



## Marktrace RFID IOT Android APK User Manual

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### Marktrace RFID IOT Android APK



## Product Information

The RFID IOT APK is an Android-based application that supports Android version 4.0.3 and above. It is designed for connecting and configuring RFID devices using Bluetooth. The application allows users to choose their preferred language and provides options for managing RFID reader parameters, antenna parameters, and platform information.

### RFID Reader Parameters:

The application enables users to configure the gain range of the antenna, which can be set from 0 to 31. A higher gain value (e.g., 31dBi) extends the reading range of the antenna up to 400 meters, while a lower gain value (e.g., 0dBi) limits the reading range to a few meters. The actual reading range may vary depending on the environment.

### Filtering Tag Data:

The application allows users to set the RSSI (Received Signal Strength Indication) range for filtering tag data. If a tag's RSSI value is less than the specified range, the tag data will be filtered. The filtering value can be set from -128 to 0. Additionally, the application provides a residence time value range (060 to 65535) for controlling how often the same tag ID is transferred.

### Server Demo:

The application offers a Server Demo feature that allows users to check data using TCP/IP interface or GPRS (4G) connection. For TCP/IP interface, users can connect the RFID reader directly to a PC using a LAN cable or via an exchange/router (WiFi is not supported). The PC's IP address should be set as static IP and configured in the reader's network parameters. After setting the parameters, users can open the server demo, input the IP and port, and start receiving data from the reader automatically. The same process applies to PCAttendance Server demo.

### Firmware Update:

After successfully connecting the reader, users have the option to update the reader's firmware if needed. By clicking the button in the red box, users can choose the Bin file of the reader and proceed with the firmware update.

### FCC Statements:

The RFID IOT APK complies with part 15 of the FCC rules. It ensures that the device does not cause harmful interference and must accept any received interference, including interference that may cause undesired operation. Unauthorized modifications or changes to the equipment that result in radio or TV interference are not the responsibility of the manufacturer. Users are advised to follow the following recommendations to minimize interference:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a different circuit from the receiver.
- Consult the dealer or an experienced radio/TV technician for assistance.

Federal Communication Commission (FCC) Radiation Exposure Statement: When using the product, maintain a distance of 20cm from the body to ensure compliance with RF exposure requirements.

**FCC ID:** 2AJQV-MR7902

## Product Usage Instructions

1. Ensure that your mobile phone's Bluetooth is turned on before connecting RFID devices.

2. Open the RFID IOT APP and choose your preferred language by clicking on the language option in the upper-right corner.
3. Choose the correct device name from the available options. The device will be connected automatically without requiring a password. If prompted for a password, use "1234".
4. Once connected, you will see various information related to the connected device.
5. To configure RFID reader parameters, antenna parameters, and platform information, navigate to the respective options within the application.
6. To check antenna information, click on the "antenna info" option in the upper-right corner.
7. For TCP/IP interface data checking, connect the RFID reader directly to a PC using a LAN cable. Ensure that the PC's IP address is set as static IP and configure it in the reader's wire network parameters. Open the server demo, input the IP and port, and click the "Start" button to receive data from the reader.
8. For GPRS (4G) connection data checking, set the Server IP and Port in the reader's wireless network parameters. The reader will automatically send data to the object server.
9. If a firmware update is required, connect the RFID reader to the application and click on the button in the red box. Choose the Bin file of the reader and proceed with the update.

### **User Manual of RFID IOT APK**

This APK based on Android OS. Android version 4.0.3 and above version supports.

Open RFID IOT APP, you can choose the language you need. Switch language on the upper-right corner



技术人员



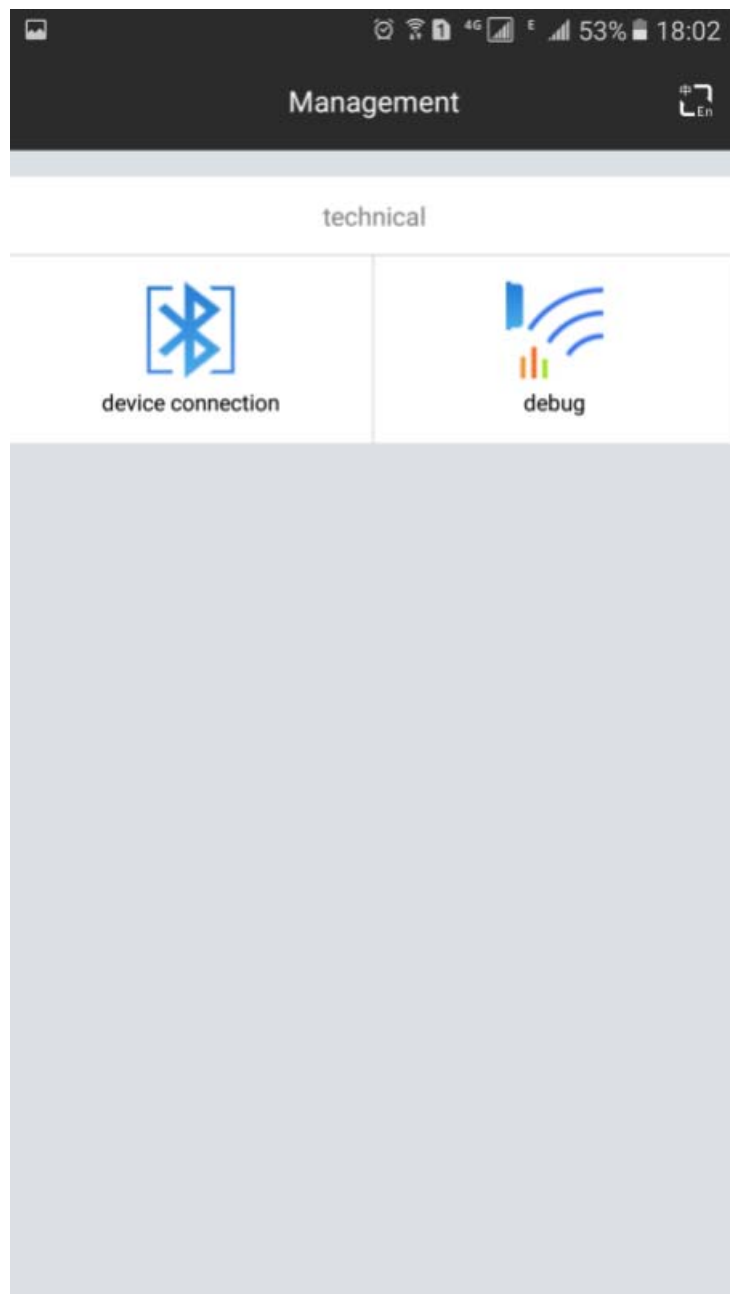
## 设备连接



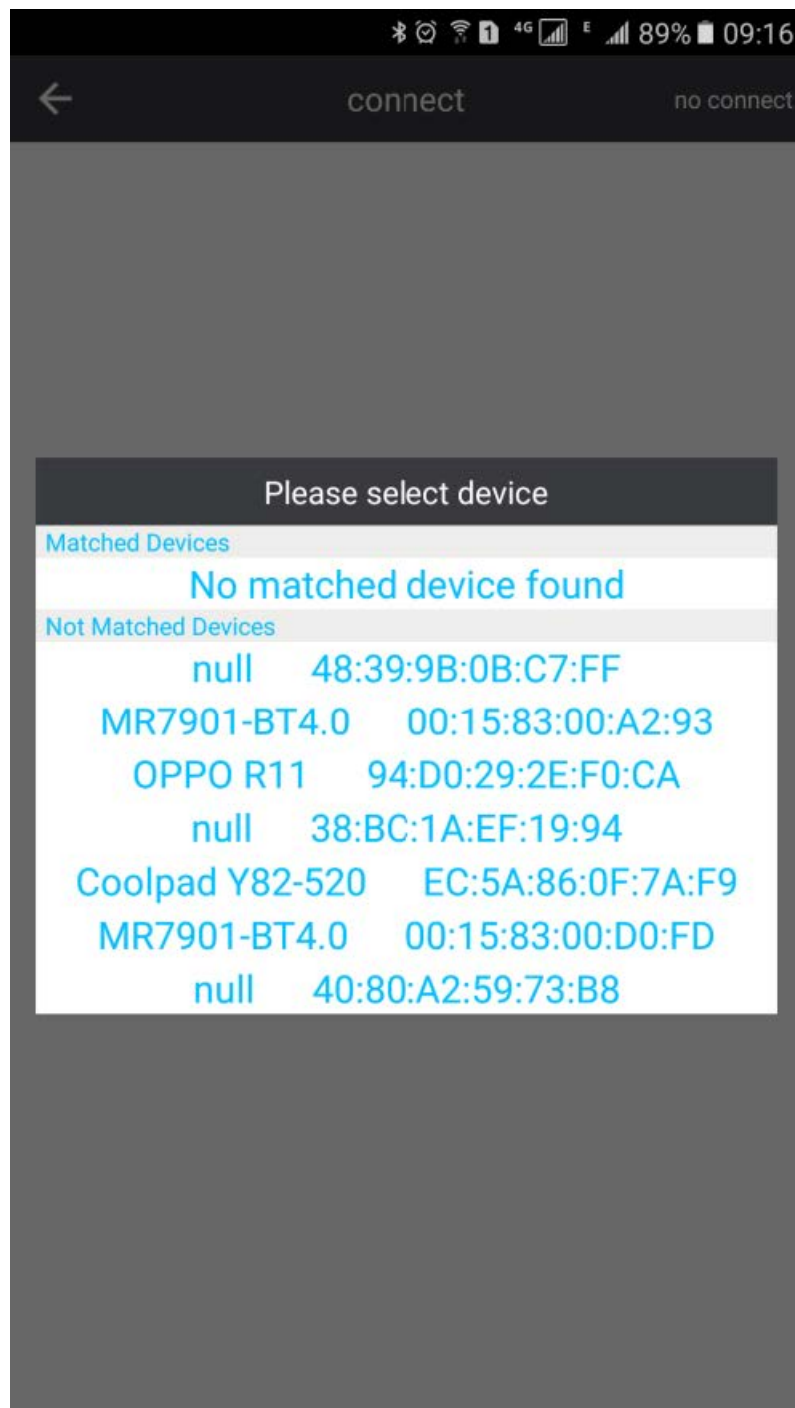
## 安装调试



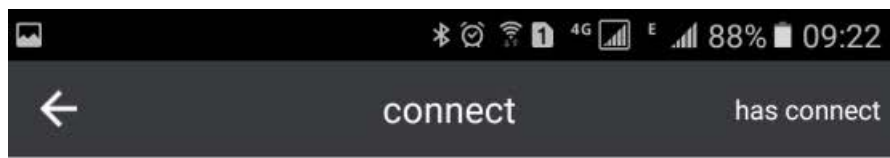
The second option is English



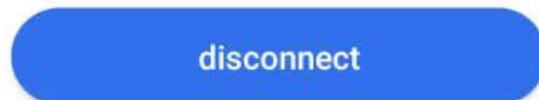
Before connect RFID devices, make sure Mobile phone Bluetooth opened.



Choose the correct device name. Device will be connected automatically without any password. After connect success, you will see these info:



device name : MR7901-BT4.0  
device mac : 00:15:83:00:D0:FD



**(Note:** If request mach password, you can use 1234)

After this, you can config RFID reader parameters, Antenna parameters, Platform info ect.



debug Antenna debugging

collector info ( V 3.5 Jul 25 2017,21:16:51 )

device id : 136510D003C0025 ×

factory num : MR7901-003C0025 read

wireless network params

plat ip 1 : 218.17.157.214 ×

plat port 1 : 4600 ×

wireless module imei : 862631036395702 read

RSSI strength : 0 read

Antenna parameters

Antenna 1 (East) Gain: 31 rssi : -88

Antenna 2 (South) Gain: 31 rssi : -88

Antenna 3 (West) Gain: 31 rssi : -88

Antenna 4 (North) Gain: 31 rssi : -88

Filter (second): 60 ☒ open buzzer

residence time (s) : 180

wire network params

local ip : 192.168.1.199 ×

read device info set params

## Collector info

- A, V3.5 this is software version of base station MR7901
- B, Jul 25 2017,21:16:52 this is the time of software version

## De

### vice ID:

This 15bytes ID can be write by customer.

Factory num: is the name of device, should to get separately.

### Wireless network params

This is the target server parameters.

### Antenna parameters

When click read device info button, this antenna parameter will display default parameters value. These parameters can be set manually. After set new value, you can use Antenna debugging option( on the upper-right corner) to check each antennas working status.

Antenna debugging

Antenna info

total tag ID in buffer:

722

target tag ID:

3E8EE3D5

Antenna 1 (East) rssi:

times of reading:

Antenna 2 (South) rssi:

-72

times of reading:

18

Antenna 3 (West) rssi:

times of reading:

Antenna 4 (North) rssi:

times of reading:

Antenna 1 reading:

Antenna 2 reading:

16

Antenna 3 reading:

Antenna 4 reading:

start read

stop read

Click antenna info (upper-right corner) can check antennas information.

Antenna info

Antenna 1 (East)

version : none Gain : none rssi : none

Antenna 2 (South)

version : 1.6 Gain : 31 rssi : -88

Antenna 3 (West)

version : none Gain : none rssi : none

Antenna 4 (North)

version : none Gain : none rssi : none

reading antenna info

#### Gain range 0~31

Set 31dbi, antenna will reach MAX reading range 400m, Set 0dbi, will be MIN reading range few meters. Different environment may vary.

#### RSSI range -128~0


RSSI range used to filter tag data, if tag RSSI value less than current value, tagdata will be filter.

#### Filter value range 0~65526

Within current value, same tag ID just transfer once.

## Residencetimevalue range 0 60~65535

Within current value, same tag ID just transfer once.



debug

Antenna debugging

Antenna 3 (West) Gain:

31

rsssi :

-88

Antenna 4 (North) Gain:

31

rsssi :

-88

Filter (second):

60

☒ open buzzer

residence time (s) :

180

wire network params

local ip :

192.168.1.199

×

local port :

100

×

subnet mask :

255.255.255.0

×

gateway :

192.168.1.1

×

plat ip 2 :

218.17.157.214

×

plat port 2 :

4600

×

collector status

system time :

2017.07.25,21:19:23

read

setting

network status:

not connect

wireless connect ip:

218.17.157.214:4600 not connect

read

wire connect ip:

: no support

read

total ID in buffer:

read

wireless:

wire:

filter:

read device info

set params

### Wire network params

This part used for base station support TCP/IP interface and TCP/IP connecting.(reserved function)

### Collector status

System time: real network time

## Network status

This part is to check device connect to operator communication network status. Connect success or not connect.

## Wireless connect IP

Check wireless network parameter

## Wire connect IP

Check wire network parameters

## Total ID in buffer

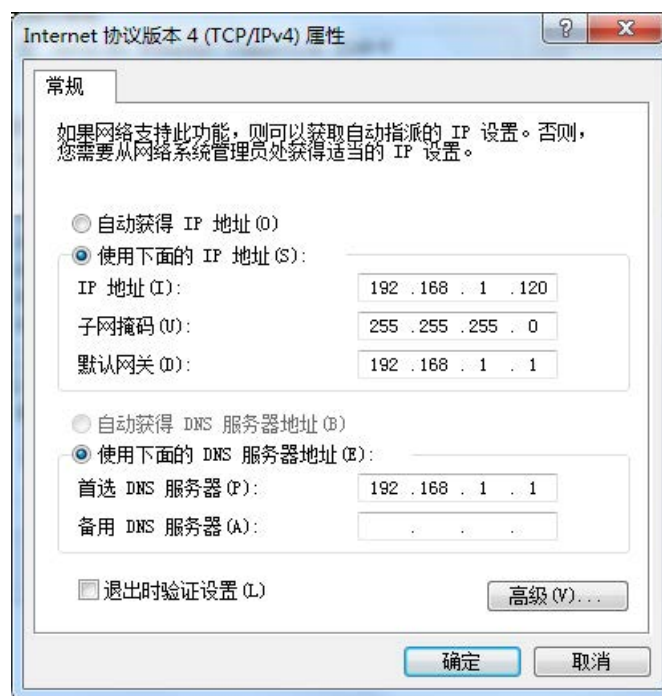
To check how many tags on reader's buffer.

After set new parameters, should click set params option on the lower right. Reader will restart automatically to make new parameters available.

## Use Server Demo to check data

## Use TCP/IP interface to check data.

- Use LAN cable connect reader to PC directly. (can also connect reader to exchange or router, but WiFi not supported)
- Make sure the IP address of PC is static IP and set this IP to Reader ( wire network params, plat IP 2.



debug

Antenna debugging

←

Filter (second):

180

residence time (s) :

180

✓

open buzzer

✓

open DHCP

wire network params

local ip :

192.168.1.199

×

local port :

100

×

subnet mask :

255.255.255.0

×

gateway :

192.168.1.1

×

plat ip 2 :

192.168.1.120

×

plat port 2 :

4600

×

collector status

system time :

get/set separately

read

setting

network status:

not connect

wireless connect ip:

Need to get separately

read

wire connect ip:

Need to get separately

read

total ID in buffer:

read

wireless:

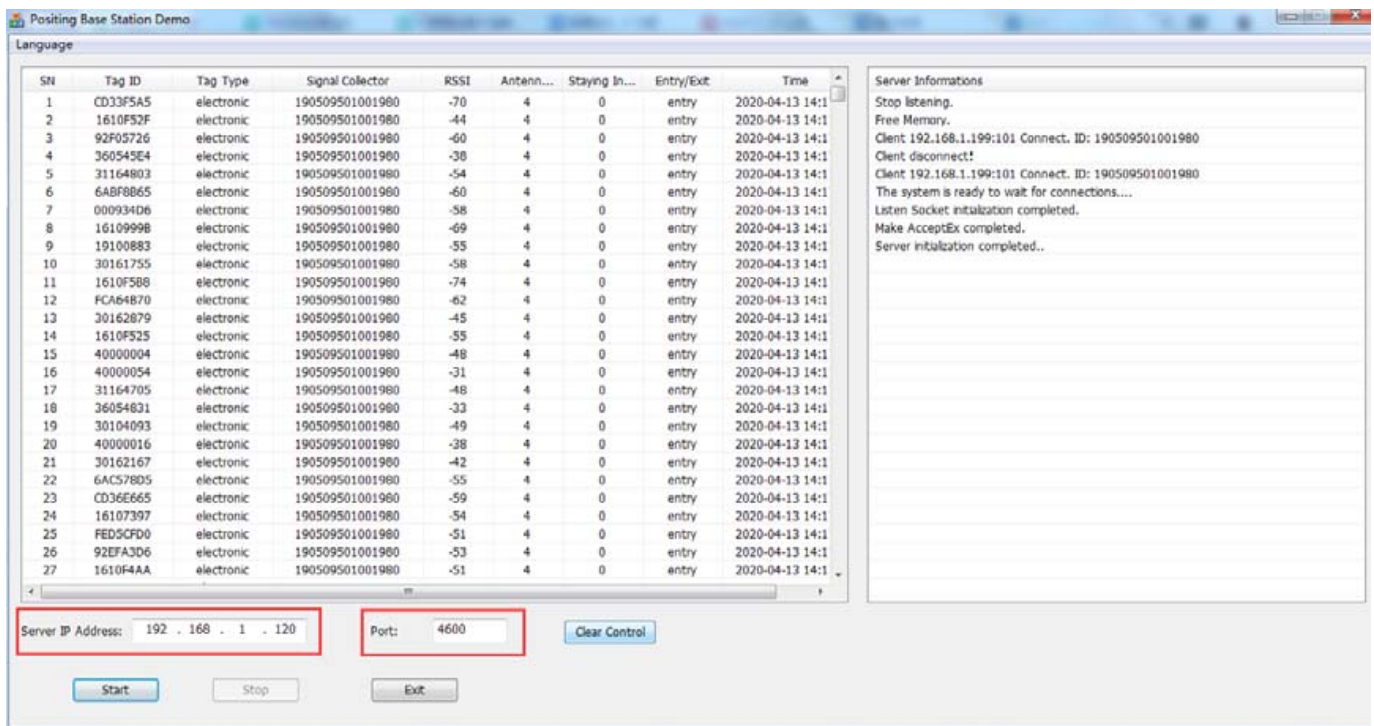
wire:

filter:

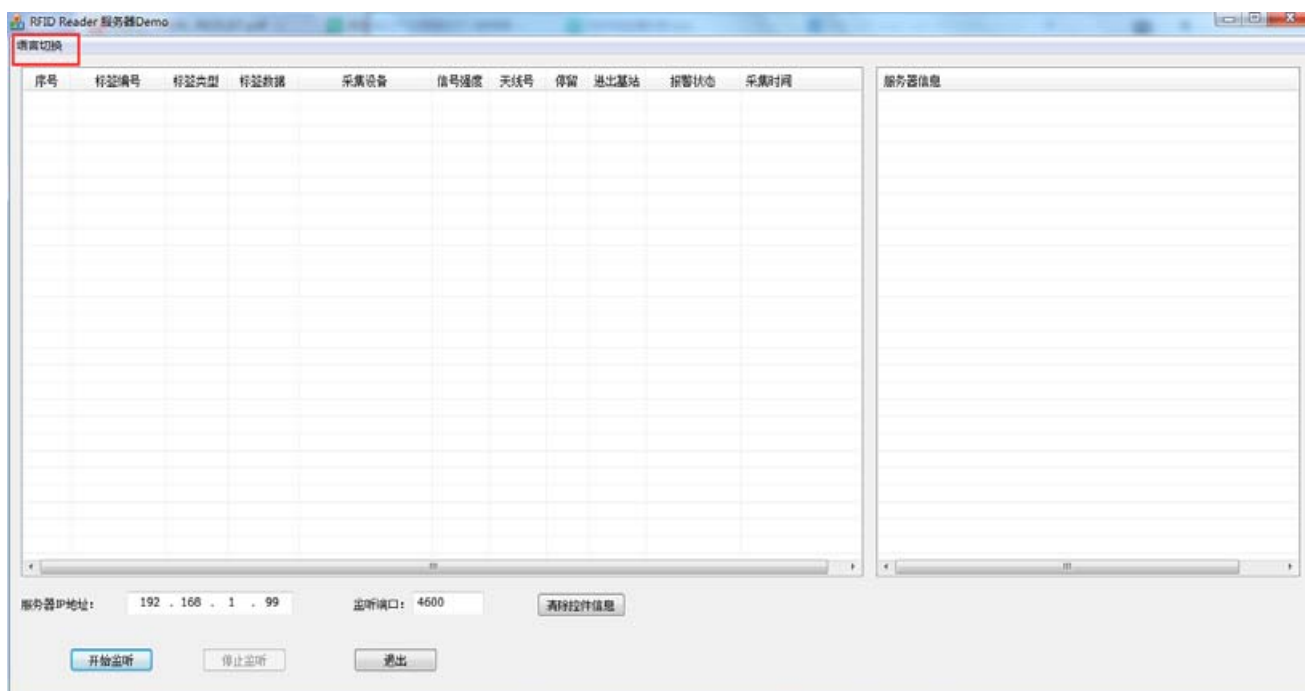
read device info

set params

After set params, open the server demo and input the IP and port. Click Start button, reader will output data to server demo automatically.



(switch language on upper left corner in cased opened in Chinese



For PCAttendance Server demo is the same way to do connection.

**PCAttenseServer\_V1.8**

**Server**

IP: 192.168.1.120

Port: 4600

Start

**Client Connection Status**

connected 192.168.1.199

Heartbe:

**Configuration**

Load User config

Gain RSSI

1

2

3

4

Antenna config

Query

Export data

**Data info**

Entrance Numbers: 578

Clear

Exit Numbers: 16

| Num | ID(Hex)  | Rep... | RSSI | In/Out | Ant | AttenceTr        |
|-----|----------|--------|------|--------|-----|------------------|
| 1   | 161251F7 | 2      | -70  | In     | 4   | 2020-04-13 14:17 |
| 2   | FED463F0 | 2      | -66  | In     | 4   | 2020-04-13 14:17 |
| 3   | 30178153 | 2      | -69  | In     | 4   | 2020-04-13 14:17 |
| 4   | 3B8A098B | 1      | -54  | In     | 4   | 2020-04-13 14:17 |
| 5   | 782A07FF | 1      | -67  | In     | 4   | 2020-04-13 14:17 |
| 6   | 3B8C4558 | 1      | -56  | In     | 4   | 2020-04-13 14:17 |
| 7   | 36000065 | 1      | -66  | In     | 4   | 2020-04-13 14:17 |
| 8   | 3B81922B | 1      | -63  | In     | 4   | 2020-04-13 14:17 |
| 9   | 1610F48D | 1      | -65  | In     | 4   | 2020-04-13 14:17 |
| 10  | 782A0806 | 1      | -72  | In     | 4   | 2020-04-13 14:17 |
| 11  | 782B6C0C | 1      | -67  | In     | 4   | 2020-04-13 14:17 |
| 12  | 7C40040C | 1      | -65  | In     | 4   | 2020-04-13 14:17 |
| 13  | 36000027 | 1      | -66  | In     | 4   | 2020-04-13 14:17 |
| 14  | 30898C50 | 1      | -72  | In     | 4   | 2020-04-13 14:17 |
| 15  | 3B8D2EDB | 1      | -61  | In     | 4   | 2020-04-13 14:17 |
| 16  | 782A07CF | 1      | -63  | In     | 4   | 2020-04-13 14:17 |

| Num | ID(Hex)  | Rep... | RSSI | In/Out | Ant | AttenceTime      |
|-----|----------|--------|------|--------|-----|------------------|
| 1   | 782A7BD9 | 1      | -68  | Out    | 4   | 2020-04-13 14:17 |
| 2   | 782A06B1 | 1      | -74  | Out    | 4   | 2020-04-13 14:17 |
| 3   | 10061218 | 1      | -77  | Out    | 4   | 2020-04-13 14:17 |
| 4   | 782A07E6 | 1      | -69  | Out    | 4   | 2020-04-13 14:17 |
| 5   | 31164790 | 1      | -78  | Out    | 4   | 2020-04-13 14:17 |
| 6   | 305F6258 | 1      | -72  | Out    | 4   | 2020-04-13 14:17 |
| 7   | 782A06C4 | 1      | -72  | Out    | 4   | 2020-04-13 14:17 |
| 8   | 7F7B93C7 | 1      | -73  | Out    | 4   | 2020-04-13 14:17 |
| 9   | 30178720 | 1      | -75  | Out    | 4   | 2020-04-13 14:17 |
| 10  | 782A7EBD | 1      | -77  | Out    | 4   | 2020-04-13 14:17 |
| 11  | 1610F616 | 1      | -77  | Out    | 4   | 2020-04-13 14:18 |
| 12  | 19061962 | 1      | -73  | Out    | 4   | 2020-04-13 14:18 |
| 13  | 782A7EBF | 1      | -73  | Out    | 4   | 2020-04-13 14:18 |
| 14  | 30178619 | 1      | -76  | Out    | 4   | 2020-04-13 14:18 |
| 15  | 782A7ECF | 1      | -73  | Out    | 4   | 2020-04-13 14:18 |
| 16  | 8C7C764D | 1      | -77  | Out    | 4   | 2020-04-13 14:18 |

**Single tag info**

Numbers: 1931

| Num | ID(Hex)  | Repeat | Ant | RSSI | LastTime            |
|-----|----------|--------|-----|------|---------------------|
| 1   | CD33F5A5 | 1      | 4   | -64  | 2020-04-13 14:20:10 |
| 2   | 1610F52F | 1      | 4   | -42  | 2020-04-13 14:20:10 |
| 3   | 92F05726 | 1      | 4   | -61  | 2020-04-13 14:20:08 |
| 4   | 360545E4 | 1      | 4   | -43  | 2020-04-13 14:20:10 |
| 5   | 31164803 | 1      | 4   | -63  | 2020-04-13 14:20:09 |
| 6   | 6ABF8B65 | 1      | 4   | -59  | 2020-04-13 14:20:10 |
| 7   | 000934D6 | 1      | 4   | -59  | 2020-04-13 14:20:08 |
| 8   | 1610999B | 1      | 4   | -69  | 2020-04-13 14:20:10 |
| 9   | 19100883 | 1      | 4   | -59  | 2020-04-13 14:20:09 |
| 10  | 30161755 | 1      | 4   | -57  | 2020-04-13 14:20:07 |
| 11  | 1610C500 | 1      | 4   | -70  | 2020-04-13 14:20:00 |

**Firmware update**

☒ Reader firmware ☐ Antenna firmware

File Path: ... Update

0 %

Listening... Start Server...

**Use GPRS (4G) to do connection.**

Set Server IP and Port to reader ( wireless network params, plat IP 2)



debug

Antenna debugging

←

debug

Antenna debugging

collector info ( V 1.5 Jun 18 2019,16:37:25 )

device id :

190509501001980

×

factory num :

Need to get separately

read

wireless network params

plat ip 1 :

218.17.157.214

×

plat port 1 :

4600

×

wireless module imei :

861529043557384

read

RSSI strength :

90

read

Antenna parameters

Antenna 1 (East) Gain:

31

rssi :

-128

Antenna 2 (South) Gain:

31

rssi :

-128

Antenna 3 (West) Gain:

31

rssi :

-128

Antenna 4 (North) Gain:

31

rssi :

-128

Filter (second):

180

residence time (s) :

180

☒ open buzzer

☒ open DHCP

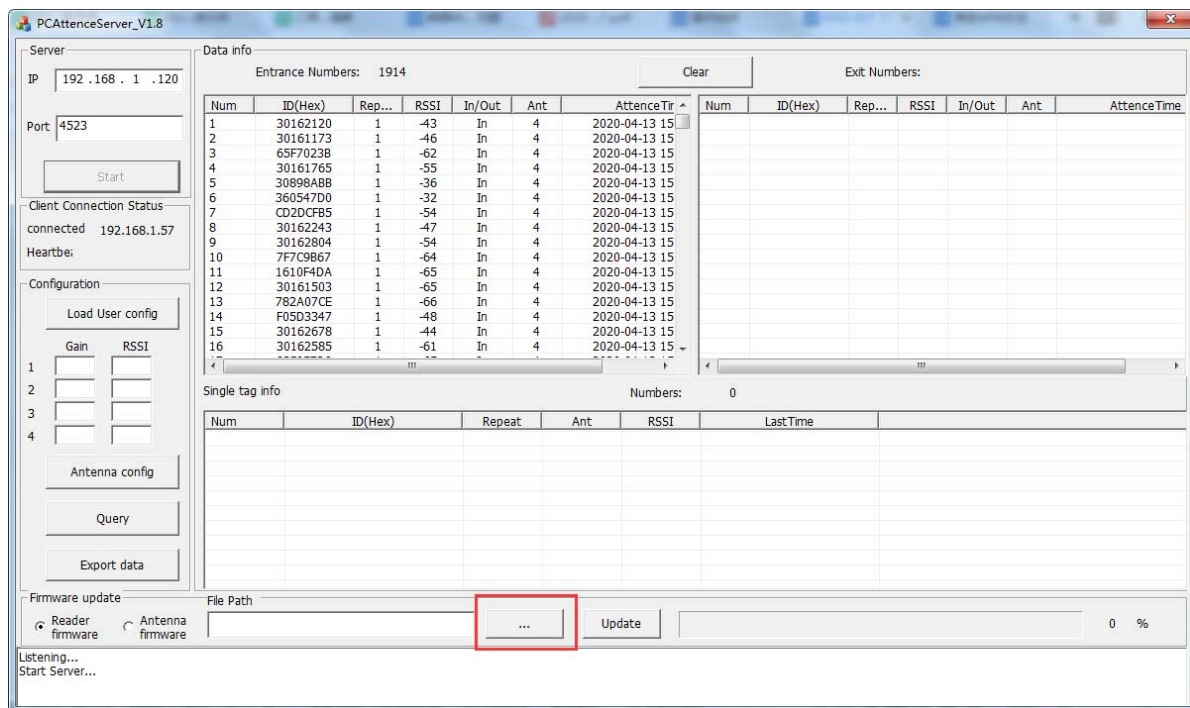
read device info

set params

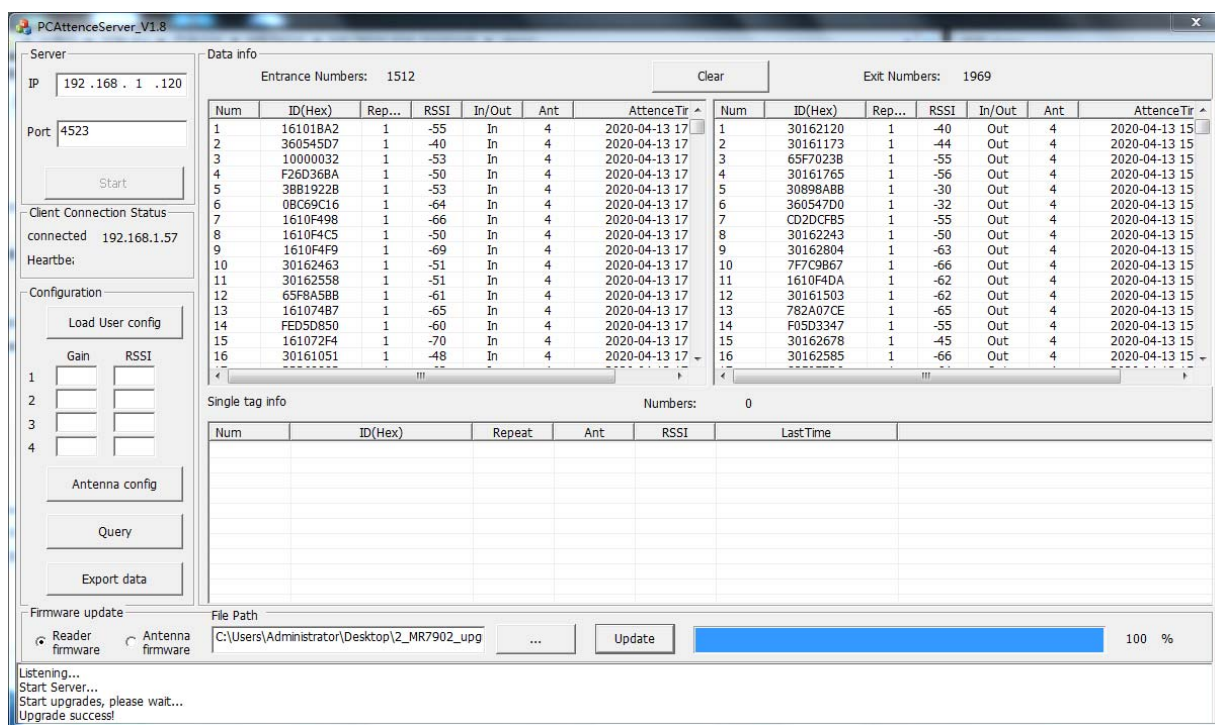
Reader will send data to object Server automatically.

#### Update reader's firmware.

After connect reader successful, we can update reader's firmware if needed.



Click the button in red box and choose the Bin file of reader. Then update.



## FCC statements

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

**NOTE:** The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or changes to this equipment. Such modifications or changes could void the user's authority to operate the equipment.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Federal Communication Commission (FCC) Radiation Exposure Statement

When using the product, maintain a distance of 20cm from the body to ensure compliance with RF exposure requirements.

FCC ID:2AJQV-MR7902

Documents / Resources

|   |   |
|---|---|
|  | <p><a href="#">Marktrace RFID IOT Android APK</a> [pdf] User Manual<br/>MR7902, 2AJQV-MR7902, 2AJQVMR7902, RFID IOT Android APK, IOT Android APK, APK</p> |
|---|---|