

DataLogger 972 - OBD Telematics Device

Danlaw's DataLogger is a powerful telematics device that plugs into the OBD port of most vehicles to collect vehicle, sensor, and behavioral data. The DataLogger 972 transmits data to backend platforms via 4G LTE and 2G cellular connections.



Key Features

- Compact size
- Self-installed - plug-n-go via OBD2 port
- Self-contained - no external antennas
- Ignition ON/OFF detection
- Cost-effective data transmission
- 3-axis accelerometer - 13-bit sampling
- Self-normalizing accelerometer
- Over-the-air re-flash
- Enhanced anti-tampering
- Real-time event capture

Markets

- Insurance (UBI, PAYD, PHYD)
- Fleet Tracking and Management
- Customer Loyalty Programs
- Teen Driver Tracking
- Mobile Resource Management
- Roadside Assistance
- Remote Vehicle Diagnostics
- Connected Vehicle Research
- Custom Applications

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Physical Characteristics

Dimensions	Ultra Compact (L = 43 mm, W = 46 mm, H = 24 mm)
Weight	32.1 g (1.13 oz)
Environment	IP64
Temperature Range	-40°C to +85°C (operating) -40°C to +85°C (storage)
Humidity	0% to 95% (non-condensing) (SAE J1455)
Shock, Vibration, and Heat	SAE J1455, SAE J1211

Certifications

Carrier Certifications	FCC, PTCRB, and AT&T Certified
CE Certifications	CE Certified (planned)
e-Mark Certifications	e-Mark E-13 (planned)
Environmental Certifications	RoHS Compliant

Electrical Characteristics

Supply Voltage	12V (min. 9V to max. 18V)
Current Consumption	<6 mA Average (sleep mode) <100 mA @ 12VDC (data upload)
Voltage Protection	Over and Reverse Voltage, Load Dump (J1113/11), Short Circuit, Transients (ISO 167502), ESD (J1113/13)
Current Protection	Internal protection (2 amps)

Vehicle Communication

Protocol Support	GMLAN, FNOS, ISO-15765, ISO-9141-2, J1850 PMW, J1850 VPW, KWP-2000, ISO-14230-4
Protocol Detection	Automatic vehicle protocol recognition
Ignition ON Detect	Automatic wake-up from sleep mode on IGN ON
Ignition OFF Detect	Automatic sleep mode on IGN OFF (saves power)

Wireless

Output Power	LTE Output Power Maximum 23 dBm
Module RF Sensitivity	-107dBm @Cat M1, 1.4MHz Bandwidth
COMM	TCP/IP, UDP, FTP, HTTP
SMS	Point-to-Point MO and MT SMS cell broadcast
Jamming Detection	Integrated cellular jamming detection
Antenna	Internal built-in cellular
FOTA	Firmware-Over-The-Air update for configuration and device firmware

Wireless Support

Cellular	4G LTE CAT M1 (Bands 2, 4, 5, 12) 2G/EGPRS (Quad Band) support
Wireless Carrier Support	North America
WiFi	None

GNSS

Satellite Channels	Acquisition 118 / Simultaneous Tracking 40
Constellation Support	GPS, GLONASS, Galileo, BeiDou
Antenna	Internal built-in
Cold Start/Hot Start	Cold Start < 32 seconds TTFF Sensitivity -145 dBm Hot Start < 1 second Sensitivity -160 dBm
Data Acquisition Rate	Typical 1 Hz
Accuracy	Position < 2.0 m CEP (open sky 1 Hz tracking)
A GPS	Full A GPS Support

Accelerometer/Gyro

3-Axis Accelerometer	X, Y, Z output
3-Axis Gyrometer/Gyroscope	X, Y, Z output
Output Resolution	+/- 2, 4, 8, 16 g (200 Hz - 13 bit max sampling)
Auto-Normalization	Self-Calibrating, Auto-Normalization of the data to the vehicle's direction of motion

Miscellaneous

Installation	Self-Installed (10 sec or less)
Data Collection Interval	Configurable (1 Hz max.)
SIM Size	3FF

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