



G120

CELLULAR 2G OR 4G LTE-M / NB-IOT
OPTIONAL IRIDIUM SATELLITE

OVERVIEW

GPS / Optional Iridium Satellite Hybrid tracking device with customizable inputs/outputs, RS-232 Interface, Bluetooth®, and remote immobilization for fleet management, driver ID, driver safety and behavior monitoring, remote worker safety, theft recovery, and more

FEATURES



High-precision GPS/GLONASS tracking device



Hardwired to permanent power for real-time tracking



Internal Backup Battery in case of loss of power or tampering



Built-in Buzzer for in-cab alerts



1 x Analog Input, 6 x Digital Inputs, 1 x Switched Ground Digital Output, 1 x Ignition Digital Input, Switched Power Out



RS-232 Interface to connect optional Iridium Edge® Module or interface with controllers and sensors



Bluetooth® 5.0 Gateway for tagged asset management and sensor monitoring



Configure iButtons®, RFID readers and Wiegand Interface for Driver ID



Accident and rollover detection, speeding, harsh braking, and more

APPLICATIONS



Fleet Management



Real-Time Vehicle Tracking



Theft Recovery



Bluetooth® Low Energy Gateway



Out-of-Cellular-Coverage Tracking



Driver ID



Driver Safety & Behavior



Accident & Rollover Detection



Remote Immobilization



In-Vehicle Alerts



Lone & Remote Worker Safety



SOS Duress Button/Pendant



Run Hours Monitoring



Preventative Maintenance



Digital Logbooking

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)
BLUETOOTH® 5.0 GATEWAY	Bluetooth 5.0 gateway reports nearby Bluetooth tags and sensors for afford dable tagged asset management and sensor monitoring.
SIM SIZE & ACCESS	Internal Micro 3FF SIM

LOCATION

MODULE	uBlox EVA-M8
CONSTELLATION	Concurrent GPS / GLONASS
CHANNELS	72 Channel High Sensitivty 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.

POWER

INPUT VOLTAGE	8- 45V DC (max)
SELF-RESETTING FUSE	Built-in self-resetting fuse makes installation simple and safe. Stringent automotive power "load dump" tests are conducted to ensure operation in the harshest electrical systems.
OPERATING CURRENT	~25/50mA when moving ~150mA battery charging
SLEEP CURRENT	<2mA
BACK-UP BATTERY	1100mAh LiPo internal backup battery pack

MECHANICS/DESIGN

DIMENSIONS	L 125 x W 65 x H 30 mm
WEIGHT	250g
HOUSING	ABS Polycarbonate Plastic
INSTALLATION	24 Pin Connector provided as standard
OPERATING TEMPERATURE	-20°C to +60°C (connected to external power) At < 0°C and > +40°C the internal backup battery will not be charged as a safety precaution due to the dangers associated with charging batteries at extreme temperatures.
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.
INTERNAL BUZZER	Internal buzzer fitted for audible alerts for speeding, harsh driving, driver ID reminders, error conditions, input feedback, and other events.

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	6 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
DIGITAL OUTPUTS	1 x Switched Ground digital output Easily wired up to switch external lights, relays, buzzers, etc. Can be used to immobilize a vehicle.
IGNITION	1 x dedicated ignition digital input 0-48V DC 5V on/off threshold
RS-232	Can be used to connect Iridium Edge® Module or interface with controllers and other sensors.
SWITCHED POWER OUT	Outputs are either 5V (external power connected) or Vbatt (no external power) Maximum current: 400mA The G120 can provide power to external peripherals, eliminating the need for additional external power supplies.
TTL INTERFACE	Serial interface used to connect a Digital Matter RFID reader for Driver ID.
WIEGAND	The G120's Wiegand Interface enables easy integration with a variety of RFID card types and readers. Existing employee access badges or IDs can be used with a Wiegand reader for driver ID, permission-based actions, and theft prevention, eliminating the hassle of issuing additional ID cards or fobs.
1-WIRE® OR IButton®	1-Wire® or "Button®" can be used to read Driver ID tags. Readers available to suit multiple card formats.

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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.
ACCIDENT & ROLLOVER DETECTION	Configure accident and rollover alerts triggered by extreme changes in velocity and orientation of vehicle or equipment. Second-by-second GPS data is saved on the device's flash memory, with a capacity of approximately 2 hours of data. In the event of an accident, a subset of the data (60 seconds before / 10 seconds after) is uploaded to the server automatically (if configured) or can be requested manually for a detailed reconstruction of the incident.
DRIVER ID OPTIONS	RFID, iButton® or Wiegand interface for Driver ID, access control, and logbooking. Wiegand interface supports many third-party readers to read nearly any ID card type.
DRIVER SAFETY & BEHAVIOR	Monitor speeding, harsh acceleration, braking, cornering, idling, and more to improve safety and prevent unnecessary wear on vehicles.
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 750 Geofences with up to 100 points per geofence.
IN-VEHICLE ALERTS	Can be wired up to external buzzers or lights for in-vehicle alerts. Also features Built-in-Buzzer for alerts.
LONE WORKER SAFETY	Interface a variety of duress pendants to enable man-down alerts for lone worker safety monitoring.
OUT-OF-CELLULAR-COVERAGE	Fit the G120 with an optional Iridium Edge® Module using the RS232 connection to track assets in remote areas outside of cellular coverage.
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.
THEFT RECOVERY	Switch to Recovery Mode in the case of theft or loss to activate real-time tracking at 30-second intervals for asset retrieval.
REMOTE IMMOBILIZATION	Digital outputs can be connected to a relay to enable remote immobilization of vehicles and equipment in the case of theft, abuse, or unauthorized usage.
REMOTE WORKER SAFETY	Interface a variety of duress pendants to enable man-down alerts for remote (out-of-coverage) worker safety monitoring. *Requires Iridium Edge® Module
RUN HOUR MONITORING	Calculate run hours and distance traveled (odometer) to understand and optimize asset utilization.
SENSOR MONITORING	Interface with a range of devices and switches for seatbelt detection, duress and panic buttons, lights, in-cab warning buzzers, and more.
TAMPER ALERTS	Instant alert if the device is removed from your asset or disconnected from its power source.

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
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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.
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WARRANTY

MANUFACTURER'S WARRANTY	One year manufacturer's warranty.
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CERTIFICATIONS

Please contact us for a full list of compliance specifications and documentation for your region.	4G - FCC, ISED, Bluetooth® Certified, CE (DoC) 2G - Bluetooth® Certified, CE (DoC)
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View more devices at www.digitalmatter.com

TECH SPECS