Remora3

Cellular 4G/5G LTE-M / NB-IoT

Ultra-rugged, long-life battery-powered GPS asset tracking device and Bluetooth® Gateway featuring 'Second-by-Second' tracking for real-time applications

Longest-lasting battery-powered device on the market

'Second-by-Second' Tracking

'Deploy Once' battery life and new 'Second-by-Second' tracking performance to support aggressive and/or extended reporting requirements, including highly accurate speeding, run hour, odometer, and area coverage monitoring

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-cell 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 Meter % with "Battery Low" and "Battery Critical" alerts

Tamper Detect

Magnetic Tamper Detection

Ultra-Rugged

Ultra-rugged and waterproof IP68 and IK07-rated housing ensures device can withstand impact, fine dust, and brief submersion

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

Location

GNSS Module	Sony CXD5605
Constellation	Concurrent GPS, GLONASS, Galileo, QZSS
Tracking Sensitivity	-149 dBm cold start / -163 dBm hot start
Location Accuracy *	~1m 2D RMS, GPS, -130dBm * Positioning accuracy specifications are provided by the GNSS supplier and reflect ideal conditions. Device configuration, installation, environmental conditions, augmentation services, and many other factors may lead to variations in positioning accuracy.
GNSS Assistance	GNSS almanac and ephemeris 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 location fallback for positioning when GPS can't get a fix

Batteries

User-Replaceable Batteries	2 x D Cell (3.6 V per cell). *Batteries not included (available as an option).*
Supported Battery Types	Lithium Thionyl Chloride (LTC) *Please dispose of Lithium batteries in a safe and responsible manner
Battery Life Estimates ** (for various applications)	Periodic location updates: 24-hourly 20+ years Periodic location updates: 1-hourly 10+ years Movement-Based location updates[1]: ~10 years [1] Basis: In-trip for 2 hours/day, 7 days/week with 1-minute logs and 30-minute batch uploads. Movement-Based location updates[2]: ~2 years [2] Basis: In-trip for 8 hours/day, 5 days/week with 1-minute logs and uploads. GPS constantly on while in-trip[3]: ~2 years [3] Basis: In-trip for 4 hours/day, 5 days/week with 30-second logs and 5-minute batch uploads. Second-by-second tracking while in-trip with onboard odometer capability for highest odometer accuracy. GPS constantly on while in-trip[4]: ~6 months [4] Basis: In-trip for 10 hours/day, 7 days/week with 30-second logs and 5-minute batch uploads. Second-by-second tracking while in-trip with onboard odometer capability for highest odometer accuracy. ** For battery life estimates over 10 years, please consider network technology availability and other factors such as battery manufacturer lifespans and self-discharge specifications. Battery life estimates are influenced by several factors including temperature, installation and orientation of the device, the frequency of location updates, network coverage, sensor integrations, peripherals, accelerometer settings, and more. Estimated battery life calculators are available at support.digitalmatter.com.

Power

Input Voltage	5-16V DC
Sleep Current	<10 uA* *Average current in lowest power configuration
Safety	Reverse Polarity Protection and Fuse Protection

Mechanics / Design

Dimensions	222 x 91 x 41 mm
Weight	430 g
Housing Materials	Non-branded Nylon Glass housing with stainless steel screws
IP/IK Rating	Ultra-rugged and waterproof IP68 and IK07-rated housing ensures the Remora3 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.
Operating Temperature	-30°C to +60°C
Cellular Antenna	Internal
GPS 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 20 days of continuous 30-second logging
On-Board Speed and Heading	Current speed and heading is reported with each position update
On-Board Temperature	The device reports internal temperature which provides an indication of ambient temperature but may not always be precise

Smarts

Auto-APN	Auto-APN allows the device to analyse the SIM card and select the correct APN details from a list that is pre-loaded in the device's firmware
Battery Life Monitoring	Battery Meter % with "Battery Low" and "Battery Critical" alert levels
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 for enhanced location-based actions and alerts. Maximum of 500 Geofences with up to 100 points per geofence.
Impact Detection	Configure impact-detection alerts when G-forces are exceeded by a user-defined threshold
Intelligent Power Management	Early registration abort and location scan throttling options
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 travelled and run hours to reduce maintenance and repair costs
Run Hour Monitoring	Capture run hours based on movement to understand and optimize asset utilisation

Smarts *(continued)*

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
Rotation Counting	Keeps a count of the number of rotations of the device about the Z axis
Tilt Detection	Define a range of angles that constitutes a 'tipped' state and configure alerts

Device Management

Flexible Configuration	Configure device parameters such as position update rate, movement, and accelerometer settings, and more to fit any tracking application
Device Management Platform	Manage, monitor, configure, debug, update, and restart devices remotely from our cloud-based device management system
Configuration App	Configurable with DMLink provisioning tool

Integration

Third-Party Integration	TCP Direct or HTTPS Webhook

Security

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

Warranty

Manufacturer's Warranty	Two-year manufacturer's warranty *plus additional two-year half price replacement IOTrack warranty*

Certifications

Certifications	FCC (in progress), ISED, CE, ICASA, ACMA RCM, EMC, RoHS Please visit Digital Matter Support Homepage for a full list of compliance specifications and documentation for your region

Side view

Bottom view

For more details see manufacturer's website Digital Matter and device page Remora3

CONTACT US FOR MORE INFORMATION OR PRICING
sales@homeofiot.com.au
www.iotrack.com.au

iotrack
gps tracking solutions