



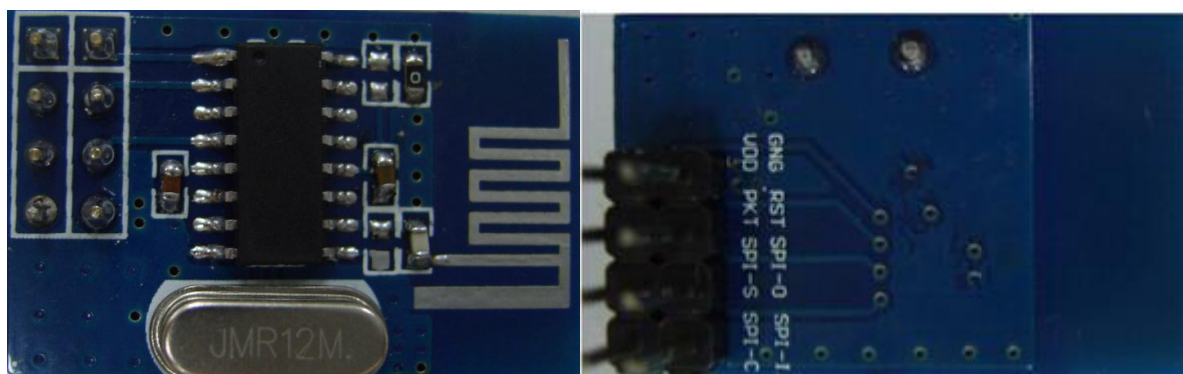
2.4G RF MODULE WITH PCB ANTENNA

1. DESCRIPTION

CYTR10 is a 2.4G wireless transceiver module which is compact small size, low power consumption, and suitable for long distance transmission. This module adapts a low cost, high integration of the 2.4Ghz wireless transceiver chip. This chipset is integrated with a transmitter, a receiver, a frequency synthesizer and a GFSK modem. The support power of the transmitter is adjustable. Adopting digital receiver extension communication mechanism, even in the complex environment and under the condition of strong interference, it can still achieve excellent transceiver performance. The Peripheral circuit is very simple. It only required matching with the MCU and a few peripheral passive devices.

The Wireless transceiver chip transmits of GFSK signal. The biggest transmission power can reach 6dBm. It use low intermediate frequency receiver structure, so the receiving sensitivity can reach -87dBm. The digital channel energy detection can monitor channel quality at any time. The chipset has reception FIFO registers and MCU communication data storage, and then transmission in the air by 1Mbps data rate. The chip itself iw with build in CRC, FEC, auto-ack and retransmission mechanism. It can greatly simplify system design and optimize the performance. The digital baseband supports 4 line SPI and 2 lines of I2C interface. In addition, it comes with three digital interfaces Reset, Pkt_flag and Fifo_flag. In order to improve the battery life, this chip is reducing power consumption in every link. This chip can support the lowest operating voltage to 1.9V and under the condition of keeping register values, the minimum current is 1uA.

This module is integrated with RF related functions and components. Users only need to register through the SPI interface with simple configuration and it can achieve communication, which shorten the development cycle of wireless products.



2. FEATURES

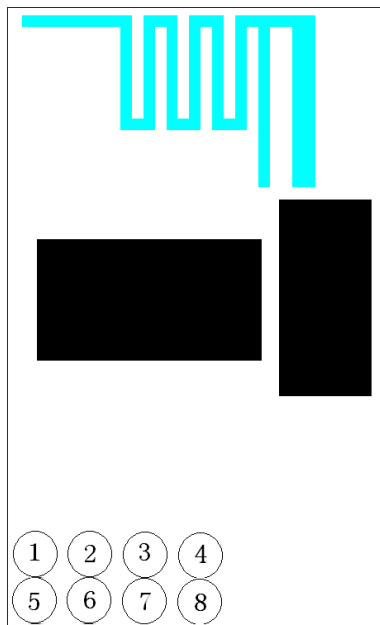
- Receiving sensitivity-87dBm, Transmitting Power can reach+6dBm;
- Frequency: 2402--2482 MHz (support hopping frequency) ;
- Power supply input range: 1.9--3.6V;
- TX current: 12--18mA;
- RX current: 17mA;
- Support SPI interface, Data Rate:1Mbps;
- Temperature range: -40-85°C (industrial grade) ; It can work under complex environment and under the condition of strong interference

- Sleep mode working current: 1uA。

3. APPLICATIONS:

- (1) Wireless data acquisition and control of industrial instrumentation.
- (2) AMR (water, electric, gas) Meter Reader;
- (3) Data Communication System;
- (4) The Remote Control System;
- (5) Intelligent Home Automation System;
- (6) Remote Control Door Opener;
- (7) Wireless Security Alarm;
- (8) Wireless Keyboard Mouse;
- (9) Wireless Industrial Controller;
- (10) Wireless Data Transmission;

4. PIN DEFINITION



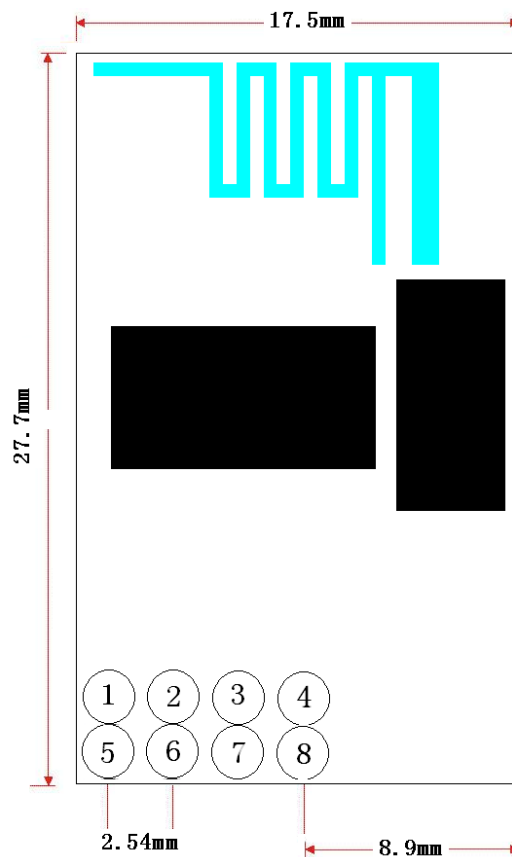
| PIN | NAME | FUNCTION DESCRIPTION |
|-----|-------|--|
| 1 | MOSI | SP I Data In |
| 2 | MISO | SP I Data out |
| 3 | RST | Chip enable pin control, effective in high level input |
| 4 | GND | Ground |
| 5 | SPI-C | Clock input pin |
| 6 | SPI-S | If set SPI_S as low level effective, it can enable SPI signal and set the chip into sleep mode |
| 7 | PKT | Transmitting/receiving status. It can be set effective in high or low level |
| 8 | VDD | Power In |

5. PARAMETERS

Testing Condition: Power Supply 3.3V , Temperature at 25°C

| Parameter | Symbol | Status | Reference Value | | | Unit |
|----------------------|--------|--------|-----------------|---------|------|------|
| | | | Min. | Typical | Max. | |
| Working Freq. | Fc | | 2400 | | 2482 | MHz |
| Modulation | | | GFSK | | | |
| Receiver Sensitivity | | | | -87 | | dBm |
| Output Power | | | | | 6 | dBm |
| Working Voltage | | | 1.9 | 3.3 | 3.6 | V |
| Working Current | TX | | 12 | | 18 | mA |
| | RX | | | 17 | | dB |
| Working Temperature | | | -40 | | +85 | °C |
| Sleeping Current | | | | 1 | | uA |
| Data Rate | | | | 1 | | M |

6. DIMENSION:



7. ORDER INFORMATION

PART NO: CYTR10

CY --BRAND NAME

TR --TRANSCEIVER

10 --MODEL NUMBER

For more information and assistance, please contact us as follows:

CY WIRELESS TECHNOLOGY LIMITED

Add: 1407, Block C, Tairan Building, 8th Tairan Road, Futian District,

Shenzhen, Guangdong Province, China

Website: www.rficy.com

Email: info@rficy.com