AppCenter User Manual

2ed Jan 2014

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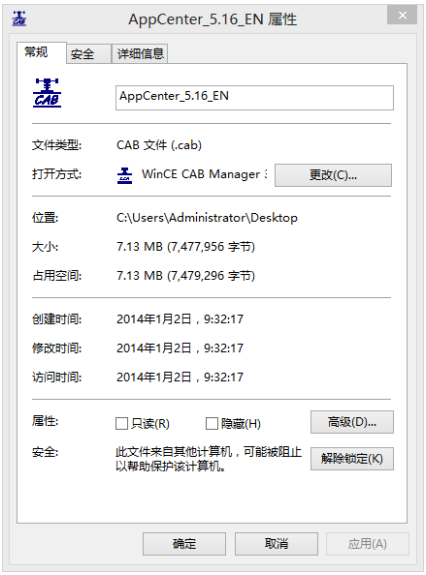
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Overview:

Appcenter is a test program of different modules embedded in the handheld, including 1D/2D barcode, RFID(LF,HF,UHF), WIFI, GPRS, GPS, Bluetooth, camera, fingerprint, etc. The options are different according to the customers' requirements. And here we use Appcenter_V5.16_EN for the reference.

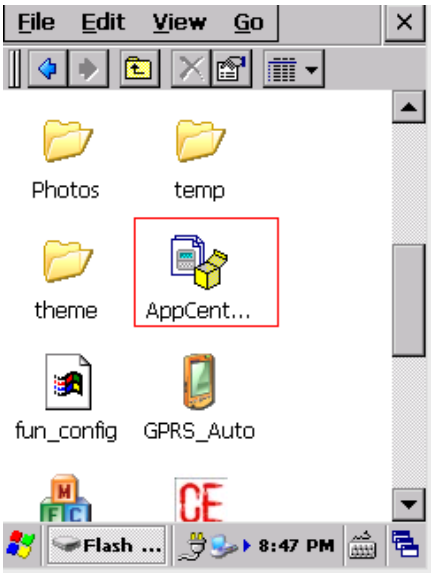
I. Installation

Download the AppCenter from our official web or get from the technical engineer . Please ensure that the format of the installation package is cab before the installation, right click the file=>Properties, details please refer to Pic 1-1.



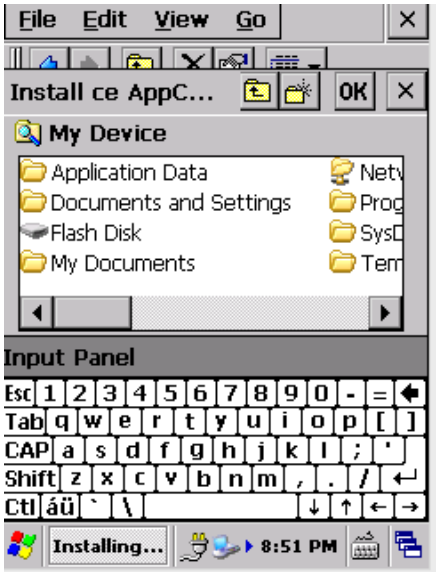
Pic 1-1.

1) Copy ‘AppCenter_V5.16_EN.cab’ to any catalogue of the handheld, double click and install it; Pic 1-2



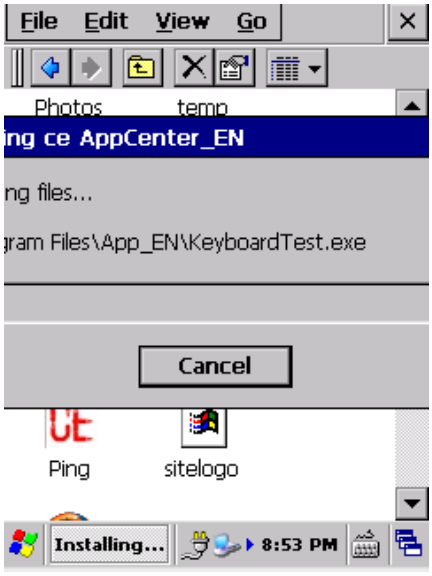
Pic 1-2

2) Choose the default installation path and click ‘OK’; Pic 1-3

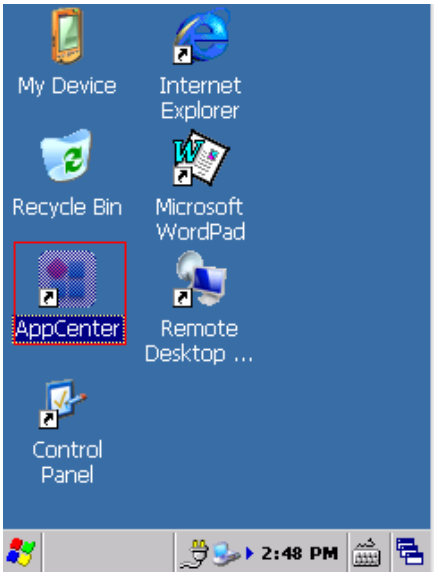


Pic 1-3

3) After a few seconds, the setup appearance will skip out automatically and we will go back to WINCE desktop and find the 'AppCenter' on the screen which indicates that the installation is finished; Pic 1-4, Pic 1-5.



Pic 1-4



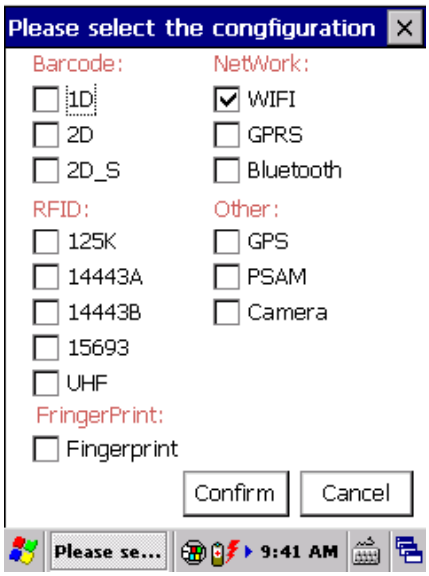
Pic 1-5

4) Double click 'AppCenter', and then we will enter the window of 'AppCenter'. Pic 1-6



Pic 1-6

Note: For handheld device, within the interface of 'AppCenter', press 'F9'(the left side button), then press '1', '2" and '3" to callout the option menu; Pic 1-7



Pic 1-7

Π. Functional Introduction

The following introductions are optional according to the requirements. The optional modules include: 1D/2D barcode, 125K/ Dual protocol (14443A,15693),UHF, GPRS,GPS, Bluetooth, camera and fingerprint.

2.1. 1D/2D Barcode

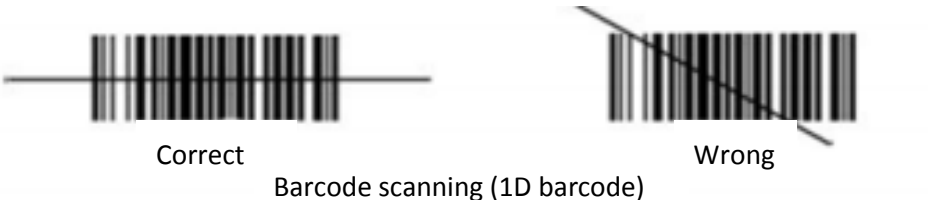
The embedded barcode module within handheld can be used for 1D/2D barcode scanning, which locates at the top of the handheld.



1D barcode　　2D barcode

Pic 2.1-1

While scanning, we need to aim at the barcode, and cover the barcode with the laser beam sent out by the scanner, any leaning or partly cover may lead to barcode scanning failure. Pic 2.1-2 describes the correct 1D/2D barcode scanning method.



Correct　　Wrong

Barcode scanning (1D barcode)



Correct　　Wrong

Barcode scanning (2D barcode)

Pic 2.1-2

2.1.1　1D Barcode

Technical parameters:

Scan engine: symbol SE955

Input voltage: 3.3VDC±10%

Scanning current: 86mA typical /114mA max

Scanning angle: wide（default）47°±3°、narrow 35°±3°

Pitch angle: Condition: 100% UPC at 5 in. ± 65° from normal

Skew Tolerance: Condition: 100% UPC at 5 in. ± 50° from normal

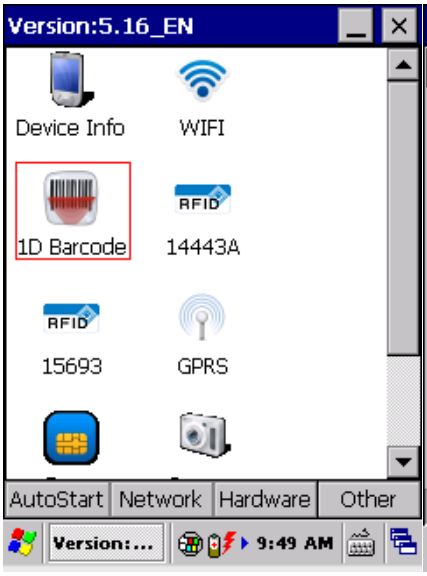
Roll: Condition: 100% UPC at 5 in. ± 35° from vertical

Operating Temperature (chassis): -4° F to 140° F (-20° C to 60° C)

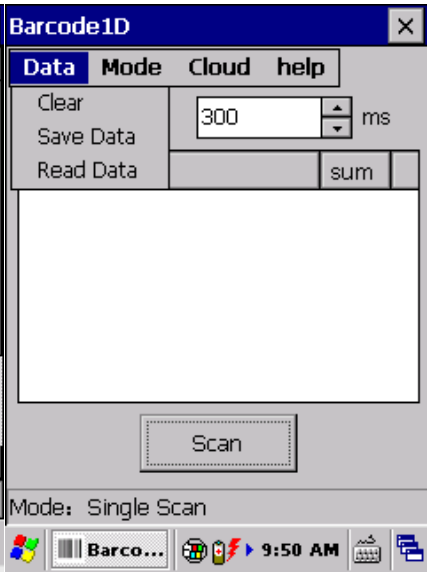
Storage Temperature: -40°F to 158° F (-40° C to 70° C)

Operation Steps:

1) Double click 'Barcode_1D' within 'AppCenter', as the following Pic 2.1.1-1 and Pic 2.1.1-2;

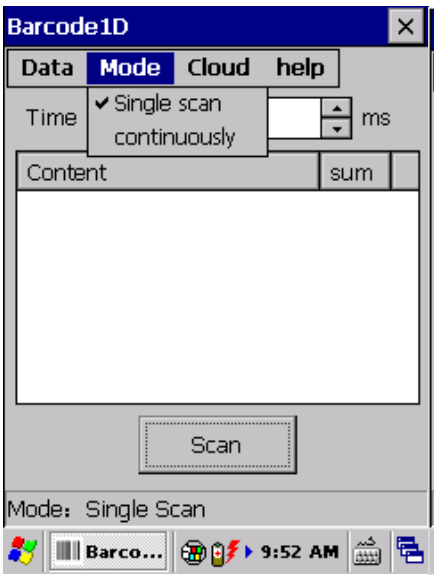


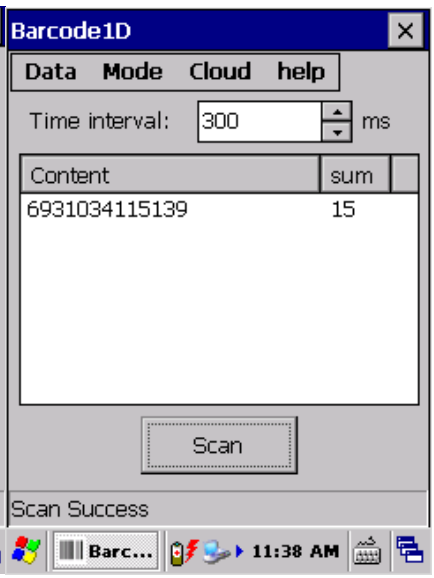
Pic 2.1.1-1



Pic 2.1.1-2

2) Start scanning, click 'scan' or 'Enter' button of the handheld. You will hear a 'tick' once it has scanned successfully, and the scanned information will be shown within the scan area. You can also select the 'Continuously Mode' to scan the barcode continuously. Pic 2.1.1-3 and Pic 2.1.1-4





Pic 2.1.1-3 Pic 2.1.1-4

2.1.2 2D Barcode

Scan engine: symbol SE4500

Power Requirements - Input Voltage: 3.3V±0.3V （23° c）

Maximum Operating Current: 250mA

Skew Tolerance:±60°

Pitch Angle:±60°

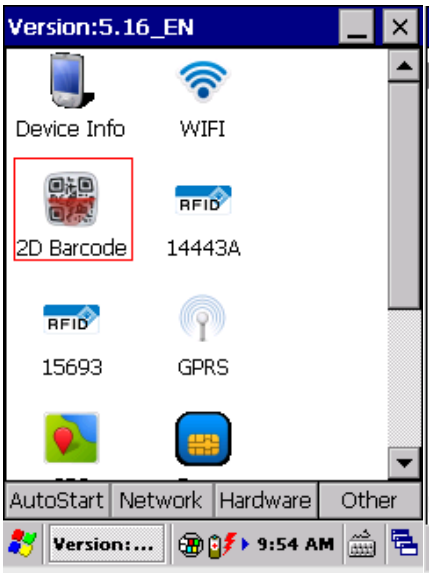
Roll: 360°

Operating Temperature: -30º to 55º C (-22º to 131º F)

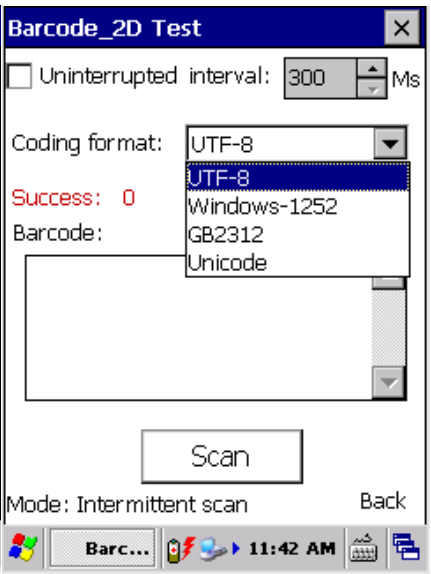
Storage Temperature: -40º to 70º C (-40º to 158ºF)

Operation Steps:

1) Double 'Barcode_2D' within 'AppCenter', as the following Pics 2.1.2-1 and 2.1.2-2;

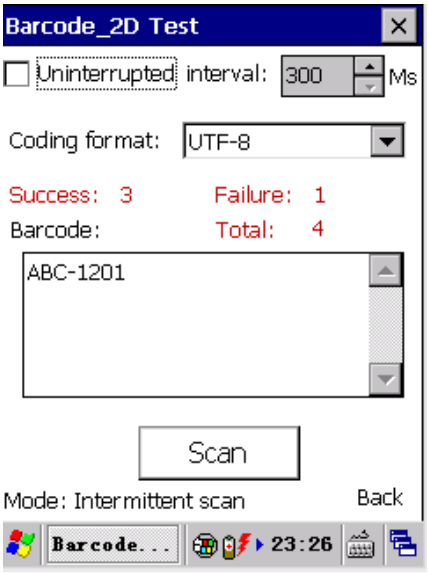


Pic 2.1.2-1



Pic 2.1.2-2

2) Starting scanning, click 'Scan' or 'Enter' button of the handheld, the scanned information will be shown within the scan area after scanned successfully. Pic 2.1.2-3

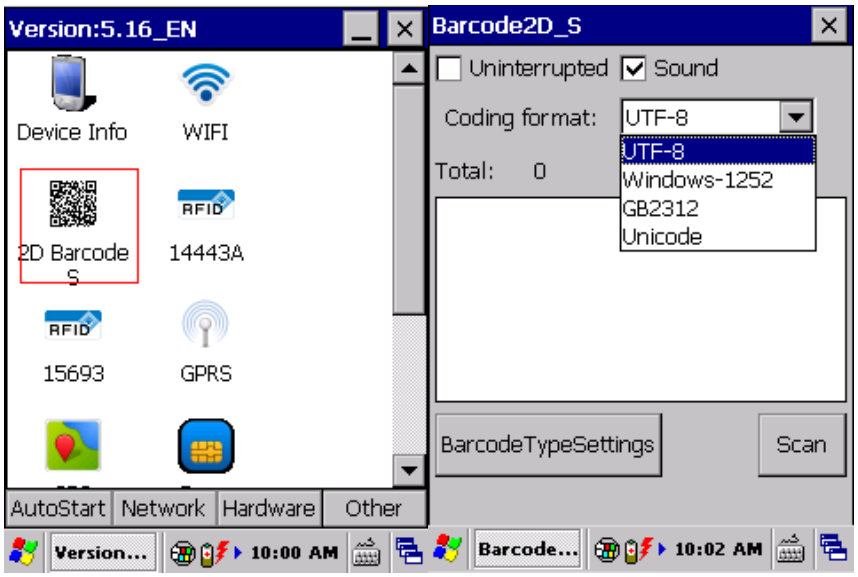


Pic 2.1.2-3

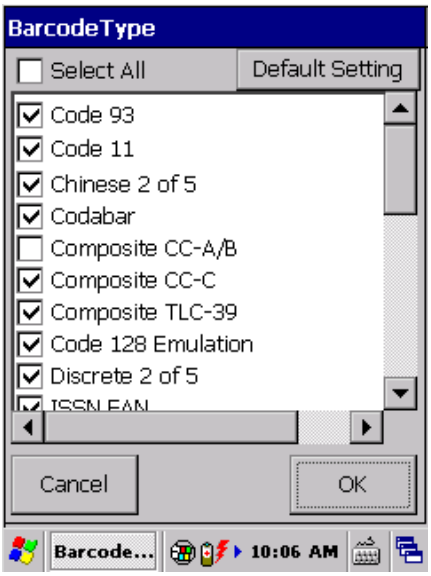
2.1.3 2D_S Barcode

Operation Steps:

1) Double 'Barcode_2D' within 'AppCenter', as the following Pics 2.1.3-1 and 2.1.3-2;



2) Starting scanning, click 'Scan' or 'Enter' button of the handheld, the scanned information will be shown within the scan area after scanned successfully. Also the barcode types can be enabled/disabled as Pic 2.1.3-3.



2.2. RFID

The sensor zone of the device locates at the back of the device, please put the tags nearby the sensor zone whiling reading. (The reading distance differs according to the tag and utilizing environment.) Pic 2.2-1



Pic 2.2-1

2.2.1 LF (low frequency)

The low frequency module of handheld readers can be used to read the tags that conform to ISO11784/11785 including ID card, animal tags, and also can be used to write for some tags like EM4305.

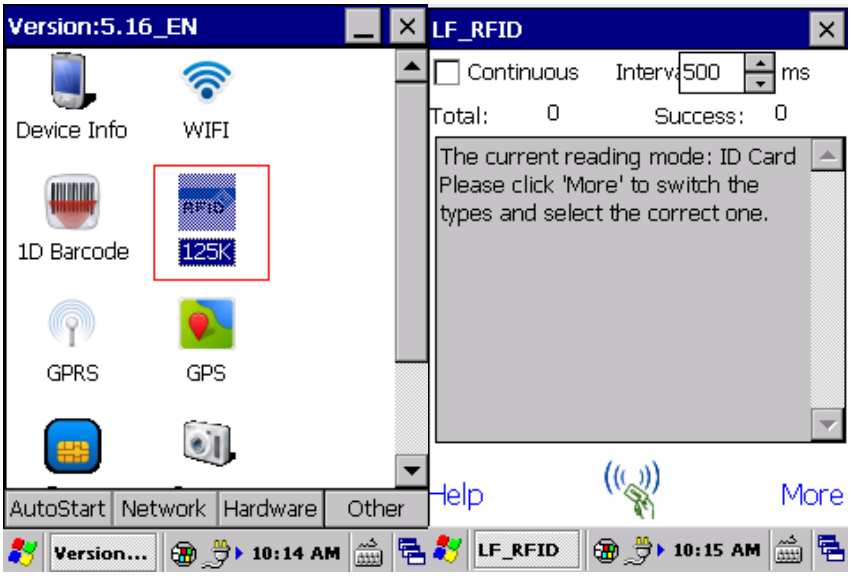
LF（Low Frequency）：

Operating frequency: 125KHz /134.2KHz(animal tags)

Protocol: ISO11784/ISO11785

Reading/Writing distance: 2cm-10cm

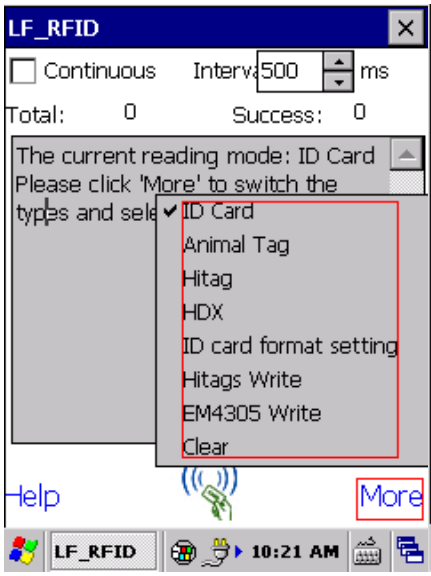
1) Double click '125K' within 'AppCenter', then please select the type of the tag properly, and the scanned information will be shown within the scan area after scanning successfully. Pic 2.2.1-1 and Pic 2.2.1-2

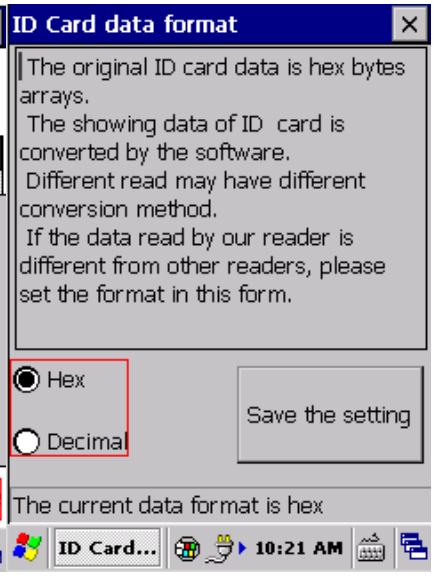


Pic 2.2.1-1

Pic 2.2.1-2

2) The other operations including reading mode, data format and some specified tag writing can be selected by 'More' as Pic 2.2.1-3 and Pic 2.2.1-4.





2.2.2 HF (high frequency)

Different configurations of the high frequency: 14443A/B, 15693 or 14443A/B+15693

HF(High Frequency):

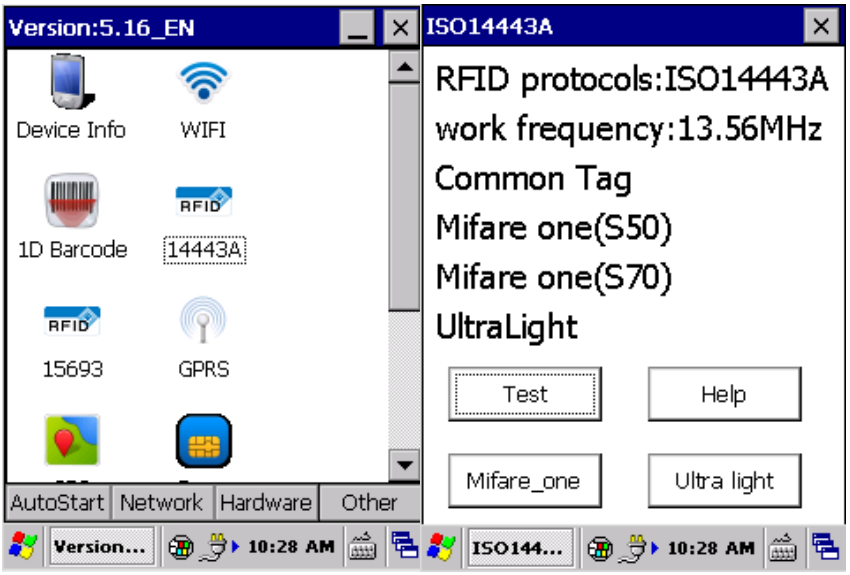
Operating frequency: 13.56MHZ

Procotol: ISO14443A/B, ISO15693

Readind/Writing distance: 5cm-10cm

2.2.2.1 ISO14443A

Double click '14443A' within 'AppCenter', the detailed interface is as follows:



Pic 2.2.2.1-1

Descriptions of the buttons:

Test: it is used to check the module information and version;

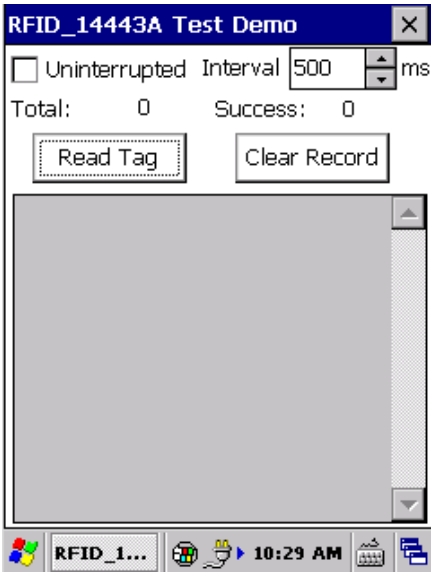
Help: Introductions of M1(S50), M1(S70) and Ultralight tags;

Mifare one: it is used to read and write tags conform to ISO14443A protocol;

Ultra light: As one type of ISO14443A protocol, a contactless IC card.

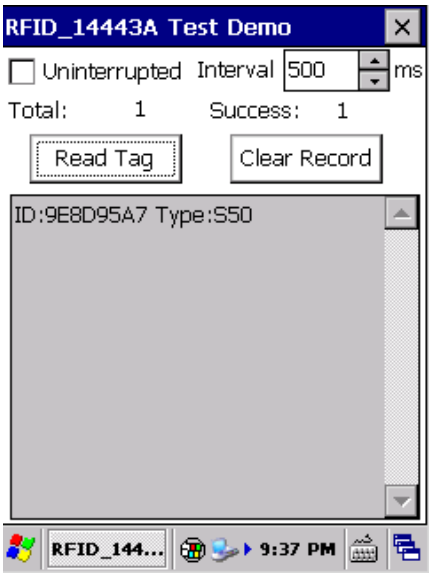
Test:

1) Click 'Test', and then enter the window as the following Pic 2.2.2.1-2 where we can check the ID information and type of the tag;



Pic 2.2.2.1-2

2) Choose the module version, put the tag within the scanning area and click 'Read Tag', then the ID and type will be shown; Pic 2.2.2.3



Pic 2.2.2.1-3

Mifare_One:

The most common Mifare one tags are S50 and S70;

S50 Tag:

With the storage capacity of 1Kbyte, containing 16 sectors, each sector containing 4 blocks (0~3), 64blocks in total, addressed by block number from 0 to 63. Each sector has an independent password and access control. The block 0 within sector 0(also the absolute address) is used for storing manufactory ID which has been solidified and cannot be changed.

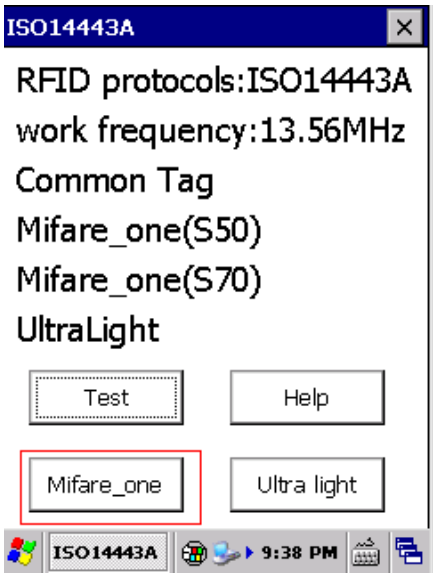
Block 0, block 1 and block 2 of other sectors are data blocks which are used for data storage; block 3 as the control block, is used for storing password A, control storage and password B.

S70 Tag:

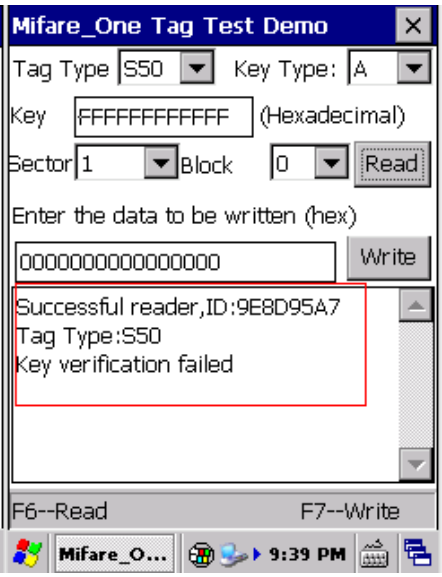
With the storage capacity of 4K bytes (also 32K bit). S70 and S50 cards are fully compatible with each other on the protocols and commends, the only difference between them is the storage capacity, S70 contains 40 sectors, and the foregoing 32 sectors (0~31) are the same as the S50. The following 8 sectors (32~39) containing 16 blocks, also 16 bytes for each blocks, and the last block is used as the password control block of the sector.

Operation of M1 Card:

1) Click ‘ Mifare_one” and enter the following interface within which we can read and write the data of the block; Pic 2.2.2.1-4 and Pic 2.2.2.1-5



Pic 2.2.2.1-4



Pic 2.2.2.1-5

Read :

1) **Choose tag type**: S50/s70;
2) **Choose key type** : key A;
3) **Input key**: Input key A, the default factory key is FFFFFFFF FFFF(6 bytes);
4) Choose the section and block and click ‘Read’, the data of the block will be shown;

Write:

1) **Choose tag type**: S50/s70;
2) **Choose key type**: key A or B;
3) **Input key**: Input key A or B, the default factory key is FFFFFFFF FFFF(6 bytes);

4) Choose section and data block, input the data within the data field dialogue with the block length of 16 bytes and then the information will be shown in the textbox;
5) Click 'Write' and then the written success information will be shown in the dialogue box;

Note: M1 card contains 16 sectors, each sector containing 4 blocks (0~3), 64blocks in total, addressed by block number from 0 to 63. The block 0 within sector 0(also the absolute address) is used for storing manufactory ID which has been solidified and cannot be changed. Block 0, block 1 and block 2 of other sectors are data blocks which are used for data storage; block 3 as the control block, is used for storing password A, control storage and password B.

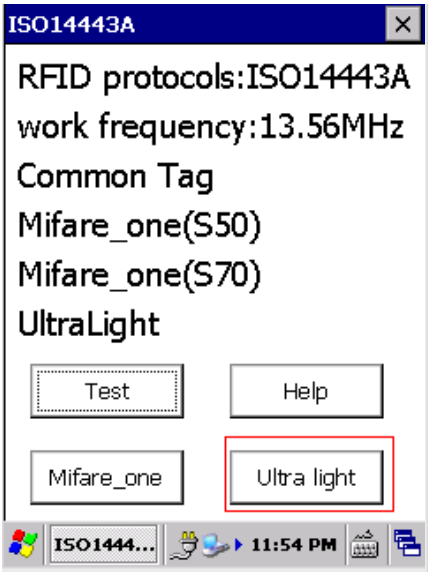
The structure of control block 3:

The number of the byte	0 1 2 3 4 5	6 7 8 9	10 11 12 13 14 15
Control value	FF FF FF FF FF FF	FF 07 80 69	FF FF FF FF FF FF
Introduction	Password A(0~5 byte)	Access control (6~9 bytes)	Password B(10 ~15 bytes)

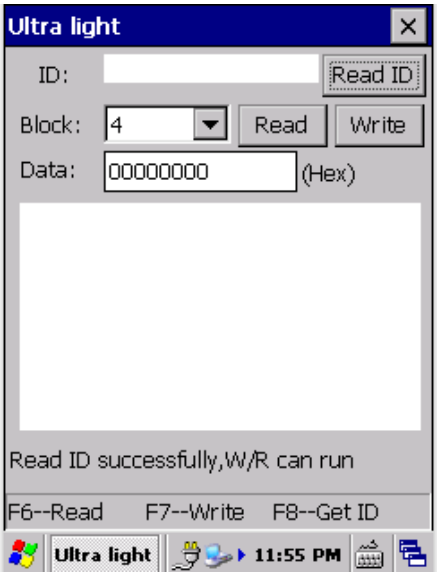
Ultra Light:

Ultra light card as an contactless IC card, has the storage capacity of 512 bits, containing 16 blocks with 4 bits of each block. Blocks 4~`15 are the data blocks, blocks 0~2 are specific data blocks. Block 3 is the onetime programmable field. There are 7 unchangeable bits in blocks 0~1 which are used for storing the serial numbers, and constitute the efficient anti-clone mechanism. The data can be stored for two years with the erase-write numbers of 1000.

1) Click 'Ultra light' and then we would enter the following interface; Pic 2.2.2.1-6 and Pic 2.2.2.1.7



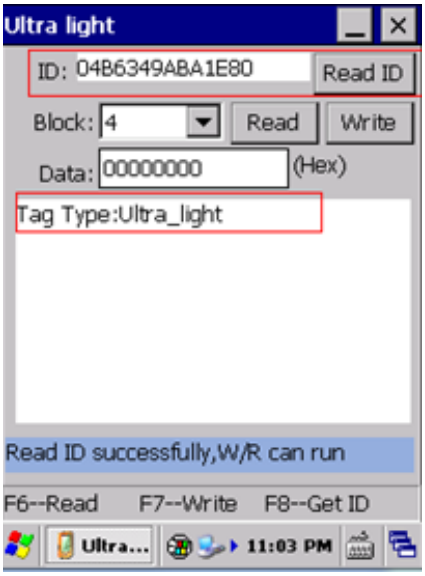
Pic 2.2.2.1-6



Pic 2.2.2.1-7

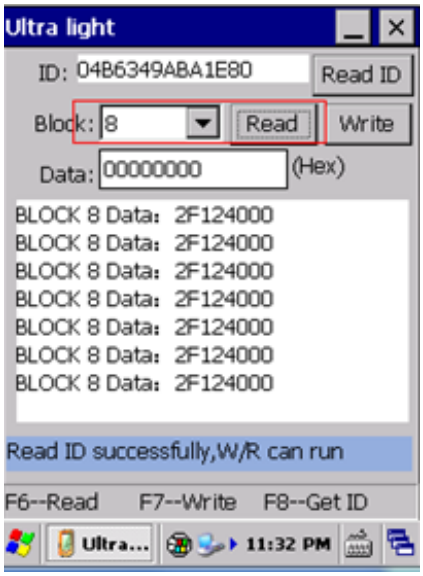
2) ID Reading:

Put the tag to the reading area, and click ‘Read ID’; Pic 2.2.2.1-8



Pic 2.2.2.1-8

3) After reading the ID successfully, we can get the storage information by choosing different blocks;
4) Choose the block 4 to 15, and click ‘Read’, then the data of the block will be shown in the textbox; Pic 2.2.2.1-9

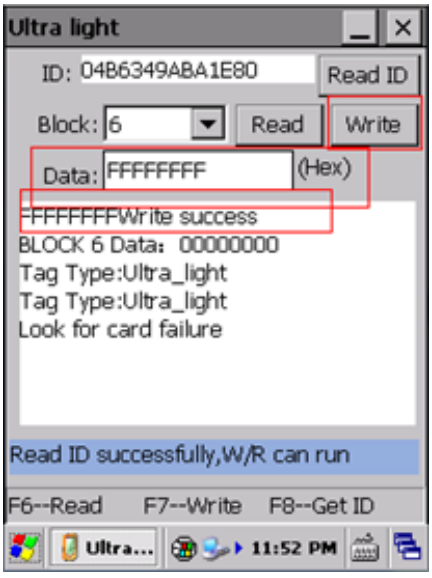


Pic 2.2.2.1-9

5) Write:

For example, if we want to modify the data of block 8 after reading it successfully, we then have to write in it.

After we read the data in block 6 successfully, input the data within the data field, and click 'Write', then the dialogue box will hint that it is written successfully. Pic 2.2.2.1-10

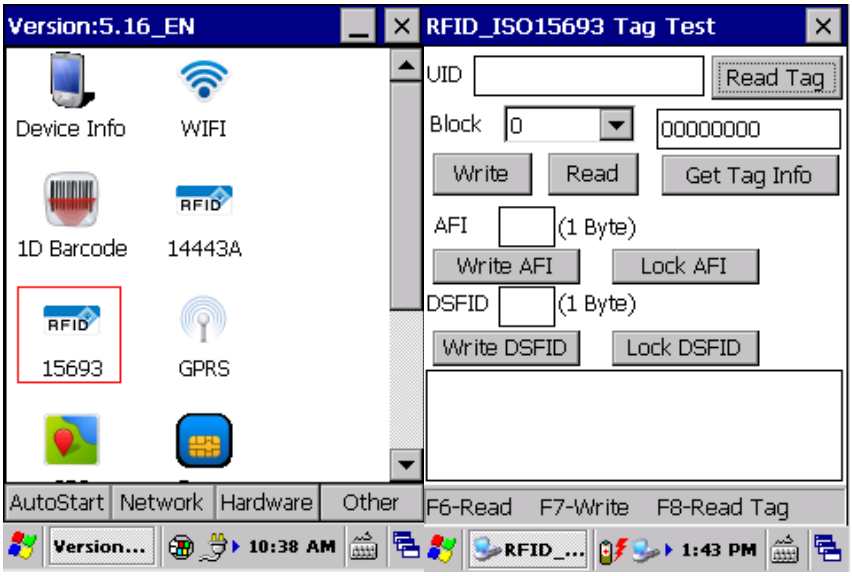


Pic 2.2.2.1-10

2.2.2.2 ISO 15693 Protocol

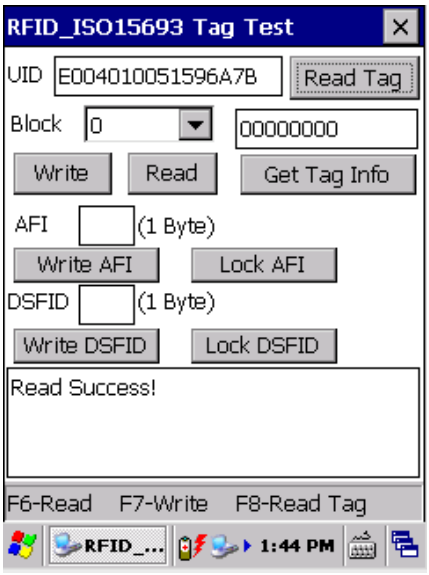
1. Test:

1) Click '15693' within 'AppCenter', then we would enter the following interface: Pic 2.2.2.2-1 and Pic 2.2.2.2-2



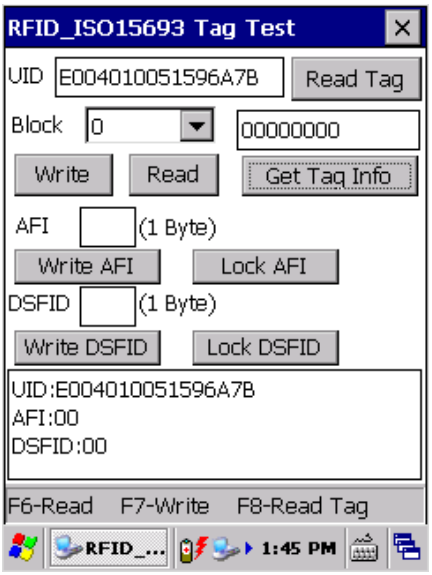
Pic 2.2.2.2-1 Pic 2.2.2.2-2

2) Click ‘Read Tag’, the UID code will be shown within the UID field; Pic 2.2.2.4-1



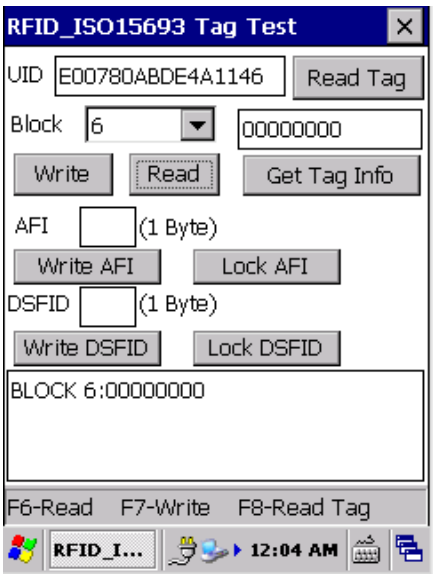
Pic 2.2.2.2-3

3) Click ‘Get Tag Info’ to get the information of the tag, and all the related information will be shown in the textbox; Pic 2.2.2.2-4 and Pic 2.2.2.2-5

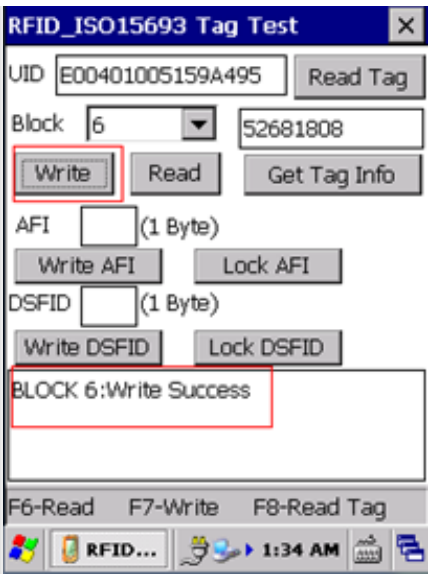


Pic 2.2.2.2-4

4) There are 28 blocks starting from 0 to 27 where we can read and write. For example, the information we read from block 6 is '00000000', then we write '52681808' to the block and click 'Write'; Pic 2.2.2.2-5 and Pic 2.2.2.2-6



Pic 2.2.2.2-5



Pic 2.2.2.2-6

2.Read UID:

Each ISO15693 protocol tag has a unique ID with the form of 64 bytes which is set permanently by the IC manufactory.

The form of UID is as follows:

MSB LSB

64 57	56 49	48 1
‘E0’	IC Mfg code	Serial number of IC manufactory

3.UID:

>8 bits MSB should be ‘E0’;

>According to ISO/IEC 7816-6: 1996/Amd， IC manufactory code should be8 bits;

> the 48 bits serial number defined by the manufactory;

4.AFI/DSFID:

& If we are not familiar with ISO15693 protocol and the structure, please do not modify AFI and DSFID unless professional;

AFI(Application family identifier):

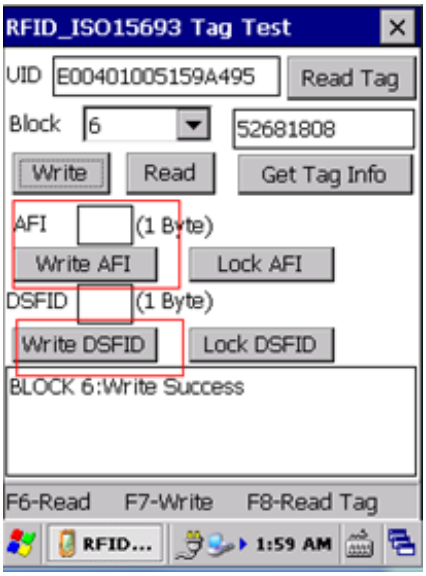
AFI, stands for the application type locked by VCD, VICCs can only be selected when they meet the required application standards. For the detailed introduction, please refer to ISO 15693 protocol.

AFI will be used for command programming and locking;

AFI is encoded in a byte which is consisted of two half-bytes;

The high-order of the half-byte is used for programming the specified or all the application family;

The low-order of the half-byte is used for programming the specified or all the application family; subfamily has its own ownership which is different from the code of 0; Pic 2.2.2.2-7



Pic 2.2.2.2-7

Note: Once the module is locked, you cannot write to it any longer;

2.2.3 UHF (Ultra High Frequency)

Technical Parameters:

Protocol: EPC, GEN2/ISO 18000-6C

Frequency: 840~960MHz

The UHF module supports 4 frequency modes:

- 920-925MHz;
- 840-845MHz;
- ETSI 865-868MHz;
- Fixed Mode 915MHz;

Default frequency is 920~925MHz; you can change the frequency mode by yourself, but antenna's frequency is fixed by factory, so if you want other frequency mode (e.g. Europe frequency ETSI 865~868MHz), please declare that when ordering.

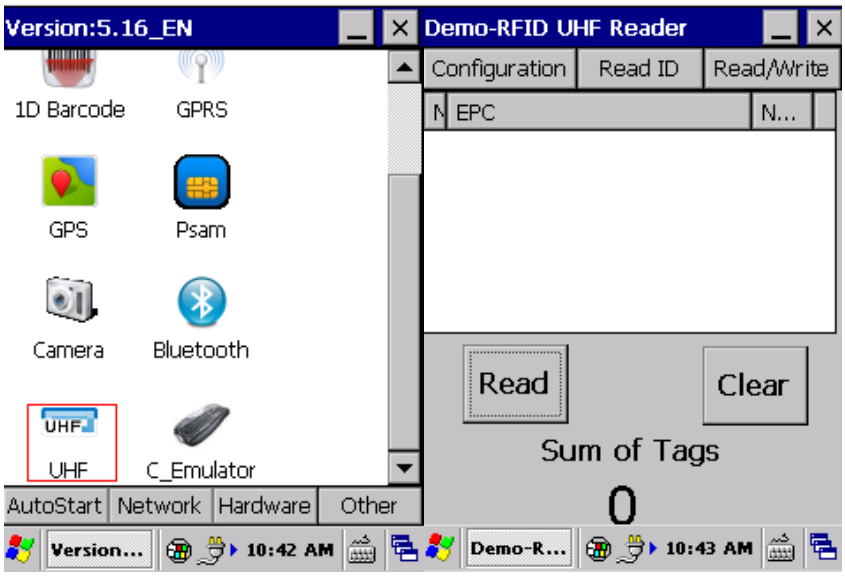
3Power: 10~30dBm; you can change it yourself; we recommend you setting to 24 dBm.

Linear Antenna Gain: 1.8 dBi;

Circular Antenna Gain: 2.5 dBi.

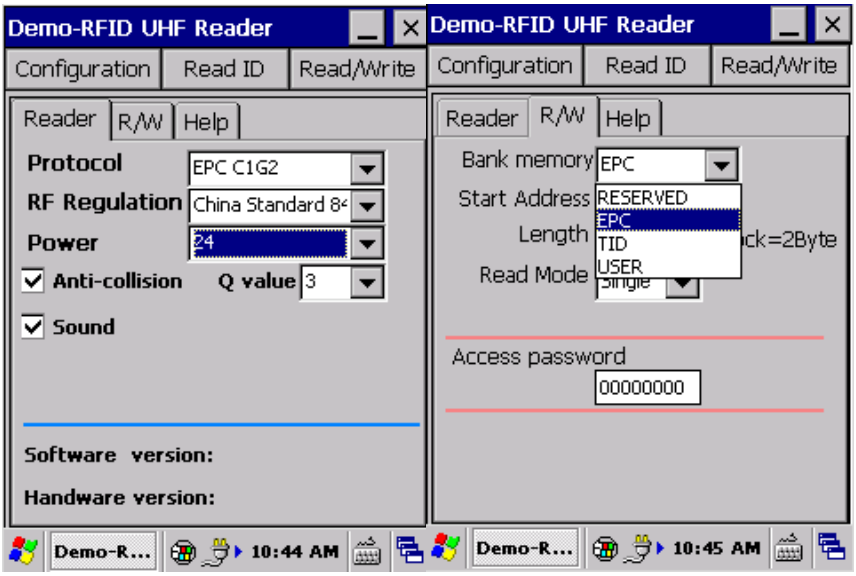
Operation Steps:

1) Open the 'UHF' within AppCenter, and we can hear a voice when the UHF is powered on, detailed interface is as Pic 2.2.3-1

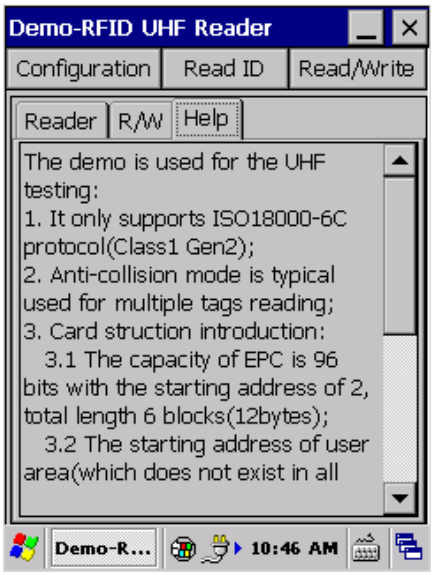


Pic 2.2.3-1

2) Click ‘Configuration’ to set the UHF module and get the information including hardware and software as Pic 2.2.3-2 Pic 2.2.3-3 and Pic 2.2.3-4

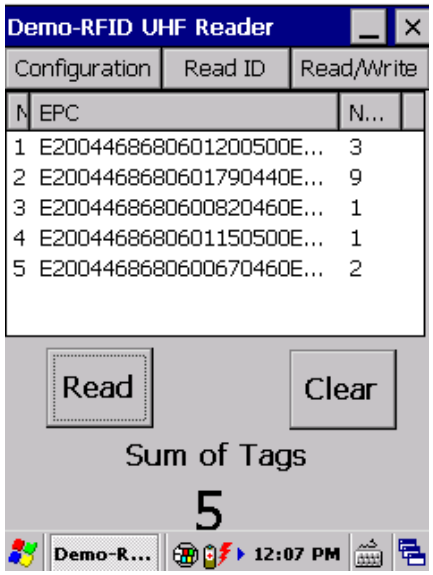


Pic 2.2.3-2 Pic 2.2.3-3



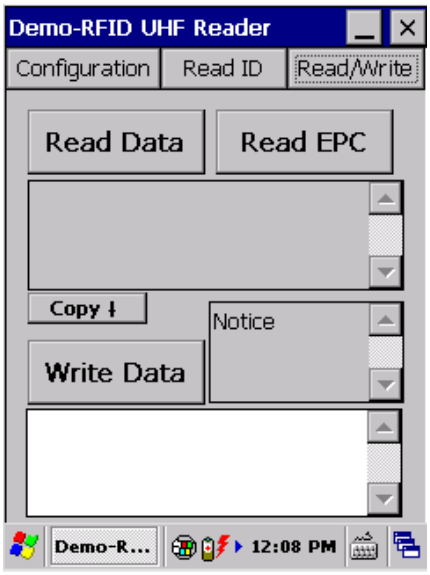
Pic 2.2.3-4

3) In the interface of 'Read ID', you can read all the UHF tags within the reading distance since the 'anti-collision' mode has been enabled; Pic 2.2.3-5 Pic 2.2.3-2



Pic 2.2.3-5

4) In the interface of 'Read/Write', we can read the data/EPC and write data to the tag; Pic 2.2.3-6



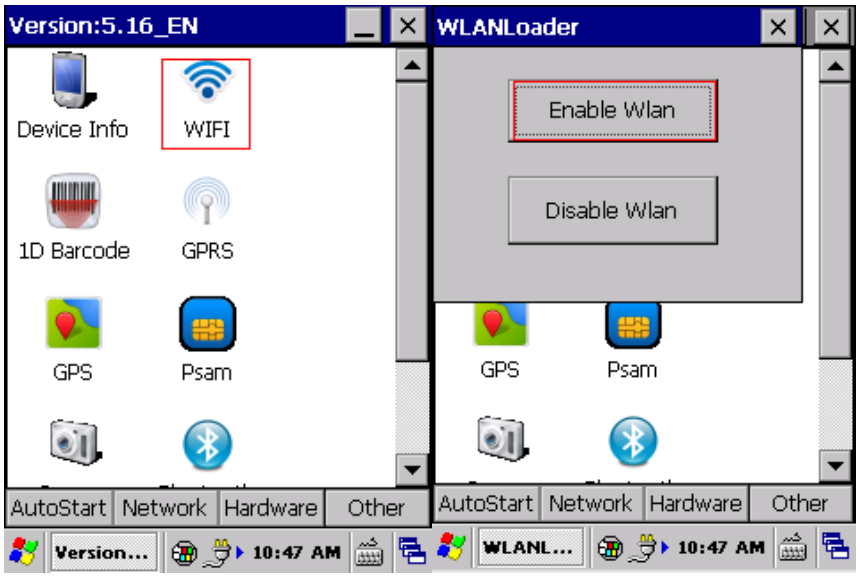
Pic 2.2.3-6

2.3. WIFI

You can transmit the data or search the internet via the wireless network by using the WIFI module which is embedded in the handheld, steps are as follows:

2.3.1 Obtain the dynamic IP address:

1) A folder named 'AppCenter' will be created after the installation of 'AppCenter', open WIFI;
2) Double click 'WIFI' by using the stylus, and then click 'Enable Wlan' button; Pic 2.3-1 and Pic 2.3-2



Pic 2.3-1 Pic2.3-2

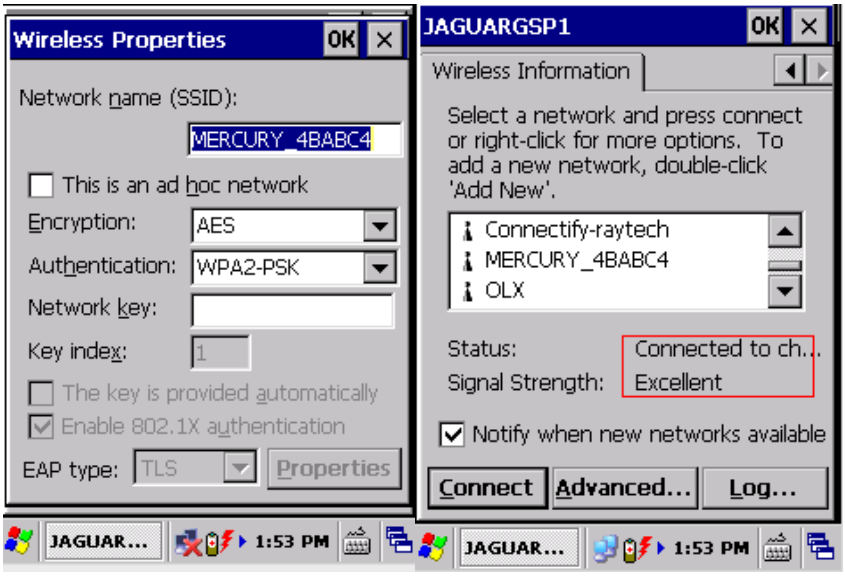
3) After clicking ‘Load’, the system will create the network connection automatically. If it is used for the first time, we have to configure the WIFI settings, an icon ‘’ will be shown in the task bar, we can set the program of WIFI properties after double clicking it;



Pic 2.3-3

4) Choose the AP you want to connect to, then we will enter the interface of ‘Wireless Properties’ after clicking ‘Connect’; Pic 2.3-3

5) Input the correct network key within the field of ‘Network Key’ and click ‘OK’ to save it; Pic 2.3-4



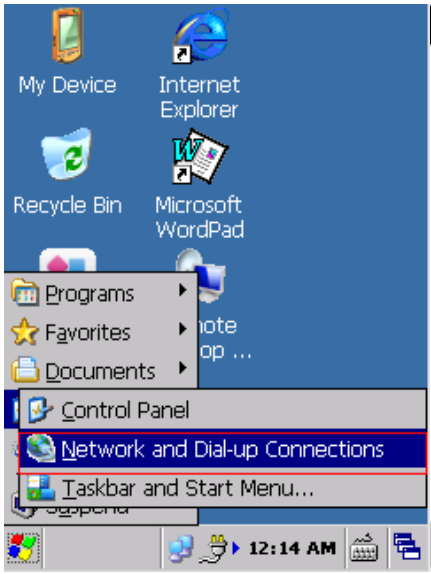
Pic 2.3-3 Pic 2.3-4

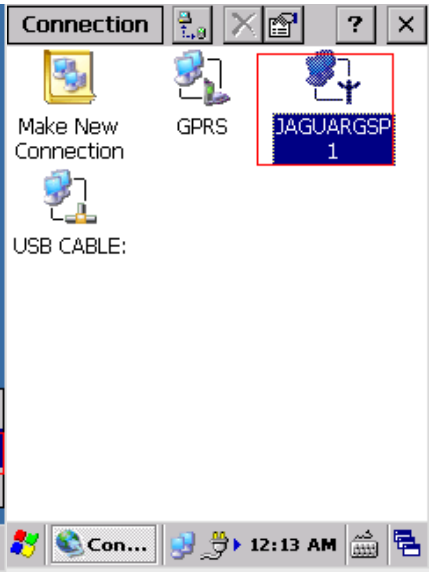
6) After the above steps, you can search the internet by the IE on the desktop or transmit the data;

After the above processes, if the device still cannot obtain the IP automatically, we have to set a static IP manually for it.

2.3.2 Set the static IP address:

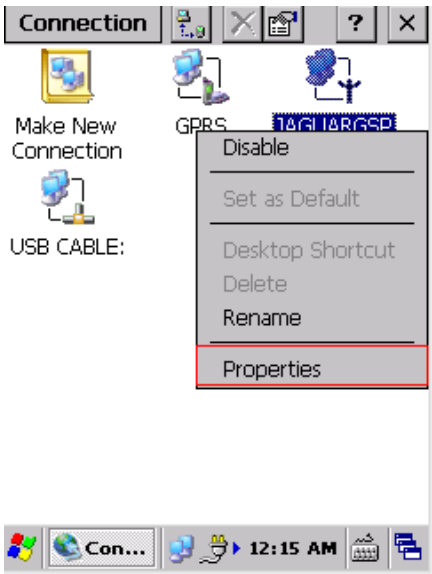
1) After the above steps, if the device still cannot obtain the IP address successfully, we can set a static one for the device; Pic 2.3-5 and Pic 2.3-6

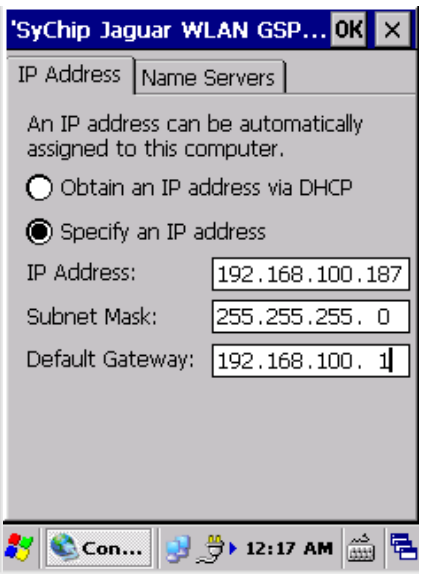




Pic 2.3-5 Pic 2.3-6

2) Click 'Start'→'Settings'→'Network and Dial-up Connections';
3) Double 'JAGUARGSP1', choose 'IP address', and set the static IP address, subnet mask and default gateway manually; Pic 2.3-7 and Pic 2.3-8





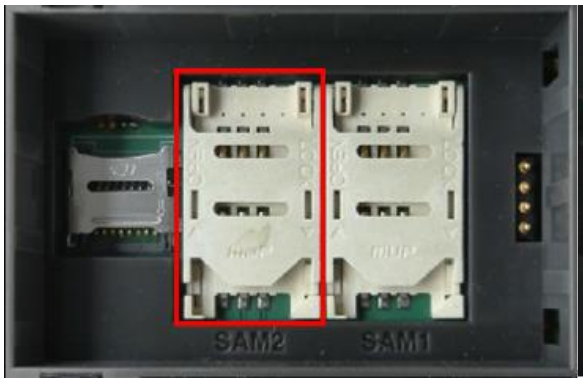
Pic 2.3-7 Pic 2.3-8

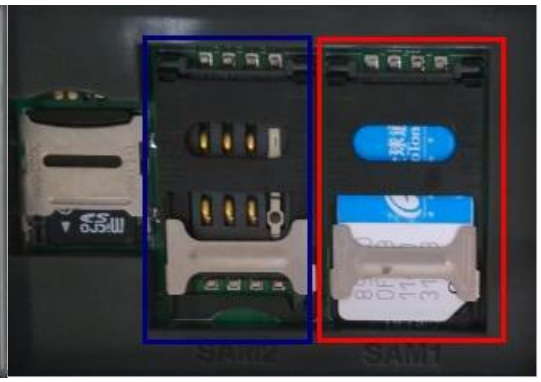
4) After the above steps, you can search the internet by the IE on the desktop or transmit the data;

2.4. GPRS

2.4.1 SIM Card Installation

Install the SIM card properly, for white slots, please install the SIM card in SAM2, and for black slots, please install it in SAM1. (You can see the color of the slots by opening the cover and taking out the battery). Pic2.4.1-1

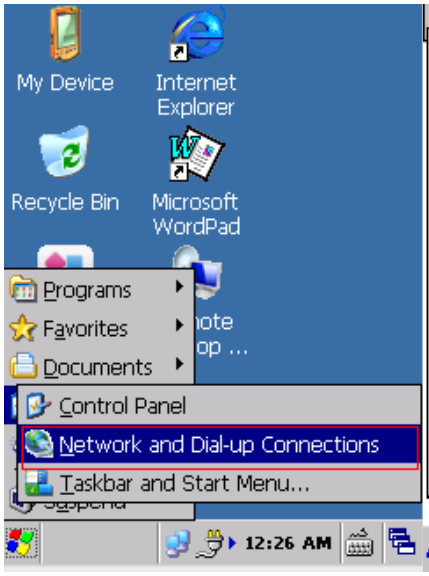


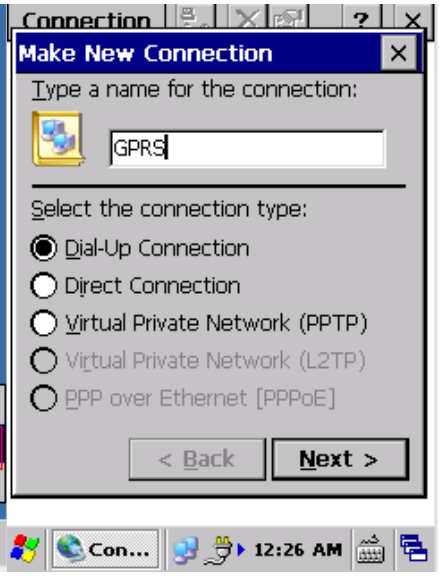


Pic 2.4.1-1 Pic 2.4.1.2

2.4.2 GPRS Dial-up Connection Creation:

1) Click 'Start->Settings->Network and Dial-up Connections', then double click 'Make a new connection'; Pic 2.4.2.1 and Pic 2.4.2-2

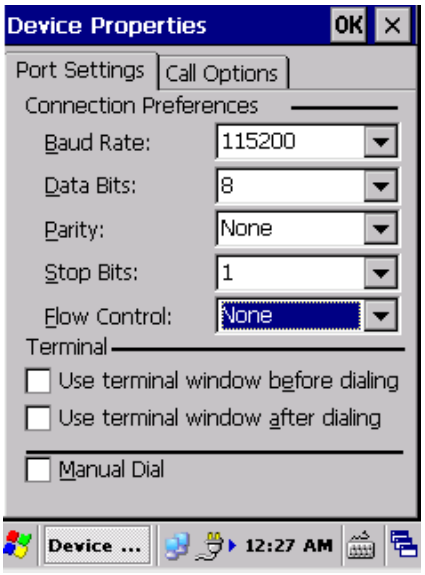




Pic 2.4.2-1 Pic 2.4.2-2

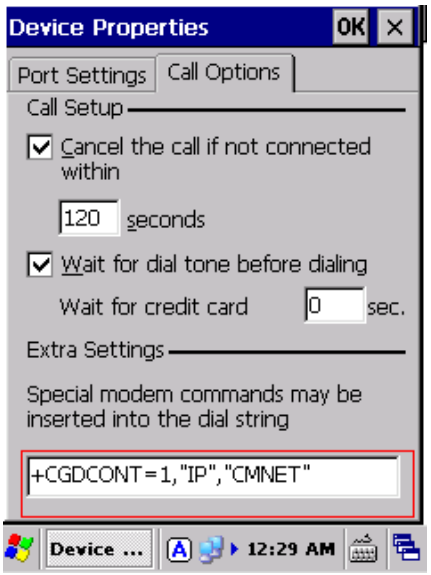
2) Input the connection name (such as GPRS) and choose ‘Dial-up Connection’, then click ‘Next’; Pic 2.4.2-2

3) Click ‘Configure’ for the port settings, set the ‘Baud Rate’ as ‘115200’,’Date Bits’ as ‘8’, ‘Parity’ as ‘None’, ‘Stop Bits’ as ‘1’, and ‘Flow Control’ as ‘None’; Pic 2.4.2-3



Pic 2.4.2-3

4) Click ‘Call Options’, input ‘+CGDCONT=1,"IP","CMNET"’ within the field of ‘Special modem commends may be inserted into the dial string’, then choose ‘OK’ in the top right corner to save the settings, and the interface will enter the window of ‘Phone number settings’ after clicking ‘Next’; Pic 2.4.2-4



Pic 2.4.2-4

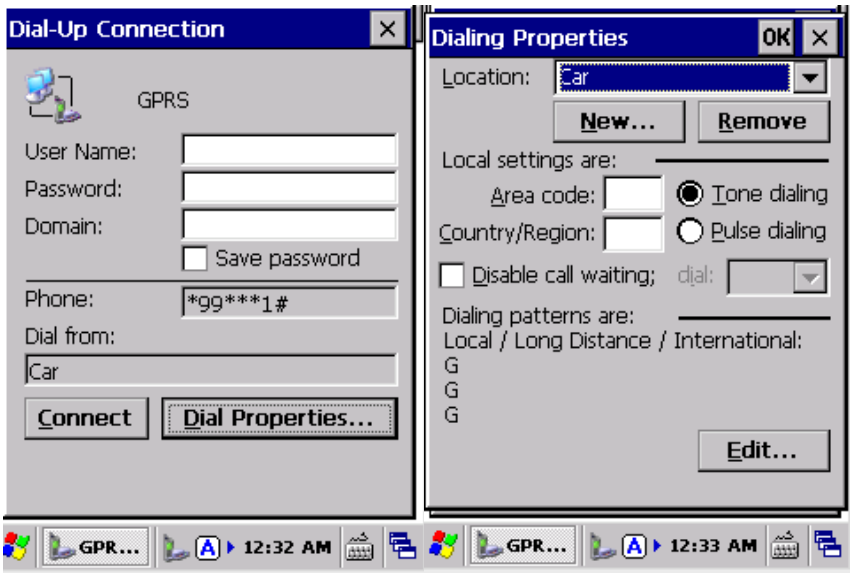
Note: ‘CMNET’ is the service provider in China, please change it correctly to the local information.

5) Input the local information in the fields of ‘Country/region code’ and ‘Area code’, and ‘*99***1#’ in the field of ‘Phone number’, then choose ‘Finish’ after the settings; Pic 2.4.2-5



Pic 2.4.2-5

6) Double click the ‘GPRS’; in the window of ‘Dial-Up Connection’ , keep ‘User Name’, ‘Password’ and ‘Domain’ fields blank, and then click ‘Dial Properties’; choose ‘Location’ as ‘Car’ and then click ‘Edit’; In the window of ‘Edit Dialing Patterns’, Input ‘G’ in all the 3 fields, then click ‘OK’. Click ‘OK’ in the window of ‘Dialing Properties’, and then back to the desktop. Pic 2.4.2-6 and Pic 2.4.2-7



Pic 2.4.2-6 Pic 2.4.2-7

Note: During the process of GPRS settings, the parameter of ‘CMNET’ in step 4 is set according to China Mobile. So users, please contact the service provider for detailed GPRS and dialing-up information to change to the local.

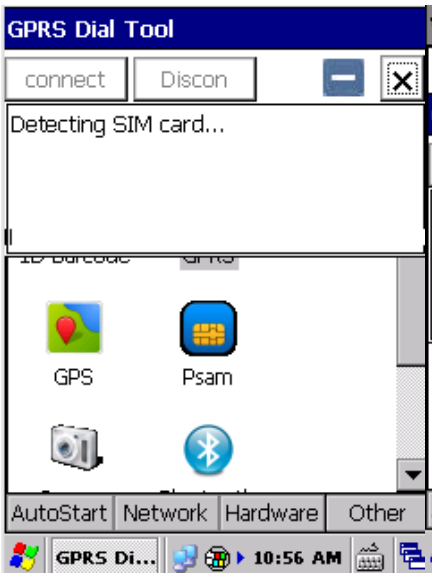
2.4.3 GPRS Dial-up Connection:

1) Open the program and choose the dial-up connection being created, click 'Connect' after showing 'Registered network success', GPRS connection will be ready after the program connects successfully; Pic 2.4.3-1



Pic 2.4.3-1

2) Open the program and choose the dial-up connection being created, click 'Connect' after showing 'Registered network success', GPRS connection will be ready after the program connects successfully; Pic 2.4.3-2 and Pic 2.4.3-4



Pic 2.4.3-2



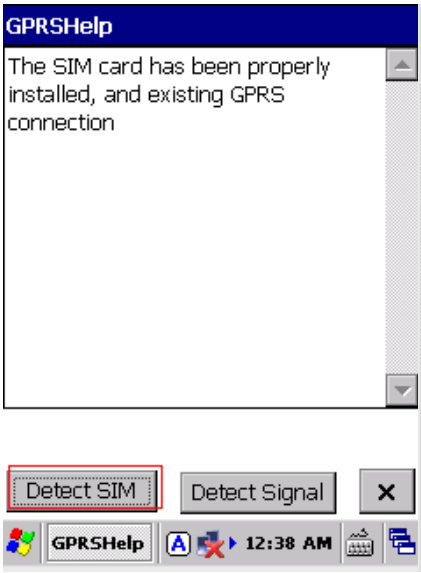
Pic 2.4.3-3

3) Click 'Connect', and after a few seconds, there will be a hint that the GPRS has connected successfully; Pic 2.4.3-4

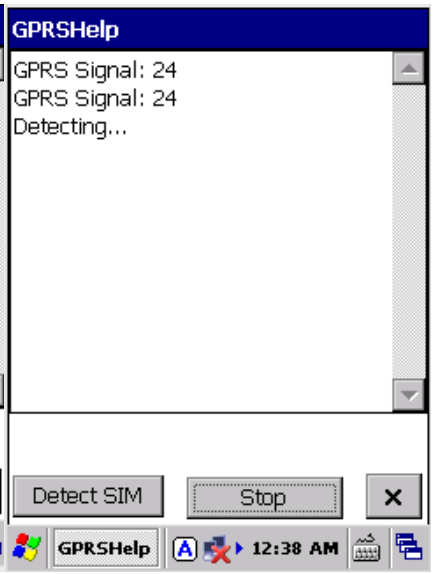


Pic 2.4.3-4

Note: By clicking the  *, we can check the SIM card and signal strength. Pic 2.4.3-5 and Pic 2.4.3-6*



Pic 2.4.3-5

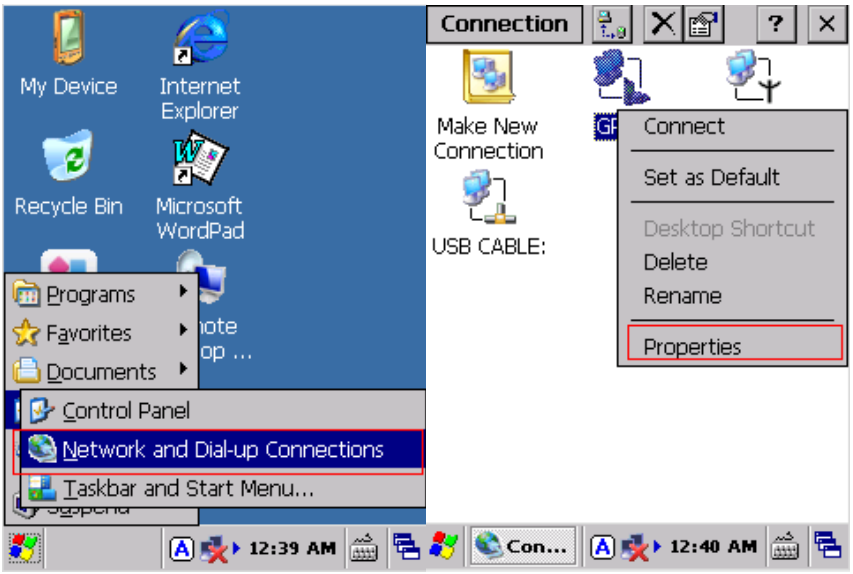


Pic 2.4.3-6

How to modify APN under the environment of WINCE:

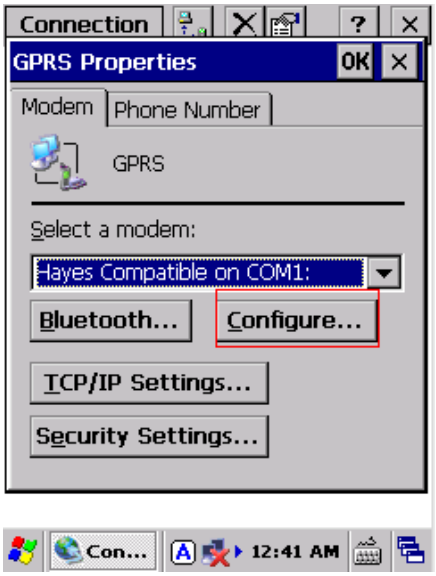
Under the environment of WINCE, we search the internet by GPRS dialing-up. For the detailed settings, please refer to the document of GPRS Setting Introduction. In our practical application, we have to change APN parameters according to the local service provider. For China Mobile, the APN is ‘CMNET’.

1) Choose ‘Network and Dial-up Connection’, and then right click the connection you have already created then choose ‘Properties’; Pic 2.4.3-7 and Pic 2.4.3-8



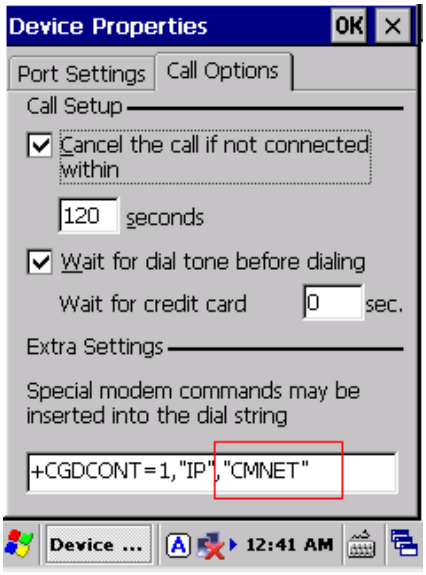
Pic 2.4.3-7 Pic 2.4.3-8

2) Within the new window of ‘GPRS Properties’, choose ‘Configure’; Pic 2.4.3-9



Pic 2.4.3-9

3) In the window of ‘Call Options’ under the field of ‘Special modem commands may be inserted into the dial string’, modify ‘CMNET’ to the information of local service provider; Pic 2.4.3-10



Pic 2.4.3-10

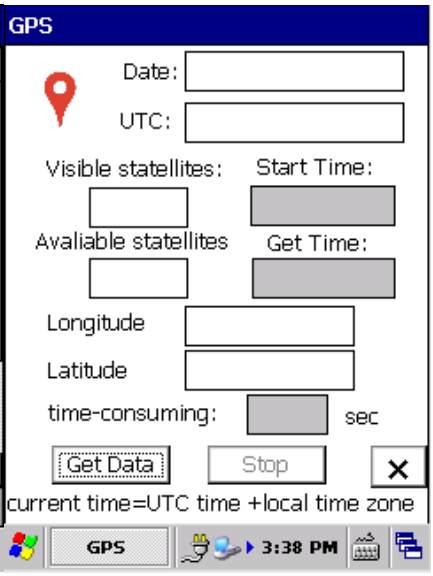
2.5. GPS

With the built-in GPS module (optional) of C5000, we can obtain the information including the local date, time, longitude, latitude, elevation, visible satellites and available satellites;

Operation Steps:

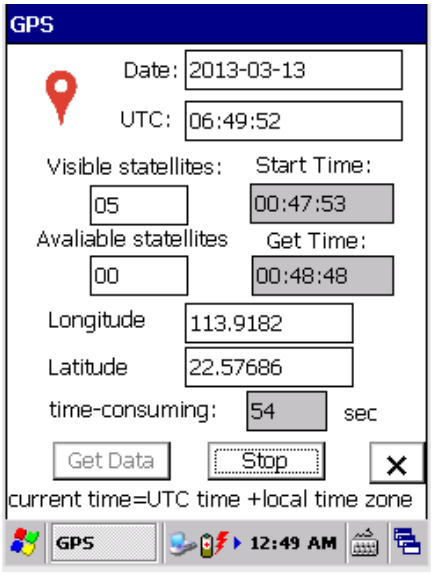
1) Double click 'GPS' and then we will enter the main interface of ' GPS'; Pic 2.5-1 and Pic 2.5-2





Pic 2.5-1 Pic 2.5-2

2) Click 'Get Data', and the handheld will obtain the satellite data, accurate cold start time and warm start time as the following captured image(for reference only); Pic 2.5-3



Pic 2.5-3

3) After the module is enabled, we can obtain the above information including date, time, longitude, latitude, visible satellites and available satellites in case that the received signal is good;

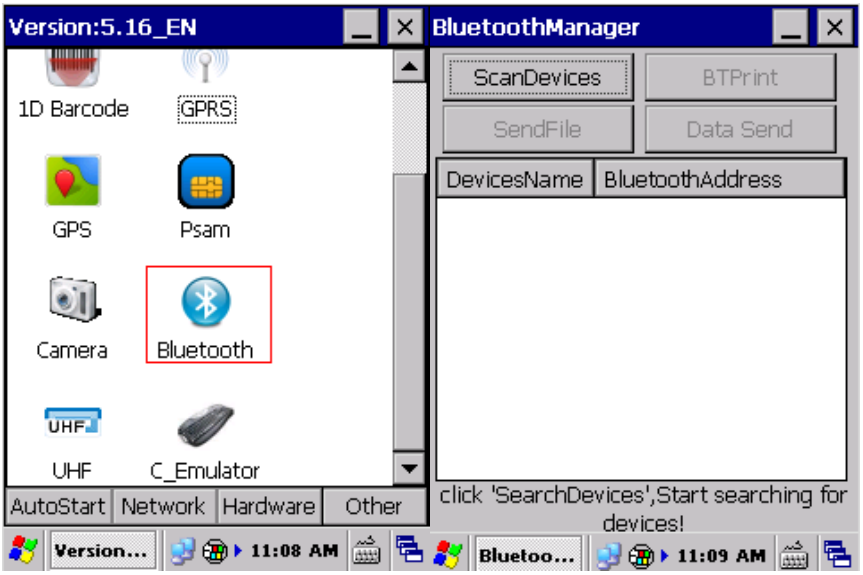
Note: Please use the GPS in outdoor environment, and keep the handheld being perpendicular to the ground.

2.6. Bluetooth

C5000W Bluetooth (optional) supports Bluetooth 2.0:

Operation Steps:

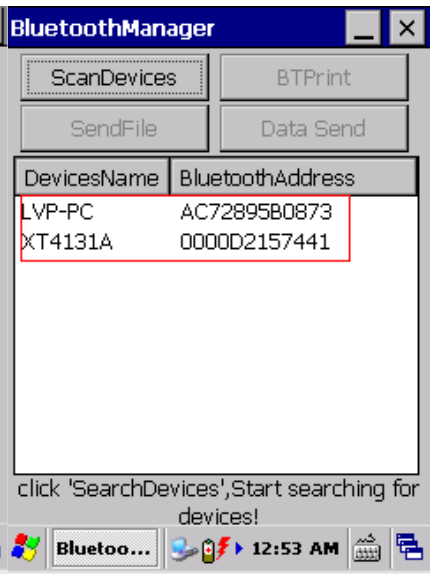
1) Open 'AppCenter' and double click ' Bluetooth'; Pic 2.6-1 and Pic 2.6-2



Pic 2.6-1 Pic 2.6-2

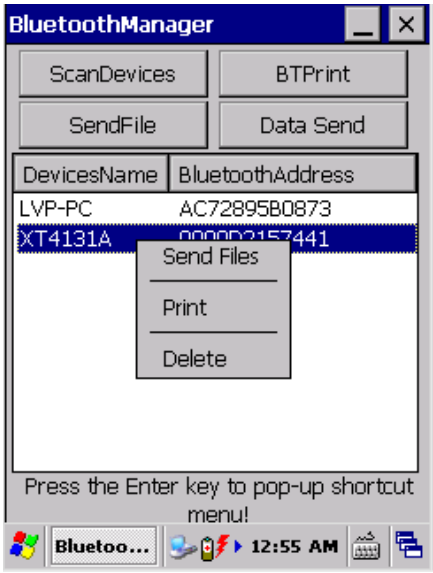
2) Click ‘ScanDevices’ to find out the nearby devices with Bluetooth on; Pic 2.6-3 and Pic 2.6-4





Pic 2.6-3 Pic 2.6-4

3) Choose one device , and click ‘Enter’(the yellow button) then a shortcut menu will skip out; Pic 2.6-5 and Pic 2.6-6



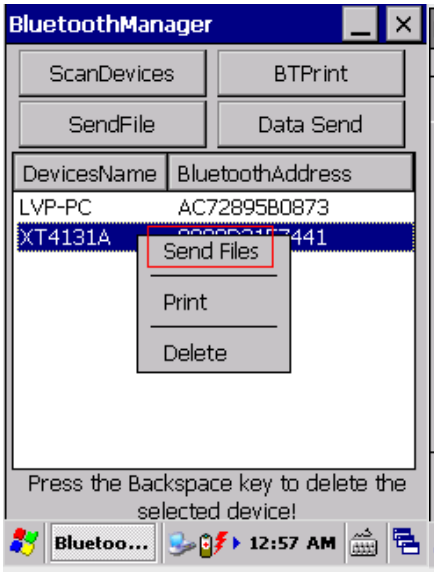


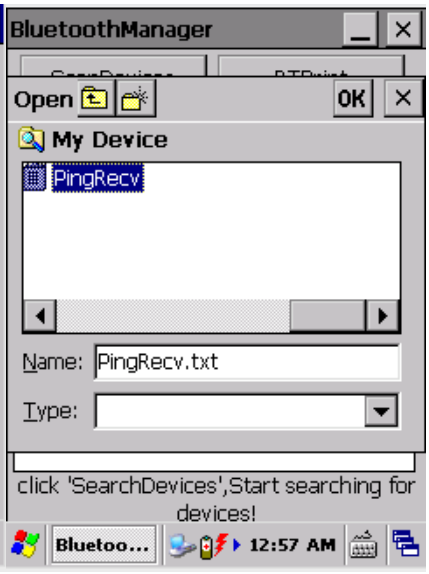
Pic 2.6-5 Pic 2.6-6

4) For deleting the record of the searched devices, press the delete button(the red button) directly;

Document Transmission:

1) Choose the device name which we want to transmit the document and press ‘Send File’ when we want to send the document in the handheld to another device; Pic 2.6-7





Pic 2.6-7 Pic 2.6-8

2) Find the document you want to transmit and click ‘OK’, then the document will be transmitted to the other device and the system will hint that the document has been sent successfully; Pic 2.6-9



Pic2.6-9

Bluetooth Printing:

1) Choose a printer with Bluetooth, and click ‘BTPrint’; Pic 2.6-10 and Pic 2.6-11

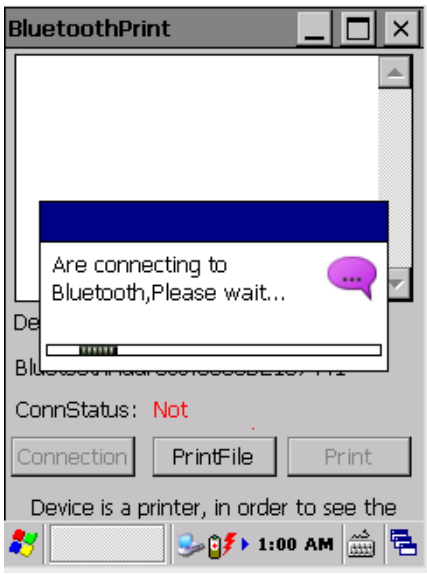


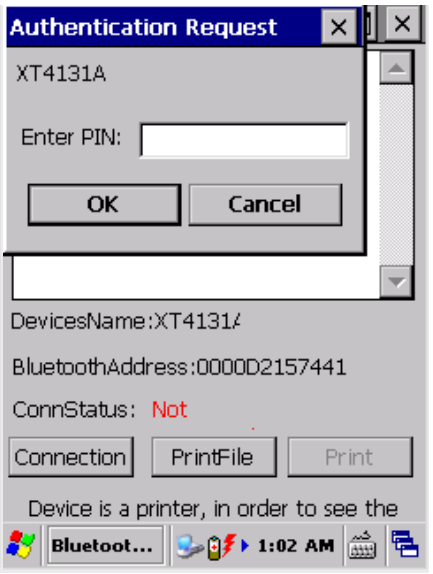
Pic 2.6-10



Pic 2.6-11

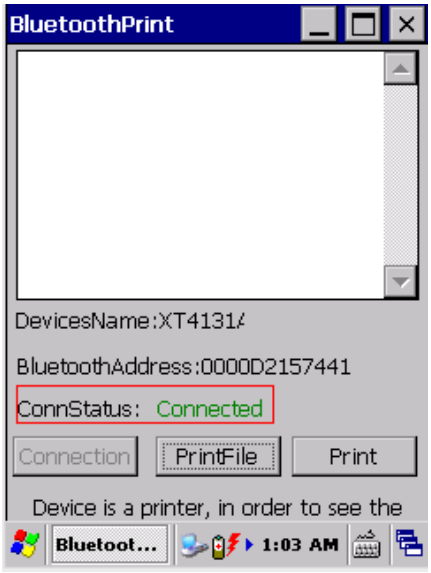
2) After entering the window of 'Bluetooth Print', then we click 'Connection', for connecting for the first time, the PIN will be needed to be input; Pic 2.6-12 and Pic 2.6-13





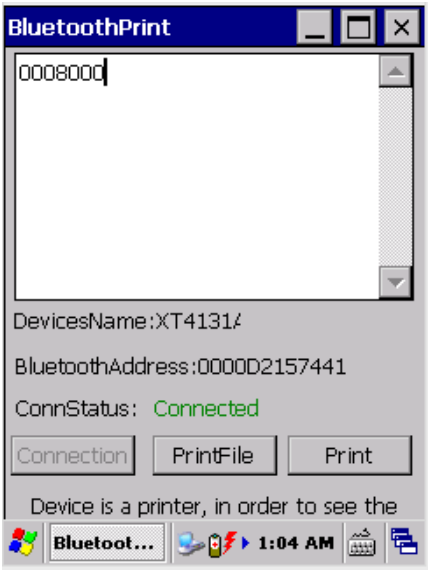
Pic 2.6-12

3) Click 'Ok' after the handheld hints that it has being connected successfully; Pic 2.6-14



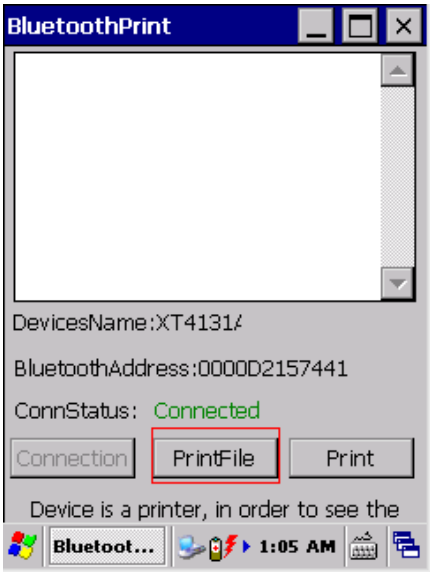
Pic 2.6-14

4) Input '0008000' and click 'Print', then the information will be printed on the paper; Pic 2.6-15

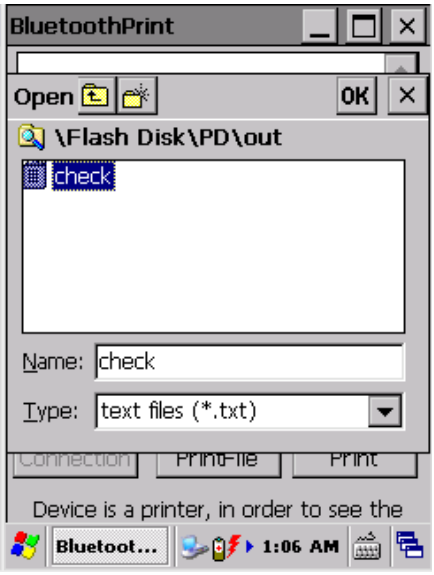


Pic 2.6-15

5) If you want to print the saved txt file, click 'Print File' and find the txt file then click 'OK'; Pic 2.6-15 and Pic 2.6-16

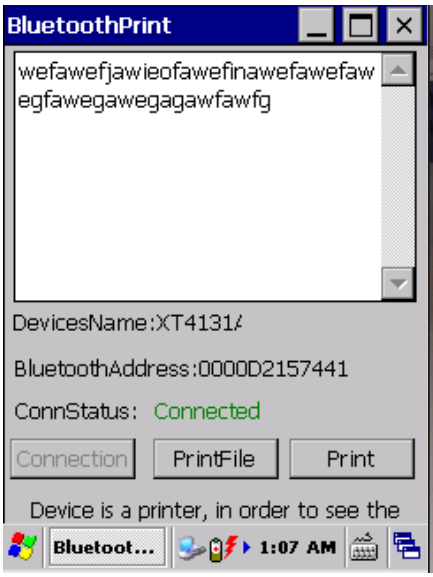


Pic 2.6-15



Pic 2.6-16

6) The information will then show within the print area, then click' Print', the print result is as follows: Pic 2.6-17 and Pic 2.6-18



Pic 2.6-19

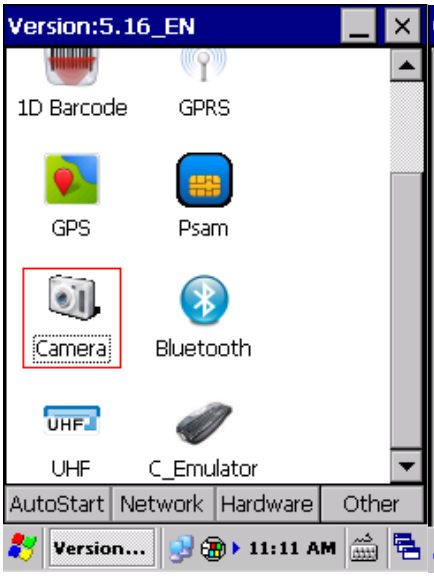


Pic 2.6-20

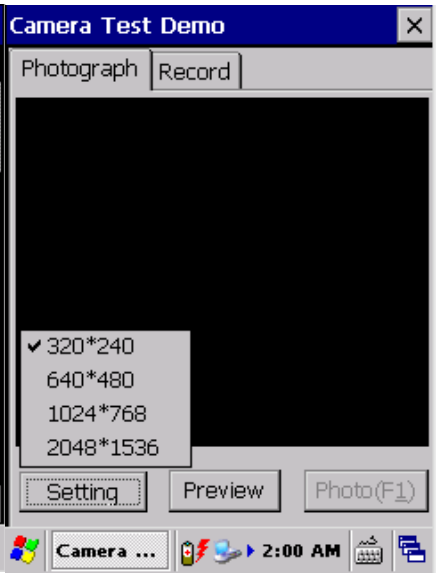
2.7. Camera

Preview:

1) Double click 'Camera' and enter the window of 'Camera Test Demo', and then choose 'Setting' where we can set the four resolutions independently; Pic 2.7-1 and Pic 2.7-2

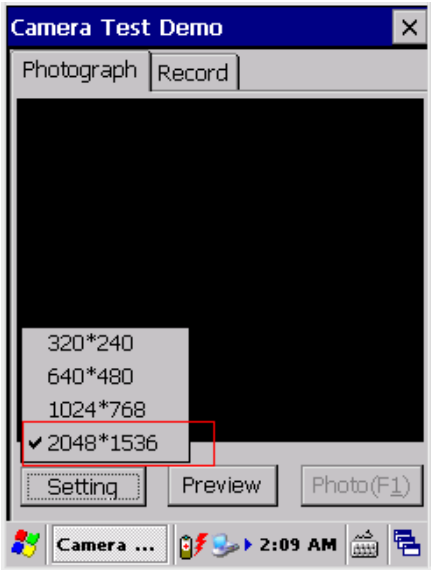


Pic 2.7-1



Pic 2.7-2

2) Choose the resolutions according to the requirements, and click 'Preview'; Pic 2.7-3 and Pic 2.7-4



Pic 2.7-3



Pic 2.7-4

3) Click 'Photo(shortcut#) , to save the current image with the form of JPEG, the path of ' My Device\Flash Disk\Photos'

Note: The photos can be saved by the format of JPEG and BMP, the default is JPEG.

Record:

1) Click 'Record' to check the previous images; Pic 2.7-5

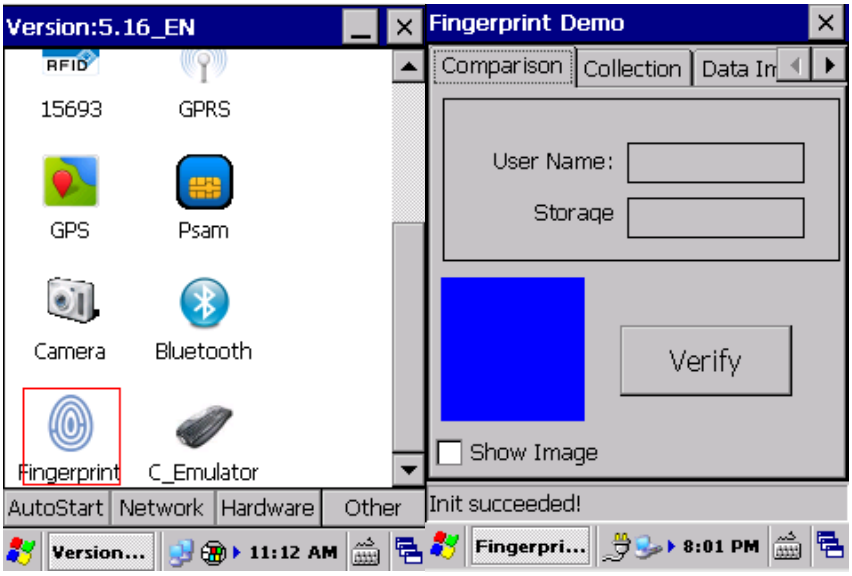


Pic 2.7-5

2.8. Fingerprint

Operation Steps:

1) Double click the 'Fingerprint' within AppCenter; Pic 2.8-1 and Pic 2.8-2



g

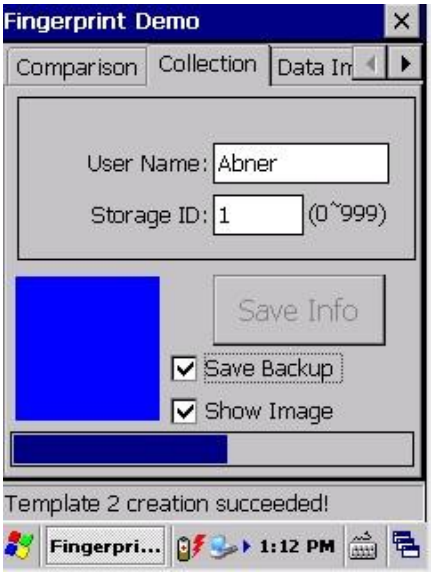
Pic 2.8-1 Pic 2.8-2

2) Input the user name/Storage ID, and put the fingerprint properly, then click 'Save Info' to save the fingerprint information. The options of 'Save Backup' and 'Show Image' are optional, and it would take a longer time when we choose 'Show Image'; Pic 2.8-3 Pic 2.8-4 Pic 2.8-5, Pic 2.8-6 and Pic 2.8-7

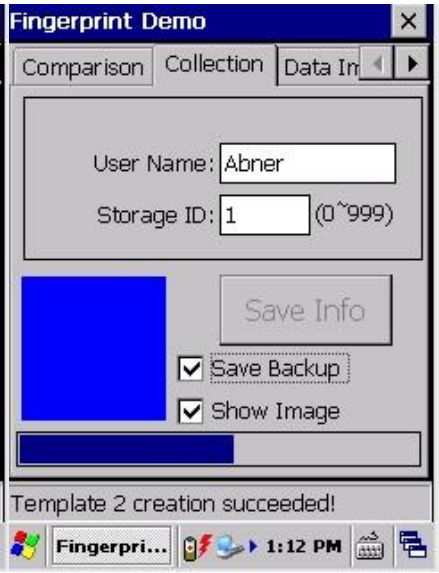


Pic 2.8-3

Pic 2.8-4



Pic 2.8-6

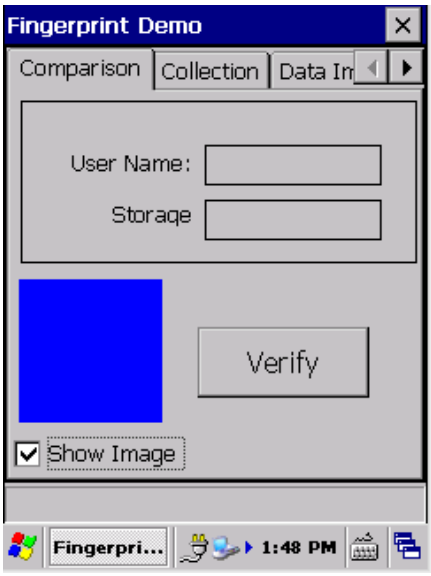


Pic 2.8-7



Pic 2.8-8

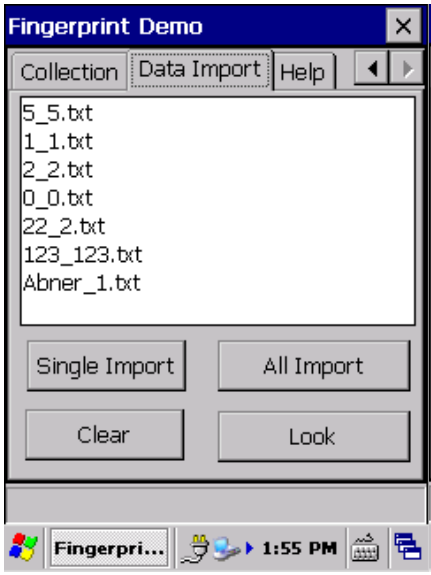
3) In the interface of ‘Comparison’, choose ‘Show Image’ and put the fingerprint which we used to save the fingerprint information properly, then ‘Verify’; Pic 2.8-9 and Pic 2.8-10



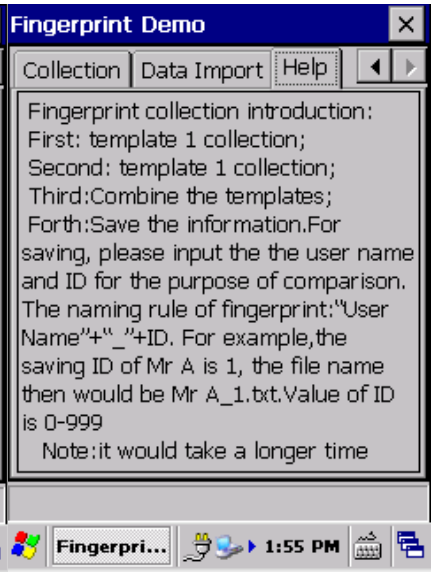


Pic 2.8-9 Pic 2.8-10

4) For ‘Data Import’ and ‘Help’, we can import/clear/look the fingerprint information from other terminals or get the brief introduction on the operation of fingerprint demo. Pic 2.8-11 and Pic 2.8-12



Pic 2.8-11

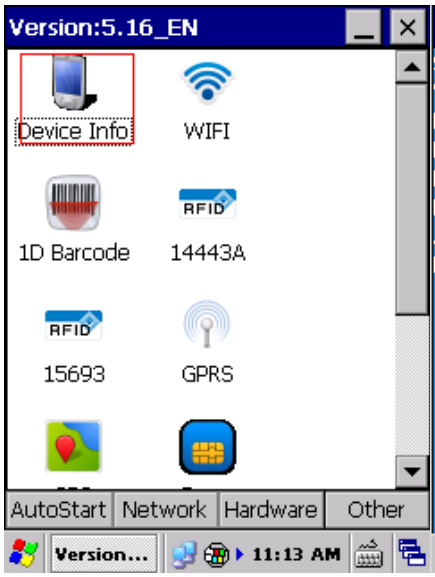


Pic 2.8-12

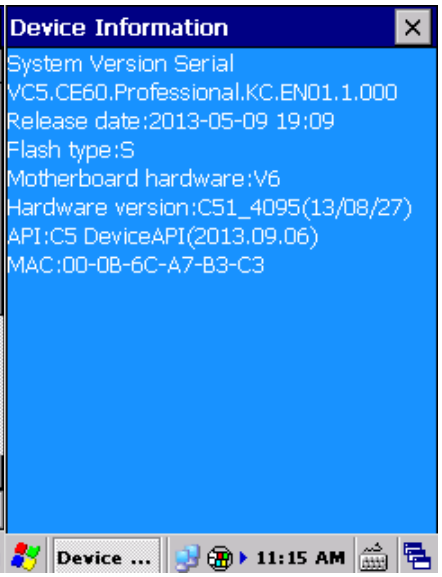
2.9. Other Functions

2.9.1 Device Info

Double click 'DeviceInfo', then you can find the information of the device including WINCE OS version, hardware version, CW and MAC address; Pic 2.9.1-1， Pic 2.9.1-2。



Pic 2.9.1-1



Pic 2.9.1-1

2.9.2 C_Emulator:

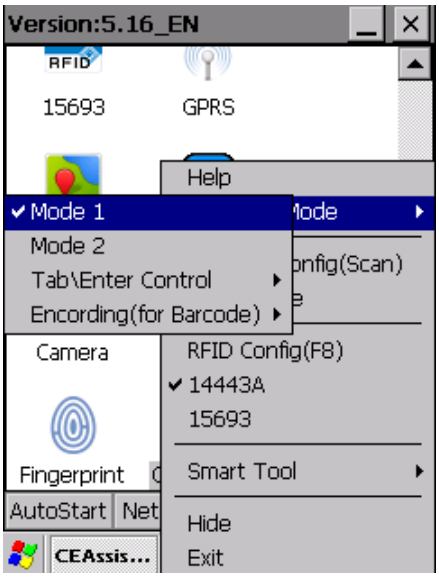
A smart tool which we can define the Barcode/RFID scanning buttons, switch the input modes including alpha/ numeric, and set the output data methods; Pic 2.9.2-1, Pic 2.9.2-2, Pic 2.9.2-3, Pic 2.9.2-4, Pic 2.9.2-5, Pic 2.9.2-6, Pic 2.9.2-7 and Pic 2.9.2-8



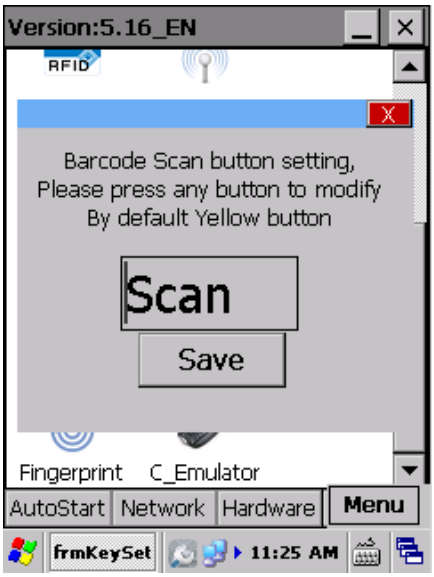
Pci 2.9.2-1



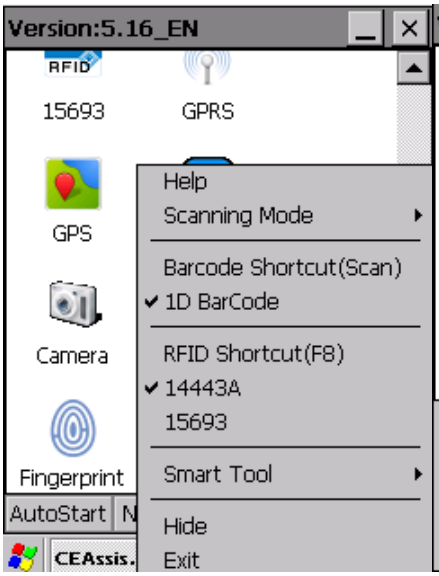
Pic 2.9.2-2



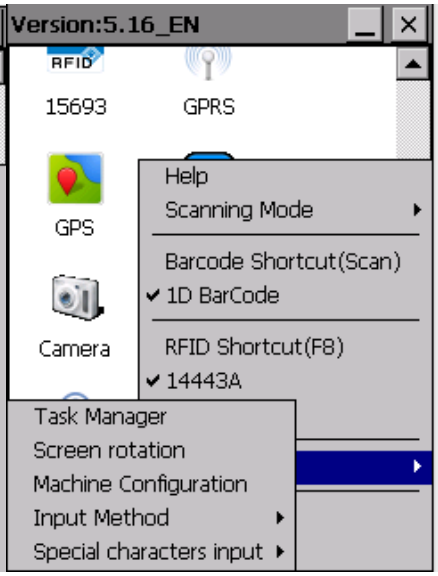
Pic 2.9.2-3



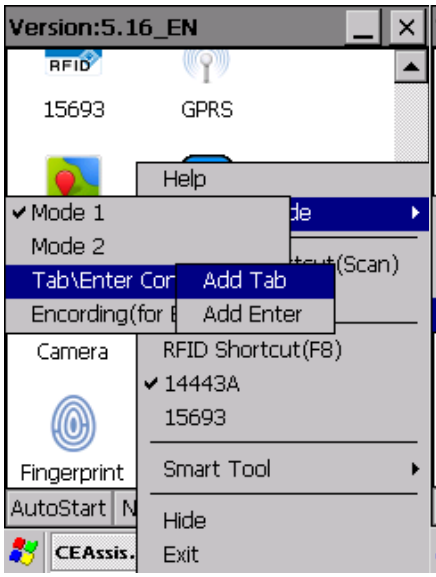
Pic 2.9.2-4



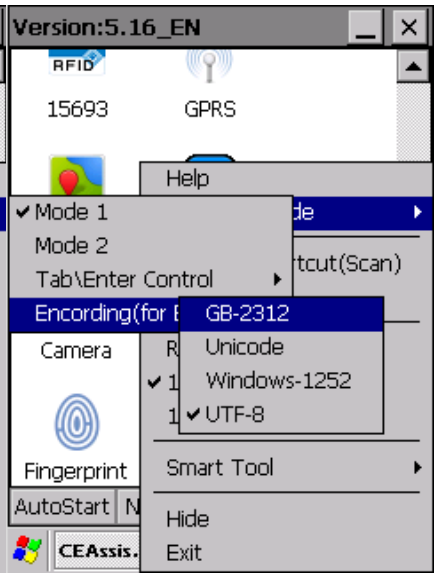
Pic 2.9.2-5



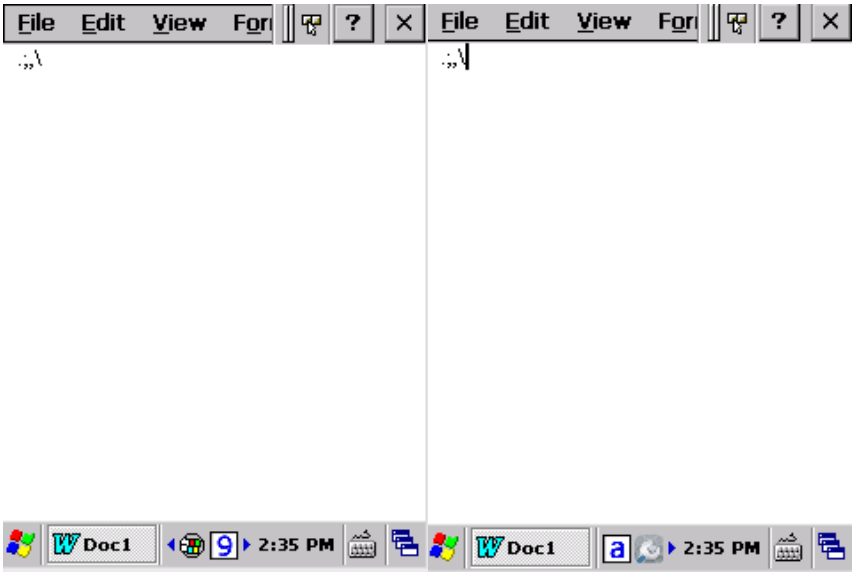
Pic 2.9.2-6



Pic 2.9.2-7



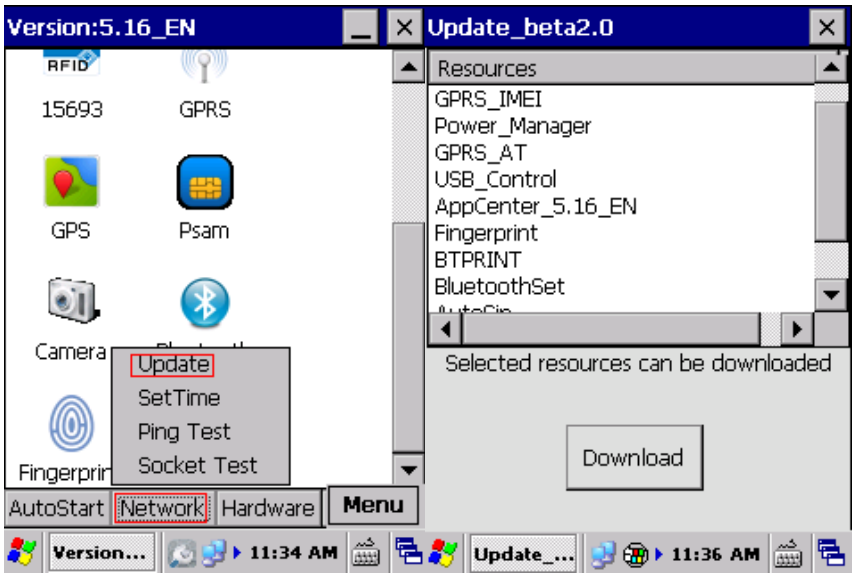
Pic 2.9.2-8



Pic 2.9.2-10 Pic 2.9.2-11

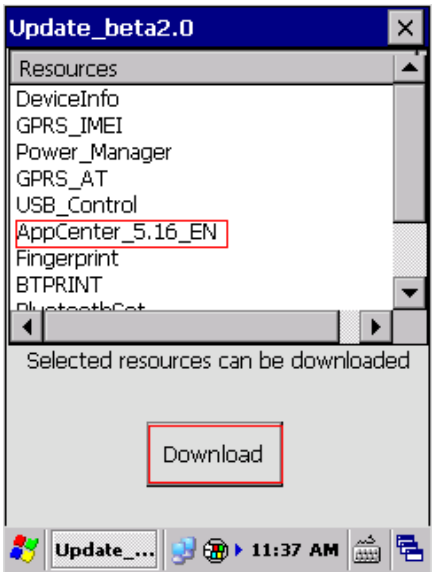
2.9.3 Download the updates

1) Double click 'Update' in the interface as the follows:(Description: the device can connect to Chainway server automatically to download the latest and available handheld program after connecting to the internet) Pic 2.9.3-1， Pic 2.9.3-2.



Pic 2.9.3-1 Pic 2.9.3-2

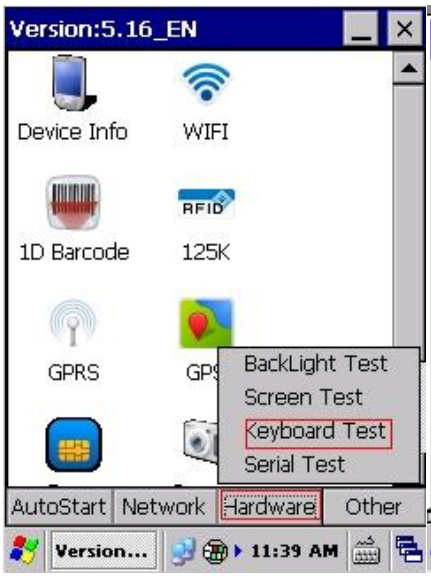
2) Pull down the menu, and choose the resource to download.(There would be more available programs after logging in.) Pic2.9.3-3



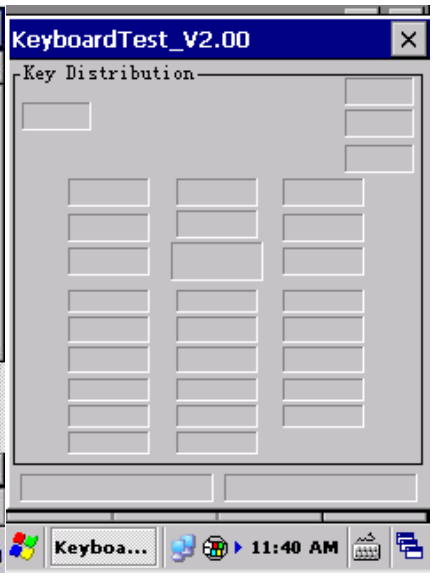
Pic 2.9.3-3

2.9.4 Keyboard Test

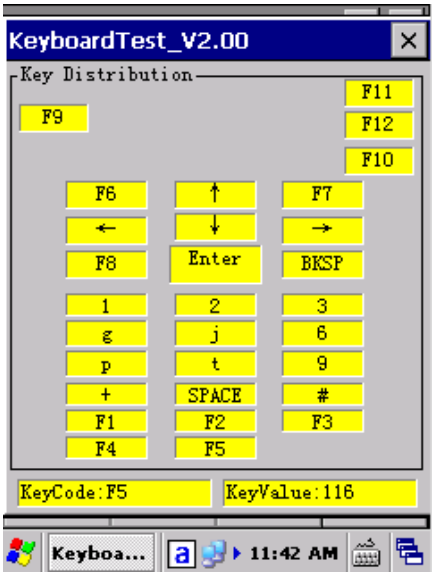
Check the corresponding key value of the keyboard by using the tool;Pic 2.9.4-1 Pic 2.9.4-2 and Pic 2.9.4-3.



Pic 2.9.4-1



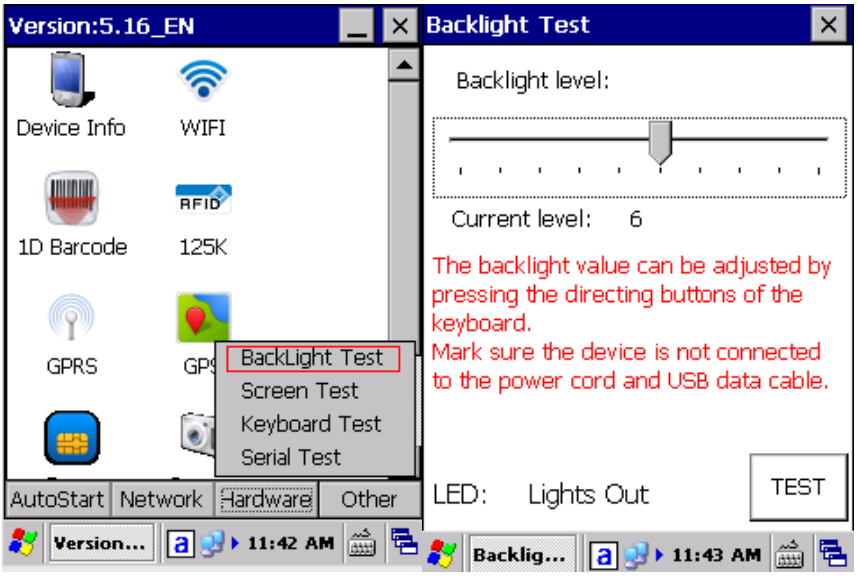
Pic 2.9.4-2



Pic 2.9.4-3

2.9.5 Backlight Test

Backlight: Adjust the screen brightness, backlight power supply is divided into 10 levels (the default is 6), it can be changed according to the customer's utilizing environment. (Note: for backlight test, please ensure not to connect the power line and USB line.) Pic 2.9.5-1 and Pic 2.9.5-2

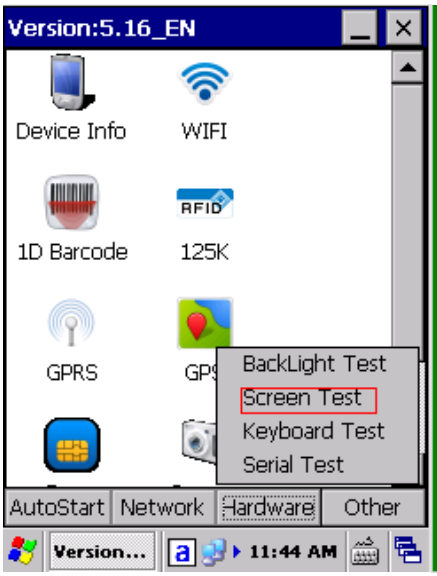


Pic 2.9.5-1 Pic 2.9.5-2

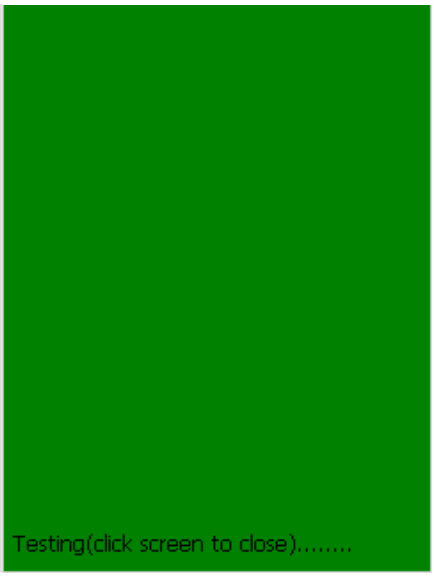
Note: we can click 'TEST' to detect if the three LED lights are working properly.

2.9.6 Screen Test

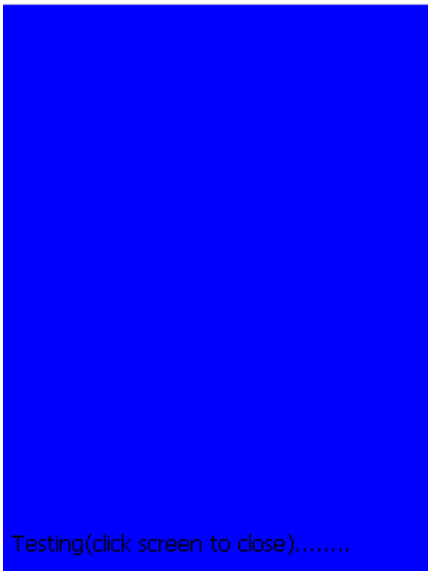
Screen Test: we can use this tool to detect and evaluate if the screen is working properly. Pic 2.9.6-1, Pic 2.9.6-2 and Pic 2.9.6-3



Pic 2.9.6-1



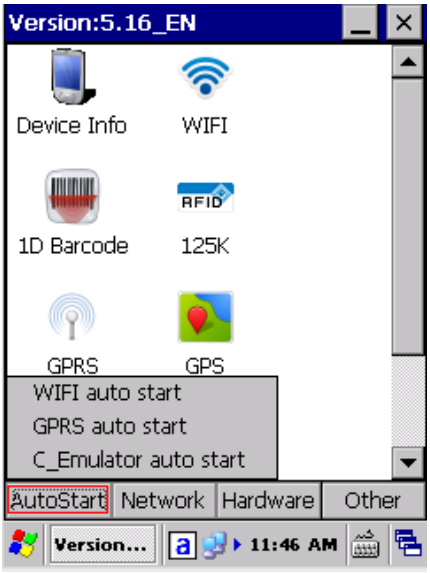
Pic 2.9.6-2



Pic 2.9.6-3

2.9.7 Autostart

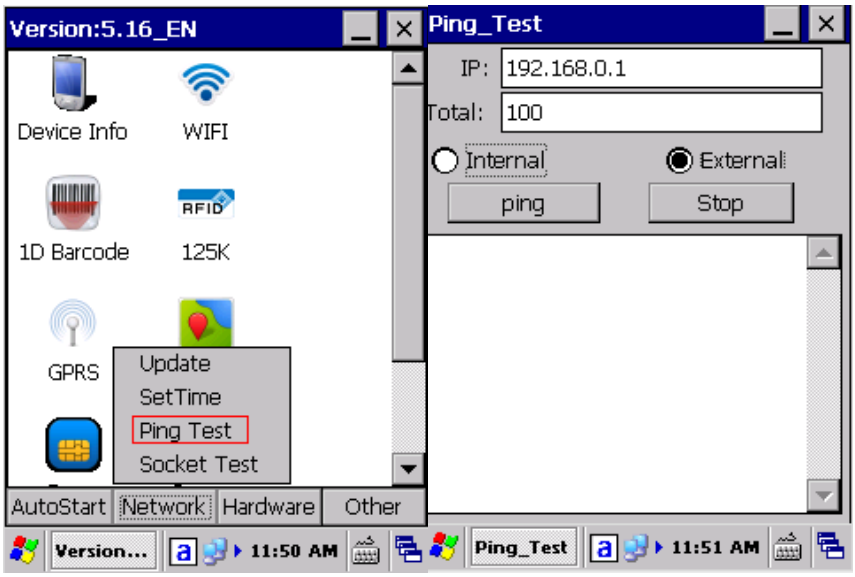
We can set the auto start of 'WIFI/GPRS/C_Emulator', then the WIFI/GPRS/C_Emulator would run once the device is rebooted. Pic 2.9.7-1



Pic 2.9.7-1

2.9.8 Ping Test

We can test the internal/external network by pinging the IP address or web as Pic 2.9.8-1 and Pic 2.9.8.2.

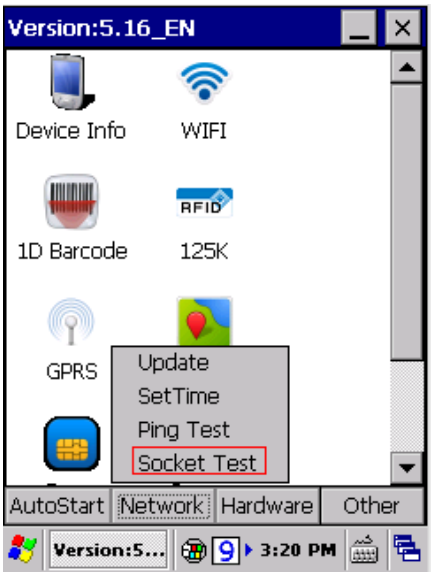


Pic 2.9.8-1 Pic 2.9.8-2

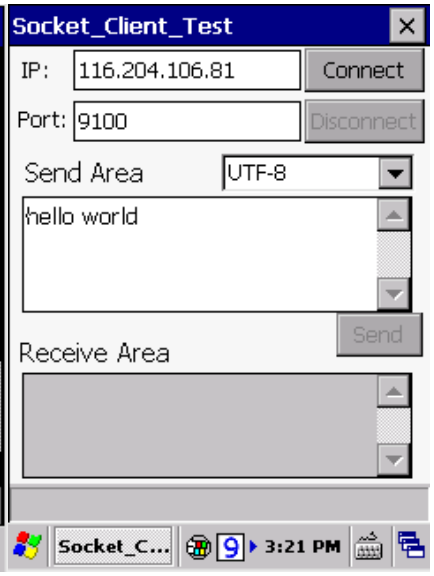
Note: For GPRS ping test, please unplug the USB cable since the USB communication has a higher priority than GPRS.

2.9.9 Socket Test

Socket Test can be used to test the socket communication as Pic 2.9.9-1 and Pic 2.9.9-2.



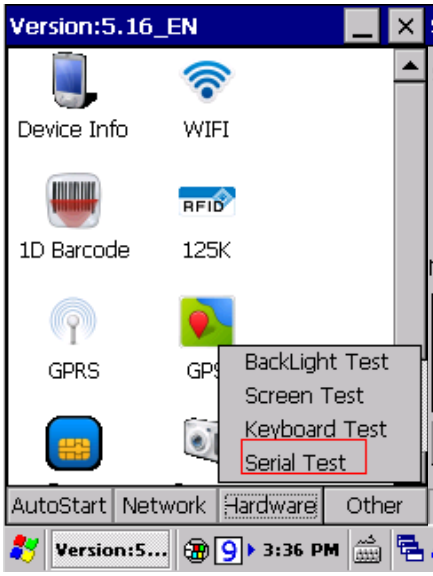
Pic 2.9.9-1



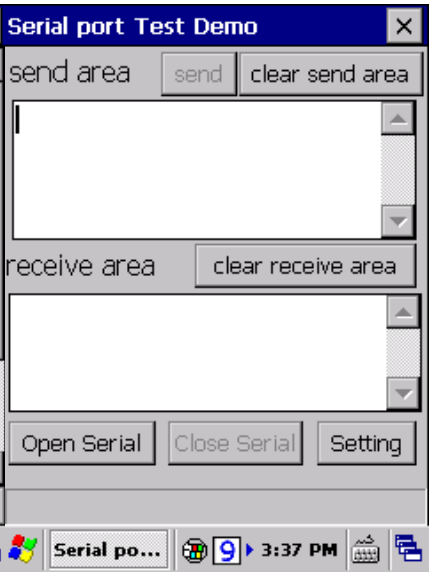
Pic 2.9.9-2

2.9.10 Serial Test

Serial Test can be used to test the serial communication as Pic 2.9.10-1 and Pic 2.9.10-2.



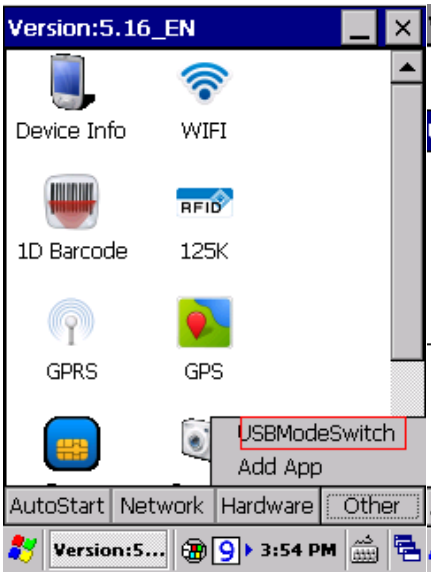
Pic 2.9.10-1



Pic 2.9.10-2

2.9.11 USBModeSwitch

We can switch the different USB modes depending on the requirements as Pic 2.9.11-1 and Pic 2.9.11-2



Pic 2.9.11-1



Pic 2.9.11-2