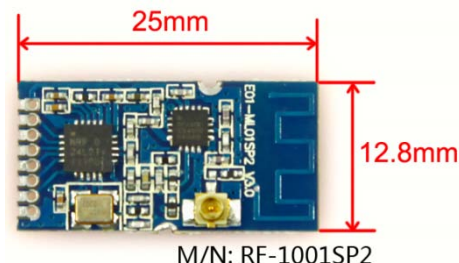


## ● Introduce

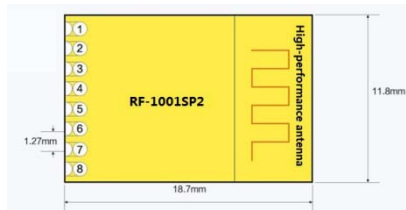
RF-1001SP2 is our latest 2.4G wireless communication module. Currently, it has a stable mass production. It is suitable for a variety of scenarios. E01-ML01SP2 module core chips used nRF24L01P from the world -renowned Nordic companies. Compared with Nrf24l01, the module have higher reliability , more power levels, as well as longer transmission distance and lower power.

## ● Parametric Description

Num	Parametric Name	Detailed Description
1	Main chip	nRF24L01P, from Norway
2	Module size	12.8* 25mm
3	Interface	1*8*1.27mm, 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	1140m@250K
7	Maximum power	20dbm
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 95mA
12	Receiving current	About 16.9mA
13	Antenna	The default connection is onboard PCB antenna , Can also be led out to the external antenna through an ipex connector
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	-102dbm@250Kbps
19	Work temperature	-30 - +80℃
20	Work humidity	Relative humidity :< 90%
21	Storage temperature	-40 - +125℃
22	Working frequency	2.4000 – 2.525GHZ

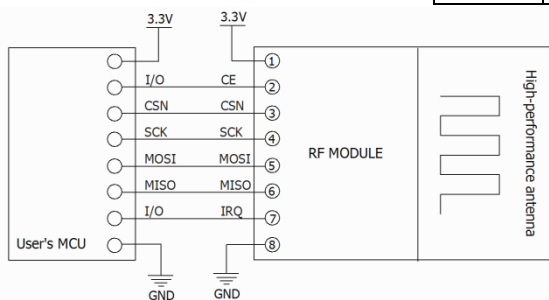


## ● Module pins and dimensions



Pin Num	Pin Name	Pin Direction	Application
1	GND		Ground
2	IRQ	Output	Interrupt signal output pin, low level effectively
3	MISO	Output	Digital output pin
4	MOSI	Input	Digital input pin
5	SCK	Input	SPI bus clock
6	CSN	Input	Chip select pin, for starting an SPI communication
7	CE	Input	Control pin
8	VCC		Power provide, must be between 2.0 to 3.6(Unit: V)

## ● 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. This module is nRF24L01 + PA + LNA, which drives the same way as nRF24L01P chip
5. Avoid harmonic interference from other wireless devices bands
6. Please make the RF module stay away from the crystal.

## ● Contact us

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