

NFC & MIFARE & ISO14443A & ISO14443B & ISO15693 IC CARD MODULE

JMY6123 IC Card Reader

User's manual

(Revision 1.0.3)

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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 Product Introduction

JMY6123 is a modular circuit. Users send commands to read/write data from/into the Contactless Card.

The RF antenna and module of JMY6123 adopt a split design, and the external antenna layout is flexible. At the same time, the RF circuit and the antenna are adjusted with an impedance analyzer to match the impedance, which can achieve very good read and write performance and very good stability.

JMY6123 has many functions, supports a variety of international standards for non-contact IC cards, and supports cards from many different suppliers. The designer has classified and integrated the commands of the non-contact IC card, so the commands issued by the user to the module are relatively simple, but they can complete the overall operation of various non-contact IC cards.

2 Key Characteristics

- Module split antenna, connected by 50ohm coaxial cable, flexible antenna size and layout
- RF communication fully complies with the requirements of EMV2010 LEVEL 1 certification
- 4 SAM slots, full fill payment system usage
- Supporting Ibutton

3 Characteristics

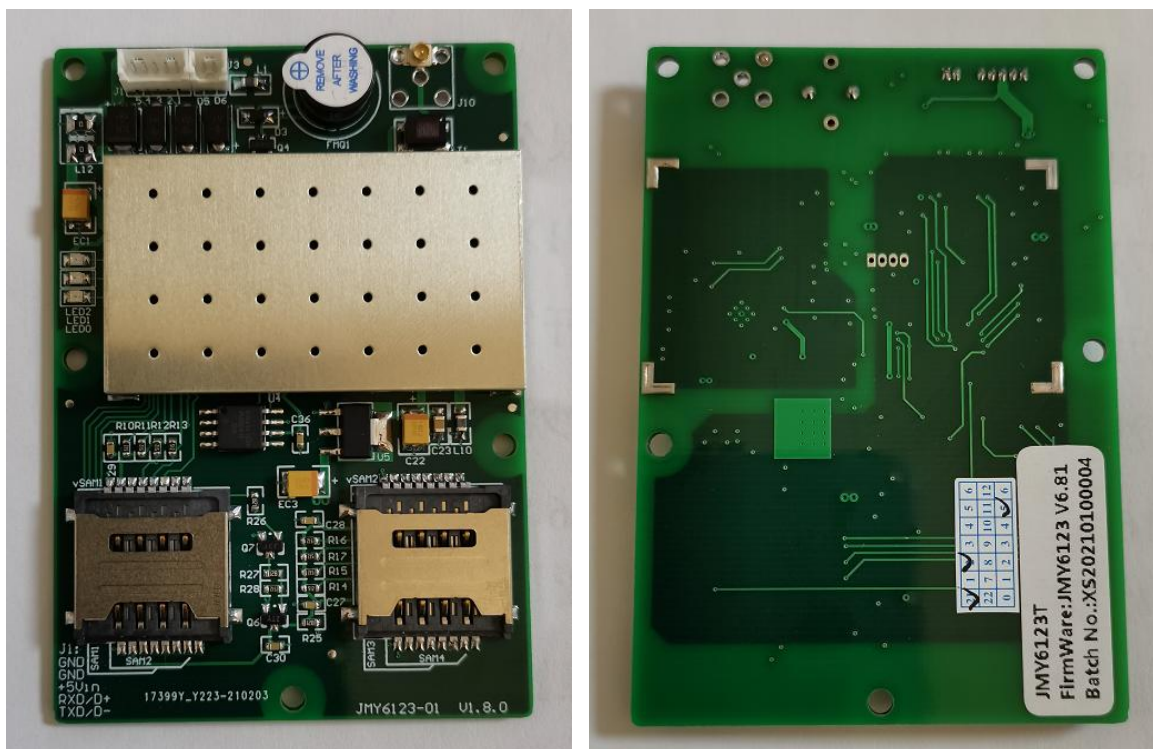
- PCD model: NXP RC663
- Working frequency: 13.56MHz
- Supported standard: ISO14443A,ISO14443B,ISO15693,ISO7816
- SAM slots: 4, T=0 & T=1 9600, 19200, 38400, 55800, 57600, 115200bps
- Anti collision ability: Full function anti collision; be able to process multi-cards; be able to set operate single card only.
- Auto detecting card: Supported, default OFF. The default state can be set
- Power supply: DC 5V (±0.5V)
- Interface: IIC, UART, RS232C or USB HID(By order)
- Communication rate: IIC Max.: 200Kbps
UART/RS232C 19200bps / 9600bps / 38400bps / 57600bps / 115200bps
USB USB 2.0 HID
- Max. command length: JCP04 253bytes
JCP05 510bytes
- Interface level: UART/IIC: 3.3V(TTL level; 5V tolerance)
- Power consumption: 150mA
- Operating distance: 90mm (M1 typical distance, depending on card quality)
- Dimension: 79mm * 55mm * 7.5mm



- Weight: About 30g (without Antenna)
- Operating temperature: -25 ~ +85 °C
- Storage temperature: -40 ~ +125 °C
- ISP: Supported
- RoHS: Compliant

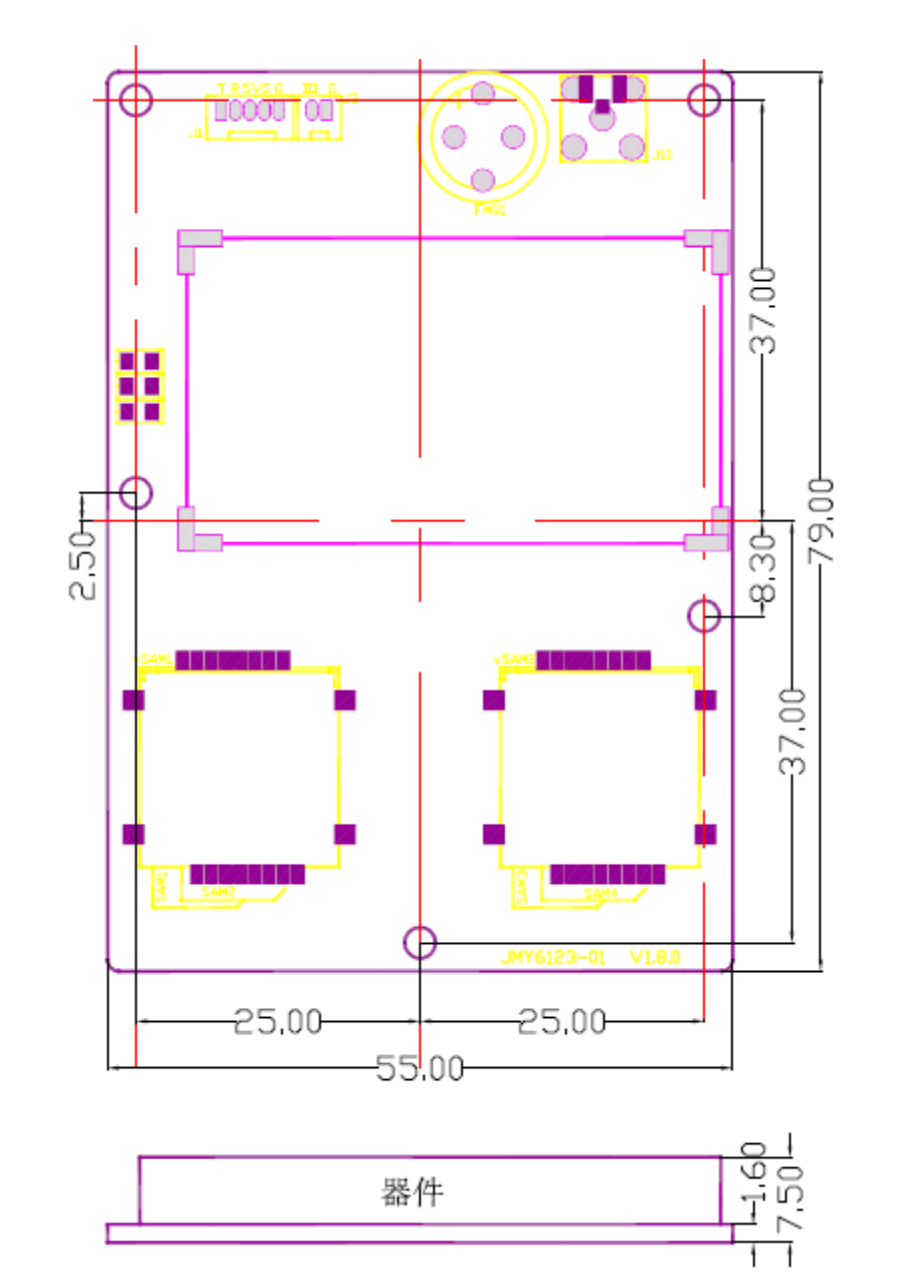
4 Physical Parameter and Pin Outs

4.1 Photo (Front and Back of JMY6123)





4.2 Dimension





4.3 Pin configurations and Pin outs

Pin number	Function	Type	Description
J1			
1	TXD / SDA	Input / Output	RS232C TXD / UART TXD / IIC SDA /USB D-
2	RXD / SCL	Input	RS232C RXD / UART RXD / IIC SCL /USB D+
3	VCC	Power	VCC
4	GND	Power	GND
5	GND	Power	GND
J3			
1	GND	Power	GND
2	IO	Output	Ibutton

4.4 Antennas

Normally, as the size of TX600 series antenna may not meet the actual demands, the antenna needs to be customized, especially in some compact systems. The following information for customization is needed:

1. Dimension of the antenna PCB;
2. The position and direction of the antenna outlet and the connector;
3. The description of the antenna periphery. Jinmuyu will design the most proper antenna according to the user's exact requirements.

We provide many models of antennas. There are some standard recommended models in the table:

Antenna model	Size of antenna	Card operating distance
TX600	70mm * 70mm	100mm
TX601	50mm * 50mm	70mm
TX602	30mm * 30mm	50mm
TX604	50mm * 70mm	80mm
TX605	100mm * 150mm	100mm



4.5 Module Function Configuration Table

	JMY6123
PCD	RC663
JCP04 Communication Protocol	●
JCP05 Communication Protocol	●
MIFARE 1K	●
MIFARE 4K	●
MIFARE Ultra Light	●
MIFARE Ultra Light C	●
MIFARE Mini	●
MIFARE DES fire (Step Commands)	●
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	●
NFC Active Initiator	-
NFC Active Target	-
NFC Passive Initiator	●
NFC Passive Target	-
NFC Card	-
SAM card slot	4
ISO7816 (T=0 & T=1)	●
On Chip Data Flash	512 bytes
IIC Interface	JMY6123I
UART Interface	JMY6123T
RS232C Interface	JMY6123S
USB Interface	JMY6123U



5 Communication Protocols

The physical interfaces of module are various. But the data link layer protocols are in accordance with JCP04 and JCP05. Please reference "JMY600 Series IC Card Module General Technical Manual".

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 in our website: www.jinmuyu.com to download or mail to jinmuyu@vip.sina.com to obtain the resources.