



RF427

905 MHz + 920 MHz Spread-Spectrum Radio



Overview

The RF427 is a high-speed 900 MHz serial radio designed for unlicensed operation in Brazil. The RF427 is a frequency-hopping spread-spectrum radio with a configurable transmit-power output of 5 to 250 mW and user-selectable channel masking for improved RF interference immunity. This power-sipping, yet speedy, radio provides a cost-effective way to network data loggers.

The RF427 is part of the RF407 series of radios that includes:

- ▶ **RF407:** North America (FCC & IC), 902 to 928 MHz
- ▶ **RF412:** Australia (ACMA RCM), 915 to 928 MHz
- ▶ **RF422:** Most of Europe and some of Asia (ETSI), 863 to 873 MHz
- ▶ **RF427:** Brazil (ANATEL), 905/920 MHz

Benefits and Features

- ▶ Does not require individual operational license in Brazil
- ▶ High-speed serial communication, optimized for PakBus networks
- ▶ Low power (< 2 mA idle) during periods of inactivity
- ▶ Supports point-to-point with RF retries and point-to-multipoint operations
- ▶ Remote diagnostics using PakBus node operations

Specifications

Radio Type	Frequency Hopping Spread Spectrum (FHSS)
Frequency	905/920 MHz
Country Used In	Brazil

Transmission Distance ▶ Up to 1.61 km (1 mi) with omnidirectional antenna; up to 16.09 km (10 mi) with higher-gain directional antennas at ideal conditions

› *-Note- Transmission distance assumes line-of-sight and appropriate antenna. Line-of-sight obstructions, RF interference, and antenna type will affect transmission distance.*

Power Output	5 to 250 mW (user-selectable)
Receiver Sensitivity	-101 dBm
Channel Capacity	Eight 25-channel hop sequences sharing 43 available channels
Data Rate	200 kbps
Link Throughput	105 kbps (maximum)
Antenna Connector	Reverse Polarity SMA (RPSMA) jack
LEDs	Red TX/PWR and green RX
RS-232 Baud Rate	1200 to 115200 bps
CS I/O Modes	SDC 7, 8, 10, 11, and ME master
Operating Temperature Range	-40° to +70°C
Power	9 to 16 Vdc
Power Connector	2.5 mm DC power jack
Powered Over	CS I/O or barrel plug

Current Required	› Average Transmit: < 80 mA (250 mW TX Power) › Sleep: 0.5 mA (depending on power-saving mode) › Receive: 15 mA
Communication Ports	› RS-232 9-pin D female › USB Type B jack › CS I/O 9-pin D male
Dimensions	11.1 x 6.9 x 2.7 cm (4.4 x 2.7 x 1.1 in.) Dimension are from the tip of the antenna connector to the other side of the case, and from the bottom of the case to the top of the DB9 connector jack screw. The width includes the thickness of the screw heads on the screws that hold the case together.
Weight	› 136 g (4.8 oz) without "Ships With" items › 283.5 g (10 oz) with "Ships With" items

Certifications

Brazil (ANATEL)	08335-17-10644 (standards in Resolution No. 506)
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For comprehensive details, visit: www.campbellsci.com/rf427 

