

---

# Dossier D100

# User's Guide

**Model: W651UI**

**First Edition: December 2007**



## **NOTICE**

Specifications and information found in this guide are subject to change **without** notice. Any changes therefore will be incorporated in future editions. The manufacturer assumes **no** responsibility for errors or omissions in this document.

## **TRADEMARKS**

**Windows™** is the trademark of *Microsoft Corporation*.

**Intel®** is the trademark of *Intel Corporation*.

**Bluetooth®** is the trademark owned by its proprietor.

Other trademarks are properties of their respective owners.

---

## **Standards**

---

The following standards are adopted throughout this guide:

- Notebook in **boldface** (with or without capitalization) refers to the notebook computer that you have purchased.
  
- **Boldface** type is also used to highlight **important information** in this document.
  
- Whenever extra caution is called for, the information will be boxed in a dark frame preceded by "**Note:**" or "**Warning:**".

**This page is left blank intentionally.**

---

# CONTENTS

---

<b>CHAPTER 1 BEFORE YOU BEGIN</b> .....	<b>1</b>
1.1 CHECKING WHAT YOU RECEIVED.....	1
1.2 EXAMINING YOUR COMPUTER .....	2
1.3 THE TWO POWER LEDS .....	7
1.4 THE FIVE STATUS LEDS .....	8
1.5 THE POWER BUTTON .....	9
1.6 THE NINE SYSTEM BUTTONS.....	10
1.7 ATTENTION ON PCI EXPRESS AND MEDIA CARD SOCKETS .....	12
1.8 OPERATING TEMPERATURE .....	14
1.9 THE <FN> KEY .....	15
1.10 THE SCROLL AREA ON TOUCH PAD .....	18
<b>CHAPTER 2 BATTERY</b> .....	<b>19</b>
2.1 BATTERY PACK.....	19
2.2 RECHARGING THE BATTERY PACK .....	19
2.3 QUESTIONS AND ANSWERS .....	20
2.4 BATTERY MAINTENANCE.....	21
2.5 POWER CONSUMPTION.....	21
2.6 REDUCING POWER CONSUMPTION .....	22
2.7 REMOVING THE BATTERY PACK .....	22
<b>CHAPTER 3 MEMORY</b> .....	<b>23</b>
3.1 REMOVING MEMORY MODULE .....	24
<b>CHAPTER 4 MINI-PCI EXPRESS MODULE</b> .....	<b>26</b>
4.1 REMOVING MINI-PCI EXPRESS MODULE.....	26
<b>CHAPTER 5 THE HARD DISK DRIVE</b> .....	<b>28</b>
5.1 REMOVING THE HARD DISK DRIVE.....	28
<b>CHAPTER 6 SYSTEM OVERVIEW</b> .....	<b>30</b>

6.1 SYSTEM SPECIFICATION ..... 30

**CHAPTER 7 BIOS SETUP ..... 31**

7.1 CONFIGURATION SOFTWARE ..... 31

7.2 RUNNING THE SETUP UTILITY ..... 32

7.3 MAIN SETUP ..... 33

7.4 ADVANCED SETUP ..... 35

7.5 SECURITY SETUP ..... 37

7.6 BOOT SETUP ..... 39

7.7 EXIT SETUP ..... 40

**APPENDIX A - AGENCY REGULATORY NOTICES ..... 41**

## Chapter 1 Before You Begin

Please read this section before you start using your computer.

### 1.1 Checking What You Received

---

Your **notebook** package should contain the following items:

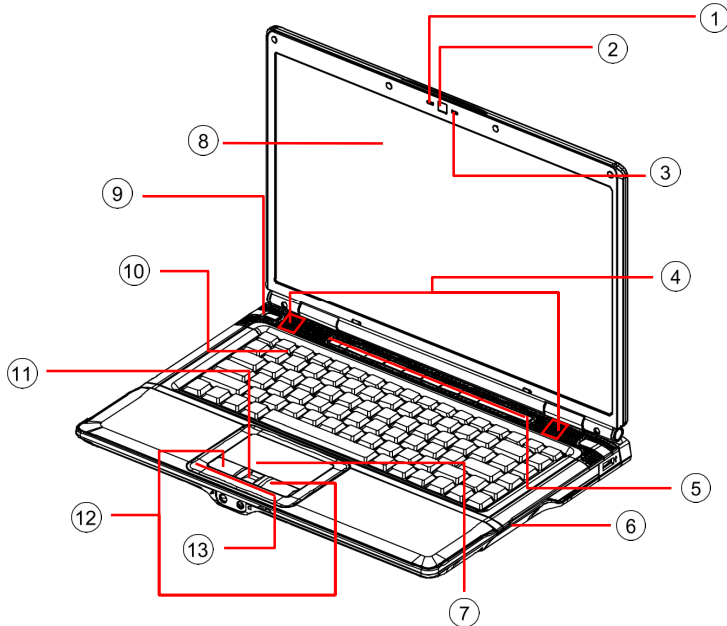


- **The Notebook.**
- AC Adapter.
- AC Power Cord.
- Driver CD Disc (Optional).
- Battery Pack.

**Note:** You should keep the original factory carton and packing materials in case you need to ship the unit back for servicing.

## 1.2 Examining Your Computer

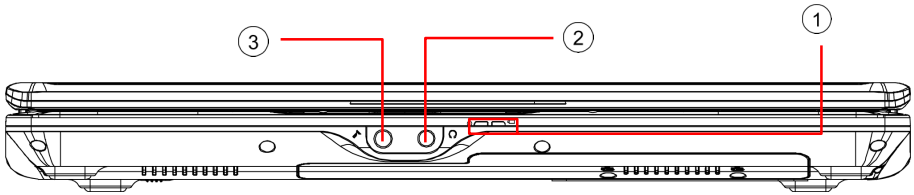
Before you start using your computer, you need to get acquainted with your **notebook's** main features and interfaces:



### *Panoramic View*

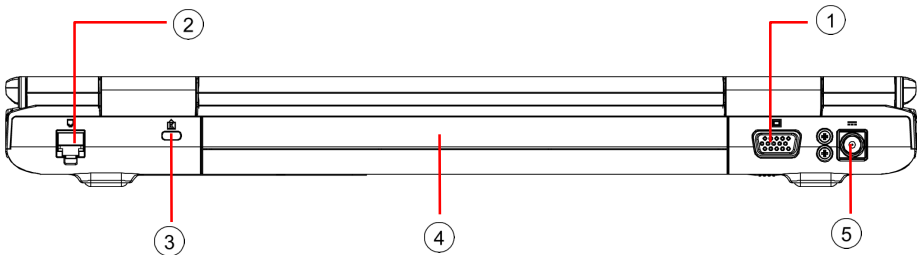
① Internal Microphone (Optional)	⑧ LCD Screen
② Web Cam Lens (Optional)	⑨ Power Button
③ Web Cam LED (Optional)	⑩ Keyboard
④ Two Speakers	⑪ Fingerprint Reader (Optional)
⑤ Nine System Buttons	⑫ Two Click Buttons
⑥ ODD Drive	⑬ Five Status LEDs
⑦ Touch Pad	





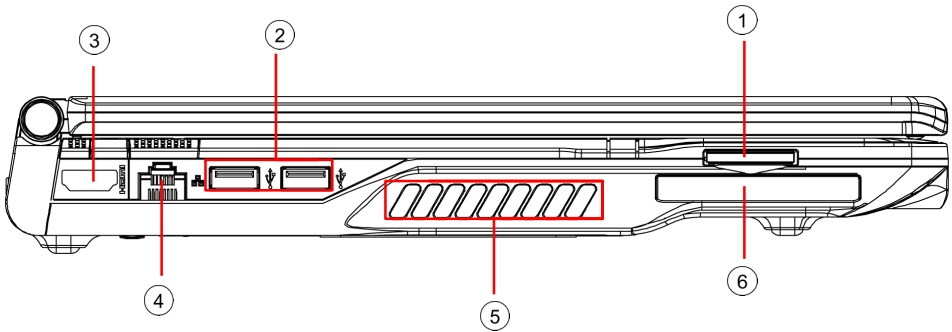
**Front View**

① Two Power LEDs	③ Microphone Jack
② Headphone Jack (SPDIF)	



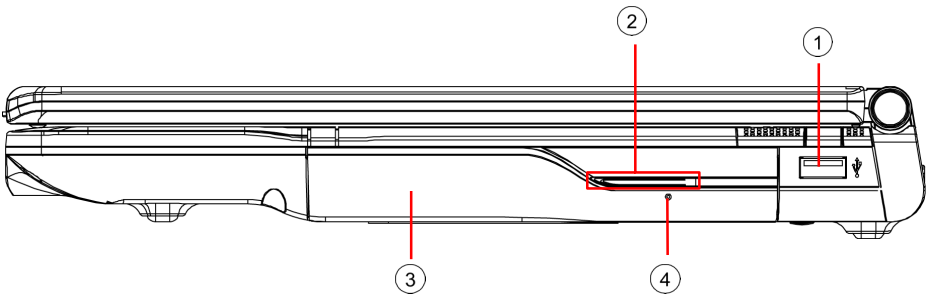
**Rear View**

① VGA Connector	④ Battery Pack
② RJ11 Fax/Modem Connector	⑤ DC-In Jack
③ Kensington Lock	



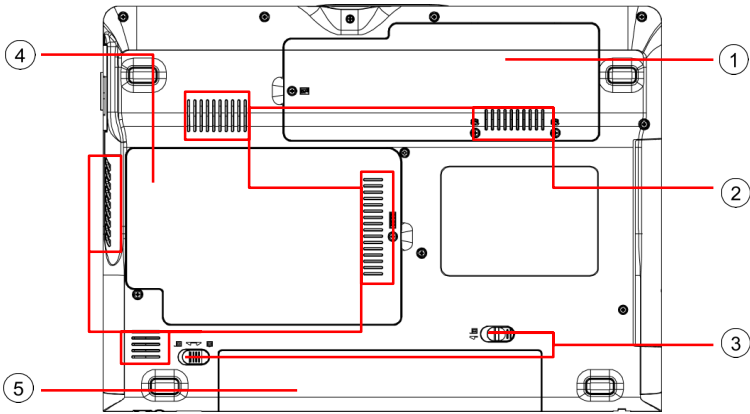
**Left View**

① Media Card Slot (for MMC/ SD/ MS/ MS-Pro Cards)	④ RJ45 LAN Connector
② Two USB Connectors	⑤ Ventilation Holes
③ HDMI Connector (Optional)	⑥ PCI Express Card Slot



**Right View**

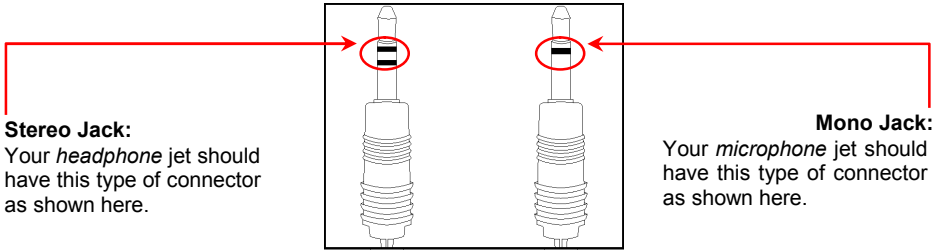
① USB Connector	③ ODD Drive
② Eject Button	④ Emergency Hole



**Bottom View**

① Compartment Door (for Mini-PCI Express and HDD Modules)	④ Compartment Door (for Memory Modules, Heatsink, and CPU)
② Ventilation Holes	⑤ Battery Pack
③ Two Battery Latches	

**Note:** Some external USB devices consume more power than this system unit can provide. In this case, these USB devices have their own power cords. To make sure this kind of USB devices can function properly, please connect these devices to the AC source first before connecting to the system unit.



**Stereo Jack:**  
Your *headphone* jet should have this type of connector as shown here.

**Mono Jack:**  
Your *microphone* jet should have this type of connector as shown here.

***Two Types of Audio Jack***

## 1.3 The Two Power LEDs



### The Power LED

Below is how the LED would behave in different situations:

<b>Off</b>	System is powered off, or in <b>Hibernate</b> mode.
<b>On</b>	System is in full operation.
<b>Blinking</b>	System is in <b>Standby</b> mode.



### The Battery LED

Below is how the LED would behave in different situations:

<b>Purple</b>	Battery pack is being recharged: fast-charge or pre-charge.
<b>Blue</b>	Battery pack is in full power capacity.
<b>Off</b>	Battery pack is not under recharge.
<b>Red Blinking</b>	<ul style="list-style-type: none"> <li>• Battery pack is consuming down to 10% level.</li> <li>• Battery pack error.</li> </ul>

**Note:** The **Two Power LEDs** are located near the front side of system unit. For exact location, please refer to the **Front View** diagram in *Chapter 1.2*.

For more details on **Standby** and **Hibernate**, please refer to **Power Options** (of Windows System) in the **Control Panel** of your Microsoft Windows operating system.

## 1.4 The Five Status LEDs



### The Wireless LAN LED

This LED would be lit when the **Wireless LAN** is powered on. For details on how to power on and power off the **Wireless LAN**, please refer to *Chapter 1.9*



### The Caps Lock LED

The LED would be lit when the keyboard is in **Caps Lock** mode. In this mode, all characters you type are in uppercase.



### The Num Lock LED

This LED would be lit when the keyboard is in **Num Lock** mode. In this mode, the embedded numeric keypads can be used.



### The ODD Access LED

This LED would be lit when system is accessing the ODD drive.



### The HDD Access LED

This LED would be lit when system is accessing the HDD drive.

**Note:** The **Five Status LEDs** are located near the two click buttons. For exact location, please refer to the **Panoramic View** diagram in *Chapter 1.2*.

## 1.5 *The Power Button*

---



### **The Power Button**

This **Power Button** is programmable by user. For detail on how to program this button, please refer to the **Power Options** of **Control Panel** in **Windows System**.

**Note:** The **Power Button** is located near the top left of keyboard. For exact location, please refer to the **Panoramic View** diagram in *Chapter 1.2*.

---

## 1.6 The Nine System Buttons

---

**Email Button**

Press this button to activate the email function. If you press this button while system is powered off or in hibernation, system would power on or resume from hibernation first before launching into the “Windows Mail” application program.

**Internet Button**

Press this button to activate the internet function.

**Media Player Button**

Press this button to activate the media player function.

**Play/Pause Button**

Press this button to play or pause media playback.

**Stop Button**

Press this button to stop media playback.

**Previous Track Button**

Press this button to skip to the previous track/chapter of media playback.

**Next Track Button**

Press this button to skip to the next track/chapter of media playback.

**Mute/Un-mute Button**


Press this button to mute and un-mute audio volume.

**Volume Button**


Press this button to increase (+) and decrease (-) audio volume.



**Note:** The **Nine System Buttons** are located near the top of keyboard. For exact location, please refer to the **Panoramic View** diagram in *Chapter 1.2*.

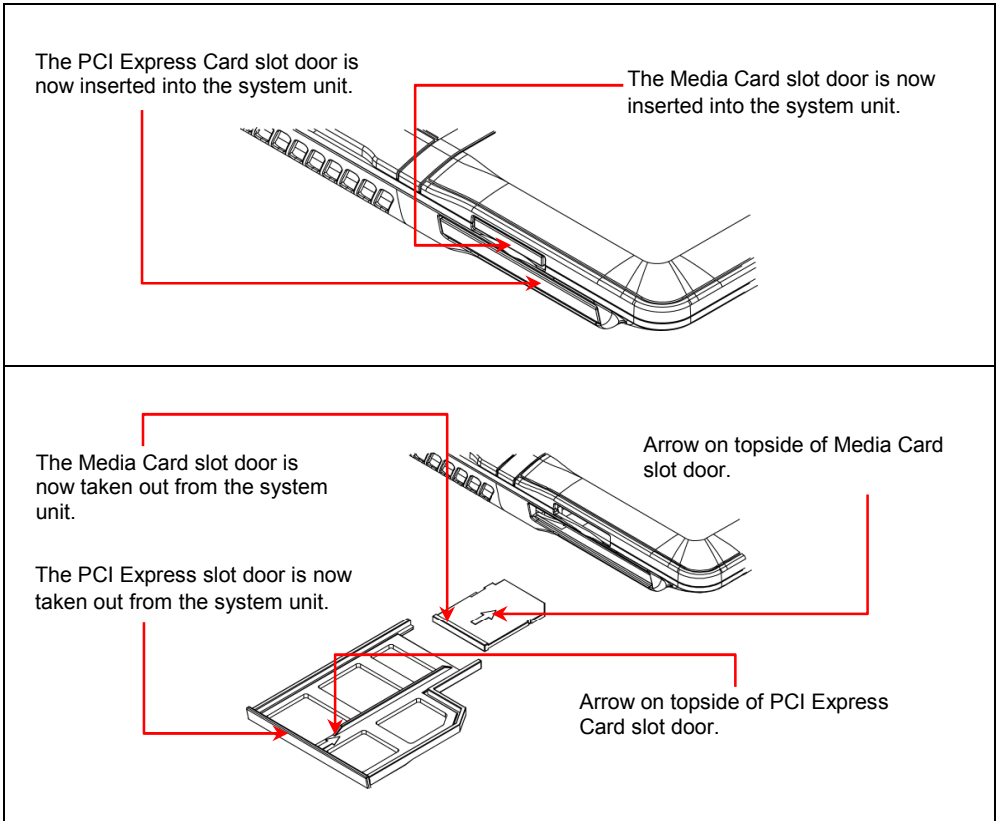
In order for the **Email Button** () to function properly in Windows™ Vista operating system, first you need to perform the below one-time registration procedure:

- In the driver CD disc, there is an execution program, “**mail.reg**”.
- Start the registration process by double clicking on the “**mail.reg**” execution program. Then follow the instructions to complete the process.
- Reboot the system to activate the email function.

In order for the **Media Player Button** () to function properly in Windows™ Vista operating system, first you need to perform the below one-time registration procedure:

- In the driver CD disc, there is an execution program, “**WMPlayer.reg**”.
- Start the registration process by double clicking on the “**WMPlayer.reg**” execution program. Then follow instructions to complete the process.
- Reboot the system to activate “**Windows Media Player**” application program.

## 1.7 Attention On PCI Express And Media Card Sockets



Please observe below safety measures:

- When PCI Express Card is not inserted into the PCI Express Card slot, make sure this slot is covered by the “PCI Express Card slot door” as supplied together with this **notebook**. The purpose of this “PCI Express Card slot door” is to prevent foreign matters from entering into the system unit through this slot, when PCI Express Card is not inserted. When inserting this “PCI Express Card slot door”, please make sure the arrow is on the topside as shown above. Inserting this door upside down may cause damage to your **notebook**.

- When no card (MMC/ SD/ MS/ MS-Pro Cards) is inserted into the media card slot, make sure this card slot is covered by the “media card slot door” as supplied together with this **notebook**. The purpose of this “media card slot door” is to prevent foreign matters from entering into the system unit through this card slot, when no card is inserted. When inserting this “media card slot door”, please make sure the arrow is on the topside as shown above. Inserting this door upside down may cause damage to your **notebook**.

## *1.8 Operating Temperature*

---

Operating Temperature : 10°C to 35°C.

## 1.9 The <Fn> Key

The <Fn> Function Key is located near the bottom-left corner of the keyboard. This key is used together with other keys to activate certain pre-defined functions. To activate these functions, press and hold down <Fn> together with the keys described below:



### Wireless LAN Switch

Press this key combination ( $F_n+F2$ ) to power on and power off the **Wireless LAN** module. Powering on the **Wireless LAN** by pressing this key combination ( $F_n+F2$ ) does not automatically activate the **Wireless LAN** function. After powering on, you need to activate the **Wireless LAN** function through Windows™. The main purpose of this key combination ( $F_n+F2$ ) is to provide you a quick way to turn off the power of **Wireless LAN** when entering venues like airplanes, airports, and hospitals where the usage of **Wireless LAN** is prohibited or not advisable.



### Sleep Switch

Press this key combination ( $F_n+F3$ ) to enter sleep mode. In sleep mode, the LCD display and selected devices would be switched off for less energy consumption.



### LCD/CRT Switch

Press this key function combination ( $F_n+F4$ ) to switch between LCD only, CRT only, and LCD/CRT simultaneously.



### Bluetooth Switch

Press this key combination ( $F_n+F6$ ) to power on and power off the **Bluetooth®** module. Powering on the **Bluetooth®** by pressing this key combination ( $F_n+F6$ ) does not automatically activate the **Bluetooth®** function. After powering on, you need to activate the **Bluetooth®** function through Windows™. The main purpose of this key combination ( $F_n+F6$ ) is to provide you a quick way to turn off the power of **Bluetooth®** when entering venues like airplanes, airports, and hospitals where the usage of **Bluetooth®** is prohibited or not advisable.

**Brightness Increasing**

Press this key combination ( $F_n+F7$ ) to increase brightness of LCD display.

**Brightness Decreasing**

Press this key combination ( $F_n+F8$ ) to decrease the brightness of LCD display.

**Touch Pad Switch**

Press this key combination ( $F_n+F9$ ) to switch off and to switch on the touch pad function. When the touch pad function is switched off, the touch pad device still can work temporarily for three to five seconds during system reboots into Windows™ operating system, or resumes from standby or hibernation.

**NumLock Switch**

Press this key combination ( $F_n+NumLk$ ) to activate or deactivate the embedded numeric keypads.

**Break Switch**

Press this key combination ( $F_n+Break$ ) to break the MS-DOS application program you are running. Its function is the same as the industry standard “break” key.

**Print Screen Switch**

Press this key combination ( $F_n+PrtSc$ ) to capture the screen image. Its function is the same as the industry standard “Prt SC” key.

**System Request Switch**

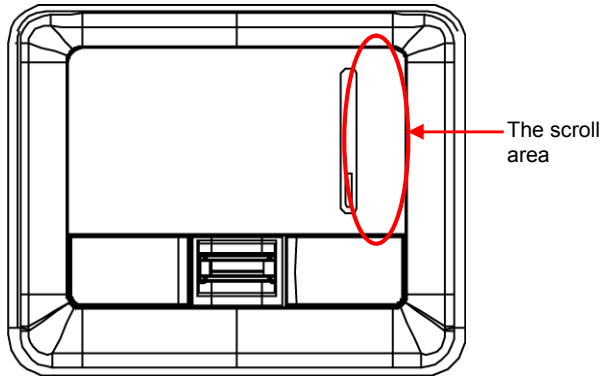
Press this key combination ( $F_n+SysRq$ ) to execute system request. Its function is the same as the industry standard “Sys Rq” key.

- Note:** The proper way to activate **Wireless LAN**, and **Bluetooth®** is as below:
- 1) Press this key combination ( $F_n+F_2$ ) to power on **Wireless LAN**.
  - 2) Press this key combination ( $F_n+F_6$ ) to power on **Bluetooth®**.
  - 3) Activate the application programs in Windows™.

The effective range of the system **Bluetooth®** is 10 meters.

## 1.10 The Scroll Area On Touch Pad

---



The system touch pad has a scroll area immediately to the right of the vertical bar. Design of traditional touch pads requires end-users to push their fingertips upward or downward on the scroll area to respectively scroll up and scroll down. Your system touch pad offers a unique feature different from other more traditional design; whereby you can rest your fingertips on the upper portion or lower portion of the scroll area to scroll up and scroll down respectively.



## *Chapter 2 Battery*

### *2.1 Battery Pack*

---

Your **notebook** is equipped with a high-energy rechargeable **Lithium Ion (Li-Ion)** battery pack. Battery life will vary depending on the product configuration, product model, applications loaded on the product, power management settings of the product, and the product features used by the customer. As with all batteries, the maximum capacity of this battery will decrease with time and usage.

### *2.2 Recharging The Battery Pack*

---

Your **notebook** supports both on-line and off-line recharge. Follow the procedure below to recharge battery:

- Make sure the battery pack is installed in the **notebook**.
- Connect the AC adapter to the **notebook** and to an electrical outlet.

When a battery pack is being recharged, the battery LED (located near the front side of the system unit) would be lit. For details on the LED, please refer to *Chapter 1.3*. When the notebook is OFF, a depleted Li-Ion battery will take three hours to recharge.

## 2.3 Questions And Answers

---

**Q:** I can feel a mild heat next to the **battery pack** during recharge. Is it normal?

**A:** The battery will generate heat during recharging and discharging. There is a protection circuit inside the **notebook** to prevent overheating. User needs not to worry.

**Q:** My battery operation time is not as long as it should be. Why?

**A:** The battery is heat sensitive and can only be charged to its maximum if the battery and its environmental temperature remain within 15-25°C (59-77°F). The more the temperature deviates from this range during recharging, the less chance there is for the battery to be fully charged. In order to recharge the pack to its full capacity, users are requested to cool down the unit by unplugging the AC Adapter. Wait until it is cooled down. Then plug in the AC Adapter to start recharging again.

**Q:** I did not use my spare battery for a few days. Even though it was fully recharged, there wasn't as much power left as a newly charged one. Why?

**A:** The batteries will self-discharge (1% per day for Li-Ion) when they are not being recharged. To make sure a battery pack is fully charged, recharge before use. Always keep the battery inside the **notebook** and have the AC adapter connected whenever possible.

**Q:** I did not use my spare battery for months. I have problem in recharging it.

**A:** If you happen to leave your battery pack to go through an extended period of self-discharge, say more than three months, the battery voltage level will become too low and needs to be **Pre-Charged** (to bring the battery voltage level high enough) before it automatically (for Li-Ion only) resumes its normal **Fast Charge**. **Pre-Charge** may take 30 minutes. **Fast Charge** usually takes 2~3 hours.

## 2.4 *Battery Maintenance*

---

To maintain the battery pack's maximum capacity, you should occasionally let the **notebook** deplete its battery power completely before recharging.

To carry out a complete depletion of the battery, disconnect the AC adapter and let your **notebook** consume the remaining battery power. To speed up the depletion, use the HDD as much as possible, and the LCD should be set as bright as possible. When the battery is empty, wait for the **notebook** to cool down (especially the battery). The temperature should be within 15-25°C (59-77°F). Then insert the AC adapter to recharge the battery.

## 2.5 *Power Consumption*

---

The **Windows™** operating system has incorporated the latest state-of-the-art **ACPI** (**A**dvanced** **C**onfiguration** **P**ower** **I**nterface****) power management methodology. In order to fully utilize the power of your battery packs, it would be a good idea for you to spend sometime to acquire a basic understanding of the power management concept from your operating system.******

In **Windows™ Operating Systems**, you can go through **Power Options** of the **Control Panel** according to the version of **Windows™ Operating System** the **notebook** applies. We shall not describe them in details.

## 2.6 Reducing Power Consumption

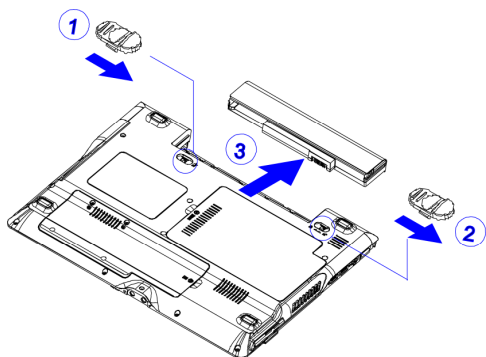
Although your **notebook** (together with the operating system) is capable of power conservation, there are measures you can take to reduce the power consumption:

- Use the AC power whenever possible.
- Lower the intensity of the LCD backlight. A very bright screen translates to higher power usage.
- Try to use the HDD to read and write files, instead of using the external USB FDD.

**Note:** Whenever system is powered on or powered off, make sure the battery pack is installed in the battery pack compartment.

## 2.7 Removing The Battery Pack

This battery pack can easily be removed and replaced. Make sure that the computer is properly shutdown before changing the battery pack. If you would like to change the battery pack while power is on, make sure this battery pack is not the only electrical source to the system unit. Follow the steps below to remove the battery pack.



- Make sure the system is properly shutdown.
- Flip the system upside down as shown.
- Push the battery latch to unlock position as shown by #1.
- Push the battery latch to unlock position as shown by #2.
- Maintain the battery latches in unlock positions.
- Remove the battery pack as shown by #3.

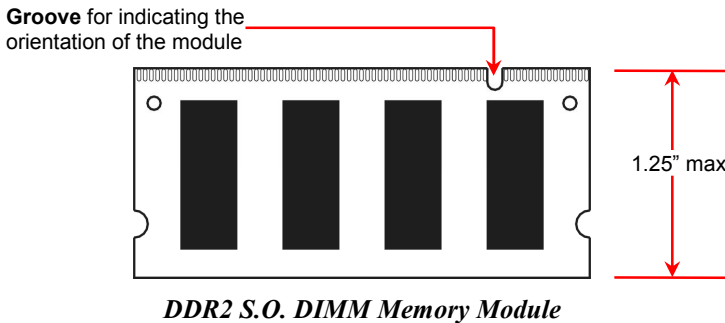
To insert the battery pack, reverse the steps above.

# Chapter 3 Memory

Your **notebook** is equipped with a configurable memory unit. The industry standard **JEDEC DDR2 S.O.DIMM** memory module sockets are available for memory upgrade to 4096MB. The table below illustrates all the possible ways system memory can be configured.

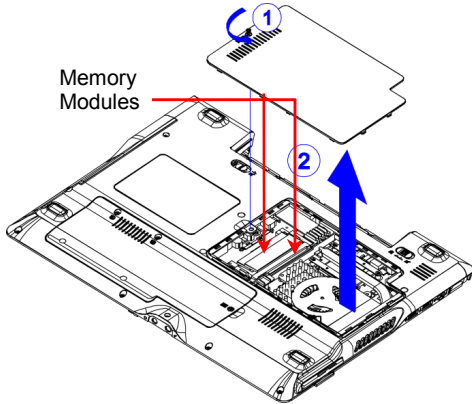
Your **notebook** supports the below industry standard memory modules: PC4300 (DDR2-533), and PC5300 (DDR2-667). If it occurs that different standards of memory module are installed into the system (with one module in socket#1 and another in socket#2), the overall speed would be downgraded to the lower standard of the two standards.

Total Memory	Socket#1	Socket#2
256MB	0MB	256MB
256MB	256MB	0MB
512MB	0MB	512MB
512MB	256MB	256MB
512MB	512MB	0MB
768MB	256MB	512MB
768MB	512MB	256MB
1024MB	0MB	1024MB
1024MB	512MB	512MB
1024MB	1024MB	0MB
1280MB	256MB	1024MB
1280MB	1024MB	256MB
1536MB	512MB	1024MB
1536MB	1024MB	512MB
2048MB	1024MB	1024MB
4096MB	2048MB	2048MB

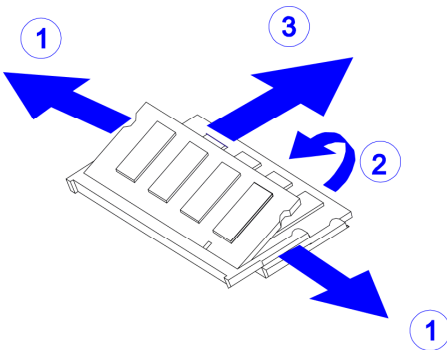


### 3.1 Removing Memory Module

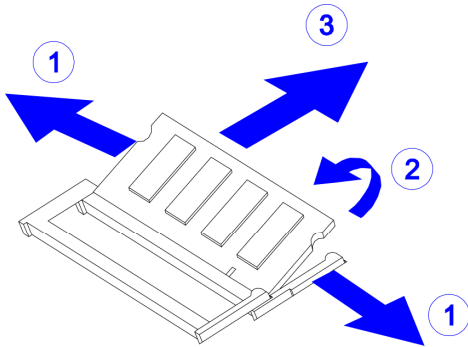
Below is the procedure on how to remove the memory module.



- Make sure the system is properly shutdown.
- Flip the system upside down as shown.
- Remove the battery pack as shown in **Chapter 2**.
- Remove the screw as shown by **#1**.
- Remove the compartment door as shown by **#2**.
- You can see two memory sockets with one socket overlapping the other socket.



- Press the spring-locks sideways as shown by **#1**.
- The first memory module would pop up as shown by **#2**.
- Remove the first memory module as shown by **#3**.



- Press the spring-locks sideways as shown by #1.
- The second memory module would pop up as shown by #2.
- Remove the second memory module as shown by #3.

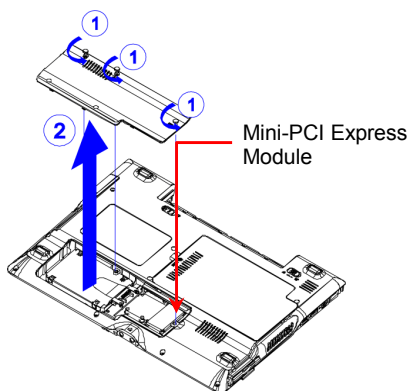
To insert the memory modules, reverse the steps above.

## Chapter 4 Mini-PCI Express Module

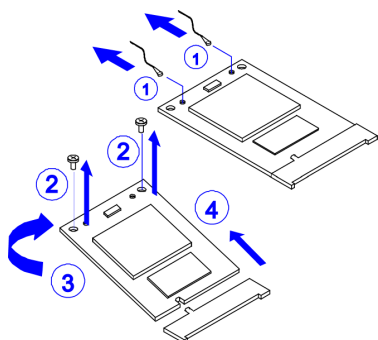
Depending on model, your **notebook** may be equipped with an optional **Mini-PCI Express** module. The **Mini-PCI Express** module supports wireless LAN function.

### 4.1 Removing Mini-PCI Express Module

Below is the procedure on how to remove the **Mini-PCI Express** module.



- Make sure the system is properly shutdown.
- Flip the system upside down as shown.
- Remove the battery pack as shown in **Chapter 2**.
- Remove the three screws as shown by **#1**.
- Remove the compartment door as shown by **#2**.



- Disconnect the two cables as shown by **#1**.
- Remove the two screws as shown by **#2**.
- The Mini-PCI Express module would pop up as shown by **#3**.
- Remove the Mini-PCI Express module as shown by **#4**.
- Note, there are different types of mini-PCI Express module. Externally, they look slightly different; especially on the locations of the cable connections.

To insert the Mini-PCI Express module, reverse the steps above.



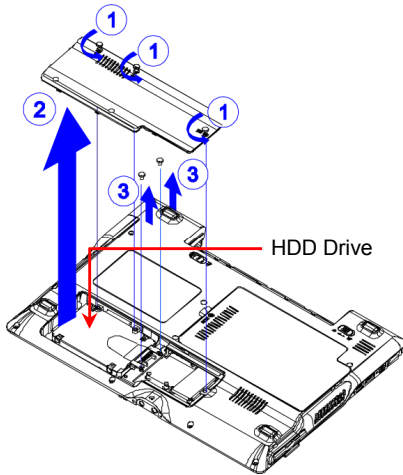
**Note:** Depend on the different types of mini-PCI Express module, some modules are with two cables, while some modules are with three cables.

## Chapter 5 The Hard Disk Drive

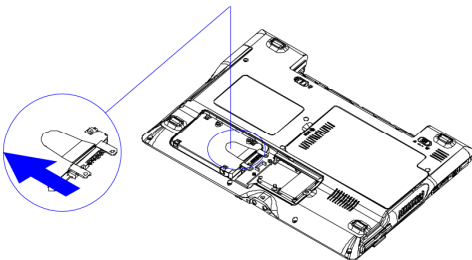
Your **notebook** is equipped with an industry standard 2.5"/9.5mm hard disk drive.

### 5.1 Removing The Hard Disk Drive

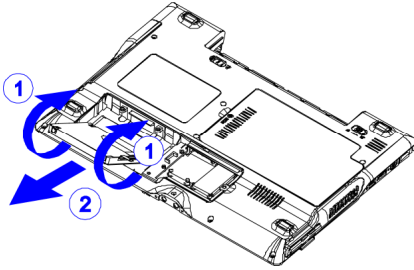
Below is the procedure on how to remove the hard disk drive.



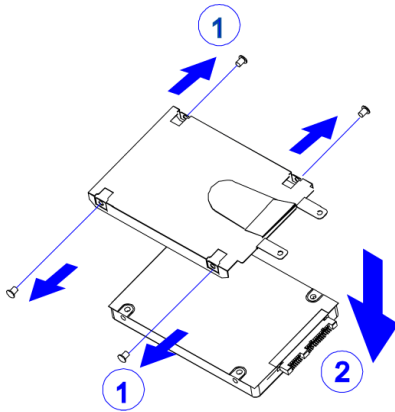
- Make sure the system is properly shutdown.
- Flip the system upside down as shown.
- Remove the battery pack as shown in **Chapter 2**.
- Remove the three screws as shown by **#1**.
- Remove the compartment door as shown by **#2**.
- Remove the two screws as shown by **#3**.



- Pull the belt in a lateral direction to unlock the HDD module as shown.



- Tilt up the HDD module as shown by #1.
- Remove the HDD module as shown by #2.



- Remove the four screws as shown by #1.
- Remove the HDD drive as shown by #2.

To insert the HDD drive, reverse the steps above.

## Chapter 6 System overview

### 6.1 System Specification

<b>CPU</b>	Intel® Merom Processor Core™2 Duo (Santa Rosa Platform) Intel® Celeron® Processor (Santa Rosa Platform)
<b>TDP</b>	35 watts
<b>FSB</b>	800/533MHz
<b>North Bridge</b>	Intel® GM965
<b>VGA</b>	Intel® GM965 Integration Shared system memory (default), supports up to 256 MB
<b>Memory</b>	Dual DDR2-SODIM, 667 MHz, Max: 4GB (Dual Channel)
<b>USB2.0</b>	Integrated in ICH-8M
<b>Media Card Reader</b>	Realtek RTS5158, USB 2.0, 4-in-1 (RS-MMC, MMC, miniSD, SD, MS, MS Pro)
<b>LAN</b>	Realtek PCI_Express 10/100 Network
<b>KBC/EC</b>	Winbond 83L951AGD or compatible
<b>Audio Codec</b>	High Definition integrated stereo sound Speakers: Stereo, 1.5 watts
<b>Audio Amplifier</b>	Maxim MAX9789A
<b>Modem</b>	Agere 56k bps, V.92
<b>ODD</b>	12.7mm, PATA, CD-ROM RW/DVD-ROM combo
<b>LCD Display</b>	15.4" WXGA (1280x800)
<b>HDD</b>	9.5mm, 2.5", SATA, Capacity 80-200G, 5400/7200rpm
<b>Bluetooth</b>	USI BCM92045NMD (Factory Fit only)
<b>WLAN Support</b>	Intel Mini Express Card Wireless LAN 802.11N (4965AGN) Intel Mini Express Card Wireless LAN 802.11a/b/g (4965AG) Intel Mini Express Card Wireless LAN 802.11a/b/g (3945ABG)
<b>Pointing Device</b>	Touch-pad (with 2 buttons & scrolling )
<b>Security</b>	Kensington lock
<b>I/O Port</b>	VGA x 1,RJ11 x 1,RJ45 x 1,Headphone out x 1 (with S/PDIF) USB(2.0) x3, DC-in x 1, Mic-In x1
<b>Battery Pack</b>	6 cells/48 WH(2.2AH), 57WH(2.6AH)
<b>Adaptor</b>	65/90 watts, DC19V output, AC100~220V input
<b>Dimension</b>	355.4mmx257.7mmx 30.32-37.66 mm
<b>Weight</b>	2.6Kg without battery

## Chapter 7 BIOS Setup

### 7.1 Configuration Software

The **notebook** can easily be configured to suit your personal needs. The built-in SETUP program allows you to setup various system parameters. The information is stored in a battery-backed CMOS memory; so when the power is turned off, your setup is retained. This Configuration Software is sometimes referred to as CMOS Setup, BIOS Setup, or simply the SETUP.

**Note:** The SETUP can be activated by pressing <F2> during system boot-up.

You are requested to perform the following one-time procedure immediately after you have upgraded/reprogrammed your BIOS:

- \* Press <F2> during system boot-up to get into the SETUP.
  - \* Go to the **EXIT** sub-menu and choose **Load Setup Defaults**. Press **Enter**.
  - \* Now, you can customize the BIOS for your personal needs.

For detail on the BIOS SETUP, read on.

**Note:** For information on the BIOS upgrade, contact your local **notebook** dealer.

## 7.2 Running the Setup Utility

---

There are five major sub-menus in the SETUP program: **Main Setup**, **Advanced Setup**, **Security Setup**, **Boot Setup**, and **Exit Setup**. Details on the five major sub-menus are described on the following pages.

### Movement within the SETUP Utility

To move between the different item fields, use the cursor keys ↑ and ↓. To move between the five SETUP sub-menus, use the cursor keys ← and →. To change the value of a field, press the <+> and <-> keys. When you select one item, this item will be highlighted and a brief explanation would be displayed in the **Item Specific Help** box located on the right side of the screen. The followings are some of the most commonly used keys:

- Press <F1> to enter the menu of **Help**.
- Press <F9> to enter the menu of **Setup Defaults**, then press **Enter** to continue or press **Esc** to abort.
- Press <F10> to enter the menu of **Save And Exit**. This would save modifications you have made. Then exit.
- Press **Enter** to execute command.
- Press **Esc** to get to the **EXIT** Setup sub-menu, or to the next higher-level sub-menu.

**Note:** The settings shown on the following sub-menu displays are factory default settings.

The content of these sub-menu displays, described in the rest of this chapter, is subject to change in the future.

## 7.3 Main Setup

You will be greeted by this screen when you enter the **Main** Setup menu:

Phoenix TrustedCore (TM) Setup Utility		Item Specific Help
<b>Main</b> Advanced    Security    Boot    Exit		
System Time:	[10:47:25]	<Tab>, <Shift-Tab>, or <Enter> selects field.
System Date:	[10/09/2007]	
BIOS Version:	92.xx	
KBC Version:	780C	
CPU Type:	Intel(R) Core(TM) 2 Duo CPU	
CPU Speed:	1800 MHz	
Cache Ram:	2048 KB	
Total Memory:	1024 MB(Dual Channel Mode)	
Slot 1 Memory:	512 MB	
Slot 2 Memory:	512 MB	
▶ IDE Primary/Master:	[HL-DT-ST DVDROM GSA-T20N-(P#)]	
▶ SATA Port:	[Hitachi HTS541680J9SA00-(S1)]	
F1 Help	↔ Select Item	-/+ Change Values
Esc Exit	↔ Select Menu	Enter Select ▶ Sub-Menu
		F9 Setup Defaults
		F10 Save And Exit

### System Time:

Current time. Use <Tab>, <Shift-Tab>, or <Enter> keys to move around these fields. To change the value, press <+> or <-> key.

### System Date:

Today date. Use <Tab>, <Shift-Tab>, or <Enter> keys to move around these fields. To change the value, press <+> or <-> key. Set any date from year 1981 to 2099. It will automatically keep track of leap years. The system date can also be set from the operating system.

### BIOS Version:

This is for display only. This shows the version of the BIOS.

### KBC Version:

This is for display only. This shows the version of the KBC (Keyboard Controller).

### CPU Type:

This is for display only. This shows the type of CPU you have in the system.

**CPU Speed:**

This is for display only. This shows the speed of CPU you have in the system.

**Cache Ram:**

This is for display only. This shows the memory of cache Ram you have in the system.

**Total Memory:**

This is for display only. This shows the total memory in the system.

**Slot 1 Memory:**

This is for display only. This shows the slot 1 memory in the system.

**Slot 2 Memory:**

This is for display only. This shows the slot 2 memory in the system.

**IDE Primary/Master:**

Enter its submenu by pressing <Enter>. In this submenu, there are seven options: **Auto**, **User**, **Other ATAPI**, **IDE Removable**, **CD-ROM**, **ATAPI Removable**, and **None**. In general, you should choose the default value **Auto** to let the system to automatically detect the type of optical drive you have in the system. If **Auto** fails to recognize your optical drive, you can choose the **User** option; then enter the parameters according to the specifications of your optical drive.

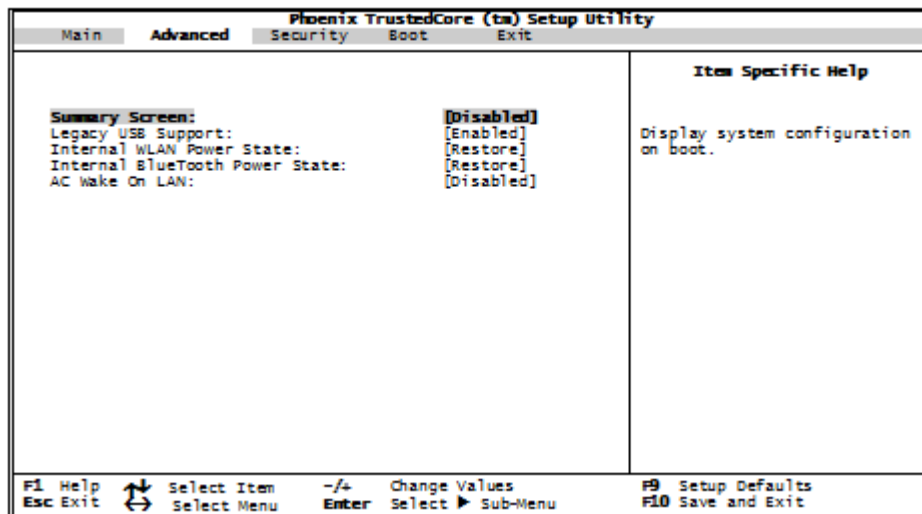
**SATA Port:**

Enter its submenu by pressing <Enter>. In this submenu, there are seven options: **Auto**, **User**, **Other ATAPI**, **IDE Removable**, **CD-ROM**, **ATAPI Removable**, and **None**. In general, you should choose the default value **Auto** to let the system to automatically detect the type of HDD you have in the system. If **Auto** fails to recognize your HDD, you can choose the **User** option; then enter the parameters according to the specifications of your HDD.



## 7.4 Advanced Setup

You will be greeted by this screen when you enter the **Advanced** Setup menu:



### Summary Screen:

There are two options to this field: **Enabled**, and **Disabled**. This field allows the system to display (**enabled**) or hide (**disabled**) the system configuration during system boot-up.

### Legacy USB Support:

There are two options to this field: **Enabled**, and **Disabled**. This field allows you to activate (**enabled**) or deactivate (**disabled**) the legacy USB support.

### Internal WLAN Power State:

There are three options to this field: **On**, **Off**, and **Restore**.

- If set to **On**, the wireless LAN LED would be on after system boot-up or resume from hibernation.
- If set to **Off**, the wireless LAN LED would be off after system boot-up or resume from hibernation.
- If set to **Restore**, the wireless LAN LED would keep their last state after system boot-up or resume from hibernation.

**Internal Bluetooth Power State:**

There are three options to this field: **On**, **Off**, and **Restore**.

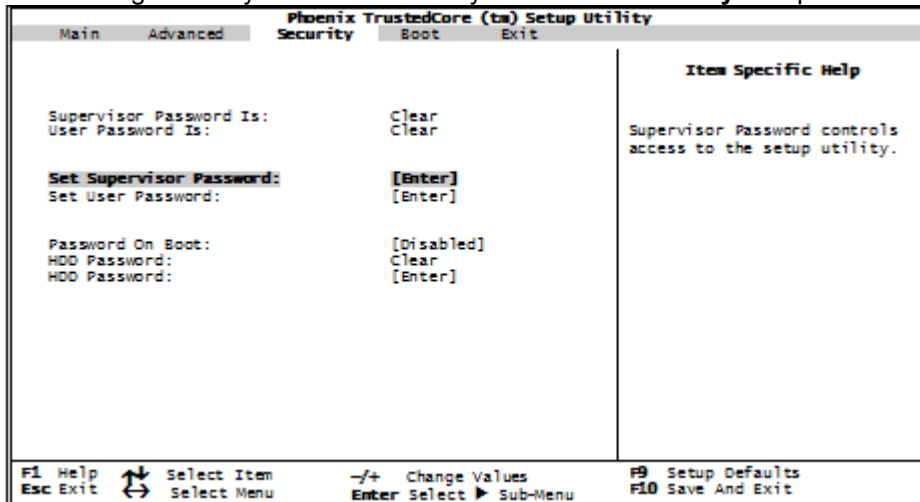
- If set to **On**, the bluetooth LED would be on after system boot-up or resume from hibernation.
- If set to **Off**, the bluetooth LED would be off after system boot-up or resume from hibernation.
- If set to **Restore**, the bluetooth LED would keep their last state after system boot-up or resume from hibernation.

**AC Wake On LAN:**

There are two options to this field: **Enabled**, and **Disabled**. This field allows the system to activate (**enabled**) or deactivate (**disabled**) the LAN function when AC adapter is plugged into the system unit.

## 7.5 Security Setup

You will be greeted by this screen when you enter the **Security** Setup menu:



### Supervisor Password Is:

This is for display only. This shows the system's supervisor password has been set (**Set**) or not (**Clear**).

### User Password Is:

This is for display only. This shows the system's user password has been set (**Set**) or not (**Clear**).

### Set Supervisor Password:

Press <Enter> to get into its sub-menu. In this sub-menu (not shown here), you can set system **Supervisor Password**. The **Supervisor Password** controls the access to system boot-up, the access to BIOS setup, and all settings within the BIOS setup.

### Set User Password:

Press <Enter> to get into its sub-menu. In this sub-menu (not shown here), you can set system **User Password**. The **User Password** controls the access to system boot-up, and the access to BIOS setup.

**Password On Boot:**

There are two options to this field: **Enabled** and **Disabled**. If the option is set to **Enabled** and when **Supervisor Password** and/or **User Password** have been set, system would prompt for password during system boot up. In order to access the system, you need to enter either the **Supervisor Password** or **User Password**. In order to set this field (**Password On Boot**), you need to set either/both the **Supervisor Password** and **User Password** as described above.

**HDD Password:**

This is for display only. This shows the system's HDD password has been set (**Set**) or not (**Clear**).

**HDD Password:**

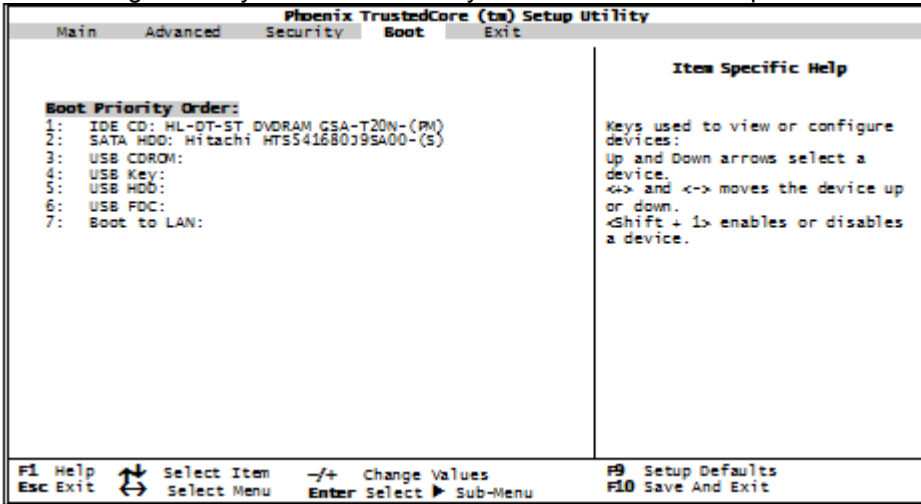
Press <Enter> to get into its sub-menu. In this sub-menu (not shown here), you can set system **HDD Password**. The sole purpose of this HDD password is to guard against information theft namely installing this HDD into another system unit. Therefore, system would not prompt for this password if this password is set and the HDD is resided in the same system unit where the password was set. However, system would prompt for this password if this password is set and the HDD is resided in some other system than the system unit where the password was set.

**Warning:**

**You are requested to disable the HDD Password before upgrading BIOS. Otherwise, there is a possibility that all data in the HDD will be lost.**

## 7.6 Boot Setup

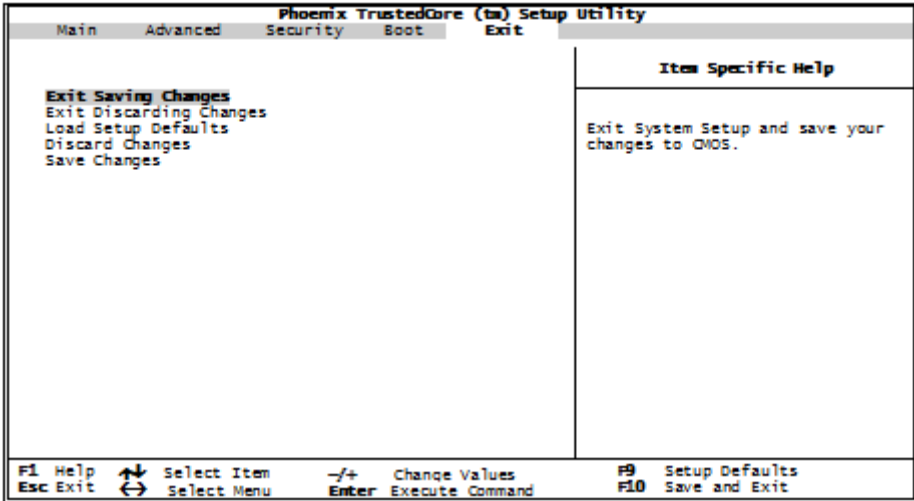
You will be greeted by this screen when you enter the **Boot** Setup Menu:



This menu is for determining the priority of which the system would boot from. This version of BIOS supports the following boot devices: **1: IDE CD, 2: SATA HDD, 3: USB CD-ROM, 4: USB Key, 5: USB HDD, 6: USB FDC, and 7: Boot to LAN.** Use <↑> and <↓> to select the device to work on. Then use <+> and <-> to escalate or downgrade the boot priority of the selected device.

## 7.7 Exit Setup

You will be greeted by this screen when you enter the **Exit** Setup Menu:



### Exit Saving Changes:

Save the changes that you have just made, and then exit the SETUP.

### Exit Discarding Changes:

If you do not want to save the changes you have just made, choose this to reject all the changes and exit the SETUP.

### Load Setup Defaults:

If you are not sure how to setup certain fields, choose this. The system would get the default settings for you.

### Discard Changes:

If you do not want to keep the changes you have just made, choose this. The system would load the previously saved settings for you.

### Save Changes:

Save the changes you have just made.

# Appendix A - Agency Regulatory Notices

## A.1 Safety Instructions

---



**CAUTION:** Please read these safety instructions carefully.

---



**CAUTION:** Please keep this User's Manual for future reference.

---



**CAUTION:** Please disconnect this equipment from AC outlet before cleaning. DO NOT use liquid or sprayed detergent for cleaning. Use a clean moistened cloth.

---



**CAUTION:** The wall socket used should be positioned near the equipment and should be easily accessible.

---



**CAUTION:** Please keep this equipment free from humidity.

---



**CAUTION:** Place the equipment on a reliable surface at all times. A drop or fall can cause severe damage.

---



**WARNING:** The openings of the enclosure are for air ventilation and are meant to protect the equipment from overheating. DO NOT COVER THE VENTILATION OPENINGS.

---

---



**CAUTION:** Verify the voltage of the power source before connecting the unit to any power outlet.

---



**WARNING:** DO NOT step on or place anything over the power cord.

---



**CAUTION:** All cautions and warnings on the equipment should be noted.

---



**WARNING:** If the equipment is not used for a long period of time, disconnect the equipment from the power source to avoid damage from power spikes.

---



**WARNING:** NEVER pour any liquid into any openings; a fire or electrical shock is possible.

---



**WARNING:** For safety reasons, other than pre-designated ports, doors, and the equipment should be opened only through qualified service personnel.

---



**CAUTION:** If one of the following situations should arise, the equipment should be checked by an authorized technician:

- a. The power cord or plug is damaged.
  - b. Liquid has penetrated into the equipment.
  - c. The equipment has been exposed to excessive moisture.
  - d. The equipment does not work well, or you fail to get it to work according to user's manual.
  - e. The equipment has been dropped or damaged.
  - f. The equipment has obvious signs of breakage.
- 
-





**CAUTION:** DO NOT LEAVE THE EQUIPMENT IN TEMPERATURES BELOW -20°C(-4°F) OR ABOVE 60°C(140°F). IT MAY CAUSE DAMAGE TO THE EQUIPMENT.

---



**WARNING:** Never install modem/telephone wiring during a lightning storm.

---



**WARNING:** Never install modem/telephone jacks in wet locations unless the jack is specially designed for wet locations.

---



**WARNING:** Never touch un-insulated modem/telephone wires or terminals unless the modem/telephone line has been disconnected at the network interface.

---



**CAUTION:** Use caution when installing or modifying modem/telephone lines.

---



**WARNING:** Avoid using a modem/telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.

---



**WARNING:** This computer contains an internal lithium battery-powered real-time circuit. There is a risk of explosion and injury if the battery is incorrectly replaced or handled. Do not attempt to recharge, disassembled, immerse in water, or dispose of it in fire. Replacement should be done through your notebook dealer.

---

---



**WARNING:** THE CD-ROM/DVD-ROM IN THIS NOTEBOOK EMPLOYS A LASER SYSTEM.

- a. To ensure proper use of this product, please read the relevant instructions carefully and retain for future reference.
  - b. Should the unit ever require maintenance, contact your local dealer.
  - c. Use of controls, adjustments or the performance of procedures other than those specified may result in hazardous radiation exposure.
  - d. To prevent direct exposure to Laser Beam, do not try to open the enclosure.
- 



**CAUTION:** The internal CD-ROM/DVD-ROM drive is classified as a **CLASS 1 LASER PRODUCT**. Label is located on the outside of the CD-ROM/DVD-ROM drive with the following wordings:

**CLASS 1 LASER PRODUCT**  
**KLASSE 1 LASER PRODUKT**

---



**WARNING:** Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.  
Explosionsgefahr bei unsachgemäßen Austausch der Batterie. Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

---



**WARNING:** Your **notebook** contains a Ni-MH or Li-Ion battery pack. There is a risk of fire and chemical burn if the battery pack is handled improperly. Do not disassemble, crush, puncture, short external contact, dispose of in water or fire, or expose it to temperature higher than 60°C.

---

---



**WARNING:** Handle the battery pack very carefully. Avoid touching the metal leads on the connector of the battery case.

---



**CAUTION:** Use only approved AC Adapter with your notebook. Using the wrong type of AC Adapter may cause serious damage to your notebook.

---



**CAUTION:** The AC Adapter can accept a line voltage ranging from 100V to 240V and is compatible with most international power sources. If you are unsure whether your power source is compatible, please contact the local dealer for assistance.

---



**CAUTION:** To reduce the risk of fire, use only No. 26 AWG or larger telecommunication line cord.

---



**CAUTION:** For continued protection against risk of fire, Replace only with same type and rating of fuse.

---



**CAUTION:** If the computer is not sold to German area, please use only the local recognized power supply cords that are recommended by the manufacturer.

---



**WARNING:** Don't expose your **notebook** to excessive heat or coldness (frost). Don't drop, spill fluids or open the exterior of the case. This can damage the **notebook** and void the warranty.

---

---

## A.2 Agency Notice

---

### **Federal Communications Commission Notice**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- \* Reorient or relocate the receiving antenna.
- \* Increase the separation between the equipment and receiver.
- \* Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- \* Consult the dealer or an experienced radio or television technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

### **Modifications**

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by the manufacturer responsible for compliance may void the user's authority to operate the equipment.

### **Cables**

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

## FCC RF Radiation Exposure Statement

- This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
- This equipment complies FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.
- If this device is going to be operated in 5.15 ~5.25GHz frequency range, then it is restricted in indoor environment only.

### USA and Canada Safety Requirements And Notices

The FCC with its action in ET Docket 93-62 has adopted a safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC certified equipment. The Intel PRO/Wireless LAN MiniPCI Adapter products meet the Human Exposure limits found in OET Bulletin 65, 2001, and ANSI/IEEE C95.1, 1992. Proper operation of this radio according to the instructions found in this manual will result in exposure substantially below the FCC's recommended limits.

The following safety precautions should be observed:

- Do not touch or move antenna while the unit is transmitting or receiving.
- Do not hold any component containing the radio such that the antenna is very close or touching any exposed parts of the body, especially the face or eyes, while transmitting.
- Do not operate the radio or attempt to transmit data unless the antenna is connected; if not, the radio may be damaged.

Use in specific environments:

- The use of wireless devices in hazardous locations is limited by the constraints posed by the safety directors of such environments.
- The use of wireless devices on airplanes is governed by the Federal Aviation Administration (FAA).
- The use of wireless devices in hospitals is restricted to the limits set forth by each hospital.

Antenna use:

- In order to comply with FCC RF exposure limits, low gain integrated antennas should be located at a minimum distance of 20 cm (8 inches) or more from the body of all persons.
- High-gain, wall-mount, or mast-mount antennas are designed to be professionally installed and should be located at a minimum distance of 30 cm (12 inches) or more from body of all persons. Please contact your professional installer, VAR, or antenna manufacturer for proper installation requirements.

**Explosive Device Proximity Warning**

**Warning:** Do not operate a portable transmitter (such as a wireless network device) near unshielded blasting caps or in an explosive environment unless the device has been modified to be qualified for such use.

**Use On Aircraft Caution**

**Caution:** Regulations of the FCC and FAA prohibit airborne operation of radio-frequency wireless devices because their signals could interfere with critical aircraft instruments.

**Canadian Notice**

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

**Avis Canadien**

Cet appareil numerique de la classe B respecte toutes les exigences du Reglement sur le materiel brouilleur du Canada.

**Canada Radio Frequency Interference Requirements**

This Class B digital apparatus complies with Canadian ICES-003, Issue 2, and RSS-210, Issue 4 (Dec. 2000).

“To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.”

Cet appareil numérique de la classe B est conforme à la norme NMB-003, No. 2, et CNR-210, No. 4 (Dec. 2000).

“Pour empêcher que cet appareil cause du brouillage au service faisant l’objet d’une licence, il doit être utilisé à l’intérieur et devrait être placé loin des fenêtres afin de fournir un écran de blindage maximal. Si le matériel (ou son antenne d’émission) est installé à l’extérieur, il doit faire l’objet d’une licence.”

## European Union Notice

Product with the CE Marking comply with the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community and if this product has telecommunication functionality, the R&TTE Directive (1999/5/EC).

Compliance with these directives implies conformity to the following European Norms (in parentheses are the equivalent international standards and regulations):

- \* EN55022 (CISPR 22)— Electromagnetic Interference
- \* EN55024 (IEC61000-4-2,3,4,5,6,8,11)— Electromagnetic Immunity
- \* EN61000-3-2— (IEC61000-3-2)-Power Line Harmonics
- \* EN61000-3-3— (IEC61000-3-3)-Power Line Flicker
- \* EN60950 (IEC60950) — Product Safety

For devices with built-in wireless equipment, the following additional standards apply:

- \* ETSI301489-17: General Emissions for Radio Equipment
- \* EN60950: Safety
- \* ETSI300328-2: Technical Requirements for Radio Equipment

**CE Caution:** Due to the fact that the frequencies used by 802.11b/802.11g wireless LAN devices may not yet be harmonized in all countries, 802.11b/802.11g products are designed for use only in specific countries or regions, and are not allowed to be operated in countries or regions other than those of designated use. As a user of these products, you are responsible for ensuring that the products are used only in the countries or regions for which they were intended and for verifying that they are configured with the correct selection of frequency and channel for the country or region of use. And deviation from permissible settings and restrictions in the country or region of use could be an infringement of local law and may be punished as such.

The wireless LAN device can currently be used indoors only in the following departments of mainland France.

01	Ain	36	Indre	69	Rhône
02	Aisne	37	Indre et Loire	70	Haute Saône
03	Allier	39	Jura	71	Saône et Loire
05	Hautes Alpes	41	Loir et Cher	72	Sarthe
08	Ardennes	42	Loire	75	Paris
09	Ariège	45	Loiret	77	Seine et Marne
10	Aube	50	Manche	78	Yvelines
11	Aude	54	Meurthe et Moselle	79	Deux Sèvres
12	Aveyron	55	Meuse	82	Tarn et Garonne
16	Charente	57	Moselle	84	Vaucluse
19	Corrèze	58	Nièvre	86	Vienne
2A	Corse Sud	59	Nord	88	Vosges
2B	Haute Corse	60	Oise	89	Yonne
21	Côte d'Or	61	Orne	90	Territoire de Belfort
24	Dordogne	63	Puy du Dôme	91	Essonne
25	Doubs	64	Pyrénées Atlantique	92	Hauts de Seine
26	Drôme	65	Haute Pyrénées	93	Seine St Denis
27	Eure	66	Pyrénées Orientales	94	Val de Marne
32	Gers	67	Bas Rhin		
35	Ille et Vilaine	68	Haut Rhin		

The wireless LAN device cannot currently be used in any departments of mainland France other than those listed above.

Maximum allowable EIRP 802.11b wireless LAN cards in the mainland departments of France not shown in the table above are as follows: (See the ART website at [www.art-telecom.fr](http://www.art-telecom.fr) for information on the French overseas territories.)

Frequency Ranges (MHz)	Indoors	Outdoors
2400 – 2446.5	10 mW	Not permitted
2446.5 – 2483.5	100 mW	100 mW on private property with Ministry of Defense approval

## Japanese Notice

本装置は、第二種情報装置（住宅地域またはその隣接した地域において使用されるべき情報装置）で住宅地域での電波障害防止を目的とした情報処理装置等電波障害自主規制協議会（VCCI）基準に適合しております。

しかし、本装置をラジオ、テレビジョン受信機に、近接してご使用になると、受信障害の原因となることがあります。本書の説明にしたがって正しい取り扱いをしてください。



## DGT Statement

根據交通部 低功率管理辦法 規定：

- 第十四條 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。
- 第十七條 低功率射頻電機之使用不得影響飛航安全及干擾合法通信，經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。
- 第二十條 輸入、製造低功率射頻電機之公司、商號或使用者違反本辦法規定，擅自使用或變更無線電頻率、電功率者，除依電信法規定處罰外，電信總局並得撤銷其型式認證證明或型式認證標籤。

## U.S. Regulations Governing the Use of Modems

This equipment complies with Part 68 of the FCC Rules. On this equipment is a label that contains, among other information, the FCC registration number and **R**inger **E**quivalence **N**umber (**REN**) for this equipment. You must, upon request, provide this information to your telephone company.

If your telephone equipment harms the telephone network, the Telephone Company may discontinue your service temporarily. If possible, they will notify in advance. But, if advance notice is not practical, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect proper operation of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

The FCC prohibits this equipment to be connected to party lines or coin-telephone service.

In the event that this equipment should fail to operate properly, disconnect the equipment from the phone line to determine if it is causing the problem. If the problem is with the equipment, discontinue use and contact your dealer or vendor.

The FCC also requires the transmitter of a FAX transmission be properly identified (per FCC Rules Part 68, Sec 68.381 (C) (3)).

## Japanese Modem Notice

本製品を日本で使用する場合は必ず日本国モードでご使用ください。  
他国のモードをご使用になると電気通信事業法(技術基準)に違反す  
行為となります。なお、ご購入時は初期値が日本国モードとなっており  
ますので、そのままご利用ください。

## U.K. Modem Compliance Information

This modem is approved by the secretary of state at the **Department of Trade and Industry** for connection to a single exchange line of the public switched telephone network run by certain licensed public telecommunication operators or system connected there to (Direct exchange lines only, not shared service or 1-1 carrier systems).

This modem is also suitable for connection to **Private Automatic Branch Exchange (PABX)**, which return secondary proceeding indication.

If this modem is to be used with a PBX which has extension wiring owned by BT, connection of the modem the PBX can only be carried out by BT; or by the authorized maintainer of the PBX unless the authorized maintainer has been given 14 days written notice that the connection is to be made by another person; and that period of notification has expired.

This modem is suitable for use only on telephone lines proved with Loop Disconnect or Multi-Frequency Dialing Facilities.

Users of this modem are advised that the approval is for connection to the **PSTN** via the telephone line interface supplied with it. Connection of a modem to the **PSTN** by any other means will invalidate the approval.

There is no guarantee of correct working in all circumstances. Any difficulties should be referred to your supplier.

Some network operators require that intended users of their network request permission to connect and for the installation of an appropriate socket.

The **Ringer Equivalence Number (REN)** of this modem is 1. **REN** is guide to the maximum number of apparatus that can simultaneously be connected to one telephone line. The **REN** value of each apparatus is added together, and should not exceed 4. Unless otherwise marked, a telephone is assumed to have a **REN** of 1.

This modem is only approved for use of the following facilities:

- \* Storage of telephone numbers for retrieval by a predator mined code.
- \* Initial proceed indication detection.
- \* Automatic calling / automatic answering.
- \* Tone detection.
- \* Loud-speaking facility.

This modem is not approved for connection to U.K./private speech-band services. This modem does not support an automatic re-dial function. Any other usage will invalidate the approval of your modem, if as a result, it then ceases to confirm to the standards against which approval was granted. The approval of this modem is invalidated if the apparatus is subject to modification in any material way not authorized by the **BABT** or if it is used with, or connected to external software that have not been formally accepted by **BABT**.