HEM Data
Data Acquisition & Analysis Solutions

OBD Mini Logger™

Overview

The DAWN OBD Mini Logger™ is a compact, low-cost data logger to acquire CAN bus data from cars and light trucks. The logger installation is simple since it snaps directly on the J1962 OBD connector. The logger is so small that it fits in the palm of your hand.

DAWN comes standard with a generic OBD-II database which defines almost 100 parameters according to the SAE J1979 standard; 40 being available on a typical car. The companion DawnEdit™ software determines which parameters are available on the vehicle to create a unique database for each vehicle model. The user can select which parameters are acquired. Also, the user can add custom messages and parameters in DawnEdit to acquire proprietary messages.

The OBD Mini Logger can simultaneously acquire four types of messages:

1. Generic OBD-II – standard on all cars and light trucks after 1996 (mode $01) as defined by J1979
2. Enhanced OBD – similar to a service scan tool database; specific to each OEM (mode $21 and $22)
3. Normal messages – transmitted for normal vehicle operation; no request messages required
4. Direct Memory Reads (DMRs)- highly proprietary (mode $23); reads controllers' memory

Read more about database types…

Soft LED indicators show the logger status without distracting the driver. It has a real-time clock which the user can set to the local time zone. The Mini Logger includes a battery backup so the logger always knows the correct time.

The DAWN Mini-Logger Video demonstrates how to configure the logger and convert the message to scaled, engineering parameters.

Standard Parameters

List of OBD-II parameters

OBD Mini Logger Specifications

Protocols	
ISO 15765-4 (CAN, 11-/29-bit, 250/500 kbps)	Yes
SAE J1850 PWM & VPW	Check with HEM Data for availability
ISO 9141-2	Check with HEM Data for availability
ISO 14230-4 (KWP)	Check with HEM Data for availability
No. of Protocol Ports (Channels)	Two CAN channels (250 or 500kbps)
Real-time PC data	Yes
Connections to PC	WiFi
Stand-alone Logger	Yes
Store Messages	Yes
On-board Storage	Micro SD card 4GB standard. Up to 32 GB allowed.
Auto Start-up	Yes
LEDs for status	RGB
Operating system	Proprietary RTOS
GPS (NMEA 0183)	Option. Internal to Mini Logger.
Wireless (WiFi)	Option. Internal to Mini Logger.
Cellular modem (External)	Option. Connects with WiFi or serial cable.
Cellular modem (Internal)	Check with HEM Data for availability.
Operating system	Proprietary RTOS
Real-time clock	Yes
Analog Inputs	
Cabin Temperature Sensor	Option
3-axis MEMS Accelerometer	Option
Vehicle Battery Voltage	Option
Expansion	Optional 8 channel ADAQ Mini Logger
Environment	
Size (inches)	OBD Connector: 1.9W x 0.70H x 1.5L
Supply Current:	80 mA. Up to 200mA with WiFi
Operating Temperature C	-40 to +70
Operating voltage	4 to 36V
Power Draw while sleeping	3 mA
Warranty	1 Year

Data Storage & Transfer

The OBD Mini Logger comes standard with a 4GB micro SD card. The card can be as large as 32 GB. A USB/micro card reader is provided to manually transfer message files to a PC.

Automated Data Transfers with WiFi and Cellular

WiFi or cellular are options to automate the file transfers to a website. If you prefer to use an HEM Data website to store and display data click here for a description of features and benefits. For details on the WiFi and cellular options click here.

GPS

GPS data is an option for the OBD Mini Logger. GPS Data syncs with vehicle data on conversion. Click here for details on GPS that is housed within the Mini Logger.

Stand-alone Data Logger or Real-Time Display

The DAWN OBD Mini Logger™ works as a stand-alone data logger for convenient data storage without a PC: just plug the logger into the OBD connector and it will start storing messages as soon as the ignition is turned on.

If you need real-time display of the data on a PC or smartphone, then you can also use the OBD Mini Logger as a pass-thru device. Contact HEM Data for details on real-time data with a PC, iPad or smartphone.

Analog Data

The ADAQ Mini Logger acquires analog data directly from sensors. This includes K type thermocouples, various voltage ranges and current measurements. The ADAQ Mini Logger works with the OBD and J1939 Mini Loggers. Click here for ADAQ Logger details.

Hybrid Test Data

To learn about DAWN and hybrid test data see this page.

Future Enhancements

Check with HEM Data for availability for support of these future enhancements: Bluetooth, and smartphone.

Options

Options include:

- Internal GPS receiver and antenna
- Internal WiFi receiver and antenna
- Cellular
- DawnPlot
- Enhanced OBD (EOBD) databases relating transmitted messages to parameters of interest

Connectors

OBD Mini Logger

J1962 Automotive Adapter

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