

G100

Modular and expandable telematics device with Iridium Satellite Option



The G100 is a highly capable GPS/GLONASS cellular tracker with a variety of inputs and outputs. The Flexi-Card slot sets it apart, providing endless integration and expansion possibilities

APPLICATIONS



Vehicle and Fleet Tracking



Lone and Remote Workers



Out of cellular coverage locations



Cold Chain Management



Agricultural Vehicles and Sites



Mining, Oil and Gas Rigs

FEATURES

- 24/7 Vehicle location
- Cellular data when in coverage
- Iridium satellite out of cell coverage (option)
- Man Down Pendant (option)
- Iridium Flexi-Card option
- Ignition + 4 Inputs and 2 Outputs
- Driver ID: RFID and iButton
- 3D Accelerometer
- Internal Back-up Battery

MECHANICAL SPECIFICATIONS

Snap-clip ABS Plastic Housing	The ABS plastic housing clips together to make provisioning devices simple and efficient
Operating Temperature	-20°C to +60°C ¹ 1) On external power Below 0°C and above +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.
Dimensions	L 125 x W 65 x H 30mm
Harness	24 Pin connector A basic harness is supplied as standard. See the harness definition for details
POWER	
Input Voltage	8V to 45V DC (max)
Operating Current	15mA avg. (battery fully charged) 135mA avg. (battery charging)
Sleep Current	<1mA
Back-up Battery	800mAh LiPo internal backup battery pack
Self-resetting fuse	The G100 passes stringent automotive power “load dump” tests to ensure that it will continue to operate in the harshest electrical systems. A built-in self-resetting fuse makes installation easy and safe.

OTHER

Flash Memory	Sufficient memory to store over 50,000 records. Normally data is sent to the server immediately but if the device is out of range there is space to ensure no data is lost – for many weeks of driving!
3-axis accelerometer	Allows the G100 to detect harsh driving events, and to go to ‘sleep’ when not moving, resulting in extremely low standby current

CONNECTIVITY

SIM Size	Standard (2FF) size cellular SIM card
2G or 3G	The G100 can be manufactured for specific markets around the world with cellular modem modules approved by all the major networks.
2G Modem	Quad Band GSM/GPRS Class 10 850/900/1800/1900 MHz
3G Modem - EU	850/900/2100 EMEA/APAC/Latin America
3G Modem - NA	850/1900/AWS - North America
3G Modem (Global Option)	800/850/900/AWS/1900/2100 Global coverage at a higher cost Enquire for other bands and 4G/LTE options 4G CatM1/NB1 model currently in development

GPS TRACKING

GPS and Cellular Antenna	Internal GPS and cellular antennas tuned by RF laboratories for optimal performance. Having the antennas inside the housing makes for very simple and quick installation.
GPS/GLONASS tracking	UBLOX MAX8 GPS Module Concurrent GPS and GLONASS tracking 72 channel high sensitivity receiver -169dBm industry leading tracking performance
AssistNow Offline	AssistNow Offline aiding data or extremely fast time-to-first-fix and performance in urban canyon environments
Low Noise GPS Amplifier (LNA)	GPS signals are boosted by a special low-noise amplifier (LNA). This allows operation where normal units will fail to receive GPS signal

INPUTS AND OUTPUTS

Ignition	1 x Ignition digital input
4 x Digital Inputs	4 x digital inputs with configurable pull-up/down
2 x 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
Internal Buzzer	Audible alert without requiring the installation of an external buzzer. Can be used for speeding alerts, harsh driving alerts, reminders to swipe RFID tags, error conditions, input feedback and other events

Switched 5V Out	The G100 can provide power to external peripherals via this 5V power line, allowing for easy installation and doing away with the need for additional external power supplies. Maximum current: 300mA
Driver Identification	Driver ID via RFID reader or iButton The G100 can be update from the server with lists of Drivers that are allowed to drive the vehicle. The G100 can be installed to immobilise a vehicle and only allow authorised drivers/operators to drive it.
DMCAN peripheral port	Digital Matter has a range of peripherals that connect to the G100 via the DMCAN peripheral port. Peripherals such as the RFID Driver ID reader, 5 digit keypad and RF gateway use the DMCAN port.
Diagnostic LED	The diagnostic LED makes it easy to see if the device is operating correctly.

IRIDIUM OPTION

Iridium Satellite	The Iridium flexi-card enables an Iridium modem to be fitted to the device, enabling communication outside of GSM coverage areas. Great for lone workers and remote areas. The 'Iridium Hybrid' G100 will send data over cellular networks when in coverage, and auto switch to Iridium to send important data when out of coverage.
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FIRMWARE SMARTS

Auto-APN	Auto-APN allows the G100 to analyse the SIM card and select the correct APN details from a list that is pre-loaded in the device's firmware.
Multi-APN	The G100 can be configured to roam across multiple networks and automatically use the different APN details for the roaming networks
Text Message Setup	The G100 can be sent text messages to set the APN, server and other details
Flexible Logging Parameters	The G100 trip logging is flexible and can be configured to log based on a variety of parameters including: Elapsed time, Distance travelled, Change in heading, Change in speed, On Stationary, Accelerometer events (harsh driving)
Accident and Rollover Detection	The G100 uses the built-in accelerometer to detect high G impacts such as accidents and rollovers and reports these events to the server for emergency alerting.
Harsh Driving	The G100 automatically calibrates its built-in 3 axis accelerometer and uses this to detect harsh driving events: <ul style="list-style-type: none">• Excessive acceleration• Harsh braking• Cornering at speed These events are logged in the G100 along with additional event statistics that allow back-end server platforms to perform sophisticated driver profiling and scoring.

Accident Data	The G100 keeps a second-by-second "black box" recording of valuable GPS and accelerometer data for a two hour window. This data can be automatically uploaded to the server when an accident is detected, or it can be requested manually.
Geo-Fences	The G100 has the capacity to hold hundreds of geo-fences that can be downloaded to it from the server. The G100 can use this geo-fence information to: <ul style="list-style-type: none">• Implement arrival and departure alerts• Implement speeding zones with audible warning alerts• Implement "No-go" and "Keep-out" areas• Automatically control outputs, e.g. to switch on warning lights when inside a special area.
Ignition Detection	The G100 can determine a trip has started based upon: <ul style="list-style-type: none">• Wired Ignition input (voltage on/off)• Emulated Ignition (GPS movement)• Run Detect (Voltage Increases)

CERTIFICATIONS

Certifications	CE, A-Tick, ICASA
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