HP64ASBE1 MC N12PGS1GBCFPk_3V3U 1*4G/500_L/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_NL11
AS5951G-2414G50Mnkk	CA	LX.RH002.014	PA	AS5951G-2414G50Mnkk W7HP64ASCA2 MC N12EGE2GBCFPk_3V3U 1*4G/500/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_FR86

**Table 7-1. RO & Description (Continued)**

Model	Country	P/N	RO	Description
AS5951G-2414G5 0Mnkk	DE	LX.RH002.005	EMEA	AS5951G-2414G50Mnkk W7HP64ASDE1 MC N12EGE2GBCFPkk_3V3U 2*2G/500/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_DE11
AS5951G-2414G5 0Mnkk	IT	LX.RGZ02.013	EMEA	AS5951G-2414G50Mnkk W7HP64ASIT1 MC N12PGS1GBCFPkk_3V3U 1*4G/500/8L3.0/5R/CB_bgn_FP_1. 3HD_MA_IT11
AS5951G-2414G5 0Mnkk	LU	LX.RGZ02.017	EMEA	AS5951G-2414G50Mnkk W7HP64ASLU3 MC N12PGS1GBCFPkk_3V3U 1*4G/500_L/BT/8L3.0/5R/CB_bgn_ FP_1.3HD_MA_IT41
AS5951G-2414G5 0Mnkk	MOYO	LX.RGZ02.012	EMEA	AS5951G-2414G50Mnkk EM W7HP64EMASME1 MC N12PGS1GBCFPkk_3V3U 2*2G/500/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ARA1
AS5951G-2414G5 0Mnkk	MOYO	LX.RH002.016	EMEA	AS5951G-2414G50Mnkk EM W7HP64EMASME1 MC N12EGE2GBCFPkk_3V3U 2*2G/500_L/BT/8L3.0/5R/CB_bgn_ FP_1.3HD_MA_ARA1
AS5951G-2414G5 0Mnkk	NL	LX.RGZ02.015	EMEA	AS5951G-2414G50Mnkk W7HP64ASNL1 MC N12PGS1GBCFPkk_3V3U 1*4G/500_L/BT/8L3.0/5R/CB_bgn_ FP_1.3HD_MA_NL11
AS5951G-2414G5 0Mnkk	RU	LX.RGZ02.005	EMEA	AS5951G-2414G50Mnkk W7HP64RUASRU1 MC N12PGS1GBCFPkk_3V3U 2*2G/500/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_RU11
AS5951G-2414G5 0Mnkk	TR	LX.RGZ02.011	EMEA	AS5951G-2414G50Mnkk EM W7HP64EMASTR1 MC N12PGS1GBCFPkk_3V3U 2*2G/500/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_TR81
AS5951G-2414G6 4Bnkk	RU	LX.RH002.013	EMEA	AS5951G-2414G64Bnkk W7HP64RUASRU1 MC N12EGE2GBCFPkk_3V3U 1*4G/640/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_RU11

**Table 7-1. RO & Description (Continued)**

Model	Country	P/N	RO	Description
AS5951G-2414G6 4Mnkk	AL/MK	LX.RH002.019	EMEA	AS5951G-2414G64Mnkk W7HP64ASAL1 MC N12EGE2GBCFPkk_3V3U 1*4G/640/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_A111
AS5951G-2414G6 4Mnkk	DE	LX.RGZ02.008	EMEA	AS5951G-2414G64Mnkk W7HP64ASDE1 MC N12PGS1GBCFPkk_3V3U 1*4G/640/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_DE11
AS5951G-2414G6 4Mnkk	DK	LX.RGZ02.006	EMEA	AS5951G-2414G64Mnkk W7HP64ASDK2 MC N12PGS1GBCFPkk_3V3U 1*4G/640/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ENS1
AS5951G-2414G6 4Mnkk	FR	LX.RGZ02.004	EMEA	AS5951G-2414G64Mnkk W7HP64ASFR1 MC N12PGS1GBCFPkk_3V3U 2*2G/640/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_FR21
AS5951G-2414G6 4Mnkk	HK	LX.RGZ02.007	CHINA	AS5951G-2414G64Mnkk W7HP64ASHK2 MC N12PGS1GBCFPkk_3V3U 1*4G/640/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ZH31
AS5951G-2414G6 4Mnkk	IN	LX.RGZ02.009	AAP	AS5951G-2414G64Mnkk W7HP64INASIN1 MC N12PGS1GBCFPkk_3V3U 1*4G/640/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ES61
AS5951G-2414G6 4Mnkk	RO	LX.RGZ02.021	EMEA	AS5951G-2414G64Mnkk W7HP64ASRO2 MC N12PGS1GBCFPkk_3V3U 2*2G/640/8L3.0/5R/CB_bgn_FP_1. 3HD_MA_RO11
AS5951G-2414G6 4Mnkk	RO	LX.RH002.024	EMEA	AS5951G-2414G64Mnkk W7HP64ASRO2 MC N12EGE2GBCFPkk_3V3U 2*2G/640/8L3.0/5R/CB_bgn_FP_1. 3HD_MA_RO11
AS5951G-2414G6 4Mnkk	RS/BA	LX.RH002.020	EMEA	AS5951G-2414G64Mnkk W7HP64ASBA1 MC N12EGE2GBCFPkk_3V3U 1*4G/640/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_A151

**Table 7-1. RO & Description (Continued)**

Model	Country	P/N	RO	Description
AS5951G-2414G6 4Mnkk	SI/HR	LX.RH002.018	EMEA	AS5951G-2414G64Mnkk W7HP64ASSI1 MC N12EGE2GBCFPkk_3V3U 1*4G/640/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_SL11
AS5951G-2414G7 5Bnkk	FR	LX.RH002.006	EMEA	AS5951G-2414G75Bnkk W7HP64ASFR1 MC N12EGE2GBCFPkk_3V3U 2*2G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_FR21
AS5951G-2414G7 5Mnkk	DE	LX.RH002.015	EMEA	AS5951G-2414G75Mnkk W7HP64ASDE1 MC N12EGE2GBCFPkk_3V3U 2*2G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_DE11
AS5951G-2414G7 5Mnkk	DK	LX.RGZ02.002	EMEA	AS5951G-2414G75Mnkk W7HP64ASDK2 MC N12PGS1GBCFPkk_3V3U 1*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ENS1
AS5951G-2414G7 5Mnkk	FR	LX.RH002.004	EMEA	AS5951G-2414G75Mnkk W7HP64ASFR1 MC N12EGE2GBCFPkk_3V3U 2*2G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_FR21
AS5951G-2416G6 4Mnkk	AL/MK	LX.RH002.021	EMEA	AS5951G-2416G64Mnkk W7HP64ASAL1 MC N12EGE2GBCFPkk_3V3U 4G+2G/640/BT/8L3.0/5R/CB_bgn_ FP_1.3HD_MA_A111
AS5951G-2416G6 4Mnkk	RS/BA	LX.RH002.022	EMEA	AS5951G-2416G64Mnkk W7HP64ASBA1 MC N12EGE2GBCFPkk_3V3U 4G+2G/640/BT/8L3.0/5R/CB_bgn_ FP_1.3HD_MA_A151
AS5951G-2416G6 4Mnkk	SI/HR	LX.RH002.023	EMEA	AS5951G-2416G64Mnkk W7HP64ASSI1 MC N12EGE2GBCFPkk_3V3U 4G+2G/640/BT/8L3.0/5R/CB_bgn_ FP_1.3HD_MA_SL11
AS5951G-2416G7 5Mnkk	BG	LX.RGZ02.014	EMEA	AS5951G-2416G75Mnkk W7HP64ASBG1 MC N12PGS1GBCFPkk_3V3U 4G+2G/750/8L3.0/5R/CB_bgn_FP_ 1.3HD_MA_RO11

**Table 7-1. RO & Description (Continued)**

Model	Country	P/N	RO	Description
AS5951G-2418G75Mnkk	CH	LX.RGZ02.010	EMEA	AS5951G-2418G75Mnkk W7HP64ASCH1 MC N12PGS1GBCFPkk_3V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_IT41
AS5951G-2524G64Mnkk	TH	LX.RH002.008	AAP	AS5951G-2524G64Mnkk EM W7HP64EMASTH1 MC N12EGE2GBCFPkk_3V3U 1*4G/640/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_TH71
AS5951G-2524G64Mnkk	TH	LX.RH002.009	AAP	AS5951G-2524G64Mnkk EM W7HP64EMASTH4 MC N12EGE2GBCFPkk_3V3U 1*4G/640/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_ES61
AS5951G-2524G64Mnkk	TH	LX.RH002.010	AAP	AS5951G-2524G64Mnkk EM W7HP64EMASTH3 MC N12EGE2GBCFPkk_3V3U 1*4G/640/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_ES61
AS5951G-2544G64Mnkk	TH	LX.RH002.007	AAP	AS5951G-2544G64Mnkk EM W7HP64EMASTH1 MC N12EGE2GBCFPkk_3V3U 1*4G/640/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_TH71
AS5951G-2544G64Mnkk	TH	LX.RH002.011	AAP	AS5951G-2544G64Mnkk EM W7HP64EMASTH4 MC N12EGE2GBCFPkk_3V3U 1*4G/640/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_ES61
AS5951G-2544G64Mnkk	TH	LX.RH002.012	AAP	AS5951G-2544G64Mnkk EM W7HP64EMASTH3 MC N12EGE2GBCFPkk_3V3U 1*4G/640/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_ES61
AS5951G-2624G00Mnkk	TH	LX.RH002.002	AAP	AS5951G-2624G00Mnkk EM W7HP64EMASTH4 MC N12EGE2GBCFPkk_3V3 1*4G/0/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_ES61
AS5951G-2624G00Mnkk	TH	LX.RH002.003	AAP	AS5951G-2624G00Mnkk EM W7HP64EMASTH3 MC N12EGE2GBCFPkk_3V3 1*4G/0/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_ES61

**Table 7-1. RO & Description (Continued)**

Model	Country	P/N	RO	Description
AS5951G-2624G75Mnkk	TH	LX.RH002.001	AAP	AS5951G-2624G75Mnkk EM W7HP64EMASTH1 MC N12EGE2GBCFPkk_3V3 1*4G/750/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_TH71
AS5951G-2628G75Mnkk	BG	LX.RH002.017	EMEA	AS5951G-2628G75Mnkk W7HP64ASBG1 MC N12EGE2GBCFPkk_3V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_RO11
AS5951G-2631675Bnkk	BE	LX.RHS02.035	EMEA	AS5951G-2631675Bnkk W7HP64ASBE1 MC N12EGE2GBCFPkkQ_3D4V3U 4G+4G+4G+4G/750/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_NL11
AS5951G-2631675Bnkk	DE	LX.RHS02.008	EMEA	AS5951G-2631675Bnkk W7HP64ASDE1 MC N12EGE2GBCFPkkQ_3D4V3U 4G+4G+4G+4G/750/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_DE11
AS5951G-2631675Bnkk	LU	LX.RHS02.036	EMEA	AS5951G-2631675Bnkk W7HP64ASLU3 MC N12EGE2GBCFPkkQ_3D4V3U 4G+4G+4G+4G/750/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_IT41
AS5951G-2631675Bnkk	NL	LX.RHS02.034	EMEA	AS5951G-2631675Bnkk W7HP64ASNL1 MC N12EGE2GBCFPkkQ_3D4V3U 4G+4G+4G+4G/750/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_NL11
AS5951G-2634G50Mnkk	IT	LX.RHS02.003	EMEA	AS5951G-2634G50Mnkk W7HP64ASIT1 MC N12EGE2GBCFPkkQ_3D4V3U 2*2G/500/8L3.0/5R/CB_bgn_FP_1.3HD_MA_IT11
AS5951G-2634G64Bnkk	DE	LX.RHS02.022	EMEA	AS5951G-2634G64Bnkk W7HP64ASDE1 MC N12EGE2GBCFPkkQ_3D4V3U 2*2G/640/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_DE11
AS5951G-2634G64Bnkk	DK	LX.RHS02.019	EMEA	AS5951G-2634G64Bnkk W7HP64ASDK2 MC N12EGE2GBCFPkkQ_3D4V3U 2*2G/640/BT/8L3.0/5R/CB_bgn_FP_1.3HD_MA_ENS1



**Table 7-1. RO & Description (Continued)**

Model	Country	P/N	RO	Description
AS5951G-2634G6 4Mnkk	IN	LX.RJS02.006	AAP	AS5951G-2634G64Mnkk W7HP64INASIN1 MC N12PGS1GBCFPkkQ_3D4V3U 2*2G/640/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ES61
AS5951G-2634G7 5Bnkk	CN	LX.RHS02.005	CHINA	AS5951G-2634G75Bnkk W7HP64SCASCN1 MC N12EGE2GBCFPkkQ_3D4V3U 2*2G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_SC11
AS5951G-2634G7 5Bnkk	DE	LX.RHS02.007	EMEA	AS5951G-2634G75Bnkk W7HP64ASDE1 MC N12EGE2GBCFPkkQ_3D4V3U 2*2G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_DE11
AS5951G-2634G7 5Bnkk	FR	LX.RHS02.001	EMEA	AS5951G-2634G75Bnkk W7HP64ASFR1 MC N12EGE2GBCFPkkQ_3D4V3U 2*2G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_FR21
AS5951G-2634G7 5Bnkk	GCTWN	LX.RHS02.032	TWN	AS5951G-2634G75Bnkk W7HP64ASTW1 MC N12EGE2GBCFPkkQ_3D4V3U 2*2G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_TC41
AS5951G-2634G7 5Bnkk	ID	LX.RHS02.014	AAP	AS5951G-2634G75Bnkk EM W7HP64EMASID1 MC N12EGE2GBCFPkkQ_3D4V3U 2*2G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ID21
AS5951G-2634G7 5Bnkk	ID	LX.RJS02.002	AAP	AS5951G-2634G75Bnkk EM W7HP64EMASID1 MC N12PGS1GBCFPkkQ_3D4V3U 2*2G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ID21
AS5951G-2634G7 5Mnkk	DE	LX.RJS02.005	EMEA	AS5951G-2634G75Mnkk W7HP64ASDE1 MC N12PGS1GBCFPkkQ_3D4V3U 2*2G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_DE11
AS5951G-2634G7 5Mnkk	IT	LX.RJS02.001	EMEA	AS5951G-2634G75Mnkk W7HP64ASIT1 MC N12PGS1GBCFPkkQ_3D4V3U 2*2G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_IT11

**Table 7-1. RO & Description (Continued)**

Model	Country	P/N	RO	Description
AS5951G-2634G7 5Mnkk	PH	LX.RHS02.006	AAP	AS5951G-2634G75Mnkk EM W7HP64EMASPH1 MC N12EGE2GBCFPkkQ_3D4V3U 2*2G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ES61
AS5951G-2634G7 5Mnkk	ZA	LX.RJS02.008	EMEA	AS5951G-2634G75Mnkk EM W7HP64EMASZA2 MC N12PGS1GBCFPkkQ_3D4V3U 2*2G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ES61
AS5951G-2636G6 4Mnkk	MOYO	LX.RHS02.028	EMEA	AS5951G-2636G64Mnkk EM W7HP64EMASME1 MC N12EGE2GBCFPkkQ_3D4V3U 4G+2G/640/BT/8L3.0/5R/CB_bgn_ FP_1.3HD_MA_ARA1
AS5951G-2636G7 5Bnkk	AU/NZ	LX.RHS02.018	AAP	AS5951G-2636G75Bnkk W7HP64ASAU1 MC N12EGE2GBCFPkkQ_3D4V3U 4G+2G/750/BT/8L3.0/5R/CB_bgn_ FP_1.3HD_MA_ES62
AS5951G-2636G7 5Mnkk	CA	LX.RHS02.025	PA	AS5951G-2636G75Mnkk W7HP64ASCA2 MC N12EGE2GBCFPkkQ_3D4V3U 4G+2G/750/BT/8L3.0/5R/CB_bgn_ FP_1.3HD_MA_FR86
AS5951G-2636G7 5Mnkk	DK	LX.RHS02.002	EMEA	AS5951G-2636G75Mnkk W7HP64ASDK2 MC N12EGE2GBCFPkkQ_3D4V3U 4G+2G/750/BT/8L3.0/5R/CB_bgn_ FP_1.3HD_MA_ENS1
AS5951G-2638G3 2Bnkk	UK	LX.RHS02.023	EMEA	AS5951G-2638G32Bnkk W7HP64ASGB1 MC N12EGE2GBCFPkkQ_3D4V3U 2*4G/320/8L3.0/5R/CB_bgn_FP_1. 3HD_MA_EN11
AS5951G-2638G6 4Mnkk	ES	LX.RHS02.027	EMEA	AS5951G-2638G64Mnkk W7HP64ASES1 MC N12EGE2GBCFPkkQ_3D4V3U 2*4G/640/8L3.0/5R/CB_bgn_FP_1. 3HD_MA_ES51
AS5951G-2638G7 5Bnkk	AU/NZ	LX.RHS02.017	AAP	AS5951G-2638G75Bnkk W7HP64ASAU1 MC N12EGE2GBCFPkkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ES62

**Table 7-1. RO & Description (Continued)**

Model	Country	P/N	RO	Description
AS5951G-2638G7 5Bnkk	DE	LX.RHS02.021	EMEA	AS5951G-2638G75Bnkk W7HP64ASDE1 MC N12EGE2GBCFPkkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_DE11
AS5951G-2638G7 5Bnkk	DK	LX.RHS02.020	EMEA	AS5951G-2638G75Bnkk W7HP64ASDK2 MC N12EGE2GBCFPkkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ENS1
AS5951G-2638G7 5Bnkk	ES	LX.RHS02.026	EMEA	AS5951G-2638G75Bnkk W7HP64ASES1 MC N12EGE2GBCFPkkQ_3D4V3U 2*4G/750/8L3.0/5R/CB_bgn_FP_1. 3HD_MA_ES51
AS5951G-2638G7 5Bnkk	FR	LX.RHS02.009	EMEA	AS5951G-2638G75Bnkk W7HP64ASFR1 MC N12EGE2GBCFPkkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_FR21
AS5951G-2638G7 5Bnkk	GCTWN	LX.RHS02.031	TWN	AS5951G-2638G75Bnkk W7HP64ASTW1 MC N12EGE2GBCFPkkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_TC41
AS5951G-2638G7 5Bnkk	GR	LX.RHS02.016	EMEA	AS5951G-2638G75Bnkk W7HP64ASGR1 MC N12EGE2GBCFPkkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_EL32
AS5951G-2638G7 5Bnkk	HK	LX.RHS02.033	CHINA	AS5951G-2638G75Bnkk W7HP64ASHK2 MC N12EGE2GBCFPkkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ZH31
AS5951G-2638G7 5Bnkk	IT	LX.RHS02.004	EMEA	AS5951G-2638G75Bnkk W7HP64ASIT1 MC N12EGE2GBCFPkkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_IT11
AS5951G-2638G7 5Bnkk	RU	LX.RHS02.015	EMEA	AS5951G-2638G75Bnkk W7HP64RUASRU1 MC N12EGE2GBCFPkkQ_3D4V3U 2G+2G+2G+2G/750/BT/8L3.0/5R/ CB_bgn_FP_1.3HD_MA_RU11

**Table 7-1. RO & Description (Continued)**

Model	Country	P/N	RO	Description
AS5951G-2638G7 5Bnkk	TH	LX.RHS07.004	AAP	AS5951G-2638G75Bnkk EM W7UT64EMASTH1 MC N12EGE2GBCFPkkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_TH71
AS5951G-2638G7 5Bnkk	TH	LX.RHS07.005	AAP	AS5951G-2638G75Bnkk EM W7UT64EMASTH3 MC N12EGE2GBCFPkkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ES61
AS5951G-2638G7 5Bnkk	TH	LX.RHS07.006	AAP	AS5951G-2638G75Bnkk EM W7UT64EMASTH4 MC N12EGE2GBCFPkkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ES61
AS5951G-2638G7 5Bnkk	UK	LX.RHS02.024	EMEA	AS5951G-2638G75Bnkk W7HP64ASGB1 MC N12EGE2GBCFPkkQ_3D4V3U 2*4G/750/8L3.0/5R/CB_bgn_FP_1. 3HD_MA_EN11
AS5951G-2638G7 5Bnkk	UK	LX.RJS02.004	EMEA	AS5951G-2638G75Bnkk W7HP64ASGB1 MC N12PGS1GBCFPkkQ_3D4V3U 2*4G/750/8L3.0/5R/CB_bgn_FP_1. 3HD_MA_EN13
AS5951G-2638G7 5Bnkk	UK	LX.RJS02.009	EMEA	AS5951G-2638G75Bnkk W7HP64ASGB1 MC N12PGS1GBCFPkkQ_3D4V3U 2*4G/750/8L3.0/5R/CB_bgn_FP_1. 3HD_MA_EN11
AS5951G-2638G7 5Mnkk	CH	LX.RJS02.007	EMEA	AS5951G-2638G75Mnkk W7HP64ASCH1 MC N12PGS1GBCFPkkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_IT41
AS5951G-2638G7 5Mnkk	GCTWN	LX.RHS02.010	TWN	AS5951G-2638G75Mnkk W7HP64ASTW1 MC N12EGE2GBCFPkkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_TC41
AS5951G-2638G7 5Mnkk	HK	LX.RJS02.010	CHINA	AS5951G-2638G75Mnkk W7HP64ASHK2 MC N12PGS1GBCFPkkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ZH31

**Table 7-1. RO & Description (Continued)**

Model	Country	P/N	RO	Description
AS5951G-2638G7 5Mnkk	KR	LX.RHS02.029	AAP	AS5951G-2638G75Mnkk W7HP64KASKR1 MC N12EGE2GBCFPkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_KO11
AS5951G-2638G7 5Mnkk	MOYO	LX.RHS02.030	EMEA	AS5951G-2638G75Mnkk EM W7HP64EMASME1 MC N12EGE2GBCFPkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ARA1
AS5951G-2638G7 5Mnkk	RO	LX.RHS02.039	EMEA	AS5951G-2638G75Mnkk W7HP64ASRO2 MC N12EGE2GBCFPkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_RO11
AS5951G-2638G7 5Mnkk	RS/BA	LX.RHS02.037	EMEA	AS5951G-2638G75Mnkk W7HP64ASBA1 MC N12EGE2GBCFPkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_A151
AS5951G-2638G7 5Mnkk	SI/HR	LX.RHS02.038	EMEA	AS5951G-2638G75Mnkk W7HP64ASSI1 MC N12EGE2GBCFPkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_SL11
AS5951G-2638G7 5Mnkk	TH	LX.RHS02.011	AAP	AS5951G-2638G75Mnkk EM W7HP64EMASTH1 MC N12EGE2GBCFPkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_TH71
AS5951G-2638G7 5Mnkk	TH	LX.RHS02.012	AAP	AS5951G-2638G75Mnkk EM W7HP64EMASTH4 MC N12EGE2GBCFPkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ES61
AS5951G-2638G7 5Mnkk	TH	LX.RHS02.013	AAP	AS5951G-2638G75Mnkk EM W7HP64EMASTH3 MC N12EGE2GBCFPkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ES61
AS5951G-2638G7 5Mnkk	TH	LX.RHS07.001	AAP	AS5951G-2638G75Mnkk EM W7UT64EMASTH1 MC N12EGE2GBCFPkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_TH71

**Table 7-1. RO & Description (Continued)**

Model	Country	P/N	RO	Description
AS5951G-2638G75Mnkk	TH	LX.RHS07.002	AAP	AS5951G-2638G75Mnkk EM W7UT64EMASTH3 MC N12EGE2GBCFPkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ES61
AS5951G-2638G75Mnkk	TH	LX.RHS07.003	AAP	AS5951G-2638G75Mnkk EM W7UT64EMASTH4 MC N12EGE2GBCFPkQ_3D4V3U 2*4G/750/BT/8L3.0/5R/CB_bgn_FP _1.3HD_MA_ES61
AS5951G-2638G75Mnkk	UK	LX.RJS02.003	EMEA	AS5951G-2638G75Mnkk W7HP64ASGB1 MC N12PGS1GBCFPkQ_3D4V3U 2*4G/750/8L3.0/5R/CB_bgn_FP_1. 3HD_MA_EN13

**Table 7-2. BOM Name & CPU**

Model	Country	P/N	BOM Name	CPU
AS5951G-2314G64Mnkk	FR	LX.RGZ02.001	AS5951G_N12PGS1GBCFPk k_3V3U	Ci32310M
AS5951G-2316G50Mnkk	AL/MK	LX.RGZ02.018	AS5951G_N12PGS1GBCFPk k_3V3U	Ci32310M
AS5951G-2316G50Mnkk	RS/BA	LX.RGZ02.019	AS5951G_N12PGS1GBCFPk k_3V3U	Ci32310M
AS5951G-2316G50Mnkk	SI/HR	LX.RGZ02.020	AS5951G_N12PGS1GBCFPk k_3V3U	Ci32310M
AS5951G-2412G75Mnkk	CN	LX.RGZ02.003	AS5951G_N12PGS1GBCFPk k_3V3U	Ci52410M
AS5951G-2414G50Mnkk	BE	LX.RGZ02.016	AS5951G_N12PGS1GBCFPk k_3V3U	Ci52410M
AS5951G-2414G50Mnkk	CA	LX.RH002.014	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52410M
AS5951G-2414G50Mnkk	DE	LX.RH002.005	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52410M
AS5951G-2414G50Mnkk	IT	LX.RGZ02.013	AS5951G_N12PGS1GBCFPk k_3V3U	Ci52410M
AS5951G-2414G50Mnkk	LU	LX.RGZ02.017	AS5951G_N12PGS1GBCFPk k_3V3U	Ci52410M
AS5951G-2414G50Mnkk	MOYO	LX.RGZ02.012	AS5951G_N12PGS1GBCFPk k_3V3U	Ci52410M

**Table 7-2. BOM Name & CPU (Continued)**

Model	Country	P/N	BOM Name	CPU
AS5951G-2414G5 0Mnkk	MOYO	LX.RH002.016	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52410M
AS5951G-2414G5 0Mnkk	NL	LX.RGZ02.015	AS5951G_N12PGS1GBCFPk k_3V3U	Ci52410M
AS5951G-2414G5 0Mnkk	RU	LX.RGZ02.005	AS5951G_N12PGS1GBCFPk k_3V3U	Ci52410M
AS5951G-2414G5 0Mnkk	TR	LX.RGZ02.011	AS5951G_N12PGS1GBCFPk k_3V3U	Ci52410M
AS5951G-2414G6 4Bnkk	RU	LX.RH002.013	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52410M
AS5951G-2414G6 4Mnkk	AL/MK	LX.RH002.019	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52410M
AS5951G-2414G6 4Mnkk	DE	LX.RGZ02.008	AS5951G_N12PGS1GBCFPk k_3V3U	Ci52410M
AS5951G-2414G6 4Mnkk	DK	LX.RGZ02.006	AS5951G_N12PGS1GBCFPk k_3V3U	Ci52410M
AS5951G-2414G6 4Mnkk	FR	LX.RGZ02.004	AS5951G_N12PGS1GBCFPk k_3V3U	Ci52410M
AS5951G-2414G6 4Mnkk	HK	LX.RGZ02.007	AS5951G_N12PGS1GBCFPk k_3V3U	Ci52410M
AS5951G-2414G6 4Mnkk	IN	LX.RGZ02.009	AS5951G_N12PGS1GBCFPk k_3V3U	Ci52410M
AS5951G-2414G6 4Mnkk	RO	LX.RGZ02.021	AS5951G_N12PGS1GBCFPk k_3V3U	Ci52410M
AS5951G-2414G6 4Mnkk	RO	LX.RH002.024	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52410M
AS5951G-2414G6 4Mnkk	RS/BA	LX.RH002.020	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52410M
AS5951G-2414G6 4Mnkk	SI/HR	LX.RH002.018	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52410M
AS5951G-2414G7 5Bnkk	FR	LX.RH002.006	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52410M
AS5951G-2414G7 5Mnkk	DE	LX.RH002.015	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52410M
AS5951G-2414G7 5Mnkk	DK	LX.RGZ02.002	AS5951G_N12PGS1GBCFPk k_3V3U	Ci52410M
AS5951G-2414G7 5Mnkk	FR	LX.RH002.004	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52410M
AS5951G-2416G6 4Mnkk	AL/MK	LX.RH002.021	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52410M

**Table 7-2. BOM Name & CPU (Continued)**

Model	Country	P/N	BOM Name	CPU
AS5951G-2416G6 4Mnkk	RS/BA	LX.RH002.022	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52410M
AS5951G-2416G6 4Mnkk	SI/HR	LX.RH002.023	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52410M
AS5951G-2416G7 5Mnkk	BG	LX.RGZ02.014	AS5951G_N12PGS1GBCFPk k_3V3U	Ci52410M
AS5951G-2418G7 5Mnkk	CH	LX.RGZ02.010	AS5951G_N12PGS1GBCFPk k_3V3U	Ci52410M
AS5951G-2524G6 4Mnkk	TH	LX.RH002.008	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52520M
AS5951G-2524G6 4Mnkk	TH	LX.RH002.009	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52520M
AS5951G-2524G6 4Mnkk	TH	LX.RH002.010	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52520M
AS5951G-2544G6 4Mnkk	TH	LX.RH002.007	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52540M
AS5951G-2544G6 4Mnkk	TH	LX.RH002.011	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52540M
AS5951G-2544G6 4Mnkk	TH	LX.RH002.012	AS5951G_N12EGE2GBCFPk k_3V3U	Ci52540M
AS5951G-2624G0 0Mnkk	TH	LX.RH002.002	AS5951G_N12EGE2GBCFPk k_3V3U	Ci72620M
AS5951G-2624G0 0Mnkk	TH	LX.RH002.003	AS5951G_N12EGE2GBCFPk k_3V3U	Ci72620M
AS5951G-2624G7 5Mnkk	TH	LX.RH002.001	AS5951G_N12EGE2GBCFPk k_3V3U	Ci72620M
AS5951G-2628G7 5Mnkk	BG	LX.RH002.017	AS5951G_N12EGE2GBCFPk k_3V3U	Ci72620M
AS5951G-263167 5Bnkk	BE	LX.RHS02.035	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-263167 5Bnkk	DE	LX.RHS02.008	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-263167 5Bnkk	LU	LX.RHS02.036	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-263167 5Bnkk	NL	LX.RHS02.034	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2634G5 0Mnkk	IT	LX.RHS02.003	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2634G6 4Bnkk	DE	LX.RHS02.022	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM



**Table 7-2. BOM Name & CPU (Continued)**

Model	Country	P/N	BOM Name	CPU
AS5951G-2634G6 4Bnkk	DK	LX.RHS02.019	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2634G6 4Mnkk	IN	LX.RJS02.006	AS5951G_N12PGS1GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2634G7 5Bnkk	CN	LX.RHS02.005	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2634G7 5Bnkk	DE	LX.RHS02.007	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2634G7 5Bnkk	FR	LX.RHS02.001	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2634G7 5Bnkk	GCTWN	LX.RHS02.032	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2634G7 5Bnkk	ID	LX.RHS02.014	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2634G7 5Bnkk	ID	LX.RJS02.002	AS5951G_N12PGS1GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2634G7 5Mnkk	DE	LX.RJS02.005	AS5951G_N12PGS1GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2634G7 5Mnkk	IT	LX.RJS02.001	AS5951G_N12PGS1GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2634G7 5Mnkk	PH	LX.RHS02.006	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2634G7 5Mnkk	ZA	LX.RJS02.008	AS5951G_N12PGS1GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2636G6 4Mnkk	MOYO	LX.RHS02.028	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2636G7 5Bnkk	AU/NZ	LX.RHS02.018	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2636G7 5Mnkk	CA	LX.RHS02.025	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2636G7 5Mnkk	DK	LX.RHS02.002	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G3 2Bnkk	UK	LX.RHS02.023	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G6 4Mnkk	ES	LX.RHS02.027	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Bnkk	AU/NZ	LX.RHS02.017	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Bnkk	DE	LX.RHS02.021	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM

**Table 7-2. BOM Name & CPU (Continued)**

Model	Country	P/N	BOM Name	CPU
AS5951G-2638G7 5Bnkk	DK	LX.RHS02.020	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Bnkk	ES	LX.RHS02.026	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Bnkk	FR	LX.RHS02.009	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Bnkk	GCTWN	LX.RHS02.031	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Bnkk	GR	LX.RHS02.016	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Bnkk	HK	LX.RHS02.033	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Bnkk	IT	LX.RHS02.004	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Bnkk	RU	LX.RHS02.015	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Bnkk	TH	LX.RHS07.004	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Bnkk	TH	LX.RHS07.005	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Bnkk	TH	LX.RHS07.006	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Bnkk	UK	LX.RHS02.024	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Bnkk	UK	LX.RJS02.004	AS5951G_N12PGS1GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Bnkk	UK	LX.RJS02.009	AS5951G_N12PGS1GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Mnkk	CH	LX.RJS02.007	AS5951G_N12PGS1GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Mnkk	GCTWN	LX.RHS02.010	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Mnkk	HK	LX.RJS02.010	AS5951G_N12PGS1GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Mnkk	KR	LX.RHS02.029	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Mnkk	MOYO	LX.RHS02.030	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Mnkk	RO	LX.RHS02.039	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM

**Table 7-2. BOM Name & CPU (Continued)**

Model	Country	P/N	BOM Name	CPU
AS5951G-2638G7 5Mnkk	RS/BA	LX.RHS02.037	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Mnkk	SI/HR	LX.RHS02.038	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Mnkk	TH	LX.RHS02.011	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Mnkk	TH	LX.RHS02.012	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Mnkk	TH	LX.RHS02.013	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Mnkk	TH	LX.RHS07.001	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Mnkk	TH	LX.RHS07.002	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Mnkk	TH	LX.RHS07.003	AS5951G_N12EGE2GBCFPk kQ_3D4V3U	Ci72630QM
AS5951G-2638G7 5Mnkk	UK	LX.RJS02.003	AS5951G_N12PGS1GBCFPk kQ_3D4V3U	Ci72630QM

**Table 7-3. LCD & VGA Chip**

Model	Country	P/N	LCD	VGA Chip
AS5951G-2314G64Mnkk	FR	LX.RGZ02.001	NLED15.6WXGAGS	N12PGS
AS5951G-2316G50Mnkk	AL/MK	LX.RGZ02.018	NLED15.6WXGAGS	N12PGS
AS5951G-2316G50Mnkk	RS/BA	LX.RGZ02.019	NLED15.6WXGAGS	N12PGS
AS5951G-2316G50Mnkk	SI/HR	LX.RGZ02.020	NLED15.6WXGAGS	N12PGS
AS5951G-2412G75Mnkk	CN	LX.RGZ02.003	NLED15.6WXGAGS	N12PGS
AS5951G-2414G50Mnkk	BE	LX.RGZ02.016	NLED15.6WXGAGS	N12PGS
AS5951G-2414G50Mnkk	CA	LX.RH002.014	NLED15.6WXGAGS	N12EGE
AS5951G-2414G50Mnkk	DE	LX.RH002.005	NLED15.6WXGAGS	N12EGE
AS5951G-2414G50Mnkk	IT	LX.RGZ02.013	NLED15.6WXGAGS	N12PGS
AS5951G-2414G50Mnkk	LU	LX.RGZ02.017	NLED15.6WXGAGS	N12PGS
AS5951G-2414G50Mnkk	MOYO	LX.RGZ02.012	NLED15.6WXGAGS	N12PGS
AS5951G-2414G50Mnkk	MOYO	LX.RH002.016	NLED15.6WXGAGS	N12EGE
AS5951G-2414G50Mnkk	NL	LX.RGZ02.015	NLED15.6WXGAGS	N12PGS
AS5951G-2414G50Mnkk	RU	LX.RGZ02.005	NLED15.6WXGAGS	N12PGS
AS5951G-2414G50Mnkk	TR	LX.RGZ02.011	NLED15.6WXGAGS	N12PGS

**Table 7-3. LCD & VGA Chip (Continued)**

Model	Country	P/N	LCD	VGA Chip
AS5951G-2414G64Bnkk	RU	LX.RH002.013	NLED15.6WXGAGS	N12EGE
AS5951G-2414G64Mnkk	AL/MK	LX.RH002.019	NLED15.6WXGAGS	N12EGE
AS5951G-2414G64Mnkk	DE	LX.RGZ02.008	NLED15.6WXGAGS	N12PGS
AS5951G-2414G64Mnkk	DK	LX.RGZ02.006	NLED15.6WXGAGS	N12PGS
AS5951G-2414G64Mnkk	FR	LX.RGZ02.004	NLED15.6WXGAGS	N12PGS
AS5951G-2414G64Mnkk	HK	LX.RGZ02.007	NLED15.6WXGAGS	N12PGS
AS5951G-2414G64Mnkk	IN	LX.RGZ02.009	NLED15.6WXGAGS	N12PGS
AS5951G-2414G64Mnkk	RO	LX.RGZ02.021	NLED15.6WXGAGS	N12PGS
AS5951G-2414G64Mnkk	RO	LX.RH002.024	NLED15.6WXGAGS	N12EGE
AS5951G-2414G64Mnkk	RS/BA	LX.RH002.020	NLED15.6WXGAGS	N12EGE
AS5951G-2414G64Mnkk	SI/HR	LX.RH002.018	NLED15.6WXGAGS	N12EGE
AS5951G-2414G75Bnkk	FR	LX.RH002.006	NLED15.6WXGAGS	N12EGE
AS5951G-2414G75Mnkk	DE	LX.RH002.015	NLED15.6WXGAGS	N12EGE
AS5951G-2414G75Mnkk	DK	LX.RGZ02.002	NLED15.6WXGAGS	N12PGS
AS5951G-2414G75Mnkk	FR	LX.RH002.004	NLED15.6WXGAGS	N12EGE
AS5951G-2416G64Mnkk	AL/MK	LX.RH002.021	NLED15.6WXGAGS	N12EGE
AS5951G-2416G64Mnkk	RS/BA	LX.RH002.022	NLED15.6WXGAGS	N12EGE
AS5951G-2416G64Mnkk	SI/HR	LX.RH002.023	NLED15.6WXGAGS	N12EGE
AS5951G-2416G75Mnkk	BG	LX.RGZ02.014	NLED15.6WXGAGS	N12PGS
AS5951G-2418G75Mnkk	CH	LX.RGZ02.010	NLED15.6WXGAGS	N12PGS
AS5951G-2524G64Mnkk	TH	LX.RH002.008	NLED15.6WXGAGS	N12EGE
AS5951G-2524G64Mnkk	TH	LX.RH002.009	NLED15.6WXGAGS	N12EGE
AS5951G-2524G64Mnkk	TH	LX.RH002.010	NLED15.6WXGAGS	N12EGE
AS5951G-2544G64Mnkk	TH	LX.RH002.007	NLED15.6WXGAGS	N12EGE
AS5951G-2544G64Mnkk	TH	LX.RH002.011	NLED15.6WXGAGS	N12EGE
AS5951G-2544G64Mnkk	TH	LX.RH002.012	NLED15.6WXGAGS	N12EGE
AS5951G-2624G00Mnkk	TH	LX.RH002.002	NLED15.6WXGAGS	N12EGE
AS5951G-2624G00Mnkk	TH	LX.RH002.003	NLED15.6WXGAGS	N12EGE
AS5951G-2624G75Mnkk	TH	LX.RH002.001	NLED15.6WXGAGS	N12EGE
AS5951G-2628G75Mnkk	BG	LX.RH002.017	NLED15.6WXGAGS	N12EGE
AS5951G-2631675Bnkk	BE	LX.RHS02.035	NLED15.6WXGAGS	N12EGE
AS5951G-2631675Bnkk	DE	LX.RHS02.008	NLED15.6WXGAGS	N12EGE
AS5951G-2631675Bnkk	LU	LX.RHS02.036	NLED15.6WXGAGS	N12EGE

**Table 7-3. LCD & VGA Chip (Continued)**

Model	Country	P/N	LCD	VGA Chip
AS5951G-2631675Bnkk	NL	LX.RHS02.034	NLED15.6WXGAGS	N12EGE
AS5951G-2634G50Mnkk	IT	LX.RHS02.003	NLED15.6WXGAGS	N12EGE
AS5951G-2634G64Bnkk	DE	LX.RHS02.022	NLED15.6WXGAGS	N12EGE
AS5951G-2634G64Bnkk	DK	LX.RHS02.019	NLED15.6WXGAGS	N12EGE
AS5951G-2634G64Mnkk	IN	LX.RJS02.006	NLED15.6WXGAGS	N12PGS
AS5951G-2634G75Bnkk	CN	LX.RHS02.005	NLED15.6WXGAGS	N12EGE
AS5951G-2634G75Bnkk	DE	LX.RHS02.007	NLED15.6WXGAGS	N12EGE
AS5951G-2634G75Bnkk	FR	LX.RHS02.001	NLED15.6WXGAGS	N12EGE
AS5951G-2634G75Bnkk	GCTWN	LX.RHS02.032	NLED15.6WXGAGS	N12EGE
AS5951G-2634G75Bnkk	ID	LX.RHS02.014	NLED15.6WXGAGS	N12EGE
AS5951G-2634G75Bnkk	ID	LX.RJS02.002	NLED15.6WXGAGS	N12PGS
AS5951G-2634G75Mnkk	DE	LX.RJS02.005	NLED15.6WXGAGS	N12PGS
AS5951G-2634G75Mnkk	IT	LX.RJS02.001	NLED15.6WXGAGS	N12PGS
AS5951G-2634G75Mnkk	PH	LX.RHS02.006	NLED15.6WXGAGS	N12EGE
AS5951G-2634G75Mnkk	ZA	LX.RJS02.008	NLED15.6WXGAGS	N12PGS
AS5951G-2636G64Mnkk	MOYO	LX.RHS02.028	NLED15.6WXGAGS	N12EGE
AS5951G-2636G75Bnkk	AU/NZ	LX.RHS02.018	NLED15.6WXGAGS	N12EGE
AS5951G-2636G75Mnkk	CA	LX.RHS02.025	NLED15.6WXGAGS	N12EGE
AS5951G-2636G75Mnkk	DK	LX.RHS02.002	NLED15.6WXGAGS	N12EGE
AS5951G-2638G32Bnkk	UK	LX.RHS02.023	NLED15.6WXGAGS	N12EGE
AS5951G-2638G64Mnkk	ES	LX.RHS02.027	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Bnkk	AU/NZ	LX.RHS02.017	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Bnkk	DE	LX.RHS02.021	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Bnkk	DK	LX.RHS02.020	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Bnkk	ES	LX.RHS02.026	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Bnkk	FR	LX.RHS02.009	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Bnkk	GCTWN	LX.RHS02.031	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Bnkk	GR	LX.RHS02.016	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Bnkk	HK	LX.RHS02.033	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Bnkk	IT	LX.RHS02.004	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Bnkk	RU	LX.RHS02.015	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Bnkk	TH	LX.RHS07.004	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Bnkk	TH	LX.RHS07.005	NLED15.6WXGAGS	N12EGE

**Table 7-3. LCD & VGA Chip (Continued)**

Model	Country	P/N	LCD	VGA Chip
AS5951G-2638G75Bnkk	TH	LX.RHS07.006	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Bnkk	UK	LX.RHS02.024	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Bnkk	UK	LX.RJS02.004	NLED15.6WXGAGS	N12PGS
AS5951G-2638G75Bnkk	UK	LX.RJS02.009	NLED15.6WXGAGS	N12PGS
AS5951G-2638G75Mnkk	CH	LX.RJS02.007	NLED15.6WXGAGS	N12PGS
AS5951G-2638G75Mnkk	GCTWN	LX.RHS02.010	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Mnkk	HK	LX.RJS02.010	NLED15.6WXGAGS	N12PGS
AS5951G-2638G75Mnkk	KR	LX.RHS02.029	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Mnkk	MOYO	LX.RHS02.030	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Mnkk	RO	LX.RHS02.039	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Mnkk	RS/BA	LX.RHS02.037	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Mnkk	SI/HR	LX.RHS02.038	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Mnkk	TH	LX.RHS02.011	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Mnkk	TH	LX.RHS02.012	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Mnkk	TH	LX.RHS02.013	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Mnkk	TH	LX.RHS07.001	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Mnkk	TH	LX.RHS07.002	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Mnkk	TH	LX.RHS07.003	NLED15.6WXGAGS	N12EGE
AS5951G-2638G75Mnkk	UK	LX.RJS02.003	NLED15.6WXGAGS	N12PGS

**Table 7-4. VRAM 1 & Memory 1**

Model	Country	P/N	VRAM 1	Memory 1
AS5951G-2314G64Mnkk	FR	LX.RGZ02.001	1G-DDR3 (64*16*8)	SO2GBIII10
AS5951G-2316G50Mnkk	AL/MK	LX.RGZ02.018	1G-DDR3 (64*16*8)	SO4GBIII10
AS5951G-2316G50Mnkk	RS/BA	LX.RGZ02.019	1G-DDR3 (64*16*8)	SO4GBIII10
AS5951G-2316G50Mnkk	SI/HR	LX.RGZ02.020	1G-DDR3 (64*16*8)	SO4GBIII10
AS5951G-2412G75Mnkk	CN	LX.RGZ02.003	1G-DDR3 (64*16*8)	SO2GBIII10
AS5951G-2414G50Mnkk	BE	LX.RGZ02.016	1G-DDR3 (64*16*8)	SO4GBIII10
AS5951G-2414G50Mnkk	CA	LX.RH002.014	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2414G50Mnkk	DE	LX.RH002.005	2G-DDR3 (128*16*8)	SO2GBIII10
AS5951G-2414G50Mnkk	IT	LX.RGZ02.013	1G-DDR3 (64*16*8)	SO4GBIII10
AS5951G-2414G50Mnkk	LU	LX.RGZ02.017	1G-DDR3 (64*16*8)	SO4GBIII10

**Table 7-4. VRAM 1 & Memory 1 (Continued)**

Model	Country	P/N	VRAM 1	Memory 1
AS5951G-2414G50Mnkk	MOYO	LX.RGZ02.012	1G-DDR3 (64*16*8)	SO2GBIII10
AS5951G-2414G50Mnkk	MOYO	LX.RH002.016	2G-DDR3 (128*16*8)	SO2GBIII10
AS5951G-2414G50Mnkk	NL	LX.RGZ02.015	1G-DDR3 (64*16*8)	SO4GBIII10
AS5951G-2414G50Mnkk	RU	LX.RGZ02.005	1G-DDR3 (64*16*8)	SO2GBIII10
AS5951G-2414G50Mnkk	TR	LX.RGZ02.011	1G-DDR3 (64*16*8)	SO2GBIII10
AS5951G-2414G64Bnkk	RU	LX.RH002.013	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2414G64Mnkk	AL/MK	LX.RH002.019	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2414G64Mnkk	DE	LX.RGZ02.008	1G-DDR3 (64*16*8)	SO4GBIII10
AS5951G-2414G64Mnkk	DK	LX.RGZ02.006	1G-DDR3 (64*16*8)	SO4GBIII10
AS5951G-2414G64Mnkk	FR	LX.RGZ02.004	1G-DDR3 (64*16*8)	SO2GBIII10
AS5951G-2414G64Mnkk	HK	LX.RGZ02.007	1G-DDR3 (64*16*8)	SO4GBIII10
AS5951G-2414G64Mnkk	IN	LX.RGZ02.009	1G-DDR3 (64*16*8)	SO4GBIII10
AS5951G-2414G64Mnkk	RO	LX.RGZ02.021	1G-DDR3 (64*16*8)	SO2GBIII10
AS5951G-2414G64Mnkk	RO	LX.RH002.024	2G-DDR3 (128*16*8)	SO2GBIII10
AS5951G-2414G64Mnkk	RS/BA	LX.RH002.020	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2414G64Mnkk	SI/HR	LX.RH002.018	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2414G75Bnkk	FR	LX.RH002.006	2G-DDR3 (128*16*8)	SO2GBIII10
AS5951G-2414G75Mnkk	DE	LX.RH002.015	2G-DDR3 (128*16*8)	SO2GBIII10
AS5951G-2414G75Mnkk	DK	LX.RGZ02.002	1G-DDR3 (64*16*8)	SO4GBIII10
AS5951G-2414G75Mnkk	FR	LX.RH002.004	2G-DDR3 (128*16*8)	SO2GBIII10
AS5951G-2416G64Mnkk	AL/MK	LX.RH002.021	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2416G64Mnkk	RS/BA	LX.RH002.022	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2416G64Mnkk	SI/HR	LX.RH002.023	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2416G75Mnkk	BG	LX.RGZ02.014	1G-DDR3 (64*16*8)	SO4GBIII10
AS5951G-2418G75Mnkk	CH	LX.RGZ02.010	1G-DDR3 (64*16*8)	SO4GBIII10
AS5951G-2524G64Mnkk	TH	LX.RH002.008	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2524G64Mnkk	TH	LX.RH002.009	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2524G64Mnkk	TH	LX.RH002.010	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2544G64Mnkk	TH	LX.RH002.007	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2544G64Mnkk	TH	LX.RH002.011	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2544G64Mnkk	TH	LX.RH002.012	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2624G00Mnkk	TH	LX.RH002.002	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2624G00Mnkk	TH	LX.RH002.003	2G-DDR3 (128*16*8)	SO4GBIII10

**Table 7-4. VRAM 1 & Memory 1 (Continued)**

Model	Country	P/N	VRAM 1	Memory 1
AS5951G-2624G75Mnkk	TH	LX.RH002.001	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2628G75Mnkk	BG	LX.RH002.017	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2631675Bnkk	BE	LX.RHS02.035	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2631675Bnkk	DE	LX.RHS02.008	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2631675Bnkk	LU	LX.RHS02.036	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2631675Bnkk	NL	LX.RHS02.034	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2634G50Mnkk	IT	LX.RHS02.003	2G-DDR3 (128*16*8)	SO2GBIII10
AS5951G-2634G64Bnkk	DE	LX.RHS02.022	2G-DDR3 (128*16*8)	SO2GBIII10
AS5951G-2634G64Bnkk	DK	LX.RHS02.019	2G-DDR3 (128*16*8)	SO2GBIII10
AS5951G-2634G64Mnkk	IN	LX.RJS02.006	1G-DDR3 (64*16*8)	SO2GBIII10
AS5951G-2634G75Bnkk	CN	LX.RHS02.005	2G-DDR3 (128*16*8)	SO2GBIII10
AS5951G-2634G75Bnkk	DE	LX.RHS02.007	2G-DDR3 (128*16*8)	SO2GBIII10
AS5951G-2634G75Bnkk	FR	LX.RHS02.001	2G-DDR3 (128*16*8)	SO2GBIII10
AS5951G-2634G75Bnkk	GCTWN	LX.RHS02.032	2G-DDR3 (128*16*8)	SO2GBIII10
AS5951G-2634G75Bnkk	ID	LX.RHS02.014	2G-DDR3 (128*16*8)	SO2GBIII10
AS5951G-2634G75Bnkk	ID	LX.RJS02.002	1G-DDR3 (64*16*8)	SO2GBIII10
AS5951G-2634G75Mnkk	DE	LX.RJS02.005	1G-DDR3 (64*16*8)	SO2GBIII10
AS5951G-2634G75Mnkk	IT	LX.RJS02.001	1G-DDR3 (64*16*8)	SO2GBIII10
AS5951G-2634G75Mnkk	PH	LX.RHS02.006	2G-DDR3 (128*16*8)	SO2GBIII10
AS5951G-2634G75Mnkk	ZA	LX.RJS02.008	1G-DDR3 (64*16*8)	SO2GBIII10
AS5951G-2636G64Mnkk	MOYO	LX.RHS02.028	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2636G75Bnkk	AU/NZ	LX.RHS02.018	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2636G75Mnkk	CA	LX.RHS02.025	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2636G75Mnkk	DK	LX.RHS02.002	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G32Bnkk	UK	LX.RHS02.023	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G64Mnkk	ES	LX.RHS02.027	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Bnkk	AU/NZ	LX.RHS02.017	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Bnkk	DE	LX.RHS02.021	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Bnkk	DK	LX.RHS02.020	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Bnkk	ES	LX.RHS02.026	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Bnkk	FR	LX.RHS02.009	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Bnkk	GCTWN	LX.RHS02.031	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Bnkk	GR	LX.RHS02.016	2G-DDR3 (128*16*8)	SO4GBIII10



**Table 7-4. VRAM 1 & Memory 1 (Continued)**

Model	Country	P/N	VRAM 1	Memory 1
AS5951G-2638G75Bnkk	HK	LX.RHS02.033	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Bnkk	IT	LX.RHS02.004	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Bnkk	RU	LX.RHS02.015	2G-DDR3 (128*16*8)	SO2GBIII10
AS5951G-2638G75Bnkk	TH	LX.RHS07.004	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Bnkk	TH	LX.RHS07.005	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Bnkk	TH	LX.RHS07.006	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Bnkk	UK	LX.RHS02.024	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Bnkk	UK	LX.RJS02.004	1G-DDR3 (64*16*8)	SO4GBIII10
AS5951G-2638G75Bnkk	UK	LX.RJS02.009	1G-DDR3 (64*16*8)	SO4GBIII10
AS5951G-2638G75Mnkk	CH	LX.RJS02.007	1G-DDR3 (64*16*8)	SO4GBIII10
AS5951G-2638G75Mnkk	GCTWN	LX.RHS02.010	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Mnkk	HK	LX.RJS02.010	1G-DDR3 (64*16*8)	SO4GBIII10
AS5951G-2638G75Mnkk	KR	LX.RHS02.029	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Mnkk	MOYO	LX.RHS02.030	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Mnkk	RO	LX.RHS02.039	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Mnkk	RS/BA	LX.RHS02.037	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Mnkk	SI/HR	LX.RHS02.038	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Mnkk	TH	LX.RHS02.011	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Mnkk	TH	LX.RHS02.012	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Mnkk	TH	LX.RHS02.013	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Mnkk	TH	LX.RHS07.001	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Mnkk	TH	LX.RHS07.002	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Mnkk	TH	LX.RHS07.003	2G-DDR3 (128*16*8)	SO4GBIII10
AS5951G-2638G75Mnkk	UK	LX.RJS02.003	1G-DDR3 (64*16*8)	SO4GBIII10

**Table 7-5. Memory 2 & Memory3**

Model	Country	P/N	Memory 2	Memory 3
AS5951G-2314G64Mnkk	FR	LX.RGZ02.001	SO2GBIII10	N
AS5951G-2316G50Mnkk	AL/MK	LX.RGZ02.018	SO2GBIII10	N
AS5951G-2316G50Mnkk	RS/BA	LX.RGZ02.019	SO2GBIII10	N
AS5951G-2316G50Mnkk	SI/HR	LX.RGZ02.020	SO2GBIII10	N
AS5951G-2412G75Mnkk	CN	LX.RGZ02.003	N	N

**Table 7-5. Memory 2 & Memory3 (Continued)**

Model	Country	P/N	Memory 2	Memory 3
AS5951G-2414G50Mnkk	BE	LX.RGZ02.016	N	N
AS5951G-2414G50Mnkk	CA	LX.RH002.014	N	N
AS5951G-2414G50Mnkk	DE	LX.RH002.005	SO2GBIII10	N
AS5951G-2414G50Mnkk	IT	LX.RGZ02.013	N	N
AS5951G-2414G50Mnkk	LU	LX.RGZ02.017	N	N
AS5951G-2414G50Mnkk	MOYO	LX.RGZ02.012	SO2GBIII10	N
AS5951G-2414G50Mnkk	MOYO	LX.RH002.016	SO2GBIII10	N
AS5951G-2414G50Mnkk	NL	LX.RGZ02.015	N	N
AS5951G-2414G50Mnkk	RU	LX.RGZ02.005	SO2GBIII10	N
AS5951G-2414G50Mnkk	TR	LX.RGZ02.011	SO2GBIII10	N
AS5951G-2414G64Bnkk	RU	LX.RH002.013	N	N
AS5951G-2414G64Mnkk	AL/MK	LX.RH002.019	N	N
AS5951G-2414G64Mnkk	DE	LX.RGZ02.008	N	N
AS5951G-2414G64Mnkk	DK	LX.RGZ02.006	N	N
AS5951G-2414G64Mnkk	FR	LX.RGZ02.004	SO2GBIII10	N
AS5951G-2414G64Mnkk	HK	LX.RGZ02.007	N	N
AS5951G-2414G64Mnkk	IN	LX.RGZ02.009	N	N
AS5951G-2414G64Mnkk	RO	LX.RGZ02.021	SO2GBIII10	N
AS5951G-2414G64Mnkk	RO	LX.RH002.024	SO2GBIII10	N
AS5951G-2414G64Mnkk	RS/BA	LX.RH002.020	N	N
AS5951G-2414G64Mnkk	SI/HR	LX.RH002.018	N	N
AS5951G-2414G75Bnkk	FR	LX.RH002.006	SO2GBIII10	N
AS5951G-2414G75Mnkk	DE	LX.RH002.015	SO2GBIII10	N
AS5951G-2414G75Mnkk	DK	LX.RGZ02.002	N	N
AS5951G-2414G75Mnkk	FR	LX.RH002.004	SO2GBIII10	N
AS5951G-2416G64Mnkk	AL/MK	LX.RH002.021	SO2GBIII10	N
AS5951G-2416G64Mnkk	RS/BA	LX.RH002.022	SO2GBIII10	N
AS5951G-2416G64Mnkk	SI/HR	LX.RH002.023	SO2GBIII10	N
AS5951G-2416G75Mnkk	BG	LX.RGZ02.014	SO2GBIII10	N
AS5951G-2418G75Mnkk	CH	LX.RGZ02.010	SO4GBIII10	N
AS5951G-2524G64Mnkk	TH	LX.RH002.008	N	N
AS5951G-2524G64Mnkk	TH	LX.RH002.009	N	N
AS5951G-2524G64Mnkk	TH	LX.RH002.010	N	N

**Table 7-5. Memory 2 & Memory3 (Continued)**

Model	Country	P/N	Memory 2	Memory 3
AS5951G-2544G64Mnkk	TH	LX.RH002.007	N	N
AS5951G-2544G64Mnkk	TH	LX.RH002.011	N	N
AS5951G-2544G64Mnkk	TH	LX.RH002.012	N	N
AS5951G-2624G00Mnkk	TH	LX.RH002.002	N	N
AS5951G-2624G00Mnkk	TH	LX.RH002.003	N	N
AS5951G-2624G75Mnkk	TH	LX.RH002.001	N	N
AS5951G-2628G75Mnkk	BG	LX.RH002.017	SO4GBIII10	N
AS5951G-2631675Bnkk	BE	LX.RHS02.035	SO4GBIII10	SO4GBIII10
AS5951G-2631675Bnkk	DE	LX.RHS02.008	SO4GBIII10	SO4GBIII10
AS5951G-2631675Bnkk	LU	LX.RHS02.036	SO4GBIII10	SO4GBIII10
AS5951G-2631675Bnkk	NL	LX.RHS02.034	SO4GBIII10	SO4GBIII10
AS5951G-2634G50Mnkk	IT	LX.RHS02.003	SO2GBIII10	N
AS5951G-2634G64Bnkk	DE	LX.RHS02.022	SO2GBIII10	N
AS5951G-2634G64Bnkk	DK	LX.RHS02.019	SO2GBIII10	N
AS5951G-2634G64Mnkk	IN	LX.RJS02.006	SO2GBIII10	N
AS5951G-2634G75Bnkk	CN	LX.RHS02.005	SO2GBIII10	N
AS5951G-2634G75Bnkk	DE	LX.RHS02.007	SO2GBIII10	N
AS5951G-2634G75Bnkk	FR	LX.RHS02.001	SO2GBIII10	N
AS5951G-2634G75Bnkk	GCTWN	LX.RHS02.032	SO2GBIII10	N
AS5951G-2634G75Bnkk	ID	LX.RHS02.014	SO2GBIII10	N
AS5951G-2634G75Bnkk	ID	LX.RJS02.002	SO2GBIII10	N
AS5951G-2634G75Mnkk	DE	LX.RJS02.005	SO2GBIII10	N
AS5951G-2634G75Mnkk	IT	LX.RJS02.001	SO2GBIII10	N
AS5951G-2634G75Mnkk	PH	LX.RHS02.006	SO2GBIII10	N
AS5951G-2634G75Mnkk	ZA	LX.RJS02.008	SO2GBIII10	N
AS5951G-2636G64Mnkk	MOYO	LX.RHS02.028	SO2GBIII10	N
AS5951G-2636G75Bnkk	AU/NZ	LX.RHS02.018	SO2GBIII10	N
AS5951G-2636G75Mnkk	CA	LX.RHS02.025	SO2GBIII10	N
AS5951G-2636G75Mnkk	DK	LX.RHS02.002	SO2GBIII10	N
AS5951G-2638G32Bnkk	UK	LX.RHS02.023	SO4GBIII10	N
AS5951G-2638G64Mnkk	ES	LX.RHS02.027	SO4GBIII10	N
AS5951G-2638G75Bnkk	AU/NZ	LX.RHS02.017	SO4GBIII10	N
AS5951G-2638G75Bnkk	DE	LX.RHS02.021	SO4GBIII10	N

**Table 7-5. Memory 2 & Memory3 (Continued)**

Model	Country	P/N	Memory 2	Memory 3
AS5951G-2638G75Bnkk	DK	LX.RHS02.020	SO4GBIII10	N
AS5951G-2638G75Bnkk	ES	LX.RHS02.026	SO4GBIII10	N
AS5951G-2638G75Bnkk	FR	LX.RHS02.009	SO4GBIII10	N
AS5951G-2638G75Bnkk	GCTWN	LX.RHS02.031	SO4GBIII10	N
AS5951G-2638G75Bnkk	GR	LX.RHS02.016	SO4GBIII10	N
AS5951G-2638G75Bnkk	HK	LX.RHS02.033	SO4GBIII10	N
AS5951G-2638G75Bnkk	IT	LX.RHS02.004	SO4GBIII10	N
AS5951G-2638G75Bnkk	RU	LX.RHS02.015	SO2GBIII10	SO2GBIII10
AS5951G-2638G75Bnkk	TH	LX.RHS07.004	SO4GBIII10	N
AS5951G-2638G75Bnkk	TH	LX.RHS07.005	SO4GBIII10	N
AS5951G-2638G75Bnkk	TH	LX.RHS07.006	SO4GBIII10	N
AS5951G-2638G75Bnkk	UK	LX.RHS02.024	SO4GBIII10	N
AS5951G-2638G75Bnkk	UK	LX.RJS02.004	SO4GBIII10	N
AS5951G-2638G75Bnkk	UK	LX.RJS02.009	SO4GBIII10	N
AS5951G-2638G75Mnkk	CH	LX.RJS02.007	SO4GBIII10	N
AS5951G-2638G75Mnkk	GCTWN	LX.RHS02.010	SO4GBIII10	N
AS5951G-2638G75Mnkk	HK	LX.RJS02.010	SO4GBIII10	N
AS5951G-2638G75Mnkk	KR	LX.RHS02.029	SO4GBIII10	N
AS5951G-2638G75Mnkk	MOYO	LX.RHS02.030	SO4GBIII10	N
AS5951G-2638G75Mnkk	RO	LX.RHS02.039	SO4GBIII10	N
AS5951G-2638G75Mnkk	RS/BA	LX.RHS02.037	SO4GBIII10	N
AS5951G-2638G75Mnkk	SI/HR	LX.RHS02.038	SO4GBIII10	N
AS5951G-2638G75Mnkk	TH	LX.RHS02.011	SO4GBIII10	N
AS5951G-2638G75Mnkk	TH	LX.RHS02.012	SO4GBIII10	N
AS5951G-2638G75Mnkk	TH	LX.RHS02.013	SO4GBIII10	N
AS5951G-2638G75Mnkk	TH	LX.RHS07.001	SO4GBIII10	N
AS5951G-2638G75Mnkk	TH	LX.RHS07.002	SO4GBIII10	N
AS5951G-2638G75Mnkk	TH	LX.RHS07.003	SO4GBIII10	N
AS5951G-2638G75Mnkk	UK	LX.RJS02.003	SO4GBIII10	N

**Table 7-6. Memory 4 & HDD 1**

Model	Country	P/N	Memory 4	HDD 1(GB)
AS5951G-2314G64Mnkk	FR	LX.RGZ02.001	N	N640GB5.4KS_4K
AS5951G-2316G50Mnkk	AL/MK	LX.RGZ02.018	N	N500GB5.4KS
AS5951G-2316G50Mnkk	RS/BA	LX.RGZ02.019	N	N500GB5.4KS
AS5951G-2316G50Mnkk	SI/HR	LX.RGZ02.020	N	N500GB5.4KS
AS5951G-2412G75Mnkk	CN	LX.RGZ02.003	N	N750GB5.4KS_4K
AS5951G-2414G50Mnkk	BE	LX.RGZ02.016	N	N500GB5.4KS
AS5951G-2414G50Mnkk	CA	LX.RH002.014	N	N500GB5.4KS_4K
AS5951G-2414G50Mnkk	DE	LX.RH002.005	N	N500GB5.4KS_4K
AS5951G-2414G50Mnkk	IT	LX.RGZ02.013	N	N500GB5.4KS_4K
AS5951G-2414G50Mnkk	LU	LX.RGZ02.017	N	N500GB5.4KS
AS5951G-2414G50Mnkk	MOYO	LX.RGZ02.012	N	N500GB5.4KS_4K
AS5951G-2414G50Mnkk	MOYO	LX.RH002.016	N	N500GB5.4KS
AS5951G-2414G50Mnkk	NL	LX.RGZ02.015	N	N500GB5.4KS
AS5951G-2414G50Mnkk	RU	LX.RGZ02.005	N	N500GB5.4KS_4K
AS5951G-2414G50Mnkk	TR	LX.RGZ02.011	N	N500GB5.4KS_4K
AS5951G-2414G64Bnkk	RU	LX.RH002.013	N	N640GB5.4KS_4K
AS5951G-2414G64Mnkk	AL/MK	LX.RH002.019	N	N640GB5.4KS
AS5951G-2414G64Mnkk	DE	LX.RGZ02.008	N	N640GB5.4KS_4K
AS5951G-2414G64Mnkk	DK	LX.RGZ02.006	N	N640GB5.4KS_4K
AS5951G-2414G64Mnkk	FR	LX.RGZ02.004	N	N640GB5.4KS_4K
AS5951G-2414G64Mnkk	HK	LX.RGZ02.007	N	N640GB5.4KS_4K
AS5951G-2414G64Mnkk	IN	LX.RGZ02.009	N	N640GB5.4KS_4K
AS5951G-2414G64Mnkk	RO	LX.RGZ02.021	N	N640GB5.4KS
AS5951G-2414G64Mnkk	RO	LX.RH002.024	N	N640GB5.4KS
AS5951G-2414G64Mnkk	RS/BA	LX.RH002.020	N	N640GB5.4KS
AS5951G-2414G64Mnkk	SI/HR	LX.RH002.018	N	N640GB5.4KS
AS5951G-2414G75Bnkk	FR	LX.RH002.006	N	N750GB5.4KS_4K
AS5951G-2414G75Mnkk	DE	LX.RH002.015	N	N750GB5.4KS_4K
AS5951G-2414G75Mnkk	DK	LX.RGZ02.002	N	N750GB5.4KS_4K
AS5951G-2414G75Mnkk	FR	LX.RH002.004	N	N750GB5.4KS_4K
AS5951G-2416G64Mnkk	AL/MK	LX.RH002.021	N	N640GB5.4KS
AS5951G-2416G64Mnkk	RS/BA	LX.RH002.022	N	N640GB5.4KS

**Table 7-6. Memory 4 & HDD 1 (Continued)**

Model	Country	P/N	Memory 4	HDD 1(GB)
AS5951G-2416G64Mnkk	SI/HR	LX.RH002.023	N	N640GB5.4KS
AS5951G-2416G75Mnkk	BG	LX.RGZ02.014	N	N750GB5.4KS_4K
AS5951G-2418G75Mnkk	CH	LX.RGZ02.010	N	N750GB5.4KS_4K
AS5951G-2524G64Mnkk	TH	LX.RH002.008	N	N640GB5.4KS_4K
AS5951G-2524G64Mnkk	TH	LX.RH002.009	N	N640GB5.4KS_4K
AS5951G-2524G64Mnkk	TH	LX.RH002.010	N	N640GB5.4KS_4K
AS5951G-2544G64Mnkk	TH	LX.RH002.007	N	N640GB5.4KS_4K
AS5951G-2544G64Mnkk	TH	LX.RH002.011	N	N640GB5.4KS_4K
AS5951G-2544G64Mnkk	TH	LX.RH002.012	N	N640GB5.4KS_4K
AS5951G-2624G00Mnkk	TH	LX.RH002.002	N	N750GB5.4KS_4K
AS5951G-2624G00Mnkk	TH	LX.RH002.003	N	N750GB5.4KS_4K
AS5951G-2624G75Mnkk	TH	LX.RH002.001	N	N750GB5.4KS_4K
AS5951G-2628G75Mnkk	BG	LX.RH002.017	N	N750GB5.4KS_4K
AS5951G-2631675Bnkk	BE	LX.RHS02.035	SO4GBIII10	N750GB5.4KS_4K
AS5951G-2631675Bnkk	DE	LX.RHS02.008	SO4GBIII10	N750GB5.4KS_4K
AS5951G-2631675Bnkk	LU	LX.RHS02.036	SO4GBIII10	N750GB5.4KS_4K
AS5951G-2631675Bnkk	NL	LX.RHS02.034	SO4GBIII10	N750GB5.4KS_4K
AS5951G-2634G50Mnkk	IT	LX.RHS02.003	N	N500GB5.4KS_4K
AS5951G-2634G64Bnkk	DE	LX.RHS02.022	N	N640GB5.4KS_4K
AS5951G-2634G64Bnkk	DK	LX.RHS02.019	N	N640GB5.4KS_4K
AS5951G-2634G64Mnkk	IN	LX.RJS02.006	N	N640GB5.4KS_4K
AS5951G-2634G75Bnkk	CN	LX.RHS02.005	N	N750GB5.4KS_4K
AS5951G-2634G75Bnkk	DE	LX.RHS02.007	N	N750GB5.4KS_4K
AS5951G-2634G75Bnkk	FR	LX.RHS02.001	N	N750GB5.4KS_4K
AS5951G-2634G75Bnkk	GCTWN	LX.RHS02.032	N	N750GB5.4KS_4K
AS5951G-2634G75Bnkk	ID	LX.RHS02.014	N	N750GB5.4KS_4K
AS5951G-2634G75Bnkk	ID	LX.RJS02.002	N	N750GB5.4KS_4K
AS5951G-2634G75Mnkk	DE	LX.RJS02.005	N	N750GB5.4KS_4K
AS5951G-2634G75Mnkk	IT	LX.RJS02.001	N	N750GB5.4KS_4K
AS5951G-2634G75Mnkk	PH	LX.RHS02.006	N	N750GB5.4KS_4K
AS5951G-2634G75Mnkk	ZA	LX.RJS02.008	N	N750GB5.4KS_4K
AS5951G-2636G64Mnkk	MOYO	LX.RHS02.028	N	N640GB5.4KS_4K
AS5951G-2636G75Bnkk	AU/NZ	LX.RHS02.018	N	N750GB5.4KS_4K

**Table 7-6. Memory 4 & HDD 1 (Continued)**

Model	Country	P/N	Memory 4	HDD 1(GB)
AS5951G-2636G75Mnkk	CA	LX.RHS02.025	N	N750GB5.4KS_4K
AS5951G-2636G75Mnkk	DK	LX.RHS02.002	N	N750GB5.4KS_4K
AS5951G-2638G32Bnkk	UK	LX.RHS02.023	N	N320GB5.4KS_4K
AS5951G-2638G64Mnkk	ES	LX.RHS02.027	N	N640GB5.4KS_4K
AS5951G-2638G75Bnkk	AU/NZ	LX.RHS02.017	N	N750GB5.4KS_4K
AS5951G-2638G75Bnkk	DE	LX.RHS02.021	N	N750GB5.4KS_4K
AS5951G-2638G75Bnkk	DK	LX.RHS02.020	N	N750GB5.4KS_4K
AS5951G-2638G75Bnkk	ES	LX.RHS02.026	N	N750GB5.4KS_4K
AS5951G-2638G75Bnkk	FR	LX.RHS02.009	N	N750GB5.4KS_4K
AS5951G-2638G75Bnkk	GCTWN	LX.RHS02.031	N	N750GB5.4KS_4K
AS5951G-2638G75Bnkk	GR	LX.RHS02.016	N	N750GB5.4KS_4K
AS5951G-2638G75Bnkk	HK	LX.RHS02.033	N	N750GB5.4KS_4K
AS5951G-2638G75Bnkk	IT	LX.RHS02.004	N	N750GB5.4KS_4K
AS5951G-2638G75Bnkk	RU	LX.RHS02.015	SO2GBIII10	N750GB5.4KS_4K
AS5951G-2638G75Bnkk	TH	LX.RHS07.004	N	N750GB5.4KS_4K
AS5951G-2638G75Bnkk	TH	LX.RHS07.005	N	N750GB5.4KS_4K
AS5951G-2638G75Bnkk	TH	LX.RHS07.006	N	N750GB5.4KS_4K
AS5951G-2638G75Bnkk	UK	LX.RHS02.024	N	N750GB5.4KS_4K
AS5951G-2638G75Bnkk	UK	LX.RJS02.004	N	N750GB5.4KS_4K
AS5951G-2638G75Bnkk	UK	LX.RJS02.009	N	N750GB5.4KS_4K
AS5951G-2638G75Mnkk	CH	LX.RJS02.007	N	N750GB5.4KS_4K
AS5951G-2638G75Mnkk	GCTWN	LX.RHS02.010	N	N750GB5.4KS_4K
AS5951G-2638G75Mnkk	HK	LX.RJS02.010	N	N750GB5.4KS_4K
AS5951G-2638G75Mnkk	KR	LX.RHS02.029	N	N750GB5.4KS_4K
AS5951G-2638G75Mnkk	MOYO	LX.RHS02.030	N	N750GB5.4KS_4K
AS5951G-2638G75Mnkk	RO	LX.RHS02.039	N	N750GB5.4KS_4K
AS5951G-2638G75Mnkk	RS/BA	LX.RHS02.037	N	N750GB5.4KS_4K
AS5951G-2638G75Mnkk	SI/HR	LX.RHS02.038	N	N750GB5.4KS_4K
AS5951G-2638G75Mnkk	TH	LX.RHS02.011	N	N750GB5.4KS_4K
AS5951G-2638G75Mnkk	TH	LX.RHS02.012	N	N750GB5.4KS_4K
AS5951G-2638G75Mnkk	TH	LX.RHS02.013	N	N750GB5.4KS_4K
AS5951G-2638G75Mnkk	TH	LX.RHS07.001	N	N750GB5.4KS_4K
AS5951G-2638G75Mnkk	TH	LX.RHS07.002	N	N750GB5.4KS_4K

**Table 7-6. Memory 4 & HDD 1 (Continued)**

Model	Country	P/N	Memory 4	HDD 1(GB)
AS5951G-2638G75Mnkk	TH	LX.RHS07.003	N	N750GB5.4KS_4K
AS5951G-2638G75Mnkk	UK	LX.RJS02.003	N	N750GB5.4KS_4K

**Table 7-7. ODD & Wireless LAN1**

Model	Country	P/N	ODD	Wireless LAN1
AS5951G-2314G64Mnkk	FR	LX.RGZ02.001	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2316G50Mnkk	AL/MK	LX.RGZ02.018	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2316G50Mnkk	RS/BA	LX.RGZ02.019	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2316G50Mnkk	SI/HR	LX.RGZ02.020	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2412G75Mnkk	CN	LX.RGZ02.003	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G50Mnkk	BE	LX.RGZ02.016	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G50Mnkk	CA	LX.RH002.014	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G50Mnkk	DE	LX.RH002.005	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G50Mnkk	IT	LX.RGZ02.013	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G50Mnkk	LU	LX.RGZ02.017	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G50Mnkk	MOYO	LX.RGZ02.012	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G50Mnkk	MOYO	LX.RH002.016	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G50Mnkk	NL	LX.RGZ02.015	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G50Mnkk	RU	LX.RGZ02.005	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G50Mnkk	TR	LX.RGZ02.011	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G64Bnkk	RU	LX.RH002.013	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2414G64Mnkk	AL/MK	LX.RH002.019	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G64Mnkk	DE	LX.RGZ02.008	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G64Mnkk	DK	LX.RGZ02.006	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G64Mnkk	FR	LX.RGZ02.004	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G64Mnkk	HK	LX.RGZ02.007	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G64Mnkk	IN	LX.RGZ02.009	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G64Mnkk	RO	LX.RGZ02.021	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G64Mnkk	RO	LX.RH002.024	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G64Mnkk	RS/BA	LX.RH002.020	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G64Mnkk	SI/HR	LX.RH002.018	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G75Bnkk	FR	LX.RH002.006	NBDCB4XS	3rd WiFi 2x2 BGN



**Table 7-7. ODD & Wireless LAN1 (Continued)**

Model	Country	P/N	ODD	Wireless LAN1
AS5951G-2414G75Mnkk	DE	LX.RH002.015	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G75Mnkk	DK	LX.RGZ02.002	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2414G75Mnkk	FR	LX.RH002.004	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2416G64Mnkk	AL/MK	LX.RH002.021	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2416G64Mnkk	RS/BA	LX.RH002.022	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2416G64Mnkk	SI/HR	LX.RH002.023	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2416G75Mnkk	BG	LX.RGZ02.014	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2418G75Mnkk	CH	LX.RGZ02.010	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2524G64Mnkk	TH	LX.RH002.008	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2524G64Mnkk	TH	LX.RH002.009	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2524G64Mnkk	TH	LX.RH002.010	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2544G64Mnkk	TH	LX.RH002.007	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2544G64Mnkk	TH	LX.RH002.011	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2544G64Mnkk	TH	LX.RH002.012	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2624G00Mnkk	TH	LX.RH002.002	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2624G00Mnkk	TH	LX.RH002.003	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2624G75Mnkk	TH	LX.RH002.001	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2628G75Mnkk	BG	LX.RH002.017	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2631675Bnkk	BE	LX.RHS02.035	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2631675Bnkk	DE	LX.RHS02.008	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2631675Bnkk	LU	LX.RHS02.036	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2631675Bnkk	NL	LX.RHS02.034	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2634G50Mnkk	IT	LX.RHS02.003	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2634G64Bnkk	DE	LX.RHS02.022	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2634G64Bnkk	DK	LX.RHS02.019	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2634G64Mnkk	IN	LX.RJS02.006	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2634G75Bnkk	CN	LX.RHS02.005	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2634G75Bnkk	DE	LX.RHS02.007	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2634G75Bnkk	FR	LX.RHS02.001	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2634G75Bnkk	GCTWN	LX.RHS02.032	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2634G75Bnkk	ID	LX.RHS02.014	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2634G75Bnkk	ID	LX.RJS02.002	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2634G75Mnkk	DE	LX.RJS02.005	NSM8XS	3rd WiFi 2x2 BGN

**Table 7-7. ODD & Wireless LAN1 (Continued)**

Model	Country	P/N	ODD	Wireless LAN1
AS5951G-2634G75Mnkk	IT	LX.RJS02.001	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2634G75Mnkk	PH	LX.RHS02.006	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2634G75Mnkk	ZA	LX.RJS02.008	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2636G64Mnkk	MOYO	LX.RHS02.028	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2636G75Bnkk	AU/NZ	LX.RHS02.018	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2636G75Mnkk	CA	LX.RHS02.025	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2636G75Mnkk	DK	LX.RHS02.002	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2638G32Bnkk	UK	LX.RHS02.023	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2638G64Mnkk	ES	LX.RHS02.027	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Bnkk	AU/NZ	LX.RHS02.017	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Bnkk	DE	LX.RHS02.021	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Bnkk	DK	LX.RHS02.020	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Bnkk	ES	LX.RHS02.026	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Bnkk	FR	LX.RHS02.009	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Bnkk	GCTWN	LX.RHS02.031	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Bnkk	GR	LX.RHS02.016	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Bnkk	HK	LX.RHS02.033	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Bnkk	IT	LX.RHS02.004	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Bnkk	RU	LX.RHS02.015	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Bnkk	TH	LX.RHS07.004	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Bnkk	TH	LX.RHS07.005	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Bnkk	TH	LX.RHS07.006	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Bnkk	UK	LX.RHS02.024	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Bnkk	UK	LX.RJS02.004	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Bnkk	UK	LX.RJS02.009	NBDCB4XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Mnkk	CH	LX.RJS02.007	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Mnkk	GCTWN	LX.RHS02.010	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Mnkk	HK	LX.RJS02.010	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Mnkk	KR	LX.RHS02.029	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Mnkk	MOYO	LX.RHS02.030	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Mnkk	RO	LX.RHS02.039	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Mnkk	RS/BA	LX.RHS02.037	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Mnkk	SI/HR	LX.RHS02.038	NSM8XS	3rd WiFi 2x2 BGN

**Table 7-7. ODD & Wireless LAN1 (Continued)**

Model	Country	P/N	ODD	Wireless LAN1
AS5951G-2638G75Mnkk	TH	LX.RHS02.011	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Mnkk	TH	LX.RHS02.012	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Mnkk	TH	LX.RHS02.013	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Mnkk	TH	LX.RHS07.001	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Mnkk	TH	LX.RHS07.002	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Mnkk	TH	LX.RHS07.003	NSM8XS	3rd WiFi 2x2 BGN
AS5951G-2638G75Mnkk	UK	LX.RJS02.003	NSM8XS	3rd WiFi 2x2 BGN

**Table 7-8. Bluetooth & NB Chipset**

Model	Country	P/N	Bluetooth	NB Chipset
AS5951G-2314G64Mnkk	FR	LX.RGZ02.001	BT 3.0	HM65
AS5951G-2316G50Mnkk	AL/MK	LX.RGZ02.018	BT 3.0	HM65
AS5951G-2316G50Mnkk	RS/BA	LX.RGZ02.019	BT 3.0	HM65
AS5951G-2316G50Mnkk	SI/HR	LX.RGZ02.020	BT 3.0	HM65
AS5951G-2412G75Mnkk	CN	LX.RGZ02.003	BT 3.0	HM65
AS5951G-2414G50Mnkk	BE	LX.RGZ02.016	BT 3.0	HM65
AS5951G-2414G50Mnkk	CA	LX.RH002.014	BT 3.0	HM65
AS5951G-2414G50Mnkk	DE	LX.RH002.005	BT 3.0	HM65
AS5951G-2414G50Mnkk	IT	LX.RGZ02.013	N	HM65
AS5951G-2414G50Mnkk	LU	LX.RGZ02.017	BT 3.0	HM65
AS5951G-2414G50Mnkk	MOYO	LX.RGZ02.012	BT 3.0	HM65
AS5951G-2414G50Mnkk	MOYO	LX.RH002.016	BT 3.0	HM65
AS5951G-2414G50Mnkk	NL	LX.RGZ02.015	BT 3.0	HM65
AS5951G-2414G50Mnkk	RU	LX.RGZ02.005	BT 3.0	HM65
AS5951G-2414G50Mnkk	TR	LX.RGZ02.011	BT 3.0	HM65
AS5951G-2414G64Bnkk	RU	LX.RH002.013	BT 3.0	HM65
AS5951G-2414G64Mnkk	AL/MK	LX.RH002.019	BT 3.0	HM65
AS5951G-2414G64Mnkk	DE	LX.RGZ02.008	BT 3.0	HM65
AS5951G-2414G64Mnkk	DK	LX.RGZ02.006	BT 3.0	HM65
AS5951G-2414G64Mnkk	FR	LX.RGZ02.004	BT 3.0	HM65
AS5951G-2414G64Mnkk	HK	LX.RGZ02.007	BT 3.0	HM65
AS5951G-2414G64Mnkk	IN	LX.RGZ02.009	BT 3.0	HM65

**Table 7-8. Bluetooth & NB Chipset (Continued)**

Model	Country	P/N	Bluetooth	NB Chipset
AS5951G-2414G64Mnkk	RO	LX.RGZ02.021	N	HM65
AS5951G-2414G64Mnkk	RO	LX.RH002.024	N	HM65
AS5951G-2414G64Mnkk	RS/BA	LX.RH002.020	BT 3.0	HM65
AS5951G-2414G64Mnkk	SI/HR	LX.RH002.018	BT 3.0	HM65
AS5951G-2414G75Bnkk	FR	LX.RH002.006	BT 3.0	HM65
AS5951G-2414G75Mnkk	DE	LX.RH002.015	BT 3.0	HM65
AS5951G-2414G75Mnkk	DK	LX.RGZ02.002	BT 3.0	HM65
AS5951G-2414G75Mnkk	FR	LX.RH002.004	BT 3.0	HM65
AS5951G-2416G64Mnkk	AL/MK	LX.RH002.021	BT 3.0	HM65
AS5951G-2416G64Mnkk	RS/BA	LX.RH002.022	BT 3.0	HM65
AS5951G-2416G64Mnkk	SI/HR	LX.RH002.023	BT 3.0	HM65
AS5951G-2416G75Mnkk	BG	LX.RGZ02.014	N	HM65
AS5951G-2418G75Mnkk	CH	LX.RGZ02.010	BT 3.0	HM65
AS5951G-2524G64Mnkk	TH	LX.RH002.008	BT 3.0	HM65
AS5951G-2524G64Mnkk	TH	LX.RH002.009	BT 3.0	HM65
AS5951G-2524G64Mnkk	TH	LX.RH002.010	BT 3.0	HM65
AS5951G-2544G64Mnkk	TH	LX.RH002.007	BT 3.0	HM65
AS5951G-2544G64Mnkk	TH	LX.RH002.011	BT 3.0	HM65
AS5951G-2544G64Mnkk	TH	LX.RH002.012	BT 3.0	HM65
AS5951G-2624G00Mnkk	TH	LX.RH002.002	BT 3.0	HM65
AS5951G-2624G00Mnkk	TH	LX.RH002.003	BT 3.0	HM65
AS5951G-2624G75Mnkk	TH	LX.RH002.001	BT 3.0	HM65
AS5951G-2628G75Mnkk	BG	LX.RH002.017	BT 3.0	HM65
AS5951G-2631675Bnkk	BE	LX.RHS02.035	BT 3.0	HM65
AS5951G-2631675Bnkk	DE	LX.RHS02.008	BT 3.0	HM65
AS5951G-2631675Bnkk	LU	LX.RHS02.036	BT 3.0	HM65
AS5951G-2631675Bnkk	NL	LX.RHS02.034	BT 3.0	HM65
AS5951G-2634G50Mnkk	IT	LX.RHS02.003	N	HM65
AS5951G-2634G64Bnkk	DE	LX.RHS02.022	BT 3.0	HM65
AS5951G-2634G64Bnkk	DK	LX.RHS02.019	BT 3.0	HM65
AS5951G-2634G64Mnkk	IN	LX.RJS02.006	BT 3.0	HM65
AS5951G-2634G75Bnkk	CN	LX.RHS02.005	BT 3.0	HM65
AS5951G-2634G75Bnkk	DE	LX.RHS02.007	BT 3.0	HM65

**Table 7-8. Bluetooth & NB Chipset (Continued)**

Model	Country	P/N	Bluetooth	NB Chipset
AS5951G-2634G75Bnkk	FR	LX.RHS02.001	BT 3.0	HM65
AS5951G-2634G75Bnkk	GCTWN	LX.RHS02.032	BT 3.0	HM65
AS5951G-2634G75Bnkk	ID	LX.RHS02.014	BT 3.0	HM65
AS5951G-2634G75Bnkk	ID	LX.RJS02.002	BT 3.0	HM65
AS5951G-2634G75Mnkk	DE	LX.RJS02.005	BT 3.0	HM65
AS5951G-2634G75Mnkk	IT	LX.RJS02.001	BT 3.0	HM65
AS5951G-2634G75Mnkk	PH	LX.RHS02.006	BT 3.0	HM65
AS5951G-2634G75Mnkk	ZA	LX.RJS02.008	BT 3.0	HM65
AS5951G-2636G64Mnkk	MOYO	LX.RHS02.028	BT 3.0	HM65
AS5951G-2636G75Bnkk	AU/NZ	LX.RHS02.018	BT 3.0	HM65
AS5951G-2636G75Mnkk	CA	LX.RHS02.025	BT 3.0	HM65
AS5951G-2636G75Mnkk	DK	LX.RHS02.002	BT 3.0	HM65
AS5951G-2638G32Bnkk	UK	LX.RHS02.023	N	HM65
AS5951G-2638G64Mnkk	ES	LX.RHS02.027	N	HM65
AS5951G-2638G75Bnkk	AU/NZ	LX.RHS02.017	BT 3.0	HM65
AS5951G-2638G75Bnkk	DE	LX.RHS02.021	BT 3.0	HM65
AS5951G-2638G75Bnkk	DK	LX.RHS02.020	BT 3.0	HM65
AS5951G-2638G75Bnkk	ES	LX.RHS02.026	N	HM65
AS5951G-2638G75Bnkk	FR	LX.RHS02.009	BT 3.0	HM65
AS5951G-2638G75Bnkk	GCTWN	LX.RHS02.031	BT 3.0	HM65
AS5951G-2638G75Bnkk	GR	LX.RHS02.016	BT 3.0	HM65
AS5951G-2638G75Bnkk	HK	LX.RHS02.033	BT 3.0	HM65
AS5951G-2638G75Bnkk	IT	LX.RHS02.004	BT 3.0	HM65
AS5951G-2638G75Bnkk	RU	LX.RHS02.015	BT 3.0	HM65
AS5951G-2638G75Bnkk	TH	LX.RHS07.004	BT 3.0	HM65
AS5951G-2638G75Bnkk	TH	LX.RHS07.005	BT 3.0	HM65
AS5951G-2638G75Bnkk	TH	LX.RHS07.006	BT 3.0	HM65
AS5951G-2638G75Bnkk	UK	LX.RHS02.024	N	HM65
AS5951G-2638G75Bnkk	UK	LX.RJS02.004	N	HM65
AS5951G-2638G75Bnkk	UK	LX.RJS02.009	N	HM65
AS5951G-2638G75Mnkk	CH	LX.RJS02.007	BT 3.0	HM65
AS5951G-2638G75Mnkk	GCTWN	LX.RHS02.010	BT 3.0	HM65
AS5951G-2638G75Mnkk	HK	LX.RJS02.010	BT 3.0	HM65

**Table 7-8. Bluetooth & NB Chipset (Continued)**

Model	Country	P/N	Bluetooth	NB Chipset
AS5951G-2638G75Mnkk	KR	LX.RHS02.029	BT 3.0	HM65
AS5951G-2638G75Mnkk	MOYO	LX.RHS02.030	BT 3.0	HM65
AS5951G-2638G75Mnkk	RO	LX.RHS02.039	BT 3.0	HM65
AS5951G-2638G75Mnkk	RS/BA	LX.RHS02.037	BT 3.0	HM65
AS5951G-2638G75Mnkk	SI/HR	LX.RHS02.038	BT 3.0	HM65
AS5951G-2638G75Mnkk	TH	LX.RHS02.011	BT 3.0	HM65
AS5951G-2638G75Mnkk	TH	LX.RHS02.012	BT 3.0	HM65
AS5951G-2638G75Mnkk	TH	LX.RHS02.013	BT 3.0	HM65
AS5951G-2638G75Mnkk	TH	LX.RHS07.001	BT 3.0	HM65
AS5951G-2638G75Mnkk	TH	LX.RHS07.002	BT 3.0	HM65
AS5951G-2638G75Mnkk	TH	LX.RHS07.003	BT 3.0	HM65
AS5951G-2638G75Mnkk	UK	LX.RJS02.003	N	HM65

**Table 7-9. Battery & Adapter**

Model	Country	P/N	Battery	Adapter
AS5951G-2314G64Mnkk	FR	LX.RGZ02.001	8CELL3.0	90W
AS5951G-2316G50Mnkk	AL/MK	LX.RGZ02.018	8CELL3.0	90W
AS5951G-2316G50Mnkk	RS/BA	LX.RGZ02.019	8CELL3.0	90W
AS5951G-2316G50Mnkk	SI/HR	LX.RGZ02.020	8CELL3.0	90W
AS5951G-2412G75Mnkk	CN	LX.RGZ02.003	8CELL3.0	90W
AS5951G-2414G50Mnkk	BE	LX.RGZ02.016	8CELL3.0	90W
AS5951G-2414G50Mnkk	CA	LX.RH002.014	8CELL3.0	120W-DE
AS5951G-2414G50Mnkk	DE	LX.RH002.005	8CELL3.0	120W-DE
AS5951G-2414G50Mnkk	IT	LX.RGZ02.013	8CELL3.0	90W
AS5951G-2414G50Mnkk	LU	LX.RGZ02.017	8CELL3.0	90W
AS5951G-2414G50Mnkk	MOYO	LX.RGZ02.012	8CELL3.0	90W
AS5951G-2414G50Mnkk	MOYO	LX.RH002.016	8CELL3.0	120W-DE
AS5951G-2414G50Mnkk	NL	LX.RGZ02.015	8CELL3.0	90W
AS5951G-2414G50Mnkk	RU	LX.RGZ02.005	8CELL3.0	90W
AS5951G-2414G50Mnkk	TR	LX.RGZ02.011	8CELL3.0	90W
AS5951G-2414G64Bnkk	RU	LX.RH002.013	8CELL3.0	120W-DE
AS5951G-2414G64Mnkk	AL/MK	LX.RH002.019	8CELL3.0	120W-DE

**Table 7-9. Battery & Adapter (Continued)**

Model	Country	P/N	Battery	Adapter
AS5951G-2414G64Mnkk	DE	LX.RGZ02.008	8CELL3.0	90W
AS5951G-2414G64Mnkk	DK	LX.RGZ02.006	8CELL3.0	90W
AS5951G-2414G64Mnkk	FR	LX.RGZ02.004	8CELL3.0	90W
AS5951G-2414G64Mnkk	HK	LX.RGZ02.007	8CELL3.0	90W
AS5951G-2414G64Mnkk	IN	LX.RGZ02.009	8CELL3.0	90W
AS5951G-2414G64Mnkk	RO	LX.RGZ02.021	8CELL3.0	90W
AS5951G-2414G64Mnkk	RO	LX.RH002.024	8CELL3.0	120W-DE
AS5951G-2414G64Mnkk	RS/BA	LX.RH002.020	8CELL3.0	120W-DE
AS5951G-2414G64Mnkk	SI/HR	LX.RH002.018	8CELL3.0	120W-DE
AS5951G-2414G75Bnkk	FR	LX.RH002.006	8CELL3.0	120W-DE
AS5951G-2414G75Mnkk	DE	LX.RH002.015	8CELL3.0	120W-DE
AS5951G-2414G75Mnkk	DK	LX.RGZ02.002	8CELL3.0	90W
AS5951G-2414G75Mnkk	FR	LX.RH002.004	8CELL3.0	120W-DE
AS5951G-2416G64Mnkk	AL/MK	LX.RH002.021	8CELL3.0	120W-DE
AS5951G-2416G64Mnkk	RS/BA	LX.RH002.022	8CELL3.0	120W-DE
AS5951G-2416G64Mnkk	SI/HR	LX.RH002.023	8CELL3.0	120W-DE
AS5951G-2416G75Mnkk	BG	LX.RGZ02.014	8CELL3.0	90W
AS5951G-2418G75Mnkk	CH	LX.RGZ02.010	8CELL3.0	90W
AS5951G-2524G64Mnkk	TH	LX.RH002.008	8CELL3.0	120W-DE
AS5951G-2524G64Mnkk	TH	LX.RH002.009	8CELL3.0	120W-DE
AS5951G-2524G64Mnkk	TH	LX.RH002.010	8CELL3.0	120W-DE
AS5951G-2544G64Mnkk	TH	LX.RH002.007	8CELL3.0	120W-DE
AS5951G-2544G64Mnkk	TH	LX.RH002.011	8CELL3.0	120W-DE
AS5951G-2544G64Mnkk	TH	LX.RH002.012	8CELL3.0	120W-DE
AS5951G-2624G00Mnkk	TH	LX.RH002.002	8CELL3.0	120W-DE
AS5951G-2624G00Mnkk	TH	LX.RH002.003	8CELL3.0	120W-DE
AS5951G-2624G75Mnkk	TH	LX.RH002.001	8CELL3.0	120W-DE
AS5951G-2628G75Mnkk	BG	LX.RH002.017	8CELL3.0	120W-DE
AS5951G-2631675Bnkk	BE	LX.RHS02.035	8CELL3.0	120W-DE
AS5951G-2631675Bnkk	DE	LX.RHS02.008	8CELL3.0	120W-DE
AS5951G-2631675Bnkk	LU	LX.RHS02.036	8CELL3.0	120W-DE
AS5951G-2631675Bnkk	NL	LX.RHS02.034	8CELL3.0	120W-DE
AS5951G-2634G50Mnkk	IT	LX.RHS02.003	8CELL3.0	120W-DE

**Table 7-9. Battery & Adapter (Continued)**

Model	Country	P/N	Battery	Adapter
AS5951G-2634G64Bnkk	DE	LX.RHS02.022	8CELL3.0	120W-DE
AS5951G-2634G64Bnkk	DK	LX.RHS02.019	8CELL3.0	120W-DE
AS5951G-2634G64Mnkk	IN	LX.RJS02.006	8CELL3.0	120W-DE
AS5951G-2634G75Bnkk	CN	LX.RHS02.005	8CELL3.0	120W-DE
AS5951G-2634G75Bnkk	DE	LX.RHS02.007	8CELL3.0	120W-DE
AS5951G-2634G75Bnkk	FR	LX.RHS02.001	8CELL3.0	120W-DE
AS5951G-2634G75Bnkk	GCTWN	LX.RHS02.032	8CELL3.0	120W-DE
AS5951G-2634G75Bnkk	ID	LX.RHS02.014	8CELL3.0	120W-DE
AS5951G-2634G75Bnkk	ID	LX.RJS02.002	8CELL3.0	120W-DE
AS5951G-2634G75Mnkk	DE	LX.RJS02.005	8CELL3.0	120W-DE
AS5951G-2634G75Mnkk	IT	LX.RJS02.001	8CELL3.0	120W-DE
AS5951G-2634G75Mnkk	PH	LX.RHS02.006	8CELL3.0	120W-DE
AS5951G-2634G75Mnkk	ZA	LX.RJS02.008	8CELL3.0	120W-DE
AS5951G-2636G64Mnkk	MOYO	LX.RHS02.028	8CELL3.0	120W-DE
AS5951G-2636G75Bnkk	AU/NZ	LX.RHS02.018	8CELL3.0	120W-DE
AS5951G-2636G75Mnkk	CA	LX.RHS02.025	8CELL3.0	120W-DE
AS5951G-2636G75Mnkk	DK	LX.RHS02.002	8CELL3.0	120W-DE
AS5951G-2638G32Bnkk	UK	LX.RHS02.023	8CELL3.0	120W-DE
AS5951G-2638G64Mnkk	ES	LX.RHS02.027	8CELL3.0	120W-DE
AS5951G-2638G75Bnkk	AU/NZ	LX.RHS02.017	8CELL3.0	120W-DE
AS5951G-2638G75Bnkk	DE	LX.RHS02.021	8CELL3.0	120W-DE
AS5951G-2638G75Bnkk	DK	LX.RHS02.020	8CELL3.0	120W-DE
AS5951G-2638G75Bnkk	ES	LX.RHS02.026	8CELL3.0	120W-DE
AS5951G-2638G75Bnkk	FR	LX.RHS02.009	8CELL3.0	120W-DE
AS5951G-2638G75Bnkk	GCTWN	LX.RHS02.031	8CELL3.0	120W-DE
AS5951G-2638G75Bnkk	GR	LX.RHS02.016	8CELL3.0	120W-DE
AS5951G-2638G75Bnkk	HK	LX.RHS02.033	8CELL3.0	120W-DE
AS5951G-2638G75Bnkk	IT	LX.RHS02.004	8CELL3.0	120W-DE
AS5951G-2638G75Bnkk	RU	LX.RHS02.015	8CELL3.0	120W-DE
AS5951G-2638G75Bnkk	TH	LX.RHS07.004	8CELL3.0	120W-DE
AS5951G-2638G75Bnkk	TH	LX.RHS07.005	8CELL3.0	120W-DE
AS5951G-2638G75Bnkk	TH	LX.RHS07.006	8CELL3.0	120W-DE
AS5951G-2638G75Bnkk	UK	LX.RHS02.024	8CELL3.0	120W-DE



**Table 7-9. Battery & Adapter (Continued)**

Model	Country	P/N	Battery	Adapter
AS5951G-2638G75Bnkk	UK	LX.RJS02.004	8CELL3.0	120W-DE
AS5951G-2638G75Bnkk	UK	LX.RJS02.009	8CELL3.0	120W-DE
AS5951G-2638G75Mnkk	CH	LX.RJS02.007	8CELL3.0	120W-DE
AS5951G-2638G75Mnkk	GCTWN	LX.RHS02.010	8CELL3.0	120W-DE
AS5951G-2638G75Mnkk	HK	LX.RJS02.010	8CELL3.0	120W-DE
AS5951G-2638G75Mnkk	KR	LX.RHS02.029	8CELL3.0	120W-DE
AS5951G-2638G75Mnkk	MOYO	LX.RHS02.030	8CELL3.0	120W-DE
AS5951G-2638G75Mnkk	RO	LX.RHS02.039	8CELL3.0	120W-DE
AS5951G-2638G75Mnkk	RS/BA	LX.RHS02.037	8CELL3.0	120W-DE
AS5951G-2638G75Mnkk	SI/HR	LX.RHS02.038	8CELL3.0	120W-DE
AS5951G-2638G75Mnkk	TH	LX.RHS02.011	8CELL3.0	120W-DE
AS5951G-2638G75Mnkk	TH	LX.RHS02.012	8CELL3.0	120W-DE
AS5951G-2638G75Mnkk	TH	LX.RHS02.013	8CELL3.0	120W-DE
AS5951G-2638G75Mnkk	TH	LX.RHS07.001	8CELL3.0	120W-DE
AS5951G-2638G75Mnkk	TH	LX.RHS07.002	8CELL3.0	120W-DE
AS5951G-2638G75Mnkk	TH	LX.RHS07.003	8CELL3.0	120W-DE
AS5951G-2638G75Mnkk	UK	LX.RJS02.003	8CELL3.0	120W-DE



# CHAPTER 8

## Test Compatible Components

Microsoft® Windows® 7 Environment Test. ....	8-4
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# Test Compatible Components

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This computer's compatibility is tested and verified by Acer's internal testing department. All of its system functions are tested under Windows® 7 environment.

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 5951G. Compatibility Test Report released by the Acer Mobile System Testing Department.

# Microsoft® Windows® 7 Environment Test

## Aspire 5951G

Table 8-1. Aspire 5951G

Vendor	Type	Description	P/N
<b>Adapter</b>			
10001023 LITE-ON	120W-DE	Adapter LITE-ON 120W-DE 19V 1.7x5.5x11 Green PA-1121-04AC, LV5+OBL LED LF	AP.12003.003
10001023 LITE-ON	90W	Adapter LITE-ON 90W 19V 1.7x5.5x11 Blue PA-1900-34AR, LV5 LED LF	AP.09003.021
10001081 DELTA	120W-DE	Adapter DELTA 120W-DE 19V 1.7x5.5x11 Green ADP-120ZB BBGB, LV5+OBL LED LF	AP.12001.009
10001081 DELTA	90W	Adapter DELTA 90W 19V 1.7x5.5x11 Blue ADP-90CD DBH, LV5 LED LF	AP.09001.031
60002015 HIPRO	90W	Adapter HIPRO 90W 19V 1.7x5.5x11 Blue HP-A0904A3 B1LF, LV5 LED LF	AP.0900A.005
<b>Audio Codec</b>			
10004786 REALTEK	ALC669X	Realtek ALC669X	LZ.21000.060
<b>Battery</b>			
60001535 PANASONIC	8CELL3.0	Battery PANASONIC AS11B Li-Ion 4S2P PANASONIC 8 cell 6000mAh Main COMMON AS11B5E	BT.00805.018
<b>Bluetooth</b>			
10001018 HON HAI	BT 3.0	Foxconn Bluetooth ATH AR3011 (BT3.0)	BH.21100.009
10001018 HON HAI	BT 3.0	Foxconn Bluetooth BRM 2070 (T77H114.01) BT 3.0	BH.21100.010
10001018 HON HAI	BT 3.0	Foxconn Bluetooth ATH BU12	BH.21100.011
10001018 HON HAI	BT 3.0	Foxconn Bluetooth BRM 2046 BT3.0 (T60H928.33) f/w:861	BH.21100.008

**Table 8-1. Aspire 5951G**

Vendor	Type	Description	P/N
<b>Camera</b>			
10001028 QUANTA	1.3M HD H264	Quanta 1.3M HD H264 QU_6A1_QIC	AM.21400.098
10001044 CHICONY	1.3M	Chicony 1.3M CH9665SN (CNF9157)	AM.21400.067
PLM00012 Suyin	1.3M	Suyin 1.3M SY9665SN	AM.21400.068
PLM00012 Suyin	1.3M HD	Suyin 1.3M HD SY_6A1(CSP)_SP	AM.21400.094
<b>Card Reader</b>			
PLM00014 ODM	5 in 1-Build in	5 in 1-Build in MS, MS Pro, SD, SC, XD	CR.21500.013
<b>CPU</b>			
10001067 INTEL	Ci32310M	CPU Intel Core i3 i3-2310M PGA 2.1G 35W 2/4	KC.23101.DMP
10001067 INTEL	Ci32330M	CPU Intel Core i3 i3-2330M PGA 2.2G 35W 2/4	KC.23301.DMP
10001067 INTEL	Ci32350M	CPU Intel Core i3 i3-2350M PGA 2.3G 35W 2/4	KC.23501.DMP
10001067 INTEL	Ci52410M	CPU Intel Core i5 i5-2410M PGA 2.3G 35W 2/4	KC.24101.DMP
10001067 INTEL	Ci52430M	CPU Intel Core i5 i5-2430M PGA 2.4G 35W 2/4	KC.24301.DMP
10001067 INTEL	Ci52520M	CPU Intel Core i5 i5-2520M PGA 2.5G 35W 2/4	KC.25201.DMP
10001067 INTEL	Ci52540M	CPU Intel Core i5 i5-2540M PGA 2.6G 35W 2/4	KC.25401.DMP
10001067 INTEL	Ci72620M	CPU Intel Core i7 i7-2620M PGA 2.7G 35W 2/4	KC.26201.DMP
10001067 INTEL	Ci72630QM	CPU Intel Core i7 i7-2630QM PGA 2.0G 45W 4/8	KC.26301.QMP
<b>Finger Print</b>			
F0000599 EGIS	SS801U	LTT Finger Print SS801U	FP.22000.007
<b>HDD</b>			
60001922 TOSHIBA DIGI	N750GB5.4K S_4K	HDD TOSHIBA 2.5" 5400rpm 750GB MK7559GSXP, 375G/P, Capricorn BS, 4K drive SATA 8MB LF+HF F/W:GN003J	KH.75004.001
60001953 TOSHIBA ELEC	N320GB5.4K S_4K	HDD TOSHIBA 2.5" 5400rpm 320GB MK3259GSXP, Capricorn 3BS, 375G/P, 4K drive SATA 8MB LF+HF F/W:GN003J 4K	KH.32004.005

**Table 8-1. Aspire 5951G**

Vendor	Type	Description	P/N
60001953 TOSHIBA ELEC	N500GB5.4K S_4K	HDD TOSHIBA 2.5" 5400rpm 500GB MK5059GSXP, Capricron 3BS, 375G/P SATA 8MB LF+HF F/W:GN003J 4K	KH.50004.003
60001953 TOSHIBA ELEC	N640GB5.4K S_4K	HDD TOSHIBA 2.5" 5400rpm 640GB MK6459GSXP, Capricron 3BS, 375G/P SATA 8MB LF+HF F/W:GN003J 4K	KH.64004.003
60001994 WD	N320GB5.4K S_4K	HDD WD 2.5" 5400rpm 320GB WD3200BPVT-22ZE0, ML320S, 4K drive SATA 8MB LF F/W: 01.01A01	KH.32008.022
60001994 WD	N500GB5.4K S_4K	HDD WD 2.5" 5400rpm 500GB WD5000BPVT-22HXZT1,ML375_AF, 4K drive SATA 8MB LF+HF F/W:01.01A01	KH.50008.021
60001994 WD	N640GB5.4K S_4K	HDD WD 2.5" 5400rpm 640GB WD6400BPVT-22HXZT1, ML375M SATA 8MB LF F/W: 01.01A01	KH.64008.005
60001994 WD	N750GB5.4K S_4K	HDD WD 2.5" 5400rpm 750GB WD7500BPVT-22HXZT1, ML375M, 4K drive SATA 8MB LF F/W:01.01A01	KH.75008.009
60002005 HGST SG	N320GB5.4K S	HDD HGST 2.5" 5400rpm 320GB HTS545032B9A300 Panther B SATA LF F/W:C60F Disk imbalance criteria = 0.014g-cm	KH.32007.008
60002005 HGST SG	N320GB5.4K S	HDD HGST 2.5" 5400rpm 320GB HTS543232A7A384, Eagle B7, 320G/P SATA LF+HF F/W:A60W	KH.32007.013
60002005 HGST SG	N500GB5.4K S	HDD HGST 2.5" 5400rpm 500GB HTS545050B9A300 Panther B SATA LF F/W:C60F Disk imbalance criteria = 0.014g-cm	KH.50007.010
60002005 HGST SG	N640GB5.4K S_4K	HDD HGST 2.5" 5400rpm 640GB HTS547564A9E384,Jet B, 375G/P,0J15082 SATA 8MB LF+HF F/W:DA3872	KH.64007.003
60002005 HGST SG	N750GB5.4K S	HDD HGST 2.5" 5400rpm 750GB Dummy P.N SATA 8MB LF+HF F/W: 0000	KH.75007.005
60002005 HGST SG	N750GB5.4K S_4K	HDD HGST 2.5" 5400rpm 750GB HTS547575A9E384, 0J15083, Jet B, 375G/P SATA 8MB LF F/W:DA3872	KH.75007.004
60002036 SEAGATE	N320GB5.4K S	HDD SEAGATE 2.5" 5400rpm 320GB ST9320310AS,9RN132-188, Cameron 320G/P SATA 8MB LF F/W:0001SDM1	KH.32001.019



**Table 8-1. Aspire 5951G**

Vendor	Type	Description	P/N
60002036 SEAGATE	N500GB5.4K S	HDD SEAGATE 2.5" 5400rpm 500GB ST9500325AS,9HH134-189, Wyatt with new pcb SATA 8MB LF F/W:0001SDM1	KH.50001.017
60002036 SEAGATE	N640GB5.4K S	HDD SEAGATE 2.5" 5400rpm 640GB ST9640320AS,9RN134-189, Cameron, 320G/P SATA 8MB LF F/W:0001SDM1	KH.64001.004
60002036 SEAGATE	N750GB5.4K S_4K	HDD SEAGATE 2.5" 5400rpm 750GB ST9750423AS,9ZW14G-188, Desaru5, 375G/P. SATA 8MB LF+HF F/W:0001SDM1	KH.75001.011
<b>Keyboard</b>			
10000981 MISC	AF7B_A10B	Keyboard ACER AF7B_A10B AF7B Internal 17 Standard Black NONE Y2010 Acer Legend Backlit-Painting	KB.I170A.297
60004864 DARFON	AF7P_A10S	Keyboard ACER AF7P_A10S AF7P Internal 17 Standard Silver NONE Y2010 Acer Legend Painting	KB.I170A.145
<b>LAN</b>			
10004786 REALTEK	RTL8111EA	Realtek RTL8111EA	NI.22400.053
10017383 Atheros	AR8151L	Atheros AR8151L	NI.22400.048
<b>LCD</b>			
60002215 SAMSUNG	NLED15.6W XGAGS	LED LCD SAMSUNG 15.6"W WXGA Glare LTN156AT11-A01 LF 200nit 16ms 500:1 (Power saving)	LK.15606.008
60003089 LG	NLED15.6W XGAGS	LED LCD LPL 15.6"W WXGA Glare LP156WH3-TLL1 LF 200nit 16ms 500:1 (Power saving)	LK.15608.008
60003089 LG	NLED15.6W XGAGS	LED LCD LPL 15.6"W WXGA Glare LP156WH3-TLAA LF 200nit 16ms 500:1 (Power saving) (2011)	LK.15608.014
60003316 AUO	NLED15.6W XGAGS	LED LCD AUO 15.6"W WXGA Glare B156XW04 V0 LF 200nit 8ms 400:1 (Power saving)	LK.15605.015
60003316 AUO	NLED15.6W XGAGS	LED LCD AUO 15.6"W WXGA Glare B156XW04 V5 LF 200nit 8ms 500:1	LK.15605.021

**Table 8-1. Aspire 5951G**

Vendor	Type	Description	P/N
<b>MEM</b>			
60001993 NANYA	SO2GBIII13	Memory NANYA SO-DIMM DDRIII 1333 2GB NT2GC64B88B0NS-CG LF 256*8 0.055um	KN.2GB03.021
60001993 NANYA	SO4GBIII13	Memory NANYA SO-DIMM DDRIII 1333 4GB NT4GC64B8HB0NS-CG LF 256*8 0.055um	KN.4GB03.005
60002000 UNIFOSA	SO1GBIII13	Memory UNIFOSA SO-DIMM DDRIII 1333 1GB GU672203EP0200 LF 128*8 0.065um	KN.1GB0H.017
60002041 QIMONDA	SO1GBIII10	Memory NONE REG-ECC DDRIII 1066 1GB phantom p/n LF	KN.1GB00.003
60002045 HYNIX	SO2GBIII13	Memory HYNIX SO-DIMM DDRIII 1333 2GB HMT325S6BFR8C-H9 LF 256*8 46nm	KN.2GB0G.018
60002045 HYNIX	SO4GBIII13	Memory HYNIX SO-DIMM DDRIII 1333 4GB HMT351S6BFR8C-H9 LF 256*8 46nm	KN.4GB0G.004
60002050 MICRON SG	SO2GBIII13	Memory MICRON SO-DIMM DDRIII 1333 2GB MT8JSF25664HZ-1G4D1 LF 256*8 0.055um	KN.2GB04.017
60002050 MICRON SG	SO4GBIII13	Memory MICRON SO-DIMM DDRIII 1333 4GB MT16JSF51264HZ-1G4D1 LF 256*8 0.055um	KN.4GB04.001
60002215 SAMSUNG	SO2GBIII10	Memory NONE SO-DIMM DDRIII 1066 2GB dummy 1066 LF	KN.2GB00.001
60002215 SAMSUNG	SO2GBIII13	Memory SAMSUNG SO-DIMM DDRIII 1333 2GB M471B5773DH0-CH9 LF 256*8	KN.2GB0B.030
60002215 SAMSUNG	SO4GBIII10	Memory SAMSUNG SO-DIMM DDRIII 1066 4GB M471B5273BH1-CF8 LF 256*8 0.055um	KN.4GB0B.007
60004668 ELPIDA	SO4GBIII10	Memory NONE SO-DIMM DDRIII 1066 4GB dummy P/N LF	KN.4GB00.001
60004668 ELPIDA	SO4GBIII13	Memory ELPIDA SO-DIMM DDRIII 1333 4GB EBJ41UF8BCS0-DJ-F LF 256*8 46nm	KN.4GB09.002
60024207 KINGSTON-FAR EAST	SO1GBIII13	Memory KINGSTON SO-DIMM DDRIII 1333 1GB ACR128X64D3S1333C9 LF 128*8 0.065um	KN.1GB07.004

**Table 8-1. Aspire 5951G**

Vendor	Type	Description	P/N
<b>NB Chipset</b>			
10001067 INTEL	HM65	NB Chipset Intel CS BD82HM65 Huron River	KI.G6501.001
10001067 INTEL	HM65	NB Chipset Intel CS BD82HM65 B3 Huron River	KI.G6501.004
<b>ODD</b>			
10001070 PHILIPS	NBDCB4XS	ODD PLDS BD COMBO 12.7mm Tray DL 4X DS-6E2SH LF W/O bezel SATA (HF + Win7 + 3D)	KO.0040F.006
10001070 PHILIPS	NSM8XS	ODD PLDS Super-Multi DRIVE 12.7mm Tray DL 8X DS-8A5SH LF+HF W/O bezel SATA With TI + Rohm Solution (HF + Windows 7)	KU.0080F.014
60001535 PANASONIC	NBDCB4XS	ODD PANASONIC BD COMBO 12.7mm Tray DL 4X UJ141AJ LF W/O bezel SATA Zero Power + BUS Encryption	KO.00407.006
60001535 PANASONIC	NBDRW4XS	ODD PANASONIC BD RW 12.7mm Tray DL 4X UJ240AF LF W/O bezel SATA Zero Power (HF+Windows 7)	KU.00407.016
60001535 PANASONIC	NSM8XS	ODD PANASONIC Super-Multi DRIVE 12.7mm Tray DL 8X UJ8A0 LF W/O bezel SATA (HF + Windows 7) Foxconn Yentai Factory	KU.00807.075
60001535 PANASONIC	NSM8XS	ODD PANASONIC Super-Multi DRIVE 12.7mm Tray DL 8X UJ8A0 LF W/O bezel 1.01 SATA Fix NTI issue in HR platform under ZP	KU.00807.077
60001535 PANASONIC	NSM8XSLOT	ODD PANASONIC Super-Multi DRIVE 12.7mm Tray DL 8X UJ-845 LF W/O bezel	KU.00807.016
60001922 TOSHIBA DIGI	NSM8XS	ODD TOSHIBA Super-Multi DRIVE 12.7mm Tray DL 8X TS-L633F LF W/O bezel SATA (HF + Windows 7)	KU.00801.040
60001939 PIONEER	NBDCB4XS	ODD PIONEER BD COMBO 12.7mm Tray DL 4X BDC-TD03RT LF W/O bezel 1.01 SATA Zero Power + BUS Encryption (Windows 7)	KO.00405.008
60001939 PIONEER	NSM8XS	ODD PIONEER Super-Multi DRIVE 12.7mm Tray DL 8X DVR-TD10RS LF W/O bezel 1.00 SATA	KU.00805.049

**Table 8-1. Aspire 5951G**

Vendor	Type	Description	P/N
60003901 HITACHI EAST	NBDCB4XS	ODD HLDS BD COMBO 12.7mm Tray DL 4X CT30N LF W/O bezel 1.00 SATA (HF + Windows 7 + 3D)	KO.0040D.005
60003901 HITACHI EAST	NSM8XS	ODD HLDS Super-Multi DRIVE 12.7mm Tray DL 8X GT34N LF W/O bezel SATA Zero Power Supported, PCC LD (HF + Windows 7)	KU.0080D.057
<b>Speaker</b>			
PLM00010 QMI	Y2011 SM51_HR Speaker	QMI Y2011 SM51_HR Speaker	SP.24200.005
<b>USB Controller</b>			
10000981 MISC	USB 3.0	USB Controller USB 3.0	LC.24500.001
<b>VGA Chip</b>			
10001067 INTEL	UMA	UMA (Intel)	KI.23200.038
60001915 NVIDIA	N12EGE	VGA Chip nVidia N12 N12E-GE-A1 40nm, 29mm*29mm, GB3-128 package	KG.EGE0V.001
60001915 NVIDIA	N12PGS	VGA Chip nVidia N12PGS A1 40nm 29mm*29mm GB2-128 package	KG.PGS0V.001
<b>VRAM</b>			
10000981 MISC	1G-DDR3 (64*16*8)	1G-DDR3 64*16*8	KI.23300.018
10000981 MISC	2G-DDR3 (128*16*8)	2G-DDR3 128*16*8	KI.23300.028
60002045 HYNIX	VR1GbIII9	VRAM HYNIX Graphic DDRIII 900 1Gb H5TQ1G63DFR-11C LF 64*16 46nm	VR.1GB0G.006
60002045 HYNIX	VR2GBIII9	VRAM HYNIX Graphic DDRIII 900 2Gb H5TQ2G63BFR-11C LF 128*16 46nm	VR.2GB0G.002
60002215 SAMSUNG	VR1GbIII9	VRAM SAMSUNG Graphic DDRIII 900 1Gb K4W1G1646G-BC11 LF 64*16 35nm	VR.1GB0B.008
60002215 SAMSUNG	VR2GBIII9	VRAM SAMSUNG Graphic DDRIII 900 2Gb K4W2G1646C-HC11 LF 128*16 46nm	VR.2GB0B.003
9999995 ONE TIME VENDER	N	N no VRAM	KI.23300.014
<b>WiFi Antenna</b>			
10000105 WNC	PIFA 3x3	WNC WiFi/WiMAX antenna 3x3	LZ.23500.010

**Table 8-1. Aspire 5951G**

Vendor	Type	Description	P/N
<b>Wireless LAN</b>			
10001018 HON HAI	3rd WiFi 2x2 BGN	Foxconn Wireless LAN Broadcom 43227 2x2 BGN	NI.23600.087
10001023 LITE-ON	3rd WiFi 2x2 BGN	Liteon Wireless LAN Atheros HB97 2x2 BGN (HM) WN6603AH	NI.23600.073
10001067 INTEL	INT6205H	Lan Intel WLAN TBD Taylor Peak 2x2 AGN	KI.TPH01.001
23707801 FOXCONN TW	3rd WiFi 2x2 BGN	Foxconn Wireless LAN Atheros HB97 2x2 BGN (HM)	NI.23600.072
23707801 FOXCONN TW	3rd WiFi 2x2 BGN	Foxconn Wireless LAN Broadcom 43225 2x2 BGN (HM) T77H103.00	NI.23600.066
23707801 FOXCONN TW	3rd WiFi BG	Foxconn Wireless LAN Atheros HB95BG (HM) T77H121.10	NI.23600.077



# CHAPTER 9

## Online Support Information

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# Online Support Information

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## Introduction

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This section describes online technical support services available to help users repair their Acer Systems.

For distributors, dealers, ASP or TPM, please refer the technical queries to a local Acer branch office. Acer Branch Offices and Regional Business Units may access our website. However some information sources will require a user i.d. and password. These can be obtained directly from Acer CSD Taiwan.

Acer's Website offers convenient and valuable support resources.

In the Technical Information section users can download information on all of Acer's Notebook, Desktop and Server models including:

- Service guides for all models
- Bios updates
- Software utilities
- Spare parts lists
- TABs (Technical Announcement Bulletin)

For these purposes, we have included an Acrobat File to facilitate the problem-free downloading of our technical material.

Also contained on this website are:

- Detailed information on Acer's International Traveller'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 technical queries.

We are always looking for ways to optimize and improve our services, so do not hesitate to direct any suggestions or comments to us.

