

Oyster using LoRaWAN™ Technology

Battery-Powered GPS LPWAN tracking on LoRaWAN Networks



The Oyster is a rugged, waterproof, GPS tracking device designed for tracking non-powered, exposed assets where super-long battery life is required on LoRaWAN networks.

FEATURES

- Up to 5 years once daily location
- Up to 2 years detailed tracking
- IP67 water and dust proof
- Rugged, robust and low profile
- No install required, simply "place 'n trace"
- Off-the-shelf, user replaceable AA batteries
- Switch from "locate" to "track" over-the-air
- Battery status and low battery alert
- Integrated accelerometer
- Unauthorised movement alert

APPLICATIONS



Vehicle and fleet tracking



Non-powered asset tracking



Equipment locate and recovery



Trailers and mobile assets



Shipping containers and freight



Anchoring and security of assets

MECHANICAL FEATURES

Low-profile IP67 rugged housing	The IP67 rated housing is made of sturdy ABS/Polycarbonate plastic to survive bumps and knocks and is UV stabilised to survive many years in the sun and weather. Its low-profile makes it easier to mount in the corrugation on containers or to conceal on the underside of a trailer.
Operating temperature	-20°C to +60°C For operation in extreme temperatures the device must be fitted with 1.5V Lithium batteries
Dimensions (mm)	L 115 x W 65 x H 20
Weight	250 grams including batteries

CONNECTIVITY

Network	LoRaWAN
Configuration	Setup by USB Cable and OTA
LoRaWAN Regions	All 868MHz and 915MHz regions supported

GPS TRACKING

GPS Module	High sensitivity assisted GPS receiver, 72 channel
GPS/GLONASS	Concurrent GPS/GLONASS
Antenna with LNA	Boosted by low-noise amplifier (LNA) allows operation in "urban canyons" and container stacks

SPECIFICATIONS

Sleep Current	5µA (micro-amps)
Batteries	3 x AA Size 1.5V batteries – alkaline or lithium. Alkaline – industrial type recommended. 1.5V Lithium – longer life and wider temperature range
Recovery Mode	Switch from Daily Locate to Live Tracking over-the-air
3D Accelerometer	The 3 axis accelerometer allows the Oyster to "sleep" in an ultra-low power state yet still wake up when movement occurs
Adaptive Tracking	Adaptive-Tracking technology enables the accelerometer and GPS data to be used intelligently to work out if it is moving and to send frequent updates, as well as to scale the update rate down to once per day if the asset is stationary in order to preserve battery life
Autonomous Aiding Data	Predicts satellite locations Reduces the time to first fix Improves performance in "urban canyons"

LoRaWAN™ is a Low Power Wide Area Network (LPWAN) specification intended for wireless battery operated *Things* in a regional, national or global network.

LoRaWAN targets key requirements of Internet of Things such as secure bi-directional communication, mobility and localization services.

The LoRaWAN specification provides seamless interoperability among smart *Things* without the need of complex local installations and gives back the freedom to the user, developer, businesses enabling the roll out of Internet of Things.