

Technical Description of the BMW TPMS (Tire Pressure Monitoring System) ECU

Brief Description

A block diagram of the RTPMS is shown in figure 1. The ECU (Electronic Control Unit) has the following sections:

- RF circuit
- CAN transceiver
- Microprocessor
- Power Decoupling

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 the ECU (receiver) which is fitted in the car.

The ECU filters this RF in the RF section and decodes the pressure information via the microprocessor.

The Power Decoupling section is used to protect the ECU against transients etc on the VBat ECU inputs.

The CAN section is an interface unit for the CAN bus on the car and out ECU.