System Recovery

Use System Recovery when:

● Your Windows operating system does not start at all.

● You want to restore the system to the factory state.

WARNING:
● Using this feature will reinstall Windows to your system and configure it to the system's factory default settings. All data on the hard disk drive will be lost.
● Make sure that power is not interrupted during the recovery process. An unsuccessful recovery may result in Windows startup problems.

To run System Recovery:

1. Connect the AC adapter.

2. During system startup when the following screen appears, press **Ctrl + Alt + F2** keys for four seconds.

3. In the screen that appears, select **Recovery** to start the recovery process.

4. The progress bar shows the percentage completed. When it reaches 100%, the system turns off.

5. Turn on the computer. The Windows setup wizard starts. Follow the onscreen prompts to continue.

6. When the system restarts, the installer screen appears. The installer will perform system hardware detection and driver installation.

7. When completed, the system restarts and displays Windows desktop.

Chapter 6

Using Getac Software

Getac software includes application programs for specific computer components and utility programs for overall management.

This chapter describes how to use the software.

Using the OSD Control Panel
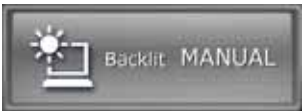
The OSD (On Screen Display) Control Panel provides a user-friendly interface for you to quickly activate or operate certain functions on your computer with a simple tap of the screen.

To open the OSD Control Panel, press the button [icon] on the front of your computer. The following screen appears.

The following table shows the various functions on the OSD Control Panel.

Icon	Function
[?]	Opens the Help file explaining the OSD Control Panel.
[tools]	Opens the Quick Button Setup menu (refer to the next section for details).
[X]	Closes the OSD Control Panel.

Icon	Function
RF OFF	Serves as the master ON/OFF control of the RF radio. The word on the button indicates the current status. The on/off status will persist through Sleep/Hibernation mode but it will always be on upon restarting.
G-Rotate ON	Enables or disables the G-Rotate function. When enabled, the LCD display will rotate itself to match the direction the computer is held. This button is available for use only when the computer is in Tablet mode. The function is automatically enabled whenever you change the LCD display position to the Tablet style.
Rotate 90°	Rotates the orientation from default landscape to **90°** portrait, **180°** landscape, or **270°** portrait. The status will persist through Sleep/Hibernation mode or system power off.
ECO OFF	Switches the ECO mode to the next choice (**MAX**, **QUICK**, **WORK**, or **OFF**). The word on the button indicates the current status. (For information on ECO modes, see "ECO Tab" later in this chapter.) This button works only when using battery power. The ECO mode will return to the default **OFF** setting whenever AC power is connected, backlight status is changed, the system resumes from Sleep/Hibernation mode, or the system is restarted.
Backlit MANUAL	Switches the LCD backlight to the next choice (**MAX**, **AUTO**, or **MANUAL**.) The word on the button indicates the current status.

Icon	Function
	When set to **MAX**, the backlight is adjusted to the highest brightness level. When set to **AUTO**, the brightness will be automatically adjusted according to the current ambient light. The backlight will return to the default **MANUAL** setting whenever the system resumes from Sleep/Hibernation mode or the system is restarted.
Display BOTH	Switches the display output to the next choice: **VGA** (external monitor), **BOTH** (LCD and external monitor), or **LCD**. This button works only when an external display is connected.
Explorer	Starts Microsoft Internet Explorer by default. You can assign a different function to this button (refer to the next section for details).
Mobility Center	Starts Windows Mobility Center by default. You can assign a different function to this button (refer to the next section for details).
Calibration	Starts the touchscreen calibration tool by default. You can assign a different function to this button (refer to the next section for details).
Bluetooth Setup	Starts the Bluetooth Setup utility by default. You can assign a different function to this button (refer to the next section for details).
Virtual Keyboard	Opens the Input Panel by default. You can assign a different function to this button (refer to the next section for details).

Icon	Function
	Allows you to adjust the sound volume by dragging the knob along the bar.
	Switches the system sound output OFF （mute） and ON.
	Allows you to adjust the LCD brightness level by dragging the knob along the bar.
	System enters "black-out" mode by turning off the LCD display, LED indicators, touchscreen, and sound. Press the power button (⏻) to wake up the system from "black-out" mode.

Quick Button Setup

By default, the five quick buttons on the OSD Control Panel have pre-assigned functions. You can re-define the buttons:

1. Click the Quick Button Setup button (🛠) on the OSD control panel and the **Quick Button Setup** window appears.

2. At the bottom of the screen are the five quick buttons. Click the button you want to change.

3. Depending on the type of task to be associated with the button, click the Open button 📁 of the **Executed Program** or **Open Folder** type.

4. A dialog box appears. Select the desired program or folder and click **Open** or **Select**. After your selection, the entry field will display the program or folder information.
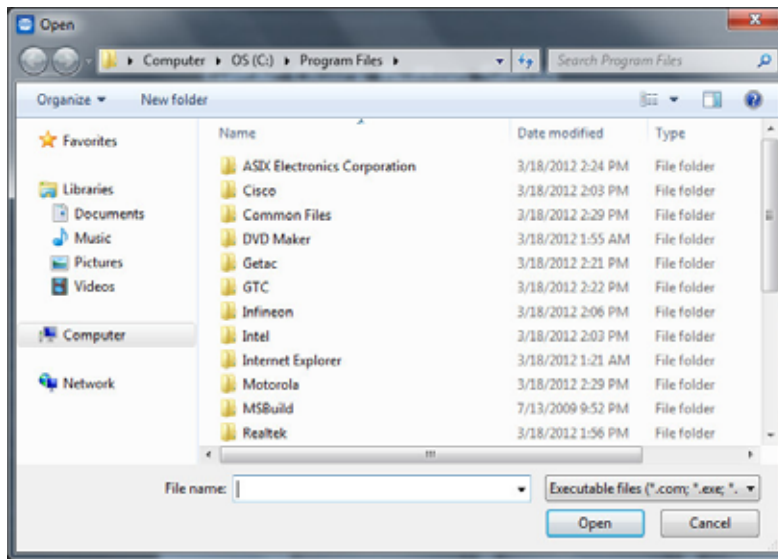
 or
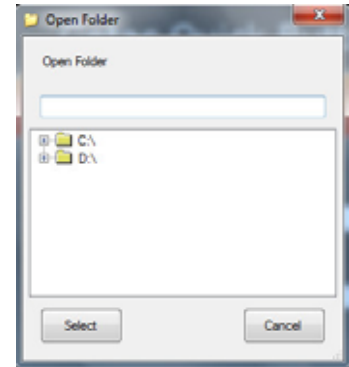
5． You can change the image appearing on the button by clicking the **Select Image** button． After selecting the image file, the original image on the button will be replaced．

6． Click **Set** to complete the changes．

NOTE: You can restore the quick buttons to the default settings by clicking **Reset All**.

Using Button Manager

The five quick buttons located on the front of your computer come with predefined functions. You can use Button Manager to re-define the buttons.

1. Click **Start → Programs → Button Manager → Button Manager**. The following screen appears.

2. Select the button to re-define.

3. Under the **Update Button Function** click the **Key Name** dropdown list to see the available options and select the option you want.
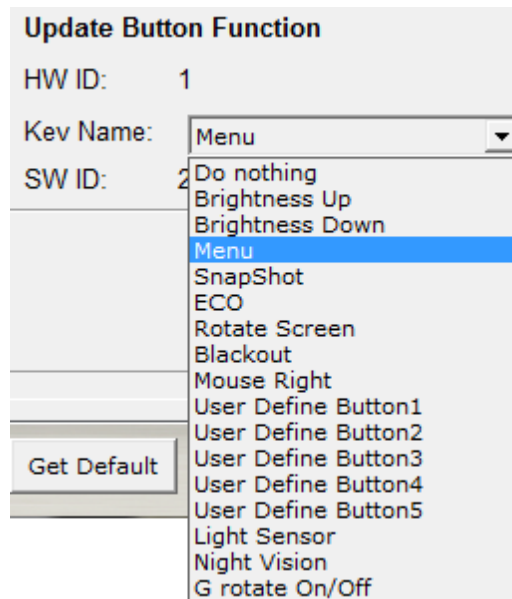
The option *User Define Button*（*1* to *5*）means the Quick Button in the OSC Control Panel.

4. Repeat the steps for the other buttons that you want to re-define.

5. For the changes to take effect immediately, click **Start Flash**.

6. If you intend to save the configurations for later retrieval, click **SAVE**. Select a location, enter a filename, and click **Save** to save the current configurations as a .bfh file.

   Click **Load** the next time you use Button Manager to load any previously saved configurations.

NOTE: You can restore to the default settings by clicking **Get Default**.

Using G-Manager

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

- System

- Battery

- ECO （economic mode）

- Light Sensor

- Ignition

- Monitoring

- GPS Status

Starting G-Manager

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

- Click S**tart → All Programs → Getac Utility → G-Manager**, or

- Click and hold the 🌀 icon located on the taskbar until a ring appears. From the small menu that pops up, click **G-Manager**.

The G-Manager window appears, containing 7 tabs as described later.

NOTE: Depending on your model, the actual items appearing on the screen may differ from those shown in this manual.

System Tab

The **System** tab provides system information.
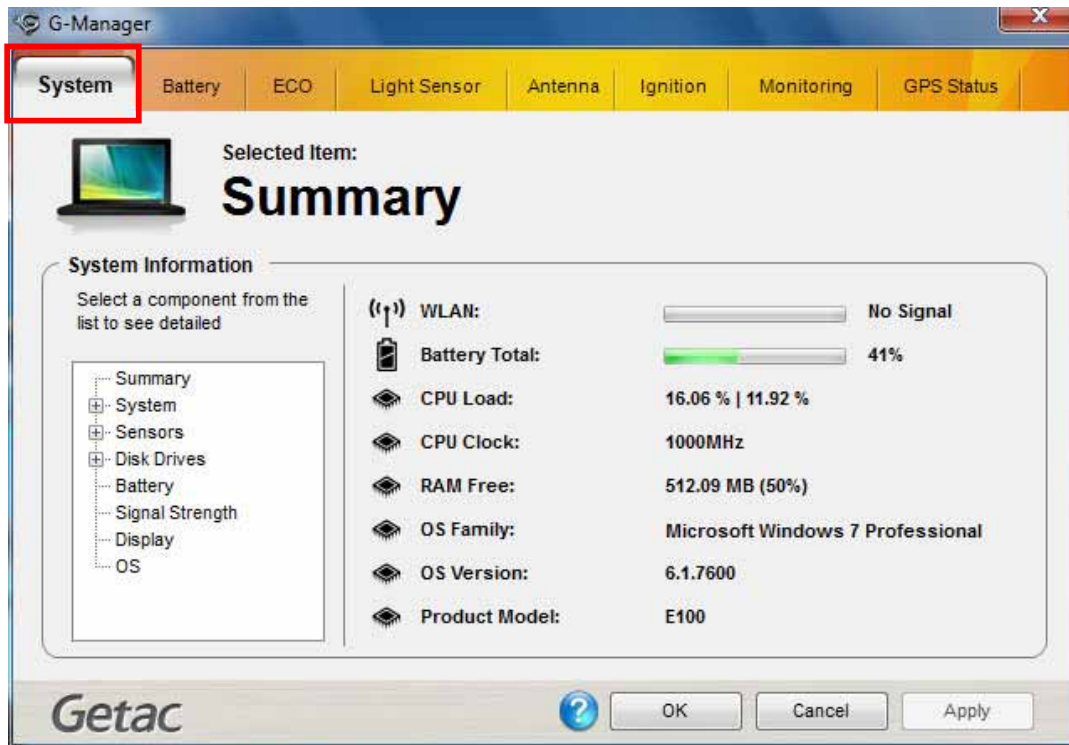
To view specific information, select the component from the list on the left side of the screen. The information of the selected component will be displayed on the right side of the screen.

Battery Tab

The **Battery** tab allows you to check the battery status and configure the battery.
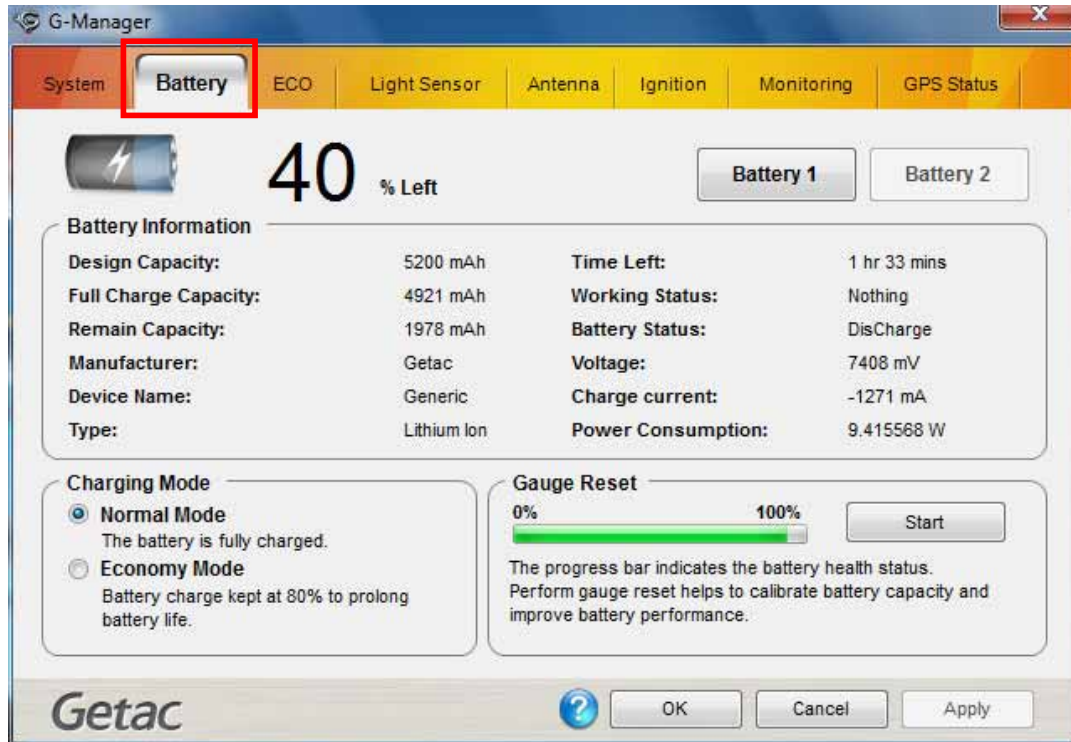
At most two batteries may be supported. Click **Battery 1** or **Battery 2** to view the information of each battery（if your model has a second battery）.

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.

Battery Information

The upper portion of the screen displays the current status of the selected battery.

Charging Mode

The lower left portion of the screen 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** – This mode helps prolong battery life by charging up to 80% of its total capacity only. It is highly recommended if you are using AC power most of the time.

Gauge Reset

The lower right portion of the screen contains the battery health bar and provides the battery calibration function.

The health bar shows the batter's health by percentage. A low percentage indicates poor health and therefore the need to perform a gauge reset to calibrate the battery's capacity and improve the battery's performance. The gauge reset process includes discharging and then fully recharging the battery in two cycles. It can take several hours.

To perform a gauge reset:

1. Connect the AC adapter.

2. Click **Start**, located next to the health bar

3. In the pop-up dialog box, click **Yes** to start the process. The window as below appears displaying the progress bar.
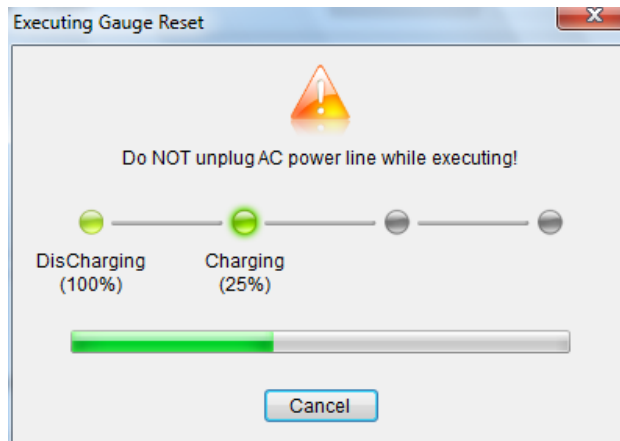
4. Wait till the process is completed. Click **Exit** when finished.
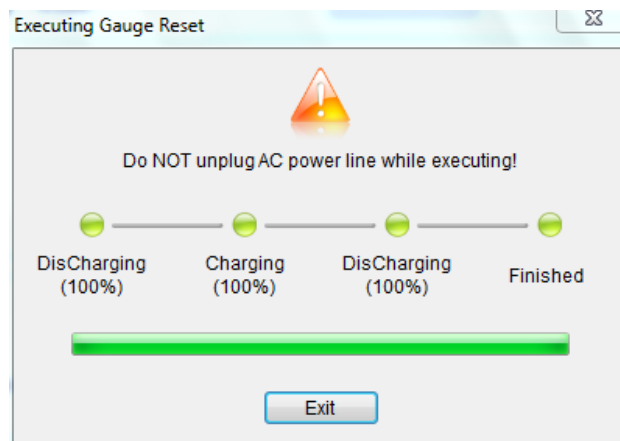
ECO Tab

The **ECO** tab allows you to configure ECO modes（or called power profiles）.
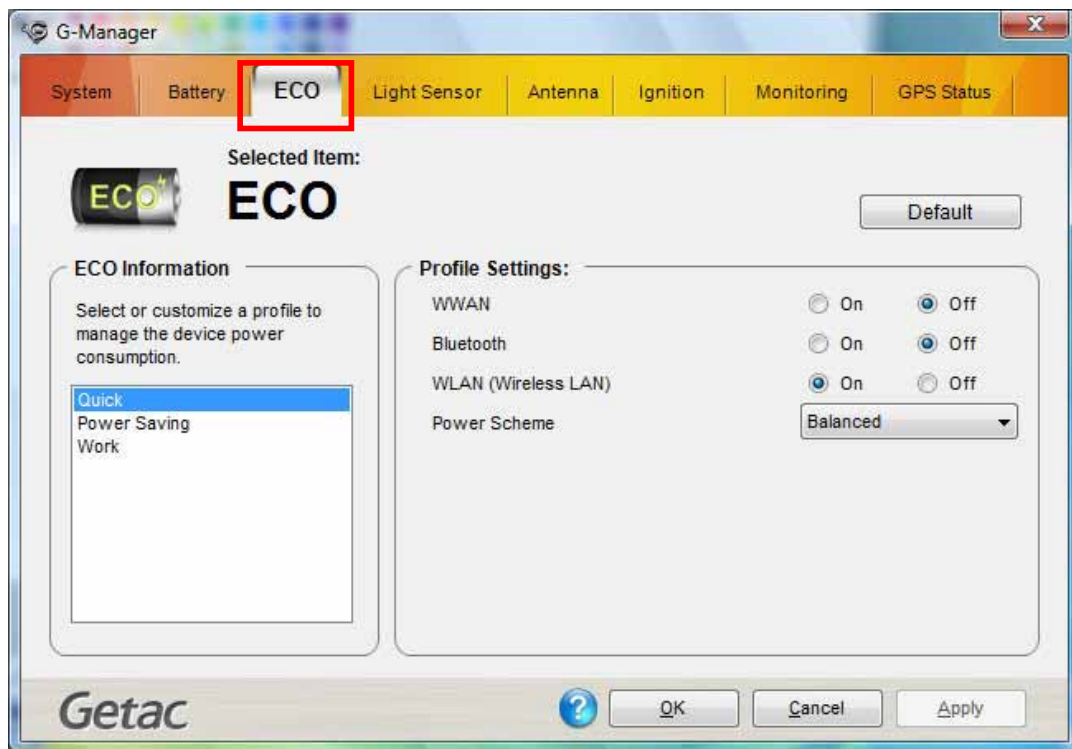
To put the system into an ECO mode, use the **ECO** button （one of the buttons in the OSD Control Panel）. （See "Using the OSD Control Panel" earlier in this chapter for information.）

ECO Information

The left portion of the screen lists the available power profiles （**Quick**, **Power Saving**, and **Work**）. Each profile is a combination of power settings that results in different power consumptions. To change the settings of a profile, select （highlight） the profile name in the list.

Profile Settings

The right portion of the screen displays the settings of the current selected profile. You can set up the following items:

● **WWAN**, **Bluetooth**, **Touchscreen**, and **WLAN** – can be on or off.

- **Power Scheme** – can be **Balanced**, **High Performance** or **Power Saver**. The settings here correspond to the settings in Windows. （See Windows Help for the description to each of the power scheme.）

After changing the settings, click **Apply** or **OK** to save the changes. To restore the settings to the default values, click **Default**.

Light Sensor Tab

The **Light Sensor** tab allows you configure how the light sensor works.
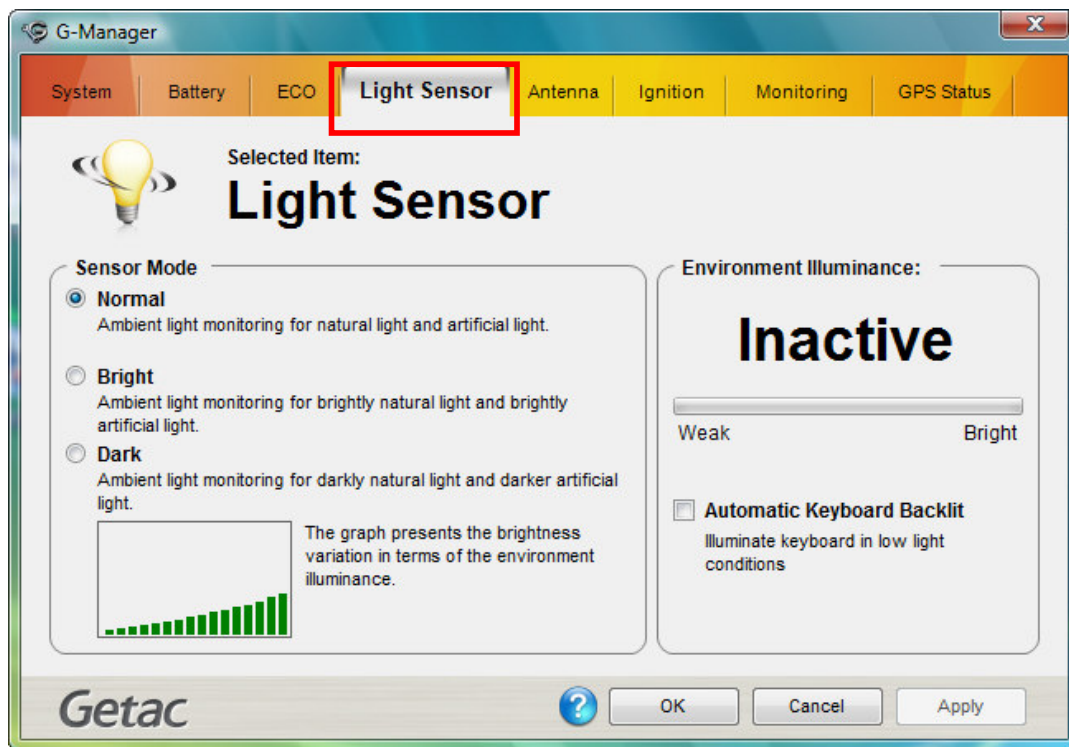
Sensor Mode

The left portion of the screen lists the sensor modes:

- **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.）.

Click to select a mode. Click **Apply** or **OK** to save the changes.

Environment Illuminance

To have the keypad backlight automatically turn on in poor lighting environment, click the checkbox **Automatic Keyboard Backlit**. Click **Apply** or **OK** to save the changes.

Ignition Tab

The **Ignition** tab allows you to configure how your system works with the vehicle ignition.
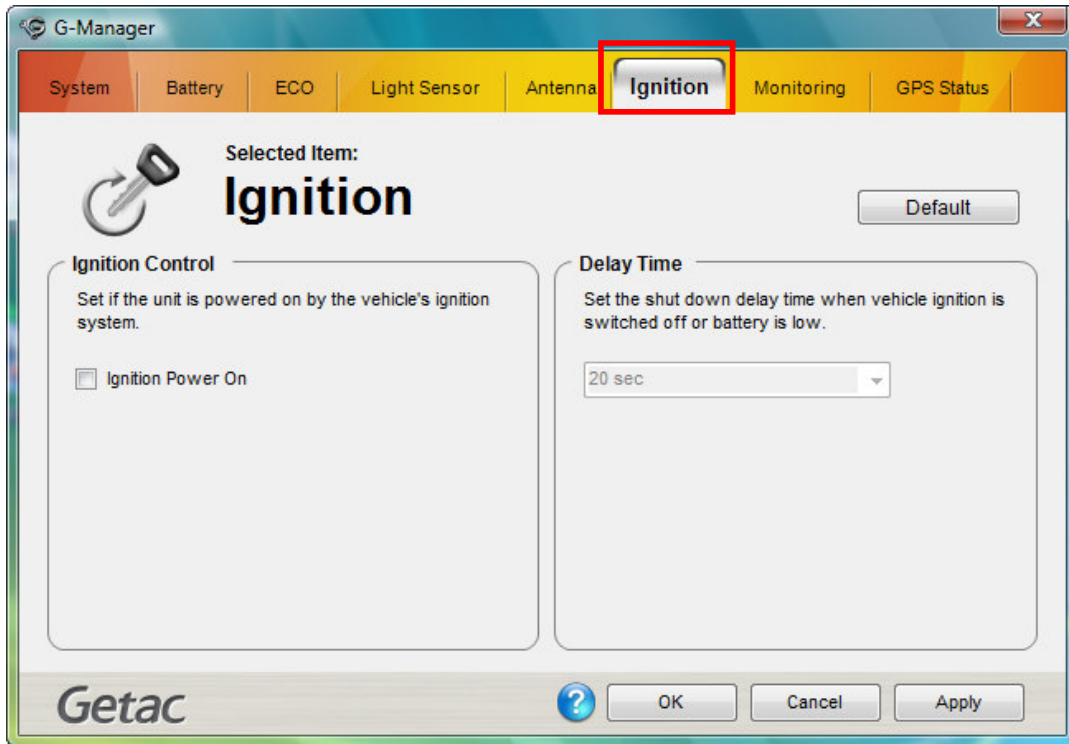
Ignition Control

When your system is connected to the Vehicle Dock（available as an option）, you can have your system derive power from the vehicle and have the on/off of the vehicle ignition turn on/off your system. To enable the feature, select the checkbox **Ignition Power On**. Click **Apply** or **OK** to save the changes.

Delay Time

When the **Ignition Power On** feature is enabled, the system will automatically shut down after the vehicle ignition is turned off or the battery is low. You can set the amount of time（20 seconds, 30 seconds, 45 seconds, 1 minute, or 2 minute）the system waits before shutting down. Click **Apply** or **OK** to save the changes.

Monitoring Tab

The **Monitoring** tab allows you to configure the monitoring function of G-Manager.

Items to Monitor

The left portion of the screen lists the items. Click the checkbox before an item to include it as a monitored component. Click **Apply** or **OK** to save the changes.

NOTE: Different models have different supported monitoring items; non-supported items cannot be selected (grayed out items).

Monitoring Options

The right portion of the screen allows you to set how the monitored items are displayed and how often the monitoring is updated.

- **Always On Top** – allows the monitoring window to remain on top of your display.

- **Monitoring Interval** – sets the frequency of updates on the monitoring window（1/3/5/10/30 seconds or 1/5/30 minutes）.

Click **Apply** or **OK** to save the changes.

Starting and Stopping the Monitoring

To start monitoring, click **START Monitor**. The monitoring window similar to the one below appears displaying requested information at specified intervals.
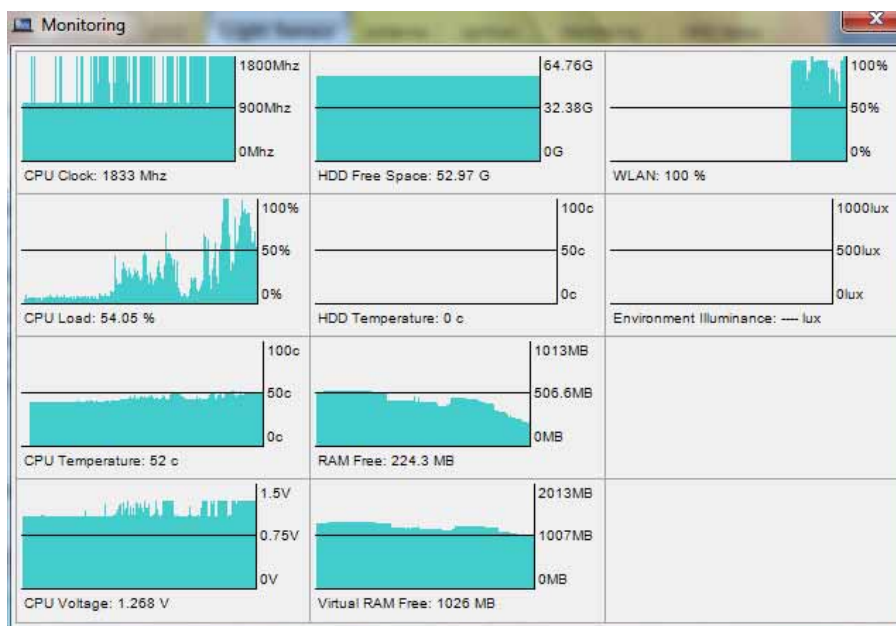
To stop monitoring, click the Close button at the upper right corner of the monitoring window or click **Stop Monitor** on the **Monitoring** tab page of G-Manager.

GPS Status Tab

The **GPS Status** tab shows the GPS status for models having the GPS module.
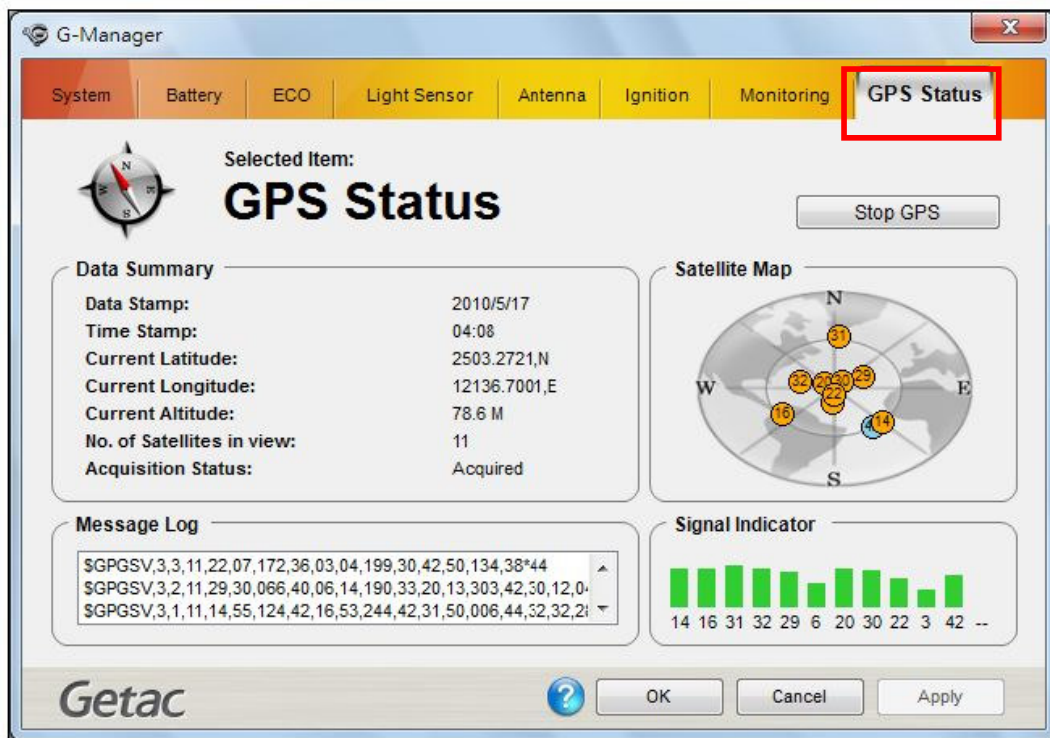
To start GPS positioning, click **Start GPS**. The screen displays:

- Ongoing raw data strings in the **Message Log** section

- Overhead satellite positions in the **Satellite Map** section

- Signal strength of the satellites in the **Signal Indicator** section

When GPS positioning is completed, the **Data Summary** section shows the GPS information of the current location.

To stop GPS positioning, click **Stop GPS**.

Using Getac Camera

Getac Camera is a geo-tagging camera program, which allows you to stamp geographical information on photos as watermarks and embed such information into JPEG files as EXIF 2.2 metadata.
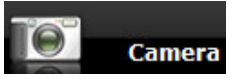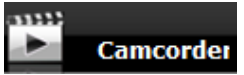
NOTE:

- Getac Camera works with Virtual-GPS (a separate application program). Make sure that Virtual-GPS is installed in your computer.
- Before starting Getac Camera, close any other program that uses the camera; otherwise, Getac Camera can only provide limited functions.
- The instructions in this document are based on touchscreen operations though there are equivalent touchpad and mouse operations.

To start the program, tap the Getac Camera program icon on Windows desktop. The Getac Camera window appears as shown below.

The GPS positioning will be automatically activated. When the GPS positioning is completed, you will see the geographical information in the watermark area on the image.

No.	Screen Elements	Descriptions	
❶	Preview/Display Window	Displays the live image in Camera mode and the selected image in View mode.	
❷	Status Display	Indicates the use of a feature.	
			GPS Lock in use
		/	Front/Bottom camera in use (depending on your model)
			Night mode in use
		/	Continuous/Timer mode in use
❸	GPS Status	Indicates if the GPS positioning is completed ( ) or not ( ).	
❹	Window Control Buttons		Minimizes the program window.
			Closes the program.
❺	Control Buttons	Perform immediate tasks on the current image.	
❻	Watermark	Displays the GPS information such as direction, longitude, latitude, GPS status, date, and time.	
❼	Thumbnail Tray	Displays up to 7 pictures in a thumbnail view. The middle is the picture last taken or selected. You can drag toward the right or left to scroll through the thumbnail view. The / button hides/shows the Thumbnail Tray.	
❽	Command Buttons		Switches to Camera Mode.
			Switches to Camcorder mode.

		View	Switches to View Mode.
		GPS	Switches to GPS view.
		Settings	Switches to the Settings screen.

No.	Screen Elements	Descriptions
		About	Provides copyright, licensing, and help information.

Taking Pictures

1. Start the Getac Camera program. You will be in Camera Mode.

2. You can use the buttons on the right and left side of the preview window for immediate controls.（See "Camera Controls Buttons" for detailed information.）

    For overall settings, tap ![Settings]. （See "Camera Settings" for detailed information.）

3. Aim the camera lens at your subject.

4. When ready, you can shoot the picture in either of the two methods:

- **Method 1:** Tap the button.

- **Method 2:** Drag the preview image and drop it into Thumbnail Tray.

5. The picture will appear in the middle of the Thumbnail View and be saved to the predefined storage location.

Camera Controls Buttons

Control Buttons	Descriptions
	Flips the image vertically.
	Flips the image horizontally.
/	Turns on/off GPS lock. The icon in the button shows the current status.
	GPS lock allows you record the exact location of the object you are shooting instead of where you are using the computer to shoot the picture. First, put the computer near your object and tap this button to lock the GPS information; then, you can go farther away to where you can have a good view of the object for the shooting.
	Remember to turn off GPS lock when the feature is not needed for the next picture. The GPS lock is always off whenever you start the program.

/	Turns off/on watermark. The icon in the button shows the current status.
	You can turn off watermark if you do not want the watermark to show in the picture. Your setting remains effective until you change it again.
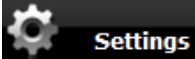
Shooting Videos

1. Start the Getac Camera program. You will be in Camera mode. Tap to switch to Camcorder mode.
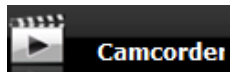
2. You can use the buttons on the right and left side of the preview window for immediate controls.（See "Camcorder Control Buttons" for detailed information.）

    For overall settings, tap .（See "Camera Settings" for detailed information.）

3. Aim the camera lens at your subject.

    To start shooting the video, tap the button.

4. To stop, tap the same button again.

5. An image from the video will appear in the middle of the Thumbnail Tray. The file is saved to the predefined storage location.

Camcorder Control Buttons

Control Buttons	Descriptions
	Increases the recording sound volume.
/	Disables/enables the microphone.
	Decreases the recording sound volume.
	Flips the image vertically.
/	Turns on/off the display of elapsed recording time and current volume.

Using View Mode

Tap at the bottom of the screen to switch to View mode.

While in Camera or Camcorder mode, you can also switch to View mode by either of the two methods:

● **Method 1:** Double-tap the thumbnail in the Thumbnail Tray.

● **Method 2:** Drag the thumbnail and drop into the preview window.

Selecting an Image or Video

To scroll through the Thumbnail Tray, drag the tray toward the left or right.

To select an image or video, use either of the two methods:

- **Method 1:** Double-tap the thumbnail in the Thumbnail Tray.

- **Method 2:** Drag the thumbnail and drop into the display window.
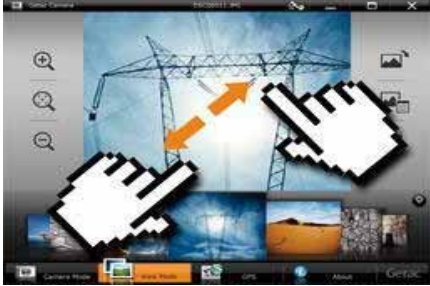
Image Viewing Controls

When you select an image to view, you can perform the following tasks.

To	Via Control Buttons	Via Multi-touch Operations
Zoom in/out（up to four scales）	/	 Drag two fingers apart/ towards to zoom in/out.
To	Via Control Buttons	Via Multi-touch Operations
	When zoomed in, you can drag to view another portion of the image.	
Restore to the 100% scale		–
Rotate to the right/left by 90°	/	 Drag two fingers in a clockwise/counterclockwise circular motion.
View image properties		–

Adding Notes to an Image

1. Switch to View mode, select the image, and tap .

2. In properties view, tap .

3. Type your notes in the entry field.

4. When completed, tap [Back] .

The first three lines of the notes show on the screen.

Video Playback Controls

When you select a video to playback, you can perform the following tasks.

To	Via Control Buttons
Start/pause the playback	▶ / ⏸
Skip backwards/forwards	⏮ / ⏭
Increase/decrease volume	🔊 / 🔉

Turn on/off the status display	/

Camera Settings

To change camera settings, tap at the bottom of the screen.

Along the left of the window are all the setting items. You can drag this area up or down to scroll through the items. The middle of the window displays the current item and setting value. To the right is the adjustment bar where you can tap or drag to change the setting value.

All changes（except for **Camera Mode**）remain effective until you change them again.

Items	Name	Descriptions
WB	**White Balance**	Five choices from which you can select one that matches the current light source: **Automatic** (default), **Sunshine**, **Cloudy**, **Fluorescence**, and **Incandescence**.
☀	**Brightness**	Adjusts the brightness level. The range of levels depends on computer models. You can tap 🔄 to restore to the default level.

Items	Name	Descriptions
◑	**Contrast**	Adjusts the contrast level. The range of levels depends on computer models. You can tap 🔄 to restore to the default level.
◉	**Hue**	Adjusts the hue level. The range of levels depends on computer models. You can tap 🔄 to restore to the default level.
∿	**Flicker**	Sets the frequency to match the local electrical system for flicker free shooting under electric light. Choices are: **60Hz** (default) and **50Hz**.
💡	**LED Light**	Turns **On** (default) or **Off** the LED light. This item is available for setting only on models with the LED light.
👤	**Night Mode**	Turns **On** or **Off** (default) night mode. You can turn on the feature for shooting in low light situations.
🖼	**Image Size**	Sets the image resolution.
		1600 x 1200, **1024 x 768**, **800 x 600**, or **640 x 480** for 2.0MP Camera.
▶	**Video Size**	Sets the video size to **640x480** or **320x240**.

	Camera Mode	Three choices for the shooting mode:	
		Normal	This is the default setting whenever the program is started.
		Continuous	Continuous shooting of 3 pictures（one shot per second）.
		Timer	5-second countdown before shooting.
disp.	Status Display	Turns **On**（default）or **Off** the display of the status indicators.	

	Watermark	Turns **On**（default）or **Off** the display of watermark in the image.（Turning off does not affect the embedded EXIF 2.2 metadata.）	
	Shutter Sound	Turns **On**（default）or **Off** the sound played upon photo shooting.	
	Power Saving	Sets if power saving works for the program.	
		System（default）	The Camera program enters power saving mode according to the settings of Windows' Power Options.
		Never	The Camera program will not enter power saving mode while the program window is open. But when the program window is minimized, the **System** setting overrides.
	Camera Switch	Switches to the **Front**（default）or **Bottom** camera lens. The latter is available for selection only on computer models with two cameras.	
	Folder Path	Sets the storage location of the images. To change to a different folder, tap **Browse** and select the folder.	

The default location is **Users\[user name]\Pictures** folder that contains the original images. A subfolder named **Thumbs** contains a copy of the same images （with filename prefix **Thumb_** ） for the thumbnail view.

NOTE: If you are adding or deleting images using File Explorer, make sure to work on both the correct folder and its **Thumbs** subfolder.

Items	Name	Descriptions	
	Time Option	Displays the time throughout the program according to one of the two choices：	
		System time zone （default）	The time zone setting of the computer is taken into consideration. If the current location is in daylight saving time, the time will be adjusted accordingly．
		UTC	The time is based on Coordinated Universal Time．
	Filename Prefix	The default filename prefix is **IMG**. The complete filename is IMG_*xxxxxx*.jpg （where *xxxxxx* = sequential number）. When the sequential number has reached 999999 and you are taking the next picture, a message will pop up to ask you to change the prefix． You can change the prefix by typing the characters （limited to A~Z, a~z, 0~9, – and _ ） in the entry field. Maximum number of characters allowed is 10．	

Chapter 7

Caring for the Computer

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

This chapter gives you guidelines covering areas such as protecting, storing, cleaning, and traveling.

Protecting the Computer

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

Using an Anti-Virus Strategy

You can install a virus-detecting program to monitor potential viruses that could damage your files.

Using Action Center (for Windows 7)

Action Center alerts you to take action on the following security essentials:

● Windows Firewall

● Windows Update

● Malware Protection (anti-virus, anti-spyware)

● Others (Internet security, user account control)

For detailed information, see Windows' Help.

Using the Cable Lock

You can use a Kensington-type cable lock to protect your computer 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.
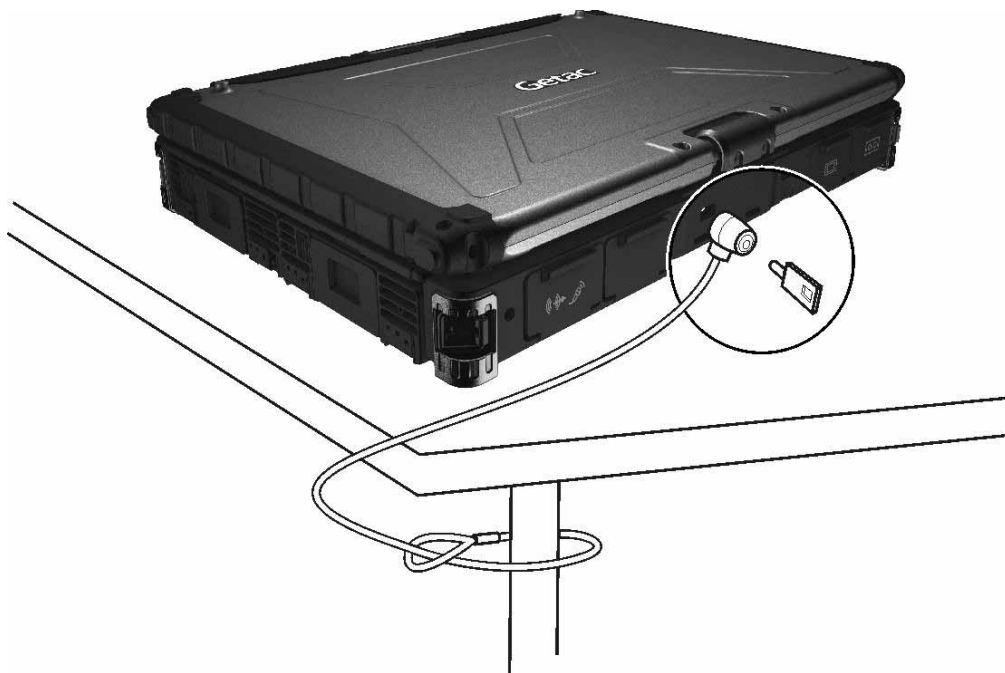
Taking Care of the Computer

Location Guidelines

- For optimal performance, use the computer where the recommended temperature is between 0°C（32°F）and 55°C（131°F）— actual operating temperature depending on product specifications.

- Avoid placing the computer in a location subject to high humidity, extreme temperatures, mechanical vibration, direct sunlight, or heavy dust. Using the computer in extreme environments for long periods can result in product deterioration and a shortened product life.

- Operating in an environment with metallic dust is not allowed.

- Place the computer on a flat and steady surface. Do not stand the computer on its side or store it in an upside-down position. A strong impact by dropping or hitting may damage the computer.

- Do not cover or block any ventilation openings on the computer. For example, do not place the computer on a bed, sofa, rug, or other similar surface. Otherwise, overheating may occur that results in damage to the computer.

- As the computer can become very hot during operation, keep it away from objects that are vulnerable to heat.

- Keep the computer 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 computer 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.

General Guidelines

● Do not place heavy objects on top of the computer when it is closed as this may damage the display.

● The screen surface is easily scratched. Avoid touching it with a sharp object such as a 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 computer with its power on.

● Use a soft cloth moistened with water or a non-alkaline detergent to wipe the exterior of the computer.

● Gently wipe the display with a soft, lint-free cloth. Do not use alcohol or detergent on the display.

● Dust or grease on the touchpad can affect its sensitivity. Clean the pad by using adhesive tape to remove the dust and grease on its surface.

● If water or liquid is split onto the computer, wipe it dry and clean when possible. Though your computer is water-proof, do not leave the computer wet when you can dry it.

● If the computer gets wet where the temperature is 0 °C (32 °F) or below, freeze damage may occur. Make sure to dry the wet computer.

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
    - 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 10°C ~ 30°C（50°F ~ 86°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 computer's power off.

- To maintain the battery pack's operating efficiency, store it in a cool dark place removed from the computer 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 computer is in Sleep mode. Abruptly removing the battery pack may cause loss of data or the computer may become unstable.
- avoid touching the battery pack terminals or damage may occur, thereby causing improper operation to it or the computer.

The computer's input voltage and surrounding temperature will directly affect the battery pack's charge and discharge time:
- charging time will be prolonged when the computer is turned on. To shorten the charging time, it is recommended that you place the computer in sleep or hibernation mode.
- a low temperature will prolong the charging time as well as hasten the discharge time.

● When using battery power in an extremely low temperature environment, you may experience shortened operating time and incorrect battery level reading. This phenomenon comes from the chemical characteristics of batteries. The appropriate operating temperature for the battery is −10 °C ~ 50 °C (14 °F ~ 122 °F).

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.

● Turn off the computer power when cleaning the display. Cleaning the display with the power on may cause improper operation.

- Do not use excessive force on the display. Avoid moving the computer while holding the display or twisting 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 $5^{o}C$）may cause a slower response time, this is normal. A normal response time may be restored upon returning to room temperature.

- When there is a noticeable discrepancy in the placement of the stylus on the screen and the indicated position of the onscreen pointer, use the calibration utility to recalibrate the touchscreen display.

When Traveling

- Before traveling with your computer, 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 computer is turned off and the top cover is securely closed.

- Do not leave objects in between the keyboard and closed display.

- Disconnect the AC adapter from the computer and take it with you. Use the AC adapter as the power source and as a battery-charger.

- Hand-carry the computer. Do not check it in as luggage.

- If you need to leave the computer in the car, put it in the trunk of the car to avoid exposing the computer to excessive heat.

- When going through airport security, it is recommended that you send the computer 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 computer, consult your dealer for the appropriate AC power cord for use in your country of destination.

Chapter 8

Troubleshooting

Computer 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.

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 computer is causing the problem.

- Make sure that you turn on all peripheral devices before turning on the computer.

- 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？ Do you hear any beeps？ 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

Battery Problems

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

- 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.

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 computer. If the actual operating time is much less than the estimated time, initialize the battery.

Bluetooth Problems

I cannot connect to another Bluetooth-enabled device.

- Make sure that both devices have activated Bluetooth.

- Make sure that the distance between the two devices is within the limit and 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.

- The display output might be set to an external device. To switch the display back to the LCD, press the **Fn+F5** hot key or change the display through the settings in **Display** Properties.

The characters on the screen are dim.

- Adjust the brightness and/or contrast.

The display brightness cannot be increased.

- As a protection, the display brightness will be fixed at a low level when the surrounding temperature is too high or too low. It is not a malfunction in this situation.

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.

Resolution cannot be adjusted to desired setting.

- Make sure that the VGA driver is installed correctly.

The external monitor displays nothing.

- Make sure that the monitor is turned on.

- Make sure that the monitor's signal cable is properly connected.

- Switch the display to the monitor by pressing the **Fn+F5** hot key or change the display through the settings in **Display** Properties.

Simultaneous display/multi-display does not work.

- Make sure that you turn on the external monitor before turning on the computer.

- Press the **Fn+F5** hot key to toggle through the display options or change the settings in **Display** Properties in Windows.

Hardware Device Problems

The computer 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 in-use 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.

Keyboard, Mouse, and Touchpad Problems

The keyboard does not respond.

● Try connecting an external keyboard. If it works, contact an authorized dealer, as the internal keyboard cable might be loose.

Water or liquid is spilt into the keyboard.

● Immediately turn off the computer and unplug the AC adapter. Then turn the keyboard upside down to drain the liquid out of the keyboard. Make sure to clean up any part of the spill you can get to. Though the keyboard of your computer is spill-proof, liquid will remain in the keyboard enclosure if you don't remove it. Wait for the keyboard to air dry before using the computer again.

The numeric keypad is disabled.

● Make sure that the **Num Lock** is switched on. (Check if the Num Lock Indicator glows or not.)

The touchpad does not work, or the pointer is difficult to control with the touchpad.

● Make sure that the touchpad is clean.

LAN Problems

I cannot access the network.

● Make sure that the LAN driver is correctly installed.

● 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.

Modem Problems

The modem does not work.

- Make sure that the modem driver is correctly installed.

- Make sure that the telephone line is properly connected.

- Make sure that the COM port in the communication software is correctly set.

- Turn off power management.

Power Management Problems

The computer does not enter Sleep or Hibernation mode automatically.

- If you have a connection to another computer, the computer does not enter Sleep or Hibernation mode if the connection is actively in use.

- Make sure that the Sleep or Hibernation time-out is enabled.

The computer does not enter Sleep or Hibernation mode immediately.

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

The computer does not resume from Sleep or Hibernation mode.

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

The computer does not enter Hibernation mode with the Fn+F12 hot keys.

- Make sure that the Hibernation function is specified for the sleep button.

- You might be using a PC card that prevents the computer from entering Hibernation mode. To enter the mode, stop the communication program and then remove the card or stop the card.

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 computer.（See "Resetting the Computer" later in this chapter.）

Sound Problems

No sound is produced.

- Make sure that the volume control is not set too low.

- Make sure that the audio driver is correctly installed.

- Make sure that the computer is not in Sleep 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 sound system does not record.

- Adjust the playback or recording sound levels.

The external microphone or audio device does not work.

- Make sure that the microphone is connected to the proper connector on the computer.

- Make sure that your computer 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 computer.

Startup Problems

When you turn on the computer, it does not seem to respond.

- Make sure that either the AC adapter is connected or the battery has power.

- **For models with the HDD heater option:** When turning on the computer in an extremely low temperature environment, the computer will heat up the hard disk before starting up. The hard disk drive in-use indicator blinks red to indicate the heater is on.（In conditions where the AC adapter is connected and the temperature is above an acceptable range, the computer will display messages on the screen informing you of the heating process; in other conditions, the screen is simply blank.）Wait till the heating is finished. However, if external AC power is not available and the remaining battery power is too low for the heating to complete, the computer may not start up. In case the computer fails to start up, turn off the computer and leave it in room temperature for about an hour before trying to turn it on again.

When you turn on the computer, it stops after POST.

- Restart your computer.

WLAN Problems

I cannot use the WLAN feature.

- Make sure that the mini PCI-E WLAN card is correctly installed.

- Make sure that the necessary driver(s) is correctly installed.

- Make sure that the WLAN feature is turned on.

Transmission quality is poor.

- Your computer may be in an out-of-range situation. Move your computer closer to the Access Point or another WLAN 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 computer away from the device causing the radio interference such as microwave oven and large metal objects.

- Plug your computer 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 WLAN device.

- Make sure that the WLAN feature is turned on.

- Make sure that the SSID setting is the same for every WLAN device in the network.

- Your computer is not recognizing changes. Restart the computer.

- 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 computer 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 computer may be in an out-of-range situation. Move your computer closer to the Access Point it is associated with.

- Make sure that your computer 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 necessary driver(s) is correctly installed.

- 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.

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 computer, the RTC (Real-Time Clock) battery is at the end of its life. Call an authorized dealer to replace the RTC battery.

Resetting the Computer

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

If the computer operation seems to hang up, first wait. It is possible that the computer 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 keyboard. If you are sure the operation has stopped and you cannot use the "restart" function of the operating system, reset the computer.

Reset the computer by any one of these methods：

- Press **Ctrl+Alt+Del** on your built-in keyboard.

- Press the Reset button ⊷ on the front panel of your computer.

- If the above action does not work, press and hold the power button for more than 5 seconds to force the system to turn off. Then turn on the power again.

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

Appendix A
Specifications

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

Parts	Specifications
CPU	Intel® Ivy Bridge i5-3320M, 2.6G, 35W
Chipset	Intel® Panther Point QM77
Memory	Up to 8 GB, 240-pin × 2, DDRIII 1333MHz SO-DIMM
BIOS	8 MB EEPROM, system and VGA BIOS, Plug-and-Play, ACPI 2.0 capability
Display — Panel	12.1-inch TFT LCD, resolution up to 1280×800 WXGA, Touchscreen function and/or Digitizer feature （option）, Sunlight-readable with 1200 nits brightness after touchscreen, Ultra low brightness （option）
Display — Video controller	Integrated in Intel® Ivy Bridge
Audio — Features	Azalia interface, left/right-channel analog output for line-out connector
Audio — Speaker	One built-in
Keyboard	Standard keys with numeric pad keys, 12 function keys, special **Fn** （Function） key and Windows keys Water-proof and dust-proof membrane, large character printing, water-proof rubber （option）, membrane backlight （option）
Pointing device	Glide touchpad with 2 buttons, capacitance-type Resistive （Glove） touchpad （option）
Hard disk drive	SATA 3 interface, 320GB, HDD heater for -20 °C low temperature （option）, 128GB solid state disk （option）
PC Card /ExpressCard/Smart card support	Standard: ExpressCard/54 + PC card Option: Smart card + ExpressCard/54

Parts		Specifications
Memory card reader		SD/SDHC/SDXC
I/O ports		USB 3.0 x 2, USB 2.0, Mini 1394a, serial (RS-232), RJ-45, RJ-11, headphone out, microphone, VGA, docking (100-pin)
Antenna	Wi-Fi 802.11a/b/g/n + Bluetooth 2.4G	2 internal (pass-through for external antenna - option)
	WCDMA/HSDPA	2 internal (pass-through for external antenna - option)
	GPS 1.5G (option)	1 internal
Modem		Azalia interface, 56 Kbps, ITU V.90 MDC 1.5 internal fax modem
LAN		IEEE 802.3i 10Base-T, IEEE 802.3u 100Base-T, IEEE 802.3ab 1000Base-T Ethernet
Wireless LAN + Bluetooth		Intel® Centrino Advanced-N 6235, 802.11 a/b/g/n WLAN booster (option) Blutooth 4.0 class 1 + EDR
Camera		2M pixel (EDOF), 225-degree rotation
GPS (option)		EB-5318RF
WWAN (option)		WCDMA/HSDPA
Security		Kensington lock TPM 1.2 Fingerprint scanner (option)
Handle		Grip and cross-type hand strap
Power	AC adapter	Universal 90 W; input: 100~240 V, 50/60 Hz; output: 19 V
	Battery	Li-ion smart 9-cell battery 8700 mAH / 10.8 V Li-ion smart 6-cell battery 6140 mAH / 10.8V (option) user-swappable, under -20 ^{o}C combined with hard drive low temperature solution
Dimension (L×W×H)		314×227×49 mm (12.4×8.74×1.93 inch)
Weight		2.8 kg (5.95 lb)

Parts		Specifications
Environment	Temperature	Operating: 0 °C (32 °F) to 60 °C (140 °F) -20 °C (-4 °F) to 60 °C (140 °F) – low temperature option Non-operating: -51 °C (-60 °F) to 71 °C (160 °F)
	Humidity	5 % to 95 % relative, non-condensing
	Altitude	Operating: 15,000 ft Non-operating: 40,000 ft
	Shock	Operating: 40 g, 11 ms, sawtooth pulse
Environment	Vibration	Integrity: MIL-STD-810G, Method 514.6, E-1, Category 24, minimum integrity Vehicle: MIL-STD-810G, Method 514.6, C-1, Category 4, Secured Cargo MIL-STD-810G, Method 514.6, C-1, Category 20, Ground Vehicle
	Drop	100 cm drop 26 times onto plywood plate surface
	Enclosure	IP65 (with input/output doors closed)
	ESD	Air discharge: 0~8 KV (included) no error; 9~15 KV allow soft error Contact discharge: 0~6 KV (included) no error; 7~8 KV allow soft error
Regulation	EMC	FCC part 15, subpart B, class B, CE, CCC
	Safety	UL, TUV, TUV/CB, E-mark
Green Product Coverage	RoHS	6 European union banned materials, EPEAT
	Other	12 universal GP product banned materials, ENERGY STAR, WEEE

Appendix B

Regulatory Information

This appendix provides regulatory statements and safety notices on your computer.

NOTE: Marking labels located on the exterior of your computer 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 brouileur.

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.

UL1604 Installation Instructions

- This equipment is suitable for use in Class I, Division 2, Groups A, B, C and D OR non-hazardous locations only.

- WARNING − EXPLOSION HAZARD − Do not disconnect equipment unless power has been removed or the area is known to be non-hazardous.

- WARNING − EXPLOSION HAZARD - Substitution of components may impair suitability for Class I, Division 2.

- Non-LPS or TNV output connectors identify the type of circuit, intended cable type or relevant circuit characteristics.

- "IMPORTANT SAFETY INSTRUCTIONS - When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:
  − Do not use this product near water for example, near a bathtub,

washbowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.

- Avoid using a telephone（other than a cordless type）during an electrical storm. There may be a remote risk of electric shock from lightning.
- Do not use the telephone to report a gas leak in the vicinity of the leak.

● Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.

"SAVE THESE INSTRUCTIONS"

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: II 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 computer. 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.

About the Modem

Caution

● Never install telephone wiring during a lightning storm.

● Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.

● Never touch non-insulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.

● Use caution when installing or modifying telephone lines.

● Avoid using the telephone function (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.

● Do not use the telephone function to report a gas leak in the vicinity of the leak.

● Do not use this product near water, for example near a bathtub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.

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

RF exposure warning

The equipment complies with FCC RF exposure limits set forth for an uncontrolled environment.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

RF exposure information (SAR)

This Notebook Computer meets the government's requirements for exposure to radio waves. This is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government. The exposure standard for employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 2.0 W/kg. Tests for SAR are conducted using standard operating positions accepted by the FCC with the transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the while operating can be well below the maximum value. This is because the is designed to operate at multiple power levels so as to use only the poser required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output. The highest SAR value for US model as reported to the FCC when tested for use at the body, as described in this user guide, **is 1.080W/kg**

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.

Canada Radio Frequency Interference Requirements

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

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

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 stenst 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 802.11a/g/n Radio Usage

CAUTION: Due to the fact that the frequencies used by 802.11a/g/n wireless LAN devices may not yet be harmonized in all countries, 802.11a/g/n 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 computer 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.