

# 429 MHz band Specified Low-power Serial Data Radio Modem MU-4-429 429 MHz

The MU-4-429 is a 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. Dedicated commands, designed for wireless applications are provided for building a range of wireless systems, from simple control systems to wide network systems. By using the commands, the user can concentrate on designing the application without needing to be aware of the radio protocol and control aspects. Reed-Solomon code is used for forward error correction (FEC) to maintain data integrity and provide highly reliable wireless communication. The relay feature allows you to extend the range by using additional units (up to 10 units).

As required by the Japanese regulations, the carrier sensing function is also implemented and automatically executed.

## Features

- Contains the Technical Standard Conformity Certification mark
- UART interface with simple command protocol
- Implementation of carrier sense function
- Forward error correction with Reed Solomon coding
- Repeater and auto answer back function
- Low power operation, 42 mA (TX)
- 40 RF channels
- 434 MHz version available (EU)

## Applications

- Environment monitoring, various measuring applications
- Remote control for industrial equipment
- Various alarm and monitoring systems



## 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)
Emission type	F1D (FSK narrow)
RF bit rate	4,800 bps
RF output power	10 mW / 1 mW selectable (Nominal, Contact 50 ohm)
Antenna	Only to be used with the specified antennas
Supply voltage	3.0 to 5.0 V (Absolute max. rating 5.5 V)
Supply current	42 mA (TX 10 mW), 22 mA (RX) 26 mA (TX 1 mW), 22 mA (RX)
Operating temperature	-20 to +65 C
Dimensions	36 x 26 x 8 mm
Weight	14.5 g

### Reference data

\* Effective radio communication speed: About 3,400 bps (Conditions: One-way communication, no error correction, 25 C)

\* Range: About 600 m (Conditions: One-way, no error correction, 25 C, line of sight distance, antenna height of 1.5 m, vertical antenna)

## Serial interface

Parameter	Specification
Communication method	Serial communication (RS232)
Synchronization	Asynchronous / UART
Data speed	1,200 / 2,400 / 4,800 / 9,600 / 19,200 / 38,400 / 57,600 bps
Flow control	RTS / CTS hardware flow control
Other parameters	Data length: 8 bit, Parity: (None, Odd, Even), Stop bit: 1 or 2

This radio modem is only permitted for use in Japan.

Specifications are subject to change without prior notice