

DATA SHEET



BENEFITS

INDUSTRY'S HIGHEST PERFORMING 802.11AC AP

ZoneFlex R710 Unleashed delivers better performance over competitive 802.11ac APs

MU-MIMO INCREASES EFFICIENCY AND CAPACITY

MU-MIMO allows for clients to utilize the RF spectrum much more efficiently by allowing multiple AP to client transmissions

DUAL CONCURRENT 4X4:4 MIMO AND BEAMFLEX+

Four spatial streams combined with BeamFlex+ adaptive antenna technology ensures the most throughput out of the total 1733Mbps (5GHz) and 800Mbps (2.4GHz) available

ADAPTIVE POLARIZATION DIVERSITY WITH BEAMFLEX+ (PD-MRC)

Dual-polarized antennas that provide better reception for hard to hear clients and more consistent performance as clients constantly change orientation. BeamFlex+ with 802.11ac enables better rates vs. other vendors

REDUCED WI-FI INTERFERENCE

Up to 15dB of interference mitigation and a 50 percent reduction in co-channel interference to neighboring APs

NO NEED TO UPGRADE POE SWITCHES IN 802.3AF MODE

Operates under 802.3af power requiring no need to upgrade PoE switches under full 802.11ac operation

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

BEST IN CLASS CHANNEL SELECTION WITH CHANNELFLY™

Capacity-driven channel selection predict and automatically selects best performing channel based on statistical, real-time capacity analysis of all RF channels

FLEXIBLE DEPLOYMENT OPTIONS

Standalone or centrally managed deployment options

RUCKUS' HIGHEST CAPACITY, HIGHEST PERFORMING FOUR-STREAM 802.11AC WAVE 2 AP

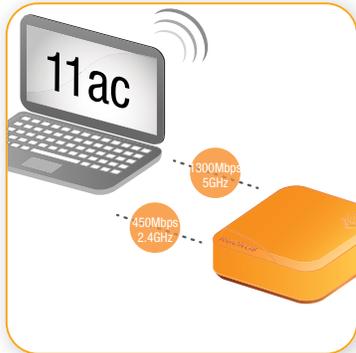
Ruckus R710 Unleashed enables controller-less Wi-Fi architecture for small business environments with superior performance, lower costs and simplified management. Separate controllers and access point licenses are no longer needed, significantly reducing upfront costs. Set-up is also easy, thanks to a simplified web interface that helps businesses configure Wi-Fi in just 60 seconds.

Featuring BeamFlex+ adaptive antenna technology, the ZoneFlex R710 Unleashed offers a substantial increase in performance and range by optimizing antenna coverage on a per client, per transmission basis. BeamFlex+ additionally mitigates co-channel interference by directing Wi-Fi signals where they are needed instead of towards neighboring access points. The R710's BeamFlex+ adaptive antenna system is also equipped with dual polarization antennas, allowing the access point to adapt to the physical orientation of client devices and maximize uplink performance.

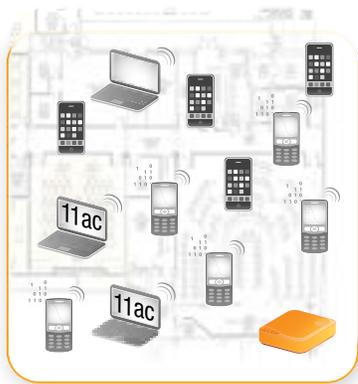
With throughput capacities of 800Mbps (2.4GHz) and 1733Mbps (5GHz), the ZoneFlex R710 Unleashed supports the highest available throughput for Wi-Fi clients. 802.11ac Multi-User MIMO (MU-MIMO) support allows the R710 Unleashed to simultaneously transmit to multiple client devices, drastically improving airtime efficiency, overall throughput, and availability.

ZoneFlex R710 Unleashed is purpose-built for high-capacity, high performance and interference-laden environments such as schools, universities, public venues, hotels, and conference centers. The perfect choice for data-intensive streaming multimedia applications, the ZoneFlex R710 Unleashed delivers picture perfect HD-quality IP video while supporting VoIP and data applications that have stringent quality of service requirements.

The ZoneFlex R710 Unleashed is backward compatible with all existing Wi-Fi clients, and is based on a highly resilient architecture.



Blinding Fast 3-Stream 802.11ac



Ultra High User Density



weight is 1.1 kg. (2.3 lbs.)

FEATURES

- 802.11ac Multi-User MIMO (MU-MIMO)
 - Concurrent dual-band (5GHz/2.4GHz) support
 - 80MHz channelization; 256-QAM modulation support; 1733Mbps PHY rates at 5GHz
 - 256-QAM support on 2.4GHz
 - Ethernet Port Link Aggregation (LACP)
 - Backward compatible with legacy 802.11 clients
 - 802.3af mode of operation
 - 802.11ac standard Tx Beamforming
 - Space Time Block Coding for increased handset performance
 - Improved Maximum Ratio Combining (MRC) for best-in-class receive sensitivity
 - Low Density Parity Check (LDPC) for increased data throughput at all ranges
 - BeamFlex+ (PD-MRC) improves signal reception of mobile devices
 - Integrated smart antenna with many unique patterns for ultra reliability
 - Unmatched Rx sensitivity down to -104dBm
 - Highly Resilient Architecture
 - USB port for hosting Internet-of-Things (IoT) devices such as Bluetooth Low Energy (BLE) smart beacons
 - Integrated DHCP support
 - Multicast IP video streaming support
 - Four software QoS queues per client station
 - Up to 16 BSSIDs per radio with unique QoS and security policies
 - Wall or ceiling mountable with padlock security
 - Built in mounting options for fast an easy deployment
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- WPA-PSK (AES), 802.1X support for RADIUS and AD
 - Zero-IT and Dynamic PSK
 - Admission control/load balancing
 - Band balancing
 - Captive portal and guest accounts
 - SmartMesh Networking

The ZoneFlex R710 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 small business environments.

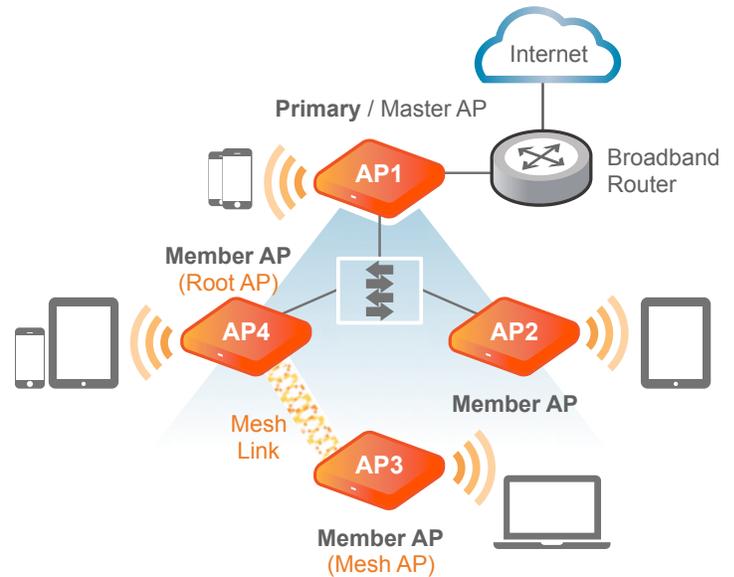
MULTI-USER MIMO (MU-MIMO)

802.11ac MU-MIMO allows the ZoneFlex R710 Unleashed to transmit multiple spatial streams to multiple client devices simultaneously, increasing the total throughput and capacity of the wireless network. The ZoneFlex R710 Unleashed is able to provide up to three clients each their own dedicated full-bandwidth channel using an MU-MIMO technique known as spatial reuse. This capability enables several benefits.

Efficient use of available spectrum effectively multiplies the total capacity of a network, allowing it to meet the increasing data demand driven by the proliferation of mobile Wi-Fi clients and data-hungry applications and uses such as high-definition video streaming. Additionally, MU-MIMO does not require client devices to time-share connections with other clients on the network as in legacy Wi-Fi, which means each device experiences less wait time and makes the network more responsive overall. Even legacy clients benefit from MU-MIMO on the wireless network, because substantially increased efficiency for MU clients leaves the network with more free time and capacity by supporting multiple users.

DEPLOYMENT FOR RETAIL

The ZoneFlex R710 Unleashed is ideal for deployment in retail to provide inconspicuous wireless connection to high quality video, wireless IP phones and data access for handheld PoS bar code scanners



PHYSICAL CHARACTERISTICS	
Power	<ul style="list-style-type: none"> DC Input: 12 VDC 2A PoE: 802.3af/at 802.3af mode feature: <ul style="list-style-type: none"> Limits 2.4GHz to 2x4 (2-chain transmit at 22dBm aggregate power, 4-chain receive) Turns off USB port Turns off one Ethernet port
Physical Size	<ul style="list-style-type: none"> 22 cm (L), 22 cm (W), 6 cm (H)
Weight	<ul style="list-style-type: none"> 11 kg / 2.3 lbs
RF	<ul style="list-style-type: none"> Adaptive antenna array: 4,000+ unique antenna patterns, polarization diversity Maximum transmit power (aggregate) is 28dBm for both 2.4 & 5GHz Physical antenna gain: 3dBi (2.4 and 5GHz) BeamFlex SINR Tx gain: up to 6dB BeamFlex SINR Rx gain: up to 3-5dB Interference mitigation: up to 15dB Minimum Rx sensitivity: -104dBm
Ethernet Ports	<ul style="list-style-type: none"> 2 ports, auto MDX, auto-sensing 10/100/1000 Mbps, RJ-45 Power over Ethernet (802.3af/at) with Category 5/5e/6 cable Link Aggregation (LACP)
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: -4°F (-20°C) to 140°F (60°C) Operating Humidity: up to 95% non-condensing
Power Draw	<ul style="list-style-type: none"> 5.5W (minimum) 9.4W (typical) 18.5W peak, no USB 25W peak, including USB loading and 100m cable 12.95W (peak in 802.3af mode)

PERFORMANCE AND CAPACITY	
Phy Data Rates	<ul style="list-style-type: none"> 800 Mbps (2.4GHz) 1733 Mbps (5GHz)
Concurrent Stations	<ul style="list-style-type: none"> 512
Simultaneous VoIP Clients	<ul style="list-style-type: none"> Up to 60 (802.11e/WMM), 30 per radio

NETWORK ARCHITECTURE	
IP	<ul style="list-style-type: none"> IPv4, IPv6, dual-stack
VLANs	<ul style="list-style-type: none"> 802.1Q (1 per BSSID or dynamic, per user based on RADIUS) Port-based
802.1X	<ul style="list-style-type: none"> Authenticator Supplicant

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

MULTIMEDIA AND QUALITY OF SERVICE	
802.11e/WMM	<ul style="list-style-type: none"> Supported
Software Queues	<ul style="list-style-type: none"> Per WLAN priority (2), Per traffic type (4), per client
Traffic Classification	<ul style="list-style-type: none"> Automatic, heuristics and TOS based or VLAN-defined
Rate Limiting	<ul style="list-style-type: none"> Dynamic per-user or per-WLAN

*Ruckus wireless proprietary and confidential. Specifications subject to change without notice

WI-FI	
Standards	<ul style="list-style-type: none"> IEEE 802.11a/b/g/n/ac
Supported Data Rates	<ul style="list-style-type: none"> 802.11ac: 29.3Mbps - 1733Mbps (80MHz) 802.11n: 6.5Mbps - 216.7Mbps(20MHz) 13.5 Mbps - 800Mbps (40MHz) 802.11a: 54, 48, 36, 24, 18, 12, 9 and 6Mbps 802.11b: 11, 5.5, 2 and 1Mbps 802.11g: 54, 48, 36, 24, 18, 12, 9 and 6Mbps
Radio Chains	<ul style="list-style-type: none"> 4x4
Spatial Streams	<ul style="list-style-type: none"> 4
MIMO	<ul style="list-style-type: none"> SU-MIMO - Up to 4 streams MU-MIMO - Up to 3 streams
Channelization	<ul style="list-style-type: none"> 20 MHz, 40 MHz, and/or 80 MHz
Frequency Band	<ul style="list-style-type: none"> IEEE 802.11ac: 5.15 - 5.85GHz IEEE 802.11a/n: 5.15 - 5.85GHz IEEE 802.11b: 2.4 - 2.484GHz
BSSIDs	<ul style="list-style-type: none"> Up to 16 (2.4GHz) Up to 16 (5GHz)
Power Save	<ul style="list-style-type: none"> Supported
Certifications ⁴	<ul style="list-style-type: none"> WEEE/RoHS compliance EN 60601-1-2 Medical Wi-Fi Alliance certified UL 2043 plenum rated
Subway And Railroad Certifications	<ul style="list-style-type: none"> EN50121-1 EMC EN50121-4 Immunity IEC 61373 Shock & Vibration

1. Max power varies by country setting, band, and MCS rate
2. BeamFlex+ gains are statistical system-level effects (including TxBF), translated to enhanced SINR here, and based on observations over time in real-world conditions with multiple APs and many clients
3. Rx sensitivity varies by band, channel width, and MCS rate
4. Refer to price list for current country certifications

PRODUCT ORDERING INFORMATION

MODEL	DESCRIPTION
ZoneFlex R710 Unleashed Smart Wi-Fi 802.11ac Access Point	
9U1-R710-XX00	ZoneFlex R710 Unleashed, dual-band 802.11abgn/ac Wireless Access Point, 4x4:4 streams, MU-MIMO, BeamFlex+, dual ports, 802.3af/at PoE support. Does not include power adapter or PoE injector. Includes Limited Lifetime Warranty..
Optional Accessories	
902-0162-XX00	<ul style="list-style-type: none"> PoE injector (90 - 264 VAC 47-63 Hz)
902-1169-XX00	<ul style="list-style-type: none"> Power supply (90 - 264 VAC 47-63 Hz)
902-0120-0000	<ul style="list-style-type: none"> Secure Mounting Bracket

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