

DataLogger 974

Get the most out of your connected vehicle telematics program, while reducing the total cost of operation using Danlaw's 974 OBDII device. The DL974 is a unique OBDII telematics device that provides highly secure, wireless data communication of critical vehicle data and location information via 4G-LTE CATM1 wireless connection. The 974 provides a perfect balance of performance and cost for connected vehicle applications, while keeping your data and vehicles safe from external threats.

Enhancements

Smallest 4GLTE CATM1 Device

Industry proven Qualcomm technology

SuperCap Back-up Power for "Last Gasp"

Ultra-Low power consumption

GPS/GLONASS/BeiDou/Galileo GNSS

3D Accelerometer & Gyro

ARM Cortex M4 CPU

HSCAN, MSCAN, and SWCAN Support

Battery Metrics

Real-time Events

J1979-1 support

J1979-2 OBDOnUDS support (upgradable)

Markets

Insurance (UBI, Pay-Per-Mile, PAYD, PHYD)

Fleet Tracking & Management

Loyalty Programs

Mobile Resource Management (MRM)

Roadside Assistance

Remote Vehicle Diagnostics

Government & Military

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Features

- Enhanced security & anti-tampering
- Real-time event capture & transmission SuperCap for real-time disconnect events
- OBDII data collection (1996 – Present)
- Industry leading vehicle compatibility
- Self-installed – plug-n-go via OBDII port
- Supports hybrid & electric vehicles
- Ignition ON/OFF detection
- Cost optimized data transmission
- Self-normalizing accelerometer
- Over-the-air re-flash (FOTA)
- Certifications – FCC, PTCRB, AT&T, RoHS



SuperCap "Last Gasp" Back-up Power

The 974's built-in SuperCap extends the device connectivity by providing highly reliable power to capture and transmit real-time disconnect event data for Pay-Per-Mile Insurance and event detection applications. When vehicle connectivity is imperative to your business, the SuperCap will ensure that event data is not lost if the device is unexpectedly disconnected. The SuperCap provides better performance at extreme automotive temperatures and enhanced durability to support over 500k power cycles.

Data Security

Danlaw's DL974 device integrates a powerful IoT security solution for data on the device and data communication, using unique credentials for each device. This cybersecurity feature provides industry standard data and cellular carrier security support. Danlaw's adaptive cybersecurity solution supports current and future government standards to secure external interfaces and protect your customer's data.

Economical Data Transmission

The DataLogger 974 offers a more affordable alternative for insurance and fleet customers looking for the same features found in the DataLogger 970 without the added complexity of Wi-Fi and Bluetooth. The DataLogger 974's LTE CATM1 technology supports reduced data communication demand and low-power requirements, providing a more cost-effective solution for large-scale, high-volume IoT deployments.

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Physical Characteristics

Dimensions	Ultra Compact (L = 43 mm, W = 46 mm, H = 23 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, AT&T Certified
Environmental Certifications	RoHS Compliant

Electrical Characteristics

Supply Voltage	24V (min. 8V to max. 32V)
Current Consumption	<4 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	Internally protected

Vehicle Communication

Protocol Support	SWCAN, 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-FDD Bands – Class 5(21 dBm +1.7/-3 dB)
Module RF Sensitivity	-107dBm @Cat M1, 1.4MHz Bandwidth for LTE CAT M1
COMM	LTE CAT M1: Max 588 kbps (DL)/ 1119 kbps (UL)
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	3GPP Rel. 14 - LTE CAT M1 / LTE CAT NB2
Wireless Carrier Support	AT&T-North America
Protocols	PPP / TCP / UDP / SSL / TLS / FTP[s] / HTTP[s] / MQTT[s] / LWM2M

GNSS

Satellite Channels	Acquisition 99 / Simultaneous Tracking 33
Constellation Support	GPS, GLONASS, Galileo, BeiDou and QZSS
Antenna	Internal built-in
Cold Start/Hot Start	Cold Start < 15 seconds TTFF Sensitivity -148 dBm Hot Start < 1 second Sensitivity -165 dBm
Data Acquisition Rate	Typical 1 Hz
Accuracy	Position < 2.5 m CEP (open sky 1 Hz tracking)
A GPS	A GPS Support (Capable)

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 Typical, Up to 1.6 kHz)
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 Typical)
SIM Size	3FF
Back-up Power	SuperCap supports real-time disconnect events at extreme automotive temps (500K + cycles)
Security	Software supported cryptographic security
Hardware RTC	Yes
Processor	ARM Cortex M4