DATA SHEET

RUCKUS® T350

Outdoor 2x2:2 Wi-Fi 6 Access Point



Benefits

SIMPLICITY

RUCKUS' 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 T350 Series with physical or virtual controller appliances.

SERVE MORE DEVICES

Connect more devices simultaneously with two MU-MIMO 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 RUCKUS 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, RUCKUS knows that one AP solution cannot meet every possible challenge of varied and complex outdoor requirements. This is why the RUCKUS T350 Wi-Fi 6 series is designed with more variety than any other outdoor AP in the market today. Available with either internal omni-directional antennas or internal high-gain directional antenna models, the T350 Series uses patented RUCKUS 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 T350 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 RUCKUS, we know that outdoor AP deployments are especially challenging for installation and maintenance, which is why RUCKUS outdoor APs use a variety of technologies, like SmartMesh that help simplify outdoor AP deployment.

The RUCKUS T350 Series is perfect for high-density outdoor public venues such as airports, convention centers, plazas, malls, smart cities, and other dense urban environments. By providing a superior Wi-Fi experience to every user in high-density outdoor locations, venue operators can improve guest satisfaction and loyalty, deliver new kinds of wireless application services, and increase revenues.

The RUCKUS T350 Series 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 T350 Series is easy to manage through RUCKUS' appliance and virtual management options.

RUCKUS® T350

Outdoor 2x2:2 Wi-Fi 6 Access Point

Access Point Antenna Pattern

RUCKUS' BeamFlex+ adaptive antennas allow the T350 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 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

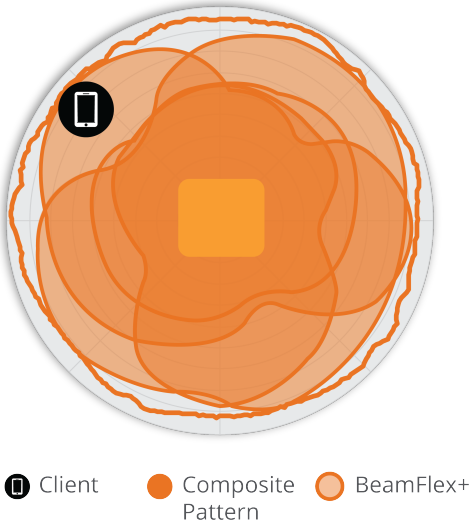


Figure 2. 2.4GHz Azimuth Antenna Patterns



Figure 3. 5GHz Azimuth Antenna Patterns



Figure 4. 2.4GHz Elevation Antenna Patterns

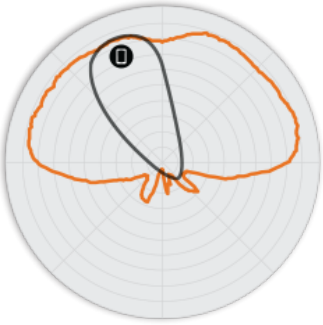
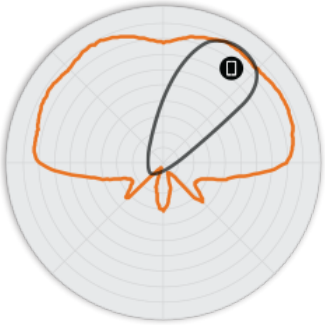


Figure 5. 5GHz Elevation Antenna Patterns



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.

© 2022 Commscope, Inc. All rights reserved.

RUCKUS® T350

Outdoor 2x2:2 Wi-Fi 6 Access Point

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			
	T350c	**T350d**	**T350se**
Antenna Type	Internal omnidir-ectional	Internal omnidir-ectional	Internal 120 deg sectorized + N-type female external connectors
	BeamFlex+ adaptive internal antennas with polarization diversity		
Antenna Gain (max)	Up to 3dBi		2.4GHz: 6dBi 5Ghz: 8dBi
Peak Transmit Power (Tx port/chain + 3dB Combining gain)	2.4GHz: 26 dBm 5GHz: 25 dBm		2.4GHz: 26dBm 5GHz: 25dBm
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
-97	-78	-94	-75	-97	-78	-94	-75
HE20				HE40			
MCS0	MCS7	MCS9	MCS11	MCS0	MCS7	MCS9	MCS11
-97	-78	-73	-67	-94	-75	-70	-64

5GHZ RECEIVE SENSITIVITY											
VHT20				VHT40				VHT80			
MCS0	MCS7	MCS8	MCS9	MCS0	MCS7	MCS8	MCS9	MCS0	MCS7	MCS8	MCS9
-97	-78	-75	-73	-95	-77	-71	-69	-92	-74	-68	-66
HE20				HE40				HE80			
MCS0	MCS7	MCS9	MCS11	MCS0	MCS7	MCS9	MCS11	MCS0	MCS7	MCS9	MCS11
-97	-78	-72	-67	-95	-77	-69	-64	-92	-74	-66	-61

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

© 2022 Commscope, Inc. All rights reserved.

RUCKUS® T350

Outdoor 2x2:2 Wi-Fi 6 Access Point

NETWORKING	
Controller Platform Support	• SmartZone • ZoneDirector • Unleashed • 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
IoT	• T350d: Integrated BLE and Zigbee (1 radio, switchable)

PHYSICAL INTERFACES	T350c	T350d	T350se
Ethernet	1 x 1GbE port, RJ-45 PoE In - 802.3at Class 4		
USB	—	1 USB 2.0 port, Type A	
DC Power	—	12V DC Terminal Block (7V - 20V)	

PHYSICAL CHARACTERISTICS	T350c	T350d	T350se
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)	• 162.3 mm (W) x 213.7 mm (L) x 80.9 mm (H) • 6.38 in (W) x 8.41 in (L) x 3.19 in (H)	• 209.1 mm (W) x 261.7 mm (L) x 102.5 mm (H) • 8.23 in (W) x 10.30 in (L) x 4.04 in (H)
Weight (w/ included bracket)	1.01kg (2.23lbs)	1.07kg (2.36lbs)	2.2kg (4.85lbs)
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)	-40°C -(-40°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]		T350c	T350d	T350se
Power Mode	**System Configuration**	**Max Power Consumption (includes USB power)**		
802.3at (PoE) - Class 4	**Full Functionality**	13.24W	17.57W	21.3W
802.3af (PoE) - Class 3	**USB Disabled** **IoT Disabled**	11.42W	12.94W	12.81W
Idle (PoE)		7.68W	7.78W	8.68W
DC - max power	**Full Functionality**	—	16.32W	19.34W
DC - idle		—	6.78W	7.92W

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]	• IEC/EN/UL 62368-1 & IEC/EN 60950-1 Safety • FCC 15B, RSS-Gen, EN 301 489-1/17 • EN 61000-3-x Emissions • EN 61000-4-2/3/5 Immunity • EN 60601-1-2 Medical • EN 50121-1/4 Railway EMC • 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) • RUCKUS Analytics
Security and Policy	• Cloudpath

MODEL FEATURE DIFFERENCES				
Model	**Antenna**	**Low Temp**	**USB**	**DC Power**
T350c	Internal omni	-20°C	N	N
T350d	Internal omni	-40°C	Y	Y
T350se	Internal sector (120°) + External antenna capable	-40°C	Y	Y

[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.

© 2022 Commscope, Inc. All rights reserved.

RUCKUS® T350

Outdoor 2x2:2 Wi-Fi 6 Access Point

ORDERING INFORMATION	
T350 OUTDOOR APs	
901-T350-XX20	T350c, omni, outdoor access point, 2x2:2 Wi-Fi 6 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.
901-T350-XX40	T350d, omni, outdoor access point, 2x2:2 Wi-Fi 6 internal BeamFlex+, dual band concurrent. One Ethernet port, PoE input, DC input and USB port. -40°C to 65°C Operating Temperature. Includes mounting bracket and one year warranty. Does not include PoE injector.
901-T350-XX51	T350se, sector+external, outdoor access point, 2x2:2 Wi-Fi 6, internal 120 degree sector + external antenna capable, dual band concurrent access point. One Ethernet port, PoE input, DC input and USB port. -40°C to 65°C Operating Temperature. Includes adjustable mounting bracket and one year warranty. Does not include PoE injector.

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 one year warranty.
For details see: http://support.ruckuswireless.com/warranty

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.
911-2140-0000	• Optional external antenna for the T350se: 2.3 - 2.7 GHz, 11.0 dBi and 4.9 - 5.875 GHz, 10.5 dBi dual band & dual polarization directional antenna. 3-dB beamwidth in azimuth 77 degrees (2.4 GHz band) and 55 degrees (5 GHz band). 3-dB beamwidth in elevation 27 degrees (2.4 GHz band) and 15 degrees (5 GHz band). Type N female connector (x2). Mounting kit is included.

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.

About RUCKUS Networks

RUCKUS Networks builds and delivers purpose-driven networks that perform in the demanding environments of the industries we serve. Together with our network of trusted go-to-market partners, we empower our customers to deliver exceptional experiences to the guests, students, residents, citizens and employees who count on them.

www.ruckusnetworks.com

Visit our website or contact your local RUCKUS representative for more information.

© 2022 CommScope, Inc. All rights reserved.

All trademarks identified by ™ or ® are trademarks or registered trademarks in the US and may be registered in other countries. All product names, trademarks and registered trademarks are property of their respective owners. This document is for planning purposes only and is not intended to modify or supplement any specifications or warranties relating to CommScope products or services.

PA-115633.3-EN (04/22)

RUCKUS®
COMMSCOPE