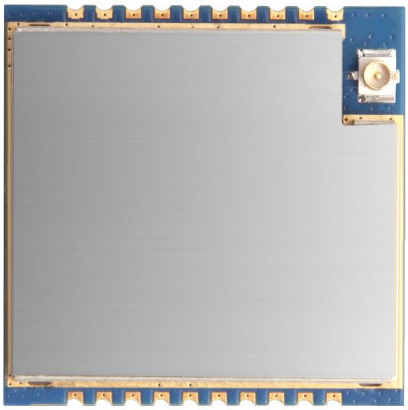
Ex10 UHF RFID Module(1-Port)



Model: RRU72828M-33
RRU52828M-33
RRU32828M-33
Size: 28 x 28 x 3.5mm
Weight: 4.5g

GENERANL DESCRIPTION

Based on the E710 chip design, Gen2 Extension Ready, small size, high performance, low cost, maximum RF output power of 33dBm, real-time temperature monitoring, making it the best choice for integration in various mobile devices. Additionally, sub-versions based on the E510 and E310 are available.

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);
- 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;
- IPEX socket for external antenna;
- Low power dissipation with single +3.8~5.5VDC power supply;
- Support RSSI;
- Capable of continuous operation for 24 hours×365 days;
- Support on-the-site firmware upgrading.

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

CHARACTERISTICS

- **Absolute Maximum Rating**

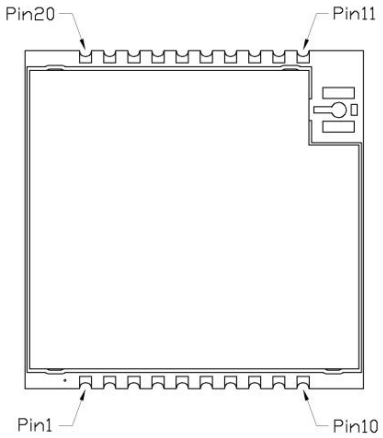
ITEM	SYMBOL	VALUE	UNIT
Power Supply	VCC	6	V
Operating Temp	T_{OPR}	-20～+65	℃
Storage Temp	T_{STR}	-40～+85	℃

Electrical and Mechanical Specification

Under TA=25℃，VCC=+5V unless specified

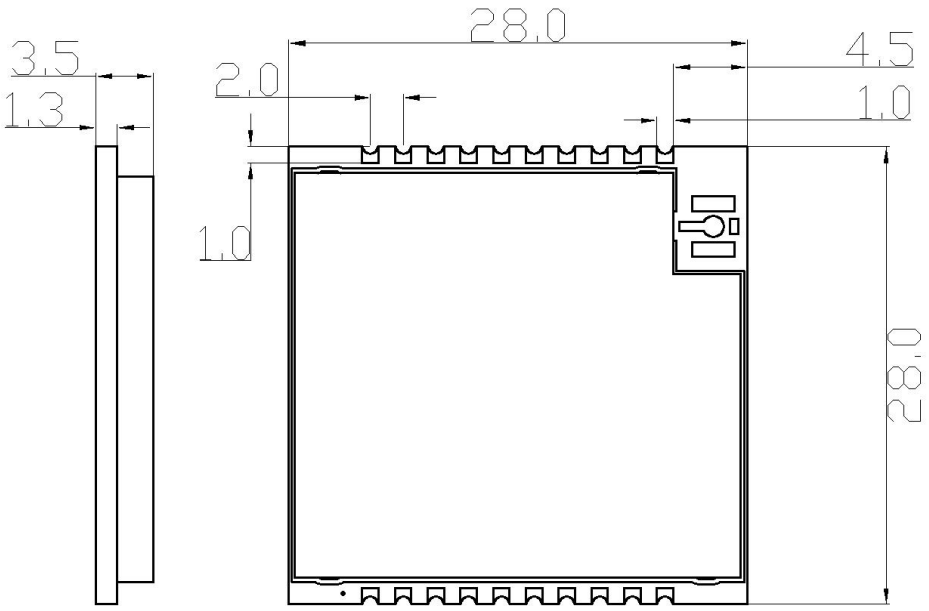
ITEM	SYMBOL	MIN	TYP	MAX	UNIT
Power Supply	VCC	3.8	5	5.5	V
Current Dissipation	I_C	360	67(standby)	1350(33dBm)	mA
Frequency	F_{REQ}	-	865~868(ETSI) 902~928(FCC)	-	MHz
RF Output Power	P_{RF}	5		33	dBm
Receive Sensitivity	SR		-74(using E310) -81(using E510) -87(using E710)		dBm

INTERFACE



Socket No.	Symbol	Comment
1	VCC	Power Supply
2	VCC	Power Supply
3	EN	Enable High level effective with internal 10kOhm resistor pulled up to VCC
4	NC	Reserved
5	NC	Reserved
6	NC	Reserved
7	RX	Serial data input
8	TX	Serial data output
9	BEEP	Buzzer output (3.3V TTL level, outputs high when activated)
10	NC	Reserved
11	GND	Ground
12	GPI1	General Input (3.3V TTL level)
13	GPI2	General Input (3.3V TTL level)
14	GPO1	General Output (3.3V TTL level)
15	GPO2	General Output (3.3V TTL level)
16	NC	Reserved
17	NC	Reserved
18	NC	Reserved
19	GND	Ground
20	GND	Ground

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.

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