

Ex10 Integrated UHF RFID Module



Model: RRU753MA

RRU553MA

RRU353MA

Size: 40mmx40mmx5.8mm

Weight: 26g

GENERAL DESCRIPTION

RRU753MA/RRU553MA/RRU353MA 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 control 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;
- 860~960MHz frequency band(frequency customization optional);
- FHSS or Fix Frequency transmission;
- RF output power up to 30dbm(adjustable);
- Embedded 2.5dBi ceramic antenna with reading distances up to 3m (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 +4.5~5.5VDC power supply;
- Support RSSI;
- Support 3 GPIOs (1 input and 2 outputs);
- Support RS232 serial communication interface (3.3V TTL level);
- 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

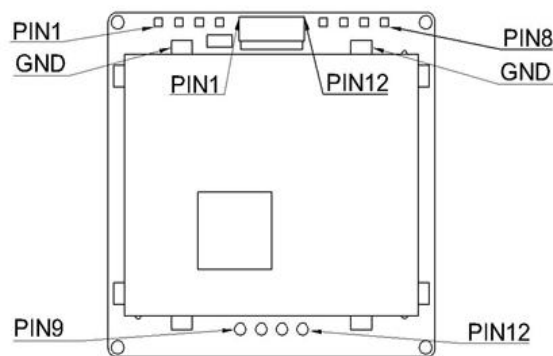
ITEM	SYMBOL	VALUE	UNIT
Power Supply	VCC	6	V
Operating Temp	T _{OPR}	-20 ~ +65	°C
Storage Temp	T _{STR}	-40 ~ +85	°C

● Electrical and Mechanical Specification

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

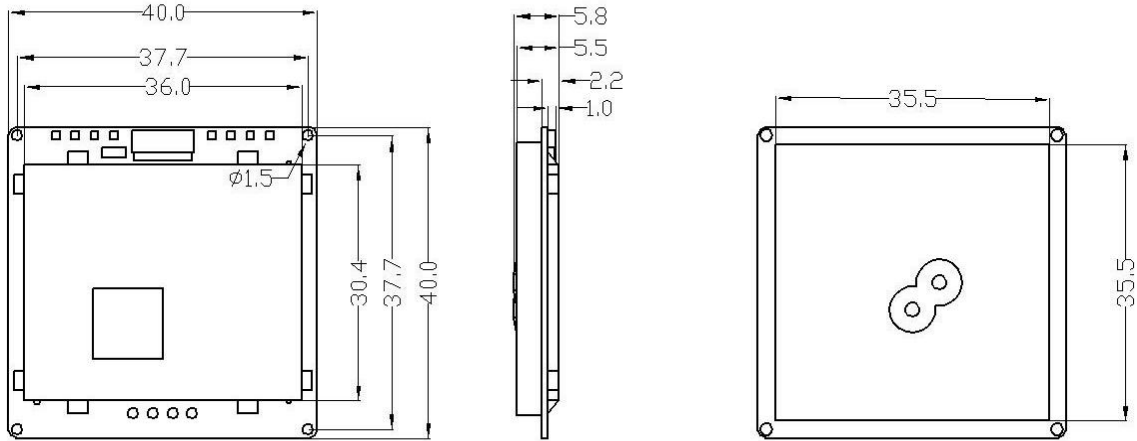
ITEM	SYMBOL	MIN	TYP	MAX	UNIT
Power Supply	VCC	4.5	5	5.5	V
Current Dissipation	I_c	320	70(standby)	600(30dBm) 730(33dBm)	mA
Frequency	F_{REQ}	-	865~868(ETSI) 902~928(FCC)	-	MHz
RF Output Power	P_{RF}	5		30	dBm
Receive Sensitivity	SR		-74(using E310) -81(using E510) -87(using E710)		dBm

INTERFACE



No.	Pad No.	SYMBOL	Comment
1		GND	Ground
2	4	GOP2	General Output 2(3.3V TTL level)
3	5	GOP1	General Output 1(3.3V TTL level)
4		BEEP	Buzzer output (3.3V TTL level, outputs high when activated)
5	3	TXD	Serial Data Output (3.3V TTL level)
6	2	RXD	Serial Data Input (3.3V TTL level)
7	6	GPI1	General Input 1(3.3V TTL level)
8	1	EN	Enable. High level effective with internal 10kOhm resistor pulled up to VCC
9		GND	Ground
10		GND	Ground
11	7	VCC	Power Supply
12	7	VCC	Power Supply
13	8~12	NC	Reserved

MECHANICAL DATA (UNIT:mm)



Application Information

1. 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.