

# Remora

Battery-Powered, IP67 Easy-Install GPS Tracking Device



## APPLICATIONS



Vehicle and  
fleet tracking



Non-  
powered  
asset tracking



Run hour  
monitoring



Trailers and  
mobile assets



Shipping  
containers  
and freight



Anchoring  
and security  
of assets

The Remora is a low-profile, rugged 2G or 3G GPS device designed for tracking non-powered assets where super-long battery life is required without sacrificing the frequency of updates and accuracy performance.

## FEATURES

- Up to 5 years once daily location
- Up to 2 years detailed tracking
- No install required, simply "place 'n trace"
- IP67 water and dust proof
- Rugged, robust and low-profile
- Switch from "locate" to "track" over-the-air
- Magnetic tamper detection (optional)
- Unauthorised movement alert
- Integrated accelerometer
- Limited speed alerts
- High-G Event Detection

## MECHANICAL SPECIFICATIONS

### Low-profile IP67 rugged housing

The IP67 rated housing is made of sturdy ABS/Polycarbonate plastic to survive bumps and knocks and to survive many years in the sun and weather.

It is low-profile making it easier to mount in the corrugation on containers or concealed on the underside of a trailer – for example.

The housing screws together for easy assembly, and has 2 convenient mounting tabs. It also has ‘strap slots’ allowing the Remora to be cable tied or metal strapped to an asset.

**Dimensions** L 225 x W 65 x H 30mm

### Operating Temperature

-20°C to +60°C<sup>1</sup>

1. Specification given is for the electronics. Check the specification of the batteries that will be used. For extreme temperatures, consider fitting LTC batteries instead of Alkalines

## POWER

### 4 x C-Cell Batteries

The Remora uses standard “C-Cell” size batteries

### Alkaline Battery option

Low cost off-the-shelf alkaline batteries can be used in the Remora

### LTC Battery option

For applications that require extreme temperature or extra long-life Lithium-Thionyl-Chloride (LTC) batteries can be used. Ensure they will supply a high enough pulse current – see here: [Remora Battery Recommendations](#)

### Sleep Current

5µA (yes, that is **micro-amps**)<sup>2</sup>

2 At room temperature in the lowest power state.

## OTHER

### Internal Memory

Sufficient memory to store over 55,000 records. Normally data is sent to the server immediately but if the device is out of range there is space to ensure no data is lost. A future firmware version will allow for geo-fences to be loaded into the flash memory of the device and used for geo-fence alerting on the device.

### 3-axis accelerometer

The 3-axis accelerometer allows the Remora to ‘sleep’ in an ultra-low power state yet still wakeup when movement occurs. The accelerometer can also be used to detect extreme G-Force events such as an accident or abuse of the asset, for example dropping a container.

### Magnetic Tamper Detect

Optional magnetic wireless tamper switch detects when the device has been removed from the asset.

## CONNECTIVITY

### SIM Size

Standard (2FF) size cellular SIM card

### 2G, 3G or 4G

The Remora can be manufactured for specific markets around the world with cellular modem modules approved by all the major networks.

2G Modem

Quad Band GSM/GPRS Class 10  
850/900/1800/1900 MHz

3G Modem - EU

850/900/2100  
EMEA/APAC/Latin America

3G Modem - NA

850/1900  
North America

Enquire for other bands and 4G options. 4G LTE-CatM1/Nb-IoT model currently in development.

## GPS TRACKING

<b>GPS and Cellular Antenna</b>	Internal GPS and cellular antennas tuned by RF laboratories for optimal performance.
<b>GPS/GLONASS tracking</b>	UBLOX MAX-M8Q GPS Module Concurrent GPS and GLONASS tracking 72 channel high sensitivity receiver -167dBm industry leading tracking performance
<b>AssistNow Offline</b>	AssistNow Offline aiding data for extremely fast time-to-first-fix and performance in urban canyon environments
<b>Low Noise GPS Amplifier (LNA)</b>	GPS signals are boosted by a special low-noise amplifier (LNA). This allows operation where normal units will fail to receive GPS signal – like in a container stack!

## FIRMWARE SMARTS

<b>OTA Configuration</b>	The Remora can be remotely configured and updated OTA (over the air). Device management is performed from Digital Matter's OEM Server device management platform.
<b>Auto-APN</b>	Auto-APN allows the Remora to analyse the SIM card and select the correct APN details from a list that is pre-loaded in the device's firmware.
<b>Multi-APN</b>	The Remora can be configured to roam across multiple networks and automatically use the different APN details for the roaming networks
<b>Text Message Setup</b>	The Remora can be sent text messages to set the APN, server and other details

<b>Recovery Mode</b>	The Remora can be remotely switched into Recovery Mode which switches the device to do live tracking and reporting – so that you can get your asset back!
<b>G-Force Events</b>	The Remora can detect harsh G-force events (like assets being dropped or involved in accidents) and report these to the server.
<b>Geo-Fences</b>	The Remora has the capacity to hold hundreds of geo-fences that can be downloaded to it from the server and updated Over-The-Air. A future firmware version will allow the Remora to use this geo-fence information to implement geo-fence based alerting on the device.
<b>Adaptive Tracking</b>	The Remora can be set to use Adaptive-Tracking technology where the accelerometer and GPS data are used to intelligently work out if it is moving and to send frequent updates, and to scale the update rate down to once per day if the asset is stationary - to preserve battery life.
<b>Performance Monitoring</b>	Track how the Remora is using its power with intelligent performance counters. Monitor wakeups, GPS fixes, uploads and more to understand exactly what the device is doing.

## CERTIFICATIONS

<b>Certifications</b>	CE, FCC, PTCRB, Canada, RCM, ICASA
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