

## DataLogger 7 Series - GEN 2 Vehicle Telematics

Danlaw's DataLogger 7-Series vehicle telematics solution is a one-of-a-kind, hybrid wireless communication device that enables data communication and connectivity via GSM and Bluetooth wireless connections. Danlaw's hybrid communication approach provides wireless data transmission by using the driver's smartphone or the DataLogger's dedicated GSM/GPRS wireless data connections.

### Hybrid Bluetooth-GSM Communication Model



### Enhancements

- Smaller Size – ultra-compact
- Integrated Bluetooth Connectivity
- Hybrid and Electric Vehicle Support
- Enhanced 3-Axis Accelerometer
- Assisted A-GPS – No cost autonomous
- Cost Effective

### Features

- OBD-II data collection
- Industry leading vehicle compatibility
- Self-Installed – plug-n-go via OBD-II port
- Self-Contained – no external antennas
- Ignition ON/OFF detection
- Dual Mode Wireless – GSM and Bluetooth
- Cost effective data transmission
- 3-Axis Accelerometer - 13-bit sampling
- Self-Normalizing Accelerometer
- 50 Channel GPS with A-GPS support
- Over-the-air re-flash (FOTA)
- Enhanced Anti-Tampering
- Real-time Event Capture and Transmission
- Certifications – FCC, PTCRB, AT&T, RoHS

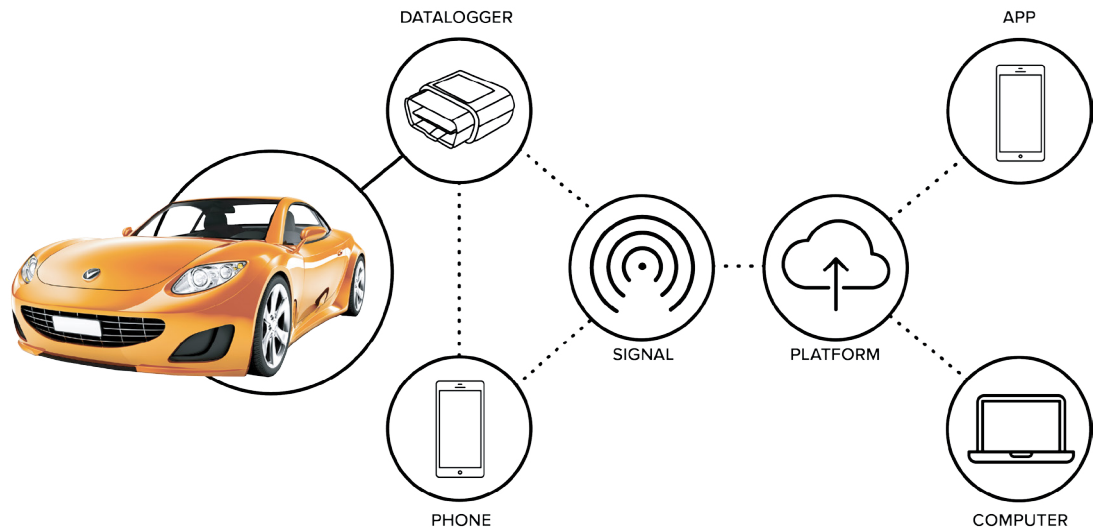
The DL 7-series telematics platform represents Danlaw's ongoing commitment to improving technology by reducing device size and cost, without compromising the features that insurance and fleet telematics industries require.

Danlaw's goal is to provide its clients with the industry's best automotive grade, self-installed OBD-II wireless communication device for monitoring, logging, and transmitting vehicle network messages and position data. Many of Danlaw's insurance and fleet telematics clients require a Quality-of-Service that ensures the consistent and timely delivery of vehicle and position information to their backend servers. The DL 7-series delivers on this need.

The DL 7-series provides the nation's largest fleet and insurance companies with the most reliable connection to their vehicles, while offering the most cost effective connection to their data.

### Markets

- Insurance (UBI, PAYD, PHYD)
- Teen Tracking
- Loyalty Programs
- Fleet Tracking
- Mobile Resource Management (MRM)
- Roadside Assistance
- Vehicle Diagnostics
- Government and Military
- Custom Applications



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## DataLogger 7 Series - GEN 2

### Physical Characteristics

|                         |  |
|-------------------------|--|
| Dimensions              | Ultra Compact (L = 43 mm, W = 46 mm, H = 23 mm)        |
| Weight                  | 31.2 g (1.1 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 & Heat | SAE J1455 & SAE J1211                                  |

### Certifications

|                              |                                |
|------------------------------|--------------------------------|
| Carrier Certifications       | FCC, PTCRB, and AT&T Certified |
| Environmental Certifications | RoHS Compliant                 |

### Electrical Characteristics

|                     |   |
|---------------------|---|
| Supply Voltage      | 12V (min. 9V to max. 24V)   |
| Current Consumption | <3 mA Average (during Sleep mode)<br><100 mA @ 12VDC (Data Upload)  |
| Voltage Protection  | Over and Reverse Voltage, Load Dump (J1113/11),<br>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,<br>ISO-14230-4 |
| Protocol Detection  | Automatic vehicle protocol recognition   |
| Ignition ON Detect  | Automatic wake-up from sleep mode  |
| Ignition OFF Detect | Automatic sleep mode on IGN OFF (saves power)                                      |

### Wireless

|                   |  |
|-------------------|--|
| Cellular GSM/GPRS | Quad-Band: 850/900/1800/1900 MHz, GPRS class 10  |
| Output Power      | Class 4 (2W) @ 850/900 MHz<br>Class 1 (1W) @ 1800/1900 MHz   |
| RF Sensitivity    | 107 dBm typical @ 850/900 MHz<br>106 dBm typical @ 1800/1900 MHz                                   |
| GPRS              | Class 10   |
| COMM              | TCP/IP, UDP, & FTP   |
| SMS               | Point-to-Point MO & MT SMS cell broadcast  |
| Jamming Detection | GSM Jamming Detection  |
| Bluetooth         | Bluetooth 2.1 +EDR, multi-phone pairing,<br>Secure Simple Pairing (SSP), Serial Port Profile (SPP) |
| Antenna           | Internal built-in  |
| FOTA              | Firmware-Over-The-Air update for configuration and complete device firmware                        |

### GPS

|                       |   |
|-----------------------|---|
| Receiver              | 50-channel GPS receiver, SBAS, WAAS, EGNOS, MSAS,<br>Tracking: -162 dBm |
| Antenna               | Internal built-in   |
| Cold Start            | <27 seconds TTFF Sensitivity -147 dBm                                   |
| Hot Start             | <1 second Sensitivity -156 dBm  |
| Data Acquisition Rate | 4 Hz (Typical 1 Hz)   |
| Accuracy              | Position 2.5 m CEP, SBAS 2.0 m CEP                                      |
| A GPS                 | AssistNow™ Autonomous (no data usage cost)                              |
| Anti-Jamming          | Integrated GPS anti-jamming   |

### Accelerometer

|                    |  |
|--------------------|--|
| 3-Axis             | X, Y, Z output   |
| Output Resolution  | +/- 2, 4, 8, 16 g (13 bit sampling max.)   |
| Auto-Normalization | Self-Calibrating, Auto-Normalization of the data to the vehicle's<br>direction of motion |

### Misc.

|                          |                                 |
|--------------------------|---------------------------------|
| Installation             | Self-Installed (10 sec or less) |
| Data Collection Interval | Configurable (1 Hz max.)        |

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