

N533BS, CC1312R Module



N533BS Module Introduce

N533BS CC1312R transceiver module based TI wireless MCU **CC1312R** and **PA LNA** chip, designed for 430M, 868M, 915MHz and 1200Mhz band. Up to **+30dBm** 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.

N533BS module design consists of a CC1312R low-power, integrated sub 1G transceiver RF chip, most IO pin of CC1312R are brought out. The module available frequency is from 410 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
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 TCXO
Communication Distance	10 – 5 000 m (Visual distance)
Antenna Interface	RF pin, IPEX
Installation Mode	SMD
Volume (mm)	36 mm x 24 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

N533BS Module Pinout

Pin Number	Function	Describe
1	GND	
2	GND	
3	VCCPA	PA power supply, 4.5V -- 5.5V; MAX current: 800mA
4	VCCPA	PA power supply, 4.5V -- 5.5V; MAX current: 800mA
5	GND	GND
6	DIO2	MCU IO port
7	DIO3	MCU IO port
8	DIO5	MCU IO port
9	DIO6	MCU IO port
10	DIO7	MCU IO port
11	DIO8	MCU IO port

12	VCC	CC1311R3 power supply, 3V -- 3.6V
13	GND	MCU IO port
14	RESET	
15	TMS	TMS
16	TCK	TCK
17	DIO18	MCU IO port
18	DIO19	MCU IO port
19	DIO20	MCU IO port
20	DIO21	MCU IO port
21	DIO22	MCU IO port
22	DIO23	MCU IO port
23	DIO24	MCU IO port
24	DIO25	MCU IO port
25	RF	
26	GND	

Application Area

Ultra low-power wireless applications

Operating in the 315/430/868/915 MHz ISM/SRD bands

Wireless alarm and security systems

Industrial monitoring and control

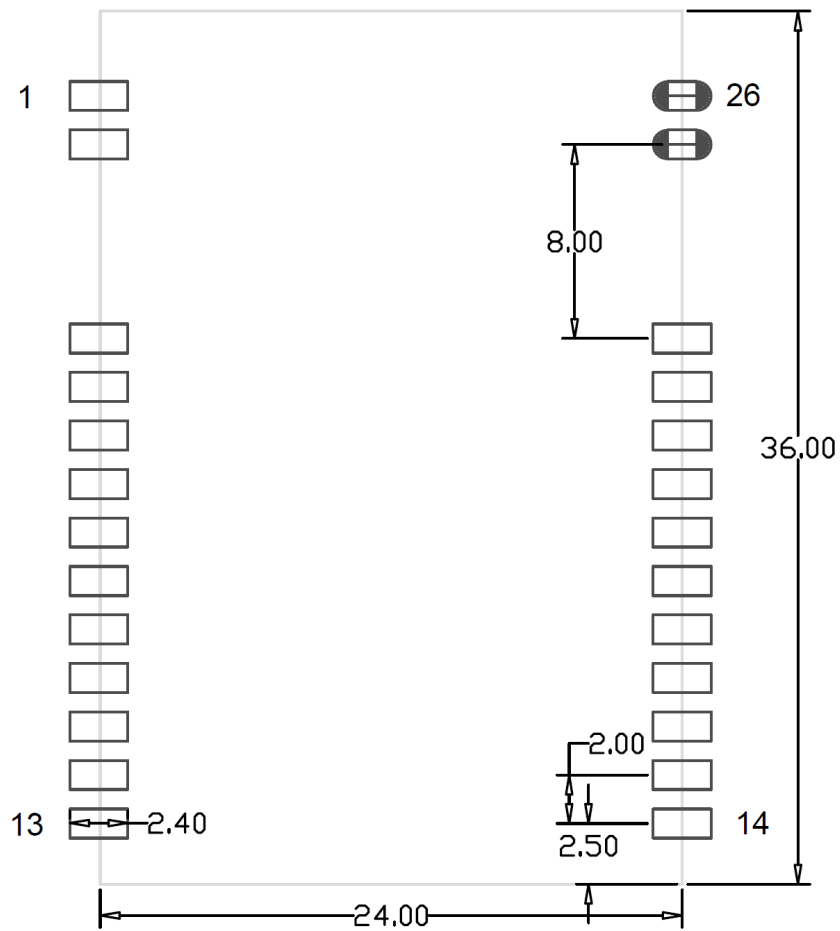
Wireless sensor networks

AMR – Automatic Meter Reading

Home and building automation

Wireless MBUS

N533BS Layout



Ordering Information

N533BS-CC1312R-430M	RF Module	CC1312R	30DBM	2000mW – 410-480Mhz
N533BS-CC1312R-868M	RF Module	CC1312R	30DBM	2000mW – 860-880Mhz
N533BS-CC1312R-915M	RF Module	CC1312R	30DBM	2000mW – 910-930Mhz