



RUCKUS[™]
WIRELESS

SMARTER, SIMPLY SUPERIOR WI-FI FOR WAREHOUSES



RUCKUS

SMARTER WI-FI INCREASES OPERATIONAL EFFICIENCY; IT'S THE STRONGEST LINK IN YOUR SUPPLY CHAIN.

AS WAREHOUSES BECOME MORE RELIANT ON WIRELESS DEVICES FOR EMPLOYEE COMMUNICATION AND INVENTORY LOGISTICS, FASTER, MORE RELIABLE WI-FI CONNECTIVITY ENSURES YOUR SUPPLY CHAIN OPERATES EFFICIENTLY WITH NO DOWN TIME.

NO ETHERNET? NO PROBLEM

Since warehouses are not easy to wire, and Wi-Fi is just as reliable as Ethernet, smart Wi-Fi meshing is the ideal solution for easily extending Wi-Fi services without the cost and complexity of pulling Cat5 cabling to every AP. The Ruckus ZoneFlex system supports Smart Mesh Networking that lets warehouses connect APs by simply plugging into a power outlet. The AP is smart enough to do the rest. And, configuring Smart Meshing is as simple as clicking a check box. No manual defining of meshing links or tedious optimization. Smart Meshing organizes, optimizes and heals on its own.



Adaptive antenna technology is ideal for making handheld devices, which move consistently with hand and body motion, completely reliable.



Ruckus Smart Wi-Fi was designed for latency sensitive bar code scanners and other wireless applications that require consistent dependable connectivity.

SIMPLY BETTER CONNECTIONS FOR MOBILE DEVICES

New Wi-Fi enabled handheld devices pose serious challenges to large warehouse environments. Unlike laptops, the orientation of mobile devices constantly changes making it harder for Wi-Fi systems to deliver a rock solid signal. Traditional omni-directional antennas were never developed to deal with this type of moving client and can't properly adapt to changing orientation of clients. This results in dropped connections and erratic Wi-Fi performance. Ruckus adaptive antenna technology uniquely solves these problems with patented, dual-polarized, adaptive antenna technology that selects the best signal path for every packet, even as the devices move around. This array automatically detects the client devices and sends signals that are vertically or horizontally polarized—remembering each client and the position of the client. Radio energy is focused and transmitted using the best performing signal path for each client on a per packet basis. The result is consistent and predictable performance you can count on.





REAL-TIME LOCATION TRACKING FOR ASSET MANAGEMENT AND INVENTORY CONTROL

RTLS can be easily implemented to track and manage assets and materials. Ruckus works with leading RTLS vendors to develop and interface with their location engines to receive information from the Ruckus WLAN system. This capability can easily be invoked by simply checking a box on the ZoneDirector controller during the provisioning process.

Real-time location tracking (RTLS) is critical in the warehouse setting.

DOUBLE CAPACITY, DOUBLE COVERAGE WITH FEWER ACCESS POINTS

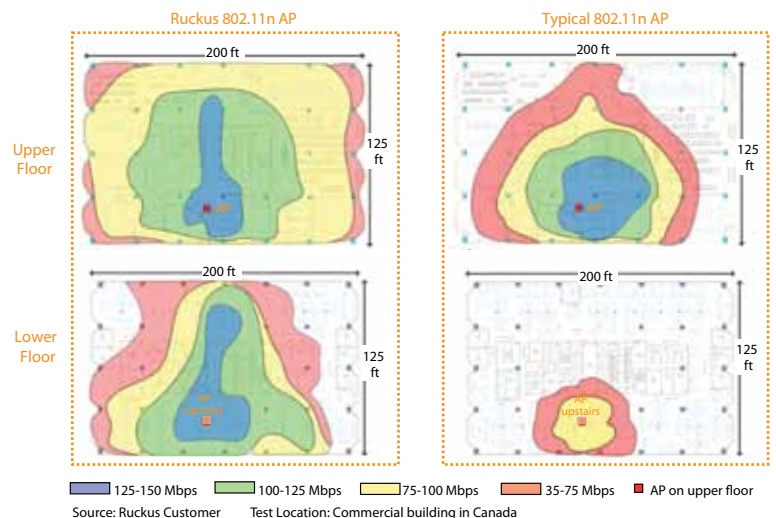
Ruckus' unique adaptive antenna technology allows for a fast implementation, and fast, reliable connectivity. With recent advances in Wi-Fi technology combined with Ruckus' unique patented approach to Wi-Fi signaling, smarter wireless WLANs now deliver unmatched wire-like performance and 2 to 4x the coverage range with fewer access points. This translates into lower infrastructure OPEX and CAPEX and a faster return on investment. Employing Ruckus' dual-band 802.11n indoor and outdoor access points, warehouses can now have a robust Wi-Fi infrastructure that delivers consistent performance everywhere, ensuring no down time or productivity loss due to mediocre Wi-Fi.

SIMPLE, SIMPLE, SIMPLE CONFIGURATION

The Ruckus ZoneFlex system is the industry's simplest WLAN system to configure and deploy. It offers one of the most advanced set of WLAN features but without the cost and complexity typically associated with high-end systems. Configured in minutes and deployed in hours, the ZoneFlex system uses an intuitive Web-based wizard. Once configured, APs are simply plugged into a power source or PoE and self-configure by automatically discovering the ZoneDirector controller or FlexMaster Wi-Fi management system. APs can be deployed in standalone mode or part of a centrally managed, full-featured WLAN. ZoneDirector controllers are deployed out of the datapath—eliminating performance bottlenecks and a single points of failure.

RUCKUS SMART WI-FI DELIVERS MORE CONSISTENT PERFORMANCE AT LONGER DISTANCES

Ruckus Smart Wi-Fi versus the alternative



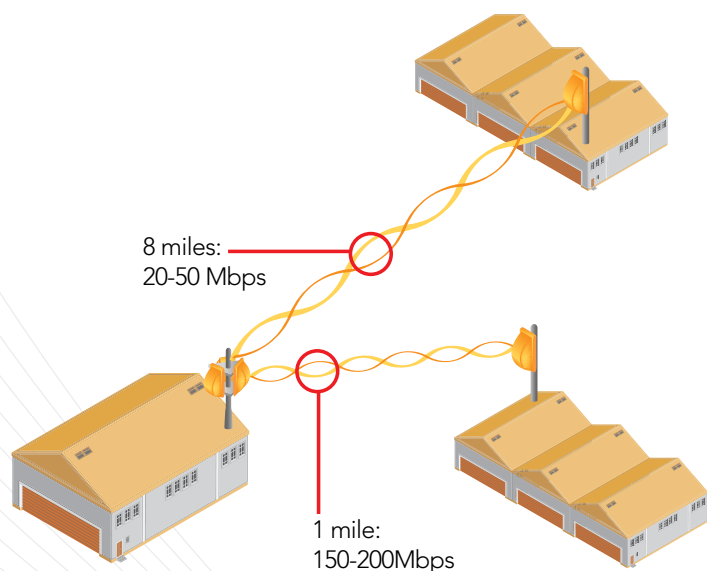
Patented smart antenna arrays in every access point provide longer range and more reliable Wi-Fi connections, requiring fewer APs than competitive alternatives.

"We have a very diverse set of businesses, applications, users, and devices — all of which require robust wireless to maintain operational efficiency. The combination of 802.11n and adaptive antenna technology eliminates flaky coverage and reliability issues that have plagued Wi-Fi in the past."

NATHAN WIEGAND, Network Manager *PacificSeafood*

ADVANCED WI-FI MANAGEMENT THAT'S ULTRA INTUITIVE

Management and administration of a wireless LAN system has never been simpler—whether onsite or remote. No complex or hard to understand menus full of confusing options. Instead, administrators simply point and click through an intuitive, graphical user interface, purposely designed for simplicity. A customizable, widget-based dashboard provides a complete at-a-glance view of the system with detailed information about system usage, recent user activity, most active clients, most frequented access points, rogue devices and much more. And detailed statistics provides real-time information for troubleshooting. Perfect for warehouse environments with already busy IT staff.



Long-range, point-to-multipoint 802.11n extends broadband connectivity.

LONG-RANGE WI-FI BROADBAND EXTENSION SAVES BIG BUCKS

To save time and recurring monthly broadband charges, warehouses can use long-range smart Wi-Fi bridges. Over distances of 1 to 8 miles, new 802.11n 5GHz Wi-Fi bridges deliver from 50 to 200 Mbps of high-capacity broadband connections into warehouse facilities—saving potentially tens of thousands of dollars every year from eliminating costly fixed line connections to connect remote sites.

TOP 10

RUCKUS DELIVERS TOP 10 WI-FI MUSTS FOR WAREHOUSING

- 1. Wi-Fi coverage everywhere**
2x to 4x coverage improvement through integrated long-range, high-gain arrays and Ruckus' patented adaptive smart antenna technology
- 2. Unparalleled client connectivity**
Ruckus' adaptive antenna technology has up to 19 antenna arrays which allows for complete connectivity
- 3. Consistent performance at range**
Ruckus' adaptive multi-antenna technology with client feedback ensures consistent, reliable, and fast connections to the end client
- 4. Remote management**
Indoor and outdoor APs can be managed remotely as one through a single interface
- 5. No new cabling**
Ruckus' smart meshing technology allows for easy meshing to endure coverage without laying new cabling in difficult to deploy environments
- 6. Flexible deployment options**
Deploy APs as stand alone or with the controller; controllers can be onsite or offsite and managed remotely
- 7. Real-time location tracking**
Checkbox provisioning in the controller can communicate with the APs to track RFIDs for your supply chain management
- 8. Easy to configure and deploy**
For warehouses with limited IT resources, Ruckus' graphical user interface is easy to use and understand
- 9. Simple security**
With dynamic PSK, you can be assured of a highly secure network without the need for security expertise or extensive IT resources
- 10. Heated AP for fluctuating environments**
The Ruckus 7762 has built in heaters, ensuring reliability even under the harshest conditions.

SMART ORGANIZATIONS ARE CHOOSING
RUCKUS SMART WI-FI SOLUTIONS
 TO SOLVE CHALLENGES

PROBLEM	RUCKUS SMART WI-FI SOLUTION
SPOTTY COVERAGE	Ruckus' adaptive antenna technology extends Wi-Fi signals two to four times farther, requiring fewer APs per warehouse
COMPLEX INSTALLATION AND MANAGEMENT	Long range high-gain access points require fewer nodes to cover a given area and allow Wi-Fi services to be offered in areas where Ethernet cabling doesn't exist or can't be pulled via advanced wireless meshing
RECURRING MONTHLY BROADBAND COSTS	Long-range 802.11n Wi-Fi point-to-multipoint bridges eliminate fixed broadband costs while delivering 50 to 150 Mbps of connectivity at a distance of to 8 miles.
CONTROLLERS IN EACH WAREHOUSE	The ZoneDirector allows IT administrators to remotely manage warehouses throughout the network through one controller
UNIFIED NETWORK	Indoor and outdoor networks access points mesh together and managed centrally by the ZoneDirector
EXTENDS WI-FI TO AREAS WITHOUT ETHERNET	Provides meshing for indoor and outdoor APs that enables Wi-Fi signals to be extended without Ethernet drops and remotely managed by the ZoneDirector
TOO MANY APs TO MANAGE	Requires one-third to one-half the number of APs over conventional omnidirectional Wi-Fi products
UNSTABLE WI-FI CONNECTIVITY	Patented adaptive antenna technology dynamically forms its beam on roaming clients ensuring stable connectivity and mitigating packet loss to ensure the highest performance

WE'RE **FEELING THE LOVE** FROM
 A MARQUEE LIST OF WORLD RENOWNED CUSTOMERS



**RUCKUS BENDS WI-FI SIGNALS
 AT ADI LOGISTICS**

ADI Logistics, of Edison, New Jersey, has a massive 185,000 square foot warehousing facility and serves a wide range of customers to store, track, and deliver their inventory. It was critical for ADI to have a robust and reliable Wi-Fi network, which had proved to be elusive in the past.

Enter Ruckus. With requirements that ranged from providing wireless for inventory tracking, back office applications, to guest and employee access all within this massive facility, Ruckus was up to the task.

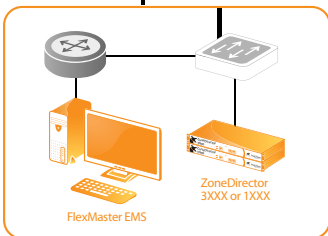
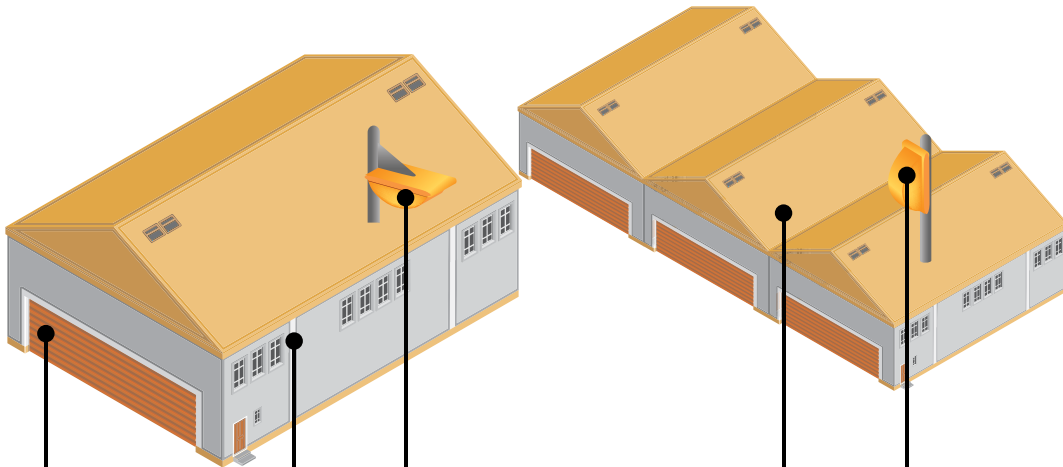
More challenging was the harsh RF environment that thwarted any successful Wi-Fi deployments in the past, and the nature of their business, which always changed the as the customer product changed the internal environment of the warehouse.

Ruckus solved ADI's problems immediately with only six ZoneFlex 2942 access points and a ZoneDirector 1006 Smart WLAN controller. Installation was a breeze since only three Ethernet drops meshed the rest of the APs with a simple click of a button. The most difficult part of installation was physically placing the AP on the ceiling.

"Combining high-gain smart antennas and wireless meshing, the Ruckus ZoneFlex system changed everything for us. For about one-third the cost of alternative WLANs we considered, the ZoneFlex system has given us complete and reliable coverage with the fewest numbers of APs and without additional cabling." Lou Schmaus, MIS Director, ADI Logistics, Inc.

RUCKUS SMART WI-FI DELIVERS WAREHOUSING'S MOST FLEXIBLE DEPLOYMENT OPTIONS

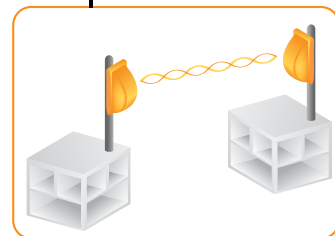
Internet Access • VoIP • Guest Networking • RTLS/RFID • Staff Administration
BOM Imaging • Back Office Administration • Supply Chain Optimization



End-to-End management
with controllers or software



Dual-band outdoor APs adaptively
mesh with other indoor/outdoor APs



Long-range point-to-point/
multipoint 802.11n Wi-Fi bridging



Advanced and intuitive Wi-Fi
troubleshooting tools



Dependable connectivity for
mobile users/devices

COMPLETE PORTFOLIO FOR WAREHOUSING

RUCKUS (REALLY) SMART WI-FI PRODUCTS



ZoneFlex 7962

Indoor dual-band, two-port 802.11n AP with integrated smart antenna array and PoE (802.3af) support



ZoneFlex 7300

Indoor single- and dual-band, three-port 802.11n AP with integrated smart antenna array and PoE (802.3af) support



ZoneFlex 2942

Indoor single-band, two-port 802.11b/g AP with integrated smart antenna array and PoE (802.3af) support



ZoneFlex 7025

Indoor 802.11n wall jack with five ports of Ethernet



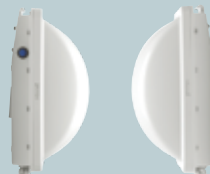
ZoneFlex 7762

Outdoor dual-band, two-port 802.11n AP with integrated smart antenna array and PoE (802.3at/af) support



ZoneFlex 2741

Outdoor single-band, one-port 802.11b/g AP with integrated smart antenna array on PoE (802.3af) support



ZoneFlex 7731

Outdoor long-range, point-to-point 802.11n 5GHz bridge



FlexMaster

Linux-based remote Wi-Fi system management software



ZoneDirector Controllers

Central wireless LAN controllers supporting from 6 to 500 Ruckus APs



ZoneSwitch 4000

Fully Managed 12/24 port Layer 2 Gigabit Smart Switches with 802.3af/at PoE



SMART **MOBILE** NETWORKING



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