

# BLACKBOX FOR PASSIVE MEASUREMENT OF MEASUREMENT DATA IN VEHICLES

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**Abstract:** *A concept for a Controller Area Network (CAN) and European Onboard Diagnostic (OBD-2/EOBD) monitoring and recording embedded device, a black box, is described in this paper. It is designed to log data. This data contains speed, acceleration, or specific information from Anti-Blocking-System (ABS) or Electronic Stability Program (ESP). The interfaces as well as the hardware and software architecture, based on a Digital Signal Processor (DSP), are described. The Blackbox is designed for passive recording only. Therefore, the in-vehicle communication networks are not affected by this device. The Blackbox can be used in most vehicles with CAN-based control units. A typical application of the Blackbox is the collection of time-stamped dynamics data over a longer time period. The recorded information can be transferred to a PC for a later analysis. Future developments will include a video-capture option.*

**Key words:** *recording, CAN, OBD, passive, network, automotive, embedded*



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