

R300

Indoor 802.11n 2x2:2 Wi-Fi Access Point



DATA SHEET



BENEFITS

AFFORDABLE ENTERPRISE PERFORMANCE

The R300 provides great performance with extended range at an affordable price point

KEEP EXISTING SWITCHES AND CABLES

Designed to operate on existing PoE switches and CAT 5e cabling to minimize costly upgrades.

MULTIPLE MANAGEMENT OPTIONS

Manage the R300 from the cloud, with on-premise physical/virtual appliances, or without a controller.

DISTICTIVE WI-FI PERFORMANCE

Extends coverage with patented BeamFlex+™ adaptive antenna technology while mitigating interference by utilizing 64 directional antenna patterns.

GET OPTIMAL THROUGHPUT

Improve performance automatically with ChannelFly and machine learning, which finds less congested Wi-Fi channels with dynamic RF channel selection.

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.

What's the difference between a small office and a crowded convention center floor? To the people in each of those spaces, a lot less than you might think. Small business users may be connecting in a less-crowded venue, but they're still using a wide range of devices and bandwidth-hungry cloud services. And they still expect to access latency-sensitive voice and video applications with consistent, reliable Wi-Fi connectivity, no matter where they roam.

The Ruckus R300 indoor access point delivers industry-leading 802.11n wireless performance and reliability for smaller venues at an affordable price. Unlike any other 802.11n wireless solution in its class, it includes patented Ruckus adaptive antenna and interference mitigation technologies found in our premier access points—in a package designed and priced for small businesses.

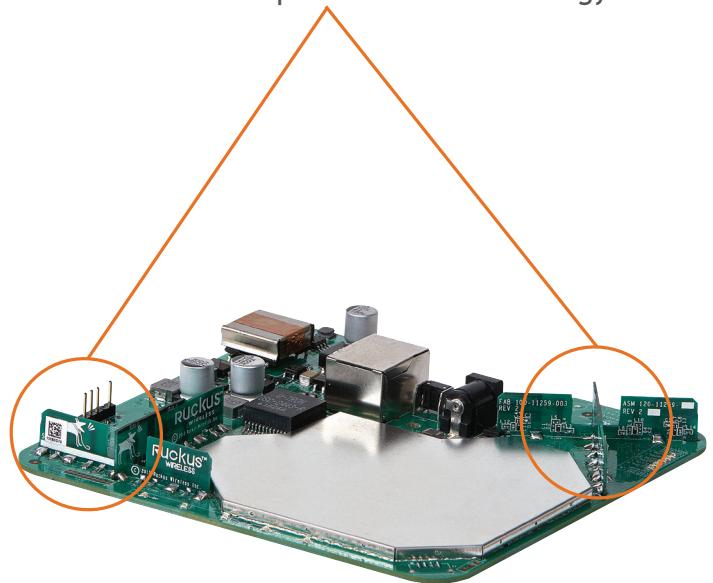
The R300 802.11n AP is an ideal solution for small enterprise sites, branch offices, and smaller restaurants and retail spaces. In practically any low-density indoor venue, you can get broader coverage, more reliable connections, and best-in-class 802.11n performance, without breaking the bank.

The R300 Wi-Fi AP 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.

Whether you're deploying ten or ten thousand APs, the R300 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 R300 Smart Wi-Fi access points integrate a software-controlled smart antenna array that delivers up to an additional 4dB of BeamFlex gain and 10dB of interference mitigation. This allows a 2 to 4x improvement in signal range and a reduction in packet loss from the ability to automatically mitigate interference and avoid obstacles.

ADVANCED WLAN APPLICATIONS WITH SMART/OS

When used with the Ruckus ZoneDirector Smart WLAN controller, each R300 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 R300 works with a wide range of authentication servers including Microsoft's Active Directory, LDAP, and RADIUS.

FLEXIBLE DEPLOYMENT OPTIONS

R300 APs can be deployed as a standalone AP or as part of a centrally managed wireless LAN using ZoneDirector Smart WLAN controllers. R300 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. When used with the ZoneDirector, each R300 is automatically configured through the network making deployment quick and easy.

COMPLETE LOCAL AND REMOTE MANAGEMENT

Each R300 can be managed as a standalone AP through a Web-based GUI, using SNMP or through the FlexMaster Wi-Fi remote management system. Local management can also be performed using the ZoneDirector Smart WLAN controller. FlexMaster is a LINUX-based software platform that uses industry-standard protocols to perform bulk configuration, fault detection, monitoring and a wide range of troubleshooting capabilities over a wire area connection. The ZoneDirector enables local management and control of APs, adding value-added services such as transmit power control, and guest networking.

FEATURES

WIRELESS

- Dual-band concurrent (5GHz/2.4GHz)
- Adaptive antenna technology and advanced RF management
- Up to an additional 4dB BeamFlex gain / 10dB interference mitigation
- Automatic interference mitigation, optimized for high-density environments
- Integrated smart antenna technology
- 2 to 4 times extended range and coverage
- IP multicast video streaming support
- Up to 27 BSSIDs per radio with unique QoS and security policies
- 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)
- Admission control/load balancing**
- Bandsteering and airtime fairness

INTERFACES

- 1 x 1GbE port with PoE

POWER

- Standard 802.3af Power over Ethernet (PoE)

SOFTWARE

- Router mode with NAT and DHCP services
- Smart Positioning Technology (Real-time location engine and analytics software)
- Cloudpath (Security and management software)
- SmartCell Insight (Network analytics engine)
- Zero-IT and Dynamic PSK**
- Captive portal and guest accounts **
- Wall, desktop or ceiling mountable

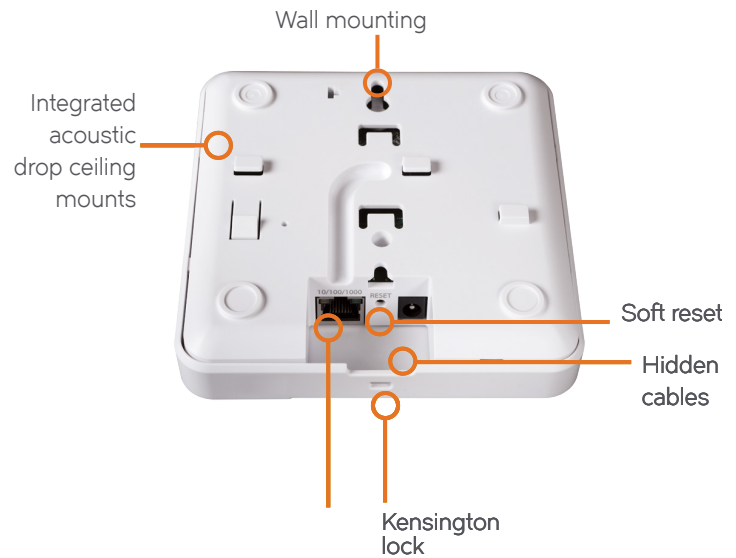
** when used with management

SMALL LIGHTWEIGHT FORM FACTOR WITH BUILT IN MOUNTING OPTIONS FOR EASY DEPLOYMENT

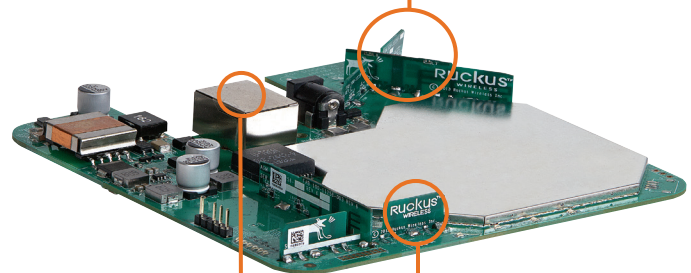
The R300 installs and mounts seamlessly making it ideal for quick and effective set up in hotspot or retail applications.



215g (0.474 lbs.)



High-gain adaptive antenna elements deliver signal gain and mitigates interference for range extension, reliability and high data rates



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"> 13cm (L), 13cm (W), 2.8cm (H) 5.1 in (L), 5.1 in (W), 1.1 in (H)
Weight	<ul style="list-style-type: none"> 215g (0.474 lbs.)
Data Ports	<ul style="list-style-type: none"> 1 auto MDX, auto-sensing 10/100/1000 Mbps, RJ-45, POE 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
Environmental Conditions	<ul style="list-style-type: none"> Operating Temperature: 0°C - 40°C Operating Humidity: 10% - 95% non-condensing
Power Draw	DC Input <ul style="list-style-type: none"> Idle: 1.6W Typical: 3.6W Peak: 8.4W Power over Ethernet Input <ul style="list-style-type: none"> Idle: 3.4W Typical: 5.3W Peak: 9.7W

PERFORMANCE AND CAPACITY	
Max Phy Rate	<ul style="list-style-type: none"> 300 Mbps / radio
Concurrent Stations	<ul style="list-style-type: none"> 256 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 128 unique antenna patterns 64 patterns per band
RF POWER OUTPUT (Aggregated)	<ul style="list-style-type: none"> 26dBm for 2.4GHz† 24dBm for 5GHz†
PHYSICAL ANTENNA GAIN	<ul style="list-style-type: none"> Up to 3dBi per spatial stream
BEAMFLEX* SINR TX GAIN	<ul style="list-style-type: none"> Up to 4dB
INTERFERENCE MITIGATION	<ul style="list-style-type: none"> Up to 10dB
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 FlexMaster Managed by SmartCell™ Gateway 200* (2.5.1 & 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

* some features not supported - e.g., mesh

WI-FI	
Standards	<ul style="list-style-type: none"> IEEE 802.11a/b/g/n 2.4GHz and 5GHz
Supported Data Rates	<ul style="list-style-type: none"> 802.11n: 6.5Mbps - 130Mbps (20MHz) 6.5Mbps - 300Mbps (40MHz) 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	<ul style="list-style-type: none"> 2 x 2
Spatial Streams	<ul style="list-style-type: none"> 2
Channelization	<ul style="list-style-type: none"> 20MHz and/or 40MHz
Operating Channels	<ul style="list-style-type: none"> US/Canada: 1-11 EU (ETSI X30): 1-13 Channel availability is country dependent according to the local regulations 5 GHz Channels - country dependent 5GHz UNII-1 (2014)
Frequency Band	<ul style="list-style-type: none"> IEEE 802.11 b/g/n: 2.4 - 2.484 GHz IEEE 802.11a/n: 5.15 - 5.25 GHz; 5.25 - 5.35 GHz; 5.47 - 5.725 GHz; 5.725 - 5.85 GHz
Bssid	<ul style="list-style-type: none"> Up to 27 user configurable
Wireless Security	<ul style="list-style-type: none"> WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i Authentication via 802.1X with ZoneDirector, local authentication database, support for RADIUS, LDAP, and Active Directory
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 EN 50121-1 Railway EMC EN 50121-4 Railway Immunity IEC 61373 Railway Shock & Vibration

† Maximum power varies by country

** For current certification status please see price list

PRODUCT ORDERING INFORMATION

MODEL	DESCRIPTION
R300 Smart Wi-Fi 802.11n Access Point	
901-R300-XXYY	Concurrent dual band 802.11n AP, no power adapter
Optional Accessories	
902-0173-XXYY	<ul style="list-style-type: none"> Power Adapter, AC/DC wall plug; 100-240Vac 50/60Hz (XX can be US, EU, AR, AU, BR, CN, IN, KR, SA, UK, UN)
902-0162-XXYY	<ul style="list-style-type: none"> PoE injector (sold in quantities of 10 or 100); (XX can be US, EU, UK, AU, CH, or IN)

PLEASE NOTE: When ordering Ruckus 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.

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