# Reader/writer Demo Application Instruction


Version 1.4.5

2019.9.25

# colophon

| Version no. | Date | Brief Statement | Writer |
|---|---|---|---|
| 1.45 | 19/09/25 | To improve description and introduction of product and its software | Mr.Huang |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

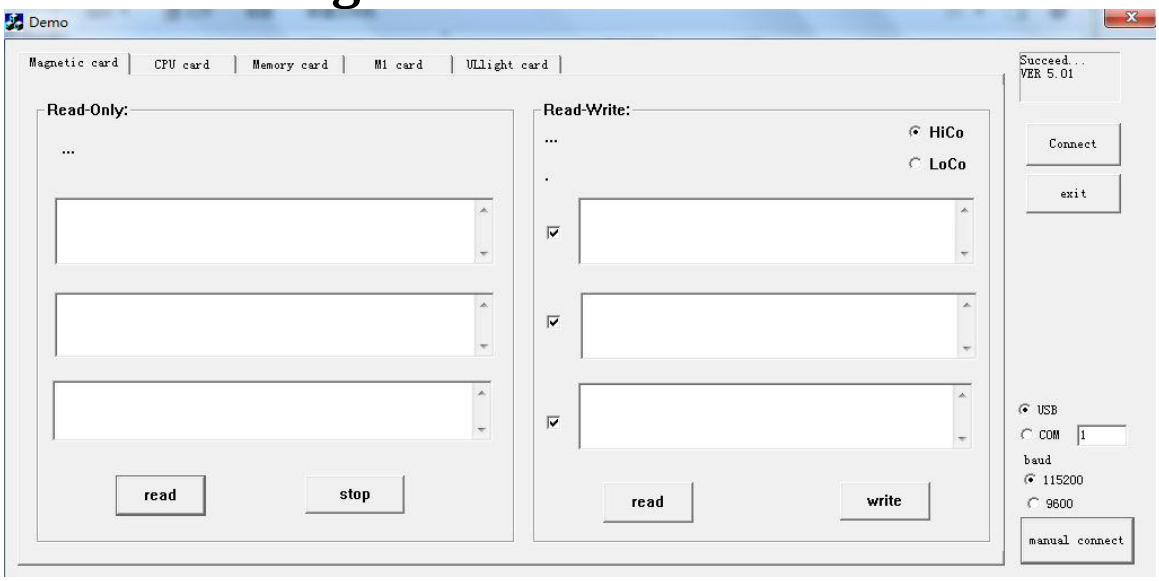
# 目录



Comment:The software demo applies to all types of desktop reader and writer devices

with USB interface. However, not all devices support all the listing functions. With any question, or any need for the latest version material, please contact us.

# Software Diagram




# 1.Initialization

Any card operation must be done after successful initialization.

Open the software, if it shows “succeed” at top right corner means it init succeed, but if shows “failed” means there were some problem with the connection. Then,u need to check the connection.

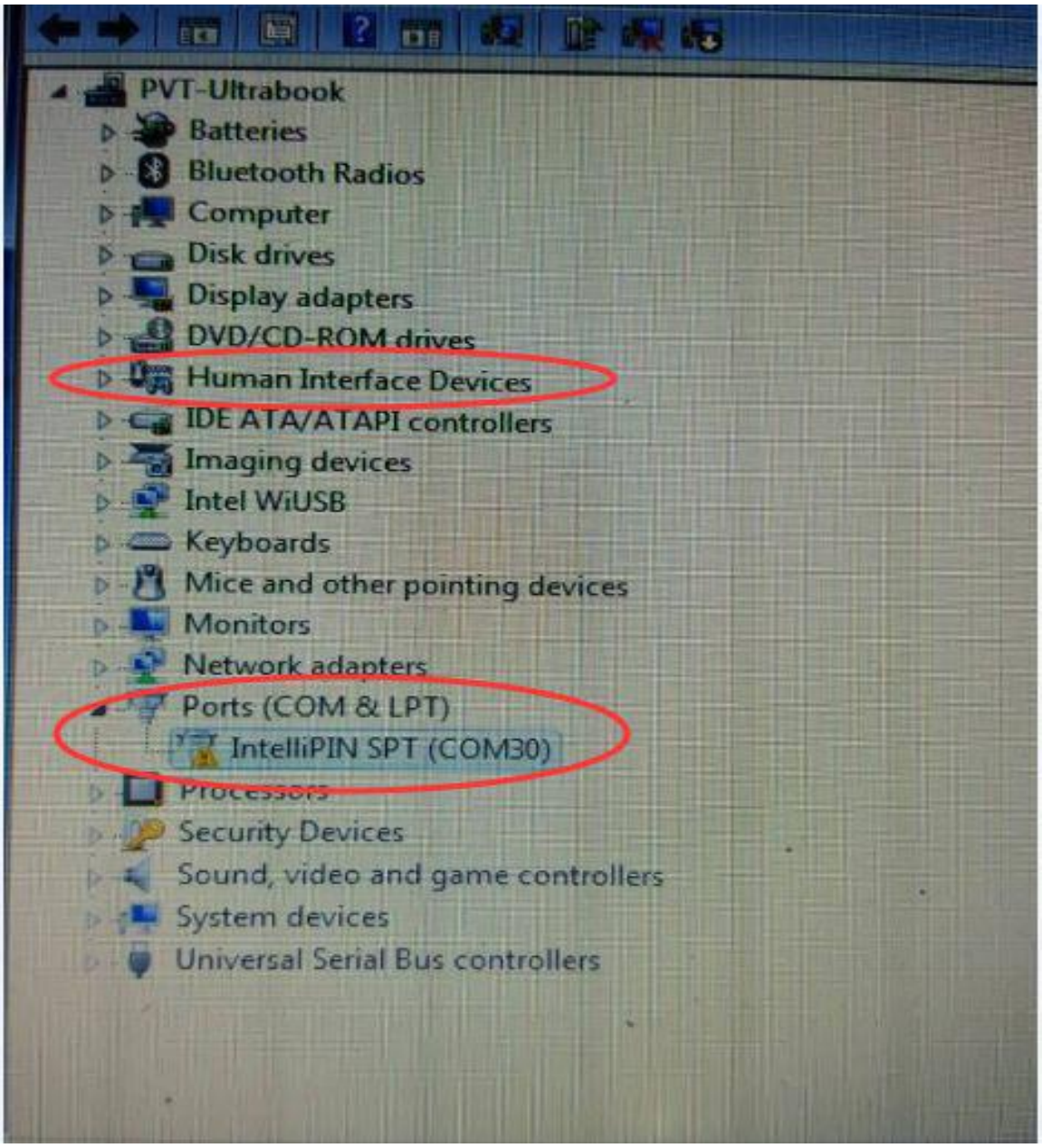
## How to confirm whether the device is connected to a computer?

USB insertion to PC and lit on light doesn’t mean the device is connected to a computer. Interface aging and wearing will result in dis-communication. Then how to confirm if the device is correctly connected to PC ?

**USB connection：**

Right click "My Computer" icon("Computer"for WIN7 )—>"management"—>"Human Interface Device" to check if the device is inserted. In addition, unplug the device then insert again, to check if there is any response in "Human Interface Device" to confirm. As picture 1.

Picture 1：




If the device connects but shows a yellow trigon like the picture shows ,it means your computer have find the divce but can`t idedify it. please right click it to update driver

**Serial Interface Connection：**

Right click"My Computer"("Computer"for WIN7)—> " Management " —> " Device Manager " —> " port（COM &LPT) " to check the connection.

Baud Rae：

Bard rate refers to Microcontroller or computer transmission rate in serial data communication. We provide two types: 115200（Baud )and 9600（Baud ）.

**Note ： When using a serial interface, if it fails to connect, please unplug the device, close software and try again from the begining.**

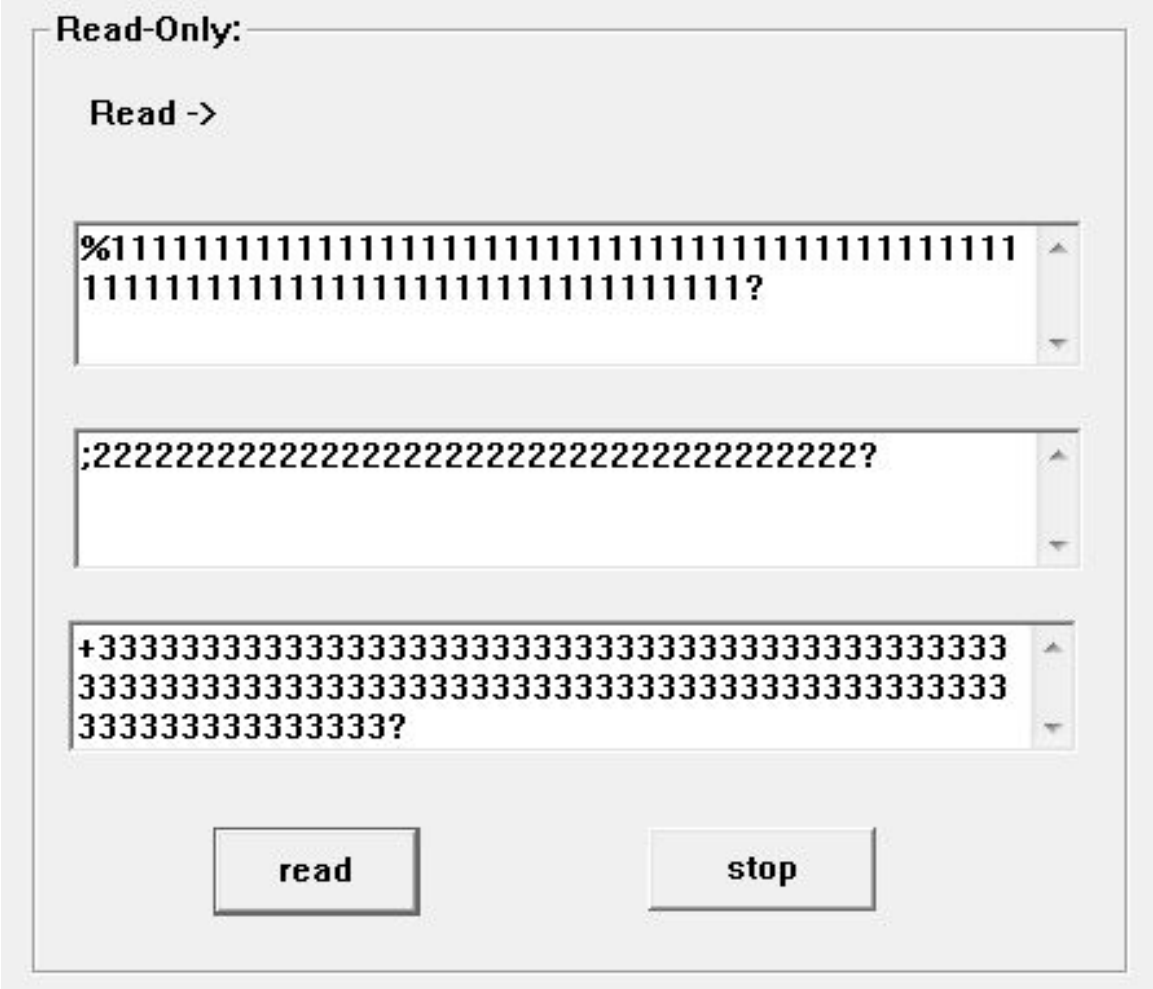
Serial or USB selection should be based on device communication type, as follow picture：
Connection here do not need to switch baud rate or select serial interface number. When select serial and USB interface, click to connect the device, it will show connect successfully. If it fails to show, pull out of device, close software and try again.
That is, only ZCS80, its magnetic card operation part needs to connect to device, the rest operations are the same as those of initialization before.

# 2.Magnetic Card

Brief introduction：Magcard (magnetic card) applies to many fields. Three tracks are provided to record data with terminal devices,such as credit cards,security cards,membership cards,inquiry cards, stored-valued cards and entrance tickets and so on, which are magnetic recorder dielectric cards. This card is made by high-strength, high-temperature plastic or plastic coated paper so that it's moisture proof wear-resisting and flexible, very easy to carry,and more stable and reliable for use.

## magcard demo：

1.click "magnetic card test",then charge it. Correspondent tip will show when charge successfully(The device supporting encryption can switch to data display format, old type doesn't support. )
2. Click "Stop" to stop the continuous testing function of magnetic card.
Magnetic card function demo：



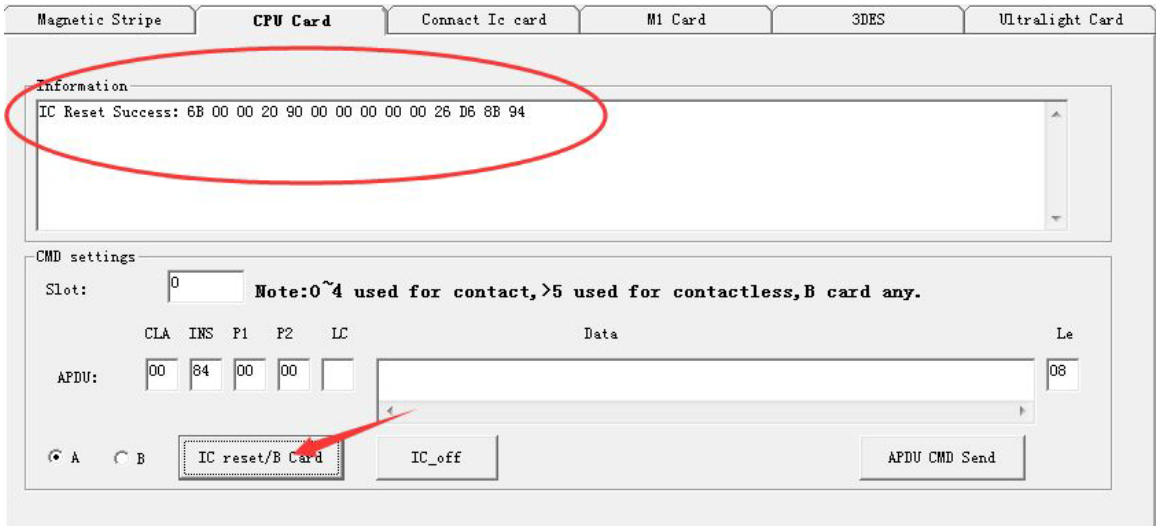

If your device support card write , u can use “read-write”part to write data into the card

# 3.CPU Card

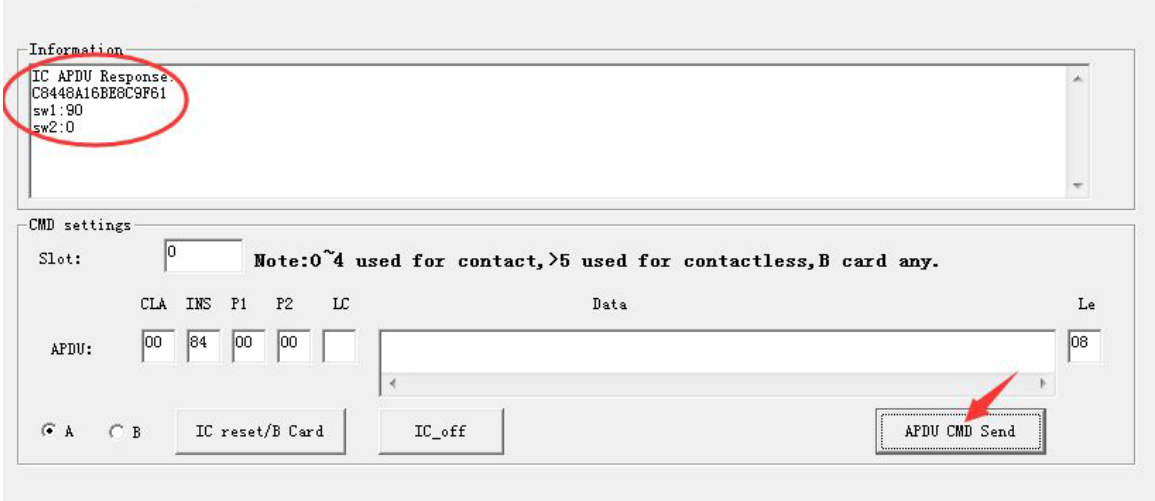
Brief introduction: with high data processing capability and computing power and large storage capability, especially its improved security technology system and program-oriented adaptability and flexibility，smart IC card has gained great concern and favor from relevant applications(domains) since its appearance. Smart IC card is quite suitable for sensitive applications which requires data security and reliability. So far, major smart IC card application areas include credit cards of financial field, SIM cards of telecommunication field (mobile phone identification card) etc. In addition, the concept of multi-purpose card, supported and represented by smart IC card, has been greater valued. In the future, the development and application of smart IC card will play an importance part in all fields. We will benefit the convenience,security and efficiency and related quality services.

# Demo Software operation procedure：

A.click “IC card reset”, please note: contact IC card and the PSAM deck use 0-4 slot corresponding channel number, while test contactless CPU card, the channel number should be above 5. Proceed subsequent operation after normal reset.




B.Input APDU commands in the corresponding area when testing, then click “APDU command send”button. The demo software sends APDU commands randomly by default, namely:CLA=0x00, IINS=0x84, P1=0x00, P2=0x00 when data is empty, Le=08.




C. In the “message box” section,you can see the result of returning APDU commands. The corresponding result will be analyzed by SW1,SW2 status bit. SW1:90 SW:00 denotes command operation is successful.

# 4.Memory Card:

Memory card belongs to logical encryption card,SLE4442 and SLE4448 are common used. security features：

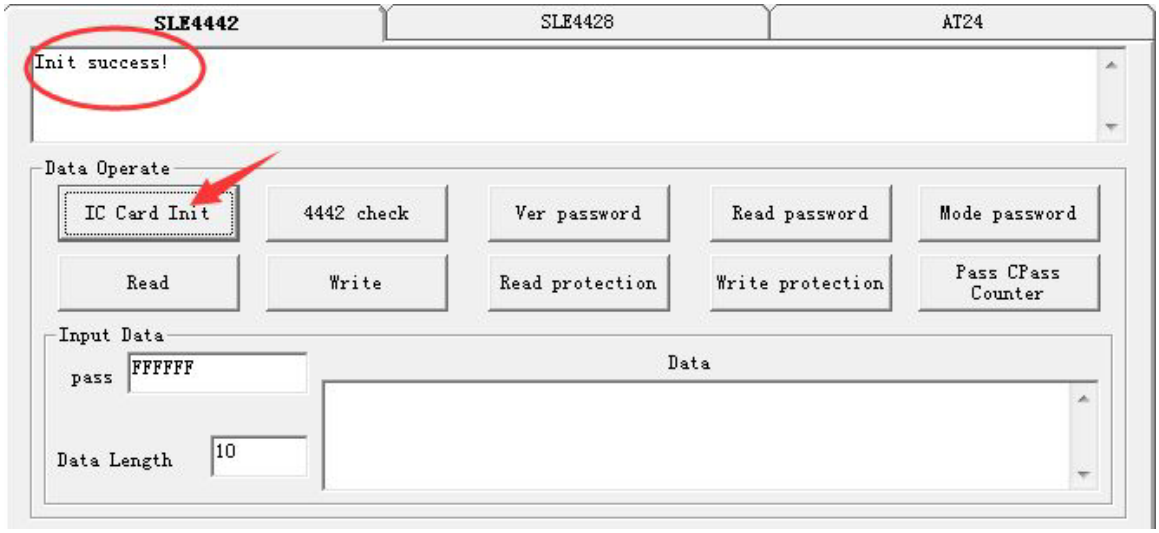
Before password checked correctly, all data only can be read, but not written.

After password checking, only when it's correct, all data can be changed, including the password.

Each byte of protected writing area(first 32 bytes)can be protected read and written individually. After the protected area is written, the content can not be changed.(ie.curing data)

## Program Demo：

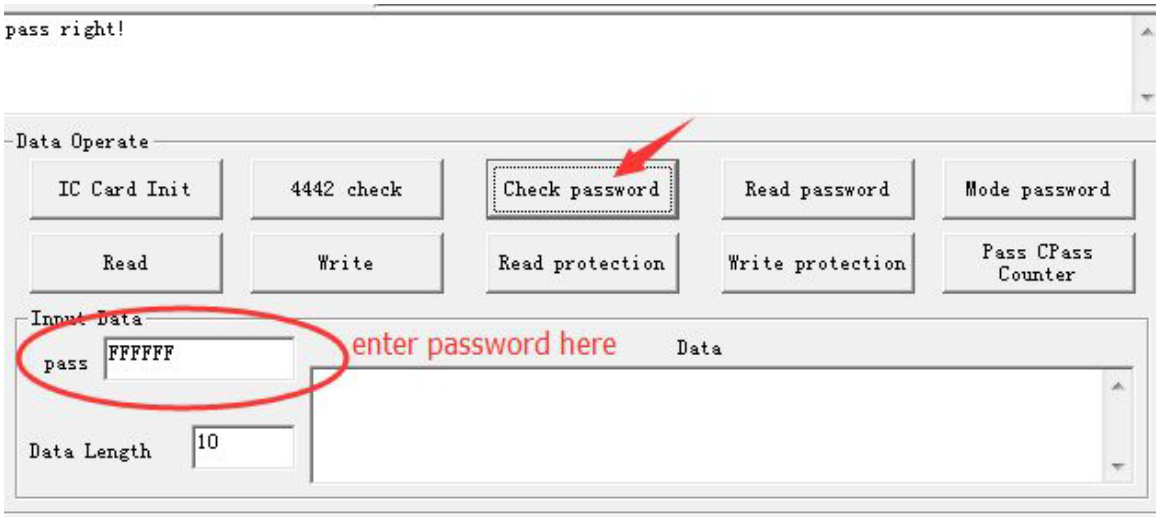
Write-protected area (first 32 bytes) of each byte can be individually write protected post write-protected content can not be changed (ie, curing data).Currently, the test is mainly to the IC card function of type SLE4442/SLE4428. Take SLE4442 as an example( similar to 4428).




A.

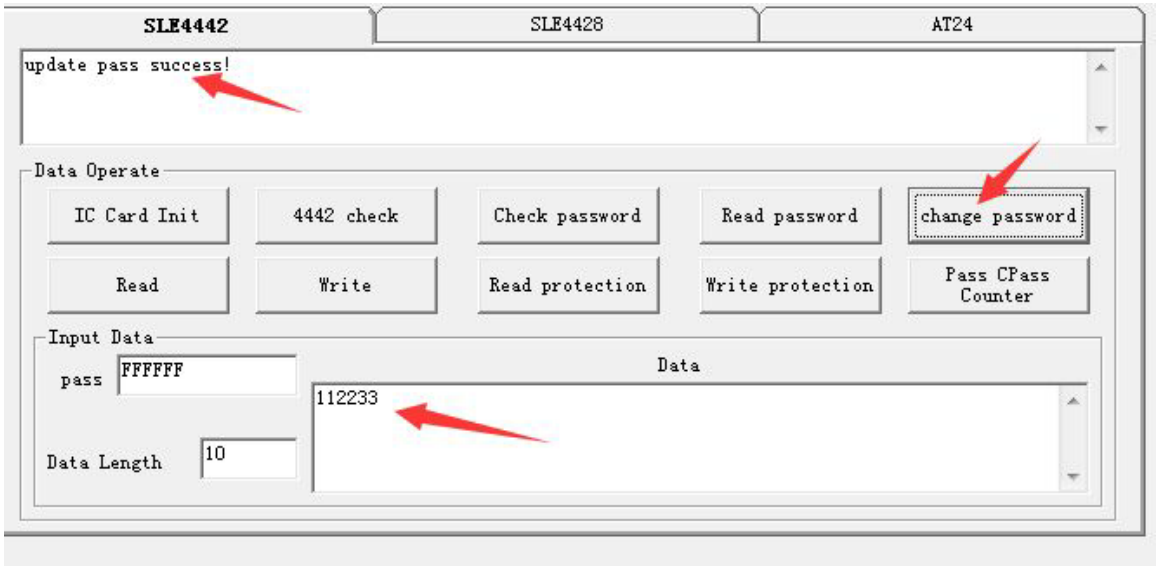
Click "IC card initialization", after success tip, continue to subsequent operations.

B. Click "4442 check" to test if the IC card is a SLE4442 card. If the tip is "Detected Success!", the card is a 4442. If test fails, it isn't a 4442 card. After successful test, continue the subsequent operations.

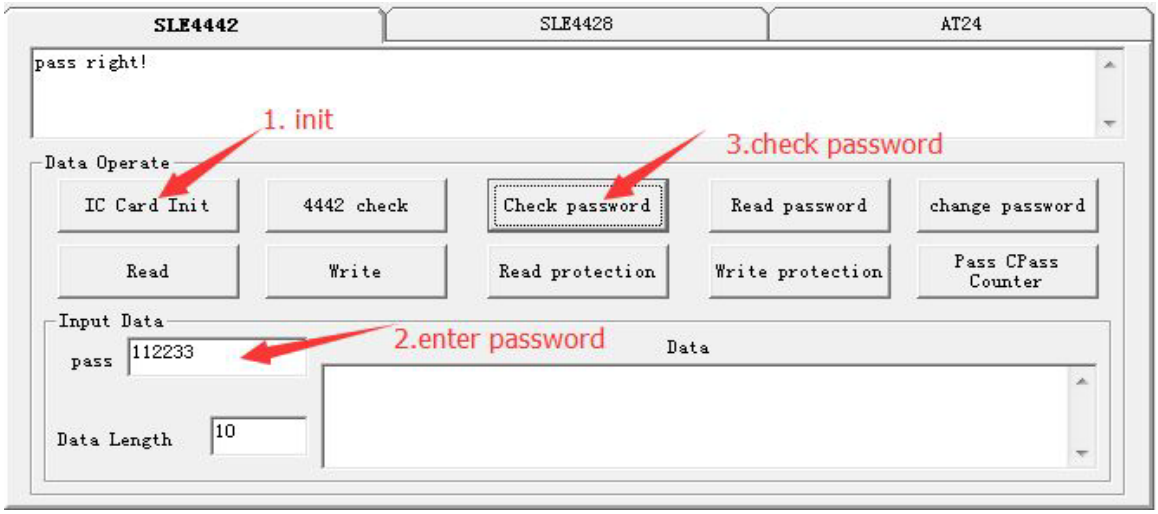



C. Enter card password in the password test area, then click “check password”. Before all the writing operations, the password should be checked first(the password must be correct). The default password has been input by the demo software,please click to check the password directly. D. Click “Read Password”, the card password will show in the message box.

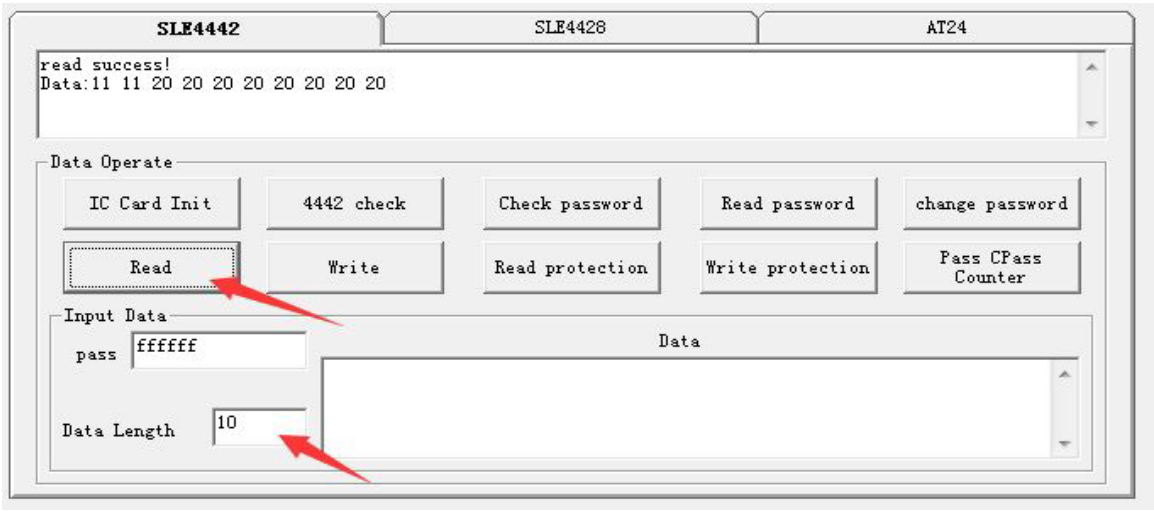
E. Change password. Enter new password in the corresponding area as following picture. Enter new password here:112233.



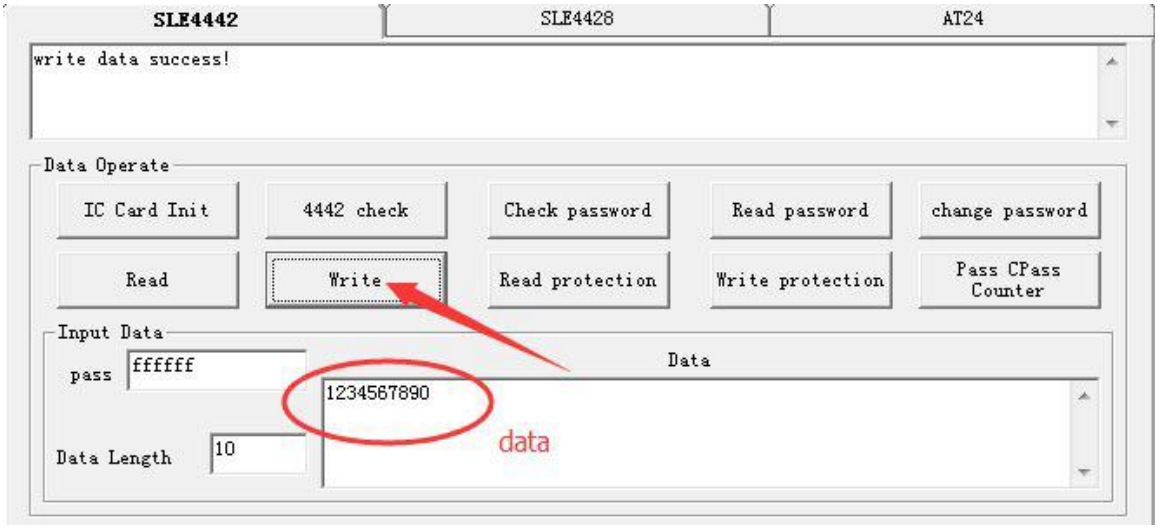

Note: The password has been changed to 112233,if start initialization now, you should enter112233 in the password area to the the password,otherwise, the it will show password incorrect and the subsequent operations can’t be proceeded anymore. Each time operation error appears, please restart initialization and proceed other operations.




F. Reading cards. Enter the data length in need in the corresponding area as following picture shows. Then click “read ”.




G.Writing cards. Input required data in the corresponding area(Hexadecimal data, enter 1234 means 0 x12, 0 x34). Then click “write ”

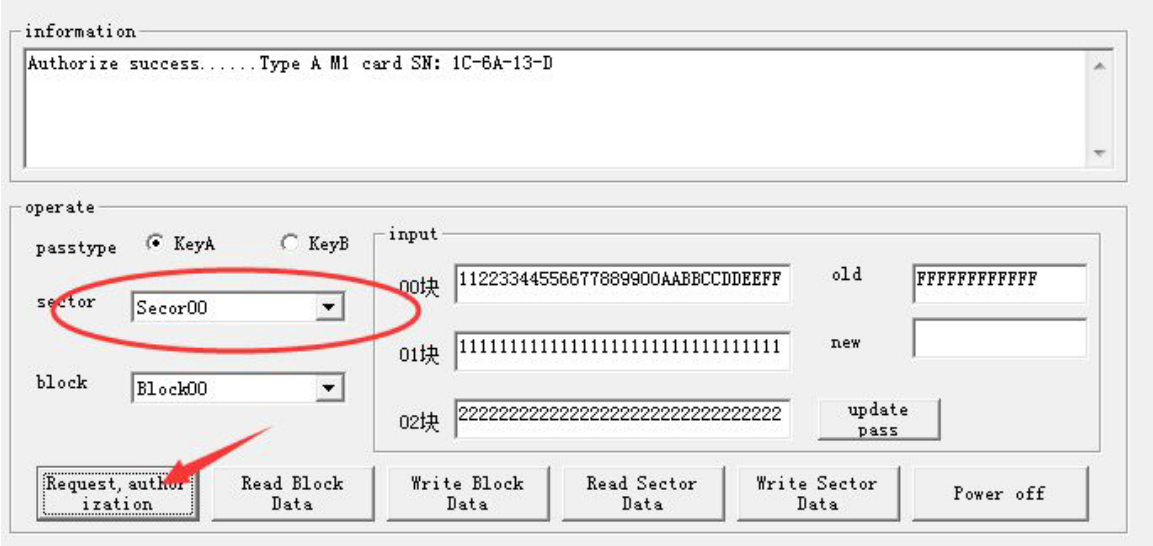


# 5.M1 Proximity Card

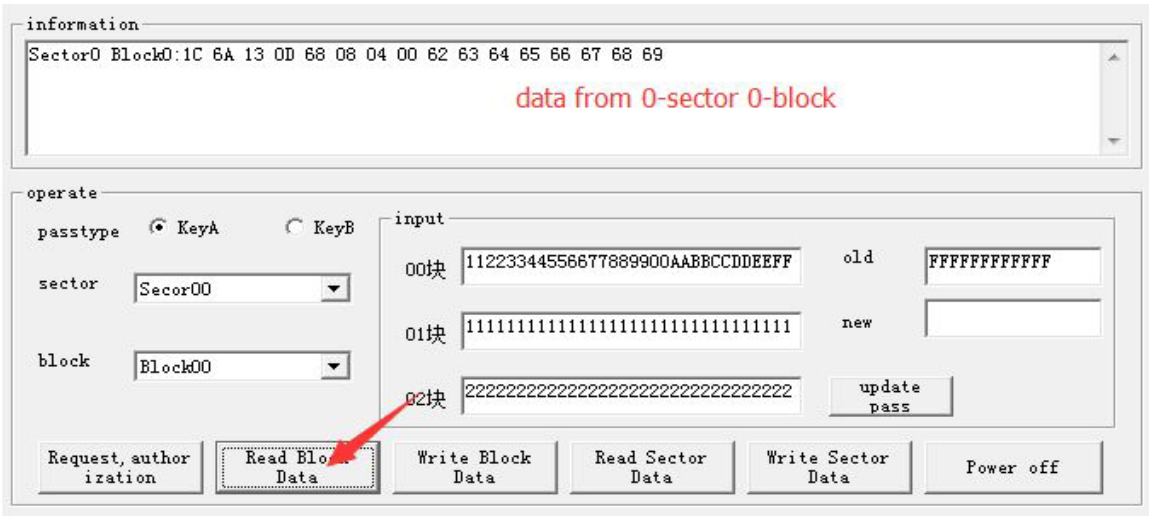
1. For its low price, M1 card is very suitable for use as consumables.
2.Anti-collision, can be used in various applications.
3.Good encryption performance.
4.M1 card door lock system configuration has been updated--- a fully functional communication controller.
5.M1 card door lock system configuration has been updated--- fully open self-service multifunctional software.
select sectors and blocks need to be tested, enter the sector password, click "find the card. Authorization." If the password is incorrect authorization fails, you can not continue down operations

## Demo

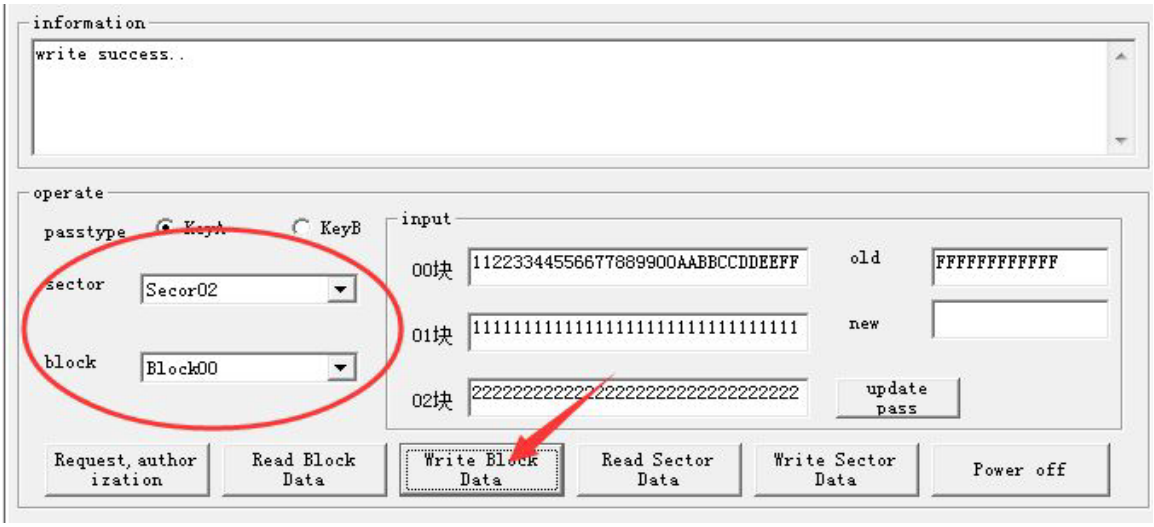
A. Select sectors and blocks those needs testing,enter password of that section,click “Request.authorization”. If the password is incorrect, authorization will fails, the subsequent operations cannot be continued.After successful authorization, continue the proceeded operations. Please note: All the read and write operations need inputting section password. Please remember.



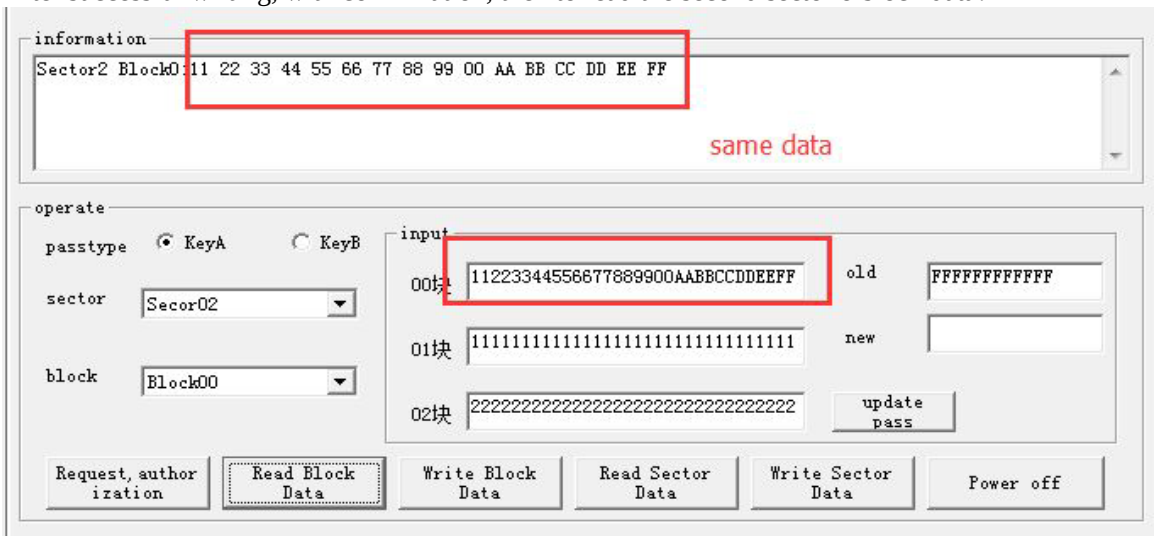

B. Click “read block data ”, data shows in the the corresponding section area. The 0 sector 0 block cures M1 card ID information, and all the three sector blocks-3 are configuration password information. In the following picture, 0 sector 0 block data is being read. And the default setting password has been filled in by the software.



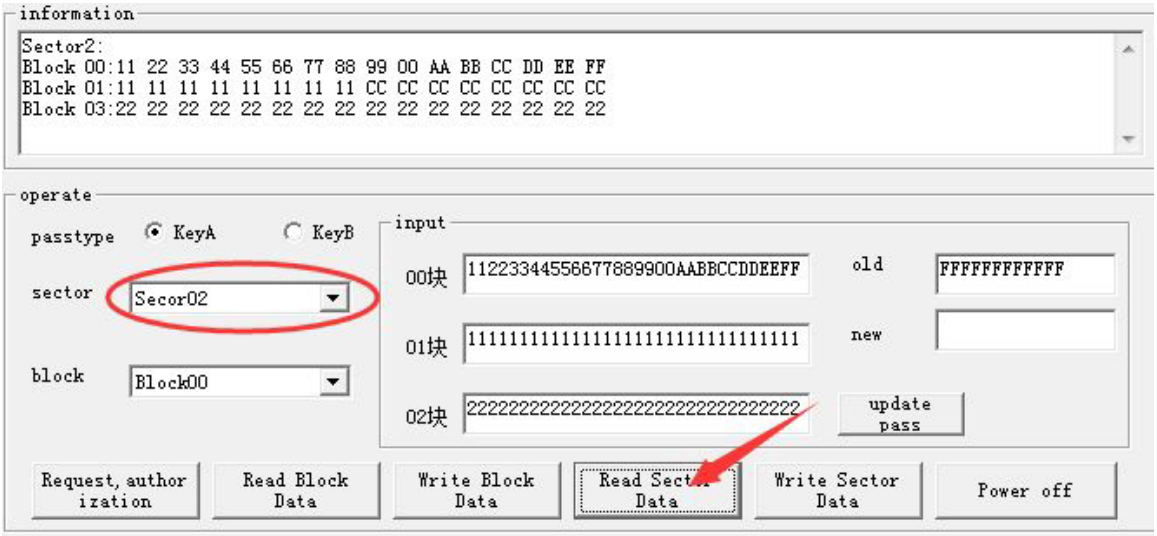

C.When writing block data, select the required sector and block, then input required data in the corresponding area on the right. Click “data block write”, after successful writing,the written data can be read directly, as shown in the following figure:



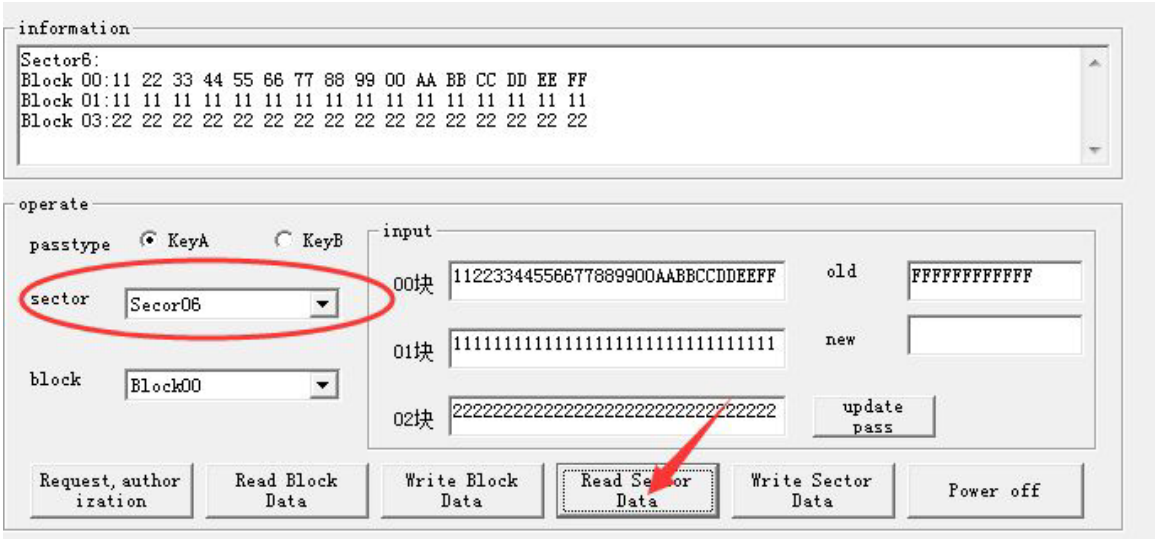

After successful writing, with confirmation, then to read the second sector o block data：



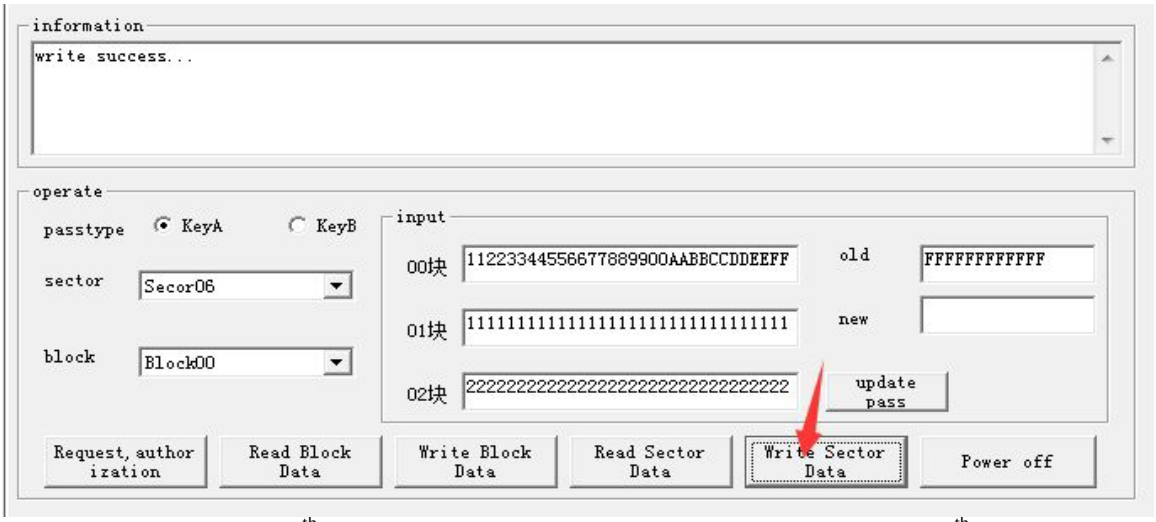
D. All the data in sector is supported to read(except 03 sector). Select the needed sector, enter the password of the needed sector, with authorization, click “read sector data ” directly.



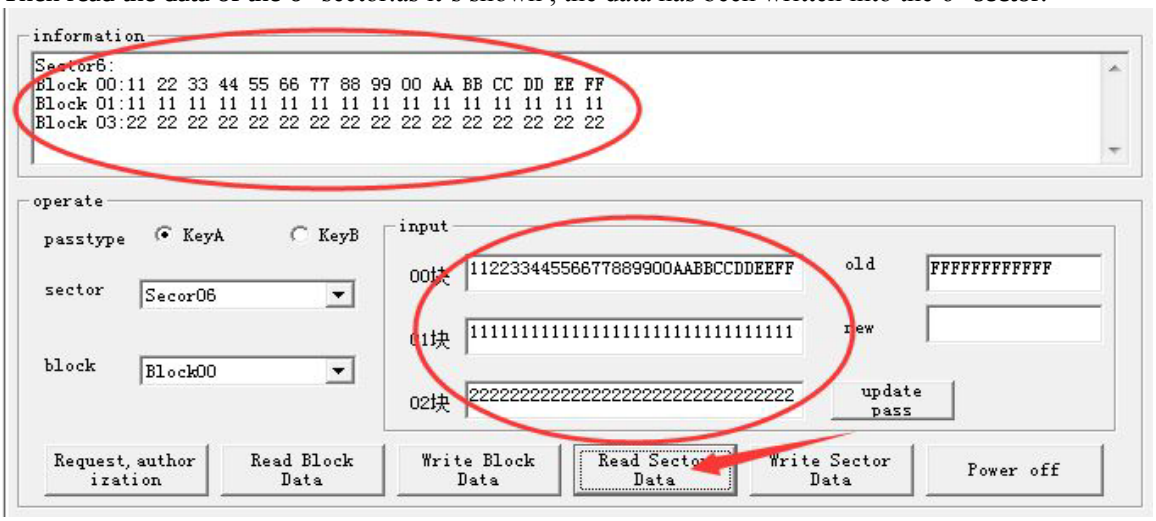

E.Support writing the data of the entire sector once, just click “write sector data ”. All the data can be read after the successful writing. The process of reading the 6th sector data is as following figure.



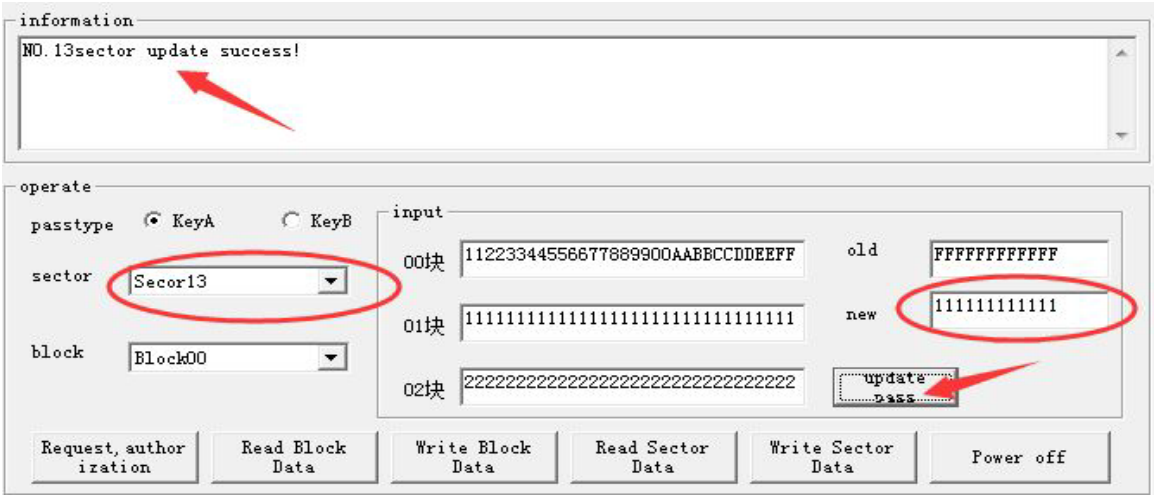

write all the data into the 6th sector once.




Then read the data of the 6th sector:as it's shown , the data has been written into the 6th sector.




change password select a sector, enter the current password and new password, then to click "modify area code" As shown in the following picture:change the password of the 13th sector into111111111111，then when new password is needed when visit the 13th sector instead of the default password FFFFFFFFFF.

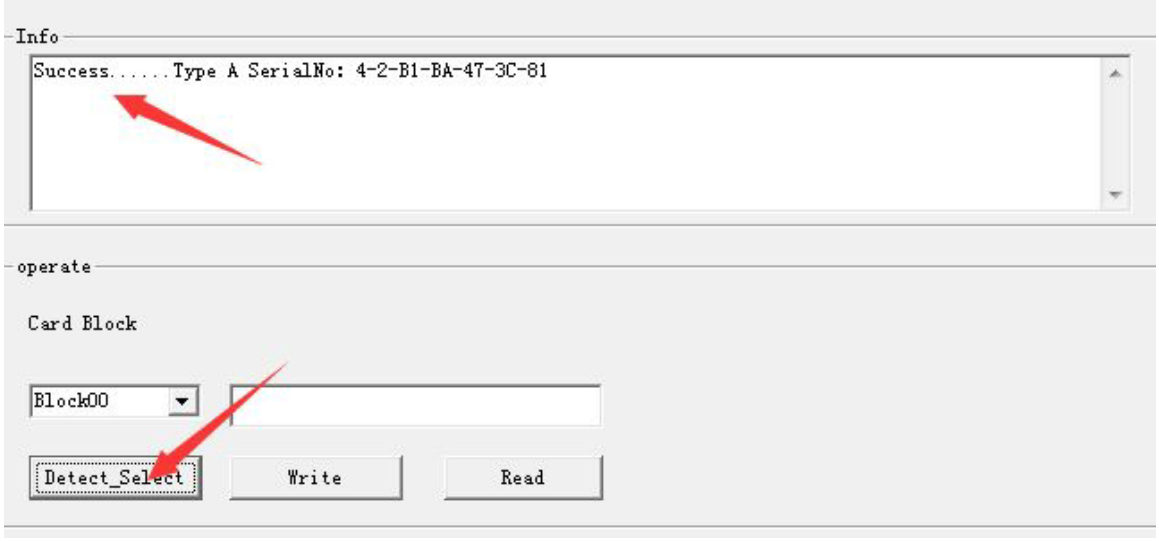


# 6.Ultralight Card

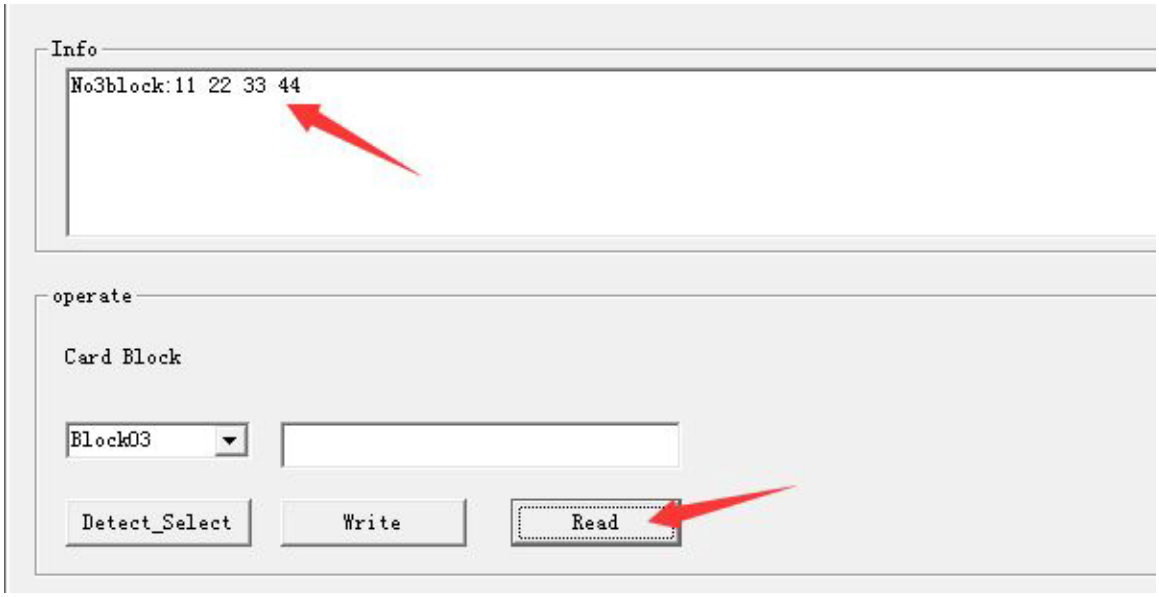
Cards or labels, made by NXP MF0 IC U10,conform to ISO14443A. Blank cards, printing cards,paper stickers,key chains,TOKEN, and various sizes and thickness are provided. Mainly applied to:access control, attendance management, meeting attendance,identification, logistics, industrial automation, various membership cards such as canteen, subway,bus tokens,clubs and other consumer electronics, electronic tickets,animal recognition, target tracking,laundry management , one-card-through etc.

## Demo Software：

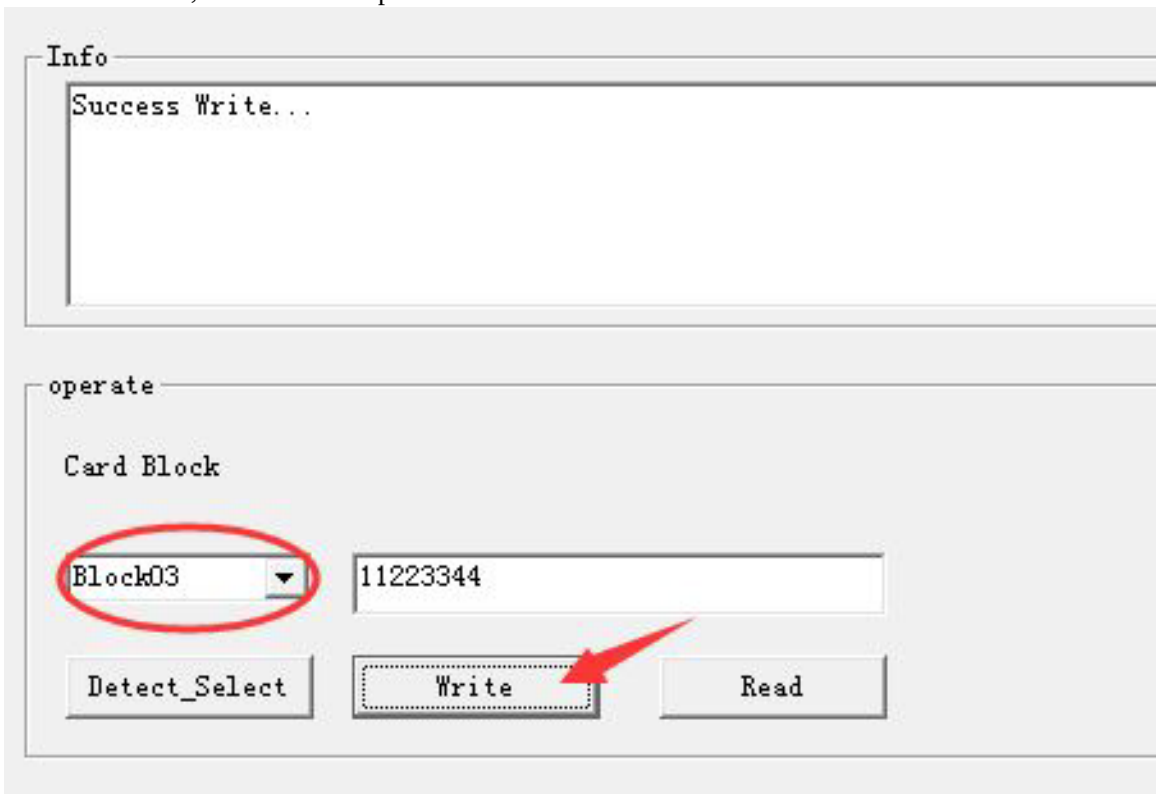
Card searching and selecting operation, as following picture.



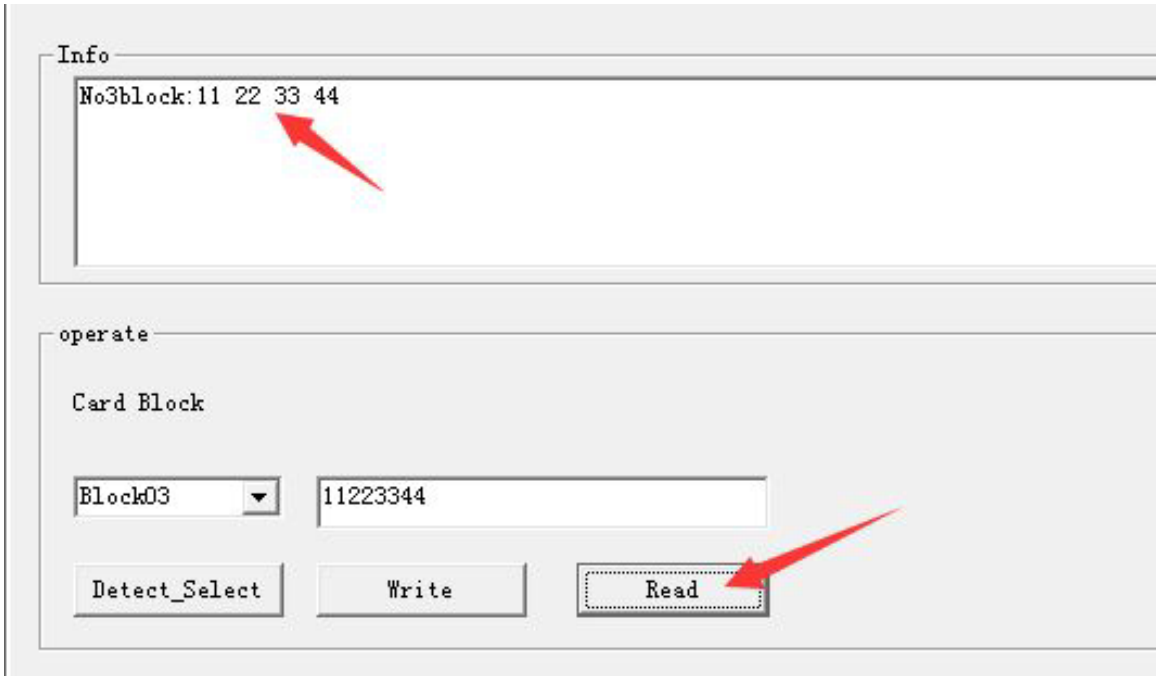

Select the block to read data.




Write block data,as shown in the picture：




Let’s check the data which is written just now, as shown in the picture：


Info
No3block:11 22 33 44
operate
Card Block
Block03
11223344
Detect_Select
Write
Read