RF-1001S Datasheet

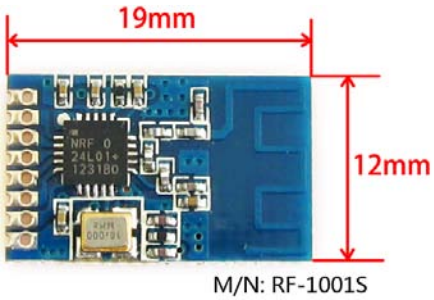
Everything done inhouse

Introduce

RF-1001S is our latest 2.4G wireless communication module. Currently, it has a stable mass production. It is suitable for a variety of scenarios. The main chip of RF-1001S is nRF24L01P, and it is imported from Norway. The resistance and the capacitance are made of imported materials, especially crystals, we use a wide temperature range with high precision crystal, in order to ensure its industrial characteristic.

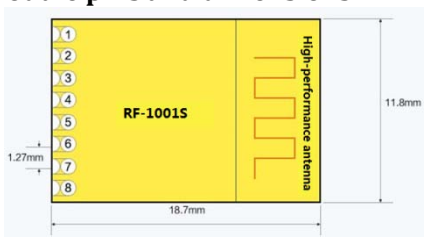
Parametric Description

Num	Parametric Name	Detailed Description
1	Main chip	nRF24L01P, from Norway
2	Module size	12* 19mm
3	Interface	2*4*2.54mm, you can use the universal plate and DuPont line
4	Supply voltage	1.9-3.6V DC
5	Communication voltage	0.7VDD-5.2VDC, VDD is the supply voltage of module
6	Measured distance	110m@250K
7	Maximum power	0dbm
8	Air Rate	250K/1M/2M
9	Shutdown Current	About 1uA. Test Conditions: CE=0, power-down mode, VDD=3.0V.
10	Power Level	4 adjustable rating
11	Transmitting current	About 13mA
12	Receiving current	About 11.5mA
13	Antenna	On-board PCB antenna
14	Communication Interface	Standard SPI Mode 0, the maximum rate is 10Mbps
15	Transmitting length	Single data packet is 1-32 bytes
16	Receiving length	Single data packet is 1-32 bytes
17	RSSI Support	Does not support the true meaning of RSSI, supports packet loss statistics
18	Reception sensitivity	-94dbm@250Kbps
19	Work temperature	-30 - +85℃
20	Work humidity	Relative humidity :10% - 90%
21	Storage temperature	-40 - +125℃
22	Working frequency	2.4000 – 2.525GHZ



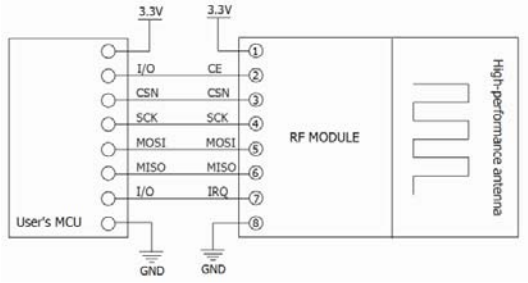
M/N: RF-1001S

Module pins and dimensions



Pin Num	Pin Name	Pin Direction	Application
1	VCC		Power provide, must be between 1.9 to 3.6(Unit: V)
2	CE	Input	Control pin
3	CSN	Input	Chip select pin, for starting an SPI communication
4	SCK	Input	SPI bus clock
5	MOSI	Input	Digital input pin
6	MISO	Output	Digital output pin
7	IRQ	Output	Interrupt signal output pin, low level effectively
8	GND	Ground	Ground

SCM Connection



Connection description:

1) CE can be long-time set HIGH, but when the module write registers must first be set to power-down mode. Recommended CE pin to control by the microcontroller.
2) IRQ can choose to not connect, and it can use SPI query way to get the interrupt status.

Notice:

1. Avoid body touch the electronic components.
2. Please ensure that the power supply has a smaller ripple , and must avoid frequent significant jitter.
3. Antenna mounting structure has a greater impact on module performance , please ensure the antenna exposed.
4. Avoid harmonic interference from other wireless devices bands
5. Please make the RF module stay away from the crystal.

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