TOSHIBA
Leading Innovation >>>

User's Manual

PORTÉGÉ Z10t-A
WT310

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Chapter 1

TOSHIBA Legal, Regulatory and Safety

This chapter states the Legal, regulatory and safety information applicable to TOSHIBA computers.

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The regulatory information herein may vary. Pease check the ID information on the back of the device for specific information applicable to the model you purchased.

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FCC notice "Declaration of Conformity Information"

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

■ Reorient or relocate the receiving antenna.
■ Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Only peripherals complying with the FCC class B limits may be attached to this equipment. Operation with non-compliant 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 HDMI(micro) port, Universal Serial Bus (USB 3.0) port as well as the HDMI port and External RGB monitor port on the TOSHIBA Keyboard Dock. 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.

FCC conditions

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

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Contact

Address: TOSHIBA America Information Systems, Inc.

9740 Irvine Boulevard

Irvine, California 92618-1697

Telephone: (949) 583-3000

This information is only applicable for the countries/regions where it is required.

EU Declaration of Conformity

This product is carrying the CE-Mark in accordance with the related European Directives. Responsible for CE-Marking is TOSHIBA EUROPE GMBH, Hammfelddamm 8, 41460 Neuss, Germany. The complete and official EU Declaration of Conformity can be found on TOSHIBA's web site http://epps.toshiba-teg.com on the Internet.

CE compliance

This product is labeled with the CE Mark in accordance with the applicable European Directives, notably RoHS Directive 2011/65/EU, Radio Equipment and Telecommunications Terminal Directive 1999/5/EC, Ecodesign Directive 2009/125/EC (ErP) and the related implementing measures.

This product and the original options are designed to observe the related EMC (Electromagnetic Compatibility) and safety standards. However, TOSHIBA cannot guarantee that this product still observes these EMC standards if options or cables not produced by TOSHIBA are connected or implemented. In this case the persons who have connected/implemented those options/cables have to provide assurance that the system (PC plus options/cables) still fulfils the required standards. To avoid general EMC problems, the following guidance should be noted:

- Only CE marked options should be connected/implemented
- Only best shielded cables should be connected

Working environment

This product was designed to fulfil the EMC (Electromagnetic Compatibility) requirements to be observed for so-called "Residential, commercial and light industry environments". TOSHIBA do not approve the use of this product in working environments other than the above mentioned "Residential, commercial and light industry environments".

For example, the following environments are not approved:

- Industrial Environments (e.g. environments where a mains voltage of 380 V three-phase is used)
- Medical Environments
- Automotive Environments
- Aircraft Environments

Any consequences resulting from the use of this product in working environments that are not approved are not the responsibility of TOSHIBA.

The consequences of the use of this product in non-approved working environments may be:

- Interference with other devices or machines in the near surrounding area.
- Malfunction of, or data loss from, this product caused by disturbances generated by other devices or machines in the near surrounding area.

Therefore TOSHIBA strongly recommend that the electromagnetic compatibility of this product should be suitably tested in all non-approved working environments before use. In the case of automobiles or aircraft, the manufacturer or airline respectively should be asked for permission before use of this product.

Furthermore, for general safety reasons, the use of this product in environments with explosive atmospheres is not permitted.

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VCCI−B

Canadian regulatory information (Canada only)

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the Radio Interference Regulation of the Canadian Department of Communications.

Note that Canadian Department of Communications (DOC) regulations provide, that changes or modifications not expressly approved by TOSHIBA Corporation could void your authority to operate this equipment.

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

Cet appareil numérique de la class B respecte toutes les exgences du Règlement sur le matériel brouleur du Canada.

Following information is only valid for EU-member States:

Disposal of products

The crossed out wheeled dust bin symbol indicates that products must be collected and disposed of separately from household waste. Integrated batteries and accumulators can be disposed of with the product. They will be separated at the recycling centres.

The black bar indicates that the product was placed on the market after August 13, 2005.

By participating in separate collection of products and batteries, you will help to assure the proper disposal of products and batteries and thus help to prevent potential negative consequences for the environment and human health.

For more detailed information about the collection and recycling programmes available in your country, please visit our website (http://eu.computers.toshiba-europe.com) or contact your local city office or the shop where you purchased the product.

Disposal of batteries and/or accumulators

The crossed out wheeled dust bin symbol indicates that batteries and/or accumulators must be collected and disposed of separately from household waste.

Pb, Hg, Cd

If the battery or accumulator contains more than the specified values of lead (Pb), mercury (Hg), and/or cadmium (Cd) defined in the Battery Directive (2006/66/EC), then the chemical symbols for lead (Pb), mercury (Hg) and/or cadmium (Cd) will appear below the crossed out wheeled dust bin symbol.

By participating in separate collection of batteries, you will help to assure the proper disposal of products and batteries and thus help to prevent potential negative consequences for the environment and human health.

For more detailed information about the collection and recycling programmes available in your country, please visit our website (http://eu.computers.toshiba-europe.com) or contact your local city office or the shop where you purchased the product.

⚠️ *These symbols may not stick depending on the country and region where you purchased.*

REACH - Compliance Statement

The new European Union (EU) chemical regulation, REACH (Registration, Evaluation, Authorization and Restriction of Chemicals), entered into force on 1 June 2007. TOSHIBA will meet all REACH requirements and is committed to provide our customers with information about the chemical substances in our products according to REACH regulation.

Please consult the following website www.toshiba-europe.com/computers/info/reach for information about the presence in our articles of substances included on the candidate list according to article 59(1) of Regulation (EC) No 1907/2006 („REACH") in a concentration above 0.1 % weight by weight.

Following information is only for Turkey:

- Compliant with EEE Regulations: TOSHIBA meets all requirements of Turkish regulation 26891 "Restriction of the use of certain hazardous substances in electrical and electronic equipment".
- The number of possible pixel failures of your display is defined according to ISO 9241-307 standards. If the number of pixel failures is less than this standard, they will not be counted as defect or failure.

■ Battery is a consumption product, since the battery time depends on the usage of your computer. If the battery can not be charged at all, then it is a defect or failure. The changes in battery time is not a defect or failure.

Following information is only for India:

The use of this symbol indicates that this product may not be treated as household waste.

By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.

For more detailed information about recycling of this product, please visit our website (http://www.toshiba-india.com) or contact call center (1800-200-8674).

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- freetype@nongnu.org

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- freetype-devel@nongnu.org

  Discusses bugs, as well as engine internals, design issues, specific licenses, porting, etc.

Our home page can be found at

http://www.freetype.org

Disposing of the computer and the computer's batteries

Contact an authorized TOSHIBA service provider for details regarding how to dispose of the computer and the batteries.

General Precautions

TOSHIBA computers are designed to optimize safety, minimize strain and withstand the rigors of portability. However, certain precautions should be observed to further reduce the risk of personal injury or damage to the computer.

Be certain to read the general precautions below and to note the cautions included in the text of the manual.

Provide adequate ventilation

Always make sure your computer and AC adaptor have adequate ventilation and are protected from overheating when the power is turned on or when an AC adaptor is connected to a power outlet (even if your computer is in Sleep Mode). In this condition, observe the following:

- Never cover your computer or AC adaptor with any object.
- Never place your computer or AC adaptor near a heat source, such as an electric blanket or heater.
- Never cover or block the air vents including those located at the base of the computer.
- Always operate your computer on a hard flat surface. Using your computer on a carpet or other soft material can block the vents.
- Always provide sufficient space around the computer.

Overheating your computer or AC adaptor could cause system failure, computer or AC adaptor damage or a fire, possibly resulting in serious injury.

Creating a computer-friendly environment

Place the computer on a flat surface that is large enough for the computer and any other items you are using, such as a printer.

Leave enough space around the computer and other equipment to provide adequate ventilation. Otherwise, they may overheat.

To keep your computer in prime operating condition, protect your work area from:

- Dust, moisture, and direct sunlight.
- Equipment that generates a strong electromagnetic field, such as stereo speakers (other than speakers that are connected to the computer) or speakerphones.

- Rapid changes in temperature or humidity and sources of temperature change such as air conditioner vents or heaters.
- Extreme heat, cold, or humidity.
- Liquids and corrosive chemicals.

Stress injury

Carefully read the *Instruction Manual for Safety and Comfort*. It contains information on the prevention of stress injuries to your hands and wrists that can be caused by extensive keyboard use. It also includes information on work space design, posture and lighting that can help reduce physical stress.

Heat injury

- Avoid prolonged physical contact with the computer. If the computer is used for long periods, its surface can become very warm. While the temperature will not feel hot to the touch, if you maintain physical contact with the computer for a long time, for example if you rest the computer on your lap or if you keep your hands on the palm rest, your skin might suffer a low-heat injury.
- If the computer has been used for a long time, avoid direct contact with the metal plate supporting the various interface ports as this can become hot.
- The surface of the AC adaptor can become hot when in use but this condition does not indicate a malfunction. If you need to transport the AC adaptor, you should disconnect it and let it cool before moving it.
- Do not lay the AC adaptor on a material that is sensitive to heat as the material could become damaged.

Pressure or impact damage

Do not apply heavy pressure to the computer or subject it to any form of strong impact as this can damage the computer's components or otherwise cause it to malfunction.

Cleaning the computer

To help ensure long, trouble-free operation, keep the computer free of dust and dirt, and use care with all liquids around it.

- Be careful not to spill liquids into the computer. If the computer does get wet, turn the power off immediately and let the computer dry completely - in these circumstance you should get the computer inspected by an authorized service provider in order to assess the scope of any damage.
- Clean the plastics of the computer using a slightly water dampened cloth.

■ You can clean the display screen by spraying a small amount of glass cleaner onto a soft, clean cloth and then wiping the screen gently with the cloth.

⚠ *Never spray cleaner directly onto the computer or let liquid run into any part of it. Never use harsh or caustic chemical products to clean the computer.*

Moving the computer

While the computer is designed for flexible day-to-day usage you should exercise a few simple precautions when moving it in order to help ensure trouble-free operation.

■ Make sure all disk/disc activity has ended before moving the computer.
■ Turn off (shut down) the computer.
■ Disconnect the AC adaptor and all peripherals before moving the computer. The Keyboard dock can be moved when connected.
■ Close the display panel (not applicable in tablet mode).
■ Do not pick up the computer by its display panel.
■ Before carrying your computer, shut it down, disconnect the AC adaptor and allow it to cool down - a failure to follow this instruction may result in minor heat injury.
■ Be careful not to subject the computer to impact or shock - a failure to follow this instruction could result in damage to computer, computer failure or loss of data.
■ Never transport your computer with any cards installed - this may cause damage to either the computer and/or the card resulting in computer failure.
■ Always use a suitable carry case when transporting the computer.
■ When carrying your computer, be sure to hold it securely so that it does not fall or hit anything.
■ Do not carry your computer by holding any of its protruding elements.

Mobile phones

Please be aware that the use of mobile phones can interfere with the audio system. The operation of the computer will not be impaired in any way, but it is recommended that a minimum distance of 30cm is maintained between the computer and a mobile phone that is in use.

Instruction Manual for Safety and Comfort

All important information on the safe and proper use of this computer is described in the enclosed Instruction Manual for Safety and Comfort. Be sure to read it before using the computer.

Safety Icons

Safety icons are used in this manual to bring important information to your attention. Each type of message is identified as shown below.

Indicates a potentially hazardous situation, which could result in death or serious injury, if you do not follow instructions.

A caution informs you that improper use of equipment or failure to follow instructions may cause data loss, equipment damage, or may result in minor or moderate injury.

Please read. A note is a hint or advice that helps you make best use of your equipment.

Chapter 2

Getting Started

This chapter provides an equipment checklist, and basic information to start using your computer.

> *Some of the features described in this manual may not function properly if you use an operating system that was not pre-installed by TOSHIBA.*

Equipment checklist

Carefully unpack your computer, taking care to save the box and packaging materials for future use.

Hardware

Check to make sure you have all the following items:

- TOSHIBA Portable Personal Computer
- TOSHIBA Keyboard Dock (provided with some models)
- Stylus Pen (provided with some models)
- Reserve Pen (included in the pen slot with some models)
- AC adaptor and power cord (2-pin plug or 3-pin plug)
- Cleaning cloth(provided with some models)

> *Stylus Pen is included together with spare pen tips and a tip removal tool in the small case coming with the product.*

Documentation

- Z10-A Quickstart or WT310 Quickstart
- Instruction Manual for Safety and Comfort
- Warranty information

If any of the items are missing or damaged, contact your dealer immediately.

Dual operating mode

Some models are provided with a TOSHIBA Keyboard Dock and support dual operating mode - your computer can be easily converted from a tablet PC to a laptop PC. Throughout this manual, operating your computer as a tablet PC and a laptop PC is called "tablet mode" and "laptop mode" respectively.

Series Model Name	Operating Mode Supported
PORTÉGÉ Z10t-A	■ Laptop mode: when TOSHIBA Keyboard Dock is docked ■ Tablet mode: when TOSHIBA Keyboard Dock is undocked
WT310	Tablet mode only

Conventions

This manual uses the following formats to describe, identify, and highlight terms and operating procedures.

SSD or Solid State Drive	This computer is equipped with a Solid State Drive (SSD).
Click	■ Tap the Touch Pad or click the left Touch Pad control button once (laptop mode). ■ Left click the mouse once. ■ Tap the touch screen once.
Right-click	■ Click the right Touch Pad control button once (laptop mode). ■ Right click the mouse once. ■ Press and hold on the touch screen.
Double-click	■ Tap the Touch Pad or click the left Touch Pad control button twice (laptop mode). ■ Left click the mouse twice. ■ Tap the touch screen twice.
Charm	By swiping in from the right edge of the touch screen or pointing the mouse pointer to the lower-right (or upper-right) corner of your screen, you will find a list of charms: **Search**, **Share**, **Start**, **Devices** and **Settings**.
Desktop	Click the **Desktop** tile from the Start screen to access the desktop.
Start screen	You can go to the Start screen by clicking the **Start** charm. You can also use the Windows logo key (⊞) on the keyboard dock or press the Windows button (⊞) on the computer to go to the Start screen. For detailed information, please refer to the Windows Help and Support.

Using your computer for the first time

Be sure to read the enclosed Instruction Manual for Safety and Comfort for information on the safe and proper use of this computer. It is intended to help you be more comfortable and productive while using a notebook computer. By following the recommendations in it you may reduce your chance of developing a painful or disabling injury to your hand, arms, shoulders or neck.

This section provides basic information to start using your computer. It covers the following topics:

■ Connecting TOSHIBA Keyboard Dock
■ Connecting the AC adaptor
■ Turning on the power
■ Initial setup
■ Getting to know the Start screen

■ *Use a virus-check program and make sure it is updated regularly.*

■ *Never format storage media without checking its content - formatting destroys all stored data.*

■ *It is a good idea to periodically back up the internal Solid State Drive or other main storage device to external media. General storage media is not durable or stable over long periods of time and under certain conditions may result in data loss.*

■ *Before you install a device or application, save any data in memory to the Solid State Drive or other storage media. Failure to do so may result in the loss of data.*

Connecting TOSHIBA Keyboard Dock

TOSHIBA Keyboard Dock provided with some models can turn your computer into a laptop for extensibility including a physical keyboard and more ports.

To use the computer in laptop mode, you need to connect TOSHIBA Keyboard Dock to the computer by following the steps below:

1. Hold the computer with two hands on both the left and right sides.
2. Align the docking interface located on the computer with the docking connector on the keyboard dock.

3. Press down the computer until it clicks into place. The docking connector on the keyboard dock engages the docking interface on the computer.

Figure 2-1 Connecting the keyboard dock
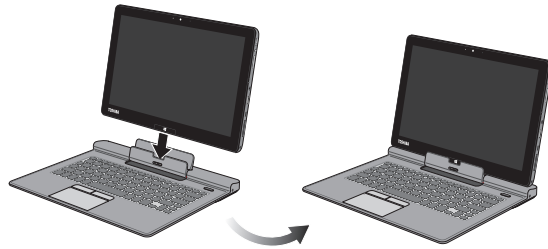
- *Please close the display screen when you move or are carrying the computer.*
- *Do not lift the computer by the palm rest on the keyboard dock. Fail to follow this instruction may cause damage to the computer or result in minor injury.*
- *Do not press or push with excess force on the display screen.*
- *Do not lift the computer by the display screen.*
- *Do not close the computer with pens or any other objects left in between the computer and the keyboard dock.*
- *Please be careful not to hurt your fingers when you are docking the computer to the keyboard dock.*
- *Never remove the computer without unlocking by the release latch, otherwise it may cause damage to the computer.*
- *Never turn the computer holder without the computer docked, otherwise it may cause damage or possibly result in mechanical malfunction.*


To disconnect and remove the computer from the keyboard dock, follow the steps below:

1. Disconnect and remove all peripheral devices and cables connected to the computer.
2. Press the **Eject button** on the keyboard dock.

3. Slide and hold the **Release latch** to the left (unlock position) and then slowly lift the computer to release it from the computer holder and completely off the keyboard dock.

Figure 2-2 Removing the computer from the keyboard dock
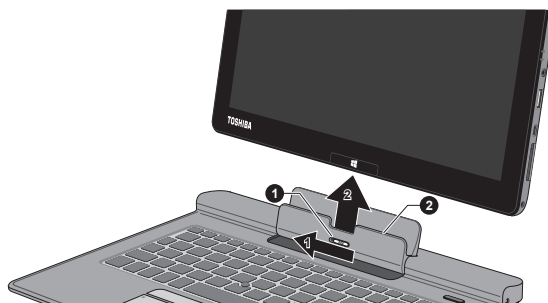
| 1. Release latch | 2. Computer holder |

Computer appearance depends on the model you purchased.

Connecting the AC adaptor

Connect the AC adaptor when you need to charge the battery or you want to operate from AC power. It is also the fastest way to get started, because the battery pack will need to be charged before you can operate from battery power.

The AC adaptor can automatically adjust to any voltage ranging from 100 to 240 volts and to a frequency of either 50 or 60 hertz, enabling you to use this computer in almost any country/region. The adaptor converts AC power to DC power and reduces the voltage supplied to this computer.

■ *Always use the TOSHIBA AC adaptor that was included with your computer, or use AC adaptors specified by TOSHIBA to avoid any risk of fire or other damage to the computer. Use of an incompatible AC adaptor could cause fire or damage to the computer possibly resulting in serious injury. TOSHIBA assumes no liability for any damage caused by use of an incompatible adaptor.*

■ *Never plug the AC adaptor into a power source that does not correspond to both the voltage and the frequency specified on the regulatory label of the unit. Failure to do so could result in a fire or electric shock, possibly resulting in serious injury.*

■ *Always use or purchase power cables that comply with the legal voltage and frequency specifications and requirements in the country of use. Failure to do so could result in a fire or electric shock, possibly resulting in serious injury.*

- *The supplied power cord conforms to safety rules and regulations in the region the computer is bought and should not be used outside this region. For use in other regions, please buy power cords that conform to safety rules and regulations in the particular region.*

- *Do not use a 3-pin to 2-pin conversion plug.*

- *When you connect the AC adaptor 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 adaptor 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.*

- *Never place your computer or AC adaptor on a wooden surface, furniture, or any other surface that could be marred by exposure to heat since the computer base and AC adaptor's surface increase in temperature during normal use.*

- *Always place your computer or AC adaptor on a flat and hard surface that is resistant to heat damage.*

Refer to the enclosed Instruction Manual for Safety and Comfort for detailed precautions and handling instructions.

1. Connect the power cord to the AC adaptor.

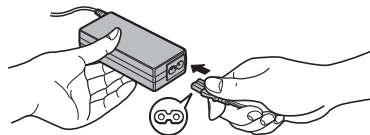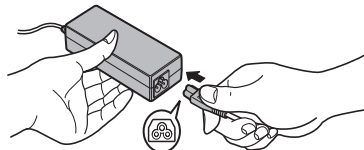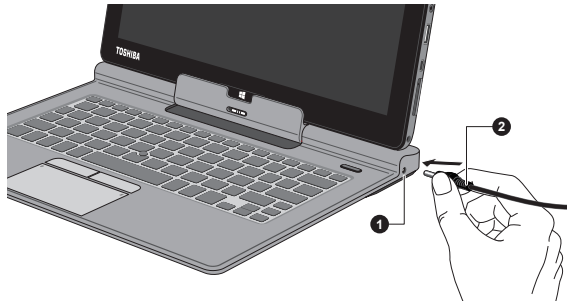*Figure 2-3 Connecting the power cord to the AC adaptor (2-pin plug)*

Figure 2-4 Connecting the power cord to the AC adaptor (3-pin plug)

Either a 2-pin or 3-pin adaptor/cord will be included with the computer depending on the model.

2. Connect the AC adaptor's DC output plug to the DC IN 19V jack.

Figure 2-5 Connecting the DC output plug to the computer (laptop mode)
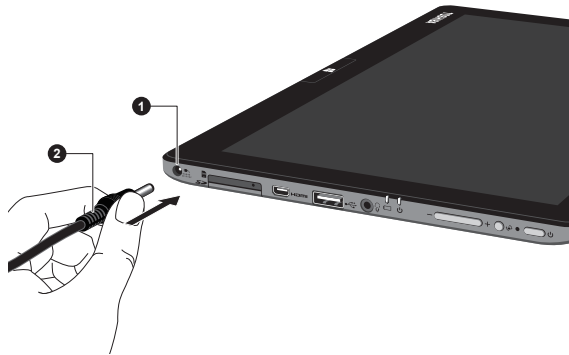
1. DC IN 19V jack   2. DC output plug

Computer appearance depends on the model you purchased.

Figure 2-6 Connecting the DC output plug to the computer (tablet mode)

1. DC IN 19V jack   2. DC output plug

Computer appearance depends on the model you purchased.

3. Plug the power cord into a live wall outlet - the **Battery** indicator should glow.

Turning on the power

This section describes how to turn on the power - the **Power** indicator will then indicate the status. Please refer to the *Monitoring of power condition* section for more information.

- *After you turn on the power for the first time, do not turn it off until you have set up the operating system.*
- *Volume cannot be adjusted during Windows Setup.*

1. Press the computer's power button.

Figure 2-7 Turning on the power (laptop mode)
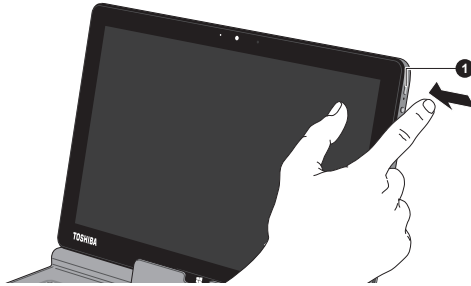
1. Power button

Computer appearance depends on the model you purchased.

Figure 2-8 Turning on the power (tablet mode)

1. Power button

Computer appearance depends on the model you purchased.

Initial setup

The Windows 8 Startup Screen will be the first screen displayed when you turn on the power. Follow the on-screen instructions on each screen in order to properly install the operating system.

When it is displayed, be sure to read the **License Terms** *carefully.*

Getting to know Windows

For detailed information on what is new and how to operate Windows 8, please refer to the Windows Help and Support.

Start screen

The Start screen is the launching pad for everything you can do in the Windows operating system, providing new and easy ways to access

everything from your favorite apps and Web sites to your contacts and other important information.

From the Start screen, you can just start typing to search for what you want. From there, you can easily switch between results for apps, files, and more.

Charms

Use the Windows Charms to start apps, find documents, set up system components, and perform most other computing tasks.

By pointing the mouse pointer to the upper or lower right corner of your screen, you will find a list of charms: **Search**, **Share**, **Start**, **Devices** and **Settings**.

🔍	**Search**	This Charm allows you to search for most anything you need to locate on your computer. It can help you find apps, documents, photos, and your favorite music.
🔗	**Share**	This Charm allows you to share music and photos with your favorite social Web sites.
⊞	**Start**	This Charm allows you to view all of the available apps downloaded to your system.
🔲	**Devices**	This Charm allows you to manage your hardware devices.
⚙	**Settings**	This Charm allows you to manage your system settings.

Tiles

Tiles can be accessed and launched from the Start screen.

Typical Start screen tiles are the Desktop tile and Mail tile, as well as tiles representing all other applications downloaded to your system.

Windows Store

Although many applications will be pre-installed or built-in to your computer, you will also have the ability to download many other applications at the click of your mouse.

In the Windows Store you can search for and browse thousands of apps, all grouped into easy to find categories.

Turning off the power

The power can be turned off in one of the following modes, either Shut Down Mode, Sleep Mode or Hibernation Mode.

Shut Down Mode

When you turn off the power in Shut Down Mode, no data will be saved and the computer will boot to the operating system's main screen the next time it is turned on.

1. If you have entered data, either save it to the Solid State Drive or to other storage media.
2. Make sure all disk/disc activity has stopped before removing the disk/disc.

⚠️ ■ *If you turn off the power while a disk (disc) is being accessed, you may lose data or damage the disk.*

■ *Never turn off the power while an application is running. Doing so could cause loss of data.*

■ *Never turn off the power, disconnect an external storage device or remove storage media during data read/write. Doing so can cause data loss.*

3. Click the **Settings** charm.
4. Click **Power** and then select **Shut down**.
5. Turn off any peripheral devices connected to your computer.

⚠️ *Do not turn the computer or peripheral devices back on immediately - wait a short period to avoid any potential damage.*

Restarting the computer

Certain conditions require that you reset the computer, for example if:

■ You change certain computer settings.

If you need to restart the computer, there are two ways this can be achieved:

■ In the **Settings** charm, click **Power** and then select **Restart**.
■ Press **CTRL**, **ALT** and **DEL** simultaneously (once) on the keyboard to display the menu window, and then select **Restart** by clicking the power icon (⏻) in the lower-right corner.

Sleep Mode

If you have to interrupt your work, you are able to turn off the power without exiting from your software by placing the computer into Sleep Mode. In this mode data is maintained in the computer's main memory so that when you turn on the power again, you can continue working right where you left off.

When you have to turn off your computer aboard an aircraft or in places where electronic devices are regulated or controlled, always completely shut down the computer. This includes turning off any wireless communication functionalities, and cancelling settings that reactivate the computer automatically, such as a timer recording function. Failure to completely shut down the computer in this way could allow the operating system to reactivate and run pre-programmed tasks or preserve unsaved data, which could interfere with aviation or other systems, possibly causing serious injury.

■ *Before entering Sleep Mode, be sure to save your data.*
■ *Do not switch to Sleep Mode while transferring data to external media, such as USB devices, memory media or other external memory devices. Data will be lost.*

■ *The computer will automatically go into Sleep Mode according to the settings in the Power Options (to access it, click **Desktop -> Desktop Assist -> Control Panel -> System and Security -> Power Options**). To prevent the computer from automatically entering Sleep Mode, disable Sleep Mode within the Power Options.*
■ *To restore the operation of the computer from Sleep Mode, press the power button or any key on the keyboard dock for a short amount of time. Please note that keyboard keys can only be used if the Wake-up on Keyboard option is enabled within the TOSHIBA System Settings.*
■ *If the computer enters Sleep Mode while a network application is active, the application might not be restored when the computer is next turned on and the system returns from Sleep Mode.*
■ *To use the Hybrid Sleep function, configure it in the Power Options.*

Benefits of Sleep Mode

The Sleep Mode feature provides the following benefits:

■ Restores the previous working environment more rapidly than does the Hibernation Mode feature.
■ Saves power by shutting down the system when the computer receives no input or hardware access for the time period set by the System Sleep Mode feature.
■ Allows the use of the panel power off feature.

Executing Sleep Mode

You can enter Sleep Mode in one of three ways:

■ In the **Settings** charm, click **Power** and then select **Sleep**.

- Close the display panel. Please note that this feature must be enabled within the Power Option.
- Press the power button. Please note that this feature must be enabled within the Power Options.

When you turn the power back on, you can continue where you left when you shut down the computer.

- *When the computer is in Sleep Mode, the Power indicator will blink white.*
- *If you are operating the computer on battery power, you can lengthen the overall operating time by turning it off into Hibernation Mode - Sleep Mode will consume more power while the computer is off.*

Sleep Mode limitations

Sleep Mode will not function under the following conditions:

- Power is turned back on immediately after shutting down.
- Memory circuits are exposed to static electricity or electrical noise.

Hibernation Mode

The Hibernation Mode feature saves the contents of memory to the Solid State Drive when the computer is turned off so that, the next time it is turned on, the previous state is restored. Please note that the Hibernation Mode feature does not save the status of any peripheral devices connected to the computer.

- *Save your data. While entering Hibernation Mode, the computer saves the contents of memory to the Solid State Drive. However, for safety sake, it is best to save your data manually.*
- *Data will be lost if you disconnect the AC adaptor before the save is completed.*
- *Do not switch to Hibernation Mode while transferring data to external media, such as USB devices, memory media or other external memory devices. Data will be lost.*

Benefits of Hibernation Mode

The Hibernation Mode feature provides the following benefits:

- Saves data to the Solid State Drive when the computer automatically shuts down because of a low battery condition.
- You can return to your previous working environment immediately when you turn on the computer.
- Saves power by shutting down the system when the computer receives no input or hardware access for the time period set by the System Hibernate feature.

■ Allows the use of the panel power off feature.

Starting Hibernation Mode

To enter Hibernation Mode, follow the steps below.

1. Click the **Settings** charm.
2. Click **Power** and then select **Hibernate**.

*In order to show **Hibernate** in Power menu, you need to setup according to the following steps:*

*1. Click **Desktop -> Desktop Assist -> Control Panel -> System and Security -> Power Options**.*

*2. Click **Choose what the power button does** or **Choose what closing the lid does**.*

*3. Click **Change settings that are currently unavailable**.*

*4. Select the **Hibernate** check box from Shutdown settings.*

*5. Click the **Save changes** button.*

Automatic Hibernation Mode

The computer can be configured to enter Hibernation Mode automatically when you press the power button or close the lid. In order to define these settings, you can follow the steps as described below:

1. Click **Power Options** and then click **Choose what the power button does** or **Choose what closing the lid does**.
2. Enable the desired Hibernation Mode settings for **When I press the power button** and **When I close the lid**.
3. Click the **Save changes** button.

Data save in Hibernation Mode

When you turn off the power in Hibernation Mode, the computer will take a moment to save the current data in memory to the Solid State Drive.

After you turn off the computer, and the content of memory has been saved to the Solid State Drive, turn off the power to any peripheral devices.

Do not turn the computer or devices back on immediately. Wait a moment to let all capacitors fully discharge.

Chapter 3

The Grand Tour

This chapter identifies the various components of the computer - it is recommended that you become familiar with each before you operate the computer.

Legal Footnote (Non-applicable Icons)

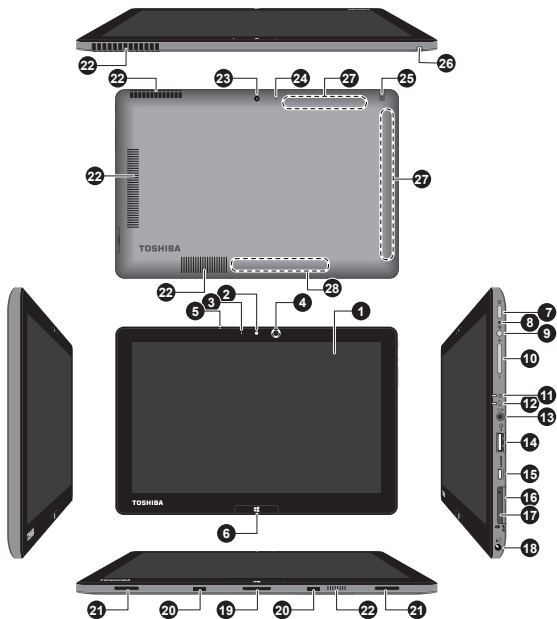For more information regarding Non-applicable Icons, please refer to the *Legal Footnotes* section.

Please handle your computer carefully to avoid scratching or damaging the surface.

The Computer

The following figure shows each important component of the computer.

Figure 3-1 The computer in tablet mode

1. Display screen
2. Web Camera (front)
3. Web Camera LED
4. Ambient light sensor (not shown)
5. Microphone
6. Windows button
7. Power button
8. Force shutdown hole
9. Orientation lock button
10. Volume up/down button
11. Power indicator
12. Battery indicator
13. Headphone/Microphone combo jack

14. Universal Serial Bus (USB 3.0) port

15. HDMI(micro) port
16. Memory media slot
17. SIM card slot*
18. DC IN 19V jack
19. Docking interface
20. Hook holes
21. Stereo speakers
22. Cooling vents
23. Web Camera (back)*
24. Web Camera LED*
25. Reserve Pen*
26. Reserve Pen slot*
27. Wireless communication antennas (not shown)
28. ID information

* Provided with some models.
Product appearance depends on the model you purchased.

Display screen	29.5cm (11.6") LCD screen, configured with the following resolutions:
	■ FHD, 1920 horizontal x 1080 vertical pixels
	Please be aware that, when the computer is operating on the AC adaptor, the image displayed on the internal screen will be somewhat brighter than when it operates on battery power. This difference in brightness levels is intended to save power when operating on batteries.

Legal Footnote (LCD)

For more information regarding LCD, please refer to the *Legal Footnotes* section.

Web Camera (front)	**Web Camera** is a device that allows you to record video or take photographs with your computer. You can use it for video chatting or video conferences using a communication tool.

- *Do not point the web camera directly at the sun.*
- *Do not touch or press strongly on the web camera lens. Doing so may reduce image quality. Use an eyeglass cleaner (cleaner cloth) or other soft cloth to clean the lens if it becomes dirty.*

Web Camera LED (front)	The Web Camera LED glows when the Web Camera is operating.
Ambient light sensor	Ambient light sensor can detect the light quality and intensity outside and can use this information to automatically adjust the display screen brightness.

Do not cover the ambient light sensor, otherwise it may not work properly.

Microphone	The built-in microphone allows you to import and record sounds for your application - please refer to the *Sound System and Video mode* section for more information.
Windows button	Press this button to show the Start screen.
Power button	Press this button to turn the computer's power on or off.

|	**Force Shut down hole**	Insert a slender object such as a needle into this hole to force shut down the computer when the system is hang up.
	Orientation lock button	Press to lock/unlock automatic rotation of the screen orientation.
+ ── −	**Volume up/down buttons**	Press these buttons to increase or decrease the volume.
	Power indicator	The **Power** indicator normally glows white when the computer is turned on. However, if you turn the computer off into Sleep Mode, this indicator will flash white.
	Battery indicator	The **Battery** indicator shows the condition of the DC IN and the battery's charge - white indicates the battery is fully charged while the power is being correctly supplied from the AC power adaptor.
		Please refer to the *Monitoring of power conditions* section for more information on this feature.
	Headphone/ Microphone combo jack	A 3.5 mm mini headphone/microphone combo jack enables connection of a monaural microphone or a stereo headphone.

Both the internal and external microphones will be disabled if you use a headset other than the type as shown below.

Mic
Ground
Right
Left
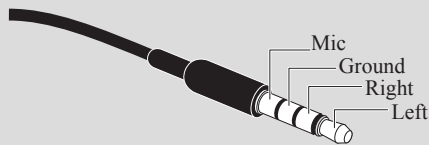
	Universal Serial Bus (USB 3.0) port	One Universal Serial Bus port, which complies to the USB 3.0 standard, is provided on the right side of the computer.
		The USB 3.0 port is compliant with USB 3.0 standard and backward compatible with USB 2.0 devices.

Please note that it is not possible to confirm the operation of all functions of all USB devices that are available. In view of this it may be noted that some functions associated with a specific device might not operate properly.

USB 3.0 port(s) may work as USB 2.0 port(s) when operating in USB Legacy Emulation mode.

Keep foreign metal objects, such as screws, staples and paper clips, out of the USB port. Foreign metal objects can create a short circuit, which can cause damage and fire, possibly resulting in serious injury.

HƏmi	**HDMI(micro) port**	HDMI(micro) port can connect to HDMI cable with Type D connector.
		An HDMI cable sends video and audio signals. In addition to this, it can send and receive control signals.
		Please refer to the *HDMI port* section for details.
SD	**Memory media slot**	This slot lets you insert an SD™/SDHC™/SDXC™ memory card, miniSD™/microSD™ Card and MultiMediaCard™. Refer to the *Memory media* section for more information.

Keep foreign metal objects, such as screws, staples and paper clips, out of the Memory media slot. Foreign metal objects can create a short circuit, which can cause damage and fire, possibly resulting in serious injury.

SIM	**SIM Card slot**	This slot lets you insert a SIM card which enables a high-speed access to the Internet, corporate Intranet and your email while you are away from office.
DC IN 19V	**DC IN 19V jack**	The AC adaptor connects to this jack in order to power the computer and charge its internal batteries. Please note that you should only use the model of AC adaptor supplied with the computer at the time of purchase - using the wrong AC adaptor can cause damage to the computer.
	Docking interface	This interface enables the connection of the keyboard dock and the optional cradle described in *Optional TOSHIBA Accessories* section.
	Hook holes	Designed for engaging the hooks on the keyboard dock and ensuring a firm connection.

Stereo speakers	The speakers emit sound generated by your software as well as audio alarms, such as low battery condition, generated by the system.

The stereo speakers will be disabled after your computer is connected to the optional cradle described in Optional TOSHIBA Accessories section and the audio output is routed through the 3.5mm audio out jack on the cradle. To manually set the stereo speakers as the default playback device, please follow the steps below:
1. *Click Desktop -> Desktop Assist -> Control Panel -> Hardware and Sound -> Sound.*
2. *In the Playback tab, select Speakers (Realtek High Definition Audio) and click Set Default button.*
3. *Click OK.*

Cooling vents	The cooling vents help the processor to avoid overheating.
Web Camera (back)	Your computer is also equipped with a back Web Camera used for recording video or taking photographs.

- *Do not point the web camera directly at the sun.*

- *Do not touch or press strongly on the web camera lens. Doing so may reduce image quality. Use an eyeglass cleaner (cleaner cloth) or other soft cloth to clean the lens if it becomes dirty.*

|	
Camera LED (back)	The Camera LED glows when the Camera is operating.
Reserve Pen	A Reserve Pen is stored in the computer and enables direct data entry through the display screen. Some models are equipped with a Reserve Pen. Please refer to the *Tablet Pen* section in Chapter 4, Operating Basics.
Reserve Pen slot	The Reserve Pen slot provides storage for the Reserve Pen.
Wireless communication antennas	The computer is equipped with the Wireless LAN/Bluetooth antennas. Some computers in this series are also equipped with the Wireless WAN antennas.
ID information	The regulatory information applicable to your computer can be identified here.

TOSHIBA Keyboard Dock

The following figure shows each important component of the keyboard dock.

Figure 3-2 Front view of the keyboard dock
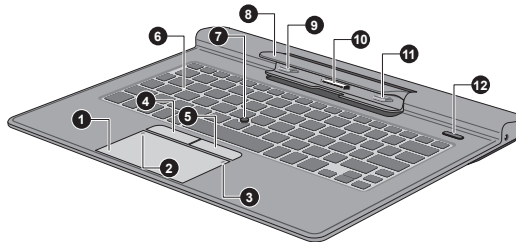
1. Touch Pad	7. AccuPoint
2. Touch Pad ON/OFF indicator	8. Computer holder
3. TOSHIBA eco indicator	9. Hook
4. Touch Pad control button	10. Docking connector
5. Touch Pad control button	11. Hook
6. Keyboard	12. Eject button

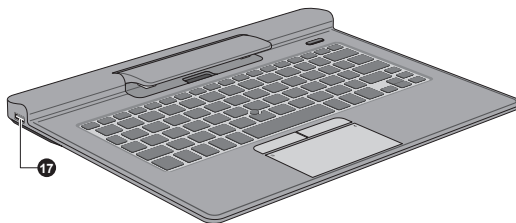Product appearance depends on the model you purchased.

Figure 3-3 Back view of the keyboard dock
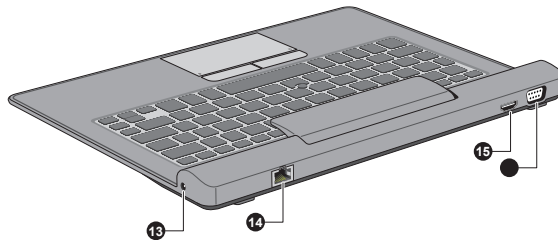
13. DC IN 19V jack	15. HDMI port
14. LAN jack	16. External RGB monitor port

Product appearance depends on the model you purchased.

Figure 3-4 Left view of the keyboard dock

17. Universal Serial Bus (USB 2.0) port

Product appearance depends on the model you purchased.

	Touch Pad	The Touch Pad located in the palm rest is used to control the movement of the on-screen pointer.
		To use the Touch Pad, simply touch and move your fingertip across it in the direction you want the on-screen pointer to go.
⌸	**Touch Pad ON/OFF indicator**	Double tap this indicator to enable/disable the Touch Pad.
⊕	**TOSHIBA eco indicator**	Double tap to enable/disable TOSHIBA eco Utility.
	Touch Pad control buttons	The two buttons above the Touch Pad are used like the buttons on a standard mouse - press the left button to select a menu item or to manipulate text or graphics designated by the pointer, and press the right button to display a menu or other function depending on the software you are using.
	Keyboard	Keyboard contains character keys, control keys, function keys, and special Windows keys, providing all the functionality of a full-size keyboard.
		Refer to the *The Keyboard* section for details.
	AccuPoint	A pointer control device located in the center of the keyboard is used to control the on-screen pointer.
		Please refer to the *AccuPoint* section for details
	Computer holder	The holder provides firm support to the computer.
	Hooks	Hooks secure the physical connection between the computer and the keyboard dock.

	Docking connector	Connects to the computer.
▲	**Eject button**	Begins the computer's disconnect sequence.
		Once the eject button is pressed and the computer cannot communicate with external devices connected to the keyboard dock. Undock and re-dock the computer to re-establish communication.
DC IN 19V	**DC IN 19V jack**	The AC adaptor connects to this jack in order to power the computer and charge its internal batteries. Please note that you should only use the model of AC adaptor supplied with the computer at the time of purchase - using the wrong AC adaptor can cause damage to the computer.
品	**LAN jack**	This jack lets you connect to a LAN. The adaptor has built-in support for Ethernet LAN (10 megabits per second, 10BASE-T), Fast Ethernet LAN (100 megabits per second, 100BASE-TX) and Gigabit Ethernet LAN (1000 megabits per second, 1000BASE-T). Refer to *Operating Basics*, for details.

⚠ ■ *Do not connect any cable other than a LAN cable to the LAN jack. It could cause damage or malfunction.*

■ *Do not connect the LAN cable to a power supply. It could cause damage or malfunction.*

HDMI	**HDMI port**	HDMI port can connect with Type A connector HDMI cable.
		Please refer to the *HDMI port* section for details
⛌	**Universal Serial Bus (USB 2.0) port**	One Universal Serial Bus port, which complies to the USB 2.0 standard, is provided on the left side of the keyboard dock.

ⓘ *Please note that it is not possible to confirm the operation of all functions of all USB devices that are available. In view of this it may be noted that some functions associated with a specific device might not operate properly.*

Keep foreign metal objects, such as screws, staples and paper clips, out of the USB port. Foreign metal objects can create a short circuit, which can cause damage and fire, possibly resulting in serious injury.

The Computer (laptop mode)

The following figure shows the front of the computer when TOSHIBA Keyboard Dock is connected.

Figure 3-5 Front view of the computer (display panel closed)
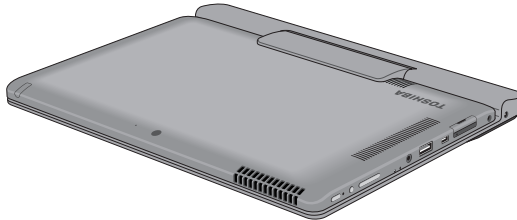
Product appearance depends on the model you purchased.

Figure 3-6 Front view of the computer (display panel open)

1. Release latch

Product appearance depends on the model you purchased.

	Release latch	Slide and hold the release latch to the left to disengage the computer from the keyboard dock.
		Please refer to the *Connecting TOSHIBA Keyboard Dock* section to learn more details.

Internal Hardware Components

This section describes the internal hardware components of your computer.

The actual specifications may vary depending on the model you purchased.

Battery pack	This computer includes a battery pack inside. However, please do not attempt to dismount or replace it by yourself. Please contact an authorized TOSHIBA service provider, if necessary.
	The rechargeable lithium-ion battery pack provides power to the computer when the AC adaptor is not connected.
	For more detailed information on the use and operation of the battery pack please refer to the *Battery* section.

Legal Footnote (Battery Life)

For more information regarding Battery Life, please refer to the *Legal Footnotes* section.

CPU	The processor type varies depending on model.
	To check which type of processor is included in your model, open the TOSHIBA PC Health Monitor by clicking **Desktop -> Desktop Assist -> Support & Recovery -> PC Health Monitor**, and then click **PC Information**.

Legal Footnote (CPU)

For more information regarding CPU, please refer to the *Legal Footnotes* section.

Solid State Drive	The capacity of the Solid State Drive varies depending on the model.
	To check which type of SSD is included in your model, open the TOSHIBA PC Health Monitor by clicking **Desktop -> Desktop Assist -> Support & Recovery -> PC Health Monitor**, and then click **PC Information**.
	Please note that part of the Solid State Drive's overall capacity is reserved as administration space.

*   *In this manual, the word "HDD" or "Hard disk drive" also refers to the SSD unless otherwise stated.*
*   *SSD is a large-capacity storage media which uses Solid-State Memory in place of a magnetic disk of the hard disk.*

Under certain unusual conditions of prolonged non-use and/or exposure to high temperatures, the SSD may be vulnerable to data retention errors.

Legal Footnote (Solid State Drive (SSD) Capacity)

For more information regarding Solid State Drive (SSD) Capacity, please refer to the *Legal Footnotes* section.

RTC battery	The internal RTC battery backs up the Real Time Clock (RTC) and calendar.
Video RAM	The memory in a computer's graphics adaptor, used to store the image displayed on a bitmap display.
	The amount of Video RAM available is dependent on the computer's system memory.
	Desktop -> Desktop Assist -> Control Panel -> Appearance and Personalization -> Display -> Adjust resolution.
	The amount of Video RAM can be verified by clicking the **Advanced settings** button in the Screen Resolution window.
Display controller	The display controller interprets software commands into hardware commands that turn particular parts on the screen on or off.
	The display controller also controls the video mode and uses industry standard rules to govern the screen resolution and the maximum number of colors that can be displayed at a time. Therefore, software written for a given video mode will run on any computer that supports that mode.

Legal Footnote (Graphics Processing Unit (GPU))

For more information regarding Graphics Processing Unit (GPU), please refer to the *Legal Footnotes* section.

Intel® Display Power Saving Technology

Intel GPU includes the Display Power Saving Technology feature that can save the computer's power consumption by optimizing picture contrast on the internal LCD.

This feature can be used if the computer is:

- running under battery mode
- using the internal LCD display only

The Display Power Saving Technology feature is enabled at factory default. If you want to disable this feature, you can disable it.

The Display Power Saving Technology feature can be disabled in the Intel® Graphics and Media Control Panel.

You can access this control panel in the following way:

- Right-click on the desktop and click **Graphics Properties...**

In this control panel:

1. Click **Power**.
2. Select **On battery** from the drop-down menu in **Power Source**.
3. Clear the **Display Power Saving Technology** check box.
4. Click **OK**.

If you want to enable this feature, under the conditions mentioned above, select the **Display Power Saving Technology** check box.

Intel Rapid Start Technology

Your computer supports Intel® Rapid Start Technology which enables the computer to change to Hibernation Mode from Sleep Mode after a specified period of time.

With the Intel® Rapid Start Technology, the Windows can rapidly resume from Hibernation Mode and battery life will be longer than when in Sleep Mode.

Intel® Rapid Start Technology is enabled at factory default. The computer will switch to Hibernation Mode after two hours of Sleep Mode.

You can launch the BIOS setup utility to enable/disable the function and change the specified time setting from Sleep Mode to Hibernation Mode.

1. Launch the BIOS setup utility.

   Please refer to *TOSHIBA Setup Utility* section for further information.
2. Select **Power Management**.
3. Enable/Disable **Intel(R) Rapid Start Technology** function.
4. You can select the period of time from Sleep Mode to Hibernation Mode using **Rapid Start Entry after**. If the **Immediately** option is selected, the computer will switch to Hibernation Mode immediately after your computer goes into the Sleep Mode.

- *When Intel® Rapid Start Technology is enabled, switching from Sleep Mode to Hibernation Mode consumes power. When you carry your computer aboard on an aircraft or in places where electronic devices are regulated or controlled, always power off your computer.*

- *When Intel® Rapid Start Technology is enabled, Wake-up on LAN, Wake-up on USB or Wake-up from Sleep Mode automatically functions are not available when the computer has been switched from Sleep Mode to Hibernation Mode.*

- *The Windows cannot be restored normally if the battery is exhausted when the computer is moving from Sleep Mode to Hibernation Mode.*

- *The partition allocation on the Solid State Drive for the Intel® Rapid Start Technology cannot be deleted even if Intel® Rapid Start Technology is disabled.*

- *Intel® Rapid Start Technology can be used only for Windows 8.*

- *The Windows restore time from Hibernation Mode depends on the amount of system memory used in the computer.*

Monitoring of power conditions

Power conditions

The computer's operating capability and battery charge status are affected by different power conditions, including whether an AC adaptor is connected and what the charge level is for that battery.

*The LED in the table below refers to the **Battery** indicator.*

		Power on	Power off (no operation)
AC adaptor connected	Battery fully charged	• Operates • No charge • LED: white	• No charge • LED: white
	Battery partially charged or no charge	• Operates • Charge • LED: amber	• Quick charge • LED: amber

		Power on	Power off (no operation)
AC adaptor not connected	Remaining battery capacity is above low battery trigger point	• Operates • LED: off	
	Remaining battery capacity is below low battery trigger point	• Operates • LED: flashes amber	
	Remaining battery capacity is exhausted	Computer shuts down	

Battery indicator

Check the **Battery** indicator to determine the status of the battery pack and the power status with the AC adaptor connected. The following indicator conditions should be noted:

Flashing amber	The battery charge is low. The AC adaptor must be connected in order to recharge the battery.
Amber	Indicates the AC adaptor is connected and the battery is charging.
White	Indicates the AC adaptor is connected and the battery is fully charged.
No light	Under any other conditions, the indicator does not light.

If the battery pack becomes too hot while it is being charged, the charge will stop and the Battery indicator will go out. When the battery pack's temperature falls to a normal range, charging will resume - this process will occur regardless of whether the computer's power is on or off.

Power indicator

Check the **Power** indicator to determine the power status of the computer - the following indicator conditions should be noted:

White	Indicates power is being supplied (either from the AC adaptor or battery) to the computer and the computer is turned on.

Flashing white	Indicates that the computer is in Sleep Mode and that there is sufficient power available (AC adaptor or battery) to maintain this condition.
No light	Under any other conditions, the indicator does not light.

Chapter 4

Operating Basics

This chapter describes the basic operations of your computer, highlights the precautions that should be taken when using it.

Operating in Tablet Mode

When operating the computer in tablet mode, follow the instructions below.
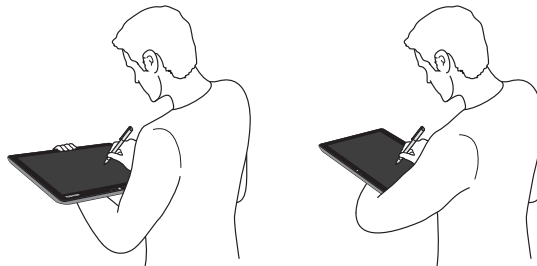
- Hold the computer firmly on your forearm. Do not block the vent.
- Remove the AC adaptor from the computer when using it held in your forearm.
- Do not use the computer while walking or driving a car.
- Do not expose the computer to rapid temperature changes (such as would be the case if you brought the computer from a cold environment into a warm room). When rapid temperature changes are unavoidable, leave the computer for around two hours before turning it on to prevent the formation of condensation.
- Remove all external peripheral devices and their connection cables from the computer before carrying.
- Do not drop the computer or apply excessive impact to it. Do not leave the tablet in a car or similar environment where it is exposed to direct sunlight.

■ The display panel with some models works as a touch sensitive digitizer screen. However, the outer edges of the screen may be less sensitive. Please keep the Stylus Pen or the Reserve Pen inside the display area when you use it near the edges of the display panel. The position of the pen may not be recognized if you move the pen too fast towards the outer edge. Please be sure to slide the pen slowly in areas near the edges of the screen. Use the pen in the areas enclosed by the dotted line as shown in the following figure.

Figure 4-2 Use area of the pen
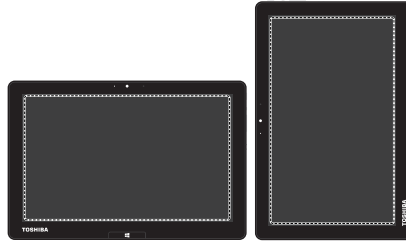
Changing the screen orientation

When operating the computer in tablet mode, you can change the screen orientation to Portrait mode by rotating the computer sideways. The screen orientation automatically changes according to the rotation angle detected.

Figure 4-3 Rotating the computer sideways

You can also lock the orientation and always use the computer in Portrait or Landscape mode by pressing the **Orientation lock** button. However, under the following conditions, the **Orientation lock** button is disabled and the screen orientation will always be in Landscape mode.

■ The computer is in laptop mode.
■ The computer is connected to the optional cradle described in *Optional TOSHIBA Accessories* section.

■ *Avoid having direct contact with the other edges of the hand held device while the wireless device is turned on and transmitting. Only factories installed wireless transmitter can be used with this hand held device to satisfy RF exposure compliance.*

■ *In the Portrait mode, some drivers/utilities may not perform install and uninstall operation. If it occurs, switch to the Landscape mode to proceed.*

Calibrating digital compass

If you have downloaded a compass application to use this feature, please note that the performance of any compass feature will vary depending on environmental conditions. For example, any source using electromagnetic or radio waves.

Before using any compass feature the compass needs to be calibrated for accuracy. To calibrate, please disconnect the AC adaptor and remove all peripherals/cables, and then horizontally rotate the computer with the power on several times as shown in the illustration below. Please note this is the most effective method of calibrating this computer.

Figure 4-4 Calibrating digital compass

Using the Touch Screen

You can use your finger to manipulate icons, buttons, menu items, the onscreen keyboard, and other items on the touch screen.

	Tap	Simply tap your finger once on the touch screen to active an item, such as an app.
	Press and hold	Press your finger down and leave it there for a few seconds. This will show information to help you learn more about an item or will open a menu specific to what you are doing.
	Pinch or stretch	Touch the screen or an item with two or more fingers, and then move the fingers toward each other (pinch) or away from each other (stretch). This will show different levels of information or visually zooms in or out.
	Rotate	Put two or more fingers on an item and then turn your hand to rotate things in the direction you turn your hand. Only some items can be rotated.

	Slide	Drag your finger on the touch screen to move through what's on the screen.

| | **Swipe** | Quickly move your finger in from the edge of the screen, without pausing when you first touch it.

Swipe from the left edge: shows your recently opened apps, and so on.

Swipe from the right edge: opens or closes the Charms (Search, Share, Start, Devices, Settings).

Swipe from the top edge: opens or closes the app command bar. |
|---|---|---|

For details and more advanced touch screen gestures to interact with Windows 8, please refer to Help and Support.

- *Do not press or push with excess force on the touch screen.*
- *Do not apply excess force when cleaning the touch screen.*
- *Never touch the screen with a sharp object such as a ball-point pen which may scratch or damage the surface.*
- *Do not use a protecting sheet for the touch screen as it may decrease its sensitivity to gestures.*

Using the Touch Pad

The Touch Pad located on the TOSHIBA Keyboard Dock may support the following gestures:

	Tap	Tap once on the touch pad to active an item, such as an app.

	Two-Finger Tap	Tap once on the touch pad with two fingers together to display a menu or other function depending on the software you are using. (Similar to right-click)

	Pinch or stretch	Place two or more fingers down on the touchpad and move them toward each other (pinch) or away from each other (stretch). This will show different levels of information or visually zooms in or out.

	Two-Finger Scroll	Place two fingers down and slide them vertically or horizontally from anywhere on the touch pad. This allows you to operate the scroll bars of a window.
	Swipe	Quickly move your finger in from the edge of the touch pad, without pausing when you first touch it.
		Swipe from the left edge: shows your recently opened apps.
		Swipe from the right edge: opens or closes the charms (Search, Share, Start, Devices, Settings).
		Swipe from the top edge: opens or closes the app command bar.

Some of the touch pad operations described in this section are only supported in certain applications.

TOSHIBA Pointing Device

AccuPoint

To use the AccuPoint, simply push it with your finger tip in the direction you want to move the on-screen pointer.

The Touch Pad control buttons below the AccuPoint are used like the buttons on a standard mouse - press the left button to select a menu item or to manipulate text or graphics designated by the pointer, and press the right button to display a menu or other function depending on the software you are using.

Figure 4-5 AccuPoint
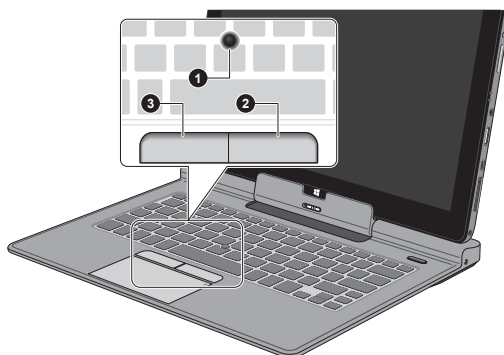
1. AccuPoint
2. Touch Pad right control button
3. Touch Pad left control button

AccuPoint precautions

Certain conditions can affect the on-screen pointer when using AccuPoint. For example, the pointer may travel contrary to AccuPoint operation or an error message may appear, if

- ■ You touch the AccuPoint during power-up.
- ■ You apply constant, soft pressure during power-up.
- ■ There is a sudden temperature change.
- ■ Strong stress is applied to the AccuPoint.

If an error message appears, reboot the tablet. If an error message does not appear, wait a moment for the pointer to stop, then continue operation.

Replacing the cap

The AccuPoint cap is an expendable item that should be replaced after prolonged use.

1. To remove the AccuPoint cap, gently dig the cap out (with finger).

Figure 4-6 Removing the AccuPoint cap

2. Position a new cap on the peg and press it into place.

The peg is square, so be careful to align the cap's square hole with the peg.

Stylus Pen and Reserve Pen

You can use the pen to execute actions and enter data. Hold the pen in a natural position and tap, press or trace on the screen lightly.
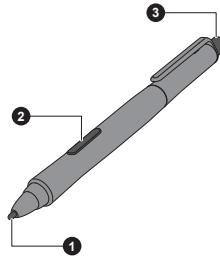
Figure 4-7 Stylus Pen

Figure 4-8 Reserve Pen
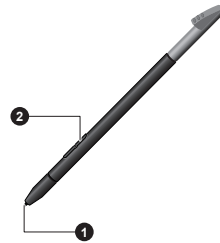
1. Pen point   3. Eraser button
2. Pen button

Pen point	Provides the same function as left clicking the mouse once.
Pen button	Provides the following function: ■ Right-clicking: Press and hold this button and touch the tip of the pen to an object. Immediately lift it to display a pop-up menu or other actions. It functions as right clicking the mouse once.
Eraser button	You can use this button as an eraser in some applications that support eraser function. These applications enable you to select and delete notes or sketches with a one-touch action.

You can choose to enable/disable the Pen button or the Eraser button function in **Pen Options**. To access it, click **Desktop -> Desktop Assist -> Control Panel -> Hardware and Sound -> Pen and Touch -> Pen Options**.

Observe the following precautions on the handling of the Stylus Pen and the Reserve Pen.

■ *Do not apply excess force when cleaning the touch screen.*

- *In order to avoid damages to the display screen, please refrain from doing anything other than the specified operation methods. Failure to do so could cause a malfunction or characteristic deterioration.*
- *Do not tap or press the pen forcefully against the display as this could damage the pen and the screen itself.*
- *Avoid using or keeping the pen in areas where the temperature can change rapidly or in places, such as a car, where the pen is exposed to direct sunlight. Store the pen without any pressure being applied to the buttons. Failure to do so could cause a malfunction or characteristic deterioration.*
- *The pen is composed of precision parts. Do not drop the pen. Strong impact causes a malfunction or characteristic deterioration. Do not apply excessive force to the pen point and the side buttons. Excessive force applied to these parts causes short life or characteristic deterioration.*
- *Avoid water entering the pen or condensation forming within it as either condition will cause a malfunction.*
- *Do not disassemble the pen. It causes maladjustment or short life.*
- *Do not stain the pen with cosmetics or chemicals as this will cause a deterioration in appearance. Use a glass wiping cloth or dry cloth to clean the pen. Do not use volatile liquids such as alcohol, thinner or petroleum benzine to clean the pen.*
- *Do not apply excessive force to the pen point as a bent or deformed pen point will cause a malfunction.*
- *Keep the small parts of the pen, such as the pen point or the knob of the side buttons, away from infants and small children to prevent the accidental ingestion by them.*
- *Do not use a ball point pen instead of the pen included with the product.*
- *The pen tip of the Reserve Pen cannot be replaced if it is worn. You can purchase a new one from a TOSHIBA authorized dealer.*

- *You can change the pen settings in Pen and Touch. To access it, click* **Desktop -> Desktop Assist -> Control Panel -> Hardware and Sound -> Pen and Touch**
- *Please wipe the touch screen with the provided cloth before you use the stylus pen.*
- *Please clean the fingerprints or smudges with the provided cloth if the sensitivity to pen writing decreases.*
- *Do not use a protecting sheet for the touch screen as it may impact the pen writing optimized for the touch screen.*

Removing the Reserve Pen

To remove the Reserve Pen, slowly pull the Reserve Pen to remove it from the Reserve Pen slot.

Figure 4-9 Removing the Reserve Pen
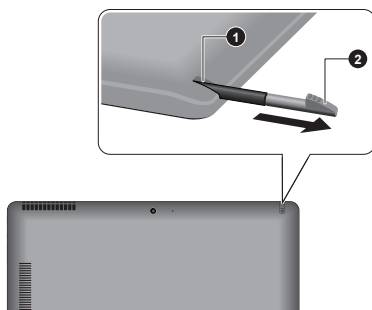
1. Reserve Pen slot   2. Reserve Pen

Inserting the Reserve Pen

To insert the Reserve Pen, slowly push the Reserve Pen into the Reserve Pen slot until it clicks into place.

Figure 4-10 Inserting the Reserve Pen

1. Reserve Pen slot   2. Reserve Pen

Pen actions

You can use the Stylus Pen or the Reserve Pen to enter data, start programs, move objects and execute other actions.

Single tap

Lightly tap the tip of the pen on an object and lift it immediately to execute an action. A single tap is similar to left clicking the mouse once.
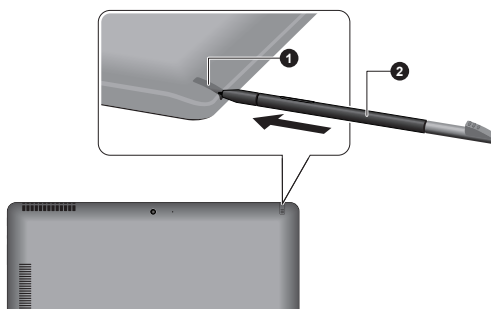
Double tap

Lightly tap the tip of the pen twice on an object and lift it immediately to execute an action. A double-tap is similar to left clicking the mouse twice.

Press and hold

Touch the tip of the pen to the display screen and hold it there to display a pop-up menu or other action. Press and hold is similar to right clicking the mouse.

Drag

Touch the pen on the screen. Without lifting the pen, drag it across the screen to select text or objects.

Drag and drop

Touch the pen on the screen to select an object. Without lifting the pen, drag it across the screen. Lift the pen to drop the object to a new location.

Replacing the pen tip

The pen tip of the Stylus Pen can be replaced with a new one which is provided when it is worn. To replace the pen tip, follow the steps as described below:

1. Pinch the tip with a draw-out tool and pull it out.
2. Insert a new pen tip into the Stylus Pen carefully, and press it securely.

Figure 4-11 Replacing the pen tip
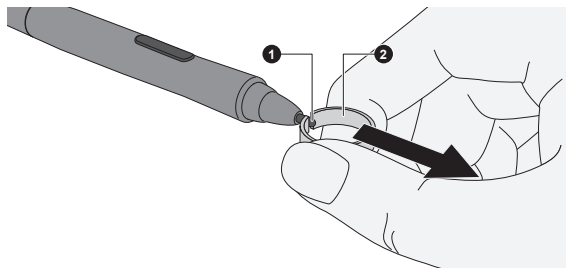
1. Pen tip   2. Draw-out tool

Do not continue to use a broken pen tip as this may result in scratching of the display panel. When the pen tip breaks replace it with one of the refills

delivered with the Stylus Pen. When these refills have run out, you can purchase a new pen set from a TOSHIBA authorized dealer.

- *A short and worn pen point is difficult to pull out. Replace the pen point with a refill before it becomes too short to remove.*
- *It is recommended that you keep another pen set as a spare. You can buy replacement pen sets from your TOSHIBA authorized dealer.*

The Keyboard

The keyboard layouts on the keyboard dock are compatible with a 104/105-key enhanced keyboard - by pressing some keys in combination, all of the 104/105-key enhanced keyboard functions can be performed on the computer.

The number of keys available on your keyboard will depend on which country/region your computer is configured for, with keyboards being available for numerous languages.

In use there are different types of keys, specifically typewriter keys, function keys, soft keys, Windows special keys and the keypad overlay.

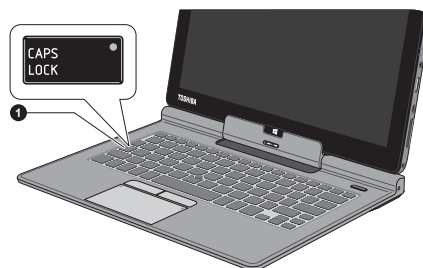*Never remove the key caps on your keyboard. Doing so could cause damage to the parts under the key caps.*

Keyboard indicator

The following figure shows the position of the **CAPS LOCK** indicator which shows the following conditions:

When the **CAPS LOCK** indicator glows, the keyboard will produce capitals when any letter is typed.

Figure 4-12 CAPS LOCK indicator

1. CAPS LOCK indicator

CAPS LOCK	This indicator glows green when letter keys are locked into their uppercase format.

Function Key

The function keys (F1 ~ F12) are the twelve keys at the top of your keyboard.

F1 F2 F3 F4   F5 F6 F7 F8   F9 F10 F11 F12

The following specific functions are executed when the function keys are pressed in combination with the **FN** key.

Key Combination	Function
FN + F1	Enters "Lock computer mode".
	To restore your desktop, you need to log on again.
FN + F2	Changes the power settings.
FN + F3	Switches the system to Sleep Mode.
FN + F4	Switches the system to Hibernation Mode.
FN + F5	Changes the active display device.
	To use a simultaneous mode, you must set the resolution of the internal display panel to match the resolution of the external display device.
FN + F6	Decreases the computer's display panel brightness in individual steps.
FN + F7	Increases the computer's display panel brightness in individual steps.
FN + F8	Turns the Airplane mode on or off.
FN + F9	Enables or disables the Touch Pad.
FN + F10	Turns on Arrow Mode.
FN + F11	Turns on Numeric Mode.
FN + F12	Locks the cursor on a specific line.
FN + ESC	Turns the sound on or off.
FN + 1	Reduces the icon size on the desktop or the font sizes within one of the supported application windows.
FN + 2	Enlarges the icon size on the desktop or the font sizes within one of the supported application windows.

Key Combination	Function
FN + 3	Decreases the computer's volume.
FN + 4	Increases the computer's volume.
FN + Space	Changes the display resolution.
FN + ⌨	Turns the keyboard backlight on or off.

Some functions will show the toast notification at the edges of the screen.

Those toast notifications are disabled at factory default. You can enable them in the TOSHIBA Function Key application.

To access it, click **Desktop -> Desktop Assist -> Tools & Utilities -> Function Key***.*

Windows special keys

The keyboard provides two keys that have special functions in Windows, the Windows Start Button key activates the **Start screen** while the application key has the same function as the secondary (right) mouse button.

This key activates the Windows **Start screen**.

This key has the same function as the secondary (right) mouse button.

Keypad overlay

The keyboard dock may not have a separate numeric keypad but includes a numeric keypad overlay which functions like one - this is located in the center of the keyboard with the relevant keys having grey letters at their front edge. The overlay provides the same functions as the numeric keypad on a standard 104/105-key enhanced keyboard.

Turning on the overlays

The numeric keypad overlay can be used for numeric data input or cursor and page control.

Arrow Mode

To turn on Arrow Mode, press **FN** + **F10** - you are able to access cursor and page control functions by using the keys. You are able to press **FN** + **F10** again to turn off this overlay function.

Numeric Mode

To turn on Numeric Mode, press **FN** + **F11** - you are able to access numeric characters by using the keys. You are able to press **FN** + **F11** again to turn off this overlay function.

Temporarily using normal keyboard (overlay on)

While using the overlay, you can temporarily access the normal keyboard functions without having to turn the overlay off:

1. Hold down **FN** key and press any other key - this key will operate as if the overlay were off.
2. Type upper-case characters by holding down **FN** + **SHIFT** and pressing a character key.
3. Release **FN** key to continue using the selected overlay function.

Temporarily using overlay (overlay off)

While using the normal keyboard function, you can temporarily use the keypad overlay without having to turn it on:

1. Hold down **FN** key and the keyboard will turn on the most recently used overlay function.
2. Release **FN** key to return to normal keyboard operation.

Temporarily changing modes

If the computer is in **Numeric Mode**, you can switch temporarily to **Arrow Mode** by pressing a **SHIFT** key, while if it is in **Arrow Mode**, you can switch temporarily to **Numeric Mode** by also pressing a **SHIFT** key.

Generating ASCII characters

Not all ASCII characters can be generated using normal keyboard operation, but you are able to generate these characters using their specific ASCII codes.

1. Hold down **ALT** with the overlay on or **ALT** + **FN** with overlay off.
2. Using the overlay keys, type the ASCII code of the character you require.
3. Release **ALT** or **ALT** + **FN** - the ASCII character will appear on the display screen.

Touch keyboard

Touch keyboard is an on-screen virtual keyboard allowing you to type on the touch screen. Touch keyboard provides a full-size keyboard, a thumb keyboard with keys split on either side of the screen and it can also switch to a handwriting panel.

To use the touch keyboard, tap in an area where you can type. The keyboard will open automatically.

To manually open the touch keyboard, please follow either of the below:

■ In the **Settings** charm, click **Keyboard -> Touch keyboard and handwriting panel**.

■ Click the keyboard icon (⌨) in the taskbar of your Windows desktop.

Battery

This section explains battery types, use, recharging methods and handling.

Battery types

The computer has different types of batteries.

Battery pack

When the AC adaptor is not connected, the computer's main power source is this lithium ion battery pack, also referred to in this manual as the main battery.

Real Time Clock (RTC) battery

The Real Time Clock (RTC) battery provides power for the internal real time clock and calendar function and also maintains the system configuration while the computer is turned off. If the RTC battery becomes completely discharged, the system will lose this information and the real time clock and calendar will stop working.

Your computer will automatically power off after 1 minute and the same message will appear again the next time when it is turned on.

You can change the Real Time Clock settings in the BIOS setup utility. Please refer to *TOSHIBA Setup Utility* section for further information.

> *The RTC battery does not charge while the computer is turned off even if the AC adaptor is attached.*

Care and use of the battery pack

This section provides the important safety precautions in order to handle your battery pack properly.

Refer to the enclosed **Instruction Manual for Safety and Comfort** for detailed precautions and handling instructions.

> ■ *The computer's RTC battery is a Ni-MH battery and should be replaced only by your dealer or by a TOSHIBA service representative. The battery can explode if not properly replaced, used, handled or disposed. Dispose of the battery as required by local ordinances or regulations.*

■ *Charge the battery pack only in an ambient temperature between 5 and 35 degrees Celsius. Otherwise, the electrolyte solution might leak, battery pack performance might deteriorate and the battery life might be shortened.*

Charging the batteries

When the power in the battery pack becomes low, the **Battery** indicator will flash amber to indicate that only a few minutes of battery power remain. If you continue to use the computer while the **Battery** indicator flashes, the computer will enable Hibernation Mode so that you do not lose any data, and automatically turn itself off.

You must recharge a battery pack when it becomes discharged.

Procedures

To recharge a battery pack, connect the AC adaptor to the DC IN 19V jack and plug the other end into a working outlet - the **Battery** indicator will glow amber while the battery is being charged.

Charging Time

The following table shows the approximate time required to fully charge a discharged battery (in tablet mode).

Battery type	Power off	Power on
Battery pack	about 3 hours	about 3.5~8.5 hours
RTC battery	Doesn't charge	about 12 hours

Please be aware that the charging time when the computer is on is affected by ambient temperature, the temperature of the computer and how you are using the computer - if you make heavy use of external devices for example, the battery might scarcely charge at all during operation.

Battery charging notice

The battery may not begin charging immediately under the following conditions:

■ The battery is extremely hot or cold (if the battery is extremely hot, it might not charge at all). To ensure the battery charges to its full capacity, you should charge it at room temperature of between 5°C to 35°C (41°F to 95°F).

■ The battery is nearly completely discharged. In this instance you should leave the AC adaptor connected for a few minutes and the battery should begin charging.

The **Battery** indicator may show a rapid decrease in battery operating time when you try to charge a battery under the following conditions:

■ The battery has not been used for a long time.
■ The battery has completely discharged and been left in the computer for a long time.

In such cases you should follow the steps as detailed below:

1. Fully discharge the battery by leaving it in the computer with the power on until the system automatically turns itself off.
2. Connect the AC adaptor to the DC IN 19V jack of the computer, and to a wall outlet that is supplying power.
3. Charge the battery until the **Battery** indicator glows white.

Repeat these steps two or three times until the battery recovers normal capacity.

Monitoring battery capacity

Remaining battery power can be monitored using the following methods.

■ Clicking the battery icon on the Taskbar
■ Via the Battery Status in the Windows Mobility Center window

■ *You should wait at least 16 seconds after turning on the computer before trying to monitor the remaining operating time. This is because the computer needs this time to check the battery's remaining capacity and then calculate the remaining operating time, based on this together with the current power consumption.*

■ *Please be aware that the actual remaining operating time may differ slightly from the calculated time.*

■ *With repeated discharges and recharges, the battery's capacity will gradually decrease. In view of this it will be noted that an often used, older battery will not operate for as long as a new battery even when both are fully charged.*

Maximizing battery operating time

A battery's usefulness depends on how long it can supply power on a single charge, while how long the charge lasts in a battery depends on:

■ Processor speed
■ Screen brightness
■ System Sleep Mode
■ System Hibernation Mode
■ Display power off period
■ Solid State Drive power off period
■ How often and for how long you use the Solid State Drive and external disk drives, for example, optical disc.
■ How much charge the battery contained to begin with.

- How you use optional devices, such as a USB device, to which the battery supplies power.
- Whether you enable Sleep Mode, which can conserve battery power if you are frequently turning the computer off and on.
- Where you store your programs and data.
- Whether you close the display panel when you are not using the keyboard - closing the display saves power.
- The environmental temperature - operating time decreases at low temperatures.
- Whether you enable Sleep and Charge function.

Batteries exhausted time

When you turn off the power of your computer with batteries fully charged, the batteries will be exhausted within the following approximate period (in tablet mode).

Battery type	Sleep Mode	Shut Down Mode
Battery pack	about 4 days	about 70 days
RTC battery	about 30 days	about 30 days

Extending battery life

To maximize the life of your battery packs:

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 as detailed below.

1. Turn off the computer's power.

2. Disconnect the AC adaptor and turn on the computer's power - if it does not turn on then go to Step 4.

3. Operate the computer on battery power for five minutes. If you find that the battery pack has at least five minutes of operating time, continue operating until the battery pack is fully discharged, however, if the **Battery** indicator flashes or there is some other warning to indicate a low battery condition, go to Step 4.

4. Connect the AC adaptor to the DC IN 19V jack of the computer, and to a wall outlet that is supplying power. The **Battery** indicator should glow amber to indicate that the battery pack is being charged, however, in the event that **Battery** indicator does not glow this indicates that power is not being supplied - check the connections for the AC adaptor and the power cord.

5. Charge the battery pack until the **Battery** indicator glows white.

Wireless WAN Device

Some computers are equipped with the Wireless WAN device. This device gives you the ability for a high-speed connection to the Internet, corporate intranet, and your email while you are away from the office.

Installing a SIM Card

To install a SIM card, follow the steps as detailed below:

1. Click **Power** in the **Settings** charm, and then click **Shut down** and ensure that the **Power** indicator is off
2. Remove the AC adaptor and all cables and peripherals connected to the computer.
3. Locate the SIM card slot.
4. To pop the SIM card tray partially open, insert a slender object (about 10mm) such as a straightened paper clip into the eject hole. Gently pull to open the SIM card tray.

⚠ *Never pull the SIM card tray completely out of the slot.*
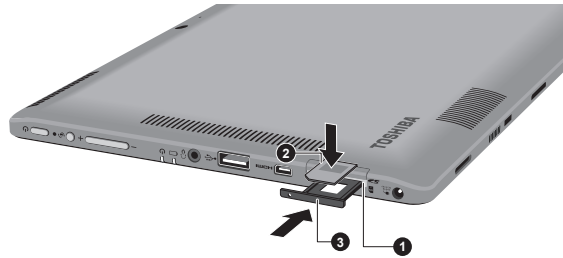
Figure 4-14 Open the SIM card tray

1. Slender object (Diameter 0.8mm)   2. SIM card tray

Product appearance depends on the model you purchased.

5. Place the SIM card into the SIM card tray with the metal connectors facing up.

6. Insert the SIM card tray into the SIM card slot, and push the center of the tray to close it. Press gently until it locks into place.

Figure 4-15 Inserting the SIM card

1. SIM card slot   3. SIM card tray
2. SIM card

Product appearance depends on the model you purchased.

- *Never allow metal objects, such as screws, staples and paper clips, to enter the computer. Foreign metal objects can create a short circuit, which can cause computer damage and fire, possibly resulting in serious injury.*

- *Do not touch the connectors on the SIM card or on the computer. Debris on the connectors may cause access problems.*

Removing a SIM Card

To remove the SIM card, follow the steps as detailed below:

1. Shut down the computer - make sure the **Power** indicator is off.
2. To pop the SIM card tray partially open, insert a slender object (about 10mm) such as a straightened paper clip into the eject hole. Gently pull to open the SIM card tray.
3. Remove the SIM card from the SIM card tray.
4. Insert the SIM card tray back into the SIM card slot.

LAN

The keyboard dock has built-in support for Ethernet LAN (10 megabits per second, 10BASE-T), Fast Ethernet LAN (100 megabits per second, 100BASE-TX) or Gigabit Ethernet LAN (1000 megabits per second, 1000BASE-T).

This section describes how to connect/disconnect to a LAN.

- *The Wake-up on LAN function consumes power even when the system is off. Leave the AC adaptor connected while using this feature.*

■ *The Link speed (10/100/1000 megabits per second) changes automatically depending on the network conditions (connected device, cable or noise and so on).*

LAN cable types

⚠ *The computer must be configured properly before connecting to a LAN. Logging onto a LAN using the computer's default settings could cause a malfunction in LAN operation. Check with your LAN administrator regarding set-up procedures.*

If you are using Gigabit Ethernet LAN (1000 megabits per second, 1000BASE-T), be sure to connect with a CAT5e cable or higher. You cannot use a CAT3 or CAT5 cable.

If you are using Fast Ethernet LAN (100 megabits per second, 100BASE-TX), be sure to connect with a CAT5 cable or higher. You cannot use a CAT3 cable.

If you are using Ethernet LAN (10 megabits per second, 10BASE-T), you can connect with a CAT3 or higher cable.

Connecting the LAN cable

To connect the LAN cable, follow the steps as detailed below:

⚠ ■ *Connect the AC adaptor before connecting the LAN cable. The AC adaptor must remain connected during LAN use. If you disconnect the AC Adaptor while the computer is accessing a LAN, the system may hang up.*

■ *Do not connect any power supplying device to the LAN cable that is connected to the LAN jack. Otherwise, malfunctions or damage may occur.*

1. Turn off the power to all external devices connected to the computer.

2. Plug one end of the cable into the LAN jack. Press gently until you hear the latch click into place.

Figure 4-16 Connecting the LAN cable
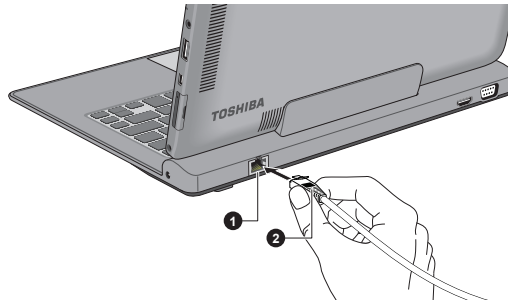
1. LAN jack   2. LAN cable

3. Plug the other end of the cable into a LAN hub connector or router. Check with your LAN administrator and hardware or software vendor before using or configuring a network connection.

Memory media

The computer is equipped with a memory media slot that can accommodate some kinds of memory media with various memory capacities so that you can easily transfer data from devices, such as digital cameras and Personal Digital Assistants.

Keep foreign objects out of the memory media slot. Never allow metal objects, such as screws, staples and paper clips, to enter the computer or Keyboard. Foreign metal objects can create a short circuit, which can cause computer damage and fire, possibly resulting in serious injury.

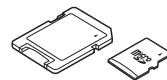- *Please note that an adaptor is required to use miniSD/microSD Card.*
- *Please note that not all memory media have been tested and verified to work correctly. Therefore, it is not possible to guarantee that all memory media will operate properly.*
- *The slot does not support Magic Gate functions.*

Figure 4-17 Examples of memory media

Secure Digital (SD) Card   microSD card adaptor and microSD card

MultiMediaCard (MMC)

Points to note about the memory media card

SD/SDHC/SDXC memory cards comply with SDMI (Secure Digital Music Initiative), which is a technology adopted to prevent unlawful copy or playback of digital music. For this reason, you cannot copy or playback protected material on another computer or other device, and you may not reproduce any copyrighted material except for your personal enjoyment.

Below is a simple explanation for distinguishing SD memory cards from SDHC memory cards and SDXC memory cards.

■ SD, SDHC and SDXC memory cards appear the same externally. However, the logo on memory cards is different, so pay careful attention to the logo when purchasing.

■ *The SD memory card logo is (⬛).*

■ *The SDHC memory card logo is (⬛).*

■ *The SDXC memory card logo is (⬛).*

■ The maximum capacity of SD memory cards is 2GB. The maximum capacity of SDHC memory cards is 32GB. The maximum capacity of SDXC memory cards is 64GB.

Memory media format

New media cards are formatted according to specific standards. If you wish to reformat a media card, be sure to do so with a device that uses media cards.

Formatting a memory media card

Memory media cards are sold already formatted in conformity to specific standards. If you reformat a memory card, be sure to reformat it with a device such as digital camera or digital audio player that uses the memory cards, not with the format command provided within Windows.

Should you need to format all areas of the memory card, including the protected area, you will need to obtain an appropriate application that applies the copy protection system.

Media care

Observe the following precautions when handling the card.

- Do not twist or bend cards.
- Do not expose cards to liquids or store in humid areas or lay media close to containers of liquid.
- Do not touch the metal part of a card or expose it to liquids or let it get dirty.
- After using card, return it to its case.
- The card is designed so that it can be inserted only one way. Do not try to force the card into the slot.
- Do not leave a card partially inserted in the slot. Press the card until you hear it click into place.
- Set the write-protect switch to the lock position, if you do not want to record data.
- Memory cards have a limited lifespan, so it is important to backup important data.
- Do not write to a card if the battery power is low. Low power could affect writing accuracy.
- Do not remove a card while read/write is in progress.

For more details on using memory cards, see manuals accompanying the cards.

About the write-protect

The memory media cards have a function for protect.

- SD Card (SD memory card, SDHC memory card and SDXC memory card)

Set the write-protect switch to the lock position, if you do not want to record data.

Inserting a memory media

The following instructions apply to all types of supported media devices. To insert a memory media, follow the steps as detailed below:

1. Remove the dummy card.

The dummy card shapes like an actual SD memory card and can keep dirt and dust out of the memory media slot.

Figure 4-18 Removing the dummy card
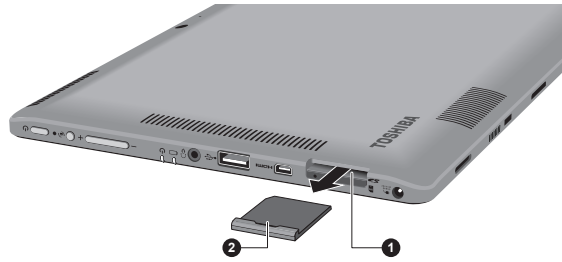
1. Memory media slot   2. Dummy card

2. Turn the memory media so that the contacts (metal areas) face up.
3. Insert the memory media into the memory media slot on the side of the computer.

Figure 4-19 Inserting a memory media

1. Memory media slot   2. Memory media

- *Make sure the memory media is oriented properly before you insert it. If you insert the media in wrong direction, you may not be able to remove it.*

- *When inserting the memory media, do not touch the metal contacts. You could expose the storage area to static electricity, which can destroy data.*

- *Do not turn the computer off or switch to Sleep Mode or Hibernation Mode while files are being copied - doing so may cause data to be lost.*

4. Push the memory media gently until you hear a click.

Removing a memory media

The following instructions apply to all types of supported media devices. To remove a memory media, follow the steps as detailed below:

1. Click the **Desktop** tile and open the **Safely Remove Hardware and Eject Media** icon on the Windows Taskbar.

2. Point to **memory media** and click the left Touch Pad control button.
3. Push the memory media until you hear a click to partially release it.
4. Grasp the memory media and remove it.
5. Insert the dummy card back into the slot.

■ *If you remove the memory media or turn off the power while the computer is accessing the memory media, you may lose data or damage the media.*

■ *Do not remove the memory media while the computer is in Sleep or Hibernation Mode. The computer could become unstable or data in the memory media could be lost.*

■ *Do not remove only the miniSD/microSD Card while leaving the adaptor in the memory media slot.*

External display

Your computer video capabilities can be enhanced with additional displays. External displays allows you to share your desktop or extend the desktop area.

Connecting an external display

Your computer comes with a built-in display, but you can also connect other external displays via available ports on the computer.

■ *HDMI port and External RGB monitor port on the keyboard dock can not be connected for use at the same time. If both ports are connected, only HDMI port is activated.*

■ *Some models may include the Triple Monitor function that can display image on Triple Monitor independently.*

External RGB monitor port

An external analog monitor can be connected to the External RGB monitor port on the keyboard dock. To connect an external analog monitor, follow the steps as detailed below:

1. Connect the RGB cable to the External RGB monitor port.

Figure 4-20 Connecting the RGB cable to the External RGB monitor port
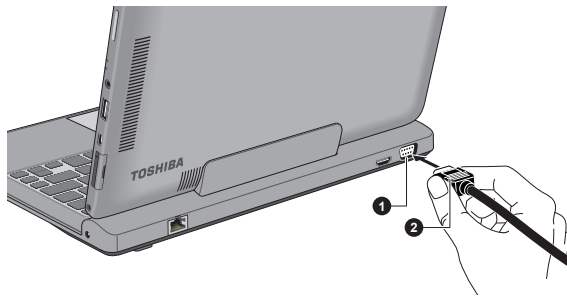
1. External RGB monitor port   2. RGB cable

There are no fastening screws for an external monitor cable on the External RGB monitor port. However, external monitor cables which have connectors with fastening screws can still be used.

2. Turn the external monitor's power on.

   When you turn on the power, the computer will automatically recognize the monitor and determine whether it is a color or monochrome device.

   When displaying desktop on an external analog monitor, desktop is sometimes displayed on the center of the monitor with black bars around desktop (with small size).

   At that time, please read the manual of the monitor and set the display mode which is supporting at the monitor. Then it will be displayed with suitable size with correct aspect ratio.

HDMI port

HDMI (High-Definition Multimedia Interface) port digitally transfers both video and audio data without reducing the quality. HDMI-compatible external display devices including televisions can be connected via the HDMI port.

To connect an HDMI-compatible display device, follow the steps as detailed below:

As the port operation of all HDMI display devices have not been confirmed, some HDMI display devices may not function properly.

To connect a device to the HDMI port, you must purchase an HDMI cable.

1. Plug one end of the HDMI cable into the HDMI port of your HDMI display device.
2. Plug the other end of the HDMI cable into the HDMI port on your computer or on the keyboard dock.

Figure 4-21 Connecting the HDMI port on the computer
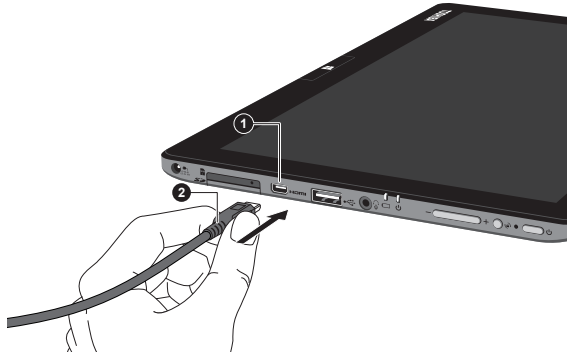
1. HDMI(micro)port   2. HDMI cable (Type D connector)

Figure 4-22 Connecting the HDMI port on the keyboard dock
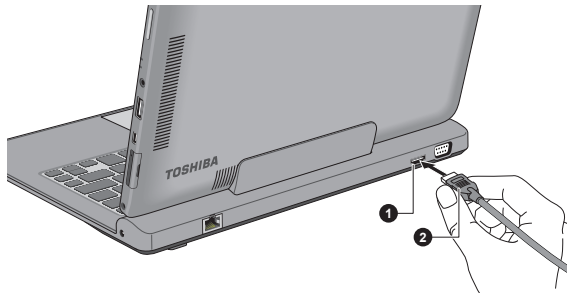
1. HDMI port   2. HDMI cable (Type A connector)

Please do not plug/unplug an HDMI display device under the following conditions:

- *The system is starting up.*
- *The system is shutting down.*

When you connect a television or external monitor to the HDMI port, the display output device is set to HDMI.

When you unplug the HDMI cable and re-plug it, please wait at least 5 seconds before you re-plug the HDMI cable again.

When you change the display output device, the playback device may not switch automatically. In this case, in order to set the playback device to the same device as the display output device, please adjust the playback device manually by the following steps:

*1. Click **Desktop -> Desktop Assist -> Control Panel -> Hardware and Sound -> Sound**.*

*2. In the **Playback** tab, select the playback device which you want to switch to.*

*3. To use the internal speakers on your computer, select **Speakers**. To use the television or the external monitor that you have connected to the computer, select a different playback device.*

*4. Click the **Set Default** button.*

*5. Click **OK** to close the **Sound** dialog.*

Settings for display video on HDMI

To view video on the HDMI display device, be sure to configure the following settings otherwise you may find that nothing is displayed.

Be sure to use the function key to select the display device before starting to play video. Do not change the display device while playing video.

Do not change the display device under the following conditions.

- *While data is being read or written.*
- *While communication is being carried out.*

Select HD Format

To select the display mode, follow the steps as detailed below:

1. Click **Desktop -> Desktop Assist -> Control Panel**.
2. Click **Appearance and Personalization**.
3. Click **Display**.
4. Click **Change display settings**.
5. Click **Advanced settings**.
6. Click **List All Modes**.
7. Select one of the mode at **List All Modes**.

Wireless display

Some models support Intel Wireless Display (Intel WiDi), a wireless technology which utilizes Wi-Fi to allow the computer to be wirelessly connected to external displays including TVs as extended screens. With Intel WiDi, documents, streamed/local media contents or other online contents can be shared wirelessly with others.

To use Intel WiDi, either one of the following devices is required:

- A compatible external display with built-in support for Intel WiDi.
- An external display with HDMI port and a digital adaptor featuring Intel WiDi.

  The adaptor is a device that connects to the external display via HDMI port and can receive Wi-Fi signals from your computer.

Type "Intel WiDi" from the Start screen and click **Intel(R) WiDi**. Intel WiDi application will launch and you are ready to start the connection.

To learn more details on how to complete the connection, please refer to the application help.

Some copy protected media contents may not play on the external displays via Intel WiDi.

Changing the display settings

After one or more external displays are connected, the operating system can automatically detect, identify and setup the display settings.

You can also manually manage how the external displays will work and change the display settings by pressing **P** while holding down the **Windows** (▮) key. If you disconnect the external display before you turn the computer's power off, be sure to switch to the internal display.

Optional TOSHIBA Accessories

You are able to add a number of options and accessories in order to make your computer even more powerful and convenient to use. For reference, the following list details some of the items that are available from your reseller or TOSHIBA dealer:

Universal AC Adaptor	If you frequently use your computer at more than one site, it may be convenient to purchase an additional AC adaptor to be kept at each site in order to remove the need to always carry the adaptor with you.
TOSHIBA Mobile Tablet Cradle	TOSHIBA Mobile Tablet Cradle provides the following extensibility: ■ Power supply and battery charge ■ Headphone jack ■ USB & HDMI ports ■ LAN jack
Stylus Pen	Stylus Pen can be purchased from your TOSHIBA dealer for use as spare items (spare pen tips and a tip draw-out tool are included).
Reserve Pen	Reserve Pen can be purchased from your TOSHIBA dealer. Use the Reserve Pen in place of the Stylus Pen if it is lost or broken.

Sound System and Video mode

This section describes some of the audio control functions.

Volume Mixer

The Volume Mixer utility lets you control the audio volume for playback of devices and applications under Windows.

- To launch the Volume Mixer utility, click **Desktop** and right click on the speaker icon on the Taskbar, and then select **Open Volume Mixer** from the sub menu.
- To adjust the volume level of speakers or headphones, move the **Speakers** slider.
- To adjust the volume level of an application that you are using, move the slider for the corresponding application.

Microphone Level

Follow the steps below to change the microphone recording level.

1. Right click on the speaker icon on the Taskbar, and select **Recording devices** from the sub menu.
2. Select **Microphone**, and click **Properties**.
3. On the **Levels** tab move the **Microphone** slider to increase or decrease the microphone volume level.

If you feel the microphone volume level is inadequate, move the **Microphone Boost** slider to a higher level.

Audio Enhancements

In order to apply the sound effects for your current speaker, follow the steps below.

1. Click **Desktop** and right click on the **Speakers** icon on the Taskbar, and then select **Playback devices** from the sub menu.
2. Select **Speakers**, and click **Properties**.
3. On the **Enhancements** tab select the sound effects you would like, and click **Apply**.

Realtek HD Audio Manager

You can confirm and change the audio configuration using the **Realtek HD Audio Manager**. To launch the **Realtek HD Audio Manager**:

- Click **Desktop -> Desktop Assist -> Control Panel -> Hardware and Sound -> Realtek HD Audio Manager**.

When you first launch the Realtek HD Audio Manager, you will see two device tabs. **Speakers** is the default output device. **Microphone** is the default input device. To change the default device, click the **Set Default Device** button under the chosen device tab.

Information

Click the **Information** button ![icon] to view hardware information, software information, and language setting.

Power Management

The audio controller in your computer can be turned off when the audio function is not used. To adjust the configuration of audio power management, click the **Power Management** button ![icon] .

- When audio power management is enabled, the circle button at the upper left of the Power Management is blue and convex.
- When audio power management is disabled, the button is black and concave.

Speaker Configuration

Click the **Auto Test** button ![icon] to confirm the internal speakers or the headphone sound is coming from the right direction.

Default Format

You can change the sample rate and bit depth of sound.

DTS Studio Sound

DTS Studio Sound™ is a premium audio enhancement suite that utilizes revolutionary audio technology to provide the most immersive and realistic listening experience ever offered for a two speaker playback environment.

DTS Studio Sound provides the following features:
- Advanced audio rendering to match 2D and 3D video content for enveloping surround sound
- Accurate placement of audio cues for immersive surround sound from any PC speaker configuration laptop/desktop speakers or headphones
- Broad sweet spot with elevated sound image
- Maximum volume output delivering maximum volume without creating clipping or distortion
- Dialog enhancement for clear and intelligible vocals
- Bass enhancement for rich, low frequency production
- High frequency definition for crisp details
- Consistent volume level across content

To access the utility, Click **Desktop -> Desktop Assist -> Media & Entertainment -> DTS Studio Sound**.

U.S. patents apply to this product. See http://patents.dts.com.

Manufactured under license from DTS Licensing Limited.

Video mode

Video mode settings are configured via the **Screen Resolution** dialog.

To open the **Screen Resolution** dialog, click **Desktop -> Desktop Assist -> Control Panel -> Appearance and Personalization -> Display -> Change display settings**.

If you are running some applications (for example a 3D application or video playback), you may see some disturbance, flickering or frame dropping on your screen.

If that occurs, adjust the resolution of display, lowering it until the screen is displayed properly.

Chapter 5

Utilities and Advanced Usage

This chapter describes the utilities and special features of this computer, and the advanced usage of some utilities.

Utilities and Applications

This section describes the pre-installed utilities that come with the computer and details how to start them. For further information on their operation, you may refer to each utility's online manual, help files or README.TXT file (if applicable).

> *All the utilities described here can be accessed from **Desktop -> Desktop Assist**. The Desktop Assist icon is located in the taskbar of the Desktop.*
>
> *Furthermore, some utilities can also be launched from Start screen and desktop shortcut.*

TOSHIBA Desktop Assist	TOSHIBA Desktop Assist is a graphical user interface that provides access to specific tools and TOSHIBA utilities and applications that make the use and configuration of the computer easier.
	To access this utility, click **Desktop -> Desktop Assist**.

TOSHIBA Display Utility	TOSHIBA Display Utility includes Desktop Text Size utility, Split Screen utility and Other Settings.
	Desktop Text Size allows you to make the text size bigger or smaller on the desktop according to your usage and favorite. You can change the text size on the display and on the title bar of windows by changing the scaling of the text size. When the scaling is smaller, more information will appear on the display simultaneously but the text size becomes smaller. When the scaling is larger, less information will appear on the display simultaneously but the text size becomes larger.
	You can install Split Screen utility by yourself. Split Screen utility enables you to create multiple display zones on a screen and to fit the active windows to within those zones.
	To access this utility, click **Desktop -> Desktop Assist -> Tools & Utilities -> Display Utility**.
	For details on Desktop Text Size utility and Split Screen utility, see the help file.
TOSHIBA Password Utility	This utility allows you to set a password in order to restrict access to the computer.
	To access this utility, click **Desktop -> Desktop Assist -> Tools & Utilities -> Password Utility**.
TOSHIBA System Settings	This utility allows you to customize your hardware settings according to the way you work with the computer and the peripherals you use.
	To access this utility, click **Desktop -> Desktop Assist -> Tools & Utilities -> System Settings**.

TOSHIBA eco Utility	This computer is equipped with "eco mode". This mode slightly lowers performance of some devices to reduce electric power consumption. You can realize measurable power savings by using it continuously.
	TOSHIBA eco Utility helps control the power consumption of your computer. Various information can help you understand your degree of contribution to the environment.
	Furthermore, this utility contains Peak shift function that can help reduce power usage during periods of peak demand by shifting some power consumption to periods when demand is lower.
	To access this utility, click **Desktop -> Desktop Assist -> Tools & Utilities -> eco Utility**.
	For details on TOSHIBA eco utility, see the help file.
TOSHIBA Media Player by sMedio TrueLink+	This software is a multimedia player which can be used to play back video, music and photo.
	TOSHIBA Media Player can play back contents on a local library/home network/SkyDrive.
	To access it, click the **Media Player** icon on the Start screen.
	For details, please refer to the Tutorial.
TOSHIBA Function Key	This utility allows you to perform some features by pressing a specified key or combined with the FN key.
	To setup this utility, click **Desktop -> Desktop Assist -> Tools & Utilities -> Function Key**.
	For details, please refer to the *Function Key* section.
TOSHIBA Service Station	This application allows your computer to automatically search for TOSHIBA software updates or other alerts from TOSHIBA that are specific to your computer system and its programs. When enabled, this application periodically transmits to our servers a limited amount of system information, which will be treated in strict accordance with the rules and regulations as well as applicable data protection law.
	To access this utility, click **Desktop -> Desktop Assist -> Support & Recovery -> Service Station**.

TOSHIBA PC Health Monitor	The TOSHIBA PC Health Monitor application proactively monitors a number of system functions such as power consumption, battery health and system cooling, informing you of significant system conditions. This application recognizes the system and individual component serial numbers and will track specific activities related to their usage.
	To access this utility, click **Desktop -> Desktop Assist -> Support & Recovery -> PC Health Monitor**.
	For details on TOSHIBA PC Health Monitor, see the help file.
TOSHIBA Resolution+ Plug-in for Windows Media Player	The plug-in lets you upconverts wmv and mp4 videos on Windows Media Player.
	For more information, please refer to the TOSHIBA Resolution+ Plug-in for Windows Media Player Help.
	To access it, click **Desktop -> Desktop Assist -> Media & Entertainment -> TOSHIBA Resolution+ Plug-in for Windows Media Player - Help**.

You may not have all the software listed above depending on the model you purchased.

*To access the setup files of the drivers/utilities, type **Applications** from the Start screen, and then click **Applications and Drivers** from the list that appears.*

TOSHIBA Media Player by sMedio TrueLink+ application is not included in the setup files above but can be downloaded from Windows Store.

Special features

The following features are either unique to TOSHIBA computers or are advanced features which make the computer more convenient to use.

Access each function using the following procedures.

[*1] To access the Power Options, click **Desktop -> Desktop Assist -> Control Panel -> System and Security -> Power Options**.

Display automatic power off [*1]	This feature automatically cuts off power to the computer's display panel when there is no keyboard input for a specified time, with power being restored the next time a key is pressed. This can be specified in the Power Options.

SSD automatic power off [1]	This feature automatically cuts off power to the Solid State Drive when it is not accessed for a specified time, with power being restored when the Solid State Drive is next accessed. This can be specified in the Power Options.
Intel AT	Intel Anti-Theft Technology (Intel AT) is an embedded, hardware-based security feature that can help secure sensitive data and protect your computer from theft.
	When you enter the password for Intel AT, please use the keyboard dock or the external USB keyboard you once used for registering the password.
	When you are registering the password for Intel AT, please use the keyboard dock or the external USB keyboard.
System automatic Sleep/Hibernation Mode [1]	This feature automatically shuts down the system into either Sleep Mode or Hibernation Mode when there is no input or hardware access for a specified time. This can be specified in the Power Options.
Power on password	Two levels of password security, supervisor and user, are available to prevent unauthorized access to your computer.
Intelligent power supply [1]	A microprocessor in the computer's intelligent power supply detects the battery's charge, automatically calculates the remaining battery capacity and protects electronic components from abnormal conditions such as a voltage overload from the AC adaptor. This can be specified in the Power Options.
Battery save mode [1]	This feature lets you configure the computer in order to save battery power. This can be specified in the Power Options.
Panel power on/off [1]	This feature automatically turns power to the computer off when the display panel is closed, and turns it back on when the display panel is opened. This can be specified in the Power Options.
Low battery automatic Hibernation Mode [1]	When battery power is exhausted to the point that computer operation cannot be continued, the system automatically enters Hibernation Mode and shuts itself down. This can be specified in the Power Options.

Sleep Mode	If you have to interrupt your work, you can use this feature to allow you to turn off power to the computer without exiting from your software. Data is maintained in the computer's main memory so that when you next turn on the power, you can continue working right where you left off.
Hibernation Mode	This feature lets you turn off the power to the computer without exiting from your software. The contents of main memory are automatically saved to the Solid State Drive so that when you next turn the power on again, you can continue working right where you left off. Refer to the *Turning off the power* section, for more details.
USB Wakeup function	This function restores the computer from Sleep Mode depending on the external devices connected to the USB ports.
	For example, if a mouse or USB keyboard is connected to a USB port, clicking the mouse button or pressing the keyboard will wakeup the computer.
Heat dispersal *1	To protect against overheating, the processor is equipped with an internal temperature sensor which activates a cooling fan or lowers the processing speed if the computer's internal temperature rises to a certain level. You are able to select whether to control this temperature by either turning on the fan first, then if necessary lowering the processor speed, or by lowering the processor speed first, then if necessary turning on the fan. Both of these functions are controlled through the Power Options.
	When the processor's temperature falls within normal range, the fan and the processor operation will return to its standard speed.
	If the processor's temperature reaches an unacceptably high level with either setting, the computer automatically shuts down to prevent any damage. In this instance all unsaved data in memory will be lost.

TOSHIBA Password Utility

The TOSHIBA Password Utility provides two levels of password security: User and Supervisor.

Passwords set by the TOSHIBA Password Utility function are different from the Windows password.

User Password

To start the utility, click the following items:

Desktop -> Desktop Assist -> Tools & Utilities -> Password Utility -> User Password

User authentication may be required to validate user rights when using TOSHIBA Password Utility to delete or change passwords, etc.

■ **Set** (button)

Click this button to register a password. After a password is set, you will be prompted to enter it when you start the computer.

■ *After you set the password, a dialog box will be displayed asking whether you want to save it to other media. If you forget the password, you can open the password file on another computer. Be sure to keep the media in a safe place.*

■ *When entering the character string to register the password, enter from the keyboard character by character and do not enter as ASCII code or copy-and-paste the character string. In addition, ensure that the registered password is correct by outputting the character string to the password file.*

■ *When entering a password, do not enter any characters (for example "!" or "#") produced by pressing the SHIFT or ALT keys.*

■ **Delete** (button)

Click this button to delete a registered password. Before you can delete a password, you must first enter the current password correctly.

■ **Change** (button)

Click this button to change a registered password. Before you can change a password, you must first enter the current password correctly.

■ **Owner String** (text box)

You can use this box to associate text with the password. After you enter text, click **Apply** or **OK**. When the computer is started, this text will be displayed together with the prompt asking you to enter a password.

You can launch the BIOS setup utility to set, change or delete the HDD Password or HDD Master Password.

Please refer to TOSHIBA Setup Utility section for further information.

If you forget your HDD User Password, TOSHIBA will NOT be able to assist you, and your HDD will be rendered COMPLETELY and PERMANENTLY INOPERABLE. TOSHIBA will NOT be held responsible for any loss of any data, any loss of use or access to your HDD, or for any other losses to you or any other person or organization that result from the loss of access to your HDD. If you can't accept this risk, don't register the HDD User Password.

When saving the HDD User Password shut down or restart the computer. If the computer is not shut down or restarted, the saved data may not be correctly reflected. For more information on shutting down or restarting the computer, refer to Turning on the power.

Supervisor Password

If you set a Supervisor Password, some functions might be restricted when a user logs on with the User Password. To set a Supervisor Password:

Desktop -> Desktop Assist -> Tools & Utilities -> Password Utility -> Supervisor Password

This utility lets you do the following:

- Register or delete the Supervisor Password.
- Specify restrictions for general users.

Starting the computer by password

If you have already registered a user password, there is one way to start the computer:

- Enter the password manually.

The password is necessary only if the computer was shut down in Hibernation mode or boot mode. It is not needed in Sleep mode and Restart.

To enter a password manually, follow the steps as detailed below:

1. Turn on the power as described in the *Getting Started* section. The following message will appear in the screen:

   Enter Password

At this point, the function keys do not work. They will function after you enter the password.

2. Enter the Password.

3. Press **ENTER**.

If you enter the password incorrectly three times in a row, or if you don't enter the password within 1 minute, the computer shuts off. In this case, some features that can power on the computer automatically (Wake-up on LAN, Task Scheduler, etc) may not work. You must turn the computer back on to retry password entry.

TOSHIBA System Settings

TOSHIBA System Settings is the TOSHIBA configuration management tool available through the Windows operating system.

To run TOSHIBA System Settings, click **Desktop -> Desktop Assist -> Tools & Utilities -> System Settings**.

The TOSHIBA System Settings window contains a number of tabs to allow specific functions of the computer to be configured.

In addition there are also three buttons: OK, Cancel and Apply.

OK	Accepts your changes and closes the TOSHIBA System Settings window.
Cancel	Closes the window without accepting your changes.
Apply	Accepts all your changes without closing the TOSHIBA System Settings window.

Some options shown in grey are possible to confirm their status.

TOSHIBA System Settings screen may have the following tabs:

■ General—Allows you to view the current BIOS version or change certain settings back to their default values
■ CPU—Allows you to set conditions for the CPU
■ Display—Allows you to select the internal LCD and/or external monitor when the computer boots up
■ Boot Options—Allows you to change the sequence in which your computer searches the drives for the operating system
■ USB—Allows you to set conditions for USB
■ SATA—Allows you to set conditions for SATA
■ LAN—Allows you to set conditions for LAN
■ Undock and Sleep—Allows you to set sleep conditions while undocking
■ Advanced Options—Allows you to set conditions for a specific device or function

The settings or options explained here may vary depending on the model you purchased.

After you changed the settings, a dialog box may appear to prompt you that the changes will take effect after the computer is restarted. Make sure to restart your computer immediately to apply these changes.

TOSHIBA Media Player by sMedio TrueLink+

Please be aware of the following limitations when you use the TOSHIBA Media Player by sMedio TrueLink+:

Notes on use

This software is a multimedia player which can be used to play back video, music and photo. However, some files may not be able to play back normally.

- It is recommended that the AC adaptor be connected while TOSHIBA Media Player is running. Power saving features may interfere with smooth playback. When TOSHIBA Media Player is used with a battery power, set the Power Options to "Balance".
- The screen saver is disabled while TOSHIBA Media Player is playing a video file or slideshows of photos.
- The computer will not enter Sleep, Hibernation and shut-down mode automatically, while TOSHIBA Media Player is running.
- The display automatic power off function is disabled while TOSHIBA Media Player is playing a video file or slideshows of photos.
- The Resolution+ function was specially adjusted for the internal monitor. Hence, please turn OFF Resolution+ when viewing on external monitor.
- Playback of high bit rate content may cause frame dropping, audio skipping or decrease in computer performance.
- Tap/click the Refresh button on app commands to refresh the content displayed on Library Screen. It won't be refreshed automatically.
- If sleep, hibernation, shutdown or reboot operation is in process during uploading the files to SkyDrive, the operation will not be properly completed.
- This app doesn't support to playback content protected by DRM. If you try to play DRM protected content with Resolution+ On state, this app may be closed.
- Photos uploaded to SkyDrive are limited to a maximum resolution of 2048 x 2048 pixels. Any photo over that resolution will be scaled proportionally to a maximum size of 2048 x 2048 pixels.
- This app doesn't support DMS.

Operating TOSHIBA Media Player by sMedio TrueLink+

The steps for playing a video file on a local library:

1. Click **My Local Library** on the Start Page of TOSHIBA Media Player.
2. Click a video file to playback.

The steps for playing a music file on a local library:

1. Click **My Local Library** on the Start Page of TOSHIBA Media Player.
2. Click **Music** in the upper-left corner of the screen.
3. Select an artist icon or album icon for playback.
4. Click a music file to playback.

The steps for playing a photo file on a local library:

1. Click **My Local Library** on the Start Page of TOSHIBA Media Player.
2. Click **Photos** in the upper-left corner of the screen.
3. Select a folder icon or date icon for playback.
4. Click a photo file to playback.

Opening TOSHIBA Media Player by sMedio TrueLink+ Manual

The features and operations about TOSHIBA Media Player are explained in the TOSHIBA Media Player Manual.

Use the following procedure to open TOSHIBA Media Player Manual:

Click the **Tutorials** icon on the Start Page of TOSHIBA Media Player.

Use the following procedure to open TOSHIBA Media Player Online help:

When TOSHIBA Media Player is running, click **Help** of the Settings charm.

TOSHIBA PC Health Monitor

The TOSHIBA PC Health Monitor application proactively monitors a number of system functions such as power consumption, battery health and the system cooling, informing you of significant system conditions. This application recognizes the system and individual component serial numbers, and will track specific activities related to the computer and their usage.

The collected information includes device operation time and number of actuations or status changes (i.e.: number of power button and **FN** key combination uses, AC adaptor, battery, LCD, fan, SSD, sound volume, wireless communication functionalities and USB information), date of initial system use, and also computer and device usage (i.e.: power settings, battery temperature and recharging, CPU, memory, backlight illumination time, and temperatures for various devices). The stored data uses a very small portion of the total Solid State Drive capacity, approximately 10MB or less per year.

This information is used to identify and provide a notification of system conditions which may effect the performance of your TOSHIBA computer. It

may also be used to help diagnose problems should the computer require service by TOSHIBA or TOSHIBA's authorized service providers. Additionally, TOSHIBA may also use this information for quality assurance analysis.

Subject to the use restrictions above, the SSD data logged may be transferred to entities located outside of your country or region of residence (e.g., European Union). Those countries may or may not have the same data protection laws or data protection levels as required by your home country or region.

Once enabled, you may disable the TOSHIBA PC Health Monitor at any time by uninstalling the software via **Uninstall a program** in the **Control Panel**. Doing so will automatically delete all collected information from the SSD.

The TOSHIBA PC Health Monitor software does not extend or modify TOSHIBA's obligations under its standard limited warranty in any way. TOSHIBA's standard limited warranty terms and limitations apply.

Starting the TOSHIBA PC Health Monitor

The TOSHIBA PC Health Monitor can be started by clicking **Desktop -> Desktop Assist -> Support & Recovery -> PC Health Monitor**.

The TOSHIBA PC Health Monitor main screen will be displayed and on clicking **Please click here to enable TOSHIBA PC Health Monitor**, the "PC Health Monitor Software Notice & Acceptance" screen will be displayed. Please carefully read the information displayed. Selecting **ACCEPT** and clicking **OK** will enable the program. By enabling the TOSHIBA PC Health Monitor software, you agree with these terms and conditions and to the use and sharing of the collected information. Once the program is enabled, the TOSHIBA PC Health Monitor screen is displayed, and the program will begin monitoring system functions and collecting information.

A message will be displayed if any changes which may interfere with the operation of the program are detected. Follow the instructions displayed on screen in the message.

TOSHIBA Setup Utility

TOSHIBA Setup Utility is a BIOS setup utility that provides you a menu-based user interface so that you can easily view and change BIOS settings.

To enter the BIOS setup utility, follow the steps below:

1. Save your work.
2. In the **Settings** charm, click **Power** and then select **Restart**.
3. Hold down the **Volume down** button until TOSHIBA Setup Utility is loaded.

If TOSHIBA Keyboard Dock is connected, the BIOS setup utility can also be launched through the keyboard operation.

1. Save your work.
2. In the **Settings** charm, click **Power** and then select **Restart**.
3. Hold down the **F2** key and then release this key one second after the computer is power on.

To save the changes and exit the utility, press the **F10** key and proceed by selecting **Yes** with the keyboard dock or select **Exit -> Exit Saving Changes -> Yes**. The computer will restart immediately.

Navigating the utility

TOSHIBA Setup Utility can be navigated through the touch screen or using the provided Stylus Pen.

Some buttons on the computer are also designated to execute the corresponding key function on the keyboard dock. Details are described as follows:

Button	Key	Function
Windows	Enter key	Proceed or confirm operation
Volume up	Up arrow key	Select an item
Volume down	Down arrow key	Select an item
Orientation lock	-	Turn on/off the virtual on-screen keyboard

System Recovery

There is a hidden partition allocated on the Solid State Drive for the System Recovery Options in the event of a problem.

You can also create recovery media and restore the system.

The following items will be described in this section:

- Creating Recovery Media
- Restoring the pre-installed software from your created Recovery Media
- Restoring the pre-installed software from the Recovery Solid State Drive

Creating Recovery Media

This section describes how to create Recovery Media.

A recovery image of the software on your computer is stored on the Solid State Drive, and can be copied to either disc media or USB Flash Memory by using the following steps:

1. Select either blank disc or USB Flash Memory.
    The application will allow you to choose from a variety of different media onto which the recovery image can be copied including disc media and USB Flash Memory.

*   *Please note that some of the disc media may not be compatible with the optical disc drive connected to your computer. You should therefore verify the optical disc drive supports the blank media you have chosen before proceeding.*
*   *USB Flash Memory will be formatted and all the data in the USB Flash Memory will be lost when proceeding.*

2. Turn on your computer and allow it to load the Windows operating system from the Solid State Drive as normal.
3. Insert the first blank disc into the optical disc drive tray, or insert the USB Flash Memory into one available USB port.
4. Click **Desktop -> Desktop Assist -> Support & Recovery -> Recovery Media Creator**.
5. After Recovery Media Creator starts, select the type of media and the title you wish to copy, and then click the **Create** button.

Restoring the pre-installed software from your created Recovery Media

If the pre-installed files are damaged, you are able to use the Recovery Media you have created to restore the computer to the state it was in when you originally received it. To perform this restoration, follow the steps below:

⚠️
- *When you reinstall the Windows operating system, the SSD will be reformatted and all data will be lost.*

- *Please make sure to use the default Boot Mode option in the BIOS setup utility before restoring.*

  1. Launch the BIOS setup utility.

  Please refer to TOSHIBA Setup Utility section for further information.

  *In the BIOS setup screen, select **Advanced -> System Configuration -> Boot Mode -> UEFI Boot** (Default).*

  *If you set the Boot Mode as **CSM Boot**, the recovery media created by Recovery Media Creator will NOT be able to restore.*

  *If you create a recovery image using advanced recovery tools from Control Panel, please also make sure to use the default Boot Mode option **(UEFI Boot)** in the BIOS setup utility before restoring.*

1. Load the Recovery Media into the external Optical Disc Drive or insert the recovery USB Flash Memory into one available USB port.
2. In the **Settings** charm, click **Power** and then select **Restart**.
3. Hold down the **F12** key and then release this key one second after the computer is power on.

   In tablet mode, hold down the **Volume up** button until the Boot menu is loaded.
4. Use the **Volume up** and the **Volume down** button to select the appropriate option from the menu according to your actual recovery media and press the **Windows** button to confirm the selection.
5. A menu will be displayed from which you should follow the on-screen instructions.

⚠️
If you have previously chosen to remove the recovery partition and are trying to create "Recovery Media", you will see the following message: "The Recovery Media Creator can not be launched because there is no recovery partition."

When there is no recovery partition, the Recovery Media Creator cannot make Recovery Media.

However, if you have already created a "Recovery Media", you can use it to restore the recovery partition.

If you have not created "Recovery Media", please contact TOSHIBA support for assistance.

Restoring the pre-installed software from the Recovery Solid State Drive

A portion of the total Solid State Drive space is configured as a hidden recovery partition. This partition stores files which can be used to restore pre-installed software in the event of a problem.

If you subsequently set up your Solid State Drive again, do not change, delete or add partitions in a manner other than specified in the manual, otherwise you may find that space for the required software is not available.

In addition, if you use a third-party partitioning program to reconfigure the partitions on your Solid State Drive, you may find that it becomes impossible to setup your computer.

Make sure that the AC adaptor is connected during the restoring process.

When you reinstall the Windows operating system, the Solid State Drive may be reformatted and all data may be lost.

1. In the **Settings** charm, click **Power** and then select **Restart**.
2. Hold down **0** (zero) key and then release this key one second after the computer is power on.

   In tablet mode, hold down the **Volume up** button until the Boot menu is loaded and then select **HDD Recovery**.
3. Select **Troubleshoot**.
4. Select **Reset your PC**.
5. Follow the on screen instructions to finish the recovery.

You can also perform the restoration through PC settings in the operating system:

1. Click the **Settings** charm and click **Change PC settings**.
2. Click **General** under PC settings.
3. Scroll down to **Remove everything and reinstall Windows** and click **Get started**.
4. Follow the on screen instructions to finish the recovery.

Ordering Recovery Discs from TOSHIBA*

You can order Product Recovery discs for your notebook from the TOSHIBA Europe Backup Media Online Shop.

	Please note that this service is not free-of-charge.

1. Visit https://backupmedia.toshiba.eu on the Internet.
2. Follow the on-screen instructions. You will receive your Recovery Discs within two weeks after placing your order.

Chapter 6

Troubleshooting

TOSHIBA have designed this computer for durability, however, should problems occur you are able to use the procedures detailed in this chapter to help determine the cause.

All users should become familiar with this chapter as knowing what might go wrong can help prevent problems from occurring in the first place.

Problem solving process

Resolving problems will be much easier if you observe the following guidelines:

- Stop immediately when you recognize a problem exists as taking further action may result in data loss or damage, or you may destroy valuable problem related information that can help solve the problem.
- Observe what is happening - write down what the system is doing and what actions you performed immediately before the problem occurred. Make a screenshot of the current display.

Please also be aware that the questions and procedures described in this chapter are meant only as a guide, they are not definitive problem solving techniques. In reality many problems can be solved simply, but a few may require help from TOSHIBA Support - if you find you need to consult others, be prepared to describe the problem in as much detail as possible.

Preliminary checklist

You should always consider the simplest solution first - the items detailed in this checklist are easy to fix and yet can cause what appears to be a serious problem:

- Make sure you turn on all peripheral devices before you turn on the computer - this includes your printer and any other external device you are using.
- Before you attach an external device you should first turn the computer off, then when you turn the computer back on again it will recognize the new device.
- Make sure all optional accessories are configured properly in the computer's setup program and that all required driver software has been loaded (please refer to the documentation included with the optional accessories for further information on its installation and configuration).

- Check all cables to ensure they are correctly and firmly attached to the computer - loose cables can cause signal errors.
- Inspect all connecting cables for loose wires and all connectors for loose pins.
- Check that your disc media is correctly loaded

Always try to make detailed notes of your observations and keep them in a permanent error log - this will help you to describe your problems to TOSHIBA Support. In addition, if a problem recurs, the log you have made will help to identify the problem faster.

Analyzing the problem

Sometimes the computer will give you clues that can help you identify why it is malfunctioning. In view of this you should keep the following questions in mind:

- Which part of the computer is not operating properly - keyboard, Solid State Drive, display panel, Touch Pad, Touch Pad control buttons - as each device will produce different symptoms.
- Check the options within the operating system to ensure that its configuration is set properly.
- What appears on the display? Does it display any messages or random characters? Make a screenshot of the current display and, if possible, look up the messages in the documentation included with the computer, software or operating system.
- Check that all connecting cables are correctly and firmly attached as loose cables can cause erroneous or intermittent signals.
- Do any indicators light, if so, which ones, what color are they and do they stay on or blink? Write down what you see.
- Do you hear any beeps, if so how many, are they long or short and are they high pitched or low pitched? In addition, is the computer making any unusual noises? Write down what you hear.

Record your observations so you can describe them in detail to TOSHIBA Support.

Software	The problems may be caused by your software or disk. If you cannot load a software package, the media may be damaged or the program might be corrupted - in these instances try loading another copy of the software if possible.
	If an error message appears while you are using a software package you should refer to the documentation supplied with it as this will usually include a problem solving section or a summary of error messages.
	Next, you should check any error messages against the operating system documentation.

| Hardware | If you cannot find a software problem, you should then check the setup and configuration of your hardware. First run through the items in the preliminary checklist as described previously then, if you still cannot correct the problem, try to identify the source - the next section provides checklists for individual components and peripherals. |

⚠ *Before using a peripheral device or application software that is not an authorized TOSHIBA part or product, make sure the device or software can be used with your computer. Use of incompatible devices may cause injury or may damage your computer.*

If something goes wrong

Your computer does not respond to the keyboard commands

If an error occurs and the computer does not respond to your keyboard commands, follow the steps below:

Press the power button and hold it down for five seconds. Once the computer has turned itself off, wait between ten and fifteen seconds before turning the power on again by pressing the power button.

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), then click **Task Manager**. The Windows Task Manager window appears.
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 the next step.
3. Close the remaining programs one by one by selecting the program name, then **End Task**. Closing all programs should allow you to continue working. If it does not, power off your computer and then restart it.

The computer will not start

Make sure you attached the AC adaptor and power cord/cable properly.

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

Verify that the computer is on by looking at the **Power** indicator.

If the indicator is glowing, the computer is on. Also, try turning the computer off and then on.

If you are using an AC adaptor, verify that the computer is receiving power from the external power source by looking at the **Battery** indicator. If the indicator is glowing, the computer is connected to a live external power source.

The computer will not load advanced options during startup

The advanced option will be loaded when you hold down one of the following keys on the keyboard dock during startup. The equivalent button operation in tablet mode are also described.

Advanced option	Key & button operations
BIOS utility	■ **F2** ■ while holding down **Volume down** button, press **Power** button
Boot menu	■ **F12** ■ while holding down **Volume up** button, press **Power** button
Recovery options	■ **0 (zero)** ■ -

*Recovery options can also be accessed from Boot menu by selecting **HDD Recovery**.*

If your computer starts to load the Operating System instead of desired advanced options, follow the steps below:

1. In the **Settings** charm, click **Power** and then select **Restart**.
2. Hold down the corresponding key and then release this key one second after the computer is power on.

   In tablet mode, hold down the corresponding button (no need to press **Power** button) until the advanced option is loaded.
3. Follow the on-screen instructions to proceed.

Hardware and system checklist

This section discusses problems caused by your computer's hardware or attached peripherals. Basic problems may occur in the following areas:

- Power
- Keyboard
- Internal display panel
- Solid State Drive
- Memory Media Card
- Pointing Device
- USB device
- Sound system
- External monitor
- Wireless LAN
- Bluetooth

Power

When the computer is not plugged into an AC power outlet, the battery pack is the primary power source. However, your computer also has a number of other power resources, including an intelligent power supply and a Real Time Clock (RTC) battery, all of which are interrelated with any one having the ability to produce apparent power problems.

Overheating power down

If the processor's temperature reaches an unacceptably high level with either setting, the computer will automatically shuts down to prevent any damage - in this instance all unsaved data in memory will be lost.

Problem	Procedure
Computer shuts down automatically.	Leave the computer off until the it reaches room temperature. If the computer has reached room temperature and it still does not start, or if it starts but shuts down quickly, contact TOSHIBA Support.

AC power

If you have trouble turning on the computer with the AC adaptor connected you should check the status of the DC IN/Battery indicator. Please refer to the *Monitoring of power condition* section for further information.

Problem	Procedure
AC adaptor doesn't power the computer	Check the connections to make sure that the power cord/adaptor is firmly connected to the computer and a working power outlet.
	Check the condition of the cord and terminals. If the cord is frayed or damaged it should be replaced, while if the terminals are soiled, they should be cleaned with a clean cotton cloth.
	If the AC adaptor still does not power the computer, you should contact TOSHIBA Support.

Battery

If you suspect a problem with the battery, you should check the status of the **Battery** indicator.

Problem	Procedure
Battery doesn't power the computer	The battery may be discharged - connect the AC adaptor to recharge the battery.
Battery doesn't charge when the AC adaptor is attached.	If the battery is completely discharged, it will not begin charging immediately, in these instances you should wait a few minutes before trying again. If the battery still does not charge, you should check that the power outlet the AC adaptor is connected to is supplying power - this can be tested by plugging another appliance into it.
Battery doesn't power the computer as long as expected	If you frequently recharge a partially charged battery, the battery might not charge to its full potential - in these instances you should fully discharge the battery and then attempt to charge it again.
	Check the **Power saver** option under **Select a power plan** in the **Power Options**.

Real Time Clock

Problem	Procedure
The BIOS setting and system date/time are lost.	The charge in the Real Time Clock (RTC) battery has run out - you will need to set the date and time in the BIOS setup utility by using the following steps:
	1. Launch the BIOS setup utility. Please refer to *TOSHIBA Setup Utility* section for further information.
	2. Set the date in the **System Date** field.
	3. Set the time in the **System Time** field.
	4. Select **Exit -> Exit Saving Changes** - a confirmation message will be displayed.
	5. Select **Yes** - the BIOS setup utility will end and the computer will restart.

Keyboard

Keyboard problems can be caused by the setup and configuration of the computer - please refer to the *The Keyboard* section for further information.

Problem	Procedure
Some letter keys produce numbers	Check that the numeric keypad overlay is not activated - press the **FN** + **F11** and try typing again.
Output to screen is garbled	Please refer to your software's documentation to ensure that it is not remapping the keyboard in any way (remapping involves changing or reassigning the function of each key).
	If you are still unable to use the keyboard, you should contact TOSHIBA Support.

Internal display panel

Apparent computer's display panel problems may be related to the computer's setup and configuration - please refer to the *TOSHIBA System Settings* section, for further information.

Problem	Procedure
No display	Press the function keys to adjust the display priority, and to make sure it is not set for output to an external monitor.
Markings appear on the computer's display panel.	These marks may have come from contact with the keyboard and Touch Pad while the display panel has been closed. You should try to remove the marks by gently wiping the display panel with a clean dry cloth or, if this fails, with a good quality LCD screen cleaner. In this latter instance you should always follow the instructions with the screen cleaner and always ensure you let the display panel dry properly before closing it.

Solid State Drive

Problem	Procedure
Computer does not boot from Solid State Drive	Check to see whether there is a disc in the optical disc drive - if so remove it and try to start the computer again.

Problem	Procedure
Slow performance	The files on the Solid State Drive may be fragmented - in this instance you should run the disk Defragmentation utility to check the condition of your files and the Solid State Drive. Please refer to the operating system's documentation or online Help File for further information on operating and using the Defragmentation utility.
	As a last resort you should reformat the Solid State Drive and then reload the operating system and all other files and data. If you are still unable to resolve the problem, contact TOSHIBA Support.

Memory Media Card

For further information, please refer to *Operating Basics*.

Problem	Procedure
Memory media card error occurs	Remove the memory media card from the computer and then reinsert it in order to ensure it is firmly connected.
	If the problem persists, then you should refer to the documentation supplied with your memory media card for further information.
You cannot write to a memory media card	Remove the memory media card from the computer and check to ensure that it is not write protected.
You cannot read a file	Check to ensure the required file is actually on the memory media card that is inserted into the computer.
	If you are still unable to resolve the problem, contact TOSHIBA Support.

Pointing device

If you are using a USB mouse, you should also refer to both the *USB mouse* section and the documentation supplied with your mouse.

Touch Pad

Problem	Procedure
The Touch Pad does not work.	Check the Device Select settings. Click **Desktop -> Desktop Assist -> Control Panel -> Hardware and Sound -> Mouse**.
On-screen pointer does not respond to pointing device operation	In this instance the system might be busy - Try moving the mouse again after waiting a short while.
Double-tapping (Touch Pad) does not work	In this instance, you should initially try changing the double-click speed setting within the Mouse Control utility. 1. To access this utility, click **Desktop -> Desktop Assist -> Control Panel -> Hardware and Sound -> Mouse**. 2. Within the Mouse Properties window, click the **Buttons** tab. 3. Set the double-click speed as required and click **OK**.
The on-screen pointer moves too fast or too slow	In this instance, you should initially try changing the speed setting within the Mouse Control utility. 1. To access this utility, click **Desktop -> Desktop Assist -> Control Panel -> Hardware and Sound -> Mouse**. 2. Within the Mouse Properties window, click the **Pointer Options** tab. 3. Set the pointer speed as required and click **OK**.
The reaction of Touch pad is either too sensitive or not sensitive enough.	Adjust the touch Sensitivity. To access it, click **Desktop -> Desktop Assist -> Control Panel -> Hardware and Sound -> Mouse**. If you are still unable to resolve the problem, contact TOSHIBA Support.

USB mouse

Problem	Procedure
On-screen pointer does not respond to mouse operation	In this instance the system might be busy - Try moving the mouse again after waiting a short while.
	Remove the mouse from the computer and then reconnect it to a free USB port in order to ensure it is firmly attached.
Double-clicking does not work	In this instance, you should initially try changing the double-click speed setting within the Mouse Control utility. 1. To access this utility, click **Desktop -> Desktop Assist -> Control Panel -> Hardware and Sound -> Mouse**. 2. Within the Mouse Properties window, click the **Buttons** tab. 3. Set the double-click speed as required and click **OK**.
The on-screen pointer moves too fast or too slow	In this instance, you should initially try changing the speed setting within the Mouse Control utility. 1. To access this utility, click **Desktop -> Desktop Assist -> Control Panel -> Hardware and Sound -> Mouse**. 2. Within the Mouse Properties window, click the **Pointer Options** tab. 3. Set the pointer speed as required and click **OK**.
The on-screen pointer moves erratically	The elements of the mouse responsible for detecting movement might be dirty - please refer to the documentation supplied with the mouse for instructions on how to clean it.
	If you are still unable to resolve the problem, contact TOSHIBA Support.

USB device

In addition to the information in this section, please also refer to the documentation supplied with your USB device.

Problem	Procedure
USB device does not work	Remove the USB device from the computer and then reconnect it to a free port in order to ensure it is firmly attached.
	Ensure that any required USB device drivers are properly installed - to achieve this you should refer to both the device documentation and the operating system documentation.

Sound system

In addition to the information in this section, please also refer to the documentation supplied with your audio device.

Problem	Procedure
No sound is heard	Press the function keys to increase or decrease volume.
	Check the software volume settings.
	Please check to see if Mute is turned to Off
	Check to make sure the headphone connection is secure.
	Check within the Windows Device Manager application to ensure the sound device is enabled and that the device is properly working.
Annoying sound is heard	In this instance you may be experiencing feedback from either the internal microphone or an external microphone connected to the computer - please refer to *Sound System and Video mode* for further information.
	Volume cannot be adjusted during Windows start up or shut down.
	If you are still unable to resolve the problem, contact TOSHIBA Support.

External monitor

Please also refer to *Operating Basics*, and to the documentation supplied with your monitor for further information.

Problem	Procedure
Monitor does not turn on	After confirming that the monitor's power switch is on, you should check the connections to make sure that the power cord/adaptor is firmly connected to the monitor and to a working power outlet.
No display	Try adjusting the contrast and brightness controls on the external monitor.
	Press the function key in order to change the display priority and ensure that it is not set for the internal display only.
	Check to see if the external monitor is connected.
	When the external monitor is set as the primary display device in extended desktop mode, it will not display when the computer wakes up from Sleep Mode if the external monitor has been disconnected while in Sleep Mode.
	To keep this from happening, do not disconnect the external monitor while the computer is in Sleep or Hibernation Mode.
	Remember to turn off the computer before disconnecting the external monitor.
	When the display panel and an external monitor are set to clone mode and they are turned off by the timer, the display panel or the external monitor may not display when turned on again.
	If this occurs, press the function key to re-set the display panel and external monitor to clone mode.
Display error occurs	Check that the cable connecting the external monitor to the computer is firmly attached.
	If you are still unable to resolve the problem, contact TOSHIBA Support.

Wireless LAN

Problem	Procedure
Cannot access Wireless LAN	Make sure the computer's Wireless communication function is on.
	If problems persist, contact your LAN administrator.

Bluetooth

Problem	Procedure
Cannot access Bluetooth device	Check to ensure the computer's Wireless Communication function is on.
	Check to ensure the Bluetooth Manager application is running on the computer and that power to the external Bluetooth device is turned on.
	Check to ensure that no optional Bluetooth Adaptor is installed in the computer - the built-in Bluetooth hardware cannot operate simultaneously with another Bluetooth controller.
	If you are still unable to resolve the problem, contact TOSHIBA Support.

TOSHIBA support

If you require any additional help using your computer or if you are having problems operating the computer, you may need to contact TOSHIBA for additional technical assistance.

Before you call

Some problems you experience may be related to software or the operating system so it is important that you investigate other sources of assistance first. Before contacting TOSHIBA, try the following:

- Review troubleshooting sections in the documentation supplied with your software and/or peripheral devices.
- If a problem occurs when you are running software applications, consult the software documentation for troubleshooting suggestions and consider calling the software company's technical support department for assistance.
- Consult the reseller or dealer from where you purchased your computer and/or software - they are your best resource for current information and support.

TOSHIBA technical support

If you are still unable to solve the problem and suspect that it is hardware related, visit TOSHIBA technical support website http://www.toshiba-europe.com or http://www.toshiba.co.jp/worldwide/.

Chapter 7

Appendix

Specifications

This section summarizes the computer's technical specifications.

Physical Dimensions

Physical Dimensions shown below do not include parts that extend beyond the main body. The physical dimensions may vary depending on the model you purchased.

Size	299 (w) x 189 (d) x 12.4 (h) millimeters (Computer only)
	(not including parts that extend beyond the main body).

Environmental Requirements

Conditions	Ambient temperature	Relative humidity
Operating	5°C (41°F) to 35°C (95°F)	20% to 80% (noncondensing)
Non-operating	-20°C (-4°F) to 60°C (140°F)	10% to 90% (noncondensing)
Wet-bulb temperature	29°C maximum	

Conditions	Altitude (from sea level)
Operating	-60 to 3,000 meters
Non-operating	-60 to 10,000 meters maximum

Power Requirements

AC adaptor	100-240V AC
	50 or 60 Hz (cycles per second)
Computer	19V DC

AC Power Cord and Connectors

The power cord's AC input plug must be compatible with the various international AC power outlets and the cord must meet the standards for the country/region in which it is used. All cords must meet the following specifications:

Wire size:	Minimum 0.75 mm^2
Current rating:	Minimum 2.5 amperes

Certification agencies

China:	CQC		
U.S. and Canada:	UL listed and CSA certified		
	No. 18 AWG, Type SVT or SPT-2		
Australia:	AS		
Japan:	DENANHO		
Europe:			
Austria:	OVE	**Italy:**	IMQ
Belgium:	CEBEC	**The Netherlands:**	KEMA
Denmark:	DEMKO	**Norway:**	NEMKO
Finland:	FIMKO	**Sweden:**	SEMKO
France:	LCIE	**Switzerland:**	SEV
Germany:	VDE	**United Kingdom:**	BSI

In Europe, two conductors power cord must be VDE type, H05VVH2-F or H03VVH2-F and for three conductors power cord must be VDE type, H05VV-F.

For the United States and Canada, two pin plug configuration must be a 2-15P (250V) or 1-15P (125V) and three pin plug configuration must be 6-15P (250V) or 5-15P (125V) as designated in the U.S. National Electrical code handbook and the Canadian Electrical Code Part II.
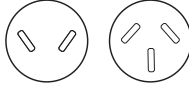
The following illustrations show the plug shapes for the U.S.A. and Canada, the United Kingdom, Australia, Europe and China.
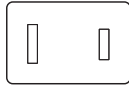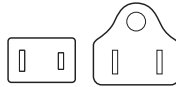
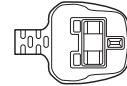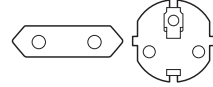| USA	United Kingdom
UL approved	BS approved
Australia	Europe
AS approved	Approved by the appropriate agency
Canada	China
CSA approved	CCC approved

Information for Wireless Devices

Wireless Technology Interoperability

The Wireless LAN is compatible with other LAN systems Direct Sequence Spread Spectrum (DSSS) /Orthogonal Frequency Division Multiplexing (OFDM) radio technology, and is compliant to:

- The IEEE 802.11 Standard on Wireless LANs (Revision a/b/g/n or b/g/n), as defined and approved by the Institute of Electrical and Electronics Engineers.

Bluetooth® Cards 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 (depending on the model you purchased), as defined and approved by the Bluetooth Special Interest Group.
- Logo certification with Bluetooth wireless technology as defined by the Bluetooth Special interest Group.

This Bluetooth product is not compatible with devices using Bluetooth Version 1.0B specifications.

The wireless devices have not completed verification of connection and operation with all devices which are using the Wireless LAN or Bluetooth radio technology.

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 visit http://www.pc.support.global.toshiba.com, if you have any questions about using Wireless LAN or Bluetooth Card from TOSHIBA.

In Europe visit http://www.toshiba-europe.com/computers/tnt/bluetooth.htm

Wireless Devices and your health

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

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

- Using the Wireless products 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 device prior to turning on the equipment.

Wireless LAN Technology

The computer's wireless communication function supports some wireless communication devices.

Only some models are equipped with both Wireless LAN and Bluetooth functions.

- *Do not use the Wireless LAN (Wi-Fi) or Bluetooth functionalities near a microwave oven or in areas subject to radio interference or magnetic fields. Interference from a microwave oven or other source can disrupt Wi-Fi or Bluetooth operation.*

> ■ *Turn all wireless functionalities off when near a person who may have a cardiac pacemaker implant or other medical electric device. Radio waves may affect pacemaker or medical device operation, possibly resulting in serious injury. Follow the instruction for your medical device when using any wireless functionality.*
>
> ■ *Always turn off wireless functionality if the computer is near automatic control equipment or appliances such as automatic doors or fire detectors. Radio waves can cause malfunction of such equipment, possibly resulting in serious injury.*
>
> ■ *It may not be possible to make a network connection to a specified network name using the ad hoc network function. If this occurs, the new network (*) will have to be configured for all computers connected to the same network in order to re-enable network connections.*
> ** Please be sure to use new network name.*

Security

■ TOSHIBA strongly recommend that you enable encryption functionality, otherwise your computer will be open to illegal access by an outsider using a wireless connection. If this occurs, the outsider may illegally access your system, eavesdrop, or cause the loss or destruction of stored data.

■ TOSHIBA is not liable for the loss of data due to eavesdropping or illegal access through the wireless LAN and the damage thereof.

Card Specifications

Form Factor	PCI Express Mini Card
Compatibility	■ IEEE 802.11 Standard for Wireless LANs
Network Operating System	■ Microsoft Windows Networking
Media Access Protocol	■ CSMA/CA (Collision Avoidance) with Acknowledgment (ACK)

Radio Characteristics

Radio Characteristics of Wireless LAN module may vary according to:

■ Country/region where the product was purchased

■ Type of product

Wireless communication is often subject to local radio regulations. Although Wireless LAN wireless networking products have been designed for operation in the license-free 2.4GHz and 5GHz band, local radio regulations may impose a number of limitations to the use of wireless communication equipment.

| Radio Frequency | ■ | Band 5GHz (5150-5850 MHz) (Revision a and n) |
| | ■ | Band 2.4GHz (2400-2483.5 MHz) (Revision b/g and n) |

The range of the wireless signal is related to the transmit rate of the wireless communication. Communications at lower transmit range may travel larger distances.

■   The range of your wireless devices can be affected when the antennas are placed near metal surfaces and solid high-density materials.

■   Range is also impacted due to "obstacles" in the signal path of the radio that may either absorb or reflect the radio signal.

Radio Frequency Interference Requirements

This device is restricted to indoor use due to its operation in the 5.15 to 5.25GHz frequency range.

Bluetooth wireless technology

Some computers in this series have Bluetooth wireless communication function which eliminates the need for cables between electronic devices such as computers, printers and mobile phones. When it is enabled, Bluetooth provides the wireless personal area network environment which is safe and trustworthy, that is quick and easy.

You cannot use the computer's built-in Bluetooth functions and an external Bluetooth adaptor simultaneously. For reference, Bluetooth wireless technology has the following features:

Security

Two advanced security mechanisms ensure a high level of security:

■   Authentication prevents access to critical data and makes it impossible to falsify the origin of a message.

■   Encryption prevents eavesdropping and maintains link privacy.

Worldwide operation

The Bluetooth radio transmitter and receiver operate in the 2.4GHz band, which is license-free and compatible with radio systems in most countries in the world.

Radio links

You can easily establish links between two or more devices, with these links being maintained even if the devices are not within a line-of-sight of each other.

Radio Regulatory Information

The Wireless device is 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 product complies with the following radio frequency and safety standards.

Europe

Restrictions for Use of 2400.0-2483.5MHz Frequencies in Europe

France:	Outdoor use limited to 10mW e.i.r.p. within the band 2454-2483.5MHz	Military Radiolocation use. Refarming of the 2.4GHz band has been ongoing in recent years to allow current relaxed regulation Full implementation planned 2012.
Italy:	-	For private use, a general authorization is required if WAS/ RLAN's are used outside own premises. For public use, a general authorization is required.
Luxembourg:	Implemented	General authorization required for network and service supply.
Norway:	Implemented	This subsection does not apply for the geographical area within a radius of 20 km from the centre of Ny-Alesund.
Russian Federation:	-	Only for indoor applications.

Restrictions for Use of 5150-5350MHz Frequencies in Europe

Italy:	-	For private use, a general authorization is required if WAS/ RLAN's are used outside own premises.
Luxembourg:	Implemented	General authorization required for network and service supply.

Russian Federation:	Limited	e.i.r.p 100mW. Permitted to use only for indoor applications, closed industrial and warehouse areas, and on board aircraft.
		1. Permitted to use for local networks of aircraft crew service communications on board aircraft in area of the airport and at all stages of flight.
		2. Permitted to use for public wireless access local networks on board aircraft during a flight at the altitude not less than 3000m.

Restrictions for Use of 5470-5725MHz Frequencies in Europe

Italy:	-	For private use, a general authorization is required if WAS/RLAN's are used outside own premises.
Luxembourg:	Implemented	General authorization required for network and service supply
Russian Federation:	Limited	e.i.r.p 100mW. Permitted to use only for indoor applications, closed industrial and warehouse areas, and on board aircraft.
		1. Permitted to use for local networks of aircraft crew service communications on board aircraft in area of the airport and at all stages of flight.
		2. Permitted to use for public wireless access local networks on board aircraft during a flight at the altitude not less than 3000m.

To remain in conformance with European spectrum usage laws for Wireless LAN operation, the above 2.4GHz and 5GHz channel limitations apply for outdoor usage. The user should use the wireless LAN utility to

check the current channel of operation. If operation is occurring outside of the allowable frequencies for outdoor use, as listed above, the user must contact the applicable national spectrum regulator to request a license for outdoor operation.

Canada - Industry Canada (IC)

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

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

USA-Federal Communications Commission (FCC)

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

Refer to the FCC information section for the detailed information.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

The radiated output power of the Wireless device is far below the FCCradio frequency exposure limits. Nevertheless, the Wireless device shall beused in such a manner that the potential for human contact during normal operation is minimized.

The radiated output power of the Wireless device is far below the FCCradio frequency exposure limits. Nevertheless, the Wireless device shall beused in such a manner that the potential for human contact during normal operation is minimized.

In the usual operating configuration, the distance between the antenna and the user should not be less than 20cm. Please refer to the computer user's manual for the details regarding antenna location.

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, obtainablefrom Health Canada's website www.hc-sc.gc.ca

Taiwan

Article 12	Without permission granted by the NCC, any company, enterprise, or user is not allowed to change frequency, enhance transmitting power or alter original characteristic as well as performance to an approved low power radio frequency devices.
Article 14	The low power radio-frequency devices shall not influence aircraft security and interfere legal communications;
	If found, the user shall cease operating immediately until no interference is achieved.
	The said legal communications means radio communications is operated in compliance with the Telecommunications Act.
	The low power radio-frequency devices must be susceptible with the interference from legal communications or ISM radio wave radiated devices.

Using this equipment in Japan

In Japan, the frequency bandwidth of 2,400MHz to 2,483.5MHz 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. Important notice

The frequency bandwidth of this equipment may operate within the same range as industrial devices, scientific devices, medical devices, microwave ovens, licensed radio stations and non-licensed specified low-power radio stations for mobile object identification systems (RFID) used in factory production lines (Other Radio Stations).

1. Before using this equipment, ensure that it does not interfere with any of the equipment listed above.
2. If this equipment causes RF interference to other radio stations, promptly change the frequency being used, change the location of use, or turn off the source of emissions.
3. Contact an authorized TOSHIBA service provider if you have problems with interference caused by this product to Other Radio Stations.

2. Indication for Wireless LAN

The indication shown below appears on this equipment.

(1)(2) (3)(4)

2.4DS/OF4

(5)
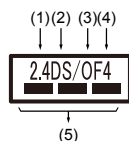
1. 2.4 : This equipment uses a frequency of 2.4GHz.
2. DS : This equipment uses DS-SS modulation.
3. OF : This equipment uses OFDM modulation.
4. 4 : The interference range of this equipment is less than 40m.
5. ▬ ▬▬ : This equipment uses a frequency bandwidth from 2,400MHz to 2,483.5MHz. It is possible to avoid the band of mobile object identification systems.

3. Indication for Bluetooth

The indication shown below appears on this equipment.

(1) (2) (3)

2.4FH1

(4)
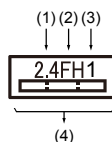
1. 2.4 : This equipment uses a frequency of 2.4 GHz.
2. FH : This equipment uses FH-SS modulation.
3. 1 : The interference range of this equipment is less than 10m.
4. ▭▭▭ : This equipment uses a frequency bandwidth from 2,400 MHz to 2,483.5 MHz. It is impossible to avoid the band of mobile object identification systems.

4. About the JEITA

5GHz Wireless LAN supports W52/W53/W56 Channel.

IEEE802.11b/g/n

IEEE802.11a/n			
J52	W52	W53	W56
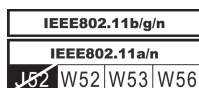
Device Authorization

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 Telecommunications Business Law of Japan.

- Intel® Centrino® Advanced-N 6235 a/g/n Wireless LAN and Bluetooth

  The Name of the radio equipment: 6235ANHMW

  DSP Research, Inc.

  Approval Number: D111083003

- Intel® Centrino® Wireless-N 2230 Wireless LAN and Bluetooth

  The Name of the radio equipment: 2230BNHMW

  DSP Research, Inc.

  Approval Number: D111287003

- Atheros 802.11b/g/n Wireless LAN/Bluetooth

  The Name of the radio equipment: AR5B225

  DSP Research, Inc.

  Approval Number: D110317003

The following restrictions apply:

- Do not disassemble or modify the device.
- Do not install the embedded wireless module into other device.

Radio approvals for wireless devices

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

⚠ *If you use this equipment in the countries/regions which are not listed in the table blow, please contact TOSHIBA Support.*

Austria	Belgium	Bulgaria	Canada
Cyprus	Czech Rep	Denmark	Estonia
Finland	France	Germany	Greece
Hong Kong	Hungary	Iceland	India
Indonesia	Ireland	Italy	Japan
Korea	Latvia	Liechtenstein	Lithuania
Luxemburg	Malta	Monaco	Netherlands
Norway	Philippines	Poland	Portugal
Romania	Slovak Republic	Slovenia	Spain
Sweden	Switzerland	UK	USA

Legal Footnotes

Non-applicable Icons

Certain computer chassis are designed to accommodate all possible configurations for an entire product series. Therefore, please be aware that your selected model may not have all the features and specifications corresponding to all of the icons or switches shown on the computer chassis.

CPU

Central Processing Unit (CPU) Performance Legal Footnotes.

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
- use of certain multimedia, computer generated graphics or video applications
- 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 several applications or functionalities simultaneously
- 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 30°C (41°F to 86°F) or >25°C (77°F) at high altitude (all temperature references are approximate and may vary depending on the specific computer model - please refer to your computer documentation or visit the TOSHIBA website at www.pcsupport.toshiba.com for details).

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 in your product documentation. Contact TOSHIBA technical service and support, refer to *TOSHIBA support* section for more information.

64-Bit Computing

Certain 32-bit device drivers and/or applications may not be compatible with a 64-bit CPU/operating system and therefore may not function properly.

Memory (Main System)

Part of the main system memory may be used by the graphics system for graphics performance and therefore reduce the amount of main system memory available for other computing activities. The amount of main system memory allocated to support graphics may vary depending on the graphics system, applications utilized, system memory size and other factors.

Battery Life

Battery life may vary considerably depending on product model, configuration, applications, power management settings and features utilized, as well as the natural performance variations produced by the design of individual components. Published battery life numbers are achieved on select models and configurations tested by TOSHIBA at the time of publication. Recharge time varies depending on usage. Battery may not charge while computer is consuming full power.

After going through many charge and discharge cycles, the battery will lose its ability to perform at maximum capacity and will need to be replaced. This is a normal phenomenon for all batteries. To purchase a new battery pack, see the accessories information that is shipped with your computer.

Hard Disk Drive (HDD) Capacity

1 Gigabyte (GB) means 10^9 = 1,000,000,000 bytes using powers of 10. The computer operating system, however, reports storage capacity using powers of 2 for the definition of 1 GB = 2^{30} = 1,073,741,824 bytes, and therefore shows less storage capacity. Available storage capacity will also be less if the product includes one or more pre-installed operating systems, such as Microsoft Operating System and/or pre-installed software applications, or media content. Actual formatted capacity may vary.

LCD

Over a period of time, and depending on the usage of the computer, the brightness of the LCD screen will deteriorate. This is an intrinsic characteristic of LCD technology.

Maximum brightness is only available when operating in AC power mode. Screen will dim when the computer is operated on battery power and you may not be able to increase the brightness of the screen.

Graphics Processing Unit (GPU)

Graphics processing unit (GPU) performance may vary depending on product model, design configuration, applications, power management settings and features utilized. GPU performance is only optimized when operating in AC power mode and may decrease considerably when operating in battery power mode.

Total Available Graphics Memory is the total of, as applicable, Dedicated Video Memory, System Video Memory and Shared System Memory. Shared System Memory will vary depending on system memory size and other factors.

Wireless LAN

The transmission speed over the wireless LAN and the distance over which wireless LAN can reach may vary depending on surrounding electromagnetic environment, obstacles, access point design and configuration, and client design and software/hardware configurations.

The actual transmission speed will be lower than the theoretical maximum speed.

Copy Protection

Applicable copy protection standards included in certain media may prevent or limit recording or viewing of the media.

Glossary

The terms in this glossary cover topics related to this manual. Alternate naming is included for reference.

Abbreviations

AC:	Alternating Current
AMT:	Intel Active Management Technology
ASCII:	American Standard Code for Information Interchange
BIOS:	Basic Input/output System
BD-ROM:	Blu-ray Disc Read-only Memory
bps:	bits per second
CD:	Compact Disc
CD-ROM:	Compact Disc Read-only Memory
CD-RW:	Compact Disc-rewritable
CMOS:	Complementary Metal-oxide Semiconductor
CPU:	Central Processing Unit
DC:	Direct Current
DDR:	Double Data Rate
DIMM:	Dual Inline Memory Module
DVD:	Digital Versatile Disc
DVD-R:	Digital Versatile Disc-recordable
DVD-RAM:	Digital Versatile Disc-random Access Memory

DVD-R DL:	Digital Versatile Disc Recordable Dual Layer
DVD-ROM:	Digital Versatile Disc-read Only Memory
DVD-RW:	Digital Versatile Disc-rewritable
DVD+R DL:	Digital Versatile Disc Recordable Double Layer
FAT:	File Allocation Table
FCC:	Federal Communications Commission
GB:	gigabyte
GBps:	gigabytes per second
HDD:	Hard Disk Drive
HDMI:	High-definition Multimedia Interface
HDMI CEC:	High-definition Multimedia Interface Consumer Electronics Control
HTML:	Hypertext Markup Language
IEEE:	Institute of Electrical and Electronics Engineers
I/O:	Input/Output
IRQ:	interrupt request
ISP:	Internet Service Provider
KB:	kilobyte
LAN:	Local Area Network
LCD:	Liquid Crystal Display
LED:	Light Emitting Diode
MB:	megabyte
MBps:	megabytes per second
MMC:	Multi Media Card
OCR:	Optical Character Recognition (Reader)
PC:	Personal Computer
PCI:	Peripheral Component Interconnect
PCMCIA:	Personal Computer Memory Card International Association
RAM:	Random Access Memory
RGB:	Red, Green, and Blue
RFI:	Radio Frequency Interference
ROM:	Read Only Memory
RTC:	Real Time Clock
S/P DIF:	Sony/philips Digital Interface Format

SD:	Secure Digital
SDHC:	Secure Digital High Capacity
SDRAM:	Synchronous Dynamic Random Access Memory
SSD:	Solid State Drive
TFT:	Thin-film Transistor
URL:	Uniform Resource Locator
USB:	Universal Serial Bus
UXGA:	Ultra Extended Graphics Array
VGA:	Video Graphics Array
WAN:	Wide Area Network
WSXGA:	Wide Super Extended Graphics Array
WSXGA+:	Wide Super Extended Graphics Array Plus
WUXGA:	Wide Ultra Extended Graphics Array
WXGA:	Wide Extended Graphics Array
WXGA+:	Wide Extended Graphics Array Plus
www:	World Wide Web
XGA:	Extended Graphics Array

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