ZoneFlex™ 7762-S

Dual-Band 802.11n Smart Wi-Fi Outdoor Sector AP

World's First Concurrent 2.4/5GHz 802.11n Sector Access Point with Dynamic Beamforming

The Ruckus ZoneFlex 7762-S is the industry's first 802.11n outdoor access point featuring a long-range, high-gain sectorized smart antenna array for unprecedented range, throughput and reliability at a fraction of the cost of conventional alternatives.

The ZoneFlex 7762-S uniquely integrates dynamic beamforming technology combined with unique interference avoidance technology to deliver up to 10dBi of signal gain and -15dB of interference rejection within in a 120° azimuth. This provides a remarkable increase in Wi-Fi coverage, better signal penetration into buildings, and more resilient mesh connections that automatically adapt to changing environmental conditions.

Supporting advanced Smart Mesh Networking, the ZoneFlex 7762-S is perfect for providers looking to quickly and economically expand branded broadband services, offload data traffic from congested 3G networks, deploy multimedia hotspots or offer wireless broadband services where fixed line access is limited. Separate radios for access and backhaul traffic deliver high-throughput to clients.

The ZoneFlex 7762-S can be centrally managed by the ZoneDirector Smart WLAN controller as part of a unified indoor/outdoor wireless LAN or deployed as a standalone AP and managed individually or through the FlexMaster remote Wi-Fi management system.

The ZoneFlex 7762-S implements Ruckus-patented BeamFlex™ smart antenna technology that enables consistent, high-performance, extended coverage and multimedia support. A Web-based wizard allows any computer user to configure ZoneFlex 7762-Ss through the ZoneDirector™ — creating a secure and sophisticated WLAN in a matter of minutes.

Ruckus ZoneFlex 7762-Ss simply plug into any Ethernet network and automatically discover the ZoneDirector. No RF tuning, no client configuration needed. A true plug-and-play outdoor WLAN that is ready to use.

BENEFITS

Unmatched Wi-Fi range and reliability
Automatic dynamic beamforming combined with unique interference avoidance technology delivers up to 10dBi of signal gain and -15dB of interference rejection in a 120° azimuth

Unprecedented outdoor Wi-Fi performance
Advanced smart Wi-Fi design with concurrent 802.11n radios delivers 150 Mbps of sustained throughput between mesh APs 600 meters apart and 50 Mbps of sustained throughput to clients 300 meters away

Unified, centralized Wi-Fi management eases administration
ZoneDirector and/or FlexMaster provide a detailed view into and control over both indoor and outdoor Smart Wi-Fi APs enabling seamless and system-wide administration of the entire wireless environment

Simplicity and elegance make deployment a breeze
A sleek, lightweight design hiding external antennas is combined with ultra-simple, Wizard-based configuration to make configuration and installation as simple as it gets, performed in minutes, not hours

Ideal for suburban/low-rise coverage
Directional, high-gain antennas dynamically combine to deliver two- to four-times the coverage over typical outdoor APs

Proven support for IP-based voice and video over Wi-Fi
A directional antenna array and expert QoS software optimize delay-sensitive, IP video and high-density voice over Wi-Fi (VoFi) applications and PoE output allows connecting other devices such as an IP camera

Smart meshing streamlines costly and complex deployment
Integrated Smart Mesh Networking technology automates deployment and eliminates running expensive cables to every outdoor AP

Hardened enclosure for outdoor deployment
IP-67 water and dust proof plastic enclosure with flexible mounting options ensures that no distortion of Wi-Fi signals is introduced

Enables a myriad of new services and service opportunities
Smart Wi-Fi applied outdoors now enables new revenue-generating services such as community Wi-Fi, IP-video applications, multimedia hotspots, extended WLAN services outdoors and 3G data offloading

Ruckus
WIRELESS™

An automatic signal optimizer modifies RF transmissions based on the orientation of the access point

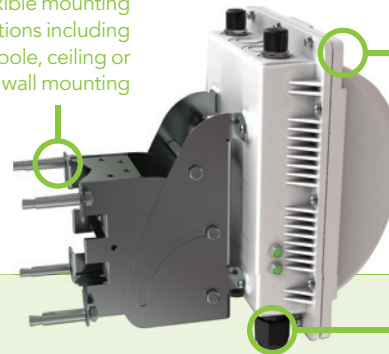Simple wall-mounting options make deployment fast and easy

Pole-mounting can be performed in minutes with all configuration and management performed centrally

Flexible mounting options including pole, ceiling or wall mounting

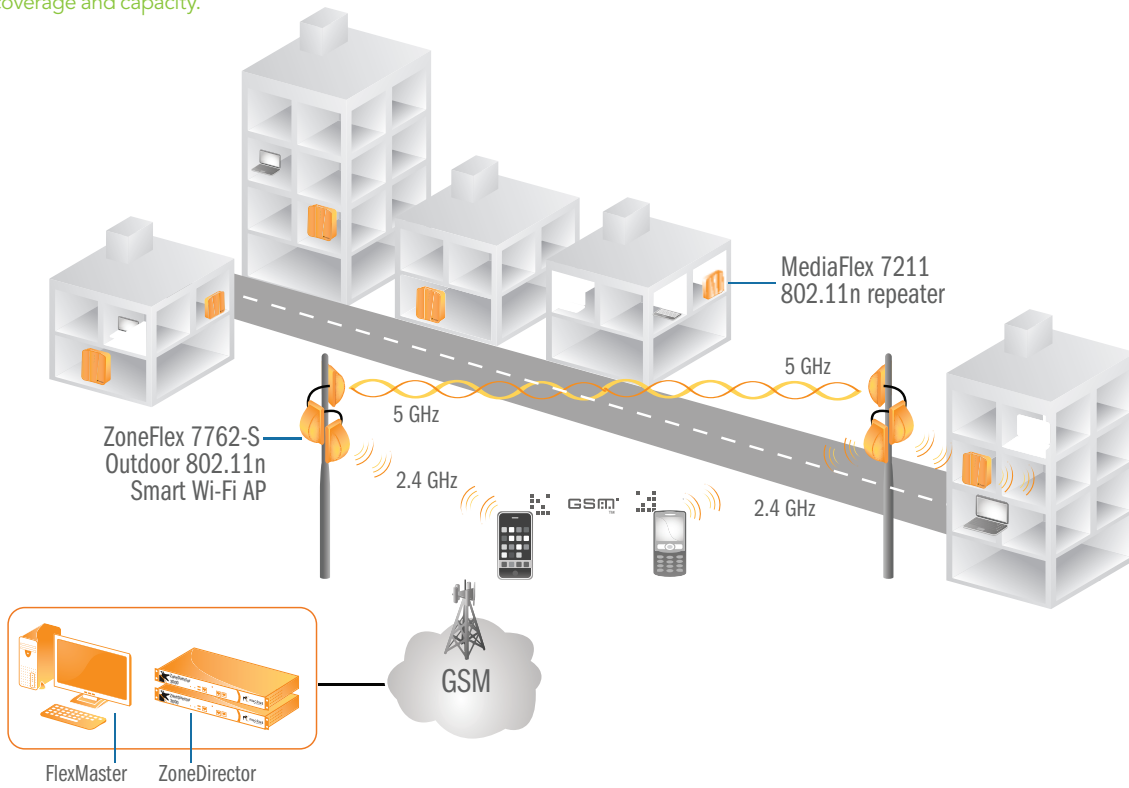ZoneFlex 7762-S can be deployed in harsh environmental conditions ranging from -40°C – 65°C (-40°F – 149°F)

Power over Ethernet (PoE) output for surveillance camera

A patented, sectorized smart antenna array in each ZoneFlex 7762-S outdoor AP integrates horizontally and vertically polarized high-gain, directional antenna elements to provide 24 potential signal paths to any given end device while delivering up to 10dBi in signal gain and up to 15dB of interference avoidance within a 120 degree azimuth for unprecedented range extension, signal reliability and higher data rates.

- Concurrent dual-band (5GHz/2.4GHz) support
- Dynamic beamforming and advanced RF management
- Up to 10dBi signal gain / -15dB interference rejection, 120° coverage
- Automatic interference avoidance, optimized for high-density environments
- Integrated smart antenna array with 24 unique patterns for ultra reliability
- Standard 802.3af/at Power over Ethernet (PoE)
- Ruckus custom high power PoE injector included
- Standard 802.3af output for surveillance camera
- Wall, pole or ceiling mountable
- Built-in heater for cold climate (-40° C)
- 2 to 4 times extended range and coverage
- Multicast IP video streaming
- 600 Mbps of user throughput (300 Mbps/radio)
- Four queues per client station
- Advanced QoS packet classification and automatic priority for latency-sensitive traffic
- 16 BSSIDs with unique QoS and security policies
- WEP, WPA-PSK (AES), 802.1X support for RADIUS and Active Directory*
- Smart Mesh Networking*
- Zero-IT and Dynamic PSK*
- Admission control/load balancing*
- Band steering and airtime fairness support
- Captive portal and guest accounts *
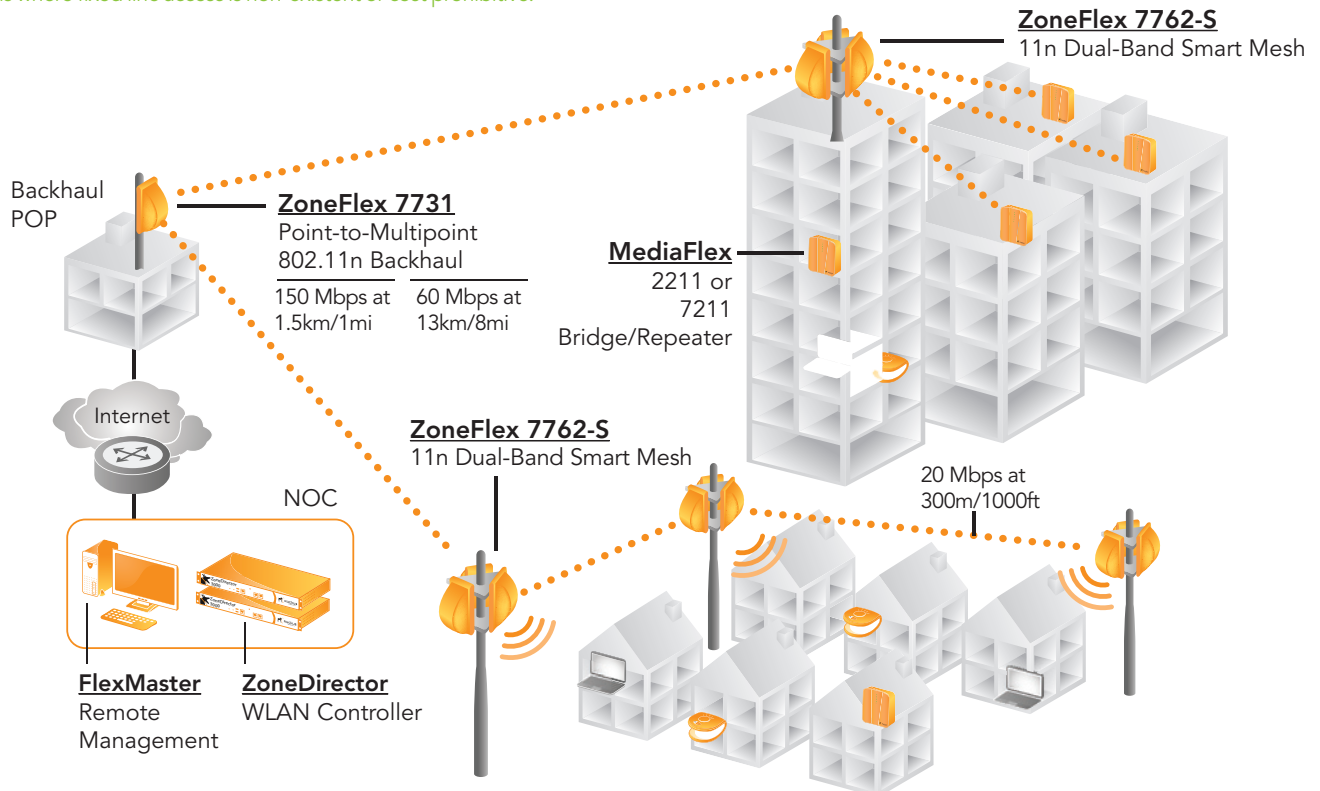
*when used with Ruckus ZoneDirector controller

3G Offload

Perfect for offloading data traffic from 3G networks, the ZoneFlex 7762-S allows the cost-effective extension of carrier-branded broadband services, optimizing coverage and capacity.

MediaFlex 7211
802.11n repeater

5 GHz

5 GHz

5 GHz

ZoneFlex 7762-S
Outdoor 802.11n
Smart Wi-Fi AP

2.4 GHz

GSM™

2.4 GHz

GSM

FlexMaster   ZoneDirector

WIRELESS BROADBAND ACCESS

A long-range, adaptive smart antenna system within each ZoneFlex 7762-S allows providers to reliably deliver new wireless broadband access services in areas where fixed line access is non-existent or cost prohibitive.

ZoneFlex 7762-S
11n Dual-Band Smart Mesh

Backhaul
POP

ZoneFlex 7731
Point-to-Multipoint
802.11n Backhaul

150 Mbps at 1.5km/1mi	60 Mbps at 13km/8mi

MediaFlex
2211 or
7211
Bridge/Repeater

Internet

NOC

ZoneFlex 7762-S
11n Dual-Band Smart Mesh

20 Mbps at
300m/1000ft

FlexMaster
Remote
Management

ZoneDirector
WLAN Controller

Specifications

PHYSICAL CHARACTERISTICS

POWER	• Power over Ethernet and 12V DC
PHYSICAL SIZE	• 23.9 cm (L), 19.5 cm (W), 14.1 cm (H)
WEIGHT	• 1900 grams (4.19 lbs.)
ANTENNA	• Internal software-configurable (2.4GHz only) antenna array with high-gain elements that provide 24 unique antenna patterns for 120° coverage
	• 5GHz external antenna connectors (required)
ETHERNET PORTS	• 2 ports, auto MDX, auto-sensing RJ-45
	• 10/100/1000 Mbps Power over Ethernet (802.3at) input
	• 10/100 Mbps Power over Ethernet (802.3af) output
ENVIRONMENTAL CONDITIONS	• IP-67 rated
	• Operating air temperature: -40°C – 65° C (-40°F – 149°F) -20C when heater disabled
POWER DRAW	• 12VDC 15W max, supports AP functions only
	• POE 12.95W for AP functions, 45W max with heating and POE out functions

PERFORMANCE AND SUPPORTED CONFIGURATIONS

CONCURRENT STATIONS	• Up to 100/radio
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
PoE INJECTOR	• Ruckus custom high power PoE injector included

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	• IEEE 802.11a/b/g/n
	• 2.4GHz and 5GHz concurrent operation
SUPPORTED DATA RATES	• **802.11n:** 6.5Mbps – 130Mbps (20MHz) 6.5Mbps – 300Mbps (40MHz)
	• **802.11a:** 54, 48, 36, 24, 18, 12, 9 and 6 Mbps
	• **802.11b:** 11, 5.5, 2 and 1 Mbps
	• **802.11g:** 54, 48, 36, 24, 18, 12, 9 and 6 Mbps
RADIO CHAINS	• 3 x 3
SPATIAL STREAMS	• 2
MAX RF POWER OUTPUT	• 28 dBm/600 mW
CHANNELIZATION	• 20 MHz and/or 40 MHz
FREQUENCY BAND	• IEEE 802.11n: 2.4 – 2.484 GHz and 5.15 – 5.875 GHz
	• IEEE 802.11a: 5.15 – 5.875 GHz
	• IEEE 802.11b: 2.4 – 2.484 GHz
OPERATING CHANNELS	• 2.4 GHz channels: US/Canada: 1-11, Europe (ETSI X30): 1-13
	• 5 GHz channels: Country dependent for the following channel ranges: 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165, 169, 173
BSSID	• Up to eight per radio (16 total)
POWER SAVE	• Supported
WIRELESS SECURITY	• WEP, WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i
	• Authentication via 802.1X with the Zone-Director, local authentication database, support for RADIUS and ActiveDirectory
CERTIFICATIONS	• U.S., Europe, Canada, Australia, India, China, Hong Kong, Malaysia, Philippines, New Zealand
	• WEEE/RoHS compliance
	• Wi-Fi Alliance Certification (Wi-Fi Certified™)

Product Ordering Information

Model	Description
ZoneFlex 7762-S Dual Band 802.11n Outdoor Sector Access Point	
901-7762-XX51	Centrally managed concurrent dual band 802.11n outdoor sector access point, includes universal pole/wall mounting bracket.
Mounting Bracket	
902-0166-0000	Flat mounting bracket

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

ruckus ™ WIRELESS

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