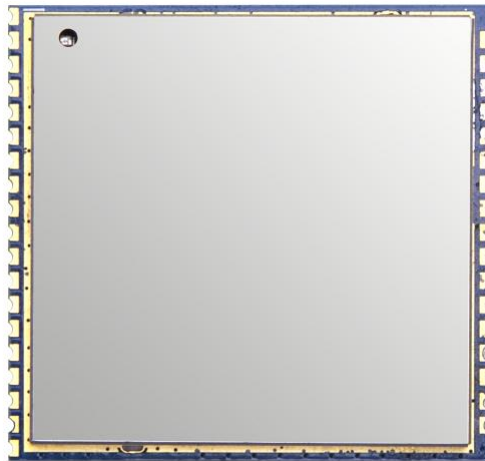


## Ex10 UHF RFID Module(1-Port)



**Model: RRU74038M**

**RRU54038M**

**RRU34038M**

**Size: 40mmx38mmx4.0mm**

**Weight: 8g**

## GENERAL DESCRIPTION

RRU74038M/RRU54038M/RRU34038M is high performance UHF RFID Module. It is designed upon fully self-intellectual property. Based on proprietary efficient digital signal processing algorithm, it supports fast tag read/write operation with high identification rate. It can be widely applied in many RFID application systems such as logistics, access contro system.

## 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 33dbm(adjustable);
- Positioning holes used to facilitate connection to external antenna;
- Effective distance up to 12m\*(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

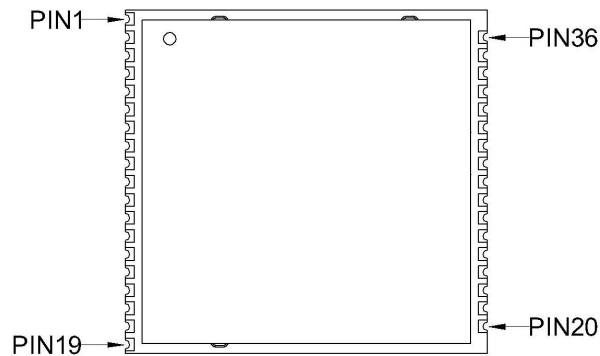
ITEM	SYMBOL	VALUE	UNIT
Power Supply	VCC	6	V
Operating Temp	T <sub>OPR</sub>	-20 ~ +65	°C
Storage Temp	T <sub>STR</sub>	-40 ~ +85	°C

## ● 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	$I_c$	500	67(standby)	1270(33dBm)	mA
Frequency	$F_{REQ}$	-	865~868(ETSI) 902~928(FCC)	-	MHz
RF Output Power	$P_{RF}$	5		33	dBm
Receive Sensitivity	SR		-74(using E310) -81(using E510) -87(using E710)		dBm

## INTERFACE



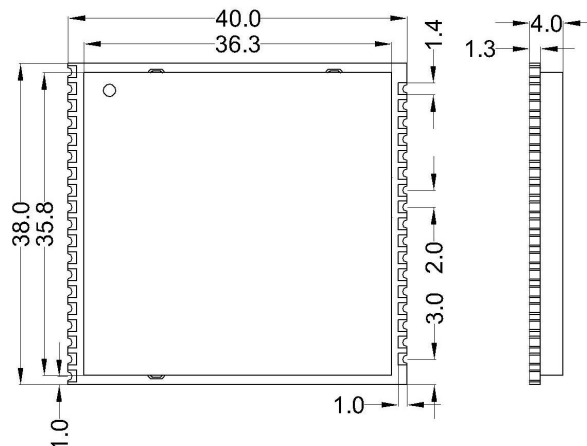
### 1. PIN1-19

No.	Symbol	Comment
1	GND	Ground
2	GND	Ground
3	VCC	Power Supply
4	VCC	Power Supply
5	GPO1	General Output 1
6	GPO2	General Output 2
7	GPI1	General Input 1
8	BUZZER	Buzzer output, High level effective.
9	RXD	Serial data input
10	TXD	Serial data output
11	NC	Reserved
12	NC	Reserved
13	GPI2	General Input 2
14	EN	Enable, High level effective.
15	485_CTRL	RS485 direction control
16	LED1	Indicator light for card reading
17	LED2	Indicator light of module status
18	NC	Reserved
19	NC	Reserved

## 2. PIN20-36

No.	Symbol	Comment
20	GND	Ground
21	V <sub>OUT</sub>	Power Supply output(3.3V)
22	ANT_C5	External RF switch chip control pin 5
23	ANT_C4	External RF switch chip control pin 4
24	ANT_C3	External RF switch chip control pin 3
25	ANT_C2	External RF switch chip control pin 2
26	ANT_C1	External RF switch chip control pin 1
27	GND	Ground
28	GND	Ground
29	ANT	Module RF output
30	GND	Ground
31	GND	Ground
32	GND	Ground
33	GND	Ground
34	GND	Ground
35	NC	Reserved
36	NC	Reserved

## 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.