

Quark - 1230CB

Embedded Ultra Compact RAIN RFID Reader

Features

- RAIN (UHF EPC Class1 Gen2, ISO 18000-63) Compliant
- Multi-regional Support
- Ultra Compact Size
- External Antenna Connector
- SW programmable output power up to 200mW (23dBm) conducted
- Low Power Consumption

Applications

- Handheld Device
- Multiregional Label Printers and Applicators
- Point of Sales Devices
- Voice Operated Gloves

General Info

The Quark (Model R1230CB), 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 15 steps from 9dBm to 23dBm, the reader can detect tags at more than 1mt 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 as well as powered directly by a standard USB port.

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 R1230CB inside the new small form factor industrial handhelds, smartphone accessories, small USB dongles and other compact form factor devices.

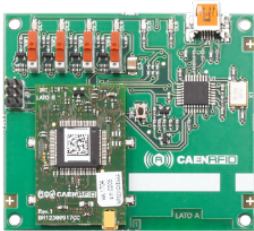
The R1230CB complies with and can operate in both European and US regulatory environments and due to its multiregional capabilities, it is ideal for integration in devices requiring compliance to different geographical regions.



- Embedded Readers
- Mobile Readers
- Integrated Readers
- Fixed Readers
- Temperature Loggers

easy2read[®] product line

The easy2read[®] product family constitutes a complete and reliable product line of RAIN RFID readers for any Auto-ID need. A reading range from a few centimetres up to 7-8 metres distance makes the easy2read[®] family suitable for applications such as access control, RFID gates, desktop reading or OEM modules for integration into handheld or printer devices.



Technical Specifications Table

Frequency Range	– 865.600÷867.600 (ETSI EN 302 208 v3.1.1) – 902÷928 MHz (FCC part 15.247)
RF Power	Programmable in 15 levels (1dB step) from 9dBm to 23dBm (from 8mW to 200mW) conducted
Output Power Accuracy	+/- 1dB
Antenna VSWR Requirement	2:1 or better for optimum performances
Antenna Connector	Nr.1 MMCX type
Frequency Tolerance	±10 ppm over the entire temperature range
Number of Channels	– 4 channels (compliant to ETSI EN 302 208 v3.1.1) – 50 hopping channels (compliant to FCC part 15.247) All subsets of 902-928 MHz band are supported via FW upgrade
Standard Compliance	EPC C1 G2 / ISO18000-63
Digital I/O	4 I/O lines 3.3V out @ 3mA; 3.3V input level
Connectivity	UART Serial Port: – Baudrate: up to 115200 – Databits: 8 – Stopbits: 1 – Parity: none – Flow control: none – 3.3 V I/O Voltage Level
Dimensions	(W)25 x (L)40 x (H)6 mm ³ (1.0 x 1.6 x 0.2 inch ³)
Power Consumption	1.6W @ RF out = 23dBm 1.3W @ RF out = 17dBm 0.25W in idle mode
DC Power	2.5 VDC ÷ 5.5 VDC
Operating Temperature	-10 °C to +55 °C
Weight	8 g

Ordering Options

Code	Description
WR1230CXBAAA	R1230CB - Quark- Low-Power OEM UHF Compact RFID Reader
WR1230CBDKEU	R1230CBDK - Development kit with Quark reader, antenna, tags

Accessories

Code	Description
WR1230CBEVB	Quark Reader Evaluation Board allows to manage the R1230CB Quark Reader directly via USB Interface. This board particularly suited for Quark reader evaluation and SW development purposes.



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