

Technical Description of the TPMS (Tire Pressure Monitoring System) TPM2 V

Part Numbers Covered:

ALM V ECU: A906 827 00 01

TPM2 V ECU: A906 540 00 01

Brief Description

A System block diagram for both ALM V ECU and TPM2 V ECU is shown in figure 1. The TPM2 V, ALM V ECU's (Electronic Control Unit) has the following sections:

	TPM2 V	ALM V
RF Section	x	x
CAN Tranceiver	x	
LIN Tranceiver	x	x
Microprocessor	x	x
Voltage Regulator	x	x

The system has been developed to monitor a vehicle's tyre pressures. An electronic unit inside each tyre, (referred to as the RTPMS transmitter) mounted to the valve stem, periodically measures actual tyre pressure. By means of RF communication, this pressure information is transmitted to ECU's (receivers) fitted in the car.

The ECU's filter this RF in the RF section and decodes the pressure information via the microprocessor.

The Voltage Regulator section is used to protect the ECU's against transients etc on the VBat ECU inputs. Wired communication is done through the CAN / LIN bus of the automobile.

Mercedes V< ECU's - MODES OF OPERATION TABLE

TPM2 V ECU

Mode of Operation	Explanation
ON (normal)	When the CAN bus becomes active th ECU will switch to ON mode and stay in ON mode so long as the CAN bus is active.
OFF (sleep)	The ECU will only monitor the CAN bus for activity. No pressure change will be visible to the Host while the ECU is OFF. This is the shipping mode and the mode the ECU enters after COAST mode.
COAST (standby)	COAST mode is a mode in which ignition = OFF, CAN signals are off but the ECU continues to decode RF from the wheel units.