Oyster3 Bluetooth®

LTE-M / 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

‘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
- 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, 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

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. Estimated battery life calculators are available at support.digitalmatter.com.

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
- 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

* Positioning accuracy specifications are provided by the GNSS supplier 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
- <10μA*
  - *Average current in lowest power configuration

Safety
- Reverse Polarity Protection
### Mechanics / Design

**Dimensions**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
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<tbody>
<tr>
<td>108 x 86 x 30 mm (4.25 x 3.39 x 1.18)</td>
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</table>

**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.

**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**

‘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 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

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Flexible Configuration</td>
<td>Configure device parameters such as position update rate, movement and accelerometer settings, and more to fit any tracking application</td>
</tr>
<tr>
<td>Device Management Platform</td>
<td>Manage, monitor, configure, debug, update, and restart devices remotely from our cloud-based device management system</td>
</tr>
<tr>
<td>Configuration App</td>
<td>Configurable with DM-Link provisioning tool</td>
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</tbody>
</table>

### Integration

<table>
<thead>
<tr>
<th>Feature</th>
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<tbody>
<tr>
<td>Third-Party Integration</td>
<td>TCP Direct or HTTPS Webhook</td>
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</table>

### Security

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<tr>
<td>Data Security</td>
<td>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 HTTPS for end-to-end security.</td>
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### Warranty

<table>
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<tr>
<th>Feature</th>
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<tbody>
<tr>
<td>Manufacturer’s Warranty</td>
<td>Two-year manufacturer’s warranty</td>
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### Certifications

<table>
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<tbody>
<tr>
<td></td>
<td>ACMA, CE, UKCA</td>
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Please visit support.digitalmatter.com for a full list of compliance specifications and documentation for your region.