JMY6021 IC Card Read/Write Module

User's Manual

(Revision 4.02)

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Contents

1 Product introduction

JMY6021 is a series of RFID read/write module with IIC / UART / RS232C / USB communication port. JMY6021 has various functions and supports multi ISO/IEC standard of contactless card. The RF protocol is complex, but the designer combined some frequent used command of RF card and then user could operate the cards with full function by sending simple command to the module.

The module and antenna is integrated. The impedance between RF circuit and antenna was tuned by impedance analyzer, and then the module has excellent performance and stability.

2 Key Characteristics

- **Modules integrated antenna, excellent consistency and stability**
- **EMV2010 certification ability in RF part**
- **2 SAM slots, full fill payment system usage**
- **USB HID interface, convenience to use on PC**

3 Technical parameters

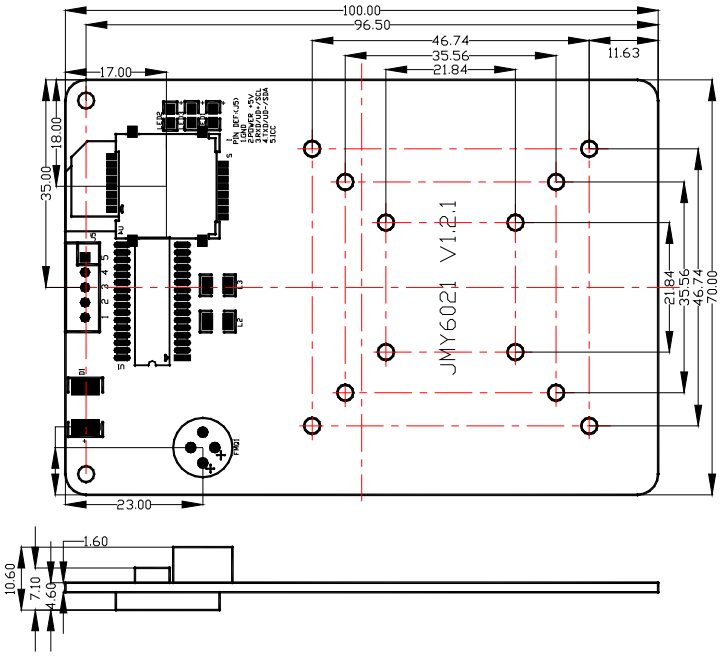
- PCD type: NXP MF RC500 / MF RC531 / CL RC400 / SL RC632
- Working frequency: 13.56MHz
- Supported standard: ISO14443A, ISO14443B, ISO15693, ISO7816
- Card supported: see: module function configuration table
- Anti collision ability: Full function anti collision; be able to set multi-cards or single card
- Auto detecting card: Supported, default OFF, could be set
- SAM slots: 2, T=0 & T=1 9600, 19200, 38400, 55800, 57600, 115200bps
- Data FLASH: 512 Bytes
- Power supply: DC 5V (±10%)
- Interface: USB HID, RS232C, UART or IIC on order
- Communication speed: IIC Max. 200Kbps
  UART 19200bps / 9600bps / 38400bps / 57600bps / 115200bps
  USB 2.0 HID class
- Interface level: UART/IIC 3.3V (5V tolerance)
- Max. command length: JCP04 253 bytes
  JCP05 510 bytes
- Power consumption: Max. 150mA
- Operating distance: 100mm (M1 typical distance, depending on card quality)
- Dimension: 100mm * 70mm * 10.6mm
- Weight: About 30g

- ISP: Supported
- RoHS: Compliant
- CE certification: in plan (Jan. 17, 2015, soon)
- Operating temperature: -25 to +85°C
- Storage temperature: -40 to +125°C

4 Physical parameter and pin outs

4.1 Photo

4.2 Dimension



4.3 Pin configurations and pin outs

Pin number	Function	Type	Description
1	GND	Power	GND
2	VCC	Power	VCC
3	RXD / SCL	Input	RS232C RXD / UART RXD / IIC SCL / USB D+
4	TXD / SDA	Input/output	RS232C TXD / UART TXD / IIC SDA / USB D-
5	ICC	Output	Card in/out indicator, 0: Card IN; 1: Card OUT

4.4 Module function configuration table

	JMY6021A	JMY6021C	JMY6021G	JMY6021H
PCD	MF RC500	MF RC531	SL RC400	CL RC632
JCP04 protocol	●	●	●	●
JCP05 protocol	●	●	●	●
MIFARE 1K	●	●		●
MIFARE 4K	●	●		●
MIFARE Ultra Light	●	●		●
MIFARE Ultra Light C	●	●		●
MIFARE Mini	●	●		●
MIFARE DES fire	●	●		●
MIFARE Plus	●	●		●
T=CL TYPE A	●	●		●
SR176		●		●
SRI512		●		●
SRI1K		●		●
SRI2K		●		●
SRI4K		●		●
SRIX4K		●		●
T=CL TYPE B		●		●
I.CODE 1			●	●
I.CODE SLI			●	●
I.CODE SLI-S			●	●
TI Tag-it series			●	●
ST LRI series			●	●
On Chip Data FLASH	512 bytes			

SAM slots	2			
ISO7816 (T=0 & T=1)	●	●	●	●
IIC interface	JMY6021AI	JMY6021CI	JMY6021GI	JMY6021HI
UART interface	JMY6021AT	JMY6021CT	JMY6021GT	JMY6021HT
RS232C interface	JMY6021AS	JMY6021CS	JMY6021GS	JMY6021HS
USB interface	JMY6021AU	JMY6021CU	JMY6021GU	JMY6021HU

5 Operate the module

The physical interfaces of module are various. But the data link layer protocols are in accordance with JCP04 & JCP05. Please reference “JMY600 series general communication protocol manual.pdf”. For convenience to test the module, we supply PC software: TransPort to users. We have interface program source code to help users also. They are KELL projects in C51 or ASM51 format.

Please log on to our website: http://www.jinmuyu.com to download or mail to jinmuyu@vip.sina.com to obtain the resources.