The R730 is based on the latest Wi-Fi standard, 802.11ax and bridges the performance gap from ‘gigabit’ Wi-Fi to ‘multi-gigabit’ Wi-Fi in support of the insatiable demand for better and faster Wi-Fi.

The Ruckus R730 is our highest capacity dual-band, dual-concurrent 802.11ax AP that supports 12 spatial streams (8x8:8 in 5GHz, 4x4:4 in 2.4GHz). The R730, with OFDMA and MU-MIMO capabilities, efficiently manages more than 1K client connections with increased capacity, improved coverage and performance in ultra-high dense environments. Furthermore, 5 Gbps multi-gigabit Ethernet ports enhances backhaul capacity.

Additionally, the R730 is IoT- and LTE-ready, and supports wireless standards beyond Wi-Fi in combination with the Ruckus IoT Suite and our CBRS/OpenG modules.

The R730 addresses the increasing client demands in transit hubs, auditoriums, stadiums, conference centers, and other highly trafficked indoor spaces. It is the perfect choice for data-intensive streaming multimedia applications like 4K video transmissions, while supporting latency sensitive voice and data applications with stringent quality-of-service requirements.

The R730 when paired with the Ruckus Ultra-High density Technology Suite found only in the Ruckus Wi-Fi portfolio, dramatically improves network performance through a combination of patented wireless innovations and learning algorithms that includes:

- **Airtime Decongestion**: Increases average network throughput in heavily congested environments
- **Transient Client management**: Reduces interference traffic from unconnected Wi-Fi devices
- **BeamFlex+ Antennas**: Extended coverage and optimized throughput with patented multi-directional antennas and radio patterns

Whether you're deploying ten or ten thousand APs, the R730 is also easy to manage through Ruckus' appliance and virtual management options.
ACCESS POINT ANTENNA PATTERN

Ruckus’ BeamFlex+ adaptive antennas allow the R730 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. R730 2.4GHz Azimuth Antenna Patterns
Figure 3. R730 5GHz Azimuth Antenna Patterns
Figure 4. R730 2.4GHz Elevation Antenna Patterns
Figure 5. R730 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.
### Wi-Fi

#### Wi-Fi Standards
- IEEE 802.11a/b/g/n/ac/ax

#### Supported Rates
- 802.11ax: 4 to 4800 Mbps
- 802.11ac: 6.5 to 3467 Mbps
- 802.11n: 6.5 to 600 Mbps
- 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
- 8x8 MU-MIMO
- 8x8 SU-MIMO

#### Spatial Streams
- 8x8 MU-MIMO
- 8x8 SU-MIMO

#### Channelization
- 20, 40, 80MHz

#### Modulation
- OFDMA (up to 1024-QAM)

#### Security
- WPA-PSK, WPA-TKIP
- WPA2 AES, 802.11i, Dynamic PSK
- WIPS/WIDS

#### Other Wi-Fi Features
- WMM, Power Save, TxBF, LDPC, STBC, 802.11r/k/vHotspot
- Hotspot 2.0
- Captive Portal
- WISPr

### RF

#### Antenna Type
- 2.4GHz Antennas
  - Omni: 2 Antennas
  - BeamFlex+ Adaptive: 2 Antennas
  - Polarization: 3 Vertical & 1 Horizontal
- 5GHz Antennas
  - Omni: 4 Antennas
  - BeamFlex+ adaptive: 4 Antennas
  - Polarization: 6 Vertical & 2 Horizontal

#### Antenna Gain (max)
- Up to 2 dBi

#### Frequency Bands
- 2.4 - 2.484 GHz
- 5.17 - 5.33 GHz
- 5.49 - 5.71 GHz
- 5.735 - 5.835 GHz

### 2.4GHz RECEIVE SENSITIVITY

<table>
<thead>
<tr>
<th>Rate</th>
<th>HT20</th>
<th>HT40</th>
<th>VHT20</th>
<th>VHT40</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC50</td>
<td>-91</td>
<td>-73</td>
<td>-88</td>
<td>-88</td>
</tr>
<tr>
<td>MC57</td>
<td>-91</td>
<td>-73</td>
<td>-87</td>
<td>-88</td>
</tr>
<tr>
<td>MC8</td>
<td>-80</td>
<td>-73</td>
<td>-88</td>
<td>-88</td>
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<tr>
<td>MC11</td>
<td>-80</td>
<td>-73</td>
<td>-88</td>
<td>-88</td>
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</tbody>
</table>

### 5GHz RECEIVE SENSITIVITY

<table>
<thead>
<tr>
<th>Rate</th>
<th>VHT20</th>
<th>VHT40</th>
<th>VHT80</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC50</td>
<td>-91</td>
<td>-72</td>
<td>-69</td>
</tr>
<tr>
<td>MC57</td>
<td>-69</td>
<td>-69</td>
<td>-69</td>
</tr>
<tr>
<td>MC58</td>
<td>-69</td>
<td>-69</td>
<td>-69</td>
</tr>
<tr>
<td>MC59</td>
<td>-69</td>
<td>-69</td>
<td>-69</td>
</tr>
</tbody>
</table>

### 2.4GHz TX POWER TARGET (PER CHAIN)

<table>
<thead>
<tr>
<th>Rate</th>
<th>Pout (dBm) - Full Power</th>
<th>Pout (dBm) - 802.3at</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC50</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>MC57</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>MC58</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>MC59</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>MC511</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

### 5GHz TX POWER TARGET (PER CHAIN)

<table>
<thead>
<tr>
<th>Rate</th>
<th>Pout (dBm) - Full Power</th>
<th>Pout (dBm) - 802.3at</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC50</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>MC57</td>
<td>16.5</td>
<td>16.5</td>
</tr>
<tr>
<td>MC59</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>MC511</td>
<td>12.5</td>
<td>12.5</td>
</tr>
</tbody>
</table>

### PERFORMANCE AND CAPACITY

#### Peak PHY Rates
- 2.4GHz: 1.148 Gbps (11ax)
- 5GHz: 4.8 Gbps (11ax)

#### Client Capacity
- Up to 1024 clients per AP

#### Simultaneous VoIP Clients
- Up to 60 per AP

#### SSID
- Up to 16SSID

### RUCKUS RADIO MANAGEMENT

#### Antenna Optimization
- BeamFlex+
- PD-MRC

#### Wi-Fi Channel Management
- ChannelFly

#### Client Density Management
- Band Balancing
- Client Load Balancing
- Airtime Fairness
- Airtime-based WLAN Prioritization

#### Queuing & Scheduling
- SmartCast

#### Mobility
- SmartRoam

#### Diagnostic Tools
- Spectrum Analysis
- SpeedFlex

#### High Density Deployments (RF Innovations)
- Perpacket Adaptive Power
- Adaptive Wi-Fi Cell Size
- Transient Client Management
- Airtime Decongestion
## NETWORKING

<table>
<thead>
<tr>
<th>Controller Platform Support</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• SmartZone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• ZD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Standalone</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mesh</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• SmartMesh™ wireless meshing technology</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IP</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• IPv4, IPv6</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VLAN</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• 802.1Q</td>
<td></td>
</tr>
<tr>
<td>• BSSID-based (16 BSSIDs / radio)</td>
<td></td>
</tr>
<tr>
<td>• Port-based</td>
<td></td>
</tr>
<tr>
<td>• Dynamic, per user based on RADIUS</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>802.1x</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Wired &amp; wireless</td>
<td></td>
</tr>
<tr>
<td>• Authenticator &amp; Supplicant</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tunnel</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• RuckusGRE, SoftGRE</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Policy Management Tools</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Application Recognition and Control</td>
<td></td>
</tr>
<tr>
<td>• Access Control Lists</td>
<td></td>
</tr>
<tr>
<td>• Device Fingerprinting</td>
<td></td>
</tr>
</tbody>
</table>

## OTHER RADIO TECHNOLOGIES

<table>
<thead>
<tr>
<th>IoT</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• BLE, Zigbee</td>
<td></td>
</tr>
</tbody>
</table>

## PHYSICAL INTERFACES

<table>
<thead>
<tr>
<th>Ethernet</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• 1x 1/2.5/5 Gbps port, Rj-45</td>
<td></td>
</tr>
<tr>
<td>• 1x 10/100/1000 Mbps port, Rj-45</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>USB</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• 1 USB 2.0 port, Type A</td>
<td></td>
</tr>
</tbody>
</table>

## PHYSICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Physical Size</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• 22.19 x 24.96 x 6 cm</td>
<td></td>
</tr>
<tr>
<td>• 8.74 x 9.83 x 2.36 in.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weight</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• 1.53 kg</td>
<td></td>
</tr>
<tr>
<td>• 3.37 lbs</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mounting</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Wall, Acoustic ceiling, Desk</td>
<td></td>
</tr>
<tr>
<td>• Secure Bracket (sold separately)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physical Security</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Hidden Latching Mechanism</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating Temperature</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• -0C (32°F) to 50°C (122°F)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating Humidity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Up to 95%, non-condensing</td>
<td></td>
</tr>
</tbody>
</table>

## POWER CONSUMPTION

<table>
<thead>
<tr>
<th>Mode</th>
<th>Power Consumption</th>
<th>System Configuration</th>
<th>Wi-Fi Radios</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC Power, PoH, uPoE (Idle)</td>
<td>16.1W</td>
<td>• 5Gbps &amp; 1Gbps Ethernet enabled</td>
<td>2.4GHz (4x4) enabled</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• USB Enabled (3W)</td>
<td>5GHz (8x8) enabled</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Zigbee/BLE Enabled (0.5W)</td>
<td>(no clients associated)</td>
</tr>
<tr>
<td>DC Power, PoH, uPoE (Max)</td>
<td>31.0W</td>
<td>• 5Gbps &amp; 1Gbps Ethernet enabled</td>
<td>2.4GHz (4x4) Tx 20 dBm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• USB Enabled (3W)</td>
<td>5GHz (8x8) Tx 22 dBm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Zigbee/BLE Enabled (0.5W)</td>
<td></td>
</tr>
<tr>
<td>802.3at (Max)</td>
<td>23.8W</td>
<td>• 5Gbps &amp; 1Gbps Ethernet enabled</td>
<td>2.4GHz (4x4) Tx 20 dBm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• USB Enabled (3W)</td>
<td>5GHz (4x4) Tx 22 dBm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Zigbee/BLE Disabled</td>
<td></td>
</tr>
<tr>
<td>802.3af (Not recommended)</td>
<td>12.4W</td>
<td>• 5Gbps &amp; 1Gbps Ethernet enabled</td>
<td>2.4GHz disabled</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• USB disabled</td>
<td>5GHz disabled</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Zigbee/BLE Disabled</td>
<td></td>
</tr>
</tbody>
</table>

## CERTIFICATIONS AND COMPLIANCE

<table>
<thead>
<tr>
<th>Wi-Fi Alliance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Wi-Fi CERTIFIED™ a, b, g, n, ac</td>
<td></td>
</tr>
<tr>
<td>• Passpoint®</td>
<td></td>
</tr>
<tr>
<td>• Vantage</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standards Compliance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• EN 60950-1 Safety</td>
<td></td>
</tr>
<tr>
<td>• EN 60601-1-2 Medical</td>
<td></td>
</tr>
<tr>
<td>• EN 61000-4-2/3/5 Immunity</td>
<td></td>
</tr>
<tr>
<td>• EN 50121-1 Railway EMC</td>
<td></td>
</tr>
<tr>
<td>• EN 50121-4 Railway Immunity</td>
<td></td>
</tr>
<tr>
<td>• IEC 61373 Railway Shock &amp; Vibration</td>
<td></td>
</tr>
<tr>
<td>• EN 62311 Human Safety/RF Exposure</td>
<td></td>
</tr>
<tr>
<td>• UL 2043 Plenum</td>
<td></td>
</tr>
<tr>
<td>• WEEE &amp; RoHS</td>
<td></td>
</tr>
<tr>
<td>• ISTA 2A Transportation</td>
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</tr>
</tbody>
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## SOFTWARE AND SERVICES

<table>
<thead>
<tr>
<th>Location Based Services</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• SPoT</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Network Analytics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• SmartCell Insight (SCI)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Security and Policy</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cloudpath</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IoT</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ruckus IoT Suite</td>
<td></td>
</tr>
</tbody>
</table>

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R730
Indoor 802.11ax 8x8:8 Wi-Fi Access Point with Multi-gigabit backhaul

ORDERING INFORMATION

| 901-R730-XX00 | R730 dual-band (5GHz and 2.4GHz concurrent) 802.11ax wireless access point, Ultra-High Density performance, 12 spatial streams, adaptive antennas, PoE support. Includes adjustable acoustic drop ceiling bracket. Two Ethernet ports with 1GBe and 5Gbe. Does not include power adaptor.

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, -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.

OPTIONAL ACCESSORIES

| 902-0180-XX00 | • PoE Injector (60W)
| 902-1170-XX00 | • Power Supply (48V, 0.75A, 36W)
| 902-0120-0000 | • Spare, Accessory Mounting Bracket

PLEASE NOTE: When ordering Indoor APs, you must specify the destination region by indicating -US, or -Winstead of XX. When ordering PoE injectors or power supplies, you must specify the destination region by indicating -US, -EU, -BR, -CN, -IN, -JP, -KR, -SA, -UK, or -UN instead of -XX.