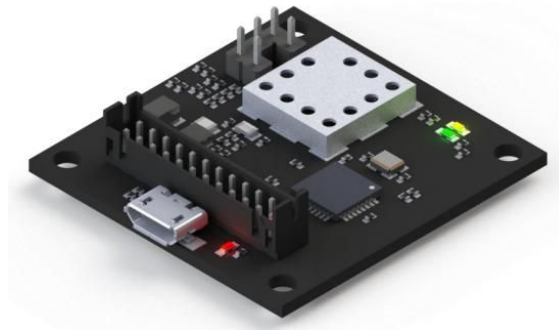


***This 13.56 MHz high frequency RFID reader module features a miniscule footprint, simple and intuitive API, low power consumption and excellent tag compatibility.***

This 13.56 MHz high frequency RFID reader module features a miniscule footprint, simple and intuitive API, low power consumption and excellent tag compatibility. It is well suited for medical applications, ticketing, security or safety applications. It reads and writes transponders based on ISO 14443A/B protocols. It has 4 general purpose I/O pins and supports adjustable host interfaces including USB, TTL level RS232, SPI and I2C. The ultra-low power reader/writer module supports not only the extremely popular NFC tags, but also NFC peer-to-peer and tag emulation modes as defined by ISO 18092. It allows for active data passing between NFC enabled smart phones, tablets and other devices. In addition, a micro USB port is available for direct connection to a USB host as well as an antenna output for an external antenna.

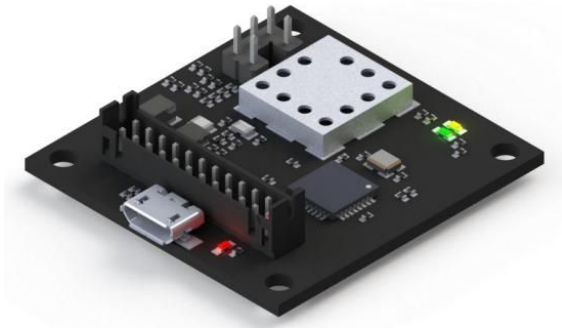


### **Key Features**

- ✓ Reads and writes to transponders based on ISO 14443A/B and other NFC devices based on ISO 18092
- ✓ Host interfaces include USB, TTL level RS232, SPI, I2C
- ✓ Cost-effective and highly scalable
- ✓ 4 general purpose I/O pins
- ✓ Wide and effective power supply with input from 2.0 – 5.5 V
- ✓ Sleep mode current down to 10  $\mu$ A
- ✓ Simple and intuitive API
- ✓ Low power consumption

## Technical Specifications

Frequency	13.56 MHz ± 7 kHz
Peripheral I/O Connection	4 programmable GPIO pins
Dimension (L×W×H)	40 mm × 38 mm × 5 mm
Supply Voltage	2.0 to 5.5 V
Current Consumption	Sleep mode: 10 µA Idle mode: 10 mA Scan mode: 120 mA
Antenna Options	Internal or 50 Ω output for external connection
Host Interfaces/Data Rates	UART(TTL): 9.6-115.2 kbps SPI: Mode 1 up to 4 Mb/s USB: 2.0 full speed 12 Mb/s I2C: 100/400 kHz
Transponder Communication Rate	ISO 14443A: 106 kbps ISO 14443B: 106 kbps
Effective Range	Internal Antenna: up to 5 cm External Antenna: up to 8 cm (read range and rate are subject to specific environmental conditions)
Operating Temperature	10 °C to 70 °C
Storage Temperature	-20 °C to 85 °C
Air-Interface Protocols	ISO 14443 A/B (parts 2-4) ISO 18092
Compliance	FCC Part 15.225 FCC Part 15 Modular Approval EN 300-330



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