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FEATURES

- High-precision GPS/GLONASS tracking device
- WiFi Positioning for Indoor Asset Tracking
- 1 x Analog Input, 2 x Digital Inputs, 1 x Switched Ground Digital Output, 1 x Ignition Digital Input, Switched Power Out
- I²C Sensor Interface
- Weatherproof and ultra-rugged IP67 Housing with compact and ergonomic design
- Flexible Power Options – 3 x AA Batteries with up to 7 years battery life or wired to permanent power
- Built-in Battery Meter for remote Battery Life Monitoring and Remaining Life Predictions

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CELLULAR 2G OR 4G LTE-M / NB-IOT

OVERVIEW

Feature-rich battery-powered or powered GPS tracking device with inputs/outputs, I²C Sensor Interface, and WiFi Positioning for indoor and outdoor asset tracking and sensor monitoring applications.

APPLICATIONS


Indoor/Outdoor Asset Tracking


Sensor Monitoring


Cold Chain


Pump Control


Pulse Counting


Door Open / Close


Run Hours Monitoring


Preventative Maintenance



Theft Recovery

DATASHEET

View more devices at www.digitalmatter.com

CONNECTIVITY

2G	2G: SARA-G350-02S-01 850/900/1800/1900 MHz
4G 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)
SIM SIZE & ACCESS	Internal Micro 3FF SIM

BATTERIES

USER-REPLACEABLE BATTERIES	3 x AA
BATTERY LIFE	Up to 7 years of battery life at once daily heartbeats / 1-year battery life at once hourly heartbeats.
SUPPORTED BATTERY TYPES	Lithium (LiFeS2) Lithium Thionyl Chloride (LTC)

LOCATION

MODULE	uBlox EVA-M8
CONSTELLATION	Concurrent GPS / GLONASS
CHANNELS	72 Channel High Sensitivy Receiver
TRACKING SENSITIVITY	-167dBM industry-leading tracking performance
ASSISTNOW OFFILINE	GNSS aiding data (such as ephemeris, time, coarse position) for a faster Time To First Fix (TTFF).
LOW NOISE AMPLIFIER	GPS signals are boosted by a unique low-noise amplifier (LNA) allowing operation where other units fail.
WiFi POSITIONING SYSTEM	Indoor asset location using Wifi Positioning Systems. Cell tower fallback for positioning when no networks are nearby
CELL TOWER LOCATION	Cell tower fallback for positioning when no WiFi and/or networks are nearby.

POWER

INPUT VOLTAGE	Flexible Power Options: 5 - 16V DC (max) 3 x AA Cell Battery holder fitted. Screw terminals for line power.
SLEEP CURRENT	<10uA* *Average current in lowest power configuration
BACK-UP BATTERY	If line power is connected and batteries are also installed, device will fall back to the 3 x AA cells if external power is disconnected.

MECHANICS/DESIGN

DIMENSIONS	L 135 x W 90 x H 35 mm
WEIGHT	163g 232g with batteries
HOUSING	ABS Polycarbonate Plastic
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. Caters for a number of cable glands (2 fitted as standard) to allow for waterproof cable entry to the housing.
OPERATING TEMPERATURE	-20°C to +60°C For operation in extreme temperatures use LTC Batteries.
GPS ANTENNA	Internal
CELLULAR ANTENNA	Internal
3-AXIS ACCELEROMETER	3-Axis Accelerometer to detect movement, acceleration, 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.

INTERFACES

ANALOG INPUTS	1 x 0-30V Analog Inputs, Auto Ranging, 12-bit ADC 0-5V range: 1.22mV precision 0-30V range: 7.32mV precision
DIGITAL INPUTS	2 x Digital Inputs with configurable pull-up/down 0-48V DC input range On/Off thresholds: Pull-up enabled: low at 0.8V, high at 1.0V Pull-down enabled: low at 2.0V, high at 2.4V Can be used for pulse counting.
DIGITAL OUTPUTS	1 x Switched Ground Digtal Output Easily wired up to control external devices and circuits, for example to turn a lighting tower on / off.
IGNITION	Digital inputs can be used as an ignition input to log run hours.
I²C	I²C (inter-IC communications) is an interface commonly used in sensor modules.
SWITCHED POWER OUT	Used to control the 3.3V power to external sensors and peripherals. Load limited and short circuit protected.

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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.
ENVIRONMENTAL MONITORING	Interface with a range of sensors such as temperature, humidity, moisture, depth, and more.
GEOFENCING	Create custom geofences and alerts if an asset enters or leaves specific 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	Configure parameters to send updates based on set time intervals (1x, 3x, 5x a day, etc) 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.
REAL-TIME TRACKING	Device remains continuously connected while on the move for real-time asset tracking.* *Optional when device is externally powered.
THEFT RECOVERY	Switch to Recovery Mode in the case of theft or loss to activate real-time tracking at 30-second intervals for asset retreival.
RUN HOUR MONITORING	Capture run hours based on movement to understand and optimize asset utilization.
SLEEP MODE	Stationary devices enter sleep mode, switching the update rate to only twice per day until movement occurs to conserve battery life and optimize data usage (when powered by batteries).

DEVICE MANAGEMENT

FLEXIBLE CONFIGURATION	Configure device parameters such as heartbeat rate, movement and accelerometer settings, and more to fit any tracking application.
OEM SERVER	Manage, monitor, configure, debug, update, and restart devices remotely from our cloud-based device management system.

INTEGRATION

THIRD-PARTY INTEGRATION	Webhook, TCP or HTTPS, Direct and Data Splitting Integration Options

SECURITY

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.

WARRANTY

MANUFACTURER'S WARRANTY	One year manufacturer's warranty.

CERTIFICATIONS

Please contact us for a full list of compliance specifications and documentation for your region.	**4G** - FCC, ISED, CE (Doc) **2G** - CE (Doc)





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