

USER'S MANUAL

Tablet notebook



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Preface

FCC Statement (Federal Communications Commission)

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

Operation is subject to the following two conditions:

1. This device may not cause interference.
And
2. This device must accept any interference, including interference that may cause undesired operation of the device.

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.



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 with an AC Input of 100 - 240V, 50 - 60Hz, DC Output of 12V, 3.A (36 Watts) **OR** AC Input of 100 - 240V~1500mA / 50 - 60Hz, DC Output of 12V, 2500mA (30 Watts) 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,
TELECOMMUNICATION LINE CORD**

This Computer's (optional) Optical Device is a Laser Class 1 Product

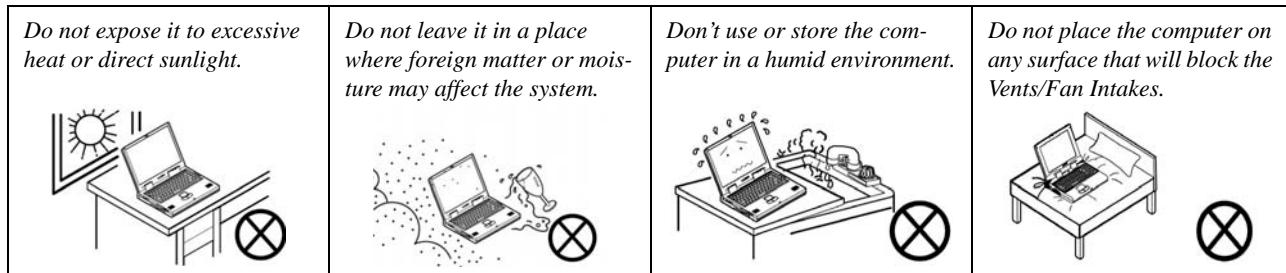
Instructions for Care and Operation

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.



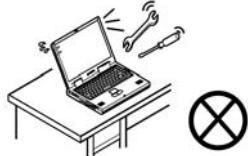



2. **Keep it dry, and don't overheat it.** Keep the computer and power supply away from any kind of heating element. This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.


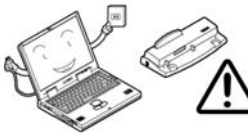


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3. **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.
4. **Follow the proper working procedures for the computer.** 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> 
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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> 
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Power Safety

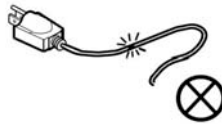
The computer has specific power requirements:

- 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).

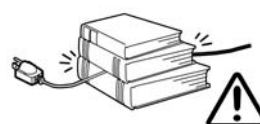
Do not plug in the power cord if you are wet.



Do not use the power cord if it is broken.



Do not place heavy objects on the power cord.



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.

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.

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 documents are prepared.



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.

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.

LCD Screen Care

To prevent **image persistence** on LCD monitors (caused by the continuous display of graphics on the screen for an extended period of time) take the following precautions:

- Set the *Windows* **Power Plans** to turn the screen off after a few minutes of screen idle time.
- Use a rotating, moving or blank screen saver (this prevents an image from being displayed too long).
- Rotate desktop background images every few days.
- Turn the monitor off when the system is not in use.



Tablet Mode Warning

Do not leave the tablet notebook in tablet mode (powered on or powered off) while not in use for an extended period (**in excess of four hours if powered on**), in order to prevent accidental damage to the computer.

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Express Card 34 Approved List


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, optional USB optical device, 5-in-1 card reader, ExpressCard 34), TouchPad & Mouse, Tablet Mode Options, Audio Features & 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's RAM and battery removal instructions.
- **Chapter 7** A quick guide to the computer's **Bluetooth, Fingerprint, Wireless LAN, PC Camera, and GPS** 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 **specifications.**

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 *“What to Install” on page 4 - 1*, *“BIOS Utilities” on page 5 - 1* and *“Upgrading The Computer” on page 6 - 1* in the remainder of this User’s Manual. 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 Vista*) and applications (e.g. word processing, spreadsheet and database programs) have their own manuals, so please consult the appropriate manuals.



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 [Table 4 - 1, on page 4 - 3](#). 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. 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 [Chapter 4](#) for installation instructions.

Ports and Jacks

See [“Notebook Ports and Jacks” on page A - 2](#) for a description of the interface (ports & jacks) which allow your computer to communicate with external devices, connect to the internet etc.

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 the following operating systems are supported.

Operating System & Version Supported	Note
Windows XP (Home or Professional) with Service Pack 3	Note that Windows XP does not support Tablet PC Functions
Windows Vista (32-bit) Home Basic Edition with Service Pack 1	Note that Windows Vista Home Basic Edition supports only limited Tablet PC functions. In order to run Windows Vista without limitations or decreased performance, your computer requires a minimum 1GB of system memory (RAM).
Windows Vista (32-bit) Home Premium Edition with Service Pack 1	

Table 1 - 1 - Operating Systems Supported

***Note:** For information on the **Windows XP OS** (specifically power, video and driver information) see [**“Windows XP Information” on page D - 1.**](#)

System Startup

1. Remove all packing materials and place the computer on a stable surface.
2. Securely attach any peripherals you want to use with the notebook (e.g. keyboard and mouse) to their ports.
3. Attach the AC/DC adapter to the DC-In jack on the left of the computer, then plug the AC power cord into an outlet, and connect the AC power cord to the AC/DC adapter.

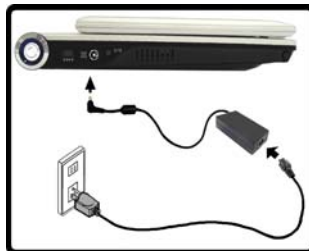


Figure 1 - 1 - AC/DC Adapter In

4. Use one hand to carefully raise the lid/LCD to a comfortable viewing angle, while using the other hand (as illustrated below) to support the base of the computer (**Note: Never** lift the computer by the lid/LCD).



LCD/Lid and Power

As a safety precaution the notebook cannot be turned on by pressing the power button while the LCD/lid is closed, or if the computer is in tablet mode.

Figure 1 - 2 - Raising The LCD

Quick Start Guide

5. Press the power button to turn the computer “on” (as a safety precaution the notebook cannot be turned on by pressing the power button while the LCD/lid is closed, or if the computer is in tablet mode).



Figure 1 - 3 - Power Button

6. See “*Rotating The LCD Panel*” on page 1 - 8.



Touch Panel Input Device

Do not use any sharp or pointed objects as your input device e.g. the end of a pen or pencil. Be very careful not to press too hard with the stylus pen when using it as the input device.



Shutdown

Note that you should always shut your computer down by choosing the **Shut Down** command from the **Lock Button Menu** in **Windows Vista**. This will help prevent hard disk or system problems.

Operating System Setup

If you are installing new system software, or are re-configuring your computer for a different system, make sure you configure the appropriate OS setting in the BIOS before installing a new operating system.

1. Start-up the computer and press <F2> to enter the **BIOS**.
2. Go to the **Advanced** menu, select “**Installed O/S**” and make sure the appropriate operating system is selected.
3. Go to the **Exit** menu and select “**Exit Saving Changes**” (or press **F10** and select “**Yes**” then press Enter) and press Enter to exit the BIOS and reboot the computer.



Network Boot

If you wish to boot the computer from a network then choose **PXE** as the installed O/S.

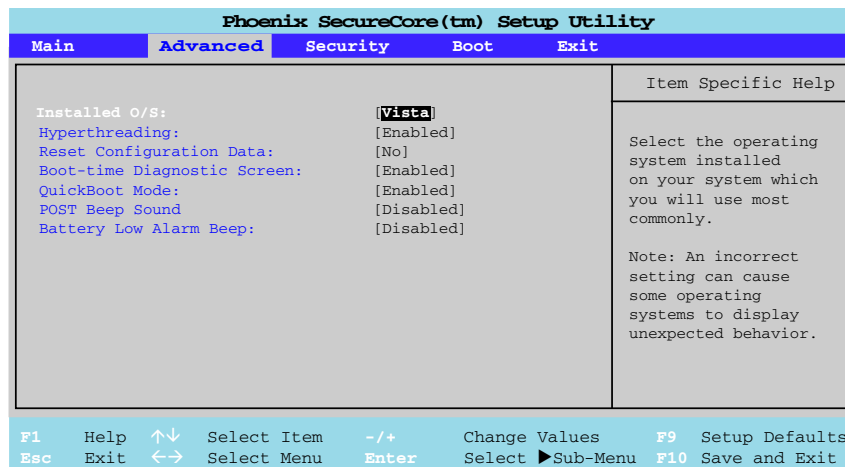


Figure 1 - 4 - BIOS (Operating System Selection)

Rotating The LCD Panel

The computer can be used in either **Notebook Mode**, or in **Tablet Mode**.

To put the computer into Tablet Mode:

1. Raise the lid/LCD panel ① (make sure the screen orientation is 0 degrees i.e. in a normal landscape orientation).
2. Carefully rotate the lid/LCD panel fully in the (clockwise) direction indicated by the arrow ②, until it is unable to rotate any further ③.



Figure 1 - 5 - Fully Rotate the Panel Clockwise

- Carefully push the lid/LCD panel down into **tablet mode** 4 (make sure the lid/LCD panel is fully flat and flush to the main body of the computer).
- Use the mouse buttons 5 and mouse pointer 6 to replace the touchpad and buttons on the computer, and/or use the stylus pen as an input device 7 (note that the mouse pointer will only track correctly in tablet mode, if the screen is in a standard landscape orientation).



Tablet Mode Warning

Do not leave the tablet notebook in tablet mode (powered on or powered off) while not in use for an extended period (**in excess of four hours if powered on**), in order to prevent accidental damage to the computer.



Power Button in Tablet Mode

When the computer is in tablet mode the power button is automatically disabled. To use the power button you will need to reorientate the computer into notebook mode.

Touch Panel Input Device

Do not use any sharp or pointed objects as your input device e.g. the end of a pen or pencil. Be very careful not to press too hard with the stylus pen when using it as the input device.

Figure 1 - 6 - Input Buttons/Pointer & Stylus Pen

Quick Start Guide

To put the computer into Notebook Mode:

1. Raise the lid/LCD panel ①.
2. Carefully rotate the lid/LCD panel fully in the (**counter clockwise**) direction indicated by the arrow ②, until it is unable to rotate any further ③.



Figure 1 - 7 - Rotating the LCD Panel Into Notebook Mode

Screen Orientation (In Tablet Mode)

1. The built-in **G-Sensor** will allow you to orientate the screen into a portrait/landscape mode as the computer is tilted to the orientation required **if the computer is in tablet mode**.
2. The **computer must be tilted to an angle of over 50 degrees** in order for the screen to rotate to the orientation required.
3. Hold the computer at an angle of over 50 degrees and move the computer in to portrait/landscape mode and the screen should then change orientation accordingly.
4. The screen will not change screen orientation if tilted to angle of less than 50 degrees in order to prevent accidental screen rotation.



Screen Orientation in Tablet Mode

If the computer is in tablet mode, then only use the G-Sensor (by tilting the screen as illustrated here) method to change the screen orientation otherwise you may experience unexpected behavior on screen.

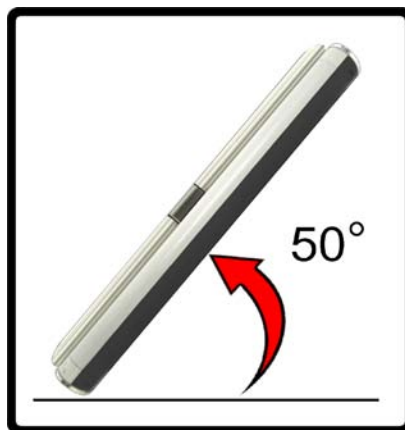


Figure 1 - 8 - Rotating the Screen (G-Sensor)

G-Sensor Notes:

The built-in **G-Sensor** allows you to rotate the screen to a portrait/landscape orientation as outlined on page [1 - 11](#) (if the computer is in tablet mode, then only use the G-Sensor method to change the screen orientation otherwise you may experience unexpected behavior on screen). However please note the following when using the **G-Sensor** to rotate the screen in tablet mode:

- Make sure the lid/lcd is fully flat and flush to the main body of the computer to ensure that the computer is in tablet mode.
- DO NOT vigorously shake the computer from side to side when rotating the screen (give the screen a few seconds to refresh). A simple smooth movement will rotate the screen as long as it is in tablet mode and tilted to an angle of over 50 degrees.
- If you shut the computer down in tablet mode, and the screen was rotated into portrait mode, the computer will take over two minutes to power on if rotated back to notebook mode.
- When the computer resumes from Sleep/Hibernate in tablet/notebook mode, do not change the mode (tablet/notebook) or the computer may experience unexpected behavior.
- Do not hold/touch the mouse pointer (see *[“System Map: Top View with LCD Panel Open” on page 1 - 19](#)*) while rotating the screen (note that the mouse pointer will only track correctly in tablet mode, if the screen is in a standard landscape orientation).
- If the computer is in **Idle Mode** (i.e. **Windows** is fully loaded but no applications are running) the **G-Sensor** may take up to 6.6 seconds to re-orientate the screen.

Screen Orientation (In Notebook Mode)

If the computer is in notebook mode there are two methods available to rotate the screen to a portrait/landscape orientation (recalibrate the touch screen after orientation).

- Use the screen rotation control from the **Intel(R) GMA Driver for ultra mobile** control panel (see below).

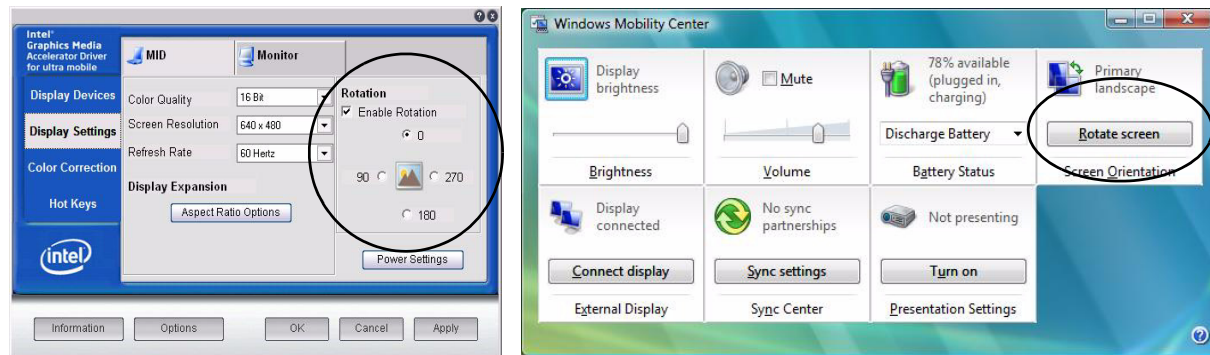



Figure 1 - 9 - Intel(R) GMA Driver for Ultra Mobile (Display Settings > Rotation) & Windows Mobility Center


- Use the **Win Key**  + **X** key combination (to bring up the **Windows Mobility Center** and use the **Rotate Screen** button).

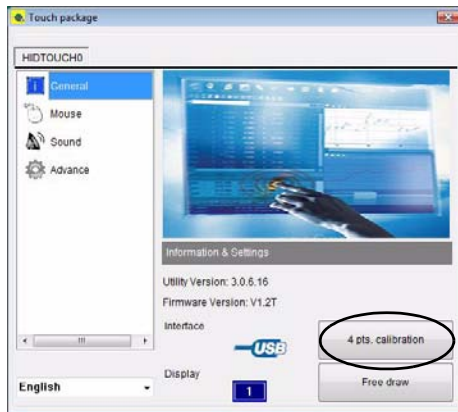
Note: After reorientating the screen you will need to recalibrate the touch screen (see [“Calibrating the Touch Screen” on page 1 - 14](#)). Make sure the screen orientation is 0 degrees, i.e. in a normal landscape orientation, before putting the computer in to tablet mode. Note that the **Mouse Pointer** is designed to track accurately in tablet mode (in notebook mode there may be inaccuracies in tracking).

Tablet Notebook Input

Use the stylus pen provided to interact with the computer in the same way you would use the mouse (tap twice to double-click and keep the pen in contact with the screen to right-click). Before using the stylus pen you should calibrate the touch screen.

Calibrating the Touch Screen

1. Double-click the **Touch tool** utility icon  on the desktop OR from the **Touch Package** folder in the **Programs/All Programs** group (the driver must be installed).
2. Click **General**.
3. Click **4 pts calibration** (if you would prefer to calibrate more accurately, or are having distortion/tracking problems, then click **Advance** and choose either **9 pts linearization** or **25 pts linearization**).



Screen Orientation & Re-Calibration

Note that you should re-calibrate the touch screen after you have **orientated** the screen to display in a different mode from that first calibrated.

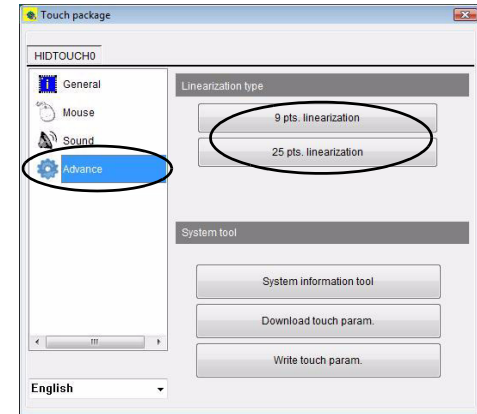


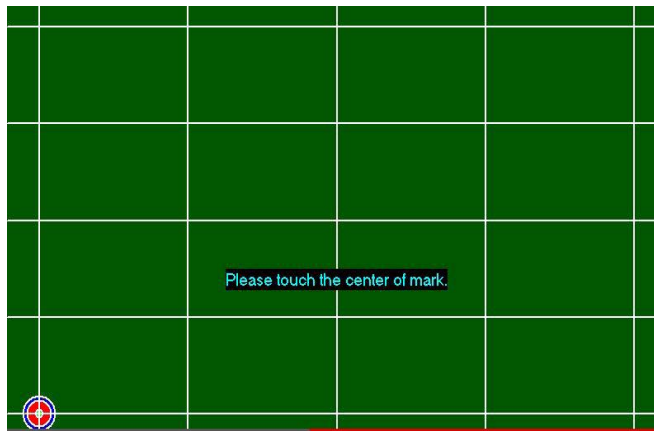
Figure 1 - 10 - Touch Package (General & Advance)

4. Use the stylus pen to touch the blinking symbol until symbol changes color (maintain contact until the symbol stops blinking) and you will be prompted to lift up the pen.
5. Repeat the process for all the remaining screen points.
6. Click **Free Draw** (button) to test the calibration.
7. Use the **Mouse Settings** and **Sound** control panels to further adjust the settings to your preference.



Touch Panel Input Device

Do not use any sharp or pointed objects as your input device e.g. the end of a pen or pencil. You should only use the provided stylus pen (PDA type) as your input device. Be very careful not to press too hard with the stylus pen when using it as the input device.



Screen Distortion

If you experience any line distortion, or tracking in-accuracy, recalibrate the touch screen using **25pts** of calibration (click the **Advance** item in the **Touch package** and click **25pts linearization**).

Figure 1 - 11 - Screen Calibration

Tablet Notebook Input Options

Configure the following options as outlined for optimum tablet mode input sensitivity for the computer's screen size (and in order to prevent screen damage).

1. Click **Start**, and click **Control Panel** (or point to **Settings** and click **Control Panel**).
2. Double-click **Taskbar and Start Menu** (**Appearance and Personalization**).
3. Make sure that **Auto-hide the taskbar** is not selected (the box is not ticked) and click **OK**.

Windows Vista Home Basic Edition

Note that the **Tablet PC Input Panel** (see *[“Tablet PC Input Panel” on page 1 - 18](#)*) and the **Pointer Options & Flicks** control panel tabs are not available in **Windows Vista Home Basic Edition**.



Figure 1 - 12 - Taskbar and Start Menu Settings

4. Return to control panel and double-click **Tablet PC Settings (Mobile PC)**.
5. Click **Other** (tab) and click **Go to Input Panel Settings (Tablet PC Input Panel options)**.

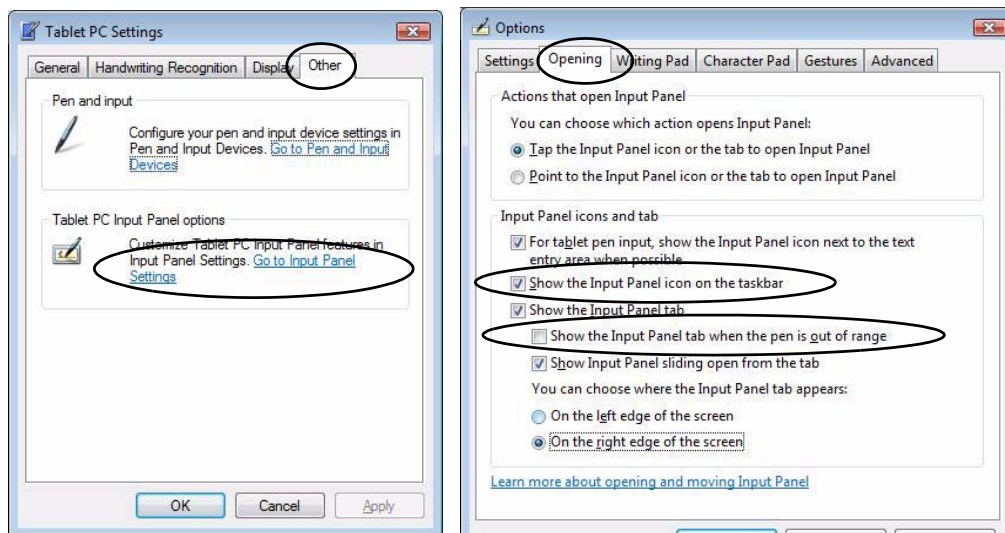





Figure 1 - 13 - Tablet PC Settings (Other) - Opening

6. Click **Opening** (tab).
7. Make sure that **Show the Input Panel Icon on the taskbar** is selected (the box is ticked), and that **Show the Input Panel tab when the pen is out of range** is not selected (the box is not ticked).
8. Click **OK > Yes** to save the settings and then close the control panel.
9. The **Tablet PC Input Panel** will now appear in the taskbar.
10. Click the taskbar icon  to access and hide the **Tablet PC Input Panel**.

Quick Start Guide

Tablet PC Input Panel

When not in use the **Tablet PC Input Panel** docks at the side of the screen (and may be docked at either side of the screen at any height). Click the taskbar icon  to access and hide the **Tablet PC Input Panel**. The input panel allows you to input text without the use of a keyboard. You can use the writing pad (write continuously), character pad (write one character at a time) or on-screen keyboard to input text. Use the **Help** menu for further information. You can also use the **Tablet PC Settings**  control panel in *Windows Vista* to adjust the advanced options (see *“Tablet Mode Options” on page 2 - 8* for further information).

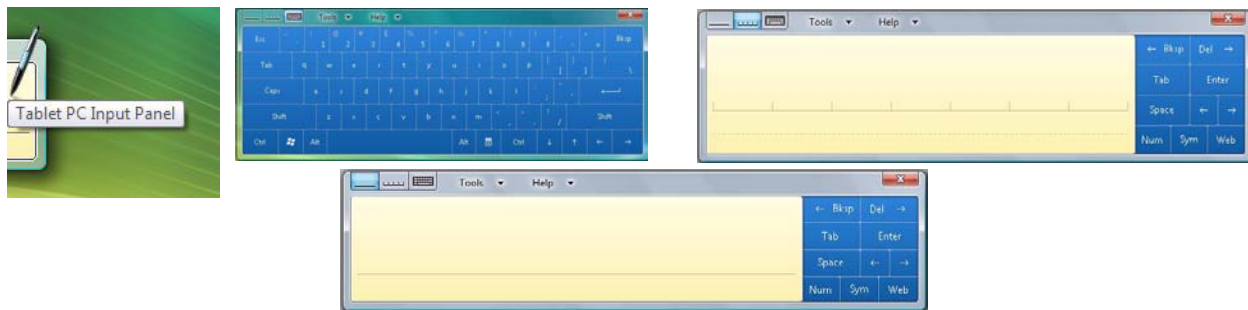


Figure 1 - 14 - Tablet PC Input Panel



Power DVD Program and Tablet PC Input Panel


Make sure you close the Tablet PC Input Panel if you are using the Cyberlink Power DVD program as the Tablet PC Input Panel and Power DVD are incompatible.

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 appropriate function key combination (see [Table 1 - 4, on page 1 - 22](#)) to toggle power to the wireless modules (WLAN/Bluetooth), and check the LED indicator  to see if the modules are powered on or not (see [Table 1 - 3, on page 1 - 20](#)).

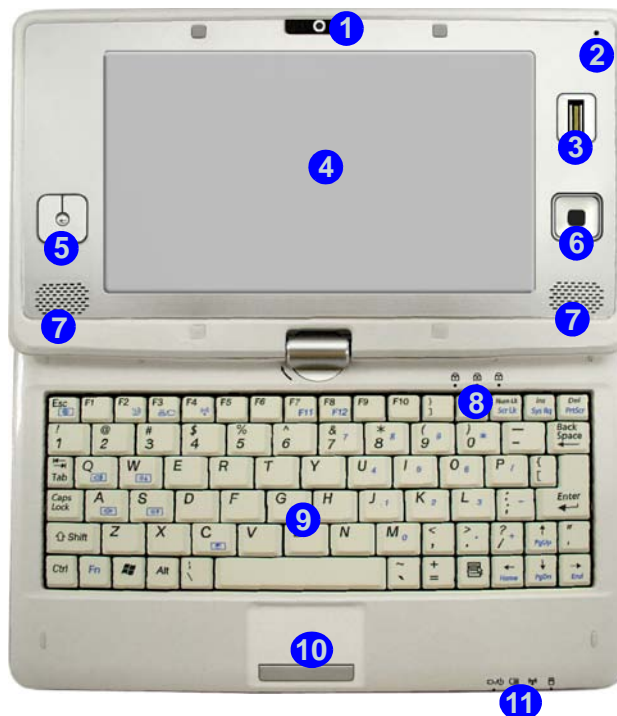
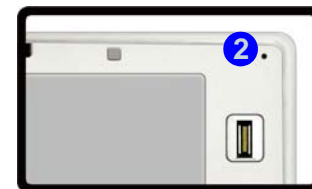


Figure 1 - 15
Top View with LCD
Panel Open

1. Built-In PC Camera
2. Microphone
3. Fingerprint Reader Module (**Optional**)
4. LCD
5. Mouse Buttons
6. Mouse Pointer
7. Speakers
8. LED Status Indicators
9. Keyboard
10. TouchPad & Buttons
11. LED Power & Communication Indicators



LED Indicators

The two sets of LED indicators (**LED Status Indicators** and **LED Power & Communication Indicators**) on the computer display helpful information about the current status of the computer.




Icon	Color	Description
	Green	Number Lock Activated
	Green	Caps Lock Activated
	Green	Scroll Lock Activated (to activate press Fn & Scr Lk)

Table 1 - 2 - LED Status Indicators





Icon	Color	Description
	Orange	DC Power is Plugged In
	Green	The Computer is On
	Blinking Green	The Computer is in Sleep Mode
	Orange	The Battery is Charging
	Green	The Battery is Fully Charged
	Blinking Orange	The Battery Has Reached Critically Low Power Status
	Green	The Wireless LAN Module is Powered On
	Orange	The Bluetooth Module is Powered On
	Green	Hard Disk Activity

Table 1 - 3 - LED Power & Communication Indicators

Keyboard

The keyboard has a numerical keypad for easy numeric data input, and features function keys to allow you to change operational features instantly. See [Table 1 - 4, on page 1 - 22](#) for details on the function keys.



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.

Figure 1 - 16 - Keyboard



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.





Function Keys

The **function keys** will act as **hot keys** when pressed while the **Fn** key is held down.

Keys	Function	Keys	Function
Fn + Esc	Mute Toggle	Fn + D	PC Camera Power Toggle
Fn + F1	Bluetooth Module Power Toggle	Fn + G	GPS Module Power Toggle
Fn + F2	Sleep Toggle	Fn + Q	Volume Increase
Fn + F3	Display Toggle	Fn + A	Volume Decrease
Fn + F4	WLAN Module Power Toggle	Fn + W	Brightness Increase
Fn + C	TouchPad & Buttons / Mouse Pointer & Buttons Toggle	Fn + S	Brightness Decrease
		Fn + ScrLk	Scroll Lock Toggle

Table 1 - 4 - Function Keys

Pop Menu

Double-click the **Pop Menu** icon  to access the on-screen **Pop Menu** (make sure you install the pop menu driver provided). Use the stylus pen to touch any of the buttons to activate the control. If the **PC Camera**, **Bluetooth**, **WLAN** or **GPS** (optional) modules are **on** the indicator will appear **green** ; if the modules are **off** then the indicator will appear **black** . Press **Esc**, or right-click the **Pop Menu** icon , to quit the menu.





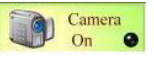
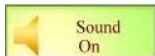









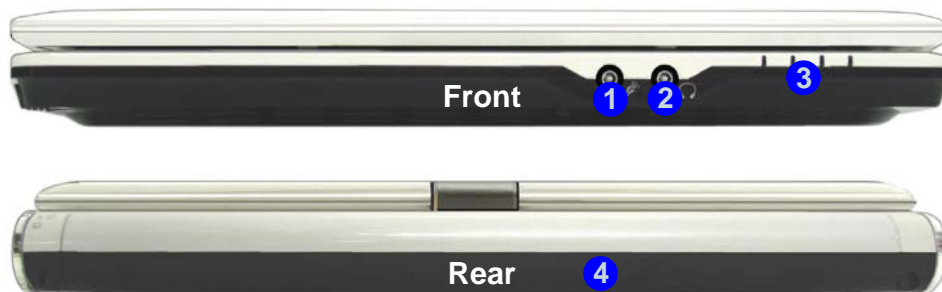
Pop Menu	Function	On-Screen Button	Function	On-Screen Button
	Brightness Decrease/Increase	 	PC Camera Module Power Toggle	 
	Mute Toggle	 	Bluetooth Module Power Toggle	 
	Volume Decrease/Increase	 	WLAN Module Power Toggle	 
	Note: Use the stylus pen to tap the appropriate on-screen button to adjust the setting.		GPS Module Power Toggle	 

Table 1 - 5 - Pop Menu Buttons

System Map: Front & Rear Views

Figure 1 - 17
Front & Rear Views

1. Microphone-In Jack
2. Headphone-Out Jack
3. LED Power & Communication Indicators
4. Battery



System Map: Right & Left Views



Figure 1 - 18
Right & Left Views

1. 2 * USB 2.0 Ports
2. 5-in-1 Card Reader
3. ExpressCard/34 Slot
4. RJ-45 LAN Jack
5. External Monitor Port
6. Power Button
7. Security Lock Slot
8. DC-In Jack
9. GPS Antenna
10. Vent
11. Stylus Pen Holder



5-in-1 Card Reader

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

- SD (Secure Digital)
- Mini SD (requires PC adapter)
- Micro SD (requires PC adapter)
- MMC (MultiMedia Card)
- RS MMC (requires PC adapter)



Express Card Slot & 1394 Card Support

Note that the Express Card slot **DOES NOT** support 1394 Express Card modules.

There is a list of approved Express Card modules listed on [Table E - 1, on page E - 1](#). Please make sure any Express Cards modules you use with this computer are included in the list. Contact your service center for further information.



Power Button in Tablet Mode

When the computer is in tablet mode the power button is automatically disabled. To use the power button you will need to reorientate the computer into notebook mode.

System Map: Bottom View

Figure 1 - 19
Bottom View

1. Battery
2. Battery Release Latch
3. Component Bay Cover
4. Vent

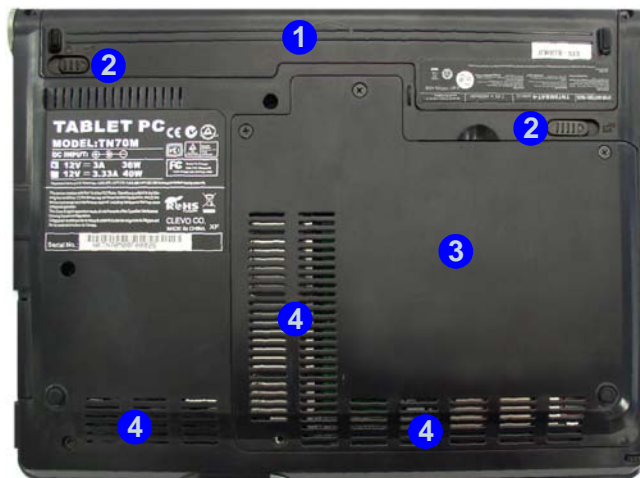


CPU

The CPU is not a user serviceable part. Accessing the CPU in any way may violate your warranty.

Overheating


To prevent your computer from overheating make sure nothing blocks the Vent/Fan Intake while the computer is in use.



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. See [“Battery Information” on page 3 - 11](#) for more information.

Windows Vista Start Menu & Control Panel

Most of the control panels, utilities and programs within *Windows Vista* (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. Right-click the **Start** menu icon , and then select **Properties** if you want to customize the appearance of the **Start** menu.

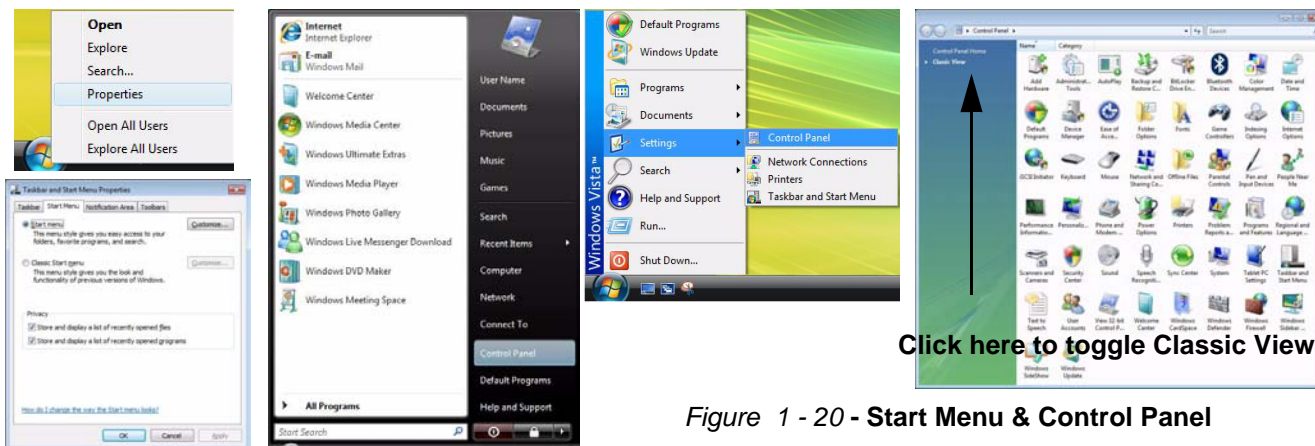



Figure 1 - 20 - Start Menu & Control Panel

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 Vista* 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 to Classic View on.

Video Features

You can switch display devices, and configure display options, from the **Display Settings** control panel (in **Personalization**) in *Windows Vista* as long as the appropriate **Intel video driver** is installed.

To access Display Settings in *Windows Vista*:

1. Click **Start**, and click **Control Panel** (or point to **Settings** and click **Control Panel**).
2. Click **Adjust screen resolution** under the **Appearance and Personalization** menu (or double-click **Personalization > Display Settings**).
3. Move the slider to the preferred setting in **Resolution**: ① (*Figure 1 - 21 on page 1 - 29*).
4. Click the arrow, and scroll to the preferred setting In **Colors**: ② (*Figure 1 - 21 on page 1 - 29*).
5. Click **Advanced Settings** (button) ③ (*Figure 1 - 21 on page 1 - 29*) and click **Intel(R) GMA Driver for ultra mobile** (tab).
6. Click **Graphics Properties** (button) ④ (*Figure 1 - 21 on page 1 - 29*) to access the **Intel GMA Driver for ultra mobile** control panel (this control panel can also be accessed by double-clicking **Intel(R) GMA Driver for ultra mobile** control panel in **Windows Classic View**).
7. The **Intel GMA** control panel can also be accessed by clicking the icon  in the taskbar and selecting **Graphics Properties** from the 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. Note: **MID** (Mobile Internet Device) is the computer's LCD display.

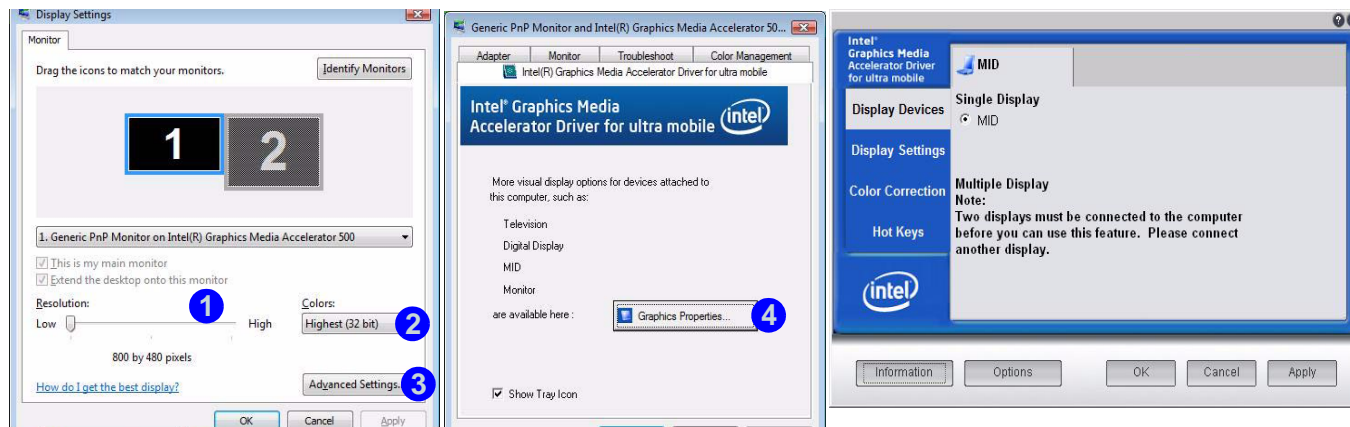


Figure 1 - 21 - Display Properties Desktop

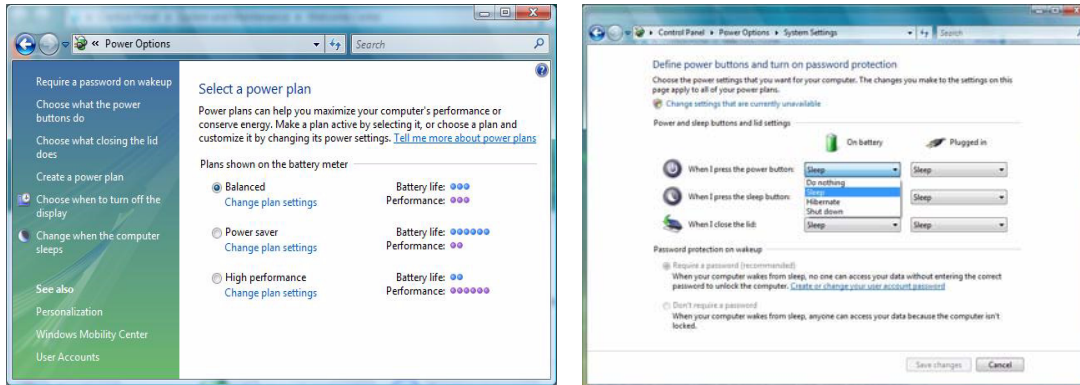
Intel Display Mode	Description
Single Mode	One of the connected displays is used as the display device
Intel(R) Dual Display Clone Mode	Both connected displays output the same view and may be configured independently
Extended Desktop Mode	Both connected displays are treated as separate devices, and act as a virtual desktop
See <i>“Screen Resolution for Games and Power DVD”</i> on page B - 4 for information on optimum display settings.	

Table 1 - 6 - Display Options

Power Options

The **Power Options** (**Hardware and Sound** menu) control panel icon in *Windows* (see page *1 - 27*) allows you to configure power management features for your computer. You can conserve power by means of **power plans** and configure the options for the **power button**, **sleep button**, **computer lid (when closed)**, **display** and **sleep** mode from the left menu. Note that the **Power saver** plan may have an affect on computer performance.

Click to select one of the existing plans, or click *Create a power plan* in the left menu and select the options to create a new plan. Click *Change Plan Settings* and click *Change advanced power settings* to access further configuration options. See also *“The Power Button in Tablet Mode” on page 3 - 9*.



Note: **Sleep** is the default power saving state in *Windows Vista*

Figure 1 - 22 - Power Options

Chapter 2: Features & Components

Overview

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

- Hard Disk Drive
- External USB Optical (CD/DVD) Device
- 5-in-1 Card Reader
- ExpressCard Slot
- TouchPad and Buttons/Mouse
- Tablet Mode Options
- 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 1.8" parallel (PATA) hard disk drives with a height of 5.0 mm.

The hard disk drive is accessible from the bottom of your computer as seen below. Due to the delicate nature of the hard disk cable we recommend that you do not do this yourself, since if it is done incorrectly you may damage the hard disk cable. Please contact your customer service representative for help with upgrading the internal storage device.

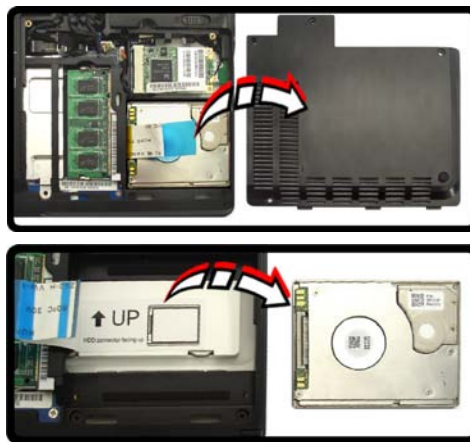


Figure 2 - 1

Hard Disk Location

External USB Optical (CD/DVD) Device

An external USB optical (CD/DVD) device is available as an **option** for this computer. The optical device may be used as a boot device if properly set in the **BIOS** (see ***“Boot Menu” on page 5 - 12***).

Loading Discs

To insert a CD/DVD, simply slide the disc into the disc slot with label-side facing up. The busy indicator will light up while data is being accessed, or while a disc is playing. If power is unexpectedly interrupted, insert an object such as a straightened paper clip into the emergency eject hole to eject the disc.



USB Cables

You can connect the optional USB optical device using one of the USB cables. However if you are experiencing connection or power problems, connect both USB cables from the device to the computer.

Figure 2 - 2
Optional 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.

5-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).

- SD (Secure Digital)
- Mini SD (requires PC adapter*)
- Micro SD (requires PC adapter*)
- MMC (MultiMedia Card)
- RS MMC (requires PC adapter*)

***Note:** The PC adapters are usually supplied with these cards.



Card Reader Cover

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

2

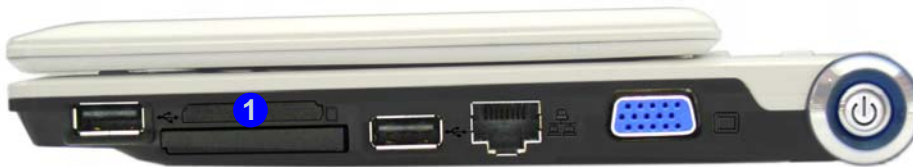


Figure 2 - 3
Right View

1. Card Reader



Express Cards Approved

There is a list of approved Express Card modules listed on [Table E - 1, on page E - 1](#). Please make sure any Express Cards modules you use with this computer are included in the list. Contact your service center for further information.

Figure 2 - 4
Left View

1. ExpressCard Slot

Figure 2 - 5
**Inserting &
Removing Express
Cards**

ExpressCard Slot

The computer is equipped with an **ExpressCard/34** slot (34mm). ExpressCards are the successors to PCMCIA (PC Cards).



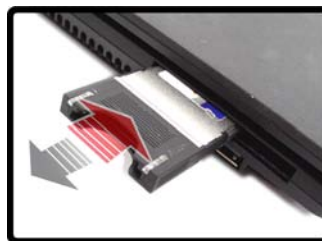
Express Card Slot & 1394 Card Support

Note that the Express Card slot **DOES NOT** support 1394 Express Card modules.



Inserting and Removing ExpressCards

- Align the ExpressCard with the slot and push it in until it locks into place (as pictured in the generic figure below).
- To remove an ExpressCard, simply press the card to eject it.



TouchPad and Buttons/Mouse

The TouchPad is an alternative to the mouse (stylus pen); 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 settings from the mouse control panel in *Windows*.



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.

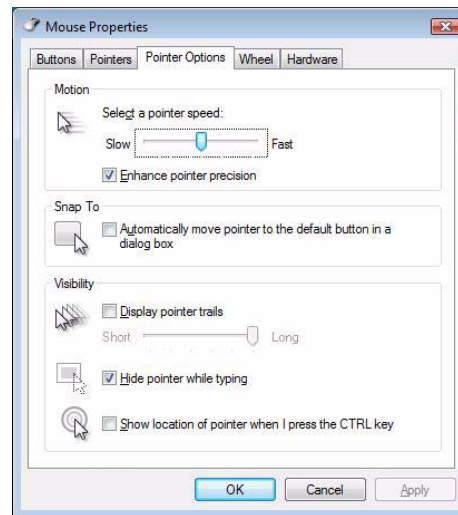
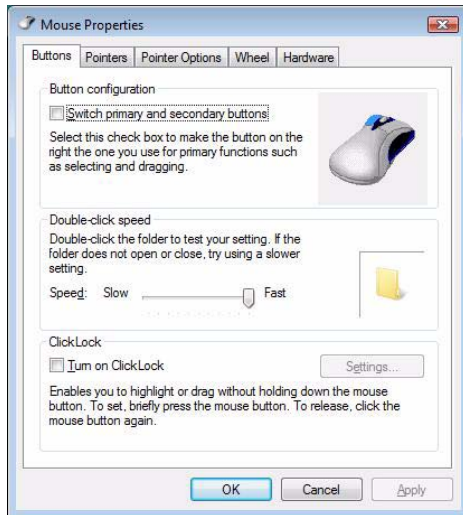


Figure 2 - 6
Mouse Properties



Windows Vista Home Basic Edition

Note that the **Tablet PC Input Panel, Pointer Options & Flicks** and **Handwriting Recognition** are not available in **Windows Vista Home Basic Edition**.

Tablet Mode Options

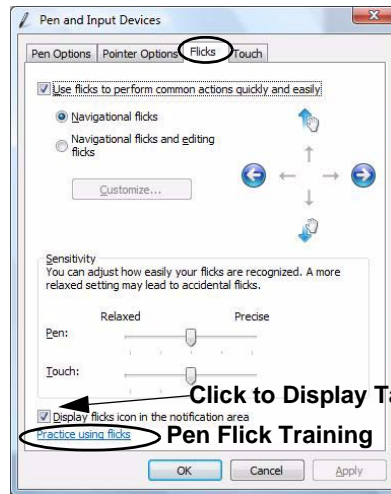
Chapter 1 contains information on rotating the screen into Tablet mode (see *“Rotating The LCD Panel” on page 1 - 8*), Tablet Notebook input (see *“Tablet Notebook Input” on page 1 - 14*) and the Pop Menu functions (see *“Pop Menu” on page 1 - 23*).

Windows Vista also has built in control panels which help you get the most out of your Tablet Notebook (see sidebar for information on **Vista Home Basic Edition**).

Flicks

Flicks are quick gestures that can be assigned various actions (similar to quickly drawing a line in one of eight directions). It is important that the motion is straight and quick. Configure flicks from the **Pen and Input Devices** control panel in **Windows**.

1. Click **Start**, and click **Control Panel** (or point to **Settings** and click **Control Panel**).
2. Click **Mobile PC** and double-click **Pen and Input Devices** (or just double-click **Pen and Input Devices**).
3. Click **Flicks** (tab).




Click to Display Taskbar Icon

Pen Flick Training



Pen Flick Training

Click **Practice** using flicks in the **Flicks** control panel tab to access the **Pen Flick Training** to help you get used to using flicks.

You can also right-click the taskbar icon  (notification area) to bring up the pen flicks menu (below).

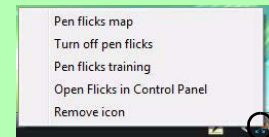
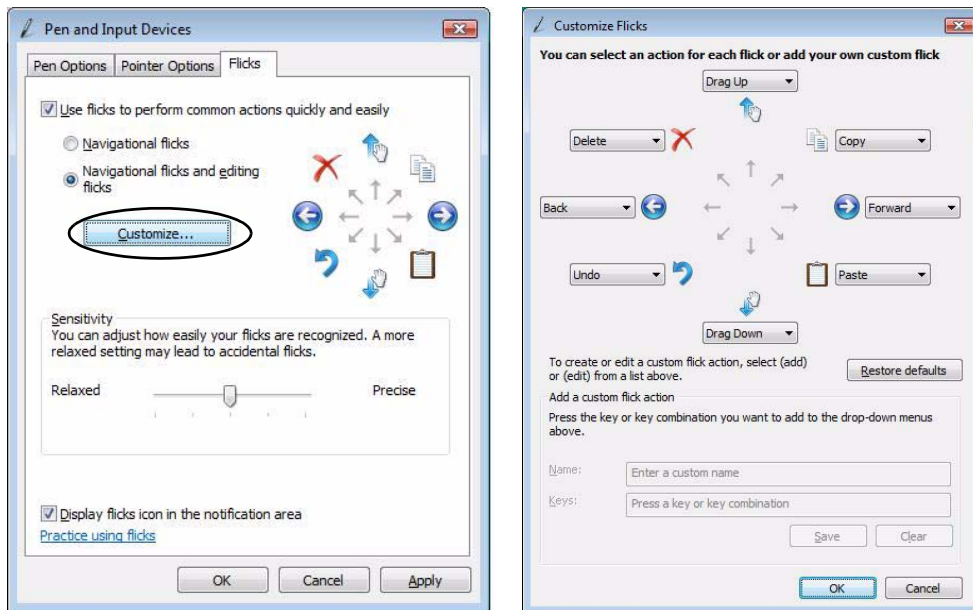


Figure 2 - 7
Flicks

You can enable/disable flicks or **customize** your own. To customize flicks, click on the drop down menu next to one of the actions and select **Add**. You can then give the action a name and specify the key combination required.

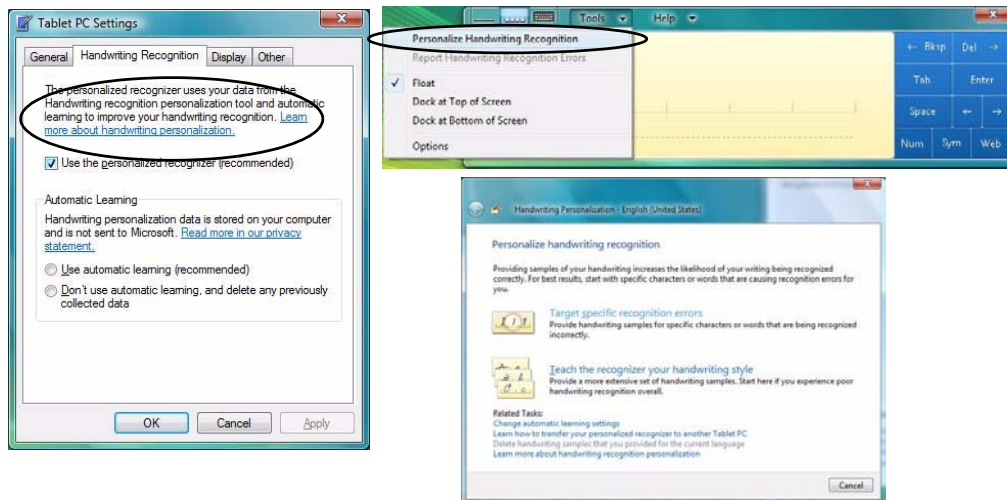
Figure 2 - 8
Customize Flicks



Handwriting Recognition

You can teach the computer to recognize your handwriting in order to help to minimize data entry errors when using the writing or character pads.

1. Open the **Tablet PC Input Panel** (see *[“Tablet PC Input Panel” on page 1 - 18](#)*).
2. Click **Tools** and select **Personalize Handwriting Recognition**.
3. Click **Target specific recognition errors** (to help correct specific characters which are not being recognized correctly), or **Teach the recognizer your handwriting style** (to teach the computer your overall handwriting style).
4. Follow the on-screen instructions to complete handwriting recognition.



Handwriting Recognition Help

Open the **Tablet PC Settings** control panel in **Windows Vista** control panel (see page **1 - 18**) and click the **Handwriting Recognition** tab.


Click on **Learn more about handwriting personalization** to bring up the help menu.

Figure 2 - 9
Tablet PC Settings Control Panel & Handwriting Personalization

Other Useful Windows Vista Features for Tablet Notebook Users

Multi-Select Files in Windows Explorer

The option to **multi-select** files in **Windows Explorer** in *Windows Vista* is very useful when using a pen as your input device.

1. Click **Start**, and click **Control Panel** (or point to **Settings** and click **Control Panel**).
2. Click **Appearance and Personalization** and click **Folder Options**  (or just double-click **Folder Options**).
3. Click **View** (tab), and make sure **Use check boxes to select items** is ticked.
4. Click **OK** to save the setting.
5. Check boxes will appear in open folders to allow you to easily multi-select files with a pen.

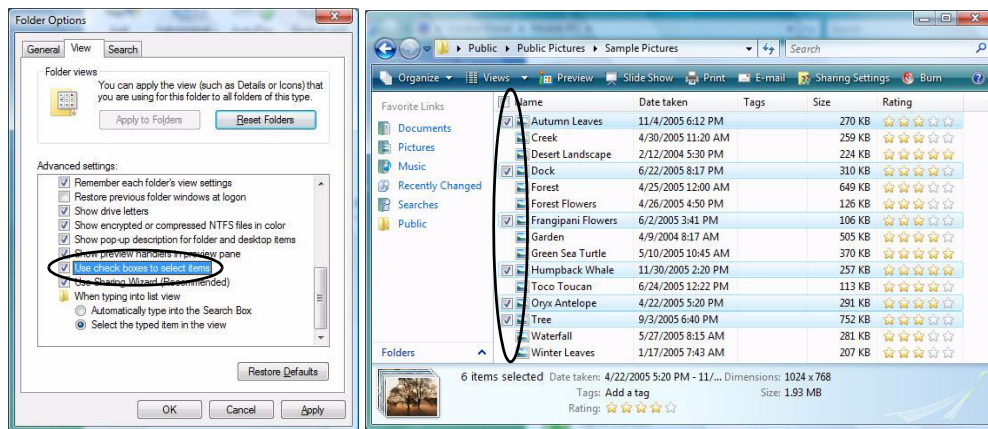
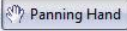


Figure 2 - 10
Folder Options
&
Multi-Select Files

Internet Explorer Panning Hand Tool

Internet Explorer has a **Panning Hand** tool that allows easier navigation of Internet webpages. Simply click the **Panning Hand**  icon in the Command Bar to activate the tool. The hand icon will appear to allow you to pan around the webpage, however the icon will change to a pointed finger icon when you move across a link.

Sound Volume Adjustment

The sound volume level is set using the volume control within **Windows** (and the volume function keys on the computer). Click the volume icon in the taskbar to check the setting.

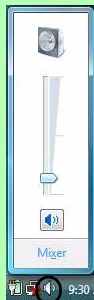






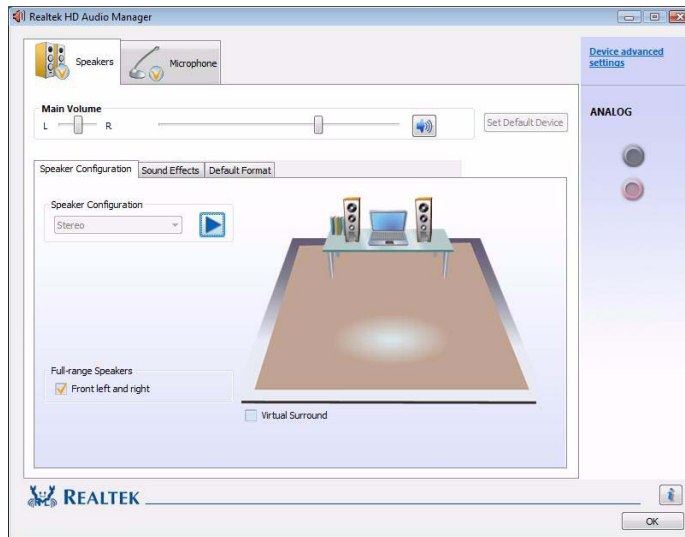
Figure 2 - 11
Realtek Audio Manager

Audio Features

You can configure the audio options on your computer from the **Sound**  control panel in **Windows**, or from the **Realtek HD Audio Manager**  icon in the taskbar/control panel (right-click the taskbar icon  to bring up an audio menu). The volume may also be adjusted by means of the **Fn + Q/A** key combination.



Right-click the icon  to access the menu above.



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. The install instructions are in the sidebar, however you will need to purchase a parallel to USB converter.



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.

Chapter 3: Power Management

Overview

To conserve power, especially when using the battery, your computer 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 Plans
- Power-Saving States
- Configuring the Power Buttons
- Battery Information

The computer uses enhanced power saving techniques to give the operating system (OS) direct control over the power and thermal states of devices and processors. For example, this enables the OS to set devices into low-power states based on user settings and information from applications.



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.

Hibernate Mode In Windows Vista SP1

If you are using **Windows Vista SP1** with **4GB RAM** installed, see page **3 - 7** for information on **Hibernate**.

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 on the left of the computer.
2. Plug the AC power cord into an outlet, and then connect the AC power cord to the AC/DC adapter.
3. Raise the lid/LCD to a comfortable viewing angle.
4. Press the power button to turn the computer “on” (as a safety precaution the notebook cannot be turned on by pressing the power button while the LCD/lid is closed).

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** (see *“How do I completely discharge the battery?” on page 3 - 15*).

We recommend that you do not remove the battery. For more information on the battery, please refer to *“Battery Information” on page 3 - 11*.

Turning on the Computer

Press the power button to turn the computer “on” (as a safety precaution the notebook cannot be turned on by pressing the power button while the LCD/lid is closed).

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



Forced Off

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

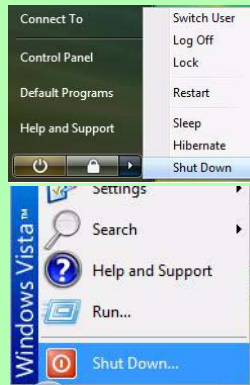
Power Button Sleep

Sleep is the default power mode when the power button is pressed for less than 4 seconds. You may configure the options for the power button from the **Power Options (Hardware and Sound menu)** control panel in *Windows Vista* (see your OS’s documentation, or “*Configuring the Power Buttons*” on page 3 - 9/“*The Power Button in Tablet Mode*” on page 3 - 9 for details).



Shut Down

Note that you should always shut your computer down by choosing the **Shut Down** command from the **Lock Button Menu** in *Windows Vista*. This will help prevent hard disk or system problems.



Resuming Operation

See **Table 3 - 1, on page 3 - 10** for information on how to resume from a power-saving state.

Password

It is recommended that you enable a password on system resume in order to protect your data.

Power Plans

The computer can be configured to conserve power by means of **power plans**. You can use (or modify) an existing **power plan**, or create a new one.

The settings may be adjusted to set the **display** to turn off after a specified time, and to send the computer into **Sleep** after a period of inactivity.

Click **Change plan settings** and then click **Change advanced power settings** to access further configuration options in **Advanced Settings**.

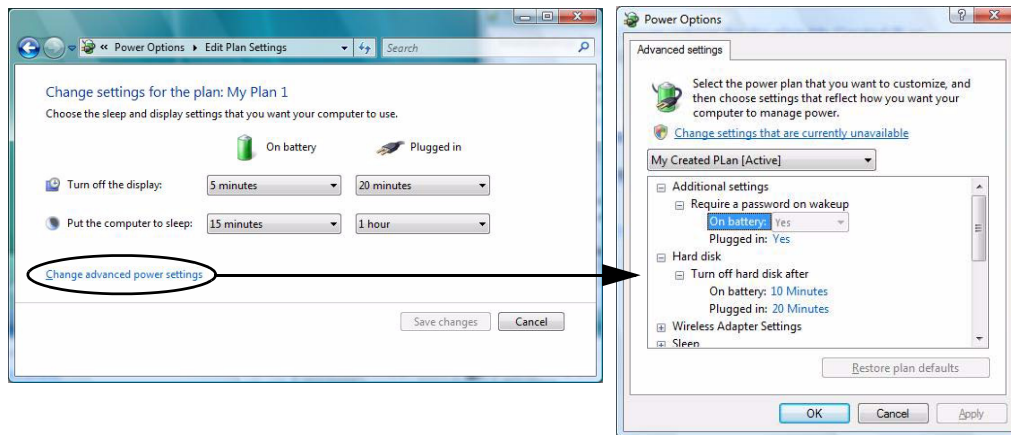


Figure 3 - 1
Power Plan -
Advanced Settings

Each **Windows power plan** 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 **High performance** for maximum performance when the computer is powered from an AC power source. Choose the **Power saver** (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.

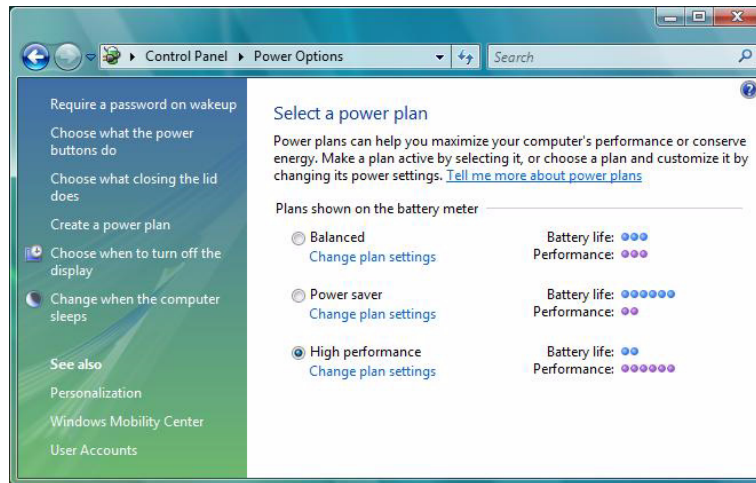




Figure 3 - 2
Power Plans



Power Button

The **Power Button**  in the Start Menu (in Classic View use the Shut Down button ) can be used to send the computer into a power-saving state.

Sleep Mode & Mobile PC Battery

A mobile PC in **Sleep** uses very little battery power.

After an extended period of time the computer will save any open documents and applications to hard disk.

Power-Saving States

You can use power-saving states to stop the computer's operation and restart where you left off. **Sleep** is the default power-saving state in *Windows Vista* (see "*The Power Button in Tablet Mode*" on page 3 - 9 for an exception to this default).

Earlier versions of *Windows* used Stand By and Hibernate as system power-saving states. *Windows Vista* combines the features of Stand By and Hibernate into the default **Sleep** power-saving state.

Sleep

In **Sleep** all of your work, settings and preferences are saved to memory before the system sleeps. When you are not using your computer for a certain length of time, which you specify in the operating system, it will enter **Sleep** to save power.

The PC wakes from **Sleep within seconds** and will return you to where you last left off (what was on your desktop) without reopening the application(s) and file(s) you last used.

If your mobile PC in **Sleep** is running on battery power the system will use only a minimum amount of power. After an extended period the system will save all the information to the hard disk and shut the computer down before the battery becomes depleted.

Hibernate

Hibernate uses the least amount of power of all the power-saving states and saves all of your information on a part of the hard disk before it turns the system off. If a power failure occurs the system can restore your work from the hard disk; if a power failure occurs when work is saved only to memory, then the work will be lost. **Hibernate** will also return you to where you last left off within seconds. You should put your mobile PC into **Hibernate** if you will not use the computer for a period of time, and will not have the chance to charge the battery.

Shut Down

You should **shut down** the computer if you plan to install new hardware (don't forget to remove the battery and follow all the safety instructions in **Chapter 6**), plan to be away from the computer for several days, or you do not need it to wake up and run a scheduled task. Returning to full operation from **shut down** takes longer than from **Sleep** or **Hibernate**.



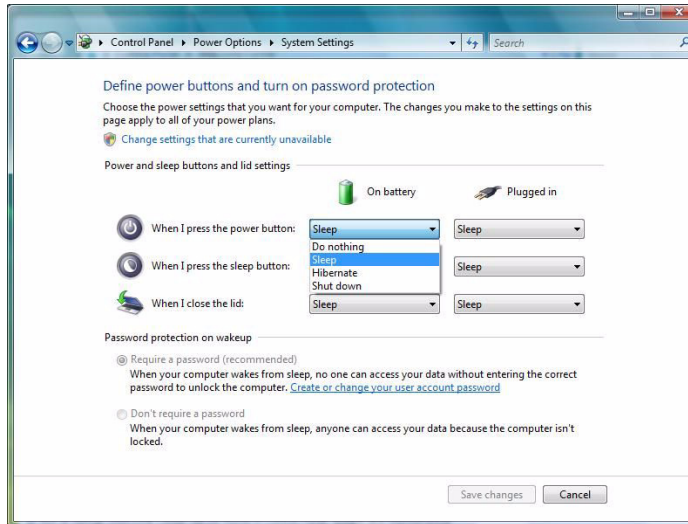
Figure 3 - 3
Lock Button menu

Power Notes for G-Sensor

- If you shut the computer down in tablet mode, with the screen was rotated into portrait mode, the computer will take over two minutes to power on if rotated back to notebook mode.
- When the computer resumes from Sleep/Hibernate in tablet/notebook mode, do not change the mode (tablet/notebook) or the computer may experience unexpected behavior.

Configuring the Power Buttons

The power button/sleep button (**Fn + F2** key combo) and closed lid may be set to send the computer in to a power-saving state.



The Power Button in Tablet Mode

When the computer is in tablet mode the power button is automatically disabled. To use the power button you will need to reorientate the LCD into notebook mode (see *“Screen Orientation (In Notebook Mode)” on page 1 - 13*).



Password Protection

It is recommended that you enable a password on wake up in order to protect your data.

However you can disable this setting from the **Power Options** menu by clicking **Require a password on wakeup** in the left menu, and selecting the options (click **Change settings that are currently unavailable**).

Figure 3 - 4
Power Options
Define Power
Buttons




Closing the Lid

If you have chosen to send the computer to **Sleep** when the lid is closed, raising the lid will wake the system up.

Table 3 - 1
Resuming Operation

Resuming Operation

You can resume operation from power-saving states by pressing the power button, or in some cases pressing the sleep button (**Fn + F2** key combo).

Power Status	Icon  Color	To Resume
Power Off	Off	Press The Power Button
Sleep	Blinking Green	Press The Power Button Press the Sleep Button (Fn + F2 Key Combo)
Hibernate	Off (battery) Orange (AC/DC adapter)	Press The Power Button
Display Turned Off	Green	Press a Key or Move the Mouse/Touchpad/ Touch the Screen



Power Button



When the computer is on, you can use the power button as a Sleep/Hibernate/Shut Down hot key button when it is pressed and released in less than **4 seconds** (pressing and holding the power button for longer than this will force the computer to shut down).

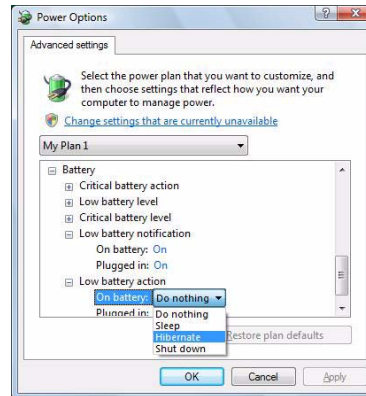
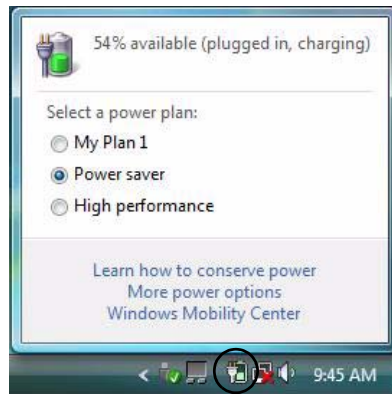
Battery Information

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

Battery Power

Your computer's battery power is dependent upon many factors, including the programs you are running, and peripheral devices attached. You can set actions to be taken (e.g. Shut down, Hibernate etc.), and set critical and low battery levels from **power plan Advanced Settings** (see *Figure 3 - 1 on page 3 - 4*).

Click the battery icon   in the taskbar to see the current battery level and charge status.



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 - 5
**Battery Icon
(Taskbar) & Battery
Advanced Settings**



Windows Mobility Center

The **Windows Mobility Center** control panel provides an easy point of access for information on battery status, power plans used and wireless device status etc.

However **DO NOT** use the **Windows Mobility Center** to power on/off the WLAN module as this can cause some unexpected behavior.

Figure 3 - 6
Windows Mobility Center

Conserving Battery Power

- Use a **power plan** that conserves power (e.g **Power saver**), however note that this may have an affect on computer performance.
- 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.
- Reduce the amount of time before the display is turned off.
- Close wireless (DO NOT use the Windows Mobility Center to power on/off WLAN), Bluetooth, modem or communication applications when they are not being used.
- Disconnect/remove any unnecessary external devices e.g. USB devices, ExpressCards etc.



Battery Life

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 - 4.*

New Battery

Always completely discharge, then fully charge, a new battery (see *“Battery FAQ” on page 3 - 15* for instructions on how to do this).

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 - 20* for information on the battery charge status, and to *“Battery Information” on page 3 - 11* for more information on how to maintain and properly recharge the battery pack.)



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.

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.

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 even if a message indicates the battery is critically low, just let the computer use up all of the battery power and shut down on its own.

1. Save and close all files and applications.
2. **Create a power plan** for discharging the battery and set all the options to **Never**.
3. Click **Change plan settings** (after saving it) and click **Change advanced power settings**.

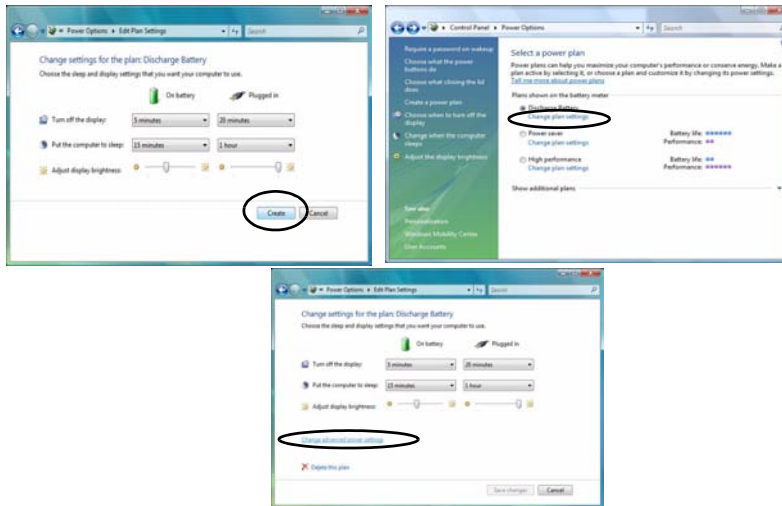


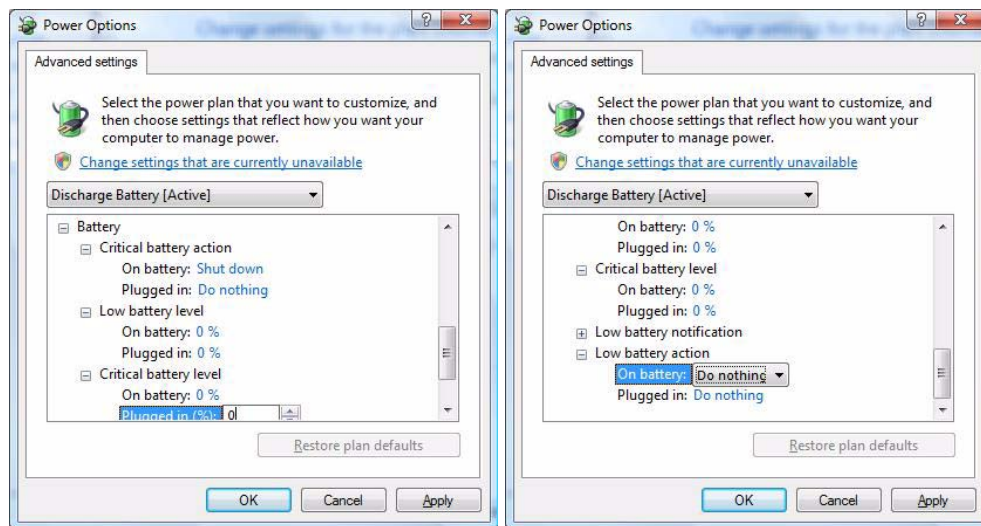
Figure 3 - 7
Power Plan - Create

Power Management

3

4. Scroll down to **Battery** and click **+** to expand the battery options.
5. Choose the options below (click **Yes** if a warning appears).

Figure 3 - 8
**Power Options
Advanced Settings -
Battery**



- Low battery levels = 0%
- Critical battery Levels = 0%
- Low battery action = Do Nothing
- Critical battery action (On battery) = Shut Down
- Critical battery action (Plugged in) = Do Nothing

How do I fully charge the battery?

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

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.

Note: For *Windows XP* driver installation information see *“Driver Installation” on page D - 40*.

What to Install

You will need to attach a CD/DVD drive to the computer in order to access the drivers on the *Device Drivers & Utilities + User's Manual* disc. This contains the drivers and utilities necessary for the proper operation of the computer.

Table 4 - 1, on page 4 - 3 lists what you need to install and **it is very important that the drivers are installed in the order indicated**.

Module Driver Installation

The procedures for installing drivers for the **Fingerprint, Wireless LAN** and **PC Camera** modules are provided in *“Modules & Options” on page 7 - 1*.

Note: The operating system is the default setting for **Bluetooth** control in *Windows Vista*, and does not require a driver. See *“Bluetooth Module” on page 7 - 2* for configuration instructions.

Driver Installation

Insert the *Device Drivers & Utilities + User's Manual* disc and click **Install Drivers** (button), or **Option Drivers** (button) to access the optional driver menu.

4



Figure 4 - 1 - Drivers Installer Screen 1

1. Check the driver installation order from **Table 4 - 1, on page 4 - 3** (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 - 2 - Drivers Installer Screen 2

Driver Name	Page #
<i>Chipset</i>	<i>Page 4 - 5</i>
<i>Video</i>	<i>Page 4 - 5</i>
<i>G-Sensor</i>	<i>Page 4 - 5</i>
<i>Touch Panel Application</i>	<i>Page 4 - 5</i>
<i>Audio</i>	<i>Page 4 - 5</i>
<i>LAN</i>	<i>Page 4 - 5</i>
<i>Pop Menu Utility</i>	<i>Page 4 - 6</i>
<i>Fingerprint Reader Module</i>	<i>Page 7 - 6</i>
<i>Wireless LAN Module</i>	<i>Page 7 - 12</i>
<i>PC Camera Module</i>	<i>Page 7 - 16</i>
<i>GPS Module</i>	<i>Page 7 - 24</i>

Table 4 - 1 - Driver Installation

Manual Driver Installation

Click **Browse CD** (button) in the *Drivers Installer* application and browse to the executable file in the appropriate driver folder.

Windows Update

After installing all the drivers make sure you enable **Windows Update** in order to get all the latest security updates etc. (all updates will include the latest **hotfixes** from Microsoft). See “*Windows Update*” on page 4 - 6 for instructions.



Windows Vista Service Pack 1

Make sure you install **Windows Vista Service Pack 1** (or a Windows Vista version which includes Service Pack 1) **before installing any drivers**. Go to the Microsoft website for download details, or contact your service center.

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 **Programs and Features** icon (**Programs > Uninstall a program**). Click to select the driver (if it is not listed see below) and click **Uninstall**, and then follow the on screen prompts (it may be necessary to restart the computer). Reinstall the driver as outlined in this chapter.

If the driver is not listed in the **Programs and Features** menu:

1. Click **Start**, and click **Control Panel** (or point to **Settings** and click **Control Panel**).
2. Double-click **Device Manager (Hardware and Sound > Device Manager)**.
3. Double-click the **device** you wish to update/reinstall the driver for (you may need to click “+” to expand the selection).
4. Click **Driver** (tab) and click the **Update Driver** or **Uninstall** button and follow the on screen prompts.

User Account Control (Win Vista)

If a **User Account Control** prompt appears as part of the driver installation procedure, click **Continue/Allow**, and follow the installation procedure as directed.

Windows Security Message

If you receive a *Windows* security message as part of the driver installation process. Just click “**Install this driver software anyway**” or **Install** to 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*.

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.

Driver Installation Procedure

Insert the *Device Drivers & Utilities + User's Manual* disc into your attached CD/DVD drive and click **Install Drivers** (button), or **Option Drivers** (button) to access the optional driver menu.

Chipset

1. Click **1.Install Chipset Driver > Yes**.
2. Click **Next > Yes > Next > Next**.
3. Click **Finish**.

Video

1. Click **2.Install Video Driver > Yes**.
2. Click **Next > Yes > Next > Next**.
3. Click **Finish** to restart the computer.

G-Sensor

1. Click **3.Install GSENSOR AP > Yes**.
2. Click **Next > Install**.
3. Click **Finish > Finish** to restart the computer.

Touch Panel Application

1. Click **4.Install Touch Panel AP > Yes**.
2. Click **Next > Next > Install**.
3. Click **Finish**.
4. You will then need to calibrate the touch panel (see [*“Calibrating the Touch Screen” on page 1 - 14*](#)).
5. Click **OK** to restart the computer after calibration.

Audio

1. Click **5.Install Audio Driver > Yes**.
2. Click **Next**.
3. Click **Finish** to restart the computer.

LAN

1. Click **6.Install LAN Driver > Yes**.
2. Click **Next > Install**.
3. Click **Finish**.
4. The network settings can now be configured.

Pop Menu Utility

1. Click **7.Install POP Menu Utility > Yes**.
2. Click **Next > Install**.
3. Click **Finish > Finish** to restart the computer.
4. See *“Pop Menu” on page 1 - 23* for details.

4



Windows Update

After installing all the drivers make sure you enable **Windows Update** in order to get all the latest security updates etc. (all updates will include the latest **hotfixes** from Microsoft).

To enable **Windows Update** make sure you are **connected to the internet**:

1. Click **Start**, and click **Control Panel** (or point to **Settings** and click **Control Panel**).
2. Click **Check for updates (Security)**, or double-click **Security Center** and click **Windows Update**.
3. Double-click **Check for updates (button)**.
4. The computer will now check for updates (you need to be connected to the internet).
5. Click **Install now** (button) to install the updates.

Optional Drivers

See the pages indicated for the driver installation procedures for any modules included in your purchase option.



Figure 4 - 3 - Optional Drivers

Bluetooth Module

Note: The operating system is the default setting for **Bluetooth** control in **Windows Vista**, and does not require a driver. See *“Bluetooth Module” on page 7 - 2* for configuration instructions.

Fingerprint Reader Module

See the introduction in *“Fingerprint Reader Module” on page 7 - 6*, and check the installation procedure.

Wireless LAN Module

See the introduction in *“Wireless LAN Module” on page 7 - 12*, and check the installation procedure.

PC Camera Module

See the introduction in *“PC Camera Module” on page 7 - 16*, and check the installation procedure.

GPS Module

See the introduction in *“GPS Module” on page 7 - 24*, and check the installation procedure.

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 *Phoenix SecureCore(tm) 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 *Setup*. 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 *Setup* and restore the **Setup Defaults** with <F9>.



POST Screen

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

Note: The **POST** screen as pictured right is for guideline purposes only. The **POST** screen on your computer may appear slightly different. If you disable the **Boot-time Diagnostic Screen**, the POST screen will not appear.

Figure 5 - 1
POST Screen

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). The screen below will appear if you have enabled the **Boot-time Diagnostic Screen** (see *[“Boot-time Diagnostic Screen: \(Advanced Menu\)” on page 5 - 9](#)*).

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

```
Phoenix TrustedCore(tm) NB
Copyright 1985-2006 Phoenix Technologies Ltd.
All Rights Reserved
Bios Revision: ***** ①
KBC/EC Firmware Revision: ***** ①

CPU = 1 Processors Detected
Genuine Intel(R) CPU @ 1.60GHz ②
1015M System RAM Passed ③
521 KB L2 Cache
System BIOS shadowed
Video BIOS shadowed
Fixed Disk 0: SAMSUNG HS030GB
Mouse initialized

Press <F2> to enter SETUP ④
```

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 SecureCore(tm) Setup Utility** tells the system how to configure itself and manage basic features and subsystems (e.g. port configuration).

Entering Setup

To enter *Setup*, turn on the computer and press **F2** during the **POST**. The prompt (*Press F2 to Enter Setup*) seen 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 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 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

Phoenix SecureCore(tm) Setup Utility			
Main	Advanced	Security	Boot Exit
System Time: [22:12:05] System Date: [08/15/2008] ► Primary Master [SAMSUNG HS030GB- (PM)] System Memory 640 KB Extended Memory 1014 MB BIOS Revision ***** KBE/EBC Firmware Revision: *****			Item Specific Help <Tab>, <Shift Tab>, or <Enter> selects field.
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults Esc Exit ←→ Select Menu Enter Select ► Sub-Menu F10 Save and Exit			

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.

Primary Master (Main Menu)

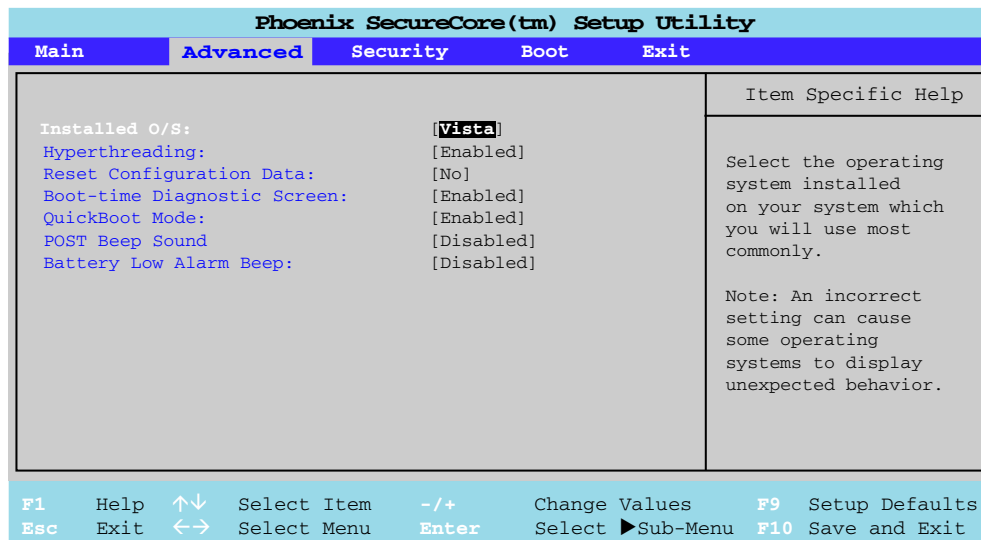
Pressing **Enter** opens the sub-menu to show the configuration of a HDD on the computer's Primary Master channel. Use the **Auto** (Type:) setting to have the items configured automatically for you.

System/Extended 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



Installed O/S (Advanced Menu)

This setting tells the computer what kind of operating system you're using. Make sure you choose the correct setting for your O/S in order to prevent system problems.

If you wish to boot the computer from a network then choose **PXE** as the installed O/S.

Hyperthreading: (Advanced Menu)

If you enable Hyperthreading it will increase performance of your computer depending on the hardware and software you use.

Reset Configuration Data: (Advanced Menu)

This item is set to **No** as default. You can change the setting to **Yes** if you have installed a new add-on which has reconfigured the system, resulting in such a serious system conflict that the operating system is unable to boot.

Boot-time Diagnostic Screen: (Advanced Menu)

Use this menu item to enable/disable the Boot-time Diagnostic Screen. Enable this item to display the POST screen as illustrated in ***“POST Screen” on page 5 - 2.***

QuickBoot Mode: (Advanced Menu)

When enabled, QuickBoot Mode will allow the computer to skip certain tests as the computer boots up, thus decreasing the boot time.

POST Beep Sound (Advanced Menu)

Use this menu item to enable/disable the beep as the computer starts up.

Battery Low Alarm Beep (Advanced Menu)

Use this menu item to enable/disable the audible warning when the battery has reached low power status.



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

Phoenix SecureCore(tm) Setup Utility			
Main	Advanced	Security	Boot Exit
Supervisor Password Is: Clear User Password Is: Clear Set Supervisor Password [Enter] Set User Password [Enter] Password on boot: [Disabled] Fixed disk boot sector: [Normal]			Item Specific Help Supervisor Password controls access to the setup utility.
F1	Help	↑↓	Select Item
Esc	Exit	←→	Select Menu
		-/+	Change Values
		Enter	Select ►Sub-Menu
		F9	Setup Defaults
		F10	Save and Exit

Figure 5 - 4
Security Menu

Set Supervisor Password (Security Menu)

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

Set User Password (Security Menu)

You can set a password for user mode access to the **Phoenix SecureCore Setup Utility**. This will not affect access to the computer OS, (only the *Setup* utility) unless you choose to set a **Password on Boot** (see below). Many menu items in the **Phoenix SecureCore Setup Utility** cannot be modified in user mode. You can only set the user password after you have set the supervisor password.

Password on boot (Security Menu)

Specify whether or not a password should be entered to boot the computer (**you may only set a password on boot if a supervisor password is enabled**). If “*Enabled*” is selected, only users who enter a correct password can boot the system (**see the warning in the sidebar**). The default setting is “*Disabled*”.

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.

Fixed disk boot sector (Security Menu)

If you choose “**Write-Protect**” 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).



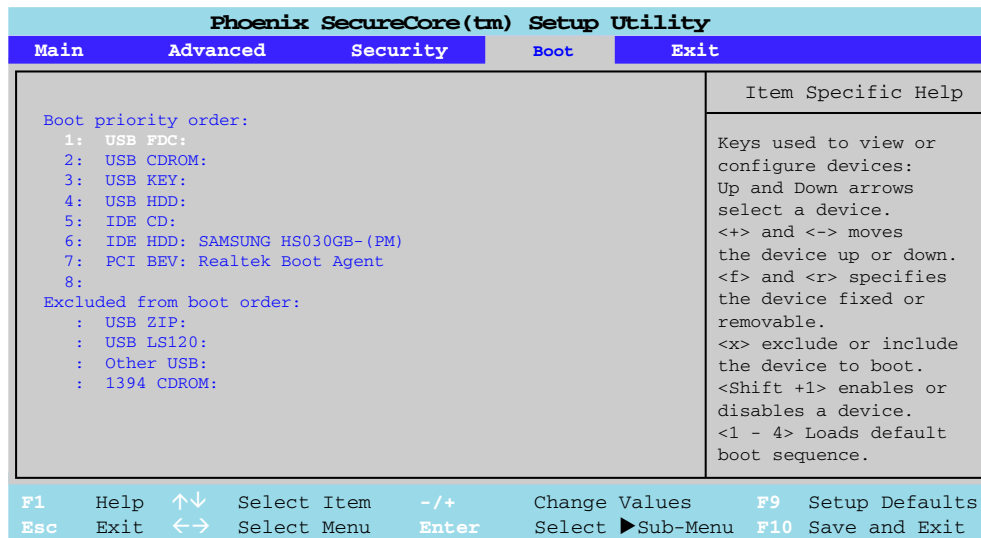
Password Warning

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.

Boot Menu

Figure 5 - 5
Boot Menu



When you turn the computer on it will look for an operating system (e.g. *Windows Vista*) 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

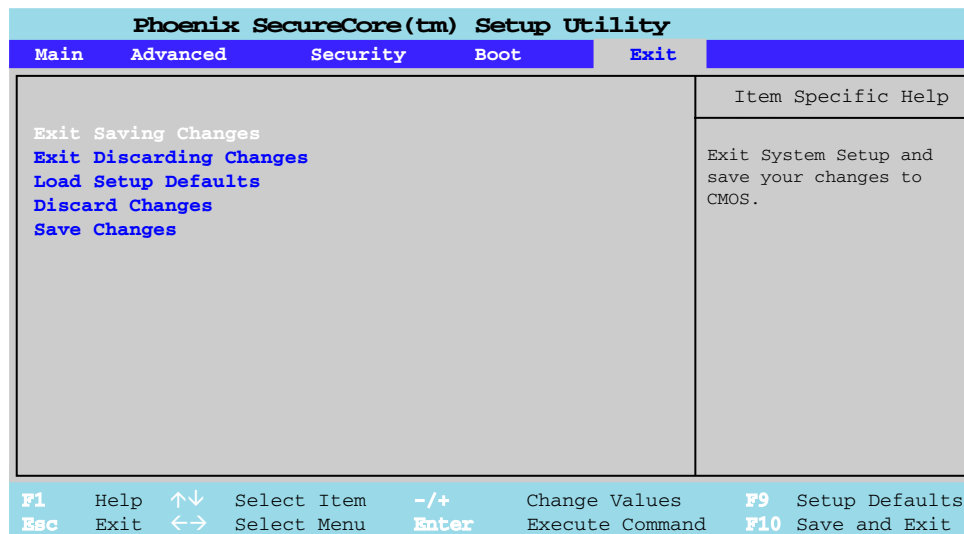


Figure 5 - 6
Exit Menu

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 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.

The CPU is not a user serviceable part. Accessing the CPU in any way, may violate your warranty.

Unauthorized tampering with the HDD may also violate 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.

Upgrading the Hard Disk Drive

The hard disk can be taken out to accommodate other 1.8" parallel (PATA) hard disk drives with a height of 5.0 mm (see *“Storage” on page C - 2*). Due to the delicate nature of the hard disk cable **we recommend that you do not do this yourself**, since if it is done incorrectly you may damage the hard disk cable. Please contact your customer service representative for help with upgrading the internal storage device.



Warranty Warning

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

Removing the Battery

If you are confident in undertaking upgrade procedures yourself, for safety reasons it is best to remove the battery.

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

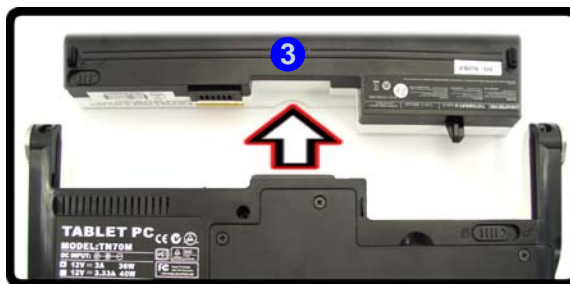
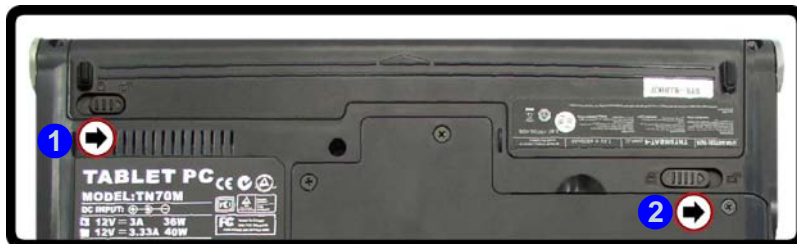


Figure 6 - 1
Battery Removal

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 bay cover and remove screws **1** - **4**.
3. Remove the component bay cover **5**.

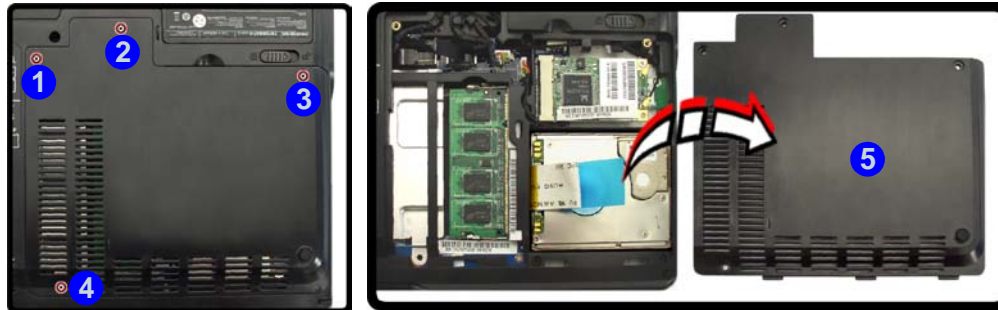


Figure 6 - 2
Removing the
Component Bay
Cover

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.

6

4. Gently pull the two release latches on the sides of the memory socket in the direction indicated by the arrows (6 & 7) in **Figure 6 - 3**.
5. The RAM module will pop-up, and you can remove it.

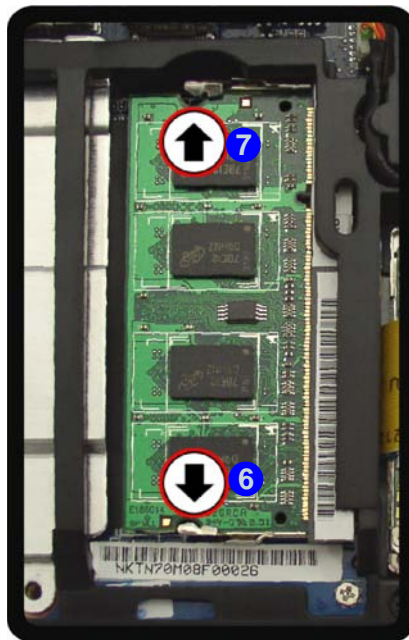


Figure 6 - 3
**RAM Module
Release Latches**

6. Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
7. 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.
8. Press the module in and down towards the mainboard until the slot levers click into place to secure the module.

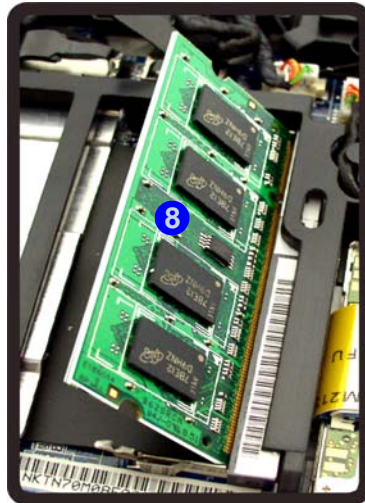


Figure 6 - 4
**RAM Module
Insertion**

9. Replace the bay cover and screws.
10. 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 information on the following modules, which may come with your computer, depending on the configuration purchased. If you are unsure please contact your service representative.

- Bluetooth Module
- Fingerprint Reader Module
- Wireless LAN Module
- PC Camera Module
- GPS Module



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 + F1** key combination/Pop Menu button to toggle power to the Bluetooth module, and check the LED indicator to see if the module is powered on or not (see [Table , on page 1 - 22](#)/[Table 1 - 5, on page 1 - 23](#)/[Table , on page 1 - 20](#)).

Bluetooth Module

The operating system's **Bluetooth Devices** control panel is used to configure the Bluetooth settings in *Windows Vista*, and therefore does not require a driver. Use the **Fn + F1** key combination (see [“Function Keys” on page 1 - 22](#)), or use the **Pop Menu** button (see [“Pop Menu” on page 1 - 23](#)) to toggle power to the Bluetooth module.



Bluetooth Data Transfer




Note that the transfer of data between the computer and a Bluetooth enabled device is supported **in one direction only (simultaneous data transfer is not supported)**. Therefore if you are copying a file from your computer to a Bluetooth enabled device, you will not be able to copy a file from the Bluetooth enabled device to your computer until the file transfer process from the computer has been completed.

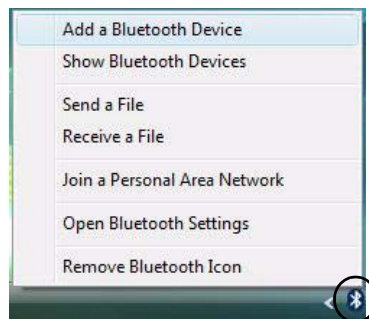
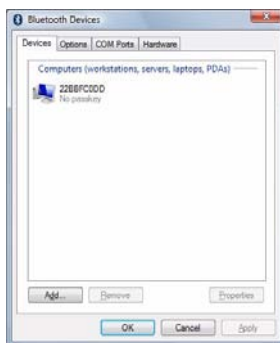
Bluetooth Configuration in Windows Vista

Setup your Bluetooth Device so the Computer Can Find it

1. Turn your Bluetooth device (e.g. PDA, mobile phone etc.) on.
2. Make the device discoverable (to do this check your device documentation).

To Turn the Bluetooth Module On

1. Press the **Fn + F1** key combination to power on the Bluetooth module.
2. A Bluetooth icon  will appear in the taskbar (see sidebar).
3. You can then do any of the following to access the **Bluetooth Devices** control panel.
 - **Double-click** the icon  to access the **Bluetooth Devices** control panel.
 - Click **Start**, and click **Control Panel** (or point to **Settings** and click **Control Panel**), and then click **Bluetooth Devices** (**Hardware and Sound**).
 - **Click/Right-click** the icon  and choose an option from the menu.



Bluetooth Taskbar Icon

If you cannot see the Bluetooth icon in the taskbar, access the **Bluetooth Devices** control panel. Click **Options** (tab), and make sure that **Show Bluetooth icon in the notification area** check box (**Connections**) has a tick inside it.

Note that you will need to check the LED indicator to see if the module is powered on or not.

Figure 7 - 1
Bluetooth Devices & Click Icon Menu

Modules & Options

Figure 7 - 2
Add Bluetooth
Device Wizard

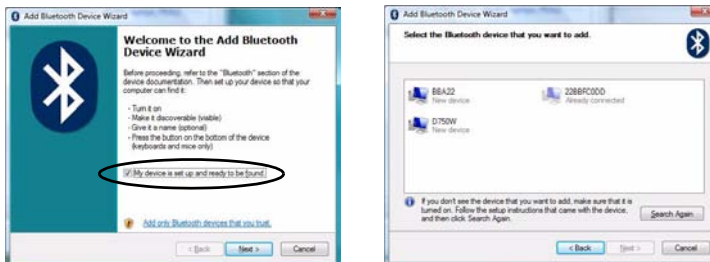
Passkey Options

You can allow the system to choose a passkey for you. You will then be prompted to enter the generated passkey on your Bluetooth device.

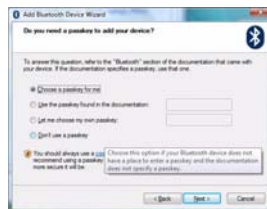
Figure 7 - 3
Passkey Option

To Add a Bluetooth Device

1. Access the **Bluetooth Devices** control panel.
2. Click **Options** (tab), and make sure that **Allow Bluetooth devices to connect to this computer** check box (**Connections**) has a tick inside it.
3. Click **Devices** (tab), and then click **Add**.
4. The **Add Bluetooth Device Wizard** will appear.
5. Click to select "**My device is set up and ready to be found**", and then click **Next**.



6. The **Wizard** will then search for any available Bluetooth devices within range.
7. Click to select the device you want to communicate with, and click **Next**.
8. Select an appropriate passkey option and click **Next**.



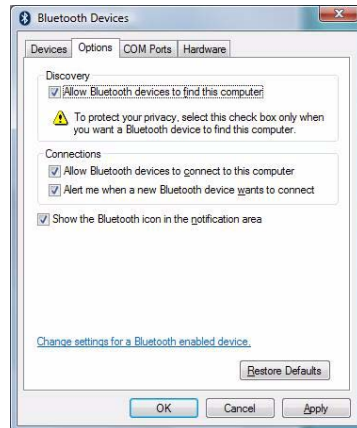
9. Click **Finish**.

To Change Settings for the Bluetooth Device

1. Access the **Bluetooth Devices** control panel.
2. Click on the device you want to change and click **Properties** to:
 - Change the **name** of the device (click **General**, type a new name and click **OK**).
 - Enable/Disable a **service** (click **Services**, clear/tick the check box next to the service and click **OK**).

To Make your Computer Discoverable to Bluetooth Devices

1. Access the **Bluetooth Devices** control panel.
2. Click **Options**, and make sure that **Allow Bluetooth devices to find this computer** check box (**Discovery**) has a tick inside it.
3. Make sure that **Alert me when a new Bluetooth device wants to connect** check box (**Connections**) has a tick inside it, if you want to be notified when a Bluetooth device wants to connect.




Bluetooth Help

To get help on Bluetooth configuration and settings, select **Help and Support** from the **Start** menu. Type Bluetooth in the **Search Help** box, and select an item from the returned search results to get more information.

Figure 7 - 4
Bluetooth Devices
Options



Help & Manual

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

Insert the *Device Drivers & Utilities + User's Manual* disc and click **Option Drivers** (button). Click **Unlock** (button) and then click **1.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* disc and click **User's Manual** (button), and click **Install Acrobat Reader** (button).

Fingerprint Reader Module

If you have included the fingerprint reader in your purchase option you will need to install the driver as per the instructions below.

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** after installing the driver.

Fingerprint Reader Driver Installation

1. Make sure the module is powered on, and then insert the *Device Drivers & Utilities + User's Manual* disc into an attached CD/DVD drive.
2. Click **Option Drivers** (button).
3. Click **1.Install FingerPrint Driver > Yes**.
4. Click **Software Installation**.
5. Click **Next > Next > Next**.
6. Click **Finish > Yes** to restart the computer.

User Enrollment

1. Click **Start > Programs/All Programs > Protector Suite QL > User Enrollment**, or double click the taskbar icon .
2. Click **Initialize**.

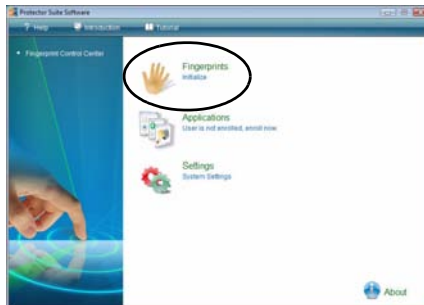


Figure 7 - 5
Initialize Fingerprints

3. On the first run of the program you will be asked to click the button to accept the license, and then click **OK**.
4. Click **Next** and select "**Enrollment to the hard disk**", and click **Finish**.

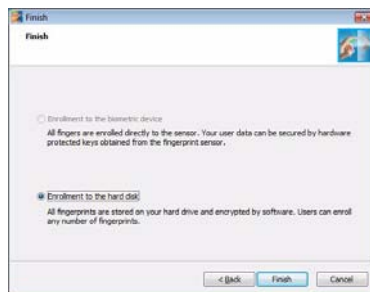
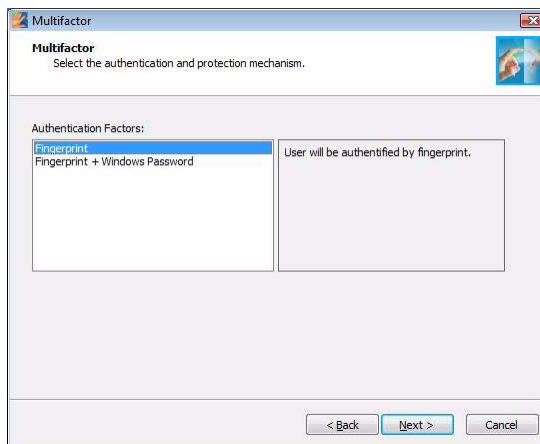


Figure 7 - 6
Enroll to Hard Disk

Modules & Options

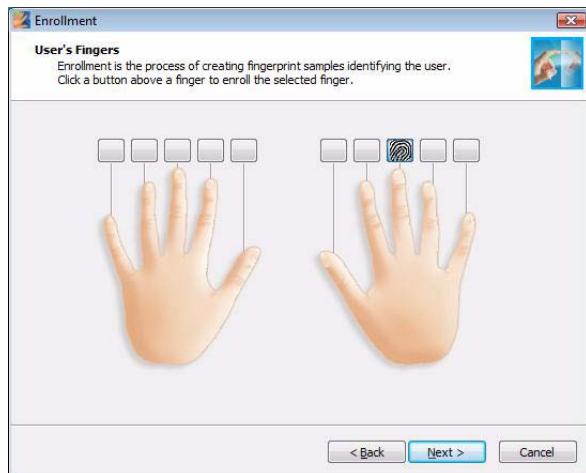
5. If you have not set a **Windows** password you will be prompted to do so (**note**: If you have not set a password **Protector Suite QL** cannot secure access to your computer).
6. Click **Next**.
7. You will then be prompted to enter your **Windows** password and click **Next**.
8. Select either to use the fingerprint reader alone for authentication, or choose both the fingerprint reader and the *Windows* password, and then click **Next**.

Figure 7 - 7
Multifactor



9. Click **Next > Next** (if you have the "**Run interactive tutorial**" tickbox selected you will run through the Fingerprint Tutorial).
10. Click **Next** for each window of the tutorial (you can click the button to "**skip tutorial**" at any time).

11. Click the button above any of the fingers to begin the enrollment process for that finger.
12. Swipe the finger **five** times to enroll that finger.
13. Repeat the process for all the fingers you wish to enroll (see sidebar), and then click **Next**.
14. Click **Finish**.
15. Click "**Help**" in the **Fingerprint Control Center** to get more information on any topic.
16. You can also run the **Tutorial**, or **Introduction** (to run the product tour video) to get more information.



Fingerprint Enrollment

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

Figure 7 - 8
Fingerprint Enrollment


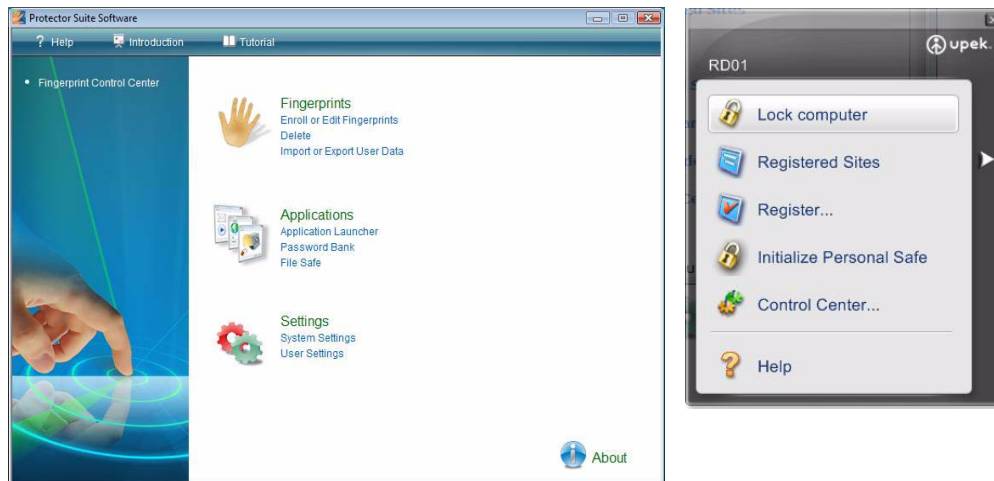
- Right-click the taskbar icon  to bring up the **Control Center** that allows you to **Edit Fingerprints**, **register applications**, manage **Password Bank**, **File Safe** and access the **Help** menu etc. You can also run the **Control Center** etc. from the **Protector Suite QL** item in the **Programs/All Programs** menu.

Figure 7 - 9
**Control Center &
Biomenu**



- See ***“Help & Manual” on page 7 - 6*** for further details.
- If you swipe your finger over the reader at any time you can access the **Biomenu** to **lock the computer**, **register websites**, access the **Personal Safe** open the **Control Center** and access the **Help** menu.

Fingerprint Control Center Features

Application Launcher

The **Application Launcher** allows you to register applications to be launched when assigned to a particular finger. Simply copy the application icon on to one of the registered fingers and then click OK to close the application window. Once registered the application will launch when you swipe the appropriate finger across the sensor.

Password Bank

The **Password Bank** stores registrations of user names, passwords and other settings for web sites etc.

File Safe

File Safe is an encrypted area assigned on your hard drive that allows you to store files and folders to be protected by fingerprint protection.

For more information on these and other features simply access “**Help**” in the **Fingerprint Control Center** and select the item from the menu on the left.



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 + F4** key combination/Pop Menu button to toggle power to the WLAN module, and check the indicator to see if the module is powered on or not (see [Table , on page 1 - 22/](#) [Table 1 - 5, on page 1 - 23/](#) [Table , on page 1 - 20](#)).

DO NOT use the **Windows Mobility Center** to power on/off the WLAN module as this can cause some unexpected behavior.

Wireless LAN Module



Before installing the **Wireless LAN** driver, make sure that the optional WLAN module is on. Use the **Fn + F4** key combination (see [“Function Keys” on page 1 - 22](#)), or use the **Pop Menu** button (see [“Pop Menu” on page 1 - 23](#)) 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 - 3](#).

802.11 b/g WLAN Driver Installation

1. Make sure the module is powered on, and then insert the *Device Drivers & Utilities + User's Manual* disc into an attached CD/DVD drive.
2. Click **Option Drivers** (button).
3. Click **2.Install Wireless Lan driver > Yes**.
4. Click **Finish** to complete the installation.
5. The operating system is the default setting for Wireless LAN control in *Windows Vista* (see overleaf).

Connecting to a Wireless Network

Make sure the Wireless LAN module is turned on.

1. Click the taskbar wireless icon , and then click **Connect to a network** (or right-click the icon , and then click **Connect to a network**).



2. In the **Show** list, click to choose **Wireless** from the drop-down menu.
3. A list of currently available networks will appear.

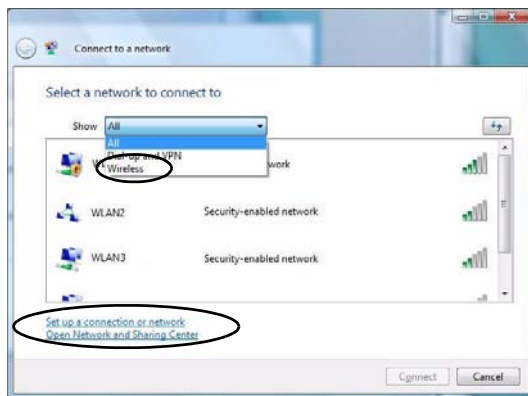


Figure 7 - 10
Taskbar Menus

Network and Sharing Center

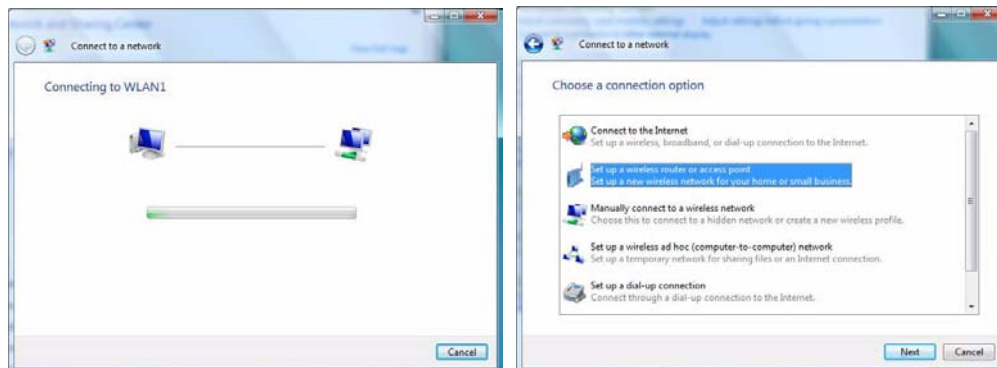
You can also use the **Network and Sharing Center** control panel in Windows (**Network and Internet**) to connect to any available wireless networks.

Figure 7 - 11
Connect to a
Network

Modules & Options

4. Click a network, and then click **Connect**.
5. If you do not see a network you want to connect to, click **Set up a connection or network** (a list of options will appear allowing manual searching, and creating a new network).



Figure 7 - 12
Connecting

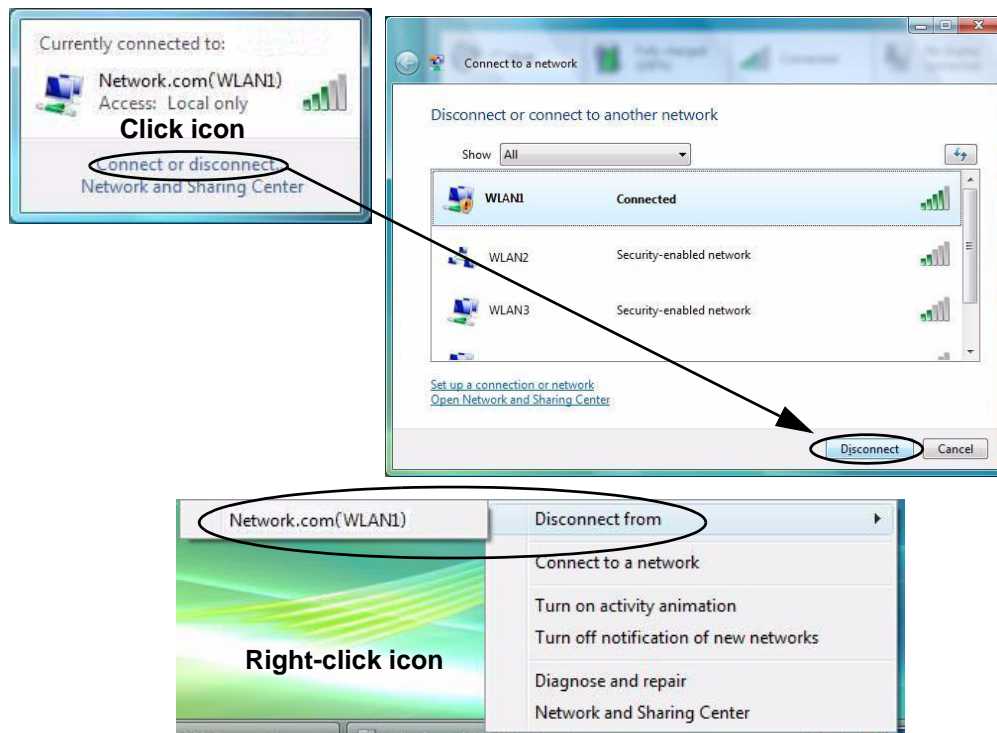


6. Move the cursor over the taskbar icon  to see the connection status (see below).

Figure 7 - 13
Connection Status



- To disconnect from the wireless network you can click the taskbar wireless icon , and then select **Connect or disconnect** to access the network menu, and click Disconnect (or **right-click** the icon , and then click **Disconnect from**).



Security Enabled Networks

You should try to make sure that any network you are connecting to is a secure network.

Connecting to unsecure networks may allow unauthorized access to your computer, documents, websites and files etc.

7

Figure 7 - 14
Disconnecting



Latest PC Camera Driver Information

Check the **CD**, and any accompanying insert pages, for the latest updated information on the PC Camera driver, which may override the information provided here.

Video Resolution Output Size

The PC Camera's default resolution is set to 320 * 240. You can adjust this resolution, however do not exceed 640 * 480 in order to avoid video lag (see "[Reducing Video File Size](#)" on page 7 - 21).

PC Camera Module

Before installing the **PC Camera** driver, make sure that the optional PC Camera is on. Use the **Fn + D** key combination (see "[Function Keys](#)" on page 1 - 22), or use the **Pop Menu** button (see "[Pop Menu](#)" on page 1 - 23) to toggle power to the **PC Camera module**. Make sure you install the drivers in the order indicated in [Table 4 - 1, on page 4 - 3](#).

PC Camera Drivers

Note that **two** drivers are provided on the disc for the **PC Camera**.

The driver included in the **Drivers Installer** menu has already received certification for **Windows**. A second driver is included (which may resolve some known issues with the original driver), which at time of going to press, has not yet received certification for **Windows**. You can install this latest driver as indicated.

1. DO NOT install the video driver from the Drivers Installer menu.
2. Click **Back** and click **Browse CD**.
3. Browse to the following location on the **Device Drivers & Utilities + User's Manual** disc (note that **D:** is the CD/DVD device drive letter, however your system may have designated a different device drive letter):
 - **D: \Options\03BisonCCD\Driver**

PC Camera Driver Installation

1. Make sure the module is powered on, and then insert the *Device Drivers & Utilities + User's Manual* disc into an attached CD/DVD drive.
2. Click **Option Drivers** (button).
3. Click **3.PC Camera, Web cam > Yes**.
4. Choose the language you prefer and click **Next > Next**.
5. Click **Finish** to restart the computer.
6. Run the **BisonCap** application program from the **BisonCam** shortcut on the desktop, or from the **BisonCam** item in the **Start > Programs/All Programs** menu (if the hardware is turned off use the **Fn + D** key combination to turn it on again).

PC Camera Audio Setup (all camera modules)

To capture video & **audio** with your camera, it is necessary to setup the audio recording options in *Windows*.


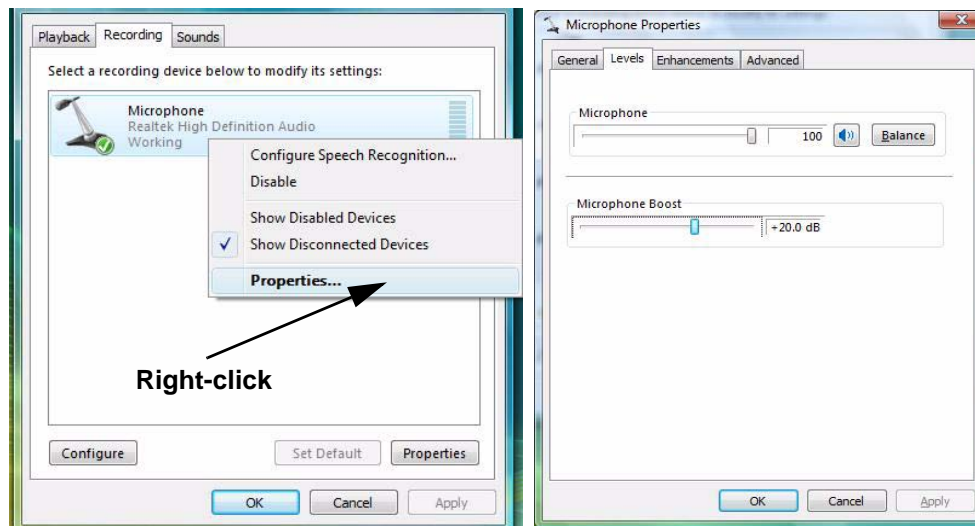
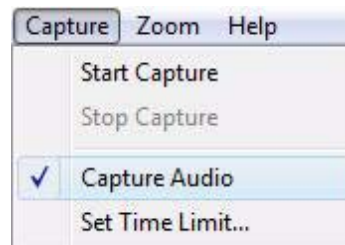
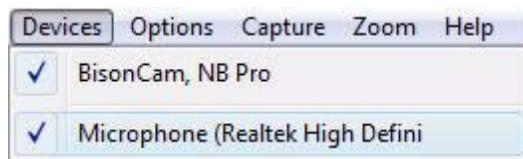
1. Click **Start**, and click **Control Panel** (or point to **Settings** and click **Control Panel**).
2. Click **Sound**  (**Hardware and Sound**).
3. Click **Recording** (tab).
4. Right-click **Microphone** (Realtek High Definition Audio) and make sure the item is not disabled.
5. Double-click **Microphone** (or select **Properties** from the right-click menu).
6. Click **Levels** (tab), and adjust the **Microphone** and **Microphone Boost** sliders to the level required.
7. Click **OK** and close the control panels.
8. Run the **BisonCap** application program from the **Start > Programs/All Programs > BisonCam** menu.
9. Go to the **Devices** menu heading and select **Microphone (Realtek....)** (it should have a tick alongside it).
10. Go to the **Capture** menu heading and select **Capture Audio** (it should have a tick alongside it).

Figure 7 - 15
Audio Setup for PC Camera



Right-click





Pre-Allocating File Space

You may pre-allocate the file size (**File > Allocate File Size**) for the capture file in the **BisonCap** program.

Pre-allocating space on the hard disk can improve the capture quality (particularly of large capture files), by reducing the amount of work the hard disk has to do in finding space for the video data as it is being captured.

See also *“Reducing Video File Size” on page 7 - 21.*

BisonCap

BisonCap is a video viewer for general purpose video viewing and testing, and capturing video files to .avi format.

1. Run the **BisonCap** program from the **Start > Programs/All Programs > Bison-Cam** menu (it is recommended that you **set the capture file** before the capture process - see **Set Capture File** below).
2. Go to the **Capture** menu heading (if you wish to capture audio check *“PC Camera Audio Setup (all camera modules)” on page 7 - 18*) and select **Start Capture**.
3. Click **OK** (the file location will be displayed in the pop-up box) to start capturing the video, and press **Esc** to stop the capture (you can view the file using the **Windows Media Player**).

Set Capture File

Prior to capturing video files you may select the **Set Capture File...** option in the **File** menu, and set the file name and location before capture (this will help avoid accidentally overwriting files). Set the name and location then click **Open**, then set the **“Capture file size:”** and click **OK**. You can then start the capture process as above.

Note the important information in *“Reducing Video File Size” on page 7 - 21* in order to save file space, and help prevent system problems.

Reducing Video File Size

Note that capturing high resolution video files requires a substantial amount of disk space for each file. After recording video, check the video file size (right-click the file and select **Properties**) and the remaining free space on your hard disk (go to **My Computer**, right-click the hard disk, and select **Properties**). If necessary you can remove the recorded video file to a removable medium e.g. CD, DVD or USB Flash drive.

Note that the *Windows Vista* system requires a minimum of **15GB** of free space on the **C: drive** system partition. In order to prevent system problems it is recommended that you save the captured video file to a location other than the **C: drive** (see *“Set Capture File” on page 7 - 20*), limit the file size of the captured video (see *“Pre-Allocating File Space” on page 7 - 20*) or reduce video resolution (see below).

To Reduce Video Resolution Output Size:

1. Run the **BisonCap** program.
2. Go to **Options** and scroll down to select **Video Capture Pin....**
3. Click the **Output Size** drop box and select a lower resolution size in order to reduce the captured file size (see sidebar).



Video Resolution Output Size

The PC Camera's default resolution is set to 320 * 240. You can adjust this resolution, however do not exceed 640 * 480 in order to avoid video lag.

Eliminating Screen Flicker

If you find that the video screen in the **BisonCap** program is flickering, you can try to adjust the setting in the **Video Capture Filter** options.

1. Run the **BisonCap** program.
2. Go to **Options** and scroll down to select **Video Capture Filter....**
3. Click either **50Hz** or **60Hz** under **Frequency** in **Property Page** (tab).

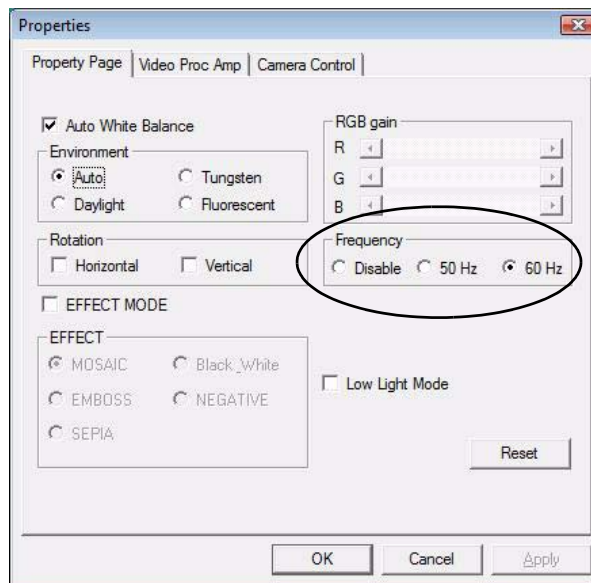


Figure 7 - 16
Video Capture Filter

Zoom

The **BisonCap** program allows you to zoom the camera in and out.


1. Run the **BisonCap** program.
2. Go to **Zoom** and select **Zoom Out/Zoom In**.



Figure 7 - 17
Zoom/Setting

Taking Still Pictures

The **BisonCap** program allows you to take still pictures.

1. Run the **BisonCap** program.
2. Go to **Options** and select **Take Picture**.
3. The picture (in JPEG format) will be placed in the **Snapshot** folder  on the desktop.



Snapshot Folder

The Snapshot folder's default location is on the desktop. Do not move this folder or an error may appear when you try to take a still picture.

If you accidentally delete or move the folder, you can create a new Snapshot folder on the desktop in order to capture the files.

GPS Module

If you have included an Global Positioning System (**GPS**) receiver module in your purchase option, you will need to obtain map software suitable for your global location. Map software programs are both commercially available and downloadable directly from the internet

A Global Positioning System satellite continually transmits high-frequency radio signals containing the time and location of the satellite in relation to earth. Your computer's GPS receiver obtains information from satellites and calculates your current position on the planet (to an accuracy of between 3 and 15 meters).

You can use the **Pop Menu** (see ***"Pop Menu" on page 1 - 23***) button, or **Fn + G** key combination, to toggle power to the GPS module.

Configuring the COM Port for the GPS Module

You need to make sure that the COM port for the GPS module is set to **COM 1** at a **4800** baud rate. To do this follow the instructions below:

1. Click **Start** (menu), point to **Settings** and click **Control Panel** (or click **Control Panel**).
2. Double-click **System** (icon); **System** (icon) is in **System and Maintenance** (category).
3. Double-click **Device Manager** (button).
4. Click "+" next to **Ports (COM & LPT)** if its sub-items are not shown.

5. Double-click **Communications Port (COM1)**.
6. Click **Port Settings** (tab) and make sure that the **Bits per second** rate is set to **4800 baud**.
7. Click **OK** and close the **Device Manager**.

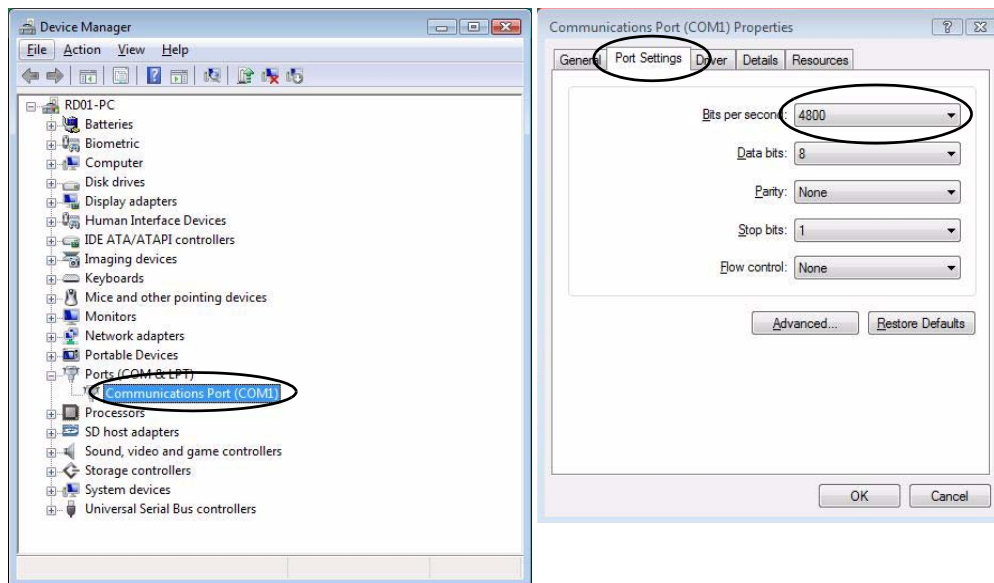


Figure 7 - 18
**COM1 Port Settings
for the GPS Module**

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 Power & Communication Indicators** (see *“LED Indicators” on page 1 - 20*) 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 **Sleep** mode by pressing the keys configured in your *Power Options* (see *“Power-Saving States” on page 3 - 6*), the **Fn + F2** key combination, or power button (make sure it is not in tablet mode) to wake-up the system.
- **Brightness** - Check the brightness of the screen by pressing the **Fn + W and S** keys to adjust the brightness.
- **Display Choice** - Press **Fn + F3** 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 (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 **Supervisor** password for the BIOS (see *[“The Power-On Self Test \(POST\)” on page 5 - 2](#)*).
- 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/USB storage device**" (this CD/DVD/USB device 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 and 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.
I have pressed the power button but the computer will not turn on.	<p><i>The computer is in tablet mode.</i> When the computer is in tablet mode the power button is automatically disabled. To use the power button you will need to reorientate the LCD into notebook mode (see “- Rotating the LCD Panel Into Notebook Mode” on page 1 - 10).</p> <p><i>The LCD/lid is closed.</i> As a safety precaution the notebook cannot be turned on by pressing the power button while the LCD/lid is closed, or if the computer is in tablet mode</p>
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 “Power Plans” on page 3 - 4) check its settings. You may also be using an ExpressCard/USB device/ external device that is drawing a lot of power.



Troubleshooting

Problem	Possible Cause - Solution
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” on page 3 - 11</i>).</p> <p><i>Power Options have been disabled.</i> Go to the Control Panel in <i>Windows</i> and re-enable the options.</p> <p><i>A peripheral device/USB device/ExpressCard is consuming a lot of power.</i> Turn off/remove the unused device to save power.</p>
The computer is taking too long to turn on .	<p><i>You have shut the computer down in tablet mode, with the screen rotated into portrait mode.</i> In this case the computer will take over two minutes to power on if rotated back to notebook mode.</p>
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 - 26</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>


Problem	Possible Cause - Solution
Nothing appears on screen.	<p><i>The system is in a power saving mode.</i> Toggle the sleep/resume key combination, Fn + F2 (see “Configuring the Power Buttons” on page 3 - 9).</p> <p><i>The screen controls need to be adjusted.</i> Toggle the screen control key combinations Fn + W/S. 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 + F3. 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.	<i>You haven't installed the video driver and configured it appropriately from the Control Panel. See Appendix B for instructions on installing and configuring the video driver.</i>
The screen will not change orientation when tilted to a different orientation.	<i>The G-Sensor (for screen orientation) will only be activated when the computer is in tablet mode, and is tilted to an angle of over 50 degrees. See “Screen Orientation (In Tablet Mode)” on page 1 - 11 for full instructions.</i>
There is unexpected behavior on-screen.	<i>You have used software controls (Intel GMA or Windows Mobility Center) to orientate the screen in tablet mode. Only use the G-Sensor tilt method to reorientate the screen in tablet mode. See “Screen Orientation (In Notebook Mode)” on page 1 - 13 for full instructions.</i>

Troubleshooting

Problem	Possible Cause - Solution
The cursor will not track across the screen very accurately.	<p><i>You have rotated the screen to a different orientation. After rotating the screen you will need to recalibrate the touch screen (see “Calibrating the Touch Screen” on page 1 - 14).</i></p> <p><i>You are using the mouse pointer in tablet mode, with the LCD not orientated in standard landscape mode. If you are using the mouse pointer in tablet mode, the LCD should be in standard landscape orientation.</i></p> <p><i>You are using the mouse pointer in notebook mode. The mouse pointer is designed to be used in tablet mode.</i></p>
The TouchPad & Buttons / Mouse Pointer & Buttons don't work.	<i>You have disabled the TouchPad & Buttons/ Mouse Pointer & Buttons. Use the Fn + C key combination to enable the TouchPad & Buttons/ Mouse Pointer & Buttons.</i>
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>	

Problem	Possible Cause - Solution
The sound cannot be heard or the volume is very low .	<i>The volume might be set too low.</i> Check the volume control in the Volume Control Panel in the Windows taskbar, or use the key combination Fn + Q/A (see “Audio Features” on page 2 - 14) to adjust.
Unwelcome numbers appear when typing.	If the LED  is lit, then Num Lock is turned ON (see “LED Indicators” on page 1 - 20).
<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 + F2) 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 “Power-Saving States” on page 3 - 6). Make sure you have enabled Hibernate mode from the control panel.

Troubleshooting






Problem	Possible Cause - Solution
The Wireless LAN/Bluetooth modules cannot be detected.	<i>The modules are off.</i> Check the LED indicator  and/or function key indicator to see if the WLAN/Bluetooth module is on or off (see “LED Indicators” on page 1 - 20). If the LED indicator is off, then press the Fn + F4 (WLAN) or Fn + F1 (Bluetooth) key combination(s), or Pop Menu button, in order to enable the modules (see “Function Keys” on page 1 - 22/“Pop Menu” on page 1 - 23).
The PC Camera module cannot be detected.	<i>The module is off.</i> Press the Fn + D key combination, or Pop Menu button, in order to enable the module (see “Function Keys” on page 1 - 22). Run the camera program to view the camera picture.
The Wireless LAN or PC Camera modules cannot be configured.	<i>The driver(s) for the module(s) have not been installed.</i> 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).
A file cannot be copied to/from a connected Bluetooth device.	<i>The transfer of data between the computer and a Bluetooth enabled device is supported in one direction only (simultaneous data transfer is not supported).</i> If you are copying a file from your computer to a Bluetooth enabled device, you will not be able to copy a file from the Bluetooth enabled device to your computer until the file transfer process from the computer has been completed
I cannot add a new User to my computer in Windows.	<i>The computer is in tablet mode.</i> If you want to add a new user to your computer then put the computer back into notebook mode (“Screen Orientation (In Notebook Mode)” on page 1 - 13) to perform the system administration task.

Appendix A: Interface (Ports & Jacks)


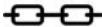

Overview

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
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.
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.

A

Item	Description
RJ-45 LAN Jack 	This port supports LAN (Network) functions. Note: Broadband (e.g. ADSL) modems usually connect to the LAN port.
Security Lock Slot 	To prevent possible theft, a Kensington-type lock can be attached to this slot. Locks can be purchased at any computer store.
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).

Interface (Ports & Jacks)

A

Appendix B: Intel Video Driver Controls

The basic settings for configuring the LCD are outlined in “*Video Features*” on *page 1 - 28*.

Intel Video Driver Installation

Make sure you install all the drivers in the order indicated in *Table 4 - 1, on page 4 - 3*.

Video Driver

1. Insert the *Device Drivers & Utilities + User's Manual* disc into an attached CD/DVD drive.
2. Click **Install Drivers**.
 1. Click **2.Install Video Driver > Yes**.
 2. Click **Next > Yes > Next > Next**.
 3. Click **Finish** to restart the computer.

Dynamic Video Memory Technology

Intel® DVMT automatically and dynamically allocates as much system memory (RAM) as needed to the video system (**the video driver must be installed**). DVMT returns whatever memory is no longer needed to the operating system.



DVMT Notes


DVMT is not local video memory.

DVMT is not user-configurable.

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



Taskbar Icon

The **Intel GMA** control panel can also be accessed by clicking the icon  in the taskbar and selecting **Graphics Properties** from the menu.

If you cannot see the tray icon click the **"Show Tray Icon"** tickbox in the **Intel(R) Graphics Media Accelerator for ultra mobile** tab.

Intel Graphics Properties

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

1. Open the **Display Settings** control panel (see *"Video Features" on page 1 - 28*) and click **Advanced Settings** (button).
2. Click the **Intel(R)...** tab and click **Graphics Properties** (button).

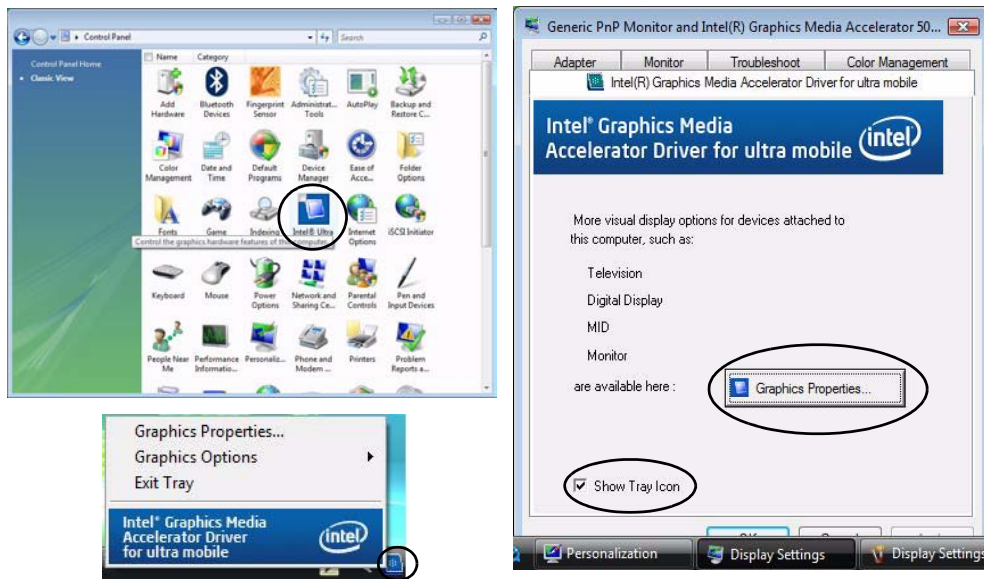


Figure B - 1
Intel Graphics Properties

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.



Help Menu

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.

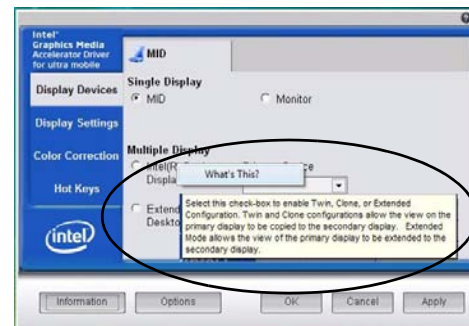
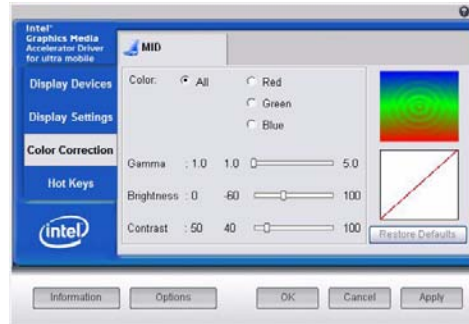


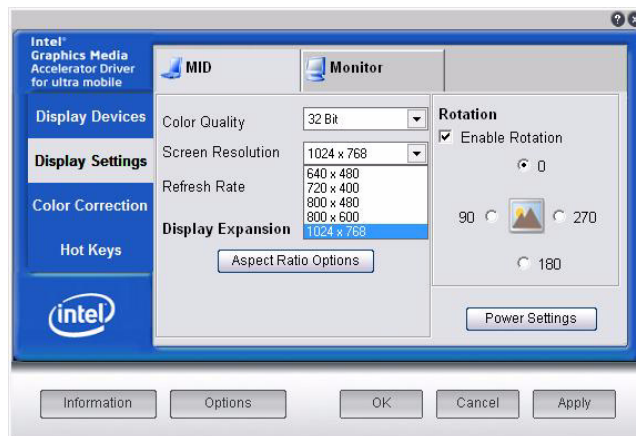
Figure B - 2
Intel Graphics Media Accelerator Driver for ultra mobile (Control Panel Tabs)

Display Settings

You can adjust the **Color Quality**, **Screen Resolution** and **Refresh Rate** for any attached display(s) from the **Intel(R) GMA Driver for ultra mobile** control panel, or from **Display Settings** (see [page 1 - 28](#)) in *Windows*.

Note: **MID** (Mobile Internet Device) is the computer's LCD display.

Figure B - 3
Display Settings



Screen Resolution for Games and Power DVD

Note that the screen resolution should be set to **800 * 600** if you are playing games, or are using the **Cyberlink Power DVD** program.

Power Settings

Use the **Power Settings** control to allow the **Intel(R) GMA Driver for ultra mobile** control panel to adjust the power options when the computer is running on battery power. To set the power settings:

1. Attach your external monitor to the external monitor port, and turn it on.
2. Go to the **Intel GMA** control panel (see *"Intel Graphics Properties" on page B - 2*) and click **Display Settings**.
3. Click **Power Settings** (button).
4. You can adjust the slider to achieve a balance between maximum quality, and maximum battery life.
5. Enabling **Intel(R) Automatic Display Brightness** will allow the in-built controls to adjust the display backlight according to the ambient lighting.
6. Enabling **Intel(R) Display Power Saving Technology** will allow the in-built controls to adjust the brightness and contrast of the display.

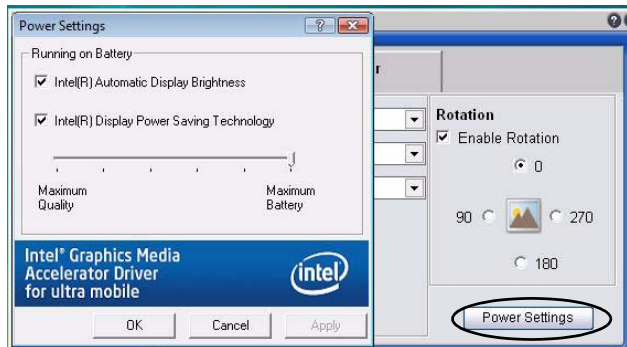


Figure B - 4
Power Settings



Function Key Combination

You can use the **Fn + F3** 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.

Attaching Other Displays

Besides the built-in LCD, you can also use an external monitor/flat panel display, connected to the external monitor port at the rear of the computer, as your 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**).

Configuring from Windows Vista

1. Attach your external display to the external monitor port, and turn it on.
2. If a **New Display Detected** window does not appear in **Windows Vista**, go to the **Windows Mobility Center** control panel (**Mobile PC > Adjust commonly used mobility settings**) and click **Connect display**.
3. Click on any of the buttons to configure the displays to your preference, or click **Display Settings** to access the control panel.

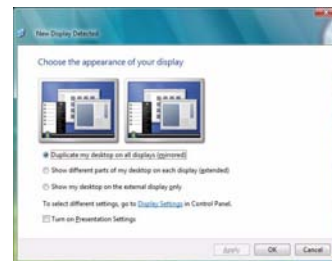
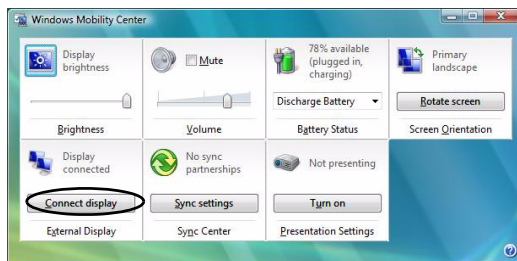
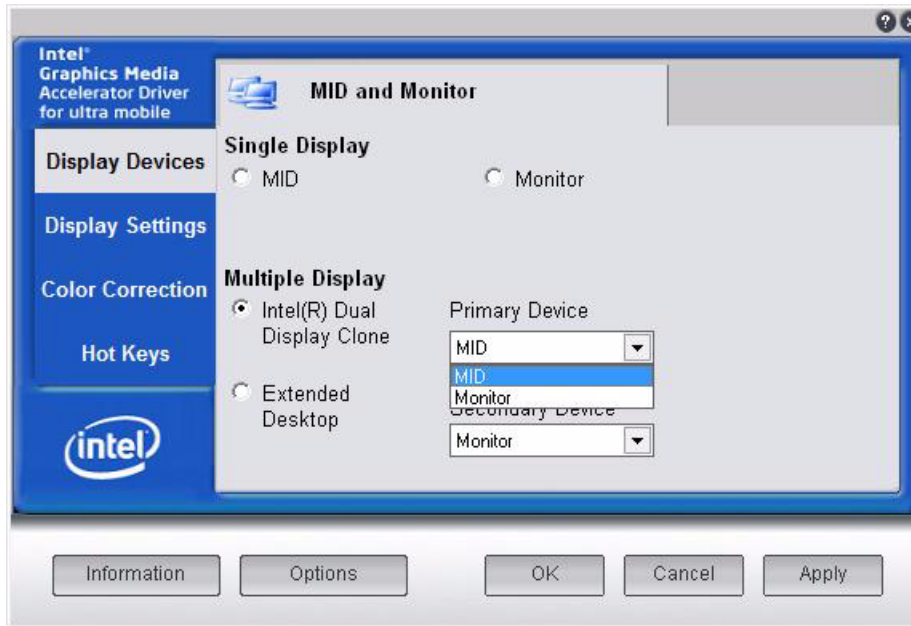


Figure B - 5
Windows Mobility Center

Configuring Displays from Intel® GMA Driver for ultra mobile

1. Go to the **Intel GMA** control panel (see *"Intel Graphics Properties" on page B - 2*) and click **Display Devices**.
2. Click to choose the display option from the **Multiple Display** menu.
3. Click **Apply** (and **OK** to confirm the settings change) and **OK** (button).



Multiple Display

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

Figure B - 6
Intel GMA Display Devices

Display Modes

Single Display

Only one of your attached displays is used.

Intel(R) Dual Display Clone (mirrored)

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 (extended)

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 the **Display Properties** control panel to drag the monitors to match the physical arrangement you wish to use, or you may also use the **Extended Desktop Settings** control panel tab in **Graphics Properties** to configure the relative size and position.

To Enable Intel(R) Dual Display Clone

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

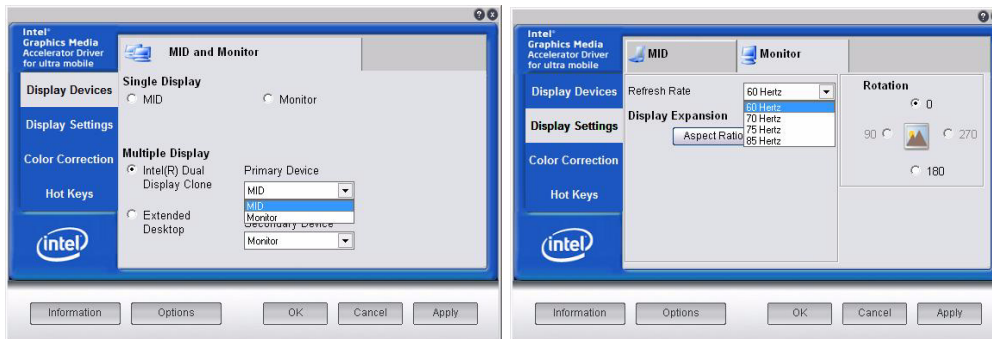


Figure B - 7
Display Devices & Settings



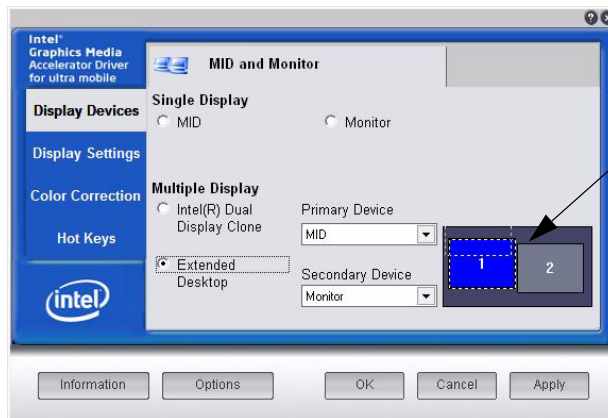
Display Settings Extended Desktop

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.

To Enable Extended Desktop

1. Attach your external monitor to the external monitor port, and turn it on.
2. Go to the **Intel GMA** control panel (see *"Intel Graphics Properties" on page B - 2*) and click **Display Devices**.
3. Click to choose **Extended Desktop (Multiple Display)**.
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).

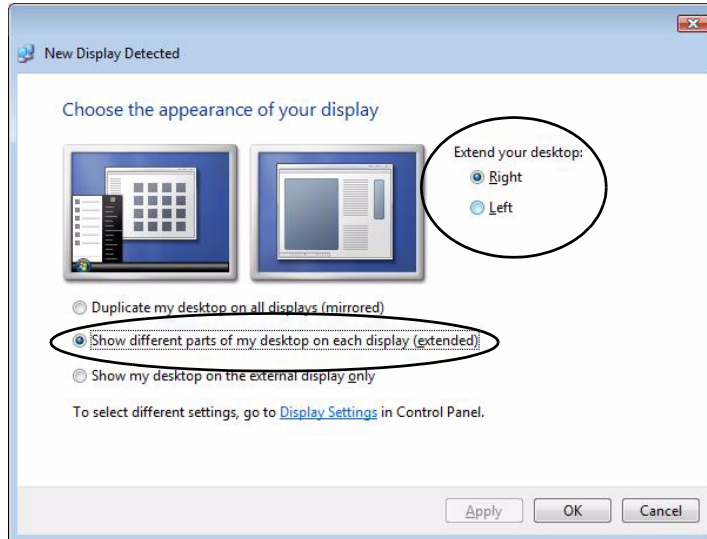
Click **Display Settings** to make any adjustments required.

Figure B - 8

Extended Desktop Mode

Using Windows Vista to Enable Extended Mode

1. Attach your external display to the external monitor port, and turn it on.
2. If a **New Display Detected** window does not appear in *Windows Vista*, go to the **Windows Mobility Center** control panel (**Mobile PC > Adjust commonly used mobility settings**) and click **Connect display**.
3. Click to select **Show different parts of my desktop on each display (extended)**.
4. Click **Right** or **Left** under **Extend your desktop**.
5. Click **Apply > OK**.



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.

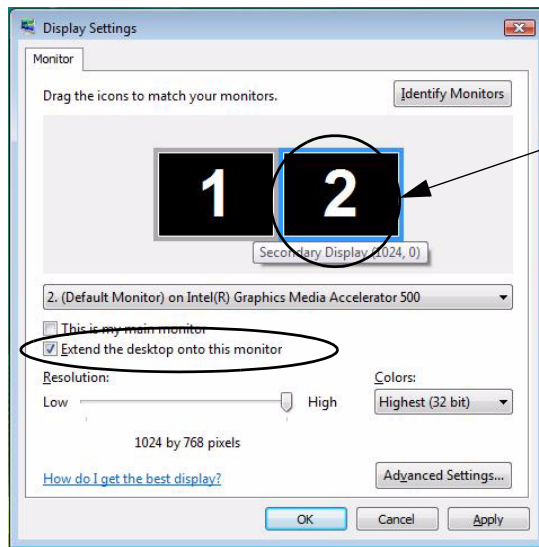
B

Figure B - 9
**Display Properties
(Extended Desktop)**

Using Display Settings to Enable Extended Mode

1. Attach your external display to the external monitor port, and turn it on.
2. Open the **Display Settings** control panel (see *“Video Features” on page 1 - 28*).
3. Click the monitor icon (e.g. **2**), and make sure you have checked **“Extend my Windows desktop onto this monitor.”** and click **Apply**.

Figure B - 10
Display Properties
(Extended Desktop)



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 Display **1** is on the left, the Secondary Display **2** is on the right.

Appendix C: Specifications



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, delayed or updated due to the manufacturer's release schedule. Check with your service center for details.

Specifications

Feature	Specification
Processor	Intel® Atom® Processor Z520/ Z530 ULV, 1.33GHz/ 1.60GHz , FSB533 TDP 2W BGA Package
	Intel® Atom® Processor Z540 ULV, 1.86GHz , FSB533 TDP 2.4W BGA Package
Core Logic	Intel® US15 Ultra Mobile Integrated Chipset
LCD	7" (800 * 480) WVGA 16:9 TFT LCD Touch Panel 7" (1024 * 600) WSVGA 16:9 TFT LCD Touch Panel 7" (800 * 480) WVGA 16:9 TFT LCD without Touch Panel
Memory	One 200 Pin SO-DIMM Socket Supporting DDRII (DDR2) 667 MHz Compatible (Operating at 533 MHz Only) 64-bit Wide DDRII (DDR2) Data Channel Memory Expandable up to 1GB (1024 MB DDRII Module)
Video Adapter	Intel® US15W Ultra Integrated Graphics and Video
Security	Security (Kensington® Type) Lock Slot BIOS Password Fingerprint ID Reader Module (Factory Option)
BIOS	One 8Mb SPI Flash ROM Phoenix™ BIOS
Storage	One Changeable 1.8" 5.0 mm (h) PATA HDD
G-Sensor	Portrait / Landscape Browsing Orientation

C - 2 Specifications

Feature	Specification
Audio	Integrated Azalia Compliant Interface 3D Stereo Enhanced Sound System Sound-Blaster PRO™ Compatible 2 * Built-In Speakers Built-In Microphone
Keyboard & Pointing Device	Winkey Keyboard Built-In TouchPad and Pointer Touch Stylus Quick Button - Power On/Off Panel Buttons - Fingerprint, Pointer, Left/Right
Interface	Two USB 2.0 Ports One External Monitor Port One Headphone-Out Jack One Microphone-In Jack One RJ-45 LAN Jack One DC-in Jack
Card Reader	Embedded 5-in-1 Card Reader (SD/ Mini SD/ Micro SD/ MMC/ RS MMC) Note: Mini SD/ Micro SD/ RS MMC Cards require a PC adapter
Card Slots	One ExpressCard/34 (DOES NOT support 1394 Express Card modules). See Table E - 1, on page E - 1 for a list of approved Express Cards. One Mini-Card Slot with USB Interface for WLAN Module
Communication	10MB/100MB Base-TX Ethernet LAN Bluetooth 2.0 + EDR (Enhanced Data Rate) Module (with Chip Antenna) - (Option) 802.11 b/g MiniCard USB Wireless LAN Module (Option) 1.3M or 2.0M Pixel USB PC Camera Module (Factory Option) GPS Module (Factory Option)

Specifications

Feature	Specification	
Power Management	Supports ACPI 2.0 & PCI Bus Power Management 1.1 Compliant Supports Wake on LAN	
Operating System	Windows Vista Home Premium (32-bit only) Windows XP (Home or Professional) with Service Pack 3	
Power	Full Range AC/DC Adapter AC input 100 - 240V, 50 - 60Hz, DC Output 12V, 3A (36 Watts)	
Battery	4 Cell Smart Lithium-Ion Battery Pack, 5200mAh, 38W - Battery Life 480 minutes	
Environmental Spec	Temperature Operating: 5°C ~ 35°C Non-Operating: -20°C ~ 60°C	Relative Humidity Operating: 20% ~ 80% Non-Operating: 10% ~ 90%
Dimensions & Weight	227.5mm (w) * 170.7mm (d) * 25 - 29.9mm (h)	904g (with 4 Cell 5200MAH Battery W/O Optional Parts)
Accessories	Stylus Pen, AC/DC Adapter, Smart Case	
Optional	External USB DVD Super Multi Drive Module Bluetooth 2.0 + EDR (Enhanced Data Rate) Module (with Chip Antenna) 802.11 b/g MiniCard USB Wireless LAN Module	1.3M or 2.0M Pixel USB PC Camera Module (Factory Option) Fingerprint ID Reader Module (Factory Option) GPS Module (Factory Option)

C - 4 Specifications

Appendix D: Windows XP Information

This Appendix contains information (including control panel information, driver installation etc.) for users of the *Windows XP OS*.

System Startup

1. Remove all packing materials and place the computer on a stable surface.
2. Securely attach any peripherals you want to use with the notebook (e.g. keyboard and mouse) to their ports.
3. Attach the AC/DC adapter to the DC-In jack on the left of the computer, then plug the AC power cord into an outlet, and connect the AC power cord to the AC/DC adapter.

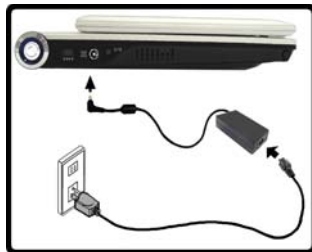


Figure D - 1 - AC/DC Adapter In

4. Use one hand to carefully raise the lid/LCD to a comfortable viewing angle, while using the other hand (as illustrated below) to support the base of the computer (**Note: Never** lift the computer by the lid/LCD).



LCD/Lid and Power

As a safety precaution the notebook cannot be turned on by pressing the power button while the LCD/lid is closed, or if the computer is in tablet mode.

Figure D - 2 - Raising The LCD

5. Press the power button to turn the computer “on” (as a safety precaution the notebook cannot be turned on by pressing the power button while the LCD/lid is closed, or if the computer is in tablet mode).



Figure D - 3 - Power Button

6. See “Rotating The LCD Panel” on page D - 5.



Touch Panel Input Device

Do not use any sharp or pointed objects as your input device e.g. the end of a pen or pencil. Be very careful not to press too hard with the stylus pen when using it as the input device.



Shutdown

Note that you should always shut your computer down by choosing the **Shut Down** command from the **Lock Button Menu** in **Windows Vista**. This will help prevent hard disk or system problems.

Operating System Setup

If you are installing new system software, or are re-configuring your computer for a different system, make sure you configure the appropriate OS setting in the BIOS before installing a new operating system.

1. Start-up the computer and press <F2> to enter the **BIOS**.
2. Go to the **Advanced** menu, select “*Installed O/S*” and make sure the appropriate operating system is selected.
3. Go to the **Exit** menu and select “*Exit Saving Changes*” (or press **F10** and select “**Yes**” then press Enter) and press Enter to exit the BIOS and reboot the computer.



Network Boot

If you wish to boot the computer from a network then choose **PXE** as the installed O/S.

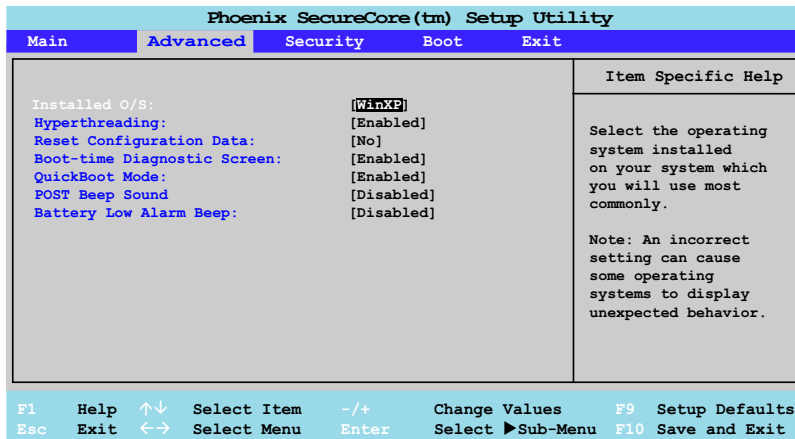


Figure D - 4 - BIOS (Operating System Selection)

Rotating The LCD Panel

The computer can be used in either **Notebook Mode**, or in **Tablet Mode**.

To put the computer into Tablet Mode:

1. Raise the lid/LCD panel **1** (make sure the screen orientation is 0 degrees i.e. in a normal landscape orientation).
2. Carefully rotate the lid/LCD panel fully in the (clockwise) direction indicated by the arrow **2**, until it is unable to rotate any further **3**.



Figure D - 5 - Fully Rotate the Panel Clockwise

Windows XP Information

- Carefully push the lid/LCD panel down into **tablet mode** ④ (make sure the lid/LCD panel is fully flat and flush to the main body of the computer).
- Use the mouse buttons ⑤ and mouse pointer ⑥ to replace the touchpad and buttons on the computer, and/or use the stylus pen as an input device ⑦ (note that the mouse pointer will only track correctly in tablet mode, if the screen is in a standard landscape orientation).



Tablet Mode Warning

Do not leave the tablet notebook in tablet mode (powered on or powered off) while not in use for an extended period (**in excess of four hours if powered on**), in order to prevent accidental damage to the computer.



Power Button in Tablet Mode

When the computer is in tablet mode the power button is automatically disabled. To use the power button you will need to reorientate the computer into notebook mode.

Touch Panel Input Device

Do not use any sharp or pointed objects as your input device e.g. the end of a pen or pencil. Be very careful not to press too hard with the stylus pen when using it as the input device.

Figure D - 6 - Input Buttons/Pointer & Stylus Pen

To put the computer into Notebook Mode:

1. Raise the lid/LCD panel ①.
2. Carefully rotate the lid/LCD panel fully in the (**counter clockwise**) direction indicated by the arrow ②, until it is unable to rotate any further ③.



Figure D - 7 - Rotating the LCD Panel Into Notebook Mode

Screen Orientation (In Tablet Mode)

1. The built-in **G-Sensor** will allow you to orientate the screen into a portrait/landscape mode as the computer is tilted to the orientation required **if the computer is in tablet mode**.
2. The **computer must be tilted to an angle of over 50 degrees** in order for the screen to rotate to the orientation required.
3. Hold the computer at an angle of over 50 degrees and move the computer in to portrait/landscape mode and the screen should then change orientation accordingly.
4. The screen will not change screen orientation if tilted to angle of less than 50 degrees in order to prevent accidental screen rotation.



Screen Orientation in Tablet Mode

If the computer is in tablet mode, then only use the G-Sensor (by tilting the screen as illustrated here) method to change the screen orientation otherwise you may experience unexpected behavior on screen.

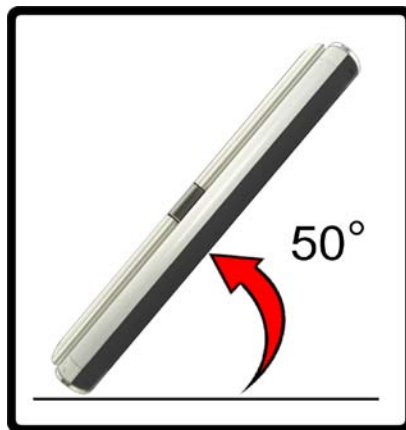


Figure D - 8 - Rotating the Screen (G-Sensor)

G-Sensor Notes:

The built-in **G-Sensor** allows you to rotate the screen to a portrait/landscape orientation as outlined on page [D - 8](#) (if the computer is in tablet mode, then only use the G-Sensor method to change the screen orientation otherwise you may experience unexpected behavior on screen). However please note the following when using the **G-Sensor** to rotate the screen in tablet mode:

- Make sure the lid/lcd is fully flat and flush to the main body of the computer to ensure that the computer is in tablet mode.
- DO NOT vigorously shake the computer from side to side when rotating the screen (give the screen a few seconds to refresh). A simple smooth movement will rotate the screen as long as it is in tablet mode and tilted to an angle of over 50 degrees.
- If you shut the computer down in tablet mode, and the screen was rotated into portrait mode, the computer will take over two minutes to power on if rotated back to notebook mode.
- When the computer resumes from Sleep/Hibernate in tablet/notebook mode, do not change the mode (tablet/notebook) or the computer may experience unexpected behavior.
- Do not hold/touch the mouse pointer (see *“System Map: Top View with LCD Panel Open” on page 1 - 19*) while rotating the screen (note that the mouse pointer will only track correctly in tablet mode, if the screen is in a standard landscape orientation).
- If the computer is in **Idle Mode** (i.e. **Windows** is fully loaded but no applications are running) the **G-Sensor** may take up to 6.6 seconds to re-orientate the screen.

Screen Orientation (In Notebook Mode)

If the computer is in **notebook mode** use the screen rotation control from the **Intel(R) GMA Driver for ultra mobile** to rotate the screen to a portrait/landscape orientation (recalibrate the touch screen after orientation).

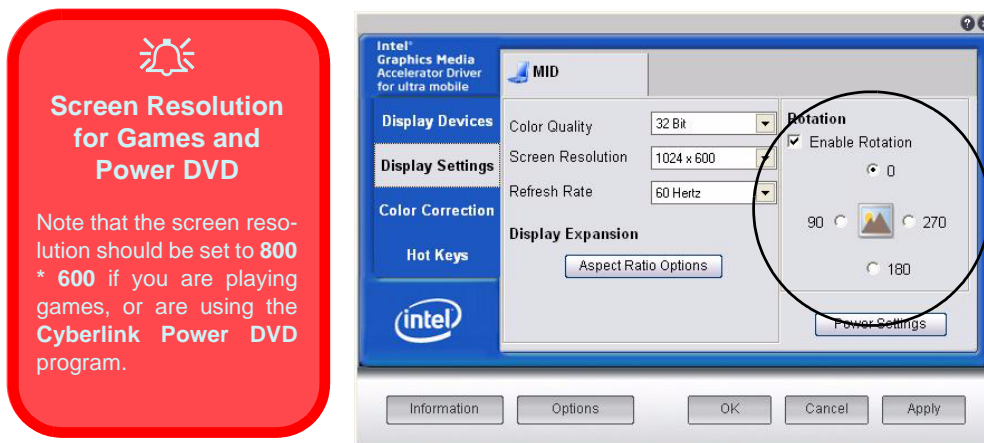



Figure D - 9 - Intel(R) GMA Driver for Ultra Mobile (Display Settings > Rotation)

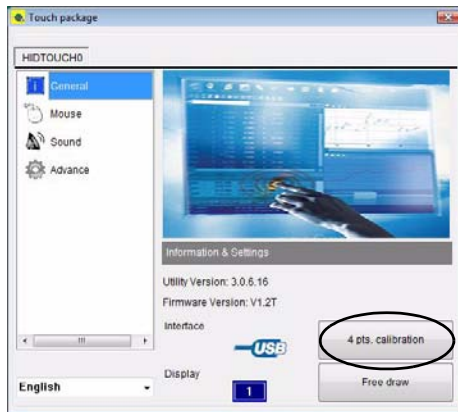
Note: After reorientating the screen you will need to recalibrate the touch screen (see *[“Calibrating the Touch Screen” on page D - 11](#)*). Make sure the screen orientation is 0 degrees, i.e. in a normal landscape orientation, before putting the computer in to tablet mode. Note that the **Mouse Pointer** is designed to track accurately in tablet mode (in notebook mode there may be inaccuracies in tracking).

Tablet Notebook Input

Use the stylus pen provided to interact with the computer in the same way you would use the mouse (tap twice to double-click and keep the pen in contact with the screen to right-click). Before using the stylus pen you should calibrate the touch screen.

Calibrating the Touch Screen

1. Double-click the **Touch tool** utility icon  on the desktop OR from the **Touch Package** folder in the **Programs/All Programs** group (the driver must be installed).
2. Click **General**.
3. Click **4 pts calibration** (if you would prefer to calibrate more accurately, or are having distortion/tracking problems, then click **Advance** and choose either **9 pts linearization** or **25 pts linearization**).



Screen Orientation & Re-Calibration

Note that you should re-calibrate the touch screen after you have **orientated** the screen to display in a different mode from that first calibrated.

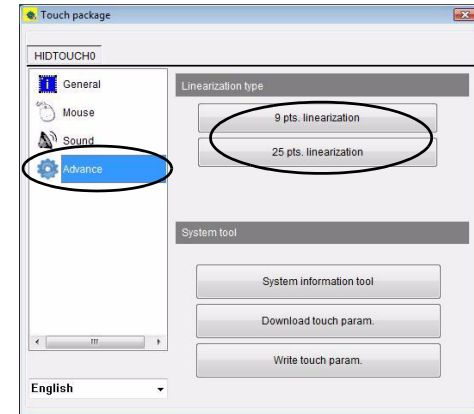


Figure D - 10 - Touch Package (General & Advance)

Windows XP Information

4. Use the stylus pen to touch the blinking symbol until symbol changes color (maintain contact until the symbol stops blinking) and you will be prompted to lift up the pen.
5. Repeat the process for all the remaining screen points.
6. Click **Free Draw** (button) to test the calibration.
7. Use the **Mouse Settings** and **Sound** control panels to further adjust the settings to your preference.



Touch Panel Input Device

Do not use any sharp or pointed objects as your input device e.g. the end of a pen or pencil. You should only use the provided stylus pen (PDA type) as your input device. Be very careful not to press too hard with the stylus pen when using it as the input device.



Screen Distortion

If you experience any line distortion, or tracking inaccuracy, recalibrate the touch screen using **25pts** of calibration (click the **Advance** item in the **Touch package** and click **25pts linearization**).

Figure D - 11 - Screen Calibration

DVD Regional Codes



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.

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.

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 D - 1 - DVD Region Codes

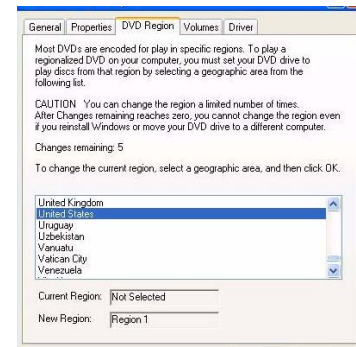


Figure D - 12 - DVD Regions

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 D - 13 - 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. To see all controls it may be necessary to toggle off Category View.

TouchPad and Buttons/Mouse

The TouchPad is an alternative to the mouse (stylus pen); 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 settings from the mouse control panel in *Windows*.



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.

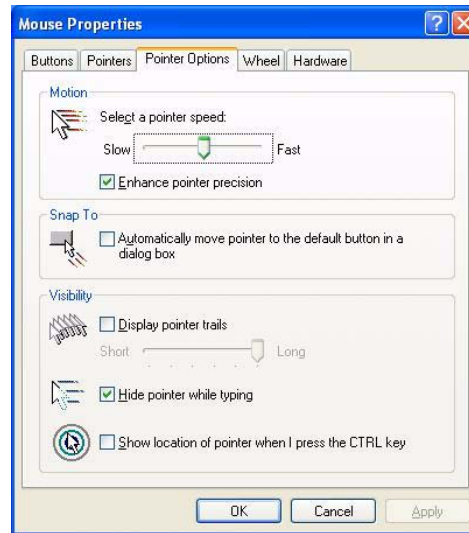
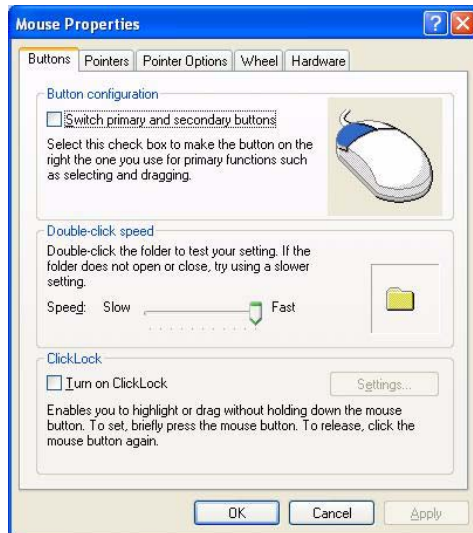






Figure D - 14 - Mouse Properties

Pop Menu

Double-click the **Pop Menu** icon  to access the on-screen **Pop Menu** (make sure you install the pop menu driver provided). Use the stylus pen to touch any of the buttons to activate the control. If the **PC Camera**, **Bluetooth**, **WLAN** or **GPS** (optional) modules are **on** the indicator will appear **green** ; if the modules are **off** then the indicator will appear **black** . Press **Esc**, or right-click the **Pop Menu** icon , to quit the menu.



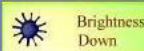

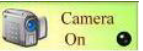
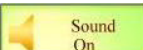
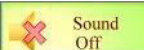
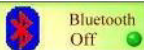







Pop Menu	Function	On-Screen Button	Function	On-Screen Button
	Brightness Decrease/Increase	 	PC Camera Module Power Toggle	 
	Mute Toggle	 	Bluetooth Module Power Toggle	 
	Volume Decrease/Increase	 	WLAN Module Power Toggle	 
	Note: Use the stylus pen to tap the appropriate on-screen button to adjust the setting.		GPS Module Power Toggle	 

Table D - 2 - Pop Menu Buttons



Function Keys

The **function** keys will act as **hot** keys when pressed while the **Fn** key is held down.

Keys	Function	Keys	Function
Fn + Esc	Mute Toggle	Fn + D	PC Camera Power Toggle
Fn + F1	Bluetooth Module Power Toggle	Fn + G	GPS Module Power Toggle
Fn + F2	Sleep Toggle	Fn + Q	Volume Increase
Fn + F3	Display Toggle	Fn + A	Volume Decrease
Fn + F4	WLAN Module Power Toggle	Fn + W	Brightness Increase
Fn + C	TouchPad & Buttons / Mouse Pointer & Buttons Toggle	Fn + S	Brightness Decrease
		Fn + ScrLk	Scroll Lock Toggle

Table D - 3 - Function Keys

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 + F5/F6** 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 D - 15 - Realtek Audio Configuration Menus

Video Features

You can switch display devices, and configure display options, from the **Display Properties** control panel in *Windows* as long as the appropriate **Intel 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 D - 16 on page D - 20*).
5. Click the arrow, and scroll to the preferred setting in **Color quality** ② (*Figure D - 16 on page D - 20*).
6. Click **Advanced** (button) ③ (*Figure D - 16 on page D - 20*) to bring up the **Advanced properties** tabs.
7. Click **Intel(R) Graphics Media Accelerator Driver for ultra 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 ultra mobile** from the taskbar icon  menu.

Dynamic Video Memory Technology

Intel® DVMT automatically and dynamically allocates as much system memory (RAM) as needed to the video system (**the video driver must be installed**). DVMT returns whatever memory is no longer needed to the operating system.



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 for ultra mobile** tab and click the “**Show Tray Icon**” tickbox. Alternatively right-click the desktop and select **Graphics Options > Tray Icon > Enable**.

Display & Graphics Properties

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.

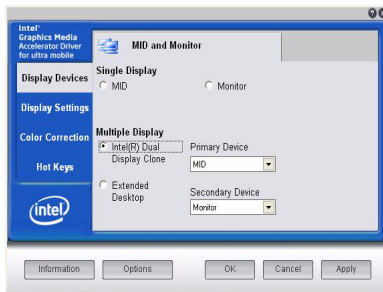
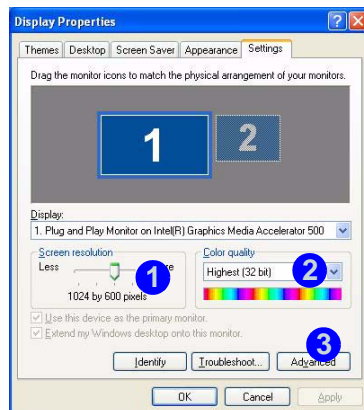
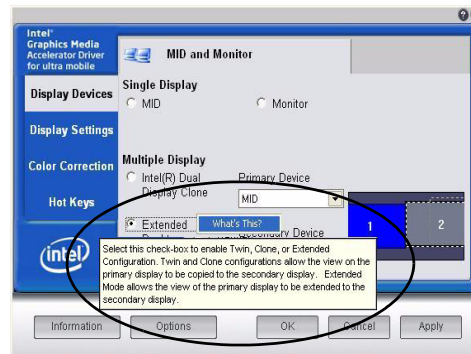
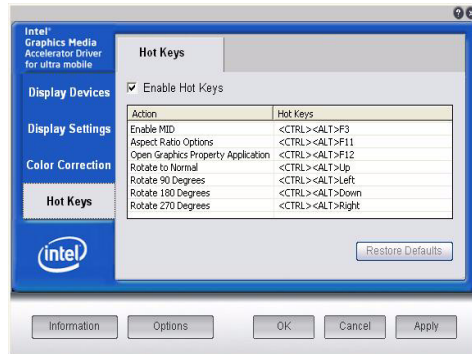
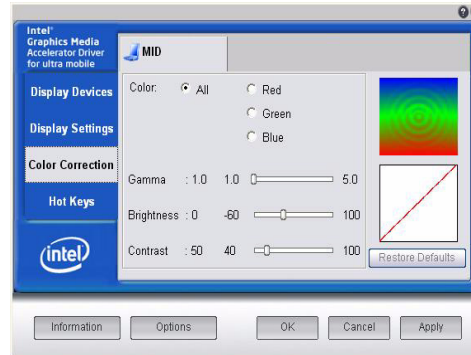
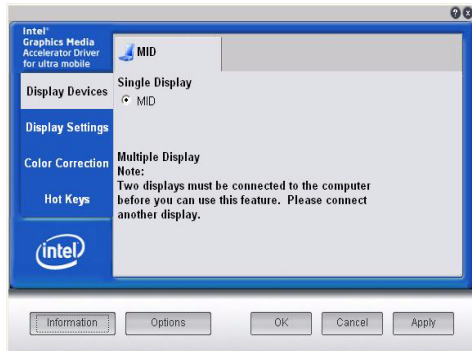


Figure D - 16
Display & Graphics
Properties

You may make changes to the devices, color, schemes, **Hot Keys** etc. by clicking the appropriate menu item or button.



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 D - 17
Intel Graphics Media
Accelerator Driver
for mobile

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:

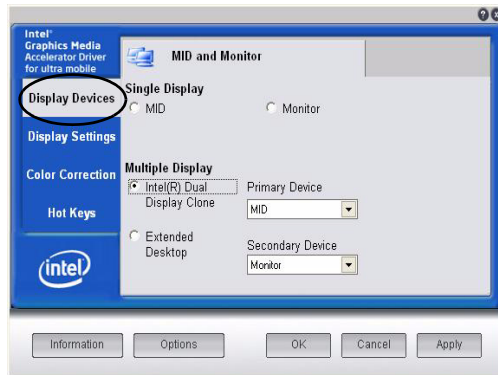
1. Attach your external monitor to the external monitor port and turn it on.
2. Open the **Intel(R) GMA Driver for ultra mobile** control panel.
3. Click to choose the display option from the **Multiple or Single Display** menu.
4. Click **Apply** (and **OK** to confirm the settings change) and **OK** (button).



Intel Display Note

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

Note: **MID** (Mobile Internet Device) is the computer's LCD display.



Screen Resolution for Games and Power DVD

Note that the screen resolution should be set to **800 * 600** if you are playing games, or are using the **Cyberlink Power DVD** program.

Figure D - 18 - Display Devices

Display Modes

Single Display

Only one of your attached displays is used.

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.

Screen Orientation (Notebook Mode)

If the computer is in notebook mode use the screen rotation control from the **Intel(R) GMA Driver for ultra mobile** to rotate the screen to a portrait/landscape orientation (recalibrate the touch screen after orientation). See *“Screen Orientation (In Notebook Mode)” on page D - 10* for details.



Function Key Combination

You can use the **Fn + F3** 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.

Windows XP Information

To Enable Intel(R) Dual Display Clone Mode

1. Attach your external display to the external monitor port and turn it on.
2. Open the **Intel(R) GMA Driver for ultra mobile** control panel.
3. Click to choose **Intel(R) Dual Display Clone** 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.

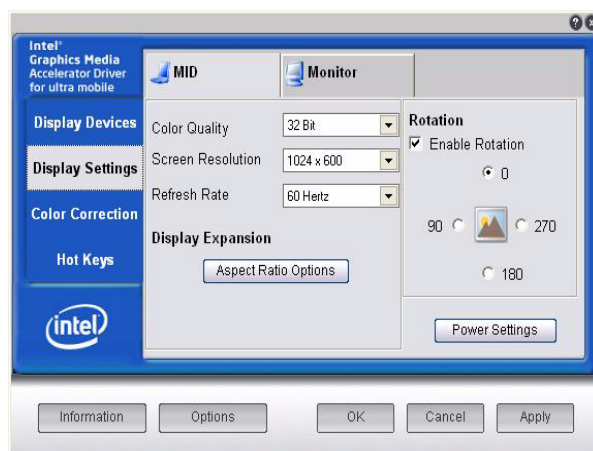
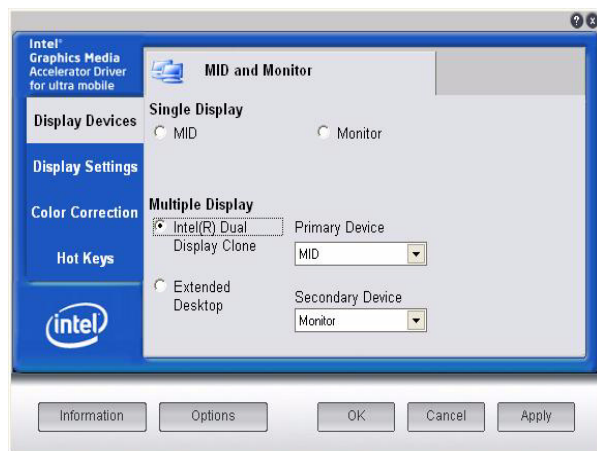


Figure D - 19 - Display Devices (Dual Display Clone) & Settings

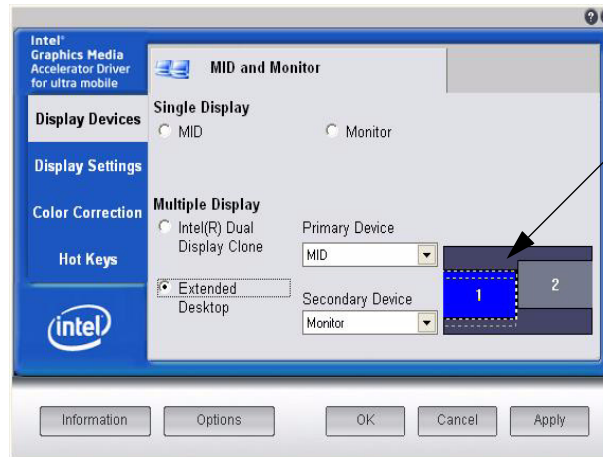
To Enable Extended Desktop Mode:

1. Attach your external monitor to the external monitor port and turn it on.
2. Open the **Intel(R) GMA Driver for ultra mobile** control panel.
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.

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.



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.

Figure D - 20 - Display Devices (Extended Desktop)

You can also enable the Extended Desktop mode from **Windows Display Properties** (see page [D - 26](#)).

Windows XP Information

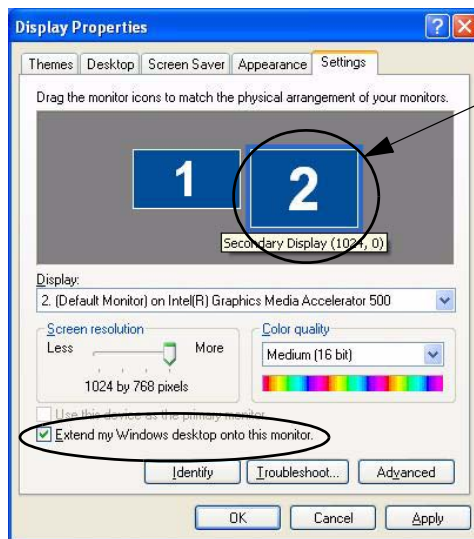
To Enable Extended Desktop (Display Properties)

1. Attach your external monitor to the external monitor port 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**.

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.



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.

Figure D - 21 - Display Properties (Extended Desktop)

Power Management Features

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.

The **Power Options** control panel icon in *Windows* (see page [D - 14](#)) allows you to configure power management features for your computer. You may conserve power through individual components such as the monitor or hard disk, or you may use either **Stand by** or **Hibernate** mode to conserve power throughout the system.

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 on the left of the computer.
2. Plug the AC power cord into an outlet, and then connect the AC power cord to the AC/DC adapter.
3. Raise the lid/LCD to a comfortable viewing angle.
4. Press the power button to turn the computer “on” (as a safety precaution the notebook cannot be turned on by pressing the power button while the LCD/lid is closed).

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** (see *“How do I completely discharge the battery?” on page D - 39*).

We recommend that you do not remove the battery. For more information on the battery, please refer to *“Battery Information” on page D - 36*.

Turning on the Computer

Now you are ready to begin using your computer. To turn it on slide the power switch on the front panel to the left and release it.

When the computer is on, you can use the power switch as a Sleep/Hibernate hot-key button when you slide it to the left and release it in less than **4 seconds** (sliding and holding the power switch to the left without releasing it for longer than this will force the computer to shut 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, slide and hold the power button for **4 seconds**, or longer, to force the system to turn itself off.

Power Switch 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 switch to send the system into Stand by or Hibernate mode (see your OS’s documentation, or *“Power Notes for G-Sensor” on page D - 34* 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.



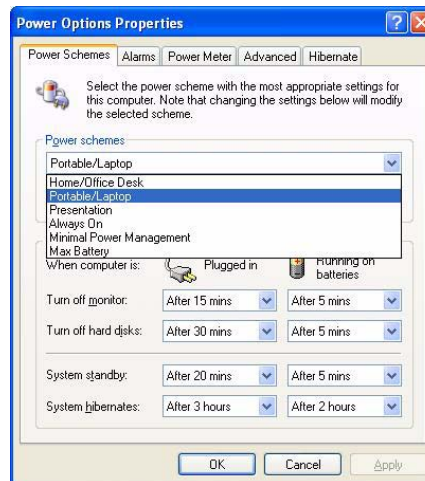
Resuming Operation

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

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 D - 32*).

Figure D - 22
Power Schemes



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 - see "*Hibernate*" on page *D - 33*).

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

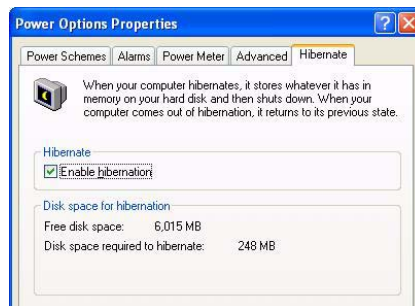
If you want to stay away from your work for just a while, you can put the system on Stand by instead of in hibernation. It takes a longer time to wake up the system from **Hibernate** mode than from **Stand by** mode.

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 sliding the power switch to power the system on.**



System Resume

The system can resume from Stand by mode by:

- Pressing the power button
- Pressing the **Sleep/Resume** key combination
- Network card (Wake On LAN) activity (if enabled)


Figure D - 23
Enable Hibernation

Windows XP Information

Power Notes for G-Sensor

- If you shut the computer down in tablet mode, with the screen was rotated into portrait mode, the computer will take over two minutes to power on if rotated back to notebook mode.
- When the computer resumes from Sleep/Hibernate in tablet/notebook mode, do not change the mode (tablet/notebook) or the computer may experience unexpected behavior.

Configuring the Power Button

The power button may be set to send the computer in to either **Stand by** or **Hibernate** mode. In **Stand by** mode, the LED  will blink green. In **Hibernate** mode the LED will be off (battery) or orange (AC/DC adapter). 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.



Sleep Button

You may also configure the **Sleep/Resume** key combination (**Fn + F2**) from the menu illustrated. In **Windows** this is referred to as the **Sleep** button.

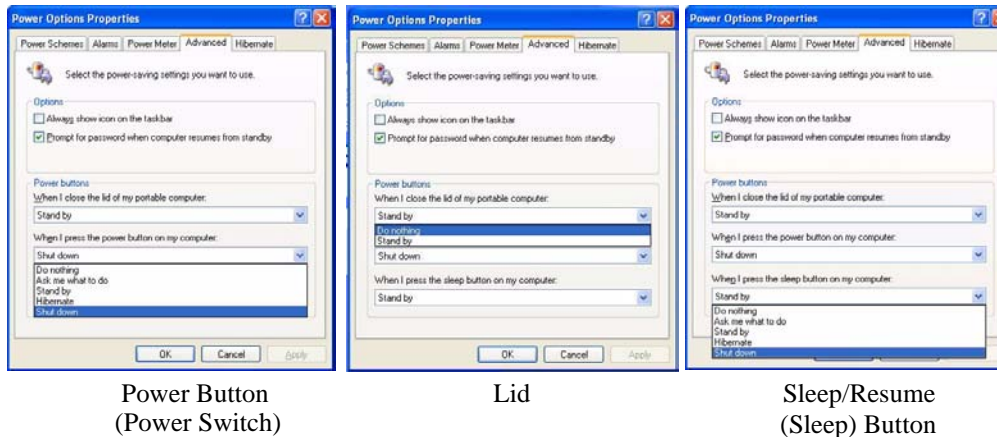


Figure D - 24
Power Options
(Advanced - Power
Buttons)

The Power Button in Tablet Mode

When the computer is in tablet mode the power button is automatically disabled. To use the power button you will need to reorientate the LCD into notebook mode (see ***“Screen Orientation (In Notebook Mode)” on page D - 10***).



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.

Battery Information

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

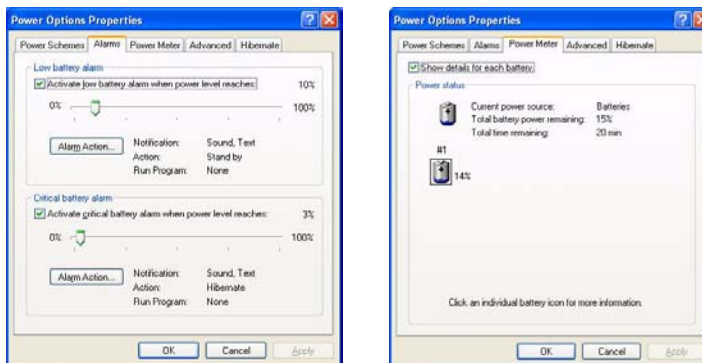
New Battery

Always completely discharge, then fully charge, a new battery (see *[“Battery FAQ” on page D - 39](#)* 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.

Figure D - 25
Power Options
(Alarm & Power
Meter)



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 need to remove the battery for any reason, see *“Removing the Battery” on page 6 - 4.*

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 - 20* for information on the battery charge status, and to *“Battery Information” on page D - 36* for more information on how to maintain and properly recharge the battery pack.)



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

Disconnect any unnecessary external devices.

Windows XP Information

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.

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 page [D - 36](#)) and **Schemes** (change all the settings to **Never** - see page [D - 30](#)). As the battery nears the end of its life save and close any critical files.

How do I fully charge the battery?

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

How do I maintain the battery?

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



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.

Driver Installation

Insert the *Device Drivers & Utilities + User's Manual CD-ROM*, click **Install Drivers/Option Drivers** (button) and then click the appropriate driver name from the *Drivers Installer* menu. Follow the instructions to install the driver.



Figure D - 26 - Drivers Installer Screen 1

1. Check the driver installation order from **Table D - 4** (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 greyed 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 D - 27 - Drivers Installer Screen 2

WinXP SP3 Driver	Page #
<i>Chipset</i>	<i>Page D - 42</i>
<i>Video</i>	<i>Page D - 42</i>
<i>G-Sensor</i>	<i>Page D - 43</i>
<i>Touch Panel Application</i>	<i>Page D - 43</i>
<i>Audio</i>	<i>Page D - 43</i>
<i>LAN</i>	<i>Page D - 43</i>
<i>Pop Menu Utility</i>	<i>Page D - 43</i>
<i>Fingerprint Reader Module</i>	<i>Page D - 50</i>
<i>Wireless LAN Module</i>	<i>Page D - 54</i>
<i>PC Camera Module</i>	<i>Page D - 57</i>

Table D - 4 - Driver Installation



Windows XP Service Pack 3

Make sure you install **Windows XP Service Pack 3** (or a Windows XP version which includes Service Pack 3) **before installing any drivers.**

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 Procedure

Insert the *Device Drivers & Utilities + User's Manual disc*, click **Install Drivers/Option Drivers** (button) and then click the appropriate driver name from the *Drivers Installer* menu.

Chipset

1. Click **1.Install Chipset Driver > Yes**.
2. Click **Next > Yes > Next > Next**.
3. Click **Finish** to restart the computer.

Video

1. Click **2.Install Video Driver > Yes**.
2. Click **Next > Yes > Next > Next**.
3. Click **Finish** to restart the computer.

G-Sensor

Note that **BEFORE** installing the G-Sensor driver you will need to download and install the **Microsoft .NET (dotnetfx) Framework tool** from the *Microsoft website*. Please contact your service center if help is required.

1. Click **3.Install GSENSOR AP > Yes**.
2. Click **Next > Install**.
3. Click **Finish > Finish** to restart the computer.

Touch Panel Application

1. Click **4.Install Touch Panel AP > Yes**.
2. Click **Next > Next > Install**.
3. Click **Finish**.
4. You will then need to calibrate the touch panel (see *“Calibrating the Touch Screen” on page 1 - 14*).
5. Click **OK** to restart the computer after calibration.

Audio

1. Click **5.Install Audio Driver > Yes**.
2. Click **Next**.
3. Click **Finish** to restart the computer.

LAN

1. Click **6.Install LAN Driver > Yes**.
2. Click **Next > Install**.
3. Click **Finish**.
4. The network settings can now be configured.

Pop Menu Utility

1. Click **7.Install POP Menu Utility > Yes**.
2. Click **Next > Install**.
3. Click **Finish > Finish** to restart the computer.
4. See *“Pop Menu” on page 1 - 23* for details.

Windows XP Information

Module Drivers

See the following pages for the driver installation procedures for any of the optional modules included in your purchase configuration.



Figure D - 28 - Optional Drivers

Bluetooth Module

Note: The operating system is the default setting for **Bluetooth** control in **Windows XP**, and does not require a driver. See ***“Bluetooth Module” on page D - 45*** for configuration instructions.

Fingerprint Reader Module

See ***“Fingerprint Reader Module” on page D - 50.***

Wireless LAN Module

See ***“Wireless LAN Module” on page D - 54.***

PC Camera Module

See ***“PC Camera Module” on page D - 56.***

Wireless LAN & Bluetooth Modules



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 LAN & Bluetooth Modules Power Toggle

Enable power to the modules as follows:

Fn + F4 = Wireless LAN Module Power Toggle

Fn + F1 = Bluetooth Module Power Toggle

Alternatively, you can use the appropriate **On-Screen Menu** button to toggle power to the module.

The LED indicator  will be **green** if the WLAN module is on, and **orange** if the Bluetooth module is on.

Bluetooth Module

The operating system's **Bluetooth Devices** control panel is used to configure the Bluetooth settings in *Windows XP*, and therefore does not require a driver. Use the **Fn + F1** key combination (see "*Function Keys*" on page D - 17) or the **On-Screen Menu** button to toggle power to the Bluetooth module.



Bluetooth Data Transfer



Note that transferring data between the computer and a Bluetooth enabled device is supported **in one direction only (simultaneous data transfer is not supported)**.

Therefore if you are copying a file from your computer to a Bluetooth enabled device, you will not be able to copy a file from the Bluetooth enabled device to your computer until the file transfer process from the computer has been completed.

Windows XP Information

Bluetooth Local Area Connection Icon

If you want to display the Local Area Connection icon for the Bluetooth connection in the taskbar, set it up as follows:

1. Access the **Network Connections** control panel in **Windows (Start > Settings > Network Connections OR Start > Connect To > Show all Connections)** or by clicking the taskbar icon .
2. Right-click the Bluetooth connection icon, and select **Properties**.
3. Click to put a tick (if none is present) in the **"Show icon in the notification area when connected"** box and click **OK**.
4. Close the control panels and the icon  for the Bluetooth local area connection will be displayed in the taskbar **when connected** (see sidebar and overleaf).



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 + F1** key combination/On-Screen Menu button to toggle power to the Bluetooth module, and check the LED indicator to see if the module is powered on or not (See **Table D - 3 on page D - 17** **Table D - 2 on page D - 16** **Table 1 - 3 on page 1 - 20**).

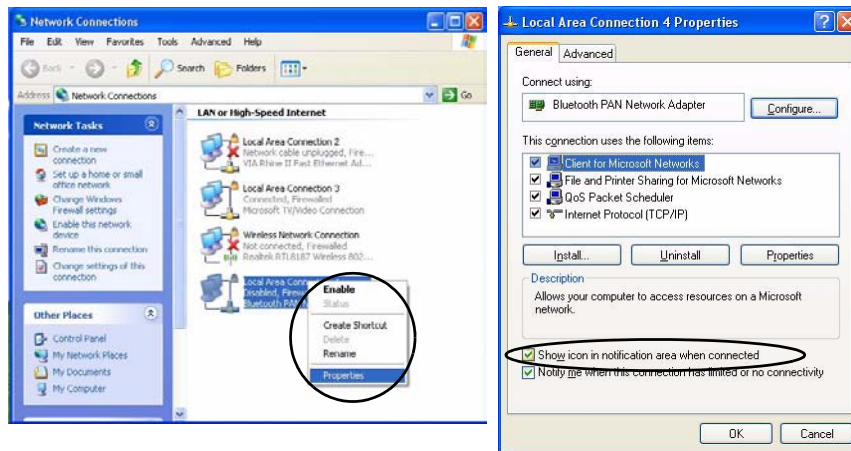





Figure D - 29 - Local Area Connection

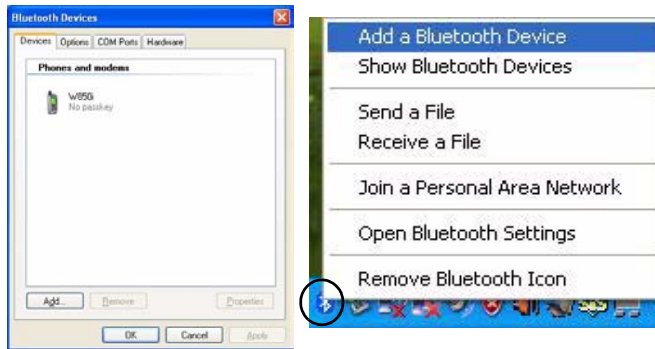
Bluetooth Configuration in Windows XP

Setup your Bluetooth Device so the Computer Can Find it

1. Turn your Bluetooth device (e.g. PDA, mobile phone etc.) on.
2. Make the device discoverable (to do this check your device documentation).

To Turn the Bluetooth Module On

1. Press the **Fn + F1** key combination to power on the Bluetooth module.
2. A Bluetooth icon  will appear in the taskbar (see sidebar).
3. You can then do any of the following to access the **Bluetooth Devices** control panel.
 - **Double-click** the icon  to access the **Bluetooth Devices** control panel.
 - Click **Start**, and click **Control Panel** (or point to **Settings** and click **Control Panel**), and then click **Bluetooth Devices (Network and Internet Connections)**.
 - **Click/Right-click** the icon  and choose an option from the menu.



Bluetooth Taskbar Icon

If you cannot see the Bluetooth icon in the taskbar, access the **Bluetooth Devices** control panel. Click **Options** (tab), and make sure that **Show Bluetooth icon in the notification area** check box has a tick inside it.

Note that you will need to check the LED indicator to see if the module is powered on or not.

Figure D - 30 - Bluetooth Devices & Click Icon Menu

To Add a Bluetooth Device

1. Access the Bluetooth Devices control panel.
2. Click **Options** (tab), and make sure that **Allow Bluetooth devices to connect to this computer** check box (**Connections**) has a tick inside it.
3. Click **Devices** (tab), and then click **Add**.
4. The **Add Bluetooth Device Wizard** will appear.
5. Click to select “**My device is set up and ready to be found**”, and then click **Next**.

Figure D - 31
Add Bluetooth
Device Wizard



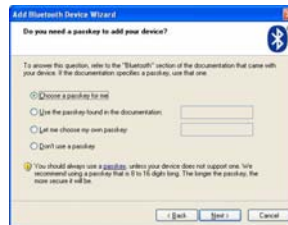
Passkey Options

You can allow the system to choose a passkey for you. You will then be prompted to enter the generated passkey on your Bluetooth device.

Figure D - 32
Passkey Option



6. The **Wizard** will then search for any available Bluetooth devices within range.
7. Click to select the device you want to communicate with, and click **Next**.
8. Select an appropriate passkey option and click **Next > Finish**.



To Change Settings for the Bluetooth Device

1. Access the Bluetooth Devices control panel.
2. Click on the device you want to change and click **Properties** to:
 - Change the **name** of the device (click **General**, type a new name and click **OK**).
 - Enable/Disable a **service** (click **Services**, clear/tick the check box next to the service and click **OK**).

To Make your Computer Discoverable to Bluetooth Devices


1. Access the **Bluetooth Devices** control panel.
2. Click **Options**, and make sure that **Turn discovery on** check box (**Discovery**) has a tick inside it.
3. Make sure that **Alert me when a new Bluetooth device wants to connect** check box (**Connections**) has a tick inside it, if you want to be notified when a Bluetooth device wants to connect.



Figure D - 33 - Bluetooth Devices Options



Help & Manual

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

Insert the *Device Drivers & Utilities + User's Manual* disc and click **Option Drivers** (button). Click **Unlock** (button) and then click **1.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* disc and click **User's Manual** (button), and click **Install Acrobat Reader** (button).

Fingerprint Reader Module

If you have included the fingerprint reader in your purchase option you will need to install the driver as per the instructions below.


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

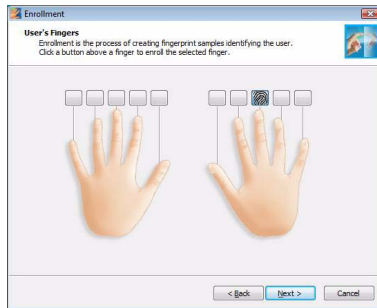
Before beginning the enrollment process it is recommended that you go through the fingerprint tutorial. To run the tutorial click **Start > Programs/All Programs > Protector Suite QL > Fingerprint Tutorial** after installing the driver.

Fingerprint Reader Driver Installation

1. Insert the *Device Drivers & Utilities + User's Manual* disc into the CD/DVD drive.
2. Click **Option Drivers** (button).
3. Click **1.Install FingerPrint Driver > Yes**.
4. Click **Software Installation**.
5. Click **Next > Next > Next**.
6. Click **Finish > Yes** to restart the computer.
7. See overleaf for information on enrolling fingerprints etc.

User Enrollment

1. Click **Start > Programs/All Programs > Protector Suite QL > User Enrollment**, or double-click the taskbar icon .
2. Click **Initialize**.
3. On the first run of the program you will be asked to click the button to accept the license, and then click **OK**.
4. Click **Next** and select "**Enrollment to the hard disk**", and click **Finish**.
5. 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).
6. Click **Next**, and you will then be prompted to enter your **Windows** password and click **Next**.
7. Select either to use the fingerprint reader alone for authentication, or choose both the fingerprint reader and the **Windows** password, and then click **Next**.
8. Click **Next > Next** (if you have the "**Run interactive tutorial**" tickbox selected you will run through the Fingerprint Tutorial).
9. Click **Next** for each window of the tutorial (you can click the button to "**skip tutorial**" at any time).
10. Click the button above any of the fingers to begin the enrollment process for that finger.




Fingerprint Enrollment

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

Figure D - 34 - Fingerprint Enrollment

Windows XP Information

11. Swipe the finger **five** times to enroll that finger.
12. Repeat the process for all the fingers you wish to enroll (see sidebar), and then click **Next > Finish**.
13. Click **"Help"** in the **Fingerprint Control Center** to get more information on any topic.
14. You can also run the **Tutorial**, or **Introduction** (to run the product tour video) to get more information.
15. Right-click the taskbar icon  to bring up the **Control Center** that allows you to **Edit Fingerprints**, **register applications**, manage **Password Bank**, **File Safe** and access the **Help** menu etc. You can also run the **Control Center** etc. from the **Protector Suite QL** item in the **Programs/All Programs** menu.

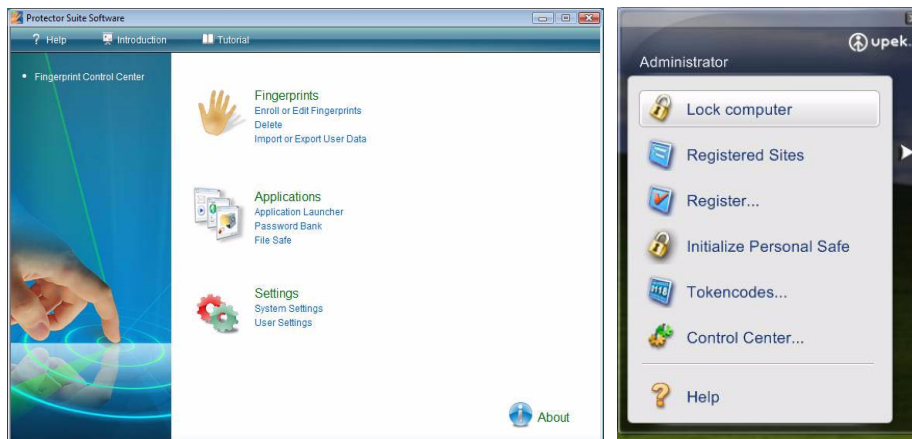


Figure D - 35 - Control Center & Biomenu

16. See **"Help & Manual" on page D - 50** for further details.
17. If you swipe your finger over the reader at any time you can access the **Biomenu** to **lock the computer**, **register websites**, access the **Personal Safe** open the **Control Center** and access the **Help** menu.

Fingerprint Control Center Features

Application Launcher

The **Application Launcher** allows you to register applications to be launched when assigned to a particular finger. Simply copy the application icon on to one of the registered fingers and then click OK to close the application window. Once registered the application will launch when you swipe the appropriate finger across the sensor.

Password Bank

The **Password Bank** stores registrations of user names, passwords and other settings for web sites etc.

File Safe

File Safe is an encrypted area assigned on your hard drive that allows you to store files and folders to be protected by fingerprint protection.

For more information on these and other features simply access “**Help**” in the **Fingerprint Control Center** and select the item from the menu on the left.



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.

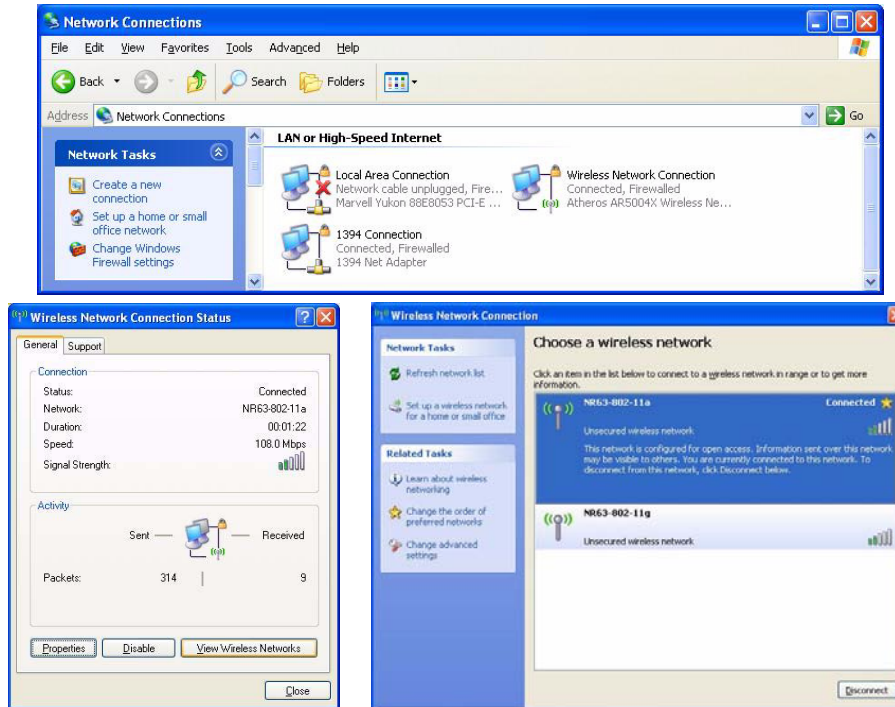
Use the **Fn + F4** key combination/Pop Menu button to toggle power to the WLAN module, and check the indicator to see if the module is powered on or not (See [Table D - 3 on page D - 17](#)/[Table D - 2 on page D - 16](#)/[Table 1 - 3 on page 1 - 20](#)).

Wireless LAN Module

Before installing the **Wireless LAN** driver, make sure that the optional WLAN module is on. Use the **Fn + F4 key combination** (see [“Function Keys” on page D - 17](#)), or use the **Pop Menu** button (see [“Pop Menu” on page D - 16](#)) to **toggle power to the Wireless LAN module**. Make sure you install the drivers in the order indicated in [Table D - 4, on page D - 41](#).

802.11 b/g 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 **Option Drivers** (button).
3. Click **2.Install Wireless Lan driver > Yes**.
4. Click **Finish** to complete the installation.
5. The operating system is the default setting for Wireless LAN control in *Windows XP* (see overleaf).
6. Access any available wireless networks from **Network Connections > Wireless Network Connection** menu in *Windows* (or click the icon  in the taskbar), and click **View Wireless Connections**.



Network Connection

Use the **Windows Network Connections** control panel to access available wireless networks (**Start > Settings > Network Connections** or **Start > Connect To > Show all Connections**).

Figure D - 36
Wireless Network Control Panels



Latest PC Camera Driver Information

Check the **CD**, and any accompanying insert pages, for the latest updated information on the PC Camera driver, which may override the information provided here.

Video Resolution Output Size

The PC Camera's default resolution is set to 320 * 240. You can adjust this resolution, however do not exceed 640 * 480 in order to avoid video lag (see *"Reducing Video File Size" on page D - 59*).

PC Camera Module

Before installing the **PC Camera** driver, make sure that the optional PC Camera is on. Use the **Fn + D** key combination (see *"Function Keys" on page D - 17*), or use the **Pop Menu** button (see *"Pop Menu" on page D - 16*) to toggle power to the **PC Camera module**. Make sure you install the drivers in the order indicated in *Table D - 4, on page D - 41*.

PC Camera Drivers

Note that **two** drivers are provided on the disc for the **PC Camera**.

The driver included in the **Drivers Installer** menu has already received certification for **Windows**. A second driver is included (which may resolve some known issues with the original driver), which at time of going to press, has not yet received certification for **Windows**. You can install this latest driver as indicated.

1. DO NOT install the video driver from the Drivers Installer menu.
2. Click **Back** and click **Browse CD**.
3. Browse to the following location on the **Device Drivers & Utilities + User's Manual** disc (note that **D:** is the CD/DVD device drive letter, however your system may have designated a different device drive letter):
 - **D: \Options\03BisonCCD\Driver**

PC Camera Driver Installation

1. Make sure the module is powered on, and then insert the *Device Drivers & Utilities + User's Manual* disc into an attached CD/DVD drive.
2. Click **Option Drivers** (button).
3. Click **3.PC Camera, Web cam > Yes**.
4. Choose the language you prefer and click **Next > Next**.
5. Click **Finish** to restart the computer.
6. Run the **BisonCap** application program from the **BisonCam** shortcut on the desktop, or from the **BisonCam** item in the **Start > Programs/All Programs** menu (if the hardware is turned off use the **Fn + D** key combination to turn it on again).

PC Camera Audio Setup

To capture video & **audio** with your camera, it is necessary to setup the audio recording options in *Windows*.

1. Go to the **Start** menu and point to **Settings** (or just click **Control Panel**) and click **Control Panel**, then double-click the **Sounds & Audio Devices** icon (**Sounds, Speech, and Audio Devices** in Category View).
2. Click **Advanced** in the **Volume > Device volume** tab.
3. Click **Options** and scroll down and click **Properties**.
4. Select **Realtek HD Audio Input** from the **Mixer device** menu.
5. Make sure the **Mic Volume** (check box) is checked, then click **OK**.
6. Boost the volume in the **Recording** section (in the Recording Control menu) as high as it will go.
7. Close the **Recording Control** window, and then click **OK**.
8. Run the **BisonCap** application program from the **Start > Programs/All Programs > BisonCam** menu.
9. Go to the **Devices** menu heading and select **Realtek HD Audio Input** (it should have a tick alongside it).
10. Go to the **Capture** menu heading and select **Capture Audio** (it should have a tick alongside it).



Pre-Allocating File Space

You may pre-allocate the file size (**File > Allocate File Space**) for the capture file in the **BisonCap** program.

Pre-allocating space on the hard disk can improve the capture quality (particularly of large capture files), by reducing the amount of work the hard disk has to do in finding space for the video data as it is being captured.

See also *“Reducing Video File Size” on page D - 59.*

BisonCap

BisonCap is a video viewer for general purpose video viewing and testing, and capturing video files to .avi format.

1. Run the **BisonCap** application from the **Start > Programs/All Programs > Bison-Cam** menu (it is recommended that you **set the capture file** before the capture process - **see Set Capture File below**).
2. Go to the **Capture** menu heading (if you wish to capture audio check *“PC Camera Audio Setup” on page D - 57*) and select **Start Capture**.
3. Click **OK** (the file location will be displayed in the pop-up box) to start capturing the video, and press **Esc** to stop the capture (you can view the file using the **Windows Media Player**).

Set Capture File

Prior to capturing video files you may select the **Set Capture File...** option in the **File** menu, and set the file name and location before capture (this will help avoid accidentally overwriting files). Set the name and location then click **Open**, then set the **"Capture file size:"** and click **OK**. You can then start the capture process as above.

Note the important information in *“Reducing Video File Size” on page D - 59* in order to save file space, and help prevent system problems.

Reducing Video File Size

Note that capturing high resolution video files requires a substantial amount of disk space for each file. After recording video, check the video file size (right-click the file and select **Properties**) and the remaining free space on your hard disk (go to **My Computer**, right-click the hard disk, and select **Properties**) If necessary you can remove the recorded video file to a removable medium e.g. CD, DVD or USB Flash drive.

Note that the *Windows XP* system requires a minimum of **1.5GB** of free space on the **C: drive** system partition. In order to prevent system problems it is recommended that you save the captured video file to a location other than the **C: drive** (see *“Set Capture File” on page D - 58*), limit the file size of the captured video (see *“Pre-Allocating File Space” on page D - 58*) or reduce video resolution (see below).

To Reduce Video Resolution Output Size:

1. Run the **BisonCap** program.
2. Go to **Options** and scroll down to select **Video Capture Pin...**
3. Click the **Output Size** drop box and select a lower resolution size in order to reduce the captured file size.

Windows XP Information

Eliminating Screen Flicker

If you find that the video screen in the **BisonCap** program is flickering, you can try to adjust the setting in the **Video Capture Filter** options.

1. Run the **BisonCap** program.
2. Go to **Options** and scroll down to select **Video Capture Filter...**
3. Click either **50Hz** or **60Hz** under **Frequency** in **Property Page** (tab).
4. Click either **50Hz** or **60Hz** under **Flickering Reduction** in **Image** (tab).

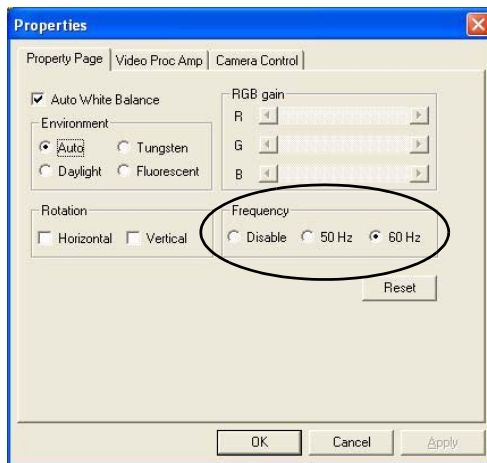


Figure D - 37 - Video Capture Filter

Zoom

The **BisonCap** program allows you to zoom the camera in and out.

1. Run the **BisonCap** program.
2. Go to **Zoom** and select **Zoom Out/Zoom In**.

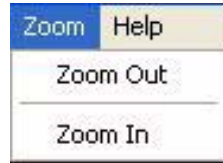


Figure D - 38 - Zoom/Setting

Taking Still Pictures

The **BisonCap** program allows you to take still pictures.

1. Run the **BisonCap/VideoView** program.
2. Go to **Options** and select **Take Picture**.



Snapshot Folder

The Snapshot folder's default location is on the desktop. Do not move this folder or an error may appear when you try to take a still picture.

If you accidentally delete or move the folder, you can create a new Snapshot folder on the desktop in order to capture the files.

GPS Module

If you have included an Global Positioning System (**GPS**) receiver module in your purchase option, you will need to obtain map software suitable for your global location. Map software programs are both commercially available and downloadable directly from the internet

A Global Positioning System satellite continually transmits high-frequency radio signals containing the time and location of the satellite in relation to earth. Your computer's GPS receiver obtains information from satellites and calculates your current position on the planet (to an accuracy of between 3 and 15 meters).

You can use the **Pop Menu** (see *“Pop Menu” on page D - 16*) button, or **Fn + G** key combination, to toggle power to the GPS module.

Configuring the COM Port for the GPS Module

You need to make sure that the COM port for the GPS module is set to **COM 1** at a **4800** baud rate. To do this follow the instructions below:

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 **Hardware** (tab).
4. Click **Device Manager** (button).
5. Click “+” next to **Ports (COM & LPT)** if its sub-items are not shown.
6. Double-click **Communications Port (COM1)**.
7. Click **Port Settings** (tab) and make sure that the **Bits per second** rate is set to **4800 baud**.
8. Click **OK** and close the **Device Manager**.

Appendix E: Express Card 34 Approved List

The Express Cards listed in the table below are approved for use with this computer. Please make sure any Express Cards modules you use with this computer are included in the list. Note that **1394 Express Cards** are **NOT** supported. For further information contact your service center.


Model	Brand
5-In-1	
GIGA-LAN	APIOTEK
	Abocom
32G SSD Express Card	Transcend
16G SSD Express Card	Transcend
AVerMedia AVerTV DVB-T	AVerMedia
Brand Luxe 3.5G Express Card	Brand Luxe
Abocom Card Reader	Abocom
Merlin XU870 3G Card	Merlin

Table E - 1 - Approved Express Cards

Express Card 34 Approved List