POWERFLEET®

PRODUCT SHEET

ASSET TRACKING

Oyster

Maximum visibility and protection for all your non-vehicle assets

The **Oyster** provides a comprehensive wireless solution for tracking mobile assets without a permanent or reliable power source. Oyster is a low profile, rugged LTE-Cat1 bis and 2G GPS tracking device designed for tracking non-powered assets, trailers or any other asset where long battery life is required, without sacrificing the frequency of update. The Oyster makes use of removable off-the shelf batteries for easy maintenance and reduced costs.

A reliable management solution that focuses on maximising asset efficiency.

The benefits of a professional, fully integrated fleet management solution are well-known among fleet owners and managers. Tracking and monitoring vehicles and drivers enables an array of practical and cost-related improvements.

But what about in industries where assets are just as valuable as vehicles and drivers?

This offers superior protection for assets of all kinds - mobile and fixed; with or without a dedicated power source - across many different industries. Unlike manual systems, Oyster offers an automatic, electronic registry of assets, their statuses and whereabouts so that they can be:

1. Located and/or tracked on a map – historically or in real-time.
2. Managed in terms of service intervals and odometer readings.
3. Billed more accurately when rented out.

This improved control and visibility can dramatically reduce the costs of not knowing an asset's whereabouts and has the potential to optimise asset deployment and utilisation.

Key features

Off-the-shelf batteries make shipping to various regions more effective

Intelligent power management system

IP67 rated ABS/Polycarbonate Plastics Enclosure

Integrated internal antennas

LTE

2G, 4G LTE Cat-M1/MN-IoT and 4G LTE Cat 1bis connectivity options

Key **Benefits**

- Track your assets on an interactive map and replay historical trips
- High-sensitivity GPS and assisted GPS ensure quick latch times and accurate position recording
- Trip and utilisation timeline
- Certificate and license reminders
- Continuous battery level reporting and low battery alarm
- No wiring required - bolt onto the vehicle's body with screws

Technical Specifications

Connectivity

Cellular Module	Ublox LENA R8 Modem operates on all major global 4G Cat 1bis and 2G bands Supported 4G Cat 1bis bands: B1, B2, B3, B4, B5, B7, B12, B20, B28, B38, B40, B41, B66
SIM Size & Access	Internal Nano 4FF SIM

Location

GNSS Module	Ublox LENA-R8001M10
Constellation	Concurrent GPS/QZSS, GLONASS, Galileo, BeiDou
Tracking Sensitivity	-148 dBm cold start / -159 dBm hot start
*Location Accuracy	~1m CEP, GPS, -130 dBm
GNSS Assistance	GNSS 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.
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	4 - 16 V DC
Sleep Current	<10uA*
Safety	Reverse Polarity Protection

*Average current in lowest power configuration

Technical Specifications (cont'd)

Batteries

User-Replaceable Batteries	3 x AA. Batteries are not included.
Supported Battery Types	Lithium (LiFeS2). Battery selection is very important. Please dispose of Lithium batteries in a safe and responsible manner.

* 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.

** 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 × 86 × 30 mm (4.25 × 3.39 × 1.18 in)
Weight	120g
Housing	Non-branded housing for optional white-labelling.
IP/IK Rating	Ultra-rugged and waterproof IP68 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 over 29 days of continuous 30-second logging.
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.

Technical Specifications (cont'd)

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	'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.
Impact Detection	Configure impact-detection alerts when G-forces are exceeded by a user-defined threshold.
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 optimise asset utilisation.
Sleep Mode	Stationary devices enter sleep mode until movement occurs to conserve battery life and optimise 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.

Integration

Third-Party Integration	TCP Direct or HTTPS Webhook

Technical Specifications (cont'd)

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 On-Road IoT is sent via HTTPS for end-to-end security

Certifications

LTE-M / NB-IoT	RCZ1 – Sigfox Certified, ICASA, CE (DoC) RCZ4 – Sigfox Certified, ACMA (DoC), CE (DoC) Visit support.digitalmatter.com for full device certifications for your region

Powerfleet (Nasdaq: PWFL; JSE: PWR; TASE: PWFL) is a global leader in the artificial intelligence of things (AIoT) software-as-a-service (SaaS) mobile asset industry. With more than 30 years of experience, Powerfleet unifies business operations through the ingestion, harmonisation, and integration of data, irrespective of source, and delivers actionable insights to help companies save lives, time, and money. Powerfleet's ethos transcends our data ecosystem and commitment to innovation; our people-centric approach empowers our customers to realise impactful and sustained business improvement. The company is headquartered in New Jersey, United States, with offices around the globe. Explore more at www.powerfleet.com.

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