



Focus on RFID core technology

# HL7202K8 Bluetooth handheld User manual

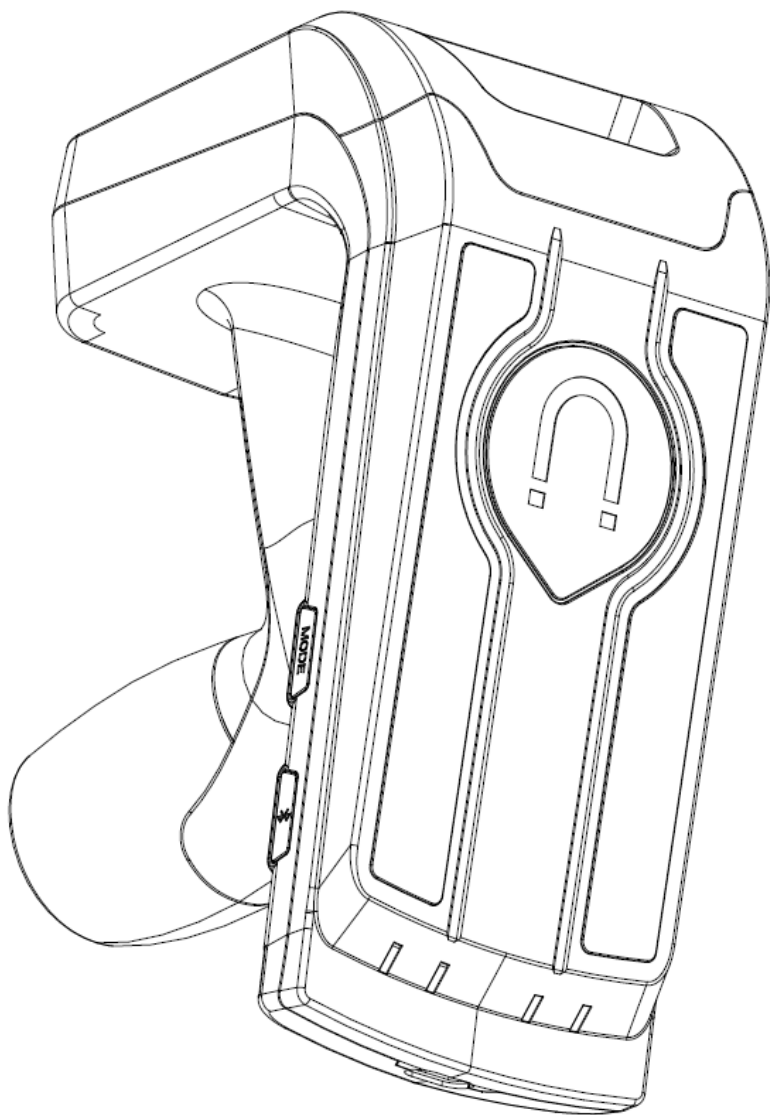
Shenzhen Hopeland Technologies co. Ltd.



Welcome to be a customer of Hopeland.

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Thank you for choosing the Bluetooth  
handheld terminal HL7202K8



## **Use this user manual**

Thank you for choosing Hopeland technology multifunctional handheld terminal. Based on the high technology and high standard of Hopeland technology, this equipment provides you with high quality experience. This user manual is convenient for you to understand the functional features and usage of this product.

## **Please read the instructions first**

- Before use, please read the safety precautions and user manual carefully to ensure safety and normal use.
- The description in the user manual is based on default parameter Settings.
- The images and screen shots used in the manual may not look like the actual product.
- The manual may be slightly different from the product, and the latest version is available at [www.hopelandrfid.com](http://www.hopelandrfid.com)
- Available features and additional services may vary from product, software, or service provider.
- The format and information are based on Google's Android operating system.
- Applications and their functions may vary by country, region, or hardware specification.
- The sound source, wallpaper and images provided in the terminal are licensed for limited use between Hopeland technology and its owners. Extracting and using these materials for commercial or other purposes would violate copyright law. Hopeland shall not be liable for such copyright infringement by users.
- There may be charges for sending and receiving information, uploading and downloading, automatic synchronization or location-based services. To avoid extra costs, choose the right mode of work.
- Keep the user manual for future reference.

Please note the following tips before use:

**Warning** - a condition that may harm yourself or others.

**Note** - possible damage to this or other equipment.

**Tips** - comments, use tips, or other information.

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# 1 Specification

## Product parameters

Functional Configurations		Major parameters
Basic functions	MCU	ATSAM4S4BA-MU
	Keypad	Trigger Key, Power key, Work mode switch key, Bluetooth reset key
	Indicator LED	Charging indicator, Bluetooth status indicator, Work mode indicator
	Bluetooth	Bluetooth V2.1+EDR Connection range of 10m and above Support Bluetooth communication
	Audio	Support buzzer
Special functions	Barcode Engine	The professional scanning engine module supports one-dimensional barcode and two-dimensional code scanning 2D: PDF417,QR Code, Hanxin . DataMatrix(ECC200,ECC000,050;080.100.140) etc. 1D: Code 128, EAN-13, EAN-8, Code 39, UPC-A, UPC-E, Codabar,Interleaved 2 of 5, ITF-6, ITF-14, ISBN, Code 93, UCC/EAN-128,GS1 Databar, Matrix 2 of 5, Code 11, Industrial 2 of 5, Standard 2 of 5,Plessey, MSI-Plessey etc.
		Air Protocols :ISO/IEC18000-6B ,6C/ EPC Global C1Gen2 Work Mode: Fixed/hop frequency optional Support RSSI Output Power: 0dBm-30dBm (±1dBm) adjustable
Physical interface	USB Type C	Support device charging function
Software	SDK	Provide secondary development documentation for Android devices
Physical Characteristics	Power Consumption	Standby time is greater than 72 hours and continuous working time is greater than 8 hours
	Temp.	Operating Temp.: -20℃ ~ +70℃ Storage Temp.: -25℃ ~ +75℃
	Humidity	5%-95% (non condensing)
	EMC	Comply with relevant national standards
	Dust & Water Proof	IP53
	Drop Spec.	1.5M Drop to concrete
Accessories	Battery	Non-replaceable and rechargeable battery, 5000mAh/3.7V Work continuously for more than 8 hours. Support USB charging. Meet GB/ T18287-2000 standard
	Power Adapter	General purpose power adapter 5V, standard USB interface Charging time is less than 4 hours
	communication cable	USB communication cable×1

## 2 Schematic diagram

### 2.1 Structure appearance

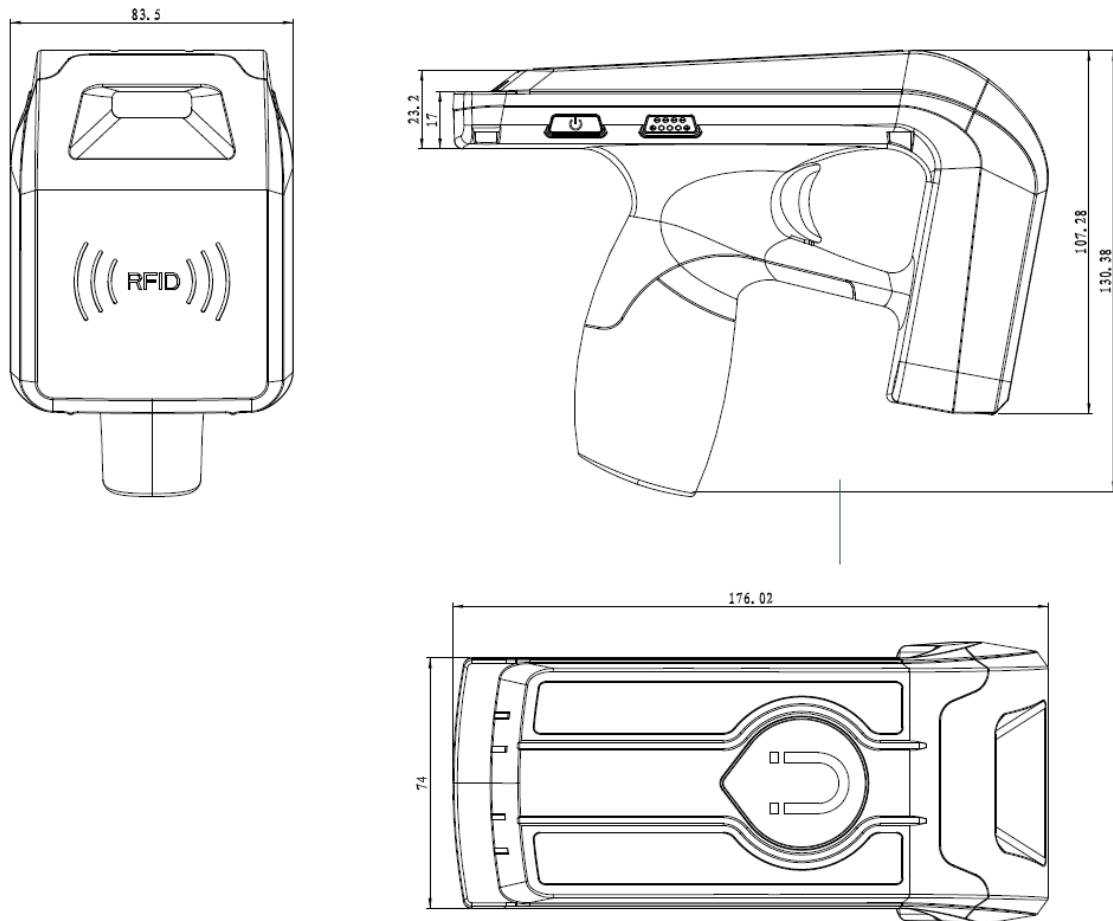


Figure 2-1 HL7202K8 Structure appearance

#### HL7202K8 Dimensions

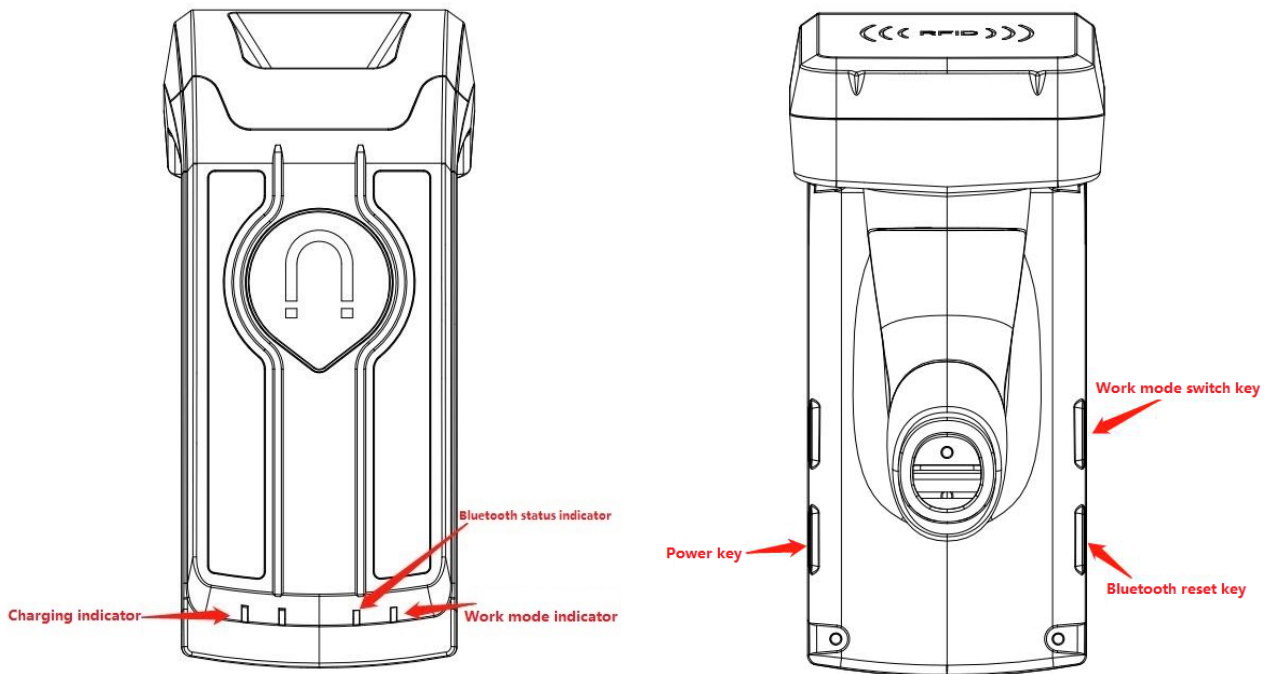
176mm×130.4mm×83.5mm (without accessories)

### 2.2 Weight

About 400g (include battery)

### 3 Instructions

#### Function diagram



#### Introductions

Charging indicator	Display red when charging, full display green
Bluetooth status indicator	Flashing slowly: Bluetooth pairing Constant: Bluetooth connected Flashing fast: battery low
Work Mode indicator	Off: UHF mode On: Scanning mode In different working modes, press the same trigger button will perform corresponding functions
Power button	Press and hold more than 2 seconds to turn on or turn off the device
Work mode switch key	Switch the working mode of the handheld (uhf mode and scanning mode), and the working mode indicator will indicate the current working mode
Bluetooth reset key	Bluetooth will automatically reset when pressed


**This handheld device cannot be used alone, it must be used with android phone.**

**When using, connect the mobile phone to the handheld by Bluetooth, and control the Bluetooth handheld device through the app.**

## 4 Demo Software instructions

### 4.1 Android installation package (apk)

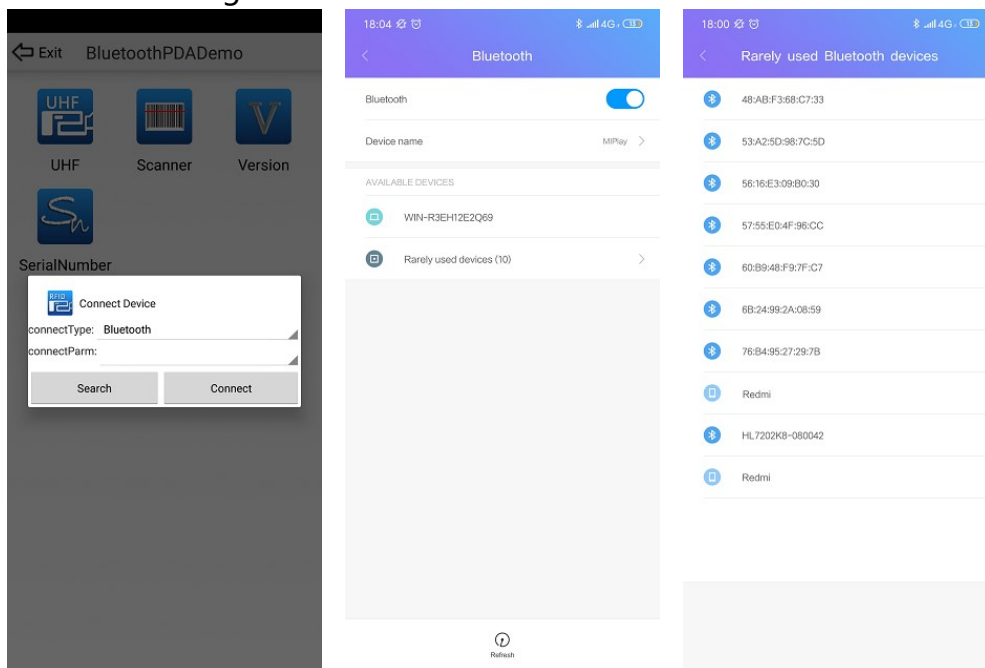
At present, Bluetooth handheld demo software version is V1.5. Demo software runs on Android 5.0 system or above.

 [bluetoothpdademo\\_v1.5\\_20190403.apk](#)

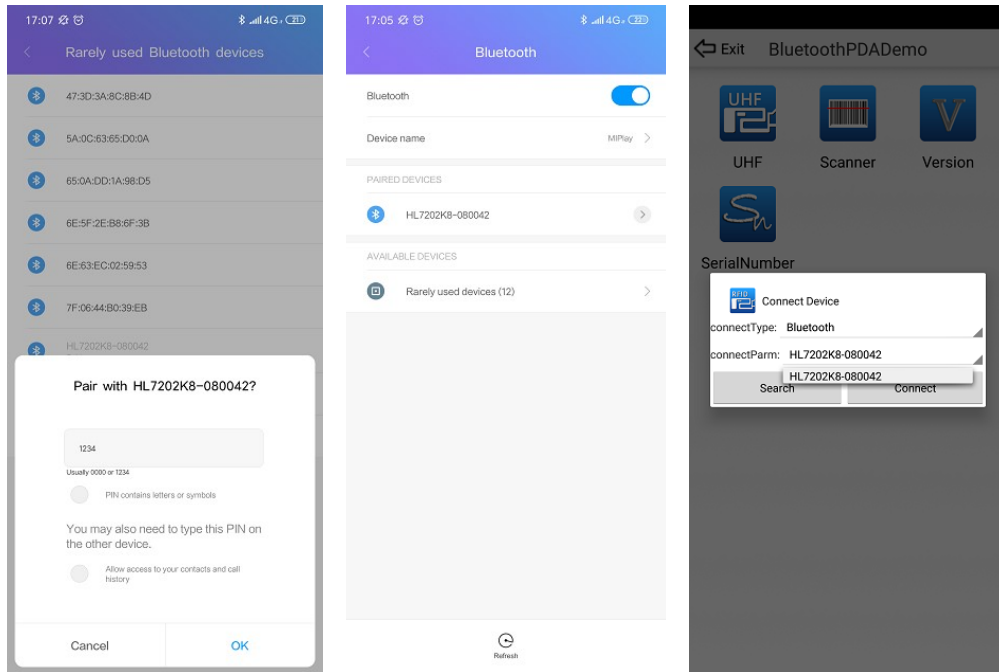
### 4.2 Bluetooth connection

Take HL7202K8-080042 as an example:

- Open the software and check whether HL7202K8-080042 exists in the parameter list of Bluetooth connection. If it does not exist, turn on the android phone's Bluetooth function, click the "search" button and the Bluetooth pairing interface will pop up. As shown in the figure below



- Click HL7202K8-096464 to enter the pairing connection, the pairing code is 1234. Return after the link is successfully paired."HL7202K8-096464" can be found in the list of connection parameters. Select it and click "Connect".

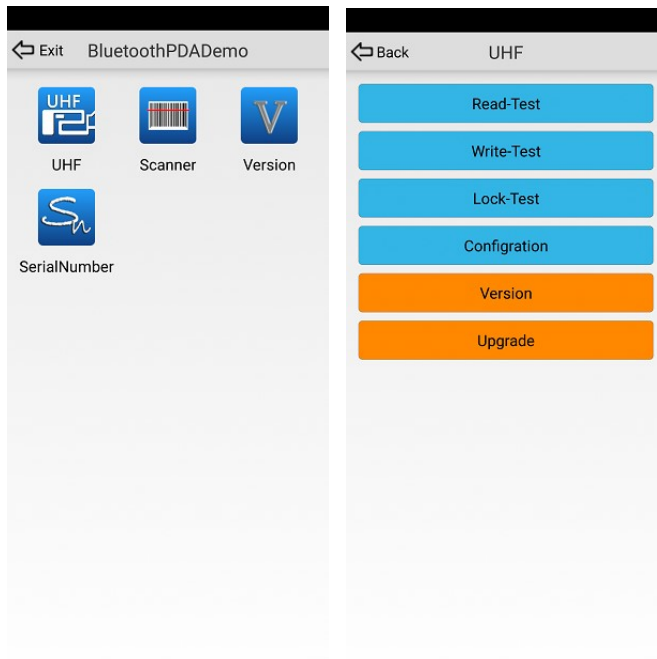


- Once the link is successfully connected, it will prompt "Open connection successfully" and jump to UHF interface by default. At this point, you can click "version" to check the baseband version of UHF and further confirm that the connection is successful.

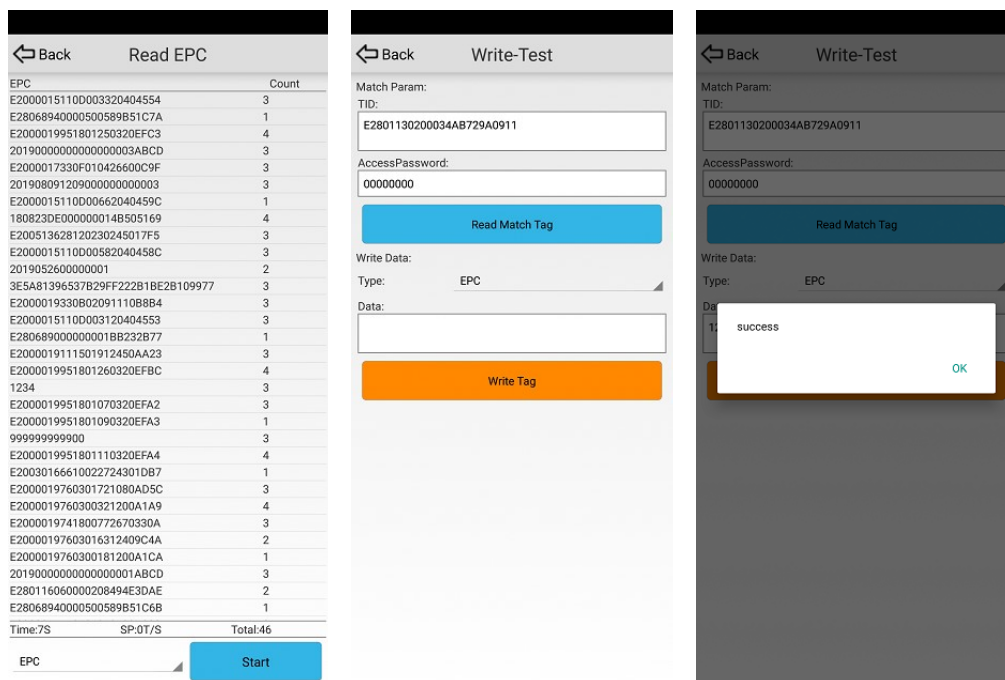


## 4.3 UHF

- Click the UHF icon to enter the UHF test interface



## ● Interfaces of Read tag, write tag, lock tag, configuration



Back
Lock-Test

Match Param:  
TID:  
E28011052000791572200979

AccessPassword:  
00000000

Read Match Tag

Write Data:  
Lock Area: Destroy Password  
Lock Type: Unlock

Lock Tag

Back
Configuration

TagType: 6C SET

Power: 30 GET

Frequency: 3,FCC 902~928... SET

BaseSpeed: 1|Concentrated GET

QValue: 4 SET

ReadTime(ms): 10000 SET

StopTime(ms): 300 SET

ANT: 1 CARRIER

Beep: ON SET

Trigger CMD: Single ANT Read EPC  
GET SET

RESTORE

Adjust the RF output power to control the reading distance, the value is larger, the reading distance will be longer.

Q value setting should be associated with the field tag quantity, it is approximately equal to  $2^Q$ . Q values range from 0 to 15

0 for single tag read  $2^0 = 1$ , 4 for multi tag read  $2^4 = 16$

## - Baseband upgrade of UHF module

Back
UHFUpgrade

Path:

Select Firmware

Upgrade

17:15
4G

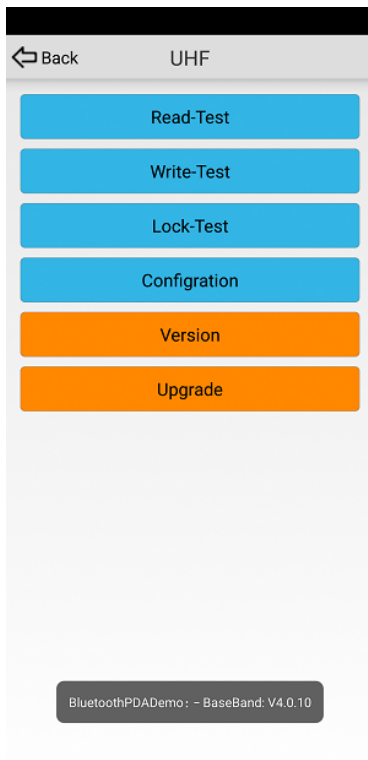
Select folder

SD card  
Available: 9.25 GB Total: 32.22 GB

Internal shared storage  
Available: 20.22 GB Total: 55.59 GB

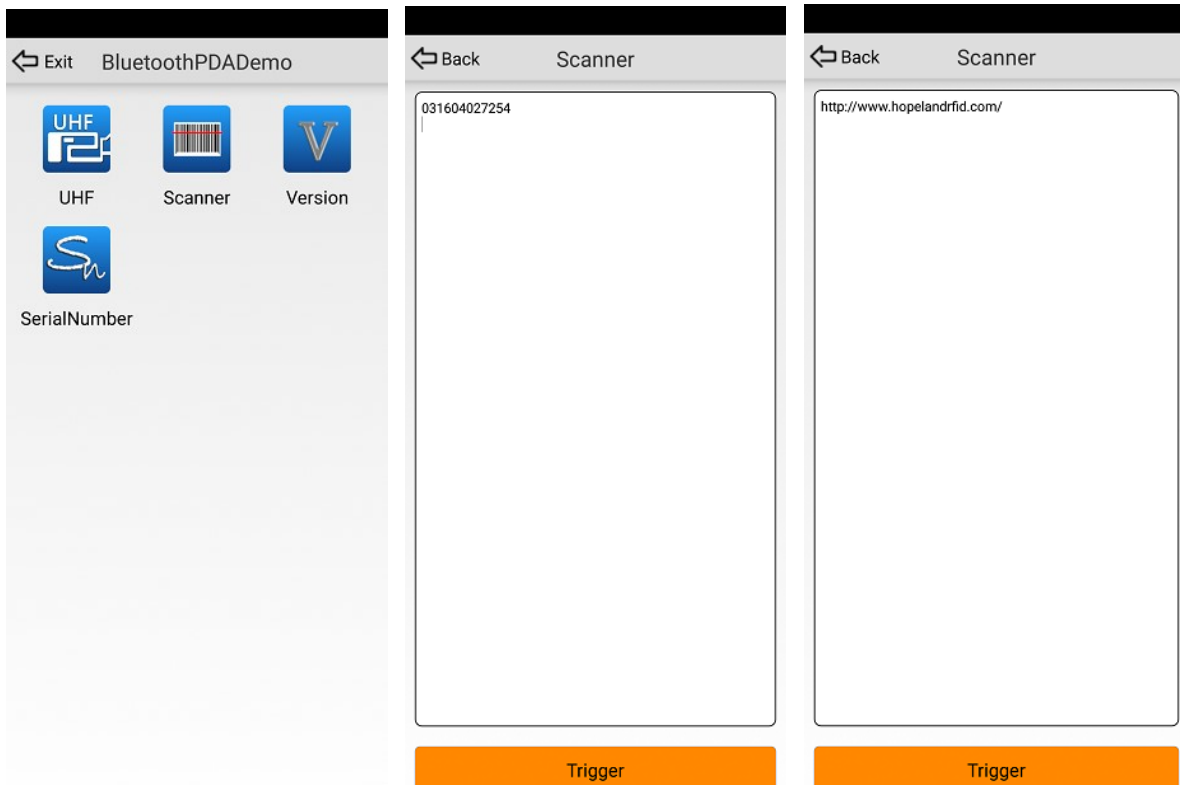
When upgrading, you need to hold down the power key of the Bluetooth handheld reader.

## - Query UHF version



## 4.4 Scan

Click the "Scanner" icon to enter the scanner test interface. One-dimensional code and two-dimensional code can be scanned respectively, as shown in the figure below:



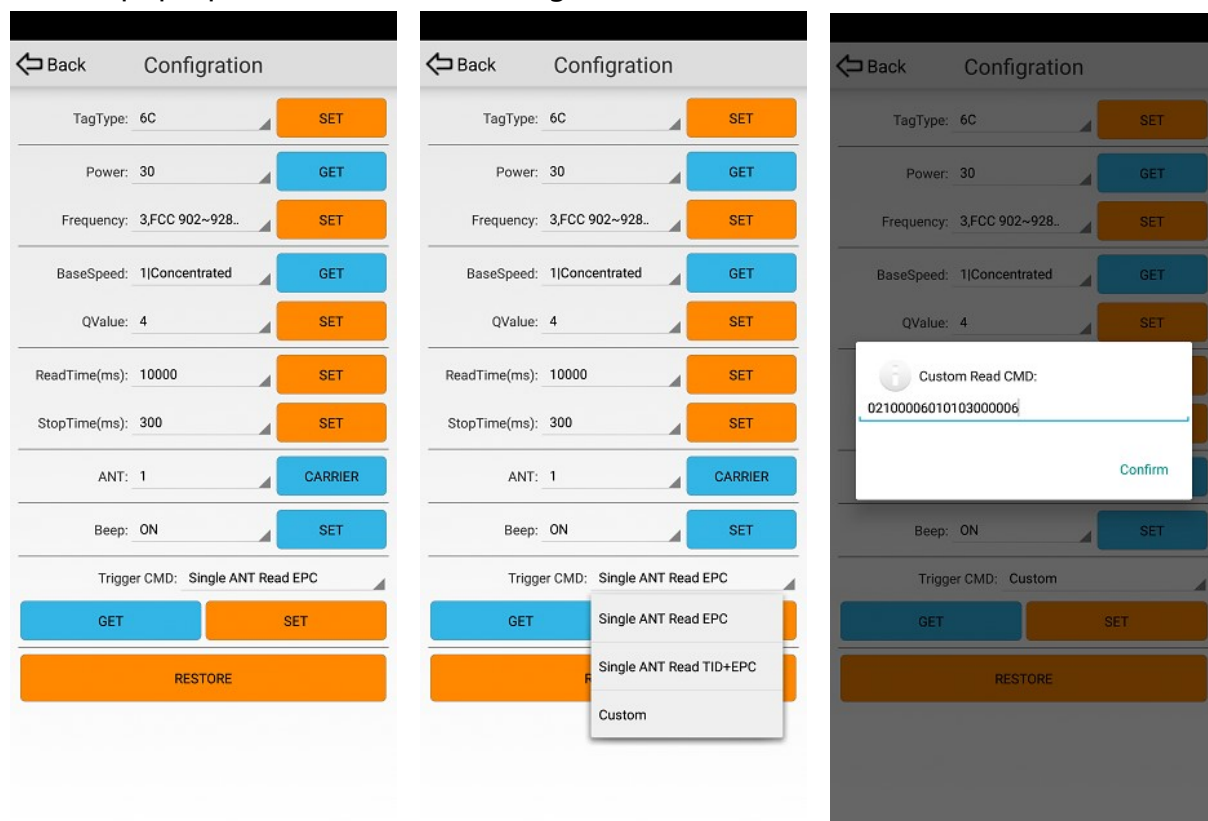
## 4.5 Trigger function setting

The trigger button of Bluetooth handheld (K8) has the following functions: Press the trigger button to start UHF tag reading test, stop reading immediately after releasing the trigger button. Press and release the trigger button once to do barcode test. The UHF operating instructions triggered by the trigger button (that is, how to read and what areas of data to read) is set through the UHF configuration interface. To read tags or scan barcodes, switch through WORK MODE key of Bluetooth handheld (K8), and use status indicator to distinguish and identify.

Data obtained by trigger button of Bluetooth handheld (K8) can only be displayed by read-test interface or scanner interface of demo. Other interfaces do not display the obtained data.

The following is an example of setting trigger button to read user data:

- Open the UHF configuration interface, select the option of "Custom" in the drop-down box of trigger execution instruction, and enter the instruction of reading user data in the pop-up box, as shown in the figure below.



- After confirm, click the "Set" button, and it will prompt that the Setting is successful. At this point, the trigger execution instruction is set to read user data. As shown in the

Back

Configuration

TagType: 6C

SET

Power: 30

GET

Frequency: 3,FCC 902~928...

SET

BaseSpeed: 1|Concentrated

GET

QValue: 4

SET

ANT: 1

CHANGE

Beep: ON

SET

Trigger CMD: Custom

GET

SET

RESTORE

- The figure displays three screenshots of the 'Read EPC' application interface, showing different data views: EPC, TID, and UserData.

**Top Screenshot (EPC View):** The main display shows a list of EPC values and their corresponding counts. The summary bar at the bottom indicates 'Total:0'.

EPC	Count
00000000000000000000000000000000	1
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	1
00000000000000000000000000000000	1
12340000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	1
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	3
00000000000000000000000000000000	2
00000000000000000000000000000000	1
00000000000000000000000000000000	1
00000000000000000000000000000000	2
00000000000000000000000000000000	1
00000000000000000000000000000000	2
00000000000000000000000000000000	3
00000000000000000000000000000000	1
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	18
00000000000000000000000000000000	2
00000000000000000000000000000000	1
00000000000000000000000000000000	2
00000000000000000000000000000000	2
4931303032C31382C4C482C	2

**Middle Screenshot (TID View):** The main display shows a list of TID values and their corresponding counts. The summary bar at the bottom indicates 'Total:0'.

TID	Count
00000000000000000000000000000000	1
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	1
00000000000000000000000000000000	1
00000000000000000000000000000000	2
00000000000000000000000000000000	1
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	3
00000000000000000000000000000000	1
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	18
00000000000000000000000000000000	2
00000000000000000000000000000000	1
00000000000000000000000000000000	2
00000000000000000000000000000000	2
4931303032C31382C4C482C	2

**Bottom Screenshot (UserData View):** The main display shows a list of UserData values and their corresponding counts. The summary bar at the bottom indicates 'Total:34'.

UserData	Count
00000000000000000000000000000000	1
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	1
00000000000000000000000000000000	1
12340000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	1
00000000000000000000000000000000	2
00000000000000000000000000000000	1
00000000000000000000000000000000	2
00000000000000000000000000000000	1
00000000000000000000000000000000	2
00000000000000000000000000000000	1
00000000000000000000000000000000	2
00000000000000000000000000000000	1
00000000000000000000000000000000	2
00000000000000000000000000000000	2
00000000000000000000000000000000	3
00000000000000000000000000000000	1</

## 4.6 Information Query

In order to query the current Bluetooth handheld serial number, software version and battery information, the Demo software provides a query interface, as shown in the figure below:



## 5 Packing accessories and transportation and storage

### 5.1 Package

To facilitate future storage and transportation, the packing boxes and packing materials should be properly stored after opening.

In the packing box, besides the handheld, it also includes the accessories for the use of the products. Please confirm that the products and accessories are complete according to the packing list of the products. If there is any nonconformity or damage, please contact the after-sales service immediately.

The specific annex list is shown in table 5-1:

Table 5-1 accessories list

No.	ITEM	QTY	UNIT	REMARK
1	Handheld terminal	1	pcs	Included
2	Charger	1	pcs	Included
3	USB cable	1	pcs	Included
4	Warranty card	1	pcs	Included
5	Certificate of approval	1	pcs	Included
6	Pin	1	pcs	Included

### 5.2 Storage environment

HL7202K8 handheld terminal should be stored in below conditions:

☆ Environment temperature: -20°C ~ +70°C

☆ Relative humidity: 5% RH ~ 95%RH

## 6 Common failure analysis and solution

### **Can't find another Bluetooth device**

Make sure the Bluetooth wireless function is enabled.

Make sure that the device you want to connect to has Bluetooth wireless function enabled (if necessary).

Make sure the distance between the device and another Bluetooth device is within Bluetooth range.

### **Safety precautions**

To protect you and others from harm or protect your terminal from damage, please read all the information below before using your terminal.

### **Warning**

Avoid electric shock, fire and explosion

Do not use damaged power cords or loose power outlets

Do not touch the power cord with wet hands or unplug the charger by pulling the cord

Do not bend or damage the power cord

Please use the special charger

Please avoid using the terminal in thunderstorm weather

- Do not throw the battery or terminal into the fire.
- Do not place the battery or terminal inside or attached to a heating device, such as a microwave oven, oven or radiator. Overheating can cause a battery to explode.
- Do not squeeze or puncture the battery. Do not subject the battery to external high pressure, otherwise it may lead to internal short circuit and overheating.

### **Protect the terminal, battery and charger from damage**

- Avoid exposing terminals and batteries to extremely cold or extremely hot temperatures.
- Extreme temperatures can deform terminals, reduce charging capacity and shorten terminal and battery life.
- Prevent the battery from contacting metal objects, otherwise it may make the

positive and negative connection of the battery, causing temporary or permanent damage to the battery.

**Note:** Please comply with all safety warnings and regulations when using terminals

#### **in restricted areas**

##### **Close the terminal where it is not allowed**

Comply with all restrictions on the use of terminals in a particular area.

##### **Do not use terminals near other electronic devices**

Most electronic devices use radio frequency signals, and your terminal may interfere with other electronic devices.

##### **Do not use terminals near hospitals or medical devices that may be interfered with by radio frequency**

If you personally use any medical equipment, please contact the equipment manufacturer to ensure that your terminal can be used safely in radio frequency.

##### **Close the terminal in the event of a possible explosion**

- Always operate according to regulations, instructions and signs in the case of possible explosion.
- Do not use terminals at gas stations (maintenance stations) or close to flammable, chemical agents or explosion areas.
- Do not store or carry flammable liquid, gas or explosive articles in a box with terminal, terminal parts or accessories

##### **Properly keep and use the terminal**

###### **Keep the terminal dry**

- Moisture and various liquids may damage terminal parts or electrical wiring.
- When the terminal is wet, remove the battery. Dry the terminal with a towel.

##### **Ensure battery and chargers reach maximum service life**

- The battery should not be charged continuously for more than a week. Overcharging may shorten the battery life.
- The battery will not discharge gradually after long-term placement and must be recharged before use.
- Please disconnect the power when the charger is idle.

## 7 After-sale service

### Letter to Customers

Since our aim is to continuously improve our products for better user experience, we may modify the product characteristics, composition and design of circuits without given notifications. Thus the real product may be not in accordance with this manual. Generally, we will provide timely amendments to this manual. If it' s not provided timely, please consult our service department.

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