JDY-10

Product introduction:

The JDY-10 transmission module is a Bluetooth 4 protocol standard, the working band is 2. 4GHZ range, the modulation mode is GFSK, the maximum transmission power is 8dB, the maximum transmission distance is 50 meters. It has the characteristics of low power consumption, small size, strong signal, stable data transmission and so on.

Product features:

1: supports the transmission of Android and IOS mobile phones.
2: Supports one-to-many, many-to-one, many-to-many data transmission and control.
3: Supporting network LED lamp (26 scenario mode, panel mode), brightness, white light, adjustable speed.
4: Supports networking GPIO control (one-to-many, many-to-one, many-to-many).
5: can be certified by FCC/CR and other standard.
6: Supporting networked remote control (ultra-low power consumption), two dry batteries can be used for at least one year.
7: support network 4 way PWM control.
8: The maximum number of 8: networks is 255.
9: supports broadcast and unicast MESH to send data.
10: supports BLE master-slave operation without master-slave switching.
11: at least 60% of the smart home application JDY-10M can be competent.

Product application scope:

1: Bluetooth networking LED lights (one to many, many to one, mobile phone or remote control, many to many control).
2: Bluetooth network motor pulling applications (one to many, many to one, machine or remote control, many to many control).
3: network panel switch, 86 switch (ultra-low power consumption).
4: network smart home application (control, relays, curtains) control.
5: networking sensor Application of network gateway of.
6: Application of network gateway of WIFI.
7: Application of Zigbeel network.
8: Application of mobile phone network control.

Technical specifications:

Type		Specification parameter
Working voltage		1.9 - 3.6V
Working temperature		-40 - 85℃
Maximum emission power		+8dbm
Antenna		PCB board antenna
Receiving sensitivity		-92dbm
SMT welding temperature		<260 degree
Communication interface		UART
average current	Wake up the MESH mode	28MA
	Deep Sleep mode	5 uA

Pin function description:

Pin	Definition	Function	Description
1	RESET	Reset	Low level effective
2	E5	0UTPUT1	The output pin can be controlled by networking, and the pin level has memory function. The next time you power up, you can keep the level set before.
3	H6	0UTPUT2	The output pin can be controlled by networking, and the pin level has memory function. The next time you power up, you can keep the level set before.
4	E7	0UTPUT3	The output pin can be controlled by networking, and the pin level has memory function. The next time you power up, you can keep the level set before.
5	F0	0UTPUT4	The output pin can be controlled by networking, and the pin level has memory function. The next time you power up, you can keep the level set before.
6	F1	K5	Key 5 input pin (key target short address can be given special attention by AT instruction: K5 pin function for IO full open / full function pin, press - down to the network all modules OUT pin output low level, then press let all chess block output level in the network, in the application can be used for one key full open, one key full off and other functions application.
7	SWS	Download program pin	
8	VCC	Power Supply	
9	GND	Power supply	
10	PWM3	PWM	AT+CLSSA0:This pin is a common PWM function
			AT+CLSSB1:This pin is controlled by the white light pin of the LED lamp
U	STAT	Connection state pin	Unconnected low level, post connection high level
12	ALED	Broadcast instruction	MESH working instruction pin flashes once per second and outputs 100MS high level.
13	PWRC	Connect the AT instruction	Connection state: PWRC pin pull low, AT instruction PWRC pin pull up or suspend transmission. Unconnected state: PWRC pins can send AT instructions in any state.
14	RXD		Serial port input, level TTL level
15	TXD		Serial output, level TTL level
16	B0	K1	Key 1 input pin (short key address can be set by AT instruction).
17	B5	K2	Key 2 input pin (short key address can be set by AT instruction).
18	B6	K3	Key 3 input pin (short key address can be set by AT instruction).

19	PWMO	PWM	AT+CLSSA0:This pin is common PWM function AT+CLSSB1: this pin is LED lamp red light pin control.
20	Cl	K4	Key 4 input pin (short key address can be set by AT instruction).
21	PWM1	PWM	AT+CLSSA0: this pin is ordinary PWM function AT+CLSSBl: this pin is LED lamp blue light pin control.制
22	PWM2	PWM	AT+CLSSA0: this pin is ordinary PWM function AT+CLSSB1: this pin is LED lamp green light pin control.

AT instruction set:

The user can communicate through the serial port and the Bluetooth chip. The serial port uses Tx, Rx two signal lines, and the baud rate supports 48009600, 19200.38400, 57600115200. The default baud rate of the serial port is 115200bps.
Detailed description of the AT instruction set.
(Note: the AT instruction must return to the line, the AT instruction can only take effect when the module is unconnected. Once the Bluetooth module is connected to the mobile phone, the Bluetooth module enters the data transmission mode) only for the feature UUID: FFEI, and MFSH can communicate with the instruction via the characteristic UUID: FFE2. Of course the serial port is connected to the state. You need to issue the AT command to send the AT instruction (including the MESH instruction) by pulling the PWRC pin low.
(AT instruction is small and case sensitive, all in return, line end: rn, pay special attention to the computer serial tool hair terminator, do not need to input rn, only need to check the send back to the line.

Inquiry - version number:

Instruction	Response	Parameter
AT+VER	+	Param:Edition Default: +JDY-10M-V2.1-MESH

Check - Bluetooth MAC address:

Instruction	Response	Parameter
AT+MAC	+MAC:	Param: MAC address

Reset - soft reset:

Instruction	Response	Parameter
AT+RESET	+OK	

Set / query - Bluetooth name:

Instruction	Response	Parameter
AT+NAME	+0K	Param: Bluetooth name Default name: the longest 18 bytes of JDY-10M

Set / query - serial port baud rate:

Instruction	Response	Parameter
AT+BAUD	0K	Param: <0-7) 0:115200bps 1:57600bps 2:38400bps 3:19200bps 4:9600bps 5:1800bps 默认值:0
AT+BAUD	+BAUD):	

Setup / check - device type:

Instruction	Response	Parameter
AT+CLSS	+OK	Param: (00-FF) A0: through mode (support 1 stroke, key switch input, OUT output) Bl: LED lamp mode (support LED lamp, keystroke input, OUT output) C0: low power remote control (only supporting key input) Default: A0 transmission mode
AT+CLSS	+CLSS=	

Set off - disconnect connection:

Instruction	Response	Parameter
AT+DISC	+0K	

Set up / query - Networking ID:

Instruction	Response	Parameter
AT+NETID	+0K	Param: (12 bytes) default: 123456789ABC
AT+NETID	+NETID=< Param>	

Set / query - short address of networking:

Instruction	Response	Parameter
AT+MADDR	OK	Param (2 bytes) Default: one bit after MAC address (HEX)
AT+MADDR	+HADDR=	

Setting / checking the -APP connection password:

Instruction	Response	Parameter
AT+PSS	+0K	param: (2 bytes) Default:12345
AT+PSS	+PSS=	

Set / check a APP cipher connection switch:

Instruction	Response	Parameter
AT + ISCEN	OK	Param: (1 bytes) 1: hit the APP password switch 0: APP connections do not require a password Default: 0
AT+ISCEN	+ISCEN=	

Set / check - the short address of the key switch:

Instruction	Response	Parameter
AT+KVALUE	+0K	Param: (4 bytes) 01FF: indicates that K1 is configured as a broadcast mode. When K1 is pressed, all devices will receive K1 key values. 0108: means that K1 is set to unicast. When K1 is pressed, only the device's short address is 08 of the device receiving the K1 key. 02FF: means that K2 is set to broadcast mode. When K2 is pressed, all devices will receive K2 key value. 0208: means that K2 is set to unicast. When K1 is pressed, only the device's short address is 08 of the device receiving the K2 key. 03FF: indicates that K3 is configured as a broadcast mode. When K3 is pressed, all devices will receive K3 key values. 0308: means that K3 is set to unicast. When K3 is pressed, only the device's short address is 08 of the device receiving the K3 key. 04FF: means that K4 is set to broadcast mode. When K4 is pressed, all devices will receive K4 key value. 0408: means that K4 is set to unicast. When K4 is pressed, only the device's short address is 08 of the device receiving the K4 key. 05FF: means that K5 is set to broadcast mode. When K5 is pressed, all devices will receive K5 key value. 0508: means that K5 is set to unicast. When K5 is pressed, only the device's short address is 08 of the device receiving the K5 key.
AT+KVALUE	+KVALUE=	Param2: (2 bytes) 01: means to read the address of the K1 02: means to read the address of the K2 03: reads the tore of K3 04: means to read the address of the K4 05: farmer reads K5's address

The number of serial ports MKSH is transmitted :(one to many, many to one, many to many)

instructions	Target short circuit address	Data

AAFC	2byte	Param

Serial MKSH data receiving:

instructions	Target short circuit address	Data long	Data
AA	lByte	lByte	lOByte
BB	lByte	lByte	lOByte

Serial port MESH function data: (one to many, many to one, many to many)

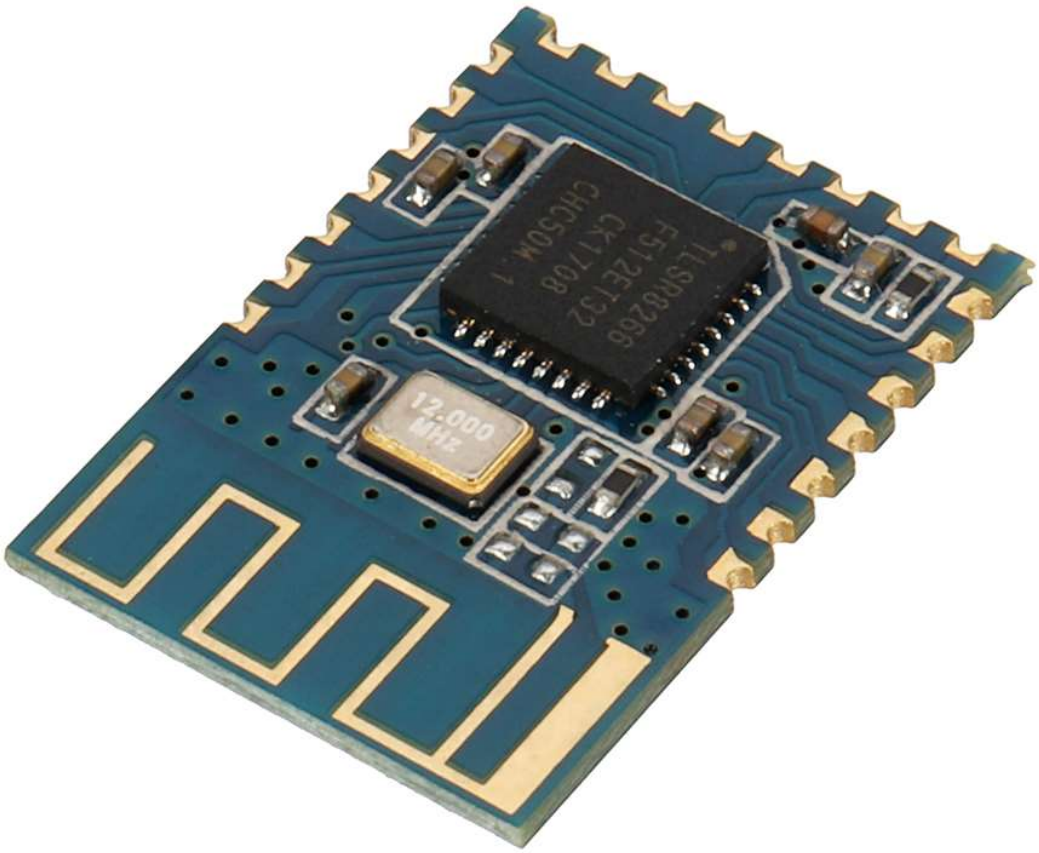
instructions	Target short circuit address	Data
AAFC	2byte	Param

I0 MESH Level control:

IOPort number	Param	Function	Data format
OUT1	E7F101	OUT1 Pin high level	HEX
	E7F100	OUT1 Pin low level	HEX
OUT2	E7F201	OUT2 Pin high level	HEX
	E7F200	OUT2 Pin low level	HEX
OUT3	E7F301	OUT3 Pin high level	HEX
	E7F300	OUT3 Pin low level	HEX
OUT4	E7F401	OUT4 Pin high level	HEX
	E7F400	OUT4 Pin low level	HEX
ALL	E7FFFF	OUT All for high level	HEX
	E7FOOO	OUT All for low level	HEX

Package included:

10 x JDY-10M 4 Bluetooth Module Master-Slave Support MESH Networking App Transmission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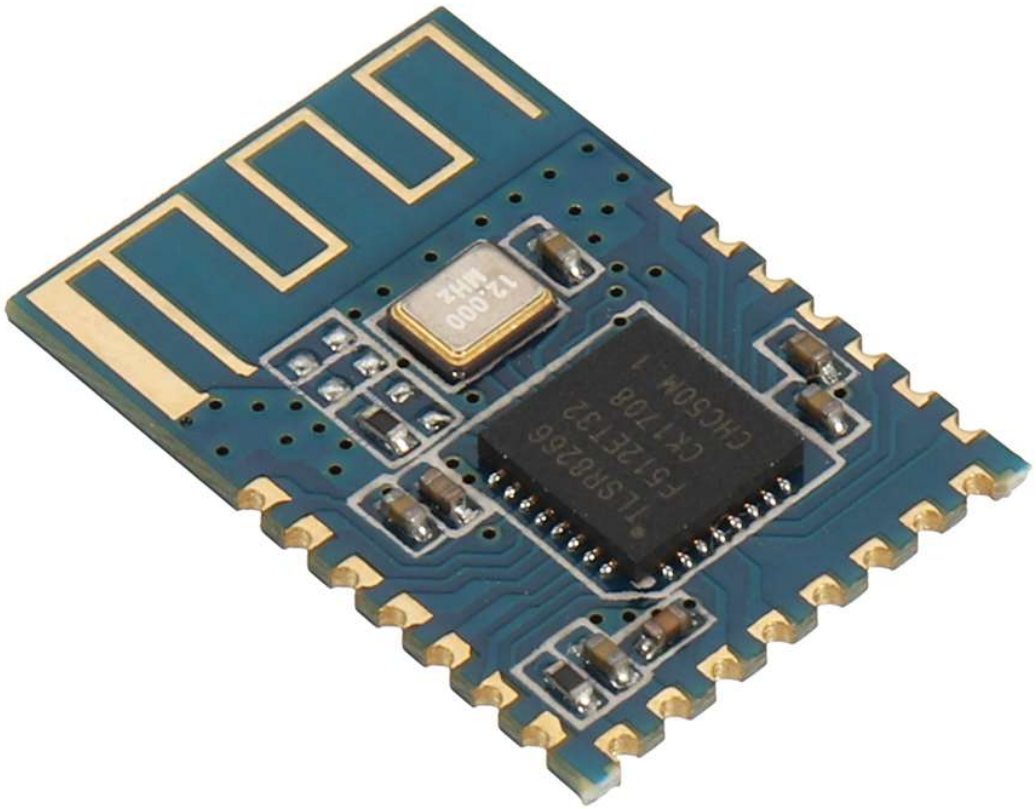
MHz


12.000
MHZ
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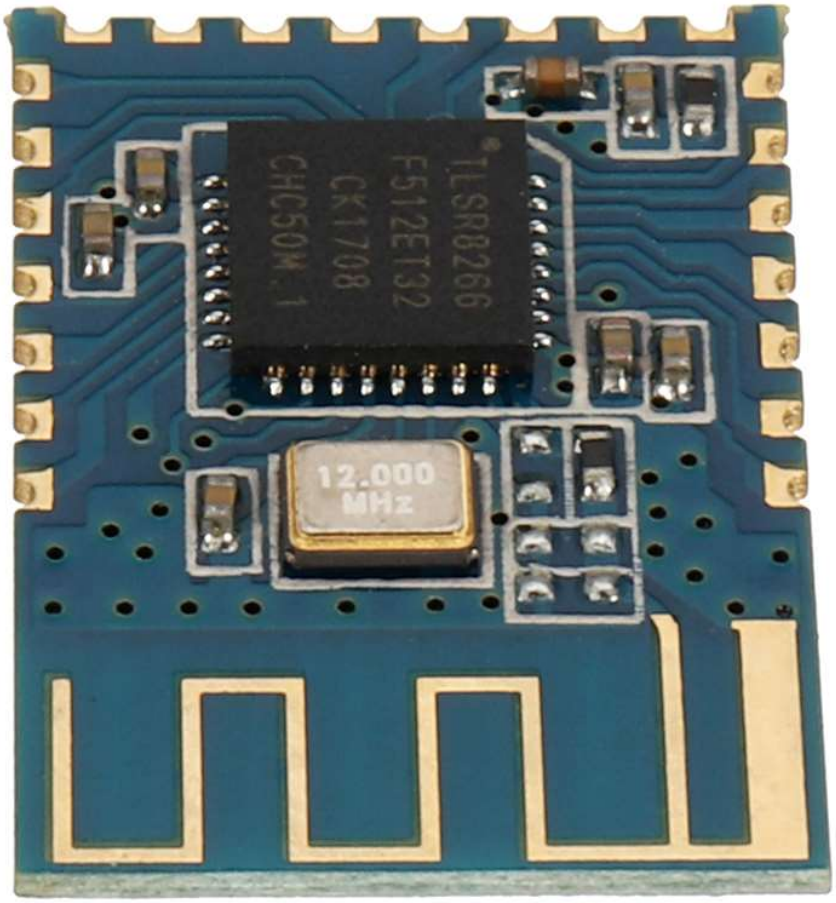
F512ET32
CK1708
CHC50M-1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F512ET32
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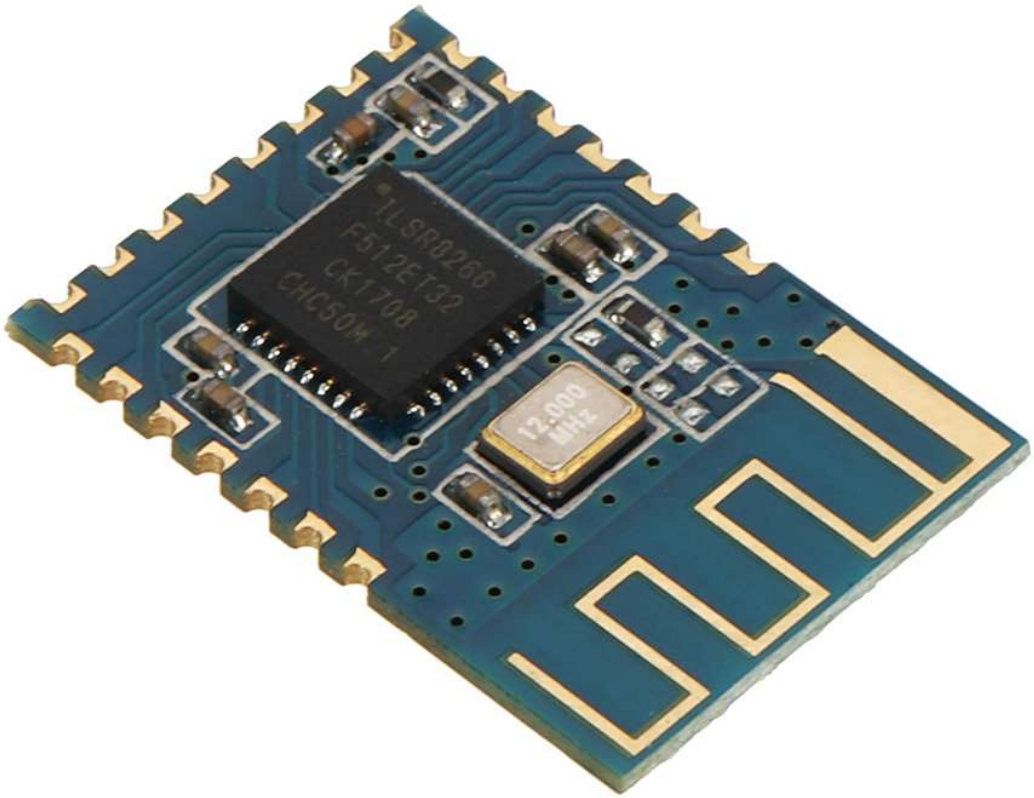
MHz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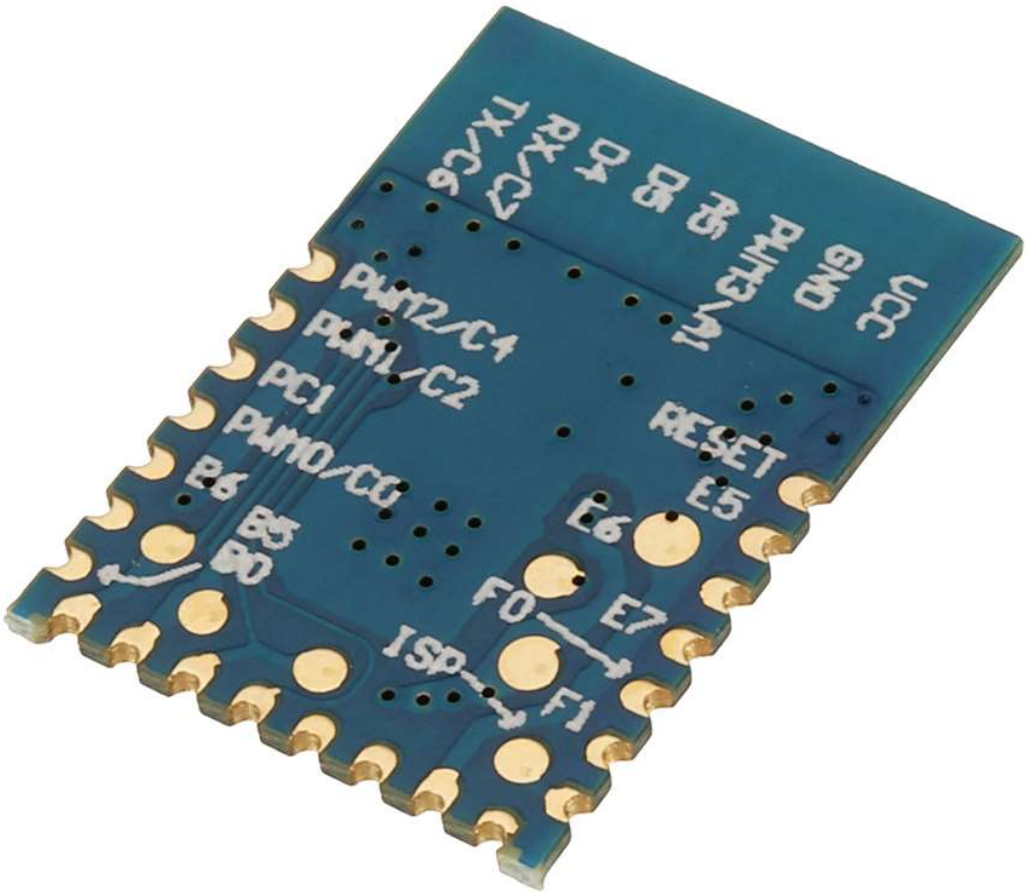
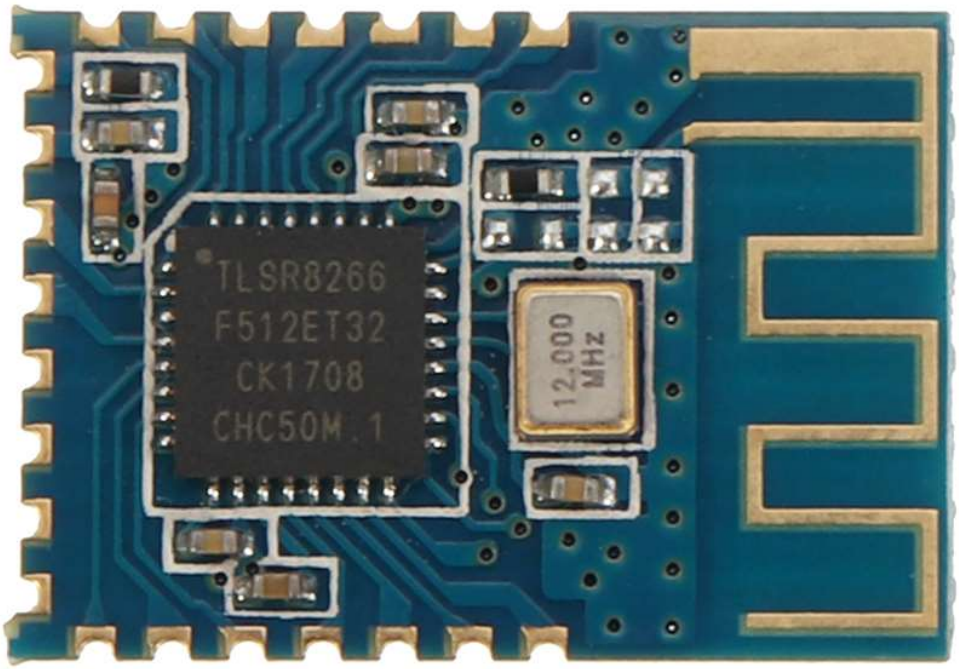
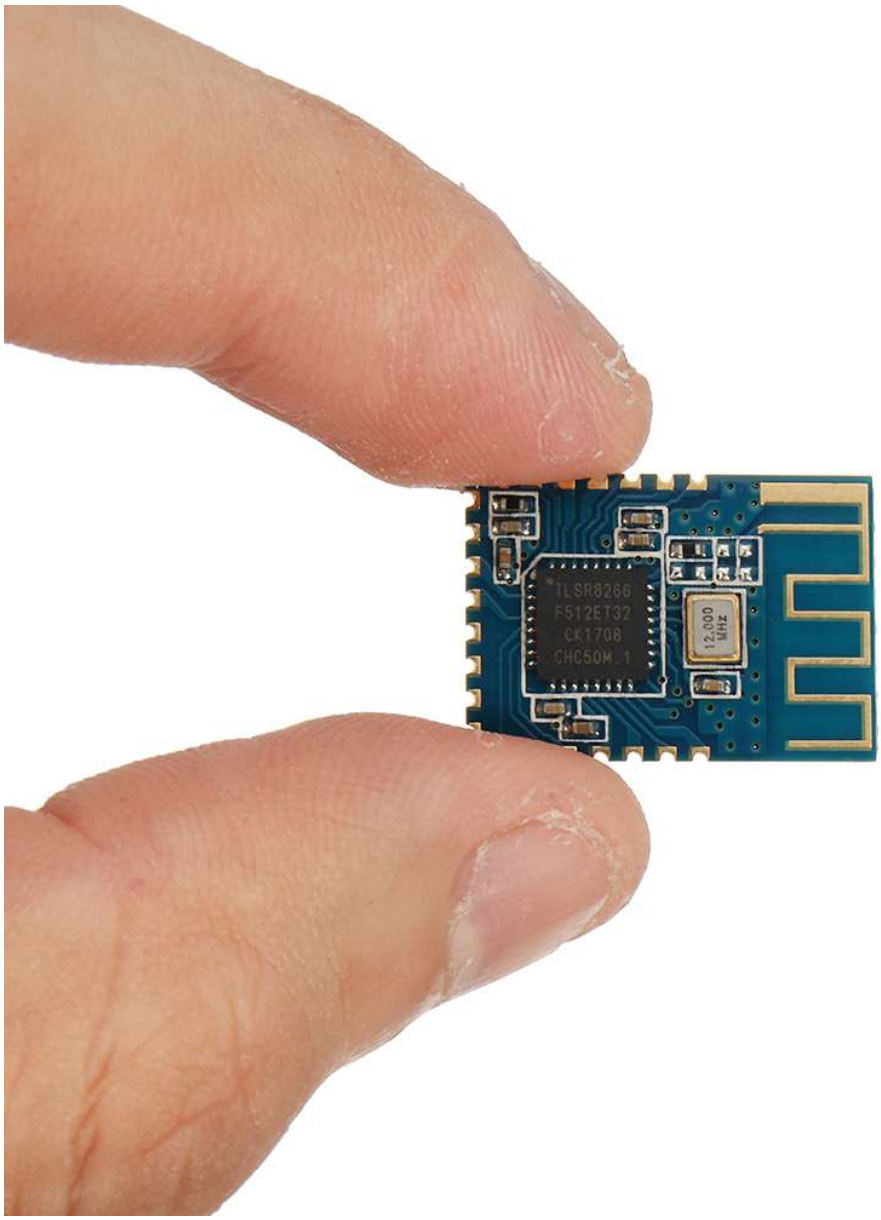

TX/C6
RX/C7
PWM3/C3
PWM4/C4
GND
VCC
PWM2/C4
PWM1/C2
PC1
PWM0/CC0
RESET
E5
E6
B6
B5
B0
F0
E7
ISP
F1


TLSR8266
F512ET32
CK1708
CHC50M.1
12.000
MHz

TX/C6
RX/C7
D4
D5
A5
PWM3/A1
GND
VCC
PWM2/C4
PWM1/C2
PC1
PWM0/C0
B6
B5
B0
ISP
F0
E6
RESET
E5
F1
E7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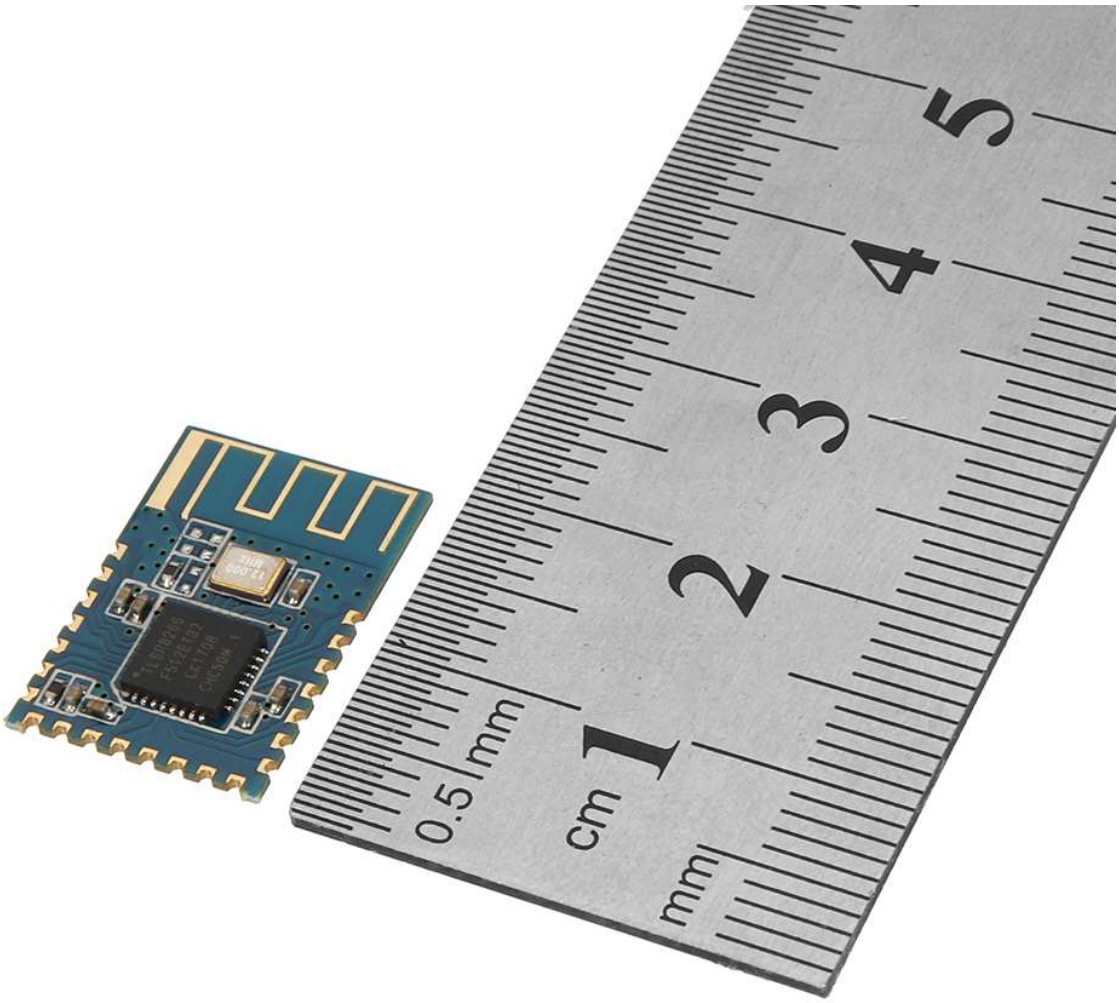
12.000
MHz


0.5
cm
1
2
3
4
5
mm