Ruckus
Simply Better Wireless.

data sheet

PTS DATA CENTER SOLUTIONS
For More Information:
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BENEFITS

Best-in-class user performance and density for 802.11g
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 for a 5,000 square foot facility

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

No RF expertise required
Smart antenna array eliminates AP placement issues and minimizes adjacent AP interference

Channel selection optimizes throughput
ChannelFly dynamic management, based on throughput measurements, not just interference, chooses the best channel to give users the highest throughput

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

"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

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

Hassle free migration to higher speed Wi-Fi
Support for standard 802.3af Power over Ethernet allows enterprises to use existing PoE switches without costly upgrades

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

ZoneFlex™ 2942

SMART WI-FI 802.11G ACCESS POINT

The Best Performing 802.11g Smart Wi-Fi Access Point with Adaptive Antenna Technology

The Ruckus ZoneFlex 2942 is the most affordable 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.

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.

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.

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 performing.

ZoneFlex™ 2942

SMART WI-FI 802.11G ACCESS POINT

Patented BeamFlex™ Technology Extends Signal Range, Improves Stability of Client Connections

The ZoneFlex 2942 Smart Wi-Fi access point integrates a software-controlled smart antenna array that delivers an additional 4 dB of BeamFlex gain in addition to the 3 dBi of physical antenna gain and 10 dB of interference mitigation. This allows a 2 to 4x improvement in signal range and a reduction in packet loss from the ability to automatically avoid interference and obstacles.

Advanced WLAN Applications with Smart/OS

When used with the Ruckus ZoneDirector Smart WLAN controller, the ZoneFlex 2942 supports a wide range of value-added applications such as guest networking, Smart Wireless Meshing, Dynamic PSK, hotspot authentication, wireless intrusion detection and many more. With Smart/OS, up to 2,048 discrete WLANs can be created and mapped to the same or different APs or VLANs. In a centrally managed configuration, the ZoneFlex 2942 works with a wide range of authentication servers including Microsoft's Active Directory, LDAP, and RADIUS.

Flexible Deployment Options

ZoneFlex 2942 APs can be deployed as a standalone AP or as part of a centrally managed wireless LAN using ZoneDirector Smart WLAN controllers. ZoneFlex 2942's can be deployed across any L2/L3 network, and can bridge traffic onto the local network, tunnel to a central location using L2TP or PPPoE, or route between the WAN and NAT'ed private subnets. It can be wired to the network or connected wirelessly by meshing to another AP when Ethernet cabling is unavailable. When used with ZoneDirector, the ZoneFlex 2942 is automatically configured through the network making deployment quick and easy.

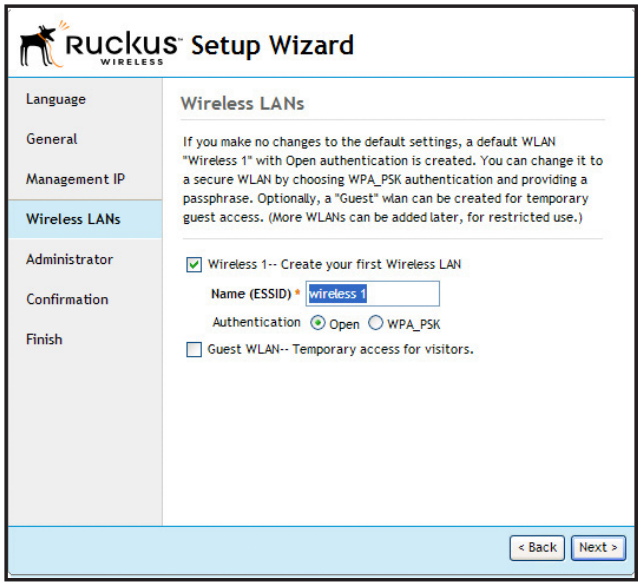
Complete Local and Remote Management

The ZoneFlex 2942 can be managed as a standalone AP through a Web-based GUI, using SNMP or through the Ruckus FlexMaster Wi-Fi remote management system. Local management can also be performed using the ZoneDirector Smart WLAN controller. FlexMaster is a LINUX-based software platform that uses industry-standard protocols to perform bulk configuration, fault detection, monitoring and a wide range of troubleshooting capabilities over a wire area connection. The ZoneDirector enables local management and control of APs, adding value-added services such as transmit power control, guest networking and meshing.

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.

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.

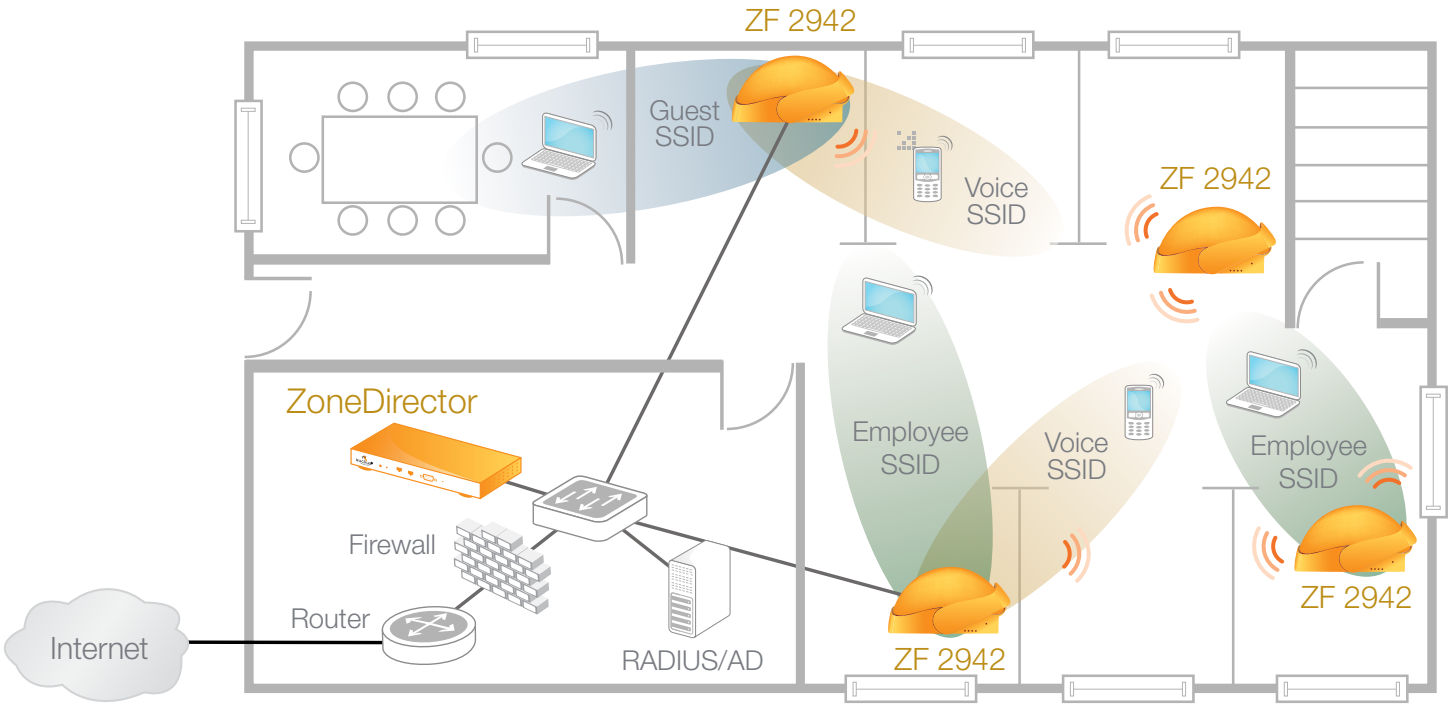


An intuitive web-based wizard in the Ruckus ZoneDirector enables quick and easy configuration of each ZoneFlex 2942 in a matter of minutes.

ZoneFlex™ 2942

SMART WI-FI 802.11G ACCESS POINT

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.



Business-Class, Multimedia Hotspots

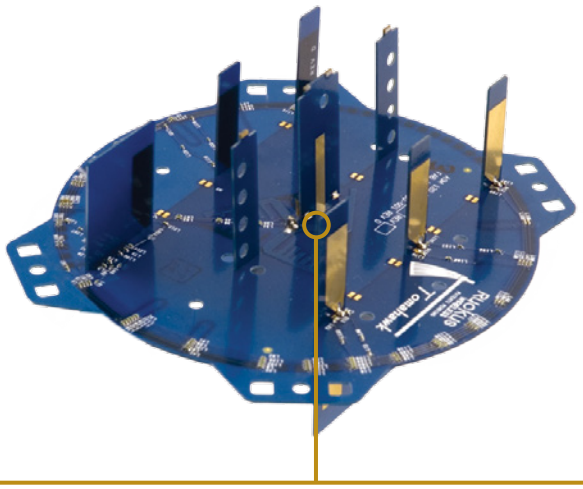
The ZoneFlex 2942 lets operators build a new class of hotspots and offers multimedia hotspot services. Equipped with a dual-polarized directional antenna system, the ZoneFlex 2942 delivers stable connectivity to any Wi-Fi-enabled handheld device and flicker-free support for concurrent video streams and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

Differentiated Services with Multiple SSIDs

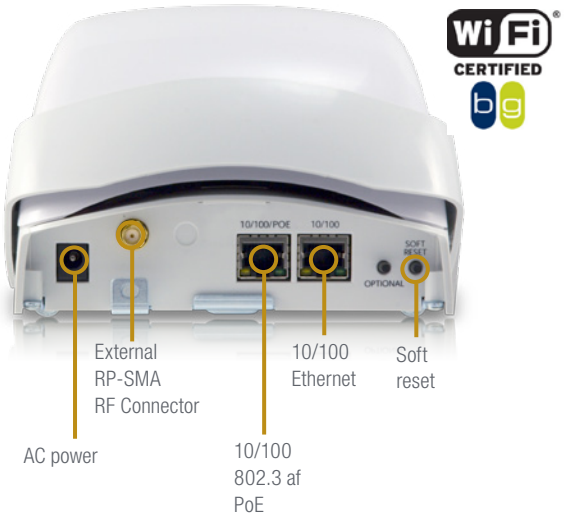
Up to eight discrete SSIDs can be configured within each Ruckus ZoneFlex 2942, each with unique broadcast, QoS, security and management parameters assigned. This enables hot-zone operators to easily offer tiered services to different user or traffic types. Enterprises can use this features to differentiate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

ZoneFlex™ 2942

SMART WI-FI 802.11G ACCESS POINT



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 an additional 4 dB BeamFlex gain on top of the 3 dBi of physical antenna 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.



FEATURES

- Adaptive antenna technology and advanced RF management
- Up to 4 dB BeamFlex gain; 3 dBi physical antenna gain and 10 dB interference mitigation
- Automatic interference mitigation, optimized for high density environment
- Integrated smart antenna array with over 4,000 unique patterns designed for triple-play services
- Standard 802.3 af Power over Ethernet (PoE)
- Router mode with NAT and DHCP services
- 2- to 4-times extended range and coverage
- Eight BSSIDs with unique QoS and security policies
- Advanced QoS packet classification and automatic priority for latency sensitive traffic
- Dynamic, per-user rate-limiting for hotspot WLANs
- WEP, WPA-PSK (AES), 802.1X support for RADIUS and Active Directory*
- Smart Mesh Networking*
- Zero-IT and Dynamic PSK*
- Admission control/load balancing*
- Airtime fairness
- Captive portal and guest accounts*
- Two 10/100 Mbps Ethernet ports allowing for daisy chaining of APs and connection of local devices
- Ceiling or wall mountable
- Kensington lock support
- Limited lifetime warranty

*when used with Ruckus ZoneDirector controller

Specifications

PHYSICAL CHARACTERISTICS	
POWER	• External power adapter • Input: 110-240V AC | Output: 12V DC, 1A • Power over Ethernet Class 2
PHYSICAL SIZE	• 19.43cm (L), 14.43cm (W), 10.16cm (H)
WEIGHT	• 680 grams (1.5 lbs.)
ANTENNA	• Internal software-configurable antenna array with directional and omni high-gain elements that provide over 4,000 unique antenna patterns • External RP-SMA connector
ETHERNET PORTS	• 2 ports, auto MDX, auto-sensing 10/100 Mbps, RJ-45 • Power over Ethernet (802.3af)
LOCK OPTION	• Integrated Kensington lock
ENVIRONMENTAL CONDITIONS	• Operating Temperature: 32°F (0°C) - 122°F (50°C) with PoE 32°F (0°C) - 104°F (40°C) with AC • Operating humidity: 15% - 95% non-condensing
POWER DRAW	• 7W (PoE) • 7W (12V DC)

RF	
ANTENNA	• Adaptive antenna array that provides 4,000+ unique antenna patterns
MAXIMUM EIRP	• 2.4 GHz: 26 dBm
PHYSICAL ANTENNA GAIN	• 3 dBi
BEAMFLEX* SINR TX GAIN	• Up to 4 dB
INTERFERENCE MITIGATION	• Up to 10 dB
MINIMUM RX SENSITIVITY	• Up to -99 dBm

*BeamFlex gains are statistical system level effects translated to enhanced SINR here, and based on observations over time in real-world conditions with multiple APs and many clients

PERFORMANCE AND CAPACITY	
TARGET UDP THROUGHPUT	• 15-20Mbps (54Mbps bursts) sustainable throughput for a 5000 sq. foot (460 sq meter) area
CONCURRENT STATIONS	• Up to 100
SIMULTANEOUS VoIP CLIENTS	• Up to 20

MANAGEMENT	
DEPLOYMENT OPTIONS	• Standalone (individually managed) • Managed by ZoneDirector • Managed by FlexMaster
CONFIGURATION	• Web User Interface (HTTP/S) • CLI (Telnet/SSH), SNMP v1, 2, 3 • TR-069 vis FlexMaster

WI-FI	
STANDARDS	• 802.11b/g
SUPPORTED DATA RATES	• 54,48,36,24,18,12,11,9,6,5.5,2,1 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 *
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, Australia, Brazil, Canada, Chile, Colombia, Ecuador, Egypt, Hong Kong, India, Indonesia, Israel, Korea, Malaysia, Mexico, New Zealand, Pakistan, Philippines, Singapore, South Africa, Taiwan, Thailand, UAE, Uruguay, Vietnam • WEEE/RoHS compliance • Wi-Fi alliance certification • EN 60601-1-2
WIRELESS SECURITY	• WEP, WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i • Authentication via 802.1X, local authentication database, support for RADIUS, LDAP, and ActiveDirectory
CERTIFICATIONS	• U.S., Europe, Australia, Brazil, Canada, Colombia, Hong Kong, India, Israel, Malaysia, Mexico, New Zealand, Philippines, Singapore, Taiwan, Thailand, Vietnam • WEEE/RoHS compliance • EN 60601-1-2 • Wi-Fi Alliance Certification (Wi-Fi Certified™)

* Maximum power varies by country

Product Ordering Information

MODEL	DESCRIPTION
ZoneFlex 2942 802.11g Smart Wi-Fi Access Point	
901-2942-XX00	Two-port centrally managed multimedia AP, no power adapter
Optional Accessories	
902-0157-0000	Flat ceiling & wall mounting kit
902-0158-0000	Drop ceiling mounting kit
902-0159-XXYY	PoE injector (sold in quantities of 10 or 100)
902-0173-XX10	Power Supply (Qty. 10)
902-0152-XX11	Power Supply (Qty. 60)

PLEASE NOTE: When ordering ZoneFlex Indoor APs, you must specify the destination region by indicating -US, -IL, or -WW instead of XX. When ordering PoE injectors or power supplies, you must specify the destination region by indicating -US, -EU, -AU, -BR, -CN, -IN, -JP, -KR, -SA, -UK, or -UN instead of -XX.

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