Tachyon Networks®

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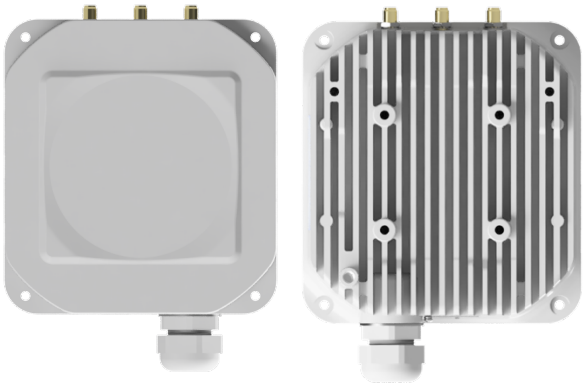

TNA-305X Datasheet

Outdoor 60 GHz + 5/6GHz PTP & PTMP Fixed Wireless Solutions

Learn more at www.tachyon-networks.com

Applications

Sub-7GHz offload

Because the sub-7GHz spectrum is scarce and prone to interference, the TNA-300 series models are perfect for offloading clients within range, leaving the low bands for hard-to-reach customers and for backup.

Deploying fiber-like service

The TNA-300 series product family can deliver multi-Gigabit speeds to up to 32 clients per sector at a fraction of the cost of deploying fiber.

High speed point-to-point

Use the TNA-300 series products to easily create point-to-point connections between buildings in urban environments.

High bandwidth video surveillance

The TNA-300 series units feature a proprietary TDMA scheduling protocol which is perfect for video surveillance networks requiring high-capacity upload bandwidth.

Key Features

Fiber-like speeds using the 60GHz band

2+ Gbps can be achieved and distances of up to 8+ km (antenna kit dependent) without trenching, permits, or licenses.

Upper-band support

All models support the full 60GHz band, including channels 5 and 6 (57-71 GHz), enabling longer links and increased co-location opportunities.

Modular design simplifies inventory and installation

The TNA-305X features a modular design. The base unit features 90° of beam-forming coverage and can be paired with an antenna kit (sold separately) to convert the radio from a wide beam-steering device to a highly directional one.

Integrated backup radio

The TNA-305X includes an integrated 5-7GHz wide band backup radio to provide connectivity during periods of heavy rainfall. The TNA-305X is extremely flexible in channel options as well as channel bandwidth making robust backup a breeze.

TNA-305X CONFIGURATIONS	BASE	AK-S-45	AK-S-90	AK-100	AK-150	AK-300
Beam-forming range	90° x 50°	45° x 5°	90° x 5°	6° x 6°	4° x 4°	2° x 2°
Max Antenna Gain (60GHz)	16dBi	30dBi	30dBi	33dBi	37dBi	42dBi
Max Antenna Gain (5/6GHz)	9dBi	Not Rec	Not Rec	11dBi	13dBi	18dBi

60 GHZ SPECS

Operating modes	Station, Access Point (software configurable)
Max STA count per AP	Up to 32 stations
Max EIRP (base)	38dBm / higher when used with antenna kits
Link encryption	AES 128 + GCMP
Frequency & supported channels	Full band: 57-71 GHz: channels: 1-6 Half channels: 1-12 (see notes on support site about half channel support)
Channel size options	Full (2 GHz), half (1 GHz) (see notes on support site about half channel support)
Station scheduling	TDMA: dynamic scheduling mechanism
TNA-305X Base Antenna	16 dBi 3D beamforming phased array with +/- 45° azimuth (90° total) and +/- 25° elevation (50° total). Beam size is: 30° azimuth x 30° elevation. Single linear polarization.
Duplexing	TDD

5-7 GHZ SPECS

Operating modes	Station, Access Point (software configurable).
Max STA count per AP	Up to 32 stations
Link encryption	AES 256 + GCMP
Frequency & supported channels	5.1-7GHz (country dependent)
Channel size options	20/40/80/160/240/320MHz
Station scheduling	OFDMA
Antenna options	Integrated 2x2 + 2x2 patch compatible with TNA-AK antenna kits 2x RP-SMA connectors (software selectable) for external antennas
Duplexing	TDD

SOFTWARE SPECS

Max MTU size	2024 b
Networking mode	Transparent bridge
VLAN capabilities	Data VLAN (in station mode) & management VLAN
Other features	Traffic shaping (station mode), DHCP snooping, device discovery, speedtest, and more
IPv4/IPv6 support	Both are supported
Management	Web interface, SNMP v2 & v3, SNMP traps, & RESTful API (SSH available upon request)

HARDWARE SPECS

Wired Interfaces	1 x 2.5G ethernet
Management Interfaces	2.4GHz WiFi7 w/ Internal Antennas
GPS	22 tracking / 66 acquisition-channel GPS receiver w/ DGPS
Mount	Pole or wall mountable via mounting backplate
PoE input power	Active PoE 38-57VDC (passive injector included)
Max power consumption	TBD
Certifications	FCC/IC/CE/UK
Operating temperature	-30°C - 55°C
Base Unit dimensions & weight	Height: 5" / 13cm, Width: 5" / 12 cm, Depth: 2” / 5.5cm, 15 oz / 425 g
LEDs	Ethernet link status, wireless status, signal level, & power