DATASHEET

Ultra-rugged, Indoor/Outdoor battery-powered asset tracking device and Bluetooth Gateway. Features cloud-based location solving for 10+ Years of battery life

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

Indoor/Outdoor
GNSS, Wi-Fi AP MAC Address Scanning, and Cell Tower location for seamless indoor/outdoor asset management

Bluetooth® 5.2
Reports on nearby Bluetooth tags and sensors for affordable tagged asset management and sensor monitoring applications

Technical Specification

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

Mechanics / Design

Dimensions	108 x 86 x 30 mm (4.25 x 3.39 x 1.18 in)
Weight	194g
Housing	Non-branded housing for optional white-labeling
IP/IK Rating	Ultra-rugged and waterproof IP68 and IK07-rated housing ensures the Oyster Edge 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 silver screws supplied.
Operating Temperature	-30°C to +60°C - For operation in extreme temperatures use Lithium Batteries
Cellular Antenna	Internal
GPS Antenna	Internal
Wi-Fi 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	Stores records if device is out of cellular coverage. Storage capacity for over 10 days of 2-minute logging.
Speed and Heading	Scanning technology used on the Oyster Edge does not return speed and heading
Onboard Temperature	The device reports internal temperature which provides an indication of ambient temperature but may not always be precise

Power

Input Voltage	3-5.5V DC
Sleep Current	<10uA* *Average current in lowest power configuration

Batteries

User-Replaceable Batteries	3 x AA. *Batteries not included.*
Supported Battery Types	Alkaline Lithium LiFeS2 (recommended for best performance) *Please dispose of Lithium batteries in a safe and responsible manner
*Battery Life Estimates	Once Daily location updates – 10 years **Movement-Based location updates – 7 years Hourly location updates – 4.5 years

Location

Chipset	Semtech LR1110
Constellation	Concurrent GPS / BeiDou
Cloud-Based Solver	Asset location is calculated in Digital Matter's Location Engine
Tracking Sensitivity	-134 dBm autonomous / -141 dBm aided
GNSS Assistance	GNSS almanac 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 fallback for positioning when there is no GNSS or Wi-Fi signal
Wi-Fi Positioning	Indoor asset location using Wi-Fi access point scanning (device does not connect to Wi-Fi)

Thank You

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