# JZ882 Micro Power Wireless Module

# User's Manual

## SHEN JIZHUO TECHNOLOGY CO., LTD

---

**TEL: +86-755-83304518 / 83308451/81353151 FAX: +86-755-83302824**
**Address: NO.813,212BLD,Tairan Tech Park, Futian District Shenzhen China**
**Post Code：518040 Website：http://www. jizhuo.net**
**Email:sale@jizhuo.com**

Before using the product, please read the user's manual carefully. Any question in technical, you can contact us. Tel: +86-755-81353151，83304518.

# About JZ882

JZ882, the Micro power wireless module, is used as the wireless data transmission in short distance.

With the small size, weight and power consumption and good stability and reliability, it has the function of bi-directional data sign transmission, test and control.

It is used for Wireless meter reading, such as water meter, electric meter and gas meter, parking meter, intellective card, electronic weighing apparatus, meter for checking on work attendance, queue wireless meter, building control, shipping company control, alarm system, intelligent equipment, Automatic data collecting system; Industrial remote control and remote test building automation, safety and security, powerhouse equipment wireless monitor, entrance control system, etc. It provide the USB power interface to be convenient for the mini computer and PC users if necessary.

# JZ8882 Feature

### 1.Ultra low power transmission

Transmission power ＜500mW, high receiving sensitivity: -120dbm;

Size: 63mm*43mm*15 mm

### 2. Low power consumption

Receiving current<60mA, transmission current<400mA, current<100Ua.

### 3. ISM frequency band, not requiring on application of frequency point

Carrier frequency of 490MHz，also capable of 160/230/315MHz

### 4. High anti-interference and low BER (Bit error Rate)

Based on the FSK modulation mode, it adopts the efficient communication protocol. The actual bit error rate of 10-5 ~ 10-6 can be achieved when channel bit error rate is 10-2.

### 5. Long transmission distance

Within the range of visibility, the reliable transmission distance is（BER=10-3/1200bps） >1500m, （BER=10-3/1200bps）>2500m when the antenna height is greater than 2m (BER=10-3/9600bps).

### 6. Transparent data transmission

Transparent data interface is offered to suit any standard or nonstandard user protocol. Any false data generated in the air can be filtrated automatically (What has been received is exactly what has been transmitted). The charge time for receiving and sending <20ms.

### 7. Multi-channel and speed

The standard JZ882 configuration provides 8 channels to meet the multiple communication combination mode of the users. It has baud rate to be chosen such as 1200bps、2400bps、4800bps、9600bps、19200bps. The wireless transmission rate is direct ratio with baud rate of interface to meet user's equipment requirement.

### 8. High speed wireless communication and large data buffer

When the speed rate in the air is quicker than interface's, allowing to transmit unlimited length data at one time, when the speed rate is slower or equal the interface's, allowing the transmission of 255 Bytes long data frames at one time for more flexible programming by users.

### 9. Intelligent data control and the user doesn't need to prepare excessive programs

Even for semi duplex communication, the user doesn't need to prepare excessive programs, only

receiving/transmitting the data from the interface. JZ882 will automatically complete the other operations, such as transmission/receiving conversion in the air, control, etc.

**10. High reliability, small and light**

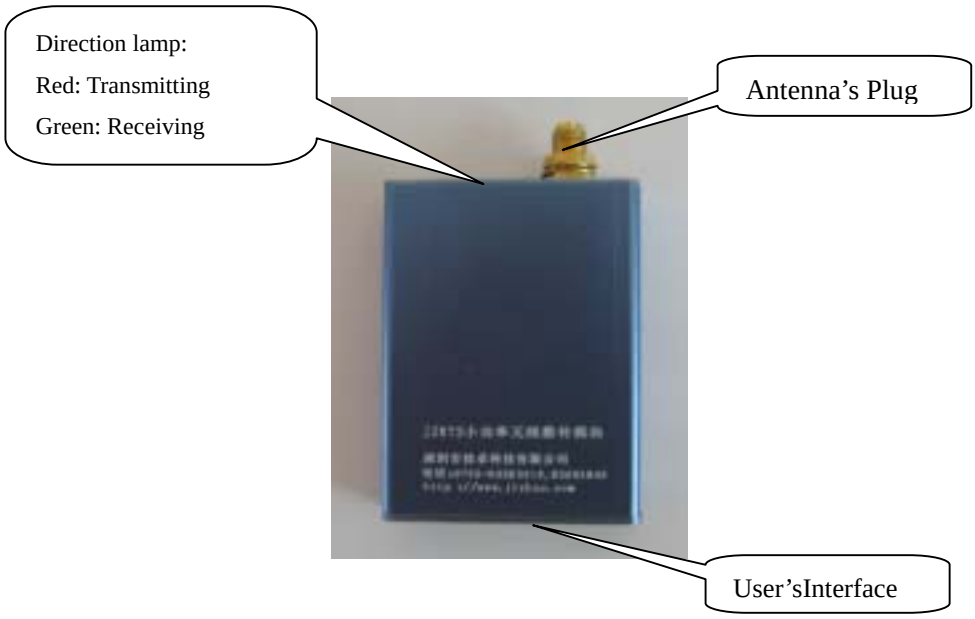
Single chip radio- frequency integrated circuit and single chip MCU are used for lessened peripheral circuits, high reliability, and low failure rate.

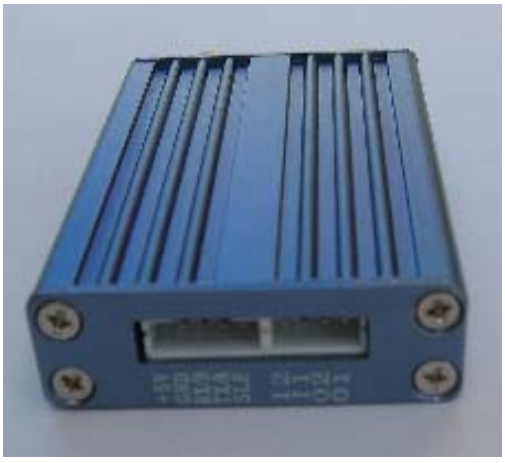
**11. Watchdog monitor**

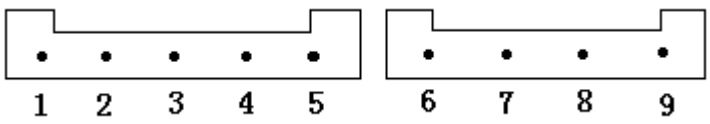
Watchdog monitors the inner function, so that change the traditional product structure and improve the product reliability.

# Application of JZ882

## 1. Dimension






Remarks: Pin space is 2.0 mm.)

## 2.JZ882 interface definition

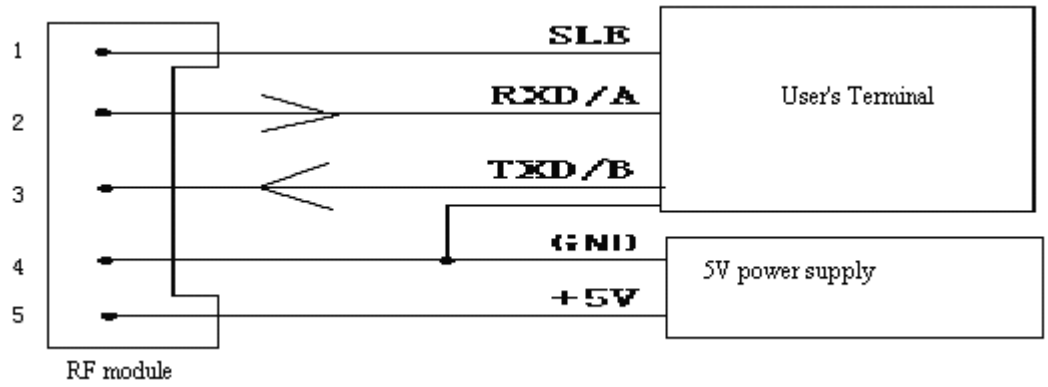
### 1) User's interface

**JZ882 have one interface of TTL/RS232/RS485, user can choose one.**

In standard interface, the plastic socket gap upward, from left to right, is 1-9 pin in turn, as follows:

**Definition of connecting pins and connection method:**

| Item no | PIN | Description | User's terminal | Remarks |
|---|---|---|---|---|
| 1 | SLE | Sleep control input end | | Low lever into sleeping, and high lever awaken |
| 2 | TXD/RS-485(A) | Serial data transmitting | RXD/RS-485(A) | |
| 3 | RXD/RS-485(B) | Serial data receiving | TXD/RS-485(B) | |
| 4 | GND | Power supply/Ground | DGND/AGND | |
| 5 | VCC | +5±0.5V | +5V | |
| 6 | I2 | Input of 2nd on and off | Output terminal of On and Off | |
| 7 | I1 | Input of 1st on and off | Output terminal of On and Off | |
| 8 | O2 | Output of 2nd on and off | Input terminal of On and Off | |
| 9 | O1 | Output of 1st on and off | Input terminal of On and Off | |



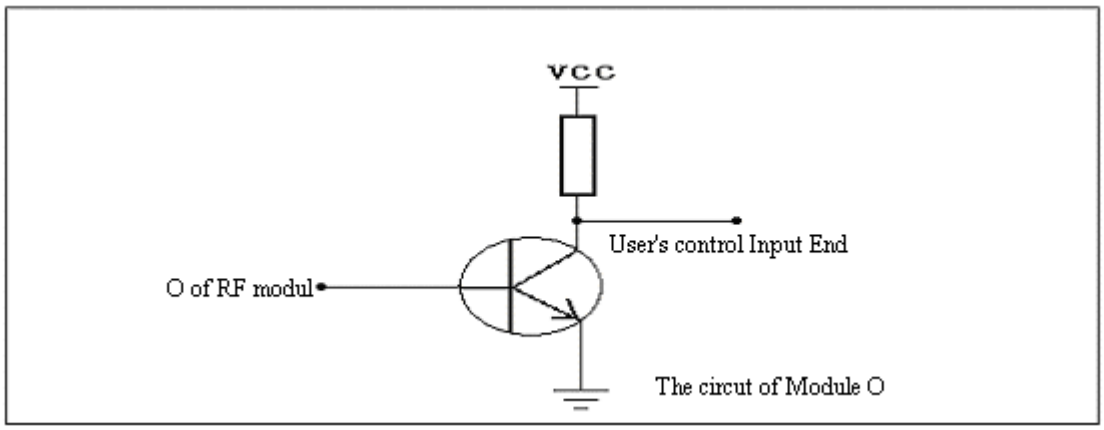

**Remarks:** To avoid to connect the interface reverse and can not communicate, please check and assure the voltage of 3 and 4 pin is existing by using multimeter. If there is one pin that has the voltage, another has not voltage, which means the interface is connected reverse, please change the connection wires between pin 3 and 4.

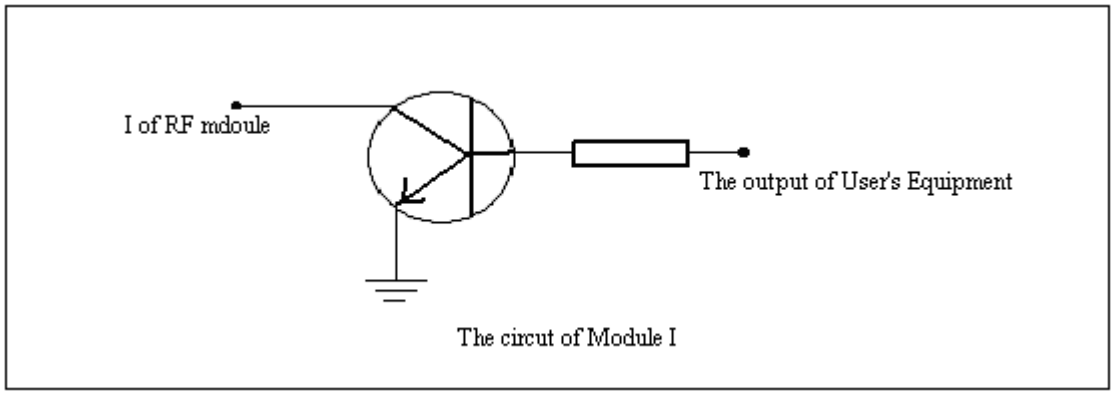
### 2) Power supply

JZ882 uses DC power supply with voltage of +5V. It can also share power supply with other equipment, however, the high quality power supply with desirable ripple factor should be selected. In addition, the reliable grounding must be used if there is other device in the system equipment. In case of failure to connect with the earth, it can form its own grounding, but it must be absolutely separated from the municipal electric supply.

### 3) The use of IO

JZ882 supply two set of IO for the users as follows:




**3). Power Saving model**

JZ882 consists of Sleeping Model and Non-sleeping model. The power is 100Ua when sleeping. The user needs to specify which model you need.

Awaken from Hardware, you can input high level in 5pin, then it sleep.

If don't need sleep, then u can connect 5 pin to ground. It will not sleep.

# 3. JZ882 Parameters Setting

JZ882 main parameters: COM baud rate and verify, RF baud rate, Channel and frequency.

You can change these parameters by our RF Module soft. When RF baud rate is faster than COM baud rate，One frame Can transmit limitless data. When RF baud rate is not faster than COM baud rate, one frame can transmit 255 bytes most. You can set the rate according your need.

**Two JZ882 communicate must have condition as follow:**

1.Their channels (i.e. frequency) are the same.

2.Their RF rates are the same.

3.RF Module Com baud rate and verify is agree with its equipment or PC that it connects with.

# Parameters default:

Channel： 1

Interface speed rate：9600BPS

Interface verify：none

Speed rate in air：9600BPS

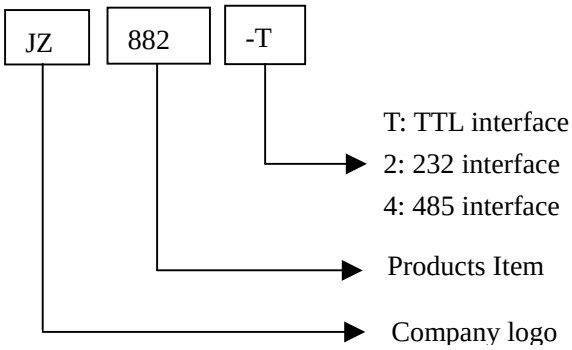
# Channel and frequency list

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 1 | 487.5072MHZ | 5 | 490.6942MHZ |
| 2 | 488.4289MHZ | 6 | 491.1580MHZ |
| 3 | 489.2329MHZ | 7 | 491.7360MHZ |
| 4 | 489.9260MHZ | 8 | 492.4388MHZ |

# Technical specification of JZ882

Modulation mode: GFSK
Working frequency: 487--493MHZ
Transmission power: <500mW
Receiving sensitivity: -120dBm
Transmitting current:: <400mA
Receiving current: <60mA
Sleeping current: <10mA
Channel speed rate: 1200/2400/4800/9600/19200Bit/s, User can Choose one
Interface speed rate: 1200/2400/4800/9600/19200Bit/s, User can Choose one
Change time for receiving and sending: <10ms
Interface data format: 8E1/8N1/8O1
Power supply: 5±0.5V DC
Working temperature: -20℃～85℃
Working humidity: 10%～90% relative humidity without condensation
Dimension: 63 mm*43mm*15 mm
Attachable Communication with Model: JZ881/JZ882

# Model and name




# Optional Antenna:


# Trouble and solve ways:

| NO. | Trouble | Trouble causes and solve ways |
|---|---|---|
| 1 | No shine of Indicator light | a、Power Line badness touch .<br>b、Power is bad.<br>c、Power line meet in reverse, or diode of polarity protect is bad. |
| 2 | No transmit or No receive | a、Radio is badness touch with PC/terminal.<br>b、Radio with TTL/RS232/RS485 not match terminal.<br>c、RX frequency and TX frequency is not same. |
| 3 | Bit error rate High | a、antenna not match, or touch bad;<br>b、RF baud rate is not right.<br>c、Power supply ripple is too great. |
| 4 | Indicator light twinkling | a、Electromagnetism disturb in circumstance.<br>b、Same frequency disturb in the circumstance. |