TravelMate3010
Service Guide

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

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Revision History

Please refer to the table below for the updates made on TravelMate3010 service guide.

Date	Chapter	Updates

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Conventions

The following conventions are used in this manual:

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

Preface

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

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

System Specifications

Features

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

Performance

- Intel® Core™ Duo processor T2300/T2400/T2500/T2600 with 667 MHz FSB
- Clock speed up to 1.66/1.83/2.16 GHz

Chipset

- North Bridge:
  - 915GM
- South Bridge:
  - ICH7M

Memory

- DDRII 533/667 SDRAM
- Two DDR SODIMM slots
- Upgradeable to 2GB Memory for 32bit OS, 4G for 64bit OS

Display

- 12.1” WXGA 200-nit high-brightness TFT LCD
- 1280x800 pixel resolution
- 16:10 viewing ratio, supporting simultaneous mlti-window viewing via Acer GridVista

Graphics

- UMA

VRAM

- UMA
  - DVMT3.0, share 8MB, up to 128MB in OS

Audio

- Intel HD(High Definition) Audio
- S/PDIF support for digital speakers
- Internal Microphone
- Sound Blaster pro™ and MS-Sound compatible
- Two speakers, at lease 1W/9cc for each

Storage

- PATA and SATA co-lay
- 9.5mm height, 2.5” HDD
- Easily removable

- 60/80/100/120GB
- PCI Bus Master Enhanced IDE
- Support Ultra DMA100, S.M.A.R.T
- G-Sensor HDD protection

Communication

- 56Kbps V.90/V.92 modem card (MDC1.5)
- PCI-E Giga LAN on board
- Intel PRO/Wireless 3945ABG network connection solution(dual-band tri-mode 802.11 a/b/g) Wi-Fi CERTIFIED™
- 2 built-in PIFA type Antenna (which has to be placed on the top of LCD on the sides of LCD latch)
- Bluetooth 2.0 +EDR(Enhanced Data Rate)

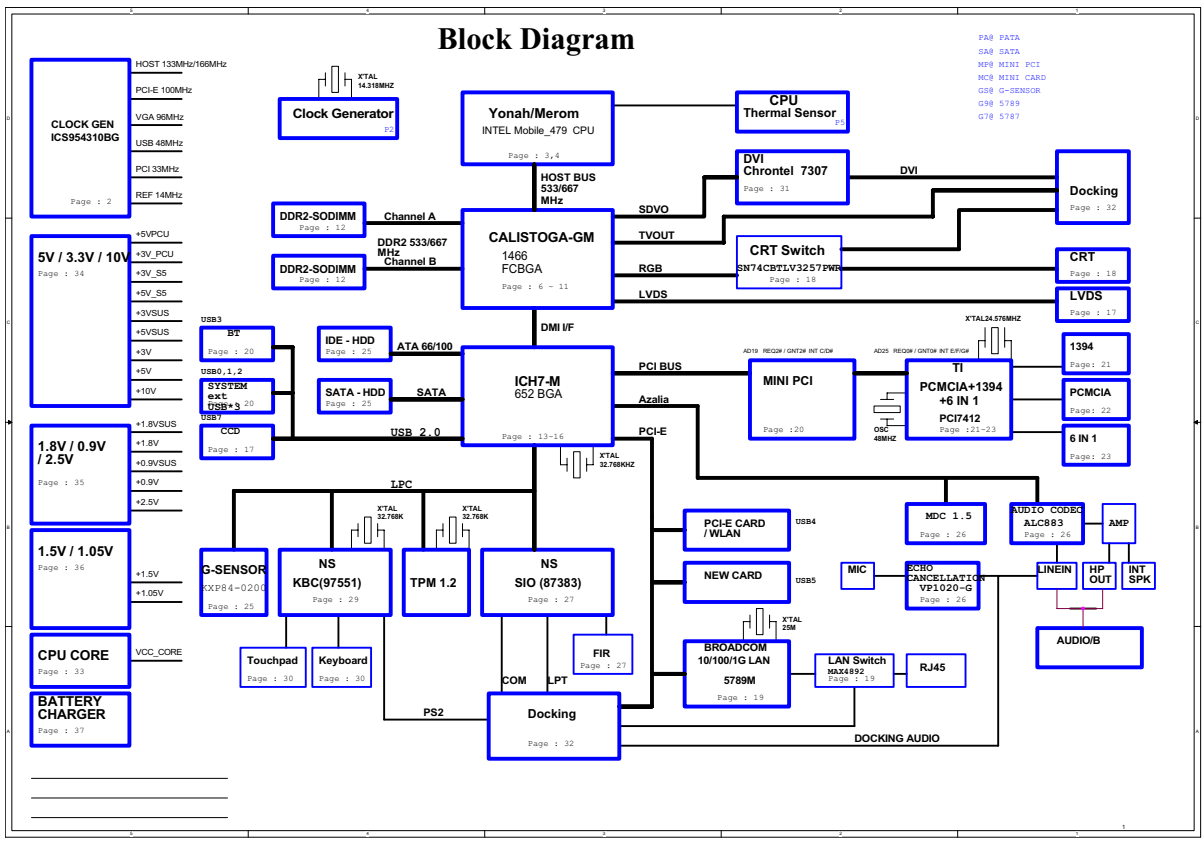
I/O Ports

- 3 external USB 2.0 ports
- IEEE 1394 port (6-pin)
- Ethernet (RJ-45) port
- Modem (RJ-11) port
- External display (VGA) port(15-pin)
- 1 Microphones-in
- 1 Line-in jack
- 1 Headphone/Speaker/Line-out jack with SPDIF support
- 1 Infrared (FIR) port
- 1 DC-in jack for AC adaptor
- 1 PCMCIA (exchange with Express card wide type slot)
- 1 ezDock port
- 6-in-1 card reader

Battery

- 6-cell of 18650 Li-ion battery pack, (2400mAh)
- 3-cell of 18650 Li-Ion battery pack, (2000mAh)
- 3-pin 90W AC adaptor

Block Diagram



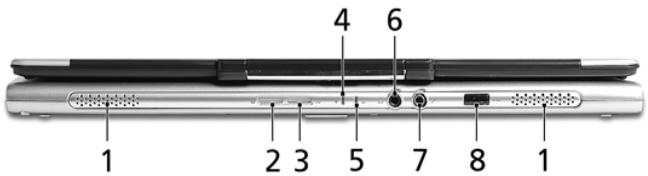
TM 3010 Outlook View

A general introduction of ports allow you to connect peripheral devices, as you would with a desktop PC.

Open View

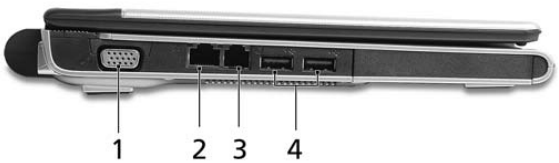
#	Item	Description
1	Camera	1.3 Mega Pixel CMOS video camera with 225 degree rotation feature.
2	Display screen	Also called Liquid-Crystal Display(LCD), displays computer output.
3	Easy-launch buttons	Buttons for launching frequently used programs.
4	Status indicators	Light-Emitting Diodes(LEDs) that light up to show the status of the computer's functions and components.
5	Palmrest	COmfortable support area for your hands when you use the computer.
6	CLick buttons(left, center and right)	The left and right buttons function like the left and right mouse buttons; the center button serves as a 4-way scroll button.
7	Touchpad	Touch-sensitive pointing device which functions like a computer mouse.
8	Microphone	Internal microphone for sound recording.
9	Keyboard	For entering data into your computer.
10	Power button	Turns the computer on and off.

Front View



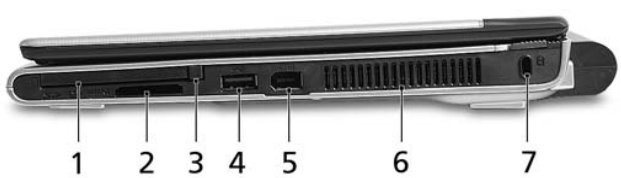
#	Icon	Item	Description
1	N/A	Speakers	Left and right speakers deliver stereo audio output.
2		Bluetooth communication button/indicator	Press to enable/disable Bluetooth function. Lights to indicate the status of Bluetooth communications.
3		Wireless communications button/indicator	Press to enable/disable Wireless function. Lights to indicate the status of wireless LAN communications. (manufacturing option)
4		Power indicator	Indicates the computer's power status.
5		Battery indicator	Indicates the computer's battery status.
6	SPDIF	Headphones/ speaker/line-out jack with S/PDIF support	Connects to audio line-out devices(e.g., speakers, headphones)
7		Mic-in jack	Accepts inputs from external microphones.
8		Infrared port	Interfaces with infrared devices(for TravelMate 4270/4670 Series)

Left View



#	Icon	Item	Description
1		External display (VGA) port	Connects to display device(e.g., external monitor, LCD projector)
2		Ethernet(RJ-45) port	Connects to an Ethernet 10/100/1000 based network.
3		Modem(RJ-11) port	Connects to a phone line.
4		Two USB2.0 ports	Connect to USB 2.0 devices(e.g., USB mouse, USB camera)

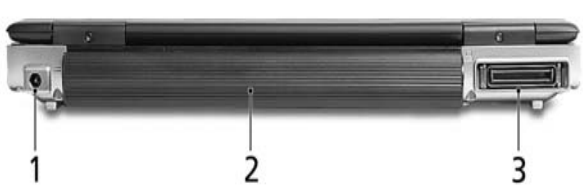
Right View



#	Icon	Item	Description
1		PC Card slot	Accepts one Type II PC Card.
2		5-in-1 card reader	Accepts Secure Digital(SD), MultiMediaCard(MMC), Memory Stick(MS), Memory Stick Pro(MS PRO), and xD-Picture Card. Note:Only one card can operate at any given time.
3		PC Card slot eject button	Ejects the PC Card from the slot.

#	Icon	Item	Description
4		Two USB 2.0 ports	Connect to Universal Serial Bus (USB) 2.0 devices (e.g., USB mouse, USB camera).
5	1394	IEEE 1394 port(6-pin)	Connects to IEEE 1394 devices
6		Ventilation slots	Enable the computer to stay cool, even after prolonged use.
7		Kensington lock slot	Connects to a Kensington-compatible computer security lock

Rear View



#	Icon	Item	Description
1		DC-in Jack	Connects to an AC adapter.
2		Battery bay	Houses the computer's battery pack.
3		124-pin Acer ezDock connector	Connects to Acer ezDock(for TravelMate 4670 Series)

Bottom View

#	Item	Description
1	Battery bay	Houses the computer’s battery pack.
2	Battery lock	Locks the battery in position.
3	Cooling fan	Helps keep the computer cool. **NOTE:** Do not cover or obstruct the opening of the fan.
4	Ventilation slots	Enable the computer to stay cool, even after prolonged use.
5	Memory compartment	Houses the computer's main memory
6	Battery release latch	Releases the battery to remove the battery pack.

Indicators

Your computer has seven easy-to-read status indicators, including four on the front panel.

The power, battery and wireless communication status indicators are visible even when the LCD display is closed.

Icon	Item	Description
	Caps Lock activity	Lights up when Caps Lock is activated.
	Num Lock activity	Lights upwhen Num Lock is activated.
	HDD	Indicate when the hard disk drive is active.
	Bluetooth	Indicates the status of Bluetooth communication.
	Wireless LAN	Indicates the status of wireless LAN communication.
	Power	Indicates the status of computer's power status.
	Battery	Indicates the computer's battery status. **NOTE:** The lights shows amber when the battery is charging. **NOTE:** The lights showns green when in AC mode.

Easy-Launch Buttons

Located above the keyboard are four buttons. They are mail, Web browser, Empowering Key and one user-programmable button.

Item	Default Application
Mail	Email application(User-programmable)
Web Browser	Internet browser(User -programmable)
e	Acer Empowering Technology(User-programmable)
P	User programmable

Touchpad

The build-in touchpad is a pointing device that senses movement on its surface.

This means the cursor responds as you move your finger across the surface of the touchpad.

The touchpad is located in the middle of the palm rest area, providing maximum comfort and efficiency.

Touchpad Basics

- Move your finger across the touchpad**(2)** to move the cursor.
- Press the left **(1)** and right **(4)** buttons located beneath the touchpad to perform selection and execution functions. These two buttons are similar to the left and right buttons on a mouse. Tapping on the touchpad is the same as clicking the left button
- Use the 4-way scroll **(3)** button to scroll up or down and move left or right a page. This button mimics your cursor pressing on the right scroll bar of windows applications.

Function	Left Button(1)	Righ Button(4)	Main touchpad(2)	Center button(3)
Execute	Quickly click twice		Tap twice (at the same speed as double-clicking the mouse button)	
Select	Click once		Tap once	
Drag	Click and hold. Then slide your finger across the touchpad to drag the cursor over the selection.		Tap twice quickly; rest your finger on the touchpad on the second tap and drag the cursor.	
Access context menu		Click once		
Scroll				CLick and hold to move up/down/left/ right

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

Using the Keyboard

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

Lock keys and Embedded Numeric Keypad

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

The computer features three lock keys, each with its own status indicator light.

Lock Key	Description
Caps Lock	When Caps Lock is on, all alphabetic characters are typed in uppercase. Toggle on and off by pressing the Caps Lock key on the left side of the keyboard.
Num lock <Fn+F11>	When Num Lock is on, the embedded keyboard 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 and external keypad.
Scroll lock <Fn+F12>	When Scroll Lock is on, the screen moves one line up or down when you press the up or down arrow keys respectively. Scroll Lock does not work with some applications.

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

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

Windows Keys

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

Windows logo key	Pressed alone, this key has the same effect as clicking on the Windows Start button; it launches the Start menu. It can also be used with other keys to provide a variety of functions: + 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 action) + 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.

Hotkeys

The computer employs hotkeys or key combinations to access most of the computer's controls like screen brightness, volume output and the BIOS utility. To activate hotkeys, press and hold the <Fn> key before pressing the other key in the hotkey combination.

Hot Key	Icon	Item	Description
Fn+F1		Hot key help	This key will cause a help message to appear on the display device that describes the definition and functionality of the unit hot keys.
Fn+F2		Acer eSettings	Launches the Acer eSetting in Acer Empowering Technology. See “Acer Empowering Technology”
Fn+F3		Acer ePower Management	Launches the Acer ePower Management in Acer Empowering Technology. See “Acer Empowering Technology”
Fn+F4		Sleep	Puts the computer in Sleep mode
Fn+F5		Display toggle	Switches display output between the display screen, external monitor(if connected)and both .
Fn+F6		Screen blank	Turns the display screen backlight off to save power. Press any key to return
Fn+F7		Touchpad toggle	Turns the internal touchpad on and off
Fn+F8		Speaker toggle	Turns the speakers on and off
Fn+w		Volume up	Increases the sound volume
Fn+y		Volume down	Decreases the sound volume
Fn+x		Brightness up	Increases the screen brightness
Fn+z		Brightness down	Decrease the screen brightness

Special Keys

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

The Euro Symbol

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

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

The US Dollar Sign

1. Open a text editor or word processor.
2. Either press < $ > at the bottom-right of the keyboard, or hold **<Shift>** and then press the **<4>** key at the upper-center of the keyboard.

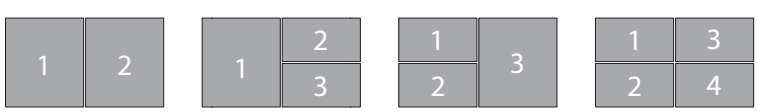
NOTE: This function varies according to the language settings.

Using the System Utilities

Acer GridVista(dual-display compatible)

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

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



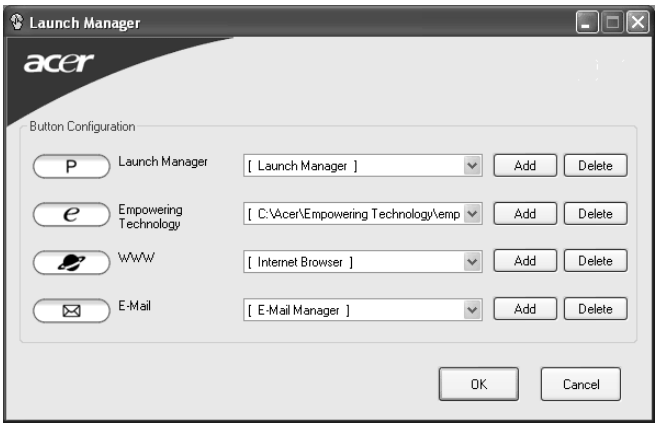
Double(vertical), Triple(primary at left), Triple(primary at right), or Quad Acer Gridvista is dual-display compatible, allowing two displays to be partitioned independently.

Set up Procedure

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

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

Launch Manager



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

Norton AntiVirus

Norton AntiVirus is an anti-virus software that finds and repairs infected files, and protects against viruses to keep your computer data safe and secure.

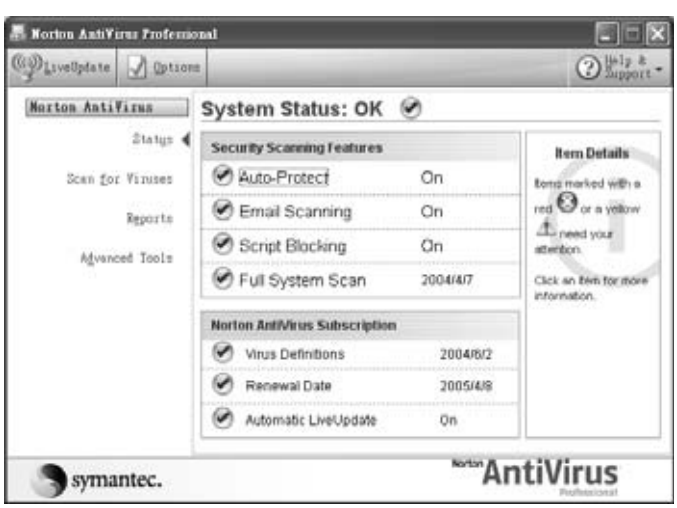
How do I check for viruses?

A Full System Scan scans all files on your computer. To perform a system scan:

1. Start Norton AntiVirus.

   Double click on the **Norton AntiVirus** icon on the desktop or click on the **Start** menu in the Windows taskbar, highlight **Programs**, and select **Norton AntiVirus**.

2. In the Norton AntiVirus main window, click **Scan for Viruses**.



3. In the **Scan** for **Viruses** panel, click **Scan My Computer**.
4. Under **Actions**, click **Scan**.
5. When the scan is complete, a scan summary appears. Click **Finished**.

You can schedule customized virus scans that run unattended on specific dates and times or at periodic intervals. If you are using the computer when the scheduled scan begins, it runs in the background so that you do not have to stop working.

For more information refer to the Norton Antivirus Help menu.

Acer Empowering Technology

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

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

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

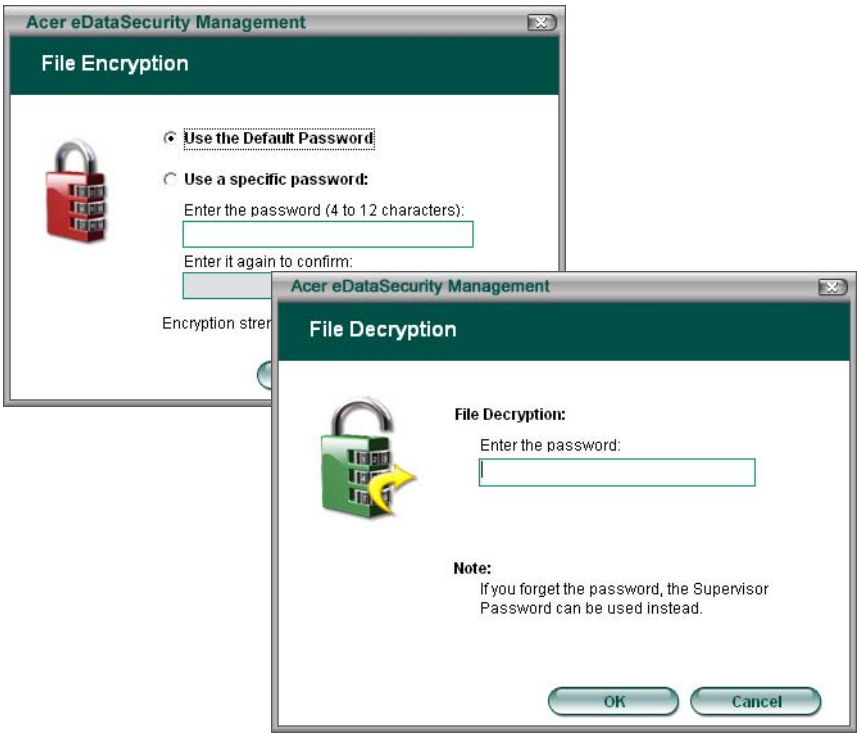
Acer eDataSecurity Management

Acer eDataSecurity Management is handy file encryption utility that protexts your files from being accessed by unauthorized persons. It is conveniently integrated with Windows explorer as a shell extension for quick and

easy data encryption/decryption and also supports on-the-fly file encryption for MSN Messager and Microsoft Outlook.

There are two passwords that can be used to encrypt/decrypt a file; the supervisor passowrd and the file-specific password. The supervisor passwork is a “master” password that cna decrypt any file on your system; the file-specific password will be used to encrypt files by default, or you cna choose to enter your own file-specific password when encrypting a file.

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



Acer eLock Management

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

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

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

If you do not set a password, Acer eLock Management will reset back to the initial status with all locks removed.

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

Acer ePerformance Management

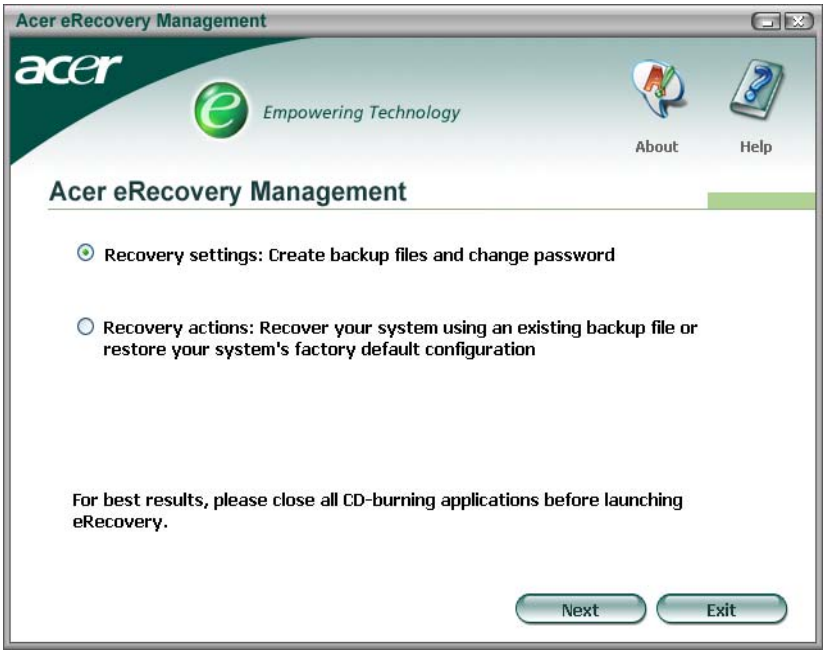
Acer ePerformance Management is a system optimization tool that boosts the performance of your Acer notebook. It provides you with the following options to enhance overall system performance:

- Memory optimization - releases unused memory and check usage.
- Disk optimization - removes unneeded items and files.
- Speed optimization - improves the usability and performance of your Windows XP system.

Acer eRecovery Management

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

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



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

Acer eSettings Management

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

Acer eSettings Management also:

- Provides a simple graphical user interface for navigating through the program effortlessly.
- Displays general system status and advanced monitoring for power users.
- Logs when a hardware component has been removed or replaced.
- Permits you to migrate personal settings.
- Keeps a history log of all alerts that were previously issued.

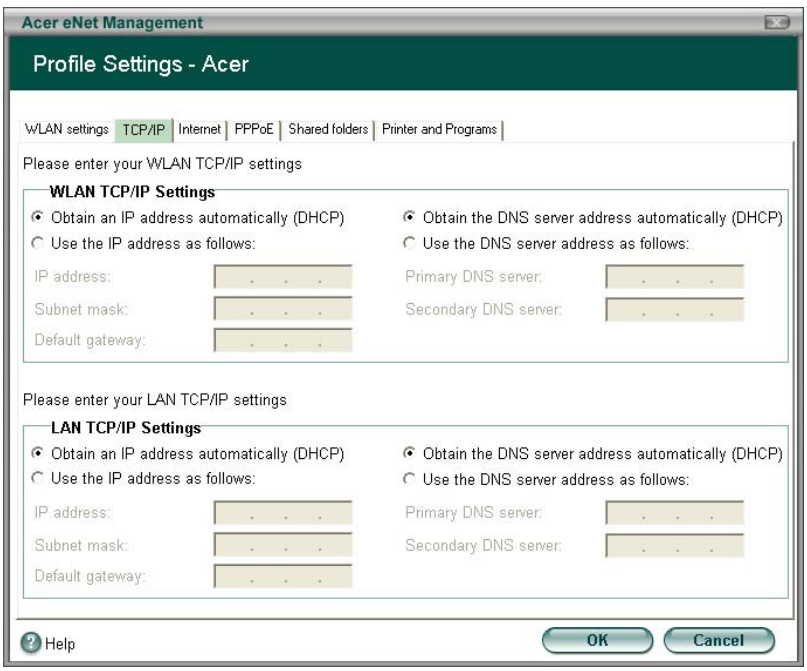
Acer eNet Management

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

Acer eNet Management automatically detects the best settings for a new location, while offering you the freedom to manually adjust the settings to match your needs, simply by right-clicking on the icon in the taskbar.

Acer eNet Management can save network settings for a location to a profile, and automatically apply the appropriate profile when you move from one location to another. Settings stored include network connection

settings(IP and DNS settings, wireless AP details, etc.), as well as default printer settings. Security and safety concerns mean that Acer eNet Management does not store username and password information.



Acer ePower Management

Acer ePower Management features a straightforward user interface. To launch it, select Acer ePower Management from the Empowering Technology interface, or double-click the Acer ePower Management icon in the task tray.

Acer Mode

The default setting is “Maximum Performance.” You can adjust CPU speed, LCD brightness and other settings, or click on buttons to turn the following functions on/off: Wireless LAN, Bluetooth, CardBus, Memory Card, Audio, and Wired LAN.

DC Mode

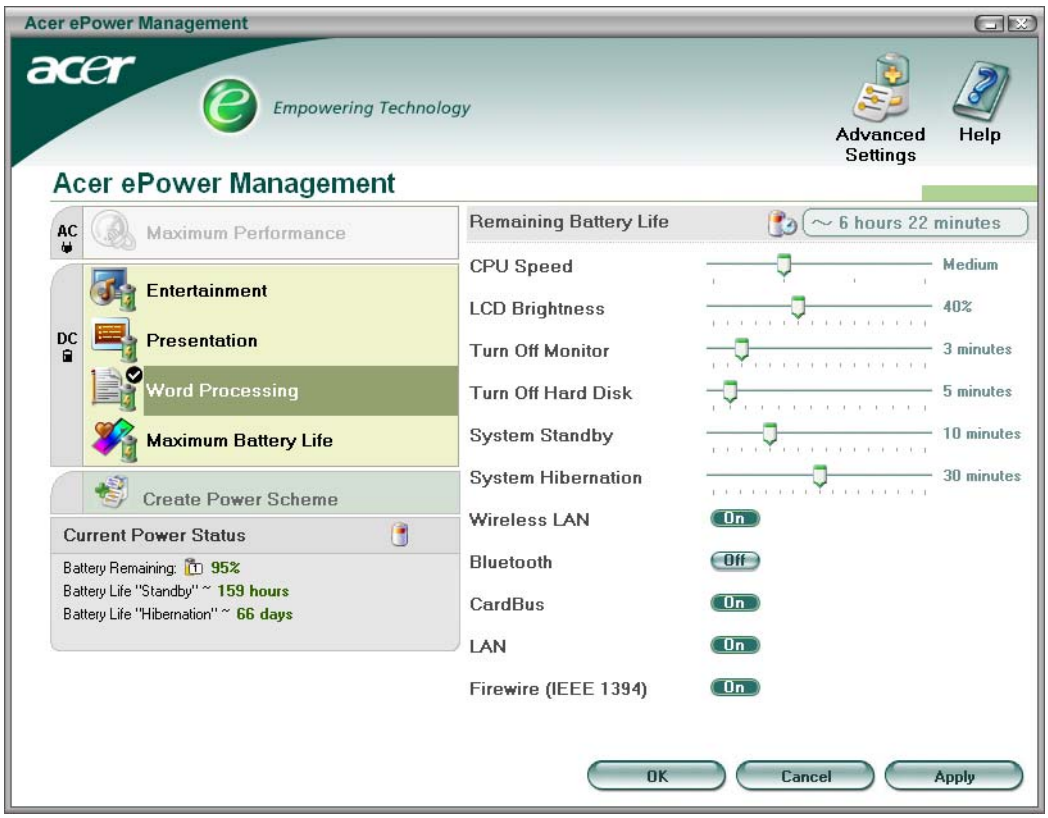
To suit your usage, there are four pre-defined profiles - Entertainment, Presentation, Word Processing, and Maximum Battery. Or, you can define up to three of your own profiles.

Create new power scheme

1. Assign a name for the new scheme.
2. Choose existing scheme to use as a template.
3. Select whether used for mains (AC) or batery mode.
4. Choose which power options best fit your needs, then click OK.
5. The new profile will appear on the main screen.

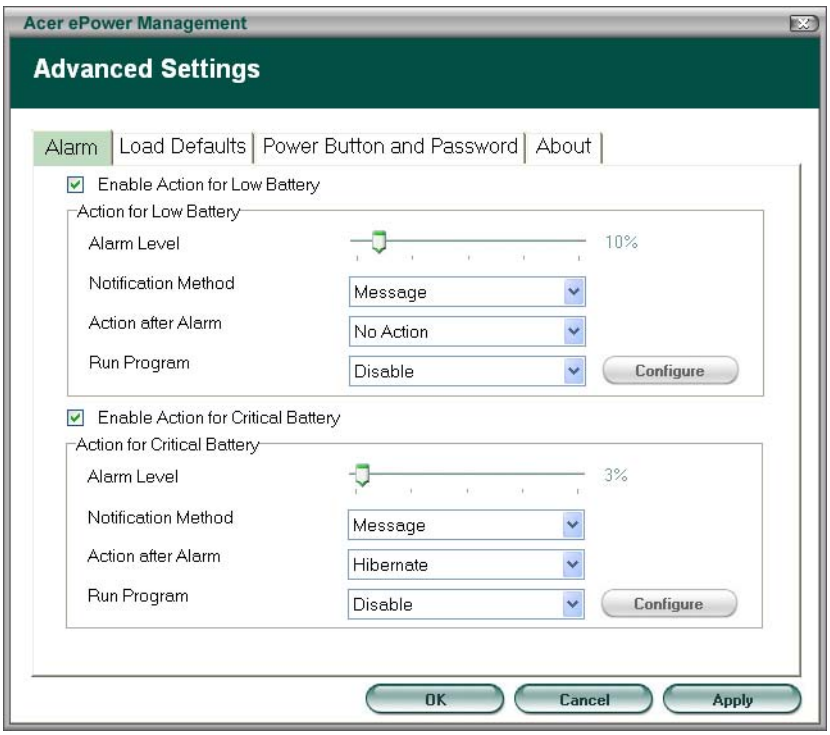
Battery status

For real-time battery life estimates based on current usage, referto the panel on the lower left-hand side of the window.



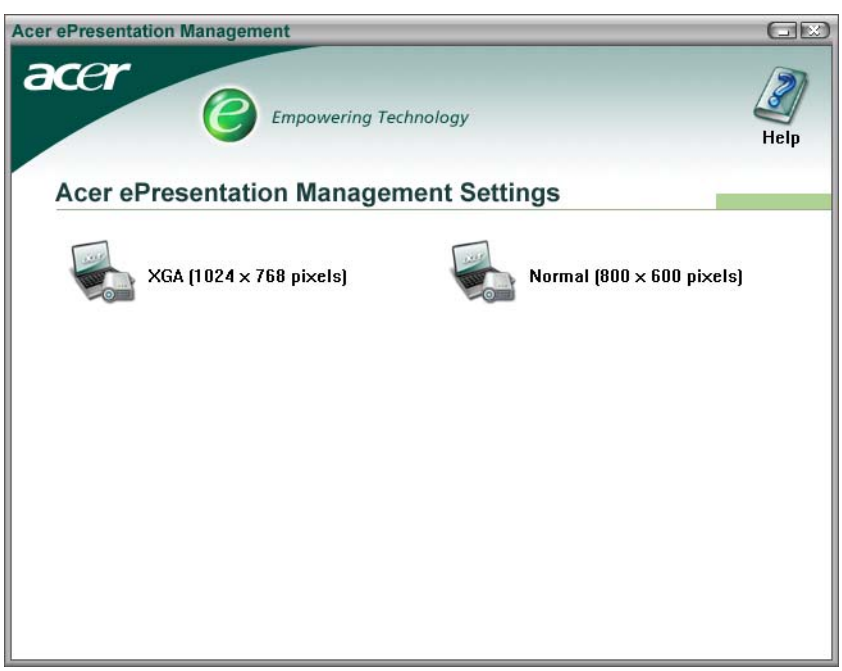
You can also click “Advanced Settings” to:

- Set alarms.
- Re-load factory defaults.
- Select what actions will be taken when the cover is closed, and set passwords for accessing the system after Hibernation or Standby.
- View information about Acer ePower Management.



Acer ePresentation Management

Acer ePresentation Management lets you select from two of the most common projector resolutions: XGA and SVGA.



Hardware Specifications and Configurations

Processor

Item	Specification
CPU type	Intel® Core™ Duo processor T2300/T2400/T2500/T2600 with 667 MHz FSB Clock speed up to 1.66/1.83/2.16 GHz
CPU package	Micro-FCPGA
CPU core voltage	Depend on DVI
CPU I/O voltage	1.2875V

System Board Major Chips

Item	Controller
System core logic	Intel® 945GM/ICH7M
Super I/O controller	SIO 87383, LPC interface
Audio controller	Azalia Audio Controller ALC883D
Video controller	UMA
Hard disk drive controller	ICH7M
Keyboard controller	NS 97551
IrDA controller	Vishay TFBS6614
DVI controller	CH7307
PCMCIA/ card reader / 1394 controller	TI PCI7412
DDR-soDIMM controller	945GM

BIOS

Item	Specification
BIOS vendor	Phoenix
BIOS Version	Phoenix First BIOS
BIOS ROM type	1MB CMOS Boot Block Flash Memory
BIOS ROM size	1MB
BIOS package	40 pin TSOP
BIOS password control	Set by setup manual

System Memory

Item	Specification
Memory controller	945GM
Memory size	256MB/512MB/1G
DIMM socket number	2
Supports memory size per slot	1024 MB
Supports maximum memory size	2GB (with dual soDIMM modules)
Supports DIMM type	DDRII SDRAM Standard
Supports DIMM Speed	533/667 MHz
Supports DIMM voltage	1.8V
Memory module combinations	You can install memory modules in any combinations as long as they match the above specifications.

.

LAN Interface

Item	Specification
Supports LAN protocol	10/100/1000 Mbps Fast Ethernet connection
LAN chip	Broadcom 5789 PCI-E GbE
LAN connector type	RJ45
Feature	Support WOL from S5, support LDCM

.

Wireless LAN

Item	Specification
Card Type	Mini-card
Mode	802.11 a/b/g(Mini-Card) 802.11 pre-n
Antenna	Built in 2 antenna(Has to be placed on the top of LCD on the sides of LCD latch)
Support	Wi-Fi, WPA2, WMM, CCX V3/V4

.

Modem Interface

Item	Specification
Data modem data baud rate (bps)	56K ITU
Supports modem protocol	V.90/V.92, WWDAA Apply CISPR22 Wake-on-Ring ready
Modem connector type	RJ11

VGA

Notice	UMA
Chipset for suitable VGA type	945GM
Video RAM	up to 128MB

USB Port

Item	Specification
USB compliancy level	2.0
OHCI	USB 2.0
Number of USB port	3
Location	Left Side *2 Right Side *1

Audio Port

Item	Specification
Audio Controller	Azalia Audio Controller (Realtek ALC883)
Audio onboard or optional	Built-in
Mono or Stereo	Stereo
Resolution	SNR>85, High-performance DACs with 95dB SNR, ADCs 85 dB SNR
Compatibility	Microsoft PC99/2100, AC97 2.3 & WHQL/WLP2.0
Mixed sound source	CD
Sampling rate	All DACs support 44.1K/48K/96K/192K sample rate All ADCs support 44.1K/48K/96K sample rate
Internal microphone	one internal microphone(2 digital picrophone array)
Internal speaker / Quantity	Yes / 2(at least 1.5W/30cc for each)
Support	VoIP/Universal jack

PCMCIA Port

Item	Specification
PCMCIA controller	PCI7412
Supports card type	Type II
Number of slots	One
Access location	Right Side
Supports 32 bit CardBus	Yes

Keyboard

Item	Specification
Keyboard controller	NS PC97551
Keyboard vendor & model name	New Acer Ergo keyboard
Total number of keypads	❑ 88-89 keys Acer Fine Touch™ keyboard
Touchpad with 4-way integrated scroll button	Yes

Keyboard

Item	Specification
Feature	❑ Support Windows keys and application keys ❑ Standard pitch, 2.5 mm travel length ❑ Hotkey controls ❑ embedded numberic keypad ❑ Multi-Langue support ❑ Spill-proof
Four easy-launch buttons	❑ Internet browser ❑ email with LED ❑ Empowering key ❑ one user-programmable button

Battery

Item	Specification
Vendor & model name	Panasonic/Sanyo
Battery Type	Li-ion
Number of battery cell	6-cell 2400mAh 3-cell 2000mAh
Package configuration	
Pin 1 Pin 2	BATT+: Battery+, Battery Positive Terminal
Pin 3	ID : Identify Pin (Note 1)
Pin 4	B/I : Battery-In Pin
Pin 5	TS : Connect to Thermister
Pin 6	SMD : SMBus data interface I/O pin
Pin 7	SMC : SMBus clock interface I/O pin
Pin 8 Pin 9	GND : Battery Negative Terminal

12.1" LCD Panel

Item	Specification		
Vendor & model name	AUO B121EW01 V3 AUO B121EW02 V5	QDI QD12TL02-01/ QD12TL02-02	CMO N121|3-L 01/ N121|3-L02
Screen Diagonal (mm)	12.1" WXGA	12.1" WXGA	12.1" WXGA
Active Area (mm)	261.12(W)163.2(H)	261.12(W)x163(H)	261.12(H)x163.2(V)
Display resolution (pixels)	1280x3(RGB)x800	1280x800	1280xRGBx800
Pixel Pitch(mm)	0.204(per on triad)x0.204	0.2055(W)x0.2055(H)	0.204x0.204
Pixel Arrangement	RGB vertical stripe	RGB vertical stripe	RGB vertical stripe
Display Mode	Normally white	Normally white	Normally white

12.1" LCD Panel

Item	Specification		
Surface Treatment	Hard coating(3H) glare type/anti-glare type	Hard coating(3H) glare type/anti-glare type	Hard coating(3H) glare type/anti-glare type
Typical White Luminance (cd/m^2) also called Brightness	180(Typical)	200(Center Typical)	200(Typical)
Contrast Ratio	400 :1(Min)	300:1(Min)	500(Typical)
Response Time (Optical Rise Time+Fall Time)msec	25(Typical) 35(Max)	50(Max)	25(Typical) 35(Max)
Normal Input Voltage of Power Supply	+3.3V(Typical)	+3.3V(Typical)	+3.3V(Typical)
Power Consumption (watt)	4.5(Typical)	4.8(Typical)	3.66(typ) IL=6.0
Weight	280g (0.5mm glass)	250g	260(Typical)
Physical Size(mm)	275.82(H)x178(V)x5.2(D) (Max)	275..82(H)x178(V)x5.2(D)(Max)	275.8(H)x178(V)x4.9(D)(Typical)
Electrical Interface	1 channel LVDS	LVDS interface system(H-Sync, V-Sync)	3.3V LVDS with 1 pixel/clock
Support Color	Native 262K colours	256K colors	Native 262K colours
Viewing Angle (degree) Horizontal: Right/Left Vertial: Upper/Lower	 40/40 10/30	 45/45 15/35	 45/45 20/45
Temperature Range(° C) Operating Storage (shipping)	 0 to +50 -40 to +60	 0 to +50 -25 to +60	 0 to +50 -25 to +60

AC Adapter

Item	Specification
Vendor & model name	LITEON-65W, PA-1650-02 QY YELLOW 1.7X5.5X11 LF
Input Requirements	
Maximum input current (A, @100Vac, full load)	1.6A @100Vac input and maximum load
Nominal(Rated) frequency (Hz)	50 or 60 and single phase
Frequency variation range (Hz)	47 - 63
Nominal voltages (Vrms)	100-127(low range) 200-240(high range)
Efficiency	High efficiency 83% minimum, full load, warm-up condition.
Output Ratings (CV mode)	
Rated output voltage	Offers rated output voltage 19.0V
Voltage Range	18.05V to 19.95V
Noise + Ripple	380mV
Rated Power	65Watts continuously at all specified conditions
Output current	0 A (min.) to 4.74A (max.)
Dynamic Output Characteristics	
Start-up time	Shall less than 5 sec

Item	Specification
Hold up time	at least 5ms (@115 Vac input, full load)
Over Voltage Protection (OVP)	29V
Over Current Protection(OCP)	Output current limit is 5A(Max mode)
Short circuit protection	Output can be shorted without damage, and auto recovery
Electrostatic discharge (ESD)	15kV (at air discharge) 8kV (at contact discharge)
Dielectric Withstand Voltage	
Primary to secondary	2150VDC for 1 sec
Leakage current	less than 100uA
Regulatory Requirements	1. CISPR 22 Class B 2. VCCI Class II

Hard Disk Drive Interface

Item		Specification	
Vendor & Model Name	Segate SATAST98823AS/ HGST SATA 1.5G NCQ MORAGA+HTS541080G9SA 00	Segate SATA ST9100824AS LF/HGST NCQMORAGA+HTS541010 G9SA00	Segate SATA ST9120821AS LF/ Toshiba SATAI1.5G W/ NCQ MK1234GSX
Capacity (MB)	80000	100000	120000
Bytes per sector	1024/512	512	512
Data heads	3/4	4	4
Drive Format			
Disks	2	2	2
Spindle speed (RPM)	5400 RPM	5400 RPM	5400 RPM
Performance Specifications			
Buffer size	8192KB	8192KB	8192KB
Interface	Serial ATA	Serial ATA	Serial ATA
Max. media transfer rate (disk-buffer, Mbytes/s)	57.6/61.6	57.6/61.6	57.6
Data transfer rate (host~buffer, Mbytes/s)	150 MB/Sec. SATA 1.0	150 MB/Sec.	150 MB/Sec.
DC Power Requirements			
Voltage tolerance	5V(DC) +/- 5%	5V(DC) +/- 5%	5V(DC) +/- 5%

8X DVD Dual Interface

Item	Specification	
Vendor & model name	Lite-On SOSW-833S	PANASONIC UJ-840
Performance Specification		
Transfer rate (KB/sec)		
(1) Read	DVD-ROM(single layer) : 1.7-4X, 2.5-6X, 3.3-8X(CAV) DVD-ROM(dual layer) : 1.7-4X, 2.5-6X(CAV) DVD+R : 1X,2.4X(CLV) / 1.7-4X, 2.5-6X, 3.3-8X(CAV) DVD+RW : 1X, 2.4X(CLV) / 1.7-4X, 2.5-6X(CAV) Double layer DVD+R: 1X, 2.4X(CLV) / 1.7-4X(CAV) Double layer DVD-R: 1X, 2.4X(CLV) / 1.7-4X(CAV) DVD-R : 1X, 2X / 1.7-4X, 2.5-6X, 3.3-8X(CAV) DVD-RW : 1X, 2X / 1.7-4X, 2.5-6X(CAV) CD-ROM, Finalized CD-R, CD-RW : Data/CD-DAE/Video CD : 4.1-10X, 6.2-15X, 8.3-20X, 10-24X Unfinalized CD-R/RW : 4X/8X(CLV)	DVD-ROM : MAX 8X CAV CD-ROM : MAX 24X CAV
(2) Write	CD-R : 10X, 24X Low speed CD-RW: 4X High Speed CD-RW : 4X, 10X Ultra Speed CD-RW : 10X, 24X DVD+R : 2.4X, 4X, 6X, 8X DVD+R DL : 2.4X DVD+RW : 2.4X, 4X DVD-R : 2X, 4X, 6X, 8X DVD-RW : 2X, 4X	CD-R : Max 24X Zone CLV CD-RW : 4X CLV High Speed CD-RW : 10X CLV Ultra Speed CD-RW : 10X CLV DVD+R : Max 8X Zone CLV DVD+R DL : 2.4X CLV DVD+RW : Max. 4X Zone CLV DVD-R : Max. 8X Zone CLV DVD-RW : Max. 4X Zone CLV
(3) ATAPI Interface PIO mode DMA mode Ultra DMA mode	 16.6MB/s: PIO mode4 16.6MB/s: Multi word mode2 33.3MB/s: Ultra DMA mode2	 16.6MB/s: PIO mode4 16.6MB/s: Multi word mode2 33.3MB/s: Ultra DMA mode2
Buffer Memory	2MB	2MB
Interface	ATA/ATAPI-6, MMC-4	Enhanced IDE(ATAPI) compatible
Applicable disc format	CD-DA, CD-TEXT, CD ROM Mode-1, CD-ROM/XA Mode-2 Form-1 Form-2, CD-I Ready, Video-CD (MPEG-1), Photo-CD, Enhance CD, CD extra, I-Trax CD and UDF, DVD-ROM, DVD-Video, DVD-VIdeo, DVD-R single/multi border(s), DVD+R single/multi session(s), DVD-RW, DVD+RW	DVD: DVD-VIDEO,DVD-ROM, DVD-R(3.9GB, 4.7GB), DVD-RW (Ver1.1) DVD+R, DVD+R DL, DVD+RW CD: CD-Audio, CD-ROM, CD-R/RW CD-ROM XA, , PhotoCD (Single and Multi Session), Video CD, CD-Extra (CD+), , CD-Text, Hybrid SACD
Loading mechanism	Load: Manual load/DC brushless motor system	Load: Manual Release: (a) Electrical Release
Power Consumption	Max. 1500 mA	Max. 1800 mA
Input Voltage	5 V +/- 5 % (Operating)	5 V +/- 5 % (Operating)

Combo Drive Interface

Item	Specification	
Vendor & model name	LITEON SOSC-2483K	PANASONIC UJDA-770
Performance Specification		
Transfer rate (KB/sec)(DVD)	Sustained: Max 10.1Mbytes/sec	Sustained: Max 10.8Mbytes/sec
Access Time(Typical)	DVD: Random Access: 100 ms DVD:Full Stroke: 190 ms	DVD: Typical:180 ms
Buffer Memory	2MB	2MB
Interface	Compliant to ATA/ATAPI-5, MMC-3	ATAPI interface
Applicable disc format	CD-DA, CD ROM Mode-1, CD-ROM/XA Mode-2 Form-1 and Form-2, CD-I Ready, Video-CD(MPEG-1), Karaoke-CD, Photo-CD, Enhance CD, CD extra, I-Trax CD and UDF	CD: CD-DA, CD-ROM, CD-R, CD-RW, CD-ROM XA, PhotoCD(MultiSession) DVD: DVD-ROM, DVD-Video, DVD-RAM(2.6GB/4.7GB), DVD-R, DVD-RW(Ver1.1), DVD+R, DVD+RW
Loading mechanism	Load: Manual load/DC brushless motor system	Load: Manual
Power Requirement		
Input Voltage	5 V +/- 5 % (Operating)	5 V +/- 5 % (Operating)

Power Management

ACPI Mode	Power Management
Mech. Off (G3)	All devices in the system are turned off completely.
Soft Off (G2/S5)	OS initiated shutdown. All devices in the system are turned off completely.
Working (G0/S0)	Individual devices such as the CPU and hard disk may be power managed in this state.
Sleeping State (S3)	CPU Power Down VGA Power Down PCMCIA Suspend Audio Power Down Hard Disk Power Down Super I/O Power Down
Sleeping State (S4)	Also called Hibernate state. System saves all system states and data onto the disk prior to power off the whole system.

Dimensions and Weight

Item	Details	
Model	**Aspire 1690**	**Aspire 3510**
Deminsions	297.5mm(W) x 210mm(D) x 24.5mm(H)	
Weight	<1650g (12.1”/6-cell w/ Camera) <1500g (12.1”/3-cell w/ Camera)	

Environmental Requirements

Item	Specification
Temperature	
Operating	+5 ~ +35°C
Non-operating	-20 ~ +65°C (storage package)
Humidity	
Operating	20% ~ 80% without condensation
Altitude	Operating sea level 0 to 10,000ft
	Storage sea level 0 to 40,000ft

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 **m** during POST (when "Press <F2> to enter Setup" message is prompted on the bottom of screen).

The setup screen displays BIOS as follows:Navigating the BIOS Utility

Function	Item
Information	Display the system informations
Main	Allows the user to specify standard IBM PC AT system parameters
Advanced	Provides advanced settings of the system
Security	Provides security settings of the system
Boot	Allows the user to specify the boot options
Exit	Allows the user to save CMOS setting and exit Setup

During setup,all Fn function keys and power saving functions are disabled.

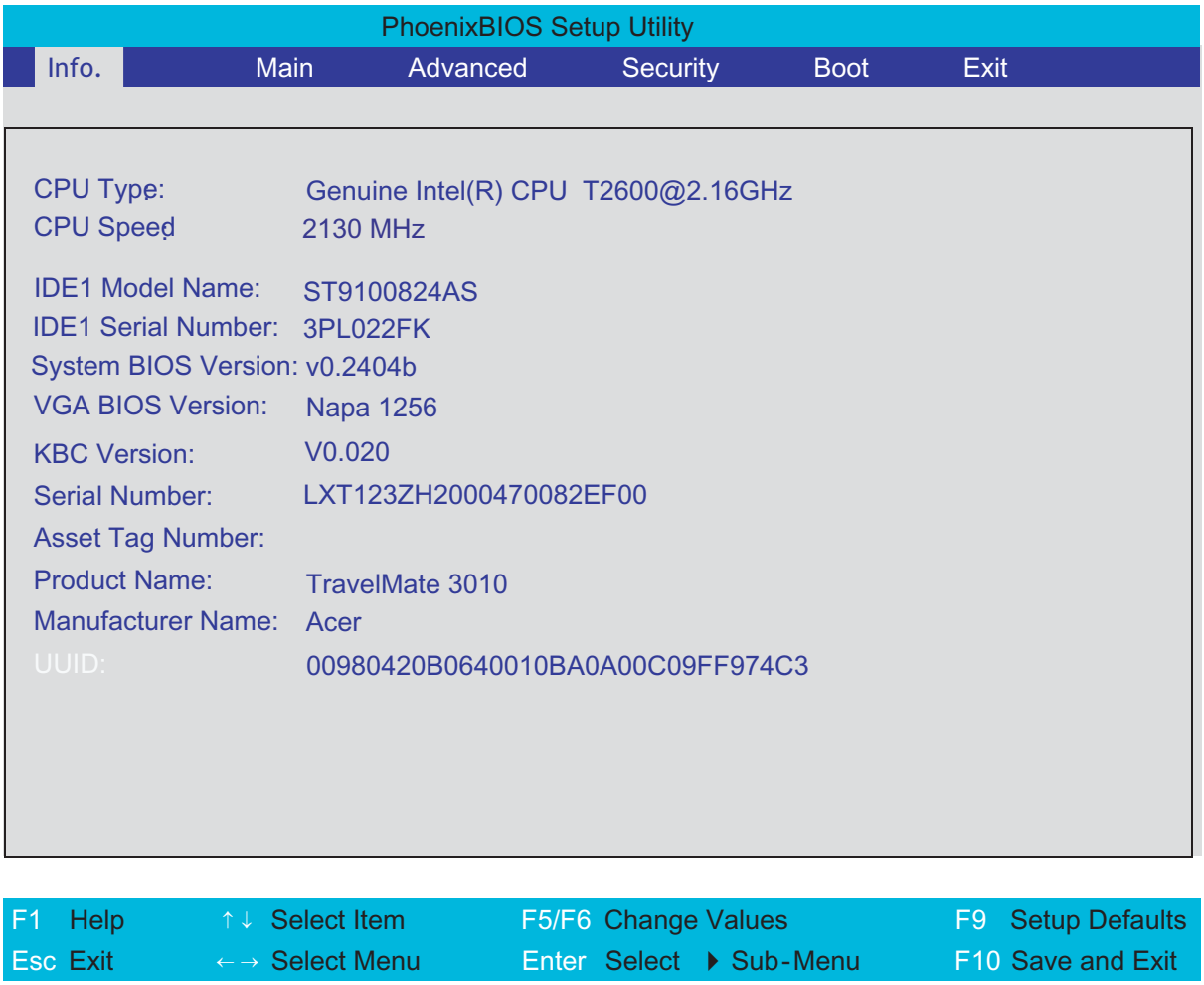
There are five menu options: Main, Advanced, Security, Boot and Exit.

Follow these instructions:

- To choose a menu, use the cursor left/right keys (zx).
- To choose a parameter, use the cursor up/down keys (wy).
- To change the value of a parameter, press p or q.
- Press ^ 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 t. You can also press u 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.

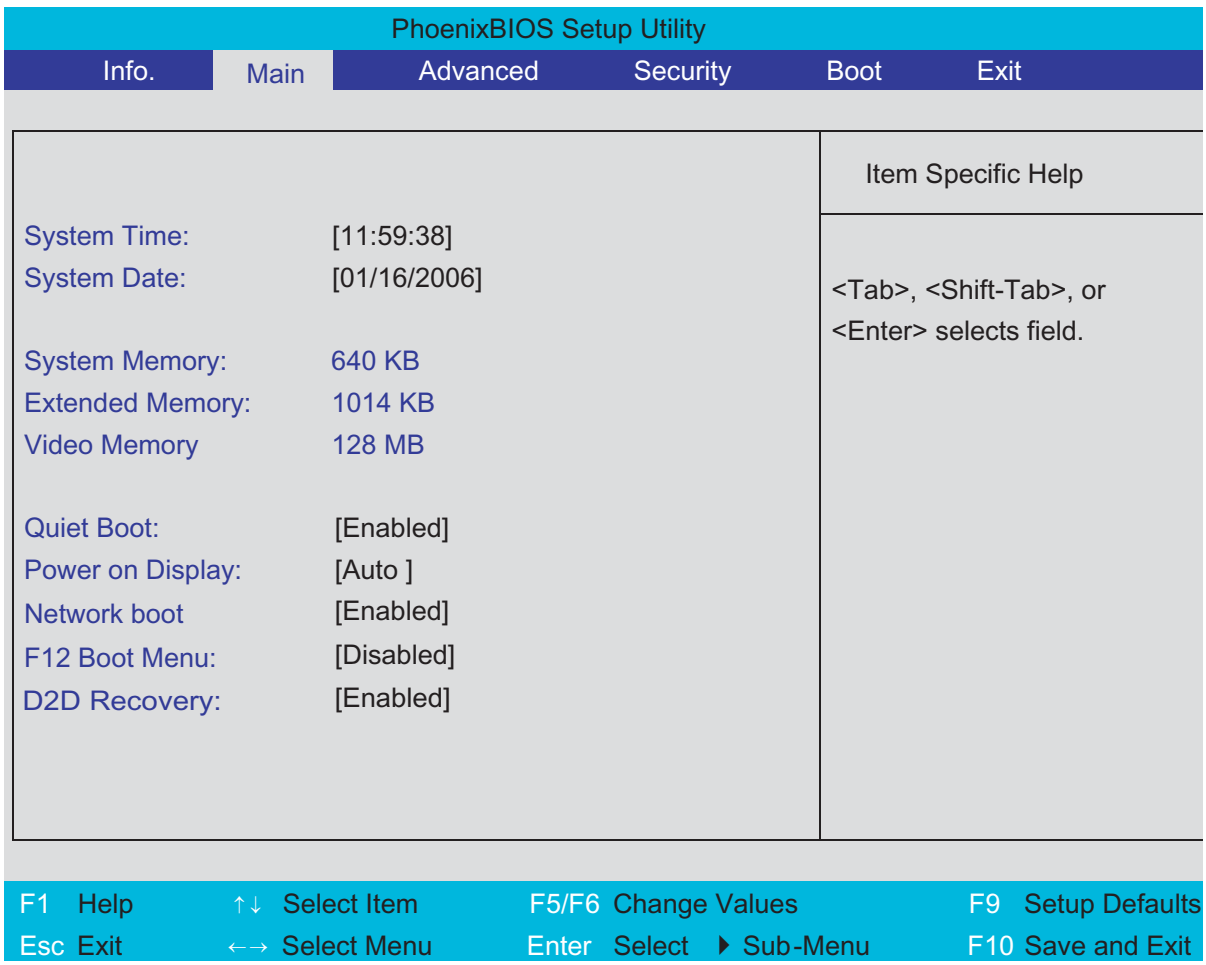
Information



Parameter	Description
CPU Type	This item will show the CPU information of the system.
CPU Speed	This item will show the CPU clock speed.
IDE1 Model Name	This item will show the Model name of HDD installed on Primary IDE master. The hard disk model name is automatically detected by the system. If there is no hard disk present or unknown type, “None” should be shown on this field
IDE1 Serial Number	This item will show the Serial number of HDD installed on Primary IDE master. If no Hard disk or other devices are installed on Primary IDE master, then it will display a blank line
System BIOS Version	This field reports the BIOS version of system
VGA BIOS Version	This field reports the VGA version of the system
KBC Version	This field reports the keyboard controller version of the system
Serial Number	This item will show the Serial number of system.
Asset Tag Number	This item will show the Asset Tag number of the system.
Product Name	This field will show product name.
Manufacturer Name	This field will show manufacturer name.
UUID	This will be visible only when there is an internal LAN device present.

Main

This menu provides you the information of the system.

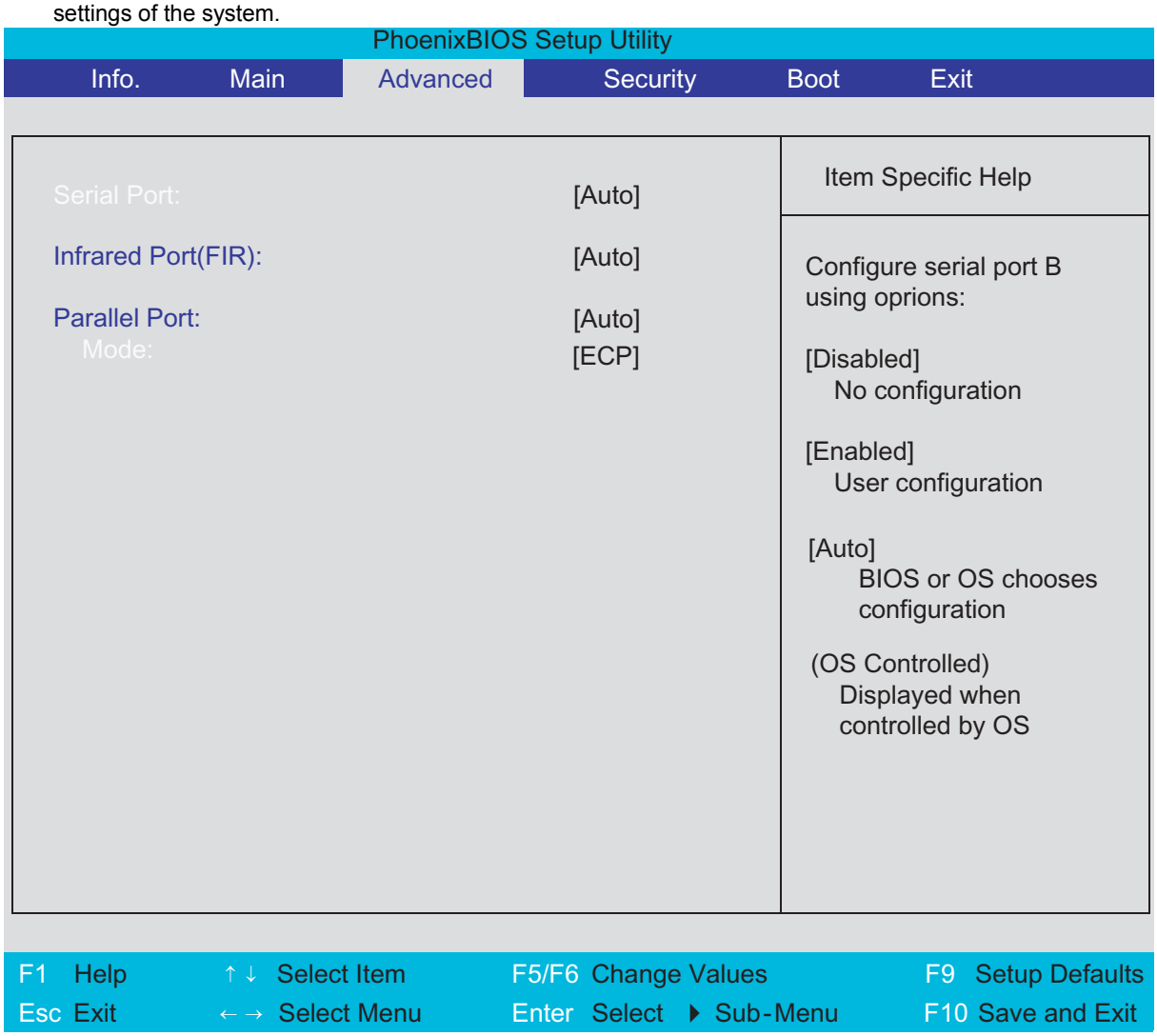


Parameter	Description
System Time / System Date	The hours are displayed with 24 hours format. The values set in these two fields take effect immediately.
System Memory	This field reports the memory size of system base memory. The size is fixed to 640KB.
Extended Memory	This field reports the memory size of the extended memory in the system. Extended Memory size = Total memory size - 1 MB
Video Memory	VGA Memory size = 128MB
Quiet Boot	Customer Logo display will be shown during POST when it is selected.
Power on display	**Auto**: During power on process, the system will detect if any display device is connected on external video port. If any external display device is connected, the power on display will be in CRT (or projector) only mode. Otherwise it will be in LCD only mode. **Both**: Simultaneously enable both the integrated LCD screen and the system's external video port (for an external CRT or projector).
Network boot	When this is selected, Boot from LAN feature is enabled. When this is not selected, Boot from LAN feature is then disabled.

Parameter	Description
F12 Boot Menu	When this is selected, users can modify device boot priority by pressing F12 key during POST. When this is not selected, device boot priority will not be adjustable during POST.
D2D Recovery	Allow user to enable/disable the Disk-to-Disk recovery

Advanced

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



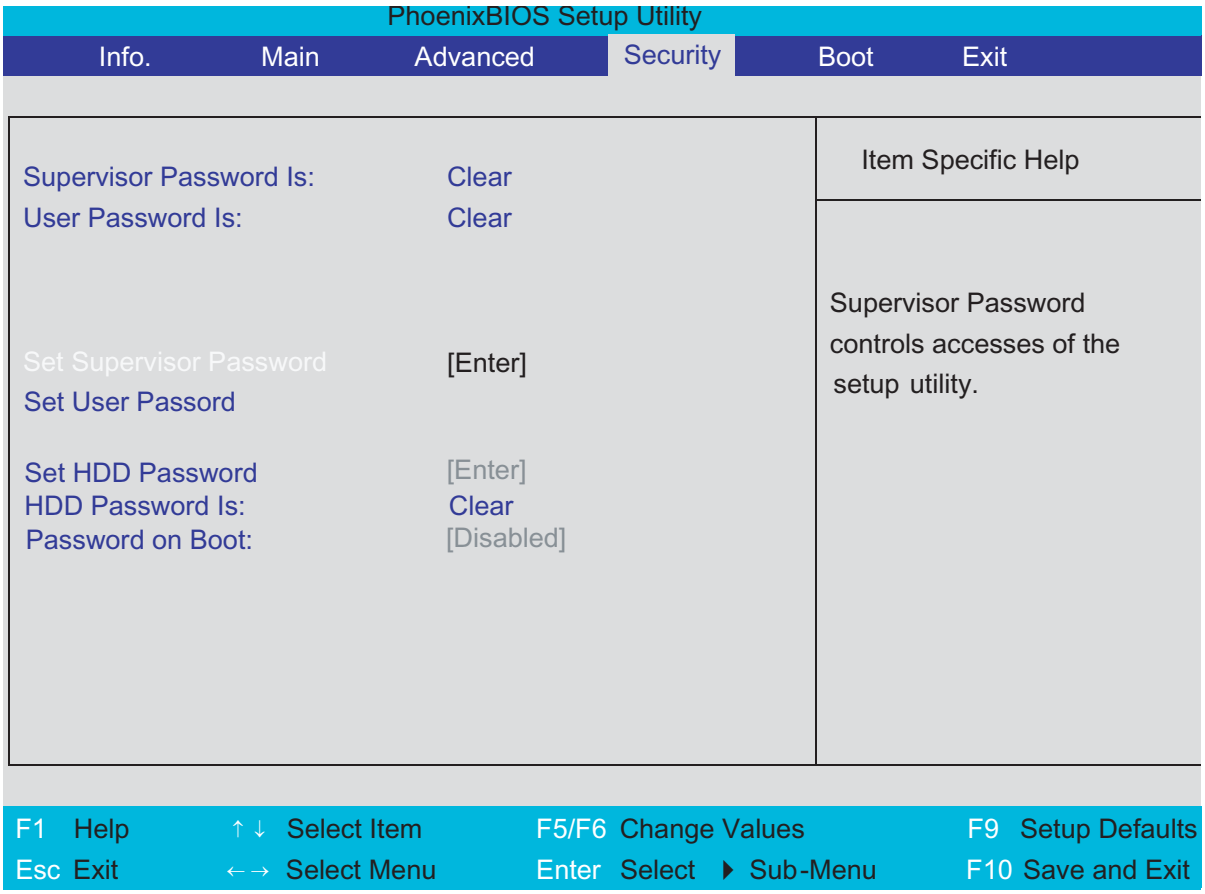
The table below describes the parameters in the screen. Settings in **boldface** are the default and suggested parameter settings.

	Description	Option
Serial Port	Configure serial port A using options: [Disabled]: No configuration [Enabled]: User configuration [Auto]: BIOS or OS chooses configuration (OS Controlled) Displayedd when controlled by OS	Disabled Enabled **Auto**

	Description	Option
Infrared Port	Configure serial port B using options: [Disabled]: No configuration [Enabled]: User configuration [Auto]: BIOS or OS chooses configuration (OS Controlled) Displayedd when controlled by OS	Disabled Enabled **Auto**
Parallel Port	Configure serial port B using options: [Disabled]: No configuration [Enabled]: User configuration [Auto]: BIOS or OS chooses configuration (OS Controlled) Displayedd when controlled by OS	Disabled Enabled **Auto**
Mode	Set the mode for the parallel port	Output only Bi-directional EPP ECP

Security

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



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

Parameter	Description	Option
Supervisor Password Is	N/A	N/A
User Password Is	N/A	N/A
HDD Password Is	N/A	N/A
Set Supervisor Password Set User Password	Press Enter to set the administrator password. When set, this password protects the BIOS Setup Utility from unauthorized access. [Set]: System password is set [Clear]: System password is not set	Length -- No more than 8 characters Characters -- 0-9, A-Z (not case sensitive)

Parameter	Description	Option
Set HDD Password	When shown as [Locked], the hard drive password currently can not be changed or disabled. To change or disable it, turn off the system and enter Setup immediately after turning it back on. Press [Enter] to input change, or disable hard drive password.	**Enter**
Password on boot	Defines whether a password is required or not while the events defined in this group happened. The following sub-options are all requires the Supervisor password for changes and should be grayed out if the user password was used to enter setup. Allows the user to specify whether or not a password is required to boot.	**Disabled** Enabled

Set Supervisor/User Password

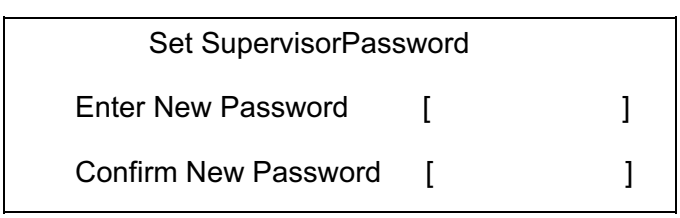
If password on boot is required, the password must be set otherwise it cannot be enabled.

The formats of the password are as follows:

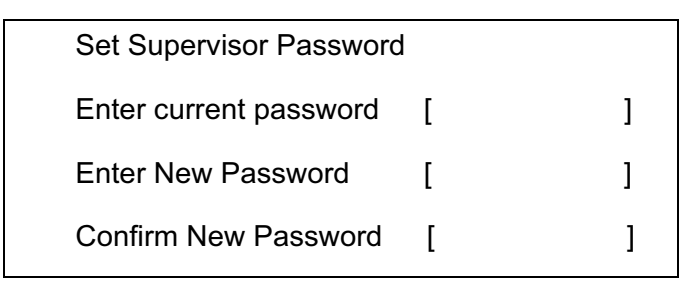
Length No more than 8 characters

Characters 0-9,A-Z (not case sensitive)

While these fields are highlighted and press “Enter”, a window similar to the following is shown:



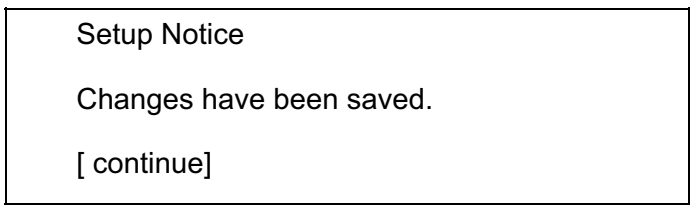
If there is an old password then setup will prompt with the following window instead and a current password will be required to be entered at first:



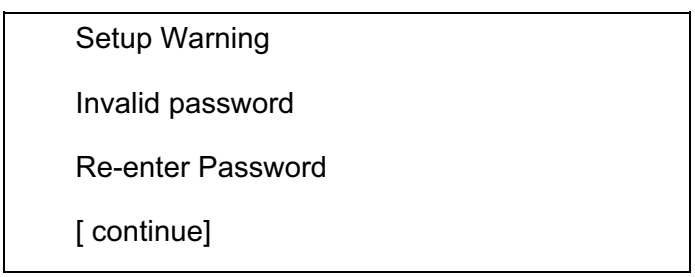
User can now type password in field “Enter New Password”, and re-enter password in field “Confirm New Password” for verification.

If the verification is OK:

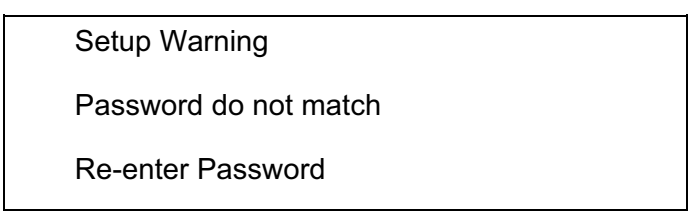
The password setting is complete after user presses enter.



If the current password entered does not match the actual current password:

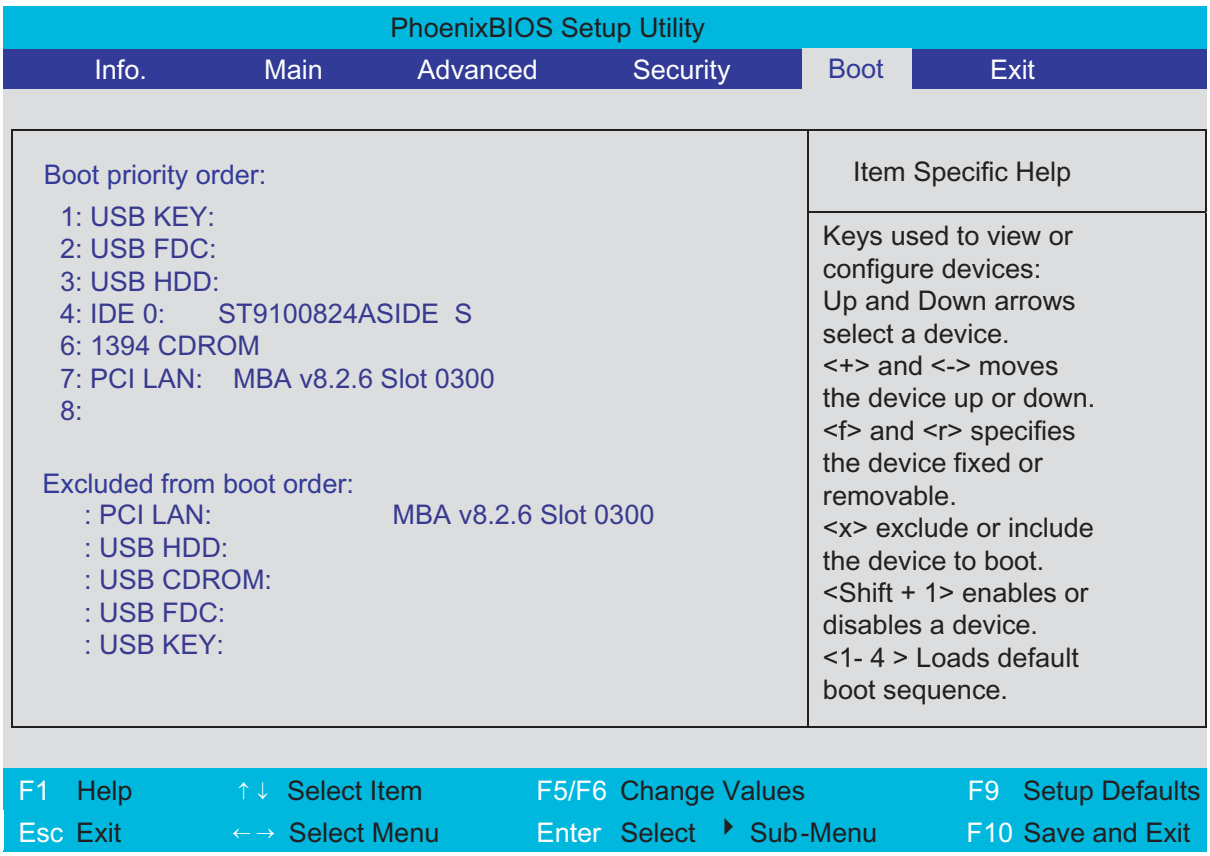


If the new password and confirm new password strings do not match:



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 and onboard LAN device.



Parameter	Description
Boot priority order	Keys used to view or configure devices: Up and Down arrows select a device. <+> and <-> movew the device up or down. <f> and <r> specifies the device fixed or removable. > <x> exclude or include the device to boot. <Shift +1> enables or disables a device. <1-4> Loads default boot sequence.

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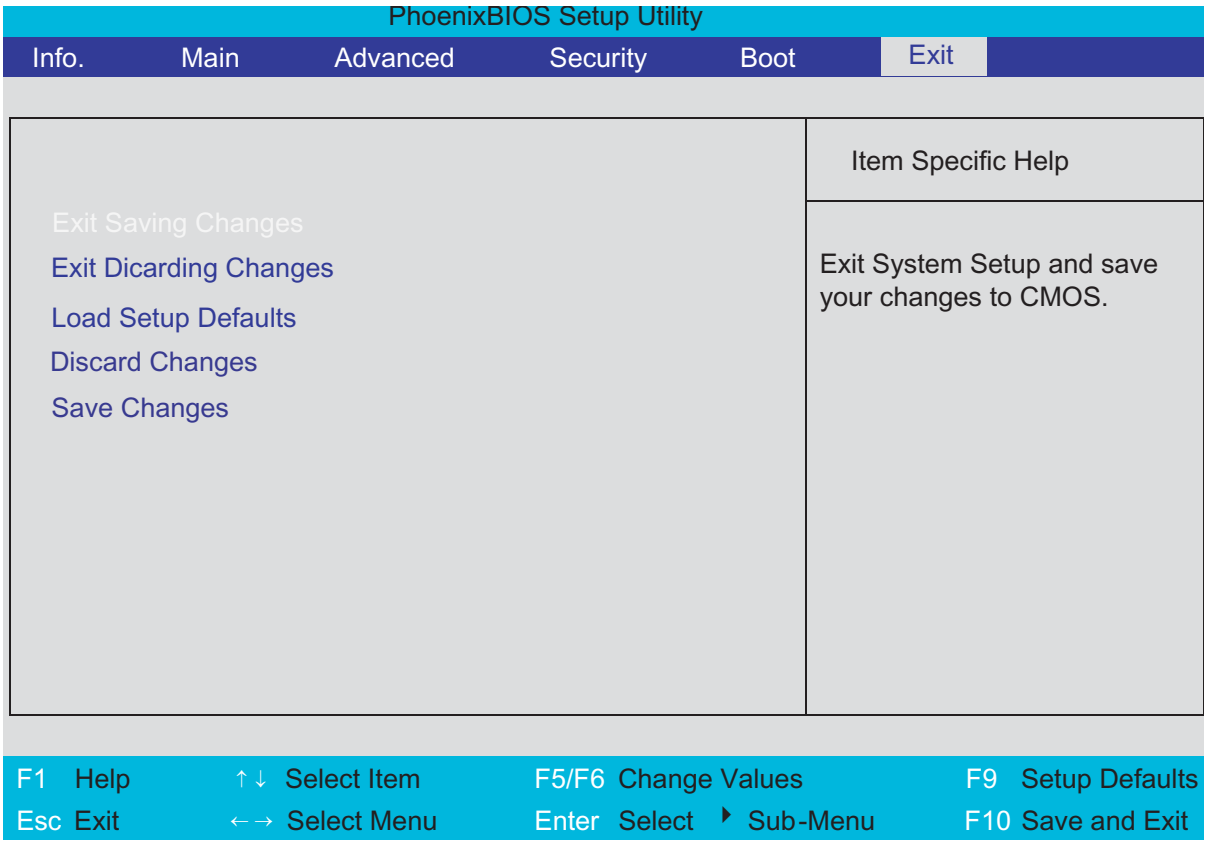
Exit

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

Machine Disassembly and Replacement

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

To disassemble the computer, you need the following tools:

- Wrist grounding strap and conductive mat for preventing electrostatic discharge
- Small Philips screw driver
- Philips screwdriver
- Plastic flat head screw driver
- Tweezers

NOTE: The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatch when putting back the components. When you remove the stripe cover, please be careful not to scrape the cover.

General Information

Before You Begin

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

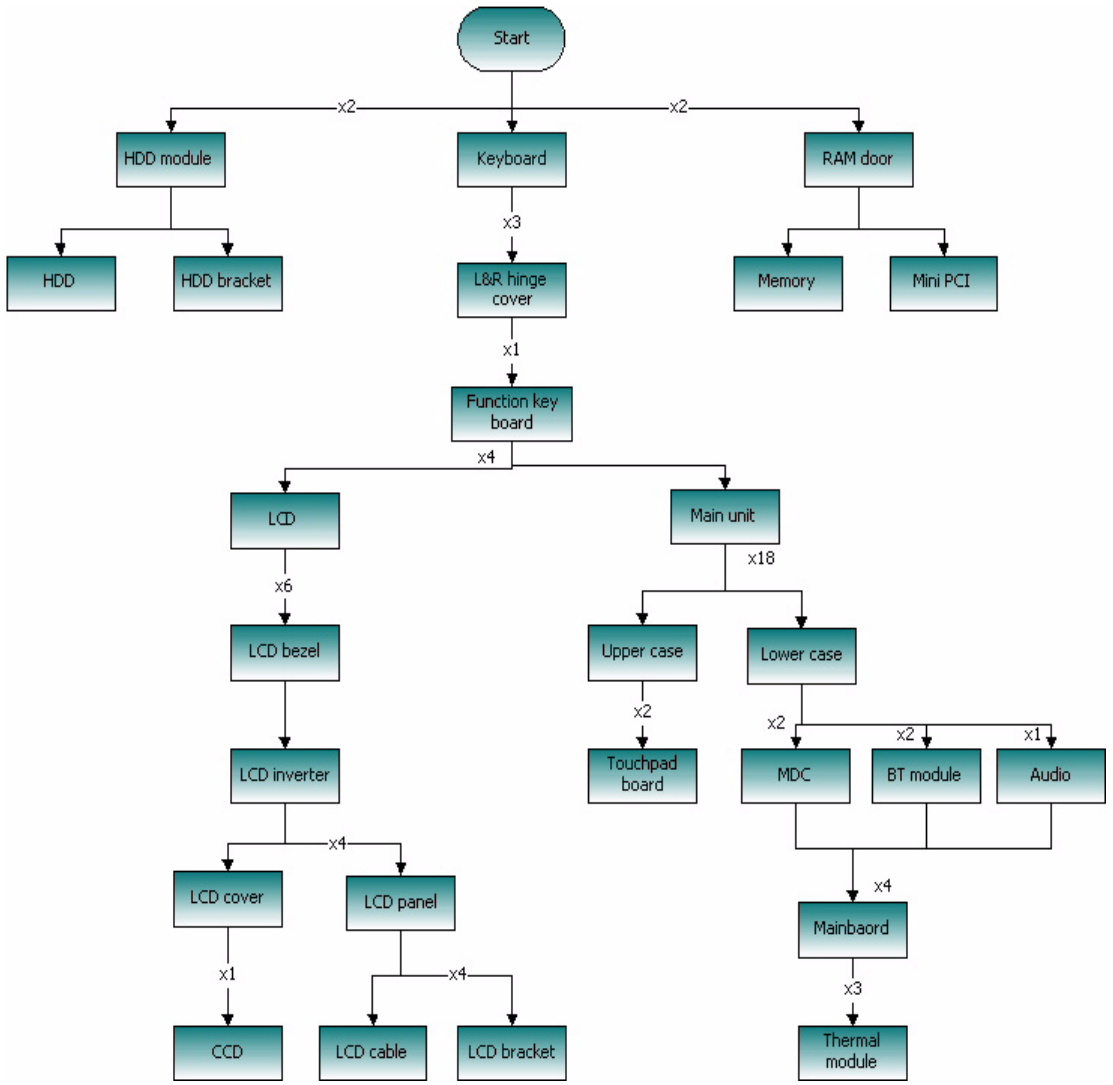
1. Turn off the power to the system and all peripherals.
2. Unplug the AC adapter and all power and signal cables from the system.
3. Remove the battery pack.

NOTE: TravelMate 3000 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.

NOTE: There are several types of screws used to secure bottom case and upper case assembly. The screws vary in length. Please refer the picture below, group the same type of screws together during service disassembling. Please also remember the screw location for each screw type. If you fasten the screw to the wrong location, the screw may be too long to damage the main board.

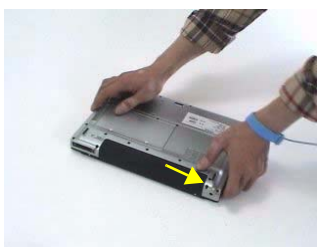
Disassembly Procedure Flowchart

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.



Removing the Battery Pack

1. Release the battery lock.
2. Slide the battery latch.
3. Remove the battery pack.



Removing the miniPCI/Memory/HDD Module/Keyboard

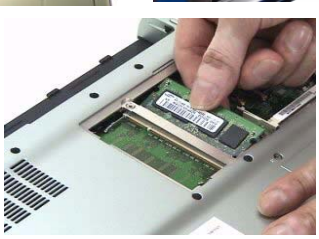
Removing the miniPCI and Memory

1. Remove the two screws that secure the RAM door and remove the RAM door.
2. Release the wireless antenna.
3. Remove the two screws securing the miniPCI card.
4. Press the latch on left and right side to pop out the miniPCI and remove it.
5. Press the latch on left and right side to pop out the memory and remove it.
6. Press the latch on left and right side to pop out the other memory and remove it.



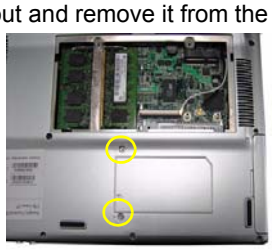







Removing the HDD

1. Remove the two screws that secure the HDD.
2. Pull the HDD out and remove it from the main unit.




Removing the keyboard

1. Open the LCD panel.
2. Press the two inner keyboard latches that secure the keyboard with flat screw driver.
3. Release another two outer keyboard latches.
4. Pull the keyboard and trun it over.

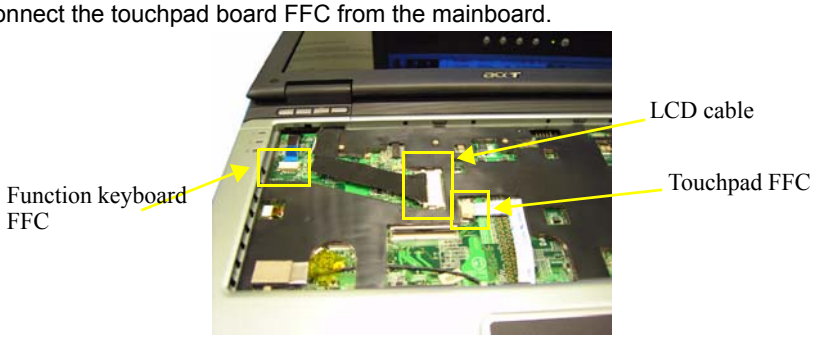
5. Disconnect the keyboard FFC from the mainboard.
6. Remove the keyboard from the main unit.






Seperate the LCD module and main unit

1. Disconnect the function key board FFC from the mainboard.
2. Disconnect the LCD cable from the mainboard.
3. Disconnect the touchpad board FFC from the mainboard.



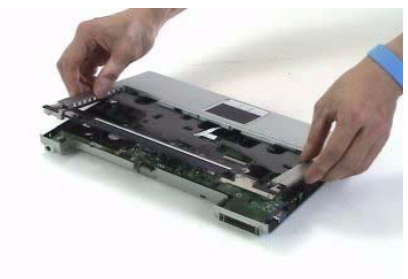
4. Remove the three screws that secure the left and right hinge cover.
5. Pull the left hinge up and slide it out as show.
6. Pull the right hinge cover up and slide it out as show.
7. Disconnect the function key board FFC from the function key board.
8. Remove the screw that secures the function key board.
9. Remove the function key board from the left hinge cover.
10. Pull the wireless antenna out.
11. Remove the two screws securing the left and right hinges.
12. Detach the LCD module from the main unit.

Disassemble the main unit

Separate upper and lower case

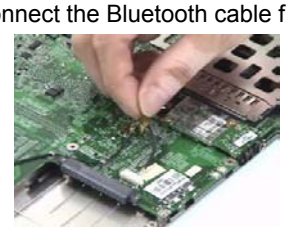
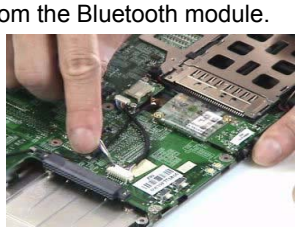
1. Turn the main unit over.
2. Remove the eighteen screws that secure the lower case.
3. Detach the upper case from the lower case assembly.

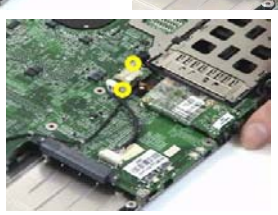
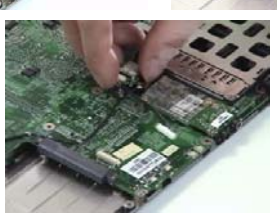




Removing the Bluetooth module

1. Tear off the mylar on the Bluetooth cable
2. Disconnect the Bluetooth cable from the mainboard.
3. Remove the two screws that secure the Bluetooth module.
4. Remove the Bluetooth module from the mainboard.
5. Disconnect the Bluetooth cable from the Bluetooth module.

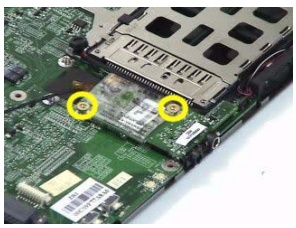
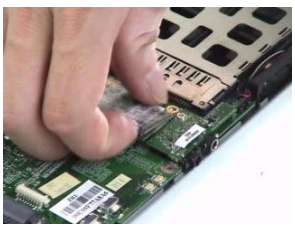
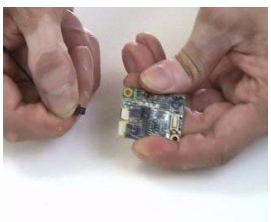
Removing the MDC module

1. Tear off the mylar on the MDC cable.
2. Disconnec the MDC cable from the mainboard.
3. Remove the MDC cable from the wire groove.
4. Remove the two screws that secure the MDC board.
5. Remove the MDC board from the mainboard.

6. Disconnect the MDC cable from the MDC board.

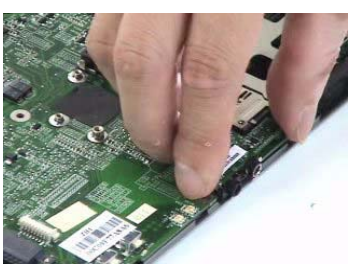




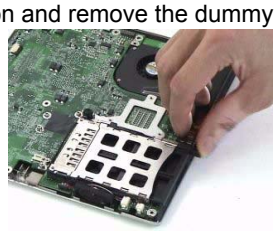
Removing the audio module

1. Remove the screw that secures the audio board.
2. Remove the audio board from the mainboard.

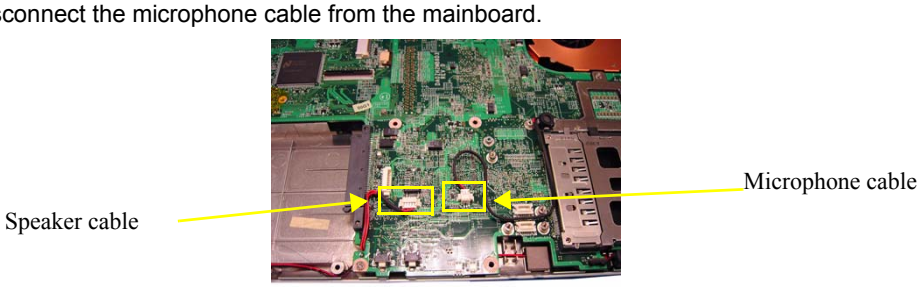



Removing the mainboard from lower case

1. Press the button and remove the dummy card from the PCMCIA card slot.

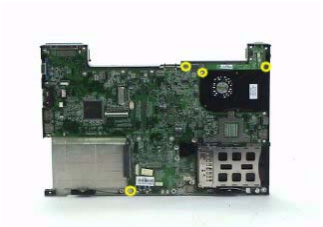


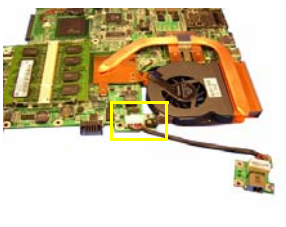

2. Disconnect the speaker cable from the mainboard.
3. Disconnect the microphone cable from the mainboard.



4. Remove the four screws that secure tha mainboard.
5. Detach the mainboard from the lower case.
6. Disconnect the power board cable from the mainboard and remove the power board from the mainboard.
7. Remove the three screws that secure the thermal following the order 1, 2, 3.

8. Disconnect the fan cable from the mainboard.
9. Remove the thermal module from the mainboard.





10. Tear off the mylar on the touchpad board FFC.
11. Disconnect the touchpad board FFC from the touchpad board.
12. Disconnect another FFC from the touchpad board.
13. Remove the two screws that secure the touchpad board.
14. Remove the touchpad board from the upper case.
15. This completes the main unit disassembly.







LCD module disassembly

1. Remove the six screw pads.
2. Remove the six screws that secure the LCD bezel.

3. Release the latches one by one. Please note that the bezel is fragile. Need to follow the following disassembly pictures from left to right.

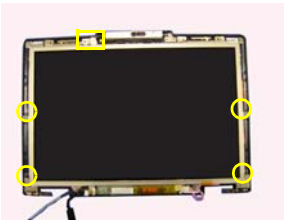


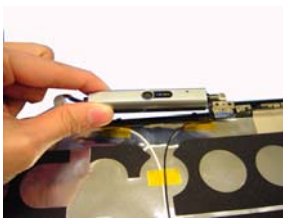

4. Pull the bezel a little bit forward that paralleled LCD cover and remove the LCD bezel.

5. Pull the inverter board out.
6. Disconnect the LVDS cable from the inverter board.
7. Disconnect the LCD cable from the inverter board.
8. Remove the inverter board.

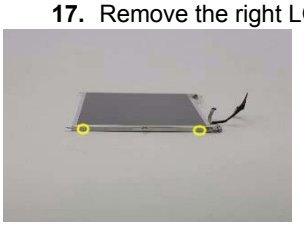

9. Remove the four screws that secure the LCD and disconnect the CCD cable.
10. Remove the LCD from the cover assembly.
11. Remove the screw securing the CCD.
12. Remvoe the CCD from the cover assembly.

13. Remove the wireless antenna from the cover assembly.



14. Remove the two screws that secure the left LCD bracket.
15. Remove the left LCD bracket from the LCD.
16. Remove the two screws that secure the right LCD bracket.
17. Remove the right LCD bracket from the LCD.




18. Turn the LCD back.
19. Tear off the tape on theLCD cable.
20. Disconnect the LCD cable from the LCD.
21. This completes the LCD disassembly.


HDD Disassembly and Reassembly

1. Remove the two screws that secure the HDD holder on on side.
2. Remove the two screws that secure the HDD holder on the other side.
3. Lift up the HDD and remove it from the HDD holder.
4. Place the HDD back to the HDD holder
5. Secure the HDD with two screws on one side.
6. This complete the HDD module disassembly and reassembly.




Troubleshooting

Use the following procedure as a guide for computer problems.

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

1. Duplicate symptom and obtain the failing symptoms in as much detail as possible.
2. Distinguish symptom. Verify the symptoms by attempting to re-create the failure by running the diagnostic test or by repeating the same operation.
3. Disassemble and assemble the unit without any power sources.
4. 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.
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 64.
POST does not complete. No beep or error codes are indicated.	"Power-On Self-Test (POST) Error Message" on page 66 "Undetermined Problems" on page 78
POST detects an error and displayed messages on screen.	"Error Message List" on page 67
Other symptoms (i.e. LCD display problems or others).	"Power-On Self-Test (POST) Error Message" on page 66
Symptoms cannot be re-created (intermittent problems).	Use the customer-reported symptoms and go to "Power-On Self-Test (POST) Error Message" on page 66 "Intermittent Problems" on page 77 "Undetermined Problems" on page 78

System Check Procedures

External Diskette Drive Check

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

If the error still remains:

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

External CD-ROM Drive Check

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

Do the following to select the test device:

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

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

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

Keyboard or Auxiliary Input Device Check

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

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

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

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

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

The following auxiliary input devices are supported by this computer:

- ❑ Numeric keypad
- ❑ External keyboard

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

Memory check

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

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

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

Power System Check

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

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

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

- “Check the Battery Pack” on page 65

Check the Battery Pack

To check the battery pack, do the following:

From Software:

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

From Hardware:

1. Power off the computer.
2. Remove the battery pack and measure the voltage between battery terminals 1(+) and 6(ground). See the following figure
3. If the voltage is still less than 7.5 Vdc after recharging, replace the battery.

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

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

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

Touchpad check

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

1. After rebooting, run Tracking Pad PS2 Mode Driver. For example, run Syn touch 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 O.K.
4. If the main board to switch board FPC is connected well, then check if the FCC on touch pad PCB connects properly.
5. If the FFC on touch pad PCB connects properly, then check if LS851 JP1 Pin6=5V are pulese. If yes, then replace switch board. If no, then go to next step.
6. Replace touch pad PCB.
7. If the touch pad still does not work, then replace 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.

Power-On Self-Test (POST) Error Message

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

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

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

If the symptom is not listed, see “Undetermined Problems” on page 78.

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

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

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

Index of Error Messages

Error Message List

Error Messages	FRU/Action in Sequence
Struck Key	See “Keyboard or Auxiliary Input Device Check” on page 63
System CMOS checksum bad - Default configuration used	RTC battery Run BIOS Setup Utility to reconfigure system, then reboot system.
Real time clock error	RTC battery Run BIOS Setup Utility to reconfigure system time, then reboot system. Main board
Previous boot incomplete - Default configuration used	“Load Default Settings” in BIOS Setup Utility. RTC battery Main baord
Invalid System Configuration Data	“Load Default Settings” in BIOS Setup Utility. Main board
Operating system not found	Enter Setup and see if fixed disk and drive A are properly identified. Dikette drive Hard disk drive Main board

Error Message List

No beep Error Messages	FRU/Action in Sequence
Power-on indicator turns off and LCD is blank.	Power source (battery pack and power adapter.) See “Power System Check” on page 64 Ensure every connector is connected tightly and correctly. Reconnect the DIMM. Main board.
Power-on indicator turns on and LCD is blank.	Power source (battery pack and power adapter.) See “Power System Check” on page 64 Reconnect the LCD connector Hard disk drive LCD cable LCD inverter LCD Main board
Power-on indicator turns on and LCD is blank. But you can see POST on an external CRT.	Reconnect the LCD connectors. LCD cable LCD inverter LCD Main board
Power-on indicator turns on and a blinking cursor shown on LCD during POST.	Ensure every connector is connected tightly and correctly. Main board

Phoenix BIOS Beep Codes

Code	Beeps	POST Routine Description
02h		Verify Real Mode
03h		Disable Non-Maskable Interrupt (NMI)
04h		Get CPU type
06h		Initialize system hardware
07h		Disable shadow and execute code from the ROM.
08h		Initialize chipset with initial POST values
09h		Set IN POST flag
0Ah		Initialize CPU registers
0Bh		Enable CPU cache
0Ch		Initialize caches to initial POST values
0Eh		Initialize I/O component
0Fh		Initialize the local bus IDE
10h		Initialize Power Management
11h		Load alternate registers with initial POST values
12h		Restore CPU control word during warm boot
13h		Initialize PCI Bus Mastering devices
14h		Initialize keyboard controller
16h	1-2-2-3	BIOS ROM checksum
17h		Initialize cache before memory autosize
18h		8254 timer initialization
1Ah		8237 DMA controller initialization
1Ch		Reset Programmable Interrupt Controller
20h	1-3-1-1	Test DRAM refresh
22h	1-3-1-3	Test 8742 Keyboard Controller
24h		Set ES segment register to 4 GB
28h		Autosize DRAM
29h		Initialize POST Memory Manager
2Ah		Clear 215 KB base RAM
2Ch	1-3-4-1	RAM failure on address line xxxx
2Eh	1-3-4-3	RAM failure on data bits xxxx of low byte of memory bus
2Fh		Enable cache before system BIOS shadow
32h		Test CPU bus-clock frequency
33h		Initialize Phoenix Dispatch Manager
36h		Warm start shut down
38h		Shadow system BIOS ROM
3Ah		Autosize cache
3Ch		Advanced configuration of chipset registers
3Dh		Load alternate registers with CMOS values
41h		Initialize extended memory for RomPilot.
42h		Initialize interrupt vectors
45h		POST device initialization
46h	2-1-2-3	Check ROM copyright notice

Code	Beeps	POST Routine Description
47h		Initialize I20 support
48h		Check video configuration against CMOS
49h		Initialize PCI bus and devices
4Ah		Initialize all video adapters in system
4Bh		QuietBoot start (optional)
4Ch		Shadow video BIOS ROM
4Eh		Display BIOS copyright notice
50h		Display CPU type and speed
51h		Initialize EISA board
52h		Test keyboard
54h		Set key click if enabled
55h		Enable USB devices
58h	2-2-3-1	Test for unexpected interrupts
59h		Initialize POST display service
5Ah		Display prompt “Press F2 to enter SETUP”
5Bh		Disable CPU cache
5Ch		Test RAM between 512 and 640 KB
60h		Test extended memory
62h		Test extended memory address lines
64h		Jump to User Patch1
66h		Configure advanced cache registers
67h		Initialize Multi Processor APIC
68h		Enable external and CPU caches
69h		Setup System Management Mode (SMM) area
6Ah		Display external L2 cache size
6Bh		Load custom defaults (optional)
6Ch		Display shadow-area message
6Eh		Display possible high address for UMB recovery
70h		Display error messages
72h		Check for configuration errors
76h		Check for keyboard errors
7Ch		Set up hardware interrupt vectors
7Eh		Initialize coprocessor if present
80h		Disable onboard Super I/O ports and IRQs
81h		Late POST device initialization
82h		Detect and install external RS232 ports
83h		Configure non-MCD IDE controllers
84h		Detect and install external parallel ports
85h		Initialize PC-compatible PnP ISA devices
86h		Re-initialize onboard I/O ports
87h		Configure Motherboard Configurable Devices (optional)
88h		Initialize BIOS Data Area
89h		Enable Non-Maskable Interrupts (NMIs)
8Ah		Initialize Extended BIOS Data Area

Code	Beeps	POST Routine Description
8Bh		Test and initialize PS/2 mouse
8Ch		Initialize floppy controller
8Fh		Determine number of ATA drives (optional)
90h		Initialize hard-disk controllers
91h		Initialize local-bus hard-disk controllers
92h		Jump to UserPatch2
93h		Build MPTABLE for multi-processor boards
95h		Install CD ROM for boot
96h		Clear huge ES segment register
97h		Fixup Multi Processor table
98h	1-2	Search for option ROMs. One long, two short beeps on checksum failure.
99h		Check for SMART drive (optional)
9Ah		Shadow option ROMs
9Ch		Set up Power Management
9Dh		Initialize security engine (optional)
9Eh		Enable hardware interrupts
9Fh		Determine number of ATA and SCSI drives
A0h		Set time of day
A2h		Check key lock
A4h		Initialize Typematic rate
A8h		Erase F2 prompt
AAh		Scan for F2 key stroke
ACh		Enter SETUP
AEh		Clear Boot flag
B0h		Check for errors
B1h		Inform RomPilot about the end of POST.
B2h		POST done- prepare to boot operating system
B4h	1	One short beep before boot
B5h		Terminate QuietBoot (optional)
B6h		Check password (optional)
B7h		Initialize ACPI BIOS
B9h		Prepare Boot
BAh		Initialize SMBIOS
BBh		Initialize PnP Option ROMs
BCh		Clear parity checkers
BDh		Display MultiBoot menu
BEh		Clear screen (optional)
BFh		Check virus and backup reminders
C0h		Try to boot with INT 19
C1h		Initialize POST Error Manager (PEM)
C2h		Initialize error logging
C3h		Initialize error display function
C4h		Initialize system error handler
C5h		PnPnd dual CMOS (optional)
C6h		Initialize notebook docking (optional)

Code	Beeps	POST Routine Description
C7h		Initialize notebook docking late
C8h		Force check (optional)
C9h		Extended checksum (optional)
CAh		Redirect Int 15h to enable remote keyboard
CBh		Redirect Int 13h to Memory Technologies Devices such as ROM, RAM, PCMCIA, and serial disk.
CCh		Redirect Int 10h to enable remote serial video
CDh		Re-map I/O and memory for PCMCIA
CEh		Initialize digitizer and display message.
D2h		Unknown interrupt
The following are for boot block in Flash ROM		
E0h		Initialize the chipset
E1h		Initialize the bridge
E2h		Initialize the CPU
E3h		Initialize the system timer
E4h		Initialize system I/O
E5h		Check force recovery boot
E6h		Checksum BIOS ROM
E7h		Go to BIOS
E8h		Set Huge Segment
E9h		Initialize Multi Processor
EAh		Initialize OEM special code
EBh		Initialize PIC and DMA
ECh		Initialize Memory type
EDh		Initialize Memory size
EEh		Shadow Boot Block
EFh		System memory test
F0h		Initialize interrupt vectors
F1h		Initialize Run Time Clock
F2h		Initialize video
F3h		Initialize System Management Mode
F4h	1	Output one beep
F5h		Clear Huge Segment
F6h		Boot to Mini DOS
F7h		Boot to Full DOS

Index of Symptom-to-FRU Error Message

LCD-Related Symptoms

Symptom / Error	Action in Sequence
LCD backlight doesn't work	First, plug a monitor to CRT port. Next, enter BIOS utility to running “Load Default Settings” then reboot the system. Reconnect the LCD connectors. Keyboard (if the brightness function key doesn't work). LCD cable LCD inverter LCD Main board
LCD is too dark LCD brightness cannot be adjusted	Enter BIOS Utility to execute “Load Setup Default Settings”, then reboot system. Reconnect the LCD connectors. Keyboard (if the 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 LCD has extra horizontal or vertical lines displayed.	Reconnect the LCD cable LCD cable LCD Main board

Indicator-Related Symptoms

Symptom / Error	Action in Sequence
Indicator incorrectly remains off or on, but system runs correctly	Main board
HDD/CD-ROM active indicators cannot work	HDD/CD-ROM drive Device driver 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 64. Battery pack AC adapter See if the thermal module is overheat (Heat sink or fan). Main board
The system cannot power-on.	Power source (battery pack and power adapter). See “Power System Check” on page 64. Battery pack Power adapter CPU Main board
The system cannot power-off.	In Windows XP operating system, hold and press the power switch for more than 4 seconds. If the system can power off, then the main board is OK. Verify OS in the HDD. Main board

Power-Related Symptoms

Symptom / Error	Action in Sequence
Battery can't be charged or discharged	See "Check the Battery Pack" on page 65. Battery pack Main board
System hang during POST	ODD/HDD/FDD/RAM module 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
PC Card cannot be inserted or ejected	Check if the PCMCIA slot is blocked Main board

Memory-Related Symptoms

Symptom / Error	Action in Sequence
Memory count (size) appears different from actual size.	Enter BIOS Setup Utility to execute "Load Default Settings" then reboot system. RAM module Main board Check BIOS revision
System can power on, but you hear two long beeps: "B--, B--" and the LCD is blank.	Reinsert DIMM DIMM Main board

Speaker-Related Symptoms

Symptom / Error	Action in Sequence
In Windows, multimedia programs, no sound comes from the computer.	OS volume control Audio driver Speaker Main board
Internal speakers make noise or emit no sound.	Speaker Main board
Microphone cannot work	Audio driver Volume control in Windows XP Main board

Power Management-Related Symptoms

Symptom / Error	Action in Sequence
The system will not enter hibernation mode	Power option in Windows XP Hard disk drive Main board
The system doesn't enter standby mode after closing the lid of the portable computer.	Driver of Power Option Properties Lid close switch in upper case Main board

Power Management-Related Symptoms

Symptom / Error	Action in Sequence
The system doesn't resume from hibernation/ standby mode.	Connect AC adapter then check if the system resumes from Standby/Hibernation mode. Check if the battery is low. Hard disk drive Main board
The system doesn't resume from standby mode after opening the lid of the portable computer.	LCD cover switch Main board
Battery fuel gauge in Windows doesn't go higher than 90%.	Refresh battery (continue use battery until power off, then charge battery). Battery pack Main board
System hangs intermittently.	Reconnect hard disk/CD-ROM drives. 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 drives/FDD or other peripherals. Main board
External display does not work correctly.	Press Fn+F5, LCD/CRT/Both display switching Keyboard Main board
USB does not work correctly	Main board
Print problems.	Enter BIOS Setup Utility to execute "Load Default Settings" then reboot the system. Run printer self-test. Printer driver Printer cable Printer Main board
Parallel port device problems	Enter BIOS Setup Utility to execute "Load Default Settings" then reboot the system. Device driver Device cable Device 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 touchpad cable. Touchpad board Main board

Modem/LAN-Related Symptoms

Symptom / Error	Action in Sequence
Internal modem does not work correctly.	Phone cable Driver Reconnect the Internal modem cable to the main board tightly. Main board
Internal LAN does not work correctly	Lan cable Driver Main board

NOTE: If you cannot find a symptom or an error in this list and the problem remains, see “Undetermined Problems” on page 78.

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

Undetermined Problems

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

Follow these procedures to isolate the failing FRU (do not isolate non-defective FRU).

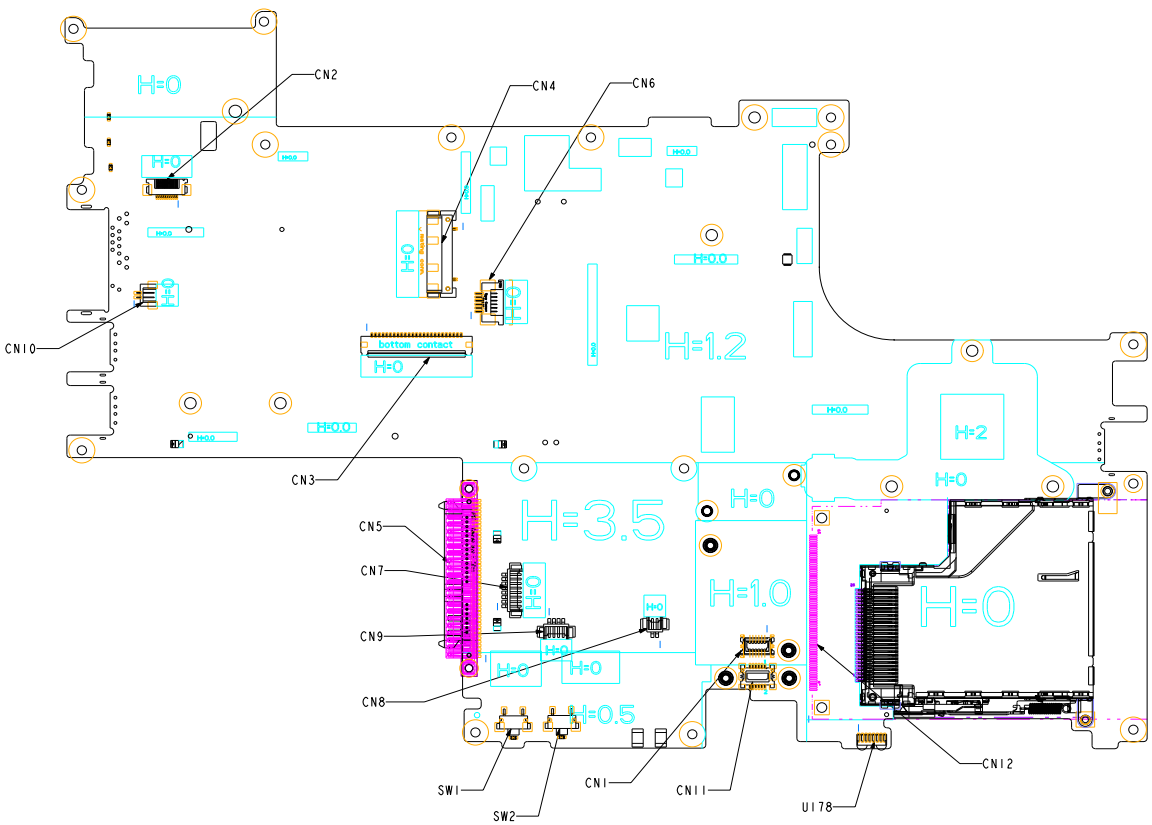
NOTE: Verify that all attached devices are supported by the computer.

NOTE: Verify that the power supply being used at the time of the failure is operating correctly. (See “Power System Check” on page 64):

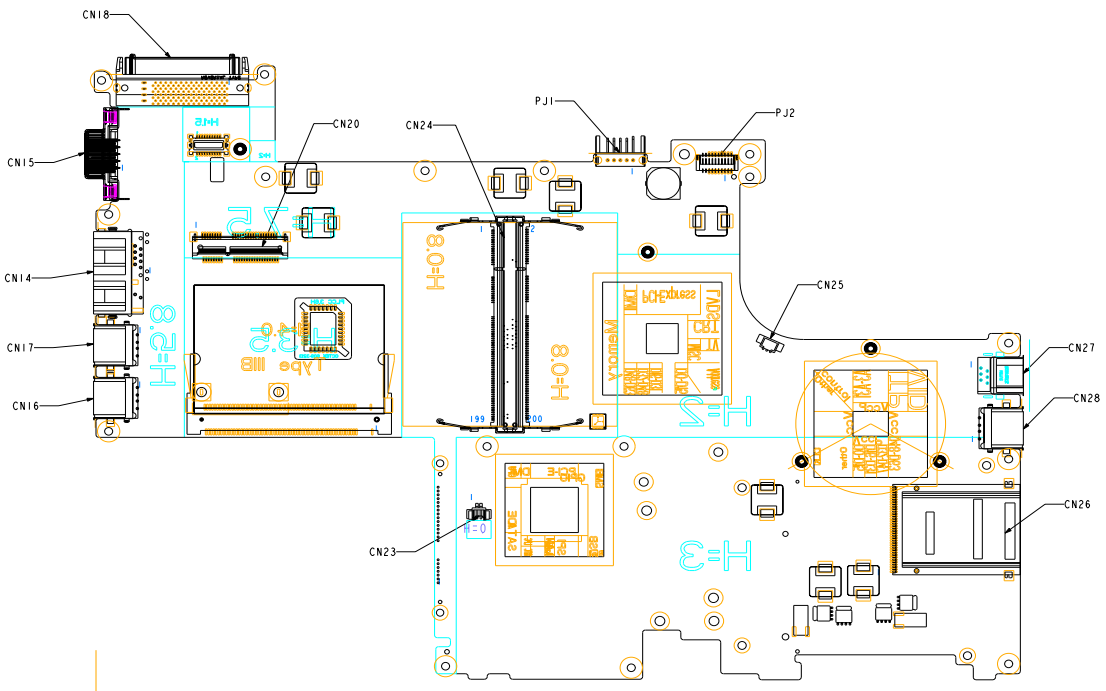
1. Power-off the computer.
2. Visually check them for damage. If any problems are found, replace the FRU.
3. Remove or disconnect all of the following devices:
    - ❑ Non-Acer devices
    - ❑ Printer, mouse, and other external devices
    - ❑ Battery pack
    - ❑ Hard disk drive
    - ❑ DIMM
    - ❑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

Jumper and Connector Locations

Top View



Bottom View



Item	Decription	Item	Description
CN18	Dock connector	CN1	to MDC connector
CN15	VGA connector	CN6	to TP FPC connector
CN14	RJ45+RJ11 Jack	CN8	to MIC connector
CN17, 16, 28	USB	CN9	to speaker
CN20	Mini card socket	CN7	to buletooth
CN24	DDR(dual)	CN10	MDC connector
PJ1	Battery connector	CN11	Audio connector
CN26	6 in 1 socket	SW1,SW2	Wireless/BT SW
CN27	1394 standard	LED 5,9,10	Wireless/BT LED
CN23	to RTC connector	CN5	HDD connector(PATA)
CN25	to thermal fan connector	CN5	HDD connector(SATA)
PJ2	to DC board connector		
CN3	KB FPC connector		
CN12	PCMCIA header		
CN4	to LCD connector		
CN2	to SW/BD FPC connector		

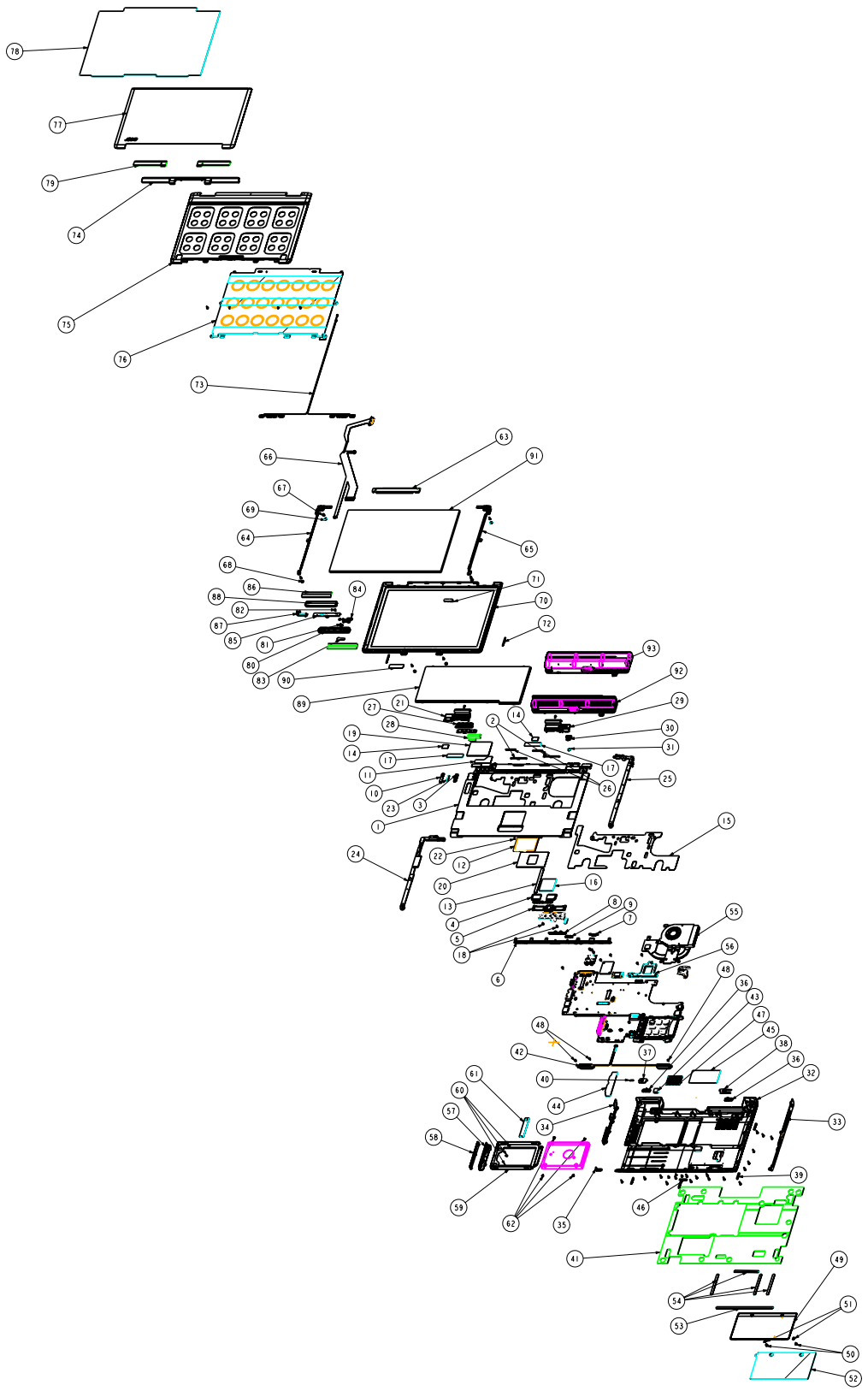
FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of TravelMate 3010 series products. 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.

Exploded Diagram



Item List

Item	Description	Q'ty	Item	Description	Q'ty
1	Top cover	1	51	E ring 5-2-0.41	2
2	Keyboard lock	2	52	RAM door protect	1
3	Function lens	1	53	RAM door gasket S1	1
4	TP button	1	54	RAM door gasket S2	4
5	4 way button	1	55	Thermal module	1
6	Front cover	1	56	CPU plate bracket	1
7	IR lens	1	57	HDD cover	1
8	Front button	1	58	HDD cover F	1
9	Charge lens	1	59	HDD bracket	1
10	VGA cap	1	60	Screw M2.5X3-I	3
11	Keyboard SP mylar	1	61	HDD bracket mylar	1
12	Touchpad	1	62	Screw M3X3.8	1
13	Cable Touchpad board	1	63	Inverter module	1
14	Top case keyboard Gasket	2	64	Hinge bracket L	1
15	Top mylar	1	65	Hinge bracket R	1
16	Touchpad kapton	1	66	Cable ZH2 AU 12.1 W/ O CCD	1
17	Top case KB al foil	2	67	Screw M2X2.5-I	4
18	Screw M2X4-I	2	68	LCD bezel rubber	4
19	TP mylar	1	69	LCD rubber down	2
20	TP kapton	1	70	LCD bezel (AU)	1
21	Hinge cover L	1	71	LCD bezel logo	1
22	BU light mylar	1	72	Bezel mid rubber	2
23	Top sponge	1	74	Antenna	1
24	Hinge SP-L	1	75	LCD cover	1
25	Hinge SP-R	1	76	LCD cover shielding	1
26	Top case rubber	2	77	LCD pre coat cover	1
27	Function key	1	78	LCD cover protect	1
28	Hinge cover al foil	1	79	Ant cover protect	2
29	Hinge cover R	1	80	CCD front case	1
30	Power button	1	81	CCD lens	1
31	Hinge cover washer	1	82	Screw M1.6X3 I	1
32	Base case	1	83	CCD protect film	1
33	Base bezel R PCMCIA	1	84	CCD hinge	1
34	Base bezel L	1	85	Camera V-UBDOEM I	1
35	Base bezel F	1	86	CCD rear protect2	2
36	Battery button	2	87	Cable CCD assy	1
37	Battery latch L	1	88	CCD rear cover	1
38	Battery latch R	1	89	KB ZH2	1
39	Base rubber foot	4	90	CCD use label	1
40	HDD latch spring	1	91	LCD	1
41	Base protector mylar	1	92	Battery 3 cell	1
42	Speaker assy	1	93	Battery 6 cell	1
43	Audio gasket	1			

Item List

Item	Description	Q'ty	Item	Description	Q'ty
44	USB mesh	1			
45	Base flow mylar	1			
46	Base rubber foot F	1			
47	Base mesh	1			
48	Screw M2X4-I	3			
49	RAM door	1			
50	Fixed screw M2.5	2			

FRU List

CATEGORY	PARTNAME	DESCRIPTION	ACER PART NO.
ADAPTER			
	ADAPTER 65W 3 PIN Delta SADP-65KB DBRF LF	ZH2 ADPTER Delta S/P	AP.06501.010
	ADAPTER 65W 3 PIN LITE-ON PA1650-02 QY LF	ZH2 ADAPTER LITE-ON S.P.	AP.06503.013
BATTERY			
	BATTERY SANYO LI-ION 3S2P 6CELL 4800mAH	ZH1 6-CELL BATTERY S/P-SANYO	BT.00603.003
	BATTERY PANASONIC LI-ION 3S2P 6CELL 4800mAH	ZH1 6-CELL BATTERY S/P-MKE	BT.00605.001
	BATTERY SANYO LI-ION 3S1P 3CELL 2000mAH	ZH1 3-CELL BATTERY S/P-SANYO	BT.00303.002
	BATTERY PANASONIC CGR LI-ION 3S1P 3CELL 2000mAH	ZH1 3-CELL BATTERY S/P-CGR	BT.00305.001
BOARD			
	MODEM 56K (MDC)FOXCONN T60M845.02 EU	ZL8 MODEM 56K(MDC) EU S/P	54.TAKV7.001
	BLUETOOTH MODULE (T60H928.01)	ZC1 FOX BLUETOOTH(T60H928.01) S/P	54.TAXV7.001
	MINI PCI WIRELESS BOARD 802.11 A/B/G MOW2 INTEL MM872659	ZC1 W/L 3945ABG MOW2 S/P	KI.GLN01.002
	MINI PCI WIRELESS BOARD 802.11 A/B/G MOW1 INTEL MM872612	ZC1 W/L 3945ABG MOW1 S/P	KI.GLN01.001
	MINI PCI WIRELESS BOARD 802.11 A/B/G ROW INTEL MM874511	ZC1 W/L 3945ABG ROW S/P	KI.GLN01.003
	WIRELESS LAN BOARD 802.11BG INTEL WM3945AGBGGEN	ZC1 W/L 3945BG S/P	KI.GLN01.005
	FUNCTION BOARD (L)	ZH2 BUTTON BOARD S/P	55.TATV7.001
	TOUCH PAD BOARD	ZH2 TOUCH PAD BOARD S/P	55.TATV7.002

CATEGORY	PARTNAME	DESCRIPTION	ACER PART NO.
	AUDIO BOARD	ZH2 AUDIO BOARD	55.TATV7.003
	DC BOARD	ZH2 DC BOARD	55.TATV7.004
CABLE			
	MODEM CABLE	ZH1 MODEM CABLE S/P	50.T74V7.001
	BLUETOOTH CABLE	ZH1 BOLUETOOTH CABLE S/P	50.T74V7.002
	FFC CABLE - TP/B TO MB	ZH1 FFC TP/B-MB S/P	50.T74V7.003
	FFC CABLE - FUNCTION/B TO MB	ZH1 FFC BUTTON/B-MB S/P	50.T74V7.004
	POWER CORD AF-S (INDIA)	ZL6A POWER CORD S/P INDIA S.P.	27.A50V7.001
	POWER CORD AU W/ LABEL (3 PIN)	ZL6A POWER CORD S/P-AU S.P.	27.A50V7.003
	POWER CORD SWISS 3 PIN	ZE1 POWER CORD 3P SWISS S.P.	27.A99V7.004
	POWER CORD AF (3 PIN)	ZI5 POWER CORD S/P-AF	27.T48V7.001
	POWER CORD ITALIAN 3PIN	EI2 POWER CORD 3P ITALY S.P.	27.A99V7.005
	POWER CORD DANISH (3 PIN)	ET2S POWER CORD SPARE PART-DANISH	27.A03V7.006
	POWER CORD US BSMI 3PIN	ZL3E POWER CORD S/P-TWN	27.A99V7.002
	POWER CORD EU 1.8M 3PBLACK FM010008-010	PA2 ADP+POWER CORD(3P 90W W/FPC)S/P	27.TATV7.001
	POWER CORD US 1.8M 3P BLACK FF0-920106	ZL3E POWER CORD S/P-US	27.TATV7.002
	POWER CORD UK 1.8M 3P BLACK FP010008-013	ZC1 POWER CORD-US EU S/P	27.TATV7.003
	POWER CORD PRC 3P Y536B30001218008	EW1 POWER CODE (CH) ASSY (8 IN 1) S/P	27.TATV7.004

CATEGORY	PARTNAME	DESCRIPTION	ACER PART NO.
	POWER CORD ISRAEL 1.8M 3P BLK FZ0I0008-038 L-F	ZL6A POWER CORD S/P-ISR S.P.	27.TATV7.005
CASE/COVER/BRACKET ASSEMBLY			
	"UPPER CASE ASSY W/ TP , TP CABLE"	ZH2 TOP COVER ASSY S/P	60.TATV7.001
	LOWER CASE ASSY W/ SPEAKER	ZH2 BASE CASE W/ PCMCIA ASSY S/P	60.TATV7.002
	HINGE COVER L W/ FUCTION BUTTON	ZH1 HINGE COVER-L S/P	42.T74V7.001
	HINGE COVER R W/ POWER BUTTON	ZH1 HINGE COVER-R S/P	42.T74V7.002
	RAM DOOR W/SCREW	ZH2 RAM DOOR S/P	42.TATV7.001
COMMUNICATION MODULE			
	WIRELESS ANTENNA (81.ED415.010)EU	ZH2 WIRELESS ANTENNA S/P	50.TATV7.001
COMBO MODULE	EXTERNAL COMBO MODULE PANASONIC UJDA-770	ZH1 KME COMBO ASSY S/P	KO.02406.014
COMBO MODULE	EXTERNAL COMBO MODULE LITEON SOSC-2483K LF	ZH1 LITE-ON COMBO ASSY S/P	KO.02409.014
DVD RW DRIVE	EXTERNAL DVD DUAL MODULE LITEON SOSW-833S LF	ZH1 LITE-ON DVD DUAL(D-L) ASSY S/P	KU.00804.020
DVD RW DRIVE	EXTERNAL DVD DUAL MODULE PANASONIC UJ-840 LF	ZH1 KME DVD DUAL (D-L) ASSY S/P	KU.00807.030

CATEGORY	PARTNAME	DESCRIPTION	ACER PART NO.
DVD RW DRIVE	EXTERNAL DVD SUPER MUJLTI MODULE LITEON SSM-8515S LF	ZH2 DVD SUPER MULTI ASSY S/P	KU.00804.026
CABLE	EXTERNAL OPTICAL CABLE	"ZH2 CABLE ASSY ZH1-1394 (6P/6P,3A) S/P"	50.T74V7.101
HDD/HARD DISK DRIVE	HDD 100G SEAGATE 2.5' 5.4K SATA 1.5G NCQ M2 ST9100824AS F/W 3.06	ZH2 HDD(100G)ST9100824AS S/P	KH.10001.005
HDD/HARD DISK DRIVE	"HDD 100G HGST 2.5' SATA 1.5G NCQMORAGA+HTS541010 G9SA00 FW:S60D,L"	ZH2 HDD(100GS)HTS541010G9 SA00 S/P	KH.10007.005
HDD/HARD DISK DRIVE	"HDD 120G SEAGATE 2.5' 5400RPM MERCURY 2 ST9120821A F/W:3.04,LF"	ZH2 HDD(120G) ST9120821A S/P	KH.12001.015
HDD/HARD DISK DRIVE	"HDD 120G HGST 2.5' 5400RPM HAKONE-B F/W : (ROHS),LF"	ZH2 HDD(80G)HTS541080G9AT 00 S/P	KH.12007.007
HDD/HARD DISK DRIVE	HDD 120G SEAGATE 2.5' 5.4K SATA 1.5G NCQ M2 ST9120821AS F/W 3.03	ZC1 HDD SEAGATE 120G S/P	KH.12001.016
HDD/HARD DISK DRIVE	"HDD 120G SEAGATE 2.5"" 5400RPM SATA ST9120821AS LF MERCURY 2 FW:3.06"	ZH2 HDD(120G)ST9120821AS S/P	KH.12001.025
HDD/HARD DISK DRIVE	"HDD 120G TOSHIBA 2.5"" 5.4K SATAI1.5G W/NCQ MK1234GSX LF TAURUS FW:AH001A"	ZH2 HDD(120G) MK1234GSX-CZK S/P	KH.12004.003
HDD/HARD DISK DRIVE	"HDD '80G SEAGATE 2.5' 5.4K SATA 1.5G NCQ M2 ST98823AS F/W 3.06,LF"	ZH2 HDD(80G)ST98823AS S/P	KH.08001.015
HDD/HARD DISK DRIVE	"HDD 80G HGST 2.5' 5.4K SATA 1.5G NCQ MORAGA+HTS541080G9S A00,C60D"	ZB1 HDD 80GS HGST S/P	KH.08007.015
CASE/COVER/ BRACKET ASSEMBLY	HDD HOLDER	ZH1 HDD DOOR S/P	60.T74V7.003
KEYBOARD			
	KEYBOARD NORWAY	ZH2 K/B MODULE(NORWEGIAN) S/P	KB.T7407.016
	KEYBOARD HEBREW	ZH2 K/B MODULE(HEBREW) S/P	KB.T7407.022
	KEYBOARD PORTUGUESE	ZH2 K/B MODULE(PORTUGUESE) S/P	KB.T7407.010
	KEYBOARD SWISS/G	ZH2 K/B MODULE(SWISS) S/P	KB.T7407.009
	KEYBOARD US INTERNATIONAL	ZH2 K/B MODULE(UI) S/P	KB.T7407.026
	KEYBOARD ARABIC	ZH2 K/B MODULE(ARAB-EN) S/P	KB.T7407.011

CATEGORY	PARTNAME	DESCRIPTION	ACER PART NO.
	KEYBOARD SPANISH	ZH2 K/B MODULE(SPANISH) S/P	KB.T7407.001
	KEYBOARD DANISH	ZH2K/B MODULE(DANISH) S/P	KB.T7407.017
	KEYBOARD CANADIAN FRENCH	ZH2 K/B MODULE(FRA-CAN) S/P	KB.T7407.019
	KEYBOARD JAPAN	ZH2 K/B MODULE(JAPAN) S/P	KB.T7407.020
	KEYBOARD ITALIAN	ZH2 K/B MODULE(ITALIAN) S/P	KB.T7407.007
	KEYBOARD GERMAN	ZH2 K/B MODULE(GERMAN) S/P	KB.T7407.006
	KEYBOARD FRENCH	ZH2 K/B MODULE(FRENCH) S/P	KB.T7407.008
	KEYBOARD UK	ZH2 K/B MODULE(UK) S/P	KB.T7407.005
	KEYBOARD SWEDEN	ZH2 K/B MODULE(SWEDISH) S/P	KB.T7407.013
	KEYBOARD BELGIUM	ZH2 K/B MODULE(BELGIUM) S/P	KB.T7407.012
	KEYBOARD TURKISH	ZH2K/B MODULE(TURKISH) S/P	KB.T7407.018
	KEYBOARD RUSSIAN	ZH2 K/B MODULE(RUSSIAN) S/P	KB.T7407.023
	KEYBOARD BRAZILIAN PROTUGESE	ZH2 K/B MODULE(BRAZIL) S/P	KB.T7407.003
	KEYBOARD HUNGAIAN	ZH2 K/B MODULE(HUNGARIAN) S/P	KB.T7407.015
	KEYBOARD CZECH	ZH2 K/B MODULE(CZECH) S/P	KB.T7407.014
	KEYBOARD THAI	ZH2 K/B MODULE(THAI) S/P	KB.T7407.002
	KEYBOARD GREEK	ZH2 K/B MODULE(GREEK) S/P	KB.T7407.021
	KEYBOARD CHINESE	ZH2 K/B MODULE(TAIWAN) S/P	KB.T7407.027
	KEYBOARD SLOVENIA	ZH2 K/B MODULE SLOVENIA S/P	KB.T7407.024
	KEYBOARD CHINA	ZH2 K/B MODULE(CHINA) S/P	
	KEYBOARD DUTCH	ZH2 K/B MODULE(DUTCH) S/P	
	KEYBOARD POLAND	ZH2 K/B MODULE(POLAND) S/P	
	KEYBOARD LA	ZH2 K/B MODULE(LA) S/P	
	KEYBOARD KOREAN	ZH2 K/B MODULE(KOREAN) S/P	
	KEYBOARD ICELAND	ZH2 K/B MODULE(ICELAND) S/P	
LCD			
LCD	LCD 12.1 LCD MODULE GLARE W/ CCD ASSY	ZH2 12.1 LCD W/ CCD(GLARE) ASSY S/P	6M.TATV7.001

CATEGORY	PARTNAME	DESCRIPTION	ACER PART NO.
LCD	LCD 12.1 IN. TFT WXGA AU B121EW01 V.3 GLARE	ZH1 12.1"WXGA AU B121EW01 V.3 GLA S/P	LK.12105.003
LCD	LCD 12.1 IN. TFT WXGA QDI QD12TL02-01 GLARE	ZH1 12.1"WXGA QD12TL02 QDI GLA S/P	LK.12109.002
LCD	LCD 12.1 IN. TFT WXGA CMO N121I3-L01 GLARE	"ZH2 LCD(TFT)12.1"" N121I3-L01(GLARE) S/P"	LK.1210D.007
	LCD INVERTER BOARD	ZH1 12 IN.WXGA LCD INVERTER S/P	19.TATV7.001
	LCD CABLE ASSY FOR CCD	ZH2 CABLE ASSY AUO WXGA S/P	50.TATV7.002
	LCD BRACKET W/HINGE - L	ZH2 HINGE-BKT-L (AU) S/P	33.TATV7.001
	LCD BRACKET W/HINGE - R	ZH2 HINGE-BKT-R(AU) S/P	33.TATV7.002
	LCD COVER W/ANTENNA/ PRECOAT/CCD ASSY	ZH2 LCD COVER W/ PRECOAT/CCD ASSY S/P	60.TATV7.003
	LCD BEZEL ASSY W/ LOGO FOR CCD	ZH2 LCD BEZEL ASSY S/P	60.TATV7.004
	CCD MODULE	ZH2 LCD CCD FRONT CASE ASSY S/P	57.TATV7.001

CATEGORY	PARTNAME	DESCRIPTION	ACER PART NO.
	LCD 12.1 LCD MODULE NON-GLARE W/ CCD ASSY	ZH2 12.1 LCD W/ CCD (NON-GL) ASSY S/P	6M.TATV7.002
	LCD 12.1 IN. TFT WXGA AU B121EW01 V.5 NON GLARE	"ZH2 LCD(TFT)12.1""B121EW01 V.5(WXGA) S/P"	LK.12105.004
	LCD 12.1 IN. TFT WXGA QDI QD12TL02-03 NON GLARE	"ZH2 LCD12.1"" NO-GLE QD12TL02 WXGA S/P"	LK.12109.001
	LCD 12.1 IN. TFT WXGA CMO N121I3-L02 NON GLARE	"ZH2 LCD(TFT) 12.1""N121I3-L02(NON-GL) S/P"	LK.1210D.006
BOARD	LCD INVERTER BOARD	ZH1 12 IN.WXGA LCD INVERTER S/P	19.TATV7.001
CABLE	LCD CABLE ASSY FOR CCD	ZH2 CABLE ASSY AUO WXGA S/P	50.TATV7.002
CASE/COVER/ BRACKET ASSEMBLY	LCD BRACKET W/HINGE - L	ZH2 HINGE-BKT-L (AU) S/P	33.TATV7.001
CASE/COVER/ BRACKET ASSEMBLY	LCD BRACKET W/HINGE - R	ZH2 HINGE-BKT-R(AU) S/P	33.TATV7.002
CASE/COVER/ BRACKET ASSEMBLY	LCD COVER W/ANTENNA/ PRECOAT/CCD ASSY	ZH2 LCD COVER W/ PRECOAT/CCD ASSY S/P	60.TATV7.003
CASE/COVER/ BRACKET ASSEMBLY	LCD BEZEL ASSY W/ LOGO FOR CCD	ZH2 LCD BEZEL ASSY S/P	60.TATV7.004
CCD MODULE	CCD MODULE	ZH2 LCD CCD FRONT CASE ASSY S/P	57.TATV7.001
LCD	LCD MODULE 12.1 IN. GLARE W/O CCD ASSY	ZH2 12.1 LCD W/O CCD GLA ASSY S/P	6M.TATV7.003
LCD	LCD 12.1 IN. TFT WXGA AU B121EW01 V.3 GLARE	ZH1 12.1"WXGA AU B121EW01 V.3 GLA S/P	LK.12105.003
LCD	LCD 12.1 IN. TFT WXGA QDI QD12TL02-01 GLARE	ZH1 12.1"WXGA QD12TL02 QDI GLA S/P	LK.12109.002
LCD	LCD 12.1 IN. TFT WXGA CMO N121I3-L01 GLARE	"ZH2 LCD(TFT)12.1"" N121I3-L01(GLARE) S/P"	LK.1210D.007
BOARD	LCD INVERTER BOARD	ZH1 12 IN.WXGA LCD INVERTER S/P	19.TATV7.001
CABLE	LCD CABLE ASSY W/O CCD	"ZH2 LCD CABLE AU 12.1"" W/O CCD S/P"	50.TATV7.003
CASE/COVER/ BRACKET ASSEMBLY	LCD BRACKET W/HINGE - L	ZH2 HINGE-BKT-L (AU) S/P	33.TATV7.001
CASE/COVER/ BRACKET ASSEMBLY	LCD BRACKET W/HINGE - R	ZH2 HINGE-BKT-R(AU) S/P	33.TATV7.002
CASE/COVER/ BRACKET ASSEMBLY	LCD COVER W/ANTENNA W/O CCD ASSY	ZH2 LCD COVER W/O CCD ASSY S/P	60.TATV7.005
CASE/COVER/ BRACKET ASSEMBLY	LCD BEZEL ASSY W/ LOGO W/O CCD	"ZH1 12"" LCD BEZEL W/ LOG S/P"	60.TATV7.006

CATEGORY	PARTNAME	DESCRIPTION	ACER PART NO.
LCD	LCD MODULE 12.1 IN. NON GLARE W/O CCD ASSY	ZH2 12.1 LCD W/O CCD NON-GL ASSY S/P	6M.TATV7.004
LCD	LCD 12.1 IN. TFT WXGA AU B121EW01 V.5 NON GLARE	"ZH2 LCD(TFT)12.1""B121EW01 V.5(WXGA) S/P"	LK.12105.004
LCD	LCD 12.1 IN. TFT WXGA QDI QD12TL02-03 NON GLARE	"ZH2 LCD12.1"" NO-GLE QD12TL02 WXGA S/P"	LK.12109.001
LCD	LCD 12.1 IN. TFT WXGA CMO N121I3-L02 NON GLARE	"ZH2 LCD(TFT) 12.1""N121I3-L02(NON-GL) S/P"	LK.1210D.006
BOARD	LCD INVERTER BOARD	ZH1 12 IN.WXGA LCD INVERTER S/P	19.TATV7.001
CABLE	LCD CABLE ASSY W/O CCD	"ZH2 LCD CABLE AU 12.1"" W/O CCD S/P"	50.TATV7.003
CASE/COVER/ BRACKET ASSEMBLY	LCD BRACKET W/HINGE - L	ZH2 HINGE-BKT-L (AU) S/P	33.TATV7.001
CASE/COVER/ BRACKET ASSEMBLY	LCD BRACKET W/HINGE - R	ZH2 HINGE-BKT-R(AU) S/P	33.TATV7.002
CASE/COVER/ BRACKET ASSEMBLY	LCD COVER W/ANTENNA W/O CCD ASSY	ZH2 LCD COVER W/O CCD ASSY S/P	60.TATV7.005
CASE/COVER/ BRACKET ASSEMBLY	LCD BEZEL ASSY W/ LOGO W/O CCD	"ZH1 12"" LCD BEZEL W/ LOG S/P"	60.TATV7.006
MAINBOARD			
	MAINBOARD SATA /T2300/ 945GM/5 in 1/GLAN	"ZH2 MB ASSY(Y2.0,SA,MC,G) S/P"	LB.TAT06.001
	MAINBOARD SATA /T2400/ 945GM/5 in 1/GLAN	"ZH2 MB ASSY (Y1.67,SA,MC,G) S/P"	LB.TAT06.002
	MAINBOARD SATA /T2500/ 945GM/5 in 1/GLAN	"ZH2 MB ASSY(Y1.83,SA,MC,G) S/P"	LB.TAT06.003
	MAINBOARD SATA /T2600/ 945GM/5 in 1/GLAN	"ZH2 MB ASSY(Y2.16,7A,MC,G) S/P"	LB.TAT06.004
MEMORY			
MEMORY	"MEMORY INFINEON, DDRII 533 256M HYS64T32000HDL-3.7-A"	ZB1 RAM DDRII5 256M INF S/P	KN.25602.023
MEMORY	"MEMORY NANYA, DDRII533 256MB NT256T64UH4A1FN-37B (PB-FREE)"	ZB1 RAM DDRII5 256M NANYA S/P	KN.25603.029
MEMORY	"MEMORY HYNIX, DDRII 533 256MB HYMP532S64P6-C4"	ZB1 RAM DDRII 533 256MB HYNIX S/P	KN.2560G.006
MEMORY	"MEMORY INFINEON, DDRII 533 512MB HYS64T64020HDL-3.7-A (0.11U/G)"	ZH2 RAM(512M)HYS64T64020H DL-3.7-A S/P	KN.51202.021

CATEGORY	PARTNAME	DESCRIPTION	ACER PART NO.
MEMORY	"MEMORY NANYA, DDRII533 512MB NT512T64UH8A1FN-37B (PB-FREE)"	ZB1 RAM(512M)DDR2 NANYA S/P	KN.51203.023
MEMORY	"MEMORY SAMSUNG, DDRII533 512MB M470T6554CZ3-CD500"	ZB1 RAM DDRII533 512MB SAMSUNG S/P	KN.5120B.015
MEMORY	"MEMORY HYNIX, DDRII 533 512MB HYMP564S64P6-C4"	ZE1 RAM DDRII5 512MB HY S/P	KN.5120G.005
	THERMAL MODULE	ZH2 THERMAL MODULE S/P	60.TATV7.007
SPEAKER	SPEAKER ASSY	ZH2 SPEAKER ASSY SPB2410-ZH2-4 EU S/P	23.TATV7.001
MISCELLANEOUS W/O CCD	"LCD BEZEL RUBBER (GAZH1003,REV3A) "	ZH2 LCD RUBER-UPPER S/P	47.TATV7.001
MISCELLANEOUS W/O CCD	"LCD BEZEL RUBBER (GAZH1003,REV3A) W/O CCD"	ZH1 LCD RUBER-DWON S/P	47.TATV7.002
MISCELLANEOUS W/CCD	"LCD BEZEL RUBBER (GAZH2003,REV3A)"	ZH2 LCD RUBER-DWON S/P	47.TATV7.003
MISCELLANEOUS W/O CCD	"LCD GASKET (GBZH1011, REV3A)"	"ZH2 LCD GASKET (GBZH1011, REV3A) S/P"	47.TATV7.004
SCREW	SCREW MS2.0X4.0	ET2S SCREW MS2.0X4.0 SPARE PART S/P	86.A03V7.018
SCREW	SCREW M2.0*2.5-I(NI)(NYLOK)	EI2 SCREW M2.0*2.5-I(NI)(NYLOK) KIT S/P	86.TADV7.001
SCREW	SCREW M2.0*5-I(BNI)(NYLOK)D4 T0.	SCREW M2.0*5-I(BNI)(NYLOK)D4 T0.	86.TATV7.001
SCREW	SCREW M2.0*7.0-I(NI)(NYLOK)	SCREW M2.0*7.0-I(NI)(NYLOK)	86.TATV7.002
SCREW	"SCREW M3.0*3.8(I)-NIH-J(4.6,0.3)"	"SCREW M3.0*3.8(I)-NIH-J(4.6,0.3)"	86.TATV7.003
SCREW	SCREW M2.5*6.0-I(NI)(NYLOK)	SCREW M2.5*6.0-I(NI)(NYLOK)	86.TATV7.004