



ELLIPSE

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

The RDL-3000 XP 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 XP 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 XP 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
186.6 Mbps wireless base
station for PMP and PTP
applications

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

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

Geo-location & timing 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

Certified for hazardous locations

FIPS-140-2 Certified

RDL-3000 XP ELLIPSE SPECIFICATIONS

Max Tx Power	+31 dBm ¹ (Max combined tx power, MIMO mode/frequency band specific)
RF Band (MHz)	470-698 ¹ , 2000-2300 ¹ , 2300-2700 ¹ , 3300-3800 ¹ , 4940-5875 ¹
Antenna Info	External MIMO sectoral or omni directional
Capability	LOS/OLOS/NLOS software-defined PMP Base Station ¹ or PTP terminal ¹
Wireless QoS	Auto link distance ranging, auto channel scanning, optimal channel selection, ATPC, DFS
Transmission	OFDM (orthogonal frequency-division multiplexing), TDD/TDMA 2 x 2 MIMO A/B with STBC & MRRC, high-rejection Tx/Rx filtering
Throughput	Up to 186.6 Mbps ¹ UBR
Channel Size (MHz)	0.875/1.25/1.75/2.5/3.5/5/6/7/10/12/14/20 [software selectable ¹]
Modulation & Coding	BPSK to 256 QAM 7/8 ¹
Spectral Efficiency	9.3 bits per second per Hertz
Channel Efficiency	Up to 93%
Max Range	150 km (93 mi)
Number of Remotes	120
Security	Management Encryption: TLS v1.2, AES-256, SHA1, Device Authentication: ECDSA digital signature-based authentication or MAC-based mutual authentication, Data Encryption: AES-128/256 with ECDH secure key exchange (over-the-air, FIPS 197 compliant), NIST FIPS-140-2
Network Features	Transparent bridge, DHCP pass-through, 802.1Q VLAN (Q-in-Q), VLAN Whitelisting, Syslog, SNMP, spectrum analyzer
Layer 2	160 Mbps aggregate ¹
Latency	<10 ms
Processing (PPS)	>280,000
MAC	Per link: dynamic ARQ, dynamic adaptive modulation, dynamic and fixed frame, Fast Fusion Link Adaptation
QoS	802.1p, 802.3x, CIR & PIR settings, up to 8 services per terminal
Management Interface	Redline ClearView NMS, SNMP v2c/v3, HTTP/HTTPS (Web), Telnet/SSH (CLI), Management VLAN tagging, RADIUS User Authentication
Provisioning	MAC-Based; Template-based ¹ ; Automatic using Redline ClearView NMS ¹
Redundancy	1+1 Warm Standby ¹ , HSR, PRP or RSTP compatible
Location & Timing	Built-in GPS ¹
Power	<17W; Standard IEEE 802.3at (PoE); CAT5 cable 100m (330 ft) max
Temperature	-40 to 75 °C (-40 to 167 °F) ³
Connections	10/100 Ethernet (RJ-45), 2xRF N(f), GPS TNC(f)
Surge Protection	Built-in: PoE and RF ports
Enclosure	IP67 (IEC 60259)
Humidity	100% humidity, condensing

Compliance

Safety: IEC, EN, and UL/CSA 60950

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

5.8 GHz¹: IC RSS-210, FCC Part 15, ETSI EN 302 502

5.4 GHz¹: IC RSS-210, FCC Part 15, ETSI EN 301 893

5.2 GHz¹: IC RSS-210, FCC Part 15

4.9 GHz¹: IC RSS-111, FCC Part 90

3.65-3.70 GHz¹: IC RSS-197, FCC Part 90Z

3.5 GHz¹: IC RSS-192

3.3-3.8 GHz¹: ETSI EN 302 326-2

2.6 GHz¹: EN 302-544

2.496-2.690 GHz¹: FCC Part 27

2.4 GHz¹: IC RSS-210, ETSI 300-328, FCC Part 15C²

2.3 GHz¹: IC RSS-195

2.1 GHz¹: [2.025-2.110 GHz¹, 2.200-2.290 GHz¹] ITU-R F.1098

600 MHz¹: IC RSS-196, FCC Part 15H

HAZ: ATEX/IECEx: Zone 2, CSA: Class 1 Div 2

Security: FIPS 140-2 Certified



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

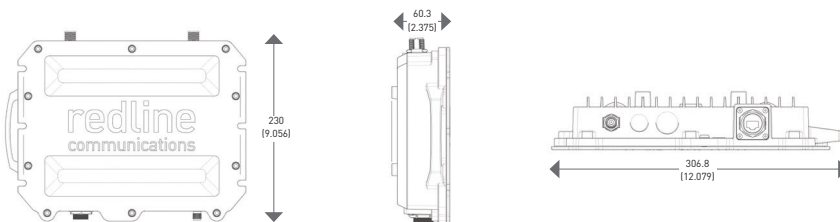
Patent No.

US 9,468,028 B2

All specifications are subject to change without notice.

1. Availability restricted by regional regulations, model type, software version and purchased product options; 2. Pending; 3. UHF systems only: 60 °C (140 °F)

DRAWINGS



Dimensions are in millimeters (inches)

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