CAENRFID

R1270C

Quark^{UP}

500mW RAIN RFID
Ultra Compact Module

BENEFITS	Compact size	Low power consumption	Multi-regional support	USB	IOIOI Serial interface	

Features

- *RAIN RFID (UHF EPC Class1 Gen2, ISO 18000-63) compliant*
- *Multiregional support*
- *Ultra compact size*
- *Up to 27 dBm (500 mW) output power*
- *USB Full Speed interface*
- *Serial interface (TTL Levels)*
- *Low power consumption*

Applications

- *Handheld devices*
- *Multiregional label printers and applicators*
- *Points of sale readers*
- *Voice operated gloves*

Overview

The **Quark-Up** (Model R1270C), an embedded reader of the easy2read© product line, is a multiregional ultra compact reader for low power, high performance RAIN RFID applications.
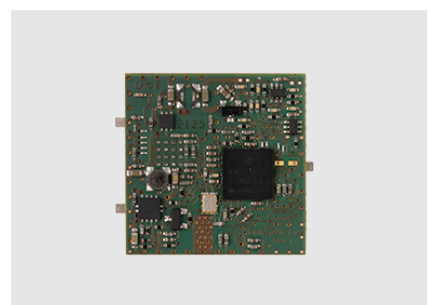
With programmable output power in 18 steps from 10 dBm to 27 dBm, the reader can detect tags at more than 3 m of distance (depending on antenna and tag dimensions).

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 permits to achieve fast reading and to be used in dense reader and dense tag environments for top-class rated performances.

The compactness of the device and the board-to-board connector allow to embed the **QuarkUp** inside the new small form factor industrial handhelds, smartphone accessories and other compact form factor devices.

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

Technical Specification Table

Frequency Range	• 865.600÷867.600 MHz (ETSI EN 302 208 v. 3.1.1) • 902÷928 MHz (FCC part 15.247)
RF Power	Configurable in 18 levels from 10 dBm to 27 dBm (from 10 mW to 500 mW) conducted power
Output Power Accuracy	± 1 dB
Antenna VSWR Requir.	< 2:1 for optimal performance
Antenna Connectors	1 U.FL type
Frequency Tolerance	± 10 ppm over the entire temperature range
Number of Channels	• 4 channels (compliant to ETSI EN 302 208 v. 3.1.1) • 50 hopping channels (compliant to FCC part 15.247)
Standard Compliance	EPC Class 1 Gen 2 - ISO18000-63

Connectivity	• USB Interface: USB 2.0 Full Speed (12 Mbit/s) device port
	• UART Serial Port:
	  • Baudrate up to 115.200 kbit/s
	  • 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 = 3 mA max.
Power Supply	5 V DC ± 5%
Power Consumption	• 2.7 W @ RF out = 27 dBm • 1.6 W @ RF out = 23 dBm • 0.15 W in idle mode
Dimensions	• (W)25 x (L)25 x (H)6 mm³ • 1.0 x 1.0 x 0.20 inches³
Operating Temperature	-10 °C to +55 °C
Weight	5 g

Ordering Options

WR1270CXAAAA	QuarkUp - Compact Embedded Reader
WR1270CXDKEU	QuarkUp - ETSI Dev. Kit
WR1270CXDKUS	QuarkUp - FCC Dev. Kit