

UHF Desktop Reader User Manual

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1. Product introduction

1.1. Parameters

- ☑ ISO18000-6C (EPC C1G2) protocol;
- ☑ 860~960MHz frequency band;
- ☑ USB HID driver-free;
- ☑ Support virtual keyboard and serial port;
- ☑ Working voltage: USB interface or +5V power supply;
- ☑ Working current: <200mA
- ☑ Read Distance range: 0-0.5

1.2. Application

- ☑ Logistics and warehouse management: logistics, warehouse management and flow management of mail, parcels and luggage
- ☑ Intelligent parking management: parking management and automatic charging
- ☑ Production line management: fixed identification of the production process
- ☑ Product anti-counterfeiting detection: use the write protection function of the memory in the label to identify the authenticity of the product
- ☑ Other fields: widely used in club management, library, student school, consumption management, time management, dinner management, Pool management

2. Specification and size



3. Software operation



Notice:

- ① At present, the software only supports WINDOWS and Android systems.
- ② When setting software parameters, do not place RFID tags within the recognition range of the device, otherwise the setting will fail.
- ③ Use the keyboard to output the RFID tag number type reference: example
Different manifestations of the same number:
Decimal value (Dec) = 123456
Hexadecimal value (Hex) = 1E240
Wiegand number = 001, 57920 , (decompose the hexadecimal value 1 E240 into the decimal number , 001, 57920)
If the output length is not enough, you can add 0 to the front to set processing.

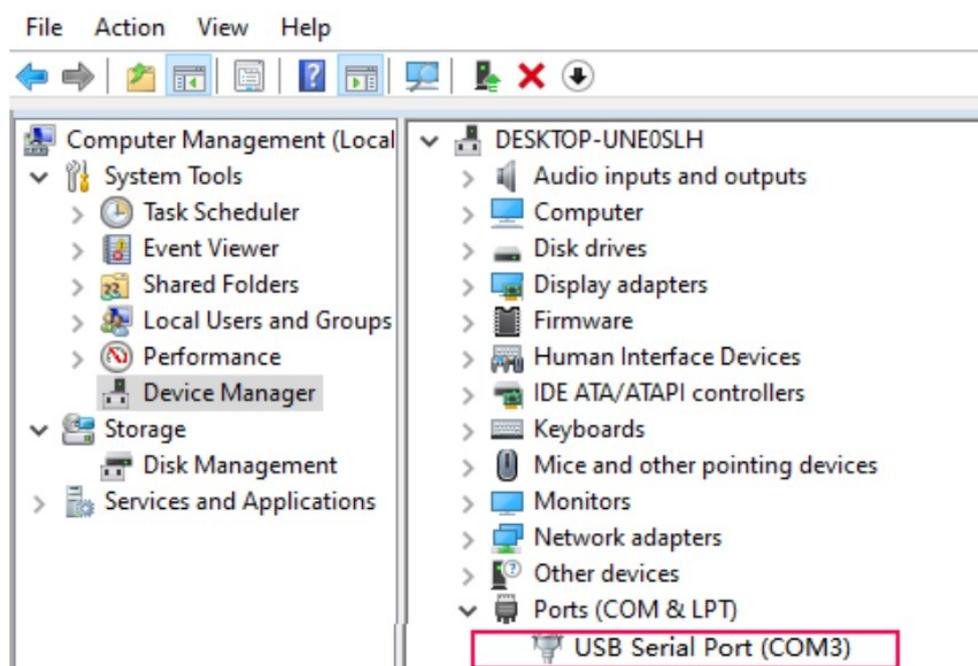
Operating Instructions

4.2.1. Connect the device

Insert the device into the USB port of the computer and the following message will pop up:



Then open the computer "Device Manager", there will be an extra device in the "Keyboard" option. as follows:



This means that the computer has successfully connected. The online operation begins now

4.2.2. Online

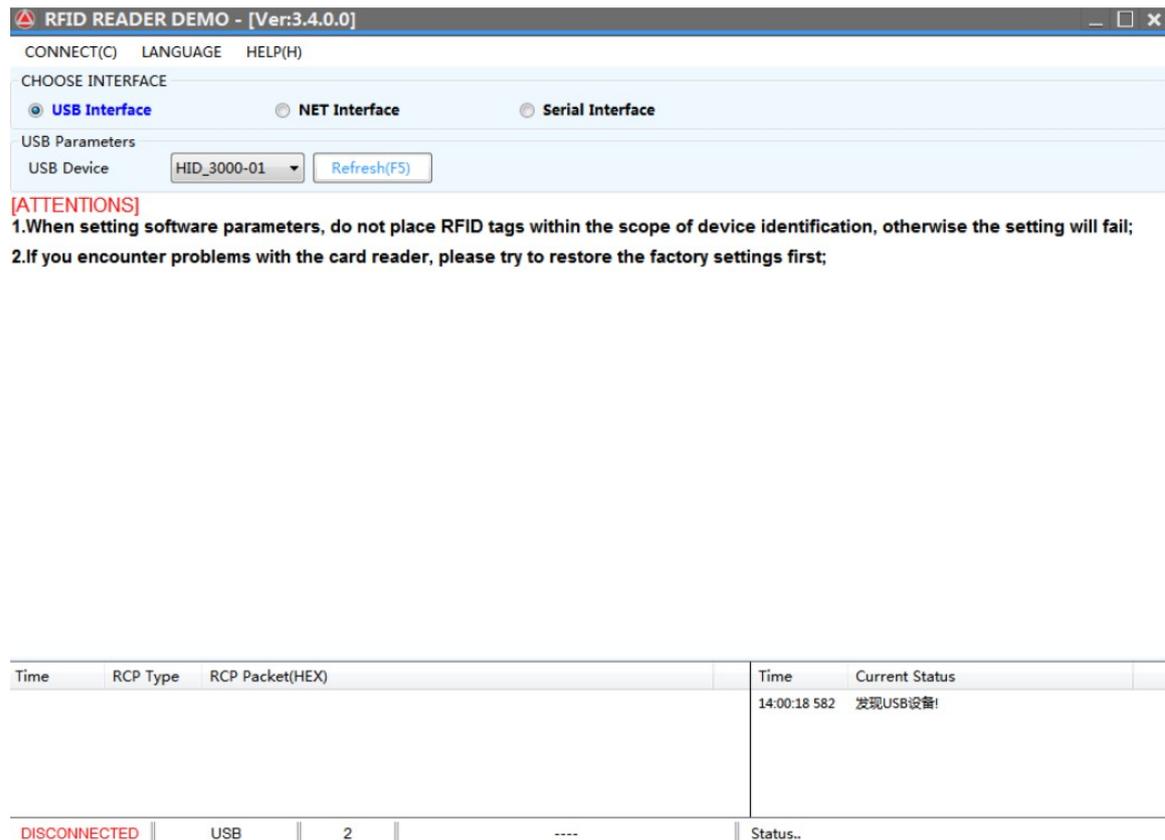
After downloading the software and decompressing it,



, Open the file and double-click the software icon



, The following main interface appears:



1. There are three kinds of communication parameter configuration, we choose " USB

communication ", if the USB device is empty, please press the button



or F5.

As shown:

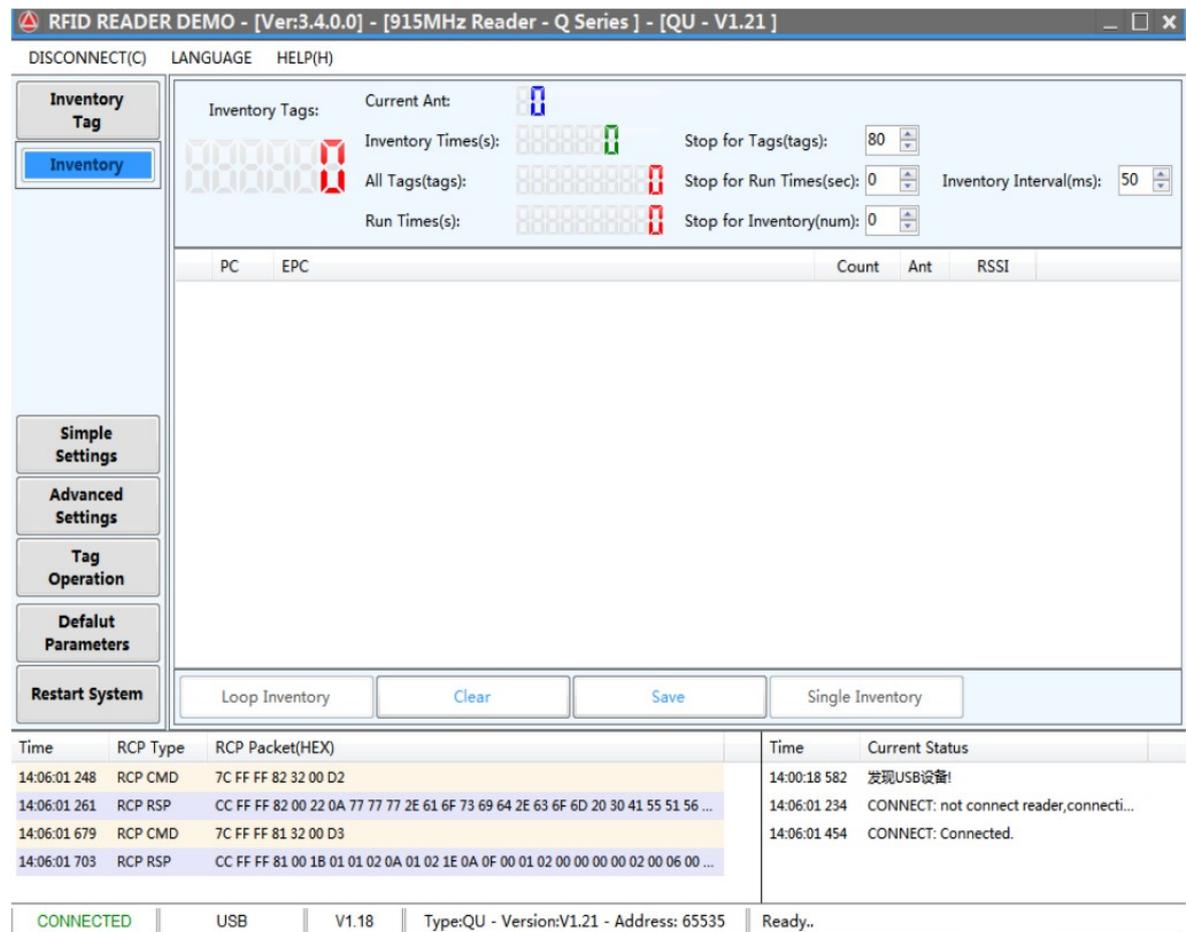


Select the USB device

2. Click the " Online " button, and four sub-function buttons can be operated on the side after online:

Followed by inventory presentation --- simple setup --- Advanced Settings --- read and write operations --- restore factory settings --- reboot the system

As shown



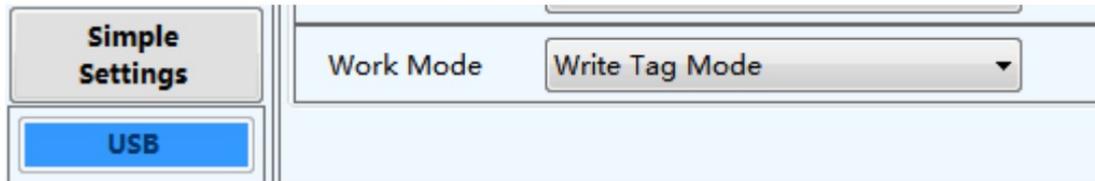
4.2.3. Demonstration of inventory

① After the system is online, the " Inventory Demo " interface will appear directly , as shown in the figure above:

② Put the RFID tag within the identifiable range of the device.

③ Click the " Continuous Inventory " button, and the label information will be displayed in the text box.

Note: The USB desktop card issuer can use this function only if the working mode is set to data writing. As shown:

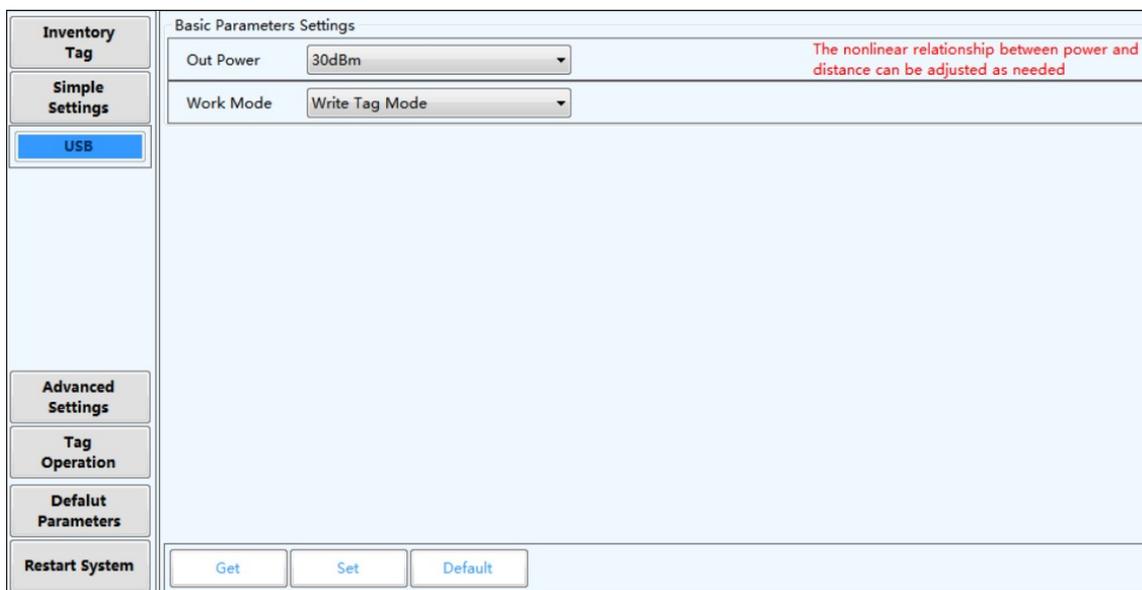


4.2.4. Simple settings

Simple setting is a simple operation set to satisfy users who do not have high requirements for data processing or who do not understand software well. If For users with higher requirements or more professional, please use " [Advanced Settings](#) ".

- ① Click the " [Simple Settings](#) " button on the left , as follows:
- ②The transmission power range (0-30DBM), corresponding to the distance (non-linear) of the device's identification RFID tag.
- ③There are three working modes: data writing mode, EPC data reading mode and TID data reading mode.
- ④Data writing mode: When writing data to a single tag, select this mode. After entering this mode, the device enters the command Status, will not actively identify the label (this mode can use the " [inventory demonstration](#) " function).
- ⑤EPC data reading mode: When this mode is selected, the device will automatically recognize the tag and output the data according to the set data.

Format the output data. [The data output format is set as shown in the figure:](#)



Sequence number: represents the sequence of the EPC number

Label **EPC** data code: represents the data of the EPC number, you can modify the data in the box, where the three numbers in the black background represent the data

For the data output to the USB port, you can adjust the length, position, etc. from the option below, and the final data will appear in the last line.

Select the output code position: adjust the length and position of the output part of the EPC number

Choose the output format: there are decimal, hexadecimal and standard Wiegand, there are more output formats in the "advanced configuration".

Select the length of the display: the fixed length of the output data, if it is less than the length, add 0 before it, and discard it if it is greater than the length.

Data output by the virtual keyboard car: After setting the previous parameters, the virtual keyboard output data is a reference.

The software can intelligently and freely combine different output formats, which can be the output of decimal, hexadecimal and other data, and the output number

According to the last line, when the " [function selection](#) " option selects to disable the virtual keyboard, it can be detected whether the data is correct, and select to enable

When using the virtual keyboard, you can output data at the cursor position or in a text file like a keyboard.

⑥TID data reading mode: This mode adds the function of TID number output on the basis of EPC data reading mode.

EPC+TID number output or TID output can be selected. [As shown:](#)

| Basic Parameters Settings | |
|---------------------------|--------------------------|
| Out Power | 6dBm |
| Work Mode | TID Visual Keyboard Mode |

| Data Output Format Settings | |
|-----------------------------|-------------------------------------|
| Out Mode: | Disabled(Check data Online) |
| No.: | 1 2 3 4 5 6 7 8 9 10 11 12 |
| EPC data(hex): | E2 00 00 1D 62 07 01 49 27 20 7F 22 |
| TID data(hex): | E2 00 34 12 01 2F F0 00 0A 25 69 62 |
| Select location: | From 1 To 3 |
| Choose the format: | Decimal |
| Change the length: | 8 |
| Output data: | 14811136 |

Tag **TID** data encoding: represents the data in the TID block

4.2.5. Advanced settings

Advanced settings have higher professional knowledge for users, please consult customer service staff if you are unclear.

Click the " [advanced settings](#) " button on the left , there are three sub-menus, namely [basic parameters](#) --- [RF parameters](#) --- [other parameters](#)

[As shown:](#)

| | | | | | | | |
|---|--|--------------------------|--------------------|--------|------------------|-----------------|-------|
| Inventory Tag Simple Settings Advanced Settings Basic RF Else Tag Operation Default Parameters Restart System | Basic Parameters Settings | | | | | | |
| | Output Mode | RS485(RS232) | Work Mode | Active | Same ID interval | 1 | *0.5s |
| | Buzzer | Output only | | | | | |
| | Auto Read Type | 6C | Auto Read Interval | 10 | *10ms | Auto Read Delay | 1 s |
| | Device Id | | | | | | |
| | Device Id | 002500110444733F00000CA8 | | | | | |
| | RS485 Protocol Address Settings | | | | | | |
| | Address | 65535 | | | | | |
| | <input type="button" value="Get"/> <input type="button" value="Set"/> <input type="button" value="Default"/> | | | | | | |

1. Setting instructions of basic parameters:

Communication mode: select the communication method between this device and the external device.

Operating mode:

Answering method (the device does not actively read the card, it can only work by sending commands)

Active mode (the device reads the card actively, works when it is powered on, and sends data to the communication interface)

Passive mode (the device reads the card actively, works when it is powered on, and does not send data to the communication interface, need to send commands to receive data).

Same ID output interval: the interval time for uploading the same tag data

Buzzer: can be turned on or off

Automatic reading type: the type of output tag data, which can be EPC number or TID number.

Automatic reading interval: the interval time between reading tag data twice

Automatic reading delay: the time to delay sending to the communication interface after reading the tag data

Device ID: the unique ID number of each device, cannot be modified

Protocol address: the address used in RS485 communication

2. Setting instructions of radio frequency parameters:

Regional standards : each country has its own corresponding standards for restrictions on the use of RFID UHF frequency bands, usually the United States Standards and European standards,



Click on this button to select the frequency to be scanned. When you select

When one frequency is scanned, the frequency is fixed, and when multiple frequencies are selected, the frequency is hopped. **As shown:**

| 区域标准 | USA | Table | 新射频规范 | 原射频规范 (待设置规范) | | | | | | | | | | | | | | | | |
|------|-------------|-------|---|---------------|-----------|---|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|------|-----------|---|-------------|
| | USA | | <table border="1"> <thead> <tr> <th>Num.</th> <th>Frequency</th> </tr> </thead> <tbody> <tr><td>0</td><td>902.250 MHz</td></tr> <tr><td>1</td><td>902.750 MHz</td></tr> <tr><td>2</td><td>903.250 MHz</td></tr> <tr><td>3</td><td>903.750 MHz</td></tr> <tr><td>4</td><td>904.250 MHz</td></tr> </tbody> </table> | Num. | Frequency | 0 | 902.250 MHz | 1 | 902.750 MHz | 2 | 903.250 MHz | 3 | 903.750 MHz | 4 | 904.250 MHz | <table border="1"> <thead> <tr> <th>Num.</th> <th>Frequency</th> </tr> </thead> <tbody> <tr><td>0</td><td>902.250 MHz</td></tr> </tbody> </table> | Num. | Frequency | 0 | 902.250 MHz |
| Num. | Frequency | | | | | | | | | | | | | | | | | | | |
| 0 | 902.250 MHz | | | | | | | | | | | | | | | | | | | |
| 1 | 902.750 MHz | | | | | | | | | | | | | | | | | | | |
| 2 | 903.250 MHz | | | | | | | | | | | | | | | | | | | |
| 3 | 903.750 MHz | | | | | | | | | | | | | | | | | | | |
| 4 | 904.250 MHz | | | | | | | | | | | | | | | | | | | |
| Num. | Frequency | | | | | | | | | | | | | | | | | | | |
| 0 | 902.250 MHz | | | | | | | | | | | | | | | | | | | |
| | | | All >> | Clear | | | | | | | | | | | | | | | | |

Transmission power size: the transmission power size range (0-30DBM), the distance of the corresponding device to identify the RFID tag (non-line sex).

Radio frequency modulation setting: This is to modulate and demodulate the tag inventory signal, generally select the default.

③Setting instructions of other parameters:

There are four options to open the "Other Parameters" menu, namely:

Output parameter setting---IO parameter setting---encryption setting---extended function

Meet various customized functions of users.

4.2.6. Read and write operations

Click the " Read and Write Operation " button on the left , there are three sub-menus, namely Quick Card Write---Label Operation---Copy TID

As shown:

1. The setting instructions of fast writing card:

This function is specially set up for writing tag data quickly. It may be very intuitive to set the data you want to write.

Sort code: represents the order of the EPC number

Hexadecimal EPC number: This line of data is the EPC number to be written into the label. The two numbers in the front black box represent

The position of the data to be written (you can adjust the length and position from the option below), the back is white

The number of boxes is a fixed number and can be modified arbitrarily.

Select the increment method of writing data: there are increment and decrement, the following column is the increment number.

Choose the format of writing data: There are decimal, hexadecimal and standard Wiegand

Select the position of the data to be written: adjust the position of the length and the length of the data input into the EPC number

Start data to be written: here enter the data you want to write to the variable EPC number, the unchanging data can be written in the EPC number above

Modify directly in the white box on the line of the code.

②Setting instructions for label operation:

This function can read and write more complex tags. For example, you can enter and access the four blocks of the tag.

Perform encryption settings and destruction settings, etc., operate with caution.

③ Copy Setting Description TID of:

This function is to directly copy the TID number of the tag to the EPC block data and turn it into the EPC number