

R600

Indoor 802.11ac 3X3:3 Wi-Fi Access Point



DATA SHEET



BENEFITS

STUNNING WI-FI PERFORMANCE

Provide a great user experience no matter how challenging the environment with BeamFlex+™ adaptive antenna technology and 512 directional antenna patterns.

GET OPTIMAL THROUGHPUT

ChannelFly dynamic channel technology uses machine learning to automatically find the least congested channels. You always get the highest throughput the band can support.

MULTIPLE MANAGEMENT OPTIONS

Manage the R600 from the cloud, or with on-premises physical/virtual appliances

BETTER MESH NETWORKING

Reduce expensive cabling, and complex mesh configurations by checking a box with SmartMesh wireless meshing technology to dynamically create self-forming, self-healing mesh networks.

EXPANDED BACKHAUL

Pair two onboard 1GbE ports with link aggregation (LACP) to maximize throughput between the AP and wired switch.

POWER EFFICIENT

Full design feature capability for 5GHz clients with 802.3af (PoE) allows enterprises to use existing switches without costly upgrades.

MORE THAN WI-FI

Enhance your network with Cloudpath security and management software, SPoT real-time Wi-Fi location engine and analytics software, and SCI network analytics.

In medium-density locations, finding the right balance between performance and affordability can be challenging. No one wants to invest in extra capacity and features they won't use. At the same time, your users expect strong, consistent connectivity wherever and whenever they need it.

The Ruckus R600 combines high performance and reliability with the right feature set for medium-density locations, at a price you can afford. Using patented Ruckus technology, it extends range and mitigates interference to deliver excellent user experiences in indoor spaces.

The R600 is an ideal choice for locations such as small and mid-size enterprises and schools, and hotspot environments at hotels, retail shops, non-franchise restaurants, and other small and medium-size venues. It features a sleek, low-profile design and dual-polarized antennas that adapt in real time to maximize performance.

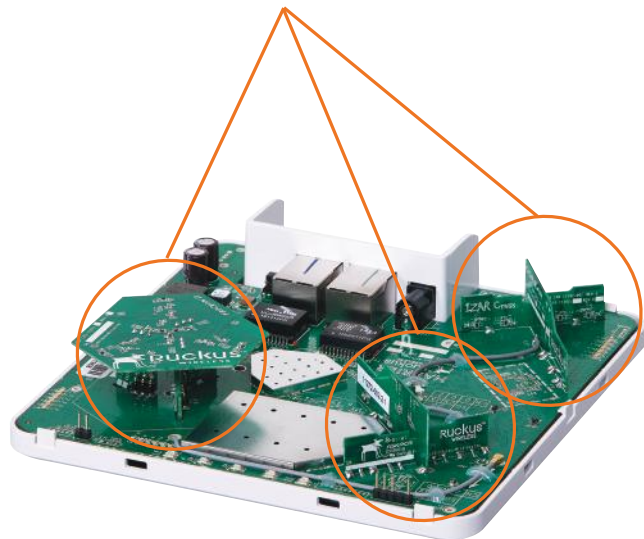
The R600 802.11ac Wi-Fi AP and switch incorporates patented technologies found only in the Ruckus Wi-Fi portfolio.

- Extended coverage with patented BeamFlex+ utilizing multi-directional antenna patterns.
- Improve throughput with ChannelFly, which dynamically finds less congested Wi-Fi channels to use.

Additionally, the R600 provides an ideal combination of features and performance for medium-density environments. It features easy-to-deploy mesh networking capabilities, support for up to 512 clients per AP, and capacity-based admission control to prevent APs from getting congested with too many attached devices.

Whether you're deploying ten or ten thousand APs, the R600 is also easy to manage through Ruckus' appliance, virtual and cloud management options.

BeamFlex Adaptive Antenna Technology



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

All R600 Wi-Fi 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 R600 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 R600 works with a wide range of authentication servers including Microsoft's Active Directory, and AAA/RADIUS.

FLEXIBLE DEPLOYMENT OPTIONS

Ruckus 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.

COMPLETE LOCAL AND REMOTE MANAGEMENT

Each R600 can be managed as a standalone AP through a Web-based GUI, using SNMP or through the Ruckus SCI or FlexMaster. Local management can also be performed using Ruckus' Smart WLAN controllers. FlexMaster is a LINUX-based software platform that uses industry standard protocols to perform bulk configuration, fault detection, monitoring and a wide range of trouble-shooting capabilities over a wire area connection. The controllers enable local management and control of APs, adding value-added services such as transmit power control and guest networking.



FEATURES

WIRELESS

- 802.11 3x3:3 Wi-Fi
- Dual-band concurrent (2.4GHz/5GHz)
- 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
- WPA-PSK (AES), 802.1X support for RADIUS and Active Directory
- Dynamic, per user rate-limiting for hotspot WLANs
- Band steering and airtime fairness support
- Admission control/load balancing

INTERFACES

- 2 x 1GbE backhaul port, one with PoE

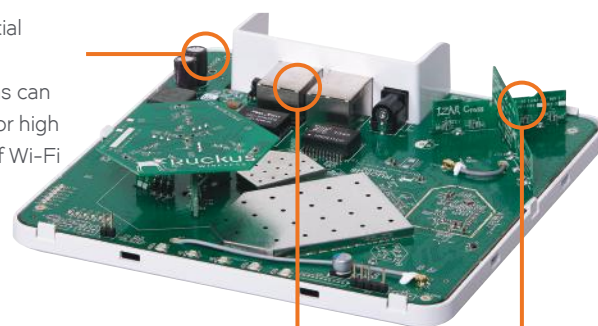
POWER

- Standard 802.3af Power over Ethernet (PoE)

SOFTWARE

- DHCP services
- IP multicast video streaming support
- Advanced QoS packet classification and automatic priority for latency-sensitive traffic
- BYOD, Zero-IT and Dynamic PSK
- Rich and customizable guest access services
- Application recognition and control
- Bonjour gateway
- SecureHotspot
- Band balancing
- SmartMesh wireless meshing technology
- Smart Positioning Technology (Real-time location engine and analytics software)
- Cloudpath (Security and management software)
- SmartCell Insight (Networks analytics engine)

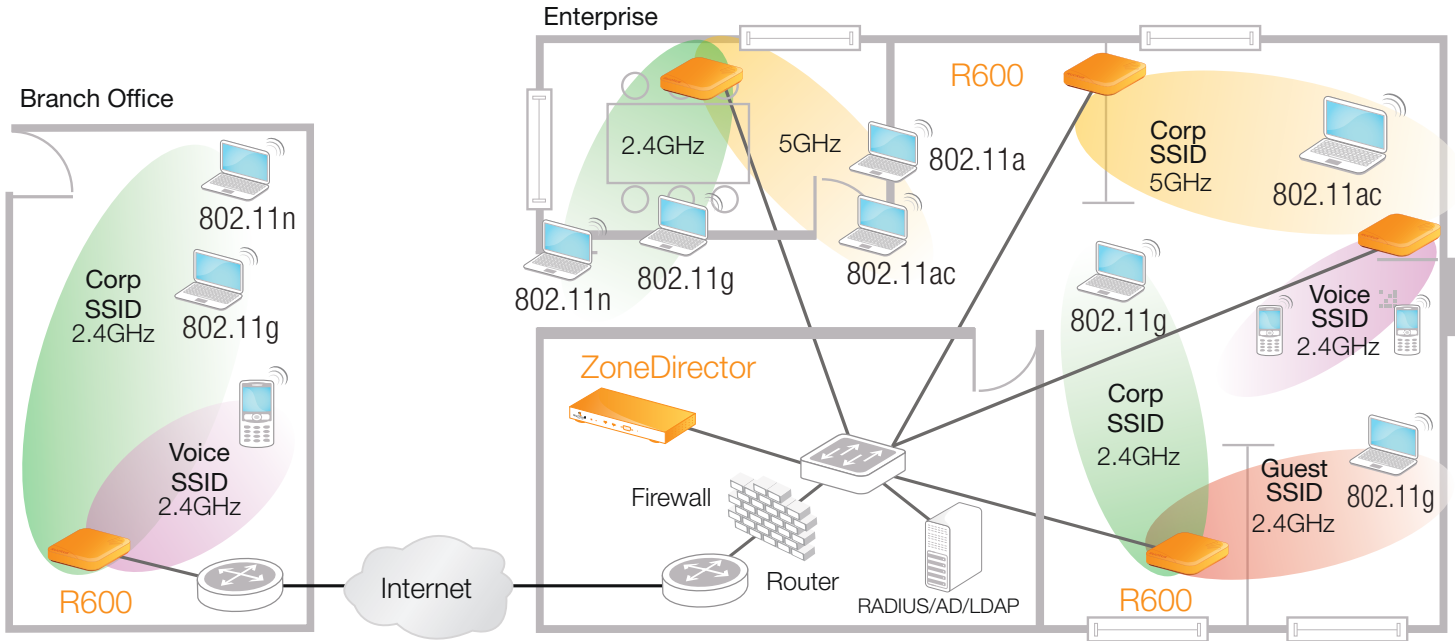
Many potential antenna combinations can be chosen for high availability of Wi-Fi



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

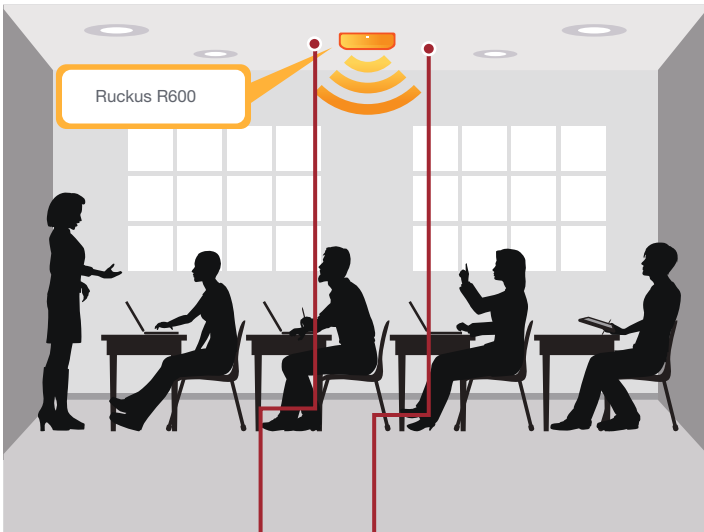
High-gain directional antenna elements not only delivers signal gain but also interference mitigation for range extension, reliability and high data rates

The R600 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.



DEPLOYMENTS FOR CLASSROOMS AND LIBRARIES

The R600 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 R600 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 barcode 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 for point of sale devices

5GHz band and smart antenna system ideal for 802.11ac clients

PHYSICAL CHARACTERISTICS	
Power	<ul style="list-style-type: none"> DC Input: 12 VDC 1.0A Power over Ethernet 802.3 af
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"> 364 g (0.8 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)
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 - 40°C Operating Humidity: 10% - 95% non-condensing
Power Draw	<ul style="list-style-type: none"> Idle: 4W Typical: 6.2W Peak: 11.2W

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

RF	
ANTENNA	<ul style="list-style-type: none"> Adaptive antenna that provides up to 512 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 6dB
BEAMFLEX* SINR RX GAIN	<ul style="list-style-type: none"> 3-5dB (PD-MRC)
INTERFERENCE MITIGATION	<ul style="list-style-type: none"> Up to 15dB
MINIMUM RX SENSITIVITY	<ul style="list-style-type: none"> Up to -10dBm

* 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"> 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 & above)
Configuration	<ul style="list-style-type: none"> Web User Interface (HTTP/S) CLI (Telnet/SSH), SNMP v1, 2, 3 TR-069 vis FlexMaster
Auto Ap Software Updates	<ul style="list-style-type: none"> FTP or TFTP, remote auto available

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 - 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 6Mbps
Radio Chains	<ul style="list-style-type: none"> 3 x 3
Spatial Streams	<ul style="list-style-type: none"> 3
RF POWER OUTPUT (Aggregate)	<ul style="list-style-type: none"> 28 dBm for 2.4GHz† 27 dBm 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 - 2.484GHz IEEE 802.11a/ac: 5.15 - 5.25GHz; 5.25 - 5.35GHz; 5.47 - 5.725 GHz; 5.725 - 5.85GHz
Power Save	<ul style="list-style-type: none"> Supported
Wireless Security	<ul style="list-style-type: none"> WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i Authentication via 802.1X with the ZoneDirector, local authentication database, support of RADIUS, and ActiveDirectory
Certifications**	<ul style="list-style-type: none"> 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 & UAE. 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
Ruckus R600 Wi-Fi 802.11ac Access Point	
901-R600-XX00	Concurrent dual band 802.11ac Access Point, no power adapter
Optional Accessories	
902-0108-0000	Spare, Accessory Mounting Bracket
902-0173-XXYY	Power Adapter, AC/DC wall plug,100-240Vac 50/60Hz
902-0162-XXYY	PoE injector (sold in quantities of 10 or 100)

PLEASE NOTE: When ordering 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

Warranty: Sold with a limited lifetime warranty.

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