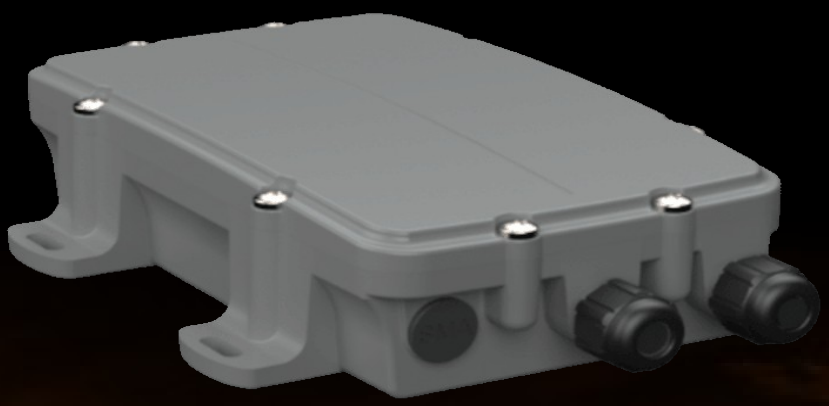
G150 -GLOBAL

Cellular 4G LTE Cat 1bis / 2G, Optional Iridium Satellite

Rugged and robust real-time GPS Tracking device and Bluetooth® Gateway with flexible inputs/outputs for comprehensive vehicle andequipment tracking.



Real-Time Tracking

High-precision GPS/GLONASS tracking device wired to vehicles or equipment

Backup Battery

Internal Backup Battery in case of loss of power or tampering

Bluetooth Gateway

Bluetooth® 5.0 Gateway for tagged asset management and sensor monitoring

Inputs/Outputs

1 x Analog Input, 4 x Digital Inputs, 2 x Switched Ground Digital Outputs, 1 x Ignition Digital Input, Switched Power Out.

RS-232 Interface

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

Global Connectivity

Connect almost anywhere in the world with a cellular network with 4G Cat 1bis and 2G fallback.

Driver Behavior

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

In-Cab Alerts

Built-in Buzzer for in-cab alerts

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Mechanics / Design

Dimensions	180 x 119 x 39 mm (7.1 x 4.7 x 1.5 in)
Weight	330 g (11.64 oz)
Housing	ABS Polycarbonate Plastic Ultra-rugged and waterproof IP68 and IK08-rated housing ensures the device can withstand impact, fine dust, and brief submersion
Installation	Device supplied with one 10-wired harness (1m). Secondary harness required to access full set of
Operating Temperature	-30°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.
GORE® Vent	Allows for pressure equalization while protecting against water and dust ingress
Cellular Antenna	Internal with optional external cellular antenna for increased transmission range
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 25 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
On-Board Speed and Heading	The device continuously monitors speed and heading, allowing for overspeed alerts as well as on speed and heading changes
On-Board Temperature	The device reports internal temperature and prevents the internal battery charging in extreme temperatures. Internal temperature provides an indication of ambient temperature but may not always be precise.

Power

Input Voltage	8-33V DC (max)
High-Performance Automotive Power	Stringent power ‘load dump” tests are conducted to ensure operation in the harshest automotive electrical systems. Built-in self-resetting fuse makes installation simple and safe.
Operating Current	~25 - 50mA when moving ~100 - 250mA battery charging
Sleep Current	<50uA (no peripherals supplied and battery fully charged)
Backup Battery	3500mAh LiPo rechargeable battery
Intelligent Power Management	Device enters sleep mode when vehicle is inactive to prevent battery drain

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

Connectivity & Location

Cellular Module	Ublox LENA R8 Modem operates on all major global 4G Cat 1bis and 2G bands Supported 4G Cat 1bis bands: B1, B2, B3, B4, B5, B7, B8, B12, B20, B28, B38, B40, B41, B66 Quad-band 2G support for global 2G networks
Bluetooth® Gateway	Bluetooth 5.2 gateway reports nearby Bluetooth tags and sensors
GNSS Module	Ublox LENA-R8001M10
Constellations	Concurrent GPS/QZSS, GLONASS, Galileo, BeiDou
Tracking Sensitivity	-167dBm GPS industry-leading tracking performance
*Location Accuracy	~1m CEP, GPS, -130dBm
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

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	4 x digital inputs with configurable pull-up/down 0 - 48V DC input range On/Off thresholds: Pull-up enabled: low at 1.2V, high at 1.5V Pull-down enabled: low at 1.8V, high at 2.2V
Digital Outputs	2 x Switched Ground Digital Outputs 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 Pulled-down in hardware: low at 1.8V, high at 2.2V
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) Max 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 iButton® can be used to read Driver ID tags. Readers available to suit multiple card formats
CAN Bus Transceiver	Compatible with ISO 11898-2 High Speed CAN Physical Layer standard Transceivers 3.3V standard CANP and CANN, 16V maximum

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.

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
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 from Telematics Guru for enhanced location-based actions and alerts. Maximum of 750 Geofences with up to 100 points per geofence.
GPS Jamming Detection	GPS Jamming or Interference can be detected and alerted on
In-Vehicle Alerts	Can be wired up to external buzzers or lights for in-vehicle alerts
Lone Worker Safety	Interface a variety of duress pendants to enable man-down alerts for lone worker safety monitoring
Out-of-Cellular-Coverage Tracking	Fit the G150 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
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
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
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
Theft Recovery	Switch to Recovery Mode in the case of theft or loss to activate real-time tracking for asset retrieval

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