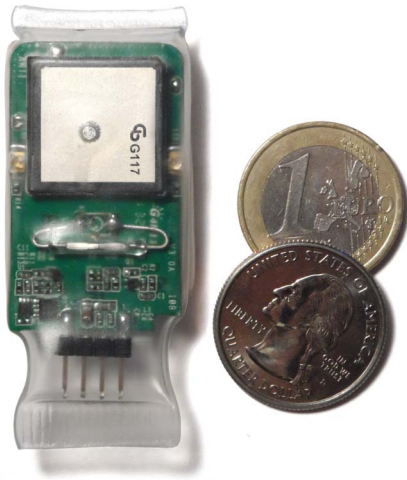


Overview



Originally designed for use with seabirds the CatLog-S GPS Logger tag is a small but powerful device (former name was CatTrack1). Its low power consumption combined with small dimensions, low weight and high accuracy makes it an ideal device for domestic and wildlife animal observation.

The device will record the position in an adjustable time interval. The movement profile can later be displayed on a map or exported to use with other software.

Optimized for scientific use, CatLog-S offers the following features:

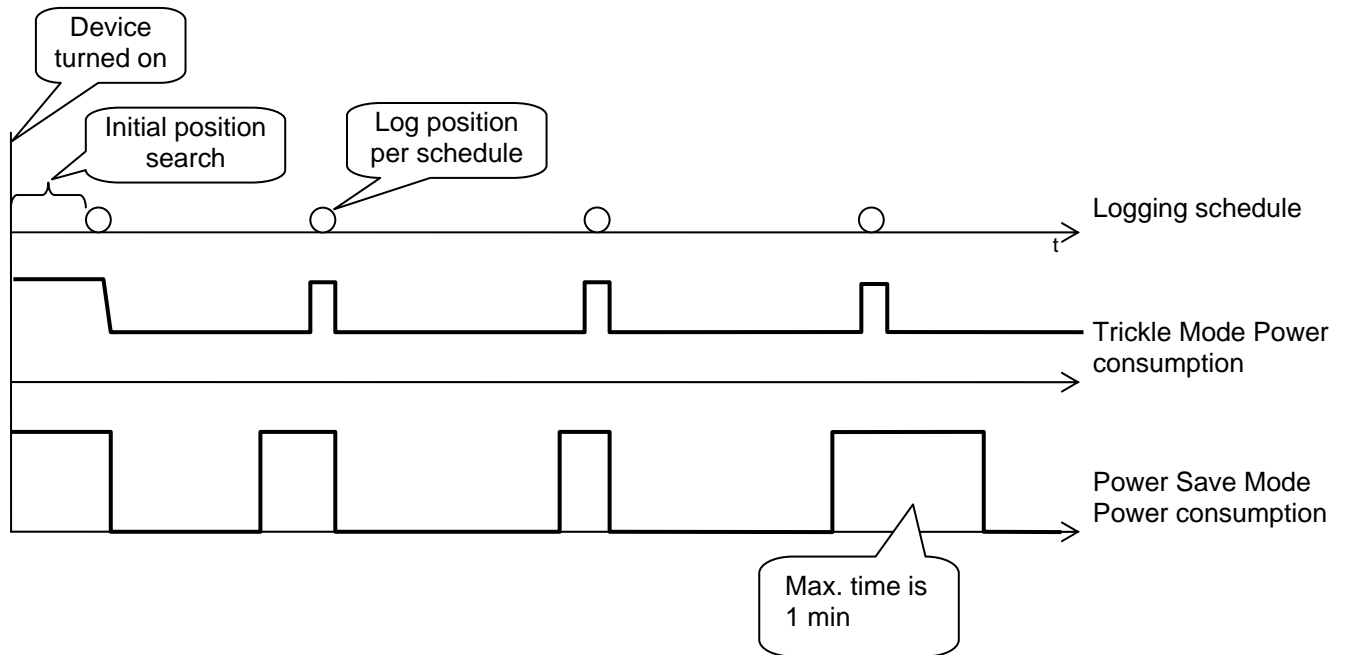
- Magnetic switch to activate and deactivate it
- ThermoSeal™ protection withstands seawater and tough conditions
- Optimized weight and operation time by scalable battery size

Specification

Device dimensions	5.0 x 2.2 x 0.8cm / 2 x 0.9 x 0.3 inch		
Device weight without battery	8 grams		
Battery	Rechargeable Lithium Polymer		
	Capacity	Operation**	Weight
	160mAh	20h	+4g
	380mAh*	60h	+7g
	750mAh	120h	+16g
	* Standard size		
	** based on 30s capture interval, scales almost linear with interval time		
Enclosure	Type	Protection	Weight
	Sealed shrink tubing (ThermoSeal)	Water, corrosion and scratch resistant	+2 g
Operation temperature	-10 to +60 degrees Celsius		
Activation	Magnetic switch		
GPS chipset	Sirf III		
GPS antenna	Patch 15x15x2mm		
Position accuracy	5-10m, depends on signal strength (position jitter is expected in low satellite signal reception conditions and power save mode)		
Position logging interval	Adjustable 1s - 60 minutes. Weekly scheduling mode available.		
Recorded data	Time, position, speed, altitude, direction		
Storage capacity	Up to 64000 positions		
Interface	USB1.1		
Operating system	Windows XP, Windows 2000, Windows 7		
Export data format	GPX, CSV (Excel)		

Specification is preliminary and can change without notice.

Power Consumption



Trickle power is standard mode, it will continuously track satellites. Once it is time to record position it will be done quickly with good accuracy. The power consumption during standby time depends on the reception signal quality.

Power Save mode turns the GPS receiver off during standby time. Once the time comes to record a position it will turn on the GPS receiver, provide it with position data from the last position and enable the search engine. Since the receiver is not aware of changes in position and reception quality it may take significantly longer to get a position. The search engine is disabled after 1 minute in order to prevent battery drainage. May result in more inaccurate results.

Typical power consumption values:

Initial position search: 40mA, stopped after 5 minutes

Trickle power standby: 5-40mA

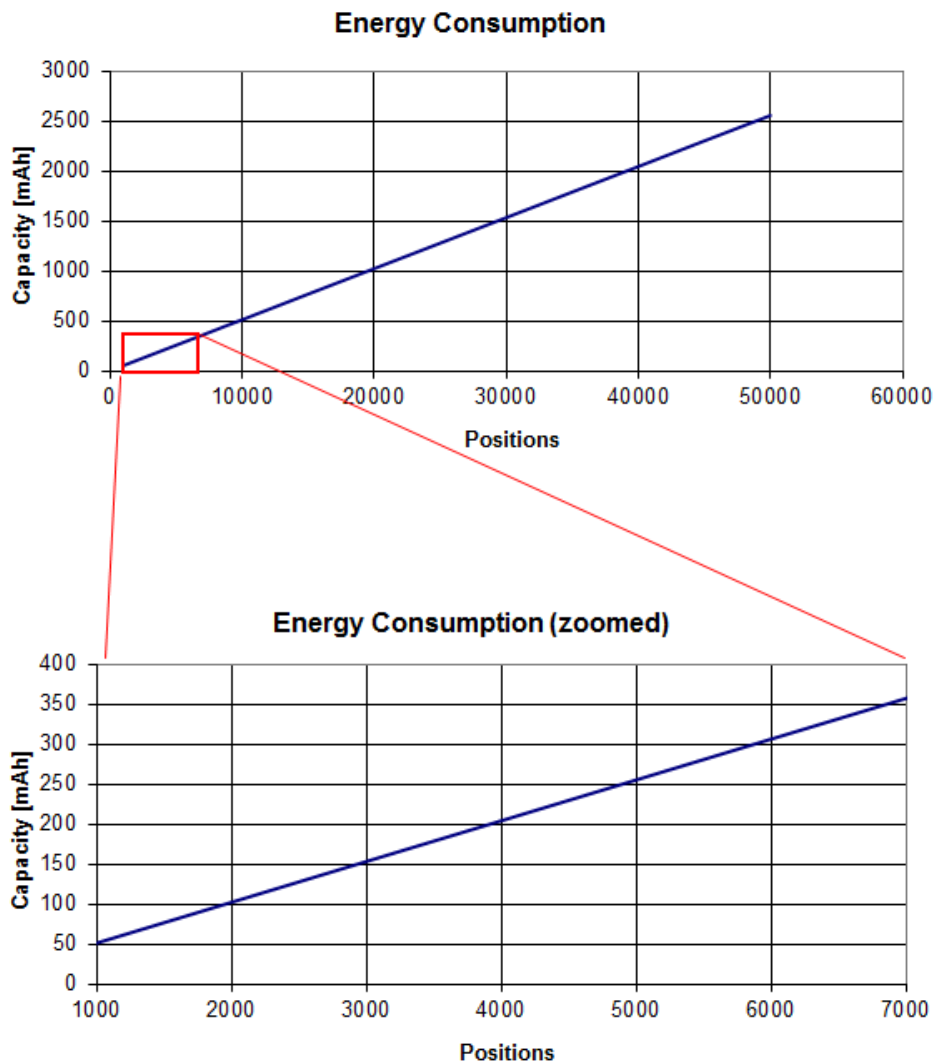
Trickle power logging: 40mA, 2 seconds

Power Save standby: 0.5mA

Power Save logging: 40mA, stopped after 1 minute

Recorded Positions vs. Battery Capacity

Assumptions: Power Save Mode, 30s interval



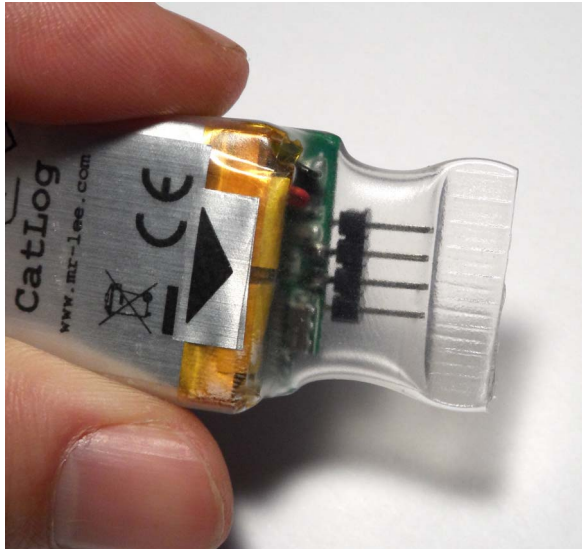
Recorded Positions vs. Interval Rate

Assumptions: Power Save Mode, 380mAh standard battery

Interval (s)	Positions	Days
10	7750	1
30	7500	2
60	7000	5
120	6300	9
240	5240	15
480	3900	22
960	2600	29
1200	2220	31
1800	1630	34
3600	910	38
7200	485	40
14400	250	41

ThermoSeal Enclosure

One key feature of the CatLog-S is the ThermoSeal enclosure that offers the best environmental protection for the least weight. It is a special heat shrink tubing with outstanding characteristics.



ThermoSeal™ Features:

- Provides reliable water tightness and is absolutely corrosion and pressure resistant.
- Reusable seal, just heat it up to open it and seal it again with heat !
- Sufficient wall thickness to mechanically protect the device
- Sticks to tape for universal deployment
- Allows to create special attachment fixtures
- Cheap, clean, economic, simple !

Seal temperature range: 160-200 degrees Celsius (320 – 390 Fahrenheit)



Process description is part of the CatLog-S User Manual.

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