Bluetooth SPP Serial Port Transparent Transmission Module
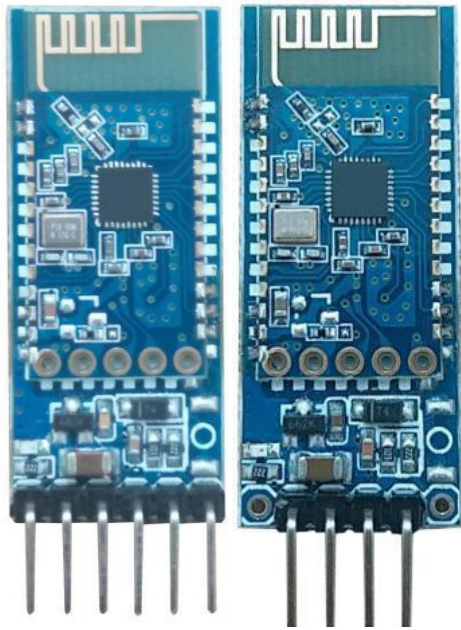
JDY-31 Bluetooth Backplane User Manual

Version

Version	Date	Description
V1.2	2018-09-21	Release version
V1.3	2019-01-08	1. Solved the problem that V1.2 can not connect to the computer 2. Added the MAC function of the output host after the module is connected to the host. 3. Added AT+ENLOG command, the user can use this command to open or block the boot, connect, and disconnect the serial output status.

1. Product introduction:

JDY-31 Bluetooth is based on Bluetooth 3.0 SPP design, which can support Windows, Linux, android data transmission, working frequency 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.
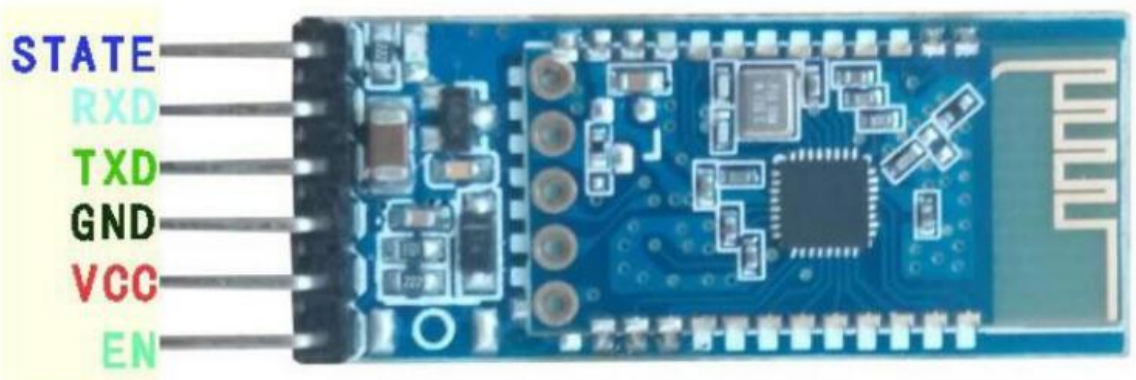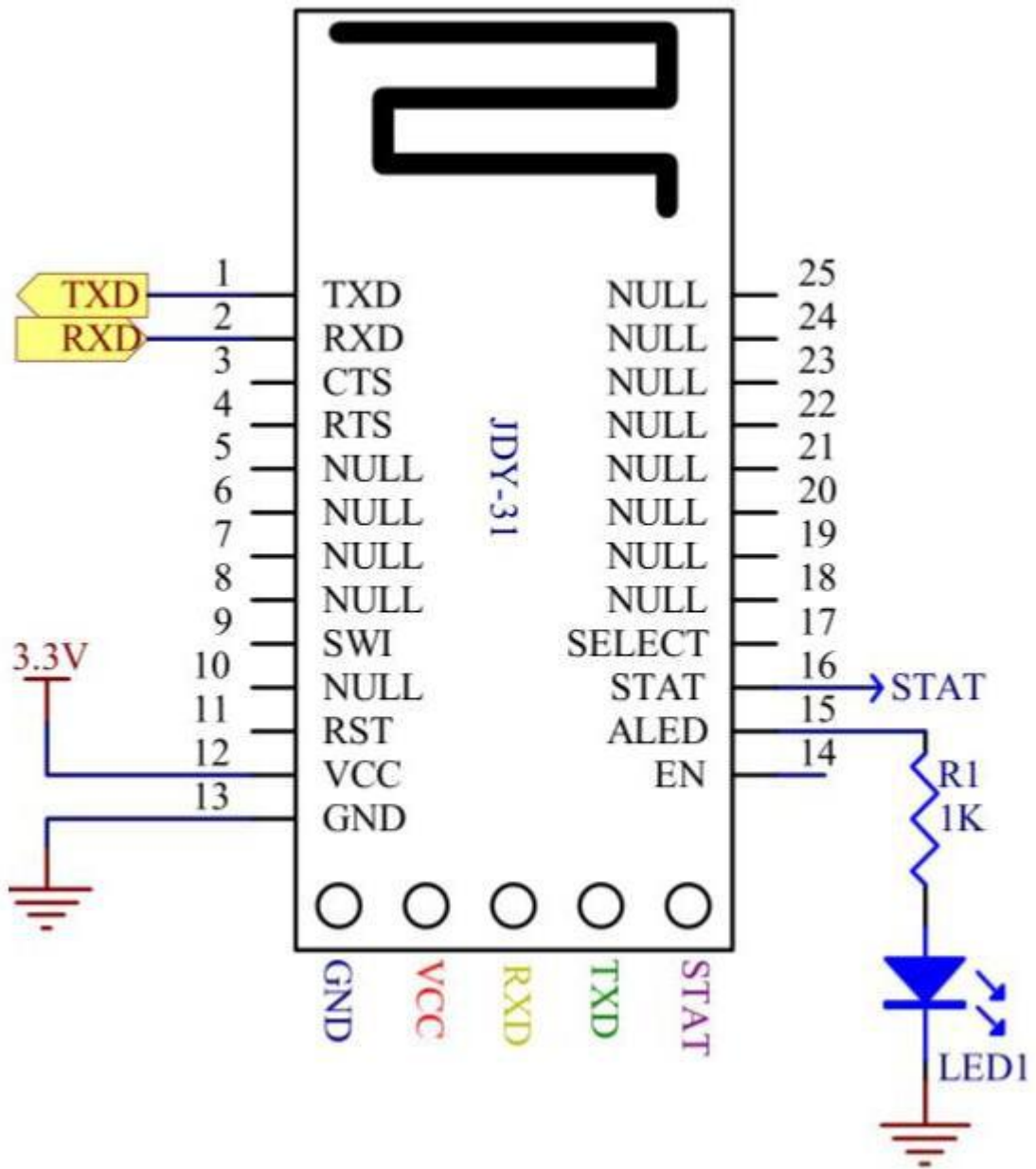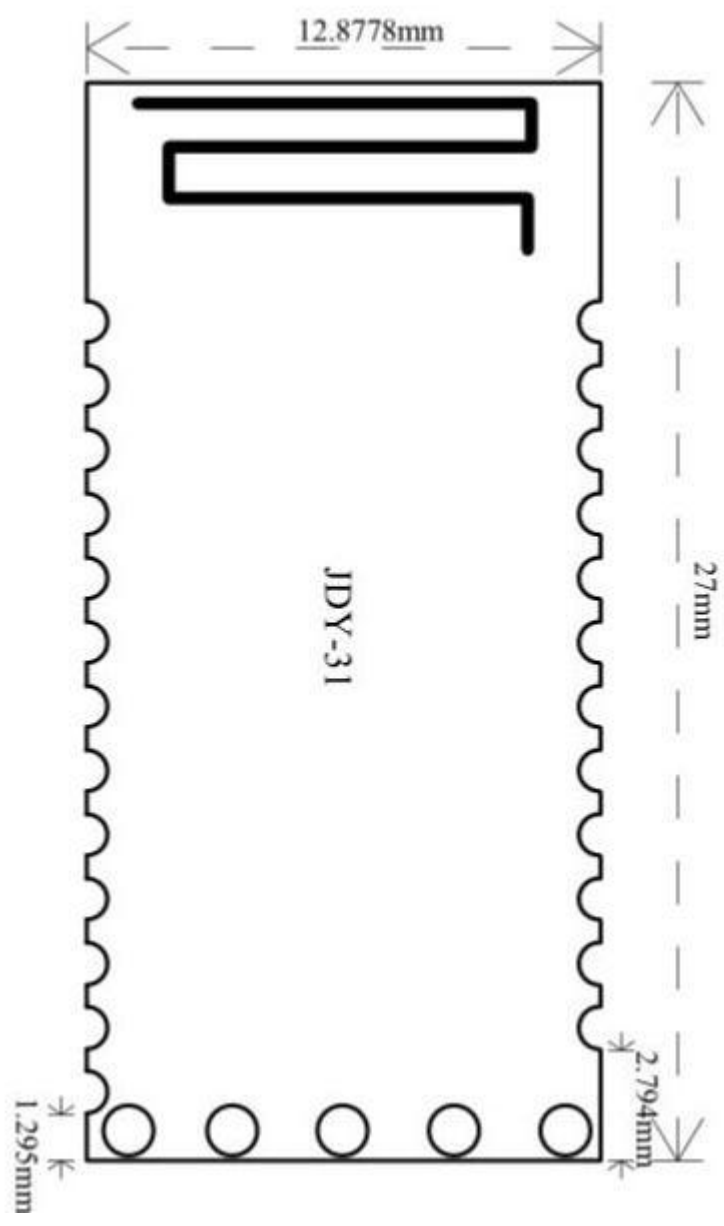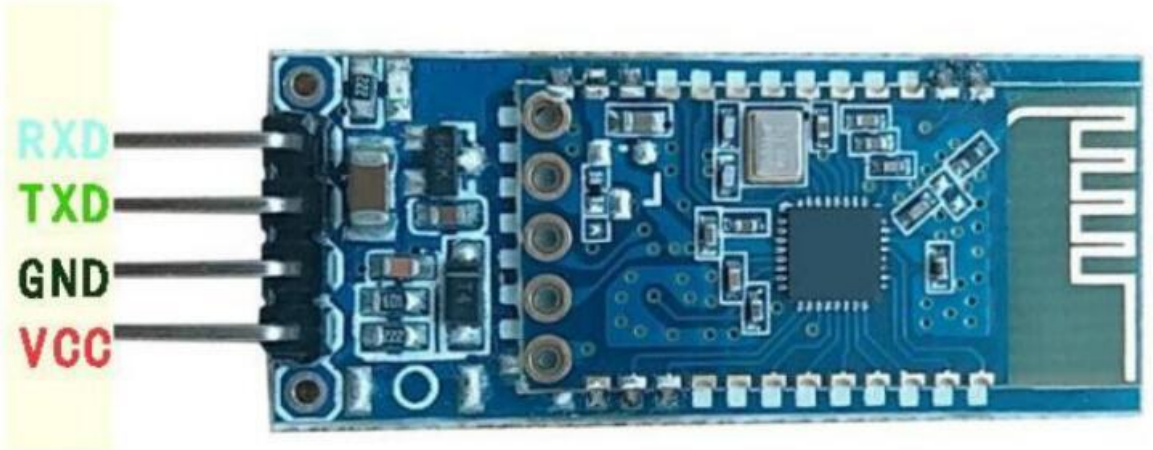
2. Applications:

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

Model	JDY-31
Working frequency	2.4GHZ
Communication Interface	UART
Operating Voltage	SMD type: 1.8-3.6V (3.3V recommended) with backplane: 3.6-6V (recommended 5V)
Operating 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
Transmit power	8db (maximum)
Receiving sensitivity	-97dbm
SPP maximum throughput	16K bytes/s (android, windows)

3. Pin function description

Pin	Left	Right	Pin
1	TXD	NULL	25
2	RXD	NULL	24
3	CTS	NULL	23
4	RTS	NULL	22
5	NULL	NULL	21
6	NULL	NULL	20
7	NULL	NULL	19
8	NULL	NULL	18
9	SWI	SELECT	17
10	NULL	STAT	16
11	RST	ALED	15
12	VCC	EN	14
13	GND		

JDY-31

TXD
RXD
3.3V
STAT
R1
1K
LED1

GND VCC RXD TXD STAT

STATE
RXD
TXD
GND
VCC
EN

RXD
TXD
GND
VCC

12.8778mm

27mm

JDY-31

1.295mm

2.794mm

Pin function description

STATE	Connection status pin (not connected low, high level after connection)
RXD	Serial input pin (TTL level)
TXD	Serial output pin (TTL level)
GND	Power ground
VCC	Power supply (support 3.6-6V)
EN	Vacant

Pin 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	Ground
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	

4. Serial AT instruction set

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

Num.	Command	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 MAC address of the module	
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	
9	AT+ENLOG	Serial port status output enable	1

1. Query the version number

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

2. Reset

Command	Response	Parameter
AT+RESET	+OK	NO

3. Disconnect

Command	Response	Parameter
AT+DISC	+OK	NO

Valid after connection

4. BLE Bluetooth MAC Address

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

5. Baud rate setting / query

Command	Response	Parameter
AT+BAUD<Param>	+OK	Param: (4 to 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

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

7. Broadcast name setting / query

Command	Response	Parameter
AT+NAME<Param>	OK	Param: BLE broadcast name
AT+NAME	+NAME=<Param>	Longest: 18 bytes

8. Reply to factory configuration

Command	Response	Parameter
AT+DEFAULT	OK	NO

9. Serial port status output enable setting / query

Command	Response	Parameter
AT+ENLOG<Param>	OK	Param: 1 or 0
AT+ENLOG	+ENLOG=<Param>	1: Turn on the serial port status output 0: Turn off the serial port status output Default: 1