FLEET GENIUS™

FLEET-GENIUS.COM

Wireless OBD-2 Vehicle Monitor Analyzer

for fleet management applications

PRODUCT DATASHEET

Prova's Fleet Genius® Wireless OBD-2 Vehicle Health Monitor & Analyzer (VHM™) for fleet management is a customer installable plug-and-play wireless computer for tracking, monitoring and automating vehicle fleet management tasks.

The VHM automatically monitors and analyzes vehicle activity and includes:

- **On-board diagnostics monitor** to assist in preventive maintenance and emergency maintenance management;
- **Automated preventive maintenance meters:** mileage, odometer, running time and fuel used*;
- **Trip monitor** to track usage, utilization and fuel economy for every trip;
- **Driver behavior monitor** to assist in managing the safe driving profiles of every driver in the fleet.

ZigBee™ Bluetooth®

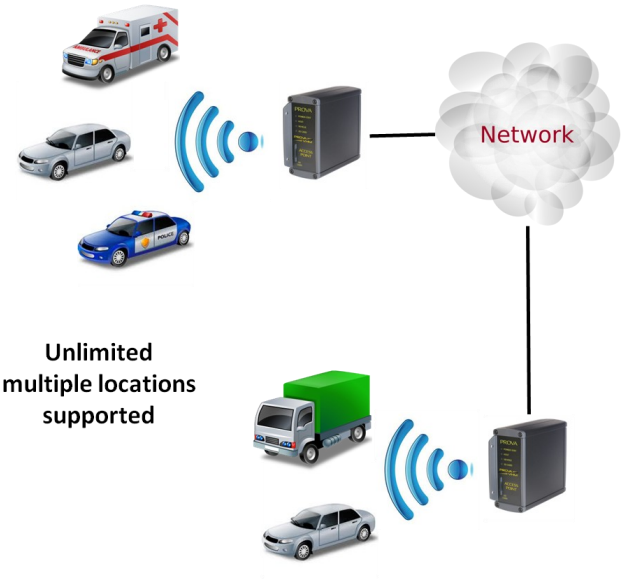
Prova Systems' Wireless VHM features and functions:

- **No cellular contracts required**
- Supports gasoline, diesel and hybrid vehicles.
- Automated meter reading (miles, gallons, operating hours, odometer, fuel used)
- Records day, date and time-of-day usage
- Monitors and reports on fuel usage and efficiency and engine idle times
- Tracks and reports engine diagnostics and DTC codes
- On-board data logger stores up to 3,000 unique trip records
- Plug & play installation
- Driver behavior monitoring
- Speed tracking
- Rapid acceleration
- Hard braking

OPERATIONS

The VHM operates independently while installed in a vehicle. It collects vehicle operations data, fleet management data and diagnostic codes and stores it for later upload and can store up to 2,000 trip records between uploads.

1. Vehicle arrives back at depot location and communicates with Access Point wirelessly and automatically.
2. The VHM uploads its fleet management records to the Access Point base station or to an Access Point app on a smartphone or tablet.
3. Access Point stores and forwards the VHM records on to Prova's Fleet Manager application and/or to 3rd party management applications.

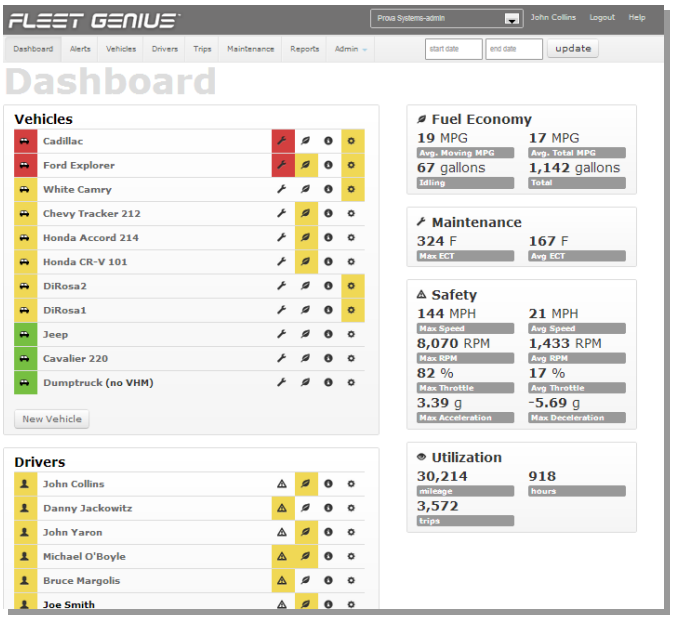


SPECIFICATIONS

- Power Requirements: -- 12VDC @ 3.7mA typ (Idle - Quiescient Sleep) 12VDC @ 27mA avg typ (OBD Active - Logging)[1]
- Wireless: IEEE 802.15.4 Compliant : 2.4GHz : 250Kb/s Raw 60mW Transmit Power : 12 Channel : 2dBi Chip Antenna
- User Interface: Power/ Status LED -> Red/Yel/Grn Buzzer -> Electro-Mech : 78dBA : 4KHz nom
- Environmental: -25C to +70C temp ambient 20% to 90% RH, Non-Condensing
- Firmware Upgrade Support: flashable program memory
- Enclosure: ABS plastic
- Enclosure dimensions: 1.8"W x 1.2"H x 1.4"D
- Weight: 1.3 oz

FLEET GENIUS PRO AND PRO PLUS

Fleet Genius Pro web-based fleet management application collects, analyzes and reports on all information collected from the VHM devices.



Key management features include:

- Fleet/vehicle/driver utilization
- Trip tracking
- Preventive maintenance
- Engine diagnostics
- Driver behavior monitoring
- Fuel economy tracking

All VHM information is stored in the cloud and is backed up everyday. VHM data can be shared with any application via Prova's SDK and Fleet Genius Export features.

Fleet Genius PRO is available 24x7 on any browser on a PC, MAC, smartphone or tablet computer.

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PROVA SYSTEMS

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SUPPORTED FEATURES

The VHM records a variety of different indicator values as the vehicles are used in their daily operations to track and manage vehicle health, performance, fuel use and driver behavior. Some of these values are tracked only at upload time but the majority are tracked every second on a trip-by-trip basis. The following list includes some of the most important values that are tracked.

DATA	DESCRIPTION
ENGINE DATA	
VIN	Vehicle Identification Number
Emissions Systems Monitor Status	Status vehicle emissions monitors includes: misfire, fuel system, comprehensive component, evaporative system, oxygen sensor, oxygen sensor heater, catalyst, heated catalyst, AC system refrigerant, secondary air system, EGR system.
DTC status	Lists all outstanding DTC codes at time of data upload
DTC event log	Date/time stamp for every DTC event includes intermittent DTC capture and codes
PID table	Listing of all PIDs supported by the vehicle
Average Engine Coolant temperature	Average engine coolant temperature for every trip
Max Engine Coolant temperature	Maximum engine coolant temperature during every trip
Battery State of Charge	For hybrid vehicles displays the state of charge of the hybrid battery
Fuel level	Reported fuel level by vehicle
TRIP DATA - UTILIZATION	
Trip Duration	Trip duration in seconds
Trip Start (UTC)	Date/time of trip start in Universal Time
Trip distance (miles/km)	Trip distance in miles or kms
Driver ID	Using Prova's driver ID system identifies the individual driver for each trip (2013)
Engine Idle Time duration	Duration of engine idling to track excessive idle time on vehicles
TRIP DATA - FUEL EFFICIENCY*	
Fuel efficiency (moving)	Calculated fuel efficiency of the vehicle during a trip while it is moving*
Fuel efficiency (idling)	Calculated fuel efficiency of a vehicle during a trip while it is idling*
Total fuel efficiency	Combined fuel efficiency for the trip including moving time and idling time*
Total fuel used	Total fuel used during the trip*
Total idling fuel used	Total fuel used while idling*
	* the system calculates fuel efficiency based on information provided by the MAF or MAP sensor and may require calibration to provide the most accurate readings. Without calibration the system provides a valuable view of relative fuel efficiency based on trip profiles. Diesel engines and other engines without MAF or MAP sensors will require calibration.

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SUPPORTED FEATURES (CONTINUED)

DATA	DESCRIPTION
TRIP DATA - DRIVER BEHAVIOR	
Max Speed	Maximum speed attained during each trip. Date/time stamped
Average Speed	Average speed for the entire trip
Max RPM	Maximum RPM reached during each trip. Date/time stamped
Average RPM	Average RPM for the entire trip
Max Throttle position	Maximum throttle position for each trip. Date/time stamped.
Average Throttle position	Average throttle position for each trip
Max acceleration (G force)	Max acceleration for each trip in g-force. Date/time stamped
Max deceleration (G force)	Max deceleration for each trip in g-force. Date/time stamped
TRIP DATA - HISTOGRAMS	
Speed vs time Histogram	Record of time a vehicle drove within specific speed bands
Fuel used vs speed histogram	Record of fuel used within specified speed bands
Acceleration vs time histogram	Record of acceleration events by time (g-forces)
Deceleration vs time histogram	Record of deceleration events by time (g-forces)
TRIP DATA - EVENT MONITORS	
DTC events	Date/time stamped event listing as DTCs are generated. Provides an accurate indication of the time a vehicle has experienced DTC event.
Idle time events	Date/time stamped event listing of every idle event greater than 1 sec. Can be used to track excessive idle time by drivers or within distracted driving programs to differentiate moving time vs stopped time during any trip.

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