

Radiocrafts – Your Wireless M-Bus Experts



Our most popular standard Wireless M-Bus modules

- RC1180-MBUS3** **868 MHz Wireless M-Bus with OMS feature set**
Two-way communication with automatic packet generation, AES-128 encryption
- RC1843-MBUS5** **433 MHz Wireless M-Bus with OMS feature set**
- RC1883-MBUS5** **868 MHz Wireless M-Bus with OMS feature set**

The market-leading MBUS5 modules support new and improved Wireless M-Bus performance:

- Excellent packet reception performance
- Superior interference immunity
- High transmit power
- Ultra-low power consumption
- Fully customizable



Module	Mode	Output power [dBm]	Sensitivity [dBm]	TX Current [mA]	RX Current [mA]	Cellular Interference rejection		Sleep current [uA]
						Blocking 10 MHz [dBm]	Phase noise 10 MHz offset	
RC1180-MBUS3	Mode S	10	-102	37	24	-40	-129	0.3
	Mode C		-101					
	Mode T		-101					
RC1843-MBUS5	Mode S	14	-111	26	6	-35	-141	0.7
	Mode C		-106					
	Mode T		-105					
RC1883-MBUS5	Mode S	14	-111	26	6	-35	-140	0.7
	Mode C		-106					
	Mode T		-105					

MBUS5 - Compact module with fully embedded protocol

- Embedded Wireless M-Bus protocol supporting EN 13757-4:2019 mode S, T, C, R and N
- Conforms with EU RED directive (EN 300 220, EN 301 489, EN 60950, EN 50581)
- Easy-to-use UART interface for communication and configuration
- 12.7 x 25.4 x 3.7 mm compact module for SMD mounting
- Wide supply voltage range, 2.1 – 3.8 V
- Ultra-low power modes for extended battery lifetime
- 2 channels (868.3, 868.95 MHz) in mode S, T and C
- No external components except antenna
- Configurable Manufacturer ID and serial number
- Designed for EX compliance

2 pins for data, 2 pins for power and 1 pin for antenna



Turn-key projects

The RC18x3-MBUS5 modules are built on a modern System-on-Chip platform with plenty of resources available. With the modular firmware design, it offers a perfect platform for turn-key projects. This could include added application-oriented features or other hardware solutions. Radiocrafts have successfully implemented several such projects for top-tier metering companies around the world.

Gateway features

Radiocrafts' modules are inside BSI certified gateways!

- Radiocrafts' module is exceptionally suited for gateway applications
- Up to 512 meters/slaves stored in the module including encryption key which is non-readable/secured
- Packet parsing and processing
- Patented Mailbox feature for storing and sending prepared messages for meters
- Dual mode reception of C/T mode
- Fast responses
- Parallel handing of packets to ensure efficient reception and fewer dropped packets

Radiocrafts' experience with Wireless M-Bus in Smart Metering

Radiocrafts is working together with some of the top-tier companies in the metering industry, providing compact RF modules and complete integrated products for Wireless M-Bus. The RC1180-MBUS3 module has been used in some of the largest pilot installations for OMS compliant systems in Germany. In addition, Radiocrafts has been a pioneer in the introduction of 169 MHz for metering applications and drafted the new EN 13757-4 mode N specification that is now fully deployed.

Radiocrafts actively participates in the development of international standards for wireless meter reading, taking part in the OMS standardisation work based in Germany, as well as several working groups in CEN TC294 defining the European M-Bus standard and the Wize Alliance, promoting the 169 MHz Wize protocol.

