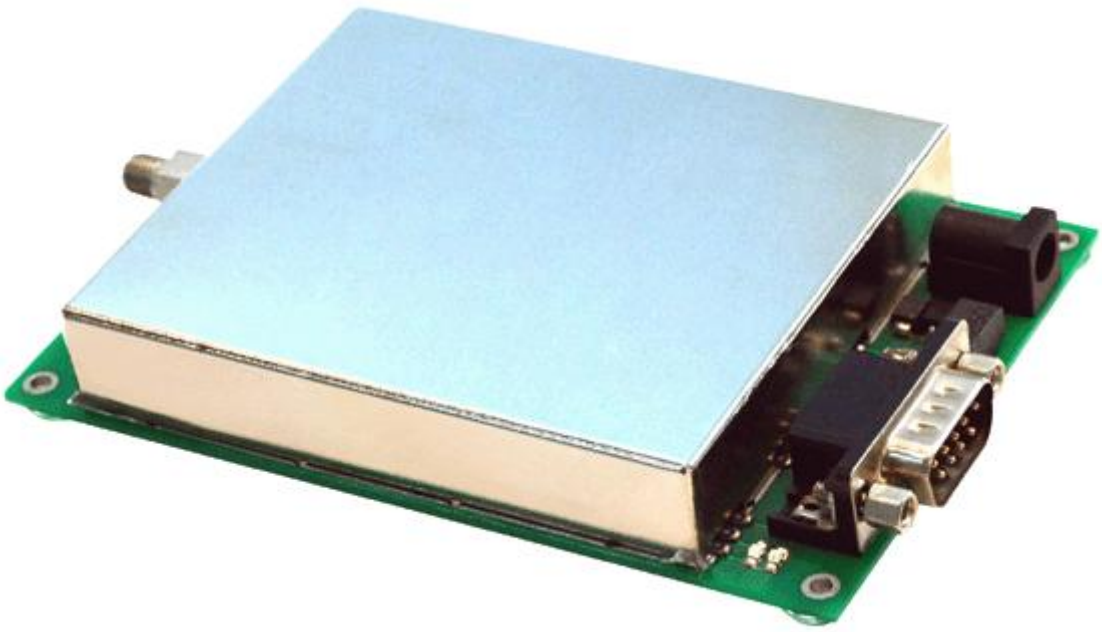
HF High Power Reader



Model：RR9091TM

Size：116mmx76mmx15mm

Weight：100g

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GENERAL DESCRIPTION

RoyalRay HF reader Module RR9091TM is designed upon fully self-intellectual property. Based on proprietary efficient anti-collision algorithm, the series features excellent tag read/write operation performance with high identification rate. The series can be widely applied in many RFID application systems such as Logistics, Personnel Identification, Conference Attendance, Access Control, Anti-counterfeit, Jewelry Management, Self-service of Laundry and Industrial Process Control.

FEATURES

- Self-intellectual property;
- Support ISO/IEC15693, ISO18000-3 protocol tags;
- RF output power over 1W;
- Advanced anti-collision algorithm, high identification rate, typical tag process speed is over 80 tags/s;
- Support standard 50ohm RFID antenna with effective distance up to 70cm*;
- Antenna open/short circuit tolerant;
- Support Scan-mode①;
- Support Transparent Command operation②;
- Support addressable multiple antenna ports;
- Support DPPM/WPPM tag-parsing mode③;
- Support reader network;
- Low power dissipation design;
- Provide DLL and Demonstration Software Source code to facilitate further development.

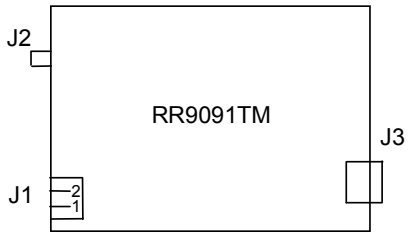
①Scan-mode: It refers to reader's automatic working mode.

②Transparent Command Operation: It is an advanced feature designed to support tag's future functions and different chip vendors' customized tag functions.

③DPPM/WPPM Tag-parsing Mode: DPPM tag-parsing mode means depth-first parsing pattern and WPPM means breadth-first parsing pattern. They are different methods of decoding multiple tags.

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INTERFACE DESCRIPTION



Top View

1. Power Supply Socket J1

No.	SYMBOL	COMMENT
J1-1	PWR	+11.6~15V
J1-2	GND	Ground

2. SMA Antenna Socket J2
3. Communication Socket J3

Standard DB9 Female Socket to be directly connected to the host.

No.	SYMBOL	COMMENT
1	G_IN1	General TTL level input with internal 20kΩ pull-up resistor to +5V
2	TXD（R-）	RS232 serial data output or RS485 R-
3	RXD（R+）	RS232 serial data input or RS485 R+
4	G_OUT1	General TTL level output with drive/sink 0.5mA current (max.)
5	GND	Ground
6	G_OUT2	General TTL level output with drive/sink 0.5mA current (max.)
7	COMMON	Common contact of built-in relay
8	N_C	Normally close contact of built-in relay
9	N_O	Normally open contact of built-in relay

CHARACTERISTICS

- Absolute Maximum Rating

ITEM	SYMBOL	VALUE	UNIT
Power Supply	VCC	16	V
G_IN1, G_OUT1, G_OUT2 I/O Voltage	V_{IO}	7	V
Operating Temp.	T_{OPR}	-20 ~ +65	℃
Storage Temp.	T_{STR}	-25 ~ +80	℃

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- Electrical and Mechanical Specification

  Under T_A＝25℃，VCC＝+12V unless specified

ITEM		SYMBOL	MIN	TYP	MAX	UNIT
Power Supply		VCC	11.5	12	15	V
Current Dissipation		I_C		350	450	mA
Frequency		F_{REQ}		13.56		MHz
Effective Distance*		DIS	0	700	850	mm
G_IN1 Input Level		V_{IH} V_{IL}	3.5	2.6 2.3	1.55	V V
G_OUT1, G_OUT2 Output Current		$\pm I_O$			0.5	mA
G_OUT1, G_OUT2 Output Level		$V_{OH}(I_O$=-0.1mA) $V_{OL}(I_O$=0.1mA)	3.95		0.73	V
Relay	Rated Load	C_{LOAD}			0.5A at 125VAC 1A at 24VDC	
	Operating Voltage				125VAC 60VDC	V
	Operating Current				1	A

**Effective distance depends on RF output power, antenna, tag and working environment.*

Remark:

1. Specifications are subject to change, please pay attention to our latest one.

2. Shenzhen RoyalRay Science and Technology Co., Ltd. reserves the right to the final interpretation of the above terms.

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