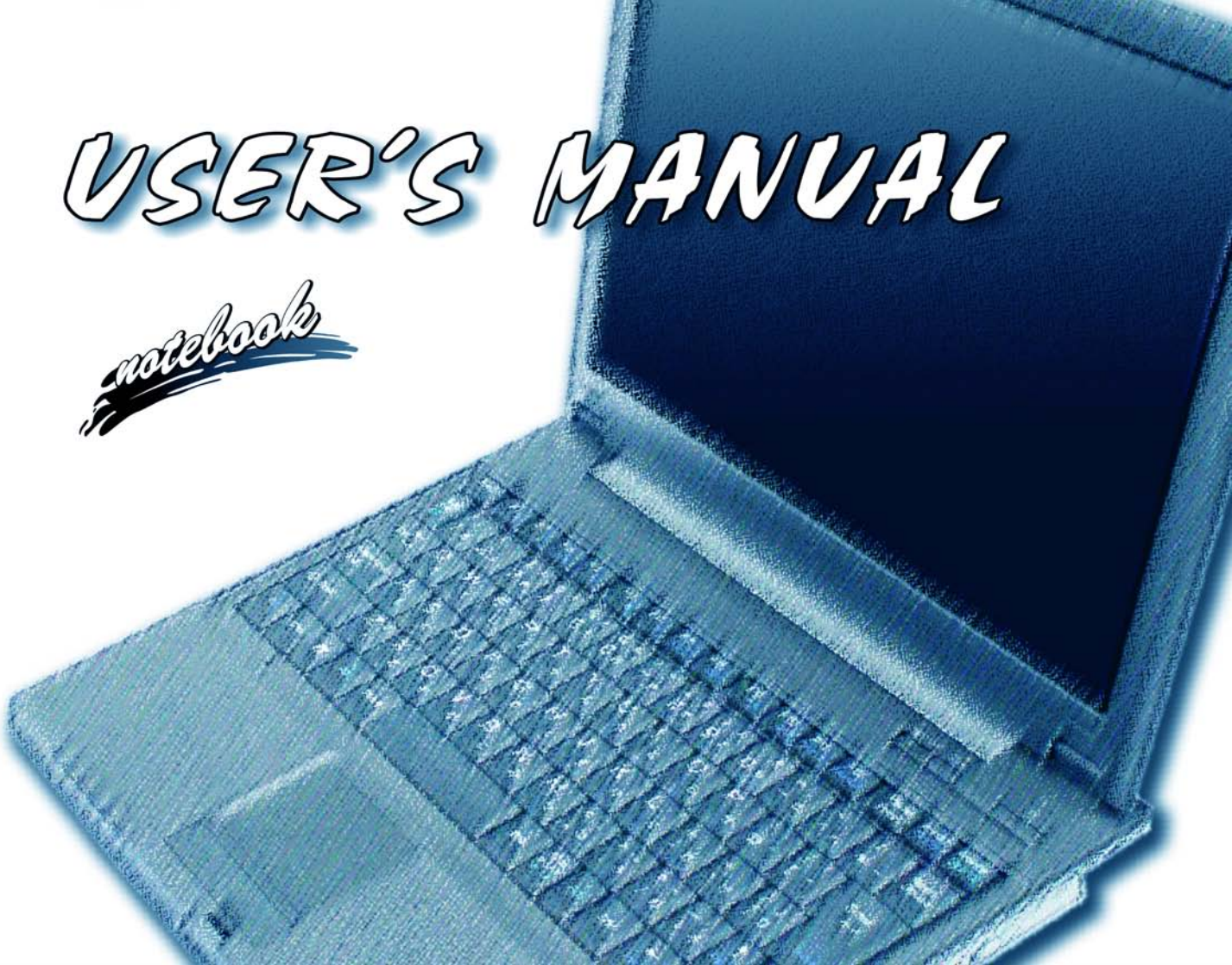


USER'S MANUAL

notebook



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FCC Statement (Federal Communications Commission)

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:

- Re orient 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 service representative or an experienced radio/TV technician for help.



Warning

Use only shielded cables to connect I/O devices to this equipment. You are cautioned that changes or modifications not expressly approved by the manufacturer for compliance with the above standards could void your authority to operate the equipment.

IMPORTANT SAFETY INSTRUCTIONS

Follow basic safety precautions, including those listed below, to reduce the risk of fire, electric shock, and injury to persons when using any electrical equipment:

1. Do not use this product near water, for example near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using this equipment with a telephone line (other than a cordless type) during an electrical storm. There may be a remote risk of electrical shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.
4. Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.
5. This product is intended to be supplied by a Listed Power Unit (DC Output 18.5V, 3.5A minimum AC/DC Adapter).

CAUTION

Always disconnect all telephone lines from the wall outlet before servicing or disassembling this equipment.

TO REDUCE THE RISK OF FIRE, USE ONLY NO. 26 AWG OR LARGER, TELE-COMMUNICATION LINE CORD

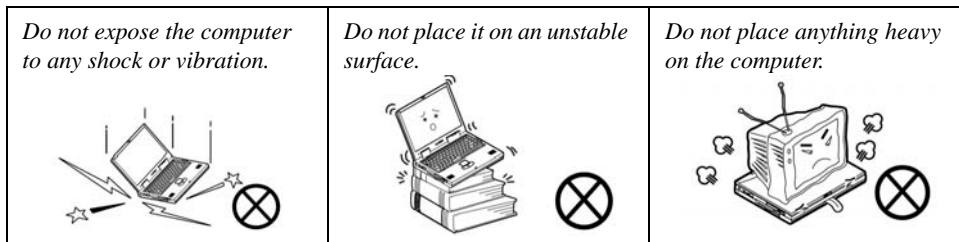
This Computer's Optical Device is a Laser Class I Product

Preface

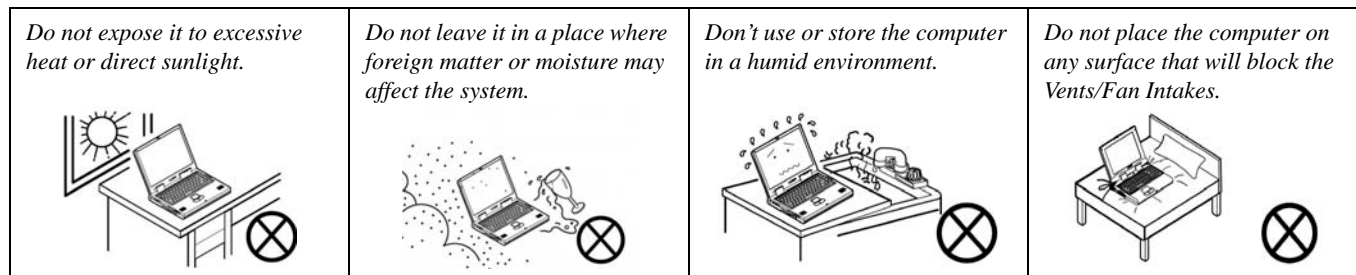
Instructions for Care and Operation

The notebook computer is quite rugged, but it can be damaged. To prevent this, follow these suggestions:









1. **Don't drop it, or expose it to shock.** If the computer falls, the case and the components could be damaged.







2. **Keep it dry, and don't overheat it.** Keep the computer and power supply away from any kind of heating element. This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.



3. **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.
4. **Follow the proper working procedures for the computer.** Shut the computer down properly and don't forget to save your work. Remember to periodically save your data as data may be lost if the battery is depleted.

<p><i>Do not turn off the power until you properly shut down all programs.</i></p>  	<p><i>Do not turn off any peripheral devices when the computer is on.</i></p>  	<p><i>Do not disassemble the computer by yourself.</i></p>  	<p><i>Perform routine maintenance on your computer.</i></p>  
--	---	---	---

5. **Take care when using peripheral devices.**

<p><i>Use only approved brands of peripherals.</i></p>  	<p><i>Unplug the power cord before attaching peripheral devices.</i></p>  
--	--

Power Safety

The computer has specific power requirements:



Power Safety Warning

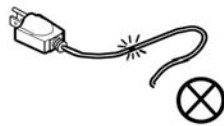
Before you undertake any upgrade procedures, make sure that you have turned off the power, and disconnected all peripherals and cables (including telephone lines). It is advisable to also remove your battery in order to prevent accidentally turning the machine on.

- Only use a power adapter approved for use with this computer.
- Your AC/DC adapter may be designed for international travel but it still requires a steady, uninterrupted power supply. If you are unsure of your local power specifications, consult your service representative or local power company.
- The power adapter may have either a 2-prong or a 3-prong grounded plug. The third prong is an important safety feature; do not defeat its purpose. If you do not have access to a compatible outlet, have a qualified electrician install one.
- When you want to unplug the power cord, be sure to disconnect it by the plug head, not by its wire.
- Make sure the socket and any extension cord(s) you use can support the total current load of all the connected devices.
- Before cleaning the computer, make sure it is disconnected from any external power supplies (i.e. AC/DC adapter or car adapter).

Do not plug in the power cord if you are wet.



Do not use the power cord if it is broken.



Do not place heavy objects on the power cord.



Battery Precautions

- Only use batteries designed for this computer. The wrong battery type may explode, leak or damage the computer.
- Do not remove any batteries from the computer while it is powered on.
- Do not continue to use a battery that has been dropped, or that appears damaged (e.g. bent or twisted) in any way. Even if the computer continues to work with a damaged battery in place, it may cause circuit damage, which may possibly result in fire.
- Recharge the batteries using the notebook's system. Incorrect recharging may make the battery explode.
- Do not try to repair a battery pack. Refer any battery pack repair or replacement to your service representative or qualified service personnel.
- Keep children away from, and promptly dispose of a damaged battery. Always dispose of batteries carefully. Batteries may explode or leak if exposed to fire, or improperly handled or discarded.
- Keep the battery away from metal appliances.
- Affix tape to the battery contacts before disposing of the battery.
- Do not touch the battery contacts with your hands or metal objects.



Battery Disposal & Caution

The product that you have purchased contains a rechargeable battery. The battery is recyclable. At the end of its useful life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal.

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used battery according to the manufacturer's instructions.

Preface

Cleaning

Do not apply cleaner directly to the computer; use a soft clean cloth.

Do not use volatile (petroleum distillates) or abrasive cleaners on any part of the computer.

Servicing

Do not attempt to service the computer yourself. Doing so may violate your warranty and expose you and the computer to electric shock. Refer all servicing to authorized service personnel. Unplug the computer from the power supply. Then refer servicing to qualified service personnel under any of the following conditions:

- When the power cord or AC/DC adapter is damaged or frayed.
- If the computer has been exposed to rain or other liquids.
- If the computer does not work normally when you follow the operating instructions.
- If the computer has been dropped or damaged (do not touch the poisonous liquid if the LCD panel breaks).
- If there is an unusual odor, heat or smoke coming from your computer.



Removal Warning

When removing any cover(s) and screw(s) for the purposes of device upgrade, remember to replace the cover(s) and screw(s) before turning the computer on.

Travel Considerations

Packing

As you get ready for your trip, run through this list to make sure the system is ready to go:

1. Check that the battery pack and any spares are fully charged.
2. Power off the computer and peripherals.
3. Close the display panel and make sure it's latched.
4. Disconnect the AC/DC adapter and cables. Stow them in the carrying bag.
5. The AC/DC adapter uses voltages from 100 to 240 volts so you won't need a second voltage adapter. However, check with your travel agent to see if you need any socket adapters.
6. Put the notebook in its carrying bag and secure it with the bag's straps.
7. If you're taking any peripherals (e.g. a printer, mouse or digital camera), pack them and those devices' adapters and/or cables.
8. Anticipate customs - Some jurisdictions may have import restrictions or require proof of ownership for both hardware and software. Make sure your "papers" are handy.



Power Off Before Traveling

Make sure that your notebook is completely powered off before putting it into a travel bag (or any such container). Putting a notebook which is powered on in a travel bag may cause the vent(s)/fan intake(s)/outlet(s) to be blocked. To prevent your computer from overheating make sure nothing blocks the vent(s)/fan intake(s)/outlet(s) while the computer is in use.

Preface

On the Road

In addition to the general safety and maintenance suggestions in this preface, and Chapter 8: Troubleshooting, keep these points in mind:

Hand-carry the notebook - For security, don't let it out of your sight. In some areas, computer theft is very common. Don't check it with "normal" luggage. Baggage handlers may not be sufficiently careful. Avoid knocking the computer against hard objects.

Beware of Electromagnetic fields - Devices such as metal detectors & X-ray machines can damage the computer, hard disk, floppy disks, and other media. They may also destroy any stored data - Pass your computer and disks around the devices. Ask security officials to hand-inspect them (you may be asked to turn it on). **Note:** Some airports also scan luggage with these devices.

Fly safely - Most airlines have regulations about the use of computers and other electronic devices in flight. These restrictions are for your safety, follow them. If you stow the notebook in an overhead compartment, make sure it's secure. Contents may shift and/or fall out when the compartment is opened.

Get power where you can - If an electrical outlet is available, use the AC/DC adapter and keep your battery(ies) charged.

Keep it dry - If you move quickly from a cold to a warm location, water vapor can condense inside the computer. Wait a few minutes before turning it on so that any moisture can evaporate.

Developing Good Work Habits

Developing good work habits is important if you need to work in front of the computer for long periods of time. Improper work habits can result in discomfort or serious injury from repetitive strain to your hands, wrists or other joints. The following are some tips to reduce the strain:

- Adjust the height of the chair and/or desk so that the keyboard is at or slightly below the level of your elbow. Keep your forearms, wrists, and hands in a relaxed position.
- Your knees should be slightly higher than your hips. Place your feet flat on the floor or on a footrest if necessary.
- Use a chair with a back and adjust it to support your lower back comfortably.
- Sit straight so that your knees, hips and elbows form approximately 90-degree angles when you are working.
- Take periodic breaks if you are using the computer for long periods of time.



Remember to:

- Alter your posture frequently.
- Stretch and exercise your body several times a day.
- Take periodic breaks when you work at the computer for long periods of time. Frequent and short breaks are better than fewer and longer breaks.



Lighting

Proper lighting and comfortable display viewing angle can reduce eye strain and muscle fatigue in your neck and shoulders.

- Position the display to avoid glare or reflections from overhead lighting or outside sources of light.
- Keep the display screen clean and set the brightness and contrast to levels that allow you to see the screen clearly.
- Position the display directly in front of you at a comfortable viewing distance.
- Adjust the display-viewing angle to find the best position.

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Chapter 1: Quick Start Guide

Overview


This Quick Start Guide is a brief introduction to the basic features of your computer, to navigating around the computer and to getting your system started. The remainder of the manual covers the following:

- **Chapter 2** A guide to using some of the main features of the computer e.g. the **storage devices (hard disk, optical device, 4-in-1 card reader, PC Card), Touch Pad & Mouse, Audio & Printer.**
- **Chapter 3** The computer's **power** saving options.
- **Chapter 4** The installation of the **drivers** and utilities essential to the operation or improvement of some of the computer's subsystems.
- **Chapter 5** An outline of the computer's built-in software or **BIOS** (Basic Input Output System).
- **Chapter 6** Instructions for **upgrading** your computer.
- **Chapter 7** A quick guide to the computer's **Bluetooth, Wireless LAN and Security (Fingerprint & TPM) Modules** (some of which may be **optional** depending on your purchase configuration).
- **Chapter 8** A **troubleshooting** guide.
- **Appendix A** Definitions of the **interface, ports/jacks** which allow your computer to communicate with external devices.
- **Appendix B** Information on the Intel Video **driver controls.**
- **Appendix C** The computer's **specification.**

Model Designs

This notebook series includes two different model designs which vary slightly in color and appearance. However both designs incorporate the same features, ports and jacks etc.

Advanced Users


If you are an advanced user you may skip over most of this Quick Start Guide. However you may find it useful to refer to [Chapter 4](#) (Drivers), [Chapter 5](#) (BIOS), [Chapter 6](#) (Upgrading) and [Chapter 7](#) (Modules & Options). You may also find the notes marked with a  of interest to you.

Beginners and Not-So-Advanced Users




Notes

Check the light colored boxes with the mark above to find detailed information about the computer's features.

If you are new to computers (or do not have an advanced knowledge of them) then the information contained in this Quick Start Guide should be enough to get you up and running. Eventually you should try to look through all the documentation (more detailed descriptions of the functions, setup and system controls are covered in the remainder of the User's Manual), but do not worry if you do not understand everything the first time. Keep this manual nearby and refer to it to learn as you go. You may find it useful to refer to the notes marked with a  as indicated in the margin. For a more detailed description of any of the interface ports and jacks see [“Interface \(Ports & Jacks\)” on page A - 1](#).

Warning Boxes

No matter what your level please pay careful attention to the warning and safety information indicated by the  symbol. Also please note the safety and handling instructions as indicated in the *Preface*.

Not Included

Operating Systems (e.g. *Windows XP*) and applications (e.g. word processing, spreadsheet and database programs) have their own manuals, so please consult the appropriate manuals.

System Software

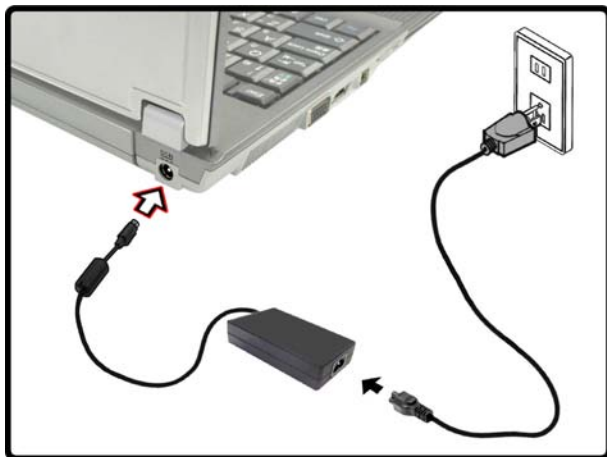
Your computer may already come with system software pre-installed. Where this is not the case, or where you are re-configuring your computer for a different system, you will find this manual refers to the *Microsoft Windows XP (Home & Professional Editions)* operating system.



Drivers

If you are installing new system software, or are re-configuring your computer for a different system, you will need to install the drivers listed in ***“Drivers & Utilities” on page 4 - 1***. Drivers are programs which act as an interface between the computer and a hardware component e.g. a wireless network module. It is very important that you install the drivers in the order listed in ***Table 4 - 1, on page 4 - 6***. You will be unable to use most advanced controls until the necessary drivers and utilities are properly installed. If your system hasn't been properly configured (your service representative may have already done that for you), refer to ***“What to Install” on page 4 - 1*** for installation instructions.

System Startup



1. Remove all packing materials.
2. Place the computer on a stable surface.
3. Securely attach any peripherals you want to use with the notebook (e.g. keyboard and mouse) to their ports.
4. Attach the AC/DC adapter to the DC-In jack at the rear of the computer, then plug the AC power cord into an outlet, and connect the AC power cord to the AC/DC adapter.
5. Raise the lid/LCD to a comfortable viewing angle, and press the power button to turn the computer "on".
6. Adjust the LCD panel to a comfortable viewing angle.
7. The LED indicators show the power and battery status of the computer.

Figure 1 - 1 - AC/DC Adapter Plugged In



Shutdown

Please note that you should always shut your computer down by choosing the **Turn Off Computer** command from the **Start** menu in **Windows**. This will help prevent hard disk or system problems.

System Map: Top View with LCD Panel Open



Wireless Device Operation Aboard Aircraft

The use of any portable electronic transmission devices aboard aircraft is usually prohibited. Make sure the module(s) are OFF if you are using the computer aboard aircraft.

Use the key combination/switch to toggle power to the WLAN/Bluetooth modules, and check the status indicator icon to see if the module is powered on or not (see [Table 1 - 1](#), on [page 1 - 6](#) [Table 1 - 2](#), on [page 1 - 7](#) [Table 1 - 3](#), on [page 1 - 8](#)).



1. LCD
2. WLAN Power Switch
3. TouchPad Power Button
4. Power Button
5. Keyboard
6. TouchPad and Buttons
7. Fingerprint Reader
8. LED Indicators
9. LCD Latch



Security Modules

The encrypted channel between the **Trusted Platform Module** security chip and the **fingerprint reader** with **Protector Suite Software** provides a high level of security for your computer. See *“Security Modules (Fingerprint & TPM)”* on [page 7 - 6](#).

Figure 1 - 2 - Top View with LCD Panel Open

LED Indicators

The LED indicators on the computer display helpful information about the current status of the computer.








Icon	Color	Description	Icon	Color	Description
					
	Green	The Computer is On		Green	The WLAN Module is Powered On
	Blinking Green	The Computer is in Stand by Mode		Orange	The Bluetooth Module is Powered On
	Orange	The Battery is Charging		Green	Caps Lock Activated
	Blinking Orange	The Battery has Reached Critically Low Power Status		Green	Number Lock Activated
	Green	Hard Disk/ODD Activity			

Table 1 - 1 - LED Indicators

Keyboard & Hot Keys

The keyboard has a numerical keypad for easy numeric data input, and features function keys to allow you to change operational features instantly.



Figure 1 - 3 - Keyboard



Special Characters

Some software applications allow the number-keys to be used with **Alt** to produce special characters. These special characters can only be produced by using the numeric keypad. Regular number keys (in the upper row of the keyboard) will not work. Make sure that **NumLk** is on.



Other Keyboards

If your keyboard is damaged or you just want to make a change, you can use any standard USB keyboard. The system will detect and enable it automatically. However special functions/hot-keys unique to the system's regular keyboard may not work.

The touchpad (button) and WLAN (switch) hot keys give instant access to the functions indicated in the table below. Visual indicators are available when the hot key driver is installed (see *“Hot Key Utility” on page 4 - 10*).

Table 1 - 2 - Hot Keys

Hot Key	Function
ON OFF Radio ON Radio OFF	WLAN Module Toggle
 TouchPad ON TouchPad OFF	Touchpad Toggle

Function Keys

The **function keys** (F1 - F12 etc.) will act as **hot keys** when pressed while the **Fn** key is held down. In addition to the basic function key combinations; visual indicators are available for certain key combinations/hot keys when the hot key driver is installed (see *“Hot Key Utility” on page 4 - 10*).









Key	Function	Key	Function
Fn + F1	Sleep Toggle (Suspend)	Fn + F7	Display Toggle  
Fn + F2	Bluetooth Power Toggle  	Fn + F8	Mute Toggle  
Fn + F5/ F6	Decrease/Increase LCD Brightness 	Fn + F9/ F10	Decrease/Increase Audio Volume 

Table 1 - 3 - Function Keys



Other Keyboards

If your keyboard is damaged or you just want to make a change, you can use any standard USB keyboard. The system will detect and enable it automatically. However special functions/hot keys unique to the system's regular keyboard may not work.

System Map: Front & Rear Views

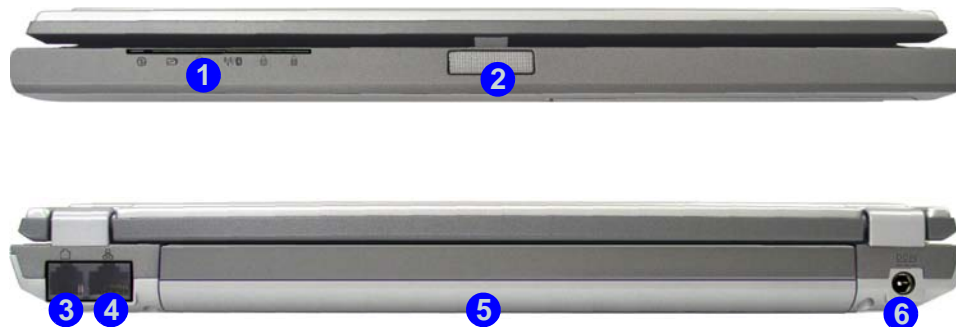


Figure 1 - 4
Front & Rear Views

1. LED Indicators
2. LCD Latch
3. RJ-11 Phone Jack
4. RJ-45 LAN Jack
5. Battery
6. DC-In Jack



Battery Information

Always completely discharge, then fully charge, a new battery before using it. Completely discharge and charge the battery at least once every 30 days or after about 20 partial discharges.



10 Cell Battery Warning

Please be careful when using the 10 cell battery.

The battery is heavy and extends beyond the case of the computer. Moving the battery, or exposing it to shock or vibration may interrupt the battery contacts and cause the computer to shutdown.

System Map: Left View

Figure 1 - 5 - Left View

1. Vent/Fan Intake/Outlet
2. External Monitor Port
3. 1 * USB 2.0 Port
4. Mini-IEEE 1394 Port
5. 4-in-1 Card Reader
6. PC Card Slot



Overheating

To prevent your computer from overheating make sure nothing blocks the vent(s)/ fan intake(s)/outlet(s) while the computer is in use.



Mini-IEEE 1394 Port

The Mini-IEEE 1394 Port only supports **SELF POWERED** IEEE 1394 devices.

4-in-1 Card Reader

The card reader allows you to use the most popular digital storage card formats:

MMC (MultiMedia Card) / SD (Secure Digital) / MS (Memory Stick) /
MS Pro (Memory Stick Pro)

System Map: Right View



Figure 1 - 6 - Right View

1. Microphone-In Jack
2. Headphone-Out/Speaker-Out Jack
3. 2 * USB 2.0 Ports
4. Optical (CD/DVD) Device Drive Bay
5. Security Lock Slot



Changing DVD Regional Codes

Go to the **Control Panel** and double-click **System > Hardware** (tab), click **Device Manager**, then click the **+** next to **DVD/CD-ROM drives**. Double-click on the DVD-ROM device to bring up the **Properties** dialogue box, and select the **DVD Region** (tab) to bring up the control panel to allow you to adjust the regional code (see *[“DVD Regional Codes” on page 2 - 5](#)*).

DVD region detection is device dependent, not OS-dependent. You can select your module's region code **5** times. The fifth selection is permanent. This cannot be altered even if you change your operating system or you use the module in another computer.



CD Emergency Eject

If you need to manually eject a CD/DVD (e.g. due to an unexpected power interruption) you may push the end of a straightened paper clip into the emergency eject hole. Do not use a sharpened pencil or similar object that may break and become lodged in the hole.

Media Warning

Don't try to remove a floppy disk/CD/DVD while the system is accessing it. This may cause the system to “crash”.

System Map: Bottom View

Figure 1 - 7 - Bottom View

1. Vent/Fan Intake/Outlet
2. Battery
3. Optical (CD/DVD) Device Drive Release Cover
4. Component Bay Cover
5. Hard Disk Drive Bay Cover
6. Speaker

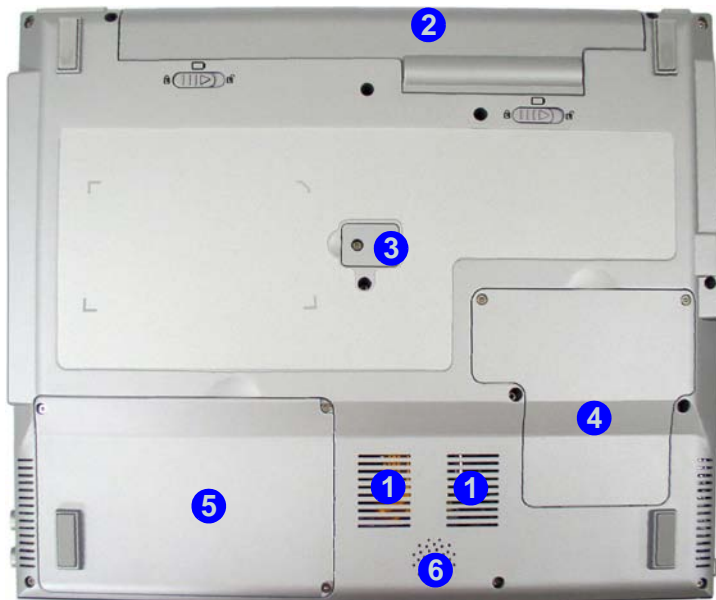


CPU

The CPU is not a user serviceable part. Opening this compartment, or accessing the CPU in any way, may violate your warranty.

Overheating

To prevent your computer from overheating make sure nothing blocks the vent(s)/fan intake(s)/outlet(s) while the computer is in use.



Windows XP Start Menu & Control Panel

Most of the control panels, utilities and programs within *Windows XP* (and most other *Windows* versions) are accessed from the **Start** menu. When you install programs and utilities they will be installed on your hard disk drive, and a shortcut will usually be placed in the **Start** menu and/or the desktop. You can customize the look of the **Start** menu by right-clicking the **Start** menu and selecting **Properties** from the menu.




Figure 1 - 8 - Start Menu & Control Panel

In many instances throughout this manual you will see an instruction to open the **Control Panel**. The **Control Panel** is accessed from the **Start** menu, and it allows you to configure the settings for most of the key features in *Windows* (e.g. power, video, network, audio etc.). *Windows XP* provides basic controls for many of the features, however many new controls are added (or existing ones are enhanced) when you install the drivers provided. To see all controls it may be necessary to toggle off Category View.

Video Features

Your computer has built-in **Intel** on-board video. You can switch display devices, and configure display options, from the **Display Properties** control panel in *Windows* as long as the appropriate **video driver** is installed.

To access Display Properties in *Windows*:

1. Click **Start**, point to **Settings** and click **Control Panel** (or just click **Control Panel**).
2. Double-click **Display** (icon) - In the **Appearances and Themes** category.
3. Click **Settings** (tab) in the **Display Properties** dialog box.
4. Move the slider to the preferred setting in **Screen resolution** ① (*Figure 1 - 9 on page 1 - 15*).
5. Click the arrow, and scroll to the preferred setting in **Color quality** ② (*Figure 1 - 9 on page 1 - 15*).
6. Click **Advanced** (button) ③ (*Figure 1 - 9 on page 1 - 15*) to bring up the **Advanced properties** tabs.
7. Click **Intel(R) Graphics Media Accelerator Driver for Mobile** (tab), and click **Graphics Properties** (button) to make any video adjustments you require.
8. You can also access **Display Properties** by right-clicking the desktop and scrolling down and clicking **Properties**. Click **Settings** (tab) and adjust as above.
9. You can also access **Intel(R) GMA Driver for Mobile** from the taskbar icon  menu.

Display Devices & Options

Besides the built-in LCD, you can also use an **external VGA monitor** (CRT) or **external Flat Panel Display** connected to the external monitor port as your display device.



Figure 1 - 9 - Display Properties Desktop

Intel Display Mode	Description
Single Mode	One of the connected displays is used as the display device
Twin Mode	This mode will drive multiple displays with the same content and resolutions, color quality etc.
Intel(R) Dual Display Clone Mode	Both connected displays output the same view and may be configured independently
Extended Desktop Mode	Both connected displays are treated as separate devices, and act as a virtual desktop

Table 1 - 4 - Display Options

Power Management Features

The **Power Options** control panel icon in *Windows* (see page [1-13](#)) allows you to configure power management features for your computer. You may conserve power through individual components such as the monitor or hard disk (by means of **Power Schemes**), or you may use either **Stand by** or **Hibernate** mode to conserve power throughout the system (enable **Hibernate** support from the control panel as pictured in [Figure 1-10](#)).

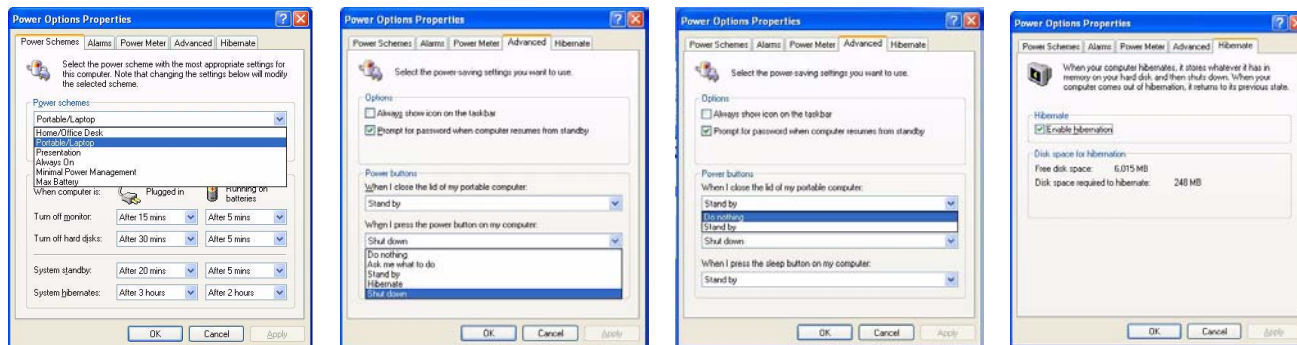


Figure 1-10 - Power Options

The computer's **power button**, **sleep button** (**Fn + F1** key combination), and **lid** (closing the lid) may be set to send the computer in to either **Stand by** or **Hibernate** mode.

Power Saving and Performance

Power Schemes may have an affect on your computer performance (e.g. the system may reduce processor performance/speed if Max Battery is the chosen Power Scheme).

Chapter 2: Features & Components

Overview

2

Read this chapter to learn more about the following main features and components of the computer:

- Hard Disk Drive
- Optical (CD/DVD) Device
- 4-in-1 Card Reader
- PC Card Slot
- TouchPad and Buttons/Mouse
- Audio Features
- Adding a Printer



Power Safety

Before attempting to access any of the internal components of your computer please ensure that the machine is not connected to the AC power, and that the machine is turned off. Also ensure that all peripheral cables, including phone lines, are disconnected from the computer.

Hard Disk Drive

The hard disk drive is used to store your data in the computer. The hard disk can be taken out to accommodate other 2.5" or 1.8" parallel (PATA) hard disk drives with a height of 9.5 mm.

The hard disk is accessible from the bottom of your computer as seen below. For further details see *[“Upgrading the Hard Disk Drive” on page 6 - 4](#)*.



Figure 2 - 1

Hard Disk Location

Optical (CD/DVD) Device

There is a bay for a 5.25" optical (CD/DVD) device (9.5mm height). The actual device will depend on the module you purchased (see *“Storage” on page C - 3*). The optical device is usually labeled **“Drive D:”** and may be used as a boot device if properly set in the **BIOS** (see *“Boot Menu” on page 5 - 15*).

Loading Discs

To insert a CD/DVD, press the open button ❶ and carefully place a CD/DVD onto the disc tray with label-side facing up (use just enough force for the disc to click onto the tray’s spindle). Gently push the CD/DVD tray in until its lock “clicks” and you are ready to start. The busy indicator ❷ will light up while data is being accessed, or while an audio/video CD, or DVD, is playing. If power is unexpectedly interrupted, insert an object such as a straightened paper clip into the emergency eject hole ❸ to open the tray.



Sound Volume Adjustment

How high the sound volume can be set depends on the setting of the volume control within **Windows**. Click the **Volume** icon on the taskbar to check the setting (see *“Audio Features” on page 2 - 9*).

Figure 2 - 2
Optical Device



CD Emergency Eject

If you need to manually eject a CD (e.g. due to an unexpected power interruption) you may push the end of a straightened paper clip into the emergency eject hole. However please do NOT use a sharpened pencil or similar object that may break and become lodged in the hole.

Disk Eject Warning

Don't try to remove a CD/DVD while the system is accessing it. This may cause the system to "crash".

Handling CDs or DVDs

Proper handling of your CDs/DVDs will prevent them from being damaged. Please follow the advice below to make sure that the data stored on your CDs/DVDs can be accessed.

Note the following:

- Hold the CD or DVD by the edges; do not touch the surface of the disc.
- Use a clean, soft, dry cloth to remove dust or fingerprints.
- Do not write on the surface with a pen.
- Do not attach paper or other materials to the surface of the disc.
- Do not store or place the CD or DVD in high-temperature areas.
- Do not use benzene, thinner, or other cleaners to clean the CD or DVD.
- Do not bend the CD or DVD.
- Do not drop or subject the CD or DVD to shock.

DVD Regional Codes

To change the DVD regional codes see *“Changing DVD Regional Codes” on page 1 - 11.*

2

DVD Regional Coding	
Region	Geographical Location
1	USA, Canada
2	Western Europe, Japan, South Africa, Middle East & Egypt
3	South-East Asia, Taiwan, South Korea, The Philippines, Indonesia, Hong Kong
4	South & Central America, Mexico, Australia, New Zealand
5	N Korea, Russia, Eastern Europe, India & Most of Africa
6	China

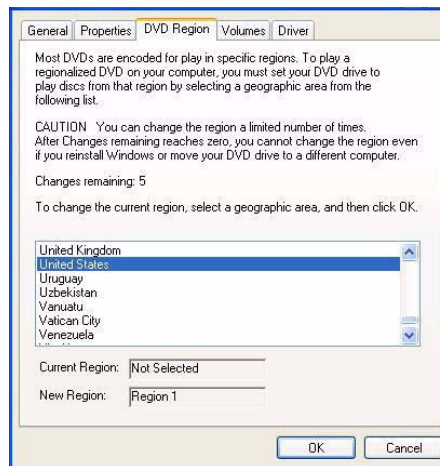


Table 2 - 1
DVD Regional Coding

Figure 2 - 3
DVD Regions



Card Reader Cover

Make sure you keep the cover in the card reader when not in use. This will help prevent foreign objects and/or dust getting in to the card reader.

4-in-1 Card Reader

The card reader allows you to use some of the latest digital storage cards. Push the card into the slot and it will appear as a removable device, and can be accessed in the same way as your hard disk (s). Make sure you install the PCMCIA/Card Reader driver (see *[“PCMCIA/CardReader” on page 4 - 9](#)*).

- MMC (MultiMedia Card)
- SD (Secure Digital)
- MS (Memory Stick)
- MS Pro (Memory Stick Pro)

Figure 2 - 4
Left View

1. Card Reader



PC Card Slot

The computer is equipped with a PCMCIA 3.3V/5V slot for **one type II** PCMCIA CardBus PC Card Slot. Make sure you install the PCMCIA/Card Reader driver (see *“PCMCIA/CardReader” on page 4 - 9*).

Inserting and Removing PC Cards

- Align the PC Card with the slot and push it in until it locks into place.
- To remove a PC Card, simply press the eject button **1** next to the slot.



PC Card Slot Cover

Make sure you keep the cover in the PC Card slot when not in use. This will help prevent foreign objects and/or dust getting in to the PC Card Slot.

Figure 2 - 5
Left View

1. PC Card Eject Button



Mouse Driver


If you are using an external mouse your operating system may be able to auto-configure your mouse during its installation or only enable its basic functions. Be sure to check the device's user documentation for details.

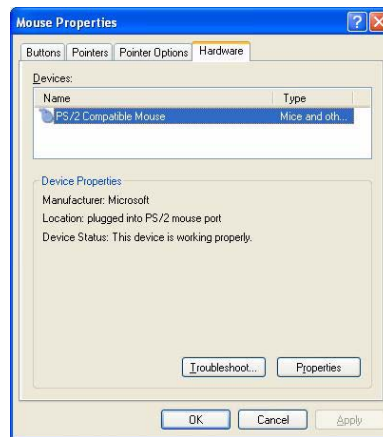
Figure 2 - 6
Mouse Properties

TouchPad and Buttons/Mouse



The TouchPad is an alternative to the mouse; however, you can also add a mouse to your computer through one of the USB ports. The TouchPad buttons function in much the same way as a two-button mouse.

You can configure the mouse functions from the **Mouse Properties** control panel. Click **Start**, point to **Settings** and click **Control Panel** (or just click **Control Panel**), and then double-click **Mouse**.

Use the **TouchPad button**  to disable/enable the TouchPad. If you have installed the Hot Key driver then a visual indicator will appear on screen (see page [1 - 7](#)).



Audio Features

You can configure the audio options on your computer from the **Sounds and Audio Devices**  **Windows** control panel, or from the **Realtek HD Audio Manager**  icon in the taskbar/control panel (this will bring up the Realtek Audio Configuration menus). The volume may also be adjusted by means of the **Fn + F9/F10** key combination.



Sound Volume Adjustment

How high the sound volume can be set depends on the setting of the volume control within **Windows** (and the volume control function keys on the computer). Click the Volume icon on the taskbar to check the setting.



Figure 2 - 7
Realtek Control Panel



Parallel Printer

After setting up the printer attach the parallel cable to the printer.

Connect the printer's parallel cable to the Parallel to USB converter, and then plug the converter into the USB port.

Turn ON the printer, then turn ON the computer.

Windows will identify the printer and either load one of its own drivers or ask you to supply one. Follow the on-screen instructions.

Adding a Printer

The most commonly used peripheral is a printer. The following conventions will help you to add a printer, however it is always best to refer to the printer manual for specific instructions and configuration options.

USB Printer

Most current printers have a USB interface connection. You may use any one of the ports to connect the printer.

Install Instructions:

1. Set up the printer according to its instructions (unpacking, paper tray, toner/ink cartridge etc.).
2. Turn ON the computer.
3. Turn ON the printer.
4. Connect the printer's USB cable to one of the USB ports on the computer.
5. **Windows** will identify the printer and either load one of its own drivers or ask you to supply one. Follow the on-screen instructions.

Parallel Printer

This is still a very common type of printer. To use a parallel printer you will need to purchase a parallel to USB converter. The install instructions are in the sidebar.

Chapter 3: Power Management

Overview

To conserve power, especially when using the battery, your computer uses the ACPI power management system. Power management conserves power by controlling individual components of the computer (the monitor and hard disk drive) or the whole system. This chapter covers:

- The Power Sources
- Turning on the Computer
- Power Schemes
- System Power Options
- Configuring the Power Button
- Battery Information

Advanced Configuration and Power Interface

The **ACPI** interface provides the computer with enhanced power saving techniques and gives the operating system (OS) direct control over the power and thermal states of devices and processors. For example, it enables the OS to set devices into low-power states based on user settings and information from applications. ACPI is fully supported in *Windows XP*.



OS Note

Power management functions will vary slightly depending on your operating system. For more information it is best to refer to the user's manual of your operating system.

(**Note:** All pictures used on the following pages are from the **Windows XP** OS.)

The Power Sources

The computer can be powered by either an AC/DC adapter or a battery pack.

AC/DC Adapter

Use only the AC/DC adapter that comes with your computer. The wrong type of AC/DC adapter will damage the computer and its components.

1. Attach the AC/DC adapter to the DC-in jack at the rear of the computer.
2. Plug the AC power cord into an outlet, and then connect the AC power cord to the AC/DC adapter (see sidebar if you are using the optional Port Replicator).
3. Raise the lid/LCD to a comfortable viewing angle.
4. Press the power button to turn “On”.

Battery

The battery allows you to use your computer while you are on the road or when an electrical outlet is unavailable. Battery life varies depending on the applications and the configuration you're using. **To increase battery life, let the battery discharge completely before recharging.** Use the **Battery Calibration Utility** in the **BIOS** for the most efficient and straightforward method of battery recharging (or see *“How do I completely discharge the battery?” on page 3 - 12*).

We recommend that you do not remove the battery. For more information on the battery, please refer to *“Battery Information” on page 3 - 9*.

Turning on the Computer

Now you are ready to begin using your computer. To turn it on simply press the power button on the front panel.

When the computer is on, you can use the power button as a Stand by/Hibernate/Shutdown hot key button when it is pressed for less than **4 seconds** (pressing and holding the power button for longer than this will shut the computer down). Use **Power Options** in the *Windows* control panel to configure this feature.



Forced Off

If the system “hangs”, and the **Ctrl + Alt + Del** key combination doesn’t work, press the power button for **4 seconds**, or longer, to force the system to turn itself off.

Power Button as Stand by or Hibernate Button

If you are using a fully ACPI-compliant OS, (such as Windows XP) you can use the OS’s “Power Options” control panel to set the power button to send the system into Stand by or Hibernate mode (see your OS’s documentation, or [“Configuring the Power Button” on page 3 - 8](#) for details).



Shutdown

Note that you should always shut your computer down by choosing the **Turn Off Computer** command from the **Start** menu in *Windows*. This will help prevent hard disk or system problems.



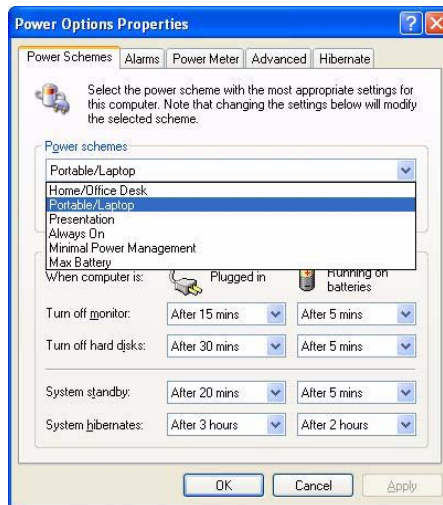
Resuming Operation

Press a key on the keyboard, or move the mouse/TouchPad to resume from Monitor or Hard Disk Stand by.

Figure 3 - 1
Power Schemes

Power Schemes

You can set your computer to conserve power through individual components by means of **Power Schemes**. You can also adjust the settings for each scheme to set the monitor to turn off after a specified time, and the computer's hard disk motor to turn off if the hard disk drive has not been accessed for a specified period of time (if the system reads or writes data, the hard disk motor will be turned back on). The schemes may also be set to set a specified time for the system to enter **Stand by** or **Hibernate** modes (see *“System Power Options” on page 3 - 6*).



Each **Windows Power Scheme** will also adjust the processor performance of your machine in order to save power. This is worth bearing in mind if you are experiencing any reduced performance (especially under DC/battery power).

Choose the **Home/Office Desk** scheme for maximum performance when the computer is powered from an AC power source. Choose the **Max Battery** scheme (bear in mind that this scheme may slow down the overall performance of the computer in order to save power) for maximum power saving when the computer is battery (DC power) powered. **Windows** will use **Portable/Laptop** as the default scheme.

System Power Options

You can use the system power options to stop the computer's operation and restart where you left off. This system features **Stand by** and **Hibernate** sleep mode levels (**Hibernate** mode will need to be enabled by clicking the option in the **Hibernate** tab in the **Power Options** control panel - *Figure 3 - 2 on page 3 - 7*).

Hibernate Mode vs. Shutdown

Hibernate mode and Shutdown are the same in that the system is off and you need to press the power button to turn it on. Their main difference is:

When you come back from hibernation, you can return to where you last left off (what was on your desktop) without reopening the application(s) and file(s) you last used.

You can use either method depending on your needs.

Stand by Mode vs. Hibernate Mode

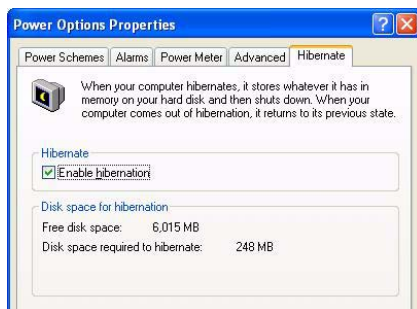
If you want to stay away from your work for just a while, you can put the system on Stand by instead of in hibernation. It takes a longer time to wake up the system from **Hibernate** mode than from **Stand by** mode.

Stand by

Stand by saves the least amount of power, but takes the shortest time to return to full operation. During Stand by the hard disk is turned off, and the CPU is made to idle at its slowest speed. All open applications are retained in memory. When you are not using your computer for a certain length of time, which you specify in the operating system, it will enter Stand by mode to save power.

Hibernate

Hibernate uses no power and saves all of your information on a part of the HDD before it turns the system off. Although it saves the most power it takes the longest time to return to full operation. You can set your computer to automatically enter Hibernate mode when the battery power is almost depleted. You will need to enable Hibernate mode from the **Hibernate** tab in the Power Options control panel. **The system will resume from Hibernate mode by pressing the power button.**



System Resume

The system can resume from Stand by mode by:

- Pressing a key on the keyboard.
- An incoming call received on the modem (if enabled)
- Network card (Wake On LAN) activity (if enabled)

Figure 3 - 2
Enable Hibernation

Configuring the Power Button


The power button may be set to send the computer in to either **Stand by** or **Hibernate** mode (*Figure 3 - 3*). In **Stand by** mode, the LED  will blink green. In **Hibernate** mode the LED will be off. If you are in a power saving mode set to save power through individual components (e.g. hard disk, monitor), the LED will remain green.

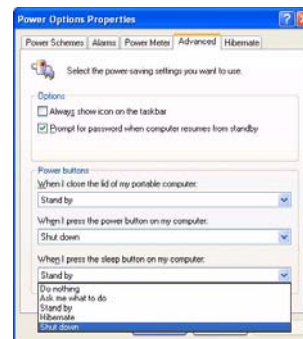
Figure 3 - 3
**Power Options
(Advanced - Power
Buttons)**



Power Button



Lid



Sleep/Resume (Sleep) Button



Sleep Button

You may also configure the **Sleep/Resume** key combination (**Fn + F1**) from the menu illustrated in *Figure 3 - 3*. In **Windows** this is referred to as the **Sleep** button.

Battery Information

Please follow these simple guidelines to get the best use out of your battery.

New Battery

Always completely discharge, then fully charge, a new battery (see ***“Battery FAQ”*** on page 3 - 12 for instructions on how to do this).

Battery Life

Your computer's battery life is dependent upon many factors, including the programs you are running, and peripheral devices attached. **Power Options** (you may set low battery **Alarms** and actions, and check the **Power Meter** from the **Power Options** control panel), and settings in the OS will help prolong the battery life if configured appropriately.



Low Battery Warning

When the battery is critically low, immediately connect the AC/DC adapter to the computer or save your work, otherwise, the unsaved data will be lost when the power is depleted.

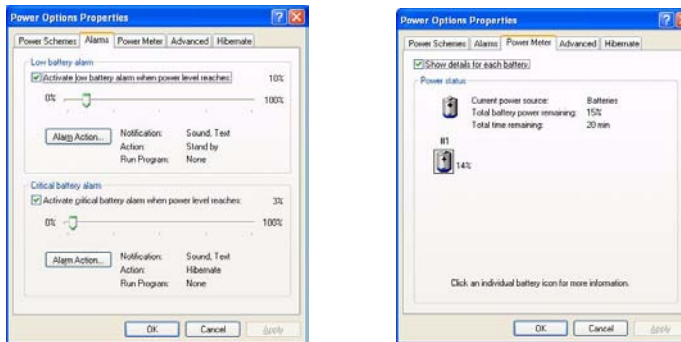


Figure 3 - 4
**Power Options
(Alarm & Power
Meter)**



Conserving Battery Power

To conserve battery power:

Lower the brightness level of the LCD display. The system will decrease LCD brightness slightly to save power when it is not powered by the AC/DC adapter.

Close modem or communication applications when they are not being used.

Remove any unused PC Card from the computer (PC Cards quickly use up battery power even if the system enters sleep mode).

Disconnect any unnecessary external devices.

Battery life may be shortened through improper maintenance. **To optimize the life and improve its performance, fully discharge and recharge the battery at least once every 30 days.**

We recommend that you do not remove the battery yourself. If you do need to remove the battery for any reason see ***“Removing the Battery” on page 6 - 3.***

Recharging the Battery with the AC/DC Adapter

The battery pack automatically recharges when the AC/DC adapter is attached and plugged into an electrical outlet. If the computer is powered on, and in use, it will take several hours to fully recharge the battery. When the computer is turned off but plugged into an electrical outlet, battery charge time is less. (Refer to ***“LED Indicators” on page 1 - 6*** for information on the battery charge status, and to ***“Battery Information” on page 3 - 9*** for more information on how to maintain and properly recharge the battery pack.)

Using the BIOS Utility to Calibrate the Battery

The most efficient method of charging the battery is to use the **BIOS Power** menu ***Start Battery Calibration*** item (see ***“Power Menu” on page 5 - 13***). If you use this method the system will prompt you through the process of fully charging and discharging the battery.

Proper handling of the Battery Pack

- DO NOT disassemble the battery pack under any circumstances
- DO NOT expose the battery to fire or high temperatures, it may explode
- DO NOT connect the metal terminals (+, -) to each other



Damaged Battery Warning

Should you notice any physical defects (e.g. the battery is bent out of shape after being dropped), or any unusual smells emanating from the notebook battery, shut your computer down immediately and contact your service center. If the battery has been dropped we do not recommend using it any further, as even if the computer continues to work with a damaged battery in place, it may cause circuit damage, which may possibly result in fire. It is recommended that you replace your computer battery every two years.

10 Cell Battery Warning

Please be careful when using the 10 cell battery.

The battery is heavy and extends beyond the case of the computer. Moving the battery, or exposing it to shock or vibration may interrupt the battery contacts and cause the computer to shutdown.



Caution

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer. Discard used battery according to the manufacturer's instructions.

Battery FAQ

How do I completely discharge the battery?

Use the computer with battery power until it shuts down due to a low battery. Don't turn off the computer by yourself even when you see a message that indicates the battery is critically low, just let the computer use up all of the battery power and shut down on its own. Disable the **Power Options** functions in the **Control Panel**, especially any **Alarms** (unclick the tickboxes - see [3 - 9](#)) and **Schemes** (change all the settings to **Never** - see page [3 - 4](#)). As the battery nears the end of its life save and close any critical files. For the most efficient method of discharging the battery see *[“Using the BIOS Utility to Calibrate the Battery” on page 3 - 10.](#)*

How do I fully charge the battery?

When charging the battery, don't stop until the battery LED changes from orange to clear.

How do I maintain the battery?

Completely discharge and charge the battery at least once every 30 days or after about 20 partial discharges.

Chapter 4: Drivers & Utilities

This chapter deals with installing the drivers and utilities essential to the operation or improvement of some of the computer's subsystems. The system takes advantage of some newer hardware components for which the latest versions of most available operating systems haven't built in drivers and utilities. Thus, some of the system components won't be auto-configured with an appropriate driver or utility during operating system installation. Instead, you need to manually install some system-required drivers and utilities.

What to Install

The *Device Drivers & Utilities + User's Manual CD-ROM* contains the drivers and utilities necessary for the proper operation of the computer.

Module Driver Installation

The procedures for installing drivers for the optional **Bluetooth** and **Wireless LAN** modules are provided in "*Modules & Options*" on page 7 - 1. Make sure that the drivers are installed in the order indicated in *Table 4 - 1, on page 4 - 6*.



Navigate (Browse..) to D:

You will notice that many of the instructions for driver installation require you to **"Navigate (Browse) to D:"**. We assume that you will install all drivers and utilities from the built-in CD device and it is assigned to **"Drive D:"**. In addition, all file extensions can be seen

In this case "D:" is the drive specified for your CD device. Not all computers are setup the same way, and some computers have the CD listed under a different drive letter - e.g. if you have two hard drives (or hard disk partitions) one may be designated as "Drive C:" and the other as "Drive D:". In this case the CD device may be designated as "Drive E:" - Please make sure you are actually navigating to the correct drive letter for the CD device.

When you click the **Browse** (button) after clicking **Run** in the **Start** menu you will see the **"Look in:"** dialog box at the top of the **Browse** window. Click the scroll button to navigate to **My Computer** to display the devices and drive letters.

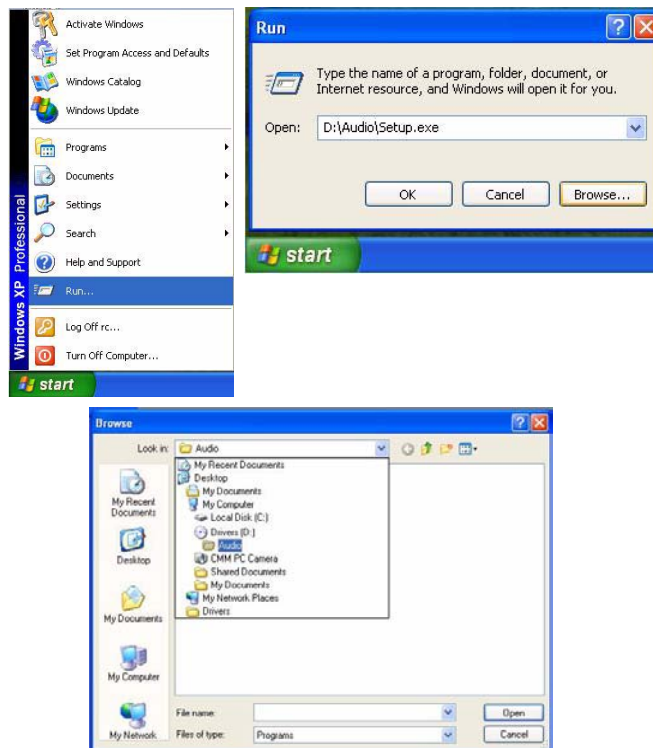


Figure 4 - 1 - Navigate (Browse..) to..

Service Packs

Check the warnings on the following pages regarding installation of the appropriate **Service Pack** for your **Windows** OS. Make sure you have installed the appropriate Service Pack **before** installing all the drivers.



Service Pack Installed

To see which **Service Pack** is currently installed on your computer go to the **General** tab of the **System** control panel. Right-click the **My Computer** icon on the desktop or in the **Start** menu and select **Properties**. The Service Pack currently installed on your system will be listed under the "**System**:" heading. (If no Service Pack information is listed, then no Service Pack is installed.)



Windows XP Service Pack 2

Make sure you install **Windows XP Service Pack 2** (or a Windows XP version which includes Service Pack 2) **before installing any drivers**. Service Pack 2 includes support for **USB 2.0**.

If you have **upgraded** the system by installing **Service Pack 2** (i.e. your Windows XP version does not include Service Pack 2) then follow these instructions:

1. Click **Start** (menu), point to **Settings** and click **Control Panel** (or click **Control Panel**).
2. Double-click **System** (icon); **System** (icon) is in **Performance and Maintenance** (category).
3. Click the **Hardware** (tab) > **Device Manager** (button).
4. Click "+" next to **Other Devices** (if its sub-items are not shown).
5. Right-click **Universal Serial Bus (USB) Controller** and select **Uninstall** > **OK** (if you don't see the item then there is no need to take any further action).
6. Restart the computer and it will find the USB 2.0 controller.

Authorized Driver Message

If you receive a message telling you that the driver you are installing is not authorized (**Digital Signature Not Found**), just click **Yes** or **Continue Anyway** to ignore the message and continue the installation procedure.

You will receive this message in cases where the driver has been released after the version of **Windows** you are currently using. All the drivers provided will have already received certification for **Windows**.

Version Conflict Message

During driver installation if you encounter any “file version conflict” message, please click **Yes** to choose to keep the existing (newer) version.

Updating/Reinstalling Individual Drivers

If you wish to update/reinstall individual drivers it may be necessary to uninstall the original driver. To do this go to the **Control Panel** in the **Windows OS** and double-click the **Add/Remove Programs** item. **If you see the individual driver listed** (if not see below), uninstall it, following the on screen prompts (it may be necessary to restart the computer). Go to the appropriate section of the manual to complete the update/reinstall procedure for the driver in question.

If the driver is not listed in the **Add/Remove Programs** item:

1. Click **Start** (menu), point to **Settings** and click **Control Panel** (or click **Start > Control Panel**).
2. Double-click **System** (icon); System (icon) is in **Performance and Maintenance** (category).
3. Click **Hardware** (tab) > **Device Manager** (button).
4. Double-click the **device** you wish to update/reinstall the driver for (you may need to click “+”).
5. Look for the **Update Driver** button (check the **Driver** tab) and follow the on screen prompts.

Driver Installation

Insert the *Device Drivers & Utilities + User's Manual* CD-ROM and click **Install WinXP Drivers** (button).

If you wish to install the drivers manually see page 4 - 6.



Figure 4 - 2 - Drivers Installer Screen 1

1. Check the driver installation order from **Table 4 - 1, on page 4 - 6** (the drivers must be installed in this order) which is the same as that listed in the **Drivers Installer** menu below.
2. Click to select the driver you wish to install, after installing each driver it will become grayed out (if you need to reinstall any driver, click the **Unlock** button).
3. Follow the instructions for each individual driver installation procedure as listed on the following pages.



Figure 4 - 3 - Drivers Installer Screen 2

WinXP SP2 Driver	Page #
Install the appropriate Service Pack for WinXP	Page 4 - 3
Chipset	Page 4 - 7
Video	Page 4 - 7
Audio	Page 4 - 7
LAN	Page 4 - 8
Modem	Page 4 - 8
PCMCIA/Card Reader	Page 4 - 9
TPM (Trusted Platform Module) Security Chip	Page 4 - 9
Fingerprint Reader	Page 4 - 10
Hot Key Utility	Page 4 - 10
Bluetooth	Page 7 - 2
Intel Wireless LAN	Page 7 - 4

Table 4 - 1 - Driver Installation

Service Pack Installation

Make sure you install the appropriate service pack for your operating system before installing any drivers (see [“Windows XP Service Pack 2” on page 4 - 3](#)).

New Hardware Found

If you see the message **“New Hardware Found”** (**Found New Hardware Wizard**) during the installation procedure (other than when outlined in the driver install procedure), click **Cancel** to close the window, and follow the installation procedure as directed.

Manual Driver Installation

If you wish to install the drivers manually, click the **Exit** button to quit the **Drivers Installer** application, and then follow the manual installation procedure for each driver. The manual installation procedure begins with instructions on how to browse to the executable file; **“Click Start (menu) > Run..”**.

Chipset

1. Click **1.Install Chipset Driver > Yes.**
OR
Click **Start** (menu) > **Run...** and navigate (**Browse..**) to **D:\Drivers\Chipset\Setup.exe** and click **OK.**
2. Click **Next > Yes > Next.**
3. Click **Finish** to restart the computer.

Video

1. Click **2.Install Video Driver > Yes.**
OR
Click **Start** (menu) > **Run...** and navigate (**Browse..**) to **D:\Drivers\Video\Setup.exe** and click **OK.**
2. To continue click **Next > Yes.**
3. Click **Finish** to restart the computer.

Audio

1. Click **3. Install Audio Driver > Yes.**
OR
Click **Start** (menu) > **Run...** and navigate (**Browse..**) to **D:\Drivers\Audio\Setup.exe** and click **OK.**
2. Click **Next** (click **Cancel** if a *Found New Hardware Wizard* appears).
3. Click **Finish** to restart the computer (click **Cancel** if a *Found New Hardware Wizard* appears after restart).

LAN

Note that you should click **Cancel** if a *Found New Hardware Wizard* appears before installing the LAN driver.

1. Click **4.Install LAN Driver > Yes.**
OR
Click **Start** (menu) > **Run...** and navigate (**Browse..**) to **D:\Drivers\LAN\SetupYukonWin.exe** and click **OK**.
2. Click **Next**.
3. Click the button to accept the license, and then click **Next > Install > Finish**.
4. The network settings can now be configured

Modem

1. Click **5.Install Modem Driver > Yes.**
OR
Click **Start** (menu) > **Run...** and navigate (**Browse..**) to **D:\Drivers\Modem\ssetup.exe** and click **OK**.
2. Click **OK**.
3. The modem is now ready for configuration.



Modem Country Selection

Be sure to check if the modem country selection is appropriate for you (**Control Panel > Phone and Modem Options**).

PCMCIA/CardReader

1. Click **6.Install CardReader Driver > Yes.**
OR
Click **Start** (menu) > **Run...** and navigate (**Browse...**) to **D:\Drivers\CardReader\setup.exe** and click **OK.**
2. Click **Next.**
3. Click **Finish.**

TPM (Trusted Platform Module)

1. Click **7.Install TPM Driver > Yes.**
OR
Click **Start** (menu) > **Run...** and navigate (**Browse...**) to **D:\Drivers\TPM\setup.exe** and click **OK.**
2. Click **Next.**
3. Click the button to accept the license, and then click **Next > Next > Next > Install.**
4. Click **Finish** and close the **ReadMe file.**
5. Click **Yes** to restart the computer.
6. See *“Security Modules (Fingerprint & TPM)” on page 7 - 6* for configuration instructions.

Fingerprint Reader

1. Click **8.Install Fingerprint Driver > Yes.**
OR
Click **Start** (menu) > **Run...** and navigate (**Browse..**) to
D:\Drivers\Fingerprint\autorun.exe and click **OK.**
2. Click **Software Installation** (button).
3. Click **Next.**
4. Click the button to accept the license, and then click **Next.**
5. Click **Next > Next > Next.**
6. Click **Finish > Yes** to restart the computer.
7. See *“Security Modules (Fingerprint & TPM)” on page 7 - 6* for configuration instructions.

Hot Key Utility

1. Click **9.Install Hotkey Utility Driver > Yes.**
OR
Click **Start** (menu) > **Run...** and navigate (**Browse..**) to
D:\Drivers\Hotkey\Setup.EXE and click **OK.**
2. Click **Next > Install.**
3. Click **Finish > Finish** to restart the computer.

Bluetooth

See install procedure in *“Bluetooth Driver Installation” on page 7 - 2.*

Wireless LAN

See install procedure in *“Intel PRO/Wireless WLAN Module” on page 7 - 4.*

Chapter 5: BIOS Utilities

Overview

This chapter gives a brief introduction to the computer's built-in software:

Diagnostics: The **POST** (Power-On Self Test)

Configuration: The **PhoenixBIOS Setup Utility**

If your computer has never been set up, or you are making important changes to the system (e.g. hard disk setup), then you should review this chapter first and note the original settings found in the **PhoenixBIOS Setup Utility**. Even if you are a beginner, keep a record of the settings you find and any changes you make. This information could be useful if your system ever needs servicing.

There is one general rule: *Don't make any changes unless you are sure of what you are doing*. Many of the settings are required by the system, and changing them could cause it to become unstable or worse. If you have any doubts, consult your service representative.



BIOS Settings Warning

Incorrect settings can cause your system to malfunction. To correct mistakes, return to *Set-up* and restore the **Set-up Defaults** with <F9>.



POST Screen

Note that the POST screen as pictured will not appear if you have enabled **Intel On-Screen Branding** (see page 5 - 9).

1. BIOS information
2. CPU type
3. Memory status
4. Enter **Setup** prompt appears only during POST

Note: The POST screen as pictured is for guideline purposes only.

The Power-On Self Test (POST)

Each time you turn on the computer, the system takes a few seconds to conduct a **POST**, including a quick test of the on-board RAM (memory).

As the **POST** proceeds, the computer will tell you if there is anything wrong. If there is a problem that prevents the system from booting, it will display a system summary and prompt you to run the **PhoenixBIOS Setup Utility**.

If there are no problems, the **PhoenixBIOS Setup Utility** prompt will disappear and the system will load the operating system. Once that starts, you can't get into the **PhoenixBIOS Setup Utility** without rebooting.

```
Phoenix TrustedCore(tm) NB
Copyright 1985-2005 Phoenix Technologies Ltd.
All Rights Reserved
BIOS Revision: 1.00.D05 ①
KBC/EC Firmware Revision: 1.00.P2

CPU = Genuine Intel (R) CPU ②      U1400 @ 1.20GHz
503M System RAM Passed ③
2048 KB L2 Cache
System BIOS shadowed
Video BIOS shadowed
Fixed Disk 0: HTC4260030G5CE00
ATAPI CD-ROM: UJDA775 DVD/CDRW
Mouse intialized

Press <F2> to enter SETUP ④
```

Figure 5 - 1
POST Screen

Failing the POST

Errors can be detected during the **POST**. There are two categories, “fatal” and “non-fatal”.

Fatal Errors

These stop the boot process and usually indicate there is something seriously wrong with your system. Take the computer to your service representative or authorized service center as soon as possible.

Non-Fatal Errors

This kind of error still allows you to boot. You will get a message identifying the problem (make a note of this message!) followed by the prompt:

- Press <F1> to resume
- <F2> to enter Setup

Press **F1** to see if the boot process can continue. It may work, without the correct configuration.

Press **F2** to run the **Setup** program and try to correct the problem. If you still get an error message after you change the setting, or if the “cure” seems even worse, call for help.

The Setup Program

The **Phoenix Setup** program tells the system how to configure itself and manage basic features and subsystems (e.g. port configuration).

Entering Setup

To enter the **PhoenixBIOS Setup Utility**, turn on the computer and press **F2** during the **POST**. The prompt (*Press F2 to Enter Setup*) seen in [Figure 5 - 1](#) on page [5 - 2](#) is usually present for a few seconds after you turn on the system. If you get a “Keyboard Error”, (usually because you pressed **F2** too quickly) just press **F2** again.

If you have enabled **Intel On-Screen Branding** (see [“Intel On-Screen Branding \(Advanced Menu\)” on page 5 - 9](#)) you can still click the mouse, or press Enter, and then choose *“Launch System Setup”* from the menu to access the **PhoenixBIOS Setup Utility**.

If the computer is already on, reboot using the **Ctrl + Alt + Delete** combination and then hold down **F2** when prompted. The *Setup* main menu will appear.

Setup Screens

The following pages contain additional advice on **portions** of the *Setup*.

Along the top of the screen is a menu bar with six (6) menu headings. When you select a heading, a new screen appears. Scroll through the features listed on each screen to make changes to *Setup*.

Instructions on how to navigate each screen are in the box along the bottom of the screen. If these tools are confusing, press **F1** to call up a **General Help** screen, and then use the arrow keys to scroll up or down the page.

The **Item Specific Help** on the right side of each screen explains the highlighted item and has useful messages about its options.

If you see an arrow ► next to an item, press **Enter** to go to a sub-menu on that subject. The sub-menu screen that appears has a similar layout, but the **Enter** key may execute a command.

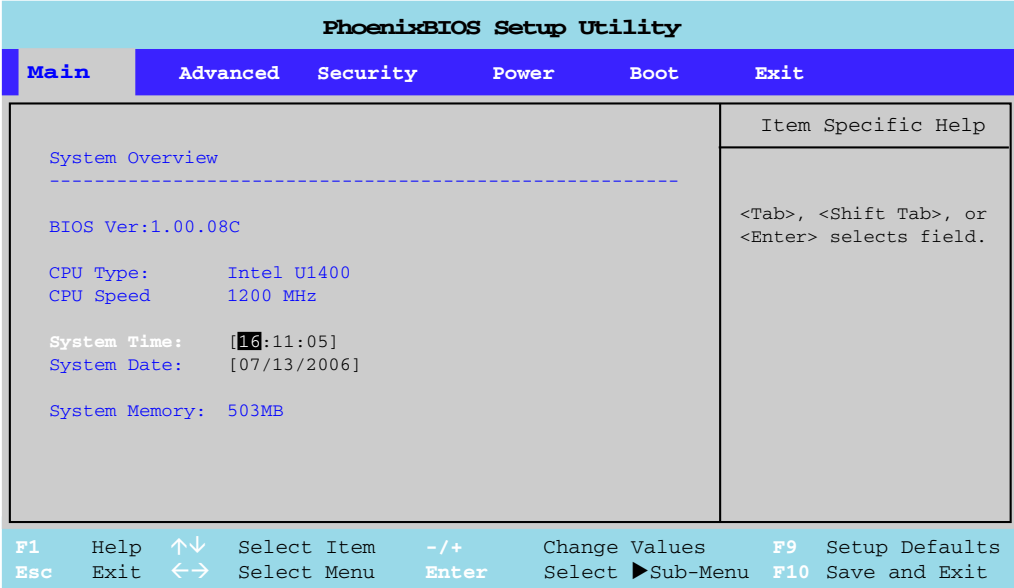


Setup Menus

The **Setup** menus shown in this section are for **reference** only. Your computer's menus will indicate the configuration appropriate for your model and options.

Main Menu

Figure 5 - 2
Main Menu



CPU Type and Speed

This item contains information on the CPU type and speed, and is not user configurable.

System Time & Date (Main Menu)

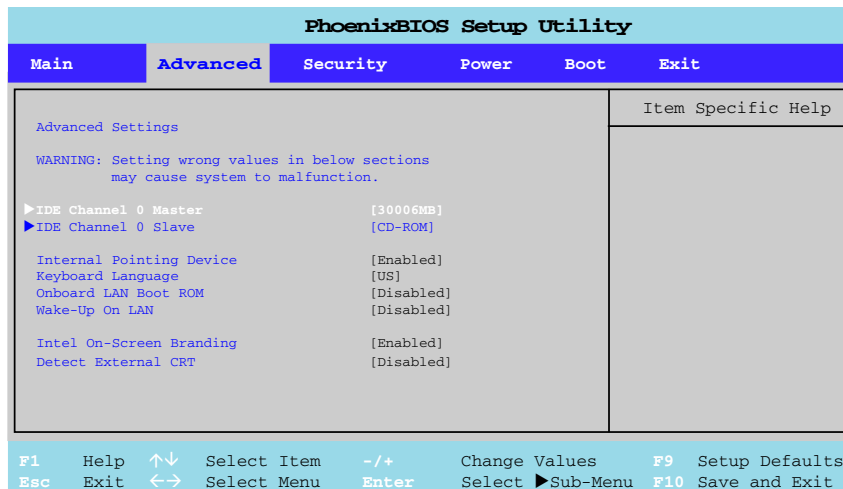
The hour setting uses the 24-hour system (i.e., 00 = midnight; 13 = 1 pm). If you can change the date and time settings in your operating system, you will also change these settings. Some applications may also alter data files to reflect these changes.

System Memory: (Main Menu)

This item contains information on the system memory, and is not user configurable. The system will auto detect the amount of memory installed.

Advanced Menu

Figure 5 - 3
Advanced Menu



IDE Channel 0 Master/Slave (Main Menu)

Press **Enter** here to open the sub-menu to show the configuration of hard disks and CD/DVD device(s) on the computer's IDE Channels. Use the **Auto** (Type:) setting to have the items configured automatically for you.

Internal Pointing Device (Advanced Menu)

Use this item to enable/disable the internal TouchPad (alternatively you can use the TouchPad power button to enable/disable the TouchPad).

Keyboard Language (Advanced Menu)

Use this item to choose either a **US** or **UK** Keyboard layout.

Onboard LAN Boot ROM (Advanced Menu)

This item may be used to enable/disable the network boot option.

Wake-Up On LAN (Advanced Menu)

Enable/Disable the Wake-Up On LAN option here. Wake-Up on LAN (WOL) is a standard that allows you to turn on a computer from another location over a network connection.

Intel On-Screen Branding (Advanced Menu)

Set this item to enable or disable the Intel logo display on the screen. If you enable this option the POST screen, as illustrated in *“The Power-On Self Test (POST)” on page 5 - 2*, will not appear. If you have enabled this item you can still click the mouse, or press Enter, and then choose *“Launch System Setup”* from the menu to access the **PhoenixBIOS Setup Utility**.

Detect External CRT (Advanced Menu)

You can disable automatic external CRT/display detection from this menu. Disabling this item will reduce power consumption, however you will need to enable the item if you want to attach an external CRT/display.



Security Menu

The changes you make here affect the access to the **Setup** utility itself, and also access to your machine as it boots up after you turn it on. These settings do not affect your machine or network passwords which will be set in your software OS.

Security Menu

PhoenixBIOS Setup Utility			
Main	Advanced	Security	Power Boot Exit
Supervisor Password Is: Clear User Password Is: Clear Set Supervisor Password [Enter] Set User Password [Enter] Password Check [Setup] Boot Sector Virus Protection [Disabled] Set HDD Password [Enter] HDD Password Is: Clear ▶ I/O Interface Security TPM Protection [Enabled]			Item Specific Help Install HDD Password. Setting 0-word password will clear it.
F1	Help	↑↓	Select Item -/+
Esc	Exit	↔	Select Menu Enter
		Change Values	F9 Setup Defaults
		Select ▶ Sub-Menu	F10 Save and Exit

Figure 5 - 4
Security Menu

Set Supervisor Password (Security Menu)

You can set a password for access to the **PhoenixBIOS Setup Utility**. This will not affect access to the computer OS, (only the **PhoenixBIOS Setup Utility**).

Set User Password (Security Menu)

You can set a password for **user mode** access to the **PhoenixBIOS Setup Utility**. This will not affect access to the computer OS, (only the **PhoenixBIOS Setup Utility**). Many menu items in the **PhoenixBIOS Setup Utility** utility cannot be modified in **user mode**. You can only set the user password after you have set the supervisor password.

Password Check (Security Menu)

Specify here when the system should prompt for a password. If the item is set to **“Setup”** then the password prompt will only appear when you attempt to access the **PhoenixBIOS Setup Utility**. If you set the item to **“Always”** the password prompt will appear when the computer boots up.

Note: To clear existing passwords press **Enter** and type the existing password, then press **Enter** for the new password (without typing any password entry) and **Enter** again to confirm the password clearance.

Boot Sector Virus Protection (Security Menu)

If you choose **“Enable”** this will protect against viruses being written to the hard disk boot sector (this is not a substitute for installing an anti-virus program - see **“Viruses” on page 8 - 4**).



Password Warning

If you set a boot password (Password on boot is “Enabled”), **NEVER** forget your password.

The consequences of this could be serious. If you cannot remember your boot password you must contact your vendor and you may lose all of the information on your hard disk.



Password Protection

Note that you should set a supervisor password in the BIOS to protect the TPM information from being tampered with by unauthorized users.

5

Set HDD Password (Security Menu)

Press Enter to create a password for access to the computer's hard disk when the computer boots up.

I/O Interface Security (Security Menu)

The submenus here allow you to enable/disable the interface controllers for Bluetooth, PC Card/Card Reader, USB/Finger Print ID, LAN and Audio/Modem.

TPM Protection (Security Menu)

You can enable/disable TPM protection from this menu. If you choose to disable TPM protection then a submenu will appear as per TPM Function below. **Note that you should disable TPM Protection when you are first going to initialize the TPM security module** (see *“Trusted Platform Module” on page 7 - 10*).

TPM Function (Security Menu)

If you disable the TPM function from the menu above this menu will appear to allow you to set the level of TPM functionality. You can enable/disable the TPM function altogether, or clear all existing TPM information but leave the function enabled, or clear all existing TPM information and disable the function.

Note: If you clear all TPM information it will be erased altogether and the information will need to be reconfigured.

Power Menu

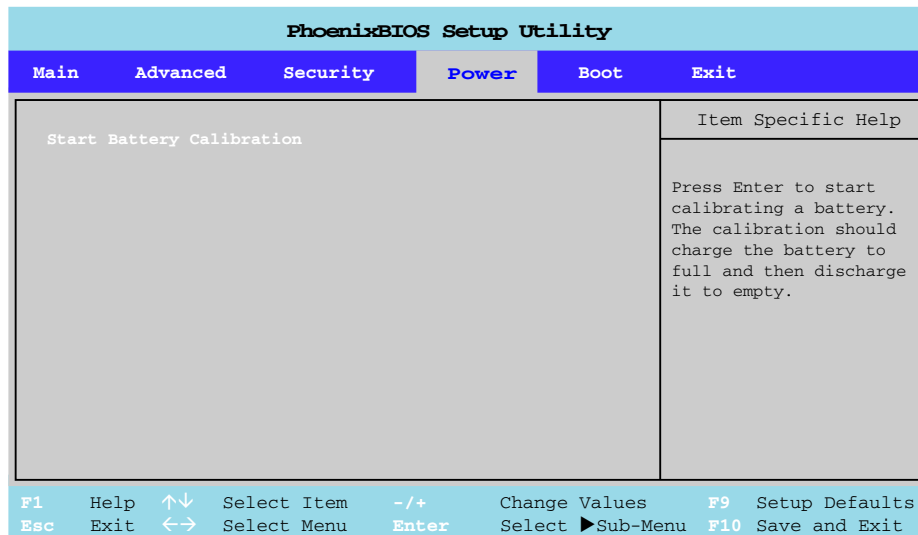


Figure 5 - 5
Power Menu


Power Menu

To optimize battery life it is necessary to discharge the battery completely and re-charge it again about every 30 days. This **Start Battery Calibration** menu will begin this process for you. Allow some time for this process as the computer needs to charge the battery fully, discharge it, and then charge it again.

Start Battery Calibration (Power Menu)

Press **Enter** to start the battery calibration process. The system will prompt you to plug-in the AC/DC adapter and will begin to charge the battery to full capacity.

Once the battery has reached full capacity you will then be prompted to remove the AC/DC adapter with the computer left on. This will completely discharge the battery. Once the computer has turned off the battery will be fully discharged.

Plug-in the AC/DC adapter and allow the computer to fully recharge the battery. You may work on your computer as the battery charges, however if the computer is powered on, and in use, it will take several hours to fully recharge the battery. When the computer is turned off but plugged into an electrical outlet, battery charge time is less. While the battery is charging the battery LED  will be orange; when the battery is fully charged the LED will be cleared.

Boot Menu

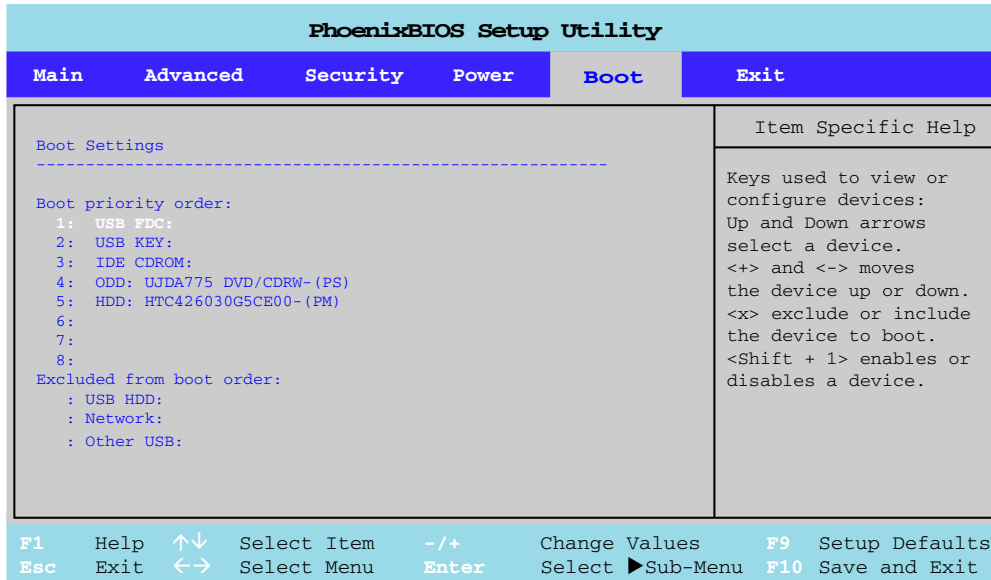
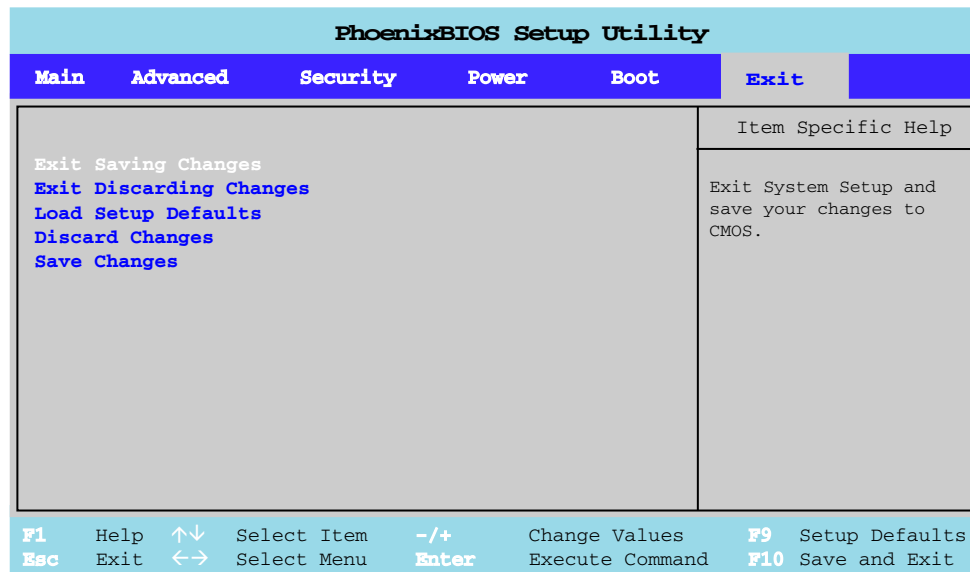


Figure 5 - 6
Boot Menu

When you turn the computer on it will look for an operating system (e.g. **WindowsXP**) from the devices listed in this menu, and **in this priority order**. If it cannot find the operating system on that device, it will try to load it from the next device in the order specified in the **Boot priority order**. Item specific help on the right is available to help you move devices up and down the order.

Exit Menu

Figure 5 - 7
Exit Menu



Choosing to **Discard Changes**, or **Exit Discarding Changes**, will wipe out any changes you have made to the **Setup**. You can also choose to restore the original **Setup** defaults that will return the **Setup** to its original state, and erase any previous changes you have made in a previous session.

Chapter 6: Upgrading The Computer

Overview

This chapter contains information on upgrading the computer. Follow the steps outlined to make the desired upgrades. If you have any trouble or problems you can contact your service representative for further help. Before you begin you will need:

- A small crosshead or Phillips screwdriver
- A small regular slotted (flathead) screwdriver
- An antistatic wrist strap

Before working with the internal components you will need to wear an antistatic wrist strap to ground yourself because static electricity may damage the components.

The chapter includes:

- Removing the Battery
- Upgrading the Hard Disk Drive
- Upgrading the Optical (CD/DVD) Device Drive
- Upgrading the System Memory (RAM)

Please make sure that you review each procedure before you perform it.



Warranty Warning

Please check with your service representative before undertaking any upgrade procedures to find out if this will VOID your warranty.



Power Safety Warning

Before you undertake any upgrade procedures, make sure that you have turned off the power, and disconnected all peripherals and cables (including telephone lines). It is advisable to also remove your battery in order to prevent accidentally turning the machine on.

When Not to Upgrade

These procedures involve opening the system's case, adding and sometimes replacing parts. You should **not** perform any of these upgrades if:

- Your system is still under warranty or a service contract
- You don't have all the necessary equipment
- You're not in the correct environment
- You doubt your abilities

Under any of these conditions, contact your service representative to purchase or replace the component(s).



Removal Warning

When removing any cover(s) and screw(s) for the purposes of device upgrade, remember to replace the cover(s) and screw(s) before turning the computer on.

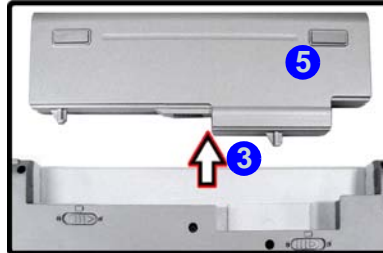
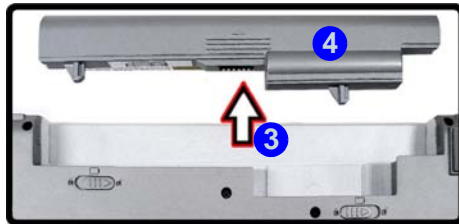
Upgrading the Processor

If you want to upgrade your computer by replacing the existing processor with a faster/new one you will need to contact your customer service representative. We recommend that you do not do this yourself, since if it is done incorrectly you may damage the processor or mainboard.

Removing the Battery

If you are confident in undertaking upgrade procedures yourself, for safety reasons it is best to remove the battery. Your computer may come with a **4 cell** battery **4**, or a **10 cell** battery **5**, depending on your purchase configuration.

1. Turn the computer **off**, and turn it over.
2. Slide the latch **1** in the direction of the arrow (it will remain in place).
3. Slide the latch **2** in the direction of the arrow, and hold it in place.
4. Slide the battery out of the computer in the direction of the arrow **3**.



10 Cell Battery Warning

Please be careful when using the 10 cell battery.

The battery is heavy and extends beyond the case of the computer. Moving the battery, or exposing it to shock or vibration may interrupt the battery contacts and cause the computer to shutdown.

Figure 6 - 1
Battery Removal



HDD System Warning

New HDD's are blank. Before you begin make sure:
You have backed up any data you want to keep from your old HDD.

You have all the CD-ROMs and FDDs required to install your operating system and programs.

If you have access to the internet, download the latest application and hardware driver updates for the operating system you plan to install. Copy these to a removable medium.

Figure 6 - 2
**Hard Disk Cover
Screws**

Upgrading the Hard Disk Drive

The hard disk drive can be taken out to accommodate other 2.5" or 1.8" Parallel (PATA) hard disks with a height of 9.5mm (h) (see *“Storage” on page C - 3*). Follow your operating system's installation instructions, and install all necessary drivers and utilities (see *“Driver Installation” on page 4 - 5*), when setting up a new hard disk.

1. Turn **off** the computer, and turn it over and remove the battery.
2. Locate the hard disk bay cover and remove the screws from points **1** - **3**.



3. Remove the hard disk bay cover **4** (and foam top cover **5** for 1.8" hard disks).

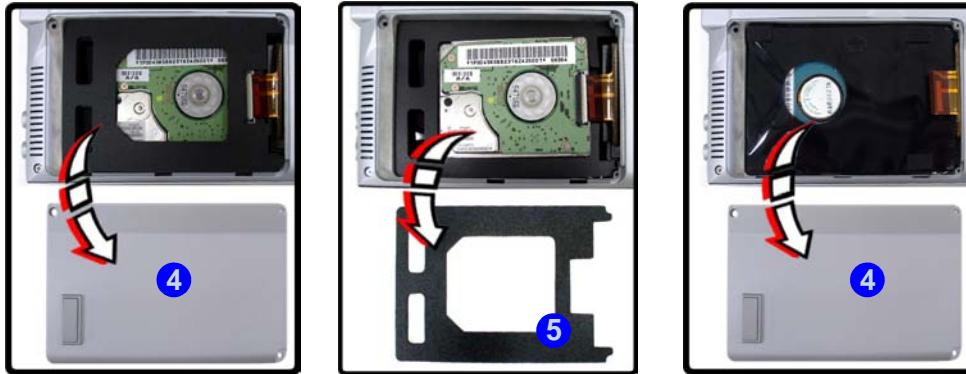


Figure 6 - 3
**Hard Disk Bay
Cover Removal**

4. Carefully lift the hard disk assembly up and disconnect the cable at point **6**.

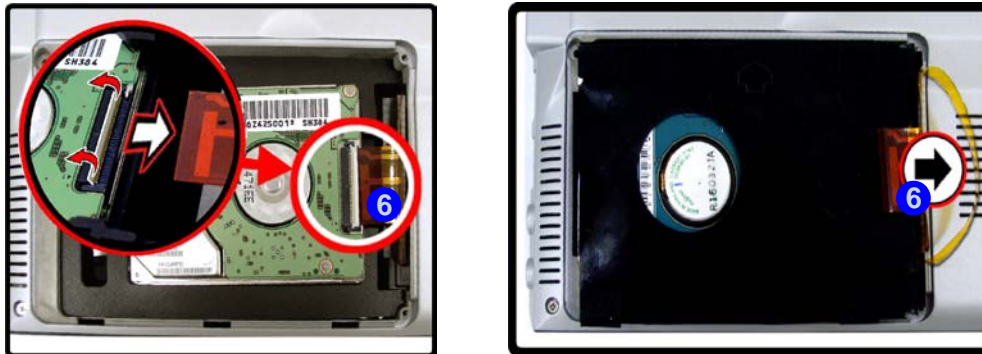
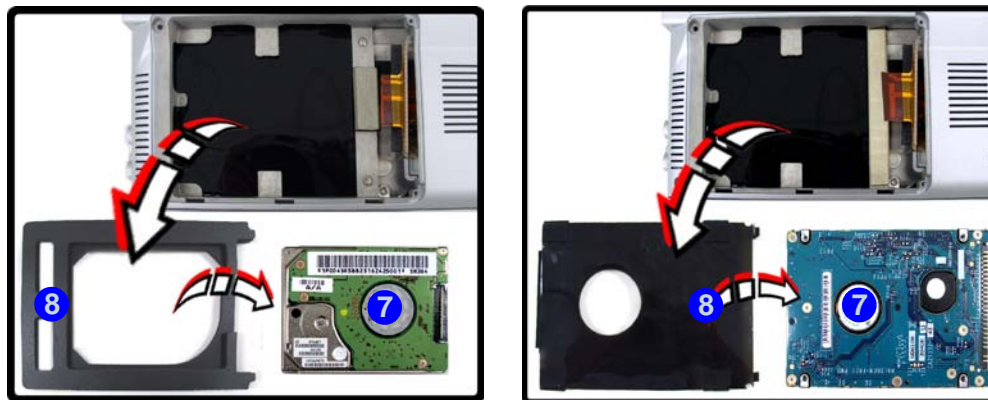


Figure 6 - 4
Cable Disconnect

5. Remove the hard disk **7** from the bay, and then remove the case **8**.

Figure 6 - 5
Hard Disk Removal



6. Reverse the process to install any new hard disk; however **if you are replacing your hard disk with a hard disk of a different size from that originally provided in the bay, then see overleaf.**

Changing Hard Disk Sizes

1. In your original packaging you will be provided with a case and a protective gasket appropriate for your hard disk.

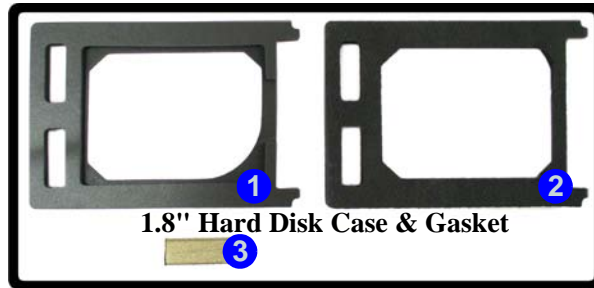


Figure 6 - 6
Hard Disk Cases & Protective Gaskets

1. 1.8" HDD Bottom Case
2. 1.8" HDD Top Case
3. 1.8" HDD Gasket
4. 2.5" HDD Case
5. 2.5" HDD Gasket

2. Remove the original gasket from its location in the bay.

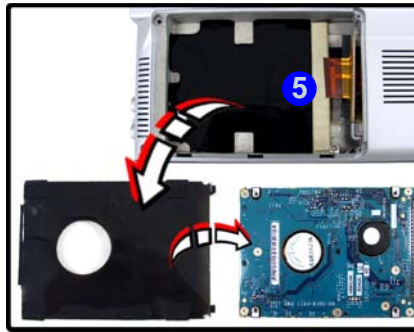
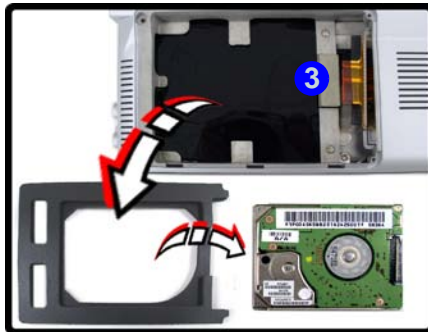


Figure 6 - 7
Gasket Location

3. Remove the backing from the new protective gasket.
4. Follow the instructions below, depending on which disk you are installing.

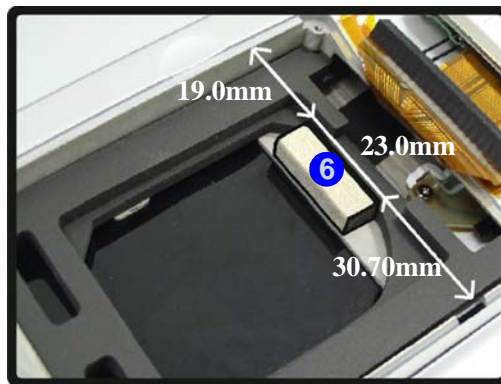
If you are replacing a 1.8" hard disk with a 2.5" hard disk:

- Stick the 2.5" protective gasket in the appropriate location **5** (*Figure 6 - 7*).
- Insert the 2.5" hard disk into the case, attach it to the connector and replace the case cover and screws.

If you are replacing a 2.5" hard disk with a 1.8" hard disk:

- Place the foam bottom cover inside the bay.
- Stick the 1.8" protective gasket in the location illustrated **6** (*Figure 6 - 8*) as per the approximate dimensions outlined.
- Attach the disk to the connector, place the foam top cover inside the bay and replace the case cover and screws.

Figure 6 - 8
**1.8" Gasket
Location**



Upgrading the Optical (CD/DVD) Device Drive

1. Turn **off** the computer, and turn it over and remove the battery.
2. Locate the ODD release cover and remove the screw **1** and cover **2**.
3. Use a screwdriver to carefully push out the optical device at point **3**.
4. Reverse the process to install the new device.

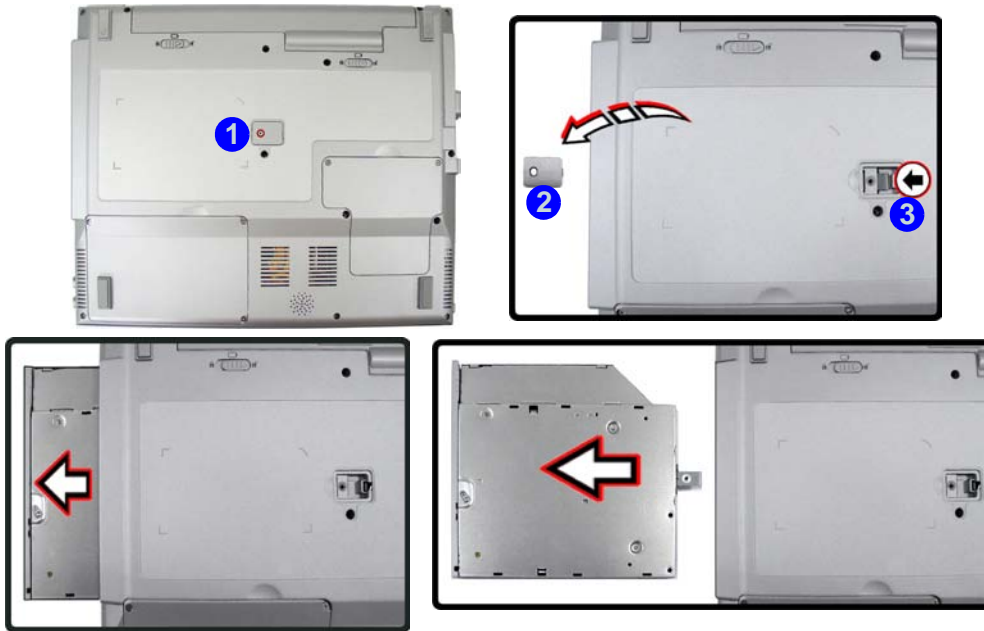


Figure 6 - 9
**Optical Device
Drive Removal**

Upgrading the System Memory (RAM)

The computer has **one** memory socket for 200 pin Small Outline Dual In-line (SO-DIMM) **DDRII (DDR2)** type memory modules (see *“Memory” on page C - 2* for details of supported module types). The total memory size is automatically detected by the POST routine once you turn on your computer.

1. Turn **off** the computer, and turn it over and remove the battery.
2. Locate the component bay cover and remove screws **1** & **2**.

Figure 6 - 10
**Component Bay
Cover Screws**



- Carefully remove the component bay cover **3**.



Figure 6 - 11
**Component Cover
Removal**

- Gently pull the two release latches **4** & **5** on the sides of the memory socket.



Figure 6 - 12
**RAM Module
Release**

Upgrading The Computer



Contact Warning

Be careful not to touch the metal pins on the module's connecting edge. Even the cleanest hands have oils which can attract particles, and degrade the module's performance.

- The RAM module **6** will pop-up, and you can remove it.



Figure 6 - 13
**RAM Module
Removal**

- Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
- The module's pin alignment will allow it to only fit one way. Make sure the module is seated as far into the slot as it will go. **DO NOT FORCE** the module; it should fit without much pressure.
- Press the module in and down towards the mainboard until the slot levers click into place to secure the module.
- Replace the cover and screws.
- Restart the computer to allow the BIOS to register the new memory configuration as it starts up.

Chapter 7: Modules & Options

Overview

This chapter contains the information on the **Bluetooth**, **WLAN** and **Security** modules which may come with your computer, depending on the configuration purchased. If you are unsure please contact your service representative.

- Bluetooth Module
- Intel PRO/Wireless WLAN Module
- Security Modules (Fingerprint & TPM)



Wireless Device Operation Aboard Aircraft

The use of any portable electronic transmission devices aboard aircraft is usually prohibited. Make sure the module(s) are **OFF** if you are using the computer aboard aircraft.




Wireless Device Operation Aboard Aircraft

The use of any portable electronic transmission devices aboard aircraft is usually prohibited. Make sure the module(s) are OFF if you are using the computer aboard aircraft.

Use the **Fn + F2** key combination to toggle power to the optional Bluetooth module, and check the indicator to see if the module(s) is powered on or not.

7

Bluetooth Module

If you have included a **Bluetooth** module in your purchase option, make sure that the **optional** Bluetooth module is on (the  LED will be orange) before installing the Bluetooth driver.

Use the **Fn + F2** key combination (see *“Function Keys” on page 1 - 8*) to **toggle power to the Bluetooth module**. Make sure you install the drivers in the order indicated in *Table 4 - 1, on page 4 - 6*.


Bluetooth Driver Installation

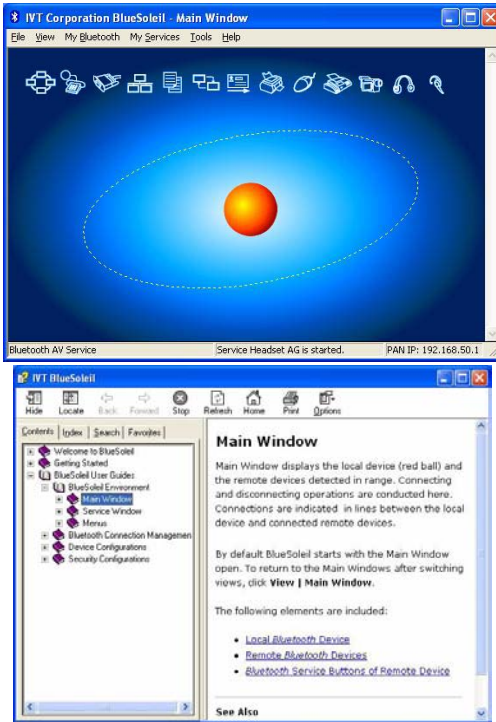
1. Make sure the module is powered on, and then insert the *Device Drivers & Utilities + User's Manual CD-ROM* into the CD/DVD drive.
2. Click **Install WinXP Drivers** (button), and then click **10.Install Bluetooth Driver > Yes**.

OR

(Click **Start** (menu) > **Run...** and navigate (**Browse..**) to **D:\Drivers\Bluetooth\SETUP.exe** and click **OK**.)

3. Click **Install Drivers and Application Software**.
4. Choose the language you prefer, and click **OK > Next**.
5. Click the button to accept the license agreement, and then click **Next**.
6. Click **Next > Next > Install**.
7. Click **Finish > Yes** to restart the computer.
8. The **IVT Corporation BlueSoleil - Main Window** will appear on restart.

- Configure the settings by going to the **IVT Corporation BlueSoleil - Main Window** control panel (**Start > Programs/All Programs > IVT BlueSoleil > BlueSoleil**), or click the taskbar icon .



Send To Bluetooth

Right-Click to select any file and scroll down to **Send To... Bluetooth Device**.



User Guide

View the BlueSoleil User Guides from the **Help** Menu (or press the **F1** key) in the **IVT Corporation BlueSoleil - Main Window**.

The Manual in Adobe .pdf format is on the **Device Drivers & Utilities + User's Manual CD-ROM**.

Click **Browse CD** (button) and navigate (Browse...) to **D:\Drivers\Bluetooth\Manual\Manual.pdf**.

Figure 7 - 1
Bluetooth Control Panel & User Guides





Wireless Device Operation Aboard Aircraft

The use of any portable electronic transmission devices aboard aircraft is usually prohibited. Make sure the module(s) are OFF if you are using the computer aboard aircraft.

Use the **hot key** to toggle power to the WLAN module, and check the indicator to see if the module is powered on or not (see [Table 1 - 2, on page 1 - 7](#) / [Table 1 - 3, on page 1 - 8](#)).

Intel PRO/Wireless WLAN Module

If you have included an **Intel PRO/Wireless 3945ABG (802.11a/b/g)** PCIe WLAN module in your purchase option, make sure that the Wireless LAN module is on (the  LED will be green) before installing the driver.


Use the hot key **ON  OFF** (see [Table 1 - 2, on page 1 - 7](#)) to toggle power to the Wireless LAN module (**make sure you install the drivers in the order indicated in [Table 4 - 1, on page 4 - 6](#)**).

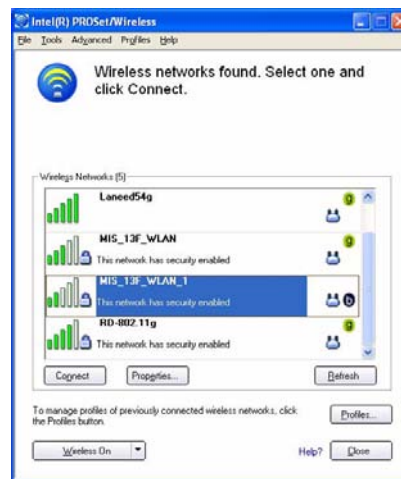
To get help on the network settings you can view the **User Guide** from the **Intel PROSet / Wireless** menu.



Figure 7 - 2
Installation Screen

Intel WLAN Driver Installation

1. Make sure the module is powered on, and then insert the *Device Drivers & Utilities + User's Manual CD-ROM* into the CD/DVD drive.
2. Click **Install WinXP Drivers** (button), and then click **11.Install WLAN Driver > Yes**.
OR
(Click **Start** (menu) > **Run...** and navigate (**Browse..**) to **D:\Drivers\WLAN\Autorun.exe** and click **OK**.)
3. Click **Install Software** (button).
4. Click the button to accept the license and click **Next > Next > OK**.
5. Click **OK** to complete the installation.
6. Configure the settings from the **Intel (R) PROSet Wireless** control panel (**Start > Programs/All Programs > Intel PROSet Wireless**), or double-click the taskbar icon .



User Guide

You can view the User Guides from the *Device Drivers & Utilities + User's Manual CD-ROM*.

Click **Install Win XP Drivers** and then click the **Unlock** button. Click **11.Install WLAN Driver**.

Click **View User Guide** (button) as per [Figure 7 - 2 on page 7 - 4](#).

Figure 7 - 3
**Intel PROSet/
Wireless**



Password Warning

If you set passwords for any of the security modules, **NEVER** forget your password.

The consequences of this could be serious. If you cannot remember your boot password you must contact your vendor and you may lose all of the information on your hard disk.

Security Modules (Fingerprint & TPM)

The encrypted channel between the **Trusted Platform Module security chip** and the **fingerprint reader** with **Protector Suite Software** provides a high level of security for your computer. A further level of security and control is provided in the BIOS (see *“Security Menu” on page 5 - 10*).

The **fingerprint reader** and **Protector Suite Software** allow you to:

- Access or Lock your computer
- Protect sensitive files
- Display and file your favorite web pages
- Fill in frequently used dialogs
- Run your favorite applications

The **TPM security chip** allows you to create and manage digital certificates for user and platform authentication. This type of security is usually administered within large enterprises and organizations, and therefore requires implementation by a system administrator before users can access security features.

Individual users can use the TPM as an authentication with the fingerprint reader.


Fingerprint Reader

Make sure you have installed the **Trusted Platform Module** (see page 4 - 9) and **Fingerprint** (see page 4 - 10) drivers before configuring the fingerprint and security system.

Make sure you have administrator's rights to your computer, and have a **Windows** password enabled for full security protection.


Before beginning the enrollment process it is recommended that you go through the fingerprint tutorial. To run the tutorial click **Start > Programs/All Programs > Protector Suite QL > Fingerprint Tutorial**.

User Enrollment

1. Click **Start > Programs/All Programs > Protector Suite QL > User Enrollment**, or double click the taskbar icon .
2. Click **Next** and select "**Enrollment to the biometric device**", and click **Finish**.
3. If you have not set a **Windows** password you will be prompted to do so (**note:** If you have not set a password **Protector Suite QL** cannot secure access to your computer).
4. Click **Next**.
5. You will then be prompted to enter your **Windows** password.
6. Click **Next > Next** (if you have the "**Run interactive tutorial**" tickbox selected you will run through the Fingerprint Tutorial).



Help & Manual

Right-click the taskbar icon  to bring up the menu to select **Help**.

Insert the *Device Drivers & Utilities + User's Manual CD-ROM* and click **Install WinXP Drivers** (button). Click **Unlock** (button) and then click **8.Install Fingerprint Driver > Yes**.

Click **Documentation** to open the folder containing the manual in .pdf format.

To install the Adobe Acrobat Reader software to read the file, insert the *Device Drivers & Utilities + User's Manual CD-ROM* and click **User's Manual** (button), and click **Install Acrobat Reader** (button).

Modules & Options



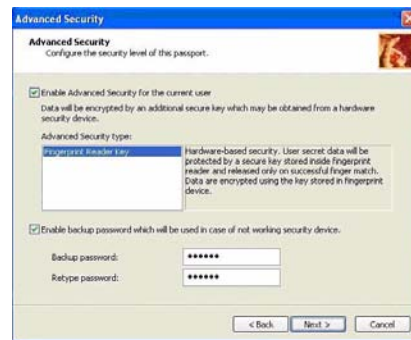
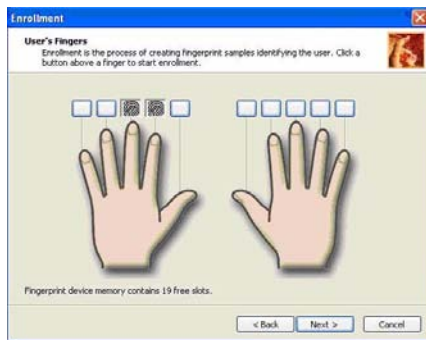
Fingerprint Enrollment


Note that it is strongly recommended that you **enroll more than one finger in case of injury etc.**

7

Figure 7 - 4
Fingerprint Enrollment & Advanced Security

- Click **Next** for each window of the tutorial (you can click the button to “**skip tutorial**” at any time).
- Click the button above any of the fingers to begin the enrollment process for that finger.
- Swipe the finger three times to enroll that finger.
- Repeat the process for all the fingers you wish to enroll (see sidebar), and then click **Next**.
- Make sure you have a tick in the “**Enable Advanced Security for the current user**” tickbox (the Fingerprint Reader Key will appear in the “**Advanced Security type**” box).



- It is advisable that you enable a backup password.
- Click **Next > Finish** (click **close** to quit the **Biomenu** information window).
- Right-click the taskbar icon  to bring up the menu that allows you to **Edit Fingerprints**, start **Control Center**, access the **Help** menu etc. You can also run the **Control Center** etc. from the **Programs/All Programs** menu.

15. See **“Help & Manual” on page 7 - 7** for further details.
16. If you swipe your finger over the reader at any time you can access the **Biomenu** to **lock the computer**, **register websites**, **Unlock My Safe**, open the **Control Center** and access the **Help** menu.
17. The **Control Center** allows you to change the **Settings**, **enroll Fingerprints** and get **Help**.
18. The **My Safe** storage folder on the desktop allows you to store documents with added security protection.
19. Double-click the folder, send then swipe a finger to open the folder.
20. Add a backup password for **My Safe**, click **Next** and then set the initial size of the folder.
21. Click **Finish** to initialize the **My Safe** folder.
22. You can now initialize the **TPM** security chip (see over).
23. After Initializing the TPM (and setting up a user) you can then initialize the TPM for use with the Protector Suite Software (see page **7 - 15**).



Control Center

To use your Fingerprint reader to replace the hard disk and/or power on passwords, enable the option from the **Power-on Security** item in the **Control Center**.

Use the **TPM** item in **System Settings** to initialize TPM for use with the **Protector Suite** software.

7

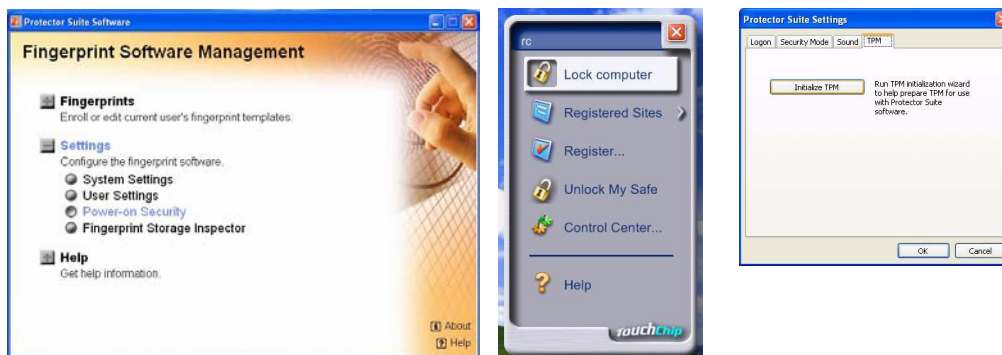


Figure 7 - 5
Control Center & Biomenu



Backup & Archive

Note that it is very important to perform routine backup and archive procedures.

This is the only way to recover if the TPM fails, the information is cleared or the computer develops a problem.

Backup should be performed to a location other than the computer itself. It is not possible to recover any TPM protected data if there is no backup available.

Trusted Platform Module

Before setting up the TPM functions you must initialize the security platform.

Initializing TPM

1. Restart the computer.
2. Enter the **PhoenixBIOS Setup Utility** by pressing **F2** during the **POST** (or press **Enter** and select **Launch System Setup**).
3. Use the arrow keys to select the **Security** menu.
4. Select **TPM Protection** and set the item to **Disabled**.
5. Select **TPM Function** and set the item to **Enabled** (or **Clear & Enabled** if you want to clear previous TPM information).
6. Press **F10** to save the changed BIOS information, exit the BIOS and restart the computer.

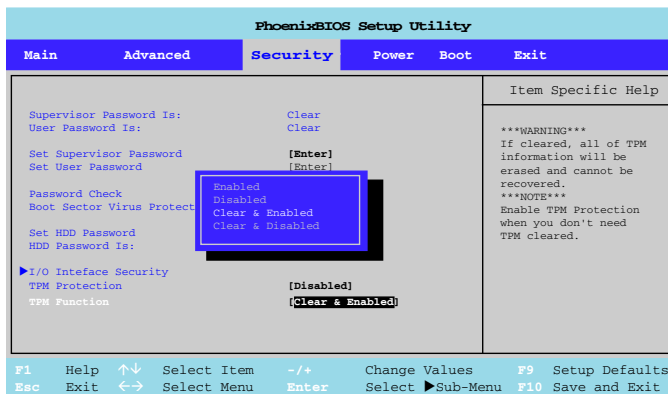

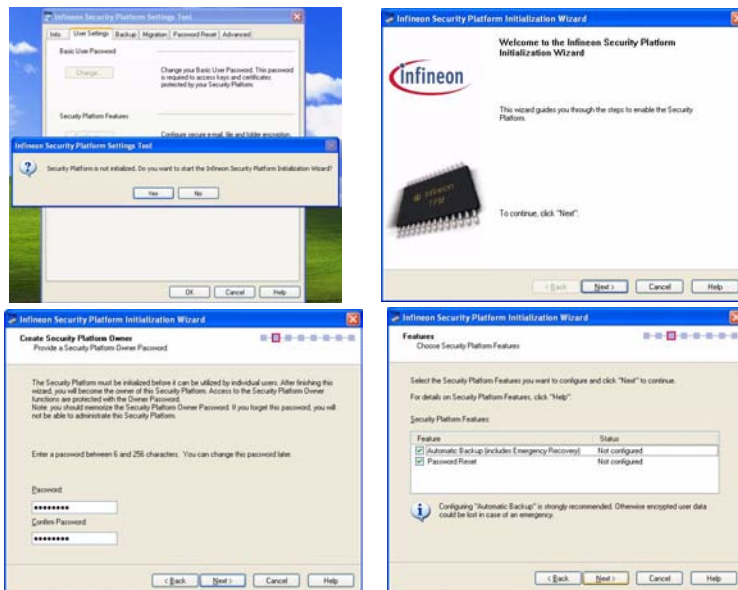


Figure 7 - 6
TPM Protection
Disabled

7. Click **Start > Programs/All Programs > Infineon Security Platform Solution > Manage Security Platform**, or double-click the taskbar icon , to bring up the **Infineon Security Platform Initialization Wizard**.
8. Click **User Settings** (tab), and then click **Yes**.
9. Click **Next** and select either **Initialize a new Security Platform**, or **Restore a Security Platform from a Backup Archive**, and click **Next**.



10. Enter and confirm a new **owner** password and click **Next**.
11. Select the **Features** you want to configure and click **Next**.



Owner Password

It is recommended that you set a different owner password from the administrator password for added security.

Figure 7 - 7
Initialization Screens

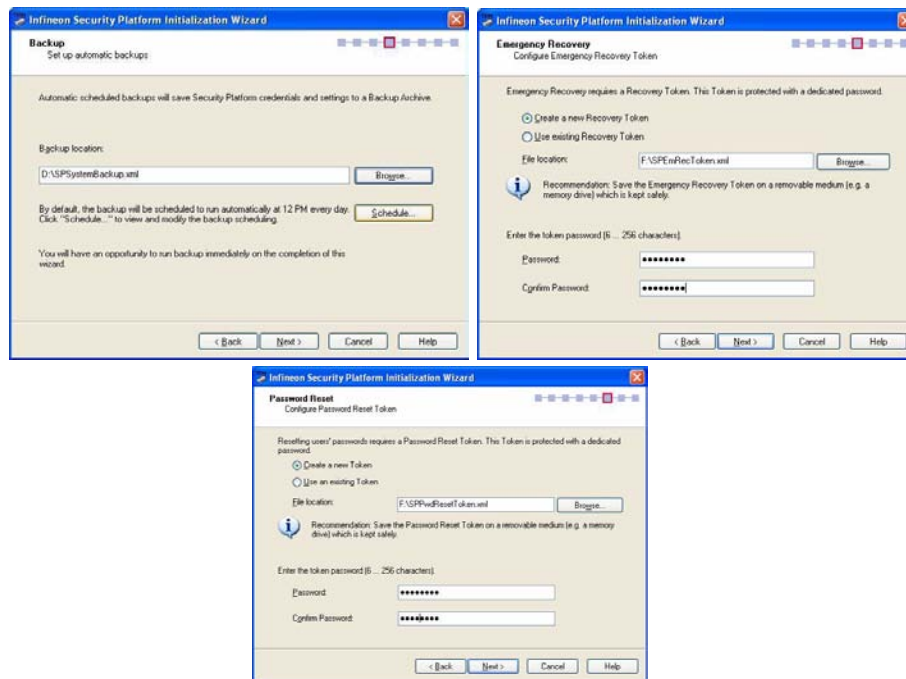


Recovery & Password Reset Tokens

It is strongly recommended that you save your Recovery/Password Reset Tokens to a removable medium (e.g. a USB flash memory drive), and that you backup this/these token(s) and save it/them in a safe location.

Figure 7 - 8
Backup and Emergency Recovery

12. If you have chosen to set an **Automatic Backup** you will need to browse to a location for the backup, and you can also **Schedule** any backups required.



13. Click **Next** (you can now create an emergency **Recovery Token** and set a password).
14. Click **Next** (you can now create a **Password Reset Token** and set a password).

15. Click **Next** to confirm the settings.
16. If you want to use the TPM for this account select **Start Security Platform User Initialization Wizard** and click **Finish**.




Figure 7 - 9
Initialization
Screens

17. The Wizard will now continue to take you through setting up a user (or see below).

TPM User Set Up

To use the TPM you must be set up as a user. You can manually add users as follows:

1. Click **Start > Programs/All Programs > Infineon Security Platform Solution > Manage Security Platform**, or double-click the taskbar icon , to bring up the **Infineon Security Platform Initialization Wizard**.
2. Click **User Settings** (tab), and then click **Yes**.
3. Click **Next**.
4. Set your **Basic User Password**, and click **Next**.

Modules & Options



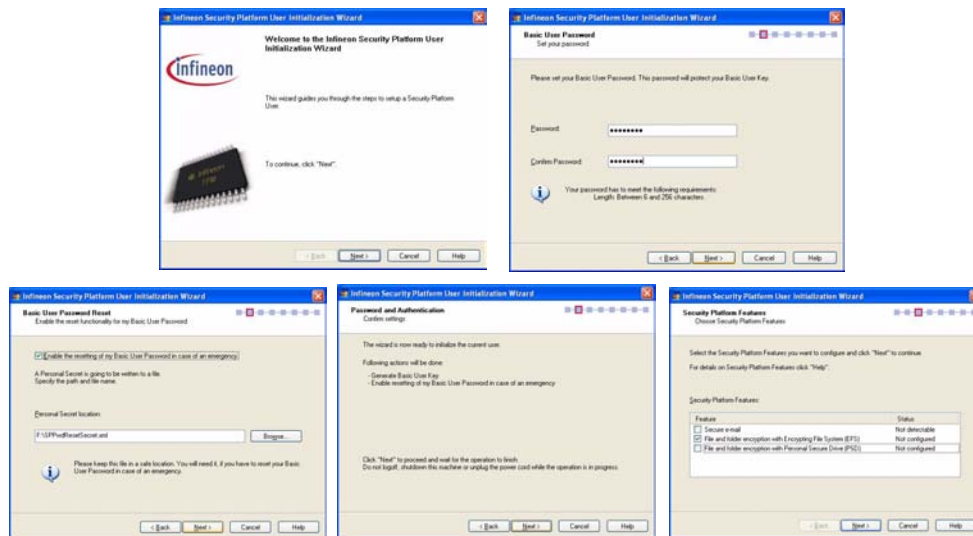
Help

To learn more about all the features click **Start > Programs/All Programs > Infineon Security Platform Solution > Help on Security Platform**.

7


Figure 7 - 10
User Initialization Screens

5. Save a location for a **Basic User Password** reset file, and click **Next**.



6. Click **Next** to confirm the settings.
7. Select the **Security Platform Features** you require:
Note: Make sure you select **File and folder encryption with Encrypting File System** to have the TPM work with the Fingerprint ID.
8. Click **Next**.
9. The wizard will then guide you through the setup procedures for the features you have enabled.
10. You will then need to restart the computer.

Initialize the TPM for use with the Protector Suite Software

1. Click **Start > Programs/All Programs > Protector Suite QL > Control Center**, or select the **Control Center** from the **Biomenu** or right click the taskbar icon  and select **Start Control Center**.
2. Click **Settings > System Settings**.
3. Click **TPM** (tab).

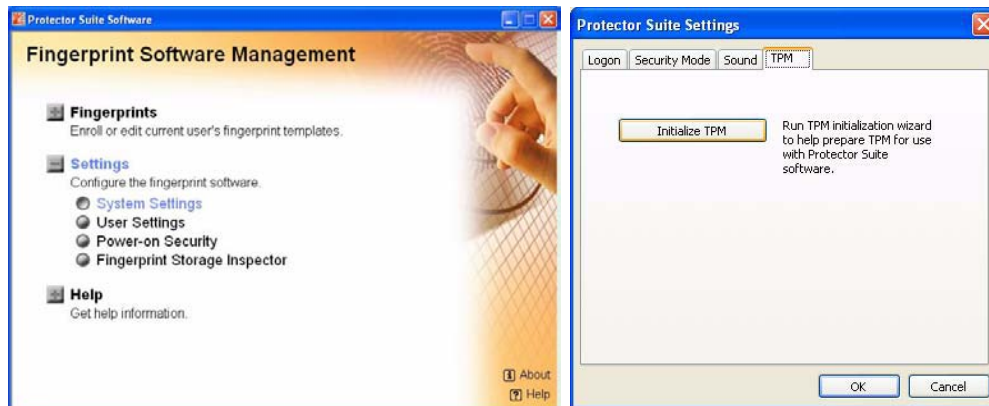


Figure 7 - 11
Initialize TPM

4. Click **Initialize TPM** (button).
5. Click **Next > Finish** and close the control panels.

Chapter 8: Troubleshooting

Overview

Should you have any problems with your computer, before consulting your service representative, you may want to try to solve the problem yourself. This chapter lists some common problems and their possible solutions. This can't anticipate every problem, but you should check here before you panic. If you don't find the answer in these pages, make sure you have followed the instructions carefully and observed the safety precautions in the preface. If all else fails, talk to your service representative. You should also make a record of what happened and what remedies you tried.

Of course, if something goes wrong, it will happen at the most inconvenient time possible, so you should preview this section just in case. If, after you've tried everything, and the system still won't cooperate, try turning it off for a few minutes and then rebooting. You will lose any unsaved data, but it may start working again. Then call your service representative.

Basic Hints and Tips

Many of the following may seem obvious but they are often the solution to a problem when your computer appears not to be working.

- **Power** - Is the computer actually plugged into a working electrical outlet? If plugged into a **power strip**, make sure it is actually working. Check the **LED Indicators** (see *“LED Indicators” on page 1 - 6*) to see the computer’s power status.
- **Connections** - Check all the **cables** to make sure that there are no **loose connections** anywhere.
- **Power Savings** - Make sure that the system is not in **Hibernate** or **Stand by** mode by pressing the keys configured in your *Power Management/Power Options* (see *“Configuring the Power Button” on page 3 - 8*), the **Fn + F1** key combination, or power button to wake-up the system.
- **Brightness** - Check the brightness of the screen by pressing the **Fn + F5 and F6** keys to adjust the brightness.
- **Display Choice** - Press **Fn + F7** to make sure the system is not set to “external only” display.
- **Boot Drive** - Make sure there are no **optical media and/or USB storage devices** in any connected drive when you start up your machine (this is a common cause of the message *“Invalid system disk - Replace the disk, and then press any key” / “Remove disks or other media. Press any key to restart”*).

Backup and General Maintenance

- Always **backup** your important data, and keep copies of your OS and programs safe, but close to hand. Don't forget to note the **serial numbers** if you are storing them out of their original cases, e.g. in a CD wallet.
- Run **maintenance programs** on your hard disk and OS as often as you can. You may schedule these programs to run at times when you are not using your computer. You can use those that are provided free with your OS, or buy the more powerful dedicated programs to do so.
- Write down your passwords and keep them safe (away from your computer). This is especially important if you choose to use a password for the BIOS (see *“Security Menu” on page 5 - 10*).
- Keep copies of vital **settings files** such as network, dialup settings, mail settings etc.(even if just brief notes).



Warranty

The CPU is not a user serviceable part. Opening this compartment, or accessing the CPU in any way, may violate your warranty.

Viruses

- Install an **Anti-Virus** program and keep the **definitions file** (the file which tells your program which viruses to look for) up to date. New computer viruses are discovered daily, and some of them may seriously harm your computer and cause you to lose data. **Anti-Virus** programs are commercially available and the **definitions file updates** are usually downloadable directly from the internet.
- Be careful when opening e-mail from sources you don't know. **Viruses** are often triggered from within **e-mail attachments** so take care when opening any attached file. You can configure most **Anti-Virus** programs to check all **e-mail attachments**. **Note:** You should also beware of files from people you know as the virus may have infected an **address book** and been automatically forwarded without the person's knowledge.
- Keep a "**Bootable CD-ROM/DVD-ROM**" (this disk provides basic information which allows you to startup your computer) handy. You may refer to your OS's documentation for instructions on how to make one, and many **Anti-Virus** programs will also provide such a disk (or at least instructions on how to make one).


Upgrading and Adding New Hardware/Software

- Do not be tempted to make changes to your **Windows Registry** unless you are very sure of what you are doing, otherwise you will risk severely damaging your system.
- Don't open your computer or undertake any repair or upgrade work if you are not comfortable with what you are doing.
- Read the **documentation**. We can assume, since you are reading this that you are looking at the computer's manual, but what about any new peripheral devices you have just purchased? Many problems are caused by the installation of new hardware and/or software. Always refer to the documentation of any new hardware and/or software, and pay particular attention to files entitled "**READ ME**" or "**READ ME FIRST**".
- When installing a new device always make sure the device is powered on, and in many cases you will need to restart the computer. Always check that all the cables are correctly connected.
- Make sure you have installed the **drivers** for any new hardware you have installed (latest **driver files** are usually available to download from vendor's websites).

Troubleshooting


- Thoroughly check any **recent changes** you made to your system as these changes may affect one or more system components, or software programs. If possible, go back and undo the change you just made and see if the problem still occurs.
- Don't over complicate things. The less you have to deal with then the easier the source of the problem may be found; **Example** - if your computer has many devices plugged into its ports, and a number of programs running, then it will be difficult to determine the cause of a problem. Try disconnecting all of the devices and restarting the computer with all the peripheral devices unplugged. A process of elimination (adding and removing devices and restarting where necessary) will often find the source of a problem, although this may be time consuming.

Problems & Possible Solutions




Problem	Possible Cause - Solution
You turned on the power but it doesn't work.	<i>Battery missing / incorrectly installed.</i> Check the battery bay, make sure the battery is present and seated properly (the design of the battery only allows it to go in one way). Make sure there's nothing interfering with the battery contacts.
The battery LED power indicator  , is blinking orange.	<i>Low Battery.</i> Plug in the DC power source. If the computer doesn't start up immediately, turn it off then on again.
You are losing battery power too quickly.	<i>The system is using too much power.</i> If your OS has a <i>Power Options</i> scheme (see <i>"Power Schemes"</i> on page 3 - 4) check its settings. You may also be using a PC Card device that is drawing a lot of power.
Actual battery operating time is shorter than expected.	<p><i>The battery has not been fully discharged before being recharged.</i> Make sure the battery is fully discharged and recharge it completely before reusing (see <i>"Battery Information"</i> on page 3 - 9).</p> <p><i>Power Options have been disabled.</i> Go to the Control Panel in Windows and re-enable the options.</p> <p><i>A peripheral device or PC Card is consuming a lot of power.</i> Turn off the unused device to save power.</p>

Troubleshooting

Problem	Possible Cause - Solution
The computer feels too hot.	<p>Make sure the computer is properly ventilated and the Vent/Fan intakes are not blocked. If this doesn't cool it down, put the system into Hibernate mode or turn it off for an hour. Make sure the computer isn't sitting on a thermal surface (see <i>"Overheating" on page 1 - 12</i>). Make sure you're using the correct adapter.</p> <p>Make sure that your notebook is completely powered off before putting it into a travel bag (or any such container). Putting a notebook which is powered on in a travel bag may cause the Vent/Fan intakes to be blocked.</p>
Nothing appears on screen.	<p><i>The system is in a power saving mode.</i> Toggle the Fn + F1 sleep/resume key combination (see <i>"Sleep Button" on page 3 - 8</i>).</p> <p><i>The screen controls need to be adjusted.</i> Toggle the screen control key combinations Fn + F5/F6. If you're connected to an external monitor, make sure it's plugged in and turned on. You should also check the monitor's own brightness and contrast controls.</p> <p><i>The computer is set for a different display.</i> Toggle the screen display key combination, Fn + F7. If an external monitor is connected, turn it on.</p> <p><i>The screen saver is activated.</i> Press any key or touch the TouchPad.</p>
No image appears on the external monitor I have plugged in and powered on.	<p><i>You haven't installed the video driver and configured it appropriately from the Control Panel.</i> See <i>"Intel Video Driver Controls" on page B - 1</i> for instructions on installing and configuring the video driver.</p>

Problem	Possible Cause - Solution
You forget the boot password.	<i>If you forget the password, you may have to discharge the battery of the CMOS. Contact your service representative for help.</i>
<div>  <p>Password Warning</p> <p>If you choose to set a boot password, NEVER forget your password. The consequences of this could be serious. If you cannot remember your boot password you must contact your vendor and you may lose all of the information on your hard disk.</p> </div>	
The sound cannot be heard or the volume is very low.	<i>The volume might be set too low. Check the volume control in the Volume Control Panel in the Windows taskbar, or use the key combination Fn + F9 and F10 (see “Audio Features” on page 2 - 9) to adjust.</i>
The compact disc cannot be read.	<i>The compact disc is dirty. Clean it with a cleaner kit.</i>
The compact disc tray will not open when there is a disc in the tray.	<i>The compact disc is not correctly placed in the tray. Gently try to remove the disc using the eject hole (see “Loading Discs” on page 2 - 3).</i>
The DVD regional codes can no longer be changed.	<i>The code has been changed the maximum 5 times. See “DVD Regional Codes” on page 2 - 5.</i>

Troubleshooting







Problem	Possible Cause - Solution
Unwelcome numbers appear when typing.	If the LED  is lit, then Num Lock is turned ON . (see “LED Indicators” on page 1 - 6).
<div>  <h3>Other Keyboards</h3> <p>If your keyboard is damaged or you just want to make a change, you can use any standard USB keyboard. The system will detect and enable it automatically. However special functions/hot keys unique to the system's regular keyboard may not work.</p> </div>	
The system freezes or the screen goes dark.	<i>The system's power saving features have timed-out.</i> Use the AC/DC adapter, press the sleep (Fn + F1) key combination, or press the power button if no LEDs are lit.
The system never goes into a power saving mode.	Power Options features are not enabled. Go to the Windows Power Options menu and enable the features you prefer (see “System Power Options” on page 3 - 6). Make sure you have enabled Hibernate mode from the control panel.
The Wireless LAN/Bluetooth modules cannot be detected.	<i>The modules are off.</i> Check the LED indicator  to see if the WLAN/Bluetooth module is on or off (see “LED Indicators” on page 1 - 6). If the LED indicator is off, then move the WLAN switch (see “Keyboard & Hot Keys” on page 1 - 7) to the ON position, or press the Fn + F2 (Bluetooth) key combination in order to enable the modules (see “Function Keys” on page 1 - 8).
The Wireless LAN and/or Bluetooth modules cannot be configured.	The driver(s) for the module(s) have not been installed. Make sure you have installed the driver for the appropriate module (see the instructions for the appropriate module in “Modules & Options” on page 7 - 1).





Appendix A: Interface (Ports & Jacks)

Overview


The following chapter will give a quick description of the interface (ports & jacks) which allow your computer to communicate with external devices, connect to the internet etc.

Notebook Ports and Jacks

Item	Description
Built-In Microphone 	The built-in microphone allows you to record on your computer
Card Reader Port 	The card reader allows you to use some of the latest digital storage cards. Push the card into the slot and it will appear as a removable device.
DC-In Jack 	Plug the supplied AC/DC adapter into this jack to power your computer.
External Monitor (VGA) Port 	This port allows you to connect an external monitor, or Flat Panel Display, to get dual video or simultaneous display on the LCD and external monitor/FPD (see <i>“Attaching Other Displays” on page B - 6</i>).
Headphone-Out Jack 	Headphones or speakers may be connected through this jack. Note: Set your system's volume to a reduced level before connecting to this jack.
Microphone-In Jack 	Plug an external microphone in to this jack to record on your computer.

Item	Description
Mini-IEEE 1394 Port 1394	<p>This port allows a high-speed connection to various peripheral devices, e.g. external disk drives and digital cameras (see note below).</p> <div>  <p>Mini-IEEE 1394 Port</p> <p>The Mini-IEEE 1394 port only supports SELF POWERED IEEE 1394 devices.</p> </div>
RJ-11 Phone Jack 	<p>This port connects to the built-in modem. You may plug the telephone line directly into this RJ-11 telephone connection.</p> <p>Note: Broadband (e.g. ADSL) modems usually connect to the LAN jack.</p>
RJ-45 LAN Jack 	<p>This port supports LAN (Network) functions.</p> <p>Note: Broadband (e.g. ADSL) modems usually connect to the LAN jack.</p>
Security Lock Slot 	<p>To prevent possible theft, a Kensington-type lock can be attached to this slot. Locks can be purchased at any computer store.</p>

Interface (Ports & Jacks)

Item	Description
USB 2.0/1.1 Ports 	These USB 2.0 compatible ports (USB 2.0 is fully USB 1.1 compliant) are for low-speed peripherals such as keyboards, mice or scanners, and for high-speed peripherals such as external HDDs, digital video cameras or high-speed scanners etc. Devices can be plugged into the computer, and unplugged from the computer, without the need to turn the system off (if the power rating of your USB device is 500mA or above, make sure you use the power supply which comes with the device).

Appendix B: Intel Video Driver Controls

The basic settings for configuring the LCD are outlined in *“Video Features” on page 1 - 14.*

Intel Video Driver Installation

Make sure you install all the drivers in the order indicated in *Table 4 - 1, on page 4 - 6.* Instructions for installing the video driver are repeated below.

1. Click **2.Install Video Driver > Yes.**
OR
Click **Start** (menu) > **Run...** and navigate (**Browse..**) to **D:\Drivers\Video\Setup.exe** and click **OK.**
2. To continue click **Next > Yes.**
3. Click **Finish** to restart the computer.



DVMT Notes

DVMT is not user-configurable.

DVMT is not local video memory.

DVMT will not function in MS-DOS. DOS uses the legacy memory indicated.

Figure B - 1
DVMT Memory Requirements

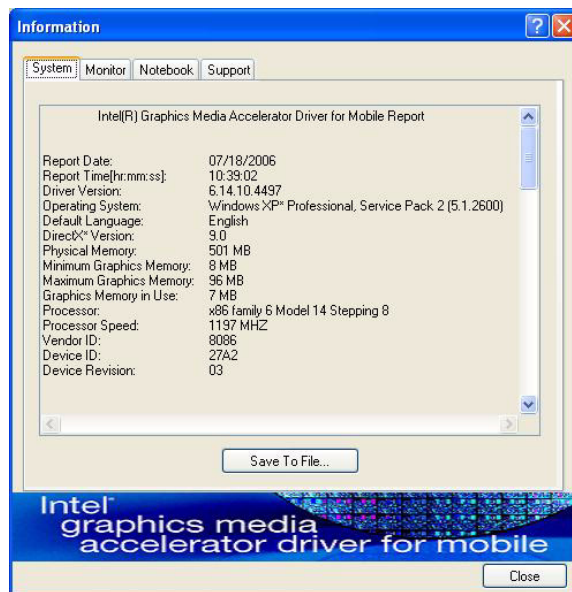
Dynamic Video Memory Technology

Intel® DVMT 3.0 automatically and dynamically allocates as much (up to **128MB**) system memory (RAM) as needed to the video system (**the video driver must be installed - see page B - 1**). DVMT returns whatever memory is no longer needed to the operating system.




Information Tab

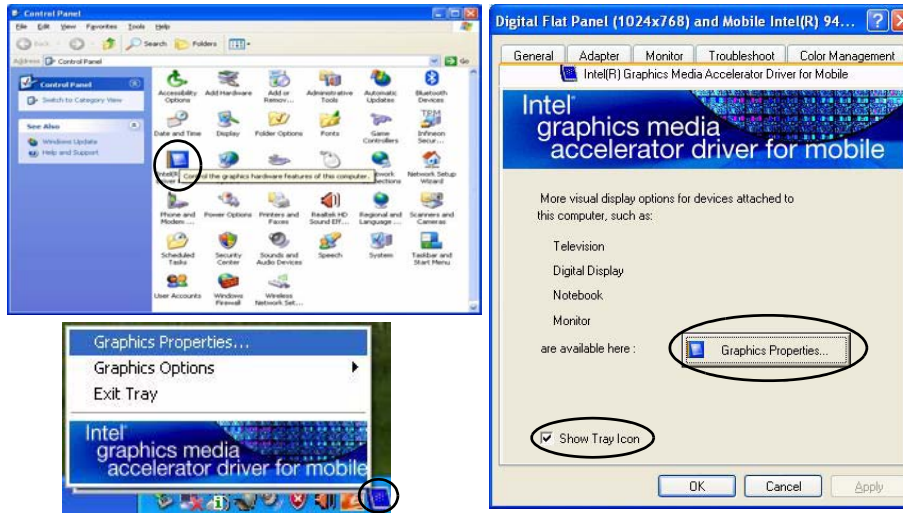
The **information** tab in **Graphics Properties** in the **intel(R) Graphics Media Accelerator Driver** (tab) lists details of your computer's memory etc. See "**Intel Graphics Properties**" on **page B - 3** to see how to access this Information tab.



Intel Graphics Properties

More advanced video configuration options are provided by the **Intel(R) Graphics Media Accelerator Driver for Mobile**.

1. Open **Display Properties** (see *"Video Features" on page 1 - 14*) and click **Advanced**.
2. Click the **Intel(R)...** tab and click **Graphics Properties** (button).
3. You can also access **Intel(R) GMA Driver for Mobile** by double-clicking the **Windows** control panel, or from the taskbar icon  menu.



Taskbar Icon

You can also access the controller properties from the taskbar. Click on the icon to bring up the menu and scroll to **Graphics Properties**.

If you cannot see the tray icon go to the **Intel(R) Graphics Media Accelerator Driver** tab (in the **Display Properties > Advanced** options) and click the **"Show Tray Icon"** tick-box.

Figure B - 2
Intel Graphics Properties

B

Intel Video Driver Controls



Help Menus

Right-click on many of the items in the tabs to bring up the "What's This?" button.

Click the "What's This?" button to bring up the help menu.

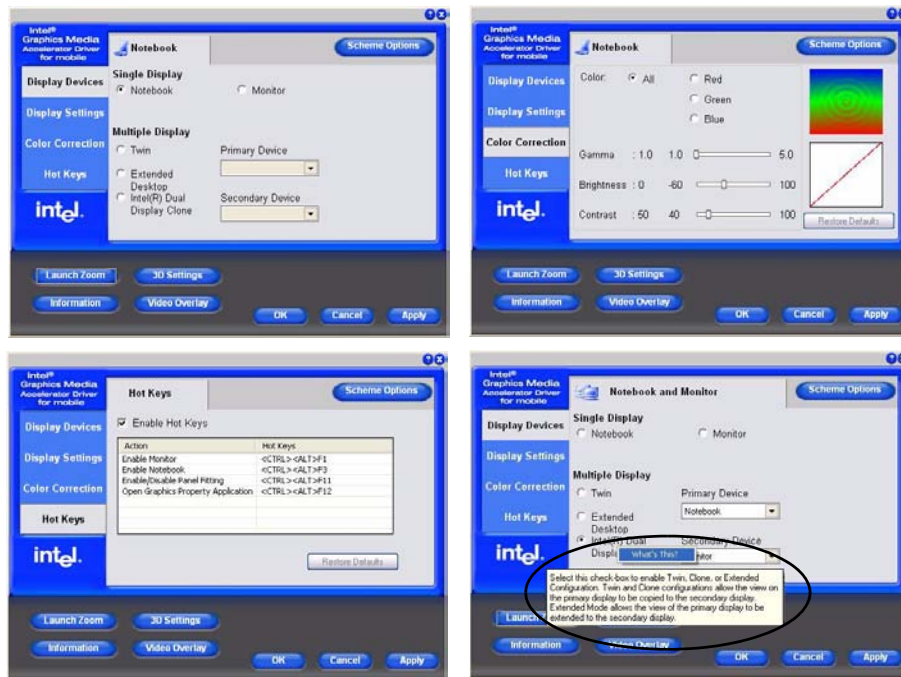
Multiple Display

At least one other display must be attached in order to view **Multiple Display** options.

Figure B - 3


**Intel Graphics Media
Accelerator Driver
for Mobile
(Control Panel Tabs)**

You may make changes to the devices, color, schemes, **Hot Keys** etc. by clicking the appropriate menu item or button. Click **Information** (button) to obtain useful information about the graphics properties of the computer, and see the **Support** tab in **Information** to get weblinks to the latest information on the Intel Website.



Scheme Options

Use Scheme Options to configure quick settings for applications which require specific resolution and color settings in order to run properly e.g. games, multimedia programs. To set the scheme options:

1. Open the **Intel(R) GMA Driver for Mobile** control panel (see *"Intel Graphics Properties" on page B - 3*).
2. Configure your display configuration, resolution etc. as per your requirements from **Display Settings**.
3. Click on **Scheme Options** (button).
4. Type a name for the scheme.
5. If you want to automatically launch an application when running the scheme click on **Browse** (button).
6. **Browse** to the executable file for the application you want to set the scheme for (see sidebar), and click **Open** to select it.
7. Click **Save** to save the settings (you can click in the "Restore the display settings after exiting this application" box to return to your original settings when you exit the program).
8. Click **OK** to exit Scheme Options.
9. Click the taskbar icon  and scroll to **Select Scheme** to choose the scheme to run.



Application.exe

You will need to locate the actual **application executable (.exe) file**, not just the shortcut. To find the application right-click its **shortcut** on the desktop click **Properties**. Click the **Shortcut** (tab) and see where the executable file is located by clicking the **Find Target** (button). Note the location and you will then be able to browse to this file.

Figure B - 4
Select Scheme



Intel Display Note

Note that the notebook is the default Primary display device and may not be changed.

Attaching Other Displays

Besides the built-in LCD, you can also use an external monitor/flat panel display as a display device. The following are the display options:

1. The built-in LCD **OR** an external monitor/flat panel display connected to the external monitor port (**Single Display**).
2. The built-in LCD **AND** an external monitor/flat panel display connected to the external monitor port (**Multiple Display**).

If you want use an external display follow these instructions:

1. Attach your external monitor to the external monitor port and turn it on.
2. Open the **Intel(R) GMA Driver for Mobile** control panel (see *[“Intel Graphics Properties” on page B - 3](#)*).
3. Click to choose the display option from the **Multiple or Single Display** menu.
4. Click **Apply** (and **OK** to confirm the settings change) and **OK** (button).

Figure B - 5
Display Devices



Display Modes

Single Display

Only one of your attached displays is used.

Twin

This mode will drive multiple displays with the same content and resolutions, color quality etc. See *“Twin Mode Support” on page B - 8* for more information.

Intel(R) Dual Display Clone

This mode will drive multiple displays with the same content. Each device may be configured independently for different resolutions, refresh rates, color quality etc. Use this feature to display the screen through a projector for a presentation.

Extended Desktop

This mode allows a desktop to span multiple displays and acts as a large workspace. This creates a lot more screen area for display. Use **Display Devices** (tab) to drag the monitors to match the physical arrangement you wish to use, or you may use **Windows Display Properties** (control panel) to configure the relative size and position.



Function Key Combination

You can use the **Fn + F7** key combination to toggle through the display options:

- Notebook Only
- External Display Only
- Notebook + External Display

Make sure you give the displays enough time to refresh.

Intel Video Driver Controls



Twin Mode Support

The **Twin** mode option will only appear if the notebook and external monitor support the same resolution (e.g. 1280 * 800). Check any documentation supplied with an external monitor to see supported resolutions.

To Enable Intel(R) Dual Display Clone Mode OR Twin Mode

1. Attach your external display to the external monitor port and turn it on.
2. Open the **Intel(R) GMA Driver for Mobile** control panel (see *[“Intel Graphics Properties” on page B - 3](#)*).
3. Click to choose **Intel(R) Dual Display Clone** or **Twin** from **Display Devices** (tab).
4. Click **Apply**, and **OK** to confirm the settings change.
5. Click **Display Settings** to adjust the settings for the attached devices.



Clone Mode



Figure B - 6
Display Devices &
Settings

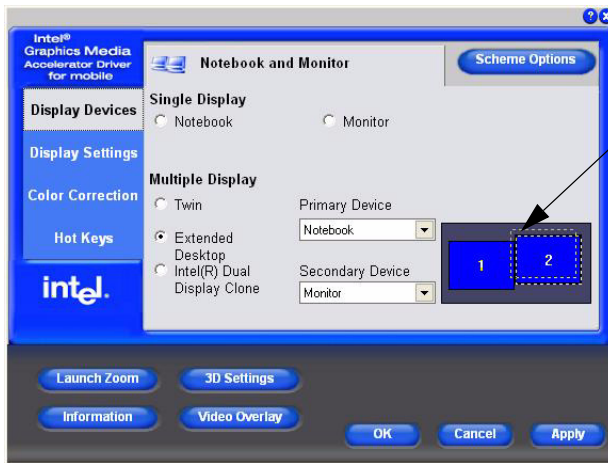


Twin Mode



To Enable Extended Desktop Mode:

1. Attach your external monitor to the external monitor port and turn it on.
2. Open the **Intel(R) GMA Driver for Mobile** control panel (see *"Intel Graphics Properties" on page B - 3*).
3. Click to choose **Extended Desktop** from **Display Devices** (tab).
4. Click **Apply**, and **OK** to confirm the settings change.
5. Click **Display Settings** to adjust the settings for the attached devices.



Click the appropriate monitor icon and drag it to match the physical arrangement you wish to use (e.g. the secondary display may be extended left/right/above/below the primary display).

Click **Display Settings** to make any adjustments required.

You can also enable the Extended Desktop mode from **Windows Display Properties** (see page *B - 10*).



Display Settings Extended Desktop

You can have different Colors, Screen Area and Monitor Refresh Rates for each display device **provided your monitor can support them**.

You can drag the monitor icons to match the physical layout of your displays. Icons and programs may also be dragged between the displays.

Figure B - 7
**Extended Desktop
Mode**



Display Settings Extended Desktop

Use the control panel to drag the monitors to match the physical arrangement you wish to use.

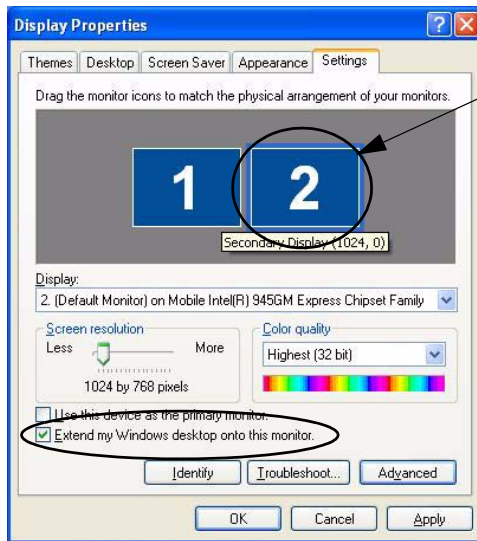
You can drag any icons or windows across to either display desktop, which makes it possible to have one program visible in one of the displays, and a different program visible in the other display.

Figure B - 8

Display Properties (Extended Desktop)

To Enable Extended Desktop (Display Properties)

1. Attach your external monitor to the external monitor port (or TV to the 7-Pin S-Video-Out Jack), and turn it on.
2. Click **Start**, point to **Settings** (or click **Control Panel**) and click **Control Panel** (if you are in **Category View** choose **Appearance and Themes**).
3. Double-click **Display** (icon).
4. In the **Display Properties** dialog box, click **Settings** (tab).
5. Click the monitor icon (e.g. **2**), and make sure you have checked “**Extend my Windows desktop onto this monitor.**” and click **Apply**.



Click the appropriate monitor icon (e.g. **2**) to be able to select the option to extend the desktop on to it.

In this example the Primary monitor **1** is on the left, the secondary display **2** is on the right.

Appendix C: Specifications

C



Latest Specification Information

The specifications listed in this Appendix are correct at the time of going to press. Certain items (particularly processor types/speeds and CD/DVD device types) may be changed or updated due to the manufacturer's release schedule. Check with your service center for details.

Specifications

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Feature	Specification	
Processor (CPU On Board)	Intel® Core™ Solo Processor FC-PGA6 Package U1400	65nm (65 Nanometer) Process Technology 2MB On-die L2 Cache & 533MHz FSB 1.20 GHz
	Intel® Celeron® M Processor FC-PGA6 Package ULV 423	65nm (65 Nanometer) Process Technology 1MB On-die L2 Cache & 533MHz FSB 1.06 GHz
Core Logic	Intel 945GMS + ICH7-M Chipset	
Memory	512MB On Board Memory 64-bit Wide DDRII (DDR2) Data Channel One 200 Pin SO-DIMM Sockets Supporting DDRII (DDR2) 533 MHz Memory Expandable up to 1.5GB (256/ 512/ 1024 MB DDRII Modules) (Note: Do Not Use Other Module Types)	
Security	Security (Kensington® Type) Lock Slot Fingerprint ID Support TPM1.2	BIOS Password HDD Password Lock
BIOS	One 8Mb Flash ROM	Phoenix™ BIOS
LCD Options	12.0" XGA (1024*768) Flat Panel TFT LCD	

Feature	Specification
Video Adapter	Intel 945GMS Integration Intel® Graphics Media Accelerator 950 (Intel® GMA 950) Dynamic Video Memory Technology DVMT 3.0 - Supports up to 128MB of Video Memory (dynamically allocated from system memory where needed) Supports DualView™
Storage	<u>Optional Device Drive Bay Options:</u> One Changeable 9.5mm(h) Optical Device (CD/DVD) Type Drive (see <i>“Optional” on page C - 5</i> for drive options) <u>Hard Disk Bay:</u> Easy Changeable 2.5" OR 1.8" , 9.5mm (h) Hard Disk (HDD) with PATA (Parallel) Interface
Audio	AZALIA High Definition Audio Interface 3D Stereo Enhanced Sound System Sound-Blaster PRO™ Compatible 1 * Built-In Monaural Speaker Built-In Microphone
Keyboard & Pointing Device	Winkey Keyboard Built-In TouchPad
PCMCIA	One Type-II PCMCIA (3.3V/5V) CardBus PC Card Slot
Card Reader	Embedded 4-in-1 Card Reader (MS/ MS PRO/ SD/ MMC)
Interface	Three USB 2.0 Ports (1.1 Compatible) One External Monitor Port One Headphone-Out Jack One Microphone-In Jack One RJ-11 Modem Jack One RJ-45 LAN Jack One DC-in Jack One Mini-IEEE 1394 Port

Specifications

C

Feature	Specification						
Communication	<p>AZALIA 56K Fax Modem - V.90 & V.92 Compliant</p> <p>10/100M Fast Ethernet LAN</p> <p>Intel PRO/Wireless 3945ABG PCIe Interface Wireless LAN Module (Option)</p> <p>USB (2.0) Bluetooth Module (Option)</p>						
Power Management	<p>Supports ACPI 2.0 and APM v 1.2</p> <p>Supports Wake On Modem Ring</p> <p>Supports Wake On LAN</p>						
Power	<p>Full Range AC/DC Adapter - AC Input 100 ~ 240V, 50 ~ 60Hz / DC Output 18.5V, 3.5A</p> <p>4 Cell Smart Lithium-Ion Battery Pack, 5200mAH, 38.48W</p> <p>10 Cell Smart Lithium-Ion Battery Pack, 13000mAH, 96.2W</p>						
Environmental Spec	<table> <tr> <td>Temperature</td><td>Relative Humidity</td></tr> <tr> <td>Operating: 5°C ~ 35°C</td><td>Operating: 20% ~ 80%</td></tr> <tr> <td>Non-Operating: -20°C ~ 60°C</td><td>Non-Operating: 10% ~ 90%</td></tr> </table>	Temperature	Relative Humidity	Operating: 5°C ~ 35°C	Operating: 20% ~ 80%	Non-Operating: -20°C ~ 60°C	Non-Operating: 10% ~ 90%
Temperature	Relative Humidity						
Operating: 5°C ~ 35°C	Operating: 20% ~ 80%						
Non-Operating: -20°C ~ 60°C	Non-Operating: 10% ~ 90%						
Dimensions & Weight	<p>281mm (w) * 237mm (h) * 32 - 35mm (d)</p> <p>1.2kg (with 1.8" 30GB HDD, DVD Dual & 4 Cell Battery)</p>						

C - 4 Specifications

Feature	Specification
Optional	<p><u>Optical Device Module Options:</u></p> <p>Dummy ODD</p> <p>DVD-ROM Drive Module</p> <p>DVD/CD-RW Combo Drive Module</p> <p>DVD Dual - Supporting Super MULTI Drive Module</p> <p>USB (2.0) Bluetooth Module (Including Bluetooth Cable)</p> <p>Intel PRO/Wireless 3945ABG PCIe Interface</p> <p>Wireless LAN Module (Option)</p> <p>10 Cell Smart Lithium-Ion Battery Pack, 13000mAH, 96.2W</p>

Specifications

C