

DATA SHEET



BENEFITS

UNMATCHED SCALABILITY

Supporting up to 500 APs and 1,024 WLANs per device, the ZoneDirector 3000 can easily serve medium to large campus deployments

IT LITE DEPLOYMENT IN 5 MINUTES, SIMPLE TO USE AND MANAGE

Web-based configuration wizard configures an entire WLAN in minutes. Ruckus APs auto-discover the ZoneDirector. Centralized management and automatic, real-time optimization of entire WLAN

ADVANCED WLAN FEATURES AND FUNCTIONS

Advanced wireless networking features include rogue AP detection, interference detection, band steering, airtime fairness, role-based user policies, per-user rate-limiting, hotspot and guest networking services

SMARTMESH NETWORKING STREAMLINES COSTLY AND COMPLEX DEPLOYMENT

Integrated Ruckus SmartMesh Networking technology automates deployment, eliminates the need to run Ethernet cable to every Wi-Fi AP. Adaptable architecture with Hybrid Mesh extends the wireless network through Ethernet-connected APs, increasing system performance

AUTOMATIC USER SECURITY

Dynamic PSK eliminates the requirement to configure and update individual PC client devices with unique encryption keys. Dynamic VLAN assignment seamlessly extends existing security policies to the WLAN

EASY MONITORING AND TROUBLESHOOTING

Customizable dashboard provides comprehensive at-a-glance network snapshot and allows drill down to troubleshoot wireless problems

DISTRIBUTED FORWARDING ARCHITECTURE

Maximizes data throughput by sending all data traffic directly from the access points to the wired network

THE FIRST SIMPLE AND POWERFUL ENTERPRISE WIRELESS LAN CONTROLLER

The Ruckus Wireless ZoneDirector 3000 is the first enterprise-class Wireless LAN system that delivers a secure, robust and easily expandable WLAN solution at an unmatched total cost of ownership.

Capable of managing up to 500 Wi-Fi access points and 10,000 clients from a single location, the Ruckus ZoneDirector 3000 is designed for simplicity and ease of use.

Unlike conventional wireless LAN systems that are costly, complex and cumbersome to deploy, the ZoneDirector 3000 is ideal for any enterprise that requires a high-performance wireless LAN that can be easily deployed and managed.

The ZoneDirector 3000 delivers advanced features such as wireless meshing, high availability, hot spot authentication, elegant guest networking and dynamic Wi-Fi security.

The Ruckus ZoneDirector 3000 can be deployed and operated by non-wireless experts and can be installed quickly and easily. Any organization with limited IT staff and budget can create a robust and secure multimedia WLAN in a matter of minutes.

The Ruckus ZoneDirector easily integrates with network, security and authentication infrastructure already in place and is easily configured through a point-and-click web wizard. Ruckus APs automatically discover and are configured by the ZoneDirector.

Redundant and secure, the Ruckus ZoneDirector provides WLAN-wide network, security, RF and location management within a single, easy-to-use and affordable WLAN system.

Simple to Deploy

The Ruckus ZoneDirector integrates seamlessly with existing switches, firewalls, authentication servers and other network infrastructure. The ZoneDirector can be placed within any Layer 2/3 network. All Ruckus APs (wired or meshed) then automatically discover the Ruckus ZoneDirector, self configure and become instantly manageable. Built-in redundancy ensures high network availability and is easy to use with automatic synchronization of configuration and authorized users between ZoneDirectors.

Simple to Manage

Once up and running the ZoneDirector automatically manages the network of APs—automatically adjusting transmit power levels and RF channel assignments as needed, to avoid interference, prevent adjacent APs from interfering and enable redundant coverage in the event of an AP failure. Configuration changes can easily be applied to multiple APs, or the entire system, simultaneously. A customizable dashboard provides instant access to a variety of client and network information and events, and a real-time heat map displays AP locations and signal coverage, as well as your Ruckus SmartMesh Networking topology.

ZoneDirector WLAN systems integrate a unique performance utility from Ruckus called SpeedFlex™. Ruckus SpeedFlex allows administrators to locally or remotely determine client Wi-Fi performance over the wireless LAN. With SpeedFlex, administrators can now 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.

Simple to Secure

The ZoneDirector 3000 provides innovative new techniques that simplify and automate Wi-Fi security. In addition to enterprise-class 802.1x support and dynamic VLAN assignment capabilities, the ZoneDirector 3000 supports a patent-pending Dynamic Pre-Shared Key (PSK) capability that streamlines WLAN security.

First-time users plug their computers into the LAN and specify a URL that directs them to a captive web portal for a one-time authentication. After successful authentication, the ZoneDirector automatically configures the client system with the designated SSID and a dynamically-generated encryption key. The key is bound to the client, and can be removed upon expiration when the user or the user's device is no longer trusted.

The Ruckus ZoneDirector centralizes authentication and authorization decisions for all APs, providing secure admission control across the WLAN. It works with any backend authentication database such as RADIUS and ActiveDirectory and also comes with an internal authentication database. Additionally, clients can be dynamically assigned to a VLAN based on their RADIUS attributes.

Avoid Interference, Maximize Performance and Extend Reach with BeamFlex

Ruckus BeamFlex™, a patented Wi-Fi beam-steering technology, ensures predictable performance for multimedia traffic applications and extends range to eliminate Wi-Fi deadspots. With ZoneDirector, the value of BeamFlex is extended beyond a single access point to the system-wide WLAN and wireless meshing.

The ZoneDirector automatically controls the channel assignments and transmit power of all Ruckus Wi-Fi APs. And with BeamFlex, the system continuously picks the best path for every packet, to both clients outside the network and mesh APs inside the network, automatically avoiding interference, to guarantee the highest quality of service.

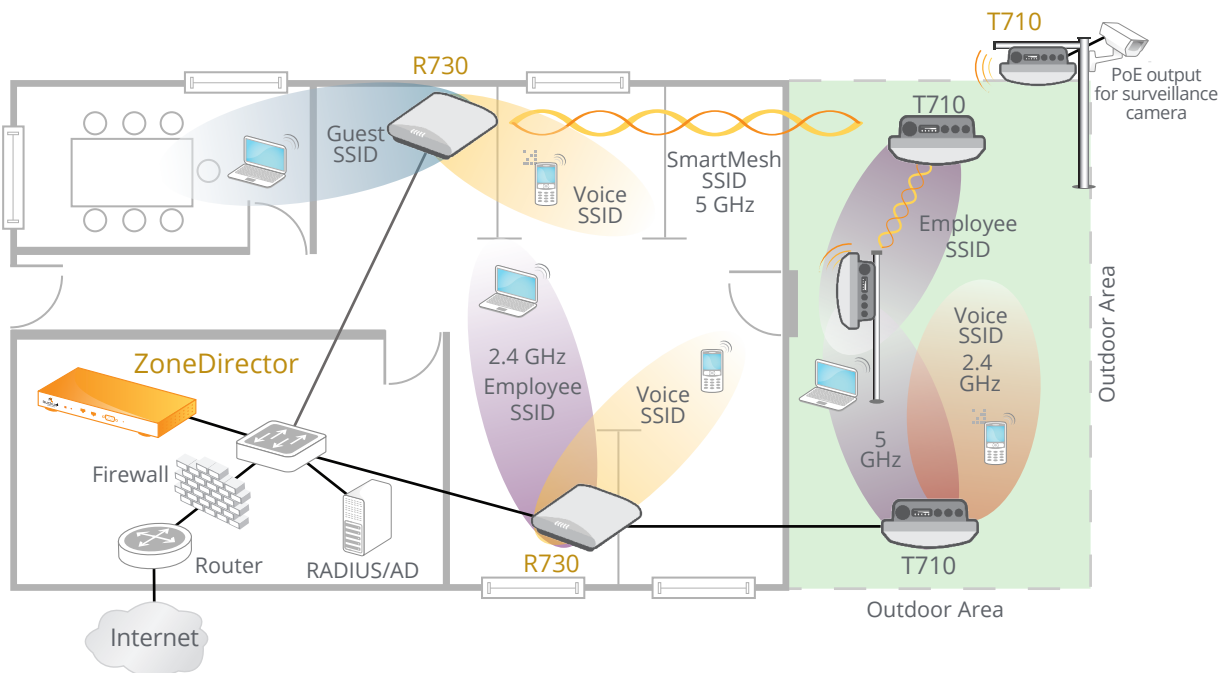


Figure 1. The ZoneDirector 3000 can be deployed anywhere within a Layer 2/3 network. All Ruckus APs are dynamically discovered and automatically provisioned by the ZoneDirector.

SmartMesh Networking Increases Flexibility, Reduces Costs

Ruckus SmartMesh Networking enables self-organizing and self-healing WLAN deployment. It eliminates the need to run Ethernet cables to every AP, allowing administrators to simply plug in Ruckus APs to any power source and walk away. All configuration and management is delivered through the ZoneDirector WLAN controller. APs can also be daisy-chained to mesh APs to extend the mesh and take advantage of spatial reuse. SmartMesh uses patented Wi-Fi technology to extend range and control Wi-Fi signals to minimize inter-nodal hops that degrade performance and automatically adapt Wi-Fi connections between nodes to maintain ultra high reliability.

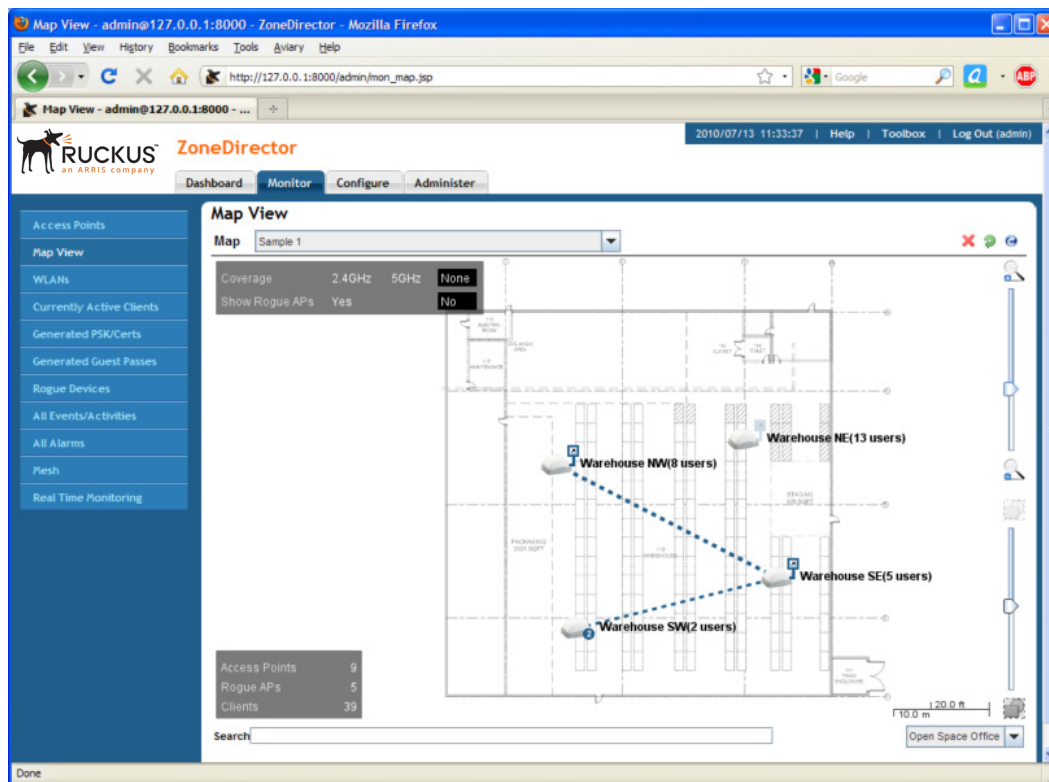


Figure 2. The ZoneDirector 3000 provides a detailed map view that lets administrators quickly see the Wi-Fi network topology for all Ruckus Wi-Fi access points.

HARDWARE FEATURES

- Thin 1U rackmountable footprint
- Easy discovery from PC using UPnP
- Manage multiple locations and ZoneDirectors with FlexMaster
- Two 1000 Mbps ports for full redundancy
- Lifetime warranty coverage

SOFTWARE FEATURES

Central control and configuration of up to 500 Ruckus APs

- Support for 1,024 WLANs
- Integrated DHCP server
- Easy-to-use setup wizard
- Ultra-intuitive GUI
- 1+1 redundancy with auto synchronization
- SmartMesh Networking control and monitoring
- Real-time client admission control
- Load-balancing, admission control
- Customizable dashboard
- Dynamic RF channel and power management
- Quality of Service with WLAN prioritization, bandsteering and airtime fairness
- Band balancing
- Integrated captive portal
- Native ActiveDirectory/RADIUS/LDAP support
- Local authentication database
- Dynamic VLAN assignment
- Guest access
- BYOD, ZeroIT, Dynamic generation of unique Pre-Shared Keys
- Rogue AP detection and graphical map view
- Aeroscout location services support
- Hotspot authentication using WISPr
- WISPr Client Support
- Performance monitoring and statistics
- Application recognition and control
- Secure Hotspot
- SPOT location services
- Limited lifetime warranty

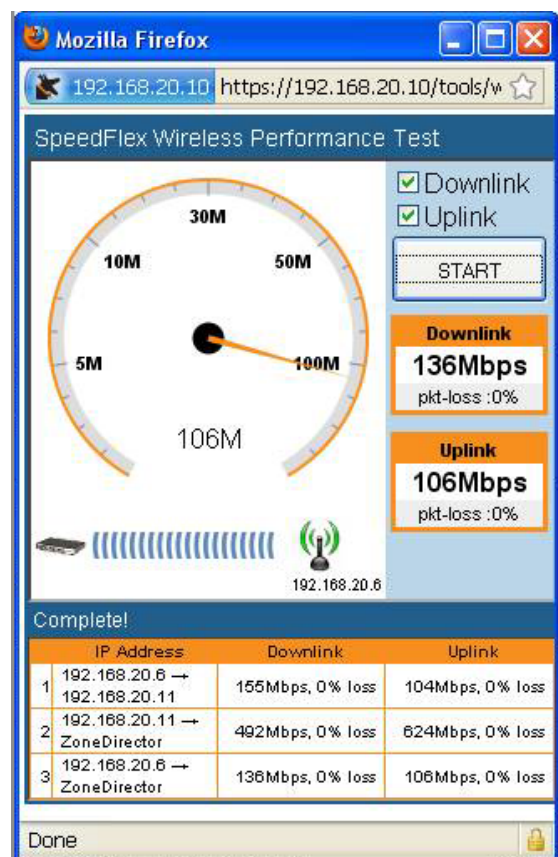


Figure 3. SpeedFlex™ is a unique wireless performance test tool integrated within the Ruckus family of centralized controllers that measures the Wi-Fi throughput of associated wireless LAN clients.

SPECIFICATIONS

PHYSICAL CHARACTERISTICS	
Power	<ul style="list-style-type: none"> 220 watt internal power supply 100 – 250V AC Universal, IEC 320 connector
Physical Size	<ul style="list-style-type: none"> 1RU: 35.52cm(L), 43.18cm(W), 4.39cm(H)
Weight	<ul style="list-style-type: none"> 14 lbs (6.37 kilograms)
Ethernet Ports	<ul style="list-style-type: none"> 2 ports, auto MDX, auto-sensing 10/100/1000 Mbps, RJ-45
Environmental Conditions	<ul style="list-style-type: none"> Operating Temperature: 41°F (5°C) – 104°F (40°C)

CAPACITY	
Managed APs	<ul style="list-style-type: none"> Up to 500
WLANs (BSSIDs)	<ul style="list-style-type: none"> 1,024
Concurrent Stations	<ul style="list-style-type: none"> Up to 10,000

APPLICATIONS	
Hotspot	<ul style="list-style-type: none"> WISPr
Guest Access	<ul style="list-style-type: none"> Supported
Captive Portal	<ul style="list-style-type: none"> Supported
Mesh	<ul style="list-style-type: none"> Supported
Voice	<ul style="list-style-type: none"> 802.11e/WMM U-APSD Tunneling to AP

NETWORK ARCHITECTURE	
IP	<ul style="list-style-type: none"> IPv4, IPv6, dual-stack
VLANs	<ul style="list-style-type: none"> 802.1Q (1 per BSSID), dynamic VLAN
Redundancy	<ul style="list-style-type: none"> 1+1 with auto-synchronization
DCHP Server	<ul style="list-style-type: none"> Supported

MANAGEMENT	
Configuration	<ul style="list-style-type: none"> Web user interface, CLI, FlexMaster, SNMP v1, v2, v3
AAA	<ul style="list-style-type: none"> RADIUS (primary and backup)
AP Provisioning	<ul style="list-style-type: none"> L2 or L3 auto-discovery Auto-software upgrade Automatic channel and power optimization
Client Provisioning	<ul style="list-style-type: none"> Zero-IT
Wireless Packet Capture	<ul style="list-style-type: none"> Supported

SUPPORTED WIRELESS STANDARDS	
IEEE	<ul style="list-style-type: none"> 802.11a, 802.11b, 802.11g, 802.11n, 802.11ac, 802.11r, 802.11k, 802.11v, 802.11d, WMM/802.11e, 802.11u

SECURITY	
Standards	<ul style="list-style-type: none"> WPA, WPA2, 802.11i
Encryption	<ul style="list-style-type: none"> WEP, TKIP, AES Ruckus Dynamic Pre-Shared Key
Authentication	<ul style="list-style-type: none"> 802.1x, MAC address
User Database	<ul style="list-style-type: none"> Internal database up to 10,000 users External: RADIUS, LDAP, Active Directory
Access Control	<ul style="list-style-type: none"> L2 (MAC address-based) L3/4 (IP and Protocol based) L2 client isolation Management interface access control Time-based WLANs
Wireless Intrusion Detection (WIDS)	<ul style="list-style-type: none"> Rogue AP detection DoS attack prevention Evil-twin/AP spoofing detection Ad hoc detection Password guessing protection

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

CERTIFICATIONS	
Certifications	<ul style="list-style-type: none"> U.S., Europe, Australia, Brazil, Canada, Chile, China, Colombia, Ecuador, Egypt, Hong Kong, India, Indonesia, Korea, Malaysia, Mexico, New Zealand, Pakistan, Philippines, Saudi Arabia, South Africa, Taiwan, Thailand, UAE, Uruguay, Vietnam Wi-Fi Alliance Certification (Wi-Fi Certified™)

PRODUCT ORDERING INFORMATION

MODEL	DESCRIPTION
ZoneDirector 3000 WLAN Controllers	
901-3025-XX00	<ul style="list-style-type: none"> ZoneDirector 3025 supporting up to 25 APs
901-3050-XX00	<ul style="list-style-type: none"> ZoneDirector 3050 supporting up to 50 APs
909-0XXX-ZD00	<ul style="list-style-type: none"> ZoneDirector 3000 AP license upgrade (increments of 50 from 50 to 450)

PLEASE NOTE: When ordering ZoneDirector, you must specify the destination region by indicating -US, -EU, -CN, -IN, -JP, -KR, -SA, -UK or -UN instead of -XX.

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