

N533ES , CC1314R10 Module



N533ES Module Introduce

N533ES CC1314R10 transceiver module based TI wireless MCU **CC1314R10RGZ** and **PA LNA** chip, designed for 868M and 915MHz band. Up to **+30 dBm** output power and down to -112 dBm sensitivity at **50kbps**.

N533ES is a low-cost and small size sub g transceiver module for transmitting and receiving digital data via radio frequency. All of the N533ES 's electronics (don't including an antenna) reside on a single PCB, and all operational power is derived from a single supply voltage.

The N533ES module design consists of a CC1314R10 low-power, integrated sub 1G transceiver RF chip , all IO pin of CC1314R10RGZ are brought out. The module available frequency is from 820 to 960Mhz. The hardware is designed for maximum range, 5000m + Range (Line of Sight).

N533ES module based TI CC1314R10RGZ transceiver.The module use SMD package. It has small size, the module is suitable for SMT production. Rapid development without understanding RF. The module supports WMbus and so on.

N533ES is suitable for ISM band in China, EU and USA at 868/915Mhz.

Module Parameter

Model	N533ES
Module Interface	SPI, UART
Frequency	160-960 Mhz, 1200Mhz
RF Data Rate	0-4000 kbps
868Mhz Transmitting Power	+30 dBm
868Mhz Receiving Sensitivity	-112 dBm at 50 kbps
868Mhz TX Current	900 mA (type)
868Mhz RX Current	12 mA
Frequency Deviation	+/- 10 khz, with Crystal oscillator
Communication Distance	10 – 5 000 m (Visual distance)
Antenna Interface	RF pin, IPEX
Installation Mode	SMD
Volume (mm)	36 mm x 32 mm x 3 mm
Operating Voltage	2 - 3.6 V

Working Temperature and Humidity Environment	Temperature: -30-70 °C; Humidity 10-95 %RH
Storage Temperature and Humidity Environment	Temperature: -40-80 °C; Humidity 10-95 %RH
Weight (kg)	≈10g

Module Pinout

Pin Number	Function	Describe
1	GND	
2	GND	
3	DIO1	
4	DIO2	MCU IO port
5	DIO3	MCU IO port
6	DIO4	MCU IO port
7	DIO5	MCU IO port
8	DIO6	MCU IO port
9	DIO7	MCU IO port
10	DIO8	MCU IO port
11	DIO9	MCU IO port
12	DIO10	MCU IO port
13	VCCPA	PA power supply, 2V -- 3.9V, MAX current: 1000mA
14	VCC	CC1314R10 power supply, 2V -- 3.6V
15	GND	GND
16	DIO11	TMS
17	DIO12	TCK
18	DIO13	MCU IO port
19	DIO14	MCU IO port
20	DIO15	MCU IO port
21	TMS	MCU IO port
22	TCK	MCU IO port
23	RESET	MCU IO port
24	DIO16	MCU IO port
25	DIO17	MCU IO port
26	DIO18	MCU IO port
27	DIO19	MCU IO port
28	DIO20	MCU IO port

29	DIO21	MCU IO port
30	DIO22	MCU IO port
31	DIO23	MCU IO port
32	DIO24	MCU IO port
33	DIO25	MCU IO port
34	RF	
35	GND	

Application Area

Ultra low-power wireless applications

Operating in the 315/433/868/915 MHz ISM/SRD bands

Wireless alarm and security systems

Industrial monitoring and control

Wireless sensor networks

AMR – Automatic Meter Reading

Home and building automation

Wireless MBUS

PALNA Logic Config

	DIO27	DIO28	DIO29	DIO30
TX	1	0	1	1
RX	0	1	0	0
Sleep	0	0	0	1

N533ES Layout

