

**HD-VWT8005**  
**Small-sized Graphical Vehicle-Mounted wireless Terminal**  
**User Manual**



**Yantai Huadong Electron-Technology Co., Ltd.**

## CONTENTS

|                                               |        |
|-----------------------------------------------|--------|
| Preface .....                                 | - 4 -  |
| 1. Product Introduction .....                 | - 5 -  |
| 2. Function Introduction .....                | - 6 -  |
| 3. Product Features .....                     | - 7 -  |
| 3.1. Technical Parameters .....               | - 7 -  |
| 3.1.1. Processor and Memory .....             | - 7 -  |
| 3.1.2. Storage .....                          | - 7 -  |
| 3.1.3. Display and Touch Screen.....          | - 7 -  |
| 3.1.4. Keyboard and Indicator.....            | - 7 -  |
| 3.1.5. Wireless Communication .....           | - 8 -  |
| 3.1.6. External Interface.....                | - 9 -  |
| 3.1.7. Power Management .....                 | - 9 -  |
| 3.2. Software Features .....                  | - 10 - |
| 3.2.1. OS .....                               | - 10 - |
| 3.2.2. Application Software .....             | - 10 - |
| 3.2.3. Control Software.....                  | - 10 - |
| 3.2.4. Third Party Software Development ..... | - 10 - |
| 4. Use Instructions .....                     | - 10 - |

---

|      |                                                                                           |        |
|------|-------------------------------------------------------------------------------------------|--------|
| 4.1. | Use Environment .....                                                                     | - 10 - |
| 4.2. | Start-up and Hibernation.....                                                             | - 10 - |
| 4.3. | 2.4G Wireless Configuration Description.....                                              | - 11 - |
| 4.4. | Touch screen calibration and disable Description.....                                     | - 14 - |
| 4.5. | Synchronous connection description .....                                                  | - 17 - |
| 4.6. | System security mode setting.....                                                         | - 18 - |
| 4.7. | Restore registry factory settings.....                                                    | - 20 - |
| 4.8. | Setting for LCD backlight.....                                                            | - 22 - |
| 5.   | Troubleshooting .....                                                                     | - 23 - |
| 5.1. | Unable to start up normally.....                                                          | - 23 - |
| 5.2. | Abnormal network connection, and unable to realize communication.....                     | - 24 - |
| 5.3. | Abnormal connection of the device to the computer, synchronization can't be realized..... | - 25 - |
| 6.   | FCC Warning.....                                                                          | - 25 - |

## **Preface**

### **Dear customer,**

Thank you for purchasing our product HD-VWT8005. Please read this manual carefully before using, and mind all notes and warnings mentioned in it. Please keep this manual properly for further reference.

Please check voltage value before connecting line. The line should be put in a place that the line won't be trampled.

Please disconnect power before plugging in or pulling out any modules or connecting line.

Please keep the equipment dry. Any water inside may cause circuit break or other serious damage.

### **If any of the following happens, please contact the specialists:**

Power cord damage, keyboard damage, or socket damage, water leakage;

The equipment can't work in normal or can't return to normal with the guidance of user manual.

The equipment can't work because of falling down or other unexpected damage.

Obvious damage occurs in equipment.

## 1. Product Introduction

HD-VWT8005 is a small-sized graphical vehicle-mounted wireless terminal developed by Yantai Huadong Elec-Tech. It satisfies industrial environment requirements, supports WIFI and GPS, and can be widely used in fields of terminal, warehouse, logistics, manufacture, transportation and mine, to improve user's operation efficiency and accuracy. Through this terminal, data can be collected and transmitted in real time which can greatly improve the user's operation efficiency and accuracy.



Figure 1: Front View of Product

## **2. Function Introduction**

This terminal adopts Windows CE6.0 operation system and has a 7 inch LCD and touch screen. Its adopted graphic display and touch screen to make the operation more easy and convenient. And it is also featured in high brightness, anti-friction, and visualization under sunshine.

It adopts the latest industrial grade ARM processor with 806M frequency. This processor can realize processing of graphic data and video data, etc. Meanwhile, it has low-power effect. The terminal is equipped with 256M memory, 512M FLASH memory, and supports SD expansion card.

The terminal supports WIFI: it adopts 2.4G wireless module and supports 802.11B/G/N standard. Its top speed can reach 54M. It is suitable for fields of terminal and warehouse.

This terminal supports Ethernet communication, it can link the network by plugging in cable, and configure the IP in the DM9000 of control panel.

This terminal supports touch screen and full keyboard inputting modes for the convenience of users. Besides, 20 function keys are provided: F1-F20 which can be user-defined for special purpose.

Featured in water-proof and dust-proof measures, and powerful anti-shake and anti-interference performance

It adopts high strength composite material with full sealing design, anti-shock, waterproof, and anti-dust performance, and reaches IP65 industrial grade, and is suitable for bad environment use, such as the terminal and yard.

## **3. Product Features**

### **3.1. Technical Parameters**

#### **3.1.1. Processor and Memory**

It adopts industrial grade ARM processor with frequency of 806M (which can be dynamically adjusted and is of low power design). 256M DDR memory.

#### **3.1.2. Storage**

It has 512M FLASH memory space and supports SD expansion card.

#### **3.1.3. Display and Touch Screen**

7" LCD, 256K TFT LCD, resolution: 800x480. Portrait display, auto backlight, and contrast adjustment, and be visual under sunlight. 4-line resistance touch screen featured in good anti-friction performance.

#### **3.1.4. Keyboard and Indicator**

Keys: number keys 0~9, function keys F1-F10, toggle key Fn, backlight adjust key + -, delete key, and enter key.

Function key

HD-VWT8005 totally has 10 function keys. F1-F10 need to be

switched through [FN] key

Keyboard backlight can be controlled for operation in different occasions

Rigid keyboard (the keys are tested to be able to accept over 500 thousand times of pressing)

4 indicators show status of power, system, wireless and function switch.



### 3.1.5. Wireless Communication

802.11b/g/n(20M)

2.4GHz Frequency Bands: 2412MHz-2462MHz

Transmit Power  $\leq 16\text{dBm}$

**The antenna of the product, under normal use condition is at least 3.5cm away from the body of the user.**

2.4GHz Antenna characteristics

Frequency Range 2400-2483MHz

Impedance 50Ohm

Yantai Huadong Elec-Tech Co., Ltd.

[www.huadong.net](http://www.huadong.net)

Polarization Vertical  
Elevation Coverage 360°  
Gain of Antenna 5dBi

### 3.1.6. External Interface

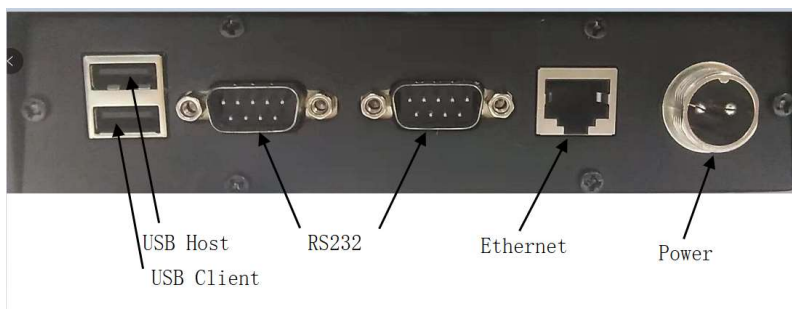
USB Client connecting PC, for synchronization.

USB Host connecting mouse, keyboard or storage device.

RS232 connecting with RS232 serial port equipment.

RJ45 connecting Ethernet.

Power input 24V power supply.



### 3.1.7. Power Management

Input power: DC24V

## **3.2. Software Features**

### **3.2.1. OS**

Windows CE 6.0 Chinese/English (user-defined)

### **3.2.2. Application Software**

Internet Explorer 6 for CE

Notebook

Active Sync

Remote desktop

Office software

### **3.2.3. Control Software**

WIFI management software

### **3.2.4. Third Party Software Development**

WINCE 6.0 SDK

## **4. Use Instructions**

### **4.1. Use Environment**

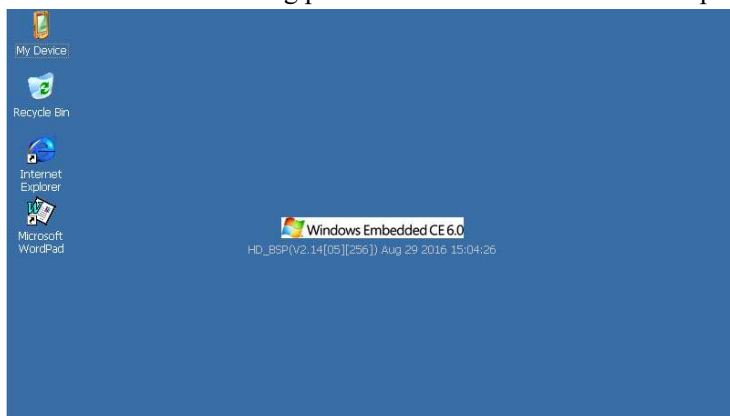
The environment requirement for using this product: temperature — 20°C~50°C; relative humidity 5~95% (non-condense).

### **4.2. Start-up and Hibernation**

Plug in 24V DC, and then power indicator is on. Gently press the power key for 3s, and the system indicator can also turn on, and then

the screen will show Huadong's LOGO which means that the device has been started up successfully. If you want to put it into hibernation, please press the power key and hold for 5 seconds, the screen will be closed and the system enters shut-down status. Or you can also click 'hibernation' from the system 'runtime'.

You will see the following picture when the device is started up:



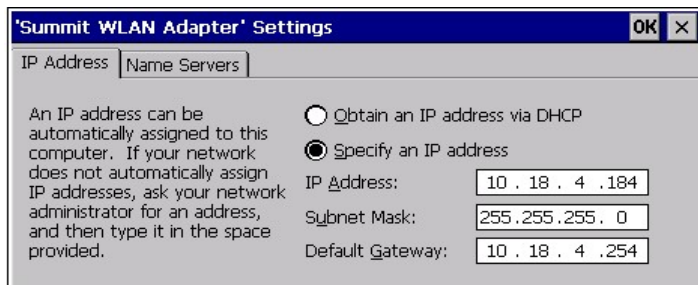
### **4.3. 2.4G Wireless Configuration Description**

Firstly, please set IP for the wireless network card

Click the network and dial-up connection in the control panel to show the dialogue box as follow; there's wireless icon 'SDCCF10G' of SUMMIT Company.

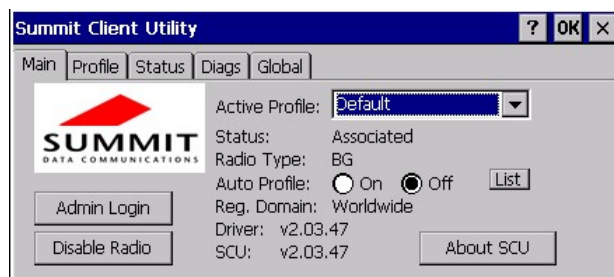
Click the 'SDCCF10G1' icon to configure IP information. For the

specific configuration, please contact the network administrator.

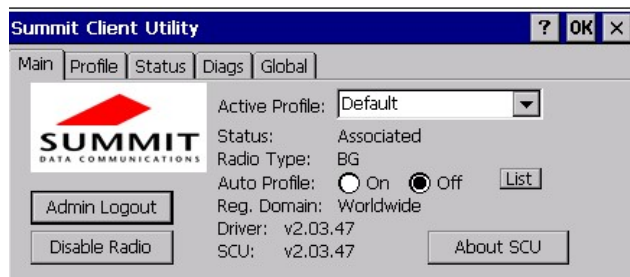


Next is the WLAN configuration

Open the summit configuration routine  at the right bottom corner to show the dialogue box as follow:



Click admin login button, and input SUMMIT password



## Click Profile tab



Configuration can be created, changed or deleted. In order to make the wireless network card work properly and connect to the wireless network successfully, relative parameters need be set:

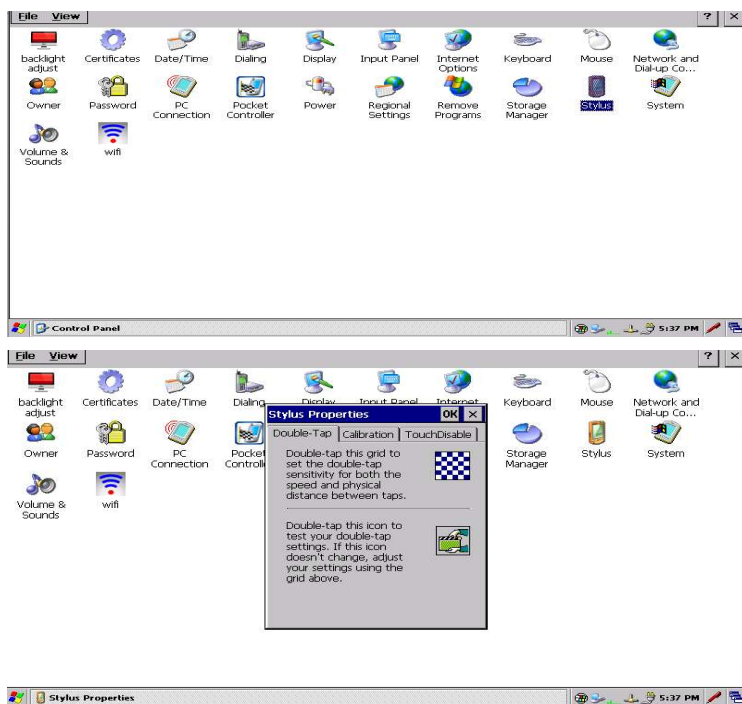
- SSID :32 bits character length
- Auth Type : authentication type (open/share/leap)
- Eap-type :none/leap/leap-fast/peap-mschap/peap-gtc
- Encryption:none/manualwep/autowep/wpapsk/wpatkip/wpa2psk/wpa2aes /cckmtkip
- **Note: please select CAM mode for Power Save**

If the setting is correct, the wireless icon on the task bar will turn green. If it doesn't turn green, please contact the network administrator to make sure that the parameters are correct.

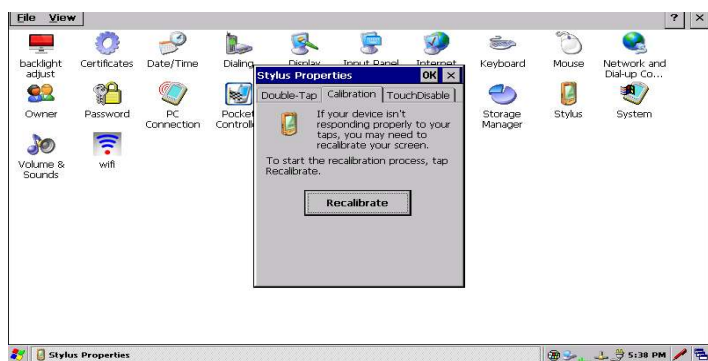
## 4.4. Touch screen calibration and disable

### Description

Click the touch screen to see whether the [mouse] on the LCD acts or not. Find the [stylus] in the [control panel], and open



Select [calibration]



Select [recalibrate] to start calibration operation.

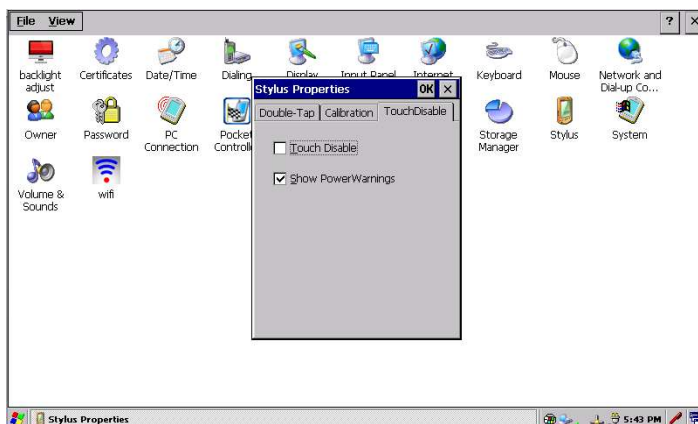
Carefully press and briefly hold stylus on the center of the target.  
Repeat as the target moves around the screen.  
Press the Esc key to cancel.



New calibration settings have been measured.  
Press the Enter key to accept the new settings.  
Press the Esc key to keep the old settings.

Press [enter] to save the calibration data. The touch screen passes the test.

For prohibiting the use of touch screen, select the label of Touch Disable.



Check on [touch disable] and click OK, the system will automatically re-start.

## 4.5. Synchronous connection description

Install activesync software in PC. Connecting one end of the USB cable to the terminal and starting WINCE operation system. Once the system is started up, connect the USB cable to the computer. The computer will show that there's new hardware been found.

After successfully connected



Select [Quick connect]



Synchronous connecting succeeded, you can browser and copy files.

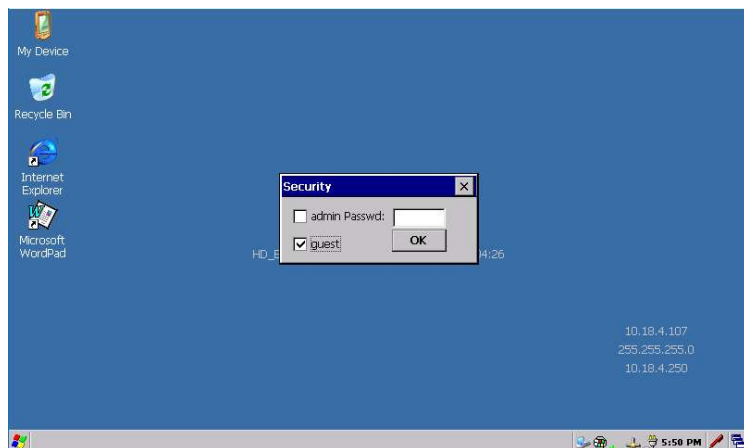
## 4.6. System security mode setting



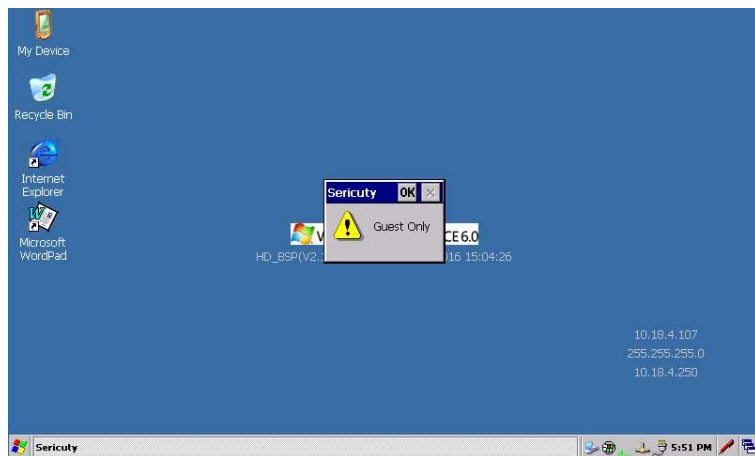
Click [security mode]

Yantai Huadong Elec-Tech Co., Ltd.

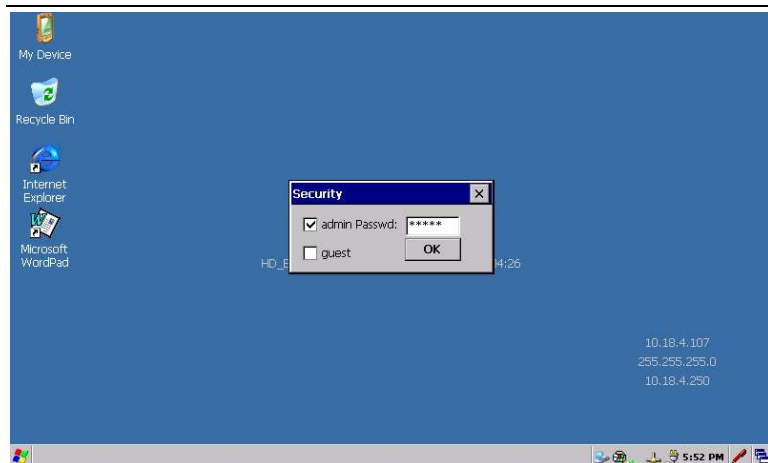
[www.huadong.net](http://www.huadong.net)



User mode: please tick [user] and click [OK]. Under user mode:



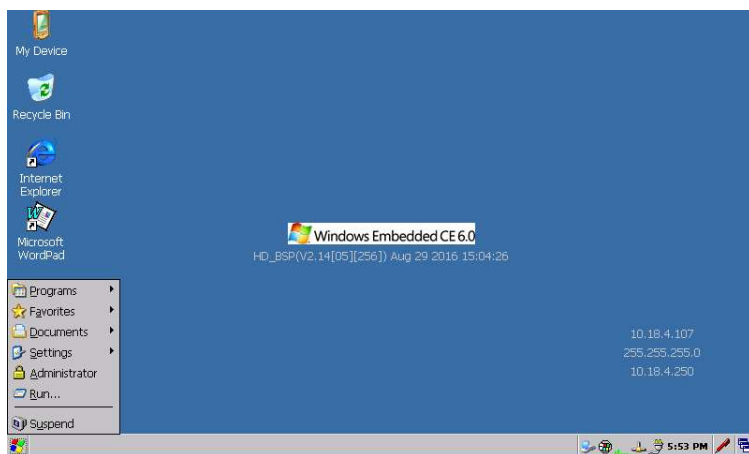
[my device] [recycle bin] cannot be opened. Resume administrator mode:



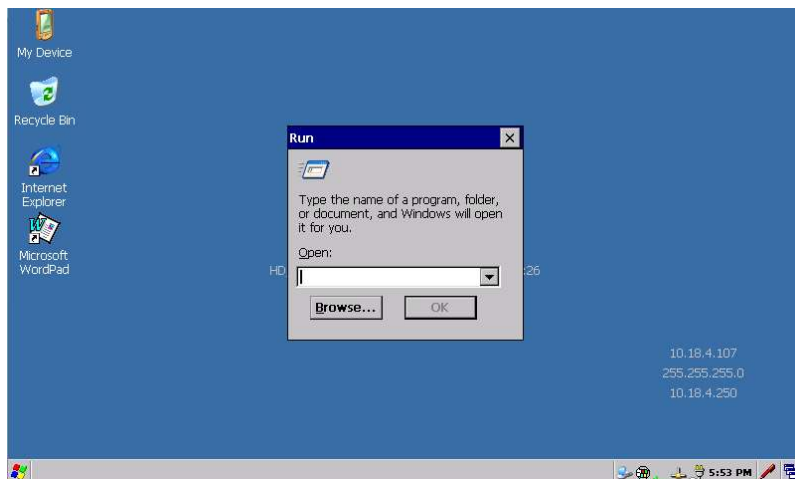
Tick [administrator] and input password [55888], click [OK], the system will be resumed to administrator mode.

## 4.7. Restore registry factory settings

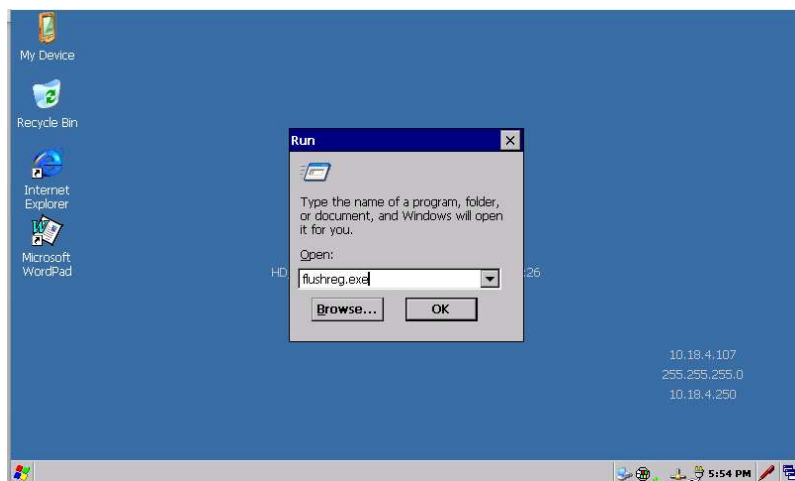
Click [start]



Click [run]



Input flushreg.exe



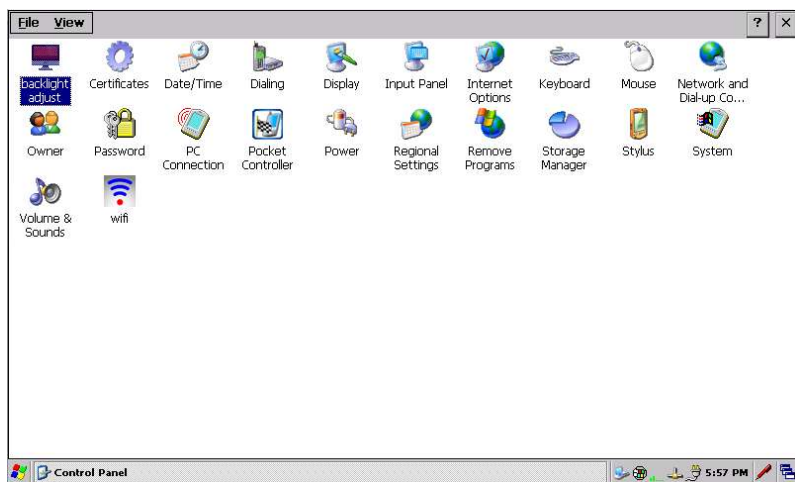
Click [OK], the system will clean up the registry tables and restart.

Note: before cleaning up the registry tables, please back up the contents in storage card and flash disc.

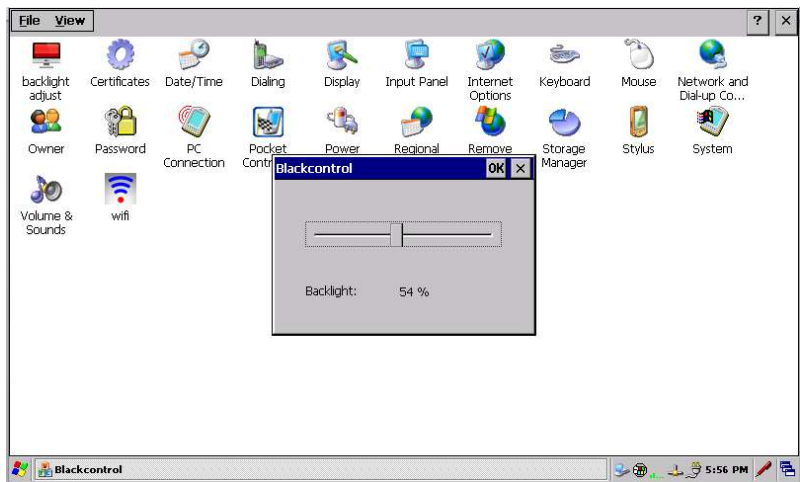
## 4.8. Setting for LCD backlight

Brightness control of LCD backlight includes two modes of key press and touch screen. Key press: use key “+”to brighten LCD backlight, and use “-”to darken LCD backlight.

Touch screen operation:



Enter into control panel, and click [backlight adjust].



## 5. Troubleshooting

### 5.1. Unable to start up normally

| You can check...                                                                              | Troubleshooting                                                                                                                                                                        |
|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Whether the battery of the device is properly installed; whether the battery still has power. | Reinstall the battery to make sure that the battery is correctly installed. If it is still unable to start up, please change a fully charged battery to make sure proper power supply. |
| Whether it is able to start up and work in the                                                | To ensure the equipment start up in the proper temperature, and don't start it                                                                                                         |

|                                               |                                                                                                                                                  |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| environment with temperature between -20℃~50℃ | immediately when it is just moved from outside to indoor (very big difference of temperature), and wait for about 2 hours in normal temperature. |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|

## **5.2. Abnormal network connection, and unable to realize communication**

| <b>You can check...</b>                                          | <b>Troubleshooting</b>                                              |
|------------------------------------------------------------------|---------------------------------------------------------------------|
| 1. Whether the network card configuration is correct.            | 1. Open SUMMIT network card management software to re-configure it; |
| 2. Whether the module parameter setting is correct.              | 2. Modify the parameters                                            |
| 3. Whether IP setting and network parameter setting are correct. | 3. Correctly set IP and wireless network parameters                 |

### **5.3. Abnormal connection of the device to the computer, synchronization can't be realized**

| <b>You can check...</b>                                                                                                                                                          | <b>Troubleshooting</b>                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Whether the active syn of the computer is normal.<br><br>2. Whether the terminal and the computer is correctly connected.<br><br>3. Whether the drive is correctly installed. | 1. Reopen active syn software<br><br>2. Re-plug USB cable<br><br>3. If it prompts that hardware can't be recognized, drive program needs to be re-installed. |

## **6. FCC Warning**

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.

MODIFICATION: Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the device.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna

shall not be less than 20 cm (8 inches) during normal operation.

**Yantai Huadong Elec-Tech Co., Ltd.**

Address: Huadong Elec-Tech Building, Gaoxin District, 264003

Yantai, PEOPLE'S REPUBLIC OF CHINA

Service Tel: 4006-582—577

Fax: 0535-6883060

Tel: 0535-6885693

Website: <http://www.huadong.net>

Zip Code: 264003