

# RM1 UHF RFID READER MODULE

RFtek RM1 is a UHF RFID reader module for low-power and low-cost applications at 860 — 960 MHz operating frequency. It allows easy communication via USB and UART interface. Command operations are provided via these interfaces. The device is compatible with EPC Class1 Gen2 UHF RFID tags.

With a SDK support it is very simple to design your own desktop UHF RFID reader.



### **TECHNICAL SPECIFICATIONS**

Operating Frequency	860 - 960 MHz
RF Output Power	200 mW (23 dBm)
Operating Voltage	5 VDC (USB)
RFID Standard	EPC Class1 Gen2 ISO 18000-6B&C
USB Connector Interface	USB B mini connector
Dimensions	91 x 70 x 1.6 mm
Read Range	20 cm
Operating Temperature	-40° C - +85° C
Graphical User Interface (GUI)	<ul> <li>Tag read/write, encryption</li> <li>Adjustable RF output power</li> <li>Adjustable RF sensitivity</li> <li>Diagnostic features: RSSI and reflected power measurement</li> <li>Frequency bands selection</li> <li>Gen2 parameters</li> <li>Sending direct commands</li> <li>Tag manipulations</li> </ul>

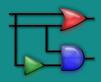
### **APPLICATION AREAS**

- MOBILE APPLICATIONS
- MODULAR SOLUTIONS
- INDUSTRIAL EMBEDDED APP.
- ACCESS CONTROL
- PAYMENT APPLICATIONS
- DOCUMENT TRACKING
- TAG PROGRAMMING
- INVENTORY MANAGEMENT

R&D design consulting



We provide innovative and flexible solutions for your RFID applications with the design of UHF RFID reader, antenna and antenna multiplexers.



We provide solutions based on electronic system level design projects with schematic & PCB and embedded system design.



We provide embedded system design for various microcontroller/processor families in 8-bit, 16-bit and 32-bit architectures.

## R&D DESIGN CONSULTING

#### **ABOUT US**

RFtek Electronics was founded in 2012 with the fund of Ministry of Science, Industry and Technology of Turkey. It is a startup company deals with the R&D processes of RF/RFID hardware design, electronic system level design projects and embedded software programming.

#### **MISSION**

To provide customer-focused products & solutions powered by the cooperation of high technology based design and R&D workouts with a reliable and high quality service of concept.

#### **VISION**

To be a leading technology company in RF/RFID field with responsive technology based solutions to industry's needs and expectations, spirit of R&D and prioritizing customer satisfaction in the first place.

# TEAM MEMBERS Huseyin U. AYDOGMUS

Co-Founder Electronics Engineer, M.Sc. Ph.D. Candidate Embedded system design

#### **Ozgur BOSTAN**

Co-Founder Electronics Engineer, M.Sc. Ph.D. Candidate RF system design

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## **HANDLED R&D PROJECTS**

thinking the beyond

#### **UHF RFID READER DESIGN**

- First domestic product (prototype)
- Funded by the Ministry of Science, Industry and Technology of Turkey

# DESIGN & IMPLEMENTATION OF UHF RFID SMART SHELF

- Funded by TUBITAK (Scientific & Technological Research Council of Turkey)
- Funded by KOSGEB (Small and Medium Enterprises Development Organization of Turkey)

#### **MODULAR ROBOT DESIGN**

 Hardware and software design of a modular robot kit for children

#### **PUBLICATIONS & PATENTS**

Beyond the R&D activities, RFtek has academic papers and issued patent applications related to its own products; UHF RFID reader, antenna multiplexer and smart shelves.



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