

# ZoneDirector™ 1000

Centralized Smart WLAN Management System



## The First "IT Lite" Centralized Control System for Multimedia Wireless LANs

The Ruckus Wireless ZoneDirector 1000 is the first centrally-managed multimedia Wireless LAN (WLAN) solution controller developed specifically for small-to-medium enterprises (SMEs) and hot zone operators.

With simplicity and ease of use in mind, the Ruckus ZoneDirector 1000 is purpose-built to address the gap between standalone, feature-deficient access points (APs) that must be individually managed and the costly, complex high-end enterprise systems that are overkill for most small business environments.

The Ruckus ZoneDirector is ideal for small businesses that require a robust and secure wireless LAN that can be easily deployed, centrally managed and automatically tuned.

The ZoneDirector 1000 is also perfect for operators who want to offer business class hot spot services such as voice over Wi-Fi, IP-based video, secure enterprise access and tiered Wi-Fi services in venues such as hotels, airports, schools and public buildings.

The Ruckus ZoneDirector easily integrates with network, security and authentication infrastructure already in place and is easily configured through a point-and-click web-based wizard. Ruckus ZoneFlex 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. Ruckus ZoneFlex APs (whether wired or mesh APs using Smart Mesh Networking) automatically discover

## BENEFITS

### Simple to use, simple to manage

Centralized management, quick setup, IT-Lite and automatic, real-time optimization of entire WLAN

### Ruckus Smart Mesh Networking streamlines costly and complex deployment

Integrated Smart Mesh Networking technology automates deployment, eliminates the need to run Ethernet cable to every Smart Wi-Fi access point

### WLAN deployment in 5 minutes or less

A web-based configuration wizard lets any computer user configure an entire WLAN in minutes. Ruckus ZoneFlex APs auto-discover the ZoneDirector

### Flexible deployment options

The ZoneDirector interacts with existing network and security infrastructure and provides dynamic RF management across APs to eliminate AP placement issues

### Triple play ready

The smart antenna array and precision Quality of Service (QoS) support within the ZoneFlex APs enable the reliable transport of voice, video and data traffic

### Easy monitoring and troubleshooting

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

### Automatic user security

Eliminates the requirement to configure and update individual PC client devices with unique encryption keys

### Complete integration

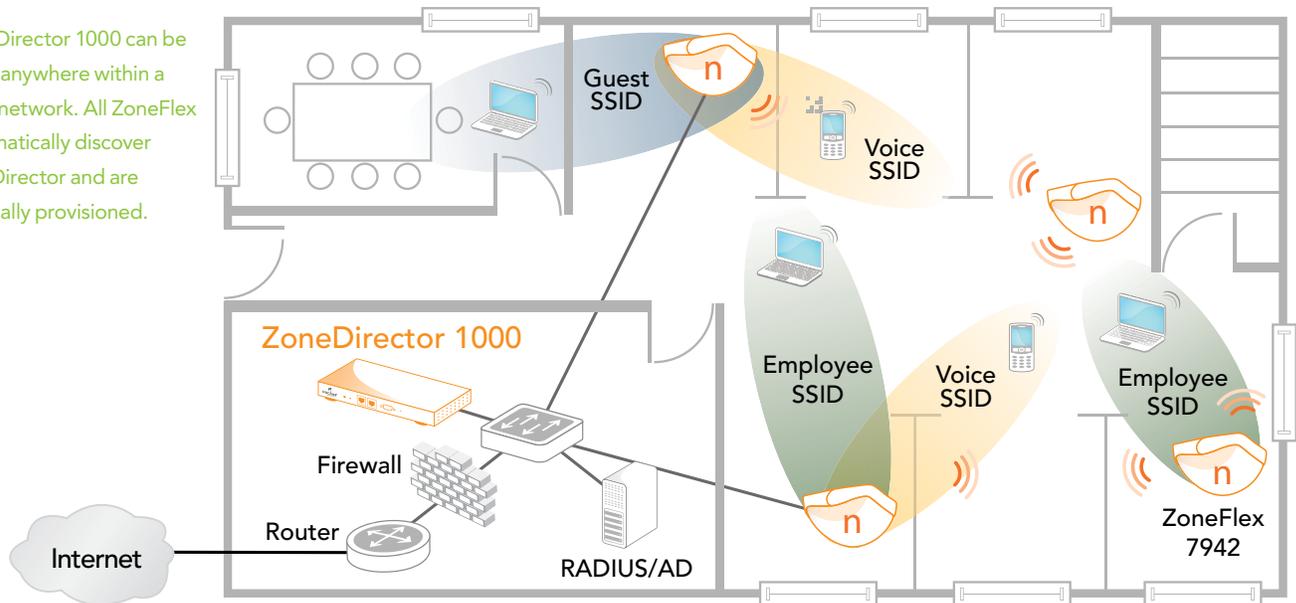
Combines network management, dynamic RF management, location management and AP control within a low-cost solution

### Advanced WLAN features and functions

Role-based user policies, internal authentication database, rogue AP detection and client thresholds per AP



The ZoneDirector 1000 can be deployed anywhere within a Layer 2/3 network. All ZoneFlex APs automatically discover the ZoneDirector and are automatically provisioned.



the Ruckus ZoneDirector, self configure and become instantly manageable. All clients trying to associate to the WLAN are sent to the ZoneDirector for authentication and authorization before network access is granted. And ZoneFlex APs integrate sophisticated RF management to focus RF signal toward clients, and away from interference, thereby automatically maximizing performance and coverage and reducing the number of APs typically required.

### Simple to Manage

Once up and running, the ZoneDirector automatically manages the ZoneFlex network of APs — automatically adjusting transmit power levels and RF channel assignments as needed to 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 Smart Mesh Networking topology.

ZoneDirector Smart 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.

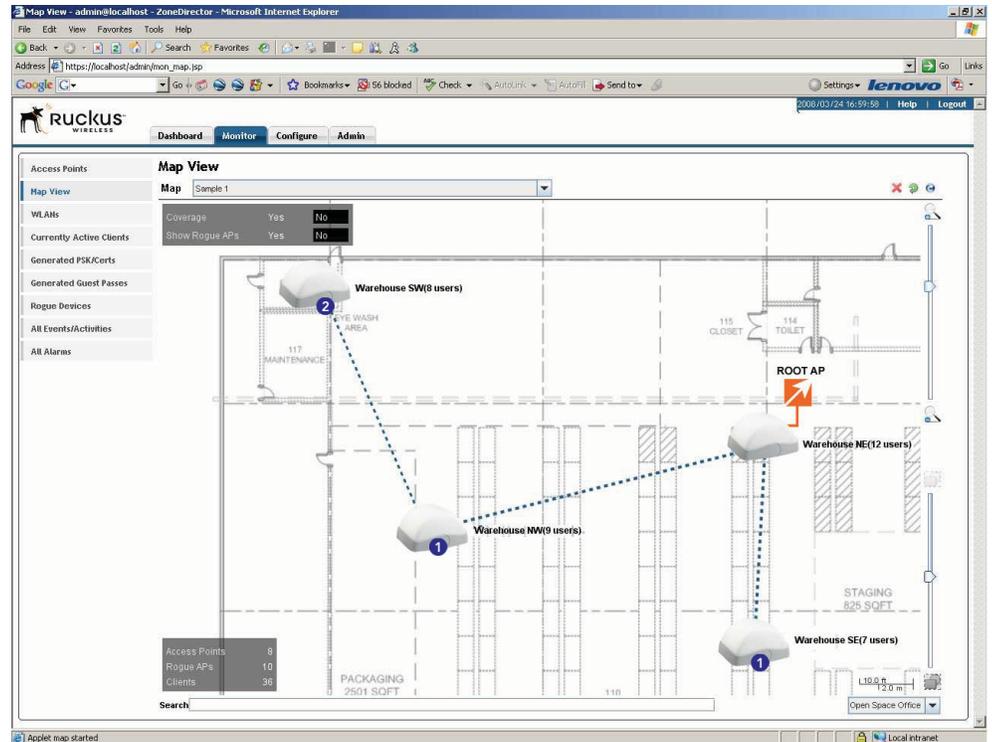
### Simple to Secure

The ZoneDirector 1000 provides innovative new techniques that simplify and automate Wi-Fi security. In addition to

### FEATURES

- Centralized configuration of up to 50 Ruckus ZoneFlex APs
- Centralized software upgrades
- Smart Mesh Networking control and monitoring
- Real-time client admission control
- Easy discovery from PC using UPnP
- Easy-to-use setup wizard
- Customizable dashboard
- Dynamic RF channel and power management
- Integrated captive portal
- ActiveDirectory and RADIUS support
- Local authentication database
- Guest accounts and Terms of Use
- Dynamic PSK and IT-Lite configuration
- Rogue AP detection and graphical map view
- Event management
- Performance monitoring and statistics
- N+1 redundancy
- Manage multiple locations and ZoneDirectors with FlexMaster
- Two 1000 Mbps ports for full redundancy
- Limited lifetime warranty coverage

The ZoneDirector 3000 provides a detail map view that lets administrators quickly see the Wi-Fi network topology for all ZoneFlex Smart Wi-Fi access points.



enterprise-class 802.1x support, the ZoneDirector 1000 supports a patent-pending Dynamic Pre-Shared Key (PSK) capability that streamlines WLAN security.

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

### Ruckus Smart Mesh Networking Increases Flexibility, Reduces Costs

Smart Mesh Networking enables self-organizing and self-healing wireless meshing. Smart Mesh Networking eliminates the need to run Ethernet cabling to every Smart Wi-Fi AP, so administrators simply plug ZoneFlex APs into any power source and walk away. All configuration and management is delivered through the ZoneDirector Smart WLAN platform. Leveraging patented Ruckus Smart Wi-Fi technology that provides extended range and dynamic signal controls, Smart Mesh Networking minimizes inter nodal hops that degrade performance, automatically adapts Wi-Fi connections between nodes to environmental changes and requires fewer APs to be deployed.

### Avoid Interference, Maximize Performance and Extend Reach with BeamFlex

Ruckus BeamFlex™, a patented Wi-Fi beam-steering technology, automatically delivers ensures predictable performance for multimedia traffic applications, extends range to eliminate

Wi-Fi deadspots. With the ZoneDirector, the value of BeamFlex is extended beyond a single access point to the system-wide WLAN and Smart Wi-Fi meshing. The ZoneDirector automatically controls the channels assignments and transmit power levels of all ZoneFlex Smart Wi-Fi APs.

With BeamFlex, the ZoneFlex system continuously picks the best path for every packet to client as well as among mesh APs — automatically avoiding interference to guarantee the highest quality of service.

The screenshot shows the SpeedFlex wireless performance test tool running in Mozilla Firefox. The test URL is https://192.168.0.2/tools/wc.jsp?cip=192.168.0.9. The test results show a speed of 6.36M. The interface includes a speedometer with markers at 5M, 10M, 30M, 50M, and 100M. A 'START' button is visible. The client IP is 192.168.0.9. The browser status bar shows 'Done' and the IP address 192.168.0.2.

SpeedFlex™ is a unique wireless performance test tool integrated within the ZoneFlex™ family of centralized controllers that measures the Wi-Fi throughput of associated wireless LAN (WLAN) clients.

# Specifications

## PHYSICAL CHARACTERISTICS

<b>POWER</b>	<ul style="list-style-type: none"> <li>External power adapter</li> <li>Input: 110–240V AC</li> <li>Output: 12V DC, 1A</li> </ul>
<b>PHYSICAL SIZE</b>	<ul style="list-style-type: none"> <li>25cm(L), 15.93cm(W), 3.86cm(H)</li> </ul>
<b>WEIGHT</b>	<ul style="list-style-type: none"> <li>2.2 lbs (1 kilogram)</li> </ul>
<b>ETHERNET PORTS</b>	<ul style="list-style-type: none"> <li>2 ports, auto MDX, auto-sensing 10/100/1000 Mbps, RJ-45</li> </ul>
<b>LED DISPLAY</b>	<ul style="list-style-type: none"> <li>Power/status</li> </ul>
<b>ENVIRONMENTAL CONDITIONS</b>	<ul style="list-style-type: none"> <li>Operating Temperature: 32°F (0°C)–122°F (50°C)</li> <li>Operating humidity: 15%–95% non-condensing</li> </ul>

## MANAGEMENT

<b>CONFIGURATION</b>	<ul style="list-style-type: none"> <li>Web user interface, FlexMaster</li> </ul>
<b>STATISTICS</b>	<ul style="list-style-type: none"> <li>LAN, wireless and associated stations (available via UI)</li> </ul>
<b>AUTO AP SOFTWARE UPDATES</b>	<ul style="list-style-type: none"> <li>Supported</li> </ul>
<b>CAPTIVE PORTAL</b>	<ul style="list-style-type: none"> <li>Supported</li> </ul>
<b>GUEST ACCOUNTS</b>	<ul style="list-style-type: none"> <li>Supported</li> </ul>
<b>VLAN SUPPORT</b>	<ul style="list-style-type: none"> <li>802.1Q (per BSSID)</li> </ul>
<b>DHCP SERVER</b>	<ul style="list-style-type: none"> <li>Supported</li> </ul>
<b>AP DISCOVERY &amp; CONTROL</b>	<ul style="list-style-type: none"> <li>Layer-2 or Layer-3</li> </ul>
<b>WLANs (BSSIDs)</b>	<ul style="list-style-type: none"> <li>Up to eight</li> </ul>

## SECURITY

<b>WIRELESS SECURITY</b>	<ul style="list-style-type: none"> <li>WEP, WPA-TKIP, WPA2-AES, 802.11i</li> </ul>
<b>AUTHENTICATION</b>	<ul style="list-style-type: none"> <li>802.1X, local database</li> <li>External AAA servers: ActiveDirectory, RADIUS</li> </ul>
<b>LOCAL AUTHENTICATION</b>	<ul style="list-style-type: none"> <li>1000 user entries</li> </ul>

## MULTIMEDIA AND QUALITY OF SERVICE

<b>VoIP TUNNELING</b>	<ul style="list-style-type: none"> <li>Supported</li> </ul>
<b>802.11e</b>	<ul style="list-style-type: none"> <li>Supported</li> </ul>
<b>SOFTWARE QUEUES</b>	<ul style="list-style-type: none"> <li>Per traffic type, per client</li> </ul>
<b>AUTO-CLASSIFICATION</b>	<ul style="list-style-type: none"> <li>Heuristics</li> </ul>
<b>RATE LIMITING</b>	<ul style="list-style-type: none"> <li>Supported</li> </ul>

## CERTIFICATIONS

<b>COUNTRIES</b>	<ul style="list-style-type: none"> <li>U.S., Europe, Canada, Australia, Chile, Colombia, Hong Kong, India, Malaysia, Philippines, Saudi Arabia, Singapore, Thailand, UAE</li> </ul>
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## PERFORMANCE AND SUPPORTED CONFIGURATIONS

<b>NUMBER OF MANAGED APs</b>	<ul style="list-style-type: none"> <li>Up to 50</li> </ul>
<b>CONCURRENT STATIONS</b>	<ul style="list-style-type: none"> <li>Up to 1250</li> </ul>



ZoneFlex 2925  
802.11g  
Smart Wi-Fi AP

ZoneFlex 2942  
802.11g  
Smart Wi-Fi AP

ZoneFlex 7942  
802.11n  
Smart Wi-Fi AP



## Product Ordering Information

Model	Description
<b>ZoneDirector Smart WLAN Controllers</b>	
901-1006-XX00	ZoneDirector 1006 supporting up to 6 ZoneFlex APs
901-1012-XX00	ZoneDirector 1012 supporting up to 12 ZoneFlex APs
901-1025-XX00	ZoneDirector 1025 supporting up to 25 ZoneFlex APs
901-1050-XX00	ZoneDirector 1050 supporting up to 50 ZoneFlex APs
901-7942-XX01	Smart Wi-Fi 802.11n access point with Power over Ethernet, wall/ceiling mount
901-2942-XX01	2-port Smart Wi-Fi 802.11g access point with Power over Ethernet, wall/ceiling mount
901-2925-XX01	5-port Smart Wi-Fi 802.11g access point for user space deployment

**PLEASE NOTE:** When ordering you must specify the destination region by indicating -US, -EU, -UK, -UN, -AU, -UU or -IN instead of XX.

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