

# RUCKUS® H350

Wall-Mounted Wi-Fi 6 2x2:2 Access Point, IoT, and Switch



## Benefits

### GREAT ALL-IN-ONE: WI-FI 6, IoT, WIRED PORTS

Deliver great in-room Wi-Fi and enable consolidated IP services with Wi-Fi 6 speed, BLE or Zigbee, and a built-in 2-port Gigabit Ethernet switch.

### STUNNING WI-FI PERFORMANCE

Patented RUCKUS technologies for performance optimization and interference mitigation delivers extended coverage and superior user experience.

### IoT ON BOARD

Eliminate siloed networks and unify Wi-Fi and IoT technologies into one single network

### MESH NETWORKING

Dynamically create self-forming, self-healing network mesh with RUCKUS patented SmartMesh technology reducing expensive cabling, and complex configurations by checking a box.

### AFFORDABLE ENTERPRISE PERFORMANCE

The H350 delivers unprecedented price/performance

### KEEP EXISTING SWITCHES AND CABLES

Designed to operate on existing PoE switches and CAT 5e cabling to minimize costly power infrastructure upgrades.

### MULTIPLE UNIFIED MANAGEMENT OPTIONS

Manage the H350 from the cloud, with on-premises physical/virtual appliances, or without a controller.

**How many devices can you connect in a single room? If you operate a hotel, apartment building, or other multi dwelling unit (MDU) structure, your answer can have a big impact on your bottom line.**

The RUCKUS® H350 wall-mounted access point, IoT gateway and Ethernet switch makes it easy to support in-room connectivity requirements. It starts with RUCKUS patented Wi-Fi optimization intelligence to deliver the industry's highest-performing wireless connectivity. Combine that with two-ports of Gigabit Ethernet to connect in-room wired devices, without extra cabling and add supports for Zigbee® or Bluetooth® Low Energy (BLE). Put it all in a sleek, low profile design that can be discretely installed over a standard electrical outlet.

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The RUCKUS® H350 delivers consistent, reliable Wi-Fi 6 (802.11ax) wireless networking without breaking the bank. The AP features the patented RUCKUS technologies for performance optimization and interference mitigation found in our premier access points, delivering superior user experiences. But it provides them in an entry level product built for smaller venues with limited device diversity.

The H350 is a great choice for low-density enterprise, hospitality, MDU, small and medium-size businesses, retail locations, restaurants, and multi-tenant small offices and branch offices.

The H350 Wi-Fi 6 AP incorporates patented technologies found only in the RUCKUS Wi-Fi portfolio.

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

The H350 provides an ideal combination of features and performance for smaller environments.

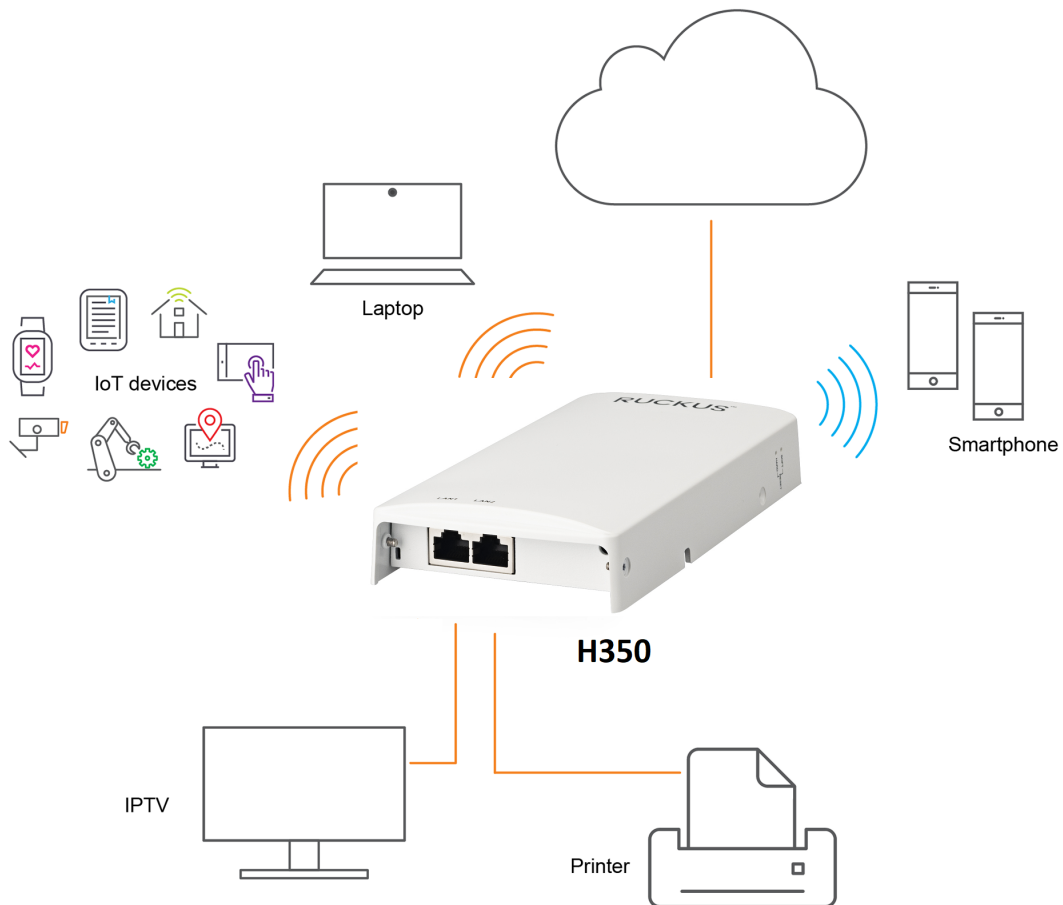
Whether you're deploying ten or ten thousand APs, the H350 is also easy to manage through RUCKUS' appliance, virtual, controller-less and cloud management options.

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## CONVERGED WIRED AND WIRELESS SERVICES



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## Access Point Antenna Pattern

RUCKUS' BeamFlex+ adaptive antennas allow the H350 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

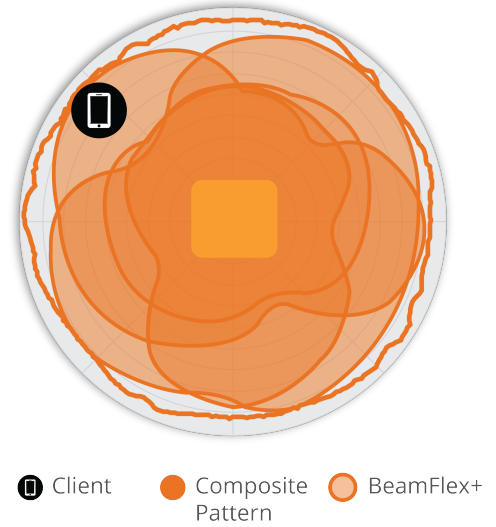


Figure 2. H350 2.4GHz Azimuth Antenna Patterns



Figure 3. H350 5GHz Azimuth Antenna Patterns



Figure 4. H350 2.4GHz Elevation Antenna Patterns

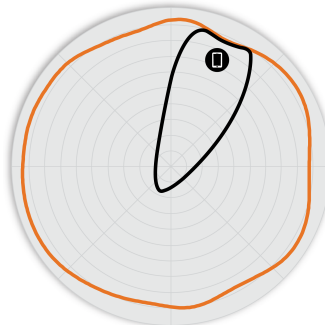


Figure 5. H350 5GHz Elevation Antenna Patterns



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.

# RUCKUS® H350

## Wall-Mounted Wi-Fi 6 2x2:2 Access Point, IoT, and Switch

| Wi-Fi                    |                                                                                                                                                                                                                                                                                                                           |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wi-Fi Standards          | <ul style="list-style-type: none"><li>IEEE 802.11a/b/g/n/ac/ax</li></ul>                                                                                                                                                                                                                                                  |
| Supported Rates          | <ul style="list-style-type: none"><li>802.11ax: 4 to 1,774 Mbps (MCS0 to MCS11, NSS=1 to 2 for HE 20/40/80)</li><li>802.11ac: 6.5 to 867 Mbps (MCS0 to MCS9, NSS = 1 to 2 for VHT 20/40/80)</li><li>802.11n: 6.5 Mbps to 300 Mbps (MCS0 to MCS15)</li><li>802.11a/g: 6 to 54 Mbps</li><li>802.11b: 1 to 11 Mbps</li></ul> |
| Supported Channels       | <ul style="list-style-type: none"><li>2.4Ghz: 1-13</li><li>5Ghz: 36-64, 100-144, 149-165</li></ul>                                                                                                                                                                                                                        |
| MIMO                     | <ul style="list-style-type: none"><li>2x2 SU-MIMO</li><li>2x2 MU-MIMO</li></ul>                                                                                                                                                                                                                                           |
| Spatial Streams          | <ul style="list-style-type: none"><li>2 Streams SU/MU-MIMO (2.4Ghz &amp; 5Ghz)</li></ul>                                                                                                                                                                                                                                  |
| Radio Chains and Streams | <ul style="list-style-type: none"><li>2x2:2 (2.4Ghz &amp; 5Ghz)</li></ul>                                                                                                                                                                                                                                                 |
| Channelization           | <ul style="list-style-type: none"><li>20, 40, 80MHz</li></ul>                                                                                                                                                                                                                                                             |
| Security                 | <ul style="list-style-type: none"><li>WPA-PSK, WPA-TKIP, WPA2 AES, WPA3-Personal, WPA3-Enterprise, 802.11i, Dynamic PSK, OWE</li><li>WIPS/WIDS</li></ul>                                                                                                                                                                  |
| Other Wi-Fi Features     | <ul style="list-style-type: none"><li>WMM, Power Save, Tx Beamforming, LDPC, STBC, 802.11r/k/v</li><li>Captive Portal</li><li>Hotspot</li><li>Hotspot 2.0</li><li>WISPr</li></ul>                                                                                                                                         |

| RF                                                 |                                                                                                                                                                                                    |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Antenna Type                                       | <ul style="list-style-type: none"><li>BeamFlex+ adaptive antennas with polarization diversity</li><li>Adaptive antenna that provides multiple unique antenna patterns</li></ul>                    |
| Antenna Gain (max)                                 | <ul style="list-style-type: none"><li>Up to 1dBi</li></ul>                                                                                                                                         |
| Peak Transmit Power (aggregate across MIMO chains) | <ul style="list-style-type: none"><li>2.4GHz: 19dBm</li><li>5GHz: 22dBm</li></ul>                                                                                                                  |
| Minimum Receive Sensitivity <sup>1</sup>           | <ul style="list-style-type: none"><li>-100dBm</li></ul>                                                                                                                                            |
| Frequency Bands                                    | <ul style="list-style-type: none"><li>ISM (2.4-2.484GHz)</li><li>U-NII-1 (5.15-5.25GHz)</li><li>U-NII-2A (5.25-5.35GHz)</li><li>U-NII-2C (5.47-5.725GHz)</li><li>U-NII-3 (5.725-5.85GHz)</li></ul> |

| 2.4GHZ RECEIVE SENSITIVITY (dBm) - PER RADIO CHAIN |      |      |       |       |      |       |       |
|----------------------------------------------------|------|------|-------|-------|------|-------|-------|
| 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 (dBm) - PER RADIO CHAIN |      |      |       |       |      |      |       |       |      |      |       |
|--------------------------------------------------|------|------|-------|-------|------|------|-------|-------|------|------|-------|
| VHT20                                            |      |      |       | VHT40 |      |      |       | VHT80 |      |      |       |
| MCS0                                             | MCS7 | MCS8 | MCS9  | MCS0  | MCS7 | MCS8 | MCS9  | MCS0  | MCS7 | MCS8 | MCS9  |
| -97                                              | -76  | -72  | --    | -92   | -73  | --   | -67   | -89   | -70  | --   | -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              | 16         |
| MCS7 HT20              | 15         |
| MCS8 VHT20             | 14         |
| MCS9 VHT40             | 13         |
| MCS11 HE40             | 11         |

| 5GHZ TX POWER TARGET   |            |
|------------------------|------------|
| Rate                   | Pout (dBm) |
| MCS0 HT20              | 19         |
| MCS7 VHT40, VHT80      | 15.5       |
| MCS9 VHT40, VHT80      | 14.5       |
| MCS11 HE20, HE40, HE80 | 12         |

| PERFORMANCE AND CAPACITY |                                                                                         |
|--------------------------|-----------------------------------------------------------------------------------------|
| Peak PHY Rates           | <ul style="list-style-type: none"><li>2.4GHz: 574Mbps</li><li>5GHz: 1,200Mbps</li></ul> |
| Client Capacity          | <ul style="list-style-type: none"><li>Up to 512 clients per AP</li></ul>                |
| SSID                     | <ul style="list-style-type: none"><li>8 per radio</li></ul>                             |

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

<sup>1</sup> Rx sensitivity varies by band, channel width and MCS rate.

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| NETWORKING                  |                                                                                                                                                                              |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Controller Platform Support | <ul style="list-style-type: none"><li>• SmartZone</li><li>• ZoneDirector</li><li>• Unleashed<sup>2</sup></li><li>• Cloud</li><li>• Standalone</li></ul>                      |
| Mesh                        | <ul style="list-style-type: none"><li>• SmartMesh™ wireless meshing technology. Self-healing Mesh</li></ul>                                                                  |
| IP                          | <ul style="list-style-type: none"><li>• IPv4, IPv6, dual stack</li></ul>                                                                                                     |
| VLAN                        | <ul style="list-style-type: none"><li>• 802.1Q (1 per BSSID or dynamic per use based on RADIUS)</li><li>• VLAN Pooling</li><li>• Port-based</li></ul>                        |
| 802.1x                      | <ul style="list-style-type: none"><li>• Authenticator and Supplicant</li></ul>                                                                                               |
| Tunnel                      | <ul style="list-style-type: none"><li>• L2TP, GRE, Soft-GRE</li></ul>                                                                                                        |
| Policy Management Tools     | <ul style="list-style-type: none"><li>• Application Recognition and Control</li><li>• Access Control Lists</li><li>• Device Fingerprinting</li><li>• Rate Limiting</li></ul> |
| IoT                         | <ul style="list-style-type: none"><li>• Integrated BLE and Zigbee (1 radio, switchable)</li></ul>                                                                            |

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

| PHYSICAL INTERFACES |                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Ethernet            | <ul style="list-style-type: none"><li>• 1x 1GbE port, RJ-45, PoE In – 802.3af Class 3</li><li>• 2x 1GbE ports, RJ-45</li></ul> |

| PHYSICAL CHARACTERISTICS |                                                                                                                                                                       |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Physical Size            | <ul style="list-style-type: none"><li>• 89.5 mm (W) x 178.5 mm (L), 29.3 mm (H)</li><li>• 3.52in (W) x 7.03in (L) x 1.15in (H)</li></ul>                              |
| Weight                   | <ul style="list-style-type: none"><li>• 276g (0.608lbs) without bracket</li><li>• 346g (0.763lbs) with bracket</li></ul>                                              |
| Mounting                 | <ul style="list-style-type: none"><li>• Electrical wallbox; Standard US and EU single gang wall jack</li><li>• Optional bracket for offset &amp; wall mount</li></ul> |
| Operating Temperature    | <ul style="list-style-type: none"><li>• 0°C (32°F) - 40°C (104°F)</li></ul>                                                                                           |
| Operating Humidity       | <ul style="list-style-type: none"><li>• Up to 95%, non-condensing</li></ul>                                                                                           |

### Power Configuration Options

| Power Configuration Options |                      |             |
|-----------------------------|----------------------|-------------|
| Power Mode                  |                      | 802.3af     |
| Wi-Fi (2.4GHz)              | Tx Power (per Chain) | 16dBm (2x2) |
| Wi-Fi (5GHz)                | Tx Power (per Chain) | 19dBm (2x2) |
| IoT Radios                  | BLE or Zigbee        | Enabled     |
| Ethernet LAN Ports (2x)     |                      | Enabled     |
| Power Consumption           |                      | 12.54W      |

<sup>2</sup> Refer to Unleashed datasheets for SKU ordering information.

<sup>3</sup> For complete list of WFA certifications, please see Wi-Fi Alliance website.

<sup>4</sup> For current certification status, please see price list.

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## SOFTWARE AND SERVICES

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

## ORDERING INFORMATION

|               |                                                                                            |
|---------------|--------------------------------------------------------------------------------------------|
| 901-H350-XX00 | <ul style="list-style-type: none"><li>• Dual band 802.11ax Wi-Fi 6 Wall plate AP</li></ul> |
|---------------|--------------------------------------------------------------------------------------------|

See RUCKUS price list for country-specific ordering information.

Warranty: Sold with a limited lifetime warranty.

For details see: <http://support.ruckuswireless.com/warranty>.

## OPTIONAL ACCESSORIES

|               |                                                                                                      |
|---------------|------------------------------------------------------------------------------------------------------|
| 902-0162-XXYY | <ul style="list-style-type: none"><li>• PoE injector (24W) (Sold in quantities of 1, 10)</li></ul>   |
| 902-0170-XXYY | <ul style="list-style-type: none"><li>• Power Supply (30W) (Sold in quantities of 1 or 10)</li></ul> |
| 902-0136-0000 | <ul style="list-style-type: none"><li>• Optional Surface-mount bracket</li></ul>                     |

PLEASE NOTE: When ordering Indoor APs, you must specify the destination region by indicating -US, -WW, or -Z2 instead of XX. 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. For access points, -Z2 applies to the following countries: Algeria, Egypt, Israel, Morocco, Tunisia, and Vietnam.

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