



R1230

**OEM UHF Multiregional
Ultra Compact Reader**

**Cost effective
and low power**



Features

- Multi-Regional Support
- EPC C1 G2, ISO 18000-6C Compliant
- Ultra Compact Size
- External Antenna Connector
- SW programmable output power up to 200mW (23dBm) conducted
- Low Power Consumption

Applications

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

General Info

The Quark (Model R1230), OEM reader of the easy2read® Family, is an UHF multiregional ultra compact reader for low-power, high performances UHF RFID applications.

With programmable output power in 15 steps from 9dBm to 23dBm, the reader can detect tags at more than 1 mt 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 R1230 inside the new small form factor industrial handhelds, smartphone accessories, small USB dongles and other compact form factor devices.

The R1230 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.



easy2read® Family

The easy2read® family constitutes a complete and reliable product line of 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, UHF gates, desktop reading or OEM modules for integration into handheld or printer devices.

- OEM Readers
- Fixed Readers
- Desktop Readers

Technical Specifications Table

Frequency Range	902÷928 MHz (FCC part 15) 865.600÷867.600 MHz (ETSI EN 302 208)
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 temp. range
Number of Channels	4 channels (compliant to ETSI EN 302 208) 50 hopping channels (compliant to FCC part 15.247) All subsets of 902-928 MHz band are supported
Std. Compliance	EPC C1 G2 / ISO18000-6C
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	2.5VDC ÷ 5.5VDC
Operating Temp.	-10 °C to +55 °C
Weight	8 g

Ordering Options

Code Description

Reader

WR1230CXBAAA R1230CB - Quark Low Power OEM UHF Compact RFID Reader

Development kit

WR1230CBDKEU R1230CBDK - Development kit with Quark reader, antenna, tags

Accessories

WR1230ADAT01 R1230ADAT - Quark Adapter Board

WR1230CBEVBX R1230CBEVB - Quark Reader Evaluation Board

WANTENNAX004 Linear polarized 3db gain 870 MHz PIFA antenna

WANTENNAX008 Linear polarized antenna for handheld units 865 - 870 MHz

WANTENNAX009 Linear polarized antenna for printers 865 - 870 MHz

WANTENNAX010 Linear polarized 3db gain 915 MHz PIFA antenna

WANTENNAX011 Linear polarized antenna for handheld units 915 MHz

WANTENNAX012 Linear polarized antenna for printers 902 - 928 MHz



CAENRFID S.r.L. - Via Vetraria, 11 - 55049 Viareggio - Italy
Tel. +39.0584.388.398 - Fax +39.0584.388.959 - info@caenrfid.com - www.caenrfid.com

For more information, visit our web site:
www.caenrfid.com

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