JDY-40 wireless serial port module
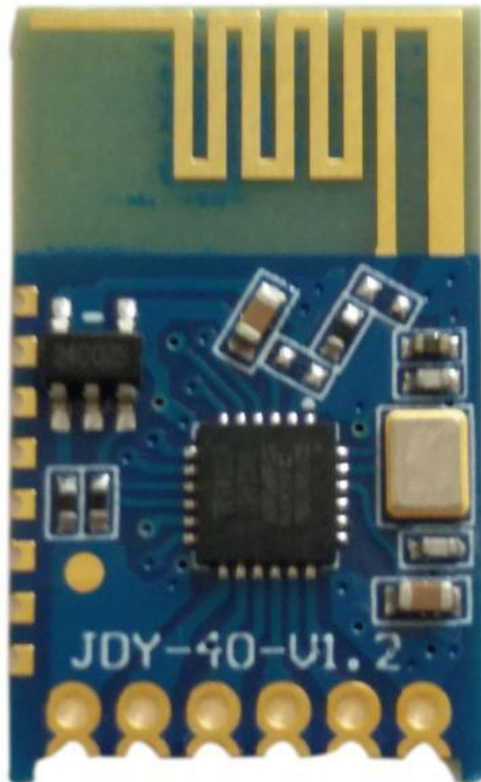
JDY-40 pin definition
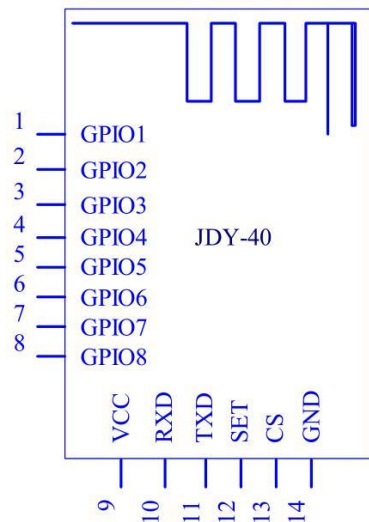
Pin function description

| Pin	Pin Names	Function
1	GPIO1	Input/output IO, which can be configured by AT+CLSS
2	GPIO2	Input/output IO, which can be configured by AT+CLSS
3	GPIO3	Input/output IO, which can be configured by AT+CLSS
4	GPIO4	Input/output IO, which can be configured by AT+CLSS
5	GPIO5	Input/output IO, which can be configured by AT+CLSS
6	GPIO6	Input/output IO, which can be configured by AT+CLSS
7	GPIO7	Input/output IO, which can be configured by AT+CLSS
8	GPIO8	Input/output IO, which can be configured by AT+CLSS
9	VCC	Power Supply（2.2V-3.6V）
10	RXD	Serial port input pin
11	TXD	Serial port output pin
12	SET	AT command switching pin (low level AT instruction, high level transparent transmission)
13	CS	CS chip select pin (low level of awaken, high level of sleep)
14	GND	Power Ground

Application scene

1：2.4G panel switch

2：2.4G remote controller

3：2.4G transparent transmission

4：Mobile phone one-to-many control

5：IO switching control

6：2.4Gtoys

7：Application of intelligent home control

Technical parameter

Model	JDY-40
Operating frequency range	2.4G
Transmit power	MAX 12db
Working temperature	-40℃ - 80℃
Reception sensitivity	-97db
Transmission distance	120meters
TX current	40mA
RX current	24mA
Sleep current	5uA
Communication interface	Standard TTL serial port

Dimensional drawing
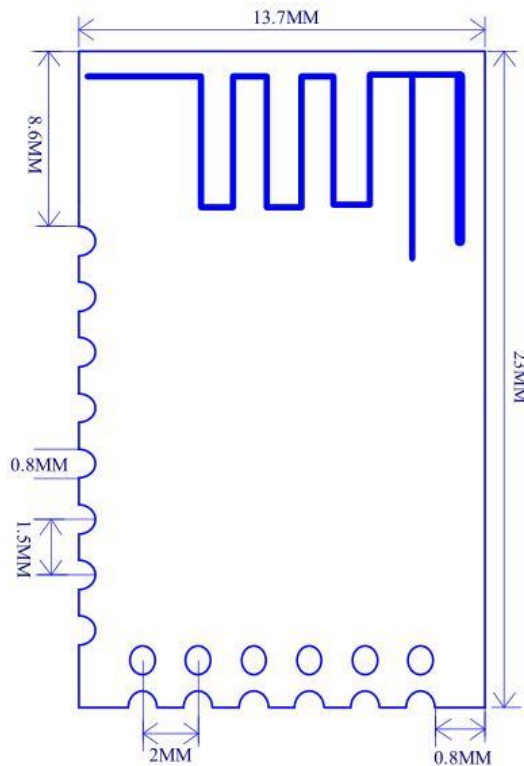
Default configuration

Sequence	Function	Parameter	instructions
1	Baud rate	9600	AT+BAUD
2	Wireless ID	8899	AT+RFID8899
3	Device ID	1122	AT+DVID1122
4	Channel	001	AT+RFC001
5	Transmit power	12db	AT+POWE9
6	Device type	A0	AT+CLSSA0

AT instruction set

Sequence	instructions	Effect	Default
1	AT+BAUD	Baud rate	9600
2	AT+RFID	Wireless ID	8899
3	AT+DVID	Device ID	1122
4	AT+RFC	Channel（128 Channels）	001
5	AT+POWE	Transmit power	+10db
6	AT+CLSS	Type	A0

AT instruction instructions

In particular, the JDY-40 module sends the AT instruction need to end the symbol \r\n

Setting / query - baud rate

Instruction	Response	Parameter
AT+BAUD<Param>	OK	Param(1-7) 1:1200 2:2400 3:4800
AT+BAUD	+BAUD=<Param>	4:9600 5:14400 6:19200 Default Value: 4

RFID Setting / query - RFID

Instruction	Response	Parameter
AT+RFID<Param>	OK	Param(0000-FFFF)
AT+RFID	+BAUD=<Param>	Default Value:8899

Setting / query - DVID

Instruction	Response	Parameter
AT+DVID<Param>	OK	Param(0000-FFFF)
AT+DVID	+BAUD=<Param>	Default Value:8899

RFC Setting / query - RFC

Instruction	Response	Parameter
AT+RFC<Param>	OK	Param(001-128)
AT+RFC	+RFC=<Param>	Default Value:001

POWESetting / query - POWE

Instruction	Response	Parameter
AT+POWE<Param>	OK	Param(0-9) 0：-25db 1：-15db
AT+POWE	+POWE=<Param>	2：-5db 3：0db 4：+3db 5：+6db 6：+9db 7：+10db 8：+10db 9：+12db

Setting / query – CLSS type

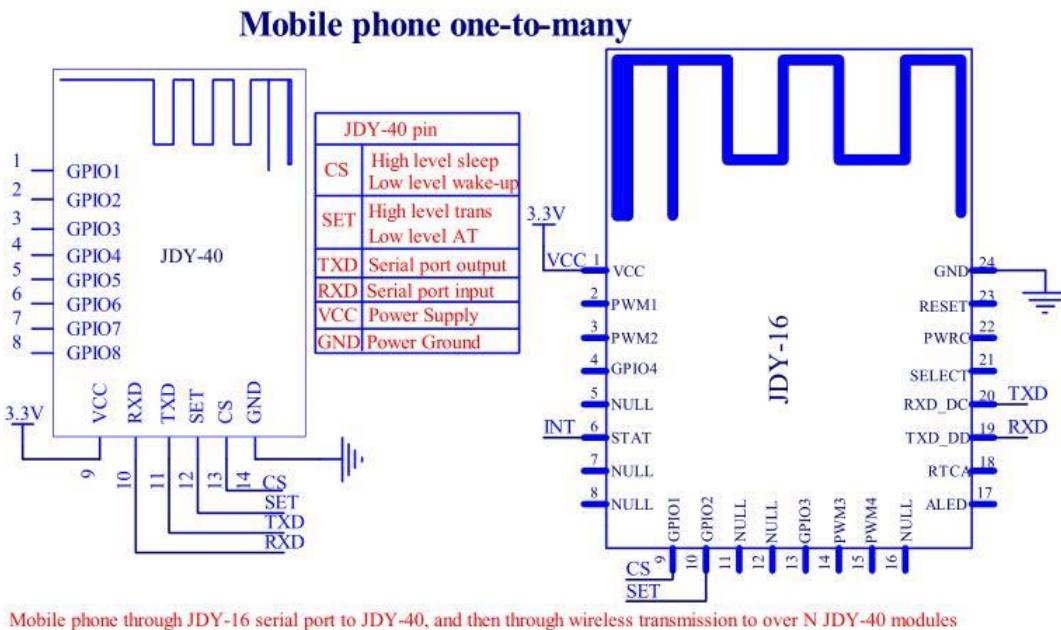| Instruction	Response	Parameter
AT+CLSS<Param>	OK	Param A0: Serial port transparent transmission(Transceiver)
AT+CLSS	+CLSS=<Param>	C0: Remote controller or IO key indicator light(Transmitting terminal) C1: remote controller or IO key without indicator light (Transmitting terminal) C2:IO is low level at normal level, high level after receiving signal and low level after delay 30mS C3:IO is high level at normal level, low level after receiving signal and high level after delay 30mS C4:IO is low level at normal level, receives pressed signal of high level and receives lift signal low level C5: The IO level is reversed when IO receives the pressed signal. Default Value:A0

JDY-40 application wiring diagram

Serial port transparent transmission application circuit diagram

It can be applied to MCU and MCU wireless serial port transparent transmission, instrument and electronic toys.

Two-way transparent transmission transceiver

JDY-40 pin	
CS	High level sleep Low level wake-up
SET	High level trans Low level AT
TXD	Serial port output
RXD	Serial port input
VCC	Power Supply
GND	Power Ground

Serial port transparent transmission CLSS type is A0
Instruction: AT+CLSSA0
JDY-40 default is a serial port transparent transmission mode
Transparent transmission applications generally do not require configuration

Mobile phone one-to-many control

It can be applied to mobile phone one-to-many control, mobile phone one-to-many transparent transmission, mobile phone one-to-many application of intelligent furniture control.

Mobile phone one-to-many

JDY-40 pin	
CS	High level sleep Low level wake-up
SET	High level trans Low level AT
TXD	Serial port output
RXD	Serial port input
VCC	Power Supply
GND	Power Ground

Mobile phone through JDY-16 serial port to JDY-40, and then through wireless transmission to over N JDY-40 modules

Switching control 1

It can be applied to: the 2.4G remote controller with 8 IO can be applied to the remote control key and support the low function, two 7th batteries can be used for at least one year, application of low power consumption switch panel in intelligent home, and 2.4G toy application.
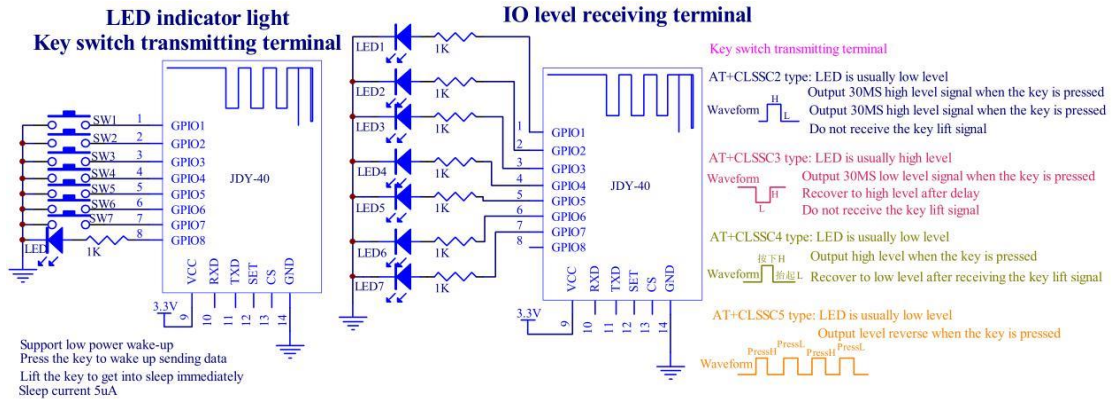
Switching control 2

It can be applied to: the 2.4G remote controller with 7 IO can be applied to the remote control key and support the low function, two 7th batteries can be used for at least one year, application of low power consumption switch panel in intelligent home, and 2.4G toy application.
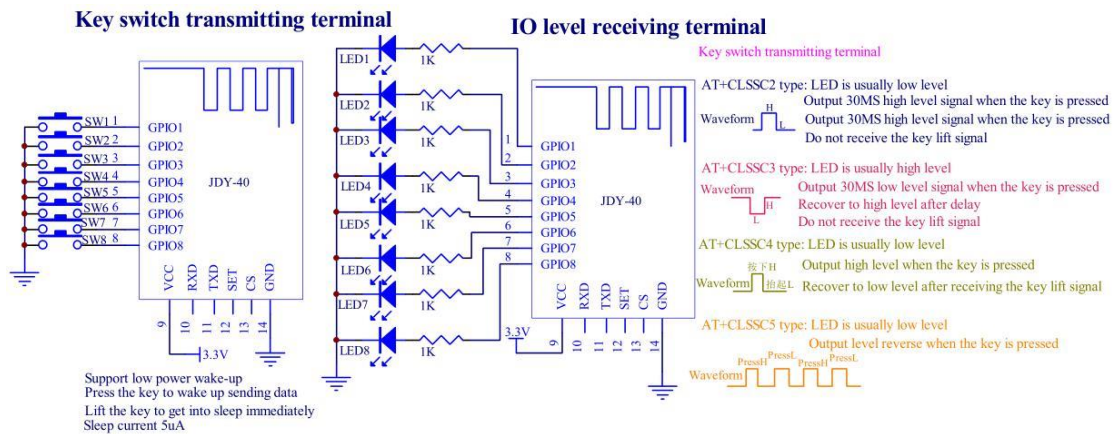
Switching control 3

It can be applied to: the 2.4G remote controller with 8 IO can be applied to the remote control key and support the low function, two 7th batteries can be used for at least one year, application of low power consumption switch panel in intelligent home, and 2.4G toy application.

Two-way transparent transmission transceiver

Half duplex mode of serial port

Support serial port writes and receives data continuously
Serial port sending and receiving data without byte limit

JDY-40 pin	
CS	High level sleep Low level wake-up
SET	High level trans Low level AT
TXD	Serial port output
RXD	Serial port input
VCC	Power Supply
GND	Power Ground

1	GPIO1
2	GPIO2
3	GPIO3
4	GPIO4	JDY-40
5	GPIO5
6	GPIO6
7	GPIO7
8	GPIO8

VCC RXD TXD SET CS GND

MCU

3.3V

GND IO RXD TXD VCC

3.3V

1	GPIO1
2	GPIO2
3	GPIO3
4	GPIO4	JDY-40
5	GPIO5
6	GPIO6
7	GPIO7
8	GPIO8

VCC RXD TXD SET CS GND

MCU

3.3V

GND IO RXD TXD VCC

3.3V

Serial port transparent transmission CLSS type is A0
Instruction: AT+CLSSA0
JDY-40 default is a serial port transparent transmission mode
Transparent transmission applications generally do not require configuration