handheld
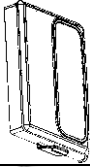
A7 Handheld Rugged Tablet PC

User Manual

Version: 1.0

Accessory

Item	Description	Note
	2 piece of 2 Cell Li-Polymer Battery Pack	Hot-swappable for battery change
	1 piece of Rugged Tablet PC QSG	
	1 piece of 12V Adapter w/ Standard Power Cord. Euro / U.S. Std type, 1.8m	

Optional Accessory

Item	Description	Note
	2 piece of 4 l Li-Polymer Battery Pack	Hot-swappable for battery change

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If the serial number and the product shipping data differ by over 30 days, the in-warranty service will be made according to the shipping date. In the serial numbers the third and fourth two digits give the year of manufacture, and the fifth digit means the month (e. g., with A for October, B for November and C for December).

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For example, the serial number 1W10Axxxxxxxx means October of year 2010.

Customer Service

We provide service guide for any problem as follow steps：First, visit the website at www.handheldgroup.com to find the update information about the product. Secondly, contact with your distributor, sales representative, or our customer service center for technical support if you need additional assistance. You may have the following information ready before you call：

➢ Product's serial number
➢ Peripheral attachments
➢ Software (OS, version, application software, etc.)
➢ Description of complete problem
➢ The exact wording of any error messages with print screen images

In addition, free technical support is available from our engineers in every business day. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products. Please do not hesitate to call or e-mail us.

Manufacturer：Handheld Inc.
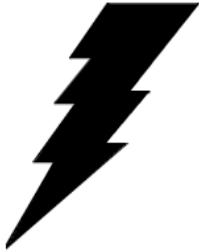Address：Handheld Group AB, Kinnegatan 17 A, S-531 33, Linkoping, Sweden
TEL：+46 (0) 510-54 71 70
FAX：+46 (0) 510-282 05

Safety Precautions

● Warning!

Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not connect the electronic device with power socket while the device's power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the Pac's chassis mechanical housing.

● Caution!

Always ground yourself to remove any static charge before touch the CPU card. The electronic devices are very sensitive to static electricity. As a safety precaution, use a grounding wrist strap all the time. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

● Battery Notice!

WARNING
Do not fix or replace battery, it may cause explosion! Only use with specified battery by following the manufacturer's user manual's instruction.

UL Safety Announcement

UL Classification: Class I mark: with respect to electronic shock; Fire and hazardous material only in accordance with the regulation of UL-60950 and CAN/CSA C22.2 No. 601.1.

● Power Supply Announcement

The Handheld Rugged Tablet PC Power Supplies are supported by Power Adapter and Battery Pack, the power rating announcement and manufacturer information list as below.

Power Adapter	Manufacture: EDAC Power Electronics Co Ltd Model: EA1050C-120 Input Rated: 100-240Vac, 1.8A, 50-60Hz. Output Rated: DC ⎓ 12V, 6.66A.
Battery Pack	Manufacture: JHT energy International Co Ltd Model: ALG7-08A Rated: 2600mAh DC 7.4V

● Power Notice!

(1) Please aware of the power code of adapter need to be connected to the Earth ground.

(2) Please notice the Power Standby mode when push power button at least 4 seconds to go to sleep status. (See Chapter 2.1 Starting and Stopping the Tablet PC)

FEDERAL COMMUNICATIONS COMMISSION

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.

CAUTION:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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 Rugged Tablet PC meets the government's requirements for exposure to radio waves. This Rugged Tablet PC 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 wireless Rugged Tablet PC employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. Tests for SAR are conducted using standard operating positions accepted by the FCC with the Rugged Tablet PC 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 Rugged Tablet PC while operating can be well below the maximum value. This is because the Rugged Tablet PC 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 Rugged Tablet PC as reported to the FCC when tested for use at the body, as described in this user guide, is 1.339 W/kg.

Industry Canada Class B Statement

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

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

This device complies with Industry Canada licence-exempt RSS standard(s).Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. IEEE 802.11b or 802.11g operation of this product in the Canada is firmware-limited to channels 1 through 11.

Déclarations d'exposition aux RF liéesAvertissement d'exposition RF: L'équipement est conforme aux limites d'exposition aux RF établies pour un environnement non contrôlé. L'antenne (s) utilisée pour ce transmetteur ne doit pas être co-localisés ou fonctionnant en conjonction avec une autre antenne ou transmetteur.

Ce dispositif est conforme à la norme de l'industrie Candada exempts de licence RSS (s). L'opération est soumise aux deux conditions suivantes: (1) Cet appareil ne peut causer d'interférences nuisibles, et (2) cet appareil doit accepter toute interférence reçue, y compris les interférences qui peuvent causer un mauvais fonctionnement de l'appareil.

Contents

Chapter 1

Specification

⚠

CHAPTER 1 Specification

This User Manual cover the use of an A7 with Microsoft Windows 7 OS, but other operating systems can also be used. Please contact your supplier for further information.

The A7 is a compact high performance, low weight rugged Tablet PC designed for outdoor fieldwork purpose. The A7 can survive in severe environmental conditions including vibration, shock, moisture and temperature variations. The A7 is suitable for use in harsh environments such as construction sites, warehousing, defense, manufacturing and field service. The A7 is delivered with two batteries and an AC adapter.

This Chapter introduces the 7" Handheld Tablet PC A7 specification.

1.1 System Specification

System	
Processor	Intel® Atom™ N2600 1.6 GHz Dual Core
BIOS	AMI System BIOS
Chipset	Intel NM10
Memory	4GB DDR3 1066 SO-DIMM RAM
LAN Controller	Broadcom BCM57780 Chipset, 10/100/1000 Mbps
Storage	Msata 128GB SSD
Audio	Audio out for headset, Micro-in for microphone jack,1.5W Speaker (Internal)
I/O Connectors	
Left I/O Port	1x Micro-In, 1x Audio Out,1x Giga LAN, 1x USB, 1x DC Power Jack
Right I/O Port	1x RS232, 1x USB
Bottom Side	Pogo-pin for docking
Rear Side	Service Window
In Front Control	
Control Button	1x Power On/Off, 1x Menu, 1x Up, 1x Down, 1x Left, 1x Right 3x Programmable Hotkeys
LED indicator	1x Power Status, 1x HDD Status, 2x Battery Status, 1x RF Device Status

Display Specification	
Size	7" (16:9)
Resolution	1024x600
Brightness	600 nit
Touch	4 Wire Resistive Touch

Power Management	
Power Input	12 V DC @ 6.66A
Power Consumption	9W
Battery	Li-Polymer 7.4V 2S1P, 2600mAh
Adapter	100-240V, 50-60Hz, 12VDC

1.2 How to Use the Tablet PC

This section describes how to control this Tablet PC.

	Components	Function Description	See Other Intro.
1	Power On Button	PUSH 4 seconds to turn on the tablet pc	
2	LED Indicator	Shows the Power Status, HDD Status, Left and Right Battery Status, and Wireless Status	
3	Menu	Push Menu function to show Brightness, Volume,Battery status and Wireless Enable/Disable.	
4	F1 – F3 Hotkey	6 programmable Hot-key functions for user to define by application, default first short push key (F1 short) will turn-on Outlook Express	

5	Up/Down/ Left/ Right/OK Button	Cotrol the up, down, left, right and Enter function.

1.3 LED Indicator

LED Term	Indicator Status Description
Power mode	Green: System Turn On. No Light : System Turn Off
Battery Status	No Light: 100% full charge or power on with AC adapter Green Light: Product under charge Red Light: Low battery status Red blinking light : Low Battery warning < 5%
Storage Status	Green Light blinking: HDD is using
Wifi status	Green Light blinking: Any RF Device On No Light: RF device is not working

1.4 Using the Battery Packs

This section describes the details of using the battery packs.

Using the Battery Packs

Before you use your Handheld tablet PC on the road, you will have to charge the battery packs, the battery packs begins to charge as soon as the Handheld tablet PC is connected with the external power source. Please fully charge the batteries before using them in the first time. The new battery packs must 100% charged before the Handheld tablet PC is disconnected with the external power source. The battery pack is fully charged when the battery light indicator turns OFF. It takes about couple of hours to fully charge the battery when the Handheld tablet PC is turned OFF.

Battery Care

The Handheld tablet packs like all rechargeable batteries, it have limit on the number times it can be fully recharged. Fully draining and charging the battery once a day in each day will leave the batteries last over a year, but rechargeable time limits are based on your environmental temperature, humidity, and how your tablet PC is used. The ideal environmental temperature range between $10°$ C and $29°$ C ($50°$ F and $85°$ F).

Battery Power System

The Handheld tablet PC is designed to work with two removable battery packs located inside the battery pack compartment. The fully charged batteries pack will provide several hours of battery life, which can further extended by using power management features through the BIOS setup. The battery system implements the power management software which allows the battery to accurately report the amount of charge percentage left in the battery.

Charging the Battery Pack

You can charge the battery pack by using the power adapter. When the power adapter is plugged in, the inserted batteries packs automatically recharges whether your tablet PC is ON or OFF. It takes about couples of hours for battery to receive fully charge when the power is OFF but takes twice as long when the tablet PC is in use. When the red charge LED indicator in flashing, charging is required. The battery is charging when the red LED is solid, when the LED is turned OFF, the battery pack is fully charged.
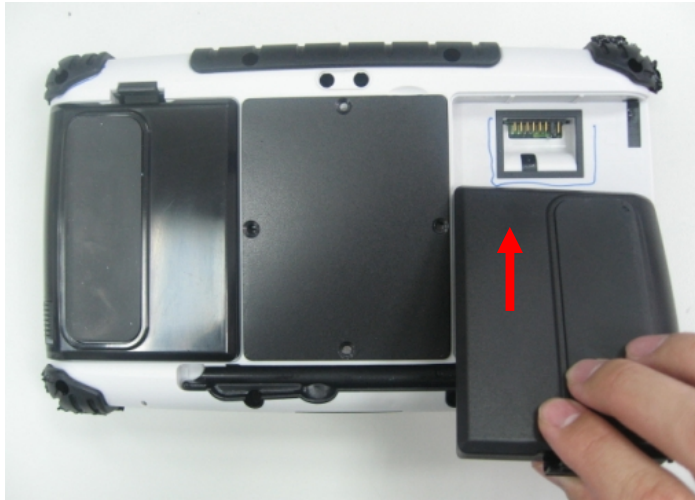
Insert the battery pack

Step 1

Insert the battery pack into the battery slot.

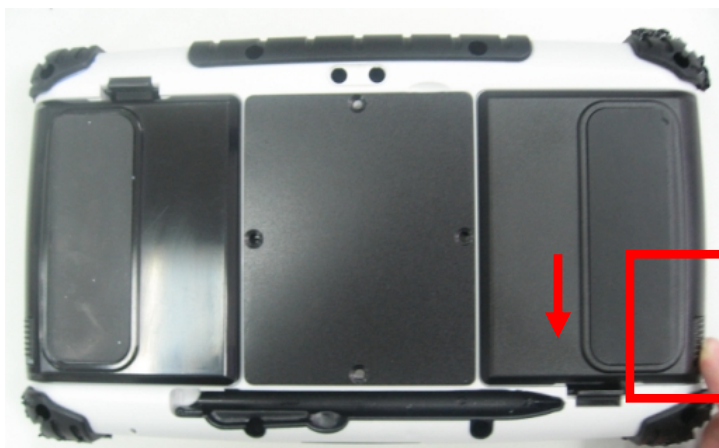**Step 2**

Press down the compression lock into the tablet pc.

Step 3

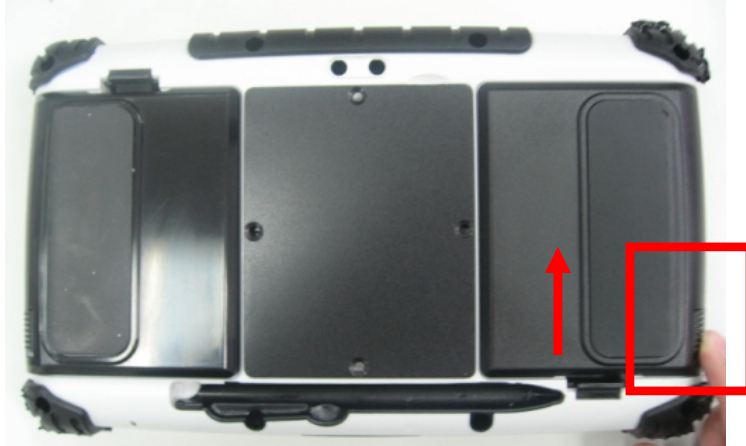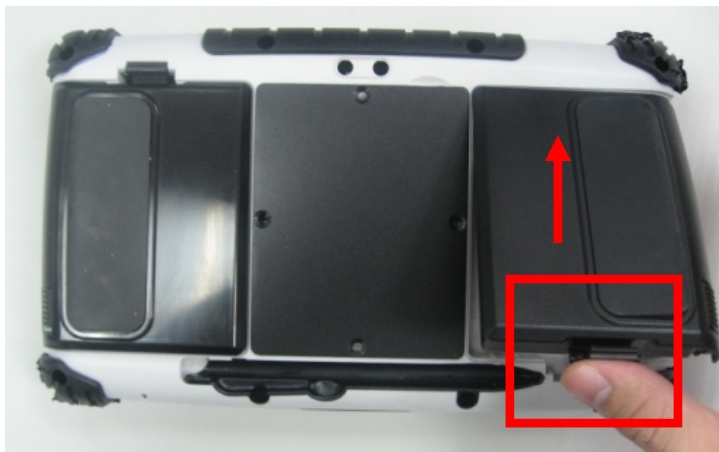 Press the latch down to fasten the battery on the tablet PC

To remove the Battery

Step 1

Press the latch up to loose the battery pack on the tablet PC

Step 2

Press up the compression lock from the tablet pc.

Step 3

Take the battery pack from the battery slot.

1.5 The Battery Light Signal Instruction

1. The two battery packs charging procedure.

When the tablet pc is connected with the power source, the battery packs are starting to charge.

A. Battery Charging Mechanism:

1. The battery packs are both at low power level

a. If first battery's power level is higher the second battery than 10%, the PC will charge the second battery first.

b. If both batteries' power level differences are lower than 10%, the PC will charge two batteries at the same time.

2. If one battery is full charged, the other is at low power level, the PC will charge the battery which is at low power level.

3. If both batteries are full charged, the PC will shut down the charging current.

B. Battery Discharging Mechanism:

1. If the battery on the right is full charged (>3%), the PC will select the right one as the power source.

2. If the battery on the left is full charged (>3%), the PC will select the left one as the power source.

3. If the both batteries are full charged, long push the F3 hot tab to switch the battery power source.

4. When the battery's power level is under 3%, the PC will automatically switch the power source to the other battery.

5. When the battery's power level is under 10%, the battery light is flashing the red light to alarm.

6. .When both batteries power level are under 10%, the PC will send out the red light to alarm.

6. When both batteries power level are under 3%, the PC will turn off the power automatically to protect the battery pack.

Battery Light Signal: Charging ● Low Power ◎

Battery A\B	B: 10%~100%	B: 3%~10%	B: 0%~3%	B: No battery
A: 10%~100%	Use A: ● ○ Use B: ○ ●	Use A: ● ◎ Use B: ○ ◎	Use A: ● ◎ Use B: Switch A	A: ● ○
A: 3%~10%	Use A: ◎ ○ Use B: ◎ ●	Use A: ◎ ◎ Use B: ◎ ◎	Use A: ◎ ◎ Use B: Switch A	A: ◎ ○
A: 0%~3%	Use A: Switch B Use B: ◎ ●	Use A: Switch B Use B: ◎ ◎	Turn off the PC	Turn off the PC
A: No battery	Use B: ○ ●	Use B: ○ ◎	Turn off the PC	Turn off the PC

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Chapter 2

Software Operation

CHAPTER 2 Software Operation

This Chapter will guide you how to operate the Tablet PC, including start / stop the PC, and how to use menu function including basic hardware function adjustment and the Hot Tab hotkey utility software that is very easy & helpful for operating the computer.

2.1 Turning On and Off the Tablet PC

2.1.1 Turn on the Tablet PC

1. Place your tablet PC on a flat and stable surface or hold the tablet PC on your hand.

2. Make sure the tablet PC is either connected with AC power adapter or the battery pack with power.
3. Press the power button at least for 4 seconds to turn it on.

2.1.2 Turn off the Tablet PC
Turn off the tablet PC power source by using the "Shut Down" command of your operating system.
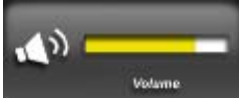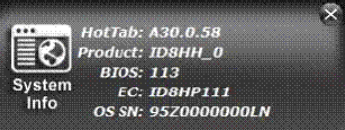
**Caution

If you have to turn the tablet PC on again immediately after turning it off, please wait for at least for five seconds. Be sure to know that turn the tablet PC off and on rapidly can damage the whole device.

2.2 How to use the software utility

Hot-Tab Hotkey Function

PUSH Menu	Function Description		Function Adjustment	
1st Time	Show Current Brightness		Click "Left/ Down" button to increase brightness (Or Drag by Touch) Click "OK" to confirm and eliminate UI.	Click "Right/Up" to decrease brightness(Or Drag by Touch) Click "OK" to confirm and eliminate UI.
2nd Time	Show current Volume			
3rd Time	Show current Battery Usage and Two BTR status			
4th Time	Show current on/off of Wireless mode		Use touch button to select all kind of wireless communication function Enable/ Disable	
5th Time	Show software version for a. Hot TAB Utility version b. BIOS / EC version			
LONG PUSH 4 sec	Lock/Unlock all button function Push 4 seconds to Lock all button**(not including Touch)		Push 4 seconds to Unlock back to normal operation	

2.3 Hot TAB Software Utility Functions

1. F1 Hot TAB functions will show four functions
   A. The first is virtual mouse

   B. Screen rotation

   C. Onscreen Keyboard

D. Handwriting(Optional)

E. F2 to F3 functional Hot key
   You can use "Browse" and choose the execution program file.
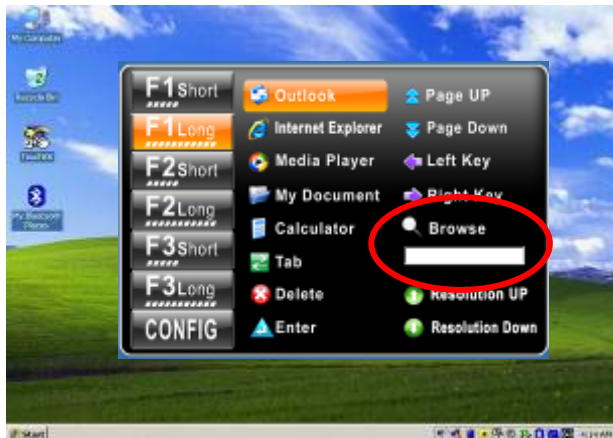
2. Power Manage function

3. System Information
   When you press menu 3rd time, you can see the system
                                                          information.

4. Low battery warning notice:

2.4 How to use the Wireless Network

We apply IEEE 802.11 b/g/n WiFi + Bluetooth 4.0 HS Standard（Class I）Half mini card for default function of the A7.

The WLAN features include:

● Support Peer-to-Peer (Ad-Hoc) and Access Point (Infrastructure) modes.

● Enhanced wireless security:64/128-bits WEP, WPA, WPA2.

● Wireless connection up to 150Mbps

1. Press the Menu button on your Tablet PC to open the Hottab menu. Click the "Wi-Fi" to switch the wireless radio on/off.
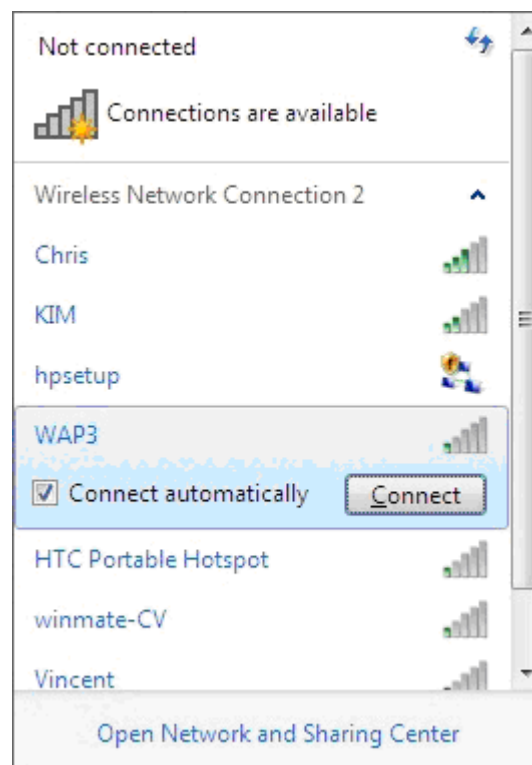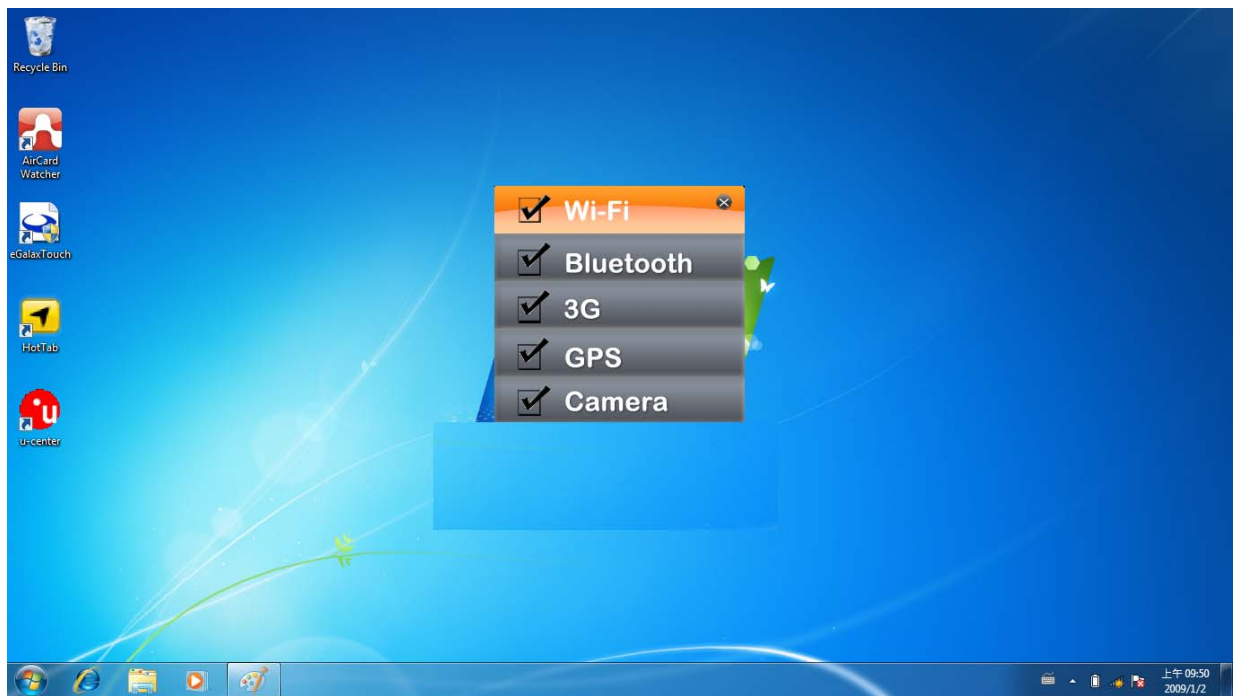
2. Click the   Wireless Network icon on the

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taskbar. (An orange light in the icon indicates connections are available.)

3. You can also do some detail setting from the device manager.
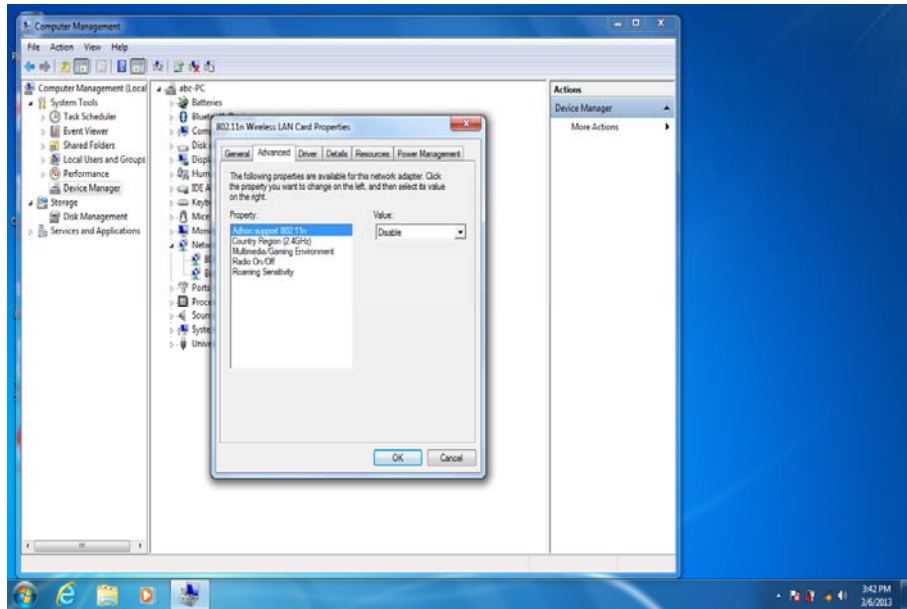
2.5 How to use the Bluetooth

Depending on your application, the Bluetooth module can give you capability for short-range wireless communications between devices without requiring a cable connection. The transmission can go through walls, pockets and briefcases as long as two devices are within range around 10 meters. Following the easy step to connect to the Bluetooth communication.

1. Press the Menu button on your Tablet PC to open the Hottab menu. Click the "Bluetooth" to switch the BT radio on/off.
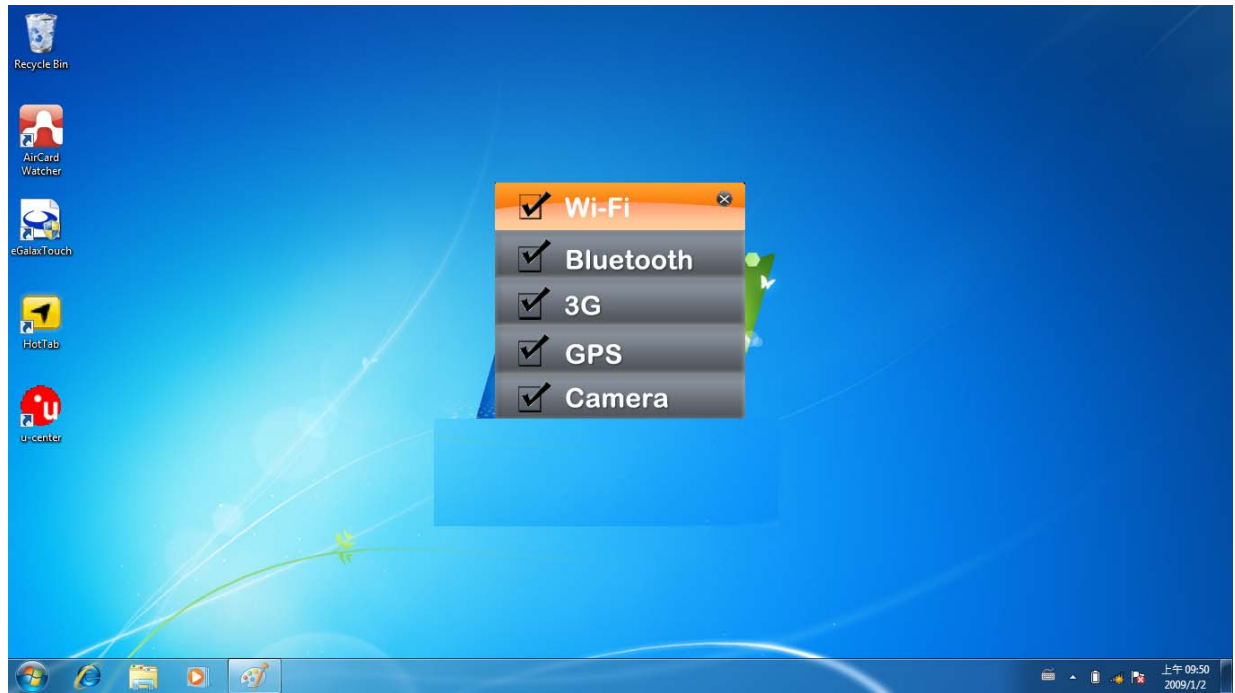
2. After installing the driver utility, the Bluetooth shortcut will shown on screen, double click the shortcut and it will search any bluetooth device automatically. Or double click "Search Devices" to search again.

3. Choose the bluetooth device you want to connect, and left click to choose "Connect". Then the device will be connected to the module.
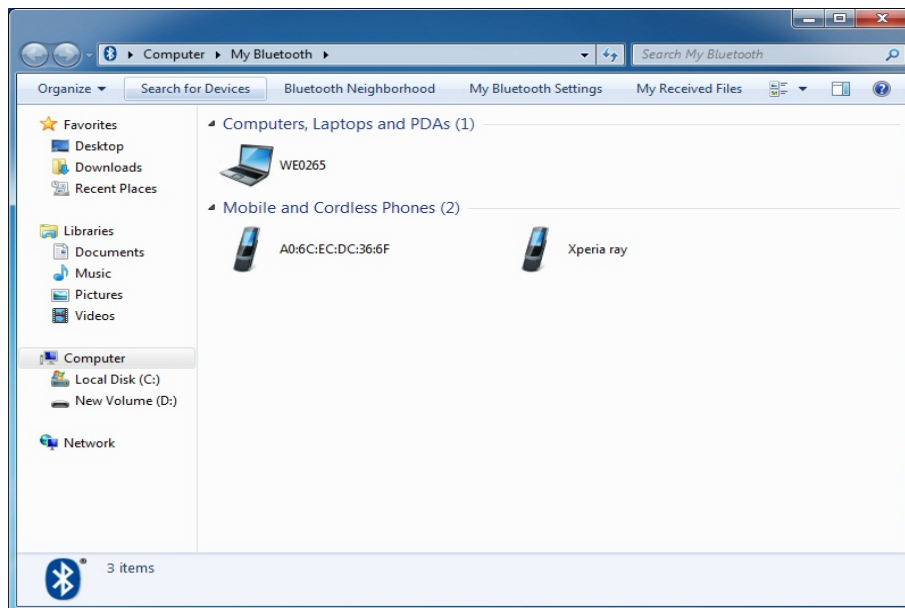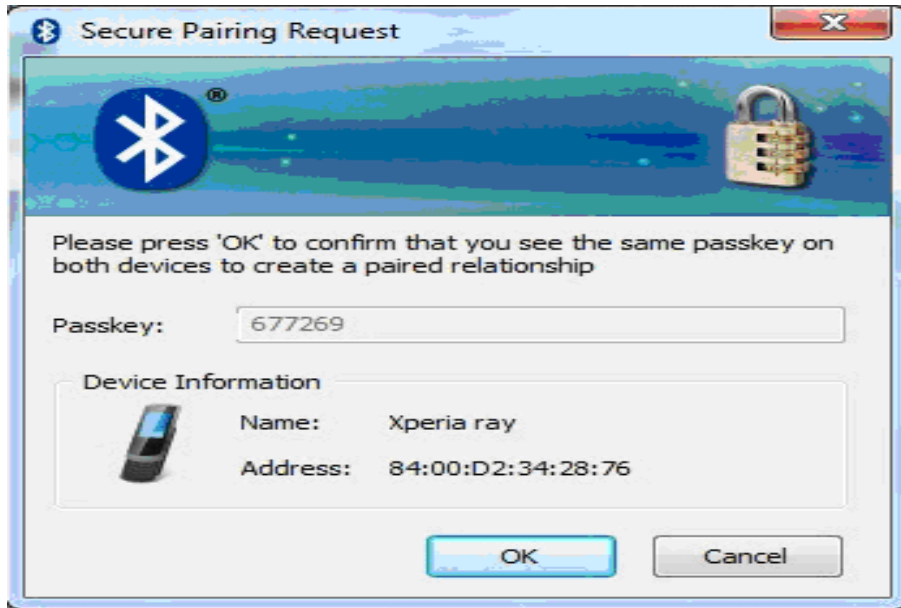
4. When under connecting, you can choose "Send" to send a data to the pair device. connection.

2.6 How to use the WWAN Feature

※Please insert SIM card before power on.

The A7 can apply a built-in Mini PCIe 3G module to perform the 3G function. Depending on your application, the 3G module can datacard and host PC software combination deliver multiband HSPA/UMTS , EDGE/GPRS , WCDMA/GSM connectivity in a single hardware configuration.

1. Press the Menu button on your Tablet PC to open the Hottab menu. Click the "3G" to switch the

    3G radio on/off.

2. On Windows desktop, double-click the AirCard Watcher shortcut. The screen as below appears.

    〔If the 3G device is not exist, the AirCard Watcher will not pop up automatically.〕

2.7 How to use the GPS Feature

We apply an on board GPS module for default function of the A7.

1. Press the Menu button on your Tablet PC to open the Hottab menu. Click the "GPS" to switch the GPS radio on/off.
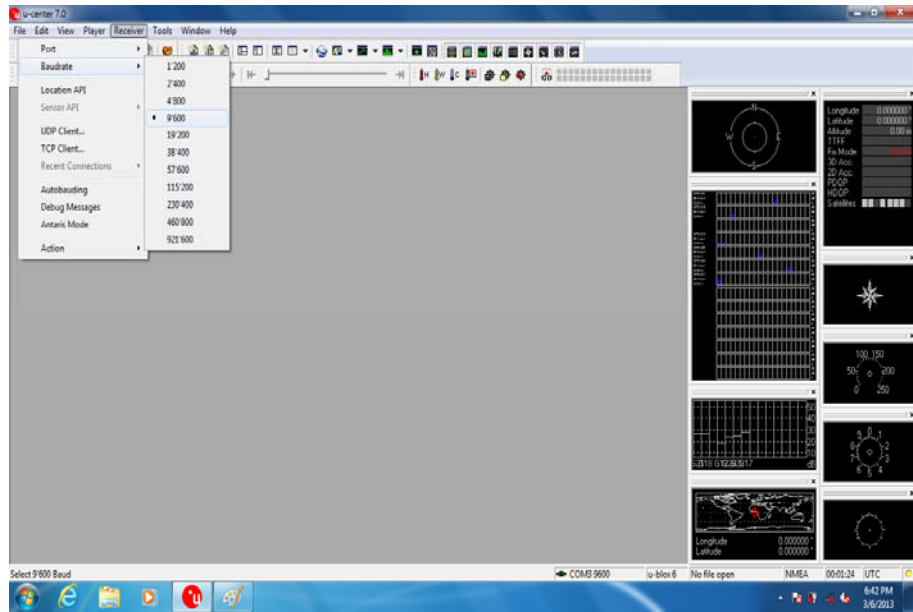

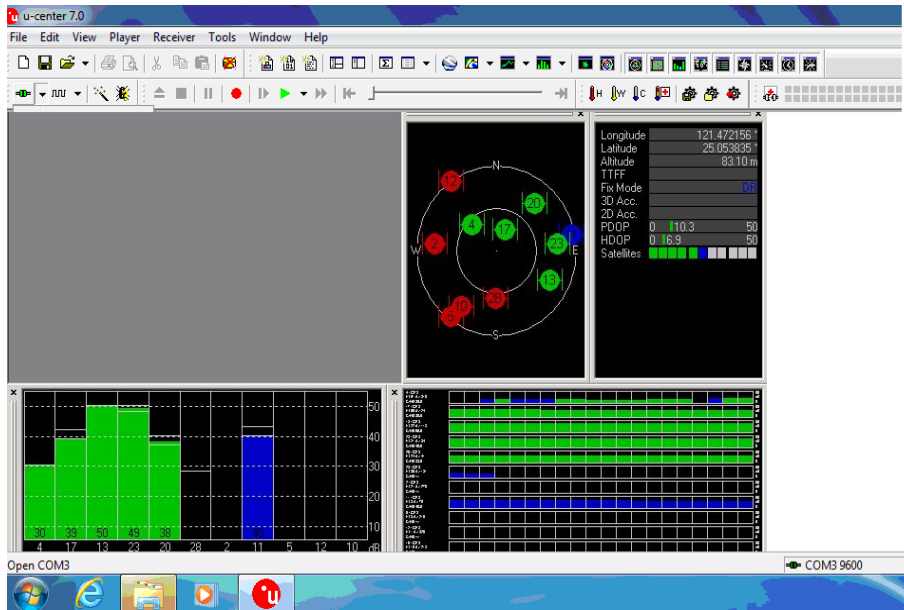2. Click the u-center icon to start the GPS function settings.
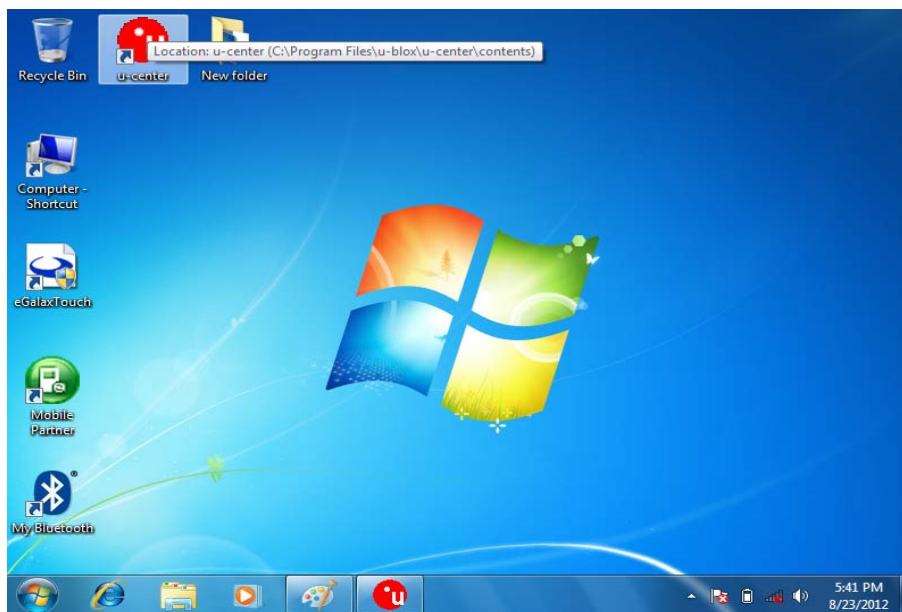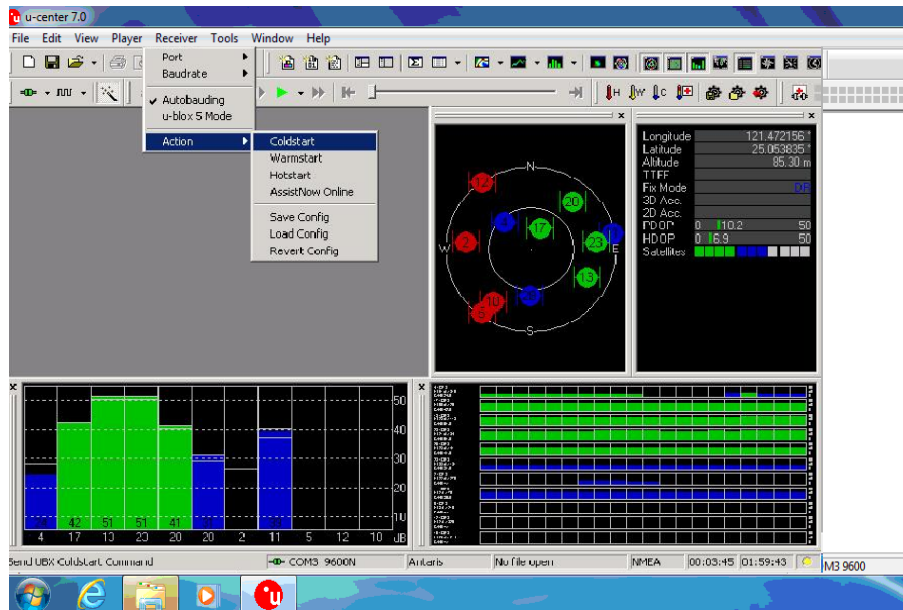
3. Setting the Receiver Port to COM3
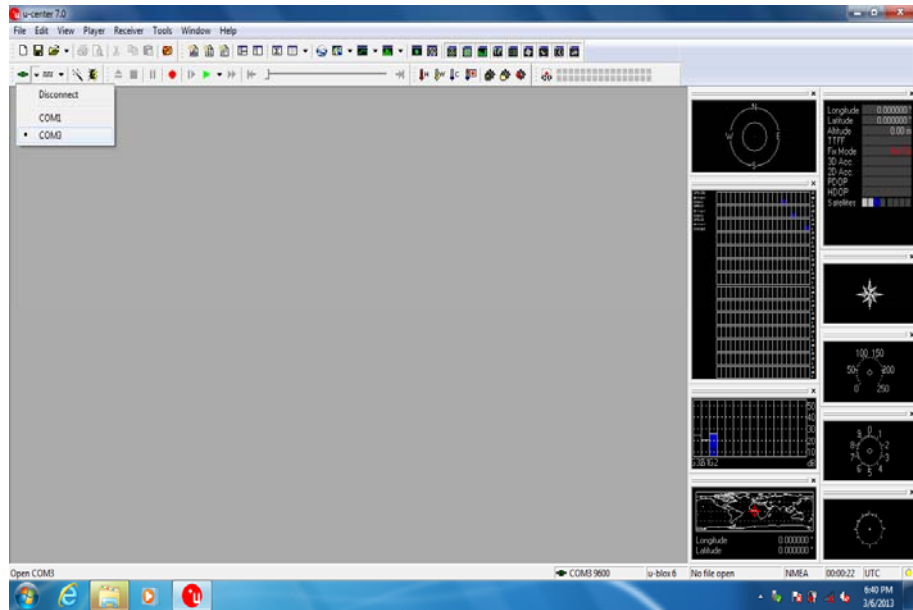
4. Setting the Receiver Baudrate to 9600

5. GPS Module will start Cold Start. When the positioning is complete, the Fix Mode will appear as DR

6. You can choose coldstart, warmstart or Hotstart from Receiver Action

2.8 How to use the Camera Feature

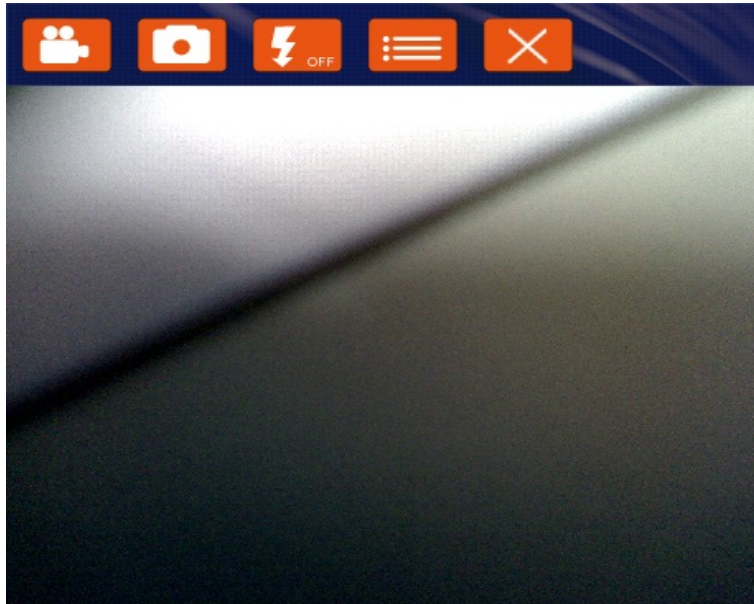The A7 applies a internal 5M Pixels Camera with microphone module for default function .

1. Press the Menu button on your Tablet PC to open the Hottab menu. Click the "Camera" to switch the Camera power on/off.
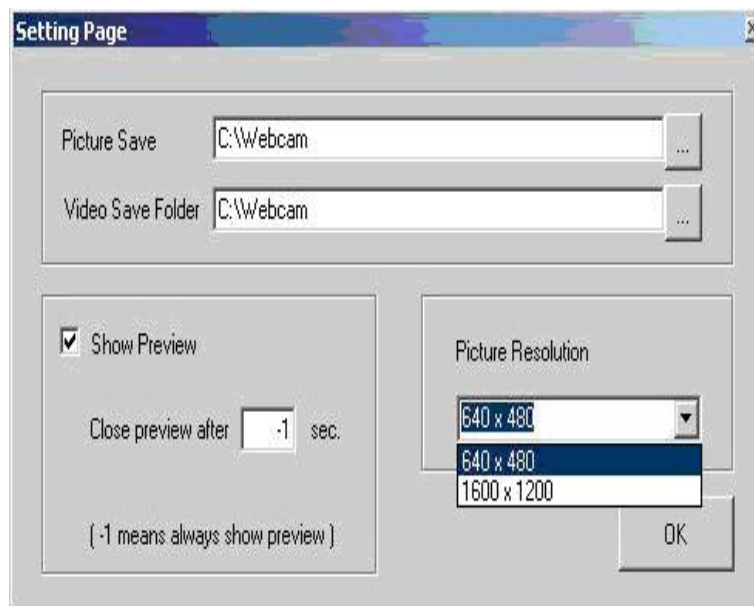

2. Start the Camera program. You will be in Camera mode.
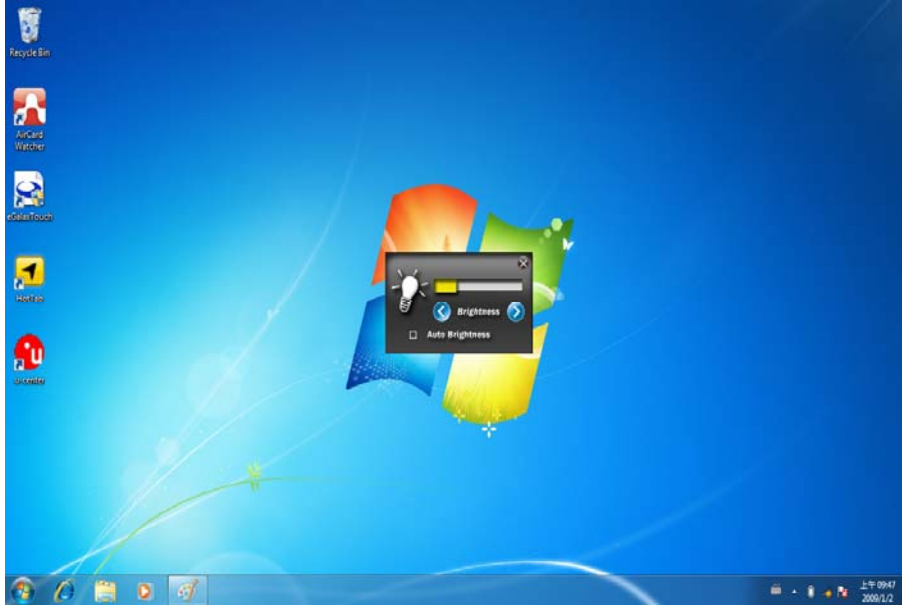
3. Setting the image pre-view resolution.

4. When you set the pre-view resolution to 640*480,the final picture resolution is also 640*480..

2.9 How to adjust the LCD brightness

1.   Press the Menu button on your Tablet PC to open the Hottab menu.
2.   Allows you to use the left and right arrow keys to adjust the LCD brightness.

3. The "Auto Brightness" choice box allows you configure how the light sensor works.

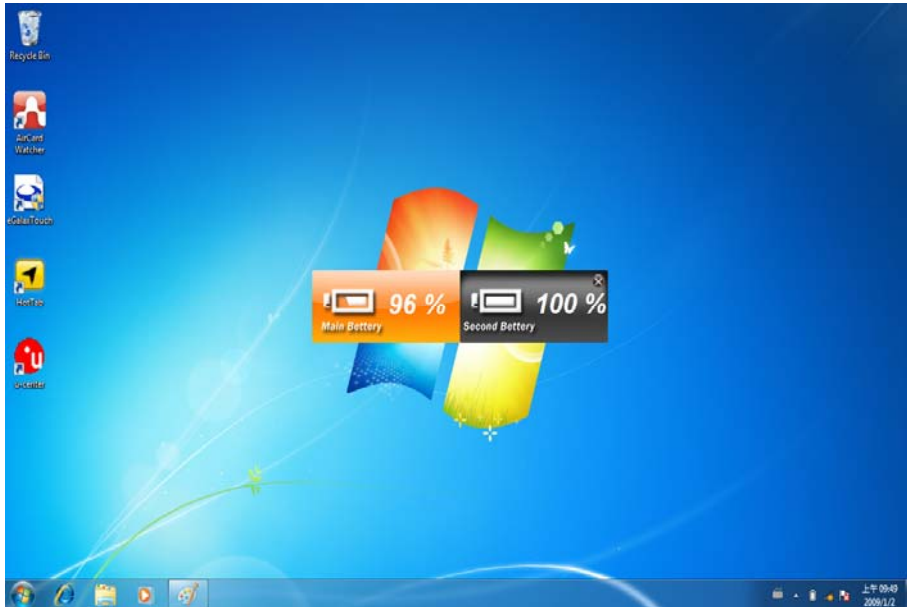## 2.10 How to adjust the speaker volume.

1. Press the Menu button twice on your Tablet PC to open the Hottab menu.

2. Allows you to use the left and right arrow keys to adjust the speaker volume. •
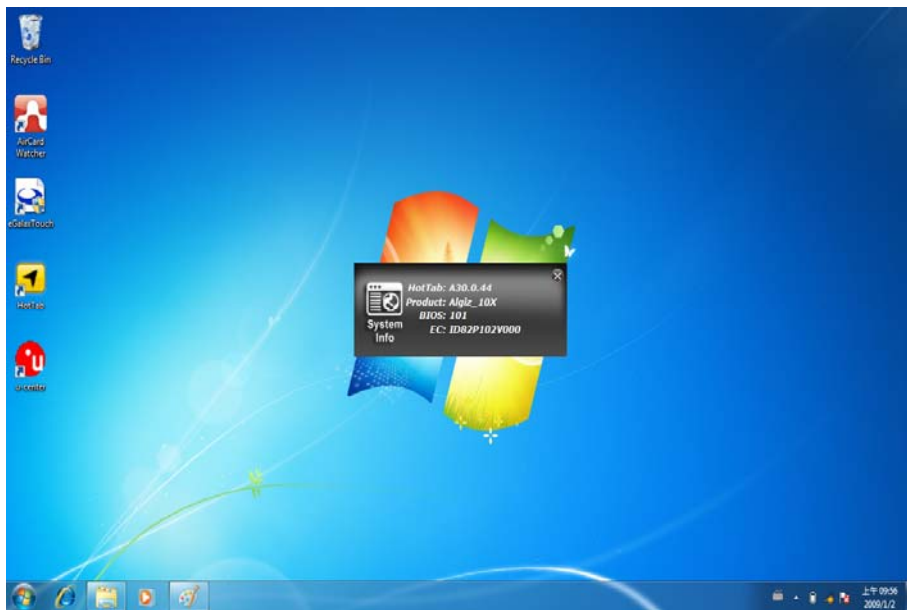
2.11 Show the battery information..

1. Press the Menu button third times on your Tablet PC to open the Hottab menu.

2.12 Show the system information.

1.