

N539DS, CC1311R3 Module



N539DS Module Introduce

N539DS CC1311R3 transceiver module based TI wireless MCU **CC1311R3** and **PA LNA** chip, designed for 169Mhz band. Up to **+36 dBm** output power and down to -112 dBm sensitivity at **50kbps**.

N539DS is a low-cost and small size sub g transceiver module for transmitting and receiving digital data via radio frequency. All of the N539DS's electronics (don't including an antenna) reside on a single PCB, and all operational power is derived from a single supply voltage.

N539DS module design consists of a CC1311R3 low-power, integrated sub 1G transceiver RF chip, most IO pin of CC1311R3 are brought out. The module available frequency is from 160 to 1200Mhz. The hardware is designed for maximum range, 5000m + Range (Line of Sight).

N539DS module based TI CC1311R3 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.

N539DS is suitable for ISM band in China, EU and USA at 868/915Mhz.

N539DS Module Parameter

Model	N539DS
Module Interface	SPI, UART
Frequency	160-175 Mhz
RF Data Rate	0-4000 kbps
169Mhz Transmitting Power	+36 dBm

169Mhz Receiving Sensitivity	-112 dBm at 50 kbps
169Mhz TX Current	900 mA (type)
169Mhz 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	3 - 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

N539DS Module Pinout

Pin	Number	Function	Describe
1		GND	
2		GND	
3		VCCPA	PA power supply, 4.5V -- 5.5V; MAX current: 1200mA
4		VCCPA	PA power supply, 4.5V -- 5.5V; MAX current: 1200mA
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 315/433/868/915 MHz ISM/SRD bands

Wireless alarm and security systems

Industrial monitoring and control

Wireless sensor networks

AMR – Automatic Meter Reading

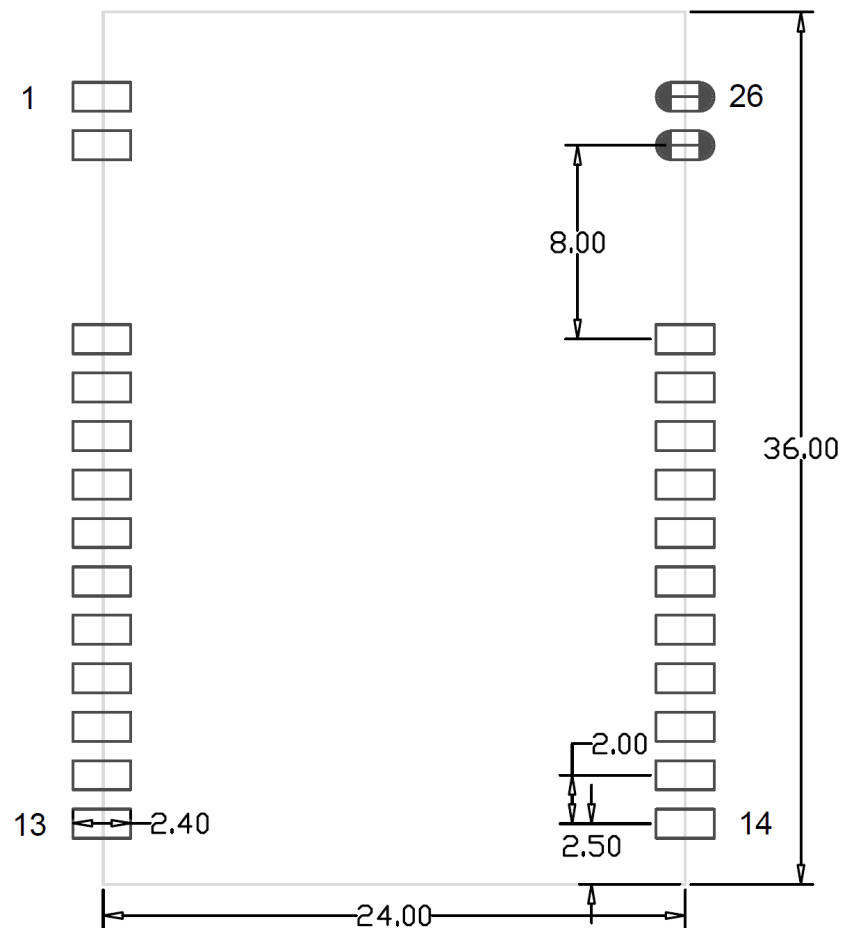
Home and building automation

Wireless MBUS

N539DS PALNA Logic

	DIO27- LNAEN	DIO28-TCXO	DIO29-RXEN	DIO30-TXEN
Active	1	1	0	0
TX	1	1	0	1
RX	1	0	1	0
SLEEP	0	1	0	0

N539DS Layout



Ordering Information

N539DS-CC1311R3-169M RF Module CC1311R3 36DBM 4000mW – 160-175Mhz