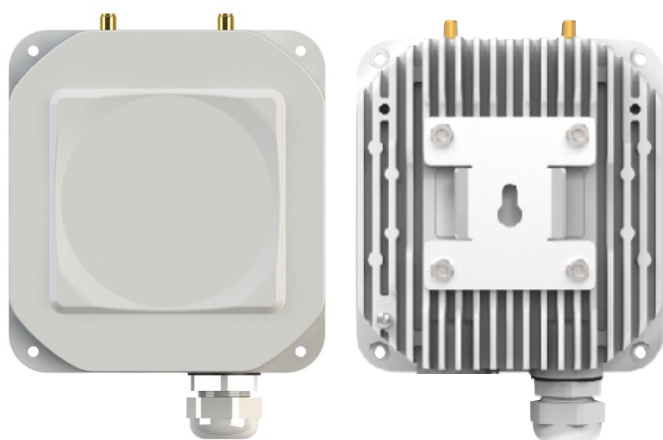




## TNA-305X Datasheet

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

Learn more at [www.tachyon-networks.com](http://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<br>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           | 20/40/80/160/240/360MHz                                                                                                            |  |
| Station scheduling             | OFDMA                                                                                                                              |  |
| Antenna options                | Integrated 2x2 + 2x2 patch compatible with TNA-AK antenna kits<br>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**

|                               |                                                                        |
|-------------------------------|------------------------------------------------------------------------|
| Interfaces                    | 1 x 2.5G ethernet                                                      |
| 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           |