

MIFARE & ISO14443A CONTACTLESS IC CARD READ/WRITE READER MODULE

JMY620A User's Manual

(Revision 3.50)

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



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1 Product introduction

JMY620A is a RFID read/write module with UART, IIC port. JMY620A 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.

And the module and antenna is linked by 50ohm coaxial cable. The impedance between RF module and antenna was tuned by impedance analyzer, so the module has excellent read/write performance and stability. Though the cable can reach 10m, the performance is still good. Normally the cable should be 60cm that is the module's best performance and stability. JMY620A adopts surface mount installation form. Small size is a major feature of JMY620A.

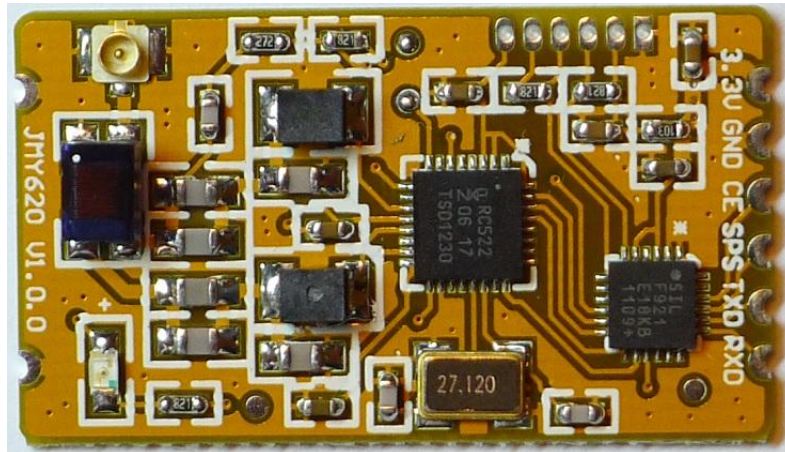
2 Characteristics

- PCD model: NXP MF RC522
- Working frequency: 13.56MHz
- Supported standard: ISO14443A
- Card supported: Mifare 1K/4K, FM11RF08, Ultra Light, DesFire, Mifare ProX, T=CL CPU cards(both ISO14443A) .
- 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 status can be set
- Power supply: DC 3.3V (±10%)
- Interface: IIC, UART(selected by SPS pin, recommend to use IIC)
- Communication rate: IIC: 400Kbps
UART: 19.2Kbps/115.2Kbps
- Max. command length: 254 Bytes
- Interface level: UART/IIC: 3.3V (TTL level; 5V tolerance)
- Static power consumption: Working mode:80mA; Idle:100uA
- Operating distance: 80mm (depending on card)
- Dimension: 20mm×35mm
- Package: Surface Mount
- Weight: About 10g
- ISP: Supported
- Operating temperature: -25 to +85 °C
- Storage temperature: -40 to +125 °C
- RoHS: Compliant

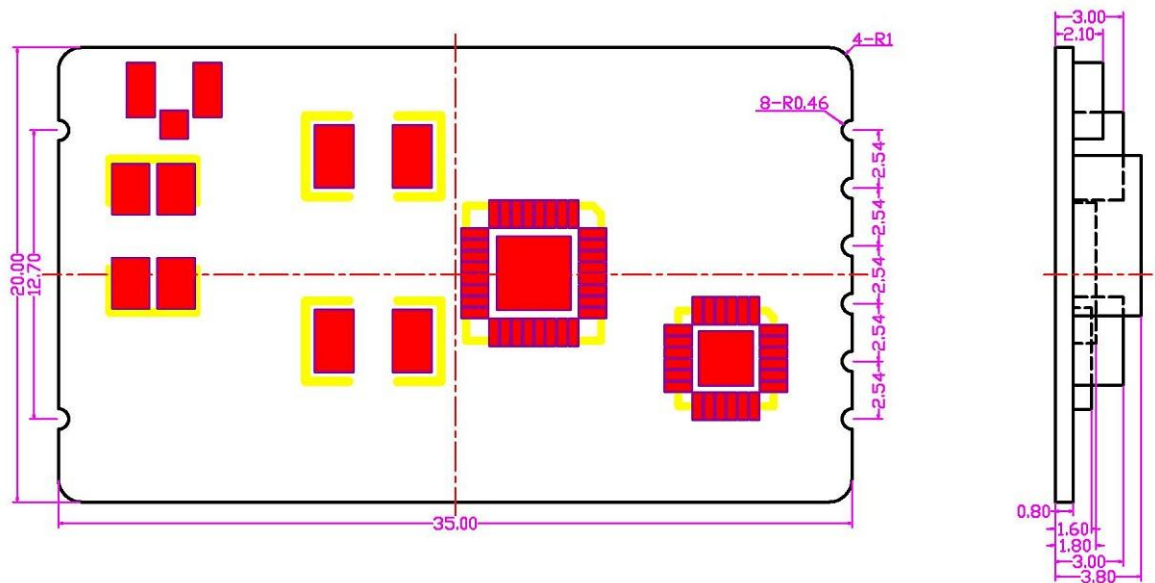


3 Physical parameter and pin outs

3.1 Photo

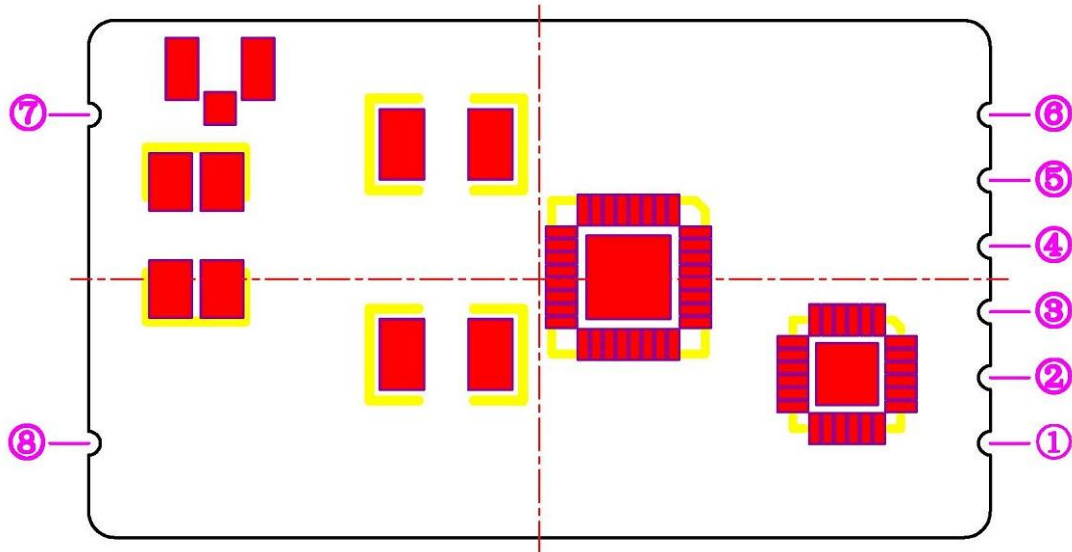


3.2 Dimension





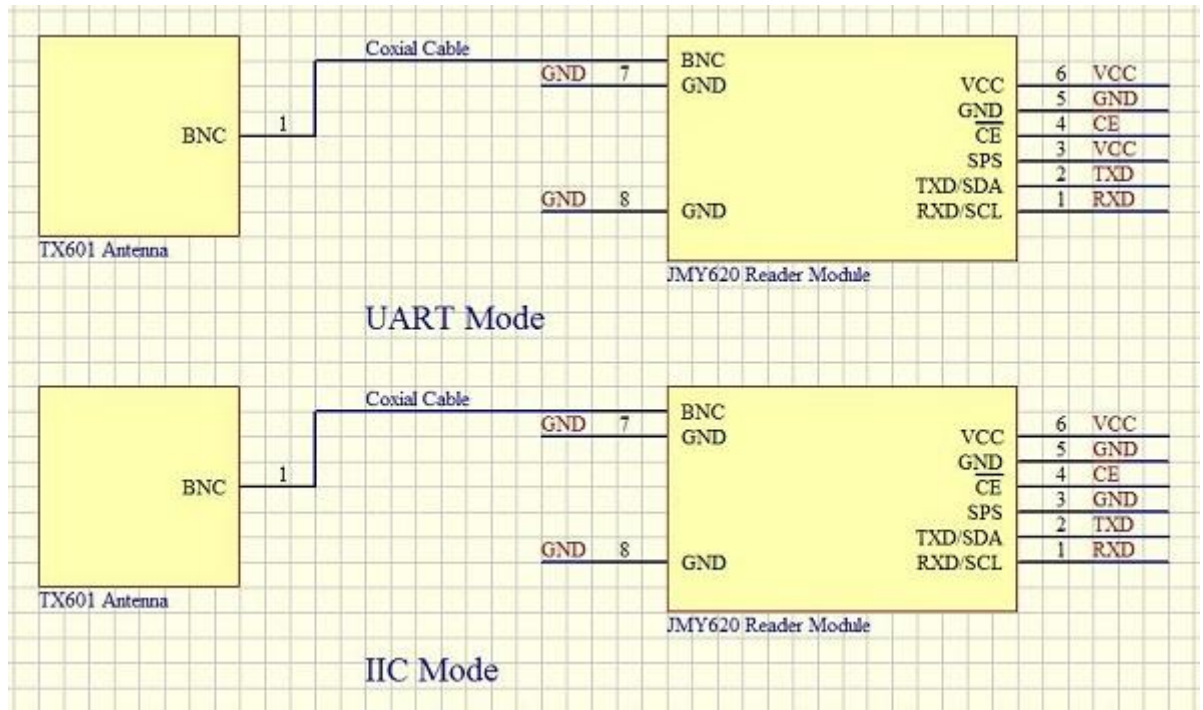
3.3 Pin configurations and pin outs



Pin number	Function	Type	Description
1	RXD/SCL	Input	UART RXD / IIC SCL
2	TXD/SDA	Input / Output	UART TXD / IIC SDA
3	SPS	Input	Serial port selector 0: IIC 1: UART
4	CE	Input	Module enable, 1: disable; 0: enable
5	GND	Power	GND
6	+3V	Power	Power
7	GND	Power	For fixing use, connect to GND
8	GND	Power	For fixing use, connect to GND



3.4 Connection schematics



3.5 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 antenna. Please visit our website to get more information. There are some 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

3.6 Model naming rule



3.6.1 Model format

1	2	3
JMY	620	X

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

3.6.2 Card operating type

A: PCD is RC522, support ISO14443A and Mifare Class

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

D: PCD is RC522, support ISO14443A and Mifare Class with 511 bytes communication buffer

E: PCD is RC523, support ISO14443AB and Mifare Class with 511 bytes communication buffer