

## Ex10 UHF RFID Module(1-Port)



**Model: RRU74030M**

**RRU54030M**

**RRU34030M**

**Size: 40mmx30mmx5.6mm**

**Weight: 10g**

## GENERAL DESCRIPTION

Based on the E710/E510/E310 chip design, Gen2 Extension Ready, maximizing chip potential with outstanding multi-tag anti-collision capability. The advanced thermal balance design ensures consistently high performance over time, making it the best choice for high-performance handheld RFID devices. It is also suitable for various mainstream RFID applications, including logistics and apparel.

## FEATURES

- Self-intellectual property;
- Designed with IMPINJ E710/E510/E310 and support ISO18000-6C(EPC C1G2) protocol tag, featuring excellent multi-tag anti-collision functionality;
- 865~868MHz/902~928MHz frequency band(frequency customization optional);
- FHSS or Fix Frequency transmission;
- RF output power up to 30dbm(adjustable);
- IPEX socket for external antenna;
- Effective distance up to 10m\*(with external 8dbi antenna and tag E41);
- Maximum inventory speed\* up to 1000pcs/s (using E710) or 600pcs/s (using E510) or 350 pcs/s (using E310);
- Tag buffer size up to 1000PCS@96bits EPC;
- Low power dissipation with single +3.6~5.5VDC power supply;
- Support RSSI;
- High stability with air cooling and no extra heat sinking;
- Capable of continuous operation for 24 hours×365 days;
- Support on-the-site firmware upgrading.

*\*Effective reading distance and tag interrogation speed are directly related to the antenna, tags, and the working environment.*

## CHARACTERISTICS

### ● Absolute Maximum Ratings

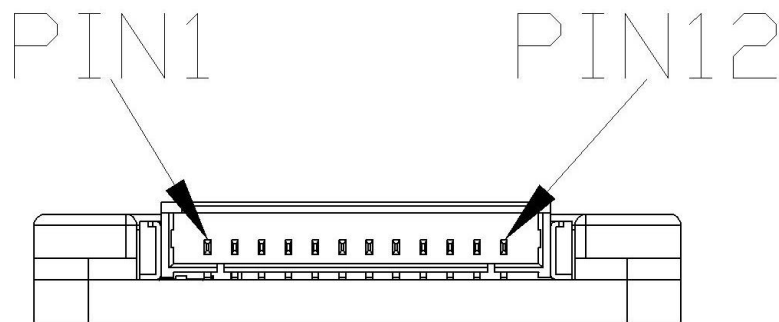
ITEM	SYMBOL	VALUE	UNIT
Power Supply	VCC	6	V
Operating Temp	T <sub>OPR</sub>	-20 ~ +65	°C
Storage Temp	T <sub>STR</sub>	-40 ~ +85	°C

## ● Electrical and Mechanical Specification

Under  $T_A=25^{\circ}\text{C}$ ,  $V_{CC}=+5.0\text{V}$  unless specified

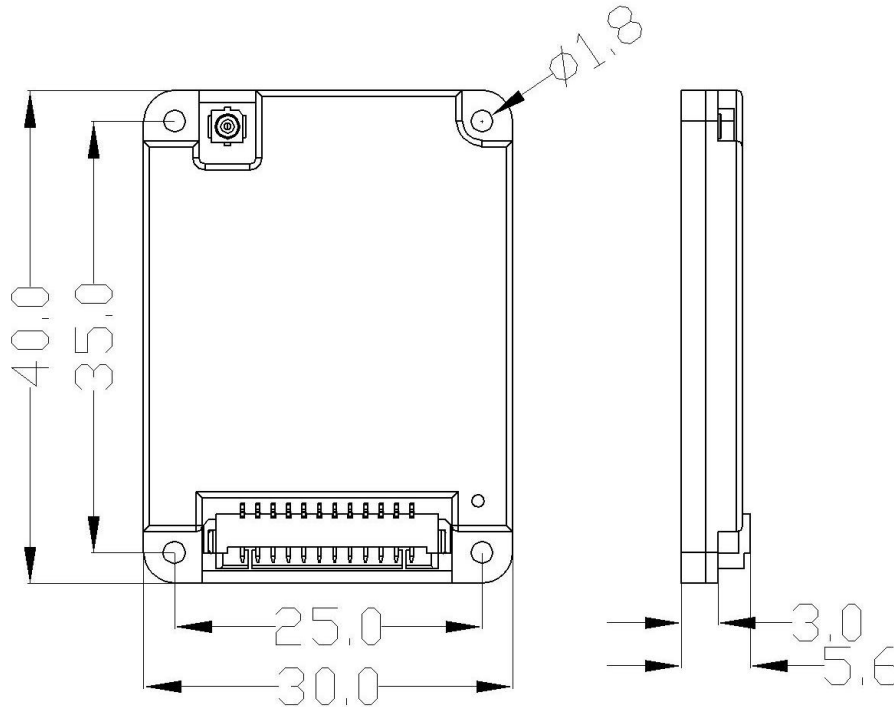
ITEM	SYMBOL	MIN	TYP	MAX	UNIT
Power Supply	VCC	3.6	5	5.5	V
Current Dissipation	I <sub>c</sub>	500	67(standby)	1000 (30dbm)	mA
Frequency	F <sub>REQ</sub>	-	865~868(ETSI) 902~928(FCC)	-	MHz
RF Output Power	P <sub>RF</sub>	5		30	dBm
Receive Sensitivity	SR		-74(using E310) -81(using E510) -87(using E710)		dBm

## INTERFACE



No.	Symbol	Comment
1	GPI	General Input
2	EN	Enable. High level effective
3	LED1	LED output, high level is active, not driven
4	RXD	Serial data input
5	TXD	Serial data output
6	GPO	General Output
7	GND	Ground
8	GND	Ground
9	NC	Reserved
10	NC	Reserved
11	VIN	Power Supply (input from 3.6V~5.5V)
12	VIN	Power Supply (input from 3.6V~5.5V)

## MECHANICAL DATA (UNIT: mm)



## Application Information

1. When designing fixed reader, please take care of heat sinking and remember to make sure the heat sinker of the module is closely and stably attached to the reader's bottom plate;
2. Please refer to User's Manual for detailed protocol description.

**Remark:**

1. Specifications are subject to change, please pay attention to our latest version.
2. Shenzhen RoyalRay Science and Technology Co., Ltd. reserves the right to the final interpretation of the above terms.