

E100

User's Manual

(October 2007)

TRADEMARKS

The *Bluetooth*[®] word mark and logos are registered trademarks owned by Bluetooth SIG, Inc.

All other brand and product names are trademarks or registered trademarks of their respective owners.

NOTE

The information in this manual is subject to change without notice.

Table of Contents

| | |
|--|------------|
| Preface | vi |
| Chapter 1 Getting Started | 1-1 |
| Getting the Tablet PC Running..... | 1-2 |
| Unpacking | 1-2 |
| Connecting to AC Power | 1-2 |
| Turning On and Off the Tablet PC | 1-5 |
| Taking a Look at the Tablet PC..... | 1-7 |
| Right-Side Components..... | 1-7 |
| Left-Side Components..... | 1-8 |
| Rear Components..... | 1-9 |
| Front Components..... | 1-10 |
| Bottom Components..... | 1-11 |
| Top Components..... | 1-12 |
| Where to Go from Here..... | 1-15 |
| Chapter 2 Operating Your Tablet PC | 2-1 |
| Starting and Stopping the Tablet PC..... | 2-2 |
| Starting the Tablet PC..... | 2-2 |
| Stopping the Tablet PC | 2-2 |
| Using the Quick Buttons | 2-4 |
| Using the Keypad..... | 2-6 |
| Numeric Keypad..... | 2-6 |
| Cursor-Control Keys..... | 2-7 |
| Using the On-screen Keyboard | 2-8 |
| Using the Touchscreen (depending on your model)..... | 2-9 |

| | |
|---|------|
| Using the Active Digitizer Feature (depending on your model) | 2-11 |
| Using the Video Features | 2-13 |
| Configuring the Display Modes | 2-13 |
| Using the Audio Features | 2-14 |
| Connecting Audio Devices | 2-15 |
| Using the Communication Features | 2-16 |
| Using the LAN..... | 2-16 |
| Using the Wireless LAN..... | 2-16 |
| Using the <i>Bluetooth</i> [®] Wireless Feature (Optional) | 2-19 |
| Using the GPS (Optional)..... | 2-22 |
| Using the 3G Feature (Optional)..... | 2-23 |

Chapter 3 Managing Power..... 3-1

| | |
|--------------------------------------|------|
| AC Adapter | 3-2 |
| Battery Pack..... | 3-3 |
| Charging the Battery Pack..... | 3-3 |
| Initializing the Battery Pack | 3-4 |
| Checking the Battery Level..... | 3-4 |
| Replacing the Battery Pack | 3-6 |
| Battery Low Signals and Actions..... | 3-8 |
| Power Management..... | 3-9 |
| Hibernation..... | 3-10 |
| Power-Saving Tips..... | 3-11 |

Chapter 4 Expanding Your Tablet PC 4-1

| | |
|--|-----|
| Connecting a USB Device..... | 4-2 |
| Using Smart Cards..... | 4-3 |
| Inserting and Removing a Smart Card | 4-3 |
| Using PC Cards (depending on your model)..... | 4-4 |
| Inserting and Removing a PC Card..... | 4-4 |
| Using ExpressCards (depending on your model) | 4-6 |
| ExpressCard Type | 4-6 |
| Inserting and Removing an ExpressCard..... | 4-7 |

| | |
|--------------------------------|-----|
| Using the Docking Station..... | 4-8 |
|--------------------------------|-----|

Chapter 5 Using BIOS Setup and System Recovery Feature 5-1

| | |
|---|------|
| When and How to Use BIOS Setup | 5-2 |
| When to Use | 5-2 |
| Starting BIOS Setup | 5-2 |
| Moving Around and Making Selections | 5-4 |
| Information Menu | 5-5 |
| Main Menu..... | 5-6 |
| Advanced Menu | 5-7 |
| Security Menu | 5-8 |
| Boot Menu..... | 5-9 |
| Exit Menu..... | 5-10 |
| When and How to Use the System Recovery Feature | 5-11 |
| When to Use | 5-11 |
| Starting System Recovery | 5-11 |

Chapter 6 Using the TPM, EasyTap, and G-Manager Utilities 6-1

| | |
|--|------|
| Using TPM (Trusted Platform Module)..... | 6-2 |
| Using the EasyTap Utility | 6-3 |
| Quick Button Setup Utility | 6-8 |
| Using the G-Manager Utility | 6-13 |
| Starting G-Manager | 6-13 |
| System Tab..... | 6-15 |
| Battery Tab | 6-16 |
| Light Sensor | 6-19 |
| ECO Tab..... | 6-20 |
| Ignition Tab | 6-22 |
| Monitoring Tab..... | 6-23 |
| Antenna Tab | 6-26 |
| GPS Status Tab | 6-27 |

| | | |
|-------------------|---|------------|
| Chapter 7 | Caring for the Tablet PC | 7-1 |
| | Protecting the Tablet PC | 7-2 |
| | Using the Cable Lock..... | 7-2 |
| | Taking Care of the Tablet PC..... | 7-3 |
| | Location Guidelines | 7-3 |
| | General Guidelines..... | 7-3 |
| | Cleaning Guidelines | 7-4 |
| | Battery Pack Guidelines | 7-4 |
| | Touchscreen Guidelines..... | 7-5 |
| | When Traveling | 7-7 |
| Chapter 8 | Troubleshooting | 8-1 |
| | Preliminary Checklist..... | 8-2 |
| | Solving Common Problems | 8-3 |
| | Battery Problems | 8-4 |
| | <i>Bluetooth</i> Wireless Transmission Problems | 8-4 |
| | Display Problems..... | 8-5 |
| | ExpressCard Problems..... | 8-5 |
| | Hardware Device Problems | 8-6 |
| | Hard Disk Drive Problems | 8-6 |
| | LAN Problems..... | 8-7 |
| | Wireless LAN Problems..... | 8-7 |
| | PC Card Problems | 8-9 |
| | Power Management Problems | 8-9 |
| | Software Problems..... | 8-10 |
| | Sound Problems..... | 8-10 |
| | Startup Problems | 8-11 |
| | Other Problems..... | 8-12 |
| | Resetting the Tablet PC..... | 8-13 |
| Appendix A | Specifications | A-1 |
| Appendix B | Regulatory Information | B-1 |
| | On the Use of the System | B-2 |

| | |
|--|------|
| Class B Regulations | B-2 |
| Safety Notices..... | B-3 |
| On the Use of the RF Device..... | B-6 |
| USA and Canada Safety Requirements and Notices | B-6 |
| European Union CE Marking and Compliance Notices ... | B-8 |
| 电子信息产品有毒有害物质或元素名称及含量标示 . | B-13 |

Preface

This manual contains information that will help you operate the tablet PC. It is divided into 8 chapters and 2 appendices.

- Chapter 1, **Getting Started**, takes you through the process of setting up the tablet PC and identifying its external components.
- Chapter 2, **Operating Your Tablet PC**, tells you how to use the tablet PC's components and features.
- Chapter 3, **Managing Power**, provides information on power.
- Chapter 4, **Expanding Your Tablet PC**, provides information on installing and using peripheral devices.
- Chapter 5, **Using BIOS Setup and System Recovery Feature**, describes the BIOS Setup program that configures the tablet PC's BIOS settings as well as the System Recovery function.
- Chapter 6, **Using the TPM, EasyTap, and G-Manager Utilities**, describes how to use TPM (Trusted Platform Module), EasyTap, and G-Manager utilities.
- Chapter 7, **Caring for the Tablet PC**, gives you tips in care and maintenance.
- Chapter 8, **Troubleshooting**, gives solutions to common problems you may encounter when using the tablet PC.
- Appendix A, **Specifications**, gives a brief specification of the tablet PC.

- Appendix B, **Regulatory Information**, provides regulatory statements and safety notices on your tablet PC.

Notational Conventions

Throughout this manual, the following conventions are used to distinguish elements of text.

| **NOTE:** identifies additional information that requires special attention.

| **CAUTION:** identifies important information that, if not followed, may result in loss of data or damage to the tablet PC.

Keypad keys are shown in a bold typeset. For example:

Press the **Ent** key to complete.

A title, command, setup item, or button that you can see on the screen is shown in boldface. A value or an option that you can select for a setup item is shown in italic. For example:

Select **When I press the power button**, set it to *Shut down*, and then click the **Save changes** button.

Getting Started

Congratulations on purchasing this rugged tablet PC.

This chapter first tells you step by step how to get the tablet PC up and running. You will find instructions for these procedures:

- Unpacking
- Connecting to AC power
- Turning on the tablet PC
- Turning off the tablet PC

Then, you will find a section briefly introducing the external components of the tablet PC. And the last section navigates you to the information you may need after the tablet PC is ready for use.

Getting the Tablet PC Running

This section guides you through the procedures for getting the tablet PC ready for operation.

Unpacking

After unpacking the shipping carton, you should find these standard items:

- Tablet PC
- Accessories:
 - AC adapter
 - AC power cord
 - Touchscreen pen (depending on your model)
 - Digitizer pen (depending on your model)

Inspect all the items. If any item is damaged or missing, notify your dealer immediately.

Keep the shipping carton and packing materials in case you need to ship or store the tablet PC in the future.

Connecting to AC Power

The tablet PC operates either on the external AC power or internal battery power. It is suggested that you use AC power when you start up the tablet PC for the very first time.

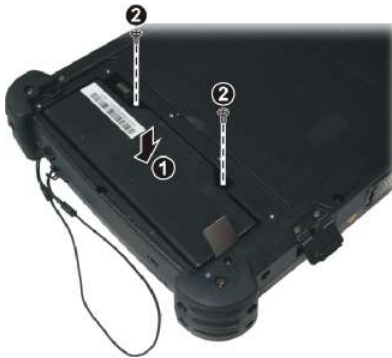
CAUTION: Use only the AC adapter included with your tablet PC. Using other AC adapters may damage the tablet PC.

1. Make sure that the tablet PC is turned off.
2. Place the tablet PC upside down.

3. Remove the four screws securing the battery compartment cover and remove it.




4. Fit the battery pack into place (❶) and secure with two screws (❷).



5. Replace the battery compartment cover and secure with four screws.
6. Plug the DC cord of the AC adapter to the power connector (⏻) of the tablet PC (❶).

7. Plug the female end of the AC power cord to the AC adapter and the male end to an electrical outlet (2).



8. Power is being supplied from the electrical outlet to the AC adapter and onto your tablet PC. Now, you are ready to turn on the tablet PC.
9. When the AC adapter is connected, it also charges the battery pack. The Battery Charge Indicator () on the tablet PC glows amber to indicate that charging is in progress. When the battery is fully charged, the Battery Charge Indicator glows green. (For information on using battery power, see Chapter 3.)

CAUTION:

- When you disconnect the AC adapter, disconnect from the electrical outlet first and then from the tablet PC. A reverse procedure may damage the AC adapter or the tablet PC.
- When unplugging the connector, always hold the plug head. Never pull on the cord.

Turning On and Off the Tablet PC

Turning On

1. Place your tablet PC on a flat and stable surface or, the tablet PC can be operated while holding it as shown.



2. Make sure that the tablet PC is either connected to AC power or the battery has power.

3. Press the power button (⏻).



4. Each time the tablet PC is turned on, it performs a Power-On Self Test (POST), and the operating system Windows XP Tablet PC edition should start (may support Windows Vista Business and Ultimate in the future).

Turning Off

To turn off the tablet PC power, use the “Shut Down” command of your operating system.

NOTE: There are other ways you can stop the tablet PC so that you will be back to where you left off when you next turn on the tablet PC. (See “Stopping the Computer” in Chapter 2 for information.)

CAUTION: If you have to turn the tablet PC on again immediately after turning it off, wait for at least five seconds. Turning the tablet PC off and on rapidly can damage it.


Taking a Look at the Tablet PC

This section identifies the external components of the tablet PC and briefly describes the function of each component.

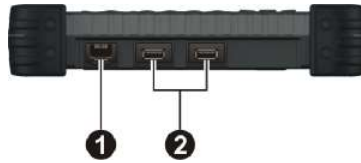
NOTE: Depending on the model you purchased, the appearance of your tablet PC may not be exactly the same as those shown in this manual.



Right-Side Components



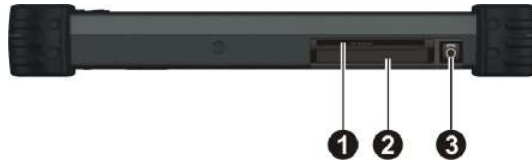
| Ref | Component | Description | See Also |
|-----|---|--|--------------|
| ❶ | Kensington Lock  | Locks the tablet PC to a stationary object for security. | P. 7-2 |
| ❷ | Touchscreen Pen / Digitizer Pen (depending on your model) | Provides a convenient way to use the touchscreen. | P. 2-9, 2-11 |
| ❸ | Tether Hole | Touchscreen pen tethered to this hole. | |



Left-Side Components



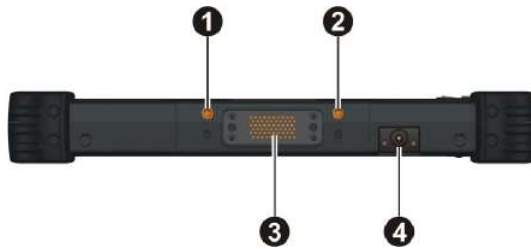
| Ref | Component | Description | See Also |
|-----|---|---|----------|
| ① | RJ-45 Connector  | Connects the LAN cable. | P. 2-16 |
| ② | USB Ports  | Each of the two ports connects a USB device, such as a USB flash disk, printer, digital camera, joystick, and more. | P. 4-2 |

Rear Components



| Ref | Component | Description | See Also |
|-----|--|---|-------------|
| ① | Smart Card Reader | Accepts a smart card for additional security feature. | P. 4-3 |
| ② | PCMCIA Slot / ExpressCard Slot  (depending on your model) | Accepts a PC card or an ExpressCard/34 / ExpressCard/54 for additional functions. | P. 4-4, 4-6 |
| ③ | Audio Output Connector  | Connects a set of headphones, external speakers with amplifier, or an audio recording device. | P. 2-15 |

Front Components



| Ref | Component | Description | See Also |
|-----|---|--|----------|
| ① | 3G Antenna pass-through Connector (option) | Connects to the optional antenna for wireless WAN (wide area network) 3G transmission. | |
| ② | GPS Antenna pass-through Connector (option) | Connects to the optional antenna for GPS receiver. | |
| ③ | Docking Connector | Connects to a docking station. | P. 4-8 |
| ④ | Power Connector | Connects the AC adapter. | P. 1-2 |



Bottom Components






| Ref | Component | Description | See Also |
|-----|--|---|-----------------------|
| ① | Battery Pack / 3G SIM Card Slot Compartment | Inside is the battery pack that supplies power to your tablet PC when external power is not connected. Also contains the 3G SIM card slot. | P. 3-6 P. 2-23 |

Top Components



| Ref | Component | Description | See Also |
|-----|---|---|----------|
| ① | LCD Touchscreen | Displays and receives information for the tablet PC. | P. 2-13 |
| ② | Power Button  | Turns the tablet PC power ON and OFF. The LED lights green when tablet PC is on. | P. 1-5 |
| ③ | Light Sensor | Adjusts the LCD brightness automatically based on your tablet PC's surrounding lighting condition. | |
| ④ | Quick Buttons | | |
| | Fn | Toggles the Fn keylock ON and OFF. | P. 2-4 |
| |  | Toggles the keypad lock ON and OFF by pressing for three seconds to prevent accidental pressing of keypad during transport. | P. 2-4 |
| | Menu | Toggles the "EasyTap" utility ON and OFF. | P. 2-4 |

| Ref | Component | Description | See Also |
|----------|--|--|----------|
| 5 | Indicators | Show the current status of the tablet PC's devices. | |
| |  WLAN/WWAN | Lights green when WLAN is on. Lights amber when WWAN is on. | P. 2-17 |
| |  Battery Charge | Lights green when the battery is fully charged. Lights amber when the battery is being charged. Blinks red when the battery's capacity is below 10 %. | P. 3-3 |
| |  Hard Disk Drive / Heater (option) | Lights green when hard disk drive is in use. Lights red when optional heater is on (temperature is lower than 5 °C when booting your tablet PC). | |
| 6 | Numeric Keypad | Facilitates entering of numbers, also includes the Del (Delete) and Ent (Enter) keys. When Fn keylock is on, the alternative function of a key is activated. The alternative functions are identified by the color of blue on the keytop. | P. 2-6 |
| 7 | Cursor-control Keys | Serves as the UP / DOWN / LEFT / RIGHT arrow keys (except pointer on screen). When Fn keylock is on, the alternative function of a key is activated. The alternative functions are identified by the color of blue on the keytop. | P. 2-6 |
| 8 | Speaker | Sends out sound and voice from your tablet PC. | P. 2-14 |

Where to Go from Here

As your tablet PC is ready for operation, you may want to do any of the following now:

| For this purpose... | Do this... |
|---|---|
| To know more about the tablet PC... | Go on to the next chapter. |
| To install the operating system if your dealer has not already done so... | See the operating system manual. |
| To know more about the operating system... | Read the operating system manual. |
| To set a power-on password... | Read the operating system manual. |
| To charge the battery pack for the first time... | See “Charging the Battery Pack” in Chapter 3. |

Operating Your Tablet PC

This chapter provides information about the use of the tablet PC.

If you are new to computers, reading this chapter will help you learn the operating basics. If you are already a computer user but are new to tablet PCs, you may choose to read only the parts containing information unique to your tablet PC.


Described in this chapter are the operating basics of these components/features:

- Starting and stopping the tablet PC
- Quick buttons
- Keypad
- Touchscreen (depending on your model)
- Active Digitizer (depending on your model)
- Video features
- Audio features
- Communication features

Starting and Stopping the Tablet PC

There are a number of ways to start and stop the tablet PC.

Starting the Tablet PC

You always start the tablet PC using the power button ().

A computer starts up with an operating system (OS) existing on the storage device such as the hard disk. The computer will automatically load the OS after you turn it on. This process is called booting.

NOTE: An operating system is the platform for all your software application programs to run on. Your computer uses the Microsoft Windows Vista operating system.

Stopping the Tablet PC

When you finish a working session, you can stop the tablet PC by turning off the power or leaving the tablet PC in Standby or Hibernation mode:



| To stop in this mode... | Do this... | To start up or resume again |
|-------------------------|--|-----------------------------|
| Off | Follow the shutdown procedure of your operating system. This can prevent loss of unsaved data or damage to your software programs. If the system is locked up because of hardware or software problems, press the power button to turn off the tablet PC. | Press the power button. |
| Standby | Depending on your settings in Windows, you can place the tablet PC in Standby mode by pressing the power button. | Press the power button. |
| Hibernation | Depending on your settings in Windows, you can place the tablet PC in Hibernation mode by pressing the power button. | Press the power button. |

If you choose to stop in Standby or Hibernation mode, you can return to where you left off the next time you start up the tablet PC. (See “Power Management” in Chapter 3 for more information.)

Using the Quick Buttons



Located on top of the keypad are three quick buttons:


- **Fn** button toggles the **Fn** keylock ON and OFF ( icon appears on the system tray when ON). You can use the secondary functions of keypad buttons with blue color on top of each button (as described in the next section).
-  button toggles the keypad lock ON and OFF. Press the button to turn on or press continuously for more than three seconds to turn off. This would prevent accidental pressing of the keypad buttons during transport.
- **Menu** button toggles the EasyTap utility ON and OFF. Upon pressing it the following screen appears (see chapter 6 for more details).



Using the Keypad

Your keypad can be divided into two major categories:


- Numeric, Delete (**Del**), and Enter (**Ent**) keys
- Cursor-control keys




NOTE: To use the keypad during poor lighting conditions, turn the keypad backlight ON by pressing the Fn button, then press the “8” () button.



Numeric Keypad

The 12-key numeric keypad with Delete and Enter keys is shown next:



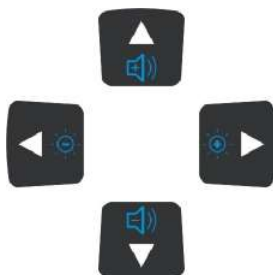
When the **Fn** keylock is ON ( icon appears on the system tray), you can use the following secondary functions with blue color on top of each button.


-  switches between landscape and portrait LCD display.
-  switches the keypad backlight ON and OFF.
-  switches the touchscreen or active digitizer OFF and ON.





-  switches the sunlight-readable mode ON and OFF.
-  serves as the mouse right-click button.
- **C+A+D** serves as the **Ctrl+Alt+Del** key.
- **ESC** serves as the Escape button.

Cursor-Control Keys

The word “cursor” refers to the indicator on the screen (except for pointer on screen) that lets you know exactly where on your screen anything you type will appear. It can take the form of a vertical or horizontal line, a block, or one of many other shapes.




When the **Fn** keylock is ON ( icon appears on the system tray), you can use the following secondary functions with blue color on top of each button.

-  increase the sound volume of your tablet PC.
-  decrease the sound volume of your tablet PC.
-  increase the brightness of LCD display.
-  decrease the brightness of LCD display.

Using the On-screen Keyboard

Use the on-screen keyboard to enter text and perform various keyboard functions.

1. Click the on-screen keyboard icon () located on the Windows system tray and the software keyboard will appear onscreen.



2. Tap the characters on the on-screen keyboard with the touchscreen / digitizer pen.

NOTE: To protect the LCD display, use the touchscreen or digitizer pen on your touchscreen.

Using the Touchscreen (depending on your model)

NOTE:

- Your tablet PC comes with either the touchscreen function or the Active Digitizer feature.
- The touchscreen function or the Active Digitizer feature is not available when running the BIOS Setup program.

CAUTION: Do not use a sharp object such as a ballpoint pen or pencil on the touchscreen. Doing so may damage the touchscreen surface. Use the included touchscreen pen.

The touchscreen is a touch-sensitive device that allows you to easily communicate with the tablet PC by controlling the location of the pointer on the screen and making selection with the buttons.



Here are some common terms that you should know when using the touchscreen:

| Term | Action |
|--------------|---------------------------------------|
| Click/Point | Tap gently on the touchscreen. |
| Double-click | Tap twice on the touchscreen rapidly. |

| Term | Action |
|---------------|--|
| Right-click | Press lightly on the display until a pop-up menu appears, then select the desired function. |
| Drag and drop | Press lightly on the touchscreen and move your finger until you reach your destination (drag). Finally, release your finger (drop) when you finish dragging your selection to the destination. The object will drop into the new location. |

Using the Active Digitizer Feature (depending on your model)

NOTE:

- Your tablet PC comes with either the Active Digitizer feature or the touchscreen function.
- The Active Digitizer feature or touchscreen function is not available when running the BIOS Setup program.






The active digitizer feature allows you to easily communicate with the tablet PC by using the optional digitizer pen.



WARNING: To protect the LCD screen with active digitizer feature, do not use force when pressing on the surface (greater than 1 kg and more than 30 seconds at a time).

Here are some common terms that you should know when using the active digitizer feature:

| Term | Action |
|------|---|
| Move | Move the cursor pointed by the digitizer pen. |

| Term | Action |
|---------------|---|
| Click/Point |  <p>Tap gently on the display.</p> |
| Right-click |  <p>Press lightly on the display until a pop-up menu appears, then select the desired function.</p> |
| Double-click |  <p>Tap twice on the display rapidly.</p> |
| Drag and drop |  <p>Press lightly on the display and move your digitizer pen until you reach your destination (drag). Finally, release your digitizer pen (drop) when you finish dragging your selection to the destination. The object will drop into the new location.</p> |
| Erase |  <p>Press and hold down the digitizer pen button, then move the cursor pointed by the digitizer pen to erase.</p> |





CAUTION: The active digitizer feature cannot be used in the BIOS Setup program or when using the full screen in DOS mode.

NOTE:

- You can move the cursor by bringing the digitizer pen close to the screen, without actually touching the screen's surface.
- Do not move the digitizer pen too quickly. If the pen moves too quickly, the cursor may be unable to follow its movement.
- If you cannot click on the edge of the screen, hold the digitizer pen perpendicular to the display and try clicking again.

Using the Video Features

The video subsystem of your tablet PC features:




- 8.4-inch wide TFT (Thin-Film Transistor) color LCD with SVGA transmissive display
- Toggle display between landscape view and portrait view using the LCD rotate button 
- Built-in light sensor to automatically adjust the LCD brightness
- Manually adjust the display brightness using the LCD brightness up () and down () buttons
- Power Management
- Sunlight-readable LCD display using the sunlight-readable mode button  (option)

Configuring the Display Modes

Your tablet PC has been set to a default resolution and number of colors before shipment. You can view and change display settings through your operating system. See your operating system documentation or online help for specific information.

Using the Audio Features

The audio subsystem of your tablet PC features:

- High density audio codec
- Manually adjust the sound volume using the sound volume up () and down () buttons
- Audio-out connector () (**1**) and
- Integrated speaker (**2**)



Ways of playing and recording sound vary with the operating system used. See your operating system documentation or online help for specific information.

Connecting Audio Devices

For higher audio quality, you can send sound through external audio devices such as speakers, headphones, or earphone set using the audio-out connector.




NOTE:

- After connecting an external audio device, make sure that you specify the use of the correct audio device in Windows.
- When using the external speakers/headphones, you cannot use the internal one.

Using the Communication Features

Using the LAN

The internal 10/100/1000Base-T LAN (Local Area Network) module allows you to connect your tablet PC to a network. It supports data transfer rate up to 1000 Mbps.

To connect the network cable to the LAN module, connect one end of the LAN cable to the RJ-45 connector () on the tablet PC and the other end to the network hub.



Using the Wireless LAN

The WLAN features include:

- Peer-to-Peer (Ad-Hoc) and Access Point (Infrastructure) modes support
- WEP (Wired Equivalent Privacy) 64/128-bit data encryption
- IEEE 802.11b/g standard compliance

| Technology | 802.11b | 802.11g |
|----------------------------------|--|---|
| Stated Maximum Throughput (Mbps) | 11 | 54 |
| Data Rates (Mbps) | 11, 5.5, 2, 1 | 54, 36, 18, 9 |
| Band (GHz) | 2.412 ~ 2.462 | 2.4 |
| Modulation Technology | DSSS (Direct Sequence Spread Spectrum) | OFDM (Orthogonal Frequency Division Multiplexing) |


NOTE: 802.11g mode is backward compatible with 802.11b mode.

Turning Off/On the WLAN Radio

NOTE: The FAA (Federal Aviation Agency) has deemed it unsafe to operate wireless devices in aircraft as this may interfere with flight safety. Remember to turn off wireless LAN when using your tablet PC in the airplane.

1. Press the **Menu** button to start up the EasyTap utility.




2. Click the RF button to switch the WLAN radio on/off, indicated by the WLAN indicator () glowing in green when on.

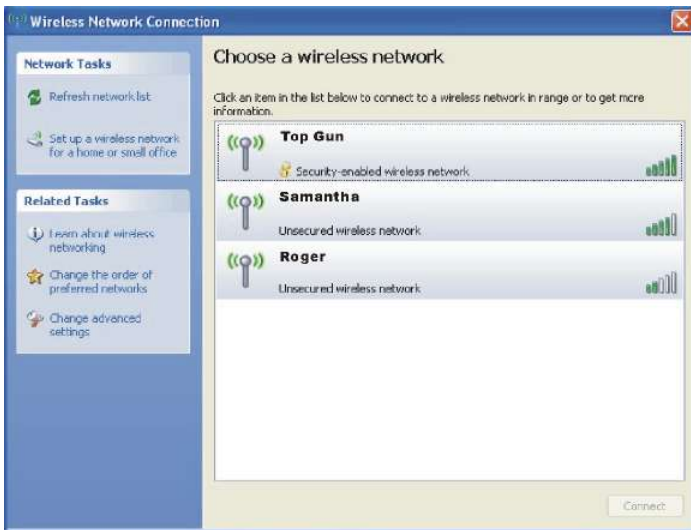
If you need to temporarily turn off the radio, click the RF button. To resume network connection, click the RF button again. Upon restarting your system, wireless LAN radio would be on even if you turned it off before system shutdown.

It takes approximately 30 seconds for your tablet PC to make a successful WLAN connection and approximately 10 seconds to disconnect.

Connecting to a Wireless Network

To connect to a wireless network:

1. Make sure that the wireless LAN radio is “on” indicated by the wireless LAN indicator (📶) glowing in green.
2. Double-click the **Wireless Network Connection** icon  located on your Windows system tray. If any wireless network is detected, the following window appears on screen.





3. Click to select a wireless network to connect to, and then click **Connect**.
4. Depending on the settings, you may be asked to enter a WEP key (refer to your Windows online help for more information on setting a wireless network connection).

Using the *Bluetooth*[®] Wireless Feature (Optional)

Depending on your model, your tablet PC may incorporate the Bluetooth capability for short-range (about 10 meters) wireless communications between devices without requiring a cable connection.

With Bluetooth, data can be transmitted through walls, pockets and briefcases as long as two devices are within range. By default, your tablet PC's Bluetooth feature is active (always ON) upon booting your tablet PC and is in the general discoverable and pairable mode.


The status of the Bluetooth connection is indicated by the Bluetooth icon located in the system tray in the lower-right part of the screen.

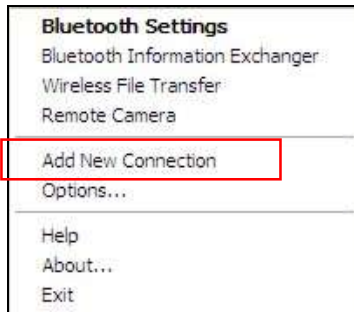
| Status | Icon |
|-----------|--|
| On |  [®] (blue with white logo). |
| Connected |  [®] (blue with green logo) |

You can use the Bluetooth Utility to configure Bluetooth connection settings and transfer files.

Connecting to Another *Bluetooth* Device

1. Make sure that the target *Bluetooth* device is turned on, discoverable and within close range. (See the documentation that came with the *Bluetooth* device.)

2. Right-click (press lightly until a pop-up menu appears) the  icon, and then click **Add New Connection**.



3. The **Add New Connection Wizard** window appears. Select **Express Mode (Recommended)**, and then click **Next**.




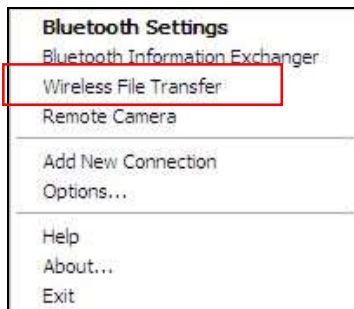
4. Select the device to connect to and click **Next**.



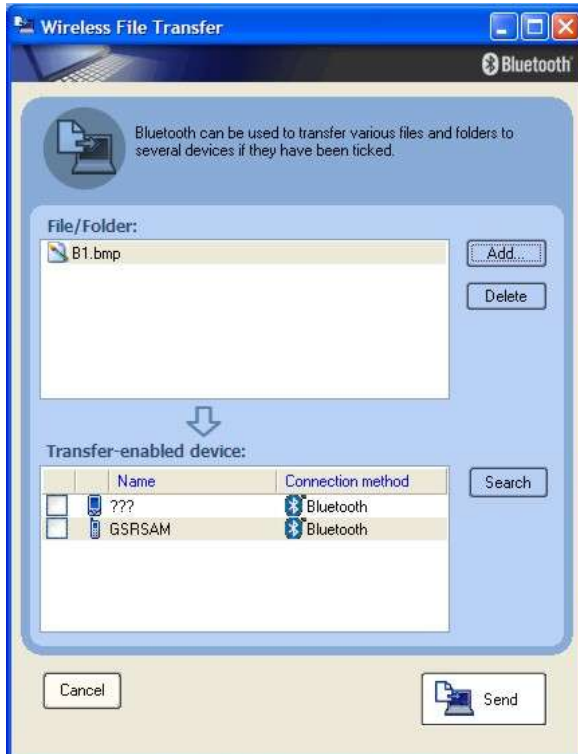
5. Depending on the type of *Bluetooth* device that you want to connect to, you will need to enter the pertinent information.

Sending a File

1. Make sure that the target *Bluetooth* device is turned on, discoverable and within close range. (See the documentation that came with the *Bluetooth* device.)
2. Right-click the  icon, and then click **Wireless File Transfer**.



3. In the **Wireless File Transfer** window, click **Add** to browse for the file to send.
4. Click the target device from the list, and then click **Send** to start the transfer procedure.



Using the GPS (Optional)

Depending on the model you purchased, your tablet PC may have the GPS receiver module built in.

GPS (Global Positioning System) is a constellation of 24 well-spaced satellites that orbit the Earth and make it possible for devices enabled with GPS receivers to pinpoint their location.

You need to install third-party GPS navigation software to take advantage of the GPS feature.

Refer to chapter 6 on using the GPS feature.

Using the 3G Feature (Optional)

3G is the third generation of mobile phone standards and technology, after 2G. It is based on the International Telecommunication Union (ITU) family of standards under the International Mobile Telecommunications programme, “IMT-2000”. Services include wide-area wireless voice telephony and broadband wireless data, all in a mobile environment.

Unlike IEEE 802.11 networks, 3G networks are *wide area cellular telephone networks* which evolved to incorporate high-speed internet access and video telephony. IEEE 802.11 networks are short range, high-bandwidth networks primarily developed for data

To use the 3G feature on your computer, you need to subscribe to 3G service and install the 3G SIM card from your service provider, network operator, or other vendor.

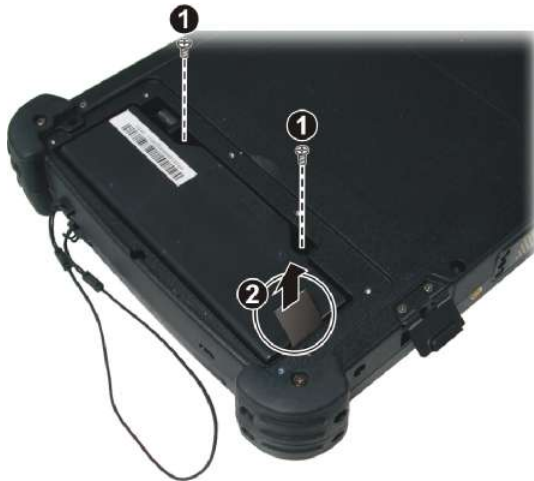
To install the SIM card, follow these steps:

1. Make sure that the tablet PC is not turned on or connected to AC power.
2. Place the tablet PC upside down.

3. Remove the four screws securing the battery compartment cover and remove it.



4. Remove the two screws securing the battery pack to the battery compartment (1) and, pull on the ribbon strip to lift the battery pack off the computer (2).



5. Locate the SIM card slot and push the SIM card into the slot. Make sure the beveled corner on the SIM card is facing towards the tablet PC and that the golden contact area on the card is facing downwards.



To remove the SIM card, just push in **(1)** the SIM card to pop-out **(2)** and remove the card.



6. Fit the battery pack into place and secure with two screws.
7. Replace the battery compartment cover and secure with four screws.

WARNING: Keep all SIM cards out of the reach of small children. For availability and information on using SIM card services, contact your SIM card vendor. This may be the service provider, network operator, or other vendor.

Managing Power

Your tablet PC operates either on external AC power or on internal battery power.

This chapter tells you how you can effectively manage power. To maintain optimal battery performance, it is important that you use the battery in the proper way.

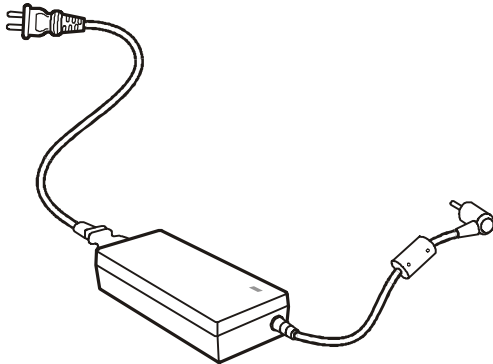
The topics in this chapter include:

- What is an AC adapter
- How to charge the battery pack
- When and how to initialize the battery pack
- How to check the battery level
- How to replace the battery pack
- What happens when the battery is low and what actions to take
- What is Power Management
- How to save power

AC Adapter

CAUTION:

- The AC adapter is designed for use with your tablet PC only. Connecting the AC adapter to another device can damage the adapter.
- The AC power cord supplied with your tablet PC is for use in the country where you purchased your tablet PC. If you plan to go overseas with the tablet PC, consult your dealer for the appropriate power cord.
- When you disconnect the AC adapter, disconnect from the electrical outlet first and then from the tablet PC. A reverse procedure may damage the AC adapter or tablet PC.
- When unplugging the connector, always hold the plug head. Never pull on the cord.



The AC adapter serves as a converter from AC (Alternating Current) to DC (Direct Current) power because your tablet PC runs on DC power, but an electrical outlet usually provides AC power. It also charges the battery pack when connected to AC power.

The adapter operates on any voltage in the range of 100~240 V AC.

Battery Pack

The battery pack is the internal power source for the tablet PC. It is rechargeable using the AC adapter.


The operating time of a fully charged battery pack depends on how you are using the tablet PC. When your applications often access peripherals, you will experience a shorter operating time.

NOTE: Care and maintenance information for the battery is provided in the “Battery Pack Guidelines” section in Chapter 7.

Charging the Battery Pack

NOTE:

- Charging will not start if the battery’s temperature is below 0 °C (32 °F). It is also recommended not to charge the battery when temperature is above 45 °C (113 °F).
- To prevent damage, the charging process may stop and the Battery Charge Indicator flashes red when the environmental temperature gets above 55 °C (131 °F).
- During charging, do not disconnect the AC adapter before the battery has been fully charged; otherwise you will get a prematurely charged battery.

To charge the battery pack, connect the AC adapter to the tablet PC and an electrical outlet. The Battery Charge Indicator () on the tablet PC glows amber to indicate that charging is in progress. You are advised to keep the tablet PC power off while the battery is being charged. When the battery is fully charged, the Battery Charge Indicator glows green.

It takes approximately 3 hours to fully charge the Li-Ion battery pack at a room temperature of 25 °C (may need a longer charging time at lower temperatures).

CAUTION: After the tablet PC has been fully recharged, do not immediately disconnect and reconnect the AC adapter to charge it again. Doing so may damage the battery.

NOTE: The battery level may automatically lessen due to the self-discharge process (0.21 % per day), even when the battery pack is fully charged (100 %). This happens no matter if the battery pack is installed in the tablet PC.

Initializing the Battery Pack

You need to initialize a new battery pack before using it for the first time or when the actual operating time of a battery pack is much less than expected.



Initializing is the process of fully charging, discharging, and then charging. It can take several hours.

1. Make sure that the tablet PC power is turned off. Connect the AC adapter to fully charge the battery pack.
2. After the battery pack is fully charged, turn on the tablet PC. Press the **Ent** key when the prompt appears on the screen during system startup. The prompt shows up on the screen for only a few seconds. You must press the **Ent** key quickly.
3. A small window appears, select **Launch System Setup** to invoke the program.
4. Disconnect the AC adapter and leave the tablet PC on until the battery is fully discharged. The tablet PC will shut down automatically.
5. Connect the AC adapter to fully charge the battery pack.

Checking the Battery Level

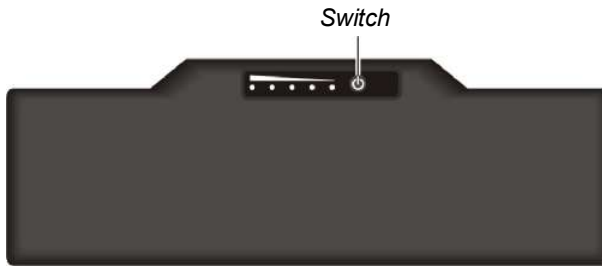
NOTE: Any battery level indication is an estimated result. The actual operating time can be different from the estimated time, depending on how you are using the tablet PC.

By Operating System

You can check the approximate battery level using the battery meter function of the operating system. To read the battery level in Windows, click the  icon on the taskbar. (Click the  icon if the tablet PC is using AC power.)

By Gas Gauge

On the exterior side of the battery pack is a gas gauge for displaying the estimated battery charge. When the battery pack is not installed in the tablet PC and you want to know the battery charge, you can press the switch with a pointed device to see the corresponding value of indicator segment that light green. The value of the corresponding green segment indicates the relative percentage of the battery charge. The battery pack is fully discharged when you see no segment glowing green.



Replacing the Battery Pack

CAUTION:

- There is danger of explosion if the battery is incorrectly replaced. Replace the battery only with the tablet PC manufacturer's optional battery packs. Discard used batteries according to the dealer's instructions.
- Do not attempt to disassemble the battery pack.

If you often rely on battery power for a long period of time while traveling, you may consider the purchase of an additional battery pack from your dealer and keep it with you in a fully charged state as a backup.

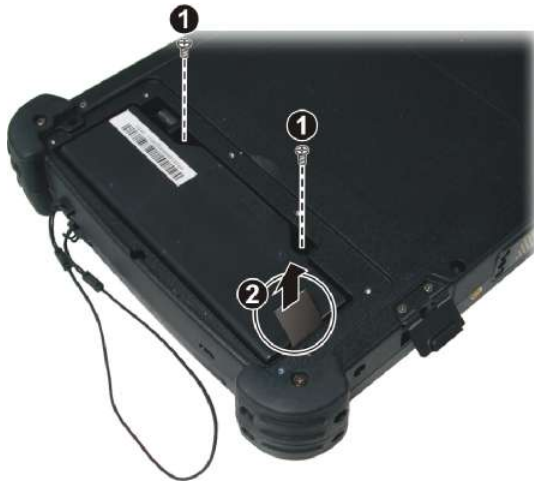
To replace the battery pack, follow these steps:

1. Make sure that the tablet PC is not turned on or connected to AC power.
2. Place the tablet PC upside down.

3. Remove the four screws securing the battery compartment cover and remove it.




4. Remove the two screws securing the battery pack to the battery compartment (1) and, pull on the ribbon strip to lift the battery pack off the tablet PC (2).



5. Fit another battery pack into place and secure with two screws.
6. Replace the battery compartment cover and secure with four screws.

Battery Low Signals and Actions

Battery Low occurs when the battery has approximately 10 % (Windows default setting) of its charge remaining. The tablet PC's Battery Charge Indicator () blinks red to alert you to take actions.

NOTE: You can set up your threshold and signals of Battery Low under Windows.

Immediately save your data upon Battery Low. The remaining operating time depends on how you are using the tablet PC. If you are using the audio subsystem, PC card, hard or USB flash disk, the battery might run out of charge very quickly.

Always respond to Battery Low by placing your tablet PC on the Standby or Hibernation mode, turning off the tablet PC, or connecting the AC adapter.

If you do not take any action, the tablet PC will automatically hibernate and turn off.

CAUTION:

- If you are using a PC card, do not access the card during battery low periods. This is because the access may take longer than the time it takes the battery to run out of charge, thus making your access to the card unsuccessful.
- If you fail to save your data when the battery completely runs out of charge, then you lose your data.

Power Management

Your tablet PC supports ACPI (Advanced Configuration and Power Interface) for power management. The power management feature allows you to reduce the power consumption for energy saving.

With an ACPI-compliant operating system such as Windows XP, power supply to different tablet PC components is controlled on an as-needed basis. This allows maximum power conservation and performance at the same time.

In general, Windows' power management works in this way:

| What... | When... |
|--|--|
| Power to the hard disk is turned off | When the hard disk has been idle for a set period. |
| Power to the display is turned off | When the display has been idle for a set period. |
| The tablet PC enters the Standby mode. The hard disk and display are turned off and the entire system consumes less power. | When the entire system has been idle for a set period. |
| | When you press the power button. * |
| The tablet PC enters the Hibernation mode. (See the next subsection for more information.) | When the entire system has been idle for a set period |
| | When you press the power button. * |

* Depends on your settings in Windows.

For detailed information on power management, see Windows' Help.

Hibernation

NOTE: Make sure that the hibernation feature is enabled in the **Hibernate** tab of the **Power Options** Properties from the Control Panel in Windows XP.

Hibernation is a very useful feature. People frequently open many applications when they use computers. It takes some time to get all these applications open and running, and normally they all have to be closed before the computer can be turned off.

When you use the hibernation feature, you do not have to close the applications. The tablet PC stores the state of your tablet PC to a file on the hard disk and then shuts down. The next time you turn on your tablet PC, you return to exactly where you left off.

Power-Saving Tips

Aside from enabling your tablet PC's power saving mode (see previous section), you can do your part to maximize the battery's operating time by following these suggestions.

- Do not disable Power Management.
- Decrease the LCD brightness to the lowest comfortable level.
- Shorten the length of time before Windows turn off the display.
- Many USB devices use power just by being connected. If you use a USB mouse, you can save power by disconnecting the mouse and using the optional touchscreen pen. If you use a USB flash drive, unplug it when you are not using it.
- If you work with an application that uses a PC card, exit the application when you finish using it.
- If you have a PC card installed, remove it when not in use. Some PC cards drain power even while they are inactive.
- Deactivate the Wireless LAN function if you are not using it (see Chapter 2).
- Deactivate the *Bluetooth* wireless feature if you are not using it (see Chapter 2).
- Turn off the tablet PC when you are not using it.

Expanding Your Tablet PC

You can expand the capabilities of your tablet PC by connecting other peripheral devices. When using a device, be sure to read the instructions accompanying the device together with the relevant section in this chapter.


This chapter gives guidelines on installing and using these devices:

- USB device
- Smart Card
- PC card
- ExpressCard
- Port Replicator

Connecting a USB Device

Your tablet PC has two USB ports for connecting USB devices, such as a digital camera, scanner, printer, modem, and mouse.

The USB ports support transfer rates up to 12 MB/s for USB 1.1 devices and 480 MB/s for USB 2.0 devices.

To connect a USB device, simply plug the device cable to one of the USB ports ().



Using Smart Cards

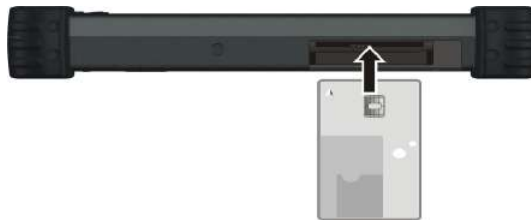
Your tablet PC has a smart card slot for additional security feature, providing tamper-proof storage of user and account identity. A smart card is a type of plastic card embedded with a computer chip that stores and transacts data between you (user) and the tablet PC.

You need to install third-party smart card software to take advantage of the smart card feature.

Inserting and Removing a Smart Card

To insert a smart card:

1. Locate the smart card slot on the rear of the tablet PC.
2. Slide the smart card, with its label and embedded computer chip facing up into the slot.



3. When a new card is seated, use the third-party smart card software to allow your tablet PC to read it.

To remove a smart card:

1. Make sure that the third-party smart card software is not accessing the smart card.
2. Pull the card out of the slot.

Using PC Cards (depending on your model)


Your tablet PC has a PC card slot which supports type II card and CardBus specifications.

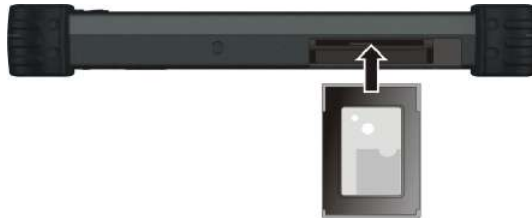
Inserting and Removing a PC Card

NOTE:

- Some PC cards require additional system resources. Before using such PC card, you may have to free other system resources for the PC card.
- Although some PC cards can be inserted and removed without turning off the computer, you cannot remove or install PC cards during Standby mode.

To insert a PC card:

1. Locate the PC card slot () on the rear of the tablet PC.
2. Slide the PC card, with its label facing up, into the slot until the eject button pops out.



3. When a new card is seated, the tablet PC will detect it and try to install the appropriate driver. Follow the on-screen instructions to complete the process.

To remove a PC card:

1. Double-click the **Safely Remove Hardware**  icon found on the Windows XP taskbar and the **Safely Remove Hardware** window appears on screen.

2. Select (highlight) the PC card from the list to disable the card.
3. Push the eject button and the card will slide out slightly.
4. Pull the card out of the slot.

Using ExpressCards (depending on your model)

NOTE: The ExpressCard interface is not compatible with the PC card interface. You need optional adapters for using PC cards if your tablet PC comes with the ExpressCard slot.

Your tablet PC may have an ExpressCard slot instead of a PC card slot.

ExpressCard supports the USB 2.0 serial data interface (supporting speeds of up to 480 Mbps), improving speed in data transfer while conserving power usage.

ExpressCard Type

The ExpressCard slot can accommodate a 54 mm (ExpressCard/54) or 34 mm (ExpressCard/34) wide ExpressCard. Typical ExpressCards support a very extensive range of applications including memory, wired and wireless communication cards, and security devices.

Shown next are the appearances of ExpressCards for your reference.

ExpressCard/54




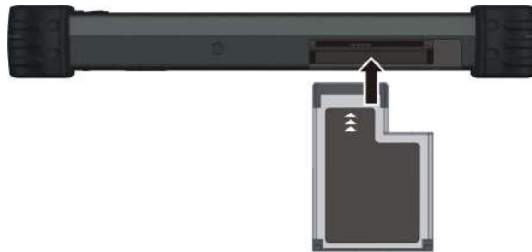
ExpressCard/34



Inserting and Removing an ExpressCard


To insert an ExpressCard:

1. Locate the ExpressCard slot () on the rear of the tablet PC.
2. Slide the ExpressCard, with its label facing up, all the way into the slot until the rear connectors click into place.



3. When a new card is seated, the tablet PC will detect it and try to install the appropriate driver. Follow the on-screen instructions to complete the process.

To remove an ExpressCard:

1. Double-click the **Safely Remove Hardware**  icon found on the Windows XP taskbar and the **Safely Remove Hardware** window appears on screen.
2. Select (highlight) the ExpressCard from the list to disable the card.
3. Push the ExpressCard slightly to release the card.
4. Pull the card out of the slot.

Using the Docking Station

A docking station is available as an option. This device eliminates the hassles of having you connect and disconnect the various cables when carrying your tablet PC around and allows a variety of peripherals to be connected including a headphone or microphone, etc. The docking station connects to the docking connector at the front of your tablet PC.

1. Locate the docking connector.



2. Connect your docking station to the docking connector.

For more detailed information, refer to the Operating Instructions of the docking station.

NOTE: Hot/warm docking and hot/warm undocking are possible with the docking connector but it is recommended that prior to undocking, press the **Menu** button and the EasyTap utility screen appears. Click the **Docking** button.



Using BIOS Setup and System Recovery Feature

BIOS Setup Utility is a program for configuring the BIOS (Basic Input/Output System) settings of the tablet PC.

BIOS is a layer of software, called firmware, that translates instructions from other layers of software into instructions that the tablet PC hardware can understand. The BIOS settings are needed by your tablet PC to identify the types of installed devices and establish special features.

The System Recovery feature allows your system's hard disk drive to return back to its factory default state with Windows operating system in its initial setting.

This chapter tells you how to use the BIOS Setup program as well as the System Recovery feature.

When and How to Use BIOS Setup

When to Use

You need to run BIOS Setup utility when:

- You see an error message on the screen requesting you to run BIOS Setup utility.
- You want to restore the factory default settings.
- You want to modify some specific settings according to the hardware.
- You want to modify some specific settings to optimize the system performance.

Starting BIOS Setup

NOTE:

- The BIOS Setup utility screens shown in this chapter are for your reference only. The actual items or settings on your tablet PC may differ.
- The BIOS Setup utility program may have been updated after the publication of this manual.
- The settings you select in your operating system might override similar settings in BIOS Setup utility.

To run BIOS Setup utility, press the **Ent** key when the prompt appears on the screen during system startup. The prompt shows up on the screen for only a few seconds. You must press the **Ent** key quickly. A small window appears, select **Launch System Setup**. The BIOS Setup Utility main screen appears as shown next.

| Information | Main | Advanced | Security | Boot | Exit |
|---------------------------|------------------------------------|-------------------|-------------------|-------------------|------|
| Model No.: | E100 | | | | |
| Serial No.: | Not Applicable | | | | |
| Processor Info : | Genuine Intel(R) processor 800 MHz | | | | |
| Installed System Memory : | 512 MB | | | | |
| IDE Channel 0 Master | [TOSHIBA MK4009GAL] 40001 MB | | | | |
| BIOS Revision : | R0.53F | | | | |
| EC Revision : | R0.53B | | | | |
| LAN MAC Address : | 00-40-D0-AE-FB-67 | | | | |
| IEEE 1394 GUID : | 00-43-44-81-00-40-D0-01 | | | | |
| Operating Time : | 75 Hours | | | | |
| F1 Help | ↑↓ Select Item | -/+ Change Values | F9 Setup Defaults | | |
| Esc Exit | ←→ Select Menu | Enter Select | ▶ Sub-Menu | F10 Save and Exit | |

The BIOS Setup utility screen can be divided into four areas:

- On the top is the menu bar containing the titles of the available menus. Each menu title brings a specific menu.
- The left column of the menu displays the menu items.
- The right column of the menu provides more detailed information when a menu item is highlighted.
- The bottom of the menu provides keyboard instructions for moving around and making selections.

Moving Around and Making Selections

You must go through two or three levels to complete the setting for an item. In most cases, there are two levels: menu title and submenu.

Use the arrow buttons to move around and make selections. Button information can be found at the bottom of the screen. A brief description of button usage is listed next:

| Button | Function |
|------------|---|
| ← , → | Selects a menu title. |
| ↑ , ↓ | Selects an item or option. |
| Ent | 1) Brings up the sub-menu when available. 2) Opens or closes the option window when an item is selected. |

NOTE: You can press the **F1**, **F9**, **F10**, **-/+**, and **Esc** keys by connecting a USB keyboard to your tablet PC. Make sure that the item “Legacy USB Support” under the Main menu is set at *Enabled* (default).

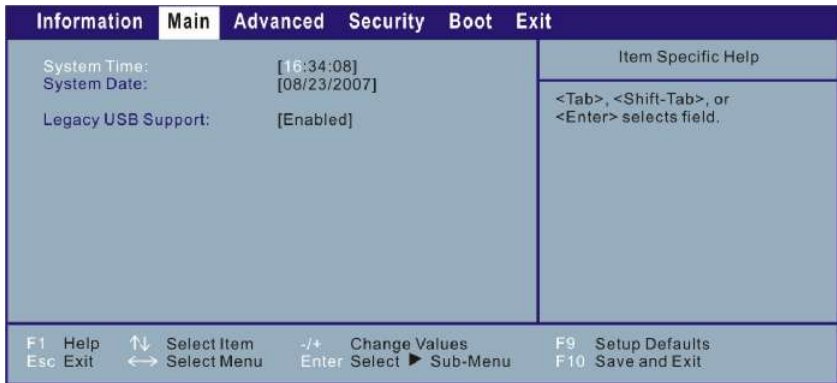
Information Menu

The Information menu contains the basic configuration information of the system.

| Information | Main | Advanced | Security | Boot | Exit |
|---------------------------|------------------------------------|-------------------------|-------------------|------|------|
| Model No.: | E100 | | | | |
| Serial No.: | Not Applicable | | | | |
| Processor Info : | Genuine Intel(R) processor 800 MHz | | | | |
| Installed System Memory : | 512 MB | | | | |
| IDE Channel 0 Master | [TOSHIBA MK4009GAL] 40001 MB | | | | |
| BIOS Revision : | R0.53F | | | | |
| EC Revision : | R0.53B | | | | |
| LAN MAC Address : | 00-40-D0-AE-FB-67 | | | | |
| IEEE 1394 GUID : | 00-43-44-81-00-40-D0-01 | | | | |
| Operating Time : | 75 Hours | | | | |
| F1 Help | ↑↓ Select Item | -/+ Change Values | F9 Setup Defaults | | |
| Esc Exit | ←→ Select Menu | Enter Select ► Sub-Menu | F10 Save and Exit | | |

Main Menu

The Main menu contains the system time and date, as well as the USB setting of the system.



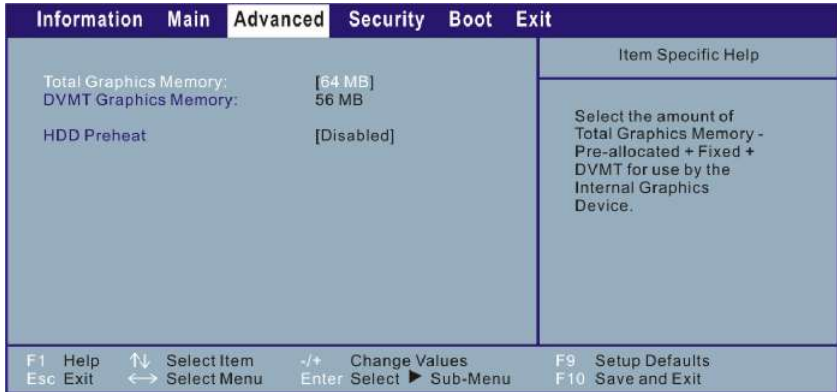
System Time sets the system time.

System Date sets the system date.

Legacy USB Support enables or disables the system's support for Legacy USB device in DOS mode.

Advanced Menu

The Advanced menu contains the advanced settings as shown next.



Total Graphics Memory allows you to select the amount of total graphics memory (pre-allocated + fixed + DVMT) for use by the internal graphics device.

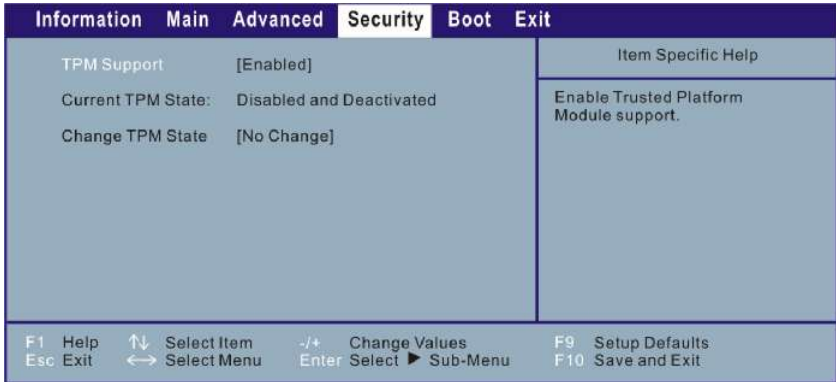
DVMT Graphics Memory shows the size of DVMT graphics memory.

HDD Preheat allows your system to automatically turn on the optional heater when temperature of the hard disk drive is lower than 5 °C.

NOTE: The optional heater can function when your tablet PC is connected to AC power or using battery power but the preheat feature can only function when your tablet PC is connected to AC power.

Security Menu

The Security menu contains the TPM (Trusted Platform Module) setting. The TPM is a component on your tablet PC's mainboard that is specifically designed to enhance platform security above-and-beyond the capabilities of today's software by providing a protected space for key operations and other security critical tasks. Using both hardware and software, TPM protects encryption and signature keys at their most vulnerable stages – operations when the keys are being used unencrypted in plain-text form. TPM is specifically designed to shield unencrypted keys and platform authentication information from software-based attacks.



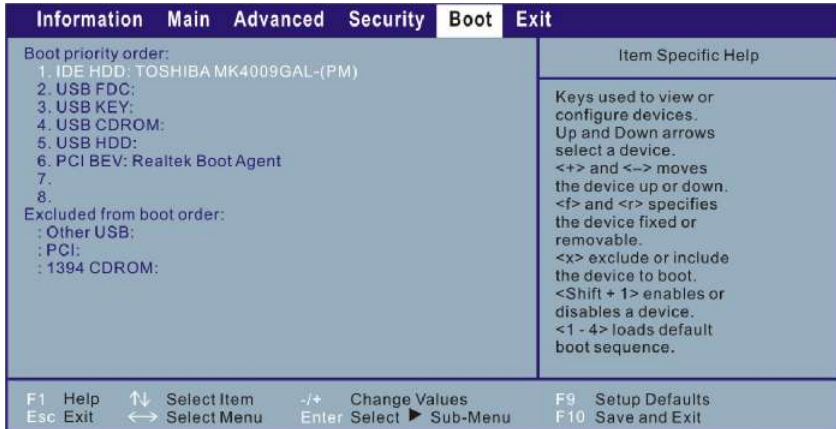
TPM Support enables or disables TPM support (see chapter 6 for details).

Current TPM State shows the current TPM state.

Change TPM State allows you to select between *No Change*, *Clear*, *Deactivate & Disable*, and *Enable & Activate*.

Boot Menu

The Boot menu sets the sequence of the devices to be searched for the operating system.



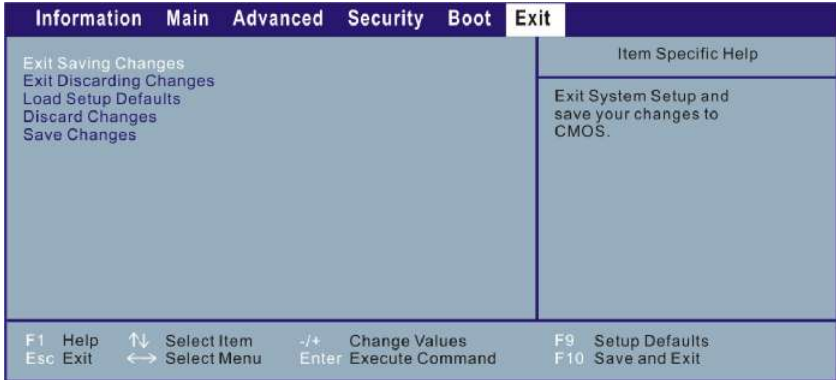
The bootable devices will be automatically detected during POST and shown here, allowing you to set the sequence that the BIOS uses to look for a boot device from which to load the operating system. A brief description of button usage is listed next:

| Button | Function |
|--------|------------------------------------|
| ↑, ↓ | Selects (highlight) a boot device. |
| 1 to 4 | Loads the default boot sequence. |

NOTE: You can press the **f**, **r**, **x**, **-/+**, and **Shift + 1** keys by connecting a USB keyboard to your tablet PC. Make sure that the item “Legacy USB Support” under the Main menu is set at *Enabled* (default).

Exit Menu

The Exit menu displays ways of exiting BIOS Setup utility. After finishing with your settings, you must save and exit so that the changes can take effect.



Exit Saving Changes saves the changes you have made and exits BIOS Setup utility.

Exit Discarding Changes exits BIOS Setup utility without saving the changes you have made.

Load Setup Defaults loads the factory default values for all the items.

Discard Changes restores the previous values for all the items.

Saves Changes saves the changes you have made.

When and How to Use the System Recovery Feature

When to Use

You need to run System Recovery when:

- Your tablet PC does not start correctly.
- Your Windows operating system does not start at all.
- You want to restore the factory default Windows settings.

Starting System Recovery

To run System Recovery:

1. During system startup when the following screen appears, press **Ctrl + Alt + F2** keys for four seconds or press **Ent** and select **HDI Recovery** when a small window appears on the screen.



2. The message **This will help you reinstall Windows to the whole HDD to factory default. All data on HDD will be lost** appears on the screen to ask if you want to access System Recovery. Type **1** to continue or type **0** to exit.
3. A warning message appears as follows:

You must accept the following terms before performing the recovery process:
 1. **The recovery software is solely the purpose of reinstalling or restoring software associated with the hard disk of this operating GETAC machine.**
 2. **Except the above, no other use is granted hereunder.*******
(1)Yes, I agree to the provisions of this agreement and wish to continue.
(0)No, I do not agree to the provisions of this agreement and do not wish to continue.
Type **1** to continue.
4. Type **1** again when the message **Are you sure you want to recover now? (1)Yes (0)No** appears onscreen.
5. Your system will start the recovery process and Windows operating system will be re-installed to its default setting.

Using the TPM, EasyTap, and G-Manager Utilities

Your tablet PC comes with an added security feature known as the TPM (Trusted Platform Module) – a component on your tablet PC’s mainboard that is specifically designed to enhance platform security above-and-beyond the capabilities of today’s software by providing a protected space for key operations and other security critical tasks.

The EasyTap utility allows you to activate or operate certain functions on your tablet PC.

The G-Manager utility is a unified user interface utility that allows you to manage and configure various system components such as: **System, Battery, Light Sensor, ECO** (economy mode), **Ignition, Monitoring, Antenna, and GPS Status**.

This chapter describes how to use these utilities.

Using TPM (Trusted Platform Module)

TPM is a hardware-based security feature that can be used to create and manage computer-generated digital certificates. When combined with security software, the TPM enhances existing network and computer security by enabling features such as file protection capabilities and protected e-mail.

NOTE:

- Make sure you select *Enable* on the **TPM Support** item under the **Security** menu of your BIOS Setup (see chapter 5 for details).
- Make sure you select *Enable & Activate* on the **Change TPM State** item under the **Security** menu of your BIOS Setup (see chapter 5 for details).
- You only need to activate these items once.

You can use the certificates to:

- Send and receive secure email from email clients like Microsoft Windows Mail/Outlook Express, Microsoft Outlook or Netscape Messenger
- Set up browser (e.g. Netscape Navigator or Internet Explorer) and web server (e.g. Microsoft Internet Information Server) for Client Authentication
- Sign Microsoft Word macros
- Encrypt files and folders
- Secure network connections

NOTE: For information on using the program and the different security features, click **Start → All Programs → Infineon Security Platform Solution → Help**.

Using the EasyTap Utility

The EasyTap utility allows you to activate or operate certain functions on your tablet PC.

To start up the EasyTap utility:






1. Press the **Menu** button on your tablet PC.









2. Upon pressing the **Menu** button, the following screen appears.



The following table shows the various functions on the EasyTap utility screen.

| Operation | EasyTap Description |
|---|--|
|  | <p>Switches the keypad lock ON and OFF. Press the button one second to turn ON (lock) and continuously for more than three seconds to turn OFF (unlock).</p> <p>This would prevent accidental pressing of the keypad buttons during transport.</p> |
|  | <p>Switches the Fn keylock ON and OFF ( icon appears on the system tray when ON).</p> <p>You can use the secondary functions of keypad buttons with blue color on top of each button.</p> |
|  | <p>An abbreviated Help file for using the EasyTap utility is available.</p> |
|  | <p>Turns on the Quick Button Setup utility (refer to</p> |

| Operation | EasyTap Description |
|---|--|
|  | <p>the next section for details).</p> <p>Closes and exits the EasyTap utility screen.</p> |
|  | <p>Switches the RF module OFF and ON (wireless LAN, Bluetooth, 3G).</p> <p>Upon restarting your system, wireless LAN radio would be on even if you turned it off before system shutdown.</p> |
|  | <p>Toggles the system power saving mode between OFF / Work / Quick and Power Saving.</p> <p>While entering into power saving mode, the system will turn down the panel backlight and sacrifices processing speed to gain more battery life. The ECO button works only when using battery power.</p> |
|  | <p>The status would display IN when you connect your tablet PC to a docking station.</p> <p>To turn off power to the docking station without disconnecting from your tablet PC, click the Docking button.</p> <p>Before removing your tablet PC from the docking station, make sure to click the Docking button to show OUT.</p> |
|  | <p>Toggles between NORMAL, MAX, and AUTO brightness for LCD backlight.</p> |
|  | <p>Rotates the LCD display orientation from default landscape to 90° portrait, 180° landscape, 270° portrait, and vice versa.</p> |

Operation

EasyTap Description



Toggles between **LCD**, **VGA** (external device e.g., monitor), and **BOTH** (LCD and external device).

Switches the display output when external devices are connected. If the external device is not connected, the choice would only be **LCD**. Upon restarting your system, the setting would be **LCD** only.



Serves as the default Microsoft® Internet Explorer quick launch button.

You can use the Quick Button Setup utility to assign a different function to this button (refer to the next section for details).



Serves as the default Microsoft® Outlook Express quick launch button.

You can use the Quick Button Setup utility to assign a different function to this button (refer to the next section for details).



Serves as the default LCD display calibration tool quick launch button.

You can use the Quick Button Setup utility to assign a different function to this button (refer to the next section for details).






Serves as the default Bluetooth® wireless setup quick launch button.


You can use the Quick Button Setup utility to assign a different function to this button (refer to the next section for details).



Serves as the default virtual keyboard quick launch button.

You can use the Quick Button Setup utility to assign a different function to this button (refer to the next section for details).

| Operation | EasyTap Description |
|---|---|
|  | <p data-bbox="501 188 1016 347">Increases or decreases the sound volume. This function adjusts the volume of sound output both from the speakers and headphones. It is synchronized with your Windows main volume controller.</p> <p data-bbox="501 363 976 459">Upon restarting your system, Windows will memorize the last setting before system shutdown.</p> |
|  | <p data-bbox="501 659 1016 699">Increases or decreases the LCD brightness level.</p> <p data-bbox="501 707 976 802">Upon restarting your system, Windows will memorize the last setting before system shutdown.</p> |
|  | <p data-bbox="501 1137 1016 1297">Switches the system sound output OFF (mute) and ON. This function mutes the sound output both from the speakers and headphones. It is synchronized with your Windows main volume controller.</p> <p data-bbox="501 1313 976 1409">Upon restarting your system, Windows will memorize the last setting before system shutdown.</p> |

| Operation | EasyTap Description |
|---|---|
|  | <p>System enters “black-out” mode by turning off the LCD display, LED indicators, touchscreen, and sound volume.</p> <p>Press the power button (⏻) to wake up the system from “black-out” mode.</p> |


Quick Button Setup Utility

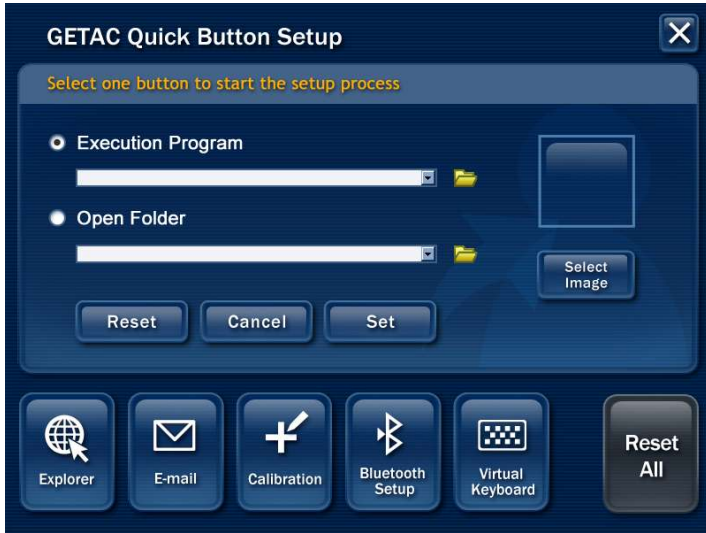
By default, the five quick launch buttons on the EasyTap utility have pre-assigned functions.



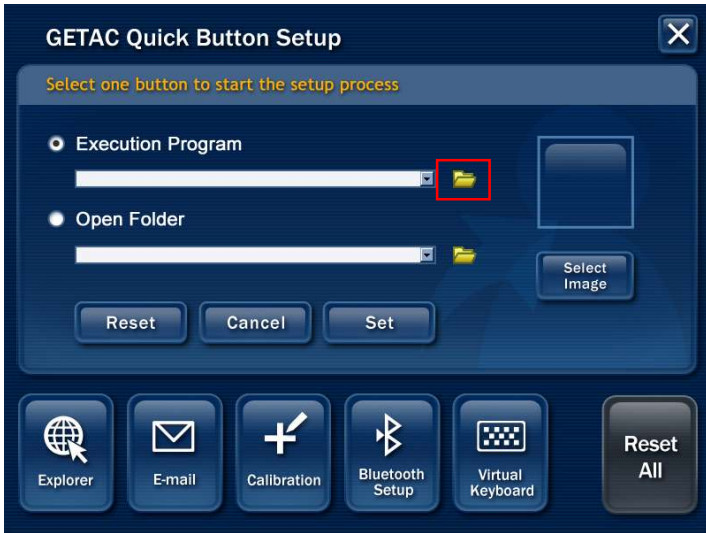
The Quick Button Setup utility allows you to re-define the above five quick launch buttons.

To re-define:

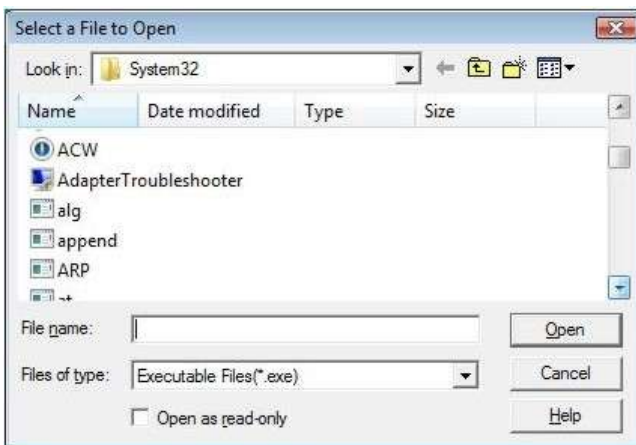
1. Click the Quick Button Setup utility button () and the **Quick Button Setup** window appears as shown next.



2. To re-assign a program to a button, click to select a particular button to change (e.g., Explorer), then click the folder icon.



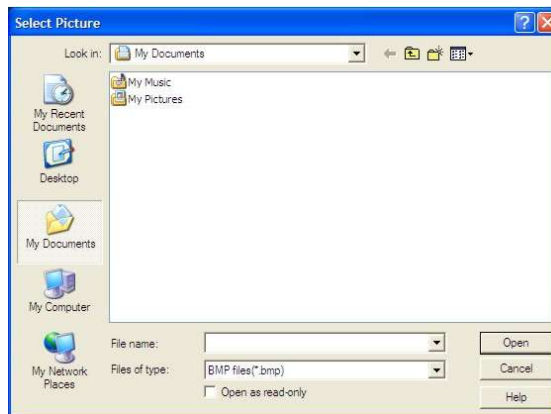
3. The **Select a File to Open** dialog box appears as shown next. Select the desired program, then click **Open** to complete the process.



4. You can change the image appearing on the button by clicking the **Select Image** icon.



5. The **Select Picture** dialog box appears as shown next.



6. After selecting the image file, the appropriate icon will then appear in the button. To launch the program, click the particular quick launch button. Click **Set** to complete the changes.


Using the G-Manager Utility

G-Manager is a unified user interface utility that allows you to manage and configure the following:

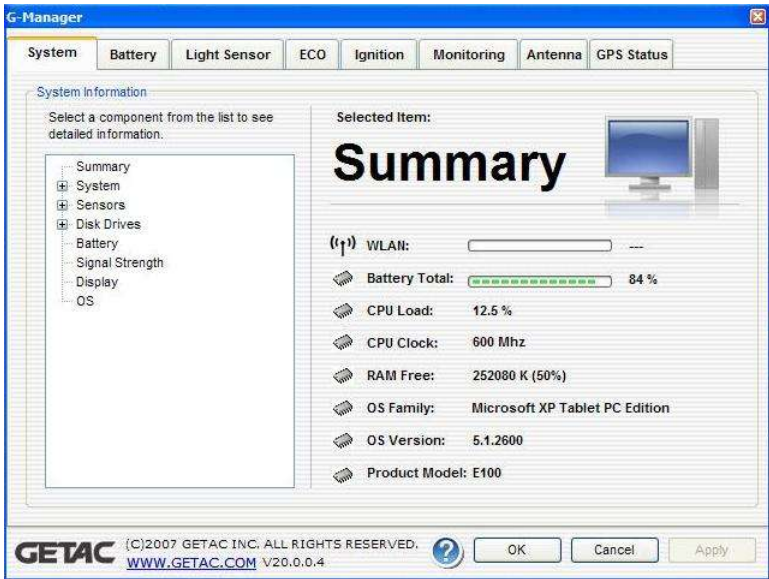
- System
- Battery
- Light Sensor
- ECO (economy mode)
- Ignition
- Monitoring
- Antenna
- GPS Status

Starting G-Manager

You can start up G-Manager by any of the following methods:

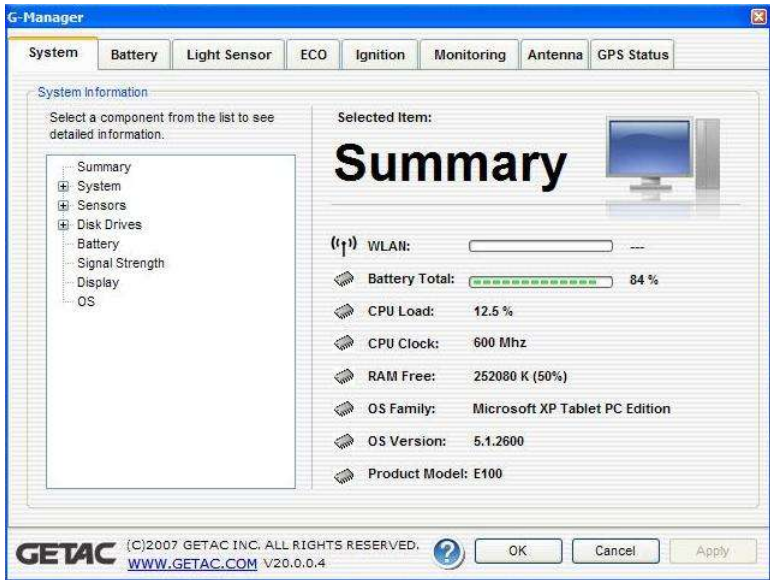
- Click **Start** → **All Programs** → **GETAC Utility**, or
- Right-click on the GETAC Utility icon () located on the system tray and click **G-Manager**.

The following screen appears.



System Tab

The **System** tab provides an overview of the system status.



The component to be viewed is selected from the tree view list on the left side of the screen. It contains eight major components namely:

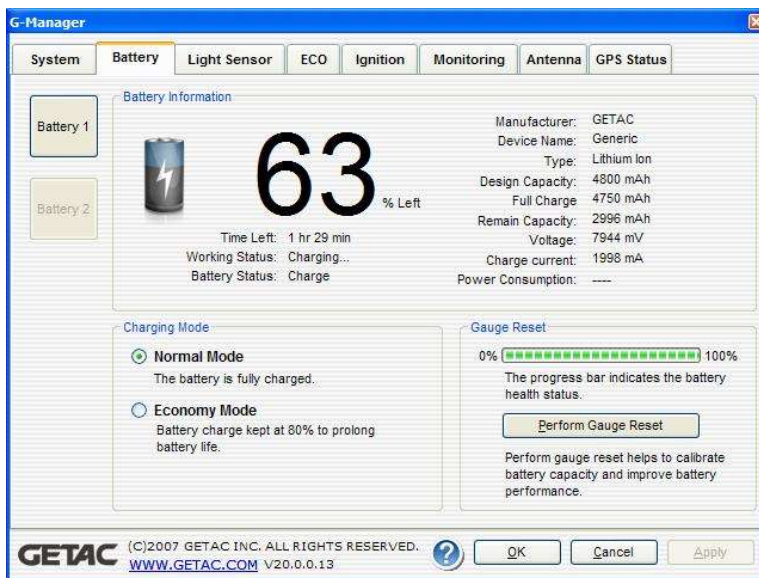
- Summary
- System
- Sensors
- Disk Drives
- Battery
- Signal Strength
- Display

- OS (operating system)

The status of the selected component is displayed on the right side of the screen.

Battery Tab

The **Battery** tab allows you to minimize deterioration of the battery thereby ensuring a longer battery life. At most two batteries may be supported.



Press **Battery 1** or **Battery 2** to view the details and configuration settings of each battery.

Battery Information

The upper portion of the Battery tab contains a live update of information about the selected battery.

NOTE:

- When the percentage **% Left** is less than 10 % then the value will be displayed in **red**.
- When an abnormal battery condition is detected **Battery Status** value will be displayed in **red**.

Charging Mode

The lower left portion of the Battery tab allows you to select the charging mode.

- **Normal Mode** – the battery will be fully charged. When remaining charge reaches below 95 %, then charging will start until it is fully charged.
- **Economy Mode** – to help prolong battery life the battery will be charged up to 80 % of its total capacity only. Highly recommended when you are using AC power most of the time.

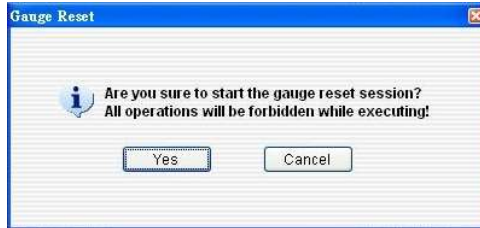
Gauge Reset

The lower right portion of the Battery tab allows you to discharge and recharge the battery in order to activate certain physical attributes periodically.

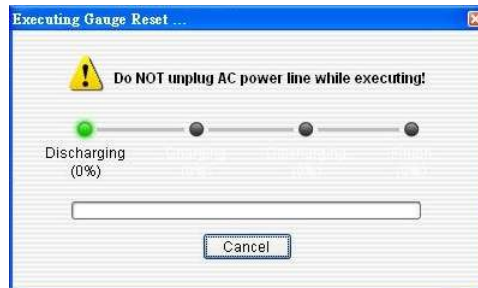
The percentage bar shows the need to perform a gauge reset. The higher the percentage, the more urgent need to perform gauge reset.

To perform a gauge reset:

1. Click **Start** to perform a gauge reset and the following screen appears.



2. Click **Yes** to start the gauge reset session and the following screen appears.



The percentage of completion will be shown on the progress bar.

Depending on the number of battery, the screen will show the corresponding number of batteries to perform gauge reset. The value of **Working Status** will show in **red** alternately.

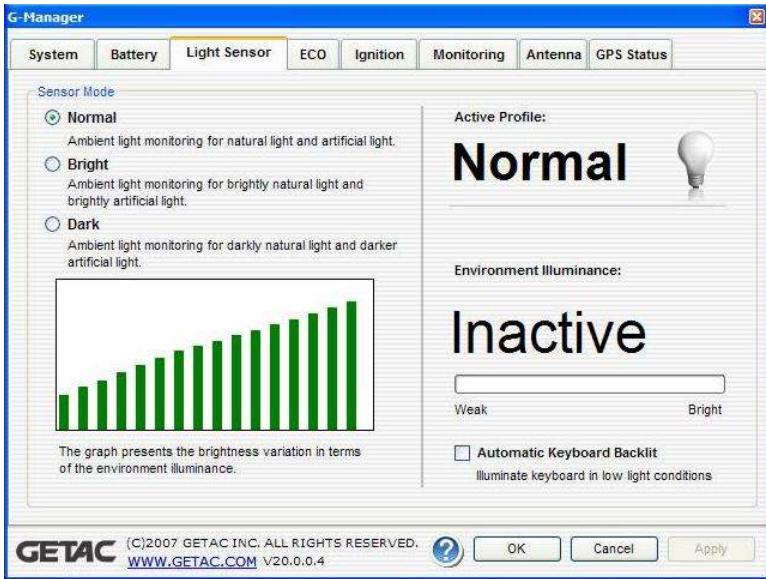
You can click **Cancel** anytime to stop gauge reset.

NOTE:

- When a gauge reset is in progress, do not execute other operation except to click **Cancel** to stop gauge reset.
- The message **!!!WARNING – LEAKING BATTERIES!!!** will appear when system detects battery performance deterioration due to its aging effect.

Light Sensor

The **Light Sensor** tab allows you to adjust the LCD brightness based on your surrounding's lighting condition.



Sensor Mode

The left portion of the Light Sensor tab allows you to select the sensor mode.

- **Normal** – light sensor sensitivity is set at normal environment lighting condition.
- **Bright** – light sensor sensitivity is set at bright environment lighting condition (e.g. outdoors).
- **Dark** – light sensor sensitivity is set at dark environment lighting condition (e.g. indoors, storage warehouse, etc.).

The lower left portion of the Light Sensor tab shows the selected sensor mode's graph.

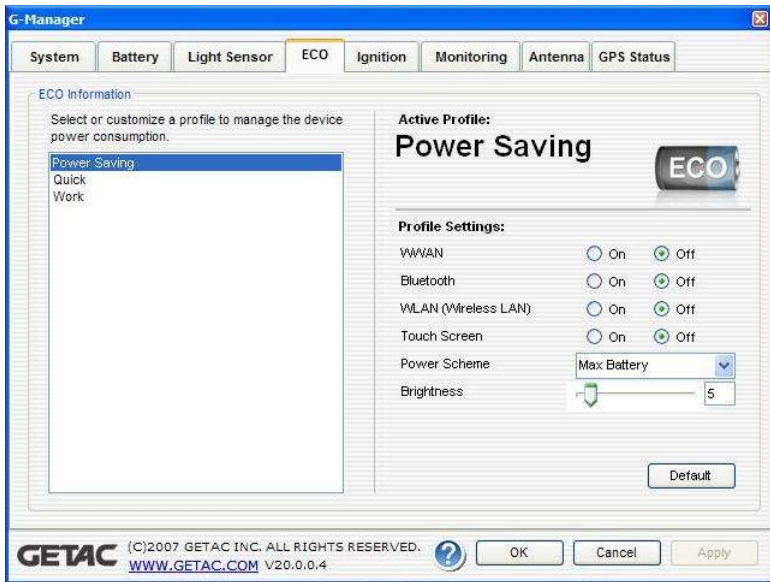
The upper right portion of the Light Sensor tab shows the active profile based on your selection on sensor mode.

The middle right portion of the Light Sensor tab shows the environment luminance (degree of Lux from weak to bright) as detected by your tablet PC's light sensor.

The lower right portion of the Light Sensor tab allows your system to illuminate the keypad in poor lighting environment by selecting the checkbox **Automatic Keyboard Backlit**.

ECO Tab

The **ECO** tab allows you to manage the system's power consumption.



NOTE: The items appearing on the ECO tab may differ depending on your model.

ECO Information

Depending on the system, the left portion of the ECO tab shows the available profile to manage the system's power consumption.

Active Profile

The right upper portion of the ECO tab shows the name of the current profile selected.

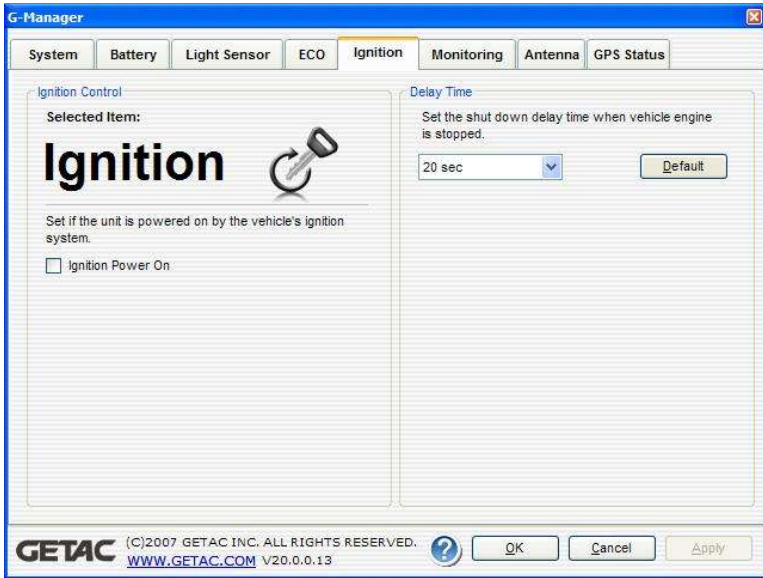
Profile Settings

The lower right portion of the ECO tab contains the following:

- Turn on/off the following for power saving: WWAN, Bluetooth, WLAN, touch screen, and optical disk drive.
- Power Scheme – select Home/Office Desk, Portable/Laptop, Presentation, Always On, Minimal Power Management, or Max Battery. The setting here will correspond to your settings in Windows. (See Windows Help for the description to each of the power scheme.)
- Brightness – adjust the brightness setting from 0 ~ 63.
- Default – revert back to original profile setting.

Ignition Tab

The **Ignition** tab allows you to set if the system is deriving power from your vehicle.



Ignition Control

The left portion of the Ignition tab allows your system to derive power from the vehicle as well as boot up your tablet PC by selecting the checkbox **Ignition Power On**. Your tablet PC will also shutdown when you turn off ignition to your vehicle. The amount of time between turning off your vehicle and tablet PC shutdown would depend on your setting on the next section Delay Time. This feature is only available when your tablet PC is docked to the GETAC docking station..


Delay Time

The right portion of the Ignition tab allows you to set the delay time (20 seconds, 30 seconds, 45 seconds, 1 minute, or 2 minute) to shut down the system when you turn off vehicle ignition. This will help prevent the tablet PC from using up the vehicle's battery power thereby causing poor vehicle startup.

Monitoring Tab

The **Monitoring** tab allows you to select the items on your system to monitor.



Press **OK** and right-click on the G-manager icon () located on the system tray and click **Start Monitor**. The changes made to the monitoring options are immediately implemented on the monitoring window.

To exit the monitor function, right-click on the G-manager icon () located on the system tray and click **Stop Monitor**.

Items to Monitor

The left portion of the Monitoring tab allows you to select which item to monitor by selecting on the checkbox before each item. When enabled the status of the selected Item is displayed and a live update is shown on the screen. Items with higher priority are shown on top of items with lower priority (see the next table).

| Priority | Monitoring Items |
|----------|--------------------------|
| 1 | CPU clock |
| 2 | CPU load |
| 3 | CPU voltage |
| 4 | CPU temperature |
| 5 | RAM free |
| 6 | Virtual RAM free |
| 7 | Battery left time |
| 8 | Battery left percentage |
| 9 | WLAN |
| 10 | GPU temperature |
| 11 | GMCH 1 temperature |
| 12 | GMCH 2 temperature |
| 13 | HDD temperature |
| 14 | HDD free space |
| 15 | Fan speed |
| 16 | Environment luminance |

Different model have different supported monitoring items; non-supported items cannot be selected (gray out item).

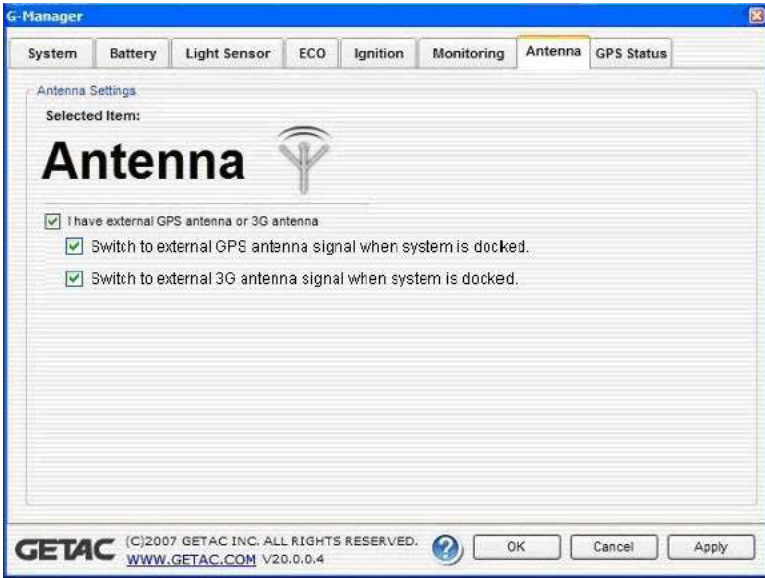
Monitoring Options

The right portion of the Monitoring tab allows you to set how the monitored items are displayed. The changes made to the monitoring options are immediately implemented on the monitoring window.

- Always On Top – allows the monitoring window to remain on top of your display.
- Background Color – select this option to display the color window for selecting the background color. If the checkbox is not selected, the background of the monitoring window is transparent.
- Monitoring Interval – allows you to set the frequency of updates on the monitoring window (1/3/5/10/30 seconds, or 1/5/30 minutes, or 1 hour).
- Transparency – allows you to set the level of transparency of the monitoring window (10 ~ 90 %).

Antenna Tab

The **Antenna** tab allows your system to connect to an external GPS or 3G antenna.

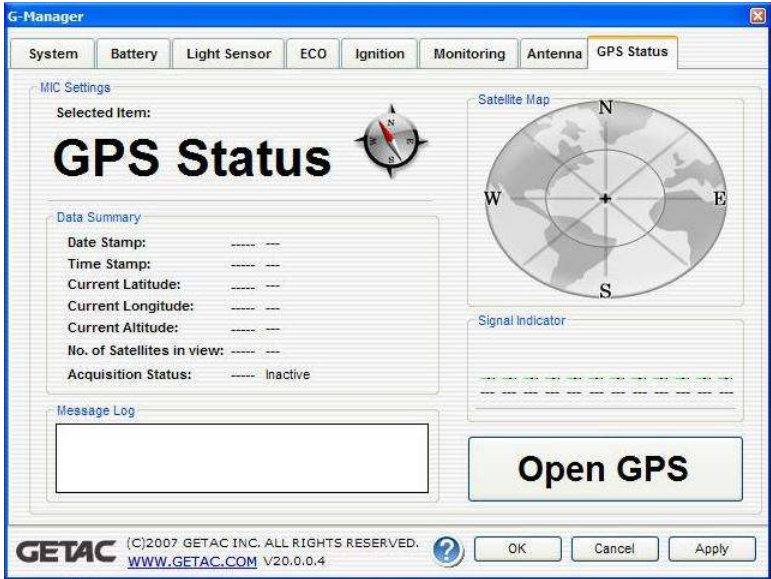


Select the checkbox **I have external GPS antenna or 3G antenna** to allow your system to connect to an external GPS/3G antenna. When this option is selected, you can choose the following:

- Switch to external GPS antenna signal when system is docked.
- Switch to external 3G antenna signal when system is docked.

GPS Status Tab

The **GPS Status** tab shows the GPS signal availability status of the system's GPS module, allowing you to check if the GPS feature is working properly. You may also need to install a third-party map of your particular location (purchased separately).



Selected Item and Data Summary

The upper left portion of the GPS Status tab shows the various data (Date Stamp, Time Stamp, Current Latitude, Current Longitude, Current Altitude, No. of Satellites in View, and Acquisition Status) collected from satellites and reflect any changes to the data.

Unlike the other items, **Acquisition Status** only shows whether GPS signal acquisition is successful or not.

Message Log

The lower left portion of the GPS Status tab shows a summary of raw data string received from satellites which can only be viewed but not editable. The Message Log window is auto-scrollable and will be cleared as soon as GPS signal is disconnected.

Satellite Map

The upper right portion of the GPS Status tab shows the satellites discovered and are placed on the satellite map according to their parsed latitude and longitude. Satellites in use are displayed in **yellow** color with their PRN number while satellites in view but not in use are displayed in **blue** color.

Signal Indicator

The lower right portion of the GPS Status tab shows the 12 satellites' signal indicator. The length of the green bar underneath each satellite changes dynamically, the stronger the signal the longer the bar shown. Beneath each signal bar is the PRN number of each discovered satellite ("00" is shown when GPS module is not functioning or satellite was not discovered).

Open/Close GPS

This button allows you to test the GPS module. Upon clicking on **Open GPS**, the following three conditions may be shown:

- GPS module has successfully connected –
The button changes from "Opening . . ." to "Close GPS." The item **Acquisition Status** under the Data Summary portion of the GPS Status tab will change from "Inactive" to "Acquiring . . ." and begin the positioning process. It will then change to "Acquired" when GPS module has successfully been positioned.

- GPS COM port is not available –
When other GPS program is running, a warning window pops-up and displays the message “GPS COM port not available! Please close all GPS program and try again.” to inform you to close the other GPS program to free up the COM port. After closing the other GPS program, click Open GPS button again to try.
- GPS COM port is somehow not functioning –
A warning window pops-up and displays the message “Time out opening GPS COM port!” when GPS COM port is not responding after 5 seconds.

Upon clicking on **Close GPS**, the GPS COM port will be closed and the button will change to show **Open GPS**. All information under the Satellite Map, Signal Indicator, Message Log, and Data Summary portion of the GPS Status tab is cleared except for the item Acquisition Status which will show “Inactive.”

GPS connection will be automatically closed whenever G-Manager is closed.

Caring for the Tablet PC

Taking good care of your tablet PC will ensure a trouble-free operation and reduce the risk of damage to your tablet PC.

This chapter gives you guidelines covering these areas of maintenance:


- How to protect the tablet PC
- What to note when using and storing the tablet PC
- How to clean the tablet PC
- What to note when using the battery pack
- What to note when traveling with the tablet PC

Protecting the Tablet PC

To safeguard the integrity of your tablet PC data as well as the tablet PC itself, you can protect the tablet PC in several ways as described in this section.

Using the Cable Lock

You can use a Kensington-type cable lock to protect your tablet PC against theft. The cable lock is available in most computer stores.

To use the lock, loop the lock cable around a stationary object such as a table. Insert the lock to the Kensington lock hole () and turn the key to secure the lock. Store the key in a safe place.



Taking Care of the Tablet PC

Location Guidelines

- For optimal performance, use the tablet PC where the recommended temperature is between 10 °C (50 °F) and 35 °C (95 °F) – actual operating temperature depending on product specifications.
- Avoid placing the tablet PC in a location subject to high humidity, extreme temperatures, mechanical vibration, direct sunlight, or heavy dust.
- Do not cover or block any ventilation openings on the tablet PC. For example, do not place the tablet PC on a bed, sofa, rug, or other similar surface. Otherwise, overheating may occur that results in damage to the tablet PC.
- Keep the tablet PC at least 13 cm (5 inches) away from electrical appliances that can generate a strong magnetic field such as a TV, refrigerator, motor, or a large audio speaker.
- Avoid moving the tablet PC abruptly from a cold to a warm place. A temperature difference of more than 10 °C (18 °F) may cause condensation inside the unit, which may damage the storage media.
- Do not place the tablet PC on an unsteady surface.

General Guidelines

- Do not place heavy objects on top of the tablet PC as this may damage the display.
- The screen surface is easily scratched. Do not use paper towels to clean the display but use the included soft cloth. Avoid touching it with your fingers, pen, or pencil.
- To maximize the life of the backlight in the display, allow the backlight to automatically turn off as a result of power management. Avoid

using a screen saver or other software that prevents the power management from working.

Cleaning Guidelines

- Never clean the tablet PC with its power on.
- Use a soft cloth moistened with water or a non-alkaline detergent to wipe the exterior of the tablet PC.
- Gently wipe the display with a soft, lint-free cloth. Do not use alcohol or detergent on the display.

Battery Pack Guidelines

- Recharge the battery pack when it is nearly discharged. When recharging, make sure that the battery pack is fully charged. Doing so may avoid harm to the battery pack.
- The battery pack is a consumable product and the following conditions will shorten its life:
 - when frequently charging the battery pack (it is recommended that you set the **Charging Mode** on the G-Manager utility's **Battery** tab to **Economy Mode** – see chapter 6 for details).
 - when using, charging, or storing the battery in high temperature condition
- To avoid hastening the deterioration of the battery pack thereby prolonging its useful life, minimize the number of times you charge it so as not to frequently increase its internal temperature.
- Charge the battery pack between 5 °C ~ 45 °C (41 °F ~ 113 °F) temperature range.

A higher environment temperature will cause the battery pack's temperature to rise. Avoid charging the battery pack inside a closed vehicle and in hot weather condition.

Also, charging will not start if the battery pack is not within the allowed temperature range.

- It is recommended that you do not charge the battery pack more than once a day.
- It is recommended that you charge the battery pack with the tablet PC's power off.
- To maintain the battery pack's operating efficiency, store it in a cool dark place removed from the tablet PC and with 30 % ~ 40 % charge remaining.
- Important guidelines when using the battery pack.

When installing or removing the battery pack take note of the following:

- avoid installing or removing the battery pack when the tablet PC is in Standby mode. Abruptly removing the battery pack may cause loss of data or the tablet PC may become unstable.
- avoid touching the battery pack terminals or damage may occur, thereby causing improper operation to it or the tablet PC.

The tablet PC's input voltage and surrounding temperature will directly affect the battery pack's charge and discharge time:

- charging time will be prolonged when the tablet PC is turned on.
To shorten the charging time, it is recommended that you place the tablet PC in standby or hibernation mode.
- a low temperature will prolong the charging time as well as hasten the discharge time.

Touchscreen Guidelines

- Use the finger or the included touchscreen pen on the display. Using a sharp or metallic object other than your finger or touchscreen pen may cause scratches and damage the display, thereby causing errors.
- Avoid using excessive force that may cause damage to the display.
- Use a soft cloth to remove dirt on the display. The touchscreen surface has a special protective coating that prevents dirt from sticking to it. Not using a soft cloth may cause damage to the special protective

coating on the touchscreen surface.

To remove hard to remove dirt, blow some steam on the particular area and gently wipe away using a soft cloth.

- Turn off the tablet PC power when cleaning the display. Cleaning the display with the power on may cause improper operation.
- Use the touchscreen within the intended area only. The display area and touchscreen operating area is the same.
- Do not use excessive force on the display. Avoid placing objects on top of the display as this may cause the glass to break thereby damaging the display.
- Using the touchscreen during low temperature (less than 5 °C) may cause a slower response time, this is normal. A normal response time may be restored upon returning to room temperature.
- When there is noticeable discrepancy in the operation of the touchscreen function (wrong location on intended operation or improper display resolution), refer to the Windows operating system for instructions on recalibrating the touchscreen display.

When Traveling

- Before traveling with your tablet PC, make a backup of your hard disk data into flash disks or other storage devices. As an added precaution, bring along an extra copy of your important data.
- Make sure that the battery pack is fully charged.
- Make sure that the tablet PC is turned off.
- Disconnect the AC adapter from the tablet PC and take it with you. Use the AC adapter as the power source and as a battery-charger.
- Hand-carry the tablet PC. Do not check it in as luggage.
- If you need to leave the tablet PC in the car, put it in the trunk of the car to avoid exposing the tablet PC to excessive heat.
- When going through airport security, it is recommended that you send the tablet PC and flash disks through the X-ray machine (the device you set your bags on). Avoid the magnetic detector (the device you walk through) or the magnetic wand (the handheld device used by security personnel).
- If you plan to travel abroad with your tablet PC, consult your dealer for the appropriate AC power cord for use in your country of destination.

Troubleshooting

Tablet PC problems can be caused by hardware, software, or both. When you encounter any problem, it might be a typical problem that can easily be solved.

This chapter tells you what actions to take when solving common computer problems. It is divided into three sections:

- Preliminary checklist
- Solving common problems
- Resetting the tablet PC

Preliminary Checklist

Here are helpful hints to follow before you take further actions when you encounter any problem:

- Try to isolate which part of the tablet PC is causing the problem.
- Make sure that you turn on all peripheral devices before turning on the tablet PC.
- If an external device has a problem, make sure that the cable connections are correct and secure.
- Make sure that the configuration information is properly set in the BIOS Setup program.
- Make sure that all the device drivers are correctly installed.
- Make notes of your observations. Are there any messages on the screen? Do any indicators light? Detailed descriptions are useful to the service personnel when you need to consult one for assistance.

If any problem persists after you follow the instructions in this chapter, contact an authorized dealer for help.

Solving Common Problems

For easy reference, the problems are divided into these categories.

| Problem Type | Go to |
|--|--------------|
| Battery Problems | P. 8-4 |
| Bluetooth Wireless Transmission Problems | P. 8-4 |
| Display Problems | P. 8-5 |
| ExpressCard Problems | P. 8-5 |
| Hardware Device Problems | P. 8-5 |
| Hard Disk Drive Problems | P. 8-6 |
| LAN Problems | P. 8-7 |
| Wireless LAN Problems | P. 8-7 |
| PC Card Problems | P. 8-9 |
| Power Management Problems | P. 8-9 |
| Software Problems | P. 8-10 |
| Sound Problems | P. 8-10 |
| Startup Problems | P. 8-11 |
| Other Problems | P. 8-12 |

Battery Problems

The battery does not charge (Battery Charge indicator does not light amber).

- Make sure that the AC adapter is properly connected.
- Make sure that the battery is not too hot or cold. Allow time for the battery pack to return to room temperature.
- Make sure that the battery pack is installed correctly.
- Make sure that the battery terminals are clean.

The operating time of a fully charged battery becomes shorter.

- If you often partially recharge and discharge, the battery might not be charged to its full potential. Initialize the battery to solve the problem. (See “Initializing the Battery Pack” in Chapter 3 for instructions.)

The battery operating time indicated by the battery meter does not match the actual operating time.

- The actual operating time can be different from the estimated time, depending on how you are using the tablet PC. If the actual operating time is much less than the estimated time, initialize the battery. (See “Initializing the Battery Pack” in Chapter 3 for instructions.)


Bluetooth Wireless Transmission Problems

I cannot connect to another device with *Bluetooth* wireless technology.

- Make sure that both devices have activated *Bluetooth* feature.
- Make sure that the distance between the two devices are not over 10 meters or that there are no walls or other obstructions between the devices.
- Make sure that the other device is not in “Hidden” mode.
- Make sure that both devices are compatible.

Display Problems

Nothing appears on the screen.

- During operation, the screen may automatically turn off as a result of power management. Press any key to see if the screen comes back.
- The brightness level might be too low. Increase brightness by pressing the  button.

The characters on the screen are dim.

- Adjust the brightness and/or contrast.

Bad dots appear on the display at all times.

- A small number of missing, discolored, or bright dots on the screen are an intrinsic characteristic of TFT LCD technology. It is not regarded as a LCD defect.

ExpressCard Problems

The ExpressCard does not work.

- Make sure that the ExpressCard is correctly seated.
- If the card requires an IRQ (Interrupt ReQuest), make sure that there is one available.

The ExpressCard stops communicating properly.

- The application may have been reset when the tablet PC is turned off or in Standby mode. Exit and restart the application.

Hardware Device Problems

The tablet PC does not recognize a newly installed device.

- The device may not be correctly configured in the BIOS Setup program. Run the BIOS Setup program to identify the new type.

- Make sure if any device driver needs to be installed. (Refer to the documentation that came with the device.)
- Make sure if the device needs any jumper or switch settings. (Refer to the documentation that came with the device.)
- Check the cables or power cords for correct connections.
- For an external device that has its own power switch, make sure that the power is turned on.

Hard Disk Drive Problems

The hard disk drive error message appears on the screen.

- The hard disk drive has defects. Ask your dealer for help.

The hard disk drive operations seem slow.

- The data files stored on the hard disk drive may be fragmented. Use a tool such as Window's **Disk Defragmenter** to defragment the files.

The hard disk drive / heater indicator () glows without blinking.



- The data files stored on the hard disk drive may be fragmented. Use a tool such as Window's **Disk Defragmenter** to defragment the files.

The hard disk drive / heater indicator glows red.

- When the tablet PC is connected to AC power and hard disk drive temperature is below 5 °C, the optional heater would turn on (if the item **HDD Preheat** under the Advanced menu of your BIOS Setup is set at *Enabled*). Wait awhile.

LAN Problems

I cannot access the network.

- Make sure that the LAN cable is properly connected to the RJ-45 connector ( ) and the network hub.

- Make sure that the network configuration is appropriate.
- Make sure that the user name or password is correct.

Wireless LAN Problems

I cannot use the wireless LAN feature.

- Make sure that the wireless LAN feature is turned on.

Transmission quality is poor.

- Your tablet PC may be in an out-of-range situation. Move your tablet PC closer to the Access Point or another wireless LAN device it is associated with.
- Check if there is high interference around the environment and solve the problem as described next.

Radio interference exists.

- Move your tablet PC away from the device causing the radio interference such as microwave oven and large metal objects.
- Plug your tablet PC into an outlet on a different branch circuit from that used by the affecting device.
- Consult your dealer or an experienced radio technician for help.

I cannot connect to another wireless LAN device.

- Make sure that the wireless LAN feature is turned on.
- Make sure that the SSID setting is the same for every wireless LAN device in the network.
- Your tablet PC is not recognizing changes. Restart the tablet PC.
- Make sure that the IP address or subnet mask setting is correct.

I cannot communicate with the computer in the network when Infrastructure mode is configured.

- Make sure that the Access Point your tablet PC is associated with is powered on and all the LEDs are working properly.
- If the operating radio channel is in poor quality, change the Access Point and all the wireless station(s) within the BSSID to another radio channel.
- Your tablet PC may be in an out-of-range situation. Move your tablet PC closer to the Access Point it is associated with.
- Make sure that your tablet PC is configured with the same security option (encryption) to the Access Point.
- Use the Web Manager/Telnet of the Access Point to check whether it is connected to the network.
- Reconfigure and reset the Access Point.

I cannot access the network.

- Make sure that the network configuration is appropriate.
- Make sure that the user name or password is correct.
- You have moved out of range of the network.
- Turn off power management.

PC Card Problems

The PC card does not work.

- Make sure that the PC card is correctly seated.
- If the card requires an IRQ (Interrupt ReQuest), make sure that there is one available.

The PC card stops communicating properly.

- The application may have been reset when the tablet PC is turned off or in Standby mode. Exit and restart the application.

Power Management Problems

The tablet PC does not enter Standby or Hibernation mode automatically.

- If you have a connection to another computer, the tablet PC does not enter Standby or Hibernation mode if the connection is actively in use.
- Make sure that the Standby or Hibernation time-out is enabled.

The tablet PC does not enter Standby or Hibernation mode immediately.

- If the tablet PC is performing an operation, it normally waits for the operation to finish.

The tablet PC does not resume from Standby or Hibernation mode.

- The tablet PC automatically enters Standby or Hibernation mode when the battery pack is empty. Do any one of the following:
 - Connect the AC adapter to the tablet PC.
 - Replace the empty battery pack with a fully charged one.


Software Problems

An application program does not work correctly.

- Make sure that the software is correctly installed.
- If an error message appears on the screen, consult the software program's documentation for further information.
- If you are sure the operation has stop, reset the tablet PC. (See "Resetting the Tablet PC" later in this chapter.)

Sound Problems

No sound is produced.

- Make sure that the volume control is not set too low. Increase volume by pressing the  button.
- Make sure that the tablet PC is not in Standby mode.
- If using an external speaker, make sure that the speaker is properly connected.

Distorted sound is produced.

- Make sure that the volume control is not set too high or too low. In most cases, a high setting can cause the audio electronics to distort the sound.


The external audio device does not work.

- Make sure that your tablet PC is equipped with the driver needed.
- Click the speaker symbol on the taskbar and check the Windows volume control.
- Check the volume control of your tablet PC.

Startup Problems

When you turn on the tablet PC, it does not respond and the Power Indicator does not light green.

- If you are using an external AC power, make sure that the AC adapter is correctly and securely connected. If so, make sure that the electrical outlet works properly.
- If you are using the battery power, make sure that the battery is not discharged.

- When the tablet PC is connected to AC power and hard disk drive temperature is below 5 °C, the optional heater would turn on as indicated by the hard disk drive / heater indicator () glowing in red (if the item **HDD Preheat** under the Advanced menu of your BIOS Setup is set at *Enabled*). Wait awhile.

When you turn on the tablet PC, it stops after POST.

- Restart your tablet PC.

Other Problems

The date/time is incorrect.

- Correct the date and time via the operating system or BIOS Setup program.
- After you have performed everything as described above and still have the incorrect date and time every time you turn on the tablet PC, the RTC (Real-Time Clock) battery is at the end of its life. Call an authorized dealer to replace the RTC battery.

Resetting the Tablet PC

You may have to reset (reboot) your tablet PC on some occasions when an error occurs and the program you are using hangs up.

If the tablet PC operation seems to hang up, first wait. It is possible that the tablet PC is processing data. Periodically check the hard disk drive in-use indicator, if it flashes irregularly, the program may be accessing data and preventing you from using the keypad. If you are sure the operation has stopped and you cannot use the “restart” function of the operating system, reset the tablet PC.

Reset the tablet PC by any one of these methods:

- Press the **Fn** button, then press **C+A+D** button on your built-in keypad.
- If the above action does not work, turn off the tablet PC. Wait for at least five seconds and turn it on again.

| CAUTION: Resetting will cause any unsaved data to be lost.

Specifications

NOTE: Specifications are subject to change without any prior notice.

| Parts | | Specifications |
|-------------------------------|-----------------|--|
| CPU | | Intel® Stealy processor, 512 KB L2 cache, 800 MHz |
| RAM (system) | | Up to 1 GB DDRII DRAM |
| Display | Panel | 8.4-inch wide TFT LCD, SVGA transmissive display, integrated touchscreen, duo mode to support digitizer (option), 800 Nits LCD brightness (option), sunlight-readable (option) |
| Audio | Features | HD audio, volume control via keypad and software |
| | Speaker | Integrated speaker |
| | Port | Line-out |
| Storage device | Hard disk drive | Shock-mounted |
| Card slots | | Smart Card PCMCIA CardBus Type II, or ExpressCard (option), or Internal second mini card (option) |
| I/O ports | | USB ports × 2 (USB 2.0 support), RJ-45 port, docking connector, WWAN antenna pass-through connector (option), 3G antenna pass-through connector (option) |
| LAN | | 10/100/1000 Mbps Ethernet |
| Wireless LAN | | IEEE 802.11b/g, AES, TKIP, WEP, 802.11i/WPA2 security, authentication 802.1x, 802.11e/WMM Quality of Service |
| Bluetooth wireless technology | | Specification 2.0 module |
| GPS (option) | | Integrated Global Positioning System (GPS) receiver module |
| WWAN (option) | | CDMA / EVDO / 1x RTT HSDPA / UMTS / EDGE / GSM |
| Security | | Kensington lock TPM 1.2 (availability may vary) Smart Card Reader will occupy Type II PCMCIA slot |
| Power | Battery | Li-ion smart battery 5100 mAh / 7.4 V or above |
| Dimension (W×D) | | 280×184×32 mm (11×7.2×1.3 inch) |

| Parts | | Specifications |
|-------------|-------------|--|
| Weight | | 1.4 kg (3.09 lb) |
| Environment | Temperature | Operating: -20 °C (-4 °F) to 60 °C (140 °F) Storage: -40 °C (-40 °F) to 75 °C (167 °F) Thermal shock: -20 °C (-4 °F) to 60 °C (140 °F) |
| | Humidity | Relative: 0 % to 95 % non-condensing |
| Compliance | | MIL-STD 810F and IP54 |

Regulatory Information

This appendix provides regulatory statements and safety notices on your tablet PC.

NOTE: Marking labels located on the exterior of your tablet PC indicate the regulations that your model complies with. Please check the marking labels and refer to the corresponding statements in this appendix. Some notices apply to specific models only.

On the Use of the System

Class B Regulations

USA

Federal Communications Commission Radio Frequency Interference Statement

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the 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.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Please note:

The use of a non-shielded interface cable with this equipment is prohibited.

Canada

Canadian Department of Communications Radio Interference Regulations Class B Compliance Notice

This Class B digital apparatus meets all requirements of the Canada Interference-Causing equipment regulations.

Cet appareil numérique de Classe B respecte toutes les exigences du Règlement Canadien sur le matériel brouilleur.

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

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Safety Notices

About the Battery

Caution Texts Concerning Lithium Batteries

DANISH

ADVARSEL! Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Levér det brugte batteri tilbage til leverandøren.

NORWEGIAN

ADVARSEL: Eksplosjonsfare ved feilaktig skifte av batteri. Benytt samme batteritype eller en tilsvarende type anbefalt av apparatfabrikanten. Brukte batterier kasseres i henhold til fabrikantens instruksjoner.

SWEDISH

VARNING: Explosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera använt batteri enligt fabrikantens instruktion.

FINNISH

VAROITUS: Paristo voi räjähtää, jos se on virheellisesti asennettu. Vaihda paristo ainoastaan valmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

ENGLISH

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

DEUTSCH

VORSICHT: Explosionsgefahr bei unsachgemäßem Austausch der Batterie. Ersatz nur durch denselben oder einen vom Hersteller empfohlenen gleich-wertigen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

FRENCH

ATTENTION: Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

Attention (for USA Users)

The product that you have purchased contains a rechargeable battery. The battery is recyclable. At the end of its useful life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal.

About the AC Adapter

- Use only the AC adapter supplied with your tablet PC. Use of another type of AC adapter will result in malfunction and/or danger.
- Do not use the adapter in a high moisture environment. Never touch the adapter when your hands or feet are wet.
- Allow adequate ventilation around the adapter when using it to operate the device or charge the battery. Do not cover the AC adapter with paper or other objects that will reduce cooling. Do not use the AC adapter while it is inside a carrying case.
- Connect the adapter to a proper power source. The voltage requirements are found on the product case and/or packaging.
- Do not use the adapter if the cord becomes damaged.
- Do not attempt to service the unit. There are no serviceable parts inside. Replace the unit if it is damaged or exposed to excess moisture.

Caution (for USA Users)

To reduce the risk of fire, use only No.26 AWG or larger telecommunication line cord.

On the Use of the RF Device

| **NOTE:** The information in this section applies to models with the wireless LAN module.

USA and Canada Safety Requirements and Notices

Radio Frequency Interference Requirements and SAR

The FCC with its action in ET Docket 93-62 has adopted a safety standard for human exposure to Radio Frequency (RF) electromagnetic energy emitted by FCC certified equipment. The wireless LAN module meets the Human Exposure limits found in OET Bulletin 65, 2001, and ANSI/IEEE C95.1, 1992. Proper operation of this radio according to the instructions found in this manual will result in exposure substantially below the FCC's recommended limits. The following safety precautions should be observed:

- Do not touch or move antenna while the unit is transmitting or receiving.
- Do not hold any component containing the radio such that the antenna is very close or touching any exposed parts of the body, especially the face or eyes, while transmitting.
- Do not operate the radio or attempt to transmit data unless the antenna is connected; if not, the radio may be damaged.

Use in specific environments:

- The use of wireless devices in hazardous locations is limited by the constraints posed by the safety directors of such environments.
- The use of wireless devices on airplanes is governed by the Federal Aviation Administration (FAA).
- The use of wireless devices in hospitals is restricted to the limits set forth by each hospital.

Explosive Device Proximity Warning

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

Use on Aircraft Caution

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

EMC Requirements

This device uses, generates and radiates radio frequency energy. The radio frequency energy produced by this device is well below the maximum exposure allowed by the Federal Communications Commission (FCC).

This device complies with the limits for a Class B digital device pursuant to Part 15 subpart C of the FCC Rules and Regulations. 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.

The FCC limits are designed to provide reasonable protection against harmful interference when the equipment is installed and used in accordance with the instruction manual and operated in a commercial environment. However, there is no guarantee that interference will not occur in a particular commercial installation, or if operated in a residential area.

If harmful interference with radio or television reception occurs when the device is turned on, the user must correct the situation at the user's own expense. The user is encouraged to try one or more of the following corrective 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.

CAUTION: The Part 15 radio device operates on a non-interference basis with other devices operating at this frequency. Any changes or modification to said product not expressly approved by the manufacturer could void the user's authority to operate this device.

European Union CE Marking and Compliance Notices

Statements of Compliance

English

This product follows the provisions of the European Directive 1999/5/EC.

Danish

Dette produkt er i overensstemmelse med det europæiske direktiv 1999/5/EC.

Dutch

Dit product is in navolging van de bepalingen van Europees Directief 1999/5/EC.

Finnish

Tämä tuote noudattaa EU-direktiivin 1999/5/EC määräyksiä.

French

Ce produit est conforme aux exigences de la Directive Européenne 1999/5/EC.

German

Dieses Produkt entspricht den Bestimmungen der Europäischen Richtlinie 1999/5/EC.

Greek

Το προϊόν αυτό πληροί τις προβλέψεις της Ευρωπαϊκής Οδηγίας 1999/5/EC.

Icelandic

Þessi vara stendst reglugerð Evrópska Efnahags Bandalagsins númer 1999/5/EC.

Italian

Questo prodotto è conforme alla Direttiva Europea 1999/5/EC.

Norwegian

Dette produktet er i henhold til bestemmelsene i det europeiske direktivet 1999/5/EC.

Portuguese

Este produto cumpre com as normas da Diretiva Européia 1999/5/EC.

Spanish

Este producto cumple con las normas del Directivo Europeo 1999/5/EC.

Swedish

Denna produkt har tillverkats i enlighet med EG-direktiv 1999/5/EC.

Local Restrictions of IEEE 802.11b/g Radio Usage

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

The European variant is intended for use throughout the European Economic Area. However, authorization for use is further restricted in particular countries or regions within countries, as follows:

General

European standards dictate maximum radiated transmit power of 100 mW Effective Isotropic Radiated Power (EIRP) and the frequency range 2400 – 2483.5 MHz.

Belgium and the Netherlands

In Belgium and the Netherlands, the product may not be used outdoors. See the instructions next under the heading “Turning Off the Wireless LAN Radio.”

France

Departments in Which the Wireless LAN Module Can Be Used (Indoors Only)

The wireless LAN module can currently be used indoors only in the following 38 departments of mainland France. Please turn off your wireless LAN radio when operating the device in areas/places other than the 38 departments listed:

| | | | | | |
|----|----------------|----|---------------------|----|-----------------------|
| 01 | Ain Orientales | 36 | Indre | 66 | Pyrénées |
| 02 | Aisne | 37 | Indre et Loire | 67 | Bas Rhin |
| 03 | Allier | 41 | Loir et Cher | 68 | Haut Rhin |
| 05 | Hautes Alpes | 42 | Loire | 70 | Haute Saône |
| 08 | Ardennes | 45 | Loiret | 71 | Saône et Loire |
| 09 | Ariège | 50 | Manche | 75 | Paris |
| 11 | Aude | 55 | Meuse | 82 | Tarn et Garonne |
| 12 | Aveyron | 58 | Nièvre | 84 | Vaucluse |
| 16 | Charente | 59 | Nord | 88 | Vosges |
| 24 | Dordogne | 60 | Oise | 89 | Yonne |
| 25 | Doubs | 61 | Orne | 90 | Territoire de Belfort |
| 26 | Drôme | 63 | Puy du Dôme | 94 | Val de Marne |
| 32 | Gers | 64 | Pyrénées Atlantique | | |

Departments in Which the Wireless LAN Module’s Maximum EIRP Not Shown in the Previous Table

| Frequency Ranges (MHz) | Indoors | Outdoors |
|-------------------------------|----------------|--|
| 2400 – 2446.5 | 10 mW | Not permitted |
| 2446.5 – 2483.5 | 100 mW | 100 mW on private property with Ministry of Defense approval |

Turning Off the Wireless LAN Radio

NOTE: Turning the wireless LAN radio off is not the same as disabling the wireless LAN card. It is not necessary to disable the card to meet the regulatory requirements.

While operating the tablet PC in those French departments that do not allow use of the wireless LAN equipment, the user of the equipment must turn off the wireless LAN radio in order to comply with local regulations (see Chapter 2 for more information).

电子信息产品有毒有害物质或元素名称及含量标示

| 项目 | 部件名称 | 有毒有害物质或元素 | | | | | |
|----|----------------|-----------|-----------|-----------|---------------|---------------|-----------------|
| | | 铅 (Pb) | 镉 (Cd) | 汞 (Hg) | 六价铬 (Cr+6) | 多溴联苯 (PBB) | 多溴二苯醚 (PBDE) |
| 1 | 金属机构件 | X | O | O | O | O | O |
| 2 | 塑料机构件 | O | O | O | O | O | O |
| 3 | 电路板组件 | X | X | O | O | O | O |
| 4 | 液晶面板 | X | X | X | O | O | O |
| 5 | 硬盘 | X | O | O | O | O | O |
| 6 | 光驱 | X | O | O | O | O | O |
| 7 | 键盘 | X | O | O | O | O | O |
| 8 | 充电电池组件 | X | X | O | O | O | O |
| 9 | 适配器 | X | X | X | O | O | O |
| 10 | 电源线 | X | O | O | O | O | O |
| 11 | 外部信号连接线 | O | O | O | O | O | O |
| 12 | 钮扣电池 | O | O | X | O | O | O |
| 13 | 风扇 | X | O | O | O | O | O |
| 14 | 散热模块 (金属部分) | X | O | O | O | O | O |
| 15 | 喇叭 | X | O | O | O | O | O |

O：表示该有害物质在该部件所有均质材料中的含量均在 SJ/T 11363-2006 规定的限量要求以下。

X：表示该有害物质至少在该部件的某一均质材料中的含量超出 SJ/T 11363-2006 规定的限量要求。

(本产品使用技术无法突破之 EU RoHS 除外项目，并于下方使用项目说明)。

使用除外项目如下：

1. 铅使用于部件、装置的内部连接用高熔点锡焊上（铅为 85wt% 以上的有铅锡焊）。
2. 电子陶瓷部件（压电组件·陶瓷介质材料等）内的含铅量。
3. 电子部件的玻璃内的含铅量。
4. 两种以上元素组成之焊料，用于连接微处理器封装与针头且铅含量超过 80wt% 并少于 85wt%。
5. 铅于覆晶集成电路封装内用于铸模与基板之电子接点之焊锡。
6. 于钢材、铝材、铜材中的含铅量。
7. 通孔盘状及平面数组陶瓷多层电容器焊料所含的铅。
8. 电子接点的电镀，其要求高可靠性，且没有替代性材料之镉。
9. 电池内的含铅量。
10. 电池内的含镉量。
11. 使用于钮扣电池之含汞量。