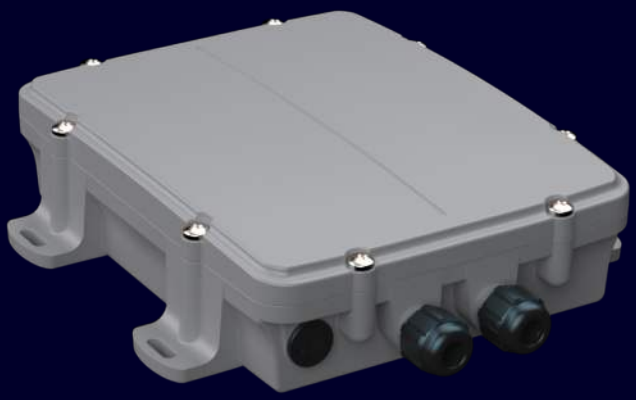
NEW

G150 GLOBAL

Cellular 4G LTE Cat 1bis / 2G

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



180 x 119 x 39 mm (7.1 x 4.7 x 1.5 in)

Global Connectivity

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

Real-Time Tracking

High-precision GPS tracking device for vehicles and equipment.

Bluetooth® Gateway

Report on Bluetooth Tags and Sensors to enable Condition Monitoring, Tagged Asset Management, and more.

Inputs/Outputs

4 x Digital Inputs, 1 x Analog Input, 2 x Switched Ground Digital Outputs, 1 x Ignition Digital Input, Switched Power Out, RS232.

Remote Immobilization

Immobilization option to safely disable vehicles and equipment remotely.

Backup Battery

Internal rechargeable LiPo backup battery in case of loss of power or tampering.

Ultra-Rugged

Waterproof and rugged IP68 housing can withstand impact, fine dust, and submersion.

Connectivity

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
SIM Size & Access	Internal Nano 4FF SIM

Location

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

*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.

Power

Input Voltage	8 - 33V DC (max)
High-Performance Automotive Power Supply	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
Intelligent Power Management	Device enters sleep mode when vehicle is inactive to prevent battery drain
Sleep Current	<50uA (no peripherals supplied and battery fully charged)
Backup Battery	3500mAh LiPo rechargeable battery

Mechanics/Design

Dimensions	180 x 119 x 39 mm (7.1 x 4.7 x 1.5 in)
Housing	Non-branded housing for optional white-labelling
IP/IK Rating	Ultra-rugged and waterproof IP68 and IK08-rated housing ensures the device can withstand impact, fine dust, and brief submersion
GORE® Vent	Allows for pressure equalization while protecting against water and dust ingress
Installation	Device supplied with one 10-wired harness (1m). Secondary harness required to access full set of I/Os. For pin out and further details, see G150 Harness Definition.

Mechanics/Design *(cont.)*

Operating Temperature	-30°C to +60°C (connected to external power) At < 0°Cand > +40°Cthe internal backup battery will not be charged as a safety precaution due to the dangers associated with charging batteries at extreme temperatures.
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 indicates operation status
Flash Memory	Store weeks of records if device is out of cellular coverage. Storage capacity for over 25 days of 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 over-speed alerts as well as on speed and heading changes
Onboard 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.

Interfaces

Analog Input	1 x 0 - 30V Analog Input Auto Ranging, 12-bit ADC 0 - 5V range: 1.22mV resolution 0 - 30V range: 7.32mV resolution
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 also be used to immobilize a vehicle.
Ignition	1 x dedicated ignition digital input with configurable pull-up/down 0 - 48V DC input range 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
*CAN Bus Transceiver	Compatible with ISO 11898-2 High Speed CAN Physical Layer standard transceivers 3.3V standard CANP and CANN, 16V maximum
Switched Power Out	Outputs are either 5V (external power connected) or Vbatt (no external power) Max Current: 400mA The G150 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	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, 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.

*Firmware support for the CAN interface is not yet available. Peripherals can be considered for integration upon request.

Smarts

Accident & Rollover Detection	Configure accident and rollover alerts trigger 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.
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
Driver ID Options	Bluetooth® (coming soon), RFID reader, iButton®, or Wiegand interface for Driver ID, access control, and log booking
Driver Safety & Behavior	Monitor speeding, harsh acceleration, braking, cornering, idling, and more to improve safety and prevent unnecessary wear on vehicles. Use the buzzer to alert drivers of these actions.
Flexible Input Monitoring	Interface with a range of devices and switches for seatbelt detection, duress and panic buttons, lights, in-cab warning buzzers, and more
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
On-Board Geofencing	The server can use device location to create geofences and alerts if an asset enters or leaves designated locations. Geofences can also be downloaded directly to the device for enhances location-based actions and alerts. Maximum of 750 geofences with up to 100 points per geofence.
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 travelled 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 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	Capture run-hours based on movement to understand and optimize asset utilization
Tamper Alerts	Instant alert if the device is 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

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 DM-Link provisioning tool

Integration

Third-Party Integration	TCP Direct or HTTPS Webhook

Security

Data Security	Military-level AES-256 Encryption from device to Device Manager 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. Exclusions apply.

Certifications

Please see our knowledge base for device certifications.