JMY609C IC Card Reader

User's manual

(Revision 3.50) Jinmuyu Electronics Co. LTD 2012/3/2



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



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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

٠	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
٠	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 °C
•	Storage temperature:	-40 to +125 °C
•	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 SRI4K

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	Х	Х

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.

DVD/CD-ROM unives
 DVD/CD-ROM unives

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

JSB Hun	nan Int	erface D	evice Properties	?
General	Driver	Details		
9	USB H	luman Inte	Iface Device	
	Device	e type:	Human Interface Devices	
	Manuf	acturer:	(Standard system devices)	
	Locati	on:	Location 0 (MR-760 HID Reader)	
Devic	e status			
This If you start	device i: u are hav the trout	s working p ving probler bleshooter.	roperly. ms with this device, click Troubleshoot to	<
			Troubleshoot	
Device	usage:			
Use th	is device	(enable)		~
				Cancel



5.2 Software connects to the device

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

Jinmuyu	Electronics Co.,LTD	
vstem Config SNR		
Support Type © ISO14443A C ISO14443B C ISO15693 Output Select © Card SNR © Card Data	Description Device Connected JMY-761 HID Reader V1.00 2010.07.23 Device Support IS014443A Mifare S50/S70 Card UltraLight Card	
	Disconnect Download	Report

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

IR76x Config Tools		
Jinmuyu System Config SNR Mifar	Electronics Co.,LTD	
Support Type © IS014443A © IS014443B © IS015693 Output Select © Card SNR © Card Data © Mifare S50/S70	Description Device Connected JMY-761 HID Reader V1.00 2010.07.23 Device Support IS014443A Mifare S50/S70 Card UltraLight Card	
☐ UltraLight	Disconnect DownLoad	Reset



5.4 Card SNR output configuration

Click "SNR" tab to set the Card SNR, as following:

SNR Config MSB first C LSB first HEX C DEC	Function CapsLk SNR end Key None Num 1	
--	--	--

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:

JINMUYU Electron System Config SNR Mifare S50/S70 Mifare S50/S70 Output Config Output Mode Output Mode Model Mode2 Block Set Sector 00 • Block 00 • Block 00 • Block 00 • Byte 15 • • Key A • Key B FFFFFFFFFF	ICS CO., LID Function CapsLk Every Block End Key None Num 1 Num 1 Num 1 Num 1
--	---

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	0 A	OB	0 C	0D	OE	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:



Mifare & ISO14443A&ISO14443B&ISO7816

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:

2 - A																
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	0 A	0B	0 C	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:

stem Config SNR Mifar	e S50/S70
Support Type	Description
 C IS014443B C IS015693 Output Select ✓ Card SNR ✓ Card Data ✓ Mifare S50/S70 ✓ UltraLight 	DownLoad Successed

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:

Mifare & ISO144	43A&ISO14443B&ISO7816	http://www.jinmuyu.com
MR76x Config Tools System Config	Jinmuyu Electronics Co.,LTD	
Support Type C ISO14443A C ISO14443B C ISO15693 Output Select Card SNR Card Data	Device Disconnected MR76x Config Tools Device reset success and Disconnect OK	
	Connect DownLo	ad Reset

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.



USB Hun	nan Interface D	evice Properties	? 🛛
General	Driver Details		
ł	USB Human Inte	rface Device	
	Device type:	Human Interface Devices	
	Manufacturer:	(Standard system devices)	
	Location:	Location 0 (MR-760 HID Reader)	
Devid	ce status		
This If yo start	device is working p u are having proble the troubleshooter.	properly. ms with this device, click Troubleshoot to	<
		Troubleshoot	
Device	usage:		
Use th	is device (enable)		~
		ОК	ancel

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	OB	0 C	0D	OE	OF
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

Jinmuyu stem Config Mifare S50/S70	Electronics Co.,LTD
Support Type Support Type ISO14443A ISO14443B ISO15693 Output Select Card SNR Card Data Vifare S50/S70 UtraLight	Description Device Connected JMY-761 HID Reader V1.00 2010.07.23 Device Support ISO14443A Mifare S50/S70 Card VltraLight Card
	Disconnect DownLoad Rese

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

System Config Mifare S50/S70 Mifare S50/S70 Output Config Output Mode • Model • Mode2 Block Set Start Sector 00 • Block 00 • Block 00 • Block 02 • Byte 07 • Byte 06 • FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	Function CapsLk Every Block End Key Nons Num 1 Data End Key Enter Num 1 V
---	---

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



6.2 SRI4K data output

	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

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

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

IK
Description Device Connected JMY-761 HID Reader V1.00 2010.07.23 Device Support IS014443A Mifare S50/S70 Card UltraLight Card Device Support IS014443B SR176 Card SR1512/2K/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

IR76x Config Tools		
Jinmuy System Config SRI512/2K/4 SRI512/2K/4K/X4 Output Mode Mode1 Mode2	U Electronics Co., LTD K/X4K K Output Config Block Select Start Block 004 Start Byte 00 End Block 006 End Byte 00 Function V CapsLk Every Block End Key None V	
2	Num 1 V Num 1 V Disconnect DownLoad	Reset

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