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# IoT Asset Tracking with Bluetooth® Low Energy

Robust and ultra-rugged Bluetooth Low Energy Gateways with GPS for smarter asset management and condition monitoring
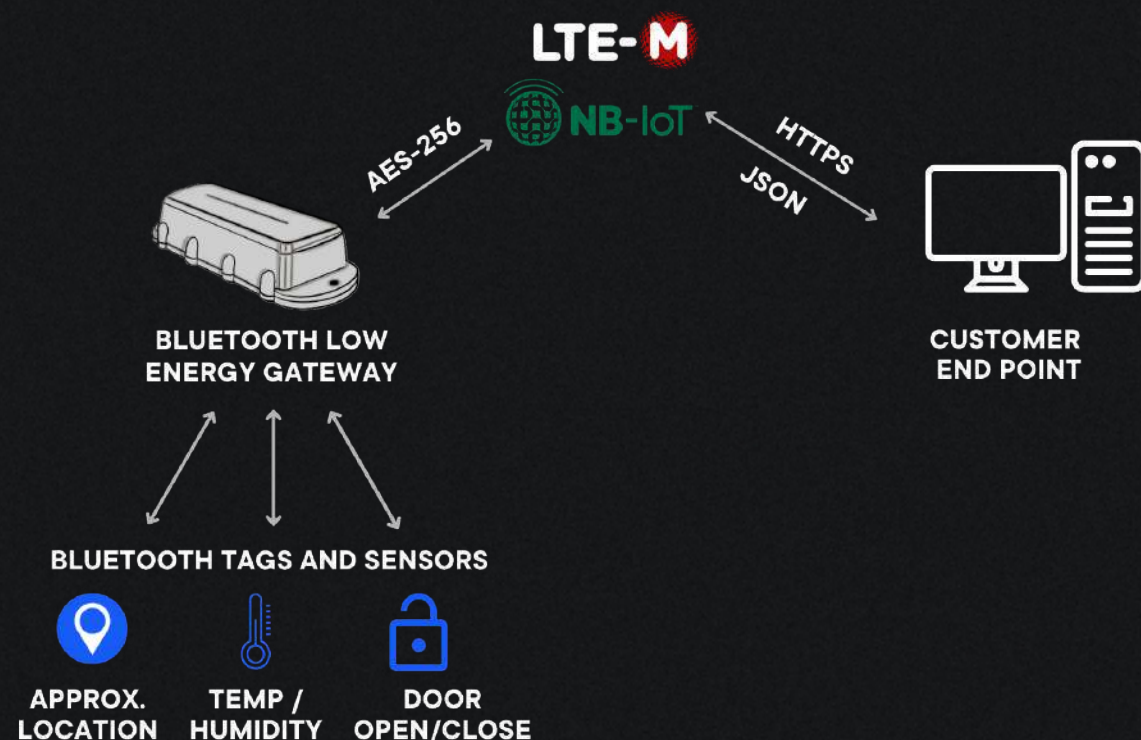
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# Track More for Less with Bluetooth Low Energy

Digital Matter Bluetooth Gateway devices feature concurrent location tracking (GNSS, Wi-Fi and Cell Tower Location) and Bluetooth Low Energy, enabling GPS track-and-trace with customizable condition monitoring for critical assets.

With battery-powered and wired Gateway solutions, simple integration protocols and hundreds of Bluetooth Low Energy tags, sensors, and beacons on the market, it's now faster and more affordable than ever to protect, optimize, and derive more value from the assets that matter.

**LTE-M**
**NB-IoT**
AES-256
HTTPS JSON

**BLUETOOTH LOW ENERGY GATEWAY**

**CUSTOMER END POINT**

**BLUETOOTH TAGS AND SENSORS**

**APPROX. LOCATION**  **TEMP / HUMIDITY**  **DOOR OPEN/CLOSE**

## Impact and High-G Force Detection
Receive instant alerts when, and at what locations, high-value assets or dangerous goods are mishandled during transit.

## Door Open/Close Monitoring
Integrate with a variety of Bluetooth sensors to enable door open/close monitoring for tamper detection, reporting, and/or compliance.

## Inventory and Asset Management
Bluetooth Location Tags can be used to manage stock, inventory, pallets, tools, small pieces of equipment, or other assets where a larger (and more expensive) full GPS device may not make commercial sense.

## Cold Chain Management
Install Bluetooth Low Energy sensors in temperature/humidity-sensitive trucks, freezers, or packages to maintain safety and compliance.

## Enhanced Fleet Management
Utilize Bluetooth fuel level and fuel flow monitoring probes, axle load meters, tire pressure and temperature sensors, and more for a robust and wire-free fleet management solution.

| | Oyster Edge | Remora3 | G120 |
|---|---|---|---|
| Connectivity | LTE-M/NB-IoT | LTE-M/NB-IoT | 2G or LTE-M/NB-IoT / Optional Iridium Edge Satellite Hybrid |
| Example Use Cases | Supply Chain, Logistics, Connected Packages, Cold Chain, Wire-Free Fleet Management | Trailers, Supply Chain, Logistics, Cold Chain, Wire-Free Fleet Management | Vehicles, Trailers, Heavy Equipment, Bluetooth tag/ sensor monitoring, Advanced Fleet Management, Global Coverage |
| Power | Battery-Powered | Battery-Powered | Wired |
| Installation | Covertly install anywhere with screws, bolts, cable ties, etc. | Covertly install anywhere with screws, bolts, cable ties, etc. | 24 pin connector provided as standard |
| IP67 Rated | Yes | Yes | - |
| Environment | Indoor/Outdoor | Outdoor | Outdoor |
| Cloud-Based Location Solving | Yes | - | - |
| GNSS | GNSS Scanning | Full | Full |
| Wi-Fi MAC Address Scanning | Yes | - | - |
| Cell Tower Location | Yes | Yes | Yes |
| Accelerometer | Yes | Yes | Yes |
| Batteries | 3 x AA Lithium | 2 x D Lithium Thionyl Chloride (LTC) | - |
| *Battery Life (Daily) | **10+ Years | **20+ Years | - |
| *Battery Life (Movement-Based) | 7 Years | **15+ Years | - |
| *Battery Life (Hourly) | 4.5 Years | **10+ Years | - |
| Inputs / Outputs, Sensor Interfaces | - | - | 1 x Analog Input, 6 x Digital Inputs, 2 x Switched Ground Digital Outputs, 1 x Ignition Digital Input, Switched Power Out, RS-232 |

* Battery life estimates are based on LTE-M/NB-IoT Connectivity and influenced by several factors including temperature, installation location 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.

** For battery life estimates over 10 years, please consider network technology availability and other factors such as battery manufacturer lifespan and self-discharge specifications.

![digital matter logo]

# Oyster EDGE

## LTE-M/NB-IoT

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

**Standard IP67**
Dimensions - 108 x 86 x 31 mm (4.25 x 3.39 x 1.22)

### 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

### 'Deploy Once' Battery Life
Over 10+ years battery life on only 3 x AA user-replaceable batteries

### Cloud-Based Location
Position calculations are handled in the cloud (versus on-device) for substantial power savings

### 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
IP67 rated housing ensures the device can withstand fine dust, high-pressure spray, and submersion for 30 minutes in 1m of water

# Remora3

## LTE-M/NB-IoT

Ultra-rugged, long-life battery-powered GPS asset tracking device and Bluetooth® Gateway featuring *20 years of battery life and tamper detect - **longest-lasting battery-powered device on the market**

### 'Deploy Once' Battery Life

Over 20 years battery life movement-based tracking, 2 years at most aggressive (second-by-second) tracking performance

### 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 2 x D Lithium Thionyl Chloride (LTC) batteries for extreme temperature operation

### 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

### Tamper Detect

Magnetic Tamper Detect

### Ultra-Rugged

IP67 rated housing ensures the device can withstand fine dust, high-pressure spray, and submersion for 30 minutes in 1m of water

**Standard IP67**

**Dimensions -** 224 x 91 x 41 mm (8.82 x 3.58 x 1.61")

* For battery life estimates over 10 years, please consider network technology availability and other factors such as battery manufacturer lifespan and self-discharge specifications.

# G120

## 2G or LTE-M/NB-IoT
## Optional Iridium Satellite Hybrid

GPS tracking device and Bluetooth® Gateway with optional Iridium Satellite for global coverage with inputs/outputs, RS-232 Interface, and remote immobilization for fleet management, driver ID, driver safety and behavior monitoring, remote worker safety, theft recovery, and more

### Real-Time Tracking
High-precision GPS/GLONASS tracking device wired to vehicles or equipment

### Backup Battery
Internal Backup Battery in case of loss of power or tampering

### Bluetooth Gateway
Bluetooth® 5.0 Gateway for tagged asset management and sensor monitoring

### Inputs/Outputs
1 x Analog Input, 6 x Digital Inputs, 2 x Switched Ground Digital Outputs, 1 x Ignition Digital Input, Switched Power Out

### RS-232 Interface
RS-232 Interface to connect optional Iridium Edge® Module or interface with controllers and sensors

### Driver ID
Configure iButton®, RFID readers and Wiegand Interface for Driver ID

### Driver Behavior
Accident and rollover detection, speeding, harsh braking, and more

### In-Cab Alerts
Built-in Buzzer for in-cab alerts

# Accelerate Time to Value with Faster Integration

Digital Matter gateways support several industry-standard Bluetooth Low Energy formats out-of-the-box. Using any third-party tags that are iBeacon/Eddystone compliant allows for a simple plug-and-play solution.

Custom third-party tag formats are also supported to maximize the number of possible installation options for any use case. This is easily enabled by utilizing a pre-integrated device, or simply specifying the custom tag frame details which the gateway can search for.

Our gateways also support both active and passive scanning on all supported tag types, along with support for Bluetooth Low Energy coded scanning technology to best support use cases where long range transmission is required.

# Sample Third-Party Bluetooth Integrations

| Device | Air Pressure | Analog Input | Digital Input | Digital Output | Fuel Level | Approx. Location | Magnet (Reed Switch : Door Open/ Close) | Movement (Accelerometer) | Relative Humidity | Temperature | Tire Pressure |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DryLink RH Tag | | | | | | | | | Yes | Yes | |
| DryLink Tag | | | | | | | | Yes | | | |
| ELA AI | * | Yes | | | * | | * | * | * | * | |
| ELA DI | * | | Yes | | * | | * | * | * | * | |
| ELA DO | | | | Yes** | | | | | | | |
| ELA ID | | | | | | Yes | | | | | |
| ELA MAG | | | | | | | Yes | | | | |
| ELA MOV | | | | | | | | Yes | | | |
| ELA RHT | | | | | | | | | Yes | Yes | |
| ELA T | | | | | | | | | | Yes | |
| Escort TD-BLE Probe | | | | | | | | | | Yes | |
| Geobox Tire Pressure | | | | | | | | | | Yes | Yes |
| Ingics iBS01 Basic / Temp | | | | | | Yes | | | Yes | Yes | |
| Jaalee iBeacon | | | | | | Yes | | Yes | | | |
| Minew S1 | | | | | | | | | Yes | Yes | |
| Nanolink BT40 | | | | | | Yes | | Yes | | | |
| Ruuvi Tag | Yes | | | | | | | Yes | Yes | Yes | |
| Sentrius BT510 | | | | | | | Yes | Yes | | Yes | |
| Technoton DUT-E S7 | | | | | Yes | | | | | Yes | |

**Integrating Third-Party Bluetooth® Tags and Sensors with Digital Matter Devices**
Digital Matter does not supply third-party Bluetooth accessories. For a full list of integrations, or more information on integrating third-party Bluetooth accessories, [visit our knowledge base.](#)

**Tables Notes**
*ELA tags that have an analog input or digital input/output can support these use cases depending on sensor integrations
**This controller responds to many industrial and security applications such as alarm triggering, motor and PLC control, etc.

# It's Time to Build a Better IoT Asset Management Solution

### Proven Expertise

We are global leaders in the asset tracking ecosystem as determined by ABI Research with over 1M+ devices designed, manufactured, and deployed across 120+ countries with over 1.5K endpoints and counting.

### Multiple Location Technologies

GNSS, Wi-Fi AP MAC Address Scanning, Cell Tower location, and Iridium Satellite hybrid solutions for Indoor, Outdoor, and Global asset tracking applications.

### Global Roaming

Supports automatic roaming between LTE-M and NB-IoT networks with minimal delay and marginal impact on battery life or performance (roaming SIM required).

### Mobile or Stationary Gateways

Gateway devices can be placed on or wired to mobile assets or installed on walls, poles, or other pieces of equipment as a stationary solution.

### Advanced Filtering

Smart filtering techniques allow our Gateways to detect specific Bluetooth accessories more efficiently, reducing cellular data usage and simplifying the integration overhead of needing to filter out unwanted tags on the end platform.

### 'Deploy Once' Battery Life

Reduce OPEX costs with industry-leading battery life and performance. Our battery-powered devices are engineered from the ground up to achieve maximum battery life with ultra-low power consumption.

### Secure AES-256 Encryption

We implement comprehensive security protocols on our devices and software to protect against attacks on the integrity and confidentiality of your telematics data.

# Let's Get Started

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