CIRCUIT DESIGN, INC.

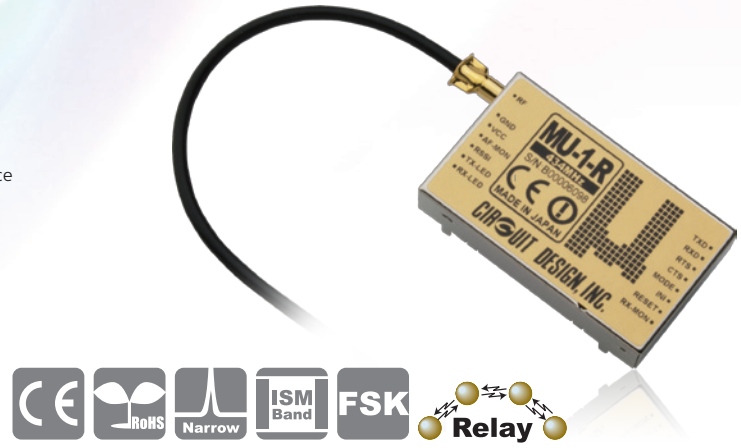
Embedded low power radio modem

MU-1-R 434 MHz

The embedded low power radio modem MU-1-R is a radio modem for transmission of serial data. Using a simple system of commands, the user can concentrate on designing the transmitting and receiving protocols for the data using the commands, without needing to be aware of the radio component control. By using a UART interface for transmitting and receiving data and for issuing commands, it is possible for the user to develop systems quickly.
The MU-1-R meets the requirements of the European R&TTE Directive and carries the CE mark.

Features

- Narrow band FM for reliable long range communication
- Pre-programmed 64 channel / 25 kHz step
- Simple dedicated command control
- Wide operating temperature range -20 to + 60 degree C
- Robust metal housing for industrial use
- Various interface board options R&TTE (EN 300 220) / RoHS compliance



Applications

- Serial data transmission radio modem
- Industrial Telecontrol
  Remote control for machines and motors
- Industrial Telemetry / Monitoring
  Monitors for water level, environmental data and gauges

General

Parameter	Specification	Remark
Standard	R&TTE Directive EN1999/5/EC	CE mark acquired
Antenna power	10 mW	Contact (50 ohm)
Oscillation system	PLL synthesizer system	
Radio communication speed	9600 bps	
Frequency range	433.200 to 434.775MHz	
Number of channels	64	Channel step 25 kHz
Receiver sensitivity	-108 dBm	Packet error rate 0.1%*1
Operating temperature	-20 to + 60 degree C	
Operating voltage	3.0 to 5.0 V	Absolute max. rate 5.5V
Consumption current	TX: 46mA RX: 32mA	at 3V
External dimensions	50 x 30 x 9 mm	Not including antenna
Unit weight	23.5 g	

*1 (255 byte / 1 packet)

Reference data

* Effective radio communication speed: About 6,800 bps / Conditions: One-way communication, no error correction, 25 degree C
* Range: About 600 m / Conditions: One-way communication, no error correction, 25 degree C, line of sight distance, ground level of 1.5 m, vertical antenna
* 12 db/SINAD receive sensitivity: -119 dBm / Conditions: Measured at the AF-MON terminal, 1 kHz Dev = +/-2.0k CCITT filter

Serial interface

Parameter	Specification
Communication method	Serial communication (RS232C format)
Synchronization	Asynchronous / UART
Data speed	1200 / 2400 / 4800 / 9600 / 38400 / 57600 bps
Flow control	RTS / CTS hardware control
Parameter	Data length: 8 bit / Parity: No / Stop bit: 1

Specifications are subject to change without prior notice

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