

Descartes IoT READER

Hardware Specification



Images are indicative only, actual product may vary

Name of the Product:	Descartes IoT Reader
Model:	RDR001
Revisions:	RDR001i
Description:	Bluetooth Low Energy (BLE) Reader used to monitor movement of goods and equipment with attached Descartes IoT Tags.
Size:	8.246" L x 5.151" W x 3.125" (209.45mm x 130.84mm x 79.38mm) <i>excluding cellular antenna</i>
DC Input:	12VDC, 3A
DC Socket:	Molex Mini-fit 2way plug (rating with Molex Mini-fit 2way receptacle)
External Power Supply:	Switching Power Supply, Input 100~240VAC 50/60Hz, Output 12VDC 3A

Power Consumption:	700mA – Idle 2300mA - Max
Temperature Range:	0°C to +50°C
Reader Weight:	35.41 oz. (1004 grams)
IP Protection Class:	IPX0

Compute Board:	Up Board
CPU:	Intel® Atom™ x5 Z8350 Processor
Memory:	32GB eMMC Flash, 4GB DDR3L RAM

Indication LEDs:	Blue and Green/Red
Bluetooth Type:	Bluetooth Low Energy 4.2
Bluetooth Sensitivity	-98dBm
Bluetooth Max Power Output:	+4dBm
Bluetooth Antenna:	< +2.8dBi Gain Antenna AMORIS External Antenna, Omni Directional
Support Frequencies:	2.4GHz ISM, 40 BLE Channels & Adv. Ch. No. 37, 38, 39
No. of BLE Modules	4 (built in)

Cellular:	Quectel EG25-G Mini PCIe
Cellular Sensitivity:	-108dBm
Cellular Max Power Output:	+33dBm (2W)
Cellular Antennas:	< +1dBi Gain EAd WTR7270 External Antenna, Omni Directional YF002A8AA internal adhesive diversity Antenna

Supported Frequencies: LTE-FDD:
 B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28
 LTE-TDD: B38/B39/B40/B41
 WCDMA: B1/B2/B4/B5/B6/B8/B19
 GSM: B2/B3/B5/B8

Cellular Data Rate: < 50 Mbps (UL)

SIM Card Size: Micro Sim

Cellular SIMS supported: Spark Jasper / AT&T Jasper SIMS

WiFi Interface: LB Link USB WiFi Dongle

WiFi Type: 802.11b/g/n

WiFi Security: WPA2 Personal and Enterprise Security

WiFi TX Power: 18dBm Max

WiFi RX Sensitivity: -95dBm Max

WiFi Frequency: 2.4-2.4835GHz

WiFi Antenna: Built in, Omni Directional

Certifications:

Core Reader (RDR001)	Bluetooth	D037239 (RDR001)
	FCC 2.1091:2020	Passed
	FCC 15.107:2020 Class A	Passed
	FCC 15.109:2020 Class A	Passed
	FCC 15.109(g):2020 Class A	Passed
	ICES-003:2016 2017 2019 Class A	Passed
	RSS-102, Issue 5.2015	Passed
	CE / RoHS	Please see “CE - Full EU DoC” document
	IP Rating	IPX0
Up Board:	FCC	Part 15 Class A
	IC	ICES-003
	REACH SVH	Passed
	CE	EN55011/EN61000-6-1
		EN55022/EN55024
	RoHS	Passed
NINA-B111	FCC	XPYNINAB1
	IC	8595A-NINAB1
	CE / RoHS	See NINA-B1 Declaration of Conformity
	Japan Radio EC	Complies
	NCC Taiwan	CCAJ16LP6460T0
	KCC South Korea	MSIP-CRM-ULX-NINA-B111
	Anatel Brazil	MSIP-CRM-ULX-NINA-B111
	AS/NZS	Complies with AS/NZS 4268:2012/AMDT 1:2013
	ICASA	TA-2016/2760 APPROVED
	Bluetooth	D032220 (85618)
Quectel EG25-G	FCC	XMR201903EG25G
	IC	10224A-201903EG25G
	CE	Declaration of Conformity
	RoHS	IEC63000:2018
	ANATEL	02828-19-07968
LB Link BL-WN2210	FCC	S8J-WN2210
	CE	CE Marked
AdapterTech 12V Supply ATS036T-W120V [1] [2]	FCC	Part 15 Class B
	CE / RoHS	Complies with: EN61000-3-2,3, EN55032, EN55024