DATASHEET

DANLAW
AUTOMOTIVE MADE SMART

DataLogger 8 Series – GEN 2.5 Vehicle Telematics (DL 820/DL 850/DL 860)

Danlaw's DataLogger 8-Series vehicle telematics solution is a one-of-a-kind, hybrid wireless communication device that enables data communication and connectivity via 3G UMTS/HSPA or CDMA 1XRTT, BLE wireless connections. Danlaw's hybrid communication approach provides wireless data transmission by using the driver's smartphone or the DataLogger's dedicated 3G UMTS with 2GSM/GPRS fallback or CDMA wireless data connections.

Benefits

- Same small size as 7 Series
- 3G UMTS/HSPA for AT&T and T-Mobile
- CDMA 1xRTT for Verizon & Sprint
- Integrated Dual Mode Bluetooth
- Bluetooth Low Energy (BLE) Support
- GPS/GLONASS for position accuracy
- Cost Effective

Features

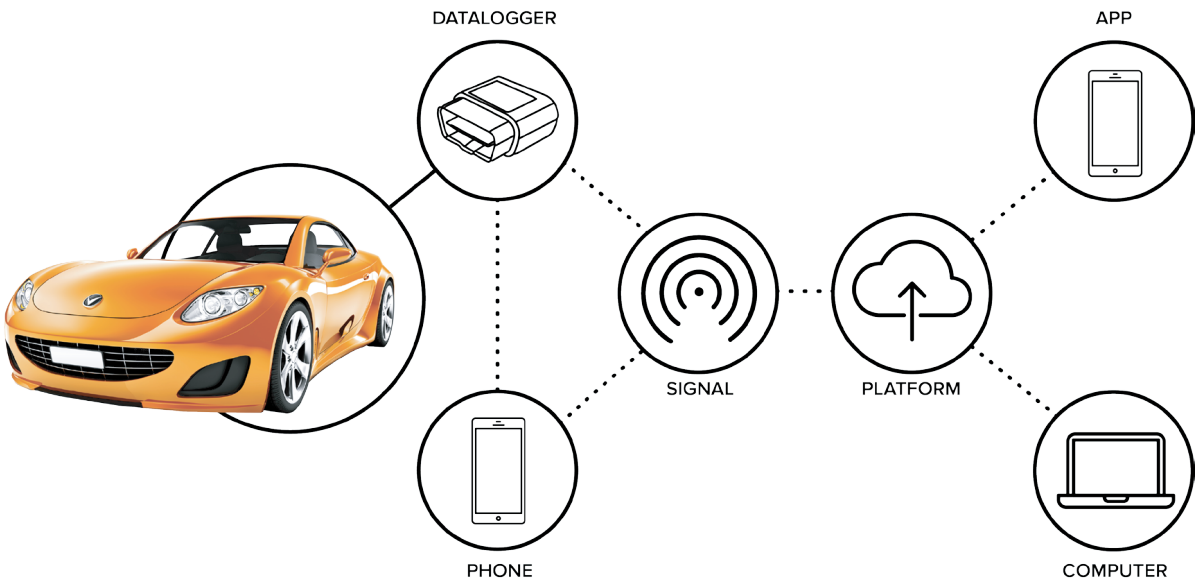
- OBD-II data collection
- Industry leading vehicle compatibility
- Self-Installed – plug-n-go via OBD-II port
- Self-Contained – no external antennas
- Ignition ON/OFF detection
- Dual Mode Wireless – GSM and Bluetooth
- Cost effective data transmission
- 3-Axis Accelerometer - 13-bit sampling
- Self-Normalizing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

Markets

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

Hybrid Bluetooth - 3G UMTS/HSPA or CDMA Communication Model

The DataLogger 8-Series device enables direct connectivity between vehicles, Bluetooth enabled phones and cloud-based and backend servers.



DATASHEET

DANLAW
AUTOMOTIVE MADE SMART

DataLogger 8 Series – GEN 2.5 (DL 820/DL 850/DL 860)

Physical Characteristics	GEN 2.5 - DL 820/850 (CDMA)	GEN 2.5 - DL 860 (UMTS/HSPA/GSM)
Dimensions	Ultra Compact (L = 43 mm, W = 46 mm, H = 23 mm)	Ultra Compact (L = 43 mm, W = 46 mm, H = 23 mm)
Weight	31.2 g (1.1 oz)	32.1 g (1.13 oz)
Environment	IP64	IP64
Temperature Range	-40ºC to +85ºC (operating), -40ºC to +85ºC (storage)	-40ºC to +85ºC (operating), -40ºC to +85ºC (storage)
Humidity	0% to 95% (non-condensing) (SAE J1455)	0% to 95% (non-condensing) (SAE J1455)
Shock, Vibration, and Heat	SAE J1455, SAE J1211	SAE J1455, SAE J1211
Certifications		
Carrier Certifications	FCC, PTCRB, DL850 Verizon, DL820 Sprint	FCC, PTCRB, and AT&T Certified
Environmental Certifications	RoHS Compliant	RoHS Compliant
Electrical Characteristics		
Supply Voltage	12V (min. 9V to max. 24V)	12V (min. 9V to max. 18V)
Current Consumption	<4 mA Average (during Sleep mode) <100 mA @ 12VDC (Data Upload)	<4 mA Average (during 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)	Over and Reverse Voltage, Load Dump (J1113/11), Short Circuit, Transients (ISO 167502), ESD (J1113/13)
Current Protection	Internal protection (2 amps)	Internal protection (2 amps)
Vehicle Communication		
Protocol Support	GMLAN, FNOS, ISO 15765, ISO-9141-2, J1850 PMW, J1850 VPW, KWP-2000, ISO-14230-4	GMLAN, FNOS, ISO 15765, ISO-9141-2, J1850 PMW, J1850 VPW, KWP-2000, ISO-14230-4
Protocol Detection	Automatic vehicle protocol recognition	Automatic vehicle protocol recognition
Ignition ON Detect	Automatic wake-up from sleep mode	Automatic wake-up from sleep mode
Ignition OFF Detect	Automatic sleep mode on IGN OFF (saves power)	Automatic sleep mode on IGN OFF (saves power)
Wireless	CDMA2000 1xRTT	3G - UMTS/HSPA/GSM/GPRS
Cellular	Dual-band CDMA2000 1xRTT 800 MHz/1900 MHz	UMTS/HSPA/GSM/GPRS 800/850/1800/1900 MHz
Wireless Carrier Support	Verizon (DL850), Sprint (DL820) and Aeris (DL850)	AT&T, T-Mobile, Rogers Wireless, Vodafone, etc.
Output Power	Class 0 (24 dBm) @ 800 MHz Class 1 (24 dBm) @ 1900 MHz	Class 3 (24 dBm) for WDCMA/HSDPA/HSUPA Class 4 (33 dBm) @ 850 MHz for GSM/GPRS Class 1 (30 dBm) @ 1900 MHz for DCS/PCS
Module RF Sensitivity	108 dBm typical @ 800 MHz 108 dBm typical @ 1900 MHz	108 dBm typical @ 850 MHz 108 dBM typical @ 1900 MHz
COMM	TCP/IP, UDP, FTP, HTTP	TCP/IP, UDP, FTP, HTTP
SMS	Point-to-Point MO and MT SMS cell broadcast	Point-to-Point MO and MT SMS cell broadcast
Jamming Detection		GSM Jamming Detection
Bluetooth	Bluetooth 4.0, BLE, Dual-Mode support, multi-phone, Secure Simple Pairing, Serial Port Profile	Bluetooth 4.0, BLE, Dual-Mode support, multi-phone, Secure Simple Pairing (SSP), Serial Port Profile (SPP)
Antenna	Internal built-in Bluetooth and CDMA Cellular	Internal built-in Bluetooth and HSPA Cellular
FOTA	Firmware-Over-The-Air update for configuration and device firmware and complete device	Firmware-Over-The-Air update for configuration and device firmware
GPS		
Receiver	56-channel GPS receiver, GLONASS Tracking: -162 dBm	56-channel GPS receiver, GLONASS Tracking: -162 dBm
Antenna	Internal built-in	Internal built-in
Cold Start	<29 seconds TTFF Sensitivity -148 dBm	<29 seconds TTFF Sensitivity -148 dBm
Hot Start	<1 second Sensitivity -148 dBm	<1 second Sensitivity -148 dBm
Data Acquisition Rate	Typical 1 Hz	Typical 1 Hz
Accuracy	Position 2.5 m CEP	Position 2.5 m CEP
A GPS	AssistNow™ Autonomous (no data usage cost)	AssistNow™ Autonomous (no data usage cost)
Anti-Jamming	Integrated GPS anti-jamming	Integrated GPS anti-jamming
Accelerometer		
3-Axis	X, Y, Z output	X, Y, Z output
Output Resolution	+/- 2, 4, 8, 16 g (13 bit sampling max.)	+/- 2,4,8,16 g (13 bit sampling Max)
Auto-Normalization	Self-Calibrating, Auto-Normalization of the data to the vehicle's direction of motion	Self-Calibrating, Auto-Normalization of the data to the vehicle's direction of motion
Misc.		
Installation	Self-Installed (10 sec or less)	Self-Installed (10 sec or less)
Data Collection Interval	Configurable (1 Hz max.)	Configurable (1 Hz Max)

DATASHEET

DANLAW
AUTOMOTIVE MADE SMART

DataLogger 8 Series – GEN 2.5 (DL 820/DL 850/DL 860)

Product Comparison

Feature	GEN 2 - DL 7-series DL 750	GEN 2.5 - DL 8-series DL 820/DL 850	GEN 2.5 - DL 8-series DL 860
OBD-II Communication	●	●	●
3-Axis Accelerometer	●	●	●
Device Size	L=43mm, W=46mm, H=23mm	L=43mm, W=46mm, H=23mm	L=43mm, W=46mm, H=23mm
Wireless Communication	2G GSM/GPRS	CDMA2000 1xRTT	3G UMTS/HSPS -2G
3G UMTS/HSPA			●
2G GSM/GPRS	●		●
2G CDMA 1xRTT		●	
Built-in/Self-Contained Antenna IP64	Quad-Band Proprietary	Dual-Band Proprietary	Quad-Band Proprietary
Wireless Carrier Support (US and Canada)			
AT&T	●		●
Verizon		● (DL 850)	
Sprint		● (DL 820)	
T-Mobile	●		●
Rogers	●		●
Aeris		●	
Telus			●
Bluetooth	BT 2.1 + EDR	BT 4.0 + BLE (Dual Mode)	BT 4.0 + BLE (Dual Mode)
Bluetooth Low Energy (BLE)		●	●
Apple iOS		●	●
Android iOS	●	●	●
GPS			
GPS - Hardware	Ublox - NEO 6M	Ublox - MAX 7Q	Ublox - MAX 7Q
GPS Antenna	Proprietary Antenna tuned for NEO	Proprietary Antenna tuned for MAX	Proprietary Antenna tuned for MAX
Ring Detect Hardware Support		●	●
Cell Locate		●	●
SIM			
Physical SIM Card	●		●
Solderable Chip SIM			●

Product Code Feature Comparison

Feature	DL 820 DL 850-12A	DL 820 DL 850-32A	DL 860-12A	DL 860-32A
OBD-II Communication	●	●	●	●
3-Axis Accelerometer	●	●	●	●
UTMS/HSPA/GSM/GPRS			●	●
CDMA	●	●		
GPS-Position Data	●		●	

Contact Us

Danlaw, Inc.
41131 Vincenti Court
Novi, Michigan 48375 USA
Tel: 1 (248) 476-5571
Fax: 1 (248) 471-4485
sales@danlawinc.com