



## data sheet



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### BENEFITS

#### High speed client performance with integrated adaptive antennas

Patented BeamFlex technology greatly improves connection reliability and increases WLAN capacity

#### Light, slim design for easy deployment

Compact, lightweight design with integrated antennas provide flexible deployment options with quick and easy installation

#### Highly Scalable

The ability to cost effectively scale high density networks

#### 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

#### Standard 802.3af power

Easy installation using standard 802.3af PoE switches or PoE injectors

#### Unmatched Wi-Fi capacity and reliability

BeamFlex delivers up to 4 dB of added signal gain and up to 10dB of interference mitigation

#### Enhanced receive capabilities

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

## ZoneFlex™ T301 Series

### 802.11AC SMART WIFI OUTDOOR ACCESS POINTS FOR DIRECTED COVERAGE

#### The Industry's First Outdoor 802.11ac AP with BeamFlex+ designed for High Density Venues

The ZoneFlex T301 Series are the first dual-band 802.11ac outdoor access points (AP) designed explicitly for high density user environments such as stadiums, arenas, train stations, convention centers, and major metro areas.

The T301 Series are the only 802.11ac access points on the market to integrate patented BeamFlex™ technology. The T301 Series has internal high gain directional antennas to provide directed coverage solutions eliminating the need for bulky panel antennas and confusing and expensive external RF cabling. The T301 Series enable focused Wi-Fi coverage to mitigate interference and implicitly improve signal-to-interference-plus-noise ratio (SINR) in the most challenging RF environments.

In addition, the T301 Series 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 reduced interference.

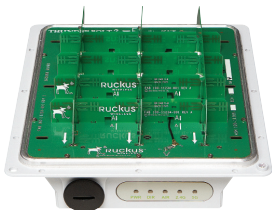
Designed for easy installation within an ultra lightweight and low profile enclosure, the T301 Series is ideal for venue owners looking to quickly and economically deploy Wi-Fi in high-capacity environments such as stadiums, arenas, train stations, convention centers, and major metro areas. Using directed coverage, the 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 T301 Series 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.

# ZoneFlex™ T301 Series

## DIRECTED COVERAGE 802.11AC SMART WI-FI OUTDOOR APs

### ZoneFlex T301n



**Dual-band 802.11ac  
2:2x2, 1200 Mbps**

Internal narrow beam antenna for 2.4GHz and 5GHz, 30° narrow sector coverage

- Well suited to extremely high-density deployments
- Best coverage and capacity at 30° x 30°

### ZoneFlex T301s



**Dual-band 802.11ac  
2:2x2, 1200 Mbps**

Internal sector adaptive antenna for 2.4GHz and 5GHz, 120° sector coverage

- Well suited to high-density deployments
- Best coverage and capacity at 120° x 30°

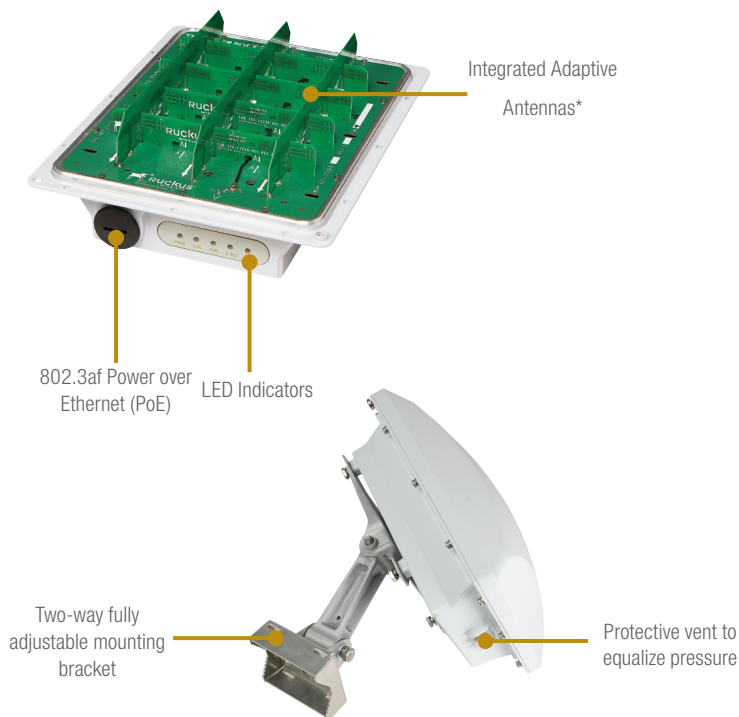


### FEATURES

- Concurrent dual-band (5GHz/2.4GHz) support
- 1200 Mbps of total WLAN RF capacity
- BeamFlex+ adaptive antenna technology and advanced RF management
- Up to 10dB interference mitigation
- Optimized for high-density environments
- Polarization diversity for optimal mobile device performance
- IP-67 rated, -20°C to +55°C
- Adjustable bracket included
- Small, lightweight, and sleek form factor
- Standalone or centrally managed by ZoneDirector, SCG 200, or FlexMaster
- Dynamic, per-user rate-limiting for hotspot WLANs
- WPA-PSK (AES), 802.1X support for RADIUS and Active Directory\*
- BYOD, Zero-IT, and Dynamic PSK\*
- Captive portal and guest accounts\*
- Admission control/load balancing\*
- Band balancing\*
- Application recognition and control\*
- Secure HotSpot\*
- SPOT location services\*
- Intelligent Band steering
- Airtime fairness
- SmartMesh\*\*
- Smart QoS

\*When used with Ruckus ZoneDirector controller

\*\*Supported in future software release



\* N model supports PD-MRC only

## Specifications

PHYSICAL CHARACTERISTICS	
<b>POWER</b>	<ul style="list-style-type: none"> <li>802.3af PoE Input (Class 3 PD)</li> </ul>
<b>PHYSICAL SIZE</b>	<ul style="list-style-type: none"> <li>9.4" x 7.6" x 4.3" (23.9cm x 19.5cm x 11.0cm)</li> </ul>
<b>WEIGHT</b>	<ul style="list-style-type: none"> <li>5.5 lbs (2.5 kg) with adjustable bracket</li> </ul>
<b>ETHERNET PORTS</b>	<ul style="list-style-type: none"> <li>10/100/1000Base-T 802.3, 802.3u, 802.3ab</li> <li>802.3at/af PoE PD Input</li> <li>Jumbo frame support (2290 byte max MTU)</li> </ul>
<b>ENVIRONMENTAL CONDITIONS</b>	<ul style="list-style-type: none"> <li>Operating temperature range: -20°C to 55° C</li> <li>Weather protection: IP67 per IEC 60529</li> </ul>
<b>POWER DRAW</b>	<ul style="list-style-type: none"> <li>PoE Input                             <ul style="list-style-type: none"> <li>Idle: 6.5W</li> <li>Typical: 7.5W</li> <li>Peak: 11W</li> </ul> </li> </ul>
<b>MOUNTING OPTIONS</b>	<ul style="list-style-type: none"> <li>Wall Mount</li> <li>Pole Mount Diameter 1" to 2.5"</li> </ul>
CERTIFICATION SPECS	
<b>TRANSPORTATION</b>	<ul style="list-style-type: none"> <li>ISTA 2A:                             <ul style="list-style-type: none"> <li>Random Vibration &amp; Drop Test</li> <li>Compression &amp; Loose Cargo Test</li> </ul> </li> <li>ETSI EN 300 019-2-2 Specification T 2.2 Careful transportation</li> </ul>
<b>SAFETY</b>	<ul style="list-style-type: none"> <li>Safety Listing - EU                             <ul style="list-style-type: none"> <li>EN 60950-1:2006/A12:2011</li> <li>EN 60950-22:2006/AC:2008</li> </ul> </li> <li>International                             <ul style="list-style-type: none"> <li>CB Scheme Certificate</li> <li>CB Bulletin</li> </ul> </li> <li>IEC 60950-1: 2005 Second Edition</li> <li>IEC 60950-22: 2005 First edition</li> <li>CISPR 22</li> <li>CISPR 24</li> <li>CAN/CSA C22.2 60950-1 Edition 2</li> <li>CAN/CSA C22.2 60950-22 Edition 1</li> </ul>
<b>HEALTH AND HUMAN SAFETY TO RF EXPOSURE</b>	<ul style="list-style-type: none"> <li>EN 62311:2008</li> <li>EN 50385:2002</li> <li>FCC OET-65</li> <li>ICNIRP:2010</li> </ul>
<b>HAZARDOUS MATERIALS</b>	<ul style="list-style-type: none"> <li>RoHS Directive 2002/95/EC</li> <li>RoHS Directive 2011/65/EU</li> <li>WEEE</li> </ul>
<b>IMMUNITY</b>	<ul style="list-style-type: none"> <li>EN61000-4-2 Level 4 Contact / Level 3 Air ESD Immunity</li> <li>EN61000-4-5 Level 1 &amp; 2 AC Surge Immunity</li> <li>EN61000-4-3 Level 4 EMC Immunity</li> <li>GR1089 - 1kV 25A Surge (data ports)</li> </ul>
<b>RAILWAY AND ROLLING STOCK</b>	<ul style="list-style-type: none"> <li>EN50155:                             <ul style="list-style-type: none"> <li>EN50121-1 EMC</li> <li>EN50121-4 Immunity</li> <li>EN61373 Shock &amp; Vibration</li> </ul> </li> </ul>
<b>Wi-Fi ALLIANCE</b>	<ul style="list-style-type: none"> <li>Wi-Fi CERTIFIED™ a, b, g, n, ac</li> <li>WPA™ — Enterprise, Personal</li> <li>WPA2™ — Enterprise, Personal</li> <li>Optimization — WMM®</li> </ul>

WI-FI	
<b>STANDARDS</b>	<ul style="list-style-type: none"> <li>5 GHz IEEE 802.11ac</li> <li>2GHz IEEE 802.11g/n</li> </ul>
<b>FREQUENCY BANDS</b>	<ul style="list-style-type: none"> <li>IEEE 802.11g/n 2.4-2.472GHz (ch1-13 CE, ch1-11 US)</li> <li>IEEE 802.11ac 5GHz                             <ul style="list-style-type: none"> <li>U-NII-1 5.15-5.25 GHz</li> <li>U-NII-2 5.25-5.35 (DFS)</li> <li>U-NII-2B 5.37-5.47<sup>6</sup></li> <li>U-NII-2C 5.47-5.725 (DFS)</li> <li>U-NII-3 5.725-5.825</li> <li>ISM 5.725 – 5.875</li> <li>U-NII-4 5.85-5.925<sup>5</sup></li> </ul> </li> </ul>
<b>WLAN RADIO CONFIGURATION</b>	<ul style="list-style-type: none"> <li>Dual band concurrent 2 x 2:2 stream radios</li> </ul>
<b>MAXIMUM TX POWER</b>	<ul style="list-style-type: none"> <li>26 dBm for 2.4GHz</li> <li>25 dBm for 5.0GHz</li> </ul>
<b>CHANNELIZATION</b>	<ul style="list-style-type: none"> <li>2.4GHz 802.11b/g/n 20/40 MHz</li> <li>5GHz 802.11a/n/ac 20/40/80 MHz</li> </ul>
<b>BSSID</b>	<ul style="list-style-type: none"> <li>Up to 32 (27 configurable) on 2.4 GHz</li> <li>Up to 16 (13 configurable) on 5 GHz</li> </ul>
<b>CERTIFICATIONS</b> <sup>4</sup>	<ul style="list-style-type: none"> <li>U.S., Europe, Argentina, Australia, Brazil, Canada, Chile, China, Colombia, Costa Rica, Hong Kong, India, Indonesia, Israel, Japan, Korea, Malaysia, Mexico, Peru, Philippines, Russia, Saudi Arabia, Singapore, South Africa, Taiwan</li> </ul>

1 Max power varies by country setting, band, and MCS rate

2 BeamFlex+ gains are statistical system-level effects (including TxBF),

translated to enhanced SINR based on observations over time in real-world conditions with multiple APs and many clients

3 Rx sensitivity varies by band, channel width, and MCS rate

4 Refer to price list for current country certifications

5 With future software release

PERFORMANCE AND CAPACITY	
<b>PHYSICAL LAYER MODULATION DATA RATE</b>	<ul style="list-style-type: none"> <li>2.4GHz 802.11b/g/n 300Mbps</li> <li>5GHz 802.11a/n/ac 867Mbps</li> </ul>
<b>CONCURRENT STATIONS</b>	<ul style="list-style-type: none"> <li>Up to 500 capable per AP</li> </ul>
<b>SIMULTANEOUS VoIP CLIENTS</b>	<ul style="list-style-type: none"> <li>Up to 30</li> </ul>

## Product Ordering Information

MODEL	DESCRIPTION
<b>ZoneFlex T301 Outdoor APs</b>	
<b>901-T301-XX61</b>	ZoneFlex T301n, 30x30 deg, Outdoor 802.11ac 2x2:2, narrow sector, dual band concurrent access point, one ethernet port, PoE input includes adjustable mounting bracket and one year warranty. Does not include PoE injector.
<b>901-T301-XX51</b>	ZoneFlex T301s, 120x30 deg, Outdoor 802.11ac 2x2:2, 120 degree sector, dual band concurrent access point, one ethernet port, PoE input includes adjustable mounting bracket and one year warranty. Does not include PoE injector.
<b>Power Accessories</b>	
<b>902-0162-XXYY</b>	Spare, PoE Adapter, 10/100/1000BaseT, 20W PoE, Input 100-240VAC
<b>902-0180-XX00</b>	Spares of Power over Ethernet (PoE) Injector (10/100/1000 Mbps), 60W, 120-240Vac, quantity of 1 unit (T300/T301, 7762-series, 7782-series, and 8800-S access points)

\*Requires ZoneFlex 9.8.1, SCG 2.5.1 or vSCG 3.0 or greater

