

What's New in Unleashed Version 200.3?

This application note describes the new features available in Ruckus Wireless Unleashed version 200.3. This document assumes familiarity with the Ruckus Unleashed product line and the features of earlier release version 200.2.

Highlights of this Release

Ruckus Unleashed is a controller-less wireless LAN solution that enables Small-Medium Business (SMBs) to deliver an optimal wireless experience to their users at an affordable price. With easy migration options to the Ruckus ZoneDirector, or SmartZone platforms, or to Ruckus Cloud, Ruckus Unleashed scales with your business.

Key features and enhancements in this release are:

- Support for WAVE 2 11ac Access Points R510 and H510
- Gateway Mode
- DHCP Enhancement
- Support for SpeedFlex
- Ability to do online upgrade to a specific Unleashed software version

Supported AP models in Unleashed 200.3

- ZoneFlex Unleashed R710 802.11ac Wave 2 Dual-band Access Point
- ZoneFlex Unleashed R510 802.11ac Wave 2 Dual-band Access Point
- ZoneFlex Unleashed H510 802.11ac Wave 2 Dual-band Access Point
- ZoneFlex Unleashed R600 802.11ac Dual-band Access Point
- ZoneFlex Unleashed R500 802.11ac Dual-band Access Point
- ZoneFlex Unleashed R310 802.11ac Dual-band Access Point
- ZoneFlex Unleashed T710 (omni) 802.11ac Wave 2 Dual-band Access Point
- ZoneFlex Unleashed T710s (sector) 802.11ac Wave 2 Dual-band Access Point
- ZoneFlex Unleashed T300 (omni) 802.11ac Dual-band Access Point
- ZoneFlex Unleashed T300e 802.11ac Dual-band Access Point
- ZoneFlex Unleashed T301n 802.11ac Dual-band Access Point
- ZoneFlex Unleashed T301s 802.11ac Dual-band Access Point

1. Support for 802.11ac Multi-User MIMO (MU-MIMO) WAVE 2 Access Points R510 and H510

Unleashed R510

The ZoneFlex Unleashed R510 brings cutting edge 802.11ac Wave 2 to the mid-tier segment. It improves aggregate network throughput and benefits both Wave 2 & non-Wave 2 clients. It combines Ruckus patented technologies and best-in-class design with the next generation of 802.11ac features to deliver outstanding Wi-Fi performance and reliability. It future proofs the customer for emerging Internet of Things (IoT) technologies.

With throughput capacities of 300 Mbps (2.4GHz) and 867 Mbps (5GHz), the ZoneFlex Unleashed R510 brings cutting edge Wave 2 technology for the mid-tier segment. 802.11ac Multi-User MIMO (MU-MIMO) support allows the R510 to simultaneously transmit to multiple client devices, drastically improving airtime efficiency, overall throughput, and availability.

ZoneFlex Unleashed R510 is purpose-built for medium density, high performance and interference-laden environments such as schools, universities, small medium businesses, hotels, MDUs and conference centers.

Key Features

- Fully functional in 802.3af PoE operating mode including USB port operation, no need to upgrade to expensive 802.3at switches
- 802.11ac Multi-User MIMO (MU-MIMO)
- Tx Beamforming
- USB port - to future proof customer for emerging technologies like BLE & other IoT technologies.
- Improves aggregate network throughput for Wave 2 & non-Wave 2 clients
- Deep Packet Inspection (DPI/L7) based Application Recognition & Control

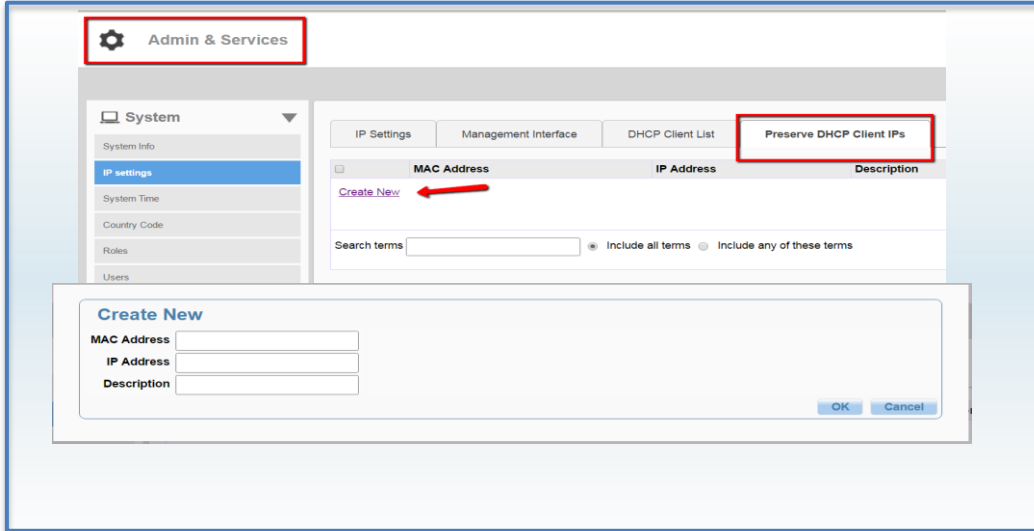
Unleashed H510

The ZoneFlex Unleashed H510 is an 802.11ac Wave 2 dual-band concurrent WiFi Wall Switch AP with integrated 5-port gigabit Ethernet, in a form factor designed for mounting to electrical outlet boxes. The H510 is targeted for hospitality and MDU applications, where it will be installed one per room for a typical hotel room or residence. The H510 is the successor of the H500, the main difference being that the H510 brings the benefits of Wave 2 802.11ac to market, including MU-MIMO, and theoretical max speeds of up to 867 Mbps on the 5 GHz radio. The H510 provides similar coverage/range as the H500 - i.e., coverage for a single hotel room or suite or residence. The switch ports can be used for in-room wired applications like IPTV and/or to provide a wired alternative for guest Internet access.

Key Features

- 802.11ac Multi-User MIMO (MU-MIMO)
- Tx Beamforming
- 5 * 10/100/1000 Ethernet ports
 - 1 rear-facing 10/100/1000 & PoE in
 - 4 front-facing 10/100/1000, single PoE out
- USB port - to future proof customer for emerging technologies like BLE & other IoT technologies.
- Improves aggregate network throughput for Wave 2 & non-Wave 2 clients
- Deep Packet Inspection (DPI/L7) based Application Recognition & Control

means that when DHCP server running on Unleashed AP should not assign those IP addresses to other devices in order to avoid IP address conflict within the network. So, DHCP server allows customers to bind MAC address to IP address in DHCP server configuration to preserve the IP addresses to specific client devices.



Customer Benefits

- Helps to preserve IP address to specific client device

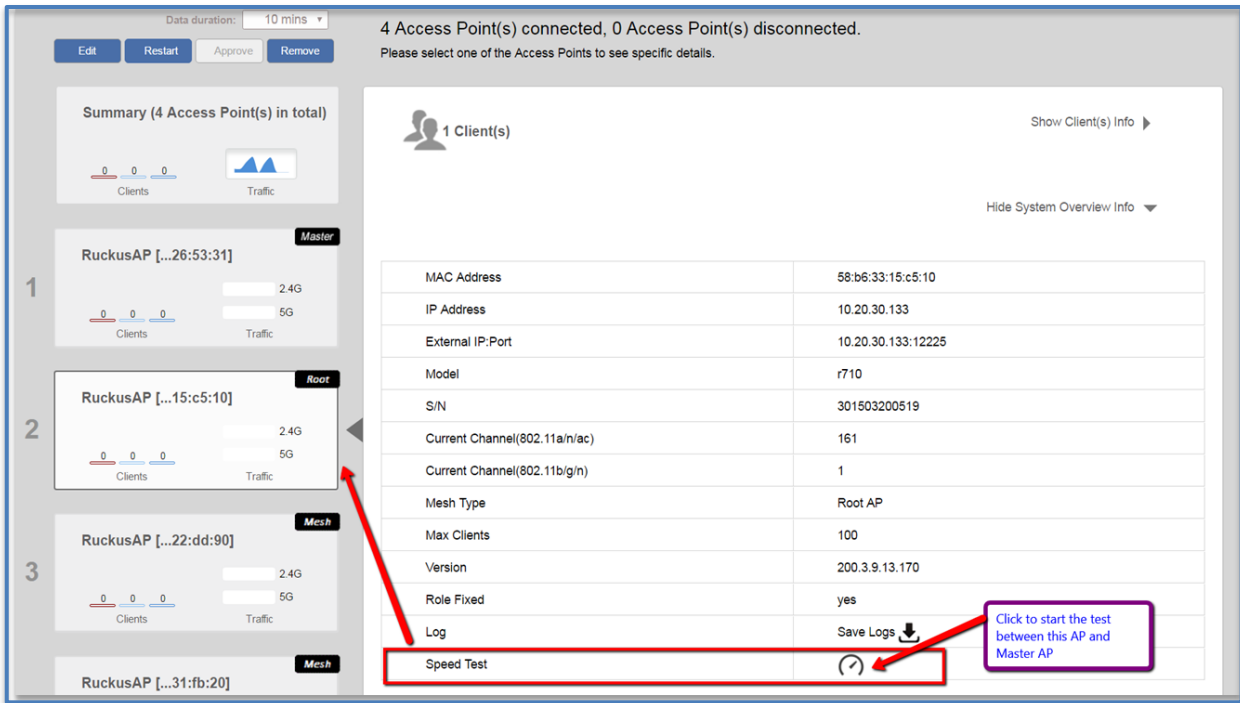
4. Support for SpeedFlex

Ruckus SpeedFlex is a unique wireless performance tool integrated within the ZoneDirector™ family of centralized controllers and FlexMaster remote Wi-Fi management system. SpeedFlex measures the Wi-Fi throughput of associated wireless LAN (WLAN) clients. With SpeedFlex, administrators can better plan, troubleshoot, monitor and measure WLAN performance, eliminating the need to use Internet-based speed tools that often provide inaccurate results of the local Wi-Fi environment.

Now, the same tool is expanded to support Unleashed network as well. The SpeedFlex can be run between

- Master AP and Member AP (Member AP can be Ethernet connected or over a Mesh link)
- Client device and an Unleashed AP within the Unleashed network
 - Ruckus SpeedFlex app is available for both iOS & Android mobile devices

In Master AP's web UI, from Member AP, the speed test can be initiated.



4 Access Point(s) connected, 0 Access Point(s) disconnected.
Please select one of the Access Points to see specific details.

Summary (4 Access Point(s) in total)

1 RuckusAP [...26:53:31] **Master**

2 RuckusAP [...15:c5:10] **Root**

3 RuckusAP [...22:dd:90] **Mesh**

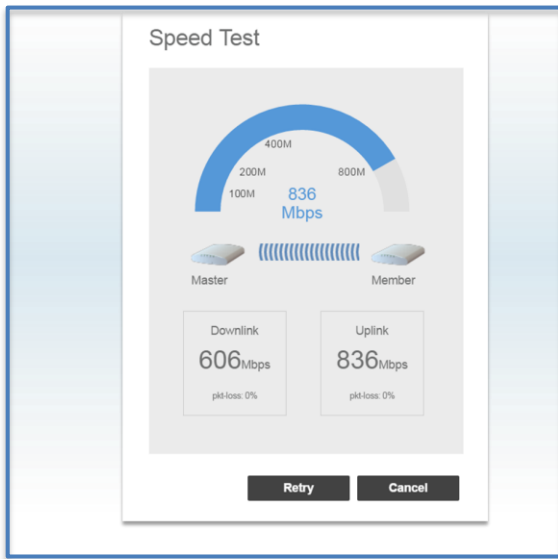
RuckusAP [...31:fb:20] **Mesh**

1 Client(s)

MAC Address	58:b6:33:15:c5:10
IP Address	10.20.30.133
External IP:Port	10.20.30.133:12225
Model	r710
S/N	301503200519
Current Channel(802.11a/n/ac)	161
Current Channel(802.11b/g/n)	1
Mesh Type	Root AP
Max Clients	100
Version	200.3.9.13.170
Role Fixed	yes
Log	Save Logs
Speed Test	

Click to start the test between this AP and Master AP

SpeedFlex test results depend up on multiple variables such as the RF environment, AP models used, client devices' capabilities, Ethernet switch and so on.



Speed Test

836 Mbps

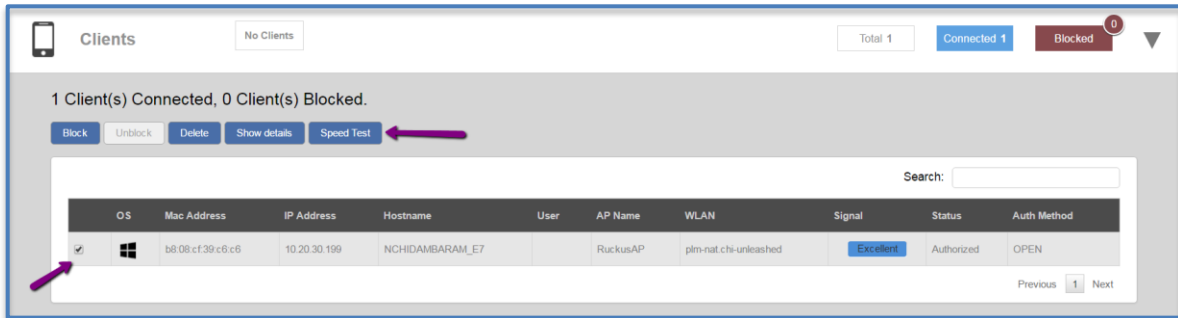
Downlink: 606Mbps, p4-loss: 0%

Uplink: 836Mbps, p4-loss: 0%

Retry Cancel

This screenshot was taken when test was done between a R510 (Master) and R710 (Member) APs that were connected through Brocade ICX Campus networking switch

SpeedFlex can be run between Client device and Master AP from Master AP's UI

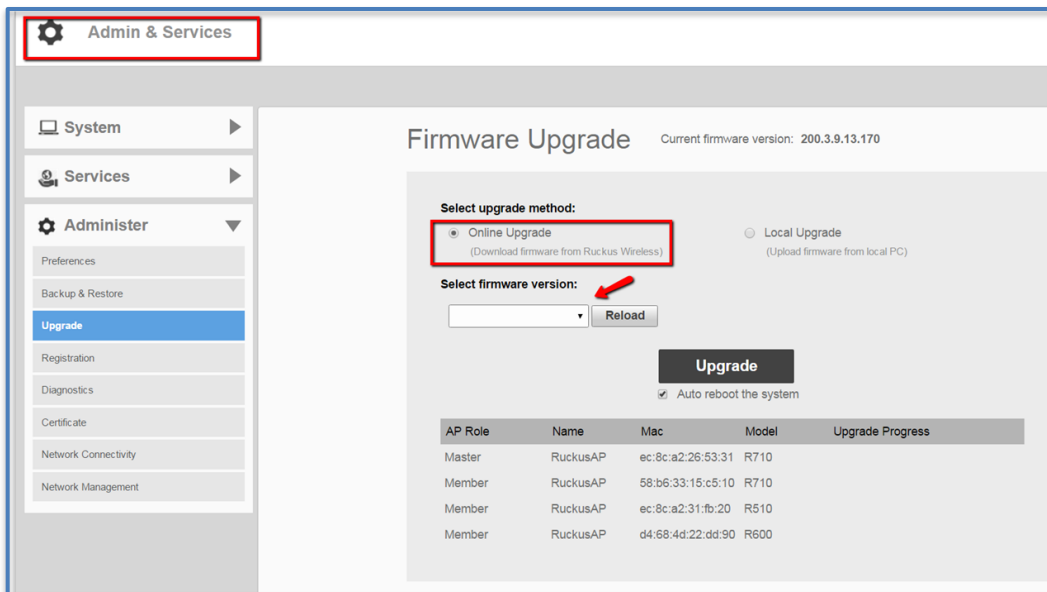


Customer Benefits

- Helps to establish baseline network throughput after installing Unleashed network
- Aides troubleshooting

5. Ability to do online upgrade to a specific Unleashed software version

Up until Unleashed 200.2, when customers do online upgrades the Unleashed network will be upgraded to the latest software version that's available. With Unleashed 200.3, customers are able to do online upgrades to specific version of their choice up to two older versions. In other words, customers can choose either the latest version or any of the previous two versions.



Customer Benefits

- Enables customer to choose to upgrade their Unleashed network to a specific software version.