Indoor Wi-Fi 6E (802.11ax) Access Point with 4.7 Gbps Data Rate





### Benefits

#### Connect more devices simultaneously

Improve device performance, by enabling more simultaneous device connections with built-in 6 spatial streams (2x2:2 concurrent in 2.4Ghz, 5GHz, and 6GHz), MU-MIMO and OFDMA technology.

#### High client density and performance

Provides exceptional end-user experience within large meeting halls, general enterprise spaces, and large classrooms with a combined data rate of 4.7 Gbps.

### BeamFlex+ Adaptive Antenna Technology

For greater speed, fewer errors, and instant bandwidth delivery, RUCKUS BeamFlex+ patented technology offers first-of-its-kind smart antenna technology that maximizes signal coverage, throughput, and network capacity and work with any client. It further increases MIMO diversity gain and maximize spatial multiplexing potential

### Converged Access Point

Allows customers to eliminate siloed networks and unify WiFi and non-WiFi wireless technologies into one single network by using built-in BLE and Zigbee, and also expanding to any future wireless technologies through the USB port.

### 5 GbE eliminates bottleneck

Optimized multi-gigabit Wi-Fi performance delivered using the built-in 1/2.5/5GbE port to connect to multigigabit switches.

#### Multiple management options

Manage the R560 with on premise physical/virtual appliances and control auto-provisioning for faster deployment and seamless firmware upgrades.

### **Enhanced Security**

The latest Wi-Fi security standard with WPA3 and receive enhanced protection from man-in-the-middle attacks. Adds the power of RUCKUS DPSK to WPA3/SAE combining enhanced security with the flexibility and ease of use of dynamic passphrase to secure network

### More Than WI-Fi

Support solutions beyond Wi-Fi with RUCKUS IoT Suite, RUCKUS Analytics, RUCKUS Cloudpath Enrollment System and onboarding software

Bandwidth-hungry ultra-high definition video, virtual reality, Internet of Things (IoT). An explosion of new devices and content. With these kinds of demands, organizations in every industry need more from their Wi-Fi. But with hundreds of devices and nonstop wireless noise and interference, busy indoor spaces can make challenging wireless environments.

The RUCKUS R560 is a mid-range Wi-Fi 6E tri-radio, tri-band concurrent indoor AP that delivers 6 spatial streams (2x2:2 concurrent in 2.4GHz, 5GHz, and 6GHz) and supports OFDMA, TWT and MU-MIMO capabilities. It delivers industry-leading performance and reliability in demanding high-density environments with a combined data rate of 4.7 Gbps and efficiently managing up to 1536 clients. Furthermore, a 5 Gbps Ethernet port ensures the backhaul is not a bottleneck for full use of available Wi-Fi capacity.

Also, wireless requirements within enterprises are expanding beyond Wi-Fi. The R560 has built-in IoT radios with onboard BLE and Zigbee capabilities. In addition, the R560 is a converged access point that allows customers to seamlessly integrate any new wireless technologies with our USB port.

The R560 addresses the increasing client demands in transit hubs, auditoriums, conference centers, and other high traffic 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 R560, with built-in RUCKUS exclusive technology, 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\* + Adaptive Antennas: Extended coverage range and optimized throughput with patented dynamic multi-directional antennas and radio patterns and work with any client.

Whether you are deploying ten or ten thousand APs, the R560 is also easy to manage through RUCKUS multiple management options including cloud based and on premises controllers.

Indoor Wi-Fi 6E (802.11ax) Access Point with 4.7 Gbps Data Rate











Indoor Wi-Fi 6E (802.11ax) Access Point with 4.7 Gbps Data Rate

### Access Point Antenna Pattern

RUCKUS' BeamFlex+ adaptive antennas allow the R560 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

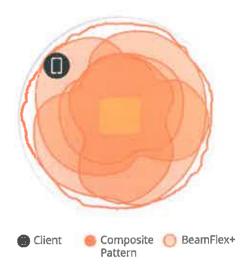


Figure 2. R560 2.4GHz Azimuth Antenna Pattern

Figure 5. R560 2.4GHz Elevation Antenna Pattern



Figure 3. R560 5GHz Azimuth Antenna Pattern



Figure 6. R560 5GHz Elevation Antenna Pattern



Figure 4. R560 6GHz Azimuth Antenna Pattern

Figure 7. R560 6GHz Elevation Antenna Pattern







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.

### Indoor Wi-Fi 6E (802.11ax) Access Point with 4.7 Gbps Data Rate

別用	
WI-FI Standards	• IEEE 802/11a/b/g/n/ac/ax, WiFl-6E
	<ul> <li>802.11ax: 4 to 2402 Mbps</li> <li>802.11ac: 6.5 to 866 Mbps</li> </ul>
Supported Rates	<ul> <li>802.11n: 6.5 to 300 Mbps</li> </ul>
	° 802.11a/g: 6 to 54 Mbps
	* 802.11b: 1 to 11 Mbps
	• 2.4GHz: 1-13
Supported Channels	<ul> <li>5GHz: 36-64, 100-144, 149-165</li> </ul>
	6GHz: 1-233
1411.60	2x2 SU-MIMO
MiMO	2x2 MU-MIMO
Spatial Streams	2 for both SU-MIMO & MU-MIMO
Radlo Chains and Streams	• 2x2:2
Channelization	* 20, 40, 80, 160 MHz
Security	<ul> <li>WEP, WPA, WPA-PSK, WPA2, WPA2-PSK, WPA3, WPA3-SAE OWE, PMF (802.11w), Dynamic PSK</li> <li>WIPS/WIDS</li> </ul>
	<ul> <li>WMM, Power Save, Tx Beamforming, LDPC, STBC, 802 11r/k/v</li> </ul>
	* MBO
Other Wi-Fi Features	Web Authentication and Guest Access
	Hotspot, Hotspot 2.0
	Captive Portal
	WISPr

<u> </u>	
Antenna Type	BeamFlex+ adaptive antennas with polarization diversity     Adaptive antenna that provides 4,000+ unique antenna patterns per band
Antenna Galn (max)	Up to 4dBl
Peak Transmit Power (Tx port/ chain + Combining gain)	<ul> <li>2.4GHz: 26dBm</li> <li>5GHz: 25dBm</li> <li>6GHz: 22dBm</li> </ul>
Frequency Bands	<ul> <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> <li>U-NII-5 (5.925-6.425GHz)</li> <li>U-NII-6 (6.425-6.525GHz)</li> <li>U-NII-7 (6.525-6.875GHz)</li> <li>U-NII-7 (6.525-6.875GHz)</li> <li>U-NII-8 (6.875-7.125GHz)</li> </ul>

-	CHIVI SEND	Wite					
للترين	20				I S		140
MCS0	MCS7	MCS0	MCS7	MCS0	MCS7	MCS0	MC57
-94	-75	-91	-72	-94	-75	-91	-72
	hei,	.30			HE	210	
MCS0	MC57	MCS9	MC511	MC50	MCS7	MCS9	MCS1
-94	-75	-70	-64	-91	-72	-67	-61

00002	HIGHWI	Strikmi	VITYLL	Will:					Hist		
	Vii	110			Viii	100			93H	TFENC	
MCS0	MCS7	MCS8	MCS9	MCS0	MCS7	MCS8	MCS9	MCS0	MCS7	MCS8	MCS9
-94	-75	-72	-69	-91	-72	-69	-66	-88	-69	-66	-63
	ьý	120			Ud.				Rai	80	170
MCSO	MCS7	MCS9	MCS11	MCS0	MCS7	MCS9	MCS11	MC50	MCS7	MCS9	MCS11
-94	-75	-69	-64	-91	-72	-66	-61	-88	-69	-63	-58

	The state of the s				46	.gre	
MCSD	MCS7	MCS9	MCS11	MCS0	MCS7	MCS9	MCS11
-94	-75	-70	-64	-91	-72	-67	-61
	H	to			1011	160	
MCS0	MCS7	MCS9	MC511	MCSO	MCS7	MC59	MC511
-88	-69	-64	-58	-85	-66	-61	-55

Ratq	Peur offin)
MCS0 HT20	22
MCS7 HT20	17.5
MCS8 VHT20	17
MCS9 VHT40	16
MCS11 HE40	14

Rate	Paul (ddle)	
MCS0, VHT20	22	
MCS7, VHT40, VHT80	18	
MCS9, VHT40, VHT80	16	
MCS11, HE20, HE40, KE80	14	

Rata	> 201 (dBpp)
MCSO, HE160	22
MCS7, HE160	17.5
MCS9, HE160	16
MCS11, HE160	14

### Indoor Wi-Fi 6E (802.11ax) Access Point with 4.7 Gbps Data Rate

Moor	Franciscon Consumption	System Configuration	WiffiRadica
C Power	32,4W	<ul> <li>5Gbps Ethernet Enabled</li> <li>1Gbps Ethernet Enabled</li> <li>USB Enabled (3W)</li> <li>loT Enabled (selectable)</li> </ul>	2.4GHz (2x2) Tx 23dBm 5GHz (2x2) Tx 22dBm 6GHz (2x2) Tx 22dBm
302.3bt5 oH, uPoE	31W	<ul> <li>5Gbps Ethernet Enabled</li> <li>1Gbps Ethernet Enabled</li> <li>USB Enabled (3W)</li> <li>IoT Enabled (selectable)</li> </ul>	2.4GHz (2x2) Tx 23dBm 5GHz (2x2) Tx 22dBm 6Ghz (2x2) Tx 22dBm
802.3at	25.0W	<ul> <li>5Gbps Ethernet Enabled</li> <li>1Gbps Ethernet Disabled</li> <li>USB Disabled (0W)</li> <li>IoT Enabled (selectable)</li> </ul>	2.4GHz (2x2) Tx 23 dBm 5GHz (2x2) Tx 22dBm 6Ghz (2x2) Tx 19dBm

Peak PHY Rates	<ul> <li>2.4GHz: 591 Mbps</li> <li>5GHz: 1237.5 Mbps</li> <li>6GHz: 2882 Mbps (MCS13), 2402 Mbps (MCS11)</li> </ul>
Client Capacity	Up to 1536 clients per AP
SSID	Up to 33 per AP

BUCKUS RADIO MANAGEMEN	
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	Qo5-based scheduling     Directed Multicast     L2/L3/L4 ACLs
Mobility	« SmartRoam
Diagnostic Tools	Spectrum Analysis     SpeedFlex

HETWOEKOW	
Controller Platform Support	Standalone Cloud (Future support)
Mesh	SmartMesh <sup>™</sup> wireless meshing technology. Self-healing Mesh in 2.4 GHz, 5GHz, and 6GHz
ĮP.	IPv4, IPv6, dual-stack
VLAN	Bullet B
802.1x	Authenticator & Supplicant
Tunnel	GRE, Soft-GRE
Policy Management Tools	Access Control Lists  Device Fingerprinting  Rate Limiting  URL Filtering
IoT Capable	Intelgrated BLE and Zigbee (1 radio, selectable)

FIRMICAL INTERIOR	P. Company
Ethernet	<ul> <li>One 100M/1/2.5/5G Ethernet (PoE) port and one 10M/ 100M/1G Ethernet port</li> </ul>
	<ul> <li>Power over Ethernet (802.3af/at/bt) with Category 5e (or better) cable</li> </ul>
	LLDP support
USB	1 USB 2.0 port, Type A

PHYTAGAL CHARACTERISTICS	
Physical Size	<ul> <li>23.3cm (L), 23.3cm (W), 4.8cm (H)</li> <li>9.2in (L) x 9.2in (W) x 1.9in (H)</li> </ul>
Weight	• 1.09kg • 2.40(bs
Mounting	Wall, acoustic celling, desk Bracket (902-0120-0000)
Physical Security	Hidden latching mechanism     Secure bracket (sold separately) (902-0120-0000)
Operating Temperature	• 0°C (32°F) to 50°C (122°F)
Operating Humidity	Up to 95%, non-condensing

Indoor Wi-Fi 6E (802.11ax) Access Point with 4.7 Gbps Data Rate

CENTRICATIONS AND COM	EMINGE
Wi-Fi Alliance <sup>1</sup>	<ul> <li>Wi-Fi CERTIFIED™ a, b, g, n, ac, 6, 6E</li> <li>Passpoint¹, Vantage</li> </ul>
	IEC/EN/UL 60950-1 Safety
	<ul> <li>IEC/EN/UL 62368-1 Safety</li> </ul>
	<ul> <li>EN 60601-1-2 Medical</li> </ul>
	<ul> <li>EN 61000-4-2/3/5  mmunity</li> </ul>
	° EN 50121-1 Railway EMC
Standards Compliance <sup>2</sup>	<ul> <li>EN 50121-4 Railway Immunity</li> </ul>
	<ul> <li>IEC 61373 Rallway Shock &amp; Vibration</li> </ul>
	UL 2043 Plenum
	<ul> <li>EN 62311 Human Safety/RF Exposure</li> </ul>
	∘ WEEE & RoHS
	ISTA 2A Transportation

902-1180-XX00	<ul> <li>Multigigabit PoE Injector (2.5/5/10)-BaseT PoE port, 60W</li> </ul>
902-0120-0000	Spare, Accessory Mounting Bracket
902-1170-XX00	<ul> <li>Power Supply (48V, 0.75A, 36W)</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, -IP, -KR, -SA, -UK, or -UN instead of -XX. For access points, -Z2 applies to the following countries: Algeria, Egypt, Israel, Morocco, Tunisia, and Vietnam.

FOR TOWARD AND MATURES		
Location Based Services	SPoT	
Network Analytics	SmartCell Insight (SCI), RUCKUS Analytics	
Security and Policy	° Cloudpath	

OFFICIENT INTORMATION		
901-R560-XX00	R560 tri-band (6GHz, 5GHz, and 2.4GHz concurrent), tri-radio Wi-Fi 6E wireless access point, 2x2:2 streams, adaptive antennas, dual ports, onboard BLE and Zigbee. PoE support-includes adjustable acoustic drop celling bracket. One Ethernet port is 5GbE. Does not include power adaptor.	

See RUCKUS price list for country-specific ordering information. Warranty: Sold with a limited lifetime warranty. For details see: <a href="http://support.ruckuswireless.com/warranty">http://support.ruckuswireless.com/warranty</a>,

### **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.runterenstunder.com

Visit dur website or contact your local BUCKOS représentative for more information.

200 Code Ico - Nr. 881 (895 America)

AT Februarity depreted by Text. The Experimental Activity of paternal Countries of the Section 1 of the Countries of the Coun

RUCKUS\*

<sup>&</sup>lt;sup>1</sup> For complete list of WFA certifications, please see WI-Fi Alliance website.

 $<sup>^{2}</sup>$  For current certification status, please see price list.