



**ELLIPSE**

## Wireless Gigabit Ethernet TCP/IP Base Station or Remote for Dedicated High Capacity Data Transport/Backhaul

The RDL-3100 XG provides high-capacity reliable wireless transport for small sector trunking and backhaul services.

The RDL-3100 XG low latency system is used for transporting multiple TCP/IP based services including transparent LAN, MPLS, IoT, M2M, small cell backhaul, VoIP and high-resolution video.

The RDL-3100 XG system is simple to setup and operate to provide hitless throughput up to 466 Mbps over the air (45 MHz channel) for PTP and small sector deployments comprised of a base station and up to 4 remotes.

The Ellipse is also a drop-in replacement for the RDL-3000 XP Ellipse 4.9-5.8 GHz base station with hitless throughput up to 186 Mbps (20 MHz channel) for large sector deployments of up to 120 RDL-3000 XP and RDL-3100 XG remote terminals.

### FEATURES AND BENEFITS

- Highly reliable transport hub intended for high throughput, low latency PTP/PMP applications
- High throughput for concurrent transport of M2M telemetry and telecontrol, data, video and voice services
- Durable all-weather enclosure for reliable operation in extreme temperatures and environmental conditions
- Over-the-air monitoring, configuration and software keyed features enable upgrades without physical access
- Software-defined architecture enhances reliability and service lifetime

### PRODUCT COMPLEMENTS

A full line of carrier grade antennas are available to address all your deployment challenges. Use Redline's ClearView NMS for complete element management and over-the-air software upgrades. Redline provides a complete selection of peripherals and professional services for all your deployment needs.

### UNIFIED GLOBAL SOLUTIONS

Redline's patented UWT™ technology provides a truly unified wireless networking solution—across the spectrum, across your company and across the globe—enabling secure, reliable, high-speed connectivity to people and smart devices everywhere.



### SYSTEM AT A GLANCE

Outdoor software-defined wireless base station for PTP and PMP applications

Operation between 4.9 - 5.8 GHz

Reliable fast transport of M2M, data, HD video and voice

Geo-location & timing using built-in GPS

Wide selection of MIMO antennas

-40 to 70 °C operating range using dynamic and thermal dissipation (no moving parts)

High-grade cyber security features

Low latency supports time-sensitive applications

Low power consumption suitable for alternative power

## RDL-3100 XG ELLIPSE SPECIFICATIONS

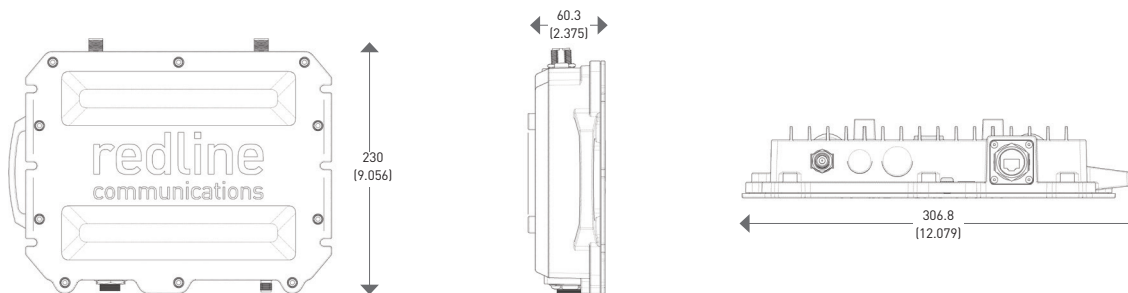
<b>Capability</b>	LOS/OLoS PTP Controller/Remote; PMP Base Station
<b>Wireless transmission</b>	OFDM (orthogonal frequency-division, multiplexing), TDD/TDMA 2 x 2 MIMO A/B with STBC & MRRC
<b>RF Band (MHz)</b>	4940-5875 <sup>1</sup>
<b>Channel Size (MHZ)</b>	v2.x: 5, 10, 20, 30, 40, 45 (software selectable) <sup>1</sup> v3.x: 0.875, 1.25, 1.75, 2.5, 3.5, 5, 7, 10, 14, 20 (software selectable) <sup>1</sup>
<b>Modulation &amp; Coding</b>	BPSK 1/2 to 256 QAM 7/8 <sup>1</sup>
<b>System Capacity</b>	v2.x: Up to 466 Mbps UBR <sup>1</sup> , 3.x: Up to 186 Mbps UBR <sup>1</sup>
<b>Number of Remotes</b>	v2.x: 4, v3.x: 120
<b>Max Range</b>	150 km (93.75 mi) <sup>2</sup>
<b>Max Tx Power</b>	+25 dBm <sup>1</sup> (Max combined tx power, MIMO mode/frequency band specific)
<b>Antenna Info</b>	External MIMO sectoral or omni directional
<b>Wireless QoS</b>	Dynamic Spectrum Access & Management <sup>1</sup>
<b>MAC</b>	Per link: Dynamic ARQ, dynamic adaptive modulation, Fast Fusion Link Adaptation, v2.x: Fixed frame, v3.x: Fixed frame and dynamic frame
<b>Security</b>	AES-128/256 (OTA, FIPS 197 compliant); HTTPS (SSL), SSH (CLI), SNMP v3; MAC-based Mutual Authentication; ECDSA Certificates Authentication <sup>1</sup>
<b>Connection</b>	10/100/1000 Ethernet (RJ-45), 2xRF N(f), 1xGPS TNC(f)
<b>Layer 2</b>	v2.x: 435 Mbps max. aggregate <sup>1</sup> , v3.x: 160 Mbps max. aggregate <sup>1</sup>
<b>Latency</b>	<10 ms <sup>1</sup>
<b>Attributes</b>	Auto. link distance ranging, transparent bridge, DHCP pass-through, 802.1Q VLAN
<b>Network QoS</b>	CIR, PIR support, multiple services per terminal, 802.3x, 802.1p
<b>Management</b>	Redline ClearView NMS, SNMP v2/v3, HTTP/HTTPS (Web), Telnet/SSH (CLI), RADIUS (User Authentication)
<b>Provisioning</b>	MAC-Based; Template-based <sup>1</sup> ; Automatic using Redline ClearView NMS <sup>1</sup>
<b>Redundancy</b>	1+1 warm standby, HSR, PRP or RSTP compatible
<b>Temperature</b>	-40 to 70 °C (-40 to 158 °F)
<b>Enclosure</b>	IP67 (IEC 60259)
<b>Humidity</b>	100% humidity, condensing
<b>Location &amp; Timing</b>	Built-in GPS
<b>Surge Protection</b>	Built-in: PoE and RF ports
<b>Power</b>	<15W; Standard IEEE 802.3af (PoE); CAT5e cable 100m (330 ft) max.

All specifications are subject to change without notice.

1. Availability restricted by regional regulations, model type, software version and purchased product options;

2. Channel Size Dependent

## DRAWINGS



Dimensions are in millimeters (inches)

## Compliance

Safety: IEC, EN, and UL/CSA 60950

EMC: EN 301 489-1, EN 301 489-17

5.8 GHz<sup>1</sup>: IC RSS-210, FCC Part 15,  
ETSI EN 302 502

5.4 GHz<sup>1</sup>: IC RSS-210, FCC Part 15,  
ETSI EN 301 893

5.2 GHz<sup>1</sup>: IC RSS-210, FCC Part 15

4.9 GHz<sup>1</sup>: IC RSS-111, FCC Part 90

Security: FIPS 197 Compliant



## Physical Attributes

### Dimensions

306.8 x 230 x 60.3 mm (12.079 x 9.06 x 2.375 in)

### Weight

2.7 kg (6.0 lbs) without bracket or antenna

### Patent No.

US 9,468,028 B2

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