



R4320P

# Proton

## Industrial 4-port RAIN RFID Long Range Reader



<b>BENEFITS</b>	Industrial IP65	M12 connectors	High Sensitivity	Customizable with Javacode	PoE	Web Config. Interface
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### Features

- RAIN RFID (UHF EPC Class1 Gen2, ISO 18000-63) compliant
- Multiregional support
- Four 50 Ohm TNC-RP antenna connectors
- Power over Ethernet interface
- Up to 31.5 dBm (1.4 W) output power
- Internal scripting engine
- IP65 in compact form factor
- PoE or external power supply
- M12 industrial connectors
- Development Kit available

### Applications

- RAIN RFID portals for logistic
- Industrial automation reading points
- RAIN RFID tunnels
- Access control reading points

### Overview

The **Proton** (Model R4320P) is a rugged long range RAIN RFID reader of the easy2read® product line, well suited for industrial environment installations.

The **Proton** reader has 4 antenna ports capable of a 31.5 dBm maximum power enabling to build RAIN RFID portals for logistic. Its compact form factor makes it easy to install and the IP65 protection permits outdoor or harsh environment installations. Featuring Power Over Ethernet, RS232 and GPIOs via industry standard M12 connectors the **Proton** is an ideal choice for industrial automation and Industry 4.0 solutions.

The **Proton** is based upon an embedded Linux platform and it's easily configurable using an internal web interface. System integrators can customize the behavior of the reader installing Java code that, having access to all the RFID features and interfaces, permits a full customization.

The **Proton** reader complies with and can operate in both European and US regulatory environments and, due to its multiregional capabilities, it's ideal for integration in solutions requiring compliance to different geographical regions.



## Technical Specification Table

<b>Frequency Range</b>	<ul style="list-style-type: none"> <li>• 865.600÷867.600 MHz (ETSI EN 302 208 v. 3.1.1)</li> <li>• 902÷928 MHz (FCC part 15.247)</li> </ul>
<b>RF Power</b>	<ul style="list-style-type: none"> <li>• Up to 31.5 dBm (1.4 W) conducted (ETSI)</li> <li>• Up to 30 dBm (1 W) conducted (FCC)</li> </ul>
<b>RX Sensitivity</b>	-84 dBm – 10%PER, assuming 20 dB antenna RL @ 31.5 dBm output
<b>Number of Channels</b>	<ul style="list-style-type: none"> <li>• 4 channels (compliant to ETSI EN 302 208 v. 3.1.1)</li> <li>• 50 hopping channels (compliant to FCC part 15.247)</li> </ul>
<b>Standard Compliance</b>	EPC Class 1 Gen 2 - ISO18000-63
<b>CPU</b>	ARM9 @ 400 MHz on Atmel AT91SAM9G25
<b>Operating System</b>	Linux
<b>Receiving Capability</b>	<ul style="list-style-type: none"> <li>• Gen 2 Dense Reader Mode Management</li> <li>• Data rate up to 400 kbit/s</li> </ul>
<b>Connectivity</b>	<ul style="list-style-type: none"> <li>• RS232 Serial Communication (M12 connector) <ul style="list-style-type: none"> <li>• Baudrate up to 115.200 kbit/s</li> <li>• Databits: 8</li> <li>• Stopbit: 1</li> <li>• Parity: none</li> <li>• Flow control: none</li> </ul> </li> <li>• Ethernet 10/100/1000Base-T (M12 connector)</li> <li>• PoE standard IEEE 802.3af</li> </ul>
<b>I/O Interface</b>	<ul style="list-style-type: none"> <li>• M12 connector</li> <li>• 2 digital inputs optically isolated</li> <li>• 2 solid state photorelay outputs optically isolated (500mA max)</li> </ul>
<b>Antenna Connectors</b>	4 TNC Reverse Polarity
<b>Power Supply</b>	<ul style="list-style-type: none"> <li>• 9÷36 V DC power supply (12 W)</li> <li>• PoE standard IEEE 802.3af (12.95 W)</li> </ul>
<b>Status Indicators</b>	Multicolour LEDs: Power, Activity, Status and Applications
<b>IP Rating</b>	IP65
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>• (W)131 x (L)106 x (H)50 mm<sup>3</sup></li> <li>• 5.15 x 4.17 x 1.96 inches<sup>3</sup></li> </ul>
<b>Operating Temperature</b>	-10 °C to +55 °C
<b>Weight</b>	530 g

## Ordering Options

<b>WR4320PXAAAA</b>	Proton - Industrial Long Range Reader
<b>WR4320PXDKEU</b>	Proton - ETSI Dev. Kit
<b>WR4320PXDKUS</b>	Proton - FCC Dev. Kit
<b>WALIM0000006</b>	Proton power supply - EU
<b>WALIM0000007</b>	Proton power supply - US

