

# N533BS , CC1312R Module



## N533BS Module Introduce

N533BS CC1312R transceiver module based TI wireless MCU **CC1312R** and **PA LNA** chip, designed for 169M, 433M, 868M and 915MHz, 1200Mhz band. Up to **+30 dBm** output power and down to -112 dBm sensitivity at **50kbps**.

N533BS is a low-cost and small size sub g transceiver module for transmitting and receiving digital data via radio frequency. All of the N533BS 's electronics (don't including an antenna) reside on a single PCB, and all operational power is derived from a single supply voltage.

The N533BS module design consists of a CC1312R low-power, integrated sub 1G transceiver RF chip , all IO pin of CC1312R are brought out. The module available frequency is from 820 to 960Mhz. The hardware is designed for maximum range, 5000m + Range (Line of Sight).

N533BS module based TI CC1312R 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.

N533BS is suitable for ISM band in China, EU and USA at 868/915Mhz.

## N533BS Module Parameter

Model	N533BS
Module Interface	SPI, UART
Frequency	160-960 Mhz, 1200Mhz
RF Data Rate	0-4000 kbps
Transmitting Power	+30 dBm
Receiving Sensitivity	-112 dBm at 50 kbps

TX Current	900 mA (type)
RX Current	12 mA
Frequency Deviation	+/- 10 khz, with <b>Crystal oscillator</b>
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: <b>1000mA</b>
14	VCC	CC1312R 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

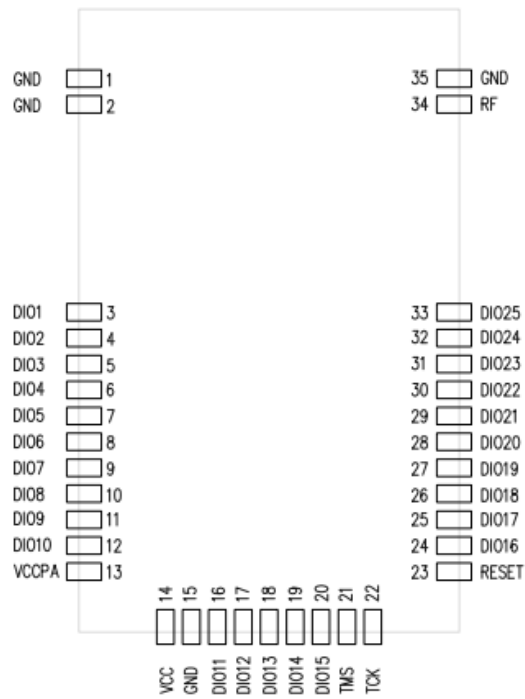
AMR – Automatic Meter Reading

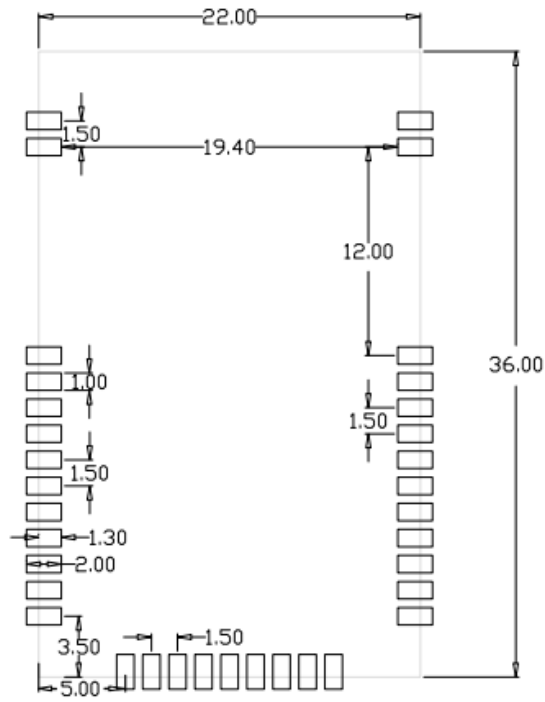
Home and building automation

**N533BS PALNA Logic**

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

**N533BS Layout**





**N533BS Ordering Information**

N533BS-CC1312R-433M	RF Module	CC1312R	30DBM	1000mW – 410-480Mhz
N533BS-CC1312R-868M	RF Module	CC1312R	30DBM	1000mW – 860-880Mhz
N533BS-CC1312R-915M	RF Module	CC1312R	30DBM	1000mW – 910-930Mhz
N533BS-CC1312R-1200M	RF Module	CC1312R	30DBM	1000mW – 1210-1250Mhz

More information please contact with us.