

UHF | RAIN - Stationary Reader CAEN - Proton

- RAIN RFID (UHF EPC Class1 Gen2, ISO 18000-63) compliant
- Up to 31.5 dBm (1 W) output power
- 4 TNC-EP Antenna ports
- IP65 in compact form factor
- PoE with M12 industrial connectors



UHF | RAIN - Stationary Reader Industrial grade & 4-Channels

CAEN RFID's Proton (Model R4320P) is a rugged long range UHF | RAIN - RFID reader from the easy2read© product line, well suited for installations in industrial environments.

The Proton reader has 4 antenna ports with a maximum power of 31.5 dBm, enabling the creation of UHF | RAIN - RFID portals for logistics. Its compact form factor and IP65 protection rating allows it to be installed outdoors or in harsh environments. With Power Over Ethernet, RS232 and GPIOs via industry standard M12 connectors, the Proton UHF | RAIN - RFID Reader is an ideal choice for industrial automation and Industry 4.0 solutions.

Based on an embedded Linux platform, the Proton is easily configurable via an internal web interface. System integrators can customise the reader's behaviour by installing Java code that has access to all RFID features and interfaces, allowing full customisation.

The Proton reader is compliant and can operate in both European and US regulatory environments, and it's multi-regional capabilities make it ideal for integration into solutions that require compliance in different geographical regions.

Common Applications

- Industrial Automation
- UHF RFID Portals
- RAIN RFID Tunnels
- Vehicle Identification
- Defence Industry



Proton UHF | RAIN - Long Range
Your partner for challenging
industrial 4.0 applications

TECHNICAL SPECIFICATIONS

Contactless Interface

Operating Frequency	865.600-867.600 MHz (ETSI EN 302 208 v. 3.3.1)
Supported Standards	EPC Class 1 Gen 2 - ISO18000-63
RF Power	Up to 31.5 dBm (1.4W) conducted (ETSI)
RF Power	-84 dBm - 10%PER assuming 20 dB antenna RL @ 31.5 dBm output
Receiving Capability	Gen 2 Dense Reader Mode Management Data rate up to 400 kbit/s
Antenna Connectors	4 x TNC Reverse Polarity
Number of Channels	4 channels (ETSI EN 302 208 V. 3.3.1) 50 hopping channels (FCC part 15.247)
Operation Modes	Standalone / Connected to host

Host Interface

Interface	RS232 Serial Communication Ethernet 10/100/1000 Base-T (PoE standard IEEE 802.3af)
Protocol	Serial Protocol / TCP/IP
Interface Settings (serial):	Baudrate: 9.6 to 921.6 kbps Databits: 8 Stopbit: 1 Parity: none Flow control: none

Physical Characteristics

Dimension	131 x 106 x 50 mm
Weight	530 g
Connector Type	M12 Connectors (Serial, Ethernet, I/O & Power)
IP Protection	IP 65
Temperature	-10 °C to +55 °C

Electrical Characteristics

Voltage	9 ÷ 36 V DC (12W) PoE standard IEEE 802.3af (12.95W)
CPU & Operating System	ARM9 @ 400 Mhz on Atmel AT91SAM9G25 Linux Operating System
I/O Interface	2 digital inputs 2 solid state photorelay outputs optically isolated (500mA max)
LED	Multicolour LEDs (Power / Activity / Status & Applications)

Certifications & Compliances

Certifications	CE, UKCA, FCC, REACH & RoHS
Compliances	RAIN ALLIANCE (ISO18000-63)

Drivers & Support

Supported OS	Works with any OS & µC
Supported Libraries	Visual C, .NET Standard 2.0, Swift, Java & Light C
Tools	Software Development Kit

Part No. / Model

25-RSR-C01-0009-01	Proton
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