



The Avwatch Mobile Tracking System (MTS) is a simple to use, turn-key solution that provides automatic tracking of nodes in a Mobile Ad hoc Network (MANET). The system is optimized to extend the range of air-to-ground links passing high definition video and any other IP based data. Ideal scenarios include UAVs, manned aircraft, vehicular and maritime applications.

With a compact form factor requiring little setup from an operator, the Mobile Tracking System simplifies an air-to-ground tactical IP network, even when both airborne and ground based nodes are in motion.

High Bandwidth, Low Maintenance.



- Radome version available for permanent installation in harsh environments
- Lightweight, small form factor
- Minimal mechanical setup required
- Automatic heading calculation
- Radio agnostic, modular design
- Integrated Inertial Navigation System (INS)
- Built in gimbal stabilization
- Cursor on Target (CoT) compatible
- Web-based Graphical User Interface (GUI)
- Compatible with Single Input, Single Output (SISO) and Multiple Input, Multiple Output (MIMO) networks
- Integration assistance & support available

Key Features & Capabilities

- **Minimal Physical Setup Required.** The MTS, paired with a radio package, is one complete unit that only requires power and a target node to track. Heading and location information of both the MTS and target node are automatically calculated and updated continuously. An integrated Inertial Navigation System provides heading information (Error < 0.8°) and computations for continuous tracking.
- **Tracking System On-The-Move.** The MTS does not need to be static like most tracking systems. With the INS and Gimbal Stabilization, the MTS has the capability to be used in maritime and vehicular environments without RF degradation or attenuation during pitch and rolls.
- **Radio Agnostic, Modular Design.** Compatible with all major MANET radios currently on the market, the MTS integrates seamlessly into SISO and MIMO networks offering extended range in the smallest form factor possible. Radios swap in seconds with wiring harnesses available for major radio manufacturers.

Specifications

PAN/TILT

Pan Range	Continuous
Tilt Range	0° - 90°

POWER

Input Power	12-36v
Power Consumption	200w (with standard radio)
Top Gimbal Power Available	3 Amps at 28v

ENVIRONMENTAL

Temperature	-20° to 65° C
Environment	Ruggedized for Outdoor Use
Water Resistant	Yes
Submersible	No

ANTENNA (options available)

Frequency	2200 - 2500 MHz 2x2 MIMO
Antenna Gain	18 dBi
Horizontal Beam Width	18°
Vertical Beam Width	19°
Impedance	50 Ω
Polarization	Adjustable—Dual Polarized, Vertical & Horizontal or X-Polarized (+45° & -45°)
Range	100+ Nautical Miles

DIMENSIONS

<i>MTS2.0</i>	
Length x Width x Height	23 x 17.5 x 24 in
Weight	40 lbs.
<i>MTS2.0 Radome</i>	
Length x Width x Height	26 x 32 x 32 in
Weight	60 lbs.

- **Unparalleled Throughput At Distance.** By utilizing Multiple Input Multiple Output (MIMO) technology on a dual polarized antenna, the MTS provides the additional Mbps needed to stream HD video feeds and other data through a MANET at 100+ miles in optimal conditions.

RF Patterns

