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G150

Global Connectivity 4G Cat 1bis and 2G bands +Optional Iridium Satellite Hybrid

GPS tracking device and Bluetooth® Gateway with optional Iridium Satellite for out-of-coverage tracking with inputs/outputs, RS-232 Interface, and remote immobilisation for fleet management, driver ID, driver safety and behaviour monitoring, remote worker safety, theft recovery, external cellular antenna options and more

Track Anywhere
Cellular 4G Cat 1bis with 2G fallback enables seamless global tracking and management

Backup Battery
Internal 3500mAh rechargeable LiPo 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, RS232, CAN*

External Antenna
Optional external antenna for increased transmission range

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

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

In-Cab Alerts
Built-in Buzzer for in-cab alerts

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
External Antenna	Optional external antenna for increased transmission range.
Bluetooth® 5.0 Gateway	Bluetooth 5.2 gateway reports nearby Bluetooth tags and sensors for affordable tagged asset management and sensor monitoring
SIM Size & Access	Internal Micro 4FF SIM

Location

Module	uBlox M10
Constellation	Concurrent GPS /GLONASS/ Galileo / Beidou
Channels	72 Channel High Sensitivity Receiver
Tracking Sensitivity	-167dBM industry-leading tracking performance
Location Accuracy**	1.5m GPS, 50% CEP, -130 dBm
GNSS Assistance	GNSS almanac data for greater sensitivity and position accuracy
Low Noise Amplifier	GPS signals are boosted by a unique low-noise amplifier (LNA) allowing operation where other units fail
Cell Tower Location	Cell tower fallback for positioning when there is no GNSS available

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 ~100-150mA battery charging
Sleep Current	<50uA
Backup Battery	3500mAh LiPo rechargeable battery 3.8-5V DC (max)

Mechanics / Design

Dimensions	183 x 119 x 309mm (7.20 x 4.68 x 1.4")
Weight	TBD
Housing	ABS Polycarbonate Plastic. Non-branded housing for optional white-labelling.
IP/IK Rating	Ultra-rugged and waterproof IP68 and IK07 - rated housing ensures the device can withstand impact, fine dust, and brief submersion
Installation	Multiple installation options for securing the device with screws, bolts, cable ties, rivets and more. Includes 2 cable glands to allow waterproof cable entry to the housing.
Operating Temperature	-30°C to +60°C LiPo Charger - At <-10°C and >+45°C the internal backup battery will not be charged as a safety precaution due to the dangers associated with charging batteries at extreme temperatures.

Mechanics / Design (continued)

Cellular Antenna	Internal + option to upgrade to external for even better reception
GPS Antenna	Internal
RF 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 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	1x 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 0.8V, 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 immobilise a vehicle
Ignition	1 x dedicated ignition digital input 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
RS-232	Can be used to connect IridiumEdge® 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) MaxCurrent: 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	The G150'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

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
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 & Behaviour	Monitor speeding, harsh acceleration, braking, cornering, idling, and more to improve safety and prevent unnecessary wear on vehicles. Use the buzzer to alert for these actions.
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 fromTelematics 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 IridiumEdge® 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 IridiumEdge® Module
Remote Immobilisation	Digital outputs can be connected to a relay to enable remote immobilisation of vehicles and equipment in the case of theft, abuse, or unauthorised usage
Run Hour Monitoring	Capture run hours based on movement to understand and optimise asset utilisation
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

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 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. Data forwarded to third-party systems is sent via HTTPS for end-to-end security.

Warranty

Manufacturer's Warranty	Two-year manufacturer's warranty

Certifications

Please contact our support team for a full list of compliance specifications and documentation for your region.	LTE-M / NB-IoT –FCC, ISED, Bluetooth® Certified, CE (Doc) 2G –Bluetooth® Certified, CE (Doc), more TBC

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

** Positioning accuracy specifications and 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.