Scishine SSUDemo Instruction

Contents

一、 Brief introduction

SSUDemo is a demo software, which is developed for our UHF serial readers by our company. Customers can use the software to connect, configure, read cards, write cards and do other operations on the UHF readers. When design your own application software, you also can refer to the software.

Icon and the open interface of the demo software are shown below:

Figure 1: SSUDemo Software Icon

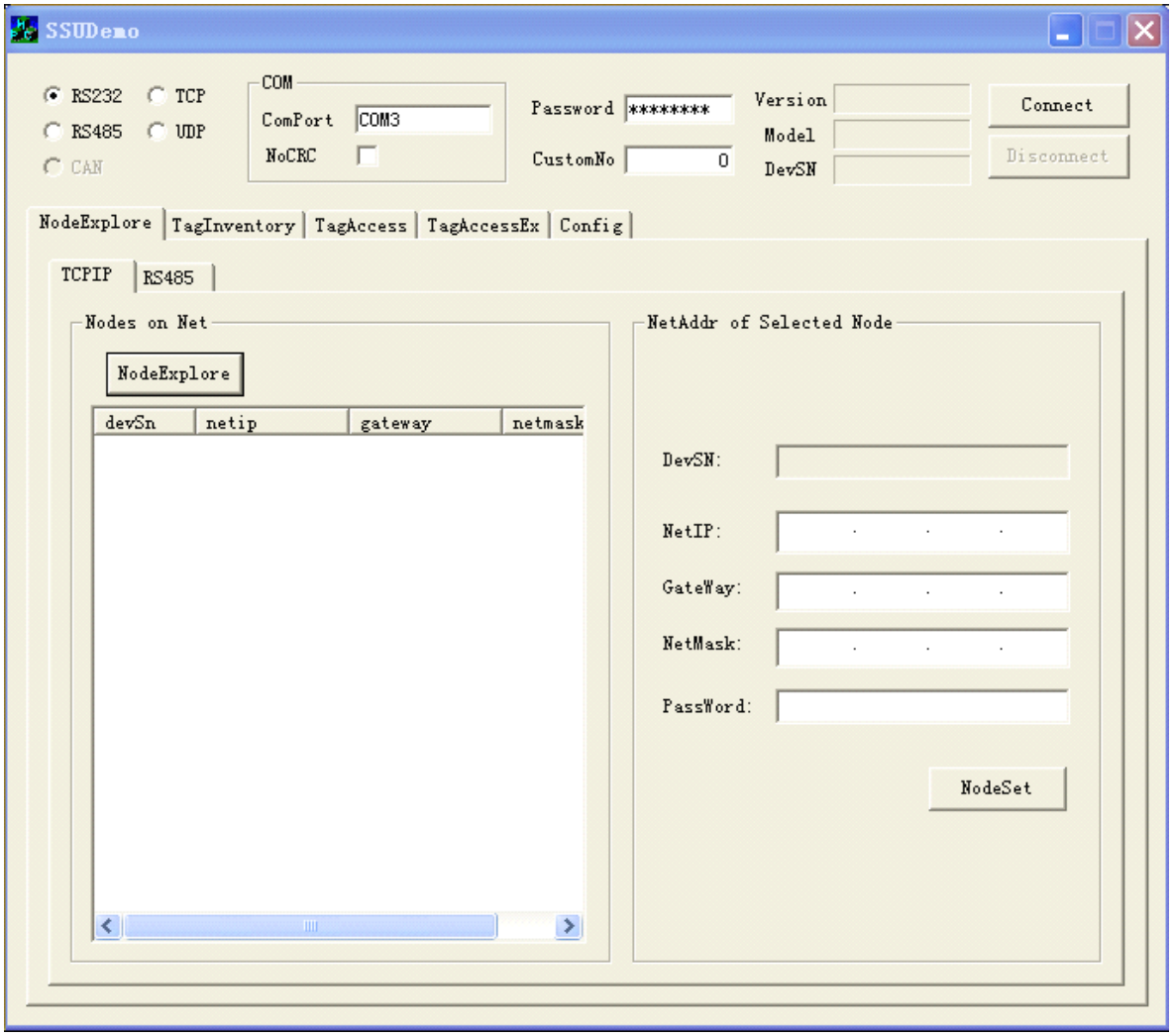


Figure 2: SSUDemo Software Interface

二、 Connection And Setting

2.1 Select Communication Mode

Open the Demo, select communication mode. Please connect the reader to the PC correctly, and then open the power supply. This product provides a variety kinds of standard communication modes, which are shown bellow.

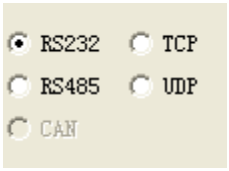


Figure 3: Communication Interface

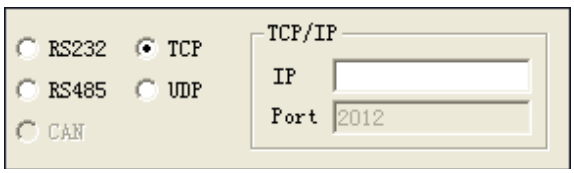
Different UHF reader maybe has different communication interface. After connect the PC and open the power supply, select the appropriate communication interface to connect PC. If you use the RS232 mode, click the white point setting which is in front of RS232.

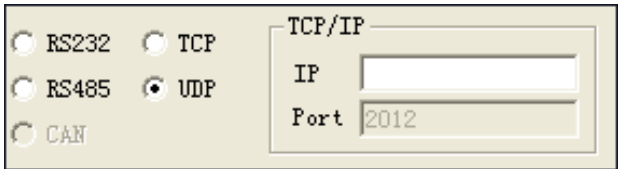
2.2 Open Ports

After select the communication interface, then select the correspond COM port to open the port. In the condition of choosing the RS232 communication interface, we should choose the COM port and NoCRC (having CRC or not) option. The default is NoCRC.

In the condition of choosing the RS485 communication interface, we should choose the COM port and NodeNO(node number).

The TCP and UDP communication mode need to input the IP address, and the default port number is 2012.



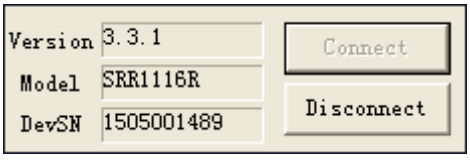


After the completion of the above steps, you can confirm the connection.

2.3 Confirm Connection

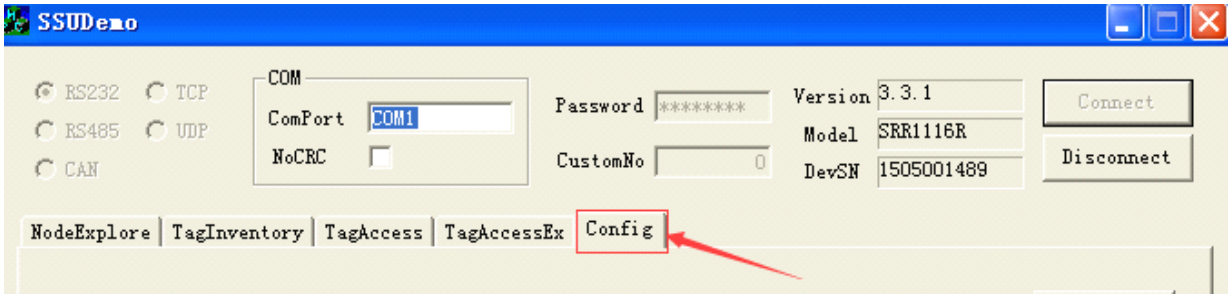
After complete the first and second step of setting correctly, click the “Connect” button to confirm connection.

If the setup fails, no response when clicked, while the reader buzzer did not tone; If the setup successes, the reader buzzer will have a short beep, the “Connect” button will turn gray, the “Disconnect” button will turn into force, the interface will be like the picture, which means the connection is succeed.

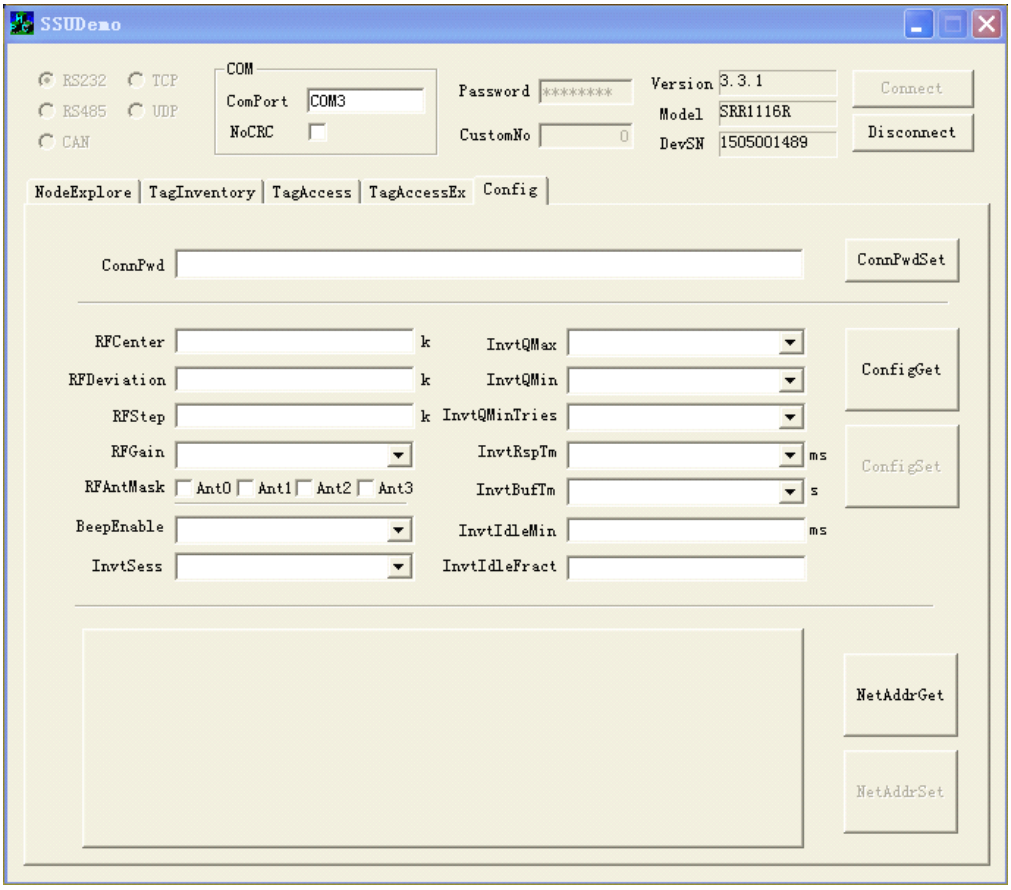


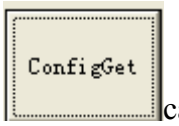
三、 Reader Configuration And Parameter Settings

After the reader connection is successful, the reader can be configured.

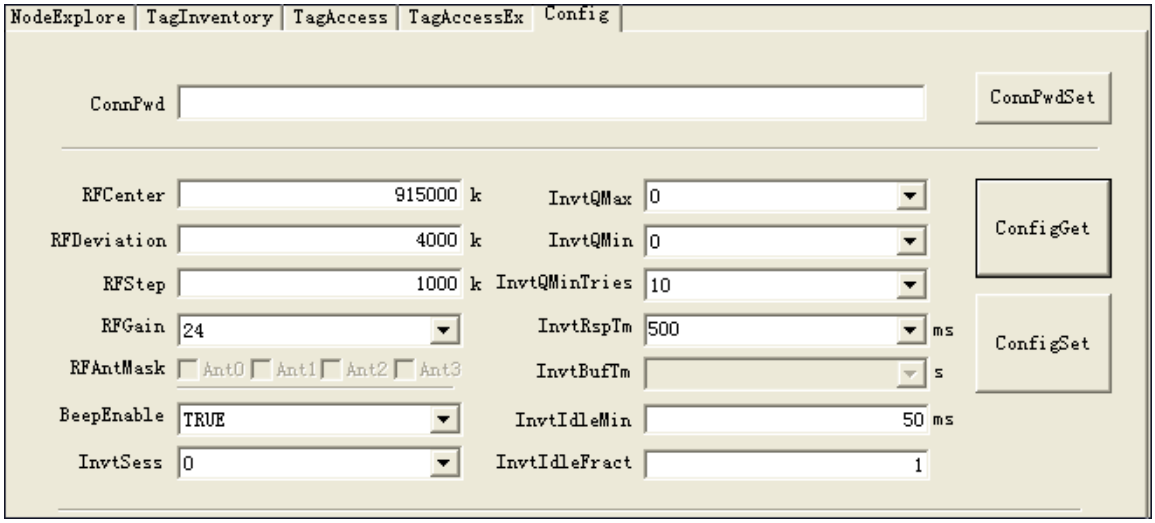


The red arrow -- “Config” contains the reader's configuration information. After click the “Config” button, the interface is as shown below:



1. Clicking the “ConfigGet” button 

can obtain the default configuration of the reader. After obtain the default configuration successfully, the detailed configuration data will be displayed. We can adjust the configuration according to the actual situation of the settings. As shown below:



2. 

Default center frequency point of the reader is 915M. For different places, the center frequency is different.

3. 

Default center frequency offset value, the default is 4MHz.

4. 

Step size when the reader is hopping, the default is 1MHz.

5. 

The output gain power, the range is 0-31dBm, default is 24dBm.

6. 

The reader buzzer switch, default is turned on.

7. 

Tag air communication session, commonly used 0. 3 and 4 are used as a large number of tags. Users generally do not need to set.

8. 

Inventory Q limits, the code limits up to 8.

9. 

When the number of tags is small, we commonly use Qmin value, usually is 4. If read single card ,we can set 0.

10. 

The number of retries InvtQMin value recognition, mainly in order to try to prevent leakage reading. Users generally do not need setting.

11. 

The response time of the tag identification command. Users generally do not need to set .

12. 

Under the mode of Automatic identification, the minimum interval between two inventory, mainly for setting the RF gap, reducing power consumption and temperature PA. Users generally do not need to set.

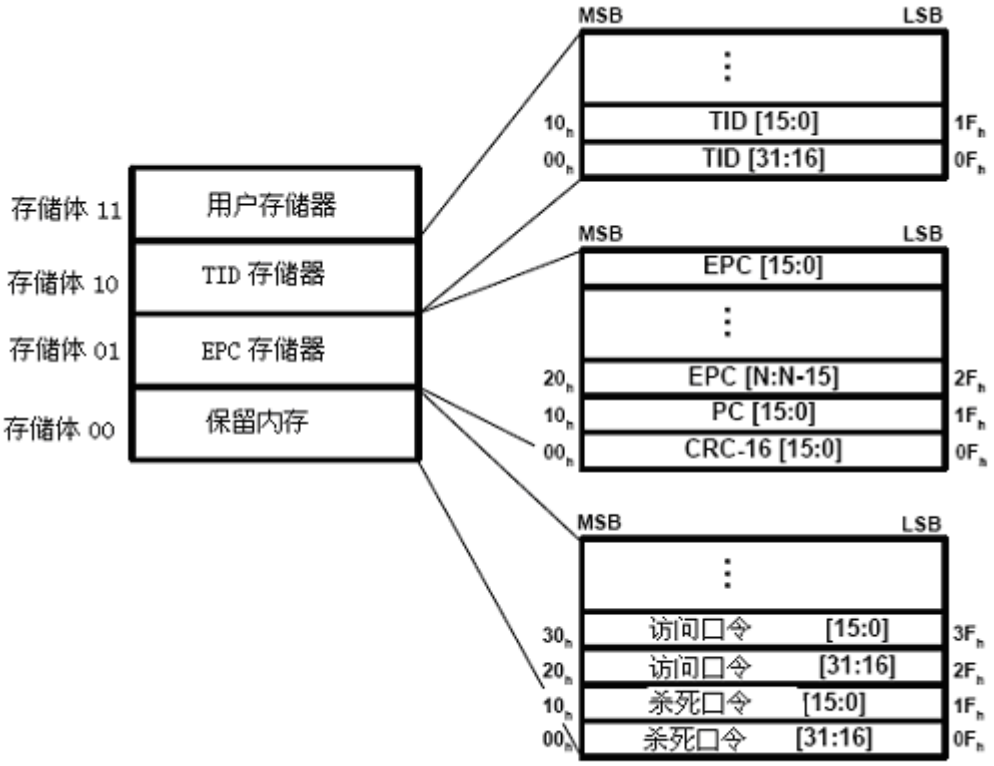
13. 

Inventory interval number. If the inventory actual use of time t(PA opening time), the actual PA closed rest time is the maximum of t/InvtIdleFract and InvtIdleMin value. Users generally do not need to set.

After modify the reader setting, we need to click “ConfigSet” button to confirm the setting. Then the set can be to take effect.

四、 Necessary Knowledge

4.1 EPC C1 G2 Tag Memory



The tag memory is divided into four storage areas, every storage area consists of one or more memories. These four storage areas are:

EPC area(EPC): Contain in the 00h to the 1Fh storage location, the EPC number of the region, the reader can store 15 word EPC. Read and write

TID area(TID): Contain in the 00h to the 07h storage location, the ID number set by the label manufacturers, currently has 4 word and two word ID number 8. Read and don’t write.

User area(User): Contain in the 00h to 07h storage location, different manufacturers of the region is not the same. The G2 tag of Inpinj company has no user area. Philips company has 28 words. Read and write.

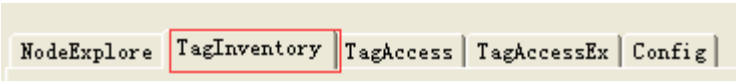
Reserve area(Reserve): Contain an inactivated and access password. The first two words are destroyed (kill) password, and the last two words are access (access) password. Read and write.

Four storage areas can be written protection. Write protection means that the area will never be written or in an unsecure state not to write. Read protection means only password area can be set to read protection, that is not readable.

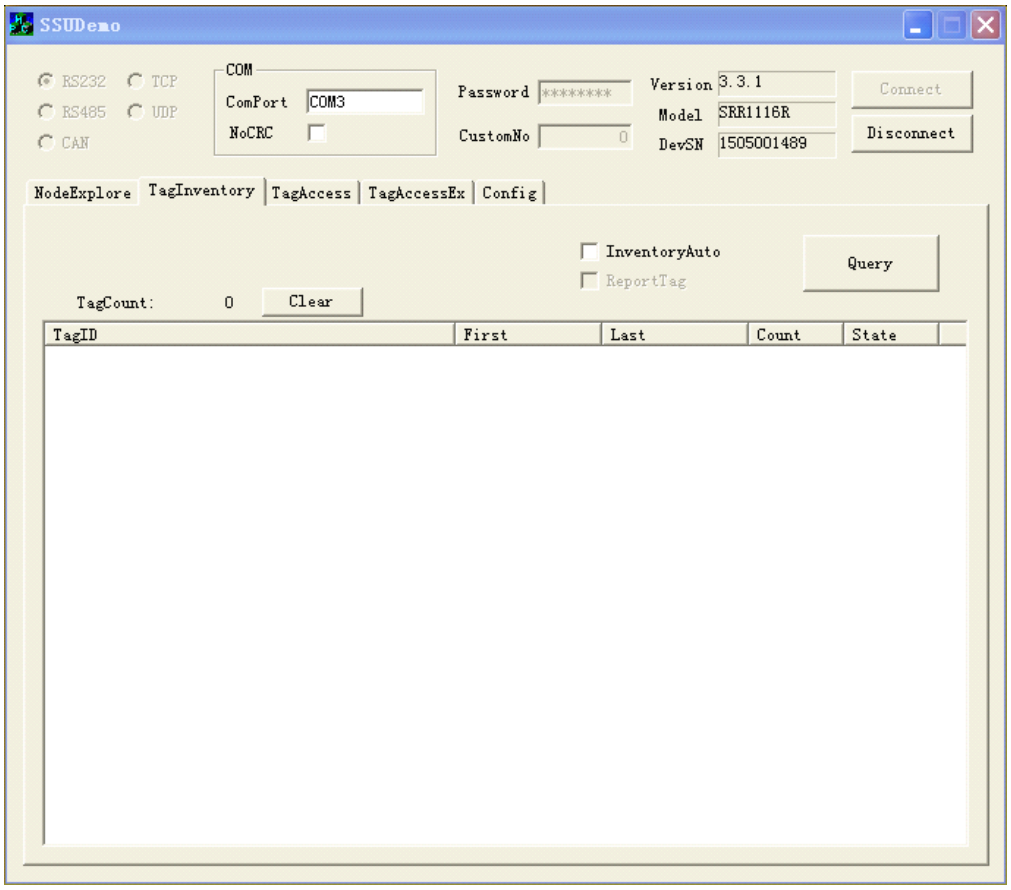
4.2 Data Display

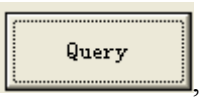
EPC number, UID number, password, storage data are displayed by16 binary.

五、 Continuous Read Card



After the reader is connected successful, the tag can be read continuously. Click the "TagInventory" button, and you can enter the interface of read card. Operation interface is as shown in the following figure:

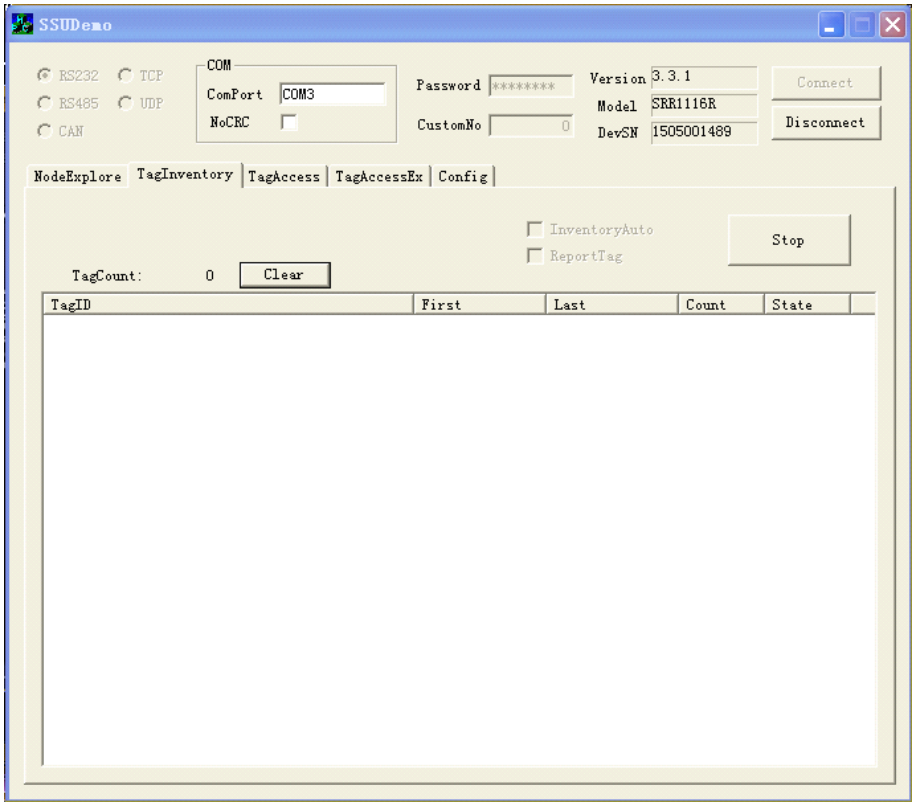


Click the “Query” button 

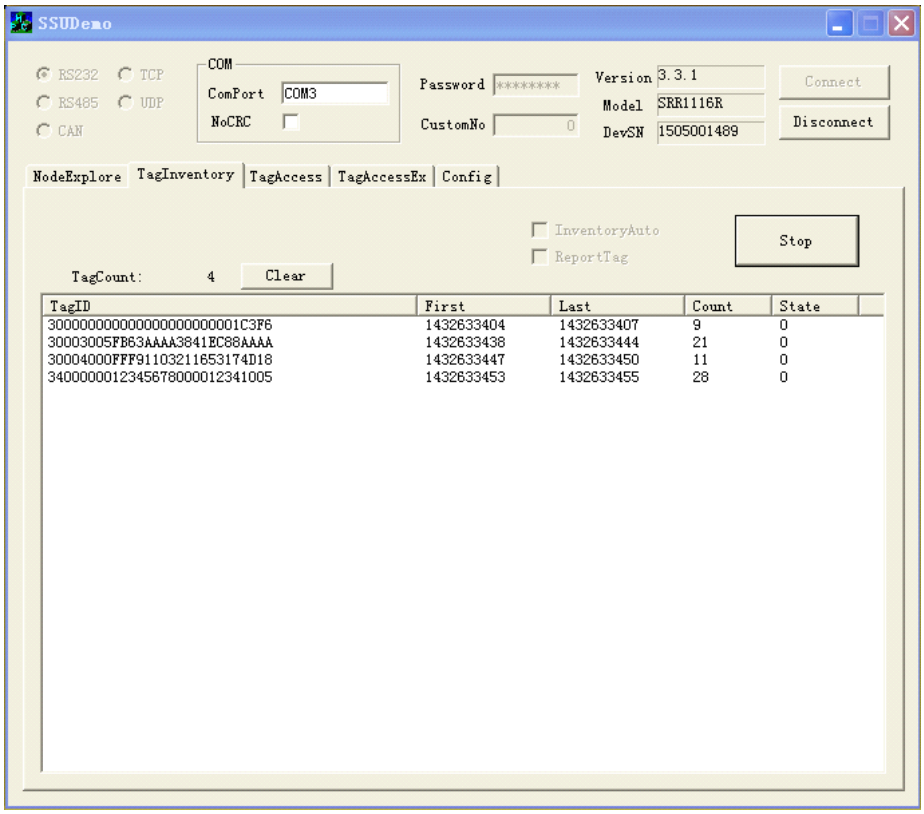
, the reader enters the continued reading card status.

At the same time, the button turns to ”Stop” 

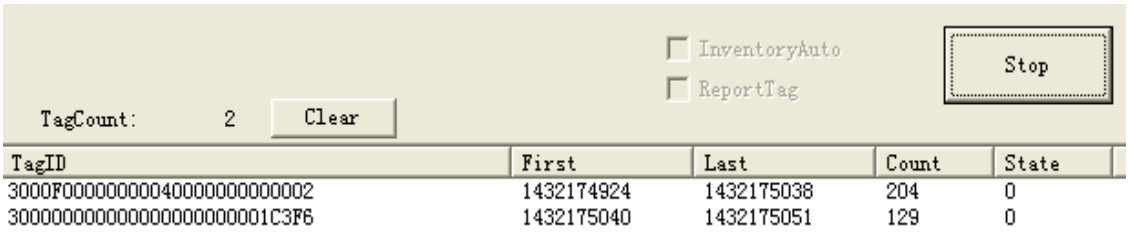
. As shown below:



At this time, place the UHF tag in front of the antenna, the reader will read the card continuous, the card number and the corresponding number of card information will be displayed on the interface.

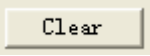


As the reader is set to open the buzzer, if read cards successful, the buzzer will sound and the status will be displayed:

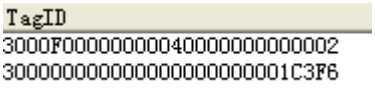


If you read more than one tag, there are more than one tag of data records.

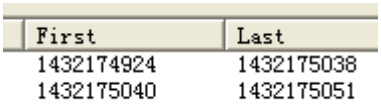
The position of "TagCount" 

shows how many cards be read. Click the "Clear" button 

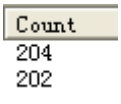
, we can clear the data.



The position of "TagID " shows the ID number.

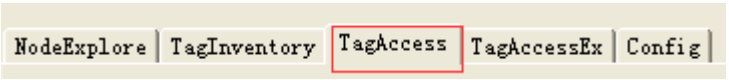


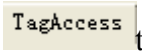
The "First Last" Bar shows the starting and ending time of read the tag.



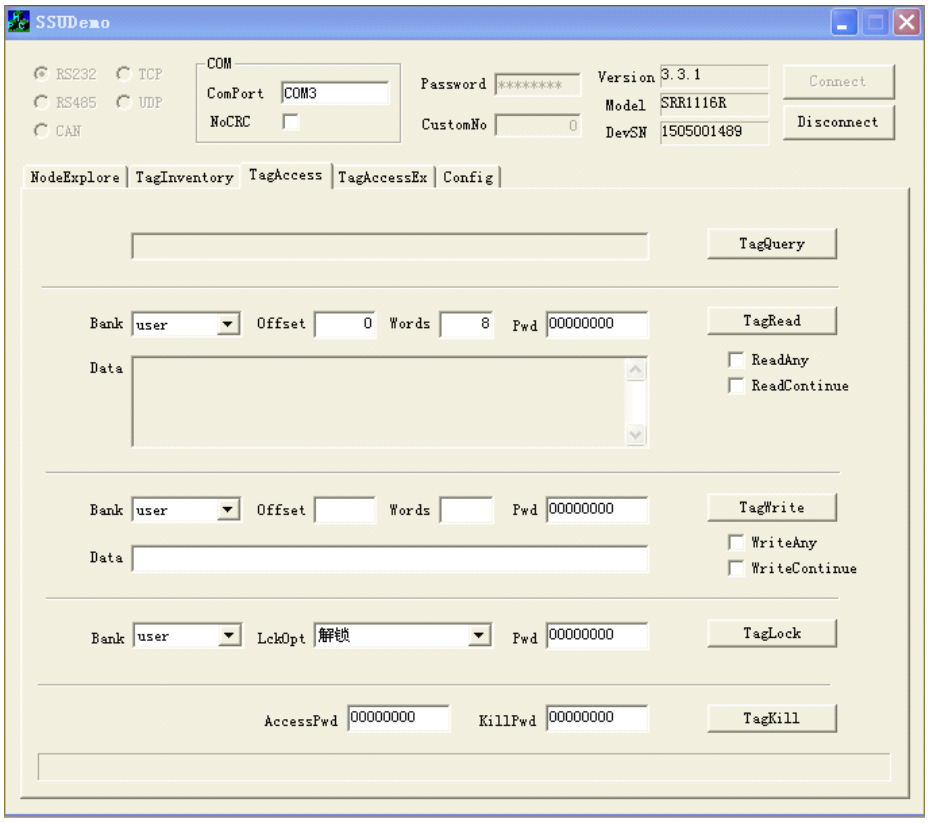
The "Count" Bar shows the times of reading the tag.

六、 Read And Write Single Tag



After connect the reader successfully, click the "TagAcess" button 

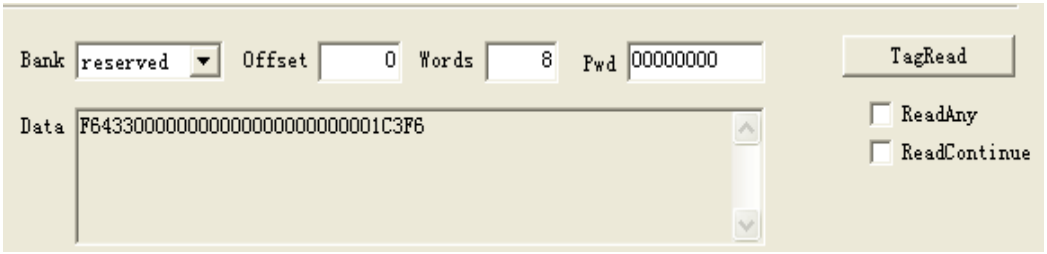
to enter the interface of operate a single card . As shown below:



Click the "TagQuery" button 

can read the ID number of the tag.

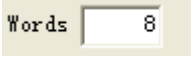
6.1 Read Different Regions' Data Of Tag



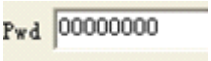
The Bar is the label plate of reading tag.

1） 

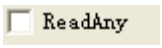
Click the triangle arrow, we can select the four readable regions.



"Words" can be used to select and set the number of bytes of data .



"Pwd" is reading password. Only the correct password can access to its different

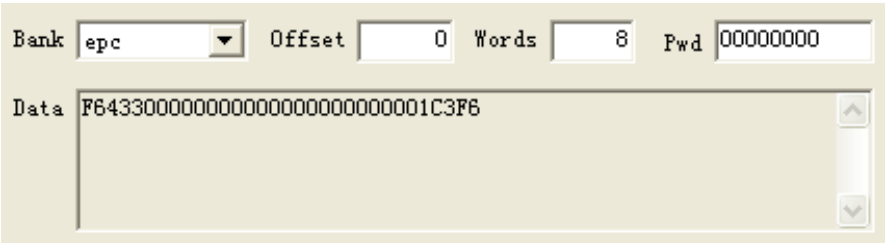
regions, the data are 16 - band display. 

"ReadAny" is used to set to read more than one tag or not. 

"ReadContinue" is used to set to read continuously or not.

2） 

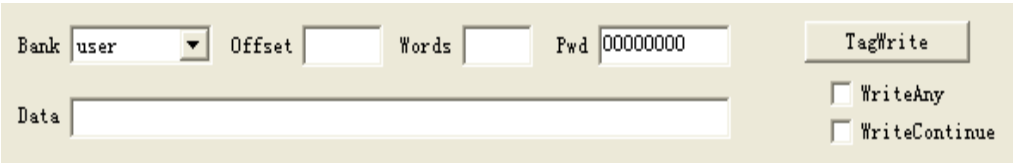
Click the "TagRead" button to read the tag.



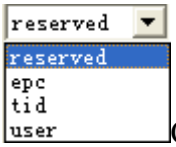
Such as the picture shows the reader reads the tag EPC area successfully. "Data" shows the data. 

3）Other areas have the same reading methods. We can read the data in different storage area.

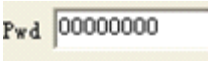
6.2 Write Tag Data

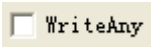


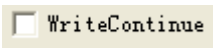
The Bar is the label plate of writing tag.

1） 

Click the triangle arrow, we can select the four writable regions.

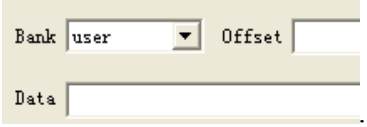


"Pwd" is reading password. Only the correct password can access to its different regions, the data are 16 - band display. 

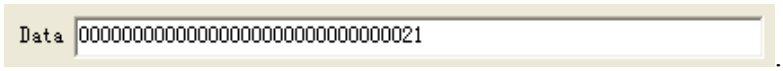
"WriteAny" is used to set to write random tag. 

"WriteContinue" is used to set to write continuously or not.

2）After select the storage area, we need to input the data behind the "Data"



. For example:

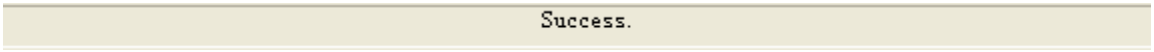


. Then click the “TagWrite” button

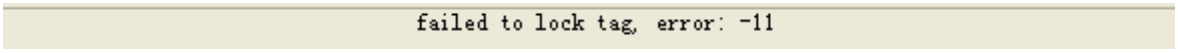
to confirm the writing operation.

3）Other areas have the same writing methods. We can write the data to the storage area.

6.3 Status Tips



At the bottom of the software box, there is a station lable, which is used to mark the success or failure station or other return value. If your operation is fail, you will be prompted for the failure of the operation. As shown below:



According to the different error code displayed, you can know the error type.

七、 Contact Us

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Products Services Support: iservice@scishine.com