data sheet

ZoneFlex™ 7321-U

SMART DUAL-BAND SELECTABLE 802.11n ACCESS POINT

BENEFITS

USB Backhaul
Support for carrier LTE / 3G backhaul with simple driver provisioning

Dual-band selectable
Dual-band selectable (2.4 GHz or 5 GHz) with a click of a button

High concurrent client capacity
Capable of supporting up to 256 concurrent Wi-Fi clients dependent on backhaul bandwidth

Extended range with transmit beamforming (TxBF)
Increases the signal gain by up to 3 dB and increases client reliability and performance

Advanced feature set maximizes performance/capacity
Integrated airtime fairness and capacity-driven channel selection minimizes interference and maximizes capacity

Unobtrusive lightweight design for fast and easy installation
Ceiling, wall or desktop mountable with integrated mounting features for easy deployment anywhere

Best in class channel selection with ChannelFly™
Capacity-driven channel selection predicts and automatically selects best performing channels based on statistical, real-time capacity analysis of all RF channels

Flexible deployment options
SmartCell™ 200 or controller-based deployment with any Ruckus ZoneDirector

Unmatched Price/Performance in a Dual-Band 802.11n Access Point

The ZoneFlex 7321-U is the ideal solution for carrier class Mi-Fi. For service providers who wish to monetize spectrum and for Internet providers, the 7321-U can be quickly and easily deployed in environments where there is limited wired connectivity. Also perfectly suited for transportation deployments, such as trains, busses, boats etc., the 7321-U can leverage LTE/3G mobility to provide seamless Wi-Fi to passengers or employees. The 7321-U is also an ideal solution for retail vendors wishing to back-up their existing PoS systems in cases of WAN failure or downtime as well as many other enterprise vendors with the need for a WAN back-up system.

The Ruckus ZoneFlex 7321-U is a two spatial stream (2x2:2), dual-band selectable access point (AP) that delivers the highest performance at the most competitive price point in the market.

Unlike other APs in its class, ZoneFlex 7321-U supports transmit beamforming (TxBF) to increase signal gain of up to 3 dB.

In an ultra sleek, unobtrusive and lightweight form factor (7 oz. / 198 g.), the ZoneFlex 7321-U supports up to 256 concurrent clients (performance is dependent on backhaul bandwidth).

The ZoneFlex 7321-U comes with a myriad of advanced features that maximizes Wi-Fi performance and capacity including airtime fairness, and capacity-driven auto channel selection (ChannelFly™).

When used with the Ruckus ZoneDirector line of Smart WLAN controllers, the ZoneFlex 7321-U supports the full complement of Smart O/S features such as, guest access, per user thresholds and Dynamic Pre-Shared Keys.

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Best price/performance of any entry-level AP

The ZoneFlex 7321-U offers the industry's best price/performance of any 2x2:2 entry-level AP in its class, making it ideal for single AP deployments, SMB requirements and emerging countries where high-capacity/value are essential.

ChannelFly for optimal wireless performance

The ZoneFlex 7321-U uniquely supports an innovative approach to automatic channel selection called ChannelFly. A capacity-driven approach to auto channel selection based on observed channel traffic, ChannelFly uses statistic modeling to learn and select the best performing RF channel. It relies on actual capacity on all channels across both 2.4 and 5 GHz frequencies to automatically move clients (using 802.11h) to a better channel with less interference and more capacity.

Simplified user security with Dynamic PSK

With the ZoneDirector, the ZoneFlex 7321-U radically simplifies Wi-Fi security for users and IT administrators through the use of Dynamic Pre-Shared Keys. Once users successfully authenticate, a unique pre-shared encryption key is generated and automatically installed on the user's device — along with the requisite SSID. This eliminates the tedious configuration of wireless settings and eases the burden of installing the same PSK (that could be easily compromised) on every user device.

Differentiated services with multiple SSIDs

Up to 8 discrete SSIDs are supported within the Ruckus ZoneFlex 7321-U, each with unique broadcast, QoS, security and management parameters. Up to 2,048 discrete WLANs can be created and mapped to the same or different AP or VLAN. This lets hot-zone operators easily offer tiered services to different users or traffic types. Enterprises can use this feature to differentiate guest, contractor and employee access policies or to segment different traffic types.

Advanced WLAN applications with Smart/OS

With the Ruckus ZoneDirector Smart WLAN controller, the ZoneFlex 7321-U supports a wide range of value-added applications such as guest networking, Smart Wireless Meshing, Dynamic PSK, hotspot authentication, wireless intrusion prevention and many more. WLANs can be grouped and shared by specific APs. In a centrally managed configuration, the ZoneFlex 7321-U works with a variety of authentication servers such as AD, LDAP, and RADIUS.

High performance hot spots

The 7321-U uniquely supports the WISPr protocol to provide universal authentication method or UAM (browser-based login at a captive portal), walled garden, time-based user session control, and additional RADIUS attributes for hotspot service settings.

Auto Recovery ☑ AP reboots if disconnected from ZoneDirector for more th

Access Point USB Software Packages

This table lists supported Access Point USB Software Packages. Click Browse to add an Software Package.

USB Device	VID	PID	Version	Actions
Verizon Wireless 4G LTE USB Modem 551L	0x1410	0xb001	1.0	Delete
ATT USBConnect Momentum 4G LTE	0x0f3d	0x68aa	1.0	Delete
Huawei E392 4G LTE USB Storage Device	0x12d1	0x1505	1.0	Delete
Huawei E392 4G LTE USB Modem Device	0x12d1	0x1506	1.0	Delete
ATT USBConnect Momentum 4G LTE	0x1199	0x0fff	1.0	Delete

Import a new USB Software Package

Browse

As part of a centrally controlled wireless LAN, the ZoneFlex 7321-U is managed through an highly intuitive and simply to use graphical, point-and-click Web interface. The dashboard gives administrators a single and comprehensive view of the state of the wireless LAN. Above is a snapshot of the simple USB provisioning capability.

ZoneFlex™ 7321-U

## SMART DUAL-BAND SELECTABLE 802.11n ACCESS POINT

FEATURES

- USB backhaul with simple push provisioning for drivers

- Transmit beamforming for extended range

- Single radio with selectable 2.4 GHz or 5 GHz option for maximum flexibility

- Airtime fairness to optimize capacity and performance

- ChannelFly - advanced channel selection and interference mitigation

- Managed via SmartCell™ 200 or ZoneDirector

- Standard 802.3 af Power over Ethernet (PoE)

- Unobtrusive design with integrated mounting

- Eight BSSIDs with unique QoS and security policies

- Advanced QoS packet classification and automatic priority for latency sensitive traffic

- Limited lifetime warranty

- *Dynamic, per-user rate-limiting for hotspot WLANs**

- *WEP, WPA-PSK (AES), 802.1X support for RADIUS and Active Directory**

- *Zero-IT and Dynamic PSK**

- *Admission control / client load balancing**

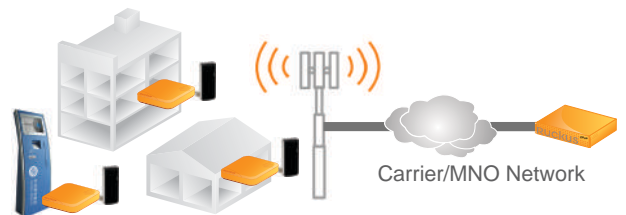- *Captive portal and guest accounts**

*when used with Ruckus ZoneDirector controller

Purchased Spectrum: 3G/LTE/WiMax

LWAPP Tunnel

Ruckus

ZoneDirector

Carrier/MNO Network

AP   USB Dongle
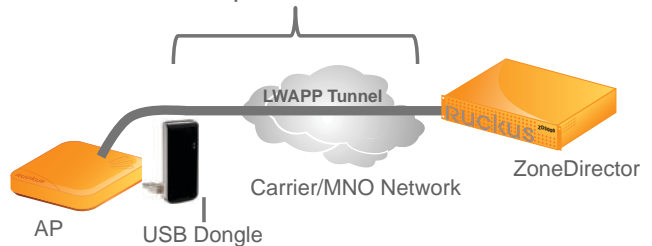
Monetize Carrier or Mobile Operator's Spectrum
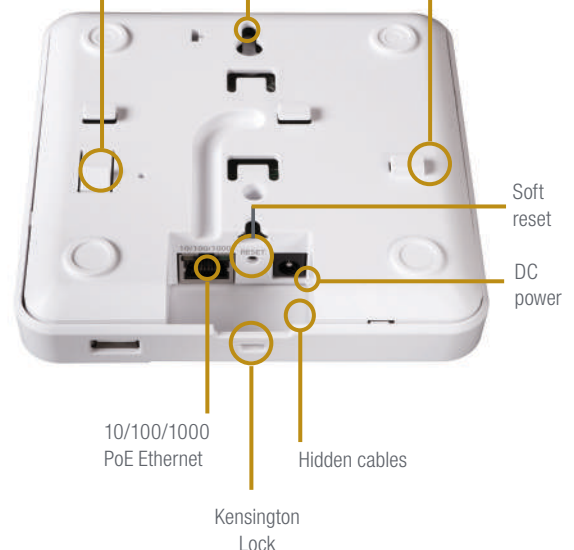

Carrier/MNO Network

Use Cases: Redundancy for Retail, Restaurant, Business, Hot Spot, Kiosk, for LAN backup and Temporary Networks

Release mechanism protected with security screw

Integrated key holes for wall or ceiling mount

Integrated T-bar mount

Soft reset

DC power

10/100/1000 PoE Ethernet

Hidden cables

Kensington Lock

5" (13 cm)

1" (2.8 cm)

5" (13 cm)

192 gm. (7 oz.)

Specifications

PHYSICAL CHARACTERISTICS

POWER	• 12V DC, 12.95 W • Power over Ethernet Class 3
PHYSICAL SIZE	• 13 cm (5.1") (L), 13 cm (5.1") (W), 2.8 cm (1.1") (H)
WEIGHT	• 198 g (7 oz.)
ETHERNET PORTS	• 1 port, auto MDX, auto-sensing 10/100/1000 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: 10% – 95% non-condensing
POWER DRAW	• 2W minimum • 3W average • 6.7W peak

PERFORMANCE AND CAPACITY

CONCURRENT STATIONS	• Up to 256 (Limited by backhaul)
SIMULTANEOUS CLIENTS	• Up to 20

APPLICATIONS

HOTSPOT	• WISPr
VOICE	• 802.11e/WMM • U-APSD

NETWORK ARCHITECTURE

IP	• IPv4, IPv6, dual-stack
VLANs	• 802.1Q (1 per BSSID or dynamic, per user based on RADIUS) • Port-based
802.1X FOR ETHERNET PORTS	• Authenticator • Supplicant
TUNNELING	• L2TP, PPPoE

MULTIMEDIA AND QUALITY OF SERVICE

802.11e/WMM	• Supported
SOFTWARE QUEUES	• Per traffic type (4), per client
TRAFFIC CLASSIFICATION	• Automatic, heuristics and TOS based or VLAN-defined
RATE LIMITING	• Dynamic, per-user or per-WLAN

MANAGEMENT

DEPLOYMENT OPTIONS	• Managed by ZoneDirector • Managed by SmartCell™ 200
CONFIGURATION	• Web user interface (HTTP/S) • CLI (Telnet/SSH), SNMP v1, 2, 3
AUTO SOFTWARE UPDATES	• FTP or TFTP, remote auto available

WI-FI

STANDARDS	• 802.11b/g/a/n
SUPPORTED DATA RATES	• 54,48,36,24,18,12,11,9,6,5.5,2,1 Mbps • 802.11n data rates
AUTO CHANNEL SELECTION	• Supported
RF POWER OUTPUT	• Max transmit power: 26 dBm (2.4 GHz); 24 dBm (5.0 GHz) • 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, 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™)

PLEASE NOTE: The 7231-U is a carrier specific product that requires customization for the USB driver. As such, minimum quantities of 1,000 units are required for purchase.

Product Ordering Information

MODEL	DESCRIPTION
ZoneFlex 7321-U 802.11n Smart Wi-Fi Access Point	
901-7321-XX00	Single-port centrally managed AP, no power adapter
Optional Accessories	
902-0162-XXYY	PoE injector (264 VAC 47-63 Hz)
902-0173-XX10	Power Supply (264 VAC 47-63 Hz)

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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