



Riot Mote

Titan Radius Mote SDI-12 LPWAN Slave



A Vital Part Of a LoRa LPWAN Network

Provides a wireless SDI-12 LPWAN bridge between the Sensors and the Gateway.

Overview

The Mote plays a vital role in creating a wireless Network for your SDI-12 Sensors. The Mote uses a wireless spectrum to connect SDI-12 sensors to a central Radius Gateway over long distances up to 3-10 Km. The Radius Mote includes a self-configuring Radio, a low temperature tolerant battery, a power management system, an enclosure, and a mounting bracket.

The Mote incorporate advanced low power, long-range wireless technologies with proprietary mechanical engineering, power management and power supply, which eliminates the need to have a communications uplink and a

data logger at each sensor site. In addition, less infrastructure and logistic challenges exist with this type of installation reducing overall cost.

The Mote is recognized as an SDI-12 device; therefore, it can be configured through any data logger, or through the cloud via a 2-way cellular connection like. Each Mote provides a wireless SDI-12 LPWAN bridge between a sensor and a Gateway/master (which connects to data logger or uplink).

The Radius Mote can support up to 10 sensors per Mote.

Specifications

Communications

Range	Up to 15 km (9.3 miles). Signals can penetrate certain foliage, buildings and obstructions. Range depends on antenna height/type and obstacles in path of line of sight.
Wireless frequency	915 and 868 MHz certified, 860–930 MHz frequency range

Sensors

Maximum number of sensors	10
Sensor power	12VDC switched, during measurement

Maximum output current	138 mA (12V), up to 500 mA pulse (12V) with capacitor battery option (available 2018-Q3)
Sensor protocol	SDI-12, v.1.3
On-board sensors	Temperature sensor for optimizing power management and battery charging in cold operations.

Environmental

Operating temperature	–40°C to 75°C
Storage temperature	–40°C to 75°C

Electrical

Input voltage	10–18V, reverse polarity protected
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Internal battery options	Primary: 8.6Ah – 38Ah, 3.6V Secondary: 10Ah Li-ion rechargeable Custom option: Hybrid
TX output power	128 mA
Optional external battery pack	10–18V

Physical

LED indicators	RSSI, sensor, battery, operating status
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Weight (excluding battery)	12.8 oz (400g)
Weight (including full battery configuration)	19.2 oz (600g)
Warm-up time	30s
External antenna	Wip antenna, high-gain omnidirectional
Security	128 bit AES encryption

For comprehensive details, visit: www.campbellsci.ca/riotmote-



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