B350

Outdoor 802.11ax 2x2:2 Wi-Fi Access Point

DATA SHEET

BENEFITS

SIMPLICITY

Access Networks' Outdoor APs make Wi-Fi deployments extremely simple to deploy with one-touch technologies like SmartMesh™.

STUNNING WI-FI PERFORMANCE

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

GREAT OUTDOOR WI-FI

Experience high performance outdoor Wi-Fi 6 with IP-67 weather proofing.

MULTIPLE MANAGEMENT OPTIONS

Manage the B350 Series with physical or virtual controller appliances.

SERVE MORE DEVICES

Connect more devices simultaneously with two MUMIMO spatial streams and concurrent dual-band 2.4/5GHz radios while also enhancing non-11ax device performance.

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.

MORE THAN WI-FI

Support services beyond Wi-Fi with IoT Suite, Cloudpath security and onboarding software, SPoT Wi-Fi locationing engine, and SCI network analytics.

Modern Wi-Fi device users expect reliable connectivity—anywhere, anytime. But in crowded outdoor venues with thousands of users and constant RF noise, they are often frustrated by poor coverage, dropped connections, and reduced data rates. These aggravating Wi-Fi experiences can easily translate to negative perceptions of the venue and the service provider, resulting in loss of business. The quality of the network experience becomes the "litmus test" for acceptance or rejection.

As the market leader in outdoor Wi-Fi deployments, Access Networks knows that one AP solution cannot meet every possible challenge of varied and complex outdoor requirements. This is why the Access Networks B350 Wi-Fi 6 series is designed with more variety than any other outdoor AP in the market today. Available with internal omni-directional antennas, the B350 Series uses patented Access Networks antenna optimization and interference mitigation technologies to improve throughput, connection reliability, and deliver industry-leading Wi-Fi 6 performance to every connected client. At the same time, the B350 Series is designed for fast, simple installation with an ultra-lightweight, low profile, IP-67 rated enclosure that can stand up to the most challenging outdoor environments.

At Access Networks, we know that outdoor AP deployments are especially challenging for installation and maintenance, which is why Access Networks outdoor APs use a variety of technologies, like SmartMesh that help simplify outdoor AP deployment.

The Access Networks B350 Series incorporates patented technologies found only in the Access Networks 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 B350 Series is easy to manage through Access Networks' appliance and virtual management options.

ACCESS POINT ANTENNA PATTERN

Access Networks' BeamFlex+ adaptive antennas allow the B350 AP to dynamically choose among a host of antenna patterns 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 Access Networks 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

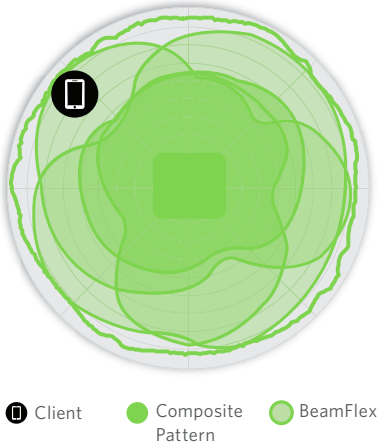


Figure 2. B350 2.4GHz Azimuth Antenna Patterns

Figure 3. B350 5GHz Azimuth Antenna Patterns

Figure 4. B350 2.4GHz Elevation Antenna Patterns

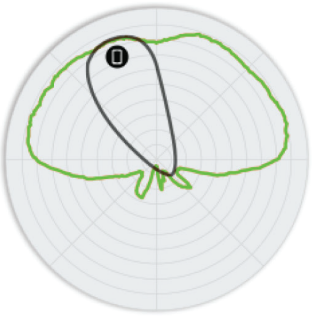
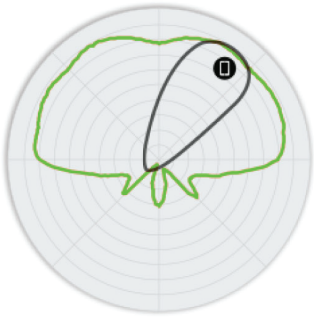


Figure 5. B350 5GHz Elevation Antenna Patterns



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	• IEEE 802.11a/b/g/n/ac/ax
Supported Rates	• 802.11ax: 4 to 1774 Mbps • 802.11ac: 6.5 to 867 Mbps • 802.11n: 6.5 to 300Mbps • 802.11a/g: 6 to 54 Mbps • 802.11b: 1 to 11 Mbps
Supported Channels	• 2.4GHz: 1-13 • 5GHz: 36-64, 100-144, 149-165
MIMO	• 2x2 SU-MIMO • 2x2 MU-MIMO
Spatial Streams	• 2 streams SU/MU MIMO 5GHz • 2 streams SU/MU MIMO 2.4GHz
Radio Chains and Streams	• 2x2:2 (5GHz) • 2x2:2 (2.4GHz)
Channelization	• 20, 40, 80MHz
Security	• WPA-PSK, WPA-TKIP, WPA2-Personal, WPA2-Enterprise, WPA3-Personal, WPA3-Enterprise, AES, 802.11i, Dynamic PSK, OWE • WIPS/WIDS
Other Wi-Fi Features	• WMM, Power Save, Tx Beamforming, LDPC, STBC, 802.11r/k/v • Hotspot, Hotspot 2.0 • Captive Portal • WISPr

RF	
	B350
Antenna Type	Internal Omnidirectional BeamFlex+ adaptive antennas with polarization diversity
Antenna Gain (max)	Up to 3dBi
Peak Transmit Power (Tx port/chain + 3dB Combining gain)	2.4GHz: 26 dBm 5GHz: 25 dBm
Frequency Bands	• 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

HT20		HT40		VHT20		VHT40	
MCS0	MCS7	MCS0	MCS7	MCS0	MCS7	MCS0	MCS7
-94	-75	-91	-72	-94	-75	-91	-72
HE20				HE40			
MCS0	MCS7	MCS9	MCS11	MCS0	MCS7	MCS9	MCS11
-94	-75	-71	-65	-91	-72	-68	-62

5GHZ RECEIVE SENSITIVITY

VHT20				VHT40				VHT80			
MCS0	MCS7	MCS8	MCS9	MCS0	MCS7	MCS8	MCS9	MCS0	MCS7	MCS8	MCS9
-95	-76	-72	-70	-92	-73	-69	-67	-89	-70	-66	-64
HE20				HE40				HE80			
MCS0	MCS7	MCS9	MCS11	MCS0	MCS7	MCS9	MCS11	MCS0	MCS7	MCS9	MCS11
-95	-76	-70	-65	-92	-73	-67	-62	-89	-70	-64	-59

2.4GHZ TX POWER TARGET

Rate	Pout (dBm)
MCS0 HT20	23
MCS7 HT20	18
MCS8 VHT20	17
MCS9 VHT40	16.5
MCS11 HE40	15

5GHZ TX POWER TARGET

Rate	Pout (dBm)
MCS0 VHT20	22
MCS7 VHT40, VHT80	20
MCS9 VHT40, VHT80	19
MCS11 HE20, HE40, HE80	15

PERFORMANCE AND CAPACITY	
Peak PHY Rates	• 2.4GHz: 574 Mbps 5GHz: 1200 Mbps
Client Capacity	• Up to 512 clients per AP
SSID	• Up to 31 per AP

RUCKUS RADIO MANAGEMENT	
Antenna Optimization	• BeamFlex+ • Polarization Diversity with Maximal Ratio Combining (PD-MRC)
Wi-Fi Channel Management	• ChannelFly • Background Scan Based
Client Density Management	• Adaptive Band Balancing • Client Load Balancing • Airtime Fairness • Airtime-based WLAN Prioritization
SmartCast Quality of Service	• QoS-based scheduling • Directed Multicast • L2/L3/L4 ACLs
Mobility	• SmartRoam
Diagnostic Tools	• Spectrum Analysis • SpeedFlex

NETWORKING	
Controller Platform Support	• ARCC Cloud-Based • C120 Hardware Controller • Unleashed
Mesh	• SmartMesh™ wireless meshing technology. Self-healing Mesh
IP	• IPv4, IPv6
VLAN	• 802.1Q (1 per BSSID or dynamic per use based on RADIUS) • VLAN Pooling • Port-based
802.1x	• Authenticator & Supplicant
Tunnel	• L2TP, GRE, soft-GRE
Policy Management Tools	• Application Recognition and Control • Access Control Lists • Device Fingerprinting • Rate Limiting

PHYSICAL INTERFACES	
	B350
Ethernet	1 x 1GbE port, RJ-45 PoE In - 802.3at Class 4

PHYSICAL CHARACTERISTICS	
	B350
Physical Size	• 162.3 mm (W) x 194.9 mm (L) x 80.9 mm (H) • 6.38 in (W) x 7.67 in (L) x 3.19 in (H)
Weight (w/ included bracket)	1.01kg (2.23lbs)
Ingress Protection	IP-67
Mounting	• Pole Mount • Wall Mount • Flat Surface • Bracket included in the box
Operating Temperature	-20°C -(4°F) to 65°C (149°F)
Operating Humidity	Up to 95%, non-condensing
Wind Survivability	Up to 266km/h (165 mph)
Altitude	Up to 3,048m (10,000 ft), functional operation

POWER[2]		
		B350
Power Mode	System Configuration	Max Power Consumption (includes USB power)
802.3at (PoE) - Class 4	Full Functionality	13.24W
802.3af (PoE) - Class 3	USB Disabled IoT Disabled	11.42W
Idle (PoE)		7.68W

CERTIFICATIONS AND COMPLIANCE	
Wi-Fi Alliance[3]	• Wi-Fi CERTIFIED™ a, b, g, n, ac • Wi-Fi CERTIFIED™ 6 • WPA3™ - Enterprise, Personal • Wi-Fi Enhanced Open™ • Wi-Fi Agile Multiband™ • Wi-Fi Optimized Connectivity™ • Wi-Fi Vantage™ • WMM® • Passpoint®
Standards Compliance[4]	• 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	• SPoT
Network Analytics	• SmartCell Insight (SCI) • Access Networks Analytics
Security and Policy	• Cloudpath

MODEL FEATURE DIFFERENCES				
Model	Antenna	Low Temp	USB	DC Power
B350	Internal omni	-20°C	N	N

[2] Max power varies by country setting, band, and MCS rate.
[3] For complete list of WFA certifications, please see Wi-Fi Alliance website.
[4] For current certification status, please see price list.

ORDERING INFORMATION	
B350 OUTDOOR APs	
ANW-B350-XX20 **ANU-B350-XX20**	B350, omni, outdoor access point, 802.11ax 2x2:2 internal BeamFlex+, dual band concurrent. One Ethernet port, PoE input. -20°C to 65°C Operating Temperature. Includes mounting bracket and one year warranty. Does not include PoE injector.

OPTIONAL ACCESSORIES	
902-0162-XXYY	· PoE injector (24W) (Sold in quantities of 1, 10 or 100)
902-0125-0000	· Secure articulating mounting bracket
902-0127-0000	· Extended cap to accommodate up to 6 cm long USB dongle
902-1121-0000	· Spare weatherizing cable gland with option of one hole or 2 hole connection
902-0183-000	· Spare cable gland for weatherizing the RJ-45 ports on outdoor APs.

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