

PRELIMINARY

Anaren Integrated Radio 1101 Series



The A1101R08C is a high-performance, ETSI compliant connectorized radio module that incorporates the Texas Instruments CC1101 transceiver chip in the industry's smallest package (9 x 12 x 2.5mm).

A1101R08C

Features

- Frequency range: 865-868 MHz
- ETSI compliant, shielded package
- Digital RSSI output
- Programmable output power up to +10dBm
- High sensitivity (-112 dBm at 1.2 kBaud, 868 MHz 1% packet error rate)
- Ultra-small package size 9 x 12 x 2.5mm
- Industry-standard U.FL connector
- LGA footprint
- RoHS compliant
- Operating temperature -40 to +85C
- Impedance-controlled, multi-layer PCB
- 1.8 to 3.6 VDC

Block diagram

TΙ

CC1101

XTAI

- Low current consumption (15 mA in RX, 1.2 kBaud, 868 MHz)
- 200 nA sleep mode current consumption
- Efficient SPI interface; all registers can be programmed with one "burst" transfer
- Available in tape & reel and matrix tray

Benefits

- No RF engineering experience necessary
- No additional "Intentional Radiator" certification required (ETSI EN 300 220)
- Minimal real estate required
- Easily implemented on a two layer PCB
- No additional harmonic filtering required
- 100% RF-tested in production
- Common footprint for product family
- No additional DC decoupling required
- Integrated analog temperature sensor
- Excellent receiver selectivity and blocking performance
- Suitable for frequency hopping systems, thanks to a fast-settling frequency synthesizer with 90 μs settling time
- Impedance-matched balun for optimized efficiency
- Support for asynchronous and synchronous serial receive/transmit mode for backwards compatibility with existing radio communication protocols

PLEASE NOTE: Additional information on the Texas Instruments CC1101 device can be found in the company's latest datasheet release at http://www.ti.com



This product shall not be used in any of the following products or systems without prior express written permission from Anaren Microwave, Inc: (i) implantable cardiac rhythm management systems, including without limitation pacemakers, defibrillators and cardiac resynchronization devices; (ii) external cardiac rhythm management systems that communicate directly with one or more implantable medical devices; or (iii) other devices used to monitor or treat cardiac function, including without limitation pressure sensors, biochemical sensors and neurostimulators.



GDO0

GDO2

14

SPI Bus



Impedance

Matching

Filtering

ly Decoupling

U.FL

External

Antenna

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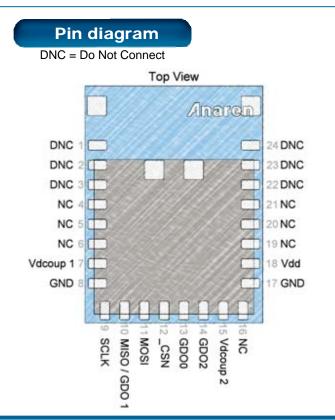
Anaren Integrated Radio

Product overview

The A1101R08C is a high-performance, ETSI compliant connectorized radio module that incorporates the Texas Instruments CC1101 transceiver chip in the industry's smallest package (9 x 12 x 2.5mm) and is compatible with all TI-approved software stacks.

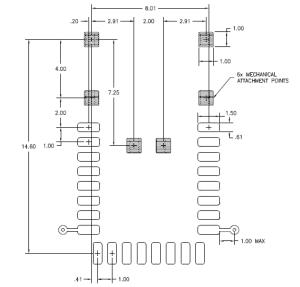
With an LGA pad footprint and industry-standard U.FL button connector receptacle, this module is designed to effortlessly integrate into a wide range of applications, including: industrial control, building automation, low-power wireless sensor networks, lighting control, and automated meter reading.

The A1101R08C has an RoHS-compliant ENIG finish and is packaged on tape and reel for high-volume automated manufacturing.



Footprint

Top 2 pads optional for compatibility with other modules. Refer to User's Manual for additional layout guidelines. Dimensions in mm.



Nomenclature



- A
- 1 Chip series
- 2 Function
- 3 Frequency band4 Form factor
- 5 Design ID
- 6 Application
- 7 Packaging

(Anaren) (1101, 2500) (R = radio only) (x100MHz) (A = Internal Antenna, C = Connector) (00 = Default) (G = General) (R = Tape/Reel, M = Matrix Tray)



Caution! ESD sensitive device. Precautions should be used when handling the device in order to prevent permanent damage.







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