

esd electronics, Inc announces the release of its newest software product - esd SAE J1939 Protocol

By esd electronics, Inc

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esd electronics, Inc introduces their new product, the esd J1939 Protocol Stack – the primary version of the esd J1939 Stack for systems with existing CAN hardware and with existing function calls.

esd electronics, Inc SAE J1939 is a Controller Area Network (CAN) based protocol developed to provide a standard architecture through which multiple Electronic Control Units (ECUs) on a vehicle can communicate. Based on the extended frame format (29-bit identifier) of the CAN 2.0B specification, it uses a fixed baud rate of 250 Kbit/s.

The esd J1939 Stack design allows quick development of applications supporting the SAE J1939 protocol. Written in ANSI-C code, the esd J1939 Stack provides a maximum level of portability, and supports little- and big-endian systems. It is easily adaptable to different target systems through the modification of #include and #define directives.

esd electronics, Inc designed the primary version of the esd J1939 Stack for systems with existing CAN hardware and with existing function calls (Read, Write, Status, etc.). In addition, esd electronics, Inc. offers a customized source code suitable for any CAN controller as requested.

An SAE J1939 Application Programming Interface (API, Object Code) for Windows will also be available by the end of the year. It works in combination with all esd CAN hardware interfaces, and it includes a J1939 Simulation Tool plus J1939/CAN Monitoring software.

The code includes some very special features to accelerate the implementation task:

The sending of PDN data is managed automatically, i.e. the code handles BAM or RTS/CTS depending on data size and destination. The code also supports automatic broadcasts.

The reception of PGN data is handled by convenient callback functions for easy differentiation between source and types (complete data, data chunk, interruption, etc.) Filtering of PG Numbers and source address is supported.

The Network Management functions support the automatic handling of the Address Claiming process. All four address configuration types (Non Configurable, Service Configurable, Command Configurable, and Self Configurable) are supported.

The code supports multiple devices in a single software instance, configured through a simple #define directive.

The resource specific settings include, to name a few, the maximum number of simultaneous transport protocol transfers, the maximum number of BAMs (BAM queue can be set to consider message priority in case the queue is full), and maximum number of automatic broadcasts.

For further technical information log on to our web site at <http://www.esd-electronics-usa.com/CAN%20SAE%20J1939%20Protocol%20Stack.html> or contact Michelle Dzialo at 413-772-3170.

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esd electronics, located on the web at <http://www.esd-electronics-usa.com>, has over 20 years experience specializing in networking technologies for industrial applications including motion control. Our product line focuses primarily on Controller Area Network (CAN), J1939, and CANopen. Recently we have extended the product line by adding EtherCAT hardware and software modules. In addition, we provide engineering services for customized hardware development, including FPGA development, and printed circuit designs plus driver software for various real-time operating systems.

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