

POWERFUL. VERSATILE. RELIABLE.

RDL-2000

Datasheet RDL-2000 PTP Broadband Radio

The RDL-2000 high-throughput carrier grade broadband radio solves middle-mile challenges by providing cost-effective, reliable point-to-point (PTP) connections in the most challenging conditions. The RDL-2000's high throughput and low latency helps telecom service providers deploy next generation 3G and 4G / LTE networks. Enterprises, local and state governments and the oil and gas industry are realizing immediate gains and lower costs through inherent support for advanced applications such as transparent LAN, voice-over-Internet protocol (VoIP) and high-quality video.

Operating in the 4.9 GHz to 5.8 GHz band, the RDL-2000 comes equipped with RapidLINK software to deliver up to 200 Mbps Ethernet data rate.

Powered by Redline's orthogonal frequency-division multiplexing (OFDM) technology, and utilizing 2 X 2 multiple-in, multiple-out (MIMO) technology, the RDL-2000 radio achieves high throughput, a latency of less than two milliseconds, and excellent line-of-sight (LOS) and non-line-of-sight (NLOS) ranges.

The RDL-2000 provides intelligent interference sensing and suppression (IIS) functionality that delivers enhanced link stability and throughput performance in noisy spectrum environments. User configurable 5–40 MHz channel size provides additional flexibility in the efficient use of radio spectrum thereby avoiding spectrum congestion.

Available with a wide selection of antennas, this compact, weatherproof, all-outdoor solution can be installed anywhere. Its low power consumption allows the RDL-2000 to be powered over the Ethernet cable (PoE), saving hundreds of dollars on installation. Link setup is fast and efficient using the audible antenna alignment tool and the Redline Link Manager wizard running on any Windows® PC, which includes real-time RSSI and PER displays, and a built-in radio frequency analyzer.

Redline's ClearView NMS network management software lets IT professionals quickly deploy and manage the RDL-2000 from any location. To streamline your order process and simplify field installation, the RDL-2000 is shipped as a 'system-in-a-box' solution that provides the necessary peripherals to install each radio.

AT A GLANCE

Optimized for 4G / LTE networks

4.9 to 5.8 GHz band support

Up to 200 Mbps wireless data rate with 2 x 2 MIMO for wire-speed Full Duplex 100Base-T

All-outdoor low power solution requires less than 6 W

Low end-to-end latency (<2 ms)

Adaptive modulation and coding

Multiple channel sizes: 5, 10, 20 and 40 MHz

Dynamic time division duplex (TDD) transmission

Dual port PoE for link cascade and redundant solutions

With its high throughput, excellent range, low latency and AES 128 encryption, the RDL-2000 is an ideal choice to quickly deploy high-capacity backhaul applications.

REDCARE SUPPORT

Redline's products are backed by RedCARE, one of best support programs in the industry, providing responsive customer and solution support everywhere that Redline's products are available. RedCARE ensures consistent, broadband wireless connectivity for our customers.

ABOUT REDLINE COMMUNICATIONS

Redline Communications (www.rdlcom.com) is a leading provider of specialized broadband wireless systems used to cost-effectively deploy distributed applications and services. Redline systems are used by local and state governments to quickly and easily deploy or extend their public safety networks; by oil and gas companies to connect their digital oil fields; by service providers and enterprises to bring dedicated Internet access to business users; and by the military to rapidly deploy secure networks. For more than 10 years, Redline has been delivering powerful, versatile and reliable wireless solutions through certified partners in the Americas, the Middle East, and Africa.

TECHNICAL SPECIFICATIONS

System Capability	LOS, optical-LOS, and non-LOS
Wireless Transmission	OFDM (orthogonal frequency-division multiplexing)
RF Band	4.940 – 5.850 GHz ¹ , TDD (time-division duplexing) 2 x 2 MIMO
Channel Size	5, 10, 20, and 40 MHz ¹ (software selectable)
Data Rate	300 Mbps - UBR 200 Mbps - Ethernet Rate
Processing Speed	50,000 PPS
Max Range	50+ km (30+ mi)
Max Tx Power	+22 dBm (region specific)
Rx Sensitivity	-95 dBm (BPSK)
PoE Cable	Up to 91 m (300 ft)
Network Attributes	Transparent bridge DHCP pass-through
Modulation	BPSK to 64 QAM Bi directional dynamic adaptive
Dynamic Control	DFS, ATPC
Management	Redline Link Manager, Telnet, ClearView NMS
MAC	PTP, Fast ARQ (Automatic Retransmit), IIS (Intelligent Interference Sensing), ACM (Adaptive Coding & Modulation), FEC (Forward Error Correction)
Network Connection	2 x 10/100 Ethernet (RJ-45)
Wireless Encryption	AES-128
Operating Temp	-35 °C to 60 °C (-30 °F to 140 °F)
Humidity	100% humidity, condensing
Power Consumption	Max 6 W, PoE
Power Supply	110/220/240 VAC 50/60 Hz
Compliance	Safety: IEC EN, and UL/CSA 60950 EMC: EN 301 489-1, EN 301 489-17 Industry Canada RSS 210 FCC Part 15 ETSI EN 302 502, EN 301 893
Dimensions	180 mm x 180 mm x 40 mm (7 in x 7 in x 1.5 in)
Weight	1.5 Kg (3.4 lbs) without bracket or antenna

¹ Availability restricted by regional regulatory certification

- ETSI: 5.4 – 5.8 GHz
- FCC, IC: 5.8 GHz
- Other: 4.9 – 5.8 GHz

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