NFC & MIFARE & ISO14443A/B & ISO15693 & 18000 & ISO18092 IC CARD MODULE

JMY6122 IC Card Reader

User's manual

（Revision B V1.02）

Jinmuyu Electronics Co. LTD

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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

JMY6122 is a series of RFID read/write module. It 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 impedance between RF module and antenna was tuned by impedance analyzer. And then the module has excellent performance and stability.

The module and antenna is split design. 50ohm coaxial cable are linked the antenna and module.

2 Key Characteristics

- Module split antenna, connected by 50ohm coaxial cable,flexible antenna size and layout
- EMV2010 certification ability
- 4 SAM slots, full fill payment system usage

3 Characteristics

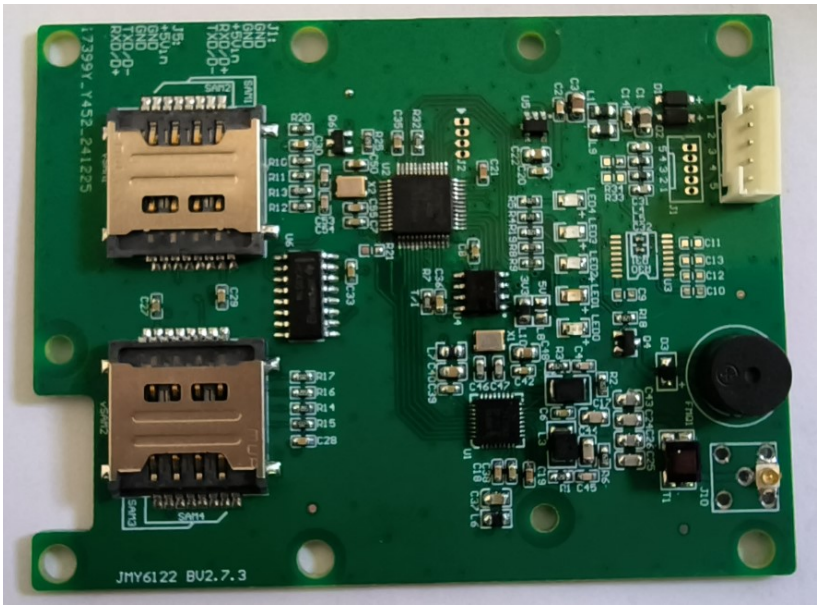
- PCD model: NXP RC663
- Working frequency: 13.56MHz
- Supported standard: ISO14443A,ISO14443B,ISO15693, ISO18000, ISO18092,ISO7816
- Card supported: Refer to: Module Function Configuration Table
- SAM slots: 4, T=0 & T=1 9600, 19200, 38400, 55800, 57600, 115200bps
- Anti collision ability: Full function 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: TTL(3.3V)/IIC(3.3V)/RS232C/USBHID
- Communication rate: IIC 100Kbps
  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)
- Power consumption: Max.150mA
- Operating distance: 60mm (M1 typical distance, depending on card quality)
- Dimension: 86.5mm*65mm*11.2mm (withoutAntenna)
- Weight: About 30g (without Antenna)

- Operating temperature: -25 ~ +85 ℃
- Storage temperature: -40 ~ +125 ℃
- ISP： Supported
- RoHS： Compliant

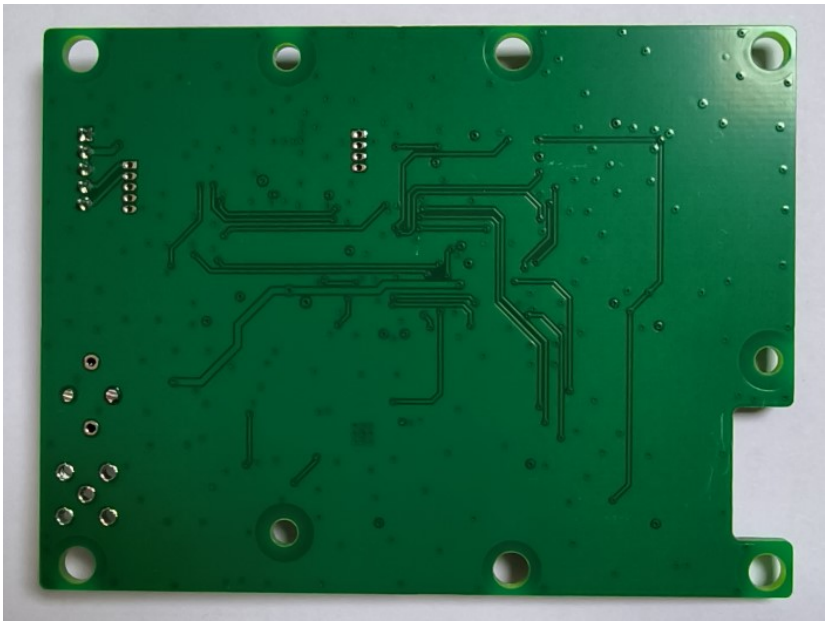
4 Physical Parameter and Pin Outs

4.1 Photo

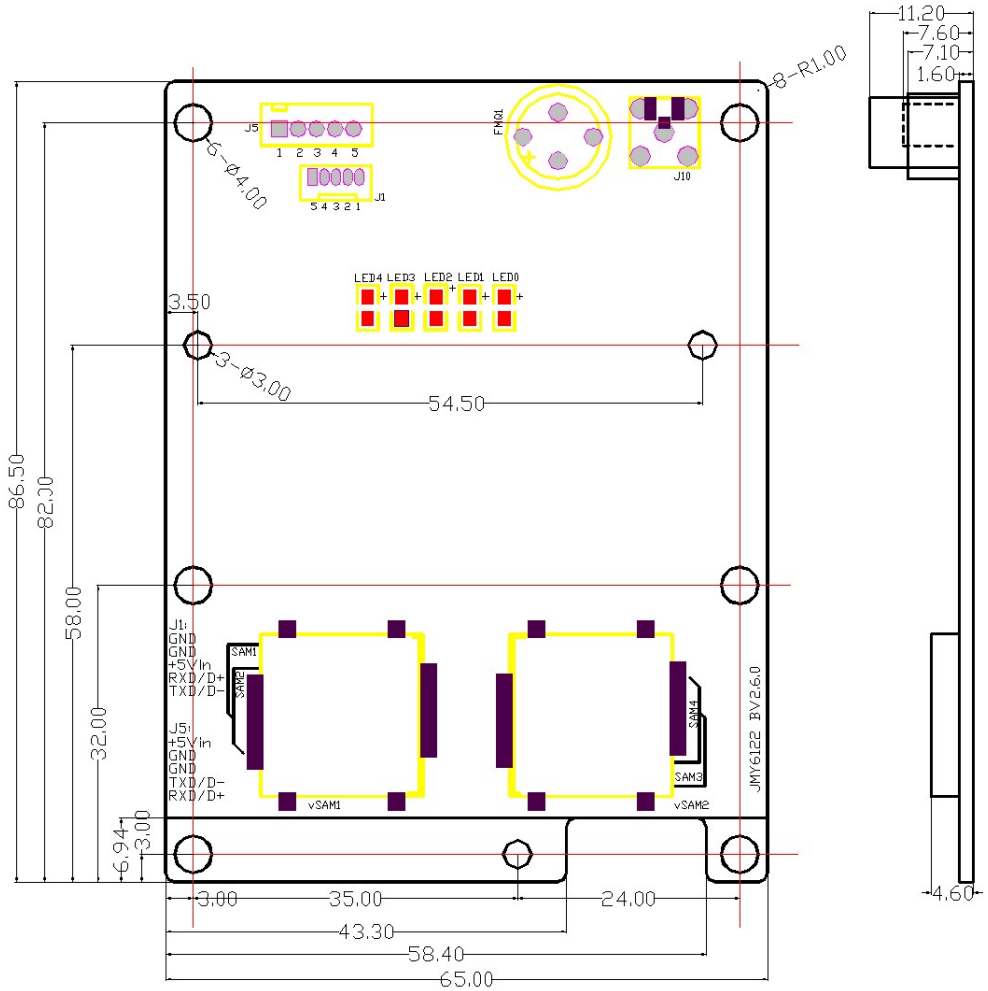
Front



Back



4.2 Dimension



4.3 Pin configurations and Pin outs

No.	Pin		Type	Description
J1	1	GND	GND	Module power ground
	2	GND	GND	Module power ground
	3	+5Vin	Power	Module power
	4	RXD/D+	Input	RS232C RXD / UART RXD / USB D+/IIC SCL
	5	TXD/D-	Output	RS232C TXD / UART TXD / USB D-/IIC SDA
J5	1	+5Vin	Power	Module power
	2	GND	GND	Module power ground
	3	GND	GND	Module power ground
	4	TXD/D-	Output	RS232C TXD / UART TXD / USB D-/IIC SDA
	5	RXD/D+	Input	RS232C RXD / UART RXD / USB D+/IIC SCL

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

	JMY6122
PCD	NXP CL RC663
JCP04 Communication Protocol	●
JCP05 Communication 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 SLI	●
I.CODE SLI-S	●
TI Tag-it Series	●
ST LRI Series	●
Felica	●
ISO18000-3MODE3	●
NFC Reader	●
SAM slots	4
ISO7816（T=0 & T=1）	●
On Chip Data Flash 4Mbits	Optional
FLASH in MCU	2K bytes
IIC Interface	JMY6122I
UART Interface	JMY6122T
RS232C Interface	JMY6122S
USB HID Interface	JMY6122UH

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.

6 Document update history

Version	Date	Detail
B V1.00	October 16, 2024	Create a new file
B V1.01	December 31, 2024	Add IIC interface description
B V1.02	February 18, 2025	Added level description for IIC and UART interfaces