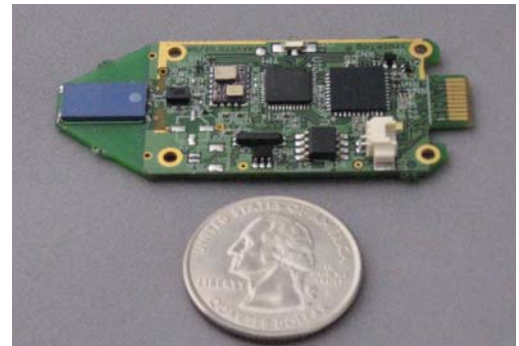


# TrackTag®

The NAVSYS TrackTag® uses NAVSYS-proprietary technology to dramatically reduce acquisition time for GPS data acquisition. This has a major effect on battery size and lifetime, permitting extremely small package archival GPS tags to be built for applications such as bird and animal tracking, military and homeland security applications.

- Captures GPS data for download when tag is retrieved.
- Extremely long duration (>2 years)
- Proven performance under tree canopy.
- Different package and GPS antenna options for different scenarios.
- Position record interval programmable from seconds to months.
- Typical capacity 128,000 positions (other options available)
- Unpackaged weight as low as 13 grams including 1 year battery and GPS antenna
- Optional salt-water switch wakeup.
- Optional external analog and digital input connector for addition data logging.



**TrackTag Board**

## TrackTag Technology Overview

TrackTag has been designed for extremely low-power, long-duration standalone position recording of assets, and is suited for applications including certain animal tracking and surveillance markets. It has been designed to overcome the limitations of standard GPS receivers, which cannot be run on small batteries for long periods of time. A conventional GPS receiver, if woken up every hour will (optimistically) need powered for at least 6 seconds to compute a navigation fix. By contrast, TrackTag needs to be powered up for less than 60 milliseconds to acquire enough data for a GPS fix. This power saving is achieved by the use of the NAVSYS patented TIDGET process, whereby the raw GPS data is acquired unprocessed, and the time-consuming and power-hungry GPS signal processing is deferred until the data is retrieved from the TrackTag. Each TrackTag is programmed to wake up at a user-definable interval (seconds to hours) to take a position fix. At the time of each position fix, an auxiliary data set comprising temperature, battery voltage and system status is also automatically logged.

TrackTag can be provided unpackaged for the customer to package or with a variety of housing options:

- Large mammal collar (highest GPS sensitivity), self-contained unit (include batteries for 2 year deployment) for attachment to a customer-provided collar.
- Diving bird housing (waterproof to 5 meters depth) lightweight housing.
- Diving animal housing (pressure proof to 2000ft water depth)

TrackTag has had successful deployments on:

- Penguin, seal, turtle
- Albatross, arctic skua
- Tapir, jaguar, puma

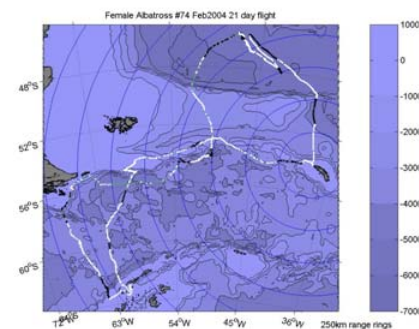


**Large mammal TrackTag Enclosure**

The these pictures show results from successful TrackTag field trials in the South Atlantic (on albatrosses, although the tags used were sufficiently small and light to be on much smaller species), and under rain-forest tree canopy in South America (50% of all TrackTag fixes computed a solution, while with conventional GPS technology collars our customer.



**Tracking Results under Amazonian Tree Canopy**



**Albatross Track in South Atlantic**