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Aspire 9100 Series

Service Guide

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

PRINTED IN TAIWAN

Revision History

Please refer to the table below for the updates made on Aspire 9100 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 Introduction

Features

This computer was designed with the user in mind. Here are just a few of its many features:

Microprocessor

- Intel® Pentium® M 730 processor at 1.6GHz or higher

Memory

- 256 MB of DDR 333 SDRAM standard, upgradeable to 2 GB with dual so DIMM modules
- 512 KB flash ROM BIOS

Data storage

- One 60 GB and above E-IDE hard disk (2.5”, 9.5mm, UltraDMA-100)
- One internal optical drive
- 3-in-1 MS/SM/SD card reader

Display and video

- Thin-Film Transistor (TFT) displaying at
  -- 15.4” WXGA (1280 X 800)
- Acer CrystalBrite
- ATI MOBILITY™ RADEON® X600 with 128 MB of video memory
- Simultaneous LCD and CRT display support
- Dual independent display

Connectivity

- Integrated gigabit Fast Ethernet connection (for selected models)
- Built-in 56Kbps fax/data modem
- Three Universal Serial Bus (USB) 2.0 ports
- InviLinkTM 802.11b/g dual-band Wireless LAN

Audio

- 16-bit AC’97 stereo audio
- Dual speakers
- Separate audio ports for headphone-out, line-in/microphone-in devices

Keyboard and pointing device

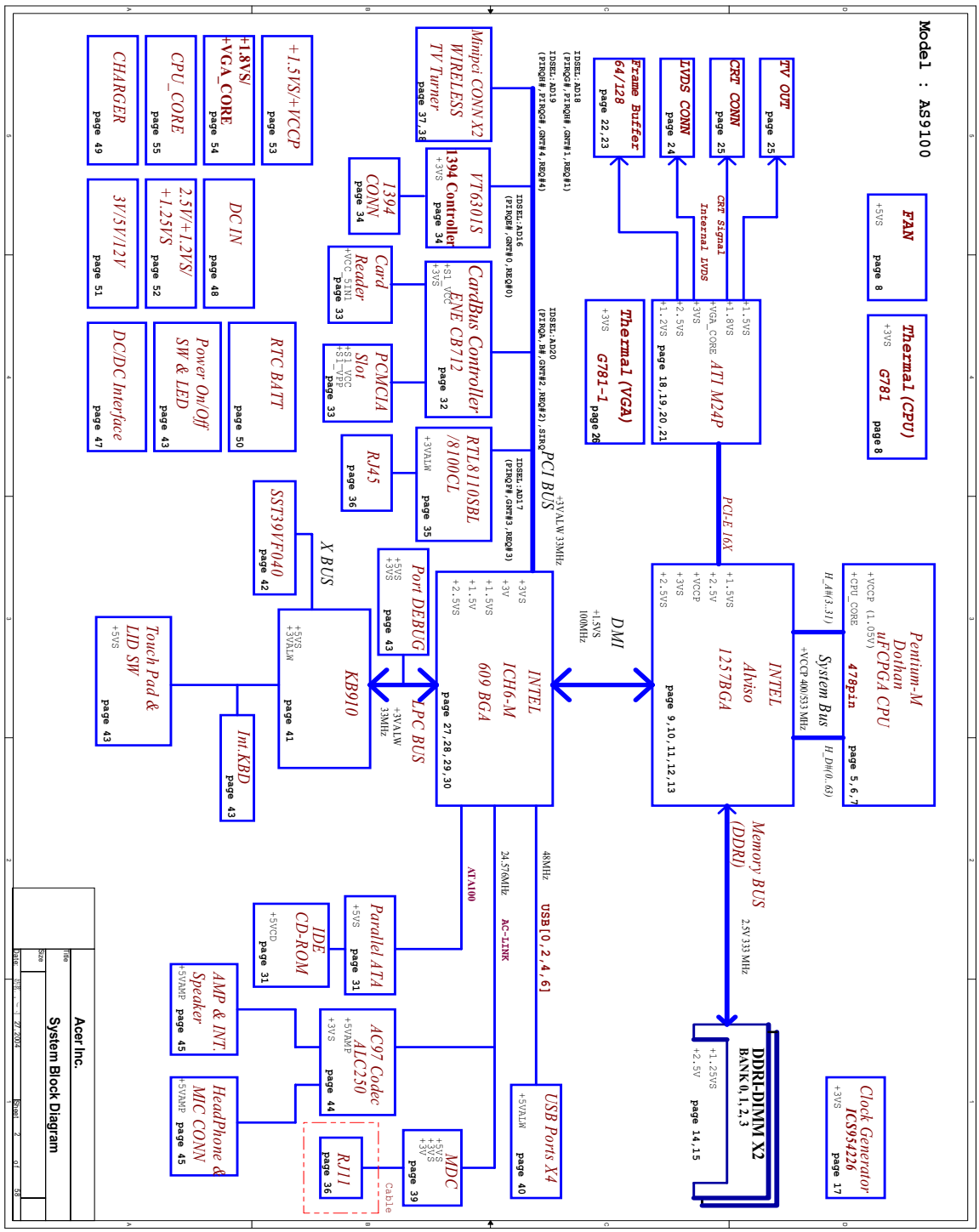
- 86/87/88-key Windows keyboard
- Ergonomically-centered touchpad pointing device

I/O Ports

- One Type II PC Card slot
- One RJ-11 phone jack (V.92, 56Kbps modem)
- One RJ-45 network jack

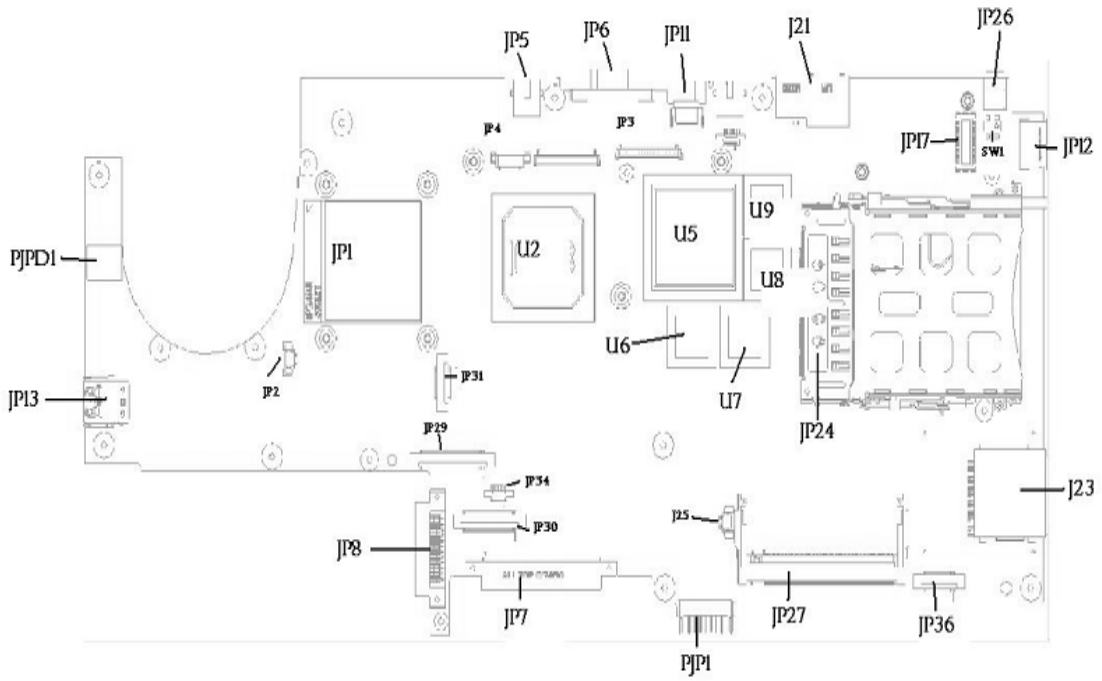
- One DC-in jack (AC adaptor)
- One external monitor port
- One speaker/headphone-out jack
- One audio line-in/microphone-in jack
- One infrared (CIR) port
- One IEEE 1394 port
- One S-video/TV-out port
- One Audio/Video-in port
- One PAL/NTSC TV-in port
- Three USB 2.0 ports
- One Consumer infrared (CIR) port
- 3-in-1 MS/SM/SD card reader

System Block Diagram



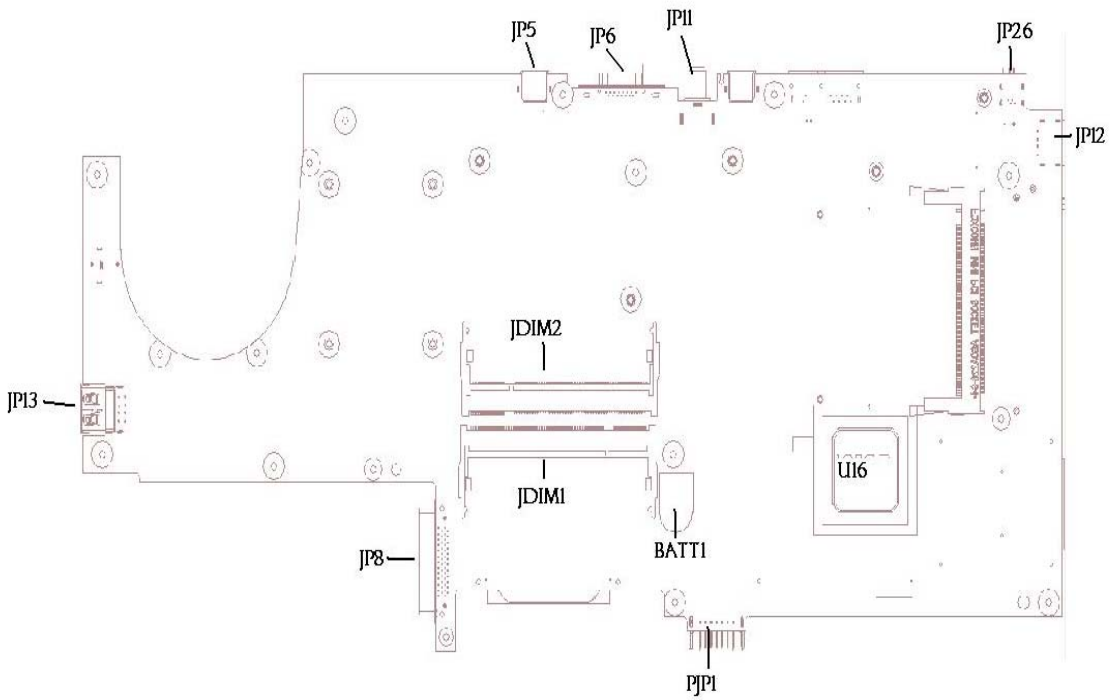
Board Layout

Top View



PJPD1	DC JACK	JP5	TV-OUT CONNECTOR
JP13	DUAL USB CONNECTOR	JP6	CRT CORRECTOR
JP1	CPU SOCKET	JP11	SINGLE USB CONNECTOR
JP2	FAN CONNECTOR	JP3	LCD CONNECTOR
JP31	LED CONNECTOR	JP4	INVERTER CONNECTOR
JP29	KEYBOARD CONNECTOR	U2	NORTH BRIDGE
JP8	CD-ROM CONNECTOR	U5	GRAPHICS CHIP
JP7	HDD CONNECTOR	U6	VGA MEMORY CHIP
JP34	TOUCHPAD CONNECTOR	U7	VGA MEMORY CHIP
JP30	SW DJ BOARD CONNECTOR	U8	VGA MEMORY CHIP
J25	NOT INSTALL	U9	VGA MEMORY CHIP
PJP1	BATTERY CONNECTOR	JP24	CARD BUS SOCKET
JP27	MINI PCI CONNECTOR	J23	MS/SD/MMC CARD READER CONNECTOR
JP36	SPEAKER CONNECTOR	JP17	MDC CONNECTOR
JP12	SINGLE USB CONNECTOR	JP26	IEEE1394 CONNECTOR
SW1	LID SWITCH	J21	ETHERNET CONNECTOR

Bottom View



JP13	DUAL USB CONNECTOR	JP5	TV-OUT CONNECTOR
JP8	CD-ROM CONNECTOR	JP6	CRT CONNECTOR
JDIM1	MEMORY CONNECTOR	JP11	SINGEL USB CONNECTOR
JDIM2	MEMORY CONNECTOR	JP26	IEEE1394 CONNECTOR
BATT1	COIN CELL CONNECTOR	JP12	SINGEL USB CONNECTOR
PJP1	BATTERY CONNECTOR	U16	SOUTH BRIDGE

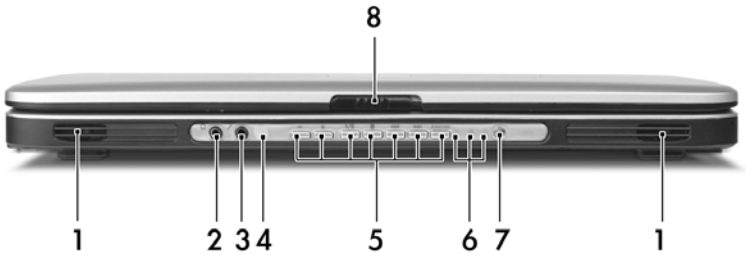
Panel

This is a brief introduction to the I/O ports, the features and the indicators.

Front Panel

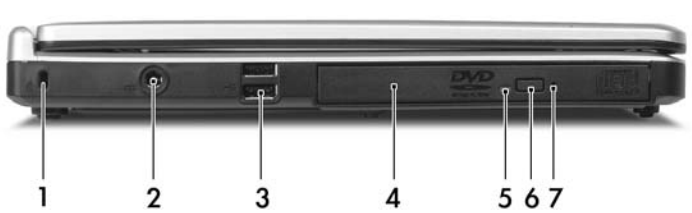
#	Item	Description
1	Display screen	Also called LCD (Liquid Crystal Display), displays computer output.
2	Launch keys	Buttons for launching frequently used programs.
3	Power button	Turns the computer on and off.
4	Keyboard	Inputs data into your computer.
5	Palmrest	Comfortable support area for your hands when you use the computer.
6	Status indicators	LEDs (Light Emitting Diodes) that turn on and off to show the status of the computer and its functions and components.
7	Touchpad	Touch-sensitive pointing device which functions like a computer mouse.
8	Click buttons (Left and right)	The left and right buttons function like the left and right mouse buttons.

Closed front viewLeft Panel



#	Icon	Item/ Port	Description
1		Speakers	Left and right speakers deliver stereo audio output.
2		Speaker/Line-Out/Headphone jack	Connects to audio line-out devices (e.g., speakers, headphones).
3		Mic-in jack	Accepts inputs from external microphone.
4		CIR Receiver	Receives remote control infrared signals.
5		Arcade/Media/Volume buttons	For use with Acer Arcade and other media playing programs.
6		Indicators (power, Hard disc, and battery)	Light to indicate the computer's status
7		Wireless communication button/ indicator	Press to enable/disable Wireless function. Lights to indicate the status of wireless LAN communications.
8		Latch	Locks and releases the lid.

Left view



#	Icon	Item/ Port	Description
1		Security keylock	Connects to a Kensington-compatible computer security lock.
2		Power jack	Connects to an AC adaptor.
3		Two USB 2.0 ports	Connect to Universal Serial Bus (USB) 2.0 devices (e.g., USB mouse, USB camera).
4		Optical drive	Internal optical drive; accepts CDs or DVDs depending on the optical drive type.
5		LED indicator	Lights up when the optical drive is active.
6		Optical drive eject button	Ejects the optical drive tray from the drive.
7		Emergency eject hole	Ejects the optical drive tray when the computer is turned off.

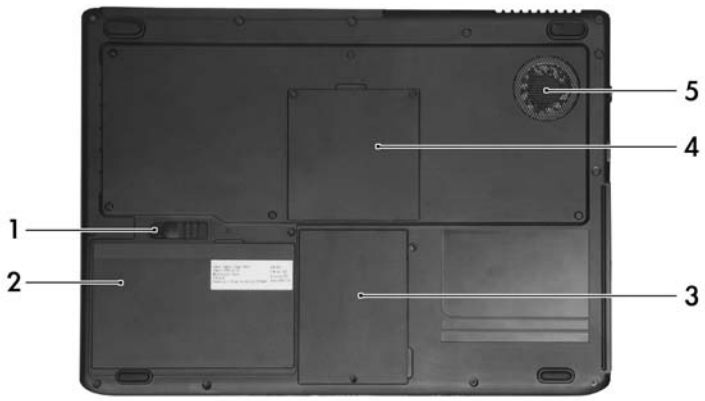
Right Panel

#	Icon	Item/ Port	Description
1		3-in-1 card reader	Accepts MS, SM and SD card. Note: Only one card can operate at any given time.
2		PC card slot	Connects to one Type II CardBus PC Card.
3		PC Card slot eject button	Ejects the PC Card fom the slot.
4		USB 2.0 port	Connects to Universal Serial Bus (USB) 2.0 devices (e.g., USB mouse, USB camera).

Rear Panel

#	Icon	Port	Description
1		IEEE 1394 port	Connects to IEEE 1394 devices.
2		Network jack	Connects to an Ethernet 10/100/1000-based network (for selected models).
3		Modem jack	Connects to a phone line.
4		Audio/video in port	Supports both audio and video input.
5		Antenna port	Connects to a (PAL/NTSC) TV antenna cable.
6		External display port	Connects to a display device (e.g., external monitor, LCD projector).
7		S-video out port	Connects ta television or display device with S-video input.
8		Ventilation slots	Enable the computer to stay cool, even after prolonged use.

Bottom Panel



#	Item	Description
1	Battery release latch	Unlatches the battery to remove the battery pack.
2	Battery bay	Houses the computer's battery pack.
3	Hard disc bay	Houses the computer's hard disc (secured by a screw).
4	Memory comparment	House the computer's main memory and Mini PCI Card.
5	Cooling fan	Helps keep the computer cool. Note: Do not cover or obstruct the opening of the fan.

Indicators

The computer has six easy-to-read status icons on the upper-right above the keyboard. In addition, there are four indicators located on the front panel.

#	Icon	Function	Description
1		Caps Lock	Lights when Caps Lock is activated.
2		Num Lock (Fn-F11)	Lights when Numeric Lock is activated.
3		Scroll Lock	Lights when the computer enters Standby mode and blinks when it enters into or resumes from hibernation mode.
4		Power	Lights when the computer is on.
5		Battery indicator	Lights when the battery is being charged.
		Media activity	Lights when the hard disc or optical drive is active.
7		Wireless communication	Lights to indicate the status of wireless LAN communications.

Using the keyboard

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

Lock keys

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

Lock key	Description
Caps Lock 	When  is on, all alphabetic characters typed are in uppercase.
Num Lock (Fn-F11) 	When  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  is on, the screen moves one line up or down when you press the up or down arrow keys respectively.  does not work with some applications.

Embedded numeric keypad

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.

Desired access	Num lock on	Num lock off
Type numbers	Use embedded keypad in the sam way as the numeric keypad on a standard keyboard.	
Type letters	Hope Fn while typing letters on embedded keypad.	Type the letters in a normal manner.

Windows keys

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

Keys	Description
Windows logo key	Start button. Combinations with this key perform shortcut functions. Below are a few examples: + <Tab> (Activates the next Taskbar button) + <E> (Opens the My Computer window) + <F1> (Opens Help and Support) + <F> (Opens the Find: All Files dialog box) + M (Minimizes all windows) SHIFT + + M (Undoes the minimize all windows) + R (Opens the Run dialog box)
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 hot keys or key combinations to access most of the computer's controls like screen contrast and brightness, volume output and the BIOS Utility.

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

Hot Key	Icon	Function	Description
Fn-F1	?	Hotkey help	Displays a list of the hotkeys and their functions.
Fn-F2		Acer eSetting	Launches the Acer eSetting in the Acer eManager set by the Acer Empowering key " e "
Fn-F3		Acer ePowerManagement	Launches the Acer ePower-Management in the Acer eManager set by the Acer Empowering key" e ".
Fn-F4	z z	Sleep	Puts the computer in Sleep mode.
Fn-F5		Display toggle	Switches display output between the display screen, external monitor (if connected) and both the display screen and external monitor.
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 on/off	Turns the speakers on and off; mutes the sound.
Fn-↑		Volume up	Increases the sound volume.
Fn-↓		Volume down	Decreases the sound volume.
Fn-→		Brightness up	Increases the screen brightness.

Hot Key	Icon	Function	Description
Fn-¨		Brightness down	Decreases the screen brightness.

The Euro symbol

If your keyboard layout is set to United States-International or United Kingdom or if you have a keyboard with a European layout, you can type the Euro symbol on your keyboard.

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

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

Launch Keys

Located above the keyboard next to the power button are two buttons. These buttons are called launch keys.

They are designated as the Internet browser, and the Acer Empowering key " e ".

Press the Empowering key " e " to run the Acer eManager. Please see an Internet browser as default, but it can be reset by users.

#	Icon	Function	Description
1		Web broswer	Internet browser apllication (User-programmable)
2		eManager	eManager launch key (User-programmable)

Touchpad

The built-in touchpad is a pointing device that senses movement on its surface. This means the cursor responds as you move your finger on the surface of the touchpad. The central location on the palmrest provides optimum comfort and suuport.

Touchpad basics

The following items teach you how to use the touchpad:

* Move your finger across the touchpad (2) to move the cursor.

* Press the left (1) and right (3) buttons located on the edge of the touchpad to do selection and execution functions. These two buttons are similar to the left and right buttons on a mouse. Tapping on the touchapd is the same as clicking the left button.

Function	Left button	Right button	Touchpad
Execute	Click twice quickly.		Tap twice (at the same speed as double-clicking a mouse button).
Select	Click once.		Tap once.
Drag	Click and hold, then use finger to drag the cursor on the touchpad.		Tap twice (at the same speed as double-clicking a mouse button); hold finger to the touchpad on the second tap and drag the cursor.
Access context menu		Click once.	

NOTE: Keep your fingers dry and clean when using the touchpad. Also keep the touchpad dry and clean. The touchpad is sensitive to finger movement, hence, the lighter the touch, the better the response. Taping harder will not increase the touchpad's responsiveness.

System Board Major Chip

Item	Controller
System core logic	Intel® Alviso(north bridge)+Intel® ICH6-M (south bridge)
Audio controller	RealTek ALC250 AC 97 Codec
Video controller	ATI M24P (ATI MOBILITY™ RADEON™)
Keyboard controller	KB910
CardBus Controller	ENE CB712
IEEE Controller	VIA VT6301S

Processor

Item	Specification
CPU type	Intel® Pentium® M processor 730/740/750/760/770 at 1.6, 1.73, 1.86, 2.0, 2.13GHz, 533Mhz FSB
CPU package	478-pin µ FCPGA
CPU core voltage	Low speed: 0.8V High speed: 1.5V
CPU I/O voltage	1.2V

BIOS

Item	Specification
BIOS vendor	Insyde BIOS
BIOS Version	AS9100 V1.00
BIOS ROM type	Flash ROM
BIOS ROM size	512K
BIOS package	32 Pin PLCC
Supported protocols	ACPI 2.0 (if available, at least 1.0b), SMBIOS 2.3, PCI 2.2, Boot Block, PXE 2.0, Mobile PC2001, Hard Disk Password, INT 13h Extensions, PCI Bus Power Management interface Specification, EI Torito-Bootable CD-ROM Format Specification V1.0, Simple Boot Flag 1.0
BIOS password control	Set by switch, see SW1 settings

Second Level Cache

Item	Specification
Cache controller	Built-in CPU
Cache size	1M
1st level cache control	Always Enabled
2nd level cache control	Always Enabled
Cache scheme control	Fixed-in write back

System Memory

Item	Specification
Memory controller	Intel® Alviso

System Memory

Item	Specification
Onboard memory size	0MB
DIMM socket number	2 Sockets
Supports memory size per socket	256MB
Supports maximum memory size	2048MB
Supports DIMM type	DDR-DRAM
Supports DIMM Speed	333 MHz
Supports DIMM voltage	2.5 V/1.25V
Supports DIMM package	200-pin so-DIMM
Memory module combinations	You can install memory modules in any combinations as long as they match the above specifications .

Memory Combinations

Slot 1	Slot 2	Total Memory
0MB	256MB	256MB
0MB	512MB	512MB
0MB	1024MB	1024MB
256MB	0MB	256MB
256MB	256MB	512MB
256MB	512MB	768MB
256MB	1024MB	1280MB
512MB	0MB	512MB
512MB	256MB	768MB
512MB	512MB	1024MB
512MB	1024MB	1536MB
1024MB	0MB	1024MB
1024MB	256MB	1280MB
1024MB	512MB	1536MB
1024MB	1024MB	2048MB

Above table lists some system memory configurations. You may combine DIMMs with various capacities to form other combinations.

LAN Interface

Item	Specification
Chipset	Realtek RTL8110SBL
Supports LAN protocol	10/100/1000Mbps
LAN connector type	RJ45
LAN connector location	Rear side

Modem Interface

Item	Specification
Chipset	CS1037 Internal Agere Scorpio chipset (Scorpio+CSP1037B)
Fax modem data baud rate (bps)	14.4K
Data modem data baud rate (bps)	56K
Supports modem protocol	V.92MDC

Modem Interface

Item	Specification
Modem connector type	RJ11
Modem connector location	Rear side

Wireless Module 802.11b/g (optional device)

Item	Specification
Chipset	Intel
Data throughput	11M~54M bps
Protocol	802.11 b+g
Interface	Mini-PCI type II

Floppy Disk Drive Interface

Item	Specification		
Vendor & model name	There is no FDD module for this product		
Floppy Disk Specifications			
Media recognition	2DD (720KB)	2HD (1.2 MB, 3 mode)	2HD (1.44MB)
Sectors/track	9	15	18
Tracks	80	80	80
Data transfer rate (Kbit/s)	1 MB	1.6 MB	2 MB
Rotational speed (RPM)	300	360	300
Read/write heads	2		
Encoding method	MFM		
Power Requirement			
Input Voltage (V)	+5V		

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Hard Disk Drive Interface

Item			
Vendor & Model Name	HGST MORAGA IC25N060ATMR04-0 08K0634 Seagate N2 ST960821A TOSHIBA PLUTO MK6025GAS	HGST MORAGA IC25N080ATMR04-0 08K635 Seagate N2 ST9808210A TOSHIBA PLUTO MK6025GAS	TOSHIBA PLUTO MK1031GAS SEAGATE N2 ST9100822A
Capacity (MB)	60000	80000	100000
Bytes per sector	512	512	512
Logical heads	16	16	16
Logical sectors	63	63	63
Drive Format			
Logical cylinders	16383	16383	16383
Physical read/write heads	3/3/4	4/3/2	4
Disks	2/2/4	2/2/4	2
Spindle speed (RPM)	4200RPM	4200RPM	4200RPM
Performance Specifications			
Buffer size	8MBytes (8192kbytes)	8MBytes (8192kbytes)	8MBytes
Interface	ATA-6	ATA/ATAPI-6	ATA/ATAPI-6

Hard Disk Drive Interface

Item			
Data transfer, rate (host~buffer, Mbytes/s)	100 MB/Sec	100 MB/Sec	100 MB/Sec
DC Power Requirements			
Voltage tolerance	5 +/- 5%	5 +/- 5%	5 +/- 5%

Combo Drive Interface

Item	Specification	Remark
Vendor & model name	DVD/CDRW TOSHIBA TS-L462A	
General Specification		
Interface	Enhanced IDE (ATAPI)	
Disc Diameter	8cm/12cm	
Loading Type	Drawer Type	
Drive Mounting	Horizontal/Vertical	
Read/Write	Read Speed: Max. 24X(3,600 KB/sec) for CD-ROM Max. 24X(3,600 KB/sec) for CD-RW Write Speed: Max. 24X(3,600 KB/sec) for CD-R Max. 10X(1,500 KB/sec) for CD-RW Max. 24X(3,600 KB/sec) for US-RW	 CAV 24X CAV 24X P-CAV 24X/20X/16X ; CLV 10X/8X/4X CLV 10X/4X P-CAV 24X/16X
Mounting Orientation	Horizontal/Vertical	All angles
Buffer Under Run	2MB	
Power consumption	DC +5v/1.2A	
Interface	Enhanced IDE(ATAPI) compatible	
Media compatibility	**CD:** 120mm CD-ROM (Read Only) 80mm CD 800/700/650/550MB CD-Recordable (Read & Write) 700/650MB CD-Rewritable (Read & Write) 700/650MB High Speed CD-Rewritable (Read & Write) **DVD:** 5/9/10/18 DVD-Single/Dual (PTP, OTP) 3.9/4.7G DVD-R (Read Only) 4.7GDVD+R (Read Only) DVD±RW (Read only) 80mm DVD	

Combo Drive Interface

Item	Specification	Remark
Format compatibility	**CD** CD-DA (Red Book) - Standard Audio CD & CD-TEXT CD-ROM (Yellow Book Mode1 & 2) - Standard Data CD-ROM XA (Mode2 Form1 & 2) - Photo CD, Multi-Session CD-I /FMV (Green Book, Mode2 Form1 & 2, Ready, Bridge) CD-Extra/ CD-Plus (Blue Book) - Audio & Text/Video Video-CD (White Book) - MPEG1 Video **DVD** DVD-ROM (Book 1.02), DVD-Video (Book 1.1) DVD-R (Book 1.0, 3.9G) DVD-R (Book 2.0, 4.7G) - General & Authoring DVD+R (Version 1.0) DVD±RW Play DVD-AUDIO except the case that required CPPM (Content protection for prerecorded Media) Write Method	
Loading mechanism	Load: Manual Release: (a) Electrical Release (Release Button) (b) Release by ATAPI command (c) Emergency Release	
Power Requirement		
Input Voltage	DC +5V+/- 5% (operation) DC +5V+/- 8% (start up)	

DVD-RW Interface

Item	Specification
Vendor & model name	TOSHIBA TS-L532A
Performance Specification	
Transfer rate (KB/sec) (1) Read DVD-ROM DVD-R CD-ROM (2) Write CD-R CD-RW HS-RW US-RW (3) ATAPI Interface PIO mode DMA mode Ultra DMA mode	 MAX 8X CAV (MAX 10800kB/s) MAX 4X CAV (MAX 5400kB/s) MAX 24X CAV (MAX 3600kB/s) 4X, 8X (CLV), MAX. 24X(ZCLV) 4X (CLV) 4X, 8X, 10X (CLV) 8X, 10X(CLV), MAX. 16X (ZCLV) 16.6MB/s: PIO mode4 16.6MB/s: Multi word mode2 33.3MB/s: Ultra DMA mode2
Buffer Memory	2MB
Interface	Enhanced IDE(ATAPI) compatible
Applicable disc format	Read: copy-protected DVD discs, CD-ROM, CD audio, DVD-ROM and DVD-RAM, DVD-R/-RW, DVD+R/+RW and CD-R/-RW, DVD-ROM, DVD-R/+R, DVD-R/+R, DVD-RW/+RW, 4.38GB DVD-RAM, CD-DA discs, CD-ROM discs, CD-R discs, CD-RW discs Write: CD-R, CD-RW, high-speed CD-RW, Ultra-speed CD-RW, DVD-R, DVD-RW, DVD+R, DVD+RW

DVD-RW Interface

Item	Specification
Loading mechanism	Load: Manual Release: (a) Electrical Release (Release Button) (b) Release by ATAPI command (c) Emergency Release
Power Requirement	
Input Voltage	5 V +/- 5 % (Operating)

Audio Interface

Item	Specification
Audio Controller	Realtek ALC250
Audio onboard or optional	Built-in
Mono or Stereo	Stereo
Resolution	18 bit stereo full duplex
Compatibility	AC97 2.2 S/PDIF extension compliant codec
Sampling rate	1Hz resolution VSR (Variable Sampling Rate)
Internal microphone	Yes
Internal speaker / Quantity	Yes
Supports PnP DMA channel	DMA channel 0 DMA channel 1
Supports PnP IRQ	IRQ10, IRQ11

Video Interface

Item	Specification
Vendor & Model Name	ATI M24P (ATI MOBILITY™ RADEON™)
Video memory size	128MB
Chip voltage	Core / 2.5V, 1.5V,
Supports ZV (Zoomed Video) port	NO
Graph interface	4X AGP (Accelerated Graphic Port) Bus
Maximum resolution LCD	1600X1200 (UXGA)
Maximum resolution CRT	2048X1536@60HZ

Video Resolutions Mode

Monitor Resolution	Hz
2D Display Mode	
640x480	120
800x600	120
1024x768	120
1152X864	120
1280X1024	120
1600x1200	85
1920x1080*16:9	75
1920x1200	75

Video Resolutions Mode

Monitor Resolution	Hz
1920x1440	75
2048x1536	60

Resolution, colors and maximum refersh rate (Hz) in 256, 65K or 16.7M colors.

NOTE: 16:9 aspect ratio monitors are supported on 1920x1080 and 848x480 on Windows(R)XP, Windows(R) 2000 and Windows(R)ME. The complete list of resolutions depends on the driver version and operating system. NOTE: resolutions are limited by the performance of the attached monitor.

USB Port

Item	Specification
USB Compliancy Level	2.0
OHCI	USB 2.0
Number of USB port	3
Location	Two on the left side; one on the right side
Serial port function control	Enable/Disable by BIOS Setup

PCMCIA Port

Item	Specification
PCMCIA controller	ENE 712
Supports card type	Type II (No Tpye III)
Number of slots	One type II
Access location	Right side
Supports ZV (Zoomed Video) port	NO
Supports 32 bit CardBus	Yes (IRQ17)

Keyboard

Item	Specification
Keyboard controller	ENE 910 keyboard controller
Keyboard vendor	Chicony/JME
Total number of keypads	86-US/87-UK/88-BZ/91-JA key
Windows keys	Yes
Internal & external keyboard work simultaneously	Yes

Battery

Item	Specification
Vendor & model name	SANYO 4UR18650F-2-CPL-15 SONY LIP8151CMPCFSY6
Battery Type	Lithium-ION
Pack capacity	4300mAH
Nominal voltage	14.8V
Number of battery cell	8
Package configuration	4P2S
Package voltage	41.8V / 9.6V

LCD

Item	Specification	
Vendor & model name	SAMSUNG LTN154X3-L01-G GLARE	LG LP154W01-A3 GLARE
Screen Diagonal (mm)	15.4inch	15.4inch
Active Area (mm)	331.2(H)x207.0(V)	331.2(H)x207.0(V)
Display resolution (pixels)	WXGA (1080x800)	WXGA (1080x800)
Pixel Pitch	0.25875(H)x0.25875(H)mm	0.25875(H)x0.25875(H)mm
Pixel Arrangement	RGB vertical stripe	RGB vertical stripe
Display Mode	Normally white	Normally white
Surface Treatment	Haze 0 (Glare), Hardness 3H	Hard coating (2H) glare+ Anti reflective treatment of the front polarizer
Typical White Luminance (cd/m^2) also called Brightness	200	185
Luminance Uniformity	not show	not show
Contrast Ratio	300	300
Response Time (Optical Rise Time/Fall Time)msec	25(rise+falling)	30(rise+falling)
Nominal Input Voltage VDD	not show	not show
Typical Power Consumption (watt)	3.7 (for backlight unit)	Total 5.26 @LCM circuit 1.12, backlight input 4.14
Weight	not show	590
Physical Size(mm)	344(W)x222(H)x6.5(D)	344(W)x222(H)x6.5(D)
Support Color	Native 262K colours	262K colours
Viewing Angle (degree) Horizontal: Right/Left Vertial: Upper/Lower	 45/45 15/35	 60/60 40/50
Temperature Range(° C) Operating Storage (shipping)	 0 to 50 -20 to -60	 0 to 50 -20 to -60

AC Adapter

Item	Specification
Vendor & model name	Liton
Input Requirements	
Maximum input current (A, @90Vac, full load)	1.5 A @ 110Vac 1.0 A @ 240Vac
Nominal frequency (Hz)	50-60
Frequency variation range (Hz)	47-63
Input voltage range (Vrms)	90-270
Inrush current	The maximum inrush current will be less than 50A and 100A when the adapter is connected to 115Vac and 230Vac respectively.
Efficiency	It should provide an efficiency of 80% minimum, when measured at maximum load under 115Vac.
Output Ratings (CV mode)	
DC output voltage	19V
Noise + Ripple	300mVp-pmax (20 MHz bandwidth)

AC Adapter

Item	Specification
Load	0(min) 3.16A(max)
Output Ratings (CC mode)	
DC output voltage	19V +/-1.0V for CV mode
Constant current mode	3.6 +/- 0.3A
Dynamic Output Characteristics	
Turn-on delay time	3 sec (@ 115Vac)
Hold up time	5ms (@115Vac, Full load)
Over Voltage Protection (OVP)	24V
Short circuit protection	3.9A max can be protected and output can be shorted without damage
Electrostatic discharge (ESD)	15KV (at air discharge) 8KV (at contact discharge)
Dielectric Withstand Voltage	
Primary to secondary	3000Vac
Leakage current	0.25 mA max. (@ 254Vac, 60Hz)
Regulatory Requirements	Safety Requirements: 1.The subject product rated 100-120V 60Hz must be listed under UL 1950 and certified with SCA Standard C22.2 No.950. 2.The subject product rated 200-240V 50Hz must comply with low voltage directive 73/23EEC. EMI Requirements: 1.The subject product rated 100-120V 60Hz must meet the EMI requirements of FCC part 15, Subpart B for Class B Digital Device and get FCC Certification before marketing into USA and Canada. 2.The subject product rated 200-240V 50Hz must meet the EMC Directive 89/336/EEC. 3.The subject product rated 100-120V must meet the VCCI-2 EMI requirements.

Power Management

Power Saving Mode	Phenomenon
Standby Mode Enter Standby Mode when 1.Standby/Hibernation hot-key is pressed and system is not ready to enter Hibernation mode. 2.System standby/ Hibernation timer expires and system is not ready to enter Hibernation mode.	❑ The buzzer beeps ❑ The Sleep indicator lights up
Hibernation Mode **Enter Hibernation Mode (suspend to HDD) when** **1.Hibernation hot-key is pressed and system is ready to enter Hibernation mode** **2.System Hibernation timer expires and system is ready to enter Hibernation mode.**	❑ All power shuts off
Display Standby Mode Keyboard, built-in touchpad, and an external PS/2 pointing device are idle for a specified period.	❑ The display shuts off

Power Management

Power Saving Mode	Phenomenon
Hard Disk Standby Mode Hard disk is idle within a specified period of time.	❑ Hard disk drive is in standby mode. (spindle turned-off)

Environmental Requirements

Item	Specification
Temperature	
Operating	+0~+35 °C
Non-operating	-20~+65 °C
Package storage	-20~+65 °C
Humidity	
Operating	10% to 90% RH, non-condensing
Non-operating	10% to 90% RH, non-condensing (Unpacked)
Non-operating	10% to 90% RH, non-condensing (Storage package)
Vibration	
Operating (unpacked)	Operation vibration: 1.0G ,X,Y,Zaxis, 30 minutes/axis
Non-operating (unpacked)	5~27.1Hz: 0.6G 27.1~50Hz: 0.04mm (peak to peak) 50~500Hz: 2.0G
Non-operating (packed)	5~62.6Hz: 0.51mm (peak to peak) 62.6~500Hz: 4.0G

Mechanical Specification

Item	Specification
Dimensions	360(W) x 265(D) x 32.2(H)mm for 15.4
Weight	6.5 lbs (2.9kg) for 15.4 TFT LCD model with battery
I/O Ports	Three USB 2.0 ports IEEE 1394 port Ethernet (RJ-45) port Modem (RJ-11) port S-video/TV-out (NTSC/PAL) port TV-in port1 Audio/video-in port1 External display (VGA) port Microphone/line-in jack Headphones/speaker/line-out jack Consumer infrared (CIR) port Type II PC Card slot DC-in jack for AC adaptor 3-in-1 card reader
Drive Bays	One
Material	Plastic
Indicators	LED indicator for keyboard hot key: Caps Lock, Scroll Lock, NUmber lock LED indicator for function indicator: System power-on, HDD/ODD, Wireless on/off, Arcade LED mode, DC-in, Battery/Charging indicator
Switch	Power

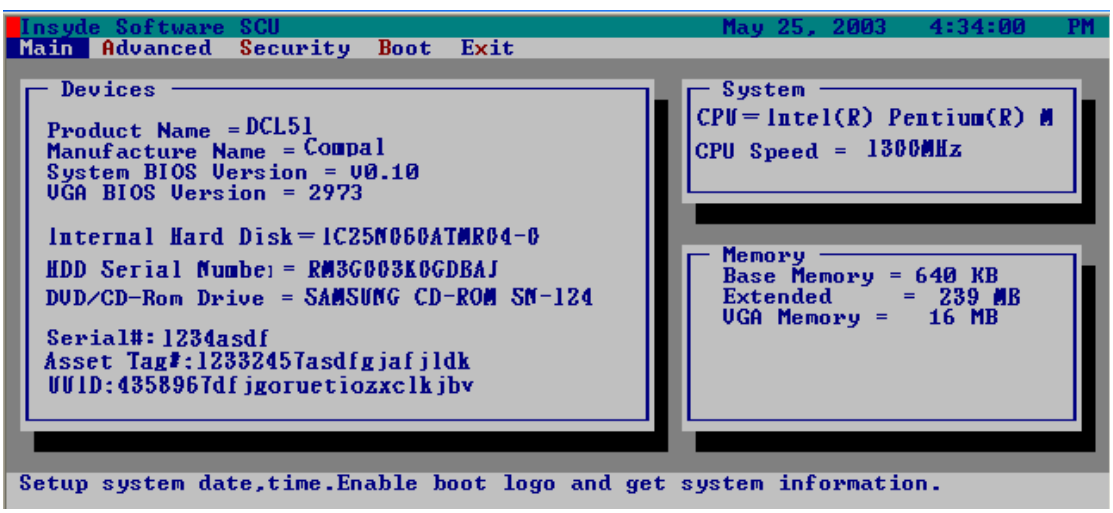
System Utilities

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).



Navigating the BIOS Utility

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

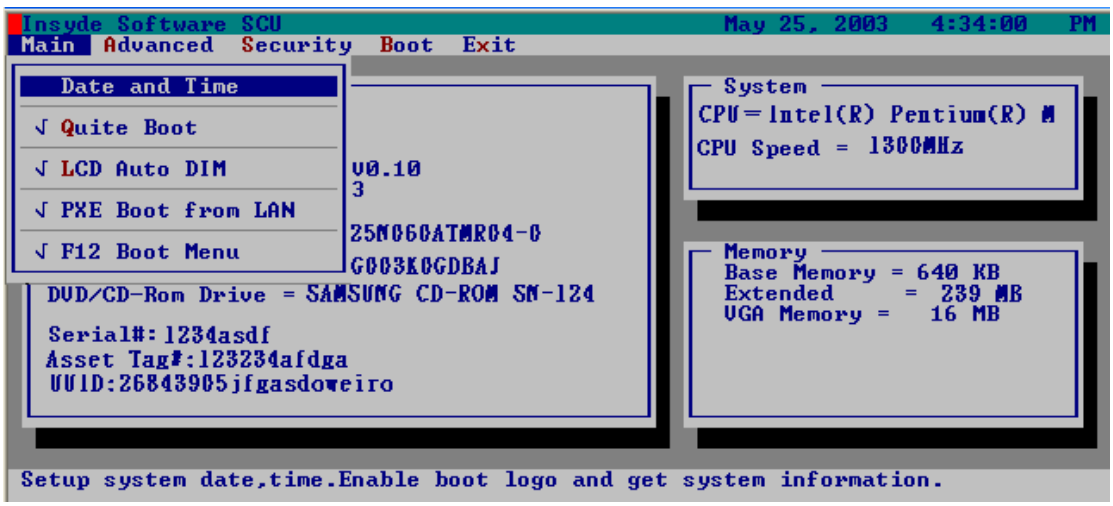
Follow these instructions:

- 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 F5 or F6.
- 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.

Main

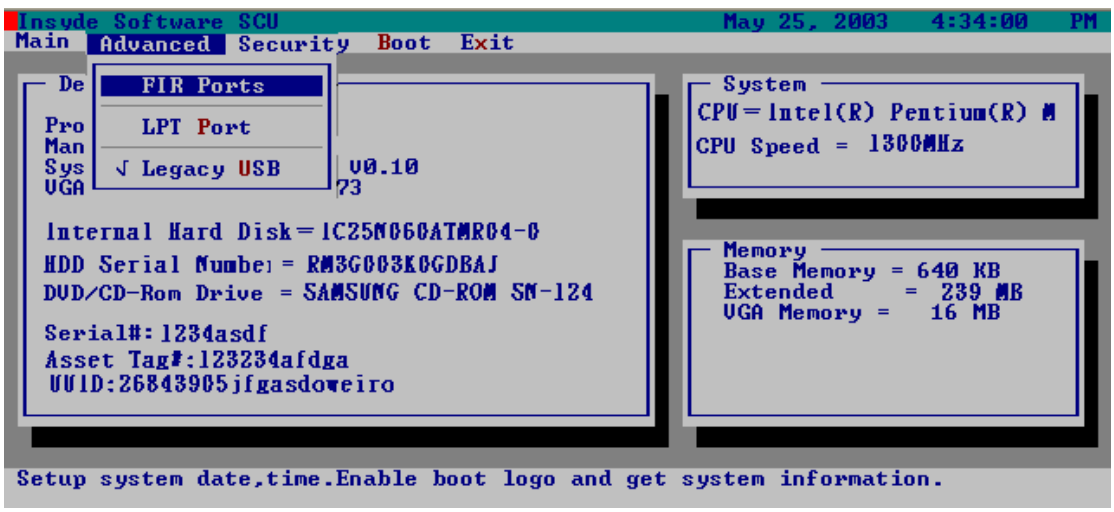
This menu provides you the information of the system.



Parameter	Description
System BIOS Version	Displays system BIOS version
VGA BIOS Version	Displays VGA BIOS version
Serial #	Displays the serial number of the unit.
UUID Number	UUID=16bytes. This will be visible only when there is an internal LAN device present.
System Memory	This field reports the memory size of system base memory. The size is fixed to 640KB.
Extended Memory	This field reports the memory size of the extended memory in the system. Extended Memory size=Total memory size
CPU Speed	CPU Speed= Max speed
System Time and System Date	Sets the system time and date.
Quiet Boot Mode	Control whether Customer Logo and Summary Screen are displayed or not.
LCD Auto DIM	Enabled: LCD brightness will automatically lower to save more power when AC is not present. Disabled: LCD brightness will NOT automatically lower to save more power when AC is not present.
PXE Boot from LAN	Enables “PXE Boot from LAN” function at DOS.
F12 Boot Menu	This field decides whether the OEM POST screen will have the following message: “Press <F12> Change Boot Device” or not during user’s quiet boot.

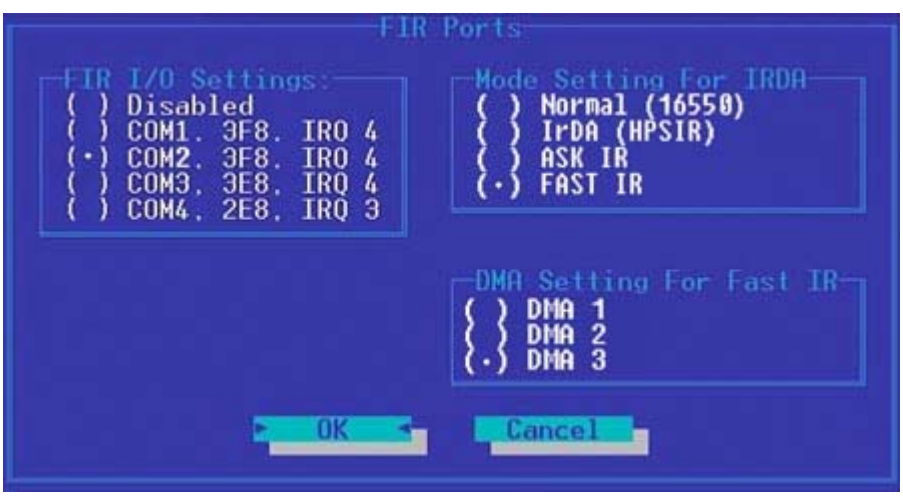
Advanced

The Advanced screen contains parameters involving your hardware devices. It also provides advanced settings of the system.



FIR Ports

Configure the system's Infrared port using options: **Disabled** and Enabled.



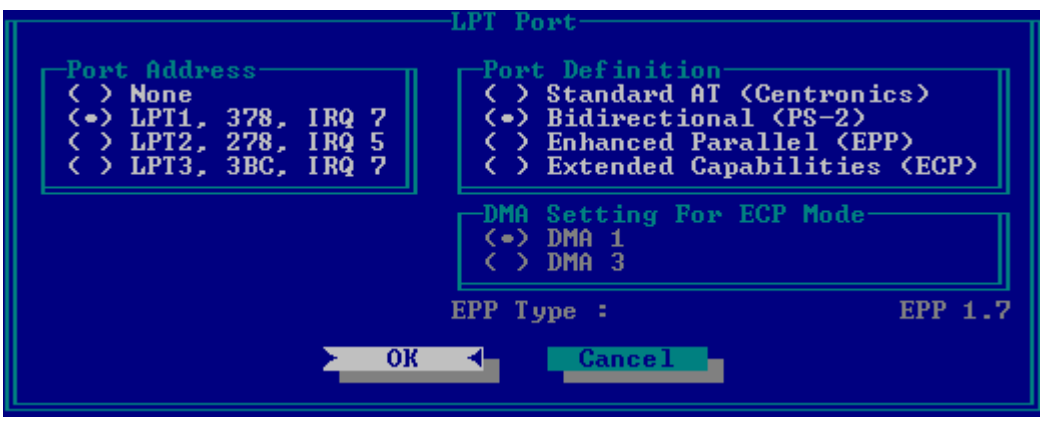
The table below describes the parameters in the screen. Settings in **boldface** are the default and suggested parameter settings.

	Description	Option
FIR I/O Settings	Sets the base I/O address and IRQ for Infrared port.	COM1, 3F8, IRQ4/ **COM2, 2F8, IRQ3**/ COM3, 3E8, IRQ4/ COM4, 2E8, IRQ3

	Description	Option
DMA Setting for Fast IR	Sets a DMA channel for the printer to operate in ECP mode. This parameter is enabled only if Mode is set to ECP.	DMA1, DMA2, **DMA3**,
Mode Setting		Normak (16550), IrDA (HPSIR), ASK IR, **FAST IR**

LPT Port

Configure the system's parallel port using options: **Disabled** and Enabled.



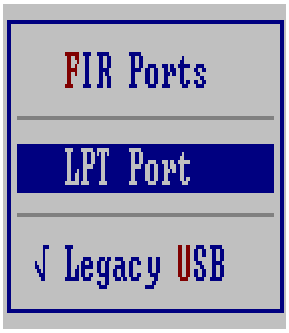
The table below describes the parameters in the screen. Settings in **boldface** are the default and suggested parameter settings.

	Description	Option
Port Definition	Sets the mode for the parallel port. Standard AT: Normal mode (AT compatible) Bi-directional: Bi-directional mod (PS/2 compatible) Enhanced Parallel (EPP): EPP mode Extended Compabilities (ECP): ECP mode (requires DMA channel)	Standard AT (Centronics), **Bidirectional (PS-2)**, Enhanced Parallel (EPP), Extended Capabilities
Port Address	Sets the base I/O address for the parallel port. When Mode is selected as EPP mode, "3BC" will not be available.	None/ **LPT1, 378, IRQ7**/ LPT2, 278, IRQ5/ LPT3, 3BC, IRQ7
Mode Setting	If ECP mode has been selected, then DMA default is DMA1.	DMA1, DAM3

Legacy USB Support

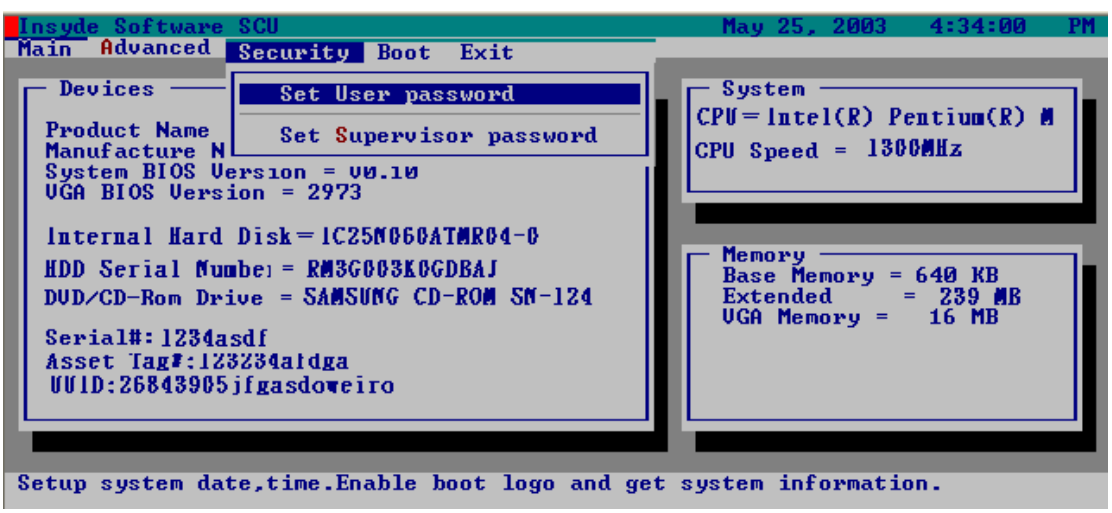
Disabled: Disable support for Legacy Universal Serial Bus.

Enabled: Enable support for Legacy Universal Serial Bus.



Security

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



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

Set Supervisor/User Password

If password on boot is required, the password must be set otherwise it cannot be enabled.

The formats of the password are as follows:

Length 10 characters

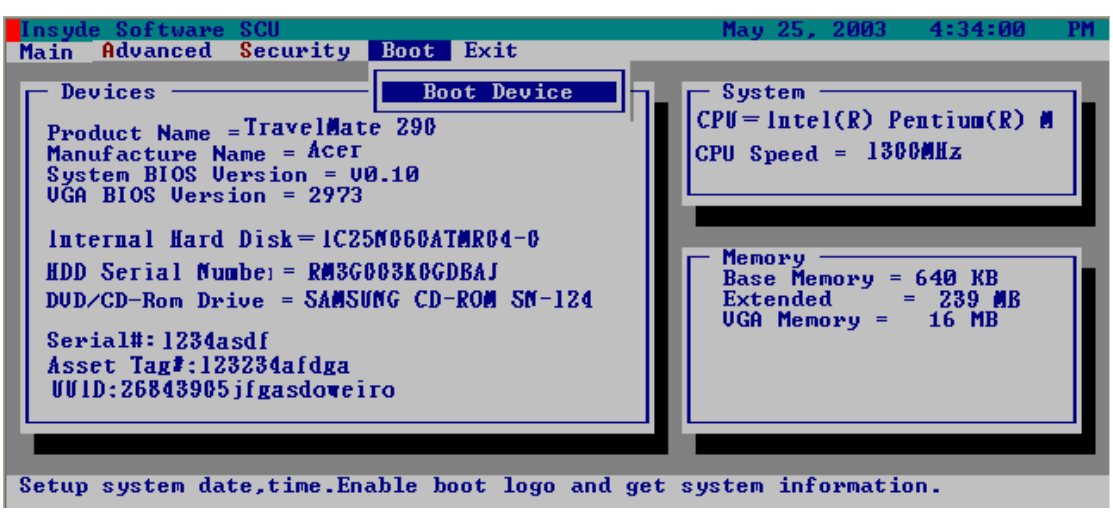
Characters Alphanumeric keys only. The shift status i.e. Ctrl, Shift, Alt and Capital are ignored.

Parameter	Description	Option
Set User Password	Press Enter to set the user password. When set, this password protects the BIOS Setup Utility from unauthorized access.	
Set Supervisor Password	Press Enter to set the administrator password. When set, this password protects the BIOS Setup Utility from unauthorized access.	
Password on Boot	Allows the user to specify whether or not a password is required to boot.	**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.

Boot

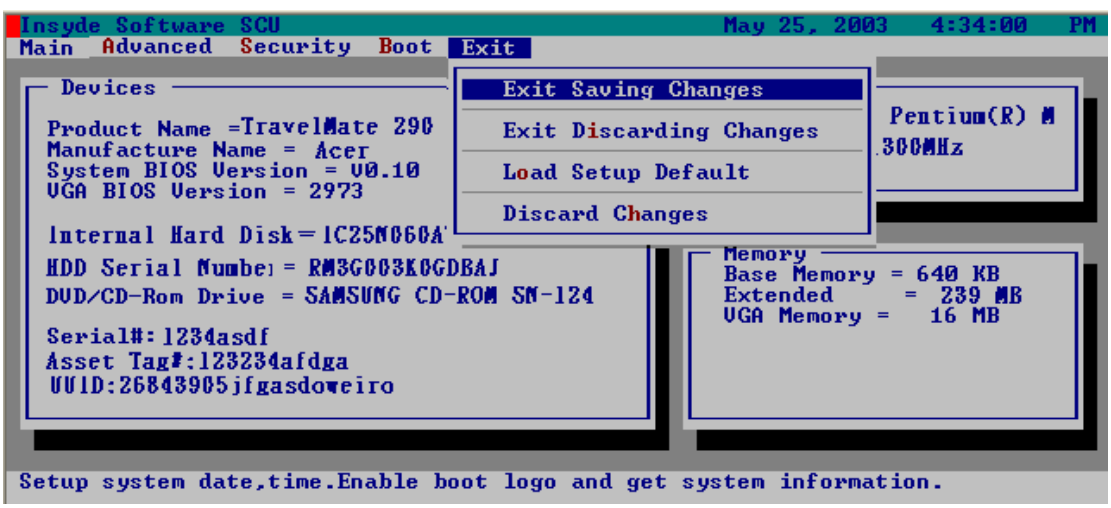
This menu allows the user to decide the order of boot devices to load the operating system. Bootable devices includes the distette drive in module bay, the onboard hard disk drive and the CD-ROM in module bay.



Please select the order of the boot devices.

Exit

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



The table below describes the parameters in this screen.

Parameter	Description
Exit Saving Changes	Allows the user to save changes to CMOS and reboot the system.
Exit Discarding Changes	Allows the user Discards changes made and exits System Setup.
Load Setup Default	Loads default settings for all parameters (same as F9).
Discard Changes	Allows the user to discard previous changes in CMOS Setup.

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 Flash 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 Flash utility.

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

NOTE: Please use the AC adaptor power supply when you run the Flash 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.

Fellow the steps below to run the Flash.

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.

Remove BIOS and HDD Password Utility

You can follow the steps below to clean BIOS and HDD password.

1. Copy clnpwd.exe to a bootable disc.
2. Boot from the disc and enter DOS mode.
3. Execute the utility by typing clnpwd.
4. The screen will display the following messages:

   Press 1-3 to clean any password shown as below

   1. User Password

   2. Supervisor Password

   3. HDD Password
5. Press 1 if you want to clean user password; press 2 if you want to clean supervisor password; press 3 if you want to clean HDD password.
6. If the password has been successfully erased, the screen will display “Password clean successfully”, if not, the screen will show “The function is not supported by this platform”.
7. If the password has been removed, you can reboot your system. If not, please contact with your manufacturer.

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
- Flat-bladed screw driver
- Phillips screw driver
- Tweezers
- Plastic Flat-bladed screw driver
- Hexed Screw Driver

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

General Information

Before You Begin

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

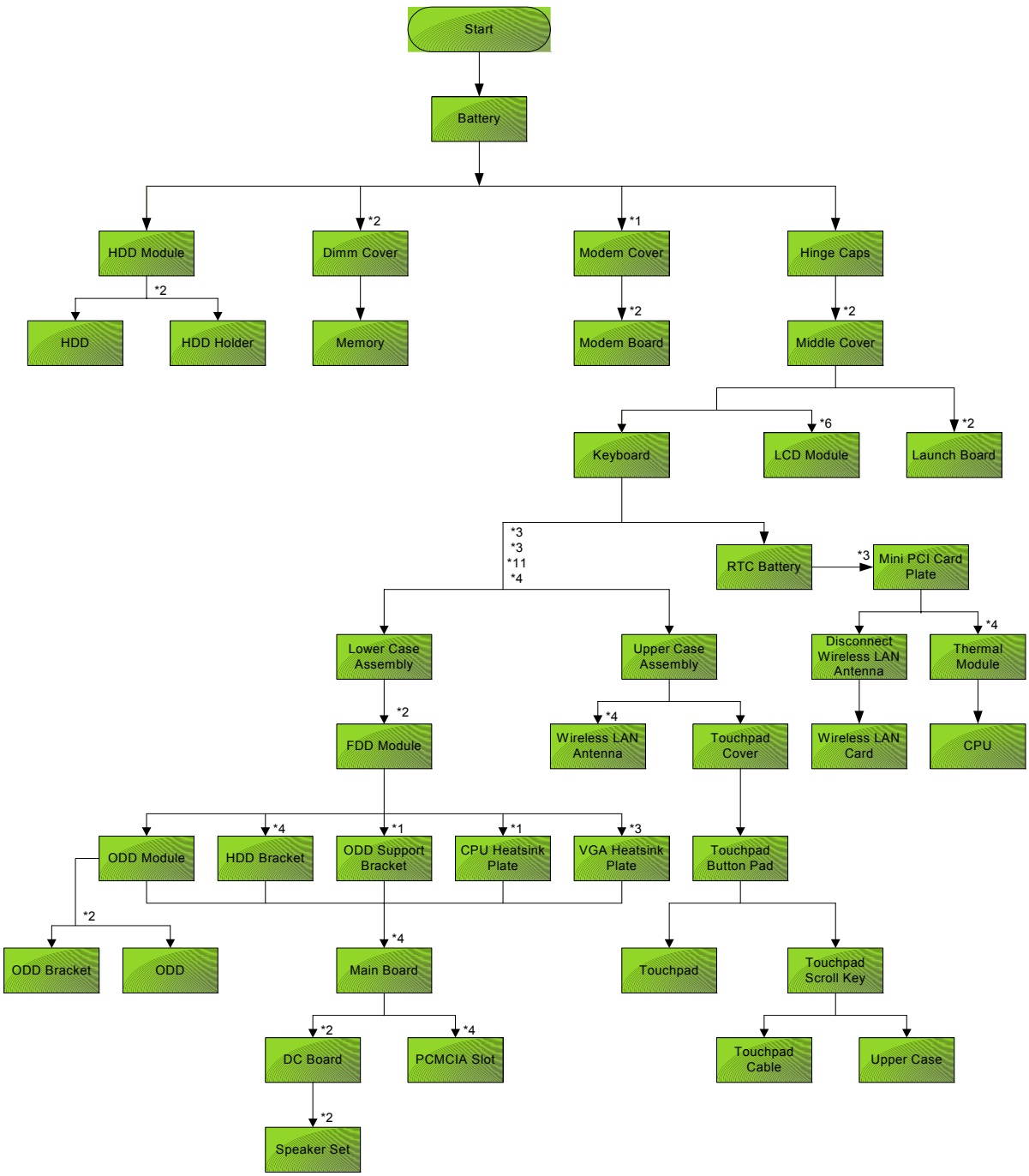
1. Turn off the power to the system and all peripherals.
2. Unplug the AC adapter and all power and signal cables from the system

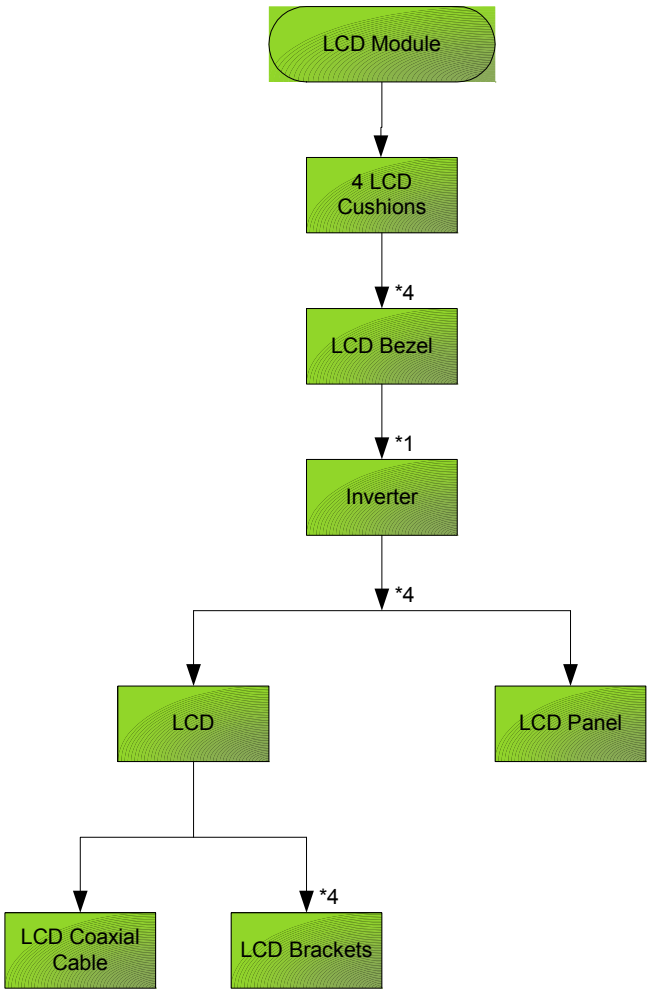
.

NOTE: Aspire 9100 series product uses mylar or tape to fasten the FFC/FPC/connectors/cable, you may need to tear the tape or mylar before you disconnect different FFC/FPC/connectors.

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 main board, you must first remove the keyboard, then disassemble the inside assembly frame in that order.





Screw List

Item	Description
A	SCREW F040 9 5.0X5.0 9.5X(IO) R00
B	SCREW M2.0X0.4P+3FP ZK(NL)
C	SCREW M2.5 K 5/2 X0.85 4 ZK(NL)
D	SCREW M2.5X0.45+10K NIL
E	SCREW M2.5X0.45+8K ZBL
F	SCREW M2.5X0.45P+3F NI
G	SCREW M3.0X0.8P+3K NL

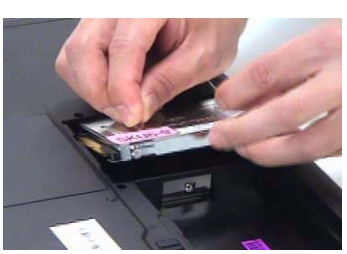
Removing the Battery

1. Unlatch the battery latch then remove the battery.


Removing the Hard Disc Drive Module

1. See “Removing the Battery” on page 44.
2. Remove the screw securing the hard disk drive (HDD) cover.
3. Then remove the HDD cover.


4. Pull the HDD module backwards as shown.
5. Remove the HDD module.



Disassembling the Hard Disc Drive Module

1. Remove two screw securing the HDD bracket.
2. Remove the other two screw on the other side.
3. Take out the HDD from the HDD bracket.



Removing the Optical Disc Drive Module

1. See “Removing the Battery” on page 44.
2. See “Removing the Hard Disc Drive Module” on page 44.
3. Remove the screw securing the optical disc drove (ODD) module.
4. Push the ODD module outwards with a flat headed screw driver.
5. Then remove the ODD module.



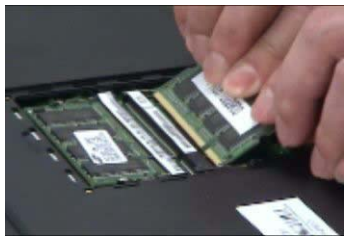
Disassembling the Optical Disc Drive Module

1. Remove two screws securing the ODD bracket.
2. Then remove the ODD bracket.


Removing the Memory

1. See “Removing the Battery” on page 44.
2. Remove the two screws securing the DIMM cover then remove the DIMM cover.
3. Pop out the memory.
4. Then remove the memory from the DIMM socket.





Removing the LCD Module

Removing the Middle Cover

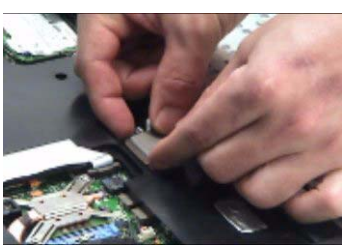
1. See “Removing the Battery” on page 44.
2. Open the notebook as image shows.
3. Detach the middle cover carefully then remove it.



Removing the Keyboard

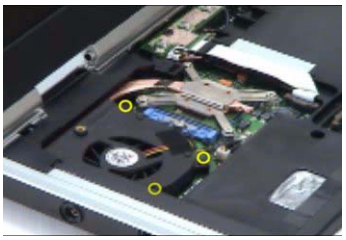
1. See “Removing the Battery” on page 44.
2. See “Removing the Middle Cover” on page 47.
3. Remove the four screws securing the keyboard.
4. Turn the keyboard over as shown.
5. Disconnect the keyboard cable then remove the keyboard.

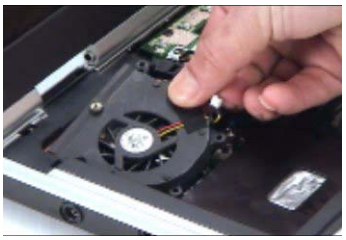




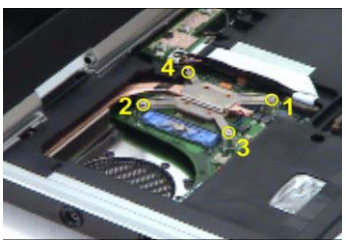
Removing the Fan, the CPU Thermal Module and the CPU

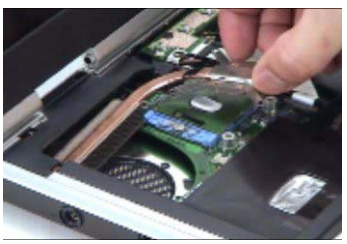
1. See “Removing the Battery” on page 44.
2. See “Removing the Middle Cover” on page 47.
3. See “Removing the Keyboard” on page 47.
4. Remove the three screws securing the system fan.
5. Disconnect the fan cable.
6. Then detach the fan from the main unit.





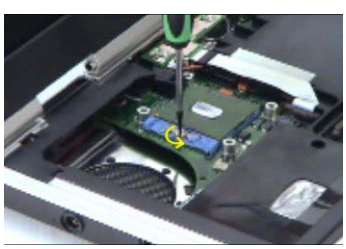
7. Remove the four screws securing the CPU thermal module.
8. Then remove the CPU thermal module.





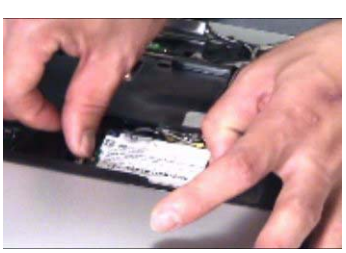
NOTE: Please remove the screws in the order that the image indicates. Start from 4, 3, 2 then 1. When you reassemble the CPU thermal module, secure the screws as the order: 1, 2, 3 then 4. This can help you average the force to each screw, therefore the CPU module can be secured well.

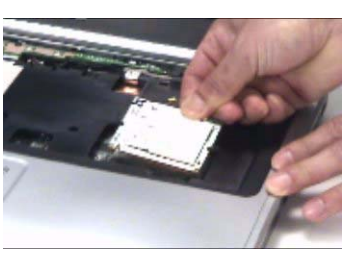
9. Release the CPU lock with a flat headed screw driver.
10. Then detch the CPU from the socket carefully.




Removing the Wireless LAN Card

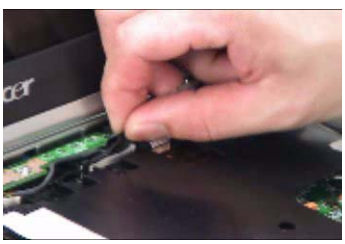
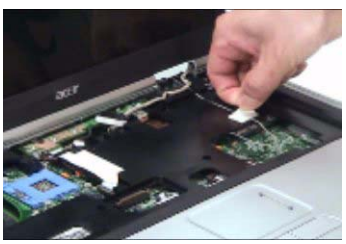
1. See “Removing the Battery” on page 44.
2. See “Removing the Middle Cover” on page 47.
3. Pop out the wireless LAN card.
4. Disconnect the main and the auxiliary antennae.
5. Then remove the wireless LAN card from the main unit.





Removing the LCD Module

1. See “Removing the Battery” on page 44.
2. See “Removing the Middle Cover” on page 47.
3. See “Removing the Keyboard” on page 47.
4. Disconnect the inverter cable with a flat headed screw driver.
5. Take out the LVDS cable then disconnect the LVDS cable.
6. Tear off the tape securing the wireless LAN antennae then release the antennae.

7. Remove the two screws securing the LCD module on the rear side.
8. Remove the two screws securing the LCD module on the bottom.
9. Then detach the LCD module carefully.



Disassembling the LCD Module

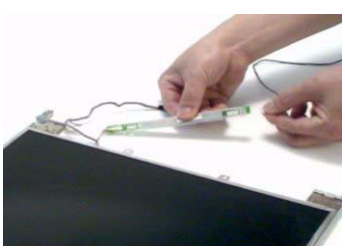
Removing the LCD Bezel

1. See “Removing the Battery” on page 44.
2. See “Removing the Middle Cover” on page 47.
3. See “Removing the Keyboard” on page 47.
4. See “Removing the Fan, the CPU Thermal Module and the CPU” on page 47.
5. See “Removing the Wireless LAN Card” on page 48.
6. See “Removing the LCD Module” on page 49.
7. Detach the two rubber pads and the two screw pads.
8. Remove the four screws securing the LCD bezel.
9. Detach the LCD bezel carefully.

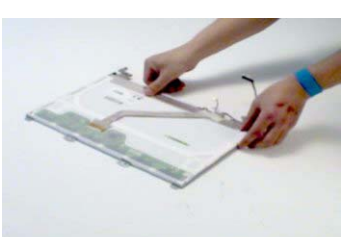


10. Remove the nine screws securing the LCD to the LCD panel.
11. Take out the LCD assembly from the LCD panel.
12. Disconnect the LCD inverter cable.

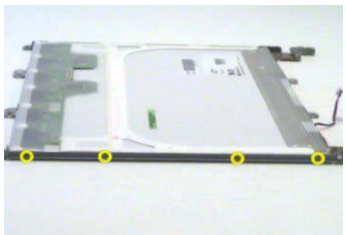


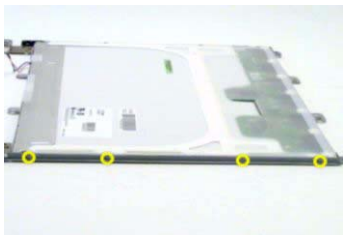


13. Discnnect the LCD inverter board.
14. Turn over the LCD.
15. Disconnect the LCD cable.


16. Remove the four screws securing the right LCD bracket, then remove the right bracket.
17. Remove the four screws securing the left LCD bracket, then remove the left bracket.



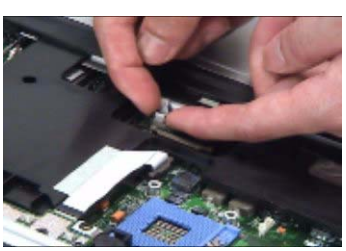


Disassembling the Main Unit

Removing the Upper Case Assembly

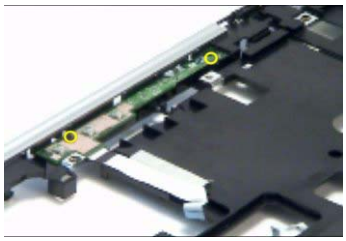
1. See “Removing the Battery” on page 44..
2. See “Removing the Hard Disc Drive Module” on page 44.
3. See “Removing the Optical Disc Drive Module” on page 45.
4. See “Removing the Memory” on page 45.
5. See “Removing the LCD Module” on page 47.
6. Remove the fifteen screws securing the lower case assembly and the upper case assembly on the bottom.
7. Remove the three screws securing the upper case assembly.

8. Disconnect the touchpad cable.
9. Disconnect the power board cable.
10. Then detach the upper case assembly.



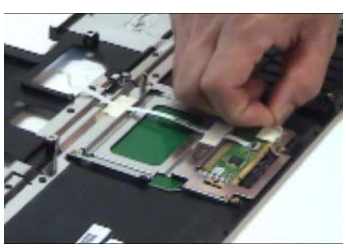
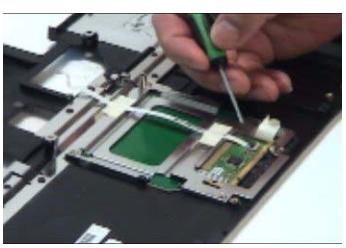
Removing the Power Board

1. See “Removing the Battery” on page 44.
2. See “Removing the Hard Disc Drive Module” on page 44.
3. See “Removing the Optical Disc Drive Module” on page 45.
4. See “Removing the Memory” on page 45.
5. See “Removing the LCD Module” on page 47.
6. Remove the two screws securing the power board.
7. Tear off the tape holding the power board cable then remove the power board.

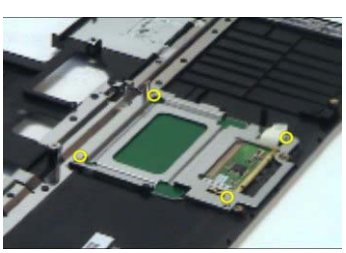
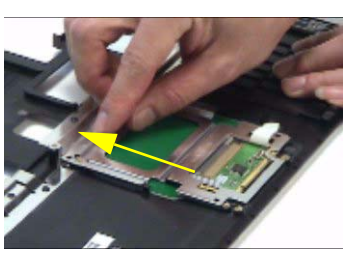
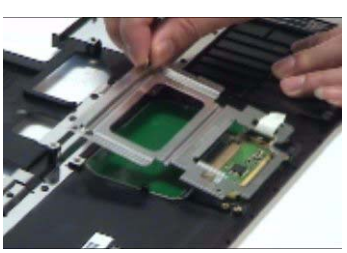



Removing the Touchpad Bracket, the Touchpad Board and the Touchpad

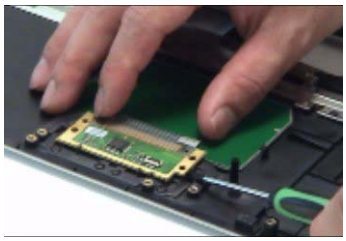
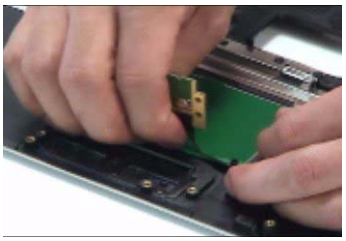
1. See “Removing the Battery” on page 44.
2. See “Removing the Middle Cover” on page 47.
3. See “Removing the Keyboard” on page 47.
4. See “Removing the Power Board” on page 52.
5. See “Removing the Upper Case Assembly” on page 52.
6. Pull back the tape covering the touchpad FFC.
7. Disconnect the touchpad FFC the remove it.

8. Remove the four screws securing the touchpad bracket.
9. Slide the touchpad bracket back as shown.
10. Then remove the touchpad bracket.

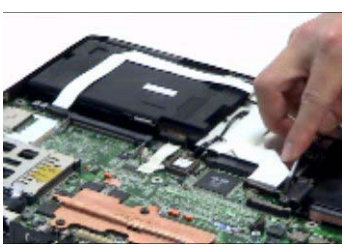
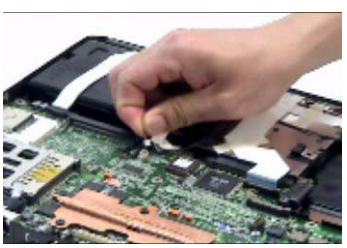
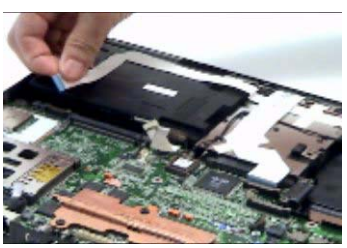




11. Use a flat headed screw driver to detach the touchpad board.
12. Then detach the touchpad carefully.

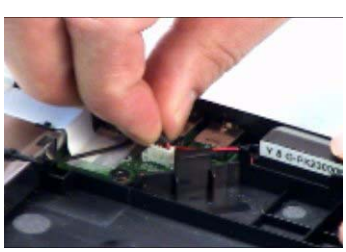



Removing the Speaker Set

1. See “Removing the Battery” on page 44.
2. See “Removing the Middle Cover” on page 47.
3. See “Removing the Keyboard” on page 47.
4. See “Removing the Power Board” on page 52.
5. See “Removing the Upper Case Assembly” on page 52.
6. Disconnect the SW DJ board cable.
7. Disconnect the CIR receiver cable.
8. Then disconnect the audio board FFC cable.

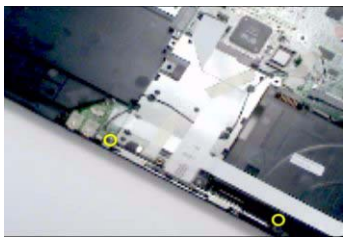
9. Disconnect the speaker set cable.
10. Then detach the speaker set from the lower case.




Removing the SW DJ Board Assembly

1. See “Removing the Battery” on page 44.
2. See “Removing the Middle Cover” on page 47.
3. See “Removing the Keyboard” on page 47.
4. See “Removing the Power Board” on page 52.
5. See “Removing the Upper Case Assembly” on page 52.
6. See “Removing the Speaker Set” on page 54.

7. Remove the two screws securing the SW DJ board assembly.
8. Remove the SW DJ board assembly from the lower case.




9. Remove the two screws securing the SW DJ board and SW DJ board bracket.
10. Then remove the SW DJ board.


Removing the Audio Board

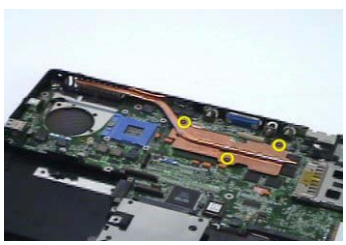
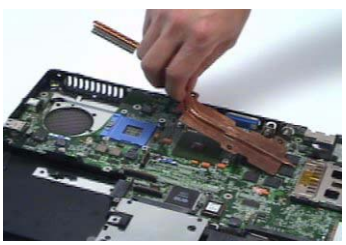
1. See “Removing the Battery” on page 44.
2. See “Removing the Middle Cover” on page 47.
3. See “Removing the Keyboard” on page 47.
4. See “Removing the Power Board” on page 52.
5. See “Removing the Upper Case Assembly” on page 52.
6. See “Removing the Speaker Set” on page 54.
7. See “Removing the SW DJ Board Assembly” on page 54.
8. Remove the screw securing the audio board.
9. Detach the audio board FFC.
10. Release the CIR receiver cable.
11. Then detach the audio board.



Removing the VGA Thermal Module

1. See “Removing the Battery” on page 44.

2. See “Removing the Middle Cover” on page 47.
3. See “Removing the Keyboard” on page 47.
4. See “Removing the Power Board” on page 52.
5. See “Removing the Upper Case Assembly” on page 52.
6. Remove the three screws securing the VGA thermal module.
7. Then detach the VGA thermal module.

Removing the Modem Board

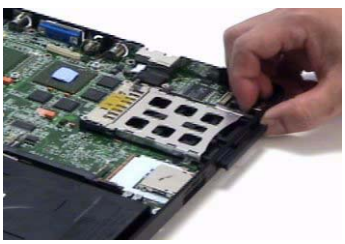
1. See “Removing the Battery” on page 44.
2. See “Removing the Middle Cover” on page 47.
3. See “Removing the Keyboard” on page 47.
4. See “Removing the Power Board” on page 52.
5. See “Removing the Upper Case Assembly” on page 52.
6. Remove the two screws securing the modem board.
7. Disconnect the modem board connector.
8. Disconnect the modem board cable then remove the board.



Removing the Main Board

1. See “Removing the Battery” on page 44.
2. See “Removing the Middle Cover” on page 47.
3. See “Removing the Keyboard” on page 47.
4. See “Removing the Power Board” on page 52.
5. See “Removing the Upper Case Assembly” on page 52.
6. See “Removing the Speaker Set” on page 54.
7. See “Removing the SW DJ Board Assembly” on page 54.
8. See “Removing the Audio Board” on page 55.
9. See “Removing the VGA Thermal Module” on page 55.

10. See “Removing the Modem Board” on page 56.
11. Remove the two nut screws securing the main board.
12. Press the PCMCIA card button.

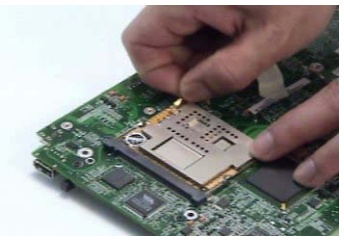
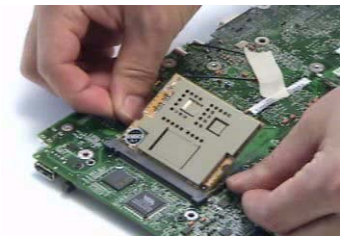



13. Remove the dummy card.
14. Remove the two screws securing the main board to the lower case.
15. Then detach the main board from the lower case carefully.



Removing the Control Board

1. See “Removing the Battery” on page 44.
2. See “Removing the Middle Cover” on page 47.
3. See “Removing the Keyboard” on page 47.
4. See “Removing the Power Board” on page 52.
5. See “Removing the Upper Case Assembly” on page 52.
6. See “Removing the Speaker Set” on page 54.
7. See “Removing the SW DJ Board Assembly” on page 54.
8. See “Removing the Audio Board” on page 55.
9. See “Removing the VGA Thermal Module” on page 55.
10. See “Removing the Modem Board” on page 56.
11. See “Removing the Main Board” on page 56.
12. Turn over the main board as shown.
13. Disconnect the control board antenna.
14. Pop out the control board then remove it.

Troubleshooting

Use the following procedure as a guide for computer problems.

1. Obtain the failed 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. If any problem occurs, you can perform visual inspection before you fellow this chapter's instructions. You can check the following:

   power cords are properly connected and secured;

   there are no obvious shorts or opens;

   there are no obviously burned or heated components;

   all components appear normal.
4. After you perform visual inspection you can also verify the following:

   ask the user if a password is registered and, if it is, ask him or her to enter the password.

   verify with the customer that Wndows XP is installed on the hard disk. Operating systems that were not preinstalled by Acer can cause malfunction.

   make sure all optional equipment is removed from the computer.

   make sure the floppy disk is empty.
5. 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 62.
POST does not complete. No beep or error codes are indicated.	"Insyde MobilePro BIOS POST Beep Code and POST Messages" on page 66 "Undetermined Problems" on page 80
POST detects an error and displayed messages on screen.	"Insyde MobilePro BIOS POST Beep Code and POST Messages" on page 66
Other symptoms (i.e. LCD display problems or others).	"Insyde MobilePro BIOS POST Beep Code and POST Messages" on page 66
Symptoms cannot be re-created (intermittent problems).	Use the customer-reported symptoms and go to "Insyde MobilePro BIOS POST Beep Code and POST Messages" on page 66 "Intermittent Problems" on page 79 "Undetermined Problems" on page 80

System Check Procedures

External Diskette Drive Check

Do the following steps 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. The FDD heads can become dirty over time, affecting their performance. Use an FDD cleaning kit to clean the heads. If the FDD still does not function properly after cleaning, go to next step.
2. Boot from diagnostic program.
3. If an error occurs with the internal diskette drive, reconnect the diskette connector on the main board.

If the error still remains:

1. Reconnect the external diskette drive module.
2. Replace the external diskette drive module.
3. Replace the main board.

External CD-ROM/DVD-ROM Drive Check

Do the following to isolate the problem to a controller, drive, or CD-ROM/DVD-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. Insert an audio CD into the CD/DVD drive. If the CD/DVD drive can read the data from the audio CD. The drive does not have problem, then go to next step. If the CD/DVD LED on the front panel does not emit light as it read the data from the audio CD, then go to next step. However, if the CD/DVD drive can not read data from the audio CD, you may need to clean the CD/DVD drive with a CD/DVD drive cleaning disk.
2. Make sure that the appropriate driver has been installed on the computer for the CD/DVD drive.
3. Boot from the diagnostics diskette and start the diagnostics program
4. See if CD-ROM Test is passed when the program runs to CD-ROM/DVD-ROM Test.
5. Follow the instructions in the message window.

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

1. Reconnect the CD-ROM/DVD-ROM module.
2. Replace the CD-ROM/DVD-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 main 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:

- Embedded 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. Currently, we do not provide memory test program. However, if you need to check memory but have no testing program or diagonositc utility at hand, please go to http://www.passmark.com to download the shareware “BurnIn Test V.3.0”. You may test the memory with this program under Window XP environment.

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:

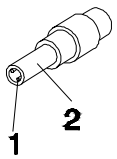
1. Remove the battery pack.
2. Connect the power adapter and check that power is supplied.
3. Disconnect the power adapter and install the charged battery pack; then check that power is supplied by the battery pack.

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

- “Check the Power Adapter” on page 63
- “Check the Battery Pack” on page 64

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: 19V
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 main board.
   - ❑ If the problem is not corrected, see “Undetermined Problems” on page 80.
   - ❑ 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 DC-IN 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 Power Adapter” on page 63.

Check the Battery Pack

To check the battery pack, do the following:

From Software:

1. Check out the Power Options 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).
3. If the voltage is still less than 7.5 Vdc after recharging, replace the battery.
4. If the voltage is within the normal range, run the diagnostic program.

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 emit, 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. After rebooting, run Touch pad/PS2 Mode Driver.
2. Run utility with the PS/2 mouse function and check if the mouse is working.
3. If the PS/2 mouse does not work, then check if the main board to switch board FPC is connected well.
4. If the main board to switch board FPC is connected well, then check if the touch pad FPC connects to the main board properly.
5. If there is still an error after you have connected the touch pad FPC to the main board properly, then replace the touch pad or touch pad FPC. The touch pad or touch pad FPC may be damaged.
6. Replace switch board.
7. If the touch pad still does not work, then replace the FPC on Track Pad PCB.

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.

Display Check

1. Connect an external display to the computer's external monitor port, the boot the computer. The computer can automatically detect the external display. Press Fn+ F5 to switch to the external display.
2. If the external display works fine, the internal LCD may be damaged. Then perform the following steps:

   Make sure the DDRRAM module is seated properly. Then run the diplay test again. If the problem still exists, go to next step.

   Replace the inverter board, then run the display test program again. If the problem still occurs, go on next step.

   Replace the LCD module with a new one then run the display test again. If the probelm still happens, continue next step.

Replace LCD/FL cable with a new one then execute the display diagnostic again. If the problem still occurs, continue next step.

Replace the CPU with another of the same specifications. If the problems still occurs, go to next step.

The main board may be damaged. Replace main board.

3. If the external monitor has the same problem as the internal monitor, the main board may be damaged. Please insert the diagnostic disk and run the display test program and go through the sub-steps under step 2.

Sound Check

To determine if the computer's built-in speakers are functioning properly, perform the following steps. Before you start the steps below, adjust the speaker volume to an appropriate level.

1. Try different audio sources. For example, employ audio CD and ditital music file to determine whether the fault is in the speaker system or not. If not all sources have sound problem, the problem is in the source devices. If all have the same problem, continue next step.
2. Connect a set of earphone or external speakers. If these devices work fine, go to next step. If not, then the main board may be defective or damaged. Replace the main board.
3. Follow the disassembling steps in Chapter 3. Esure the speaker cable is firmly connected to the main board. If the speaker is still a malfunction, go on next step.
4. If the speakers do not sound properly, the speakers may be defective or damaged. Replace the speakers. If the problem still occurs, then replace the main board.

Insyde MobilePro BIOS POST Beep Code and POST Messages

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 80.

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.

Beep Code	Message	Description
short, short, short; short, short, long	“FAULTY DMA PAGE REGISTERS”	DMA page registers do not function properly.
short, short, short; short, long, short	“FAULTY REFRESH CIRCUIT”	RAM refresh circuit does not function properly.
short, short, short; short, long, long	“ROM CHECKSUM INCORRECT”	BIOS ROM checksum failed.
short, short, short; long, short, short	“CMOS RAM TEST FAILED”	CMOS RAM test failed.
short, short, short; long, short, long	“DMA CONTROLLER FAULTY”	DMA controller does not work properly.
short, short, short; long, long short	“INTERRUPT CONTROLLER FAILED”	The interrupt controller does not work properly.
short, short, short; long, long, long	N/A	Keyboard controller failed to respond with the self-test command.
short, short, long; short, short, short	N/A	No video device found.
short, short, long; short, short, long	N/A	No RAM installed.
N/A	“KEYBOARD CONTROLLER FAILURE”	Keyboard controller failed during system inquiry about connected devices.
N/A	“KEYBOARD FAILURE”	The keyboard fails to respond or no keyboard is connected.
N/A	“CMOS FAILURE - RUN SCU”	CMOS data error, probably due to battery power loss.
N/A	“CMOS CHECKSUM INVALID - RUN SCU”	CMOS checksum error.
N/A	“RAM ERROR AT LOCATION *xxxxxx*: WROTE: *xxxx* READ: *xxxx”*	The RAM failed during memory test at the indicated location.
N/A	“PARITY ERROR AT UNKNOWN LOCATION”	Parity error during memory test at unknown location.
N/A	“PARITY ERROR AT LOCATION XXXXXX”	Parity error during memory test at the indicated location.

Beep Code	Message	Description
N/A	“NO INTERRUPTS FROM TIMER 0”	Timer 0 of the clock timer controller does not generate system interrupts correctly.
N/A	“UNEXPECTED AMOUNT OF MEMORY - RUN SCU”	The system memory size does not match with the CMOS record.
N/A	“CLOCK NOT TICKING CORRECTLY”	The system clock does not working correctly.
N/A	“TIME/DATA CORRUPT - RUN SCU”	The time/date information in CMOS is invalid.
N/A	“MACHINE IS LOCKED - TURN KEY”	The keyboard operation is locked.
N/A	“BOOT SECTOR 0 HAS CHANGED”	The boot sector of the hard disk has been changed, probably because of a virus attack.
N/A	Suspend-to-Disk partition MISSING!”	No Suspend-to-Disk partition found.
N/A	“Hard Disk ERROR!”	Access to the Suspend-to-Disk partition failed.
N/A	“Suspend-to-Disk partition signature NOT FOUND!”	No Suspend-to-Disk partition signature found.
N/A	“Suspend-to-Disk partition size TOO SMALL!”	The capacity of the Suspend-to-Disk partition is not enough.
N/A	“MEMORY SIZE HAS CHANGED -- REBOOTING”	The memory size has changed after previous Suspend-to-Disk operation.

Insyde MobilePro BIOS POST Beep Code and POST Messages

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 80.

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.

Beep Code	Message	Description
short, short, short; short, short, long	“FAULTY DMA PAGE REGISTERS”	DMA page registers do not function properly.
short, short, short; short, long, short	“FAULTY REFRESH CIRCUIT”	RAM refresh circuit does not function properly.
short, short, short; short, long, long	“ROM CHECKSUM INCORRECT”	BIOS ROM checksum failed.
short, short, short; long, short, short	“CMOS RAM TEST FAILED”	CMOS RAM test failed.
short, short, short; long, short, long	“DMA CONTROLLER FAULTY”	DMA controller does not work properly.
short, short, short; long, long short	“INTERRUPT CONTROLLER FAILED”	The interrupt controller does not work properly.
short, short, short; long, long, long	N/A	Keyboard controller failed to respond with the self-test command.
short, short, long; short, short, short	N/A	No video device found.
short, short, long; short, short, long	N/A	No RAM installed.
N/A	“KEYBOARD CONTROLLER FAILURE”	Keyboard controller failed during system inquiry about connected devices.
N/A	“KEYBOARD FAILURE”	The keyboard fails to respond or no keyboard is connected.
N/A	“CMOS FAILURE - RUN SCU”	CMOS data error, probably due to battery power loss.
N/A	“CMOS CHECKSUM INVALID - RUN SCU”	CMOS checksum error.
N/A	“RAM ERROR AT LOCATION *xxxxxx*: WROTE: *xxxx* READ: *xxxx”*	The RAM failed during memory test at the indicated location.
N/A	“PARITY ERROR AT UNKNOWN LOCATION”	Parity error during memory test at unknown location.
N/A	“PARITY ERROR AT LOCATION XXXXXX”	Parity error during memory test at the indicated location.

Beep Code	Message	Description
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N/A	“UNEXPECTED AMOUNT OF MEMORY - RUN SCU”	The system memory size does not match with the CMOS record.
N/A	“CLOCK NOT TICKING CORRECTLY”	The system clock does not working correctly.
N/A	“TIME/DATA CORRUPT - RUN SCU”	The time/date information in CMOS is invalid.
N/A	“MACHINE IS LOCKED - TURN KEY”	The keyboard operation is locked.
N/A	“BOOT SECTOR 0 HAS CHANGED”	The boot sector of the hard disk has been changed, probably because of a virus attack.
N/A	Suspend-to-Disk partition MISSING!”	No Suspend-to-Disk partition found.
N/A	“Hard Disk ERROR!”	Access to the Suspend-to-Disk partition failed.
N/A	“Suspend-to-Disk partition signature NOT FOUND!”	No Suspend-to-Disk partition signature found.
N/A	“Suspend-to-Disk partition size TOO SMALL!”	The capacity of the Suspend-to-Disk partition is not enough.
N/A	“MEMORY SIZE HAS CHANGED -- REBOOTING”	The memory size has changed after previous Suspend-to-Disk operation.

Insyde MobilePro BIOS POST Beep Code and POST Messages

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.

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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.

Beep Code	Message	Description
short, short, short; short, short, long	“FAULTY DMA PAGE REGISTERS”	DMA page registers do not function properly.
short, short, short; short, long, short	“FAULTY REFRESH CIRCUIT”	RAM refresh circuit does not function properly.
short, short, short; short, long, long	“ROM CHECKSUM INCORRECT”	BIOS ROM checksum failed.
short, short, short; long, short, short	“CMOS RAM TEST FAILED”	CMOS RAM test failed.
short, short, short; long, short, long	“DMA CONTROLLER FAULTY”	DMA controller does not work properly.
short, short, short; long, long short	“INTERRUPT CONTROLLER FAILED”	The interrupt controller does not work properly.
short, short, short; long, long, long	N/A	Keyboard controller failed to respond with the self-test command.
short, short, long; short, short, short	N/A	No video device found.
short, short, long; short, short, long	N/A	No RAM installed.
N/A	“KEYBOARD CONTROLLER FAILURE”	Keyboard controller failed during system inquiry about connected devices.
N/A	“KEYBOARD FAILURE”	The keyboard fails to respond or no keyboard is connected.
N/A	“CMOS FAILURE - RUN SCU”	CMOS data error, probably due to battery power loss.
N/A	“CMOS CHECKSUM INVALID - RUN SCU”	CMOS checksum error.
N/A	“RAM ERROR AT LOCATION *xxxxxx*: WROTE: *xxxx* READ: *xxxx”*	The RAM failed during memory test at the indicated location.
N/A	“PARITY ERROR AT UNKNOWN LOCATION”	Parity error during memory test at unknown location.
N/A	“PARITY ERROR AT LOCATION XXXXXX”	Parity error during memory test at the indicated location.

Beep Code	Message	Description
N/A	“NO INTERRUPTS FROM TIMER 0”	Timer 0 of the clock timer controller does not generate system interrupts correctly.
N/A	“UNEXPECTED AMOUNT OF MEMORY - RUN SCU”	The system memory size does not match with the CMOS record.
N/A	“CLOCK NOT TICKING CORRECTLY”	The system clock does not working correctly.
N/A	“TIME/DATA CORRUPT - RUN SCU”	The time/date information in CMOS is invalid.
N/A	“MACHINE IS LOCKED - TURN KEY”	The keyboard operation is locked.
N/A	“BOOT SECTOR 0 HAS CHANGED”	The boot sector of the hard disk has been changed, probably because of a virus attack.
N/A	Suspend-to-Disk partition MISSING!”	No Suspend-to-Disk partition found.
N/A	“Hard Disk ERROR!”	Access to the Suspend-to-Disk partition failed.
N/A	“Suspend-to-Disk partition signature NOT FOUND!”	No Suspend-to-Disk partition signature found.
N/A	“Suspend-to-Disk partition size TOO SMALL!”	The capacity of the Suspend-to-Disk partition is not enough.
N/A	“MEMORY SIZE HAS CHANGED -- REBOOTING”	The memory size has changed after previous Suspend-to-Disk operation.

Insyde MobilePro BIOS POST Codes

POST Code	Macro Name	Description
Boot Loader--BLOAD.ASM		
00	DIAG_SYSTEM_INIT	Boot started, check motherboard power is stable.
01	DIAG_A20_DISABLE	Disable A20 through A20
02	DIAG_INIT_CHIPSET	Initialize Chipset
03	DIAG_TEST_RAM	Test the basic 640k RAM
04	DIAG_MOVE_BB_LOADER	Move boot load segment into the RAM
05	DIAG_EXECUTE_IN_DRAM	program execution from DRAM
06	DIAG_USER_FLASH_CHECK	Test print port for check crisis option is enable or disable
07	DIAG_SHADOW_BIOS	Decompress the system BIOS, and Shadow System BIOS to RAM
08	DIAG_CHECKSUM_BIOS	Checksum System BIOS ROM
09	DIAG_NORMAL_BOOT	Jump to the reset point
0A	DIAG_CRISIS_BOOT	Proceed with Crisis Boot, first initial super I/O and boot device
0F	DIAG_FATAL_ERROR	Fatal Error, like the RAM error or ROM error
CC	DIAG_CRISIS_BEGIN	Start process the Crisis recovery procedure
99	DIAG_RESUME_RAM_ERROR	Resume SMRAM not Found
POST DIAG -- BIOSPINE.ASM		
10	DEBUG_MISC_RESET	Disable internal cache ram, and reset cpu
11	DEBUG_CS_FAST_A20_RESET	Turn off FASTA20 for post, and check have keyboard
12	DEBUG_POST_SIGNAL_POR	Initial PIC enable INT and Signal Power On Reset
13	DEBUG_CS_CHIP_INIT	Initialize the Chipset and hook PCI BIOS
14	DEBUG_OEM_ISA_VGA_SEARCH	Search For ISA Bus VGA Adapter, from address c000 to e000
15	DEBUG_HWIO_SETUP_CTC1	Initialize Counter and Timer chip
16	DEBUG_OEM_SET_CMOS_REGS	User register config through CMOS
17	DEBUG_CS_MEMORY_SIZE	Size Memory, and detect memory timing, setup memory controllor
18	DEBUG_POST_TEST_RAM	Initialize and test the first 64k memory
19	DEBUG_GEN_TEST_ROMS	checksum the system ROM
1A	DEBUG_HWIO_RESET_INTS	Reset PIC's status
1B	DEBUG_VIDEO_VIDEO_INIT	Initialize Video Adapter(s),and check vga rom and vga ram
1C	DEBUG_VIDEO_EQUIP_INIT	Initialize Video (6845 Regs),set display mode
1D	DEBUG_VIDEO_COLOR_INIT	Initialize Color Adapter, and setup display reg.
1E	DEBUG_VIDEO_BW_INIT	Initialize Monochrome Adapter, and setup display reg.
1F	DEBUG_HWIO_TEST_DMA_PAG	Send out some value, to test 8237A Page Registers
20	DEBUG_KEYB_SELFTEST_CTLR	Send self test command (AAH) to test Keyboard controller. If o.k. return (55h)
21	DEBUG_KEYB_RESET_KEYBOARD	TestKeyboardControllerandinitializekeyboard controller.

POST Code	Macro Name	Description
22	DEBUG_POST_CHECK_CMOS_RAM	Send test petten to Check CMOS Ram
23	DEBUG_POST_TEST_BATT_CMOS_SUM	Test Battery Fail & check CMOS X-SUM
24	DEBUG_HWIO_TEST_DMA_CTLRS	Use DMA to copy data for Test the DMA controllers
25	DEBUG_HWIO_INIT_8237	Initialize 8237A Controller
26	DEBUG_POST_INIT_VECS	Install and Initialize interrupt Vectors
27	DEBUG_RAM_QUICK_SIZE	Enter memory protect mode, use change RAM bank to do RAM Quick Sizing
28	DEBUG_RAM_PROT_ENTRY_1	Memory protected mode entered safely
29	DEBUG_RAM_SIZE_DONE	Test the basic 640k ram , RAM test completed
2A	DEBUG_RAM_PROT_EXIT	Protected mode exit successful
2B	DEBUG_CS_SHADOW_SETUP	Shadow system and video BIOS to RAM, if CMOS requests shadow
2C	DEBUG_VIDEO_EQUIP_INIT_INIT	Going To Initialize 6845 CRT controllor
2D	DEBUG_VIDEO_BW_SEARCH	Search For Monochrome Adapter
2E	DEBUG_VIDEO_COLOR_SEARCH	Search For Color Adapter
2F	DEBUG_VIDEO_SIGNON	Signon messages displayed
30	DEBUG_OEM_CONFIG_KBD_CTL	For special initialize of keyboard controller
31	DEBUG_KEYB_PRESENT_TEST	Test the keyboard controllor , If Keyboard Present
32	DEBUG_KEYB_TEST_IRQ1	Clear keyboard buffer and send keyboard command to test Keyboard Interrupt
33	DEBUG_KEYB_TEST_CMD	Send keyboard command to turn off keyboard LED and Test some Keyboard Command Byte
34	DEBUG_RAM_FULL_TEST	TEST memory procedure, for test, blank and count all RAM
35	DEBUG_RAM_PROT_ENTRY_2	Eneter the memory protected mode for test all expand memory
36	DEBUG_RAM_TEST_DONE	Test and blank all memory complete
37	DEBUG_RAM_PROT_EXIT_2	Switch the memory from Protected mode to real mode
38	DEBUG_KEYB_OUTPUT_PORT	Disable A20 status for memory test finish
39	DEBUG_CS_CACHE_SETUP	Setup Cache Controller
3A	DEBUG_HWIO_TEST_PERIODIC	Check and test the timer 0 interrupt function is Working
3B	DEBUG_GEN_CHECK_RTC	test for RTC ticking
3C	DEBUG_GEN_INIT_HARD_VECS	Install and initialize the hardware vectors
3D	DEBUG_MOUSE_INIT	Clear keyboard buffer for search and Init the Mouse
3E	DEBUG_KEYB_SET_LEDS_1	Send keyboard command to Update keyboard NUMLOCK status
3F	DEBUG_OEM_DEVICE_CONFIG	special init of COMM and LPT ports
40	DEBUG_CS_CONFIG_PORTS	Configure the COMM and LPT ports
41	DEBUG_FLOP_INIT	According cmos data to initialize the floppies
42	DEBUG_WINI_INIT	Scan and initialize the hard disk, and display the result n crt

POST Code	Macro Name	Description
43	DEBUG_HWIO_ROM_INIT	Search option rom from c800 to e000 and to Initialize option ROMs
44	DEBUG_OEM_INIT_POWER_MAN	Check special device initial power management function
45	DEBUG_KEYB_SET_LEDS_2	Clear keyboard buffer and Update NUMLOCK status
46	DEBUG_HWIO_FIND_80X87	Test For Coprocessor Installed, and enable coprocessor interrupt
47	DEBUG_OEM_LAST_MINUTE_INIT	Run OEM functions before boot, and enable L1,L2 cache
48	DEBUG_MISC_LAUNCH_INT19	Post code will finish, ready to run int19 and load OS
49	DEBUG_BEGIN_BOOT_CODE	Into Int19, to boot from floppy or other boot device
50	DEBUG_ACPI_INIT	Initialize the ACPI function
51	DEBUG_PM_CPU_INIT	Power manager initial & GEYSERVILLE CPU initialize
52	DEBUG_USB_HC_INIT	Clear USB status register and Initiallize the USB Hub controller.
PCI BIOS -- PCICORE.ASM		
D0	DEBUG_ROM_MAPPED_OK	check PCI 1.x VGA card rom mapping and rom signature
D1	DEBUG_SEGMENTENABLE_ COPYSTATE_1	enable PCI device use ram area, record in PCI register
D2	DEBUG_COPY_HROM_RAM_1	Enable PCI device ROM copy to RAM, record in PCI register
D3	DEBUG_SEGMENTENABLE_ READWRITE_1	update PCI device segment range attribute registers
D4	DEBUG_MAP_MEM_1	Configure PCI device memory registers
D5	DEBUG_MAP_IO_1	Configure PCI device I/O registers
D6	DEBUG_MAP_IRQ_1	Configure PCI device IRQ assignments
D7	DEBUG_CONFIG_COM_REG_1	turn on PCI device
D8	DEBUG_REVISION_1	PCI 2.x video card rom mapping
D9	DEBUG_OEM_DEV_CLEANUP_1	OEM PCI device defined, and initial OEM rom
DA	DEBUG_PCI_ADDIN_ROM_ DISABLE_1	disable add-in rom card decode
DB	DEBUG_RET_PCI_1	PCI device config finish
DC	DEBUG_SEGMENTENABLE_ COPYSTATE_2	enable PCI video device use ram area, record in PCI register
DD	DEBUG_COPY_HROM_RAM_2	Enable PCI video device ROM copy to RAM, record in PCI register
DE	DEBUG_SEGMENTENABLE_ READWRITE_2	update PCI video device segment range attribute registers
DF	DEBUG_MAP_MEM_2	configure PCI video device memory registers
E0	DEBUG_MAP_IO_2	configure PCI video device I/O registers
E1	DEBUG_MAP_IRQ_2	configure PCI video device IRQ assignments
E2	DEBUG_CONFIG_COM_REG_2	turn on PCI video device
E3	DEBUG_REVISION_2	PCI 2.x video rom mapping
E4	DEBUG_OEM_DEV_CLEANUP_2	OEM PCI video device defined, and initial OEM rom

POST Code	Macro Name	Description
E5	DEBUG_PCI_ADDIN_ROM_ DISABLE_2	disable PCI video device add-in rom card decode
E6	DEBUG_RET_PCI_2	PCI device config finish
E7	DEBUG_BRIDGE_HUNT	Search for PCI bridge controllor device
E8	DEBUG_PCI_IDE_FIND	Search IDE controllors on the PCI bus, and config the IDE controllors
E9	DEBUG_CB_CONFIG	start of cardbus config
PNP BIOS -- PNPINIT.ASM		
A1	DEBUG_PNP_ENABLE_VERIFY_RT DATA	Enable and Verify R/W Status for PNP BIOS Runtime Data Area
A2	DEBUG_PNP_GET_VERIFY_NVRAM	Get and Verify R/W Status for PNP BIOS NVRAM data area
A3	DEBUG_PNP_SYSTEM_NODES	Resolve System Nodes with the CMOS settings
A4	DEBUG_PNP_INITIALIZE_RTDATA	Initialize variable in the PNP BIOS Runtime Data area
A5	DEBUG_PNP_HOOK_INT15	Hook INT 15
A6	DEBUG_PNP_SET_COPY_AREA	copy and setup PnP BIOS sytem node
A7	DEBUG_PNP_OEM_LATE_HOOK	Allow the OEM any Last Minute Hooks
A8	DEBUG_PNP_WRITE_PROTECT_R T_DAT	Write protect RTData Area and NVRAM Copy Buffer, and make runtime data checksum
A9	DEBUG_PNP_INIT_RETURN	PNP BIOS initialize finish
General SMI Entry/Exit Code -- SMICHIP.ASM		
C0	dSMI_ENTRY	SMI procedure entry point
C1	dSMI_EXIT	SMI procedure exit
C2	dSMI_APM_ENTRY	APM MODE SMI procedure entry point
C3	dSMI_APM_EXIT	APM MODE SMI procedure exit
Software SMI request Codes -- SWSHELL.ASM		
C4	dSMI_SWEXEFN	SoftWare SMI function execution
C5	dSMI_HWEXEFN	HardWare SMI function execution

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 Defaults” on Exit screen, then reboot system. Reconnect the LCD connectors. Keyboard (if contrast and brightness function key doesn't work). LCD cable LCD inverter LCD Main board
Unreadable LCD screen Missing pels in characters Abnormal screen Wrong color displayed	Reconnect the LCD connector LCD cable LCD inverter LCD Main board
LCD has extra horizontal or vertical lines displayed.	LCD inverter LCD cable LCD Main 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 Main 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 62. Battery pack Power adapter Hard drive & battery connection board Main board
The system doesn’t power-on.	Power source (battery pack and power adapter). See “Power System Check” on page 62“. Battery pack Power adapter Hard drive & battery connection board Main board
The system doesn’t power-off.	Power source (battery pack and power adapter). See “Power System Check” on page 62. Hold and press the power switch for more than 4 seconds. Main board
Battery can’t be charged	See “Check the Power Adapter” on page 63. Battery pack Main board

PCMCIA-Related Symptoms

Symptom / Error	Action in Sequence
System cannot detect the PC Card (PCMCIA)	PCMCIA slot assembly Main 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.	DIMM Main board

Speaker-Related Symptoms

Symptom / Error	Action in Sequence
In Windows, multimedia programs, no sound comes from the computer.	See “Sound Check” on page 65 Audio driver Speaker Main board
Internal speakers make noise or emit no sound.	See “Sound Check” on page 65 Speaker Main board

Power Management-Related Symptoms

Symptom / Error	Action in Sequence
The system will not enter hibernation	Keyboard (if control is from the keyboard) Hard disk drive Main 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 Main board
The system doesn’t enter standby mode after closing the LCD	LCD cover switch Main board
The system doesn't resume from hibernation mode.	Hard disk connection board Hard disk drive Main board
The system doesn't resume from standby mode after opening the LCD.	LCD cover switch Main board
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 Main board
System hangs intermittently.	Reconnect hard disk drives. Hard disk drive connector Main board

Peripheral-Related Symptoms

Symptom / Error	Action in Sequence
System configuration does not match the installed devices.	Enter BIOS Setup Utility to execute “Load Setup defaults”, then reboot system. Reconnect hard disk/CD-ROM/diskette drives.
External display does not work correctly.	See if there is an error beep. If there is an erro beep, then change main board. Power off. Then check if RAM CPU BIOS are well-connected. Press Fn+F5 three times slowly LCD FPC LCD inverter LCD
USB does not work correctly	USB device cable is firmly connected into the USB ports. Test one USB port each time. USB socket is firmly secured to the main board. Main board
Print problems.	Ensure the “Parallel Port” in the “System Devices” of BIOS Setup Utility is set to Enabled. Onboard Devices Configuration Run parallel port test Printer driver Printer cable Printer Main board

Keyboard/Touchpad-Related Symptoms

Symptom / Error	Action in Sequence
Keyboard (one or more keys) does not work.	Reconnect the keyboard cable. Keyboard Main board
Touchpad does not work.	Reconnect touch pad cable. Modem port is secured to the main board Touch pad FPC Audio/Touch pad board Main board

Modem-Related Symptoms

Symptom / Error	Action in Sequence
Internal modem does not work correctly.	Ensure the telephone cable is firmly plugged into the telephone wall socket and the modem port of the computer. Modem phone port is secured to the main board. modem combo board Main board

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

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 diagnostic test for several times to isolate the problem.
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.

If an error is detected by the main battery test, see “Check the Power Adapter” on page 63

If an error is detected by the display test, see “Index of Symptom-to-FRU Error Message” on page 76 .

If an error is detected by the floppy disk drive test, see “External Diskette Drive Check” on page 61.

If an error is detected by the keyboard test, see “Keyboard or Auxiliary Input Device Check” on page 61.

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).

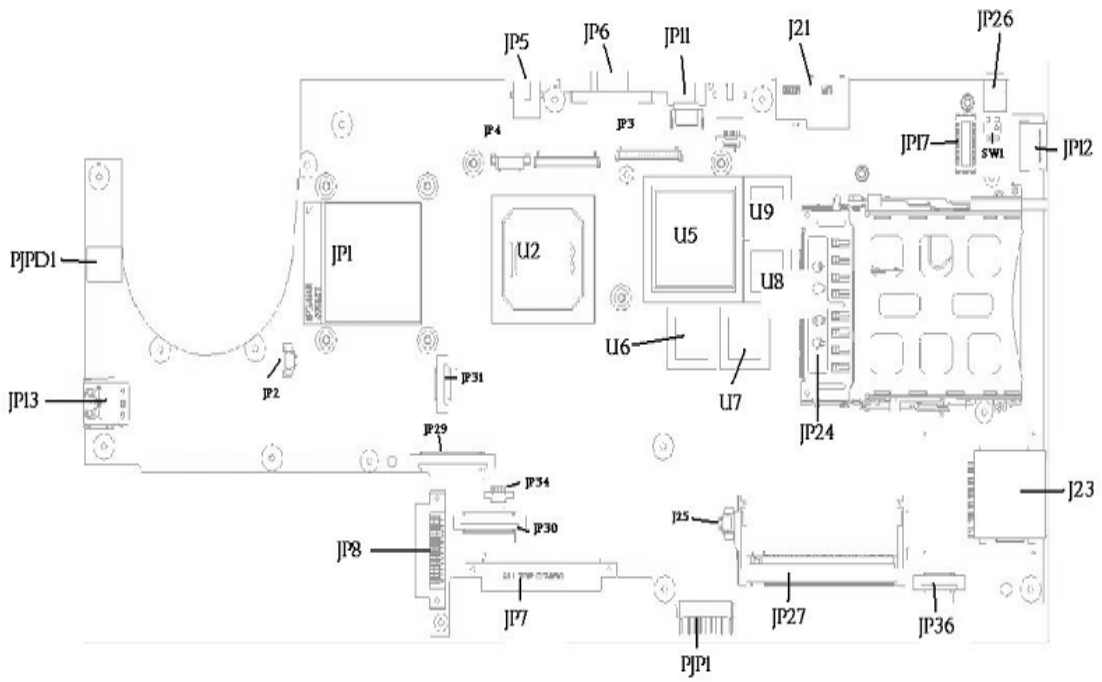
NOTE: Verify that all attached devices are supported by the computer.

NOTE: Verify that the power supply being used at the time of the failure is operating correctly. (See “Power System Check” on page 62):

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:
    - ❑ Main board
    - ❑ LCD assembly

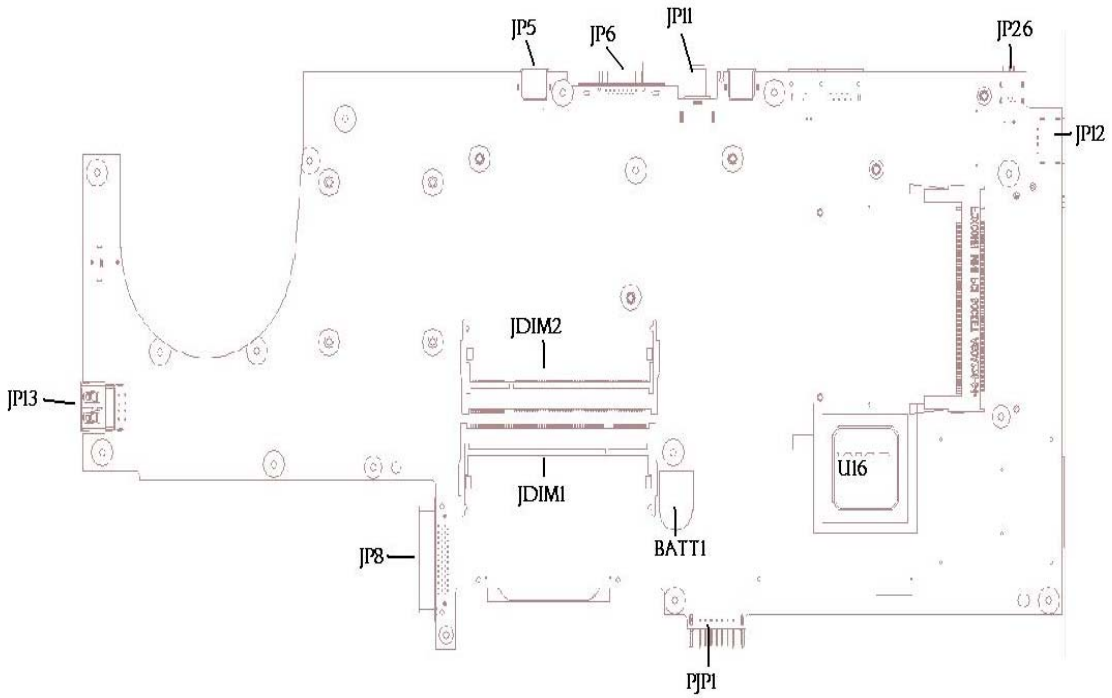
Jumper and Connector Locations

Top View



PJPD1	DC JACK	JP5	TV-OUT CONNECTOR
JP13	DUAL USB CONNECTOR	JP6	CRT CORRECTOR
JP1	CPU SOCKET	JP11	SINGLE USB CONNECTOR
JP2	FAN CONNECTOR	JP3	LCD CONNECTOR
JP31	LED CONNECTOR	JP4	INVERTER CONNECTOR
JP29	KEYBOARD CONNECTOR	U2	NORTH BRIDGE
JP8	CD-ROM CONNECTOR	U5	GRAPHICS CHIP
JP7	HDD CONNECTOR	U6	VGA MEMORY CHIP
JP34	TOUCHPAD CONNECTOR	U7	VGA MEMORY CHIP
JP30	SW DJ BOARD CONNECTOR	U8	VGA MEMORY CHIP
J25	NOT INSTALL	U9	VGA MEMORY CHIP
PJP1	BATTERY CONNECTOR	JP24	CARD BUS SOCKET
JP27	MINI PCI CONNECTOR	J23	MS/SD/MMC CARD READER CONNECTOR
JP36	SPEAKER CONNECTOR	JP17	MDC CONNECTOR
JP12	SINGLE USB CONNECTOR	JP26	IEEE1394 CONNECTOR
SW1	LID SWITCH	J21	ETHERNET CONNECTOR

Bottom View



JP13	DUAL USB CONNECTOR	JP5	TV-OUT CONNECTOR
JP8	CD-ROM CONNECTOR	JP6	CRT CONNECTOR
JDIM1	MEMORY CONNECTOR	JP11	SINGEL USB CONNECTOR
JDIM2	MEMORY CONNECTOR	JP26	IEEE1394 CONNECTOR
BATT1	COIN CELL CONNECTOR	JP12	SINGEL USB CONNECTOR
PJP1	BATTERY CONNECTOR	U16	SOUTH BRIDGE

SW Settings

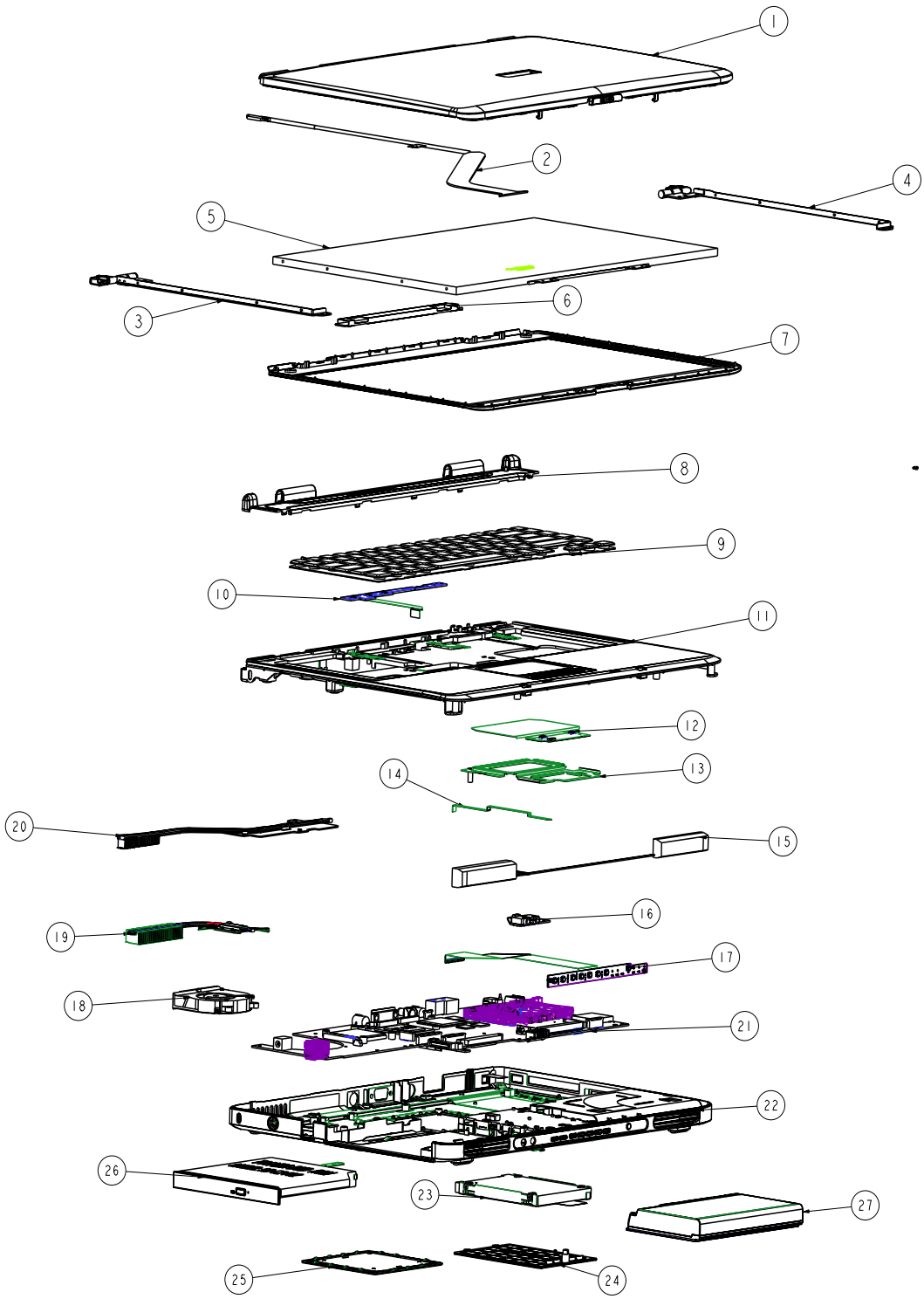
FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of Aspire 9100. Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

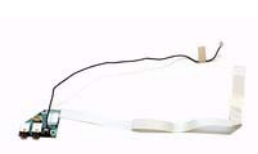
Please note that WHEN ORDERING FRU PARTS, you should check the most up-to-date information available on your regional web or channel. For whatever reasons a part number change is made, it will not be noted on the printed Service Guide. For ACER AUTHORIZED SERVICE PROVIDERS, your Acer office may have 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 9100 Exploded Diagram



Aspire 1360

Picture	No.	Partname And Description	Part Number
Adapter			
		ADAPTER 65W 3PIN LITEON PA-1650-02A4	AP.06503.009
		ADAPTER 65W 3PIN HI-PRO HP-OK066B 13QT	AP.0650A.001
Battery			
		BATTERY LI-ION 8 CELLS 4.3AH SANYO 4UR18650F-2-CPL-15	BT.00803.005
		BATTERY LI-ION 8 CELLS 4.3AH SONY LIP8151CMPCFSY6	BT.00804.004
Boards			
		MODEM BOARD (FOXCONN T60M283.15)	54.A52V5.001
		MINI PCI WIRELESS BOARD 802.11b/G INTEL WM3B2200	KI.CAX01.008
		POWER BOARD W/FFC CABLE	55.A52V5.001
		SW DJ BOARD W/FFC CABLE	55.A52V5.002
		AUDIO BOARD W/CIR, FFC/WIRE CABLE	55.A52V5.003

Picture	No.	Partname And Description	Part Number
		CONTROL BOARD MODULE	55.A52V5.004
Cables			
		FFC CABLE -TOUCHPAD	50.A52V5.001
		POWER CORD US 3PIN	27.A52V5.001
		POWER CORD EU 3PIN	27.A52V5.002
		POWER CORD UK 3PIN	27.A52V5.003
		POWER CORD AUS 3PIN	27.A52V5.004
		POWER CORD CHINA 3PIN	27.A52V5.005
		POWER CORD DENMARK 3PIN	27.A52V5.006
		POWER CORD ITALY 3PIN	27.A52V5.007
		POWER CORD SWISS 3PIN	27.A52V5.008
		POWER CORD KOREA 3PIN	27.A52V5.009
		POWER CORD SOUTH AFRICA 3PIN	27.A52V5.010
		POWER CORD 3 PIN 125V	27.01618.051
Case/Cover/Bracket Assembly			
		MIDDLE COVER W/NAME PLATE , BUTTON	42.A52V5.001
		LOWER CASE W/DIMM DOOR, SW DJ PLATE W/O SPEAKER	60.A52V5.001
		UPPER CASE W/TP, TP BOARD, TP FFC AND BRACKET	60.A52V5.002

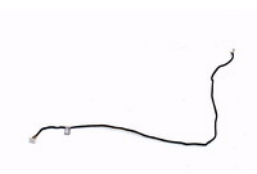
Picture	No.	Partname And Description	Part Number
		DIMM COVER	42.A52V5.002
		TOUCHPAD SUPPORT BRACKET	33.A52V5.001
		SW DJ BRACKET	33.A52V5.002
Communication Module			
		WIRELESS ANTENNA ASSY	50.A52V5.002
CPU			
		INTEL PENTIUM M 1.6G 2M 533FSB uFCPGA2 SL86G C-1 STEPPING	KC.N0001.730
		INTEL PENTIUM M 1.73G 2M 533FSB uFCPGA2 SL7SA C-1 STEPPING	KC.N0001.740
		INTEL PENTIUM M 1.87G 2M 533FSB uFCPGA2 SL7S9 C-1 STEPPING	KC.N0001.750
		INTEL PENTIUM M 2.0G 2M 533FSB uFCPGA2 SL7SM C-1 STEPPING	KC.N0001.760
		INTEL PENTIUM M 2.13G 2M 533FSB uFCPGA2 SL7SL C-1 STEPPING	KC.N0001.770
Combo DRIVE			
		VD/CDRW COMBO MODULE TOSHIBAN TS-L462A	6M.A52V5.001

Aspire 1360

Picture	No.	Partname And Description	Part Number
		DVD/CDRW COMBO DRIVE TOSHIBA TS-L462A W/BEZEL	KO.02404.003
		OPTICAL DEVICE BRACKET	33.A52V5.003
DVD RW DRIVE			
		DVD DUAL MODULE (DL) TOSHIBA TS-L532A	6M.A52V5.002
		DVD DUAL DRIVE (DL)TOSHIBA TS-L532A W/BEZEL	KO.00801.008
		OPTICAL DEVICE BRACKET	33.A52V5.003
HDD/ HARD DISK DRIVe			

Picture	No.	Partname And Description	Part Number
		HDD 60GB 2.5IN. 4200RPM SEAGATE N2 ST960821A F/W 3.01	KH.06001.002
		HDD 60GB 2.5IN. 4200RPM TOSHIBA PLUTO MK6025GAS(ROHS) F/W KA200A	KH.06004.004
		HDD 60GB 2.5IN. 4200RPM HGST MORAGA IC25N060ATMR04-0 08K0634 F/S:AD4A	KH.06007.006
		HDD 80GB 2.5IN. 4200RPM TOSHIBA PLUTO MK8025GAS F/W KA023	KH.08004.003
		HDD 80GB 2.5IN. 4200RPM HGST MORAGA IC25N080ATMR04-0 08K635 FW:AD4A	KH.08007.007
		HDD 80GB 2.5IN. 4200RPM SEAGATE N2 ST9808210A F/W 3.01	KH.08001.012
		HDD 100GB 2.5IN. 4200RPM TOSHIBA PLUTO MK1031GAS F/W AA20	KH.10004.001
		HDD 100GB 2.5IN. 4200RPM SEAGATE N2 ST9100822A F/W 3.01	KH.10001.001
CASE/COVER/BRACKET ASSEMBLY			
		HDD BRACKET	33.A52V5.004
		HDD COVER	42.A52V5.003
KEYBOARD			
		KEYBOARD CHICONY ARABIC	KB.A5203.018
		KEYBOARD CHICONY BELGIAN	KB.A5203.007
		KEYBOARD CHICONY CZECH	KB.A5203.010
		KEYBOARD CHICONY DENMARK	KB.A5203.015
		KEYBOARD CHICONY FRENCH	KB.A5203.004
		KEYBOARD CHICONY GERMAN	KB.A5203.001
		KEYBOARD CHICONY GREECE	KB.A5203.016
		KEYBOARD CHICONY HUNGARY	KB.A5203.011
		KEYBOARD CHICONY ITALY	KB.A5203.003

Picture	No.	Partname And Description	Part Number
		KEYBOARD CHICONY NORWAY	KB.A5203.014
		KEYBOARD CHICONY PORTUGUESE	KB.A5203.009
		KEYBOARD CHICONY RUSSIAN	KB.A5203.012
		KEYBOARD CHICONY SPAIN	KB.A5203.008
		KEYBOARD CHICONY SWEDEN	KB.A5203.013
		KEYBOARD CHICONY SWISS/G	KB.A5203.005
		KEYBOARD CHICONY THAILAND	KB.A5203.019
		KEYBOARD CHICONY TRADITIONAL CHINESE	KB.A5203.020
		KEYBOARD CHICONY TURKISH	KB.A5203.017
		KEYBOARD CHICONY UK	KB.A5203.002
		KEYBOARD CHICONY US INTERNATIONAL	KB.A5203.006
		KEYBOARD JME ARABIC	KB.A5205.018
		KEYBOARD JME BELGIAN	KB.A5205.007
		KEYBOARD JME CZECH	KB.A5205.010
		KEYBOARD JME DENMARK	KB.A5205.015
		KEYBOARD JME FRENCH	KB.A5205.004
		KEYBOARD JME GERMAN	KB.A5205.001
		KEYBOARD JME GREECE	KB.A5205.016
		KEYBOARD JME HUNGARY	KB.A5205.011
		KEYBOARD JME ITALY	KB.A5205.003
		KEYBOARD JME NORWAY	KB.A5205.014
		KEYBOARD JME PORTUGUESE	KB.A5205.009
		KEYBOARD JME RUSSIAN	KB.A5205.012
		KEYBOARD JME SPAIN	KB.A5205.008
		KEYBOARD JME SWEDEN	KB.A5205.013
		KEYBOARD JME SWISS/G	KB.A5205.005
		KEYBOARD JME THAILAND	KB.A5205.019
		KEYBOARD JME TRADITIONAL CHINESE	KB.A5205.020
		KEYBOARD JME TURKISH	KB.A5205.017
		KEYBOARD JME UK	KB.A5205.002
		KEYBOARD JME US INTERNATIONAL	KB.A5205.006
		ASSY LCD MODULE 15.4 IN. WXGA SAMSUNG LTN154X3-L01-G GLARE	6M.A52V5.011
		ASSY LCD MODULE 15.4 IN. WXGA LG LP154W01-A3 GLARE	6M.A52V5.012
		LCD 15.4 IN. WXGA SAMSUNG LTN154X3-L01-G GLARE	LK.15406.006
		LCD 15.4 IN. WXGA LG LP154W01-A3 GLARE	LK.15408.008

Picture	No.	Partname And Description	Part Number
		LCD INVERTER	19.A52V5.001
		LCD CABLE - 15.4 WXGA	50.A52V5.003
		INVENTER CABLE	50.A52V5.004
		LCD PANEL WITH LOGO W/ANTENNA 15.4	60.A52V5.003
		LCD BEZEL 15.4 IN.	60.A52V5.004
		LCD BRACKET L	33.A52V5.005

Picture	No.	Partname And Description	Part Number
		LCD BRACKET R	33.A52V5.006
		LCD RUBBER - CIRCLE	47.A52V5.001
		LCD RUBBER - LONG	47.A52V5.002
		LCD SCREW PAD	47.A52V5.003
MAINBOARD			
		MAINBOARD 915GM M24-128MB FOR TV SKU W/ 3 IN 1, PCMICA SLOT W/O CPU MEMORY	TBD
		MAINBOARD 915GM M24-128MB NON TV SKU W/ 3 IN 1, PCMICA SLOT W/O CPU MEMORY	TBD
		PCMCIA SLOT	22.A52V5.001
MEMORY			
		MEMORY DDR333 256MB SAMSUNG M470L3224FT0-CB3	KN.2560B.008
		MEMORY DDR333 256MB INFINEON HYS64D32020HDL-6-C (.11u)	KN.25602.012
		MEMORY DDR333 256MB HYNIX HYMD232M646D6-JAA	KN.2560G.001
		MEMORY DDR333 512MB SAMSUNG M470L6524 FT0-CB3	KN.5120B.006
		MEMORY DDR333 256MB INFINEON HYS64D64020HBDL-6-C (.11u)	KN.51202.025
FAN			
		FAN	23.A52V5.001
Heatsink			
		THERMAL MODULE-CPU	33.A52V5.001

Picture	No.	Partname And Description	Part Number
		THERMAL MODULE-VGA	34.A52V5.002
MISCELLANEOUS			
		RUBBER FOOT - REAR	47.A52V5.004
		RUBBER FOOT - FRONT	47.A52V5.005
POINTING DEVICE			
		TOUCHPAD W/TOUCHPAD BOARD	56.A52V5.001
SPEAKER			
		SPEAKER SET (R&L)	23.A52V5.002
ACCESSORY			
		STRC-100 PCMCIA SLOT REMOTE CONTROL	LZ.A2902.001
		MCERC-200 REMOTE CONTROLLER	LC.MCE05.001
		MCEIR-210 RECEIVER	LC.MCE05.002
		MCEBS-220 IR BLASTER	LC.MCE05.003
SCREW			
		SCREW F040 9 5.0X5.0 9.5X(IO) R00	86.A52V5.001
		SCREW M2.0X0.4P+3FP ZK(NL)	86.A52V5.002
		SCREW M2.5 K 5/2 X0.85 4 ZK(NL)	86.A52V5.003
		SCREW M2.5X0.45+10K NIL	86.A52V5.004
		SCREW M2.5X0.45+8K ZBL	86.A52V5.005
		SCREW M2.5X0.45P+3F NI	86.A52V5.006
		SCREW M3.0X0.8P+3K NL	86.A52V5.007

Model Definition and Configuration

Aspire 9100 Series

Model Number	CPU	LCD	Memory	HDD (GB)	Remote Controller	Card Reader	Wireless LAN
AS9104W LMi	PM760	N15.4WXG AGH	2*256 2*256 2*512	80 100 (for France, Italy, UK) 100	STRC-100 PCMCIA	3-in-1	INT2200 BG_MW

Test Compatible Components

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

Refer to the following lists for components, adapter cards, and peripherals which have passed these tests. Regarding configuration, combination and test procedures, please refer to the Aspire 9100 series Compatibility Test Report released by the Acer Mobile System Testing Department.

Microsoft®Windows® XP Environment Test

Item	Specifications
Processor	Intel Pentium M 730 (1.6G 2M 533FSB) Intel Pentium M 740 (1.73G 2M 533FSB) Intel Pentium M 750 (1.87G 2M 533FSB) Intel Pentium M 760 (2.0G 2M 533FSB) Intel Pentium M 770 (2.13G 2M 533FSB)
Memory	256MB DDR333 INFINEON HYS64D320 20HDL-6-C 32X64 (.11U) SAMSUNG M470L3224 FT0-CB3 (.13U) HYNIX HYMD232M6 46D6-J AA 512MB DDR333 INFINEON HYS64D64020HBDL-6-C 64MX64 (0.11U/GREEN SAMSUNG M470L6524 BT0-CB300 UNIFOSA U30512AAUIQ652AW20 1GB DDR333 ELPIDA EBD11UD8ADD A
LCD	15.4” WXGA TFT LG LP154W01-A3K3 QDI QD15TL03-02 GLARE TYPE LEAD-FREE SAMSUNG LTN154X3-L01-G GLARE TYPE
Hard Disk Drive	60G SEAGATE 2.5" 4.2RPM N2ST960821A F/W 3.01 60G TOSHIBA 2.5" 4200RPM PLUTO MK6025GAS 60G HGST MORAGA 60G 4200RPM IC25N020ATMR04-0 08K0634 80G SEAGATE 2.5" 4.2RPM N2ST9808210A 80G TOSHIBA 2.5" 4200RPM PLUTO MK8025GAS 80G HGST MORAGA 4200RPM IC25N0 80ATMR04-0 08K635 100G SEAGATE N2 4.2RPM ST9100822A 100G TOSHIBA 2.5" 4200RPM PLUTO MK1031GAS
DVD/CD-RW Combo 24X	TOSHIBA TS-L462 QSI SBW-243/LF LITEON SOSC-24083K
DVD-Dual 8X	TOSHIBA TS-L532A PIONEER DVR-K15RA
AC Adapter (3 pin)	Lite-On PA-1650-02A4, 19V, 3 PINS, HIPRO HP-OK066B13QT, 65W
Battery Li-Ion	Sanyo 4UR18650F-2-CPL-15, 8cell 4300mAh SONY LIP8151CMPCFSY6, 8cell 4300mAh
Network Adapters	
LAN Ethernet/10baseT/100baseT	3Com Etherlink III 3C589D IBM EtherJet CardBus Adapter 10/100 Intel Ether Express Pro/100 Mobile Adapter MBLA3200 Xircom CardBus Ethernet 10/100 32 Bit CBE-10/100BTX
Multifunction Card (Combo)	3Com Megahertz 10/100 LAN + 56K Modem PC Card Xircom RealPort CardBus Ethenet 10/100 + Modem 56
LAN Token Ring	IBM Token Ring 16/4 Adapter II

Item	Specifications
Wireless LAN Card	IBM Wireless LAN Cardbus Adapter Intel Pro-Wireless LAN PC Card Proxim Skyline 802.11a Cardbus PC Card Cisco Aironet 350 series Wireless Lan Card NeWeb Wireless Lan Card 802.11b
Modem Adapters	
Modem (up to 56K)	3Com Megahertz 56K Modem PC Card Xircom Credit Card Modem 56 IBM 56K Double Jack Modem
ISDN	US Robotics Megahertz 128K ISDN Card 405R17T7117M IBM OBI International ISDN PC Card
I/O Peripheral	
I/O - Display	Acer 211c 21” Viewsonic PF790 19” Acer FP751 17” TFT LCD IBM Color TFT LCD 14” Compaq Color Monitor NET Color Monitor 20” Mozo 17” TFT LCD (DVI)
I/O - Projector	NEC MultiSync MT-1040
I/O - Parallel (Printer/Scanner)	Canon BJC-600J Epson Stylus Color 740 Parallel Interface HP DeskJet 890C HP DeskJet 880C Parallel Interface HP LaserJet 6MP HP LaserJet 2200
I/O - USB Keyboard/Mouse	Chicony USB Keyboard KU-8933 Microsoft Natural Keyboard Pro Acer Aspire USB mouse Logicool US Mouse Logitech Cordless Mouseman Wheel USB Interface Logitech USB Wheel Mouse M-BB48 Microsoft IntelliMouse Optical USB Interface
I/O - PS2 (Serial) Keyboard/Mouse	IBM 101 key keyboard IBM 109 key keyboard Acer PS2 keyboard Acer KB-101A IBM Numeric Keypad III IBM Numeric Keypad Acer Mouse IBM PS2 Mini Mouse IBM PS2 Mouse Logitech Cordless MouseMan Wheel PS2 interface Logitech Serial Mouse M-M35 Microsoft InteliMouse PS2 interface Microsoft InteliMouse Optical PS2 interface Logitech First Mouse Three Button Serial Mouse
I/O - USB (Printer/Scanner)	Epson Stylus Color 740 USB interface HP DeskJet 880C USB interface Canon CanonScan D1250 (USB 2.0, JP OS only) HP ScanJet 3300C Color Scanner

Item	Specifications
I/O - USB (Speaker/Joystick))	JS USB Digital Speaker Panasonic USB Speaker EAB-MPC57USB AIWA Multimedia Digital Speaker Microsoft SideWinder Precision Pro Joystick Logitech WingMan RumblePad
I/O - USB Camera	Intel Easy PC Camera Logitech QuickCam Express Internet Logitech QuickCam Home PC Video Camera Orange Micro USB 2.0 Web Cam
I/O - USB Storage Drive	Logitech CDRW +DVDROM combo USB interface Iomega USB Zip 250MB
I/O-USB Flash Drive	IBM 32MB USB Memory key Apacer USB Handy Drive 32MB Apacer USB Handy Drive 256MB
I/O - USB Hub	Belkin 4 Port USB Hub Eizo I Station USB Hub Elecom USB Hub 4 Port Sanwa USB Hub 4 Port 4 Port Hub USB 2.0
I/O - Access Point (802.11b)	Hitachi DC-CN3300 Lucent RG-1000 Lucent WavePoint-II Cisco Aironet 350 Orinoco AP-500
I/O Acess Point (802.11a/b)	Intel Dual Pro/Wireless 5000
I/O Acess Point (802.11a)	Intel Pro/Wireless 5000
PCMCIA	
PCMCIA - ATA	IBM Microdrive 340MB IBM Microdrive 1G Iomega Click! 40MB Sony Memory Stick 64MB Apacer SD Flash Card 128MB Transcedn SD Card 32MB
PCMCIA - USB 2.0	Apricorn EZ-USB2.0 Cardbus PC Card DTK USB 2.0 2Port CardBus Host Controller Adaptec USB2CONNECT
PCMCIA - 1394	Buffalo 1394 Interface Cardbus IFC-ILCB/DV I-O Data 1394 Interface Cardbus CB1394/DVC Pixela 1394 Cardbus PC Card PIX-PCMC/FW1
PCMCIA-SCSI	Adaptec 1408 or B SCSI CB NewMedia Bus Toaster SCSI II
PCMCIA - Bluetooth	IBM Community Bluetooth PC Card Toshiba Bluetooth PC Card

Online Support Information

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

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

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

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

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

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

Also contained on this website are:

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

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