MIFARE & ISO14443A & ISO14443B IC CARD READ/WRITE MODULE

JMY620 IC Card Read/Write Module

User's Manual

(Revision 4.01)

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

JMY620 is a series of RFID read/write module with UART and IIC communication port. JMY620 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 split. The impedance between RF circuit and antenna was tuned by impedance analyzer, and then the module has excellent performance and stability.

2 Key Characteristics

● **Module split antenna, connected by 50ohm coaxial cable, flexible antenna size and layout**
● **Surface mount and very small module size to fit portable devices**
● **Low power consumption, could be set RF output level**

3 Technical parameters

● PCD type: NXP MF RC522 / MF RC523 / PN512
● Working frequency: 13.56MHz
● Supported standard: ISO14443A, ISO14443B
● 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
● Data FLASH: 512 Bytes
● Power supply: DC 3.3V (±10%)
● Interface: UART and IIC
● Interface level: UART/IIC: 3.3V (TTL level; 5V tolerance)
● Communication speed: IIC   Max. 200Kbps
                           UART   19200bps / 9600bps / 38400bps / 57600bps / 115200bps
● Max. command length: JCP04   253 bytes
                           JCP05   510 bytes
● Power consumption: Max.   100mA
                           Normal model   30mA
                           Idle model   100uA
● Operating distance: 60mm (M1 typical distance, depending on card quality)
● Dimension: 20mm*35mm*4.1mm (without Antenna)
● Weight: About 10g (without Antenna)
● ISP: Supported
● RoHS: Compliant

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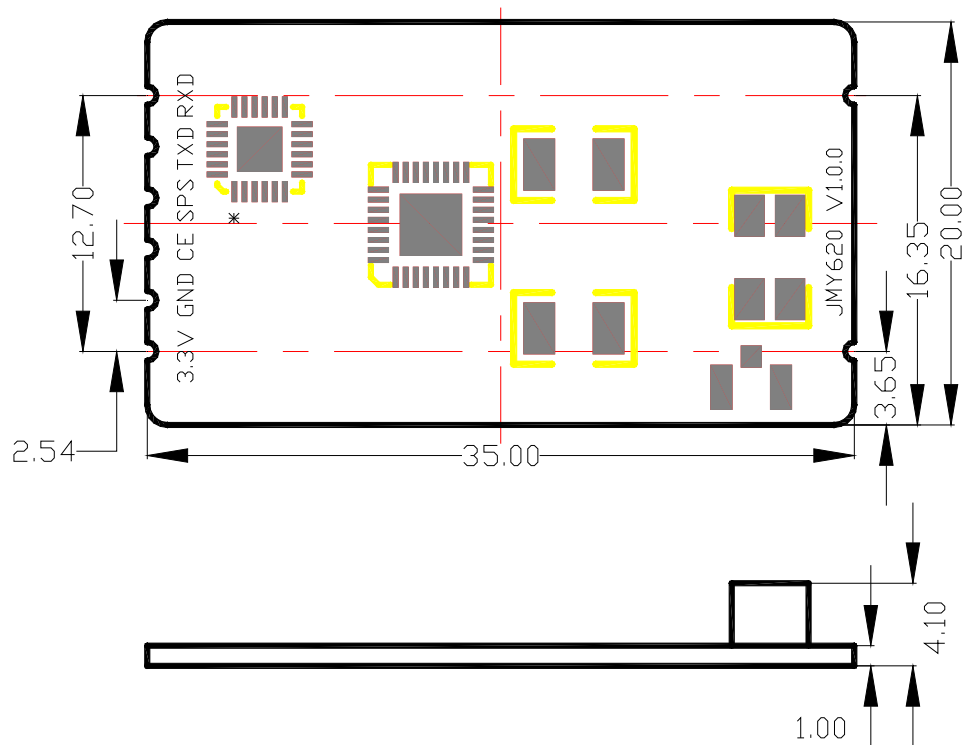- Operating temperature: -25 to +85°C
- Storage temperature: -40 to +125°C

4 Physical parameter and pin outs

4.1 Photo
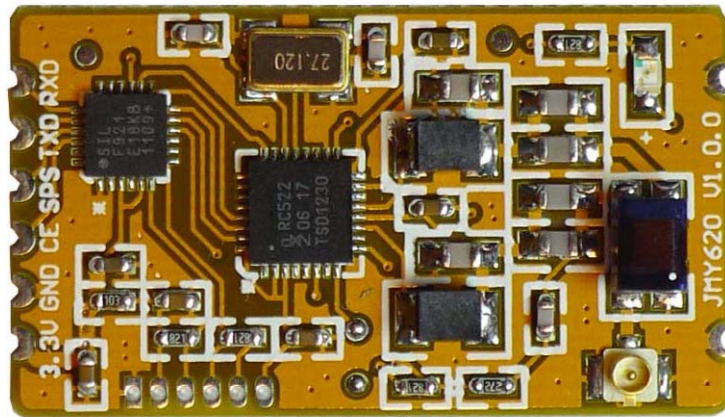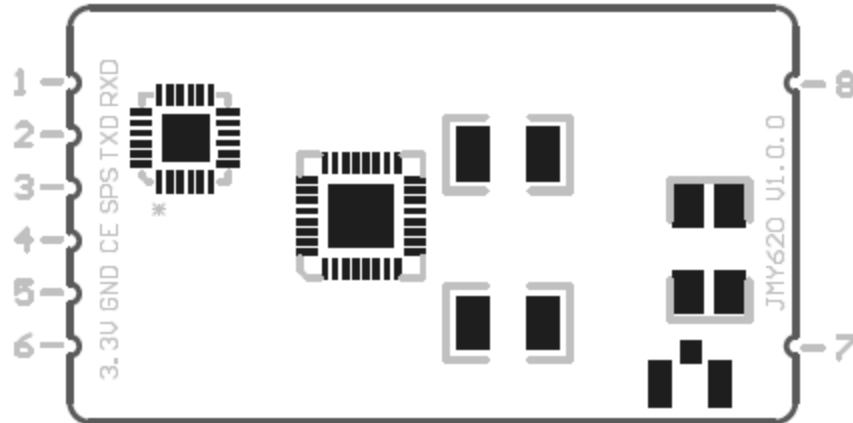

4.2 Dimension

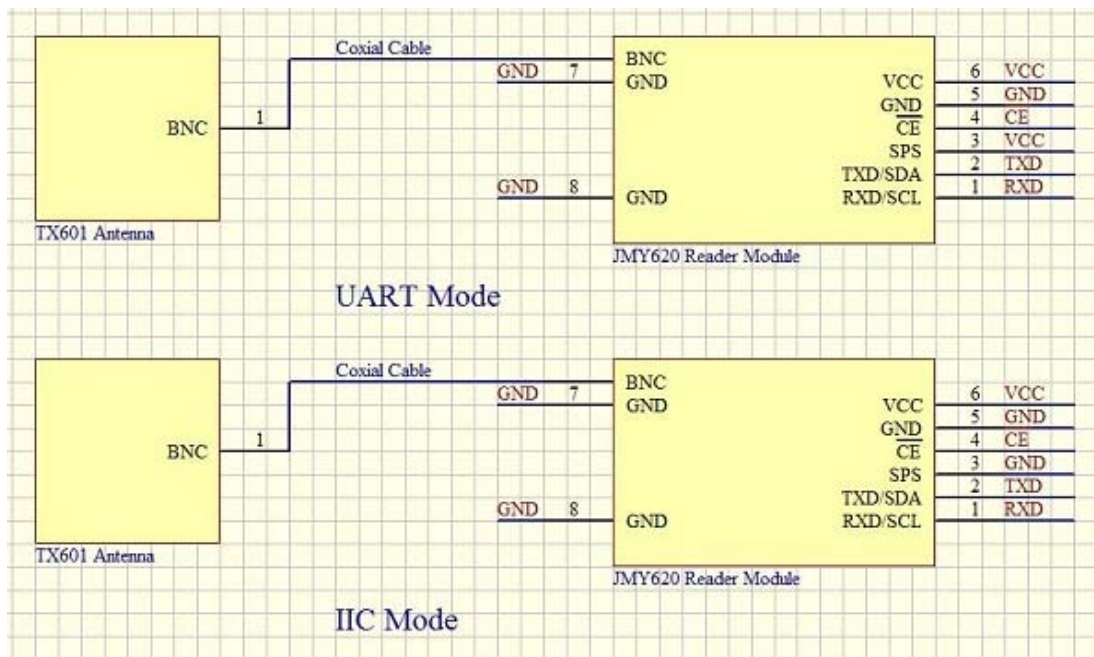Size in mm

4.3 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: 1: UART; 0: IIC
4	CE	Input	Module enable: 1: disable; 0: enable
5	GND	GND	GND
6	+3V	POWER	VCC
7	GND	GND	Module fix up, connect to GND
8	GND	GND	Module fix up, connect to GND

4.4 Connection

4.5 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	60mm
TX601	50mm * 50mm	60mm
TX602	30mm * 30mm	40mm
TX604	50mm * 70mm	60mm
TX605	100mm * 150mm	60mm

4.6 Module function configuration table

	JMY620A	JMY620C	JMY620N
PCD	MF RC522	MF RC523	PN512
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		●	●
NFC upgrade able			●
On Chip Data Flash	512 bytes		
IIC Interface	●	●	●
UART Interface	●	●	●

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.