

# JDY-31 Bluetooth Module

## Introduction:

JDY-31 Bluetooth is based on Bluetooth 3.0 SPP design, which can support Windows, Linux, android data transmission, working frequency band 2.4GHZ, modulation mode GFSK, maximum transmission power 8db, maximum transmission distance 30 meters, support users to modify device name through AT command The baud rate and other instructions are convenient and quick to use.

## Applications:

JDY-31 is a classic Bluetooth protocol that can communicate with Bluetooth-enabled computers (desktops, notebooks) and mobile phones (android). Can be applied

- Windows computer Bluetooth serial port transparent transmission
- Android Bluetooth serial port transparent transmission
- Smart home control
- Automotive ODB testing equipment
- Bluetooth toy
- Share mobile power, share weight
- Medical equipment

## Parameter:

Model: JDY-31

Working frequency band: 2.4GHZ

Communication interface: UART

Operating voltage: 1.8-3.6V (3.3V recommended)

Working temperature: -40 ° C - 80 ° C

Antenna: Built-in PCB antenna

Transmission distance: 30 meters

Master-slave support: slave

Module size: 19.6 \* 14.94 \* 1.8 mm (length, width, height)

Bluetooth version: Bluetooth 3.0 SPP

STM soldering temperature: <260°C

Unconnected operating current: 4.7mA

Current after BLE connection: 7.3mA

Transmitting power: 8db (maximum)

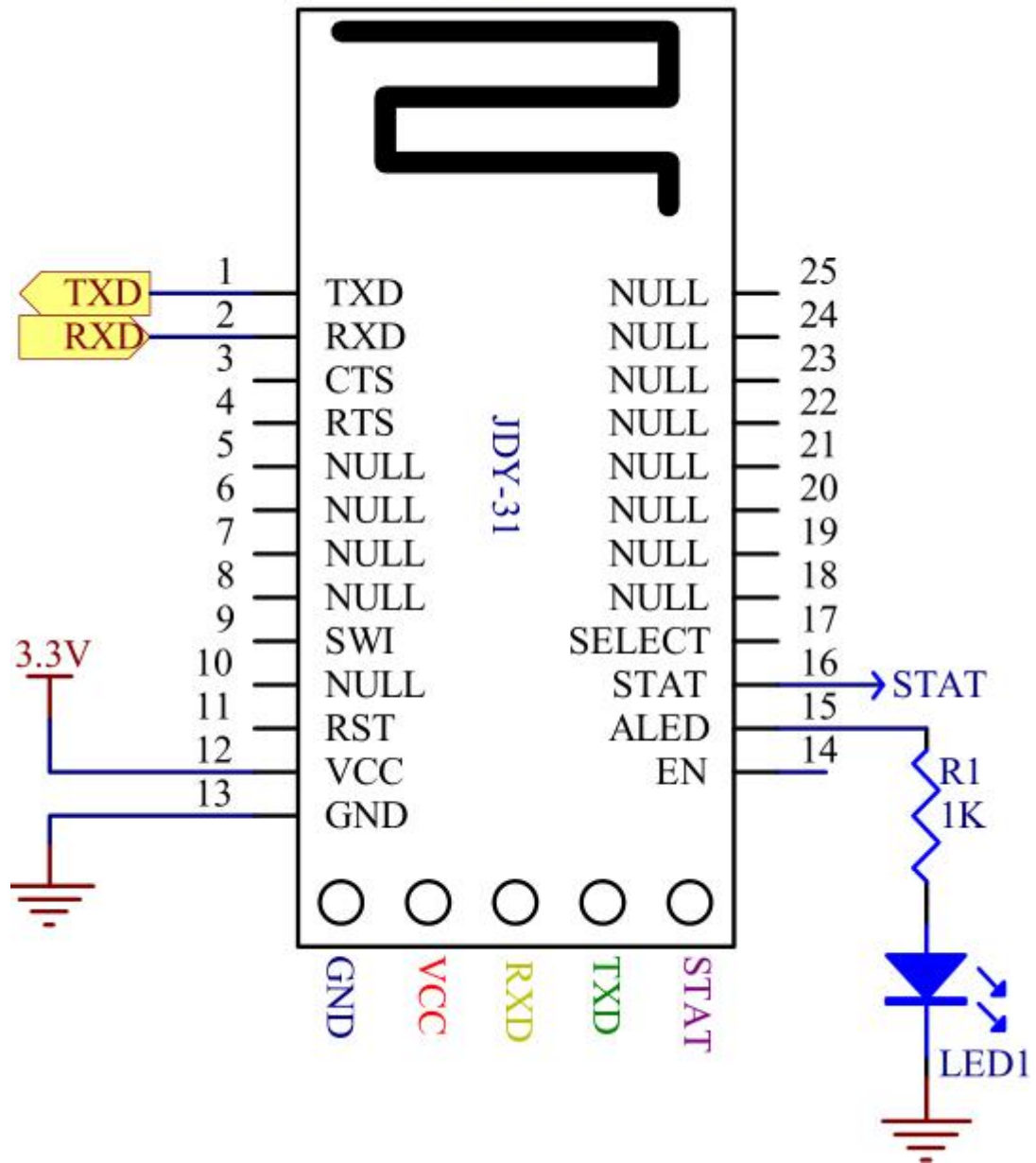
Receive sensitivity: -97dbm

SPP maximum throughput: 16K bytes/s (android, windows)

JDY-31 support patch and solder pin header

1. Needle pin application: The pin header specification is standard 2.54 pitch pin header, just need to weld 5 pin holes on the module.

## 贴片式接线



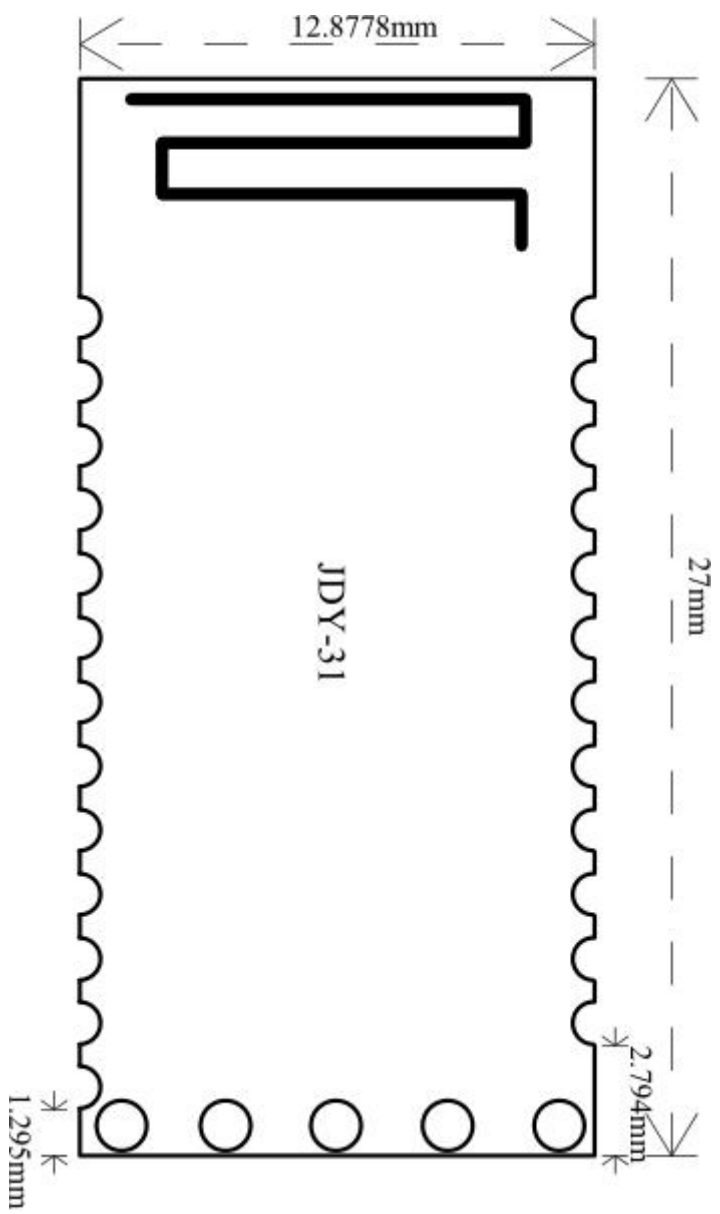
2.

patch application: general application only need to connect VCC, GND, RXD, TXD 4 pins, if you need to actively disconnect in the connection state, send AT+DISC in the connection state

### Pin function description:

Number	Pin function	Pin function description
1	TXD	Serial output pin (TTL level)
2	RXD	Serial input pin (TTL level)
3	CTS	
4	RTS	
5	NULL	

6	NULL	
7	NULL	
8	NULL	
9	SWI	
10	NULL	
11	RST	Reset (active low)
12	VCC	Power supply (1.8-3.6V)
13	GND	
14	EN	
15	ALED	Broadcast status pin (not connected to flash, output high level after connection)
16	STAT	Connection status pin (not connected low level, output high level after connection)
17	SELECT	
18	NULL	
19	NULL	
20	NULL	
21	NULL	
22	NULL	
23	NULL	
24	NULL	
25	NULL	



## Serial AT instruction set

JDY-31 module serial port sending AT command must be added \r\n

Num.	instruction	Function	default
1	AT+VERSION	version number	JDY-31-V1.2
2	AT+RESET	Soft reset	
3	AT+DISC	Disconnected (valid in connection state)	
4	AT+LADDR	Query the module's MAC address	
5	AT+PIN	Connection password settings and queries	1234
6	AT+BAUD	Baud rate setting and query	9600
7	AT+NAME	Broadcast name setting and query	JDY-31-SPP
8	AT+DEFAULT	reset	

### 1. Query version number

Instruction	Response	Parameter
AT+VERSION	+VERSION=JDY-31-V1.2,Bluetooth V3.0	NO

### 2. Reset

Instruction	Response	Parameter
AT+RESET	+OK	NO

### 3. Disconnect

Instruction	Response	Parameter
AT+DISC	+OK	NO

Valid after connection

4. BLE Bluetooth MAC address

Instruction	Response	Parameter
AT+LADDR	+LADDR=<Param>	NO

5. Baud rate setting / query

Instruction	Response	Parameter
AT+BAUD<Param>	+OK	Param:(4 - 9)
AT+BAUD	+BAUD=<Param>	4: 9600 5: 19200 6: 38400 7: 57600 8: 115200 9: 128000

JDY-31 supports 128000 baud rate continuous data transmission and transmission, and does not lose packets, the transmission speed can reach 16Kbytes per second.

6. SPP Bluetooth pairing password

Instruction	Response	Parameter
AT+PIN<Param>	+OK	Param: 4-digit password
AT+PIN	+PIN=<Param>	Default PIN: 1234

7. broadcast name settings / query

Instruction	Response	Parameter
AT+NAME<Param>	OK	Param: BLE broadcast

AT+NAME	+NAME=<Param>	name is the longest: 18 bytes Default broadcast name: JDY-31-SPP
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8. Restore factory configuration

Instruction	Response	Parameter
AT+DEFAULT	OK	NO

### Compatibility and performance comparison

	JDY-30	JDY-31	
Working current	19mA	7.3mA	JDY-31 has obvious advantages
Transmission rate	8KByte	16KByte	
Compatibility	Search is slow	Fast search and fast connection	