

Specified Low-power LoRa® Radio Modem SLR-429M 429 MHz

The SLR-429M is a narrowband specified low-power embedded radio modem operating in the 429 MHz band. This modem which is targeted for use in Japan, has the Technical Standard Conformity Certification mark meaning no radio licence or registration is required to use it. Compact and designed for ease of use, it incorporates LoRa® technology to achieve extremely long range at low power, albeit at low bit rate. Its superior sensitivity allows the possibility of communication into areas once considered difficult for RF to penetrate.

The SLR-429M uses a dedicated command system with a simple to use proprietary protocol. In addition to serial data transmission, the module also includes 8 x IO ports for switching signals allowing transmission of signals from sensors or for driving relays. As required by the Japanese regulations, the carrier sensing function is also implemented and automatically executed.

Features

- Contains the Technical Standard Conformity Certification mark
- Extremely long range operation achieved by LoRa® mode
- Implementation of carrier sense function
- UART interface
- Transmission of up to 8 switching signals
- Low power consumption makes battery power operation possible
- Compact size
- 434 MHz version available (EU)

Applications

- Data transmission, building air conditioning control
- Debris flow monitoring at mudslide control dams
- River water level / dam gate management
- Greenhouse temperature / humidity monitoring and control
- Monitoring of tunnels and bridges



General

Parameter	Specification
Applicable standard	ARIB STD-T67 (Technical Standard Conformity Certification mark)
Frequency	429.2500 to 429.7375 MHz
Number of RF channels	40 ch (Channel step 12.5 kHz)
Modulation	LoRa or 2-FSK
RF bit rate	15 to 245 bps (LoRa), 4,800 bps (FSK)
RF output power	10 mW (SMA / 50 ohm)
Antenna	Only to be used with the specified antennas
Supply voltage	3.5 to 5.0 V
Supply current	29 mA typ. (TX), 17 mA typ. (RX)
Operating temperature	-30 to +70 C
Dimensions	40 x 29 x 6.2 mm (Not including antenna connector)
Weight	13 g
Number of sw signal I/O	8

Serial interface

Parameter	Specification
Communication method	Serial communication (RS232)
Synchronization	Asynchronous / UART
Data speed	19,200 bps
Flow control	Hardware: RTS / CTS pin software: Xon / Xoff not used
Other parameters	Data length: 8 bit, Parity: None, Stop bit: 1

Specifications are subject to change without prior notice

The SLR-429M contains a Semtech's LoRa® wireless RFIC.
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This radio modem is only permitted for use in Japan.