

# H320 Unleashed

Wall-Mounted 802.11ac Wave 2 Wi-Fi Access Point and Switch



## DATA SHEET



## BENEFITS

### DEPLOY IN UNDER 5 MINUTES

Setup your Wi-Fi network in under 5 minutes from a mobile device or browser with an intuitive and easy to understand User Interface.

### POWER IN YOUR POCKET

Manage your network, get detailed insights about your network and understand your network usage patterns from the free mobile app available on Google Play and App Store.

### AFFORDABLE ALL-IN-ONE

Deliver great in-room Wi-Fi and concurrent wired IP connectivity with 802.11ac Wave 2 speed and a built-in 2-port switch.

### STUNNING PERFORMANCE

Extends coverage with patented BeamFlex+™ adaptive antenna technology while mitigating interference by utilizing multi-directional antenna patterns.

### GET 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

### SERVICE MORE DEVICES

Connect more devices simultaneously with two MU-MIMO spatial streams and concurrent dual-band 2.4/5GHz radios while enhancing non-Wave 2 device performance.

### SUPPORT MORE SERVICES

Multiple SSIDs and switch ports help support services such as VoIP, IPTV, and high-speed Internet access and in-room device connectivity

### KEEP YOUR SWITCHES AND CABLES

Designed to operate on existing PoE switches and CAT 5e cabling to minimize costs.

Wi-Fi is a critical amenity as users bring more devices into our hotel rooms, meeting rooms, and classrooms. Today, with an ever increasing need for quality Wi-Fi, an AP in every room has increasingly become necessary.

The Ruckus H320 Unleashed provides an affordable controller-less Wi-Fi solution with premium performance and simplified management. There is no need for separate controllers and access point licenses, significantly reducing upfront costs. With an intuitive and easy to understand user interface, Unleashed network can be setup in under 10 minutes on the mobile phone or a web browser without need of IT expertise.

The H320 Unleashed combines an 802.11ac Wave 2 Wi-Fi access point and wired switch into one wall-mount device. Designed specifically for per-room deployments, the H320 Unleashed is compact, inconspicuous, secure, and easy to mount to an electrical junction box. Bottom facing Ethernet ports eliminate unsightly cabling and accommodates any furniture placement.

The H320 Unleashed easily supports converged wired and wireless services with one device, that include VoIP, IPTV, high-speed Internet access and in-room Wi-Fi device connectivity.

This 802.11ac Wave 2 Wi-Fi AP and switch incorporates patented technologies found only in the Ruckus Wi-Fi portfolio.

- Extended coverage with patented BeamFlex+ utilizing multi-directional antenna patterns
- Improved throughput with ChannelFly which dynamically find less congested Wi-Fi channels to use

The H320 Unleashed supports Multi-User MIMO (MU-MIMO) which increases network throughput by transmitting to multiple clients simultaneously. The H320 Unleashed supports per room wired IP devices from TVs to phones with 2 onboard Ethernet ports.

SmartMesh™ wireless meshing technology further accelerates time-to-deployment and eliminates the need to configure each of the access point in the network. With this technology, once configured Unleashed AP automatically sets up all the other APs in the network.



### BEST IN CLASS PERFORMANCE

#### BeamFlex+—Patented Adaptive Antenna Technology

The Ruckus H320 Unleashed integrates patented software-controlled adaptive antennas. BeamFlex+ antenna adapts automatically to client locations and environmental conditions; the smart antenna technology optimizes the RF energy toward client on a per packet basis. This allows for substantially higher performance than traditional solutions.

#### ChannelFly—Machine Learning Auto Channel

ChannelFly is a new approach to optimizing RF channel selection based on capacity averages across all channels. Specialized algorithms select the best channel based on historical values. In combination with the adaptive antenna technology, ChannelFly delivers substantially higher throughput than our competitors.

#### SmartMesh™—Self-Forming and Self-Healing Mesh

SmartMesh simplifies the deployment of your unleashed network by reducing cumbersome radio planning and costly cabling needed to reliably connect every Wi-Fi access point. SmartMesh automatically establishes wireless connections between individual access points using patented smart antenna technology and self-heals in the event of a failed link.

### BETTER FOR YOUR BUSINESS

#### Easy to Deploy and Manage

The Ruckus H320 Unleashed can be deployed in under 5 minutes from your laptop browser (eg. Chrome, Safari) or from your mobile device (eg. iPhone). Unleashed app is free and available on App Store and Google Play. With the intuitive user interface, you can setup an access point in less than 60 seconds. Configure the Master AP and it automatically configures all the other APs.

#### Low CAPEX and Low OPEX

Controller functions are integrated into the H320 Unleashed. Separate controllers and access point licenses are no longer needed, significantly reducing upfront costs. H320 Unleashed is so easy to deploy and manage that you don't need IT.

#### Network Investment Protection

We ensured that your network investment with Ruckus is fully protected. If your business grows or your needs change, you can migrate to a Controller based or a Cloud based solution using your Unleashed APs without any additional cost.

### ENTERPRISE-GRADE FEATURES

The Ruckus H320 Unleashed is loaded with enterprise-grade features to provide great Wi-Fi experience for your customers and employees. Some of the key features include:

Feature	Benefit
Zero IT	Easily onboard customers or employees onto your Wi-Fi through an interactive portal.
Guest Features	Customize the Wi-Fi service with your logo, brand and messages. Create Guest Passes, Guest Wi-Fi access or Wi-Fi access through social media to gain better customer insights.
Resiliency	Continue to access your network even if internet connectivity fails. In case of any disruption, network will continue to work as long as at least one AP is up.
App Recognition	Gain insights into your network usage patterns of over 2200 applications with Deep Packet Inspection.
Security	Secure your network and protect your client with encryption, WPA-PSK, Dynamic PSK, client isolation and 802.1x for RADIUS and AD.
Multiple language support	Create and manage your Wi-Fi network in your own language. Supports 13 languages currently.
Remote Management	Manage your Unleashed network across multiple locations with a single pane view through the mobile app or the Ruckus Unleashed Multi-Site Manager for more advanced options. Manage up to 10 Unleashed networks using the mobile app.

PHYSICAL CHARACTERISTICS	
Power	<ul style="list-style-type: none"> <li>POE 802.3af</li> </ul>
Physical Size	<ul style="list-style-type: none"> <li>89mm (L) x 136mm (W) x 29mm (H)</li> </ul>
Weight	<ul style="list-style-type: none"> <li>195g</li> <li>276g with bracket</li> </ul>
Physical Ports	<ul style="list-style-type: none"> <li>2 x 10/100 Mbps Base-T 802.3, 802.3u, RJ-45 Ethernet access ports</li> <li>1 x 1GbE 802.3, 802.3u, 802.3ab, 802.3af PoE input, RJ-45</li> </ul>
Mounting Options	<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>
Environmental Conditions	<ul style="list-style-type: none"> <li>Operating Temperature: 0°C (32°F) - 40°C (104°F)</li> <li>Operating Humidity: 15% - 95% non-condensing</li> </ul>
Power Draw	<ul style="list-style-type: none"> <li>Idle: 3W</li> <li>Typical: 4W</li> <li>Peak: 6W</li> </ul>

RF	
Minimum Rx Sensitivity	<ul style="list-style-type: none"> <li>Up to -99dBm</li> </ul>
Beamflex* Sinr Tx Gain	<ul style="list-style-type: none"> <li>2dB</li> </ul>
Beamflex* Sinr Rx Gain	<ul style="list-style-type: none"> <li>3-5dB (PD-MRC)</li> </ul>
Interference Mitigation	<ul style="list-style-type: none"> <li>5dB</li> </ul>

\* BeamFlex gains are statistical system level effects translated to enhanced SINR based on observations over time in real-world conditions with multiple APs and many clients

PERFORMANCE AND CAPACITY	
Concurrent users	<ul style="list-style-type: none"> <li>100 per AP</li> </ul>
Voice Calls	<ul style="list-style-type: none"> <li>30</li> </ul>
BSSID	<ul style="list-style-type: none"> <li>8 BSSIDs per radio</li> </ul>

MULTIMEDIA AND QUALITY OF SERVICE	
802.11e/WMM	<ul style="list-style-type: none"> <li>Supported</li> </ul>
Software Queues	<ul style="list-style-type: none"> <li>Per traffic type (4), per client</li> </ul>
Traffic Classification	<ul style="list-style-type: none"> <li>Automatic, heuristics and TOS based or VLAN-defined</li> </ul>
Rate Limiting	<ul style="list-style-type: none"> <li>Dynamic, per-user or per-WLAN</li> </ul>

NETWORK ARCHITECTURE	
IP	<ul style="list-style-type: none"> <li>IPv4, IPv6, dual-stack</li> </ul>
VLANs	<ul style="list-style-type: none"> <li>802.1Q (1 per BSSID or dynamic, per user based on RADIUS)</li> <li>Port-based</li> </ul>
802.1X For Ethernet Ports	<ul style="list-style-type: none"> <li>Authenticator</li> <li>Supplicant</li> </ul>

MANAGEMENT	
Deployment Options	<ul style="list-style-type: none"> <li>Locally managed using Unleashed Web UI, Mobile App, and Multi-Site Manager</li> </ul>
Configuration	<ul style="list-style-type: none"> <li>Web User Interface (HTTP/S)</li> <li>CLI (Telnet/SSH), SNMP v1, 2, 3</li> </ul>

WI-FI	
Standards	<ul style="list-style-type: none"> <li>IEEE 802.11a/b/g/n/ac</li> </ul>
MIMO Configuration	<ul style="list-style-type: none"> <li>2.4GHz</li> <li>1x1: 1 SU-MIMO</li> <li>5GHz</li> <li>2x2: 2 SU-MIMO</li> <li>2x2: 2 MU-MIMO</li> </ul>
Supported Data Rates	<ul style="list-style-type: none"> <li>802.11n/ac: 6.5Mbps - 173.4Mbps (20MHz)</li> <li>13.5Mbps - 400Mbps (40MHz)</li> <li>29.3Mbps - 867Mbps (80MHz)</li> <li>802.11a: 54, 48, 36, 24, 18, 12, 9 and 6Mbps</li> <li>802.11b: 11, 5.5, 2 and 1 Mbps</li> <li>802.11g: 54, 48, 36, 24, 18, 12, 9 and 6 Mbps</li> </ul>
Rf Power Output** (Aggregate)	<ul style="list-style-type: none"> <li>2.4GHz: 16dBm</li> <li>5.0GHz: 20dBm</li> </ul>
Channelization	<ul style="list-style-type: none"> <li>20MHz, 40MHz, 80MHz</li> </ul>
Frequency Band	<ul style="list-style-type: none"> <li>IEEE 802.11 b/g/n: 2.4 - 2.484GHz</li> <li>IEEE 802.11a/ac: 5.15 - 5.25 GHz; 5.25 - 5.35GHz; 5.47 - 5.725 GHz; 5.725 - 5.85GHz</li> </ul>
Operating Channels	<ul style="list-style-type: none"> <li>2.4GHz: 1-13</li> <li>5GHz: 36-64, 100-140, 149-165</li> <li>Channel availability is country dependent according to the local regulations</li> </ul>
Wireless Security	<ul style="list-style-type: none"> <li>WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i</li> <li>Authentication via 802.1X with ZoneDirector, SmartZone, local authentication database, support for RADIUS, LDAP, and Active Directory</li> </ul>

\*\*See price list for latest country certifications

## PRODUCT ORDERING INFORMATION

Model	Description
H320 Unleashed Wi-Fi 802.11ac Wave 2 Wall Switch	
9U1-H320-XX00	Dual band Wave 2 802.11ac Wi-Fi Wall Switch. Does not include power adapter or PoE injector
Optional Accessories	
902-1120-0000	<ul style="list-style-type: none"> <li>Optional Surface-mount bracket</li> </ul>

XX: US/KS/JP/Z2/WW

For explanation of XX - please consult current Ruckus System Price list Region availability subject to Certification Date per region