

www.rr-rfid.com

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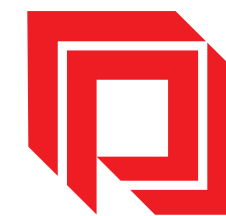
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荣睿科技
RoyalRay



公司简介

深圳市荣睿和芯科技有限公司专业致力于RFID读写器系列产品的开发、生产和销售。全线产品具有完全自主知识产权，涵盖125KHz、134.2kHz、13.56MHz、840-960MHz、2.45GHz等多个频段及ISO14443A/B、ISO15693、HF EPC、UHF EPC Gen2(ISO18000-6C)、ISO18000-6B等多项国际标准。

荣睿系列产品已获得欧盟CE、RoHS认证、美国FCC认证，此外日本、台湾、韩国、加拿大等国的多家公司使用我公司产品获得了日本VCCI认证、台湾NCC认证、韩国KCC和EK认证，以及加拿大CSA认证。

荣睿系列RFID产品不仅具有优良的性能价格比，更在产品稳定性、灵敏度及一致性等方面成为行业典范。

深圳市荣睿和芯科技有限公司始终坚持前瞻的产业观、务实的企业观、创新的产品观、体贴的服务观，以高品质的RFID产品实现客户的价值。

Company Information

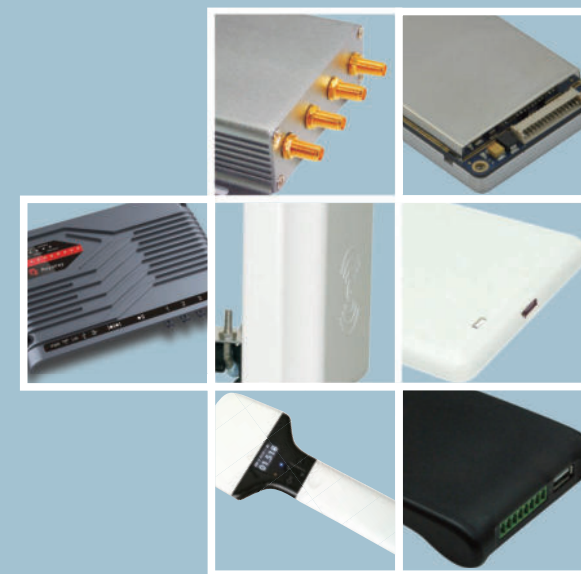
Shenzhen RoyalRay Science and Technology Co., Ltd. is dedicated in providing RFID series reader products and system solutions. All products own fully self-proprietary intellectual property and cover 125kHz, 134.2kHz, 13.56MHz, 840-960MHz, 2.45GHz multiple frequency bands and ISO14443A/B, ISO15693, HF EPC, UHF EPC Gen2(ISO18000-6C), ISO18000-6B international standards.

RoyalRay series products have acquired CE, RoHS certification of EU, FCC certification of USA and VCCI, NCC, KCC, EK, CSA approval via Japanese, Taiwanese, Korean, and Canadian companies.

RoyalRay RFID products have established an industrial example with its stability, sensitivity, conformity and high performance/price ratio.

RoyalRay sticks to Foreseeing Industry Concept, Pragmatic Enterprise Concept, Creative Product Concept and Considerate Service Concept and strives to realize our customers' value.

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荣睿高频全向通道设备 RoyalRay HF 3D Gate



型号/model : • RR-CH-TD6960C
• RR-CH-TD6961C

FEATURES

- Self-intellectual property;
- Support mainstream ISO15693 protocol tag (TI, PHILIPS, ST, INFINEON, FUJITSU, EM...) omni-directional operation;
- Typical gate width up to 90cm*;
- Low power dissipation design with RF output power over 4Watt;
- 2 line infrared motion sensor with intelligent movement direction determination and personnel counting;
- Support EAS/AFI security surveillance;
- Support single gate standalone or multiple gate synchronized work mode;
- Support RS232/RS485 and TCP/IP interface;
- Support remote configuration and management;
- Support further development and customization.

*Effective gate width depends on tag and working environment.

GENERAL DESCRIPTION

RR-CH-TD6960 series is a high performance ISO/IEC15693 protocol HF tag gate device. Designed upon fully self-intellectual property, it supports fast tag anti-collision operation with high identification rate, 2 line infrared motion sensor with intelligent personnel movement direction determination and counting, EAS/AFI security surveillance, multiple gate synchronization, RS232/485 and TCP/IP interface, remote configuration and management. It is an ideal choice for various HF RFID application systems such as library anti-theft, open access control, conference attendance and logistics etc.

COMPONENTS

RR-CH-TD6960 series is designed upon advanced panel-based concept. Each panel is an integrated system and comprises omni-directional antenna array, high RF power reader, controller, infrared motion sensor unit, power splitter, multiplexer, power supply and communication interface etc. Each panel can operate in standalone mode and a pair of panels constructs a gate device. Multiple panels (up to 8 panels) can work in synchronized mode to realize a multiple gate device. Other accessories include AC power cable, data synchronization cable, RF synchronization cable and RS232 serial communication cable.

产品介绍

RR-CH-TD6960系列是高性能的电子标签通道设备，支持ISO/IEC 15693格式电子标签的快速防冲突解析，内置2路红外运动传感器支持人员进出方向检测和人数统计，支持EAS和AFI两种安全检测功能，支持单通道独立工作和多通道并列工作，支持RS232/RS485串行通讯接口以及TCP/IP网络接口，可实现通道设备远程集中配置和管理，是图书防盗、开放式门禁考勤、会议签到、物流管理等高频RFID应用系统的理想选择。

特点

- 完全自主知识产权设计；
- 充分支持符合ISO/IEC 15693协议各主流电子标签（TI、PHILIPS、ST、INFINEON、FUJITSU...）的全方向检测；
- 通道宽度达至90cm*；
- 低功耗设计，射频输出功率4W以上；
- 2路红外运动传感器支持判断运动方向和人数统计；
- 支持EAS和AFI两种安全检测模式；
- 支持单通道独立工作和多通道并列工作；
- 支持RS232/RS485、TCP/IP接口；
- 支持设备远程集中配置管理；
- 支持二次开发和客户定制。

* 通道宽度与使用的标签及使用环境相关

组件

RR-CH-TD6960系列采用先进的单扇门独立设计，每扇门包括全向天线阵、大功率读写器、控制器、红外运动检测单元、功率分配器、多路器、电源及通讯接口等。单扇门可独立工作，双扇门可实现单通道运作，多扇门并列（最多8扇门并列）可实现多通道协同运作。

RR-CH-TD6960系列通道的附件包括交流电源线、同步数据线、同步射频线以及串口通讯电缆线。

型号/model : • RR-CH-TD6960
• RR-CH-TD6961

规格 Electrical and Mechanical Specification
除特别说明，所示规格取自TA = 25℃及VCC = +13.6V工作条件下
Under Ta = 25℃, VCC = +13.6V unless specified

项目 ITEM	典型值 VALUE
型号 MODEL	RR-CH-TD6960C RR-CH-TD6961C
尺寸(高x宽x厚) Dimension (H x W x T)	1680 x 580 / 620 x 18 / 55 (mm)
重量(单扇门) Weight (1 panel)	29 (kg)
外壳 Housing	亚克力 & 金属底座箱 Acrylic & Metallic Base Box
颜色 Color	透明、白、浅灰 Transparent, White, Light Gray
多扇门级联数量 NO. of Cascaded Panels of Gate	8扇(最多) 8 Panels (max)
每个通道宽度 Each Aisle Width	90 (cm)
方向判断 Motional orientation judgment	可精确实现 Accurate
数量统计 Quantity Statistics	充分支持 Adequate Support
警示 Alarm	声光报警 Light & Buzzer
通讯接口 Communication Interface	RS232/RS485, TCP/IP
电源 Power Supply	220/50 (V/Hz)
电流 Current	90 (mA)
工作温度 Operating Temp.	-10 ~ +60 (°C)
贮藏温度 Storage Temp.	-25 ~ +70 (°C)

项目 ITEM	典型值 VALUE
型号 MODEL	RR-CH-TD6960 RR-CH-TD6961
尺寸(高x宽x厚) Dimension (H x W x T)	1700 x 620 x 35 / 60 (mm)
重量(单扇门) Weight (1 panel)	23 (kg)
外壳 Housing	ABS
颜色 Color	浅灰、灰、黑 Light Gray, Gray, Black
多扇门级联数量 NO. of Cascaded Panels of Gate	8扇(最多) 8 Panels (max)
每个通道宽度 Each Aisle Width	90 (cm)
方向判断 Motional orientation judgment	可精确实现 Accurate
数量统计 Quantity Statistics	充分支持 Adequate Support
警示 Alarm	声光报警 Light & Buzzer
通讯接口 Communication Interface	RS232/RS485, TCP/IP
电源 Power Supply	220/50 (V/Hz)
电流 Current	90 (mA)
工作温度 Operating Temp.	-10 ~ +60 (°C)
贮藏温度 Storage Temp.	-25 ~ +70 (°C)

睿睿高频级联通道设备

RoyalRay HF Cascaded Access Control Gate

产品介绍

RR-CH-ACS3156是睿睿全新设计推出的一款高性能的电子标签级联通道设备，支持ISO/IEC 15693格式电子标签的快速防冲突解析和2路红外运动检测，内置存储功能记录标签解析结果信息，支持多通道无缝级联工作。RS485串行通讯接口和TCP/IP网络接口可直接连接主机、控制器及其它相关设备，是开放式、大流量、通道式门禁、考勤、会议签到及数字化景区管理的理想选择。

特点

- 完全自主知识产权设计；
- 充分支持符合ISO/IEC 15693协议各主流电子标签（TI、PHILIPS、ST、INFINEON、FUJITSU...）；
- 支持多通道无缝级联工作；
- 采用金属屏蔽设计，抗干扰能力强；
- 低功耗设计，24V低压供电，安全可靠；
- 2路红外判断运动方向；
- 支持28600条信息存储容量；
- 可配置报警设置；
- 支持RS485、TCP/IP接口；
- 支持二次开发和客户定制。
* 通道宽度与协议格式、标签及使用环境相关。

GENERAL DESCRIPTION

RoyalRay "RR-CH-ACS3156" is a high performance new design HF Cascaded Access Control Gate Device. It supports fast process anti-collision and 2 line infrared motion detection of ISO/IEC 15693 protocol tag. Built-in storage feature of RR-CH-ACS3156 record tag-parsing result, so do Multi-gate cascading. Standard RS485 serial communication port and RJ45 (TCP/IP) network port can connect to the host, controller and other associated equipments directly. The series are top choice for open mass flow RFID applications, such as: Access Control, Conference Attendance, Digital Scenic Spots Network Management, etc.

FEATURES

- Self-intellectual property;
- Support mainstream ISO/IEC15693 protocol tag (TI, PHILIPS, ST, INFINEON, FUJITSU...);
- Support Multi-gate cascading;
- Robust anti-interference ability by metallic shielding design;
- Low power dissipation design with 24V low power supply, safe and reliable;
- Built-in 2 line infrared motion detection sensor;
- The storage capacity of messages up to 28600;
- Optional alarm setting;
- Support RS485 and RJ45 (TCP/IP) network interface;
- Provide DLL and Demonstration Software Source code to facilitate further development;
- Support customized solutions.
* Effective distance depends on protocol, tag and working environment.

组件

RR-CH-ACS3156包括3种类型，分别为L型、R型和M型。L型和R型通常放置在通道阵列的两端，单独的L型和R型可以支持单通道应用。构建多通道应用，需要在L型和R型中间插入M型设备。M型设备可以看作是L型和R型的无缝集成。根据用户习惯的不同，L型、R型和M型设备又称为A型、B型和AB型。RR-CH-ACS3156附件包括独立24V电源箱、RS485配置线、220VAC电源线以及其他通讯和连接电缆。

COMPONENTS

RR-CH-ACS3156 includes three types of gate: Type L, Type R and Type M. Type L and Type R are usually placed at both ends of the gate array. Single Type L and Type R can come together as a single gate aisle application. After inserting Type M between Type L and Type R, they build Multi-gate application. Type M is the seamless integration of Type L and Type R. According to user's different habits, Type L, Type R and Type M also are called as Type A, Type B and Type AB. RR-CH-ACS3156 accessories include single +24V power box, RS485 layout line, 220VAC power line and other communication and the connection cable.



型号/model :
• RR-CH-ACS3156



规格 Electrical and Mechanical Specification
除特别说明，所示规格取自TA = 25°C及VCC = +13.6V工作条件下
Under Ta = 25°C, VCC = +13.6V unless specified

项目 ITEM	典型值 VALUE
型号 MODEL	RR-CH-ACS3156
尺寸(高x宽x厚) Dimension (H x W x T)	L/R Gate: 1360 x 660 x 80 (mm) M Gate: 1360 x 660 x 150 (mm)
重量(单扇门) Weight (1 panel)	L/R Gate: 17(kg) M Gate: 25(kg)
外壳 Housing	ABS、金属边框和底座 ABS, Metallic Frame and Pedestal
颜色 Color	白、黑 White, Black
户外使用 Outdoor Use	充分支持 Adequate Support
多扇门级联数量 NO. of Cascaded Panels of Gate	无上限 No Maximum
每个通道宽度 Each Aisle Width	90 (cm)
方向判断 Motional orientation judgment	可精确实现 Accurate
数量统计 Data Storage	充分支持 Adequate Support
警示 Alarm	声光报警 Light & Buzzer
通讯接口 Communication Interface	RS485, TCP/IP
电源 Power Supply	220/50 (V/Hz)
电流 Current	110 (mA)
使用温度 Operating Temp.	-10 ~ +60 (°C)
贮藏温度 Storage Temp.	-25 ~ +70 (°C)

荣睿 高频 数字信号处理电子标签读写器

RoyalRay HF Digital Signal Processing Reader



型号/model:
•RR9299TZF-FZ1

型号/model:
•RR9299TZF-FZ4

型号/model:
•RR9299TZF-FZ8

型号/model:
•RR9299TZF-FZ12

产品介绍

荣睿高性能系列电子标签读写器，全系列均基于数字信号处理设计方案，完全自主知识产权设计，充分支持ISO/IEC 15693协议电子标签，结合专有的高效电子标签碰撞处理算法，在保持高识读率的同时，实现对电子标签的快速读写处理，可广泛应用于无人零售、智能书架、物流、个人身份识别、会议签到系统、门禁系统、防伪系统及生产过程控制等多种无线射频识别（RFID）系统。



型号/model:
•RR9299TZF-FZ24

特点

- 完全自主知识产权设计；
- 全数字信号处理设计，无需人工调节；
- 支持ISO/IEC15693协议电子标签；
- 射频输出功率0.5~5W（7W）可调；
- 先进的标签碰撞处理算法，高识读率，典型标签处理速度超过80张/秒；
- 1/4/8/12/16/20/24/32/36路SMA天线接口可直接配接50Ω标准RFID天线，有效距离达至90cm以上*；
- 支持多天线端口工作状态检测、支持组合盘点；
- 支持RS232接口，可选配TCP/IP；
- 通讯波特率软件可调；
- 提供动态连接库（DLL）及演示软件源代码，支持二次开发；
- 支持Firmware在线升级。

*有效距离与外接天线、电子标签及工作环境有关。



型号/model:
•RR9299TZF-FZ32



接口图



型号/model:
•RR9299TZF-FZ16

GENERAL DESCRIPTION

RoyalRay high performance ISO/IEC 15693 protocol HF reader which are designed upon fully self-intellectual property. Based on full Digital-Signal-Processing (DSP) architecture and proprietary efficient DSP algorithm, they support fast tag read/write operation with high identification rate. It can be widely applied in many RFID application systems such as smart book shelf, intelligent library management, new retail machine, logistics, access control, anti-counterfeit and industrial production process control system.

FEATURES

- Self-intellectual property;
 - Full digital signal processing architecture without manual adjustment;
 - Support ISO/IEC 15693 compatible protocol;
 - RF output power adjustable from 0.5~5W (7W);
 - Advanced anti-collision algorithm with high identification rate up to 80pcs/s;
 - Support 4/8/12/16/20/24/32 standard 50ohm RFID antennae with effective distance up to 90cm*;
 - Support antenna quality and status check;
 - Support RS232 and provide TCP/IP interface for selection;
 - Provide DLL and demonstration software to facilitate development;
 - Support on-the-site firmware upgrading;
- * effective distance depends on antenna, tag and environment.

电气特性 CHARACTERISTICS

● 极限参数 Absolute Maximum Rating

参数 ITEM	符号 SYMBOL	数值 VALUE	单位 UNIT
电源电压 Power Supply	VCC	28	V
工作温度 Operating Temp.	T _{OPR}	-20~+65	℃
贮藏温度 Storage Temp.	T _{STR}	-25~+80	℃

项目 ITEM	符号 SYMBOL	数值 VALUE	单位 UNIT
1 个天线口 1 antenna port	L x W x H	220 x 185 x 38	mm
	N.W.	1300	g
4 个天线口 1 antenna port	L x W x H	220 x 185 x 38	mm
	N.W.	1350	g
8 个天线口 1 antenna port	L x W x H	220 x 185 x 38	mm
	N.W.	1400	g
12 个天线口 1 antenna port	L x W x H	220 x 185 x 38	mm
	N.W.	1450	g
16 个天线口 1 antenna port	L x W x H	220 x 185 x 38	mm
	N.W.	1500	g
24 个天线口 1 antenna port	L x W x H	309 x 220 x 38	mm
	N.W.	1880	g
32 个天线口 1 antenna port	L x W x H	309 x 220 x 38	mm
	N.W.	1980	g
36 个天线口 1 antenna port	L x W x H	309 x 220 x 38	mm
	N.W.	2080	g

荣睿高频远距离电子标签读写器

RoyalRay HF Long Distance Reader

产品介绍

荣睿高频远距离电子标签读写器是一组高性能的ISO/IEC 15693协议读写器，完全自主知识产权设计，结合专有的高效电子标签碰撞处理算法，在保持高识读率的同时，实现对电子标签的快速读写处理。可广泛应用于物流、个人身份识别、会议签到系统、门禁系统、防伪系统及生产过程控制等多种无线射频识别(RFID)系统。

特点

- 完全自主知识产权设计；
 - 支持ISO/IEC15693、ISO18000-3协议电子标签；
 - 射频输出功率0.25~8W(10W)可调；
 - 先进的标签碰撞处理算法，高识读率，典型标签处理速度超过80张/秒；
 - SMA接口可直接配接50欧姆标准RFID天线，有效距离达至100cm以上*；
 - 支持扫描工作模式^①；
 - 支持EAS扫描工作模式；
 - 扫描工作模式下，支持输入电平同步和指令同步两种方式；
 - 支持透明命令格式操作^②；
 - 双解析模式最大限度提高标签处理速度；
 - 支持天线工作状态检测；
 - 支持RS232、RS485、RS422，可选配RJ45(TCPIP)接口、WiFi接口；
 - 通讯波特率软件可调；
 - 低功耗设计，单+24V电源供电；
 - 提供动态连接库（DLL）及演示软件源代码，支持二次开发；
- *有效距离与输出功率、外接天线、电子标签及工作环境有关；

注释：
 ①扫描工作模式：读写器的一种自动工作模式。
 ②透明命令：为了配合和支持未来标签的新增功能以及各个厂商标签的特色功能而配备的高端特性。

GENERAL DESCRIPTION

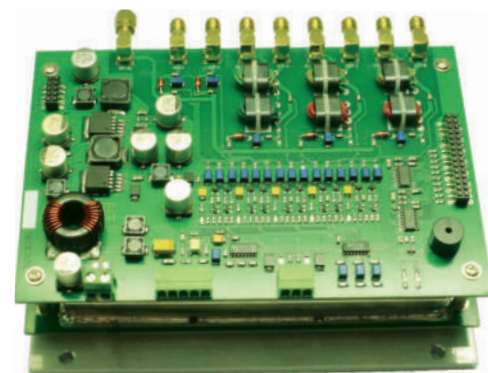
RoyalRay HF long distance series reader is a high performance tag reader. It is designed upon fully self-intellectual property. Based on proprietary efficient anti-collision algorithm, it supports fast tag read/write operation with high identification rate. It can be widely applied in many RFID application systems such as Logistics, Personnel Identification, Conference Attendance System, Access Control, Anti-counterfeit, Industrial Production Process Control System, etc.

FEATURES

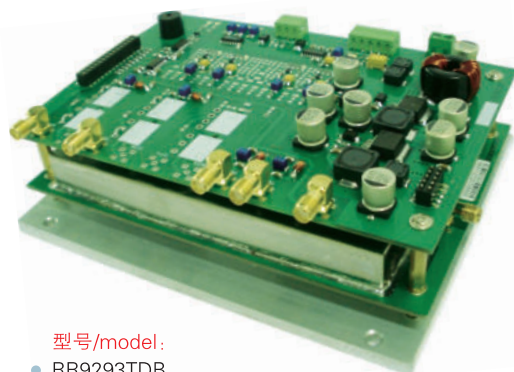
- Self-intellectual property;
- Support ISO/IEC15693, ISO18000-3 protocol tags;
- RF output power is adjustable 0.25~8W(10W) ;
- Advanced anti-collision algorithm, high identification rate, typical tag process speed is over 80 tags/s;
- Support standard 50ohm RFID antenna with effective distance up to 100cm*;
- Support Scan-mode^①;
- Support EAS scan mode;
- Support external input and command synchronization in scan mode;
- Support Transparent Command operation^② ;
- DPPM/WPPM tag-parsing mode maximize processing speed;
- Support antenna failure detection;
- Support RS232, RS485, RS422 interface with optional RJ45(TCPIP), WiFi interface;
- Baud rate adjustable;
- Low power dissipation with single+24V DC needed;
- Provide DLL and Demonstration Software Source code to facilitate further development.

*Effective distance depends on protocol, tag and working environment.

Remark,
 ① Scan-mode: It refers to reader's automatic working mode.
 ② Transparent Command Operation: It is an advanced feature designed to support tag's future functions and different chip vendors' customized tag functions.



型号/model:
 ● RR9297TDB



型号/model:
 ● RR9293TDB



型号/model:
 ● RR9291TDB
 ● RR9291TDB/IP



型号/model
 ● RR9291TDBW

电特性CHARACTERISTICS 极限参数Absolute Maximum Rating :

参数 ITEM	符号 SYMBOL	数值 VALUE	单位 UNIT
电源电压 Power Supply	VCC	28	V
光耦输入输出 Optical Input / Output	V _{OPC}	30V/30mA	
工作温度 Operating Temp.	T _{OPR}	-15~+70	°C
贮藏温度 Storage Temp.	T _{STR}	-25~+85	°C

规格
 除特别说明外，所示规格取自T_A = 25°C及VCC = +24V及输出RF功率4W工作条件下。
 Electrical and Mechanical Specification
 Under T_A = 25°C, VCC = +24V and RF out put power 4W unless specified

参数 ITEM	符号 SYMBOL	最小 MIN	典型 TYP	最大 MAX	单位 UNIT
电源电压 Power Supply	VCC	22	24	26	V
工作电流 Current Dissipation	I _c		0.68	1.2	A
工作频率 Frequency	F _{REQ}		13.56		MHz
有效距离* Effective Distance*	DIS	0	90	100	cm
继电器 Relay	端子负载 Rated Load	C _{LOAD}		0.5A at 125VAC 1A at 24VDC	
	端子操作电压 Operating Voltage			125VAC 60VDC	V
	端子操作电流 Operating Current			1	A

*有效距离与输出功率、外接天线、电子标签及工作环境有关。
 *Effective distance depends on RF output power, antenna, tag and working environment.

参数 ITEM	符号 SYMBOL	典型 TYP	单位 UNIT
规格尺寸 Size	L x W x H	无外壳 No Casing	170 x 135 x 63
		有外壳 With Casing	210 x 160 x 68
净重 Net Weight	Net Weight	无外壳 No Casing	800
		有外壳 With Casing	2380

荣睿高频大功率电子标签读写器

RoyalRay HF High Power Reader

产品介绍

荣睿高频大功率电子标签读写器RR9299TL基于完全自主知识产权设计，结合专有电子标签解码核心与处理算法，在保持高识读率的同时，实现对电子标签的快速读写处理，成功应用于智能图书管理、物流、个人身份识别、会议签到管理、开放式门禁考勤、防伪、医疗卫生行业及生产过程控制等多种RFID系统。

特点

- 完全自主知识产权设计；
- 支持ISO/IEC15693、ISO18000-3协议电子标签（TI、PHILIPS、ST、INFINEON、FUJITSU...）；
- 射频输出功率5W以上；
- 先进的标签碰撞处理算法，高识读率，典型标签处理速度超过80张/秒；
- BNC接口可直接配接50Ω标准RFID天线，有效距离达至90cm以上*；
- 支持扫描工作模式¹；
- 支持透明命令格式操作²；
- 支持可寻址16天线端口；
- 标准RS232接口，可选配RJ45(TCP/IP)网口；
- 低功耗设计，单13.6V电源供电；
- 提供动态连接库（DLL）及演示软件源代码，支持二次开发。

*有效距离与协议格式、外接天线、电子标签及工作环境有关。

注释：

- ①扫描工作模式：读写器的一种自动工作模式。
- ②透明命令：为了配合和支持未来标签的新增功能以及各个厂商标签的特色功能而配备的高端特性。

GENERAL DESCRIPTION

RoyalRay HF High Power Tag Readers RR9299TL 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. It has been successfully applied in many RFID application systems such as Library entrance control, Logistics, Personnel Identification, Conference Attendance, Access Control, Anti-counterfeit, Healthcare Process & Medical Industry and Industrial Process Control.

FEATURES

- Self-intellectual property;
- Support ISO/IEC15693, ISO18000-3 protocol tags (TI, PHILIPS, ST, INFINEON, FUJITSU...);
- RF output power over 5W;
- 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 90cm*;
- Support Scan-mode¹;
- Support Transparent Command operation²;
- Support addressable 16 antenna ports;
- Standard RS232 interface with optional RJ45(TCP/IP) interface;
- Low power dissipation design with single13.6VDC power supply;
- Provide DLL and Demonstration Software Source code to facilitate further development.

Remark :

- ① Scan-mode: It refers to reader's automatic working mode.
- ② Transparent Command Operation: It is an advanced feature designed to support tag's future functions and different chip vendors' customized tag functions.



型号/model:
● RR9299TL

电特性CHARACTERISTICS 极限参数 Absolute Maximum Rating:

参数 ITEM	符号 SYMBOL	数值 VALUE	单位 UNIT
电源电压 Power Supply	VCC	16	V
G_IN1、G_OUT1、G_OUT2 输入输出电压 G_IN1、G_OUT1、G_OUT2 I/O Voltage	V _{opc}	7	V
工作温度 Operating Temp.	T _{opr}	-20~+65	°C
贮藏温度 Storage Temp.	T _{str}	-25~+80	°C

规格

除特别说明外，所示规格取自T_a=25°C及VCC=+13.6V工作条件下。

Electrical and Mechanical Specification
Under T_a=25°C, VCC=+13.6V unless specified

参数 ITEM	符号 SYMBOL	最小 MIN	典型 TYP	最大 MAX	单位 UNIT
电源电压 Power Supply	VCC	11.6	13.6	15	V
工作电流 Current Dissipation	I _c		0.9	1.3	A
工作频率 Frequency	F _{REQ}		13.56		MHz
有效距离* Effective Distance	DIS	0	90	100	cm
G_IN1 输入电平 G_IN1 Input Level	V _{IH} V _{IL}	3.5		1.55	V
G_OUT1、G_OUT2 输出电流 G_OUT1、G_OUT2 Output Current	±I _o			0.5	A
G_OUT1、G_OUT2 输出电平 G_OUT1、G_OUT2 Output Level	V _{OH} (I _o =-0.1mA) V _{OL} (I _o =0.1mA)	3.95		0.73	V
继电器 Relay	端子负载 Rated Load	C _{LOAD}		0.5A at 125VAC 1A at 24VDC	
	端子操作电压 Operating Voltage			125VAC 60VDC	V
	端子操作电流 Operating Current			1	A

*有效距离与协议格式、外接天线、电子标签及工作环境有关。

*Effective distance depends on protocol, antenna, tag and working environment.



荣睿高频中功率电子标签读写器

RoyalRay HF Medium Power Reader

产品介绍

荣睿高频中功率电子标签读写器RR9191TL基于完全自主知识产权设计，结合专有电子标签解码核心与处理算法，在保持高识读率的同时，实现对电子标签的快速读写处理，成功应用于智能图书管理、物流、个人身份识别、会议签到管理、开放式门禁考勤、防伪、医疗卫生行业及生产过程控制等多种RFID系统。

特点

- 完全自主知识产权设计；
- 支持ISO/IEC15693、ISO18000-3协议电子标签（TI、PHILIPS、ST、INFINEON、FUJITSU...）；
- 射频输出功率2W以上；
- 先进的标签碰撞处理算法，高识读率，典型标签处理速度超过80张/秒；
- BNC接口可直接配接50Ω标准RFID天线，有效距离达至75cm以上*；
- 支持扫描工作模式¹；
- 支持透明命令格式操作²；
- 标准RS232接口，可选配RJ45(TCP/IP)网口；
- 低功耗设计，单13.6V电源供电；
- 提供动态连接库（DLL）及演示软件源代码，支持二次开发。

*有效距离与协议格式、外接天线、电子标签及工作环境有关。

注释：

- ①扫描工作模式：读写器的一种自动工作模式。
- ②透明命令：为了配合和支持未来标签的新增功能以及各个厂商标签的特色功能而配备的高端特性。

GENERAL DESCRIPTION

RoyalRay HF Medium Power Tag Readers RR9191TL 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. It has been successfully applied in many RFID application systems such as Library entrance control, Logistics, Personnel Identification, Conference Attendance, Access Control, Anti-counterfeit, Healthcare Process & Medical Industry and Industrial Process Control.

FEATURES

- Self-intellectual property;
- Support ISO/IEC15693, ISO18000-3 protocol tags (TI, PHILIPS, ST, INFINEON, FUJITSU...);
- RF output power over 2W;
- 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 75cm*;
- Support Scan-mode¹;
- Support Transparent Command operation²;
- Standard RS232 interface with optional RJ45(TCP/IP) interface;
- Low power dissipation design with single13.6VDC power supply;
- Provide DLL and Demonstration Software Source code to facilitate further development.

Remark :

- ① Scan-mode: It refers to reader's automatic working mode.
- ② Transparent Command Operation: It is an advanced feature designed to support tag's future functions and different chip vendors' customized tag functions.



型号/model:
● RR9191TL

参数 ITEM	符号 SYMBOL	典型 TYP	单位 UNIT
规格尺寸 Size	L×W×H	190x160x65	mm
净重 Net Weight	Net Weight	1100	g

电特性CHARACTERISTICS 极限参数 Absolute Maximum Rating:

参数 ITEM	符号 SYMBOL	数值 VALUE	单位 UNIT
电源电压 Power Supply	VCC	16	V
G_IN1、G_OUT1、G_OUT2 输入输出电压 G_IN1、G_OUT1、G_OUT2 I/O Voltage	V _{opc}	7	V
工作温度 Operating Temp.	T _{opr}	-20~+65	°C
贮藏温度 Storage Temp.	T _{str}	-25~+80	°C

规格

除特别说明外，所示规格取自T_a=25°C及VCC=+13.6V工作条件下。

Electrical and Mechanical Specification
Under T_a=25°C, VCC=+13.6V unless specified

参数 ITEM	符号 SYMBOL	最小 MIN	典型 TYP	最大 MAX	单位 UNIT
电源电压 Power Supply	VCC	11.6	13.6	15	V
工作电流 Current Dissipation	I _c		0.9	1.3	A
工作频率 Frequency	F _{REQ}		13.56		MHz
有效距离* Effective Distance	DIS	0	75	90	cm
G_IN1 输入电平 G_IN1 Input Level	V _{IH} V _{IL}	3.5		1.55	V
G_OUT1、G_OUT2 输出电流 G_OUT1、G_OUT2 Output Current	±I _o			0.5	A
G_OUT1、G_OUT2 输出电平 G_OUT1、G_OUT2 Output Level	V _{OH} (I _o =-0.1mA) V _{OL} (I _o =0.1mA)	3.95		0.73	V
继电器 Relay	端子负载 Rated Load	C _{LOAD}		0.5A at 125VAC 1A at 24VDC	
	端子操作电压 Operating Voltage			125VAC 60VDC	V
	端子操作电流 Operating Current			1	A

*有效距离与协议格式、外接天线、电子标签及工作环境有关。

*Effective distance depends on protocol, antenna, tag and working environment.

荣睿高频中功率电子标签读写器

RoyalRay HF Medium Power Reader

产品介绍

荣睿高频中功率电子标签读写器基于完全自主知识产权设计，结合专有电子标签解码核心与处理算法，在保持高识读率的同时，实现对电子标签的快速读写处理，不仅被成功应用到物流、个人身份识别、会议签到管理、开放式门禁考勤、防伪及生产过程控制等多种RFID系统应用领域，还在图书馆的RFID智能化管理、自助借还书机、娱乐业等方面发挥了积极的作用。

特点

- 完全自主知识产权设计；
- 支持ISO/IEC15693、NXP EPC、NXP UID、HF EPC协议电子标签；
- 射频输出功率1W以上；
- 先进的标签碰撞处理算法，高识读率典型标签处理速度超过80张/秒；
- SMA接口可直接配接50欧姆标准RFID天线，有效距离达至70cm以上*；
- 支持天线开短路极限环境；
- 支持扫描工作模式^①；
- 支持透明命令格式操作^②；
- 支持可寻址多天线端口；
- 支持多读写器连网；
- 精巧外形；
- 低功耗设计，单12V电源供电；
- 提供动态连接库（DLL）及演示软件源代码，支持二次开发；

*有效距离与协议格式、外接天线、电子标签及工作环境有关

注释：

- ① 扫描工作模式：读写器的一种自动工作模式。
- ② 透明命令：为了配合和支持未来标签的新增功能以及各个厂商标签的特色功能而配备的高端特性。



型号/model:

- RR9001T
- RR9091T
- RR7001...



型号/model:

- RR9002T
- RR9092T



型号/model:

- RR9003T
- RR9093T
- RR7003...



RS232

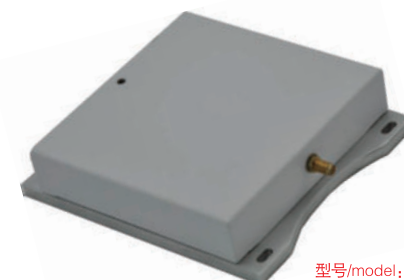


RS232 + TCP/IP



型号/model:

- RR9091T-WiFi
- RR7091T-WiFi



型号/model:

- RR9091TY



型号/model:

- RR9091TUSB-M12



型号/model:

- RR9091TUSBDK

电特性CHARACTERISTICS 极限参数 Absolute Maximum Rating:

参数 ITEM	符号 SYMBOL	数值 VALUE	单位 UNIT
电源电压 Power Supply	VCC	16	V
G_IN1、G_OUT1、G_OUT2 输入输出电压 G_IN1、G_OUT1、G_OUT2 I/O Voltage	V _{IO}	7	V
工作温度 Operating Temp.	T _{OPR}	-20~+70	°C
贮藏温度 Storage Temp.	T _{STR}	-35~+80	°C

规格

除特别说明外，所示规格取自T_A=25°C及VCC=+12V工作条件下。

Electrical and Mechanical Specification Under T_A=25°C, VCC=+12V unless specified

参数 ITEM	符号 SYMBOL	最小 MIN	典型 TYP	最大 MAX	单位 UNIT
电源电压 Power Supply	VCC	11.5	12	15	V
工作电流 Current Dissipation	I _C		0.35	0.45	A
工作频率 Frequency	F _{REQ}		13.56		MHz
有效距离* Effective Distance	DIS	0	70	85	cm
G_IN1 输入电平 G_IN1 Input Level	V _{IH} V _{IL}	3.5		1.55	V
G_OUT1、G_OUT2 输出电流 G_OUT1、G_OUT2 Output Current	±I _O			0.5	A
G_OUT1、G_OUT2 输出电平 G_OUT1、G_OUT2 Output Level	V _{OH} (I _O =-0.1mA) V _{OL} (I _O =0.1mA)	3.95		0.73	V
继电器	端子负载 Rated Load C _{LOAD}			0.5A at 125VAC 1A at 24VDC	
	端子操作电压 Operating Voltage			125VAC 60VDC	V
	端子操作电流 Operating Current			1	A

*有效距离与协议格式、外接天线、电子标签及工作环境有关。

*Effective distance depends on protocol, antenna, tag and working environment.

GENERAL DESCRIPTION

RoyalRay HF medium power tag readers are 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 not only have been applied successfully to Logistics, Personnel Identification, Conference Attendance, Access Control, Anti-counterfeit and Industrial Production Process Control, but also have played an active role in Library RFID Intelligent Management, Self-service Library, and Entertainment Industry, etc.

FEATURES

- Self-intellectual property;
- Support ISO/IEC15693, NXP EPC, NXP UID, HF EPC protocol tags;
- RF output power over 1W;
- Advanced anti-collision algorithm, high identification rate, typical tag process speed is over 80tags/s;
- Support standard 50ohm RFID antenna with effective distance up to 70cm*;
- Antenna open/short circuit tolerant
- Support Scan-mode^①;
- Support Transparent Command operation^②;
- Support addressable multiple antenna ports;
- Support reader network;
- Small outline;
- Low power dissipation design;
- Provide DLL and Demonstration Software Source code to facilitate further development.

* Effective distance depends on protocol, antenna, tag and working Environment.

Remark:

- ① Scan-mode: It refers to reader's automatic working mode.
- ② Transparent Command Operation: It is an advanced feature designed to support tag's future functions and different chip vendors' customized tag functions.

荣睿高频RFID天线

RoyalRay HF RFID Antenna

产品介绍

荣睿 50Ω 13.56MHz 高频 RFID 天线可广泛用于物流、个人身份识别、门禁系统及生产过程控制等多类系统。另外，我公司可以根据客户现场的需求定制天线的尺寸和外观。

高频平板天线 HF Panel Antenna

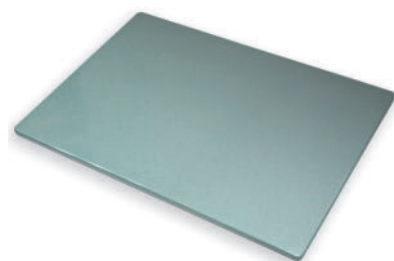
型号 Model	RR- PN- ANT4232
尺寸 Size	LxWxT (mm) : 420x320x28 LxWxT (mm) : 260x260x22
重量 Weight	1800g / 3600g
颜色 Color	黑色&白色 Black & White
备注 Remark	可支持达至 6W 射频功率； 1.5m同轴线缆，SMA 接口； 典雅造型，PMMA外壳 Input Power up to 6 W; 1.5m RF cable with SMA socket; Classic outline with PMMA shell.

我们提供基于此款外形的三维立体天线和屏蔽天线。
We provide 3D Antenna and Metal-shielding Antenna with the same casing.



高频平板天线 HF Panel Antenna

型号 Model	RR-PN- ANT3424
尺寸 Size	LxWxT (mm) : 340x240x9
重量 Weight	800g
颜色 Color	烟灰色 Smoky Gray
备注 Remark	可支持达至 1.5W 射频功率； 1.5m同轴线缆，SMA接口； 超薄造型，ABS外壳 Input Power up to 1.5W; 1.5 RF cable with SMA socket; Ultra-thin appearance with ABS shell.



GENERAL DESCRIPTION

RoyalRay 13.56MHz HF RFID antennae can be widely applied in many RFID application systems such as Logistics, Personnel Identification, Conference Attendance, Access Control, Anti-counterfeit and Industrial Production Process Control. Antennae can be customized as customers' requirements.



高频平板天线 HF Panel Antenna

型号 Model	RR- PN- ANT5031
尺寸 Size	LxWxT (mm) : 500x310x31
重量 Weight	1900g
颜色 Color	浅灰色 Light Gray
备注 Remark	可支持达至 6W 射频功率； 1.5m同轴线缆，SMA 接口； 典雅造型，ABS 外壳 Input Power up to 6 W; 1.5m RF cable with SMA socket; Classic outline with ABS shell.



高频框架天线 HF Frame Antenna

型号 Model	RR-PF- ANT8361
尺寸 Size	LxWxT (mm) : 832X612X30
重量 Weight	4800g
颜色 Color	香槟金 Champagne Gold
备注 Remark	可支持达至 6W 射频功率； 1.5m同轴线缆，SMA 接口； 典雅造型，ABS 外壳 Input Power up to 6 W; 1.5m RF cable with SMA socket; Classic outline with ABS shell.

荣睿高频天线自动调谐单元

RoyalRay HF Antenna Auto Tuning Unit

产品介绍

RRATU是一款高性能的13.56MHz高频天线自动调谐单元，完全自主知识产权设计，结合专有的高效自动调谐算法，实现了对高频天线尤其是定制异形天线的快速精确调谐，方便高频天线的工程现场制作和实地适应调整，可广泛应用于物流、个人身份识别、门禁系统、防伪系统及生产过程控制等多种无线射频识别（RFID）系统。

特点

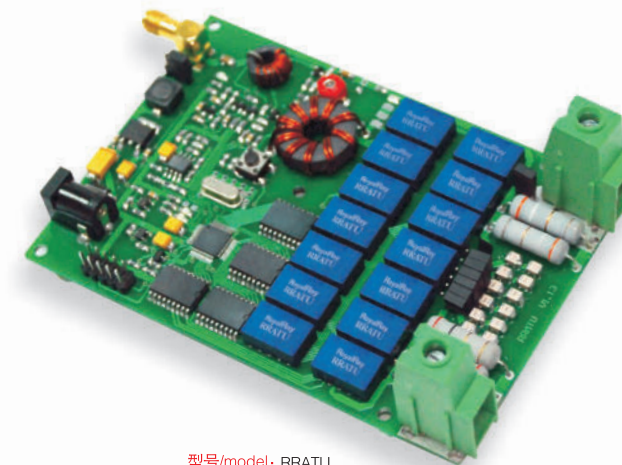
- 完全自主知识产权设计；
- 支持读写器命令控制调谐；
- 实现高频天线快速精确调谐；
- 调谐信息交互直接通过射频电缆线，无需另外接线；
- 调谐完成后天线无需供电。

FEATURES:

- Self-intellectual property;
- Support reader command control tuning operation;
- Quick and accurate HF antenna tuning effect;
- Tuning information exchange through RF cable;
- No power is required after tuning procedure.

GENERAL DESCRIPTION

RRATU is a specially designed high performance HF antenna auto-tuning unit. Based on proprietary tuning algorithm, RRATU can realize fast and accurate 13.56MHz HF antenna tuning which will greatly facilitate on-the-spot HF antenna installation and adjustment. It can be widely applied in Logistics, Personnel Identification, Access Control, Production Line Control and other RFID systems.



型号/model: RRATU

高频手持天线 HF Handheld Antenna

型号 Model	RR-HH- ANT3533
天线尺寸 Antenna Size	LxWxT (mm): 352x332x22
手柄长度 Handle Length	130mm
重量 Weight	1000g
颜色 Color	浅灰色 Light Gray
备注 Remark	可支持达至 6W 射频功率； 1.5m同轴线缆，SMA 接口； 典雅造型，ABS 外壳 Input Power up to 6 W; 1.5m RF cable with SMA socket; Classic outline with ABS shell.



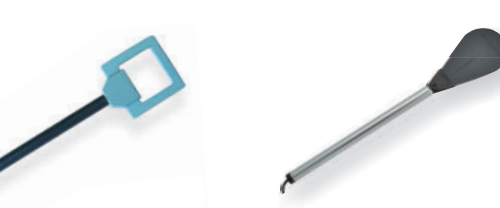
高频手持天线 HF Handheld Antenna

型号 Model	RR-HH- ANT121535
天线尺寸 Antenna Size	LxWxT (mm): 125X130X6
手柄长度 Handle Length	320mm
重量 Weight	340g
颜色 Color	香槟金&蓝色 Champagne Gold & Blue
备注 Remark	可支持达至 5W 射频功率； 1.5m同轴线缆，SMA 接口； 典雅造型，ABS 外壳 Input Power up to 5W; 1.5mRF cable with SMA socket; Classic outline with ABS shell.



高频手持天线 HF Handheld Antenna

型号 Model	RR-HH- ANT1130
天线尺寸 Antenna Size	LxWxT (mm): 106x106x7
手柄长度 Handle Length	300mm
重量 Weight	240g
颜色 Color	灰色&黑色 Gray & Black
备注 Remark	可支持达至 1.5W 射频功率； 1.5m同轴线缆，SMA接口； 超轻造型，ABS 外壳 Input Power up to 1.5W; 1.5m RF cable with SMA socket; Ultra-light outline with ABS shell.



荣睿高频台式读写器

RoyalRay HF Desktop Reader

产品介绍

荣睿高频台式、移动式电子标签读写器基于完全自主知识产权设计，采用先进的信号处理算法，可对高频ISO/IEC 15693、ISO14443TypeA & TypeB等多种协议的电子标签进行快速读写处理。由于其外观小巧、数据传输速度快、性价比高，被大量应用于物流、身份识别、门禁、食品药品防伪、产品质检等多种RFID应用系统。

特点

- 完全自主知识产权设计；
- 支持ISO/IEC15693、ISO18000-3、ISO14443TypeA & TypeB协议电子标签（TI、PHILIPS、ST、INFINEON、FUJITSU、EM...）；
- 先进的标签碰撞处理算法，高识别率；
- 内建收发天线，有效距离达至在3~15cm*；
- 低功耗设计；
- 提供USB / VSP(Virtual Serial Port) / HID模式、RJ45 (TCP/IP)、RS232、WiFi、CFII等多种接口方式；
- 提供动态连接库（DLL）及演示软件源代码，支持二次开发；
- 提供Pocket PC环境PDA演示软件源代码。

*有效距离与协议格式、外接天线、电子标签及工作环境有关。

GENERAL DESCRIPTION

RoyalRay HF Desktop Readers are designed upon fully self-intellectual property. Based on advanced digital single processing algorithm, the series features excellent tag read / write operation on HF (13.56MHz) ISO/IEC15693, ISO14443TypeA & TypeB protocol tags. Due to small appearance, speedy transportation, superior quality and cost-effective, the series is widely been used in many RFID application systems such as Logistics, Personnel Identification, Access Control, Foods and Medicines Anti-counterfeit and Quality Supervision, etc.

FEATURES

- Self-intellectual property;
- Support ISO/IEC15693, ISO18000-3, ISO14443TypeA & TypeB protocol tags (TI, PHILIPS, ST, INFINEON, FUJITSU, EM...);
- Advanced tag processing algorithm, high identification rate;
- Built-in TX/RX antenna with effective distance around 3~15cm*;
- Low power dissipation design;
- Provide USB / VSP(Virtual Serial Port) / HID mode, RJ45(TCP/IP), RS232, WiFi, CFII communication interface for choice;
- Provide DLL and Demonstration Software Source code to facilitate further development;
- Provide Pocket PC/PDA demo source code.

*Effective distance depends on protocol, antenna, tag and working environment.



支持的协议 Support Protocol	ISO14443TypeA & ISO14443TypeB							
支持的卡片 Supported Tag	TI, NXP, ST, INFINEON, FUJITSU, EM... (Mifare1 S50, S70, Ultralight...)							
型号 Model	1036USB	1036USB-L	1036SR	1036SRIP	RTAG1-4522	RTAG1-7522	RTAG1-7822	RTAG1-7415
尺寸 Size	115x82x25 mm	105x70x11 mm	123x94x29 mm	123x94x29 mm	121 x45.5 x22 mm	123.5 x75 x22.5 mm	119 x78 x22 mm	116x74.5 x15 mm
净重 Net Weight	80g	80g	144g	164g	120g	150g	130g	150g
通讯接口 Communication Interface	USB	USB	RS232	RS232 TCP/IP	RS232, RS485, Wiegand 26 / 34			
供电电压 Power supply	5V	5V	12V	12V	12V	12V	12V	12V
典型功耗 Power dissipation	0.4W	0.45 W	1.2 W	1.7 W	0.84W	0.84W	0.84W	0.84W
有效读距 Effective Reading Distance	50 mm	70 mm	70 mm		50 mm			

支持的协议 Support Protocol	ISO/IEC 15693							
支持的卡片 Supported Tag	TI, NXP, ST, INFINEON, FUJITSU, EM... (ICODE ILT, ICODE SLI / -S / -L / -X...)							
型号 Model	9036USB	9036USB-L	9036SR	9036SRIP	RTAG9-4522	RTAG9-7522	RTAG9-7822	RTAG9-7415
尺寸 Size	115x82x25 mm	105x70x11 mm	123x94x29 mm	123x94x29 mm	121 x45.5 x22 mm	123.5 x75 x22.5 mm	119 x78 x22 mm	116x74.5 x15 mm
净重 Net Weight	80g	80g	144g	164g	120g	150g	130g	150g
通讯接口 Communication Interface	USB	USB	RS232	RS232 TCP/IP	RS232, Wiegand 26 / 34			
供电电压 Power supply	5V	5V	12V	12V	12V	12V	12V	12V
典型功耗 Power dissipation	0.4 W	0.45 W	1.2 W	1.7 W	0.84W	0.84W	0.84W	0.84W
有效读距 Effective Reading Distance	120 mm	150 mm	150 mm		100 mm			

支持的协议 Support Protocol	ISO/IEC 15693, ISO14443A & ISO14443B							
支持的卡片 Supported Tag	TI, NXP, ST, INFINEON, FUJITSU, EM... (ICODE ILT, ICODE SLI / -S / -L / -X..., Mifare1 S50, S70, Ultralight, DESFire, CPU, MF1208/1216...)							
型号 Model	7036USB	7036USB-L	7036SR	7036SRIP	RTAG7-4522	RTAG7-7522	RTAG7-7822	RTAG7-7415
尺寸 Size	115x82x25 mm	105x70x11 mm	123x94x29 mm	123x94x29 mm	121 x45.5 x22 mm	123.5 x75 x22.5 mm	119 x78 x22 mm	116x74.5 x15 mm
净重 Net Weight	80g	80g	144g	164g	120g	150g	130g	150g
通讯接口 Communication Interface	USB	USB	RS232	RS232 TCP/IP	RS232, Wiegand 26 / 34			
供电电压 Power supply	5V	5V	12V	12V	12V	12V	12V	12V
典型功耗 Power dissipation	0.4W	0.4W	0.84W	1.2W	0.84W	0.84W	0.84W	0.84W
有效读距 Effective Reading Distance	ISO15693	120 mm		150 mm		100 mm		
	ISO14443A	70 mm		90 mm		50 mm		
	ISO14443B	30 mm		50 mm		20 mm		

荣睿高频模块

RoyalRay HF Module

产品介绍

荣睿高频读写器模块、天线模块等基于完全自主知识产权设计，结合客户不同需求和各RFID项目的硬件基础定制开发，更好地配合了项目要求，取得了理想的使用效果。

荣睿研制出的各类读写器模块、天线模块已被众多手持机、一体机、手持天线、移动终端等设备广泛应用，并成功应用于玩具行业、食品医药供应链管理、零售业、文档追踪、航空行李处理等多个领域。

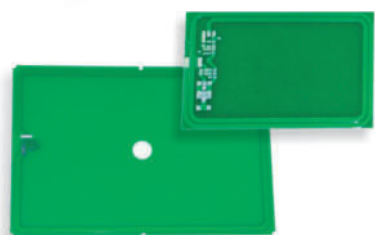
GENERAL DESCRIPTION

RoyalRay HF reader module and antenna module are designed upon fully self-intellectual property and customized according to customers application requirements. All reader modules and antenna modules have been adapted by kinds of handheld readers, integrated readers, handheld antennae, mobile terminals and have been widely applied to Toy Industry, Food and Medicine Supply Chain Management, Retail System, Document Tracking, Airline Baggage Tracking and other fields.

型号/model:
● RRANT2217ZH



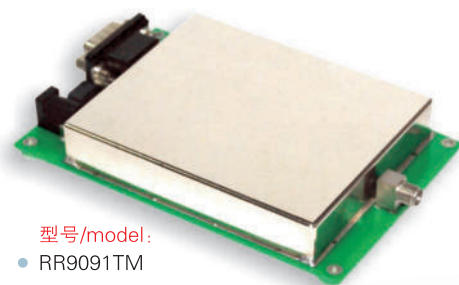
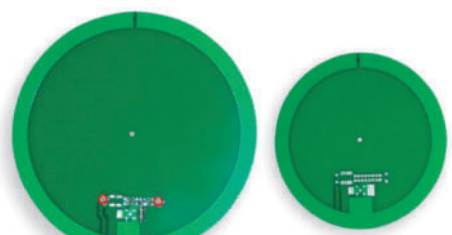
型号/model:
● RRA3222-M
● RRA0906-M



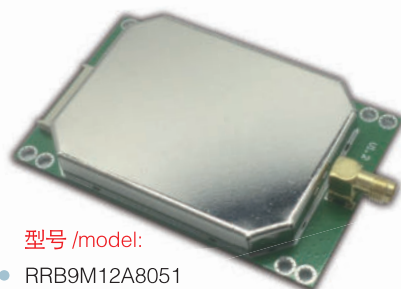
型号/model:
● RRA4608-M
● RRA4207-M
● RRA1802-M



型号/model:
● RRA162-M
● RRA125-M



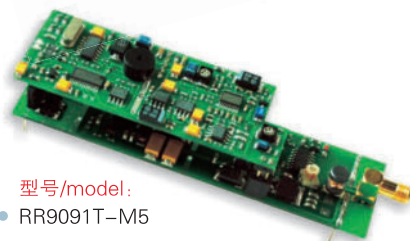
型号/model:
● RR9091TM



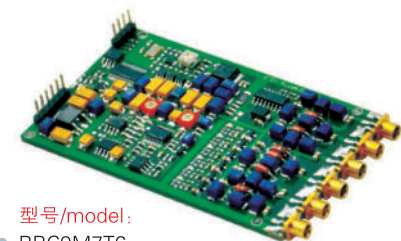
型号/model:
● RRB9M12A8051



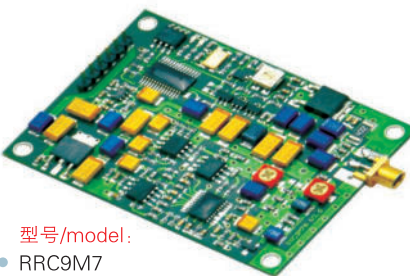
型号/model:
● RRI9M12A5937



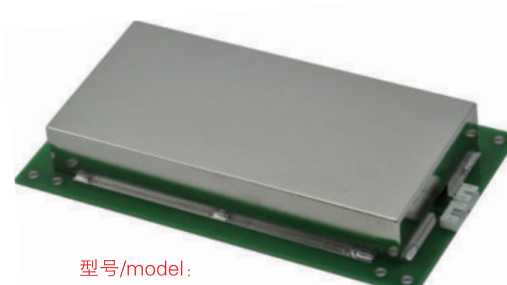
型号/model:
● RR9091T-M5



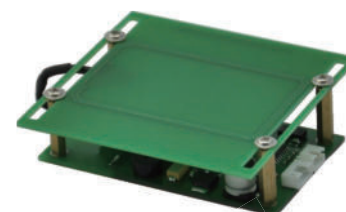
型号/model:
● RRC9M7T6



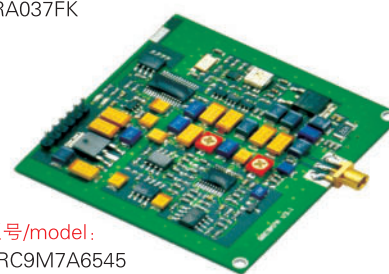
型号/model:
● RRC9M7



型号/model:
● RRA037LIB



型号/model:
● RRA037FK



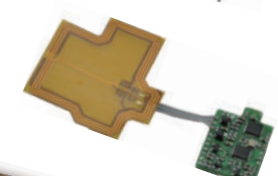
型号/model:
● RRC9M7A6545



型号/model:
● RR9036M



型号/model:
● RR3036M



型号/model:
● RR7036HV5



型号/model:
● RRA036TM5V33



型号/model:
● RR1036A5M33

支持的协议 Support Protocol	ISO/IEC15693, ISO14443A/B			ISO/IEC15693		ISO14443A
支持的卡片 Supported Tag	TI, NXP, ST, INFINEON, FUJITSU, EM... (ICODE ILT, ICODE SLI / -S / -T / -X...Mifare1 S50, S70, Ultralight, DESFire, CPU, MF 1208/1216...)			TI, NXP, ST, INFINEON, FUJITSU, EM... (ICODE ILT, ICODE SLI / -S / -T / -X...)		TI, NXP, ST, INFINEON, FUJITSU, EM... (Mifare1 s50, s70, Ultralight...)
型号 Model	RR7036HM5	RR7036HV5	RR3036M	RR9036M	RRA036TM5V33	RR1036A5M33
尺寸 Size	70x50x8.5 mm	30 x20 x3 mm	48x19x12 mm	48 x 19 x 12 mm	27 x9.3 x4.5 mm	28x9x5 mm
净重 Net Weight	30g	5g	10g	10g	5g	5g
通讯接口 Communication Interface	RS232 (TTL Level)	RS232 (TTL Level). USB	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level). USB	RS232 (TTL Level). USB
天线 Antenna	含天线 Built-in Antenna	含天线 Built-in Antenna	为外接天线提供 SMA 接口 SMA for External Antenna	为外接天线提供 SMA 接口 SMA for External Antenna	含天线 Built-in Antenna	含天线 Built-in Antenna
供电电压 Power supply	+ 4V	+ 5V	+ 5V	+ 5V	+ 5V	+ 5V
典型功耗 Power Dissipation	0.2W	0.17W	0.32W	0.4W	0.17W	0.17W

支持的协议 Support Protocol	ISO/IEC15693, ISO18000-3							
支持的卡片 Supported Tag	TI,NXP,ST,INFINEON,FUJITSU,EM...							
型号 Model	9091TM	RRB9M12A8051	RRI9M12A5937	9091T-M5	RRC9M7T6	RRC9M7	RRC9M712A	RRC9M7A6545
尺寸 Size (mm)	116x76x15	80x51x10	59x37x5	114.5x30x15	97x55x6	80x55x11	80x52x6.6	64x45x11
净重 Weight	100g	13.5 g	41 g	90g	50g	30g	25g	20g
通讯接口 CommunicationInterface	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)
外接天线接口 External Antenna Interface	SMA	SMA	IPX	SMA	MCX	MCX	MCX	MMCX
供电电压 Power supply	+12V	+12V	3.3V~12V	+5V	+7.4V	+7.4V	+12V	+7.4V
典型功耗 Power Dissipation	4.2W	4W	2.5W	2.5W	3.3W	3.3W	6.6W	3.3W

荣睿 高频 / 超高频 一体化台面读写器设备

RoyalRay HF / UHF Integrated Desktop Reader

产品介绍

荣睿高频/超高频RFID一体化台式读写器基于完全自主知识产权设计, 结合专有电子标签解码核心与处理算法, 在保持高识读率的同时, 实现对电子标签的快速读写处理, 不仅被成功应用到物流、个人身份识别、会议签到管理、开放式门禁考勤、防伪及生产过程控制等多种RFID系统应用领域, 还在图书馆的RFID智能化管理、自助借还书机、娱乐业、新零售等方面发挥了积极的作用。

该设备的亮点在于优越的抗干扰能力, 这使得其能够被广泛的使用于有金属干扰的环境中。

GENERAL DESCRIPTION

RoyalRay HF/UHF integrated desktop readers are 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. The highlight of this series is anti-interference performance, it makes readers can be used widely in harsh environment.



型号/model:

- RR9100IE
- RRU2881DK4130IE



项目	符号	数值
频段 Frequency	13.56MHz	860~868MHz / 902~928MHz
支持协议 Support Protocol	ISO/IEC 15693, ICODE UID	EPC Gen2(ISO18000-6C) ISO18000-6B
支持的卡片 Supported Tag	TI, EM, INFINEON, ICODE ILT, ICODE SLI,-S, -L, -X...	NXP ALIEN, IMPINJ...
型号 Model	RR9100IE	RRU2881DK4130IE
尺寸 Size	410x300x30mm	410x300x30mm
净重 Net Weight	2800g	2850g
接口 Interface	RS232, USB...	RS232, RS485, TCP/IP, Wiegand 26/34, USB...
天线 Antenna	内置天线 Built-in Antenna	内置天线 Built-in Antenna
屏蔽功能 Shielding Function	充分支持 Adequate Support	充分支持 Adequate Support
供电电压 Power Supply	12 V	9 V
典型功耗 Typ Power Dissipation	4.2 W	3.15 W

荣睿高频/超高频一体化台面式读写器设备

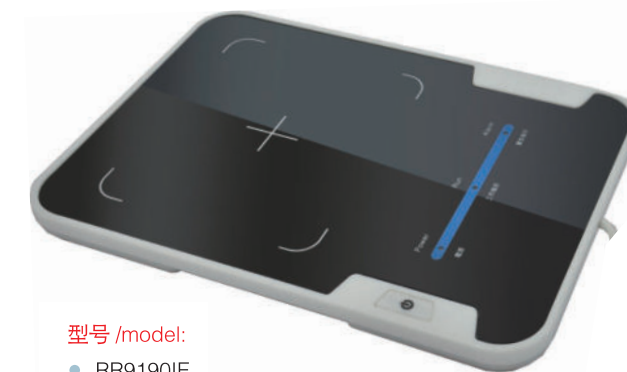
RoyalRay HF / UHF Integrated Desktop Reader

产品介绍

荣睿高频/超高频一体化台式读写器设备基于完全自主知识产权设计, 结合专有电子标签解码核心与处理算法, 在保持高识读率的同时, 实现对电子标签的快速读写处理, 成功应用于物流、个人身份识别、会议签到管理、开放式门禁考勤、防伪及生产过程控制等多种RFID系统应用领域, 还在图书馆的RFID智能化管理、自助借还书机、娱乐业等方面发挥了积极的作用。

GENERAL DESCRIPTION

RoyalRay HF / UHF Integrated Desktop Readers are 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. It has been successfully applied in many RFID application systems such as Logistics, Personnel Identification, Conference Attendance, Access Control, Anti-counterfeit and some other RFID applications. At the same time this series readers are also popular in RFID Intelligent Management, Library Self-help book borrow & return machine, Casino Management, etc.



型号 /model:

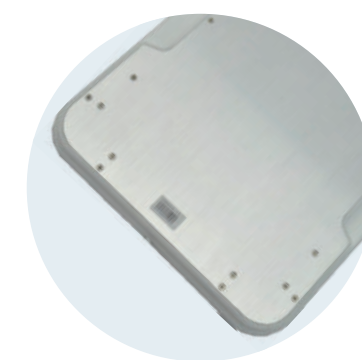
- RR9190IE
- RRU2881DK4230IE

频段 Frequency	13.56MHz	13.56MHz	860~868MHz / 902~928MHz	
支持协议 Supported Protocol	ISO/IEC 15693, ICODE UID	ISO/IEC 15693, ICODE UID, ISO14443A & ISO14443B	EPC Gen2 (ISO18000-6C) ISO18000-6B	
支持的卡片 Supported Tag	ICODE ILT, ICODE SLI, -S, -L, -X...	ICODE ILT, ICODE SLI, -S, -L, -X...MIFARE Ultralight, MF1 IC S50, -S70, -D41...	NXP, ALIEN, IMPINJ	
型号 Model	RR9190IE	RR7036USB-IE	RRU1861DK1812IE	RRU2881DK4230IE
尺寸 Size	420x300x24 mm	180x120x24 mm	180x120x24 mm	420x300x24 mm
净重 Net Weight	2850 g	550 g	550 g	2850 g
接口 Interface	RS232	USB	USB	RS232, RS485, Wiegand 26/34
天线 Antenna	内置天线 Built-in Antenna	内置天线 Built-in Antenna	内置天线 Built-in Antenna	内置天线 Built-in Antenna
屏蔽功能 Shielding Function	充分支持 Adequate Support	充分支持 Adequate Support	充分支持 Adequate Support	充分支持 Adequate Support
供电电压 Power Supply	12 V	5 V	5 V	9 V
典型功耗 Typ Power Dissipation	4.2 W	0.45 W	1.4 W	3.15 W



型号/model:

- RR7036USB-IE
- RRU1861DK1812IE



荣睿超高频高性能级联通道设备

RoyalRay UHF High Performance Cascaded Access Gate

产品介绍

荣睿RRU-CH-A15045/9系列高性能UHF级联型通道设备,支持UHF EPC Gen2(ISO18000-6C)格式电子标签的快速处理,内置2路红外运动传感器支持人员进出方向检测和人数统计,支持EAS和AFI(EPC仿真)两种安全检测功能,支持RS232/RS485串行通讯接口以及TCP/IP网络接口,可实现通道设备远程集中配置和管理,是开放式、大流量、通道式门禁、考勤、会议签到及数字化景区管理的理想化选择。

特点

- 完全自主知识产权设计;
- 工作频率840-960MHz (可按不同国家或地区要求调整);
- 支持ISO18000-6C (EPC C1G2), ISO18000-6B协议电子标签;
- 以扩频跳频(FHSS)或定频发射方式工作,支持RSSI (选配);
- 输出功率高达30dBm (可调);
- 支持2路红外运动传感器支持判断运动方向和人数统计;
- 支持EAS和AFI (EPC仿真)两种安全检测模式;
- 支持单通道独立工作和多通道并列工作;
- 先进的标签处理算法,高识读率;
- 低功耗设计,安全可靠;
- 支持声光报警;
- 支持RS232/RS485、TCP/IP接口;
- 支持二次开发和客户定制。
*通道宽度与协议格式,标签及使用环境相关。

组件

RRU-CH-A15045/9系列通道采用先进的单扇门独立设计,每扇门包括天线阵、UHF四口读写器、控制器、红外接收及发射组件和运动检测单元、数码显示、电源及通讯接口等。

单扇门可独立工作,双扇门可实现单通道运作,多扇门并列可实现多通道协同运作。

RRU-CH-C16058系列通道的附件包括交流电源线、同步数据线、同步射频线以及串口通讯电缆线等。

GENERAL DESCRIPTION

RoyalRay "RRU-CH-A15045/9" is a high performance new design UHF Gate Device. The series support fast tag anti-collision process of UHF EPC Gen2 (ISO18000-6C) protocol tag, 2 line infrared motion detection, EAS & AFI (EPC emulated) security surveillance mode. It equipped with RS232/RS485 and RJ45 (TCP/IP) interface to connect with the host, controller and other associated equipments directly. The series are top choice for open mass flow RFID applications, such as: Access Control, Conference Attendance, Digital Scenic Spots Network Management, etc.

FEATURES

- Self-intellectual property;
- 840-960MHz frequency band (frequency customization optional)
- Support ISO18000-6C (EPC C1G2), ISO18000-6B protocol tag;
- FHSS or Fix Frequency transmission, support RSSI (optional);
- RF output power up to 30dbm(adjustable);
- Built-in 2 line infrared motion detection sensor with intelligent movement direction determination and personal counting;
- Support EAS and AFI (EPC simulation) security mode;
- Support single gate standalone or multiple gate synchronized work mode;
- Advanced anti-collision algorithm, high identification rate;
- Low power dissipation design with excellent safety and reliability;
- Support buzzer and alarm;
- Support RS232 / RS485 and RJ45 (TCP/IP) network interface;
- Provide DLL and Demonstration Software Source code to facilitate further development.
* Effective distance depends on protocol, tag and working environment.

COMPONENTS

RRU-CH-A15045/9 series is designed upon advanced panel-based concept. Each gate panel includes Antenna Array, UHF Fixed 4 channel Reader, Controller, Infrared Receiver & Motion Detection Unit, Display, Power Source and Communication Port.

Each single gate panel can operate in Standalone Mode. Two gate panels can construct one gate aisle. Multi-gate panels realize multiple gate aisles. RRU-CH-C16058 series gate accessories include AC power cord, data synchronization cable, RF synchronization cable and RS232 serial communication cable, etc.



型号/model:
• RRU-CH-A15045
• RRU-CH-A15049

ITEM	TYP
尺寸 (高 x 宽 x 厚) Dimension (HxWxT)	1500x440x90 (mm)
重量 (单只天线) Weight (1 panel)	18 (kg)
外壳 Housing	ABS
颜色 Color	白色、浅灰色 White, Light Gray
多扇门级联数量 NO. of Cascaded Panels of Gate	无上限 No Maximum
方向判定 Motional orientation judgment	可精确实现 Accurate
数据统计 Data Storage	充分支持 Adequate Support
警示 Alarm	声光报警 Light & Buzzer
通讯接口 Communication Interface	RS232, RS485, TCP/IP
电源 Power Supply	50 / 60 (V/Hz)
电流 Current	160 (mA)
工作温度 Operating Temp.	-10 ~ +60 (°C)
储藏温度 Storage Temp.	-25 ~ +70 (°C)

ITEM	TYP
尺寸 (高 x 宽 x 厚) Dimension (HxWxT)	1500x480x70(mm)
重量 (单只天线) Weight (1 panel)	25kg
外壳 Housing	ABS、金属底座 ABS, Metallic Pedestal
颜色 Color	白色、浅灰色 White, Light Gray
多扇门级联数量 NO. of Cascaded Panels of Gate	无上限 No Maximum
方向判定 Motional orientation judgment	可精确实现 Accurate
数据统计 Data Storage	充分支持 Adequate Support
警示 Alarm	声光报警 Light & Buzzer
通讯接口 Communication Interface	RS232, RS485, TCP/IP
电源 Power Supply	50 / 60 (V/Hz)
电流 Current	160 (mA)
工作温度 Operating Temp.	-10 ~ +60 (°C)
储藏温度 Storage Temp.	-25 ~ +70 (°C)

荣睿超高频通道系统设备

RoyalRay UHF Gate Device

特点

- 完全自主知识产权设计;
- 支持UHF EPC G2 (ISO18000-6C)、ISO18000-6B协议电子标签;
- 工作频率860~868MHz/902~928MHz(可以按不同国家或地区要求调整);
- 以扩频跳频(FHSS)或定频发射方式工作, 支持RSSI (选配);
- 输出功率达至30dBm (可调);
- 可选红外, 内置3路红外检测, 可进行运动方向判断;
- 先进的标签碰撞处理算法, 高识读率;
- 低功耗设计;
- 支持标签EAS功能和AFI功能;
- 提供标准RS232、RS485串行通讯接口以及RJ45(TCP/IP)网络接口;
- 内置蜂鸣器和指示灯;
- 可接驳摄像头、大屏幕显示器/电视等输出端, 实现更为直观的监控和管理。

*通道宽度与协议格式, 标签及使用环境相关。



规格
除特别说明, 所示规格取自Ta = 25°C及VCC = +9V工作条件下

项目	典型值
尺寸 (高 x 宽 x 厚)	1530 x 640/580 x 48/20 (mm)
重量 (单扇门)	28 (kg)
外壳	亚克力 & 金属底座箱
颜色	透明、白、浅灰
多扇门级联数量	无上限
方向判断	可精确实现
数据统计	充分支持
警示	声光报警
通讯接口	RS232, RS485, TCP/IP
电源	50/60 (V/Hz)
电流	160 (mA)
工作温度	-10 ~ +60 (°C)
贮藏温度	-25 ~ +70 (°C)

FEATURES

- Self-intellectual property;
- Support UHF EPC G2 (ISO18000-6C), ISO18000-6B protocol tags;
- 860~868MHz/902~928MHz frequency band(frequency customization optional);
- FHSS or Fix Frequency transmission, support RSSI(optional);
- RF output power up to 30dbm(adjustable);
- Built-in 3 line infrared motion detection sensor;
- Advanced anti-collision algorithm, high identification rate;
- Low power dissipation design;
- Support NXP tag/label EAS function and AFI function;
- Support RS232, RS485 and RJ45 (TCP/IP) network interface;
- Configuration various alarm modes;
- Support plug-in camera, large screen display/ television to realize control and management in a more intuitive way.

* Effective distance depends on protocol, antenna, tag and working environment.



型号/model:

- RRU-CH-C16058
- RRU-CH-C16058AS

Electrical and Mechanical Specification
Under Ta = 25°C, VCC = +9V unless specified

ITEM	VALUE
Dimension (HxWxT)	1530 x 640/580 x 48/20 (mm)
Weight (1 panel)	28 (kg)
Housing	Acrylic & Metallic Base Box
Color	Transparent, White, Light Gray
NO. of Cascaded Panels of Gate	No Maximum
Motional orientation judgment	Accurate
Data Storage	Adequate Support
Alarm	Light & Buzzer
Communication Interface	RS232, RS485, TCP/IP
Power Supply	50/60 (V/Hz)
Current	160 (mA)
Operating Temp.	-10 ~ +60 (°C)
Storage Temp.	-25 ~ +70 (°C)

荣睿高频 / 超高频便携式 RFID 蓝牙读写器

RoyalRay HF / UHF Portable RFID Bluetooth Reader

产品介绍

荣睿高频 / 超高频便携式 RFID 蓝牙读写器, 结合专有的高效处理算法, 实现对电子标签的快速读写处理, 成功应用于资产管理、库存管理、产品追溯、个人身份识别及防伪系统等多种无线射频识别 (RFID) 系统。

GENERAL DESCRIPTION

RoyalRay HF / UHF Portable RFID Bluetooth Readers are based on proprietary efficient anti-collision algorithm, the series features excellent tag read/write operation performance with high identification rate. It has been successfully applied in many RFID application systems such as Stock Management, Traceability System, Personnel Identification, Access Control and Anti-counterfeit System, etc.

特点

- 蓝牙 4.0 无线通讯; 时尚、纤薄设计, 满足移动应用和便携需求;
- 充分支持 HF 高频 / UHF 超高频各个频段主流电子标签;
- 内置收发天线, 有效距离达至 10cm* / 50cm*;
- 支持按键触发和交互应答等工作模式;
- 内置锂电池供电, 无需外接电源; USB 充电, 提供电池充电指示和低电量指示;
- 超低功耗设计, 连续读标签时间超过 4 小时, 待机时间长达 6 天;
- 3 组 LED 指示工作状态;
- USB1.1 接口规范, 虚拟串口方式通讯, 提供动态连接库 (DLL), 支持二次开发。

*有效距离与协议格式、电子标签及工作环境有关。

FEATURES

- Bluetooth 4.0 wireless communication; Fashion, thin and well portable design;
- Support HF / UHF mainstream RFID tags;
- Built-in antenna with up to 10cm* / 50cm* effective reading distance;
- Support interactive and trigger-activating work mode;
- Built-in lithium battery, without external power supply; USB charging and also the charging indicator, the low battery indicator;
- Ultra low power design, over 4 hours continuous reading tag and up to 6 days in standby;
- 3 groups LED as working indicator;
- USB1.1 interface. Provide DLL and demonstration software to facilitate development.

*Effective distance depends on protocol, tag and working environment.



型号/model:

- RR7036UBT
- RRU9816UBT

频段 Frequency	13.56MHz	860~868MHz / 902~928MHz
支持协议 Supported Protocol	ISO/IEC 15693, ISO14443A & ISO14443B, ICODE UID, NFC	EPC Gen2 (ISO18000-6C)ISO18000-6B
支持的卡片 Supported Tag	ICODE ILT, ICODE SLI, -S, -L, -X..., MIFARE Ultralight, MF1 IC S50, -S70, -D41...	NXP, ALIEN, IMPINJ...
型号 Model	RR7036UBT	RRU9816UBT
尺寸 Size	110 x 50 x 5 mm	110 x 50 x 5 mm
净重 Net Weight	50 g	50 g
通讯 Communication	蓝牙 4.0 无线通讯 USB1.1 接口, 虚拟串口方式通讯 Bluetooth 4.0 wireless communication USB1.1 interface.	蓝牙 4.0 无线通讯 USB1.1 接口, 虚拟串口方式通讯 Bluetooth 4.0 wireless communication USB1.1 interface.
天线 Antenna	内置天线 Built-in Antenna	内置天线 Built-in Antenna
读距 Effective Reading Distance	10 cm*	50 cm*
供电方式 Power Supply	内置电池, USB 充电 Li-ion battery, USB charging	内置电池, USB 充电 Li-ion battery, USB charging

*有效距离与协议格式、电子标签及工作环境有关。
*Effective distance depends on protocol, tag and working environment.

睿睿超高频高性能一体式读写器

RoyalRay UHF High Performance Integrated Reader

产品介绍

睿睿超高频高性能一体式读写器完全自主知识产权设计，结合专有的高效信号处理算法，在保持高识读率的同时，实现对电子标签的快速读写处理，可广泛应用于物流、门禁系统、防伪系统及生产过程控制等多种无线射频识别（RFID）系统。

特点

- 完全自主知识产权设计；
- 工作频率 840 ~ 960MHz (可以按不同国家或地区要求调整)
- 基于 Impinj R2000 设计，充分支持符合 EPC CLASS1 G2、ISO18000-6B 标准的电子标签；
- 以广谱跳频 (FHSS) 或定频发射方式工作，支持 RSSI 功能 (选配)；
- 输出功率达至 30dBm (可调)；
- 支持外接 1 个天线，实现一体式双天线读写 (选配)；
- 支持主动、交互应答、触发等多种工作模式；
- 支持 EPC 和 TID 两种防冲突模式；
- +9V ~ +24V 电源供电，可选配 POE 供电方式；
- 支持 RS232、RS485、韦根等多种用户接口；可选配 WiFi、TCP/IP 网络接口等；
- 支持 1 路外接灯或蜂鸣器控制，2 路继电器控制 (选配)；
- 提供动态连接库 (DLL) 及演示软件源代码，支持二次开发；
- 高可靠设计，满足严苛工作环境要求。






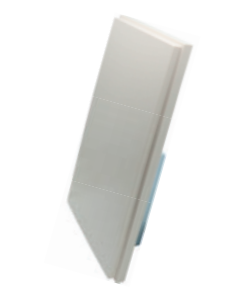


GENERAL DESCRIPTION

RoyalRay UHF High Performance Integrated Readers are 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, anti-counterfeit and industrial production process control system.

FEATURES

- Self-intellectual property;
- 840~960MHz frequency band (frequency customization optional);
- Based on R2000 design, excellent multi-tag anti-collision performance, fully support EPC CLASS1 G2, ISO18000-6B protocol tag;
- FHSS or Fix Frequency transmission, support RSSI (optional);
- RF output power up to 30dbm (adjustable);
- One more extendable external antenna port (optional);
- Support auto-running, interactive and trigger-activating work mode;
- Support EPC and TID anti-collision operation;
- Wide power supply voltage input (+9V~+24V) power supply, POE (Power over Ethernet) is optional;
- Support RS232, RS485, Wiegand with optional WiFi, TCP/IP interface;
- Support 1 external indicator control port and 2 built-in relays (optional);
- Provide DLL and Demonstration Software Source code to facilitate further development;
- IP67 seal grade housing, ideal for applications in harsh outdoor environment.

规格 Electrical and Mechanical Specification

工作频率 Frequency Band	860 ~ 868 MHz / 902 ~ 928 MHz							
支持的协议 Support Protocol	EPC Gen2 (ISO18000-6C) , ISO18000-6B							
支持的卡片 Support Tag	NXP, ALIEN, IMPINJ...							
图片 Picture								
天线增益 Antenna gain	4 dBi	5 dBi	8 dBi	8 dBi	9 dBi	10 dBi	12 dBi	9 dBi
型号 Model	RRU1861-4dbi RRU1881-4dbi	RRU1801-5dbi	RRU1861-8dbi	RRU1861-8dbi/EU RRU1881-8dbi	RRU1881-9dbi	RRU1861-10dbi RRU1881-10dbi	RRU1861-12dbi RRU1881-12dbi	RRU6881
有效读距 Effective Reading Distance	> 3 m > 6 m	> 6 m	> 6 m	> 6 m > 9 m	> 12 m	> 10 m > 18 m	> 12 m > 24 m	> 18m
尺寸 Size	160x160x45mm	130x130x45mm	235x235x57mm	255x255x45mm	260x260x45mm	420x240x58mm	445x445x55mm	298x298x105mm
净重 Net Weight	450 g 550 g	400 g	900 g	900 g 1550 g	1800 g	1200 g 1600 g	2600 g 3600 g	2800 g
支持R2000 Support R2000	√			√	√	√	√	√
RSSI	√	√		√	√	√	√	√
功耗 Power Dissipation	3.15 W 4.5 W	3.15 W	3.15 W	3.15 W 4.5 W	3.15 W 4.5 W	3.15 W 4.5 W	3.15 W 4.5 W	4.5 W
供电电压 Power Supply	9 V (提供POE供选择, 支持PLC供电)							
工作模式 Working Mode	应答模式、主动模式、触发模式							
通讯接口 Communication Interface	(通讯接口视具体机型或客户选配而定)							
输出功率 RF Output Power	0 ~ 30 dbm (可调 adjustable)							

除特别说明，所示规格取自 TA = 25°C及 VCC = +9V 工作条件下 Under TA = 25°C, VCC = +9V unless specified

荣睿超高频分体式/固定式读写器(内置操作系统)

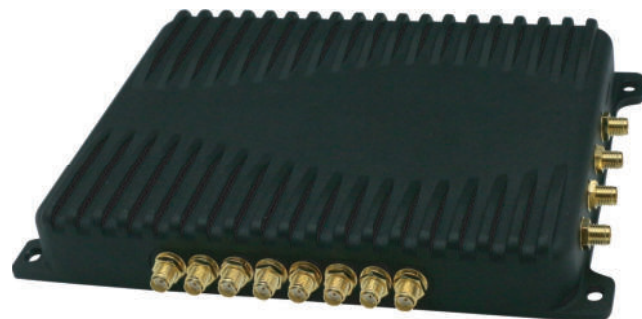
RoyalRay UHF Fixed Reader(Built-in OS)

产品介绍

荣睿高性能的UHF超高频电子标签读写器RRU2889AOS-SC系列，自主知识产权设计，结合专有的高效信号处理算法，在保持高识读率的同时，实现对电子标签的快速读写处理。内嵌Android操作系统，支持4G广域网通讯，可广泛应用于物流、门禁系统、防伪系统及生产过程控制等多种无线射频识别(RFID)系统。

特点

- 完全自主知识产权设计；
- 工作频率840~960MHz（可以按不同国家或地区要求调整）；
- 基于Impinj E710/R2000读写引擎设计，充分支持符合EPC CLASS1 G2、ISO18000-6B标准的电子标签；
- 以广谱跳频（FHSS）或定频发射方式工作，支持RSSI功能，峰值标签巡查速度大于1000/700张/秒；
- 输出功率达至33dBm（可调）；
- 支持8个外接SMA天线接口，支持天线检测；
- Android 10.0/5.1操作系统；
- RAM+ROM存储配置：1GB LPDDR3 + 8GB EMMC + 16GB EMMC（选配）；
- 支持4G全网通，有主、副4G天线接口；
- 支持2.4G/5G双频WIFI；
- 支持蓝牙1.2/2.1+EDR/4.2/5.0；
- 支持GPS定位；
- HDMI D Type 接口，最快支持高达5GB/s的传输速度和1920x1080P高清格式视频输出；
- 支持USB 2.0 OTG；
- 支持100M/10M自适应网络接口，支持IPV6；
- 支持RS232接口；
- 低功耗设计，单+9V~24V电源供电；
- 支持多路光耦隔离GPIO，4路输入，4路输出，隔离电压VRMS>3kV；
- 支持二次开发和远程在线升级；
- 精致小巧设计，IP43防护，满足多种应用场合需求。



GENERAL DESCRIPTION

RoyalRay high performance UHF RFID reader RRU2889AOS-SC which is designed upon fully self-intellectual property. Base on the proprietary decoding and signal processing algorithm, RRU2889AOS-SC is able to perform high-speed tag read/write operations with an outstanding identification rate. RRU2889AOS is embedded with Android OS, and supports 4G Wide Area Network (WAN). RRU2889AOS forms an ideal choice for RFID applications, such as logistics, access control, anti-counterfeit and industrial production process control system.

FEATURES

- Independent intellectual property rights (IPR) protected design;
- Working frequency: 840 ~ 960MHz (adjustable according to various frequency requirements in different countries and regions);
- Impinj E710/R2000 based design, fully supports EPC CLASS1 G2、ISO18000-6B defined tag;
- Capable for both Frequency Hopping Spread Spectrum (FHSS) transmission and fixed-frequency transmission.
- Supports Received Signal Strength Indication (RSSI).
- Inventory speed > 1000/700 tags/s at peak;
- Carries 8 external antenna ports and supports antenna check;
- Android 10.0/5.1/6.0 OS;
- Memories: 1GB LPDDR3+8GB EMMC/2GB LPDDR3+16GB EMMC (optional);
- Supports 4G networks (capable with all network modes) with main and secondary 4G antenna ports;
- Supports Bluetooth 1.2/2.1+EDR/4.2/5.0;
- Supports GPS positioning;
- HDMI D Type port, supports up to 5GB/s transmission speed and 1920x1080P HD video signal output;
- Supports USB 2.0 OTG;
- Supports 100M / 10M auto-negotiation network ports,Support IPV6;
- Supports RS-232 interface;
- Low power consumption design, single +9V ~ 24V power supply;
- Supports multi-channel isolated GPIO ports (4 inputs and 4 outputs), isolated voltage VRMS>3kV;
- Supports firmware online update, and SDK is provided for secondary development.on-the-site firmware upgrading;
- Compact design with IP43 standards, capable for various applications.

型号/model:

- RRU2889AOS
- RRU2889AOS-SC



电气特性 CHARACTERISTICS

● 极限参数 Absolute Maximum Rating

参数 ITEM	符号 SYMBOL	数值 VALUE	单位 UNIT
电源电压 Power Supply	VCC	30	V
工作温度 Operating Temp.	T _{OPR}	-30~+70	°C
贮藏温度 Storage Temp.	T _{STR}	-40~+85	°C

荣睿超高频高性能分体式/固定式读写器

RoyalRay UHF High Performance Fixed Reader

产品介绍

荣睿RRU2881是一款高性能的UHF超高频电子标签读写器，完全自主知识产权设计，结合专有的高效信号处理算法，在保持高识读率的同时，实现对电子标签的快速读写处理，可广泛应用于物流、门禁系统、防伪系统及生产过程控制等多种无线射频识别（RFID）系统。

特点

- 完全自主知识产权设计；
- 工作频率840~960MHz（可按不同国家或地区要求调整）；
- 基于R2000设计，充分支持符合EPC CLASS1 G2\ISO18000-6B标准的电子标签；
- 以扩频跳频（FHSS）或定频发射方式工作，支持RSSI（选配）；
- 输出功率率达至30dBm（可调）；
- 支持4个外接天线接口，支持天线自动微调谐和天线检测；
- 支持主动、应答、触发方式等多种工作模式；
- 低功耗设计，单+9V电源供电，可选配POE供电方式；
- 支持RS232、RS485、USB（Host/Slave）、RJ45（TCP/IP）、WiFi等多种通讯接口；
- 内置WinCE或Linux操作系统（选配）；
- 提供动态连接库（DLL）及演示软件源代码，支持二次开发；
- 高可靠设计，满足严苛工作环境要求。

GENERAL DESCRIPTION

RoyalRay UHF High Performance Fixed Reader 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, and anti-counterfeit and industrial production process control system.

FEATURES

- Self-intellectual property;
- 840~960MHz frequency band (frequency customization optional) ;
- Based on R2000 design, excellent multi-tag anti-collision operation, fully support EPC CLASS1 G2 \ ISO18000-6B protocol tags;
- FHSS or Fix Frequency transmission, support RSSI (optional);
- RF output power up to 30dbm(adjustable);
- 4 TNC antenna ports support antenna auto-tuning and antenna testing;
- Support auto-running, interactive and trigger-activating work mode;
- Low power dissipation with single +9 DC power supply, POE is optional;
- Support RS232, RS485, USB(Host / Slave), TCP/IP interface, WiFi and some other communication port for choice;
- Provide WinCE / Linux operation system for choice;
- Provide DLL and Demonstration Software Source code to facilitate further development;
- High reliability design, meet the requirements of harsh working environment.



型号/ model:
• RRU2881Lite



型号/ model:
• RRU9883Lite



型号/ model:
• RRU2881ADV
• RRU2881WOS
• RRU2881LOS
...

电特性 CHARACTERISTICS
极限参数 Absolute Maximum Rating :

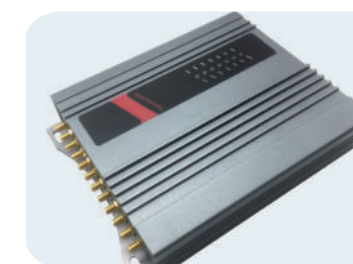
参数 ITEM	符号 SYMBOL	数值 VALUE	单位 UNIT
电源电压 Power Supply	VCC	16	V
工作温度 Operating Temp.	T _{OPR}	-10~+55	°C
贮藏温度 Storage Temp.	T _{STR}	-20~+75	°C

规格
除特别说明外，所示规格取自T_A=25°C及VCC=+9V工作条件下
Electrical and Mechanical Specification
Under T_A=25°C, VCC=+9V unless specified

参数 ITEM	符号 SYMBOL	最小 MIN	典型 TYP	最大 MAX	单位 UNIT
电源电压 Power Supply	VCC	8	9	12	V
工作电流 Current Dissipation	I _c		0.5	1.2	A
工作频率 Frequency	F _{REQ}	840	860-868 902-928	960	MHz
尺寸 Size	Size		RRU2881ADV	310 × 210 × 41	mm
			RRU2881	230 × 170 × 40	
			RRU2881Lite RRU9883Lite	189/158 × 92 × 25	
			RRU1881-EA	190 × 122 × 45	
净重 Net Weight	Net Weight		RRU2881ADV	1880	g
			RRU2881	1380	
			RRU2881Lite RRU9883Lite	360	
			RRU1881-EA	650	



型号/ model:
• RRU2881



睿睿超高频高性能分体式 / 固定式读写器

RoyalRay UHF High Performance Fixed Reader

特点

卓越的射频引擎:

基于 R2000 的创新射频引擎设计, 极致发挥其全部潜能; 独有的 I-Activate “智激活” 技术, 主动唤醒能量不足的弱标签, 极大强化多标签防冲突处理能力; 创新的多标签识别算法和量子遗传算法参数优化, 提供了最高的多标签识别效率和最快的标签反应速度;

优秀的系统支撑:

双核协同处理, 主核驱动 RFID 读写引擎, 副核驱动标签数据管理及通讯协议解析; 两种标签盘存模式, “实时模式” 即时上传标签, 数据获取快速直观, “缓存模式” 在提供重复标签数据过滤的同时, 实现最大的标签数据吞吐且可在双标准无缝快速切换; 射频输出功率经由电脑控制, 在生产过程自动标定, 确保输出功率精确一致, 配合热备份双功率检测模块, 满足 7/24 系统不间断正常运行要求;

可靠的安全防护:

精密板载温度传感器实时检测模块运行状况; 多达 8 颗高品质低噪音板载电源, 模块电源系统精益求精; 看门狗、防失控固件代码、软硬件实时监控等多技术手段确保常年运行不死机; 热平衡布局, 结合大面积的散热片以及辅助固体散热材料, 确保系统极佳的热稳定性;

丰富的功能扩展:

固件工能可现场升级, 可支持测温、测压、国密 SM7 等多类特殊标签功能; 支持客户定制功能;

稳定的接口驱动:

采用精选连接器, 确保稳定可靠; 接口过压过流保护, 精细化布局, 提供最佳 EMC 性能, 支持 3C、CE、FCC、TELEC 等认证需求。

FEATURES

Excellent RFID Engine:

Creative IMPINJ R2000 based design releasing its extreme performance;
Proprietary I-Activate technology proactivating weak tags;
Innovative anti-collision algorithm with parameters optimized by quantum genetic algorithm showing best efficiency and speed;

Superior System Scenario:

Dual core coordinated design ensuring best tag process and external interaction management simultaneously;
Two tag inventory modes with real-time mode presenting fastest response and buffered mode providing tag filtering and other advanced functions;
RF output power automatically calibrated with best conformity and real time monitoring to support perfect 7/24 non-stop application;

Reliable Safety Proof:

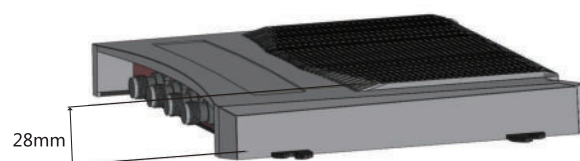
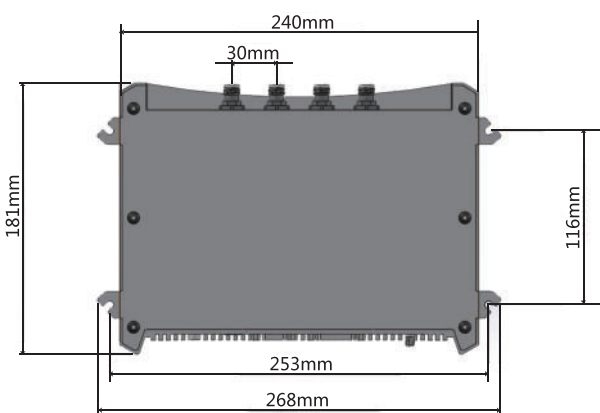
on-board precise temperature sensor; up to 8 LDO regulators with ultralow noise figure;
fault-tolerant hardware/software design; system level heat balance layout showing great heat stability;

Abundant Function Extension:

firmware on-the-site upgrading; sensor tag with temperature, pressure and other analog measurements; tag data encryption;

Stable Interface Design:

selected connector; surge and over voltage/current protection;
considerate floor planning and layout presenting best EMC characteristics;
support CCC, CE, FCC, TELEC and other standards;



型号 /model:
● RRU2889Lite



型号 /model:
● RRU2882Lite



● 接口图

电特性 CHARACTERISTICS

极限参数 Absolute Maximum Rating:

参数 ITEM	符号 SYMBOL	数值 VALUE	单位 UNIT
电源电压 Power Supply	VCC	16	V
工作温度 Operating Temp.	T _{OPR}	-10~+55	°C
贮藏温度 Storage Temp.	T _{STR}	-20~+75	°C

规格

除特别说明外, 所示规格取自 T_A = 25°C 及 VCC = +9V 工作条件下

Electrical and Mechanical Specification

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

参数 ITEM	符号 SYMBOL	最小 MIN	典型 TYP	最大 MAX	单位 UNIT
电源电压 Power Supply	VCC	8	9	16	V
工作电流 Current Dissipation	I _c		0.5	1.2	A
工作频率 Frequency	FREQ	840	860~868 902~928	960	MHz
尺寸 Size	Size		RRU2882Lite RRU2889Lite	240 × 181 × 28	mm
净重 Net Weight	Net Weight		RRU2882Lite RRU2889Lite	1180 1500	g

荣睿超高频 RFID 天线

RoyalRay UHF RFID Antenna

产品介绍







荣睿 50 Ω 标准阻抗的 840~960MHz 超高频天线，专门针对高性能射频识别系统应用设计，具有完全自主知识产权。结合高质量的天线设计理念，采用独特的辐射模式，加之各类天线材质进行组合，实现对电子标签的稳定感应效果。








荣睿 RFID 天线造型典雅、坚固耐用，可广泛应用于银行和金融机构、服装和纺织业、图书馆等场馆、制造业和产线管理、运动计时系统、仓储与物流管理及电信及其数据采集设备管理等多种无线射频识别 (RFID) 系统。







GENERAL DESCRIPTION








RoyalRay 840~960MHz UHF antenna is standard 50 Ω impedance. It based on fully self-intellectual property and specifically aimed at RFID application. Combining with high quality antenna design concept, adopting unique radiation pattern, RoyalRay UHF antenna realize stable performance by various kinds of antenna materials.








Durable, esthetic and pleasing design, RoyalRay UHF antenna can be widely used in many RFID applications, such as Banks & Financial Institutions, Fashion, Apparel & Textile Outlets, Libraries, Galleries & Museums, Manufacturing & Belt Conveyors, Sport Timing Systems, Warehouse & Logistics, and Telecommunications, IT & Data Centers, etc.

图片 Photo						
品名 Name	近场天线 Near-Field Antenna	近场天线 Near-Field Antenna	近场天线 Near-Field Antenna	近场天线 Near-Field Antenna	近场天线 Near-Field Antenna	近场天线 Near-Field Antenna
型号 Model	RR-UANT0606NF	RR-UANT1510NF	RR-UANT2323NF	RR-UANT3030NF	RR-UANT3232NF	RR-UANT4020NF
频率 Frequency	860-960MHz	860-960MHz	860-960MHz	860-960MHz	860-960MHz	860-960MHz
尺寸 Dimension	62x62x5mm	150x100x6mm	230 x 230x 6mm	300x300x 6mm	320 x 320 x 6mm	400 x 200 x 6mm
净重 Net weight	0.1kg	0.12kg	0.3kg	0.4kg	0.6kg	0.8kg
增益 Gain	0dBi	-15dBi	-15dBi	-10dBi	-10dBi	-10dBi
极化方式 Polarization	圆极化 Circular	圆极化 Circular	圆极化 Circular	圆极化 Circular	圆极化 Circular	圆极化 Circular
接头类型 Connector	SMA座 SMA-Female	SMA座 SMA-Female	SMA座 SMA-Female	SMA座 SMA-Female	SMA座 SMA-Female	SMA座 SMA-Female
天线罩材料 Radome material	PVC	PVC	PVC	PVC	PVC	PVC
波瓣宽度 Beam, Width	-	-	-	-	-	-
电压驻波比 VSWR	≤1.8	≤1.8	≤1.8	≤1.8	≤1.8	≤1.8

图片 Photo							
品名 Name	书立天线 Bookends Antenna	3dB 超薄天线 Ultra-thin Antenna	5dB 线路板天线 PCB Antenna	5dB 超薄天线 Ultra-thin Antenna	通道门天线 Gate Antenna	冰柜天线 Freezer Antenna	全向玻璃钢天线 Omnidirectional Antenna
型号 Model	RR-UANT1513V	RR-UANT2511C	RR-UANT1212UT	RR-UANT4413C	RR-UANT1919P	RR-UANT1919C	RR-UANT11023VF
频率 Frequency	860-960MHz	902-928MHz	860-960MHz	902-928MHz	860-960MHz	860-960MHz	806-960MHz
尺寸 Dimension	156*131*1.5mm	250 x110 x1.0mm	120 x 120 x 8 mm	440 x 130 x1 mm	190 x 190 x20 mm	236 x 210 x 20 mm	Φ23 x 1100 mm
净重 Net weight	0.12 kg	0.2kg	0.3 kg	0.3 kg	0.15kg	0.18 kg	0.25 kg
增益 Gain	3 dBi	3dBi	5 dBi	5 dBi	8 dBi	8 dBi	8 dBi
极化方式 Polarization	垂直极化 Vertical	圆极化 Circular	圆极化 Circular	圆极化 Circular	圆极化 Circular	圆极化 Circular	垂直极化 Vertical
接头类型 Connector	N座 N-Female	SMA座 SMA-Female	SMA座 SMA-Female	SMA座 SMA-Female	SMA座 SMA-Female	SMA座 SMA-Female	N座 N-Female
天线罩材料 Radome material	ABS	PCB	PCB	PCB	PCB	PVC	玻璃钢 Fiberglass
波瓣宽度 Beam, Width	Hor: 360°, Ver: 60°	Hor: 110°, Ver: 55°	Hor: 120°, Ver: 120°	Hor: 110°, Ver: 55°	Hor: 75°, Ver: 75°	Hor: 75°, Ver: 75°	Hor: 360°, Ver: 10°
电压驻波比 VSWR	≤1.5	≤1.5	≤1.4	≤1.4	≤1.4	≤1.4	≤1.5

图片 Photo							
品名 Name	3dB i 平板天线 Panel Antenna	5dB i 平板天线 Panel Antenna	8dB i 平板天线 Panel Antenna	10dB i 平板天线 Panel Antenna	12dB i 平板天线 Panel Antenna	10dB i 机柜天线 Cabinet Antenna	12dB i 平板天线 Panel Antenna
型号 Model	RR-UANT2010C	RR-UANT4609L	RR-UANT4516C-US RR-UANT4516C-EU	RR-UANT6010L	RR-UANT9010L	RR-UANT1609L	RR-UANT12019
频率 Frequency	902-928/865-868MHz	902-928/865-868MHz	902-928/865-868MHz	902-928/865-868MHz	902-928/865-868MHz	902-928/865-868MHz	902-928/865-868MHz
尺寸 Dimension	200 x 100 x 20 mm	460 x 90 x 20 mm	453 x 163 x 20 mm	600 x 100 x 28 mm	900 x 100 x 28 mm	1600 x 60 x 22 mm	1200 x 190 x 20 mm
净重 Net weight	0.3 kg	0.65 kg	0.7 kg	0.8 kg	1.1 kg	1.5 kg	3.5 kg
增益 Gain	3 dBi	5 dBi	8 dBi	10 dBi	12dBi	10dBi	12 dBi
极化方式 Polarization	圆极化 Circular	线极化 Linear	圆极化 Circular	线极化 Linear	线极化 Linear	线极化 Linear	圆极化 Circular
接头类型 Connector	SMA座 SMA-Female	SMA座 SMA-Female	SMA座 SMA-Female	SMA座 SMA-Female	SMA座 SMA-Female	SMA座 SMA-Female	SMA座 SMA-Female
天线罩材料 Radome material	有机玻璃 Organic Glass	有机玻璃 Organic Glass	ABS	PVC	PVC	PVC	有机玻璃 Organic Glass
波瓣宽度 Beam, Width	Hor: 60°, Ver: 60°	Hor: 60°, Ver: 72°	Hor: 60°, Ver: 60°	Hor: 30°, Ver: 120°	Hor: 30°, Ver: 120°	Hor: 75°, Ver: 45°	Hor: 75°, Ver: 25°
电压驻波比 VSWR	≤1.5	≤1.5	≤1.4	≤1.5	≤1.5	≤1.5	≤1.4

图片 Photo							
品名 Name	15dBi 平板天线 Panel Antenna	4dB i 天线 4dBi Antenna	5.5dB i 天线 5.5dBi Antenna	6dB i 天线 6dBi Antenna	6dB i 天线 6dBi Antenna	8dB i 天线 8dBi Antenna	9dB i 天线 9dBi Antenna
型号 Model	RR-UANT16019	RR-UANT1616C	RR-UANT1412C	RR-UANT1313C	RR-UANT1313C	RR-UANT802C	RR-UANT2626C
频率 Frequency	902-928/865-868MHz	902-928/865-868MHz	902-928/865-868MHz	902-928/865-868MHz	902-928/865-868MHz	902-928/865-868MHz	902-928/865-868MHz
尺寸 Dimension	1600 x 190 x 20 mm	165 x 165 x 20 mm	140 x 120 x 25 mm	130 x 130 x 18 mm	130 x 130 x 18 mm	256 x 256 x 45 mm	260 x 260 x 30 mm
净重 Net weight	3.5 kg	0.3 kg	0.3 kg	0.2 kg	0.2 kg	0.65 kg	1.1 kg
增益 Gain	15 dBi	4 dBi	5.5 dBi	6 dBi	6 dBi	8 dBi	9 dBi
极化方式 Polarization	圆极化 Circular	圆极化 Circular	圆极化 Circular	圆极化 Circular	圆极化 Circular	圆极化 Circular	圆极化 Circular
接头类型 Connector	SMA座 SMA-Female	N座 N-Female	SMA座 SMA-Female	SMA座 SMA-Female	SMA座 SMA-Female	N座 N-Female	N座 N-Female
天线罩材料 Radome material	有机玻璃 Organic Glass	ABS	ABS	ABS	ABS	ABS	ABS
波瓣宽度 Beam, Width	Hor: 75°, Ver: 25°	Hor: 60°, Ver: 60°	Hor: 65°, Ver: 55°	Hor: 90°, Ver: 90°	Hor: 90°, Ver: 90°	Hor: 60°, Ver: 60°	Hor: 70°, Ver: 70°
电压驻波比 VSWR	≤1.4	≤1.4	≤1.4	≤1.3	≤1.4	≤1.4	≤1.4

图片 Photo							
品名 Name	9dB i 天线 9dBi Antenna	10dB i 天线 10dBi Antenna	12dB i 天线 12dBi Antenna	12dB i 天线 12dBi Antenna	轨道天线 Orbital Antenna	12dB i 天线 12dBi Antenna	15dB i 天线 15dBi Antenna
型号 Model	RR-UANT2626C	RR-UANT4224C	RR-UANT1201H	RR-UANT1201C	RR-UANT6015	RR-UANT1201V	RR-UANT1501V
频率 Frequency	902-928/865-868MHz	902-928/865-868MHz	902-928/865-868MHz	902-928/865-868MHz	902-928MHz	806-960MHz	806-960MHz
尺寸 Dimension	260 x 260 x 30 mm	420 x 240 x 30 mm	440 x 440 x 40 mm	440 x 440 x 40 mm	605 x 153 x 52 mm	600 x 280 x 125 mm	1200 x 280 x 125 mm
净重 Net weight	1.1 kg	1.15 kg	2.1 kg	2.1 kg	2.46 kg	5.2 kg	8 kg
增益 Gain	9 dBi	10 dBi	12 dBi	12 dBi	11 dBi	12 dBi	15 dBi
极化方式 Polarization	圆极化 Circular	圆极化 Circular	水平极化 Horizontal	圆极化 Circular	线极化 Linear	垂直极化 Vertical	垂直极化 Vertical
接头类型 Connector	N座 N-Female	N座 N-Female	N座 N-Female	N座 N-Female	N座 N-Female	N座 N-Female	N座 N-Female
天线罩材料 Radome material	ABS	ABS	ABS	ABS	玻璃钢 Fiberglass	PVC	PVC
波瓣宽度 Beam, Width	Hor: 70°, Ver: 70°	Hor: 70°, Ver: 70°	Hor: 45°, Ver: 45°	Hor: 45°, Ver: 45°	Hor: 90°, Ver: 30°	Hor: 65°, Ver: 30°	Hor: 65°, Ver: 30°
电压驻波比 VSWR	≤1.4	≤1.4	≤1.3	≤1.5	≤1.3	≤1.5	≤1.5

睿睿超高频智能分支器

RoyalRay UHF Intelligent Antenna Multiplexer

产品介绍

睿睿RRUITMUX是一款高性能的UHF超高频智能分支器，完全自主知识产权设计，结合专有的智能识别算法，可以实现多达32个子分支器和256路天线的任意接入，并且能够实时提供当前天线连接情况，从而完成将UHF读写器的一路射频切换到最多256路天线中任意一个输出。可用于联网和在实时物品级资产跟踪智能货架中分配RFID天线以及电子标签货架及其应用当中。

特点

- 完全自主知识产权设计；
- 频率范围支持860~960MHz；
- 物理连接简洁，子分支器无需额外的取电路线，复用射频传输用同轴电缆线与主分支器实现取电、通讯；
- 上电自动查询子分支器和天线的接入状态，并且支持动态更新当前连接情况；
- 8个MCX输出接口，每个接口支持4级子分支器级联，也可作为天线接口接入天线。每个子分支器最多可接入8个天线，故一个主分支器输出接口可以连接多达32个天线；
- 最多支持256路天线切换，且天线切换速度小于100ms；
- 射频输入端到天线端的射频传输线上距离可达10m以上；
- 低功耗设计，单+9V电源供电；
- 支持RS232和TCPIP网络等用户接口；
- 高可靠设计，满足严苛工作环境要求。

GENERAL DESCRIPTION

RoyalRay RRUITMUX is a high performance UHF intelligent antenna multiplexer system for networking and distributing UHF RFID antennae for real-time item level assets tracking and management. It also ideal choices for smart shelf, electronic label shelf and other RFID application.

FEATURES

- Self-intellectual property;
- Work frequency 860~960MHz;
- Master and slave unit design;
- All information exchange between master and slave go though RF cable and no extra communication cable needed.
- Master with 1 RF input connecting reader and 8 RF output ports;
- Slave with 1 RF input connecting master, 1 RF output for cascading and 8 RF output for antennae;
- Support 4 level slave cascading;
- Total 256 antennae supported;
- Support antenna scanning for its network topology and plug-and-play;
- Low insertion loss;
- Low power dissipation design with single +9VDC supply;
- Support RS232 and TCPIP interface;
- High reliability design for harsh environment.



天线 Antenna
型号/ model:
● RR-UANT-XP160



天线 Antenna
型号/ model:
● RR-UANT-YJ145



天线 Antenna
型号/ model:
● RR-UANT-TC38



型号/ model: ● RRUITMUX-M
● RRUITMUX-S

电特性 CHARACTERISTICS

极限参数 Absolute Maximum Rating :

参数 ITEM	符号 SYMBOL	数值 VALUE	单位 UNIT
电源电压 Power Supply	VCC	45	V
工作温度 Operating Temp.	T _{OPR}	-10~+55	°C
贮藏温度 Storage Temp.	T _{STR}	-20~+75	°C

规格

除特别说明外，所示规格取自T_A=25°C及VCC=+9V工作条件下

Electrical and Mechanical Specification

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

参数 ITEM	符号 SYMBOL	最小 MIN	典型 TYP	最大 MAX	单位 UNIT
电源电压 Power Supply	VCC	7	9	40	V
工作电流 Current Dissipation	I _C	170	200	300	mA
频率带宽 Frequency	F _{REQ}	860		960	MHz
RF输出功率 RF Output Power	P _{out}			36	dBm

参数 ITEM	符号 SYMBOL	典型 TYP		单位 UNIT
规格 尺寸 Size	L x W x H	主板Master	200 x 105 x 28	mm
		子板Slave	125 x 59 x 17	
净重 Net Weight	Net Weight	主板Master	500	g
		子板Slave	220	

荣睿超高频台面式读写器

RoyalRay UHF Desktop Reader

产品介绍

荣睿超高频台面式、移动式高性能电子标签读写器基于完全自主知识产权设计，结合专有的高效信号处理算法，在保持高识读率的同时，实现对电子标签的快速读写处理，可广泛应用于物流、门禁系统、防伪系统、产品质检、以及生产过程控制等多种无线射频识别（RFID）系统。

特点

- 完全自主知识产权设计；
- 工作频率860~868MHz / 902~928MHz（可按不同国家或地区要求调整）；支持ISO18000-6C（EPC C1G2），ISO18000-6B 协议电子标签；
- 以扩频跳频（FHSS）或定频发射方式工作；
- 输出功率可调；
- 内建收发天线，有效距离20~400cm*；
- 低功耗设计；
- 提供USB / VSP（Virtual Serial Port）/ HID模式、RJ45（TCP/IP）、RS232、WiFi等多种通讯接口供选择；
- 独特外形设计；
- 提供动态连接库（DLL）及演示软件源代码，支持二次开发。

*有效距离与协议格式、外接天线、电子标签及工作环境有关。

GENERAL DESCRIPTION

RoyalRay UHF high performance Desktop Readers are designed upon fully self-intellectual property. Based on proprietary efficient digital signal processing algorithm, RoyalRay UHF Desktop Readers support fast tag read/write operation with high identification rate. They can be widely applied in many RFID application systems such as Logistics, Personnel Identification, Access Control, Anti-counterfeit, Quality Supervision and industrial production process control system, etc.

FEATURES

- Self-intellectual property;
- 860~868MHz / 902~928MHz frequency band（frequency customization optional）;
- Advanced tag processing algorithm, high identification rate;
- Support ISO18000-6C（EPC C1G2）, ISO18000-6B protocol tag;
- FHSS or Fix Frequency transmission;
- RF output power is adjustable;
- Built-in antenna with effect distance is 20~400cm*;
- Low power dissipation design;
- Provide USB / VSP（Virtual Serial Port）/ HID mode, RJ45（TCP/IP）, RS232, WiFi communication interface for choice;
- Unique design outline;
- Provide SDK and demo software to facilitate further development.

*Effective distance depends on protocol, antenna, tag and working environment.



型号/ model:
• RRU9809USB-LV2.0
• RRU9809UKB-LV2.0



型号/ model:
• RRU9816SR
• RRU9816SRIP



型号/ model:
• RRU9816
• RRU9816-3



型号/ model:
• RRU1861DK
• RRU1861DKIP



型号/ model:
• RRU1861DK3324
• RRU1861DK3324IP
• RRU1861DK3324USB



型号/ model:
• RRU9809USB-L
• RRU9809UKB-L



型号/ model:
• RRU9826-IA



型号/ model:
• RRU1861DKUSB

支持协议 Support Protocol	EPC Gen2 (ISO18000-6C) ISO18000-6B													
支持的卡片 Support Tag	NXP, ALIEN, IMPINJ...													
型号 Model	RRU9809 USB-LV2.0	RRU9809 USB-L	RRU9816 SR	RRU9816 SRIP	RRU1861 DK3324	RRU1861 DK3324IP	RRU1861 DK3324USB	RRU9816	RRU9826-IA	RRU1861 DK	RRU1861 DKIP	RRU1861 DKUSB	RRU1861 DKWiFi	
尺寸 Size	125x91x24 mm	105x70x11 mm	123x94x29 mm	123x94x29 mm	330x240x18 mm	330x240x18 mm	330x240x18 mm	122x83x20/15 mm	172x125x30 mm	160x110x42 mm	160x110x42 mm	160x110x42 mm	160x110x42 mm	
净重 Net Weight	150g	100g	154g	174g	1300g	1300g	1300g	100g	430g	400g	420g	400g	460g	
通讯接口 Communication Interface	USB	USB	RS232, Wiegand 26/34	RS232, Wiegand 26/34, TCP/IP	RS232, Wiegand 26/34, RS485	RS232, Wiegand 26/34, RS485, TCP/IP	USB	USB RS232,	USB, RS232, Wiegand 26/34, TCP/IP	RS232, Wiegand 26/34	RS232, Wiegand 26/34, TCP/IP	USB	RS232, Wiegand 26/34, WiFi	
天线增益 Antenna Gain	2 dBi	2dBi	2dBi	2dBi	4 dBi	4 dBi	4 dBi	2 dBi	3 dBi	2 dBi	2 dBi	2 dBi	2 dBi	
有效读距 Effective Reading Distance	> 50 cm	> 20cm	> 30 cm	> 30 cm	> 200 cm	> 200 cm	> 200 cm	> 30 cm	> 400cm	> 30cm	> 30 cm	> 30 cm	> 30 cm	
供电电压 Power Supply	5V	5V	9V	9V	9V	9V	5V	9V	9V	9V	9V	5V	9V	
典型功耗 Typ Power Dissipation	0.45W	0.45W	1.35W	1.8W	3.15W	3.15W	1.4W	1.8W	5W	3.15W	3.15W	1.4W	4.5W	

荣睿超高频高性能模块

RoyalRay UHF High Performance Module

特点

- 完全自主知识产权设计;
- 工作频率 840~960MHz(可按不同国家和地区要求调整);
- 基于 R2000,E710,E510,E310 设计,充分支持符合 EPC CLASS1 G2 标准的电子标签,优异的多标签防碰撞功能;
- 支持应答模式和实时查询模式;
- 以广播跳频(FHSS)或定频发射方式工作,支持 RSSI(选配);
- 输出功率达至 30dBm(可按 1db 进行微调);
- 提供动态链接库(DLL)及演示软件源代码,支持二次开发;

*有效距离及标签存储数量与协议格式、标签 UID 长度和工作环境相关

FEATURES

- Self-intellectual property;
- 860~868MHz, 902~928MHz frequency band (frequency customization optional);
- Based on R2000,E710,E510,E310 design, excellent multi-tag anti-collision operation, fully support EPC CLASS1 G2 protocol tags;
- FHSS or Fix Frequency transmission, support RSSI (optional);
- RF output power up to 30dbm (adjustable with 1db step);
- Provide DLL and Demonstration Software Source code to facilitate further development.

*Effective distance and tag storage depend on protocol ,tag UID length and working environment.

工作频率 Frequency Band	865~868MHz / 920~925MHz / 902~928MHz / 按需定制频段 Offer Customization	865~868MHz / 920~925MHz / 902~928MHz / 按需定制频段 Offer Customization	865~868MHz / 920~925MHz / 902~928MHz / 按需定制频段 Offer Customization	865~868MHz / 920~925MHz / 902~928MHz / 按需定制频段 Offer Customization	865~868MHz / 920~925MHz / 902~928MHz / 按需定制频段 Offer Customization	865~868MHz / 920~925MHz / 902~928MHz / 按需定制频段 Offer Customization	865~868MHz / 920~925MHz / 902~928MHz / 按需定制频段 Offer Customization	865~868MHz / 920~925MHz / 902~928MHz / 按需定制频段 Offer Customization	865~868MHz / 920~925MHz / 902~928MHz / 按需定制频段 Offer Customization	865~868MHz / 920~925MHz / 902~928MHz / 按需定制频段 Offer Customization	865~868MHz / 920~925MHz / 902~928MHz / 按需定制频段 Offer Customization	865~868MHz / 920~925MHz / 902~928MHz / 按需定制频段 Offer Customization	865~868MHz / 920~925MHz / 902~928MHz / 按需定制频段 Offer Customization	865~868MHz / 920~925MHz / 902~928MHz / 按需定制频段 Offer Customization
空中接口协议 Working Protocol	EPC Gen2 (ISO18000-6C)	EPC Gen2 (ISO18000-6C)	EPC Gen2 (ISO18000-6C)	EPC Gen2 (ISO18000-6C)	EPC Gen2 (ISO18000-6C)	EPC Gen2 (ISO18000-6C)	EPC Gen2 (ISO18000-6C)	EPC Gen2 (ISO18000-6C)	EPC Gen2 (ISO18000-6C)	EPC Gen2 (ISO18000-6C)	EPC Gen2 (ISO18000-6C)	EPC Gen2 (ISO18000-6C)	EPC Gen2 (ISO18000-6C)	EPC Gen2 (ISO18000-6C)
核心芯片 Chipset	Impinj E710 (Offer E510/E310 for choice)	Impinj E710 (Offer E510/E310 for choice)	Impinj E710 (Offer E510/E310 for choice)	Impinj E710 (Offer E510/E310 for choice)	Impinj E710 (Offer E510/E310 for choice)	Impinj E710 (Offer E510/E310 for choice)	Impinj E710 (Offer E510/E310 for choice)	Impinj R2000	Impinj R2000	Impinj R2000	Impinj R2000	Impinj R2000	Impinj R2000	Impinj R2000
图片 Picture														
型号 Model	RRU7180M	RRU7381M	RRU7280M	RRU7181M	RRU7182M	RRU7189M	RRU7199M	RRU9880	RRU9881M	RRU9882M	RRU2881M	RRU2882M	RRU2889M	RRU2899M
尺寸 Dimension	57*36.8*6.4mm	42*42*7.5mm	55.5*39.5*7.6mm	69.5*43*7.75mm	67.5*51*7.75mm	78.7*91*7.75mm	117*92*7.75mm	57*36.8*6.4mm	42*42*7.5mm	55.5*39.5*7.6mm	69.5*43*7.75mm	67.5*51*7.9mm	78.7*91*8.2mm	117*92*8.2mm
净重① Net Weight	23g	24g	25g	40g	42g	96g	116g	23g	24g	25g	40g	42g	75g	82g
输出功率 Output Power	0~33dBm 可调(±1dB)步进1dB 0~33dBm(±1dB)adjustable	0~30dBm 可调(±1dB)步进1dB 0~30dBm(±1dB)adjustable	0~33dBm 可调(±1dB)步进1dB 0~33dBm(±1dB)adjustable	0~33dBm 可调(±1dB)步进1dB 0~36dBm 可调(±1dB)步进1dB 0~33dBm(±1dB)adjustable	0~33dBm 可调(±1dB)步进1dB 0~36dBm 可调(±1dB)步进1dB 0~33dBm(±1dB)adjustable	0~33dBm 可调(±1dB)步进1dB 0~36dBm 可调(±1dB)步进1dB 0~33dBm(±1dB)adjustable	0~33dBm 可调(±1dB)步进1dB 0~36dBm 可调(±1dB)步进1dB 0~33dBm(±1dB)adjustable	0~33dBm 可调(±1dB)步进1dB 0~36dBm 可调(±1dB)步进1dB 0~33dBm(±1dB)adjustable	0~33dBm 可调(±1dB)步进1dB 0~33dBm(±1dB)adjustable	0~33dBm 可调(±1dB)步进1dB 0~33dBm(±1dB)adjustable	0~33dBm 可调(±1dB)步进1dB 0~33dBm(±1dB)adjustable	0~33dBm 可调(±1dB)步进1dB 0~33dBm(±1dB)adjustable	0~33dBm 可调(±1dB)步进1dB 0~33dBm(±1dB)adjustable	0~33dBm 可调(±1dB)步进1dB 0~33dBm(±1dB)adjustable
接收灵敏度(Typ.)② Receive Sensitivity	-87dBm	-87dBm	-87dBm	-87dBm	-87dBm	-87dBm	-87dBm	-85dBm	-85dBm	-85dBm	-85dBm	-85dBm	-85dBm	-85dBm
峰值标签查询速度 Peak Inventory Speed	≥ 1000pcs/s	≥ 1000pcs/s	≥ 1000pcs/s	≥ 1000pcs/s	≥ 1000pcs/s	≥ 1000pcs/s	≥ 1000pcs/s	≥ 700pcs/s	≥ 700pcs/s	≥ 700pcs/s	≥ 500pcs/s	≥ 700pcs/s	≥ 700pcs/s	≥ 700pcs/s
标签缓存区 Buffering memory	1000pcs @ 96bits EPC	1000pcs @ 96bits EPC	1000pcs @ 96bits EPC	1000pcs @ 96bits EPC	1000pcs @ 96bits EPC	1000pcs @ 96bits EPC	1000pcs @ 96bits EPC	1000pcs @ 96bits EPC	1000pcs @ 96bits EPC	1000pcs @ 96bits EPC	1000pcs @ 96bits EPC	1000pcs @ 96bits EPC	1000pcs @ 96bits EPC	1000pcs @ 96bits EPC
RSSI	√	√	√	√	√	√	√	√	√	√	√	√	√	√
工作模式 Working Mode	应答模式、主动(触发)模式 Answer / Active(Trigger)	应答模式、主动(触发)模式 Answer / Active(Trigger)	应答模式、主动(触发)模式 Answer / Active(Trigger)	应答模式、主动(触发)模式 Answer / Active(Trigger)	应答模式、主动(触发)模式 Answer / Active(Trigger)	应答模式、主动(触发)模式 Answer / Active(Trigger)	应答模式、主动(触发)模式 Answer / Active(Trigger)	应答模式、主动(触发)模式 Answer / Active(Trigger)	应答模式、主动(触发)模式 Answer / Active(Trigger)	应答模式、主动(触发)模式 Answer / Active(Trigger)	应答模式、主动(触发)模式 Answer / Active(Trigger)	应答模式、主动(触发)模式 Answer / Active(Trigger)	应答模式、主动(触发)模式 Answer / Active(Trigger)	应答模式、主动(触发)模式 Answer / Active(Trigger)
GPIO	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)
通讯接口 COMM Interface	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)
天线接口 Antenna Connector	MMCX-F * 1	IPX-M * 1	MMCX-F * 1	MMCX-F * 4	SMA-F * 4	SMA-F * 8	SMA-F * 16	MMCX-F * 1	IPX-M * 1	MMCX-F * 1	MMCX-F * 4	SMA-F * 4	SMA-F * 8	SMA-F * 16
供电电压 Power Supply	3.8 ~ 5.5V	3.8 ~ 5.5V	3.8 ~ 5.5V	3.8 ~ 5.5V	3.8 ~ 5.5V	3.8 ~ 5.5V	3.8 ~ 5.5V	3.8 ~ 5.5V	3.8 ~ 5.5V	3.8 ~ 5.5V	3.8 ~ 5.5V	3.8 ~ 5.5V	3.8 ~ 5.5V	3.8 ~ 5.5V
典型功耗 Power Dissipation	约8W(峰值) approx.8W(peak)	(30dBm)约6W(峰值) (30dBm)approx. 6W(peak)	(33dBm)约8W(峰值) (34.5dBm)约11W(峰值) (33dBm)approx. 8W(peak) (34.5dBm)approx. 11W(peak)	(33dBm)约8W(峰值) (34.5dBm)约11W(峰值) (33dBm)approx. 8W(peak) (34.5dBm)approx. 11W(peak)	(33dBm)约8W(峰值) (34.5dBm)约11W(峰值) (33dBm)approx. 8W(peak) (34.5dBm)approx. 11W(peak)	(33dBm)约8W(峰值) (34.5dBm)约11W(峰值) (33dBm)approx. 8W(peak) (34.5dBm)approx. 11W(peak)	(33dBm)约11W(峰值) (33dBm)approx. 11W(peak)	约8W(峰值) approx.8W(peak)	约8W(峰值) approx.8W(peak)	约8W(峰值) approx.8W(peak)	约8W(峰值) approx.8W(peak)	约8W(峰值) approx.8W(peak)	约8W(峰值) approx.8W(peak)	约8W(峰值) approx.8W(peak)
天线连接保护 Antenna Protecting	√	√	√	√	√	√	√	√	√	√	√	√	√	√
温度检测 Self-Temp. Detection	√	√	√	√	√	√	√	√	√	√	√	√	√	√
散热方式 Heat Dissipation	外置散热片空气冷却 Heatsink for Air Cooling	外置散热片空气冷却 Heatsink for Air Cooling	外置散热片空气冷却 Heatsink for Air Cooling	外置散热片空气冷却 Heatsink for Air Cooling	外置散热片空气冷却 Heatsink for Air Cooling	外置散热片空气冷却 Heatsink for Air Cooling	外置散热片空气冷却 Heatsink for Air Cooling	外置散热片空气冷却 Heatsink for Air Cooling	外置散热片空气冷却 Heatsink for Air Cooling	外置散热片空气冷却 Heatsink for Air Cooling	外置散热片空气冷却 Heatsink for Air Cooling	外置散热片空气冷却 Heatsink for Air Cooling	外置散热片空气冷却 Heatsink for Air Cooling	外置散热片空气冷却 Heatsink for Air Cooling
工作温度 Operating Temp.	-25°C ~ +70°C	-25°C ~ +70°C	-25°C ~ +70°C	-25°C ~ +70°C	-25°C ~ +70°C	-25°C ~ +70°C	-25°C ~ +70°C	-25°C ~ +70°C	-25°C ~ +70°C	-25°C ~ +70°C	-25°C ~ +70°C	-25°C ~ +70°C	-25°C ~ +70°C	-25°C ~ +70°C
存储温度 Storage Temp.	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C
工作湿度 Operating Humidity	< 95% (+25°C)	< 95% (+25°C)	< 95% (+25°C)	< 95% (+25°C)	< 95% (+25°C)	< 95% (+25°C)	< 95% (+25°C)	< 95% (+25°C)	< 95% (+25°C)	< 95% (+25°C)	< 95% (+25°C)	< 95% (+25°C)	< 95% (+25°C)	< 95% (+25°C)



备注
Remark

(I) ①②请以实际为准。
①Please see the real product for detailed information.
(II) 提供定制化模块。
Provide customized module according to your demands.

荣睿超高频高性能模块

RoyalRay UHF High Performance Module

产品介绍

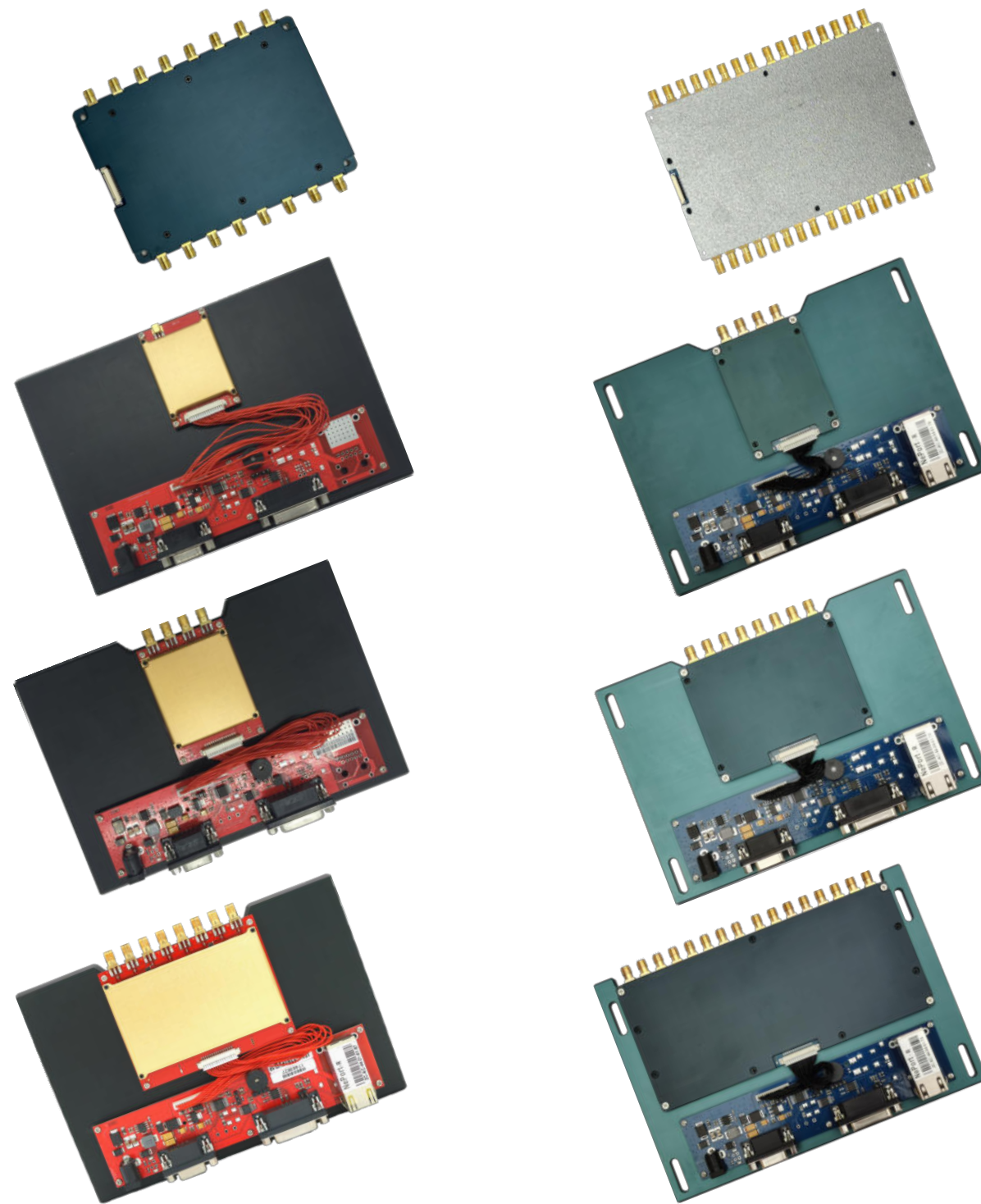
荣睿嵌入式 UHF 超高频高性能读写模块，完全自主知识产权设计，结合专有的高效碰撞处理算法，在保持高识读率的同时，实现对电子标签的快速读写处理，可广泛用于物流、个人身份识别、会议签到系统、门禁系统、防伪系统及生产过程控制等多种无线射频识别（RFID）系统。

GENERAL DESCRIPTION

RoyalRay UHF high performance Reader Modules are 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, attendance system, anti-counterfeit, industrial production process control system.

工作频率 Frequency Band	865-868MHz / 920-925MHz / 902-928MHz / 按需定制频段 Offer Customization	865-868MHz / 920-925MHz / 902-928MHz / 按需定制频段 Offer Customization	865-868MHz / 920-925MHz / 902-928MHz / 按需定制频段 Offer Customization	865-868MHz / 920-925MHz / 902-928MHz / 按需定制频段 Offer Customization	865-868MHz / 920-925MHz / 902-928MHz / 按需定制频段 Offer Customization	865-868MHz / 920-925MHz / 902-928MHz / 按需定制频段 Offer Customization
空中接口协议 Working Protocol	EPC Gen2 (ISO18000-6C), GBT29768-2013(选配), GJB7377.1A-2018(选配)	EPC Gen2 (ISO18000-6C), GBT29768-2013(选配), GJB7377.1A-2018(选配)	EPC Gen2 (ISO18000-6C), GBT29768-2013(选配), GJB7377.1A-2018(选配)	EPC Gen2 (ISO18000-6C), GBT29768-2013(选配), GJB7377.1A-2018(选配)	EPC Gen2 (ISO18000-6C), GBT29768-2013(选配), GJB7377.1A-2018(选配)	EPC Gen2 (ISO18000-6C), GBT29768-2013(选配), GJB7377.1A-2018(选配)
核心芯片 Chipset	FM13RD1616E	FM13RD1616E	FM13RD1616E	FM13RD1616E	FM13RD1616E	FM13RD1616E
图片 Picture						
型号 Model	RRU1680	RRU1681M	RRU1682M	RRU1689M	RRU1699M	RRU16932MHP
尺寸 Dimension	57×36.8×6.4mm	69.5×43×7.75mm	67.5×51×7.9mm	78.7×91×8.2mm	117×92×8.2mm	160×105×8.2mm
净重① Net Weight	23g	40g	42g	75g	82g	138g
输出功率 Output Power	0~33dBm可调(±1dB)步进1dB 0~33dBm(±1dB)adjustable	0~33dBm可调(±1dB)步进1dB 0~33dBm(±1dB)adjustable	0~33dBm可调(±1dB)步进1dB 0~33dBm(±1dB)adjustable	0~33dBm可调(±1dB)步进1dB 0~33dBm(±1dB)adjustable	0~33dBm可调(±1dB)步进1dB 0~33dBm(±1dB)adjustable	0~33dBm可调(±1dB)步进1dB 0~36dBm可调(±1dB)步进1dB 0~33dBm(±1dB)adjustable 0~36dBm(±1dB)adjustable
接收灵敏度(Typ.)② Receive Sensitivity	-75dBm	-75dBm	-75dBm	-75dBm	-75dBm	-75dBm
峰值标签询查速度 Peak Inventory Speed	≥ 1000pcs/s	≥ 1000pcs/s	≥ 1000pcs/s	≥ 1000pcs/s	≥ 1000pcs/s	≥ 1000pcs/s
标签缓存区 Buffering memory	1000pcs @ 96bits EPC	1000pcs @ 96bits EPC	1000pcs @ 96bits EPC	1000pcs @ 96bits EPC	1000pcs @ 96bits EPC	1000pcs @ 96bits EPC
RSSI	√	√	√	√	√	√
工作模式 Working Mode	应答模式、主动(触发)模式 Answer / Active(Trigger)	应答模式、主动(触发)模式 Answer / Active(Trigger)	应答模式、主动(触发)模式 Answer / Active(Trigger)	应答模式、主动(触发)模式 Answer / Active(Trigger)	应答模式、主动(触发)模式 Answer / Active(Trigger)	应答模式、主动(触发)模式 Answer / Active(Trigger)
GPIO	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)	2路输入,2路输出(3.3V电平) 2 Input,2 Output(3.3V level)
通讯接口 COMM Interface	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)	RS232 (TTL Level)
天线接口 Antenna Connector	MMCX-F * 1	MMCX-F * 4	SMA-F * 4	SMA-F * 8	SMA-F * 16	SMA-F * 32
供电电压 Power Supply	3.8 ~ 5.5V	3.8 ~ 5.5V	3.8 ~ 5.5V	3.8 ~ 5.5V	3.8 ~ 5.5V	3.8 ~ 5.5V
典型功耗 Power Dissipation	约8W(峰值) approx.8W(peak)	约8W(峰值) approx.8W(peak)	约8W(峰值) approx.8W(peak)	约8W(峰值) approx.8W(peak)	约8W(峰值) approx.8W(peak)	约16W(峰值) approx.16W(peak)
天线连接保护 Antenna Protecting	√	√	√	√	√	√
温度检测 Self-Temp. Detection	√	√	√	√	√	√
散热方式 Heat Dissipation	外置散热片空气冷却 Heatsink for Air Cooling	外置散热片空气冷却 Heatsink for Air Cooling	外置散热片空气冷却 Heatsink for Air Cooling	外置散热片空气冷却 Heatsink for Air Cooling	外置散热片空气冷却 Heatsink for Air Cooling	外置散热片空气冷却 Heatsink for Air Cooling
工作温度 Operating Temp.	-25°C ~ +70°C	-25°C ~ +70°C	-25°C ~ +70°C	-25°C ~ +70°C	-25°C ~ +70°C	-25°C ~ +70°C
存储温度 Storage Temp.	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C
工作湿度 Operating Humidity	< 95% (+25°C)	< 95% (+25°C)	< 95% (+25°C)	< 95% (+25°C)	< 95% (+25°C)	< 95% (+25°C)

备注
Remark
(1)①②请以实际为准。
①②Please see the real product for detailed information.
(11)提供定制化模块。
Provide customized module according to your demands.



荣睿超高频蓝牙手持机

RoyalRay UHF Bluetooth Handheld Reader

型号/model:
● RRUA100



产品介绍

荣睿超高频蓝牙手持机 RRUA100，内置高性能 UHF 超高频 RFID 模块和线极化天线，结合专有的高效处理算法，实现了对电子标签的快速读写处理。先进的蓝牙连接特性、稳定的数据交互、舒适的人体工学设计与实用的工业化设计并存，使之迅速成为资产管理、库存盘点、产品追溯以及防伪系统等 RFID 应用领域的理想选择。

RRUA100 可通过 USB 或蓝牙与智能手机、平板电脑、便携式设备、电脑等进行有线/无线通信，传输 RFID 数据。

GENERAL DESCRIPTION

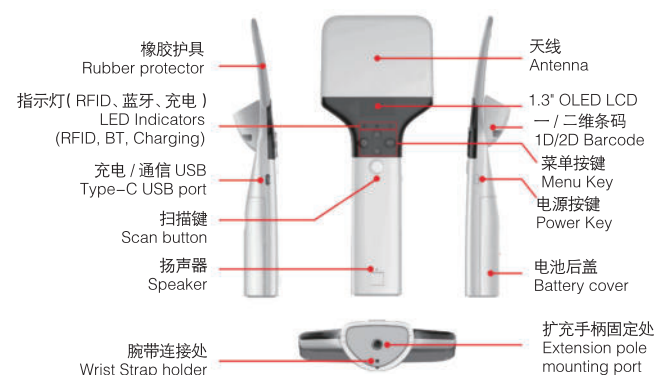
RoyalRay UHF RFID Handheld Bluetooth reader RRUA100 design upon high performance UHF RFID module and linear polarized antenna. Based on proprietary efficient digital signal processing algorithm, RRUA100 support fast tag read/write operation with high identification rate. Advanced Bluetooth connectivity features, stable and smooth RFID data interaction, perfect combination of comfortable ergonomic design and practical industrial design, RRUA100 makes it a natural choice for Asset Management, Inventory Verification, Product Tracing System, Anti-counterfeit, Jewelry Management and other RFID applications.

RRUA100 interact RFID data with Smartphone, Tablet PC, Portable Devices, PC, ect by Bluetooth (Wireless Transmission) and USB cable (Wire Transmission).

特点

- 完全自主知识产权设计；
- 蓝牙 V2.0/5.1 BLE 无线通讯方式和 USB Type-C 有线通讯方式，提供最广泛的连接性；
- 基于 E710/R2000 设计，充分支持符合 EPC CLASS1 G2 标准的电子标签，优异的多标签防撞功能；
- 工作频率 860~868MHz / 902 ~ 928MHz (可以按不同国家或地区要求调整) ；
- 以广谱跳频 (FHSS) 或定频发射方式工作；
- 输出功率达至 30dBm (可调) ；
- 内置线极化天线，典型读取距离 20 米 * ；
- 数据可本地缓存，掉电不丢失；
- 标签存储容量高达 65000 张 @ 96bit EPC ；
- 超低功耗设计，内置大容量锂电池；
- 3 组 LED、内置蜂鸣器、内置振动器提供声光工作状态指示；
- 提供动态连接库 (DLL) 及演示软件源代码，支持二次开发；固件可在线升级。

*有效距离与工作模式、电子标签及工作环境相关。



FEATURES

- Self-intellectual property;
- Bluetooth 2.0/5.1 BLE (Wireless Transmission) and USB Type-C cable (Wire Transmission) provide versatile connect ability;
- Based on Impinj Indy E710/R2000 chip design, outstanding anti-collision performance sufficiently support EPC CLASS1 Gen2 (ISO18000-6C) protocol tag;
- 860~868 MHz / 902 ~ 928 MHz frequency band (frequency customization optional);
- Supports both Frequency Hopping Spread Spectrum (FHSS) transmission and fixed-frequency transmission;
- RF output power up to 30 dBm (adjustable);
- Built-in Linear Polarization antenna, up to 20 meters typical reading distance*;
- Embedded non-volatile memory;
- Tag buffer store is up to 65,000 tags @ 192 bits EPC;
- Ultra-low power consumption design, built-in high capacity Lithium-ion battery;
- 3 LED indicators, built-in buzzer and vibrating motor provide acousto-optic prompting;
- Provide SDK and demo software to facilitate further development; Support firmware updating online;

*Reading distance depends on working mode, tag and operating environment.

型号 Model	RRUA100	
RFID Engine RFID 引擎	Impinj Indy E710/R2000 chip design	
支持频段 Support Frequency	EU: 860-868MHz; US: 902-928MHz (可以按不同国家或地区的要求进行调整) (adjustable according to various frequency requirements in different countries and regions)	
支持协议 Support Protocol	EPC Global Class1 Gen2 / ISO18000-6C	
支持的卡片 Support Tag	NXP, ALIEN, IMPINJ...	
项目 ITEM	典型 TYP	备注 REMARK
RFID 读距 RFID Reading Distance	> 20m	有效读距与工作模式、标签，工作环境有关 Effective reading distance depends on working mode, tag/label and operating environment.
射频功率 RF Power	+30dBm (1 Watt)	1dBm 单位可调 1dBm adjustable
RFID 天线 RFID Antenna	线极化天线 Linear-polarization Antenna	内置 Built-in
标签存储容量 Tag buffer store	65,000 tags @ 192 bits EPC	取决于标签 EPC 长度 Depends on EPC length
读取速度 Reading Speed	可达 200 张 / 秒 Up to 200pcs/second	
一维激光扫描头 1D Laser Scanner	√	Optional UPC/EAN, Code128, Code39, Code93, Code11, Interleaved 2 of 5, MSIDiscrete 2 of 5, Chinese 2 of 5, Matrix 2 of 5, Inverse 1D, Codabar, GSI Databar
二维扫描头 2D COMS Scanner (OR Code Image)	√	Backward 1D, Optional PDF417, MicroPDF417, Data Matrix(Inverse), Maxicode, QR Code(Inverse), Micro QR, Aztec(Inverse)
显示屏 LCD Screen	1.3" White OLED LCD	128 x 64 dpi
尺寸 Dimensions	L x W x T: 262 x 105 x 42mm	手柄长度 Handle Length: 155mm
重量 Weight	247 g	含电池 with battery
通信 Communication	Bluetooth, USB	Bluetooth 2.0/4.0, USB Type C
充电接口 Charge Jack	USB Type C	
LED 指示灯 LED Indicator	RFID 指示、蓝牙指示、充电指示	RFID indicator, Bluetooth indicator, Battery status indicator
按键 Keyboard	电源键、扫描键、Up 键、Down 键、F1 键、选择键	Power key, Scan key, Up Key, Down Key, F1 key, Select key
电池 Battery	3.6V 3100 mAh	锂 - 离子电池 Li-ion Battery
充电器 Charger	AC 100 ~ 240V, 50 ~ 60Hz DC 5V/2.0A	输入功率 Input 输出功率 Output
扬声器 Loudspeaker	√	
延长杆 Docking Station	√	
贮藏温度 Storage Temp.	-20°C ~ 75°C	
充电温度 Charging Temp.	-10°C ~ 40°C	
工作温度 Operating Temp.	-10°C ~ 55°C	
工作湿度 Humidity	5% ~ 95%	无凝聚 non-condensing
电池 Battery	3.6V 3100 mAh	锂 - 离子电池 Li-ion Battery
延长杆 Docking Station	√	选配 optional

超强实力 一「揽」无余

RELIABLE ASSISTANT TO SUCCESS

超高频/高频RFID智能手持终端

High Performance UHF/HF Handheld Reader



- RRU7171A
- RRU9171A
- RRU5171A
- RRH9171A
- RRU3171A
- RRH9171A-5

高精度RFID识读

5dBi高灵敏度RFID天线, 扫描范围更宽广, 可批量识别20米开外的标签

HIGH COVERAGE RFID SCANNING

5dB high sensitivity RFID antenna expands reading coverage. Batch reading limitation is more than 20M.

让标签“无所遁形”

采用自适应干扰对消(SJC)技术, 轻松应对有金属物干扰的复杂环境; 集聚识别技术, 有效减少遮挡或叠加盲点, 高密度标签也可顺利识读

COZY FOR LONG HOURS

Ergonomic pistol grip design, minimized fatigue and delivered high efficiency during long hours of operation.

握感舒适 不易疲惫

符合人体工学手柄, 采用防滑和防疲劳设计, 让工作更专注、更高效

FIND THE LAST TAG

With Self Jammer Cancellation (SJC) and high density recognition technology, easily find all tags in metal or huge volume environment.

支持2小时不间断扫码

高散热材质及设计工艺, 搭配优化算法, 低功耗、散热快, 持久续航

2 HOURS CONTINUE SCAN APPROVED

Hi-tech thermal material with optimized fluidmechanics algorithm, expressed cool, econom-ic, long-lasting performance, supporting every challenging task.

高速精准扫码

搭载国际专业扫码模块, 一维/二维/招曲/污损码一网打尽

PRECISE BARCODE DECODING

Embedded market leading scan engine, au-to-corrects damaged/distorted barcode.

性能参数

性能参数

处理器	八核 Cortex-A53, 1.4 GHz
内存	RAM: 2GB ROM: 16GB RAM: 4GB ROM: 64GB(选配)
操作系统	Android 9.0

物理参数

显示屏	5.7英寸高清 (720×1440)
触摸屏	支持多点触控、手套触摸, 多点触控, 带水操作和被动笔签名
外形尺寸	143.3*169*95.5mm
整机重量	678g
主电池	3.85V 9000mAh 可充电锂电池 (典型值)
充电时间	不超过 7 小时
扩展内存	Micro SD 卡, 最大可支持 128GB
SIM 卡槽	Nano-SIM x 2
音频	1.5W 扬声器、两个麦克风 (支持降噪)、听筒
按键	实体按键: 音量+/-键、电源键、自定义键、扫描按键 x2

使用环境

工作温度	-20 ~ +60°C
储存温度	-40 ~ +70°C
湿度	5%RH ~ 95%RH (无凝结)
坠地抗震高度	能承受 1.2 米高度多次跌落到光滑水泥地面的冲击
防护等级	IP65
静电	空气放电 ±15KV, 接触放电 ±8KV

数据采集

扫描	专业扫描头, 支持扫描主流的一维和二维码, 支持屏幕扫码
摄像头	后置 1300W 自动对焦摄像头, 匹配自动闪光灯, 支持手电筒模式, 可支持 4K 高清录像; 前置摄像头采用 500W 像素定焦摄像头

无线 PAN

蓝牙	蓝牙 4.2+BR/EDR+BLE
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八核 高性能CPU RFID 远距离超高频/高频 5.7英寸 超大触摸屏 IP65级 防尘防水 1.2米 抗跌落 合作伙伴平台 轻松管理企业终端设备

RFID (UHF)

工作频段	902~928MHz 或 865~868MHz 或 13.56MHz (可以按不同国家或地区要求调整)
协议	ISO18000-6C (标准EPC C1G2), ISO18000-6B ISO18000-3
工作距离	读取距离15/25m(R2000/E710), 距离与标签有关 读取距离25cm, 距离与标签有关
阅读速度	每秒 200 个标签
天线类型	圆极化天线 / HF天线

无线 WAN 数据和语音通信

无线局域网	4G: TD-LTE (B34/B38/B39/B40/B41) FDD-LTE (B1/B2/B3/B4/B5/B7/B8/B12/B17/B19/B20/B28A/B28B) 3G: WCDMA (B1/B2/B4/B5/B8) CDMA2000 1xEV-DO Rev.A BC0(800MHz) TD-SCDMA (B34、B39) 2G: CDMA 1x GSM/EDGE/GPRS (850/900/1800/1900MHz)
GPS	高精度 GPS, 支持 A-GPS、北斗和 GLONASS、Galileo
VoLTE	支持 VoLTE 高清视频语音通话

无线 LAN

WiFi	IEEE 802.11a/b/g/n/ac
数据通信	5GHz: 802.11a/n/ac—最大速率 866.7Mbps 2.4GHz: 802.11b/g/n—最大速率 300Mbps
工作信道 (以当地为准)	2.4G: 1-13 5G: 34-140, 149-165
加密方式	WEP, WPA/WPA2-PSK WAPI 证书, WAPI-PSK
快速漫游	PMKID caching, 802.11r, OKC

可选配件



座充



* 由于睿睿和芯致力于不断努力改善产品的品质, 包含的信息在本手册中如有变更, 恕不另行通知。

SPECIFICATIONS

PERFORMANCE CHARACTERISTICS

CPU	Qualcomm® Octa-core 1.4 GHz 64bit processor
Memory	2GB RAM / 16GB ROM 4GB RAM / 64GB ROM (optional)
O.S.	Android 9 Pie

PHYSICAL PARAMETER

Display	5.7" HD (720 x 1440 resolution) display
Touch panel	Ultrasensitive capacitivetouch panel,workswith glovesandwet fingers;Corning GorillaGlass; Multi-touch
Dimensions	143.3mm×169mm×90.5mm
Weight	678g
Screen Backlight	LED Backlight
Power	Replaceable 3.85V/9000mAh Battery
Expansion slot	Support DHC, SDXC, up to 128GB extensions
SIM	Nano-SIM x 2
Notification	Audio, LED, Vibration
Buttons	Scan Button *2, Power button, Volume +/- button, User definable button, Pistol Grip trigger button
Audio	Speakers, Dual, Microphones, Earphone, Receiver

ENVIRONMENTAL

Operating Temperature	-20°C~60°C (-4°F~140°F)
Storage Temperature	-40°C~70°C (-40°F~158°F)
Humidity	5% RH~95%RH (No condensation)
Temperature Test	Device can withstand rapid conversion from -40 to 70°C
Drop Specification	Multiple 1.2m drops on concrete floor
Tumbling Test	Device can withstand 200 roller drops of 1m, with a frequency of 10 roller test per minutes
Sealing	IP65
ESD	±15KV Air Discharge,±8KV Contact Discharge

DATA CAPTURE

Scanning	Professional scan engine, support 1D/2D barcode and screen barcode
Camera	Front - 5MP Rear - 13MP auto-focus color rear camera with flash



CPU
Octa-core high performance processor



RFID
HF RFID
UHF RFID



Display
5.7" Giant touch screen



IP Sealing
IP65 waterproof



Drop Resistance
1.2M drop resistance



Partner Connect
Simplify your device management

RFID(UHF)

Frequency	865-868MHz,902-928MHz,13.56MHz
Protocol	ISO 18000-6C(EPC Global Class 1 Gen 2), ISO 18000-6B,ISO18000-3
Reading Distance	up to 15/25(R2000/E710)meters(relative to tags) up to 25cm(relative to tags)
Reading Speed	200 tags per second
Type	Circularly polarized antenna,HF antenna

WIRELESS WAN DATA AND VOICE COMMUNICATIONS

Radio Frequency Band	4G: TD-LTE(B34/B38/B39/B40/B41) FDD-LTE(B1/B2/B3/B4/B5/B7/B8/B12/B17/B19/B20/B28A/B28B) 3G: WCDMA(B1/B2/B4/B5/B8) TD-SCDMA(B34/B39) CDMA2000 1x EV-DO Rev.A BC0 (800MHz) 2G: CDMA 1x GSM/EDGE/GPRS(850/900/1800/1900)
GPS	GPS, BEIDOU, GLONASS, Galileo, support AGPS
Vo-LTE	Support Vo-LTE HD video voice call

WIRELESS LAN

WiFi	IEEE 802.11 a/b/g/n/ac/d/e/f/h/i/k/r/v
Frequency	5GHz: 802.11a/n/ac—Maximum rate 433Mbps 2.4GHz: 802.11b/g/n—Maximum rate 150Mbps
Working Channels	2.4G: 1-13 5G: 34-140, 149-165
Encryption	WEP, WPA/WPA2-PSK WAPI certificate, WAPI-PSK
Quick Roaming	802.11r

WIRELESS PAN

Bluetooth	BT4.2+BR/EDR+BLE
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APPLICATIONS

Urovo U-Home	U-Launcher, U-Talking, ScanWedget, FeatureSet, AutoInstall, U-Setting, KeyMapping, AppMarket, Analysis, UMS and SDK support.
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Optional Accessories



Single-slot Cradle

* Because RoyalRay is constantly striving to improve its high-quality products, the information contained in this manual is subject to change without notice.

超高频UHF台面式平板读写器

UHF High Performance Desktop Reader

产品介绍

睿睿超高频UHF电子标签台面式平板读写器，完全自主知识产权设计，结合专有的高效信号处理算法，在保持高识读率的同时，实现对电子标签的快速读写处理，可广泛应用于零售、物品管理、物流、防伪系统及生产过程控制等多种无线射频识别（RFID）系统。尤其适用于珠宝管理、图书馆/档案馆的馆员工作站、自助借还书台、RFID新零售结算台等对读取范围有相对精确要求的应用场合。通过Type-C USB3.0、蓝牙BT BLE 4.2/5.1等通讯方式与Windows、Android、IOS等不同操作系统的设备进行互动。

GENERAL DESCRIPTION

RoyalRay high performance UHF Desktop Integrated reader are 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. Via Type-C USB 3.0 or BT5.1, this reader can interact with Windows, Android, IOS and other devices. It can be widely applied in many RFID application systems such as Jewelry Management, Library / Archive Librarian Workstation, Self-service Kiosk, Retail Logistics, Access Control, Anti-counterfeit and Industrial Production Process Control System, etc

频段 Frequency	865~868MHz / 920~925MHz / 902~928MHz / 按需定制频段Offer Customization			
支持协议 Support Protocol	EPC Gen2 (ISO18000-6C)			
支持的卡片 Support Tag	IMPINJ, NXP, ALIEN			
型号 Model	RRU3232U-NF	RRU3232BT-NF	RRU3221U-NF	RRU3221BT-NF
尺寸 Size	325x325x20mm	325x325x20mm	320x210x36mm	320x210x36mm
净重 Net Weight	1850g	1850g	1200g	1200g
接口 Interface	USB	USB + Bluetooth	USB	USB + Bluetooth
天线 Antenna	内置天线 Built-in Antenna	内置天线 Built-in Antenna	内置天线 Built-in Antenna	内置天线 Built-in Antenna
屏蔽功能 Shielding Function	充分支持 Adequate Support	充分支持 Adequate Support	充分支持 Adequate Support	充分支持 Adequate Support
供电电压 Power Supply	5V	5V	5V	5V



型号/model : • RRU3232U-NF
• RRU3232BT-NF



型号/model : • RRU3221U-NF
• RRU3221BT-NF



E系列UHF超高频高性能电子标签分体机

Power By E710

特点

- 完全自主知识产权设计；
- 工作频率840~960MHz（可以按不同国家或地区要求调整）；
- 基于Impinj E700读写引擎设计，双国际标准同时兼容，支持ISO18000-6C和ISO18000-6B全部协议功能，且可在双标准间无缝快速切换；
- 双核协同处理，主核驱动RF ID读写引擎，副核驱动标签数据管理及通讯协议解析；
- 两种标签盘存模式，“实时模式”即时上传标签，数据获取快速直观，“缓存模式”在提供重复标签数据过滤的同时，实现最大的标签数据吞吐；
- 以广谱跳频（FHSS）或定频发射方式工作，支持RSSI功能，峰值标签巡查速度大于700张/秒；
- 支持应答工作模式和实时巡查工作模式；
- 标签缓存容量：1000张@最长96bitsEPC；
- 支持EPC和TID两种防冲突模式；
- 输出功率达至33dBm（可调），经由电脑控制，在生产过程中自动标定，确保输出功率精确一致；
- 支持4/8/16个外接SMA天线接口，支持天线自动微调谐和天线检测；
- 精密板载温度传感器实时检测模块运行状况；
- 多达8颗高品质极低噪音板载电源，模块电源系统精益求精；
- 看门狗、防失控固件代码、软硬件实时监控等多技术手段确保常年运行不死机；
- 热平衡布局，结合大面积的散热片以及辅助固体散热材料，确保系统极佳的热稳定性；
- 低功耗设计，单+9V电源供电，可选配POE供电方式；
- 支持RS232、USB（Slave）、RJ45（TCP/IP），可选配WiFi等多种通讯接口；
- 提供动态连接库（DLL）及演示软件源代码，支持二次开发；
- 可支持测温、测压、国密SM7、军标、国军标、LED亮灯等多类特殊标签功能；
- 固件功能可现场升级，支持客户功能定制；
- 采用精选连接器，确保稳定可靠；接口过压过流保护，精细化布局布线，提供最佳EMC性能，支持3C、CE、FCC、TELEC、SRRC等认证需求；
- 配合热备份双功率检测模块，满足7/24系统不间断正常运行要求；
- 精致小巧，IP65设计，满足多种应用场合需求。



型号/model: RRU7182Lite/IP



型号/model: RRU7189Lite/IP



型号/model: RRU7199Lite/IP



E-series UHF High Performance Fixed Reader

Power By E710

FEATURES

- Self-intellectual property;
- 840~960MHz frequency band (frequency customization optional);
- Based on Impinj E700 high performance RF engine, excellent multi-tag anti-collision operation, fully support EPC CLASS1 G2 \ ISO18000-6B protocol tags
- FHSS or Fix Frequency transmission, support RSSI;
- Maximum inventory speed over 700pcs;
- RF output power up to 33dbm (adjustable);
- Support 4 / 8 / 16 SMA antenna port with antenna auto-tuning and failure-detection;
- Support answer and real-time-inventory work mode;
- Tag buffer: 1000pcs@96bitsEPC;
- Support EPC and TID anti-collision mode
- Low power dissipation with single +9 DC power supply, POE (Power over Ethernet) is optional;
- Support RS232, USB(Slave), RJ45 (TCP/IP), provide WiFi and other interface for choice;
- Provide DLL and Demonstration Software Source code to facilitate further development;
- High reliability design, meet the requirements of harsh working environment and certification needs, such as CE, FCC,... ect..



型号/model: RRU7199Lite/IP



型号/model: RRU7182Lite/IP



型号/model: RRU7189Lite/IP



应用案例(部分) Typical Solutions



无障碍门禁考勤
Open Access Control System



珠宝管理
Jewelry Management



开放式会议签到系统
Conference Attendance System



畜牧业管理
Stock Farming Management



酒类防伪
Liquor Anti-counterfeit Management



温控管理
Temperature Control Management



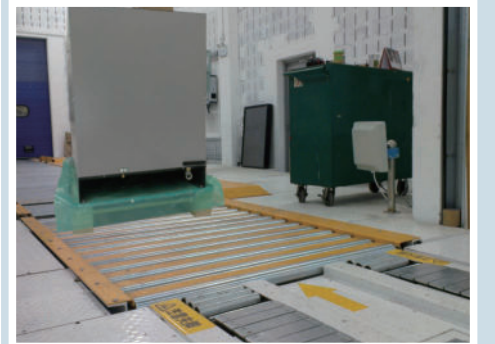
料场智能化管理
Raw Material Management



生产过程控制
Manufacturing Processes Control



烟草仓储管理
Tobacco Storage Management



出入库管理
Storage Management



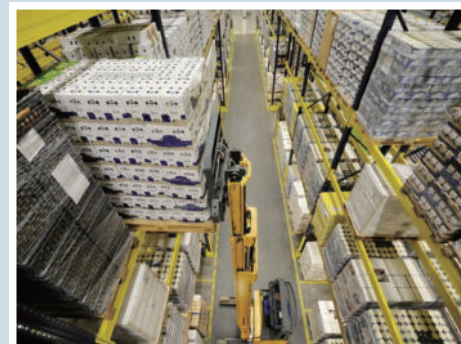
机场行李分拣
Airport Luggage Sortation



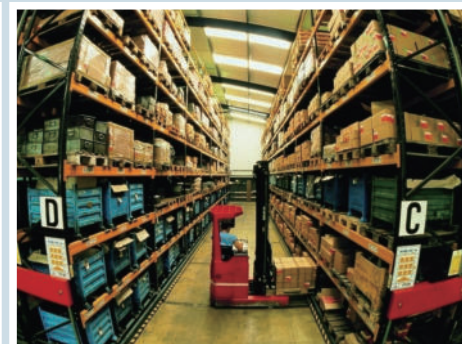
畜牧业管理
Stock Farming Management



乳业安全管理
Dairy Industry Safety Management



仓储管理
Warehouse Management



货品追踪
Goods Tracking Management



港口管理
Port Management



智能文件柜管理
RFID Intelligent Cabinet Management



智能停车场管理
RFID Parking System



物流管理
Logistics Management



生产过程控制
Industrial Process Control



仓储管理
Warehouse Management



娱乐业管理
RFID Casino Management



服装管理
Uniform Management



医疗器械管理
Medical Devices Management



卫生安全管理
Health Security Management



食品安全管理
Food Safety Management



图书馆管理
Library Management



会议安全管理
Conference Management



枪械管理
Firearm Control Management



防窜货管理
Anti-channel Conflict Management



电子支付
Electronic Payment Management



采矿安全管理
Mining Safety Management



胎铃管理
Tire Safety Management



气瓶安全管理
Gas Jar Safety Management

资质认证 Certification

