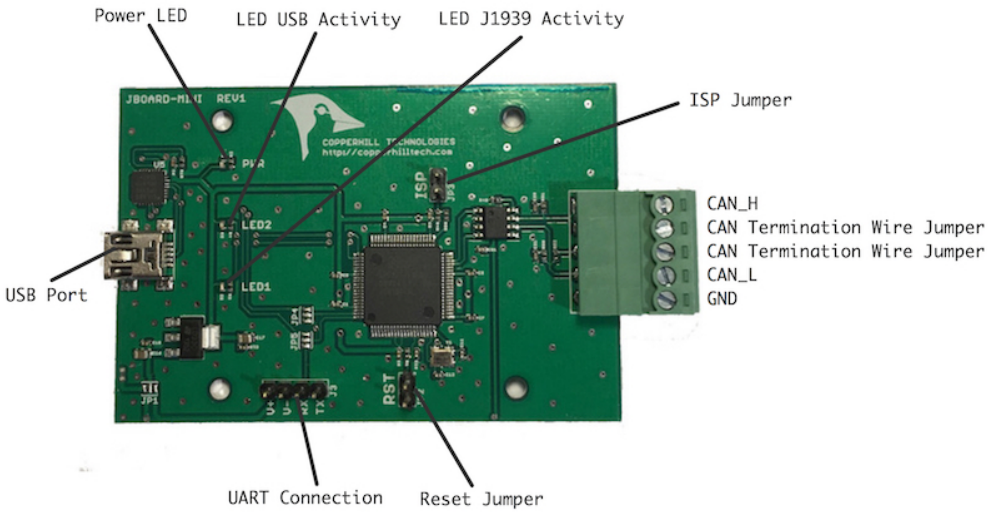
OS-Independent, License-Free On-Chip SAE J1939 Protocol Stack for Embedded, Linux, and Windows Systems



Copperhill Technologies offers a variety of hardware modules equipped with an On-Chip SAE J1939 Protocol Stack, relieving the end user from implementing third-party source code and avoiding license fees. The programming of J1939 network communication is accomplished through accessing a standard serial port, making the development virtually independent of the operating system.

GREENFIELD, Mass. - April 12, 2021 - *PRLog* -- The modules are fully SAE J1939/1x compliant, and they operate under an extended temperature range of -40°C to +85°C.

A serial communication protocol converts SAE J1939 data frames into separate parameters, such as PGN, Priority, Source Address, Destination Address, and Data. The protocol is documented in great detail. It supports the full SAE J1939 protocol stack according to SAE J1939-21 (Data Link Layer) and SAE J1939-81 (Network Management), including address claim, request messages, and Transport Protocol. Additional features include message filtering, setup of preferred node addresses, adjustable node address negotiation range, network scanner, data traffic recording, data traffic simulation, and more. Source code samples are available in C and C#.

The SAE J1939 ECU Simulator Board with USB Port (JCOM.J1939.USB-B) represents the core hardware configuration containing the CAN Bus interface and the serial port, either USB or UART. The module utilizes UART-to-USB communication at a baud rate of 115,200 bps.

The SAE J1939 Gateway Module with USB Port, RTC, MicroSD Memory Card (JCOM.J1939.USB-X) offers additional hardware components to support timestamps plus storing data on the onboard MicroSD memory card. The module also supports the full USB 2.0 speed of 480 Mbps.

The SAE J1939 Gateway and Data Logger with Real-Time Clock (JCOM-XE) provides the same features as the JCOM.J1939.USB-X but operates at an extended power input range of 7 VDC to 30 VDC. It comes

is a dust and splash-water proof design, making it suitable for use on diesel engines operating under harsh environmental conditions.

All modules work with a free-of-charge Windows software, the JCOM1939 Monitor Software, which allows SAE J1939 data monitoring, network scanning, ECU simulation, data recording, module setup, and more.

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