

MR760UG User's Manual

(Revision 3.31)

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Please read this manual carefully before using. If any problem, please mail to: jinmuyu@vip.sina.com



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1 Overview

MR760UG desktop contactless IC card reader use USB interface (HID standard). In the systems of Windows, Linux and other PC systems support USB keyboard, the reader simulate the USB keyboard to output the card data. We supply a configuration software. Under the the software, user could configuar complex read card method to implement many type of uses.

The reader supports the ISO15693 compliant tags. The output data could be UID and/or card data.



2 Technical parameters

- PCD: NXP SL RC400
- Working frequency: 13.56MHz
- RF protocol: ISO15693
- Operating distance: 100mm (Mifare One, typical)
- Display: 1 tricolor LED
- Buzzer: Build in
- Interface: USB HID standard, keyboard simulator
- Power supply: DC5V \pm 10%, USB power supply
- Power consumption: 0.6W
- Dimension: 123mm * 88mm * 25mm
- Weight: About 100g
- Operating temperature: -25 ~ +85 °C
- Storage temperature: -40 ~ +125 °C
- PC software: MR76x Config Tools, download from <http://www.jinmyu.com>
- ISP: Support
- RoHS: Compliant



3 Cards supported

- I.CODE SLI
- Tag-it HF-I
- Other tags compliant with ISO15693

4 Model of the reader

4.1 Model format

This is the model format of Master Reader series contactless card reader/writer:

1	2	3	4	5	6
MR	XXX	X	X	X	-XXX

1: Product code; 2: Device class; 3: Communication port; 4: Supported card type;
5: Color of enclosure; 6: ODM code;

4.2 Model description

4.2.1 Product code

The code of Master Reader series contactless card reader is: MR

4.2.2 Device class

600: Desktop reader/writer with LED digital display

701: Desktop reader/writer

730: Ethernet desktop reader/writer

760: HID keyboard simulator interface desktop reader, support ISO15693 only

761: HID keyboard simulator interface desktop reader, support ISO14443A and ISO14443B

780: High performance desktop reader/writer, support ISO7816 fully

790: USB PC/SC interface desktop reader/writer

800: High performance USB PC/SC interface desktop reader/writer with LCD display

810: High performance USB PC/SC interface desktop reader/writer



4.2.3 Communication port

S: RS232C interface, power supply from USB
R: RS485 interface, power supply by wire connection
U: USB interface
E: Ethernet interface, power supply by AC adaptor

4.2.4 Supported card type

A: ISO14443A, Mifare classic and ISO7816
C: ISO14443A, ISO14443B, Mifare classic and ISO7816
G: ISO15693 and ISO7816
H: ISO14443A, ISO14443B, ISO15693, Mifare classic and ISO7816

4.2.5 Color of enclosure

W: white (if blank, default white)
B: black

4.2.6 ODM code

This part is for ODM customer only. It is 3 digital codes like 001, 002...

4.3 Model available

The models below are available for supply:

- MR761UG

5 DIP switch configuration

	ON (default)	OFF
SW1	Working mode depends on the software	Working mode depends on SW2
SW2	Reader on the configuration mode	Reader on the reading card mode
SW3	—	—
SW4	—	—



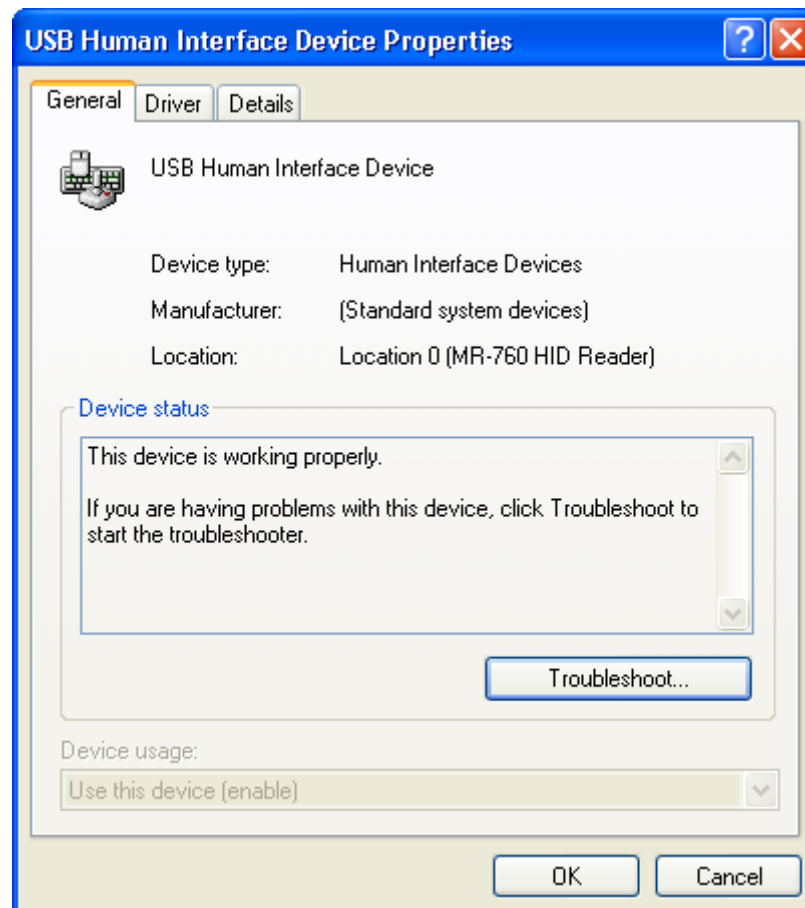
6 Configuration software instruction

6.1 Reader installation

The reader interface is USB HID class. The driver installation will automatic process by OS. User need not do anything except connect the reader.



Then check the attributes of “USB Human Interface Device”:

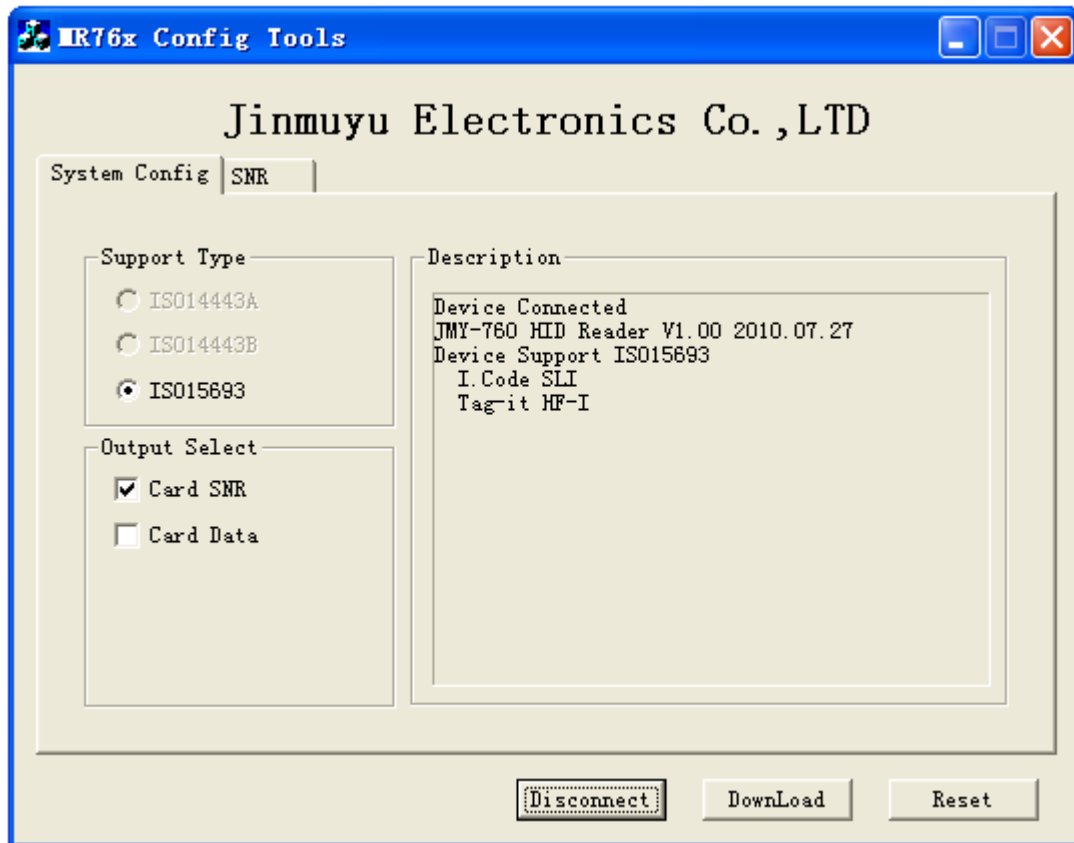




6.2 Software connects to the device

Open the configuration tool.

Then click the “Connect” button. Successfully connect as following:

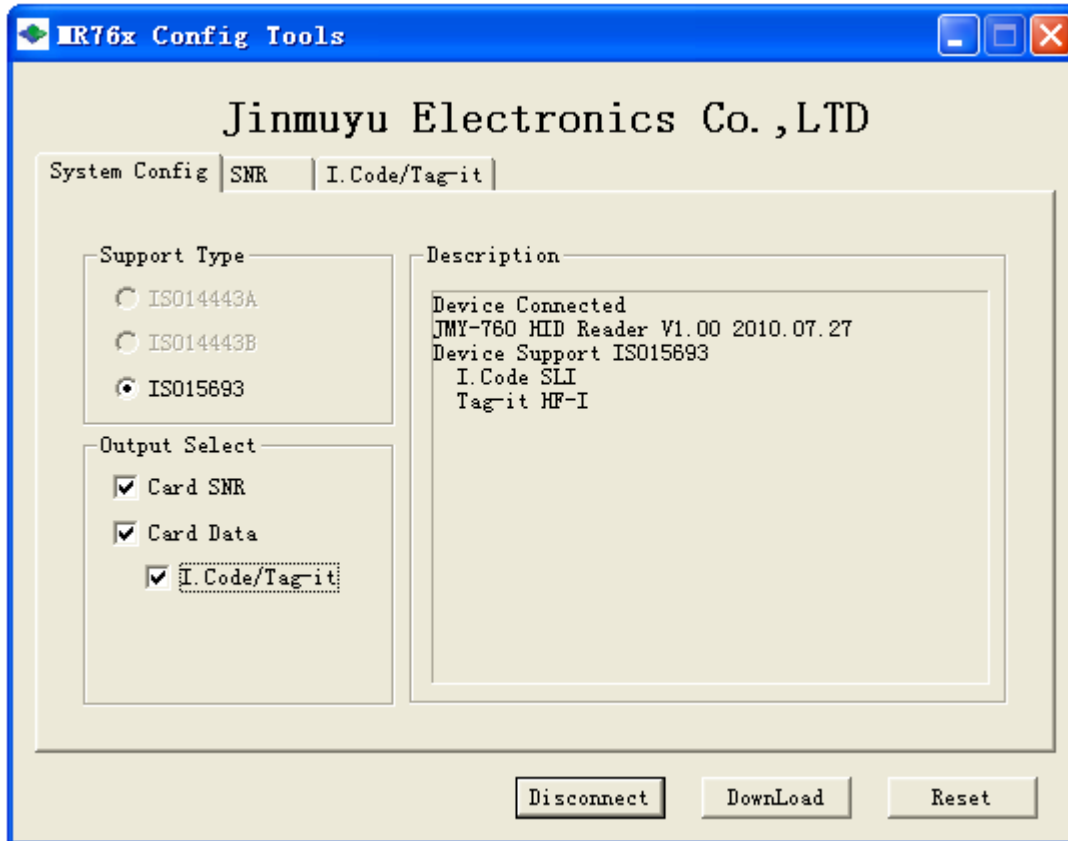


The dialog box will prompt the supported card types.



6.3 Data output configuration instruction

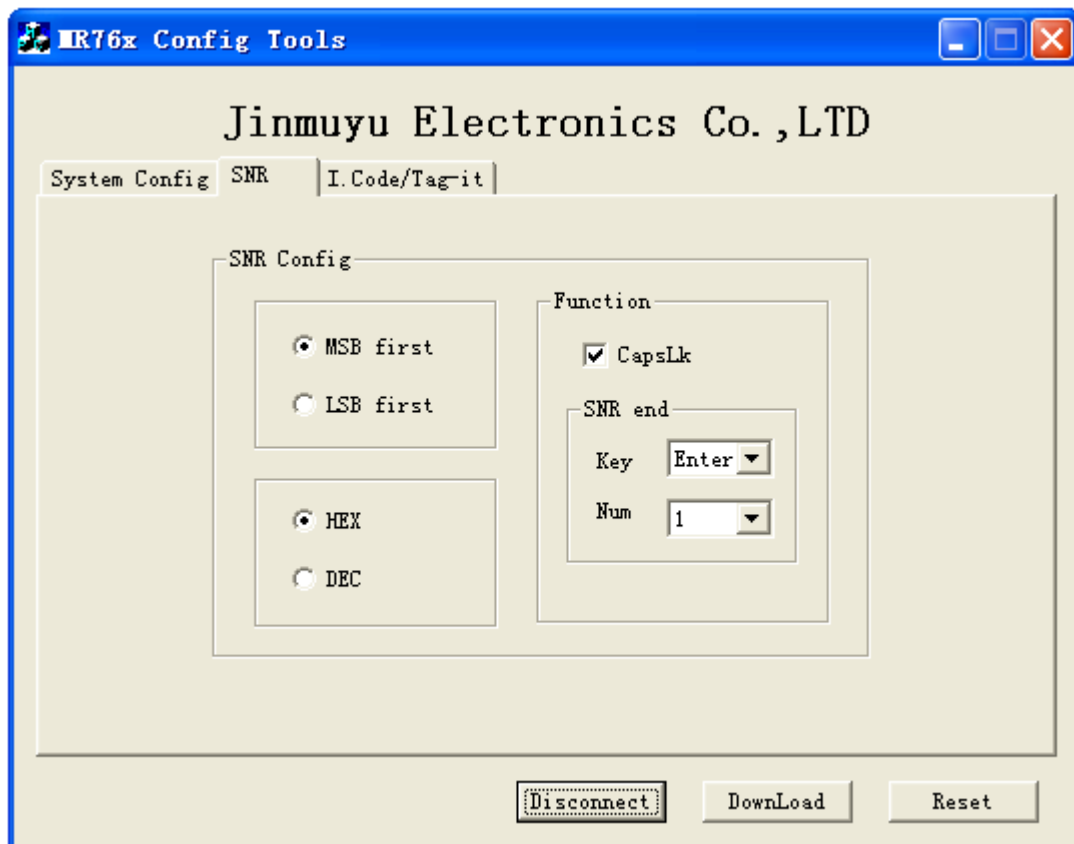
Taking ISO15693 tag as an example, set the output card number and card data. As the picture, the supported tag is I.CODE/Tag.it, and output select is Card SNR and Card Data.





6.3.1 Card SNR output configuration

Click “SNR” tab to set the Card SNR, as following:



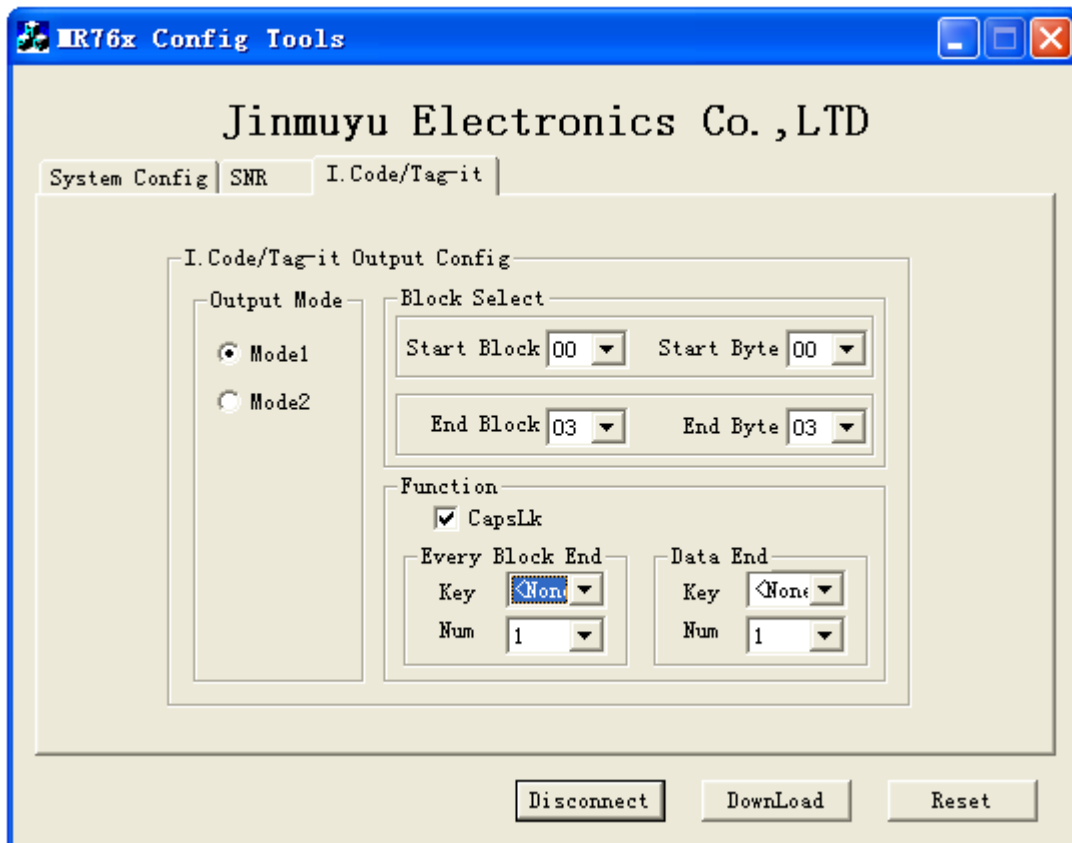
- | | |
|-------------------------|---|
| Card number order set: | Set MSB first or LSB first output |
| Card Number format set: | Set HEX or DEC |
| CapsLk set: | Set the letter of card number in Caps or lower case |
| Extra key set: | After card number output, select output key assignments (4 optional keys: Tab, Enter, Down Arrow and Page Down) and typing numbers. |



6.3.2 Card data output configuration

6.3.2.1 Start data configuration

Click “I.Code/Tag.it” tab to set the card data output configuration. Two modes (Mode1, Mode2) can be select. Select the key assignment in “Every Block End” and “Data End”, as following:



6.3.2.2 Continuous mode

Name the start byte of the start block, then output, till to the end byte of the named end block, as the chart:

	Byte0	Byte1	Byte2	Byte3
Block0	11	22	33	44
Block1	55	66	77	88
Block2	99	AA	BB	CC
Block3	DD	EE	FF	00

If set the following parameters:

Start block = 00

End block = 03

Start byte = 02

End byte = 01

Then the output data is the red data in the chart:

33 44 55 66 77 88 99 AA BB CC DD EE



6.3.2.3 Array mode

Name the start block and end block, then start to output the data from the start byte to the end byte, as the chart:

	Byte0	Byte1	Byte2	Byte3
Block0	11	22	33	44
Block1	55	66	77	88
Block2	99	AA	BB	CC
Block3	DD	EE	FF	00

If set the following parameters:

Start block=00

End block=03

Start byte=01

End byte=02

Then the output data is the red data in the chart:

22 33 66 77 AA BB EE FF

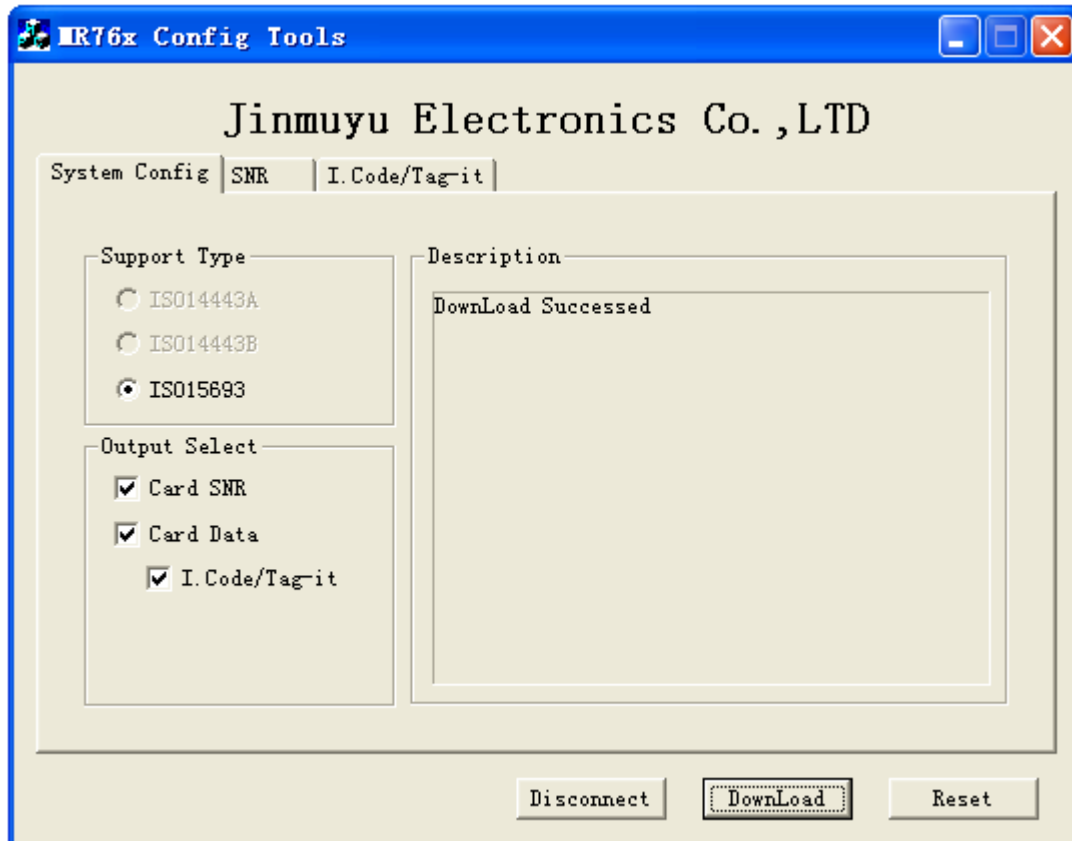
6.3.2.4 Extra key additional

- CapsLk setting: Set CapsLk to configure the output of part of card number letter in Upper-case or Lower-case format.
- Extra key setting: Set the key in two positions (Every block end and Data End) after the card number output. Then set the output key assignments (4 optional keys: Tab, Enter, Down and Page Down) and typing number.
- Every block end: Set the output extra key after every block output ends.
- Data end: Set the output extra key after data output ends.

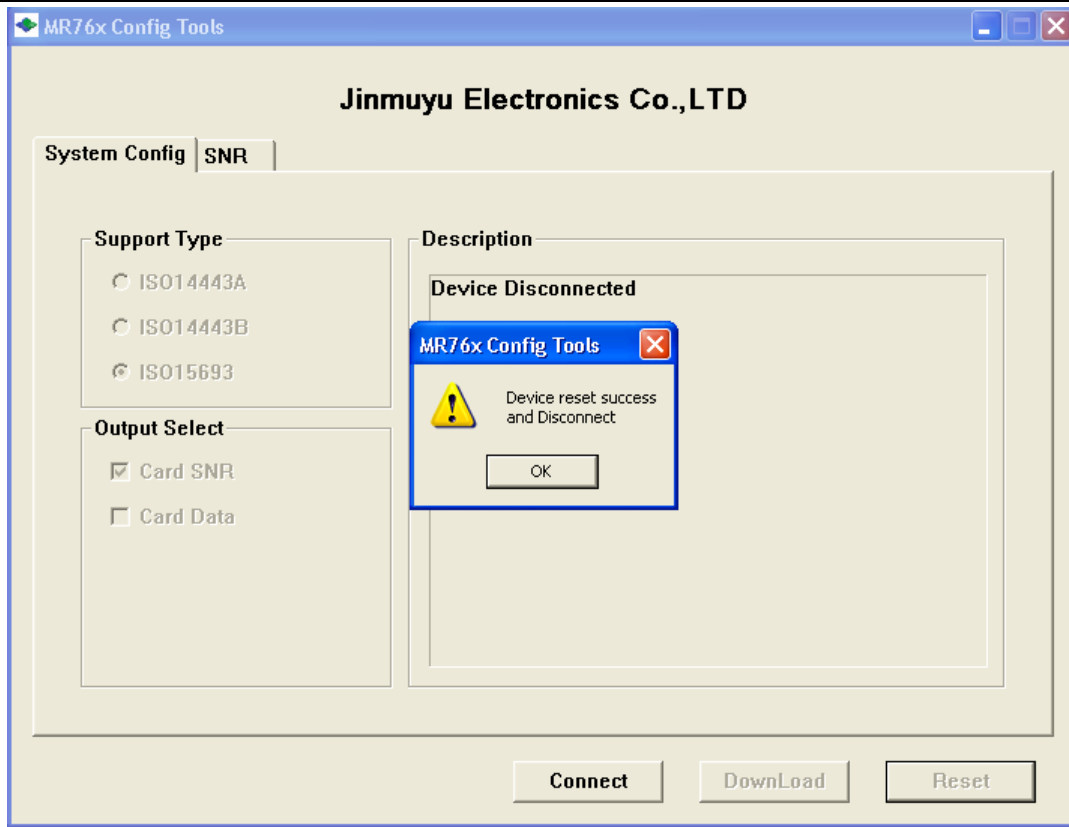


6.3.3 Parameter downloads

After finish all the configuration item, click “DownLoad” to download the parameters, if success, as following:



If download success, and then click “Reset” to restart the device. After restart, the computer and device disconnect. Then the computer will re-identify the device and turn to the reading card mode, as following:

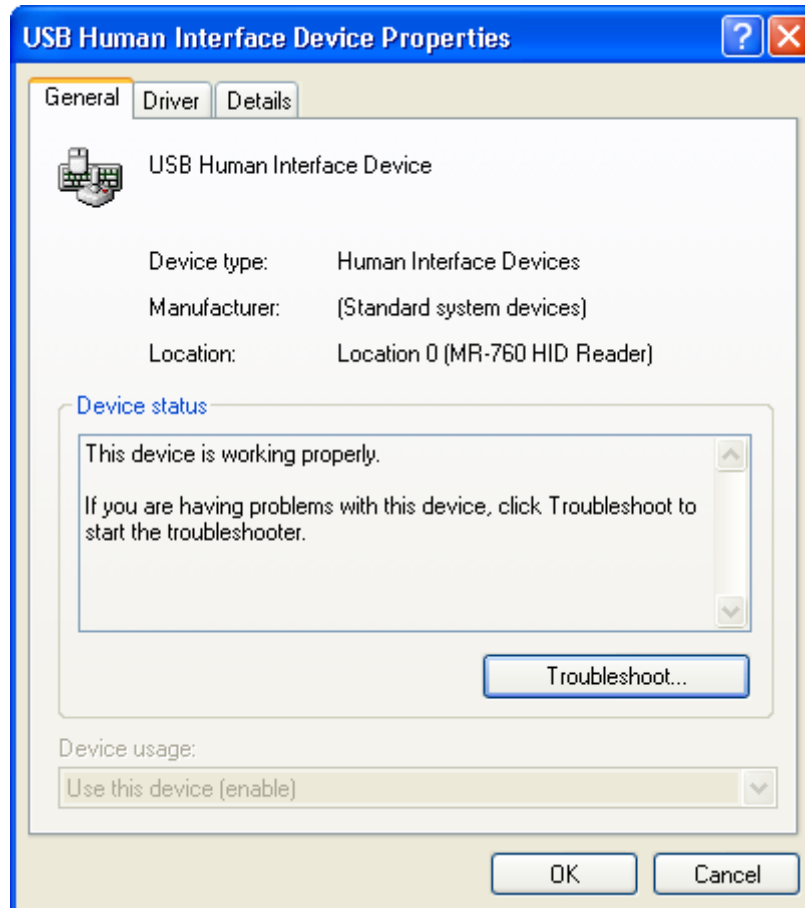


6.4 Device working

Once the computer re-identifies the device, it will only identify one device. As following:



Then according to the set parameter, the device will output the data after read success.



6.5 Reset the configuration parameter

If the output data changed, then need to reset the configuration parameters. Please pull the DIP switch SW1 to OFF, and SW2 to ON. After the device power up and start, user can normally setup the device parameter. When parameter download finishes, pull the DIP switch SW1 to ON, then click “Reset” and restart the device, the device will turn into working mode.

Setting steps:

- Step 1: Pull SW1 to OFF, SW2 stay in ON, device power up.
- Step 2: Set the configuration parameter, download parameter (see the Chapter 5.3)
- Step 3: Pull SW1 to ON.
- Step 4: Click “Reset” to restart the device.

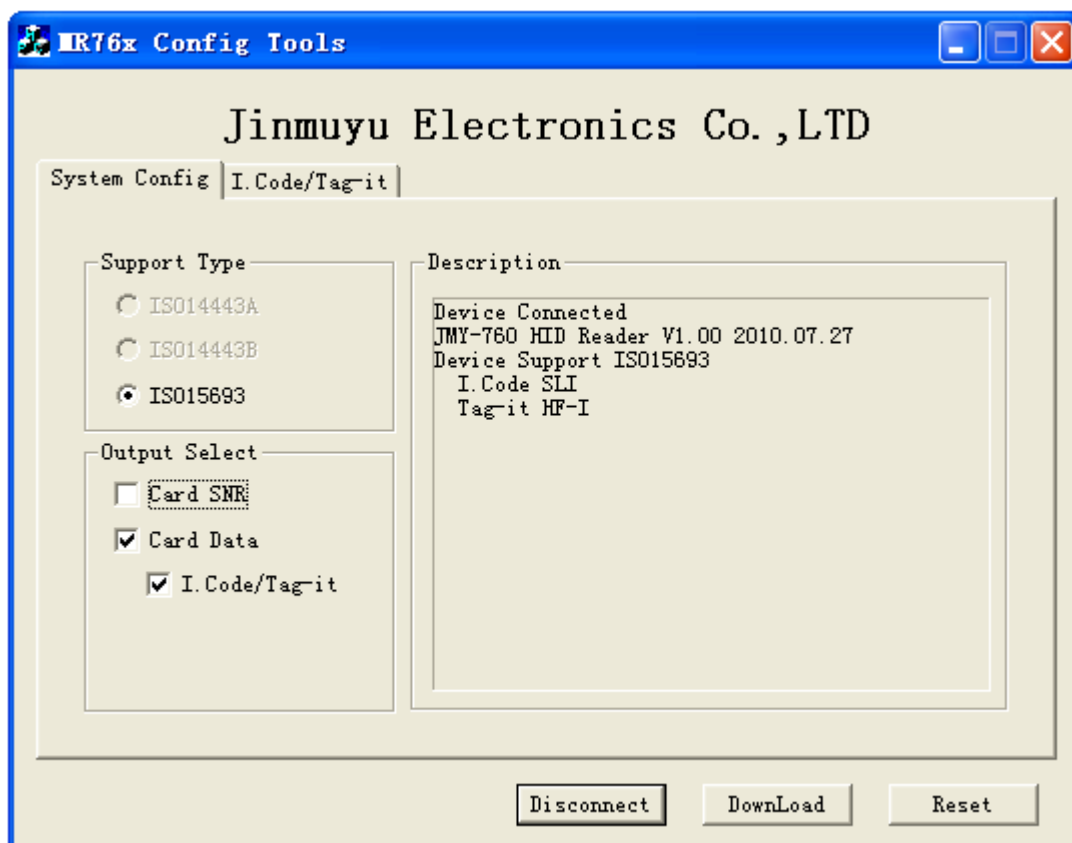


7 Application sample

E.g., as the chart, the ID number **123456201008231234** stores in the Block 4~6:

	Byte0	Byte1	Byte2	Byte3
Block3	XX	XX	XX	XX
Block4	12	34	56	20
Block5	10	08	23	12
Block6	34	XX	XX	XX
Block7	XX	XX	XX	XX

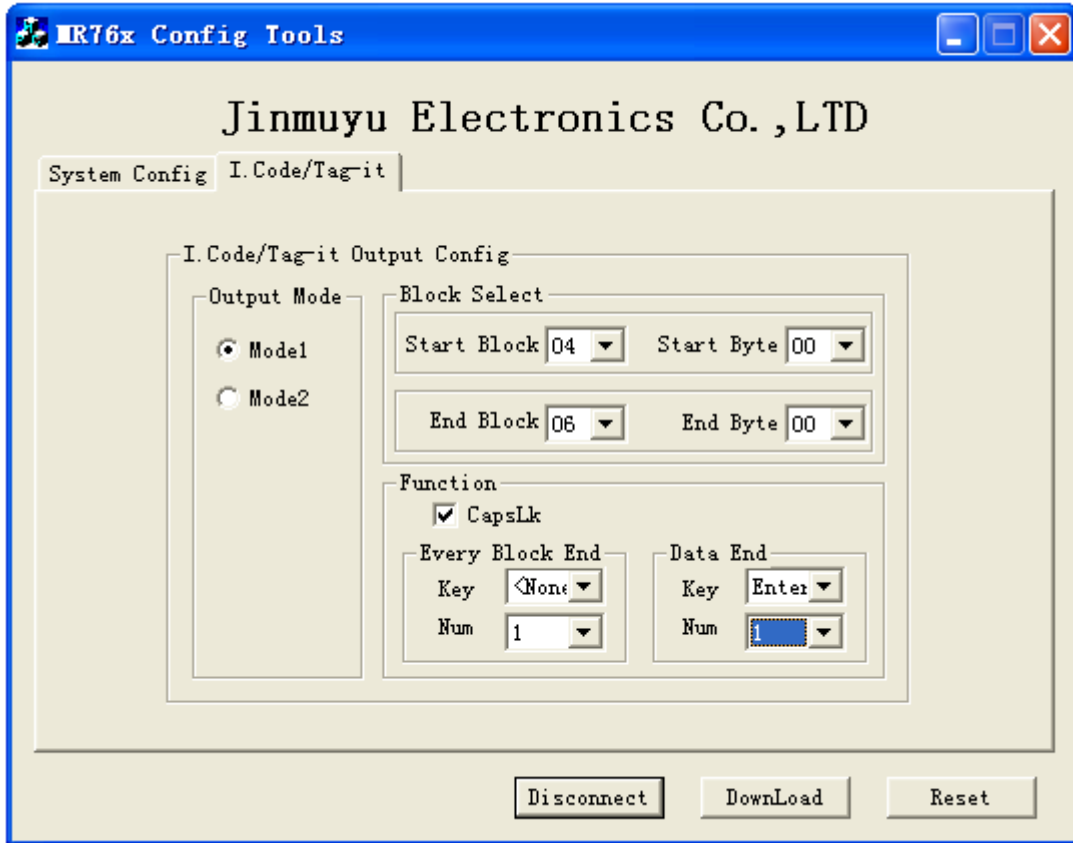
- Set the "System Config" as following:
Not select Card SNR
Select Card data and I.Code/Tag.it



- Set the I.Code/Tag.it as following:
Select Mode 1
Sets:
Start Block = 04
End Block = 06
Start Byte = 00
End Byte = 00
Select CapsLk
Set Every Block End, the Key of Every Block End is None



Key = None
Num = 1
Set Data End, the Key of Data end is Enter, Num is 1.
Key = Enter
Num = 1



As the above setting, the reader will output the Red data in the chart.