OYSTER3 LORAWAN®

All 868, 902-928 MHz regions supported in single SKU

- High-performance, high-precision GPS asset tracking device for LoRaWAN networks
- Powered by 3 x AA user-replaceable batteries with 10+ years battery life
- Highly accurate outdoor location tracking with GNSS
- Intelligent power management and battery life monitoring

'Deploy Once' Battery Life

Ultra-Rugged & Waterproof

Outdoor Location

Highly Configurable

868, 902-928 MHz

White-Label & Integration Ready

Asset Visibility

Monitor asset location and movement within LoRaWAN Gateway coverage.

Adaptive Tracking

Automatically adapt reporting rate when asset is mobile or stationary to conserve battery life.

Geofence Alerts

Receive notification if asset enters or exits designated locations.

Battery Life Monitoring

Periodic battery status uplinks give a breakdown of power use.

Wire-Free Installation

Multiple installation options for securing device to asset or concealing within.

Track Longer with Industry-Leading Battery Life

Location Updates	1 x Daily	1 x Hourly	Movement-Based**
Estimated Battery Life*	10 Years	2 Years	2.5 Years

LOGISTICS | EQUIPMENT | BINS & CONTAINERS | MEDICAL | AGRICULTURE | & MORE

* Battery life estimates are influenced by several factors including temperature, installation and orientation of the device, battery selection, the frequency of location updates, network coverage, sensor integrations, peripherals, accelerometer settings, and more.

** Devices can be configured to provide more frequent location updates when the asset is in motion. Movement-based estimates are based on 2 hours of movement daily, 5 days a week.

This device is designed, developed, and manufactured by Digital Matter. For more information, please visit our website at digitalmatter.com.

Connectivity

LoRaWAN	Highly sensitive radio transceiver is available in a single multiband device. Both 868 and 902 - 928 MHz supported.
Regions	AU915 AS923-1 AS923-2 AS923-3 AS923-4 EU868 IN865 KR920 RU864 US915

Location

GNSS Module	Sony CXD5605
Environment	Outdoor
Constellations	Concurrent GPS, GLONASS, Galileo, BeiDou
Low Noise Amplifier	GPS signals are filtered and boosted by a SAW filter and low-noise amplifier (LNA) allowing operation where other units fail.
Location Accuracy*	~1m CEP

* Positioning accuracy specifications are provided by the module supplier and reflect ideal conditions. Device configuration, installation, environmental conditions, augmentation services, and many other factors may lead to variations in positioning accuracy.

Power

User-Replaceable Batteries	3 x AA. Batteries not included. Widely available at most hardware or retail locations.
Supported Battery Types	Lithium or Lithium Thionyl Chloride (LTC) Battery selection is very important. Follow this link to learn more. Please dispose of Lithium batteries in a safe and responsible manner.

Battery Life Estimates*	Once Daily location updates – 10 years Movement-Based location updates** – 2.5 years Hourly location updates – 2 years
Sleep Current	<10uA Average current in lowest power state.

* Battery life estimates are influenced by several factors including temperature, installation and orientation of the device, battery selection, the frequency of location updates, network coverage, sensor integrations, peripherals, accelerometer settings, and more. Battery life calculators are available at support.digitalmatter.com.

** Movement-based estimates are based on 2 hours of movement, occurring 5 days a week, with default trip tracking parameters (location updates every 3 minutes and uploads every 30 minutes). Devices can be configured to provide more frequent location updates when the asset is in motion which will impact battery life.

Mechanics / Design

Dimensions	108 x 86 x 30 mm (4.25 x 3.39 x 1.18 in)
Housing	Non-branded nylon glass housing is suitable for white labeling.
IP/IK Rating	Ultra-rugged and waterproof IP68 and IK07-rated housing ensures the device can withstand impact, fine dust, and brief submersion.
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.
Temperature Range	Operating: -30°C to +60°C Recommended Storage: 10°C to 30°C, Humidity 30%. Store in a cool, dry place.
GPS Antenna	Internal
RF Antenna	Internal
3-Axis Accelerometer	3-Axis accelerometer to detect movement.
Diagnostic LED	Diagnostic LED indicates operation status.
Onboard Speed and Heading	Current speed and heading is reported with each position update.

Smarts

Adaptive 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.
Battery Life Monitoring	Periodic battery status uplinks give a breakdown of power use.
Geofence Alerts	The server can use device location to create geofences and alerts if an asset enters or leaves designated locations.
Sleep Mode	Stationary devices enter sleep mode until movement occurs to conserve battery life and optimize data usage.

Device Management

Flexible Configuration	Configure device parameters such as position update rate, movement and accelerometer settings, and more to fit any tracking application.
Configuration App	Manage device firmware updates and parameters via DMLink provisioning tool. Some parameters can be changed via downlink.

Integration

Third-Party Integration	Easy integration with comprehensive documentation and a flexible and open payload format.

Security

Data Security	LoRaWAN® networks use AES-128 Encryption so your data is protected.

Warranty

Manufacturer's Warranty	Two-year manufacturer's warranty. Exclusions apply.

Certifications

Please view our knowledge base for regulatory and network certifications.