

CAN SIC boards for system development and validation



(Source: Dspace)

For the modular and scalable Scalexio real-time platform by Dspace, there are interface boards with multiple CAN FD ports available. Now, they can be equipped with CAN SIC transceivers. The systems are suitable for hardware-in-the-loop (HIL) and rapid control prototyping (RCP) applications.

A Scalexio system consists of hardware and software. It comes in different sizes and can be used for laboratory as well as in-vehicle applications. During HIL tests, the system simulates the environment of the ECU (electronic control unit) whereas during RCP projects, the system replaces the ECU in a vehicle or controlled system, allowing the user to experience and test control functions in a real environment.

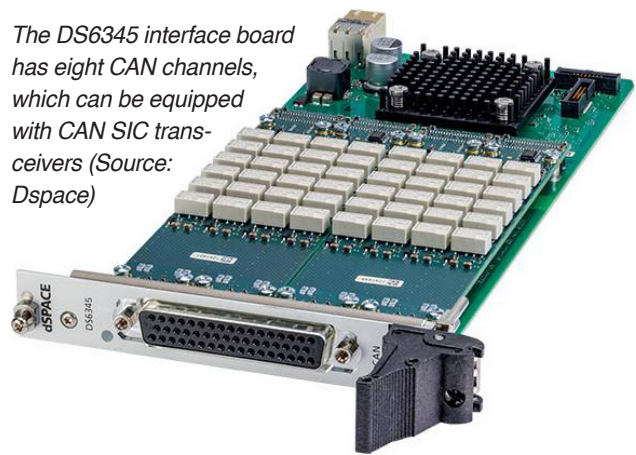
The German supplier provides several CAN interface modules. They can be equipped with different CAN transceivers. Besides legacy CAN FD transceiver (TJA1145T by NXP) supporting data-phase bit rates up to 2 Mbit/s, the CAN ports can be applied with a CAN SIC (signal improvement capability) transceivers (TJA1463AT by NXP) featuring bit rates up to 8 Mbit/s. Additionally, CAN transceivers with wake-up detection or partial networking are available. So-called fault-tolerant transceivers according to ISO 11898-3 can be selected.

The following CAN interface board variants are offered:

- ◆ DS6302 CAN/LIN board with four CAN and four LIN channels
- ◆ DS6344 CAN board with four CAN channels
- ◆ DS6345 CAN board with eight CAN channels

The CAN SIC physical layer option, called CAN 8 channel type, enables higher data-phase bit rates and meets the increasing demand of carmakers in using CAN SIC networks. All features and settings of these board

The DS6345 interface board has eight CAN channels, which can be equipped with CAN SIC transceivers (Source: Dspace)



can be configured with the supplier's Configuration-Desk software. The boards feature software-configurable 120- Ω termination resistors between the CAN-High and the CAN-Low pins. In case of fault-tolerant CAN transceivers, the termination resistor is software-configurable between 560 Ω and 5,6 k Ω .

According to the supplier, the DS6345 interface board with eight CAN FD ports is ideal for compact test systems with a limited number of available slots, such as the Auto-Box or the eight-slot Lab-Box systems. Network management functions such as wake-up and sleep are also included as software-configurable functions. A CAN feed-through is also available.

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