Nano GPS Backpack

An innovative, state-of-the-art tracking device developed specifically for the requirements of researchers working with wildlife.

- Long-range, automatic data transfer, up to 24 km. (depending on field conditions, requires line of sight)
- Multiple user settings to ensure best performance
- Factory support 365 days per year
- Optional “Iridium Base Station” transmits data by satellite to online database

Specifications

General Information	
Weight	5 to 16 grams
Dimensions	(30 mm x 10 mm x 13 mm) OR (28 mm x 13 mm x 5 mm AND 30 mm x 17 mm x 19 mm)
Color	Black
Housing Construction	Conformal Coating

Main Features
User programmable GPS schedules (set interval between GPS locations or set specific times of day)
GPS positions automatically transmitted by UHF transceiver to mobile base station*
Optionally, GPS positions transmitted from base station by Iridium to online database**
Lightweight conformal housing built for extreme temperature environments
Configurable “GPS additional time” for better precision
Temperature range of operation is -40° C. - + 60° C. (Depending on battery technology)
Ergonomic housings specifically designed for your study species
VHF transmitter Optional

*Requires mobile base station

**Requires Iridium enabled base station (you won’t need this at the university study site)

Other Features	
GPS Module	33-Channel GPS receiver
GPS antenna	Active Patch for better GPS performance
Power	Lithium Thionyl Chloride Batteries
Battery Life	Contact Telemetry Solutions, depends on GPS schedule
Warranty	1-year parts and labor for manufacturing defects
Customer Support	365 days per year, included 08:00 – 21:00 (PST/PDT)
Memory Size	65,000 lines of data (GPS positions, sensor output, etc.)

Optional Features	
Iridium base station	Data uploads to internet
Remote environmental data collection by Bluetooth	For Example, Temperature, environmental sensors in close proximity to animal, etc.
VHF Frequency Range	148 - 170 MHz

Primary Data Management	
Data uploads to mobile base station	Extract in Telemetry software then export to GIS
Real time information on each device	Using Base Station Info App
Export data formats	KML, UTM, Latitude/Longitude ddd;mm;ss.ss
Data displayed	ID, Date & Time, Latitude, Longitude, Altitude, Time to Fix, Maximum GPS signal strength received, Number of satellites used to obtain position, GPS battery Voltage, Temperature (C.°)
Export data file types	KML, CSV, plot on Google Maps

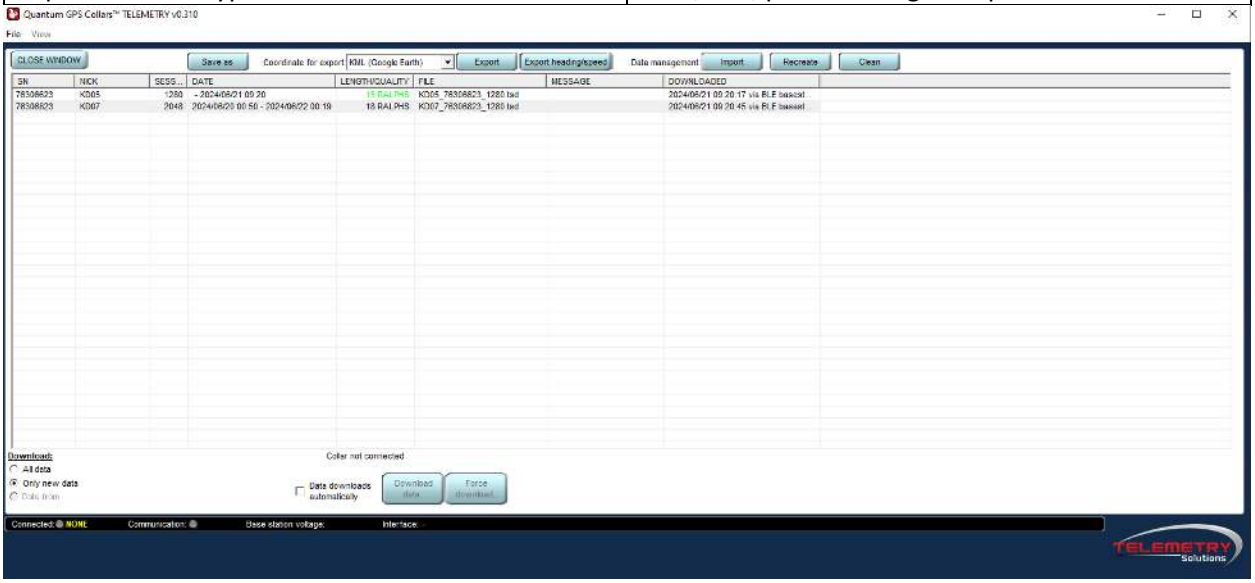

Figure 1- Screenshot showing data files in user software after downloading from base station.

What sets us apart

- Custom manufactured for humane use, smaller housings than industry conventional products
- No additional cost for collecting GPS positions remotely from device
- Conformal Housings will provide for a small overall package under the neck and on top of the neck for better animal comfort and survival
- GPS additional time for better precision (user controls)
- Up to 20 unique, daily GPS positioning schedules (user controls)
- 365 day per year direct from factory customer support

Mobile Base Station & Base Station Info App

- Automatically collects GPS data from device
- No directional antennas required
- No human operator required
- App is a time saver in the field

General Information	
Weight	~180 grams
Dimensions (without antennas)	97.5 mm wide x 86 mm. deep x 30 mm. tall
Color	High-Visibility Hunter Orange
Housing Construction	Impact Resistant ABS
Power	Internal, rechargeable battery with optional external 12-volt power

Main Features
Automatically collects GPS data from devices, no human operator required
Compatible with Base Station Info App (See YouTube for app information)
4-day continuous use on a full battery charge
Recharge by USB from computer or 5-volt charger
Red, green and yellow LEDs indicate operational status
On/off switch via app
Memory stores up to 3 million GPS positions
Temperature range of operation is -20°C. - +60° C.
User software compatible to facilitate wireless GPS device programming
Stores GPS positions for download into User Software
No directional antennas required
Can be left in the field to collect data on its own

Iridium Enabled Base Station and App

- Automatically collects GPS data from Devices
- Automatically sends GPS data to internet
- No human operator required
- Battery powered with solar backup

General Information	
Weight	2.3 Kg
Dimensions (without antennas)	Depends upon battery chosen
Color	Grey
Housing Construction	Waterproof ABS plastic
Power	7.5 Ah Lithium polymer

Main Features
Automatically collects GPS data from Device, no human operator required
Transmits collected data via Iridium satellite to online database
Solar charging for battery
On/off switch inside housing
Green LED indicate operational status
Compatible with Base Station Info App (see YouTube for app information)
Memory stores up to 3 million GPS positions
Temperature range of operation is -10° C. - +55° C. (Optional -40° C. - +55° C lead-acid)
Designed to be left in the field to collect data on its own

Stores GPS positions for download into User Software
No directional antennas required
Data transmission fees apply

Base Station Info App

- Shows base station's battery voltage
- Displays each whitelisted GPS
- Displays amount of data downloaded from device
- Displays most recent contact between device and base station
- Displays device voltage

Main Features
Android and iOS compatible
Works with multiple base stations simultaneously
Displays base station battery voltage
Displays every whitelisted GPS device in base station

GPS list sortable by GPS remaining to download, device nickname, last contact & most recent GPS
Continuously searches for additional base stations
Color coding indicates current base station’s current action
Audible tones indicating a remote GPS data download in progress
Different tones indicating the end of a remote GPS data download
Displays each GPS devices’ GPS remaining in device memory
GPS battery voltage
Date and time since last connection between last device and base station