

PRODUCT FAMILY DATA SHEET



BENEFITS

BLAZING-FAST WI-FI PERFORMANCE

- Great user experience in the most challenging environments. BeamFlex+™ adaptive antenna technology dynamically reconfigures antenna patterns choosing from more than 4,000 patterns to provide the best performance for every device.
- Highest throughput on every band. ChannelFly™ dynamic channel technology uses machine learning to automatically find the least congested channels.
- Lower costs, easier installation. SmartMesh™ wireless meshing technology can dynamically create self-forming, self-healing mesh networks by just checking a box—reducing the need for expensive cabling and complex mesh configurations.

INSTALL AND MANAGE WITH EASE

- Up and running in under 5 minutes. With Zero-Touch Mesh, set up your entire Wi-Fi network in a few simple steps from a mobile device or browser with an intuitive, easy-to-understand user interface.
- Total control at your fingertips. Gain detailed insights about your network and perform all key administrative tasks from anywhere with the free Unleashed app for iPhone and Android.

MORE THAN WI-FI

- Network loaded with features. Enhance your network with built-in features such as Guest Services, DPSK security, Zero IT onboarding and Application Visibility.
- Built-in resiliency. If the internet goes out—even if an AP fails—you can continue to access printers and other network devices.

PROTECT YOUR INVESTMENT

- Scale up when you need to. Easily expand your Wi-Fi across multiple locations with the Unleashed Multi-Site Manager. Growing even more? Move up to a controller- or cloud-based deployment with your existing Unleashed APs.

HAS YOUR ORGANIZATION OUTGROWN YOUR WI-FI?

More devices than ever. Bandwidth-hungry video applications. Internet of Things (IoT). Constant demand for mobile connectivity. They add up to a perfect storm of technology trends—and your Wi-Fi better be ready for it. The days when a consumer-grade Wi-Fi device could meet most small business needs are over. Today, even smaller organizations need fast, reliable, always-on connectivity for dozens or even hundreds of devices. At the same time, small and midsize businesses don't have the time (or often, the in-house IT expertise) to wrestle with complex configurations and installations that require a PhD to get right.

Want blazing-fast Wi-Fi performance? Simple installation and management? Business-class security and resiliency? Enterprise-class features? And all at an affordable cost? Welcome to Ruckus Unleashed. These access points (APs) use our patented technologies to deliver Ruckus' industry-leading Wi-Fi performance, but in a package designed and priced for small and medium-size businesses (SMBs) and organizations.



High-performance, simple-to-setup, easy-to-manage and affordable Wi-Fi

INTRODUCING RUCKUS UNLEASHED

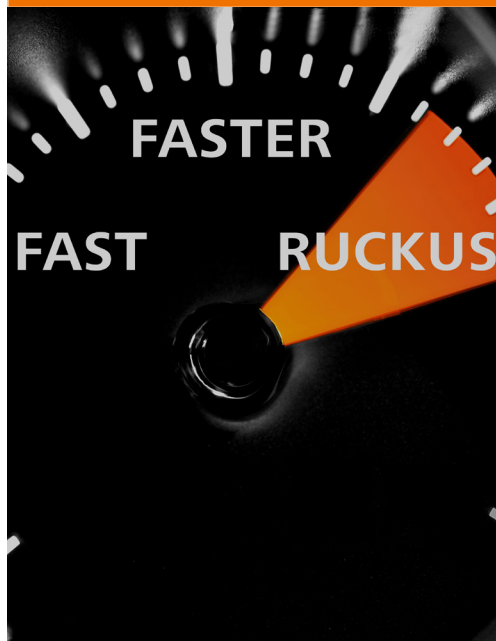
Ruckus Unleashed is a high-performance, simple-to-setup, easy-to-manage and affordable portfolio of access points. With built-in controller functionality, there's no need to invest in a separate appliance. You can manage your entire network from your phone or web browser. Deploying at multiple sites? Manage all your Wi-Fi networks from one place through the Unleashed Multi-Site Manager. You can get your network up and running in under 5 minutes—no complex configurations, and no expert installers required.

Ruckus Unleashed APs make Wi-Fi easy for SMBs, and feature patented Ruckus technologies that enable us to [consistently beat the competition](#). With patented Ruckus innovations like BeamFlex+™, ChannelFly™ and SmartMesh™, Unleashed APs deliver higher speeds, better coverage and more reliable connections to every device, every time.

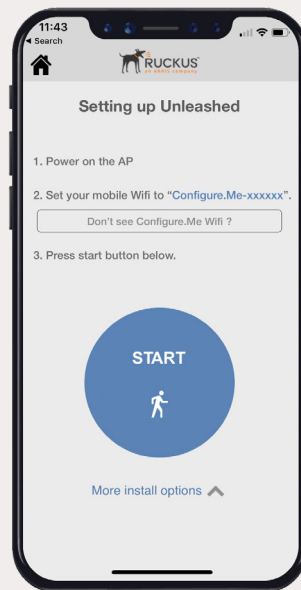
Ruckus Unleashed APs also come packed with enterprise-class features that are easy to configure and manage. Easily set up secure guest access with full-featured Guest Services. Monitor and optimize network performance for over 2,200 applications with Application Visibility and Control. Lock down access with enterprise-grade security—without the enterprise-scale complexity—using DPSK. And build a resilient Wi-Fi network that lets you continue to access printers and other devices even if the internet—or one of the APs—goes down.

Ruckus Unleashed APs deliver all of this and more at an affordable price. And if your business grows and you need to move to a controller- or cloud-based infrastructure, you can—without having to overhaul your infrastructure. Migrate to Ruckus ZoneDirector™ Controllers, Ruckus SmartZone™ Controllers or Ruckus Cloud down the road—using the same Unleashed APs.

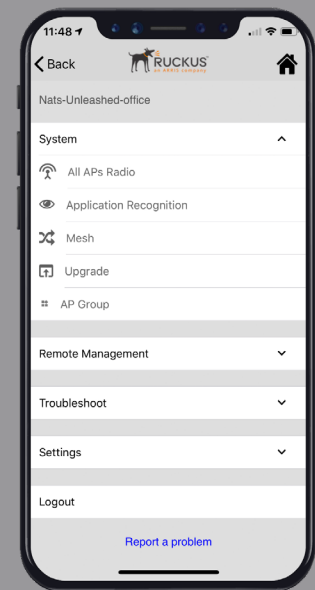
PERFORMANCE



SIMPLE AND EASY



MORE THAN WI-FI

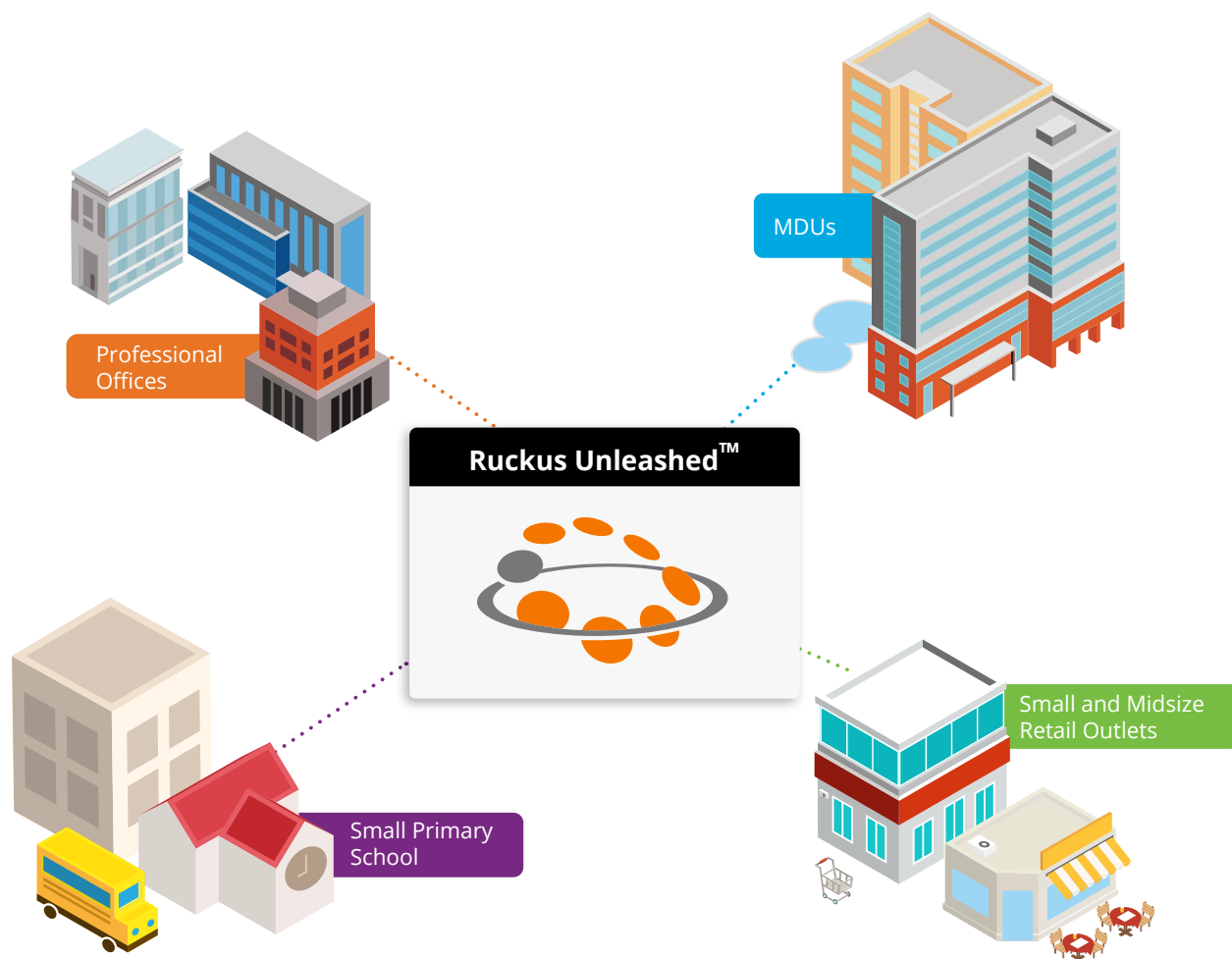


WHERE CAN RUCKUS UNLEASHED DELIVER MAXIMUM VALUE?

Ruckus Unleashed APs are designed for small and midsize businesses with a single location or multiple locations with up to 50 APs and/or 1,024 concurrently connected clients per deployment. They're the perfect choice for smaller organizations that need to provide high-performing, enterprise Wi-Fi to employees, customers and guests without breaking the bank. Using the Unleashed mobile app, Unleashed APs can be managed by practically anyone—no specialized IT expertise required. And Unleashed APs are designed to easily scale up as the business grows—a key requirement for the 58% of SMBs that expect to grow within next 6–12 months.

The Ruckus Unleashed portfolio offers solutions for practically any SMB use case, at a wide range of price points. Choose from entry-level to ultra-high-performance APs, with both indoor and outdoor form factors and a variety of mounting options. Use Ruckus Unleashed for:

- Small offices (law firms, health clinics, insurance agencies and others) that need enterprise-class performance, advanced security and guest access, built-in resiliency and easy onboarding
- Multi-dwelling units (MDUs) such as large homes, small apartments and housing structures that want pervasive coverage
- Small and midsize retail outlets (stores, restaurants, coffee shops) that want more in-depth Application Visibility and Control in a solution that's easy to manage
- Smaller primary school classrooms and offices that want to unleash digital learning without compromising security



KEY BENEFITS AND FEATURES

BEST-IN-CLASS PERFORMANCE

BeamFlex+—Patented Adaptive Antenna Technology

Ruckus Unleashed APs integrate our patented, software-controlled adaptive antennas. BeamFlex+ antennas adapt automatically to client locations and environmental conditions, continually optimizing RF signals for every connected device, on a per-packet basis. It's the "secret sauce" that lets our APs maintain stronger connections and deliver better performance than the competition.

ChannelFly—Machine Learning Auto Channel Selection

Most APs can switch channels when the one they're using to connect with a given device gets congested. Only Ruckus APs with ChannelFly technology, however, use machine learning and specialized algorithms to identify the best alternate channel *before* switching over. Combined with BeamFlex+ adaptive antenna technology, ChannelFly delivers substantially higher throughput than competing APs.

SmartMesh—Self-Forming, Self-Healing Mesh

SmartMesh makes it simple to blanket every corner of your space with reliable Wi-Fi coverage—while eliminating the need for cumbersome radio planning and expensive cabling to every AP. Just check the "Zero Touch Mesh" box in the management app, and it automatically establishes wireless mesh connections between individual APs. Ruckus Unleashed APs use our patented smart antenna technology to create strong, reliable mesh links. And if a link ever fails, the network heals itself automatically.

THE SMARTER SMB SOLUTION

Install in Minutes

Ruckus Unleashed APs can be installed in under 5 minutes from a laptop browser (e.g., Chrome, Safari) or from iPhone and Android mobile devices. Configure just one "Master AP," and you can automatically push that configuration securely to all the other APs in the network with the "Zero Touch Mesh" features.

Easy to Manage

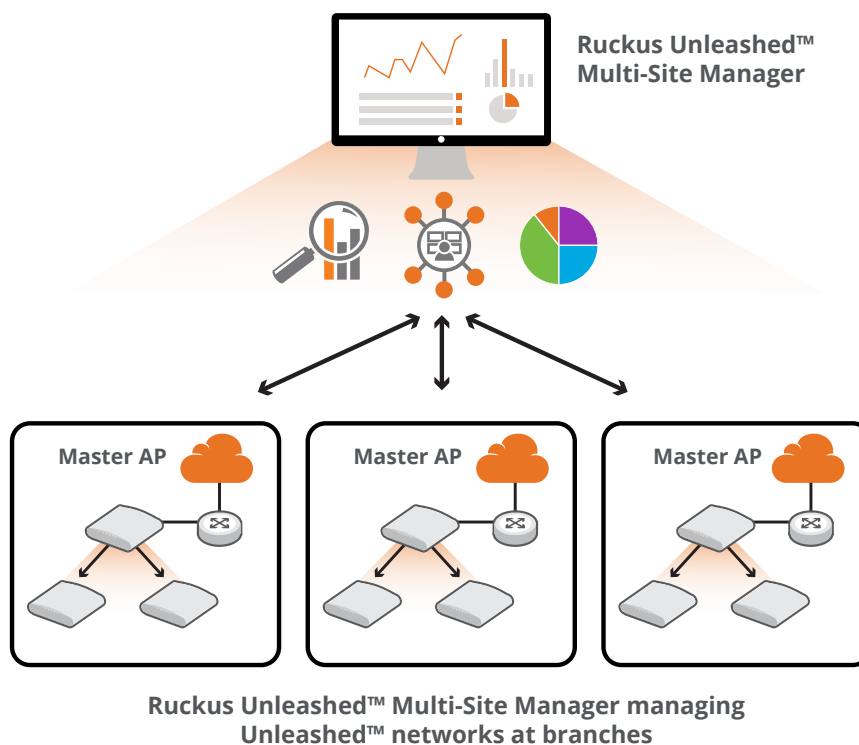
You can manage smaller Unleashed networks from anywhere in the world with the free Unleashed Mobile app. The app's dashboard puts all the essential information about your network, and provides access to all key administrative tasks and troubleshooting options, right at your fingertips.

Lower Capital and Operational Costs

Unleashed APs come with controller functions built in. You don't need separate controller appliances or access point licenses, so the upfront costs are much lower than other business-class APs. Unleashed networks are also designed to be simple to deploy and manage—no specialized network or wireless expertise required.

Network Investment Protection

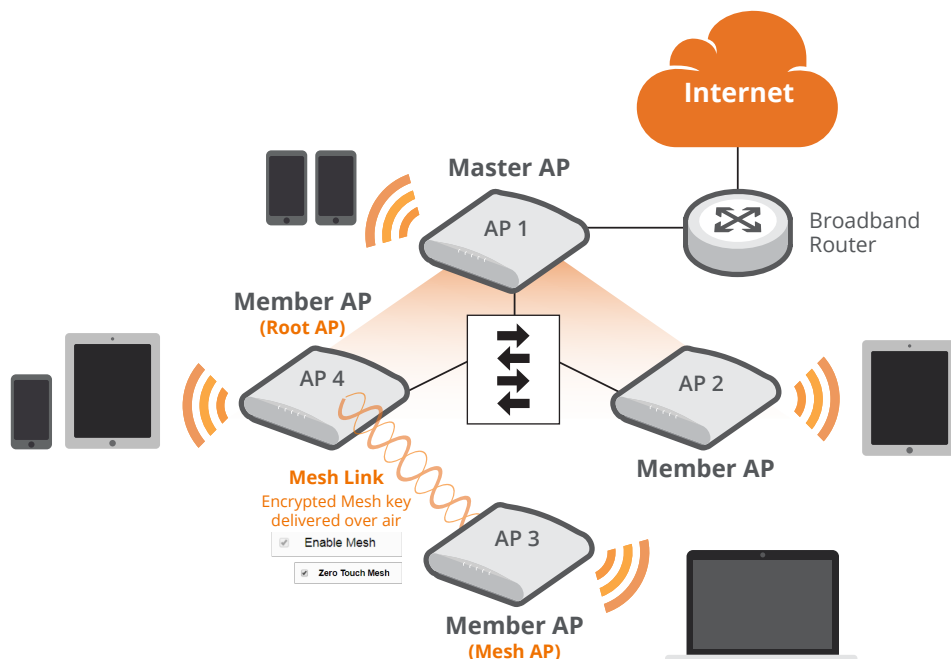
When you deploy Ruckus Unleashed APs, you're making an investment that will continue to serve your business as you grow. Expand across multiple locations with the Unleashed Multi-Site Manager. And if your business grows even more, you can move up to a controller- or cloud-based solution using the same Unleashed APs you've already deployed.



ENTERPRISE-GRADE FEATURES

Ruckus Unleashed APs come loaded with enterprise-grade features to customize, optimize and secure your Wi-Fi networks and deliver great user experiences. Key features are highlighted below. Detailed list of features is available at the end of the data sheet.







FEATURE	BENEFIT
Guest Services	Give guests secure, high-performance Wi-Fi access, while isolating their traffic from the private business network easily. Customize your guest Wi-Fi portal with your logo, brand and messages. Provide Wi-Fi access through Guest Passes, or have guests authenticate using social media accounts such as Facebook to eliminate the hassle (and security holes) of sharing Wi-Fi passwords.
Application Visibility and Control	Monitor the network usage patterns of over 2,200 applications with Deep Packet Inspection, and find out which ones are consuming the most resources. You can define application-specific access rules (such as limiting access to YouTube or social media), or even limit Wi-Fi speeds for specific applications and/or SSIDs.
Resiliency	Continue to access printers and other network devices even if internet connectivity fails. Users stay connected to the Wi-Fi network even if one or several APs fail for any reason, as long as at least one AP in the network is online.
Security	Use DPSK to eliminate the risks of shared passwords and lock down access to the Wi-Fi network—without complex configurations. In addition, secure your network and protect your clients with WPA encryption, client isolation and 802.1x for RADIUS and Active Directory.
Zero Touch Mesh	Add new Unleashed APs to the existing network securely over the air. Dramatically speed up and simplify the installation of Unleashed network.
Multiple Language Support	Create and manage your Wi-Fi network in your own language. Ruckus Unleashed currently supports 13 languages.
Social Login	With the built-in Social Login feature, you can sign into the Unleashed mobile app using your Gmail, Facebook or Twitter account, and link your Unleashed Wi-Fi network. From that point on, you can manage your Unleashed network from anywhere in the world using your social login.
Remote Management	Need a quick answer or help troubleshooting a network issue? Just tap the “Invite for Remote Management” option on the mobile app, and send a text message or email with a link containing all the Unleashed network information to an expert.
AP Groups	Apply multiple configuration profiles to different groups of APs.
Zero IT	Easily onboard customers or employees onto your Wi-Fi network through a simple, self-service portal.
SSID Rate-Limiting	If you want to limit data speeds for particular group of users (such as guest users), you can create a separate SSID with a data rate “speed limit” that you define.












Unleashed is a perfect fit for deployments with up to 50 APs/1,024 Client

UNLEASHED ACCESS POINTS

The tables below illustrate the complete portfolio of Ruckus Unleashed APs, including indoor, outdoor and specialty form factors. Click the AP model number to review detailed features and specs.

Indoor	MODEL	HARDWARE SPECS	MU-MIMO	DATA SPEED	CONCURRENT USERS	ANTENNA PATTERNS (PER BAND)	ETHERNET PORTS
R310		802.11ac, 2x2:2	No	867 Mbps (5GHz) 300 Mbps (2.4GHz)	100	64	1x1GbE
R320		802.11ac Wave 2, 2x2:2	No	867 Mbps (5GHz) 300 Mbps (2.4GHz)	256	64	1x1GbE
R510		802.11ac Wave2, 2x2:2	Yes	867 Mbps (5GHz) 150 Mbps (2.4GHz)	100	64	2x1GbE
R610		802.11ac Wave 2, 3x3:3	Yes	1300 Mbps (5GHz) 600 Mbps (2.4GHz)	512	512	2x1GbE
R710		802.11ac Wave2, 4x4:4	Yes	1733 Mbps (5GHz) 800 Mbps (2.4GHz)	512	4,000+	2x1GbE
R720		802.11ac Wave2, 4x4:4	Yes	1733 Mbps (5GHz) 800 Mbps (2.4GHz)	512	4,000+	1x1GbE 1x2.5GbE

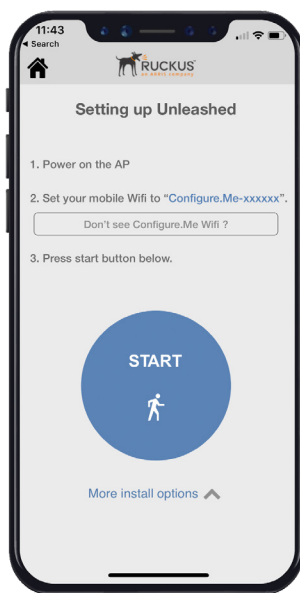
Outdoor	MODEL	HARDWARE SPECS	MU-MIMO	DATA SPEED	CONCURRENT USERS	ANTENNA PATTERNS (PER BAND)	ETHERNET PORTS
T301 Narrow & Sector		802.11ac, 2x2:2	No	867 Mbps (5GHz) 300 Mbps (2.4GHz)	512	8	1x1GbE
T310		802.11ac Wave 2, 2x2:2	Yes	867 Mbps (5GHz) 400 Mbps (2.4GHz)	512	64	1x1GbE
E510		802.11ac Wave 2, 2x2:2	Yes	867 Mbps (5GHz) 400 Mbps (2.4GHz)	512	64	1x1GbE
T610		802.11ac Wave2, 4x4:4	Yes	1733 Mbps (5GHz) 800 Mbps (2.4GHz)	512	4,000+	2x1GbE
T710 Omni & Sector		802.11ac Wave2, 4x4:4	Yes	1733 Mbps (5GHz) 800 Mbps (2.4GHz)	512	4,000+	2x1GbE

Specialty	MODEL	HARDWARE SPECS	MU-MIMO	DATA SPEED	CONCURRENT USERS	ANTENNA PATTERNS (PER BAND)	ETHERNET PORTS
C110		802.11ac Wave 2, 2x2:2	Yes	867 Mbps (5GHz) 400 Mbps (2.4GHz)	512	4	2x10/100MbE 1x DOCSIS 3.0 modem port
H320		802.11ac Wave2, 2x2:2	Yes	867 Mbps (5GHz) 150 Mbps (2.4GHz)	100	4	2x10/100MbE 1x1GbE
H510		802.11ac Wave2, 2x2:2	No	867 Mbps (5GHz) 150 Mbps (2.4GHz)	100	4	5x1GbE
M510		802.11 ac Wave 2, 2x2:2	Yes	867 Mbps (5GHz) 300 Mbps (2.4GHz)	512	64	2x 1GbE 1x RJ-45

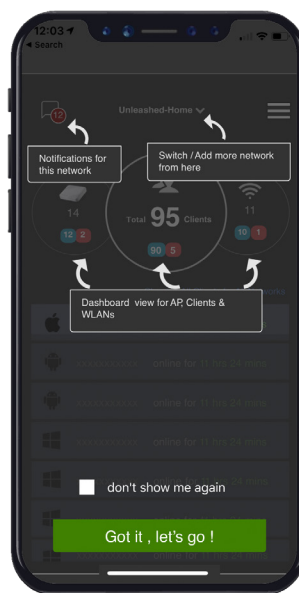
UNLEASHED MOBILE APP

Ruckus Unleashed networks are designed from the ground up to be easy to deploy and manage. The Unleashed mobile app makes things even simpler. Monitor, manage and upgrade your network from anywhere in the world. Everything you need to know, and all key administrative tasks, are always right at your fingertips.

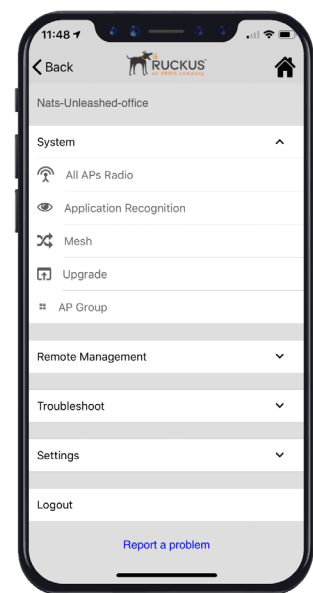
Using the mobile app, you can install an Unleashed AP in under 5 minutes, and review all of the essential information about your network. See how many clients and APs are connected, ongoing network traffic and any important alerts at a glance. Quickly and easily create a new Wireless LAN or edit an existing network. See which applications are using the most data on the network, and create rules to deny access to any website. Need help? Simply tap the "Invite for Remote Management" option, and send a text message or email with a link containing all of your Unleashed network information to an expert.



Install in under 5 minutes with a few taps



Perform key administrative tasks from anywhere in the world



See what's happening on your network at a glance

ORDERING INFORMATION

MODEL	SKU	DESCRIPTION
R310	9U1-R310-XX00	Entry-level 802.11ac Wave 1 dual-concurrent AP with BeamFlex
R320	9U1-R320-XX02	Entry-level 802.11ac Wave 2 dual-concurrent AP with BeamFlex
R510	9U1-R510-XX00	Mid-range 802.11ac Wave 2 dual-concurrent AP with MU-MIMO and BeamFlex+
R610	9U1-R610-XX00	Mid-range 802.11ac Wave 2 dual-concurrent AP with MU-MIMO and BeamFlex+
R710	9U1-R710-XX00	High-end 802.11ac Wave 2 dual-concurrent AP with MU-MIMO and BeamFlex+
R720	9U1-R720-XX00	High-end 802.11ac Wave 2 dual-concurrent AP with MU-MIMO, BeamFlex+ and 2.5Gbps backhaul
T301n	9U1-T301-XX61	Enterprise class 802.11ac AP with narrow sector integrated antennas
T301s	9U1-T301-XX51	Enterprise class 802.11ac AP with 120° directional integrated antennas
T300e	9U1-T300-XX81	Enterprise class 802.11ac AP with integrated external antennas (5GHz)
T310c	9U1-T310-XX20	Entry-level 802.11ac Wave 2 outdoor AP series with integrated BeamFlex+ omni antennas, -20° C
T310d	9U1-T310-XX40	Entry-level 802.11ac Wave 2 outdoor AP series with integrated BeamFlex+ omni antennas, -40° C
T310e	9U1-T310-XX51	Entry-level 802.11ac Wave 2 outdoor AP series with integrated BeamFlex+ 120x30 deg sector antennas, -20° C
T310n	9U1-T310-XX61	Entry-level 802.11ac Wave 2 outdoor AP series with integrated BeamFlex+ 30x30 deg narrow antenna, -40° C
E510	9U1-E510-XX01	Embedded 802.11ac Outdoor Wave 2 Wi-Fi AP with External Beam-Flex+ Antennas
T610	9U1-T610-XX01	Mid-range 802.11ac Wave 2 omni-directional dual concurrent AP with BeamFlex+
T610s	9U1-T610-XX51	Mid-range 802.11ac Wave 2 120-degree sector dual concurrent AP with BeamFlex+
T710	9U1-T710-XX01	High-end 802.11ac Wave 2 omni-directional dual concurrent AP with BeamFlex+
T710s	9U1-T710-XX51	High-end 802.11ac Wave 2 120-degree sector dual concurrent AP with BeamFlex+
C110	9U1-C110-XX00	802.11ac Wave2 dual-concurrent wall plate with built-in DOCSIS 3.0 cable modem
H320	9U1-H320-XX00	802.11ac Wave 2 dual-concurrent wall switch with two 10/100MbE ports and BeamFlex+
H510	9U1-H320-XX00	802.11ac Wave 2 dual-concurrent wall switch with five GbE ports and BeamFlex+
M510	9U1-M510-ATT0	Mobile indoor 802.11ac Wave 2 AP with LTE Backhaul, AT&T
	9U1-M510-D100	Mobile indoor 802.11ac Wave 2 AP with LTE Backhaul, Domain1 (most of APAC & Europe)
	9U1-M510-D200	Mobile indoor 802.11ac Wave 2 AP with LTE Backhaul, Domain2 (parts of APAC & LATAM)

PLEASE NOTE: When ordering outdoor 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.

For accessory ordering information, please visit the [Accessory Guide](#).

FEATURES

802.1X Authentication Caching
802.1X EAP authentication using an external AAA server (RADIUS)
Access Control Lists
AP Groups
Application Recognition and control. Application based rate-limiting and QoS traffic shaping. The following pie charts are provided: <ul style="list-style-type: none"> • Top 10 clients by application • Top 10 applications used in the networks • Top 10 applications used by each client
Automatic Master AP Selection: One Ruckus Unleashed AP serves as the "Master AP," one of the member APs will take over controller functions if the Master is unreachable.
Bonjour Fencing
Bonjour Gateway
CLI Setup Wizard
Client Renaming
Client Isolation
Client Fingerprinting and Device Access Policies
DHCP server (configured manually from Unleashed Network Master AP)
Dynamic Pre-Shared Keys (DPSK)
Dynamic VLAN
Ethernet Port VLAN Support for H320 and H510
Guest Access WLANs
Hotspot (WISPr) WLANs
HTTP-based Captive Portal
HTTP/HTTPS redirect
Layer 2 roaming
Management IP Interface
Multi-language support
One-step firmware upgrades of the entire network from a single interface
Password Recovery
Preferred Master - Admins can configure an AP to serve as the "preferred" Unleashed Master AP. If the preferred Master is offline, another member AP will become the Master. When the preferred Master comes back online, it will resume the Unleashed Master role.

Radio Frequency (RF) management features: <ul style="list-style-type: none"> • BeamFlex • ChannelFly • Background Scanning • Automatic Channel Selection based on ChannelFly or Background Scanning • Band Steering • Client Load Balancing • Rogue AP detection
Same-WLAN support for Multiple Social Media Logins
Self-Service Guest Pass
Smart Mesh (on select models)
SNMP
Social Media login (Facebook, Google, LinkedIn, Microsoft and WeChat)
The Unleashed Master AP can be configured in Gateway mode to provide routing, NAT and DHCP functions for all devices in a local area network, in addition to serving as the controller and serving clients.
Troubleshooting <ul style="list-style-type: none"> • SpeedFlex • Client Connectivity • Internet Status • AP Ethernet Port Status • AP Reboot Cause Reporting
Uniform Recovery SSID
Unleashed Multi-Site Manager connectivity
Up to 1024 client devices supported (depending on encryption/auth method)
Up to 512 local users supported (on the internal database)
WLAN encryption/authentication options: <ul style="list-style-type: none"> • Open + None • Open + None + MAC Auth • Open + None + Web Auth • Open + WPA2 + AES + PSK • Open + WPA2 + AES + DPSK • 802.1X + WPA2 + AES + AAA
WLAN Prioritization
WLAN per radio
Zero-IT support for automatic configuration of client Wi-Fi settings
Zero Touch Mesh