

TOUGH STUMP TECHNOLOGIES

ATOS TRACKING SYSTEM

ATOS — Track What Matters

ATOS is an organic Line of Sight (LOS) tracking system that runs inside of ATAK and can track virtually any object to include MWDs, sUAS, personnel, vehicles, aircraft, and parachute bundles. ATOS operates in the UHF spectrum, independent of cellular, WiFi or satellite networks. The Command Link connects via Blue Tooth to an ATAK EUD and can communicate via UHF with tags at a range of 1 to 4 miles, increasing to 30+ miles in the air. The user can choose to broadcast the location of tags over their ATAK network using mesh network radios or the internet. The tracks and other symbols are displayed as Cursor on Target (CoT) data. ATOS provides the user the ability to track and monitor the real time location of 100+ tags. The user can assign unique data to each of these tags.

ATOS Key Features

ATOS consists of 3 components, enabling it to function in disconnected environments:

1. **An End User Device (EUD):** Operating inside of ATAK, the ATOS plugin enables the user to track up to 100 ATOS tags. Each of these tags can be assigned one of the following designators: Military Working Dog, sUAS, Personnel, Parachute Bundle, Vehicle, or Custom. Information such as call sign, contact frequency, special equipment, etc. can be added to provide the user with useful information regarding the equipment or personnel being tracked, located, or monitored. The ATOS plugin can be configured to broadcast the location of each ATOS tag to all or selected team members on the user's ATAK network.

2. **The ATOS Tag:** A small, ruggedized GPS receiver/transmitter that runs off a disposable CR123 battery, the ATOS tag is roughly the size of your thumb, weighs about 2 ounces and has a 6 inch thread like antenna. The tag's GPS location is transmitted via UHF signal to the Command Link. It operates in the UHF 433-435MhZ range and has an airborne range of roughly 30 miles depending upon environmental conditions. When using the HD setting it will send an updated position once every second and has a battery life of approximately 24 hours. The housing is constructed of watertight machined aluminum. It has been constructed to withstand temperatures from -40 to 150 degrees Fahrenheit.

3. **The Command Link:** The UHF transmitter/receiver is slightly larger than a deck of cards, constructed out of machined aluminum, is watertight and has no moving parts. It has a rechargeable battery (via USB-C) and a removable 6" whip antenna which can be connected to a 3' whip antenna (magnetic base) for increased reception range. The Command Link connects wirelessly to the ATAK EUD by Blue Tooth Low Energy (BTLE).



The ATOS Tracking System created by Tough Stump Technologies is named in honor of ATOS, a Military Working Dog (MWD) that was KIA on Christmas Eve 2007 in Iraq.

For more information on the best system to keep track of your assets, call or email tst_tech@toughstump.com.

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ATOS TRACKING SYSTEM TECHNICAL SPECIFICATIONS

ATOS TAG

Body: .75" x .2", machined 6000 series aluminum. IP68 (waterproof to two atmospheres)

Battery: CR123 Primary Lithium

Battery Life: 24hrs w/ real-time GPS updates

Tag Antenna: 7" UHF / GPS monopole

Weight: 25 grams (with battery)

Antenna: Braided Stainless steel

GPS 74 correlator, WAAS enabled GPS Receiver, 2m precision

GPS Update Rate 2sec (100tag) or 5sec (200tag), factory configured

COMMANDLINK DATA RECEIVER

Body: 4.3" x 1.9" x .9", 6000 series aluminum, IP68 (waterproof)

Antenna: 7" unity gain whip (included), SMA connector

Battery: 4Ah internal lipo w/ USB-C charging

Connectivity: Bluetooth Low Energy

RADIO FREQUENCY SPECIFICATIONS

Frequency Range Factory pre-configured: 432-436 MHz

Power Output: Standard 10 mW EIRP (maximum)

Note: Radiated Power depends on antenna environmental conditions and may be reduced by proximity to conducting objects.