

Preface

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Limitation of Liability

While reasonable efforts have been made to ensure the accuracy of this manual, the manufacturer and distributor assume no liability resulting from errors or omissions in this manual, or from the use of the information contained herein.

Notices

Federal Communications Commission Radio Frequency Interference Statement

NOTE....

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

-
- Reorient or relocate the receiving antenna
 - Increase the separation between the equipment and receiver
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected

Consult the dealer or an experienced radio TV technician for help
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Notice:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Shielded interface cables and a non-shielded AC power cord must be used in order to comply with emission limits.

This equipment is to be used with power supply:

65W

There is no internal power supply.

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Personal Inventory

This Notebook computer system is designed for years of productive and pleasurable computing. Use this section to keep notes about details of your purchase. Update this section when you add new options.

Date of Purchase:

Dealer's Name:

Phone:

Address:

E-Mail Address:

WWW Site:

Serial Number:

CPU Type:

Hard Disk Capacity:

Memory Capacity:

Optional Equipment:



Chapter I

Before you Start

Conventions of This Manual

Use this manual will help you get the most from your notebook computer.

- If you are an experienced user of computers and/or Microsoft's Windows operating systems, you might find it useful to read the Quick Start Guide that comes along with your accessories.
- If you are a less experienced user, you should through the manual carefully before using your system.

Whether or not you are an experienced user, you should consult on the Troubleshooting Chapter if you encounter any problems with your notebook.

Safety Precautions

This section is designed to assist you in identifying potentially unsafe conditions while working with this product. Required safety features have been installed in the computer to protect you from injury. However, you should use good judgment to identify potential safety hazards:

1. Please read these safety instructions carefully.
2. Please keep this User's Manual for later reference.
3. Please disconnect this equipment from AC outlet before cleaning. Don't use liquid or sprayed detergent for cleaning. Use moisture sheet or cloth for cleaning.
4. For pluggable equipment, that the socket-outlet shall be installed near the equipment and shall be easily accessible.
5. Please keep this equipment from humidity.
6. Lay this equipment on a reliable surface when installed. A drop or fall could cause injury.
7. Make sure to use the right voltage for the power source when connecting the equipment to the power outlet.
8. Place the power cord in such a way that people can not step on it. Do not place anything on top of the power cord.
9. All cautions and warnings on the equipment should be noted.

-
- 10.** If the equipment is not use for a long time, disconnect the equipment from the main power outlet to avoid being damaged by transient overvoltage.
 - 11.** Never pour any liquid into the opening, this could cause fire or electrical shock.
 - 12.** Never open the equipment. For safety reason, the equipment should only be opened by a qualified service personnel.
 - 13.** If on the following situations arises, get the equipment checked by a service personnel:
 - a.** The Power cord or plug is damaged.
 - b.** Liquid has penetrated into the equipment.
 - c.** The equipment has been exposed to moisture.
 - d.** The equipment has not worked well or you cannot get it work according to the user's manual.
 - e.** The equipment has dropped and damaged.
 - f.** If the equipment has obvious sign of breakage.
 - 14.** Do not leave this equipment in an environment unconditioned, storage temperature above 60°C (140°F), it may damage the equipment.
 - 15.** The unit can be operated at an ambient temperature of max. 35°C.
 - 16.** The sound pressure level at the operators position according to IEC 704-1: 1982 is equal or less than 70 dB(A).
 - 17.** Power Cord Requirements

The power cord set used with the AC adaptor must meet the requirements of the country where you use the AC adaptor, whether it is 100-120 or 200-240 Vac. The following information explains the requirements for power cord set selection.

 - The cord set must be approved for the country in which it is used.
 - The appliance coupler must have a configuration for mating with a CEE22/EN6032/IEC 320 appliance inlet.

A. For U.S. and Canada:

 - The cord set must be UL Listed and CSA Certified.
 - The minimum specifications for the flexible cord are No. 18 AWG.

B. For Japan:

-
- All components of the cord set must bear a “PSE” or “ T ” mark and registration number in accordance with the Japanese Dentori Law.
 - The minimum specifications for the flexible cord are .75m mm² conductors.
- C. For Other Countries:**
- The cord set fittings must bear the certification mark of the agency responsible for evaluation in a specific country.
 - The flexible cord must be of a HAR (harmonized) type H03VV-F.
 - The cord set must have a current capacity of a least 2.5 Amperes and voltage rating of 125 or 250 Vac.
- 18.** When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons. These precautions includes the following:
- Do not use this product near water, for example, near a bathtub, washbowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
 - Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
 - Do not use the telephone to report a gas leak in the vicinity of the leak.
 - Use only the power cord indicated in this manual.
- 19.** Do not use the AC adapter near open water or other liquids. Never spill liquid into the AC adapter.
- 20.** Laser Warning: Laser Class I Product Caution - Invisible laser radiation when open avoid exposure to beam.
- 21.** Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions. Never remove the battery pack while the power is on as this may result in data loss when the system loses power.
- 22.** The input receptacle is used as the main disconnecting device.

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23. Note to CATV System Installer – This reminder provided to call the CATV system installer's attention to Section 820-93 of the National Electric Code which provide guidelines for proper grounding and in particular, specify that the Coaxial cable shield shall be connected to the grounding system of the building, as close to the point of cable entry as practical

Wichtige Sicherheitshinweise

1. Bitte lesen Sie diese Hinweis sorgfältig durch.
2. Heben Sie diese Anleitung für den späteren Gebrauch auf.
3. Vor jedem Reinigen ist das Gerät vom Stromnetz zu trennen. Versenden Sie keine Flüssig- oder Aerosolreiniger. Am besten eignet sich ein angefeuchtetes Tuch zur Reinigung.
4. Die Netzanschlußsteckdose soll nahe dem Gerät angebracht und leicht zugänglich sein.
5. Das Gerät ist vor Feuchtigkeit zu schützen.
6. Bei der Aufstellung des Gerätes ist auf sicheren Stand zu achten. Ein Kippen oder Fallen könnte Beschädigungen hervorrufen.
7. Beachten Sie beim Anschluß an das Stromnetz die Anschlußwerte.
8. Verlegen Sie die Netzanschlußleitung so, daß niemand darüber fallen kann. Es sollte auch nichts auf der Leitung abgestellt werden.
9. Alle Hinweise und Warnungen, die sich am Gerät befinden, sind zu beachten.
10. Wird das Gerät über einen längeren Zeitraum nicht benutzt, sollten Sie es vom Stromnetz trennen. Somit wird im Falle einer Überspannung eine Beschädigung vermieden.
11. Durch die Lüftungsöffnungen dürfen niemals Gegenstände oder Flüssigkeiten in das Gerät gelangen. Dies könnte einen Brand bzw. Elektrischen Schlag auslösen.
12. Öffnen Sie niemals das Gerät. Das Gerät darf aus Gründen der elektrischen Sicherheit nur von autorisiertem Servicepersonal geöffnet werden.
13. Wenn folgende Situationen auftreten ist das Gerät vom Stromnetz zu trennen und von einer qualifizierten Servicestelle zu Überprüfung:
 - a. Netzlabel oder Netzstecker sind beschädigt.
 - b. Flüssigkeit ist in das Gerät eingedrungen.
 - c. Das Gerät war Feuchtigkeit ausgesetzt.
 - d. Wenn das Gerät nicht der Bedienungsanleitung entsprechend

funktioniert oder Sie mit Hilfe dieser Anleitung keine Verbesserung erzielen.

e. Das Gerät ist gefallen und/oder das Gehäuse ist beschädigt.

f. Wenn das Gerät deutliche Anzeichen eines Defektes aufweist.

- 14. VORSICHT:** Explosionsgefahr bei unsachgemäßen Austausch der Batterie. Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.
- 15.** Dieses Schaltnetzteil kann bis zu einer Außentemperatur von maximal 35°C.
- 16.** Die Ausgangswerte dürfen nicht die auf dem Label angegebenen Werte überschreiten.
- 17. Anforderungen an das Stromkabel**
Das Kabel-Set, das an das Netzteil angeschlossen wird, muss den Anforderungen des Landes, in dem Sie das Netzteil einsetzen, genügen, je nachdem, ob die Netzspannung 100-120 oder 200-240V Wechselfspannung beträgt.
- Das Kabel-Set muss für das Land, in dem es eingesetzt wird, zugelassen sein.
 - Der Gerätestecker des Kabels muss in eine CEE22/ EN603/IEC 320 Buchse passen.
- A.** Für die USA und Kanada:
- Das Kabel-Set muss UL-gelistet und CSA zertifiziert sein.
 - Die Minimalanforderungen für das Kabel entsprechen No. 18 AWG.
- B.** Für Japan:
- Alle Teile des Kabel-Sets müssen entsprechend dem japanischen Dentori Law mit einem „PSE“ or „T“-Symbol markiert sein
 - Die Minimalanforderungen für das Kabel sind .75m ² Leiter.
- C.** Für andere Länder:
- Die Zubehörteile des Kabel-Sets müssen das Prüfsiegel derjenigen Stelle, die in dem jeweiligen Land für die Sicherheitsprüfung zuständig ist, tragen.
 - Das Kabel muss vom HAR (harmonisierten) Typ H03VV-F sein.

-
- Das Kabel-Set muss eine Stromkapazität von mindestens 2,5 Ampere haben und Spannungen von 125 oder 250 V Wechselstrom gestatten.
- 18.** Bei der Benutzung Ihres Telefongerätes sollten Sie immer die grundlegenden Sicherheitsmaßnahmen beachten, um das Risiko von Feuer, Stromschlägen und Verletzungen zu minimieren. Zu beachten sind u.a. folgende Punkte:
- Benutzen Sie das Gerät nicht in der Nähe von Wasser, wie zum Beispiel Badewanne, Waschbecken, Spülbecken, Waschbottich, in feuchten Kellerräumen oder in der Nähe von Schwimmbecken.
 - Benutzen Sie kein Telefon (ausgenommen schnurlose Modelle) während eines Gewitters. Es besteht das geringe Restrisiko eines Blitzschlages.
 - Benutzen Sie das Telefon nicht um ein Gasleck zu melden, falls es sich in der Nähe des Lecks befindet.
 - Benutzen Sie nur solch ein Stromkabel, wie in dieser Anleitung beschrieben.
- 19.** Benutzen Sie das Netzteil nicht in unmittelbarer Nähe zu Wasser oder anderen Flüssigkeiten. Gießen Sie nie Flüssigkeiten über das Netzteil.
- 20.** Achtung Laser: Laser Produkt der Klasse I. Achtung - Unsichtbarer Laserstrahl, vermeiden Sie Kontakt mit dem Strahl bei offenem Gehäuse.
- 21.** Es besteht Explosionsgefahr, wenn der Akku nicht ordnungsgemäß ersetzt wird. Ersetzen Sie den Akku nur durch einen Akku gleichen oder äquivalenten Typs, der vom Hersteller empfohlen wird. Entsorgen Sie Akkus entsprechend den Anweisungen des Herstellers. Entfernen Sie den Akku auf keinen Fall bei eingeschaltetem Notebook, da hierdurch Daten verloren gehen könnten.
- 22.** Der Netzeingabeanschluss dient als Hauptschalter des Geräts.

-
23. Hinweis für die CATV-Systeminstallation: Dieser Hinweis dient dazu, die Aufmerksamkeit der CATV-Systemmonteure auf Abschnitt 820-93 des National Electrical Code zu richten, der Richtlinien für die korrekte Erdung enthält und im Besonderen festlegt, dass der Schirm des Koaxialkabels an das Erdungssystem des Gebäudes angeschlossen werden muss, und zwar so nahe wie möglich am Ort des Kabeleingangs

Things you must remember before working on your computer

Let your computer acclimate itself

Your notebook can easily stand temperature extremes but it doesn't like rapid changes in temperature, like going from the cold outdoors to a warm office.

Rapid changes in temperature can cause water droplets to condense inside your case, threatening to damage the electronic parts inside.

After receiving your notebook when it's hot or cold outside, try not to power up the computer immediately, let the computer adjust to the room temperature gradually at least for three to four hours.



WARNING

If your system arrives in cold weather, do not apply power to the computer or monitor until they have been allowed to come to room temperature.

Heat, Cold, Humidity, and Glare

Find a suitable place for your computer that's not too hot, too cold, too dark, or too bright. Glare can make it hard to read the screen.

- Try to avoid the computer components from being destroyed if it is over heated, so try to allow plenty of room for air to circulate around the case.
- Do not block the ventilation opening.
- Do not place your computer in direct sunlight.

Suitable place to work

Your computer will run well wherever you're comfortable but extremes of temperature and humidity can be challenging to your system's parts. There are some things you can tolerate that the computer can't – things like static electricity, dust, water, steam and oil. In case you decide to pull over for roadside computing, try to choose a clean, comfortable work area for your system.

A lithium-ion battery pack will be available when you are traveling. If you are running your system for the first time on battery power, remove the battery from the package, install it into the system and recharge the battery to fully prepare for service.



Chapter 2

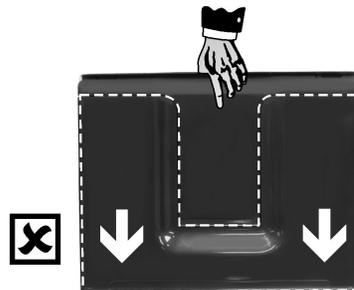
Introduction

Welcome to the Notebook PC

Congratulations on your purchase of the Notebook PC. Your Notebook features the latest advances in portable computing technology. The Notebook's modular design provides maximum expandability without compromising portability.



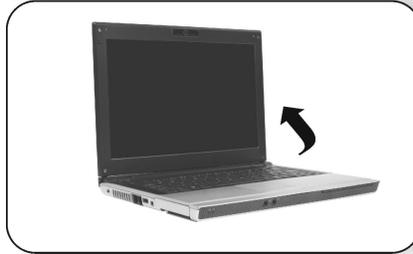
When you are carrying the computer, be sure the rear panel should be facing downward as shown in the illustration.



Don't try to carry the computer with the top side facing downward to prevent the LCD sub assembly from sliding out of the mainframe.

Getting to Know Your Computer

Opening the LCD Panel

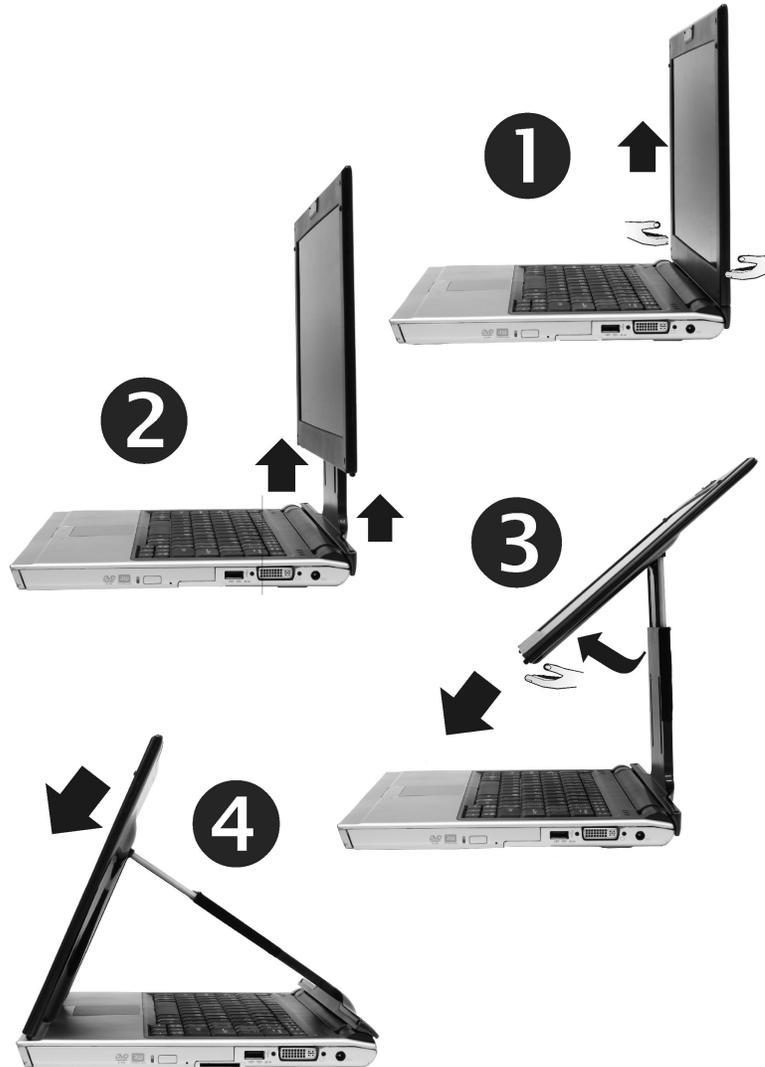


 **WARNING** To avoid damage to the display panel:

1. Try not to slam the display upon closing it.
2. Try not to place any object on top when it is closed or open.
3. Be sure the system is turned off or in suspend mode before you close the display panel.

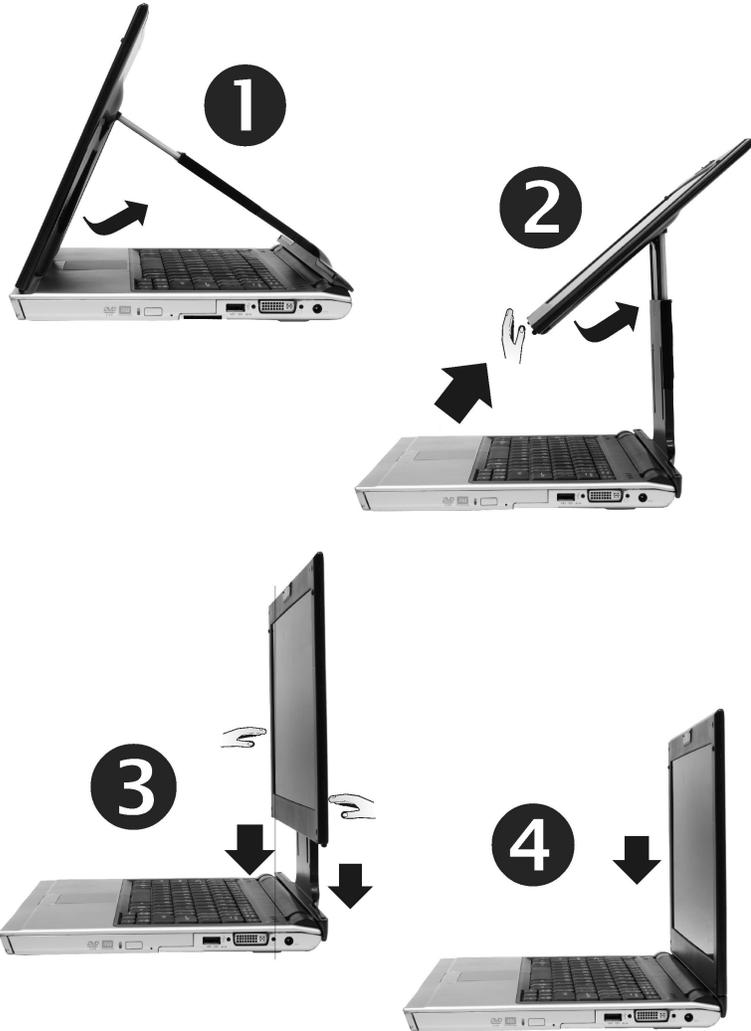
With the LCD screen open, you will see several features important for operating your Notebook computer.

Tilting your Display Panel

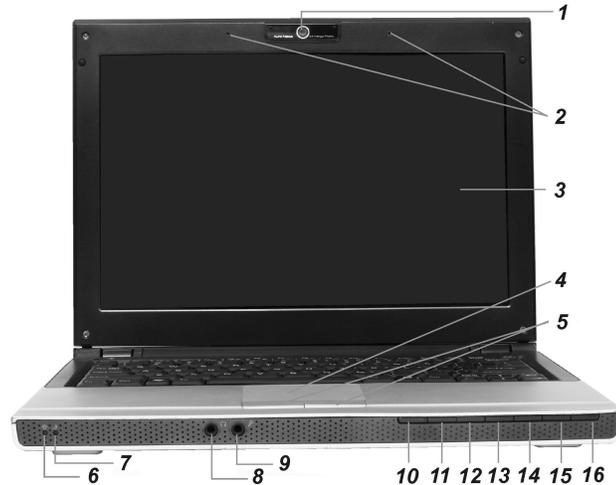




To return to the original size, follow the procedures:



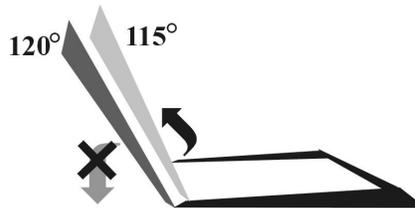
The Front



Each of these features is briefly described below.

1. Camera (Option)
2. Microphone
3. LCD Display

 **WARNING** This LCD panel can only support up to a maximum opening of 115-120 degrees, please do not push it forcibly.



4. TouchPad
5. TouchPad Buttons

Function LED

6. Battery Charge LED
7. Suspend LED
8. Audio Line Out Jack

-
9. Microphone Jack

Audio Buttons

10. The Mute Button
11. The Volume Down Button
12. The Volume Up Button
13. The Previous Track Button
14. The Next Track Button
15. The Stop Button
16. The Play/Pause Button

The Left Side



1. Kensington Lock
2. Ventilation Opening
3. The Modem Port

NOTE.... 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.

4. The LAN Port

NOTE.... When using a LAN, please use an EMI Shielding Cable to minimize an interference when transmitting.

5. USB Port

-
- 6. IEEE 1394 Port
 - 7. Hard Disk Drive
 - 8. ExpressCard



Function Button

- 1. Power Button
- 2. WLAN RF On/Off Button

Function LED

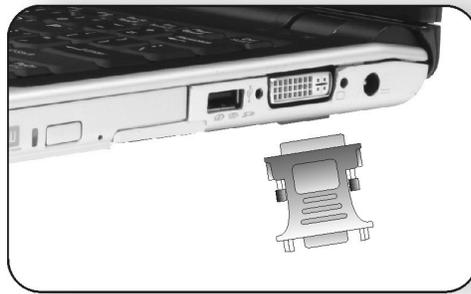
- 3. WLAN LED
- 4. Bluetooth LED

The Right Side



-
1. The CD-ROM/DVD-ROM or DVD CD-RW Combo
 2. USB Port
 3. DVI (Digital Video Interface) Connector

DVI is a digital interface standard to convert analog signals into digital signals to accommodate both analog and digital monitors.



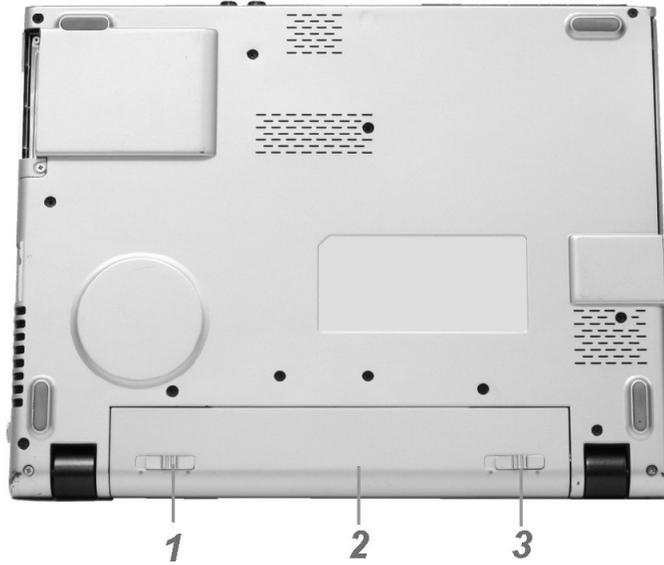
4. DC-IN



Function LED

1. HDD LED
2. Numeric Lock
3. Caps Lock

The Bottom Panel



1. Battery Lock
2. Battery
3. Battery Release Latch

Chapter 3

Getting Started

Connecting to a Power Source

Connecting the AC Adapter

A universal AC adapter is provided to supply your computer with power and also charge the computer's battery pack. The adapter's AC input voltage can range anywhere from 100 to 240 volts, covering the standard voltages available in almost every country. The power cord for the AC adapter requires a three-hole grounded AC outlet. To connect the computer to an external power source:



 **WARNING** Do not use inferior extension cords as this may result in damage to your Notebook. The Notebook comes with its own AC adapter. Do not use a different adapter to power the computer and other electrical devices.

Whenever possible, keep the AC adapter plugged into the Notebook and an electrical outlet to recharge the battery.

 **WARNING** Never turn off or reset your Notebook while the hard disk is in use and the CD-ROM status icon is lit; doing so can result in loss or destruction of your data. Always wait at least 5 seconds after turning off your Notebook before turning it back on; turning the power on and off in rapid succession can damage the Notebook's electrical circuitry.

Turning On Your Notebook Computer

Turn on your Notebook by pressing the power button. Hold the button down for a second or two and release. The Power-On Self Test (POST) runs automatically.

After the POST is completed, the computer reads the operating system from the hard disk drive into computer memory (this is commonly referred to as "booting" a computer). If your OS (Operating System such as Windows XP.... etc) is installed, it should start automatically.

To turn the Notebook off, save your work and close all open applications, click on **Start**, then **Shut Down** and select **Shut down the computer** and click "Yes" or press the power button for 4-6 seconds.

Operating on Battery Power

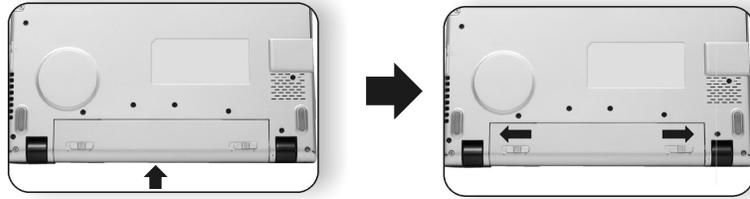
Your computer comes with a rechargeable battery pack that lets you operate the computer without an external power source. When the battery pack is fully charged, you can operate the computer under the following conditions:

- The battery pack initially has a full charge.
- No peripheral devices are installed.
- The disk/CD-ROM drives run no more than 10% of the time.

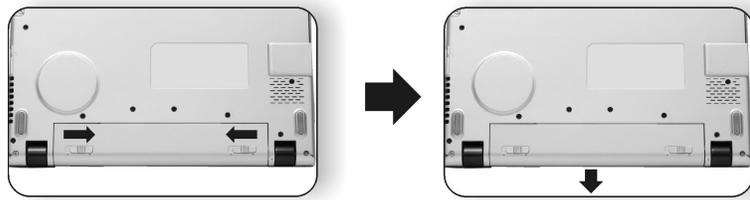
 **WARNING** Only use batteries that are approved by an authorized dealer. All batteries are not the same and therefore should not be treated as such. Using the wrong battery could cause serious damage to your computer and yourself through toxic emissions.

Inserting and Removing the Battery Pack

The battery pack should already be inserted in your Notebook computer when you unpack it. If not inserted, follow these directions:

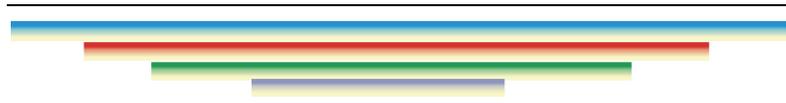


To remove the battery pack:



Charging the Battery Pack

The installed battery pack charges automatically any time the computer is connected to the AC adapter and an external power source. It is a good idea to occasionally discharge the battery pack fully to preserve its operating performance.





Chapter 4

Using the Notebook Computer

Adjusting the LCD Screen Display

The LCD screen display can be adjusted by the following key combinations.

KEYS	FUNCTIONS
[Fn] + [F7]	Decreases the brightness level.
[Fn] + [F8]	Increases the brightness level.
[Fn] + [F10]	Use this key combination to expand your video screen or reset to its original size.
[Fn] + [F12]	This key combination toggles the display between the LCD, CRT/DVI, simultaneous LCD and CRT/DVI

LCD Care

LCD screens are delicate devices that need careful handling. Please pay attention to the following precautions:

- When you are not using the computer, keep the LCD screen closed to protect it from dust.
- If you need to clean your LCD screen, use a soft tissue to gently wipe the LCD surface.
- Do not put your fingers or sharp objects directly on the surface and never spray cleaner directly onto the display.
- Do not press on, or store any objects on the cover when it is closed. Doing so may cause the LCD to break.

External CRT Display

You can hook up an external monitor through the 15-pin CRT connector. Three configurations are available:

- LCD only
- CRT/DVI only
- Simultaneous display of the LCD screen and CRT monitor

You can switch between these display configurations by pressing the key combination **[Fn] + [F12]**.

For information on connecting an external display, please refer to Chapter Four.

A Tour of the Notebook's Keyboard

The Notebook's keyboard uses a standard QWERTY layout with the addition of special function keys and an embedded numeric keypad for number intensive data entry. Your keyboard supports Windows by incorporating the two Windows specific keys.

With the two Windows keys you will be able to access and take advantage of many of the timesaving features of Windows software.

The function keys (F1-F12) on the top row of the keyboard, serve different purposes and carry out different tasks depending on the application you are running.

The cursor (arrow) keys (which are all located in the lower right corner of your keyboard) and the [PgUp], [PgDn], [Home] and [End] keys (which are located along the right edge of the keyboard) allow you to move the active cursor of the computer to various locations on the screen or within the document.

The embedded numeric keypad consists of 15 keys that make number intensive input more convenient. Like the [Num Lock] key, these keys are labeled in blue on the keycaps. Numeric assignments are located at the upper right of each key.

When the numeric keypad is engaged, the NumLock icon will appear in the System Window. The keypad is activated by pressing the [Fn] + [NumLk] key. If an external keyboard is connected, pressing the NumLock key on either the Notebook or external keyboard will enable/disable NumLock of both keyboards in unison.

To disable the Notebook numeric keypad while keeping the keypad on an external keyboard activated, use the [Fn] + [NumLk] hot key on the Notebook keyboard.

The Notebook's Hot Key Controls

KEYS	FUNCTION(S)
Power Button	Press this button once to power on the system. Press this button for more than 4 seconds to power off the system.
Wireless Button	Press this button to On/Off wireless function
[Fn] + [F2]	Turns on/off the volume.
[Fn] + [F3]	Decreases the speaker volume.
[Fn] + [F4]	Increases the speaker volume.

KEYS	FUNCTION(S)
[Fn] + [F5]	Enable/Disable the system Touchpad function
[Fn] + [F6]	Open the Microsoft's IE Internet Explorer
[Fn] + [F7]	Decreases the brightness level.
[Fn] + [F8]	Increases the brightness level.
[Fn] + [F9]	Open the Microsoft's Outlook
[Fn] + [F10]	Use this key combination to expand your video screen or reset to its original size.
[Fn] + [F11]	Enter Standby mode.
[Fn] + [F12]	This key combination toggles the display between the LCD, CRT/DVI, simultaneous LCD and CRT/DVI

System Management Master Function

The System Management Master function provides you to enable the power saving scheme for your system.

- Press the [Fn] + [Esc] key to open up the SMM function screen display.
- You can also click on the “SMM”  icon on your windows desktop to open up the SMM function.



- **Webcam function** – execute the built-in camera function of your system. Selection: On/Off
- **Bluetooth function** – execute the Bluetooth function of your system. Selection: On/Off.
- **GLAN function** – execute the GigaLAN function of your system. Selection: On/Off.

NOTE.... To turn off each individual function, just click on the display switch.

- **Memory Slow Down** – this will help generate the power saving scheme.

NOTE.... This will affect when you are running any computer program to access the relative performance from a number of standard tests and will get a lower scores.

- **Ultimate Mode** – click on this function will turn off the **WebCam, Bluetooth, GLAN** as well as the **WLAN** function. On the other hand will turn ON the “**Memory Slow Down**” function lowering its power consumption.

NOTE.... This mode will forcibly turn “OFF” the **WLAN** even if you have pressed the “**Wireless RF**” button to turn “ON” the **WLAN** function.

The TouchPad

The touchpad is a rectangular electronic panel located just below your keyboard. You can use the static-sensitive panel of the touchpad and slit it to move the cursor. You can use the buttons below the touchpad as left and right mouse buttons.



TouchPad Precautions

The TouchPad is a pressure sensitive device. Please take note of the following precautions.

- Make sure the TouchPad does not come into contact with dirt, liquids or grease.
- Do not touch the TouchPad if your fingers are dirty.

-
- Do not rest heavy objects on the TouchPad or the TouchPad buttons.

You can use the TouchPad with Microsoft Windows as well as non-Windows applications.

The Combo Drive (DVD-ROM + CD-RW), DVD Dual (DVD+/-RW), Super Multi (DVD-RAM+DVD+/-RW)

Features of the Combo Drive (DVD-ROM + CD-RW), DVD Dual (DVD+/-RW), Super Multi (DVD-RAM+DVD+/-RW)

The features of the Combo Drive (DVD-ROM + CD-RW), DVD Dual (DVD+/-RW), Super Multi (DVD-RAM+DVD+/-RW) are listed below.

- The Audio Play feature allows you to play music CDs
- Front panel load/unload button
- Supports CD-DA, CD-ROM mode 1 and mode 2, Multi-Session Photo CD™, CD-I/Video CD (pcs.)
- Low power consumption
- 12.7mm height

Precautions for Handling CD Discs

- Always hold the disc by the edges, avoid touching the surface.
- Use a clean, dry, cloth to remove dust, smudges, or fingerprints. Wipe from the center outward.
- Do not write or place objects on the surface of the disc.
- Store discs in a cool dry place not to damage the disc.
- Do not use benzene, thinners, or cleaners with detergent. Only use CD-ROM/DVD-ROM/Combo cleaning kits.
- Do not bend or drop the discs.

Loading a Disc

To play a CD disc, follow the instructions listed below.

1. Push the Combo Drive (DVD-ROM + CD-RW), DVD Dual (DVD+/-RW), Super Multi (DVD-RAM+DVD+/-RW) eject button on the CD drive door. Gently pull the tray all the way out.
2. Carefully lift the CD disc by the edges and make sure the shiny surface is face down (the side with no writing on it). Carefully insert the CD disc onto the tray. Push the CD disc down gently so that it snaps onto the center ring.

-
3. Push the tray back into the drive.

To remove a CD disc, do the following:

1. Check the LED display and make sure that the computer is not accessing the Combo Drive (DVD-ROM + CD-RW), DVD Dual (DVD+/-RW), Super Multi (DVD-RAM+DVD+/-RW).
2. Push the eject button and pull the tray all the way out.
3. Carefully pick up the CD disc by the edges and – while pressing down on the center ring – remove the CD disc from the tray.

 **NOTE....** Do not insert any foreign objects into the disc tray. If you experience difficulty when ejecting the CD disc tray, stretch a paper clip (or use a pin or a thin metal rod) and insert it into the emergency eject hole located on the right side of the front panel. The CD disk tray should eject immediately. This procedure can also be used to remove a CD from the drive when the Notebook is powered off.

Power Saving Modes

This section contains information on the Notebook's power system, including the AC Adapter, the battery system, recharging the battery, and tips for conserving battery power.

The power system is comprised of two parts, the AC Adapter and the battery system. The AC Adapter converts AC power from a wall outlet to the DC power required by the computer.

The Battery Power System

Before using the computer on battery power for the first time, check the battery status icon on the Windows Toolbar to make sure the battery is fully charged.

See Battery Status later in this section for a description and explanation of the Windows Battery icon. Charging the battery takes about 3 hours to charge when the system is in off state. If possible, always charge the battery completely.

 **NOTE....** If you use the battery so frequently that it exceed more than 20 times by fully discharging/charging in a single month alone, we recommend you to perform the “Battery Calibration” process every 3 months to maintain the battery life.

Please refer to the topic on “Battery Calibration” describing how to calibrate your system battery discussed on the latter part of this chapter.

If you discover the battery life is getting shorter, please perform the “Battery Calibration” process immediately.

Removing the Battery Pack

To remove the battery pack from its compartment, please refer to Chapter 3, *Inserting and Removing the Battery Pack*.

Preparing the Battery Pack for Use

Before using the battery pack for the first time, the Smart Battery IC within the battery pack should be calibrated in order to get accurate reporting of remaining battery life status.

To calibrate the battery pack follows the instructions below:

1. Insert the battery into the battery compartment and turn on the Notebook. If the battery is completely without power go to the next step. Otherwise, let the battery run down until the battery low-low warning beeps are heard. The system will automatically enter Suspend mode.
2. Turn the Notebook off. Connect the AC adapter and let the battery fully recharge. When the battery charge indicator turns off, the battery is fully charged.
3. Turn On the notebook, let the battery run down until the battery is in low-low state and you hear a warning beeps. The system will automatically enter the Suspend mode. You can now connect the AC adapter.
4. The battery pack is now calibrated properly.

In general, using the battery until the low-low battery-warning indicator appears and fully recharges the battery each time (full discharge/charge cycle) will ensure the accurate reporting of the battery gauge status.

Automatic Battery Pack Charging Function

You can automatically charge the battery pack by using the AC Adapter. The charge time is about three hours when the Notebook power is turned off. The following table summarizes the charging modes:

Charge Mode	Charge Time
Fast	3 hours with the system off or in Suspend mode. The temperature must be 25°C or below room temperature.
Pre-Charge	A pre-charge is supplied to the Li-Ion battery pack.

Battery Status

Windows XP has an applet in the Control Panel that will display an icon in the Windows taskbar indicating when the Notebook is running on battery power or is attached to the AC adapter.

This applet also displays a meter that indicates how much charge is remaining in the battery.

Battery Low Warning

When the pack initially reaches the “Battery Low” state approximately 7 ~ 10 minutes of the usable battery life is left.

You will hear an audible beep signal every 5 seconds alerting you to the “Battery Low” status. When the battery power reaches the “Battery Low Low” status the beeping sound will accelerate.

Your battery now has 1 ~ 2 minutes of battery charge remaining. You must save your data or connect AC power immediately; otherwise, you may lose your data.

Sound	Meaning
Continuous beeping every 5 seconds	Battery Low: Indicates that there is 7 to 10 minutes charge remaining.
Beeping accelerates	Battery Low Low: Indicates that there is 1 to 2 minutes of battery charge remaining. Save your work and turn off the Notebook, or connect the AC adapter.

When there is only one minute of battery charge remaining, the Notebook will suspend to the HDD and power off. You should connect AC power and resume to save your work.

Small Battery for the Real Time Clock

There is a small built-in battery pack that supplies power to the system in order to maintain certain system information while the power is off. If the Notebook is left without a power source for long period of time, this battery will be exhausted and system information will be lost.

 **WARNING** Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions. Never remove the battery pack while the power is on as this may result in data loss when the system loses power.

Battery Calibration

The purpose for this process is to provide a longer battery life for your system battery pack.

1. Turn on the computer, when the text appears, press [Del] or the [Delete] key until the system enters the BIOS Setup screen, you may now make the necessary changes.
2. Press the → arrow key until it reaches the “Exit” menu screen. Again press the ↓ arrow key and select the “Battery Calibration” item.
Press the [Enter] key and disconnect the AC adapter then press the [Y] key until you hear continuous battery low-low warning beeping sounds. The system will be fully discharge and shutdown completely.
3. Connect the AC adapter and let the battery fully recharge. The “Battery Charge LED” of the notebook will light indicating it is in charging status.
4. When the battery charge LED turns off will indicate the system is fully charged.
5. Repeat step 1 to 4 once again.
6. The battery is now fully calibrated.

Resetting the System

After installing a software application package, you may be prompted to reset the system to load the changed operating environment. To reset the system, or “reboot,” press the **[Ctrl]+[Alt]+[Delete]** keys simultaneously. This is known as “**warm boot**.” This key combination acts as “**software**” reset switch when you encounter hardware or software problems, which lock up the Notebook.

If this key combination does not shut down the Notebook, you can reset the Notebook by using the Notebook’s power button. Should the Notebook lock up for some reason, pressing this button powers the Notebook off.

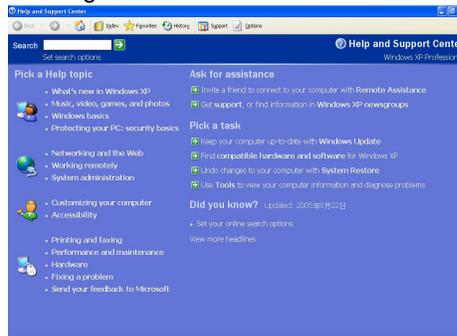
Adjusting the Brightness

To adjust the brightness on the LCD screen, press and hold down the **[Fn]** key in the lower left hand corner of the keyboard and press the **[F7]** key to reduce the brightness or **[F8]** to increase the brightness.

Using the Windows

Help Windows

For Windows XP/Vista help, click **Start → Help and Support** icon will open the dialog box.



Windows XP



Windows Vista

Desktop

Desktop may vary differently on the software installed in your notebook with different or additional shortcuts.



Windows XP



Windows Vista

Recycle Bin

Used for storing deleted files in case you want to recover and save it in your system. The files will only be deleted from the Recycle Bin permanently only if you empty it by right clicking your mouse and select the "Empty Recycle Bin".

Start Button

Allows easy access to all Windows programs.



Windows XP



Windows Vista

The **Start** menu allows you to adapt and show the programs used most frequently. If you wish to keep an item, right click the item and click **Pin to Start menu**.

Log Off will enable the current user to log off and allows a new user to log on.

Turn Off Computer allows you to shut down, restart, and Stand by modes for power saving purposes.

Taskbar

When you open a program, its icon is displayed at the taskbar for you to conveniently move between programs by clicking the relevant button.

To add or remove toolbars from the taskbar: right click an empty spot on the taskbar, select **Toolbars** → **choose the toolbar you want to add**.

Notification

The icons that appear here are for quick access to some programs and computer functions that you frequently used. For you to see the hidden icons, simply click the  icon.

To prevent Windows XP from hiding icons:

From an empty spot on the **Taskbar**, right click your mouse and select the **Properties**, remove the checked mark on the **Hide inactive icons**.



Windows XP



Windows Vista

Control Panel

It is in this area that you can change how Windows looks and works. Click Start → Control Panel dialog box. There are two interfaces – **Classic View** or **Category View**.



Windows XP



Windows Vista



Chapter 5

Desktop Operation

Your notebook is capable of providing you with efficient and productive mobile computing, it also has the speed and capacity to service as a desktop system.

This chapter discusses those functions of your notebook that are typical of desktop systems.

Audio

The Multimedia Sound System

The Notebook's built-in audio capabilities allow you to take advantage of a wide range of education and entertainment multimedia software. The Notebook is equipped with two internal stereo speakers, a microphone, and input audio ports for external audio units.

An external microphone can be connected to the microphone jack. External speakers or headphones can be connected to the Notebook's audio-out jack.

External audio devices can be connected to the Line in jack. All audio features are software controlled. The Notebook's multimedia sound system includes the following features:

- Supports Windows Sound System compatibility
- Full Duplex operation
- Dynamic filtering reduces noise and distortion rate
- 16-bit digitized audio playback
- Built-in stereo speakers
- Digitized audio recording through the Notebook's built-in microphone or any external source

Audio Volume Control

The Notebook is equipped with hot-key volume controls: Pressing the **[Fn]+[F3]** hot-key combination decreases the audio output volume, press the **[Fn]+[F4]** hot-key combination increases the audio output volume.

Audio Software

Your notebook comes equipped with an integrated sound system capable of providing you with quality audio sound through the built-in speakers or through external speakers connected via the system ports.

Sound Recording

Your system allows you to record sounds and store them as files using the microphone via the microphone jack on the rear of the notebook computer. Check the Windows Help and Support Center in Windows for information on using the various elements in sound recording.

NOTE.... For a high-quality sound, click on the "Volume Control" at the lower right end of your screen. From the Volume Control windows, click on the "Advanced" tab, click and select the "Microphone Boost" item.

Playing Sound Files

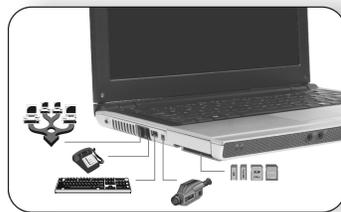
Your notebook can play audio files stored in MIDI, WAVE or MP3 file format. Check the Help and Support Center in Windows for information on the functions of the Media Player.

External Speakers and Microphone

The sound system is capable in providing high-quality sound to external speakers and receiving and processing sounds from an external microphone or external sound source.

Connecting Peripheral Devices

To expand your computing capabilities, you can add a variety of external devices to your computer.



Chapter 6

Internet Connection

There are numerous ways to connect to the Internet. This may vary from the user's working environment as well as system specifications.

- Using a modem and a telephone line
- Using a wired LAN
- Using a wireless LAN (Optional)

Using a modem for Connection to Internet

- Use a telephone line to connect to the modem port of your computer. Do not use a digital telephone line.
- Please apply to an Internet Service Provider (ISP) for Internet service in order for you to connect the modem to the Internet and use e-mail.

NOTE.... For more detail on the Network key, please refer to your local ISP provider and follow the procedures describe in the “ISP Installation Guide” to proceed with the installation.

Using a wired LAN for Connection to Internet (Windows XP)

For you connect to the Internet, a wired LAN environment normally uses the company's LAN or a broadband modem.

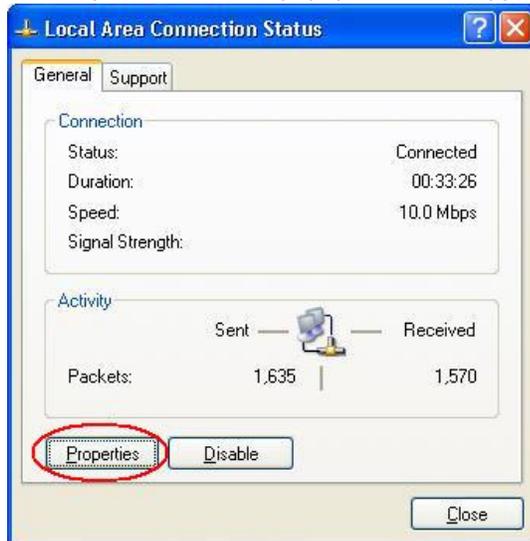
1. Use the network (LAN) cable to connect to the LAN port of the system.
2. Select on “My Network Places” and click on the “View Network Connection” in the “Control Panel” window.



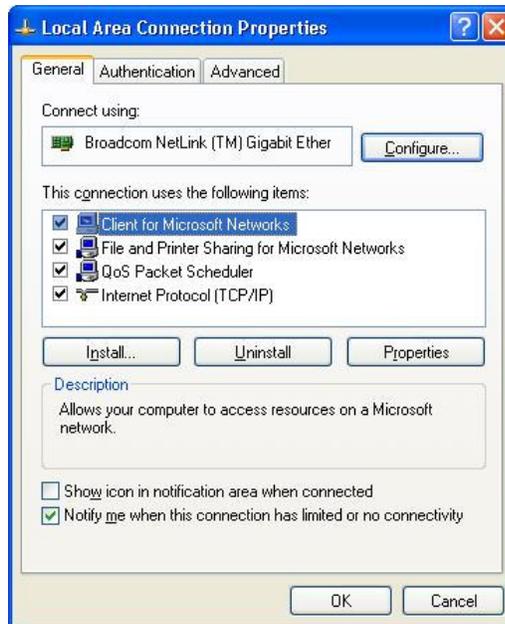
3. In the “Network Tasks” window, use your mouse pointer to click on the “Local Area Connection”.



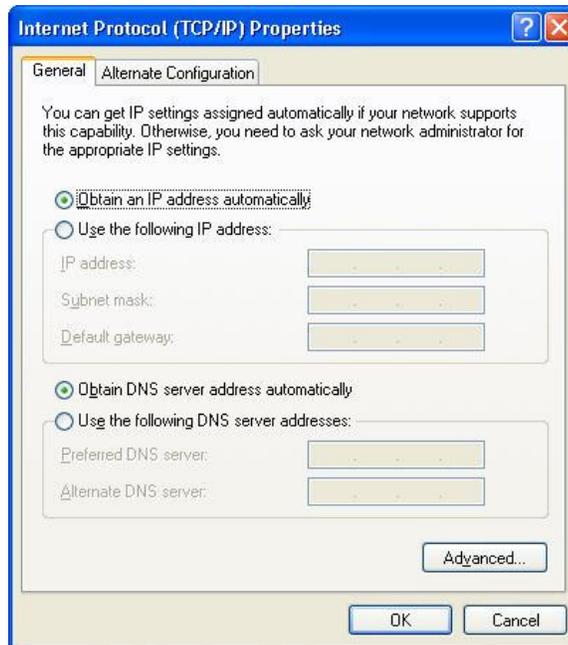
4. Select "Properties" from the popup menu that appears



5. In the "This connection uses the following items" field, select "Internet Protocol (TCP/IP)", and click "Properties".



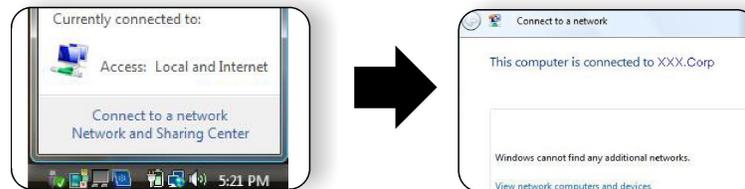
6. Enter the system's IP and DNS server addresses on the General tab of the "Internet Protocol (TCP/IP) Properties" window. If DHCP is used, click "Obtain an IP address automatically" and "Obtain DNS server address automatically" on the General tab.



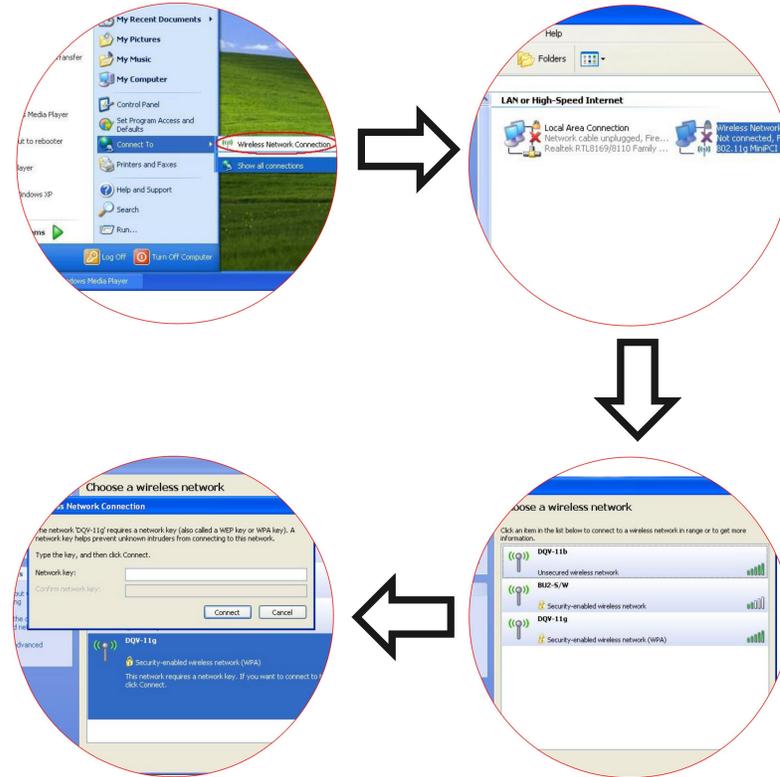
7. After all the all the information are correctly entered in the “Internet Protocol (TCP/IP) Properties” window, click “OK” to finish.

Using a wired LAN for Connection to Internet (Windows Vista)

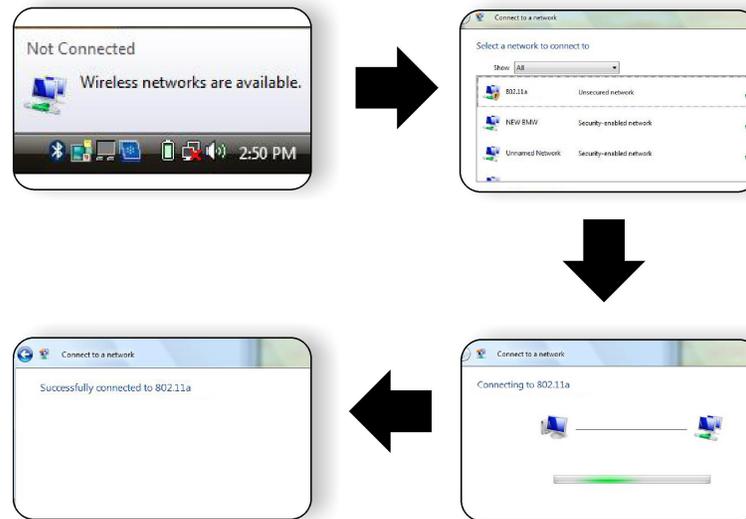
For you connect to the Internet, a wired LAN environment normally uses the company’s LAN or a broadband modem.



Using Wireless LAN Network for Connection to Internet (Windows XP) (Optional)



Using Wireless LAN Network for Connection to Internet (Windows Vista) (Optional)



Bluetooth Connection (Optional)

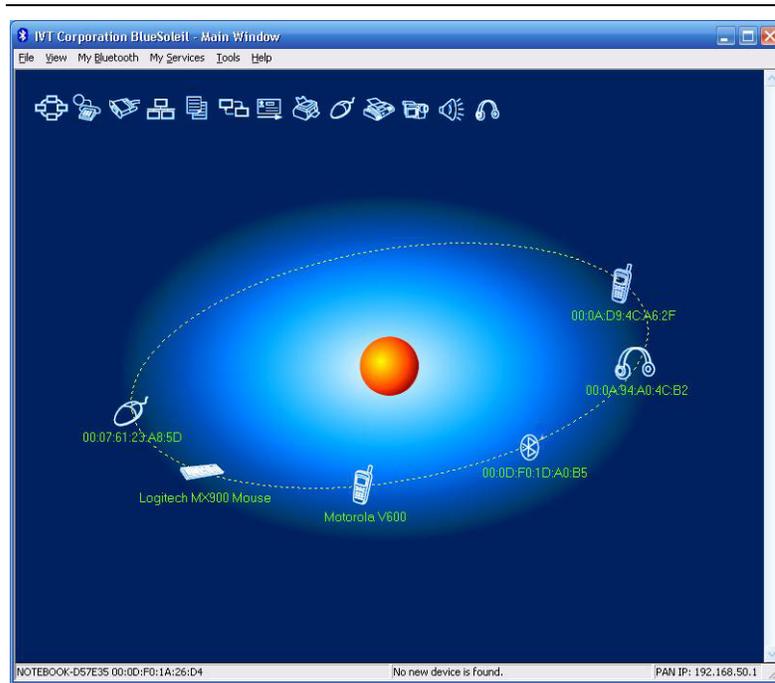
Bluetooth is a developing, world wide, open, short-range radio specification focused on communication between the Internet and Net devices, plus it defines communication protocols between devices and computers.

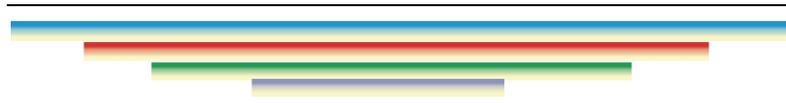
It connect wirelessly to your world: In home, at work, in motion and at play.

Access the internet or your e-mail account from anywhere, anytime. Fast downloads.



Press on the Bluetooth icon to connect other devices that has this application.







Chapter 7

Running BIOS Setup

The BIOS (Basic Input and Output System) Setup program is a menu driven utility that enables you to make changes to the system configuration and tailor your system to reflect installed hardware or alter system performance. When the Notebook is turned back on, the system is configured with the values stored in CMOS. With easy-to-use menus, you can configure such items as:

- Hard drives and peripherals
- Boot up Drive Sequence
- Password protection
- Power Management Features

The settings made in the BIOS Setup program intimately affect how the Notebook performs.

Navigating through BIOS Setup

The Setup program has been designed to make it as easy to use as possible. If you accidentally make a setting and don't know which one to switch back to, the Setup program has a hot key that allows you to return to the previous value.

Accessing the BIOS Setup Program

To access the BIOS Setup program, press the DEL key after the Notebook has run through its POST.

Item Specific Help

On the right side of the Setup screen is an area labeled Item Specific Help. This area will list navigation key shortcuts and information that is specific for the item that you are currently editing.

The Menu Bar

The top of the screen has a menu bar with the following selections:

Main - Use this menu to make changes to the basic system configuration.

Advanced - Use this menu to enable and make changes to the advanced features available on your system.

Boot - Use this menu to configure the default system device used to locate and load the Operating System and for booting up the Notebook.

Security - Use this menu to set a password. The password allows bootup and controls access to the BIOS setup menu.

Exit - Use this menu to exit the current menu or specify how to exit the Setup program.

To access the menu bar items, press the right or left arrow key on the keyboard until the desired item is highlighted.

The Legend Bar

At the bottom of the Setup screen you will notice a legend bar. The keys in the legend bar allow you to navigate through the various setup menus. The following table lists the keys found in the legend bar with their corresponding alternates and functions.

Legend Key	Alternate Key	Function
F1		Displays the General Help window. It can be enabled from anywhere in the BIOS.
Esc		Jumps to the Exit menu or returns to the Main menu from a submenu.
←		Selects the menu item to the left.
→		Selects the menu item to the right.
↑ or ↓	Keypad arrow keys	Moves the cursor up and down between fields.
Tab	Enter	Moves the cursor to the next position available in the field.
Minus key (=)		Scrolls backward through the values for the highlighted field.
Plus key (+)		Scrolls forward through the values for the highlighted field.
Home	PgUp	Moves the cursor to the field at the top of the window.
End	PgDn	Moves the cursor to the field at the bottom of the window.
F9		Sets the parameters for the current menu to their <i>default</i> values.

Legend Key	Alternate Key	Function
F10		Save and Exit.
Enter		Will select a sub menu or show a range of options for a field.

Launching Submenus

Note that a right pointer symbol ► appears to the left of certain fields. This pointer indicates that a submenu can be launched from this field. A submenu contains additional options for a field parameter. To call up a submenu, simply move the cursor to highlight the field and press the **[Enter]** key. Use the **[Esc]** key to return to the Main menu.

General Help

In addition to the Item Specific Help window, the BIOS Setup program also provides a General Help screen can be called up from any menu by simply pressing **[F1]**. Use the **[PgUp]** and **[PgDn]** keys or the up and down arrow keys (↑↓) to scroll through the entire help document.

Press the Home key to display the first page, press End to go to the last page. To exit the help window, press the **[Enter]** or the **[Esc]** key.

Save Changes and Exit the Setup Program

Refer to the Exit menu section of this chapter for detailed information on saving changes and exiting the setup program.

The Main Menu

When the Setup program is accessed, the following screen appears:

BIOS Setup Utility	
Main	Advanced Security Boot Exit
System Overview	Use [ENTER], [TAB] or [SHIFT-TAB] to select a field.
Processor : Genuine Intel (R) CPU U2500 @ 1.20GHz : 1200MHz	Use [+] or [-] to configure system Time
System Memory Size : 1016MB	
▶ System Time [00:18:12] ▶ System Date [Thu 08/31/2006]	
: [Hard Disk]	
CD/DVD ROM : [ATAPI CDROM]	
Hard Disk	
	←→ Select Screen ↑↓ Select Item +- Change Field Tab Select Field F1 General Help F10 Save and Exit ESC Exit
V02.61 (C)Copyright 1985-2005, American Megatrends, Inc.	

The Advanced Menu

Selecting *Advanced* from the menu bar displays the Advanced menu:

BIOS Setup Utility				
Main	Advanced	Security	Boot	Exit
Advanced Settings		Configure settings related to Trusted Computing innovations		
WARNING: Setting wrong values in below settings may cause system to malfunctions				
▶ Infineon Trusted Computing				
▶ CPU Configuration				
▶ IDE Configuration				
Quick Boot	[Enabled]			
Quiet Boot	[Enabled]			
Touchpad Support	[Enabled]			
Legacy USB Support	[Enabled]			
USB Beep Message	[Enabled]			
AUTO DIM Supported	[Enabled]			
A.P.S. Support	[Disabled]			
DUMT Maximum Memory	[128MB]			
		←→	Select Screen	
		↑↓	Select Item	
		Enter	go to Sub Screen	
		F1	General Help	
		F10	Save and Exit	
		ESC	Exit	
V02.61 (C) Copyright 1985-2005, American Megatrends, Inc.				

The Security Menu

The Notebook's advanced system of security allows you to set a password to prevent unauthorized access to system resources, data, and the BIOS Setup Program.

BIOS Setup Utility				
Main	Advance	Security	Boot	Exit
Security Settings		Install or Change the password		
Supervisor Password : Not Installed User Password : Not Installed				
Change Supervisor Password Change User Password				
Boot Sector Virus Protection [Disabled]				
		←→ Select Screen ↑↓ Select Item Enter Change F1 General Help F10 Save and Exit ESC Exit		
V02.61 (C) Copyright 1985-2005, American Megatrends, Inc.				

The Boot Menu

The Boot menu allows the user to specify the order in which the Notebook is to check for a device to boot the system. You can also configure the way that the system will boot up.

To make changes, select *Boot* from the menu bar. The following screen appears:

BIOS Setup Utility				
Main	Advance	Security	Boot	Exit
Boot Settings		Specifies the Boot Device Priority Sequence		
▶ Boot Device Priority ▶ Hard Disk Drives ▶ CD/DVD Drives				
		←→ Select Screen ↑↓ Select Item Enter Go to Sub screen F1 General Help F10 Save and Exit ESC Exit		
V02.61 (C) Copyright 1985-2005, American Megatrends, Inc.				

The Exit Menu

Once you have made all of your selections from the various menus in the Setup program, you should save your changes and exit Setup. Select *Exit* from the menu bar to display the following menu:

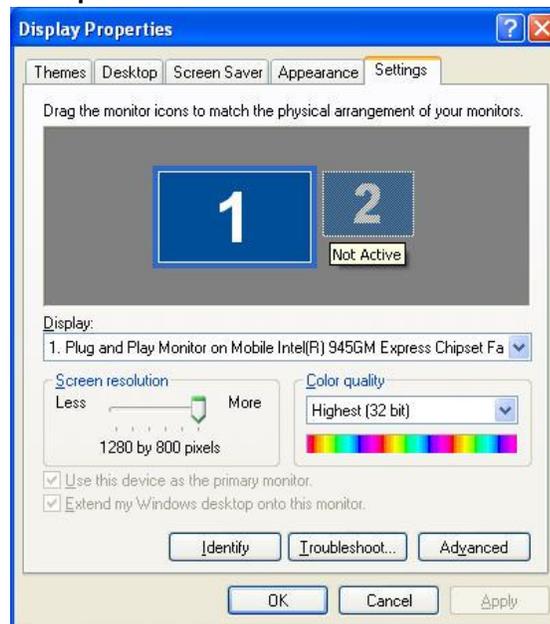
BIOS Setup Utility				
Main	Advance	Security	Boot	Exit
Exit Options		Exit system setup after saving the changes.		
Save Changes and Exit		F10 key can be used for this operation		
Discard Changes and Exit				
Discard Changes				
Load Optimal Defaults				
Load Failsafe Defaults				
Battery Calibration				
		←→ Select Screen		
		↑↓ Select Item		
		Enter Go to Sub Screen		
		F1 General Help		
		F10 Save and Exit		
		ESC Exit		
V02.61 (C) Copyright 1985-2005, American Megatrends, Inc.				

Chapter 8

VGA Utilities

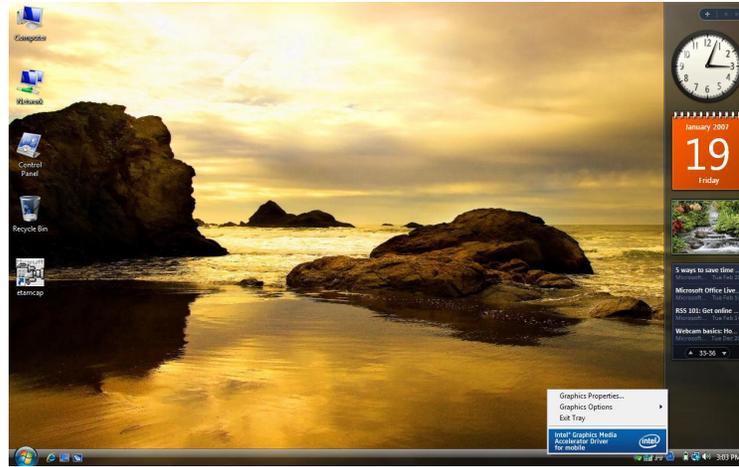
Windows XP

After you have restarted Windows, open the “Control Panel” and double click on the “Display” icon. From the “Display Properties” window, select the “Settings” tab and click on the “Advanced” tab to enter the “**Plug and Play Monitor on Mobile Intel® 945GM Express Chipset**”.

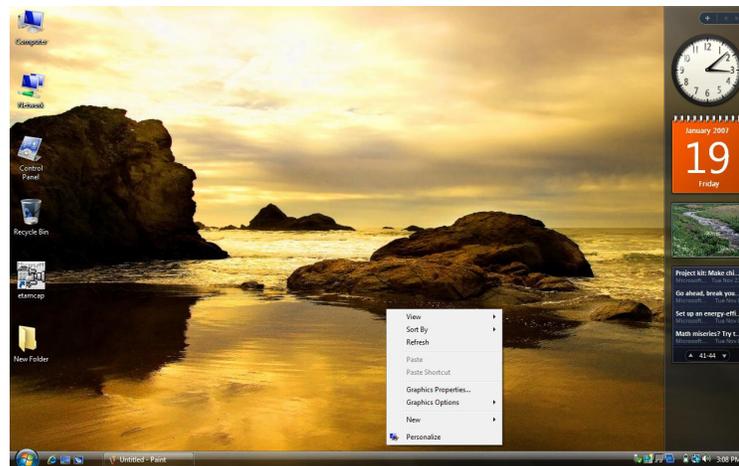




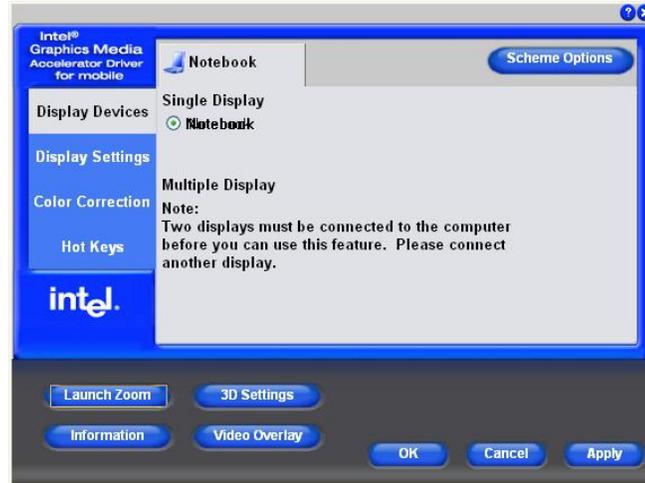
Windows Vista



or



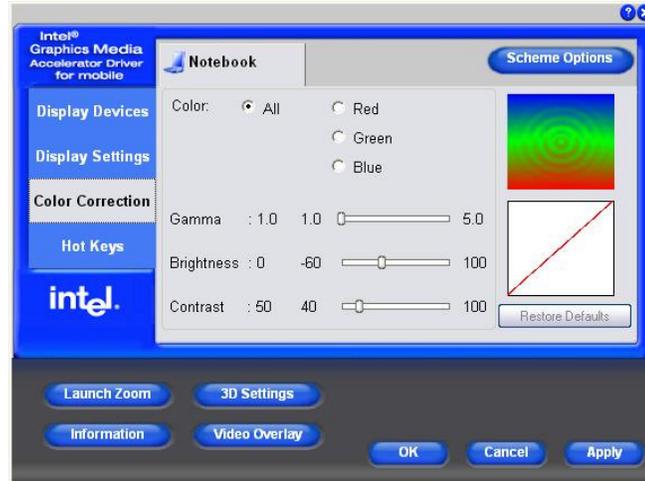
Display Device



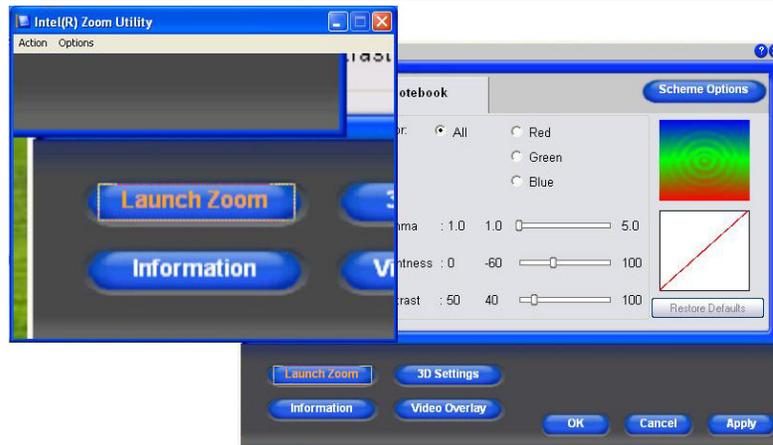
Display Settings



Color Correction



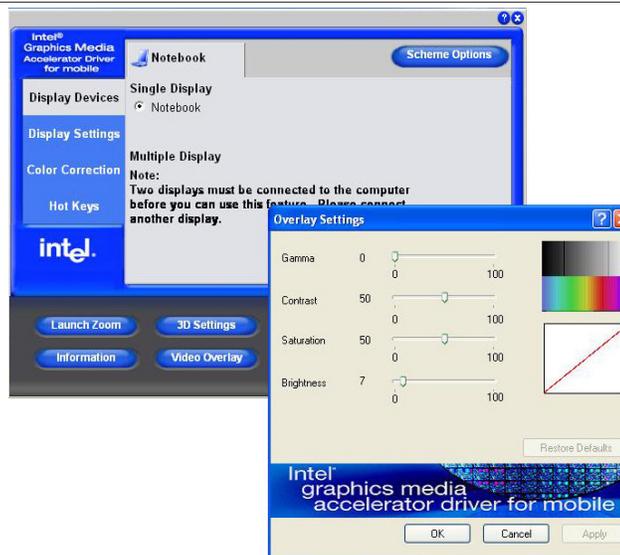
Launch Zoom



3D Settings



Video Overlay



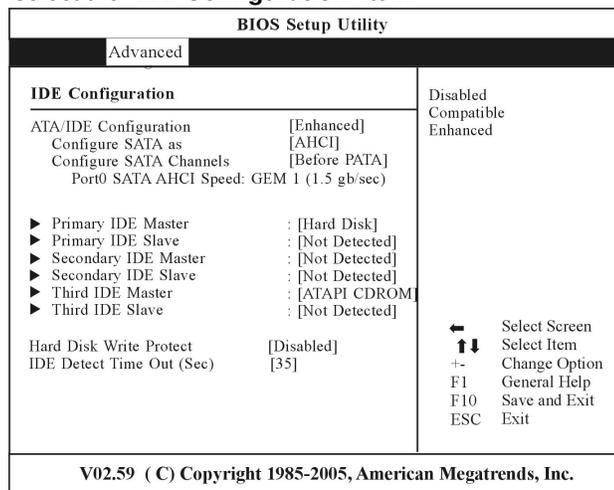


Chapter 9

Installing the WinXP in AHCI/RAID System

WinXP (AHCI/RAID system) Installation

1. Before installing the WinXP into your system, please set the SATA hard drive to AHCI/RAID mode. Enter the BIOS Setup.
2. Proceed to **“Advanced”** Setup using the → arrow key and select the **“IDE Configuration”** item.



3. Set the BIOS setup IDE mode to **“ATA/IDE Configuration [Enhanced]”** and Configure SATA as [AHCI] or [RAID] mode.
4. Copy the AHCI/RAID driver into the floppy drive (Driver\SATA_F6\F6flpy32*.*) for WinXP 32 bit (Driver\SATA_F6\F6flpy64*.*) for WinXP 64bit or execute the Driver\SATA_F6\F6flpy32.exe to create 32bit driver or execute the Driver\SATA_F6\F6flpy64.exe to create 64bit driver

AHCI Mode

BIOS Setup Utility	
Advanced	
IDE Configuration	Disabled Compatible Enhanced
ATA/IDE Configuration [Enhanced] Configure SATA as [AHCI] Port0 SATA AHCI Speed: GEM 1 (1.5 gb/sec)	
▶ Primary IDE Master : [Hard Disk] ▶ Primary IDE Slave : [Not Detected]	
Hard Disk Write Protect [Disabled] IDE Detect Time Out (Sec) [35]	
	← Select Screen ↑↓ Select Item +- Change Option F1 General Help F10 Save and Exit ESC Exit
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RAID Mode

BIOS Setup Utility	
Advanced	
IDE Configuration	Disabled Compatible Enhanced
ATA/IDE Configuration [Enhanced] Configure SATA as [RAID] Port0 SATA AHCI Speed: GEM 1 (1.5 gb/sec)	
▶ Primary IDE Master : [Hard Disk] ▶ Primary IDE Slave : [Not Detected]	
Hard Disk Write Protect [Disabled] IDE Detect Time Out (Sec) [35]	
	← Select Screen ↑↓ Select Item +- Change Option F1 General Help F10 Save and Exit ESC Exit
V02.59 (C) Copyright 1985-2005, American Megatrends, Inc.	

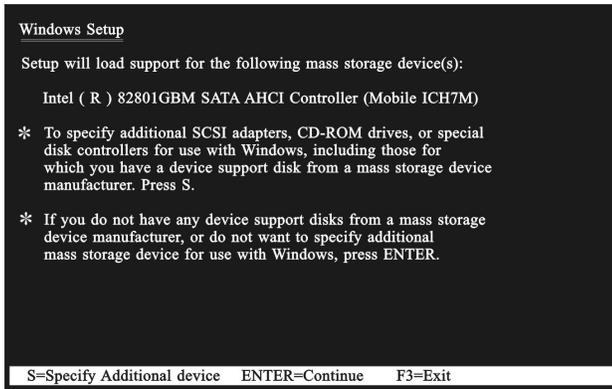
5. Put your floppy disk into the USB FDD drive that contain AHCI/RAID driver. (i.e.: Windows setup don't support USB disk).
6. Now you can start installing the WinXP in AHCI/RAID mode.

-
7. Press the “F6” key to load the AHCI Driver

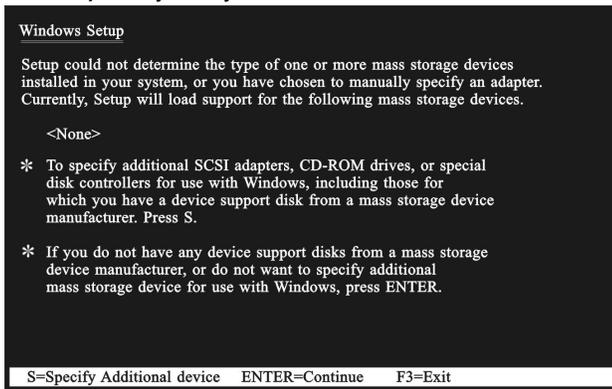


8. Press the “S” key in specifying to install the AHCI driver “Intel(R) 82801GBM SATA AHCI Controller (Mobile ICH7M)” for your system.





9. Press the “**S**” key in specifying to install the RAID driver “**Intel(R) 82801GBM SATA RAID Controller (Mobile ICH7M)**” for your system”.



10. After installing the AHCI/RAID driver, the AHCI/RAID HDD (Mass Storage Device) is now displayed.
11. You can now follow the WinXP installation process to install the Operating system.

Windows Setup

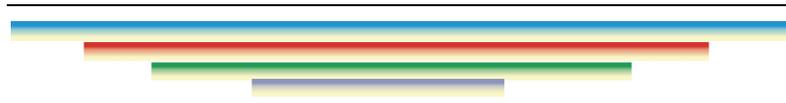
Setup will load support for the following mass storage device(s):

Intel (R) \$2801GBM SATA RAID Controller (Mobile ICH7M/DH)

- * To specify additional SCSI adapters, CD-ROM drives, or special disk controllers for use with Windows, including those for which you have a device support disk from a mass storage device manufacturer. Press S.
- * If you do not have any device support disks from a mass storage device manufacturer, or do not want to specify additional mass storage device for use with Windows, press ENTER.

S=Specify Additional device ENTER=Continue F3=Exit

 **NOTE....** If your WinXP CD still include the old IDE driver (e.g. Intel 915 Chipset or other), you will not be able to install the OS (like having blue screen or system restart). We recommend you to contact your WinXP OPK CD engineer to remove the old driver and replace with a new one.





Chapter 10

Troubleshooting

This chapter describes locating and solving problems that you may encounter while using your computer.

Locating a Problem

Problems with your computer can be caused by something as minor as an unplugged power cord – or as major as a damaged hard disk. The information in this chapter is designed to help you find and solve minor problems. If you try all the suggested solutions and you still have a problem, make a list of what steps you have taken to correct the problem and contact your dealer.

Successful troubleshooting is the result of careful observation, deductive reasoning, and an organized approach to solving the problem.

The problems that you will encounter can be divided into two basic categories: hardware problems and software problems. Hardware problems can be further divided into electrical and mechanical problems. You will know you have a hardware problem if the screen is dark, the computer cannot read the disk drives, or you get an error message during the Power-On Self Test (POST).

Software errors can occur at several levels. The ROM BIOS and the operating system can give you a large number of error messages. On top of this, each application software package has its own set of error messages. It is important to determine whether the software error message you are getting is from the application or the operating system. Once you know this, you can look in the respective manual for a solution to the problem.

Checking Cables and Connections

Start by performing a careful visual inspection of the exterior of the computer. If no LEDs are illuminated, make sure that your computer and its peripherals are getting power and communicating with each other properly.

To check the power cables, and connections:

1. If you have been using battery power, connect the Notebook to an external power source and make sure that the battery has a charge.
2. If you are using the Notebook with the AC adapter, check the power outlet, the power cord, and any power switches that may affect your computer.
3. Check the wall outlet or power strip with an item that you know is functioning properly. A lamp or radio is a convenient item for checking the power. You may also need to check the fuses and breakers in your electric box.
4. If the outlet is controlled by a wall switch, make sure that the switch is on.
5. If the outlet is controlled by a dimmer switch, use a different outlet.
6. If your computer is plugged into a power strip with an On/Off switch, make sure the switch is on.
7. With the computer's power switched off, check all cable connections. If the computer is connected to any peripheral devices, look for loose or disconnected cables.

If the computer is too close to a wall, a cable connection may be loose or the cables may be crimped.

 **NOTE.... Do not substitute cables for different devices (other than the manufacturer recommended cables) even if they look exactly alike. The wiring inside the cable may be different.**

8. When you are certain that you have power available and all connections are good, turn the computer on again. If the computer still does not start, you may have a hardware problem.

The Power-On Self Test

The Power-On Self Test (POST) runs every time you turn on or reset the Notebook. The POST checks memory, the main system board, the display, the keyboard, the disk drives, and other installed options.

A few seconds after you turn on your computer, a copyright message appears on your display screen. A memory test message appears next; as the test continues, memory size increases until all installed memory is tested.

Normally, the only test routine visible on the screen will be the memory test.

Two classifications of malfunctions can be detected during the POST:

- Error messages that indicate a failure with either the hardware, the software, or the *Basic Input/Output System* (BIOS). These *critical malfunctions* prevent the computer from operating at all or could cause incorrect and apparent results. An example of a critical error is microprocessor malfunction.
- Messages that furnish important information on the power-on and boot processes (such as memory status). These *non-critical malfunctions* are those that cause incorrect results that may not be readily apparent. An example of a non-critical error would be a memory chip failure.

In general, if the POST detects a system board failure (a critical error), the computer halts and generates a series of beeps. If failure is detected in an area other than the system board (such as the display, keyboard, or an adapter card) an error message is displayed on the screen and testing is stopped. It is important to remember that the POST does not test all areas of the computer, only those that allow it to be operational enough to run diagnostic programs.

If your system does not successfully complete the POST, but displays a blank screen, emits a series of beeps, or displays an error code, consult your dealer.

General Hardware Problems

A few common hardware problems and suggested solutions are presented in the table below:

Problem: Failure in the installation of the Audio driver.

Solution: Be sure to first remove the current audio device from your system. Please follow the instruction on the installation of audio driver.

Problem: The display screen is dark

Solution: Make sure that the computer is not in Suspend mode. Check the Brightness controls for the screen. If the controls are turned too far down, the screen will be dark.

Problem: An incorrect date and time are displayed.

Solution: Correct the date and time using the DOS DATE and TIME commands or the options in the Setup Utility. If the date and time become incorrect after a short time, your CMOS battery may be depleted. Contact your dealer to change the battery.

Problem: You hear irregular beeps during operation of the Notebook and the system halts.

Solution: The problem is beyond the scope of this manual. Contact technical support.

Problem: An unidentified message is displayed.

Solution: Reboot the computer and run the BIOS system setup. Confirm the Setup parameters. If the same message is displayed after booting up again, contact technical support for assistance.

Problem: The system cannot access the CD-ROM/DVD-ROM drive.

Solution: Check that a CD is properly inserted in the drive. Make sure that you are using the correct program for that kind of CD. For example, the system cannot read a data CD using an audio program.

Problem: You cannot operate the printer.

Solution: Check the printer cable connection. Ensure that the printer power switch is turned on. Confirm that the printer is on-line.

Problem: You cannot use the mouse.

Solution:

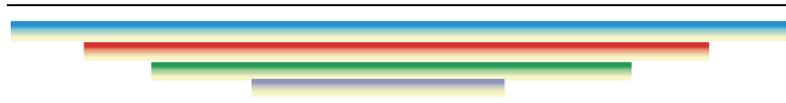
- Check the cable connection.
- Check the mouse with another application to see if there is a software incompatibility problem.
- If possible, check the mouse with another computer to see if it works. If it doesn't operate on a different system, the mouse might be broken.

Contacting Your Dealer

If you still have a problem after reading the preceding sections, the next step is to contact your dealer. Your dealer can determine if the problem is something that requires the computer to be taken to the shop. Before you call your dealer, however, prepare the following information:

- How is your computer configured? Your dealer needs to know what peripheral devices you are using.
- What messages, if any, are on the screen?

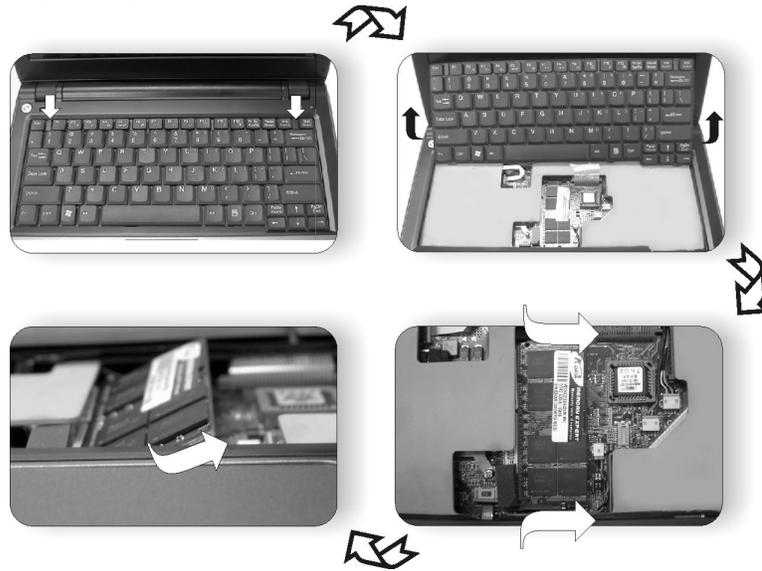
-
- What software were you running at the time?
 - What have you done already to try to solve the problem? If you have overlooked a step, your dealer may be able to solve the problem over the phone.

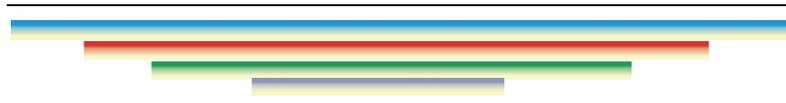


Chapter 11

Upgrading your System

Upgrading your Memory







Appendix A

Specification

Processor

- Intel® Core™ Duo Processor ULV/LV, U2500/L2000 sequence, FSB 533 / 667 MHz
- Micro-FCBGA packaging technology

Operating System

- Genuine Windows® Vista Home Premium
- Genuine Windows® XP Professional

Core Logic

- Intel® GMS Express Chipsets with ICH7M(GHM)

Memory

- Expansion 1 slot of 200pin DDRII module, 1GB total memory capacity
- Support DDRII 533 / 667 module

LCD Display

- 12.1" WXGA (1280 x 800; 16:10) TFT display

Video & Graphics

- Intel® 945GMS with Embedded 3D engine (New Generation GMA 950), United Memory Architecture (UMA), 128 / 64MB DDRII Frame buffer

NOTE....

The VGA share memory will depend on the size of the main memory. The system will automatically adjust the VGA share memory according to its setting and environment

Hard Drive

- 2.5" 9.5mm height, SATA support

Optical Drive

- 9.5mm height Combo Drive (DVD-ROM + CD-RW), Super Multi(DVD+-RW, DVD-RAM)

Pointing Device

- Synaptic touchpad

Application Launch Key

- Power On/Off, Wireless On/Off (WLAN)

LED Status Indicator

- Power, Suspend/Resume, Battery Charging Status, Hard Disk Access, NumLock mode, CapsLock mode, Bluetooth&WLAN Indicators.

Keyboard

- 2.5mm travel, 88/85 keys US/UK.

ExpressCard

- One PCI ExpressCard™ slot, 34 / 54 compliant

Audio

- Azalia Audio, Built-in ICH-M (GHM), two speakers

AC Adapter

- Input: 100-240V AC, 50-60Hz, 1.5A, Universal
- Output: 19V DC, 3.42A, 65W

Battery

- 3 cell / 6 cell(optional) Li-Ion battery pack

BIOS

- AMI, Support PnP, password, Bootable from USB FDD, Optical Drive Device

Communication

- 10/100/1000Mbps PCI-E Ethernet on board
- Built-in Alazia interface V.92 56Kbps Fax/Modem
- Intel® PRO/Wireless 3945ABG network connection, two built-in antenna
- 1.3 mega pixels camera on top of LCD display
- EDR 2.0 Bluetooth module with USB interface

Power Management

- ACPI 2.0 compliance
- Support Stand-by, Hibernate to Disk, Suspend to RAM

Security

- Kensington Lock, BIOS password protection

Size

- 298 mm (L) x 234 mm (D) x 29 mm(H) (TBD)

Weight

- Approximately 1.8kg with 12.1" panel, 3 cell battery and Optical drive installed (TBD)

PS

- Battery life will vary depending on your specific hardware and software configuration
- Spec subject to change without notice