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

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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

Rev 2.0 – 5th Sept 2018

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. Itis 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[1] 1. Specfication 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

Batteries	**C-Cell Size**	The Remora uses standard "C-Cell" size batteries
	Alkaline	Low cost off-the-shelf alkaline batteries can be used in the Remora
	Lithium-Thionyl-Chloride (LTC)	For applications that require extreme temperature or extra long-life Lithium-Thionyl-Chloride (LTC) batteries can be used
	Sleep Current	5µA (yes, that is **micro-amps**)[2] 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/NbIoT model currently in development.	

GPS TRACKING

GPS and Cellular Antenna	Internal GPS and cellular antennas tuned by RF laboratories for optimal performance.
GPS/GLONASS tracking	UBLOX MAX-M8Q GPS Module Concurrent GPS and GLONASS tracking 72 channel high sensitivity receiver -167dBM industry leading tracking performance
AssistNow Offline	AssistNow Offline aiding data for extremely fast time-to-first-fix and performance in urban canyon environments
Low Noise GPS Amplifier (LNA)	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

OTA Configuration	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.
Auto-APN	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.
Multi-APN	The Remora can be configured to roam across multiple networks and automatically use the different APN details for the roaming networks
Text Message Setup	The Remora can be sent text messages to set the APN, server and other details
Recovery Mode	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!
G-Force Events	The Remora can detect harsh G-force events (like assets being dropped or involved in accidents) and report these to the server.
Geo-Fences	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.
Adaptive Tracking	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.
Performance Monitoring	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

Certifications	CE, FCC, PTCRB, Canada, RCM, ICASA