

Aspire 7520/7520G/7220/7220G

Service Guide

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

PRINTED IN TAIWAN

Revision History

Please refer to the table below for the updates made on Aspire Poyang 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.

System Specifications

Features

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

Operating system

- Genuine Windows® Vista™ Capable
- Genuine Windows® Vista™ Home Basic / Home Premium / Ultimate / Business Edition
- Genuine Windows® XP Home / Professional Edition (Service Pack 2)
- Genuine Windows® XP Media Center / Tablet Edition
- Genuine Windows® 2000 (Service Pack 4)

NOTE: Windows® Vista™ Capable PCs come with Windows® XP installed, and can be upgraded to Windows® Vista™. For more information on Windows® Vista™ and how to upgrade, go to: Microsoft.com/windowsvista.

Platform and memory

- Intel® Centrino® Merom mobile technology, featuring:
 - ▶ Intel® Core™2 Duo processor T7300/T7500/T7700 (4MB, L2 cache 2.0/2.2/2.4, 800 MHz FSB) or higher
 - ▶ Intel® Core™2 Duo processor T5450/T7100 (2MB, L2 cache 1.66/1.8, 667/800 MHz FSB) or higher
 - ▶ Intel® 965PM/965GM Express chipset
- Integrated Intel® PRO/Wireless 4965ABGN network connection (dual-band tri-mode 802.11a/b/g/n) Wi-Fi CERTIFIED™ solution, supporting Acer SignalUp™ wireless technology
- Core logic: Intel® 965PM/965GM+ICH8M (north bridge+ south bridge)
- Up to 2GB of DDR2 533/677 MHz memory, upgradeable to 4GB using two soDIMM modules (dual-channel support)

Display and graphics

- 17" WXGA+ high-brightness Acer CrystalBrite™ TFT LCD, 1680 x 1050 pixel resolution, 6 lamps
- 16 ms typical off/off and 8 ms average gray-to-gray response time
- Simultaneous multi-window viewing via Acer Vista™ supported
- Supporting NVIDIA® PureVideo™ technology (WMV HD, High-Definition MPEG-2 Hardware Acceleration, integrated HDTV encoder) dual-link DVI, Microsoft® DirectX® 9.0, Shader Model 3.0, OpenEXR High Dynamic Range (HDR) technology, NVIDIA® PowerMizer™ 6.0 and PCI Express®
- Dual independent display
- 16.2 million colors
- MPEG-2/DVD hardware-assisted capability
- S-video/TV-out (NTSC/PAL) support
- Acer Arcade™ featuring Acer CinemaVision™ and Acer ClearVision technologies

Audio

- Intel® High Definition audio support
- Two built-in Acer 3DSonic stereo speakers (1W)

-
- Dolby® Digital Live and DTS Neo: PC support
 - Sound Blaster Pro™ and MS Sound compatible
 - Built-in microphone

Storage subsystem

- Two 80/100/120/160/200 GB Serial ATA hard disk drives, supporting software RAID 0/1
- Optical drive options: DVD-Super Multi double-layer drive (slot-load)
- 5-in-1 card reader, supporting Secure Digital (SD), MultiMediaCard (MMC), Memory Stick® (MS), Memory Stick PRO™ (MS PRO), xD-Picture Card™ (xD)

Input devices

- 88/89-key Acer FineTouch™ keyboard with 5-degree curve
- Touchpad with 4-way scroll button
- Four easy-launch buttons
- Two front-access switches: WLAN LED and Bluetooth® LED-switches

Communication

- Acer Video Conference, featuring Voice and Video over Internet Protocol (VVoIP) support via Acer OrbiCam™ and optional Acer Bluetooth® VoIP phone
- Acer OrbiCam™ 0.3 megapixel CMOS camera, featuring:
 - ▶ 30 degree ergonomic rotation
 - ▶ Acer VisageOn™ technology
 - ▶ Acer Primalite™ technology
- Modem: 56K ITU V.92 modem with PTT approval; wake-on ring ready
- LAN: gigabit Ethernet; wake-on-LAN ready
- WPAN: Bluetooth® 2.0+EDR (Enhanced Data Rate)
- WLAN: Intel® PRO/Wireless 4965ABGN network connection (dual-band tri-mode 802.11a/b/g/n) Wi-Fi® CERTIFIED™ solution, supporting Acer SignalUp™ wireless technology

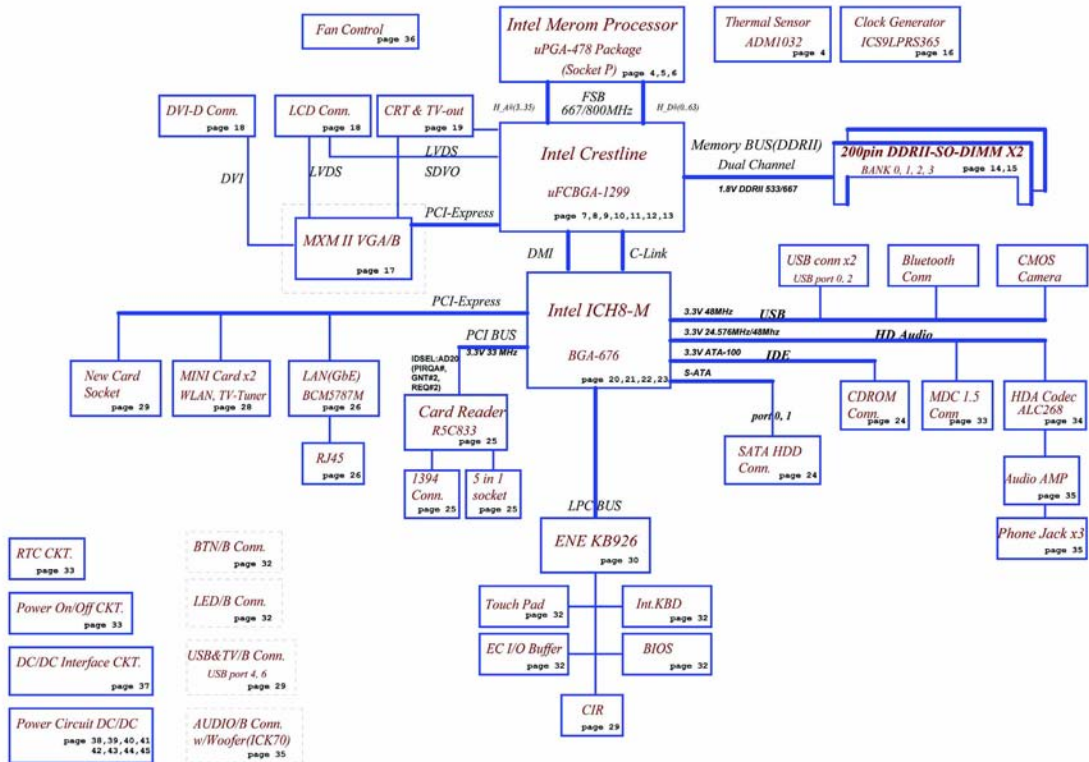
I/O Ports

- PCI Express Card slot (54mm type)
- 5-in-1 card reader (SD/MMC/MS/MS PRO/xD)
- Four USB 2.0 ports
- IEEE 1394 port
- Microsoft MCE infrared (MIR) port
- External display (VGA) port
- DVI-D port (for selected models)
- S-video/TV-out (NTSC/PAL) port
- RF-in port (for selected models)
- AV-in port
- Headphones port with S/PDIF support
- Microphone-in jack
- Line-in jack
- Ethernet (RJ-45) port
- Modem (RJ-11) port
- DC-in jack for AC adapter

Environment

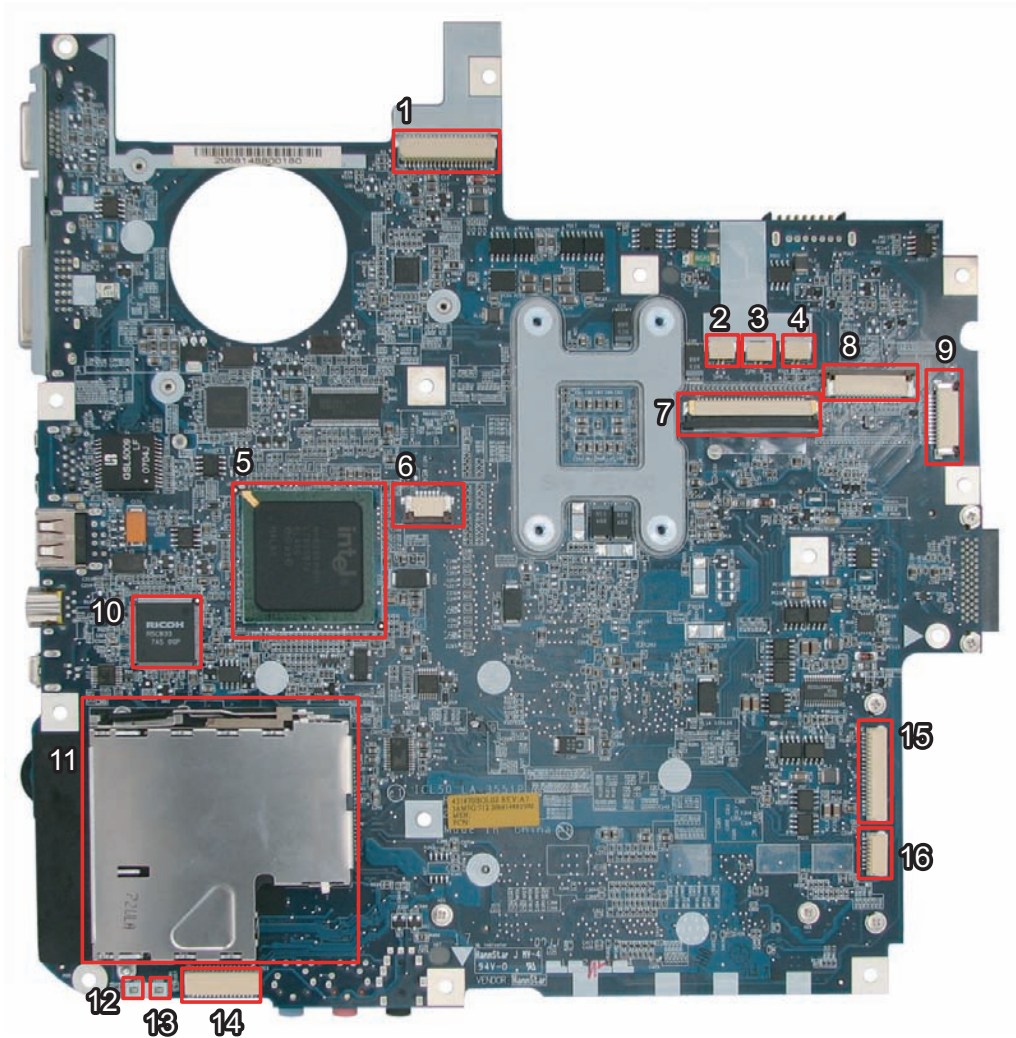
- ❑ Temperature:
 - Operating: 5°C to 35°C
 - Non-operating: -20°C to 65°C
- ❑ Humidity (non-condensing):
 - Operating: 20%~80%
 - Non-operating: 20%~80%

System Block Diagram



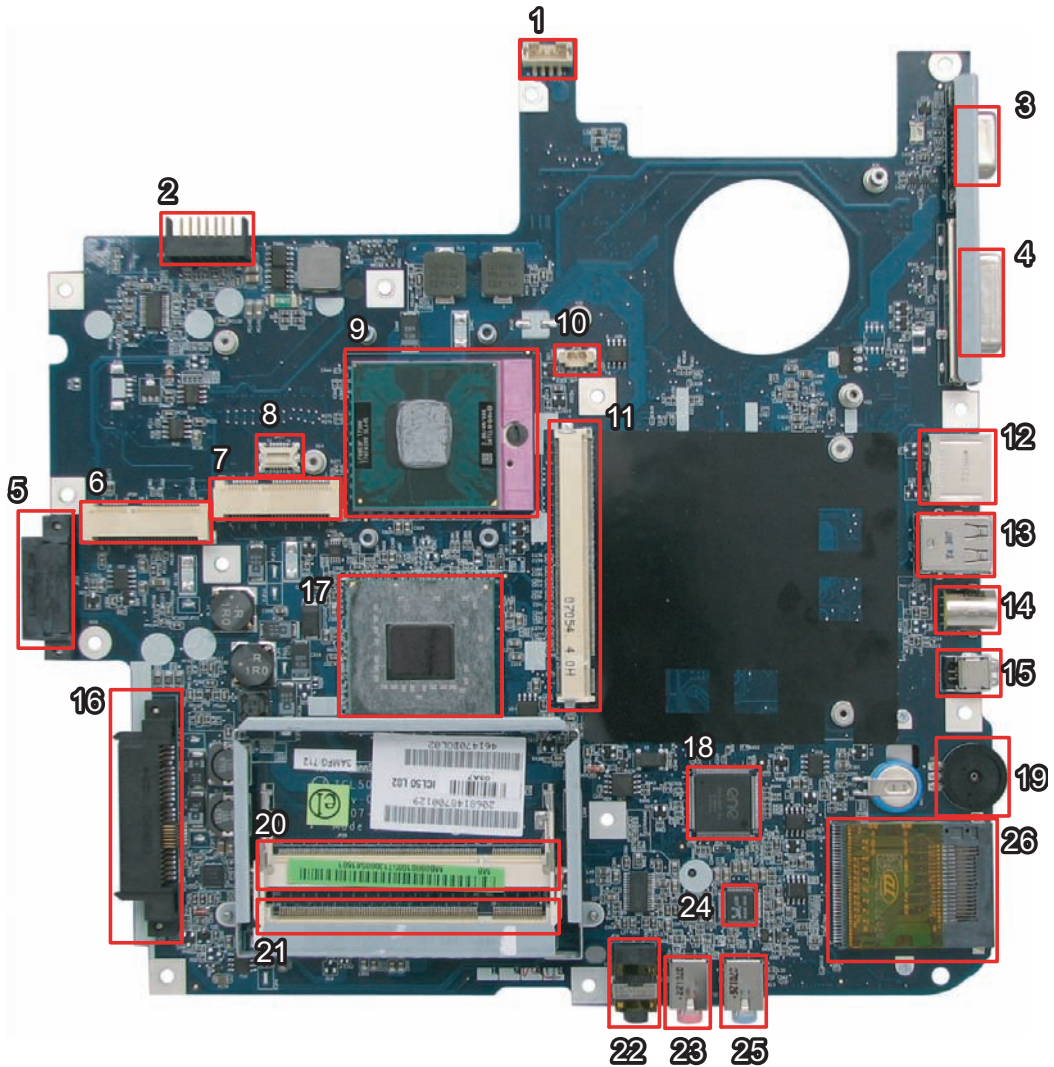
Board Layout

Top View



| | | | | | |
|---|------|-------------------------------------|----|------|------------------------------------|
| 1 | JP1 | LCD Connector | 9 | JP36 | Mainboard to LED Board Connector |
| 2 | JP3 | Speaker (Left) Connector | 10 | U12 | |
| 3 | JP34 | Speaker (Right) Connector | 11 | JP9 | PCI Express Card Socket |
| 4 | JP4 | Internal MIC Connector | 12 | LED1 | Power/Suspend LED |
| 5 | U5 | South Bridge (ICH8M) | 13 | LED2 | Battery Charge/Discharge LED |
| 6 | JP6 | Internal Track-Pad Connector | 14 | JP13 | Mainboard to Audio Board Connector |
| 7 | JP5 | Internal Keyboard Connector | 15 | JP11 | Mainboard to USB Board Connector |
| 8 | JP2 | Mainboard to Button Board Connector | 16 | JP12 | Bluetooth Module Connector |

Bottom View

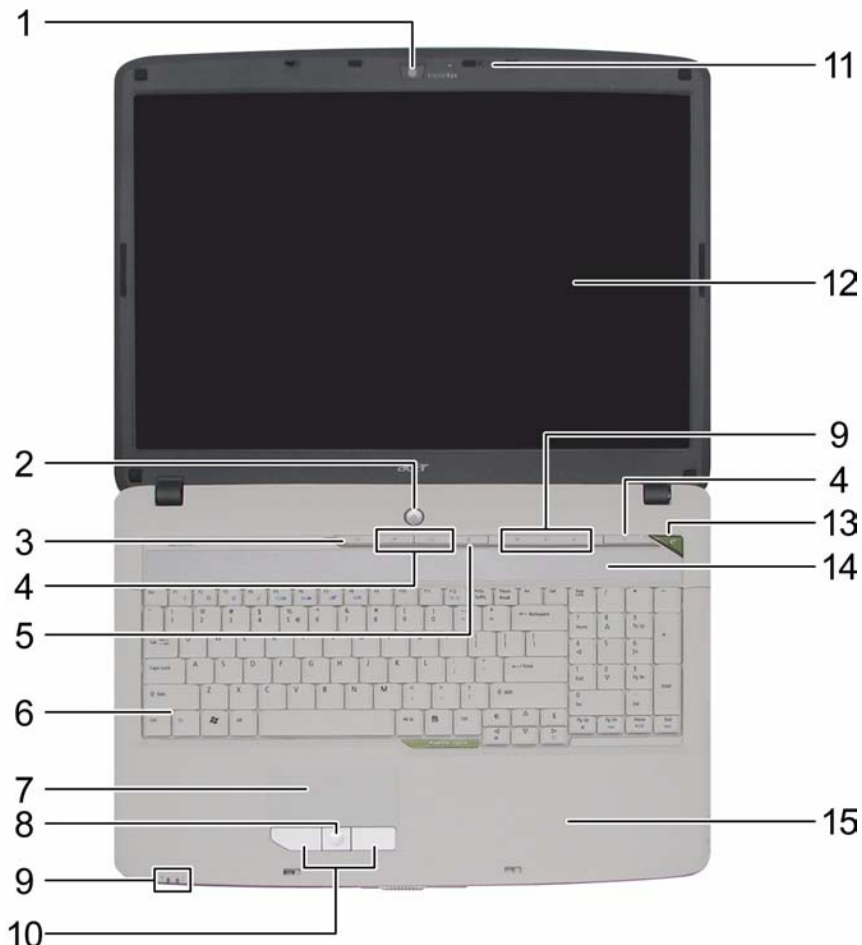





| | | | | | |
|----|------|-----------------------------|----|------|----------------------------|
| 1 | PJP1 | DC-in Power Jack | 14 | JP24 | TV-out Connector |
| 2 | PJP2 | Battery Connector | 15 | JP26 | IEEE1394 Connector |
| 3 | JP14 | CRT Connector | 16 | JP27 | SATA HDD Connector |
| 4 | JP15 | DVI-D Connector | 17 | U23 | North Bridge (965PM/965GM) |
| 5 | JP25 | ODD Connector | 18 | U28 | |
| 6 | JP20 | Mini Card (WLAN) Socket | 19 | U29 | Volume Control |
| 7 | JP19 | Mini Card (TV-Tuner) Socket | 20 | JP28 | DDRII Memory Socket |
| 8 | JP17 | MDC Connector | 21 | JP29 | DDRII Memory Socket |
| 9 | JP22 | CPU Socket | 22 | JP31 | Headphone/SPDIF Jack |
| 10 | JP16 | Internal Fan Connector | 23 | JP32 | Mic-in Jack |
| 11 | JP19 | VGA Board Connector | 24 | U33 | Audio Codec Controller |
| 12 | JP18 | RJ45 (LAN) Connector | 25 | JP33 | Line-in Jack |
| 13 | JP23 | USB (Dual) Connectors | | | |


Your Acer Notebook Tour

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

Front View









| # | Icon | Item | Description |
|---|---|---|--|
| 1 | | Built-in camera | 0.3 megapixel web camera for video communication. |
| 2 |  | Power button | Turns the computer on and off. |
| 3 |  | Wireless communication button/indicator | Enables/disables the wireless function. Indicates the status of wireless LAN communication. |
| 4 | | Easy-launch buttons | Buttons for launching frequently used programs. |
| 5 |  | Bluetooth [®] communication button/indicator | Enables/disables the Bluetooth [®] function. Indicates the status of Bluetooth communication. |
| 6 | | Keyboard | For entering data into your computer. |
| 7 | | Touchpad | Touch-sensitive pointing device which functions like a computer mouse. |
| 8 | | Scroll button | Press up, down, left and right to scroll around the screen. |

| | | | |
|----|---|--------------------------------|---|
| 9 | | Status indicators | Light-Emitting Diodes (LEDs) that light up to show the status of the computer's functions and components. |
| 10 | | Click buttons (left and right) | The left and right buttons function like the left and right mouse buttons. |
| 11 | | Microphone | Internal microphone for sound recording. |
| 12 | | Display screen | Also called Liquid-Crystal Display (LCD), displays computer output. |
| 13 |  | Empowering button | Launches the Empowering Technology toolbar. |
| 14 | | Speaker | Left and right speakers deliver stereo audio output. |
| 15 | | Palmrest | Comfortable support area for your hands when you use the computer. |








Closed Front View



| # | Icon | Item | Description |
|---|---|---|---|
| 1 |  | Power indicator | Indicates the computer's power status. |
| 2 |  | Battery indicator | Indicates the computer's battery status. |
| 3 |  | Line-in jack | Accepts audio line-in devices (e.g., audio CD player, stereo walkman). |
| 4 |  | Microphone-in jack | Accepts input from external microphones. |
| 5 |  | Headphones/speaker/ line-out jack with S/PDIF support | Connects to audio line-out devices (e.g., speakers, headphones). |
| 6 | | LCD display latch | Secures the LCD display in place when closed. |
| 7 |  | Infrared port | Interfaces with infrared devices (e.g. infrared printer and IR-aware computer). |





Left View



| # | Icon | Item | Description |
|----|---|--------------------------------|---|
| 1 |  | Kensington lock slot | Connects to a Kensington-compatible computer security lock. |
| 2 |  | External display (VGA) port | Connects to a display device (e.g., external monitor, LCD projector). |
| 3 | DVI | DVI-D port | Supports digital video connections. |
| 4 |  | Ethernet (RJ-45) | Connects to an Ethernet 10/100/1000-based network (for selected models). |
| 5 |  | 2 USB 2.0 port | Connect to USB 2.0 devices (e.g., USB mouse, USB camera). |
| 6 |  | S-video/TV-out (NTSC/PAL) port | Connects to a television or display device with S-video input. |
| 7 |  | 4-pin IEEE 1394 port | Connects to IEEE 1394 devices. |
| 8 | | Volume control | Increases and decreases the volume. |
| 9 |  | 5-in-1 card reader | Accepts Secure Digital (SD), MultiMediaCard (MMC), Memory Stick (MS), Memory Stick PRO (MS PRO), xD-Picture Card (xD). |
| 10 | | PCI Express Card slot | Accepts an Express Card/54 module. Note: Express Cards are third generation of PC cards, hot-swappable and smaller than previous PC Cards. Designed for both desktop and mobile use, Express Cards use either USB 2.0 or a single lane PCI Express technology that provides 500 Mbytes/sec total throughput. Formerly code named "NEWCARD," Express Cards are 5mm thick like Type II PC Cards, but do not use the same 86x54mm footprint. Express Cards come in 75x54mm and 75x34mm sizes. Express Card/54 slot means this notebook accepts 75x54mm Express Cards. |


Right View



| # | Icon | Item | Description |
|---|---|-------------------------------|--|
| 1 |  | 2 USB 2.0 ports | Connect to USB 2.0 devices (e.g., USB mouse, USB camera). |
| 2 |  | AV-in port | Accepts input signals from audio/video (AV) devices. |
| 3 | | Optical drive | Internal optical drive; accepts CDs or DVDs (slot-load or tray-load depending on model). |
| 4 | | Optical disk access indicator | Lights up when the optical drive is active. |
| 5 | | Optical drive eject button | Ejects the optical disk from the drive. |
| 6 | | Emergency eject hole | Ejects the optical drive tray when the computer is turned off. |
| 7 |  | Modem (RJ-11) port | Connects to a phone line. |
| 8 |  | RF-in port | Accepts input signals from analog/digital TV-tuner devices (for selected models). |

Rear view



| # | 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. |

Base view










| # | Item | Description |
|-------|-----------------------------------|---|
| 1 | Battery bay | Houses the computer's battery pack. |
| 2 | Battery release latch | Releases the battery for removal. |
| 3 | Battery lock | Locks the battery in position. |
| 4 | Hard disk bay | Houses the computer's hard disk (secured with screws) |
| 5 & 6 | Ventilation slots and cooling fan | Enable the computer to stay cool, even after prolonged use. Note: Do not cover or obstruct the opening of the fan. |

Indicators

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



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

| Icon | Function | Description |
|---|--------------|--|
|  | Power | Lights up when the computer is on. |
|  | Battery | Lights up when the battery is being charged. |
|  | Wireless LAN | Indicates the status of wireless LAN communication. |
|  | Bluetooth | Indicates the status of Bluetooth communication. |
|  | HDD | Indicates when the hard disc or optical drive is active. |
|  | Num lock | Lights when Num Lock is activated. |
|  | Cap lock | Lights when Cap Lock is activated |

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

Easy-Launch Buttons

To the top of the keyboard there are four easy-launch buttons: Web browser, mail, arcade buttons and an Empowering Key “*e*”.

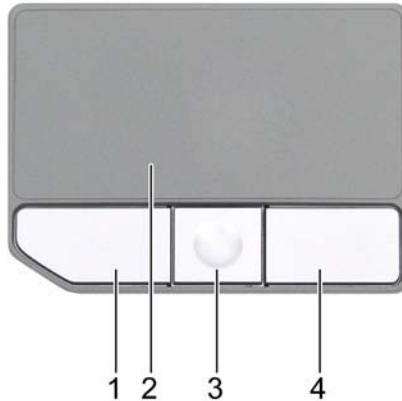
Press “*e*” to run the Acer Empowering Technology. The mail and Web browser buttons are pre-set to email and Internet programs, but can be reset by users. To set the Web browser and mail buttons, run the Launch Manager.



| Launch Button | Default application |
|---------------|--|
| e | Acer Empowering Technology (user-programmable) |
| Web browser | Internet browser (user-programmable) |
| Mail | Email application (user-programmable) |
| Arcade | Windows Media Center |

Touchpad Basics

The following teaches you how to use the touchpad:



- 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.
- The center (3) button to mimics your cursor pressing on the right scroll bar of Windows applications.

| Function | Left Button (1) | Right Button (4) | Main touchpad (2) | Center button (3) |
|---------------------|---|------------------|--|--|
| Execute | Click twice quickly | | Tap twice (at the same speed as double-clicking the 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 | | |
| Scroll | | | | Click and hold to move up/down/left/right. |

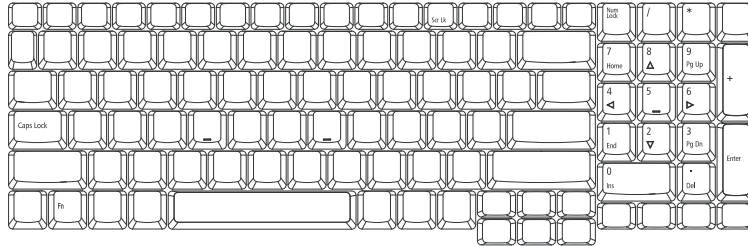
NOTE: When using the touchpad, keep it - and your fingers - dry and clean. The touchpad is sensitive to finger movements; hence, the lighter the touch, the better the response. Tapping too hard will not increase the touchpad's responsiveness.

Using the Keyboard

The keyboard has full-sized keys and an embedded keypad, separate cursor keys, one Windows key and twelve function 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

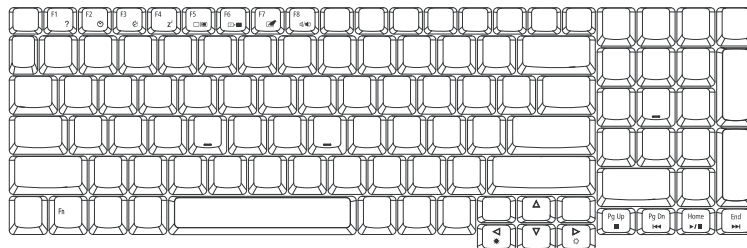
The keyboard has one key that performs Windows-specific functions.



| Key | Icon | Description |
|---|------|--|
| Windows key  | | <p>Pressed alone, this key has the same effect as clicking on the Windows Start button; it launches the Start menu. It can also be used with other keys to provide a variety of function:</p> <ul style="list-style-type: none">  + <Tab> Activates next taskbar button.  + <E> Opens the My Computer window  + <F1> Opens Help and Support.  + <F> Opens the Search: All Files dialog box.  + <R> Opens the Run dialog box.  + <M> Minimizes all windows. <p><Shift>+  + <M> Undoes the minimize all windows action.</p> |
|  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.



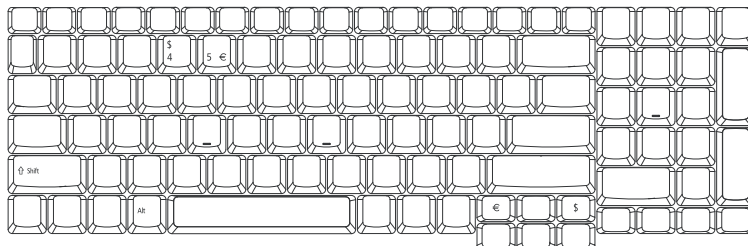
| Hot Key | Icon | Function | Description |
|-----------|---|------------------------|--|
| <Fn>+<F1> | ? | Hot key help | Displays help on hot keys. |
| <Fn>+<F2> |  | Acer eSettings | Launches the Acer eSettings in Acer eManager. |
| <Fn>+<F3> |  | Acer ePower Management | Launches the Acer ePower Management in Acer Empowering Technology. See "Acer Empowering Technology" on page 18. |
| <Fn>+<F4> | Z ^z | Sleep | Puts the computer in Sleep mode. |

| Hot Key | Icon | Function | Description |
|--------------|---|-----------------|---|
| <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 |
| <Fn>+<Home> |  | Play/Pause | Plays or pauses the media. |
| <Fn>+<Pg Up> |  | Stop | Stops the media playing. |
| <Fn>+<Pg Dn> |  | Previous | Returns to previous media file. |
| <Fn>+<End> |  | Next | Jumps to next media file. |

Special Key

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

To type:



The Euro symbol

1. Open a text editor or word processor.
2. Either directly press the <€> symbol at the bottom-right of the keyboard, or hold <Alt Gr> and then press the<5> symbol at the upper-center of the keyboard.

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. Either directly press the <\$> key at the bottom-right of the keyboard, or hold <Shift> and then press the <4> key at the upper-center of the keyboard.

NOTE: This function varies by the operating system version.

Acer Empowering Technology

Acer's innovative Empowering Technology makes it easy for you to access frequently used functions and manage your new Acer notebook. It features the following handy utilities:

- ❑ **Acer eNet Management** hooks up to location-based networks intelligently.
- ❑ **Acer ePower Management** extends battery power via versatile usage profiles.
- ❑ **Acer ePresentation Management** connects to a projector and adjusts display settings conveniently.
- ❑ **Acer eDataSecurity Management** protects data with passwords and advanced encryption algorithms.
- ❑ **Acer eLock Management** limits access to external storage media.
- ❑ **Acer eRecovery Management** backs up and recovers data flexibly, reliably and completely.
- ❑ **Acer eSettings Management** accesses system information and adjusts settings easily.
- ❑ **Acer ePerformance Management** improves system performance by optimizing disk space, memory and registry settings.



For more information, press the < *e* > key to launch the Empowering Technology toolbar, then click on the appropriate utility and select the Help or Tutorial function.

Empowering Technology password

Before using Acer eLock Management and Acer eRecovery Management, you must initialize the Empowering Technology password. Right-click on the Empowering Technology toolbar and select "Password Setup" to do so. If you do not initialize the Empowering Technology password, you will be prompted to do so when running Acer eLock Management or Acer eRecovery Management for the first time.

Acer eNet Management

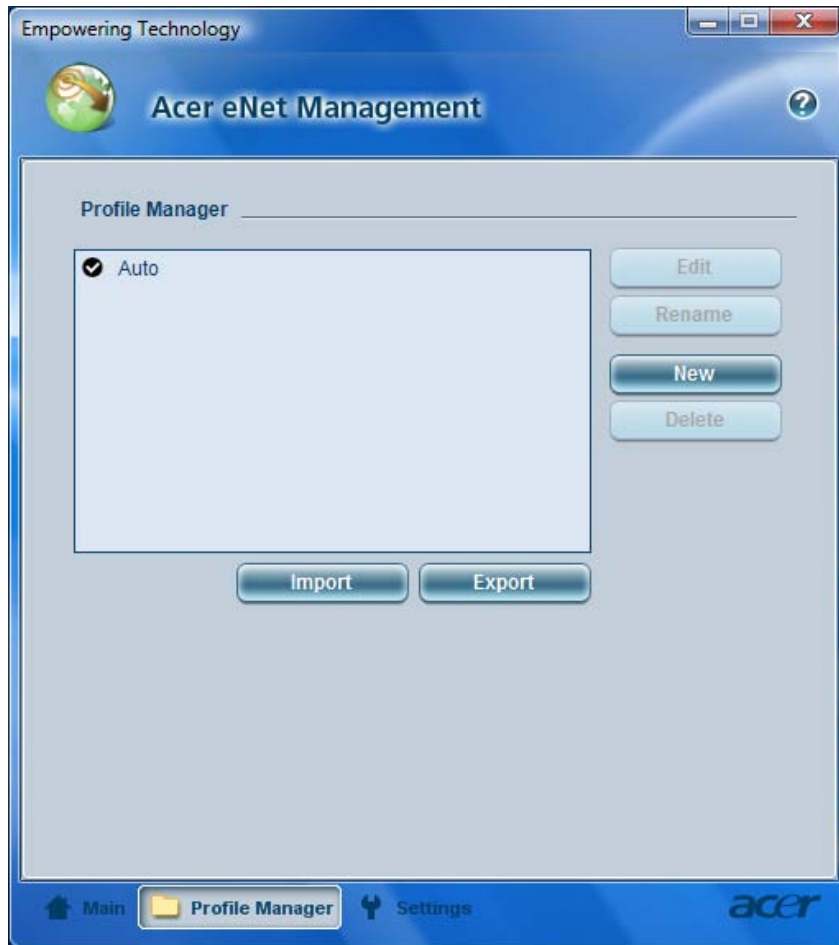
Acer eNet Management helps you to quickly and easily connect to both wired and wireless networks in a variety of locations. To access this utility, either click on the "**Acer eNet Management**" icon on your notebook, or start the program from the Start menu. You also have the option to set Acer eNet Management to start automatically when you boot up your PC.

Acer eNet Management automatically detects the best settings for a new location, while offering you the freedom to manually adjust the settings to match your needs.



Acer eNet Management can save network settings for a location to a profile, and automatically switch to the appropriate profile when you move from one location to another. Settings stored include network connection settings (IP and DNS settings, wireless AP details, etc.), as well as default printer settings.

Security and safety concerns mean that Acer eNet Management does not store username and password information.



Acer ePower Management

Acer ePower Management features a straightforward user interface. To launch it, select Acer ePower Management from the Empowering Technology interface.


AC Mode (Adapter mode)

The default setting is "Maximum Performance." You can adjust CPU speed, LCD brightness and other settings, or click on buttons to turn the following functions on/off: Wireless LAN, Bluetooth, CardBus, FireWire (1394), Wired LAN and Optical Device if supported.

DC Mode (Battery mode)

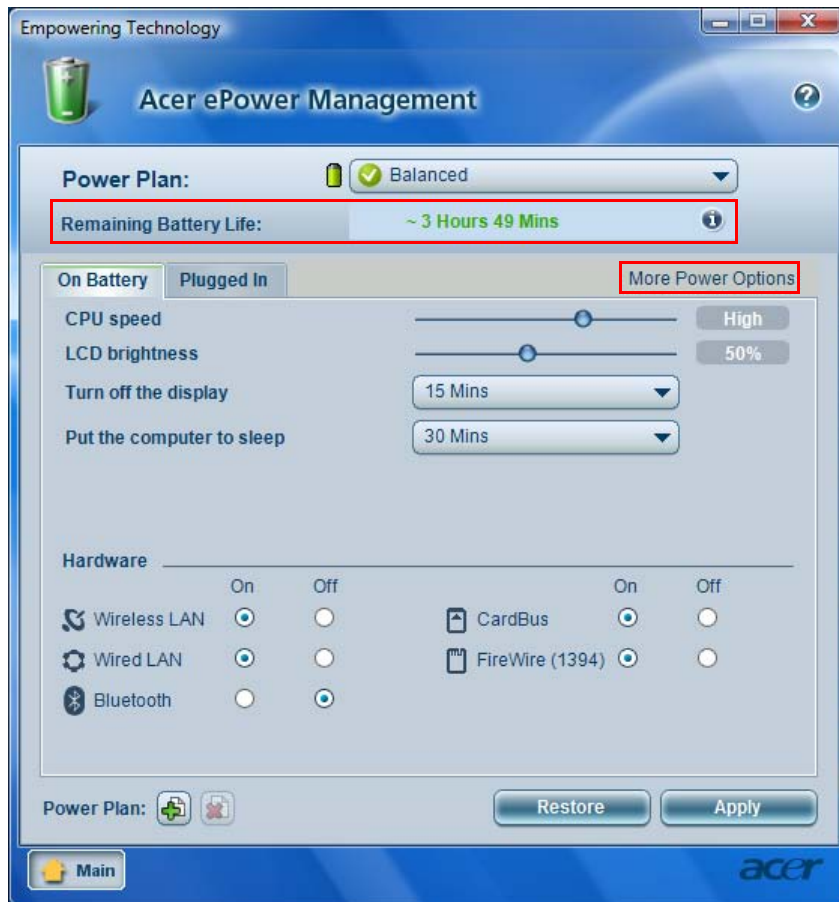
There are three pre-defined profiles - Balanced, Power Saver, and High Performance. You can also define the power plan optimized for your needs.

To create new power plan

1. Select a predefined power plan and click the  icon shown on the lower left-hand side.
2. Enter the name for the newly created power plan.
3. Select one of the predefined power plan that is closest to what you want.
4. Change the display and sleep settings as desired.
5. Click "OK" to apply the setting.
6. A new power plan is created.

Battery status

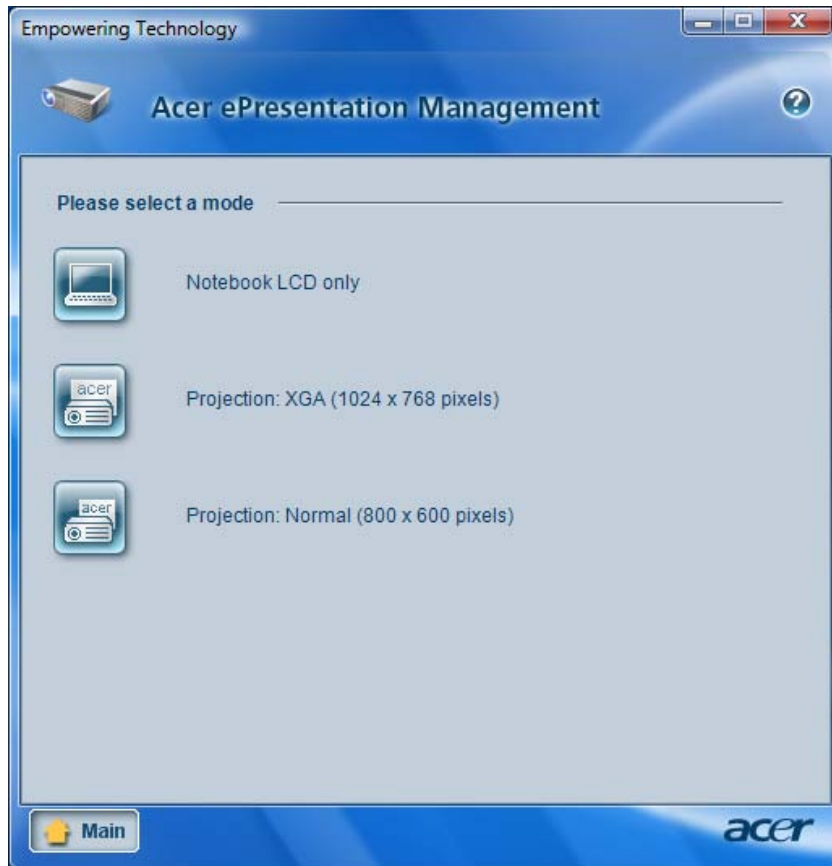
For real-time battery life estimates based on current usage, refer to the time shown in the “Remaining Battery Life” field.



For additional power options, click “**More Power option**”.

Acer ePresentation Management

Acer ePresentation Management lets you project your computer’s display to an external device or project using the hot key: Fn + F5. If auto-detection hardware is implemented in the system, your system display will be automatically switched out when an external display is connected to the system.

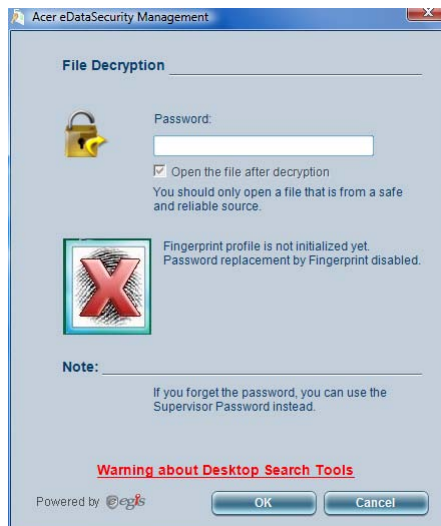
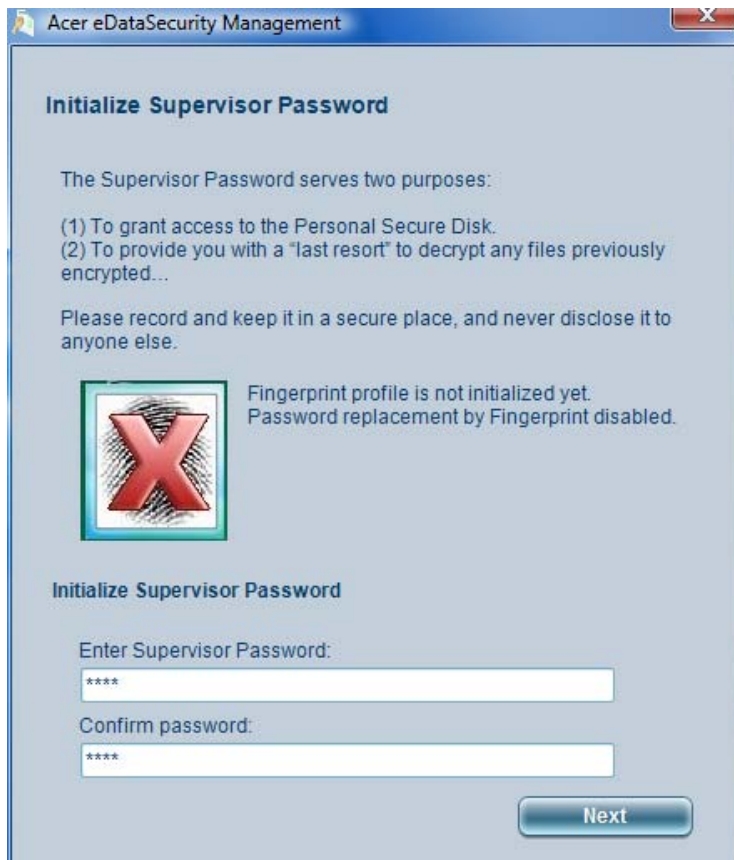


Acer eDataSecurity Management

Acer eDataSecurity Management is handy file encryption utility that protects your files from being accessed by unauthorized persons. It is conveniently integrated with Windows explorer as a shell extension for quick and easy data encryption/decryption and also supports on-the-fly file encryption for MSN Messenger and Microsoft Outlook.

The Acer eDataSecurity Management setup wizard will prompt you for a supervisor password and default encryption. This encryption will be used to encrypt files by default, or you can choose to enter your won file-specific password when encrypting a file.

NOTE: The password used to encrypt a file is the unique key that the system needs to decrypt it. If you lose the password, the supervisor password is the only other key capable of decrypting the file. If you lose both passwords, there will be no way to decrypt your encrypted file! **Be sure to safeguard all related passwords!**



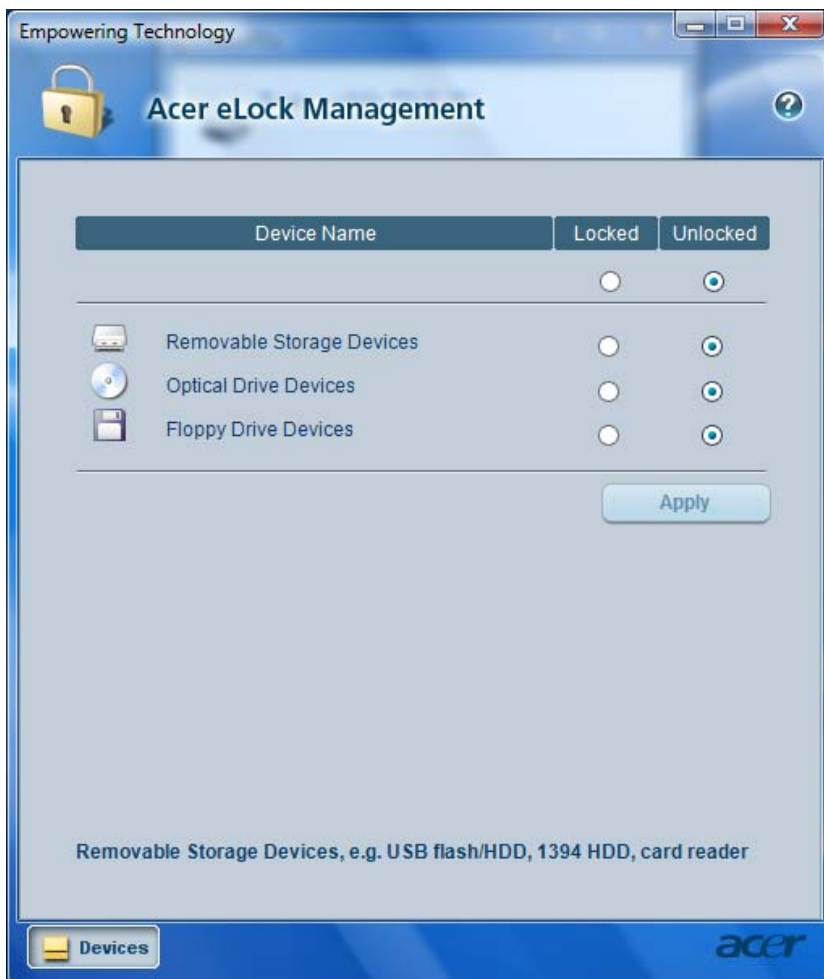
Acer eLock Management

Acer eLock Management is a security utility that allows you to lock your removable data, optical and floppy drives to ensure that data cannot be stolen while your notebook is unattended.

- Removable data devices - includes USB disk drives, USB pen drives, USB flash drives, USB MP3 drives, USB memory card readers, IEEE 1394 disk drives and any other removable disk drives that can be mounted as a file system when plugged into the system.
- Optical drive devices - includes any kind of CD-ROM or DVD-ROM drives.
- Floppy disk drives - 3.5-inch disks only.
- Interfaces - includes serial ports, parallel port, infrared (IR), and Bluetooth.

To activate Acer eLock Management, a password must be set first. Once set, you can apply locks to any of the devices. Lock(s) will immediately be set without any reboot necessary, and will remain locked after rebooting, until unlocked.

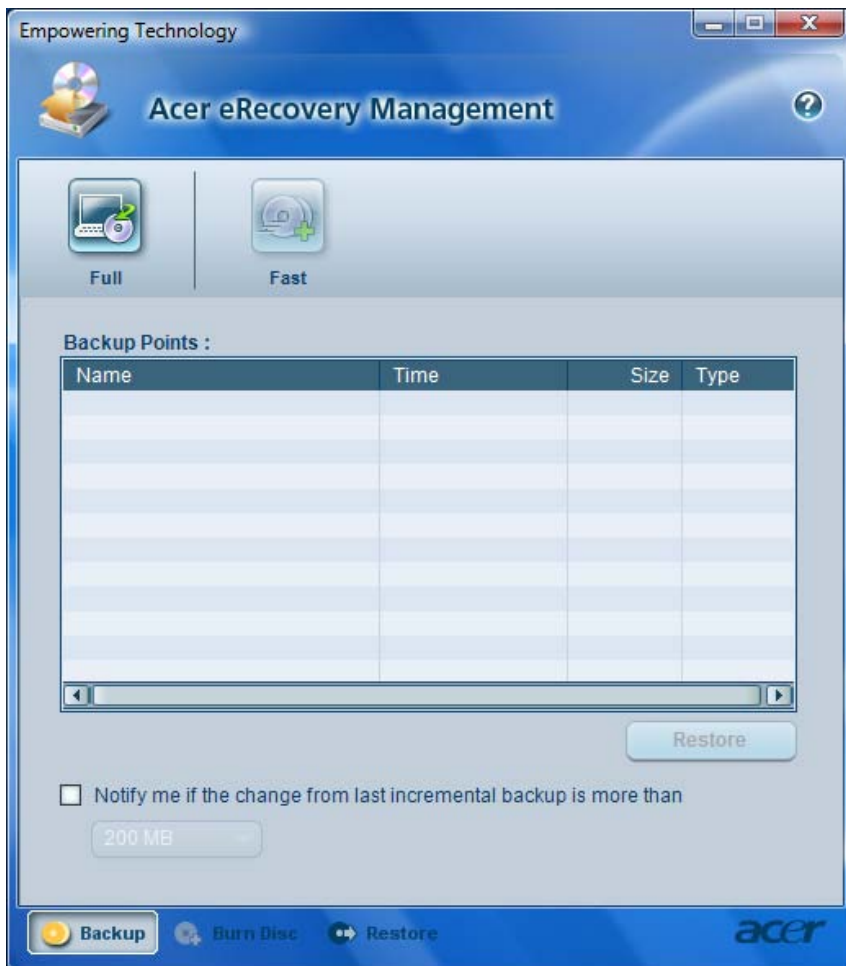
NOTE: If you lose your password, there is no method to reset it except by reformatting your notebook or taking your notebook to an Acer Customer Service Center. Be sure to remember or write down your password.



Acer eRecovery Management

Acer eRecovery Management is a powerful utility that does away with the need for recovery disks provided by the manufacturer. The Acer eRecovery Management utility occupies space in a hidden partition on your system's HDD. User-created backups are stored on D:\ drive. Acer eRecovery Management provides you with:

- Password protection.
- Recovery of applications and drivers.
- Image/data backup:
 - Back up to HDD (set recovery point).
 - Back up to CD/DVD.
- Image/data recovery tools:
 - Recover from a hidden partition (factory defaults).
 - Recover from the HDD (most recent user-defined recovery point).
 - Recover from CD/DVD.



For more information, please refer to "Acer eRecovery Management"

NOTE: If your computer did not come with a Recovery CD or System CD, please use Acer eRecovery Management's "System backup to optical disk" feature to burn a backup image to CD or DVD. To ensure the best results when recovering your system using a CD or Acer eRecovery Management, detach all peripherals (except the external Acer ODD, if your computer has one), including your Acer ezDock.

Acer eSettings Management

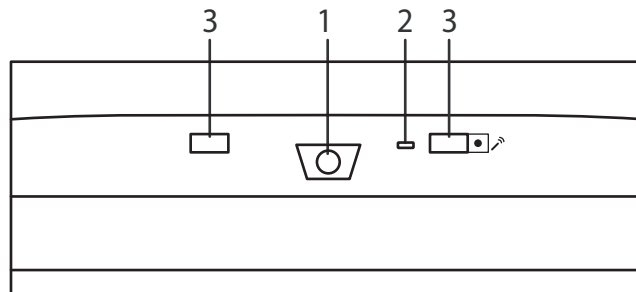
Acer eSettings Management allows you to inspect hardware specifications and to monitor the system health status. Furthermore, Acer eSettings Management enables you to optimize your Windows operating system, so your computer runs faster, smoother and better.

Acer eSettings Management also:

- Provides a simple graphical user interface for navigating.
- Displays general system status and advanced monitoring for power users.



Getting to know your Acer OrbiCam



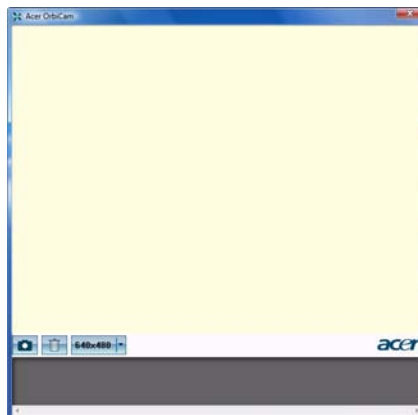
| No. | Item |
|-----|------------------------------------|
| 1 | Lens |
| 2 | Power indicator |
| 3 | Rubber grip (selected models only) |

Launching the Acer OrbiCam

To launch the Acer OrbiCam, double click on the Acer OrbiCam icon on the screen.

OR

Click Start > All programs > Acer > Acer OrbiCam. The Acer OrbiCam capture window appears.



Changing the Acer OrbiCam resolution

To change the capture resolution, click the displayed resolution button to select the desired resolution.

Using the Acer OrbiCam as webcam

The Acer OrbiCam is automatically selected as the capture device of any instant messenger (IM) application. To use the Acer OrbiCam as a webcam, open the IM service, then select the video/webcam feature. You can now broadcast from your location to an IM partner anywhere in the world.

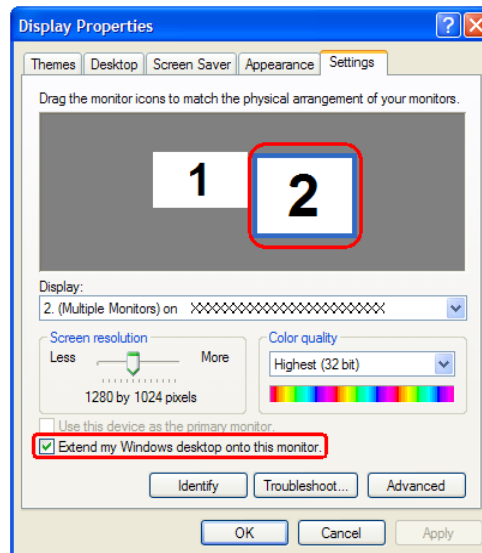
Using the System Utilities

NOTE: The system utilities work under Microsoft Windows XP only.

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:

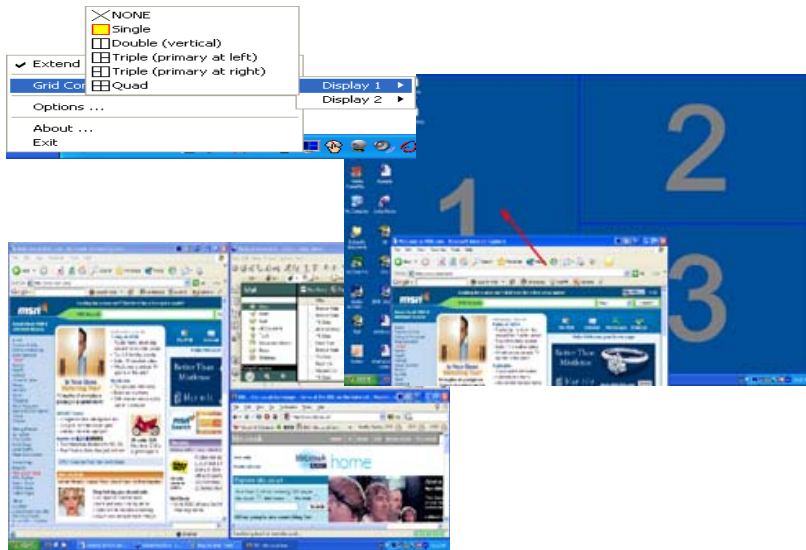


Double (vertical), Triple (primary at left), Triple (primary at right), or Quad Acer Gridvista is dual-display compatible, allowing two displays to be partitioned independently.

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

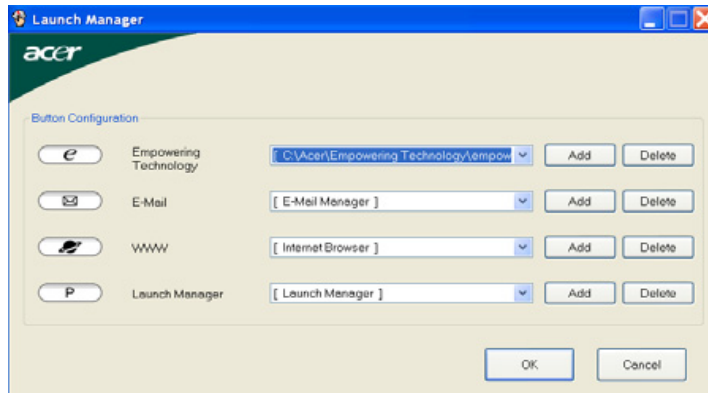
AcerGridVista is simple to set up:

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 (see their locations mentioned in “Easy-Launch Buttons”). You can access the Launch Manager by clicking Start > All Programs > Launch Manager to start the application.

Hardware Specifications and Configurations

Processor

| Item | Specification |
|------------------|---|
| CPU type | Intel® Core™2 Duo processor T7300/T7500/T7700 (4MB, L2 cache 2.0/2.2/2.4, 800 MHz FSB) or higher Intel® Core™2 Duo processor T5450/T7100 (2MB, L2 cache 1.66/1.8, 667/800 MHz FSB) or higher |
| Core logic | Intel® 965PM/965GM Express chipset+ICH8M |
| CPU package | Intel socket 1466pin FCBGA |
| CPU core voltage | 0.944~1.3V |

CPU Fan True Value Table

| TEST Condition: 35W@Ambient 35 degree C | | | |
|---|--------|-----------|----------------|
| CPU Temperature | | Fan Speed | Acoustic Level |
| Core 0 | Core 1 | (rpm) | (dBA) |
| 86 | 86 | 3700 | 39 |
| 88 | 88 | 3450 | 36.5 |
| 91 | 91 | 3150 | 34.5 |
| 95 | 95 | 2800 | 31 |

BIOS

| Item | Specification |
|-----------------------|---|
| BIOS vendor | InsydeH2O |
| BIOS Version | |
| BIOS ROM type | Flash ROM |
| BIOS ROM size | 512KB |
| BIOS package | 32-pin PLCC |
| Supported protocols | ACPI 1.0b/2.0/3.0, PCI 2.2, System/HDD Password Security Control, INT 13h Extensions, PnP BIOS 1.0a, SMBIOS 2.4, Simple Boot Flag 1.0, Boot Block, PCI Bus Power Management Interface Specification, USB1.1/2.0, IEEE 1394 1.0, USB/1394 CD-ROM Boot Up support, PC Card 95 (PCMCIA 3.0 Compliant Device), IrDA 1.0, Intel AC97 CNR Specification, WfM 2.0, PXE (Preboot Execution Environment), BIS 1.0 (Boot Integrity Service Application Program Interface), PC99a and Mobile PC2001 Compliant, Intel Enhanced SpeedStep Technology |
| BIOS password control | Set by setup manual |

NOTE: If you need to check PXE version, press F2 to enter BIOS then enable boot from LAN function. After that, power off the system and remove the HDD. Last, reboot the laptop. Then you will see PXE version displaying on the screen.

Second Level Cache

| Item | Specification |
|-------------------------|---------------------|
| Cache controller | Built-in CPU |
| Cache size | 2MB |
| 1st level cache control | Always enabled |
| 2st level cache control | Always enabled |
| Cache scheme control | Fixed in write-back |

System Memory

| Item | Specification |
|---------------------------------|--|
| Memory controller | Built-in Intel® 965PM/965PM |
| Memory size | 0MB (no on-board memory) |
| DIMM socket number | 2 sockets |
| Supports memory size per socket | 2GB |
| Supports maximum memory size | 4GB (by two 1024MB SO-DIMM module) |
| Supports DIMM type | DDR 2 Synchronous DRAM |
| Supports DIMM Speed | 667 MHz |
| Supports DIMM voltage | 1.8V and 0.9V |
| Supports DIMM package | 200-pin soDIMM |
| 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 | 128MB | 128MB |
| 0MB | 256MB | 256MB |
| 0MB | 512MB | 512MB |
| 0MB | 1024MB | 1024MB |
| 0MB | 2048MB | 2048MB |
| 128MB | 128MB | 256MB |
| 128MB | 256MB | 384MB |
| 128MB | 512MB | 640MB |
| 128MB | 1024MB | 1152MB |
| 128MB | 2048MB | 2176MB |
| 256MB | 128MB | 384MB |
| 256MB | 256MB | 512MB |
| 256MB | 512MB | 768MB |
| 256MB | 1024MB | 1280MB |
| 256MB | 2048MB | 2304MB |
| 512MB | 128MB | 640MB |
| 512MB | 256MB | 768MB |
| 512MB | 512MB | 1024MB |
| 512MB | 1024MB | 1536MB |
| 512MB | 2048MB | 2560MB |
| 1024MB | 0MB | 1024MB |
| 1024MB | 128MB | 1152MB |
| 1024MB | 256MB | 1280MB |
| 1024MB | 512MB | 1536MB |
| 1024MB | 1024MB | 2048MB |
| 1024MB | 2048MB | 3072MB |

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 |
|------------------------|--|
| Chipset | Broadcom 5787 |
| Supports LAN protocol | 10/100/1000 Ethernet Giga LAN |
| LAN connector type | RJ45 |
| LAN connector location | Left side |
| Features | Integrated 10/100/1000 BASE-T transceiver Wake on LAN support compliant with ACPI 2.0 PCI v2.2 |

Modem Interface

| Item | Specification |
|---------------------------------|---------------|
| Data modem data baud rate (bps) | 56K |
| Supports modem protocol | V.92 |
| Modem connector type | RJ11 |
| Modem connector location | Right side |

Bluetooth Interface

| Item | Specification |
|-----------------|--|
| Chipset | Foxconn Bluetooth® 2.0+EDR |
| Data throughput | 723 bps (full speed data rate) |
| Protocol | Bluetooth 1.1 (Upgradeable to Bluetooth 1.2 when SIG specification is ratified). |
| Interface | USB 1.1 |
| Connector type | USB |

Wireless Module 802.11a/b/g/n

| Item | Specification |
|-----------------|---|
| Chipset | Intel 4965AGN/3945ABG/3945BG |
| Data throughput | 11~54 Mbps |
| Protocol | 802.11a+b+g+Draft-n/802.11a+b+g/802.11b+g |
| Interface | PCI |

Hard Disk Drive Interface

| Item | | | | |
|---------------------|--|--|--|-------------------|
| Vendor & Model Name | HGST HTS541680J9SA00 Seagate ST980811AS Toshiba MK8037GSX WD WD800BEVS-22RST0 | HGST HTS541612J9SA00 Seagate ST9120822AS Toshiba MK1237GSX WD WD1200BEVS-22RST0 | HGST HTS541616J9SA00 Seagate ST9160821AS Toshiba MK1637GSX WD WD1600BEVS-22RST0 | Toshiba MK2035GSS |
| Capacity (MB) | 80000 | 120000 | 160000 | 200000 |
| Bytes per sector | 512 | 512 | 512 | 512 |

Hard Disk Drive Interface

| Item | | | | |
|--|---------------------------------|--|------------------------------------|---------------------------------|
| Data heads | 2 | 3 (for Hitachi and Seagate) 4 (for Toshiba) | 4 (for Hitachi) 3 (for Seagate) | |
| Drive Format | | | | |
| Disks | 1 | 1 | 1 | 1 |
| Spindle speed (RPM) | 5400 RPM | 5400 RPM | 5400 RPM | 4200 RPM |
| Performance Specifications | | | | |
| Buffer size | 2048KB | 8192KB | 8192KB | 8192KB |
| Interface | ATA/ATAPI-6; ATA-6 | ATA/ATAPI-6; ATA-6 | ATA/ATA-6; ATA-6 | ATA/ATA-6; ATA-6 |
| Max. media transfer rate (disk-buffer, Mbytes/s) | 372 | 350 | 350 | 350 |
| Data transfer rate (host-buffer, Mbytes/s) | 100 MB/Sec. Ultra DMA mode-5 | 100 MB/Sec. Ultra DMA mode-5 | 100 MB/Sec. Ultra DMA mode-5 | 100 MB/Sec. Ultra DMA mode-5 |
| DC Power Requirements | | | | |
| Voltage tolerance | 5V(DC) +/- 5% | 5V(DC) +/- 5% | 5V(DC) +/- 5% | 5V(DC) +/- 5% |

DVD-Dual Interface

| Item | Specification | |
|---------------------------|--|----------------------------------|
| Vendor & model name | HLDS COMBO 12.7mm Tray 24X GCC-T10N SONY COMBO 12.7mm Tray 24X CRX880A LF PIONEER Super-Multi Drive 12.7mm Tray DVR-K17RS PANASONIC Super-Multi Drive 12.7mm Tray DL 8X UJ-850 PHILIPS Super-Multi Drive 12.7mm Tray DL 8X DS-8A1P HLDS Super-Multi Drive 12.7mm Tray LabelFlash 8X GSA-T20N SONY Super-Multi Drive 12.7mm Tray DL 8X AD-7530A TOSHIBA HD-DVD Drive 12.7mm Tray TS-L802A | |
| Performance Specification | With CD Diskette | With DVD Diskette |
| Transfer rate (KB/sec) | Sustained: Max 3.6Mbytes/sec | Sustained: Max 10.8Mbytes/sec |
| Buffer Memory | 2MB | |
| Interface | Enhanced IDE(ATAPI) compatible | |
| Applicable disc format | Support disc formats 1. Reads data in each CD-ROM, CD-ROM XA, CD-1, Video CD, CD-Extra and CD-Text 2. Reads data in Photo CD (single and Multi-session) 3. Reads standard CD-DA 4. Reads and writes CD-R discs 5. Reads and writes CD-RW discs 6. Reads and writes in each DVD+R/RW (Ver. 1.1) 7. Reads data in each DVD-ROM and DVD-R (Ver. 2.0 for Authoring) 8. Reads and writes in each DVD-R (Ver. 2.0 for general), DVD-RW and DVD+R/RW (Ver1.1) | |
| Loading mechanism | Load: Manual Release: (a) Electrical Release (Release Button) (b) Release by ATAPI command (c) Emergency Release | |

DVD-Dual Interface

| Item | Specification |
|-------------------|-------------------------|
| Power Requirement | |
| Input Voltage | 5 V +/- 5 % (Operating) |

Audio Interface

| Item | Specification |
|-----------------------------|---|
| Audio Controller | Realtek ALC268 |
| Audio onboard or optional | Built-in |
| Mono or Stereo | Stereo |
| Resolution | 18 bit stereo full duplex |
| Compatibility | HD audio Interface; S/PDIF output for PCM or AC-3 content |
| Sampling rate | 1Hz resolution VSR (Variable Sampling Rate) |
| Internal microphone | Yes |
| Internal speaker / Quantity | Yes/2(1.5W speakers) |
| Supports PnP DMA channel | DMA channel 0 DMA channel 1 |
| Supports PnP IRQ | IRQ10, IRQ11 |

USB Port

| Item | Specification |
|------------------------------|--|
| Chipset | Built-in ICH8M |
| USB Compliancy Level | 2.0 |
| OHCI | USB 1.1 and USB 2.0 Host controller |
| Number of USB port | 4 |
| Location | One on the left side; three on the rear side |
| Serial port function control | Enable/Disable by BIOS Setup |

PCMCIA Port

| Item | Specification |
|---------------------------------|---------------|
| PCMCIA controller | TI PCI 7412 |
| Supports card type | Type-II |
| Number of slots | One type-II |
| Access location | Left side |
| Supports ZV (Zoomed Video) port | No ZV support |
| Supports 32 bit CardBus | Yes |

System Board Major Chips

| Item | Controller |
|----------------------|--|
| Core logic | Intel® 965PM/965GM+ICH8M |
| LAN | Broadcom 5787 |
| USB 2.0 | Built in ICH8M |
| Super I/O controller | NS 87383 |
| MODEM | Foxconn Delphi-AM3 3.3v Foxconn Delphi 3.3v |

System Board Major Chips

| Item | Controller |
|--------------|---|
| Bluetooth | Foxconn Bluetooth® 2.0+EDR |
| Wireless LAN | Foxconn Atheros XB63 minicard b/g Fox BRM 4311 Minicard BG |
| PCMCIA | TI PCI 7412 |
| Audio | Realtek ALC268 |

Keyboard

| Item | Specification |
|--|---|
| Keyboard controller | KBC1122 |
| Total number of keypads | 88-/89-key |
| Windows logo key | Yes |
| Internal & external keyboard work simultaneously | Plug USB keyboard to the USB port directly: Yes |

Battery

| Item | Specification |
|------------------------|--|
| Vendor & model name | BATTERY PANASONIC LI-ION 6CELLS BATTERY SANYO LI-ION 6CELLS BATTERY SIMPLO LI-ION 6CELLS BATTERY SONY LI-ION 6CELLS BATTERY PANASONIC LI-ION 8CELLS BATTERY SANYO LI-ION 8CELLS BATTERY SIMPLO LI-ION 8CELLS BATTERY SONY LI-ION 8CELLS |
| Battery Type | Li-ion |
| Pack capacity | 4000 mAh or 4800 mAh |
| Number of battery cell | 6 cell or 8cell |
| Package configuration | 9 cells in series, 2 series in parallel |
| Normal voltage | 14.8V |
| Charge voltage | 16.8+-0.2v |

LCD 17" inch

| Item | Specification | | | |
|-----------------------------|--|---|--|--|
| Vendor & model name | LCD 17 WXGA GLARE AUO B170PW03 V4 200nits 16ms | LCD 17 WXGA GLARE CMO N170C2-L02 10ms 200nits | LCD 17 WXGA GLARE LPL LP171WP4-TLB1 16ms 200nits | LCD 17 WXGA GLARE SAMSUNG LTN170X2-L02-H 16ms 200nits PMMA |
| Screen Diagonal (mm) | 17 inches | 17 inches | 17 inches | 17 inches |
| Active Area (mm) | 304.1x228.1 | 304.1x228.1 | 304.1x228.1 | |
| Display resolution (pixels) | 1440x900 WXGA+ | 1440x900 WXGA+ | 1440x900 WXGA+ | 1440x900 WXGA+ |
| Pixel Pitch | 0.297x0.297 | 0.099x0.297 | 0.297x0.297 | |
| Pixel Arrangement | R.G.B. Vertical Stripe | R.G.B. Vertical Stripe | R.G.B. Vertical Stripe | R.G.B. Vertical Stripe |

LCD 17" inch

| Item | Specification | | | |
|---|--|------------------------|------------------------|------------------------|
| Display Mode | Normally White | Normally White | Normally White | Normally White |
| Typical White Luminance (cd/m ²) also called Brightness | 300 | 300 | 300 | 300 |
| Luminance Uniformity | N/A | N/A | 70 | 70 |
| Contrast Ratio | 300 | 300 | 250 | 250 |
| Response Time (Optical Rise Time/Fall Time)msec | 8 | 8 | 8 | 8 |
| Nominal Input Voltage VDD | +3.3V Typ. | +3.3V | 3.3V | 3.3V |
| Typical Power Consumption (watt) | 5.6/5.7 | 3.96 | N/A | N/A |
| Weight | 550 | 570 | 600 | 600 |
| Physical Size(mm) | 317.3x242.0x6.0 | 317.3x242.0x5.9 | 317.3x242.0x6.5 | 317.3x242.0x6.5 |
| Electrical Interface | 1 channel LVDS | 1 channel LVDS | 1 channel LVDS | 1 channel LVDS |
| Support Color | 262K colors (RGB 6-bit data driver) | 262,144 | 262,144 | 262,144 |
| Viewing Angle (degree) Horizontal: Right/Left Vertical: Upper/Lower | 40/40 10/30 | 45/45 15/35 | 40/40 20/40 | 40/40 20/40 |
| Temperature Range(° C) Operating Storage (shipping) | 0 to +50 -20 to +60 | 0 to +50 -25 to +60 | 0 to +50 -20 to +60 | 0 to +50 -20 to +60 |

LCD Inverter

| Item | Specification |
|---------------------------------|---------------------------|
| Vendor & model name | Darfon/V189-301GP |
| Brightness conditions | N/A |
| Input voltage (V) | 9~21 |
| Input current (mA) | 2.56 (max) |
| Output voltage (V, rms) | 780V (2000V for kick off) |
| Output current (mA, rms) | 6.5 (max) |
| Output voltage frequency (k Hz) | 65K Hz (max) |

AC Adapter

| Item | Specification |
|--------------------------|----------------------------------|
| Input rating | 90V AC to 264V AC, 47Hz to 63Hz |
| Maximum input AC current | 1.7A |
| Inrush current | 220A@115VAC 220A@230VAC |
| Efficiency | 82% min. @115VAC input full load |

System Power Management

| ACPI mode | Power Management |
|------------------|---|
| Mech. Off (G3) | All devices in the system are turned off completely. |
| Soft Off (G2/S5) | OS initiated shutdown. All devices in the system are turned off completely. |

System Power Management

| ACPI mode | Power Management |
|---------------------|--|
| Working (G0/S0) | Individual devices such as the CPU and hard disc may be power managed in this state. |
| Suspend to RAM (S3) | CPU set power down VGA Suspend PCMCIA Suspend Audio Power Down Hard Disk Power Down CD-ROM Power Down Super I/O Low Power mode |
| Save to Disk (S4) | Also called Hibernation Mode. System saves all system states and data onto the disc prior to power off the whole system. |

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.

| InsydeH20 Setup Utility | | | | Rev. 3.0 | |
|-------------------------|-----------------------------|---------------------|-------------------|-------------------|------|
| Information | Main | Security | Advanced | Boot | Exit |
| CPU Type : | Intel (R) Core(TM)2 Duo CPU | T7300 | | | |
| CPU Speed : | 2.00 GHz | | | | |
| HDD Model Name : | ST980811AS | | | | |
| HDD Serial Number : | xxxxxxxxxxxxxxxxxxxxxx | | | | |
| HDD Model Name : | ST980811AS | | | | |
| HDD Serial Number : | xxxxxxxxxxxxxxxxxxxxxx | | | | |
| ATAPI Model Name : | TOSHIBA DVDW/HD TS-L802A | | | | |
| ATAPI Serial Number: | xxxxxxxxxxxxxxxxxxxxxx | | | | |
| System BIOS Version: | V0.18.T04 | | | | |
| VGA BIOS Version: | ATI | | | | |
| Serial Number: | | | | | |
| Asset Tag Number: | | | | | |
| Product Name: | | | | | |
| Manufacturer Name: | Acer | | | | |
| UUID: | xxxxxxxxxxxxxxxxxxxxxx | | | | |
| F1 Help | ↑↓ Select Item | F5/F6 Change Values | F9 Setup Defaults | | |
| Esc Exit | ←→ Select Menu | Enter Select | ▶ Sub-Menu | F10 Save and Exit | |

Navigating the BIOS Utility

There are six menu options: Info., Main, System Devices, Security, Boot, and Exit.

Follow these instructions:

- ❑ To choose a menu, use the cursor left/right keys (← →).
- ❑ To choose a parameter, use the cursor up/down keys (↑ ↓).
- ❑ To change the value of a parameter, press F3 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

| InsydeH20 Setup Utility | | | | | | Rev. 3.0 |
|-------------------------|-----------------------------|----------|----------|------|------|----------|
| Information | Main | Security | Advanced | Boot | Exit | |
| CPU Type : | Intel (R) Core(TM)2 Duo CPU | T7300 | | | | |
| CPU Speed : | 2.00 GHz | | | | | |
| HDD Model Name : | ST980811AS | | | | | |
| HDD Serial Number : | xxxxxxxxxxxxxxxxxxxxxx | | | | | |
| HDD Model Name : | ST980811AS | | | | | |
| HDD Serial Number : | xxxxxxxxxxxxxxxxxxxxxx | | | | | |
| ATAPI Model Name : | TOSHIBA DVDW/HD TS-L802A | | | | | |
| ATAPI Serial Number: | xxxxxxxxxxxxxxxxxxxxxx | | | | | |
| System BIOS Version: | V0.18.T04 | | | | | |
| VGA BIOS Version: | ATI | | | | | |
| Serial Number: | | | | | | |
| Asset Tag Number: | | | | | | |
| Product Name: | | | | | | |
| Manufacturer Name: | Acer | | | | | |
| UUID: | xxxxxxxxxxxxxxxxxxxxxx | | | | | |

| | | | |
|----------|----------------|-------------------------|-------------------|
| F1 Help | ↑↓ Select Item | F5/F6 Change Values | F9 Setup Defaults |
| Esc Exit | ←→ Select Menu | Enter Select ▶ Sub-Menu | F10 Save and Exit |

NOTE: The system information is subject to different models.

| Parameter | Description |
|----------------------|--|
| CPU Type / CPU Speed | This field shows the CPU type and speed of the system. |
| 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 devices installed on secondary IDE master. The hard disk drive or optical drive model name is automatically detected by the system. |
| ATAPI Serial Number | This field displays the serial number of devices installed on secondary IDE master. The hard disk drive or optical drive model name is automatically detected by 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 | This will be visible only when an internal LAN device is presenting. UUID=32bytes |

Main

The Main screen displays a summary of your computer hardware information, and also includes basic setup parameters. It allows the user to specify standard IBM PC AT system parameters.



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 Time |
| System Date | Sets the system date. | Format MM/DD/YYYY (month/day/year) System Date |
| System Memory | This field reports the memory size of the system. Memory size is fixed to 640MB | |
| Total Memory | This field reports the total memory size in the system. | |
| Video Memory | Shows the Video memory size. | |
| Quiet Boot | Determines if Customer Logo will be displayed or not; shows Summary Screen is disabled or enabled. Enabled: Customer Logo is displayed, and Summary Screen is disabled. Disabled: Customer Logo is not displayed, and Summary Screen is enabled. | 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: Disabled or Enabled |
| D2D Recovery | Enables, disables D2D Recovery function. The function allows the user to create a hidden partition on hard disc drive to store operation system and restore the system to factory defaults. | Option: Enabled or Disabled |
| Wake-up on LAN | Enables, disables remote wakeup (power on) via LAN. | Option: Disabled or Enabled |

NOTE: The sub-items under each device will not be shown if the device control is set to disable or auto. This is because the user is not allowed to control the settings in these cases.

Security

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

| InsydeH20 Setup Utility | | | Rev. 3.0 |
|---|----------------|---|---|
| Information | Main | Security | Advanced Boot Exit |
| Supervisor Password Is Clear User Password Is Clear HDD Password Clear Set Supervisor Password Set User Password Set HDD Password | | Password on Boot : [Enabled] | Item Specific Help Install or Change the password. |
| F1 Help | ↑↓ Select Item | F5/F6 Change Values | F9 Setup Defaults |
| Esc Exit | ←→ Select Menu | Enter Select ► Sub-Menu | F10 Save and Exit |

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 Password | 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 Password | Press Enter to set the hard disk 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. | |
| 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 supervisor, user, or hard disk password:

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

| | |
|-------------------------|--------------------------|
| Set Supervisor Password | |
| Enter New Password | [] |
| Confirm New Password | [] |

2. Type a password in the "Enter New Password" field. The password length can not exceed 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 Supervisor 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 Supervisor Password box appears:

| | | |
|-------------------------|---|---|
| Set Supervisor Password | | |
| Enter current password | [|] |
| Enter New Password | [|] |
| Confirm New Password | [|] |

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 **F10** 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 Supervisor Password box appears:

| | | |
|-------------------------|---|---|
| Set Supervisor Password | | |
| Enter current password | [|] |
| Enter New Password | [|] |
| Confirm New Password | [|] |

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 Supervisor 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.

| | | |
|--------------------------|--|--|
| Setup Notice | | |
| Changes have been saved. | | |
| [continue] | | |

The password setting is complete after the user presses **F10**.

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

Setup Warning
Invalid password
Re-enter Password
[continue]

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

Setup Warning
Password do not match
Re-enter Password

Advanced

The Advanced screen displays advanced settings in BIOS.

| InsydeH20 Setup Utility | | | Rev. 3.0 |
|--|------|----------|--|
| Information | Main | Security | Advanced |
| <ul style="list-style-type: none"> ▶ Advanced CPU Control ▶ Platform Power Management ▶ IDE Configuration <p>ACPI S1: [Enabled] ACPI S3: [Enabled] Auto wake on S5 [Disabled]</p> <p>Crestline PM Support [Enabled] POPUP Support [Enabled] POPDOWN Support [Enabled] DeepC4 [Enabled] Hard C4E [Enabled]</p> | | | <p>Item Specific Help</p> <p>These items control various CPU parameters.</p> |
| <p>F1 Help ↑↓ Select Item F5/F6 Change Values F9 Setup Defaults Esc Exit ←→ Select Menu Enter Select ▶ Sub-Menu F10 Save and Exit</p> | | | |

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

| Parameter | Description | Option |
|---------------------------|---|--|
| Advanced CPU Control | | |
| Platform Power Management | | |
| IDE Configuration | | |
| ACPI S1 | Sets the ACPI S1 sleep state. | Enabled or Disabled |
| ACPI S3 | Sets the ACPI S3 sleep state. | Enabled or Disabled |
| Auto wake on S5 | Enables the Auto wake on S5 by day of month or fixed time of every day, or disables this feature. | Disabled , By Every Day, or By Day of Month |
| Crestline PM Support | Enables, disables Calistoga Enhanced Power Management mode. | Enabled or Disabled |
| POPUP Support | | Enabled or Disabled |
| POPDOWN Support | | Enabled or Disabled |
| DeepC4 | | Enabled or Disabled |
| Hard C4E | | Enabled or Disabled |

Boot

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

| InsydeH20 Setup Utility | | | | Rev. 3.0 | |
|--|----------------|-------------------------|-------------------|----------|---|
| Information | Main | Security | Advanced | Boot | Exit |
| <p>Boot Priority Order:</p> <ul style="list-style-type: none">1: IDE 0 : ST980811AS2: IDE 1 : TOSHIBA DVDW/HD TS-L802A3: USB FDD :4: Network Boot : MBA v9.4.5 Slot 04005: USB HDD :6: USB KEY :7: USB CDROM : | | | | | <p>Item Specific Help</p> <p>Use <↑> or <↓> to select a device, then press <F5> to move it up the list, or <F6> to move it down the list. Press <Esc> to escape the menu.</p> |
| F1 Help | ↑↓ Select Item | F5/F6 Change Values | F9 Setup Defaults | | |
| Esc Exit | ←→ Select Menu | Enter Select ► Sub-Menu | F10 Save and Exit | | |

Exit

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

| InsydeH20 Setup Utility | | | | Rev. 3.0 | | |
|---|--|-------------------------|-------------------|----------|--|--|
| Information | Main | Security | Advanced | Boot | Exit | |
| <table border="1"> <tr> <td> Exit Saving Changes Exit Discarding Changes Load Setup Defaults Discard Changes Save Changes </td> <td> Item Specific Help Exit System Setup and save your changes to CMOS. </td> </tr> </table> | | | | | Exit Saving Changes Exit Discarding Changes Load Setup Defaults Discard Changes Save Changes | Item Specific Help Exit System Setup and save your changes to CMOS. |
| Exit Saving Changes Exit Discarding Changes Load Setup Defaults Discard Changes Save Changes | Item Specific Help Exit System Setup and save your changes to CMOS. | | | | | |
| F1 Help | ↑↓ Select Item | F5/F6 Change Values | F9 Setup Defaults | | | |
| Esc Exit | ←→ Select Menu | Enter Select ▶ Sub-Menu | F10 Save and Exit | | | |

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 Defaults | 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: If you do not have a crisis recovery diskette at hand, then you should create a **Crisis Recovery Diskette** before you use the Phlash utility.

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

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

Follow the steps below to run the Phlash.

1. Prepare a bootable diskette.
2. Copy the flash utilities to the bootable diskette.
3. Then boot the system from the bootable diskette. The flash utility has auto-execution function.

Machine Disassembly and Replacement

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

To disassemble the computer, you need the following tools:

- Wrist grounding strap and conductive mat for preventing electrostatic discharge
- Small Philips screw driver
- Philips screwdriver
- Plastic flat head screw driver
- 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. When you remove the stripe cover, please be careful not to scrape the cover.

General Information

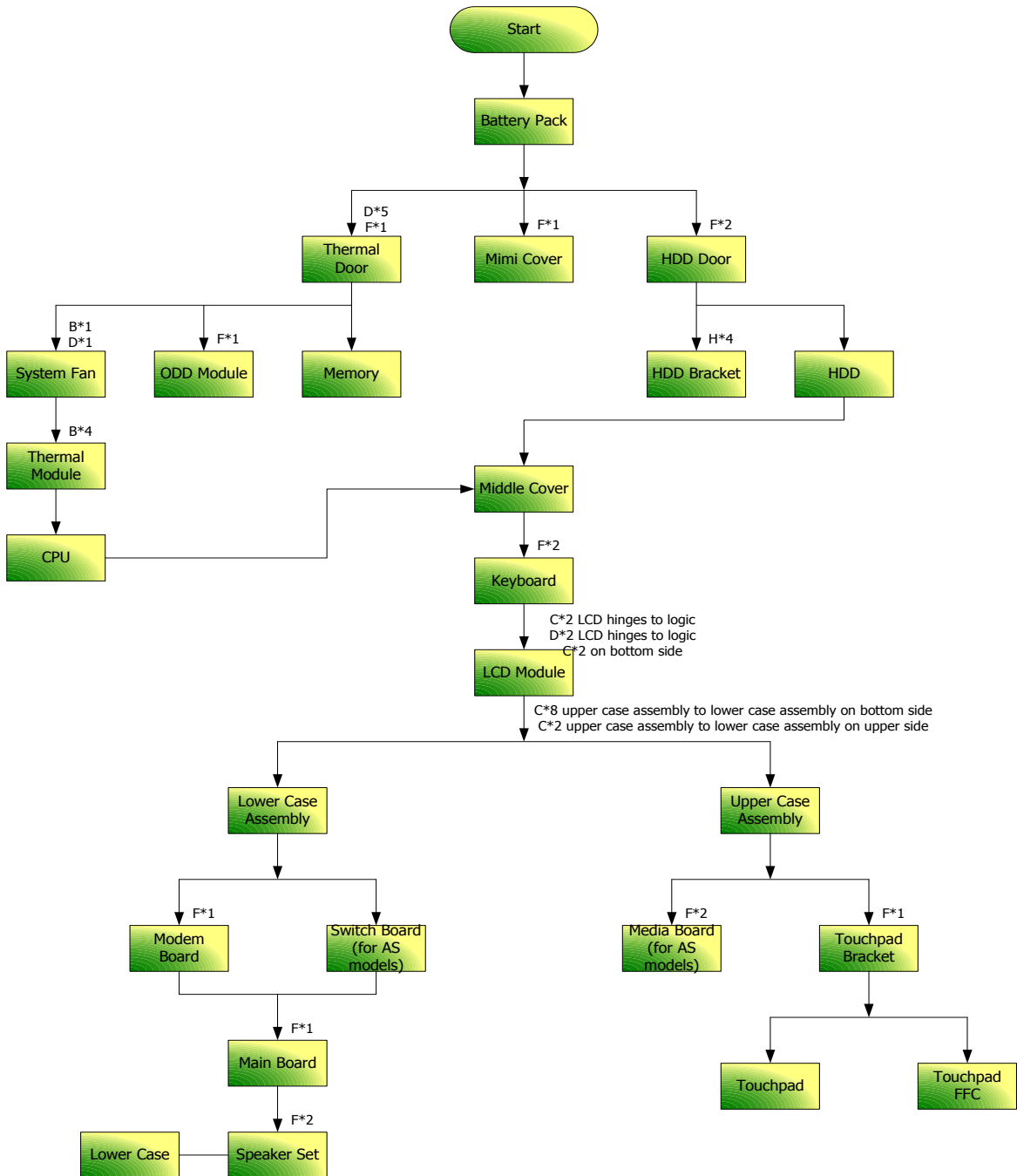
Before You Begin

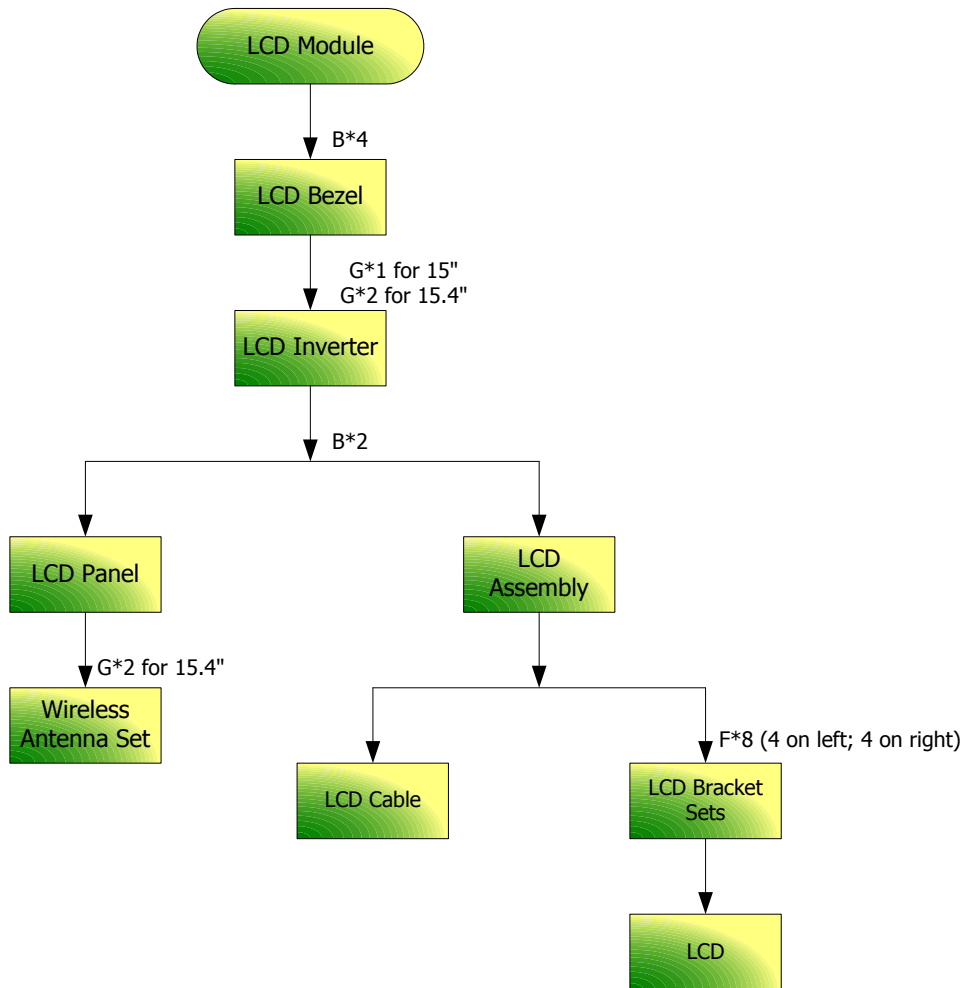
Before proceeding with the disassembly procedure, make sure that you do the following:

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. Remove the battery pack.

Disassembly Procedure Flowchart

The flowchart on the succeeding page 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 system board, you must first remove the keyboard, then disassemble the inside assembly frame in that order.





Screw List

| Item | Description | Part Number |
|------|--------------------------------|--------------|
| A | SCREW M2.5*3(NL) | 86.TAVV5.001 |
| B | SCREW M2.5*6(NL) | 86.TAVV5.002 |
| C | SCREW M2.5*10(NL) | 86.TAVV5.003 |
| D | SCREW M2.5*15(NL) | 86.TAVV5.004 |
| E | SCREW M2*2.2 | 86.TAVV5.005 |
| F | SCREW M2*3(NL) | 86.TAVV5.006 |
| G | SCREW M2*4 | 86.TAVV5.007 |
| H | SCREW M3*4(NL) | 86.TAVV5.008 |
| I | SCREW D-SUB 4#X40* 1/5-NI (NL) | 86.TAVV5.009 |

Removing the Battery Pack

1. Unlock the battery lock (move the battery lock to the unlock position as shown).
2. Slide the battery release latch then remove the battery.



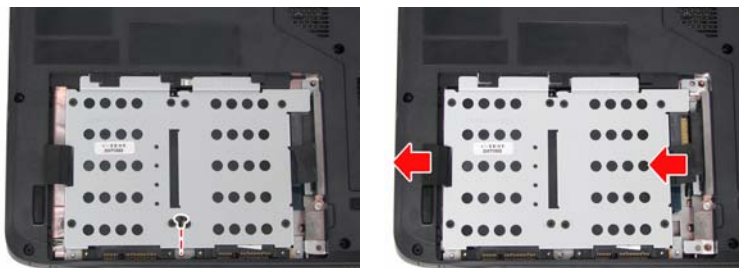
Removing the HDD Module/Memory/Wireless LAN Card/Modem Card/ TV Tuner Card/System Fan/Thermal Modules/VGA Board/CPU/ Keyboard and the LCD Module

Removing the HDD Module

1. Remove the two screws fastening the HDD cover.
2. Detach the HDD cover from the main unit.



3. Remove the screw fastening the HDD module.
4. Pull the tab to remove the HDD module in the direction of the arrow.



Removing the Memory

1. Remove the four screws holding the thermal cover.
2. Detach the thermal cover from the main unit.
3. Pop out the memory from the DIMM socket then remove it (If the notebook has two memory, then repeat this step).

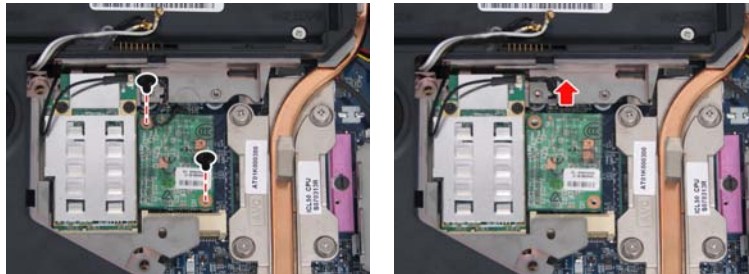


Removing the Wireless LAN Card/Modem Card and TV Tuner Card

1. Disconnect the three antennae from the wireless LAN card.
2. Remove the two screws fastening the wireless LAN card.
3. Then take out the wireless LAN card from the main unit.



4. Remove the screw fastening the modem card and detach the modem card from the main board.
5. Disconnect the RJ-11 cable and remove the modem card.



6. Disconnect the RF cable from the TV tuner card.
7. Remove the two screws fastening the TV tuner card.
8. Then take out the TV tuner card from the main unit.



NOTE: TV tuner card on selected models only.

Removing the System Fan/Thermal Modules/VGA Board and CPU

1. Disconnect the fan cable from the main board.
2. Remove the three screws holding the system fan.



3. Remove the four spring screws holding the CPU thermal module.
4. Then detach the CPU thermal module as shown.

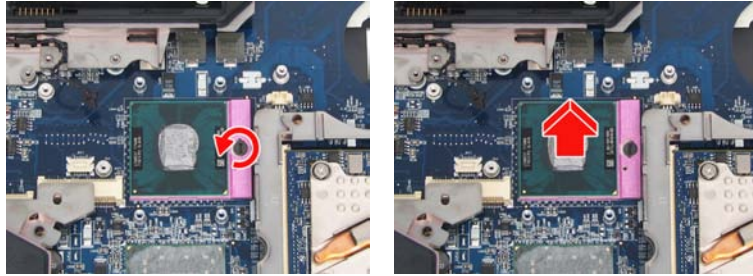


5. Remove the four spring screws holding the VGA thermal module.
6. Then detach the VGA thermal module as shown.
7. Remove the two screws fastening the VGA board then remove it.



8. Use a flat screwdriver to release the CPU lock (Turn counter clock-wise).
9. Remove the CPU from the CPU socket carefully.

NOTE: VGA thermal module and VGA board on selected models only.



Removing the Keyboard and LCD Module

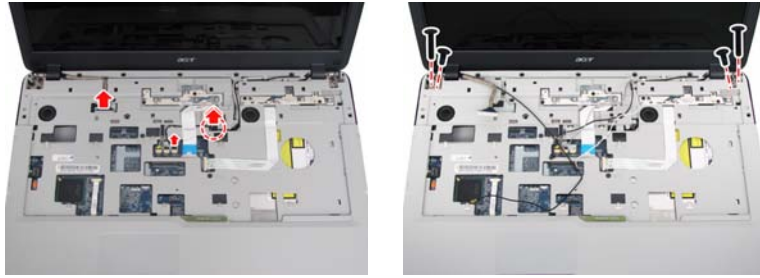
1. Turn the notebook over.
2. Remove the two screws from inside the battery compartment and the two screws fastening the LCD module.
3. Detach the strip cover from the front side and remove it.
4. Gently pull up the keyboard to release it from the four snaps as shown.



5. Turn over the keyboard as the image shows. Then disconnect the keyboard cable from the main board.
6. Remove the keyboard from the main unit.



7. Disconnect the LCD cable and microphone cable from the main board. Then pull out the wireless LAN antennas free from the main unit as shown.
8. Remove the four screws securing the hinges.



9. Detach the LCD module from the main unit.



Disassembling the Main Unit

Separate the Main Unit Into the Upper and the Lower Case Assembly

1. Remove the screw fastening the ODD from the bottom of the notebook.
2. Push the ODD module outwards and gently pull it out as shown.



3. Press and release the PC dummy card from the PC slot as shown.



4. Then press and release the memory dummy card from the 5-in-1 card reader slot as shown.



5. Remove the nine screws fastening the upper case and the lower case assembly on the bottom.
6. Remove the eight screws fastening the upper case assembly and the lower case assembly on the front side.

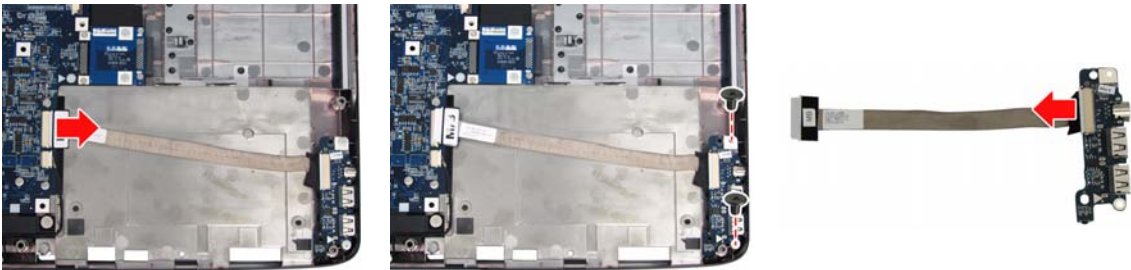


7. Disconnect the touchpad FFC, speaker cables, button board FFC, and LED board FFC from the main board.
8. Carefully detach the upper case assembly from the lower case assembly.

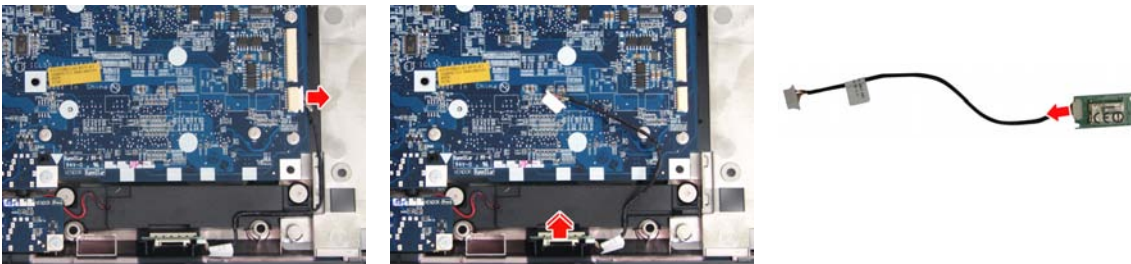


Disassembling the Lower Case Assembly

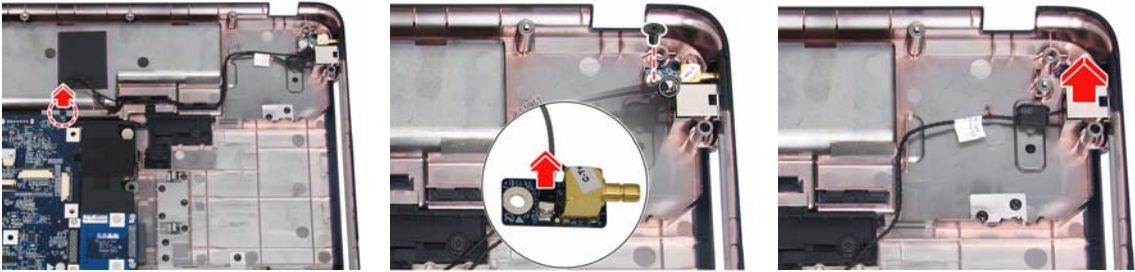
1. Disconnect the USB cable from the main board.
2. Remove the screw fastening the USB board and take out the board and its cable from the lower case.
3. Then detach the USB cable from the USB board.



4. Disconnect the Bluetooth cable from the main board.
5. Take out the Bluetooth module and its cable from the lower case as shown.
6. Then detach the Bluetooth cable from the Bluetooth module.

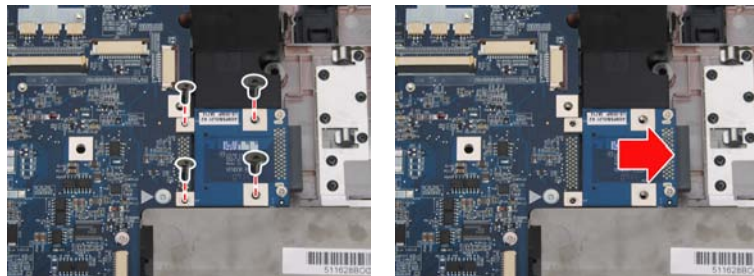


7. Pull the RF cable through the opening in the lower case as shown.
8. Remove the screw holding the RF board to the lower case.
9. Take out the RF board from the lower case, then detach the RF cable from the RF board as shown.
10. Remove the RJ-11 jack from the lower case.



NOTE: RF board on selected models only.

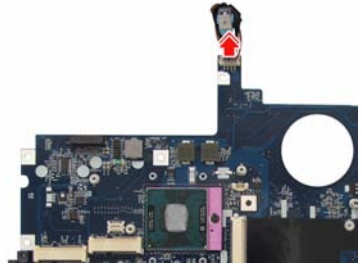
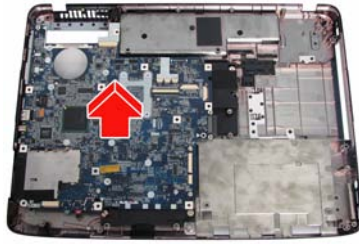
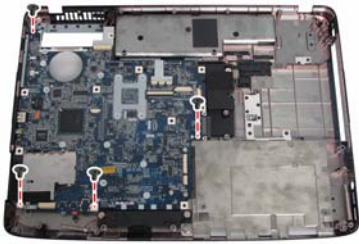
11. Remove the four screws fastening the ODD board to the lower case.
12. Remove the ODD board from the lower case.



13. Remove the two screws fastening the audio board to the lower case.
14. Disconnect the audio board cable from the motherboard.
15. Disconnect the subwoofer cable from the audio board.
16. Remove the audio board from the lower case unit.

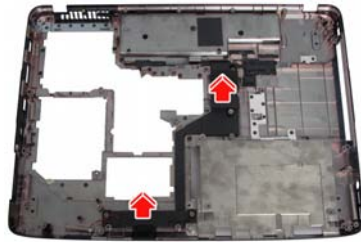


17. Remove the screw fastening the main board to the lower case.
18. Detach the main board from the lower case as shown.
19. Turn the main board over, then remove the DC-in connector from the board as shown.



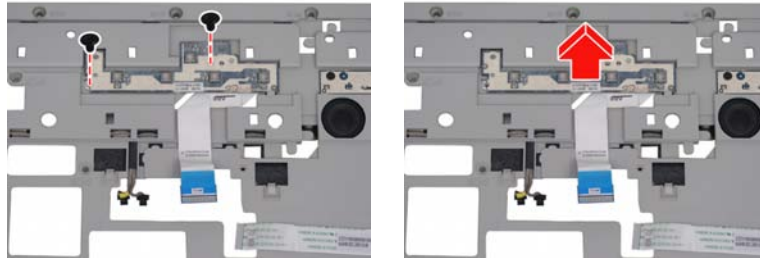
20. Remove the three screws fastening the subwoofer to the lower case.

21. Remove the subwoofer from the lower case as shown.

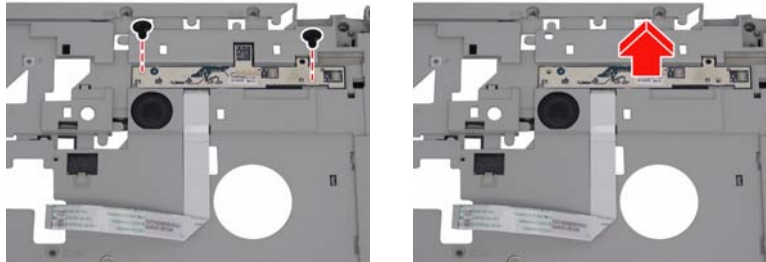


Disassembling the Upper Case Assembly

1. Turn the upper case over.
2. Remove the two screws fastening the button board.
3. Detach the button board with FFC from the upper case as shown.



4. Remove the two screws fastening the LED board.
5. Detach the LED board with FFC from the upper case as shown.



6. Remove the four screws fastening the speakers.
7. Remove the speakers from the upper case as shown.



Disassembling the LCD Module

1. Remove the four screw rubbers as shown.
2. Then remove the four screws fastening the LCD bezel.
3. Detach the LCD bezel from the LCD module carefully.



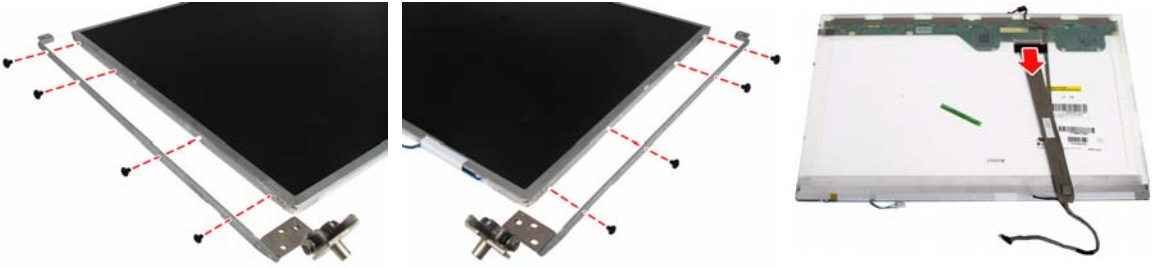
4. Remove the two screws holding the LCD and the one screw holding the inverter board to the LCD panel.
5. Detach the two inverter cable connectors from the inverter board.
6. Detach the CCD cable connector from the CCD board.



7. Remove the two screws fastening the CCD module to the LCD panel and remove the CCD module.
8. Remove the two screws fastening the CCD board to the CCD bracket.
9. Lift out the LCD from the LCD panel as shown.



-
10. Remove the four screws fastening the left LCD bracket and detach it.
 11. Remove the four screws fastening the right LCD bracket and detach it.
 12. Disconnect the LCD cable from the rear side of the LCD.



Disassembling the External Modules

Disassembling the HDD Module

1. Turn over the HDD module and remove the three screws fastening the HDD board.
2. Remove the HDD board.
3. Turn over the HDD module and remove the eight screws fastening the HDD bracket.
4. Remove the



Disassembling the ODD Module

1. Remove the three screws holding the optical bracket.
2. Then remove the optical bracket from the optical disk drive.



Troubleshooting

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 failure (The power indicator does not go on or stay on). | "Power System Check" on page 73 |
| POST does not complete. No beep or error codes are indicated. | "Power-On Self-Test (POST) Error Message" on page 76 "Undetermined Problems" on page 88 |
| POST detects an error and displayed messages on screen. | "Error Message List" on page 77 |
| Other symptoms (i.e. LCD display problems or others). | "Power-On Self-Test (POST) Error Message" on page 76 |
| Symptoms cannot be re-created (intermittent problems). | Use the customer-reported symptoms and go to "Power-On Self-Test (POST) Error Message" on page 76 "Intermittent Problems" on page 87 "Undetermined Problems" on page 88 |

System Check Procedures

External Diskette Drive Check

Do the following to isolate the problem to a controller, driver, or diskette. A write-enabled, diagnostic diskette is required.

NOTE: Make sure that the diskette does not have more than one label attached to it. Multiple labels can cause damage to the drive or cause the drive to fail.

Do the following to select the test device:

1. Boot from the diagnostics diskette and start the diagnostics program.
2. See if FDD Test is passed as the program runs to FDD Test.
3. Follow the instructions in the message window.

If an error occurs with the internal diskette drive, reconnect the diskette connector on the system board.

If the error still remains:

1. Reconnect the external diskette drive/DVD-ROM module.
2. Replace the external diskette drive/CD-ROM module.
3. Replace the main board.

External CD-ROM Drive Check

Do the following to isolate the problem to a controller, drive, or CD-ROM. Make sure that the CD-ROM does not have any label attached to it. The label can cause damage to the drive or can cause the drive to fail.

Do the following to select the test device:

1. Boot from the diagnostics diskette and start the diagnostics program.
2. See if CD-ROM Test is passed when the program runs to CD-ROM Test.
3. Follow the instructions in the message window.

If an error occurs, reconnect the connector on the System board. If the error still remains:

1. Reconnect the external diskette drive/CD-ROM module.
2. Replace the external diskette drive/CD-ROM module.
3. Replace the main board.

Keyboard or Auxiliary Input Device Check

Remove the external keyboard if the internal keyboard is to be tested.

If the internal keyboard does not work or an unexpected character appears, make sure that the flexible cable extending from the keyboard is correctly seated in the connector on the system board.

If the keyboard cable connection is correct, run the Keyboard Test.

If the tests detect a keyboard problem, do the following one at a time to correct the problem. Do not replace a non-defective FRU:

1. Reconnect the keyboard cables.
2. Replace the keyboard.
3. Replace the main board.

The following auxiliary input devices are supported by this computer:

- Numeric keypad
- External keyboard

If any of these devices do not work, reconnect the cable connector and repeat the failing operation.

Memory check

Memory errors might stop system operations, show error messages on the screen, or hang the system.

1. Boot from the diagnostics diskette and start the doagmpstotics program (please refer to main board).
2. Go to the diagnostic memory in the test items.
3. Press F2 in the test items.
4. Follow the instructions in the message window.

NOTE: Make sure that the DIMM is fully installed into the connector. A loose connection can cause an error.

Power System Check

To verify the symptom of the problem, power on the computer using each of the following power sources:

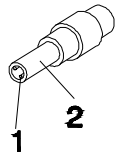
1. Remove the battery pack.
2. Connect the power adapter and check that power is supplied.
3. Disconnect the power adapter and install the charged battery pack; then check that power is supplied by the battery pack.

If you suspect a power problem, see the appropriate power supply check in the following list:

- "Check the Power Adapter" on page 74
- "Check the Battery Pack" on page 75

Check the Power Adapter

Unplug the power adapter cable from the computer and measure the output voltage at the plug of the power adapter cable. See the following figure:



Pin 1: +19 to +20.5V
Pin 2: 0V, Ground

1. If the voltage is not correct, replace the power adapter.
2. If the voltage is within the range, do the following:
 - Replace the System board.
 - If the problem is not corrected, see “Undetermined Problems” on page 88.
 - If the voltage is not correct, go to the next step.

NOTE: An audible noise from the power adapter does not always indicate a defect.

3. If the power-on indicator does not light up, check the power cord of the power adapter for correct continuity and installation.
4. If the operational charge does not work, see “Check the Battery Pack” on page 75.

Check the Battery Pack

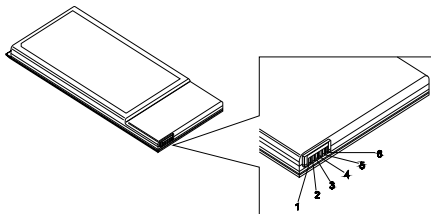
To check the battery pack, do the following:

From Software:

1. Check out the Power Management in Control Panel
2. In Power Meter, confirm that if the parameters shown in the screen for Current Power Source and Total Battery Power Remaining are correct.
3. Repeat the steps 1 and 2, for both battery and adapter.
4. This helps you identify first the problem is on recharging or discharging.

From Hardware:

1. Power off the computer.
2. Remove the battery pack and measure the voltage between battery terminals 1(+) and 6(ground). See the following figure



3. If the voltage is still less than 7.5 Vdc after recharging, replace the battery.

To check the battery charge operation, use a discharged battery pack or a battery pack that has less than 50% of the total power remaining when installed in the computer.

If the battery status indicator does not light up, remove the battery pack and let it return to room temperature. Re-install the battery pack.

If the charge indicator still does not light up, replace the battery pack. If the charge indicator still does not light up, replace the DC/DC charger board.

Touchpad Check

If the touchpad doesn't work, do the following actions one at a time to correct the problem. Do not replace a non-defective FRU:

1. Reconnect the touchpad cables.
2. Replace the touchpad.
3. Replace the system board.

After you use the touchpad, the pointer drifts on the screen for a short time. This self-acting pointer movement can occur when a slight, steady pressure is applied to the touchpad pointer. This symptom is not a hardware problem. No service actions are necessary if the pointer movement stops in a short period of time.

Power-On Self-Test (POST) Error Message

The POST error message index lists the error message and their possible causes. The most likely cause is listed first.

NOTE: Perform the FRU replacement or actions in the sequence shown in FRU/Action column, if the FRU replacement does not solve the problem, put the original part back in the computer. Do not replace a non-defective FRU.

This index can also help you determine the next possible FRU to be replaced when servicing a computer.

If the symptom is not listed, see “Undetermined Problems” on page 88.

The following lists the error messages that the BIOS displays on the screen and the error symptoms classified by function.

NOTE: Most of the error messages occur during POST. Some of them display information about a hardware device, e.g., the amount of memory installed. Others may indicate a problem with a device, such as the way it has been configured.

NOTE: If the system fails after you make changes in the BIOS Setup Utility menus, reset the computer, enter Setup and install Setup defaults or correct the error.

Index of Error Messages

Error Code List

| Error Codes | Error Messages |
|-----------------|--|
| 006 | Equipment Configuration Error Causes: 1. CPU BIOS Update Code Mismatch 2. IDE Primary Channel Master Drive Error (The causes will be shown before "Equipment Configuration Error") |
| 010 | Memory Error at xxxx:xxxx:xxxxh (R:xxxxh, W:xxxxh) |
| 070 | Real Time Clock Error |
| 071 | CMOS Battery Bad |
| 072 | CMOS Checksum Error |
| 110 | System disabled. Incorrect password is specified. |
| <No error code> | Battery critical LOW In this situation BIOS will issue 4 short beeps then shut down system, no message will show. |
| <No error code> | Thermal critical High In this situation BIOS will shut down system, not show message. |

Error Message List

| Error Messages | FRU/Action in Sequence |
|---|---|
| Failure Fixed Disk | Reconnect hard disk drive connector. "Load Default Settings" in BIOS Setup Utility. Hard disk drive System board |
| Stuck Key | see "Keyboard or Auxiliary Input Device Check" on page 72. |
| Keyboard error | see "Keyboard or Auxiliary Input Device Check" on page 72. |
| Keyboard Controller Failed | see "Keyboard or Auxiliary Input Device Check" on page 72. |
| Keyboard locked - Unlock key switch | Unlock external keyboard |
| Monitor type does not match CMOS - Run Setup | Run "Load Default Settings" in BIOS Setup Utility. |
| Shadow RAM Failed at offset: nnnn | BIOS ROM System board |
| System RAM Failed at offset: nnnn | DIMM System board |
| Extended RAM Failed at offset: nnnn | DIMM System board |
| System battery is dead - Replace and run Setup | Replace RTC battery and Run BIOS Setup Utility to reconfigure system time, then reboot system. |
| System CMOS checksum bad - Default configuration used | RTC battery Run BIOS Setup Utility to reconfigure system time, then reboot system. |
| System timer error | RTC battery Run BIOS Setup Utility to reconfigure system time, then reboot system. System board |

Error Message List

| Error Messages | FRU/Action in Sequence |
|---|---|
| Real time clock error | RTC battery Run BIOS Setup Utility to reconfigure system time, then reboot system. System board |
| Previous boot incomplete - Default configuration used | Run "Load Default Settings" in BIOS Setup Utility. RTC battery System board |
| Memory size found by POST differed from CMOS | Run "Load Default Settings" in BIOS Setup Utility. DIMM System board |
| Diskette drive A error | Check the drive is defined with the proper diskette type in BIOS Setup Utility See "External Diskette Drive Check" on page 72. |
| Incorrect Drive A type - run SETUP | Check the drive is defined with the proper diskette type in BIOS Setup Utility |
| System cache error - Cache disabled | System board |
| CPU ID: | System board |
| DMA Test Failed | DIMM System board |
| Software NMI Failed | DIMM System board |
| Fail-Safe Timer NMI Failed | DIMM System board |
| Device Address Conflict | Run "Load Default Settings" in BIOS Setup Utility. RTC battery System board |
| Allocation Error for device | Run "Load Default Settings" in BIOS Setup Utility. RTC battery System board |
| Failing Bits: nnnn | DIMM BIOS ROM System board |
| Fixed Disk n | None |
| Invalid System Configuration Data | BIOS ROM System board |
| I/O device IRQ conflict | Run "Load Default Settings" in BIOS Setup Utility. RTC battery System board |
| Operating system not found | Enter Setup and see if fixed disk and drive A: are properly identified. Diskette drive Hard disk drive System board |

Error Message List

| No beep Error Messages | FRU/Action in Sequence |
|---|---|
| No beep, power-on indicator turns off and LCD is blank. | Power source (battery pack and power adapter). See "Power System Check" on page 73.. Ensure every connector is connected tightly and correctly. Reconnect the DIMM. LED board. System board. |
| No beep, power-on indicator turns on and LCD is blank. | Power source (battery pack and power adapter). See "Power System Check" on page 73.. Reconnect the LCD connector Hard disk drive LCD inverter ID LCD cable LCD Inverter LCD System board |
| No beep, power-on indicator turns on and LCD is blank. But you can see POST on an external CRT. | Reconnect the LCD connectors. LCD inverter ID LCD cable LCD inverter LCD System board |
| No beep, power-on indicator turns on and a blinking cursor shown on LCD during POST. | Ensure every connector is connected tightly and correctly. System board |
| No beep during POST but system runs correctly. | Speaker System board |

Phoenix BIOS Beep Codes

| Code | Beeps | POST Routine Description |
|------|---------|--|
| 02h | | Verify Real Mode |
| 03h | | Disable Non-Maskable Interrupt (NMI) |
| 04h | | Get CPU type |
| 06h | | Initialize system hardware |
| 08h | | Initialize chipset with initial POST values |
| 09h | | Set IN POST flag |
| 0Ah | | Initialize CPU registers |
| 0Bh | | Enable CPU cache |
| 0Ch | | Initialize caches to initial POST values |
| 0Eh | | Initialize I/O component |
| 0Fh | | Initialize the local bus IDE |
| 10h | | Initialize Power Management |
| 11h | | Load alternate registers with initial POST values |
| 12h | | Restore CPU control word during warm boot |
| 13h | | Initialize PCI Bus Mastering devices |
| 14h | | Initialize keyboard controller |
| 16h | 1-2-2-3 | BIOS ROM checksum |
| 17h | | Initialize cache before memory autosize |
| 18h | | 8254 timer initialization |
| 1Ah | | 8237 DMA controller initialization |
| 1Ch | | Reset Programmable Interrupt Controller |
| 20h | 1-3-1-1 | Test DRAM refresh |
| 22h | 1-3-1-3 | Test 8742 Keyboard Controller |
| 24h | | Set ES segment register to 4 GB |
| 26h | | Enable A20 line |
| 28h | | Autosize DRAM |
| 29h | | Initialize POST Memory Manager |
| 2Ah | | Clear 215 KB base RAM |
| 2Ch | 1-3-4-1 | RAM failure on address line xxxx |
| 2Eh | 1-3-4-3 | RAM failure on data bits xxxx of low byte of memory bus |
| 2Fh | | Enable cache before system BIOS shadow |
| 30h | 1-4-1-1 | RAM failure on data bits xxxx of high byte of memory bus |
| 32h | | Test CPU bus-clock frequency |
| 33h | | Initialize Phoenix Dispatch Manager |
| 36h | | Warm start shut down |
| 38h | | Shadow system BIOS ROM |
| 3Ah | | Autosize cache |
| 3Ch | | Advanced configuration of chipset registers |
| 3Dh | | Load alternate registers with CMOS values |
| 42h | | Initialize interrupt vectors |
| 45h | | POST device initialization |

| Code | Beeps | POST Routine Description |
|------|---------|---|
| 46h | 2-1-2-3 | Check ROM copyright notice |
| 48h | | Check video configuration against CMOS |
| 49h | | Initialize PCI bus and devices |
| 4Ah | | Initialize all video adapters in system |
| 4Bh | | QuietBoot start (optional) |
| 4Ch | | Shadow video BIOS ROM |
| 4Eh | | Display BIOS copyright notice |
| 50h | | Display CPU type and speed |
| 51h | | Initialize EISA board |
| 52h | | Test keyboard |
| 54h | | Set key click if enabled |
| 58h | 2-2-3-1 | Test for unexpected interrupts |
| 59h | | Initialize POST display service |
| 5Ah | | Display prompt "Press F2 to enter SETUP" |
| 5Bh | | Disable CPU cache |
| 5Ch | | Test RAM between 512 and 640 KB |
| 60h | | Test extended memory |
| 62h | | Test extended memory address lines |
| 64h | | Jump to User Patch1 |
| 66h | | Configure advanced cache registers |
| 67h | | Initialize Multi Processor APIC |
| 68h | | Enable external and CPU caches |
| 69h | | Setup System Management Mode (SMM) area |
| 6Ah | | Display external L2 cache size |
| 6Bh | | Load custom defaults (optional) |
| 6Ch | | Display shadow-area message |
| 6Eh | | Display possible high address for UMB recovery |
| 70h | | Display error messages |
| 72h | | Check for configuration errors |
| 76h | | Check for keyboard errors |
| 7Ch | | Set up hardware interrupt vectors |
| 7Eh | | Initialize coprocessor if present |
| 80h | | Disable onboard Super I/O ports and IRQs |
| 81h | | Late POST device initialization |
| 82h | | Detect and install external RS232 ports |
| 83h | | Configure non-MCD IDE controllers |
| 84h | | Detect and install external parallel ports |
| 85h | | Initialize PC-compatible PnP ISA devices |
| 86h | | Re-initialize onboard I/O ports |
| 87h | | Configure Motherboard Configurable Devices (optional) |
| 88h | | Initialize BIOS Area |
| 89h | | Enable Non-Maskable Interrupts (NMIs) |
| 8Ah | | Initialize Extended BIOS Data Area |
| 8Bh | | Test and initialize PS/2 mouse |

| Code | Beeps | POST Routine Description |
|------|-------|--|
| 8Ch | | Initialize floppy controller |
| 8Fh | | Determine number of ATA drives (optional) |
| 90h | | Initialize hard-disk controllers |
| 91h | | Initialize local-bus hard-disk controllers |
| 92h | | Jump to UserPatch2 |
| 93h | | Build MPTABLE for multi-processor boards |
| 95h | | Install CD ROM for boot |
| 96h | | Clear huge ES segment register |
| 97h | | Fixup Multi Processor table |
| 98h | 1-2 | Search for option ROMs. One long, two short beeps on checksum failure. |
| 99h | | Check for SMART drive (optional) |
| 9Ah | | Shadow option ROMs |
| 9Ch | | Set up Power Management |
| 9Dh | | Initialize security engine (optional) |
| 9Eh | | Enable hardware interrupts |
| 9Fh | | Determine number of ATA and SCSI drives |
| A0h | | Set time of day |
| A2h | | Check key lock |
| A4h | | Initialize Typematic rate |
| A8h | | Erase F2 prompt |
| AAh | | Scan for F2 key stroke |
| ACh | | Enter SETUP |
| A Eh | | Clear Boot flag |
| B0h | | Check for errors |
| B2h | | POST done- prepare to boot operating system |
| B4h | 1 | One short beep before boot |
| B5h | | Terminate QuietBoot (optional) |
| B6h | | Check password (optional) |
| B9h | | Prepare Boot |
| BAh | | Initialize DMI parameters |
| BBh | | Initialize PnP Option ROMs |
| BCh | | Clear parity checkers |
| BDh | | Display MultiBoot menu |
| BEh | | Clear screen (optional) |
| BFh | | Check virus and backup reminders |
| C0h | | Try to boot with INT 19 |
| C1h | | Initialize POST Error Manager (PEM) |
| C2h | | Initialize error logging |
| C3h | | Initialize error display function |
| C4h | | Initialize system error handler |
| C5h | | PnPnd dual CMOS (optional) |
| C6h | | Initialize notebook docking (optional) |
| C7h | | Initialize notebook docking late |
| C8h | | Force check (optional) |
| C9h | | Extended checksum (optional) |

| Code | Beeps | POST Routine Description |
|------|-------|--------------------------|
| D2h | | Unknown interrupt |

| Code | Beeps | POST Routine Description |
|------|-------|-----------------------------------|
| E0h | | Initialize the chipset |
| E1h | | Initialize the bridge |
| E2h | | Initialize the CPU |
| E3h | | Initialize the system timer |
| E4h | | Initialize system I/O |
| E5h | | Check force recovery boot |
| E6h | | Checksum BIOS ROM |
| E7h | | Go to BIOS |
| E8h | | Set Huge Segment |
| E9h | | Initialize Multi Processor |
| EAh | | Initialize OEM special code |
| EBh | | Initialize PIC and DMA |
| ECh | | Initialize Memory type |
| EDh | | Initialize Memory size |
| EEh | | Shadow Boot Block |
| EFh | | System memory test |
| F0h | | Initialize interrupt vectors |
| F1h | | Initialize Run Time Clock |
| F2h | | Initialize video |
| F3h | | Initialize System Management Mode |
| F4h | 1 | Output one beep before boot |
| F5h | | Boot to Mini DOS |
| F6h | | Clear Huge Segment |
| F7h | | Boot to Full DOS |

Index of Symptom-to-FRU Error Message

LCD-Related Symptoms

| Symptom / Error | Action in Sequence |
|---|--|
| LCD backlight doesn't work LCD is too dark LCD brightness cannot be adjusted LCD contrast cannot be adjusted | Enter BIOS Utility to execute "Load Setup Default Settings", then reboot system. Reconnect the LCD connectors. Keyboard (if contrast and brightness function key doesn't work). LCD inverter ID LCD cable LCD inverter LCD System board |
| Unreadable LCD screen Missing pels in characters Abnormal screen Wrong color displayed | Reconnect the LCD connector LCD inverter ID LCD cable LCD inverter LCD System board |
| LCD has extra horizontal or vertical lines displayed. | LCD inverter ID LCD inverter LCD cable LCD System board |

Indicator-Related Symptoms

| Symptom / Error | Action in Sequence |
|--|--|
| Indicator incorrectly remains off or on, but system runs correctly | Reconnect the inverter board Inverter board System board |

Power-Related Symptoms

| Symptom / Error | Action in Sequence |
|-----------------------------------|---|
| Power shuts down during operation | Power source (battery pack and power adapter). See "Power System Check" on page 73. Battery pack Power adapter Hard drive & battery connection board System board |
| The system doesn't power-on. | Power source (battery pack and power adapter). See "Power System Check" on page 73. Battery pack Power adapter Hard drive & battery connection board System board |
| The system doesn't power-off. | Power source (battery pack and power adapter). See "Power System Check" on page 73. Hold and press the power switch for more than 4 seconds. System board |

Power-Related Symptoms

| Symptom / Error | Action in Sequence |
|--------------------------|--|
| Battery can't be charged | See "Check the Battery Pack" on page 75. Battery pack System board |

PCMCIA-Related Symptoms

| Symptom / Error | Action in Sequence |
|---|--------------------------------------|
| System cannot detect the PC Card (PCMCIA) | PCMCIA slot assembly System board |
| PCMCIA slot pin is damaged. | PCMCIA slot assembly |

Memory-Related Symptoms

| Symptom / Error | Action in Sequence |
|---|---|
| Memory count (size) appears different from actual size. | Enter BIOS Setup Utility to execute "Load Default Settings, then reboot system. DIMM System board |

Speaker-Related Symptoms

| Symptom / Error | Action in Sequence |
|--|---|
| In Windows, multimedia programs, no sound comes from the computer. | Audio driver Speaker System board |
| Internal speakers make noise or emit no sound. | Speaker System board |

Power Management-Related Symptoms

| Symptom / Error | Action in Sequence |
|--|---|
| The system will not enter hibernation | See "Save to Disk (S4)" on page 45. Keyboard (if control is from the keyboard) Hard disk drive System board |
| The system doesn't enter hibernation mode and four short beeps every minute. | Press Fn+ F4 and see if the computer enters hibernation mode. Touchpad Keyboard Hard disk connection board Hard disk drive System board |
| The system doesn't enter standby mode after closing the LCD | See "Save to Disk (S4)" on page 45. LCD cover switch System board |
| The system doesn't resume from hibernation mode. | See "Save to Disk (S4)" on page 45. Hard disk connection board Hard disk drive System board |
| The system doesn't resume from standby mode after opening the LCD. | See "Save to Disk (S4)" on page 45. LCD cover switch System board |

Power Management-Related Symptoms

| Symptom / Error | Action in Sequence |
|---|--|
| Battery fuel gauge in Windows doesn't go higher than 90%. | Remove battery pack and let it cool for 2 hours. Refresh battery (continue use battery until power off, then charge battery). Battery pack System board |
| System hangs intermittently. | Reconnect hard disk/CD-ROM drives. Hard disk connection board System board |

Peripheral-Related Symptoms

| Symptom / Error | Action in Sequence |
|--|---|
| System configuration does not match the installed devices. | Enter BIOS Setup Utility to execute "Load Default Settings", then reboot system. Reconnect hard disk/CD-ROM/diskette drives. |
| External display does not work correctly. | Press Fn+F5, LCD/CRT/Both display switching System board |
| USB does not work correctly | System board |
| Print problems. | Ensure the "Parallel Port" in the "Onboard Devices Configuration" of BIOS Setup Utility is set to Enabled. Onboard Devices Configuration Run printer self-test. Printer driver Printer cable Printer System Board |
| Serial or parallel port device problems. | Ensure the "Serial Port" in the Devices Configuration" of BIOS Setup Utility is set to Enabled. Device driver Device cable Device System board |

Keyboard/Touchpad-Related Symptoms

| Symptom / Error | Action in Sequence |
|--|---|
| Keyboard (one or more keys) does not work. | Reconnect the keyboard cable. Keyboard System board |
| Touchpad does not work. | Reconnect touchpad cable. Touchpad board System board |

Modem-Related Symptoms

| Symptom / Error | Action in Sequence |
|---|---|
| Internal modem does not work correctly. | Modem phone port modem combo board System board |

NOTE: If you cannot find a symptom or an error in this list and the problem remains, see "Undetermined Problems" on page 88.

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).

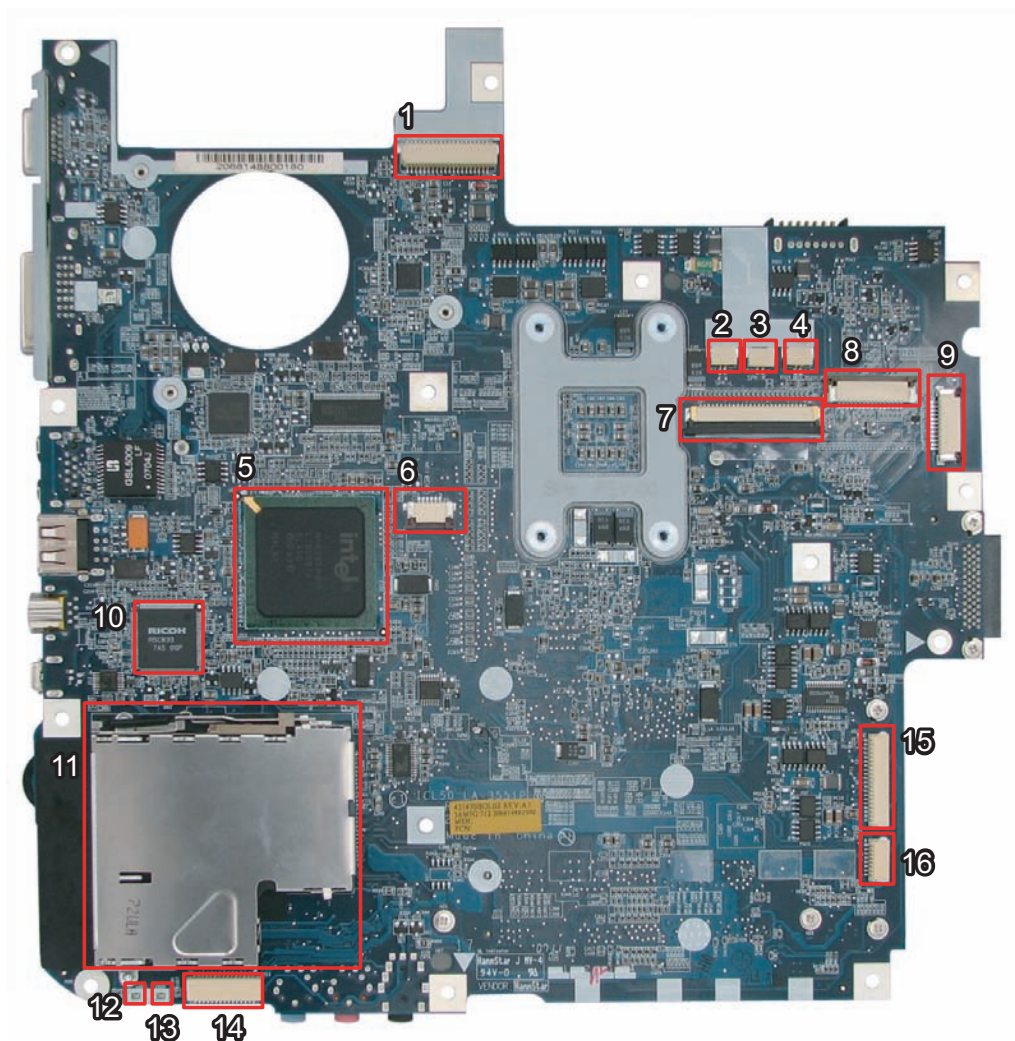
NOTE: Verify that all attached devices are supported by the computer.

NOTE: Verify that the power supply being used at the time of the failure is operating correctly. (See "Power System Check" on page 73.):

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

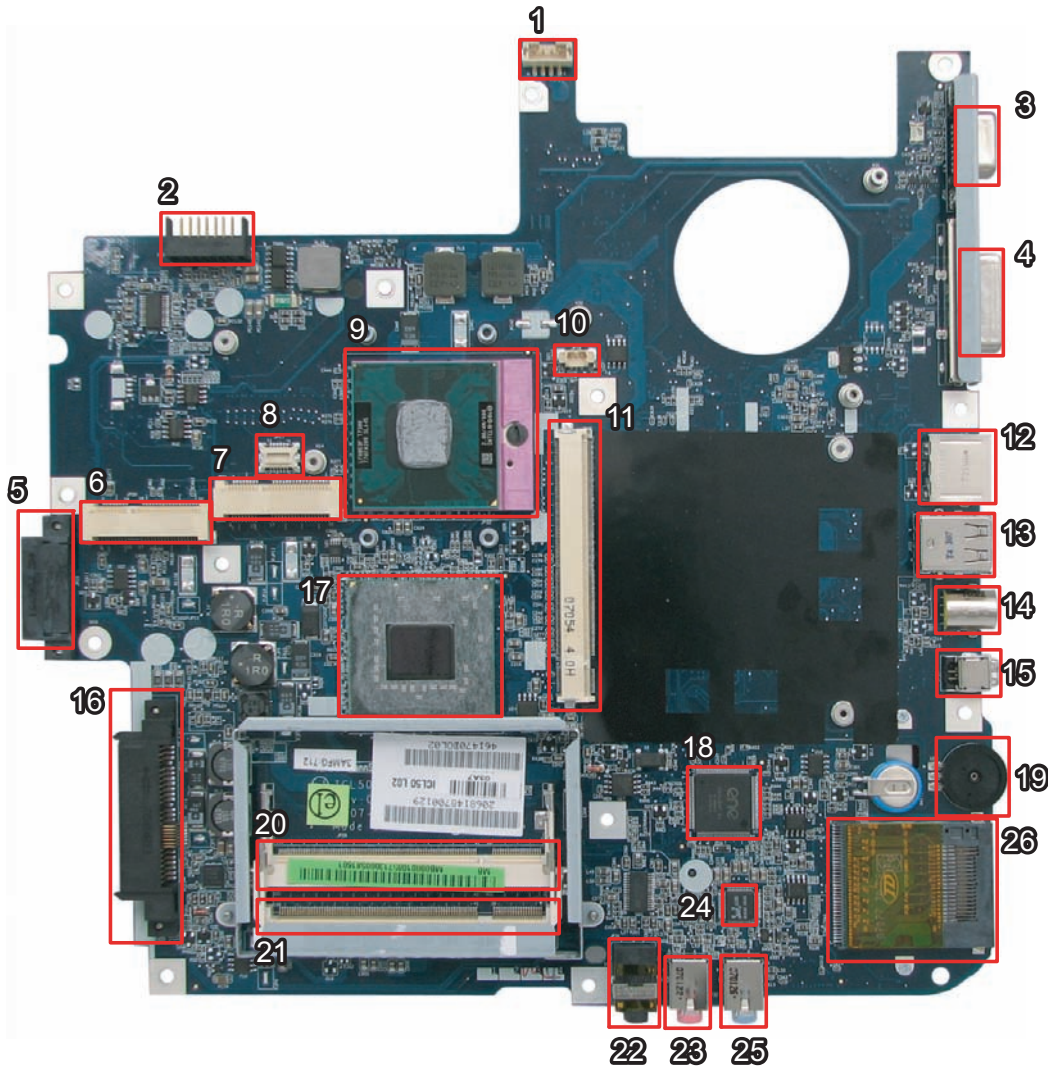
Jumper and Connector Locations

Top View



| | | | | | |
|---|------|-------------------------------------|----|------|------------------------------------|
| 1 | JP1 | LCD Connector | 9 | JP36 | Mainboard to LED Board Connector |
| 2 | JP3 | Speaker (Left) Connector | 10 | U12 | |
| 3 | JP34 | Speaker (Right) Connector | 11 | JP9 | PCI Express Card Socket |
| 4 | JP4 | Internal MIC Connector | 12 | LED1 | Power/Suspend LED |
| 5 | U5 | South Bridge (ICH8M) | 13 | LED2 | Battery Charge/Discharge LED |
| 6 | JP6 | Internal Track-Pad Connector | 14 | JP13 | Mainboard to Audio Board Connector |
| 7 | JP5 | Internal Keyboard Connector | 15 | JP11 | Mainboard to USB Board Connector |
| 8 | JP2 | Mainboard to Button Board Connector | 16 | JP12 | Bluetooth Module Connector |

Bottom View



| | | | | | |
|----|------|-----------------------------|----|------|----------------------------|
| 1 | PJP1 | DC-in Power Jack | 14 | JP24 | TV-out Connector |
| 2 | PJP2 | Battery Connector | 15 | JP26 | IEEE1394 Connector |
| 3 | JP14 | CRT Connector | 16 | JP27 | SATA HDD Connector |
| 4 | JP15 | DVI-D Connector | 17 | U23 | North Bridge (965PM/965GM) |
| 5 | JP25 | ODD Connector | 18 | U28 | |
| 6 | JP20 | Mini Card (WLAN) Socket | 19 | U29 | Volume Control |
| 7 | JP19 | Mini Card (TV-Tuner) Socket | 20 | JP28 | DDRII Memory Socket |
| 8 | JP17 | MDC Connector | 21 | JP29 | DDRII Memory Socket |
| 9 | JP22 | CPU Socket | 22 | JP31 | Headphone/SPDIF Jack |
| 10 | JP16 | Internal Fan Connector | 23 | JP32 | Mic-in Jack |
| 11 | JP19 | VGA Board Connector | 24 | U33 | Audio Codec Controller |
| 12 | JP18 | RJ45 (LAN) Connector | 25 | JP33 | Line-in Jack |
| 13 | JP23 | USB (Dual) Connectors | | | |






FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of Aspire Poyang. 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.




Aspire Poyang Exploded Diagram




| Category | No. | Part Name and Description | Acer Part No. |
|---|-----|--|---------------|
| ADAPTER | | | |
|  | | ADAPTER 90W 3PIN DELTA ADP-90SB BBAC | AP.09001.003 |
| | | ADAPTER 90W 3PIN DELTA ADP-90SB BBEA | AP.09001.013 |
| | | ADAPTER 90W 3PIN LITEON PA-1900-24AR | AP.09003.006 |
| | | ADAPTER 90W 3PIN LITEON PA-1900-04 LR | AP.09003.011 |
| BATTERY | | | |
|  | | BATTERY LI-ION 6CELLS 4KMAH PANASONIC PA 3S2P 4.0AH 7 01K 0FA | BT.00605.015 |
| | | BATTERY LI-ION 6CELLS 4KMAH SANYO SA 3S2P 4AH 7 01K 0FA | BT.00603.033 |
| | | BATTERY LI-ION 6CELLS 4KMAH SIMPLO SP PA 3S2P 4.0AH 7 01K 0FA | BT.00607.010 |
| | | BATTERY LI-ION 6CELLS 4KMAH SONY SY 3S2P 4.0AH 7 01K 0FA | BT.00604.018 |
| | | BATTERY LI-ION 8CELLS 4.8MAH PANASONIC PA 4S2P 4.8AH 7 01K 0FA | BT.00805.011 |
| | | BATTERY LI-ION 8CELLS 4.8MAH SANYO SA 4S2P 4.8AH 7 01K 0FA | BT.00803.024 |
| | | BATTERY LI-ION 8CELLS 4.8MAH SIMPLO SP PA 4S2P 4.8AH 7 01K 0FA | BT.00807.014 |
| | | BATTERY LI-ION 8CELLS 4.8MAH SONY SY 4S2P 4.8AH 7 01K 0FA | BT.00804.020 |
| BOARD | | | |
|  | | MODEM BOARD | FX.22500.009 |
|  | | BLUETOOTH BOARD | 54.AHE02.001 |
|  | | MINI WLAN/B INTEL 802.11 B/G | KI.GLN01.005 |
| | | MINI WLAN/B INTEL 802.11 A/B/G MOW1 (MM#872612) | KI.GLN01.001 |
| | | MINI WLAN/B INTEL 802.11 A/B/G MOW2 (MM#872612) | KI.GLN01.002 |
| | | MINI WLAN/B INTEL 802.11 A/B/G ROW (MM#872612) | KI.GLN01.003 |
| | | MINI WLAN/B INTEL 802.11 A/B/G JPN (MM#875652) | KI.GLN01.004 |
| | | MINI WLAN/B INTEL 802.11 4965ANG MOW1 (MM#886224) | KI.KDN01.001 |
| | | MINI WLAN/B INTEL 802.11 4965ANG MOW2 (MM#886220) | KI.KDN01.002 |

| Category | No. | Part Name and Description | Acer Part No. |
|---|-----|--|---------------|
| | | MINI WLAN/B INTEL 802.11 4965ANG ROW (MM#886434) | KI.KDN01.003 |
| | | MINI WLAN/B INTEL 802.11 4965ANG JP (MM#886437) | KI.KDN01.004 |
|  | | BUTTON BOARD W/CABLE 17 | 55.AHJ02.001 |
| | | AUDIO BOARD 17 | 55.AHJ02.002 |
|  | | LED BOARD W/CABLE 17 | 55.AHJ02.003 |
|  | | USB BOARD FOR TV 17 | 55.AHJ02.004 |
| | | USB BOARD FOR W/O TV | 55.AHJ02.005 |
|  | | RF BOARD FOR DTV | 55.AHJ02.006 |
|  | | ODD BOARD 17 | 55.AHJ02.007 |
|  | | HDD BOARD 17 | 55.AHJ02.008 |
|  | | VGA BOARD-M71M 128MB | VG.71M02.002 |
| | | VGA BOARD-M71M 256MB W/HDCP | VG.71M02.001 |
| CABLE | | | |
|  | | RJ11 CABLE 17 | 50.AHJ02.001 |
| | | FFC CABLE - T/P TO MB | 50.AHJ02.002 |

| Category | No. | Part Name and Description | Acer Part No. |
|---|-----|---|---------------|
|  | | BLUE TOOTH CABLE 17 | 50.AHJ02.003 |
| | | AUDIO CABLE 17 | 50.AHJ02.004 |
|  | | USB CABLE 17 | 50.AHJ02.005 |
|  | | RF CABLE 17 | 50.AHJ02.006 |
| | | 7 PIN MINI-DIN S-VIDEO TO 4 CABLE | 50.ABD02.001 |
| | | PAL TO NTSC CONNECTOR | 20.ABD02.001 |
| | | SMB JACK | 50.ABD02.002 |
| | | DVB-T ANT | 50.ABD02.003 |
|  | | DC-IN CABLE (90W) UMA/DIS | 50.AHH02.001 |
| | | POWER CORD US 3 PIN | 27.TAVV5.001 |
| | | POWER CORD EU 3 PIN | 27.TAVV5.002 |
| | | POWER CORD AUS 3 PIN | 27.TAVV5.003 |
| | | POWER CORD UK 3 PIN | 27.TAVV5.004 |
| | | POWER CORD CHINA 3 PIN | 27.TAVV5.005 |
| | | POWER CORD SWISS 3 PIN | 27.TAVV5.006 |
| | | POWER CORD ITALIAN 3 PIN | 27.TAVV5.007 |
| | | POWER CORD DENMARK 3 PIN | 27.TAVV5.008 |
| | | POWER CORD JP 3 PIN | 27.TAVV5.009 |
| | | POWER CORD SOUTH AFRICA 3 PIN | 27.TAVV5.010 |
| | | POWER CORD KOREA 3 PIN | 27.TAVV5.011 |
| | | POWER CORD ISRAEL 3 PIN | 27.TAVV5.012 |
| | | POWER CORD INDIA 3 PIN | 27.TAVV5.013 |
| | | POWER CORD TWN 3 PIN | 27.TAVV5.014 |
| CASE/COVER/BRACKET ASSEMBLY | | | |
|  | | MIDDLE COVER 17 | 42.AHJ02.001 |
|  | | UPPER CASE ASSY 17 W/TP TP BRACKET TP FFC | 60.AHJ02.001 |
| | | LOWER CASE ASSY UMA W/TV-17 | 60.AHJ02.002 |
| | | LOWER CASE ASSY UMA W/O TV-17 | 60.AHJ02.003 |
|  | | LOWER CASE ASSY DIS W/TV-17 | 60.AHK02.001 |
| | | LOWER CASE ASSY DIS W/O TV-17 | 60.AHK02.002 |
| | | THERMAL DOOR 17 UMA | 42.AHJ02.002 |


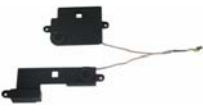

| Category | No. | Part Name and Description | Acer Part No. |
|---|-----|--|---------------|
|  | | THERMAL DOOR 17 DIS | 42.AHK02.001 |
| CPU/PROCESSOR | | | |
|  | | INTEL CPU MEROM DUAL CORE T7700 2.4G LF80537GG0564M SLA43 E1 UFCPGA | KC.77001.DTP |
| | | INTEL CPU MEROM DUAL CORE T7500 2.2G LF80537GG0494M SLA44 E1 UFCPGA | KC.75001.DTP |
| | | INTEL CPU MEROM DUAL CORE T7300 2.0G LF80537GG0414M SLA45 E1 UFCPGA478P | KC.73001.DTP |
| | | INTEL CPU MEROM DUAL CORE T7100 1.8G LF80537GG0332M SLA4A M0 UFCPGA | KC.71001.DTP |
| | | INTEL CPU MEROM DUAL CORE T5450 1.66G IC LF80537GF0282M QWNW M0 PGA 478P | KC.54501.DTP |
| COMBO MODULE | | | |
|  | | DVD/CDRW 24X COMBO MODULE | 6M.AHJ02.002 |
| | | DVD/CDRW COMBP DRIVE HLDS GCC-T10N VISTA 0FA | KO.0240D.005 |
| | | DVD/CDRW COMBP DRIVE SONY CRX880A VISTA 0FA | KO.0240E.005 |
|  | | ODD BEZEL-COMBO | 42.AHE02.003 |
|  | | ODD BRACKET 17 | 33.AHJ02.001 |
| DVD-RW DRIVE | | | |
|  | | DVD SUPER MULTI MODULE TRAY IN | 6M.AHJ02.003 |
| | | DVD SUPER MULTI DRIVE PIONEER DVR-K17RS 0FA | KU.00805.038 |
| | | DVD SUPER MULTI DRIVE PANASONIC UJ-850UAA1-A VISTA | KU.00807.055 |

| Category | No. | Part Name and Description | Acer Part No. |
|---|-----|--|---------------|
| | | DVD SUPER MULTI DRIVE PHILIPS DS-8A1P 0FA | KU.00809.010 |
| | | DVD SUPER MULTI DRIVE HLDS GSA-T20N 0FA | KU.0080D.027 |
| | | DVD SUPER MULTI DRIVE SONY AD-7530A 0FA | KU.0080E.002 |
|  | | ODD BEZEL-SUPER MULTI | 42.AHE02.004 |
|  | | ODD BRACKET 17 | 33.AHJ02.001 |
| | | HD-DVD MODULE | 6M.AHJ02.004 |
| | | HD-DVD DRIVE TOSHIBA TS-L802A VISTA 0FA AC05 | KV.00101.002 |
|  | | ODD BEZEL-HD DVD | 42.AHE02.005 |
| HDD/HARD DISK DRIVE | | | |
|  | | HDD SATA 80G 5400RPM HGST HTS541680J9SA00 SURUGA-B LF F/W: C70P | KH.08007.021 |
| | | HDD SATA 80G 5400RPM SEAGATE ST980811AS SATA 8MB LF 3.ALD | KH.08001.030 |
| | | HDD SATA 80G 5400RPM TOSHIBA MK8037GSX Gemini BS SATA LF F/W:DL230J | KH.08004.010 |
| | | HDD SATA 80G 5400RPM WD WD800BEVS-22RST0 ML80 SATA LF F/W:04.01G04 | KH.08008.033 |
| | | HDD SATA 120G 5400RPM HGST HTS541612J9SA00 SURUGA-B LF F/W: C70P | KH.12007.010 |
| | | HDD SATA 120G 5400RPM SEAGATE ST9120822AS SATA 8MB LF 3.ALD | KH.12001.031 |
| | | HDD SATA 120G 5400RPM TOSHIBA MK1237GSX Gemini BS SATA LF F/W:DL130J | KH.12004.006 |
| | | HDD SATA 120G 5400RPM WD WD1200BEVS-22RST0 ML80 SATA LF F/W:04.01G04 | KH.12008.018 |
| | | HDD SATA 160G 5400RPM HGST HTS541616J9SA00 SURUGA-B LF F/W: C70P | KH.16007.011 |
| | | HDD SATA 160G 5400RPM SEAGATE ST9160821AS SATA 8MB LF 3.ALD | KH.16001.026 |
| | | HDD SATA 160G 5400RPM TOSHIBA MK1637GSX Gemini BS SATA LF F/W:DL030J | KH.16004.001 |
| | | HDD SATA 160G 5400RPM WD WD1600BEVS-22RST0 ML80 SATA LF F/W:04.01G04 | KH.16008.019 |
| | | HDD SATA 200G 4200RPM TOSHIBA MK2035GSS Gemini SATA LF F/W:DK022A | KH.20004.001 |

| Category | No. | Part Name and Description | Acer Part No. |
|---|-----|--|---------------|
|  | | HDD DOOR 17 | 42.AHJ02.007 |
|  | | HDD BRACKET 17 | 33.AHJ02.002 |
| KEYBOARD | | | |
|  | | KEYBOARD 17KB-FV2 105KS WHITE US INTERNATIONAL | KB.INT00.138 |
| | | KEYBOARD 17KB-FV2 105KS WHITE ARABIC/ENGLISH | KB.INT00.170 |
| | | KEYBOARD 17KB-FV2 106KS WHITE BELGIUM | KB.INT00.169 |
| | | KEYBOARD 17KB-FV2 106KS WHITE BRAZILIAN PORTUGUESE | KB.INT00.168 |
| | | KEYBOARD 17KB-FV2 106KS WHITE CANADIAN FRENCH | KB.INT00.167 |
| | | KEYBOARD 17KB-FV2 105KS WHITE TRADITIONAL CHINESE | KB.INT00.166 |
| | | KEYBOARD 17KB-FV2 106KS WHITE CZECH | KB.INT00.165 |
| | | KEYBOARD 17KB-FV2 106KS WHITE DANISH | KB.INT00.164 |
| | | KEYBOARD 17KB-FV2 106KS WHITE DUTCH | KB.INT00.163 |
| | | KEYBOARD 17KB-FV2 106KS WHITE FRENCH | KB.INT00.161 |
| | | KEYBOARD 17KB-FV2 106KS WHITE GERMAN | KB.INT00.160 |
| | | KEYBOARD 17KB-FV2 105KS WHITE GREEK | KB.INT00.159 |
| | | KEYBOARD 17KB-FV2 106KS WHITE HUNGARIAN | KB.INT00.158 |
| | | KEYBOARD 17KB-FV2 106KS WHITE ITALIAN | KB.INT00.155 |
| | | KEYBOARD 17KB-FV2 105KS WHITE KOREAN | KB.INT00.154 |
| | | KEYBOARD 17KB-FV2 106KS WHITE NORWEGIAN | KB.INT00.152 |
| | | KEYBOARD 17KB-FV2 106KS WHITE PORTUGUESE | KB.INT00.150 |
| | | KEYBOARD 17KB-FV2 105KS WHITE RUSSIAN | KB.INT00.149 |
| | | KEYBOARD 17KB-FV2 106KS WHITE SLO/CRO | KB.INT00.148 |
| | | KEYBOARD 17KB-FV2 106KS WHITE SLOVAK | KB.INT00.147 |
| | | KEYBOARD 17KB-FV2 106KS WHITE SPANISH | KB.INT00.145 |

| Category | No. | Part Name and Description | Acer Part No. |
|---|-----|--|---------------|
| | | KEYBOARD 17KB-FV2 106KS WHITE SWISS/G | KB.INT00.143 |
| | | KEYBOARD 17KB-FV2 105KS WHITE THAILAND | KB.INT00.142 |
| | | KEYBOARD 17KB-FV2 106KS WHITE TURKISH | KB.INT00.141 |
| | | KEYBOARD 17KB-FV2 106KS WHITE UK | KB.INT00.140 |
| | | KEYBOARD 17KB-FV2 105KS WHITE US INTERNATIONAL HEBREW | KB.INT00.139 |
| | | KEYBOARD 17 JP | TBD |
| LCD | | | |
|  | | ASSY LCD MODULE 17 IN. WXGA GLARE W/ANTENNA CCD | 6M.AHJ02.001 |
|  | | LCD 17 WXGA GLARE AUO B170PW03 V4 200nits 16ms | LK.17105.005 |
| | | LCD 17 WXGA GLARE CMO N170C2-L02 10ms 200nits | LK.1700D.009 |
| | | LCD 17 WXGA GLARE LPL LP171WP4-TLB1 16ms 200nits | LK.17008.025 |
| | | LCD 17 WXGA GLARE SAMSUNG LTN170X2-L02-H 16ms 200nits PMMA | LK.17006.024 |
|  | | INVERTER BOARD 17 | 9.AHJ02.001 |
|  | | LCD WIRESET 17 | 50.AHJ02.007 |
|  | | LCD COVER ASSY 17 IN. LOGO W/ MIC W/ANTENNA | 60.AHJ02.004 |
|  | | LCD BEZEL ASSY 17 FORW/O CCD | 60.AHJ02.005 |
|  | | LCD BRACKET SET R&L 17 | 33.AHJ02.003 |
|  | | CCD MODULE 0.3M | 57.AHE02.001 |
| | | CCD BRACKET 17 | 33.AHJ02.004 |
| | | | |
| | | ASSY LCD MODULE 17 IN. WXGA GLARE W/ANTENNA | TBD |

| Category | No. | Part Name and Description | Acer Part No. |
|---|-----|---|---------------|
| | | LCD 17 WXGA GLARE AUO B170PW03 V4 200nits 16ms | LK.17105.005 |
| | | LCD 17 WXGA GLARE CMO N170C2-L02 10ms 200nits | LK.1700D.009 |
| | | LCD 17 WXGA GLARE LPL LP171WP4-TLB1 16ms 200nits | LK.17008.025 |
| | | LCD 17 WXGA GLARE SAMSUNG LTN170X2-L02-H 16ms 200nits PMMA | LK.17006.024 |
| | | INVERTER BOARD 17 | 19.AHJ02.001 |
| | | LCD WIRESET 17 | 50.AHJ02.007 |
| | | LCD COVER ASSY 17 LOGO W/MIC W/ANTENNA | 60.AHJ02.004 |
| | | LCD BEZEL ASSY 17 FORW/O CCD | |
| MAINBOARD | | | |
|  | | MAINBOARB GM965 UMA W/CARD READER_EXPRESS CARD W/O CPU MEMORY | MB.AHE02.001 |
| | | MAINBOARB PM965 DISCRETE W/ CARD READER_EXPRESS CARD W/O CPU MEMORY | MB.AHH02.001 |
| MEMORY | | | |
|  | | MEMORY 512MB DDRII 667 NANYA NT512T64UH8B0FN-3C | KN.51203.032 |
| | | MEMORY 512MB DDRII 667 SAMSUNG M470T6554EZ3-CE6 | KN.5120B.023 |
| | | MEMORY 512MB DDRII 667 HYNIX HYMP564S64CP6-Y5 | KN.5120G.019 |
| | | MEMORY 1GB DDRII 667 NANYA NT1GT64U8HB0BN-3C | KN.1GB03.014 |
| | | MEMORY 1GB DDRII 667 SAMSUNG M470T2953EZ3-CE6 | KN.1GB0B.011 |
| | | MEMORY 1GB DDRII 667 HYNIX HYMP512S64CP8-Y5 | KN.1GB0G.006 |
| FAN | | | |
|  | | FAN | 23.AHJ02.001 |
| HEATSINK | | | |
|  | | CPU THERMAL MODULE | 60.AHJ02.0069 |

| Category | No. | Part Name and Description | Acer Part No. |
|---|-----|------------------------------------|---------------|
|  | | VGA THERMAL (M71M) DIS | 60.AHK02.003 |
| SPEAKER | | | |
|  | | SPEAKER R&L 17 | 23.AHJ02.002 |
|  | | SUB WOOFER | 23.AHJ02.003 |
| ANTENNA | | | |
| | | ANTENNA R 17 | 50.AHJ02.008 |
| | | ANTENNA L 17 | 50.AHJ02.009 |
| | | MIC SET 17 | 23.AHJ02.004 |
| ACCESSORY | | | |
| | | REMOTE CONTROLLER EU | LZ.20400.004 |
| | | REMOTE CONTROLLER TS | LZ.20400.005 |
| | | REMOTE CONTROLLER SC | LZ.20400.006 |
| | | REMOTE CONTROLLER EN | LZ.20400.007 |
| MISCELLANEOUS | | | |
| | | RUBBER FOOT_B | 47.AHJ02.004 |
| | | RUBBER FOOT_C | 47.AHJ02.005 |
| | | THERMAL RUBBER FOOT | 47.AHJ02.006 |
| | | THERMAL PAD | 47.AHJ02.007 |
| | | NAMEPLATE - AS7720 | 40.AHJ02.001 |
| | | LCD SCREW PAD 17 | 47.AHJ02.001 |
| | | LCD SIDE RUBBER 17 | 47.AHJ02.002 |
| | | LCD FRONT RUBBER 17 | 47.AHJ02.003 |
| SCREW LIST | | | |
| | | SCREW,M2.5*12 (NL) | 86.AHE02.003 |
| | | SCREW,M2.5*4 | 86.AHJ02.001 |
| | | SCREW,M2.5*6 (NL) | 86.AHE02.002 |
| | | SCREW,M2*3 (NL) | 86.AHE02.005 |
| | | SCREW,M2*2.2 | 86.AHE02.004 |
| | | SCREW,M2*4 (NL) | 86.AHJ02.002 |
| | | SCREW,M3*4 (NL) | 86.AHJ02.003 |
| | | SCREW, F 4# 5L K 4.5D ZK NL + CR3+ | 86.AHJ02.004 |
| | | SCREW,M M 2D 3.0L K 8.0D NI + | 86.AHJ02.005 |
| | | CPU THERMAL SCREW ASSY | 86.AHJ02.006 |
| | | SCREW,M M 2.0D 3L K 5D NI + | 86.AHE02.008 |

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