ZoneFlex™ 7762 Series

Dual-Band 802.11n Smart Wi-Fi Outdoor AP

World's First Concurrent 2.4/5GHz 802.11n Access Point with Adaptive Antenna Technology and Smart Wi-Fi Meshing

The Ruckus ZoneFlex 7762 Series represents a completely new class of outdoor Wi-Fi products that unleashes the promise of 802.11n — delivering unparalleled simplicity, throughput, range and reliability at a fraction of the cost of conventional alternatives.

The ZoneFlex 7762 Series is the first dual-band 802.11n outdoor access point (AP) to integrate adaptive antenna technology to enable much longer range signals, better signal penetration inside buildings, and more resilient mesh connections that automatically adapt to interference and changing environmental conditions.

Supporting advanced Smart Mesh Networking, the Ruckus ZoneFlex 7762 Series is perfect for service 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 throughout the mesh network.

The ZoneFlex 7762 Series is also ideal for hotels, resorts, multi-dwelling units, schools, warehouses and other enterprises needing to deliver broadband access from the outside in or to extend managed wireless LANs (WLANs) outdoors where Ethernet cabling is not possible.

The ZoneFlex 7762 Series 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 Series implements Ruckus-patented BeamFlex™ smart antenna technology that enables consistent, high-performance, extended coverage and multimedia support. Ruckus ChannelFly dynamic channel management optimizes client throughput by selecting the best channel to operate on. A Web-based wizard allows any computer user to configure ZoneFlex 7762 Series through the ZoneDirector™ — creating a secure and sophisticated WLAN in a matter of minutes.

Ruckus ZoneFlex 7762 Series 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

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

Best in class channel selection technology
ChannelFly dynamic channel management, based on throughput measurements, not just interference, chooses the best channel to give users the highest throughput

Environmentally hardened with AC power
Enables fast and easy mounting to street lights, traffic controls and other street furniture. Includes hardened enclosures for outdoor deployment with IP-67 rated enclosure

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 including carrier grade 3GPP, I-WLAN core networks and future 4G/LTE core

Unmatched Wi-Fi range and reliability
Adaptive antenna technology combined with unique interference mitigation technology delivers up to 6 dB of added signal gain and up to -15dB of interference mitigation and support for up to 500 clients in the AC

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

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

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 wireless backhaul for small cell cluster, and mobile data offload

Ruckus
Simply Better Wireless.

ZoneFlex™ 7762 Series

ZoneFlex 7762

**Dual-band 802.11n
3:3x2, 600 Mbps**

Smart antenna for 2.4/5GHz
19 elements, +4000 patterns
360° coverage

- Optimized for enterprise apps
- Ideal for dual-band environments
  (e.g., most clients are laptops)

ZoneFlex 7762-S

**Dual-band 802.11n
3:3x2, 600 Mbps**

Smart antenna for 2.4GHz
12 elements, 24 patterns
120° coverage,
5GHz external antennas

- Optimized for 3G offload
- Best 2.4GHz coverage and capacity at 120°
- Ideal for poles, exterior walls

ZoneFlex 7762-T

**Dual-band 802.11n
3:3x2, 600 Mbps**

Smart antenna for 2.4GHz
12 elements, +4000 patterns
360° coverage,
5GHz external antennas

- Optimized for 3G offload
- Ideal for poles, street corners, areas where
  3 APs cannot be mounted

ZoneFlex 7762-AC, ZoneFlex 7762-S-AC

**Dual-band 802.11n
3:3x2, 600 Mbps**

Smart antenna for 2.4GHz
12 elements, +4000 patterns
360° coverage,
5GHz external antennas

- Optimized for 3G offload
- Ideal for poles, street corners, areas where
  3 APs cannot be mounted
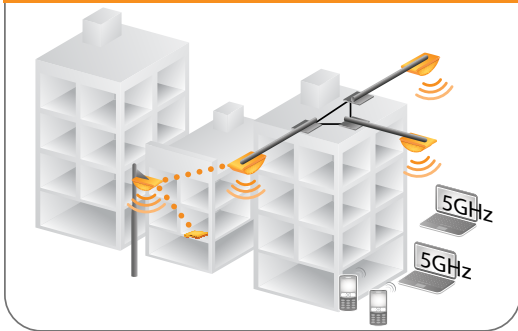- AC power for flexible deployment

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- Concurrent dual-band (5GHz/2.4GHz) support
- Adaptive antenna technology and advanced RF management
- Up to 6 dB signal gain / -15dB interference mitigation (ZF7762)
- Up to 6 dB signal gain / -15 dB interference mitigation (ZF7762-S)
- Up to 6 dB signal gain / -15 interference mitigation (ZF7762-T)
- Automatic interference avoidance, optimized for high-density environments
- Integrated smart antenna array with up to 4,000 unique patterns for ultra reliability
- Standard 802.3af/at Power over Ethernet (PoE)
- Ruckus custom high power PoE injector available
- Standard 802.3af output for surveillance cameras
- 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)
- 16 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*
- Band steering and airtime fairness support
- Captive portal and guest accounts *

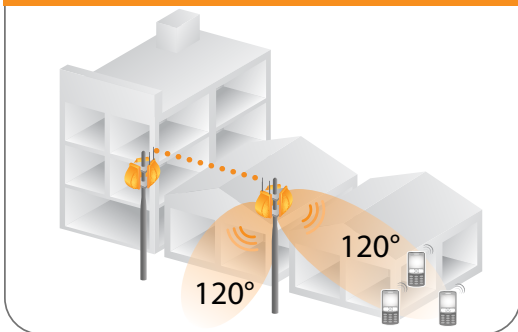*when used with Ruckus ZoneDirector controller

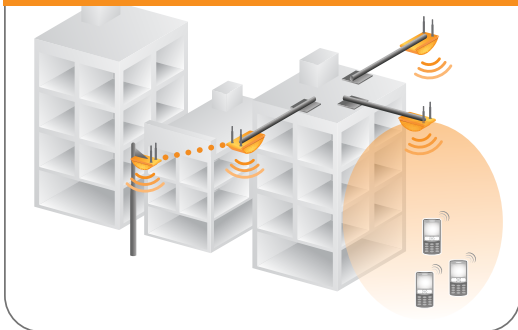### ZoneFlex 7762/7762-AC: General Purpose Outdoor, Enterprise

- First dual-band 802.11n smart outdoor AP with adaptive antenna array
- Designed for extreme conditions
- Smart channel selection
- Concurrent dual-band 802.11n
- 360° "beamforming" coverage
- 19 elements, +4000 patterns
- IP-67 rated, -40°C – 65°C
- Standalone or centrally managed by ZoneDirector or FlexMaster

ZoneFlex 7762-S/7762-AC: Long-range, horizontal coverage/capacity

- First smart sector 802.11n AP
- Optimized for horizontal, long-range coverage and high-density user environments
- Smart channel selection
- Concurrent dual-band 802.11n
- 120° smart sector 2.4GHz antenna for longer range
- External 5GHz antennas
- IP-67 rated, -40°C – 65°C
- Standalone or centrally managed by ZoneDirector or FlexMaster

ZoneFlex 7762-T: Mobile Data Offload

- Smart antenna optimized for 2.4GHz
- 360° "beamforming" coverage
- 12 elements, +4000 patterns
- Smart channel selection
- 5GHz external antennas
- Concurrent dual-band 802.11n
- IP-67 rated, -40°C – 65°C
- Managed by ZoneDirector and FlexMaster

Low profile bracket with "Any Angle" mounting

Power over Ethernet (PoE) output for metro picocell base station

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

Flexible mounting options including pole, ceiling or wall mounting

Specifications (7762, 7762-S, 7762-T)

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	• **ZF 7762:** Internal software-configurable dual band antenna array with directional and omni high-gain elements that provide over 4,000 unique antenna patterns • **ZF 7762-S:** Internal software-configurable 2.4GHz antenna array with directional high-gain elements that provide over 24 unique antenna patterns (requires external antenna for 5GHz operations) • **ZF 7762-T:** Internal software-configurable 2.4GHz antenna array with directional and omni high-gain elements that provide over 4,096 unique antenna patterns (requires external antenna for 5GHz operations)
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), -20°C when heater disabled
POWER DRAW	• 12.95W (PoE) • 15W (12V DC)

RF (7762, 7762-S)

ANTENNA	• Adaptive antenna array that provides 4,000+ unique antenna patterns
MAXIMUM EIRP	• 2.4 GHz: 35 dBm • 5 GHz: 31 dBm
PHYSICAL ANTENNA GAIN	• Up to 12 dBi (2.4 GHz) • Up to 10 dBi (5 GHz)
BEAMFLEX* SINR TX GAIN	• Up to 6 dB
BEAMFLEX* SINR RX GAIN	• Up to 4 dB
INTERFERENCE MITIGATION	• Up to 15 dB
MINIMUM RX SENSITIVITY	• Up to -95 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

RF (7762-T)

ANTENNA	• Adaptive antenna array that provides 4,000+ unique antenna patterns
MAXIMUM EIRP	• 2.4 GHz: 33 dBm • 5 GHz: 31 dBm
PHYSICAL ANTENNA GAIN	• Up to 10 dBi
BEAMFLEX* SINR TX GAIN	• Up to 6 dB
BEAMFLEX* SINR RX GAIN	• Up to 4 dB
INTERFERENCE MITIGATION	• Up to 15 dB
MINIMUM RX SENSITIVITY	• Up to -95 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	• Up to 150 Mbps sustained throughput over 300 meters between mesh nodes • Up to 50 Mbps sustained throughput over 150 meters to client devices
CONCURRENT STATIONS	• 256
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	• 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: 2
RF POWER OUTPUT	• 28 dBm/600 mW*
FREQUENCY BAND	• IEEE 802.11n: 2.4 – 2.484 GHz and 5.15 – 5.85 GHz • IEEE 802.11a: 5.15 – 5.875 GHz • IEEE 802.11b: 2.4 – 2.484 GHz
BSSID	• Up to eight per radio (16 total)
WIRELESS SECURITY	• WEP, WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i • Authentication via 802.1X, local authentication database, support for RADIUS and ActiveDirectory
CERTIFICATIONS	• U.S., Europe, Australia, Brazil, Canada, China, Egypt, Hong Kong, India, Japan, Korea, Malaysia, Mexico, New Zealand, Philippines, Singapore, South Africa, Taiwan, Thailand, UAE, Vietnam • WEEE/RoHS compliance • Wi-Fi Alliance Certification (Wi-Fi Certified™)

* Maximum power varies by country

Product Ordering Information

MODEL	DESCRIPTION
ZoneFlex 7762 Series 802.11n Outdoor Access Points	
901-7762-XX01	**7762:** Centrally managed concurrent dual band 802.11n outdoor access point, includes universal pole/wall/ceiling mounting bracket and power injector.
901-7762-XX91	**7762-T:** Centrally managed concurrent dual band 802.11n outdoor access point, includes universal pole/wall/ceiling mounting bracket and power injector.
901-7762-XX51	**7762-S:** Centrally managed concurrent dual band 802.11n outdoor access point, includes universal pole/wall/ceiling mounting bracket and power injector.
Optional Accessories	
911-1212-DP01	5 GHz directional antenna, dual-polarized 12.5 dBi gain and 120 degrees 3 dBm beam width*
911-0636-VP01	5 GHz Omni-directional antenna, vertically polarized, 5.5 dBi
911-0536-HP01	5 GHz Omni-directional antenna, horizontally polarized, 5 dBi
911-0636-VH01	Bundle of one 911-0636-VP01 and one 911-0536-HP01
902-0165-0000	Universal pole/wall/ceiling mounting bracket, spare (sold in quantities of 10)
902-0166-0000	Flat mounting bracket
902-0180-XX00	PoE injector, spare (sold in quantities of 10 or 100)

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

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Specifications (7762-S-AC & 7762-AC)

PHYSICAL CHARACTERISTICS

POWER	• Power over Ethernet and 100-240 VAC, 50/60Hz
PHYSICAL SIZE	• 23.9 cm (L), 19.5 cm (W), 14.1 cm (H)
WEIGHT	• 2177 grams (4.8 lbs.)
ANTENNA	• **ZF 7762-AC:** Internal software-configurable dual band antenna array with directional and omni high-gain elements that provide over 4,000 unique antenna patterns • **ZF 7762-S-AC:** Internal software-configurable 2.4GHz antenna array with directional high-gain elements that provide over 24 unique antenna patterns (requires external antenna for 5GHz operations)
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), -20°C when heater disabled
POWER DRAW	• 12.95W (PoE) • 14W typical / 43W peak (AC)

RF (7762-AC)

ANTENNA	• Adaptive antenna array that provides 4,000+ unique antenna patterns
MAXIMUM EIRP	• 31 dBm
PHYSICAL ANTENNA GAIN	• Up to 8 dBi (2.4 GHz) • Up to 10 dBi (5 GHz)
BEAMFLEX* SINR TX GAIN	• Up to 6 dB
BEAMFLEX* SINR RX GAIN	• Up to 4 dB
INTERFERENCE MITIGATION	• Up to 15 dB
MINIMUM RX SENSITIVITY	• Up to -95 dBm

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RF (7762-S-AC)

ANTENNA	• Adaptive antenna array that provides 24 unique antenna patterns
MAXIMUM EIRP	• 2.4 GHz: 35 dBm • 5 GHz: 31 dBm
PHYSICAL ANTENNA GAIN	• Up to 12 dBi (2.4 GHz) • Up to 10 dBi (5 GHz)
BEAMFLEX* SINR TX GAIN	• Up to 6 dB
BEAMFLEX* SINR RX GAIN	• Up to 4 dB
INTERFERENCE MITIGATION	• Up to 15 dB
MINIMUM RX SENSITIVITY	• Up to -95 dBm

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PERFORMANCE AND CAPACITY

TARGET UDP THROUGHPUT	• Up to 150 Mbps sustained throughput over 300 meters between mesh nodes • Up to 50 Mbps sustained throughput over 150 meters to client devices
CLIENT SUPPORT	• 500
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	• IEEE 802.11a/b/g/n • 2.4GHz and 5GHz concurrent operation
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RADIO CHAINS	• 3 x 3:2
RF POWER OUTPUT	• 28 dBm/600 mW
FREQUENCY BAND	• IEEE 802.11n: 2.4 – 2.484 GHz and 5.15 – 5.85 GHz • IEEE 802.11a: 5.15 – 5.875 GHz • IEEE 802.11b: 2.4 – 2.484 GHz
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, local authentication database, support for RADIUS and ActiveDirectory
CERTIFICATIONS	• U.S., Europe, Australia, Brazil, Canada, China, Egypt, Hong Kong, India, Japan, Korea, Malaysia, Mexico, New Zealand, Philippines, Singapore, South Africa, Taiwan, Thailand, UAE, Vietnam • WEEE/RoHS compliance • Wi-Fi Alliance Certification (Wi-Fi Certified™)

Product Ordering Information

MODEL	DESCRIPTION
ZoneFlex 7762-AC and 7762-S-AC 802.11n Outdoor Access Points	
901-7762-XX03	**7762-AC:** Centrally managed concurrent dual band 802.11n outdoor access point, includes any angle pole/wall mounting bracket
901-7762-XX53	**7762-S-AC:** Centrally managed concurrent dual band 802.11n outdoor access point, includes any angle pole/wall mounting bracket
Optional Accessories	
902-0182-0003	Spare outdoor mounting bracket, bare metal, any angle
902-0180-XX00	60W PoE injector 10/100/1000 Mbps with country-specific power cord
902-0183-0000	Spare data connector with weatherizing cable gland
902-0185-0000	Spare weatherized AC connector

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