CAN On-Board Diagnostic Reference Design

CAN-OBD-RD

On-Board Diagnostics (OBD) is an automotive protocol supported by current vehicles to capture and report diagnostic data over a Controller Area Network (CAN) bus. The Silicon Labs CAN OBD Reader Reference Design use the CAN peripheral of the C8051F502 microcontroller (MCU) and interfaces to the OBD-II port in a vehicle to retrieve the diagnostic error codes and status information. The retrieved information can be displayed on a Windows PC using the ToolStick Terminal software application. The reference design firmware can also decode a small subset of status information before displaying the results on the PC. The OBD Reader supports modes 1, 2, and 3 of the OBD-II standard SAE J1979. These modes allow the OBD Reader to access the current d show freeze frame data, and show the stored diagnostic trouble codes. The purpose of th reference design is to demonstrate an automotive Silicon Labs MCU interfacing to a vehic with a very simple and straightforward design. The MCU communicates with the vehicle u the CAN bus at 500 kbps and does not require an external crystal.

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CAN OBD Reference Design kit includes:

ToolStick Base Adapter

TollStick CAN OBD Daughter Card

OBD-II Cable

USB Extension Cable

Software CD

Quick Start Guide