

Oyster3

Ultra-low Power Consumption

The brand new Oyster3 provides users with a rugged solution for all your asset tracking needs. The ultra-low power design means that 3 AA batteries will power the device for up to 10+ years (5x battery life of Oyster2). The Oyster3 is no slouch when it comes to the GPS data as well, supplying high-precision GPS or GLONASS data. You can track assets when they're on the move and enter sleep mode when stationary to save power. The Oyster3 is more rugged than ever, with IP68 classified housing proofing it against the worst of conditions.



Key Features



EXCEPTIONAL BATTERY LIFE

Over 10+ years battery life on user-replaceable 3 x AA Lithium or Lithium Thionyl Chloride (LTC) batteries for extreme temperature operation.



ADAPTIVE TRACKING

Periodic or optional movement-based tracking - tracks assets throughout the day and/or when movement occurs, entering sleep mode when inactive to conserve power and data usage.



BATTERY LIFE ALERTS

"Battery Low" and "Battery Critical" alerts.



ULTRA-RUGGED

IP68 rated housing ensures the device can withstand fine dust, high-pressure spray, and submersion for 30 minutes in 1m of water.

EXPERIENCE LEADING-EDGE TECHNOLOGY

Contact us today to implement innovative, reliable and scalable asset tracking.

Oyster3 Device Specs



CONNECTIVITY

LTE-M / NB-IoT (supports roaming between networks - roaming SIM required)	Nordic nRF9160 Modem operates on all major global LTE-M and NB-IoT bands. Supported LTE bands: LTE-M (Cat-M1): B1, B2, B3, B4, B5, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B66 NB-IoT (Cat-NB1/NB2): B1, B2, B3, B4, B5, B8, B12, B13, B17, B19, B20, B25, B26, B28, B66
SIM Size & Access	Internal Nano 4FF SIM

BATTERIES

User-Replaceable Batteries	3 x AA
Supported Battery Types	Alkaline Lithium (LiFeS2)* Lithium Thionyl Chloride (LTC)* * Lithium or LTC recommended for best performance. Please dispose of Lithium batteries in a safe and responsible manner.
Battery Life	Once Daily location updates – 10+ years Movement-Based location updates – 7 years Hourly location updates – 3.5 years

LOCATION

GNSS Module	Sony CXD5605
Constellation	Concurrent GPS, GLONASS, Galileo, BeiDou, QZSS
Tracking Sensitivity	-147 dBm cold start / -161 dBm hot start
GNSS Assistance	GNSS almanac and ephemeris data for greater sensitivity and position accuracy
Low Noise Amplifier	GPS signals are filtered and boosted by a SAW filter and low-noise amplifier (LNA) allowing operation where other units fail
Cell Tower Location	Cell tower location fallback for positioning when GPS can't get a fix

POWER

Input Voltage	3.3-16V DC
Sleep Current	<10uA* * Average current in lowest power configuration
Safety	Reverse Polarity Protection

MECHANICS / DESIGN

Dimensions	108 x 86 x 31 mm (4.25 x 3.39 x 1.22")
Weight	161 g (5.68 oz)
Housing	Ultra-Rugged IP68 Housing
IP Rating	IP68 rated housing ensures device can withstand fine dust, high-pressure spray, submersion for 30 minutes 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. Stainless steel screws provided.
Operating Temperature	-30°C to +60°C For operation in extreme temperatures use LTC Batteries.
Cellular Antenna	Internal
GPS Antenna	Internal
Accelerometer	3-Axis Accelerometer to detect movement, high G-force events, and more
Diagnostic LED	Diagnostic LED indicates operation status
Flash Memory	Store weeks of records if device is out of cellular coverage. Storage capacity for over 1 month of continuous 30-second logging.
On-Board Speed & Heading	Current speed and heading is reported with each position update
On-Board Temperature	The device reports internal temperature and prevents the internal battery charging in extreme temperatures. Internal temperature 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	'Battery Low' and 'Battery Critical' alert levels
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. Max of 500 Geofences with up to 100 points per geofence.
Impact Detection	Configure impact-detection alerts when G-forces are exceeded by a user-defined threshold
Power Management	Early registration abort saves power when out of cellular coverage
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.

SMARTS (CONTINUED)

Preventative Maintenance	Set reminders based on distance traveled and run hours to reduce maintenance/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
Theft Recovery	Switch to Recovery Mode in the case of theft or loss to activate real-time tracking
Tip Detection & Rotation Counting	Axis angle reporting, tip detection and rotation counting (planned)

DEVICE MANAGEMENT

Flexible Configuration	Configure device parameters such as position update rate, movement and accelerometer settings, and more to fit any tracking application
Device Management Platform	Manage, monitor, configure, debug, update, and restart devices remotely from our cloud-based device management system
Configuration App	Configurable with DMLink provisioning tool

INTEGRATION

Third-Party Integration	TCP Direct or HTTPS Webhook
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SECURITY

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

Manufacturer's Warranty	Two-year manufacturer's warranty
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