



## **ZQ-MP2050**

### **Mobile POS**

## Notices

### Copyright

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### Statement

Any modification of the manual will not be informed

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## Chapter 1 Overview

Below parts will be included in the package:

1. Host machine
2. AC adapter
3. Battery
4. USB to PC cable
5. RS232 to PC cable
6. Paper roll
7. User's Manual/Warranty Card

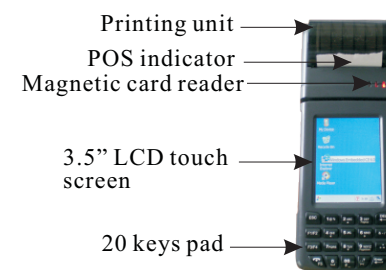


Picture for reference only.

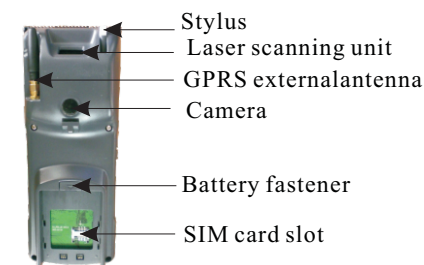
## Chapter 2 Specification

### 2.1 Parts introduction

#### 1. Front parts



#### 2. Back parts

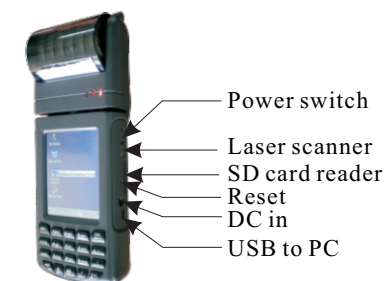


### 2.2 Keys and Interfaces introduction

#### 1. Left side



#### 2. Right side



## 2.3 Equipment characteristics

Standard	Optional
58 mm thermal printing unit WIFI 802.11 b/g 3.5" LCD touch screen 2.0 MEGA PIXEL	4 bands GPRS wireless communication module MSR 1/2/3 tracks Laser barcode (1D) scanner

## 2.4 Power on/off the machine

Power button can switch the device 3 models: power on the machine, stand-by and hibernate status, power off the machine. Here is how to enter the 3 models from power off.

Power on	Press power button once when it is off
Stand-by	Press power button once when it is on
Wake up	Press power button once when it is standby
Power off	Hold power button for 3 seconds when it is on

## 2.5 Reset operation

Reset function makes the device restore factory settings. Operation as follows: Firstly, turn on the machine to the display status. Secondly, stab the button in the reset hole for seconds till the system reboots. Then, machine is initialized.

## 2.6 Battery operation

Guide to change battery: The battery should be installed properly while using. The red light is continuous on when the battery power is sufficient, and the red light will flicker when the battery power is low. User should change the battery. Please make sure the machine shutdown before change the battery.

Guide to recharge the battery: Please connect one side of adapter to AC power, and connect the other side to the machine. The Indicator light will be green. User also can use the machine while it is recharging, but please avoid doing so.

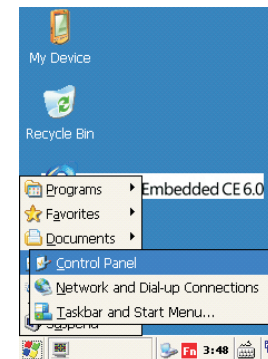
## Chapter 3 Products with standard configuration

### 3.1 System setting

#### 3.1.1 Touch screen check

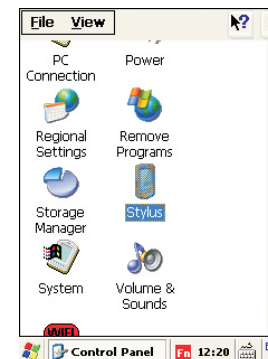
The touch screen is adjusted after factory; However, long time after factory, Power-off time is long so touch screen may need to be adjusted for the first use. The procedure is as the pictures show:

Start → Settings → Control Panel → Stylus



1. Turn on the machine. Click the left bottom start menu and select [settings].

2. Click [Control panel] on right pop-up to the Control panel.



3. Then double click [Stylus] under the Control panel.



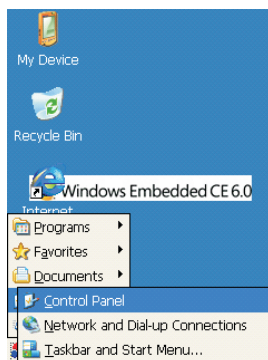


In stylus properties, please select [Calibration] tab and click the [Calibration] button to 5 crossings adjusting interface. Click each center of crossings about 1 second, and afterwards click [OK] to save the settings.

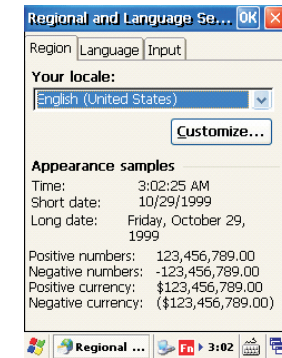
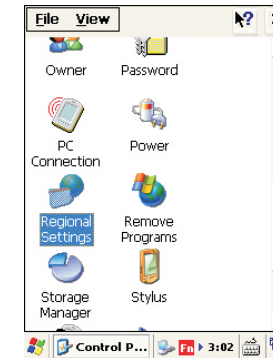
### 3.1.2 Region and location

User can set your equipment own region and location at the first use.

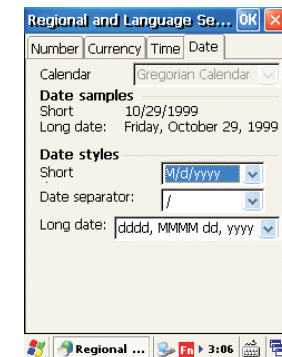
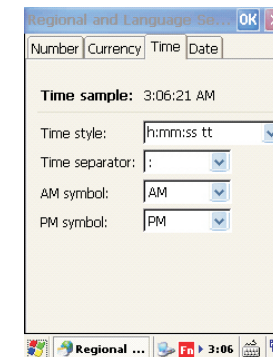
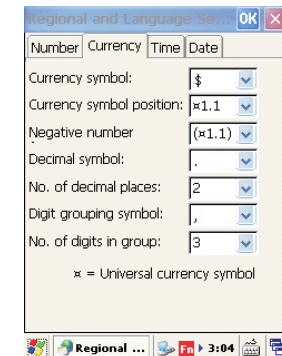
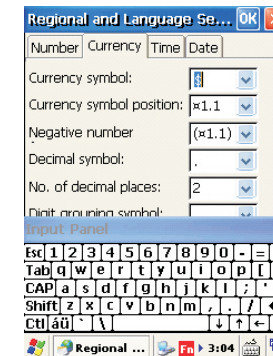
Start → Settings → Control Panel → Regional settings



1. Turn on the machine. Click the left bottom start menu and select [settings]
2. Click [Control panel] on right pop-up to the Control panel.



Double click [Regional Settings] under the Control panel as the right picture shows. Select your location in the pull-down list, and meanwhile click [Customize] as the below picture shows to customize system number, currency, time and date format. At last, click top right corner [OK] to save the settings.



### 3.1.3 Language

The language of machine is default after factory settings. User can't change the settings as pictures show.

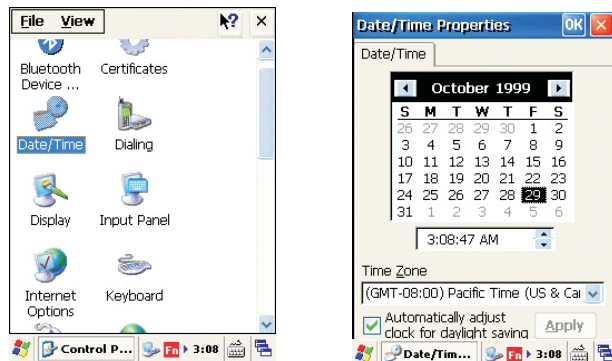
Start → Settings → control panel → Regional → Settings



### 3.1.4 Time and date

Power-off time is long after factory settings, so there is something wrong in time and date. User should adjust it at the first use as pictures show.

Start → Settings → control panel → Date/Time



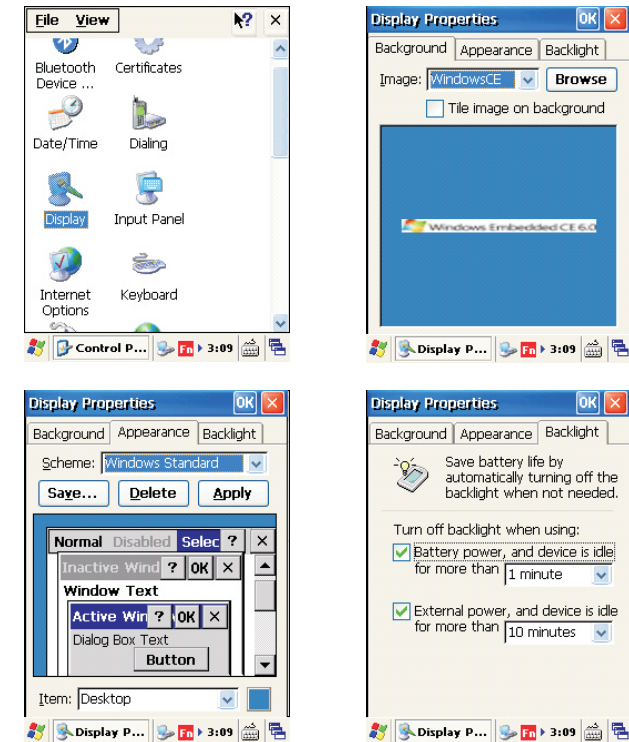
As the picture shows, user can correct date and time in Date/time properties.

### 3.1.5 Display and screen

Display and screen settings refer to user interface: background image, the color of title bar and dialog box, back light.

Start → Settings → control panel → display

The operation procedures are as follows:

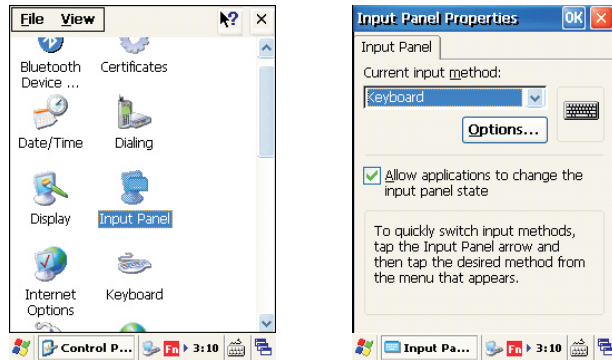


In back light setting, default setting is recommended in order to save power and increase the using time by auto turn off back light.

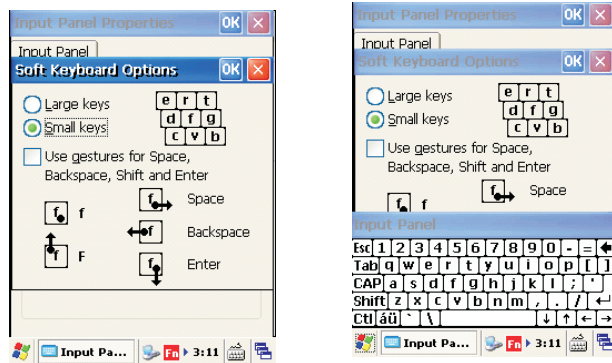
### 3.1.6 Soft keyboard

Soft keyboard is supported in this system. User can define the functions and appearance according to your own needs as the pictures show.

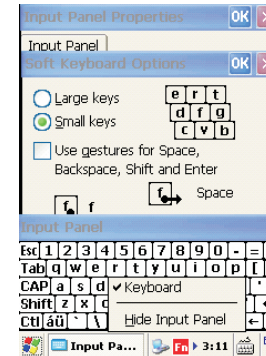
Start → Settings → control panel → Input Panel



Click [Options] of soft keyboard to select size and shape of soft keyboard.



In system setting of soft keyboard, soft keyboard will automatically popup when you type in the input box.

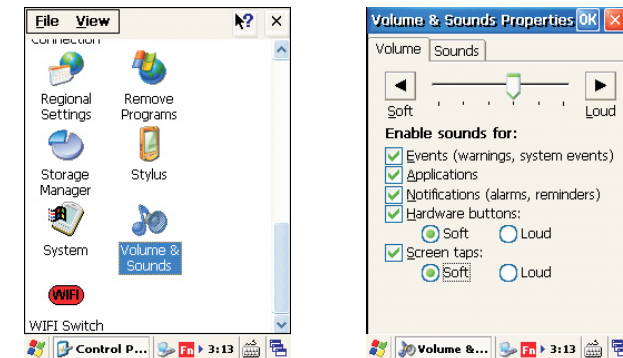


Click the right bottom keyboard and select [keyboard]. The soft keyboard will popup. If you select [hide input panel], the soft keyboard will be hidden.

### 3.1.7 Sound

The sound response is supported in this system. User can adjust volume as follows:

Start → Settings → control panel → Volume & Sounds



The functions of options on the interface are as follows:

**Events:** The machine will make a sound when events are triggered.

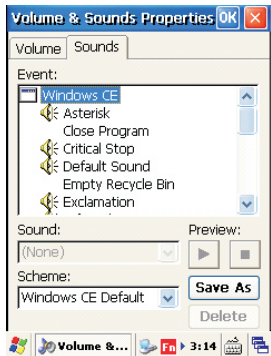
**Applications:** The machine will make a sound when application software is running.

**Notification:** The machine will make a sound when warning of breakdown or events are reminded.

**Hardware button:** The machine will make a sound when keyboard is pressed.

**Screen taps:** The machine will make a sound when you tap the screen.

**Soft:** Minimum volume    **Loud:** Maximum volume



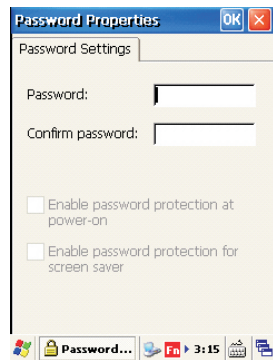
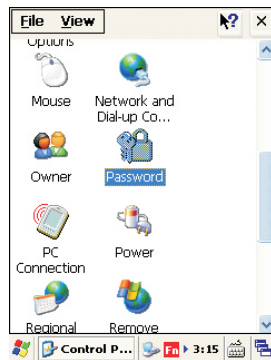
User can choose various system sound in [Scheme] option box, but the modification is not suggested.

### 3.1.8 Password setting

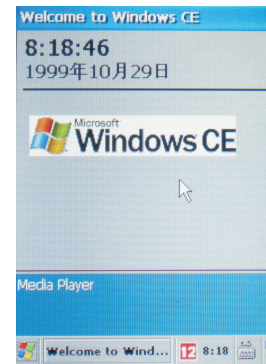
Password can be set in the system. The factory default settings password is empty. User can set use password and standby start password as needed.

The steps are as follows:

Start → Settings → control panel → Password



In user password input interface, user should input 6 numbers password. The gray part will be displayed after the second time. User should click [Enable password Protection at power-on:], and then click [Enable password protection for screen saver:]. User can set the password as needed.

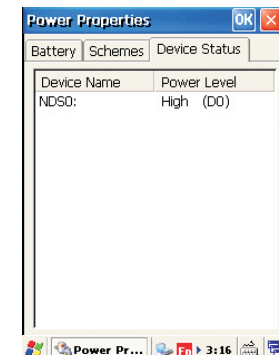
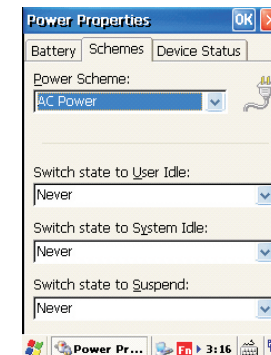
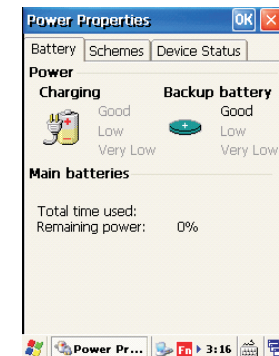
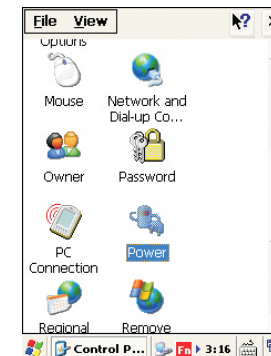


After the setting, System screen will be as the left picture shows, when you restart computer or start dormancy. User should input password by the keyboard and click determine key for system operation and screen normal display.

### 3.1.9 Standby and hibernate mode

Low power mode is supported. The operation procedures are as follows:

Start → Settings → control panel → Power





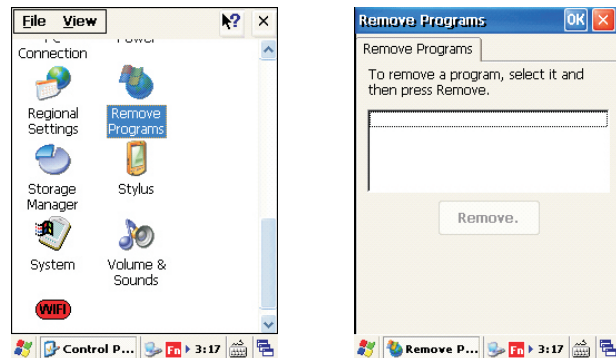
In the battery attribute interface, user can check the condition of the battery in Battery Module and set the standby time in Schemes Module. If you want to cancel standby function, please choose [never] in the 3 optional box as pictures show, and then click upper right [OK] to save the settings. If you want to set it, user can do it as needs. The 3 options are as follows:

- ①. Switch state to user idle
- ②. Switch state to system idle
- ③. Switch state to Suspend

User is recommended to set 3 options for the same time.

### 3.1.10 Removing Software

Start → Settings → control panel → Remove Programs



In [Remove Programs] interface, please click the application you want to remove and click [Remove] to uninstall it.

## 3.2 Printing unit

### (1)The supported language

The print unit supports English, Chinese, and 58mm thermal printing module.

### (2)Printing setting

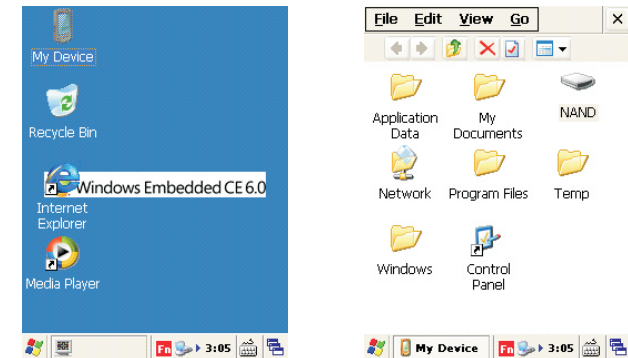
The printing unit works through fixed communication port COM0. The default Baud rate is 9600, which is adjustable. The machine is with the test software, so user can make sure its function before development use by test software.

User on development client software needs to use a series of its printer control instruction.

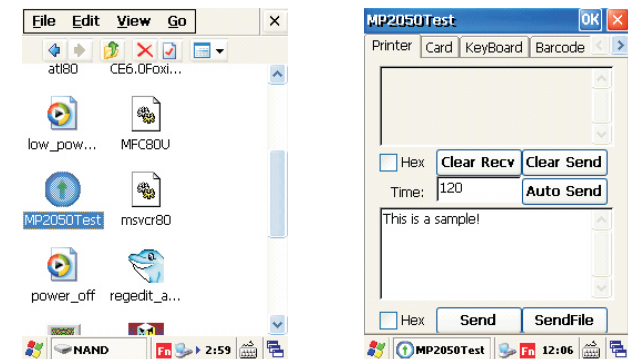
Development information is detailed in products development records.

### (3)Printing testing

System has the print test software. User who wants to choose print unit should do as follows.



As pictures show, please double click [My device] on desktop to the right picture and then double click [NAND] to the storage interface.



In [NAND] interface, please double click [MP2050TEST] to test software as the right picture shows. After that, please choose [Printer] tab and then click [Send], it will automatically print out a line [This is a sample] characters.

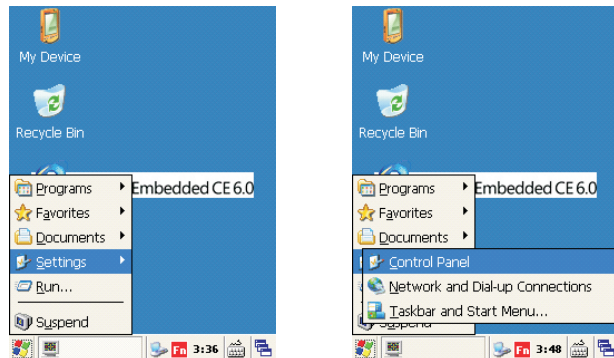
(1)The gray area is the receiving area of printer's feedback information. The white area is the sending area to send the print content. User can input the print content at this area.

- (2) **【clear rcv】**
- (3) **【clear send】**
- (4) **【send】**
- (5) **【Auto Send】**
- (6) **【Send File】**

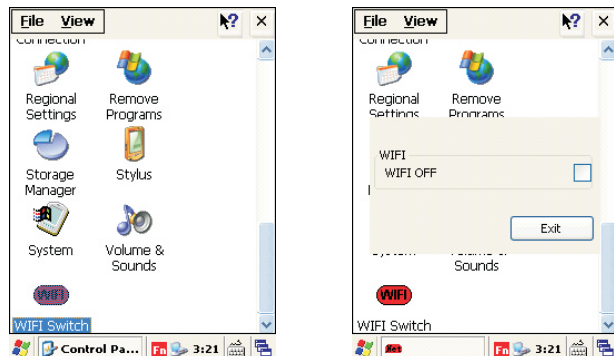
### 3.3 WIFI

#### 1. Turn on/off WIFI

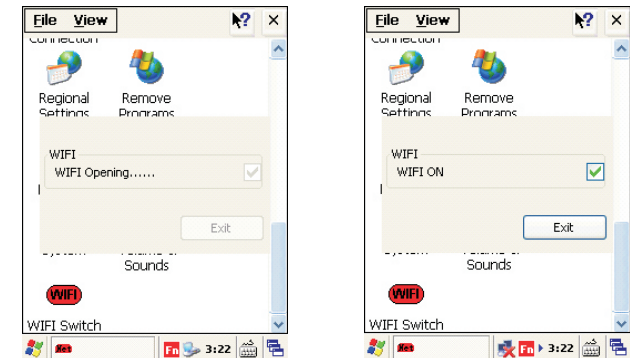
Default setting of WIFI is off. User need to turn on WIFI function before use. Please turn off WIFI to save power when it is not in use. The operations are as below.



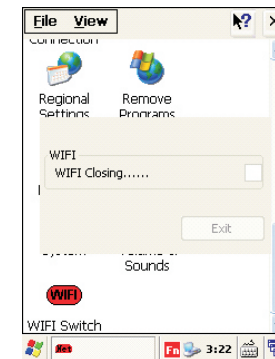
Click the start menu and choose [Settings] [Control Panel] to control panel.



Double click an icon [WIFI Switch] to run procedure as the right picture shows.



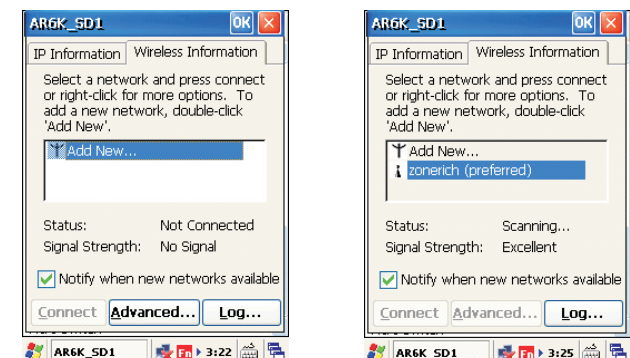
Click the software box of WIFI to display "✓". The system will turn on WIFI function as the right picture shows.



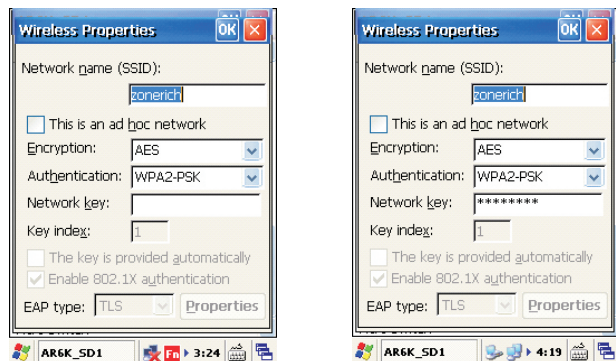
Click the software box of WIFI to cancel "✓". The system will turn off WIFI function. And then please Click [Exit] button to Exit the software.

#### 2. The connection of WIFI

When WIFI is activated, the system will pop up a wireless network dialog box to search additional wireless network. User also can add own wireless network as pictures show.



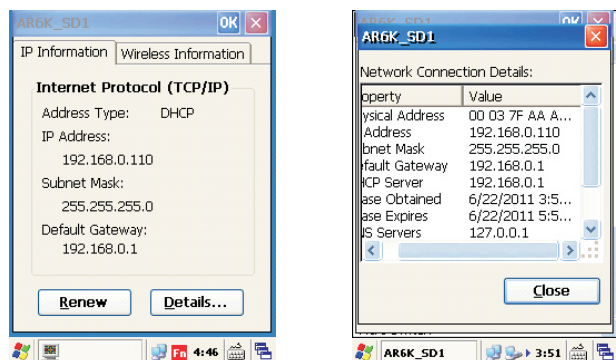
As in the picture above, the wireless network is found. Please double click it to pop up the dialog box of property settings as below pictures show.



If it is the first time to connect the wireless network, please input wireless network password and other related information. User can set the data in the dialog box according to actual needs and click upper right [OK] button to save.

### 3. IP and MAC address

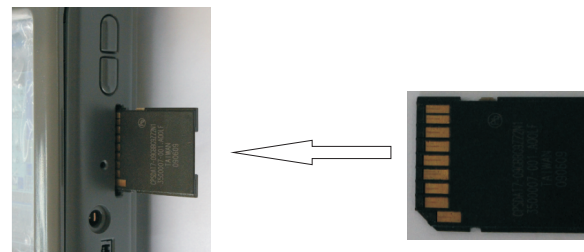
MAC address is fixed, and IP address needs to be automatically distributed by network. The method of IP address inquiries is as follows:



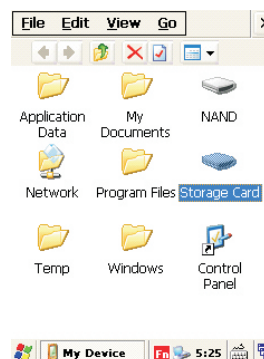
User chooses [IP Information] and it will display related IP information after successful connection. User click [Details...] and a popup will show MAC address.

## 3.4 SD card reader

The machine supports SD card more than 2G, which can be used as a equipment of mobile data transfer. SD card should be directly inserted into the card slot after reboot. Please pay attention to the correct insert direction. The storage device will be automatically found after inserting. User can directly use it as below.



1. Insert the SD card as above picture shows
2. The storage device will be automatically found after inserting as below.



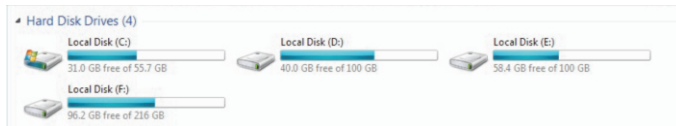
Double click Storage Card to read and write on SD card as above picture shows.

## 3.5 USB Communication

The machine can communicate with Windows OS PC via accessory USB Cable. Windows will regard the machine as a mobile data storage device. The files in NAND of machine can be visited and user also can copy files to the NAND device. ( Windows7 OS can automatic find and communicate with the machine. Windows, it XP OS has to install the special communication driver by files in CD-ROM

The operation procedures are as follows:

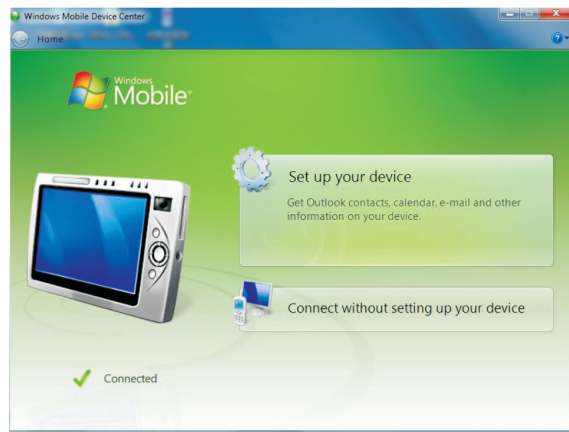
1. Turn on PC and the device
2. Connect the machine to PC via accessory USB Cable.
3. PC will automatic find and show the device. Please double click device icon to visit it.



If the system appears the following interface, user can directly open the files on PC and copy them to NAND.



The system will pop up the below interface after connection, and user can directly click “Connect without setting up your device”

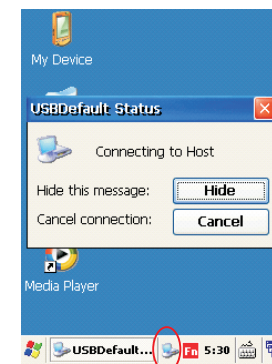


(PC display interface after connection)



The system will pop up the second interface. Please click File Management, “Browse the contents of your device” to visit NAND. select file manage, browse device to visit NAND.

4. The system will pop up a dialogue box and it will automatically hide in the right corner of taskbar icon after connection as below.



The icon in red circle is PC online icon. Please double click it to pop up the above dialogue box.



### 3.6 RS232 Communication

This device supports outer serial port communication by COM1 and default Baud rate 9600 BPS. It can connect to PC by serial port cable line of machine configuration. User also can connect other serial port equipment according to serial port definition of machine configuration. The serial port definition of machine configuration is as follows.

Pin No.	Signal name	Direction	Function
1	FG	-	Frame Ground
3	TxD	Output	Transmit Data
2	RxD	Input	Receive Data
7	RTS	Output	Ready To Send
8	CTS	Input	Clear To Send
6	DSR	Input	Date Set Ready
5	SG	-	Signal Ground
4	DTR	Output	Data Terminal Ready

### 3.7 Keyboard

#### 1. Keyboard shape and list

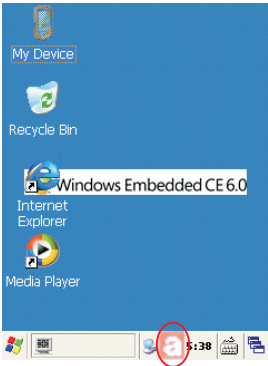
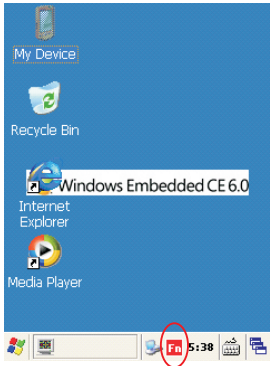


#### 2. Keyboard function instruction

Function keys

F1/F2 : Switch key of letters and numbers.

Input method switching icon on display screen as below.



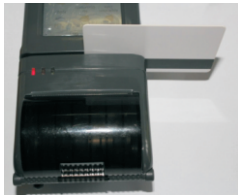
- (1) Press **【F5】** to characters input state and small letters input state "a" from functional state "Fn" as above pictures show.
- (2) When the keyboard is in characters input state "a", user can press **【F1/F2】** to capital letters input state "A", and press **【F3/F4】** to nummbers input state "12".

## Chapter 4 Products with optional configuration

### 4.1 Magnetic Strip Card Reader (MSR)

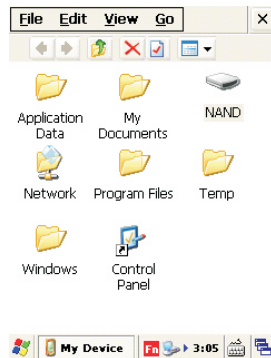
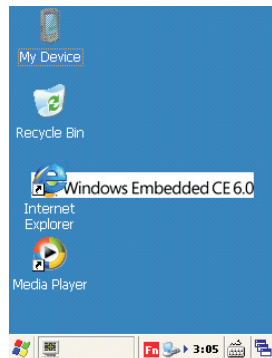
MSR belongs to optional configuration. Its communication port shares with printing port, so the two devices can't work at same time.

#### 1. Swiping card operation method

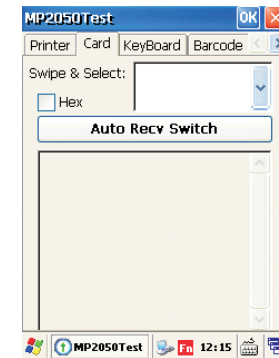
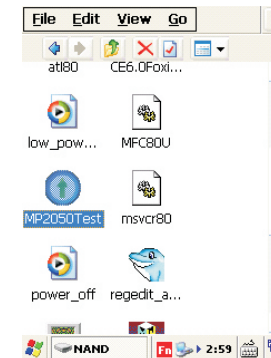


The magnetic strip towards the printing unit can swipe from right to left or left to right.

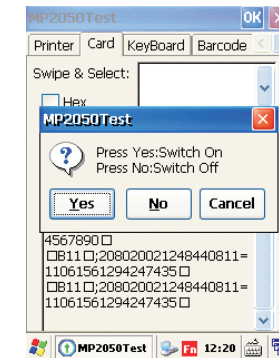
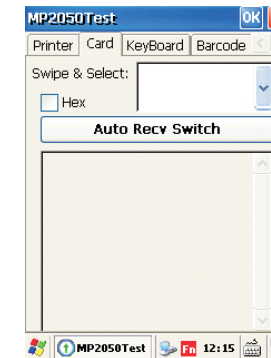
#### 2. MSR testing can be done by system. Development information is detailed in [ products development records].



(1) Double click [My Device] icon on desktop to right interface, and then double click NAND to the below picture.



(2) Double click [MP2050Test] icon to run testing software, and click [Card] to the next picture.



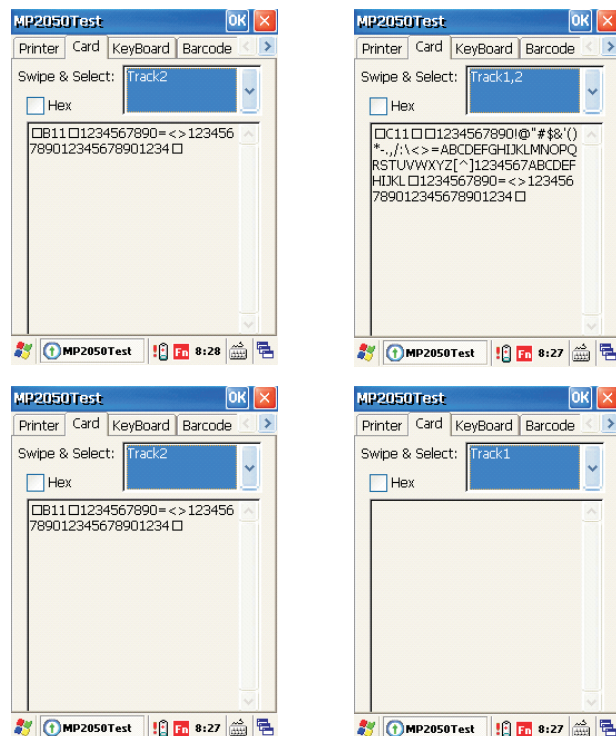
The system supports 2 swiping card methods: ① Check and read card information.

② Auto-read card information

① Check and read card information.

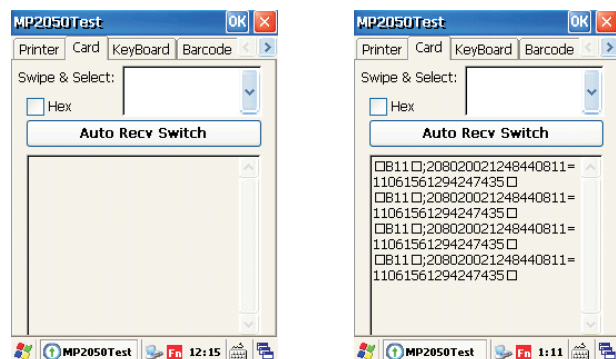
A: Click **Auto Recv Switch** to get prompt dialog box. If you want to check and read card information, please click **No** as above picture shows.

B: In optional box of [Swipe&select], please choose Track1 to active credit channel, and then swipe magnetic stripe. Because the device supports 3 tracks data reading, user can choose different reading tracks at this optional box for each swiping card at testing as below.



## ② Auto-read card information

Factory default setting is auto-read card information. The operation procedures are as follows.



Click [Card] option and swiping magnetic stripe card. The system will auto-read card information and display all contents.

## 4.2 GPRS

Factory default setting uses SIM card wireless communication of Chinese telecoms. If user wants to adopt other wireless communications, which supports 4 bands 850/900/1800/1900MHZ modules, customer is easily to use own regional GPRS communication by SIM card. The method of GPRS connection can be seen New GPRS Connection

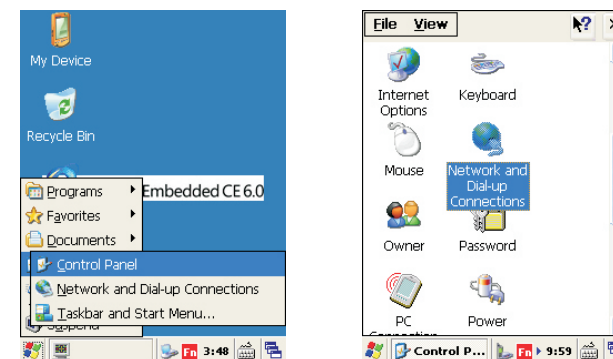
### 4.2.1 Connection of mobile, wireless network

#### 1. Insert SIM card

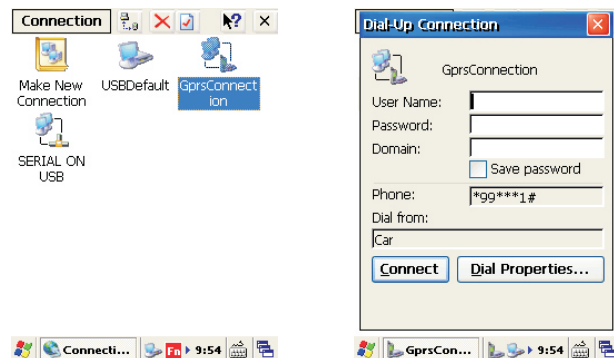


Do it as the picture shows.

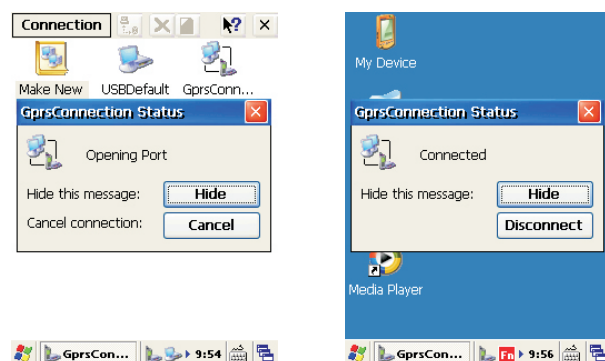
#### 2. Power on/off GPRS



Start → Settings → Control panel → Network and dial-up Connections

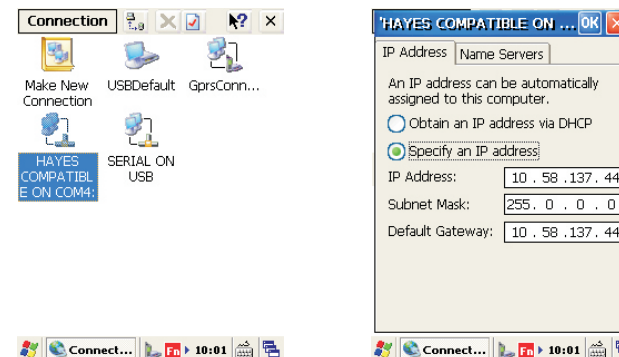


Double click [GPRS Connection] icon, fill the SIM card information, and then click [Connect] to accomplish connection as below pictures show.



[HAYESCOMPATIBLE ON COM4] icon will display on the screen after GPRS successful connection.

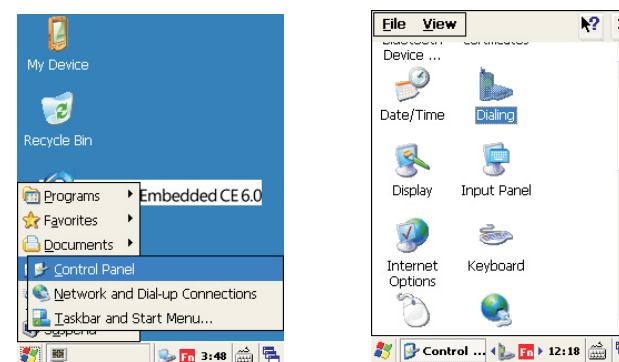
### 3. Use GPRS



Double click [HAYESCOMPATIBLE ON COM4] icon to the right interface, which display the default IP address. User can modify it as needed. COM4 is the port of GPRS network data and system communicating port.

### 4.2.2 Other GPRS connecting method

1. Start → Settings → Control panel → Dialing

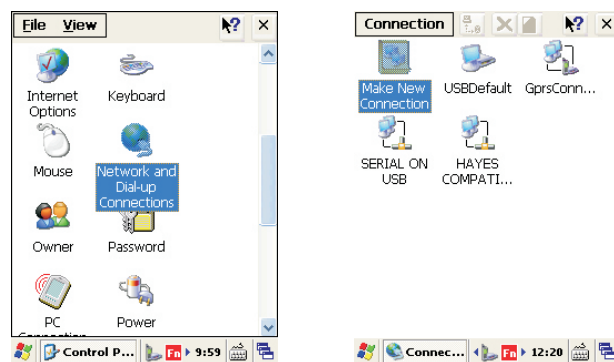


2. Double click [Dialing] icon. Please set the option [Location] as [Home] or built a new position name. Do not modify the others and click [Edit] button to the bottom right interface.

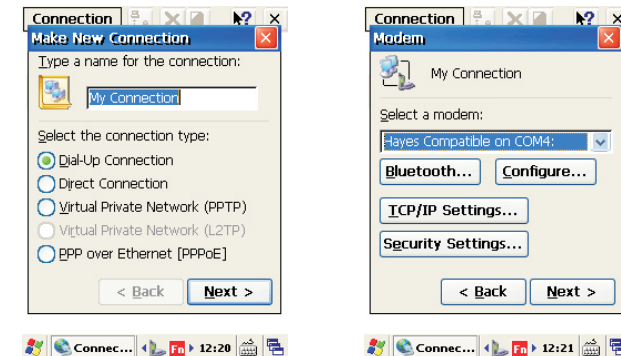


Please input “G” at the 3 input boxes in the bottom right screen and click [OK] on top right corner of 2 interfaces.

3. Double click [Network and dial-up Connections] icon on control panel and click [Make New Connection] icon as below.

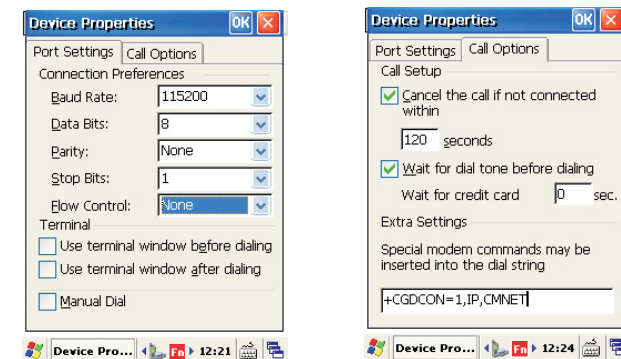


4. Input the new connection name of wireless network or adopt the default name. Do not modify the others and click [Next] button.



Please select [Hayes Compatible on COM4] at the option box of [Select a modem] and click [Configure] button.

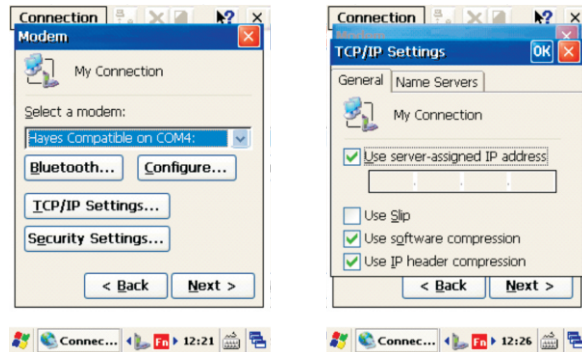
5. Click [Call Options] in title bar at [Device Properties] interface to set parameters in [Call Options] interface as pictures show.



In Call Options interface, please set by the above picture. Click OK to save and back to Modern setting



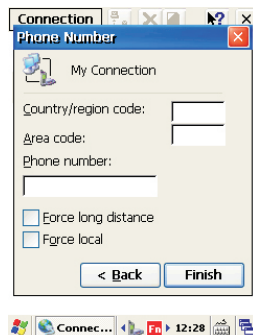
6. Click [TCP/IP Setting] button at [Modem] interface to set related information as below.



TCP/IP setting is recommended as default, IP address will set by SIM provider  
User need set own favorite GPRS IP address, Please cancel" Use server-assigned addresses" , and input IP address

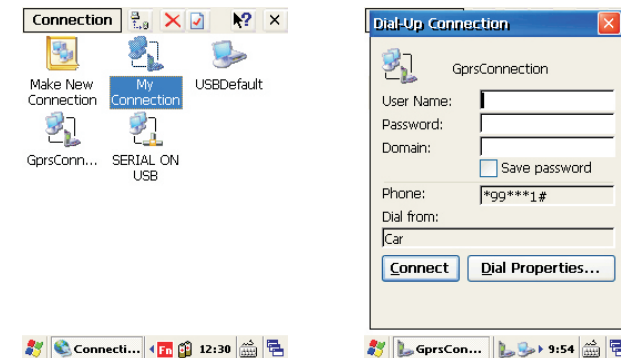


Security setting should not be changed ,  
it shows as picture below



User should input related information of SIM card which has been have used and save the information . User needs to inquire the SIM card provide about the above info.

7. Dial-up will pop up a new connection after setting, then click connect button in my Connection .

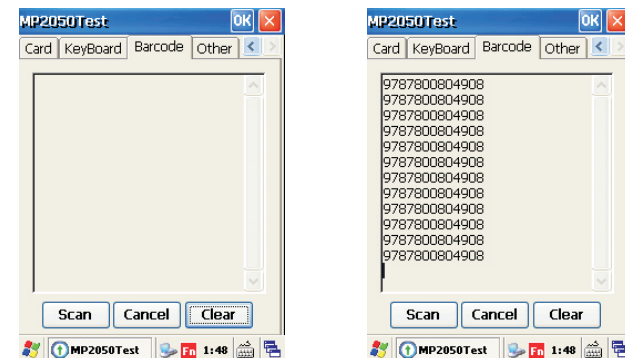


## 4.3 Barcode scanning function

1. The use of barcode scanner

The system supports 1D barcode scan. Laser scanner is closed in system default setting. The machine is with the test software of laser scanning, so user can test barcode scanning function. If user wants to develop client software to use barcode scanning function, please consult [ZONERICH products development records].

2. Barcode scanner testing and use



Please choose option [Barcode] and press scanner button to scan.

# 4.4 Camera function

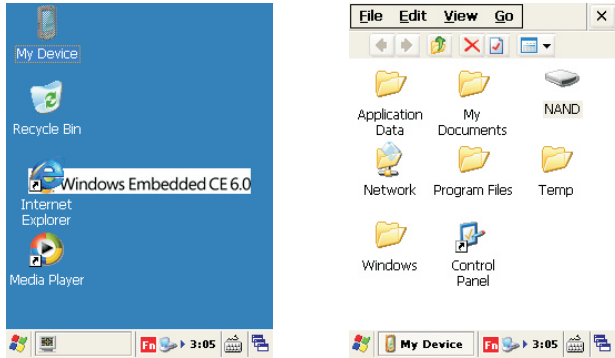
## 1. Turn on/off camera

The machine supports 2.0 mega pixel to take video and capture image and so on. The camera is closed in system default setting. The machine is with the test software of camera and user should test camera function before use.

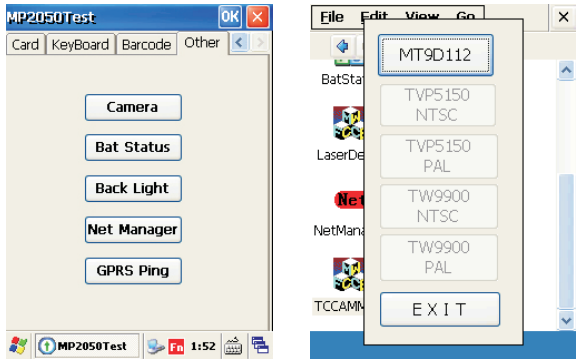
If user wants to develop client software to use camera function, please consult [Products development records].

## 2. Camera testing and usage

As pictures show, please double click [My device] on desktop to the right picture and then double click [NAND] to the storage interface.



In [NAND] interface, please double click [MP2050TEST] to test software as the right picture shows. Click [Other] tab and click [Camera] button to open test software of camera.



Click [MT9D112] button to video interface.



【Capture】 is to take a photo

【Exit】 : is back to system

## Chapter 5 Device specifications

### Device specifications

CPU	ARM 11 * 720MHZ
Operation System	WINCE 6.0 R3
Display	3.5" TT L LCD with Touch screen, 240*320
Memory	2G Nand Flash , 256MB DDRII RAM
Communication	WIFI 802.11b/g
Telecom standards (option)	Quad-band GPRS
Printer	58mm thermal printer 25mm/sec Roll Ø 30 ,10M
MSR (option)	Track 1,2,3 Support
Barcode scanner (option)	1D Laser
Cammera	2 megapixel
Extension slot	Micro SD Card (support SD/SDHC)
Other	Support flash lite 3.1 Support hive based registry Support full format for audio decoding Support 1080p high-definition video decoding Support Video formats: MPEG1/2/4, DIVX3/4/5, XVID,H.264, WMV7/8/9, VC1, RMVB8/9/10 etc
Environmental	Operation temperature 0° C to 40° C Storage temperature -20° C to 60°C
Battery	Recharegeable Li-ion battery 7.4V 2200 mAh
Power adaptor	Input : 100-240V ~ 50/60HZ 0.5A Output: 9V DC 1A
Dimension (L*W*H)	217 * 86 * 65 mm
Weight	Full feature model 500 g ( include battery )
PC port	USB port RS232C Serial port
Accessories	Speaker