The RUCKUS R550 Access Point (901-R550-WW00) Datasheet

Overview

The RUCKUS R550 (901-R550-WW00) is an indoor, dual-band Wi-Fi 6 (802.11ax) access point built for medium-density environments such as classrooms, residence halls, hallways, and office spaces. Two concurrent 2x2:2 radios deliver a combined 1.8 Gbps (up to 1,200 Mbps on 5 GHz and 574 Mbps on 2.4 GHz) and support up to 512 connected clients.

RUCKUS BeamFlex+ adaptive antennas, with up to 64 antenna patterns per band and polarization diversity, steer signal toward each client to improve range and reduce interference. Onboard Bluetooth Low Energy and Zigbee radios add IoT connectivity without extra hardware. The R550 can be managed from RUCKUS Cloud, SmartZone controllers, or in standalone controller-less mode, and it is plenum-rated for installation above ceilings.

QUICK SPEC

Figure 1: APPEARANCE OF 901-R550-WW00 (TOP VIEW)



TABLE 1: Quick Specs

SKU	901-R550-WW00
Wi-Fi Standard	Wi-Fi 6 (802.11ax), dual band, 2x2:2 MU-MIMO
Max. Data Rate	1,200 Mbps (5 GHz), 574 Mbps (2.4 GHz)
Ports	2 x 1 GbE RJ-45 (PoE+ in), 1 x USB 2.0
Concurrent Clients	Up to 512
Dimensions (L x W x H)	17.60 x 19.02 x 4.78 cm

Product Details

FIGURE 2: ANGLED VIEW OF 901-R550-WW00



FIGURE 3: PORT SIDE OF 901-R550-WW00



RUCKUS R550 (901-R550-WW00) provides these features:

1. Wi-Fi 6 Dual-Band Performance

Two concurrent 2x2:2 radios with MU-MIMO deliver up to 1,200 Mbps on 5 GHz and 574 Mbps on 2.4 GHz, a combined PHY rate of 1.8 Gbps. Wi-Fi 6 efficiency gains help the R550 serve many clients at once, with support for up to 512 concurrent users.

2. BeamFlex+ Adaptive Antennas

Patented BeamFlex+ technology selects from up to 64 antenna patterns per band, with polarization diversity and up to 3 dBi gain. The AP steers its signal toward each client in real time, improving range and throughput while avoiding interference.

3. Built-In IoT Connectivity

Onboard Bluetooth Low Energy and Zigbee radios let the R550 connect IoT devices such as sensors, locks, and beacons directly, removing the need for separate IoT gateways or dongles.

4. Flexible Management Options

Manage the R550 from RUCKUS Cloud, a physical or virtual SmartZone controller, or run it controller-less in standalone mode. This suits both single-site deployments and large multi-site networks.

5. Automatic Radio Optimization

ChannelFly automatically moves the AP to the least-congested channel, and SmartMesh lets APs form wireless links where cabling is not practical. PD-MRC improves receive performance on uplink traffic.
T-bar kit are sold separately.

6. Dual Gigabit Ethernet and USB

Two 1 GbE RJ-45 ports (one accepting 802.3at PoE+) and a USB 2.0 port provide wired uplink, a second wired connection, and IoT expansion. With 802.3af power the AP runs in a reduced mode, so 802.3at is recommended for full functionality.

7. Flexible Installation

The R550 mounts on a wall, acoustic ceiling, or desk, and is plenum-rated for installation above ceilings. An adjustable acoustic drop-ceiling bracket ships with the AP, while the secure multipurpose bracket and

Specification

Parameter	Specification
Model	RUCKUS R550 Indoor Access Point
SKU	901-R550-WW00
Device Type	Indoor Wi-Fi 6 access point
Wi-Fi Standard	IEEE 802.11a/b/g/n/ac/ax (Wi-Fi 6)
Radios	Dual-band concurrent, 2.4 GHz and 5 GHz
Spatial Streams	2x2:2 per band, SU-MIMO and MU-MIMO
Max. PHY Rate	5 GHz: 1,200 Mbps | 2.4 GHz: 574 Mbps
Antennas	BeamFlex+ adaptive antennas, up to 64 patterns per band, up to 3 dBi gain
Peak Transmit Power	2.4 GHz: 26 dBm | 5 GHz: 25 dBm (including combining gain)
Receive Sensitivity	-97 dBm (2.4 GHz and 5 GHz, lowest rate)
Concurrent Clients	Up to 512 per AP
SSIDs	Up to 31 per AP
Ethernet Ports	2 x 10/100/1000 Mbps RJ-45 (one with PoE+ input)
USB	1 x USB 2.0 Type A
IoT Radios	Bluetooth Low Energy, Zigbee
Power Input	802.3at PoE+ (full function), 802.3af PoE (reduced), or 12 VDC
Max. Power Consumption	18.71 W (PoE+) / 12.71 W (PoE) / 16.58 W (12 VDC)
Management	RUCKUS Cloud, SmartZone, ZoneDirector, standalone
Mounting	Wall, acoustic ceiling, or desk; drop-ceiling bracket included
Dimensions (L × W × H)	176.0 × 190.2 × 47.8 mm (6.93 × 7.49 × 1.88 in)
Weight	0.562 kg (1.24 lb)
Operating Temperature	0°C to 50°C (32°F to 122°F)
Operating Humidity	Up to 95%, non-condensing
Environmental	Plenum-rated

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