The ZoneFlex 7782-N is the first dual-band 802.11n outdoor access point (AP) designed explicitly for very high density user environments such as stadiums, arenas, train stations, convention centers, and major metro areas.

The ZoneFlex 7782-N is the only AP on the market to integrate patented narrow beam BeamFlex™ technology with a 30º narrow beam antenna to deliver up to 3 dB of signal-to-interference-plus-noise (SINR) improvement above the antenna gain and up to 15 dB of interference mitigation. This enables much more focused Wi-Fi coverage and more resilient mesh connections that mitigate interference and provides resilience to harsh environmental conditions.

In addition, the ZoneFlex 7782-N uniquely leverages a predictive model for channel selection (ChannelFly) that uses actual activity to learn what channels will yield the most capacity to provide the highest client speeds and reduce interference.

Designed for easy installation within an ultra lightweight and low profile enclosure, the Ruckus ZoneFlex 7782-N is ideal for venue owners looking to quickly and economically deploy Wi-Fi in high-capacity environments such as stadiums, arenas, train stations, convention centers, and major metro areas. Using a very narrow and focused beam, the 7782-N APs can be deployed in close proximity, mitigating co-channel interference. This is critical as high density deployments require a large number of APs within a fixed space.

The ZoneFlex 7782-N can be centrally managed by the ZoneDirector Smart WLAN controller or the SmartCell™ Gateway 200 (SCG 200) as part of a unified indoor/outdoor wireless LAN, deployed as a standalone AP and managed individually, or through the FlexMaster remote Wi-Fi management system.

**BENEFITS**

- Ultra high density client support
  - Support for over 500 concurrent clients per AP

- High speed client performance with integrated 30º narrow beam array
  - Patented BeamFlex technology limits client contention to maximize user performance

- Light, slim design for easy deployment
  - Compact, lightweight design with integrated antennas provide flexible deployment options with quick and easy installation

- Onboard GPS receiver for location services
  - Integrated GPS receiver automatically populates each AP with GPS coordinates

- Predictive channel selection for increased capacity and reduced interference
  - ChannelFly automatically selects the best performing channel based on statistical, real-time capacity analysis of all RF channels

- Integrated AC and PoE power in and out
  - Easy installation on light poles and the ability to directly power devices such as small cells

- Unmatched Wi-Fi capacity and reliability
  - BeamFlex delivers up to 4 dB of added signal gain and up to 15 dB of interference mitigation

- Enhanced receive capabilities
  - Support for signal polarization diversity with maximal ratio combining (MRC) ensures reliable connectivity for mobile devices

- Integrated Smart Mesh backhaul
  - Resilient and high speed mesh links between APs reduce the need for expensive fiber and microwave alternatives to simplify deployment

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**ZoneFlex™ 7782-N**

30 DEGREE NARROW BEAM OUTDOOR AP

The Industry’s Highest Capacity, Highest Performing Access Point for Extreme, High Density Wi-Fi Deployments
ZoneFlex™ 7782-N
30 DEGREE NARROW BEAM OUTDOOR AP

FEATURES

• Concurrent dual-band (5GHz/2.4GHz) support
• Narrow beam antenna technology and advanced RF management
• 15dB interference mitigation
• Automatic interference avoidance, optimized for high-density environments
• PoE output supports up to 25 Watts to power small cells, surveillance cameras
• Polarization diversity for optimal mobile device performance
• Integrated AC power
• IP-67 rated, -40°C to +65°C
• Integrated GPS for location services
• Wall, pole or ceiling mountable
• Small, lightweight, and sleek form factor
• 2 to 4 times extended range and coverage
• Multicast IP video streaming
• 600 Mbps of user throughput (300Mbps/radio)
• 32 BSSIDs with unique QoS and security policies
• Auto packet classification and priority for latency-sensitive traffic
• Standalone or centrally managed by ZoneDirector, SCG 200, or FlexMaster
• Continuous spectrum analysis
• Dynamic, per-user rate-limiting for hotspot WLANs
• WPA-PSK (AES), 802.1X support for RADIUS and Active Directory*
• Smart Mesh Networking*
• BYOD, Zero-IT and Dynamic PSK*
• Admission control/load balancing*
• Band steering and airtime fairness
• Captive portal and guest accounts *
• Application recognition and control*
• SecureHotspot*
• SPOT location services*
• Band balancing*

*When used with Ruckus ZoneDirector controller

ZoneFlex 7782-N

Dual-band 802.11n 2:2x2, 600 Mbps
Internal narrow beam antenna for 2.4GHz and 5GHz 4 elements, 30° narrow sector coverage

• Well suited to extremely high-density deployments
• Can be used in mesh applications
• Best coverage and capacity at 30°

802.3at/af Power over Ethernet (PoE) output for metro picocell base station
Standard 802.3at/af Power over Ethernet (PoE) input option

Integrated AC power option

30° narrow beam antenna purpose-built for high density environments.
ZoneFlex™ 7782-N
30 DEGREE NARROW BEAM
OUTDOOR AP

7782-N with polarization diversity optimizing performance for handheld clients that constantly change orientation.

Purpose-built 30° narrow beam AP for very high density stadium environments.

High capacity AP supports up to 500 clients are purpose built for very high density environments.

Narrow beam antenna technology mitigates inter-cell interference, one of the biggest challenges in high-density deployments.

Protective vent to equalize pressure

Mounting points

AnyAngle mounting bracket for quick and easy installation

LED status indicators

11.8 cm (H)

23.9cm (L)

19.5 cm (W)

2.4kg
### Specifications

#### PHYSICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>POWER</th>
<th>AC Input</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Idle: 8W</td>
</tr>
<tr>
<td></td>
<td>Typical: 10W</td>
</tr>
<tr>
<td></td>
<td>Peak: 18W (PoE output off)</td>
</tr>
<tr>
<td></td>
<td>Peak: 50W (PoE output 25W)</td>
</tr>
</tbody>
</table>

**PoE Input**
- Idle: 6W
- Typical: 8W
- IEEE 802.3at/af

**Physical Size**
- 23.9 cm (L), 19.5 cm (W), 11.8 cm (H)

**Weight**
- 2.4 Kg

**Ethernet Ports**
- **PoE Input**
  - 10/100/1000Base-T 802.3, 802.3u, 802.3ab, 802.3at/af PoE PD Input up to 44W with high power PoE injector
  - Jumbo frame support* (2000 byte MTU)

- **PoE Output**
  - 10/100/1000Base-T 802.3, 802.3u, 802.3ab, 802.3at/af PoE PSE Output up to 25W
  - Jumbo frame support (2000 byte MTU)
  - PoE power out powered with AC in or 60W PoE injector

**Environmental**
- Operating temperature: -40 to -65°C
- Operating humidity: 5% to 100% condensing
- IP 67

**RF Antenna**
- 1 pattern

**Physical Antenna Gain**
- 9 dBi (2.4GHz); 15 dBi (5GHz)

**SINR RX Gain**
- Up to 3 dB

**Interference Mitigation**
- 15 dB

**Minimum RX Sensitivity*®**
- -100 dBM (2.4GHz); -95 dBM (5GHz)

*Rx Sensitivity varies by band, channel width, and MCS rate

#### WI-FI

**STANDARDS**
- IEEE 802.11a/b/g/n
- 2.4GHz and 5GHz concurrent operation

**Data Rates**
- **802.11n**: 6.5Mbps – 130Mbps (20MHz)
  - 6.5Mbps – 300Mbps (40MHz)
- **802.11a**: 54, 48, 36, 24, 18, 12, 9 and 6 Mbps
- **802.11g**: 54, 48, 36, 24, 18, 12, 9 and 6 Mbps

**Radio Chains**
- 2 x 2: 2

**RF Power Output**
- 26 dBM (2.4GHz) / 24 dBM (5GHz)**

**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 802.11g: 2.4 – 2.484 GHz

**BSSID**
- 32 per radio (64 per AP)*

**Advanced Radio Features**
- Narrow Beam Antenna Technology
- LDPC and ML receiver
- GPS
- Continuous spectrum analysis*

**Certifications***
- U.S., Europe, Argentina, Australia, Brazil, Canada, Chile, China, Columbia, Egypt, Hong Kong, India, Indonesia, Israel, Japan, Korea, Malaysia, Mexico, New Zealand, Peru, Philippines, Russia, Saudi Arabia, Singapore, South Africa, Taiwan, Thailand, UAE, Vietnam
- WEEE/RoHS compliance
- Wi-Fi Alliance Certification (Wi-Fi Certified™)
- EN 61373 Shock and Vibration for Railway Applications
- EN50121-1 EMC Railway Rolling Stock
- EN50121-4 Immunity Railway Rolling Stock

* Release 9.6.1
** Maximum power varies by country, setting, band, and MCS rate
*** Refer to price list for latest country availability

#### Product Ordering Information

**Model**
- ZoneFlex 7782-N Outdoor Access Point

**Description**
- 7782-N: ZoneFlex 7782-N 802.11n Outdoor Wireless Access Point, 30 degree Narrow Sector 2.4GHz/5GHz antenna. Includes mounting kit, 1 year warranty. Does not include PoE Injector. Does not include AC Power Cord.

**Optional Accessories**
- 60W Power over Ethernet (PoE) Injector (10/100/1000 Mbps) quantity of 1 unit US Plug
- Spare, Outdoor Mounting Bracket, Bare Metal, Any-Angle
- Spare Data Connector for contains 1 weatherizing data cable gland
- Spare Weatherized AC Connector ; 4-pin AC connector

PLEASE NOTE: When ordering you must specify the destination region by indicating -US, -WW, -IL instead of -XX.

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