

ZoneFlex R500 Unleashed

Dual-Band 802.11ac 2X2:2 Smart Wi-Fi Access Points



DATA SHEET



BENEFITS

UNLEASH THE PERFORMANCE

In the Unleashed version, the ZoneFlex R500 is capable of supporting controller-less deployments for up to 25 access points and 512 concurrent devices.

EXTENDED RANGE REQUIRES FEWER APS

Adaptive antenna technology delivers up to 2x increase in Wi-Fi signal coverage minimizing the number of APs required to service any area

SLEEK, LOW PROFILE ENCLOSURE FOR EASE-OF-DEPLOYMENT

Aesthetically-pleasing design and a range of mounting options

CHANNEL SELECTION OPTIMIZES THROUGHPUT

ChannelFly dynamic channel management, based on throughput measurements, not just interference, chooses the best channel to give users the highest possible throughput

SUPER SIMPLE CONFIGURATION AND MANAGEMENT

The industry's simplest configuration and management through a Web-based wizard and automated deployment capabilities

FLEXIBLE DEPLOYMENT OPTIONS

Standalone or controller-based deployment

ADAPTIVE POLARIZATION DIVERSITY (PD-MRC)

Dual-polarized antennas that are dynamically selected provide better reception for hard to hear clients and more consistent performance as clients constantly change orientation

HASSLE FREE MIGRATION TO HIGHER SPEED WI-FI

Support for standard 802.3af power over Ethernet allows enterprises to use existing PoE switches without costly upgrades.

HIGH PERFORMANCE, 802.11AC MID-RANGE SMART WI-FI ACCESS POINTS WITH ADAPTIVE ANTENNA TECHNOLOGY

Ruckus R500 Unleashed™ enables controller-less Wi-Fi architecture for small business environments with superior performance, lower costs and simplified management. Separate controllers and access point licenses are no longer needed, significantly reducing upfront costs. Set-up is also easy, thanks to a simplified web interface that helps businesses configure Wi-Fi in just 60 seconds.

The R500 Unleashed is ideal for wireless networks servicing mobile devices with dual-polarized antennas that adapt in real time to hand-held device movement and rotation ensuring consistent performance.

Each ZoneFlex R500 Unleashed integrates Ruckus-patented BeamFlex, a software-controlled, high gain antenna array that continually forms and directs each Wi-Fi packet over the best performing signal path. The ZoneFlex R500 Unleashed automatically selects channels for highest throughput potential using Ruckus ChannelFly dynamic channel management, adapting to environmental changes. Once deployed, enterprises never have to worry about constant site surveys as the environment changes.

A sleek and low-profile design, the ZoneFlex R500 Unleashed was purpose-built for small-medium enterprises requiring reliable high speed client connectivity. It is ideal for a variety of medium density enterprise and hotspot environments including SMBs, venues, local retailers and non-franchise restaurants.

PATENTED BEAMFLEX™ TECHNOLOGY EXTENDS SIGNAL RANGE, IMPROVES STABILITY OF CLIENT CONNECTIONS

All ZoneFlex R500 Unleashed access points integrate a software-controlled smart antenna with PD-MRC (polarization diversity) that delivers up to an additional 6dB of BeamFlex gain and 15dB of interference mitigation. This is especially beneficial to enhance the performance of mobile devices which are constantly in motion and changing orientation.

ADVANCED WLAN APPLICATIONS

Each ZoneFlex R500 Unleashed supports a wide range of value-added applications such as guest networking, Dynamic PSK, hotspot authentication, wireless intrusion detection and many more. In a controller-less configuration, the ZoneFlex R500 Unleashed works with a wide range of authentication servers including Microsoft's Active Directory and AAA/RADIUS.

FLEXIBLE DEPLOYMENT OPTIONS

Ruckus Unleashed is custom-designed to help small business owners grow their business, deliver an excellent customer experience and manage costs while supporting Wi-Fi and a variety of mobile devices with minimal IT staff.

Unleashed access points have built-in controller capabilities, including user access controls, guest networking functions, advanced Wi-Fi security and traffic management.

As businesses grow to multiple sites or a larger scale deployment, Ruckus offers an easy migration path to a controller-based Wi-Fi, using the same Wi-Fi access points.

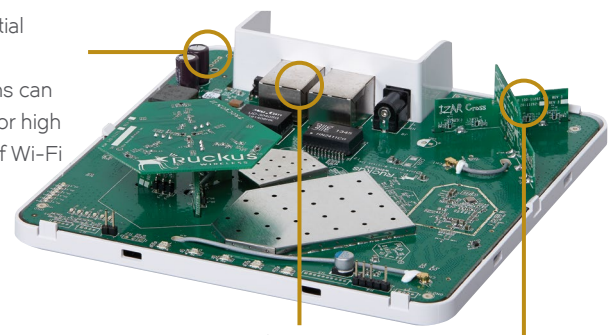
COMPLETE LOCAL AND REMOTE MANAGEMENT

ZoneFlex R500 Unleashed can be securely managed from anywhere at anytime using any browser on any device.

FEATURES

- Dual-band concurrent (5GHz/2.4GHz)
- Adaptive antenna technology and advanced RF management
- Up to an additional 6dB BeamFlex gain / 15dB interference mitigation / 3dBi physical antenna gain
- Automatic interference mitigation, optimized for high-density environments
- Integrated smart antenna technology
- Standard 802.3af Power over Ethernet (PoE)
- Gateway mode with NAT and DHCP services
- IP multicast video streaming support
- Advanced QoS packet classification and automatic priority for latency-sensitive traffic
- Dynamic, pre-user rate-limiting for hotspot WLANs
- WPA-PSK (AES), 802.1X support for RADIUS and Active Directory
- Ethernet 802.1x port-based authentication (authenticator and supplicant)
- BYOD, Zero-IT and Dynamic PSK
- Admission control/load balancing
- Band balancing and airtime fairness support
- Captive portal and guest accounts
- Application recognition and control
- SmartWay Bonjour gateway
- SecureHotspot
- SmartMesh

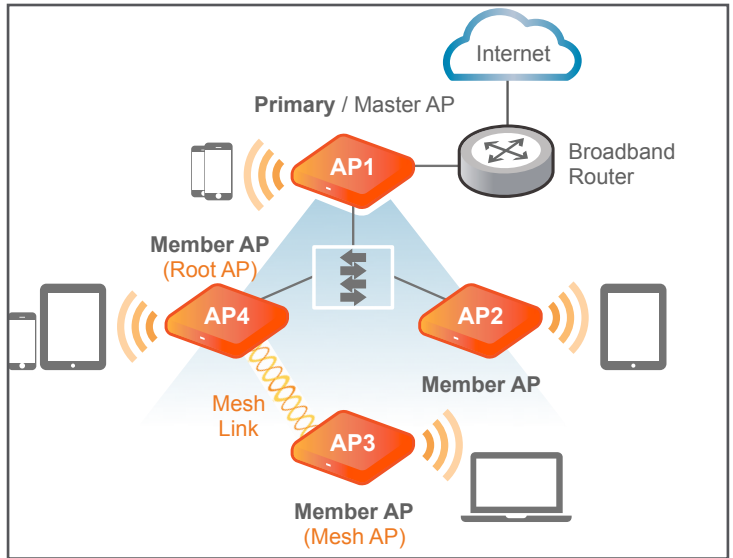
Many potential antenna combinations can be chosen for high availability of Wi-Fi



Two 10/100/1000 Mbps ports; one with PoE

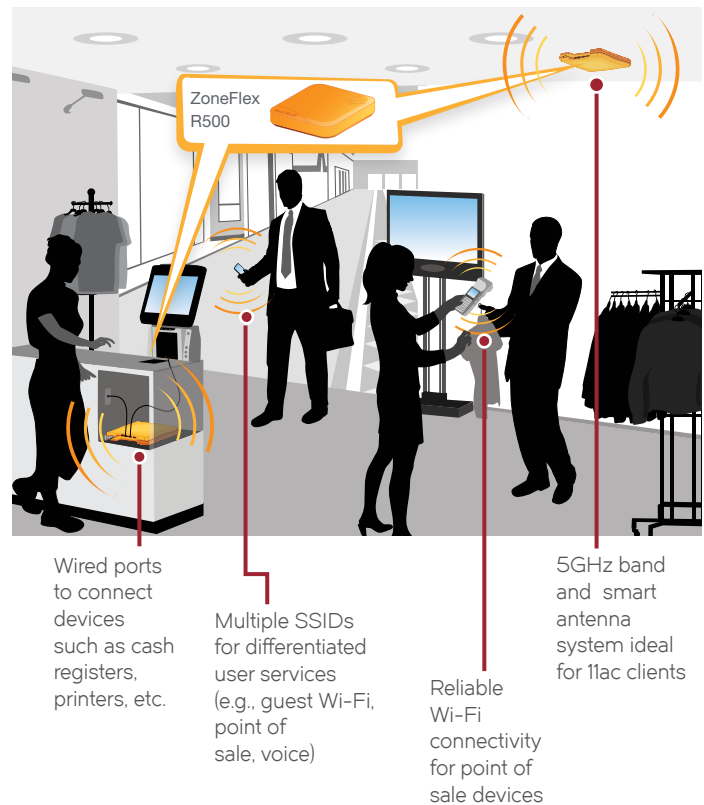
High-gain directional antenna elements not only delivers signal gain but also interference mitigation for range extension, reliability and high data rates

The ZoneFlex R500 Unleashed integrates with your existing network infrastructure, delivering best-in-class 802.11ac performance and reliability at a competitive price — making it the ideal wireless solution for mid-range enterprise and branch office applications.



DEPLOYMENT FOR RETAIL / BRANCH OFFICES

The ZoneFlex R500 Unleashed is ideal for deployment in retail stores to provide inconspicuous wireless connection to high quality video, wireless IP phones and data access for handheld PoS bar code scanners.



ZoneFlex R500 Unleashed

Dual-Band 802.11ac Access Points

DATA SHEET

PHYSICAL CHARACTERISTICS	
Power	<ul style="list-style-type: none"> DC Input: 12 VDC 1.0A Power over Ethernet 802.3af
Physical Size	<ul style="list-style-type: none"> 15.8 cm x 15.8 cm x 4 cm (6.2 in x 6.2 in x 1.57 in)
Weight	<ul style="list-style-type: none"> 350 g (0.77 lb.)
Data Ports	<ul style="list-style-type: none"> 2 auto MDX, auto-sensing 10/100/1000 Mbps, RJ-45, POE port (on one port)
Mounting Options	<ul style="list-style-type: none"> Electrical wallbox; Standard US and EU single gang wall jack Optional bracket for offset & wall mount
Lock Options	<ul style="list-style-type: none"> Hidden latching mechanism Kensington Lock Hole T-bar Torx Bracket (902-0108-0000) Torx screw & padlock (sold separately)
Environmental Conditions	<ul style="list-style-type: none"> Operating Temperature: 0°C - 50°C Operating Humidity: 10% - 95% non-condensing
Power Draw	<ul style="list-style-type: none"> Idle: 4W Typical: 6.13W Peak: 11.1W

PERFORMANCE AND CAPACITY	
Concurrent Stations	<ul style="list-style-type: none"> 512 clients per AP
Simultaneous Voip Clients	<ul style="list-style-type: none"> 30

RF	
ANTENNA	<ul style="list-style-type: none"> Adaptive antenna that provides up to 64 unique antenna patterns per radio Full omnidirectional polarization diversity
PHYSICAL ANTENNA GAIN	<ul style="list-style-type: none"> Up to 3dBi
BEAMFLEX* SINR TX GAIN	<ul style="list-style-type: none"> Up to 4dB
BEAMFLEX* SINR RX GAIN	<ul style="list-style-type: none"> 3-5dB (PD-MRC)
INTERFERENCE MITIGATION	<ul style="list-style-type: none"> Up to 10dB
MINIMUM RX SENSITIVITY	<ul style="list-style-type: none"> Up to -101dBm

* BeamFlex gains are statistical system level effects translated to enhanced SINR based on observations over time in real-world conditions with multiple APs and many clients

MANAGEMENT	
Deployment Options	<ul style="list-style-type: none"> Ruckus Unleashed, controller-less
Configuration	<ul style="list-style-type: none"> Basic SNMP support

Warranty: Sold with a limited lifetime warranty.
For details see: <http://support.ruckuswireless.com/warranty>

WI-FI	
Standards	<ul style="list-style-type: none"> IEEE 802.11a/b/g/n/ac 2.4GHz and 5GHz
Supported Data Rates	<ul style="list-style-type: none"> 802.11n/ac: 6.5Mbps - 173.4Mbps (20MHz) 13.5Mbps - 400Mbps (40MHz) 29.3Mbps - 867Mbps (80MHz) 802.11a: 54, 48, 36, 24, 18, 12, 9 and 6Mbps 802.11b: 11, 5.5, 2 and 1 Mbps 802.11g: 54, 48, 36, 24, 18, 12, 9 and 6Mbps
Radio Chains	<ul style="list-style-type: none"> 2 x 2
Spatial Streams	<ul style="list-style-type: none"> 2
RF Power Output (Aggregate)	<ul style="list-style-type: none"> 26dBm for 2.4GHz 25dBm for 5GHz
Channelization	<ul style="list-style-type: none"> 20MHz, 40MHz, 80MHz
Operating Channels	<ul style="list-style-type: none"> US/Canada: 1-11, Europe (ETSI X30): 1-13, Japan X41: 1-13 5 GHz channels: Country dependent
Frequency Band	<ul style="list-style-type: none"> IEEE 802.11 b/g/n: 2.4 - 2.484 GHz IEEE 802.11a/ac: 5.15 - 5.25 GHz; 5.25 - 5.35 GHz; 5.47 - 5.725 GHz; 5.725 - 5.85 GHz
Power Save	<ul style="list-style-type: none"> Supported
Wireless Security	<ul style="list-style-type: none"> Authentication via 802.1X with the local authentication database, support for RADIUS, LDAP, DPSK and ActiveDirectory
Certifications**	<ul style="list-style-type: none"> U.S., Europe, Australia, Brazil, Canada, Chile, China, Colombia, Costa Rica, Hong Kong, India, Indonesia, Israel, Japan, Korea, Malaysia, Mexico, New Zealand, Peru, Philippines, Saudi Arabia, Singapore, South Africa, Taiwan, Thailand, UAE, Vietnam WEEE/RoHS compliance EN-60601-1-2 (Medical) Wi-Fi Alliance EN50121-1 Railway EMC EN50121-4 Railway Immunity IEC 61373 Railway Shock & Vibration UL 2043 plenum rated 5GHz UNII-1 (2014)

* Maximum power varies by country

** For current certification status please see price list

PRODUCT ORDERING INFORMATION

MODEL	DESCRIPTION
ZoneFlex R500 Unleashed 802.11ac Access Point	
9U1-R500-XX00	Concurrent dual band 802.11ac Unleashed Access Point, no power adapter
Optional Accessories	
902-0108-0000	<ul style="list-style-type: none"> Spare, Accessory Mounting Bracket
902-0173-XXYY	<ul style="list-style-type: none"> Power Adapter, AC/DC wall plug, 100-240Vac 50/60Hz
902-0162-XXYY	<ul style="list-style-type: none"> PoE injector (sold in quantities of 10 or 100)

When ordering ZoneFlex Indoor APs, you must specify the destination region by indicating -US, -WW, or -Z2 instead of XX. When ordering PoE injectors or power supplies, you must specify the destination region by indicating -US, -EU, -AU, -BR, -CN, -IN, -JP, -KR, -SA, -UK, or -UN instead of -XX.

For access points, -Z2 applies to the following countries: Algeria, Egypt, Israel, Morocco, Tunisia, and Vietnam

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