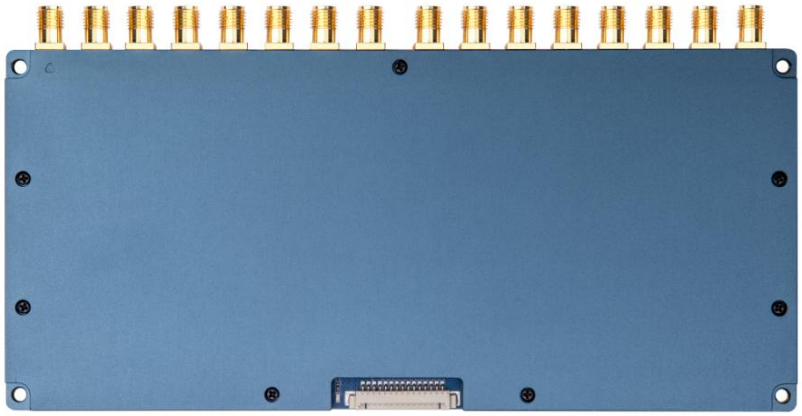
Ex10 High Isolation UHF RFID Module(16-Port)



Model: **RRU7199HIIS**
RRU5199HIIS
RRU3199HIIS
Size: **173mmx88.3mmx7.8mm**
Weight: **252g**

GENERAL DESCRIPTION

RRU7199HIIS/RRU5199HIIS/RRU3199HIIS 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;
- 865~868MHz/902~928MHz frequency band(frequency customization optional);
- FHSS or Fix Frequency transmission;
- RF output power up to 33dbm(adjustable), SMA sockets for 16 external antennae;
- 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);
- Support RSSI, tag buffer size up to 1000PCS@96bits EPC;
- Low power dissipation with +4.5~5.5VDC power supply;
- Up to 75db isolation between antenna ports with specific high-isolation scheme
- Support 4 GPIOs (2 inputs and 2 outputs);
- Support RS232 serial communication interface (3.3V TTL level);
- High stability with air cooling and no extra heat sinking;
- 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**

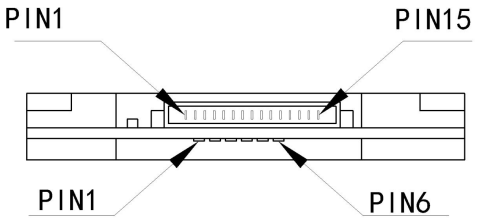
ITEM	SYMBOL	VALUE	UNIT
Power Supply	VCC	6	V
Operating Temp	T_{OPR}	-20 ~ +65	℃
Storage Temp	T_{STR}	-40 ~ +85	℃

- **Electrical and Mechanical Specification**

Under T_A=25℃,VCC=+5.0V unless specified

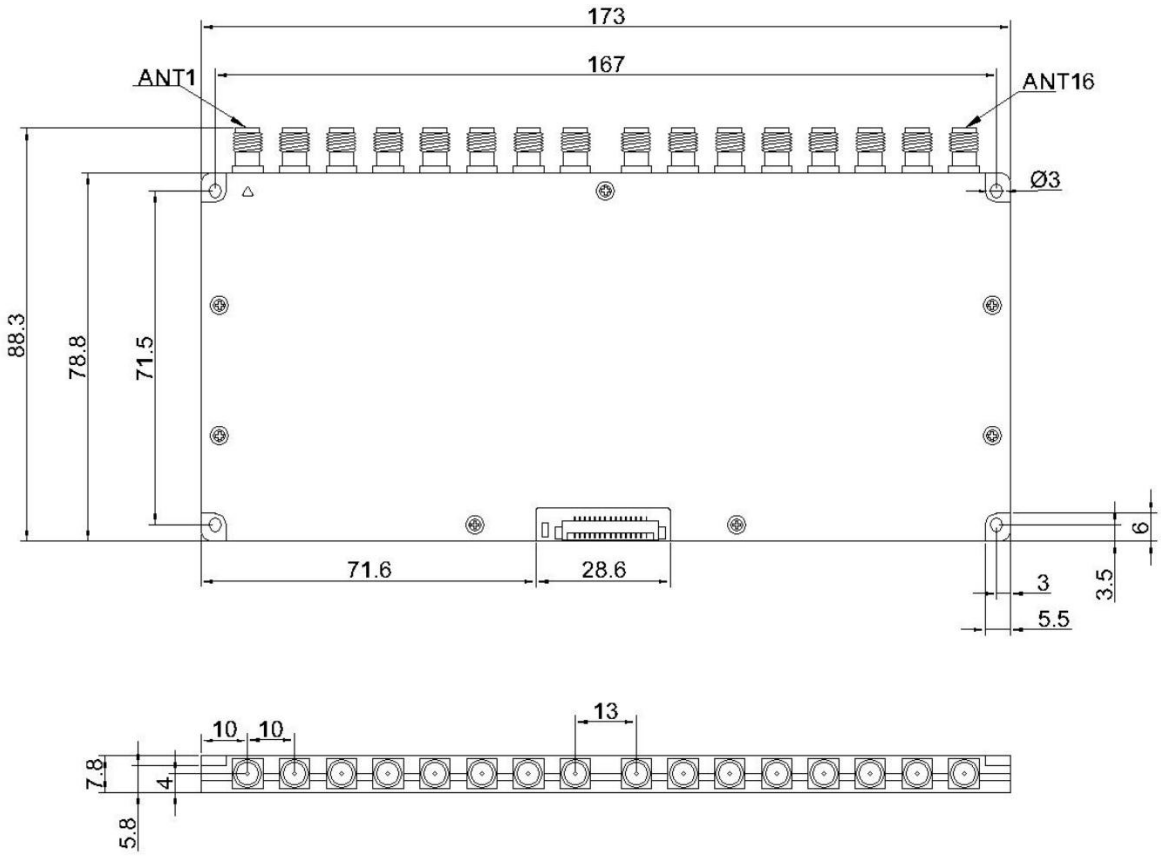
ITEM	SYMBOL	MIN	TYP	MAX	UNIT
Power Supply	VCC	4.5	5	5.5	V
Current Dissipation	I_C	410	100(standby)	1670(30dBm) 2200(33dBm)	mA
Frequency	F_{REQ}	-	865~868(ETSI) 902~928(FCC)	-	MHz
RF Output Power	P_{RF}	5		33	dBm
Receive Sensitivity	SR		-74(using E310) -81(using E510) -87(using E710)		dBm
Isolation Between Ports	IBP		75		dB

INTERFACE



No.	Pad No.	Symbol	Comment
1	2	GND	Ground
2	2	GND	Ground
3	1	VCC	Power Supply
4	1	VCC	Power Supply
5	4	GOP1	General Output 1(3.3V TTL level)
6		GOP2	General Output 2(3.3V TTL level)
7		GPI1	General Input 1(3.3V TTL level)
8		BUZZER	Buzzer output. outputs high when activated
9	5	RXD	Serial data input
10	6	TXD	Serial data output
11		Reserved	Reserved
12		Reserved	Reserved
13		GPI2	General Input 2 (3.3V TTL level)
14	3	EN	Enable. High level effective with internal 10kOhm resistor pulled up to VCC
15		RS425_CTRL	RS485 direction control

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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