

## ELLIPSE

### Wireless Base Station for Redline Outdoor Wireless TCP/IP Data Terminals



The RDL-3000 Ellipse manages all security, traffic scheduling and Quality of Service (QoS) functions for Redline's extensive family of outdoor wireless TCP/IP remote data terminals. This highly configurable wireless base station features powerful processing capabilities to reliably transport any mix of wireless traffic between the base station and multiple remote sites.

#### FEATURES AND BENEFITS

- Highly reliable transport hub supports all RDL-3000 remote wireless data terminals including auto-acquire systems
- 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

The Ellipse base station is fully compatible with all Redline RDL-3000 wireless remote terminals. 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  
120 Mbps wireless base station  
for PMP and PTP applications

Supports for all RDL-3000  
remote terminals including  
auto-acquire systems

Reliable fast transport of M2M,  
data, HD video and voice at  
many remote sites

Geo-location using built-in GPS

Wide selection of MIMO  
antennas

-40 to 75 °C operating range  
using dynamic and thermal  
dissipation (no moving parts)

High-grade cyber security  
features

Very low latency supports  
time-sensitive applications

Low power requirement suitable  
for solar applications

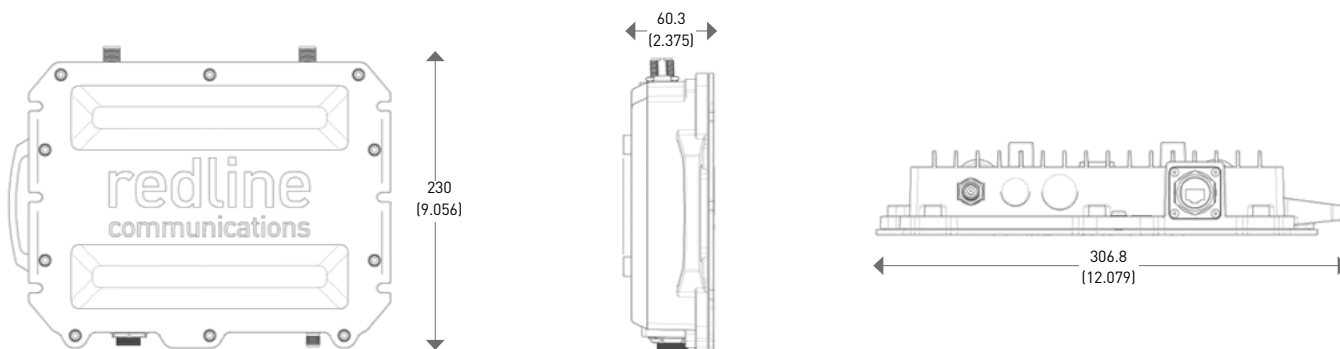
## ELLIPSE SPECIFICATIONS

<b>Capability</b>	LOS/0LOS/NLOS PMP Base Station, PTP Terminal
<b>Wireless transmission</b>	OFDM (orthogonal frequency-division, multiplexing), TDD, 2 x 2 A/B MIMO
<b>RF Band (MHz)</b>	470-698 <sup>1</sup> , 2000-2300 <sup>1</sup> , 2300-2700 <sup>1</sup> , 3300-3800 <sup>1</sup> , 4940-5875 <sup>1</sup>
<b>Channel Size (MHz)</b>	3.5/5/7/14, 5/10/20, 6/12 software selectable <sup>1</sup>
<b>Modulation</b>	BPSK to 64 QAM, TDMA
<b>Data Rate</b>	Up to 120 Mbps UBR
<b>Max Range</b>	100 km (66 mi)
<b>Max Tx Power</b>	+28 dBm <sup>1</sup> (MIMO, frequency band specific)
<b>Antenna Info</b>	External MIMO
<b>Wireless QoS</b>	Dynamic Spectrum Access & Management <sup>1</sup>
<b>MAC</b>	Per link: dynamic ARQ, dynamic adaptive modulation, dynamic and fixed TDD
<b>Encryption (OTA)</b>	AES-128 <sup>1</sup> and AES-256 <sup>1</sup> (software keyed)
<b>Authentication</b>	X.509 Certificates (software keyed)
<b>Connection</b>	10/100 Ethernet (RJ-45), 2xRF N(f), GPS TNC(f)
<b>Ethernet Rate</b>	Up to 100 Mbps
<b>Latency</b>	<10 ms
<b>Processing (PPS)</b>	>150,000
<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/Q
<b>Management</b>	ClearView NMS, SNMP v2/v3, HTTP (Web), HTTPS (SSL), Telnet, SSH, RADIUS
<b>Temperature</b>	-40 to 75 °C [-40 to 167 °F] <sup>3</sup>
<b>Enclosure</b>	IP67 (IEC 60259)
<b>Humidity</b>	100% humidity, condensing
<b>Surge Protection</b>	Built-in: PoE and RF ports
<b>GPS</b>	Built-in (software keyed)
<b>Power</b>	Standard IEEE 802.3at (PoE), cable 91 m (300 ft) max.

All specifications are subject to change without notice.

1. Availability restricted by regional regulations or product options; 2. Pending; 3. UHF systems only: 60 °C (140 °F); 4. In Process

## 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

3.65-3.70 GHz<sup>1</sup>: IC RSS-197, FCC Part 90Z

3.5 GHz<sup>1</sup>: IC RSS-192

3.3-3.8 GHz<sup>1</sup>: ETSI EN 302 326-2

2.6 GHz<sup>1</sup>: EN 302-544

2.4 GHz<sup>1</sup>: IC RSS-210, ETSI 300-328, FCC Part 15C<sup>2</sup>

2.3 GHz<sup>1</sup>: IC RSS-195

2.1 GHz<sup>1</sup>: (2.025-2.110 GHz<sup>1</sup>, 2.200-2.290 GHz<sup>1</sup>) ITU-R F.1098

600 MHz<sup>1</sup>: IC RSS-196, FCC Part 15H

Security: FIPS 140-2<sup>4</sup>



**RoHS**  
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

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