



## Anaren Integrated Radio 1101 Series



**A1101R09C**

The A1101R09C is a high-performance, FCC-certified connectorized radio module that incorporates the Texas Instruments CC1101 transceiver chip in the industry's smallest package (9 x 12 x 2.5mm).

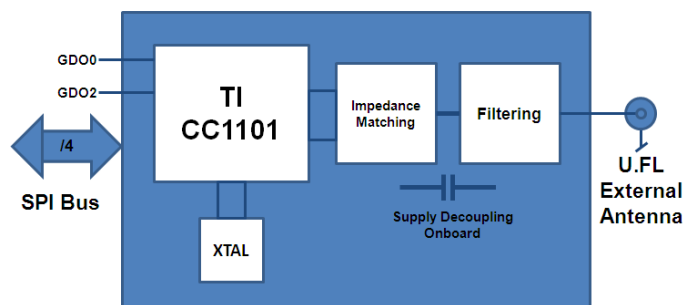
### Features

- Frequency range: 902-928 MHz
- FCC compliant, shielded package
- Digital RSSI output
- Programmable output power up to +10dBm
- High sensitivity (-112 dBm at 1.2 kBaud, 915 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
- Low current consumption (15 mA in RX, 1.2 kBaud, 915 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 FCC "Part 15" certification required
- 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  $\mu$ s 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

### Block diagram



**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.*



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## Anaren Integrated Radio

### Product overview

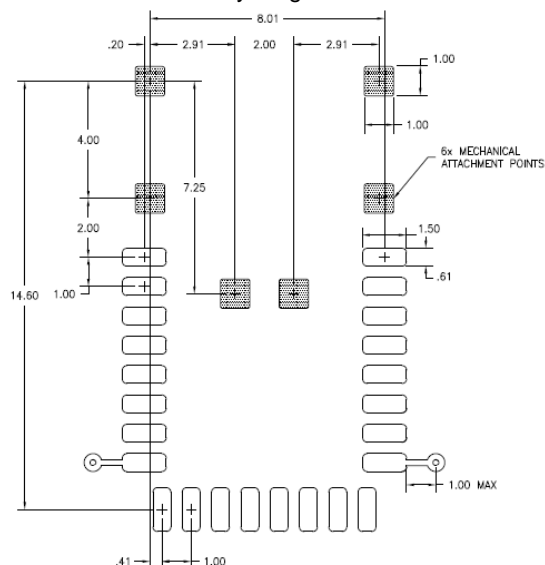
The A1101R09C is a high-performance, FCC-certified connectorized radio module that incorporates the Texas Instruments CC1101 transceiver chip in the industry's smallest package (9 x 12 x 2.5mm) and is compatible with all TI-approved software stacks.

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 A1101R09C has an RoHS-compliant ENIG finish and is packaged on tape and reel for high-volume automated manufacturing.

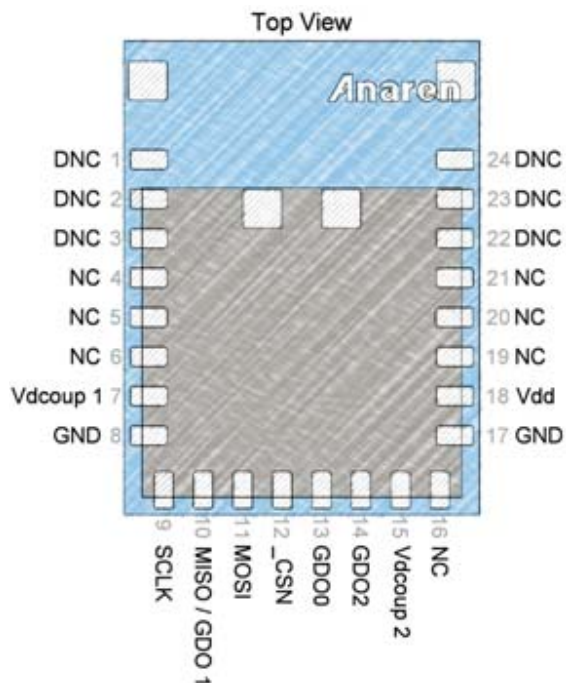
### Footprint

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



### Pin diagram

DNC = Do Not Connect



### Nomenclature

# A1101R09C00GR

- |               |              |                  |               |                                       |                                  |               |
|---------------|--------------|------------------|---------------|---------------------------------------|----------------------------------|---------------|
| 1             | 2            | 3                | 4             | 5                                     | 6                                | 7             |
| A             | 1            | R                | 09            | C                                     | 00                               | G             |
| (Anaren)      | (1101, 2500) | (R = radio only) | (x100MHz)     | (A = Internal Antenna, C = Connector) | (00 = Default)                   | (G = General) |
| 1 Chip series | 2 Function   | 3 Frequency band | 4 Form factor | 5 Design ID                           | 6 Application                    | 7 Packaging   |
|               |              |                  |               |                                       | (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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