JMY609C IC Card Reader

User's manual

(Revision 3.50)

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

Contents

1 Product introduction 2
2 Characteristics 2
3 Physical parameter and pin outs 3
3.1 Photo 3
3.2 Dimension 4
3.3 Cards supported 4
3.3.1 ISO14443A 4
3.3.2 ISO14443B 5
3.3.3 ISO7816 5
3.4 Model available 5
3.5 Model rule 5
3.5.1 Model format 5
3.5.2 Card operating type 5
3.5.3 Communication port 5
4 DIP switch configuration 6
5 Configuration software instruction 6
5.1 Reader installation 6
5.2 Software connects to the device 7
5.3 Data output configuration instruction 8
5.4 Card SNR output configuration 9
5.5 Card data output configuration 10
5.5.1 Start data configuration 10
5.5.2 Continuous mode 10
5.5.3 Array mode 11
5.5.4 Extra key additional 11
5.6 Parameter downloads 12
5.7 Device working 13
5.8 Reset the configuration parameter 14
6 Application sample 14
6.1 Mifare S50/S70 data output 15
6.2 SRI4K data output 17

1 Product introduction

JMY609C contactless IC card reader module use USB interface (HID standard). In the systems of Windows, Linux and other PC systems support USB keyboard, the reader module simulate the USB keyboard to output the card data. We supply a configuration software. Under the software, user could configure complex read card method to implement many type of uses.

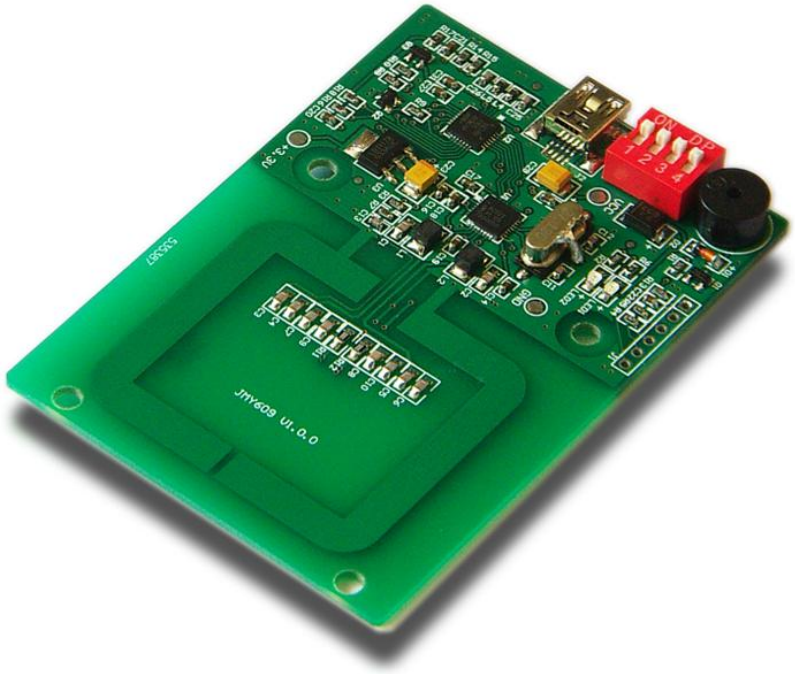
The reader module supports the ISO14443A&B compliant IC cards. The output data could be UID and/or card data.

2 Characteristics

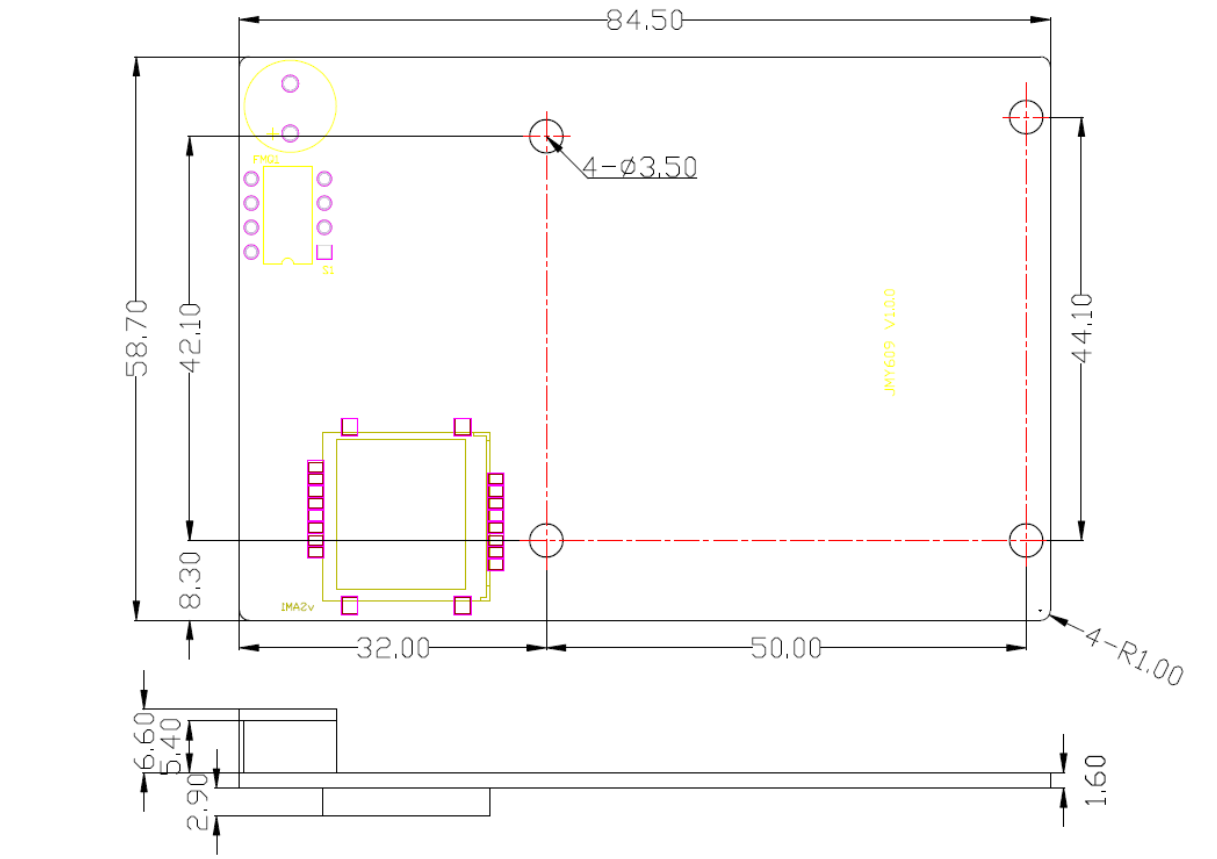
- PCD model: NXP RC523
- Working frequency: 13.56MHz
- Supported standard: ISO14443A, ISO14443B
- SAM card slot: 2 slots, full function support ISO7816, only for ODM
- Power supply: DC 5V (±0.5V), USB power supply
- Display: 2 LED (red, yellow)
- Buzzer: Build in
- Interface: USB (HID standard), keyboard simulator
- Power consumption: 110mA
- Operating distance: 80mm (MIFARE One, typical distance)
- Dimension: 84.5mm*58.7mm
- Weight: About 100g
- ISP: Supported
- Operating temperature: -25 to +85 ℃
- Storage temperature: -40 to +125 ℃
- RoHS: Compliant
- PC software: MR76x Config Tools

3 Physical parameter and pin outs

3.1 Photo



3.2 Dimension



3.3 Cards supported

3.3.1 ISO14443A

Mifare One S50
Mifare One S70
Mifare One Mini
Mifare Ultra Light
Desfire (UID)
Mifare Plus (UID)
ISO14443-4 (T=CL) TYPE A dual interface CPU Card (UID)

3.3.2 ISO14443B

SR176
SRI512
SRI1K
SRI2K
SRI4K
SRIX4K

3.3.3 ISO7816

Any type of contact smart cards according to ISO7816, support any baud rate reset and any baud rate operation (by PPS).

3.4 Model available

- JMY609AU
- JMY609CU

3.5 Model rule

3.5.1 Model format

1	2	3	4
JMY	609	X	X

1: company code; 2: product series code; 3: card operating type; 4: communication port type

3.5.2 Card operating type

A: PCD is RC522, support ISO14443A and Mifare Class
C: PCD is RC523, support ISO14443A, ISO14443B and Mifare Class

3.5.3 Communication port

U: USB(HID Standards)

4 DIP switch configuration

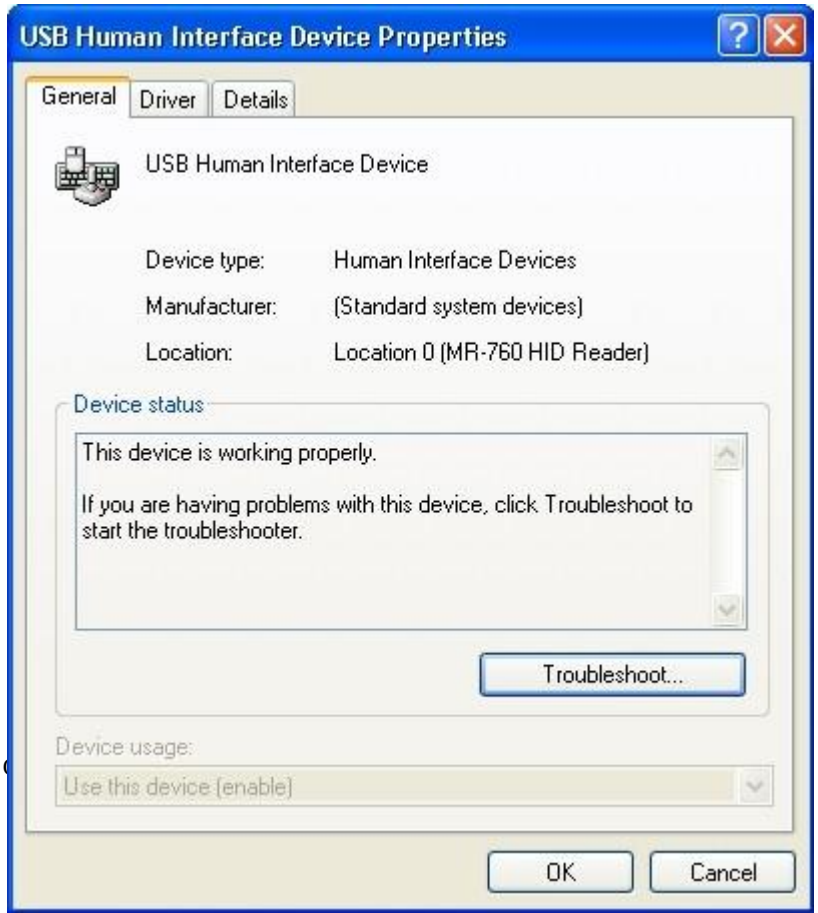
	ON (default)	OFF
SW1	Working mode depends on the software	Working mode depends on SW2
SW2	Reader on the configuration mode	Reader on the reading card mode
SW3	-	-
SW4	-	-

5 Configuration software instruction

5.1 Reader installation

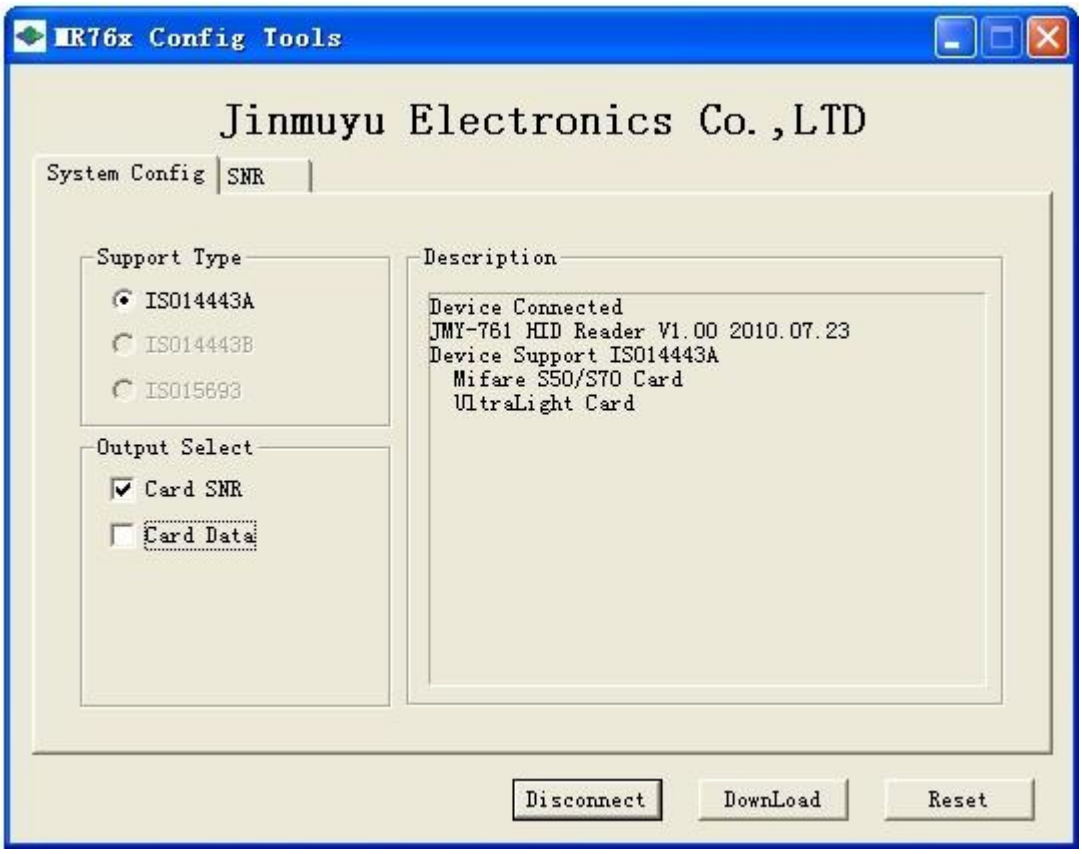
The reader module interface is USB HID class. The driver installation wills automatic process by OS. User need not do anything except connect the reader.

Then check the attributes of "USB Human Interface Device":



5.2 Software connects to the device

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

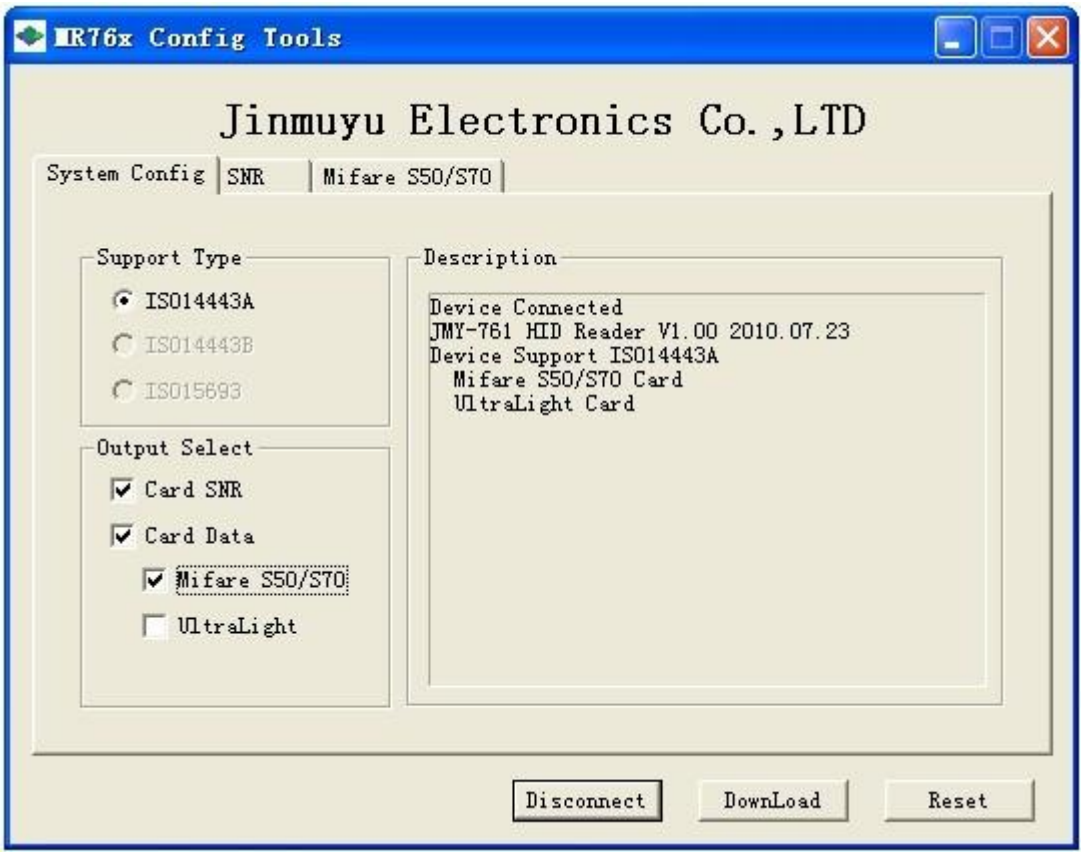


The dialog box will prompt the supported card types.

Note: MR761 and JMY609 have the same "Configuration Software".

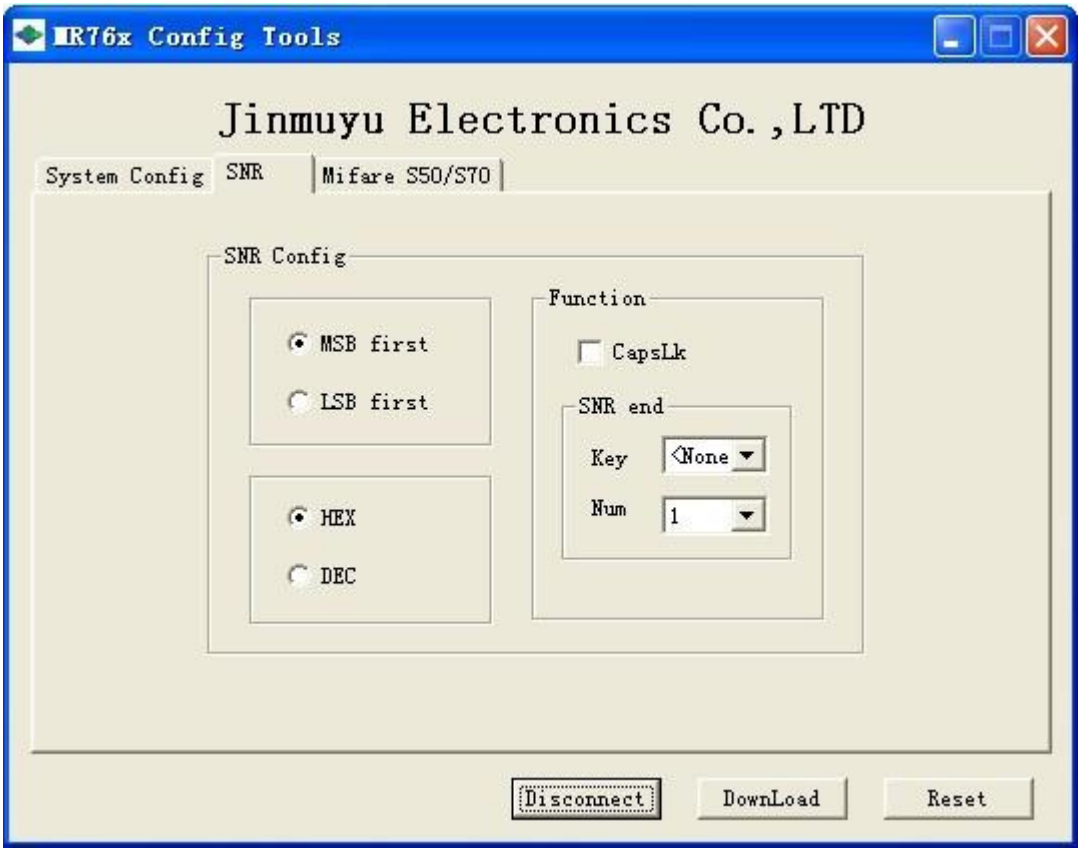
5.3 Data output configuration instruction

Taking ISO14443A tag as an example, set the output card number and card data. As the picture, the supported card is ISO14443A, and output select is Card SNR, Card Data Mifare S50/S70 and UltraLight



5.4 Card SNR output configuration

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

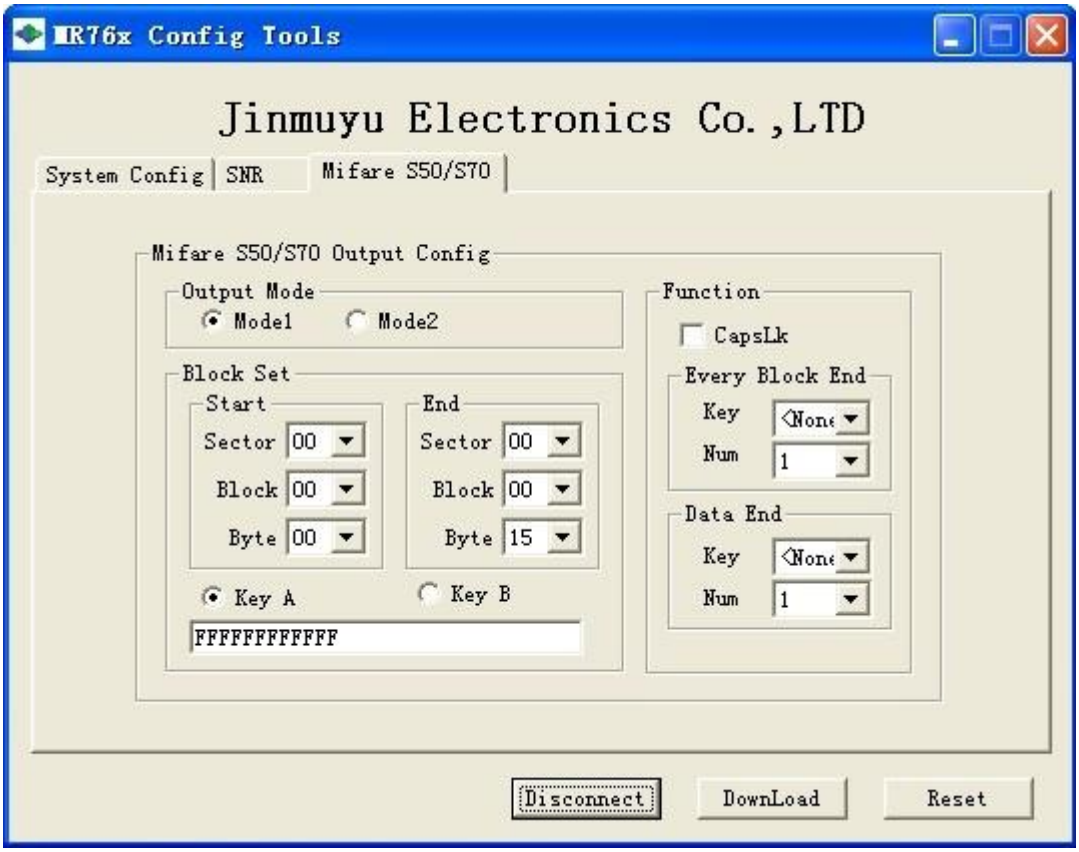


Card number order set: Set MSB first or LSB first output
Card Number format set: Set HEX or DEC
CapsLk set: Set the letter of card number in Caps or lower case
Extra key set: After card number output, select output key assignments (4 optional keys: Tab, Enter, Down Arrow and Page Down) and typing numbers.

5.5 Card data output configuration

5.5.1 Start data configuration

Click “Mifare S50/S70” 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:



5.5.2 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:

Byte / Block	00	01	02	03	04	05	6	7	8	9	10	11	12	13	14	15
Block0	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
Block1	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F
Block2	20	21	22	23	24	25	26	27	28	29	2A	2B	2C	2D	2E	2F

If set the following parameters:

Start sector = 00
End sector = 00
Start block = 00
End block = 02
Start byte = 07
End byte = 06
Then the output data is the red data in the chart:

07 08 09 0A 0B 0C 0D 0E 0F
10 11 12 13 14 15 16 17 18 19 1A 1B 1C 1D 1E 1F
20 21 22 23 24 25 26

5.5.3 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:

Byte / Block	00	01	02	03	04	05	6	7	8	9	10	11	12	13	14	15
Block0	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
Block1	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F
Block2	20	21	22	23	24	25	26	27	28	29	2A	2B	2C	2D	2E	2F

If set the following parameters:
Start sector=00
End sector=00
Start block=00
End block=02
Start byte=03
End byte=09
Then the output data is the red data in the chart:
03 04 05 06 07 08 09
13 14 15 16 17 18 19
23 24 25 26 27 28 29

5.5.4 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.

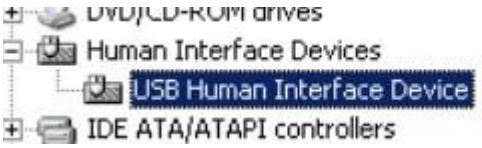
5.6 Parameter downloads

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

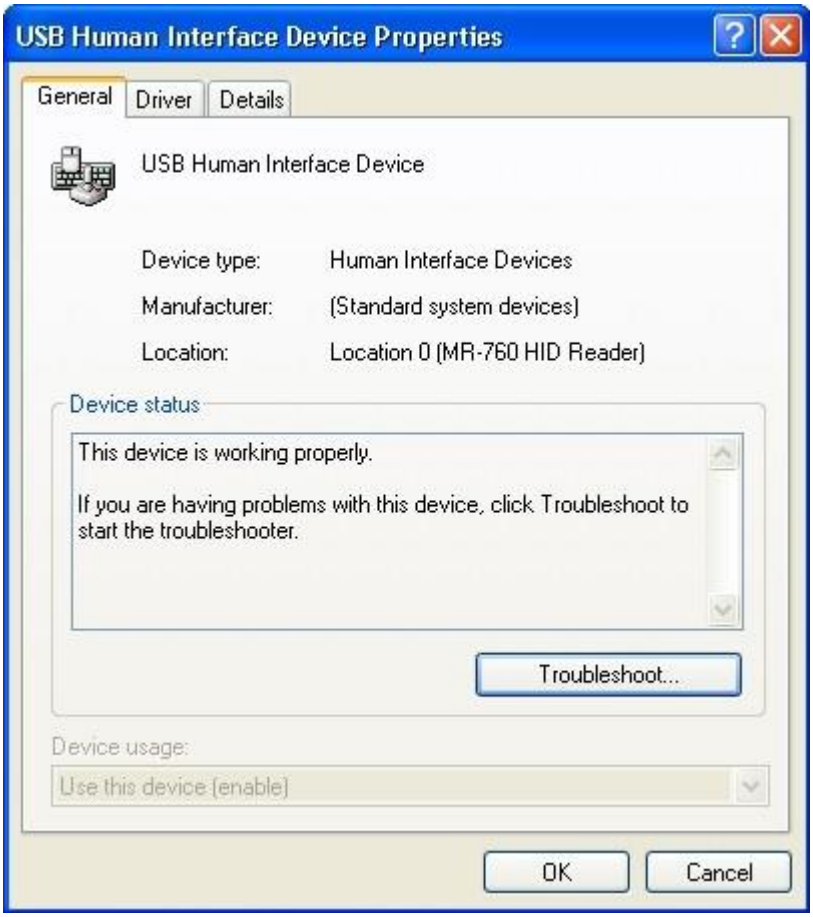
If download success, and then click “Reset” to restart the device. After restart, the computer and device disconnect. Then the computer will re-identify the device and turn to the reading card mode, as following:

5.7 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.



5.8 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.

Step 3: Pull SW1 to ON.

Step 4: Click “Reset” to restart the device.

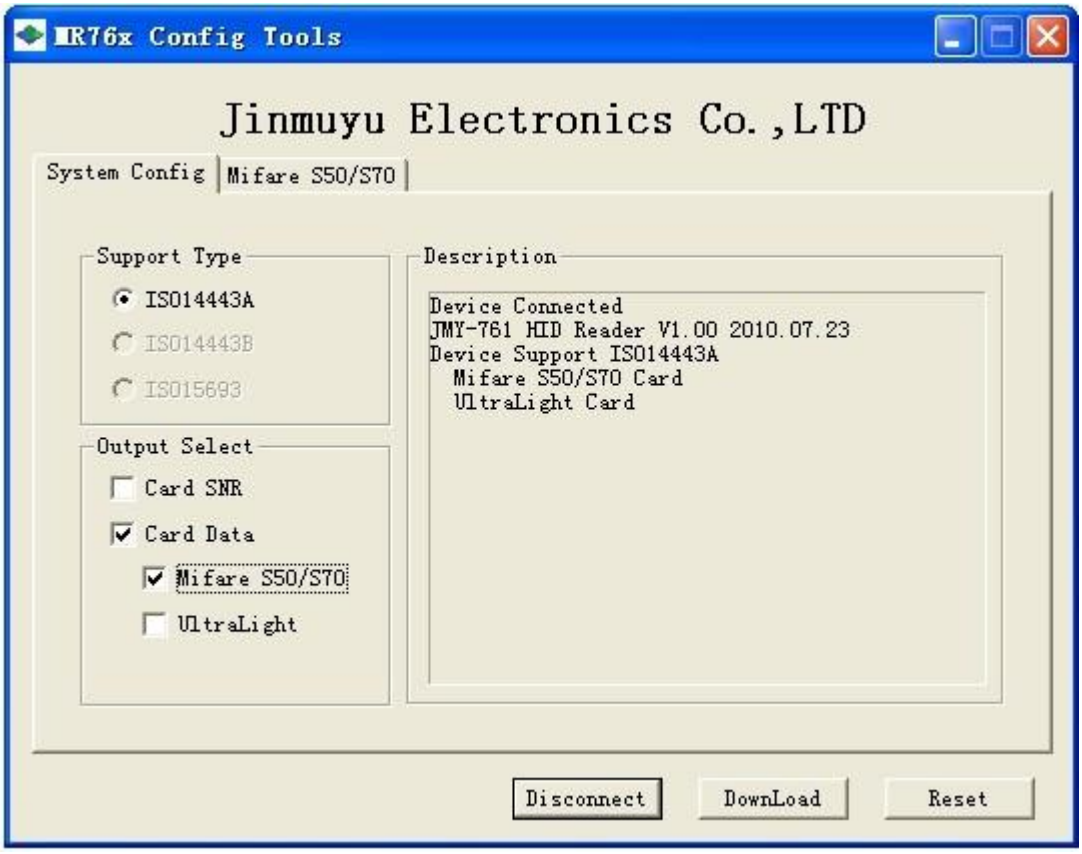
6 Application sample

6.1 Mifare S50/S70 data output

E.g., as the chart, the RED NUMBER stores in the Block 4~6:

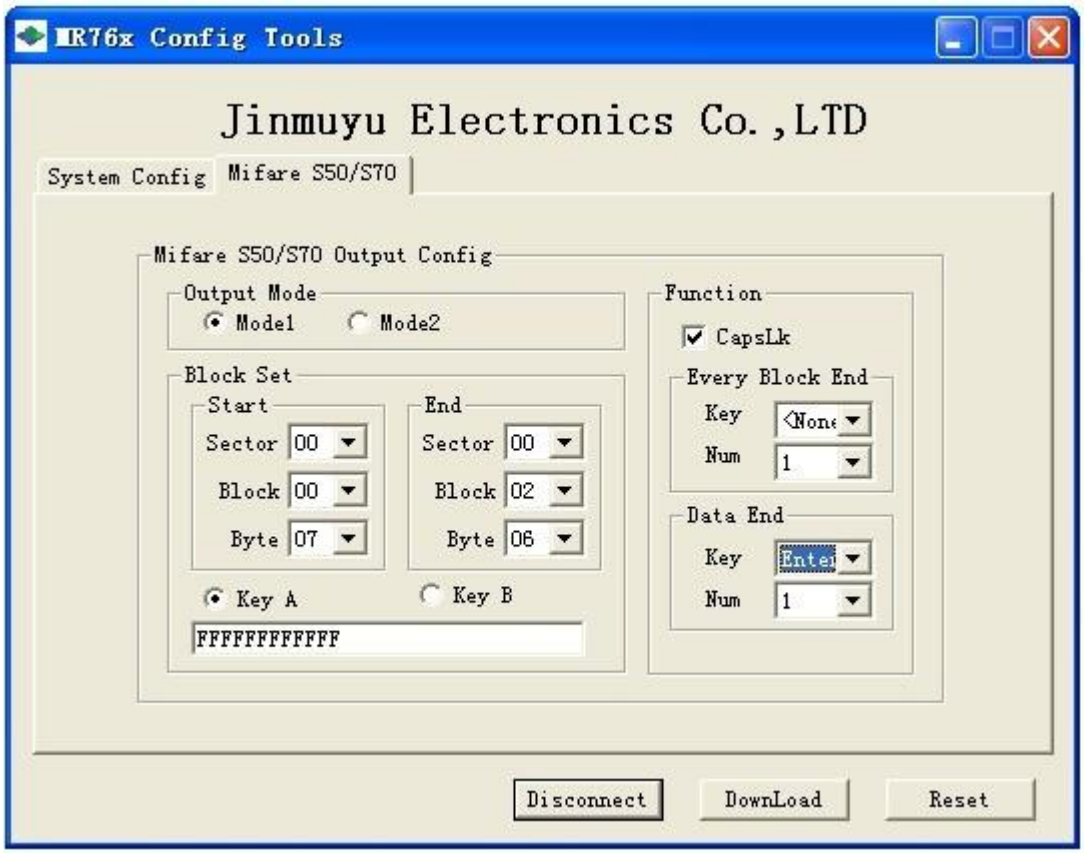
Byte / Block	00	01	02	03	04	05	6	7	8	9	10	11	12	13	14	15
Block4	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
Block5	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F
Block6	20	21	22	23	24	25	26	27	28	29	2A	2B	2C	2D	2E	2F

Set the “System Config” as following:
Not select Card SNR, not output the card number
Select Card data and Mifare S50/S70



Set the Mifare S50/S70 as following:
Select Mode 1, and set the continuous output mode
Set:
Start sector=01
Start block=00
Start byte=07

End sector=01
End Block=02
End Byte=06
Select data to output
Select Key type: Key A
Set Key: FF FF FF FF FF FF
Set CapsLk to select the Capital letter output.
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



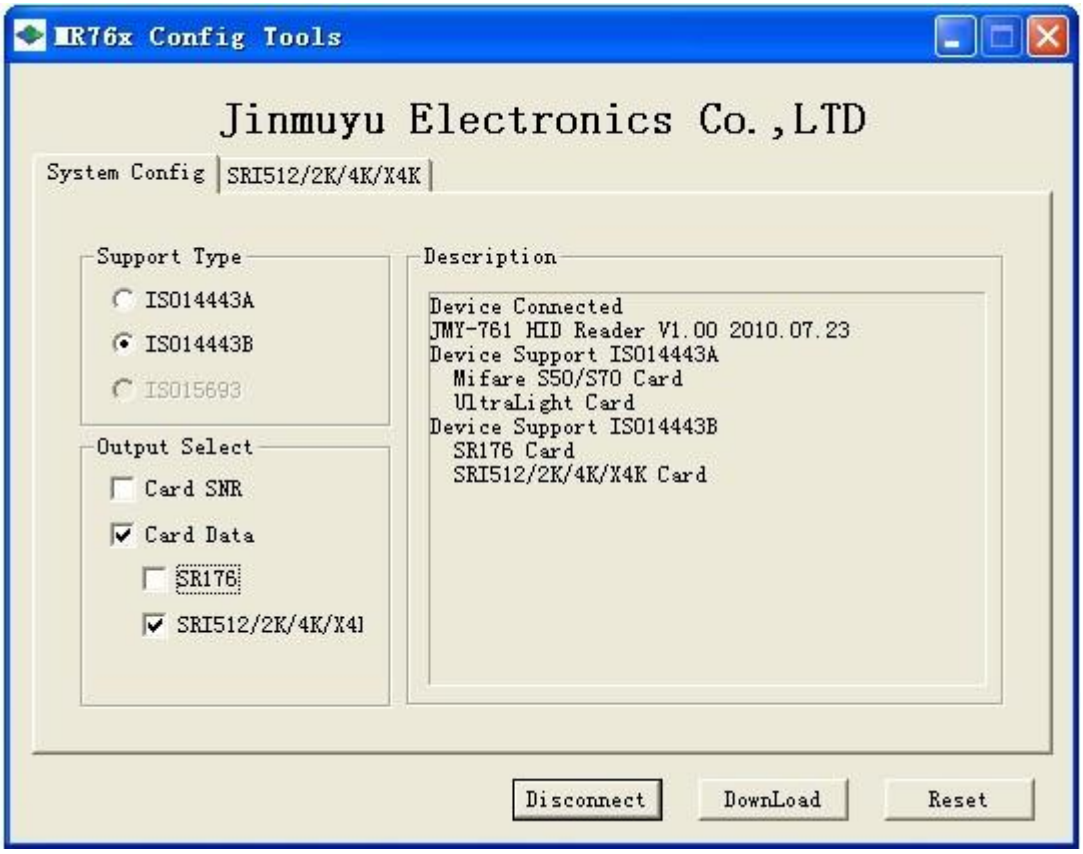
As the above setting, the reader will output the Red data in the chart.

6.2 SRI4K data output

As the chart, there are 123456201008231234 stored in the Block4-6:

	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, not output the card number
Select ISO14443B, Card data and SRI512/2K/4K/X4K Card



Set the SRI512/2K/4K/X4K Card as following:
Select Mode 1
Set:
Start Block=04
End Block=06

Start Byte=00

End Byte=00

Select CapsLk, Capital output

Set Every Block End, the Key of Every Block End is None

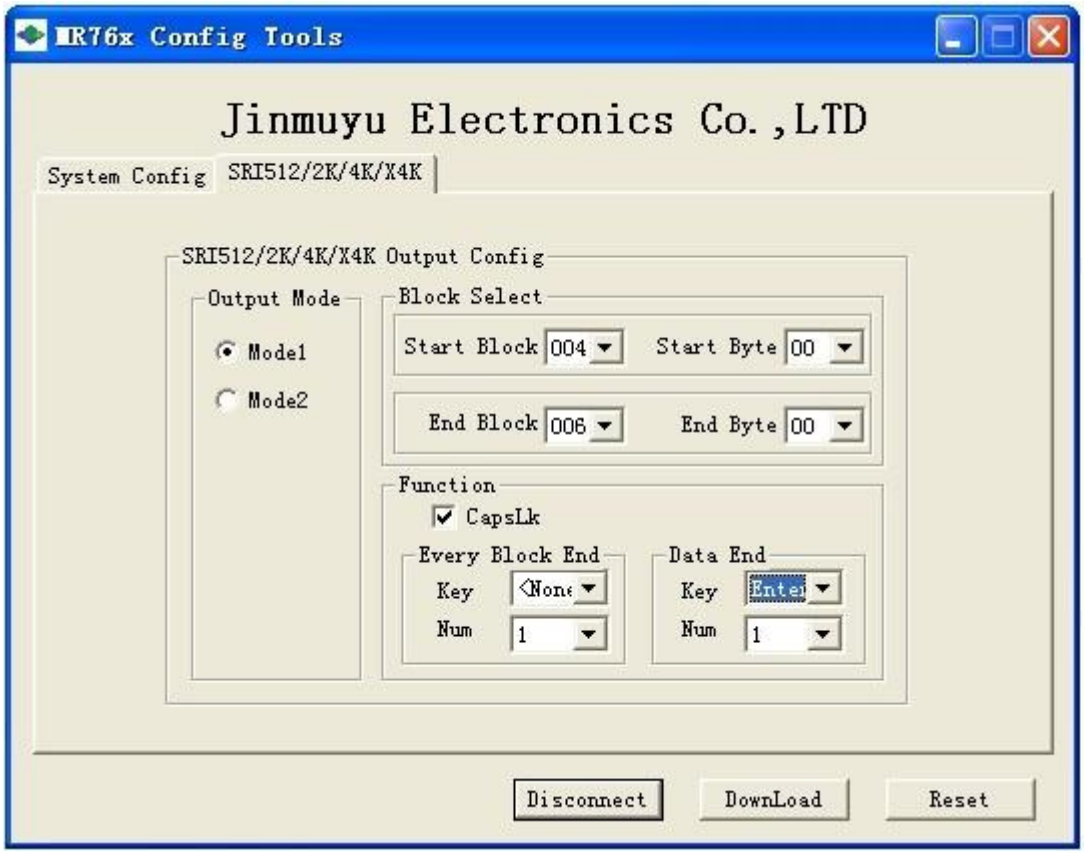
Key=None

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.

