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 solution for 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;
- **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.

The VHM works with all cars and light-duty trucks manufactured since 1996 and also supports hybrid vehicles.

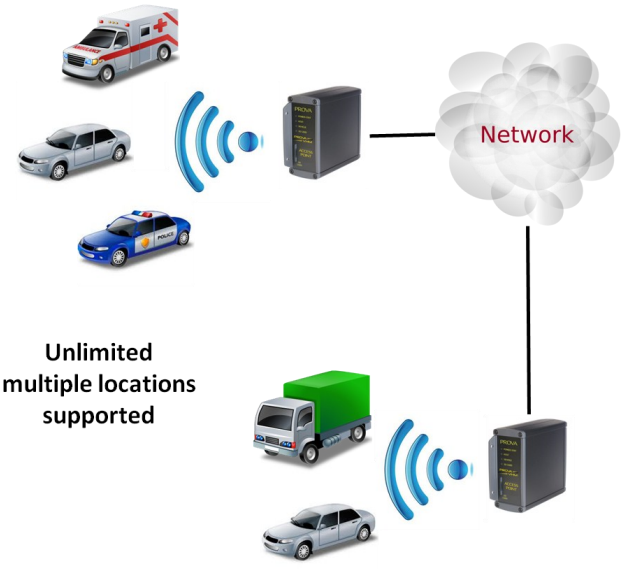
The Wireless Zigbee VHM features and functions:

- **No monthly cellular costs**
- Supports gasoline 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 real idling times
- Tracks and reports engine diagnostics and DTC codes

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.
3. Access Point stores and forwards the VHM records on to Prova's Fleet Manager application and/or to 3rd party management applications.



SPECIFICATIONS

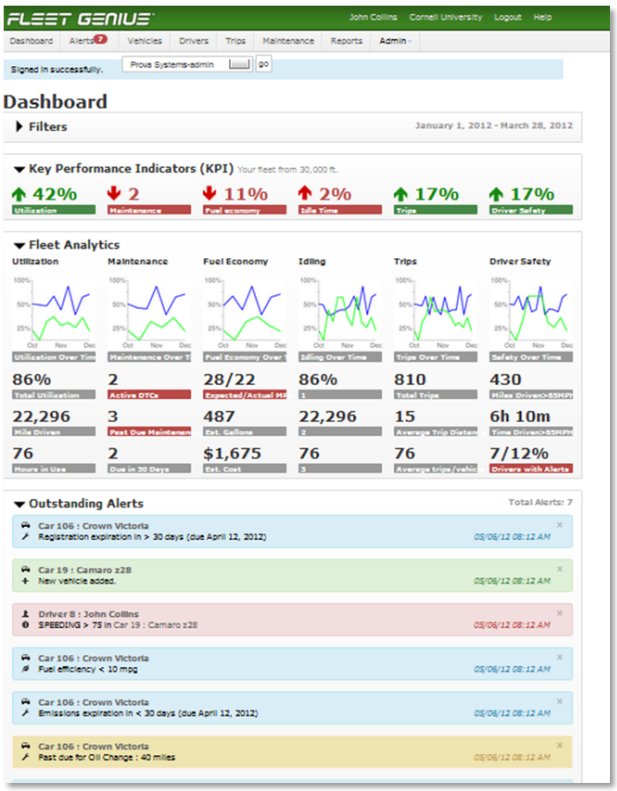
- Power Requirements: -- 12VDC @ 3.7mA typ (Idle - Quiescient Sleep) 12VDC @ 27mA avg typ (OBD Active - Logging)[1]
- Wireless: IEEE 802.15.4 Compliant : 2.4GHz : 250Kb/s Raw 60mW Transmit Power : 12 Channel : 2dBi Chip Antenna
- User Interface: Power/ Status LED -> Red/Yel/Grn Buzzer -> Electro-Mech : 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

Fleet Genius Pro collects, analyzes and reports on all information collected from the the fleet's VHM devices. The data is sent to this cloud based application for secure storage and access from any PC, table or smartphone via a standard browser

Fleet Genius Pro addition to reporting on trip details by vehicle or driver it also highlights alerts to make managing the vehicle fleet easier.

The PC-based Windows application allows the manager to report on any number of data sets collected by the VHM. The system also permits manual entry of maintenance information to track scheduled maintenance activities.



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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

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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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