

The wireless transceiver

Module Instruction

Client: Ecovacs

Item: 2.4G receiving and receiving module

PO: JWTRF2411A

Edition: V1.2

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Date: 2017/12/04

Manufacturer: jiangsujingweite

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Product characteristics

The 2.4G module adopts the JD0069 chip, and the JD0069 chip is a single integrated wireless transceiver chip that works in the 2.4GHz world general ISM frequency band. The chip is integrated with radio frequency receiver, radio frequency transmitter, frequency synthesizer, GFSK modulator, GFSK demodulator and other functional modules. Through the SPI interface can be output power, channel selection and protocol for flexible configuration, and built-in CRC, FEC, automatic response and automatic retransmission mechanism, can greatly simplify system design and optimization performance.

This module adopts the way of complete circuit design, need very little connection of peripheral devices, in the simplest case, the user simply connect the power supply, ground, MOSI, MISO, CS, CLK this six line can be used, using the stamp hole design, has the advantages of small volume, low power consumption and high sensitivity to send and receive, apply patch batch production.

Low power consumption

The current consumption is 14mA when the work is in launch mode (the transmitting power is 0dBm);

The current consumption is 16mA when the work is in receiving mode;

Current consumption is lower than 1uA when working in hibernation mode.

Low cost

Low-cost system solutions;

The peripheral components are less than 5 pcs;

Internal integrated power reset and software reset function, peripheral control is simple;

Double layer PCB can be used for plate antenna;

high performance

Work frequency: 2437MHz;

Maximum data rate of 1Mbps;

The sensitivity can be up to -89dBm

Application circuit

The input power: 3.3V

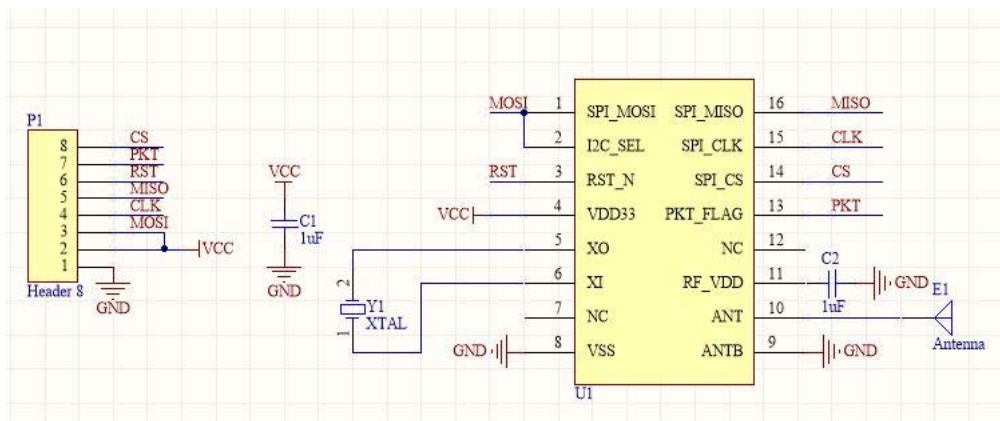


图 1

Use instructions for pins

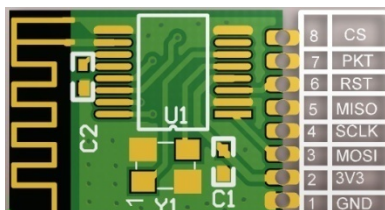


图 2

Pin number	appellation	type	Functional description
1	GND	power	land
2	VCC	PWR	3.3V power input
3	MOSI	DI	SPIData entry pin
4	CLK	DI	SPIclock entry pin
5	MISO	DI	SPIDataoutput pin
6	RST	DI	Chip reset feet, low level effective, reset after register value loss, all become the default value
7	PKT	DO	Launch receive status flag
8	CS	DI	Make the signal, low and effective, pull low can make the chip exitsleep mode

Installation considerations

1. Before installation, check whether the shield shape is intact and the logo is complete
2. The module adopts the half-hole welding mode, and it is necessary to ensure that the semi-hole welding position of the main plate is coincident with the half hole of the module to avoid welding short circuit
3. The welding position of the main plate and half hole shall overlap with the half hole of the module to avoid welding short circuit
4. The MCU is used to drive software, which can communicate with other modules

Warning: after all equipment has been installed, switch on power

FCC Statement:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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IMPORTANT NOTES

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

Co-location warning:

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Limited Channels fixed for use in the US:

This device is pre-set to only transmit in FCC approved channels from 2437MHz. This cannot be changed.

IC Statement:

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Manufacturer related information

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