Radiocontrolli®
WIRELESS MODULES

Ultra Low Power sub 1GHz Multichannels Radio Transceiver with USB interface

The **RC-CC1310-USB-868** module is based on Texas Instruments CC1310F128 component. This device combines a flexible, very low power RF transceiver with a powerful 48 MHz Cortex M3 microcontroller in a platform supporting multiple physical layers and RF standard.
In addition the tranceiver is connected to a single chip CP2102 (Silicon Labs), to allow the USB to UART data transfer.

Frequency band : 868MHz - 915MHz

Long range operations, the sensitivity parameter is -110dBm at data rates of 50 kbps and down to -124dBm when the data rate is 0.625kbps.
Interference from other wireless communications can be overcome with 90dB of blocking.
The RF output power levels can reach up to +14dBm.
All this ensure a robust signaling for long range communications.

SimpleLink-Easylink compatibility,ultra-low power platform designed (from TI) to easily implement the long-range connectivity with low power consumption on the Internet of Things projects (IoT).

TI-15.4 Stack, IEEE802.15.4e/g Standard Based Star Networking Software Designed for long **r**ange & robust star networks

6LoWPAN compatibility with mesh network stack for **Contiki.**

Applications :

- Low-Power Wireless Systems
- Smart Grid and Automatic Meter Reading
- Home and Building Automation
- Wireless Sensor Network
- 6LoWPAN systems

Feature :

- IEEE 802.15.4g mode switch support
- Ultra Low consumption technology
- Powerful ARM Cortex M3
- Supported by the open platform Contiki 6LoWPAN.
- Very Small size

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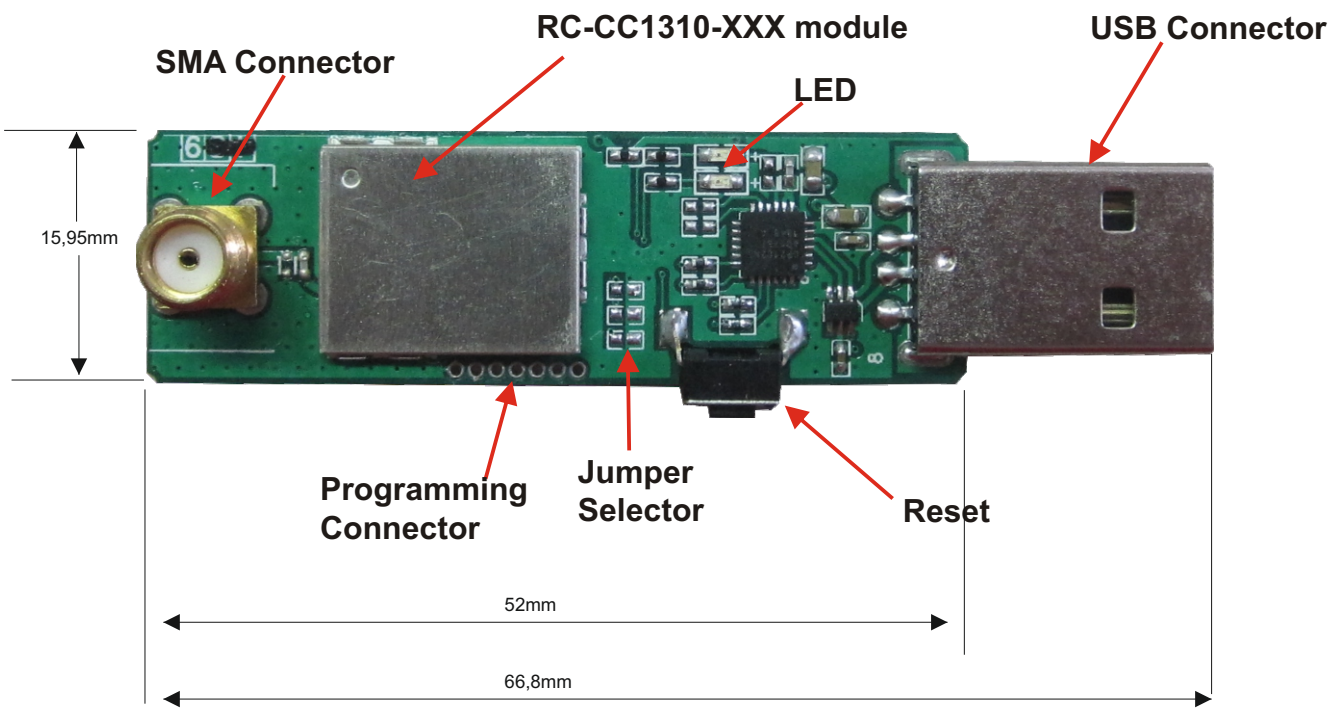

Technical Characteristics

Characteristics	MIN	TYP	MAX	UNIT
Supply Voltage	1.8	3	3.8	VDC
Supply Current RX mode		5.5		mA
Supply Current TX mode ---> +10dBm		13.4		mA
Supply Current TX mode ---> +14dBm		23.5		mA
Supply Current Standby Mode		0.7		µA
Supply Current Shut Down Mode		185		nA
Operative Frequency		868/915		MHz
Frequency error		± 10		ppm
RF Power Output 50ohm (*)	-10		+14	dBm
RF Sensitivity 50kbps		- 110		dBm
RF Sensitivity long range mode 625bps		- 124		
Data Rate (*)	0,01		4	Mbit/s
Operative Temperature	-30		+75	°C

(*) Programmable parameter.

MICROCONTROLLER:
- Power ARM Cortex - M3
- Up to 48MHz Clock Speed
- 128KB of On-System Programming Flash
- 8KB of SRAM for Cache (or as General-Purpose RAM)
- 20KB of Ultralow Leakege SRAM
- Support Over-the-Air Upgrade (OTA)

USB Interface :
- Single Chip CP2102 (Silicon Labs)

For more information and details, please refer to the CC1310 Texas Instruments datasheet.

Reference Schematics