

PCR91505

EDGE Hub: RAIN UHF RFID Reader Datasheet

DESCRIPTION

The Powercast PCR91505 is a RAIN UHF RFID reader EDGE Hub. The device contains the PCR91505-M UHF RFID reader module, an integrated directional linear polarized patch antenna, a status LED and a USB-C port. The RFID module's air interface protocol adheres to EPCglobal® UHF Class 1 Gen 2/ISO 18000-63 RFID.

The hub is designed to interface to other host systems via USB communication. The hub is intended to be powered and operated via PC/laptop (5VDC/1A).

The RFID module communicates with and powers RFID tag devices. The RFID reader operates in the 902-928MHz ISM frequency band.

ORDERING OPTIONS

Part Number
PCR91505

PRODUCT CONTENTS

The following items are included:

Quantity	Description
1	PCR91505 RAIN RFID Reader
1	USB-C to 90° USB-C Cable

FEATURES

- ISO/IEC 18000-63 compliant
- Impinj E310 RFID Chip
- Frequency Range: 902MHz to 928MHz
- Maximum EIRP: +36dBm (4W)
- UHF Module soldered down with integrated antenna
- Status LED
- Compact hard case packaging with a swivel stand and wall mounting option

APPLICATIONS

- Automated Inventory Management
- Industrial Asset Tracking
- Supply Chain & Logistics Automation
- Secure Access Control
- Fleet & Vehicle Tracking
- Data Center & IT Asset Management
- Cold Chain Monitoring
- Environmental Monitoring



Powercast products and technology are covered by one or more patents with other patents pending. All patent and trademark information can be found at <http://www.powercastco.com/IP/>

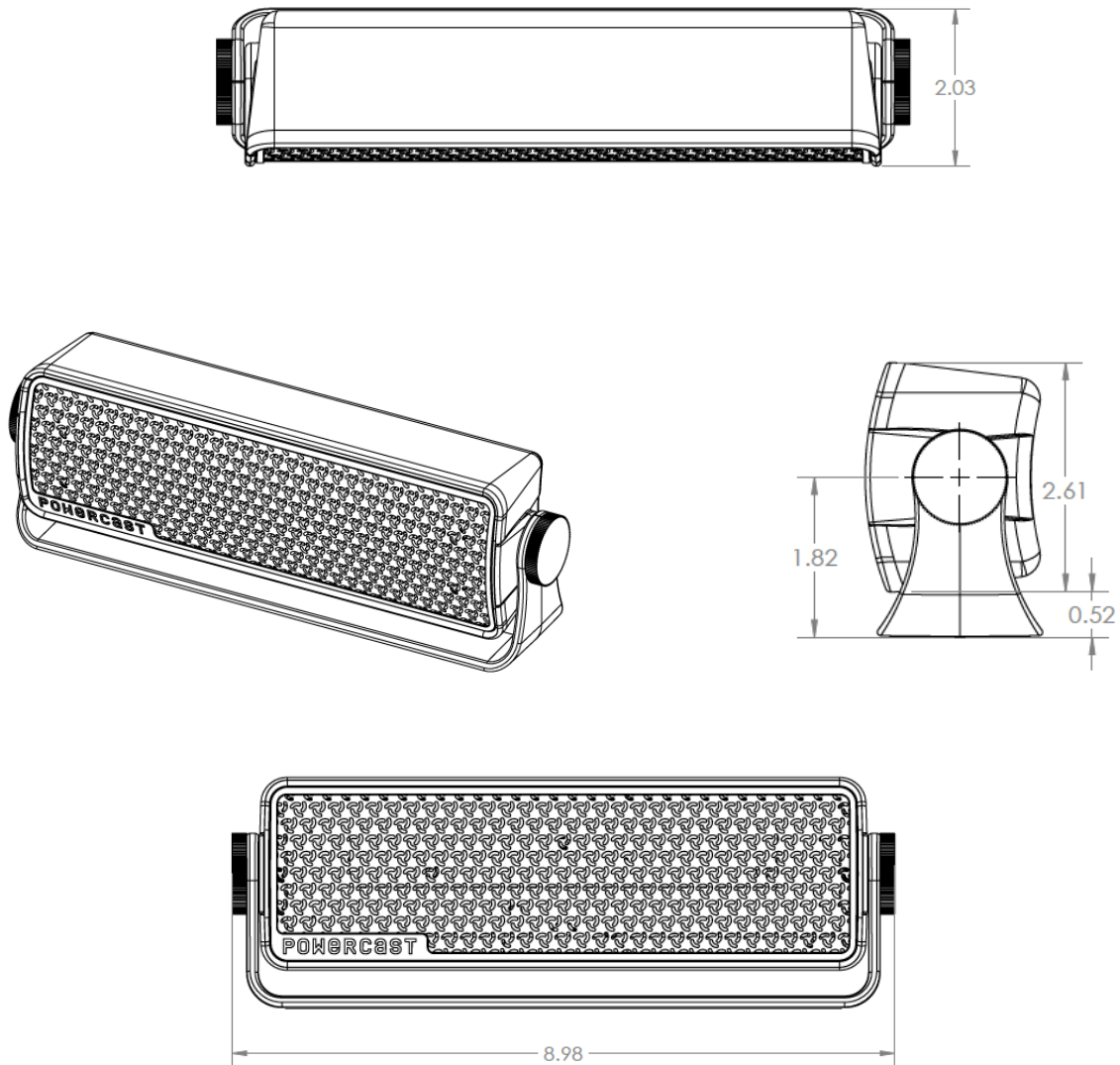
SPECIFICATIONS

	Parameters	Description
RF Performance	Frequency	FCC: 902MHz – 928 MHz
	Sensitivity	-80dBm
	Tags Per second	Greater than 50 tags/sec
	Tag Read Distance	Up to 20 feet (6.1m) depending on tag sensitivity and orientation with internal antenna.
	RF Communication	EPCglobal® UHF Class 1 Gen 2/ISO 18000-63 RFID
	Power Output (conducted power output at the antenna connection)	+30dBm (1W) max (adjustable)
	Power Output (radiated with antenna gain)	+36dBm EIRP (4W) max
Antenna	Antenna Gain	6dBi (4 linear)
	Antenna Return Loss	< -10dB (902-928MHz)
	Antenna Radiation Pattern	Directional Horizontal Beamwidth: 60° Vertical Beamwidth: 120°
	Antenna Polarization	Linear - lengthwise
Compliance	Regulatory	Contains Transmitter Module: FCC 47 CFR Ch. 1 Part 15, Industrie Canada RSS-21 0
Interface	Digital Communication Interface	USB-C, 921600 bps, custom JSON protocol
Environmental	Operating Temperature	-40°C to +50°C
	Storage Temperature	-55°C to +60°C
	Environment	Indoor use
Electrical	Power	5VDC/1A
Mechanical	Mounting	Swivel stand used for tabletop or wall mounting
	Weight	281 grams (approximately)
	Dimensions	8.98" x 2.03" x 3.13"

PCR91505

EDGE Hub: RAIN UHF RFID Reader Datasheet

DIMENSIONS



Please Note: All dimensions in the figure above are presented in inches (in).

IMPORTANT NOTICES

Information furnished by Powercast Corporation (Powercast) is believed to be accurate and reliable. However, no responsibility is assumed by Powercast for its use, nor for any infringements of patents or other rights of third parties that may result from its use. Specifications are subject to change without notice.

No license is granted by implication or otherwise under any patent or patent rights of Powercast. Trademarks and registered trademarks are the property of their respective owners.

CRITICAL APPLICATIONS DISCLAIMER

POWERCAST PRODUCTS (INCLUDING HARDWARE AND/OR SOFTWARE) ARE NOT DESIGNED OR INTENDED TO BE FAIL-SAFE, FAULT TOLERANT OR FOR USE IN ANY APPLICATION THAT COULD LEAD TO DEATH, PERSONAL INJURY OR SEVERE PROPERTY OR ENVIRONMENTAL DAMAGE (INDIVIDUALLY AND COLLECTIVELY, "CRITICAL APPLICATIONS"), SUCH AS LIFE-SUPPORT OR SAFETY DEVICES OR SYSTEMS, CLASS III MEDICAL DEVICES, NUCLEAR FACILITIES, APPLICATIONS THAT AFFECT CONTROL OF A VEHICLE OR AIRCRAFT, APPLICATIONS RELATED TO THE DEPLOYMENT OF AIRBAGS, OR ANY OTHER CRITICAL APPLICATIONS. CUSTOMER AGREES, PRIOR TO USING OR DISTRIBUTING ANY SYSTEMS THAT INCORPORATE POWERCAST PRODUCTS, TO THOROUGHLY TEST THE SAME FOR SAFETY PURPOSES. CUSTOMER ASSUMES THE SOLE RISK AND LIABILITY OF ANY USE OF POWERCAST PRODUCTS IN CRITICAL APPLICATIONS, SUBJECT ONLY TO APPLICABLE LAWS AND REGULATIONS GOVERNING LIMITATIONS ON PRODUCT LIABILITY.

Powercast warrants its products in accordance with Powercast's standard warranty available at www.powercastco.com/terms-conditions



Powercast Corporation

620 Alpha Drive, Suite 1
Pittsburgh, PA, USA 15238
www.powercastco.com
contact@powercastco.com
+1 (412)-455-5800