

## Ex10 Integrated RFID Reader(6dBi)



**Model: RRU7001-6dBi**

**RRU5001-6dBi**

**RRU3001-6dBi**

**Size: 139.5mm×130mm×51.8mm**

## GENERAL DESCRIPTION

RRU7001-6dBi/RRU5001-6dBi/RRU3001-6dBi is a high-performance UHF RFID integrated Reader, designed with fully proprietary intellectual property rights. It combines a proprietary, efficient signal processing algorithm that maintains a high identification rate while achieving rapid read/write processing of RFID tags. Its flexible multi-interface design ensures seamless interoperability between interfaces, making it widely applicable in various Radio Frequency Identification (RFID) systems such as logistics, access control systems, anti-counterfeiting systems, and production process control.

## 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);
- Built-in 6dBi circularly polarized antenna, with typical reading distance of 9 meters\*;
- Supports multiple working modes such as active mode and answer mode;
- Support RSSI;
- Low power consumption design, powered by +9 ~ +24V DC, with POE optional;
- Supports interfaces such as RS232, RS485, Wiegand, GPIO, TCPIP, with optional WIFI/BT, USB2.0, 4G, etc.;
- High reliability design, meet the requirements of harsh working environment;
- Support on-the-site firmware upgrading.

*\*Effective distance varies with tags and the working environment.*

## CHARACTERISTICS

### ● Absolute Maximum Ratings

ITEM	SYMBOL	VALUE	UNIT
Power Supply	VCC	26	V
Operating Temp	T <sub>OPR</sub>	-20 ~ +60	°C
Storage Temp	T <sub>STR</sub>	-20 ~ +70	°C

## ● Specifications

Under TA=25°C,VCC=+9V unless specified

ITEM	SYMBOL	MIN	TYP	MAX	UNIT
Power Supply	VCC	9	9	24	V
Operating Current	I <sub>c</sub>	420	80 (standby)	970(30dBm) 1180(33dBm)	mA
Operating Frequency	F <sub>REQ</sub>	-	865~868(ETSI) 902~928(FCC)	-	MHz
RF Output Power	P <sub>RF</sub>	5		33	dBm
Receiver Sensitivity	SR		-74(using E310) -81(using E510) -87(using E710)		dBm

## INTERFACE



### 1. Power Supply (Model 5525)

NO.	SYMBOL	DESCRIPTION
Central	PWR	+9 ~ +24V Power
Outer	GND	Ground

### 2. RS232 (DB9 Female)

NO.	SYMBOL	DESCRIPTION
1	NC	Reserved
2	TXD	Serial communication data output
3	RXD	Serial communication data input
4	NC	Reserved
5	GND	Ground
6	NC	Reserved
7	NC	Reserved
8	NC	Reserved
9	NC	Reserved

### 3. RS485 (3\*3.5mm Green Terminal Block)

NO.	SYMBOL	DESCRIPTION
1	A	RS485 Interface A
2	B	RS485 Interface B
3	EGND	Earth Ground

### 4. Wiegand (3\*3.5mm Green Terminal Block)

NO.	SYMBOL	DESCRIPTION
1	GND	Ground
2	DATA1	Wiegand Data1
3	DATA0	Wiegand Data 0

### 5. Output (4\*3.5mm Green Terminal Block)

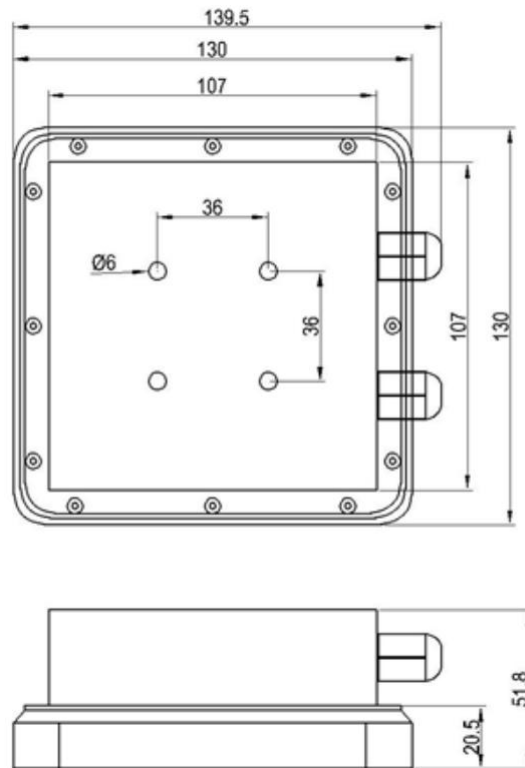
NO.	SYMBOL	DESCRIPTION
1	NO1	Normally Open terminal of Relay 1 (can be customized to output power voltage as per customer requirement)
2	COM1	Common terminal of Relay 1
3	NO2	Normally Open terminal of Relay 2 (can be customized to output power voltage as per customer requirement)
4	COM2	Common End of Relay 2

### 6. Input (3\*3.5mm Green Terminal Block)

NO.	SYMBOL	DESCRIPTION
1	GND	Ground
2	INPUT1	Input 1 with low level 0 ~ +1V, high level +2.5 ~ +12V (threshold can be customized according to customer requirements)
3	INPUT2	Input 2 with low level 0 ~ +1V, high level +2.5 ~ +12V (threshold can be customized according to customer requirements)

### 7. TCPIP Network Interface RJ45

## MECHANICAL DATA (UNIT:mm)



## ACCESSORY



**Power Adapter\*1**



**Power Cord\*1**



**Mounting Bracket\*1**

*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.