User Manual of CL7206C RFID Reader

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(V2.0.2)

Welcome to be user of CLOU RFID products. Thanks for choosing CLOU’ s 4-port Fixed RFID Reader CL7206C. We believe our device will bring convenience for your work.

Catalogue

1. Technical Specification

1.1 Feature

CL7206C is a high performance eight antenna port fixed UHF RFID reader and writer; support ISO18000-6C/6B protocols. The work frequency includes China standard dual frequency 920MHz ~ 925MHz and 840MHz ~ 845MHz, FCC 902MHz ~ 928MHz and ETSI 865MHz ~ 868MHz.

Output power from 0 ~ 33dBm optional, with long identification distance, fast reading speed, high accurate rate, strong anti-interference ability, good protection performance and easy installation

1.2 Technical

1.2.1 Main function

- Protocol: support ISO18000-6C/6B standard
- Built-in LINUX operating system
- Multiple communication port (Ethernet, RS232, RS485, USB),
- Support tag data filtering
- Support RSSI: the intensity of the perceived signal
- Adjustable RF output power
- Optional working mode: constant frequency / frequency hopping
- Supports antenna detection function
- Supports online and remote upgrade
- I/O interface: 4 port opt coupler input, 4 port relay output and Weigand output

1.2.2 Technical parameter

- Working frequency: ETSI 865MHz～868MHz
- Output power (port): 33dBm + 1dB (MAX)
- Power adjustment: 1 dB step-by-step
- Reading distance: 0 ~8meters (depending on tags, antennas and environment)
- Channel bandwidth: <200 KHz
- RS232 serial communication rate: 115200bps (default), 19200 bps, 9600bps
- RS485 interface communication rate: 115200bps (default), 19200 bps, 9600bps
- Wiegand output support wiegand 66, 34 & 26 types.
- Power supply: 30V ~ 10V (power capacity is not less than 60W)
- Power adapter: AC input 100V ~ 50Hz, 240V ~ 60Hz
- DC output: 24V/2.5A
- High protection grade: IP53

1.2.3 Operational environment

- Working environment: -20℃～+30℃
- Relative Humidity: 5%RH～90%RH（+25℃）

2. Sketch map

2.1 Physical construction

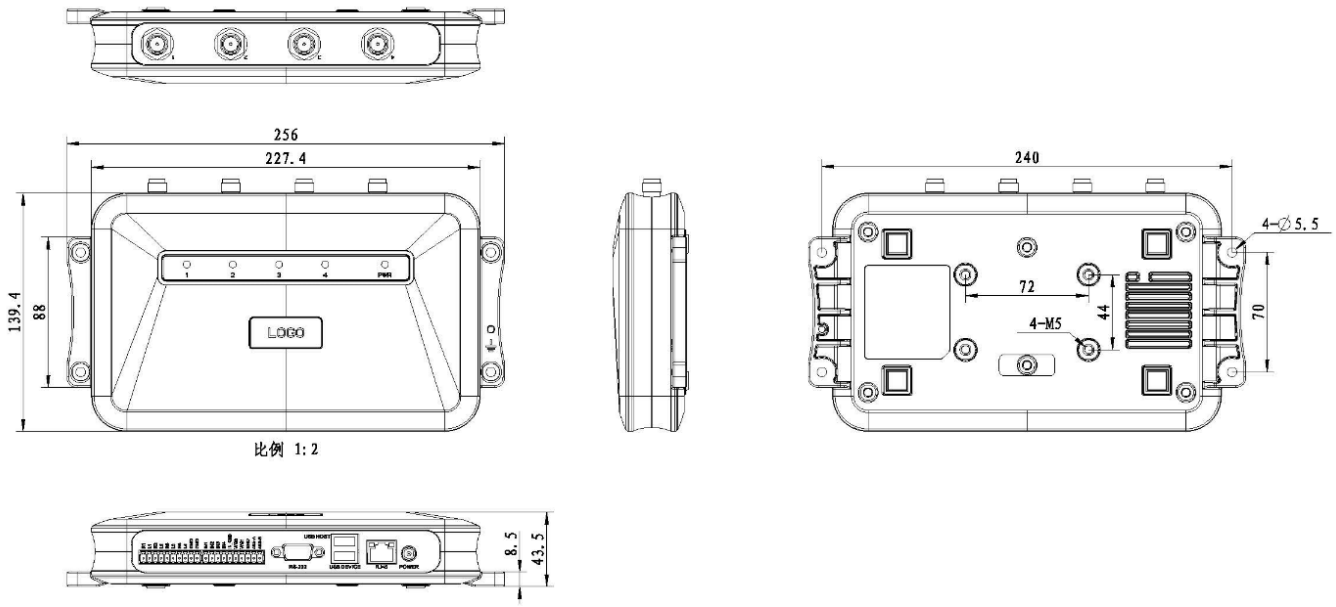


Image 2-1 Structure diagram of CL7206C

Size: 256mm*147.6mm*43.47mm

2.2 Weight

Main body: 1.14kg（accessories excluded）

2.3 Illustration of LED display

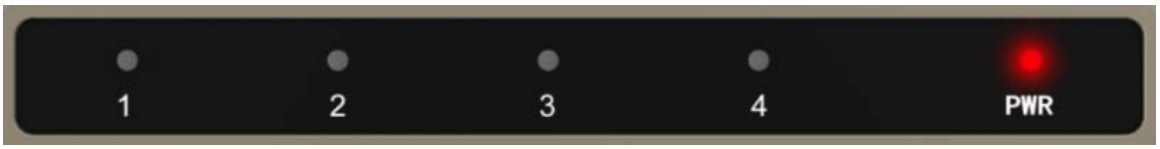


Image2-2 Sketch map of reader’s LED indicator

LED indicator panel describe as below Form 2-1:

Form 2-1 LED indicator description

LED Mark	Mark NO.	Status description

NO.		
ANT1	Antenna 1 indicator	Indicates antenna 1 is working
ANT2	Antenna 2 indicator	Indicates antenna 2 is working
ANT3	Antenna 3 indicator	Indicates antenna 3 is working
ANT4	Antenna 4 indicator	Indicates antenna 4 is working
POWER	Power indicator	Keep bright indicates power supply working normally

2.4 Interfaces

2.4.1 Power supply, communication and I/O interface

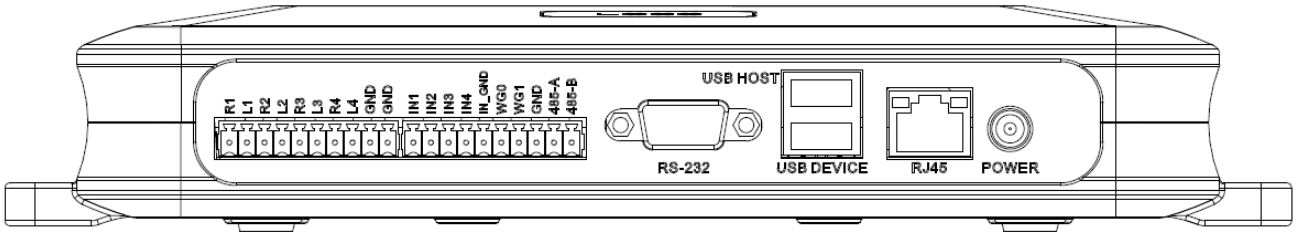


Image 2-3 Sketch map of reader’ s power supply, communication and I/O interface,

Details are shown in form 2-2

Form 2-2 Reader’ s power supply, communication and I/O interface,

Interface ID	Interface Name	Detail description
POWER	Power supply	DC,10~30V, power capacity no less than 60W.
RJ45	Ethernet interface	10/100M Ethernet interface, the reader control and communication interface.
USB DEVICE	USB device port	PC and other PC connected, the reader control and

		communication interface.
USB HOST	USB host port	For external U disk, wireless LAN and other expansion devices.
RS-232	RS-232 serial port	Serial communication interface with control reader.
Other	I/O interface	See detailed definition 2.4.2.

2.4.2 I/O Interface definition

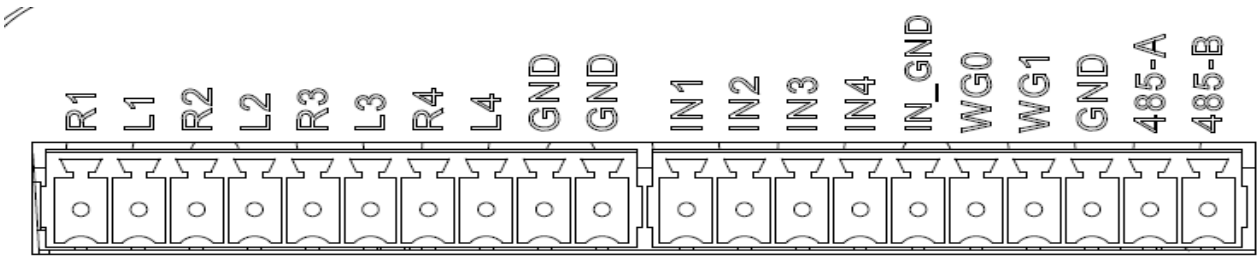


Image 2-4 Sketch map of I/O control interface

I/O control signal define as follow form 2-3

Form 2-3 I/O control signal definitions

PIN Identification	PIN Description
R1	Relay Output # 1; DC_MAX: 30V, 2A; AC_MAX: 125V, 0.3A; logic '0' indicates the open, a logic '1' means close, the default is open.
L1	Relay output # 1, DC_MAX: 30V, 2A; AC_MAX: 125V, 0.3A; logic '0' indicates the open, a logic '1' means close, the default is open
R2	Relay output # 2, DC_MAX: 30V, 2A; AC_MAX: 125V, 0.3A; logic '0' indicates the open, a logic '1' means close, the default is open.

L2	Relay output # 2, DC_MAX: 30V, 2A; AC_MAX: 125V, 0.3A; logic '0' indicates the open, a logic '1' means close, the default is open.
R3	Relay # 3 output, DC_MAX: 30V, 2A; AC_MAX: 125V, 0.3A; logic '0' indicates the open, a logic '1' means close, the default is open.
L3	Relay # 3 output, DC_MAX: 30V, 2A; AC_MAX: 125V, 0.3A; logic '0' indicates the open, a logic '1' means close, the default is open.
R4	Relay output # 4, DC_MAX: 30V, 2A; AC_MAX: 125V, 0.3A; logic '0' indicates the open, a logic '1' means close, the default is open.
L4	Relay output # 4, DC_MAX: 30V, 2A; AC_MAX: 125V, 0.3A; logic '0' indicates the open, a logic '1' means close, the default is open.
GND	ground
GND	ground
IN1	# 1 optocoupler input, DC, 0 ~ 12V, higher than 9V is high, less than 8V is low level.
IN2	# 2 optocoupler input, DC, 0 ~ 12V, higher than 9V is high, less than 8V is low level.
IN3	# 3 optocoupler input, DC, 0 ~ 12V, higher than 9V is high, less than 8V is low level.
IN4	# 4 optocoupler input, DC, 0 ~ 12V, higher than 9V is high, less than 8V is low level.
IN_GND	Optocoupler input, the reader optocoupler external input signal ground.
WG0	Wiegand Data 0 signal, the default state is high.

WG1	Wiegand Data 1 signal, the default state is high.
GND	Ground
485-A	RS485 A-side signal
485-B	RS485 B-side signal

2.4.3 Feeding line(optional)

Image 2-6 schematic diagram of feeder line

RF cable TNC(Reverse polarity, internal thread, inner pin) connector connect with reader antenna TNC connector, RF cable SMA connector connect with external circular polarization antennas SMA connector, cable maximum length is 5m, impedance 50Ω, insertion loss is less than 2dB, or you also can choose a high performance cable, appropriate increase in length, insertion loss is less than 2dB.

Note: If Ultra long RF cable or the cable joint is not contacted well, may cause performance deterioration on the read and write because of the emission signal and the received echo signal’ s attenuation.

2.4.4 Network connection diagram

Network interface used for long-distance high-speed connection (less than 80 m), can be connected with the switcher or router through the network cable, or directly connected

with the PC network interface, as shown in figure 2-7:

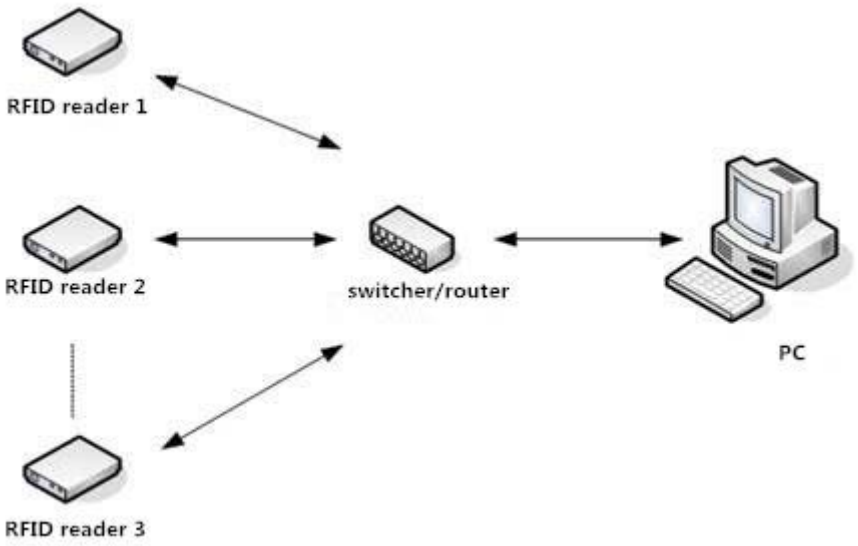


Image 2-7 Network application connection diagram

3. Installation

3.1 Notes

To ensure the normal and stable operation of the device and your personal property and safety, please carefully read the following notes before install CL7206C reader and writer:

1. Firstly, check whether the power socket is connected to the ground, and to see whether the local power supply voltage is in accordance with the applicable voltage range of the reader;

2. Check the device and the external connection if is closely connected;

3. Pay attention to the type selection and the length limit of the cable and the serial line:

- Network cable connects directly, no longer than 80 meters
- Serial line connects directly, no longer than 10 meters

4. When installing several readers, the antenna position and the antenna spacing should be appropriate to avoid interference with each other.

3.2 Installation conditions

Before installing the reader, please carefully check if the product is in good condition, the accessories are complete or not, if there is any damage, please contact the supplier.

3.3 Device connection

3.3.1 Power on

Insert the power cord into the AC power supply socket and plug another end into the power connector of the device and tighten.

Turn on and wait about 20 seconds, the system initialization process is completed and is standby state.

3.3.2 Antenna connection

The device built with four TNC coaxial cable connector for connecting an external antenna, select low consumption RF cable, connectors should be tightened (Ensure to be waterproof when install outdoors);

The reader antenna angle or corner to adjust to the best position through the actual test according to the specific application,.

3.3.3 PC connection

The device provides special adapter cable, including interface of network, serial and power;

RS232 interface is for short distance communication (less than 10m), through the DB9 connector and the PC serial port connection to realize the communication of PC and the device.

RJ45 network port used for long distance communication (less than 80m), connect PC with extend cable.

3.4 Device installation

The reading and writing range of the reader depends on the onsite application, the tilt angle of the antenna is adjusted to achieve the best reading and writing performance.

3.5 Acceptance

Mainly from two aspects of acceptance criteria: structure and performance.

3.5.1 Acceptance of structure

Check below details:

- Whether reader is fixed firmly, without loose;
- Whether the cable connected firmly ;

- Whether the screws are tighten

3.5.2 Performance acceptance

- Whether the reader is working properly;
- Whether the read and write range is reasonable.

4. Software operating

4.1 Demo software

The demo software mainly carries on system control, communication mode selection, parameter setting and searching, read and write tags and data presentation and so on.

Before using the demon software, please check if the connection of the reader hardware is completed, mainly ensure the following tips:

1, If the reader and computer serial port (network or RS485) is connected correctly

2, If the antenna ports have been connected to the antenna (ANT, ANT1 2, ANT 3, ANT totally four ports)

3, If the reader and writer start up (hear "drop" buzzer sound).

4.2 Application environment

- The software environment

Windows 2000 Service Pack 3、 Windows Server 2003、Windows XP Service Pack 2、Windows 7 system

- The hardware environment

P4/1.7GHz above PC, 512M or more memory, 40GB hard drive

4.3 Software version

- V2.0.2

4.4 Installation

1. Copy the software to the PC, open the software installation package, double click “setup” application, and follow the installation guide.

2. Click the next step, and select the installation path, click next, and the software will begin to

install.

3. Click the "Install", and software installation progress takes about 1mins.

4. After the progress of the software is finished, click the "finish" button to complete the installation.

4.5 Operation

4.5.1 Device connection

All functions can be operated only after successful connection.

4.5.1.1 Serial communication connection

Double click the icon  to start the Demo software, the main interface of the toolbar icons are gray means reader is not connected, in the ‘connecting reader’ option list select communication mode ‘serial connection’, ‘connection parameters’ select ‘COM?’ (choose PC serial number), communication baud rate select 115200 (default), click “OK “ button, as shown in image 4-6.

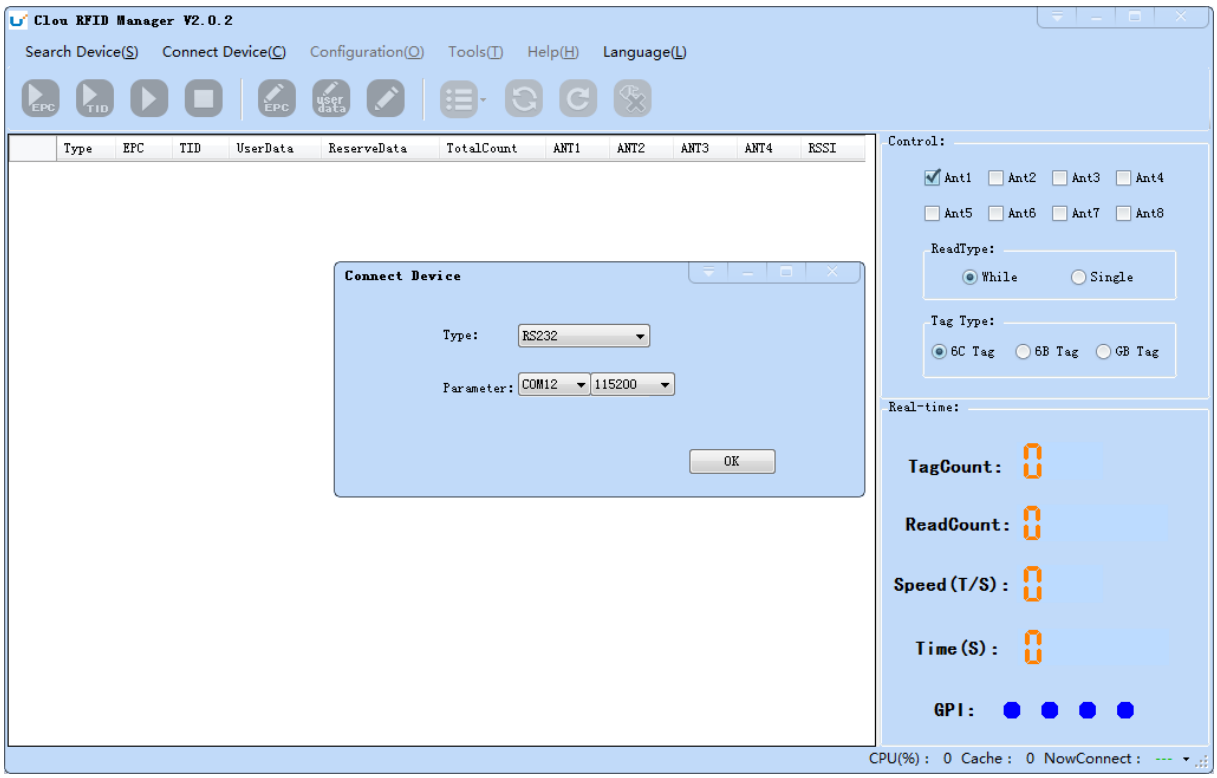
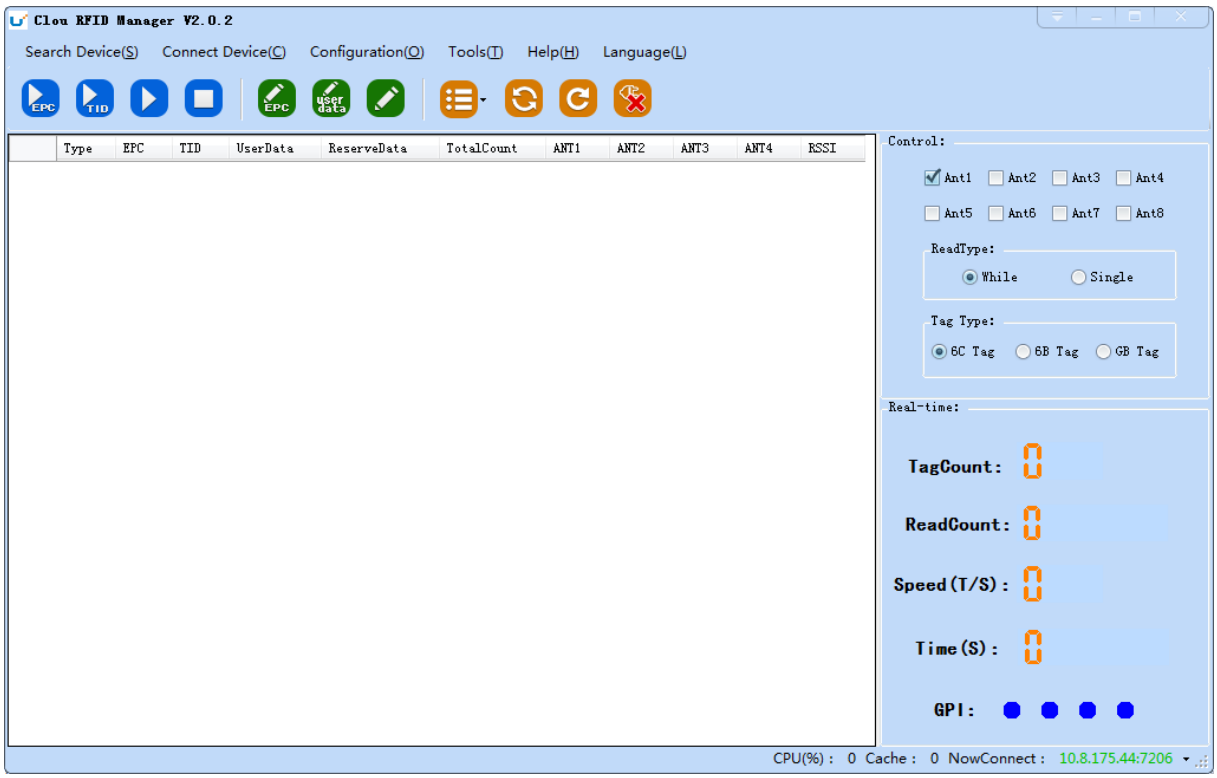


Image 4-6 Serial communication connection

If the connection is successful, all the icons in the toolbar are illuminated, as shown in image 4-7, means the serial communication connection is successful.



Imag4-7 serial port communication connect successful

4.5.1.2 Network port communication connection

Network port used for long distance connection (within 80 m), connect to the router through cable and switcher, router, or connected with the PC network port directly. Select the communication mode "TCP connection" in the "connect reader" option list, "connect parameter" input reader IP (default 192.168.1.116), enter the communication port number (default 9090), and click OK button, as shown in image 4-8

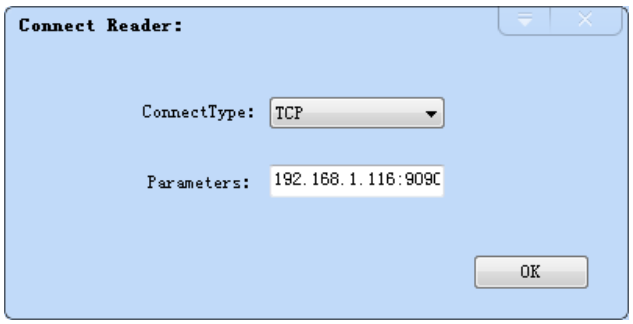


Image 4-8 Network port communication connection

The device has been written IP address 192.168.1.116 as default. If you forget or need to modify, using serial connection "connection" after connect successfully, then you can found the current IP address through select “settings” > "senior" > “configuration”, set up the IP address in “Network port settings” when “configuration” dialog pops up. See image 4-9

Note: The IP address of the reader can’t be repeated. Use the Ping command to test whether the network is connected on PC.

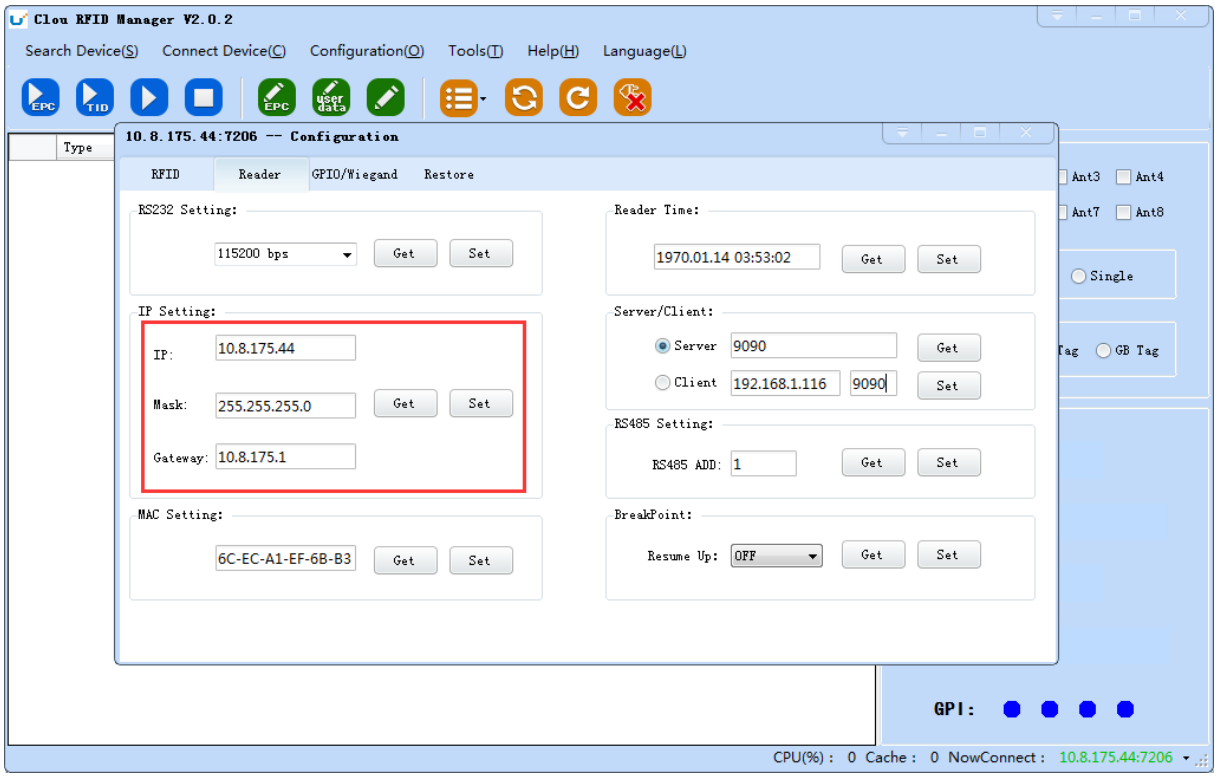


image 4-9 reader configuration

4.5.1.3 RS485 communication connection

Select the communication mode in the "connect to the reader" option "485 connection (serial port)", "connect parameter" select "COM?" (select PC serial number), communication rate select "115200", enter the RS485 address, then click OK, as shown in image 4-10.

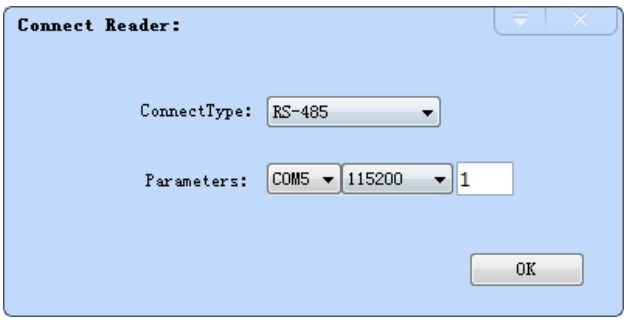


Image 4-10 485 communication connection

RS485 address defaults to 1

RS485 address range 1~255

Note: Click the butt after changing the configuration

4.5.1.4 USB communication connection

Select the communication mode "serial port" in the "connect reader" option list, "connect parameter" select "COM?" (the USB serial number detected by PC), the communication rate is selected "115200" (the default value), and click OK button, as shown in image 4-11.

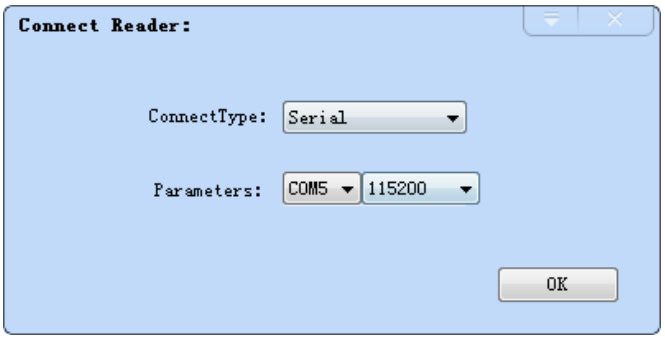


Image 4-11 USB communication connection

4.5.2 Data display area

Click the button ,the data display area will show as image 4-12

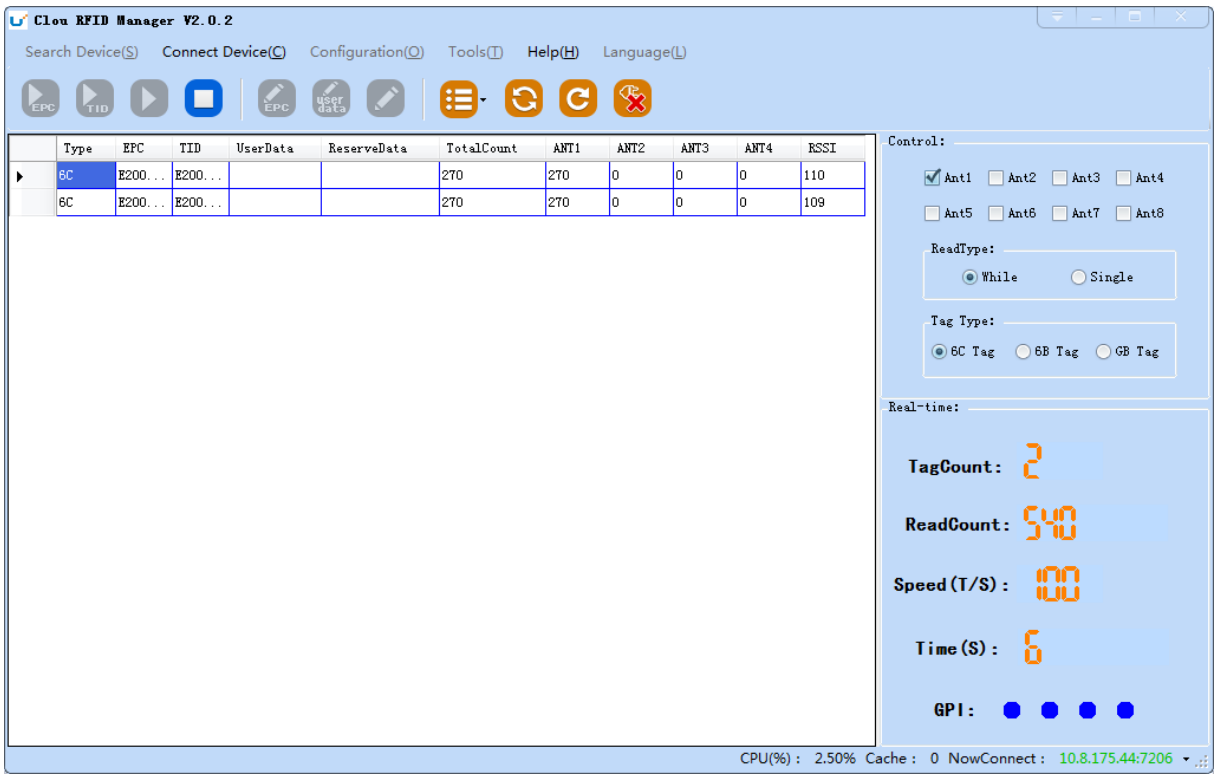


Image 4-12 data display area parameter meanings

Type: label type: 6C, 6B two types

EPC: EPC data of tags, can be read and write.

TID: the TID data of the label, the only logo, read only

User Data: user data area, can be read and write.

Reserve Data: reserved area data, store the password data, etc.

Total Count: total number of tags

ANT1: the reading times of NO.1 antenna

ANT2: the reading times of NO.2 antenna

ANT3: the reading times of NO.3 antenna

ANT4: the reading times of NO.4 antenna

RSSI：Signal Intensity

4.5.2.1 Read EPC

Click the button  , the data display area will display the current read EPC data

EPC display as hexadecimal character string, use the word as length unit (1 word = 2 bytes = 4 hexadecimal character)

If you want to read the EPC data of the custom length, please refer to chapter 4.5.2.3 custom read

4.5.2.2 Read TID

Click the button  , the data display area will display the current read EPC and TID data

TID data display as hexadecimal character string, use the word as length unit (1 word = 2 bytes = 4 hexadecimal character).

TID length, the default is 6 words.

If you want to read the TID data of the custom length, please refer to chapter 4.5.2.3 custom read

4.5.2.3 Custom read

Click the button  , pop-up dialog box, as shown in Image 4-13

Select "6C tag configuration"

Matching read, you can matching read through known EPC data or TID data of tags.

Read TID, select to read the tag TID data, the read mode default as "adaptation", use the word as length unit.

Read the user area, select to read the tag user area data, use the word as the starting address and read length unit

Read the reserved area, select to read the tag retains data, use the word as the starting address and read length unit

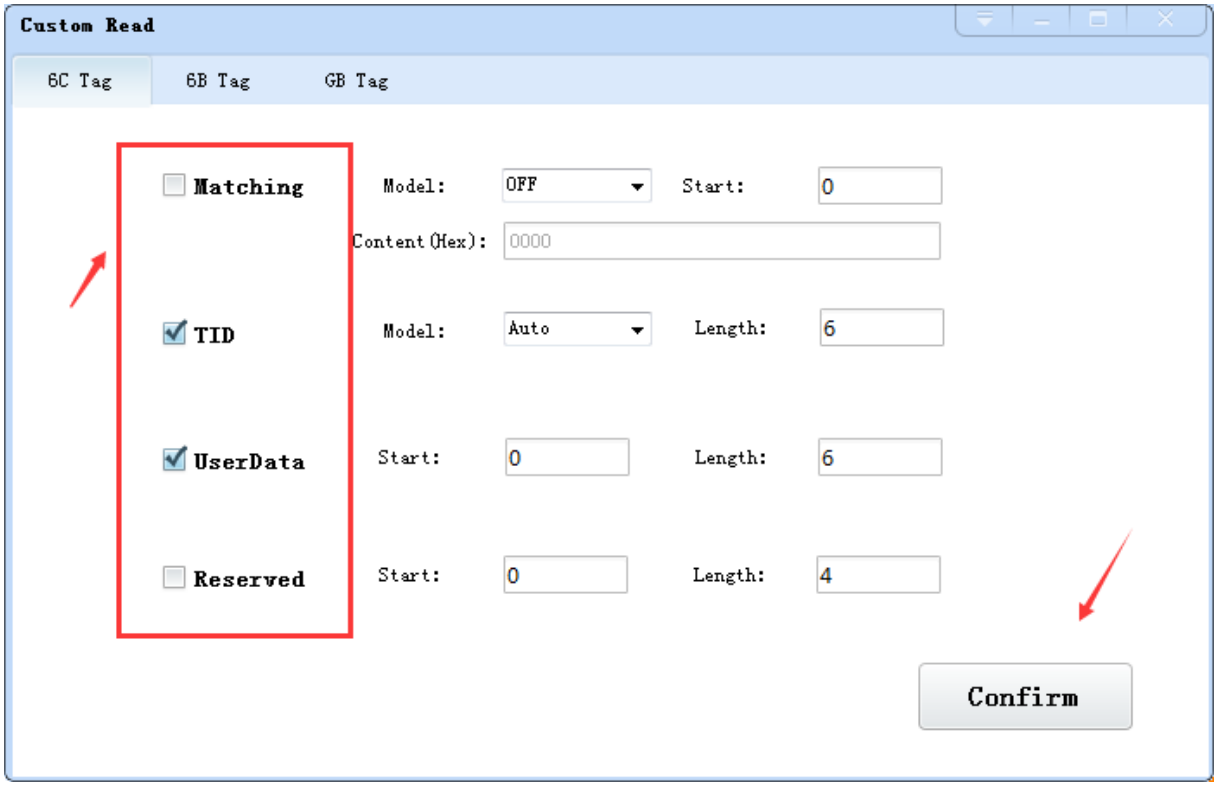


Image 4-13 6C Tag custom configurations

Select the 6B tag configuration, and pop up dialog box as shown in image 4-14

Can choose to read TID data or user data

Can matching read TID data.

Tip: Customer who not familiar with the label agreement, please ignore this feature

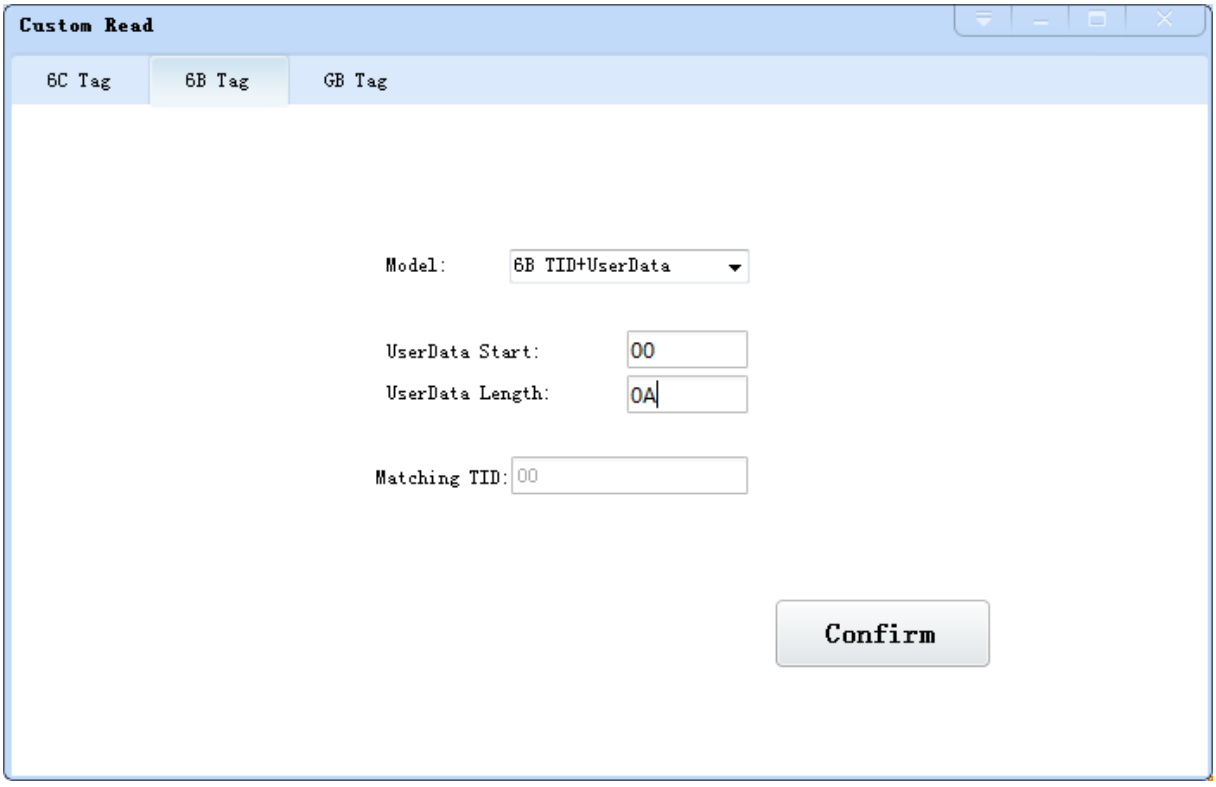


Image 4-14 6B Tag custom configurations

4.5.2.4 Stop read

Click button  stop all read and write operations.

4.5.3 Write data

4.5.3.1 Write EPC data

Click button  and pop up dialog box as shown in image 4-15:

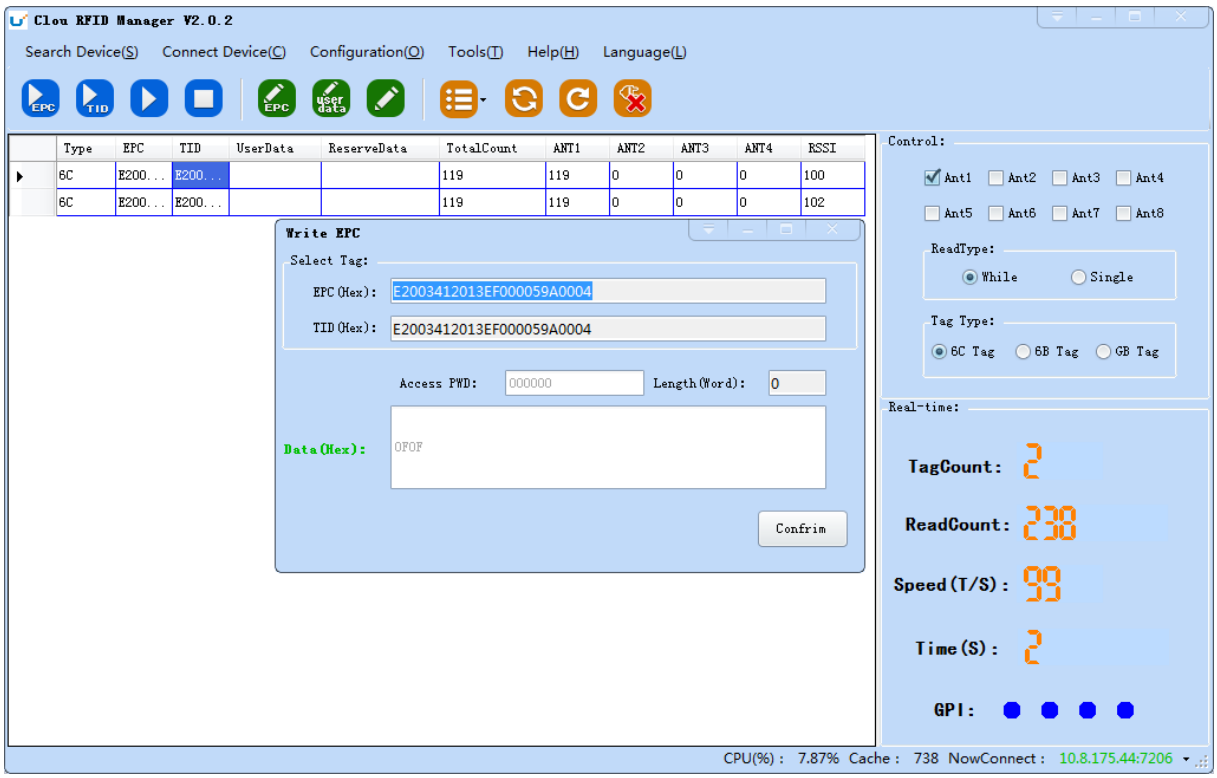


Image 4-15 write EPC data

Select a label data (contains TID information) has been read, fill in the EPC data (16 hex string), click "OK".

4.5.3.2 Write user data

Click button  and pop up dialog box as shown in image 4-16:

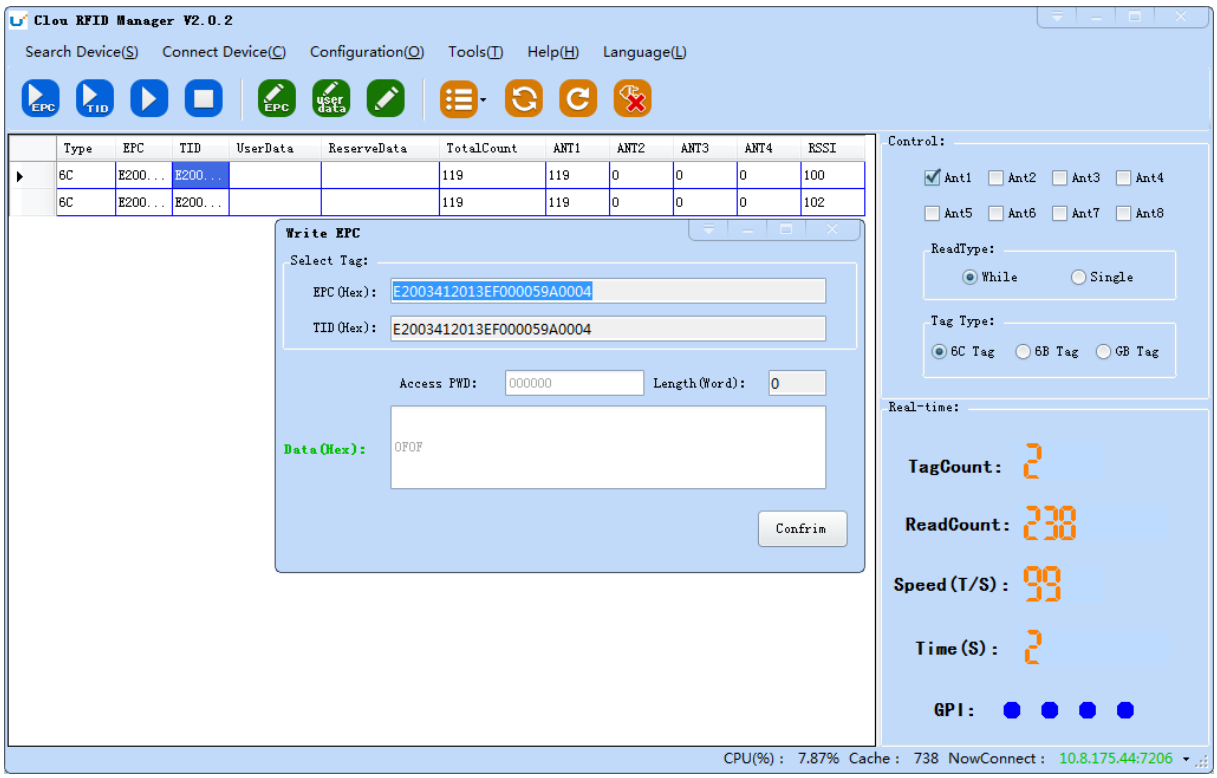


Image 4-16 write user data

Select a label data (contains TID information)has been read, fill in the user data (16 hex string), click "OK".

4.5.3.3 Custom tag action

Click button  and pop up dialog box as shown in image 4-17:

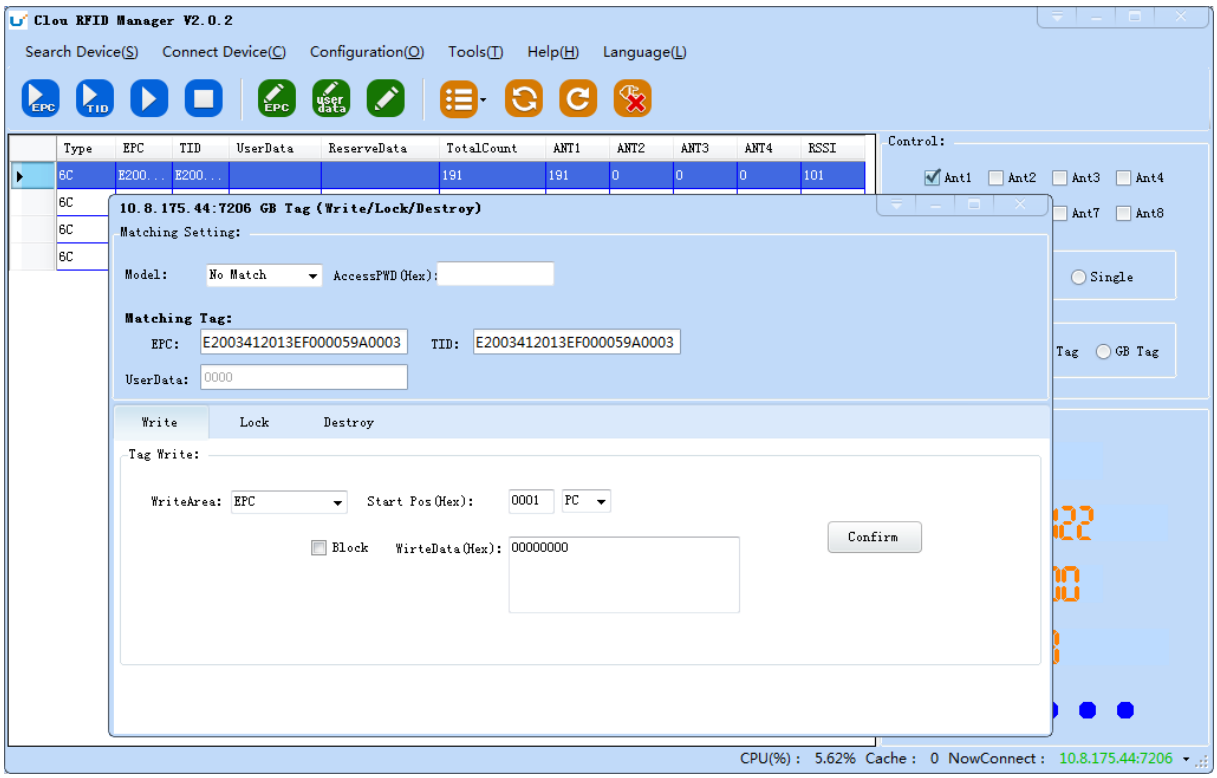


Image 4-17 Custom tag action

1. Select a tag data that has been read;

2. Click the "custom operation" button;

3. Take detailed action to write / lock / destroy tag according to the reader protocol

4.5.4 TCP server / client mode

Select configuration on the main demo interface > "read and write configuration >" TCP server / client mode ", pop-up dialog box, as shown in Image 4-18:

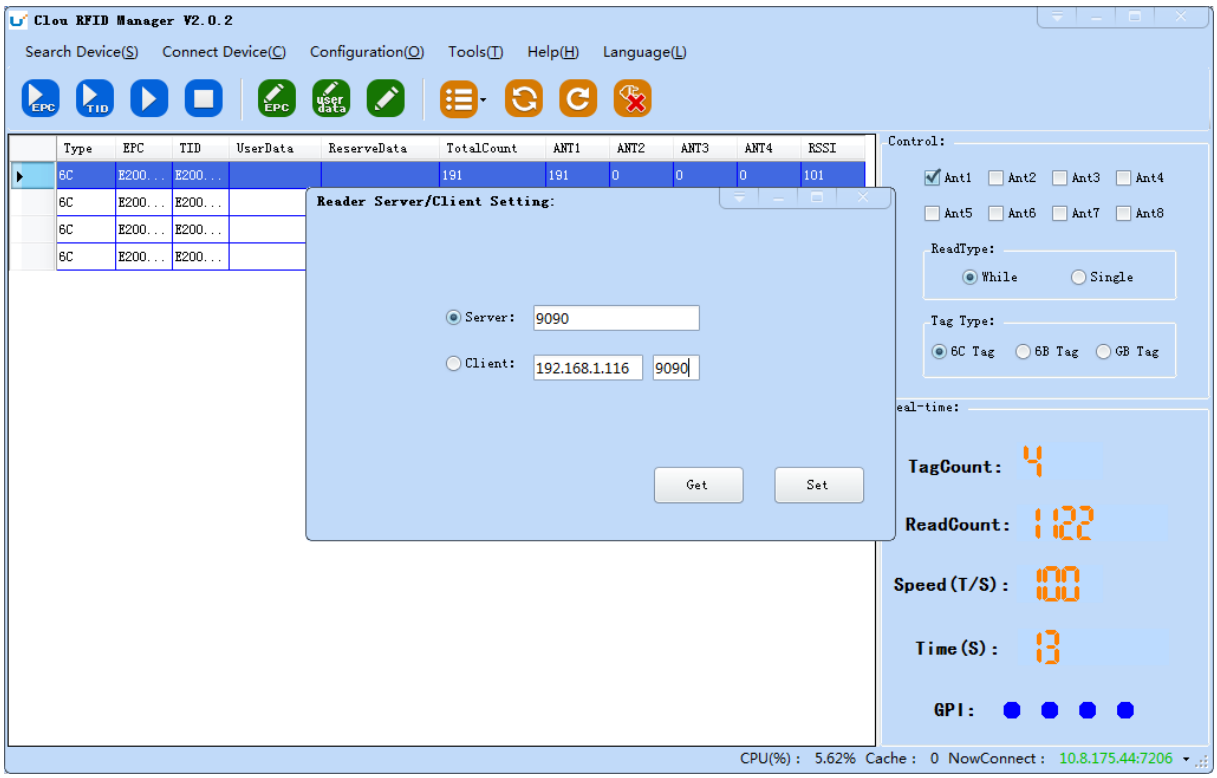


Image 4-18 Mode setting

When the reader is configured as a "server" mode, the connection is initiated by PC; when the reader set as a "client" mode, it will connect to the PC side automatically.

4.5.5 Antenna configuration

Select" configuration" on the DEMO main interface-- > "senior"-- > "reader configuration ", then pop-up dialog box, as shown in image 4-19.

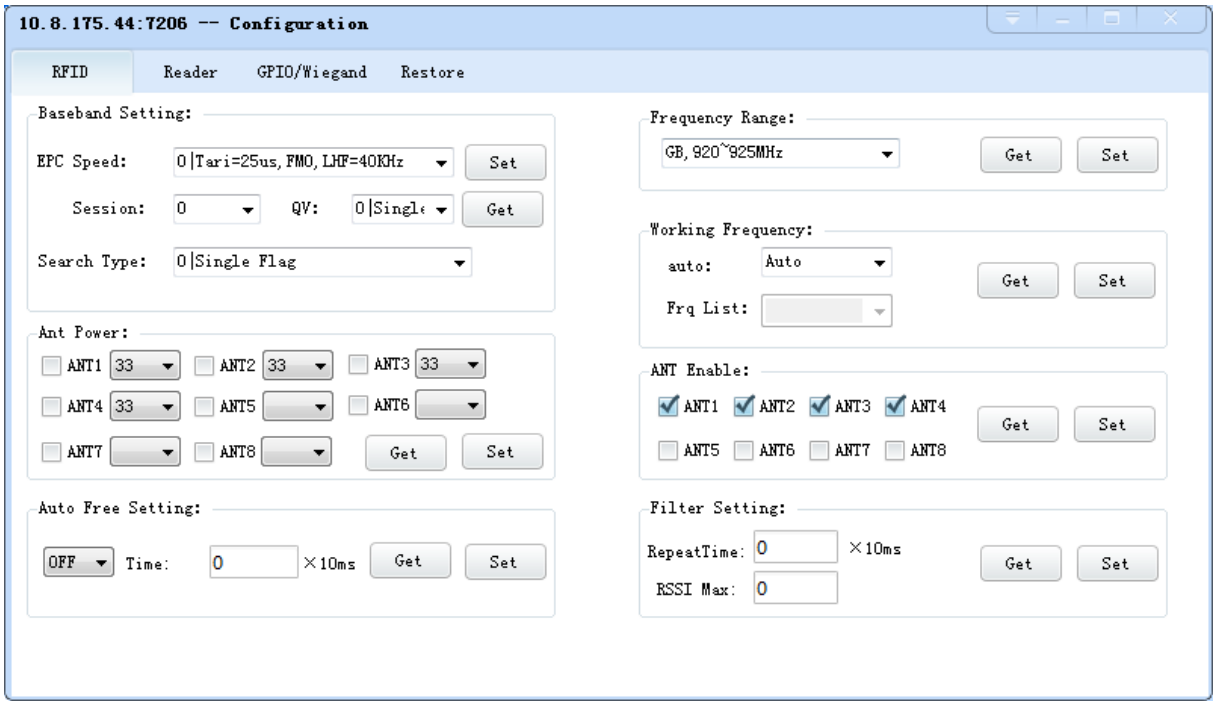


Image 4-19 Antenna enable configuration

Select all antenna enable configuration, click the "configuration", pop up dialog box, click "OK" means configure succeeds. If the antenna enable is not selected, when select the corresponding reader on the DEMO main interface, will pop up dialogue box as shown in image 4-20.

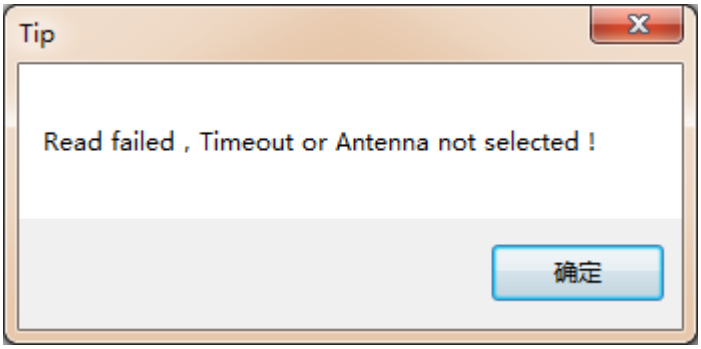


Image 4-20 Antenna selection

4.5.6 Base band parameter configuration

Select "configuration" on the DEMO main interface --> "senior" --> "reader", then pop-up dialog box, as shown in image 4-21.

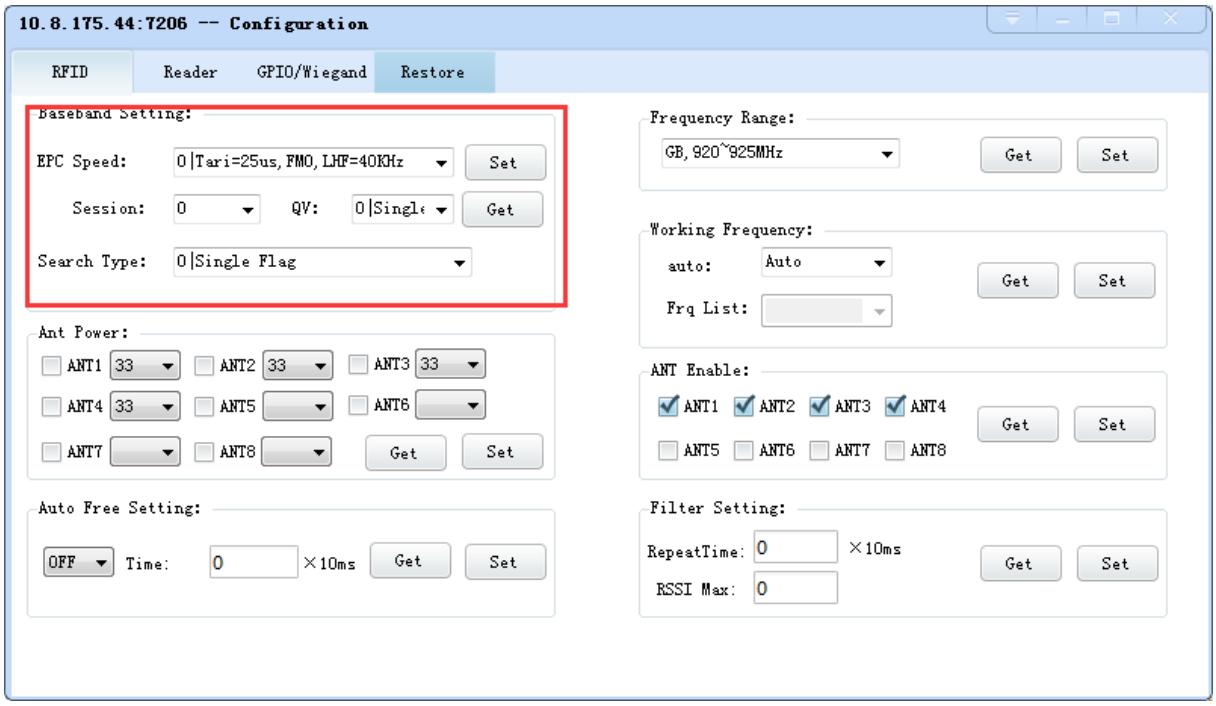


Image 4-21 Base band parameter configuration

Changing the base band parameter configuration can change the actual effect of the read and write (can be reasonably configured according to the application scenarios, but it needs to be operated under the guidance of our engineers).

EPC base band rate provides five options: Tair=25us, FM0, LHF=40KHz, dense reading mode; Tair=25us, Miller4, LHF=300KHz; fast reading mode; 255/OUTO.

Session four choices: 0; 1; 2; 3.

Q values provide sixteen options: 0/ single label; 1; 2; 3; 4/ multi label; 5; 6; 7; 8; 9; 10; 14; 11; 12; 13; 15.

There are three options for searching tags: one side search; inventory only with Flag B; double search.

4.5.7 Antenna port power setting

Select "configuration" on the DEMO main interface --> "senior" --> "reader", pop-up

dialog box, as shown in image 4-22.

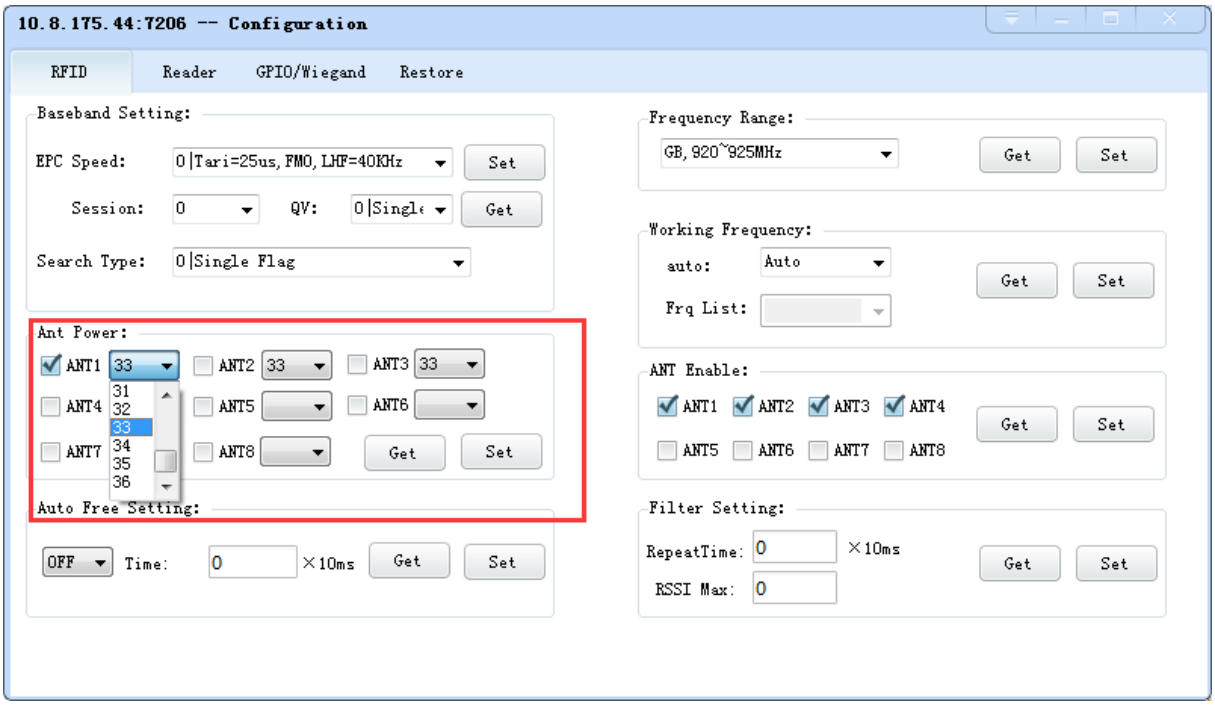


Image 4-22 Antenna port power setting

Select the corresponding antenna port (external antenna connected), select the appropriate power values from the power list, click Configure, pop up the configuration of the success of the dialog box, click OK to complete power configuration.

4.5.8 Clock setting

Select "configuration" on the DEMO main interface --> "senior" --> "reader configuration", then pop-up dialog box, as shown in image 4-23. The current time of the reader can be check in the area of the "reader time". If you need to modify the reader time, modify the "reader time" then click "configuration" button, pop-up dialog box then click OK.

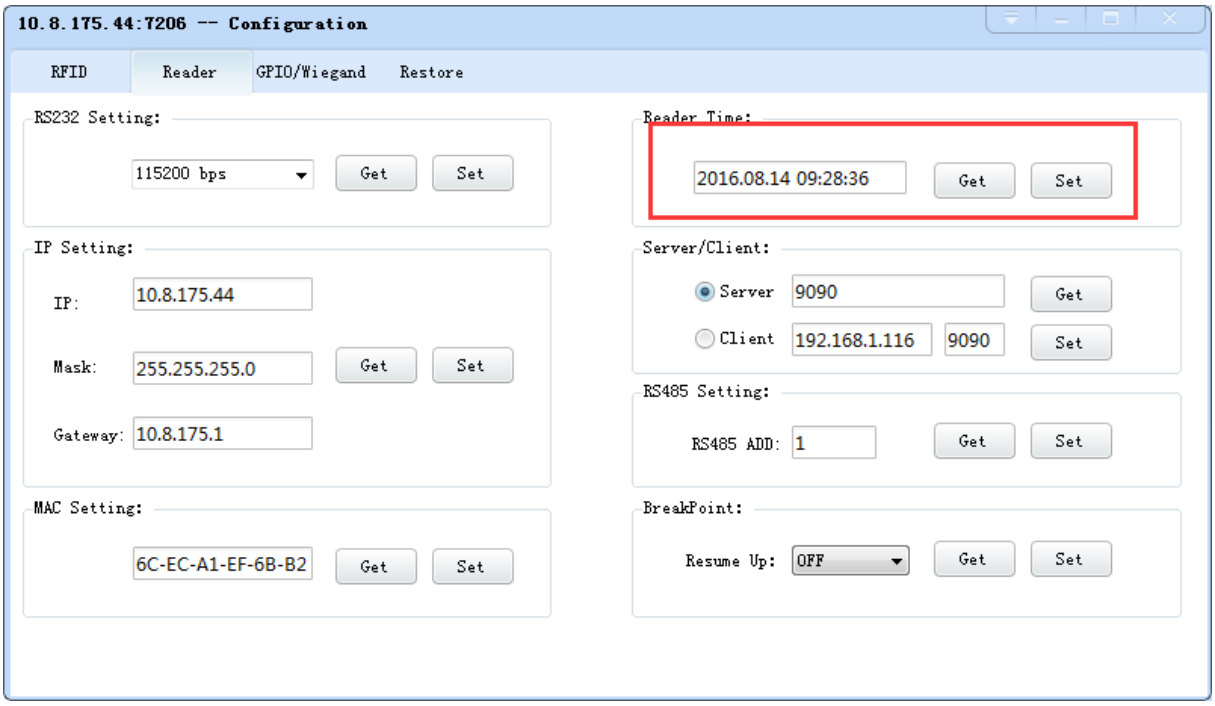
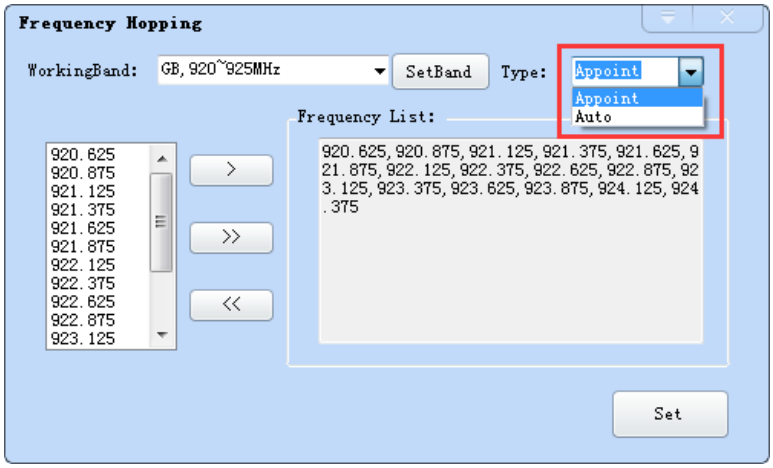


Image 4-23 Clock display setting

4.5.9 Frequency Hopping

Click "configuration" on the main interface > RFID configuration > "hopping management", pop-up frequency hopping management dialog box, as shown in image 4-24



Imag 4-24 Frequency Hopping management

Select "CMII, 920-925MHz" (see Image 4-25) in the "working band" drop-down list, click the "Settings", select single frequency points from the left frequency list box(see Image 4-24) then

click the "›" button, right into the list box, and then click the "configuration" to confirm; If you want to select the full band frequency hopping just click » all the frequency points will show on the right side of the list box, click the "configuration" to confirm. If you click «, all frequency points on the right side of the list box will be cleared.

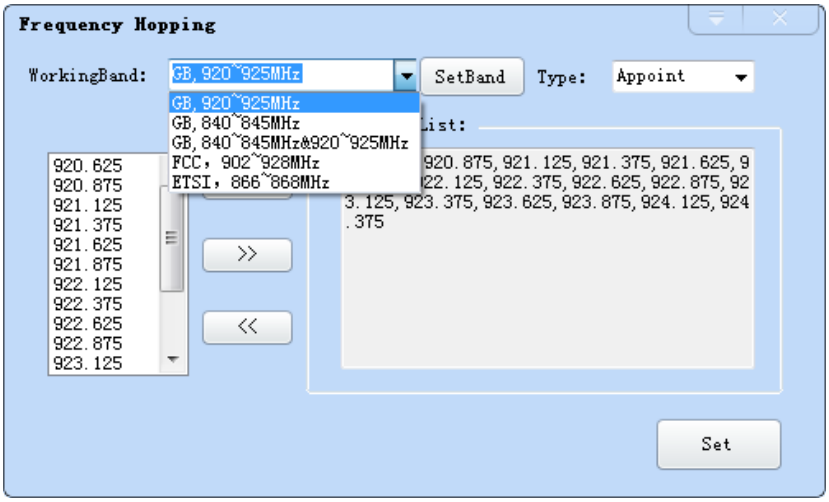


Image 4-25 Frequency Band selection

Note: The purpose of setting up the "automatic" is to avoid the interference of the external signal and select the fast frequency hopping. The default configuration for general application is automatically (as shown red mark dropdown list in image 4-24).

4.5.10 Label filtering

Select "configuration" on the main interface > "RFID configuration" > "label filter", then pop-up dialog box, as shown in image 4-26:

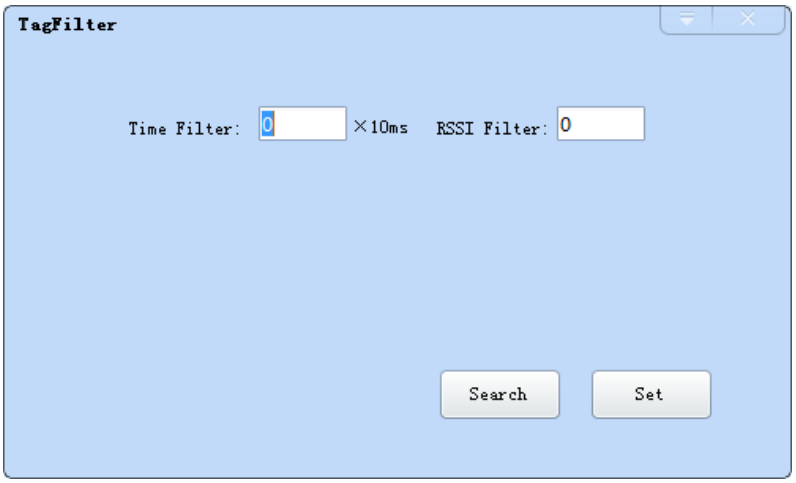


Image 4-26 label filtering

Filtering time: indicates that the same label content within a specified period of time within a read card instruction is only uploaded once, 0~65535, and time units: 10ms.

RSSI threshold: When label RSSI value small than the threshold value, the label data will not be uploaded and discarded.

4.5.11 Buffer and breakpoint resume

For make sure the reader ‘s complete collection of rfid tags’ data, CL7206C support tag data-caching mechanism and breakpoint resume, in case that the tag’s data loss because of the communication interrupted or PC application error exit, the tag data by caching mechanism could be saved without power.

Data caching mechanism mode’s start:

Main manu’s setting → Advanced → Reader setting → Breakpoint, choose “ON” then it will validate the function of tag’s caching mechanism. As image 4-27 shows.

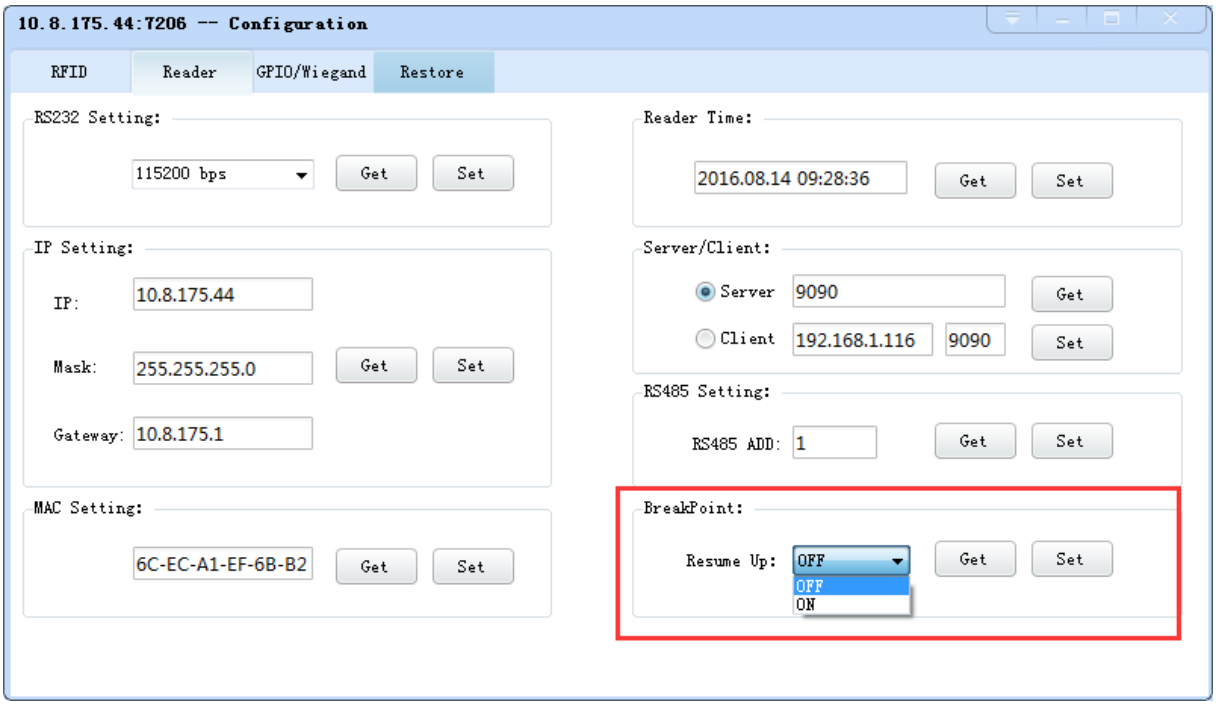


Image 4-27 tag filter

After the validate the breakpoint resume function, the PC will reply each data of tags uploading, reader will automatically save the tag’ s data which are not uploaded. PC could operate the saved data through setting → Obtain saved data or setting → clear saved data. As below image 4-28.

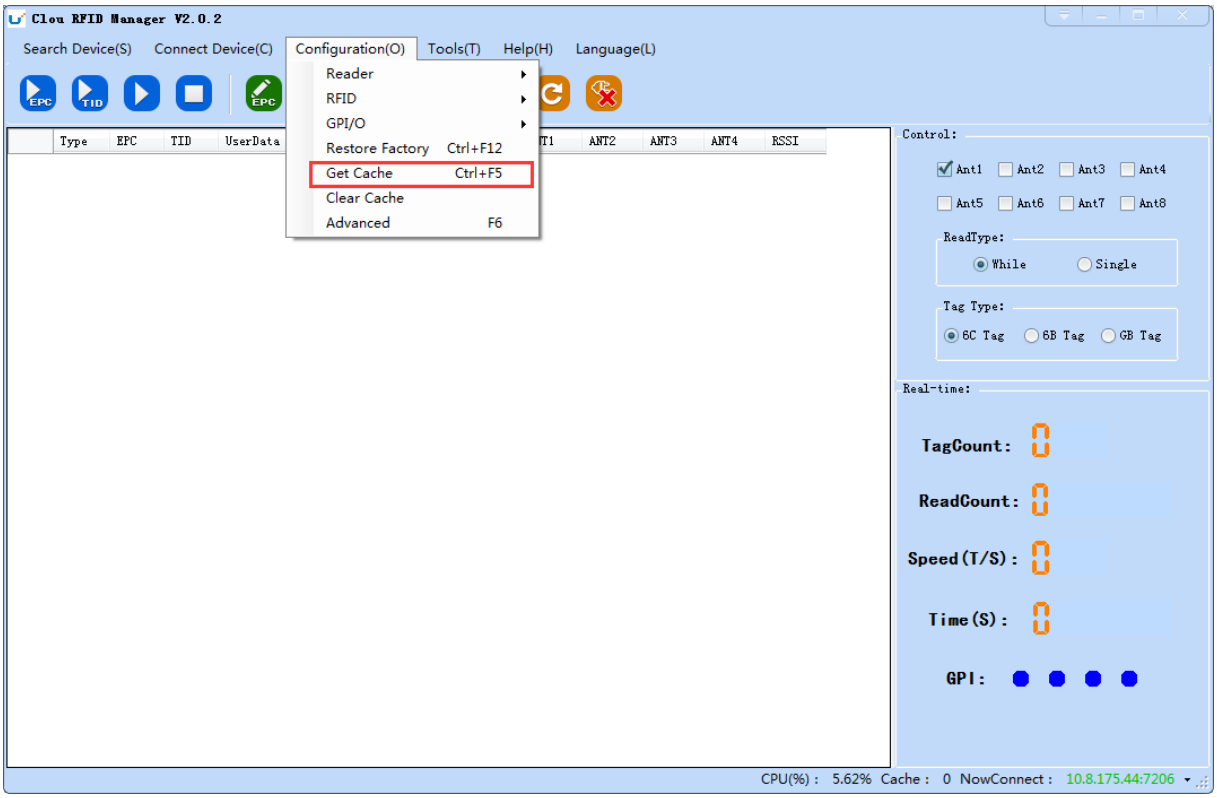


Image 4-28 tag buffer data operation

As under the breakpoint resume mode, PC will confirm to each tag data from reader, under mass quantity of

tag data will reduce the communication efficiency, increase the system load, **we suggest: When start the breakpoint upload functions, according to your application, can set up suitable "tag filter parameter" → "filter time" to reduce the extra data uploading.**

4.5.12 Auto idle set up

Select "configuration" on the main interface > "RFID configuration" > "auto idle ", then pop-up dialog box, as shown in image 4-29:

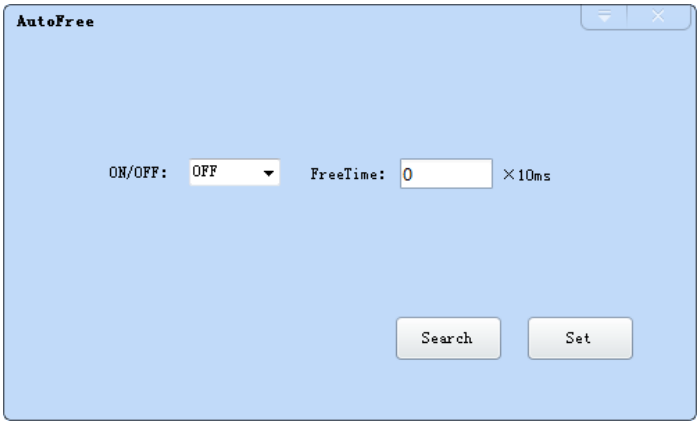


Image 4-29 Auto idle configuration

Auto idle mode means when the reader continuous reading tags, all using antenna didn’ t identify the tags for three times continuously ,then the reader automatically enter a period of idle state to save power consumption, the reader re-enter the card reader automatically after idle time.

4.5.13 GPI/O configuration

GPI/O control is to provide the query and set up the I/O port state, control the function of the I/O device.

GPI configuration

Select “configuration “on the main interface --> "GPI/O configuration" --> “GPI configuration "then pop-up dialog box, as shown in image 4-30:

Imag 4-30 GPI configuration

- Check: check the various port trigger parameters
- Configuration: select the port need to set, click button to execute the settings after modify
- Trigger start condition: select the mode from the drop-down list
- Trigger execution instruction: select the mode from the drop-down list
- Trigger stop condition: select the mode from the drop-down list
- Description: when the start condition is satisfied, the reader will perform the configuration of the reader/ writer command.

GPO configuration

Select "configuration" on the main interface > "GPI/O configuration" > " GPO configuration "then pop-up dialog box, as shown in image 4-3:

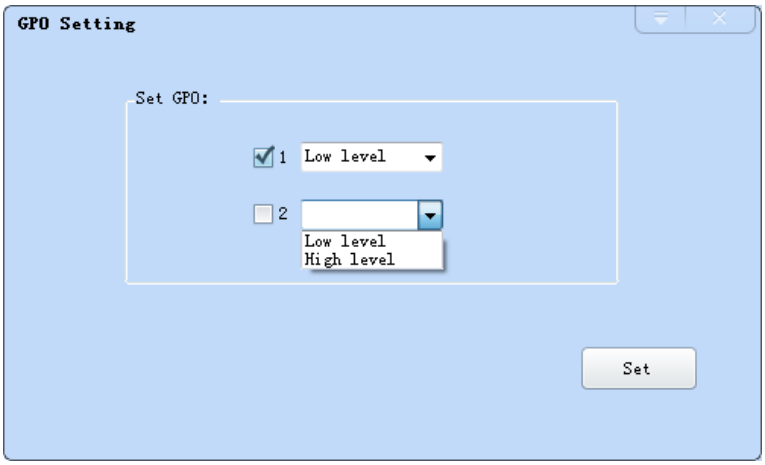


Image 4-3 GPO configuration

CL7206C reader only supports four GPO outputs, that is "1" "2", "3", "4".

Select the high / low level, click this configuration to execute settings after modify.

4.5.14 Others

Wigand configuration

Select "configuration" on the main interface --> "GPI/O configuration" --> "Wigand "then pop-up dialog box, as shown in image 4-30:

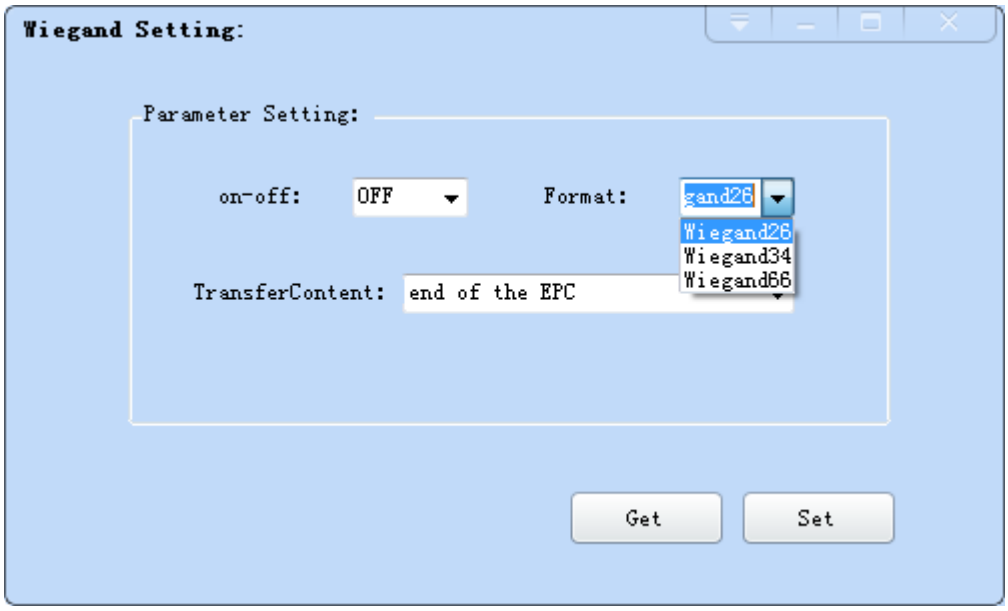


Image 4-30 Weigand configuration

In the Weigand parameter settings area, set up the "communication switch" for the "open" state, and select the corresponding "communication format" and "transmission data content", click on the "configuration" to determine.

Weigand port Parameter configuration: includes "Weigand 26, "Weigand 34" and

“Weigand 66"models.

Weigand 26: TID or EPC data reported from the end of the Weigand port is valid for 3 bytes.

Weigand 34: TID or EPC data reported from the end of the Weigand port is valid for 4 bytes.

Weigand 66: TID data reported from the end of the Weigand port is valid for 8 bytes.

Restore factory settings

Select “configuration” on the main interface > “restore factory settings” then pop-up dialog box, as shown in image 4-31:

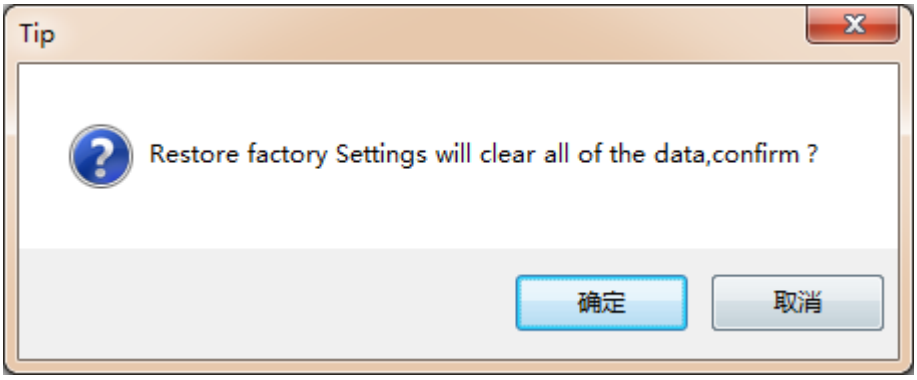


Image 4-31 restore factory settings

When connected to the reader in any form, click OK button, and all settings of the reader will be restored to the factory setting.

4.5.15 Tools

Data export

Select "tools" on the main interface > "data export" > "form (*. XLS), in the pop-up dialog box, as shown in image 4-32, select the required export file save path.

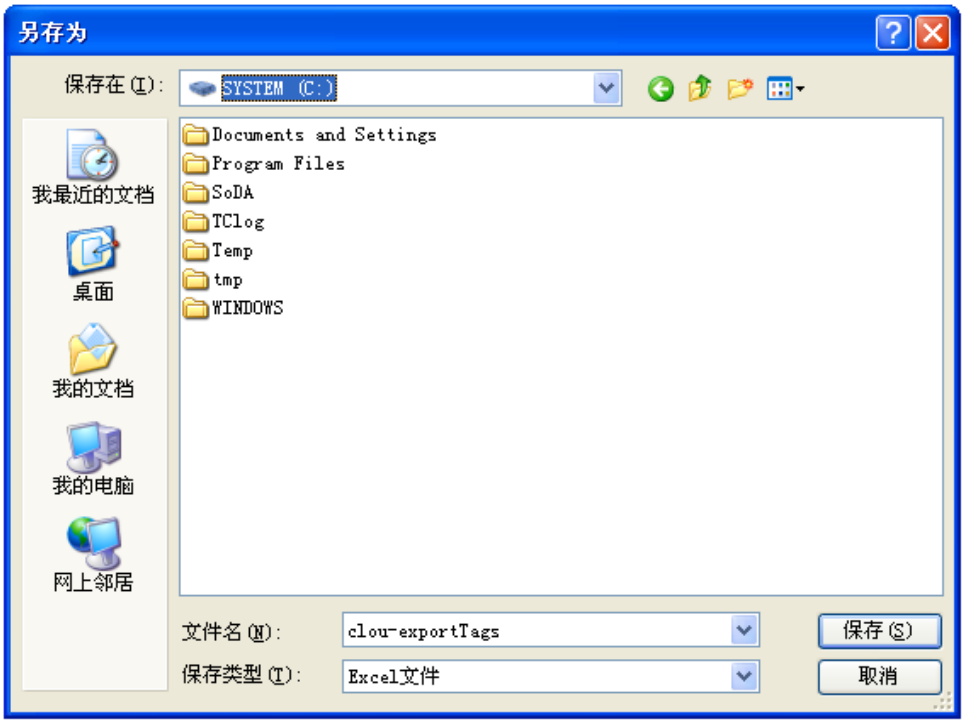


Image 4-32 Data export

Read the tag data to support data export, export format can be.csv (comma file) and.Xls (Excel).

Software upgrade

The reader support for online upgrade, software upgrades support the baseband software upgrade (the underlying software) and application software upgrades (system software applications). Select "tools" on the main interface > "software upgrade" > "software", the pop-up dialog box, as shown in image 4-33:

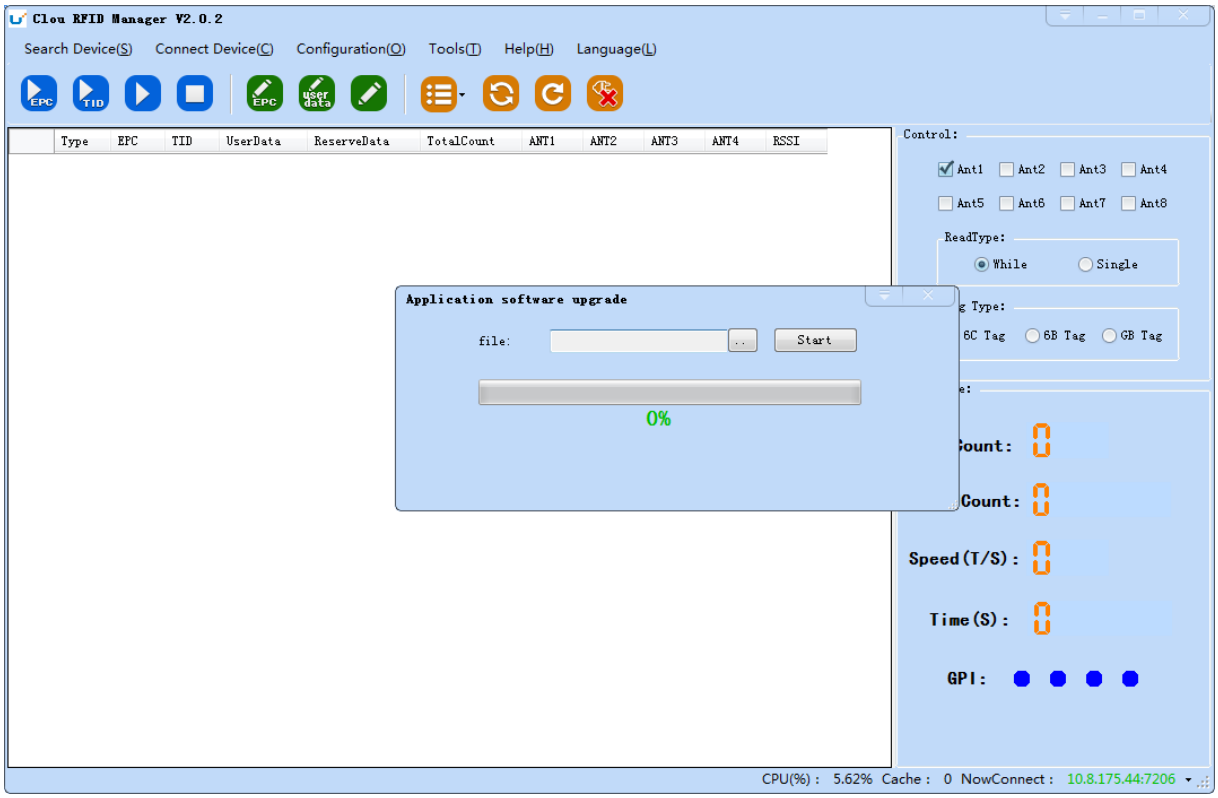


Image 4-33 Application software upgrade

To find the Bin upgrade file path in the upgrade file drop-down list, click Start the upgrade progress bar shows 100% that means the application software upgrade successfully, pop-up upgrade prompted success dialog box, click OK to restart the reader, as shown in image 4-34.

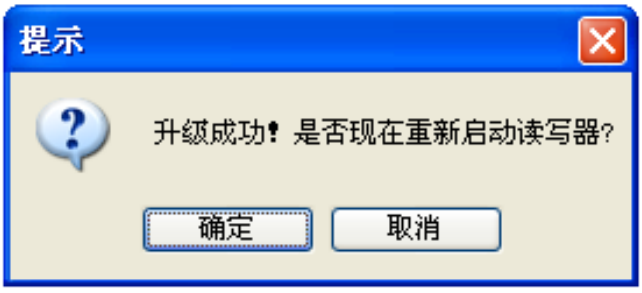


Image 4-34 Software upgrade successfully

The process of the application of the base band software is the same as that of the application software.

5. Common failures

5.1 Daily maintenance

The routine maintenance of CL7206C usage:

☆To check whether the tightening of RF connector

☆To check if the screw fixed reader and antenna is loose

☆To check whether the RF cable joints appear outsourcing breaking the shielding layer

☆To check if the reader power line connection is reliable

5.2 Common failure analysis and solution

Power supply system failures:

Check whether the power adapter is normal, and the AC supply voltage is between 100V ~ 240V.

The panel indicator light failed when power on:

Check whether the communication is normal; please contact customer service if it' s not normal.

The serial port unable to connect:

Check if the serial cable is not connected or connected unstable.

Check if the serial port connect baud rate of the reader is correct

Check if the selected COM port is right.

The network port cannot connect:

Factory set the default IP address: 192.168.1.116 when CL7206C reader device ex-factory, ensure the IP address of the PC and reader in the same network segment, such as "192.168.1.XXX" then you can connect to the reader, if you forget the IP address of the device,

you can reset the reader’ s IP address through the serial port.

The reader can't read the tag

Check if the setting of antenna number is correct

Check if the label is damaged

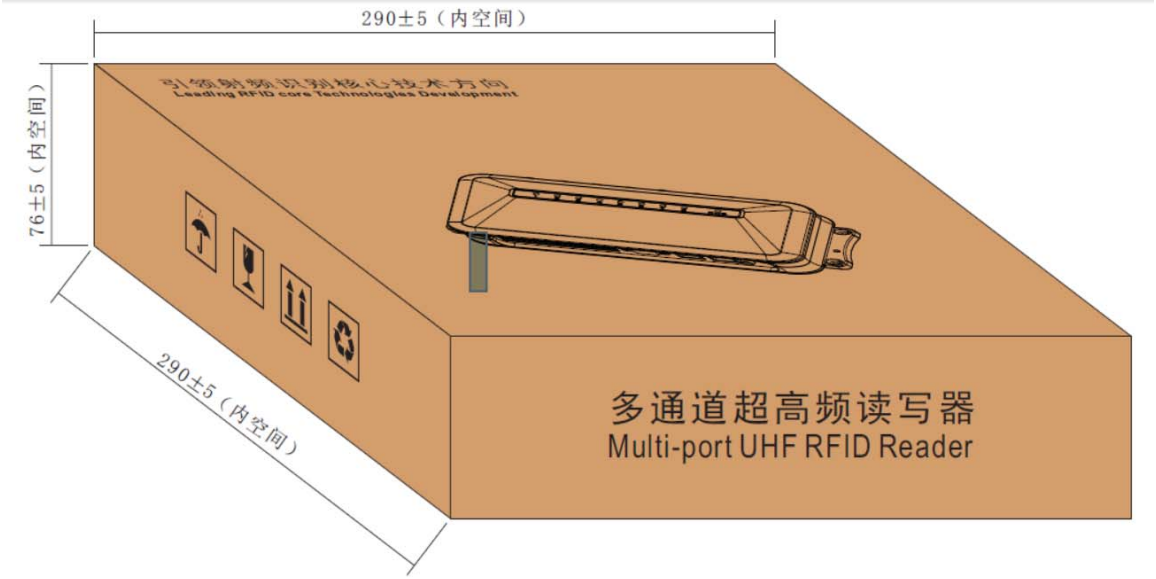
Check if the label is placed in the reader's valid reading and writing range.

Check if the electromagnetic interference between the reader and the other device.

For the problem users cannot solve, please contact customer service.

6. Package

6.1 Package



Imag6-1 Carton box size

Carton box size: 290X290X76MM

6.2 Accessories

In order to facilitate the storage and transportation in near future, the packing box and the packing material should be kept properly after unpack.

Besides of the device in the box, accessories equipped with the reader are also included in, please check the product packing list to confirm whether the product and accessories are complete, if any discrepancies or damage, please contact with the after-sale service in time.

The specific list of accessories as shown in table 6-1

Table 6-1 Package list

NO.	Name	Material Code	Qty	Unit	Remark
1	CL7206C Four-port fixed reader	————————	1	set	Included
2	Power adapter 24V/2.5A	20109000000324	1	pcs	Included
3	AC power cord	20350000000195	1	unit	Included
4	Network cable	20350000000188	1	unit	Included
5	RS232 blackcable	20351000000478	1	pcs	Included
6	USB cable	20351000000036	1	pcs	Included
7	9dBi circularly polarized antenna	20351000000035	4	pcs	Optional
8	Feeder line SMA-K--TNC-J reversed polarity	20351000000814	4	pcs	Optional
9	Mounting screws M4*28	W01-104028-100	4	pcs	Included
10	Warranty card	20420000001651	1	pcs	Included
11	Certificate of approval	20420000001650	1	pcs	Included
12	CD	N10-010000-002	1	pcs	Optional

6.3 Storage environment

CL7206C fixed reader should be stored in below conditions:

☆ Environment temperature：-40℃～+85℃

☆ Relative humidity：5% RH～95%RH

DECLARATION OF CONFORMITY

Hereby，Shenzhen Clou IOT Technologies Co.,Ltd. declares that this Integrated Fixed Reader product in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. A copy of the Declaration of Conformity can be found an Website: http://www.clouiotech.com/

Testing standards:

EN 60950-1:2006 + A11:2009 + A1:2010+A12:2011+A2:2013
EN 62311:2008
EN 301 489-1 V1.9.2(2011-09)
ETSI EN 301 489-3 V1.6.1(2013-08)
EN 302 208-1 V2.1.1: 2015-02 EN 302 208-2 V2.1.1: 2015-02

Manufacturer's Name: Shenzhen Clou IOT Technologies Co.,Ltd.

RFID Reader

Trade Mark: N/A

Model number: CL7206C

This device was tested for typical body-worn operations. To comply with RF exposure requirements, a minimum separation distance of 50cm must be maintained between the user’s body and the handset, including the antenna. Third-party belt-clips, holsters, and similar accessories used by this device should not contain any metallic components. Body-worn accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided. Use only the supplied or an approved antenna.

This device in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. All essential radio test suites have been carried out.

1. CAUTION : RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE

OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS

2. The device complies with RF specifications when the device used at 50cm form your body

Care for the environment! Must not be discarded with household waste!

This product contains electrical or electronic components that should be recycled. Leave the product for recycling at the designated station, e.g. the local authority's recycling station.

3. Adapter shall be installed near the equipment and shall be easily accessible.

4. The plug considered as disconnect device of adapter

CE 0700

FCC WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance 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.

To maintain compliance with FCC’ s RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.

FCC ID: 2AKAGCLOUIOTCL7206C

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.

Shenzhen Clou IOT Technologies Co., Ltd.

Tel of Sales Dept: 0755-36901039

Tel of Customer Service Dept: 0755-36901039

Email: RFIDoverseas@szclou.com

Guarantee card of Shenzhen Electrical Technology Co.,Ltd

Product Name			Model No.	
Product Code			Level	
Description of troubles				
User’s name			Postcode	
Contact person		Contact no.		

Address of factory: Block 3 of CLOU Electronics Industrial Park, Baolong Industrial City, Longgang District ,Shenzhen, Guangdong, China (Interchange of Baolong road and Qingfeng Road)

Post code: 518057 Customer service centre: +86-755-36901057

Warranty Description: In order to offer users better service, our company provide warranty card with each device, please keep it to enjoy the service.

1, Products can replace free under conditions within one month after sale, in the precondition of normal operation without repairing.

2, Free maintenance won’t be given under the following circumstance:

①The damage of the terminal caused by high voltage of the power grid.

② The damage caused by misuse or operated improperly.

③ The damage caused by excessive vibration when user delivering.

3, The software of this product can be upgraded freely, users can be training in our company for free.

4, Will be charge appropriately if the user don’t have a warranty card.

5, Users will need to fill out the warranty card for repair service, and sent back to CLOU.