ZoneFlex™ 2942

Smart Wi-Fi 802.11g Multimedia Access Point

The First Centrally Managed 802.11g Smart Wi-Fi Access Point with Mesh Support

The Ruckus ZoneFlex 2942 is the first centrally-managed, multimedia 802.11g Wi-Fi access point (AP) that delivers advanced features and functionality not available in any low-end consumer AP or high-end WLAN system.

Deployed individually, or as a system centrally managed by the Ruckus ZoneDirector™ Smart WLAN family of controllers, the Ruckus ZoneFlex 2942 can be deployed with or without Ethernet cabling. Support for Ruckus Smart Mesh Networking streamlines costly and complex deployment headaches, eliminating the need to run Ethernet cabling to every access point. This minimizes operational overhead, making the ZoneFlex 2942 ideal for hotels, schools, airports and enterprises everywhere.

The ZoneFlex 2942 is also perfect for hot spot operators that want to deliver business-class hot-spot services — such as voice over Wi-Fi, IP-based video or secure enterprise access.

Each ZoneFlex 2942 integrates Ruckus-patented BeamFlex™ smart antenna technology that enables consistent, high performance, extended coverage and multimedia support as it automatically tunes itself to adapt to constant changes in the environment. This means fewer APs, more satisfied users, and a cost-effective system that can be installed anywhere by wireless novices.

A web-based wizard allows any computer user to configure the ZoneFlex 2942 through the ZoneDirector — creating a secure and sophisticated WLAN in a matter of minutes. The Ruckus ZoneFlex 2942 simply plugs into any Ethernet network and automatically discovers the ZoneDirector. No RF tuning. No client configuration. A true plug-and-play multimedia WLAN that is ready to use, stable and high performance.

BENEFITS

Breakthrough user performance and density
Advanced antenna array and Quality of Service (QoS) software delivers 20 concurrent voice calls, 100 simultaneous data users or 20 Mbps of guaranteed user throughput throughout a 5,000 square foot facility.

No RF expertise required
Smart antenna array eliminates AP placement issues and minimizes adjacent AP interference, while ZoneDirector controls dynamic channel assignment and power management.

Ruckus Smart Mesh Networking streamlines costly and complex deployment
Integrated Smart Mesh Networking technology automates deployment, eliminates the need to run Ethernet cables to every Smart Wi-Fi access point.

Extended coverage means fewer APs
Directional, high-gain antennas dynamically combine to give hotspot operators and enterprises two- to four-times the coverage over typical consumer and enterprise APs.

Optimized for voice over Wi-Fi
Specialized antenna design, dynamic signal path selection and precision QoS software optimize delay-sensitive, high-density Voice-over-Wi-Fi (VoFi) applications. Power Save (UAPSD) maximizes handset battery life.

Proven video streaming support
The Ruckus smart antenna system and video QoS already proven for real-time IP video streaming applications deployed by over 100 IPTV operators worldwide.

"IT lite" configuration and management
Web-based wizard enables configuration of multiple APs across the entire WLAN in minutes. Once configured, the WLAN manages itself.

Enables business class hotspot services
New revenue opportunities for operators such as (VoFi) services, extended enterprise access, IP video applications and tiered service classes.

Ruckus WIRELESS™

Ultra High Performance and Cost Effective

Based on the IEEE 802.11g standards, the Ruckus ZoneFlex 2942 supports up to 54 Mbps of data capacity. What differentiates the ZoneFlex 2942 is the integration of patented Ruckus BeamFlex Smart antenna technology that automatically adapts to the RF environment by steering Wi-Fi signals on the best path, while rejecting interference, in real time.

Each Ruckus ZoneFlex 2942 comes equipped with a state-of-the-art, high-gain smart antenna array designed to deliver unsurpassed density and range. Supporting up to 100 simultaneous data users or 20 concurrent voice calls, while its superior coverage reduces the number of APs required, the Ruckus ZoneFlex 2942 delivers the industry's most cost-effective 802.11g Wi-Fi solution.

Simple Deployment

The self-optimizing Ruckus BeamFlex technology allows the Ruckus ZoneFlex 2942 to be installed without site survey and RF planning. Plug any Ruckus ZoneFlex 2942 into an Ethernet and the AP automatically discovers the Ruckus ZoneDirector and self-configures.

The Ruckus ZoneFlex 2942 and ZoneDirector system seamlessly integrate with existing security systems such as firewalls, intrusion detection systems and authentication servers, including RADIUS and ActiveDirectory. An internal authentication database lets enterprises implement user authentication without the expense and complexity associated with external authentication servers.
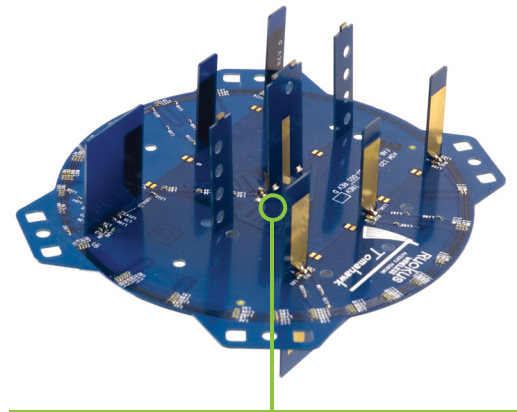
Simple Configuration

Ruckus ZoneFlex 2942 APs are automatically configured by the Ruckus ZoneDirector. A network of APs can be centrally configured quickly and simply through the ZoneDirector's web-based wizard.

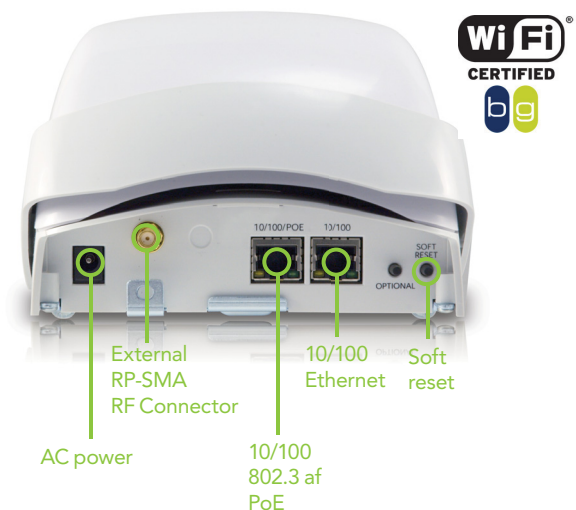## Smart Mesh Networking Increases Flexibility, Reduces Costs

Ruckus 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, allowing administrators to simply plug ZoneFlex APs into any power source, then walk away. All configuration and management is delivered through the ZoneDirector Smart WLAN platform. Patented Ruckus Smart Wi-Fi technology provides extended range and dynamic signal controls. Smart Mesh Networking minimizes inter-nodal hops that might degrade performance, automatically adapts Wi-Fi connections between nodes to environmental changes, and requires deployment of fewer APs.

Automatic User Security

Used with the Ruckus ZoneDirector, the Ruckus ZoneFlex 2942 provides first-of-its-kind automatic, robust user security enforcement. Provisioning secure wireless access often involves configuring all the client devices with a wireless setting such as an SSID and encryption key. Typically organizations use a single pre-shared key for all employees. This is a security problem and an ongoing operational headache.

A patented smart antenna array integrates six high-gain vertically-polarized and six horizontally-polarized antenna elements. This enables up to 4096 potential antenna combinations and up to 9 dBi gain, thereby delivering unprecedented range extension and signal reliability. The dual polarized smart antenna increases the effectiveness of spatial-multiplexing, resulting in higher data rates.
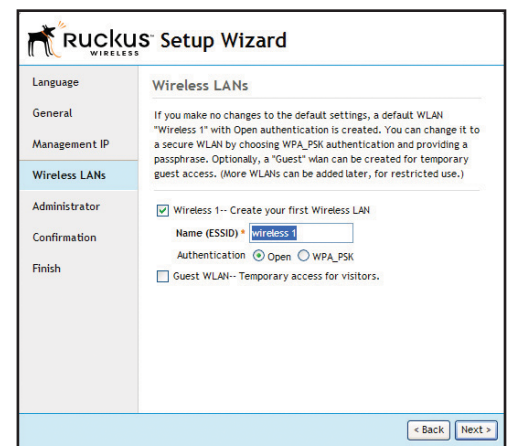
AC power

External RP-SMA RF Connector

10/100 802.3 af PoE
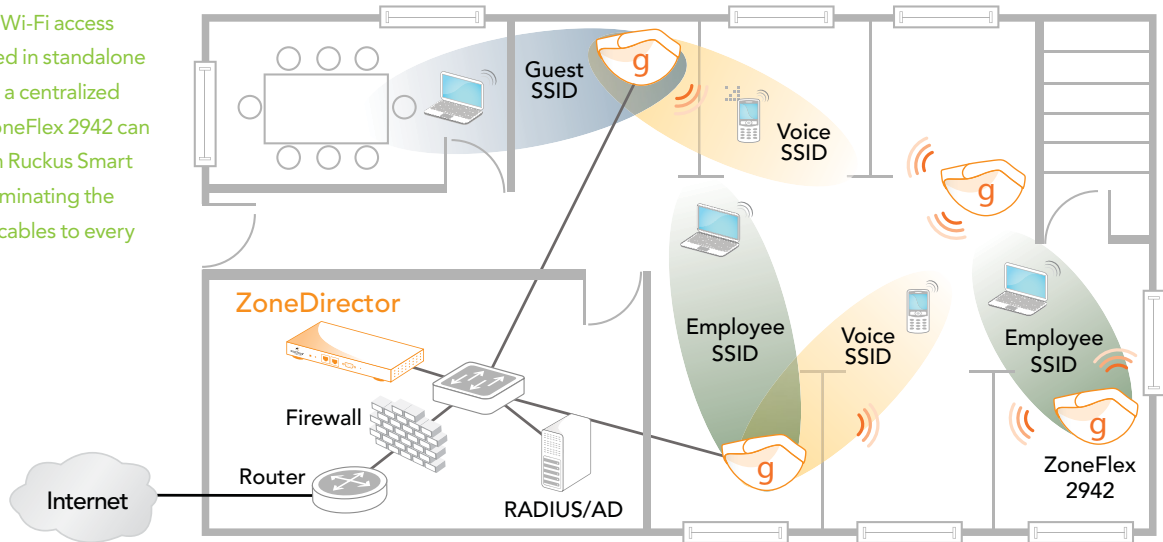
10/100 Ethernet

Soft reset

An intuitive web-based wizard in the Ruckus ZoneDirector enables quick and easy configuration of each ZoneFlex 2942 in a matter of minutes.

ZoneFlex 2942 Smart Wi-Fi access points can be deployed in standalone mode or managed by a centralized ZoneDirector. The ZoneFlex 2942 can also be deployed with Ruckus Smart Mesh Networking, eliminating the need to run Ethernet cables to every access point.

Ruckus Dynamic PSK™ on the Ruckus ZoneDirector and ZoneFlex 2942 automates this process to assure integrity of the user authentication system. First-time users simply plug their computers into the LAN and specify a URL that directs them to a captive 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 their device is no longer trusted.

Business-Class, Multimedia Hotspots

The ZoneFlex 2942 lets operators build a new class of hotspots and offers multimedia hotspot services. Equipped with a dual-polarized directional antenna system, the ZoneFlex 2942 delivers stable connectivity to any Wi-Fi-enabled handheld device and flicker-free support for concurrent video streams and voice over Wi-Fi calls.

Differentiated Services with Multiple SSIDs

Up to eight discrete SSIDs can be configured within each Ruckus ZoneFlex 2942, each with unique broadcast, QoS, security and management parameters assigned. This enables hot-zone operators to easily offer tiered services to different user or traffic types. Enterprises can use this features to differentiate guest, contractor and employee access policies or to segment different traffic types.

Dynamic RF Management

A Ruckus ZoneFlex WLAN is inherently RF-coordinated as BeamFlex automatically steers Wi-Fi signals toward each receiver, and away from noise, in real time. And unlike omni antennas, BeamFlex does not constantly radiate in all directions, thereby minimizing the chances of adjacent AP interference. As a last resort, the Ruckus ZoneDirector can dynamically exert control over the RF channel assignment and transmit power levels on the ZoneFlex APs, to further optimize the RF environment without manual intervention.

FEATURES

- Integrated smart antenna array with over 4,000 unique patterns designed for triple-play services
- Automatic interference avoidance, optimized for high-density environments
- Two- to four-times extended range and coverage
- 20 Mbps of guaranteed user throughput to any corner of a 10,000 sq. ft facility
- Four queues per station
- Eight BSSIDs with unique QoS and security policies
- WEP, WPA-PSK, 802.1X
- Smart Mesh Networking (with ZoneDirector)
- Zero-IT and Dynamic PSK (with ZoneDirector)
- Admission control/load balancing (with ZoneDirector)
- Captive portal and guest accounts (with ZoneDirector)
- RADIUS and Active Directory support (with ZoneDirector)
- Advanced RF management (with ZoneDirector)
- Two 10/100 Mbps Ethernet ports allowing for daisy chaining of APs and connection of local devices
- Power over Ethernet (PoE) for easy deployment
- Ceiling or wall mountable
- Kensington lock support
- Limited lifetime warranty coverage

Specifications

PHYSICAL CHARACTERISTICS

POWER
- External power adapter
- Input: 110-240V AC
- Output: 12V DC, 1A
- Power over Ethernet Class 0

PHYSICAL SIZE
- 19.43cm (L), 14.43cm (W), 10.16cm (H)

WEIGHT
- 680 grams

ANTENNA
- Internal software-configurable antenna array with directional and omni high-gain elements that provide up to 4,000 unique antenna patterns
- External RP-SMA connector

ETHERNET PORTS
- 2 ports, auto MDX, auto-sensing 10/100Mbps, RJ-45
- Power over Ethernet (802.3af)

LED DISPLAY
- Power/status, Ethernet status, wireless status, wireless network quality indicator, Director status

LOCK OPTION
- Integrated Kensington lock

ENVIRONMENTAL CONDITIONS
- Operating Temperature: 32°F (0°C) - 122°F (50°C) with PoE
- Operating humidity: 15% - 95% non-condensing

PERFORMANCE AND SUPPORTED CONFIGURATIONS

CONCURRENT STATIONS
- Up to 100

TARGET UDP THROUGHPUT
- 15-20Mbps (54Mbps bursts) sustainable throughput for a 5000 sq. foot (460 sq meter) area

SIMULTANEOUS Vo-Fi CLIENTS
- Up to 20

TRAFFIC MANAGEMENT AND QUALITY OF SERVICE

CLASSES OF SERVICE
- Voice, video, best effort and background

SOFTWARE QUEUES
- Four per station

802.11e
- Supported

AUTOMATIC TRAFFIC CLASSIFICATION
- Automatic type of service tagging for multicast video packets

RATE LIMITING
- Supported

VLAN SUPPORT
- 802.1Q

HEURISTIC CLASSIFICATION
- Supported

DEPLOYMENT

OPTIONS
- Managed by ZoneDirector
- Individually managed
- Managed by FlexMaster™

MANAGEMENT

CONFIGURATION
- Web user interface, CLI (Telnet), SSH HTTP/S, SNMP statistics interface. TR-069 through FlexMaster

STATISTICS
- LAN, wireless and associated stations (accessible via Web UI)

AUTO AP SOFTWARE UPDATES
- FTP or TFTP, remote auto available

WI-FI

STANDARDS
- 802.11b/g

SUPPORTED DATA RATES
- 54,48,36,24,18,12,11,5.5,2,1 Mbps

CHANNELS
- US/Canada: 1-11
- Europe (ETSI X30): 1-13
- Japan X41: 1-13

AUTO CHANNEL SELECTION
- Supported

RF POWER OUTPUT
- Max transmit power 24 dBm
- Country-specific power settings are configurable

TRANSMIT POWER CONTROL
- Supported

BSSID
- Up to eight

POWER SAVE
- Supported

WIRELESS SECURITY
- WEP, WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i
- Authentication via 802.1X with the ZoneDirector, local authentication database, support for RADIUS and ActiveDirectory

CERTIFICATIONS
- U.S., Europe, Canada, Australia, Chile, Colombia, Hong Kong, Indonesia, India, Mexico, New Zealand, Philippines, Singapore, Saudi Arabia, Taiwan, Thailand, UAE
- Plenum-rated (UL-2043 in process)
- WEEE/RoHS compliance
- Wi-Fi alliance certification

Product Ordering Information

Model	Description
ZoneFlex 2942 802.11g Smart Wi-Fi Access Point	
901-2942-XX01	2-port centrally managed multimedia AP

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

ruckus WIRELESS™