

Hardware Specification



Images are indicative only, actual product may vary

| | |
|------------------------|---|
| Name of the Product: | Descartes IoT Reader |
| Model: | RDR001 |
| Revisions: | RDR001G< |
| 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 (Mating 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) |

| | |
|-------------------------------|--|
| Compute Board: | Up Board |
| CPU: | Intel® Atom™ x5 Z8350 Processor |
| Memory: | 32GB eMMC Flash, 4GB DDR3L RAM |
| Battery: | Single Cell Rechargeable Lithium-Ion Battery rated at 1300mAh for UPS functions. Each Battery weighs 40g & contains .4g amount of lithium per battery. |
| Core Communications Board: | BLE Reader + Power Supply Rev22 |
| 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 (built-in) | 4 |
| Cellular: | Quectel EG25-G Mini PCIe |
| Cellular Sensitivity: | |
| Cellular Max Power Output: | |
| Cellular Antennas: | < +1dBi Gain EAd WTR7270 External Antenna, Omni Directional DIVERSITY |

| | |
|--------------------------|--|
| 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 | Complies |
| Up Board: | FCC | Part 15 Class A |
| | IC | ICES-003 |
| | REACH SVH | Passed |
| | CE | EN55011/EN61000-6-1 |
| | | EN55022/EN55024 |
| | RoHS | Passed |
| NINI-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 | Passed |
| | RoHS | IEC63000:2018 |
| | ANATEL | 02828-19-07968 |
| LB Link BL-WN2210 | FCC | S8J-WN2210 |
| | CE | CE Marked |
| AdapterTech 12V Supply | FCC | Part 15 Class B |
| | CE / RoHS | Complies |