Lightpath

Managed WiFi

Ruckus Zoneflex™ R600

802.11AC 3X3:3 SMART WiFi Access Points

with Adaptive Antenna Technology

Lightpath's wireless portfolio includes a family of 802.11n and 802.11ac high-performance Access Points (APs) that are a perfect fit for enterprises of all sizes, including educational institutions, retail, hospitality, and healthcare providers who are looking to move their organizations to a pervasive mobility environment.

High Capacity, High Performing Enterprise Access Points

The Ruckus ZoneFlex R600 delivers high-performance and reliable 802.11ac wireless networking at a competitive price point.

The ZoneFlex R600 combines patented adaptive antenna technology and automatic interference mitigation to deliver consistent, predictable performance at extended ranges with up to an additional 6dB of BeamFlex gain on top of the physical antenna gain and up to 15dB of interference mitigation.

The R600 is ideal for wireless networks servicing mobile devices with dual-polarized antennas that adapt in real time to maximize performance for the mobile enterprise.

Performance is further enhanced as the ZoneFlex R600 integrates Ruckus' patented BeamFlex, a software-controlled, high gain adaptive antenna technology. The ZoneFlex R600 automatically selects channels for highest throughput potential using Ruckus ChannelFly dynamic channel management, adapting to environmental changes.

A sleek and low-profile design, the ZoneFlex R600 was purpose-built for enterprises requiring reliable high speed client connectivity. It is ideal for a variety of medium density enterprise and hotspot environments including SMBs, hotels, and schools.

Patented BeamFlex+™ Technology Extends Signal Range, Improves Stability of Client Connections

All ZoneFlex R600 Smart WiFi access points integrate a softwarecontrolled smart antenna with PD-MRC (polarization diversity) that delivers up to an additional 6 dB of BeamFlex gain and 15 dB of interference mitigation. This is especially beneficial to enhance the performance of mobile devices which are constantly in motion and changing orientation.

Flexible Deployment Options

ZoneFlex R600 APs can be deployed as a standalone AP or as part of a centrally managed wireless LAN using ZoneDirector Smart WLAN controllers. ZoneFlex R600 can be deployed across any L2/L3 network and can bridge traffic onto the local network, tunnel to a central location using L2TP or PPPoE, or route between the WAN and NAT'ed private subnets. With the Ruckus controllers, each ZoneFlex R600 is automatically configured through the network making deployment quick and easy.

Advanced WLAN Applications with Smart/OS

When used with the Ruckus Smart WLAN controllers, each ZoneFlex R600 supports a wide range of value-added applications such as guest networking, Dynamic PSK, hotspot authentication, wireless intrusion detection and many more. With Smart/OS, WLANs can be created and mapped to the same or different APs or VLANs. In a centrally managed configuration, the ZoneFlex R600 works with a wide range of authentication servers including Microsoft's Active Directory, LDAP, and RADIUS.

Benefits:

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 Webbased 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

Features:

- Dual-band concurrent (5GHz/2.4GHz)
- Adaptive antenna technology and advanced RF management
- Up to an additional 6dB BeamFlex gain / 15dB interference mitigation / 3 dBi physical antenna gain
- Automatic interference mitigation, optimized for high-density environments
- Integrated smart antenna technology
- Standard 802.3af Power over Ethernet (PoE)
- 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
- Ethernet 802.1x port-based authentication (authenticator and supplicant)
- Band steering and airtime fairness support

Specifications:

WiFi	
Standards	EEE 802.11a/b/g/n/ac 2.4GHz and 5GHz
Supported Data Rates	802.11n/ac: 6.5Mbps – 260Mbps (20MHz) 13.5Mbps – 600Mbps (40MHz) 29.3Mbps – 1300Mbps (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 6 Mbps
Radio Chains	3 x 3
Spatial Streams	3
RF Power Output (Aggregate)	28 dBm for 2.4GHz† 27 dBm for 5GHz†
Channelization	20MHz, 40MHz, 80MHz
Frequency Band	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
Operating Channels	US/Canada: 1-11 Europe (ETSI X30): 1-13 Japan (X41): 1-13 5 GHz channels: Country dependent
Power Save	Supported
Wireless Security	• WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i • Authentication via 802.1X with the ZoneDirector, local authentication database, support for RADIUS, LDAP, and ActiveDirectory
Certifications	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) • WiFi Alliance • EN50121-1 Railway EMC • EN50121-4 Railway Immunity • IEC 61373 Railway Shock & Vibration • UL 2043 plenum rated • 5GHz UNII-1 (2014)

Capacity	
Concurrent Stations	Up to 512 clients per AP
Simultaneous VoIP Clients	Up to 30

RF	
Antenna	Adaptive antenna that provides up to 512 unique antenna patterns per radio Full omnidirectional polarization diversity
Physical Antenna	Gain Up to 3 dBi
BeamFlex SINR TX Gain*	Up to 6 dB
BeamFlex SINR RX Gain*	3-5 dB (PD-MRC)
Interference Mitigation	Up to 15 dB
Minimum RX Sensitivity	Up to -101 dBm

Management	
Deployment Options	Standalone (individually managed) Managed by ZoneDirector (9.8.1 & above) Managed by SmartZone (3.0 & above) Managed by FlexMaster Managed by SmartCell™ Gateway 200 (2.5.1 & above)
Configuration	Web User Interface (HTTP/S) CLI (Telnet/SSH), SNMP v1, 2, 3 TR-069 vis FlexMaster
Auto AP Software Updates	FTP or TFTP, remote auto available

Hardware	
Power	DC Input: 12 VDC 1.0A Power over Ethernet 802.3 af
Physical Size	15.8 cm x 15.8 cm x 4 cm (6.2 in x 6.2 in x 1.57 in)
Weight	364 g (0.8 lb.)
Ethernet Ports	2 auto MDX Auto-sensing 10/100/1000 Mbps RJ-45, POE port (on one port)
Lock Options	Hidden latching mechanism Kensington Lock Hole T-bar Torx Bracket (902-0108-0000) Torx screw & padlock (sold separately)
Environmental Conditions	Operating Temperature: 0°C - 40°C Operating Humidity: 10% - 95% noncondensing
Power Draw	Idle: 4W Typical: 6.2W Peak: 11.2W

† Maximum power varies by country

* Beamflex+ gains are statistical-level effects translated to enhanced SINR based on observations over time in real-world conditions with multiple APs anmany clients.