TravelMate 4530 Series
Service Guide

Service guide files and updates are available on the ACER/CSD web; for more information, please refer to http://csd.acer.com.tw

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Revision History

Please refer to the table below for the updates made on TravelMate 4530 Series service guide.

Date	Chapter	Updates

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Conventions

The following conventions are used in this manual:

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

Preface

Before using this information and the product it supports, please read the following general information.

1. This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.
2. Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

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System Specifications

Features

Below is a brief summary of the computer's many feature:

NOTE: Items marked with * denote only selected models.

Operating System

- Genuine Windows® Vista™
- Genuine Windows® XP

Platform

- AMD Better By Design program, featuring:
  - Mobile AMD Sempron™ Processor*
  - AMD Turion™ Ultra Dual-Core Processor*
  - AMD Turion™ Dual-Core Processor*
  - AMD Athlon™ Dual-Core Processor*
  - Acer InviLink™ 802.11b/g*
  - Acer InviLink™ Nplify™ 802.11b/g/Draft-N*

System Memory

- Dual-Channel DDR2 support
- Up to 2 GB of DDR2 667 MHz memory, upgradeable to 4 GB using two soDIMM modules*

Display and graphics

- 14.1" WXGA TFT LCD, 1280 x 800
- ATI Mobility Radeon™ HD 3200

Storage subsystem

- 2.5" hard disk drive
- Optical drive options:
  - Blu-ray Disc™ /DVD-Super Multi double-laye drive
  - DVD-Super Multi double-layer drive
  - DVD/CD-RW combo drive
- 5-in-1 card reader

Audio

- Two built-in Acer 3DSonic stereo speakers
- High-definition audio support
- MS-Sound compatible
- Built-in microphone

Communication

- Acer Video Conference, featuring:
  - Integrated Acer Crystal Eye webcam
  - Optional Acer Xpress VoIP phone
- WLAN:
  - Acer InviLink™ 802.11b/g*
  - Acer InviLink™ Nplify™ 802.11b/g/Draft-N*
- WPAN: Bluetooth® 2.0+EDR
- LAN: Gigabit Ethernet, Wake-on-LAN ready
- Modem: 56K ITU V.92

Privacy control

- Acer Bio-Protection fingerprint solution*
- BIOS user, supervisor, HDD passwords
- Kensington lock slot

Dimensions and Weight

- 338 (W) x 247 (D) x 31/41 (H) mm (13.31 x 9.7 x 1.22/1.61 inches)
- 2.29 kg (6.36 lbs)

Power subsystem

- ACPI 3.0
- 71 W 4800 mAh
- 48.8W 4400 mAh
- 3-pin 65 W AC adapter
- Energy Star 4.0

Input Devices

- 88-/89-key keyboard
- Touchpad pointing device

I/O interface

- PC Card slot (Type II)
- 5-in-1 card reader (SD™, MMC, MS, MS PRO, xD)
- Three USB 2.0 ports
- External display (VGA) port
- HDMI™ port with HDCP support
- Headphone/speaker/line-out jack
- Microphone-in jack
- Line-in jack
- Ethernet (RJ-45) port

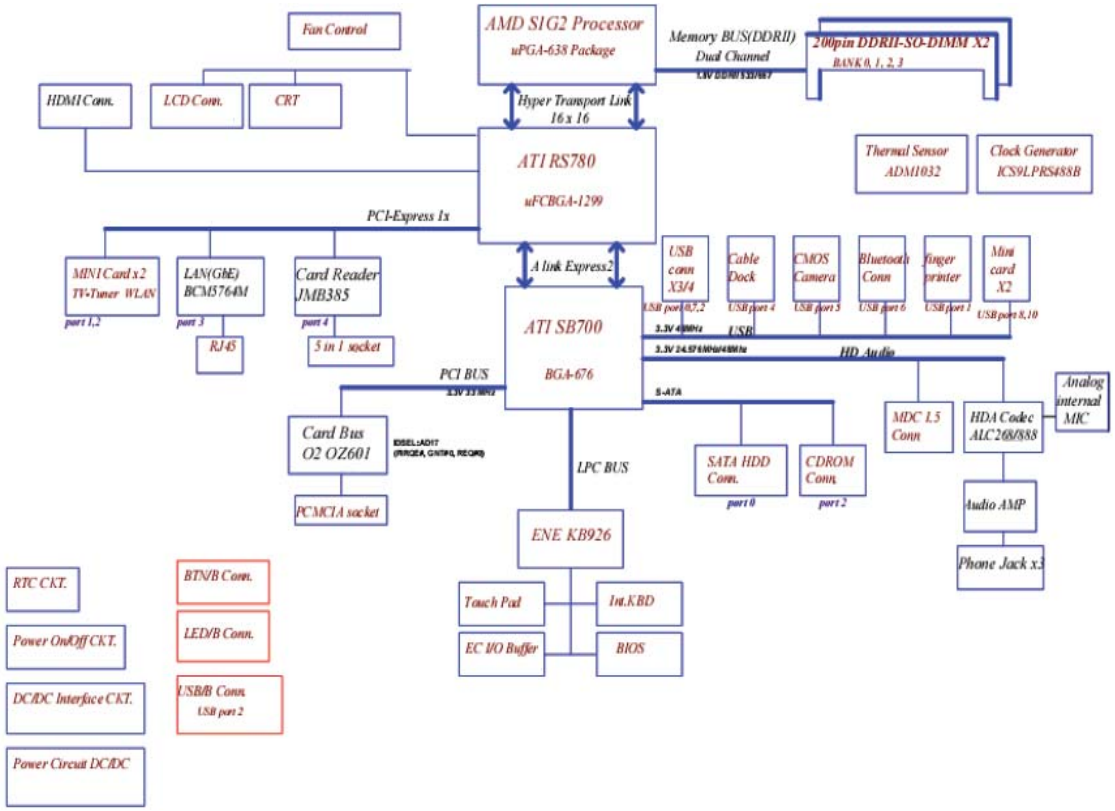
- Modem (RJ-11) port
- DC-in jack for AC adapter
- Acer EasyPort IV connector

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%

NOTE: Items marked with * denote only selected models. The specifications listed above are for reference only. The exact configuration of your PC depends on the model purchased.

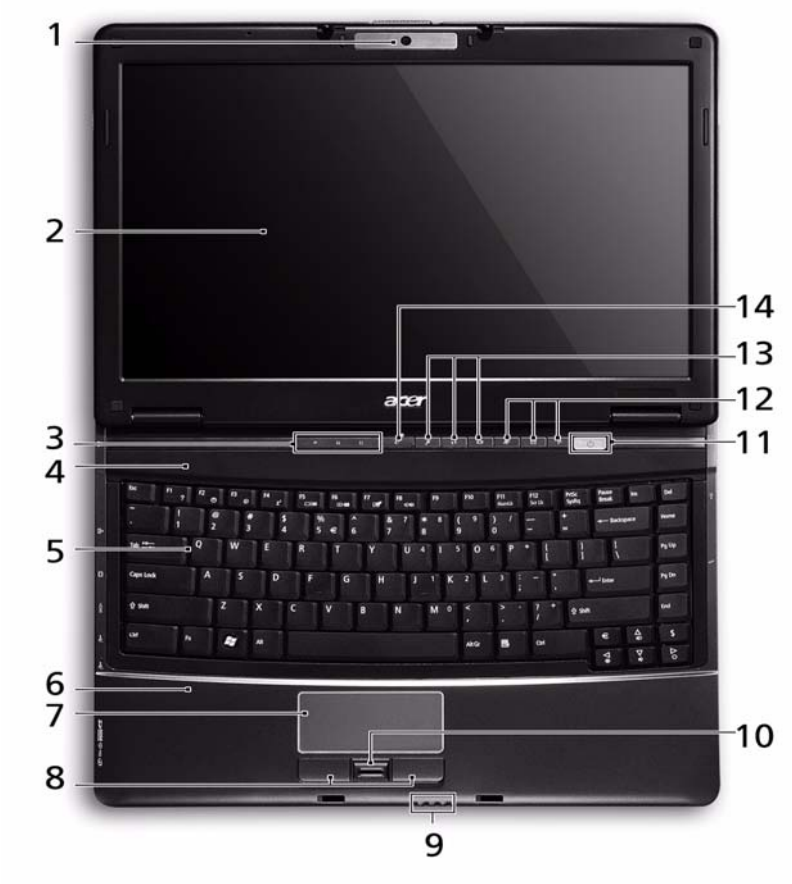
System Block Diagram



Your Acer Notebook tour

After knowing your computer features, let us show you around your new computer.

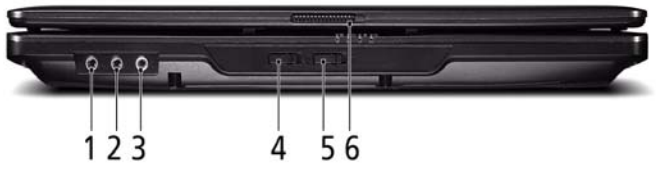
Front View



No.	Icon	Item	Description
1		Acer Crystal Eye	Web camera for video communication.
2		Display screen	Also called Liquid-Crystal Display (LCD), displays computer output.
3		Status indicators	Light-Emitting Diodes (LEDs) that light up to show the status of the computer's functions and components.
4		Speakers	Left and right speakers deliver stereo audio output.
5		Keyboard	For entering data into your computer.
6		Palmrest	Comfortable support area for your hands when you use the computer.
7		Touchpad	Touch-sensitive pointing device which functions like a computer mouse.

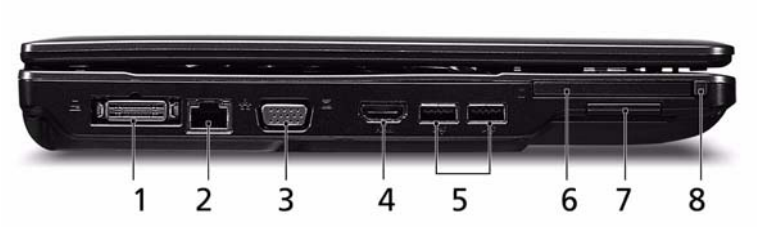
No.	Icon	Item	Description
8		Click buttons (left, center* and right)	The left and right buttons function like the left and right mouse buttons. *The center button serves as Acer Bio-Protection fingerprint reader supporting Acer FingerNav 4-way control function (only for certain models).
9		Status indicators	Light-Emitting Diodes (LEDs) that light up to show the status of the computer's functions and components.
10		Acer Bio-Protection fingerprint reader	The center button serves as Acer Bio-Protection fingerprint reader supporting Acer FingerNav 4-way control function (only for certain models).
11		Power button	Turns the computer on and off.
12		Easy-launch buttons	Buttons for launching frequently used programs.
13		Productivity Keys	Three productivity keys give users onetouch access to protection and manageability features for a more secure, smarter and easier way to work.
14		Empowering key	Launch Acer Empowering Technology.

Closed Front View



No.	Icon	Item	Description
1		Line-in jack	Accepts audio line-in devices (e.g., audio CD player, stereo walkman, mp3 player).
2		Microphone jack	Accepts inputs from external microphones.
3		Headphones/ speaker/line-out jack	Connects to audio line-out devices (e.g., speakers, headphones).
4		Bluetooth communication switch	Enables/disables the 3G/Bluetooth function. (only for certain models).
5		Wireless communication switch	Enables/disables the wireless function.
6		Latch	Locks and releases the lid.

Left View



No.	Icon	Item	Description
1		Acer EasyPort IV connector	Connects to Acer EasyPort IV (only for certain models).
2		Ethernet (RJ-45) port	Connects to an Ethernet 10/100/1000-based network.
3		External display (VGA) port	Connects to a display device (e.g. external monitor, LCD projector).
4	HDMI	HDMI	Connects to a television or display device with HDMI input (only for certain models).
5		2 USB 2.0 ports	Connect to USB 2.0 devices (e.g. USB mouse, USB camera).
6		PC Card slot	Accepts one Type II PC Card.
7		5-in-1 card reader	Accepts Secure Digital (SD), MultiMediaCard (MMC), Memory Stick (MS), Memory Stick PRO (MS PRO), xD-Picture Card (xD). **Note:** Push to remove/install the card. Only one card can operate at any given time.
8		PC Card slot eject button	Ejects the PC Card from the slot.

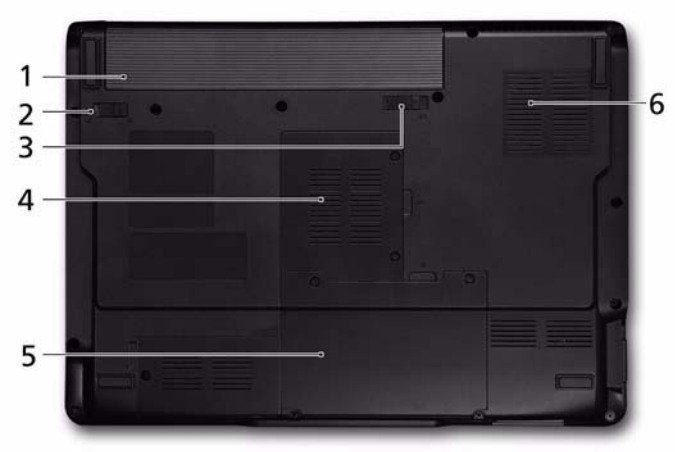
Right View

No.	Icon	Item	Description
1		Kensington lock slot	Connects to a Kensington-compatible computer security lock.
2		Optical drive	Internal optical drive; accepts CDs or DVDs.
3		Optical disk access indicator	Lights up when the optical drive is active.
4		Optical drive eject button	Ejects the optical disk from the drive.
5		Emergency eject hole	Ejects the optical drive tray when the computer is turned off. **Note:** Insert a paper clip into the emergency eject hole to eject the optical drive tray when the computer is off.
6		USB 2.0 port	Connect to USB 2.0 devices (e.g. USB mouse, USB camera).
7		Modem (RJ-11) port	Connects to a phone line.

Rear 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.

Bottom View



No.	Icon	Item	Description
1		Battery bay	Houses the computer's battery pack.
2		Battery lock	Locks the battery in position.
3		Battery release latch	Releases the battery for removal.
4		Memory compartment	Houses the computer's main memory.
5		Hard disk bay	Houses the computer's hard disk (secured with screws).
6		Ventilation slots and cooling fan	Enable the computer to stay cool, even after prolonged use.

Indicators

The computer has several easy-to-read status indicators:

The front panel indicators are visible even when the computer cover is closed.

Icon	Function	Description
	Bluetooth	Indicates the status of Bluetooth communication.
	WLAN	Indicates the status of wireless LAN communication.
	Power	Indicates the computer's power status.
	Battery	Indicates the computer's battery status.
	HDD	Indicates when the hard disk drive is active.
	Num Lock	Lights up when Num Lock is activated.
	Caps Lock	Lights up when Caps Lock is activated.

NOTE: 1. **Charging:** The battery light shows amber when the battery is charging. 2. **Fully charged:** The light shows green when in AC mode.

Easy-Launch Buttons

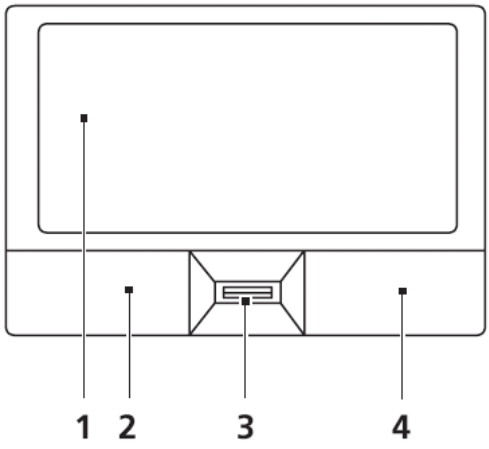
Located beside the keyboard are application buttons. These buttons are called easy-launch buttons. They are: WLAN, Internet, email, Bluetooth, Arcade and Acer Empowering Technology.

The mail and Web browser buttons are pre-set to email and Internet programs, but can be reset by users. To set the Web browser, mail and programmable buttons, run the Acer Launch Manager.

Icon	Function	Description
	Empowering Technology	Launch Acer Empowering Technology. (user-programmable)
	Web browser	Internet browser (user-Programmable)
	Mail	Email application (user-Programmable)
	Bluetooth communication switch	Enables/disables the Bluetooth function.
	Wireless communication switch	Enables/disables the wireless function.

Touchpad Basics (with fingerprint reader)

The following items show you how to use the touchpad with Acer Bio-Protection fingerprint reader:



- Move your finger across the touchpad (2) to move the cursor.
- Press the left (1) and right (4) buttons located beneath the touchpad to perform selection and execution functions. These two buttons are similar to the left and right buttons on a mouse. Tapping on the touchpad is the same as clicking the left button.
- Use Acer Bio-Protection fingerprint reader (3) supporting Acer FingerNav 4-way control function (only for certain models) or the 4-way scroll (3) button (only for certain models) to scroll up or down and move left or right a page. This fingerprint reader or button mimics your cursor pressing on the right scroll bar of Windows applications.

Function	Left Button (1)	Right Button (3)	Main touchpad (2)
Execute	Quickly click twice.		Tap twice (at the same speed as double-clicking a mouse button).
Select	Click once.		Tap once.
Drag	Click and hold, then use finger on the touchpad to drag the cursor.		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.
Access context menu		Click once.	

NOTE: When using the touchpad, keep it - and your 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

The keyboard has full-sized keys and an embedded numeric keypad, separate cursor, lock, Windows, function and special keys.

Lock Keys and embedded numeric keypad

The keyboard has three lock keys which you can toggle on and off.

Lock key	Description
Caps Lock	When Caps Lock is on, all alphabetic characters typed are in uppercase.
Num Lock **<Fn> + <F11>**	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 you need to do 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 you press the up or down arrow keys 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 keycaps. To simplify the keyboard legend, cursor-control key symbols are not printed on the keys.

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

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

Key	Description
Windows key	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: <Win> : Open or close the Start menu <Win> **+ <D>:** Display the desktop <Win> **+ <E>:** Open Windows Explore <Win> + <F>: Search for a file or folder <Win> + <G>: Cycle through Sidebar gadgets <Win> + <L>: Lock your computer (if you are connected to a network domain), or switch users (if you're not connected to a network domain) <Win> + <M>: Minimizes all windows <Win> **+ <R>:** Open the Run dialog box <Win> + <T>: Cycle through programs on the taskbar <Win> **+ <U>:** Open Ease of Access Center <Win> + <X>: Open Windows Mobility Center <Win> + <BREAK>: Display the System Properties dialog box <Win> **+ <SHIFT+M>:** Restore minimized windows to the desktop <Win> **+ <TAB>:** Cycle through programs on the taskbar by using Windows Flip 3-D <Win> **+ <SPACEBAR>:** Bring all gadgets to the front and select Windows Sidebar **<CTRL> +** <Win> **+ <F>:** Search for computers (if you are on a network) **<CTRL> +** <Win> **+ <TAB>:** Use the arrow keys to cycle through programs on the taskbar by using Windows Flip 3-D **Note:** Depending on your edition of Windows Vista, some shortcuts may not function as described.
Application key	This key has the same effect as clicking the right mouse button; it opens the application's context menu.

Hot Keys

The computer employs hotkeys or key combinations to access most of the computer's controls like screen brightness, volume output and the BIOS utility.

To activate hot keys, press and hold the **<Fn>** key before pressing the other key in the hotkey combination.

Hotkey	Icon	Function	Description
<Fn> + <F1>	?	Hotkey help	Displays help on hotkeys.
<Fn> + <F2>		Acer eSettings Management	Launches Acer eSettings Management in Acer Empowering Technology.
<Fn> + <F3>		Acer ePower Management	Launches Acer ePower Management in Acer Empowering Technology.
<Fn> + <F4>	Z z	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 internal touchpad on and off.
<Fn> + <F8>		Speaker toggle	Turns the speakers on and off.
<Fn> + <▷>		Brightness up	Increases the screen brightness.
<Fn> + <◁>		Brightness down	Decreases the screen brightness.

Special Key

You can locate the Euro symbol and the US dollar sign at the upper-center and/or bottom-right of your keyboard.

The Euro symbol

1. Open a text editor or word processor.
2. Hold <Alt Gr> and then press the <5> key at the upper-center of the keyboard.

NOTE: Note: Some fonts and software do not support the Euro symbol. Please refer to **www.microsoft.com/typography/faq/faq12.htm** for more information.

The US dollar sign

1. Open a text editor or word processor.
2. Hold **<Shift>** and then press the **<4>** key at the upper-center of the keyboard.

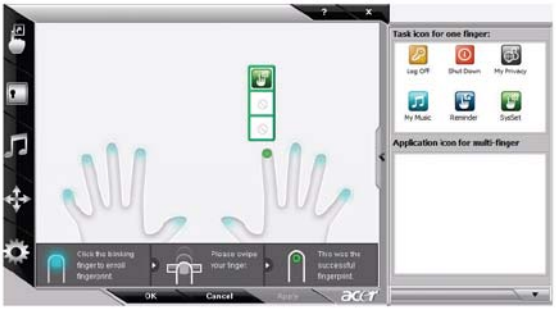
NOTE: This function varies by the operating system version.

Using the System Utilities

Acer Bio-Protection (only for certain models) Acer Bio-Protection Fingerprint Solution is a multi-purpose fingerprint software package integrated with the Microsoft Windows operating system. Utilizing the uniqueness of one's fingerprint features, Acer Bio-Protection Fingerprint Solution has incorporated protection against unauthorized access to your computer with centralized password management with Password Bank, easy music player launching with Acer MusicLaunch, secure Internet favorites via Acer MyLaunch, and fast application/website launching and login with Acer FingerLaunch, while Acer ProfileLaunch can launch up to three applications/websites from a single finger swipe.

Acer Bio-Protection Fingerprint Solution also allows you to navigate through web browsers and documents using Acer FingerNav. With Acer Bio-Protection Fingerprint Solution, you can now enjoy an extra layer of protection for your personal computer, as well as the convenience of accessing your daily tasks with a simple swipe of your finger!

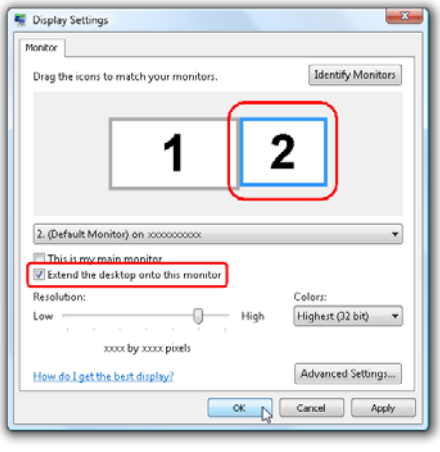
For more information refer to the Acer Bio-Protection help files.



Acer GridVista (dual-display compatible)

NOTE: This feature is only available on certain models.

To enable the dual monitor feature of the notebook, first ensure that the second monitor is connected, then select **Start, Control Panel, Display** and click on **Settings**. Select the secondary monitor **(2)** icon in the display box and then click the check box **Extend my windows desktop onto this monitor**. Finally, click **Apply** to confirm the new settings and click **OK** to complete the process.



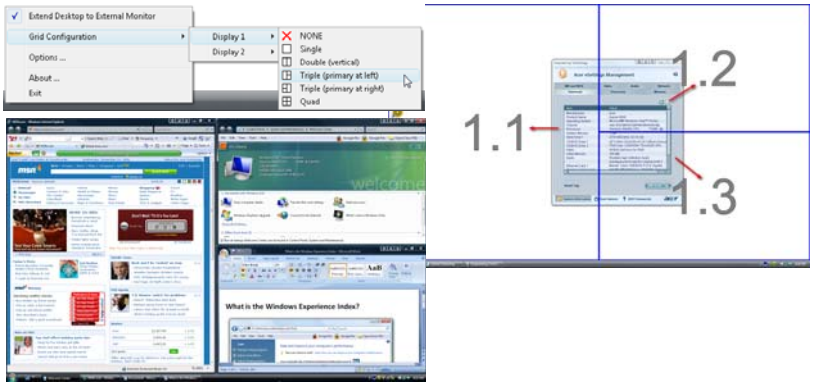
Acer GridVista is a handy utility that offers four pre-defined display settings so you can view multiple windows on the same screen. To access this function, please go to **Start→ All Programs** and click on **Acer GridVista**. You may choose any one of the four display settings indicated below:

Double (vertical), Triple (primary at left), Triple (primary at right), or Quad Acer Gridvista is dual-display compatible, allowing two displays to be partitioned independently.

Acer Gridvista is dual-display compatible, allowing two displays to be partitioned independently.

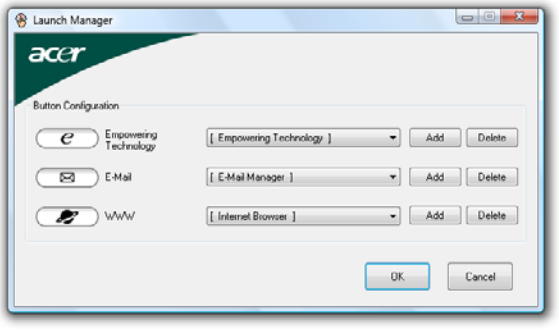
AcerGridVista is simple to set up:

1. Run Acer GridVista and select your preferred screen configuration for each display from the task bar.
2. Drag and drop each window into the appropriate grid.
3. Enjoy the convenience of a well-organized desktop.



NOTE: Please ensure that the resolution setting of the second monitor is set to the manufacturer's recommended value.

Launch Manager



Launch Manager allows you to set the four easy-launch buttons located above the keyboard. You can access the Launch Manager by clicking on Start > All Programs > Launch Manager to start the application.

Hardware Specifications and Configurations

Processor

Item	Specification
CPU type	Mobile AMD Family 11h Processor
Core logic	• AMD RS780M • AMD SB700 • ENE KB926 for Keyboard Controller, Battery management Unit, and RTC. • JMircon JMB385 for Card Reader controller • Integrated VGA solution for RS-780M/ • Realtek ALC268 for High Definition Audio Codec with Dolby. • Broadcom BCM5764KMLG for Giga LAN
CPU package	S1G2 package CPU

CPU Fan True Value Table

DTS (degree C°)	Fan Speed (rpm)	Acoustic Level (dBA)
45 - 55	2800	31
50 - 65	3200	34
60 - 75	3600	37
70 - 80	4000	40
80 - 100	4000	40

- CPU DTS Throttling 50% point = 100C; /recover 85C

BIOS

Item	Specification
BIOS vendor	Phoenix
BIOS Version	V0.20T1
BIOS ROM type	Flash ROM
BIOS ROM size	1 MB
BIOS package	
Supported protocols	Support ISIPP Support Acer UI Support multi-boot Suspend to RAM (S3) Support SMBIOS 2.3 ,PCI2.2. DMI utility for BIOS serial number configurable/asset tag Support PXE Support Y2K solution Support WinFlashWake on LAN from S3
BIOS password control	Supervisor, user, HDD, power on

Cache

Item	Specification
Cache controller	Built in
Cache size	1MB L2 Cache x 2

System Memory

Item	Specification
Memory controller	Built in
Memory size	0 MB (no onboard memory)
DIMM socket number	2
Supports memory size per socket	2 GB
Supports maximum memory size	4 GB
Supports DIMM type	DDRII SO-DIMM
Supports DIMM Speed	667/800 MHz
Supports DIMM voltage	+1.8V
Supports DIMM package	200-pin DDRII SO-DIMM
Memory module combinations	You can install memory modules in any combinations as long as they match the above specifications.

Memory Combinations

Slot 1	Slot 2	Total Memory
0MB	256MB	256MB
0MB	512MB	512MB
0MB	1024MB	1024MB
0MB	2048MB	2048MB
256MB	256MB	512MB
256MB	512MB	768MB
256MB	1024MB	1280MB
256MB	2048MB	2304MB
512MB	256MB	768MB
512MB	512MB	1024MB
512MB	1024MB	1536MB
512MB	2048MB	2560MB
1024MB	0MB	1024MB
1024MB	256MB	1280MB
1024MB	512MB	1536MB
1024MB	1024MB	2048MB
1024MB	2048MB	3072MB
2048MB	0MB	2048MB
2048MB	256MB	2304MB
2048MB	512MB	2560MB
2048MB	1024MB	3072MB
2048MB	2048MB	4096MB

NOTE: Above table lists some system memory configurations. You may combine DIMMs with various capacities to form other combinations. On above table, the configuration of slot 1 and slot 2 could be reversed.

LAN Interface

Item	Specification
LAN Chipset	Broadcom BCM5764MKML
Supports LAN protocol	Integrated 10/100/10000BASE-T transceiver
LAN connector type	RJ-45
LAN connector location	Left side
Features	• Automatic MDI crossover function • PCIe V1.1 compliant • 10/100/10000BASE-T full -duplex/half -duplex MAC • Receive side scaling(RSS)for multi-core processors • IPv4 and IPv6 large send offload and checksum offload (LSO/TCO) • Wake on LAN (WOL) support meeting the ACPI requirements • Statistics for SNMP MIB II, Ethernet-like MIB, and Ethernet MIB (IEEE 802.3z, Clause 30) • Self-boot feature, utilizing smaller EEPROM size • Serial flash memory support • SMBus interface supporting Alert Standard Format (ASF) v2.0 • Hot Plug support • PCI Express CLKREQ# support • Energy Detect/Cable sense • 68-pin QFN package

Bluetooth Interface

Item	Specification
Chipset	
Data throughput	
Protocol	
Interface	
Connector type	

Wireless Module 802.11b/g

Item	Specification
Chipset	
Data throughput	
Protocol	
Interface	

Hard Disk Drive Interface

Item				
Vendor & Model Name				
Capacity (MB)				
Bytes per sector				
Data heads				

Item				
Drive Format				
Disks				
Spindle speed (RPM)				
Performance Specifications				
Buffer size				
Interface				
Max. media transfer rate (disk-buffer, Mbytes/s)				
Data transfer rate (host~buffer, Mbytes/s)				
DC Power Requirements				
Voltage tolerance				

Combo Drive Module

Item	Specification	
Vendor & model name		
Performance Specification	With CD Diskette	With DVD Diskette
Transfer rate (KB/sec)	Sustained:	Sustained:
Buffer Memory		
Interface		
Applicable disc format		
Loading mechanism		
Power Requirement		
Input Voltage		

Audio Interface

Item	Specification
Audio Controller	Realtek ALC268 for High Definition Audio Codec
Audio onboard or optional	Onboard
Mono or Stereo	Stereo
Resolution	Wide range (-80dB ~ +42dB) volume control with 1.5dB resolution of analog to analog mixer gain

Item	Specification
Compatibility	• Two GPIOs (General Purpose Input and Output) for customized applications • Supports Anti-pop mode when analog power AVDD is on and digital power is off • Support stereo digital microphone interface to improve voice quality • Integrates high pass filter to cancel DC offset generated from digital microphone • 48-pin LQFP 'Green' package • Support low voltage IO for HDA Link (1.5V~3.3V) • Support legacy analog mixer architecture
Sampling rate	• All DACs supports 16/20/24-bit, 44.1k/48k/96k/192kHz sample rate • All ADCs supports 16/20/24-btt, 44.1k/48k/96k/192kHz sample rate • Two independent S/PDIF-OUT converters support 16/20/24-bit,44.1k/48k/88.2k/96k/192kHz sample rate
Internal microphone	AC-coupled input,100mVP-P maximum
Internal speaker / Quantity	Speaker capacity (1.5Watt/10cc chamber) x 2

Video Memory

Item	Specification
Chipset	Built in
Memory size	128MB

USB Interface

Item	Specification
Chipset	built in
USB Compliancy Level	2.0
Number of USB port	3
Location	2 left side, 1 right side

PCMCIA Port

Item	Specification
PCMCIA controller	
Supports card type	
Number of slots	
Access location	
Supports ZV (Zoomed Video) port	
Supports 32 bit CardBus	

System Board Major Chips

Item	Controller
Core logic	
VGA	
LAN	
USB 2.0	
Super I/O controller	
MODEM	

Item	Controller
Bluetooth	
Wireless 802.11 b+g	
PCMCIA/ 5 in 1 Card Reader	
Audio Codec	

Keyboard

Item	Specification
Keyboard controller	
Total number of keypads	
Windows logo key	
Internal & external keyboard work simultaneously	

Battery

Item	Specification
Vendor & model name	
Battery Type	
Pack capacity	
Number of battery cell	
Package configuration	
Normal voltage	
Charge voltage	

LCD 15.4”

Item	Specification
Vendor/model name	
Screen Diagonal (mm)	
Active Area (mm)	
Display resolution (pixels)	
Pixel Pitch	
Pixel Arrangement	
Display Mode	
Typical White Luminance (cd/m^2) also called Brightness	
Luminance Uniformity	
Contrast Ratio	
Response Time (Optical Rise Time/Fall Time) msec	
Nominal Input Voltage VDD	
Typical Power Consumption (watt)	
Weight (without inverter)	
Physical Size (mm)	
Electrical Interface	
Support Color	

Item	Specification
Viewing Angle (degree) Horizontal: Right/Left Vertical: Upper/Lower	
Temperature Range (°C) Operating Storage (shipping)	

LCD Inverter

Item	Specification
Vendor & model name	
Brightness conditions	
Input voltage (V)	
Input current (mA)	
Output voltage (V, rms)	
Output current (mA, rms)	
Output voltage frequency (k Hz)	

AC Adapter

Item	Specification
Input rating	
Maximum input AC current	
Inrush current	
Efficiency	

System Power Management

ACPI mode	Power Management
Mech. Off (G3)	
Soft Off (G2/S5)	
Working (G0/S0)	
Suspend to RAM (S3)	
Save to Disk (S4)	

System Utilities

BIOS Setup Utility

The BIOS Setup Utility is a hardware configuration program built into your computer's BIOS (Basic Input/ Output System).

Your computer is already properly configured and optimized, and you do not need to run this utility. However, if you encounter configuration problems, you may need to run Setup. Please also refer to Chapter 4 Troubleshooting when problem arises.

To activate the BIOS Utility, press **F2** during POST (when "Press <F2> to enter Setup" message is prompted on the bottom of screen).

Press **F2** to enter setup. The default parameter of F12 Boot Menu is set to "disabled". If you want to change boot device without entering BIOS Setup Utility, please set the parameter to "enabled".

Press <F12> during POST to enter multi-boot menu. In this menu, user can change boot device without entering BIOS SETUP Utility.

Navigating the BIOS Utility

There are six menu options: Information, Main, Advanced, Security, Boot, and Exit.

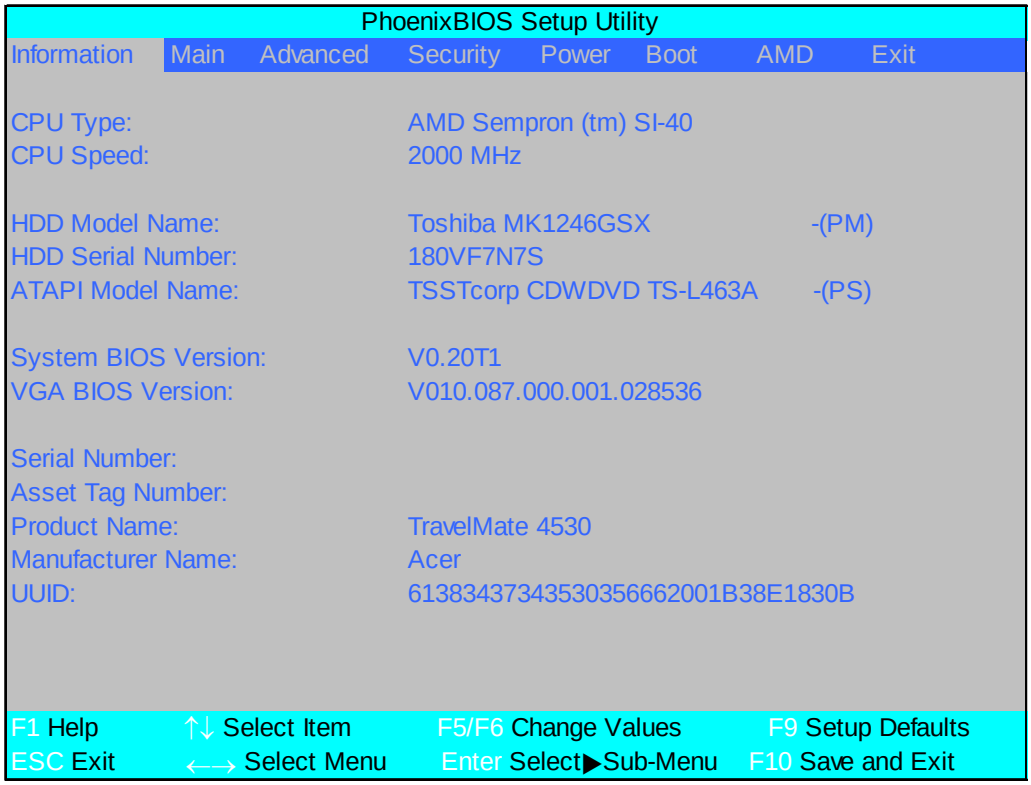
Follow these instructions:

- To choose a menu, use the left and right arrow keys.
- To choose an item, use the up and down arrow keys.
- To change the value of a parameter, press **F5** or **F6**.
- A plus sign (+) indicates the item has sub-items. Press **Enter** to expand this item.
- Press **Esc** while you are in any of the menu options to go to the Exit menu.
- In any menu, you can load default settings by pressing **F9**. You can also press **F10** to save any changes made and exit the BIOS Setup Utility.

NOTE: You can change the value of a parameter if it is enclosed in square brackets. Navigation keys for a particular menu are shown on the bottom of the screen. Help for parameters are found in the Item Specific Help part of the screen. Read this carefully when making changes to parameter values. **Please note that system information is subject to different models**.

Information

The Information screen displays a summary of your computer hardware information.

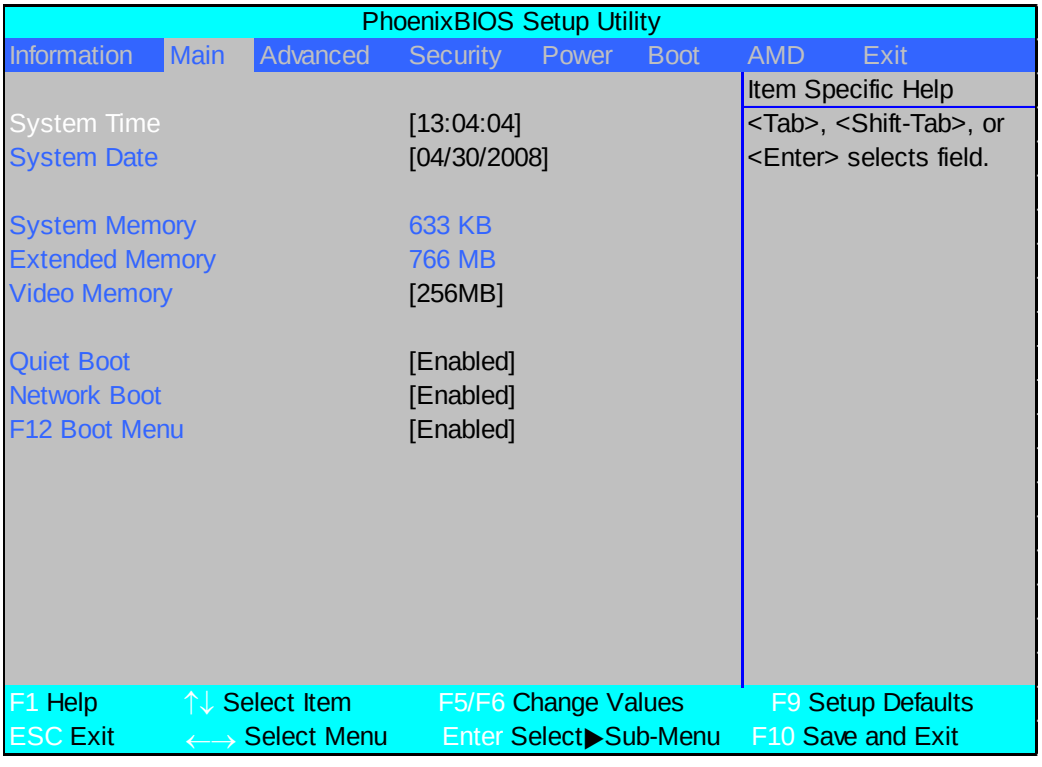


NOTE: The system information is subject to different models.

Parameter	Description
CPU Type	This field shows the CPU type and speed of the system.
CPU Speed	This field shows the speed of the CPU.
HDD Model Name	This field shows the model name of HDD installed on primary IDE master.
HDD Serial Number	This field displays the serial number of HDD installed on primary IDE master.
ATAPI Model Name	This field shows the model name of the Optical device installed in the system.
System BIOS Version	Displays system BIOS version.
VGA BIOS Version	This field displays the VGA firmware version of the system.
Serial Number	This field displays the serial number of this unit.
Asset Tag Number	This field displays the asset tag number of the system.
Product Name	This field shows product name of the system.
Manufacturer Name	This field displays the manufacturer of this system.
UUID Number	Universally Unique Identifier (UUID) is an identifier standard used in software construction, standardized by the Open Software Foundation (OSF) as part of the Distributed Computing Environment (DCE).

Main

The Main screen allows the user to set the system time and date as well as enable and disable boot option and recovery.



NOTE: The screen above is for your reference only. Actual values may differ.

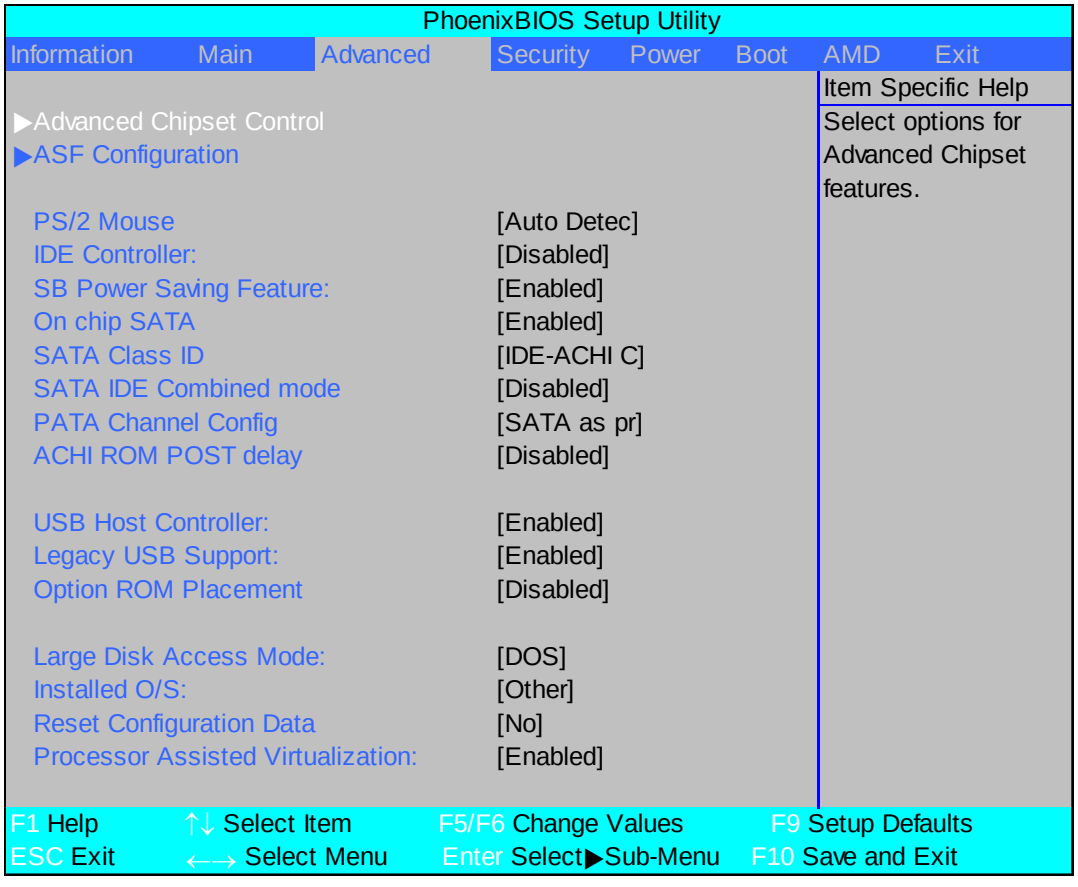
The table below describes the parameters in this screen. Settings in **boldface** are the default and suggested parameter settings.

Parameter	Description	Format/Option
System Time	Sets the system time. The hours are displayed with 24-hour format.	Format: HH:MM:SS (hour:minute:second)
System Date	Sets the system date.	Format MM/DD/YYYY (month/day/year)
System Memory	This field reports the memory size of the system. Memory size is fixed to 633 KB.	N/A
Extended Memory	This field reports the Extended Memory size. Memory size is fixed to 4094 MB.	N/A
Video Memory	Shows the video memory size. VGA Memory size =256 MB	N/A
Quiet Boot	Displays the logo screen while booting.	Option: **Enabled** or Disabled
Network Boot	Enables, disables the system boot from LAN (remote server).	Option: **Enabled** or Disabled
F12 Boot Menu	Enables, disables Boot Menu during POST.	Option: **Enabled** or Disabled

Advanced

The Advanced screen allows the user to configure the various advanced BIOS options.

IMPORTANT: Making incorrect settings to items on these pages may cause the system to malfunction. Unless you have experience adjusting these items, we recommend that you leave these settings at the default values. If making settings to items on these pages causes your system to malfunction or prevents the system from booting, open BIOS and choose Load Optimal Defaults in the Exit menu to boot up normally.



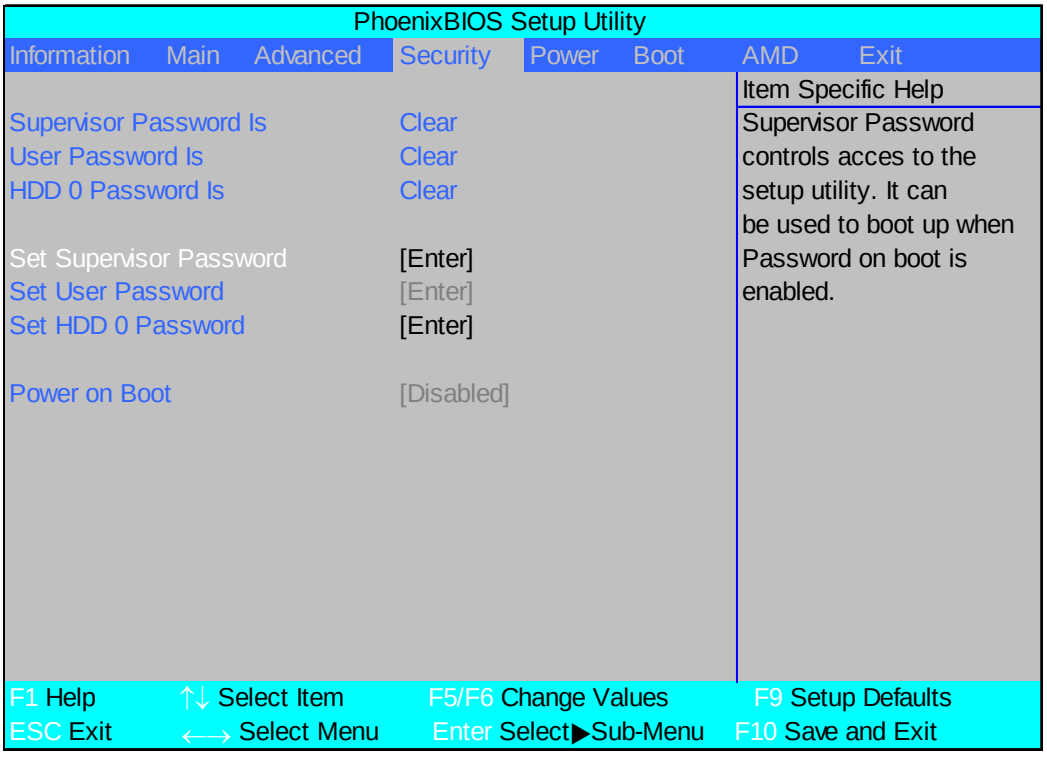
The table below describes the items, menus, and submenus in this screen. Settings in **boldface** are the default and suggested parameter settings.

Parameter	Description	Submenu Items
Advanced Chipset Control	Enter the Advanced Chipset Control menu.	• Advanced NB Options • Advanced SB Options
ASF Configuration	Enter the ASF Configuration menu.	• ASF OS Device Availability • Minimum Watchdog Timeout • BIOS Boot Timeout • OS Boot Timeout • Power-on wait time
PS/2 Mouse	Enable or Disable PS/2 Mouse port IRQ12.	Option: **Auto Detect**, Enabled, or Disabled
IDE Controller	Configure the Integrated Local Bus IDE Controller.	Option: **Disabled**, Both, or Primary
SB Power Saving Feature	Enable SB Power Saving Feature.	Option: **Enabled** or Disabled

Parameter	Description	Submenu Items
On chip SATA	Enable On chip SATA.	Option: **Enabled** or Disabled
SATA Class ID	Select the SATA Class ID.	Option: **IDE-ACHI Class**, HyperFlash Class, IDE-HyperFlash Class, IDE Native Mode, Raid Class, ACHI Class, or IDE Legacy Mode
SATA IDE Combined mode	Set SATA IDE Combined mode.	Option: **Disabled** or Enabled
PATA Channel Config	Set the SATA channel as Primary or Secondary channel.	Option: **SATA as primary** or SATA as secondary
ACHI ROM POST delay	Select SATA option ROM POST delay.	Option: **Disabled**, 7, 6, 5, 4, 3, 2, or 1 second(s) delay
USB Host Controller	Enable or disable USB hardware.	Option: **Enabled** or Disabled
Legacy USB Support	Enable support for Legacy Universal Serial Bus.	Option: **Enabled** or Disabled
Option ROM Placement	Determines which peripheral devices can be booted. **NOTE:** Changes to this setting can cause the system to halt during boot.	Option: **Disabled**, Temporary, or E000 Extend
Large Disk Access Mode	Set the Large Disk Access mode. Different O/S require different drive geometry representations. Select **Other** for UNIX, Novell NetWare, or other O/S.	Option: **DOS** or Other
Installed O/S	Set the most commonly used O/S on the system.	Option: **Other**, Win2000, WinMe, Win98, or Win95
Reset Configuration Data	Clear Extended System Configuration Data (ESCD) area.	Option: **No** or Yes
Processor Assisted Virtualization	Enable the hardware visualization support.	Option: **Enabled** or Disabled.

Security

The Security screen contains parameters that help safeguard and protect your computer from unauthorized use.



The table below describes the parameters in this screen. Settings in **boldface** are the default and suggested parameter settings.

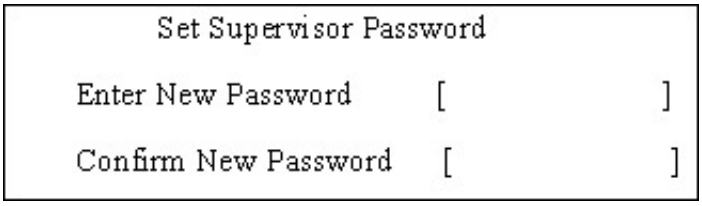
Parameter	Description	Option
Supervisor Password Is	Shows the setting of the Supervisor password	**Clear** or Set
User Password Is	Shows the setting of the user password.	**Clear** or Set
HDD 0 Password Is	Shows the setting of the hard disk password.	**Clear** or Set
Set Supervisor Password	Press Enter to set the supervisor password. When set, this password protects the BIOS Setup Utility from unauthorized access. The user can not either enter the Setup menu nor change the value of parameters.	
Set User Password	Press Enter to set the user password. When user password is set, this password protects the BIOS Setup Utility from unauthorized access. The user can enter Setup menu only and does not have right to change the value of parameters.	
Set HDD 0 Password	Press Enter to set the HDD 0 password. When the HDD password is set, this password protects HDD 0 from unauthorized access.	
Password on Boot	Defines whether a password is required or not while the events defined in this group happened. The following sub-options are all requires the Supervisor password for changes and should be grayed out if the user password was used to enter setup.	**Disabled** or Enabled

NOTE: When you are prompted to enter a password, you have three tries before the system halts. Don't forget your password. If you forget your password, you may have to return your notebook computer to your dealer to reset it.

Setting a Password

Follow these steps as you set the user or the supervisor password:

1. Use the ↑ and ↓ keys to highlight the Set Supervisor Password parameter and press the **Enter** key. The Set Supervisor Password box appears:



2. Type a password in the “Enter New Password” field. The password length can not exceeds 8 alphanumeric characters (A-Z, a-z, 0-9, not case sensitive). Retype the password in the “Confirm New Password” field.

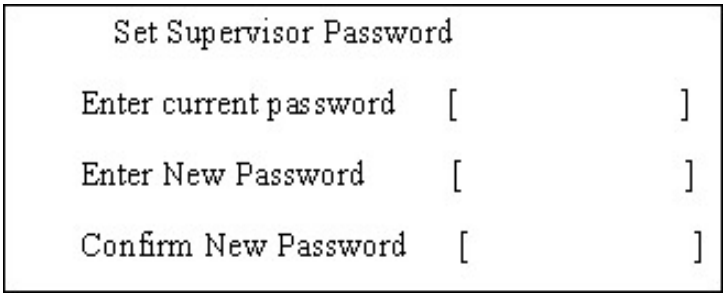
IMPORTANT: Be very careful when typing your password because the characters do not appear on the screen.

3. Press **Enter**. After setting the password, the computer sets the User Password parameter to “Set”.
4. If desired, you can opt to enable the Password on boot parameter.
5. When you are done, press F10 to save the changes and exit the BIOS Setup Utility.

Removing a Password

Follow these steps:

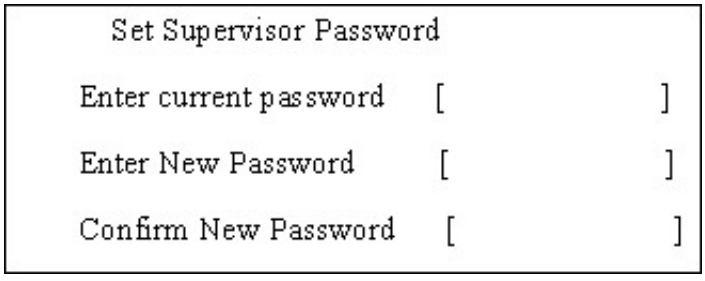
1. Use the ↑ and ↓ keys to highlight the Set Supervisor Password parameter and press the **Enter** key. The Set Password box appears:



2. Type the current password in the Enter Current Password field and press **Enter**.
3. Press **Enter** twice **without** typing anything in the Enter New Password and Confirm New Password fields. The computer then sets the Supervisor Password parameter to “Clear”.
4. When you have changed the settings, press u to save the changes and exit the BIOS Setup Utility.

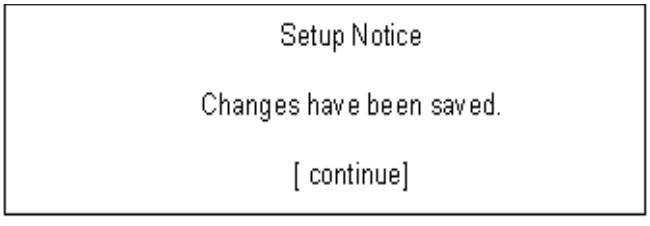
Changing a Password

1. Use the ↑ and ↓ keys to highlight the Set Supervisor Password parameter and press the **Enter** key. The Set Password box appears.



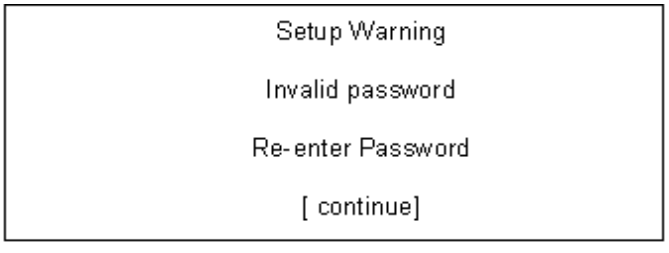
2. Type the current password in the Enter Current Password field and press **Enter**.
3. Type a password in the Enter New Password field. Retype the password in the Confirm New Password field.
4. Press **Enter**. After setting the password, the computer sets the User Password parameter to “Set”.
5. If desired, you can enable the Password on boot parameter.
6. When you are done, press F10 to save the changes and exit the BIOS Setup Utility.

If the verification is OK, the screen will display as following.

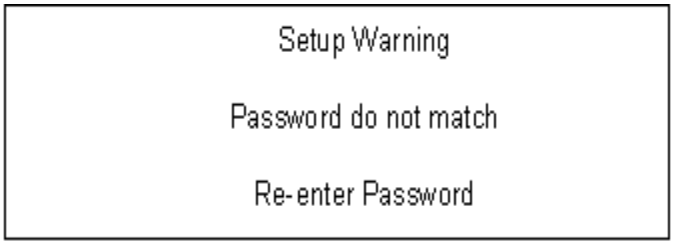


The password setting is complete after the user presses **Enter**.

If the current password entered does not match the actual current password, the screen will show you the Setup Warning.

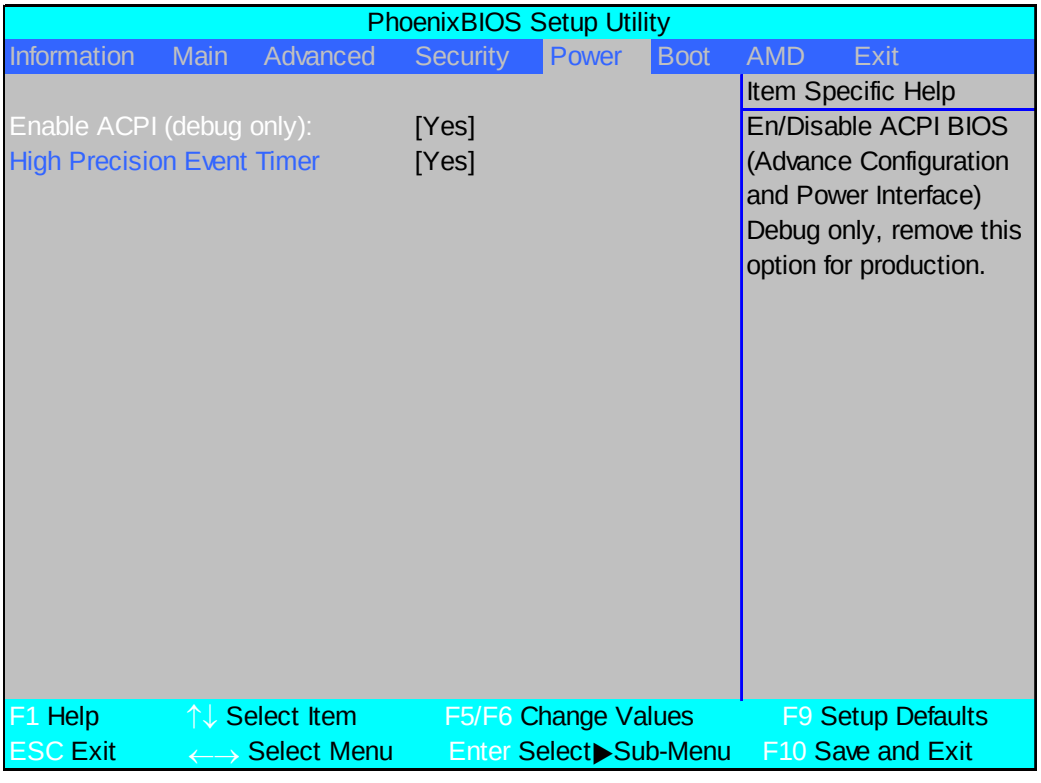


If the new password and confirm new password strings do not match, the screen will display the following message.



Power

The Power screen allows the user to configure CPU and power management options.

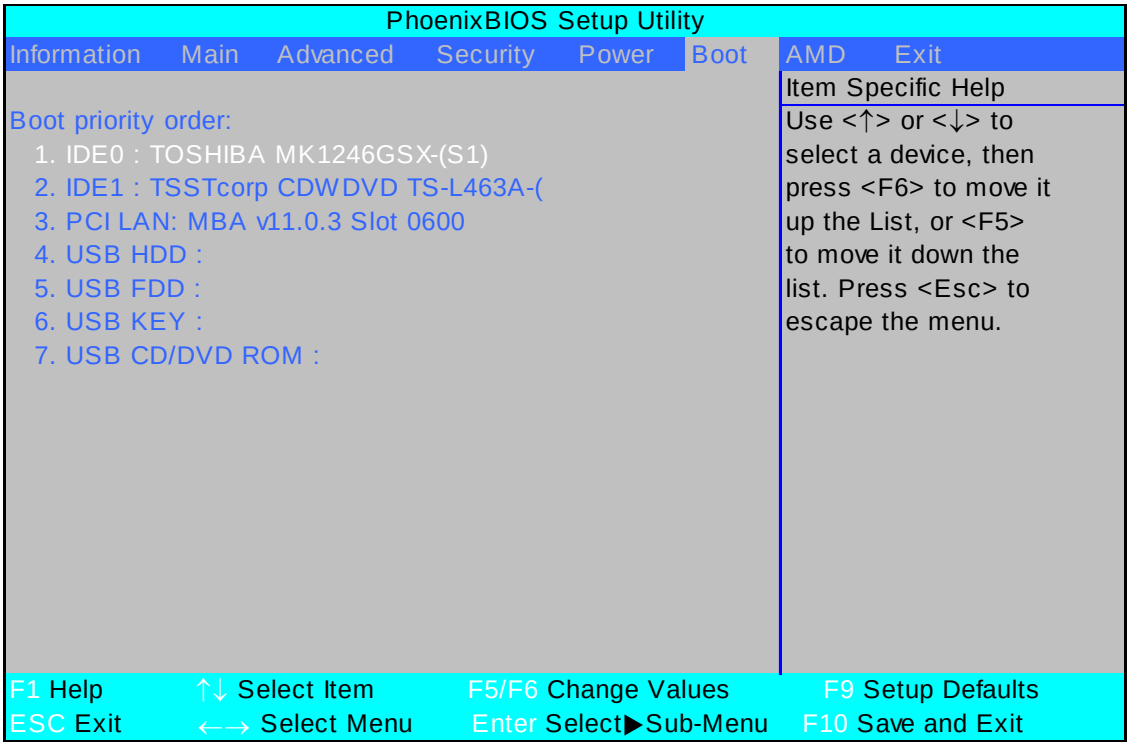


The table below describes the items, menus, and submenus in this screen. Settings in **boldface** are the default and suggested parameter settings.

Parameter	Description	Option
Enable ACPI (debug only)	Enable or disable ACPI BIOS.	**Yes** or No
High Precision Event Timer	Enable or disable HPET.	**Yes** or No

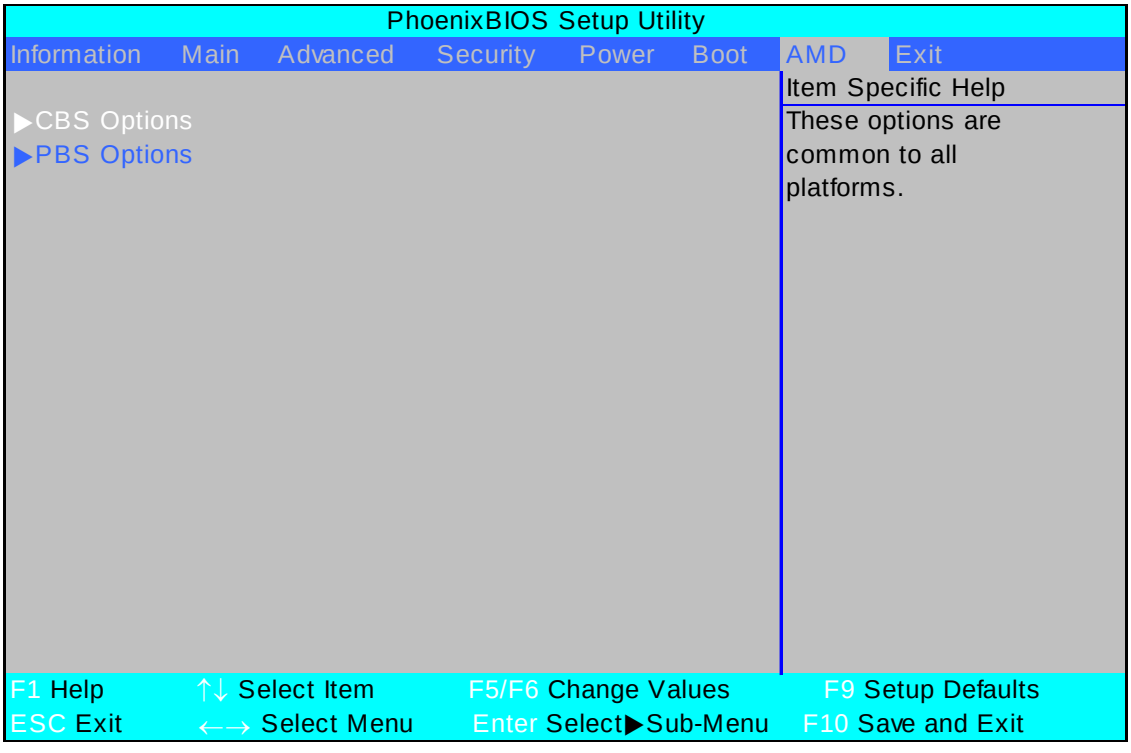
Boot

This menu allows the user to decide the order of boot devices to load the operating system. Bootable devices includes the USB diskette drives, the onboard hard disk drive and the DVD drive in the module bay.



AMD

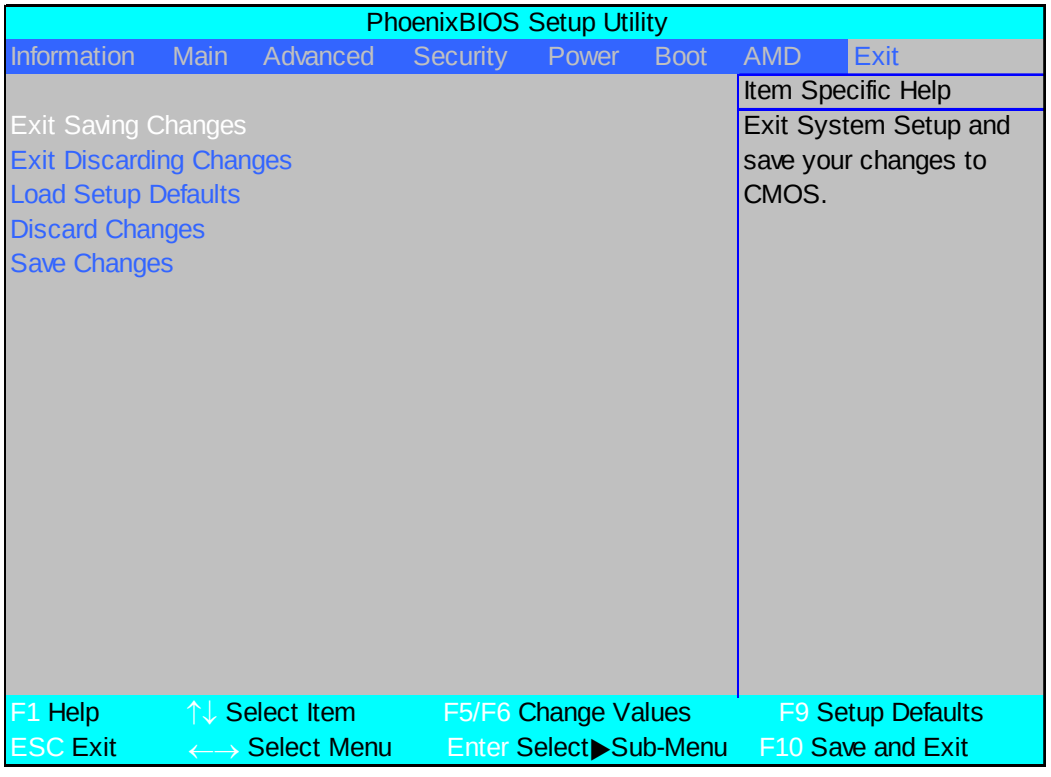
The AMD screen allows the user to configure memory, thermal management options, and device wakeup behavior.



Parameter	Description	Submenu Items
CBS Options	Manage common platform BIOS settings.	• Power Management • Thermal Control • DDR2 Memory & Memory Controller
PBS Options		• Primary Display • Parallel ATA • On chip SATA • USB Host Controller • USB3 Controller • Legacy USB Support • OSC Support • System Time Lag Workaround • Thermal Fan Control

Exit

The Exit screen allows you to save or discard any changes you made and quit the BIOS Utility.



The table below describes the parameters in this screen.

Parameter	Description
Exit Saving Changes	Exit System Setup and save your changes to CMOS.
Exit Discarding Changes	Exit utility without saving setup data to CMOS.
Load Setup Default	Load default values for all SETUP item.
Discard Changes	Load previous values from CMOS for all SETUP items.
Save Changes	Save Setup Data to CMOS.

BIOS Flash Utility

The BIOS flash memory update is required for the following conditions:

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

Use the Phlash utility to update the system BIOS flash ROM.

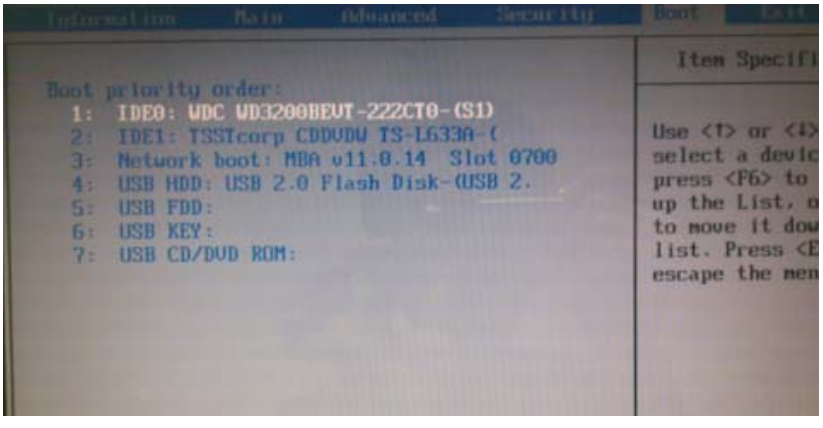
NOTE: Create a **Crisis Recovery Media** (such as USB HDD) before you use the Phlash utility.

NOTE: Do not install memory-related drivers (XMS, EMS, DPMI) when you use the Phlash.

NOTE: Please use the AC adaptor power supply when you run the Phlash utility. If the battery pack does not contain enough power to finish BIOS flash, the system will not boot as the BIOS is not loaded.

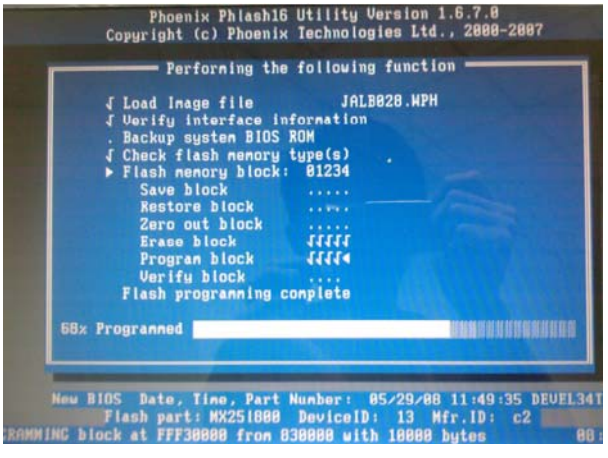
Perform the following steps to use the Flash Utility:

1. Press F2 during boot to enter the Setup Menu.
2. Select **Boot Menu** to modify the boot priority order, for example, if using USB HDD to Update BIOS, move USB HDD to position 1.



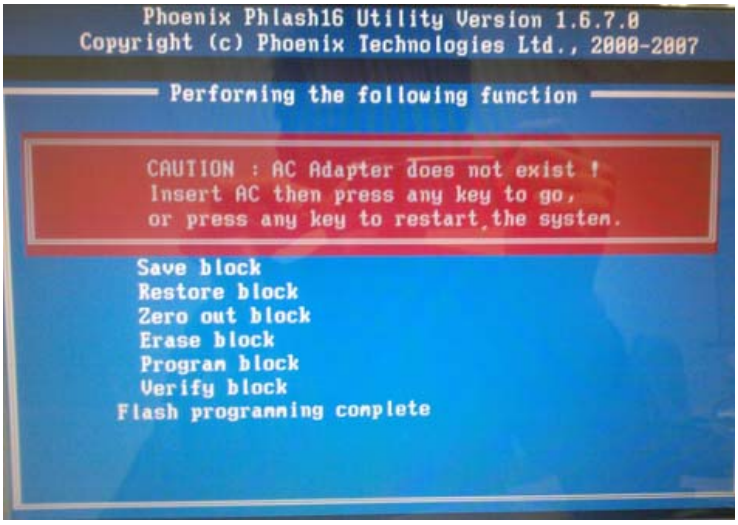
3. Execute the **JALB028.BAT** batch file from C:\JALB0_JALC0\BIOS\JALB028A to update BIOS.

The flash process begins as shown.



4. In flash BIOS, the message **Please do not remove AC Power Source** displays.

NOTE: If the AC power is not connected, the following message displays.



Plug in the AC power to continue.

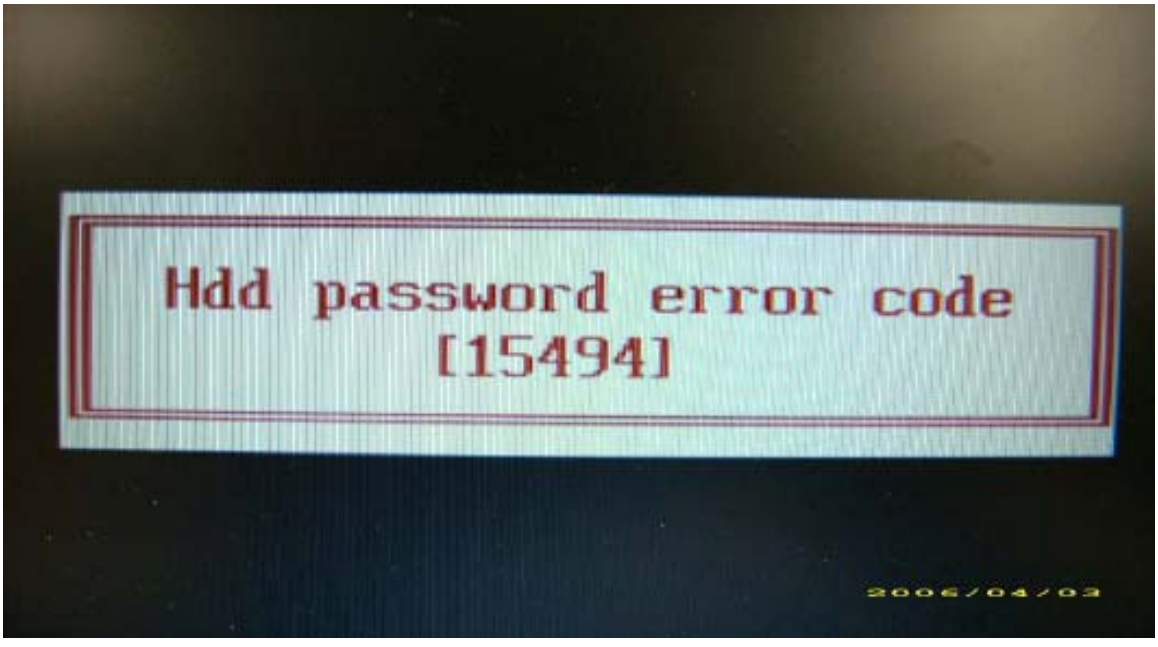
5. Flash is complete when the message Flash programming complete displays.

Removing HDD Passwords

This section provide you with removing HDD/BIOS password method:

Remove HDD Password:

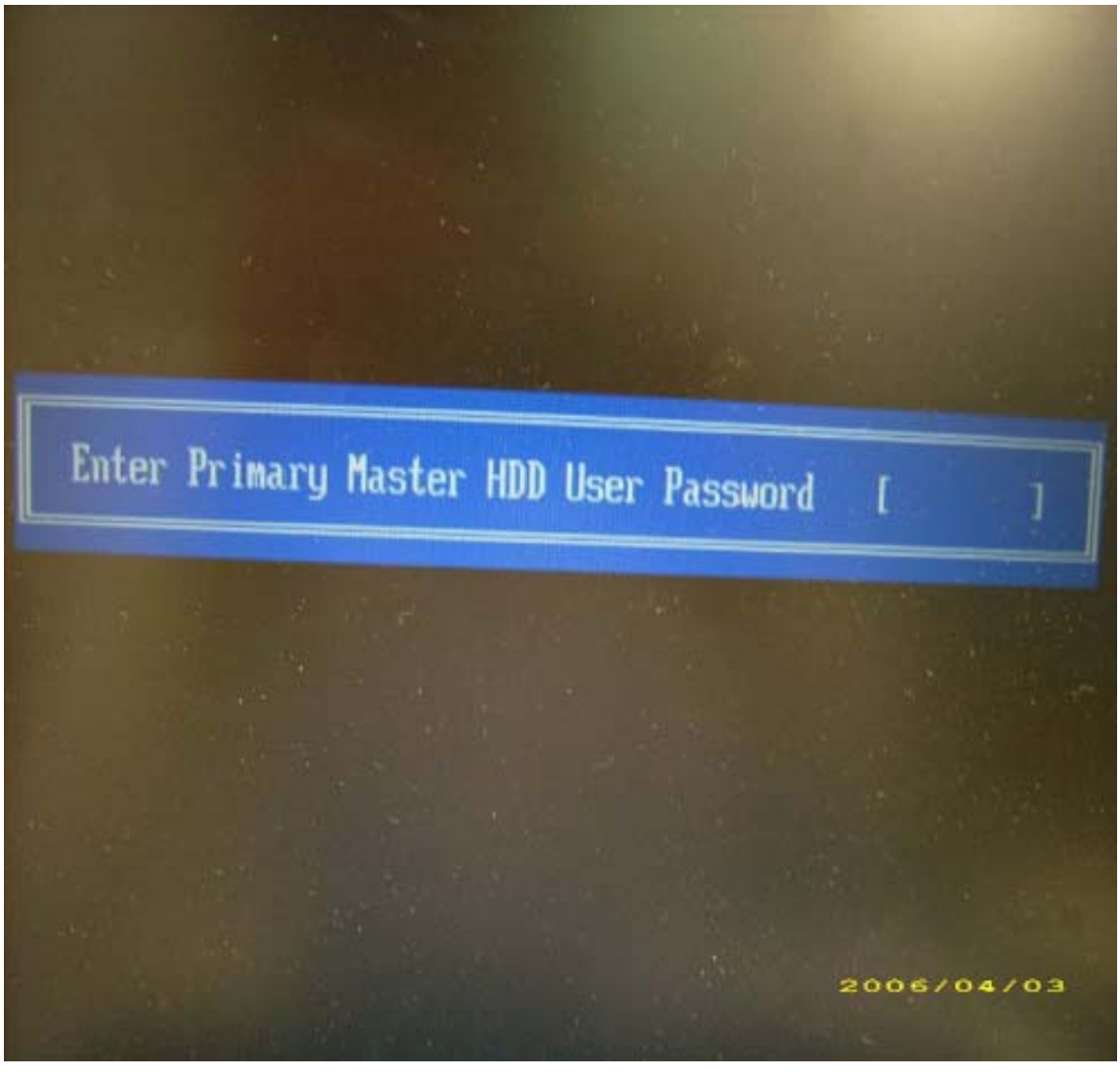
- If you key in wrong HDD password for three time, “HDD password error code” would display on the screen. See the image below.



- If you need to solve HDD password locked problem, you can run HDD_PW.EXE

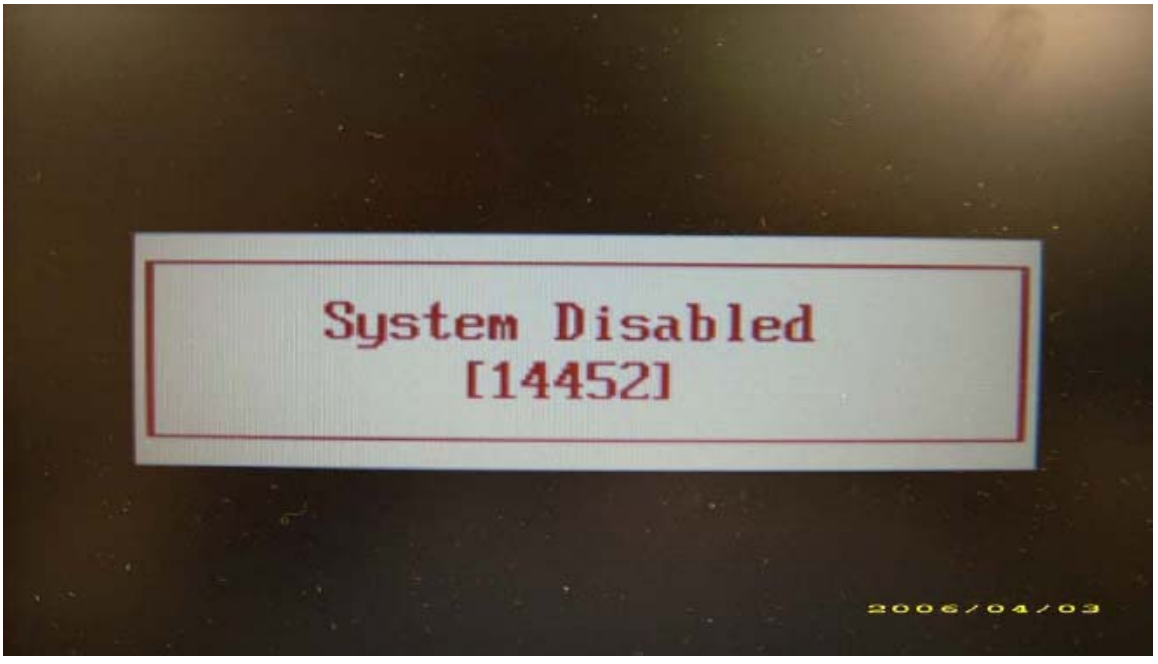
1. Key in “hdd_pw 15494 0”
2. Select “2”
3. Choose one upper-case string

- Reboot system and key in “0KJFN42” or “UVEIQ96” to HDD user password.


Enter Primary Master HDD User Password [ ]
2006/04/03

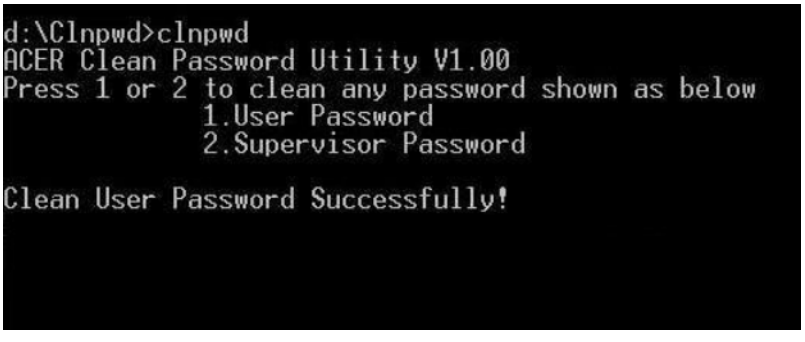
Removing BIOS Passwords:

If you key in wrong Supervisor Password three time, “System Disabled” displays on the screen. See the image below.



To clear the password, perform the following steps:

1. From a DOS prompt, Execute **clnpwd.exe**



2. Press 1 or 2 to clean the desired password shown on the screen.

The onscreen message determines whether the function is successful or not.

Machine Disassembly and Replacement

This chapter contains step-by-step procedures on how to disassemble the notebook computer for maintenance and troubleshooting.

Disassembly Requirements

To disassemble the computer, you need the following tools:

- Wrist grounding strap and conductive mat for preventing electrostatic discharge
- Flat screwdriver
- Philips screwdriver
- Plastic flat screwdriver
- Plastic tweezers

NOTE: The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatch when putting back the components.

General Information

Pre-disassembly Instructions

Before proceeding with the disassembly procedure, make sure that you do the following:

1. Turn off the power to the system and all peripherals.
2. Unplug the AC adapter and all power and signal cables from the system.

3. Place the system on a flat, stable surface.
4. Remove the battery pack.

Disassembly Process

The disassembly process is divided into the following stages:

- External module disassembly
- Main unit disassembly
- LCD module disassembly

The flowcharts provided in the succeeding disassembly sections illustrate the entire disassembly sequence. Observe the order of the sequence to avoid damage to any of the hardware components. For example, if you want to remove the main board, you must first remove the keyboard, then disassemble the inside assembly frame in that order.

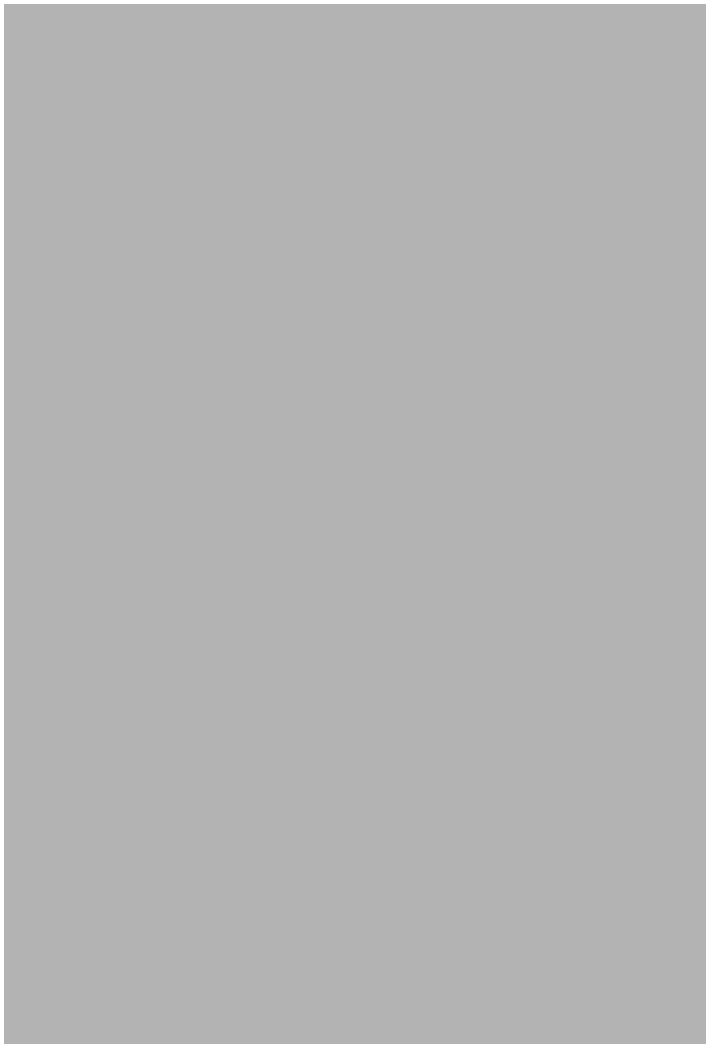
Main Screw List

Screw	Quantity	Part Number
M2.5*8 (NL)	15	MA000005YG0
M2.5*5 (NL)	22	MA000007YG0
M2.5*3 (NL)	2	MA000005WG0
M2*3 (NL)	36	MA0000060G0
M2.5*4 (NL)	2	MA0000005G0
M2*6 (NL)	4	MMCK20060G0
M2*4-NI (NL)	5	MACK20040G0
M3*3 (NL)	4	MAAA03032G0
M2*6.5	4	MA0000096G0
M2.5*5.0	2	MA000002NG0
M2.5*6.5	4	MA000006C00

External Module Disassembly Process

External Modules Disassembly Flowchart

The flowchart below gives you a graphic representation on the entire disassembly sequence and instructs you on the components that need to be removed during servicing. For example, if you want to remove the main board, you must first remove the keyboard, then disassemble the inside assembly frame in that order.



Screw List

Step	Screw	Quantity	Color	Part No.
WLAN Module	M2*3 (NL)	2	Black	MA0000060G0
HDD Carrier	M3*3 (NL)	4	Silver	MAAA03032G0
ODD Module	M2.5*3(NL)	1	Black	MA000002NG0
ODD Bracket	M2*3 (NL)	3	Black	MA0000060G0

Removing the Battery Pack

1. Turn computer over.
2. Slide the battery lock/unlock latch to the unlock position.

3. Slide and hold the battery release latch to the release position (1), then slide out the battery pack from the main unit (2).

Removing the SD dummy card

1. Push the SD dummy card all the way in to eject it.

2. Pull it out from the slot.

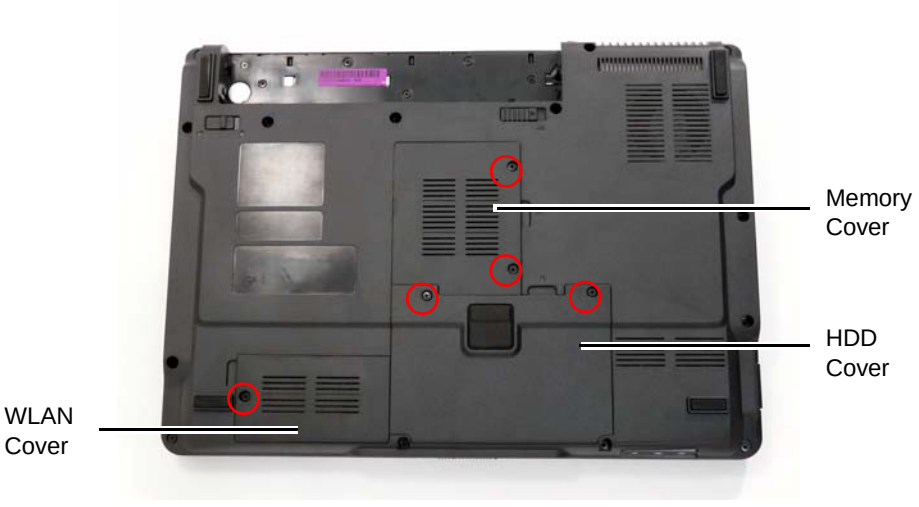
Removing the ExpressCard dummy card

1. Push the ExpressCard eject button to eject it, then push it all the way in to eject the ExpressCard dummy.

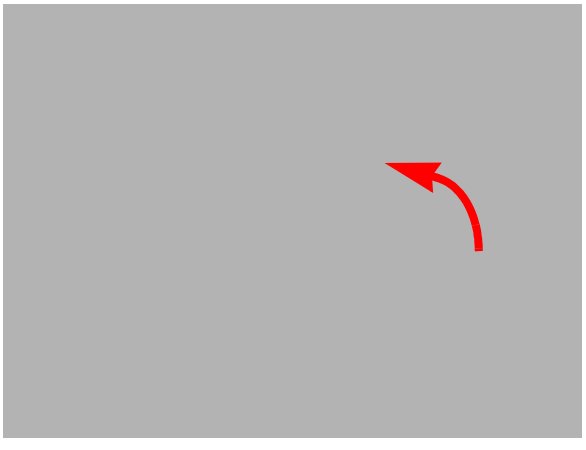
2. Pull it out from the slot.

Removing the Lower Covers

1. See “Removing the Battery Pack” on page 46.
2. See “Removing the SD dummy card” on page 47.
3. See “Removing the ExpressCard dummy card” on page 48.
4. Loosen the five captive screws in the Memory, HDD, and WLAN bays as shown.



5. Carefully open the memory cover.

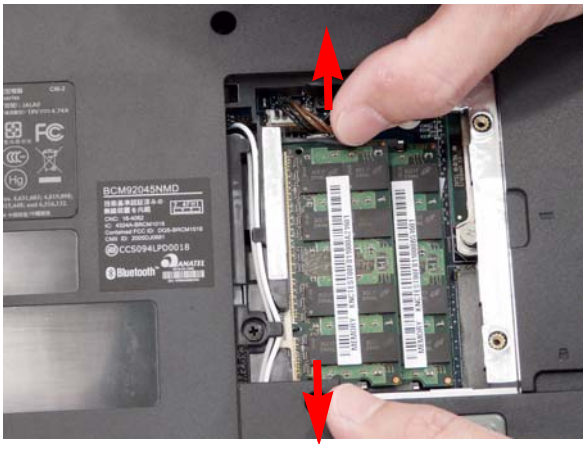


6. Remove the HDD cover as shown.

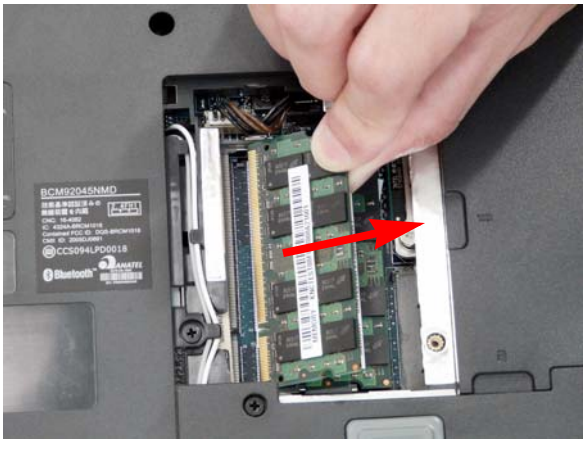
7. Remove the WLAN cover as shown.

Removing the DIMM Modules

1. See “Removing the Battery Pack” on page 46.
2. Remove the Memory Module cover See “Removing the Lower Covers” on page 49.
3. Push out the release latches on both sides of the DIMM socket to release the DIMM module.



4. Remove the DIMM module.

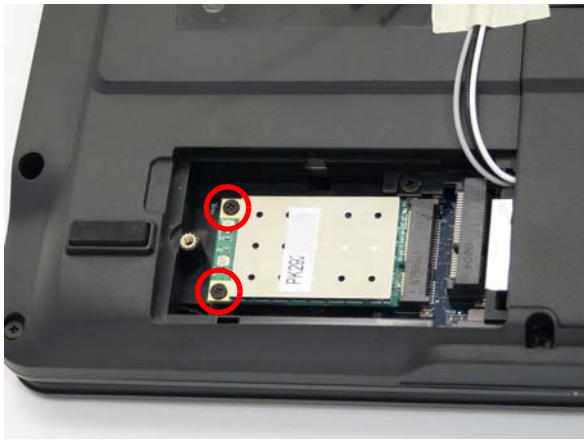


5. Repeat steps for the second DIMM module.

Removing the WLAN Module

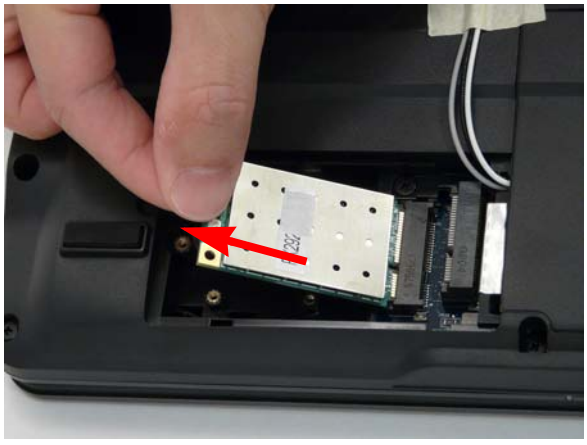
1. See “Removing the Battery Pack” on page 46.
2. Remove the WLAN cover. See “Removing the Lower Covers” on page 49.
3. Remove the adhesive tape and disconnect the antenna cables from the WLAN board.

4. Move the antenna cables away and remove the two screws on the WLAN board to release the WLAN board.



Step	Size	Quantity	Screw Type
WLAN Module	M2*3 (NL)	2	

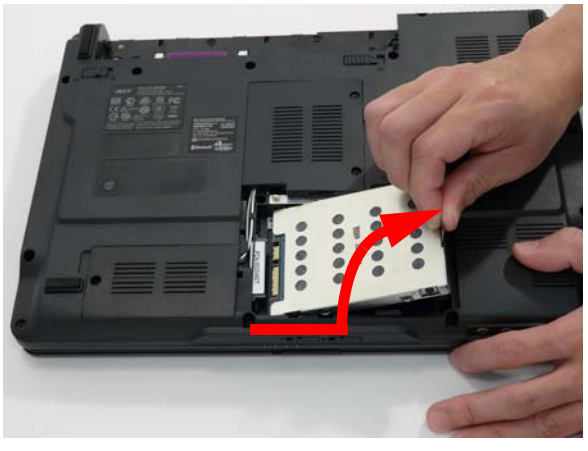
5. Detach the WLAN board from the WLAN socket.



NOTE: When re-attaching the antenna cables, ensure the black cable is attached to connector -1, while the white cable is attached to connector-2.

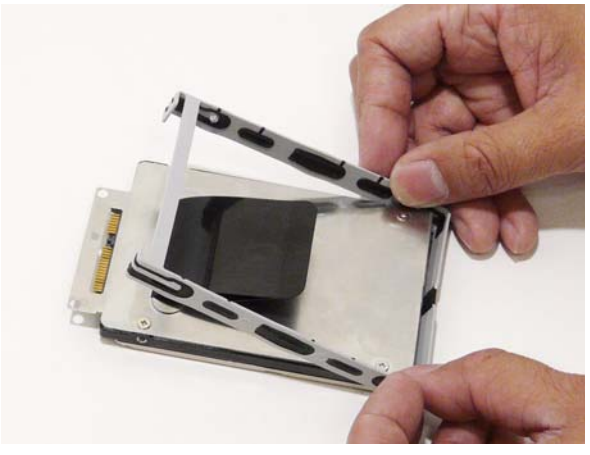
Removing the Hard Disk Drive Module

1. See “Removing the Battery Pack” on page 46.
2. Remove the HDD cover, See “Removing the Lower Covers” on page 49.
3. Use the mylar tab to slide and lift up the hard disk drive module to remove.

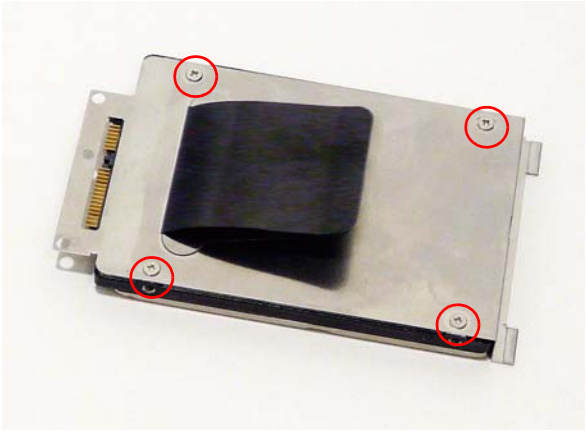


NOTE: To prevent damage to device, avoid pressing down on it or placing heavy objects on top of it.

4. Remove the HDD holder by easing the sides outward to clear the carrier.

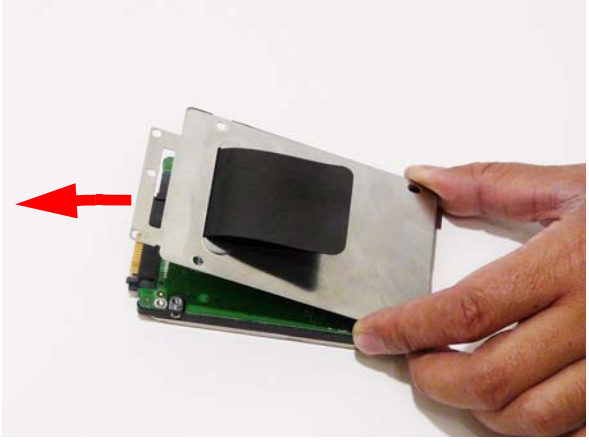


5. Remove the four screws securing the hard disk to the carrier.



Step	Size	Quantity	Screw Type
HDD Carrier	M3*3.5 (NL)	4	

6. Remove the HDD from the carrier.



Removing the Optical Drive Module

1. See “Removing the Battery Pack” on page 46.
2. Remove the Memory cover. See “Removing the Lower Covers” on page 49.
3. Remove the screw securing the ODD module.

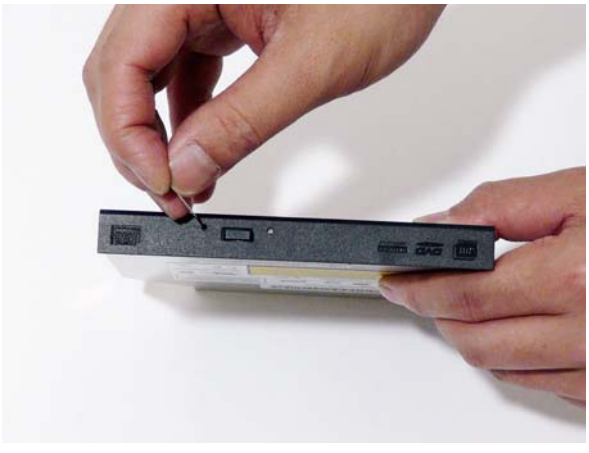
Step	Size	Quantity	Screw Type
ODD Module	M2.5*5(NL)	1	

4. Using a screw driver, push the ODD module through the chassis and pull to remove it from the main unit.

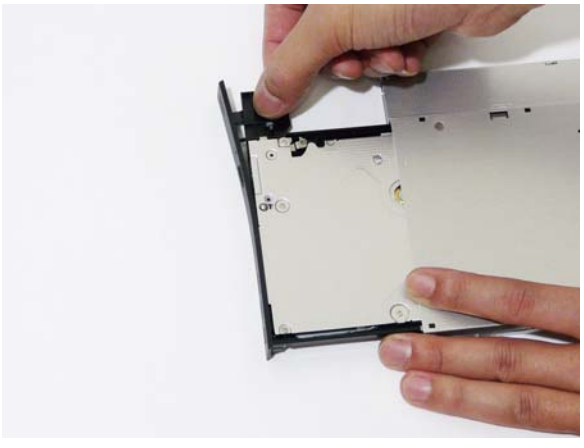
5. Remove the three screws securing the ODD bracket and remove the ODD bracket from the ODD module.

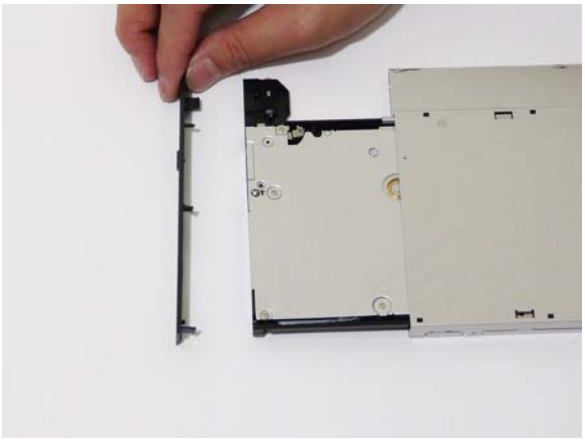
Step	Size	Quantity	Screw Type
ODD Bracket	M2*3 (NL)	3	

6. Insert a pin in the eject hole of the ODD to eject the ODD tray.



7. Press down on the locking catch to release the ODD cover and remove.





Main Unit Disassembly Process

Main Unit Disassembly Flowchart

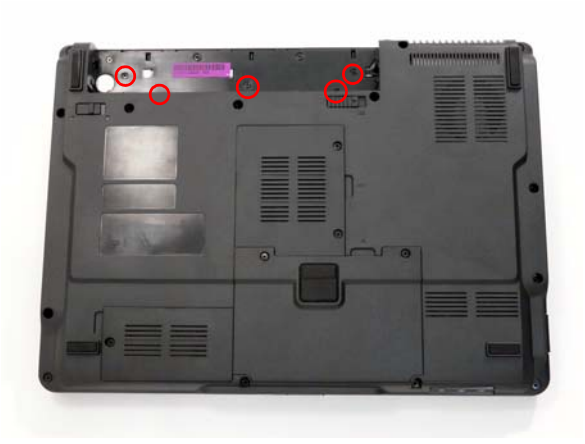
Screw List

Step	Screw	Quantity	Color	Part No.
Switch Cover	M2*3 (NL)	2		MA0000060G0
LCD Module	M2.5*8(NL)	4		MA000005YG0
LCD Module	M2.5*5 (NL)	2		MA000007YG0
Upper Cover	M2.5*8 (NL)	8		MA000005YG0
Upper Cover	M2.5*5 (NL)	7		MA000007YG0
Touch Pad Bracket	M2*3 (NL)	2		MA0000060G0
Launch Board	M2*3 (NL)	2		MA0000060G0
Speaker	M2*3 (NL)	4		MA0000060G0
I/O Board	M2.5*5 (NL)	1		MA000007YG0
Bluetooth Board	M2*3 (NL)	1		MA0000060G0
Modem Module	M2*3 (NL)	2		MA0000060G0
Mainboard	M2.5*5 (NL)	1		MA000007YG0
Thermal Module	M2*6.5	4		MA0000096G0
CPU Fan	M2*4-NI (NL)	3		MACK20040G0

Removing the Switch Cover

CAUTION: Using tools to remove the Switch Cover may cause damage to the outer casing. It is recommended that you use your hands to remove the Switch Cover.

1. See “Removing the Battery Pack” on page 46.
2. Locate and remove the five securing screws as shown.



Step	Size	Quantity	Screw Type
Switch Cover	M2*3	5	

3. Turn the computer over and open the LCD module fully to expose the Switch Cover.

   IMPORTANT: The LCD module must be extended horizontally to remove the switch cover.

4. Starting from right to left, pry the right corner up as shown.

5. Lift the Switch Cover clear of the chassis.

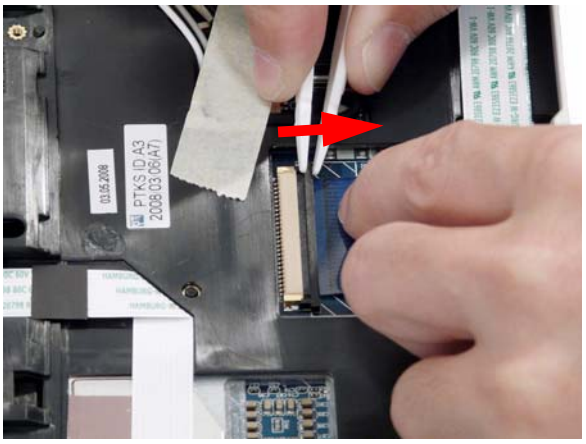
Removing the Keyboard

1. See “Removing the Battery Pack” on page 46.
2. See “Removing the Switch Cover” on page 59.
3. Remove the two screws securing the keyboard to the upper case.

Step	Size	Quantity	Screw Type
Keyboard	2	M2*3	

4. Lift the keyboard as shown to remove from the chassis.

5. Turn the keyboard over and pull back the securing latch to release the FFC.

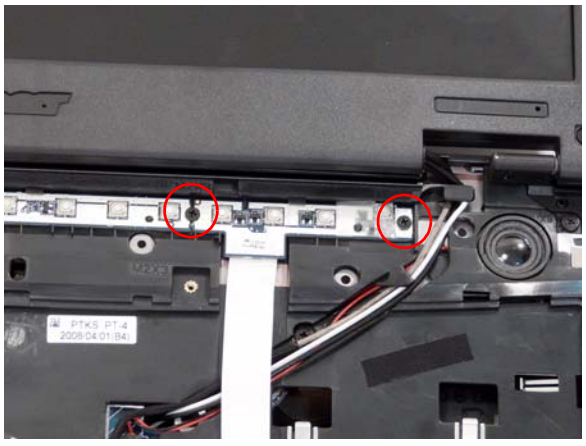


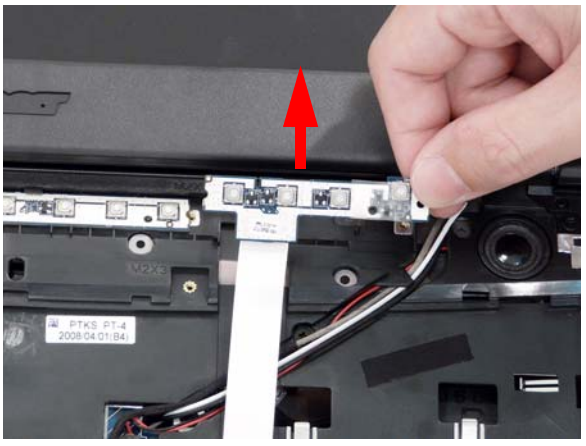
6. Remove the keyboard from the chassis.

Removing the Power Board

1. See “Removing the Battery Pack” on page 46.
2. See “Removing the Keyboard” on page 61.
3. Disconnect the Power Board cable from the mainboard.

4. Remove the two securing screws from the Power Board.
   NOTE: The left hand securing screw is shared by the eKey Board.



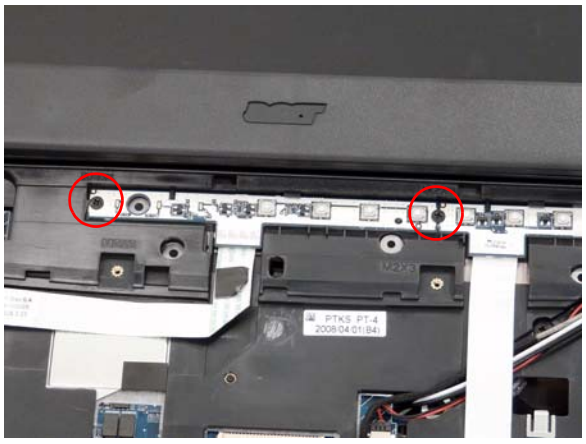


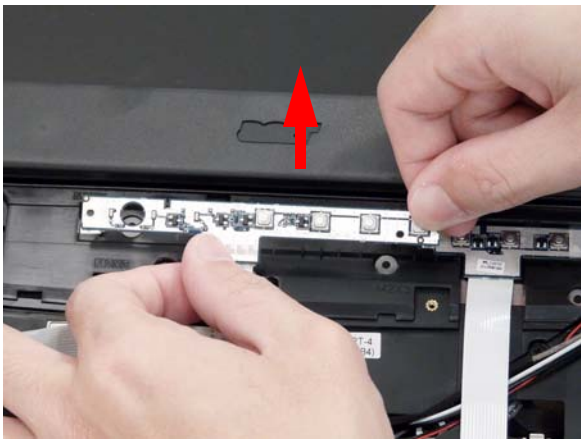
Step	Size	Quantity	Screw Type
Power Board	M2*3	2	

Removing the Launch Board

1. See “Removing the Battery Pack” on page 46.
2. See “Removing the Keyboard” on page 61.
3. Disconnect the Launch Board cable from the mainboard.

4. Remove the two securing screws from the Launch Board.
   NOTE: The right hand securing screw is shared by the Power Board.

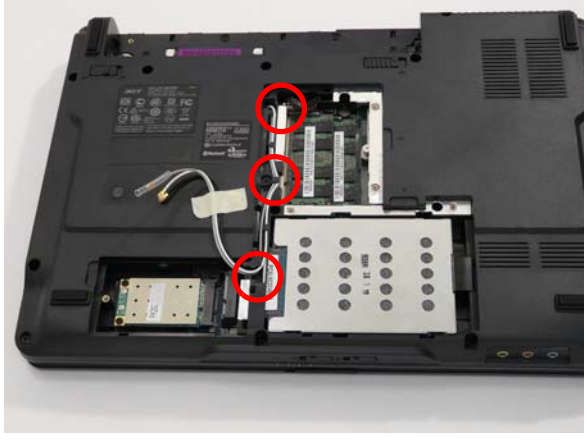


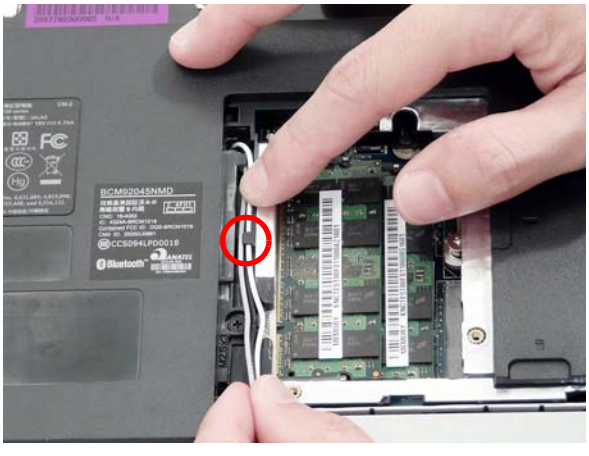


Step	Size	Quantity	Screw Type
Launch Board	M2*3	2	

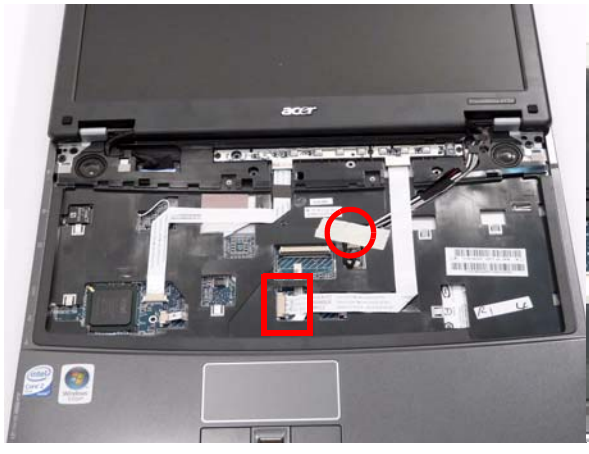
Removing the Antenna

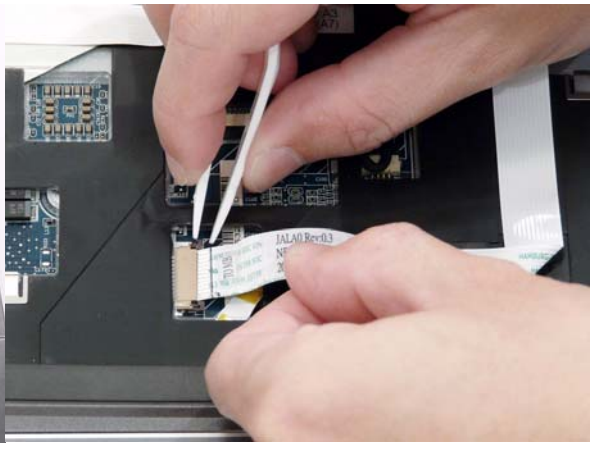
1. See “Removing the WLAN Module” on page 52.
2. Remove the Antenna Cables from the securing guides as shown.





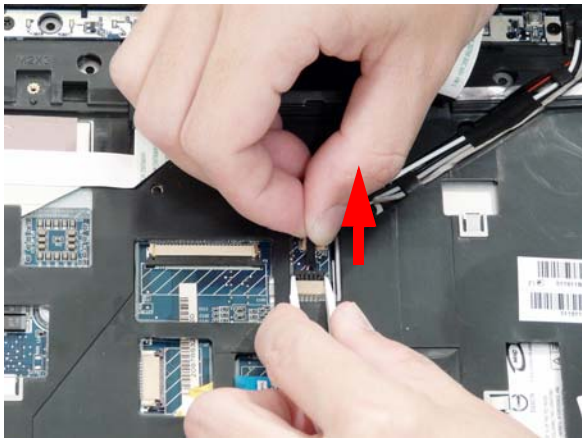
3. Turn the computer over, remove the adhesive tape and disconnect the FCC cables to expose the antenna cables underneath.

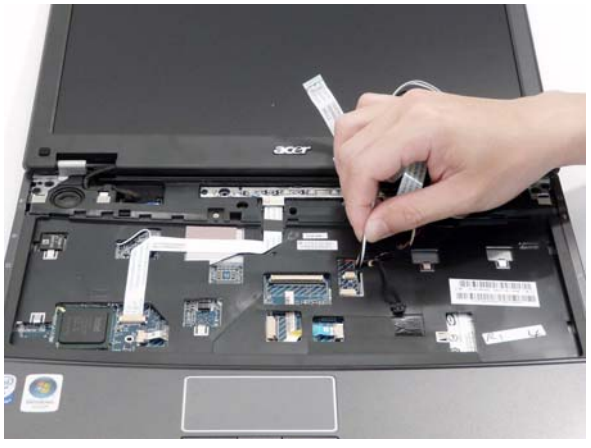




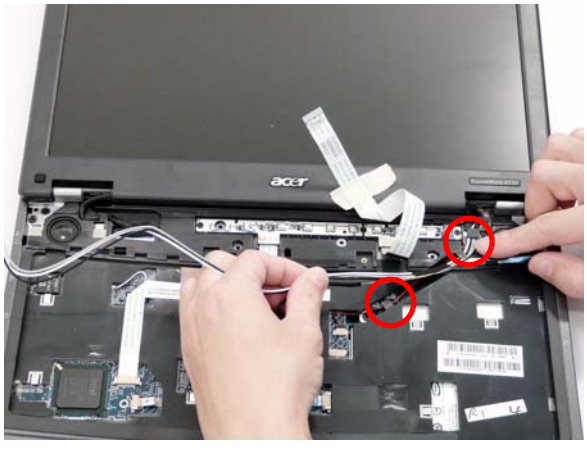
4. Secure the FFC cable out of the way using the adhesive tape.
5. Turn the computer over and push the cables through the underside of the chassis.

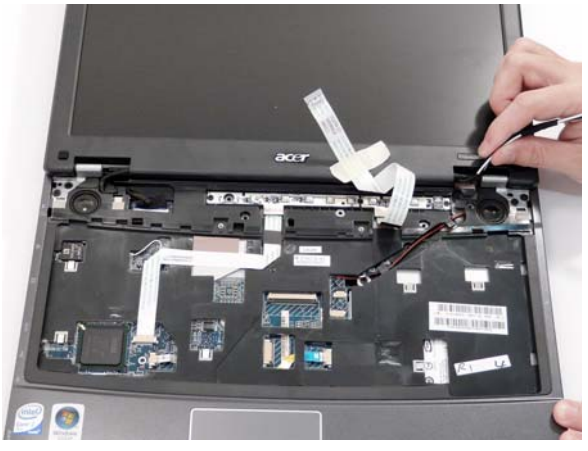
6. Turn the computer over, and remove the cable from the mainboard as shown.





7. Remove the Antenna Cables from the housing well as shown.
   NOTE: Place the cables to one side to avoid damage.





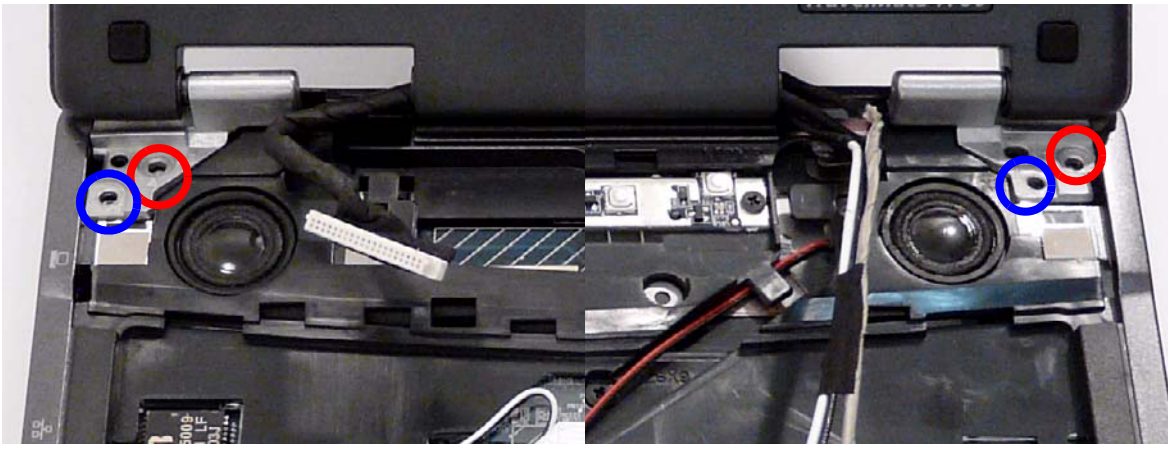
Removing the LCD Module

1. Remove the Battery Pack. See “Removing the Battery Pack” on page 46.
2. Remove the Lower Covers. See “Removing the Lower Covers” on page 49.
3. Remove the WLAN Module. See “Removing the WLAN Module” on page 52.
4. Remove the Antenna. See “Removing the Antenna” on page 64.
5. Remove the two securing screws from the bottom of the chassis.

Step	Size	Quantity	Screw Type
LCD Module	M2.5*8(NL)	2	

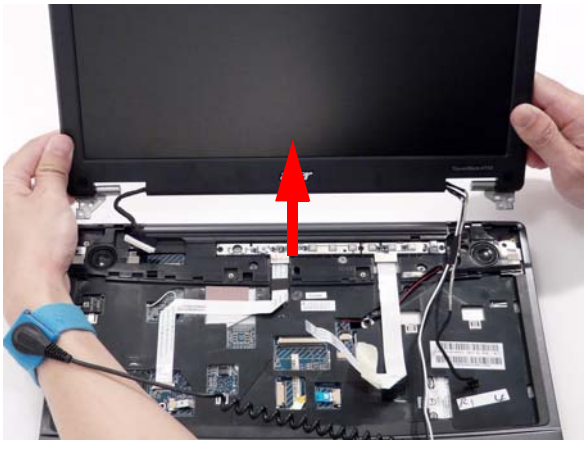
6. Turn the computer over. Disconnect the the LCD cable from the top panel.

7. Remove the four securing screws (two on each side) connecting the LCD module.



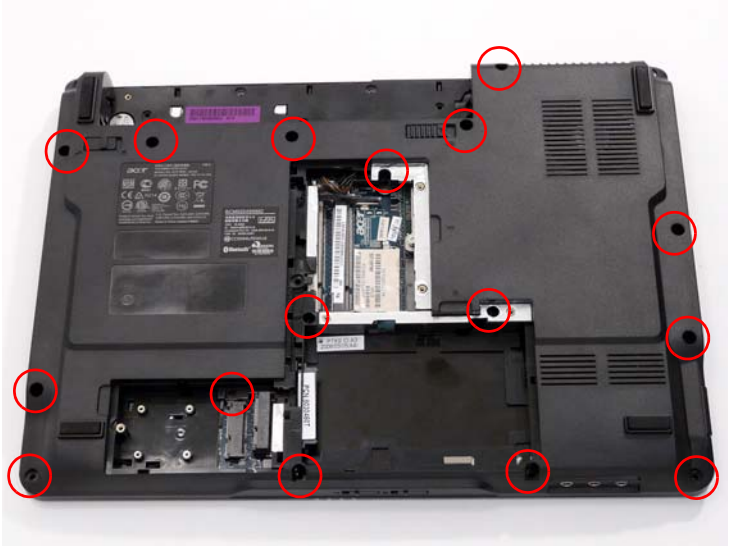
Step	Size	Quantity	Screw Type
LCD Module (Red callout)	M2.5*9	2	redo
LCD Module (Blue callout)	M2.5*5	2	

8. Carefully remove the LCD module from the chassis.



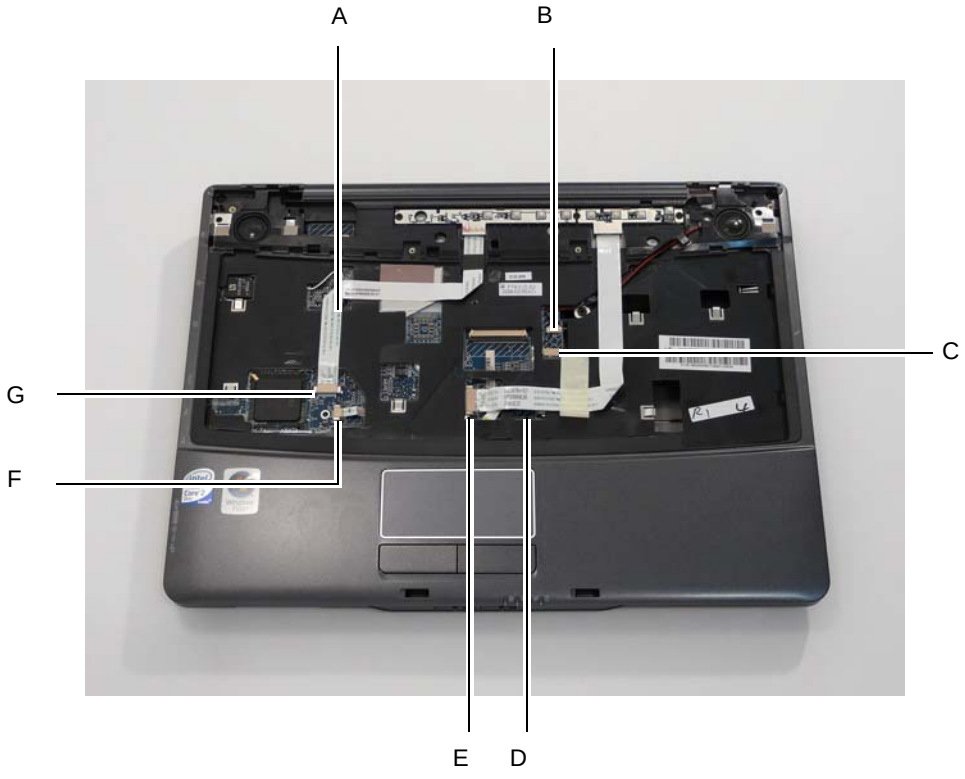
Removing the Upper Cover

1. See “Removing the Battery Pack” on page 46.
2. See “Removing the LCD Module” on page 66.
3. Turn the computer over. Remove the fifteen screws on the bottom panel.

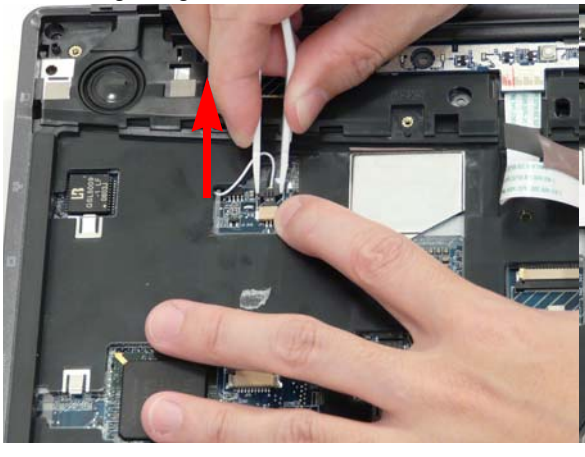


Step	Size	Quantity	Screw Type
Lower Cover	M2.5x9	16	redo

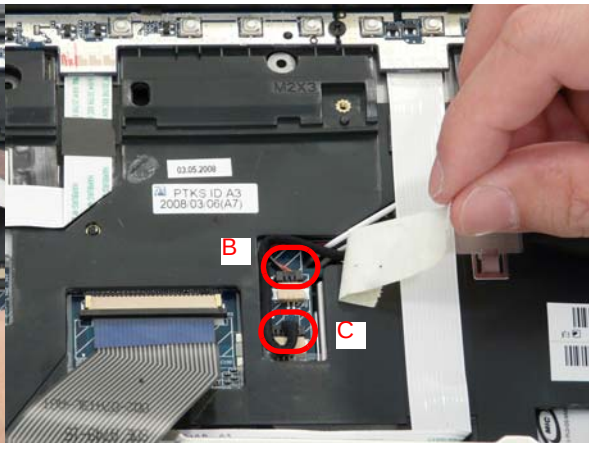
4. Turn the computer over and disconnect the seven cables from the mainboard as shown.



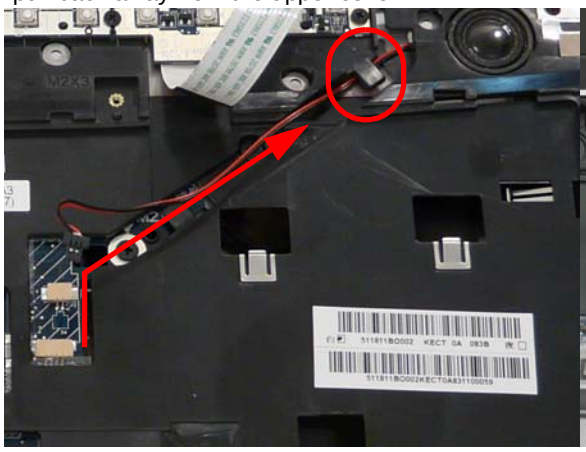
Disconnect A as shown. If necessary, remove FFC G before beginning.



Pull back the securing strip and disconnect B and C as shown.

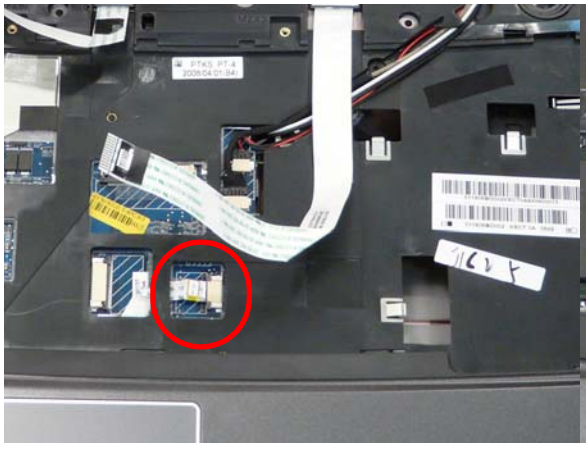


Remove the antenna cables from the housing and pull back away from the upper cover.

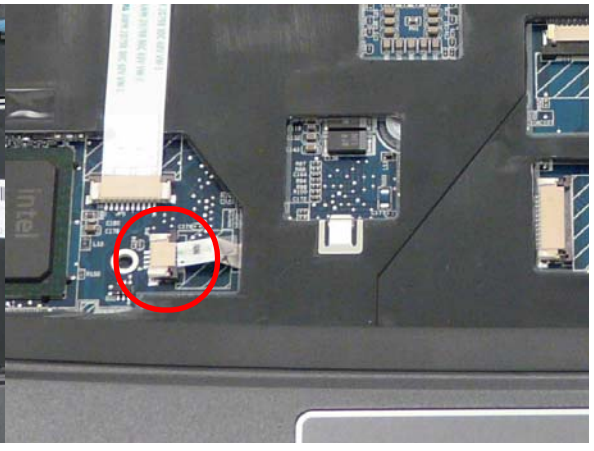


Release the securing latches and disconnect E as shown.

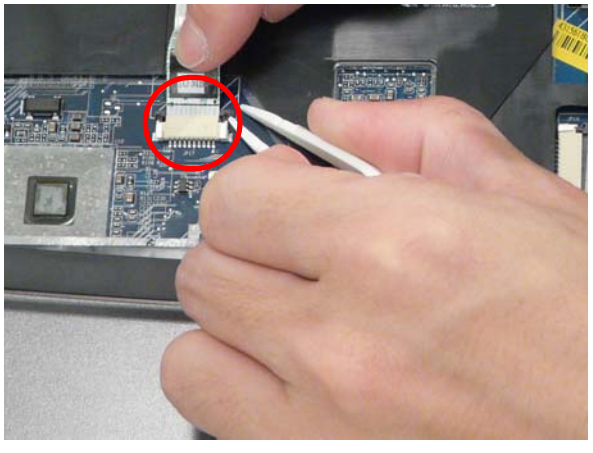
Disconnect the Power Board FFC (E) first before removing FFC D. Pull back the locking latches to release D.



Release the securing latches and disconnect F as shown.



Release the securing latches and disconnect G as shown.

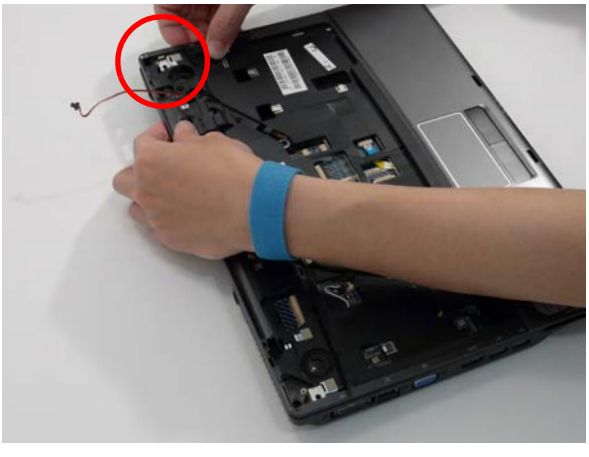


5. Remove the single screw on the top panel.

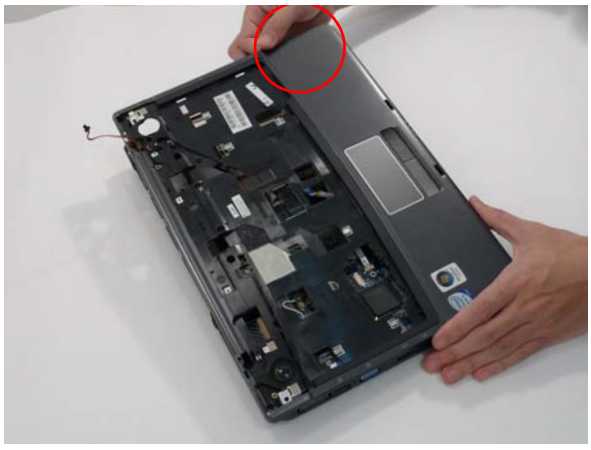
Step	Size	Quantity	Screw Type
Upper Cover	M2.5*9 (NL)	1	

6. Grasp the top left corner first and pry the cover off.

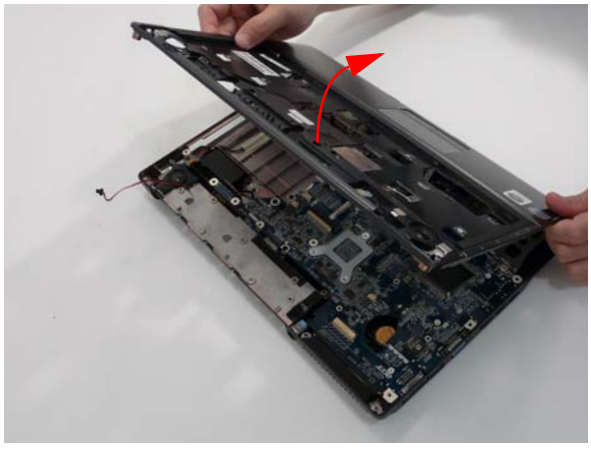
7. Continue moving from left to the right corner and pry it off the lower cover.



8. Move to the bottom right corner and pry it up.

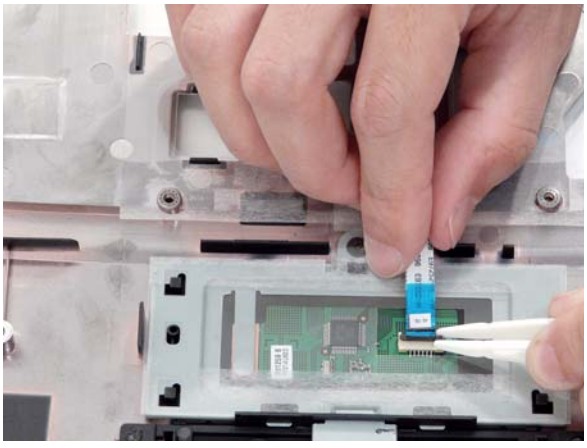


9. The Upper Cover can now be removed from the lower base.

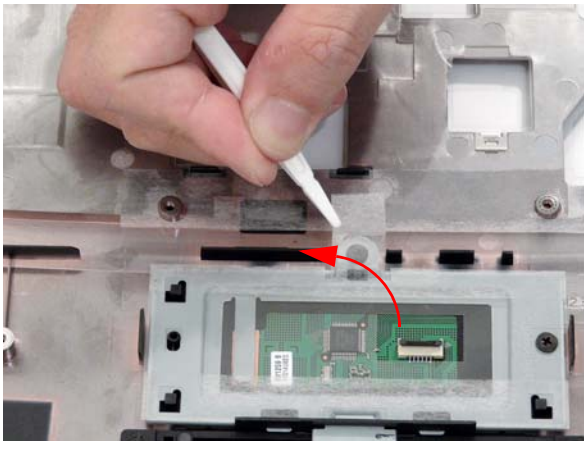


Removing the Touch Pad Bracket

1. See “Removing the Upper Cover” on page 68.
2. Disconnect the Touch Pad FFC from the Touch Pad board.

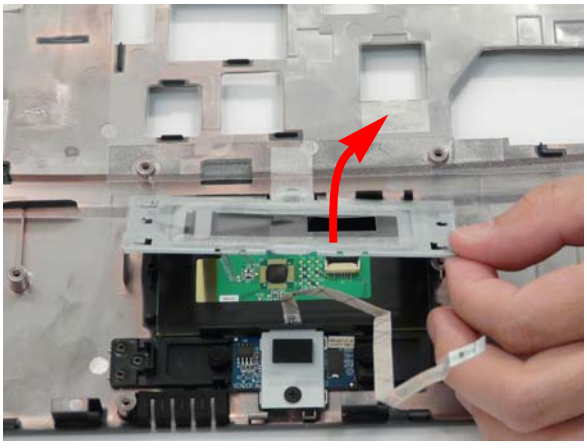


3. Peel back cover and remove the securing screw.



Step	Size	Quantity	Screw Type
Touch Pad Bracket	M2.5*3 (NL)	2	

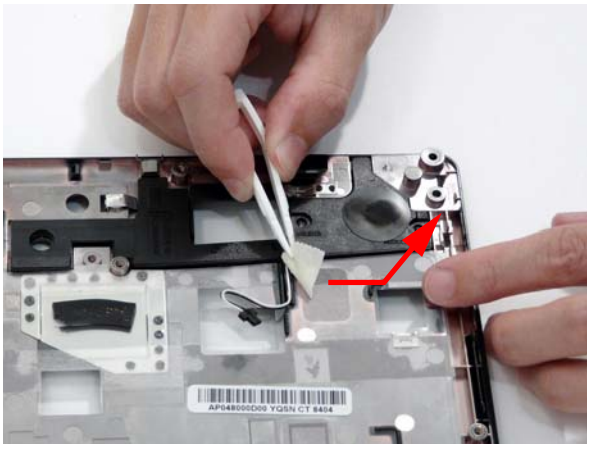
4. Remove the Touch Pad bracket.



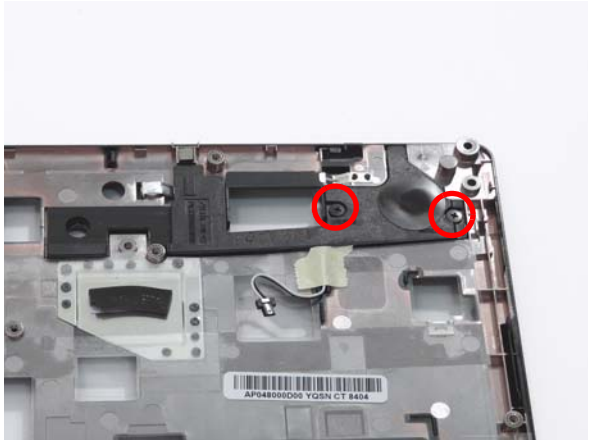
IMPORTANT: The Touch Pad cannot be removed individually. To replace the Touch Pad, replace the entire Upper Cover.

Removing the Left Speaker Module

1. See “Removing the Upper Cover” on page 68.
2. Peel back the adhesive strip to expose the speaker cabling.

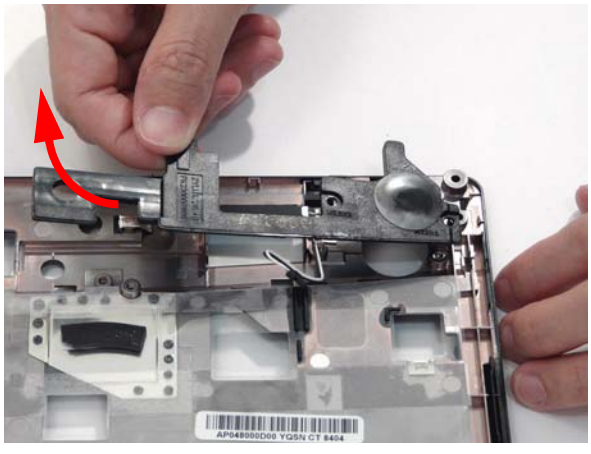


3. Remove the two securing screws.



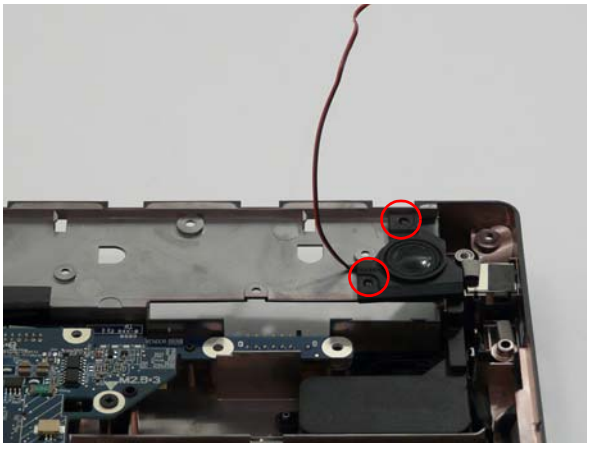
Step	Size	Quantity	Screw Type
Left Speaker Module	M2.5*3 (NL)	2	

4. Remove the Speaker Module as shown.



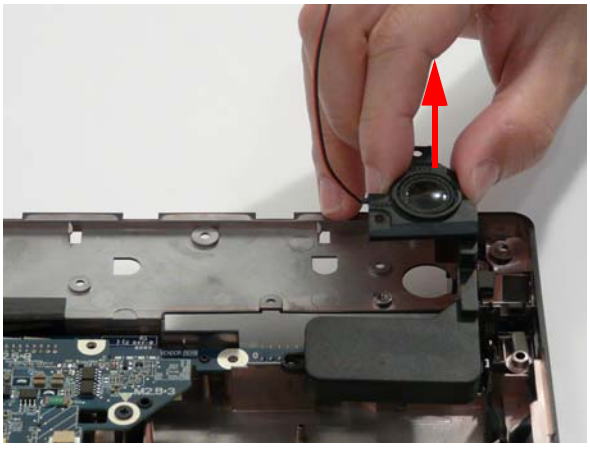
Removing the Right Speaker Module

1. See “Removing the Upper Cover” on page 68.
2. Remove the two securing screws from the speaker module.



Step	Size	Quantity	Screw Type
Right Speaker Module	M2.5*3 (NL)	2	

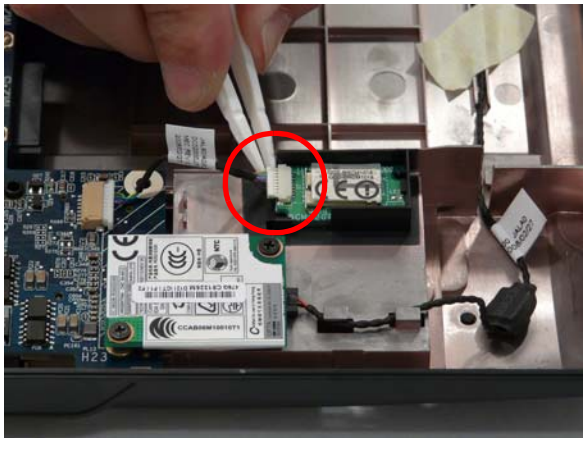
3. Grip the Speaker Module and remove.



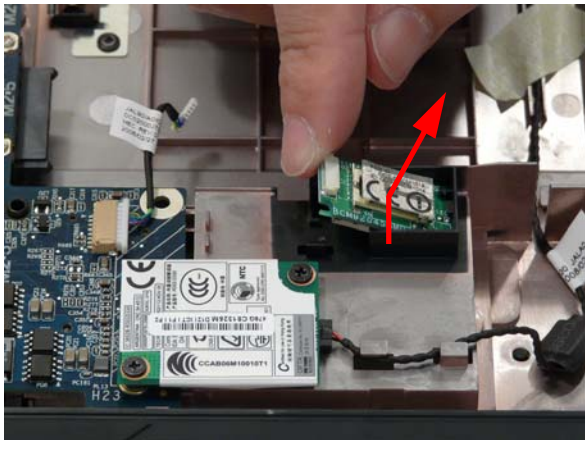
Removing the Bluetooth Module

1. See “Removing the Upper Cover” on page 68.
2. Remove the adhesive strip to expose the Bluetooth cable.

3. Disconnect the bluetooth cable as shown.

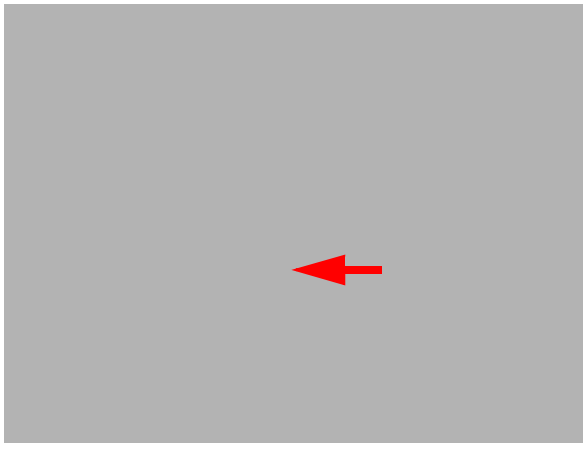


4. Lift the corner of the module up, then grasp to remove.

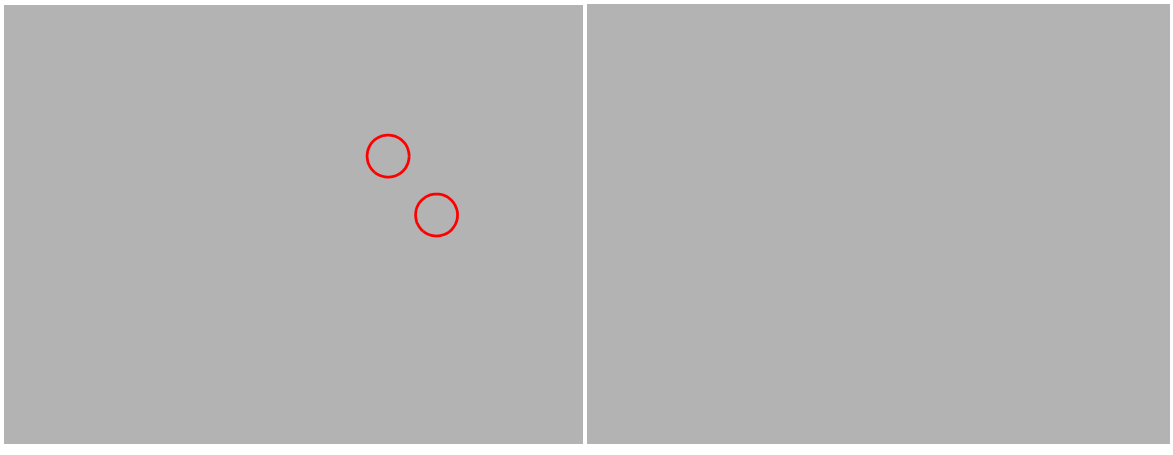


Removing the USB Board

1. See “Removing the Upper Cover” on page 68.
2. See “Removing the Bluetooth Module” on page 77.
3. Remove cable from the USB board.



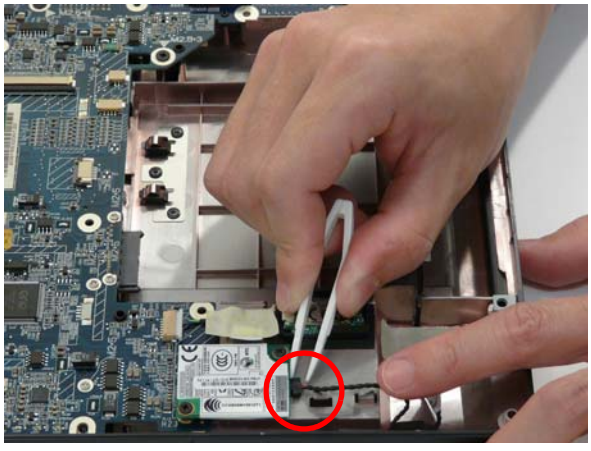
4. Remove the two securing screws from the USB board and lift clear of the chassis.



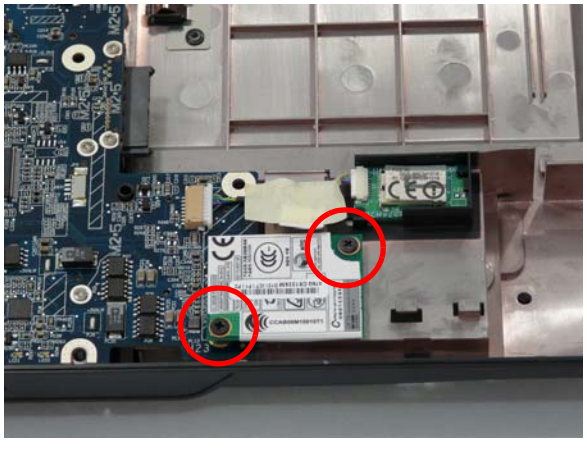
Step	Size	Quantity	Screw Type
TV tuner board	M2.5*4 (NL)	2	

Removing the Modem Module

1. See “Removing the Upper Cover” on page 68.
2. Disconnect the modem cable as shown in the following images.

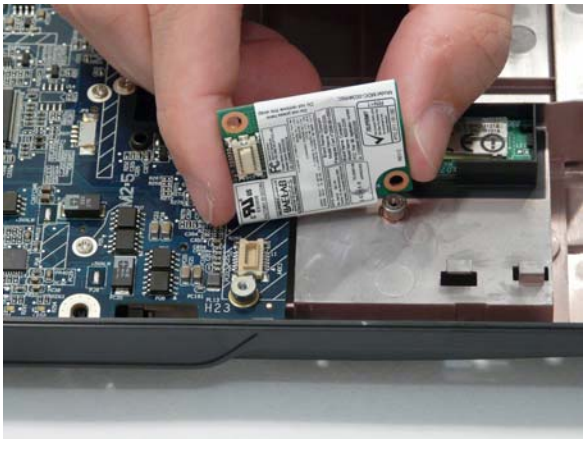


3. Remove the two securing screws from the modem module.



Step	Size	Quantity	Screw Type
Modem Module	M2*3 (NL)	2	

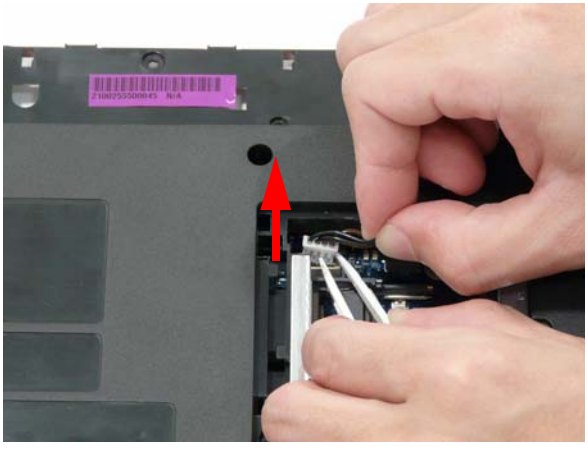
4. Remove the module from the lower base.



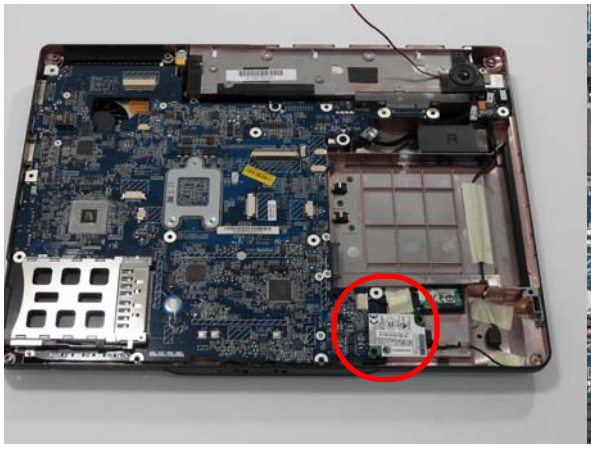
Removing the Mainboard

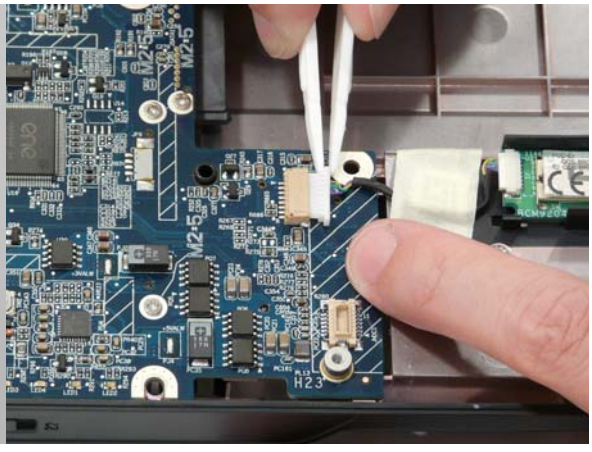
1. See “Removing the LCD Module” on page 66.
2. See “Removing the Upper Cover” on page 68.
3. See “Removing the Modem Module” on page 79.
4. Turn the lower base over on a clean surface, and disconnect the DC-IN cable as shown.

IMPORTANT: Ensure the cable can easily pass through the lower cover during mainboard dissasembly.

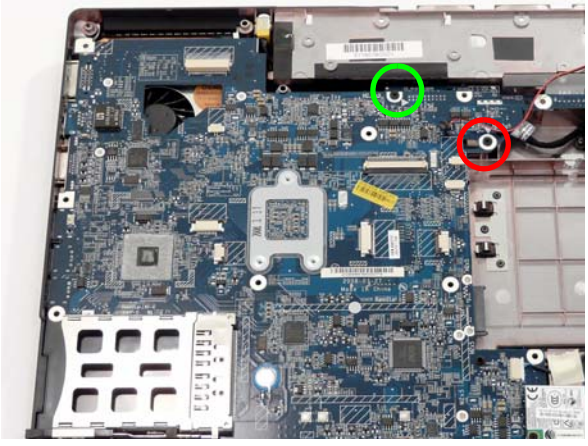


5. Turn the base rightside up, and disconnect the bluetooth cable from the bottom right of the mainboard as shown.



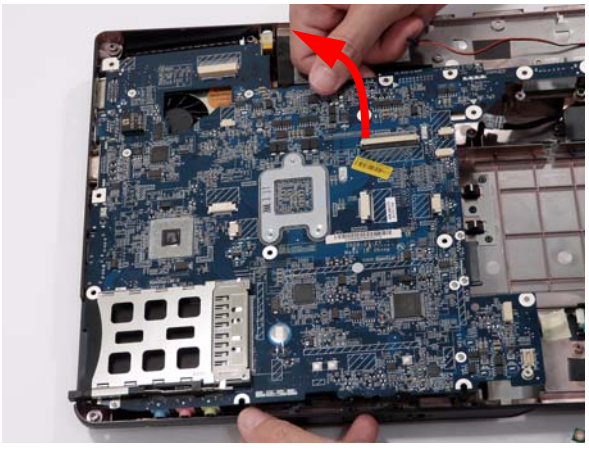


6. Remove the two securing screws from the Mainboard.



Step	Size	Quantity	Screw Type
Mainboard	M2.5*9 (NL) Green Callout	1	redo
Mainboard	M2.5*3 (NL) Red Callout	1	

7. Lift the mainboard to expose the DC-IN jack and USB cable.

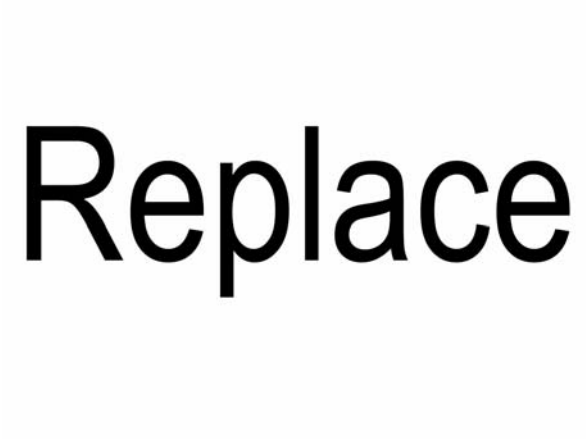


Replace

8. Remove the DC-IN jack and USB cable as shown.

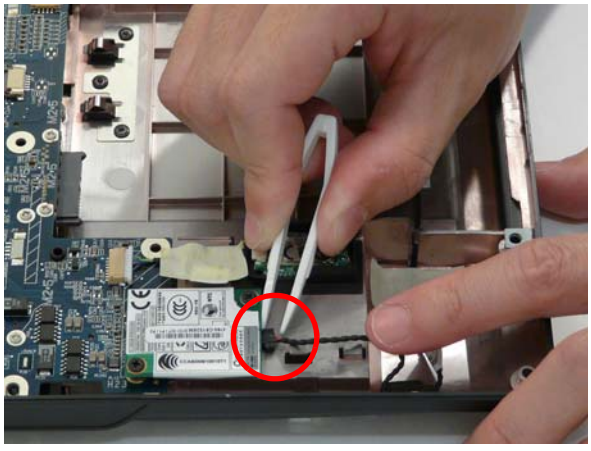
Replace

9. Continue to lift the mainboard and remove from the lower cover.

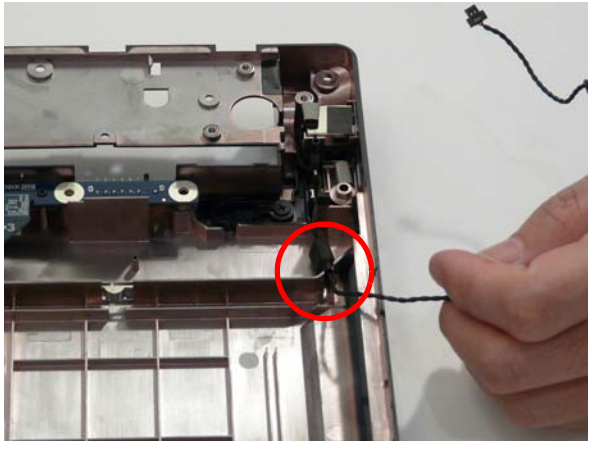


Removing the RJ-11 Port

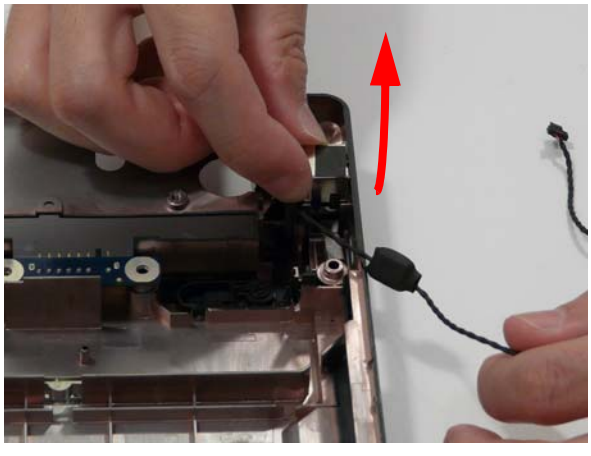
1. See “Removing the Upper Cover” on page 68.
2. See “Removing the Right Speaker Module” on page 76.
3. See “See “Removing the LCD Module” on page 66.” on page 80.
4. Disconnect the RJ-11 cable from the modem module.



5. Grasp the cable and remove it from the housing well.

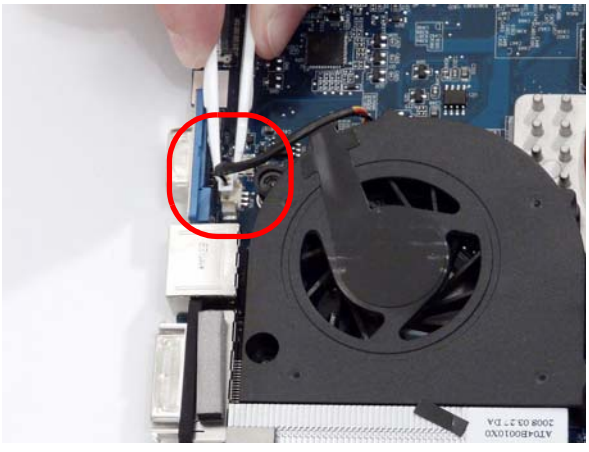


6. If necessary, insert the tweezers in the RJ-11 jack. Grip the jack and lift to remove.



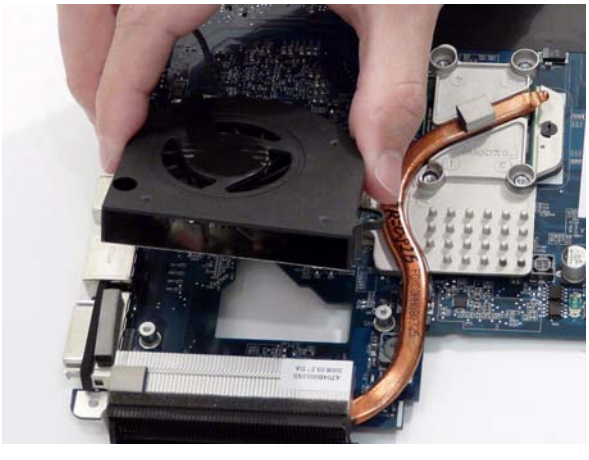
Removing the CPU Fan

1. See “Removing the Mainboard” on page 80.
1. Disconnect the fan cable from the mainboard as shown.



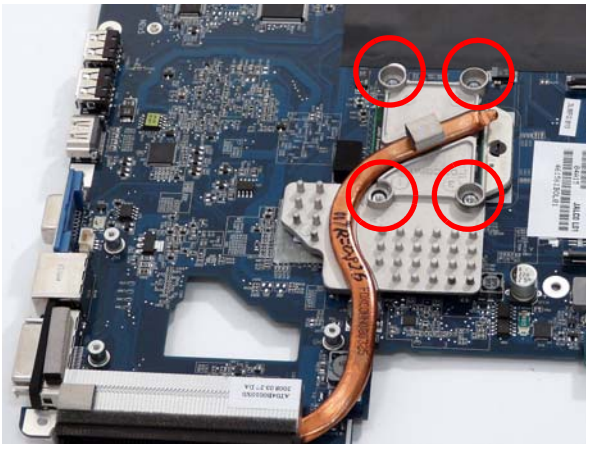
2. Remove the single captive screw to release the module.

3. Remove the fan module as shown



Removing the Thermal Module

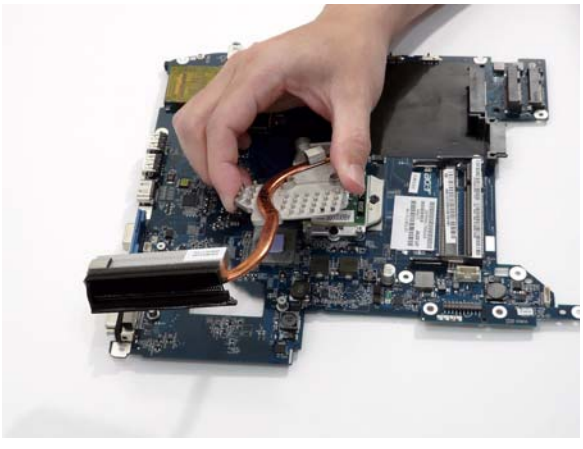
1. See “Removing the Mainboard” on page 80.
2. See “Removing the CPU Fan” on page 84.
3. Remove the four (4) securing screws from the CPU plate.



Step	Size	Quantity	Screw Type
CPU Thermal Module	M2.5*3	4	

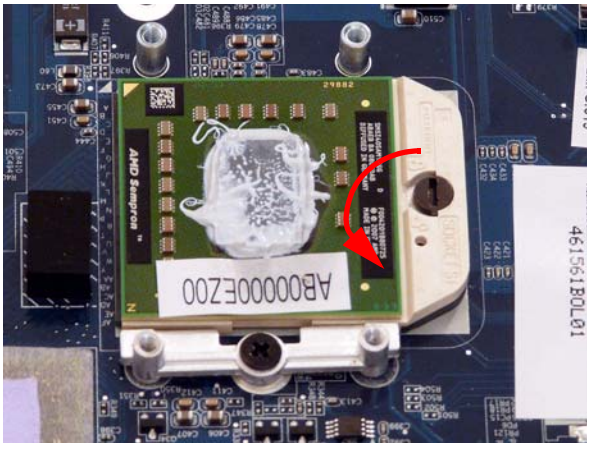
NOTE: When replacing, ensure the screws are replaced in the order as marked on the plate.

4. Remove the module from the mainboard.

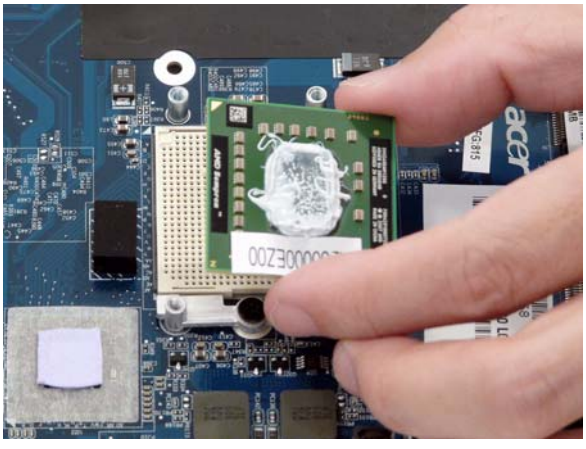


Removing the CPU

1. See “Removing the Thermal Module” on page 85.
2. Using a flat screwdriver, turn the CPU socket latch counter-clockwise 180° to release the CPU.



3. Lift the CPU clear of the Mainboard.



LCD Module Disassembly Process

LCD Module Disassembly Flowchart

Screw List

Step	Screw	Quantity	Color	Part No.
LCD Bezel	M2.5*5 (NL)	4	Black	MA000007YG0
Inverter Board	M2.5*5 (NL)	1	Black	MA000007YG0
Camera Module	M2*3 (NL)	2	Black	MA0000060G0
LCD Panel	M2.5*5 (NL)	2	Black	MA000007YG0
LCD Brackets	M2*3 (NL)	8	Black	MA0000060G0

Removing the LCD Bezel

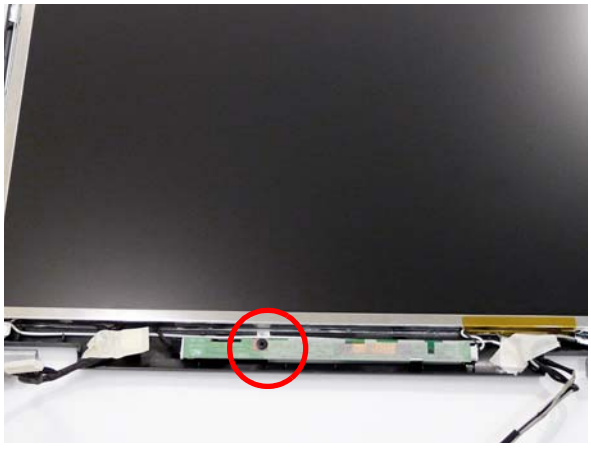
1. See “Removing the LCD Module” on page 66.
2. Remove the two upper and two lower bezel screw caps. Remove the four securing screws from the LCD module.

Step	Size	Quantity	Screw Type
LCD Bezel	M2.5*5 (NL)	4	

3. Starting from the bottom, pry the bezel inwards and upwards to remove it from the LCD Module.

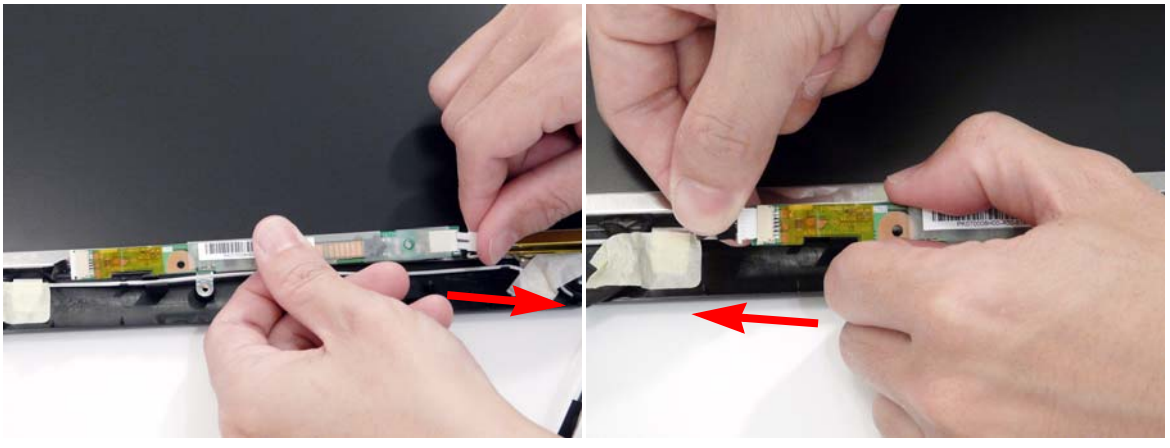
Removing the Inverter Board

1. See “Removing the LCD Bezel” on page 88.
2. Remove the securing screw.



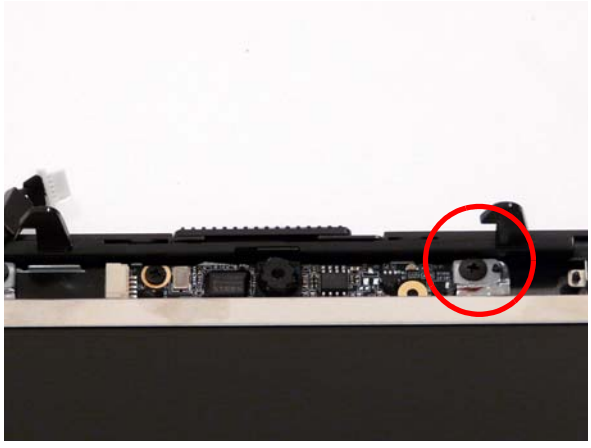
Step	Size	Quantity	Screw Type
Inverter Board	M2.5*3 (NL)	1	

3. Remove the inverter board and disconnect the left and right Inverter board cables as shown..



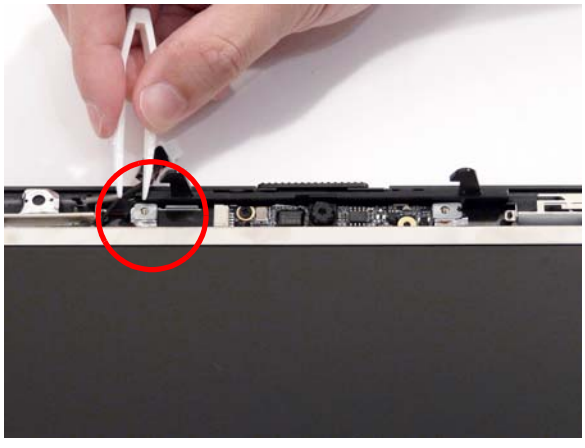
Removing the Camera Module

1. See “Removing the LCD Bezel” on page 88.
2. Remove the securing screw.

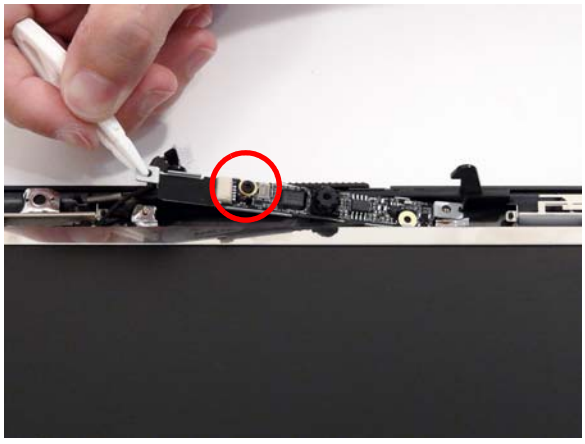


Step	Size	Quantity	Screw Type
Camera Module bracket	M2.5*3 (NL)	1	

3. Disconnect the Camera Module cable as shown.



4. Lift the Camera Module clear of the LCD Module and remove the single securing screw on the bracket.



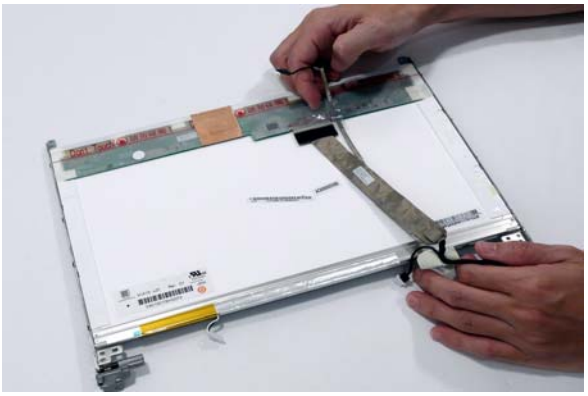
Step	Size	Quantity	Screw Type
Camera Board	M2*2.3	1	

Removing the LCD Panel

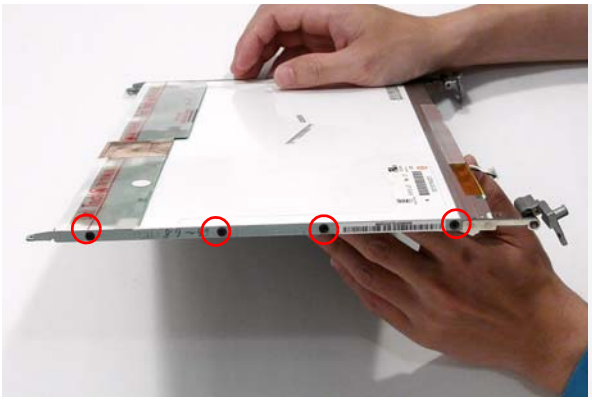
1. See “Removing the LCD Bezel” on page 88.
2. Lift the LCD Panel clear of the LCD Module, taking care to ensure the cables are free from the back cover.

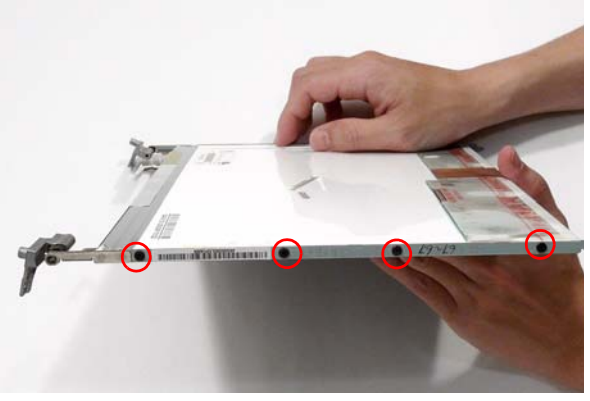
Removing the LCD Brackets and FPC Cable

1. See “Removing the Battery Pack” on page 46.
2. See “Removing the Lower Covers” on page 49.
3. See “Removing the WLAN Module” on page 52.
4. See “Removing the Keyboard” on page 61.
5. See “Removing the LCD Panel” on page 92.
6. Turn the LCD panel over to expose the rear. Disconnect the cable from the LCD Panel using the tab provided.



7. Grip the FPC cable and lift upward to detach the adhesive pads.
8. Remove the eight securing screws (four on each side) from the LCD Panel brackets.



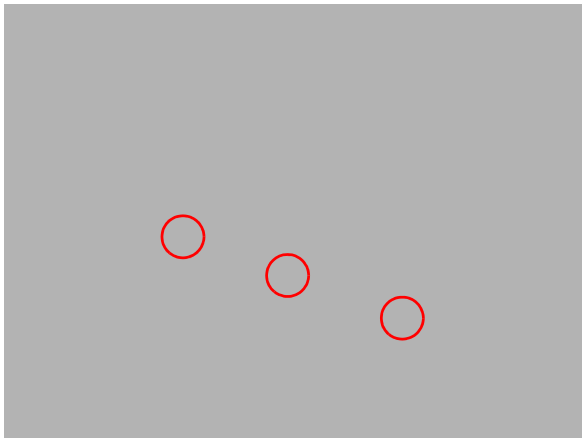


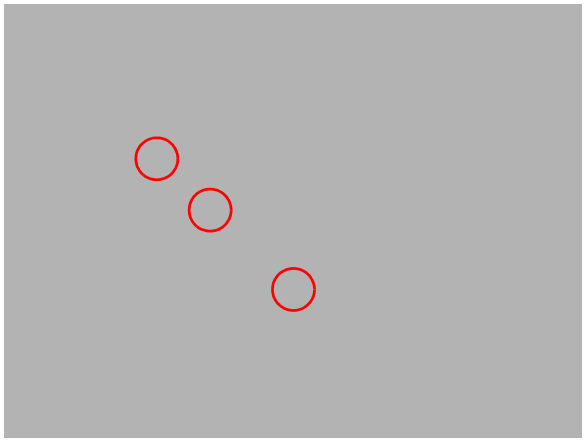
Step	Size	Quantity	Screw Type
LCD Brackets	M2*3 NL	8	

9. Remove the LCD brackets by pulling away from the LCD Panel.

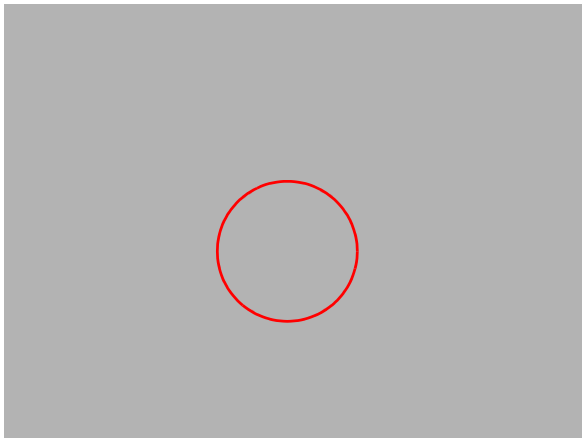
Removing the Antennas

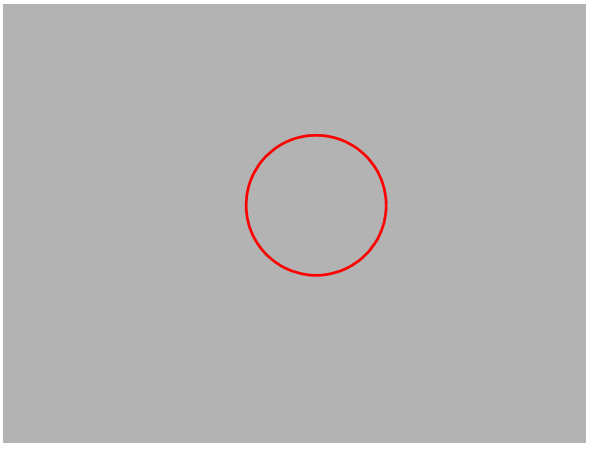
1. See “Removing the Battery Pack” on page 46.
2. See “Removing the Lower Covers” on page 49.
3. See “Removing the WLAN Module” on page 52.
4. See “Removing the LCD Panel” on page 92.
5. Remove the strips holding the antenna cables in place. Ensure the cables are free from obstructions.





6. Remove the tabs securing the left and right antennas to the LCD module.

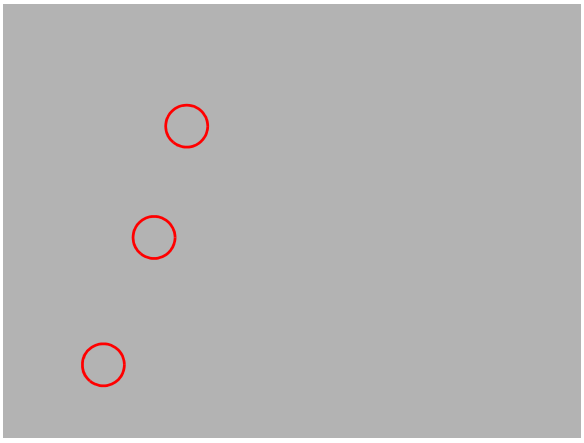




7. Remove the antenna cables and assembly from the LCD module.

Removing the MIC Module

1. See “Removing the Battery Pack” on page 46.
2. See “Removing the Lower Covers” on page 49.
3. See “Removing the WLAN Module” on page 52.
4. See “Removing the LCD Panel” on page 92.
5. Remove the strips holding the MIC Module cable in place. Ensure the cable is free from obstructions.

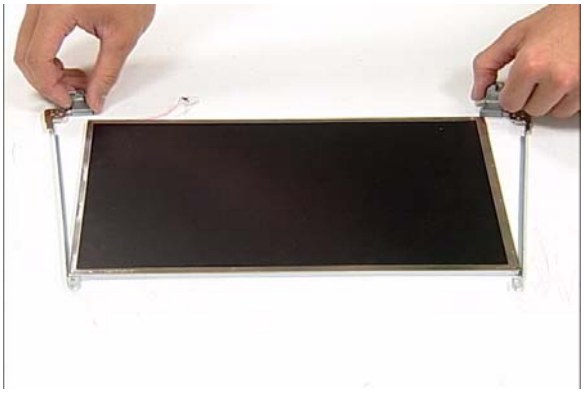


6. Remove the MIC cable and Module from the LCD module.

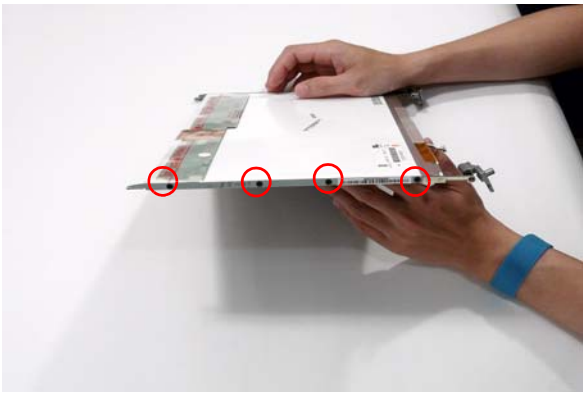
LCD Module Reassembly Procedure

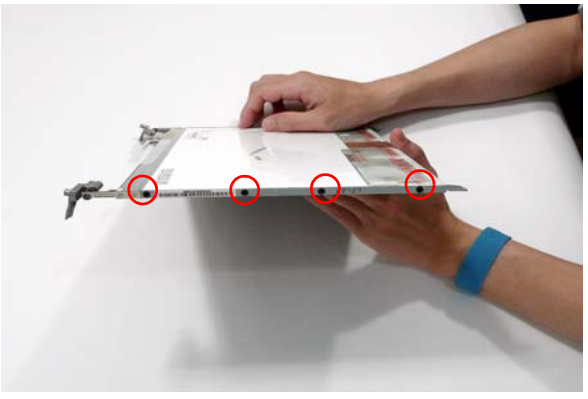
Replacing the LCD Panel

1. Align the LCD brackets with the eight screw holes (four on each side) on the LCD Panel as shown.

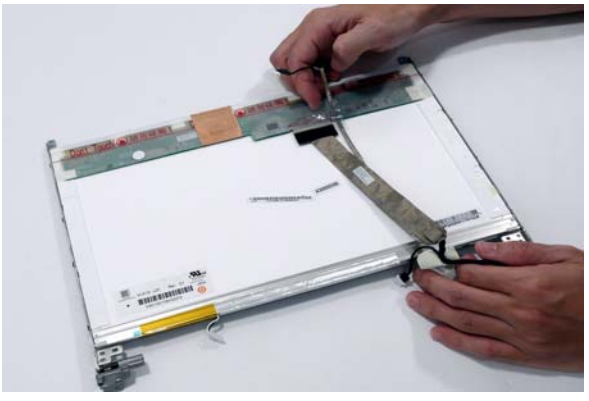


2. Secure the LCD brackets to the LCD panel.

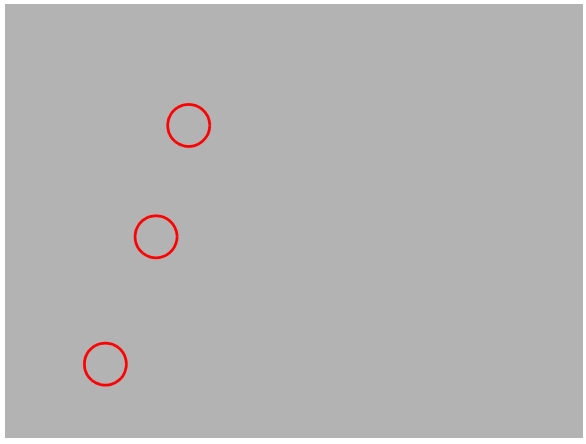




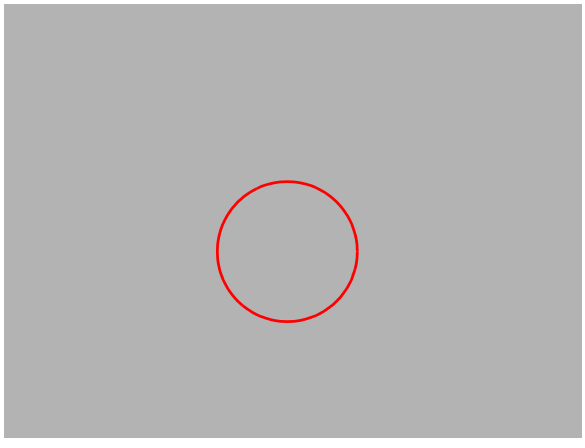
3. Turn the panel over. Insert the LCD Panel cable into the LCD Panel as shown.

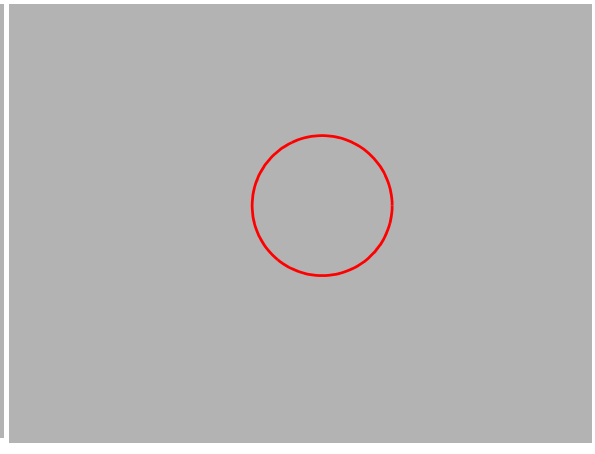


4. Replace the MIC cable under the mylar tab strips, and replace the MIC as shown. Secure the cable by pressing down on the strips.

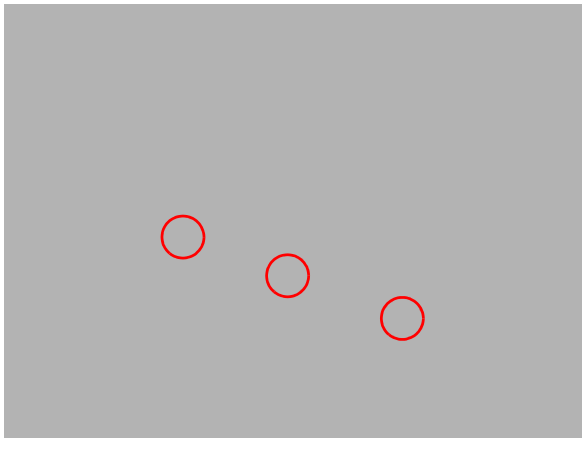


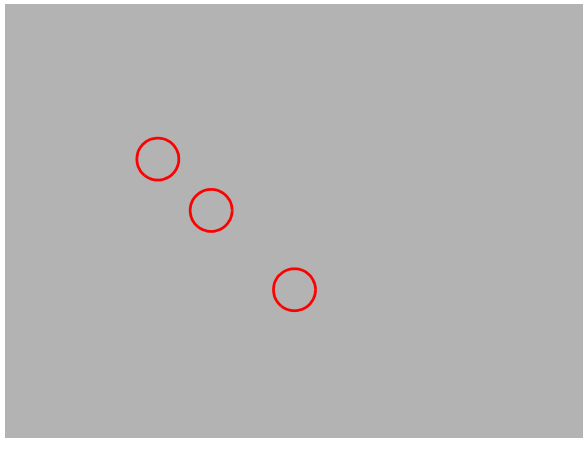
5. Replace the antenna cables and assembly.
6. Replace the tabs securing the left and right antennas to the LCD module.



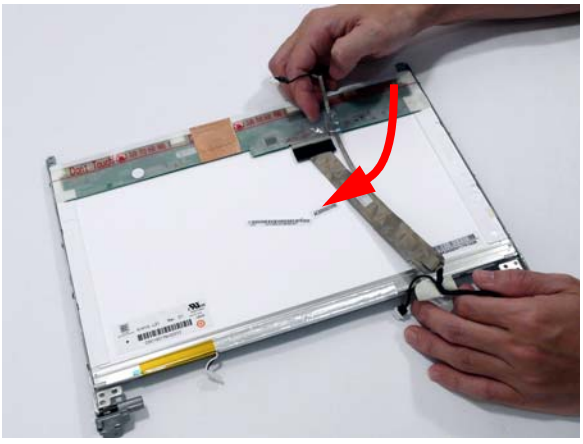


7. Replace the strips holding the antenna cables in place. Ensure the cables are free from obstructions.





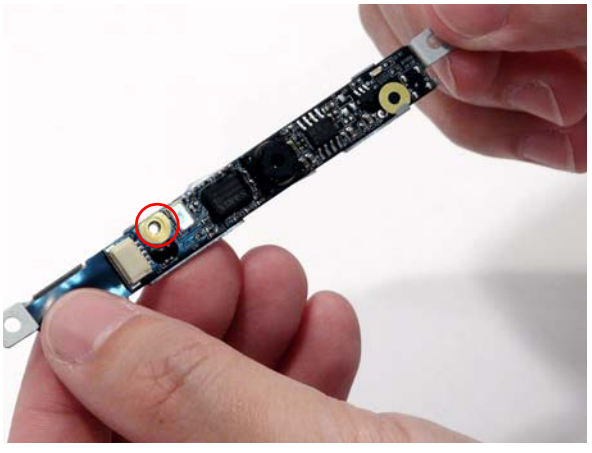
8. Secure the cable by pressing down on the securing strip.



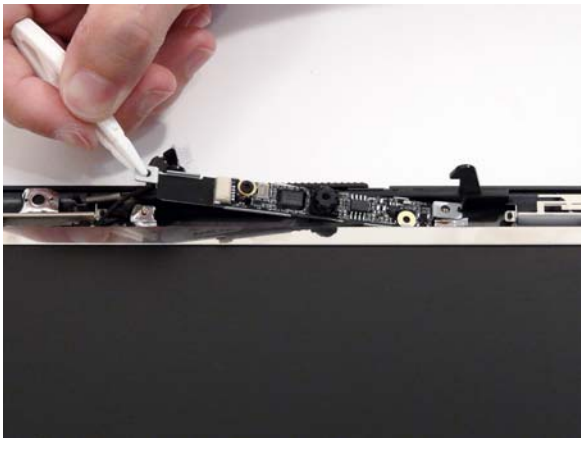
9. Replace the two securing screws on the LCD Module.

10. Replace the camera board in the bracket.

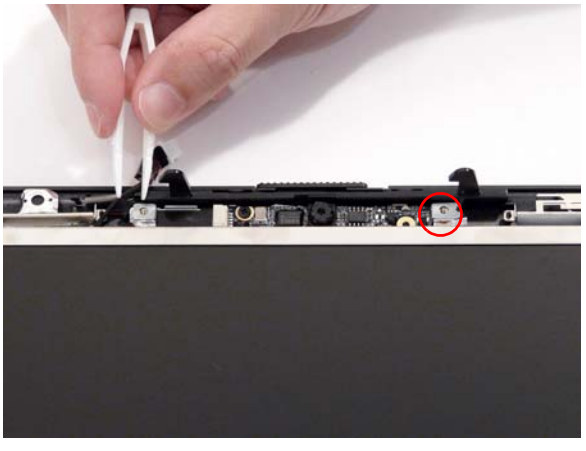
11. Replace the securing screw on the camera board.



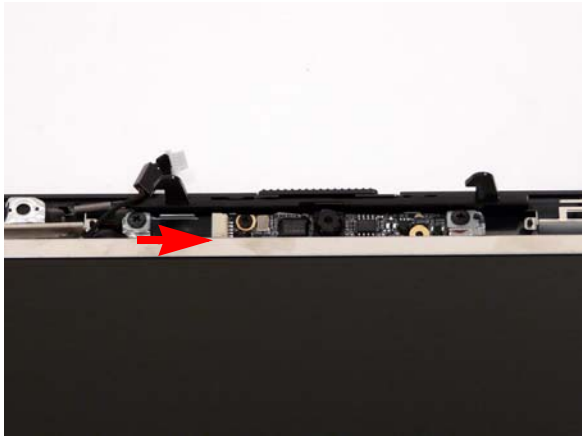
12. Replace the Camera Module in the bottom cover.



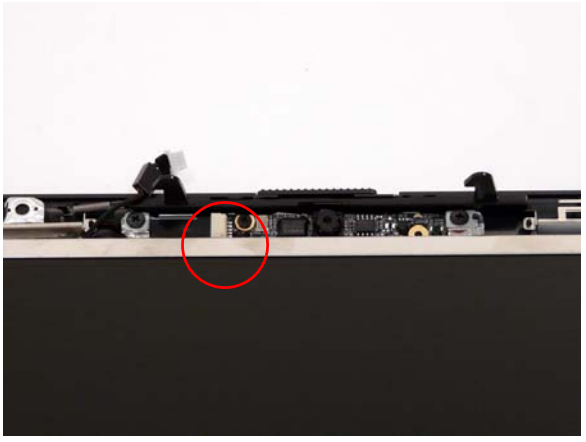
13. Press the module in place and replace the securing screw on the Camera Module bracket.



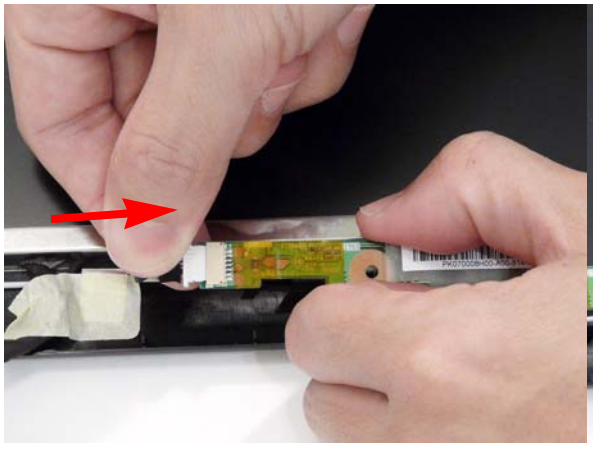
14. Connect the Camera Module cable as shown.

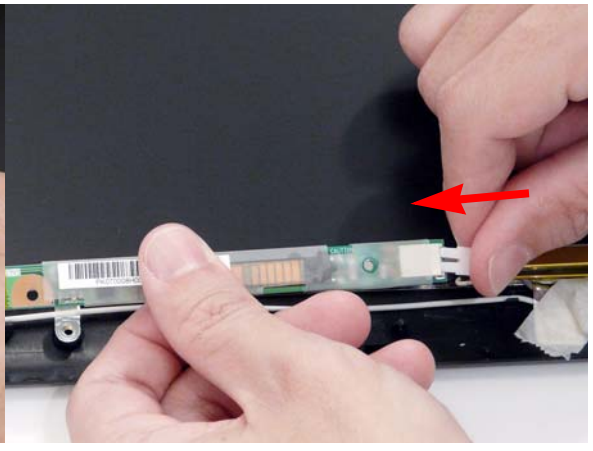


15. Connect the left and right Inverter board cables as shown.



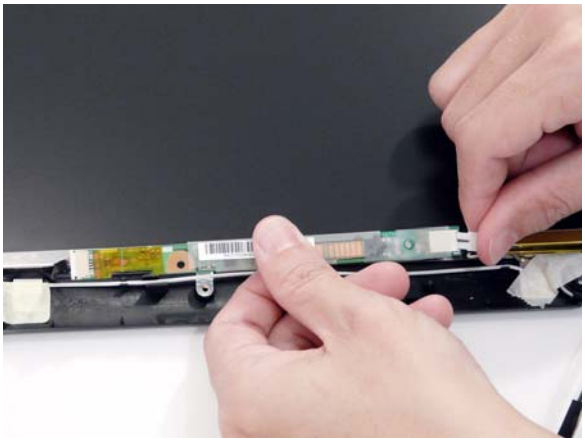
16. Connect the left and right Inverter board cables as shown.





17. Press the inverter board in place to secure.

18. Replace the securing tapes from the left and right sides of the Inverter board as shown.



NOTE: Tuck the cables securely to prevent damage to the cables or module.

Replacing the LCD Bezel

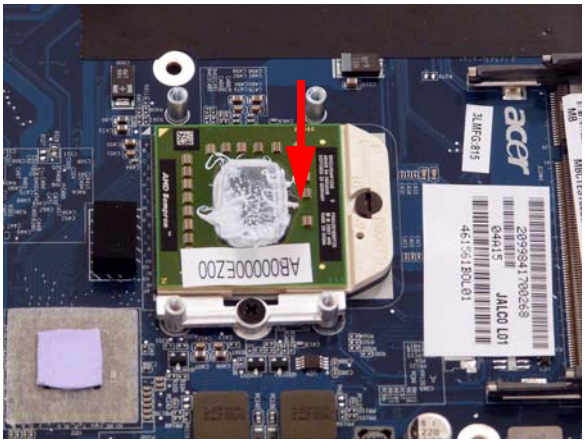
1. Align the edge of the bezel with the bottom cover and replace the LCD Module.

2. Replace the two upper and two lower bezel screw caps. Remove the four securing screws from the LCD module.

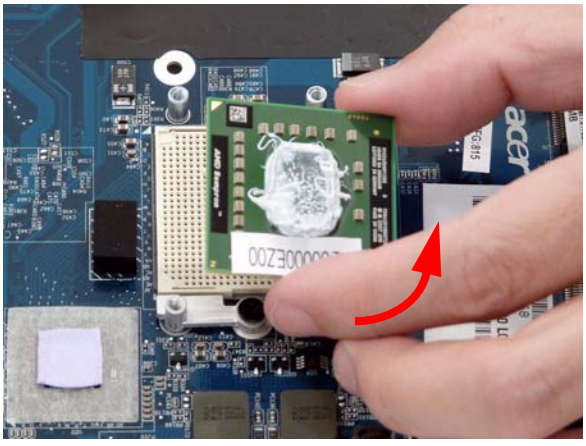
Main Module Reassembly Procedure

Replacing the CPU

1. Carefully turn the mainboard upside down (CPU side up), and insert the CPU into the CPU bracket as shown.

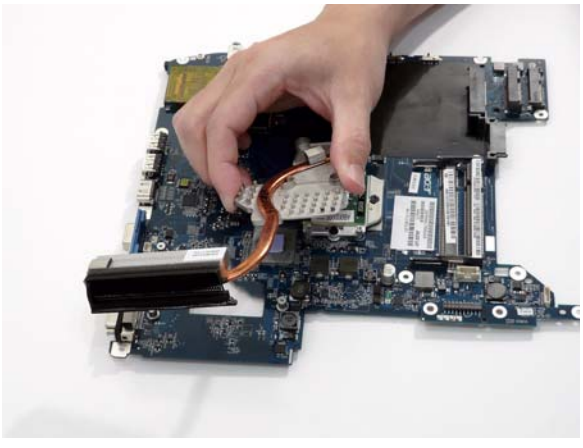


2. Using a flat-tipped screw driver, lock the CPU in the socket as shown.

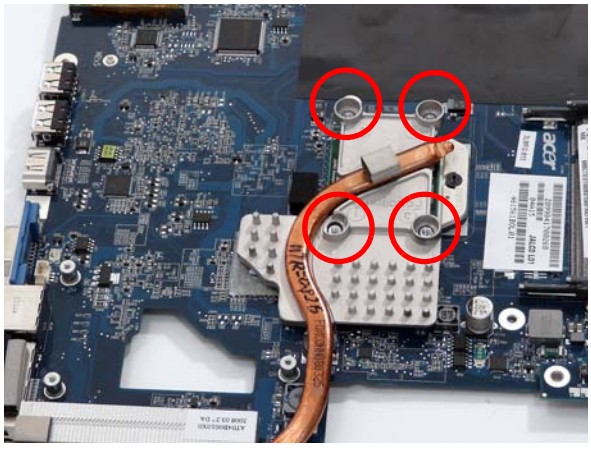


Replacing the Thermal Module

1. Align and place the Thermal Module in the mounting as shown.

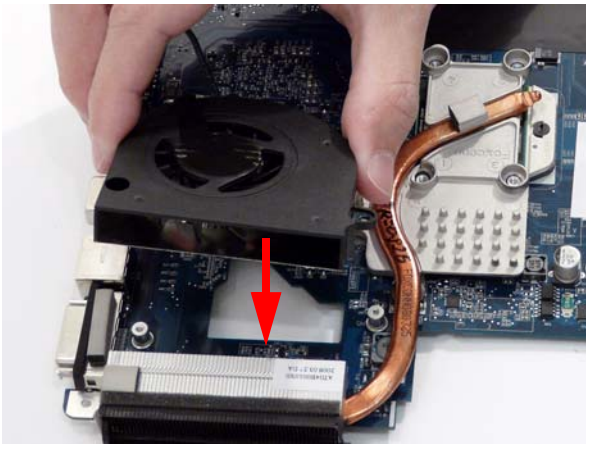


2. Tighten the four (4) securing screws from the CPU plate.



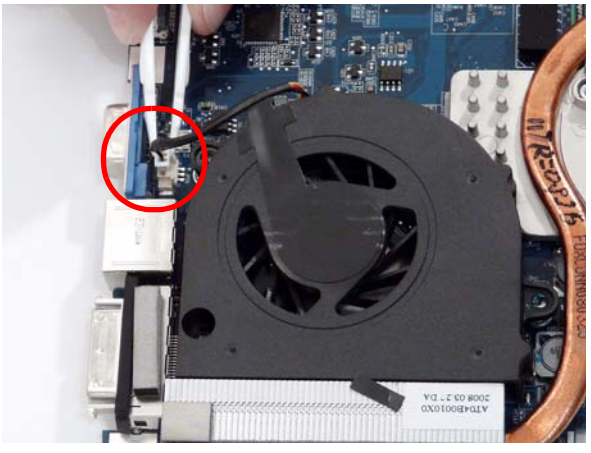
Replacing the CPU Fan

1. Align and place the Fan Module in the mounting as shown.



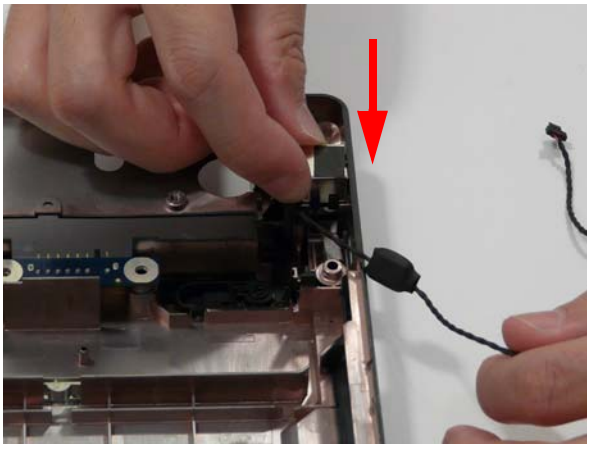
2. Tighten the securing screw on the module.

3. Connect the fan module cable to the mainboard.

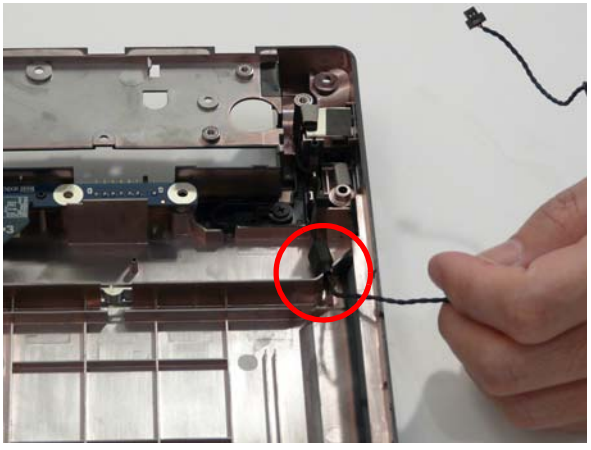


Replacing the RJ-11 Port

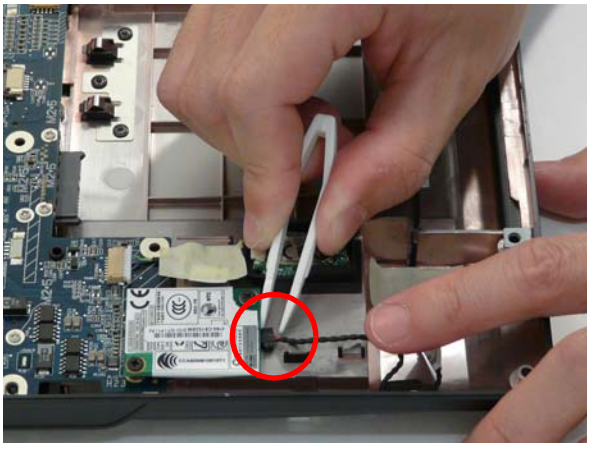
1. Push the jack in as shown.



2. Using the tweezers, grasp the end of the cable and press down to attach it to the base.

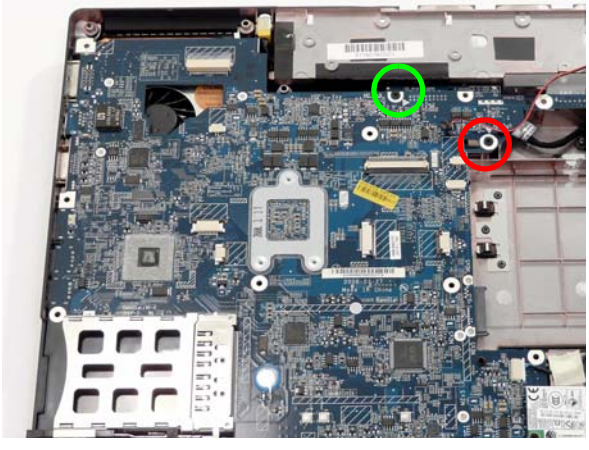


3. Connect the RJ-11 cable to the modem module.

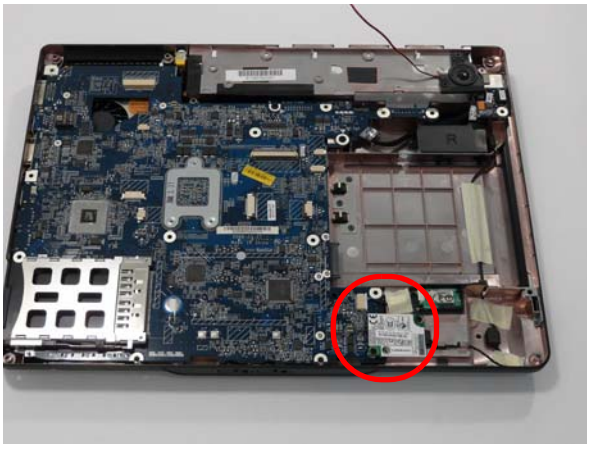


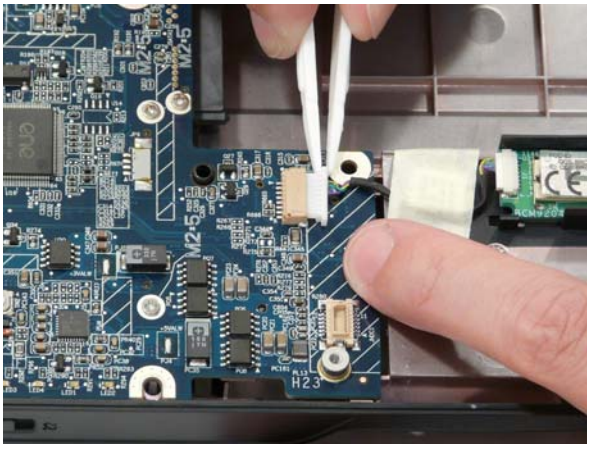
Replacing the Mainboard

1. Tighten the two (2) securing screws on the mainboard.



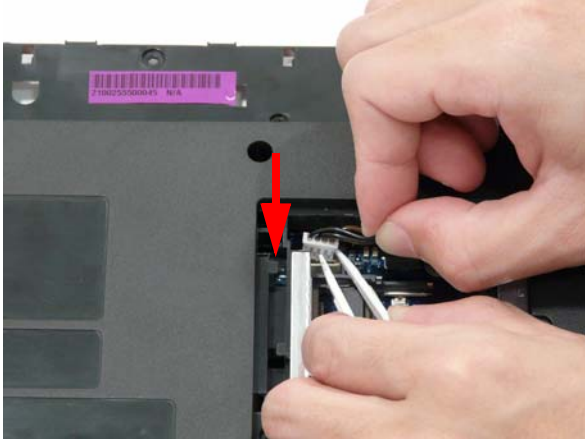
2. Turn the base rightside up, and connect the bluetooth cable to the bottom right of the mainboard as shown.





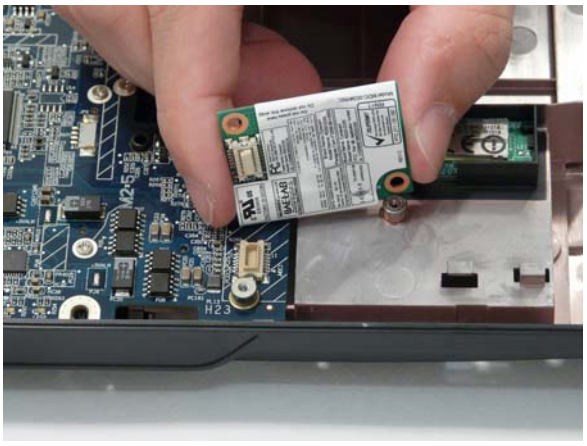
3. Turn the lower base over on a clean surface, and connect the DC-IN cable as shown.

   IMPORTANT: Ensure the cable can easily pass through the lower cover during the process.

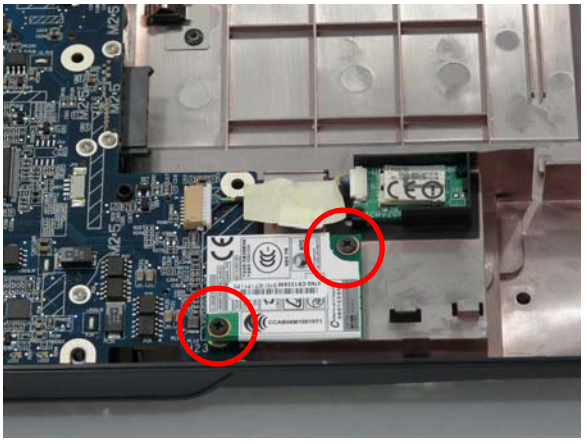


Replacing the Modem Module

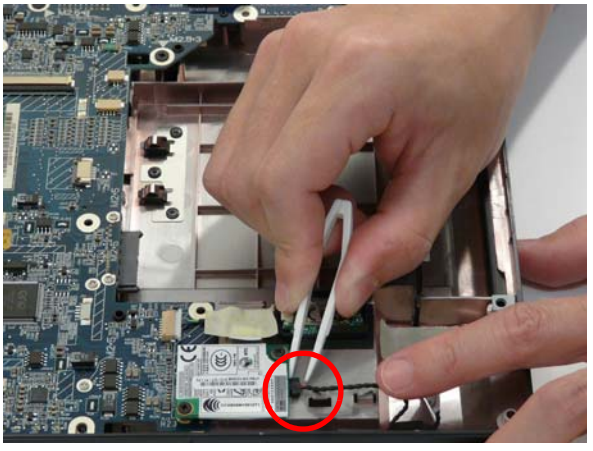
1. Replace the module from the lower base.



2. Tighten the two (2) securing screws on the modem module.



3. Connect the modem cable as shown in the following images.



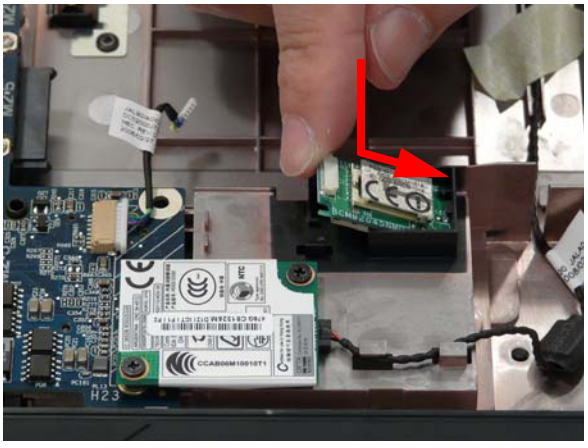
Replacing the USB Board

1. Angle the right side of the USB board into the lower base. Align the screw sockets and replace the two securing screws.

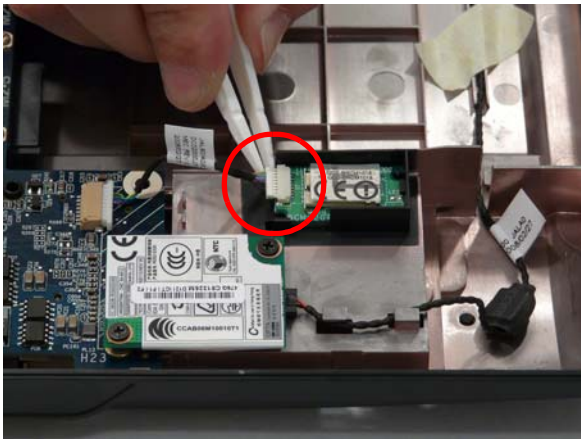
2. Replace the cable on the USB board.

Replacing the Bluetooth Module

1. Position the module and insert in place.



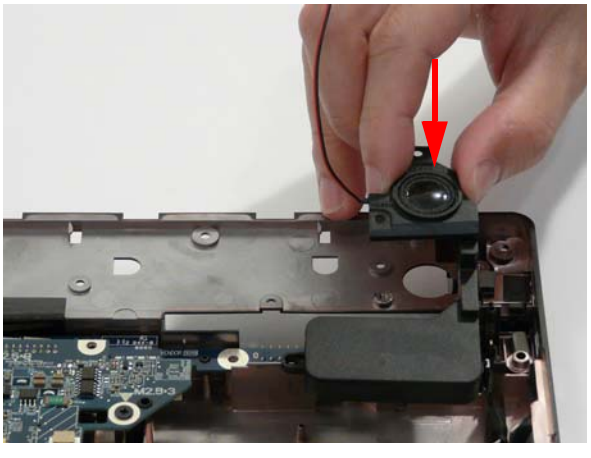
2. Connect the bluetooth cable as shown.



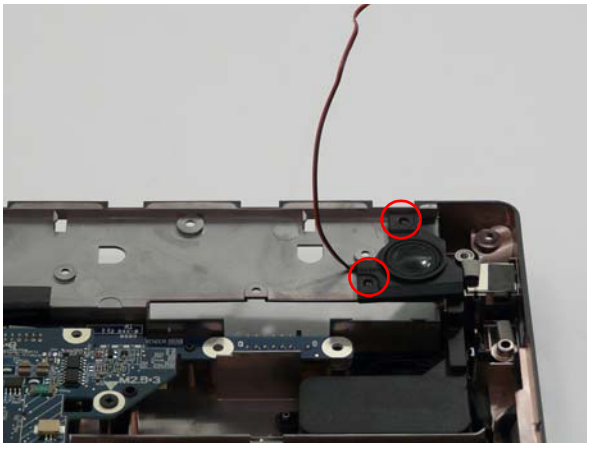
3. Replace the adhesive strip to cover the Bluetooth cable.

Replacing the Right Speaker Module

1. Replace the the speaker module as shown.

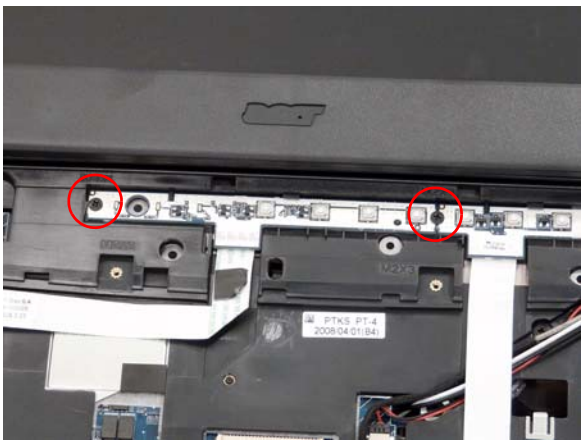


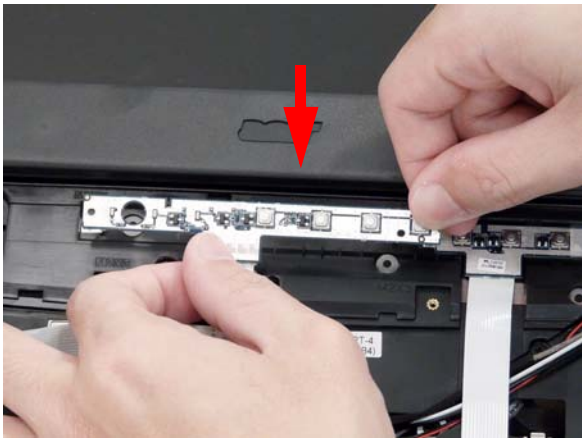
2. Replace the two securing screws on the speaker module.



Replacing the Launch Board

1. Replace the two securing screws on the Launch Board.
   NOTE: The right hand securing screw is shared by the Power Board.



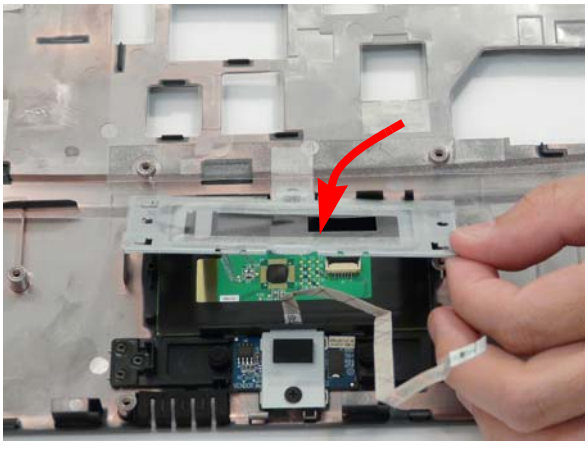


2. Connect the Launch Board cable to the mainboard.

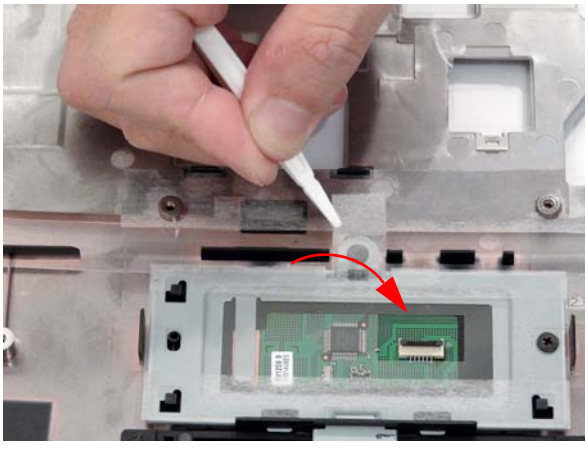
Replacing the Touch Pad Bracket

IMPORTANT: The Touch Pad cannot be removed individually. To replace the Touch Pad, replace the entire Upper Cover.

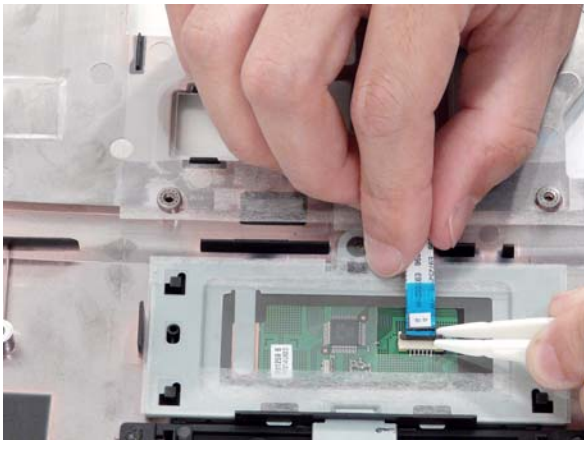
1. Replace the Touch Pad bracket.



2. Replace back cover and the securing screw.

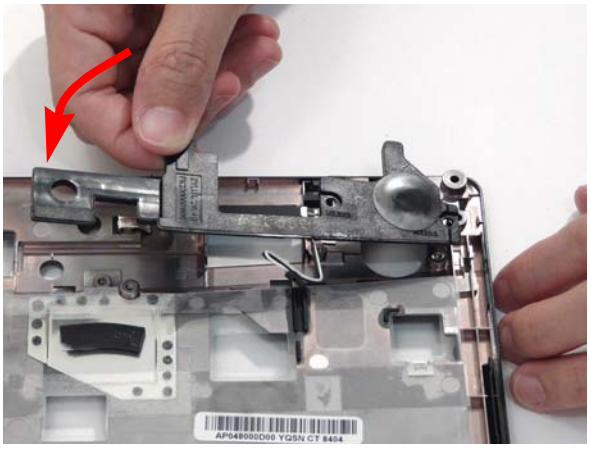


3. Connect the Touch Pad FFC to the Touch Pad board.

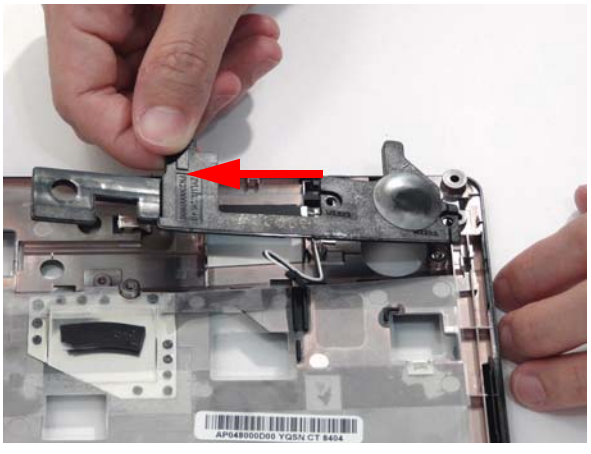


Replacing the Left Speaker Module

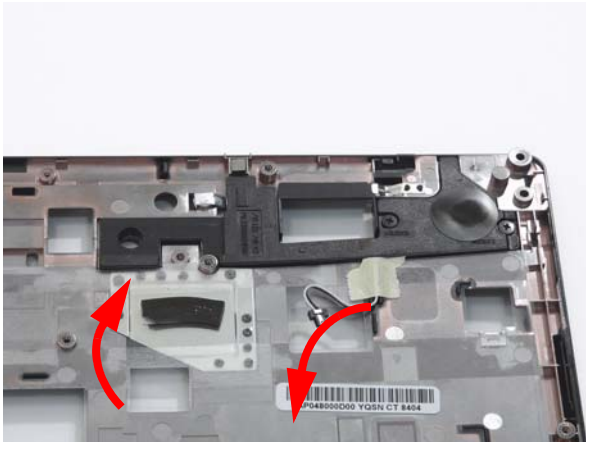
1. Replace the speaker module as shown.

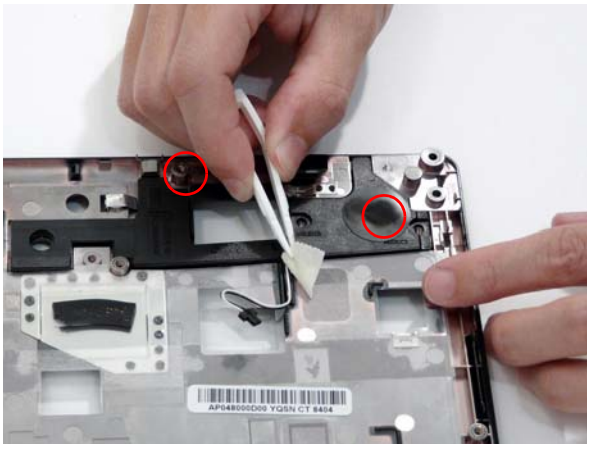


2. Grasp both ends of the mylar cover to expose the housing.
3. Replace the speaker cable as shown.



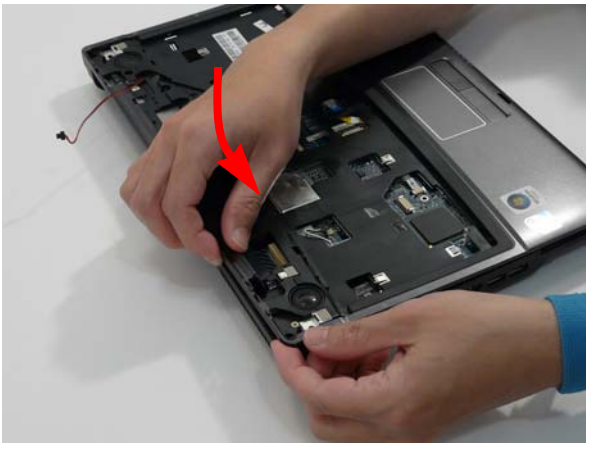
4. While holding the mylar cover back with one hand, replace the speaker cable in its housing.
5. Replace the mylar cover to secure the cable.
6. Replace the two securing screws on the left speaker.



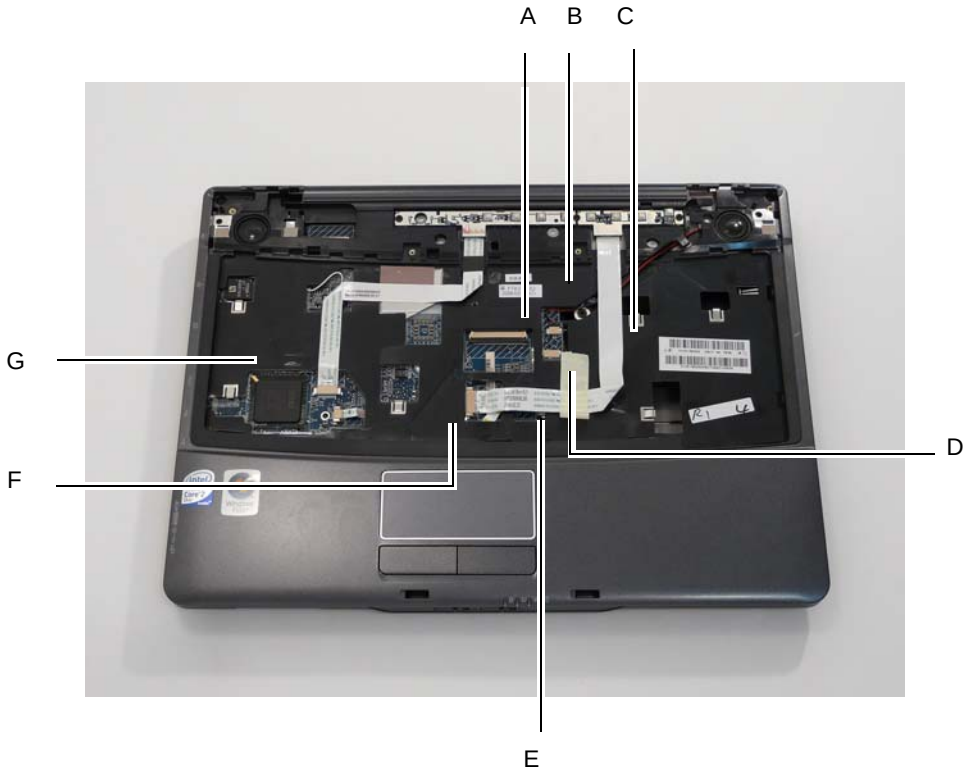


Replacing the Upper Cover

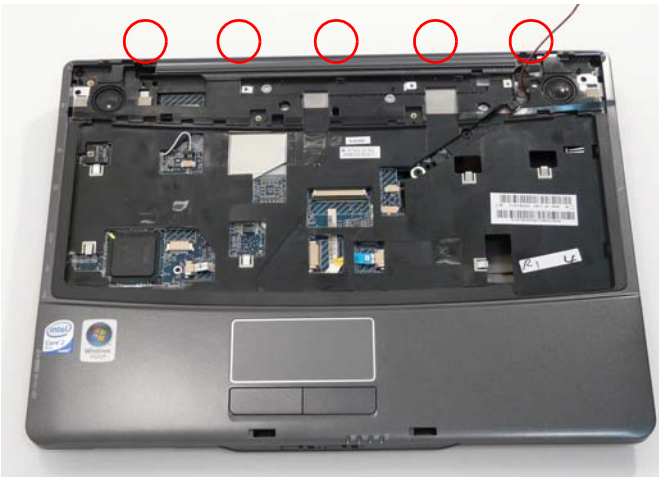
1. Startig with the reasr, align the upper cover with the lower cover, taking care to not force in place.



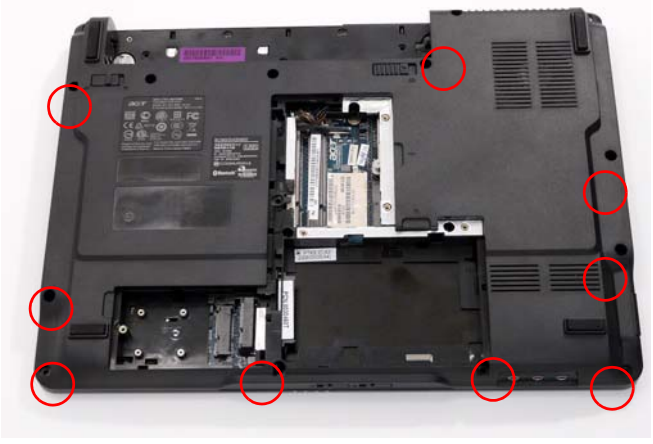
2. Connect the seven cables on the mainboard as shown.


A
B
C
G
D
F
E

3. Replace the five screws on the top panel.



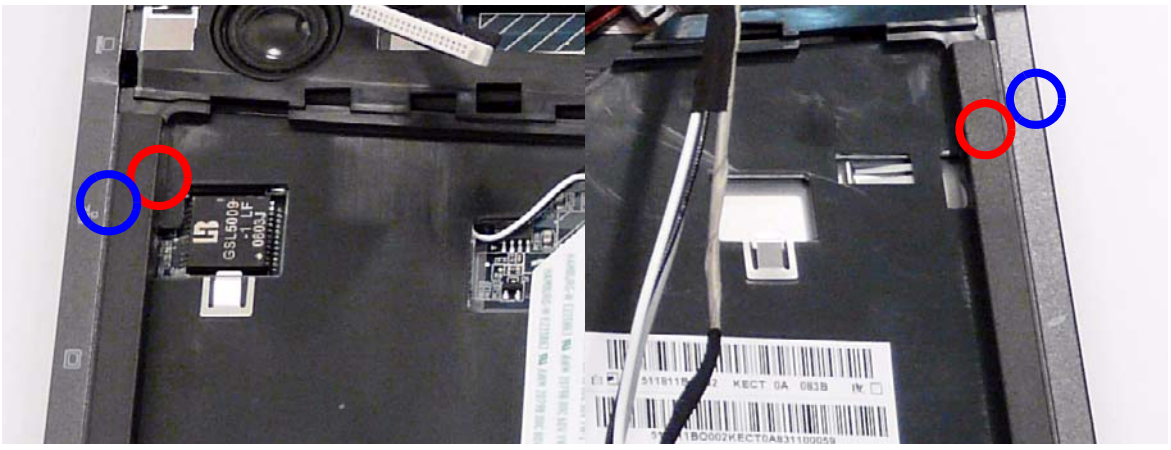
4. Turn the computer over. Replace the nine screws on the bottom panel.



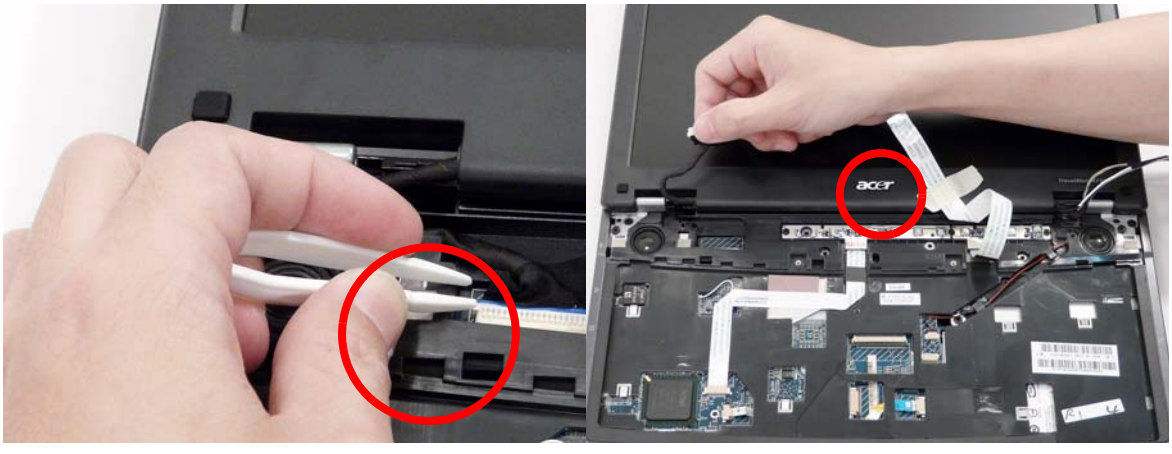
Replacing the LCD Module

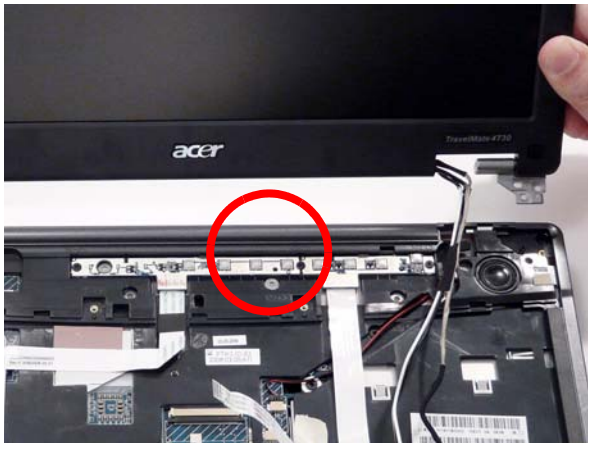
1. Carefully align the LCD module over the hinge sockets and lower the module into the chassis.

2. Replace the four securing screws (two on each side) securing the LCD module.

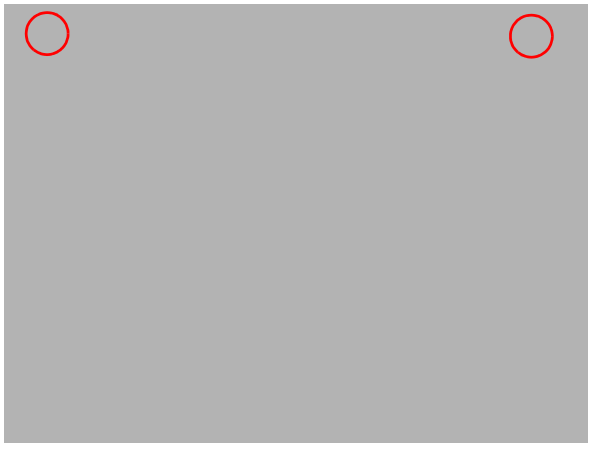


3. Connect the the LCD, MIC and back light cables.





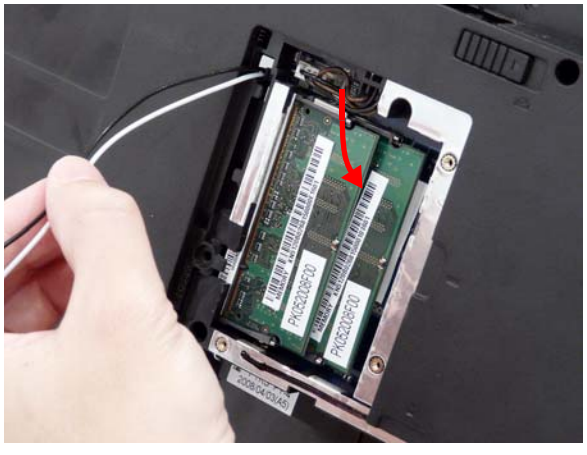
4. Turn the computer over and replace the two securing screws on the bottom of the chassis.



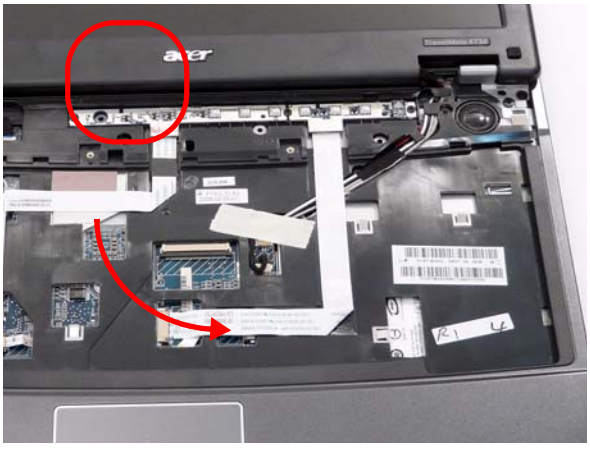
Replacing the Antenna Cables

Ensure that the three Antenna cables pass through the Mainboard and are accessible from the underside of lower cover.

1. Insert the Antenna Cables through the Upper Cover. Make sure they are accessible from the underside.

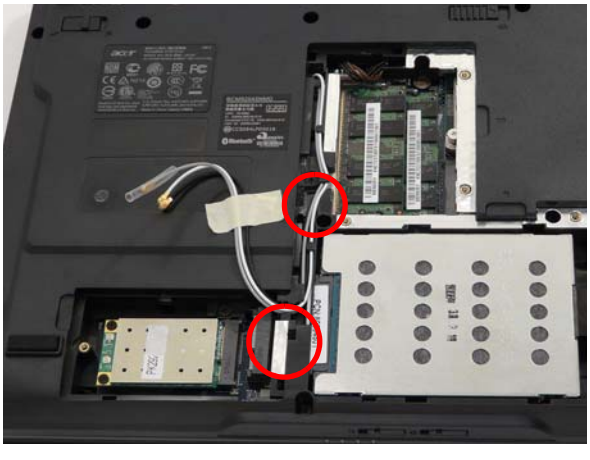


2. Pull the cables through.



3. Secure the cables in place as shown.

4. Place the cabling in the wiring conduit as shown.



Replacing the Keyboard

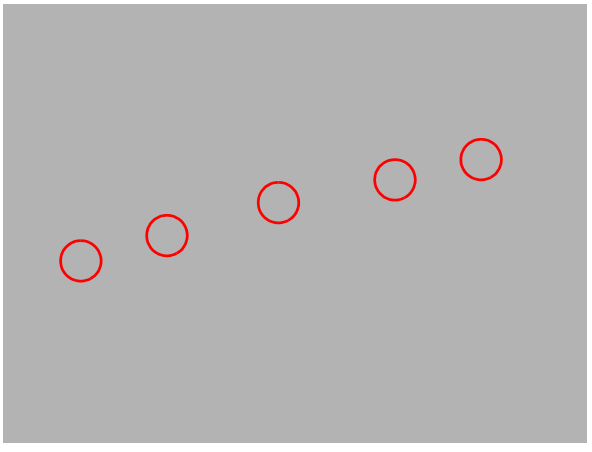
1. Align the FFC with the connector and press the latch down to secure.

2. Turn the keyboad over and press down to secure.

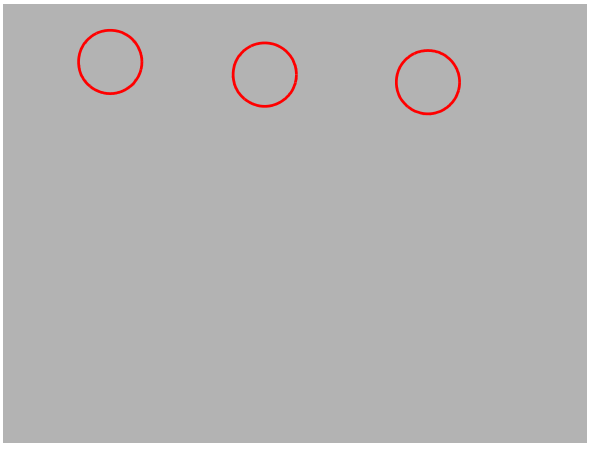
Replacing the Switch Cover

1. Insert the left side of the switch cover and angle down in place.

2. Starting from the left, press down on the Switch Cover to secure.



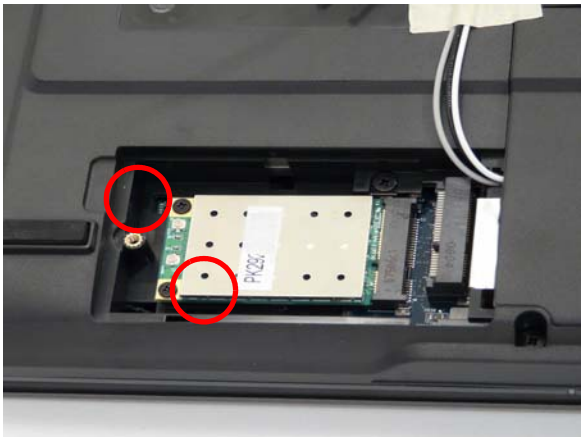
3. Turn the computer over and replace the three securing screws.



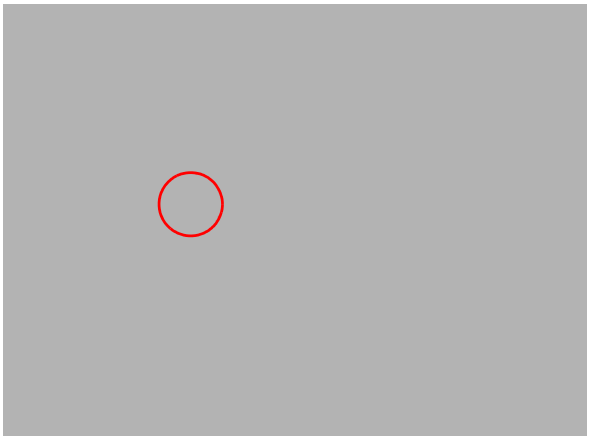
Replacing the WLAN Module

1. Insert the WLAN board into the WLAN socket.

2. Replace the two screws to secure the module.

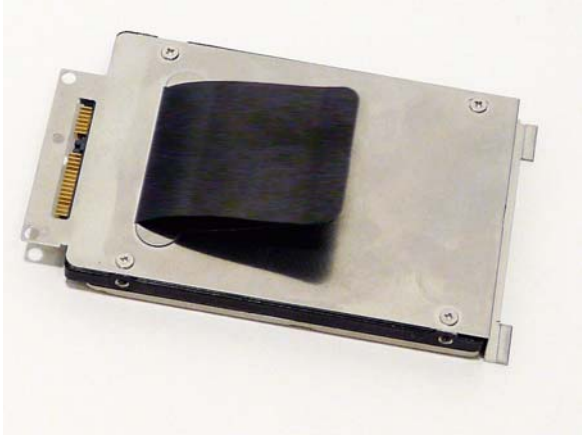


3. Connect the two antenna cables to the module.

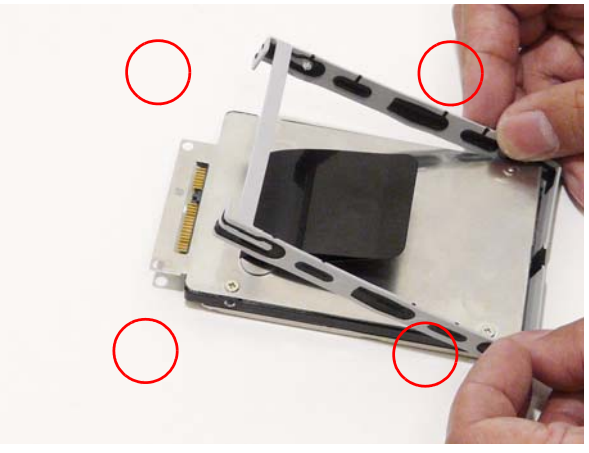


Replacing the Hard Disk Drive Module

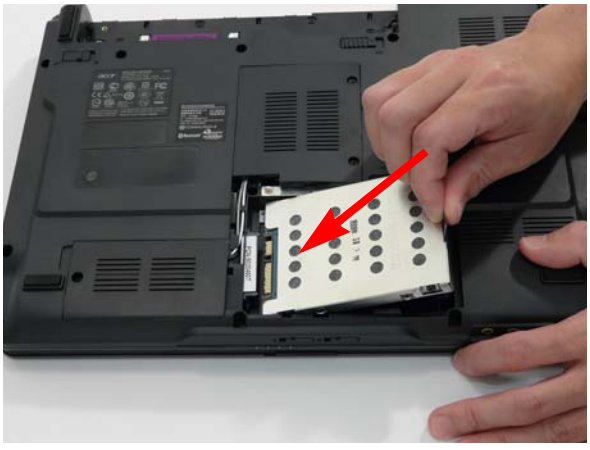
1. Place the HDD in the HDD carrier.



2. Replace the four screws to secure the carrier.



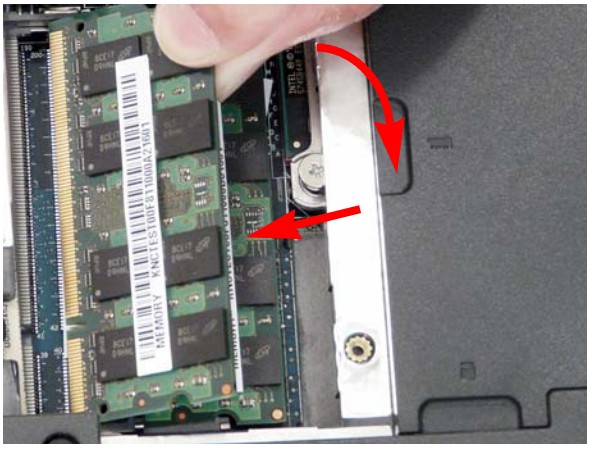
3. Insert the HDD, interface side first, until HDD firmly slides in place.



Replacing the DIMM Modules

NOTE: To replace DIMM Module 2, first remove DIMM Module 1. In this procedure, only DIMM Module 1 is shown.

1. Insert the DIMM Module flush with the connector and press down to lock in place.



Replacing the ODD Module

1. With the ODD tray in the eject position, replace the ODD cover on the new ODD Module.

2. Press the cover into the tray, bottom edge first, to secure.

3. Turn the ODD over and replace the three securing screws.

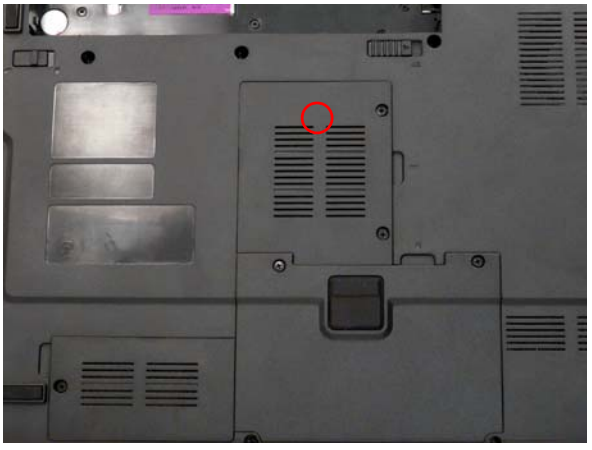
4. Slide Module in chassis and press until Module is flush with chassis.

5. Replace the single screw to secure Module.

Replacing the Lower Covers

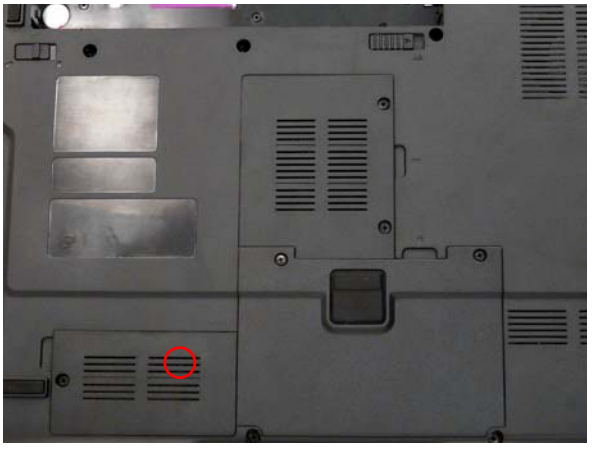
1. Replace the Memory Cover.

2. Replace the single screw to secure in place.



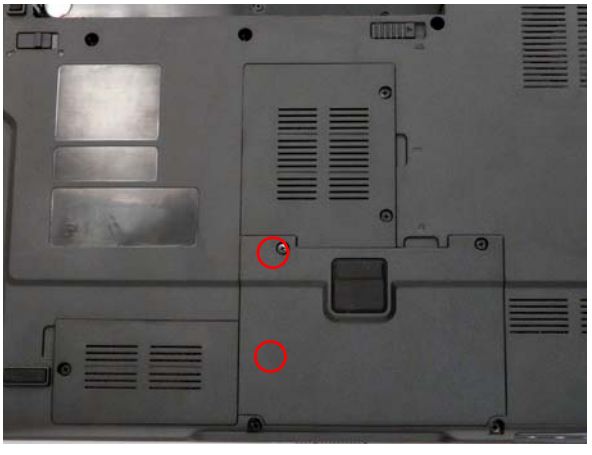
3. Replace the WLAN Cover.

4. Replace the screw to secure in place.



5. Replace HDD Cover.

6. Replace the two screws to secure in place.



Replacing the Express and SD Card Trays

1. Insert the Express Card and push into the slot until flush with the chassis cover.

2. Insert the SD Card and push into the slot until flush with the chassis cover.

Troubleshooting

Common Problems

Use the following procedure as a guide for computer problems.

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

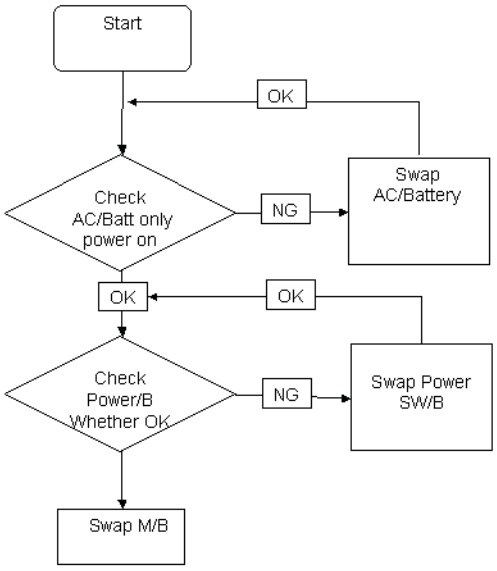
1. Obtain the failing symptoms in as much detail as possible.
2. Verify the symptoms by attempting to re-create the failure by running the diagnostic test or by repeating the same operation.
3. Use the following table with the verified symptom to determine which page to go to.

Symptoms (Verified)	Go To
Power On Issue	Page 124
No Display Issue	Page 125
LCD Failure	Page 127
Internal Keyboard Failure	Page 127
Touchpad Failure	Page 128
Internal Speaker Failure	Page 128
Internal Microphone Failure	Page 130
ODD Failure	Page 132
Rightside USB Failure	Page 135
Modem Failure	Page 135
WLAN Failure	Page 136
Acer EasyLaunch Button Failure	Page 136
Acer MediaTouch Failure	Page 137
Fingerprint Reader Failure	Page 137
Thermal Unit Failure	Page 138
HDTV Switch Failure	Page 138
Other Functions Failure	Page 139
Intermittent Failures	Page 140
Undermined Failures	Page 140

4. If the Issue is still not resolved, see “Online Support Information” on page 169.

Power On Issue

If the system doesn't power on, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



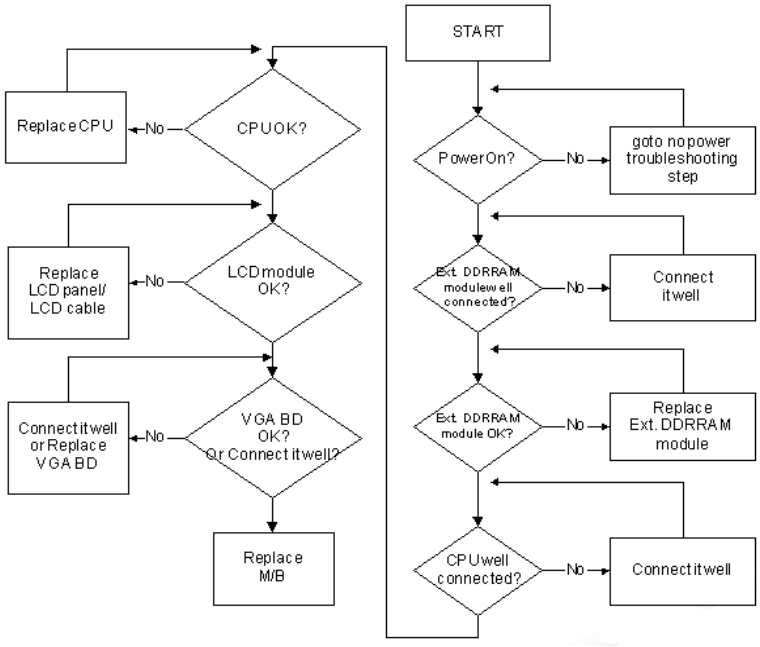
Computer Shutsdown Intermittently

If the system powers off at intervals, perform the following actions one at a time to correct the problem.

1. Check the power cable is properly connected to the computer and the electrical outlet.
2. Remove any extension cables between the computer and the outlet.
3. Remove any surge protectors between the computer and the electrical outlet. Plug the computer directly into a known good electrical outlet.
4. Disconnect the power and open the casing to check the Thermal Unit (see "Thermal Unit Failure" on page 138) and fan airways are free of obstructions.
5. Disable the power management settings in the BIOS to ensure they are not the cause of the problem (see "Power" on page 33).
6. Remove all external and non-essential hardware connected to the computer that are not necessary to boot the computer to the failure point.
7. Remove any recently installed software.
8. If the Issue is still not resolved, see "Online Support Information" on page 169.

No Display Issue

If the **Display** doesn't work, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



No POST or Video

If the POST or video doesn't display, perform the following actions one at a time to correct the problem.

1. Make sure that the internal display is selected. On this notebook model, switching between the internal display and the external display is done by pressing **Fn+F5**. Reference Product pages for specific model procedures.
2. Make sure the computer has power by checking at least one of the following occurs:
   - Fans start up
   - Status LEDs light up

   If there is no power, see "Power On Issue" on page 124.
3. Drain any stored power by removing the power cable and battery and holding down the power button for 10 seconds. Reconnect the power and reboot the computer.
4. Connect an external monitor to the computer and switch between the internal display and the external display is by pressing **Fn+F5** (on this model).

   If the POST or video appears on the external display, see "LCD Failure" on page 127.
5. Disconnect power and all external devices including port replicators or docking stations. Remove any memory cards and CD/DVD discs. Restart the computer.

   If the computer boots correctly, add the devices one by one until the failure point is discovered.
6. Reseat the memory modules.
7. Remove the drives (see "Disassembly Process" on page 44).
8. If the Issue is still not resolved, see "Online Support Information" on page 169.

Abnormal Video Display

If video displays abnormally, perform the following actions one at a time to correct the problem.

1. Reboot the computer.
2. If permanent vertical/horizontal lines or dark spots display in the same location, the LCD is faulty and should be replaced. See “Disassembly Process” on page 44.
3. If extensive pixel damage is present (different colored spots in the same locations on the screen), the LCD is faulty and should be replaced. See “Disassembly Process” on page 44.
4. Adjust the brightness to its highest level. See the User Manual for instructions on adjusting settings.

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

   If the display is too dim at the highest brightness setting, the LCD is faulty and should be replaced. See “Disassembly Process” on page 44.
5. Check the display resolution is correctly configured:
   a. Minimize or close all Windows.
   b. If display size is only abnormal in an application, check the view settings and control/mouse wheel zoom feature in the application.
   c. If desktop display resolution is not normal, right-click on the desktop and select **Personalize→ Display Settings**.
   d. Click and drag the Resolution slider to the desired resolution.
   e. Click **Apply** and check the display. Readjust if necessary.
6. Roll back the video driver to the previous version if updated.
7. Remove and reinstall the video driver.
8. 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.
9. If the Issue is still not resolved, see “Online Support Information” on page 169.
10. Run the Windows Memory Diagnostic from the operating system DVD and follow the onscreen prompts.
11. If the Issue is still not resolved, see “Online Support Information” on page 169.

Random Loss of BIOS Settings

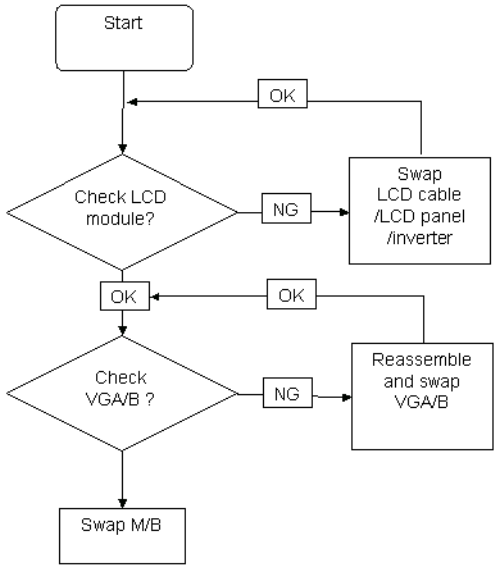
If the computer is experiencing intermittent loss of BIOS information, perform the following actions one at a time to correct the problem.

1. If the computer is more than one year old, replace the CMOS battery.
2. Run a complete virus scan using up-to-date software to ensure the computer is virus free.
3. If the computer is experiencing HDD or ODD BIOS information loss, disconnect and reconnect the power and data cables between devices.

   If the BIOS settings are still lost, replace the cables.
4. If HDD information is missing from the BIOS, the drive may be defective and should be replaced.
5. Replace the Motherboard.
6. If the Issue is still not resolved, see “Online Support Information” on page 169.

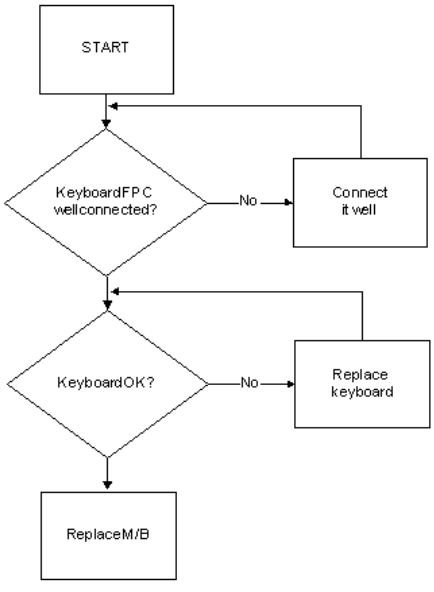
LCD Failure

If the **LCD** fails, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



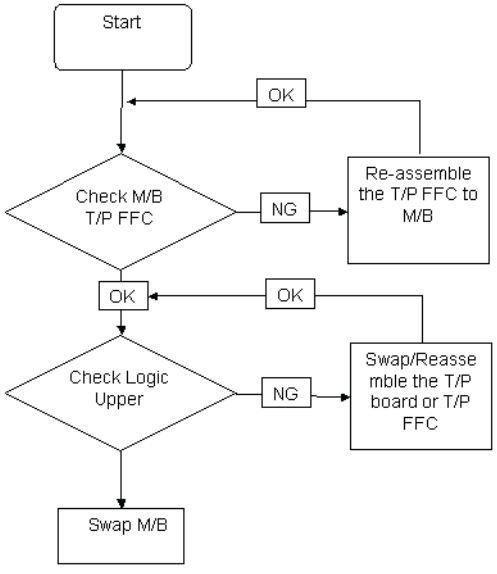
Built-In Keyboard Failure

If the built-in **Keyboard** fails, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



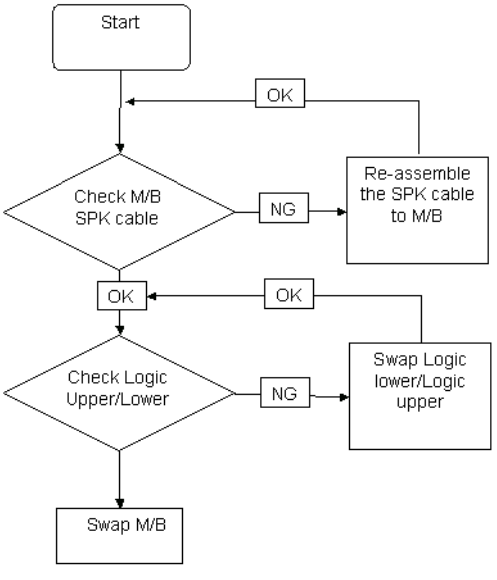
Touchpad Failure

If the **Touchpad** doesn't work, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



Internal Speaker Failure

If the internal **Speakers** fail, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



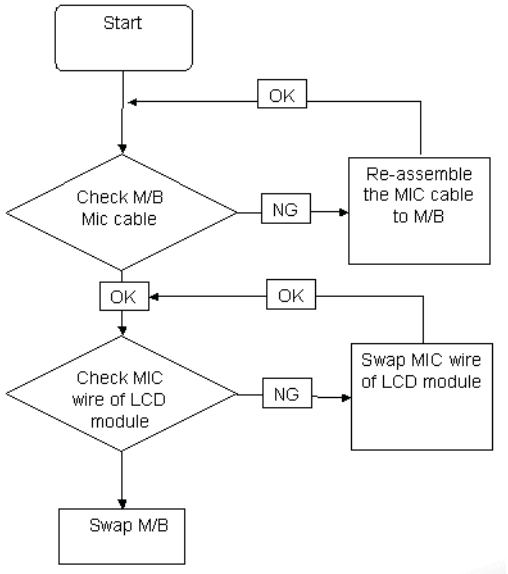
Sound Problems

If sound problems are experienced, perform the following actions one at a time to correct the problem.

1. Reboot 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. Roll back the audio driver to the previous version, if updated recently.
4. Remove and reinstall the audio driver.
5. Ensure that all volume controls are set mid range:
   a. Click the volume icon on the taskbar and drag the slider to 50. Ensure that the volume is not muted.
   b. 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**. Ensure 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 onscreen prompts to configure the speakers.
8. Remove and recently installed hardware or software.
9. Restore system and file settings from a known good date using **System Restore**.
   If the issue is not fixed, repeat the preceding steps and select an earlier time and date.
10. Reinstall the Operating System.
11. If the Issue is still not resolved, see “Online Support Information” on page 169.

Internal Microphone Failure

If the internal **Microphone** fails, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



Microphone Problems

If internal or external **Microphones** do no operate correctly, perform the following actions one at a time to correct the problem.

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).
3. The microphone appears on the **Recording** tab.
4. Right-click on the microphone and select **Enable**.
5. Select the microphone then click **Properties**. Select the **Levels** tab.
6. Increase the volume to the maximum setting and click **OK**.
7. Test the microphone hardware:
   a. Select the microphone and click **Configure**.
   b. Select **Set up microphone**.
   c. Select the microphone type from the list and click **Next**.
   d. Follow the onscreen prompts to complete the test.
8. If the Issue is still not resolved, see “Online Support Information” on page 169.

HDD Not Operating Correctly

If the **HDD** does not operate correctly, perform the following actions one at a time to correct the problem.

1. Disconnect all external devices.
2. Run a complete virus scan using up-to-date software to ensure 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. The **Install Windows** screen displays. Click **Next**.
   d. Select **Repair your computer**.
   e. The **System Recovery Options** screen displays. Click **Next**.
   f. Select the appropriate operating system, and click **Next**.

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

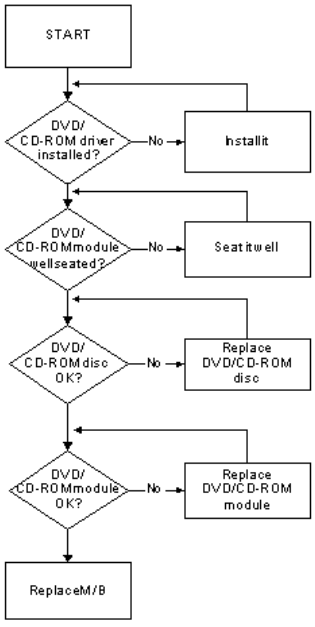
   g. Select **Startup Repair**.
   h. Startup Repair attempts to locate and resolve issues with the computer.
   i. When complete, click **Finish**.

   If an issue is discovered, follow the onscreen information to resolve the problem.
4. Run the Windows Memory Diagnostic Tool. For more information see Windows Help and Support.
5. 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.
6. Ensure all cables and jumpers on the HDD and ODD are set correctly.
7. Remove any recently added hardware and associated software.
8. Run the Windows Disk Defragmenter. For more information see Windows Help and Support.
9. Run Windows Check Disk by entering **chkdsk /r** from a command prompt. For more information see Windows Help and Support.
10. Restore system and file settings from a known good date using **System Restore**.

    If the issue is not fixed, repeat the preceding steps and select an earlier time and date.
11. Replace the HDD. See “Disassembly Process” on page 44.

ODD Failure

If the **ODD** fails, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



ODD Not Operating Correctly

If the **ODD** exhibits any of the following symptoms it may be faulty:

- Audio CDs do not play when loaded
- DVDs do not play when loaded
- Blank discs do not burn correctly
- DVD or CD play breaks up or jumps
- Optical drive not found or not active:
  - Not shown in My Computer or the BIOS setup
  - LED does not flash when the computer starts up
  - The tray does not eject
- Access failure screen displays
- The ODD is noisy

Perform the following general solutions one at a time to correct the problem.

1. Reboot the computer and retry the operation.
2. Try an alternate disc.
3. Navigate to **Start→ Computer**. Check that the ODD device is displayed in the **Devices with Removable Storage** panel.
4. Navigate to **Start→ Control Panel→ System and Maintenance→ System→ Device Manager**.
   a. Double-click **IDE ATA/ATAPI controllers**. If a device displays a down arrow, right-click on the device and click **Enable**.
   b. Double-click **DVD/CD-ROM drives**. If the device displays a down arrow, right-click on the device and click **Enable**.

c. Check that there are no yellow exclamation marks against the items in **IDE ATA/ATAPI controllers**. If a device has an exclamation mark, right-click on the device and uninstall and reinstall the driver.

d. Check that there are no yellow exclamation marks against the items in **DVD/CD-ROM drives**. If a device has an exclamation mark, right-click on the device and uninstall and reinstall the driver.

e. If the exclamation marker is not removed from the item in the lists, try removing any recently installed software and retrying the operation.

Discs Do Not Play

If discs do not play when inserted in the drive, perform the following actions one at a time to correct the problem.

1. Check that the disc is correctly seated in the drive tray and that the label on the disc is visible.
2. Check that the media is clean and scratch free.
3. Try an alternate disc in the drive.
4. Ensure that **AutoPlay** is enabled:
   a. Navigate to **Start**→ **Control Panel**→ **Hardware and Sound**→ **AutoPlay**.
   b. Select **Use AutoPlay for all media and devices**.
   c. In the Audio CD and DVD Movie fields, select the desired player from the drop down menu.
5. Check that the Regional Code is correct for the selected media:

IMPORTANT: Region can only be changed a limited number of times. After Changes remaining reaches zero, the region cannot be changed even Windows is reinstalled or the drive is moved to another computer.

   a. Navigate to **Start**→ **Control Panel**→ **System and Maintenance**→ **System**→ **Device Manager**.
   b. Double-click **DVD/CD-ROM drives**.
   c. Right-click **DVD drive** and click **Properties**, then click the **DVD Region** tab.
   d. Select the region suitable for the media inserted in the drive.

Discs Do Not Burn Properly

If discs can not be burned, perform the following actions one at a time to correct the problem.

1. Ensure that the default drive is record enabled:
   a. Navigate to **Start**→ **Computer** and right-click the writable ODD icon. Click **Properties**.
   b. Select the **Recording** tab. In the **Desktop disc recording** panel, select the writable ODD from the drop down list.
   c. Click **OK**.
2. Ensure that the software used for burning discs is the factory default. If using different software, refer to the software's user manual.

Playback is Choppy

If playback is choppy or jumps, perform the following actions one at a time to correct the problem.

1. Check that system resources are not running low:
   a. Try closing some applications.
   b. Reboot and try the operation again.
2. Check that the ODD controller transfer mode is set to DMA:
   a. Navigate to **Start**→ **Control Panel**→ **System and Maintenance**→ **System**→ **Device Manager**.
   b. Double-click **IDE ATA/ATAPI controllers**, then right-click ATA Device 0.
   c. Click **Properties** and select the **Advanced Settings** tab. Ensure that the **Enable DMA** box is checked and click **OK**.

d. Repeat for the other ATA Devices shown if applicable.

Drive Not Detected

If Windows cannot detect the drive, perform the following actions one at a time to correct the problem.

1. Restart the computer and press F2 to enter the BIOS Utility.
2. Check that the drive is detected in the **ATAPI Model Name** field on the Information page.

   NOTE: Check that the entry is identical to one of the ODDs specified in “Hardware Specifications and Configurations” on page 18.
3. Turn off the power and remove the cover to inspect the connections to the ODD. See “Disassembly Process” on page 44.
   - **a.** Check for broken connectors on the drive, motherboard, and cables.
   - **b.** Check for bent or broken pins on the drive, motherboard, and cable connections.
   - **c.** Try an alternate cable, if available. If the drive works with the new cable, the original cable should be replaced.
4. Reseat the drive ensuring and all cables are connected correctly.
5. Replace the ODD. See “Disassembly Process” on page 44.

Drive Read Failure

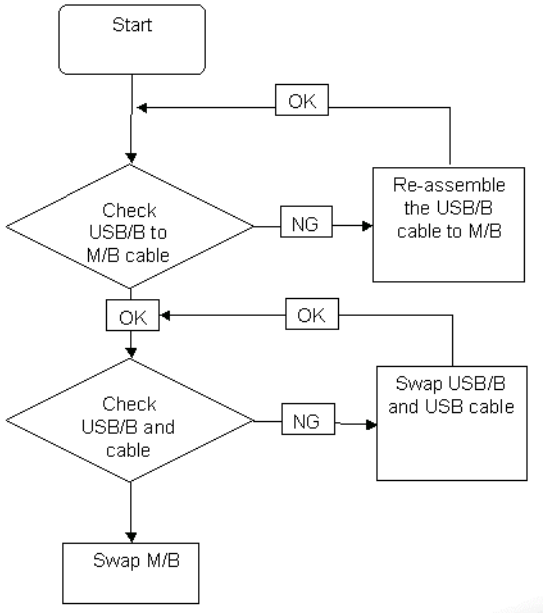
If discs cannot be read when inserted in the drive, perform the following actions one at a time to correct the problem.

1. Remove and clean the failed disc.
2. Retry reading the CD or DVD.
   - **d.** Test the drive using other discs.
   - **e.** Play a DVD movie
   - **f.** Listen to a music CD

   If the ODD works properly with alternate discs, the original disc is probably defective and should be replaced.
3. Turn off the power and remove the cover to inspect the connections to the ODD. See “Disassembly Process” on page 44.
   - **a.** Check for broken connectors on the drive, motherboard, and cables.
   - **b.** Check for bent or broken pins on the drive, motherboard, and cable connections.
   - **c.** Try an alternate cable, if available. If the drive works with the new cable, the original cable should be replaced.
4. Replace the ODD. See “Disassembly Process” on page 44.

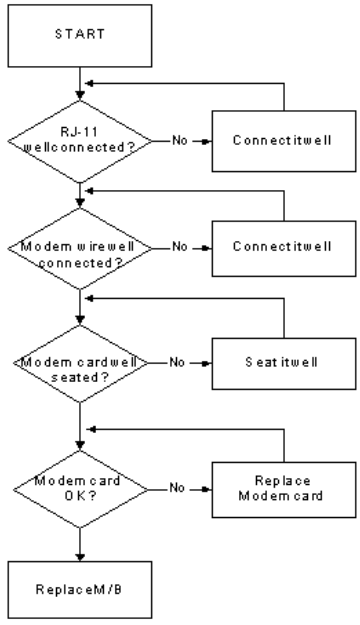
USB Failure (Rightside)

If the rightside **USB** port fails, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



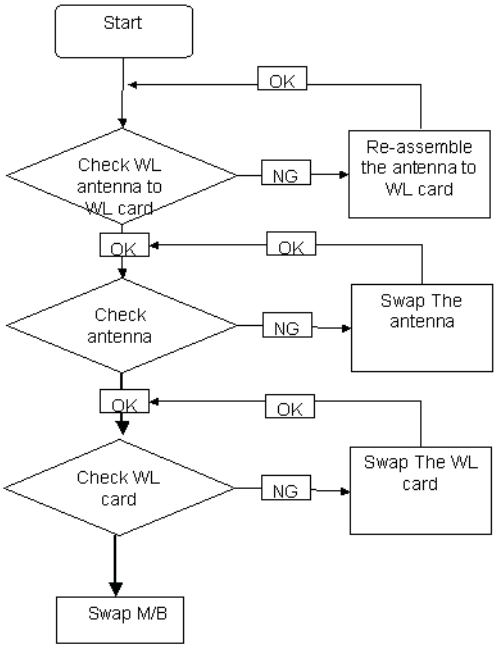
Modem Function Failure

If the internal **Modem** fails, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



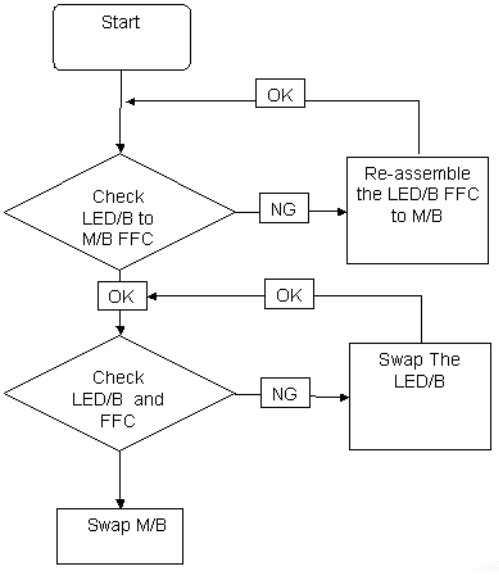
Wireless Function Failure

If the **WLAN** fails, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



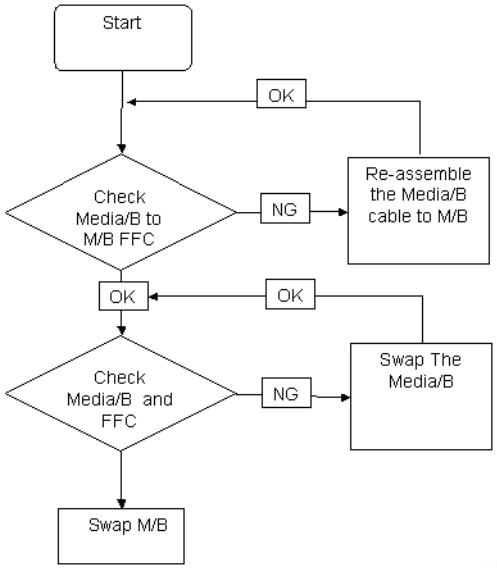
EasyTouch Button Failure

If the **Acer EasyTouch** buttons fail, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



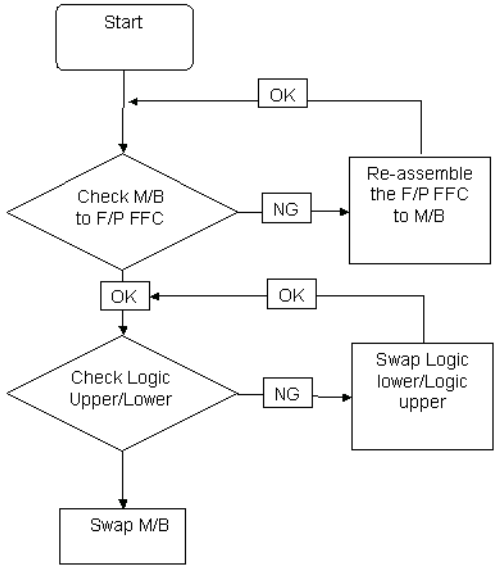
MediaTouch Button Failure

If the **Acer MediaTouch** buttons fail, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



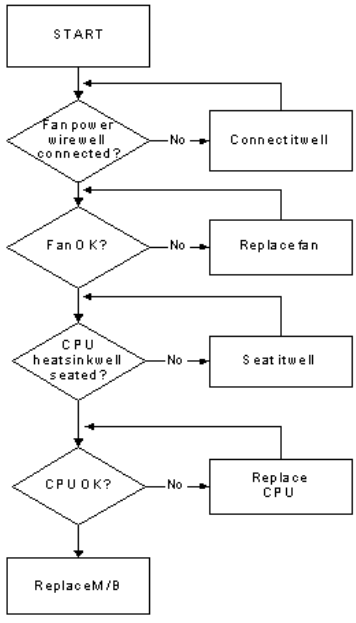
Fingerprint Reader Failure

If the **Fingerprint Reader** fails, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



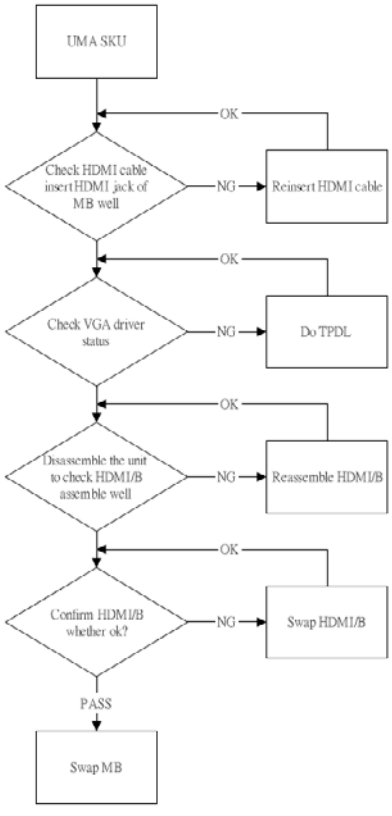
Thermal Unit Failure

If the **Thermal Unit** fails, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



HDTV Switch Failure

If the **HDTV Switch** fails, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



External Mouse Failure

If an external **Mouse** fails, perform the following actions one at a time to correct the problem.

1. Try an alternative mouse.
2. If the mouse uses a wireless connection, insert new batteries and confirm there is a good connection. See the mouse user manual.
3. If the mouse uses a USB connection, try an alternate USB port.
4. Try an alternative program to verify mouse operation. Reinstall the program experiencing mouse failure.
5. Restart the computer.
6. Remove any recently added hardware and associated software.
7. Remove any recently added software and reboot.
8. Restore system and file settings from a known good date using **System Restore**.

   If the issue is not fixed, repeat the preceding steps and select an earlier time and date.
9. Run the Event Viewer to check the events log for errors. For more information see Windows Help and Support.
10. Roll back the mouse driver to the previous version if updated recently.
11. Remove and reinstall the mouse driver.
12. 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.
13. If the Issue is still not resolved, see “Online Support Information” on page 169.

Other Failures

If the CRT Switch, Dock, LAN Port, external MIC or Speakers, PCI Express Card, 5-in-1 Card Reader or Volume Wheel fail, perform the following general steps to correct the problem. Do not replace a non-defective FRUs:

1. Check Drive whether is OK.
2. Check Test Fixture is ok.
3. Swap M/B to Try.

Intermittent Problems

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

When analyzing an intermittent problem, do 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 any error is detected, replace the FRU. Rerun the test to verify that there are no more errors.

Undetermined Problems

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.

Follow these 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. (See “Power On Issue” on page 124.):

1. Power-off the computer.
2. Visually check them for damage. If any problems are found, replace the FRU.
3. Remove or disconnect all of the following devices:
    - Non-Acer devices
    - Printer, mouse, and other external devices
    - Battery pack
    - Hard disk drive
    - DIMM
    - CD-ROM/Diskette drive Module
    - PC Cards
4. Power-on the computer.
5. Determine if the problem has changed.
6. If the problem does not recur, reconnect the removed devices one at a time until you find the failing FRU.
7. If the problem remains, replace the following FRU one at a time. Do not replace a non-defective FRU:
    - System board
    - LCD assembly

POST Codes Tables

These tables describe the POST codes, drivers, and keys for the POST.

Port 80 POST Codes

The following table details the Port 80 POST codes and drivers used in the POST.

Driver Name	Port 80 Code	Driver Name	Port 80 Code
PeiEventLog	01	CpuIo	3E
OemServices	02	Cf9Reset	3F
SioInit	03	PcRtc	40
MonoStatusCode	04	StatusCode	41
PentiumMCpuPeim	08	Variable	42
PlatformStage1	09	SmmVariable	CF
Variable	0A	EmuVariable	43
IchInit	0B	TcgDxe	A2
PlatformStage2	0D	PhysicalPresence	A3
IchSmbusArpDisabled	0E	TpmDriver	AE
ClockGen	12	TcgSmm	AE
OpPresence	13	PhysicalPresenceReadyToBoot	AE
TcgPei	14	DataHubRecordPolicy	AD
FindFv	15	Undi	86
DxeIpl	2F	SNP	90
LightMemoryInit	10	BC	91
S3ResumeSoftSmi	11	PxeDhcp4	92
Crc32SectionExtract	31	Ebc	93
OemServices	A4	IsaBus	4D
EventLog	A5	IsaSerial	4E
ScriptSave	32	Ps2Mouse	6D
AcpiS3Save	33	IdeBus	4F
SmartTimer	34	LightPciBus	50
JpegDecoder	35	UsbBot	6E
PcxDecoder	36	UsbCbi0	6F
PlatformBds	8A	UsbCbi1	70
MpCpu	37	UsbKb	71
LegacyMetronome	38	UsbMassStorage	72
FtwLite	39	UsbMouse	74
Runtime	3A	Ehci	8F
MonotonicCounter	3B	Uhci	73
WatchDogTimer	3C	UsbBus	75
SecurityStub	3D	SmmBase	C2

Driver Name	Port80 Code	Driver Name	Port80 Code
SmmDisp	C5	HiiDatabase	80
SmmReloc	C4	OemSetupBrowser	82
SmmRuntime	C7	Font(English)	7E
SmmThunk	C9	Font(French)	7F
OemServices	D8	Font(Chinese)	8D
ChipsetInit	44	UnicodeCollation	B1
SmmAccess	C0	ConPlatform	5A
PciHostBridge	46	ConSplitter	5D
PciExpress	47	GraphicsConsole	79
GmchMbi	CD	Terminal	7A
IchInit	48	VgaClass	5E
IdeController	49	SaveMemoryConfig	5B
SataController	4A	AcpiSupport	5C
IchSmbusLight	4B	AcpiPlatform	53
SmmControl	C1	DataHub	5F
Ich7MSmmDispatcher	C8	DataHubStdErr	7B
IsaAcpiDriver	4C	GenericMemoryTest	61
Fwh	52	DiskIo	60
SmmFwh	CE	Fat	7C
PciHotPlug	54	Partition	7D
BootOptionPolicy	51	PciPlatform	6B
SetupUtility	76	AlertStandardForma	45
Platform	55	PciSerial	A8
PlatformIde	56	AsfInit	A7
Ppm	D9	IdeRController	A9
Platform	CC	Legacy8259	63
Ihisi	D0	LegacyRegion	64
SetupMouse	f9	LegacyInterrupt	65
Int15Microcode	D1	BiosKeyboard	66
SmmPnp	D2	BiosVideo	67
Smbios	57	MonitorKey	68
MemorySubClass	58	LegacyBios	69
MiscSubclassDriver	59	LegacyBiosPlatform	6A
SysPassword	AB	LegacyMouse	77
PswdConsole	AC	SmmUsbLegacy	78
HddPswdServiceBody	D7	AmtbxInvoke	AA
HddPswdService	A6	OemBadgingSupport	83

POST Keys and Messages

The following keys are available during POST.

Key	Function
F2	Enter into Setup Menu
F12	Enter into Boot Manager

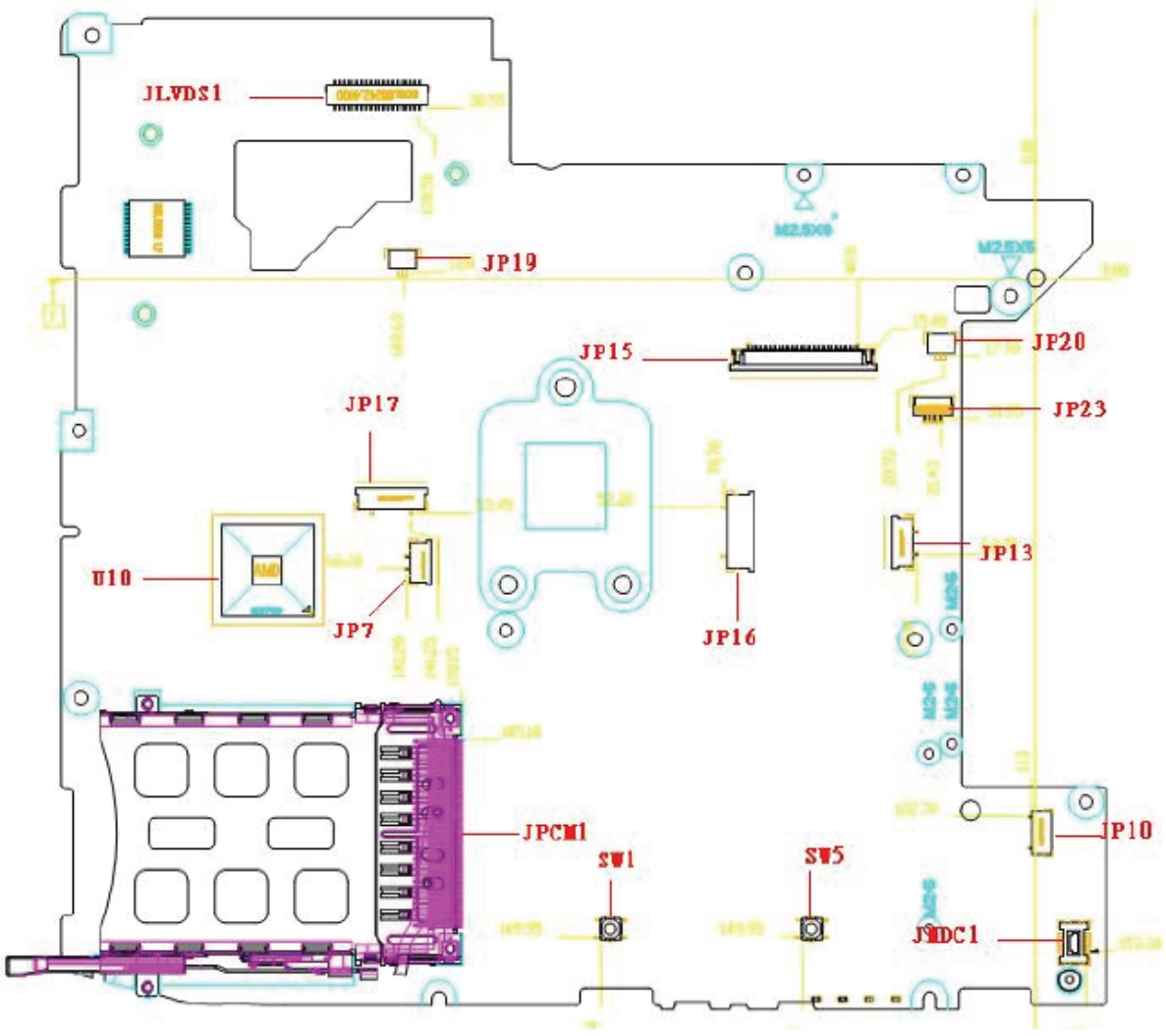
The following messages display during POST:

Before press function key
CPUID : XXXXXX Press F2 go to Setup Utility Press F12 go to Boot Manager Press [PXE HOT KEY] go to PXE Setup Menu

After press function key
If user pressed F2 CPUID : XXXXXX F2 is pressed. Go to Setup Utility.
If user pressed F12 CPUID : XXXXXX F12 is pressed. Go to Boot Manager.
If user didn’t press any key CPUID : XXXXXX Prepare Boot to OS
If user pressed PXE HOT KEY CPUID : XXXXXX [PXE HOT KEY] is pressed. Go to PXE Setup Menu.

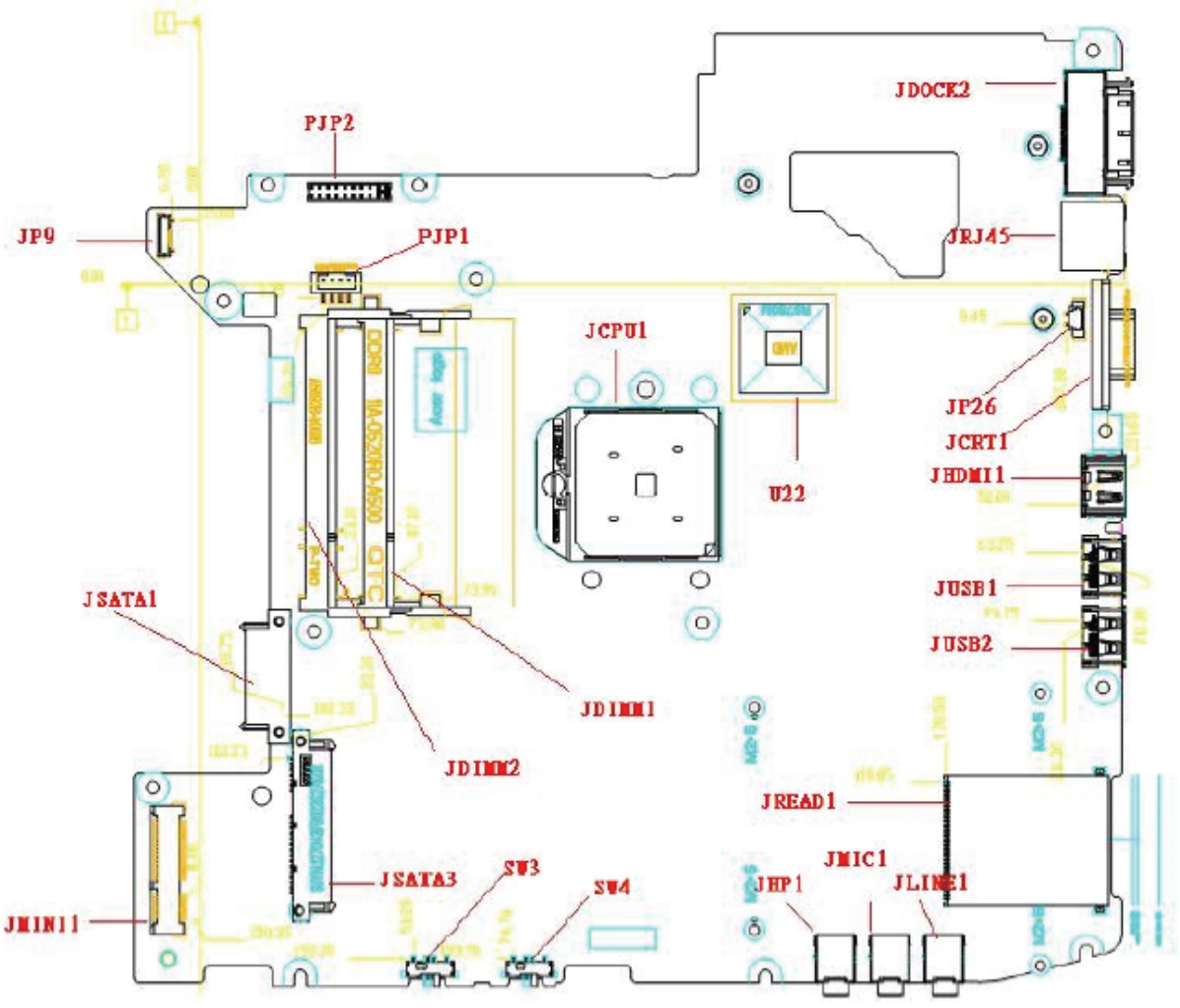
Jumper and Connector Locations

Top View



Item	Description	Item	Description
JLVDS1	LCD Connector	JP7	FP/B Connector
JP23	MIC-In Jack	JP10	Bluetooth Connector
JP16	BTN/B Connector	JMDC1	MDC Connector
JP17	Fun/B Connector	SW5	Touch pad (right) Button
JP19	Speaker (Left) Connector	SW1	Touch pad (left) Button
JP20	Speaker (Right) Connector	JPCM1	PCMCIA Connector
JP15	Internal Keyboard Connector	U10	South Bridge
JP13	Touch Pad Connector		

Bottom View



Location	Description	Location	Description
PJP1	AC-IN Connector	JMINI1	Wireless Card Connector
JDOCK2	Dock Connector	JSATA1	ODD Connector
JRJ45	RJ45 Connector	JDIMM2	MemoryDIMM2 Connector
JCRT1	CRT Connector	JDIMM1	MemoryDIMM1 Connector
JHDMI1	HDMI Connector	PJP2	Battery Connector
JP9	USB Connector	JCPu1	CPU Socket
JLINE1	Line-In Jack	U22	North Bridge
JMIC1	MIC-In Jack	SW3	Wireless SWITCH
JHP1	Head-Phone Connector	SW4	BT SWITCH
JREAD1	Card Reader Socket	JUSB1	USB Connector
JSATA3	HDD Connector	JUSB2	USB Connector
JMINI1	Wireless Card Connector	JP26	FAN1 Connector
JSATA1	ODD Connector		

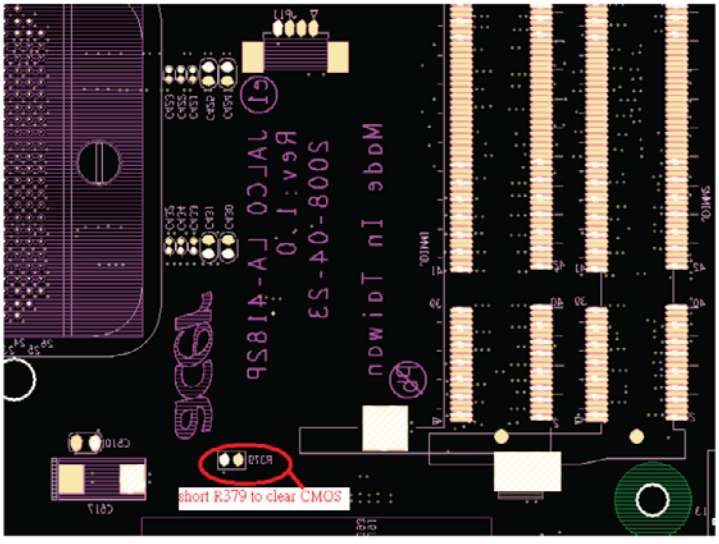
Clearing Password Check and BIOS Recovery

This section provide you the standard operating procedures of clearing password and BIOS recovery for TravelMate 4530. TravelMate 4530 provide one Hardware Open Gap on main board for clearing password check, and one Hotkey for enabling BIOS Recovery.

Clearing Password Check

Hardware Open Gap Description

Item	Description
R379	Clear CMOS Jumper



Steps for Clearing BIOS Password Check

If users set BIOS Password (Supervisor Password and/or User Password) for a security reason, BIOS will ask the password during systems POST or when systems enter to BIOS Setup menu. However, once it is necessary to bypass the password check, users need to short the HW Gap to clear the password by the following steps:

- Power Off a system, and remove HDD, AC and Battery from the machine.
- Open the back cover of the machine, and find out the HW Gap on M/B as picture.
- Use an electric conductivity tool to short the two points of the HW Gap.
- Plug in AC, keep the short condition on the HW Gap, and press Power Button to power on the system till BIOS POST finish. Then remove the tool from the HW Gap.
- Restart system. Press F2 key to enter BIOS Setup menu.
- If there is no Password request, BIOS Password is cleared. Otherwise, please follow the steps and try again.

NOTE: The steps are only for clearing BIOS Password (Supervisor Password and User Password).

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 to a successful one once the previous BIOS flashing process failed.

BIOS Recovery Hotkey:

The system provides a function hotkey: **Fn+Esc**, for enable BIOS Recovery process when system is powered on during BIOS POST. To use this function, it is strongly recommended to have the AC adapter and Battery present. If this function is enabled, the system will force the BIOS to enter a special BIOS block, called Boot Block.

Steps for BIOS Recovery by Crisis Disk:

Before doing this, one Crisis Disk should be prepared ready in hand. The Crisis Disk could be made by executing the Crisis Disk program in another system with Windows XP OS.

Follow the steps below:

1. Power Off failed system.
2. Attach a USB floppy drive to the failed system.
3. Insert the Crisis Disk in to the USB floppy drive attached to the BIOS flash failed system.
4. In the power-off state, press and hold **Fn+Esc** then press the Power button.

   The system powers on and the Crisis BIOS Recovery process begins.

   BIOS Boot Block begins restoring the BIOS code from the Crisis floppy disk to BIOS ROM on the failed systems.

   When the Crisis flash process is finished, the system restarts with a workable BIOS.
5. Update to the latest version BIOS for the system using the regular BIOS flashing process.

FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of TravelMate 4530 Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

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

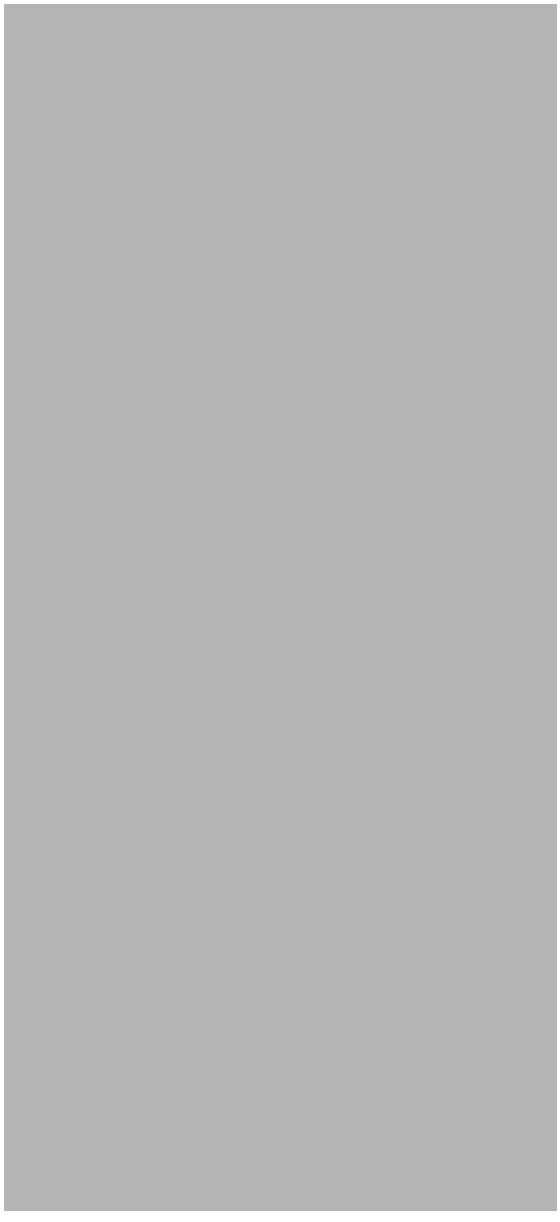
NOTE: To scrap or to return the defective parts, you should follow the local government ordinance or regulations on how to dispose it properly, or follow the rules set by your regional Acer office on how to return it.

TravelMate 4530 Exploded Diagrams

Upper Cover

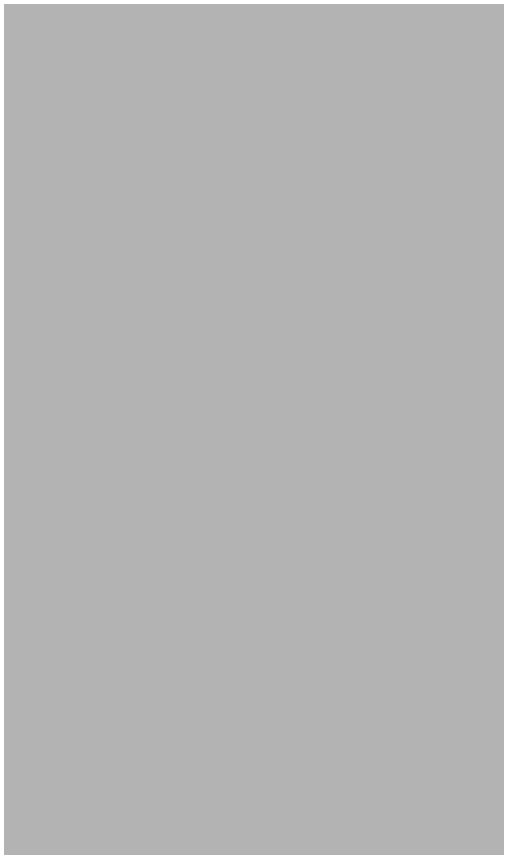
Item	Description	Part No.	Item	Description	Part No.
1			7		
2			8		
3			9		
4			10		
5			11		
6					

Lower Cover



Item	Description	Part No.	Item	Description	Part No.
1	Keyboard		8		
2			9		
3	Card Reader		10	Middle Cover	
4	Mainboard		11	Bluetooth	
5	CPU		12	Modem	
6	Thermal Module		13	Fan	
7	Thermal Module		14		

LCD Module



Item	Description	Part No.	Item	Description	Part No.
1	Camera Module		7	MIC Cable	
2	Camera Bracket		8	LCD Bracket Right	
3	LCD Cable		9	Antenna Right	
4	LCD Bracket Left		10	Inverter Board	
5	Antenna Left		11	LCD Module	
6	LCD Bezel				

TravelMate 4530 FRU List

Category	Description	Part Number
Adapter		
ADAPTER	ADAPTER 65W 3PIN DELTA SADP-65KB DFA	
ADAPTER	ADAPTER 65W 3PIN DELTA SADP65KB BFJA	
ADAPTER	ADAPTER 65W 3PIN LITE-ON PA-1650-02AC	
ADAPTER	ADAPTER 65W 3PIN HIPRO AC-OK065B13	
ADAPTER	ADAPTER 90W 3PIN DELTA ADP-90SB BBEA	
ADAPTER	ADAPTER 90W 3PIN DELTA ADP90SB BBEN	
ADAPTER	ADAPTER 90W 3PIN LITE-ON PA-1900-24AR	
ADAPTER	ADAPTER 90W 3PIN HIPRO AC-OL093B13P	
Battery		
BATTERY	BATTERY 6CELL 2.2AH SANYO SA SA 3S2P 4.4AH	
BATTERY	BATTERY 6CELL 2.2AH SONY SY SY 3S2P 4.4AH	
BATTERY	BATTERY 6CELL 2.2AH SIMPLO SP PA 3S2P 4.4AH	
BATTERY	BATTERY 6CELL 2.2AH PANASONIC PA PA 3S2P 4.4AH	
BATTERY	BATTERY 8CELL 2.4AH SANYO SA SA 4S2P 4.8AH	
BATTERY	BATTERY 8CELL 2.4AH PANASONIC PA PA 4S2P 4.8AH	
BATTERY	BATTERY 8CELL 2.4AH SIMPLO SP PA 4S2P 4.8AH	
BATTERY	BATTERY 8CELL 2.4AH SONY SY SY 4S2P 4.8AH	
Board		
BOARD	MODEM CARD	
BOARD	MODEM CARD-AUS	
BOARD	BLUE TOOTH	
BOARD	TV TUNER	
BOARD	WLAN CARD FOXCONN T60H976.00 (FW-06) 54M XB63	
BOARD	WLAN CARD FOXCONN T77H030.00 54MBPS BCM4312	
BOARD	VGA BOARD-M86ME	
BOARD	USB BOARD	
BOARD	TV BOARD W/RF	
BOARD	TV BOARD W/O RF	
BOARD	MEDIA BOARD	
BOARD	FINGER PRINT BOARD	
BOARD	POWER BOARD	
BOARD	FUNCTION BOARD	
BOARD	BUTTON BOARD	
BOARD	HDMI BOARD-UMA	
Cable		
CABLE	RJ11 CABLE	
CABLE	BLUE TOOTH CABLE	
CABLE	USB CABLE	

Category	Description	Part Number
CABLE	TV BOARD CABEL	
CABLE	MEDIA BOARD FFC	
CABLE	ANTENNA-R	
CABLE	ANTENNA-L	
CABLE	T/P FFC	
CABLE	POWER CORD US 3 PIN	27.TAVV5.001
CABLE	POWER CORD EU 3 PIN	27.TAVV5.002
CABLE	POWER CORD AUS 3 PIN	27.TAVV5.003
CABLE	POWER CORD UK 3 PIN	27.TAVV5.004
CABLE	POWER CORD CHINA 3 PIN	27.TAVV5.005
CABLE	POWER CORD SWISS 3 PIN	27.TAVV5.006
CABLE	POWER CORD ITALIAN 3 PIN	27.TAVV5.007
CABLE	POWER CORD DENMARK 3 PIN	27.TAVV5.008
CABLE	POWER CORD JP 3 PIN	27.TAVV5.009
CABLE	POWER CORD SOUTH AFRICA 3 PIN	27.TAVV5.010
CABLE	POWER CORD KOERA 3 PIN	27.TAVV5.011
CABLE	POWER CORD ISRAEL 3 PIN	27.TAVV5.012
CABLE	POWER CORD INDIA 3 PIN	27.TAVV5.013
CABLE	POWER CORD TWN 3 PIN	27.TAVV5.014
CABLE	POWER CORD ARGENTINA 3 PIN	
Assembly		
CASE/COVER/ BRACKET ASSEMBLY	STRIP COVER	
CASE/COVER/ BRACKET ASSEMBLY	UPPER CASE ASSY W/FP	
CASE/COVER/ BRACKET ASSEMBLY	UPPER CASE ASSY W/O FP	
CASE/COVER/ BRACKET ASSEMBLY	T/P BRACKET	
CASE/COVER/ BRACKET ASSEMBLY	LOWER CASE ASSY W/TV	
CASE/COVER/ BRACKET ASSEMBLY	LOWER CASE ASSY W/OTV	
CASE/COVER/ BRACKET ASSEMBLY	UPPER SADDLE-R	
CASE/COVER/ BRACKET ASSEMBLY	UPPER SADDLE-L	
CASE/COVER/ BRACKET ASSEMBLY	MINI PCI BRACKET-L	

Category	Description	Part Number
CASE/COVER/ BRACKET ASSEMBLY	FINGER PRINT BOARD BRACKET	
CASE/COVER/ BRACKET ASSEMBLY	EXPRESS DUMMY CARD	
CASE/COVER/ BRACKET ASSEMBLY	SD DUMMY CARD	
CASE/COVER/ BRACKET ASSEMBLY	RAM DOOR	
CASE/COVER/ BRACKET ASSEMBLY	HDD DDOR	
CASE/COVER/ BRACKET ASSEMBLY	MINI PCI DOOR	
CPU		
CPU/PROCESSOR		
ODD		
COMBO DRIVE		
COMBO DRIVE	DVD SUPER MULTI DRIVE PIONEER DVR-TD08RS 0FA	
COMBO DRIVE	DVD SUPER MULTI DRIVE TSST TS-L633A 0FA	
COMBO DRIVE	DVD SUPER MULTI DRIVE PANASONIC UJ-870S 0FA	
COMBO DRIVE	DVD SUPER MULTI DRIVE HLDS GSA-T50N 0FA	
COMBO DRIVE	DVD SUPER MULTI DRIVE SONY AD-7560S 0FA	
COMBO DRIVE	DVD SUPER MULTI DRIVE PLDS DS-8A2S 0FA	
CASE/COVER/ BRACKET ASSEMBLY	ODD BEZEL-SUPER MULTI	
CASE/COVER/ BRACKET ASSEMBLY	ODD BRACKET	
COMBO DRIVE		
COMBO DRIVE	BLUE RAY DRIVE SONY BC-5500S AR 0FA	
CASE/COVER/ BRACKET ASSEMBLY	ODD BEZEL-BR	
CASE/COVER/ BRACKET ASSEMBLY	ODD BRACKET	
HDD		
HDD/HARD DISK DRIVE	HDD SATA 120G 5400RPM HGST HTS542512K9SA00 0FA	
HDD/HARD DISK DRIVE	HDD SATA 120G 5400RPM TOSHIBA MK1246GSX 0FA	
HDD/HARD DISK DRIVE	HDD SATA 120G 5400RPM SEAGATE ST9120817AS 0FA	

Category	Description	Part Number
HDD/HARD DISK DRIVE	HDD SATA 120G 5400RPM WD WD1200BEVS-22UST0 0FA	
HDD/HARD DISK DRIVE	HDD SATA 160G 5400RPM HGST HTS542516K9SA00 0FA	
HDD/HARD DISK DRIVE	HDD SATA 160G 5400RPM HGST HTS543216L9A300 0FA	
HDD/HARD DISK DRIVE	HDD SATA 160G 5400RPM TOSHIBA MK1646GSX 0FA	
HDD/HARD DISK DRIVE	HDD SATA 160G 5400RPM TOSHIBA MK1652GSX 0FA	
HDD/HARD DISK DRIVE	HDD SATA 160G 5400RPM SEAGATE ST9160827AS 0FA	
HDD/HARD DISK DRIVE	HDD SATA 160G 5400RPM SEAGATE ST9160310AS 0FA	
HDD/HARD DISK DRIVE	HDD SATA 160G 5400RPM WD WD1600BEVS-22ZCT0	
HDD/HARD DISK DRIVE	HDD SATA 250G 5400RPM HGST HTS542525K9SA00 0FA	
HDD/HARD DISK DRIVE	HDD SATA 250G 5400RPM TOSHIBA MK2546GSX 0FA	
HDD/HARD DISK DRIVE	HDD SATA 250G 5400RPM SEAGATE ST9250827AS 0FA	
HDD/HARD DISK DRIVE	HDD SATA 250G 5400RPM WD WD2500BEVS-22UST0 0FA	
HDD/HARD DISK DRIVE	HDD SATA 320G 5400RPM WD WD3200BEVT-22ZCT0 0FA	
HDD/HARD DISK DRIVE	HDD SATA 320G 5400RPM HGST HTS543232L9A300 0FA	
HDD/HARD DISK DRIVE	HDD SATA 320G 5400RPM SEAGATE ST9320320AS 0FA	
CASE/COVER/ BRACKET ASSEMBLY	HDD CARRIER	
Keyboard		
KEYBOARD	KEYBOARD INTE(UI) BLACK AS	
KEYBOARD	KEYBOARD ARE BLACK AS	
KEYBOARD	KEYBOARD BE BLACK AS	
KEYBOARD	KEYBOARD BZ BLACK AS	
KEYBOARD	KEYBOARD CF BLACK AS	
KEYBOARD	KEYBOARD CH BLACK AS	
KEYBOARD	KEYBOARD CZ BLACK AS	
KEYBOARD	KEYBOARD DM BLACK AS	
KEYBOARD	KEYBOARD NL BLACK AS	
KEYBOARD	KEYBOARD FR BLACK AS	
KEYBOARD	KEYBOARD GR BLACK AS	
KEYBOARD	KEYBOARD GK BLACK AS	
KEYBOARD	KEYBOARD HG BLACK AS	
KEYBOARD	KEYBOARD IT BLACK AS	

Category	Description	Part Number
KEYBOARD	KEYBOARD KO BLACK AS	
KEYBOARD	KEYBOARD NW BLACK AS	
KEYBOARD	KEYBOARD PO BLACK AS	
KEYBOARD	KEYBOARD RU BLACK AS	
KEYBOARD	KEYBOARD SA/CR BLACK AS	
KEYBOARD	KEYBOARD SV BLACK AS	
KEYBOARD	KEYBOARD SP BLACK AS	
KEYBOARD	KEYBOARD SD/FN BLACK AS	
KEYBOARD	KEYBOARD SW BLACK AS	
KEYBOARD	KEYBOARD TI BLACK AS	
KEYBOARD	KEYBOARD TR BLACK AS	
KEYBOARD	KEYBOARD UK BLACK AS	
KEYBOARD	KEYBOARD HB BLACK AS	
KEYBOARD	KEYBOARD JP BLACK AS	
KEYBOARD	KEYBOARD ND BLACK AS	
KEYBOARD	KEYBOARD AR/FR BLACK AS	
KEYBOARD	KEYBOARD CB BLACK AS	
LCD Display		
LCD		
LCD	LCD PANEL G 15.4" WXGA AUO B154EW08 V1 3A	
LCD	LCD PANEL G 15.4" WXGA CMO N154I3-L03	
LCD	LCD PANEL G 15.4" WXGA LG LP154WX4-TLB4	
LCD	LCD PANEL G 15.4" WXGA SEC LTN154AT01-A01	
BOARD	INVERTER	
CABLE	LCD CABLE	
CASE/COVER/ BRACKET ASSEMBLY	LCD COVER	
CASE/COVER/ BRACKET ASSEMBLY	LCD BEZEL	
CASE/COVER/ BRACKET ASSEMBLY	LCD BRACKET-R	
CASE/COVER/ BRACKET ASSEMBLY	LCD BRACKET-L	
DIGITAL LIGHT DEVICE	CAMERA MODULE-0.3M	
CASE/COVER/ BRACKET ASSEMBLY	CAMERA BRACKET	
CASE/COVER/ BRACKET ASSEMBLY	SCREW PAD	
Mainboard		
MAINBOARD	MB ASSY-UMA	

Category	Description	Part Number
MAINBOARD	MB ASSY-DIS	
CASE/COVER/ BRACKET ASSEMBLY	THERMAL PAD-L	
CASE/COVER/ BRACKET ASSEMBLY	THERMAL PAD-S	
Memory		
MEMORY	RAM 512MB DDRII 667 NANYA NT512T64UH8B0FN-3C	
MEMORY	RAM 512MB DDRII 667 SAMSUNG M470T6464QZ3-CE6	
MEMORY	RAM 512MB DDRII 667 SAMSUNG M470T6554EZ3-CE6	
MEMORY	RAM 512MB DDRII 667 HYNIX HYMP164S64CP6-Y5	
MEMORY	RAM 1G DDRII 667 NANYA NT1GT64U8HB0BN-3C	
MEMORY	RAM 1G DDRII 667 HYNIX HYMP112S64CP6-Y5	
MEMORY	RAM 1G DDRII 667 SAMSUNG M470T2864QZ3-CE6	
MEMORY	RAM 1G DDRII 667 SAMSUNG M470T2864DZ3-CE6	
MEMORY	RAM 2G DDRII 667 MICRON MT16HTF25664HY-667E1	
MEMORY	RAM 2G DDRII 667 HYNIX HYMP125S64CP8-Y5	
MEMORY	RAM 2G DDRII 667 SAMSUNG M470T5663QZ3-CE6	
Fan		
FAN	FAN-UMA	
Heatsink		
HEATSINK	CPU THERMAL MODULE-DIS	
HEATSINK	CPU THERMAL MODULE-UMA	
Speaker		
SPEAKER	SPEAKER-R	
SPEAKER	SPEAKER-L	
SPEAKER	SUB WOOFER	
SPEAKER	MIC SET	
Misc		
MISCELLANEOUS	VGA MYLAR	
MISCELLANEOUS	NAME PLATE-AS5530	
MISCELLANEOUS	NAME PLATE-AS5230	
MISCELLANEOUS	RUBBER FOOT-L	
MISCELLANEOUS	RUBBER FOOT-S	
Accessories		
ACCESSORY	DVB-T ANTENNA	
ACCESSORY	SMB-PAL CONNECTOR	
ACCESSORY	PAL-F CONNECTOR	

Screw List

Category	Description	Part Number
SCREW	SCREW M2.5X4(NL)	
SCREW	SCREW M2.5X6(NL)	
SCREW	SCREW M2.5X10(NL)	
SCREW	SCREW M 2D 2.5L K 4.05D NI NL	
SCREW	SCREW M2D 3.0L K 8.0D(Ni)	
SCREW	SCREW M2X3(NL)	
SCREW	SCREW M2X5(Ni-NL)	
SCREW	SCREW M3.0D 3.0L K 4.9D(Ni)	
SCREW	SCREW CPU_THERMAL_SCREW_ASSY	
SCREW	SCREW M2.0D 3L K 5D(Ni)	
SCREW	SCREW F 4# 5L K 4.5D ZK NL +CR3+	

Model Definition and Configuration

Aspire 5530 Series (not available yet for TravelMate4530, we will update soon)

Model	RO	Country	Acer Part no	Description	CPU	LCD	DIMM 1	DIMM 2	HDD 1 (GB)	ODD	Wireless LAN	Bluetooth	Finger Print
AS5530G-702G25Mi	PA	USA	LX.ARV0X.001	AS5530G-702G25Mi VHP32ATUS1MC 82MEXTHM256CO 2*1G/250/6L/5R/CB_bg_FP_0.3D_HG_EN32	ATRM70	N15.4 WXGAG8	SO1 GBII6	SO1 GBII6	N250 GB5.4 KS	NSM8XS	3rd WiFi BG	N	AES1610
AS5530G-702G25Mi	PA	Canada	LX.ARV0X.002	AS5530G-702G25Mi VHP32ATCA2MC 82MEXTHM256CO 2*1G/250/6L/5R/CB_bg_FP_0.3D_HG_FR31	ATRM70	N15.4 WXGAG8	SO1 GBII6	SO1 GBII6	N250 GB5.4 KS	NSM8XS	3rd WiFi BG	N	AES1610
AS5530G-702G25Mi	PA	ACLA-Portuguese	LX.ARV0X.003	AS5530G-702G25Mi EM VHP32ATXC1MC 82MEXTHM256CO 2*1G/250/6L/5R/CB_bg_FP_0.3D_HG_XC22	ATRM70	N15.4 WXGAG8	SO1 GBII6	SO1 GBII6	N250 GB5.4 KS	NSM8XS	3rd WiFi BG	N	AES1610
AS5530G-702G25Mi	PA	ACLA-Spanish	LX.ARV0X.004	AS5530G-702G25Mi EM VHP32ATEA1MC 82MEXTHM256CO 2*1G/250/6L/5R/CB_bg_FP_0.3D_HG_ES22	ATRM70	N15.4 WXGAG8	SO1 GBII6	SO1 GBII6	N250 GB5.4 KS	NSM8XS	3rd WiFi BG	N	AES1610
AS5530G-702G25Mi	PA	ACLA-Spanish	LX.ARV0X.005	AS5530G-702G25Mi EM VHP32ATEA3MC 82MEXTHM256CO 2*1G/250/6L/5R/CB_bg_FP_0.3D_HG_ES22	ATRM70	N15.4 WXGAG8	SO1 GBII6	SO1 GBII6	N250 GB5.4 KS	NSM8XS	3rd WiFi BG	N	AES1610
AS5530G-823G32Bi	PA	ACLA-Spanish	LX.ARV0X.009	AS5530G-823G32Bi EM VHP32ATEA1MC 82MEXTHM256CO 2G+1G/320/BT/8L/5R/CB_bg_FP_0.3D_HG_ES22	ATUZM82	N15.4 WXGAG8	SO2 GBII6	SO1 GBII6	N320 GB5.4 KS	NBDCB2XS	3rd WiFi BG	BT 2.0	AES1610

Model	RO	Country	Acer Part no	Description	CPU	LCD	DIMM 1	DIMM 2	HDD 1 (GB)	ODD	Wireless LAN	Bluetooth	Finger Print
AS5530G-823G32Bi	PA	ACLA-Spanish	LX.ARV0X.010	AS5530G-823G32Bi EM VHP32ATEA3 MC 82MEXTHM256CO 2G+1G/320/BT/8L/5R/CB_bg_FP_0.3D_HG_ES22	ATUZM82	N15.4 WXGA G8	SO2 GBII6	SO1 GBII6	N320 GB5.4 KS	NBDC B2XS	3rd WiFi BG	BT 2.0	AES1610
AS5530G-823G32Bi	PA	USA	LX.ARV0X.006	AS5530G-823G32Bi VHP32ATUS1 MC 82MEXTHM256CO 2G+1G/320/BT/8L/5R/CB_bg_FP_0.3D_HG_EN32	ATUZM82	N15.4 WXGA G8	SO2 GBII6	SO1 GBII6	N320 GB5.4 KS	NBDC B2XS	3rd WiFi BG	BT 2.0	AES1610
AS5530G-823G32Bi	PA	ACLA-Portuguese	LX.ARV0X.007	AS5530G-823G32Bi EM VHP32ATXC1 MC 82MEXTHM256CO 2G+1G/320/BT/8L/5R/CB_bg_FP_0.3D_HG_XC22	ATUZM82	N15.4 WXGA G8	SO2 GBII6	SO1 GBII6	N320 GB5.4 KS	NBDC B2XS	3rd WiFi BG	BT 2.0	AES1610
AS5530G-823G32Bi	PA	Canada	LX.ARV0X.008	AS5530G-823G32Bi VHP32ATCA2 MC 82MEXTHM256CO 2G+1G/320/BT/8L/5R/CB_bg_FP_0.3D_HG_FR31	ATUZM82	N15.4 WXGA G8	SO2 GBII6	SO1 GBII6	N320 GB5.4 KS	NBDC B2XS	3rd WiFi BG	BT 2.0	AES1610
AS5530G-701G25Mi	TWN	GCTWN	LX.ARV0X.011	AS5530G-701G25Mi VHP32ATTW1 MC 82MEXTHM256CO 1*1G/250/BT/8L/5R/CB_bg_FP_0.3D_HG_TC11	ATRM70	N15.4 WXGA G8	SO1 GBII6	N	N250 GB5.4 KS	NSM8 XS	3rd WiFi BG	BT 2.0	AES1610
AS5530G-702G25Mi	AAP	Japan	LX.ARV0X.012	AS5530G-702G25Mi VHP32AJP1 MC 82MEXTHM256CO 2*1G/250/BT/6L/5R/CB_bg_FP_0.3D_HG_JA11	ATRM70	N15.4 WXGA G8	SO1 GBII6	SO1 GBII6	N250 GB5.4 KS	NSM8 XS	3rd WiFi BG	BT 2.0	AES1610
AS5530G-702G25Mi	AAP	Thailand	LX.ARV0X.013	AS5530G-702G25Mi EM VHP32ATTH1 MC 82MEXTHM256CO 1*2G/250/BT/8L/5R/CB_bg_FP_0.3D_HG_TH22	ATRM70	N15.4 WXGA G8	SO2 GBII6	N	N250 GB5.4 KS	NSM8 XS	3rd WiFi BG	BT 2.0	AES1610
AS5530G-701G25Mi	TWN	GCTWN	LX.ARV0X.014	AS5530G-701G25Mi VHP32ATTW1 MC 82MEXTHM256CO 1*1G/250/BT/6L/5R/CB_bg_FP_0.3D_HG_TC11	ATRM70	N15.4 WXGA G8	SO1 GBII6	N	N250 GB5.4 KS	NSM8 XS	3rd WiFi BG	BT 2.0	AES1610

Test Compatible Components

This computer's compatibility is tested and verified by Acer's internal testing department. All of its system functions are tested under Windows® XP Home, Windows® XP Pro 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 5530 series Compatibility Test Report released by the Acer Mobile System Testing Department.

Microsoft® Windows® Vista Environment Test

With Fingerprint Reader SKU

Vendor	Type	Description
Cover Test		
Quanta Wistron	Normal wi IMR	
Adapter Test		
DELTA	90W	Adapter DELTA 90W 1.7x5.5x11 ADP-90SB BBEA LF level 4
DELTA	90W-DE	Adapter DELTA 90W 1.7x5.5x11 ADP-90SB BBEN (for OBL Spec.) LV4 LF
Audio Codec Test		
Realtek	ALC888S	
Back Cover Test		
B Cover	Mirror w/Camera	Mirror w/Camera
Battery Test		
SANYO	6CELL2.2	Battery SANYO AS-2007B Li-Ion 3S2P SANYO 6 cell 4400mAh Main COMMON Normal Type
SANYO	8CELL2.4	Battery SANYO AS-2007B Li-Ion 4S2P SANYO 8 cell 4800mAh Main COMMON
Bluetooth Test		
Foxconn	BT 2.0	Foxconn Bluetooth FOX_BRM_2.0 F/W 300
Camera Test		
Suyin	0.3M DV	Suyin 0.3M DV Camellia_2
Card Reader Test		
For all	5 in 1-Build in	5 in 1-Build in MS, MS Pro, SD, SC, XD
Card Bus 1 Test		
JMicron	JMB385	JMicron JMB385 Card Reader: SD/MMC/MS/MS Duo/MS-HG (1/4/8-bit) & xD (PCI Express)
CPU Test		
AMD	AAQL60	CPU AMD Athlon64X2 QL60 PGA 1.9G 1M 638 35W Griffin B1
AMD	ATRM70	CPU AMD TurionX2 RM70 PGA 2.0G 1M 638 35W Griffin B1
AMD	ATUZM80	CPU AMD TurionX2 ZM80 PGA 2.1G 2M 638 35W Griffin B1
AMD	ATUZM82	CPU AMD TurionX2 ZM82 PGA 2.2G 2M 638 35W Griffin B1
AMD	ATUZM84	CPU AMD TurionX2 ZM84 PGA 2.3G 2M 638 35W Griffin B1
AMD	ATUZM86	CPU AMD TurionX2 ZM86 PGA 2.4G 2M 638 35W Griffin B1
Fingerprint Reader Test		
Authentec	AES1610	Authentec AES1610
HDD Test		
TOSHIBA	N120GB5.4KS	HDD TOSHIBA 2.5" 5400rpm 120GB MK1246GSX Leo BS SATA I LF F/W:LB213J
SEAGATE	N160GB5.4KS	HDD SEAGATE 2.5" 5400rpm 160GB ST9160310AS Crockett SATA LF F/W:0303
TOSHIBA	N160GB5.4KS	HDD TOSHIBA 2.5" 5400rpm 160GB MK1652GSX Virgo - BS SATA LF F/W:LV010J
SEAGATE	N250GB5.4KS	HDD SEAGATE 2.5" 5400rpm 250GB ST9250827AS Corsair SATA LF F/W:3.AAA

Vendor	Type	Description
HGST	N250GB5.4KS	HDD HGST 2.5" 5400rpm 250GB HTS543225L9A300 Falcon-B SATA LF F/W:C40C
HGST	N320GB5.4KS	HDD HGST 2.5" 5400rpm 320GB HTS543232L9A300 Falcon-B SATA LF F/W:C40C
Keyboard Test		
None	14_15KB-FV3 Black	Keyboard 14_15KB-FV3 Black McKinley/Eiger Standard (Aspire Black)
LAN Test		
Broadcom	BCM5764	Broadcom BCM5764
LCD Test		
LPL	N15.4WXGAG8	LCD LPL 15.4" WXGA Glare LP154WX4-TLB4 LF 220nit 8ms
Memory Test		
NANYA	SO1GBII6	SO-DIMM DDRII 667 1GB NT1GT64U8HB0BN-3C (0.09U)
NANYA	SO1GBII6	Memory NANYA SO-DIMM DDRII 667 1GB NT1GT64UH8D0FN-3C LF 64*16 0.07um
NANYA	SO2GBII6	Memory NANYA SO-DIMM DDRII 667 2GB NT2GT64U8HD0BN-3C LF 128*8 0.07um
MICRON	SO2GBII6	Memory MICRON SO-DIMM DDRII 667 2GB MT16HTF25664HY-667E1 LF
NANYA	SO512MBII6	Memory NANYA SO-DIMM DDRII 667 512MB NT512T64UH8B0FN-3C LF 32*16 0.09um
Modem Test		
Foxconn	Fox+Con MC4Z 1.5_3.3V	Foxconn Conexant -Unizion 1.5_3.3v T60M955.02
Norhtbridge Chipset Test		
AMD	AMDRS780MN	AMD RS780MN w/ HDCP EEPROM
ODD Test		
SONY	NBDCB2XS	ODD SONY BD COMBO 12.7mm Tray DL 2X BC-5500S LF W/O bezel SATA
TOSHIBA	NSM8XS	ODD TOSHIBA Super-Multi DRIVE 12.7mm Tray DL 8X TS-L633A LF W/O bezel SATA
Remote Controller Test		
Fomosa21	RC804V-B	Fomosa21 Remote Controller RC804V-B EU
Southbridge Chipset Test		
AMD	AMDSB700	AMD SB700
Software Test		
None	McAfee	Antivirus application McAfee
VGA Chip Test		
AMD	86MEHM	AMD 86MEHM w/ HDCP w/o Macrovision
VoIP Phone Test		
Wistron	BT VoIP Xpress	Wistron Acer Xpress Card Phone Kit Rev 2.0
VRAM Test		
ODM	256M-GD3	256M GDDR2
WiFi Antenna Test		
WNC	PIFA	WiFi Antenna
WLAN Test		
Foxconn	3rd WiFi BG	Foxconn Atheros XB63 minicard b/g

Without Fingerprint Reader SKU

Vendor	Type	Description
Cover Test		
None	Quanta Wistron	Normal wi IMR
Adapter Test		
DELTA	90W-DE	Adapter DELTA 90W 1.7x5.5x11 ADP-90SB BBEN (for OBL Spec.) LV4 LF
LITE-ON	90W	Adapter LITE-ON 90W 19V 1.7x5.5x11 Blue PA-1900-24AR LED LF level 4
Audio Codec Test		
Realtek	ALC888S	
Back Cover Test		
B Cover	Mirror w/Camera	Mirror w/Camera
Battery Test		
SANYO	6CELL2.2	Battery SANYO AS-2007B Li-Ion 3S2P SANYO 6 cell 4400mAh Main COMMON Normal Type
SANYO	8CELL2.4	Battery SANYO AS-2007B Li-Ion 4S2P SANYO 8 cell 4800mAh Main COMMON
Bluetooth Test		
Foxconn	BT 2.0	Foxconn Bluetooth FOX_BRM_2.0 F/W 300
Canera Test		
Bison	0.3M DV	Bison 0.3M DV Lotus_2
Card Reader Test		
For all	5 in 1-Build in	5 in 1-Build in MS, MS Pro, SD, SC, XD
Card Bus 1 Test		
JMicron	JMB385	JMicron JMB385 Card Reader: SD/MMC/MS/MS Duo/MS-HG (1/4/8-bit) & xD (PCI Express)
CPU Test		
AMD	AAQL60	CPU AMD Athlon64X2 QL60 PGA 1.9G 1M 638 35W Griffin B1
AMD	ATRM70	CPU AMD TurionX2 RM70 PGA 2.0G 1M 638 35W Griffin B1
AMD	ATUZM80	CPU AMD TurionX2 ZM80 PGA 2.1G 2M 638 35W Griffin B1
AMD	ATUZM82	CPU AMD TurionX2 ZM82 PGA 2.2G 2M 638 35W Griffin B1
AMD	ATUZM84	CPU AMD TurionX2 ZM84 PGA 2.3G 2M 638 35W Griffin B1
AMD	ATUZM86	CPU AMD TurionX2 ZM86 PGA 2.4G 2M 638 35W Griffin B1
HDD Test		
SEAGATE	N120GB5.4KS	HDD SEAGATE 2.5" 5400rpm 120GB ST9120817AS Corsair SATA LF F/W:3.AAA
WD	N120GB5.4KS	HDD WD 2.5" 5400rpm 120GB WD1200BEVS-22UST0 ML125 SATA LF F/W:01.01A01
SEAGATE	N160GB5.4KS	HDD SEAGATE 2.5" 5400rpm 160GB ST9160827AS Corsair SATA LF F/W:3.AAA
TOSHIBA	N160GB5.4KS	HDD TOSHIBA 2.5" 5400rpm 160GB MK1652GSX Virgo - BS SATA LF F/W:LV010J
SEAGATE	N250GB5.4KS	HDD SEAGATE 2.5" 5400rpm 250GB ST9250827AS Corsair SATA LF F/W:3.AAA
HGST	N250GB5.4KS	HDD HGST 2.5" 5400rpm 250GB HTS543225L9A300 Falcon-B SATA LF F/W:C40C

Vendor	Type	Description
WD	N320GB5.4KS	HDD WD 2.5" 5400rpm 320GB WD3200BEVT-22ZCT0 ML160 SATA LF F/W:11.01A11
Keyboard Test		
None	14_15KB-FV3 Black	Keyboard 14_15KB-FV3 Black McKinley/Eiger Standard (Aspire Black)
LAN Test		
Broadcom	BCM5764	Broadcom BCM5764
LCD Test		
SAMSUNG	N15.4WXGAG8	LCD SAMSUNG 15.4" WXGA Glare LTN154AT01-A LF 220nit 8ms NON-bracket
Memory Test		
NANYA	SO1GBII6	SO-DIMM DDRII 667 1GB NT1GT64U8HB0BN-3C (0.09U)
NANYA	SO1GBII6	Memory NANYA SO-DIMM DDRII 667 1GB NT1GT64UH8D0FN-3C LF 64*16 0.07um
NANYA	SO2GBII6	Memory NANYA SO-DIMM DDRII 667 2GB NT2GT64U8HD0BN-3C LF 128*8 0.07um
SAMSUNG	SO2GBII6	Memory SAMSUNG SO-DIMM DDRII 667 2GB M470T5663QZ3-CE6 LF
HYNIX	SO512MBII6	Memory HYNIX SO-DIMM DDRII 667 512MB HYMP164S64CP6-Y5 LF 64*16 0.065um
Modem Test		
Foxconn	Fox+Con MC4Z 1.5_3.3V Aus	Foxconn Conexant -Unizion 1.5_3.3v AUS T60M955.0x
Northbridge Chipset Test		
AMD	AMDRS780MN	AMD RS780MN w/ HDCP EEPROM
ODD Test		
SONY	NBDCB2XS	ODD SONY BD COMBO 12.7mm Tray DL 2X BC-5500S LF W/O bezel SATA
TOSHIBA	NSM8XS	ODD TOSHIBA Super-Multi DRIVE 12.7mm Tray DL 8X TS-L633A LF W/O bezel SATA
Remote Controller Test		
Fomosa21	RC804V-B	Fomosa21 Remote Controller RC804V-B EU
Southbridge Chipset Test		
AMD	AMDSB700	AMD SB700
Software Test		
None	McAfee	Antivirus application McAfee
VGA Chip Test		
AMD	82MEXTHM	AMD 82MEXTHM w/ HDCP w/o Macrovision
VoIP Phone Test		
Wistron	BT VoIP Xpress	Wistron Acer Xpress Card Phone Kit Rev 2.0
VRAM Test		
ODM	256M-GD2	256M GDDR2
WiFi Antenna Test		
WNC	PIFA	WiFi Antenna
WLAN Test		
Foxconn	3rd WiFi BG	Foxconn Atheros XB63 minicard b/g

Online Support Information

This section describes online technical support services available to help you repair your Acer Systems.

If you are a distributor, dealer, ASP or TPM, please refer your technical queries to your local Acer branch office. Acer Branch Offices and Regional Business Units 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 you convenient and valuable support resources whenever you need them.

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

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

For these purposes, we have included 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 Traveler's Warranty (ITW)
- Returned material authorization procedures
- An overview of all the support services we offer, accompanied by a list of telephone, fax and email contacts for all your technical queries.

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

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