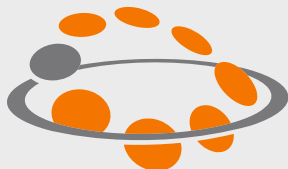


RUCKUS® Unleashed

Enterprise Wi-Fi for small organizations



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.
- 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.
- Switch management made easy. Manage your ICX switches from the Unleashed dashboard and mobile app. Gain insights about switch connectivity information. Perform software upgrade, configuration, backup and restore.
- 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 (APs and switches) 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 such as 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 and switches 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 SmartZone™ Controllers or RUCKUS Cloud down the road—using the same Unleashed APs.

The image consists of three vertical panels, each with a colored header and a corresponding image below it.

- PERFORMANCE** (Orange header): The image shows a speedometer with a needle pointing to the right. The word "FASTER" is written in large white letters across the top of the speedometer. Below it, the words "FAST" and "RUCKUS" are also written in large white letters.
- SIMPLE AND EASY** (Green header): The image shows a smartphone screen displaying the "Setting up Unleashed" interface. The screen lists three steps: 1. Power on the AP, 2. Set your mobile Wifi to "Configure.Me-xxxxxx", and 3. Press start button below. A large blue circular button with the word "START" and a person icon is prominent in the center. Below the button is a link for "More install options".
- MORE THAN WI-FI** (Blue header): The image shows a smartphone screen displaying a management menu for "Nats-Unleashed-office". The menu includes sections for "System" (All APs Radio, Application Recognition, Mesh, Upgrade, AP Group), "Remote Management", "Troubleshoot", "Settings", and "Logout". A "Report a problem" link is visible at the bottom.

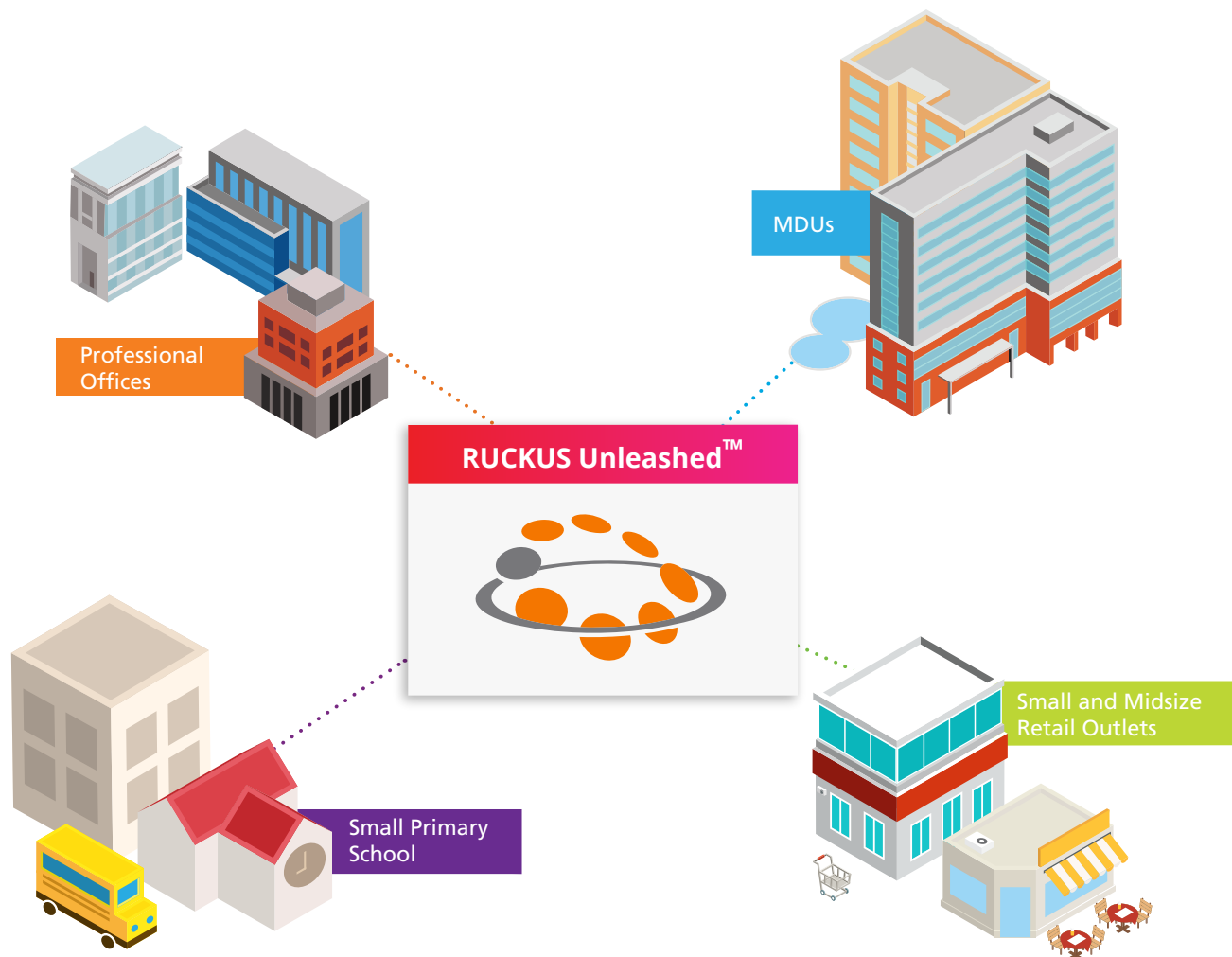
Where can RUCKUS Unleashed deliver maximum value?

RUCKUS Unleashed APs and switches are designed for small and midsize businesses with a single location or multiple locations with up to 128 APs, 2048 clients and 8 switches 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 the 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. Choose from a variety of ICX switches. Use RUCKUS Unleashed for:

- 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
- 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

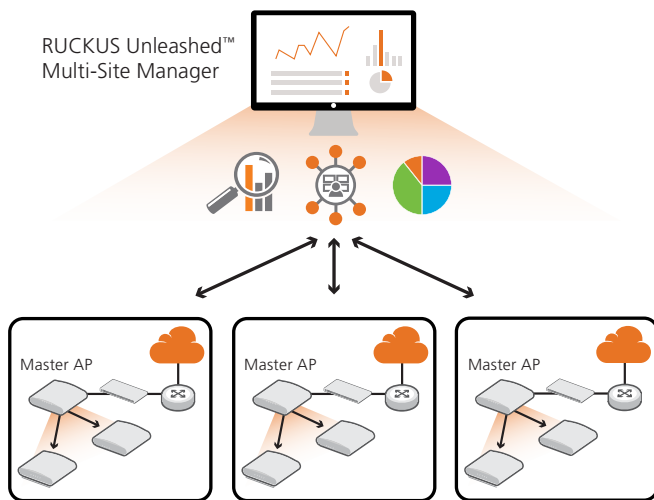
You can manage smaller Unleashed networks from anywhere in the world with the free Unleashed Mobile app. The app's dashboard puts all the essential information about your network, and provides access to all key administrative tasks and troubleshooting options, right at your fingertips.

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 and switches, 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.

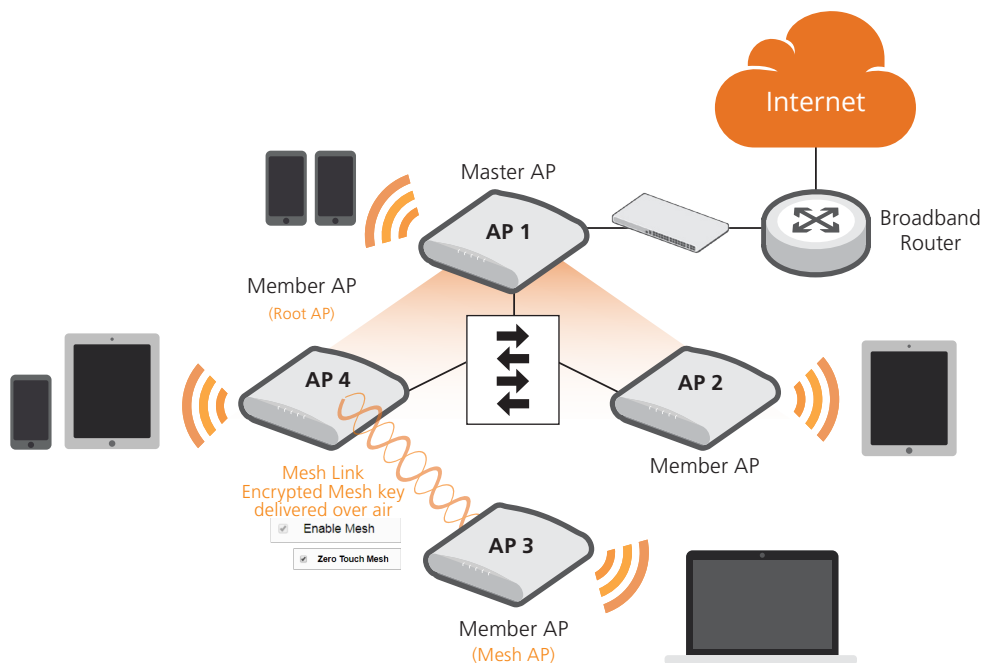


RUCKUS Unleashed™ Multi-Site Manager managing Unleashed™ networks at branches

Enterprise-grade features

RUCKUS Unleashed APs and switches 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. A 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 an Unleashed network.
Multiple Language Support	Create and manage your Wi-Fi network in your own language. RUCKUS Unleashed currently supports 13 languages.
URL Filtering	Define web access rules for your network users. Protect your network from malware and phishing sites.
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 a 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 128 APs/2,048 clients

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 Wave 1, 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 Wave 2, 2x2:2	Yes	867 Mbps (5GHz) 300 Mbps (2.4GHz)	512	512	2x1GbE
R610		802.11ac Wave 2, 3x3:3	Yes	1300 Mbps (5GHz) 450 Mbps (2.4GHz)	512	512	2x1GbE
R710		802.11ac Wave 2, 4x4:4	Yes	1733 Mbps (5GHz) 600 Mbps (2.4GHz)	512	4,000+	2x1GbE
R720		802.11ac Wave 2, 4x4:4	Yes	1733 Mbps (5GHz) 600 Mbps (2.4GHz)	512	4,000+	1x1GbE 1x2.5GbE
R750		802.11ax (Wi-Fi 6), 4x4:4	Yes	2400 Mbps (5GHz) 1148 Mbps (2.4GHz)	1024	4,000+	1x1GbE 1x2.5GbE

Outdoor	MODEL	HARDWARE SPECS	MU-MIMO	DATA SPEED	CONCURRENT USERS*	ANTENNA PATTERNS (PER BAND)	ETHERNET PORTS
T310		802.11ac Wave 2, 2x2:2	Yes	867 Mbps (5GHz) 300 Mbps (2.4GHz)	512	64	1x1GbE
E510		802.11ac Wave 2, 2x2:2	Yes	867 Mbps (5GHz) 300 Mbps (2.4GHz)	512	64	1x1GbE
T610		802.11ac Wave 2, 4x4:4	Yes	1733 Mbps (5GHz) 600 Mbps (2.4GHz)	512	4,000+	2x1GbE
T710 Omni & Sector		802.11ac Wave 2, 4x4:4	Yes	1733 Mbps (5GHz) 600 Mbps (2.4GHz)	512	4,000+	2x1GbE

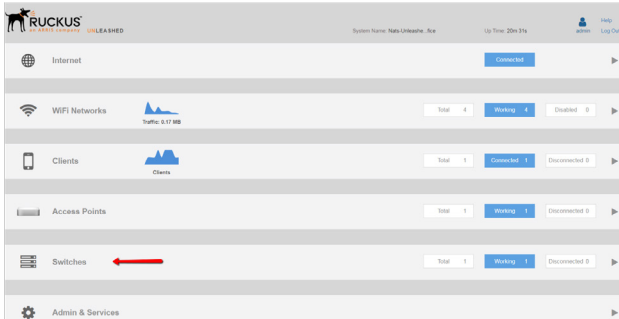
Speciality	MODEL	HARDWARE SPECS	MU-MIMO	DATA SPEED	CONCURRENT USERS*	ANTENNA PATTERNS (PER BAND)	ETHERNET PORTS
C110		802.11ac Wave 2, 2x2:2	Yes	867 Mbps (5GHz) 300 Mbps (2.4GHz)	100	4	2x10/100MbE 1x DOCSIS 3.0 modem port
H320		802.11ac Wave 2, 2x2:2	Yes	867 Mbps (5GHz) 150 Mbps (2.4GHz)	100	4	2x10/100MbE 1x1GbE
H510		802.11ac Wave 2, 2x2:2	Yes	867 Mbps (5GHz) 300 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

* All access points operating as a Master AP will only support 100 clients.

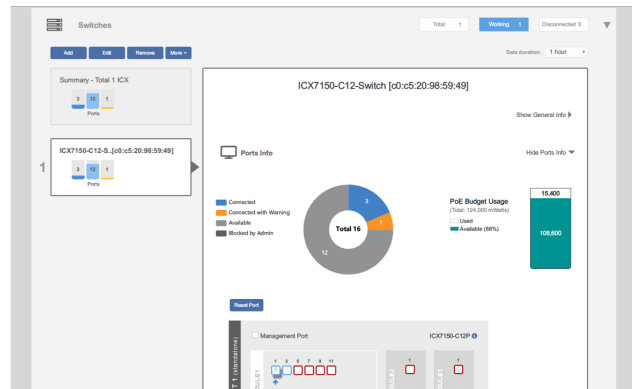
Unleashed ICX switches

Manage ICX switches from RUCKUS Unleashed dashboard or mobile app. You can manage up to 8 ICX switches on an Unleashed network. ICX switches work seamlessly with RUCKUS Unleashed access points to deliver enterprise-class wired and wireless management for small organizations.

Gain insights into switch port connectivity, upgrade your switch and perform backup and restore from RUCKUS Unleashed dashboard or mobile app.








Unleashed dashboard (with APs and switches)



Ports view of a switch on Unleashed

RUCKUS Unleashed supports all ICX 7000 series switches*. The table below provides a list of our recommended switches for RUCKUS Unleashed. Please find the detailed information about ICX switch portfolio [here](#).

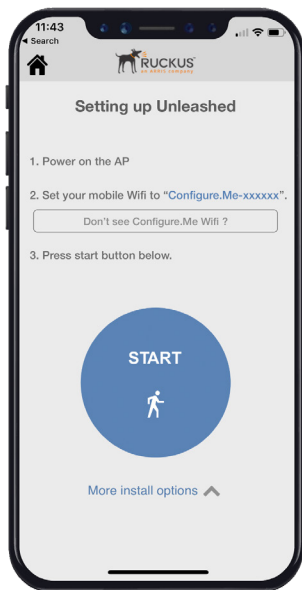
	SWITCH MODEL	ACCESS PORTS	PoE/PoE+	UP TO 90W PoE PER PORT	TOTAL PoE BUDGET
Gigabit switches					
	ICX-7150-C12P	12	✓		124W
	ICX-7150-24P	24	✓		370W
	ICX-7150-48PF	48	✓		740W
Multigigabit switches (for Wi-Fi 6)					
	ICX7150-C10ZP	10	✓	✓	240W
	ICX7150-48ZP	48	✓	✓	1440W

* ICX FastIron firmware version 8.0.90d or later required.

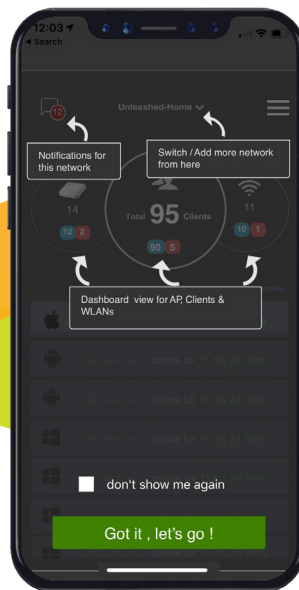
Unleashed mobile app

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.

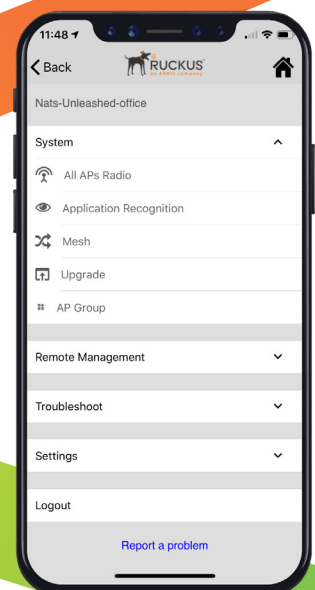
Using the mobile app, you can install an Unleashed AP in under 5 minutes, and review all of the essential information about your network. See how many clients, APs and switches are connected, ongoing network traffic and any important alerts at a glance. Quickly and easily create a new Wireless LAN or 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-XXXX	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
R750	9U1-R750-XX00	High-end 802.11ax (Wi-Fi 6) dual-concurrent AP with MU-MIMO, BeamFlex+ and 2.5Gbps backhaul
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 BeamFlex+ 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 Wave 2 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-H510-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 -ZZ 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, -ZZ applies to the following countries: Algeria, Egypt, Israel, Morocco, Tunisia, and Vietnam.

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

For RUCKUS ICX switch ordering information, see switch datasheets. Please visit www.commscope.com/product-type/enterprise-networking/ethernet-switches/.

Features

128 APs or 2,048 concurrent clients
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
Auto-Discovery (switches)
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 Gateway
CLI Setup Wizard
Client Renaming
Client Isolation
Client Fingerprinting and Device Access Policies
Configuration backup and restore (APs and switches)
DHCP server (configured manually from Unleashed Network Master AP)
Dynamic Pre-Shared Key (DPSK)
Ethernet Port VLAN Support for H320 and H510
Firmware updates (switch and AP)
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
SmartMesh (on select models)
SNMP
Social Media login (Facebook, Google, LinkedIn, Microsoft and WeChat)
Switch reporting: port status; PoE utilization; Health; Events & Alarms
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 2,048 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

CommScope pushes the boundaries of communications technology with game-changing ideas and ground-breaking discoveries that spark profound human achievement. We collaborate with our customers and partners to design, create and build the world's most advanced networks. It is our passion and commitment to identify the next opportunity and realize a better tomorrow. Discover more at commscope.com

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