

Ra-02 LoRa Module



Features

- LoRa[™] spread spectrum modulation technology
- Receive sensitivity as low as -141 dBm
- Excellent resistance to blocking
- Supports preamble detection
- Supports half-duplex SPI communication
- Programmable bit rate up to 300Kbps
- Supports FSK, GFSK, MSK, GMSK, LoRa[™] and OOK modulation modes

- Supports automatic RF signal detection, CAD mode and ultra high speed AFC

- Packets with CRC, up to 256 bytes
- Small package with double volume stamps

Overview

Ra-02 can be used for ultra-long distance spread spectrum communication, and compatible FSK remote modulation and demodulation quickly, to solve the traditional wireless design can not take into account the distance, anti-interference and power consumption.

Ra-02 can be widely used in a variety of networking occasions, for automatic meter reading, home building automation, security systems, remote irrigation systems, is the ideal solution for things networking applications.

Ra-02 is available in SMD package and can be used for rapid production by standard SMT equipment. It provides customers with high reliability connection mode.





Product Specifications

Module Model	Ra-02		
Package	SMD-16		
Size	$17*16*(3.2 \pm 0.1) \text{ mm}$		
Interface	SPI		
Programmable bit rate	UP to 300Kbps		
Frequency Range	410-525 MHz		
Antenna	IPEX		
Max Transmit Power	18±1 dBm		
Power (Typical Values)	433MHz: TX:93mA RX:12.15mA Standby:1.6mA 470MHZ: TX:97mA RX:12.15mA Standby:1.5mA		
Power Supply	2.5~3.7V, Typical 3.3V		
Operating Temperature	-30 °C ~ 85 °C		
Storage Environment	-40 ℃ ~ 90 ℃ , < 90%RH		
Weight	0.45g		

Receive Sensitivity

Frequency	Spread Factor	SNR	Sensitivity
433MHz	7	-7	-125
	10	-15	-134
	12	-20	-141
470MHz	7	-7	-126
	10	-15	-135
	12	-20	-141

Note: The above data are measured by the Semtech Shenzhen laboratory. The test conditions: power output 20dBm, bandwidth 125KHz.

Contact US

Shenzhen Ai-Thinker Technology Co., Ltd

Address: 6/F, Block C2, Huafeng Industrial Park, Hangcheng Road, Bao'an Road, Baoan District, Shenzhen ,ChinaWebsite:www.ai-thinker.comTel: 0755-29162996E-mail: support@aithinker.com