



# UHF RFID Ultra Compact Reader Module

## 865 – 868 MHz, 902 – 928 MHz

**RFI31**

### Features

- Multiregional Reader for ETSI, FCC Regions
- EPC Class 1 Gen 2
- ISO18000-6B
- DRM
- 1 Antenna MMCX Port
- Up to 20 dBm Output Power
- ASK, PR-ASK Modulation
- UART Interface, Programmable GPIO
- Small Dimensions 63 × 35 × 6 mm
- Embeddable
- Low Power Consumption
- Low Cost

### Item Picture



### Description

RFI31 is an RFID UHF compact EPC C1 Gen2 and ISO18000-6B reader module for identification of UHF transponders in fields of application like logistics, industry, retail, transportation etc. The module is embeddable in a broad range of products.

### Technical Data

Dimensions (W × H × D)	63 × 35 × 6 mm
Weight	20 g
Power Supply	4.75-5.40 V DC
Current Consumption	Suspend Mode: <50 μA Idle Mode: <50 mA Scan Mode: 200 mA typical
Operating Frequency	865-868 MHz for ETSI regions, 902-928 MHz for FCC regions
Transmitting Power	13-20 dBm adjustable
Modulation	PR-ASK, ASK
Transponder Communication Rates	Forward link: 40-160 kbps (FCC reg.), 40 kbps (ETSI reg.) Return link: 40-640 kbps (FCC reg.), 40-320 kbps (ETSI reg.)
Receiving sensitivity	-63 dBm typical
Antenna Connection	1 × 50 Ω MMCX female connector, VSWR 1.5:1 or lower for best performance
Interface	3.3 V UART, 12 programmable GPIO pins, Metra open protocol, firmware bootloader
Supported Transponders	EPC Class 1 Gen 2, ISO18000-6B anticollision support
Indicators	1 LED (operating status)
Temperature Range	Operating -20 °C to +55 °C, storage -20 °C to +85 °C
Relative Humidity	5-90 % not condensing
Compliance (RFI31.1EU version for ETSI regions only)	EN 302 208-1,2 V.1.3.1, EN 301 489-1,3,5, EN 55022, EN 60950, EN 60068-2-6, 27, 31, IEC 68-2-32, EN 60529, EN 60950-1, FCC 15.247