

Wireless ZigBee Vehicle Health Monitor (VHM)

Prova's Wireless Zigbee OBD-2 Vehicle Health Monitor (VHM-VM-ZGHP-01) is a customer installable plug-and-play wireless solution for vehicle fleet management,

The VHM plugs into a vehicle's OBD-2 port and immediately begins to monitor vehicle operations and perform diagnostics. The data collected by the VHM is uploaded automatically and wirelessly to the fleet management application for further analysis.

Updates are completed without driver or technician intervention and no monthly cellular contracts are required to support the VHM's wireless operations. The VHM has a 100m (300') operational radius and uploads to any of Prova's VHM Access Points on a fleet's network.



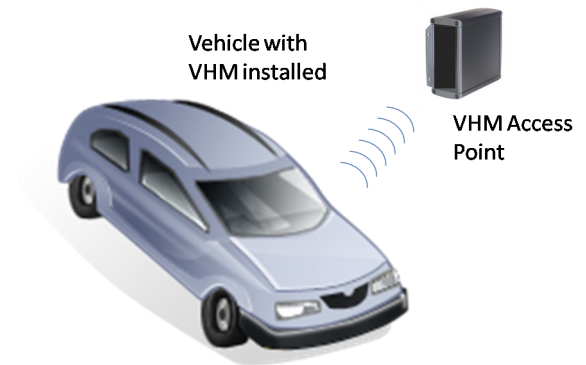
The Wireless Zigbee VHM features and functions:

- No monthly fees for wireless operation
- Reports vehicle emissions status
- Monitors and manages fuel usage and efficiency and idling times
- Tracks and reports engine diagnostics and DTC codes
- Manages vehicle maintenance schedules
- Performs automated mileage tracking and updating
- Records day, date and time-of-day usage
- Supports VHM device removal alerts

OPERATIONS

The VHM operates independently while installed in a vehicle. It collects vehicle operations data and stores it for later upload and can store up to 3,000 trip records between uploads.

1. Vehicle arrives back at depot location.
2. The VHM communicates with the Access Point when they are within 100m (300')*.
3. VHM uploads its records to the Access Point.
4. Access point stores and forwards the VHM records on to the VHM Manager application.
5. VHM resets its on-board storage.



* dependent on antenna coverage area

SPECIFICATIONS MANAGEMENT INTERFACE

- Power Requirements: --
12VDC @ 3.7mA typ (Idle - Quiescent 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

PROVA Vehicle Management System						
Application Drivers Vehicles Help						
Dashboard Drivers Vehicles Reports Company						
Vehicle Alerts		Vehicle #	Alert Type			
		-- ALL --	-- ALL --			
		GO	Generate Report...			
Vehicle #	Class	Year	Make	Model	Alert Type	Alert Description
Vehicle # : Blue F150 - 6 item(s)						
Blue F150	F150	2002	FORD	F150	DTC Alert	Diagnostic Trouble Codes present (Count: 2)
Blue F150	F150	2002	FORD	F150	Fuel Efficiency	Average MPG: 12 (Threshold: 13.5)
Blue F150	F150	2002	FORD	F150	Emission Inspection	Due on 5/15/2009
Blue F150	F150	2002	FORD	F150	Oil Change	Due in 200 miles
Blue F150	F150	2002	FORD	F150	Safety Inspection	Due on 5/15/2009
Blue F150	F150	2002	FORD	F150	Tire Rotation	Due in 200 miles
Vehicle # : Black F150 - 5 item(s)						
Black F150	F150	2003	FORD	F150	Air Filter	Due in 198 miles
Black F150	F150	2003	FORD	F150	Emission Inspection	Due on 5/15/2009
Black F150	F150	2003	FORD	F150	Front Brake Service	Due in 210 miles

The VHM Vehicle Manager application collects all data sent from the VHM to make it easier for managers to view the health of their fleets remotely.

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.

The application supports the management of hundreds of variables and permits reporting on vehicle usage by vehicle and by driver. This gives the fleet manager flexibility over their reporting requirements.

The alerts based system simplifies management by permitting the manager to work on vehicle, driver and system alerts instead of managing the details of every vehicle and driver everyday.

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