DATA SHEET

RUCKUS® T710

Outdoor 802.11ac Wave 2 4x4:4 Wi-Fi Access Point

COMMSCOPE® RUCKUS®

Benefits

Great Outdoor Wi-Fi

Experience high performance outdoor Wave 2 Wi-Fi with IP-67 weather proofing and dual backhaul options with SFP and 2 gigabit Ethernet ports.

Stunning Wi-FI Performance

Extends coverage with patented BeamFlex®+ adaptive antenna technology while mitigating interference by utilizing over 4,000 directional antenna patterns.

Multiple Management Options

Manage the T710 from the cloud, with on-premises physical/virtual appliances, or without a controller.

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.

Serve More Devices

Connect more devices simultaneously with four MU-MIMO spatial streams and concurrent dual-band 2.4/5GHz radios while enhancing non-Wave 2 device performance.

Power Other Devices

Daisy chain and power other devices like an IP camera, or another AP directly from the PoE output port.

More Than Wi-Fi

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

The busiest outdoor locations can have the most demanding wireless requirements. Somehow you need to provide the same top-tier capacity and performance as a crowded large office or convention center floor, but packaged in a way that can stand up to the rigors of outdoor deployments.

Designed for the highest-density outdoor venues, the RUCKUS® T710 access point delivers RUCKUS' premier Wi-Fi in an ultra-lightweight, industrial-grade (IP 67-rated) enclosure. This dual-band 802.11ac AP features patented RUCKUS technologies to extend range, mitigate interference, and deliver blazing fast performance—up to data rates of 600Mbps (2.4GHz) and 1.733Gbps (5GHz), the highest available for Wi-Fi clients. The T710 also provides a full range of next-generation 802.11ac features to deliver industry-leading capacity, reliability, and coverage in the most crowded outdoor spaces.

The T710 is an ideal solution for high-density public venues such as airports, convention centers, plazas, malls, and other dense urban environments. It is also well-suited to public outdoor hotspots, smart cities, and coverage for outdoor enterprise and university campuses, where support for data-intensive streaming HD video applications is imperative.

The RUCKUS T710 802.11ac Wi-Fi AP incorporates patented technologies found only in the RUCKUS Wi-Fi portfolio.

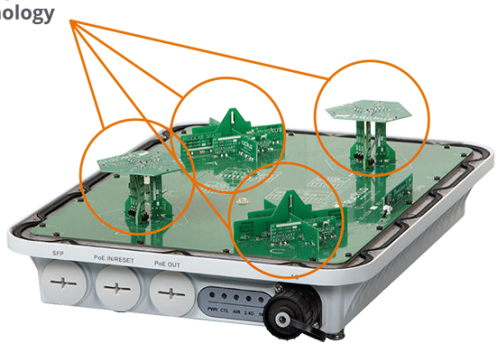
- Extended coverage with patented BeamFlex®+ utilizing multi-directional antenna patterns.
- Improve throughput with ChannelFly®, which dynamically finds less congested Wi-Fi channels to use.

With 802.11ac Multi-User MIMO (MU-MIMO) support, the T710 can simultaneously transmit to multiple MU-MIMO capable devices, drastically improving RF efficiency and overall throughput for even non-Wave 2 clients.

The T710 is also designed with an SFP fiber interface that enables seamless connectivity to a fiber backhaul.

Whether you're deploying ten or ten thousand APs, the T710 is also easy to manage through RUCKUS' appliance, virtual and cloud management options.

BeamFlex+ Adaptive Antenna Technology



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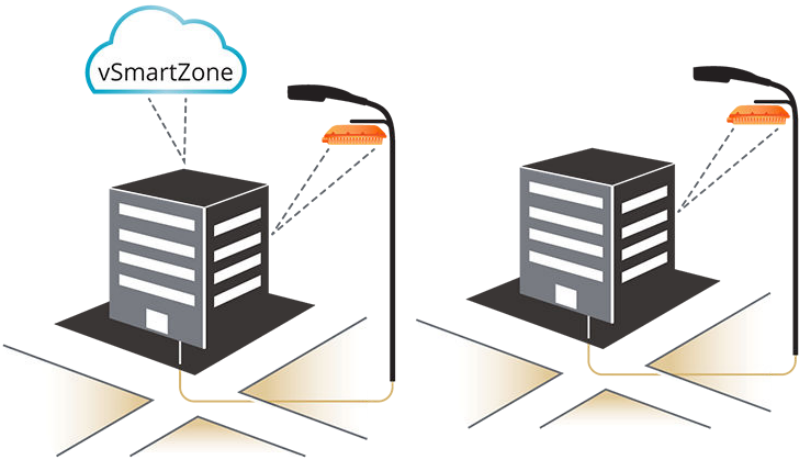
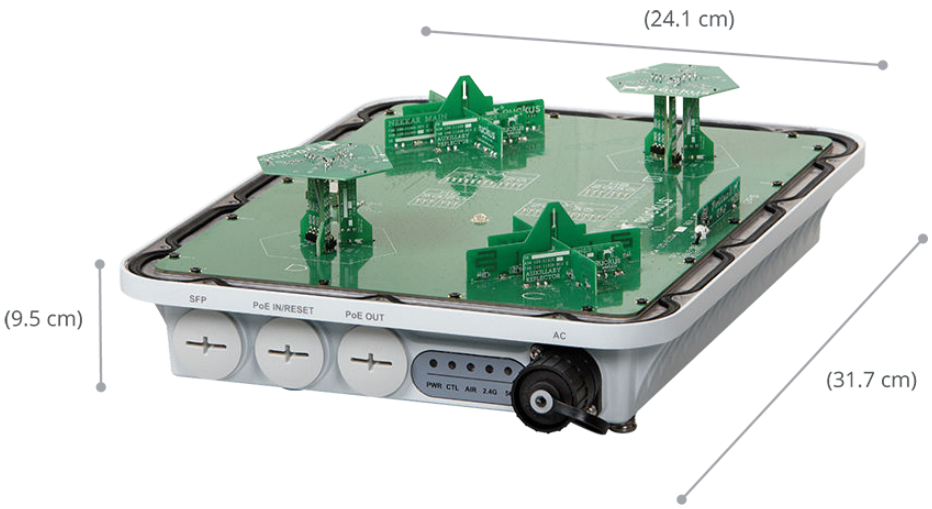


Flexible Architecture

Smart Mesh



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Access Point Antenna Pattern

RUCKUS' BeamFlex+ adaptive antennas allow the T710 AP to dynamically choose among a host of antenna patterns (over 4,000 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 RUCKUS 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

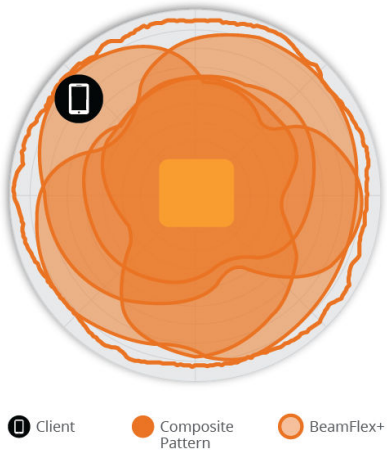


Figure 2. T710o 2.4GHz Azimuth Antenna Patterns

Figure 3. T710o 5GHz Azimuth Antenna Patterns

Figure 4. T710o 2.4GHz Elevation Antenna Patterns

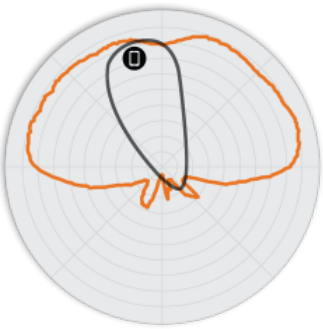
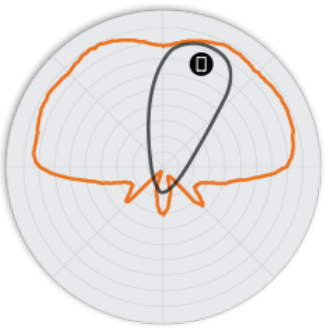


Figure 5. T710o 5GHz Elevation Antenna Patterns



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.

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WI-FI	
Wi-Fi Standards	• IEEE 802.11a/b/g/n/ac Wave 2
Supported Rates	• 802.11ac: 6.5 to 1,733Mbps (MCS0 to MCS9, NSS = 1 to 4 for VHT20/40/80) • 802.11n: 6.5Mbps to 600Mbps (MCS0 to MCS 31) • 802.11a/g: 54, 48, 36, 24, 18, 12, 9, 6Mbps • 802.11b: 11, 5.5, 2 and 1 Mbps
Supported Channels	• 2.4GHz: 1-13 • 5GHz: 36-64, 100-144, 149-165
MIMO	• 4x4 SU-MIMO • 4x4 MU-MIMO
Spatial Streams	• 4 SU-MIMO • 3 MU MIMO
Radio Chains and Streams	• 4x4:4
Channelization	• 20, 40, 80MHz
Security	• WPA-PSK, WPA-TKIP, WPA2-Personal, WPA2-Enterprise, WPA3-Personal, WPA3-Enterprise, AES, 802.11i, Dynamic PSK • 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	
Antenna Type	• BeamFlex+ adaptive antennas with polarization diversity • Adaptive antenna that provides over 4,000 unique antenna patterns per band
Antenna Gain (max)	• Omni - Up to 3dBi • Sector - Up to 8dBi
Peak Transmit Power (aggregate across MIMO chains)	• 2.4GHz: 28dBm • 5GHz: 28dBm
Minimum Receive Sensitivity[1]	• -104dBm
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	
MCS0	MCS7	MCS0	MCS7
-97	-79	-94	-78

5GHZ RECEIVE SENSITIVITY					
VHT20		VHT40		VHT80	
MCS0	MCS7	MCS0	MCS7	MCS0	MCS7
-96	-80	-94	-77	-91	-74

[1] Rx sensitivity varies by band, channel width and MCS rate.

2.4GHZ TX POWER TARGET	
Rate	Pout (dBm)
MCS0 HT20	22
MCS7 HT20	19
MCS0 HT40	22
MCS7 HT40	19

5GHZ TX POWER TARGET	
Rate	Pout (dBm)
MCS0 VHT20	22
MCS7 VHT20	19
MCS0 VHT40, VHT80	22
MCS7 VHT40, VHT80	19

PERFORMANCE AND CAPACITY	
Peak PHY Rates	• 2.4GHz: 600Mbps • 5GHz: 1733Mbps
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

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NETWORKING	
Controller Platform Support	• SmartZone • ZoneDirector • Unleashed[2] • Cloud • Standalone
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

OTHER RADIO TECHNOLOGIES	
GPS	• Types GLONAS…etc

PHYSICAL INTERFACES	
Ethernet	• 2 x 10/100/1000 Mbps ports, RJ-45 • LACP
Fiber	• SFP, 1Gbps, NBASE-x

PHYSICAL CHARACTERISTICS	
Physical Size	• 31.7(L) x 24.1(W) x 9.5(H) cm • 12.5(L) x 9.49(W) x 3.7(H) in
Weight	• 2.95kg • 6.5lbs
Ingress Protection	• IP-67
Mounting	• Pole Mount • Wall Mount • Flat Surface • Bracket included in the box
Operating Temperature	• -40°C (-40°F) to 65°C (145°F)
Operating Humidity	• Up to 95%, non-condensing
Wind Survivabiity	• Up to 266km/h (165mph)

POWER[3]		
Power Supply	**Max Power Consumption**	**System Configuration**
AC Power	• 59.5W	• Full Functionality
802.3bt Class 7	• 52.5W	• Full Functionality
802.3bt Class 5	• 25W	• PSE Out disabled
802.3at	• 25W	• PSE Out disabled
Idle	• 8W	• PSE Out disabled

CERTIFICATIONS AND COMPLIANCE	
Wi-Fi Alliance[4]	• Wi-Fi CERTIFIED™ a, b, g, n, ac • Wi-Fi Enhanced Open™ • WPA2™ - Personal • WPA2™ - Enterprise • WPA3™-Personal • WPA3™-Enterprise • Wi-Fi Agile Multiband™ • Wi-Fi Optimized Connectivity™ • Wi-Fi Vantage™ • WMM® • Passpoint®
Standards Compliance[5]	• 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 • EN 62311 Human Safety/RF Exposure • WEEE & RoHS • ISTA 2A Transportation

SOFTWARE AND SERVICES	
Location Based Services	• SPoT
Network Analytics	• SmartCell Insight (SCI) • RUCKUS Analytics
Security and Policy	• Cloudpath

ORDERING INFORMATION	
901-T710-XX01	• T710 dual band 802.11ac Outdoor Wireless Access Point, 4x4:4 streams, omni-directional Beamflex+ coverage, dual 10/100/1000 Ethernet ports, 90-264 Vac, POE in and POE out, Fiber SFP, GPS, IP-67 outdoor enclosure. Includes mounting bracket. Does not include power adapter.
901-T710-XX51	• T710 dual band 802.11ac Outdoor Wireless Access Point, 4x4:4 Streams, 120 degree sector Beamflex+ coverage, dual 10/100/1000 Ethernet ports, 90-264 Vac, POE in and POE out, Fiber SFP, GPS, IP-67 Outdoor enclosure. Includes mounting bracket. Does not include power adapter.

See RUCKUS price list for country-specific ordering information. PLEASE NOTE: When ordering Outdoor APs, you must specify the destination region by indicating -US, -WW, or -Z2 instead of XX. For access points, -Z2 applies to the following countries: Algeria, Egypt, Israel, Morocco, Tunisia, and Vietnam.
Warranty: Sold with a limited 1-year warranty.
For details see: http://support.ruckuswireless.com/warranty.

[2] Refer to Unleashed datasheets for SKU ordering information.
[3] Max power varies by country setting, band, and MCS rate.
[4] For complete list of WFA certifications, please see the Wi-Fi Alliance website.
[5] For current certification status, please see the price list.

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OPTIONAL ACCESSORIES	
902-0180-XX00	• PoE Injector (60W)
902-0183-0000	• Spare Weatherizing Cable Gland with 1 hole
902-0185-0000	• Spare Weatherized 4 pin AC Connector
902-0125-0000	• Secure articulating mounting bracket
902-0134-0000	• Outdoor AP mounting bracket (weatherized aluminum), 180-degree adjustment range in both azimuth and elevation. Mounting support for solid wall or ceiling, vertical or horizontal pole 1" to 4" in diameter using enclosed mounting hardware. Pole diameter greater than 4" can be supported with user-supplied clamps.

PLEASE NOTE: 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.

CommScope pushes the boundaries of communications technology with game-changing ideas and ground-breaking discoveries that spark profound human achievement. We collaborate with our customers and partners to design, create and build the world's most advanced networks. It is our passion and commitment to identify the next opportunity and realize a better tomorrow. Discover more at commscope.com

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