

FIC MR031 User Guide



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Notebook Computer User Guide

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This manual guides you in setting up and using your new notebook computer. Information in this manual has been carefully checked for accuracy and is subject to change without notice.

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FCC Information to User

Safety and Care Instructions

No matter what your level of experience with computers, please make sure you read the safety and care instructions. This information can help protect you and your computer from possible harm.

For Safety Regulation:

- Risk of explosion if battery is replaced by an incorrect type.
- For electrical safety concerns, only use telephone cables rated 26AWG or higher.
- The Optical drive is a Class 1 Laser Product.
- Li-Ion battery is vulnerable, do not charge it with other power adapter, or it may cause fire or explosion.
- For the power supply of this equipment,
 - An approved power cord has to be used.
 - 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 adapter).

Radio and television interference

Warning: Use the specified shielded power cord and shielded signal cables with this computer, so as not to interfere with radio and television reception. If you use other cables, it may cause interference with radio and television reception.

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 not cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encourage 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 device and receiver
- Connect the device into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

You may find helpful the following booklet, prepared by the Federal Communications Commission: Interference Handbook (stock number 004-000-00345-4). This booklet is available from the U.S. Government Printing Office, Washington, DC20402

Warning: The user must not modify or change this computer without approval. Modification could void authority to this equipment.

Canadian Department of Communications Compliance Statement

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

Shielded Cables Notice

All connections to other computing devices must be made using shielded cables to maintain compliance with FCC regulations.

Peripheral Devices Notice

Only peripherals (input/output devices, terminals, printers, etc) certified to comply with Class B limits may be attached to this equipment. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

Optical Disk Drive Notice

The optical disk drive is Class 1 Laser Product.

Caution

Changes or modifications not expressly approved by the manufacturer may void the user's authority, which is granted by the Federal Communications Commission, to operate this computer.

Use Conditions

This part complies with Part 15 of the FCC Rules. Operation is subject to the following 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.

Warranty requirement in the manual: Along with the user documentation the importer/distributor must provide a statement that warranty services are included in the responsibilities of the distributor representative.

Canada (see also United States)

Canada Radio Frequency Interference Requirements

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

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

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

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

Regulatory Information

Intel(R) Wireless WiFi Link 4965AGN

Intel(R) Wireless WiFi Link 4965AG_

Intel(R) Wireless WiFi Link 4965AGN and Intel(R)

Wireless WiFi Link 4965AG_

The information in this document applies to the following products:

Quad-mode wireless LAN adapters (802.11a/802.11b/802.11g/802.11n)

Intel(R) Wireless WiFi Link 4965AGN (model WM4965AGN)

Tri-mode wireless LAN adapters (802.11a/802.11b/802.11g)

Intel(R) Wireless WiFi Link 4965AG_ (model WM4965AG_)

NOTE: Due to the evolving state of regulations and standards in the wireless LAN field (IEEE 802.11 and similar standards), the information provided herein is subject to change. Intel Corporation assumes no responsibility for errors or omissions in this document. Nor does Intel make any commitment to update the information contained herein.

Information for the user

Safety Notices


The FCC with its action in ET Docket 96-8 has adopted a safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC certified equipment. The Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_adapter meet the Human Exposure limits found in OET Bulletin 65, supplement C, 2001, and ANSI/IEEE C95.1, 1992. Proper operation of this radio according to the instructions found in this manual will result in exposure substantially below the FCC's recommended limits.

The following safety precautions should be observed:


- Do not touch or move antenna while the unit is transmitting or receiving.
- Do not hold any component containing the radio such that the antenna is very close or touching any exposed parts of the body, especially the face or eyes, while transmitting.
- Do not operate the radio or attempt to transmit data unless the antenna is connected; if not, the radio may be damaged.
- Use in specific environments:
 - ⇒ The use of wireless devices in hazardous locations is limited by the constraints posed by the safety directors of such environments.
 - ⇒ The use of wireless devices on airplanes is governed by the Federal Aviation Administration (FAA).
 - ⇒ The use of wireless devices in hospitals is restricted to the limits set forth by each hospital.
- Antenna use:
 - ⇒ In order to comply with FCC RF exposure limits, low gain integrated antennas should be located at a minimum distance of 20 cm (8 inches) or more from the body of all persons.
 - ⇒ High-gain, wall-mount, or mast-mount antennas are designed to be professionally installed and should be located at a minimum distance of 30 cm (12 inches) or more from the body of all persons. Please contact your professional installer, VAR, or antenna manufacturer for proper installation requirements.
- Explosive Device Proximity Warning (see below)


- Antenna Warning (see below)
- Use on Aircraft Caution (see below)
- Other Wireless Devices (see below)
- Power Supply (Access Point) (see below)

Explosive Device Proximity Warning


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

Antenna Warnings

 **Warning:** To comply with the FCC and ANSI C95.1 RF exposure limits, it is recommended for the Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ adapter installed in a desktop or portable computer, that the antenna for this device be installed so as to provide a separation distance of at least 20 cm (8 inches) from all persons and that the antenna must not be co-located or operating in conjunction with any other antenna or radio transmitter. It is recommended that the user limit exposure time if the antenna is positioned closer than 20 cm (8 inches).

 **Warning:** Intel(R) PRO/Wireless LAN products are not designed for use with high-gain directional antennas. Use of such antennas with these products is illegal.


Use On Aircraft Caution

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

Other Wireless Devices

Safety Notices for Other Devices in the Wireless Network: See the documentation supplied with wireless Ethernet adapters or other devices in the wireless network.

Local Restrictions on 802.11a, 802.11b, 802.11g and 802.11n Radio Usag

 **Caution:** Due to the fact that the frequencies used by 802.11a, 802.11b, 802.11g and 802.11n wireless LAN devices may not yet be harmonized in all countries, 802.11a, 802.11b, 802.11g and 802.11n products are designed for use only in specific countries, and are not allowed to be operated in countries other than those of designated use. As a user of these products, you are responsible for ensuring that the products are used only in the countries for which they were intended and for verifying that they are configured with the correct selection of frequency and channel for the country of use. The device transmit power control (TPC) interface is part of the Intel(R) PROSet/Wireless software. Operational restrictions for Equivalent Isotropic Radiated Power (EIRP) are provided by the system manufacturer. Any deviation from the permissible power and frequency settings for the country of use is an infringement of national law and may be punished as such.

For country-specific information, see the additional compliance information supplied with the product.

Wireless interoperability

The Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ is designed to be interoperable with other wireless LAN products that are based on direct sequence spread spectrum (DSSS) radio technology and to comply with the following standards:

- IEEE Std. 802.11b compliant Standard on Wireless LAN
- IEEE Std. 802.11g compliant Standard on Wireless LAN
- IEEE Std. 802.11a compliant Standard on Wireless LAN

- IEEE Std. 802.11n compliant Standard on Wireless LAN
- Wireless Fidelity (WiFi) certification, as defined by the Wi-Fi Alliance

The Intel(R) Wireless WiFi Link 4965AGN adapter

The Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ adapter, like other radio devices, emits radio frequency electromagnetic energy. The level of energy emitted by this device, however, is less than the electromagnetic energy emitted by other wireless devices such as mobile phones. The Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ adapter wireless device operates within the guidelines found in radio frequency safety standards and recommendations. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature. In some situations or environments, the use of the Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ adapter may be restricted to:

- Using the Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ adapter equipment on board airplanes, or
- Using the adapter equipment in any other environment where the risk of interference with other devices or services is perceived or identified as being harmful.

If you are uncertain of the policy that applies to the use of wireless devices in a specific organization or environment (an airport, for example), you are encouraged to ask for authorization to use the Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ wireless devices before you turn it on.

Regulatory Information

Information for the OEMs and Integrators

The following statement must be included with all versions of this document

supplied to an OEM or integrator but should not be distributed to the end user

- This device is intended for OEM integrators only.
- This device cannot be co-located with any other transmitter.
- Please See the full Grant of Equipment document for other restrictions.
- This device must be operated and used with a locally approved access point.


Information To Be Supplied to the End User by the OEM or Integrator

The following regulatory and safety notices must be published in documentation supplied to the end user of the product or system incorporating an Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ in compliance with local regulations. Host system must be labeled with "Contains FCC ID: XXXXXXXX", FCC ID displayed on label.

The Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ wireless network device must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. For country-specific approvals, see Radio approvals. Intel Corporation is not responsible for any radio or television interference caused by unauthorized modification of the devices included with the Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ adapter kit, or the substitution or attachment of connecting cables and equipment other than that specified by Intel Corporation. The correction of interference caused by such unauthorized modification, substitution or attachment is the responsibility of the user. Intel Corporation and its authorized resellers or distributors are not liable for any damage or violation of government regulations that may arise from the user failing to comply with these guidelines.

Local Restriction of 802.11a, 802.11b, 802.11g, and 802.11n Radio Usage

The following statement on local restrictions must be published as part of the compliance documentation for all 802.11a, 802.11b, 802.11g and 802.11n products.

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

FCC Radio Frequency Interference Requirements


This device is restricted to indoor use due to its operation in the 5.15 to 5.25 GHz frequency range. FCC requires this product to be used indoors for the frequency range 5.15 to 5.25 GHz to reduce the potential for harmful interference to co-channel Mobile Satellite systems. High power radars are allocated as primary users of the 5.25 to 5.35 GHz and 5.65 to 5.85 GHz bands. These radar stations can cause interference with and /or damage this device.

- This device is intended for OEM integrators only.
- This device cannot be co-located with any other transmitter.

USA—Federal Communications Commission (FCC)

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


- This device may not cause harmful interference, and
- This device must accept any interference that may cause undesired operation.

 **NOTE:** The radiated output power of the Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ adapter wireless network device is far below the FCC radio frequency exposure limits. Nevertheless, the Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ adapter wireless device should be used in such a manner that the potential for human contact during normal operation is minimized. To avoid the possibility of exceeding the FCC radio frequency exposure limits, you should keep a distance of at least 20 cm between you (or any other person in the vicinity) and the antenna that is built into the computer.

Interference statement

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. If the equipment is not installed and used in accordance with the instructions, the equipment may cause harmful interference to radio communications. There is no guarantee, however, that such 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 taking one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and the receiver.
- Connect the equipment to 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.

 **NOTE:** The Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ adapter wireless network device must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. Any other installation or use will violate FCC Part 15 regulations.

Underwriters Laboratories Inc. (UL) Regulatory Warning


For use in (or with) UL Listed personal computers or compatible.

Brazil

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

Canada—Industry Canada (IC)

This device complies with RSS210 of Industry Canada.

 **Caution:** When using IEEE 802.11a wireless LAN, this product is restricted to indoor use due to its operation in the 5.15- to 5.25-GHz frequency range. Industry Canada requires this product to be used indoors for the frequency range of 5.15 GHz to 5.25 GHz to reduce the potential for harmful interference to co-channel mobile satellite systems. High power radar is allocated as the primary user of the 5.25- to 5.35-GHz and 5.65 to 5.85-GHz bands. These radar stations can cause interference with and/or damage to this device.

The maximum allowed antenna gain for use with this device is 6dBi in order to comply with the E.I.R.P limit for the 5.25- to 5.35 and 5.725 to 5.85GHz frequency range in point-to-point operation.

This Class B digital apparatus complies with Canadian ICES-003, Issue 4, and RSS-210, No 4 (Dec 2000) and No 5 (Nov 2001).

Cet appareil numérique de la classe B est conforme à la norme NMB-003, No. 4, et CNR-210, No 4 (Dec 2000) et No 5 (Nov 2001).

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

« Pour empêcher que cet appareil cause du brouillage au service faisant l'objet

d'une licence, il doit être utilisé à l'intérieur et devrait être placé loin des fenêtres afin de fournir un écran de blindage maximal. Si le matériel (ou son antenne d'émission) est installé à l'extérieur, il doit faire l'objet d'une licence. »

Europe Frequency Bands

2.400 - 2.4835 GHz (Europe ETSI)

5.15 - 5.35 GHz and 5.47-5.725 GHz (Europe ETSI)
Low band 5.25 - 5.35 GHz is for indoor use only

5.47 - 5.725 GHz is currently not allowed in Czech Republic and France

Declaration of Conformity

This equipment complies with the essential requirements of the European Union directive 1999/5/EC.

Česky [Czech]	Intel(R) Corporation tímto prohlašuje, že tento Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
Dansk [Danish]	Undertegnede Intel(R) Corporation erklærer herved, at følgende udstyr Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Deutsch [German]	Hiermit erkläre Intel(R) Corporation, dass sich das Gerät Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
Esti [Estonian]	Käesolevaga kinnitab Intel(R) Corporation seadme Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
English	Hereby, Intel(R) Corporation, declares that this Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]	Por medio de la presente Intel(R) Corporation declara que el Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Ελληνικά [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Intel(R) Corporation ΔΗΛΩΝΕΙ ΟΤΙ Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
Français [French]	Par la présente Intel(R) Corporation déclare que l'appareil Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Italiano [Italian]	Con la presente Intel(R) Corporation dichiara che questo Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo Intel(R) Corporationdeklarē, ka Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvi [Lithuanian]	Šiuo Intel(R) Corporation deklaruoja, kad šis Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Nederlands [Dutch]	Hierbij verklaart Intel(R) Corporation dat het toestel Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
Malti [Maltese]	Hawnhekk, Intel(R) Corporation, jiddikjara li dan Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn rilevanti li hemm fid-Direttiva 1999/5/EC.

Magyar [Hungary]	Alulírott, Intel(R) Corporation nyilatkozik, hogy a Intel(R) Wireless WiFi Link 4965AGN or Intel (R) Wireless WiFi Link 4965AG_ megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
Polski [Polish]	Niniejszym, Intel(R) Corporation, oświadczam, że Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ jest zgodne z zasadniczymi wymaganiami oraz innymi stosownymi postanowieniami Dyrektywy 1999/5/WE.
Português [Portuguese]	Intel(R) Corporation declara que este Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Slovensko [Slovenian]	Šiuo Intel(R) Corporation izjavlja, da je ta Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovenský [Slovak]	Intel(R) Corporation týmto vyhlasuje, že Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
Suomi [Finnish]	Intel(R) Corporation vakuuttaa täten että Intel (R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ tyypinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar Intel(R) Corporation att denna Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.
Íslenska [Icelandic]	Hér með lýsir Intel(R) Corporation yfir því að Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC.
Norsk [Norwegian]:	Intel(R) Corporation erklærer herved at utstyret Intel(R) Wireless WiFi Link 4965AGN or Intel(R) Wireless WiFi Link 4965AG_ er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.

France

Pour la France métropolitain

2.400 -2. 4835 GHz (canaux 1 à 13) autorisé en usage intérieur

2.400 - 2.454 GHz (canaux 1 à 7) autorisé en usage extérieur

Pour la Guyane et la Réunion

2.400 - 2.4835 GHz (Canaux 1à 13) autorisé en usage intérieur

2.420 - 2.4835 GHz (canaux 5 à 13) autorisé en usage extérieur

Italy

A general authorization is requested for outdoor use in Italy

The use of these equipments is regulated by:

1. D.L.gs 1.8.2003, n. 259, article 104 (activity subject to general authorization) for outdoor use and article 105 (free use) for indoor use, in both cases for private use.
2. D.M. 28.5.03, for supply to public of RLAN access to networks and telecom services.

L'uso degli apparati è regolamentato da:

1. D.L.gs 1.8.2003, n. 259, articoli 104 (attività soggette ad autorizzazione generale) se utilizzati al di fuori del proprio fondo e 105 (libero uso) se utilizzati entro il proprio fondo, in entrambi i casi per uso private.
2. D.M. 28.5.03, per la fornitura al pubblico dell'accesso R-LAN alle reti e ai servizi di telecomunicazioni.

Latvia

A license is required for outdoor use for operation in 2.4 GHz band.

Japan

Indoor use only.

Korea

당해 무선설비는 운용 중 전파혼신 가능성이 있음

Taiwan

第十二條

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信法規定作業之無線電通信。

低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Radio Approvals

To determine whether you are allowed to use your wireless network device in a specific country, please check to see if the radio type number that is printed on the identification label of your device is listed in the manufacture OEM Regulatory Guidance document.

Intel(R) PRO/Wireless 3945ABG Network Connection and the Intel(R)PRO/Wireless 3945BG Network Connection


The information in this document applies to the following products:

Tri-mode wireless LAN adapters (802.11a/802.11b/802.11g)

Intel(R) PRO/Wireless 3945ABG Network Connection (model WM3945ABG)

Dual-mode wireless LAN adapters (802.11b/802.11g)

Intel(R) PRO/Wireless 3945BG Network Connection (model WM3945BG)

 **Note** Due to the evolving state of regulations and standards in the wireless LAN field (IEEE 802.11 and similar standards), the information provided herein is subject to change. Intel Corporation assumes no responsibility for errors or omissions in this document. Nor does Intel make any commitment to update the information contained herein.

Information for the user

Safety Notices


The FCC with its action in ET Docket 96-8 has adopted a safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC certified equipment. The Intel(R) PRO/Wireless 3945ABG Network Connection adapter or the Intel(R) PRO/Wireless 3945BG Network Connection adapter meet the Human Exposure limits found in OET Bulletin 65, supplement C, 2001, and ANSI/IEEE C95.1, 1992. Proper operation of this radio according to the instructions found in this manual will result in exposure substantially below the FCC's recommended limits.

The following safety precautions should be observed:


- Do not touch or move antenna while the unit is transmitting or receiving.
- Do not hold any component containing the radio such that the antenna is very close or touching any exposed parts of the body, especially the face or eyes, while transmitting.
- Do not operate the radio or attempt to transmit data unless the antenna is connected; if not, the radio may be damaged.
- Use in specific environments:
 - ⇒ The use of wireless devices in hazardous locations is limited by the constraints posed by the safety directors of such environments.
 - ⇒ The use of wireless devices on airplanes is governed by the Federal Aviation Administration (FAA).
 - ⇒ The use of wireless devices in hospitals is restricted to the limits set forth by each hospital.
- Antenna use:
 - ⇒ In order to comply with FCC RF exposure limits, low gain integrated antennas should be located at a minimum distance of 20 cm (8 inches) or more from the body of all persons.
 - ⇒ High-gain, wall-mount, or mast-mount antennas are designed to be professionally installed and should be located at a minimum distance of 30 cm (12 inches) or more from the body of all persons. Please contact your professional installer, VAR, or antenna manufacturer for proper installation requirements.


-
- Explosive Device Proximity Warning (see below)
 - Antenna Warning (see below)
 - Use on Aircraft Caution (see below)
 - Other Wireless Devices (see below)
 - Power Supply (Access Point) (see below)

Explosive Device Proximity Warning


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

Antenna Warnings

 **Warning:** To comply with the FCC and ANSI C95.1 RF exposure limits, it is recommended for the Intel(R) PRO/Wireless 3945ABG Network Connection adapter or the Intel(R) PRO/Wireless 3945BG Network Connection adapter installed in a desktop or portable computer, that the antenna for this device be installed so as to provide a separation distance of at least 20 cm (8 inches) from all persons and that the antenna must not be co-located or operating in conjunction with any other antenna or radio transmitter. It is recommended that the user limit exposure time if the antenna is positioned closer than 20 cm (8 inches).

 **Warning:** Intel(R) PRO/Wireless LAN products are not designed for use with high-gain directional antennas. Use of such antennas with these products is illegal.


Use On Aircraft Caution

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

Other Wireless Devices

Safety Notices for Other Devices in the Wireless Network: See the documentation supplied with wireless Ethernet adapters or other devices in the wireless network.

Local Restrictions on 802.11a, 802.11b, and 802.11g Radio Usage

 **Caution:** Due to the fact that the frequencies used by 802.11a, 802.11b and 802.11g wireless LAN devices may not yet be harmonized in all countries, 802.11a, 802.11b, and 802.11g products are designed for use only in specific countries, and are not allowed to be operated in countries other than those of designated use. As a user of these products, you are responsible for ensuring that the products are used only in the countries for which they were intended and for verifying that they are configured with the correct selection of frequency and channel for the country of use. The device transmit power control (TPC) interface is part of the Intel(R) PROSet/Wireless software. Operational restrictions for Equivalent Isotropic Radiated Power (EIRP) are provided by the system manufacturer. Any deviation from the permissible power and frequency settings for the country of use is an infringement of national law and may be punished as such.

For country-specific information, see the additional compliance information supplied with the product.

Wireless interoperability

The Intel(R) PRO/Wireless 3945BG Network Connection are designed to be interoperable with other wireless LAN products that are based on direct sequence spread spectrum (DSSS) radio technology and to comply with the following standards:

- IEEE Std. 802.11b compliant Standard on Wireless LAN.
- IEEE Std. 802.11g compliant Standard on Wireless LAN.
- IEEE Std. 802.11a compliant Standard on Wireless LAN.
- Wireless Fidelity (WiFi) certification, as defined by the Wi-Fi Alliance.

The Intel(R) PRO/Wireless 3945ABG Network Connection adapter or the Intel(R) PRO/Wireless 3945BG Network Connection adapter

The Intel(R) PRO/Wireless 3945ABG Network Connection adapter or the Intel(R) PRO/Wireless 3945BG Network Connection adapter, like other radio devices, emits radio frequency electromagnetic energy. The level of energy emitted by this device, however, is less than the electromagnetic energy emitted by other wireless devices such as mobile phones. The Intel(R) PRO/Wireless 3945ABG Network Connection adapter or the Intel(R) PRO/Wireless 3945BG Network Connection adapter wireless device operates within the guidelines found in radio frequency safety standards and recommendations. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature. In some situations or environments, the use of the Intel (R) PRO/Wireless 3945ABG Network Connection adapter or the Intel(R) PRO/Wireless 3945BG Network Connection adapter may be restricted to:

- Using the Intel(R) PRO/Wireless 3945ABG Network Connection adapter or the Intel(R) PRO/Wireless 3945BG Network Connection adapter equipment on board airplanes, or
- Using the Intel(R) PRO/Wireless 3945ABG Network Connection adapter or the Intel(R) PRO/Wireless 3945BG Network Connection adapter equipment in any other environment where the risk of interference with other devices or services is perceived or identified as being harmful.

If you are uncertain of the policy that applies to the use of wireless devices in a specific organization or environment (an airport, for example), you are encouraged to ask for authorization to use the Intel(R) PRO/Wireless 3945ABG Network Connection adapter or the Intel(R) PRO/Wireless 3945BG Network Connection wireless devices before you turn it on.

Regulatory information

Information for the OEMs and Integrators:

The following statement must be included with all versions of this document

supplied to an OEM or integrator, but should not be distributed to the end user.

- This device is intended for OEM integrators only.
- This device cannot be co-located with any other transmitter.
- Please see to the full Grant of Equipment document for other restrictions.
- This device must be operated and used with a locally approved access point.


Information to be Supplied to the End User by the OEM or Integrator

The following regulatory and safety notices must be published in documentation supplied to the end user of the product or system incorporating an Intel(R) PRO/Wireless 3945ABG Network Connection or an Intel(R) PRO/Wireless 3945BG Network Connection in compliance with local regulations. Host system must be labeled with "Contains FCC ID: XXXXXXXX", FCC ID displayed on label.

The Intel(R) PRO/Wireless 3945ABG Network Connection adapter or the Intel(R) PRO/Wireless 3945BG Network Connection wireless network device must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. For country-specific approvals, see Radio approvals. Intel Corporation is not responsible for any radio or television interference caused by unauthorized modification of the devices included with the Intel(R) PRO/Wireless 3945ABG Network Connection or the Intel(R) PRO/Wireless 3945BG Network Connection adapter kit, or the substitution or attachment of connecting cables and equipment other than that specified by Intel Corporation. The correction of interference caused by such unauthorized modification, substitution or attachment is the responsibility of the user. Intel Corporation and its authorized resellers or distributors are not liable for any damage or violation of government regulations that may arise from the user failing to comply with these guidelines.

Local Restriction of 802.11a, 802.11b, and 802.11g Radio Usage

The following statement on local restrictions must be published as part of the compliance documentation for all 802.11a, 802.11b, and 802.11g products.

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

FCC Radio Frequency Interference Requirements


This device is restricted to indoor use due to its operation in the 5.15 to 5.25 GHz frequency range. FCC requires this product to be used indoors for the frequency range 5.15 to 5.25 GHz to reduce the potential for harmful interference to co-channel Mobile Satellite systems. High power radars are allocated as primary users of the 5.25 to 5.35 GHz and 5.65 to 5.85 GHz bands. These radar stations can cause interference with and /or damage this device.

- This device is intended for OEM integrators only.
- This device cannot be co-located with any other transmitter.

USA—Federal Communications Commission (FCC)

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


- This device may not cause harmful interference.
- This device must accept any interference that may cause undesired operation.

 **Note:** The radiated output power of the Intel(R) PRO/Wireless 3945ABG Network Connection adapter or the Intel(R) PRO/Wireless 3945BG Network Connection wireless network device is far below the FCC radio frequency exposure limits. Nevertheless, the Intel(R) PRO/Wireless LAN wireless network device should be used in such a manner that the potential for human contact during normal operation is minimized. To avoid the possibility of exceeding the FCC radio frequency exposure limits, you should keep a distance of at least 20 cm between you (or any other person in the vicinity) and the antenna that is built into the computer.

Interference statement

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. If the equipment is not installed and used in accordance with the instructions, the equipment may cause harmful interference to radio communications. There is no guarantee, however, that such 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 taking one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and the receiver.
- Connect the equipment to 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.

 **Note:** The Intel(R) PRO/Wireless 3945ABG Network Connection adapter or the Intel(R) PRO/Wireless 3945BG Network Connection adapter wireless network device must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. Any other installation or use will violate FCC Part 15 regulations.

Underwriters Laboratories Inc. (UL) Regulatory Warning


For use in (or with) UL Listed personal computers or compatible.

Brazil

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário

Canada—Industry Canada (IC)

This device complies with RSS210 of Industry Canada.

 **Caution:** When using IEEE 802.11a wireless LAN, this product is restricted to indoor use due to its operation in the 5.15- to 5.25-GHz frequency range. Industry Canada requires this product to be used indoors for the frequency range of 5.15 GHz to 5.25 GHz to reduce the potential for harmful interference to co-channel mobile satellite systems. High power radar is allocated as the primary user of the 5.25- to 5.35-GHz and 5.65 to 5.85GHz bands. These radar stations can cause interference with and/or damage to this device.

The maximum allowed antenna gain for use with this device is 6dBi in order to comply with the E.I.R.P limit for the 5.25- to 5.35 and 5.725 to 5.85GHz frequency range in point-to-point operation

This Class B digital apparatus complies with Canadian ICES-003, Issue 4, and RSS-210, No 4 (Dec 2000) and No 5 (Nov 2001).

Cet appareil numérique de la classe B est conforme à la norme NMB-003, No. 4, et CNR-210, No 4 (Dec 2000) et No 5 (Nov 2001).

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

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

Europe Frequency Bands

2.400 - 2.4835 GHz (Europe ETSI)

5.15 – 5.35 GHz and 5.47 - 5.725 GHz (Europe ETSI)
Low band 5.25 – 5.35 GHz is for indoor use only

5.47 - 5.725 GHz is current not allowed in Czech Republic and France

Declaration of Conformity



Declaration of Conformity (1999/5/EC)

We, **INTEL CORPORATION SAS**

Address: Les Taissounières B3, 1681 route des Dolines – BP 293
06905 – Sophia Antipolis, France

declare under our sole responsibility that the product:

- Name: **INTEL® PRO/Wireless 3945ABG Network Connection**
- Model: **WM3945ABG MOW2**

to which this declaration relates, is in compliance with all the applicable essential requirements, and other provisions of the European Council Directive:

1999/5/EC	Radio and Telecommunications Terminal Equipment Directive (R&TTE)
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The conformity assessment procedure used for this declaration is Annex IV of this Directive

This product will bear the CE Mark label CE 0336 !

Product compliance has been demonstrated on the basis of:

- IEC 60950-1:2001, and EN 60950-1:2001 (safety) - EN 50371: 2002	For article 3.1(a) : Health and Safety of the User
- EN 301 489-1 V1.4.1 (2002-08) - EN 301 489-17 V1.2.1 (2002-08)	For article 3.1(b) : Electromagnetic Compatibility
- EN 300 328 V1.5.1 (2004-08) - EN 301 893 V1.2.3 (2003-08)	For article 3.2 : Effective use of the spectrum allocated

The technical construction file is kept available at:

INTEL CORPORATION SAS

Branch Office: 1681 route des Dolines,
06905 - Sophia Antipolis, France

Authorized Signature by

Date: 9th September 2005

Gilles Catala,
Regulatory & Compliance Engineering Manager
Wireless Networking Group

This equipment complies with the essential requirements of the European Union directive 1999/5/EC.

česky [Czech]	Intel(R) Corporation tímto prohlašuje, že tento Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
Dansk [Danish]	Undertegnede Intel(R) Corporation erklærer herved, at følgende udstyr Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Deutsch [German]	Hiermit erkläre Intel(R) Corporation, dass sich das Gerät Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
Eesti [Estonian]	Käesolevaga kinnitab Intel(R) Corporation seadme Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
English	Hereby, Intel(R) Corporation, declares that this Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]	Por medio de la presente Intel(R) Corporation declara que el Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Ελληνικά [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Intel(R) Corporation ΔΗΛΩΝΕΙ ΟΤΙ Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
Français [French]	Par la présente Intel(R) Corporation déclare que l'appareil Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Italiano [Italian]	Con la presente Intel(R) Corporation dichiara che questo Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo Intel(R) Corporation deklarē, ka Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvi [Lithuanian]	Šiuo Intel(R) Corporation deklaruoja, kad šis Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Nederlands [Dutch]	Hierbij verklaart Intel(R) Corporation dat het toestel Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.

Malti [Maltese]	Hawnhekk, Intel(R) Corporation, jiddikjara li dan Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection jikkonforma mal- <i>ħ</i> ti•ijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
Magyar [Hungary]	Alulírott, Intel(R) Corporation nyilatkozom, hogy a Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
Polski [Polish]	Niniejszym, Intel(R) Corporation, o•wiadcza, •e Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection jest zgodne z zasadniczymi wymaganiami oraz innymi stosownymi postanowieniami Dyrektywy 1999/5/WE.
Português [Portuguese]	Intel(R) Corporation declara que este Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Slovensko [Slovenian]	Šiuo Intel(R) Corporation izjavlja, da je ta Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection v skladu z bistvenimi zahtevami in ostalimi relevantnimi dolo•ili direktive 1999/5/ES.
Slovenský [Slovak]	Intel(R) Corporation týmto vyhlasuje, že Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection sp••a základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
Suomi [Finnish]	Intel(R) Corporation vakuuttaa täten että Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar Intel(R) Corporation att denna Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.
Íslenska [Icelandic]	Hér með lýsir Intel(R) Corporation yfir því að Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection) er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC.
Norsk [Norwegian]:	Intel(R) Corporation erklærer herved at utstyret Intel(R) PRO/Wireless 3945ABG Network Connection or Intel(R) PRO/Wireless 3945BG Network Connection er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.

France

Pour la France métropolitaine

2.400 - 2.4835 GHz (Canaux 1 à 13) autorisé en usage intérieur

2.400 - 2.454 GHz (Canaux 1 à 7) autorisé en usage extérieur

Pour la Guyane et la Réunion

2.400 - 2.4835 GHz (Canaux 1 à 13) autorisé en usage intérieur

2.420 - 2.4835 GHz (Canaux 5 à 13) autorisé en usage extérieur

Italy

A general authorization is requested for outdoor use in Italy

The use of these equipments is regulated by:

1. D.L.gs 1.8.2003, n. 259, article 104 (activity subject to general authorization) for outdoor use and article 105 (free use) for indoor use, in both cases for private use.
2. D.M. 28.5.03, for supply to public of RLAN access to networks and telecom services.

L'uso degli apparati è regolamentato da:

1. D.L.gs 1.8.2003, n. 259, articoli 104 (attività soggette ad autorizzazione generale) se utilizzati al di fuori del proprio fondo e 105 (libero uso) se utilizzati entro il proprio fondo, in entrambi i casi per uso private.
2. D.M. 28.5.03, per la fornitura al pubblico dell'accesso R-LAN alle reti e ai servizi di telecomunicazioni.

Latvia

A license is required for outdoor use for operation in 2.4 GHz band.

Japan

Indoor use only.

Korea

당해 무선설비는 운용 중 전파혼신 가능성이 있음

Taiwan

第十二條

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信法規定作業之無線電通信。

低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Radio approvals

To determine whether you are allowed to use your wireless network device in a specific country, please check to see if the radio type number that is printed on the identification label of your device is listed in the manufacture OEM Regulatory Guidance document.

Television antenna connectors protection (for system TV tuner card)

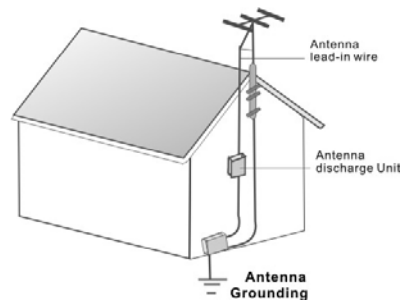
External television antenna grounding

If an outside antenna or cable system is to be connected to your mini EPC, make sure that the antenna or cable system is electrically grounded to provide some protection against voltage surges and static charges.

ANSI/NFPA 70, the National Electrical Code (NEC), in particular Section 820.93, provide information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

Lightning protection

For added protection of any product during a lightning storm or when it is left unattended or unused for long periods of time, unplug the product from the wall outlet and disconnect the antenna or cable system.



Power Lines

Do not locate the antenna near overhead light or power circuits, or where it could fall into such power or circuits.

WARNING: When installing or realigning an outside antenna system, extreme care should be taken to keep from touch such power lines or circuits. Contact with them could be fatal.

Regulatory information:

Installation and use of this Wireless LAN device must be in strict accordance with the instructions included in the user documentation provided with the product. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment. The manufacturer is not responsible for any radio or television interference caused by unauthorized modification of this device, or the substitution of the connecting cables and equipment other than manufacturer specified. It is the responsibility of the user to correct any interference caused by such unauthorized modification, substitution or attachment. Manufacturer and its authorized resellers or distributors will assume no liability for any damage or violation of government regulations arising from failing to comply with these guidelines.

FCC RF Radiation Exposure Statement:

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

Safety Information

In order to maintain compliance with the FCC RF exposure guidelines, this equipment should be installed and operated with minimum distance 20cm

between the radiator and your body. Use only with supplied antenna. Unauthorized antenna, modification, or attachments could damage the transmitter and may violate FCC regulations.

This equipment complies with FCC RF radiation exposure limits set forth in an uncontrolled environment. This device was tested for typical lap-held operations with the device contacted directly to the human body to the back side of the notebook computer. To maintain compliance with the FCC RF exposure requirement, avoid direct contact to the transmitting antenna during operation.

About Your Notebook Computer

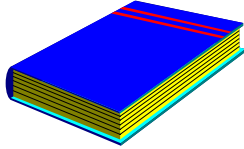


Congratulation for having purchased your new Professional Multimedia Notebook. This notebook incorporates the strongest features, which integrate the latest technologies available in the notebook industry.

Your new notebook computer not only drives today multimedia applications but also be ready for tomorrow exciting new software.

This Professional Multimedia Notebook is a freedom, flexibility, and functionality notebook which users are demanding for a long time.

About Your User Guide



Welcome to your Professional Multimedia Notebook User Guide. This manual covers everything you need to know in learning how to use your computer. This manual also assumes that you know the basic concepts of Windows and the PC. You will start doing a lot of great and fun things with your computer.

This manual is divided into eight chapters.

- Chapter 1 gives introduction on your computer features.
- Chapter 2 provides step-by-step instructions to help you begin using your notebook as quickly as possible.
- Chapter 3 describes how to operate the standard features of your computer.
- Chapter 4 illustrates how to integrate video and sound chips into impressive presentation.
- Chapter 5 illustrates how to connect external device to your computer.
- Chapter 6 explains how to use the System BIOS Setup program.
- Chapter 7 explains how to use the internal module options of your computer.
- Chapter 8 offers instructions on how to care and maintain your notebook.

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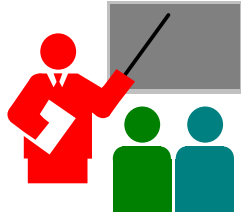
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1 Introduction



Your Notebook PC is a fully Windows compatible portable personal computer. With the latest features in mobile computing and multimedia technology, this notebook makes a natural traveling companion. With leap of technology and compact, your Notebook PC runs on a whole wide range of general business, personal productivity, entertainment, and professional applications. It is ideal for use in the office, at home, and on the road.

Your Notebook PC makes an ideal choice for use in the office, the schoolroom, at home, on the road and all other occasions.

1.1 Feature Highlight

Before we go to identify each part of your Notebook PC, we will first introduce you to other notable features of your computer.

Processing Unit

- Your notebook runs on Intel® Core™ 2 Duo processor that is integrated with 2MB or 4MB L2 Cache. Check with your dealer on the CPU type and speed.
- Fully compatible with an entire library of PC software based on operating systems such as Windows Vista.

Memory

This notebook provides two memory slots for installing DDRII SDRAM 200-pin SODIMM modules up to 4GB using 512MB, 1024MB or 2048MB DDRII SDRAM modules.

Wide Screen LCD Display

Provides extraordinary 13.3" WXGA 1280 x 800 wide screen LCD display. It is the best choice for you to watch DVD movie.

Wireless LAN

Intel® Wireless WiFi Link 4965AGN Network Connection (802.11a/b/g/n), Mini Card.

Graphic System

Provides blazing graphics controller embedded in Intel GM965 chipset.

Optical Disk Drive

Provides DVD Dual or DVD Super-Multi optical disk drive..

IEEE 1394

Provides one IEEE 1394 port for fast data transmission by external hard disk or digital video (DV).

USB 2.0

Provides three USB2.0 ports for fastest I/O data transmission.

Audio System

Compliant with Intel HD Audio (Azalia). Sound Blaster compatible. Support 32-bit, multi-channel audio system output.

Flash BIOS

Flash BIOS allows you to easily upgrade the System BIOS using the Phoenix Flash utility program.

Power and System Management

- Integrated SMM (System Management Mode) on system chipset that shuts down components not in use to reduce power consumption. To execute power management, you can set up the parameter in Power Options properties by pointing your mouse to Control Panel of Windows.
- Closing the Notebook computer (lowering the cover) allows you to suspend the system operation instantly and resume at the press of the power button.
- System Password for User and Supervisor included on the BIOS SETUP Program to protect unauthorized use of your computer.

1.2 Unpacking the Computer

Your computer comes securely packaged in a sturdy cardboard shipping carton. Upon receiving your computer, open the carton and carefully remove the contents. In addition to this User Guide, the shipping carton should also contain the following items:

- The Notebook Computer
- An AC Adapter and AC Power Cord
- Li-Ion Battery Pack
- CD Driver Utility/ User Guide
- Quick Setup Manual

Carefully inspect each component to make sure that nothing is missing and/or damaged. If any of these items is missing or damaged, notify your dealer immediately. Be sure to save the shipping materials and the carton in case you need to ship the computer or if you plan to store the computer away sometime in the future.

1.3 The Inside of the Notebook

The notebook computer is compact with features on every side. First, look at the inside of the system. The following sections describe inside features.



- | | |
|---------------------------------|-----------------------------|
| 1. 5. Integrated Microphone | 2. Webcam. |
| 3. Color Widescreen LCD Display | 4. Power On/Resume Button |
| 6. Webcam Switch | 7. LED Indicators |
| 8. Keyboard | 9. Touchpad Pointing Device |

- Integrated Microphone
Integrated mono microphone for instant voice recording and simultaneous voice conversation.
- Webcam
The Webcam is 1300K pixels. It can be used as a communication device that transmits instant image through network for conference.
- Color Widescreen LCD Display
The notebook computer comes with a color LCD that you can adjust for a comfortable viewing position. The LCD is 13.3" TFT color LCD with

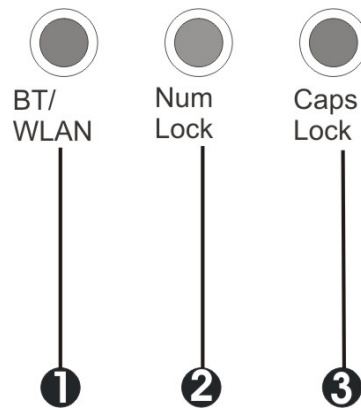
1280x800 (Wide XGA) resolution panels. The features of the Color LCD Display are summarized as follows:

- ⊖ TFT color LCD with Widescreen 13.3" 1280x800 (Wide XGA) resolution panels.
- ⊖ Capable of displaying 16M colors (32-bit true color).
- ⊖ LCD display control hot-keys allows you to adjust the brightness of the LCD.
- ⊖ Simultaneous display capability for LCD and external desktop computer monitor.
- Power On/Resume Button
Switches the computer power on and off, or resumes whenever it is in Suspend mode.
- Webcam Switch
To disable or enable the Webcam function. For closing this function, push the switch to the left side; for turning on this function, push the switch to the right side.
- LED Indicators
Keeps you informed of your notebook computer's current status of Bluetooth/Wireless LAN accessing, Numeric Lock and Caps Lock. Description of the status appears in the latter part of this section.
- Keyboard
 - ⊖ Standard QWERTY-key layout and full-sized 87 keys keyboard with Windows system hot-keys, embedded numeric keypad, 11 hot keys, inverted "I" cursor arrow keys, and separate page screen control keys.
 - ⊖ Wide extra space below the keyboard panel for your wrist or palm to sit-on comfortably during typing.

- **Touchpad Pointing Device**
Microsoft mouse compatible with two touchpad click buttons. The two select buttons located at each side support tapping selection and dragging functions. These buttons work like a standard computer mouse. Simply move your fingertip over the touchpad to control the position of the cursor. Use the selection buttons below the touchpad to select menu items.

NOTEBOOK LED INDICATOR

The Status LED keeps you informed of your notebook computer's current status of Bluetooth/Wireless LAN accessing, Numeric Lock and Caps Lock.



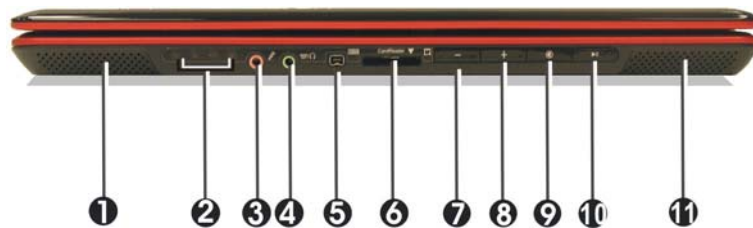
1. Wireless LAN/Bluetooth 2. Num Lock 3. Caps Lock

- **Wireless LAN/Bluetooth**
When LED in blue light indicates that the Wireless LAN/Bluetooth Function is activated. When activate, the system will search the wireless LAN signal automatically if you had installed the driver.
- **Num Lock**

When LED in blue light indicates that the Num Lock key on the keyboard is activated. When activated, the embedded numeric keypad will be enabled.

- **Caps Lock**
When LED in blue light indicates that the Caps Lock key on the keyboard is activated. When activated, all alphabet keys typed in will be in uppercase or capital letters.

1.4 The Front Side of the Notebook



- | | |
|---------------------------------|-----------------------|
| 1. 11. Built-in Stereo Speakers | 2. LED Indicators |
| 3. Microphone Jack | 4. Headphone Jack |
| 5. IEEE1394 | 6. 4 in 1 card slot |
| 7. Volume-Down Button | 8. Volume-Up Button |
| 9. Mute/Resume Button | 10. Play/Pause Button |

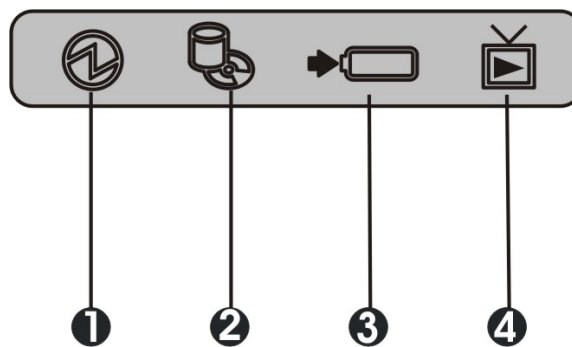
- **Built-in Stereo Speakers**
Integrated left and right mini stereo speakers for sound and audio output for your multimedia presentations or listening pleasure.

- **LED Indicators**
Keeps you informed of your notebook computer's current operating status. Description of the status icons appears in the latter part of this section.
- **Microphone Jack**
Allows you to connect an external microphone for monophonic sound recording directly into your notebook computer.
- **Headphone Jack (with SPDIF out)**
Lets you plug in a stereo headphone, powered speakers, or earphone set with 1/8 inch phono plug for personal listening. (The SPDIF transmits digitized audio signal by optical fiber. The external audio amplifier can get the best audio quality without loss.)
- **Line-In Jack**
Lets you connect audio sources, such as external CD, players to this jack for recording on your computer or playback through the Line-Out device.
- **IEEE 1394**
IEEE 1394 port is a high speed I/O port that can transfer high levels of data in real-time, such as external hard disk, Digital Video Camera.
- **4 in 1 card slot**
The card slot supports SD, MMC, MS (Memory Stick) and MS_Pro flash memory card format. You can use either of the 4 types flash memory cards for extra storage media. Please pay attention to correct direction when you insert the flash memory card. For more detail of flash card, you can refer to Chapter 3.9
- **Easy buttons for music listening**
There are four easy buttons for your listening pleasure.
 - **Volume-Down Button**
Decreases the audio volume of the music incrementally.

- ⦿ Volume-Up Button
Increases the audio volume of the music incrementally.
- ⦿ Mute/Resume Button
Press this button to shut down or resume the music.
- ⦿ Play/Pause Button
Press this button to play or pause the music.

NOTEBOOK STATUS ICONS

The Status LED Panel keeps you informed of the notebook's current power and operating status. Each LED is marked with an icon to designate the system status.



- | | |
|-------------------------|-----------------|
| 1. Power Indicator | 2. Drive Access |
| 3. Battery Charging LED | 4. TV Access |

- Power Indicator
Lets you know that power to the system is turned on. This LED is positioned so that you can see the power state whether the LCD panel is opened or closed.
 - ⦿ Lights blue when the system is powered on.

- ⦿ Lights blue blinking when the system is in Standby mode.
- ⦿ Lights yellow when the battery power is low.
- ⦿ Lights orange when the battery power is critical low.
- Battery Charging LED
Lights to indicate battery in charging status.
 - ⦿ Lights orange to indicate that the battery is in charging.
 - ⦿ Lights orange blinking when the battery charging is in error.
 - ⦿ Lights blue to indicate the battery is fully charged or no battery installed.
- Drive Access
When LED in blue blinking light indicates that the system is accessing the Hard Disk or Optical Disk Drive.
- TV Access
When LED in blue light indicates that the system is accessing the TV channel.

1.5 The Left Side of the Notebook

The left side of your notebook computer provides the features shown in the following figure.



- | | |
|---------------------------|------------------|
| 1. Locking Device Keyhole | 2. LAN Port |
| 3. Air-Outlet Vent | 4. USB 2.0 Ports |
| 5. ExpressCard Slot | |

- **Locking Device Keyhole**
Lets you attach a Kensington security system or a compatible lock to physically secure your notebook computer.
- **LAN Port**
An internal 10Base-T/100Base-TX Ethernet LAN module connects your computer to other computers/networks through a local area network (LAN).
- **Air-Outlet Vent**
Emits the heat out of your computer and keeps it within operating temperature.
- **USB 2.0 Ports**
The Universal Serial Bus (USB) port allows you to connect USB 2.0-compliant devices (for example, printers, scanners and so on) to your notebook computer.
- **ExpressCard Slot**

A newly developed PC Card interface, its connector has 26 pins and has a potential transfer rate of up to 500 MB/sec (or 250 MB/sec in each direction).

1.6 The Right Side of the Notebook

The right side of the notebook computer offers the features shown in the following figure.



- | | |
|-----------------|-----------------------|
| 1. Eject Button | 2. Optical Disk Drive |
| 3. Antenna Port | 4. USB 2.0 Port |
| 5. VGA Port | 6. DC Power Port |

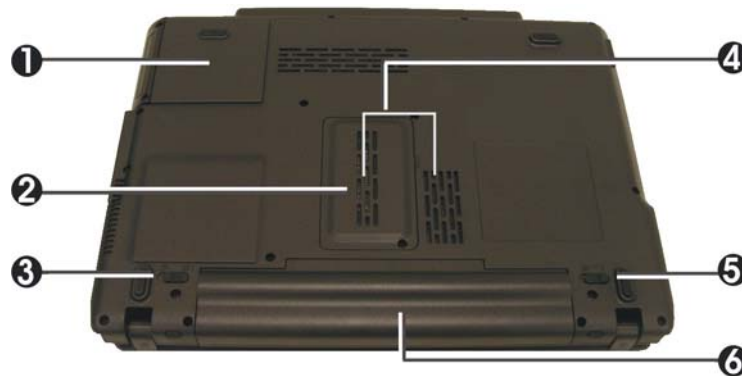
Right Side Features

- Eject Button
Push the eject button found on the left side of the Optical Disk Drive slot to release the Optical Disk.
- Optical Disk Drive
Allows you to load and start programs from a compact disc (CD) or a digital video disc (DVD) and play conventional audio CDs. It also can make CD/DVD by using CD-R/RW or DVD-R/RW.

- **Antenna Port**
Allows you to connect the antenna for accessing the TV channel for TV watching..
- **USB 2.0 Port**
The Universal Serial Bus (USB) port allows you to connect USB 2.0-compliant devices (for example, printers, scanners and so on) to your notebook computer
- **VGA Port**
Lets you attach an external monitor or projector for wider display. You can run the LCD display and the external monitor simultaneously or switch it to monitor only using the display hot-key.
- **DC Power Port**
Lets you connect the AC power adapter in supplying continuous power to your notebook and recharging the battery.

1.7 The Underside of the Notebook

The bottom of the notebook computer offers the following features.



- | | |
|--------------------------|-----------------------|
| 1. Hard Disk Compartment | 2. Memory Compartment |
| 3. Battery Lock Latch | 4. Air-Outlet Vent |
| 5. Battery Release Latch | 6. Battery Bay |

Bottom of the System

- **Hard Disk Compartment**
Open this cover of this compartment to replace with other Hard Disk Drive. Please refer to Chapter 7 for how to replace it.
- **Memory Compartment**
There are two SO-DIMM memory slots. One memory slot is empty for upgrade usage.
- **Battery Lock Latch**
Push the latch to the lock side to lock and secure the battery, or push the latch to the unlock side for unpacking the battery pack.
- **Air-Outlet Vent**
Emits the heat out of your computer and keeps it within operating temperature.
- **Battery Release Latch**
To release the battery, first locate the Battery Lock Latch at the left side with unlock status, then push the Battery Release Latch to the right end to remove the battery pack.
- **Battery Bay**
Equipped with a choice of Lithium-Ion (Li-Ion) battery pack.

1.8 Notebook Accessories

AC Adapter

The AC Adapter supplies external power to your notebook computer and charges the internal battery pack simultaneously. The AC adapter has an auto-switching design that can connect to any 100VAC ~ 240VAC power outlets. You just change the power cord if you are going to use your notebook in other countries with different connector outlets.

When you connect the AC adapter, it charges the battery whether or not the notebook computer is powered on.

Battery Pack

Aside from the AC adapter, your computer can also be powered through the internal battery pack. The battery pack uses rechargeable Lithium-Ion (Li-Ion) battery cells that provide long computing hours when fully charged and power management enabled. You should always leave the battery inside your computer even when using the AC adapter as it also acts as a back-up power supply in case power from the AC adapter is cut off. It is also very important to have the battery pack always charged to prevent battery cell degradation.

1.9 Notebook Options

DVD dual (Dual Rewritable DVD combo) Device Pack

This device pack combines following two standard packs. Using the suitable media, you can make any format of CD or DVD as you want.

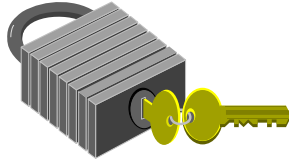
DVD-RW combo:

This device pack can write data to CD-R or CD-RW and DVD-R or DVD-RW media and also can read DVD/CD title. This media is commonly used on DVD video player.

DVD+RW combo:

This device pack can write data to CD-R or CD-RW and DVD+R or DVD+RW media for you to backup the data and also can read DVD/CD title. This media is commonly used on newer DVD video player.

2 Getting Started



Your Notebook is designed and pre-configured for easy setup and use. This chapter describes the installation steps you should follow to get the notebook up and running as quickly as possible. Contact your dealer if they have pre-installed all the needed drivers to fully operate your computer or if there is an update on the driver installation of the notebook.

2.1 Using the Battery Pack

The notebook is designed to operate with one of the following power sources:

- With AC power using the AC adapter connected to an electrical outlet.
- With a Lithium-Ion (Li-Ion) battery pack.

You should use the AC adapter whenever it is possible, relying on the battery pack only when AC power is unavailable.

Before you use your notebook computer, install and recharge the battery pack first. The rechargeable Li-Ion battery pack allows you to operate the notebook without an external power source. When you connect the AC power adapter, the battery immediately starts to recharge. Normal battery charging time is 2 hours for Lithium-Ion (Li-Ion) battery pack when your computer is turned off.

For maximum battery performance, fully discharge the battery first before recharging it when you start to use it first time. To do so, unplug the AC adapter, turn off power management features (through Setup and Windows), and turn on the system. Once the battery is fully discharged, plug in the AC adapter and recharge the battery.

If you do not discharge the battery completely, it fails to accept a full recharge.

- ⚠ *Li-Ion battery is vulnerable, do not charge it with other power adapter, or it may cause fire or explosion.*
- ⚠ *Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.*

Installing the Battery Pack

This notebook provides the most convenient way to install the battery pack into your computer. With the extended nose directed toward the compartment, insert and push the battery pack.



Removing the Battery Pack

To remove the battery pack, slide the lock latch to the end of left side to unlock the battery lock latch (1), and slide the battery release latch to the end of right side to release the battery latch (2), then take out the battery pack with your finger (3).



Replacing the Battery Pack

When your notebook estimates that the battery only has enough charge to continue for a few minutes, it will alert you with a battery low warning beep. If you are consuming a lot of power by using the audio system, the PCMCIA slots, the hard disk drives, and optical disk drive, your notebook might run out of charge much sooner than you expect. You should always respond to the battery low indication by connecting to AC power or turning off your notebook, or suspending your notebook to disk. If you do not do so, the notebook will automatically suspend to disk and turn off. The contents of the memory will store in the hard disk drive. You will be unable to restart the notebook until you have connected to the AC adapter or installed a charged battery. To replace the battery pack, refer to the previous sections on "Installing the Battery Pack" and "Removing the Battery Pack."

⚠ Be sure to save your data before replacing the battery pack or connecting the AC adapter. Failure to do so can result in data loss.

EXTENDING BATTERY LIFE

It is important to be aware of the simple things for extending the life of the system main battery while you are on the road. You should find a working place where the external lighting is not too bright and turn down the screen brightness. Also, you can choose the available mode on the Power Management item of the Control Panel in Windows.

2.2 Connecting the AC Power Source

The AC adapter provides external power source to your computer and charges the internal battery pack at the same time. The AC adapter also has an auto-switching design that can connect to any 100VAC ~ 240VAC power outlets.

To connect the power adapter:

1. Plug the AC power cord into the power socket of the AC power adapter.
2. Plug the other end of the AC power cord to a live AC wall outlet.



3. Plug the connector of the AC adapter to the DC-IN port found at the rear side of the computer.

⚠ *Whenever possible, it is advisable to always have the AC adapter connected to the notebook and the battery pack installed. This ensures continuous power supply and prevents any data loss incurring from sudden power breakdown.*

- *For the power supply of this equipment, an approved power cord has to be used.*
- *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 adapter).*

2.3 Starting Your Computer

The Power/Resume button is found on the top of the base unit. Press the Power/Resume button to start your computer and check that if the Power LED turns on.



After a few seconds, the computer's display will turn on and your computer will begin to execute the Power On Self Test or POST to check if all system components are running properly. Any error found during the test will be displayed on the screen and may generate short beep sound as well.

After the test, the screen will also display a message "**press <F2> to enter SETUP**". You don't need to run this program at the moment as your dealer already made the necessary settings for your computer optimal operation. Refer to Chapter 6 on running the SETUP program later.

After the test has completed, your computer will start to search and boot up the operating system from your hard drive. The notebook computer normally

comes with a Windows operating system pre-installed in your hard drive. Consult the Windows manual on how to use the program. If not, contact your dealer for assistance.

2.4 Adjusting the Display Controls

The LCD brightness adjustment is controlled by <Fn> +<F8> and <Fn> + <F9> keys respectively. You need to press these hot-key controls after powering on your notebook to suit your viewing pleasure.

The Brightness hot-key control adjusts the brightness on the LCD. The brightness hot-key control will not set the LCD completely dark or bright; it provides sufficient lighting to the LCD to match the external lighting of the surrounding. The brighter the room, the more you need to increase the brightness of the LCD.

2.5 Installing the Notebook Device Drivers

If you already have an operating system installed into your notebook computer, it is best to install the needed device drivers for using the built-in devices of your computer. Before installing the drivers, check with your dealer first if they have already installed all the drivers along with the operating system. If not, follow the procedures below:

INSTALLING WINDOWS VISTA FROM OPTICAL DISK DRIVE

To install Windows Vista directly from your optical disk drive, please go to **Boot** menu of **BIOS** setup menu. Use arrow key to select "CD-ROM Drive", then use "+" or "-" to move it to the top. Go to **Exit** menu and select "**Exit**

Saving Changes". Accordingly, insert the Windows Vista installation CD into optical disk drive with following the instructions on the screen to finish the installation.

DRIVER INSTALLATION NOTE:

» *Please be notified that you should install the **CHIPSET Driver** first before installing other driver utilities.*

INSTALLING THE CHIPSET DRIVER

Your notebook computer uses this advanced chipset to enhance the stability and performance. Following is the procedure for installing the chipset driver:

Installing Chipset device driver for Windows Vista 32

1. Click the **Start** button, then point to **Run**. The **Run** dialog box appears.
2. Click the **Browse** button and specify the directory as **"E:\Drivers\Vista 32\Chipset\Setup.exe"**.
3. When screen appears the **User Account Control** window, click **"Allow"** for processing the further step.
4. Click **"Next"** continuously to install this driver when screen displays this command.
5. Click **"Yes"** to accept the License Agreement.
6. Click **"Next"** to continue the following step.
7. Tick the option **"Yes, I want to restart my computer now."**, and press **"Finish"** to restart your system.

INSTALLING THE VGA DEVICE DRIVER

Following is the procedure for installing the Video Accelerator 3D Adapter VGA driver to your computer:

Installing VGA device driver for Windows Vista 32

1. Click the **Start** button, then point to **Run**. The **Run** dialog box appears.
2. Click the **Browse** button and specify the directory as.
"E:\Drivers\Vista32\VGA\Setup.exe".
3. When screen appears the **User Account Control** window, click
"Continue" for processing the further step.
4. Click "Next" to install this driver when screen displays this command.
5. Click "Yes" to accept the License Agreement.
6. Click "Next" to continue the following step.
7. Tick the option "Yes, I want to restart my computer now.", and press
"Finish" to restart your system.

INSTALLING THE AUDIO DEVICE DRIVER

Your notebook computer uses the Conexant Audio controller:

Installing Audio device driver for Windows Vista 32

1. Click the **Start** button, then point to **Run**. The **Run** dialog box appears.
2. Click the **Browse** button and specify the directory as.
"E:\Drivers\Vista32\Audio\Setup.exe"
where the audio driver is located.
3. When screen appears the **User Account Control** window, click
"Continue" for processing the further step.

4. Click **"OK"** to continue the following steps.
5. Tick the **"OK"** and then restart your system to finish the installation.

INSTALLING SYNAPTICS – TOUCH PAD DRIVER

Installing Synaptics - Touchpad driver for Windows Vista 32

1. Click the **Start** button, then point to **Run**. The **Run** dialog box appears.
2. Click the **Browse** button and specify the directory as
"E:\Drivers\Vista32\Touch Pad\Setup.exe".
3. When screen appears the **User Account Control** window, click
"Continue" for processing the further step.
4. Click **"Next"** to continue the following step.
5. Click **"Finish"** and then press **"Restart Now"** to restart your system

INSTALLING THE LAN DEVICE DRIVER

Please follow the procedures below for installing the LAN driver.

Installing LAN driver for Windows Vista 32

1. Click the **Start** button and then click **Run**. The **Run** dialog box appears.
2. Click **Browse** button and specify the directory as
"E:\Drivers\Vista32\LAN\Autorun.exe "
3. Click **"Install Drivers and Software"** to continue the following steps.
4. When screen appears the **User Account Control** window, click
"Continue" for processing the further step.
5. Click **"Next"** to continue the following steps.
6. Choose **"I accept the terms in the license agreement"** and click

“Next”.

7. Click “Next” to continue the following steps.
8. Click “Install” to implement the setup program to install this driver.
9. Click “Finish” and then press “Exit” to complete the installation.

INSTALLING THE BLUETOOTH DEVICE DRIVER

Please follow the procedures below for installing the Bluetooth driver:

Installing Bluetooth driver for Windows Vista 32

1. Click the **Start** button, then point to **Run**. The **Run** dialog box appears.
2. Click the **Browse** button and specify the directory as **"E:\Drivers\Vista32\Bluetooth\Setup.exe"**.
3. When screen appears the **User Account Control** window, click **“Continue”** for processing the further step.
4. Click **“Next”** to continue the following steps.
5. Choose **“I accept the terms in the license agreement”** and click **“Next”**.
6. Click **“Install”** to implement setup program to install this driver.
7. Click **“Finish”** and then press **“Yes”** to restart your system

INSTALLING CAMERA DEVICE DRIVER

Please follow the procedures below for installing the Camera Device Driver:

Installing Camera Device Driver for Windows Vista 32

1. Click the **Start** button, then point to **Run**. The **Run** dialog box appears.

2. Click the **Browse** button and specify the directory as.
"E:\Drivers\Vista32\Camera\setup.exe"
3. When screen appears the **User Account Control** window, click
"Continue" for processing the further step.
4. Click "Next" to continue the following steps.
5. Tip the option "Yes, I want to restart my computer now" to finish the installation.

INSTALLING CARDREADER DEVICE DRIVER

Please follow the procedures below for installing the CardReader Device Driver:

Installing CardReader Device Driver for Windows Vista 32

1. Click the **Start** button, then point to **Run**. The **Run** dialog box appears.
2. Click the **Browse** button and specify the directory as.
"E:\Drivers\Vista32\CardReader\setup.exe"
3. When screen appears the **User Account Control** window, click
"Continue" for processing the further step.
4. Click "OK" to complete the installation.

INSTALLING THE WIRELESS LAN DRIVER AND UTILITY

Please follow the procedures below for installing the Wireless LAN Adapter driver:

Installing Wireless LAN driver and Utility for Windows Vista 32

1. Click the **Start** button, then point to **Run**. The **Run** dialog box appears.

2. Click **Browse** button and specify the directory as
“E:\Drivers\Vista32\Wireless LAN\Autorun.exe”
3. When screen appears the **User Account Control** window, click
“Continue” for processing the further step.
4. Click **"Install Software"** to execute the setup program.
5. Tick the option **“I accept the terms in the license agreement”**, and
click **Next** for further step processing.
6. Tick the option **“Typical”**, and click **“Next”** again.
7. Click **“OK”** to complete the installation.

INSTALLING THE ROBSON DRIVER AND UTILITY

Please follow the procedures below for installing the Robson driver:

Installing Robson driver and Utility for Windows Vista 32

1. Click the **Start** button and then click **Run**. The **Run** dialog box appears.
2. Click **Browse** button and specify the directory as
“E:\Drivers\Vista32\Robson\setup.exe”
3. When screen appears the **User Account Control** window, click **“Allow”**
for processing the further step.
4. Click **“Next”** continuously to install this driver when screen displays this
command.
5. Click **“Yes”** to accept the License Agreement.
6. Click **“Next”** to continue the following step.
7. When screen appears the **Windows Security** window, click **“Install”** for
processing the further step.

8. Click **“Next”** again.
9. Tick the option **“Yes, I want to restart my computer now.”**, and press **“Finish”** to restart your system.

INSTALLING THE TV-TUNER CARD DEVICE DRIVER

Please follow the procedures below for installing the TV-Tuner Card Device Driver:

Installing TV-Tuner Card Device Driver for Windows Vista 32

1. Click the **Start** button, then point to **Run**. The **Run** dialog box appears.
2. Click the **Browse** button and specify the directory as:
**"E:\Drivers\Vista32\TV
Driver\A306_Vista_Drv_x86_V1.12.0.60_Install"**
3. When screen appears the **User Account Control** window, click **“Allow”** to complete the installation.

2.6 Turning off Your Computer

If you are not going to use the computer for a while, it is best to turn off the power of the computer for longer use. Before turning off the power, you need to close first all application programs and shutdown the operating system.

After turning off the computer, make it a habit to leave the LCD panel open for a while whenever used for an extended period of time. This allows the inside parts of the computer to cool off. Closing the panel will force the heat up against the LCD screen, which may degrade the LCD when done regularly. More importantly, never close the LCD panel for a long period of time when computer is on and power saving features are disabled.

3 Using Your Notebook



This chapter describes how to operate the standard built-in features of the notebook that you normally would use in your day-to-day computer work. If you are new to computers and to your operating system, you also need to read the manual for the operating system on how to work with your computer. It is very important to familiarize yourself well with the operating system. The succeeding chapters not only guide you to go beyond the basics, but also try other exciting features.

3.1 Starting Your Operating System

The operating system is a must ingredient in using your computer. Without an operating system, it is like playing chess without the chessboard. It is the platform for all your software application programs to run on. The most popular operating system today is Microsoft Windows. You should have installed one operating system by your dealer unless you are an expert computer user and would need a more powerful operating system. If you have an operating system already installed in your computer, then you would be up and running after you power on your computer and boot up the system. Check your operating system manual on how to run it.

3.2 Understanding the Keyboard Functions

Your notebook computer is equipped with an 104 keys keyboard that provides all the functionality of a full-sized 101 or 102-key keyboard. Aside from the standard typewriter-layout keyboard of your computer, there are a number of extra features and function controls on the built-in keyboard including Windows system hot keys.



- | | |
|---------------------------|------------------------|
| 1. Function Keys | 2. Control Keys |
| 3. Windows Start Menu Key | 4. Control Keys |
| 5. Windows Shortcut Key | 6. Cursor Control Keys |

Keyboard

Key features and operations are described below:

- Function Keys**
 Function keys are application-driven, like **F1** through **F12** can be found on the keyboard. These keys work together with the **Fn** key to activate special functions. Some keys (printed in blue on keypad) are preprogrammed with dual functions.
- Control keys** — **Ctrl**, **Alt**, **Fn**, and **Shift** are controls used in conjunction with other keys to change their functions. To use control keys, press and hold the control key while pressing another key. For example, "Press **Ctrl-C**" means to hold down the **Ctrl** key and type the letter **C**. Key combinations work especially to the application you are running.

- **Windows keys**

Use the following two keys to facilitate your work:

- Start Menu key
Displays the Start menu.
- Shortcut/Application key
Provides quick access to shortcut menus. This key acts like a right mouse button.








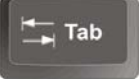

- **Cursor Control keys**



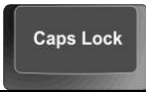

Cursor control keys let you position the cursor on the screen where you want. In the screen, the cursor is a blinking underline, block, or vertical bar depending on the application. The cursor indicates where the next text typed is inserted.

- **Typewriter keys**





Typewriter keys (also called *alphanumeric* keys) are used to enter text and characters. Keys with blue print on them behave differently when combined with control keys.

BASIC KEYBOARD FUNCTIONS





Keypad	Function Description
	<Enter> key. Execute a command. Within many text editing application programs, the <Enter> key inserts a hard carriage return, just like what ordinary typewriter does.
	<Esc> key. Press this key to cancel or escape from a command or function.
	<Ins> key. Known as the Insert key. Press this key to toggle the keyboard data entry from insert to type over mode.
	<Fn> + <PrtScr> key. Known as the Print Screen key. Press this key to map the whole screen to share memory for your specific usage.
	 key. Known as the Delete key. Press this key to delete the character to the right of the cursor, or delete marked texts or items.
	<Backspace> key. Press this key to delete the character to the left of the cursor.
	<Shift> key. Press this key in combination with alphabet letters to produce uppercase letters in typing. Use this key in combination with those two-character keys (found on the second row of the keyboard) to produce the upper marked keys. Also used in most application program in combination with other keys to execute a certain command.
	<Tab> key. Press this key to move the cursor to the next tab stop on the right. This key works much the same as in ordinary typewriter.
	<Ctrl> key. Known as the Control key. Used in most application program in combination with other keys to execute a certain command.

Keypad	Function Description
	<Alt> key. Known as the Alternate key. Used in most application program in combination with other keys to execute a certain command.
	<Num Lock> key. Activates the embedded 15-key numeric keypad. The keys are color coded blue.
	<Caps Lock> key. Used in most application program to always activate uppercase alphabet characters.
	<Fn> + <Scroll Lock> key. Used in most application program to scroll the screen without having to move the cursor.



CURSOR CONTROL KEYS

Keypad	Function Description
	Up arrow key. Moves the cursor up one line at a time.
	Down arrow key. Moves the cursor down one line at a time.
	Left arrow key. Moves the cursor to the left one space at a time.
	Right arrow key. Moves the cursor to the right one space at a time.

SCREEN CONTROL KEYS









Keypad	Function Description
	< Home > key. Moves the cursor to the beginning of a screen or line.
	< PgUp > key. Moves the cursor up one screen at a time
	< PgDn > key. Moves the cursor down one screen at a time
	< End > key. Moves the cursor to the end of a screen or line.








WINDOWS HOT KEYS

Keypad	Function Description
	< Start > key. Pulls up the Windows Start menu.
	< Right Click > key. Performs a mouse right-click function for Windows system.

SPECIAL FUNCTION KEYS

The notebook has special system function keys that activate key serving dual functions. When pressed in conjunction with the <**Fn**> key, these keys set specific system parameters and are sometimes referred to as "hot keys".

Keypad	Function Description
	Switches the system into Suspend mode.
	To enable or disable the wireless LAN function.
	Switches display between LCD, CRT, or LCD and CRT simultaneously.
	To enable or disable the Bluetooth function.
	To enable or disable the Webcam function.
	To enable or disable the TV tuner.
	To play or pause the music.
	To stop the music or DVD/VCD playing.

Keypad	Function Description
	To revert the previous music or previous DVD (VCD) section.
	To play the next music or next DVD (VCD) section.
	Increases the brightness of LCD display incrementally.
	Decreases the brightness of LCD display incrementally.
	Increases the audio volume of the notebook incrementally.
	Decreases the audio volume of the notebook incrementally.
	To shut down or resume the built-in system speaker volume.

3.3 Using the Touchpad Pointing Device

Your computer comes with a built-in touchpad pointing device that is found on the center of the palm-rest surface.

The touchpad offers a number of options that let you customize how it functions. To access these options, locate the **Control Panel** and double click on the **Mouse** icon. The options let you control the size and color of the cursor, cursor speed, the accepted double-click speed, and selection button orientation.

The touchpad works a mouse pointing device replacement that is used under Windows-based operating system. You can use the standard Microsoft driver that is compatible with the touchpad device and is normally used under Windows-based operating system. However, if you want to utilize the added features of the touchpad, you may want to try installing its own device driver that comes with added utilities for enhancing the function of the device.



- 1. Left Selection Button
- 2. Right Selection Button
- 3. Touchpad

Touchpad Features

Here how to use the touchpad pointing device:

1. The rectangular surface acts like a miniature duplicate of your display screen. To move the mouse cursor, place the finger lightly on the sensor pad and move in the desired direction. If you reach the end of the pad, lift your finger and place it back down on the other side of the pad.
2. To select an item, click on the item by pressing the left button control or by simply tapping on the surface once. A light, quick tap always works best. To execute an item, click the left button twice or do a quick double tap on the surface.
3. To simulate holding the mouse button down (dragging an icon or selection), use the tap-and-drag gesture. This feels much like a double-click, except that the finger remains on the pad after the second tap: Tap, lift, tap, hold and move. The simulated button remains held as long as the finger remains on the pad.
4. When you press both the Left and Right click button at the same time, the auto Scroll function will be activated.

⚠ *Avoid spilling any liquid on the touchpad surface and always keep the touchpad surface and pointing finger dry from sweat built-up. Also do not expose touchpad to any magnetic source object.*

3.4 Configuring Your Screen Display

The VGA display function of your notebook is based on a high performance AGP local bus controller and is fully VGA compatible. This controller offers a large set of extended functions and higher resolutions especially useful when

you are connecting an external high-resolution and high-frequency CRT or LCD.

Please Refer to Section 5 "Installing the Notebook Device Drivers" of Chapter 2 in this manual for the procedures on how to install the VGA device driver under Windows. After installing the VGA driver, you would then configure the display resolution or screen size to match your LCD display panel. This notebook computer model provides Wide screen 15.4" 1280x800 (Wide XGA) resolution panels. You would also probably want to set the amount of color output to display sharper images and photos.

POSSIBLE DISPLAY CONFIGURATIONS

The table below shows you the possible display resolution you can set when using either the LCD display or the external monitor (CRT):

Display	Possible Resolution	Maximum Colors
Widescreen 13.3" 1280x800 WXGA LCD	800 x 600	16 million colors
	1024 x 768	16 million colors
	1280 x 768	16 million colors
	1280 x 800	16 million colors
CRT	800 x 600	16 million colors
	1024 x 768	16 million colors
	1152 x 768	16 million colors
	1280 x 1024	16 million colors

☞ *65,536 or 64K colors is also equivalent to 16-bit high color while 16 million or 16M colors is equivalent to 32-bit true color.*

☞ *You can use the <Fn> + <F3> hot-key to switch the display between LCD only, CRT only, or both LCD and CRT display.*

CHANGING THE DISPLAY PROPERTIES UNDER WINDOWS

To change the display properties of your screen under Windows system, just right-click on the desktop area and select Properties or go to the Control Panel and click on the Display icon. The Display Properties dialog box will appear on your screen. Click on the Settings tab to set your desired configuration. Make sure to follow the configuration table above.

⚠ *If you cannot configure the display properties, change the display driver first as mentioned on Section 5 "Installing the Notebook Device Drivers" of Chapter 2 in this manual. Consult your dealer for the latest Windows VGA driver.*

3.5 Knowing the Power Saving Features

One of the great features in your notebook computer aside from its superior performance is the ability to save energy power. Your computer is designed to incorporate intelligent and advanced power management functions that turn off power of most components when system is idle or not in use. This feature not only gives you longer battery hours but cooler systems and components as well. For more information on how to control the power management features of your computer, refer to **Power Options** function in **Control Panel** of Windows.

The definitions of Standby Mode, Hibernation Mode, and Shutdown are depicted as follows:

Standby Mode

Standby Mode is mainly for power saving. When the Standby Mode is activated, your display and hard drive are shut down and all open applications

and documents are stored in RAM (Random Access Memory). This allows your notebook to wake up quickly, but a low level of power is required to maintain this suspended state. How quickly your system powers down into Standby mode is up to you by setting proper times in Power Options of Control Panel in Window. While the notebook is in Standby mode, the LED of power indicator flashes. To resume your working again, you can press the power button to return your work to the screen where you left off.

Hibernation Mode

In Hibernation mode, all system devices are powered down and the contents of RAM are stored on your hard drive. Hibernate mode uses less power than Standby mode, but takes a bit longer time to resume. When your notebook goes into hibernation, Windows saves your entire desktop state before powering down your computer. You don't need to save and close each document before you put your notebook into hibernation. When you press power button again, system will bring your notebook out of hibernation. You'll find your applications and documents open on your desktop exactly as you left them.

☞ ***Hibernation is enabled by default. To verify that Hibernation is enabled, Click Start, point to Settings, and then click Control Panel. Choose Power Options icon, then click on the Hibernate tab. IF the chock box of Enable Hibernate is selected, the Hibernation mode is enabled.***

Shutdown

All power has been turned off from the notebook. This means that no power including external AC power source and battery power source will be consume by the notebook.

3.6 Working with the Built-in HDD

Your notebook computer is equipped with a built-in large capacity 2.5 inch IDE hard disk drive where you store or install your computer operating system and all application software programs. You need to format the hard disk before using. The internal hard disk is normally assigned as Drive C after formatting. Sometimes divided into two partitions, adding a Drive D. Since your computer supports different hard disk capacities (up to 80 GB), you also need to setup the disk type first on your computer's BIOS SETUP program before formatting the disk drive. Your computer supports Auto-detect hard disk type, so you do not need to set it manually. Your dealer should already have done all of this for you. You can refer to **Chapter 6** on how to run the BIOS SETUP program.

You can increase the system's storage capacity by replacing the standard hard disk drive with a drive of greater storage capacity.

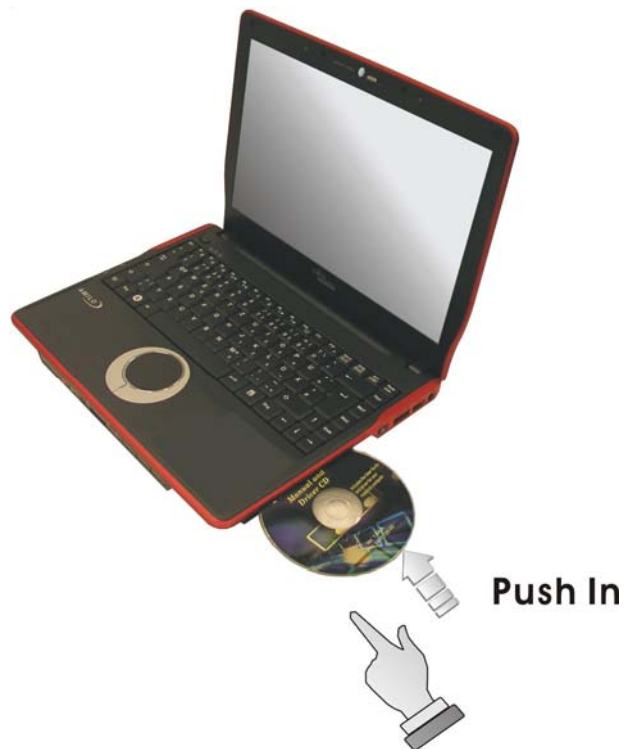
- *If you wish to replace your hard disk, contact your local dealer for more information about this dealer-installable device.*
- *Always turn off your computer first before removing the hard disk drive. Failure to do so will damage the computer and the hard disk. Avoid jarring or moving the computer while the hard disk is still being accessed.*

3.7 How to Access the Optical Drive

Your system ships with an optical disk drive installed on the right side of your computer. You would normally use the drive for installing operating system and software application programs.

To insert and remove a disc on the drive:

1. Make sure the computer is turned on. Insert the Optical disk into the drive slot with the label side facing up. The optical disk will be automatically slide in the optical drive.



2. To remove the disc, press the eject button found on the left bottom side of the optical drive.
3. The optical disk will pop-out slightly.

How to care the Optical Disks (CDs, DVDs, etc.)

When you handle CDs, pay attention to the following guidelines:

- Always pick up the disk by its edges.
- Avoid scratching or soiling either side of the disk.
- Do not write with the hard ball-point pen or apply labels on either side of the disk.
- Keep the disk away from direct sunlight or high temperatures.
- Clean fingerprints or dust from the disk by wiping it with a soft cloth.

The above points also apply to other optical storage media.

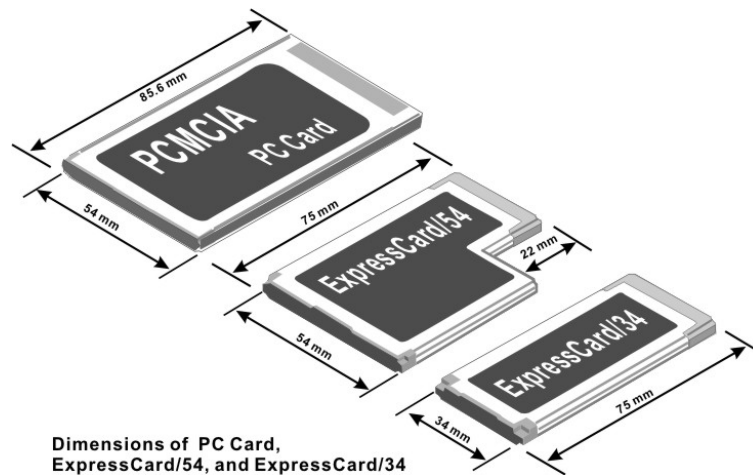
⚠ *The Combo drive is a Class 1 Laser Product.*

3.8 ExpressCard

WHAT IS EXPRESSCARD ?

The ExpressCard is a newly developed PC Card interface, its connector has just 26 pins and the interface has a potential transfer rate of up to 500 MB/sec (or 250 MB/sec in each direction) using a single-lane PCI Express link. Its form factor is up to 40 percent smaller than a PC Card, which allows ExpressCard modules to be included in smaller host systems. Designed for both desktop and mobile use, ExpressCard use either USB 2.0 or a single lane PCI Express technology.

The ExpressCard standard was developed by PCMCIA member companies including technology leaders, system manufacturers, card manufacturers, from all other parts of the PC Card industry.



Dimensions of ExpressCard

Current CardBus PC cards are 54 millimeters wide. ExpressCard can be divided into two categories, based on width. Most designs will use the ExpressCard 34 design, which sets the width at 34 millimeters. For some applications, the wider ExpressCard 54 standard will be used to produce cards that can handle the higher thermal requirements of those applications.

All ExpressCard modules are 5mm thick but the standard also allows for card developers to build longer 'extended' modules.

Native Bus Connection

The ExpressCard standard supports both the USB 2.0 and PCI Express interfaces. Card manufacturers are able to choose whichever bus is appropriate to their application; the performance of PCI Express, or from the wide range of solutions supported by USB. All host PC ExpressCard slots will support cards using either interface. The host platform no longer needs to incorporate

a bridge chip between the chipset and the socket. PCI Express and USB 2.0 are fully hot-pluggable.

To support the broadest range of applications there are two sizes of module. Both are smaller than today's CardBus card. The smallest card, the ExpressCard/34 module, is almost half the size of a CardBus card. This size is suited to a very broad range of applications covering communications, media, and general purpose.

	PC Card (CardBus, Type II)	ExpressCard/54	ExpressCard/34
Data Transfer rate	132 Mbps	500Mbps (or 250Mbps in each direction)	
Connector pins	68	26	
Port Type	Parallel	Serial	
Dimensions (HxWxD)	54mmx86mmx5m m	54mmx75mmx5m m	34mmx75mmx5m m

A big part of "just working" will be the existing software support. Both Windows XP and Windows Vista already support the ExpressCard specification.

INSERTING AND REMOVING A EXPRESSCARD

Your computer includes hot swapping capability, that allows you to exchange cards while the computer is turn on and start using it immediately.

Inserting ExpressCard

To insert a ExpressCard into the ExpressCard slot:

1. Locate the ExpressCard slot cover on the front side of the computer.

2. Insert the side of ExpressCard with the 26-pin socket into the ExpressCard slot. The face label of the card should also be facing up.
3. When the full length of the card is almost inside the slot, push firmly but slowly, to ensure full connection with the computer. The ExpressCard will be automatically detected and once the needed driver is installed, it will generate a beep sound to indicate that the card is detected.



Removing ExpressCard

To remove a ExpressCard from the ExpressCard slot, you should first disable the ExpressCard card setting in the system as described followings:

1. Double click the **ExpressCard** icon on the right bottom side of the task bar.
2. Select the socket from the list that you want to remove, and click **Stop** button. The system then disables the function of ExpressCard card.
3. Then you can remove the inserted ExpressCard, push the ExpressCard to the bottom to release the ExpressCard.
4. When the ExpressCard has moved out a space out of the slot, hold the edges of the card and slowly slide it out.



⚠ The power consumption of ExpressCard/54 is about 2.1W, while the consumption of ExpressCard/34 is about 1.3W. To save energy, press the button to disconnect the card when it is not in use.

3.9 Using Flash Memory Cards

WHAT IS FLASH MEMORY CARD?

Flash Memory is a memory storage media. It is used by most digital camera, moreover, it can replace the traditional floppy disk. Flash memory card is built with different form factor and brand name. Their size is smaller than PCMCIA card. This computer supports most of the flash memory card, including SD, MMC, MS (Memory Stick), and MS_Pro card.

The 4 in 1 card slot is used by the following cards as SD, MS (Memory Stick), MMC, and MS_Pro.

⚠ For a single moment, only one card can be inserted into the 4 in 1 card slot

Inserting Flash Memory Card

To insert a flash memory card into the slot is similar to ExpressCard. You only need to pay more attention whenever insert the flash memory card into the slot with the correct side.

For MMC and SD card, you should position the copper connector at the bottom side. For Memory Stick card, you should position the copper connector at the topside. All of these cards should be located at the center of the slots in inserting.

Slot	Card type	Copper connector
4 in 1	SD (Secure Digital)	Bottom side
	MMC (MultiMedia Card)	Bottom
	MS (Memory Stick)	Top side
	MS_Pro	Top side

Only one correct side can be accepted for the 4 in 1 card slots. If you cannot insert the card into the 4 in 1 slot or you had inserted the card but it is not recognized by the computer, please remove the card and turn the card upside down and insert it again. To prevent the damage made both on card and the slot, never forced an entry into the slot with incorrect side.



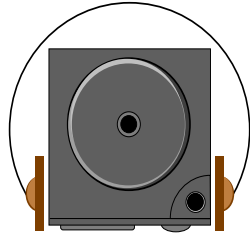
Removing Flash Memory Card

It is similar to ExpressCard for removing a flash memory card from the slot. You should first disable the card setting in the system as described in the former section.

To remove the flash memory card, you should only pull out the card by finger, there is no release button for flash memory slot.



4 Fun with Windows Vista Experience



This notebook integrated in a highly compact platform is designed for digital entertainment. With Windows Vista, it offers a breakthrough user experience and is designed to help you feel confident in your ability to view, find, and organize information and to control your computing experience. It simplifies our digital life in taking charge of media, share movies, TV, photos, and music with your friends and family.

4.1 What is Windows Vista?

Windows Vista is an operating system that enables you to enjoy the best in entertainment on your notebook.

The visual sophistication of Windows Vista helps streamline your computing experience by refining common window elements so you can better focus on the content on the screen rather than on how to access it.

With Windows Vista, you can store, share and enjoy all of your photos, all of your music, all of your home video and even recorded TV. It's all contained in one control system. That is as easy to use with a great new user-friendly interface.

4.2 Get Ready for Windows Vista

Windows Vista is designed to help make you more productive as you work with your PC throughout the day with new features.

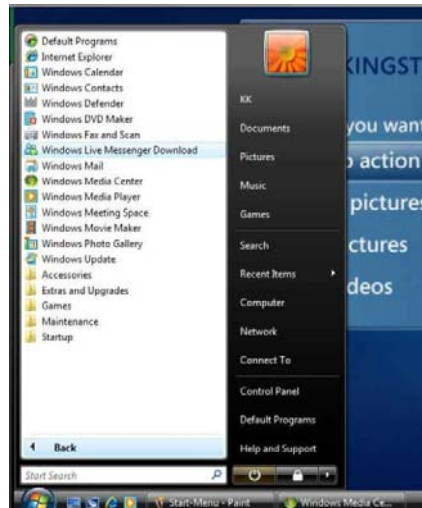
Starting the Windows Vista

When you start using Windows Vista, you will recognize familiar elements such as the Start menu, which is now faster, more streamlined, and more helpful than in previous versions of Windows. More than that, the new start menu makes it very easy for you to navigate across all of the installed applications on your PC. Eliminating the slow performing, cascading "All Programs" view, the new start menu can help you get something started more quickly than ever.



About the entertainment

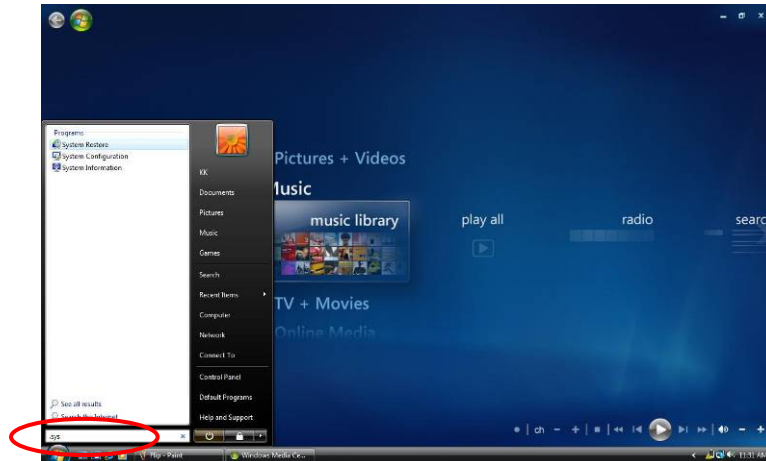
To recall all default multimedia applications, click on “All Programs” located on the left corner on the desktop, the “All Programs” will be changed to “Back” as shown in the following figure.



It now becomes more easy to execute various application with just click on it.

Instant Search

The Start menu features integrated desktop search through a new feature called Instant Search which can help you find and launch almost anything on your PC. Just type in a word, a name, or a phrase, and Instant Search can find the right file for you.

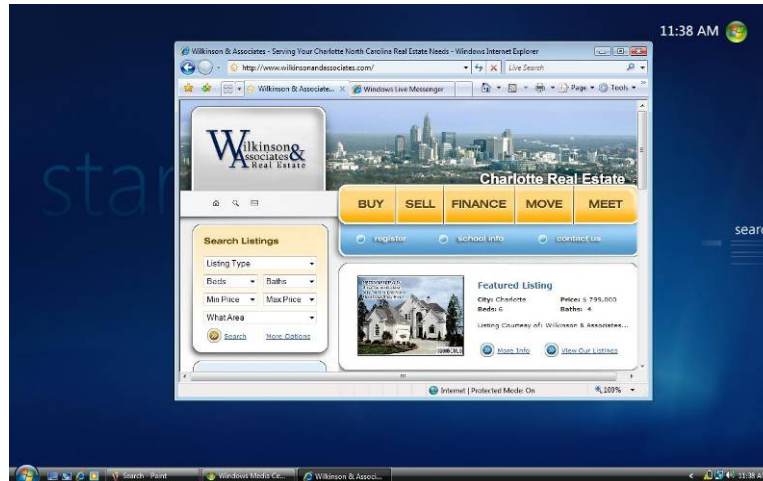


Use Instant Search to quickly find the information you need.

4.3 Enjoy Your Multimedia Application

INTERNET EXPLORER

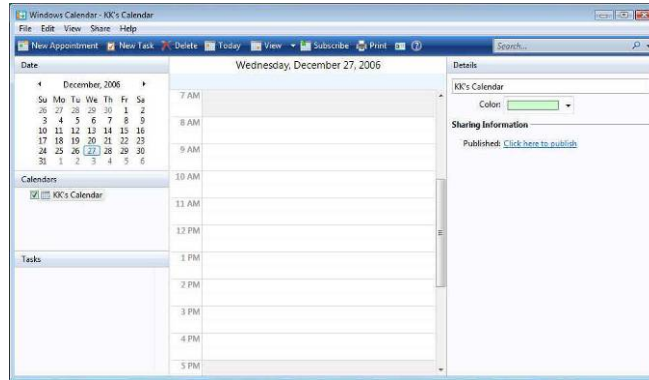
Windows Vista enhances the Internet Explorer experience in finding and displaying information, and Web sites on the Internet.



The upcoming release of Internet Explorer 7 not only adds important new security and privacy features, but makes everyday tasks easier through features such as tabbed browsing, inline search, and shrink-to-fit printing

WINDOWS CALENDAR

Windows Calendar helps you in management appointments and tasks by creating personal calendar, publishing them, and subscribe to other users calendars.

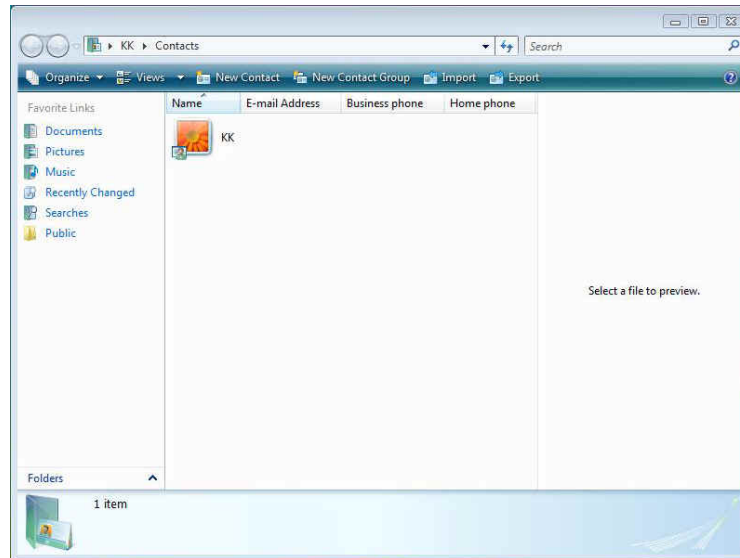


Windows Calendar is a flexible, easy-to-use calendar built directly into the Windows Vista operating system. It lets you plan and manage all of your activities and coordinate your schedule with others. It also lets you create a personal task list and receive automatic notifications and reminders about specific tasks and upcoming appointments.

Windows Calendar has a broad range of features to help you manage your personal schedule

WINDOWS CONTACTS

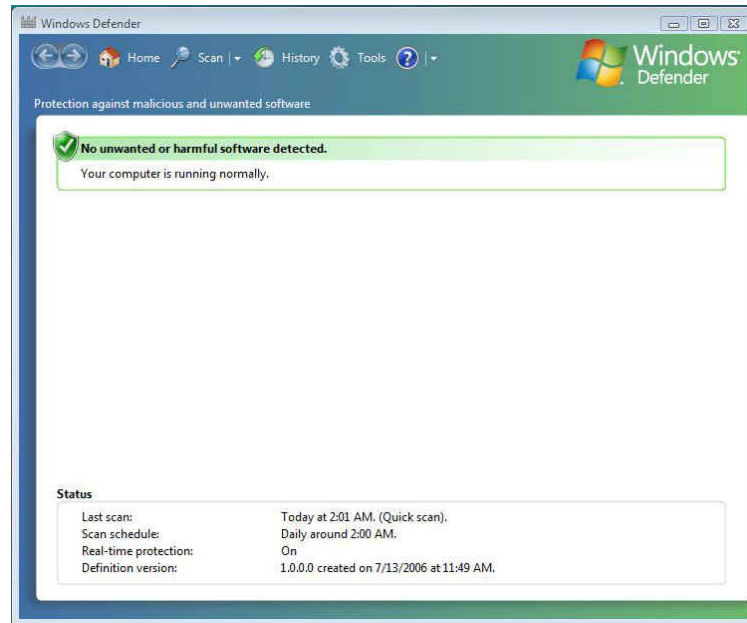
Windows Contacts can store e-mail addresses and other information about people and organizations.



Microsoft Windows Vista provides a new mechanism and user interface for storing and retrieving information about people (contacts) who are important to the users of Microsoft Outlook and Windows Mail (formerly Outlook Express).

WINDOWS DEFENDER

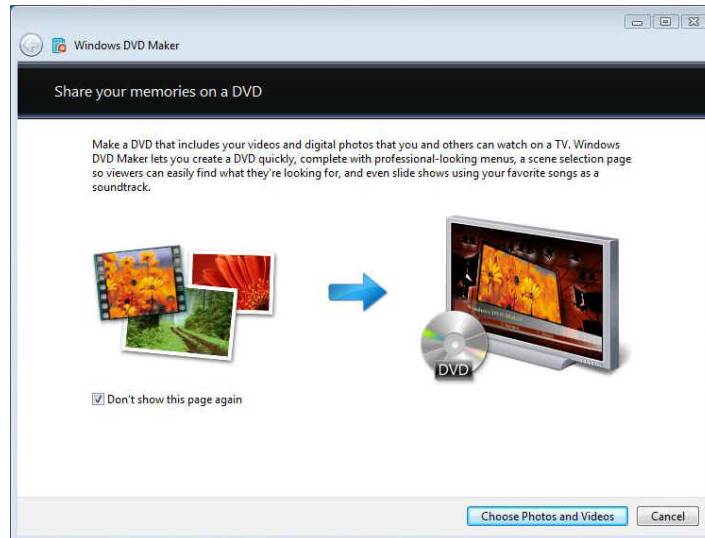
Windows Defender is able to protect the computer from spyware and other potentially unwanted software.



Windows Defender helps protect computers against pop-ups, slow performance, and security threats caused by spyware and other unwanted software. Applications can check and change its status.

WINDOWS DVD MAKER

Windows DVD maker helps you burn pictures and video to DVD..



Windows DVD maker lets you create a DVD quickly, complete with professional-looking menus, a scene selection page so viewers can easily find what they are looking for, and even slide shows using your favorite songs as a soundtrack.

WINDOWS FAX AND SCAN

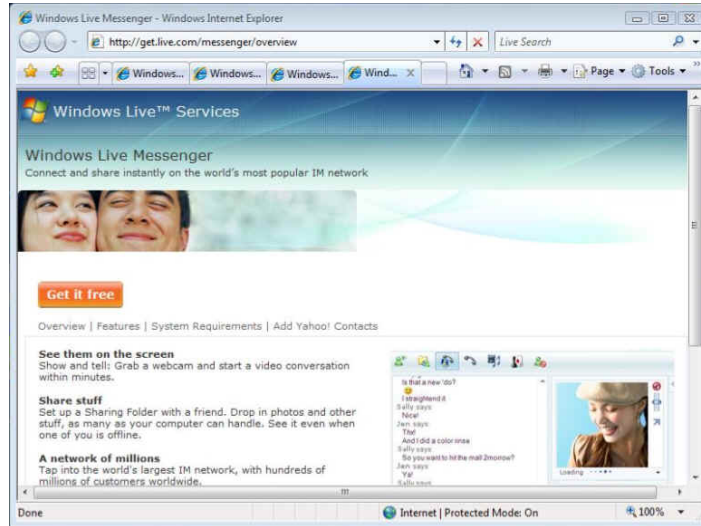
Windows Fax and Scan help you send and receive faxes or scan pictures and documents.



Faxing and scanning functions come together in Windows Vista through Windows Fax and Scan. Sending and receiving faxes through your PC is now as simple as performing the same tasks on a fax machine, especially for digital document

WINDOWS LIVE MESSENGER DOWNLOAD

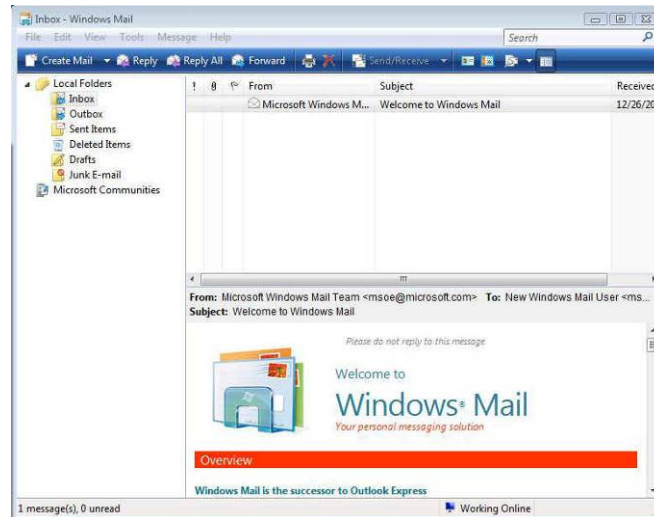
Windows Live Messenger Download can connect and share message instantly on the world's favorite IM service..



Windows Live Messenger is the next-generation MSN Messenger. It has everything you already love about Messenger, and much more.

WINDOWS MAIL

Windows Mail can send and receive e-mail and newsgroup messages.



Windows Mail is designed to help you prevent emerged some annoyances and risks that have grown over the years, that enables your e-mail experience is as productive and fun as possible. Windows Mail includes features that help you reduce the risks, while enjoying the many benefits, of e-mail

WINDOWS MEDIA CENTER

Windows Media Center lets you opens your home entertainment option for digital and on-demand media, including TV, Movies, music and pictures.

It is enable to make you enjoy all your favorite digital entertainment—including live and recorded TV, movies, music, and pictures—in one place with the easy-to-use Windows Media Center menu system and remote control. Windows Media Center in Windows Vista includes enhancements for expanded support of digital and high-definition cable TV, an improved menu system, and the ability to create a consumer-electronics-quality living-room experience, as well as new options for multi-room access to your entertainment through Media Center Extenders.

WINDOWS MEDIA PLAYER

Windows Media Player can play digital media including music, video, CDs and DVDs.



Windows Media Player gives you an easier way to enjoy and manage your digital music, video, and pictures on your PC. See things the way you want to see them, by CD cover art or in lists. Connect to networked media devices around your home or seamlessly sync up with your portable digital media player to enjoy all your entertainment wherever you are. Sporting an improved look and feel, Windows Media Player delivers a high-quality audio and visual experience both on the computer and around your home

WINDOWS MEETING SPACE

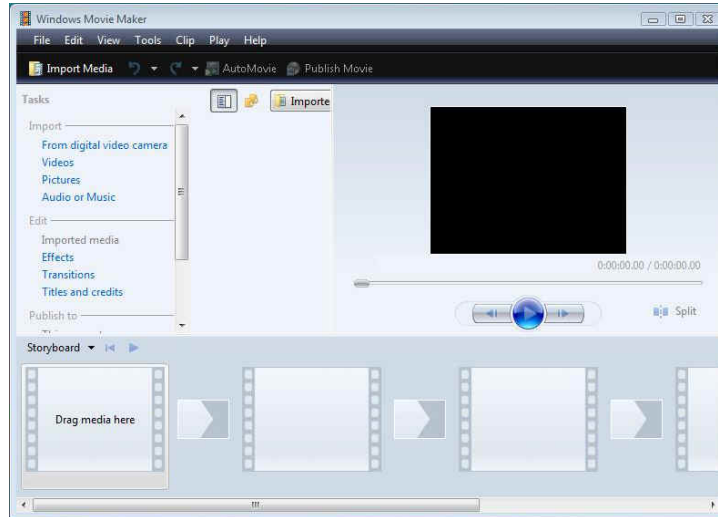
Windows Meeting Space lets you share files, a program, or your laptop anytime and anywhere.



Windows Meeting Space gives you the ability to share documents, programs, or your desktop with other people. Some advantages are: you can share your desktop or any program with other meeting participants; you and other meeting participants can distribute and co-edit documents; you can pass notes to other participants; you can connect to a network projector to give a presentation.

WINDOWS MOVIE MAKER

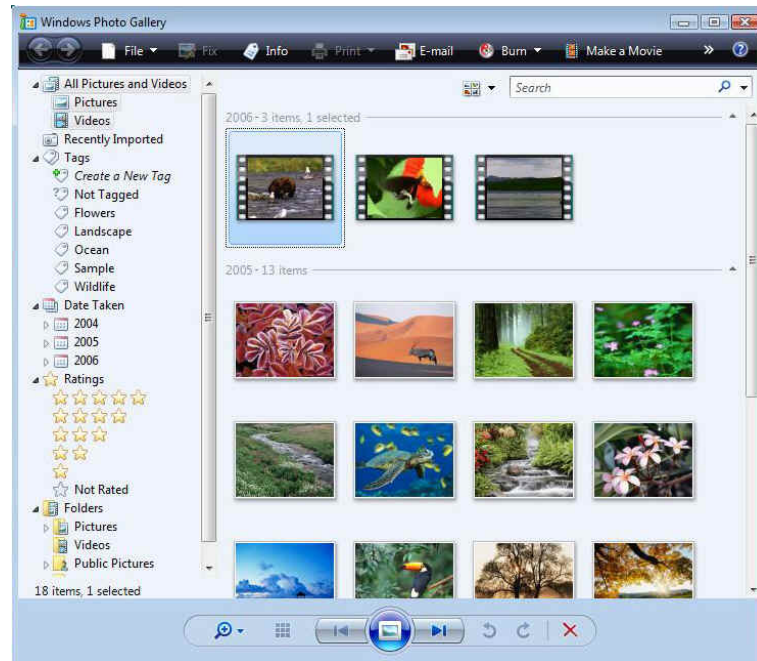
Windows Movie Maker helps you make your own movie using videos, digital pictures and movies.



With Windows Movie Maker, you can quickly and easily import, edit, and organize all of your digital home videos. New tools, such as new effects and transitions, and improved graphics performance help you manage and edit your home videos. You can include photos along with video when you create a movie, and even add narration and soundtracks. Once your movies are just the way you want them, you can easily burn them to DVD or share them with others through the Internet

WINDOWS PHOTO GALLERY

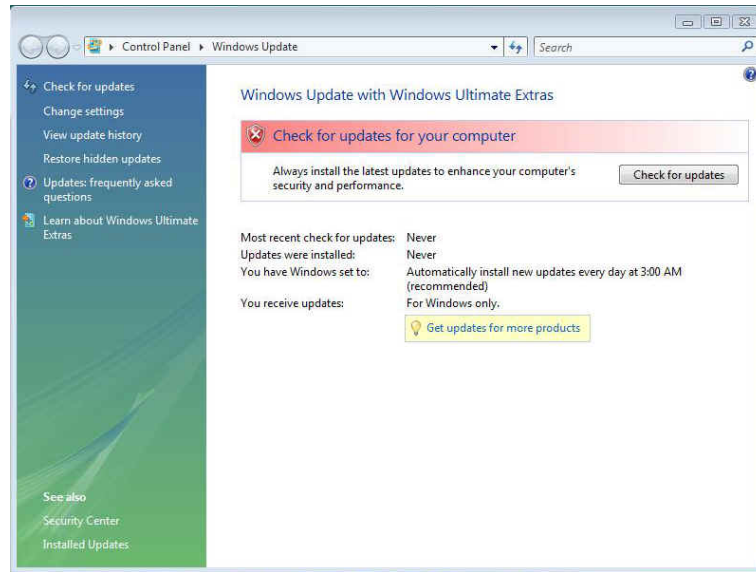
Windows Photo Gallery lets you view , edit, organize, and share your photos and videos.



Windows Photo Gallery in Windows Vista gives you the tools you need to easily organize, find, and view your photos and videos. You can edit, print, and share your photos from within Windows Photo Gallery, as well as transfer photos from your camera to your computer with a simple import process

WINDOWS UPDATE

Windows Update delivers software updates and drivers, and provide automatic updating options.



Windows Update keeps your computer up to date and more secure by automatically providing software updates to Microsoft Windows Vista. Updates can include upgrades to Windows Vista features, updates that improve reliability and performance, and updates that provide new security protections against malware and other potentially unwanted software.

Windows Update makes updating easy and minimizes disruption to your work. It's easy to start updating—when you set up Windows Vista, you can set options that enable Windows Update to automatically download and install updates for you—so you can "set it and forget it"

WINDOWS SIDEBAR AND GADGETS

As you use your computer to access more information, perform more tasks, and interact with more software applications, you increasingly face information overload. You open a web browser just to check the weather, open an application to view your calendar, and open a calculator program to simply add

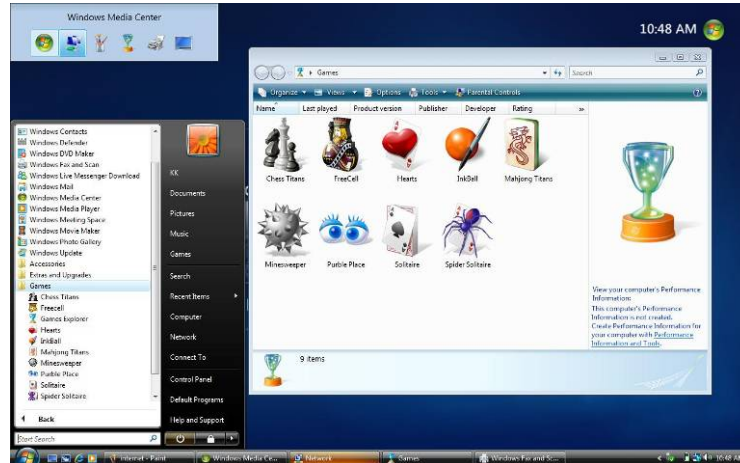
numbers. You need simple, specialized, and lightweight mini-applications that put information and tasks at your fingertips—no matter what you're doing.

Windows Sidebar boosts your personal productivity by providing instant access to gadgets—a wide variety of engaging, easy-to-use, and customizable mini-applications that offer information at a glance and provide easy access to frequently used tools



GAMING

If you are a parent, you now have a rich set of controls to ensure your children are only playing games that you consider appropriate. You can allow or restrict your children's access to games according to game title, rating, category, or content. Windows Vista supports six international rating standards and makes it easy for parents to manage and monitor their children's gaming experience



WINDOWS FLIP AND WINDOWS FLIP 3D

Windows Vista provides two entirely new features to manage windows: Windows Flip and Windows Flip 3D. Flip allows you to flip through open windows (by using Alt+Tab), providing a live thumbnail of each window, rather than just a generic icon and file name. Live thumbnails make it easier to quickly identify the window you want, particularly when multiple windows of the same kind are open. With Flip 3D, you can use the scroll wheel on your mouse to flip through open windows in a stack, and quickly locate and select the one you want to work with.



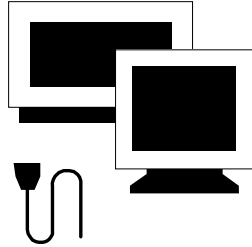
Use Flip to view and navigate more easily through open windows.

You can visit and browse each domain to experience the information and assistance that Windows Vista offers.

For more information, please refer to Microsoft's website:

<http://www.microsoft.com/windowsvista/features/default.aspx>

5 Connecting to Peripherals

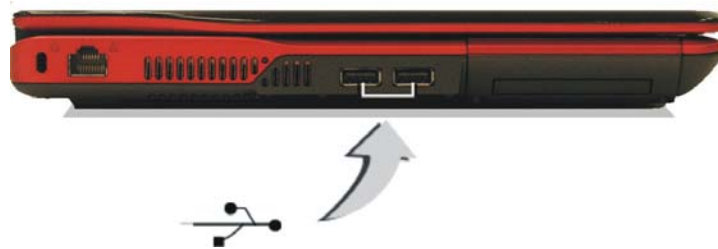


This chapter describes how you attach peripheral devices to your notebook. You can attach a printer or mouse; connect an external monitor and keyboard, or any other peripheral device. You will learn how to use these peripheral devices with the step-by-step instructions depicted in this chapter.

5.1 Using the USB Port

USB (Universal Serial Bus) is a hardware interface that enables you to connect multiple devices (such as printers, mice, keyboards, storage devices, joysticks, digital cameras, and video conference cameras, etc.) to your notebook computer, and up to 127 devices can be attached. Besides, USB's hot swap capability allows everything to be plugged in and unplugged without turning the system off.

Microsoft, HP, Compaq, Intel, Agere, NEC and Philip are seven core members of USB-IF to have worked on USB 2.0 standardization. USB 2.0 offers data transfer rate up to 480Mbps (megabits per second) compared to USB 1.1 devices, which transfer at speeds of 12Mbps. So, you could know that USB 2.0 can transfer data between the computer and its peripherals 40 times faster than USB 1.1. However, USB 2.0 is fully backward compatible, you will be able to use a USB 1.1 device in a USB 2.0 compliant system.



⚠ *Depending on your operational requirements, you may need to disable other ports in order to release system resource for the USB port.*

• *The USB bus distributes 0.5 amps (500 milliamps) of power through each port. For the purpose of power saving, please disconnect your USB device while not in use.*

5.2 Using the IEEE 1394 Port

IEEE 1394, also known as FireWire, is a high-bandwidth serial bus developed by Apple and Texas Instruments. IEEE 1394 supports 100, 200, and 400 Mbps (Megabit per second) transfer rates and is widely used for downloading video from digital camcorders to the computer. In addition to its high speed, IEEE 1394 enables isochronous (real-time) data transfer. This makes it ideal for devices that transfer high-bandwidth of data in real-time, such as video devices. It supports both Plug-and-Play and hot plugging, and also allows for the connection of up to 63 devices.

With built-in IEEE 1394 port, this computer enables the peripheral devices in transmitting digital video data or data backup. The Windows system will automatically recognize it after installing a suitable driver for it. Please visit Microsoft's web site for more information about it. Moreover, you should install the driver of peripheral device to connect with the IEEE 1394 port, for details please refer to the manual that comes with your peripheral device.



⚠ Please make sure that the external IEEE 1394 HDD box you purchase on local electronic store should provide external power adapter. There are different types of IEEE1394 HDD box and hard disk from different manufactures, the power consumption has varied range. If the power of the external IEEE 1394 HDD is supplied from the USB of this notebook, it may not run properly.

5.3 Using the External Monitor Port

Your computer has a 15-pin Monitor port for supporting any external CRT or LCD color monitor. You need a display signal cable (usually provided with the monitor). One end of the cable must have a 15-pin connector for the system.

To connect an external monitor:

1. Turn off your computer and make sure the monitor power switch is turned off.

⚠ The notebook computer must be powered off or suspended while the monitor is being connected. Although you can connect the external Monitor without power off the computer and the external monitor, however, it is harmful to both devices and it shortens the life of these devices.

2. Connect the connector cable of the monitor to the VGA port at the back of your computer. Secure the cable connection with the screws provided.
3. Connect the monitor power cable and plug it into a properly grounded wall outlet.
4. Turn on the power of the monitor.
5. Turn on your computer. Both the LCD panel and the monitor screen will show the display. Your computer is set at default to run at simultaneous display mode.
6. If you only want to show the display on the external monitor or projector and shut off the LCD display, you can use the <Fn> + <F3> hot-key to switch display type between LCD and external monitor. Keep pressing the hot-key until you get the display to external monitor only.



» Refer to Chapter 3 regarding the possible External CRT resolutions and how to change the display properties.

5.4 Using the Antenna Port

Your system is equipped with an antenna port and provides an antenna module for TV watching. .

To access the TV channel:

1. Turn on your system and make sure your notebook is positioned with the area for easily searching the TV channel.
2. Connect the antenna cable to the right side of the antenna port at your notebook.
3. Execute the **Windows Media Center** program for TV setting, TV watching, recording your favorite TV shows or burning your TV programs.

☞ *For more information, please refer to Microsoft's website, <http://www.microsoft.com/windowsxp/mediacenter/using/getstarted/default.mspx>.*

4. Reorient or relocate the receiving antenna if you cannot access the TV channel successfully.



5.5 Using the External Audio System

At the right side of your computer, you will find the built-in audio ports. You can connect Microphone jacks, earphone or powered speaker.

To connect to a audio jack:

1. Locate the audio port (Microphone, Headphone) that you want to use to the target device.
2. Plug the jack into the port on the front side of the system.

⚠ *If you use external speakers and experience the sound distortion or feedback, please lower the volume. Some factors is caused by too close locating the microphone and speakers from each other, moving away the external audio option from the unit may also help.*

5.6 Using the LAN Port

This notebook comes with an internal 10Base-T/100Base-TX LAN module that connects your computer to other computers/networks through a local area network (LAN) and supports data transfer rates at 10Mbps and can be up to 100Mbps. The 10Base-T standard also called Twisted Pair Ethernet is connected with RJ-45 connectors. The 100Base-TX is based on the older Ethernet standard. Because it is 10 times faster than Ethernet, it is often referred to as Fast Ethernet.

The built-in LAN module provides a standard RJ-45 connector.

To connect the twisted-pair cable to your LAN port:

1. Locate the twisted-pair cable in the accessories box in notebook shipping carton. Each end of the cable has a RJ-45 connector.
2. Connect one end of the cable into the network wall outlet or HUB.
3. Connect the other end of the cable into the computer RJ-45 LAN port.



5.7 Using the Wireless LAN

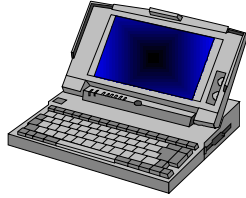
Wireless LAN is the major breakthrough in computer communication technology. It lets user connect to the LAN environment without using any wire to traditional RJ-45 jack. User can enjoy the wireless connection within the range of Access Point (AP) of LAN.

Access Point (AP) is the wireless transmission and receiving device, it generally connects to the server of a LAN environment or act as a LAN hub with wireless connection. Access point can be set in an office environment, airport, major railway station, etc. that depends on the construction of each country. In most case, you probably can use it at office, please consult with the network department of your company for more details.

This computer integrates built-in 802.11 a/b/g/n wireless LAN module. IEEE 802.11b standard supports 11 Mbps wireless connection speed. However, IEEE 802.11g supports 54Mbps wireless connection speed, and is backward compatible with the slower 802.11b.

Wireless LAN module is similar to LAN module. You need to install software driver before using it. Please refer to chapter 2.5 on how to install the driver.

6 Customizing Your Notebook



Your computer uses the Phoenix BIOS Setup program that allows you to set several system configuration in changing the way your computer performs. This includes your system time and date, disk drive configuration and password setup. This information is then stored in the CMOS RAM and will remain permanent unless you change it again. This chapter discusses on how you will activate the BIOS Setup program and change the system configuration to suit your desired operation. You must be careful to set the configuration properly in order for your computer to run smoothly. If you are not sure of any settings, contact your dealer.

6.1 Running the BIOS Setup Program

Your computer is likely to have been properly setup and configured by your dealer prior to delivery. However, you may find it necessary to use the computer's BIOS (Basic Input-Output System) Setup program to change system configuration information, such as the current date and time, or your hard disk drive type. The Setup program can be accessed when you power on the system and pressing the <F2> function key.

The settings that you specify within the Setup program are recorded in a special area memory called the **CMOS RAM**. This memory is backed up by a battery so that it will not be erased when you turn off or reset the system.

Whenever you turn on the computer, the system will read the settings stored in the CMOS RAM and compare them to the equipment check conducted during the Power On Self Test (POST). If an error occurs, an error message will be displayed on the screen, and you will then be prompted to run the Setup Program.

As the POST (Power-On Self Test) executes during the boot up process, the screen will display the following message:

Press <F2> to Enter SETUP

Press the <F2> key to run the BIOS Setup program. The BIOS Setup program is organized into five menus which you can select using the <--> and <--> keys. To move from one option to another, you use the up and down arrow keys while using the <F5> and <F6>, or <+> and <-> keys to change the settings. On the right hand side of the screen are some brief help descriptions of each item you want to change.

On the BIOS Setup program, you will find the following parts on the screen:

- **Item Specific Help**
The right side of the screen. This area describes each parameter and its available settings.
- **Menu Bar**
The top line of the screen. Each of the five selections displays its own screen.
- **Parameters**
The left side of the screen. This area lists the parameters and their current settings.
- **Key Status Bar**
The bottom part of the screen. These lines display the keys available to move the cursor, select a particular function and so forth.

To exit the BIOS Setup program, simply press the <Esc> key and select from the Exit menu whether you want to Save changes and exit; Discard Changes and exit.

6.2 Using the Main Menu Setup

Phoenix BIOS Setup Utility				
Main	Advanced	Security	Boot	Exit
System Time: [07:54:32] System Date: [10/12/2007] ▶ Primary Master [MATSHITADVD-RAM UJ-85JS-(PM)] ▶ Secondary Master [WDC WD1600BEVS-07RST0-(S1)] CPU Type Intel (R) Core (TM)2 Duo CPU CPU Speed T7250 2.0GHz System Memory: 640 KB Extended Memory: 1038336 KB BIOS Version: 0.4A-1471-0011				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
 Allows you to change the system time using the hour: minute: second format of the computer.
 Enter the current time for each field and use the <Tab>, <Shift>+<Tab>, or <Enter> key to move from one field or back to another.
 You can also change the system time from your operating system.

- **System Date**
Allows you to set the system date using the month/date/year format. Enter the current time for each field and use the <Tab>, <Shift>+<Tab>, or <Enter> key to move from one field or back to another.
You can also change the system time from your operating system.
- **IDE Primary/Master**
This field displays various parameters for the hard disk drive. If type [Auto] is selected, the system automatically sets these parameters. If type [User] is selected, Cylinders, Heads and Sectors and other value can be edited.
- **SATA Port 1**
This field is for information only as the BIOS automatically detects the drive.
- **CPU Type**
This field reports the CPU type information detected by the BIOS during Power-On Self-Test (POST).
- **CPU Speed**
This field reports the CPU speed information detected by the BIOS during Power-On Self-Test (POST).
- **System Memory**
This field reports the amount of base (or conventional) memory found by the BIOS during Power-On Self-Test (POST).
- **Extended Memory**
This field reports the amount of extended memory found by the BIOS during Power-On Self-Test (POST).

- BIOS Version
This field is for information only as the BIOS displays the BIOS version during the Power-On Self-Test (POST).

6.2.1 PRIMARY MASTER SUB-MENU

Phoenix BIOS Setup Utility		
Main		
Primary Master [MATSHITADVD-RAM UJ-85JS-(PM)]	Item Specific Help	
Type:	[Auto]	User = you enter parameters of hard-disk drive installed at this connection.
Multi-Sector Transfers:	[Disabled]	Auto = autotypes hard-disk drive installed here.
LBA Mode Control:	[Disabled]	CD-ROM = a CD-ROM drive is installed here.
32 Bit I/O:	[Disabled]	ATAPI Removable = removable disk drive is installed here.
Transfer Mode:	[FPIO 4 / DMA 2]	
Ultra DMA Mode:	[Mode 2]	
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults Esc Exit ←-→ Select Menu Enter Select ▶ Sub-Menu F10 Save and Exit		

Use the Type field to select the drive type installed. You can select different drive types as **CD-DVD**, **User**, **Auto** or **None** by pressing <Space> bar. Set this option to Auto so your computer will automatically detect the drive type during power on. Set this option to None when your computer is not installed any devices. Press <Esc> to return to the Main Menu.

6.2.2 SECONDARY MASTER SUB-MENU

Phoenix BIOS Setup Utility		
Main		
Secondary Master [WDC WD1600BEVS-07RST0-(S1)]		Item Specific Help
Type:	[Auto] LBA Format	User = you enter parameters of hard-disk drive installed at this connection. Auto = autotypes hard-disk drive installed here.
Total Sector:	312581808	CD-ROM = a CD-ROM drive is installed here.
Maximum Capacity:	160GB SATA1	ATAPI Removable = removable disk drive is installed here.
Multi-Sector Transfers:	[16 Sectors]	
LBA Mode Control:	[Enabled]	
32 Bit I/O:	[Disabled]	
Transfer Mode:	[FPIO 4 / DMA 2]	
Ultra DMA Mode:	[Mode 5]	
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults Esc Exit ←--> Select Menu Enter Select ▶ Sub-Menu F10 Save and Exit		

Use the Type field to select the drive type installed. You can select different drive types by pressing <Space> bar. Set this option to Auto so your computer will automatically detect the drive type during power on. Set this option to None when your computer is not installed any devices. Press <Esc> to return to the Main Menu.

6.3 Using the Advanced CMOS Setup

Phoenix BIOS Setup Utility				
Main	Advanced	Security	Boot	Exit
			Item Specific Help	
Legacy USB Support		[Enabled]	Enable support for	
Disable Logo screen:		[Disabled]	Legacy Universal Serial Bus	
SATA – Device 31, Function 2:		[Enhanced]		
AHCI Configuration:		[Enabled]		
F1 Help	↑ ↓ Select Item	-/+ Change Values	F9 Setup Defaults	
Esc Exit	←--> Select Menu	Enter Select ▶ Sub-Menu	F10 Save and Exit	

- Legacy USB Support
Enable or disable the USB Bus support when in connection with USB device.
- Disable Logo Screen
Lets you display POST screen or Logo screen by choosing “Enabled” or “Disabled”, respectively.
- SATA – Device 31, Function 2:
This function lets you choose “Compatible” or “Enhanced” to define the SATA or PATA controller mode. For enabling the AHCI configuration, you should choose “Enhanced” option first.

- AHCI Configuration
Lets you choose “Enabled” or “Disabled” to activate or inactive the AHCI mode for Windows Vista driver.

6.4 Using Security Menu Setup

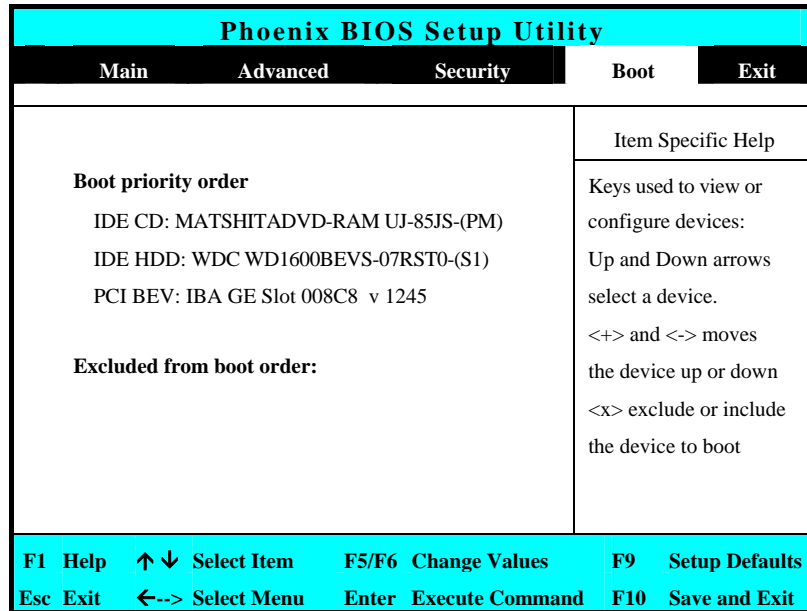
Phoenix BIOS Setup Utility		
Main	Advanced	Security
		Item Specific Help
Supervisor Password Is:	Clear	Supervisor Password controls access to the setup utility.
User Password Is:	Clear	
Set Supervisor Password	[Enter]	
Set User Password	[Enter]	
Fixed disk boot sector	[Normal]	
Password on boot	[Disabled]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

- Supervisor Password Is
Set/Clear selections show that the notebook is under controlled by Supervisor Password or not.
- User Password Is
Set/Clear selections show that the notebook is under controlled by User Password or not.

- **Set Supervisor Password**
Supervisor password gives you the authority in accessing the setup utility. You also need to enter this password in system booting and resuming from suspend mode. When you press <Enter> in this field, the Set Supervisor Password dialog box appears. Enter a new password with up to 8 alpha-numeric characters, and then re-enter it for confirmation.
- **Set User Password**
This field is only available when Supervisor Password has set. Enter the user password when boot the system or resume from suspend mode. But if the Write Protect is set in the Fixed disk boot sector field, you should enter a supervisor password to access the fixed disk when boot the system or resume from suspend mode.
- **Fixed disk boot sector**
If you set this field to Write Protect, the write protect boot sector on hard disk will protect against viruses. In this situation, only the supervisor can access the Boot Sector of fixed disk.
- **Password on Boot**
If you set this field to Enabled, your computer will always ask for the password every time you boot your computer.

6.5 Using the Boot Setup

This item allows you to set the search drive sequence where the system will try to boot up first.



This page allows you to set the search drive sequence where the system will try to boot up first.

To select the boot device, you can setup “Enabled” or “Disabled” for booting from LAN, or you can search drive sequence by using the up or down arrow key, then press <+> to move up the device in the list or press <-> to move down the device in the list. To exit from this menu, press <Esc>.

6.6 How to Exit the Setup Program

There are two choices to escape from the Setup program.

Phoenix BIOS Setup Utility				
Main	Advanced	Security	Boot	Exit
Exit Saving Changes Exit Discarding Changes Load Setup Defaults Discard Changes Save Changes				Item Specific Help Exit System Setup and save your changes to CMOS.
F1	Help	↑ ↓	Select Item	F5/F6 Change Values
Esc	Exit	← →	Select Menu	Enter Execute Command
				F9 Setup Defaults
				F10 Save and Exit

- **Exit Saving Changes**
Saves all changes to CMOS while running the BIOS setup program and exit from the system setup program.
- **Exit Discarding Changes**
Allows you to discard all changes made while running the BIOS setup program and exit from the system setup program.
- **Load Setup Defaults**
Lets you load the default values for all setup items.
- **Discard Changes**
Load previous values from CMOS for all SETUP items.

- Saving Changes
Save Setup data to CMOS.

6.7 How to Upgrade the BIOS

Your computer uses EPROM Flash BIOS chip that allows you to easily upgrade the BIOS program. When you update the BIOS, any customized settings you made are lost.

To upgrade the BIOS:

1. Put in the BIOS Update data into the USB device.
2. Power on the system with the USB device inserted in the USB port.
3. On the DOS prompt, type the following command.

```
A:\>Phlash XXXXXX.ROM (BIOS filename) or  
A:\>XXXXXX.BAT (Batch file for BIOS file)
```

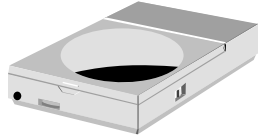
Press <Enter> to run this BIOS utility. After the system has been successfully run this program, a message similar to the following appears:

```
Flash memory has been successfully programmed,  
press any key to restart the system. If the  
system does not restart, turn it off, then turn  
on again.
```

4. Press any key to restart this system.

Contact your dealer for the latest BIOS update file.

7 Using Options



This chapter describes the advanced features and expandable architecture in your notebook. You can upgrade your system for specific requirements.

System Upgrade

This section provides some steps in doing system upgrade for your notebook computer. The upgrade procedures include the following:

7.1 Memory Upgrade

Your notebook computer offers 200-pin SODIMM (Small Outline Dual Inline Memory Module) at least 512 MB DDRII-SDRAM. The memory compartment is located inside your computer. The table below lists the possible combinations of different memory module and memory size.

⚠ Please contact dealer for changing or adding DDRII-SDRAM module. It is not available for users to change it by themselves.

Based Memory	Installing Memory	Total
512 MB	0 MB	512 MB
512 MB	512 MB	1024 MB
512 MB	1024MB	1536 MB
512 MB	2048MB	2560 MB
1024MB	0 MB	1024 MB
1024MB	512 MB	1536 MB
1024MB	1024MB	2048 MB
1024MB	2048MB	3072 MB
2048MB	0 MB	2048 MB
2048MB	512 MB	2560 MB
2048MB	1024MB	3072 MB
2048MB	2048MB	4096 MB

INSTALLING MEMORY MODULE

Your computer comes with standard 512MB, 1024MB or 2048 MB of synchronous DDRII SDRAM. You can increase system memory to a maximum of 4096 MB in the system, by installing two small outline double inline memory modules (SO-DIMMs) with installed base memory in the system.

The 512MB, 1024MB and 2048MB memory modules are available:

To install the memory module:

1. Make sure the system is powered off, the battery also is removed and that no peripheral devices are attached.
2. Turn the computer upside-down and locate the screws that secure the DIMM door at the underside of the notebook.



3. Remove the screws and open the DIMM cover by your finger.
4. Locate the memory module into the empty memory module sockets. (Your system comes with one memory module already installed in the socket.)

⚠ *Avoid touching the exposed components inside the system. Doing so may damage the system.*

5. Insert the connector of the memory module into the socket. Make sure the notch of the memory module fits the nose of the socket.
 - Hold the memory module at a 30-degree angle and push its connector into the memory socket of the notebook.
 - Press down on the edge of the memory module until the locking tabs on both sides is locked.
6. Put the DIMM door back and secure the screw on the DIMM door.
7. Turn the system over.

To remove a memory module, push the locking tabs aside from the memory module until the module pops up. Then, remove the memory module.

7.2 Hard Disk Upgrade

Your notebook computer offers one 2.5" format, 9.5mm height hard disk. If the volume does not fit your need or it is crashed, you can upgrade it by replacing with new hard disk. Please do the following steps to change it.

1. Remove the screw and open the cover by lifting its upper side cover.



2. Take out the hard disk from the compartment by finger carefully
3. Remove the connector from the hard disk gently.
4. Remove the crane screws located at each side of the hard disk.
5. Rotate and tighten the crane screws to the new hard disk.
6. Attach the connector to the new hard disk precisely.
7. Place the hard disk back to the compartment.
8. Cover the lid, then rotate and tighten the screws.
9. Set the boot device as DVD/CD-RW Combo drive and Primary Master as Auto on BIOS setup menu. Please refer to Chapter 6 about the setting of BIOS setup menu. Then, boot the system by using WinVista CD-ROM and the system will detect the hard disk automatically and prompt you how to format the new disk.

⚠ *Please tighten the screws located at each side of the hard disk before operating the hard disk. Any vibration may cause damage for the running hard disk.*

⚠ *Please contact dealer or certified technician for changing the hard disk drive. The damage of changing HDD resulting from users may not be under warranty*

7.3 Wireless Module Installation

This computer uses mini card wireless LAN module for wireless connection.

⚠ *Please contact dealer for adding or changing this module. Any damage that caused by inappropriately adding or changing this module will not be under warranty*

8 Caring for Your Notebook



Your Notebook PC is a fully compatible portable personal computer with the latest features in mobile computing and multimedia technology. Lightweight and compact, your Notebook PC runs on a whole wide range of general business, personal productivity, and professional applications, it is ideal for use in the office, at home, and on the road.

Your Notebook PC also allows you for several levels of customization and expansion that are previously available only on desktop PCs.

8.1 Important Safety Instructions

Portable computers take the most beating from end users. This section gives you detailed information about how to maintain a safe working environment while using the notebook computer. You can maintain its condition and performance by following these guidelines. Please read it carefully to ensure maximum safety.

- Before cleaning the notebook computer, make sure it is disconnected from any external power supplies (i.e. AC adapter, car adapter and so on).
- When cleaning, do not use liquid or sprayed detergent for cleaning. Instead, use moisture sheet or a cloth for cleaning.
- The socket-outlet shall be installed near the notebook computer and shall be easily accessible.
- Please keep the notebook computer from humidity.
- Lay the notebook computer on a reliable surface when installing. A drop or fall may cause injury.
- The openings on the enclosure are for air convection hence the notebook computer can be protected from overheating. **DO NOT COVER THE OPENINGS.**
- Be careful of using power supply. The notebook computer has specific power requirements.
- Use only a power adapter approved for use with this notebook computer.
- The power adapter may have a 2-prong plug. This is an important safety feature. A compatible outlet is required. If it is not available, find a qualified electrician to install one.

- While unplugging the power cord, disconnect it by the plug head, not by its wire.
- Make sure the socket and any extension cords you may use can support the total current load of all the connected devices.
- Though your AC adapter is suitable for universal international voltage, it still requires a stable and continual power supply. Make sure the voltage of the power source when connect the notebook computer to the power outlet. If your are unsure of your local power specifications, consult your dealer or local power company.
- Place the power cord in such a way that people can not step on it. Do not place anything over the power cord.
- All cautions and warnings on the notebook computer should be noted.
- If the notebook computer is not in use for a long time, disconnect it from mains to avoid possible damage by transient over-voltage.
- Never pour any liquid into openings as this may cause fire or electrical shock.
- Never open the body of notebook computer. For safety reason, the notebook computer should only be opened by qualified service personnel.
- If one of the following situations arises, have the notebook computer checked by service personnel:
 - ə The power cord or plug is damaged.
 - ə Liquid has penetrated into the notebook computer.
 - ə The notebook computer has been exposed to moisture.
 - ə The notebook computer has not worked well or you can not get it work according to user's manual.

- ⊖ The notebook computer has dropped and damaged.
- ⊖ The notebook computer has obvious sign of breakage.
- Do not leave this notebook computer in an environment unconditioned. Storage temperature above 60°C (140°F) may damage the notebook computer.
- An approved power cord has to be used for the notebook computer's power supply. For a rated current up to 6A and an equipment weight more than 3 kg, a power cord not lighter than H05VV-F, 2G, 0.75mm², has to be used.
- To avoid any damage happened to the internal device, you should first disconnect the AC adapter and remove the battery pack from the notebook when replacing any internal device.

The sound pressure level at the operator's position according to IEC 60704-1 is equal or less than 70dB(A).

8.2 Cleaning Your Computer

When it is necessary to clean the plastic case and keyboard, use a soft, lint-free cloth, slightly dampened with a mild detergent solution or use the contents of any commercially available computer cleaning kit.

Never use alcohol, petroleum-based solvents, or harsh detergents to clean the notebook. Also never spray any liquids directly on the computer case, keyboard, or screen. If the liquid-crystal display (LCD) screen has become smeared or dusty, clean the screen by first applying a mild glass cleaner to a soft, clean, lint-free cloth, and gently wipe the glass. Never apply liquids directly on the screen surface. Moreover, do not use paper towels to clean the display screen. Paper can scratch the display screen matte.

8.3 Maintaining the LCD Quality

When it comes to screen problems, heat plays a big part. After a good working session, the typical routine is to shut the machine and close the cover. But the display surface - no matter what type it is - and the components inside the computer radiates heat; when you close the cover, you trap the heat against the screen. Leave the computer's cover open for about ten minutes while the heat disperses. Make this a habit.

You should also enable the power management of your computer to turn off the LCD power and display when the system is in inactivity for some time. Adding screen savers is also acceptable.

Follow the safety guidelines mentioned earlier and how to clean your computer.

8.4 Maintaining Your Hard Disk

Losing your data has the same consequences as a system break down. Users must make it a habit of doing hard disk maintenance every week or so. Here is some maintenance you could do:

- Always back up your data files from your hard disk.
- Install the virus detecting program to monitor virus that could tamper your files.
- Use SCANDISK once in a while to correct any errors found in the directory and File Allocation Table. This will also free up space from any unused sectors.
- Never move or raise the computer while the hard disk is being accessed, most especially don't jar the hard disk as this may cause a hard disk crash.

- Use hard disk maintenance programs like **Disk Defragmenter** of Windows. These reorganize your hard disk by eliminating fragmentation and improving your hard disk access time.
- Install a system password in your computer so others won't be able to use the hard disk.

8.5 Battery Care Guidelines

The battery pack furnished with the computer requires reasonable care and handling to ensure efficient operation and maximum life. There is a risk of fire and chemical burn if the battery pack is handled improperly.

To ensure that the battery pack endures normal life cycle, always observe the following precautions when handling the battery pack:

- Handle batteries carefully. Do not try to disassemble, crush, puncture, open, drop, mutilate, short external contacts, disposed of in water or fire, or expose it to temperatures higher than 60 C.
- Recharge batteries only as described in this manual and only in ventilated areas. Never use an external charger other than the one supplied with your computer.
- Do not leave batteries in hot locations for more than a day or two.
- Do not leave your battery in your computer for longer than 1 month without plugging in the power adapter.
- Do not leave battery in storage for more than 2 months without recharging it to prevent over discharge. Over discharge will hurt the battery
- Dispose dead battery properly to protect the environment. The batteries contain hazardous chemicals and should not be thrown out with household or office trash.

- You should always discharge your battery before recharging it on either of these two conditions: first, this is the first time you start to use your battery; second, you had not charge the battery for more than 2 months. To discharge the battery, please execute the "Battery Refresh" function in the BIOS Setup Utility.

8.6 When You Travel

For safety and convenience when traveling, please follow these instructions:

- Back up all needed files on your hard disk before traveling.
- Recharge your battery overnight to ensure full battery power before you leave.
- Don't forget to bring along the AC adapter and extra battery pack.
- Try to bring backup software as well.
- Check the voltage rating and the outlet type of your destination. If the power cord of the adapter is different, then you need to purchase a suitable one. Consult your dealer.
- Carry your computer in its carrying case or in a briefcase. Never check-in the computer as a luggage.
- Remember to apply those power saving features and techniques to save battery power.

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APPENDIX A

System Specification



This appendix gives information on the technical and hardware specifications of your computer. Please note that the information mentioned here may not be exactly the same with your computer as specification is subject to change without notice or modifying this manual.

Designed with an advanced modular architecture, your Notebook PC also allows you for several levels of customization and expansion that are previously available only on desktop PCs.

PROCESSOR UNIT

- Intel® Core™ 2 Duo processor
T5450/T5550 for 1.66/1.66 GHz, 667MHz FSB, 2MB integrated L2 cache for the processor.
- Intel® Core™ 2 Duo processor
T7250 for 2.00 GHz, 800MHz FSB, 2MB integrated L2 cache for the processor.
- Intel® Core™ 2 Duo processor
T7300/T7500 for 2.0/2.2 GHz, 800MHz FSB, 4MB integrated L2 cache for the processor.

SYSTEM MEMORY

- Two 200-pin memory slots.
- User-upgradeable to maximum 4GB using 200-pin SODIMM 512MB, 1024MB or 2048MB modules
- DDRII –667 SDRAM modules

LCD DISPLAY

- 13.3" WXGA Color TFT LCD, 1280x800
- Maximum 16M true colors on all LCD display

VGA SYSTEM

- Embedded with Intel GM965 graphic engine
- Maximum 16 million colors on LCD display at 1280x800 resolution for 13.3" LCD

- Maximum 16 million colors on external monitor or projector at 1280x1024 resolution (Non-Interlaced)

STORAGE

- 2.5" Format 9.5mm High SATA HDD Module; Bus Mastering, Ultra DMA ATA-150 Support for LBA Scheme
- Enhanced IDE bootable DVD Dual or DVD Super-Multi drive module
- 4-in-1 (SD, MS, MMC, and MS_Pro) card reader

AUDIO SYSTEM

- Compliant with Intel HD Audio (Azalia).
- H/W Audio Sound Blaster 16 compatible
- Audio input jacks for microphone (MIC)
- Audio output jack for external speaker or headphone (Line-Out)
- Digitized audio SPDIF port for high quality signal transmission.
- Sound volume adjust by K/B Hot-Keys

EXPRESSCARD

One 54mm, 26-pin ExpressCard slot

TOUCHPAD

Integrated touchpad (Serial/USB mouse) pointing device with 2 click buttons

KEYBOARD

- Full-sized 87-keys keyboard with Windows systems hot-keys, inverted T-cursor keys, 10 hot keys, 12 function keys, and embedded numeric keypad
- Provides international language keyboard

FLASH BIOS

512K Flash ROM BIOS for easy BIOS upgrade

I/O PORTS

- 1 x VGA Port
- 3 x Universal Serial Bus (USB 2.0)
- 4 in 1 Card Reader Socket
- 1 x IEEE 1394 port (BTO)
- 1 x 10/100/1000 Mbps LAN port

WIRELESS DEVICES

Intel® Wireless WiFi Link 4965AGN Network Connection (802.11a/b/g/n), Mini Card.

AC/DC POWER SUPPLY ADAPTER

Universal auto-switching (100V~240V) 65W adapter, 20 Volt

BATTERY

- Rechargeable 6 Cells Li-ion battery pack with Smart Battery function
- Approximately 3 Hours (for Battery Mark) Battery Life

WEIGHT AND DIMENSION

- 328 (W) x 247 (D) x 36.6 ~ 38 (H) mm
- Approximately 2.3 kg