

Embedded low power radio modem

MU-4 434 MHz

The MU-4 434 MHz is an embedded radio modem operating in the 434 MHz ISM band. Dedicated commands, specially designed for wireless applications are provided for building a range of wireless systems from simple control systems to wide network systems. 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 MU-4 meets the requirements of the European RE Directive and carries the CE marking.

The relay feature allows you to extend the range by using additional units (up to 10 units).

Features

- UART interface with simple command protocol
- 127 RF channels
- 10 mW / 1 mW power selectable
- Error correction with Reed-Solomon code
- Repeater and auto answer back function
- Target station receive signal and noise level acquisition
- Low power operation, 42 mA (TX)
- Optional transparent mode
- CE marking



Applications

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



General

Parameter	Specification
Applicable standard	EN 300 220
Communication method	Simplex, Half duplex
Emission type	F1D (FSK narrow)
RF output power	10 mW / 1 mW selectable (Nominal, Contact 50 ohm)
RF bit rate	4,800 bps
Frequency	433.2000 to 434.7750 MHz
Channel spacing	12.5 kHz
Number of RF channels	127 ch (Channel step 12.5 kHz)
Receiver sensitivity	-113 dBm (Transparent mode BER 0.1%)
Operating temperature	-20 to +65 C
Supply voltage	3.0 to 5.0 V (Absolute max. rate 5.5 V)
Supply current	42 mA (TX 10 mW), 22 mA (RX) 26 mA (TX 1 mW), 22 mA (RX)
Dimensions	36 x 26 x 8 mm
Weight	14.5 g (Not including antenna)

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

Specifications are subject to change without prior notice