

AUTO TRACKING SYSTEM FOR THPR RADIO PRODUCTS

The TTS 2.0 is a compact tracking antenna system that seamlessly integrates with Triad's THPR high power radio systems. Combined with our proprietary high power radio payloads, it is easy to achieve 100-200 mile range, reliable high capacity HD video and IP data links. Size, Weight, Power, and Cost (SWaP-C) are a fraction of competitive solutions. A variety of antenna and feed configurations allows for operation in all bands within UHF, L, S and C. X and Ku bands are also available, using Triad's integrated frequency translating bi-directional modules.



FEATURES

- Integrated INS and Gimbal Stabilization
- Supports SISO, 2x2, 3x3 and 4x4 MIMO Systems
- Throughput and Range of systems 4x the size
- Web-Based GUI for node tracking / monitoring
- Continuous Pan Range / 180° Tilt Range

APPLICATIONS

- Ultra Long Range, High Bandwidth UAS Links
- OTM (on the move) data links
- Mobile GCS for UAS Bi-Directional Links
- Vehicle / Ship - UAS Teaming
- Multiple High BW EO/IR video feed and data transport

3 MINUTE SET-UP | AUTOMATIC ACQUISITION AND TRACKING | DESIGNED FOR MIMO

Contained within the TTS 2.0 is a high accuracy, gimbal-stabilized pan-tilt, an AHRS and Inertial Navigation System, and a SBC that performs heading and location updates for tracking. Set up is a single-person operation that only requires attaching the high power RF Radio payload, connecting the TTS to your network, and powering the unit on. The only connections required are Ethernet and DC Power.

100+ MILE LINKS IN A SINGLE-CASE, 45 LB KIT | HIGHER DATA-RATES THAN SYSTEMS 5X THE SIZE

The TTS 2.0 achieves the link distance and data throughput of much larger systems when paired with the high power THPR radio module product line. The increased RF power allows for the use of smaller / lighter antennas and pan-tilt units to achieve the same (or better) link margins than using the radios stand-alone. In addition, RF Tx power is continually monitored and adjusted to eliminate RF degradation and further enhance link reliability. 360° of continuous panning is supported since the TTS utilizes slip rings to deliver DC power, and the entire THPR high power radio sub-system is compact and efficient enough to be installed above the slip ring.



MOBILE TRACKING ANTENNA SYSTEM | TTS 2.0

HIGH CAPACITY LONG RANGE LOS LINKS FOR UAS

RF SPECIFICATIONS	
Operating Frequencies	Antennas and THPR modules available for UHF, L, S, C, X and Ku bands
RF power Handling	Configurations available for up to 200W total Tx output
Antenna Options Available	<ul style="list-style-type: none"> - Single and Dual-Polarized Dish for SISO and 2x2 MIMO Applications - Dual-Dish, Dual-Pol Antennas for 4x4 MIMO Applications - Up to 20 dBi gain supported, V/H or 45° X-Pol options - Mount can be configured with additional antenna mounting points for separate C2 or back-up radio links when required
Radios Supported	System is radio-agnostic and supports all radio links that the Triad THPR modules are designed for.
Data Link Range	Communication ranges of 200nm or greater are achievable, using the appropriate THPR modules and payload configuration. Triad offers turn-key support services for all links utilizing our products.

ELECTRICAL SPECIFICATIONS	
DC Input Power	12-36 VDC
AC Input Power	85-264 VAC
Power Consumption (including radio)	200W nominal, will vary based on system requirements of radio selection, link distance, data throughput required, and RF Tx power output selected
DC Compliance	Can be configured to comply with MIL-STD-1275 surge, spike and ripple. Other MIL-STD vehicle / airborne bus compliance configurations available.
AC Compliance	PSU configuration available for system compliance with MIL-STD-1399 and other AC supply bus requirements.

MECHANICAL SPECIFICATIONS		
PARAMETER	VALUE	UNIT
Dimensions (L x W x H)	23 x 17.5 x 24	in
Weight	40	lbs.
Position Resolution	Pan: 0.006° / Tilt: 0.003°	--
Pan Speed	100 Max / 0.006 Min	°/s
Pan Range	Continuous, 360°	--
Tilt Speed	50 Max / 0.003 Min	°/s
Tilt Range	120	°
Mounting	Built-In .380" through-holes for flat-surface mounting Mounting hardware available for mast and tripod mounting configurations	--