OYSTER3 Bluetooth®

LTE-M (Cat-M1)/NB-IoT

Our best-selling Oyster series with added Bluetooth functionality - Ultra-rugged and robust GPS asset tracking device and Bluetooth Low Energy Gateway featuring 10+ years battery life

108 x 86 x 30 mm (4.25 x 3.39 x 1.18 in)

‘Deploy Once’ Battery Life

Substantially reduce operating costs with over 10+ years of battery life

Bluetooth® 5.2 Gateway

Reports on nearby Bluetooth tags and sensors for affordable tagged asset management and sensor monitoring applications

User-Replaceable Batteries

Uses off-the shelf 3 x AA Lithium batteries

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

Ultra-rugged and weatherproof IP68, IK07 Housing

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
Bluetooth® 5.2 Gateway	Bluetooth 5.2 gateway reports nearby Bluetooth tags and sensors for affordable tagged asset management and sensor monitoring
SIM Size & Access	Internal Nano 4FF SIM

Location

GNSS Module	Sony CXD5612
Constellation	Concurrent GPS, GLONASS, Galileo, QZSS, BeiDou
Tracking Sensitivity	-149 dBm cold start / -163 dBm hot start
*Location Accuracy	~1m 2D RMS, GPS, -130dBm
GNSS Assistance	GNSSalmanac and ephemeris data for greater sensitivity and position accuracy
Low Noise Amplifier	GPSsignals 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 GPScan't get a fix

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

Power

Input Voltage	3 V – 5.5 V DC
Sleep Current	<10uA* *Average current in lowest power configuration
Safety	Reverse Polarity Protection

Batteries

User-Replaceable Batteries	3 x AA. Batteries not included.
Supported Battery Types	Lithium (LiFeS2) *Please dispose of Lithium batteries in a safe and responsible manner
*Battery Life Estimates	Once Daily location updates – 10 years **Movement-Based location updates – 6 years Hourly location updates – 3.5 years

* Battery life estimates are influenced by several factors including temperature, installation and orientation of the device, 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 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.

Mechanics / Design

Dimensions	108 x 86 x 30 mm (4.25 x 3.39 x 1.18″)
Weight	173g
Housing	Non-branded housing for optional 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.
Operating Temperature	-30°C to +60°C
Cellular Antenna	Internal
GPS Antenna	Internal
3-Axis 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 20 days of continuous 2-minute logging.
Onboard Speed and Heading	Current speed and heading is reported with each position update
Onboard 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	'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
Onboard Geofencing	Geofences can be downloaded directly to the device for enhanced location-based actions and alerts. Maximum 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
Intelligent 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.
Preventative Maintenance	Set reminders based on distance traveled and run hours to reduce maintenance and repair costs
Rotation Counting	Keeps a count of the number of rotations of the device about the Z axis
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 for asset retrieval
Tip Detection	Define a range of angles that constitutes a 'tipped' state and configure alerts

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 DM-Link provisioning tool

Integration

Third-Party Integration	TCP Direct or HTTPS Webhook

Security

Data Security	Military-level AES-256 Encryption from device to Device Manager to protect the integrity and confidentiality of telematics data. Data forwarded to third-party systems is sent via HTTPSfor end-to-end security.

Warranty

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

Certifications

Please check our knowledge base for regulatory and network certifications