YR9010 desktop uhf rfid reader user manual

The document scope	
Reader firmware version	V 1.9
Presentation software version	V 3.62

catalogue

一、 Acquaintance your RFID reader

1.1Frontview

1.2Backview

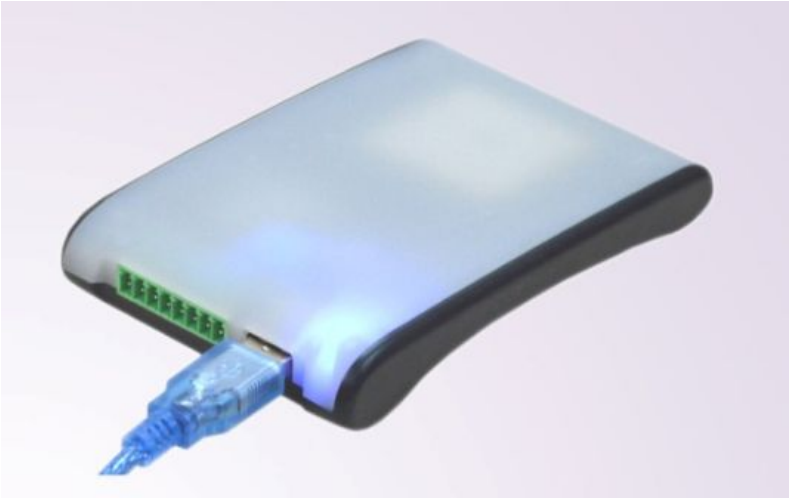
1.3plan view

二、Operation and Settings of reader

2.1 First use

2.1.1 The first step: connect USB

let reader Connect with PC well by random spin-off USB Data Line ,as shown:



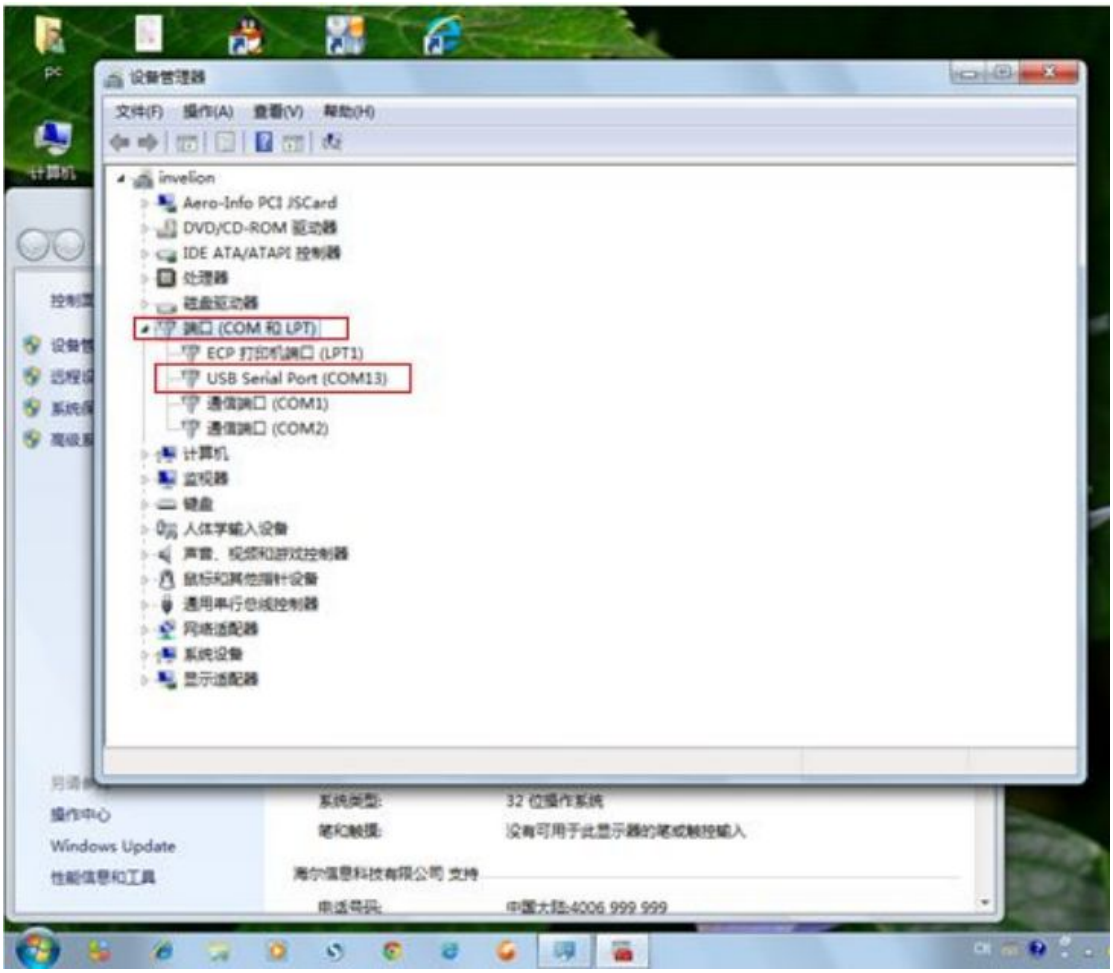
At this time, you will be heard a "drops" ringing, power indicator light is lit at the same time. Said to electricity process is normal, reader self-checking passed.

Note: reader connected to the PC will automatically install the driver for the first time. If the driver installation failure, can ask our technical staff for driving manual installation.

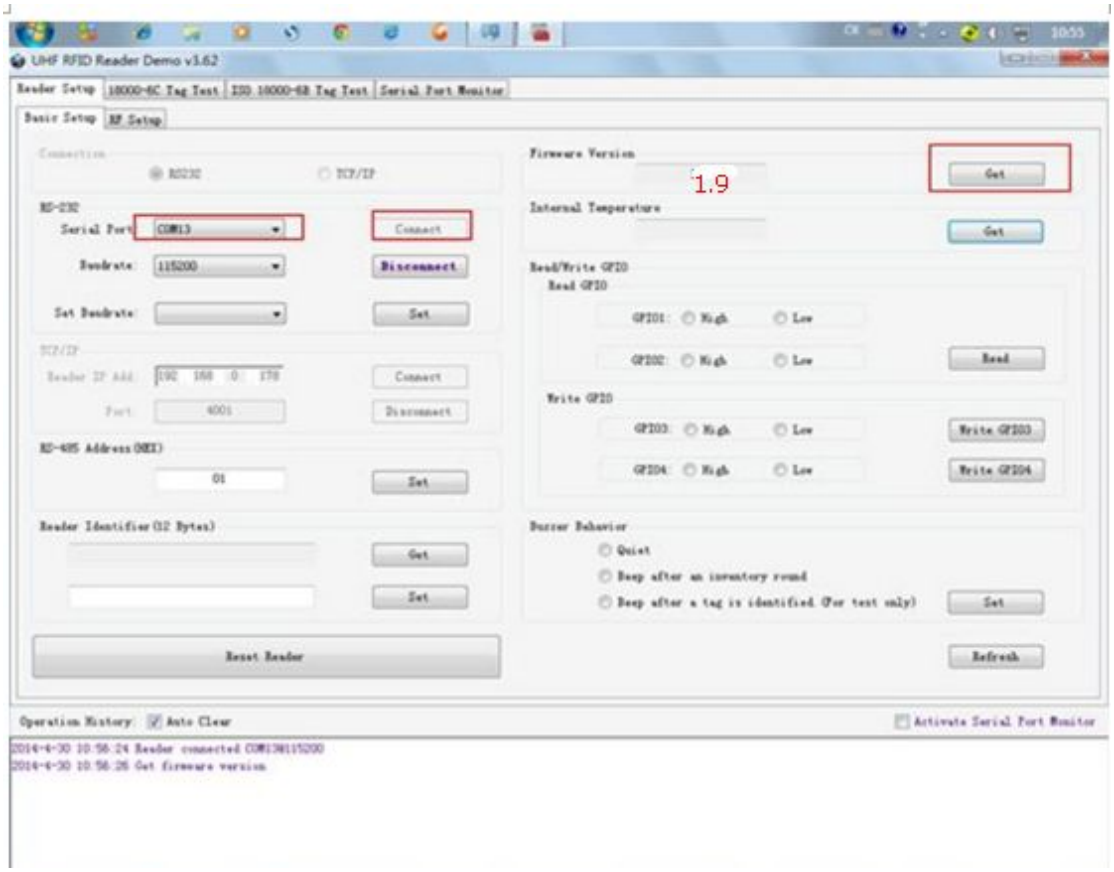
2.1.2 The fourth step: use presentation software operate reader

Start Random spin-off presentation software. This software does not need to install, directly let “UHFDemo.exe , reader.dll, customControl.dll " three file copy to the same folder, and double-click the executable file " UHFDemo.exe ".

When you use USB connector(reader back switch 1and 2 on ,3 and 4 off) ,need select the corresponding serial number（Check serial number：My Computer-Management-Device Manager- COM port-USB Serial Port），And then, click "connect reader button "If the serial interface is not occupied, it will displays the following information in the bottom of the operating record column:

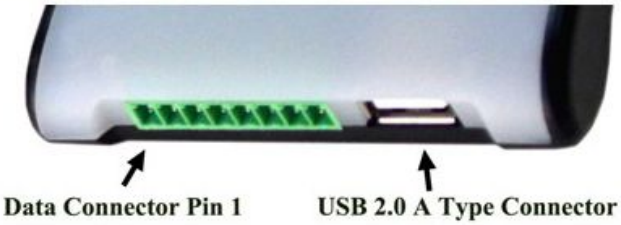


Click read version number button, interface will show the corresponding information,As shown in the figure below:

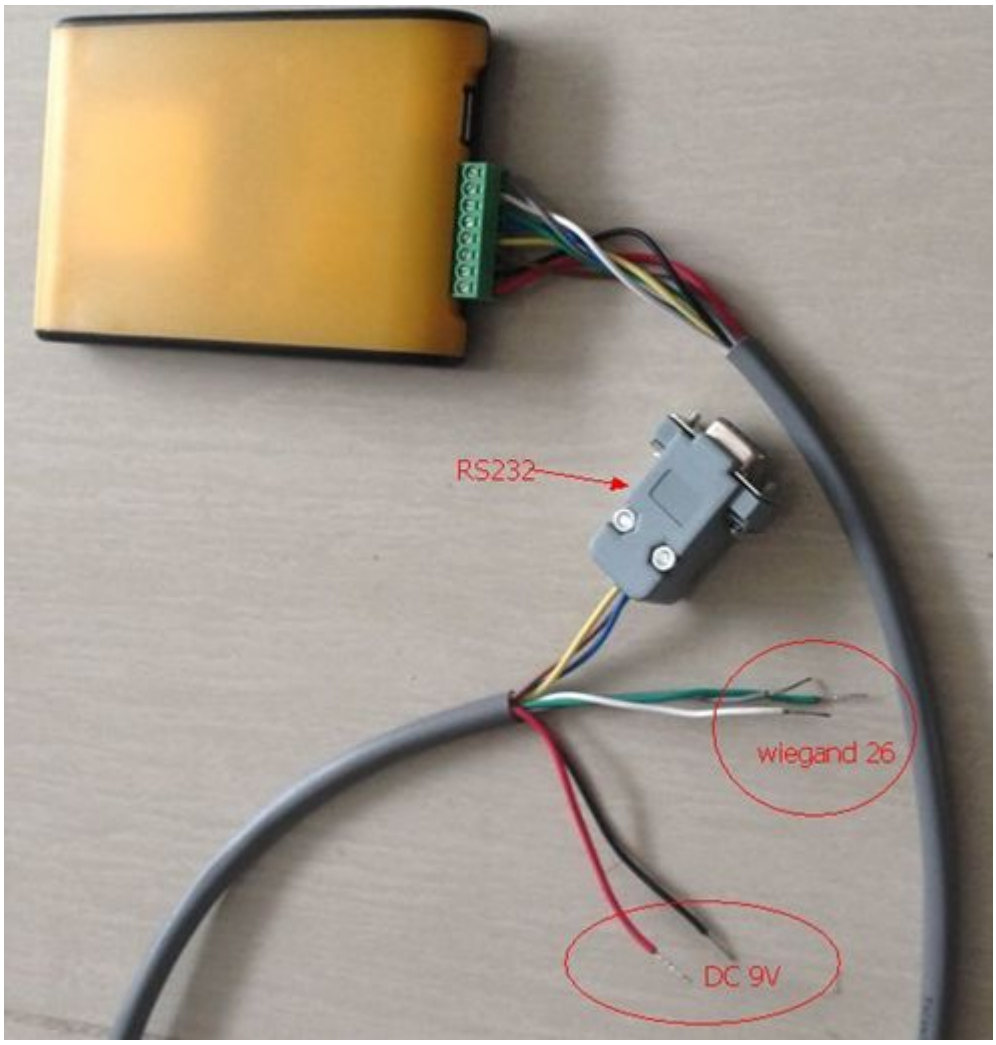


At this time, the reader connected to the computer has been successful.

Note : when you use rs232/wiegand26/34 (reader back switch 1and 2 off ,3 and 4 on) ,need use “Configuration customization function tools ”,to Configuration （all COM is COM1 ）:



PIN	Definition	Explain
1	+9V	External 9 V power supply.（Note: do not connect the external power supply and USB at the same time.）
2	GND	With + 9 v external power supply common grounding.
3	RS-232 TXD	RS-232 data output.
4	RS-232 RXD	RS-232 data input.。
5	GND	With RS-232 connector common grounding.
6	GPIO3	GPIO3 or WiegandData 0。
7	GPIO4	GPIO4 or WiegandData 1。
8	GND	with Wiegand Data common grounding.


RS232
wiegand 26
DC 9V


UHF RFID 定制功能配置
连接方式
RS232
TCP/IP
RS-232
串口号:
COM1
连接读写器
串口波特率:
115200
断开读写器
TCP/IP
读写器IP:
192 . 168 . 0 . 178
连接读写器
端口号:
4001
断开读写器
定制功能设置
rs232
设置定制功能
查询当前定制功能
功能编号(HEX):
00
天线切换顺序设置
设置
查询
A
轮询次数
B
轮询次数
C
轮询次数
D
轮询次数
天线间延时(mS)
天线1
1
天线2
1
天线3
1
天线4
1
0
操作记录:
2014-6-30 15:43:22 与读写器通讯成功 COM16@115200
2014-6-30 15:43:24 当前功能编号(HEX): 00


UHF RFID 定制功能配置
连接方式
RS232
TCP/IP
RS-232
串口号: COM1
连接读写器
串口波特率: 115200
断开读写器
TCP/IP
读写器IP: 192 . 168 . 0 . 178
连接读写器
端口号: 4001
断开读写器
定制功能设置
wiegand 26
设置定制功能
查询当前定制功能
功能编号(HEX): 03
天线切换顺序设置
设置
查询
A 轮询次数 B 轮询次数 C 轮询次数 D 轮询次数 天线间延时(mS)
天线1 1 天线2 1 天线3 1 天线4 1 0
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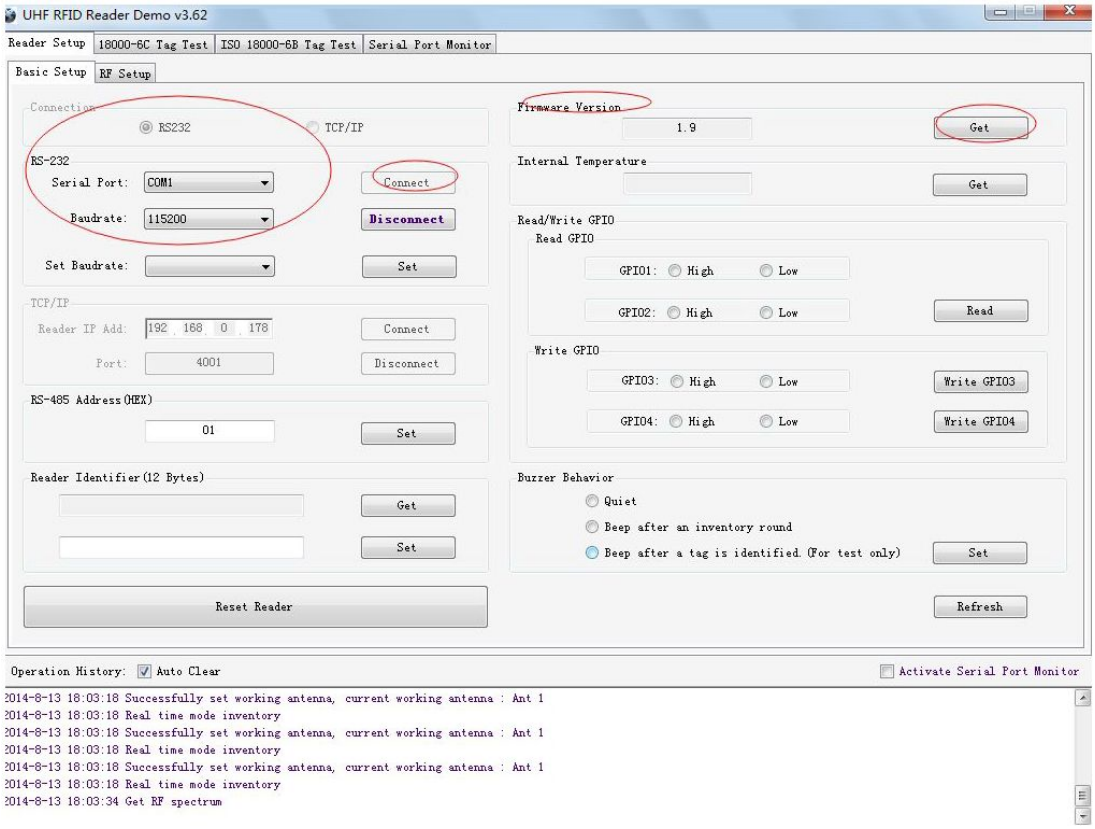
端口号: 4001
断开读写器
定制功能设置
wiegand 34
设置定制功能
查询当前定制功能
功能编号(HEX): 02
天线切换顺序设置
设置
查询
A 轮询次数 B 轮询次数 C 轮询次数 D 轮询次数 天线间延时(mS)
天线1 1 天线2 1 天线3 1 天线4 1 0
操作记录:
2014-6-30 15:43:22 与读写器通讯成功 COM16@115200
2014-6-30 15:43:24 当前功能编号(HEX): 00

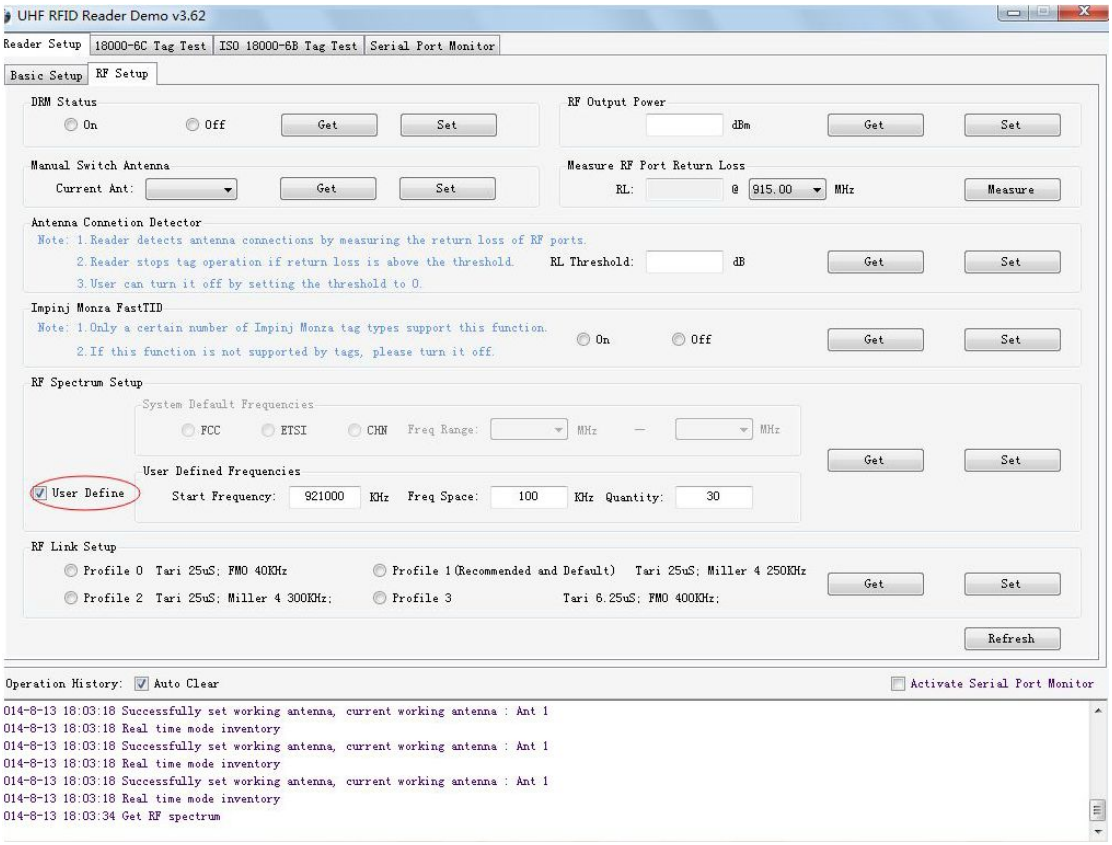


2.2 RFID parameter Settings

After the reader connected successful，We need to set up two most basic RFID parameters, output power and spectrum range.

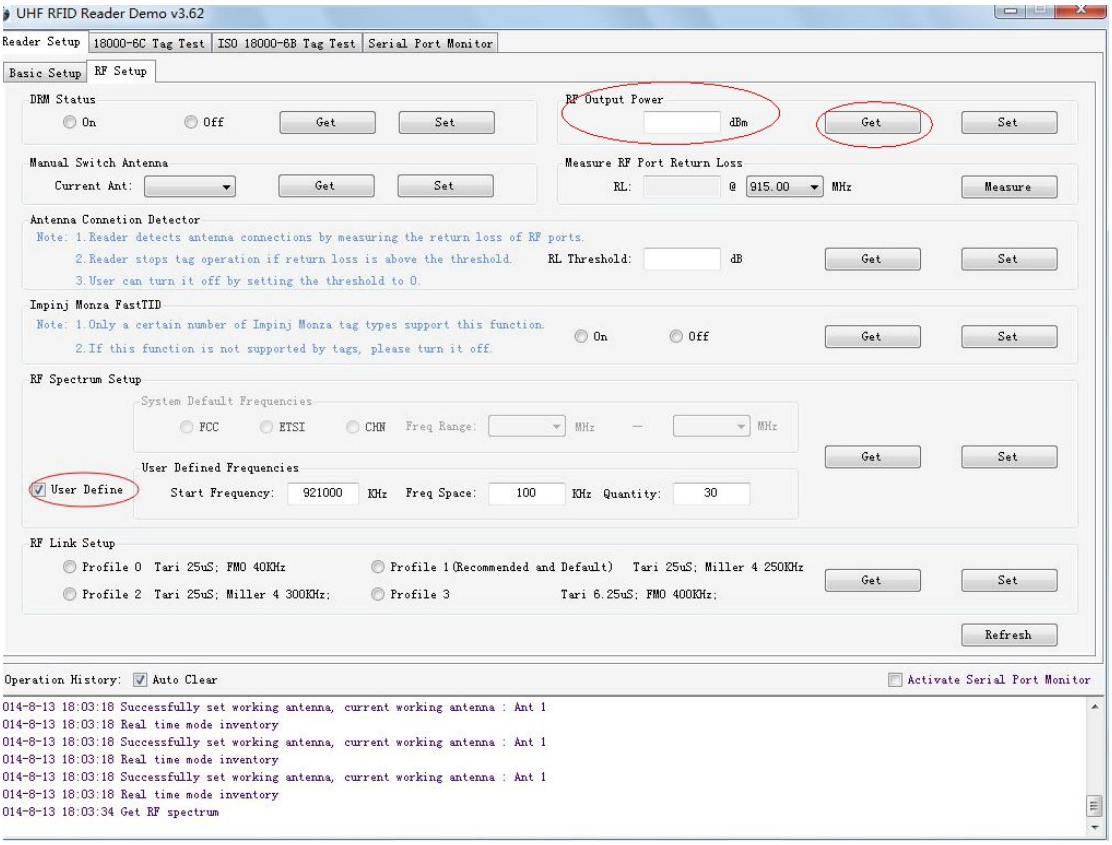
RFID parameter Settings: reader Settings - RFID parameter Settings.

Reader support frequency range is 902-928 MHZ.865-868mhz



2.2.1 set RFID output power

RFID output power refers to RFID signal strength of the antenna ports output .The unit is dBm。



The range of output power is 10dBm、18dBm – 26dBm.The default value is 26 dBm , after the completion of this value set, it will automatically stored inside the machine, it is not lost when the power is cut off.

2.3 inventory ISO-18000-6C tag

Properly connected reader, then can read tag operation after the RF parameter setting well.

Inventory tag that is the EPC number of identify tags. it is the core function of the UHF RFID reader, its performance directly determines the advantages and disadvantages of reader.

2.3.1 cache mode and real-time mode

There are two modes to choose from when Inventory tags The most common is real-time mode, namely, immediately upload after read the tag number of EPC,the user can get the EPC number of tag in the first time.

Another caching pattern, namely, firstly, put into reader the cache after read the tag number of EPC ;finally ,to upload multiple EPC data together when needed.

These two models have different characteristics，real-time mode advantage with good performance of Identification Multi-tag ， quick response ， the user can get the tag data in the first time, no delay. And RSSI (tag signal strength indicate), frequency parameters (read tag carrier frequency) also real-time change .Will produce large amounts of data.

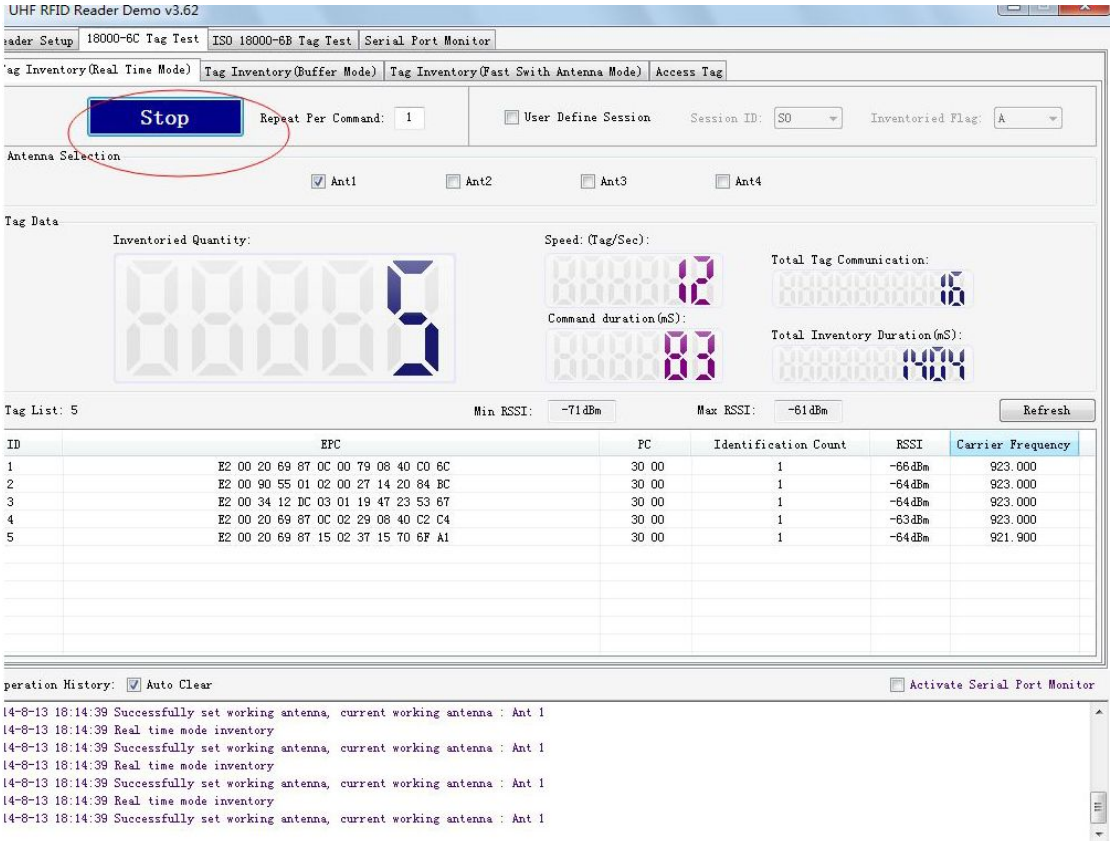
Caching pattern the advantage is that small amount of communication data ,because summary upload data is filtered no duplicate data. But identifying a large number of tags, each time need to filter duplicate data for the tag information by one by one,

so the efficiency of recognition a large number of tags will be slightly lower than the real time mode. In addition, Extracted tag data from the cache , it can't read and write tags operation when , it should pay attention to this user.

User can choose the appropriate method of inventory tag according to the practical application environment .

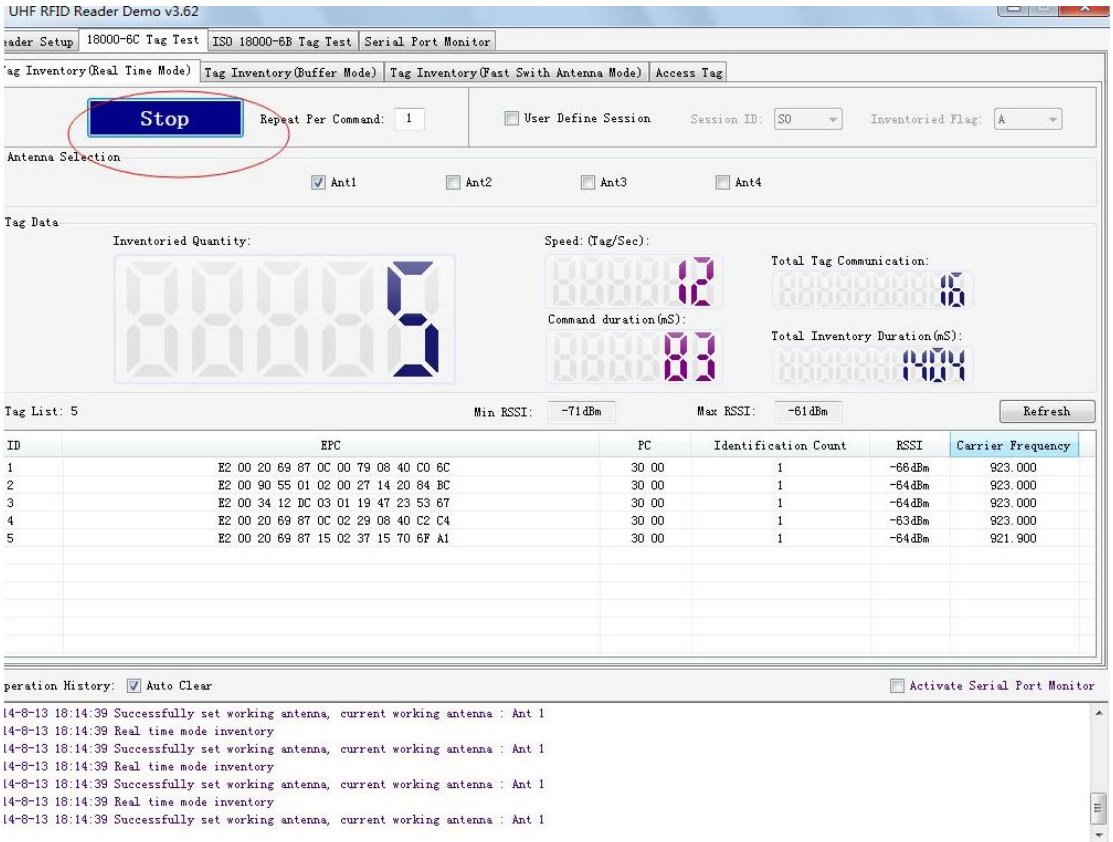
In random spin-off the presentation software, choosing the way of inventory

tags through the following interface:



Let's start inventory tags by real-time mode.

Click the inventory tags (real-time mode) selection page, let software interface to switch to the real time mode. Next, click the reading tag EPC number buttons, then we can see that the EPC data of the tag wil be upload immediately ,Updated in real time.if not Click stop the inventory， reader will inventory tag all the time， as shown in the figure below:



the meaning of data display as the following:

total number	the total number of inventory different tag from

of had inventory tags	click start inventory button up to now.
Command recognition speed	recognition tags speed，The unit is tags/second.
cumulative return data	one tag EPC record that is a data, real-time statistics a total how much of the data return , which contains repeated read data of the same tag.
command execution time	The consumption time of each inventory command。The unit is ms.
Cumulative run time	the total consumption time of inventory different tag from click start inventory button up to now.The unit is ms.

tag EPC number list (don't repeat) list box meaning as follows:

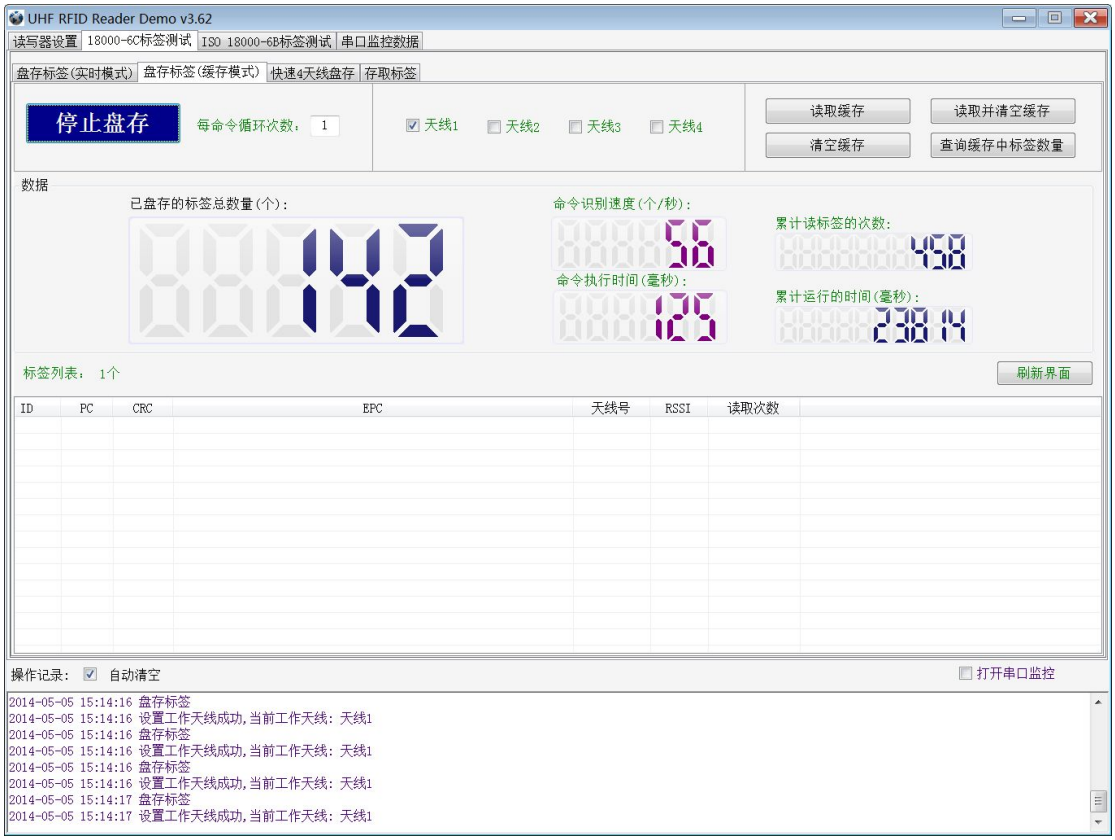
serial number	serial number of data
E P C	EPC number of tags
P C	Protocol control word of tags
Identified times	The number of tag identified.
RSSI	Signal strength of when The last time label is identified
Carrier	the carrier frequency of when The last time label is

frequency	identified

Next ,inventory tags by caching pattern .

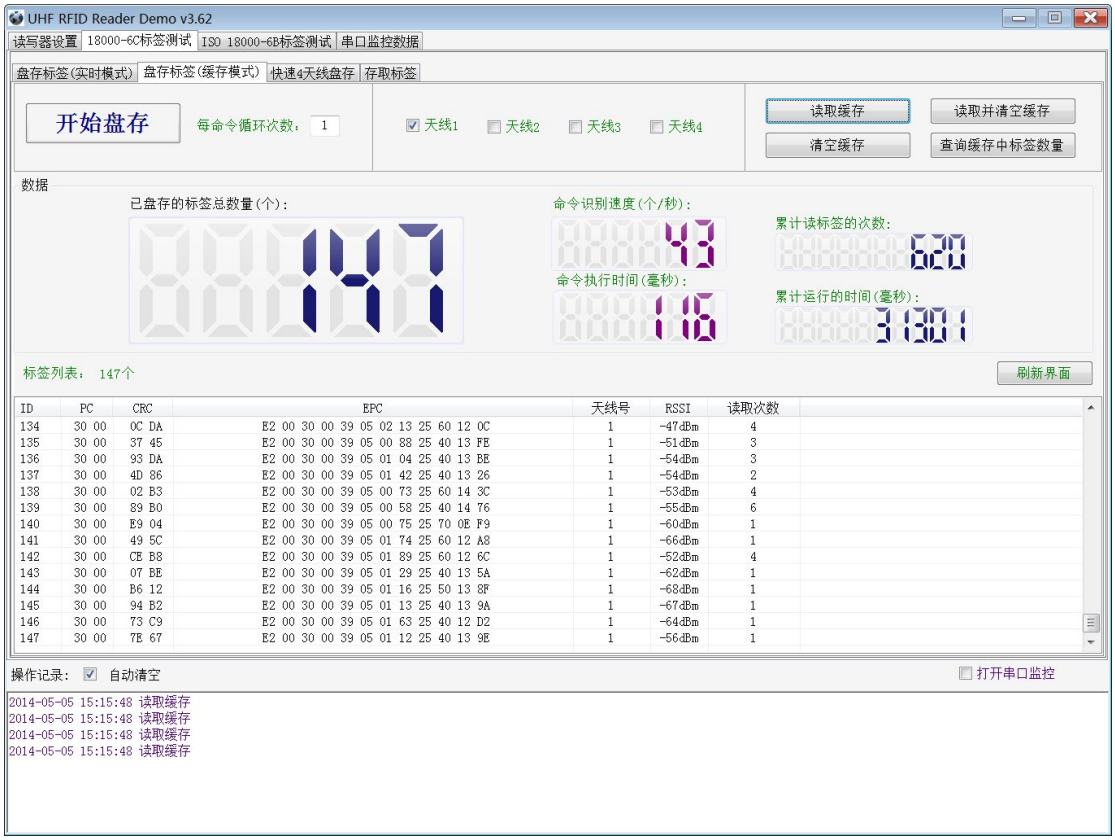
Click the inventory tags (caching pattern) selection page, let software interface to switch to the caching pattern .

The same as real-time mode,Click the start inventory button.Software interface shows the following information:



We found that data display had read the tag, but no tag data display on the tag list.

If you want to get the tag data, now need to click the stop inventory button .Then click read cache button, at this time,tag data of All stored in the reader cache will be uploaded, as shown in the figure below:



The function of cache operation ‘s other three buttons is very simple and clear, described as follows:

Read and clear the cache: the data of cache is clear immediately after the data read from the cache . Again reading the cache is empty at this time.

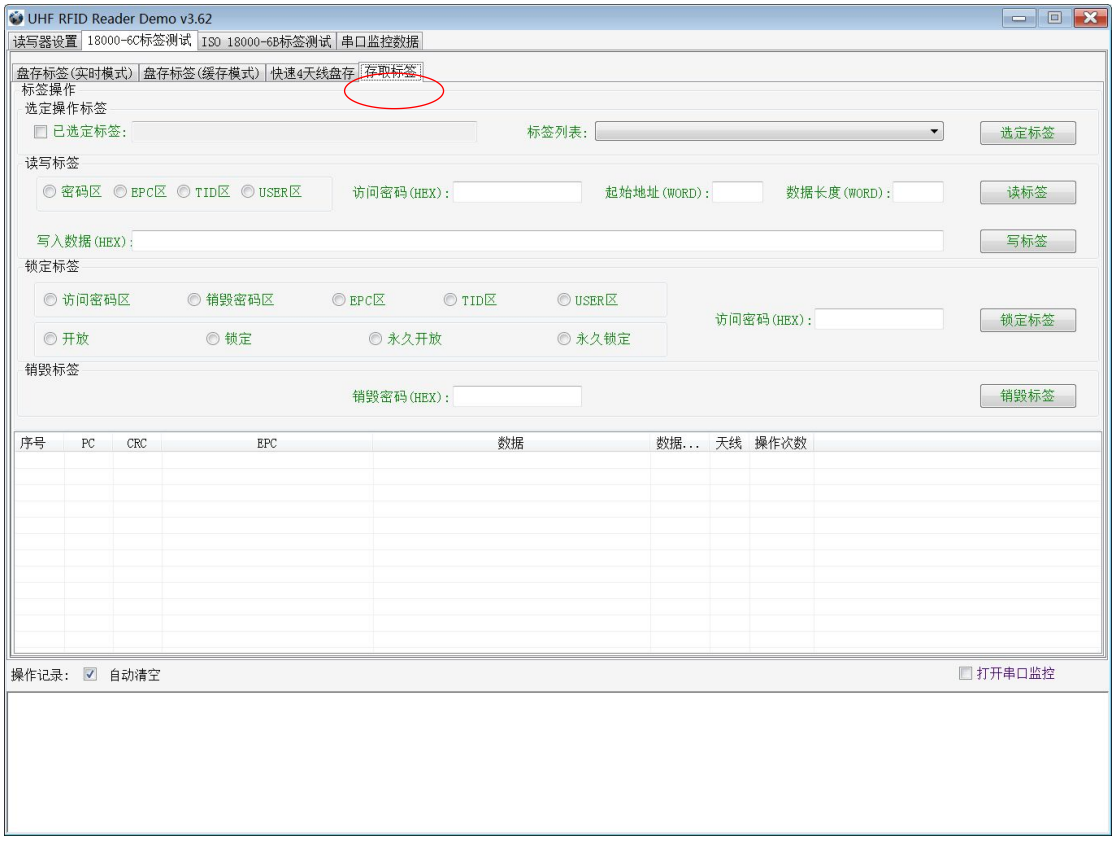
query Tag number of cache: sometimes just know how many tags data in the cache, without to upload all of the content, click the button ,the tag number will showed in the records column of operating

Clear the cache: empty caches, and refresh the software interface.

Through above operation ， Users can clearly understand the differences for these two method of the inventory tag.

2.4 Access ISO-18000-6C tag

Click on the "access tag" check box into the interface of access tag, as shown in the figure below:



The following will introduce how to access tag operation .

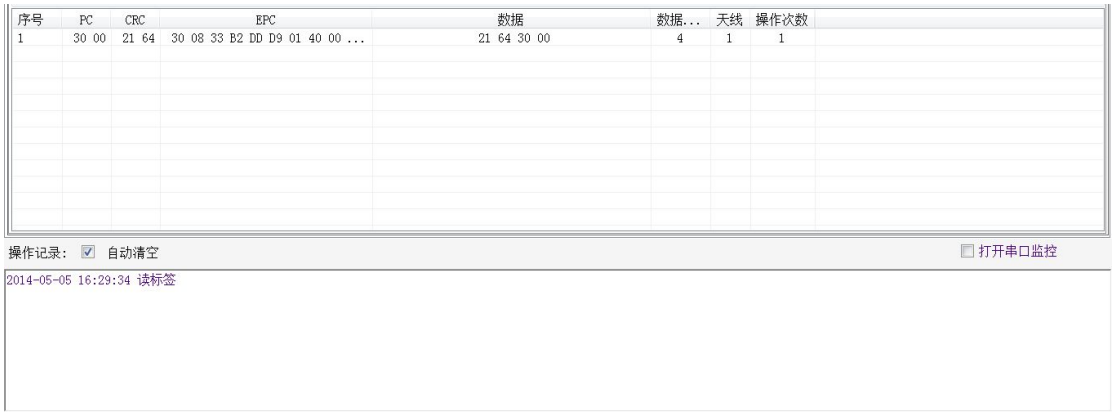
2.4.1 reading tags operation

input parameters of reading tag in the interface of shown below:

Reading tag need to input three parameters: read tag area, starting address and data length. Notice that units of the start address and data length both are a WORD ,that is 16 bit double byte. Click the button of read tag after parameter after set finished.

It is important to note that the input parameters need meet the tag's specifications , otherwise there will be error message.

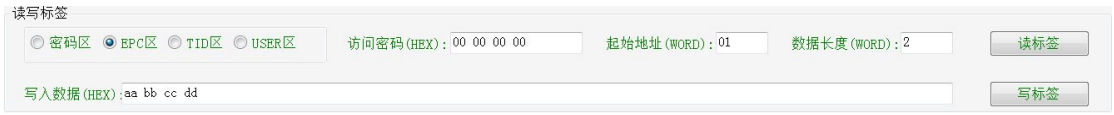
After operation finished successful , feedback will be shown below



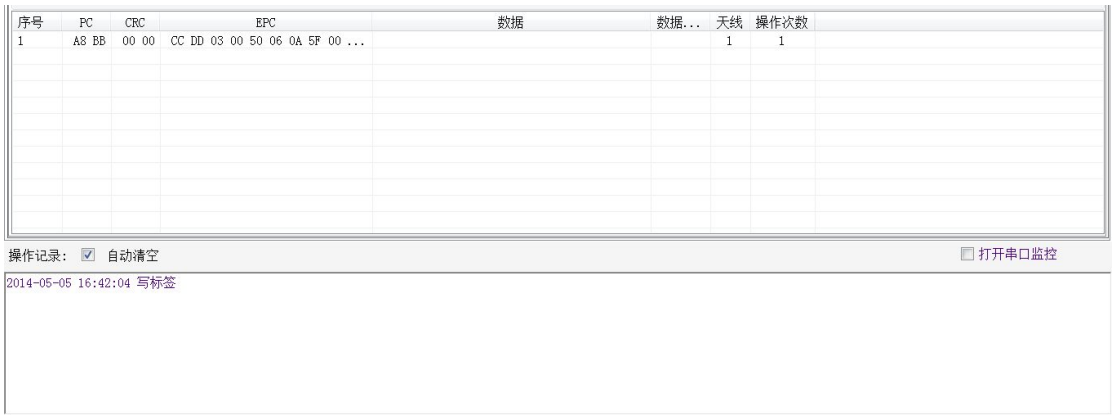
.Operation how many tags, there will be the same quantity data displayed in the list as shown .

2.4.2 writing tag operation

Interface of read tag operation and write operation in the same area, the difference is that the write operation also shall provide the access password and to write these data information.



After the successful operation, feedback will be shown below:



Successful operation how many tags, will be shows same quantity data in the area of arrow indicated , the difference with reading tags that is, there is no content in the data column of above graph. The user can read the same area of the tags again, validation data is whether properly written.

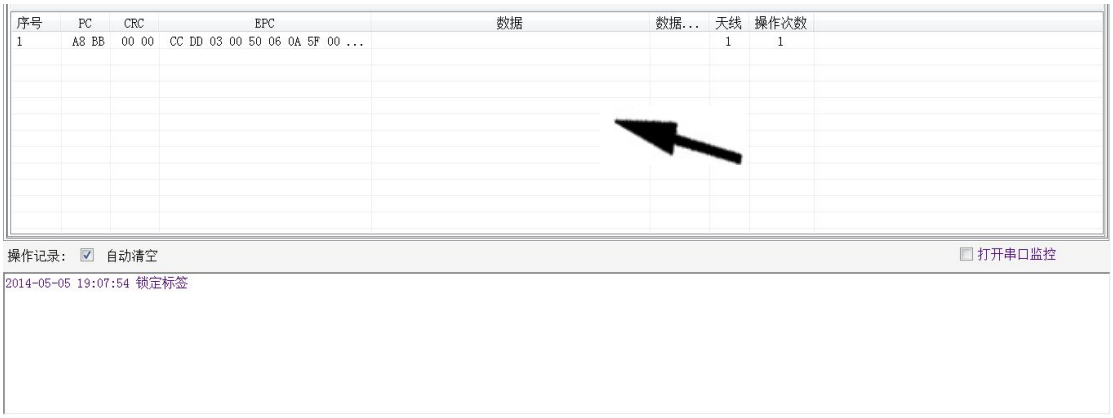
Note ,a one-time write biggest length is 32 Word（64 bytes，512bits）.

2.4.3 lock tag operation

The operation interface of the locking tags ， as shown in the figure below:

It must provide access password for Lock tag .

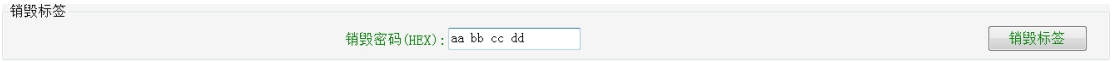
After the successful operation, it will return the following information:



the same as, how many tags operated ,it will shows how much quantity data in the area of arrow.

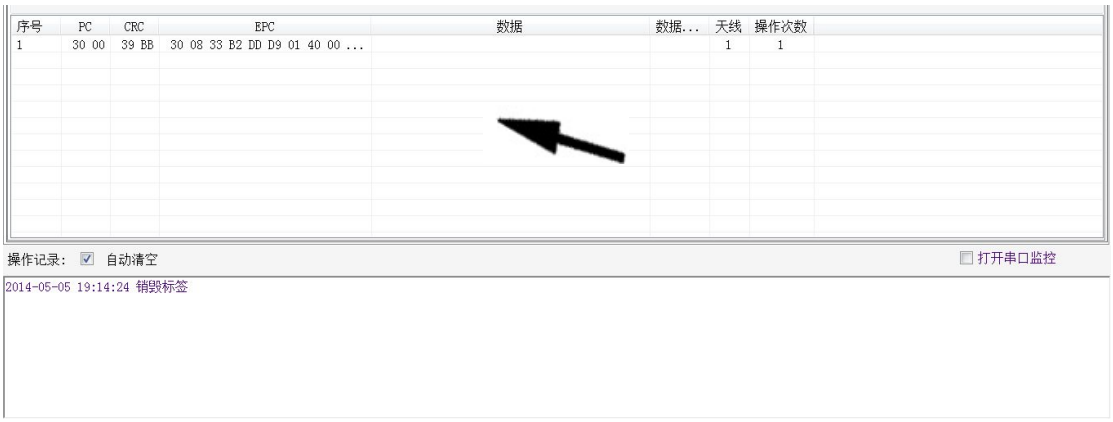
2.4.4 inactivated tag operation

Operating interface of inactivated tag, as shown in the figure below:



Inactivated tags must provide destruction password and destroyed the password can't be 00 00 00 00, therefore ,destroy one tag, firstly ,need modify the password region 's content by writing tag command .

After inactivated tag success, will return to the following information:



the same as operation of all access tags， inactivated how much tag, indicating it shows how many records in the area of arrow.

2.4.5 selected tag of the operation

In many cases, we hope that no matter how many tags in rfid area, only for a known EPC tags to access operation, this time, you need use the tag's operation of selected operation (EPC matching function) .

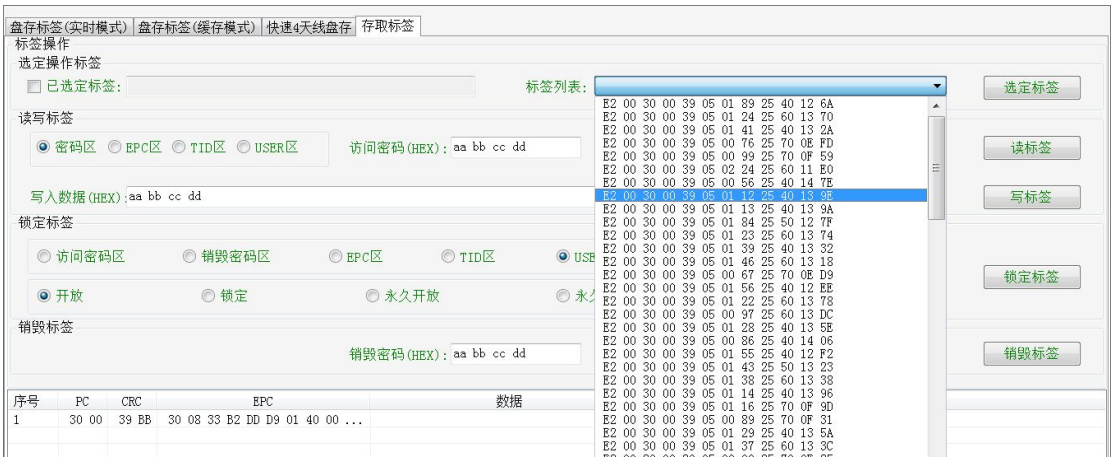
In Random spin-off presentation software, we can operate like this:

◆First to inventory tags by caching mode, to get all the EPC number.

◆And then read the cache.

◆And then switch to access tag's interface again ,to choose need match the EPC number.

As shown in the figure：



After finished selection ,click selected tag. After the successful operation, as shown in the figure below:

We will see "selected tag" check box which had put a tick on the left side , and select the EPC number will appears in the text box on the left side.

Next, all access tag operation just operate the tags with the EPC number .

If you want to cancel the EPC match, the method is very simple, just need uncheck “Selected tag check box”.

as shown in the figure below: