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CANgine FMS now for trucks and busses

Bringing operating data of the truck or bus into the telematics system is easy done with CANgine FMS. This works without changing existing hardware. The small unit reads the real-time data on the CAN / FMS of the truck or bus and sends these data on a standard serial link formatted as normal ASCII text. The data to transmit on the serial link can be selected from a wide range of data groups. The cycle time for periodic transmission is selectable between 100 ms and 16 hours.

FMS

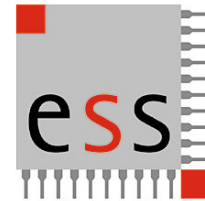
Companies like DaimlerChrysler, Scania, Iveco, MAN, Volvo and DAF jointly developed the FMS standard which was later published by the SAE. Large European and international truck manufacturers started using it in May 2002. Using the FMS standard 3rd parties can access truck data required by fleet management systems using a manufacturer independent, standardized protocol.

Usage of the standard is not yet wide spread as truck manufactures often prefer their proprietary solutions for fleet management. Nevertheless, the standard offers the integration of important vehicle information into 3rd party fleet management systems. These are specialized for dealing with GPS data and freight data. The specialized knowledge required to interface such systems to the CAN bus and the FMS protocols is not readily available.

CANgine[®] FMS

ESS is a manufacturer of communication components for industrial automation applications. ESS placed a focus on CAN bus applications and recognized the missing link: a component that receives all FMS data and provides it to the application in plain ASCII using a regular serial interface. ESS introduced this CANgine[®] FMS module in 2003. Multiple configuration options of the CANgine[®] FMS allow selecting the data provided on the serial interface and the cycle time with which the data is transmitted to the serial interface.

CANgine[®] FMS is integrated into a double-sided plug between two D-Sub 9 connectors. Several companies providing fleet management solutions use CANgine[®] FMS to get access to a truck's data and it is already used in many trucks on the streets today. Another model – CANgineBT FMS – uses Bluetooth[®] instead of the serial link to connect to the host.



New Functionality with Firmware 5.0

The Firmware used by CANgine FMS and the Bluetooth version CANgineBT FMS was enhanced again. The resolution of several measured values was increased to achieve a more precise data analysis. Data values out of range, not defined or not available in the actual truck are flagged with special alpha characters. In this way the plausibility check is done in CANgine's firmware. In previous versions this plausibility check had to be performed by the host's software.

This firmware version 5.0 is also the base for a new FMS protocol chip currently in development. The FMS protocol chip can be used by manufactures of telemetric hardware to get access to CAN and FMS without requiring detailed knowledge about the communication protocols involved. The vehicle data collected can then directly be integrated into the manufacturer's systems.

Customized Solutions

ESS developed the hardware and firmware of the CANgine on a modular base and new developments are added continuously. Customer specific versions can thus be made at reasonable costs.

The microcontroller used has more resources available then currently used, so additional tasks can be added. If QFP44 is still too large the BGA housing of the chip can be used, reducing the chip size to 8 x 8 mm².

The firmware can be customized towards specific requirements. As an example one customer required that changes of the tachograph data are transferred immediately and not based on the fixed parameterized cycle time.

Further information is available at www.CANgine.com, which is regularly updated with the latest information.

Pictures and Drawings:

CANgine FMSIA-CC.jpg: FMS Protocol Chip
CANgine FMS_hr.jpg: FMS to RS232 Gateway
CANgineLogo.jpg

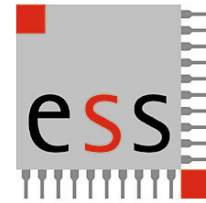
Embedded Systems Solutions

ESS Embedded Systems Solutions is a privately owned GmbH. ESS specializes in the development of microcontroller based applications for industrial communication, industrial automation and automotive applications.

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Press Release



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