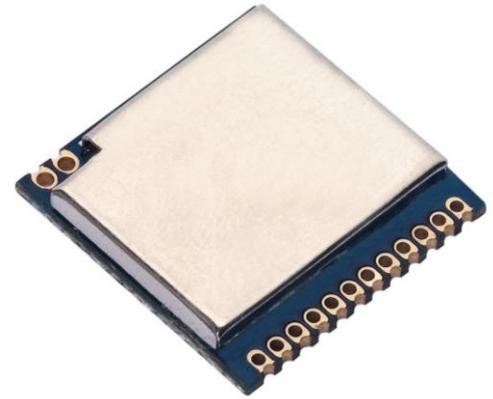


RF4463PRO wireless transceiver module

1. Description

RF4463PRO adopts Silicon Lab Si4463 RF chip, which is a highly integrated wireless ISM band transceiver chip. Extremely high receive sensitivity (-126 dBm) and +20 dBm output power ensure that the covering of the range and improve the data link performance. Built-in antenna diversity and the hopping function can be used to aggressively improve the performance.



2. Features

- Frequency Range: 433/470/868/915 (Customizable 142-1050 MHz)
- Sensitivity up to -126 dBm
- Maximum output power: 20dBm
- 10mA@receiver status
- Data transfer rate: 0.1-1000 kbps
- FSK, GFSK and OOK Modulation mode
- 1.8-3.6 V Power supply
- Ultra-low consumption shutdown mode
- Digital received signal strength indicator (RSSI)
- Timed wake-up function
- The antenna automatically match and two-way switch control
- Configurable packet structure
- Preamble detection
- 64/128byte transmit and receive data register (FIFO)
- Low-power detection
- Temperature sensor and 8-bit analog-to-digital converters
- Operating Temperature Range: -40 ~ + 85 °C
- Integrated voltage regulator
- Frequency hopping
- Power-on reset function
- Built-in crystal adjustment function

3. Application

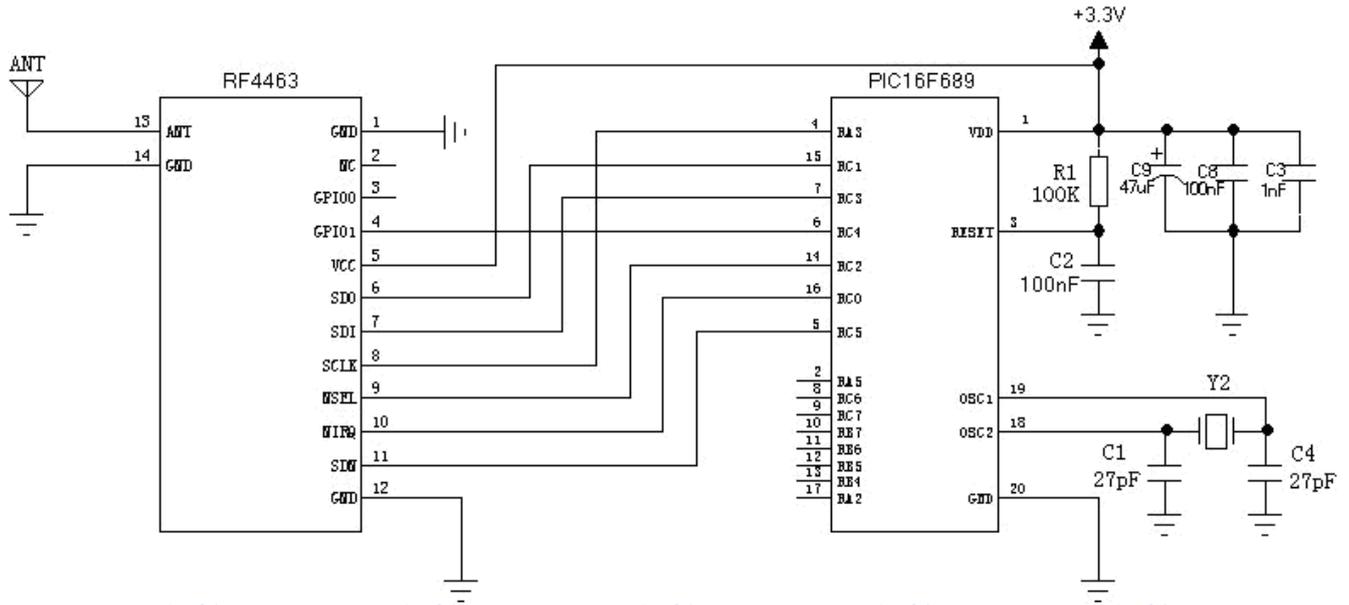
- Remote control
- Remote meter reading
- Home security alarm and remote keyless entry
- industrial control
- home automation remote sensing
- individual data records
- toys control
- sensor network

- tire pressure monitoring
- health monitoring
- wireless PC peripherals
- tag reading and writing

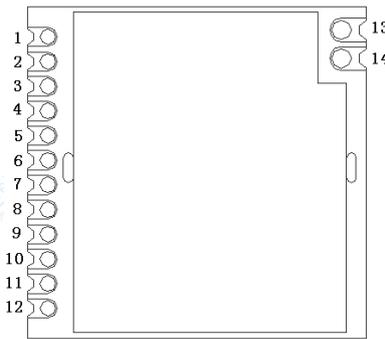
4. Electrical Specifications

Parameter	Min	Typ	Max	Unite	Condition
Working condition					
Working voltage range	1.8	3.3	3.6	V	
Temperature voltage	-40		85	°C	
Current consumption					
Receiving current		13.5		mA	High performance mode
Receiving current		10.7		mA	Low power mode
Transmitting current		85		mA	@20dBm
Sleep current		<0.1		uA	
parameter					
Frequency range	403	433	463	MHZ	@433MHZ
	838	868	898	MHZ	@868MHZ
Modulation rate	0.123		1000	Kbps	FSK
Output power range	-5		20	dBm	
Receiving sensitivity		-126		dBm	@data=500bps,Fdev=3kHz

5. Schematic



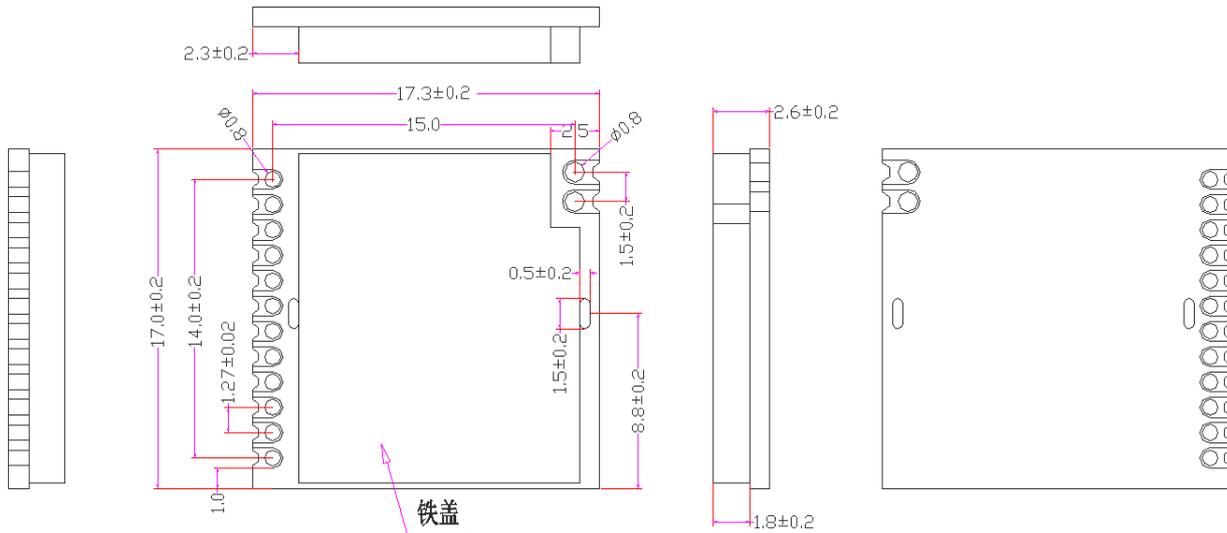
6. Pinout



Pin NO.	Pin name	Description
1	GND	power ground
2	NC	NC
3	GPIO0	GPIO0 pin directly connected to the chip
4	GPIO1	GPIO0 pin directly connected to the chip
5	VCC	Positive power supply 3.3V
6	SDO	0 ~ VDD V digital output, providing serial readback function for internal control of registers.
7	SDI	Serial data input. 0 ~ VDD V digital input. This pin is a 4-wire serial data bus serial data stream.
8	SCLK	Serial clock input. 0 ~ VDD V digital input. This pin provides a 4-wire serial data clock function.
9	nSEL	Serial interface selection input pin. 0 ~ VDD V digital input. This pin is to provide select / enable function for 4-wire serial data. this signal is also used to represent the burst read / write mode.
10	nIRQ	suspend to output pin
11	SDN	Close to input pin. 0 ~ VDD V digital input. Except shutdown mode, all

		modes SDN = 0. When SDN = 1 the chip will be completely closed and the register contents will be lost.
12	GND	power ground
13	ANT	50 ohm coaxial antenna connection
14	GND	power ground

7. Mechanical dimensions



8. Products Ordering Information

RF4463PRO-433

Module Model

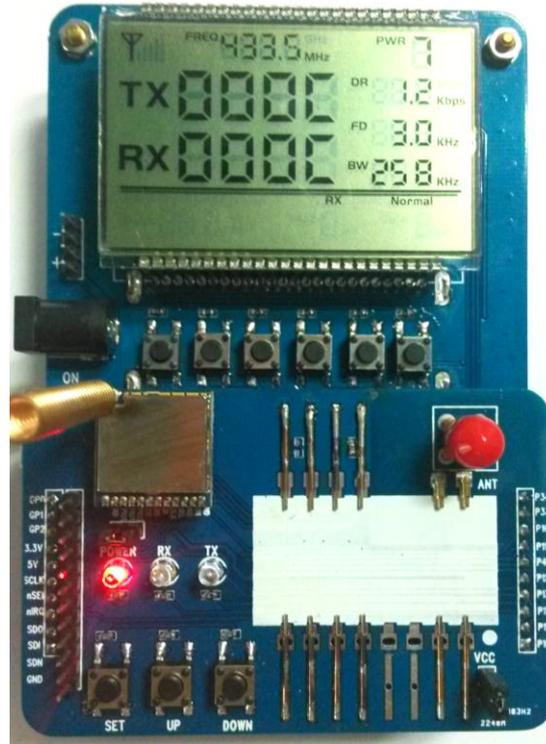
Frequency

For example:

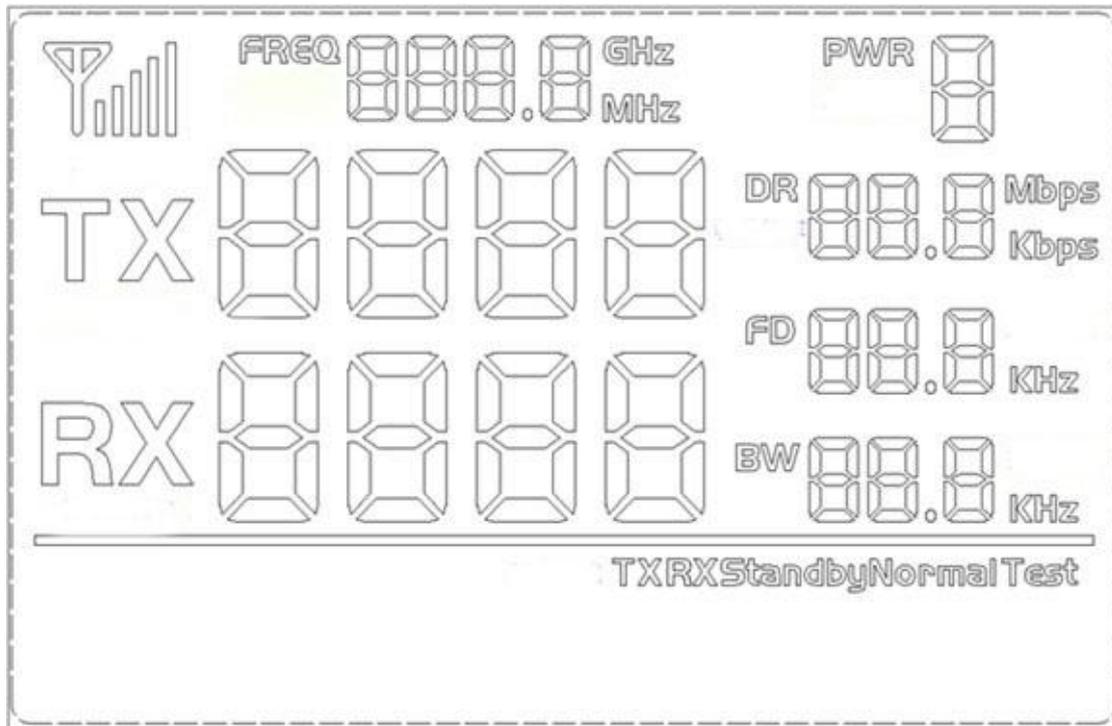
- a) If the customer needs a patch module small crystal 433MHZ band module that order model: RF4463PRO-433

Appendix:

Module equipped with standard DEMO demo program, debugging, for customers to test distance. As shown in the following illustration:



The board of DEMO LCD display interface as shown below:



Users can set the button transceiver frequency, transmitter power, wireless transmission module, serial number rate of transmission rate, the serial data bits, stop bits, parity bit parameters.

➤ Work mode:

- 1) Transmitting mode: Send data packets period (In setup mode, not to send data packets);
- 2) Reception mode: Enter the receiving mode after power up. Receive data packets and send to the serial ports.
- 3) Regular transmitting mode: the modules continuously transmit;
- 4) Regular receive mode: module is often receive state (not forwarding data);
- 5) Sleep mode: data transmission module in the standby state.

➤ Button operation

1) SET Button

Press enter setup mode, such as the setting of the last one parameter, then press jump set mode.

2) UP /Down Button

In setup mode, changes corresponding to the set parameters by these bottoms

Note: The data transmission module with FLASH inside, all the parameters set can be saved automatically evenr power-off.