

N511 Series User's Guide

1. N511 Module Introduce

N511xS transceiver module designed for 169M, 433M, 868M and 915MHz ISM band.

2. N511 Module Parameter

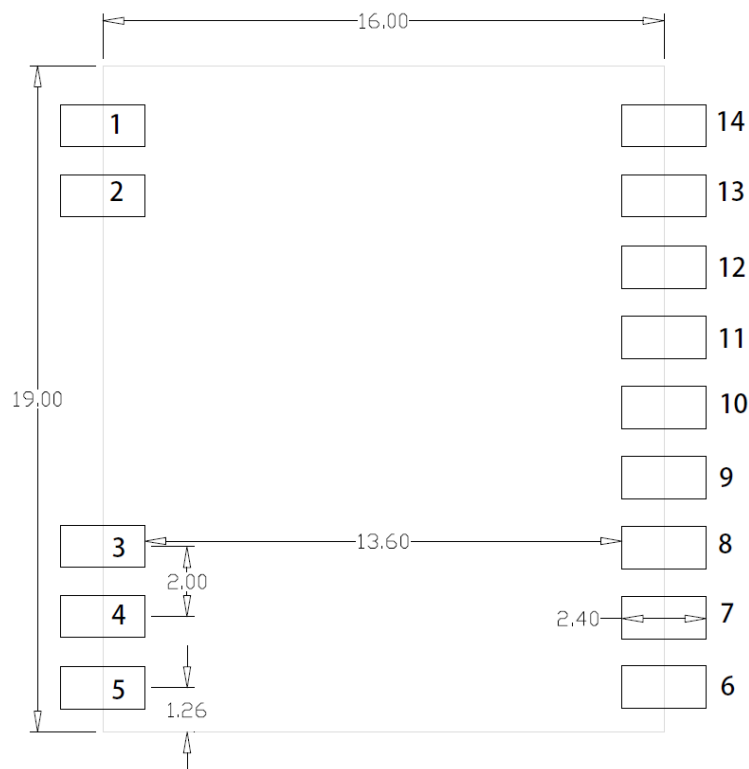
Model	N511
Module Interface	SPI
Frequency	160-175 MHz, 410-480 Mhz, 860-960 Mhz
RF Data Rate	0-200 kbps or 1200kbps
Transmitting Power	+15 dBm
Receiving Sensitivity	-120 dBm
TX Current	56 mA
RX Current	27 mA
Frequency Deviation	+/- 1 khz
Communication Distance	10 – 1500 m(Visual distance)
Antenna Interface	RF pin
Installation Mode	SMD
Volume (mm)	19 mm x 16 mm x 3 mm
Operating Voltage	1.8 - 3.6 V
Working Temperature and Humidity Environment	Temperature: -40-80 °C; Humidity 10-95 %RH
Storage Temperature and Humidity Environment	Temperature: -40-80 °C; Humidity 10-95 %RH

3. N511 Module Pinout

Pin Number	Function	Describe
1	RF	RF pin
2	GND	

3	GND	
4	GPIO3	Connected to MCU IO port
5	RESET	Connected to MCU IO port
6	VTC	TCXO power supply, Connected to MCU IO port or VCC.
7	GPIO2	Connected to MCU IO port
8	MOSI	SPI
9	SCK	SPI
10	MISO	SPI
11	GPIO0	Connected to MCU IO port
12	NSS	SPI
13	VCC	1.8V to 3.6V
14	GND	

4. N511xS Layout (mm)



5. RF pin

For RF pin, Please use a 50 ohm impedance wire for connection.

Eg: For modules with FR4 material and 1.2mm PCB thickness, please use a line width of 1.35mm and a

spacing of 0.254mm.

6. TCXO

N511AS and N511ES TCXO is 32Mhz;

N511BS, N511CS, N511DS TCXO is 40Mhz.

N511 module startup sequence:

- 1) Power On TCXO;
- 2) Wait 2ms;
- 3) Reset module;
- 4) Configuration Register;
- 5) TX and RX.

N511 module enter to sleep and wake on sequence:

- 1) Configuration Register;
- 2) enter cc112x/cc12xx sleep mode;
- 3) Wait 2ms;
- 4) Power On TCXO;
- 5) Enter MCU power off.
- 6) Power On TCXO;
- 7) Wait 2ms;
- 8) TX and RX.

7. N511 code

The N511 soft example please down load from TI, or get from www.coralradio.com.

Note: This guide supports N511AS, N511BS, N511CS, N511DS, N511ES.