Radiocontrolli
Wireless Modules

Sub 1GHz Multichannels Radio Transceiver

It is a low cost sub 1GHz multichannels transceiver designed for low-consumption wireless applications. The hardware is based on Texas Instruments CC1101 component.
Programmable from external microcontroller via SPI interface.
SMT Version

Operative Frequency Band : 915MHz

Technical Characteristics

Characteristics	MIN	TYP	MAX	UNIT
Supply Voltage	1.8	3	3.6	VDC
Supply Current (RX mode / TX mode)		18/30		mA
Supply Corrente Power Down mode		0.2		µA
Operative Frequency band		915		MHz
RF Power Output 50ohm		+10		dBm
RF Sensitivity (1.2 Kb/sec data rate)		- 112		dBm
Data Rate	1.2		500	Kbit/s
Operating Temperature Range	-20		+70	°C

For more information and details, please refer to the CC1101 Texas Instruments datasheet.

Applications :

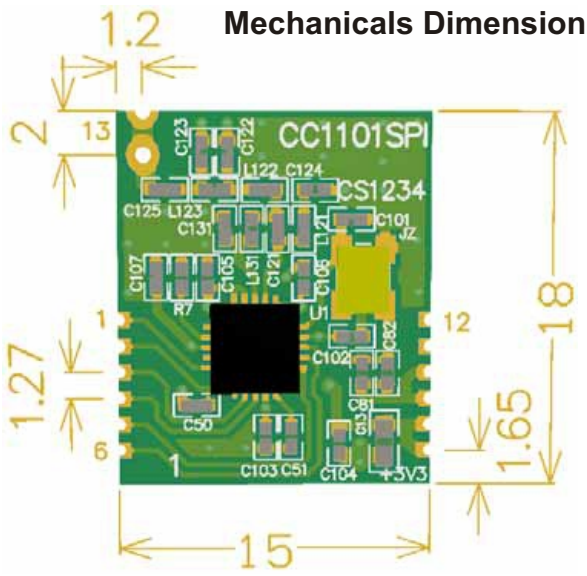
- Wireless security systems
- Home and building automation
- Automatic Measure Reading
- Industrial Control and Monitoring
- Wireless Sensor Network

Feature :

- Bidirectional multichannel Link
- Low consumption technology

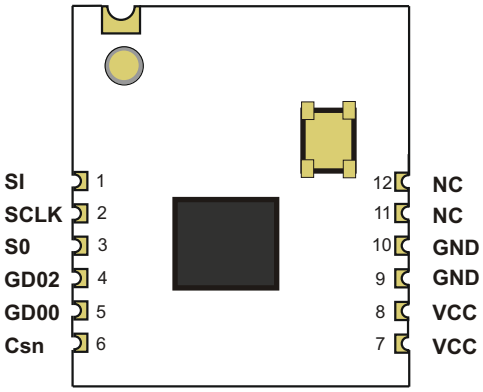
Radiocontrolli s.r.l refuses any responsibility for irregular uses of the devices and for any possible lack or inaccuracy of the data and reserves the right to change in whole or in part these information without notice.

Mechanicals Dimension (mm)

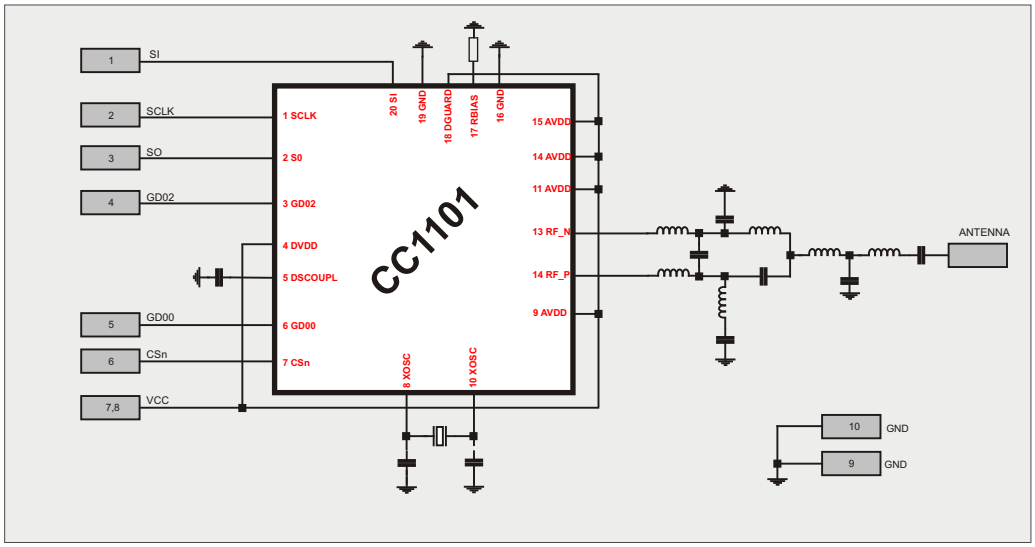


Pin Out RC-CC1101-SPI-SMT

Pads	Name	Description
1	SI	Serial Configuration interface SPI -----> Data Input
2	SCLK	Serial Configuration Interface SPI -----> Clock Input
3	S0	Serial Configuration Interface SPI -----> Data Output
4	GD02	Digital Output
5	GD00	Digital Output
6	CSn	Serial Configuration Interface SPI -----> Chip Select
7	VCC	Power Supply
8	VCC	Power Supply
9	GND	Gnd
10	GND	Gnd
11	NC	Not Used
12	NC	Not Used



SCHEMATICS



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Recommended Hardware design

1) Hardware

All unused pins should be left floating; do not ground.
All GND pins must be well grounded.
Traces should not be routed underneath the module.

2) Power Supply

The transceiver module must be powered from a regulated voltage.
It is recommended to keep the power supply line for VCC as short and low impedence as possible. Near the power pins it is recommended to insert a ceramic the decoupling capacitor (100nF).

3) Ground Plane

It is recommended to have a copper ground plane under the module. The ground plane should be unbroken.

4) Module Placement (PCB Antenna version)

The antenna on the PCB has an omnidirectional radiation pattern. To maximize antenna efficiency, an adequate grounding plane must be provided under the module. Instead the areas underneath and surrounding the antenna area must be free of copper.

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