

R3104C

Lepton³x4

25dBm 4-Port RAIN RFID Reader Module



BENEFITS	Ultra compact size	High Sensitivity	Molex data connector	IOIOI Serial interface	MMCX antenna connector	Wide voltage range

Features

- RAIN RFID (UHF EPC Class1 Gen2, ISO 18000-63) compliant
- Multiregional support
- Ultra compact size
- Up to 25 dBm (316 mW) output power
- 4 antenna ports
- Serial interface (TTL Levels)
- Low power consumption

Applications

- Handheld devices
- Multiregional label printers and applicators
- Points of sale readers
- Voice operated gloves
- Smart appliances for home automation
- Security and access management systems

Overview

The **Lepton³x4** (Model R3104C), an embedded reader of the easy2read[©] product line, is an ultra compact reader for low power, high performance RAIN RFID applications.

With programmable output power from 10 dBm to 25 dBm, the reader can detect tags at more than 2 m of distance (depending on antenna and tag dimensions).

Due to its low power consumption, the module is specifically designed to be easily integrated in battery powered devices.

The radio frequency core of the module is based on the **Impinj E310** IC that permits to achieve fast reading speed and to be used in dense reader and dense tag environments for top-class rated performances.

The compactness of the device allows to embed the **Lepton³x4** inside industrial handhelds, smartphone accessories and other compact form factor devices.

The **Lepton³x4** complies with and can operate in both European and US regulatory environments and, thanks to its multiregional capabilities, it's ideal for integration in devices requiring compliance to different geographical regions.

The **Lepton**³**x4** is designed on the basis of the **Lepton**³ with the aim to facilitate the integration for those who prefer to use connectors instead of automatic manufacturing required by the SMD form factor.





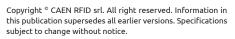


Technical Specification Table

Frequency Range	• 865.600÷867.600 MHz (ETSI EN 302 208 v. 3.3.1) • 902÷928 MHz (FCC part 15.247)					
RF Power	Configurable from 10 dBm to 25 dBm (from 10 mW to 316 mW) conducted power					
RX Sensitivity	• -72 dBm - 10%PER, assuming 20 dB antenna RL @ 25 dBm output					
Antenna VSWR Requir.	< 2:1 for optimal performance					
Antenna Connectors	4 MMCX jacks					
Frequency Tolerance	± 10 ppm over the entire temperature range					
Number of Channels	 4 channels (compliant to ETSI EN 302 208 v. 3.3.1) 50 hopping channels (compliant to FCC part 15.247) 					
Standard Compliance	EPC Class 1 Gen 2 - ISO18000-63					
Connectivity	 UART Serial Port: Baudrate from 9.6 to 921.6 kbps, default 921.6 kbps Databits: 8 Stopbit: 1 Parity: none Flow control: none 3.3 V I/O voltage level 					
I/O Interface	 4 I/O lines 3.3 V level Iout = 8 mA max. 					
Power Supply	3.2 ÷ 5.25 V DC					
Power Consumption	 800 mA @ 5 V - RF out = 25 dBm 5 mA in idle mode - Ready to receive commands 					
Dimensions	• (L)60 x (W)42 x (H)8.1 mm³ • 2.36 x 1.65 x 0.32 inches³					
Operating Temperature	-20 °C to +70 °C					
Weight	34 g					

Ordering Options

WR3104CXAAAA	Lepton3x4 - 25dBm Reader Module	
WR4320CXDKEU	Hadron, Rx101, Rx104 - ETSI Dev. Kit	
WR4320CXDKUS	Hadron, Rx101, Rx104 - FCC Dev. Kit	
WR4320CXEVBX	Hadron, Rx101, Rx104 Eval. Board	





CAEN RFID srl

via Vetraia, 11 - 55049 Viareggio (LU) - Italy Phone +39 0584 388398 - Fax +39 0584 388959 www.caenrfid.com - info@caenrfid.com