The A110LR09A is a ULTRA low cost, high-performance, FCC & IC certified radio module that incorporates the Texas Instruments CC110L “value line” transceiver chip in the industry’s smallest package (9 x 16 x 2.5mm).

### Features
- Frequency range: 902-928 MHz (N. America) and 868-870 MHz (Europe)
- FCC, IC and ETSI 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 16 x 2.5mm
- LGA footprint
- RoHS compliant
- Operating temperature -40 to +85°C
- 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
- Minimal RF engineering experience necessary
- No additional “Intentional Radiator” certification required (FCC CFR 47 Part 15, IC RSS-210)
- 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

### Block diagram

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

Additional information on the Texas Instruments CC110L device can be found in the company’s latest datasheet release at http://www.ti.com
**Product overview**

The A110LR09A is a high-performance, dual-band FCC & IC certified and ETSI compliant radio module that incorporates the Texas Instruments CC110L “value line” low-cost transceiver chip in the industry’s smallest package (9 x 16 x 2.5mm) and is compatible with all TI-approved software stacks.

With an LGA pad footprint, 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 A110LR09A has an RoHS-compliant ENIG finish and is packaged on tape and reel for high-volume automated manufacturing.

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**Footprint**

Refer to User’s Manual for additional layout guidelines. Dimensions in mm.

**Nomenclature**

A110LR09A00GR

1 Chip series (Anaren)
2 Function (CC1101, CC110L, CC2500)
3 Frequency band (R = radio only)
4 Form factor (x100MHz)
5 Design ID (A = Internal Antenna, C = Connector)
6 Application (D0 = Default)
7 Packaging (G = General)

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