

Oyster 2 Cellular

4G LTE CAT-M1 NB-IoT, Compact GPS Asset Tracker



The Oyster is a rugged, waterproof, battery powered cellular GPS tracking device designed for tracking non-powered, exposed assets. Super-long battery life is possible with LTC (Lithium Thionyl Chloride) batteries.

FEATURES

- Up to 8 years once daily location
- Up to 2 years detailed tracking
- IP67 water and dust proof
- Rugged, robust and low profile
- LTC or off-the-shelf, replaceable Lithium AA batteries
- No install required, simply "place 'n trace"
- Switch from "locate" to "track" over-the-air
- Battery status and low battery alert
- Unauthorised movement alert
- Integrated accelerometer

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 SPECIFICATIONS

Low-profile IP67 rugged housing The IP67 rated housing is made of sturdy ABS/Polycarbonate plastic to survive bumps and knocks and to survive many years in the sun and weather. It's low profile together with mounting tabs and 'strap slots' allow for easy mounting.

Dimensions L 137 x W 72 x H 30mm

Operating Temperature -20°C to +60°C¹
1) For operation in extreme temperatures, the Oyster must be fitted with Lithium batteries. Batteries are affected by temperature extremes and typical performance is dependent on temperature

POWER

3 x AA Batteries The Oyster uses 3 x "AA" size LTC 3.6V or 1.5V Lithium Batteries. The 1.5V batteries are readily available from retail outlets, for example Energizer Ultimate Lithium.

Sleep Current 10uA (micro amps)

OTHER

Flash Memory Sufficient memory to store over 25,000 records. Normally data is sent to the server immediately but if the device is out of range there is space to ensure no data is lost. A future firmware version will allow for geo-fences to be loaded into the flash memory of the device and used for geo-fence alerting on the device.

3-axis accelerometer The 3-axis accelerometer allows the Oyster to 'sleep' in an ultra-low power state yet still wakeup when movement occurs. Future firmware versions will allow for harsh G-force detection (like assets being dropped or involved in accidents)

CONNECTIVITY

SIM Size Micro (3FF) size cellular SIM card

4G Modem uBlox SARA-R410M Modem operates on all major global LTE-Cat-M1 and NB-IoT bands. These new low-power networks are specifically designed for IoT applications, providing great battery life.

Supported LTE bands:
1-5, 6, 8, 12, 13, 17, 19, 20, 25, 26, 28

GPS TRACKING

GPS and Cellular Antenna Internal GPS and cellular antennas tuned by RF laboratories for optimal performance.

GPS/GLONASS tracking Concurrent GPS and GLONASS tracking
72 channel high sensitivity receiver
-167dBm industry leading tracking performance

AssistNow Offline AssistNow Offline aiding data for extremely fast time-to-first-fix and performance in urban canyon environments

Low Noise GPS Amplifier (LNA) GPS signals are boosted by a special low-noise amplifier (LNA). This allows operation where normal units will fail to receive GPS signal – like in a container stack!

FIRMWARE SMARTS

Auto-APN	Auto-APN allows the Oyster to analyse the SIM card and select the correct APN details from a list that is pre-loaded in the device's firmware.
Recovery Mode	The Oyster can be remotely switched into Recovery Mode which switches the device to do live tracking and reporting so that you can get your asset back!
G-Force Events	A future firmware version will allow for harsh G-force detection (like assets being dropped or involved in accidents) and report these to the server.
Geo-Fences	The Oyster has the capacity to hold hundreds of geo-fences that can be downloaded to it from the server and updated Over-The-Air. A future firmware version will allow the Oyster to use this geo-fence information to implement geo-fence based alerting on the device.
Adaptive Tracking	The Oyster can be set to use Adaptive-Tracking technology where the accelerometer and GPS data are used to intelligently work out if it is moving and to send frequent updates, and to scale the update rate down to once per day if the asset is stationary - to preserve battery life.

CERTIFICATIONS

Certifications	CE, FCC, PTCRB, Canada, RCM, ICASA
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