

4940-5875 MHz Wireless Remote Subscriber for Premium Wireless Access

The Enterprise wireless Customer Premise Equipment (CPE) provides high performance TCP/IP transport for dedicated access, trunking and midrange backhaul applications. Either deployed in pairs for point-to-point (PTP) service or connected from multiple sites to the Redline Ellipse series base station in point-to-multipoint (PMP) applications, Enterprise terminals economically deliver reliable, simultaneous voice, data and video services.

Superior performance allows for lower antenna heights and significantly reduced deployment costs. Flexible mounting options and full over-the-air provisioning lowers upfront costs and yields faster ROI.

Enterprise CPE offers the most cost-effective solution while Enterprise XR and Enterprise RF meet the challenge of sites requiring extra power or extended distance.

ENTERPRISE FEATURES

- Installs in minutes on buildings and street furniture
- Push all provisioning (SLAs), upgrades and Pay-as-You-Grow features over-the-air
- Comprehensive warranty, maintenance and optimization packages for lowest TCO
- □ Supported by industry's first CRM-integrated auto-provisioning system

REDLINE'S TECHNOLOGY ADVANTAGE

Redline's award winning Virtual FiberTM system is advanced technology that delivers multipoint access or transport quickly and cost-efficiently. The unsurpassed fixed-wireless and nomadic-wireless solution has all your communication needs covered, while easily outperforming traditional point-to-point microwave applications.



SYSTEM AT A GLANCE

High performance wireless terminal for PTP and PMP

Three models CPE/XR/RF meet all your deployment needs

Approved bands in 4940-5875 MHz with over 10 selectable channel sizes

Simple Layer 2 network integration

Field-proven in complex urban environments

Multiple user-defined service levels per terminal

High-grade cyber security features

Small footprint and low power requirement



4940-5875 MHZ WIRELESS REMOTE SUBSCRIBER - SPECIFICATIONS

Capability	LOS/OLOS software-defined PMP (std.) or PTP terminal [software keyed option] 1
Channel Access	Scheduler with ARQ (Automatic Repeat Request)
Channel Efficiency	Up to 93%
Channel Size	0.875/1.75/3.5/7/14 ; 1.25/2.5/5/10/20 MHz [software selectable] ¹
Modulation & Coding	BPSK to 256 QAM 7/81
RF Band	4940-5875 MHz ¹
RF Features	Dynamic and multiple Fixed Frame profiles; Fast Fusion Link Adaptation; Frequency scanning; Spectrum Analyzer
Spectral Efficiency	9.3 bits per second per Hertz
Transmission	OFDM, TDD/TDMA 2 x 2 MIMO A/B with STBC & MRRC, high-rejection Tx/Rx filtering
Wireless Throughput	Up to 186.6 Mbps UBR ¹
NETWORK	
Latency	<10 ms
Layer 2	160 Mbps max. aggregate ¹
Management Interface	Redline ClearView NMS, SNMP v2c/v3, HTTP/HTTPS (Web), Telnet/ SSH (CLI), Management VLAN tagging, RADIUS User Authentication, OTA software upgrades
Metered Data Speeds	From 512 Kbps to Unlimited (Software keyed option) ¹
Network Features	Transparent bridge, DHCP pass-through, 802.1Q VLAN (Q-in-Q), VLAN, Whitelisting, Syslog, SNTP
Packet Processing	>280,000 Packets/second
Provisioning	MAC-Based; Template-based; Automatic using Redline ClearView NMS ¹
QoS	802.1p, 802.3x, CIR & PIR settings, up to 8 services per terminal
Security	Management Encryption: TLS v1.2, AES-256, SHA1
ENVIRONMENTAL	
Enclosure	IP 67 (IEC 60259), Chromate finished aluminum with polycarbonate radome where applicable.
Humidity	100% humidity, condensing
Power Requirement	<17 W; standard IEEE 802.3at (PoE) over CAT5 cable 100 m (330 ft) max.
Surge Protection	Built-in: PoE and RF ports
Temperature	-40 to 60 °C (-40 to 140 °F) dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C (-58 to 185 °F)
COMPLIANCE	
Bands:	4.9 GHz ¹ : IC RSS-111, FCC Part 90 5.2 GHz ¹ : IC RSS-210, FCC Part 15 5.4 GHz ¹ : IC RSS-210, FCC Part 15, ETSI EN 301 893 5.8 GHz ¹ : IC RSS-210, FCC Part 15, ETSI EN 302 502
EMC:	EN 301 489-1, EN 301 489-17
Safety:	IEC, EN, and UL/CSA 60950
Security	FIPS 197 compliant
Other:	RoHS compliant
PATENTS	
Website:	Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents).
NOTES	
1.	All specifications are subject to change without notice. Availability restricted by regional regulations, model type, software version and purchased product options key



4940-5875 MHZ WIRELESS REMOTE SUBSCRIBER - PACKAGING

ENTERPRISE CPE

Antenna

19 dBi, 15 degree, integrated MIMO Up to +44 dBm max. EIRP*

Connections

1x 10/100 Ethernet (RJ-45)

Dimensions / Weight

204.8 x 204.8 x 98.3 mm (8.06 x 8.06 x 3.87 in) 2.0 kg (4.4 lbs) (without bracket)

In the Box

RDL3000 XP Enterprise CPE 4940-5875 MHz with 8 in (205 mm) integrated antenna, RJ45 Ethernet port, port gland and dust caps, AC-DC PoE (802.3at) and mounting kit for wall or 1.75-4.5" (25-115 mm) pole.



Enterprise CPE 8 in Int. Antenna 10/100 Eth RJ-45



Lightweight Mounting Kit



Ethernet Port Gland



AC PoE Power Adapter

ENTERPRISE XR

Antenna

24 dBi, 8 degree, externally integrated MIMO Up to +49 dBm max. EIRP*

Connections

1x 10/100 Ethernet (RJ-45)

Dimensions / Weight

368 x 368 x 116.6 mm (14.5 x 14.5 x 4.59 in)

3.13 Kg (6.9 lb) (without bracket)

In the Box

RDL3000 XP Enterprise XR 4940-5875 MHz with 14 in (360 mm) externally integrated antenna, RJ-45 Ethernet port, port gland and dust caps, AC-DC PoE (802.3at) and mounting kit for wall or 1.75-4.5" (25-115 mm) pole.



Enterprise XR 14 in Int. Antenna 10/100 Eth RJ-45



Lightweight Mounting Kit



Ethernet Port Gland



AC PoE Power Adapter

ENTERPRISE RF

Antenna

Up to +25 dBm max., external MIMO

Connections

1x 10/100 Ethernet (RJ-45)

2x RF N(F)

Dimensions / Weight

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

2.7 kg (6.0 lbs) (without bracket or antenna)

In the Box

RDL-3000 XP Enterprise RF 4940-5875 MHz with 2x RF N(f), RJ-45 Ethernet port, port gland and dust caps, AC-DC PoE (802.3at), x2 16" (450 mm) RF jumper cables and mounting kit for wall or 1.75-4.5" (25-115 mm) pole.



Enterprise RF Ext. Antenna 2xN(f) 10/100 Eth RJ-45



Lightweight Mounting Kit

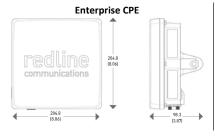


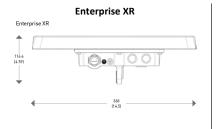
Ethernet Port Gland

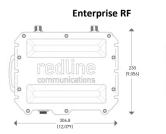


AC PoE Power Adapter

DRAWINGS









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^{*}Max combined transmit power: MIMO mode/frequency band specific



3300-3800 MHz Wireless Remote Subscriber for Premium Wireless Access

The Enterprise wireless Customer Premise Equipment (CPE) provides high performance TCP/IP transport for dedicated access, trunking and midrange backhaul applications. Either deployed in pairs for point-to-point (PTP) service or connected from multiple sites to the Redline Ellipse series base station in point-to-multipoint (PMP) applications, Enterprise terminals economically deliver reliable, simultaneous voice, data and video services.

Superior performance allows for lower antenna heights and significantly reduced deployment costs. Flexible mounting options and full over-the-air provisioning lowers upfront costs and yields faster ROI.

Enterprise CPE offers the most cost-effective solution while Enterprise XR and Enterprise RF meet the challenge of sites requiring extra power or extended distance.

ENTERPRISE FEATURES

- Installs in minutes on buildings and street furniture
- Push all provisioning (SLAs), upgrades and Pay-as-You-Grow features over-the-air
- Comprehensive warranty, maintenance and optimization packages for lowest TCO
- □ Supported by industry's first CRM-integrated auto-provisioning system

REDLINE'S TECHNOLOGY ADVANTAGE

Redline's award winning Virtual FiberTM system is advanced technology that delivers multipoint access or transport quickly and cost-efficiently. The unsurpassed fixed-wireless and nomadic-wireless solution has all your communication needs covered, while easily outperforming traditional point-to-point microwave applications.



SYSTEM AT A GLANCE

High performance wireless terminal for PTP and PMP

Three models CPE/XR/RF meet all your deployment needs

Approved bands in 3300-3800 MHz with over 10 selectable channel sizes

Simple Layer 2 network integration

Field-proven in complex urban environments

Multiple user-defined service levels per terminal

High-grade cyber security features

Small footprint and low power requirement



3300-3800 MHZ WIRELESS REMOTE SUBSCRIBER - SPECIFICATIONS

OTEN THE AIR	
Capability	LOS/OLOS software-defined PMP (std.) or PTP terminal [software keyed option] $^{\rm 1}$
Channel Access	Scheduler with ARQ (Automatic Repeat Request)
Channel Efficiency	Up to 93%
Channel Size	0.875/1.75/3.5/7/14 MHz; 1.25/2.5/5/10/20 MHz [software selectable] ¹
Modulation & Coding	BPSK to 256 QAM 7/8 ¹
RF Band	3300-3800 MHz ¹
RF Features	Dynamic and multiple Fixed Frame profiles; Fast Fusion Link Adaptation; Frequency scanning; Spectrum Analyzer
Spectral Efficiency	9.3 bits per second per Hertz
Transmission	OFDM, TDD/TDMA 2 x 2 MIMO A/B with STBC & MRRC, high-rejection Tx/Rx filtering
Wireless Throughput	Up to 186.6 Mbps UBR ¹
NETWORK	
Latency	<10 ms
Layer 2	160 Mbps max. aggregate ¹
Management Interface	Redline ClearView NMS, SNMP v2c/v3, HTTP/HTTPS (Web), Telnet/ SSH (CLI), Management VLAN tagging, RADIUS User Authentication, OTA software upgrades
Metered Data Speeds	From 512 Kbps to Unlimited (Software keyed option) ¹
Network Features	Transparent bridge, DHCP pass-through, 802.1Q VLAN (Q-in-Q), VLAN, Whitelisting, Syslog, SNTP
Packet Processing	>280,000 Packets/second
Provisioning	MAC-Based; Template-based; Automatic using Redline ClearView NMS ¹
QoS	802.1p, 802.3x, CIR & PIR settings, up to 8 services per terminal
Security	Management Encryption: TLS v1.2, AES-256, SHA256
ENVIRONMENTAL	
Enclosure	IP 67 (IEC 60259), Chromate finished aluminum with polycarbonate radome where applicable.
Humidity	100% humidity, condensing
Power Requirement	<12 W; standard IEEE 802.3af (PoE) over CAT5 cable 100 m (330 ft) max.
Surge Protection	Built-in: PoE and RF ports
Temperature	Operation: -40 to 60 °C (-40 to 140 °F) dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C (-58 to 185 °F)
COMPLIANCE	
Bands:	
	3.65-3.70 GHz ¹ : IC RSS-197, FCC Part 90Z
2445.	3.65-3.70 GHz ¹ : IC RSS-197, FCC Part 90Z 3.5 GHz ¹ : IC RSS-192
EMC:	3.5 GHz ¹ : IC RSS-192
	3.5 GHz ¹ : IC RSS-192 3.3-3.8 GHz ¹ : ETSI EN 302 326-2
EMC:	3.5 GHz ¹ : IC RSS-192 3.3-3.8 GHz ¹ : ETSI EN 302 326-2 EN 301 489-1, EN 301 489-17
EMC: Safety:	3.5 GHz ¹ : IC RSS-192 3.3-3.8 GHz ¹ : ETSI EN 302 326-2 EN 301 489-1, EN 301 489-17 IEC, EN, and UL/CSA 60950
EMC: Safety: Security Other:	3.5 GHz ¹ : IC RSS-192 3.3-3.8 GHz ¹ : ETSI EN 302 326-2 EN 301 489-1, EN 301 489-17 IEC, EN, and UL/CSA 60950 FIPS 197 compliant
EMC: Safety: Security Other:	3.5 GHz ¹ : IC RSS-192 3.3-3.8 GHz ¹ : ETSI EN 302 326-2 EN 301 489-1, EN 301 489-17 IEC, EN, and UL/CSA 60950 FIPS 197 compliant
EMC: Safety: Security Other: PATENTS Website:	3.5 GHz ¹ : IC RSS-192 3.3-3.8 GHz ¹ : ETSI EN 302 326-2 EN 301 489-1, EN 301 489-17 IEC, EN, and UL/CSA 60950 FIPS 197 compliant RoHS compliant Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in
EMC: Safety: Security Other: PATENTS	3.5 GHz ¹ : IC RSS-192 3.3-3.8 GHz ¹ : ETSI EN 302 326-2 EN 301 489-1, EN 301 489-17 IEC, EN, and UL/CSA 60950 FIPS 197 compliant RoHS compliant Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in



3300-3800 MHZ WIRELESS REMOTE SUBSCRIBER - PACKAGING

ENTERPRISE CPE

Antenna

15 dBi, 24 degree, integrated MIMO Up to +41 dBm max. EIRP*

Connections

1x 10/100 Ethernet (RJ-45)

Dimensions / Weight

204.8 x 204.8 x 98.3 mm (8.06 x 8.06 x 3.87 in)

2.0 kg (4.4 lbs) (without bracket)

In the Box

RDL3000 XP Enterprise CPE 3300-3800 MHz with 8 in (205 mm) integrated antenna, RJ45 Ethernet port port gland and dust caps, AC-DC PoE (802.3af) and mounting kit for wall or 1.75-4.5" (25-115 mm) pole.



Enterprise CPE 8 in Int. Antenna 10/100 Eth RJ-45



Lightweight Mounting Kit



Ethernet Port Gland



AC PoE Power Adapter

ENTERPRISE XR

Antenna

22 dBi, 12 degree, externally integrated MIMO Up to +49 dBm max. EIRP*

Connections

1x 10/100 Ethernet (RJ-45)

Dimensions / Weight

368 x 368 x 116.6 mm (14.5 x 14.5 x 4.59 in) 3.13 Kg (6.9 lb) (without bracket)

In the Box

RDL3000 XP Enterprise XR 3300-3800 MHz with 14 in (360 mm) externally integrated antenna, RJ-45 Ethernet port, port gland and dust caps, AC-DC PoE (802.3af) and mounting kit for wall or 1.75-4.5" (25-115 mm) pole.



Enterprise XR 14 in Int. Antenna 10/100 Eth RJ-45



Lightweight Mounting Kit



Ethernet Port Gland



AC PoE Power Adapter

ENTERPRISE RF

Antenna

Up to +26 dBm max., external MIMO

Connections

1x 10/100 Ethernet (RJ-45)

2x RF N(F)

Dimensions / Weight

306.8 x 230 x 60.3 mm (12.079 x 9.06 x 2.375 in) 2.7 kg (6.0 lbs) (without bracket or antenna)

In the Box

RDL-3000 XP Enterprise RF 3300-3800 MHz with 2x RF N(f), RJ-45 Ethernet port, port gland and dust caps, AC-DC PoE (802.3af), x2 16" (450 mm) RF jumper cables and mounting kit for wall or 1.75-4.5" (25-115 mm) pole.



Enterprise RF Ext. Antenna 2xN(f) 10/100 Eth RJ-45



Lightweight Mounting Kit

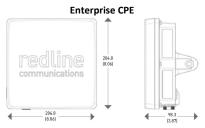


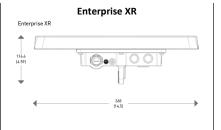
Ethernet Port Gland

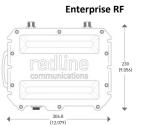


AC PoE Power Adapter

DRAWINGS









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^{*}Max combined tx power, MIMO mode/frequency band specific



2300-2700 MHz Wireless Remote Subscriber for Premium Wireless Access

The Enterprise wireless Customer Premise Equipment (CPE) provides high performance TCP/IP transport for dedicated access, trunking and midrange backhaul applications. Either deployed in pairs for point-to-point (PTP) service or connected from multiple sites to the Redline Ellipse series base station in point-to-multipoint (PMP) applications, Enterprise terminals economically deliver reliable, simultaneous voice, data and video services.

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SYSTEM AT A GLANCE

High performance wireless terminal for PTP and PMP

Three models CPE/XR/RF meet all your deployment needs

Approved bands in 2300-2700 MHz with over 10 selectable channel sizes

Simple Layer 2 network integration

Field-proven in complex urban environments

Multiple user-defined service levels per terminal

High-grade cyber security features

Small footprint and low power requirement



2300-2700 MHZ WIRELESS REMOTE SUBSCRIBER - SPECIFICATIONS

Channel Access Scheduler with AR0 (Automatic Repeat Request) Channel Size Up to 93% Channel Size 0.8757.175/3.57/14 MHz; 1.25/2.5/5/10/20 MHz [software selectable] Modulation & Coding BPSK to 256 QAM 7/8 RF Band 2300-2700 MHz RF Features Dynamic and multiple Fixed Frame profiles; Fast Fusion Link Adaptation; Frequency scanning; Spectrum Analyzer Spectral Efficiency 9.3 bits per second per Hertz Transmission OFDM, TDD/TDMA 2 x 2 MIMO A/B with STBC & MRRC, high-rejection Tx/Rx filtering Wireless Throughput Up to 18.6.6 Mbps UBR NETWORK Latency <10 ms Layer 2 166 Mbps max. aggregate Management Interface Redline ClearView NMS, SNMP v2c/v3, HTTP/HTTPS (Web), Telnet/ SSH (CLI), Management VLAN tagging, RADIUS User Authonication, OTA software upgrades Metered Data Speeds From 512 Kbps to Untimitted (Software keyed option) Network Features Transparent bridge, DHCP pass-through, 802-10 VLAN (Q-in-Q), VLAN, Whitelisting, Syslog, SNTP Packet Processing >280.000 Packets/second Provisioning MAC-Based; Template-based; Automatic using Redline ClearView NMS Management Encryption: TLS v1.2, AES-256, SHA256 ENVIRONMENTAL Enclosure IP 67 [IEC 60259], Chromate finished aluminum with polycarbonate radome where applicable. Humidity 100% humidity, condensing Chemotechnic value of the Software several second provision of the Software several and thermal dissipation (no moving parts) Short-Term Storage: 50 to 85°C (-58 to 185°F) COMPLIANCE Bands: 2.4 GHz ½: IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz; IC RSS-195 EMC: EN 301 489-1; EN 301 489-1; EN 51 489-17 Safety: IEC, EN, and UNCSA 60950 Security FiPS 197 compliant PATENTS Website: Protected by U.S. Patents 8,711,920 I 8,750,365 I 8,711,921. Additional patents may be pending in the U.S. and elsewhere Indicom.com/patents).		
Channel Efficiency Up to 93% Channel Size 0.8751.75/3.5/7/14 MHz; 1.25/2.5/5/10/20 MHz [software selectable] 1 Modulation & Coding RF Band 2300-2700 MHz 1 RF Features Dynamic and multiple Fixed Frame profiles; Fast Fusion Link Adaptation; Frequency scanning; Spectrum Analyzer Spectrum Analyzer Spectral Efficiency 9.3 bits per second per Hertz Transmission OFDM, TDD/TDMA 2 x 2 MIMD A/B with STBC & MRRC, high-rejection Tx/Rx filtering Wireless Throughput Up to 186.6 Mbps UBR 1 NETWORK Latency 10 ms Layer 2 160 Mbps max. aggregate 1 Redline Clear/View NMS, SNMP v2c/v3, HTTP/HTTPS [Web], Telnet/ SSH [CLI], Management VLAN tagging, RADIUS User Authentication, OTA software upgrades From 512 Kbps to Unitimited (Software keyed option) 1 Network Features Transparent bridge, DHCP pass-through, 802.10 VLAN (Q-in-QI), VLAN, Whitelisting, Syslog, SNTP Packet Processing 280.000 Packets/second Provisioning MAC-Based; Template-based; Automatic using Redline Clear/View NMS 1 QoS 802.1p, 802.3x, CIR & PIR settings, up to 8 services per terminal Security Management Encryption: TLS v1.2, AES-256, SHA256 ENVIRONMENTAL Enclosure IP 67 [IEC 60259], Chromate finished aluminum with polycarbonate radome where applicable. Humidity 100% humidity, condensing Power Requirement 312 W; standard IEEE 802.3af [PoE] over CAT5 cable 100 m [330 ft] max. Surge Protection Built-in: PoE and RF ports Temperature Operation: -40 to 60° C [-40 to 140° Ft] dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85° C [-58 to 185° Ft] EMC: EN 301 489-1; IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz!: IC RSS-195 EMC: EN 301 489-1; IC RSS-201, ETSI 300-328, FCC Part 15C 3.3 GHz!: IC RSS-195 EMC: EN 301 489-1; IC RSS-201, ETSI 300-328, FCC Part 15C 4.3 GHz!: IC RSS-195 EMC: EN 301 489-1; IC RSS-201, ETSI 300-328, FCC Part 15C 4.3 GHz!: IC RSS-195 EMC: EN 301 489-1; IC RSS-201, ETSI 300-328, FCC Part 15C 4.3 GHz!: IC RSS-195 EMC: EN 301 489-1; IC RSS-201, ETSI 300-328, FCC Part 15C 4.5 GHZ Part 15C 4.5 GHZ Part 15C 4.5 GHZ Part 15	Capability	LOS/OLOS software-defined PMP (std.) or PTP terminal [software keyed option] 1
Channel Size 0.875/1.75/3.5/7/14 MHz; 1.25/2.5/5/10/20 MHz [software selectable] Modulation & Coding BP5K to 256 QAM 7/8 1 RF Band 2300-2700 MHz 2 RF Features Dynamic and multiple Fixed Frame profiles; Fast Fusion Link Adaptation; Frequency scanning; Spectrum Analyzer Spectral Efficiency 9.3 bits per second per Hertz Transmission 0FDM, TDD/TDMA 2 x 2 MIMO A/B with STBC & MRRC, high-rejection Tx/Rx filtering Wireless Throughput Up to 186.6 Mbps UBR 1 NETWORK Latency <10 ms Layer 2 160 Mbps max. aggregate 1 Redline ClearView MMS, SNMP v2c/v3, HTTP/HTTPS (Web), Telnet/ SSH [CLI), Management VLAN tagging, RADIUS User Authentication, OTA software upgrades Metered Data Speeds From 512 Kbps to Unlimited [Software keyed option] 1 Network Features Transparent bridge, DHCP pass-through, 802.10 VLAN (D-in-O), VLAN, Whitelisting, Systog, SNTP Packet Processing 280,000 Packets/second Provisioning MAC-Based; Template-based; Automatic using Redline ClearView NMS 1 QoS 802.1p, 802.3x, CIR & PIR settings, up to 8 services per terminal Security Management Encryption: TLS v1.2, AES-256, SHA256 ENVIRONMENTAL Enclosure IP 67 (IEC 60259), Chromate finished aluminum with polycarbonate radome where applicable. Humidity 100% humidity, condensing Power Requirement <12 W, standard IEEE 802.3af (PoE) over CATS cable 100 m (330 ft) max. Surge Protection Built-in: PoE and RF ports Temperature Operation: -40 to 60 °C (-40 to 140 °F) dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 88 °C (-58 to 185 °F) COMPLIANCE Bands: 2.4 GHz ½: IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz½: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 40950 Security FIPS 197 compliant Other: RoHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 I 8,750,365 I 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdtcom.com/patents).	Channel Access	Scheduler with ARQ (Automatic Repeat Request)
Modulation & Coding BPSK to 256 QAM 7/81	Channel Efficiency	Up to 93%
RF Band 2300-2700 MHz¹ RF Features Dynamic and multiple Fixed Frame profiles; Fast Fusion Link Adaptation; Frequency scanning; Spectrum Analyzer Spectral Efficiency 9.3 bits per second per Hertz Transmission 0FDM, TDD/TDMA 2 x 2 MIMO a/B with STBC & MRRC, high-rejection Tx/Rx filtering Wireless Throughput Up to 186.6 Mbps UBR¹ NETWORK Latency <10 ms Layer 2 160 Mbps max. aggregate¹ Management Interface Redtine ClearView MMS, SMMP v2c/v3, HTTP/HTTPS [Web], Telnet/ SSH [CLI], Management VLAN tagging, RADIUS User Authentication, OTA software upgrades Metered Data Speeds From 512 Kbps to Unlimited ISoftware keyed option Metwork Features Transparent bridge, DHCP pass-through, 802.10 VLAN (0-in-Q), VLAN, Whitelisting, Syslog, SNTP Packet Processing >280.000 Packets/second Provisioning MAC-Based; Template-based; Automatic using Redline ClearView NMS¹ QoS 802.1p, 802.3x, CIR & PIR settings, up to 8 services per terminal Security Management Encryption: TLS v1.2, AES-256, SHA256 ENVIRONMENTAL Enclosure IP 67 (IEC 60259), Chromate finished aluminum with polycarbonate radome where applicable. Humidity 100% humidity, condensing Power Requirement <12 W; standard IEEE 802.3af (PoEl over CATS cable 100 m (330 ft) max. Surge Protection Built-in: PoE and RF ports Temperature Operation: -40 to 60 °C (-40 to 140 °F) dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C (-58 to 185 °F) COMPLIANCE Bands: 2.4 GHz ¹: IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz ¹: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FiPS 197 compliant PATENTS Website: Protected by U.S. Patents 8,711,920 I 8,750,365 I 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdcom.com/patents).	Channel Size	0.875/1.75/3.5/7/14 MHz; 1.25/2.5/5/10/20 MHz [software selectable] ¹
RF Features Spectrum Analyzer Spectrum Analyzer Spectral Efficiency 9.3 bits per second per Hertz Transmission OFDM, TDD/TDMA 2 x 2 MIMO A/B with STBC & MRRC, high-rejection Tx/Rx filtering Wireless Throughput Up to 186.6 Mbps UBR¹ NETWORK Latency 160 Mbps max. aggregate¹ Management Interface Redline ClearView NMS, SNMP y2c/v3, HTTP/HTTPS [Web], Telnet/ SSH [CLI], Management VLAN tagging, RADIUS User Authentication, OTA software upgrades Metered Data Speeds From 512 Kbps to Unlimited (Software keyed option)¹ Network Features Framsparent bridge, DHCP pass-through, 802.10 VLAN [Q-in-Q], VLAN, Whitelisting, Syslog, SNTP Packet Processing 280.000 Packets/second Provisioning MAC-Based, Template-based, Automatic using Redline ClearView NMS¹ QoS 802.1p, 802.3x, CIR & PIR settings, up to 8 services per terminal Security Management Encryption: TLS v1.2, AES-256, SHA256 ENVIRONMENTAL Enclosure IP 67 (IEC 60259), Chromate finished aluminum with polycarbonate radome where applicable. Humidity 100% humidity, condensing Power Requirement 12 W; standard IEEE 802.3af (PoEI over CAT5 cable 100 m (330 ft) max. Surge Protection Built-in: PoE and RF ports Temperature Operation: -40 to 60 °C [-40 to 140 °F] dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C (-58 to 185 °F) COMPLIANCE Bands: 2.4 GHz¹: IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz¹: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 compliant Other: ROHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 1 8,750,365 1 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	Modulation & Coding	BPSK to 256 QAM 7/81
Spectral Efficiency 9.3 bits per second per Hertz Transmission Wireless Throughput Up to 186.6 Mbps UBR¹ NETWORK Latency Layer 2 160 Mbps max. aggregate¹ Management Interface Redtine CtearView NMS, SNMP v2c/v3, HTTP/HTTPS (Web), Telnet/ SSH (CLI), Management VLAN tagging, RADIUS User Authentication, OTA software upgrades From 512 Kbps to Unlimited (Software keyed option)¹ Network Features Transparent bridge, DHCP pass-through, 802.10 VLAN (Q-in-Q), VLAN, Whitelisting, Syslog, SNTP Packet Processing 280,000 Packets/second Provisioning MAC-Based; Template-based; Automatic using Redline ClearView NMS¹ QoS 802.1p, 802.3x, CIR & PIR settings, up to 8 services per terminal Security Management Encryption: TLS v1.2, AES-256, SHA256 ENVIRONMENTAL Enclosure IP 67 (IEC 60259), Chromate finished aluminum with polycarbonate radome where applicable. Humidity 100% humidity, condensing Power Requirement 12 W; standard IEEE 802.3af (PoE) over CAT5 cable 100 m (330 ft) max. Surge Protection Built-in: PoE and RF ports Temperature Operation: -40 to 60 °C (-40 to 140 °F) dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C (-58 to 185 °F) EMC: Bands: 2 4 GHz¹: IC RSS-201, ETSI 300-328, FCC Part 15C 2 3 GHz¹: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 compliant Other: ROHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,345 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdicom.com/patents). NOTES	RF Band	2300-2700 MHz ¹
Spectral Efficiency 9.3 bits per second per Hertz Transmission OFDM, TDD/TDMA 2 x 2 MINO A/B with STBC & MRRC, high-rejection Tx/Rx filtering Wireless Throughput Up to 186.6 Mbps UBR1	RF Features	
Transmission OFDM, TDD/TDMA 2 x 2 MIMO A/B with STBC & MRRC, high-rejection Tx/Rx filtering Wireless Throughput Up to 186.6 Mbps UBR¹ NETWORK Layer 2 160 Mbps max. aggregate¹ Management Interface Redline ClearView NMS, SNMP v2c/v3, HTTP/HTTPS (Web), Telnet/ SSH (CLI), Management VLAN tagging, RADIUS User Authentication, OTA software upgrades Metered Data Speeds From 512 Kbps to Unlimited (Software keyed option)¹ Network Features Transparent bridge, DHCP pass-through, 802.10 VLAN (Q-in-Q), VLAN, Whitelisting, Syslog, SNTP Packet Processing >280,000 Packets/second Provisioning MAC-Based; Template-based; Automatic using Redline ClearView NMS¹ QoS 802.1p, 802.3x, CIR & PIR settings, up to 8 services per terminal Security Management Encryption: TLS v1.2, AES-256, SHA256 ENVIRONMENTAL Enclosure IP 67 (IEC 60259), Chromate finished aluminum with polycarbonate radome where applicable. Humidity 100% humidity, condensing Power Requirement <12 W; standard IEEE 802.3af (PoE) over CAT5 cable 100 m (330 ft) max. Surge Protection Built-in: PoE and RF ports Temperature Operation: -40 to 60 °C (-40 to 140 °F) dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C (-58 to 185 °F) COMPLIANCE Bands: 2.4 GHz¹: IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz¹: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 compliant Other: ReHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere [rdlcom.com/patents]. NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	Spectral Efficiency	
NETWORK Latency <10 ms Layer 2 160 Mbps max. aggregate ¹ Management Interface Redline ClearView NMS, SNMP v2c/v3, HTTP/HTTPS (Web), Telnet/ SSH (CLI), Management VLAN tagging, RADIUS User Authentication, OTA software upgrades Metered Data Speeds From 512 Kbps to Unlimited [Software keyed option]¹ Network Features Transparent bridge, DHCP pass-through, 802.10 VLAN (Q-in-Q), VLAN, Whitelisting, Syslog, SNTP Packet Processing >280,000 Packets/second Provisioning MaC-Based; Template-based; Automatic using Redline ClearView NMS¹ QoS 802.1p, 802.3x, CIR & PIR settings, up to 8 services per terminal Security Management Encryption: TLS v1.2, AES-256, SHA256 ENVIRONMENTAL Enclosure IP 67 (IEC 60259), Chromate finished aluminum with polycarbonate radome where applicable. Humidity 100% humidity, condensing Power Requirement <12 W; standard IEEE 802.3af (PoE) over CAT5 cable 100 m (330 ft) max. Surge Protection Built-in: PoE and RF ports Temperature Operation: -40 to 60 °C (-40 to 140 °F) dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C (-58 to 185 °F) COMPLIANCE Bands: 2.4 GHz¹; IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz¹; IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 compliant Other: RoHS compliant PATENTS Website: Protected by U.S. Patents 8,711,720 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. Availability restricted by regional regulations, model type, software version and purchased		OFDM, TDD/TDMA 2 x 2 MIMO A/B with STBC & MRRC, high-rejection Tx/Rx filtering
Latency <10 ms Layer 2	Wireless Throughput	Up to 186.6 Mbps UBR ¹
Latency <10 ms Layer 2	NETWORK	
Layer 2 160 Mbps max. aggregate ¹ Management Interface Redline ClearView NMS, SNMP v2c/v3, HTTP/HTTPS [Web], Telnet/SSH [CLI], Management VLAN tagging, RADIUS User Authentication, OTA software upgrades From 512 Kbps to Unlimited [Software keyed option]¹ Network Features Transparent bridge, DHCP pass-through, 802.10 VLAN [Q-in-Q], VLAN, Whitelisting, Syslog, SNTP Packet Processing > 280,000 Packets/second Provisioning MAC-Based; Template-based; Automatic using Redline ClearView NMS¹ QoS 802.1p, 802.3x, CIR & PIR settings, up to 8 services per terminal Security Management Encryption: TLS v1.2, AES-256, SHA256 ENVIRONMENTAL Enclosure IP 67 [IEC 60259], Chromate finished aluminum with polycarbonate radome where applicable. Humidity 100% humidity, condensing Power Requirement 21 W; standard IEEE 802.3af [PoE] over CAT5 cable 100 m [330 ft] max. Surge Protection Built-in: PoE and RF ports Temperature Operation: -40 to 60 °C [-40 to 140 °F] dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C [-58 to 185 °F] COMPLIANCE Bands: 2.4 GHz¹: IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz¹: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 compliant Other: PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere [rdlcom.com/patents]. NOTES		<10 ms
Management Interface Redline ClearView NMS, SNMP v2c/v3, HTTP/HTTPS (Web), Tetnet/ SSH (CLI), Management VLAN tagging, RADIUS User Authentication, DTA software upgrades Metered Data Speeds From 512 Kbps to Untimited (Software keyed option)¹ Network Features Transparent bridge, DHCP pass-through, 802.10 VLAN (Q-in-Q), VLAN, Whitelisting, Syslog, SNTP Packet Processing Packet Processing >280,000 Packets/second Provisioning MAC-Based; Template-based; Automatic using Redline ClearView NMS¹ QoS 802.1p, 802.3x, CIR & PIR settings, up to 8 services per terminal Security Management Encryption: TLS v1.2, AES-256, SHA256 ENVIRONMENTAL Enclosure Humidity 100% humidity, condensing Power Requirement <12 W; standard IEEE 802.3af (PoE) over CAT5 cable 100 m (330 ft) max.		160 Mbps max. aggregate ¹
Network Features Transparent bridge, DHCP pass-through, 802.1Q VLAN (Q-in-Q), VLAN, Whitelisting, Syslog, SNTP Packet Processing >280,000 Packets/second Provisioning MAC-Based; Template-based; Automatic using Redline ClearView NMS¹ QoS 802.1p, 802.3x, CIR & PIR settings, up to 8 services per terminal Security Management Encryption: TLS v1.2, AES-256, SHA256 ENVIRONMENTAL Enclosure IP 67 (IEC 60259), Chromate finished aluminum with polycarbonate radome where applicable. Humidity 100% humidity, condensing Power Requirement <12 W; standard IEEE 802.3af (PoE) over CAT5 cable 100 m (330 ft) max. Surge Protection Built-in: PoE and RF ports Temperature Operation: -40 to 60 °C (-40 to 140 °F) dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C (-58 to 185 °F) COMPLIANCE Bands: 2.4 GHz¹: IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz²: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 compliant Other: RoHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased		Redline ClearView NMS, SNMP v2c/v3, HTTP/HTTPS (Web), Telnet/ SSH (CLI), Management VLAN
Packet Processing >280,000 Packets/second Provisioning MAC-Based; Template-based; Automatic using Redline ClearView NMS¹ QoS 802.1p, 802.3x, CIR & PIR settings, up to 8 services per terminal Security Management Encryption: TLS v1.2, AES-256, SHA256 ENVIRONMENTAL Enclosure IP 67 (IEC 60259), Chromate finished aluminum with polycarbonate radome where applicable. Humidity 100% humidity, condensing Power Requirement <12 W; standard IEEE 802.3af (PoE) over CAT5 cable 100 m (330 ft) max. Surge Protection Built-in: PoE and RF ports Temperature Operation: -40 to 60 °C (-40 to 140 °F) dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C (-58 to 185 °F) COMPLIANCE Bands: 2.4 GHz¹: IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz¹: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 compliant Other: RoHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	Metered Data Speeds	From 512 Kbps to Unlimited (Software keyed option) 1
Provisioning MAC-Based; Template-based; Automatic using Redline ClearView NMS¹ QoS 802.1p, 802.3x, CIR & PIR settings, up to 8 services per terminal Security Management Encryption: TLS v1.2, AES-256, SHA256 ENVIRONMENTAL Enclosure IP 67 (IEC 60259), Chromate finished aluminum with polycarbonate radome where applicable. Humidity 100% humidity, condensing Power Requirement <12 W; standard IEEE 802.3af (PoE) over CAT5 cable 100 m (330 ft) max. Surge Protection Built-in: PoE and RF ports Temperature Operation: -40 to 60 °C (-40 to 140 °F) dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C (-58 to 185 °F) COMPLIANCE Bands: 2.4 GHz¹: IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz¹: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 compliant Other: RoHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	Network Features	Transparent bridge, DHCP pass-through, 802.1Q VLAN (Q-in-Q), VLAN, Whitelisting, Syslog, SNTP
QoS 802.1p, 802.3x, CIR & PIR settings, up to 8 services per terminal Security Management Encryption: TLS v1.2, AES-256, SHA256 ENVIRONMENTAL Enclosure IP 67 (IEC 60259), Chromate finished aluminum with polycarbonate radome where applicable. Humidity 100% humidity, condensing Power Requirement <12 W; standard IEEE 802.3af (PoE) over CAT5 cable 100 m (330 ft) max. Surge Protection Built-in: PoE and RF ports Temperature Operation: -40 to 60 °C (-40 to 140 °F) dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C (-58 to 185 °F) COMPLIANCE Bands: 2.4 GHz ¹: IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz ¹: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 compliant Other: RoHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	Packet Processing	>280,000 Packets/second
Security Management Encryption: TLS v1.2, AES-256, SHA256 ENVIRONMENTAL Enclosure IP 67 (IEC 60259), Chromate finished aluminum with polycarbonate radome where applicable. Humidity 100% humidity, condensing Power Requirement <12 W; standard IEEE 802.3af (PoE) over CAT5 cable 100 m (330 ft) max. Surge Protection Built-in: PoE and RF ports Temperature Operation: -40 to 60 °C (-40 to 140 °F) dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C (-58 to 185 °F) COMPLIANCE Bands: 2.4 GHz ¹: IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz ¹: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 comptiant Other: RoHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	Provisioning	MAC-Based; Template-based; Automatic using Redline ClearView NMS ¹
ENVIRONMENTAL Enclosure IP 67 (IEC 60259), Chromate finished aluminum with polycarbonate radome where applicable. Humidity 100% humidity, condensing Power Requirement <12 W; standard IEEE 802.3af (PoE) over CAT5 cable 100 m (330 ft) max. Surge Protection Built-in: PoE and RF ports Temperature Operation: -40 to 60 °C (-40 to 140 °F) dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C (-58 to 185 °F) COMPLIANCE Bands: 2.4 GHz ¹: IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz ¹: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 compliant Other: RoHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere [rdlcom.com/patents]. NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	QoS	802.1p, 802.3x, CIR & PIR settings, up to 8 services per terminal
Enclosure Humidity 100% humidity, condensing Power Requirement <12 W; standard IEEE 802.3af (PoE) over CAT5 cable 100 m (330 ft) max. Surge Protection Built-in: PoE and RF ports Temperature Operation: -40 to 60 °C (-40 to 140 °F) dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C (-58 to 185 °F) COMPLIANCE Bands: 2.4 GHz ¹: IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz ¹: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 compliant Other: RoHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	Security	Management Encryption: TLS v1.2, AES-256, SHA256
Humidity 100% humidity, condensing Power Requirement <12 W; standard IEEE 802.3af (PoE) over CAT5 cable 100 m (330 ft) max. Surge Protection Built-in: PoE and RF ports Temperature Operation: -40 to 60 °C (-40 to 140 °F) dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C (-58 to 185 °F) COMPLIANCE Bands: 2.4 GHz ¹: IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz ¹: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 compliant Other: RoHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	ENVIRONMENTAL	
Power Requirement Surge Protection Built-in: PoE and RF ports Temperature Operation: -40 to 60 °C (-40 to 140 °F) dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C (-58 to 185 °F) COMPLIANCE Bands: 2.4 GHz ¹: IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz ¹: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 compliant Other: RoHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	Enclosure	IP 67 (IEC 60259), Chromate finished aluminum with polycarbonate radome where applicable.
Surge Protection Built-in: PoE and RF ports Temperature Operation: -40 to 60 °C (-40 to 140 °F) dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C (-58 to 185 °F) COMPLIANCE Bands: 2.4 GHz ¹: IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz ¹: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 compliant Other: RoHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	Humidity	100% humidity, condensing
Temperature Operation: -40 to 60 °C (-40 to 140 °F) dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C (-58 to 185 °F) COMPLIANCE Bands: 2.4 GHz ¹: IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz ¹: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 compliant Other: RoHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. Availability restricted by regional regulations, model type, software version and purchased	Power Requirement	<12 W; standard IEEE 802.3af (PoE) over CAT5 cable 100 m (330 ft) max.
Short-Term Storage: -50 to 85 °C (-58 to 185 °F) COMPLIANCE Bands: 2.4 GHz ¹: IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz ¹: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 compliant Other: RoHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	Surge Protection	Built-in: PoE and RF ports
Bands: 2.4 GHz ¹: IC RSS-201, ETSI 300-328, FCC Part 15C 2.3 GHz ¹: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 compliant Other: RoHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	Temperature	
2.3 GHz ¹: IC RSS-195 EMC: EN 301 489-1, EN 301 489-17 Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 compliant Other: RoHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	COMPLIANCE	
Safety: IEC, EN, and UL/CSA 60950 Security FIPS 197 compliant Other: RoHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	Bands:	
Security FIPS 197 compliant Other: RoHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	EMC:	EN 301 489-1, EN 301 489-17
Other: RoHS compliant PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	Safety:	IEC, EN, and UL/CSA 60950
PATENTS Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	Security	FIPS 197 compliant
Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	Other:	RoHS compliant
Website: Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents). NOTES All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	PATENTS	
All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased		
All specifications are subject to change without notice. 1. Availability restricted by regional regulations, model type, software version and purchased	NOTES	
1. Availability restricted by regional regulations, model type, software version and purchased		All specifications are subject to change without notice.
	1.	Availability restricted by regional regulations, model type, software version and purchased



2300-2700 MHZ WIRELESS REMOTE SUBSCRIBER - PACKAGING

ENTERPRISE CPE

Antenna

15 dBi, 35 degree, integrated MIMO Up to +41 dBm max. EIRP*

Connections

1x 10/100 Ethernet (RJ-45)

Dimensions / Weight

204.8 x 204.8 x 98.3 mm (8.06 x 8.06 x 3.87 in)

2.0 kg (4.4 lbs) (without bracket)

In the Box

RDL3000 XP Enterprise CPE 2300-2700 MHz with 8 in (205 mm) integrated antenna, RJ45 Ethernet port port gland and dust caps, AC-DC PoE (802.3af) and mounting kit for wall or 1.75-4.5" (25-115 mm) pole.



Enterprise CPE 8 in Int. Antenna 10/100 Eth RJ-45



Lightweight Mounting Kit



Ethernet Port Gland



AC PoE Power Adapter

ENTERPRISE XR

Antenna

19 dBi, 12 degree, externally integrated MIMO Up to +45 dBm max. EIRP*

Connections

1x 10/100 Ethernet (RJ-45)

Dimensions / Weight

368 x 368 x 116.6 mm (14.5 x 14.5 x 4.59 in) 3.13 Kg (6.9 lb) (without bracket)

In the Box

RDL3000 XP Enterprise XR 2300-2700 MHz with 14 in (360 mm) externally integrated antenna, RJ-45 Ethernet port, port gland and dust caps, AC-DC PoE (802.3af) and mounting kit for wall or 1.75-4.5" (25-115 mm) pole.



Enterprise XR 14 in Int. Antenna 10/100 Eth RJ-45



Lightweight Mounting Kit



Ethernet Port Gland



AC PoE Power Adapter

ENTERPRISE RF

Antenna

Up to +26 dBm max., external MIMO

Connections

1x 10/100 Ethernet (RJ-45)

2x RF N(F)

Dimensions / Weight

306.8 x 230 x 60.3 mm (12.079 x 9.06 x 2.375 in) 2.7 kg (6.0 lbs) (without bracket or antenna)

In the Box

RDL-3000 XP Enterprise RF 2300-2700 MHz with 2x RF N(f), RJ-45 Ethernet port, port gland and dust caps, AC-DC PoE (802.3af), x2 16" (450 mm) RF jumper cables and mounting kit for wall or 1.75-4.5" (25-115 mm) pole.



Enterprise RF Ext. Antenna 2xN(f) 10/100 Eth RJ-45



Lightweight Mounting Kit

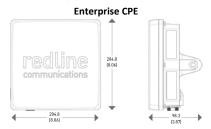


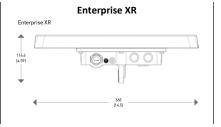
Ethernet Port Gland

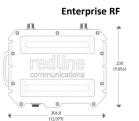


AC PoE Power Adapter

DRAWINGS









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^{*}Max combined tx power, MIMO mode/frequency band specific



470-698 MHz Wireless Remote Subscriber for Premium Wireless Access

The Enterprise wireless Customer Premise Equipment (CPE) provides high performance TCP/IP transport for dedicated access, trunking and midrange backhaul applications. Either deployed in pairs for point-to-point (PTP) service or connected from multiple sites to the Redline Ellipse series base station in point-to-multipoint (PMP) applications, Enterprise terminals economically deliver reliable, simultaneous voice, data and video services.

In TV Whitespaces (TVWS) regulated regions, the Enterprise 'cognitive radio' efficiently employs dynamical resource allocation technology access to shared spectrum (channels). Based on regional regulations, up to 10 additional non TVWS channels may be available to deliver higher throughputs or avoid local interference. The ability to provide excellent coverage through dense foliage and over water enables reliable access to areas impractical using higher band systems.

Superior performance allows for lower antenna heights and significantly reduced deployment costs. Flexible mounting options and full over-the-air provisioning lowers upfront costs and yields faster ROI.

ENTERPRISE FEATURES

- ☐ Installs in minutes on buildings and street furniture
- Push all provisioning (SLAs), upgrades and Pay-as-You-Grow features over-the-air
- Comprehensive warranty, maintenance and optimization packages for lowest TCO
- □ Supported by industry's first CRM-integrated auto-provisioning system

REDLINE'S TECHNOLOGY ADVANTAGE

Redline's award winning Virtual Fiber™ system is advanced technology that delivers multipoint access or transport quickly and cost-efficiently. The unsurpassed fixed-wireless and nomadic-wireless solution has all your communication needs covered, while easily outperforming traditional point-to-point microwave applications.



SYSTEM AT A GLANCE

High performance wireless terminal for PTP and PMP

One model - connectorized for choice of antennas

Approved bands in 470-698 MHz with over 10 selectable channel sizes

Simple Layer 2 network integration

Field-proven in complex urban environments

Multiple user-defined service levels per terminal

High-grade cyber security features

Small footprint and low power requirement



470-698 MHZ WIRELESS REMOTE SUBSCRIBER - SPECIFICATIONS

Capability	LOS/OLOS software-defined PMP (std.) or PTP terminal [software keyed option] 1
Channel Access	Scheduler with ARQ (Automatic Repeat Request)
Channel Efficiency	Up to 93%
Channel Size	6/12/18 MHz; 0.875/1.75/3.5/7/14 MHz; 1.25/2.5/5/10/20 MHz [software selectable] ¹
Modulation & Coding	BPSK to 256 QAM 7/81
RF Band	470-698 MHz ¹ with notch at 602-620 MHz
RF Features	Dynamic and multiple Fixed Frame profiles; Fast Fusion Link Adaptation; Frequency scanning; Spectrum Analyzer
Spectral Efficiency	9.3 bits per second per Hertz
Transmission	OFDM, TDD/TDMA 2 x 2 MIMO A/B with STBC & MRRC, high-rejection Tx/Rx filtering
Wireless Throughput	Up to 186.6 Mbps UBR ¹
NETWORK	
Latency	<10 ms
Layer 2	160 Mbps max. aggregate ¹
Management Interface	Redline ClearView NMS, SNMP v2c/v3, HTTP/HTTPS (Web), Telnet/ SSH (CLI), Management VLAN tagging, RADIUS User Authentication, OTA software upgrades
Metered Data Speeds	From 512 Kbps to Unlimited (Software keyed option) 1
Network Features	Transparent bridge, DHCP pass-through, 802.1Q VLAN (Q-in-Q), VLAN, Whitelisting, Syslog, SNTP
Packet Processing	>280,000 Packets/second
Provisioning	MAC-Based; Template-based; Automatic using Redline ClearView NMS ¹
QoS	802.1p, 802.3x, CIR & PIR settings, up to 8 services per terminal
Security	Management Encryption: TLS v1.2, AES-256, SHA256
ENVIRONMENTAL	
Enclosure	IP 67 (IEC 60259), Chromate finished aluminum.
Humidity	100% humidity, condensing
Power Requirement	<17 W; standard IEEE 802.3at (PoE) over CAT5 cable 100 m (330 ft) max.
Surge Protection	Built-in: PoE and RF ports
Temperature	Operation: -40 to 60 °C (-40 to 140 °F) dynamic and thermal dissipation (no moving parts) Short-Term Storage: -50 to 85 °C (-58 to 185 °F)
COMPLIANCE	
Bands:	600 MHz ¹ : IC RSS-196, FCC Part 15H
EMC:	EN 301 489-1, EN 301 489-17
Safety:	IEC, EN, and UL/CSA 60950
Security	FIPS 197 compliant
Other:	RoHS compliant
PATENTS	
Website:	Protected by U.S. Patents 8,711,920 8,750,365 8,711,921. Additional patents may be pending in the U.S. and elsewhere (rdlcom.com/patents).
NOTES	
1.	All specifications are subject to change without notice. Availability restricted by regional regulations, model type, software version and purchased product options key.



470-698 MHZ WIRELESS REMOTE SUBSCRIBER - PACKAGING

ENTERPRISE RF

Antenna

Up to +26 dBm max., external MIMO

Connections

1x 10/100 Ethernet (RJ-45)

2x RF N(F)

Dimensions / Weight

306.8 x 230 x 60.3 mm (12.079 x 9.06 x 2.375 in) 2.7 kg (6.0 lbs) (without bracket or antenna)

In the Box

RDL-3000 XP Enterprise RF 470-698 MHz, RJ-45 Ethernet port, port gland, dust caps, AC-DC PoE (802.3at) and mounting kit for wall or 1.75-4.5" (25-115 mm) pole









Enterprise RF Ext. Antenna 2xN(f) 10/100 Eth RJ-45

Lightweight Mounting Kit

Ethernet Port Gland

AC PoE Power Adapter

*Max combined tx power, MIMO mode/frequency band specific

DRAWINGS

Enterprise RF

