

# Oyster2

Cellular 2G or LTE-M / NB-IoT

Best Seller! Ultra-rugged, long-life battery-powered GPS tracking device with up to 7 years battery life for asset tracking and management, theft recovery, and more



## 7 Years Battery Life

Powered by 3 x AA Batteries with up to 7 years battery life



## Movement-Based Tracking

High-precision GPS/GLONASS tracking device tracks assets when they're on the move and enters sleep mode when stationary to save power



## Ultra-Rugged

Weatherproof and ultra-rugged IP67 Housing



## User-Replaceable Batteries

Uses off-the-shelf Lithium batteries or Lithium Thionyl Chloride (LTC) batteries for extreme temperature tolerance



## Battery Life Monitoring

Built-in Battery Meter for remote Battery Life Monitoring and Remaining Life Predictions

## Connectivity

2G	2G: SARA-G350-02S-01 850/900/1800/1900 MHz
LTE-M / NB-IoT	ublox AG SARA-R410M-02B Modem operates on all major global LTE-M and NB-IoT bands Supported LTE bands: 1*, 2, 3, 4, 5, 8, 12, 13, 18, 19, 20, 25, 26*, 28 (*roaming bands)
SIM Size & Access	Internal Micro 3FF SIM

## Batteries

User-Replaceable Batteries	3 x AA
Battery Life	Up to 7 years of battery life at once-daily position updates, 1 year battery life at once-hourly position updates. Enable intelligent movement-based tracking for longer battery life. Battery life calculations based on LTE-M connectivity.
Supported Battery Types	Lithium (LiFeS2) Lithium Thionyl Chloride (LTC) *Please dispose of Lithium batteries in a safe and responsible manner

## Location

Module	ublox EVA-M8
Constellation	Concurrent GPS / GLONASS
Channels	72 Channel High Sensitivity Receiver
Tracking Sensitivity	-167dBm industry-leading tracking performance
GNSS Assistance	GNSS almanac data for greater sensitivity and position accuracy
Low Noise Amplifier	GPS signals are boosted by a unique low-noise amplifier (LNA) allowing operation where other units fail
Cell Tower Location	Cell tower fallback for positioning when GPS fails

## Power

Input Voltage	5-16V DC
Sleep Current	<10uA* *Average current in lowest power configuration

## Mechanics / Design

Dimensions	108 x 86 x 31 mm (4.25 x 3.39 x 1.22")
Weight	194 g (6.84 oz)
Housing	Ultra-Rugged Nylon Glass
IP Rating	IP67 rated housing ensures device can withstand fine dust, high-pressure spray, submersion for 30 mins in 1m of water, and extreme temperatures
Installation	Compact and concealable. Multiple installation options for covertly and easily securing the device to assets with screws, bolts, cable ties, rivets, and more.
Operating Temperature	-20°C to +60°C For operation in extreme temperatures use LTC Batteries
GPS Antenna	Internal
Cellular Antenna	Internal
RF Antenna	Internal
3-Axis Accelerometer	3-Axis Accelerometer to detect movement, high G-force events, and more
Diagnostic LED	Diagnostic LED signifies operation status
Flash Memory	Store weeks of records if device is out of cellular coverage. Storage capacity for over 10 days of continuous 30-second logging.
On-Board Speed and Heading	Current speed and heading is reported with each position update
On-Board Temperature	The device reports internal temperature which provides an indication of ambient temperature but may not always be precise

## Smarts

Auto-APN	Auto-APN allows the device to analyze the SIM card and select the correct APN details from a list that is pre-loaded in the device's firmware
Battery Life Monitoring	Built-in Battery Meter for monitoring battery use and remaining life predictions
Geofence Alerts	The server can use device location to create geofences and alerts if an asset enters or leaves designated locations
Geofence Download to Device	Geofences can be downloaded directly to the device from Telematics Guru for enhanced location-based actions and alerts. Maximum of 100 Geofences with up to 100 points per geofence.
Impact Detection	Configure impact-detection alerts when G-forces are exceeded by a user-defined threshold
Periodic or Movement-Based Tracking	Configure parameters to send updates based on set time intervals or when movement occurs. Adaptive tracking technology detects when the device is on the move and increases the update rate, providing detail when you need it while conserving battery when stationary.
Preventative Maintenance	Set reminders based on distance traveled and run hours to reduce maintenance and repair costs
Run Hour Monitoring	Capture run hours based on movement to understand and optimize asset utilization
Sleep Mode	Stationary devices enter sleep mode until movement occurs to conserve battery life and optimize data usage
Tilt Detection	1-axis angle reporting, tip detection and rotation counting
Theft Recovery	Switch to Recovery Mode in the case of theft or loss to activate real-time tracking for asset retrieval

# Device Management

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Flexible Configuration	Configure device parameters such as position update rate, movement and accelerometer settings, and more to fit any tracking application
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OEM Server	Manage, monitor, configure, debug, update, and restart devices remotely from our cloud-based device management system
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# Integration

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Third-Party Integration	TCP Direct or HTTPS Webhook
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# Security

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Data Security	Military-level AES-256 Encryption from device to OEM Server to protect the integrity and confidentiality of telematics data. Data forwarded to third-party systems is sent via HTTPS for end-to-end security.
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# Warranty

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Manufacturer's Warranty	One year manufacturer's warranty
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# Certifications

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Please visit our <a href="#">knowledge base</a> for a full list of compliance specifications and documentation for your region	<b>LTE-M / NB-IoT</b> - FCC, ISED, ACMA (DoC), PTCRB, AT&T, VERIZON, CE (Doc), Environmental Testing (Temperature, Shock, Vibration) <b>2G</b> - ICASA, CE (Doc)
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