

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.

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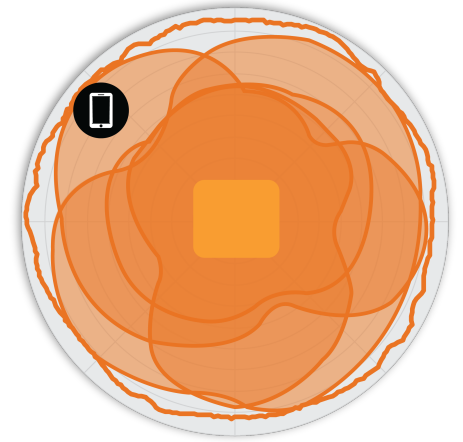
Access Point Antenna Pattern

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



☐ Client ● Composite Pattern ○ BeamFlex+ Pattern

Figure 2. 2.4GHz Azimuth Antenna Patterns



Figure 3. 5GHz Azimuth Antenna Patterns



Figure 4. 2.4GHz Elevation Antenna Patterns

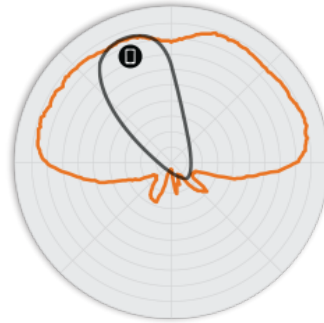
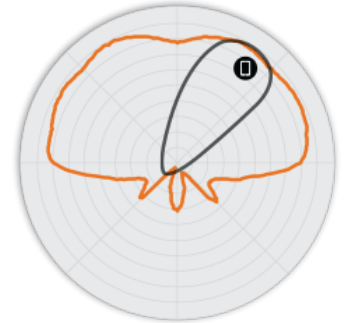


Figure 5. 5GHz Elevation Antenna Patterns



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.

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| 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 867 Mbps 802.11n: 6.5 to 300Mbps 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-Personal, WPA2-Enterprise, WPA3-Personal, WPA3-Enterprise, AES, 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 | | | |
|--|--|--------------------------|---|
| | T350c | T350d | T350se |
| Antenna Type | Internal omnidirectional | Internal omnidirectional | 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 | <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 | | | | | | | |
|----------------------------|------|------|-------|-------|------|-------|-------|
| 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 | <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 |

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| NETWORKING | |
|-----------------------------|---|
| Controller Platform Support | <ul style="list-style-type: none"> SmartZone ZoneDirector Unleashed Cloud Standalone |
| Mesh | <ul style="list-style-type: none"> SmartMesh™ wireless meshing technology. Self-healing Mesh |
| IP | <ul style="list-style-type: none"> IPv4, IPv6 |
| VLAN | <ul style="list-style-type: none"> 802.1Q (1 per BSSID or dynamic per use 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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) | <ul style="list-style-type: none"> 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) | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <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™ Wi-Fi Optimized Connectivity™ Wi-Fi Vantage™ WMM® Passpoint® |
| Standards Compliance ⁴ | <ul style="list-style-type: none"> 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 | <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 |

| 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.

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| 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. |

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.

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