

# Remora

## Cellular 2G, 3G, or LTE-M / NB-IoT

Ultra-rugged, long-life battery-powered GPS tracking device and Bluetooth® Gateway with up to 10 years of battery life and tamper detect for asset tracking and management, sensor and tag monitoring, theft recovery, and more



### **10 Years Battery Life**

Powered by 2 x D LTC batteries with up to 10 years battery life

### **Movement-Based Tracking**

High-precision GPS/GLONASS tracking device tracks assets when they're on the move and enters sleep mode when stationary to save power

### **Bluetooth Gateway**

Bluetooth® 5.0 Gateway for tagged asset management and sensor monitoring

### **Ultra-Rugged**

Weatherproof and ultra-rugged IP67 Housing

### **User-Replaceable Batteries**

Uses Lithium Thionyl Chloride (LTC) batteries for extreme temperature tolerance

### **Battery Life Monitoring**

Built-in Battery Meter for remote Battery Life Monitoring and Remaining Life Predictions

### **Tamper Detect** Magnetic Tamper Detect

# Connectivity

2G	2G: SARA-G350-02S-01 850/900/1800/1900 MHz
3G (MOQs apply)	uBlox SARA-U201 modem offering 3G with 2G fallback 3G: UMTS/HSPA, 800/850/900/1900/2100 MHz 2G: GSM Quad-band, 850/1900, 900/1800 MHz
LTE-M / NB-IoT	uBlox SARA-R410M Modem operates on all major global LTE-M and NB-IoT bands. Supported LTE bands: 1*, 2, 3, 4, 5, 8, 12, 13, 18, 19, 20, 26*, 28 (*roaming bands)
Bluetooth® 5.0 Gateway	Bluetooth 5.0 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	2 x D Cell (3.7V per cell)
Battery Life	Up to 10 years of battery life at once-daily position updates, 5 years battery life at once-hourly position updates. Enable intelligent movement-based tracking for longer battery life. Battery life estimates based on LTE-M connectivity.
Supported Battery Types	Lithium Thionyl Chloride (LTC) *Please dispose of Lithium batteries in a safe and responsible manner

# Location

Module	uBlox EVA-M8
Constellation	Concurrent GPS / GLONASS
Channels	72 Channel High Sensitivity Receiver
Tracking Sensitivity	-167dBm industry-leading tracking performance
GNSS Assistance	GNSS almanac data for greater sensitivity and position accuracy
Low Noise Amplifier	GPS signals are boosted by a unique low-noise amplifier (LNA) allowing operation where other units fail
Cell Tower Location	Cell tower fallback for positioning when GPS fails

# Power

Input Voltage	5-16V DC
Sleep Current	<10uA* *Average current in lowest power configuration

# Mechanics / Design

Dimensions	224 x 91 x 41 mm (8.82 x 3.58 x 1.61")
Weight	443 g (15.63 oz)
Housing	Ultra-Rugged Nylon Glass
IP Rating	IP67 rated housing ensures device can withstand fine dust, high-pressure spray, submersion for 30 mins in 1m of water, and extreme temperatures
Installation	Compact and concealable. Multiple installation options for covertly and easily securing the device to assets with screws, bolts, cable ties, rivets, and more.
Operating Temperature	-20°C to +60°C For operation in extreme temperatures use LTC Batteries.
GPS Antenna	Internal
Cellular Antenna	Internal
RF Antenna	Internal
3-Axis Accelerometer	3-Axis Accelerometer to detect movement, high G-force events, and more
Diagnostic LED	Diagnostic LED signifies operation status
Flash Memory	Store weeks of records if device is out of cellular coverage. Storage capacity for over 10 days of continuous 30-second logging.

# 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	Built-in Battery Meter for monitoring battery use and remaining life predictions
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 from Telematics Guru for enhanced location-based actions and alerts. Maximum of 100 Geofences with up to 100 points per Geofence.
Impact Detection	Configure impact-detection alerts when G-forces are exceeded by a user-defined threshold
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
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
Tamper Alerts	Magnetic tamper switch provides an instant alert if the device is removed from your asset
Theft Recovery	Switch to Recovery Mode in the case of theft or loss to activate real-time tracking for asset retrieval
Tilt Detection	1-axis angle reporting, tip detection and rotation counting

# Device Management

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Flexible Configuration

Configure device parameters such as position update rate, movement and accelerometer settings, and more to fit any tracking application

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OEM Server

Manage, monitor, configure, debug, update, and restart devices remotely from our cloud-based device management system

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# Integration

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Third-Party Integration

TCP Direct or HTTPS Webhook

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# Security

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Data Security

Military-level AES-256 Encryption from device to OEM Server to protect the integrity and confidentiality of telematics data.  
Data forwarded to third-party systems is sent via HTTPS for end-to-end security.

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# Warranty

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Manufacturer's Warranty

One year manufacturer's warranty

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# Certifications

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**LTE-M / NB-IoT** - FCC, ISED, ACMA (DoC), Bluetooth® Certified, VERIZON, CE (Doc), Telstra  
**2G** - ICASA, Bluetooth® Certified, CE (Doc)

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