

## DATA SHEET



## BENEFITS

### MU-MIMO: IMPROVES NETWORK PERFORMANCE FOR ALL CLIENTS

This cutting edge Wi-Fi technology, gets you ready for the new 11ac Wave 2 mobile devices. It improves network efficiency & throughput for even non-Wave 2 clients

### HASSLE-FREE IOT READINESS

Ideal for enabling IoT technologies like BLE using the USB port

### INVESTMENT PROTECTION

Flexible deployment options enable AP's to be supported across various management platforms: standalone, on-premise/virtual controller or Cloud-managed

### 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

### WIDER CHANNELS

Capability to support 80+80MHz/160MHz channels for higher bandwidth

### EXTENDED RANGE REQUIRING FEWER ACCESS POINTS

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

### 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

## HIGH PERFORMANCE, 802.11AC WAVE 2 MID-RANGE SMART WI-FI ACCESS POINTS WITH ADAPTIVE ANTENNA TECHNOLOGY

The Ruckus ZoneFlex R610 delivers high-performance and reliable 802.11ac wireless networking with MU-MIMO (Multi-User Multiple-Input Multiple-Output) capability. MU-MIMO helps boost network throughput by serving multiple clients simultaneously and also benefiting non-Wave 2 clients, thus improving overall network performance.

The R610, through its USB port, also enables IoT readiness for technologies like BLE, to help customers take advantage of upcoming IoT technologies.

Each ZoneFlex R610 integrates Ruckus-patented BeamFlex+, a software-controlled, high gain antennas that continually forms and directs each Wi-Fi packet over the best performing signal path.

Using dual-polarized antennas, the R610 adapts in real time to anticipate hand-held device movement and rotation ensuring consistent performance.

### MU-MIMO

MU-MIMO helps Wave 2 and non-Wave 2 clients. The R610 can communicate simultaneously to multiple Wave 2 clients increasing network performance. This frees up airtime for non-Wave 2 clients resulting in enhanced aggregate network throughput.

### ADVANCED WLAN APPLICATIONS

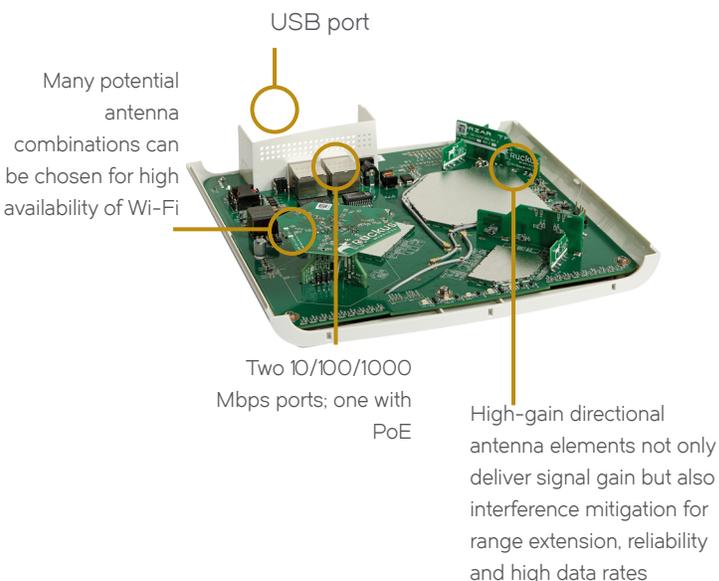
When used with the Ruckus WLAN controllers, each ZoneFlex R610 supports a wide range of value-added applications such as BYOD/guest onboarding, Dynamic PSK, hotspot authentication, wireless intrusion detection and many more. WLANs can be created and mapped to the same or different APs or VLANs. In a centrally managed configuration, the ZoneFlex R610 works with a wide range of authentication servers including Microsoft's Active Directory, LDAP, and RADIUS.

### FLEXIBLE DEPLOYMENT OPTIONS

R610 offers unprecedented & unmatched flexibility—with the same AP being able to connect to a variety of controllers—ZoneDirector, SmartZone or Cloud. This gives you the ability to buy an AP now, and change your controller later. ZoneFlex R610 can be deployed across any L2/L3 network and can bridge traffic onto the local network, tunnel to a central location using L2TP\*\*, or route between the WAN and NAT'ed private subnets. With the Ruckus controllers, each ZoneFlex R610 is automatically configured through the network making deployment quick and easy.

### COMPLETE LOCAL AND CLOUD MANAGEMENT

Each ZoneFlex R610 can be managed by the ZoneDirector controller or the SmartZone series of on-premise or virtual hosted controllers or through Cloud Wi-Fi.

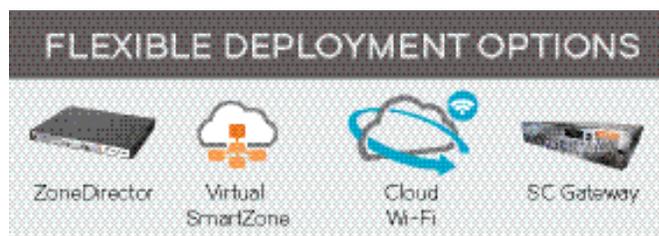


### FEATURES

- 802.11ac Multi-User MIMO (MU-MIMO)
- Dual-band concurrent (5GHz/2.4GHz)
- BeamFlex+ (PD-MRC) smart antenna, with support for up to 1024 unique antenna patterns per access point enables up to 4dB of additional gain and up to 10dB of additional interference mitigation
- 80+80/160MHz capable
- Ethernet Port Link Aggregation (LACP)
- Automatic interference mitigation, optimized for high-density environments
- 802.11ac standard Tx Beamforming
- Standard 802.3af/at Power over Ethernet (PoE)
- Two 10/100/1000 Ethernet ports, one with 802.3af/at Power over Ethernet (PoE)
- USB port for IoT technologies
- Router 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) \*\*
- Dynamic PSK\*
- Admission control/load balancing\*
- Band steering and airtime fairness support
- Captive portal and guest accounts\*
- Application recognition and control\*
- SmartWay Bonjour gateway\*
- Hotspot 2.0\*
- SPOT location services\*
- SmartMesh\*

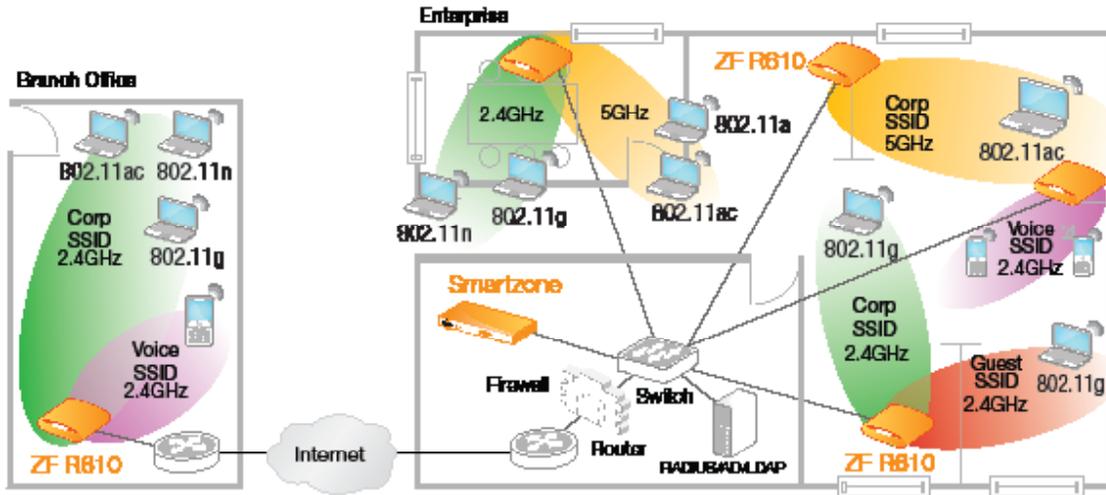
\* when used with a controller platform

\*\* only in standalone mode



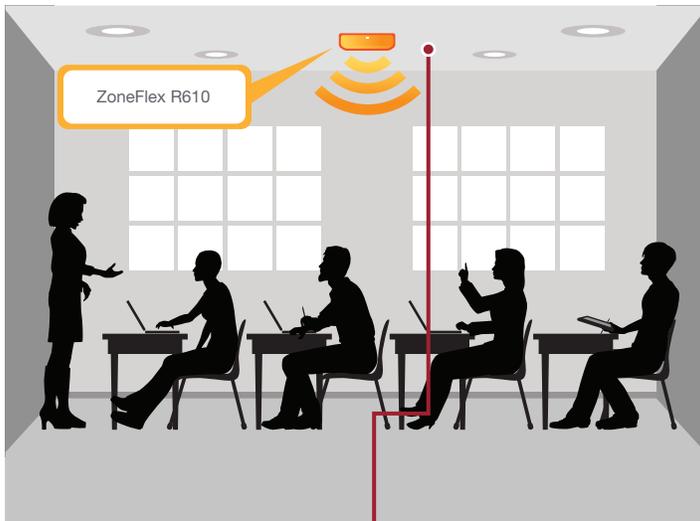
### THE ZONEFLEX R610 INTEGRATES WITH YOUR EXISTING NETWORK INFRASTRUCTURE

Delivering best-in-class 802.11ac performance and reliability — making it the ideal wireless solution for mid-range enterprise and branch office applications.



### DEPLOYMENTS FOR CLASSROOMS AND LIBRARIES

The ZoneFlex R610 is ideal for deployment in education common areas providing high quality wireless access in high-density locations.

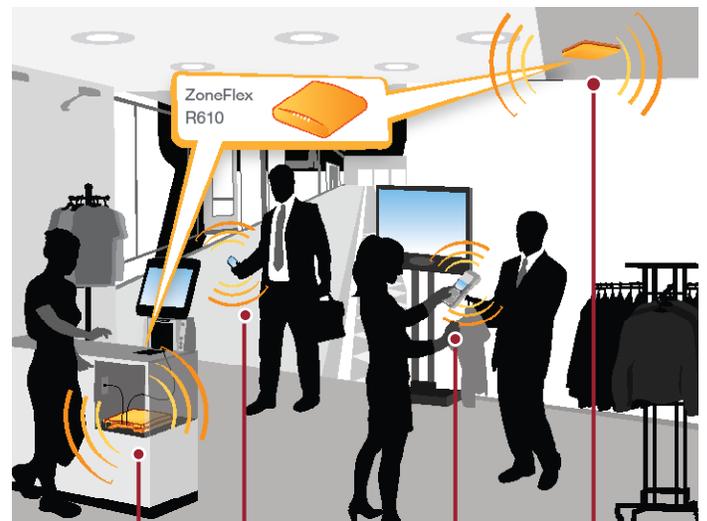


Dual-band (2.4/5GHz) support allows for concurrent Internet and IP-based video services

Sleek, elegant design easily concealed

### DEPLOYMENT FOR RETAIL / BRANCH OFFICES

The ZoneFlex R610 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.



Wired ports to connect devices such as cash registers, printers, etc.

Multiple SSIDs for differentiated user services (e.g., guest Wi-Fi, point of sale, voice)

Reliable Wi-Fi connectivity & IoT capabilities using technologies such as BLE

5GHz band and smart antenna system ideal for 11ac clients

PHYSICAL CHARACTERISTICS	
Power	<ul style="list-style-type: none"> <li>DC Input 12V DC, 1.0A</li> <li>Power over Ethernet 802.3af/at</li> <li>802.3af mode feature:                             <ul style="list-style-type: none"> <li>Limits 2.4GHz to 2x3 (2-chain transmit at 21dBm aggregate power, 3-chain receive)</li> <li>Turns off USB port</li> <li>Turns off 1 Ethernet port</li> </ul> </li> </ul>
Physical Size	20.1cm (L), 19.5cm (W), 5.1cm (H)
Weight	578g (1.3 lb)
Ethernet Ports	<ul style="list-style-type: none"> <li>2 auto MDX, auto-sensing 10/100/1000 Mbps, RJ-45, POE port (on one port)</li> <li>Link Aggregation (LACP)</li> </ul>
Mounting Options	<ul style="list-style-type: none"> <li>Electrical wallbox; Standard US and EU single gang wall jack</li> <li>Optional bracket for offset &amp; wall mount</li> </ul>
Lock Options	<ul style="list-style-type: none"> <li>Hidden latching mechanism</li> <li>Kensington Lock Hole</li> <li>T-bar Torx</li> </ul>
Environmental Conditions	<ul style="list-style-type: none"> <li>Operating Temperature: 0°C - 40°C</li> <li>Operating Humidity: 10% - 95% non-condensing</li> </ul>
Power Draw	12V DC Input <ul style="list-style-type: none"> <li>Idle: 5.7W</li> <li>Typical: 10.5W</li> <li>Peak: 19.1W</li> </ul> Power over Ethernet Input <ul style="list-style-type: none"> <li>Idle: 5.7W</li> <li>Typical: 10.4W</li> <li>Peak: 18.8W</li> </ul>
USB PORT	<ul style="list-style-type: none"> <li>USB 2.0</li> <li>Type A connector</li> <li>Ideal for BLE dongles and sensors</li> </ul>

PERFORMANCE AND CAPACITY	
Concurrent Stations	512 clients per AP
Simultaneous Voip Clients	30 clients per AP

RF	
ANTENNA	Full omnidirectional polarization diversity
PHYSICAL ANTENNA GAIN	Up to 3dBi
BEAMFLEX* SINR TX GAIN	Up to 6dB
BEAMFLEX* SINR RX GAIN	3-5dB (PD-MRC)
INTERFERENCE MITIGATION	Up to 15dB
MINIMUM RX SENSITIVITY	Up to -100dBm

\* 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"> <li>Standalone (individually managed)</li> <li>Managed by ZoneDirector (9.13.2 &amp; Above)</li> <li>Managed by SmartZone (3.4.1 &amp; above)</li> <li>Managed by FlexMaster</li> </ul>
Configuration	<ul style="list-style-type: none"> <li>Web User Interface (HTTP/S)</li> <li>CLI (Telnet/SSH), SNMP v1, 2, 3</li> <li>TR-069 vis FlexMaster</li> </ul>
Auto Ap Software Updates	FTP or TFTP, remote auto available

WI-FI	
Standards	<ul style="list-style-type: none"> <li>IEEE 802.11a/b/g/n/ac</li> <li>2.4GHz and 5GHz</li> </ul>
Supported Data Rates	<ul style="list-style-type: none"> <li>802.11n/ac: 6.5Mbps - 260Mbps (20MHz), 13.5Mbps - 600Mbps (40MHz), 29.3Mbps - 1300Mbps (80MHz), 867Mbps (160MHz)</li> <li>802.11a: 54, 48, 36, 24, 18, 12, 9 and 6Mbps</li> <li>802.11b: 11, 5.5, 2 and 1 Mbps</li> <li>802.11g: 54, 48, 36, 24, 18, 12, 9 and 6 Mbps</li> </ul>
Radio Chains	3 x 3
Spatial Streams	3 streams
Channelization	20MHz, 40MHz, 80MHz, 160MHz capable
RF POWER OUTPUT (Aggregate)	<ul style="list-style-type: none"> <li>28dBm for 2.4GHz*</li> <li>27dBm for 5GHz*</li> </ul>
Operating Channels	<ul style="list-style-type: none"> <li>US/Canada: 1-11, Europe ( ETSI X30): 1-13, Japan X41: 1-13</li> <li>5 GHz channels: Country dependent</li> </ul>
Frequency Band	<ul style="list-style-type: none"> <li>IEEE 802.11 b/g/n: 2.4 - 2.484GHz</li> <li>IEEE 802.11a/ac: 5.15 - 5.25GHz; 5.25 - 5.35GHz; 5.47 -5.725GHz; 5.725 - 5.85GHz</li> </ul>
Power Save	Supported
Wireless Security	<ul style="list-style-type: none"> <li>WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i</li> <li>Authentication via 802.1X with the ZoneDirector, SmartZone, local authentication database, support of RADIUS, and ActiveDirectory</li> </ul>
Certifications**	<ul style="list-style-type: none"> <li>US, Europe, Argentina, Australia, Brazil, Canada, Chile, China, Colombia, Costa Rica, Egypt, Hong Kong, India, Indonesia, Israel, Japan, Korea, Malaysia, Mauritius, Mexico, New Zealand, Pakistan, Peru, Philippines, Russia, Saudi Arabia, Singapore, South Africa, Taiwan, Thailand &amp; UAE.</li> <li>WEEE/RoHS compliance</li> <li>EN-60601-1-2 (Medical)</li> <li>Wi-Fi Alliance</li> <li>EN50121-1 Railway EMC</li> <li>EN50121-4 Railway Immunity</li> <li>IEC 61373 Railway Shock &amp; Vibration</li> <li>UL 2043 plenum rated</li> <li>5GHz UNII-1 (2014)</li> </ul>

\* Maximum power varies by country

\*\* For current certification status please see price list

† With 160MHz channelization enabled, the R610 runs in single stream mode (1x1)

## PRODUCT ORDERING INFORMATION

MODEL	DESCRIPTION
Zoneflex R610 Smart Wi-Fi Wave 2 802.11ac Access Point	
901-R610-XX00	Concurrent dual band 802.11ac AP, no power adapter
Optional Accessories	
902-1169-XXYY	Power supply (90 - 264 VAC, 47 - 63 Hz)
902-0162-XXYY	PoE injector (sold in quantities of 10 or 100)
902-0120-0000	Secure Mounting Bracket

PLEASE NOTE: When ordering ZoneFlex Indoor APs, you must specify the destination region by indicating -US, -WW, -JP or -Z2 instead of XX.

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

Warranty: Sold with a limited lifetime warranty.

For details see: <http://support.ruckuswireless.com/warranty>

NOTE: SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE