Ruckus
Simply Better Wireless.

data sheet

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™ T301n

802.11AC SMART WIFI OUTDOOR ACCESS POINTS FOR DIRECTED COVERAGE

Outdoor 802.11ac AP Designed for High Density Venues

The ZoneFlex T301n, a dual-band 802.11ac outdoor access point (AP), is designed explicitly for high density user environments such as stadiums, arenas, train stations, convention centers, and major metro areas.

The T301n is the only 802.11ac access point on the market to integrate Ruckus' patented technologies for enhancing WLAN capacity in challenging high density applications. The T301n 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 T301n enables focused Wi-Fi coverage to implicitly mitigate interference and improve signal-to-interference-plus-noise ratio (SINR) in the most challenging RF environments.

In addition, the T301n 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.

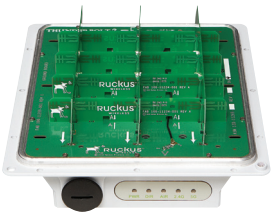
Designed for easy installation within an ultra lightweight and low profile enclosure, the T301n is ideal for venue owners looking to quickly and economically deploy Wi-Fi in high-capacity environments such as stadiums, arenas, train stations, convention centers, and major metro areas. Using directed 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 T301n 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™ T301n

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

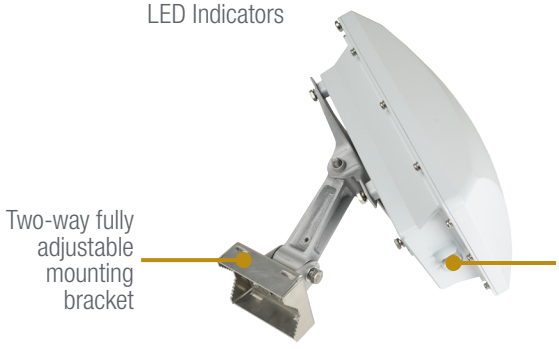
- Well suited to extremely high-density deployments
- Best coverage and capacity at 30° x 30°

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



Specifications

PHYSICAL CHARACTERISTICS	
POWER	• 802.3af PoE Input (Class 3 PD)
PHYSICAL SIZE	• 9.4" x 7.6" x 4.3" (23.9cm x 19.5cm x 11.0cm)
WEIGHT	• 5.5 lbs (2.5 kg) with adjustable bracket
ETHERNET PORTS	• 10/100/1000Base-T 802.3,802.3 u,802.3ab • 802.3at/af PoE PD Input • Jumbo frame support (2290 byte max MTU)
ENVIRONMENTAL CONDITIONS	• Operating temperature range: -20°C to 55° C • Weather protection: IP67 per IEC 60529

POWER DRAW	• PoE Input
	  • Idle: 4.7W
	  • Typical: 5.7W
	  • Peak: 10.2W

MOUNTING OPTIONS	• Wall Mount • Pole Mount Diameter 1" to 2.5"

CERTIFICATION SPECS	

TRANSPORTATION	• ISTA 2A:
	  • Random Vibration & Drop Test
	  • Compression & Loose Cargo Test
	• ETSI EN 300 019-2-2 Specification T 2.2 Careful transportation

SAFETY	• Safety Listing - EU • EN 60950-1:2006/A12:2011 • EN 60950-22:2006/AC:2008 • International • CB Scheme Certificate • CB Bulletin • IEC 60950-1: 2005 Second Edition • IEC 60950-22: 2005 First edition • CISPR 22 • CISPR 24 • CAN/CSA C22.2 60950-1 Edition 2 • CAN/CSA C22.2 60950-22 Edition 1
HEALTH AND HUMAN SAFETY TO RF EXPOSURE	• EN 62311:2008 • EN 50385:2002 • FCC OET-65 • ICNIRP:2010
HAZARDOUS MATERIALS	• RoHS Directive 2002/95/EC • RoHS Directive 2011/65/EU • WEEE
IMMUNITY	• EN61000-4-2 Level 4 Contact / Level 3 Air ESD Immunity • EN61000-4-5 Level 1 & 2 AC Surge Immunity • EN61000-4-3 Level 4 EMC Immunity • GR1089 - 1kV 25A Surge (data ports)

RAILWAY AND ROLLING STOCK	• EN50155:
	  • EN50121-1 EMC
	  • EN50121-4 Immunity
	  • EN61373 Shock & Vibration

WI-FI	
STANDARDS	• 5 GHz IEEE 802.11ac • 2GHz IEEE 802.11g/n
FREQUENCY BANDS	• IEEE 802.11g/n 2.4-2.472GHz (ch1-13 CE, ch1-11 US) • IEEE 802.11ac 5GHz • U-NII-1 5.15-5.25 GHz • U-NII-2 5.25-5.35 (DFS) • U-NII-2B 5.37-5.47[5] • U-NII-2C 5.47-5.725 (DFS) • U-NII-3 5.725-5.825 • ISM 5.725 – 5.875 • U-NII-4 5.85-5.925[5]
WLAN RADIO CONFIGURATION	• Dual band concurrent 2 x 2:2 stream radios
MAXIMUM TX POWER[1]	• 26 dBm for 2.4GHz • 25 dBm for 5.0GHz
CHANNELIZATION	• 2.4GHz 802.11b/g/n 20/40 MHz • 5GHz 802.11a/n/ac 20/40/80 MHz
BSSID	• Up to 32 (27 configurable) on 2.4 GHz • Up to 16 (13 configurable) on 5 GHz
CERTIFICATIONS[4]	• 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

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	
PHYSICAL LAYER MODULATION DATA RATE	• 2.4GHz 802.11b/g/n 300Mbps • 5GHz 802.11a/n/ac 867Mbps
CONCURRENT STATIONS	• Up to 500 capable per AP
SIMULTANEOUS VoIP CLIENTS	• Up to 30

Product Ordering Information

MODEL	DESCRIPTION
ZoneFlex T301 Outdoor APs	
901-T301-XX61*	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.
Power Accessories	
902-0162-XX10	Spare, PoE Adapter, 10/100/1000BaseT, 20W PoE, Input 100-240VAC

*Requires ZoneFlex 9.8.1 or SCG 2.5.1
*Shipping to major markets Sept. 2014

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