TravelMate 6293 Series
Service Guide

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

PRINTED IN TAIWAN

Revision History

Please refer to the table below for the updates made on TravelMate 6293 Series service guide.

Date	Chapter	Updates

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Conventions

The following conventions are used in this manual:

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

Preface

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

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

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Chapter 1

System Specifications

Features

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

Operating System

- Genuine Windows Vista® Business*
- Genuine Windows Vista® Home Premium*
- Genuine Windows Vista® Home Basic*

Platform

- Intel® Centrino® 2 processor technology, featuring:
  - Intel® Core™ 2 Duo mobile processor
  - Mobile Intel® GM45 Express Chipset
  - Intel® Wireless WiFi Link 5100/5300

System Memory

- Dual-Channel DDR3 support
- Up to 2 GB of DDR3 1066 MHz memory, upgradeable to 4 GB using two soDIMM modules*

Display and Graphics

- 12.1" WXGA TFT LCD, 1280 x 800
- Mobile Intel® GM45 Express Chipset

Storage Subsystem

- 2.5" hard disk drive with enhanced Acer DASP (Disk Anti-Shock Protection)
- Optical drive options:
  - DVD-Super Multi double-layer drive
  - DVD/CD-RW combo drive
- 5-in-1 card reader, supporting Secure Digital™ (SD), MultiMediaCard (MMC), Memory Stick® (MS), Memory Stick PRO™ (MS PRO), xD-Picture Card™ (xD)

Audio

- Two built-in Acer 3DSonic stereo speakers
- High-definition audio support
- MS-Sound compatible
- Acer PureZone technology with two built-in stereo microphones

Communication

- Acer Video Conference, featuring:
  - Integrated Acer Crystal Eye webcam
  - Acer PureZone technology
  - Optional Acer Bluetooth® VoIP phone
- WLAN: Intel® Wireless WiFi Link 5100/5300
- WPAN: Bluetooth® 2.0+EDR
- LAN: Gigabit Ethernet, Wake-on-LAN ready
- Modem: 56K ITU V.92
- 3G Card: Option

Privacy control

- Enhanced Acer DASP (Disk Anti-Shock Protection)
- Acer Bio-Protection fingerprint solution
- TravelMate TPM (Trusted Platform Module) solution
- Kensington lock slot

Dimensions

- Non-3G:
  - 306 (W) x 227 (D) x 27.5/34.9 (H) mm (12.05 x 8.94 x 1.08/1.37 inches)
- 3G:
  - 306 (W) x 227 (D) x 27.5/36.9 (H) mm (12.05 x 8.94 x 1.08/1.45 inches)
- 1.9 kg (4.3 lbs) with 6-cell battery pack

Power Subsystem

- ACPI 3.0
- 79.9 W 7200 mAh
- 58.8 W 4800 mAh
- 3-pin 65W AC adapter

Input Devices

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

I/O Ports

- Acer ezDock II/ II+ connector
- PC Card slot (Type II)
- Acer Bio-Protection fingerprint reader*
- 5-in-1 card reader (SD™, MMC, MS, MS PRO, xD)
- Three USB 2.0 ports
- Fast infrared (FIR) port
- External display (VGA) port
- Headphone/speaker/line-out jack
- Microphone-in jack

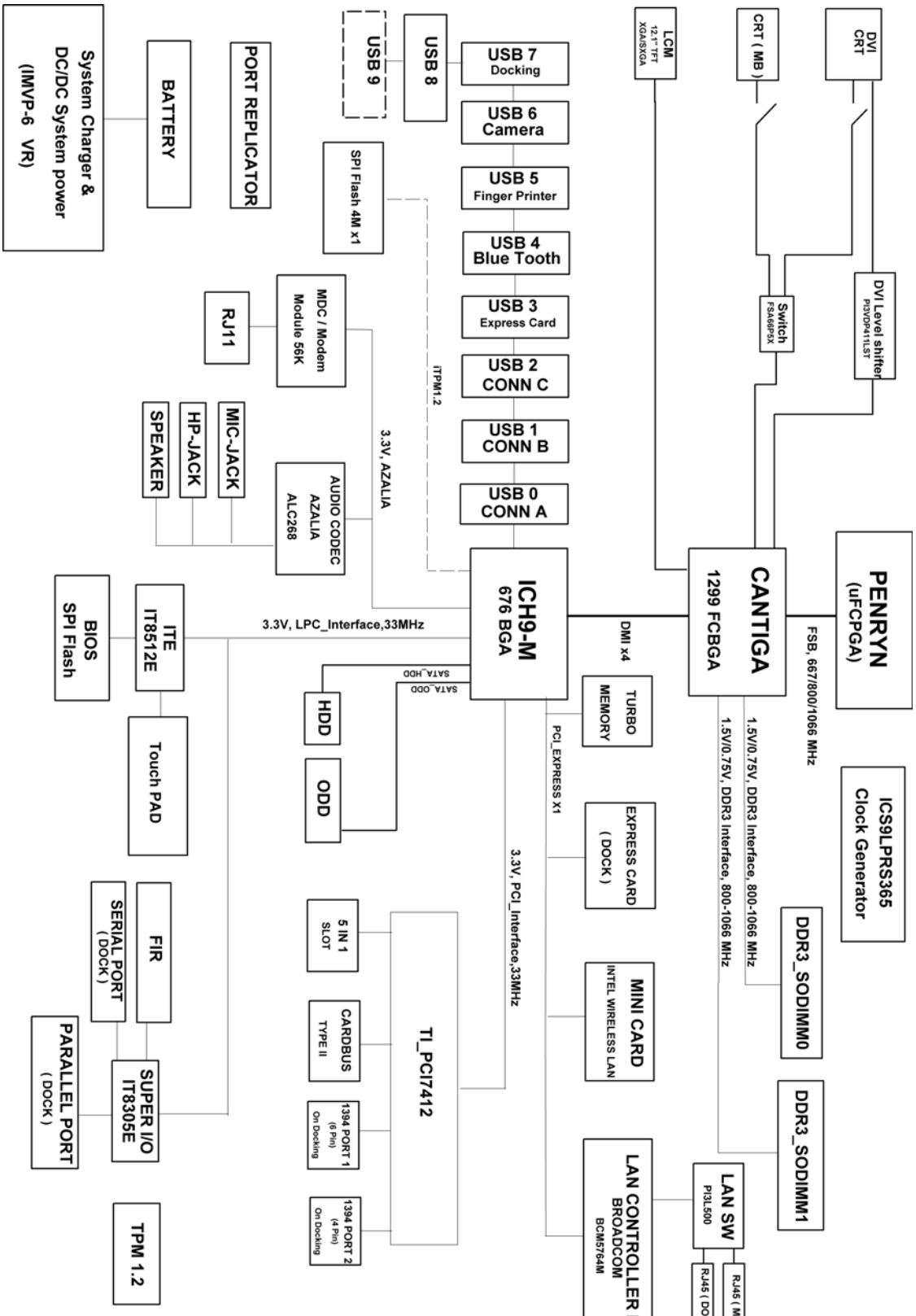
- ❑ Ethernet (RJ-45) port
- ❑ Modem (RJ-11) port
- ❑ DC-in jack for AC adapter

Environment

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

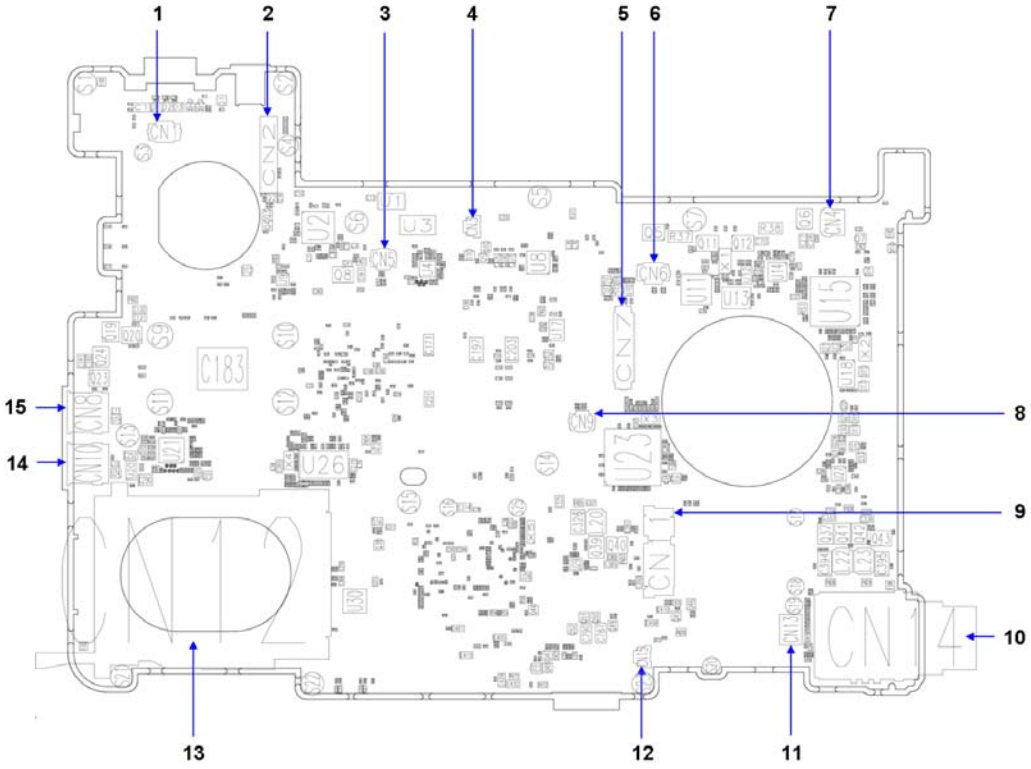
NOTE: **"*"** only for certain models.

System Block Diagram



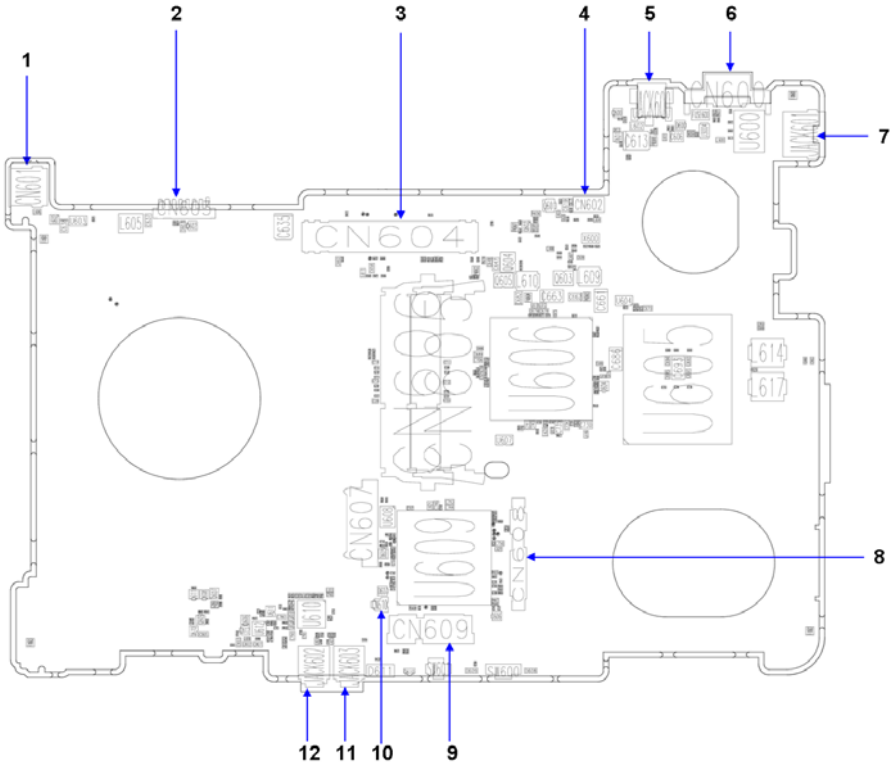
Board Layort

Top View



TM6293 M/B layout and connector location TOP view		
No.	**Name**	**Description**
1	CN1	Power Board FFC CNTR
2	CN2	LCM Cable CNTR
3	CN5	SIM card/Board FFC CNTR (For 3G SKU only)
4	CN3	Modem card FFC CNTR
5	CN7	KeyBoard CNTR
6	CN6	Hot Key Board CNTR
7	CN4	BT cable CNTR
8	CN9	Touch Pad CNTR
9	CN11	PCMCIA CNTR
10	CN14	Card Reader CNTR
11	CN13	Modem card CNTR
12	CN15	Speaker Card CNTR
13	CN12	Express card CNTR
14	CN10	USB Port
15	CN8	USB Port

Bottom view



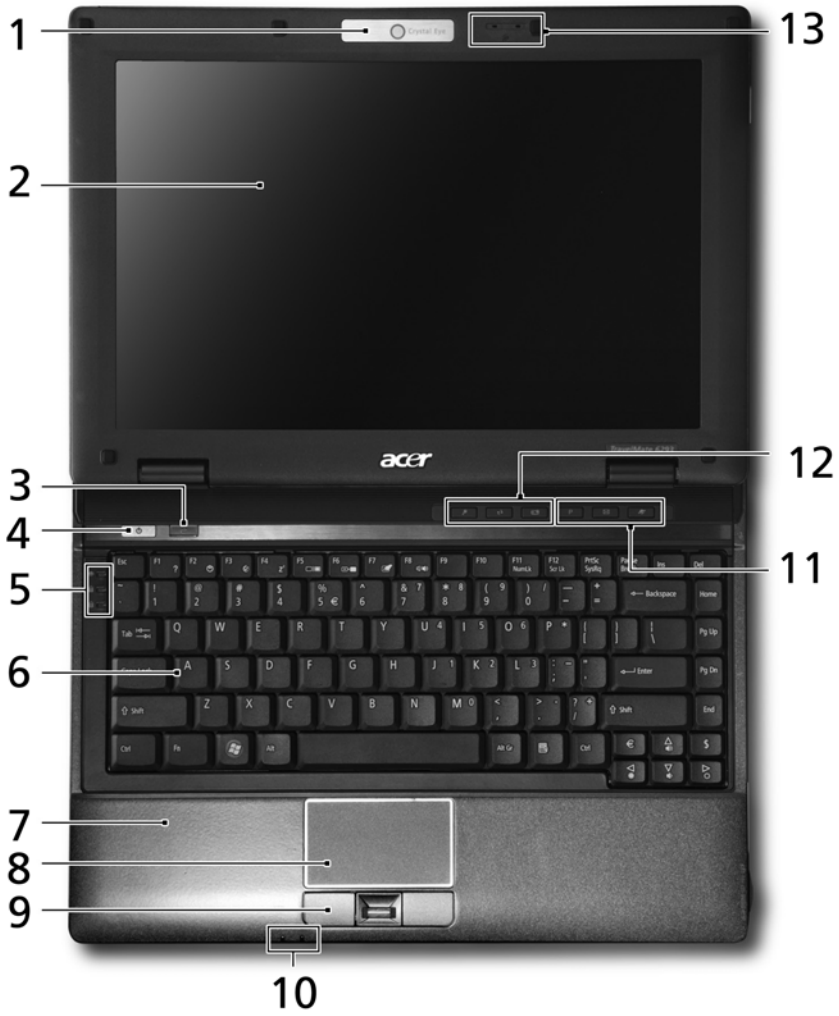
Bottom view		
No.	**Name**	**Description**
1	CN601	USB Port
2	CN603	Battery CNTR
3	CN604	Docking CNTR
4	CN602	FAN Cable CNTR
5	Jack600	DC In Jack
6	CN600	VGA Port
7	Jack601	RJ45
8	CN608	HDD CNTR
9	CN609	Wirless Card CNTR
10	CN610	RTC Cattery Cable CNTR
11	Jack603	MIC Jack
12	Jack602	Earphone Jack

NOTE: There's no clear CMOS jumper available on this model.

Your Acer Notebook tour

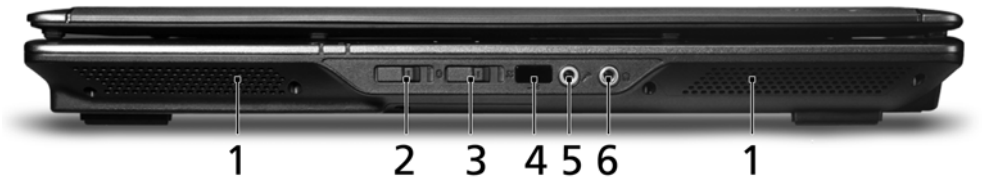
After knowing your computer features, let us show you around your new TravelMate computer.

Front View



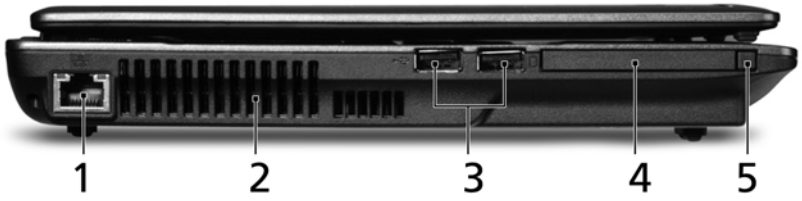
No.	Icon	Item	Description
1		Acer Crystal Eye	Web camera for video communication. (only for certain models)
2		Display screen	Also called Liquid-Crystal Display (LCD), displays computer output.
3		Empowering key	Lanuch Acer Empowering Technology.
4		Power button	Turns the computer on and off.
5/10		Status indicators	Light-Emitting Diodes (LEDs) that light up to show the status of the computer's functions and components.
6		Keyboard	For entering data into your computer.
7		Palmrest	Comfortable support area for your hands when you use the computer.
8		Touchpad	Touch-sensitive pointing device which functions like a computer mouse.
9		Click buttons (left, center* and right)	The left and right buttons function like the left and right mouse buttons. *The center button serves as Acer BioProtect fingerprint reader supporting Acer FingerNav 4-way control function. (only for certain model)
11		Easy-launch button	Buttons for launching frequently used program.
12		Productivity keys	Three productivity keys give users one-touch access to protection and manageability features for a more secure, smarter and easier way to work.
13		Acer PureZone	Two internal stereo microphones for sound recording. (only for certain models)

Closed Front View



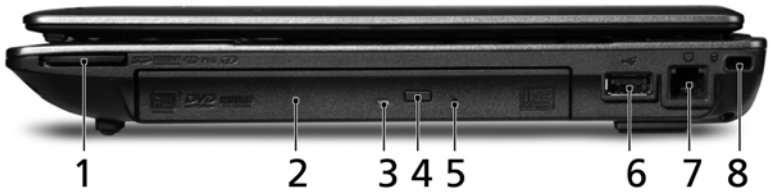
No.	Icon	Item	Description
1		Speakers	Left and right speakers deliver stereo audio output.
2		Bluetooth communication switch	Enable/disables the Bluetooth function.
3		Wireless communication switch	Enable/disables the wireless function.
4		Infrared port	Interfaces with infrared devices (e.g., infrared printer and IR-aware computer).
5		Microphone jack	Accepts input from external microphones.
6		Headphones/ speaker/line-out jack	Connects to audio line-out devices (e.g., speakers, headphones).

Left View



No.	Icon	Item	Description
1		Ethernet (RJ-45) port	Connects to an Ethernet 10/100/1000-based network.
2		Ventilation slots	Enable the computer to stay cool, even after prolonged use.
3		Two USB 2.0 ports	Connect to USB 2.0 devices (e.g., USB mouse, USB camera).
4		PC Card slot	Accepts one Type II PC Card.
5		PC Card slot eject button	Ejects the PC Card from the slot.

Right View

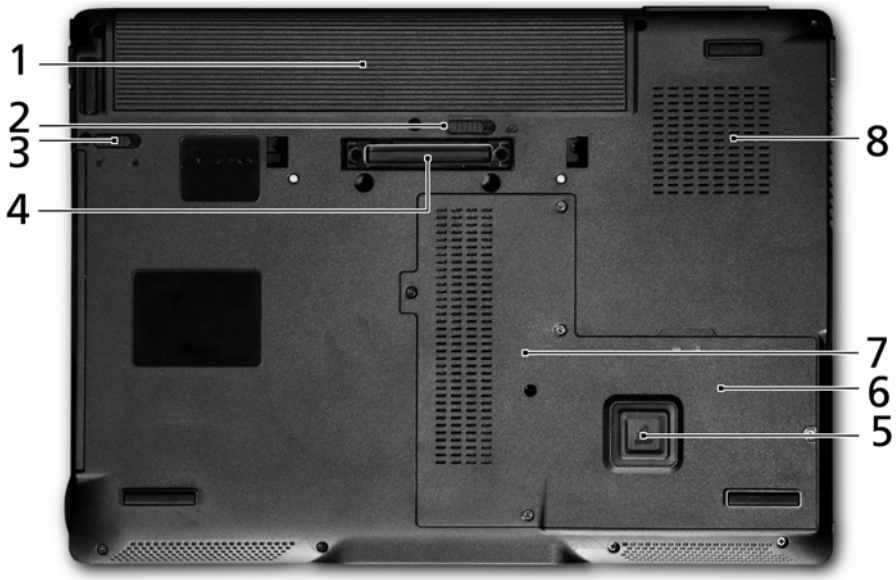


No.	Icon	Item	Description
1		5-in-1 card reader	Accepts Secure Digital (SD), MultiMediaCard (MMC), Memory Stick (MS), Memory Stick Pro (MS PRO), and xD-Picture Card. **Note:** Push to remove/install the card. Only one card can operate at any given time.
2		Optical drive	Internal optical drive; accepts CDs or DVDs.
3		Optical disk access indicator	Lights up when the optical drive is active.
4		Optical drive eject button	Ejects the optical disk from the drive.
5		Emergency eject hole	Ejects the optical drive tray when the computer is turned off. **Note:** Insert a paper clip to the emergency eject hole to eject the optical drive tray when the computer is off.
6		USB 2.0 ports	Connect to USB 2.0 devices (e.g., USB mouse, USB camera).
7		Modem (RJ-11) port	Connects to a phone line.
8		Kensington lock slot	Connects to a Kensington-compatible computer security lock.

Rear View

No.	Icon	Item	Description
1		DC-in jack	Connects to an AC adapter.
2		External display (VGA) port	Connects to a display device (e.g., external monitor, LCD projector).

Base View

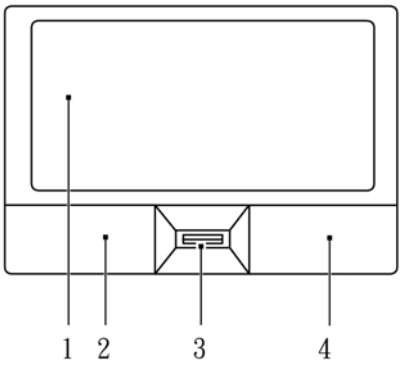


No.	Icon	Item	Description
1		Battery bay	Houses the computer's battery pack.
2		Battery release latch	Releases the battery to remove the battery pack.
3		Battery lock	Locks the battery in position.
4		Acer ezDock II/II+ connector	Connects to Acer ezDock II/II+.
5		Acer DASP (Disk Anti-Shock Protection)	Protects the hard disk drive from shocks and bumps. (only for certain models)
6		Hard disk bay	Houses the computer's hard disk (secured with screws).
7		Memory compartment	Houses the computer's main memory.
8		Ventilation slots and cooling fan	Enable the computer to stay cool, even after prolonged use. **Note:** Do not cover or obstruct the opening of the fan.

Touchpad

Touchpad Basics (with fingerprint reader)

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



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

Function	Left Button (2)	Right Button (4)	Main touchpad (1)	Center button (3)
Execute	Quickly click twice.		Tap twice (at the same speed as double-clicking a mouse button).	
Select	Click once.		Tap once.	
Drag	Click and hold, then use finger on the touchpad to drag the cursor.		Tap twice (at the same speed as double-clicking a mouse button); rest your finger on the touchpad on the second tap and drag the cursor.	
Access context menu		Click once.		
Scroll				Swipe up/down/ left/right using Acer FingerNav 4-way control function (Manufacturing option).

NOTE1: 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.

NOTE2: By default, vertical and horizontal scrolling is enabled on your touchpad. It can be disabled under Mouse settings in Windows Control Panel.

Using the Keyboard

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

Lock Keys and embedded numeric keypad

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

Lock key	Description
Caps Lock	When Caps Lock is on, all alphabetic characters typed are in uppercase.
Num Lock **<Fn> + <F11>**	When Num Lock is on, the embedded keypad is in numeric mode. The keys function as a calculator (complete with the arithmetic operators +, -, *, and /). Use this mode when you need to do a lot of numeric data entry. A better solution would be to connect an external keypad. **Note:** <Fn> + <F11> only for certain models.
Scroll Lock **<Fn> + <F12>**	When Scroll Lock is on, the screen moves one line up or down when you press the up or down arrow keys respectively. Scroll Lock does not work with some applications.

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

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

Windows Keys

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

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

Hot Keys

The computer employs hotkeys or key combinations to access most of the computer's controls like sreen 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.

Hotkey	Icon	Function	Description
<Fn> + <F1>	?	Hotkey help	Displays help on hotkeys.
<Fn> + <F2>		Acer eSettings	Launches Acer eSettings in Acer Empowering Technology.
<Fn> + <F3>		Acer ePower Management	Launches Acer ePower Management in Acer Empowering Technology.
<Fn> + <F4>	z z	Sleep	Puts the computer in Sleep mode.
<Fn> + <F5>		Display toggle	Switches display output between the display screen, external monitor (if connected) and both.
<Fn> + <F6>		Screen blank	Turns the display screen backlight off to save power. Press any key to return.
<Fn> + <F7>		Touchpad toggle	Turns the internal touchpad on and off.
<Fn> + <F8>		Speaker toggle	Turns the speakers on and off.
<Fn> + <△>		Volume up	Increases the sound volume.
<Fn> + <▽>		Volume down	Decreases the sound volume.
<Fn> + <▷>		Brightness up	Increases the screen brightness.
<Fn> + <◁>		Brightness down	Decreases the screen brightness.

Special Key (only for certain models)

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

The Euro symbol

1. Open a text editor or word processor.
2. 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 by the operating system version.

Hardware Specification and Configurations

Processor

Item	Specification
CPU type	Intel CPU Penryn
Core logic	IntelGM45 + ICH9M
CPU package	uFCPGA, Socket P
CPU core voltage	0.35~1.325V

Second Level Cache

Item	Specification
Cache controller	Intel CPU Penryn
Cache size	6MB
1st level cache control	Always enabled
2st level cache control	Always enabled
Cache scheme control	Fixed in write-back

System Memory

Item	Specification
Memory controller	IntelGM45
Memory size	0MB (no on-board memory)
DIMM socket number	2 sockets
Supports memory size per socket	2GB
Supports maximum memory size	4GB
Supports DIMM type	DDR 3 Synchronous DRAM
Supports DIMM Speed	800/1066 MHz
Supports DIMM voltage	1.5V and 0.75V
Supports DIMM package	204-pin soDIMM

Lan Interface

Item	Specification
Chipset	BCM_BCM5764MA0KMLG
Supports LAN protocol	10/100/1000 Ethernet
LAN connector type	RJ45
LAN connector location	Left side
Features	Integrated 10/100/1000 BASE-T transceiver

Modem Interface

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

3G Module

Item	Specification
Module Name	Integration Manual Globe Trotter Module GTM380
Vendor	Option Confidential
Supported radio frequency bands	
UMTS/HSDPA1	
GTM380W	850 MHz, 1900 MHz and 2100 MH
GTM380E	850 MHz, 1900 MHz and 2100 MHz
GTM380JD	800 MHz, 1700 MHz and 2100 MHz
GSM/GPRS/EDGE	
GTM380W	850 MHz, 900 MHz, 1800 MHz and the 1900 MHz
GTM380E	850 MHz, 900 MHz, 1800 MHz and the 1900 MHz
GPS2	
L1 band	1575.42 MHz

Bluetooth Interface

Item	Specification
Chipset	Built-in ICH9
Data throughput	723 bps (full speed data rate)
Protocol	Bluetooth 1.1 (Upgradeable to Bluetooth 1.2 when SIG specification is ratified)
Interface	AC97
Connector type	MDC

Hard Disk Drive Interface

Item	Specification	
Vendor & Model Name	HGST: HTS542512K9SA00 HTS542525K9SA00 HTS542516K9SA00	SEAGATE: ST9120817AS ST9160827AS ST9250827AS
Capacity (GB)	120 160 250 320	
Bytes per sector	512	
Data heads	2	
4 for Toshiba and HGST	4	
Drive Format		
Disks	1	
Spindle speed (RPM)	5400 RPM	
Performance Specifications		
Buffer size	8M	
Interface	SATA	
Max. media transfer rate (disk-buffer, Mbytes/s)	100, 150	
Data transfer rate (host~buffer, Mbytes/s)		
Ultra DMA mode-5	100 MB/Sec.	
DC Power Requirements		
Voltage tolerance	5V(DC) +/- 5%	

DVD-Super Multi Interface

Item	Specification
Vendor & Model Name	TOSHIBA 8X TS-L632D PHILIPS 8X DS-8A1P HLDS 8X GSA-T20N
Performance Specification	With CD Diskette
Transfer rate (KB/sec)	Sustained:Max 3.6Mbytes/sec Sustained:Max 10.8Mbytes/sec
Buffer Memory	2MB
Interface	Intergated Serial ATA
Applicable disc format	
Support disc formats	1. Reads data in each CD-ROM, CD-ROM XA, CD-1, Video CD, CD-Extra and CD-Plus 2. Reads data in super Audio CD (SACD) Hybrid type 3. Reads standard CD-DA 4. Reads and writes CD-R discs 5. Reads and writes CD-RW andHSRW discs 6. Reads and writes US & US+RW 7. Reads data in each DVD-ROM and DVD-Dual 8. Reads and writes in each DVD-R (Ver. 2.0 for general), DVD-RW and DVD+R/RW (Ver1.1) 9.Reads and writes DVD+-R Dual 10.Reads and writes DVD-RAM
Loading mechanism	Load: Manual Release: (a) Electrical Release (Release Button) (b) Release by ATAPI command (c) Emergency Release
Input Voltage	5 V +/- 5 % (Operating)

Audio Interface

Item	Specification
Audio Controller	Realtek ALC268-VB1
Audio onboard or optional	On board
Mono or Stereo	Stereo
Resolution	1dB of analog output volue control
Compatibility	HDA audio Interface.
Sampling rate	1Hz resolution VSR (Variable Sampling Rate)
Internal microphone	Yes
Internal speaker / Quantity	Yes/2 (2W speakers)
Supports PnP DMA channel	DMA channel 0

Video Interface

Item	Specification
Chipset	Intel GM46
Video Memory	64M

USB Port

Item	Specification
Chipset	Built-in ICH9M
USB Compliancy Level	2
OHCI	USB 2.0 Host controller
Number of USB port	3
Location	One on the right side; two on the left right side
Serial port function control	Enable/Disable by BIOS Setup

System Board Major Chips

Item	Specification
Core logic	Intel GM45 + ICH9M
VGA	Internal Graphics
LAN	BCM_BCM5764MA0KMLG
USB 2.0	Built in ICH9M
CardReader	Ti_PCI7412HK
MODEM	Foxconn T60M955
Bluetooth	Foxconn T60H928.11
Wireless 802.11 a+b+g	Built-in ICH9M
Wireless 802.11 a+b+g	Realtek ALC268-VB1

Keyboard

Item	Specification
Keyboard controller	ITE 8512E
Total number of keypads	88-/89-/92-key
Windows logo key	Yes
Internal & external keyboard work simultaneously	Plug USB keyboard to the USB port directly: Yes

Battery

Item	Specification	
Vendor & Model Name	Panasonic LI-ION 9 CELL 7200mAh	SANYO LI-ION 6CELL 4400 mAh
Battery Type	Li-ion	
Pack capacity	7200 mAh	4400mAh
Number of battery cell	9 cell	6 cell
Package configuration	3 cells in series, 3 series in parallel	3 cells in series, 2 series in parallel
Normal voltage	11.1V	
Charge voltage	12.6V	

LCD 12.0" inch

Item	Specification
Vendor & model name	AUO 12.1" WXGA None Glare B121EW03 TOSHIBA 12.1" WXGA Glare LTD121
Screen Diagonal (mm)	12.1 inches
Active Area (mm)	163.2(H) x 261.12(W) mm
Display resolution (pixels)	1280 x 800 XGA-WIDE
Pixel Pitch	0.204 (H) x 0.204(W) mm
Pixel Arrangement	R.G.B. Vertical Stripe
Display Mode	Normally White
Typical White Luminance (cd/m2)	210 typ. (5 points average) 178 min. (5 points average)
also called Brightness	200
Luminance Uniformity	N/A
Contrast Ratio	600
Response Time (Optical Rise Time/Fall Time)msec	50 ms
Nominal Input Voltage VDD	+3.3V
Typical Power Consumption (watt)	4.5W
Weight(g)	315g
Physical Size(mm)	275.8x178.0x5.5
Electrical Interface	Single channel LVDS

LCD Inverter

Item	Specification
Vendor & model name	TDK TAIWAN CORP. - TDB488NR
Brightness conditions	3.14V~3.47V
Input voltage (V)	9.0V~20V
Input current (mA)	0.6A(MAX)
Output voltage (V, rms)	AC660V
Output current (mA, rms)	1.9mA~2.5mA (Min. Brightness) 6.0mA~7.0mA (Max. Brightness)
Output voltage frequency (k Hz)	54KHz~60KHz

AC Adaptor

Item	Specification
Input rating	100V AC to 240V AC, 50Hz to 60Hz
Maximum input AC current	1.6A
Inrush current	50A@115VAC 100A@230VAC
Efficiency	85% min. @115VAC input full load

System Power Management

Item	Specification
Mech. Off (G3)	All devices in the system are turned off completely.
Soft Off (G2/S5)	OS initiated shutdown. All devices in the system are turned off completely.
Working (G0/S0)	Individual devices such as the CPU and hard disc may be power managed in this state.
Suspend to RAM (S3)	CPU set power down VGA Suspend PCMCIA Suspend Audio Power Down Hard Disk Power Down CD-ROM Power Down Super I/O Low Power mode
Save to Disk (S4)	Also called Hibernation Mode. System saves all system states and data onto the disc prior to power off the whole system.

Chapter 2

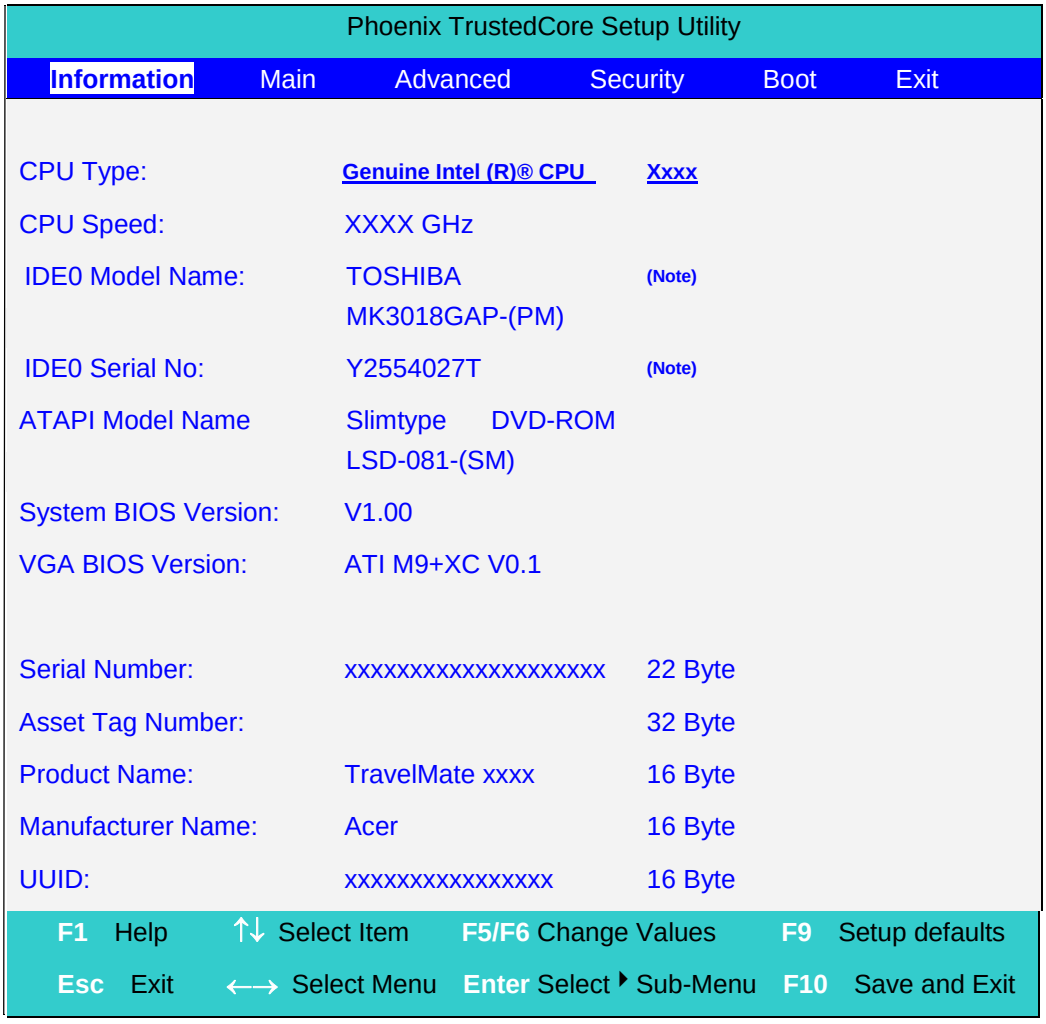
System Utilities

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)..



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

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

Navigating the BIOS Utility

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

Follow these instructions:

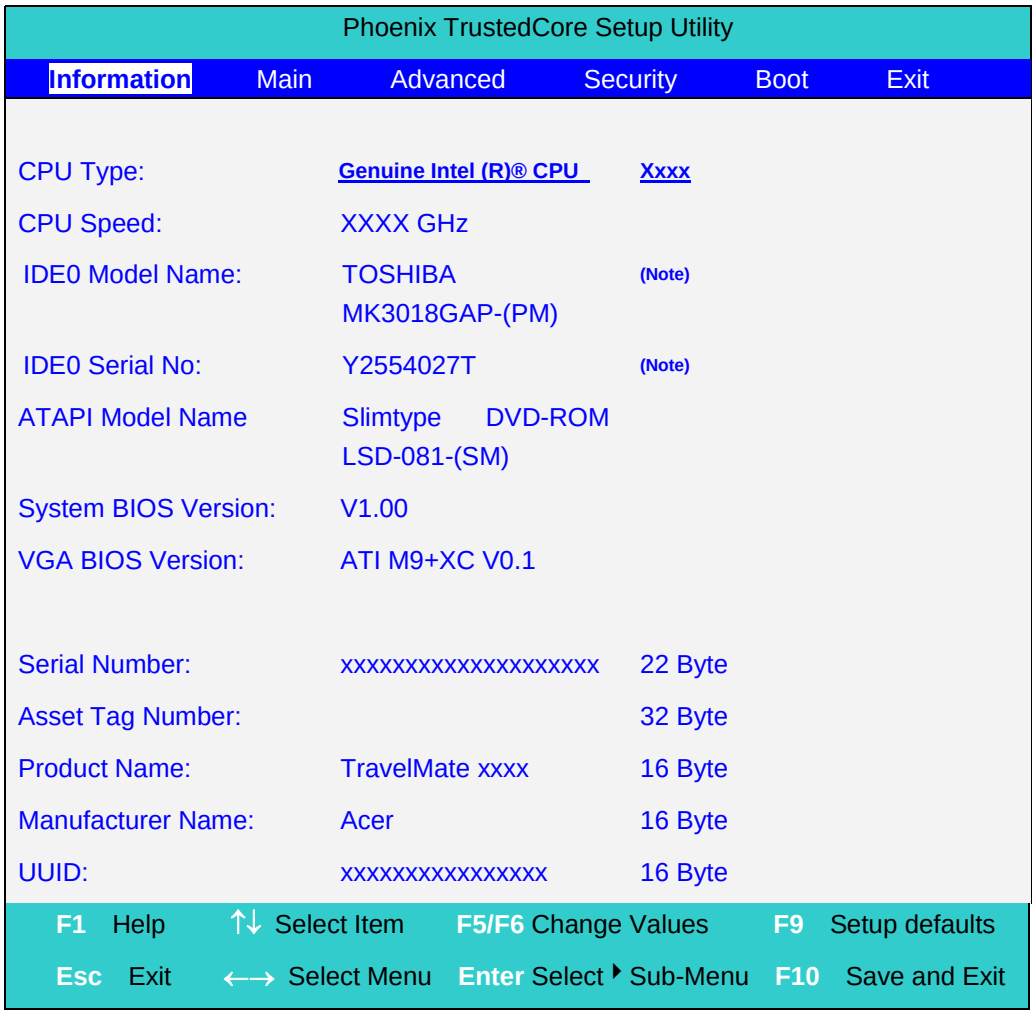
- To choose a menu, use the left and right arrow keys.
- To choose an item, use the up and down arrow keys.
- To change the value of a parameter, press **F5** or **F6**.
- A plus sign (+) indicates the item has sub-items. Press **Enter** to expand this item.
- Press **Esc** while you are in any of the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

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

NOTE: Please note that system information is subject to different models.

Information

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

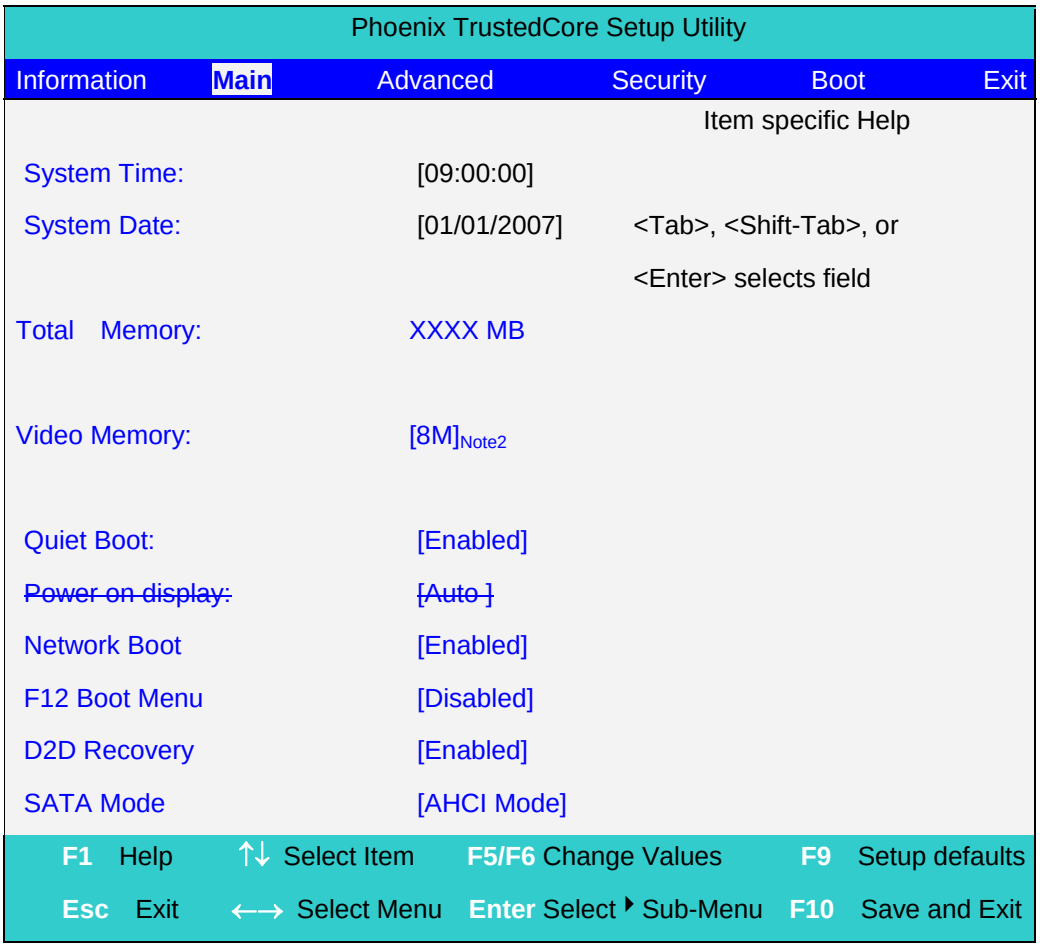


NOTE: The system information is subject to different models.

ParameterItem	Description
CPU Type	This field shows the CPU type and speed of the system.
IDE1 Model Name	This field shows the model name of HDD installed on primary IDE master.
IDE1 Serial Number	This field displays the serial number of HDD installed on primary IDE master.
IDE2I Model Name	This field displays the mofel name of devices installed on secondary IDE master. The hard disk drive or optical drive model name is automatically detected by the system.
IDE2 Serial Number	This field shows the serial number of devices installed on secondary IDE master.
System BIOS ver	Displays system BIOS version.
VGA BIOS Ver	This field displays the VGA firmware version of the system.
KBC Ver	This field shows the keyboard
Serial Number	This field displays the serial number of this unit.
Asset Tag Number	This field displays the asset tag number of the system.
Product Name	This field shows product name of the system.
Manufacturer Name	This field displays the manufacturer of this system.
UUID Number	This will be visible only when an internal LAN device is presenting. UUID=32bytes

Main

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



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

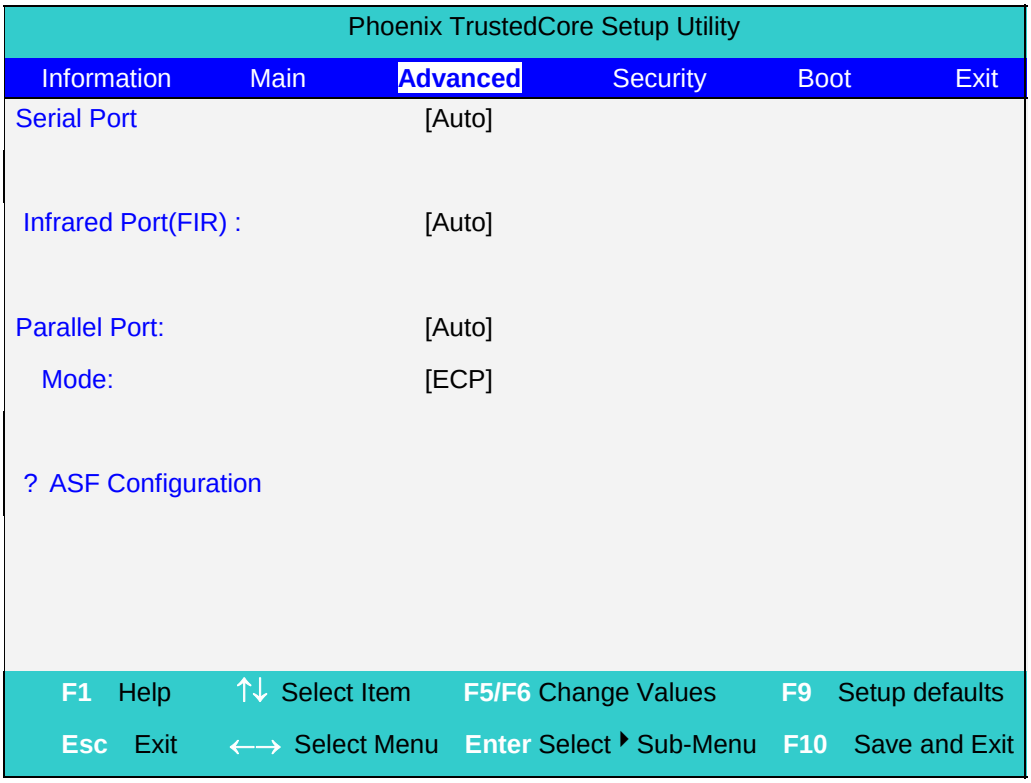
The table below describes the parameters in this screen. Settings in boldface are the default and suggested parameter settings

Parameter	Description	Format/Option
System Time	Sets the system time. The hours are displayed with 24-hour format.	Format: HH:MM:SS (hour:minute:second) System Time
System Date	Sets the system date.	Format MM/DD/YYYY (month/day/ year) System Date
System Memory	This field reports the memory size of the system. Memory size is fixed to 640MB	
Extended Memory	This field reports the memory size of the extended memory in the system. Extended Memory size=Total memory size-1MB	
VGA Memory	Shows the VGA memory size. VGA Memory size=64/128MB	
Quiet Boot	Determines if Customer Logo will be displayed or not; shows Summary Screen is disabled or enabled. Enabled: Customer Logo is displayed, and Summary Screen is disabled. Disabled: Customer Logo is not displayed, and Summary Screen is enabled.	Option: **Enabled** or Disabled
Power on display	Auto: During power 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).	Option: **Auto** or Both
Network Boot	Enables, disables the system boot from LAN (remote server).	Option: **Enabled** or Disabled
F12 Boot Menu	Enables, disables Boot Menu during POST.	Option: **Disabled** or Enabled
D2D Recovery	Enables, disables D2D Recovery function. The function allows the user to create a hidden partition on hard disc drive to store operation system and restore the system to factory defaults.	Option: **Enabled** or Disabled

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

Advanced

The Advanced screen allows the user to set the serial, infrared and parallel ports.

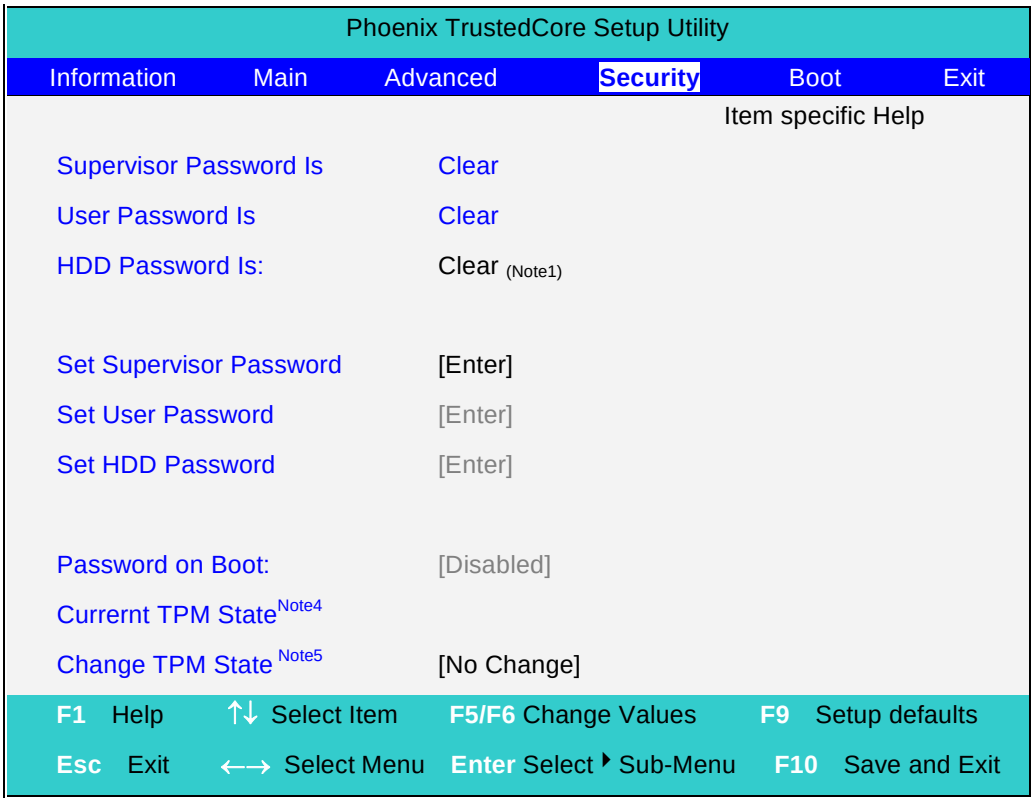


The table below describes the parameters in this screen. Settings in **boldface** are the default and suggested parameter settings.

Parameter	Description	Format/Option
Serial port	Displays the settings of the serial port	**Enabled** or Disabled
Parallel port	Shows the settings of the parallel port	**Enabled** or Disabled

Security

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



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

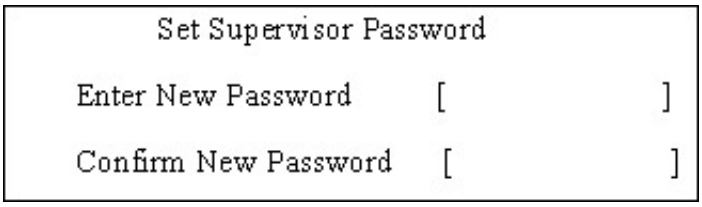
Parameter	Description	Format/Option
User Password is	Shows the setting of the user password.	**Clear** or Set
Supervisor Password is	Shows the setting of the Supervisor password	**Clear** or Set
Set User Password	Press Enter to set the user password. When user password is set, this password protects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

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

Setting a Password

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

1. Use the w andy keys to highlight the Set Supervisor Password parameter and press the e key. The Set Supervisor Password box appears:



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

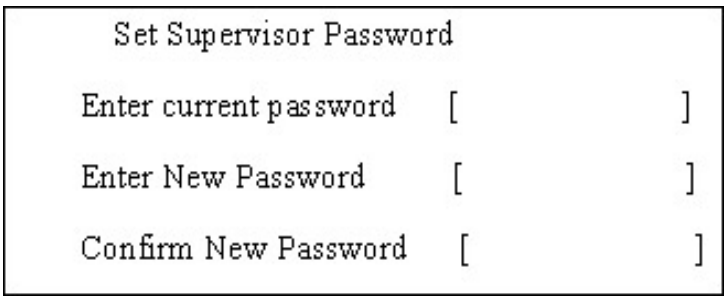
IMPORTANT: Be very careful when typing your password because the characters do not appear on the screen.

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

Removing a Password

Follow these steps:

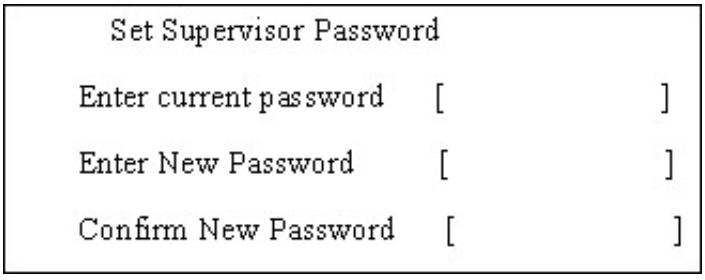
1. Use the w and y keys to highlight the Set Supervisor Password parameter and press the e key. The Set Password box appears:



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

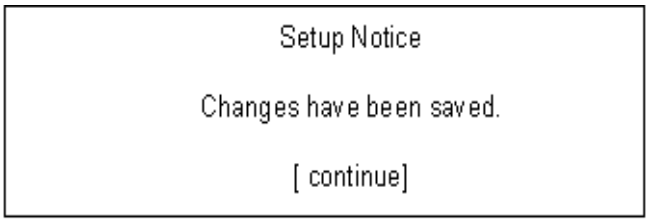
Changing a Password

1. Use the w and y keys to highlight the Set Supervisor Password parameter and press the e key. The Set Password box appears:



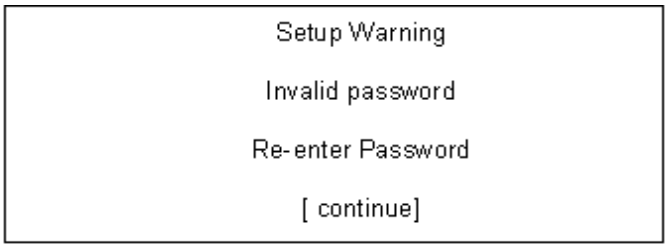
2. Type the current password in the Enter Current Password field and press e.
3. Type a password in the Enter New Password field. Retype the password in the Confirm New Password field.
4. Press e. After setting the password, the computer sets the User Password parameter to “Set”.
5. If desired, you can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

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



The password setting is complete after the user presses u.

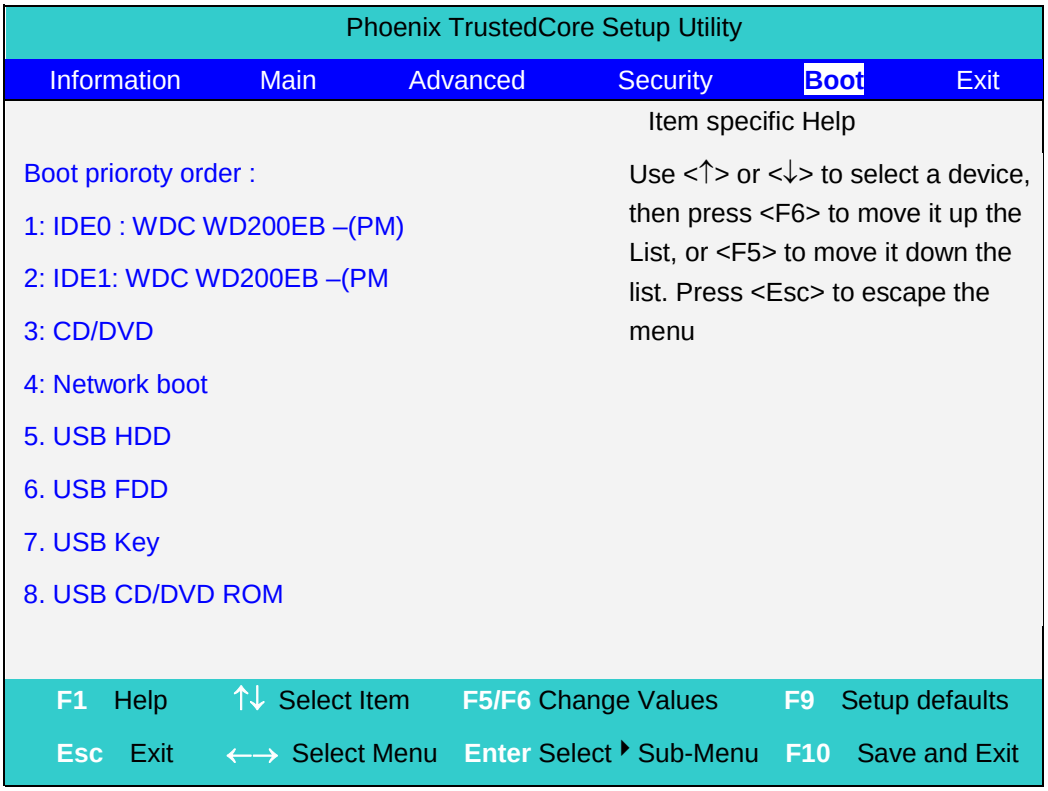
If the current password entered does not match the actual current password, the screen will show you the Setup Warning.



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

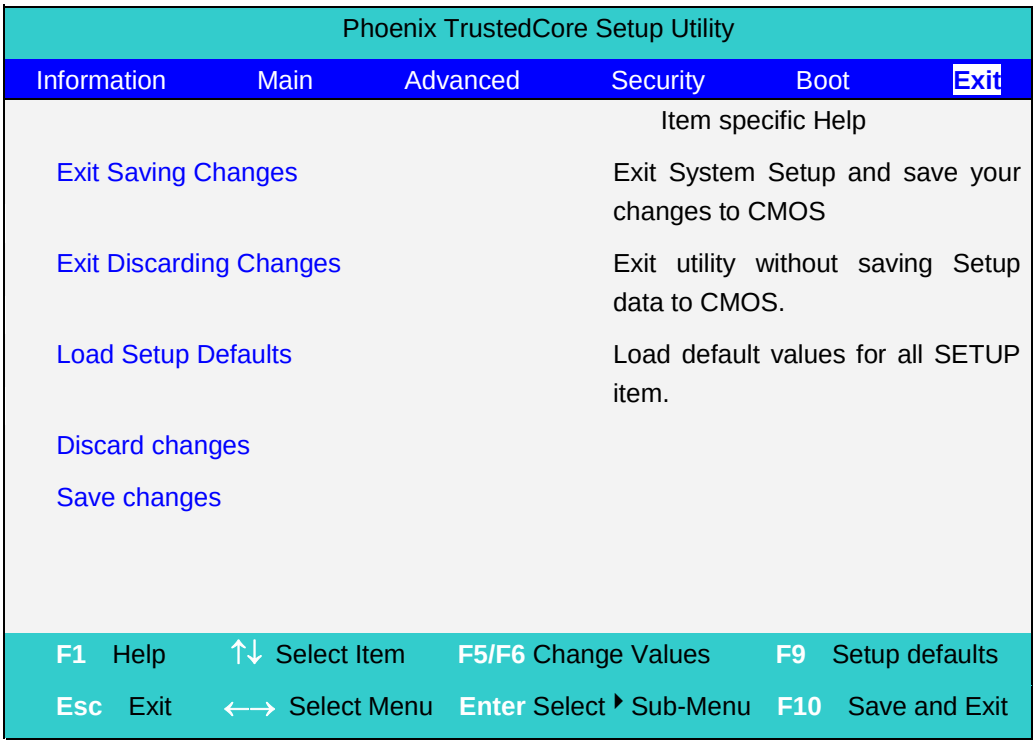
Boot

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.



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 item.
Discard Changes	Load previous values from CMOS for all SETUP items.
Save Changes	Save Setup Data to CMOS.

BIOS Flash Utility

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

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

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

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

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

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

Fellow the steps below to run the Phlash.

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

HDD unlock Utility

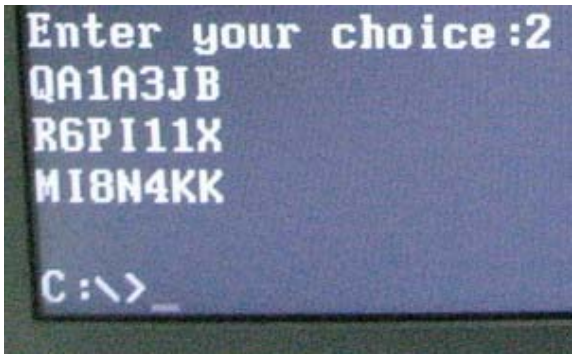
This section provide you with removing HDD password method.

Remove HDD Password

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

If you need to solve HDD password locked problem, you can run unlock6.EXE

1. Key in “unlock6 error code 205”
2. Select “2”
3. Choose one HDD password



Reboot system and key in “R6PI11X” or “MI8N4KK” to HDD user password.

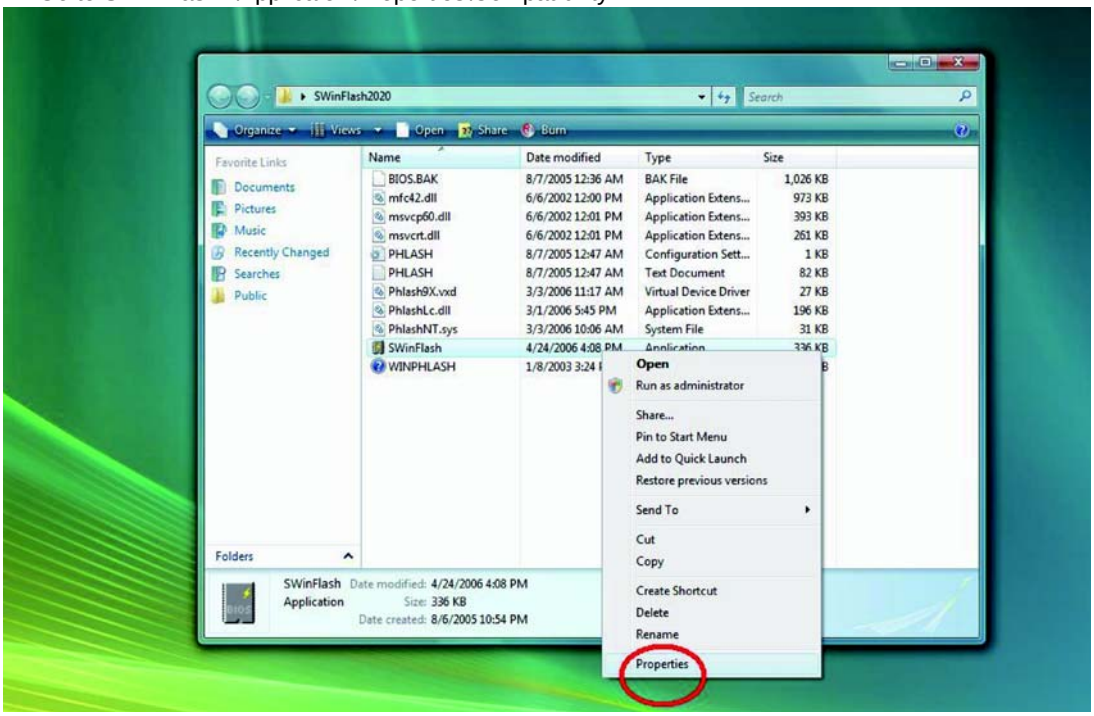
Then the HDD password will be unlocked and will auto into Windows after reboot.

BIOS Flash SOP under DOS Mode

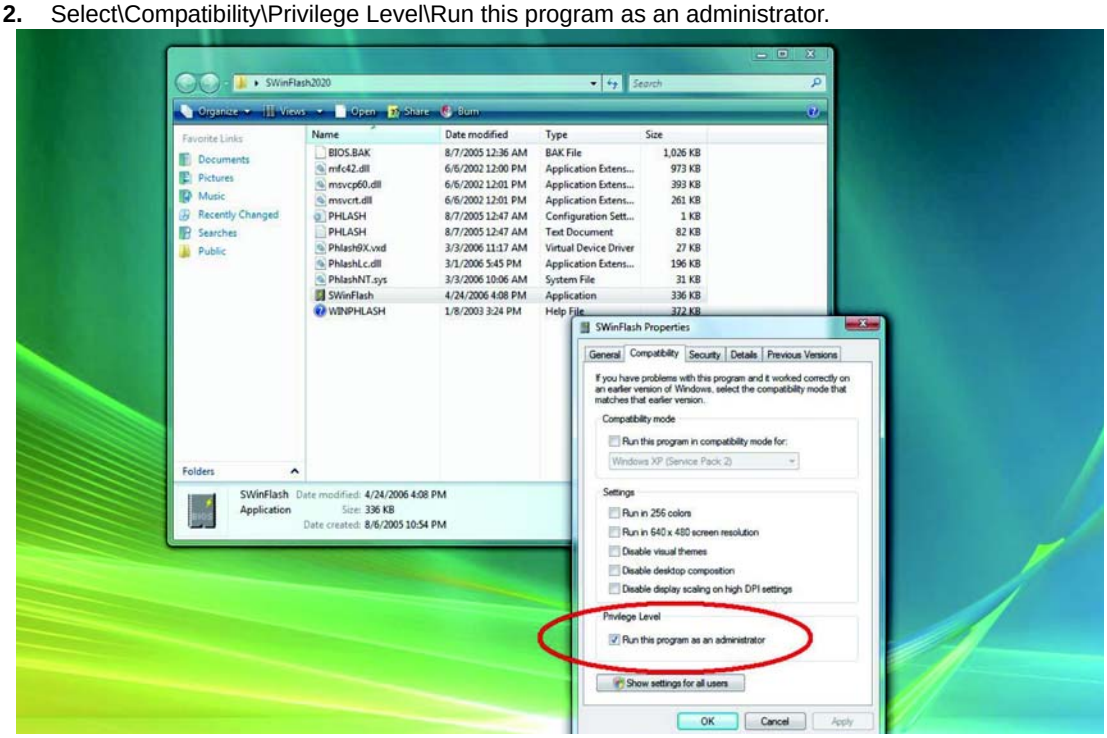
1. USB Floppy into DOS Mode.
2. Dos mode run: phlash16 xxx.rom
3. Restart System.

BIOS update SOP

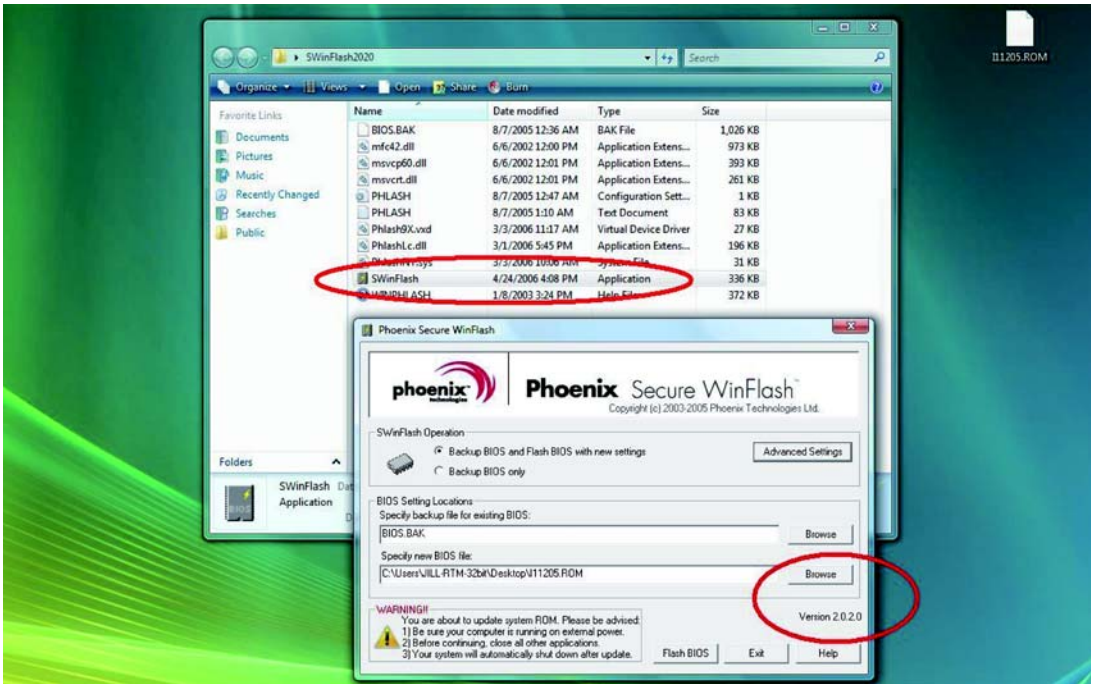
1. Go to SWinFlashn\Applicaion\Properties\Compatibility.



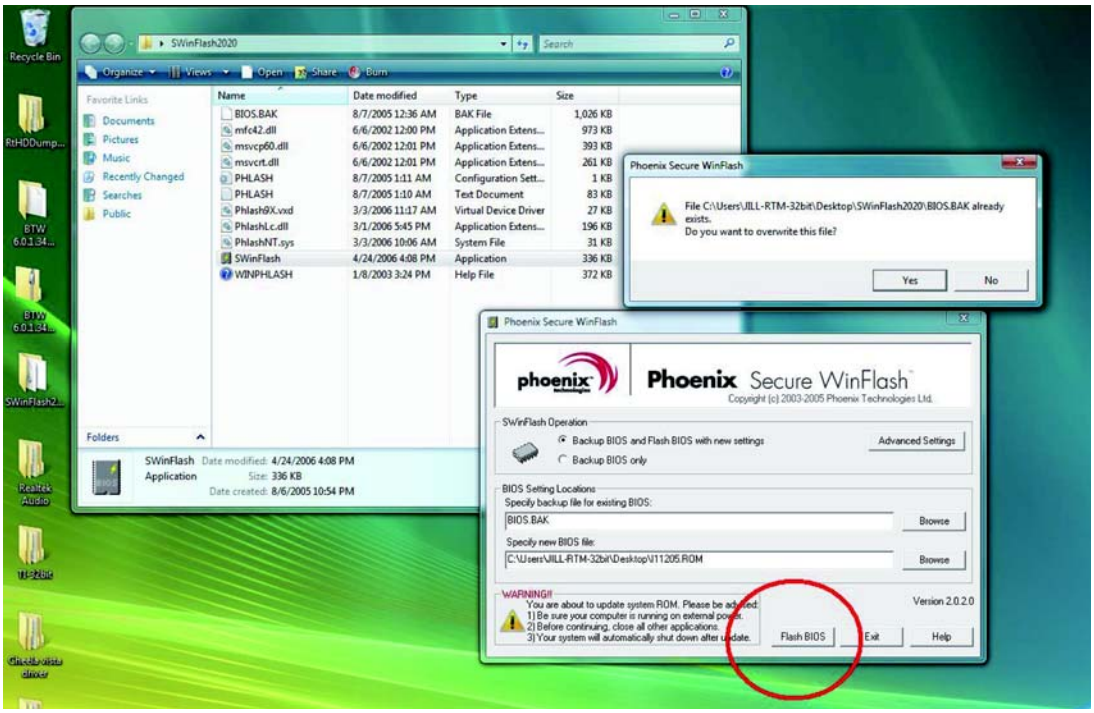
2. Select\Compatibility\Privilege Level\Run this program as an administrator.



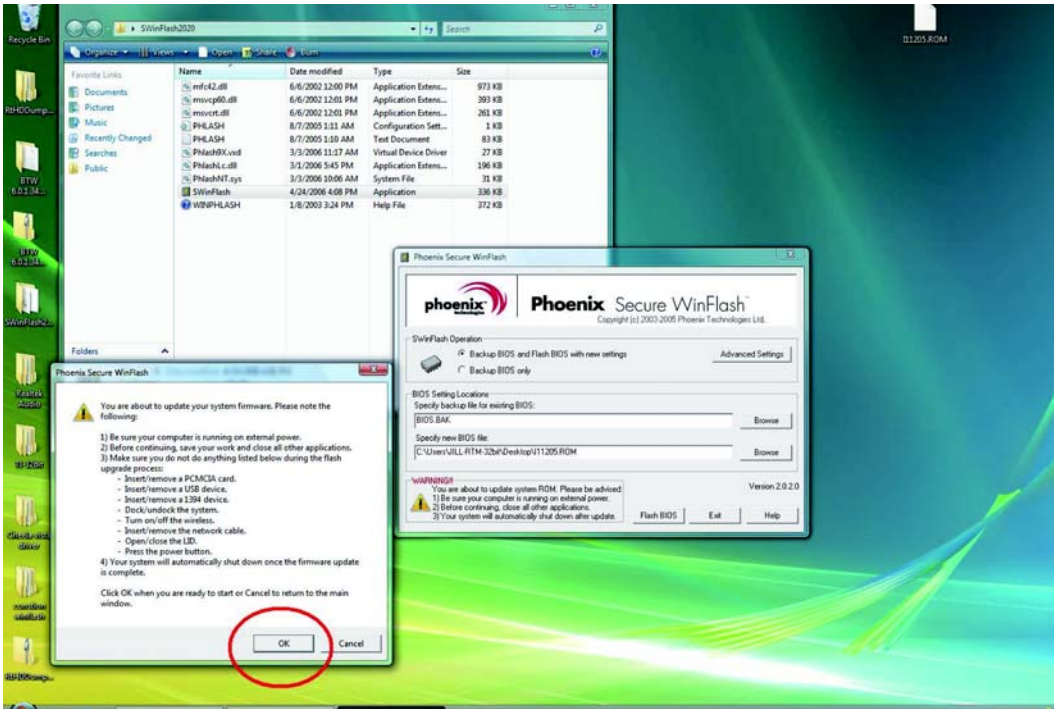
3. Execute SWin-Flash Application.
4. Select new BIOS update.



5. Run Flash BIOS..



6. SWinFlash BIOS is select ok.



7. SWin-Flash program is running.
   - v Load new BIOS.
   - v Analyze old and new BIOS.
   - v Compatibility.
   - v Read old BIOS.
   - v Save old BIOS to Backup file.
   - v Flash new BIOS.

   System BIOS was success update.

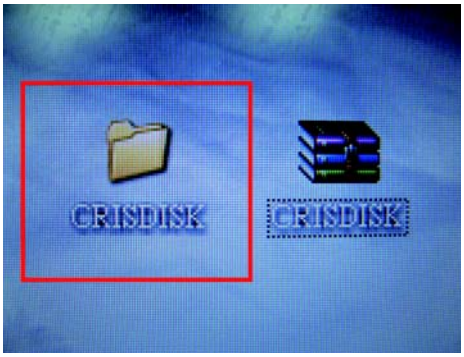
8. System will be shut down.

NOTE: **1.** Please input AC adapter when flash BIOS.

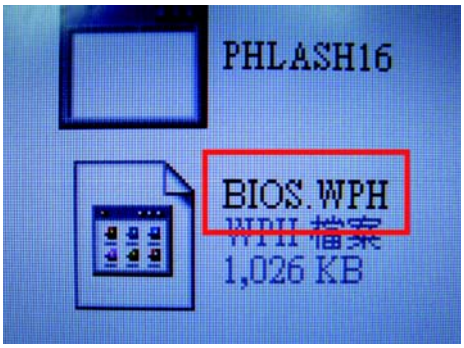
2. Close all application when flash BIOS.

Crisis disk creation

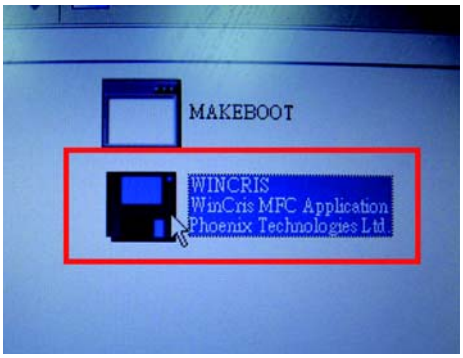
1. UnZIP the CRISDISK file.



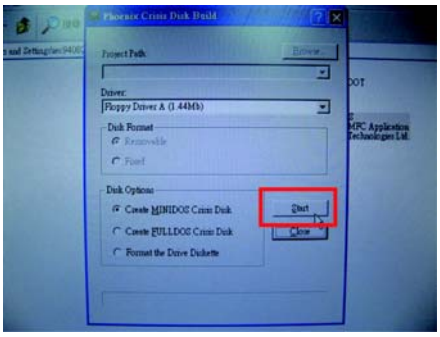
2. Download a new BIOS, rename the BIOS to “BIOS.WPH”.



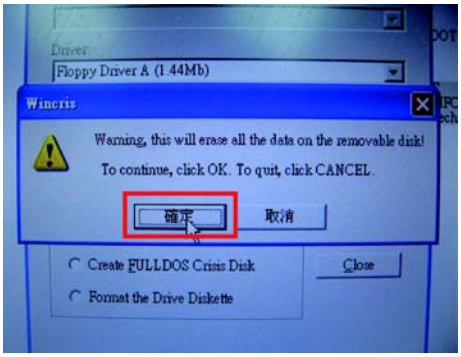
3. Open the CRISDISK file, run the “WINCRIS”.



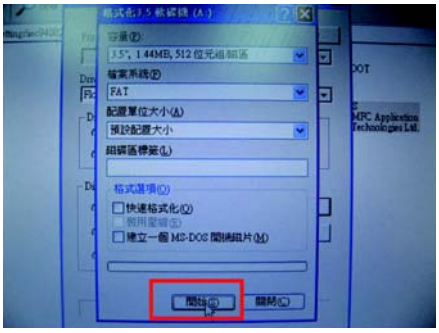
4. Press “Start”.



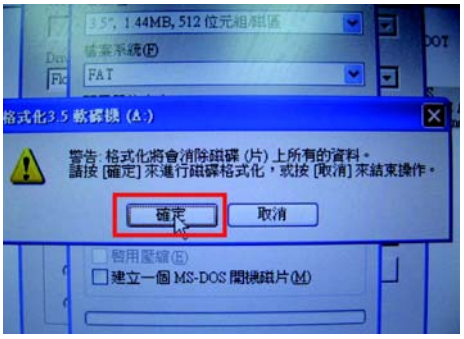
5. Press “ 確定 ”.



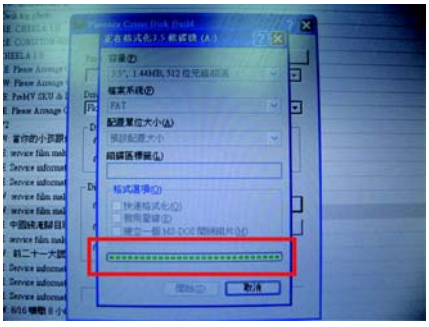
6. Press “Start”



7. Press “ 確定 ”.

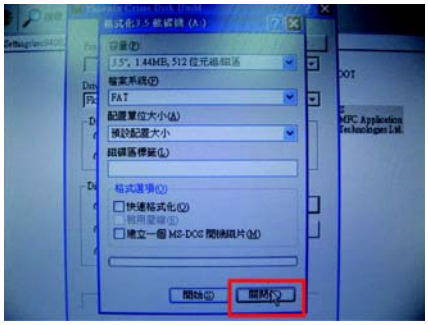


8. Wait the disk format complete.

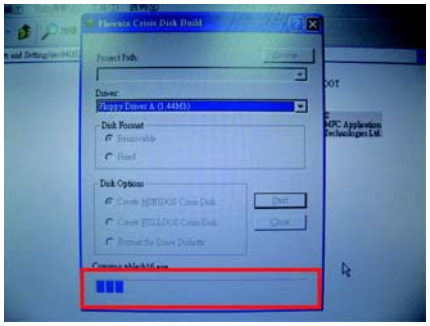


9. Press “ 確定 ”.

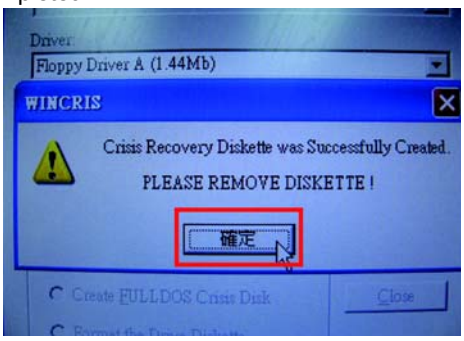
10. Press “ 關閉 ”



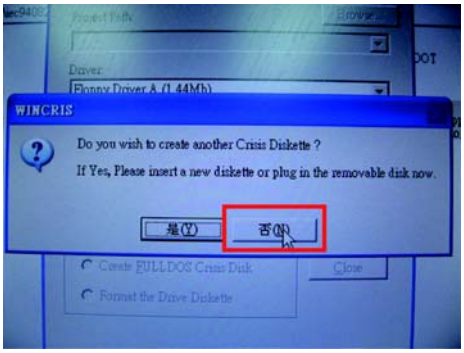
11. Wait for the system to create the disk.



12. Press “ 確定 ” when it's completed.



13. Press “否”.



14. nsert Floppy with the Crisis disk on system.

Crisis disk executing

1. Press Esc + Fn + Power all together at once, system will power on (for 1 second) then release all key pads.

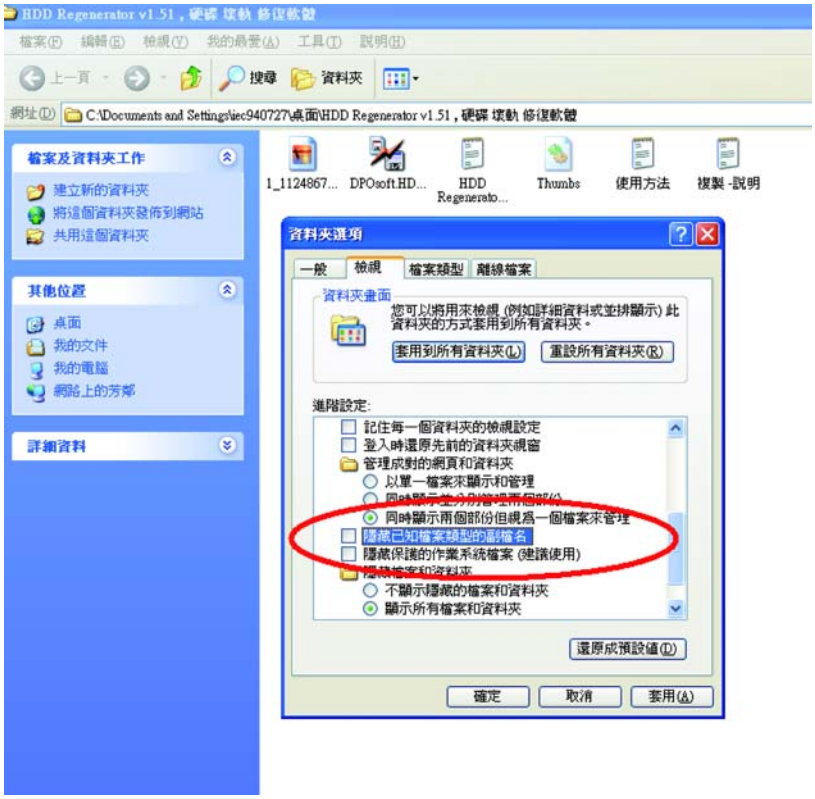
2. When system power off, press Fn+ Esc and wait for system to power on again (about 4 seconds) .

3. Crisis disk executing, FDD should be reading for about 15 seconds.
4. System will power off on crisis disk executing completion.
5. Reboot system.

Trouble shooting

1. If Crisis disk is not working, please check the status of bios.wph file.

2. To fix incorrect bios.wph file format, please uncheck "hide extensions for known file types".



3. Rename it to bios.wph.

Chapter 3

Machine Disassembly and Replacement

This chapter contains step-by-step procedures on how to disassemble the notebook computer TravelMate 6293 for maintenance and troubleshooting.

To disassemble the computer, you need the following tools:

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

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

General Information

Before You Begin

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

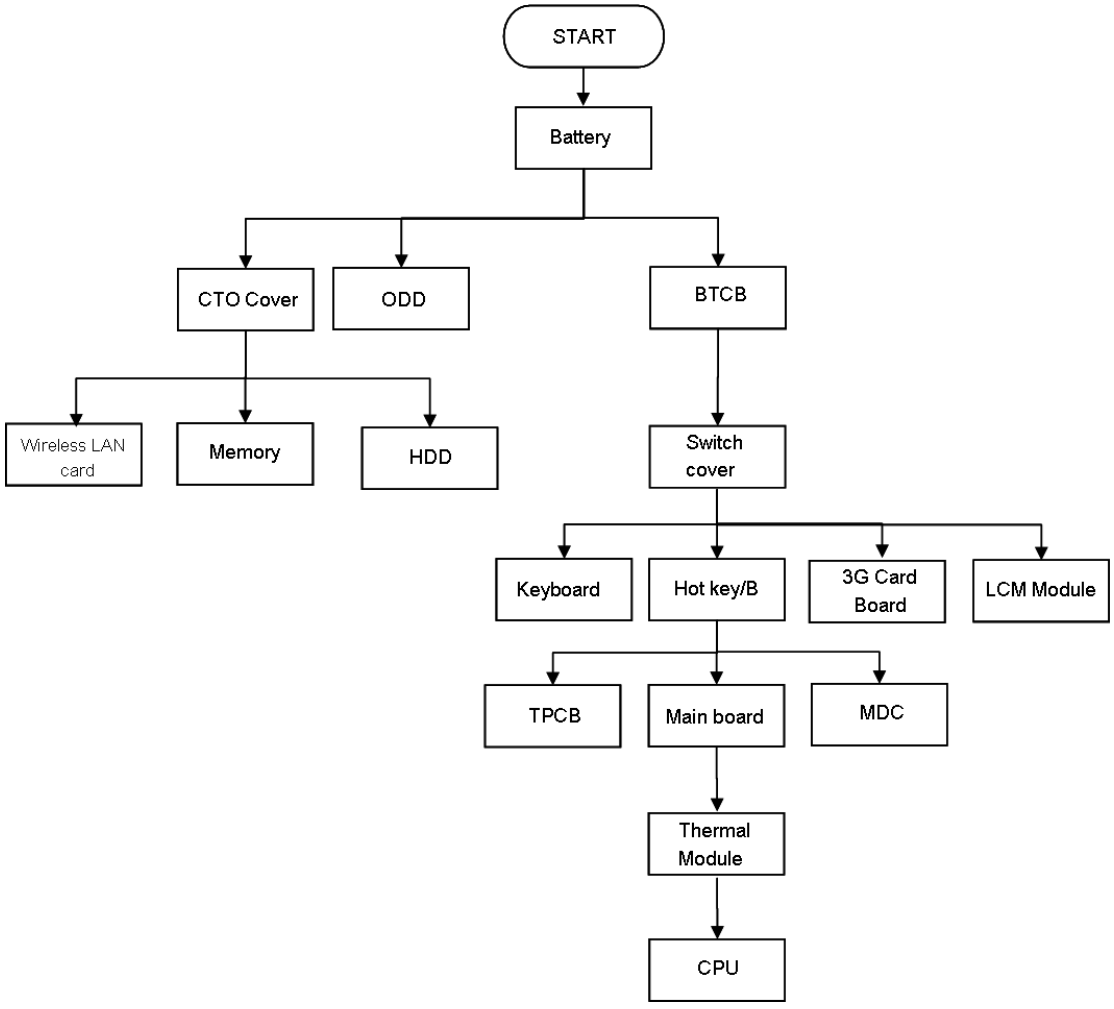
1. Turn off the power to the system and all peripherals.
2. Unplug the AC adapter and all power and signal cables from the system.
3. Remove the battery pack.

Display screw list			
No.	SPEC	Quantity	Location
1	6052B0118301--M2x4.5(40Dx08T)	6	Display A&B Cover
2	6052B0127601--M2x4.0(40Dx08T)	7	Hinge / Inverter = 6 / 1
3	6052B0120001--M2x2.5(40Dx05T)	8	Panel / 3G Module / Bluetooth = 4 / 3 / 1
Base screw list			
No.	SPEC	Qty	Location
1	6052B0118301--M2x4.5(40Dx08T)	21	Base / MB(Cardbus&Odd Cntr) / BTCB(Speaker) = 13 / 6 / 2
2	6052A0051101--M2x3.5(40Dx08T)	1	TPCB(Kensington Lock)
3	6052A0050703--M2x2.0(68Dx05T)	4	TPCB(Hotkey/B & Button/B)
4	6052B0120001--M2x2.5(40Dx05T)	28	Base / thermal / Sim pcb(3G) / Power pcb / TPCB / ODD(Bracket) = 7 / 7 / 2 / 2 / 8 / 2
5	60520D065905--M2x2.0(35Dx03T)	1	TPCB(HDD Lens)
6	6052B0125901--M2x6.0(40Dx08T)	8	Base(Front side) / Hinge = 4 / 4
7	6052B0126701--M2x1.5-2.5(45Dx08T)	3	HDD Cover Set
8	6052B0126601--M2x3.0-4.5(45Dx08T)	1	HDD Cover Set
9	6052B0089301--M2.5x2.5(45Dx08T)	6	Wireless / Modem / 3G or Robson = 2 / 2 / 2
10	6052A0034701--M2.5x6.0(45Dx08T)	2	M/B(Dock Cntr)
Total Quantity		96	

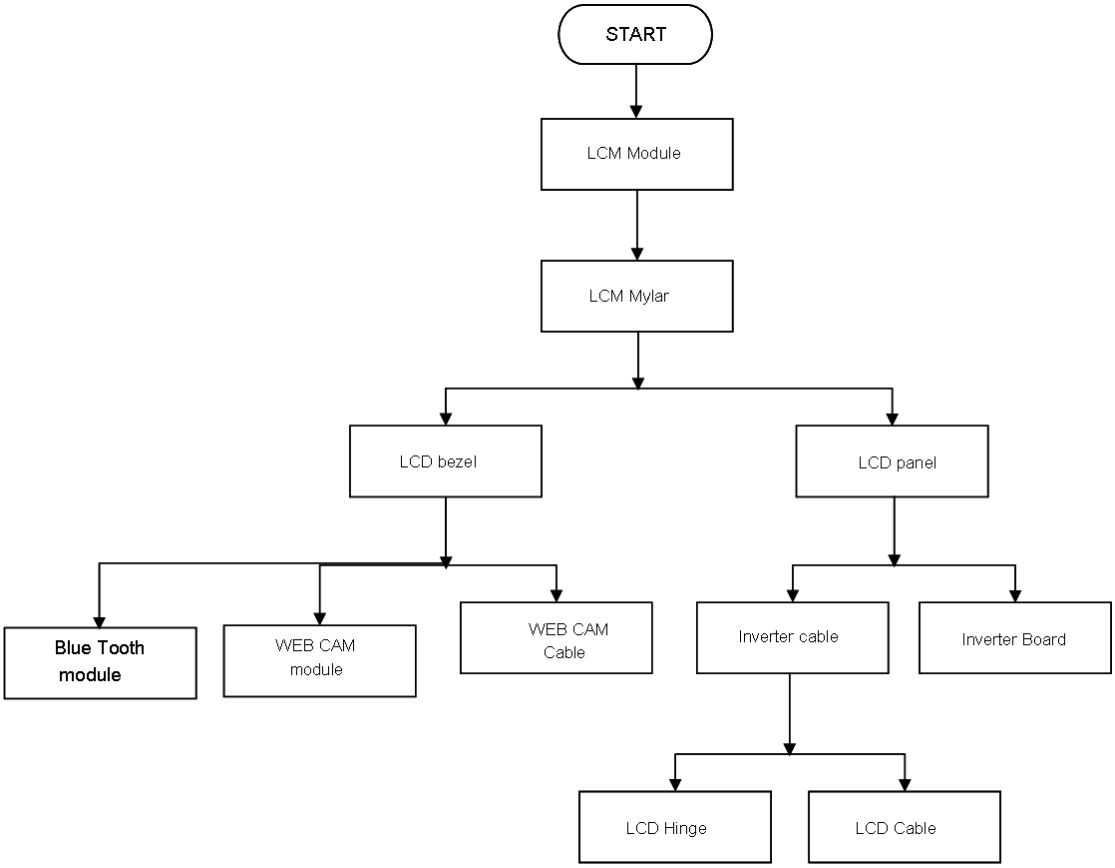
Disassembly Procedure Flowchart

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

Main unit disassembly flow chart



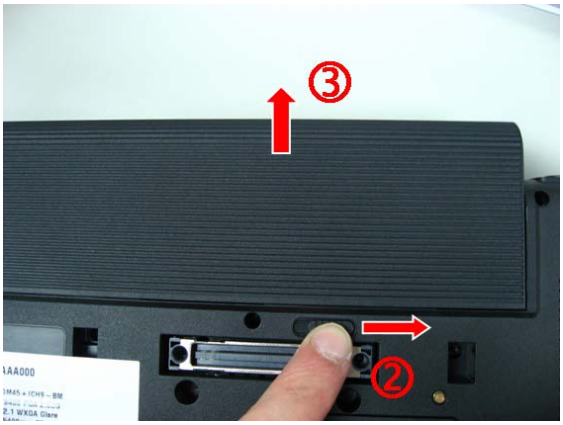
LCM module disassembly flow chart



Removing the Battery Pack

1. Release the battery.

2. Slide the battery latch then remove the battery.



Removing the HDD/Wirless Card/RAM Module/ODD/Express Dummy Card/Card Reader Dummy Module

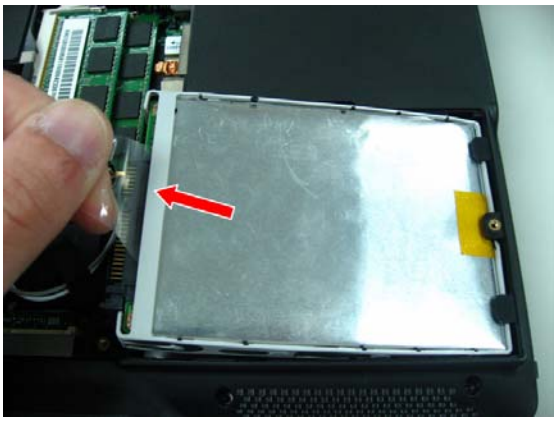
Removing CTO Cover

1. Loose 6 CTO cover screws.

2. Remove CTO cover.

Removing the HDD

3. Remove HDD module.



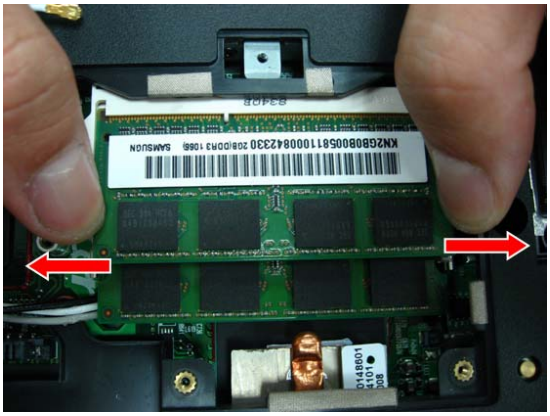
Removing the Wirless Card

4. Remove Wireless card antenna.

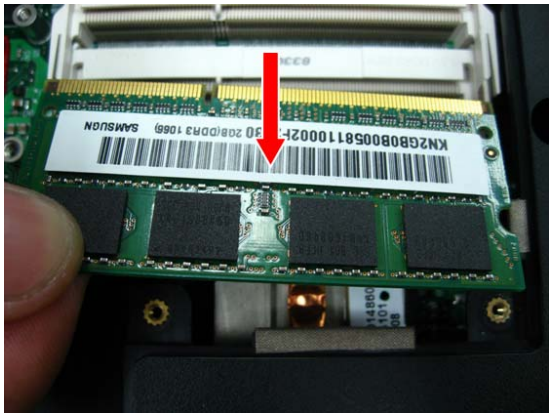
5. Remove Wireless card.

Removing RAM Module

6. Release RAM module from RAM socket.



7. Remove RAM module.



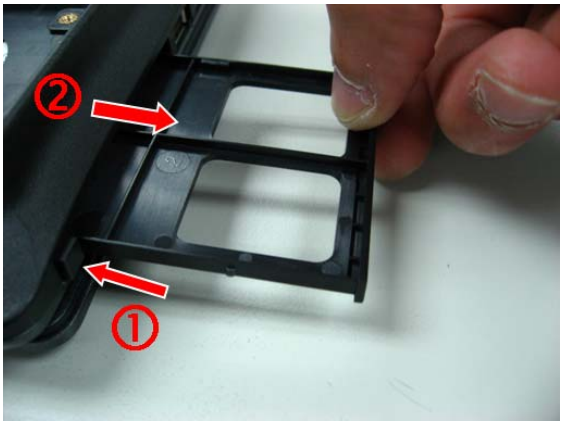
Removing BTCB Screws

8. Loose and remove BTCB screws X 16.

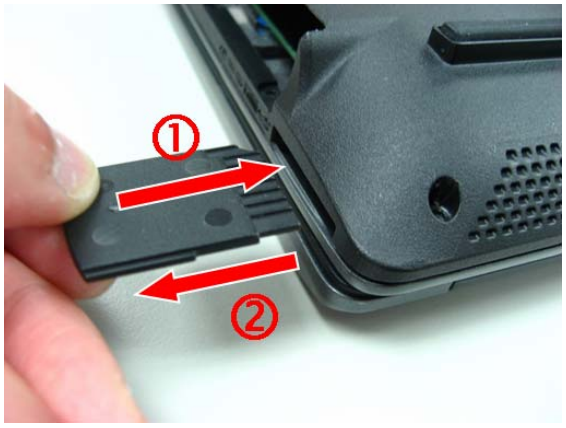
Removing ODD, Express Dummy Card, Dummy Card Reader

9. Remove ODD module.

10. Press express card latch and remove express dummy card.



11. Push dummy card reader and remove the dummy card.

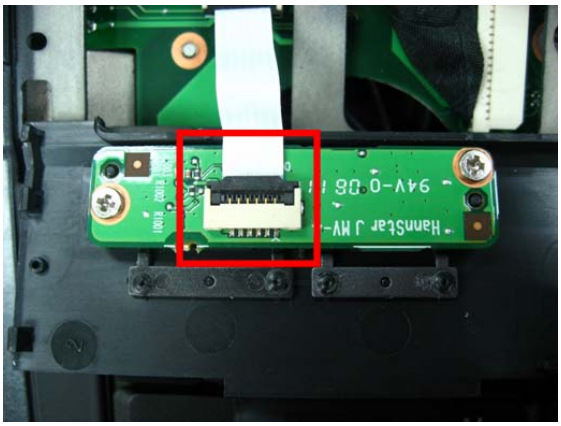


Remove Switch Cover

12. Pull Switch cover up.

13. Reverse Switch cover.

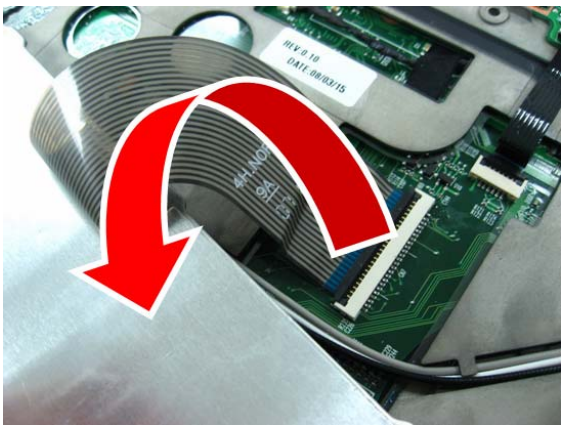
14. Disconnect Power/B FFC from the Switch cover.



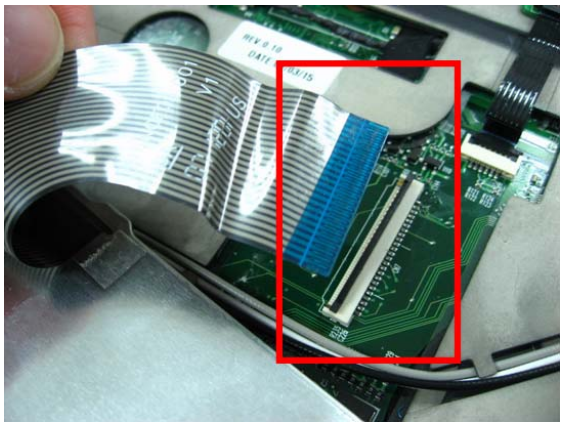
Remove Keyboard

15. Pull Keyboard up.

16. Reverse Keyboard.

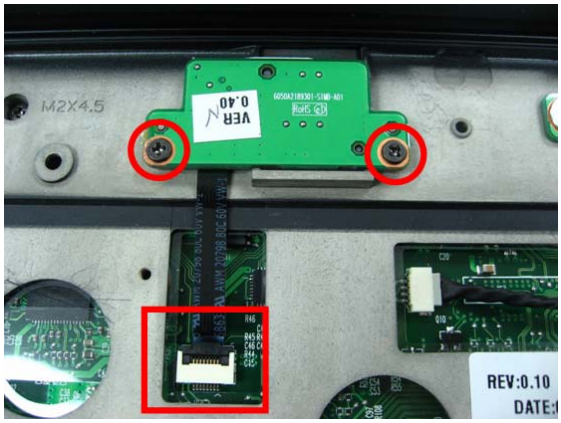


17. Disconnect K/B FFC from the MB.

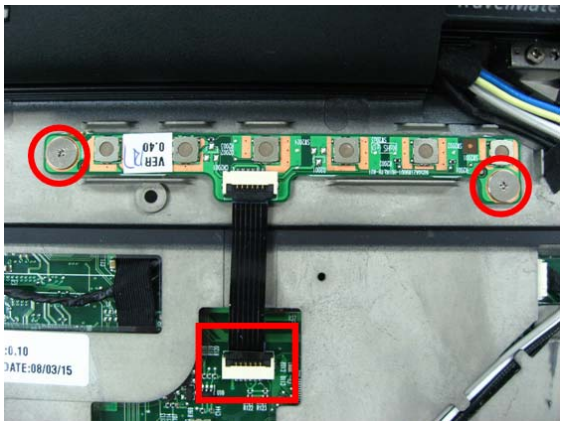


Remove 3G SIM Card/B, Hotkey/B

18. Loose 3G SIM card board screws X 2. Disconnect SIM card boardFFC.

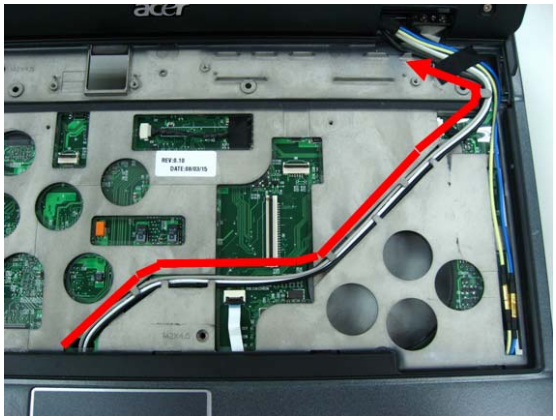


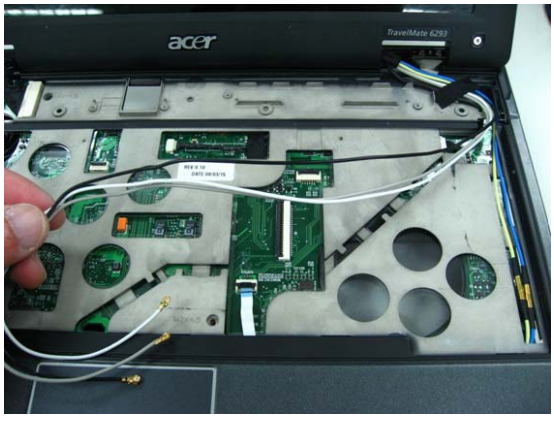
19. Loose Hotkey board screws X 2. Disconnect Hotkey board FFC.



Remove Wireless Antenna from TPCB

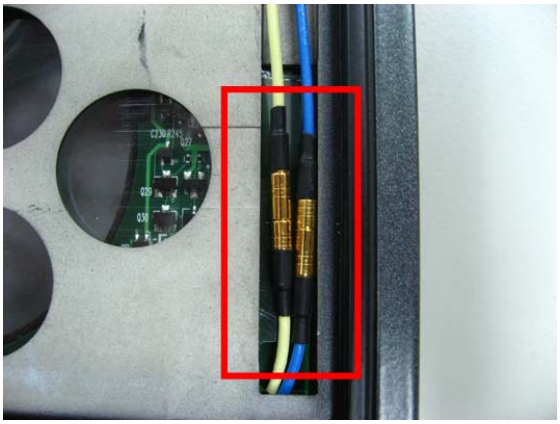
20. Remove Wireless antenna from the TPCB

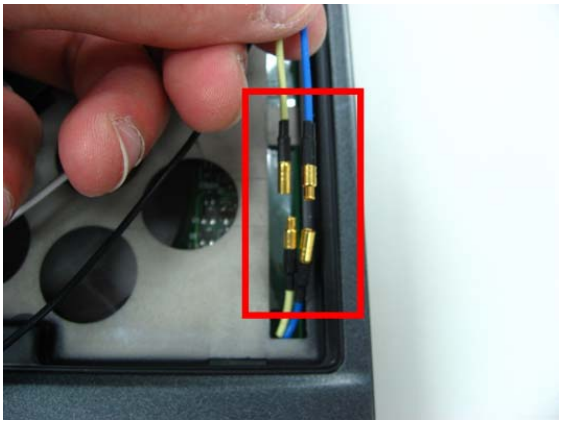




Disconnect 3G wireless antenna cable

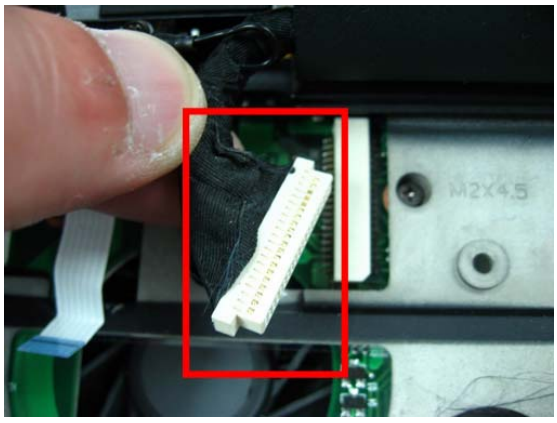
21. Disconnect 3G module antenna.



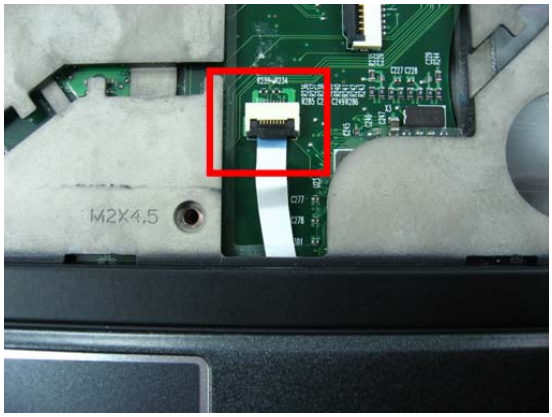


Disconnect LCM cable, Touchpad FFC, BT cable

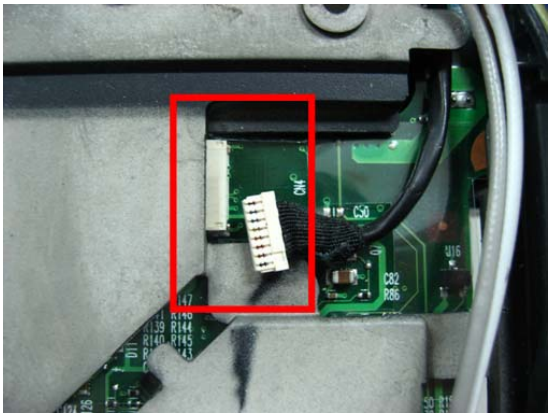
22. Disconnect LCM cable.



23. Disconnect Touchpad FFC.

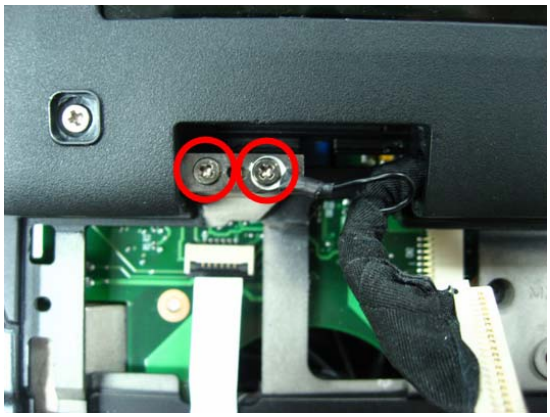


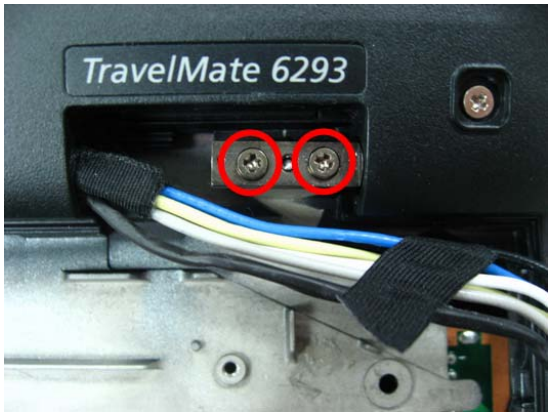
24. Disconnect BT cable.



Disassemble LCM screws

25. Loose LCM screws X 4.

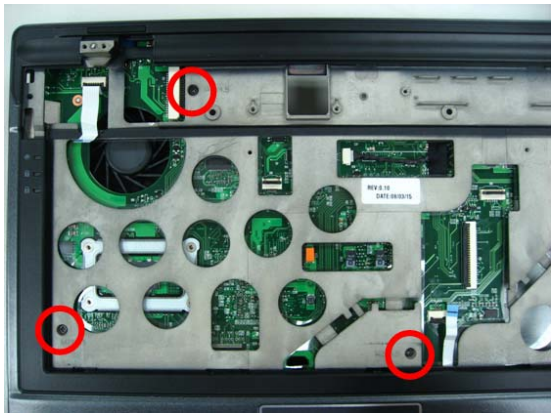




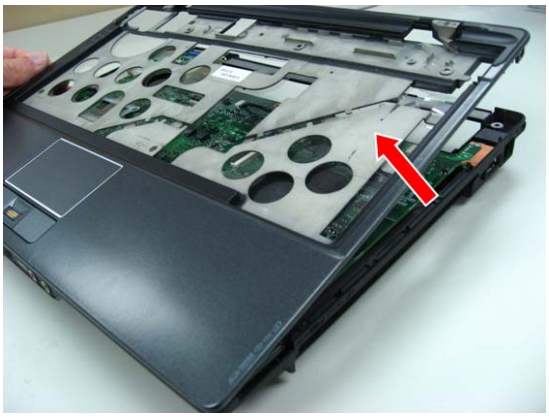
26. Remove LCM module

Disassemble TPCB

27. Loose TPCB screws X 3.



28. Remove TPCB.

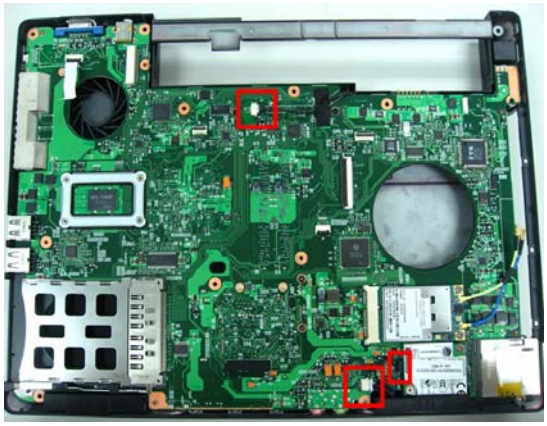


Disconnect Modem cable, Wireless card cable, Speaker cable

29. Disconnect Modem cable.

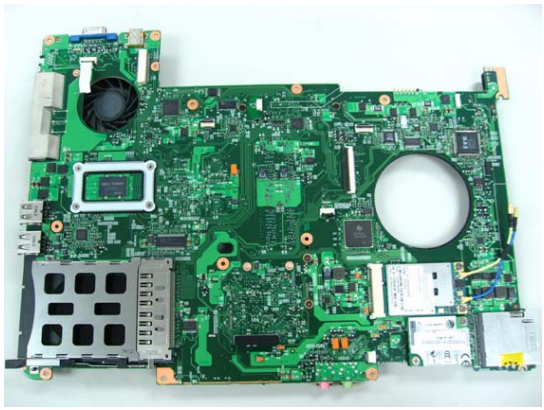
30. Disconnect Wireless cable.

31. Disconnect Speaker cable.



Remove Main board

32. Remove M/B from the BTCB.



Disassembly LCM module

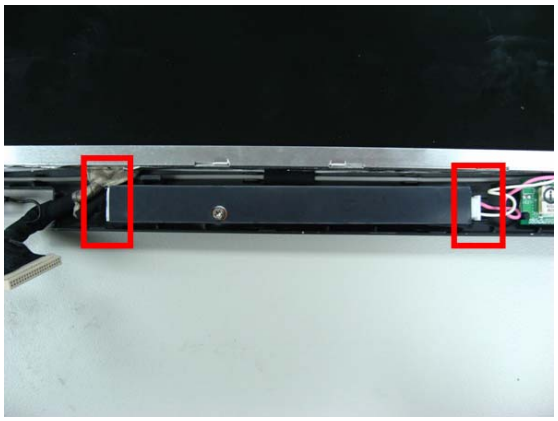
Remove LCM bezel

3. Remove six LCM bezel mylar.

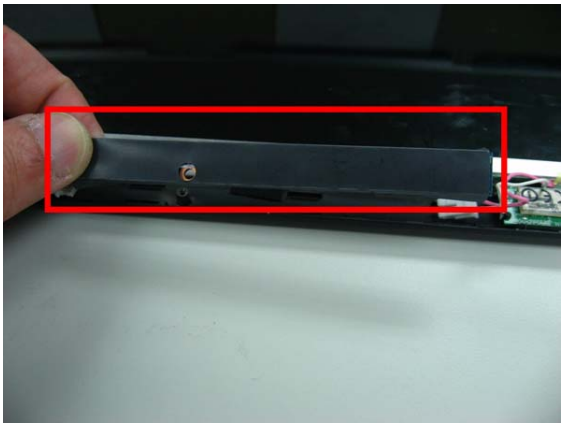
4. Remove LCM bezel.

Remove Inverter board

5. Disconnect Inverter cables.

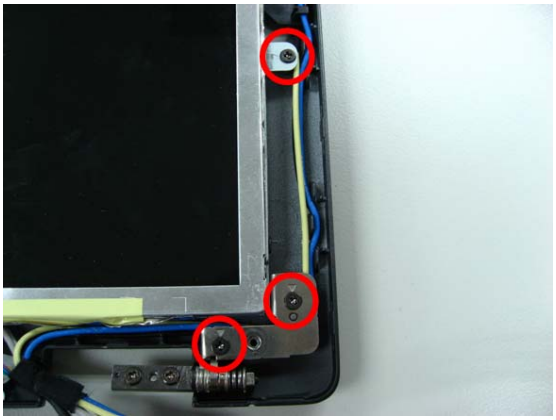


6. Remove Inverter board.



Remove LCM hinge screws

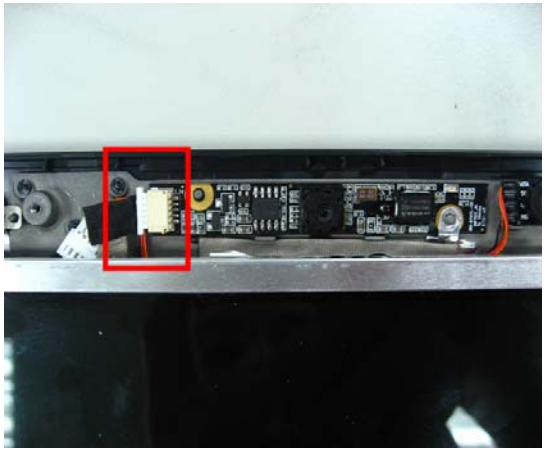
7. Loose LCM hinge screws Left side X 3.



8. Loose LCM hinge screws Right side X 3.

Remove CCD cable

9. Disconnect CCD cable.



Remove LCD panel

10. Remove LCD panel from the TPDL.

Chapter 4

Troubleshooting

Use the following procedure as a guide for computer problems.

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

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

Symptoms (Verified)	Go To
Power failure. (The power indicator does not go on or stay on.)	“Power System Check” on page 69.
POST does not complete. No beep or error codes are indicated.	“Fingerprinter Function Check” on page 70 “Undetermined Problems” on page 83
POST detects an error and displayed messages on screen.	“Error Messages List” on page 72
Other symptoms (i.e. LCD display problems or others).	“Fingerprinter Function Check” on page 70
Symptoms cannot be re-created (intermittent problems).	Use the customer-reported symptoms and go to “Fingerprinter Function Check” on page 70 “Intermittent Problems” on page 83 “Undetermined Problems” on page 83

System Check Procedures

External Diskette Drive Check

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

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

Do the following to select the test device.

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

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

If the error still remains:

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

External CD-ROM Drive Check

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

Do the following to select the test device:

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

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

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

Keyboard or Auxiliary Input Device Check

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

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

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

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

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

The following auxiliary input devices are supported by this computer:

- ❑ Numeric keypad
- ❑ External keyboard

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

Memory check

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

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

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

Power System Check

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

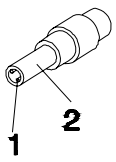
1. Remove the battery pack.
2. Connect the power adapter and check that power is supplied.
3. Disconnect the power adapter and install the charged battery pack; then check that power is supplied by the battery pack.

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

- ❑ “Check the Power Adapter” on page 69
- ❑ “Check the Battery Pack” on page 69

Check the Power Adapter

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



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

1. If the voltage is not correct, replace the power adapter.
2. If the voltage is within the range, do the following:
   - ❑ Replace the System board.
   - ❑ If the problem is not corrected, see “Undetermined Problems” on page 83.
   - ❑ If the voltage is not correct, go to the next step.

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

3. If the power-on indicator does not light up, check the power cord of the power adapter for correct continuity and installation.
4. If the operational charge does not work, see “Check the Battery Pack” on page 69.

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

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

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

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

Touchpad Check

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

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

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

Fingerprinter Function Check

If the fingerprinter doesn't work, do the following to correct the problem.

1. Reboot machine and turn fingerprinter power on again.
2. If the function is not work, check device manager to see if the fingerprinter driver status.
3. If the function still fail, replace the mainboard.

5-in1 Card Reader Check

If the 5-in-1 Card reader malfunction, Please go through following steps:

1. Reinsert your memory card to check is the card reader function normal.
2. If the function is not work, check device manager to see if the card reader driver status.
3. If the function still fail, replace the mainboard.

FIR Function Check

If the FIR function malfunction, do the following to correct the problem.

1. Reboot machine and turn FIR power on again.
2. If the FIR function still fail, check device manager to see if the FIR driver status.
3. If the function still fail, replace the mainboard.

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 83.

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

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

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

Index of Error Messages

Error Code List

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

Error Messages List

Error Messages	FRU/Action in Sequence
Failure Fixed Disk	Reconnect hard disk drive connector. “Load Default Settings” in BIOS Setup Utility. Hard disk drive System board
Stuck Key	see “Keyboard or Auxiliary Input Device Check” on page 68.
Keyboard error	see “Keyboard or Auxiliary Input Device Check” on page 68.
Keyboard Controller Failed	see “Keyboard or Auxiliary Input Device Check” on page 68.
Keyboard locked - Unlock key switch	Unlock external keyboard
Monitor type does not match CMOS - Run Setup	Run “Load Default Settings” in BIOS Setup Utility.
Shadow RAM Failed at offset: nnnn	BIOS ROM System board
System RAM Failed at offset: nnnn	DIMM System board
Extended RAM Failed at offset: nnnn	DIMM System board
System battery is dead - Replace and run Setup	Replace RTC battery and Run BIOS Setup Utility to reconfigure system time, then reboot system.
System CMOS checksum bad - Default configuration used	RTC battery Run BIOS Setup Utility to reconfigure system time, then reboot system.
System timer error	RTC battery Run BIOS Setup Utility to reconfigure system time, then reboot system. System board
Real time clock error	RTC battery Run BIOS Setup Utility to reconfigure system time, then reboot system. System board
Previous boot incomplete - Default configuration used	Run “Load Default Settings” in BIOS Setup Utility. RTC battery System board
Memory size found by POST differed from CMOS	Run “Load Default Settings” in BIOS Setup Utility. DIMM System board
Diskette drive A error	Check the drive is defined with the proper diskette type in BIOS Setup Utility See “External Diskette Drive Check” on page 68.
Incorrect Drive A type - run SETUP	Check the drive is defined with the proper diskette type in BIOS Setup Utility
System cache error - Cache disabled	System board
CPU ID:	System board
DMA Test Failed	DIMM System board
Software NMI Failed	DIMM System board
Fail-Safe Timer NMI Failed	DIMM System board

Error Messages	FRU/Action in Sequence
Device Address Conflict	Run “Load Default Settings” in BIOS Setup Utility. RTC battery System board
Allocation Error for device	Run “Load Default Settings” in BIOS Setup Utility. RTC battery System board
Failing Bits: nnnn	DIMM BIOS ROM System board
Fixed Disk n	None
Invalid System Configuration Data	BIOS ROM System board
I/O device IRQ conflict	Run “Load Default Settings” in BIOS Setup Utility. RTC battery System board
Operating system not found	Enter Setup and see if fixed disk and drive A: are properly identified. Diskette drive Hard disk drive System board

No beep Error Messages List

No beep Error Messages	FRU/Action in Sequence
No beep, power-on indicator turns off and LCD is blank.	Power source (battery pack and power adapter). See “Power System Check” on page 69. Ensure every connector is connected tightly and correctly Reconnect the DIMM LED board System board
No beep, power-on indicator turns on and LCD is blank.	Power source (battery pack and power adapter). See “Power System Check” on page 69. Reconnect the LCD connector Hard disk drive LCD inverter ID LCD cable LCD Inverter LCD System board
No beep, power-on indicator turns on and LCD is blank. But you can see POST on an external CRT.	Reconnect the LCD connectors. LCD inverter ID LCD cable LCD inverter LCD System board
No beep, power-on indicator turns on and a blinking cursor shown on LCD during POST.	Ensure every connector is connected tightly and correctly. System board
No beep during POST but system runs correctly.	Speaker System board

Phoenix BIOS Beep Codes

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

Code	Beeps	POST Routine Description
45h		POST device initialization
46h	2-1-2-3	Check ROM copyright notice
48h		Check video configuration against CMOS
49h		Initialize PCI bus and devices
4Ah		Initialize all video adapters in system
4Bh		QuietBoot start (optional)
4Ch		Shadow video BIOS ROM
4Eh		Display BIOS copyright notice
50h		Display CPU type and speed
51h		Initialize EISA board
52h		Test keyboard
54h		Set key click if enabled
58h	2-2-3-1	Test for unexpected interrupts
59h		Initialize POST display service
5Ah		Display prompt “Press F2 to enter SETUP”
5Bh		Disable CPU cache
5Ch		Test RAM between 512 and 640 KB
60h		Test extended memory
62h		Test extended memory address lines
64h		Jump to User Patch1
66h		Configure advanced cache registers
67h		Initialize Multi Processor APIC
68h		Enable external and CPU caches
69h		Setup System Management Mode (SMM) area
6Ah		Display external L2 cache size
6Bh		Load custom defaults (optional)
6Ch		Display shadow-area message
6Eh		Display possible high address for UMB recovery
70h		Display error messages
72h		Check for configuration errors
76h		Check for keyboard errors
7Ch		Set up hardware interrupt vectors
7Eh		Initialize coprocessor if present
80h		Disable onboard Super I/O ports and IRQs
81h		Late POST device initialization
82h		Detect and install external RS232 ports
83h		Configure non-MCD IDE controllers
84h		Detect and install external parallel ports
85h		Initialize PC-compatible PnP ISA devices
86h		Re-initialize onboard I/O ports
87h		Configure Motherboard Configurable Devices (optional)
88h		Initialize BIOS Area
89h		Enable Non-Maskable Interrupts (NMIs)
8Ah		Initialize Extended BIOS Data Area
8Bh		Test and initialize PS/2 mouse
8Ch		Initialize floppy controller

Code	Beeps	POST Routine Description
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
B2h		POST done- prepare to boot operating system
B4h	1	One short beep before boot
B5h		Terminate QuietBoot (optional)
B6h		Check password (optional)
B9h		Prepare Boot
BAh		Initialize DMI parameters
BBh		Initialize PnP Option ROMs
BCh		Clear parity checkers
BDh		Display MultiBoot menu
BEh		Clear screen (optional)
BFh		Check virus and backup reminders
C0h		Try to boot with INT 19
C1h		Initialize POST Error Manager (PEM)
C2h		Initialize error logging
C3h		Initialize error display function
C4h		Initialize system error handler
C5h		PnPnd dual CMOS (optional)
C6h		Initialize notebook docking (optional)
C7h		Initialize notebook docking late
C8h		Force check (optional)
C9h		Extended checksum (optional)
D2h		Unknown interrupt
E0h		Initialize the chipset

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

Index of Symptom-to-FRU Error Message

LCD-Related Symptoms

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

Indicator-Related Symptoms

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

Power-Related Symptoms

Symptom / Error	Action in Sequence
Power shuts down during operation	Power source (battery pack and power adapter). See “Power System Check” on page 69. Battery pack Power adapter Hard drive & battery connection board System board
The system doesn’t power-on.	Power source (battery pack and power adapter). See “Power System Check” on page 69. Battery pack Power adapter Hard drive & battery connection board System board
The system doesn’t power-off.	Power source (battery pack and power adapter). See “Power System Check” on page 69. Hold and press the power switch for more than 4 seconds. System board
Battery can’t be charged	See “Check the Battery Pack” on page 69. Battery pack System board

PCMCIA-Related Symptoms

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

Memory-Related Symptoms

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

Speaker-Related Symptoms

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

Power Management-Related Symptoms

Symptom / Error	Action in Sequence
The system will not enter hibernation	See “Save to Disk (S4)” on page 22 Keyboard (if control is from the keyboard) Hard disk drive System board
The system doesn't enter hibernation mode and four short beeps every minute.	Press Fn+**0**and see if the computer enters hibernation mode. Touchpad Keyboard Hard disk connection board Hard disk drive System board
The system doesn’t enter standby mode after closing the LCD	See “Save to Disk (S4)” on page 22. LCD cover switch System board
The system doesn't resume from hibernation mode.	See “Save to Disk (S4)” on page 22. Hard disk connection board Hard disk drive System board
The system doesn't resume from standby mode after opening the LCD.	See “Save to Disk (S4)” on page 22. LCD cover switch System board
Battery fuel gauge in Windows doesn’t go higher than 90%.	Remove battery pack and let it cool for 2 hours. Refresh battery (continue use battery until power off, then charge battery). Battery pack System board
System hangs intermittently.	Reconnect hard disk/CD-ROM drives. Hard disk connection board System board

Peripheral-Related Symptoms

Symptom / Error	Action in Sequence
System configuration does not match the installed devices.	Enter BIOS Setup Utility to execute “Load Default Settings”, then reboot system. Reconnect hard disk/CD-ROM/diskette drives.
External display does not work correctly.	Press Fn+F5, LCD/CRT/Both display switching System board
USB does not work correctly	System board

Keyboard/Touchpad-Related Symptoms

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

Modem-Related Symptoms

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

NOTE: If you cannot find a symptom or an error in this list and the problem remains, see “Undetermined Problems” on page 83.

Intermittent Problems

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

When analyzing an intermittent problem, do the following:

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

Undetermined Problems

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

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

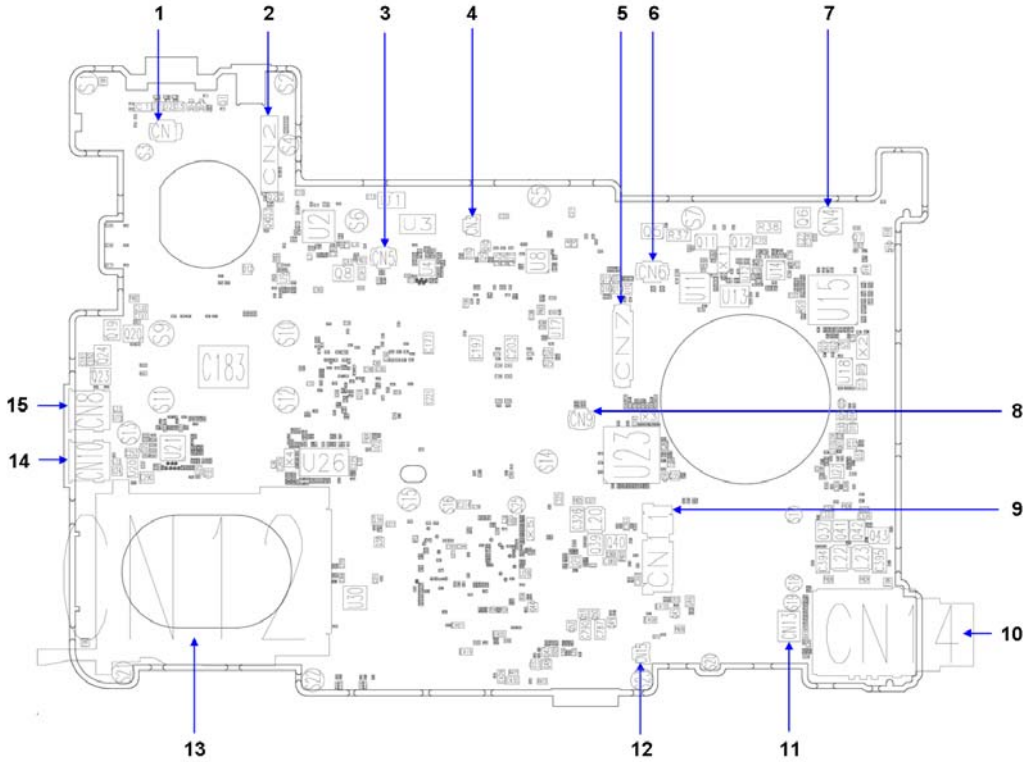
NOTE: Verify that all attached devices are supported by the computer.

NOTE: Verify that the power supply being used at the time of the failure is operating correctly. (See “Power System Check” on page 69):

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

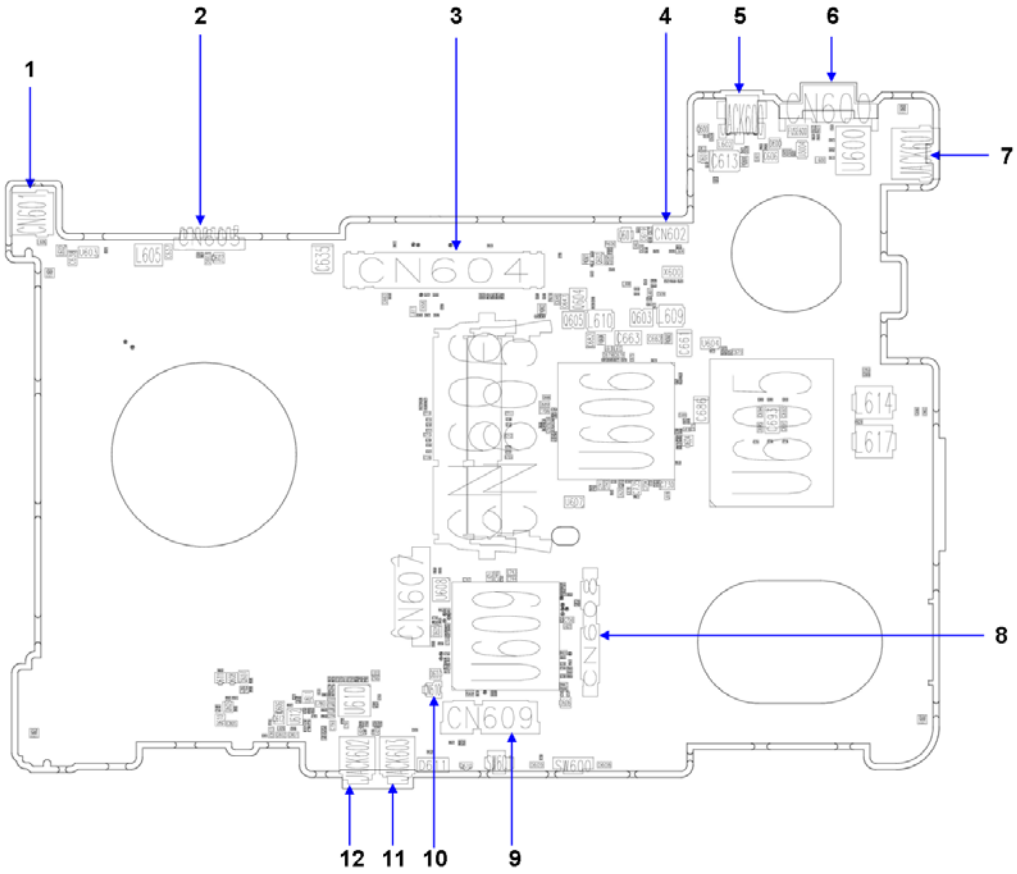
Jumper and Connector Locations

Top View



TM6293 M/B layout and connector location TOP view		
No.	**Name**	**Description**
1	CN1	Power Board FFC CNTR
2	CN2	LCM Cable CNTR
3	CN5	SIM card/Board FFC CNTR (For 3G SKU only)
4	CN3	Modem card FFC CNTR
5	CN7	KeyBoard CNTR
6	CN6	Hot Key Board CNTR
7	CN4	BT cable CNTR
8	CN9	Touch Pad CNTR
9	CN11	PCMCIA CNTR
10	CN14	Card Reader CNTR
11	CN13	Modem card CNTR
12	CN15	Speaker Card CNTR
13	CN12	Express card CNTR
14	CN10	USB Port
15	CN8	USB Port

Bottom view



Bottom view		
No.	**Name**	**Description**
1	CN601	USB Port
2	CN603	Battery CNTR
3	CN604	Docking CNTR
4	CN602	FAN Cable CNTR
5	Jack600	DC In Jack
6	CN600	VGA Port
7	Jack601	RJ45
8	CN608	HDD CNTR
9	CN609	Wirless Card CNTR
10	CN610	RTC Cattery Cable CNTR
11	Jack603	MIC Jack
12	Jack602	Earphone Jack

NOTE: There’s no clear CMOS jumper available on this model.

Chapter 6

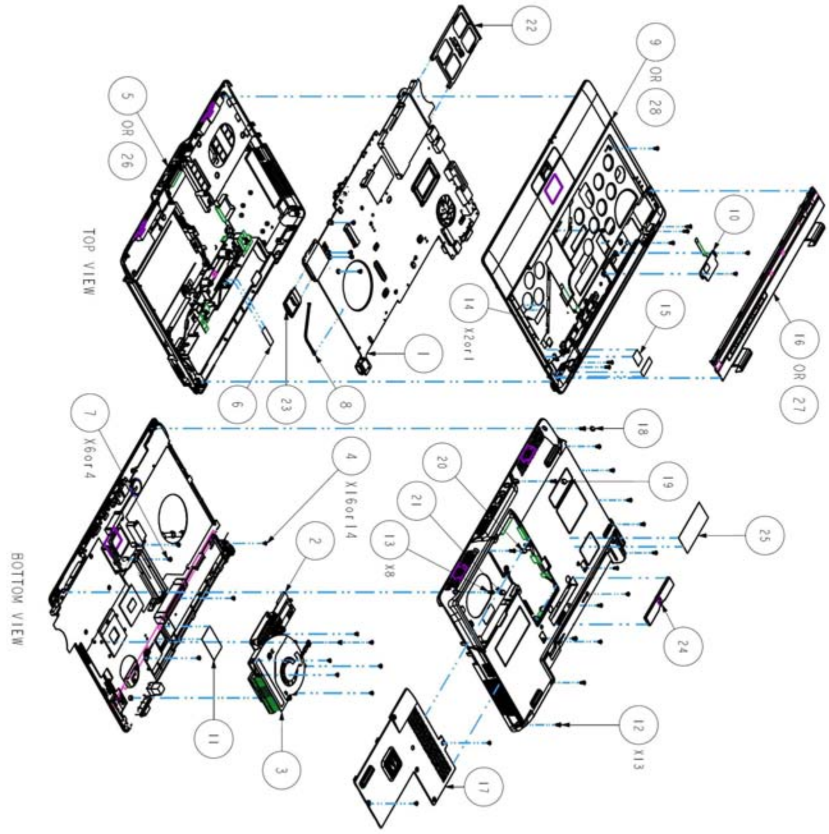
FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of TravelMate 6293. Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

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

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

TravelMate 6293 Exploded Diagram



ITEM	PART NAME	PART NO	DESCRIPTION	01	02	03	04
28		1510B0479702	ASSEMBLY,CASE,TOP			1	1
27		1510B0480702	ASSEMBLY,COVER,SWITCH		1	1	
26		1510B0480202	ASSEMBLY,CASE,BOTTOM		1	1	
25		6060B0221301	LABEL,BLANK,REEL,60mm,26mm	1	1	1	1
24	DOCK RUBBER	6054B0447601	BUMPER,BOTTOM,DOCK,SILICONE	1	1	1	1
23	CARDREADER DUMMY	6051B0291301	DUMMY,CARD READER,PC+ABS	1	1	1	1
22	PCMCIA DUMMY	6051B0278701	DUMMY,PCMCIA,PC+ABS	1	1	1	1
21	BTM FRONT RUBBER	6054B0375801	FOOT,BOTTOM,FRONT L,SILICONE	1	1	1	1
20	BTM FRONT RUBBER	6054B0375701	FOOT,BOTTOM,FRONT ML,SILICONE	1	1	1	1
19	BTM FRONT RUBBER	6054B0375501	FOOT,BOTTOM,FRONT MR,SILICONE	1	1	1	1
18	BTM FRONT RUBBER	6054B0375601	FOOT,BOTTOM,FRONT R,SILICONE	1	1	1	1
17		1510B0481201	ASSEMBLY,COVER,HDD,OFFLINE	1	1	1	1
16		1510B0480701	ASSEMBLY,COVER,SWITCH	1			1
15	TOP_BT_MYLAR	6054B0380801	INSULATOR,TOP,BLUETOOTH,PC	1	1	1	1
14	TOP_GASKET_3G	6054B0381601	GASKET,TOP,3G,NI/CU PNW FR	2	1	1	2
13		6052B0125901	SCREW,I,M2.0,6.0mm,MACH,4.0mm,0.8mm,CROSS,BNI,PATCH	8	8	8	8
12		6052B0118301	SCREW,I,M2.0,4.5mm,MACH,4.0mm,0.8mm,CROSS,BNI,PATCH	13	13	13	13
11	SIMCARD MYLAR	6054B0351001	INSULATOR,SIMCARD,PC		1	1	
10		1397B0034801	ASSEMBLY,MODULE,SIM	1			1
9		1510B0479701	ASSEMBLY,CASE,TOP	1	1		
8		6036B0033401	ANTENNA,WWAN,3G,150MM	1			1
7		6052B0089301	SCREW,I,M2.5,2.5mm,MACH,4.5mm,0.8mm,CROSS,BNI,PATCH	6	4	4	6
6	TAPE 25X8X0.1T	6054A0076201	TAPE-25x8x0.1mm-3M8915	1	1	1	1
5		1510B0480201	ASSEMBLY,CASE,BOTTOM	1			1
4		6052B0120001	SCREW,I,M2.0,2.5mm,MACH,4.0mm,0.5mm,CROSS,BNI,PATCH	16	14	14	16
3	FAN	6033B0015501	FAN.SET,VERTICAL,5V0.24A,4830RPM,82.5X79.6X10.3,55mm,Y	1	1	1	1
2	THERMAL MODULE DIECASTING,CPU	6043B0048601	THERMAL MODULE,CPU	1	1	1	1
1		1310A2174701	ASSEMBLY,BOARD,MAIN	1	1	1	1

TravelMate 6293 FRU List

Accessory

Category	Part Name and Description	Acer Part No.
	3G ANTENNA	25.TQK0N.001

Adapter

Category	Part Name and Description	Acer Part No.
	ADAPTER 65W 3PINS DELTA SADP-65KB DFA YELLOW 1.7X5.5X11 LF LEVEL4	AP.06501.013
	ADAPTER 65W 3PINS LITEON PA-1650-02AC 1.7X5.5X11 LF LEVEL4	AP.06503.016
	ADAPTER 65W 3PINS HIPRO HP-OK065B13 1.7X5.5X11 LF LEVEL4	AP.0650A.010
	ADAPTER 65W 3PIN DELTA SADP-65KB BFJA LF LEVEL-4 FOR OBL ONLY	AP.06501.014

Battery

Category	Part Name and Description	Acer Part No.
	BATTERY LI-ION 6CELL SANYO TM-2007A 3S2P 4400MAH	BT.00603.044
	BATTERY LI-ION 6CELL SONY TM-2007A 3S2P 4400MAH	BT.00604.027
	BATTERY LI-ION 6CELL PANASONIC TM-2007A 3S2P 4400MAH PSS	BT.00605.024
	BATTERY LI-ION 6CELL SIMPLO TM-2007A 3S2P 4400MAH PSS	BT.00607.018
	BATTERY LI-ION 9CELL SONY TM-2007A 3S3P 7200MAH	BT.00904.003
	BATTERY LI-ION 9CELL PANASONIC TM-2007B 3S3P 7200MAH PSS	BT.00907.003

Board

Category	Part Name and Description	Acer Part No.
	Mainboard TM6293 Intel GM45 ICH9 Acer Logo V1.0 LF	MB.TQM0B.001
	POWER BUTTON BOARD	55.TQP0N.001

Category	Part Name and Description	Acer Part No.
	HOTKEY BOARD	55.TQP0N.002
	3G SIMM BOARD	55.TQK0N.001
	TOUCHPAD BUTTON BOARD WITH FINGER PRINT	55.TQP0N.003
	TOUCHPAD BUTTON BOARD W/O FINGER PRINT	55.TQK0N.002
	TOUCHPAD SYNAPTICS TM-00450-001	56.TQP0N.001
	MODEM BOARD LITE-ON CONEXANT-UNIZION 1.5_3,3V AUS B85247600G	FX.22500.021
	BLUETOOTH BOARD FOXCONN BCM2045 V2 T60H928.11	BT.21100.005
	WIRELESS LAN BOARD 512AN_MMWG SHIRLEY PEAK 5100 MM#895361	KI.SPM01.003
	WIRELESS LAN BOARD 533AN_MMWG SHIRLEY PEAK MM#895362	KI.SPM01.001
	WIRELESS LAN BOARD 512AN_HMWG SHIRLEY PEAK 5100 MM#895373 (HALF MINI-CARD)	KI.SPH01.003
	WIRELESS LAN BOARD 533AN_HMWG SHIRLEY PEAK MM#895401 (HALF MINI-CARD)	KI.SPH01.001
	WWAN 3G MODULE MINI-PCI GTM378 M00201	LC.21300.004

Cable

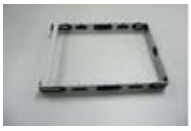
Category	Part Name and Description	Acer Part No.
	LED LCD/CAMERA CABLE	50.TQP0N.006
	LCD/CAMERA CABLE	50.TQP0N.008
	BLUETOOTH BOARD CABLE	50.TQP0N.007
	POWER BUTTON BOARD CABLE	50.TQP0N.001
	HOTKEY BOARD CABLE	50.TQP0N.002
	TOUCHPAD CABLE	50.TQP0N.004
	TOUCAPAD BUTTON BOARD CABLE	50.TQP0N.003
	3G SIMM BOARD CABLE	50.TQK0N.001
	MODEM CABLE WITH RJ11 CONNECTOR	50.TQP0N.005
	CORD-ROUND-3POS-1828mm-E-POWER-USA	27.AAMVN.001
	CORD-ROUND-3POS-1850mm-E-POWER-EUR	27.AAMVN.002
	POWER CORD 3PIN SOUTH AFRICA	27.AAMVN.008
	POWER CORD 3PIN DENMARK	27.AAMVN.010
	POWER CORD ISRAEL	27.AAMVN.011
	POWER CORD 3PIN ITALIAN	27.AAMVN.009
	POWER CORD 3PIN UK	27.AAMVN.004
	POWER CORD 3PIN SWISS	27.AAMVN.006
	POWER CORD AUSTRALIA W/LABEL	27.AAMVN.003
	POWER CORD 3PIN CHINA	27.AAMVN.005
	POWER CORD SOUTH AFRICA (AIL)	27.AAMVN.007

Camra

Category	Part Name and Description	Acer Part No.
	CAMERA 0.3M SUYIN	57.APQ0N.001
	CAMERA 0.3M CHICONY	57.APQ0N.002

CASE COVER BRACKET ASSEMBLY

Category	Part Name and Description	Acer Part No.
	LCD COVER 12.1" W/ANTENNA (3G)	60.TQK0N.003
	LCD COVER 12.1" W/ANTENNA	60.TQP0N.005
	UPPER CASE WITH FINGER PRINT HOLE	60.TQP0N.002
	UPPER CASE W/O FINGER PRINT HOLE	60.TQK0N.002
	LOWER CASE (3G)	60.TQK0N.001
	LOWER CASE	60.TQP0N.001
	LCD BEZEL 12.1"	60.TQP0N.004
	LCD BRACKET LEFT	33.TQP0N.004
	LCD BRACKET RIGHT	33.TQP0N.003

Category	Part Name and Description	Acer Part No.
	SUPER-MULTI BEZEL	42.TQP0N.006
	COMBO BEZEL	42.TQP0N.005
	BD COMBO BEZEL	42.TQP0N.007
	OPTICAL BRACKET	33.TQP0N.001
	HDD HOLDER	42.TLK0N.006
	UNITLOAD COVER	42.TQP0N.002
	MIDDLE COVER (3G)	42.TQK0N.001
	MIDDLE COVER	42.TQP0N.001
	HDD CONNECTOR	20.TLK0N.001
	HALF MINI-CARD BRACKET	33.TQP0N.002

CPU/PROCESSOR

Category	Part Name and Description	Acer Part No.
	CPU INTEL CORE2DUAL T9600 PGA 2.8G 6M 1066 35W	KC.96001.DTP
	CPU INTEL CORE2DUAL T9400 PGA 2.53G 6M 1066 35W	KC.94001.DTP
	CPU INTEL CORE2DUAL P9500 PGA 2.53G 6M 1066 25W	KC.95001.DPP
	CPU INTEL CORE2DUAL P8600 PGA 2.4G 1066 25W 3M	KC.86001.DPP
	CPU INTEL CORE2DUAL P8400 PGA 2.26G 3M 1066 25W	KC.84001.DPP

ODD

Category	Part Name and Description	Acer Part No.
	ODD SONY COMBO 12.7MM TRAY DL 24X CRX-890S LF W/O BEZEL SATA	KO.0240E.009
	ODD PANASONIC SUPER-MULTI DRIVE 12.7MM TRAY DL 8X UJ-870A LF W/O BEZEL SATA	KU.00807.059
	ODD HLDS SUPER-MULTI DRIVE 12.7MM TRAY DL 8X GSA-T50N LF W/O BEZEL SATA	KU.0080D.029
	ODD HLDS SUPER-MULTI DRIVE 12.7MM TRAY DL 8X GSA-T50N LF W/O BEZEL SATA MALAYSIA MADE	KU.0080D.034
	ODD SONY BD COMBO 12.7MM TRAY DL 2X BC-5500S LF W/O BEZEL SATA	KO.0020E.002

FAN

Category	Part Name and Description	Acer Part No.
	FAN	23.TQP0N.002

HDD/HARD DISK DRIVER

Category	Part Name and Description	Acer Part No.
	HDD 120GB SATA 5400RPM SEAGATE ST9120817AS CORSAIR LF F/W:3.AAA	KH.12001.032
	HDD 120GB 5400RPM SATA TOSHIBA MK1246GSX LEO BS I LF F/W:LB213J	KH.12004.007
	HDD 120GB 5400RPM SATA II HGST HTS542512K9SA00 BRONCO-B LF F/ W:C31P	KH.12007.014
	HDD 120GB 5400RPM SATA WD WD1200BEVS-22UST0 ML125 LF F/ W:01.01A01	KH.12008.019
	HDD 160GB 5400RPM SATA SEAGATE ST9160827AS CORSAIR LF F/W:3.AAA	KH.16001.029
	HDD 160GB 5400RPM SATA TOSHIBA MK1646GSX LEO BS LF F/W:LB113J	KH.16004.002
	HDD 160GB 5400RPM SATA II HGST HTS542516K9SA00 BRONCO-B LF F/ W:C31P	KH.16007.016
	HDD 160GB 5400RPM SATA WD WD1600BEVT-22ZCTO ML160 LF F/ W:11.01A11	KH.16008.022
	HDD 250GB 5400RPM SATA SEAGATE ST9250827AS CORSAIR LF F/W:3.AAA	KH.25001.011
	HDD 250GB 5400RPM SATA TOSHIBA MK2546GSX LEO BS LF F/W:LB013J	KH.25004.001
	HDD 250GB 5400RPM SATA II HGST HTS542525K9SA00 LF F/W:C31P	KH.25007.011
	HDD 250GB 5400RPM SATA WD WD2500BEVS-22UST0 ML125 LFF/ W:01.01A01	KH.25008.018
	HDD 320GB 5400RPM SATA WD WD3200BEVT-22ZCT0 ML160 LF F/ W:11.01A11	KH.32008.013

HEATSINK

Category	Part Name and Description	Acer Part No.
	FAN	23.TQP0N.002

INVERTER

Category	Part Name and Description	Acer Part No.
	INVETRTER BOARD TDK TBD488NR	19.TQP0N.001

KEYBOARD

Category	Part Name and Description	Acer Part No.
	KEYBOARD 12_13KB-FV3 88KS BLACK US INTERNATIONAL	KB.INT00.333
	KEYBOARD 12_13KB-FV3 88KS BLACK US INTERNATIONAL HEBREW	KB.INT00.334
	KEYBOARD 12_13KB-FV3 89KS BLACK UK	KB.INT00.335
	KEYBOARD 12_13KB-FV3 89KS BLACK TURKISH	KB.INT00.336
	KEYBOARD 12_13KB-FV3 88KS BLACK THAILAND	KB.INT00.337
	KEYBOARD 12_13KB-FV3 89KS BLACK SWISS/G	KB.INT00.338
	KEYBOARD 12_13KB-FV3 89KS BLACK SWEDISH	KB.INT00.339
	KEYBOARD 12_13KB-FV3 89KS BLACK SPANISH	KB.INT00.340
	KEYBOARD 12_13KB-FV3 89KS BLACK SLOVAK	KB.INT00.341
	KEYBOARD 12_13KB-FV3 89KS BLACK SLO/CRO	KB.INT00.342
	KEYBOARD 12_13KB-FV3 88KS BLACK RUSSIAN	KB.INT00.343
	KEYBOARD 12_13KB-FV3 89KS BLACK PORTUGUESE	KB.INT00.344
	KEYBOARD 12_13KB-FV3 89KS BLACK POLISH	KB.INT00.345
	KEYBOARD 12_13KB-FV3 89KS BLACK NORWEGIAN	KB.INT00.346
	KEYBOARD 12_13KB-FV3 89KS BLACK LUXEMBOURGISH	KB.INT00.347
	KEYBOARD 12_13KB-FV3 88KS BLACK KOREAN	KB.INT00.348
	KEYBOARD 12_13KB-FV3 92KS BLACK JAPANESE	KB.INT00.349
	KEYBOARD 12_13KB-FV3 89KS BLACK ITALIAN	KB.INT00.350
	KEYBOARD 12_13KB-FV3 88KS BLACK ISRAEL	KB.INT00.351
	KEYBOARD 12_13KB-FV3 89KS BLACK IRISH	KB.INT00.352
	KEYBOARD 12_13KB-FV3 89KS BLACK HUNGARIAN	KB.INT00.353
	KEYBOARD 12_13KB-FV3 88KS BLACK GREEK	KB.INT00.354
	KEYBOARD 12_13KB-FV3 89KS BLACK GERMAN	KB.INT00.355
	KEYBOARD 12_13KB-FV3 89KS BLACK FRENCH	KB.INT00.356
	KEYBOARD 12_13KB-FV3 89KS BLACK FINNISH	KB.INT00.357
	KEYBOARD 12_13KB-FV3 89KS BLACK DUTCH	KB.INT00.358

Category	Part Name and Description	Acer Part No.
	KEYBOARD 12_13KB-FV3 89KS BLACK DANISH	KB.INT00.359
	KEYBOARD 12_13KB-FV3 89KS BLACK CZECH	KB.INT00.360
	KEYBOARD 12_13KB-FV3 88KS BLACK TRADITIONAL CHINESE	KB.INT00.361
	KEYBOARD 12_13KB-FV3 89KS BLACK CANADIAN FRENCH	KB.INT00.362
	KEYBOARD 12_13KB-FV3 89KS BLACK BRAZILIAN PORTUGUESE	KB.INT00.363
	KEYBOARD 12_13KB-FV3 89KS BLACK BELGIUM	KB.INT00.364
	KEYBOARD 12_13KB-FV3 88KS BLACK ARABIC/ENGLISH	KB.INT00.365
	KEYBOARD 12_13KB-FV3 89KS BLACK ARABIC/FRENCH	KB.INT00.366
	KEYBOARD 12_13KB-FV3 89KS BLACK NORDIC	KB.INT00.367
	KEYBOARD 12_13KB-FV3 89KS BLACK ENGLISH/CANADIAN FRENCH	KB.INT00.368

LCM

Category	Part Name and Description	Acer Part No.
	LCD 12.1" WXGA NONE GLARE AU B121EW03 V6 LF 220NIT 16MS	LK.12105.013
	LCD 12.1" WXGA NONE GLARE TOSHIBA TD121EXEV LF 200NIT 25MS	LK.1210F.017
	LCD 12.1" WXGA GLARE AU B121EW03 V7 LF 220NIT 16MS	LK.12105.012
	LED LCD 12.1" WXGA GLARE AU B121EW09 V0 LF 220NIT 16MS	LK.12105.014
	LED LCD 12.1" WXGA NONE GLARE AU B121EW09 V1 LF 220NIT 16MS	LK.12105.015
	LCD 12.1" WXGA GLARE TOSHIBA LTD121EXVV-V01 LF 200NIT 30MS	LK.1210F.016
	LCD 12.1" WXGA NONE GLARE TOSHIBA TD121EXEV NEW GLASS LF 200NIT 25MS	LK.1210F.018
	LCD 12.1" WXGA GLARE TOSHIBA LTD121EXVV-V01 NEW GLASS LF 200NIT 30MS	LK.1210F.019

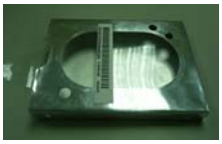
MEMORY

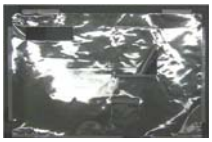
Category	Part Name and Description	Acer Part No.
	SO-DIMM 1GB DDRIII1066 MICRON MT8JSF12864HY-1G1D1 LF	KN.1GB04.003
	SO-DIMM 1GB DDRIII1066 ELPIDA EBJ11UE6BAU0-AE-E LF	KN.1GB09.009
	SO-DIMM 1GB DDRIII1066 SAMSUNG M471B2874DZ1-CF8 LF	KN.1GB0B.019
	SO-DIMM 2GB DDRIII1066 MICRON MT16JSF25664HY-1G1D1 LF	KN.2GB04.004
	SO-DIMM 2GB DDRIII1066 ELPIDA EBJ21UE8BAU0-AE-E LF 128*8 0.07um	KN.2GB09.002
	SO-DIMM 2GB DDRIII1066 SAMSUNG M471B5673DZ1-CF8 LF\	KN.2GB0B.005

MICPHONE

Category	Part Name and Description	Acer Part No.
	MICROPHONE	23.TQP0N.003

MISCELLANEOUS

Category	Part Name and Description	Acer Part No.
	LCD CUSHION UP	47.TQP0N.002
	LCD CUSHION DOWN	47.TQP0N.001
	HDD INSULATOR	47.TLK0N.005
	RUBBER FOOT LEFT	47.TQP0N.003
	RUBBER FOOT MIDDLE-LEFT	47.TQP0N.004
	RUBBER FOOT MIDDLE-RIGHT	47.TQP0N.005
	RUBBER FOOT RIGHT	47.TQP0N.006
	BUMPER DOCK	47.TLT0N.004
	SD DUMMY CARD	42.TQP0N.003

Category	Part Name and Description	Acer Part No.
	PCMCIA DUMMY CARD	42.TQP0N.004
	LCD SHIELD (3G)	47.TQK0N.001
	INVETRTER INSULATOR	47.TQP0N.007

SCREW

Category	Part Name and Description	Acer Part No.
	SCREW M2.0 2.0MM CROSS NI	86.TQP0N.001
	SCREW M2.5 2.5MM CROSS BNI PATCH	86.TQP0N.002
	SCREW M2.0 4.5MM CROSS BNI PATCH	86.TQP0N.003
	SCREW M2.0 2.5MM CROSS BNI PATCH	86.TQP0N.004
	SCREW M2.0 6.0MM CROSS BNI PATCH	86.TQP0N.005
	SCREW M2.0 4.0MM CROSS NI PATCH	86.TQP0N.006

SPEAKER

Category	Part Name and Description	Acer Part No.
	SPEAKER SET	23.TQP0N.001