TOSHIBA

Satellite® M20 Series Resource Guide

NOTE Keep this guide in a convenient place to access important information about your computer.

If you need assistance, use one of the following:

❖ Toshiba Global Support Centre
Calling within the United States (800) 457-7777
Calling from outside the United States (949) 859-4273

Please fill in for your reference and future use:

Model name_____

Part number_____

Serial number_____

⚠WARNING Handling the cord on this product will expose you to lead, a chemical known to the State of California to cause birth defects or other reproductive harm. ***Wash hands after handling***.

Contents

Regulatory information
Model: Satellite ® P25 Series

ReWritable CD/DVD Drives

The computer system you purchased may include a ReWritable CD and/or DVD drive(s), among the most advanced data storage technologies available. As with any new technology, you must read and follow all set-up and usage instructions in the applicable user guides and/or manuals enclosed. If you fail to do so, this product may not function properly and you may lose data or suffer other damage. **TOSHIBA AMERICA** INFORMATION SYSTEMS ("TOSHIBA"), ITS AFFILIATES AND SUPPLIERS DO NOT WARRANT THAT OPERATION OF THE PRODUCT WILL BE UNINTERRUPTED OR ERROR FREE. YOU AGREE THAT TOSHIBA, ITS AFFILIATES AND SUPPLIERS SHALL HAVE NO RESPONSIBILITY FOR DAMAGE TO OR LOSS OF ANY BUSINESS, PROFITS, PROGRAMS, DATA OR REMOVABLE STORAGE MEDIA ARISING OUT OF OR RESULTING FROM THE USE OF THE PRODUCT, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.

Protection of Stored Data

For your important data, please make periodic back-up copies of all the data stored on the hard disk or other storage devices as a precaution against possible failures, alteration, or loss of the data. **IF YOUR DATA IS ALTERED OR LOST DUE TO ANY TROUBLE, FAILURE OR MALFUNCTION OF THE HARD DISK DRIVE OR OTHER STORAGE DEVICES AND THE DATA CANNOT BE RECOVERED, TOSHIBA SHALL NOT BE LIABLE FOR ANY DAMAGE OR LOSS OF DATA, OR ANY OTHER DAMAGE RESULTING THEREFROM. WHEN COPYING OR TRANSFERRING YOUR DATA, PLEASE BE SURE TO CONFIRM WHETHER THE DATA HAS BEEN SUCCESSFULLY COPIED OR TRANSFERRED. TOSHIBA DISCLAIMS ANY LIABILITY FOR THE FAILURE TO COPY OR TRANSFER THE DATA CORRECTLY.**

Critical Applications

The computer you have purchased is not designed for any "critical applications." "Critical applications" means life support systems, medical applications, connections to implanted medical devices, commercial transportation, nuclear facilities or systems or any other applications where product failure could lead to injury to persons or loss of life or catastrophic property damage. **ACCORDINGLY, TOSHIBA, ITS AFFILIATES AND SUPPLIERS DISCLAIM ANY AND ALL LIABILITY ARISING OUT OF THE USE OF THE COMPUTER PRODUCTS IN ANY CRITICAL APPLICATIONS. IF YOU USE THE COMPUTER**

PRODUCTS IN A CRITICAL APPLICATION, YOU, AND NOT TOSHIBA, ASSUME FULL RESPONSIBILITY FOR SUCH USE.

FCC Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

❖ Reorient or relocate the receiving antenna.

❖ Increase the separation between the equipment and receiver.

❖ Connect the equipment 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   Only Peripherals complying with the FCC Class B limits may be attached to this equipment. Operation with noncompliant peripherals or peripherals not recommended by Toshiba is likely to result in interference to radio and TV reception. Shielded cables must be used between the external devices and the computer's or expansion unit's serial port, parallel port, monitor port, USB port, PS/2 port®, i.LINK® port and microphone jack. Changes or modifications made to this equipment not expressly approved by Toshiba or parties authorized by Toshiba could void the user's authority to operate the equipment.

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

❖ This device may not cause harmful interference.

❖ This device must accept any interference received, including interference that may cause undesired operation.

Contact:

Toshiba America Information Systems, Inc.
9740 Irvine Blvd.
Irvine, CA 92618-1697
(949) 583-3000

Industry Canada Requirement

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conformé à la norme NMB-003 du Canada.

FCC Requirements

The following information is pursuant to FCC CFR 47, Part 68 and refers to internal modems.

Installation

When you are ready to install or use the modem, call your local telephone company and give them the following information:

❖ The telephone number of the line to which you will connect the modem.

❖ The FCC registration number of the modem.

❖ The ringer equivalence number (REN) of the modem, which is 0.6B.

The modem connects to the telephone line by means of a standard jack called the USOC RJ11C.

Type of Service

Your modem is designed to be used on standard-device telephone lines. Connection to telephone company-provided coin service (central office implemented systems) is prohibited. Connection to party lines service is subject to State tariffs. If you have any questions about your telephone line, such as how many pieces of equipment you can connect to it, the telephone company will provide this information upon request.

Telephone Company Procedures

The goal of the telephone company is to provide you with the best service it can. In order to do this, it may occasionally be necessary for them to make changes in their equipment, operations or procedures. If these changes might affect your service or the operation of your equipment, the telephone company will give you notice, in writing, to allow you to make any changes necessary to maintain uninterrupted service.

If Problems Arise

If any of your telephone equipment is not operating properly, you should immediately remove it from your telephone line, as it may cause harm to the telephone network. If the telephone company notes a problem, they may temporarily discontinue service. When practical, they will notify you in advance of this disconnection. If advance notice is not feasible, you will be notified as soon as possible. When you are notified, you will be given the opportunity to correct the problem and informed of your right to file a complaint with the FCC. In the event repairs are ever needed on your modem, they should be performed by Toshiba Corporation, Toshiba America Information Systems, Inc. or an authorized representative of Toshiba.

Disconnection

If you should ever decide to permanently disconnect your modem from its present line, please call the telephone company and let them know of this change.

Fax Branding

The Telephone Consumer Protection Act of 1991 makes it unlawful to use a computer or other electronic device to send any message via a telephone fax machine unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity or individual sending the message and the telephone number of the sending machine or such business, other entity or individual.

In order to program this information into your fax modem, you should complete the setup for your fax software before sending a message.

Instructions for IC CS-03 certified equipment

1   NOTICE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

2   The user manual of analog equipment must contain the equipment's Ringer Equivalence Number (REN) and an explanation notice similar to the following:

The Ringer Equivalence Number (REN) of this device can be found on the label affixed to your computer.

NOTICE: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

3 The standard connecting arrangement (telephone jack type) for this equipment is jack type(s): USOC RJ11C.

Wireless LAN and your Health

Wireless LAN products, like other radio devices, emit radio frequency electromagnetic energy. The level of energy emitted by Wireless LAN devices however is far much less than the electromagnetic energy emitted by wireless devices like for example mobile phones.

Because Wireless LAN products operate within the guidelines found in radio frequency safety standards and recommendations, TOSHIBA believes Wireless LAN is safe for use by consumers. 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 Wireless LAN may be restricted by the proprietor of the building or responsible representatives of the organization. These situations may for example include:

❖ Using the Wireless LAN equipment on board of airplanes, or

❖ In any other environment where the risk of interference to other devices or services is perceived or identified as harmful.

If you are uncertain of the policy that applies on the use of wireless devices in a specific organization or environment (e.g. airports), you are encouraged to ask for authorization to use the Wireless LAN device prior to turning on the equipment.

Regulatory Information

The TOSHIBA Wireless LAN Mini PCI Card must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. This device complies with the following radio frequency and safety standards.

Canada – Industry Canada (IC)

This device complies with RSS 210 of Industry Canada.

The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's website www.hc-sc.gc.ca/rpb. The RF device shall not be

co-located with any other transmitter that has not been tested with this device.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of this device.

L 'utilisation de ce dispositif est autorisée seulement aux conditions suivantes: (1) il ne doit pas produire de brouillage et (2) l' utilisateur du dispositif doit étre prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

The term "IC" before the equipment certification number only signifies that the Industry Canada technical specifications were met.

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 empecher que cet appareil cause du brouillage au service faisant l'objet d'une licence, il doit etre utilize a l'interieur et devrait etre place loin des fenetres afin de Fournier un ecram de blindage maximal. Si le matriel (ou son antenne d'emission) est installe a l'exterieur, il doit faire l'objet d'une licence.

Europe – EU Declaration of Conformity

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC with essential test suites as per standards:

❖ EN 60950 Safety of Information Technology equipment

❖ ETS 300 328 Technical requirements for radio equipment

❖ ETS 300 826 General EMC requirements for radio equipment.

België/ Belgique:	For outdoor usage only channel 10 (2457 MHz) and 11 (2462 MHz) is allowed.
	For private usage outside buildings across public grounds over less than 300m no special registration with IBPT/BIPT is required. Registration to IBPT/BIPT is required for private usage outside buildings across public grounds over more than 300m. An IBPT/BIPT license is required for public usage outside building. For registration and license please contact IBPT/BIPT.
	Gebruik buiten gebouw alleen op kanalen 10 (2457 MHz) en 11 (2462 MHz). Voor privé-gebruik buiten gebouw over publieke groud over afstand kleiner dan 300m geen registratie bij BIPT/IBPT nodig; voor gebruik over afstand groter dan 300m is wel registratie bij BIPT/IBPT nodig. Voor publiek gebruik buiten gebouwen is licentie van BIPT/IBPT verplicht. Voor registratie of licentie kunt u contact opnemen met BIPT.

	L'utilisation en extérieur est autorisé sur le canal 10 (2457 MHz) et 11 (2462 MHz). Dans le cas d'une utilisation privée, a l'extérieur d'un bâtiment, audessus d'un espace public, aucun enregistrement n'est nécessaire pour une distance de moins de 300m. Pour une distance supérieure à 300m un enregistrement auprés de I'IBPT est requise. Pour une utilisation publique à l'extérieur de bâtiments, une licence de I'IBPT est requise. Pour les enregistrements et licences, veuillez contacter I'IBPT.
Deutschland:	License required for outdoor installations. Check with reseller for procedure to follow.
	Anmeldung im Outdoor-Bereich notwendig, aber nicht genehmigungspflichtig. Bitte mit Händler die Vorgehensweise abstimmen.
France:	Restricted frequency band: only channels 10 and 11 (2457 MHz and 2462 MHz respectively) may be used in France. License required for every installation, indoor and outdoor installations. Please contact ART for procedure to follow.
	Bande de fréquence restreinte : seuls les canaux 10 à 11 (2457 et 2462 MHz respectivement) doivent être utilisés en France. Toute utilisation, qu'elle soit intérieure ou extérieure, est soumise à autorisation. Vous pouvez contacter I'Autorité de Régulation des Télécommuniations (http://www.art-telecom.fr) pour la procédure à suivre.
Italia:	License required for indoor use. Use with outdoor installations not allowed.
	E'necessaria la concessione ministeriale anche per l'uso interno. Verificare con i rivenditori la procedura da seguire. L'uso per installazione in esterni non e' permessa.
Nederland:	License required for outdoor installations. Check with reseller for procedure to follow.
	Licentie verplicht voor gebruik met buitenantennes. Neem contact op met verkoper voor juiste procedure.

USA-Federal Communications Commission (FCC)

This device complies with Part 15 of FCC Rules. Operation of the devices in a Wireless LAN System 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.

TOSHIBA is not responsible for any radio or television interference caused by unauthorized modification of the devices included with this TOSHIBA

Wireless LAN Mini PCI Card, or the substitution or attachment of connecting cables and equipment other than specified by TOSHIBA.

The correction of interference caused by such unauthorized modification, substitution or attachment will be the responsibility of the user.

Caution: Exposure to Radio Frequency Radiation

The Toshiba Wireless LAN Mini PCI Card will be installed with one of two types of antennas. The both of antenna types, when installed are located at the upper edge of the LCD screen.

For both antennas, the radiated output power of the TOSHIBA Wireless LAN Mini PCI Card is far below the FCC radio frequency exposure limits. Nevertheless, the TOSHIBA Wireless LAN Mini PCI Card shall be used in such a manner that the potential for human contact during normal operation is minimized. In normal operating configuration, the LCD in the upright position, the distance between the antenna and the user should not be less than 20cm. The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Antenna(s) used in 5.15-5.25GHz frequency band must be integral antenna which provide no access to the end user.

Refer to the Regulatory Statements as identified in the documentation that comes with those products for additional information.

Caution: 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 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.

NOTE   The above Caution information applies to products that operate with an 802.11a device.

Taiwan

Article 14   Unless approved, for any model accredited low power radio frequency electric machinery, any company, trader or user shall not change the frequency, increase the power or change the features and functions of the original design.

Article 17   Any use of low power radio frequency electric machinery shall not affect the aviation safety and interfere with legal communications. In event that any interference is found, the use of such electric machinery shall be stopped immediately, and reusing of such products can be resumed until no interference occurs after improvement.

The legal communications mentioned in the above item refer to radio communications operated in accordance with telecommunication laws and regulations.
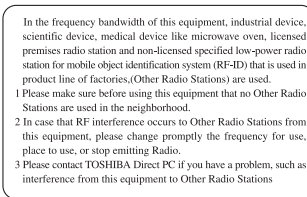
Low power radio frequency electric machinery shall resist against interference from legal communications or from industrial, scientific and medical radio emission electric machinery.

Using this equipment in Japan

In Japan, the frequency bandwidth of 2,400-2,483.5 MHz for second generation lowpower data communication systems such as this equipment overlaps that of mobile object identification systems (premises radio station and specified low-power radio station).
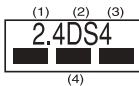
1. Sticker

Please put the following sticker on devices incorporating this product.

In the frequency bandwidth of this equipment, industrial device, scientific device, medical device like microwave oven, licensed premises radio station and non-licensed specified low-power radio station for mobile object identification system (RF-ID) that is used in product line of factories,(Other Radio Stations) are used.
1 Please make sure before using this equipment that no Other Radio Stations are used in the neighborhood.
2 In case that RF interference occurs to Other Radio Stations from this equipment, please change promptly the frequency for use, place to use, or stop emitting Radio.
3 Please contact TOSHIBA Direct PC if you have a problem, such as interference from this equipment to Other Radio Stations

2. Indication

The indication shown below appears on this equipment.

```
      (1)   (2)   (3)
    ┌─────────────────┐
    │ 2.4DS4          │
    │ ▀▀▀  ▀▀▀  ▀▀▀   │
    └─────────────────┘
          (4)
```

1   2.4 this equipment uses a frequency of 2.4GHz.
2   DS.This equipment uses DS-SS modulation.
3   The interference range of this equipment is less than 40m.
4   This equipment uses a frequency bandwidth from 2,400 MHz to 2,483.5 MHz.

It is possible to avoid the band of mobile object identification systems.

3. TOSHIBA Direct PC

Monday – Friday: 10:00 – 17:00

Toll Free Tel: 0120-13-1100

Direct Dial: 03-3457-5916

Fax: 03-5444-9450

Device Authorization

This device obtains the Technical Regulation Conformity Certification and the Technical Conditions Compliance Approval, and it belongs to the device class of radio equipment of low-power data communication system radio station stipulated in the Radio Law and the Telecommunications Business Law of Japan.

The Name of the radio equipment: MPC13A-20/R

JAPAN APPROVALS INSTITUTE FOR TELECOMMUNICATIONS EQUIPMENT

Approval Number: D01-1128JP

TELECOM ENGINEERING CENTER Approval Number: 03NY.A0018, 03GZDA0017

The following restrictions apply:

❖ Do not disassemble or modify the device.

❖ Do not install the embedded wireless module into other device.

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 not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by 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.

Toshiba is not responsible for any radio or television interference caused by unauthorized modification of the devices included with this Toshiba Wireless LAN Mini PCI Card, or the substitution or attachment of connecting cables and equipment other than specified by Toshiba.

The correction of interference caused by such unauthorized modification, substitution or attachment will be the responsibility of the user.

NOTE The following information is dependant on what type of wireless device is in your computer.

Approved Countries/Regions for use for the Atheros AR5001X Mini PCI Wireless network adapter

This equipment is approved to the radio standard by the countries/regions in the following table.

CAUTION Do not use this equipment except in the countries/regions in the following table.

NOTE This device works on passive scan only.

A peer-to-peer mode is not available in 802.11a and Turbo Mode.

802.11b (2.4GHz)

Australia	Austria	Belgium
Canada	Denmark	Finland
France	Germany	Greece
Ireland	Italy	Liechtenstein
Luxembourg	Netherlands	New Zealand
Norway	Portugal	Sweden
Switzerland	UK	USA

802.11a (5GHz)

Australia	Austria	Belgium
Canada	Denmark	Finland
France	Germany	Greece
Ireland	Italy	Liechtenstein
Luxembourg	Netherlands	New Zealand
Norway	Portugal	Sweden
Switzerland	UK	USA

Turbo Mode (5GHz)

Canada	USA	

Approved Countries/Regions for use for the Intel® PRO/Wireless LAN 2100 3B Mini PCI Adapter

This equipment is approved to the radio standard by the countries/regions in the following table.

CAUTION   Do not use this equipment except in the countries/regions in the following table.

Argentina	Australia	Austria
Belgium	Brazil	Canada
Chile	Denmark	Finland
France	Germany	Greece
Iceland	Ireland	Italy
Japan	Liechtenstein	Luxembourg
Mexico	Netherlands	New Zealand
Norway	Peru	Portugal
Singapore	Spain	Sweden
Switzerland	UK	Uruguay
USA	Venezuela	

Approved Countries/Regions for use for the Toshiba Mini PCI Wireless LAN Card

This equipment is approved to the radio standard by the countries/regions in the following table.

CAUTION   Do not use this equipment except in the countries/regions in the following table.

Australia	Austria	Belgium
Canada	Denmark	Finland
France	Germany	Greece
Hong Kong	Iceland	Ireland
Italy	Japan	Liechtenstein
Luxembourg	Malaysia	Netherlands
New Zealand	Norway	Philippines
Portugal	Singapore	Spain
Sweden	Switzerland	Thailand
UK	USA	

Bluetooth wireless technology Interoperability

Bluetooth™ Cards from TOSHIBA are designed to be interoperable with any product with Bluetooth wireless technology that is based on Frequency Hopping Spread Spectrum (FHSS) radio technology, and is compliant to:

❖ Bluetooth Specification Ver.1.1, as defined and approved by The Bluetooth Special Interest Group.

❖ Logo certification with Bluetooth wireless technology as defined by The Bluetooth Special interest Group.

`CAUTION` Bluetooth wireless technology is a new innovative technology, and TOSHIBA has not confirmed compatibility of its Bluetooth™ products with all PCs and/ or equipment using Bluetooth wireless technology other than TOSHIBA portable computers.

Always use Bluetooth™ cards from TOSHIBA in order to enable wireless networks over two or more (up to a total of seven) TOSHIBA portable computers using these cards. Please contact TOSHIBA PC product support on Web site http://www.toshiba-europe.com/computers/tnt/bluetooth.htm in Europe or http://www.pcsupport.global.toshiba.com in the United States for more information.

When you use Bluetooth™ cards from TOSHIBA close to 2.4 GHz Wireless LAN devices, Bluetooth transmissions might slow down or cause errors. If you detect certain interference while you use Bluetooth™ cards from TOSHIBA, always change the frequency, move your PC to the area outside of the interference range of 2.4 GHz Wireless LAN devices (40 meters/43.74 yards or more) or stop transmitting from your PC. Please contact TOSHIBA PC product support on Web site http://www.toshiba-europe.com/computers/ tnt/bluetooth.htm in Europe or http://www.pcsupport.global.toshiba.com in the United States for more information.

Bluetooth™ and Wireless LAN devices operate within the same radio frequency range and may interfere with one another. If you use Bluetooth™ and Wireless LAN devices simultaneously, you may occasionally experience a less than optimal network performance or even lose your network connection. If you should experience any such problem, immediately turn off either one of your Bluetooth™ or Wireless LAN. Please contact Toshiba PC product support on web site http:// www.toshiba-europe.com/computers/tnt/bluetooth.htm in Europe or http:// www.pcsupport.global.toshiba.com in the United States for more information.

Bluetooth wireless technology and your Health

The products with Bluetooth wireless technology, like other radio devices, emit radio frequency electromagnetic energy. The level of energy emitted by devices with Bluetooth wireless technology however is far much less than the electromagnetic energy emitted by wireless devices like for example mobile phones.

Because products with Bluetooth wireless technology operate within the guidelines found in radio frequency safety standards and recommendations, TOSHIBA believes Bluetooth wireless technology is safe for use by consumers. 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 Bluetooth wireless technology may be restricted by the proprietor of the building or responsible representatives of the organization. These situations may for example include:

❖   Using the equipment with Bluetooth wireless technology on board of airplanes, or

❖   In any other environment where the risk of interference to other devices or services is perceived or identified as harmful.

If you are uncertain of the policy that applies on the use of wireless devices in a specific organization or environment (e.g. airports), you are encouraged to ask for authorization to use the device with Bluetooth wireless technology prior to turning on the equipment.

Regulatory statements

This product complies with any mandatory product specification in any country/ region where the product is sold. In addition, the product complies with the following:

European Union (EU) and EFTA

This equipment complies with the R&TTE directive 1999/5/EC and has been provided with the CE mark accordingly.

Canada-Industry Canada (IC)

This device complies with RSS 210 of Industry Canada.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of this device."

L ' utilisation de ce dispositif est autorisée seulement aux conditions suivantes : (1) il ne doit pas produire de brouillage et (2) l' utilisateur du dispositif doit étre prét à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

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Caution: FCC Interference Statement

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❖ This device must accept any interference received, including interference that may cause undesired operation.

Note that any changes or modifications to this equipment not expressly approved by the manufacturer may void the authorization to operate this equipment.

Caution: Exposure to Radio Frequency Radiation

The radiated output power of the Bluetooth™ Card from TOSHIBA is far below the FCC radio frequency exposure limits. Nevertheless, the Bluetooth™ Card from TOSHIBA shall be used in such a manner that the potential for human contact during normal operation is minimized.

In order to comply with FCC radio-frequency radiation exposure guidelines for an uncontrolled environment, the Bluetooth™ Card from TOSHIBA has to be operated while maintaining a minimum body to antenna which are located on top of LCD distance of 20 cm.

Refer to the Regulatory Statements as identified in the documentation that comes with those products for additional information.

The Bluetooth™ Card from TOSHIBA is far below the FCC radio frequency exposure limits.

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NOTE Changes or modifications made to this equipment not expressly approved by TOSHIBA or parties authorized by TOSHIBA could void the user's authority to operate the equipment.

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Article 14 Unless approved, for any model accredited low power radio frequency electric machinery, any company, trader or user shall not change the frequency, increase the power or change the features and functions of the original design.

Article 17 Any use of low power radio frequency electric machinery shall not affect the aviation safety and interfere with legal communications. In event that any interference is found, the use of such electric machinery shall be stopped immediately, and reusing of such products can be resumed until no interference occurs after improvement.

The legal communications mentioned in the above item refer to radio communications operated in accordance with telecommunication laws and regulations.
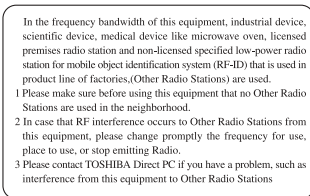
Low power radio frequency electric machinery shall resist against interference from legal communications or from industrial, scientific and medical radio emission electric machinery.

Using this equipment in Japan

In Japan, the frequency bandwidth of 2,400-2,483.5 MHz for second generation low-power data communication systems such as this equipment overlaps that of mobile object identification systems (premises radio station and specified low-power radio station).

1. Sticker

Please put the following sticker on devices incorporating this product.

> In the frequency bandwidth of this equipment, industrial device, scientific device, medical device like microwave oven, licensed premises radio station and non-licensed specified low-power radio station for mobile object identification system (RF-ID) that is used in product line of factories,(Other Radio Stations) are used.
> 1 Please make sure before using this equipment that no Other Radio Stations are used in the neighborhood.
> 2 In case that RF interference occurs to Other Radio Stations from this equipment, please change promptly the frequency for use, place to use, or stop emitting Radio.
> 3 Please contact TOSHIBA Direct PC if you have a problem, such as interference from this equipment to Other Radio Stations

2. Indication

The indication shown below appears on this equipment.

```
      (1)    (2) (3)
    ┌──────────────┐
    │  2.4FH1      │
    │  ▭ ┆ ┆       │
    └──────────────┘
        (4)
```

1   2.4: this equipment uses a frequency of 2.4 GHz.

2   FH: This equipment uses FH-SS modulation.

3   The interference range of this equipment is less than 10m.

4   This equipment uses a frequency bandwidth from 2,400 MHz to 2,483.5 MHz. It is impossible to avoid the band of mobile object identification systems.

3. TOSHIBA Direct PC

Monday – Friday: 10:00 – 17:00

Toll Free Tel: 0120-13-1100

Direct Dial: 03-3457-5916

Fax: 03-5444-9450

Device Authorization

This device obtains the Technical Regulation Conformity Certification, and it belongs to the device class of radio equipment of low-power data communication system radio station stipulated in the Radio Law of Japan.

The Name of the radio equipment: EYXF2CS

TELECOM ENGINEERING CENTER

Approval Number: 01NYDA1305

The following restrictions apply:

❖ Do not disassemble or modify the device.

❖ Do not install the embedded wireless module into other device.

DVD-ROM and Multifunction Drive Safety Instructions

The DVD-ROM and Multifunction drives employ a laser system. To ensure proper use of this product, please read this instruction manual carefully and retain for future reference. Should the unit ever require maintenance, contact an authorized service location.

Use of controls, adjustments or the performance of procedures other than those specified may result in hazardous radiation exposure.

To prevent direct exposure to the laser beam, do not try to open the enclosure.

Location of the required label

(Sample shown below. Location of the label and manufacturing information may vary.)

Product is certified by the manufacturer to comply with DHHS rules 21 CFR sub-chaper J applicable at the date of manufacture.

MANUFACTURED:

Toshiba Corporation
1-1, Shibaura 1-Chome
Minato-Ku, Tokyo 105-8001, Japan

**CLASS 1 LASER PRODUCT
LASER KLASSE 1**
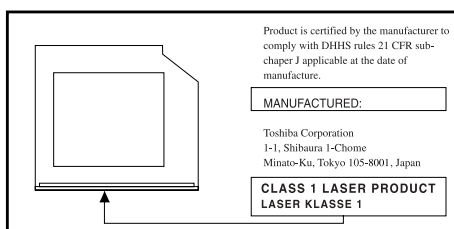
⚠CAUTION

This appliance contains a laser system and is classified as a "CLASS 1 LASER PRODUCT." To use this model properly, read the instruction manual carefully and keep it for your future reference. In case of any trouble with this model, please contact your nearest "AUTHORIZED service station." To prevent direct exposure to the laser beam, do not try to open the enclosure.

CLASS 1 LASER PRODUCT
LASSER KLASSE 1

Use of controls or adjustments or performance of procedures other than those specified in the owner's manual may result in hazardous radiation exposure.

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Computer Disposal Information

This product contains mercury. Disposal of this material may be regulated due to environmental considerations. For disposal, reuse or recycling information, please contact your local government or the Electronic Industries Alliance at www.eiae.org.

Introduction

Welcome to the world of powerful and portable multimedia computers! With your new Toshiba notebook computer, your access to information can accompany you wherever you go.

You will find that the Windows® XP operating system is already installed on your computer. It offers exciting features and easy Internet access.

This guide

This guide offers important information about your computer, including solutions to the most common problems, in addition to features and specifications.

For more detailed information, descriptions of other features, and more extensive troubleshooting guidelines, see the electronic user's guide preinstalled on your system. It is also available on the Web at pcsupport.toshiba.com.

Safety icons

This guide contains safety instructions that must be observed in order to avoid potential hazards that could result in personal injuries, damage to your equipment, or loss of data. These safety cautions have been classified according to the seriousness of the risk, and the icons highlight these instructions as follows:

⚠ DANGER	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
⚠WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in property damage.
NOTE	Provides important information.

Other icons used

Additional icons highlight other helpful or educational information:

HINT: This icon denotes helpful hints and tips.

Other documentation

Your computer comes with all or some of the following documentation in addition to this resource guide:

❖ An electronic version of the user's guide. Look for the user's guide icon on your desktop or in the DOCS folder on the C: drive.

❖ Guides for other programs that may come preinstalled on your computer or that are available for installation on your Recovery Media.

❖ For accessory information, visit Toshiba's web site at toshiba.com.

❖ The Microsoft® Windows® operating system documentation which explains the features of the operating system.

Setting up your computer and getting started

Strain and stress injuries are becoming more common as people spend more time using their computers. With a little care and proper use of the equipment, you can work comfortably throughout the day.

⚠CAUTION Using the computer keyboard incorrectly can result in discomfort and possible injury. If your hands, wrists, and/or arms bother you while typing, stop using the computer and rest. If the discomfort persists, consult a physician.

For more information, consult books on ergonomics, repetitive-strain injury, and repetitive-stress syndrome.

Placement of the computer

Proper placement of the computer and external devices is important to avoid stress-related injuries. Consider the following when placing your computer.

❖ Place the computer on a flat surface at a comfortable height and distance. You should be able to type without twisting your torso or neck, and look at the screen without slouching.

❖ If you are using an external monitor, the top of the display should be no higher than eye level.

❖ If you use a paper holder, set it at about the same height and distance as the screen.

Seating and posture

When using your computer, maintain good posture with your body relaxed and your weight distributed evenly. Proper seating is a primary factor in reducing work strain.

Precautions

Your notebook computer is designed to provide optimum safety and ease of use, and to withstand the rigors of travel. You should observe certain precautions to further reduce the risk of personal injury or damage to the computer.

CAUTION   Never apply heavy pressure to the computer or subject it to sharp impacts. Excessive pressure or impact can damage computer components or otherwise cause your computer to malfunction.

CAUTION   Some PC Cards become hot with prolonged use. If two cards are installed, both can become hot even if only one is being used. Overheating of a PC Card can result in errors or instability in its operation.

Be careful when you remove a PC Card that has been used for lengthy periods of time.

Connecting the AC adapter

The AC adapter allows you to power the computer from an external AC power source and to charge the computer's batteries.

⚠CAUTION   Use only the AC adapter supplied with your computer or an equivalent adapter that is compatible. Use of any incompatible adapter could damage your computer. Toshiba assumes no liability for any damage caused by use of an incompatible adapter.

When you connect the AC adapter to the computer, always follow the steps in the exact order as described in the User's Manual. Connecting the power cable to a live electrical outlet should be the last step; otherwise, the adapter DC output plug could hold an electrical charge and cause an electrical shock or minor bodily injury when touched. As a general safety precaution, avoid touching any metal parts.

Power cable

AC adapter

Power Cable and AC Adapter

⚠WARNING Hold the power cable by its plug when you connect/disconnect it. Do NOT pull the cable itself. Doing so may damage the power cable and result in a short circuit or electric shock.

⚠WARNING Handling the cord on this product will expose you to lead, a chemical known to the State of California to cause birth defects or other reproductive harm. ***Wash hands after handling***.

Connecting a printer

Before you can connect a printer, you need to know whether it uses a serial or a parallel interface. Check the printer's documentation. If the printer can be switched between serial and parallel mode, choose parallel because it is faster.

You also need a suitable printer cable, which may come with your printer. Otherwise, you can purchase one from a computer or electronics store.

NOTE If your printer is ECP- or IEEE-compliant, make sure your printer cable is an IEEE 1284 cable.

Installing additional memory (optional)

CAUTION Before you install or remove a memory module, turn off the computer using the Start menu. If you install or remove a memory module while the computer is in Standby or Hibernation mode, data will be lost.

Your computer comes with enough memory to run most of today's popular applications. You may want to increase the computer's memory if you use complex software or process large amounts of data.

Additional memory comes in various sized modules. You can install a maximum of two modules in your computer's expansion memory slots, located on the bottom of your computer.

You need a standard Phillips no. 1 screwdriver to install a memory module.

CAUTION   To avoid damaging the computer's screws, use a standard Phillips no. 1 screwdriver that is in good condition.

The computer has two memory expansion slots—Slot A and Slot B. You can install one or two memory modules.

1   Shut down your computer completely using the Shut Down command.

2   Unplug the computer.

CAUTION   Installing a memory module with the computer's power on may damage the computer, the module, or both.

3   Close the display panel and remove any cables you may have connected.

4   Turn the computer upside down.

5   Locate and remove the screws that hold the cover plate in place, and lift the cover off of the memory module bay.
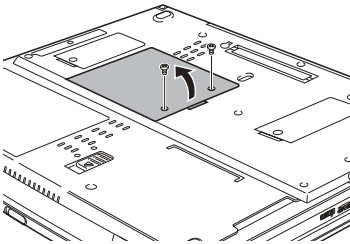
Removing the memory module cover

CAUTION Static electricity can damage the memory module. Before you handle the module, touch a grounded metal surface to discharge any static electricity you may have built up.

To avoid damaging the memory module, be careful not to touch its pin connector on the side you insert into the computer.

6 Remove the new memory module from its antistatic packaging.

7 Insert the memory module in the slot and gently press it down into place.

The clips on either side of the module will click to secure the module.
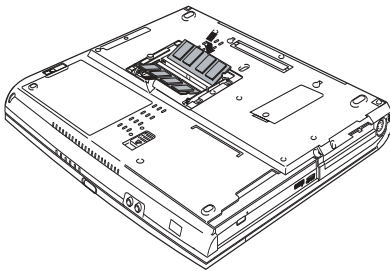
Inserting the memory module into the slot

8 Replace the cover plate and the screws.

9 Turn the computer over and restart it.

When you turn on the computer, it automatically recognizes the additional memory.

Removing a memory module

If you need to remove a memory module:

1 Complete steps 1 through 6 in "Installing additional memory (optional)" on page 25 to shut down the computer and open the memory module cover.

2 Pull the clips away from the memory module.

The memory module pops partially out of the slot.
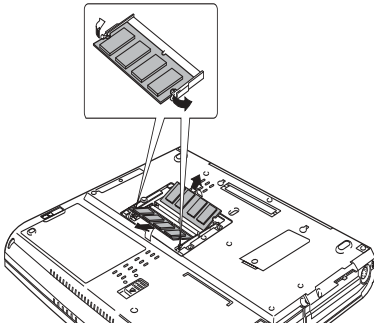
Pulling the clips away from the memory module

3   Carefully remove the module from the slot.

4   Replace the cover plate and screws.

5   Turn the computer over and restart it.

Your computer's TFT display

Small bright dots may appear on your TFT display when you turn on your computer. Your display contains an extremely large number of thin-film transistors (TFT) and is manufactured using high-precision technology. Any small bright dots that may appear on your display are an intrinsic characteristic of the TFT manufacturing technology.

Inserting and removing PC Cards

Your Satellite M20 Series computer comes with two stacked PC Card slots and supports three types of PC Cards:

❖   Type I cards—You can install up to two of these cards, one in each slot.

❖   Type II cards—You can install up to two of these cards, one in each slot.

❖   Type III cards—You can install just one of these cards.

Inserting a PC Card

Before you insert a PC Card, refer to the documentation that comes with the card to see if you need to do anything before you insert it.

When preparing to insert a PC Card, there are three methods:

❖   Turn off the computer and follow the steps below.

❖ Insert the PC card while the computer is running. Follow the steps below.

❖ Hot swap the card (choose this method if there is already a PC Card in the slot you wish to use). Stop the PC Card by clicking the **Safely Remove Hardware** icon on the System tray. After the PC Card is stopped, it is safe to remove it. Follow the steps below.

1 Locate the PC Card slots on the left side of the computer.

2 If the PC Card slots are locked, unlock them by turning the computer over, locating the PC Card lock, and sliding the lock into the unlocked position.

3 Insert the PC Card.

If you have a Type III card, insert it into the lower slot. If you have a Type I or Type II card, insert it into either the upper or lower slot.
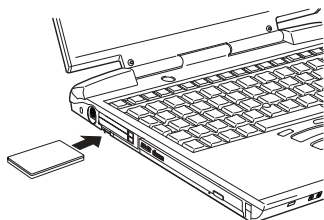
Inserting a PC Card

4 When the card is almost all the way into the slot, push firmly, but gently, to ensure a firm connection with the computer. Do not force the card into position.

5 To lock the PC Card in its slot, turn the computer over and slide the lock into the locked position.

Removing a PC Card

Stop the PC Card by clicking the **Safely Remove Hardware** icon on the System tray. After the PC Card is stopped, it is safe to remove it.

1 If the PC Card slots are locked, unlock them by turning the computer over, locating the PC Card lock and sliding it into the unlocked position

2   Locate the PC Card ejection button that corresponds to the slot in which your PC Card is installed.

The top tab releases a card in the upper slot. The bottom tab releases a card in the lower slot.

3   Press the PC Card eject button once to extend it, and push it again to remove the PC Card.
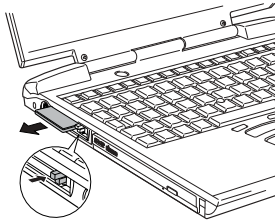
Press the PC card ejection button once to extend it

The PC Card ejects slightly from the slot.

4   Grasp the edges of the PC Card and pull it out of the slot.

Learning the basics

Computing tips

❖   Save your work frequently.

Your work stays in the computer's temporary memory until you save it to the disk. You will lose all unsaved work if, for example, a system error occurs and you must restart your computer, or your battery runs out of charge while you are working. Your computer can be configured to warn you when the battery is running low.

HINT: Some programs have an automatic save feature that you can turn on. This feature saves your file to the hard disk at preset intervals. See your software documentation for details.

❖   Back up your files to diskettes (or other removable storage media) on a regular basis. Label the backup copies clearly and store them in a safe place.

❖   Scan all new files for viruses.

❖ Never turn off the computer if a drive indicator light indicates a drive is active.

CAUTION | The Windows® XP operating system records information, such as your desktop setup, during its shutdown procedure. If you do not let the operating system shut down normally, details such as new icon positions may be lost.

Using the AccuPoint II® pointing device

The button in the middle of the keyboard is the AccuPoint II pointing device. Together with the primary and secondary AccuPoint II buttons, it provides the same functionality as a mouse — enabling you to move the cursor and to select items on the screen.

— AccuPoint II pointing device
— Internet Back button
— Universal scroll
— Primary AccuPoint II button
— Secondary AccuPoint II button
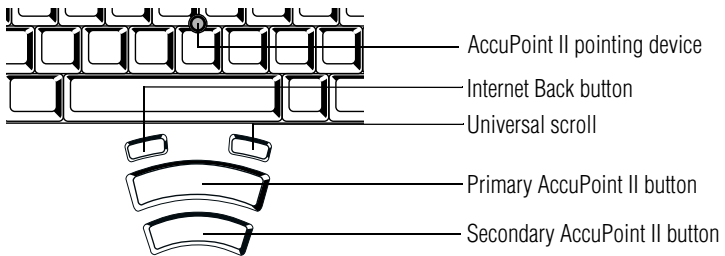
AccuPoint II pointing system

HINT: If you would rather use a mouse or trackball, you can connect one to the computer's serial port, USB port, or PS/2 port.

To move the cursor, gently push the AccuPoint II pointing device in the direction you want the cursor to move. Pushing harder on the AccuPoint II pointing device moves the cursor faster.

The primary AccuPoint II button corresponds to the primary (typically left) mouse button. When a step instructs you to click or choose an item, move the cursor to the item, then press and release the primary AccuPoint II button. To double-click, press the primary AccuPoint II button twice in rapid succession.

The secondary button acts as the second (typically right) mouse button. The function of the secondary AccuPoint II button depends on the program you are using. Check your program's documentation to determine whether it uses the

right mouse button. For more information on programming buttons and keys, see "Fn-esse" in the electronic user's guide.

The small left button performs the Internet Back button.

The small right button performs the Universal scroll.

Playing a CD or DVD

Your Satellite M20 Series computer may have a DVD-ROM, or Multifunction drive.

Digital versatile discs (DVDs) provide a significant increase in data storage and support features that are not available on any other video platform. These features include wide-screen movies, multiple language tracks, digital surround sound, multiple camera angles, and interactive menus. The computer can play high-resolution video at up to 30 frames per second.

HINT: Your DVD-ROM or DVD-ROM/CD-RW drive is designed to play region 1 (North America) DVD-ROMs.

You use CD-ROMs to load and run software, and to access reference material such as catalogs, as well as listen to music.

Drive in-use indicator light
Eject button
Manual eject hole
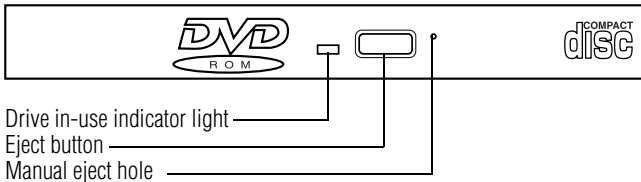
Sample DVD-ROM/Multifunction drive

Drive in-use indicator light—Indicates when the DVD-ROM or Multifunction drive is in use.

Eject button—Press to release the disc tray. The eject button does not function when the system is off.

CAUTION   Do not press the eject button or turn off the computer while the in-use indicator light is glowing. Doing so could damage the disc or the drive.

When the disc tray is open, be careful not to touch the lens or the area around it. Doing so could cause the drive to malfunction.

Manual eject hole—Use if you need to release the disc tray when the power is off. Use a straightened paper clip or other narrow object to press the manual eject button located inside the hole.

CAUTION Never use a pencil to press the eject button. Pencil lead can break off inside the computer and damage it.

Inserting compact discs

To insert a compact disc into the DVD-ROM or Multifunction drive:

1 Make sure the computer is turned on.

2 Make sure the in-use indicator light is off.

3 Press the DVD-ROM or Multifunction drive's eject button.

The disc tray slides partially out of the drive (about 1 inch).

HINT: The drive will not open if the computer's power is off.

4 Grasp the tray and pull it fully open.
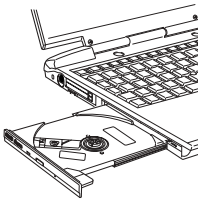
The drive tray fully extended

5 Hold the disc by its edges and check that it is free of dust.

If the disc is dusty, clean it as described in the electronic user's guide.

6 Place the disc carefully in the disc tray, label side up.
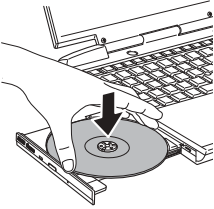
Positioning the disc in the drive

7   Gently press the disc onto the center spindle until you feel it click into place.

CAUTION   Handle DVDs and CDs carefully, making contact only with the center hole and edge. Do not touch the surface of the disc. Do not stack discs. If you incorrectly handle the discs, you could lose data.

8   Make sure the disc is completely on the spindle and is lying flat on the tray.

CAUTION   If you insert the disc incorrectly, it may jam the drive. If this happens, contact your Toshiba support for assistance.

9   Push the disc tray in by pressing gently on the center of the tray until it clicks into place.

You are ready to use the disc.

Removing compact discs

To remove a compact disc (CD or DVD) with the computer turned on:

1   Press the eject button on the drive.

CAUTION   Do not press the eject button while the in-use indicator light is glowing. Doing so could damage the disc or the drive.

Also, if the disc is still spinning when you open the disc tray, wait for it to stop spinning before you remove it.

2   Pull the tray until it is fully open, remove the disc, and place it in its protective cover.

3   Gently push the tray in to close it.

To remove a compact disc with the computer turned off:

1 Insert a slender object, such as a straightened paper clip, into the manual eject hole.

2 Gently pull the tray out until it is fully open, remove the disc, and place it in its protective cover.

3 Gently push the tray in to close it.

Moving the computer

Before moving your computer, even across the room, make sure all disk activity has ended (the in-use indicator lights stop glowing) and all external peripheral cables are disconnected.

CAUTION Never pick up the computer by its display panel or by the back (where the ports are located).

Mobile computing

Running the computer on battery power

The computer contains a removable lithium ion (Li-ion) battery pack that provides power when you are away from an AC outlet. This is the main battery. You can recharge it many times.

Battery Notice

To ensure that the battery pack maintains its maximum capacity, operate the computer on battery power at least once a month until the battery pack is fully discharged. Refer to "Extending Battery Life" in this document for procedures. If the computer is continuously operated on AC power, either through an AC adapter or a docking station for an extended period, more than a month, the battery may fail to retain a charge. It may not function efficiently over the expected life of the battery and the Battery LED may not indicate a low-battery condition.

In addition to the main battery, you may also have a second battery installed in the Slim SelectBay. If you travel and need to work for many hours without an AC power source, you may purchase a battery module for use in the computer's

Slim SelectBay, or carry additional charged battery packs with you.

The computer also has an internal real-time-clock (RTC) battery. The RTC battery powers the RTC memory that stores your system configuration settings and the current time and date information.

| NOTE | The RTC battery does not charge while the computer is turned off, even when AC power is attached. |

Monitoring battery power

The computer's main battery light gives you an indication of the main battery's current charge:

❖ Green indicates the AC adapter has fully charged the battery.

❖ Amber indicates the AC adapter is charging the battery.

❖ Off indicates that the battery is not being charged.

| NOTE | Battery life and charge time may vary depending upon power management settings, applications and features used. |

❖ Flashing amber indicates that the computer is using battery power, and the battery's charge is running low.

HINT: Be careful not to confuse the battery light (▭) with the on/off light (⏻). When the on/off light flashes amber, it indicates that the system is suspended (using Windows® XP Standby command).

Setting battery alarms

Your computer can be configured to warn you when the battery is running low. For more information, see "What to do when the battery alarm sounds" in the electronic user's guide.

Changing the main battery

When your battery power is running low, you have two options: connect the computer to an AC power source or install a charged battery.

| NOTE | If your battery discharges fully, your information will be lost. Be sure to save your work often. |

CAUTION When handling a battery, be careful not to drop it or short-circuit its terminals.

To change the battery:

1 Save your work.

2 Shut down and turn off the computer.

3 Remove all cables connected to the computer.

4 Turn the computer over.

5 If the battery lock is in the locked position (towards the center of the computer), slide it towards the edge of the computer to unlock it.

6 Slide the battery release latch to release the battery.
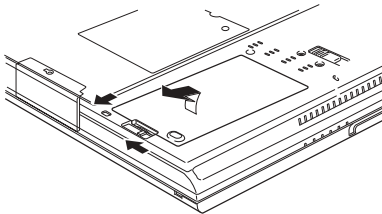
Battery release latch

7 Pull the discharged battery module out of the computer.
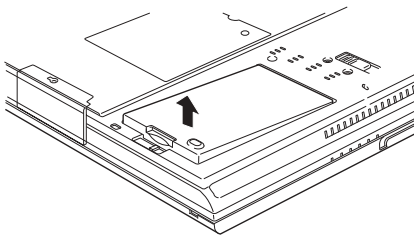
Removing the discharged battery

WARNING If the battery is leaking or its case is cracked, put on protective gloves to handle it, and discard it immediately following the advice in the electronic user's guide.

8 Insert the charged battery into the slot until the latch clicks.

The battery pack has been designed so that you cannot install it with reverse polarity.

CAUTION If the battery does not slide into the slot easily, move the battery release lock to the unlocked position and try again. Do not force the battery into position.

9   Reset the battery lock to the locked position.

10 Turn the computer right side up.

11 Reconnect any cables.

12 Restart the computer.

Safety Precautions

❖ Turn off the computer's power immediately and disconnect the power cord from the power socket, if the battery pack produces an odor, overheats or changes color or shape while it is being used or charged. Carefully remove the battery pack from the computer.

❖ Never try to disassemble a battery pack.

❖ Never overcharge or reverse charge a battery. Overcharging will shorten its life and reverse charging could destroy it, causing the release of toxic fumes.

❖ Avoid touching the metal terminals of the battery with another metal object. Short-circuiting the battery will cause it to overheat and may cause permanent damage to the battery or the computer.

❖ Never incinerate a spent battery, as this will cause it to explode and release toxic materials.

❖ If a battery is leaking or damaged, replace it immediately. Use protective gloves when handling a damaged battery.

❖ To replace the main battery, use an identical battery that you can purchase through www.toshibaaccessories.com.

❖ Reverse Polarity should be avoided with all batteries. The main battery is designed so that it cannot be installed in reverse polarity.

❖ Charge the battery pack only in the computer or in a battery charger designated as an approved option.

❖ When you install the battery pack, you should hear a click when it is seated properly.

❖ Do not expose the battery pack to fire. The battery pack could explode.

Maximizing battery life

To maximize the life of your battery pack:

❖ At least once a month, disconnect the computer from a power source and operate it on battery power until the battery pack fully discharges. Before doing so, follow the steps below:

1 Turn off the computer's power.

2 Disconnect the AC adapter and turn on the computer's power. If it does not turn on, go to step 4.

3 Operate the computer on battery power for five minutes. If the battery pack has at least five minutes of operating time, continue operating until the battery pack is fully discharged. If the battery light LED flashes or there is some other warning to indicate a low battery, go to step 4.

4 Connect the AC adapter to the computer and the power cord to a power outlet. The DC-IN or AC power-light LED should glow green, and the Battery LED should glow amber to indicate that the battery pack is being charged. If the DC-IN or AC power-light indicator does not glow, power is not being supplied. Check the connections for the AC adapter and power cord.

5 Charge the battery pack until the Battery LED glows green.

❖ If you have extra battery packs, rotate their use.

❖ If you will not be using the system for an extended period, more than one month, remove the battery pack.

❖ Disconnect the AC adapter when the battery is fully charged. Overcharging makes the battery hot and shortens life.

❖ If you are not going to use the computer for more than eight hours, disconnect the AC adapter.

❖ Store spare battery packs in a cool dry place out of direct sunlight.

If something goes wrong

Problems that are easy to fix

Your program stops responding.

If you are working with a program that suddenly freezes all operations, chances are the program has stopped responding. You can exit the failed program without shutting down the operating system or closing other programs.

To close a program that has stopped responding:

1 Press Ctrl, Alt, and Del simultaneously (once).

The Windows Task Manager window appears.

The words "not responding" appear beside the name of the program that is not responding.

2 Select the program you want to close, then click **End Task**.

Closing the failed program should allow you to continue working. If it does not, continue with step 3.

3 Close the remaining programs one by one by selecting the program name, then **End Task**.

4 Click **Start**, **Turn off computer**.

5 The Turn off computer window appears.

6 Click **Turn off**.

The computer turns off.

Your program performs an illegal operation.

If you receive the message, "Your program has performed an illegal operation," you should record the details of the message and consult the software manufacturer.

To record the details:

1 Click the **Details** button and select the text the operating system displays.

The Details button displays information that the software manufacturer needs to help you solve your problem.

2 Press Ctrl and C simultaneously to copy the text to the clipboard.

3 Open Notepad (click **Start**, point to **All Programs**, then point to **Accessories** and click **Notepad**).

4 Press Ctrl and V simultaneously to paste the details into Notepad.

5 Add a paragraph break and type some notes describing what you were doing when you received the message.

Save the file and refer to it when you contact the software manufacturer.

Problems when you turn on the computer

These problems may occur when you turn on the power.

The computer will not start.

Make sure you attached the AC adapter and power cable properly or have installed a charged battery.

Press and hold down the power button for a few seconds.

If you are using the AC adapter, check that the wall outlet is working by plugging in another device, such as a lamp.

The computer starts but, when you press a key, nothing happens.

You are probably in Stand By mode and have a software or resource conflict. When this happens, turning the power on returns you to the problem instead of restarting the system. To clear the condition, press Ctrl, Alt, and Del simultaneously.

Clearing the condition may get the computer running, but it won't solve a resource conflict. Read the documentation that came with the conflicting device.

The keyboard produces unexpected characters.

A keypad overlay may be on. If the numeric keypad or cursor control light is on, press Fn and F10 simultaneously to turn off the cursor control light or press Fn and F11 simultaneously to turn off the numeric keypad light.

If the problem occurs when both the keypad overlays are off, make sure the software you are using is not remapping the keyboard. Refer to the software's documentation and check that the program does not assign different meanings to any of the keys.

Display problems

Here are some typical display problems and their solutions:

The display is blank.

Display Auto Off may be in effect. Press any key to activate the screen.

You may have activated the instant password feature by pressing Fn and F1 simultaneously. If you have registered a password, press the Enter key, type the password and press Enter. If no password is registered, press Enter. The screen reactivates and allows you to continue working.

If you are using the built-in screen, make sure the display priority is not set for an external monitor. To do this, press Fn and F5 simultaneously (once). If this does not correct the problem, press Fn and F5 simultaneously again to return the display priority to its previous setting.

Small bright dots appear on your TFT display when you turn on your computer.

Your display contains an extremely large number of thin-film transistors (TFT) and is manufactured using high-precision technology. The small bright dots that appear on your display are an intrinsic characteristic of the TFT manufacturing technology.

PC Card problems

PC Card checklist

❖ Make sure the card is inserted properly into the slot.

❖ Make sure all cables are securely connected.

❖ Occasionally a defective PC Card slips through quality control. If another PCMCIA-equipped computer is available, try the card in that machine. If the card malfunctions again, it may be defective.

Resolving PC Card problems

The slots appear dead and cards that worked no longer do.

Check the PC Card status:

1   Click **Start**.

2   Click **My Computer** icon with the secondary button, then click **Properties**.

    The System Properties dialog box appears.

3   Click the **Hardware** tab.

4   Click the **Device Manager** button.

5   Double-click the **PCMCIA adapter**.

6   Double-click the appropriate PC Card.

    The operating system displays your PC Card's Properties dialog box, which contains information about your PC Card configuration and status.

The computer stops working (hangs) when you insert a PC Card.

The problem may be caused by an I/O (input/output) conflict between the PCMCIA socket and another device in the system. Use Device Manager to make sure each device has its own I/O base address.

Since all PC Cards share the same socket, each card is not required to have its own address.

If you need further assistance

If you have followed the recommendations in this chapter and are still having problems, you may need additional technical assistance.

Before you call

Since some problems may be related to the operating system or the program you are using, it is important to investigate other sources of assistance first.

Try the following before contacting Toshiba:

❖ Review the troubleshooting information in your operating system documentation.

❖ If the problem occurs while you are running a program, consult the program's documentation for troubleshooting suggestions. Contact the software company's technical support group for their assistance.

❖ Consult the dealer from whom you purchased your computer and/or program. Your dealer is your best source for current information.

Detailed system specifications are available at www.ts.toshiba.com by selecting your particular product and model number, clicking **GO**, and then clicking the **Detailed Specs** link from the menu on the left. Or just refer to the computer documentation that shipped with your product.

For the number of a Toshiba dealer near you in the United States, call: (800) 457-7777.

Contacting Toshiba

If you still need help and suspect that the problem is hardware-related, Toshiba offers a variety of resources to help you. Start with accessing Toshiba on the Internet using any Internet browser by typing pcsupport.toshiba.com

Toshiba voice contact

Before calling Toshiba, make sure you have:

❖ Your computer's serial number.

❖ The computer and any optional devices related to the problem.

❖ The Recovery media that came with your system.

❖ Name and version of the program involved in the problem along with its installation CD-ROM.

❖ Information about what you were doing when the problem occurred.

❖ Exact error messages and when they occurred.

For technical support, call the Toshiba Global Support Centre:

Within the United States at (800) 457-7777

Outside the United States at (949) 859-4273

Power cable connectors

Your notebook computer features a universal power supply you can use worldwide. This appendix shows the shapes of the typical AC power cable connectors for various parts of the world.

USA and Canada
(UL and CSA
approved)

United Kingdom
(BS approved)

Australia
(AS approved)

Europe
(VDA and
NEMKO approved)

Features and specifications

This section lists the computer's features.

NOTE   The information in the specifications section of this Resource Guide reflects the most recent information and updates, and may differ slightly from features and/or functionality described in the electronic user's guide installed on your computer.

NOTE   To stay current on the most recent software and hardware options for your computer, and for other product information, be sure to regularly check the Toshiba web site at pcsupport.toshiba.com.

Technology and processor

Microprocessor   Intel® Pentium® M processor at 1.30 GHz, 1.40 GHz, 1.50 Ghz, and 1.60 GHz

CPU performance in your computer product may vary from specifications under the following conditions:

- use of certain external peripheral products

- use of battery power instead of AC power without changing factory pre-set power management settings

- use of certain multimedia games or videos with special effects

- use of standard telephone lines or low speed network connections

- use of complex modeling software, such as high end computer aided design applications

- use of computer in areas with low air pressure (high altitude >1,000 meters or >3,280 feet above sea level)

- use of computer at temperatures outside the range of 5°C to 35°C (41°F to 95° F) or >25°C (77°F) at high altitude (all temperature references are approximate).

CPU performance may also vary from specifications due to design configuration.

Under some conditions, your computer product may automatically shut-down. This is a normal protective feature designed to reduce the risk of lost data or damage to the product when used outside recommended conditions. To avoid risk of lost data, always make back-up copies of data by periodically storing it on an external storage medium. For optimum performance, use your computer product only under recommended conditions. Read additional restrictions under "Environmental Conditions" in your product Resource Guide. Contact Toshiba Technical Service and Support for more information

Graphics	Intel 855GM GMCH integrated graphics controller, 3D graphics accelerator, AGP bus support; 2D graphics accelerator, BitBLT hardware, hardware cursor, DirectDraw support

Power

Main battery	Removable Lithium Ion (Li-Ion) battery (6 cell)
	Battery life may vary depending on product model, configuration, applications, power management settings and features utilized. Recharge time varies depending on usage. Battery may not charge while computer is consuming full power. After a period of time, the battery will lose its ability to perform at maximum capacity and will need to be replaced. This is normal for all batteries. To purchase a new battery pack, see the accessories information that shipped with your computer or visit the Toshiba Web site at www.accessories.toshiba.com.
RTC battery	The RTC battery provides power for the internal real-time clock and calendar

Storage capacity

Hard disk	2.5-inch removable drive and controller provides non-volatile storage for 30 GB, 40 GB, 60 GB, or 80 GB (GB means 1 billion bytes)
3.5-inch diskette drive module	External USB drive accommodates 1.44 MB, high density (2HDD) diskettes

Ports

DC-IN	Lets you connect the computer to AC power, using the AC adapter and power cable
Headphone jack	Use the 3.5 mm headphone jack to connect stereo headphones or other audio output devices. Connecting headphones or other devices to this jack automatically disables the internal speakers
Microphone jack	3.5 mm stereo jack lets you connect an external monaural microphone or other audio input device
RGB (monitor) port	15-pin, analog VGA port lets you connect an external monitor or projector
Modem port	The modem port lets you connect the internal modem directly to a telephone line via an RJ11 connection
USB ports	Support USB peripherals
Parallel port	ECP-compatible parallel port that provides a Centronics-compatible connection to a printer or other parallel output or bi-directional device. It gives increased performance when you're using an ECP-compatible parallel device
Serial port	9-pin, high speed, buffered serial port lets you connect an external modem, serial mouse, serial printer or other serial device
Video out port	RCA composite port lets you connect the computer to an external NTSC/PAL video device such as a standard television, using an RCA cable

Standard hardware

Memory	The system may come with 256 MB or 512 MB of RAM, expandable to 2,048 MB (2 GB)* *these capacities require the availability of 1,024 MB memory modules*
Display options	14.1-inch (measured diagonally) active matrix Thin Film Transistor (TFT) color LCD displays up to 16 million colors at 1600 x 1200 (virtual display), 1400 x 1050 (virtual display), 1280 x 1024 (virtual display), 1024 x 768, 800 x 600, 640 x 480
Communication	Integrated V92* modem *Due to FCC limitations, speeds of 53 kbps are the maximum permissible rates during downloads. Actual data transmission speeds will vary depending on on-line conditions. For more detailed information regarding your system's modem, visit the Toshiba web site at toshiba.com.

Pointing device	AccuPoint® II pointing device provides the functionality of a mouse or other pointing device
PC card slots	Two stacked PC Card slots let you install two Type II and one Type III PC Cards
Sound controller	ADI AD1886, 16-bit stereo, Sound Blaster® Pro and FM synthesis support; built-in stereo speakers; full duplex sound, 64-channel wavetable music synthesis; DirectSound® Direct3D®Sound, DirectMusic®
DVD-ROM/ CD-RW drive	24x CD-ROM, 8x DVD-ROM, 24x CD-R, 24x CD-RW, 4x DVD-R, 4x DVD-RW, 4x DVD Multi
	Compatibility: CD-ROM, CD-R (read/Write), CD-RW (read/re-write), DVD-ROM, DVD-R (Read only), DVD-RW (read), DVD Multi (read)
DVD Multi drive	24x CD-ROM, 8x DVD-ROM, 24x CD-R, 24x CD-RW, 4x DVD-R, 4x DVD-RW, 4x DVD Multi
	Compatibility: CD-ROM, CD-R (read/write), CD-RW (read/re-write), DVD-ROM, DVD-R (read/write), DVD-RW (read/write), DVD-RAM (read/write)
Wireless communication	The computer may come with an optional integrated Wi-Fi wireless LAN mini PCI communication module providing wireless LAN functions.

NOTE   Toshiba recommends that Wi-Fi options be factory-installed at the time of order.

Index

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