

A550

Entry-level Indoor Wi-Fi 6 (802.11ax) Access Point



DATA SHEET



BENEFITS

STUNNING WI-FI PERFORMANCE

Mitigate interference and extend coverage with patented BeamFlex+™ adaptive antenna technology utilizing several directional antenna patterns.

SERVE MORE DEVICES

Connect more devices simultaneously with four MU-MIMO spatial streams and concurrent dual-band 2.4/5GHz radios while enhancing device performance.

CONVERGED ACCESS POINT

Eliminate siloed networks and unify Wi-Fi and non-Wi-Fi wireless technologies into one single network by using built-in BLE and Zigbee, and also expand to any future wireless technologies through the USB port.

AUTOMATE 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.

BETTER MESH NETWORKING

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

The Access Networks A550 access point (AP) with the latest Wi-Fi 6 (802.11 ax) technology delivers the ideal combination of increased capacity, improved coverage and affordability for small to medium deployments.

The A550 is our entry-level dual-band, dual-concurrent Wi-Fi 6 AP that supports four spatial streams (2x2:2 in 2.4GHz/5GHz). The A550 supports peak data rates of up to 1774 Mbps and efficiently manages up to 512 clients connections.

Also, wireless requirements within enterprises are expanding beyond Wi-Fi with BLE, Zigbee and many other non-Wi-Fi wireless technologies resulting in creation of network silos. Enterprises need a unified platform to eliminate network silos. The Access Networks AP portfolio is equipped to solve these challenges.

The A550 has built-in IoT radios with onboard BLE and Zigbee capabilities. In addition, the A550 is a converged access point that allows customers to seamlessly integrate any new wireless technologies with the pluggable IoT module.

The A550 is packed with patented technologies in addition to Wi-Fi 6 features such as OFDMA, MU-MIMO and TWT. The A550 is ideal for small to medium density deployments.

The A550 Wi-Fi 6 AP incorporates patented technologies found only in the Access Networks & Ruckus Wi-Fi portfolio.

- **BeamFlex+ Antennas:** Extended coverage and optimized throughput with patented multi-directional antennas and radio patterns
- **ChannelFly:** Improved throughput with dynamically changing the channels to use least congested channel



Front view



Weight: 1.24 lbs (0.562 kg)

ACCESS POINT ANTENNA PATTERN

BeamFlex+ adaptive antennas allow the A550 AP to dynamically choose among a host of antenna patterns (up to 64 possible combinations) in real-time to establish the best possible connection with every device. This leads to:

- Better Wi-Fi coverage
- Reduced RF interference

Traditional omni-directional antennas, found in generic access points, oversaturate the environment by needlessly radiating RF signals in all directions. In contrast, the BeamFlex+ adaptive antenna directs the radio signals per-device on a packet by-packet basis to optimize Wi-Fi coverage and capacity in real-time to support high device density environments. BeamFlex+ operates without the need for device feedback and hence can benefit even devices using legacy standards.

Figure 1. Example of BeamFlex+ pattern

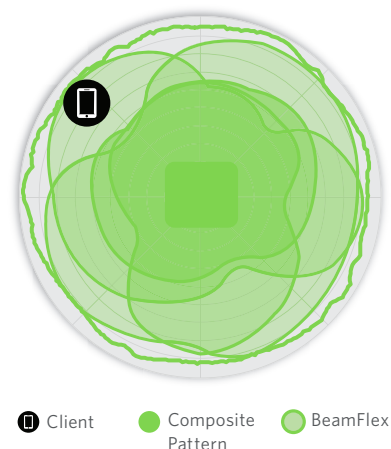


Figure 2. A550 2.4GHz Azimuth Antenna Patterns

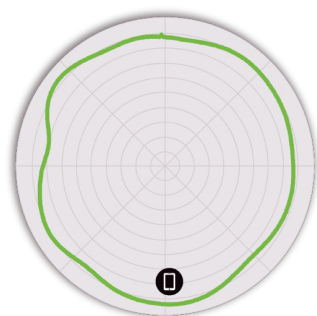


Figure 3. A550 5GHz Azimuth Antenna Patterns

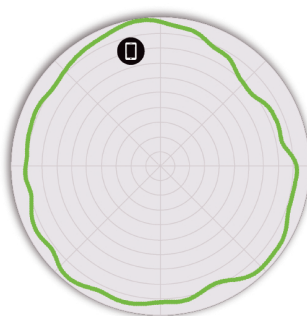


Figure 4. A550 2.4GHz Elevation Antenna Patterns



Figure 5. A550 5GHz Elevation Antenna Patterns



Note: The outer trace represents the composite RF footprint of all possible BeamFlex+ antenna patterns, while the inner trace represents one BeamFlex+ antenna pattern within the composite outer trace.

OvrC® Integration for Unleashed Access Networks Wi-Fi 6 Access Points



OvrC is a free, cloud-based remote management platform created by Snap One that empowers professionals to configure, manage, and troubleshoot devices across a network seamlessly. By combining high-performance, reliable hardware with the power of OvrC, the Access Networks® Unleashed Wi-Fi 6 Access Points provide a comprehensive solution for your networking needs. Enjoy streamlined setup, easy scalability, enhanced remote management capabilities, and more.

Access Networks Unleashed Wi-Fi 6 Access Points are also now available through the client OvrC Connect app.

Wi-Fi	
Wi-Fi Standards	<ul style="list-style-type: none"> IEEE 802.11a/b/g/n/ac/ax
Supported Rates	<ul style="list-style-type: none"> 802.11ax: 4 to 1774 Mbps 802.11ac: 6.5 to 867Mbps (MCS0 to MCS9, NSS = 1 to 2 for VHT20/40/80) 802.11n: 6.5 Mbps to 300Mbps (MCS0 to MCS15) 802.11a/g: 6 to 54 Mbps 802.11b: 1 to 11 Mbps
Supported Channels	<ul style="list-style-type: none"> 2.4GHz: 1-13 5GHz: 36-64, 100-144, 149-165
MIMO	<ul style="list-style-type: none"> 2x2 SU-MIMO 2x2 MU-MIMO
Spatial Streams	<ul style="list-style-type: none"> 2 streams SU/MU MIMO 5GHz 2 streams SU/MU MIMO 2.4GHz
Radio Chains and Streams	<ul style="list-style-type: none"> 2x2:2 (5GHz) 2x2:2 (2.4GHz)
Channelization	<ul style="list-style-type: none"> 20, 40, 80MHz
Security	<ul style="list-style-type: none"> WPA-PSK, WPA-TKIP, WPA2 AES, WPA3-Personal, WPA3-Enterprise, 802.11i, Dynamic PSK, OWE WIPS/WIDS
Other Wi-Fi Features	<ul style="list-style-type: none"> WMM, Power Save, Tx Beamforming, LDPC, STBC, 802.11r/k/v Hotspot Hotspot 2.0 Captive Portal WISPr

RF	
Antenna Type	<ul style="list-style-type: none"> BeamFlex+ adaptive antennas with polarization diversity Adaptive antenna that provides up to 64 unique antenna patterns per band
Antenna Gain (max)	<ul style="list-style-type: none"> Up to 3dBi
Peak Transmit Power (Tx port/chain + Combining gain)	<ul style="list-style-type: none"> 2.4GHz: 26 dBm 5GHz: 25 dBm
Frequency Bands	<ul style="list-style-type: none"> ISM (2.4-2.484GHz) U-NII-1 (5.15-5.25GHz) U-NII-2A (5.25-5.35GHz) U-NII-2C (5.47-5.725GHz) U-NII-3 (5.725-5.85GHz)

2.4GHz RECEIVE SENSITIVITY (dBm)							
HT20		HT40		VHT20		VHT40	
MCS0	MCS7	MCS0	MCS7	MCS0	MCS7	MCS0	MCS7
-97	-78	-94	-75	-97	-78	-94	-75
HE 20				HE40			
MCS0	MCS7	MCS9	MCS11	MCS0	MCS7	MCS9	MCS11
-97	-78	-73	-67	-94	-75	-70	-64

5GHz RECEIVE SENSITIVITY (dBm)											
VHT20				VHT40				VHT80			
MCS0	MCS7	MCS8	MCS9	MCS0	MCS7	MCS8	MCS9	MCS0	MCS7	MCS8	MCS9
-97	-78	-75	-72	-94	-75	-72	-69	-91	-72	-69	-66
HE20				HE40				HE80			
MCS0	MCS7	MCS9	MCS11	MCS0	MCS7	MCS9	MCS11	MCS0	MCS7	MCS9	MCS11
-97	-78	-72	-67	-94	-75	-69	-64	-91	-72	-66	-61

2.4GHz TX POWER TARGET (PER CHAIN)	
Rate	Pout (dBm)
MCS0 HT20	22
MCS7 HT20	18
MCS8 VHT20	17
MCS9 VHT40	16
MCS11 HE40	14

5GHz TX POWER TARGET (PER CHAIN)	
Rate	Pout (dBm)
MCS0, VHT20	22
MCS7, VHT40, VHT80	17.5
MCS9, VHT40, VHT80	16
MCS11, HE20, HE40, HE80	13

PERFORMANCE AND CAPACITY	
Peak PHY Rates	<ul style="list-style-type: none"> 2.4GHz: 574 Mbps 5GHz: 1200 Mbps
Client Capacity	<ul style="list-style-type: none"> Up to 512 clients per AP
SSID	<ul style="list-style-type: none"> Up to 31 per AP

RUCKUS RADIO MANAGEMENT	
Antenna Optimization	<ul style="list-style-type: none"> BeamFlex+ Polarization Diversity with Maximal Ratio Combining (PD-MRC)
Wi-Fi Channel Management	<ul style="list-style-type: none"> ChannelFly Background Scan Based
Client Density Management	<ul style="list-style-type: none"> Adaptive Band Balancing Client Load Balancing Airtime Fairness Airtime-based WLAN Prioritization
SmartCast Quality of Service	<ul style="list-style-type: none"> QoS-based scheduling Directed Multicast L2/L3/L4 ACLs
Mobility	<ul style="list-style-type: none"> SmartRoam
Diagnostic Tools	<ul style="list-style-type: none"> Spectrum Analysis SpeedFlex

NETWORKING

Controller Platform Support	<ul style="list-style-type: none"> SmartZone ZoneDirector Unleashed¹ Standalone Cloud
Mesh	<ul style="list-style-type: none"> SmartMesh™ wireless meshing technology. Self-healing Mesh
IP	<ul style="list-style-type: none"> IPv4, IPv6, dual-stack
VLAN	<ul style="list-style-type: none"> 802.1Q (1 per BSSID or dynamic per user based on RADIUS) VLAN Pooling Port-based
802.1x	<ul style="list-style-type: none"> Authenticator & Supplicant
Tunnel	<ul style="list-style-type: none"> L2TP, GRE, Soft-GRE
Policy Management Tools	<ul style="list-style-type: none"> Application Recognition and Control Access Control Lists Device Fingerprinting Rate Limiting
IoT Capable	<ul style="list-style-type: none"> Integrated BLE and ZigBee (1 radio, switchable)

PHYSICAL INTERFACES

Ethernet	<ul style="list-style-type: none"> 2 x 1GbE Ethernet ports Power over Ethernet (802.3af/at) with Category 5/5e/6 cable LLDP
USB	<ul style="list-style-type: none"> 1 USB 2.0 port, Type A

PHYSICAL CHARACTERISTICS

Physical Size	<ul style="list-style-type: none"> 17.60cm (L), 19.02cm (W), 4.78cm (H) 6.93in (L) x 7.49in (W) x 1.88in (H)
Weight	<ul style="list-style-type: none"> 0.562 kg 1.24 lbs
Mounting	<ul style="list-style-type: none"> Wall, acoustic ceiling, desk Secure bracket (sold separately)
Physical Security	<ul style="list-style-type: none"> Hidden latching mechanism Kensington lock Bracket (902-0120-0000)
Operating Temperature	<ul style="list-style-type: none"> 0°C (32°F) - 50°C (122°F)
Operating Humidity	<ul style="list-style-type: none"> Up to 95%, non-condensing

OPTIONAL ACCESSORIES

902-0180-XX00	<ul style="list-style-type: none"> PoE Injector (60W)
902-1169-XX00	<ul style="list-style-type: none"> Power Supply (12V, 2.0A, 24W)
902-0120-0000	<ul style="list-style-type: none"> Spare, Accessory Mounting Bracket
902-0195-0000	<ul style="list-style-type: none"> Spare, T-bar ceiling mount kit for mounting to flush frame ceiling

POWER²

Power Supply	Operating Characteristics	Max Power Consumption
802.3af PoE	<ul style="list-style-type: none"> 2.4GHz radio: 2x2, 19dBm per chain 5GHz radio: 2x, 2 18dBm per chain 2nd Ethernet port, onboard IoT & USB disabled 	PoE: 12.71W
802.3at PoE+	Full Functionality	PoE+ : 18.71W
DC Input 12VDC	Full Functionality	16.58W

CERTIFICATIONS AND COMPLIANCE

Wi-Fi Alliance ³	<ul style="list-style-type: none"> Wi-Fi CERTIFIED™ a, b, g, n, ac Wi-Fi CERTIFIED 6™ WPA3™-Enterprise, Personal Wi-Fi Enhanced Open™ Wi-Fi Agile Multiband™ Passpoint® Vantage WMM®
Standards Compliance ⁴	<ul style="list-style-type: none"> EN 60950-1 Safety EN 60601-1-2 Medical EN 61000-4-2/3/5 Immunity EN 50121-1 Railway EMC EN 50121-4 Railway Immunity IEC 61373 Railway Shock & Vibration UL 2043 Plenum EN 62311 Human Safety/RF Exposure WEEE & RoHS ISTA 2A Transportation

SOFTWARE AND SERVICES

Location Based Services	<ul style="list-style-type: none"> SPoT
Network Analytics	<ul style="list-style-type: none"> SmartCell Insight (SCI), Ruckus Analytics
Security and Policy	<ul style="list-style-type: none"> Cloudpath

ORDERING INFORMATION

ANU-A550-XX00 ANW-A550-XX00	<ul style="list-style-type: none"> A550 dual-band (5GHz and 2.4GHz concurrent) 802.11ax wireless access point, 2x2:2 + 2x2:2 streams, adaptive antennas, dual ports, onboard BLE and Zigbee, PoE support. Includes adjustable acoustic drop ceiling bracket. Does not include power adaptor.
--------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Warranty: This Access Networks product includes a limited lifetime warranty. This warranty is described in greater detail here:

<https://www.snapone.com/legal/limited-hardware-warranty>