CIRCUIT DESIGN, INC.

Low Power Radio Modem
SLR-434M 434 MHz

The SLR-434M is a narrowband embedded radio modem for the 434 MHz ISM band. 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-434M 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.

Features

- Narrowband
- CE marking
- Extremely long range operation achieved by LoRa mode.
- Higher resistance to urban noise, enabling long range operation
- Switchable between FSK mode and LoRa mode
- UART interface
- Transmission of up to 8 switching signals
- Low power consumption makes battery power operation possible
- Compact size
- 429 MHz (Japan) available

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	EN 300 220
Communication method	Simplex, Half duplex
Emission type	F1D
Modulation	2-FSK or LoRa
RF output power	10 mW (SMA / 50 ohm)
RF bit rate	4,800 bps (FSK) or 15 to 245 bps (LoRa)
Frequency	433.0750 to 434.7750 MHz
Operating temperature	-30 to +70 C
Number of RF channels	137 ch (Channel step: 12.5 kHz)
Channel spacing	12.5 kHz
Receiver sensitivity	-115 dBm (FSK), -133 dBm (LoRa 128 chip) (PER 1% with the user data of 45 bytes or less)
Supply voltage	3.5 to 5.0 V
Supply current	29 mA typ. (TX), 17 mA typ. (RX)
Dimensions	40 x 29 x 6.2 mm (Not including antenna connector)
Weight	13 g
Number of sw inputs	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-434M contains a Semtech's LoRa® wireless RFIC.
The LoRa® Mark and LoRa Logo are trademarks of Semtech corporation.

CIRCUIT DESIGN, INC.
https://www.circuitdesign.jp
SLR-434M ver. 1.7 Jan. 2026

Sales Division
7557-1 Hotaka, Azumino, Nagano 399-8303, Japan
Tel:+81-(0)263-82-1024 Fax:+81-(0)263-82-1016