



## N320 Ruggedized PDA

## Quick Start Guide

v2.2.4



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### **About NephSystem Technologies**

NephSystem Technologies is the leading supplier in the fields of RFID, Smart Tracking Systems and Industrial PDAs. It was established in 1998 and has headquarters in Canada and has offices in the Asian-Pacific region. NephSystem works with partners around the world to ensure that our customers have the right products and solutions to achieve their business goals.

We manufacture and distribute a wide variety of industrial embedded products, Wireless communication devices and related peripherals around the world.

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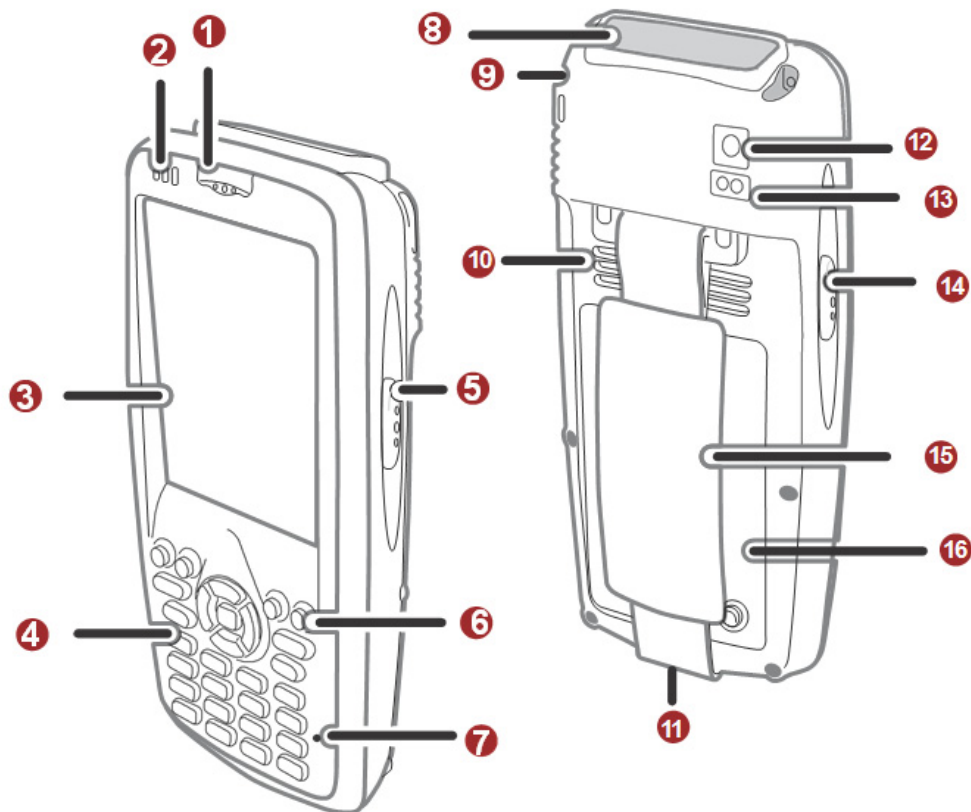
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## 1. Get Understanding of Your N320 PDA

The NephSystem Technologies' N320 PDA package comes with the following components.

- ❖ PDA
- ❖ Stylus
- ❖ Mini-USB Cable
- ❖ Battery
- ❖ RFID sample tags (if the RFID feature is purchased)
- ❖ Product CD or a copy of packing list
- ❖ Global 110~220VAC power adapter

Please contact us if any of the above mentioned parts is not included in the package.



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## Detailed Introduction:

1. Earpiece
2. System indicators
3. LCD: 3.2 inch Touch Screen LCD, the resolution is 240 \* 320
4. Keypad
5. Programmable right key
6. Power Button
7. RESET button: can be used to RESET N320
8. Barcode scanner
9. Stylus holder
10. Speaker
11. USB interface
12. Camera: 1.3 million pixels camera
13. Flash light of the camera
14. Programmable left key
15. Strap
16. Battery cover

## Keyboard Description:



	Photograph		Volume-
	Volume+		On/Off
	Left menu		Right menu
	Answer/dial		Hang up
	Up		Down
	Left		Right
	Confirm		Numberkeys
	Backspace		Main menu
	Switch		Enter

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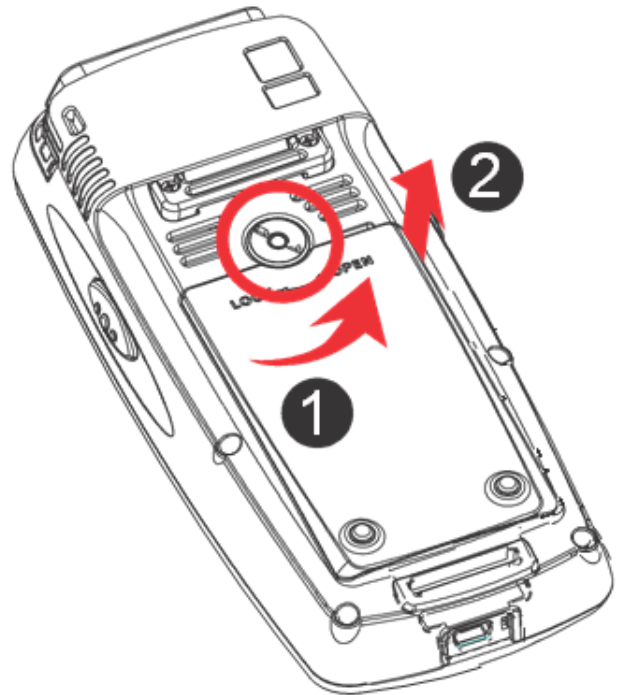
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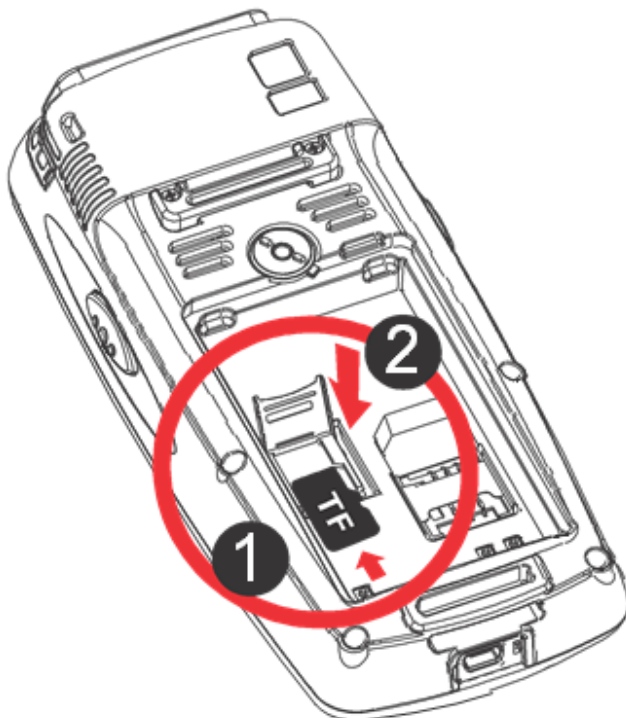
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## 2. Hardware Connection of N320

Remove the battery cover



Insert a TF or Mini SD card  
(If it is needed)



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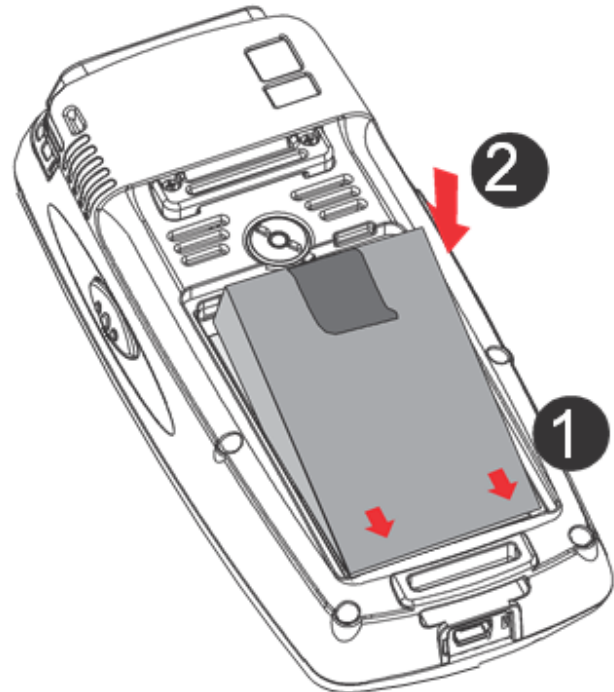


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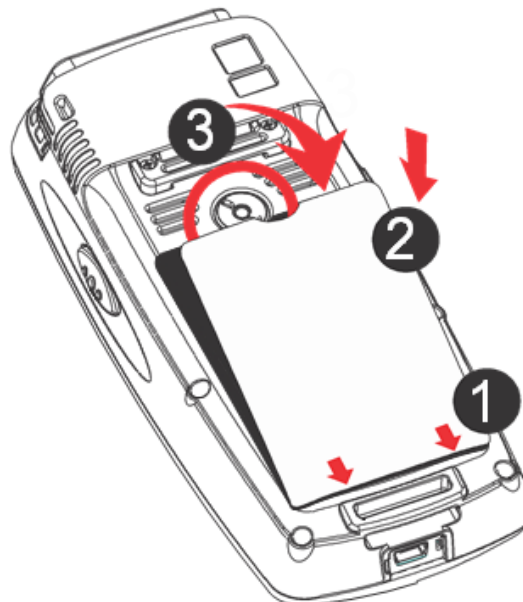
Insert the SIM card



Insert the battery



Install the battery cover



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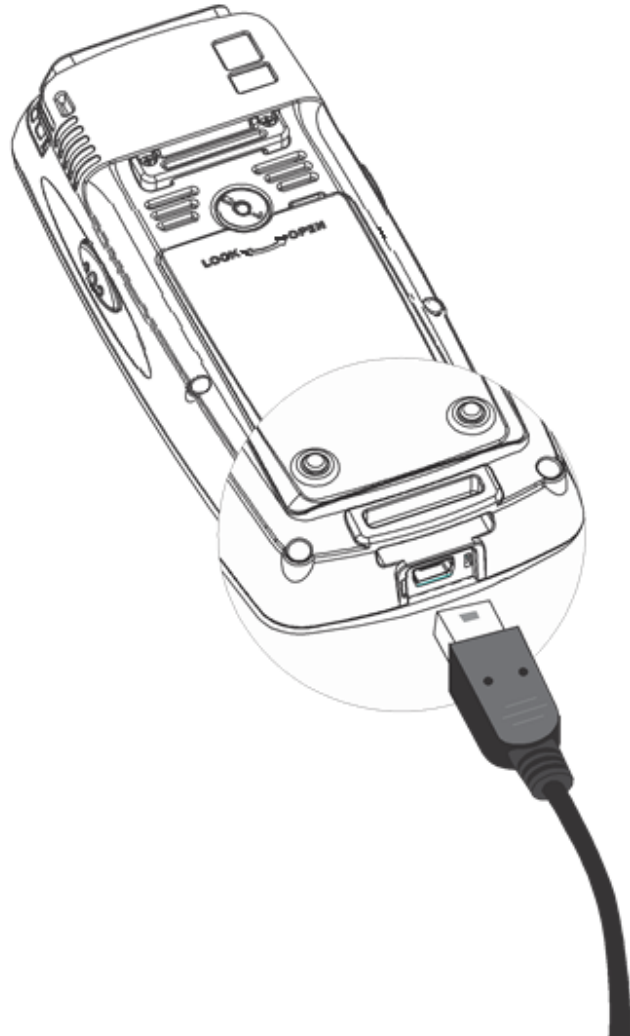
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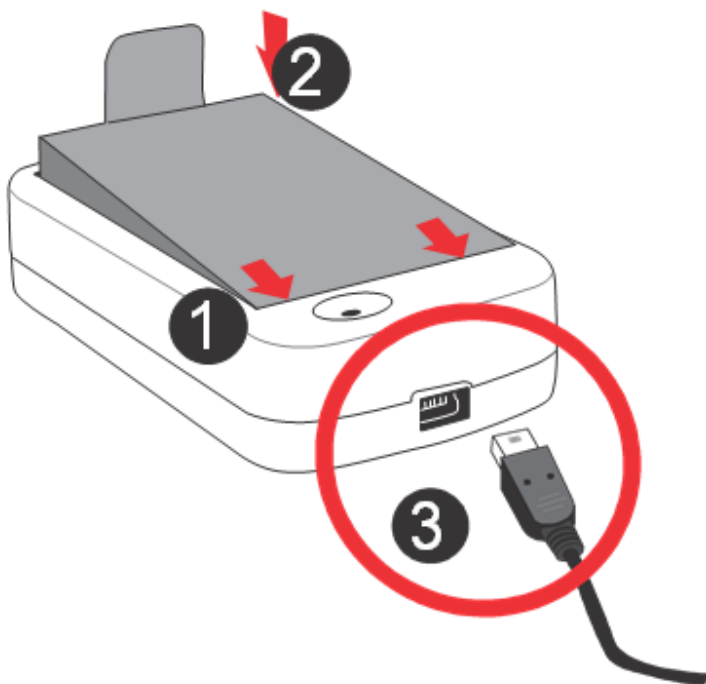


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## Data Communication cable connection



## Battery Charger Usage



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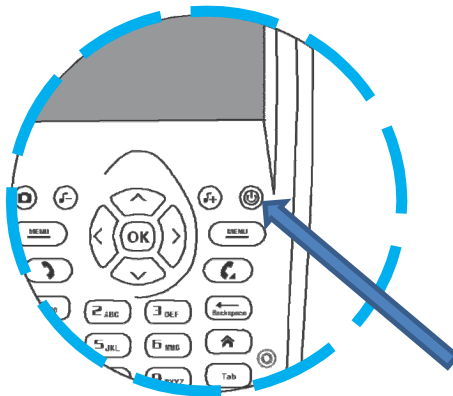
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## 3. Power On/Off and Reset Your PDA

### ***Power on:***



Press and hold the power button for 2 to 3 seconds, the power indicator will light on automatically, and at the same time, the startup picture will be displaying on the screen.



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## ***Stand by:***

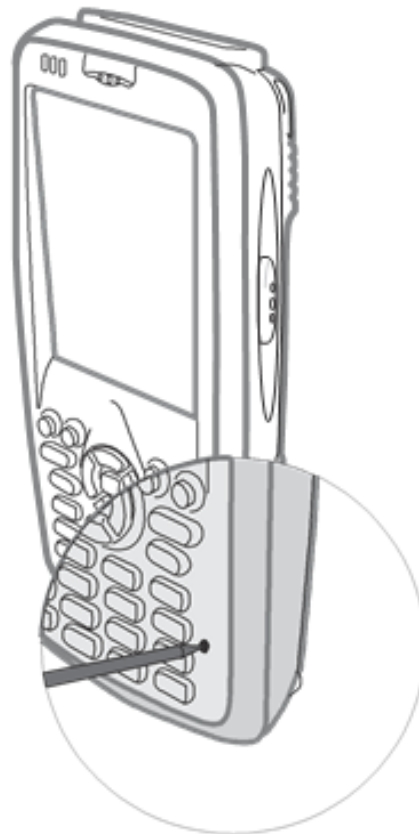
Press the power button, PDA will enter into the standby mode or the sleeping mode.  
Toggle the power button can wake it up.

## ***Shut down:***

When you don't need to use the N320, please press and hold the power button for 2 seconds, the PDA will pop up with a shutdown message window, just click the "**Yes**" to shut down immediately, at this time the LCD backlight and the power indicator will be off.

## ***Reset Your N320 PDA:***

Use the stylus to get your N320 reset by pressing the reset button on the panel



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## 4. Getting Started

 **NOTE:** Make sure *the N320 is fully charged before proceeding.*

### INSTALL the SYNCHRONIZATION SOFTWARE ON HOST PC

 *Do not connect your N320 to your host PC until the synchronization software has been installed on the PC.*

#### For Windows 7/Vista

1. Download the Windows Mobile Device Center software from:  
32bit O.S.: <http://www.microsoft.com/download/en/details.aspx?id=14>  
64bit O.S.: <http://www.microsoft.com/download/en/details.aspx?id=3182>
  2. Follow the instructions on the webpage to install the software.
-  *Refer to the Microsoft website for information on how to use the software.*
3. When you connect your N320 to your computer for the first time, the Windows Mobile Device Center should automatically start.




4. Click "**Set up your device**".
5. Select the information you want to synchronize and click **Next**.
6. Follow the instructions in the remaining screens to complete the setup.




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## For Windows XP/2000

-  *ActiveSync version 4.2 or above versions is required to connect to Windows Mobile 5.0, and version 4.5 or greater is required to connect to Windows Mobile 6. Users are able to find this ActiveSync from N320's product CD.*

1. When you connect your N320 to your computer for the first time, the New Partnership wizard should automatically pop up.



-  **NOTE:** *If the wizard does not automatically appear, click Start | All Programs | Microsoft ActiveSync.*

2. Follow the setup wizard to set up the partnership. Once completed, the first synchronization will start automatically.
3. The next time you wish to use the synchronization software, just plug your N320 into your computer via the USB cable. The software will open automatically and update your device.

## 5. RFID Operation(s)

RFID stands for “Radio Frequency Identification”. RFID is the most popular contactless automatic identification technology in the world. It automatically identifies items and gets their related data through radio frequency, the identification work does not require manual interference.

RFID technology is able to identify moving items with fast speed and identify multiple labels simultaneously; the operation is convenient and fast. NephSystem N320 ruggedized

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PDA has a built-in 13.56MHz High Frequency Mifare Standard RFID scanner and optional 125kHz or 134.2KHz FDX low frequency standard scanner(s) are also available.

We provide ready-to-use RFID testing software along with the products (if the RFID feature is selected).

To make a testing for the RFID, please copy the file of "**NephSystem\_320.cab**" from the product CD over to your N320, click on this cab file on the N320, the testing software will be installed properly on the PDA.

The image displays three screenshots of the NephSystem N320 PD software interface, showing different RFID testing functions.

**Left Screenshot (NephSystem N320 PD 3:28):** Shows the "Scanning Speed" set to "Medium". The "Timestamp" checkbox is checked, and the "Beep" checkbox is also checked. The "Data Log" checkbox is unchecked. The "Clear" button is highlighted. Below the buttons, a list of RFID data is shown, with the last entry "5AAECE11 11/3/11 3:28 PM" selected.

**Middle Screenshot (13.56MHz RFID 3:29):** Shows the "add money success" message. The "Initialize" button is highlighted. Below the buttons, a list of RFID data is shown, with the last entry "5AAECE11 11/3/11 3:28 PM" selected.

**Right Screenshot (NephSystem N320 PD 3:31):** Shows the "Timestamp" and "Data Log" checkboxes checked. The "Stop" button is highlighted. Below the buttons, a list of RFID data is shown, with the last entry "156000017496860 11/3/11 3:30 PM" selected.

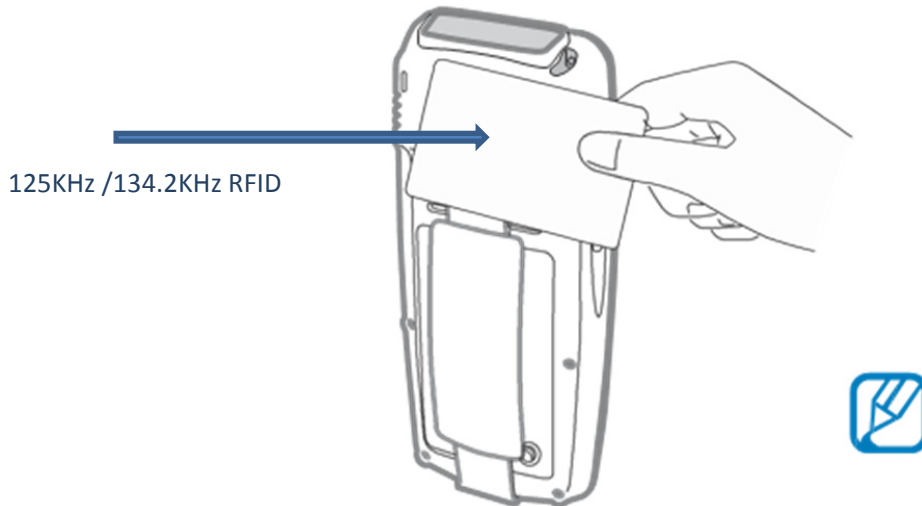
The RFID antenna zones for different RFID components are located at different areas on N320 –

**For 125 KHz or 134.2 KHz RFID, the antenna zone is located on the top side of back panel (close to the camera area), see the picture below –**



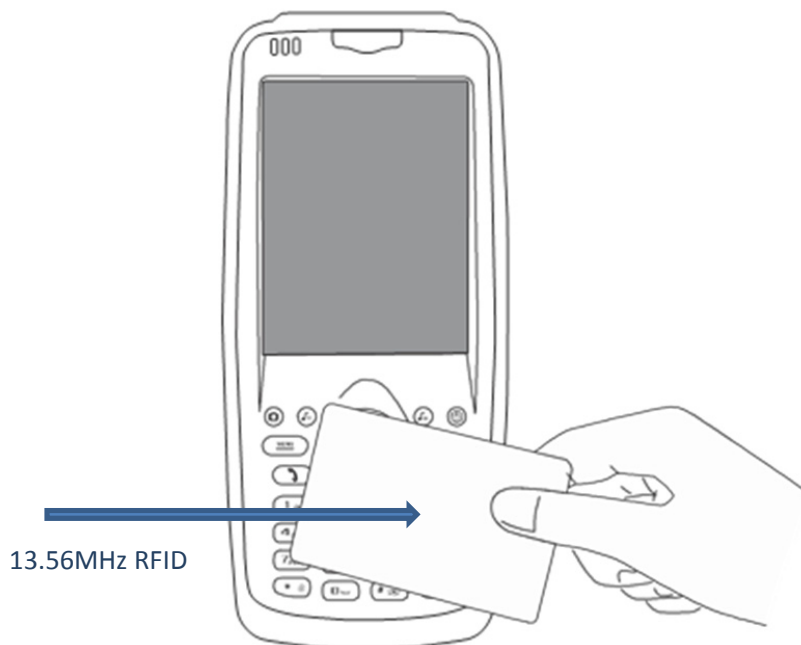
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125KHz /134.2KHz RFID

***For 13.56MHz ISOq14443A RFID, the antenna zone is located at the keypad area on the front panel, see the picture below –***



13.56MHz RFID

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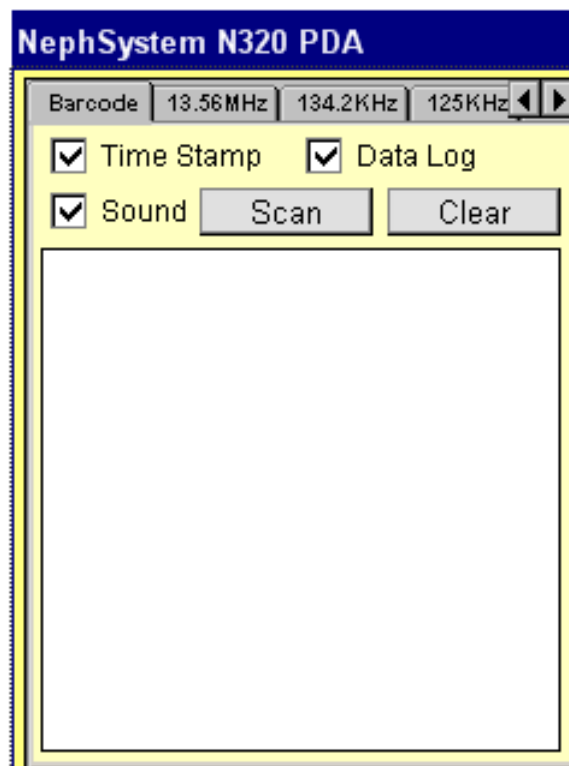
We also offer detailed SDK for all of our RFID featured or Barcode featured PDAs, The SDK includes the user-friendly testing software applications with the full functionalities, detailed API documentations, detailed sample codes, etc.

For more info about the SDK, please contact our support team or sales representative for details.

## 6. Barcode Identification

NephSystem N320 PDA has optional high performance of barcode scanner. It can identify universal barcodes including EAN code, 39 code, cross 25 code, UPC code, 128 code, 93 code, Codabar, etc.

To make a testing for the RFID, please copy the file of "**NephSystem\_320.cab**" from the product CD over to your N320, click on this cab file on the N320, the testing software will be installed properly on the PDA.



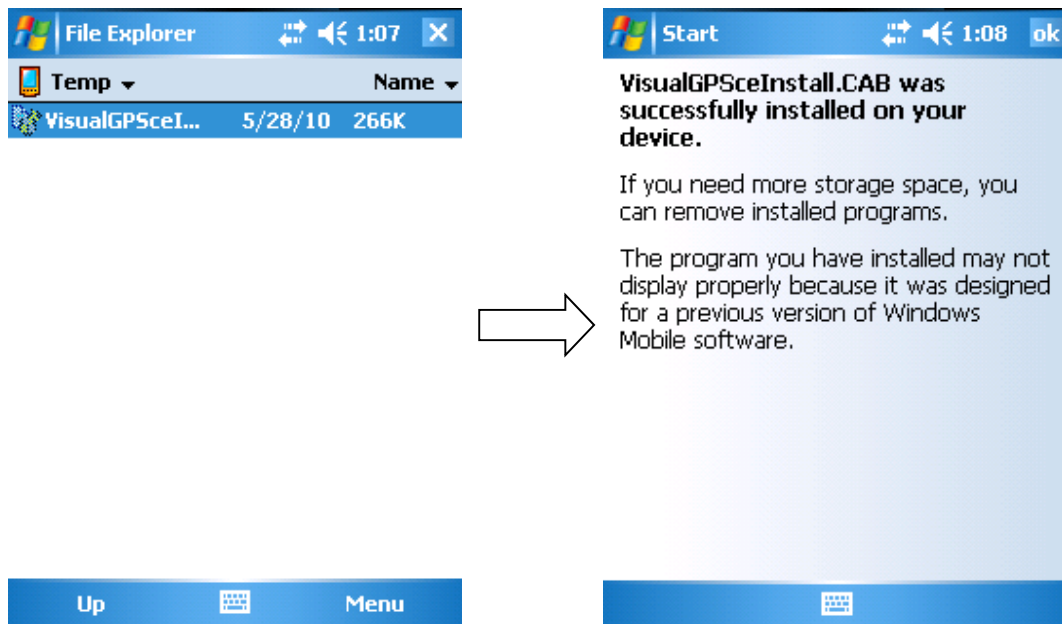
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## 7. GPS Operation

*To make the GPS testing, please follow the steps below -*

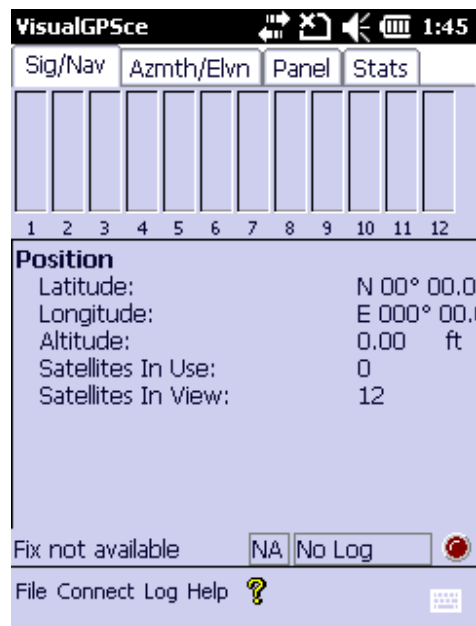
- A. Get N320 PDA connected with a computer via the ActiveSync, copy the GPS demo software of “**VisualGPSceInstall.CAB**” from the product CD onto any folder on the PDA.
- B. Click on the CAB on the N320 for the installation of GPS demo utility.



- C. Go to “**My Device**” -> “**Programs**”, then click “**VisualGPSce**”
- D. Click “**Connect**” from the menu, then choose “**Serial Port (Comm Port)**”

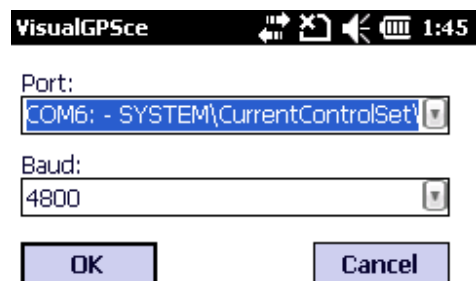


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E. Change the Port to “**COM6**”

F. Select the Baud as “**4800**”, then press “**OK**”



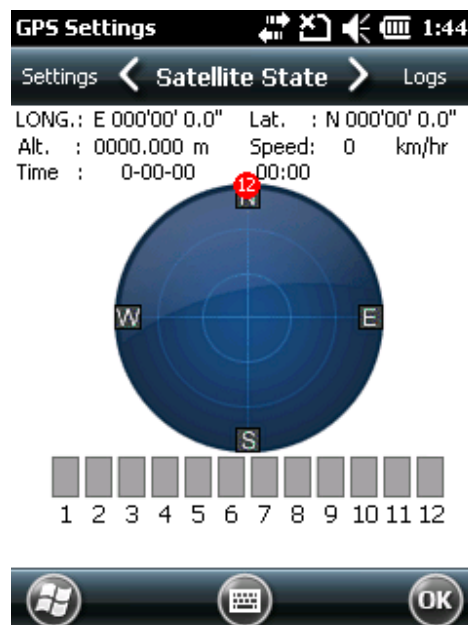
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- G. Or users are able to use the default GPS testing software which is coming with Windows Mobile 6.5 for testing purpose. To realize that, please got to “**Start**” -> “**Settings**” -> “**System**”, then click on the icon of “**GPS Settings**”, see the picture below –



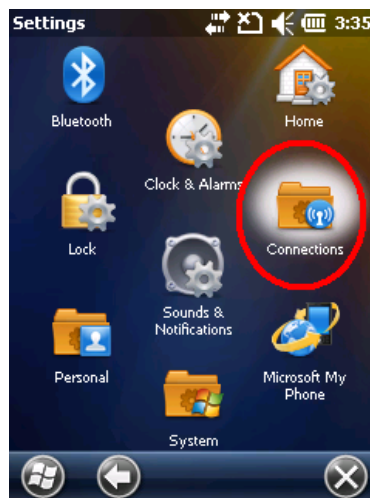
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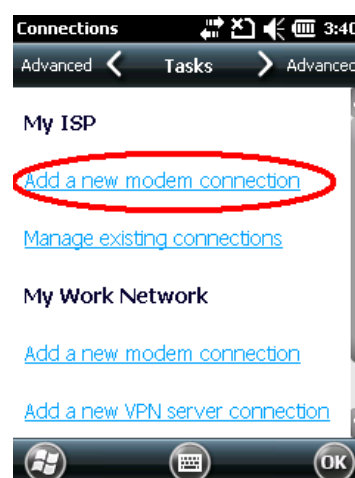
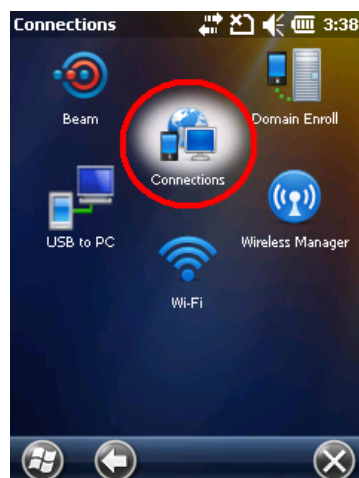
## 8. GPRS Operation

To perform a GPRS test, please follow the steps below –

- A. Go to “**Start**” -> “**Settings**” -> “**Connections**”.



- B. Then click on the “**Connections**” icon, on the following screen, choose the “**Add a new modem connection**”, see pictures below –





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C. Name a connection then choose “**Next**” button.

D. In the “**Access point name**” area, type in the access point which is being used in your GSM/GPRS network, for more information about it, please work with your ISP to find out, and then click “**Next**” button to go ahead.

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- E. If required, type in the log in information (User name and Password) on the next window, then hit the button of “**Finish**”.

Connections 3:49

**NephSystem N320 GPRS**

User name:

Password:

Domain:\*

\* If provided by ISP or network administrator.

123 1 2 3 4 5 6 7 8 9 0 - =

Tab q w e r t y u i o p [ ]

CAP a s d f g h j k l ; ' ,

Shift z x c v b n m , . / <

Ctl á ü ` \ | \_ { } ~

Back Finish

**Note:** To acquire the log in info, please work with your ISP for details.

- F. The GPRS connection will be ready to go.



## 9. Security Specification

### 9.1 Declaration of Security Specification

#### European Notice

Products with the CE marking comply with Radio & Telecommunication Terminal Equipment Directive (R&TTE) (1999/5/EEC), the Electromagnetic Compatibility Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) – as amended by Directive 93/68/ECC - issued by the Commission of the European Community. Compliance with these directives implies conformity to the following European Standards:

1999/5/EEC	Radio & Telecommunication Terminal Equipment Directive (R&TTE) EN 301 511 / EN 300 328 Specific Absorption Rate (SAR)
Standard:	EN 50360, EN 50361.
73/23/EEC	Low Voltage Directive (LVD) IEC 60950-1:2001.
89/336/EEC	Electromagnetic Compatibility (EMC-Directive) Standard: EN 301489-1/7/17. The manufacturer cannot be held responsible for Modifications made by the User and the consequences thereof, This may alter the conformity of the product with the CE Marking.

### 9.2 Notice of Security about Charger

- Notice: please use the attached charger only. Using other chargers may lead to faults or dangers.
- Do not use the charger in the moist environment. Do not touch the charger with wet hands or feet.



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- Keep the environment with good ventilation when the charger is supplying power or being charged. Do not use paper or other items to cover the charger which may lead to bad cooling effect. Do not use the charger by putting in the bag.
- The charger must be connected to the proper power supply. The requirements of voltage and ground connection are marked on the external body (or) package of the product.
- Do not use the charger when the cable is broken.
- When the device turns off due to insufficient power supply, the mobile phone may be in the inactive state when plugging in the charger for charging.
- Do not try to repair the device. The device has no maintainable spare parts. If the device is damaged or in the moist environment, the device shall be replaced.

## 9.3 About Battery

- Notice: Wrong battery replacement may lead to explosion. Please comply with the instruction to dump the worn battery.
- Please replace the designated battery by the original factory when replacing.
- In order to avoid the dangers of fire or burning, do not disassemble, pierce, crash or dump the battery into fire or water. The battery may crack, explode, or release dangerous chemicals.
- The battery is restricted to the specific devices.



## 9.4 About Static Discharging

Static discharging may interfere normal operation of electronic equipment. Your device may go abnormal and lead to damage or loss of data. Please reset your device for returning normal. In order to avoid data loss caused by static discharging or other factors, it is suggested that you often save data and make backup regularly.

## 9.5 Certificate Information (SAR)

### Certificate Information (SAR)

The mobile device with this model is in compliance with the national norm on wave radiation.

Your mobile device is a transmitter and a receiver. Its design allows its limit value of wave radiation within the international norms advised by ICNIRP. The norms are drawn up by the independent scientific organization ICNIRP, including fixed safety factor and ensure the safety of people at all ages and in any physical state.

The unit of measurement adopted for the radiation standard of mobile devices is called Specific Absorption Rate (SAR). The limit value of SAR specified in ICNIRP norms is 2.0W/kg per 10g of physical organ on average. When measuring SAR, standard operation position is adopted, meanwhile, transmit power of the device among all tested frequency ranges is confirmed the highest level. In consideration of that this device is designed the power range only for using connection network, the actual SAR of the device will be lower than the maximum in the operation. The actual SAR will change according to many factors, such as your distance to the network base station. The SAR of the device when using aside the ears is 0.501W/kg, in accord with the request of ICNIRP norms.

The spare parts of the device may lead to different SAR. SAR may differ due to different reporting requirements, testing requirements and frequency ranges of network of different countries or regions.