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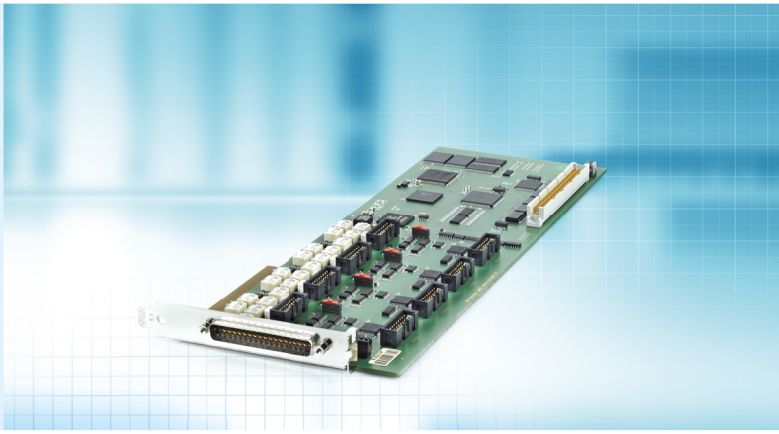
Find the *dSPACE DS4302-05* at our website: *Click HERE*

DS4302 CAN Interface Board

Interface to CAN bus

Highlights

- Connects modular dSPACE systems to the CAN bus
- Features 4 CAN channels



Application Areas

The DS4302 CAN Interface Board has been designed to operate in controller area network (CAN) environments as used primarily in the automotive and automation industries. Typical application fields of the DS4302 are:

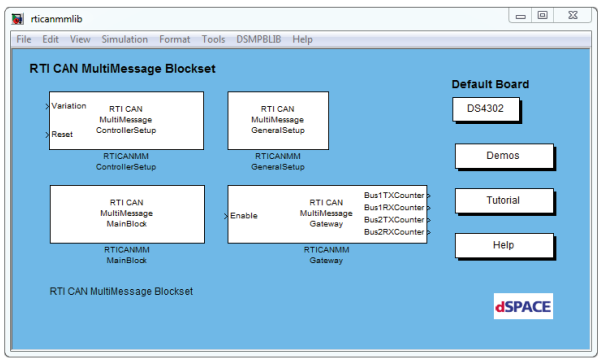
- In-vehicle rapid control prototyping
- Hardware-in-the-loop (HIL) tests
- Restbus simulation
- Automation tasks

Key Benefits

The DS4302 enables dSPACE systems to take part in CAN-bus traffic without the need for extra interface electronics. Its three individual transceivers on each of the four independent channels cover almost all possible application areas. They include a high-speed transceiver for hard real-time communication and a fault-tolerant low-speed transceiver, necessary for tasks such as comfort electronics. Every configuration of the DS4302 can be carried out in a Simulink® block diagram, thereby eliminating CAN controller programming.

Comprehensive Software Support

With the RTI CAN Blockset, you can easily configure all CAN interfaces in Simulink using a dialog-based method, without any complicated CAN controller programming. The configuration options range from message setup to interrupt configuration, right through to message time-stamping. The easiest way is if you already have communication description files: simply import them, and your CAN hardware is configured. For efficient and dynamic handling of complex CAN setups in HIL applications, we offer the RTI CAN MultiMessage Blockset, which allows you to manage large CAN message bundles (> 200 messages) from one Simulink block.



- RTI CAN Blockset (p. 64)
- RTI CAN MultiMessage Blockset (p. 67)

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Technical Details

Parameter		Specification
General		■ 4 independent CAN channels ■ 3 different onboard CAN transceivers per channel ■ Piggyback module socket for up to 4 customer-specific CAN transceivers
Processor	Slave DSP	■ TMS320VC33-150 from Texas Instruments (75 MHz, 150 MFLOPS, 75 MIPS) ■ Handles CAN controller communication
Memory	Onboard memory	■ 256 k x 32-bit SRAM ■ 4 M x 32-bit flash memory
	Dual port memory (DPMEM)	■ 32 k x 32-bit dual-port memory (DPMEM) for communication between PHS-bus master and slave DSP
Interrupt controller		■ CAN controller interrupt ■ PHS interrupt support ■ Various interrupt sources
Standards supported		■ CAN 2.0 A (standard frame format) ■ CAN 2.0 B (extended frame format) ■ ISO DIS 11898-2 – high-speed CAN bus ■ ISO 11519-1 – low-speed CAN bus, fault-tolerant
Onboard CAN transceivers	Transceiver chips	■ MAX3057 ISO11898 high-speed transceiver (up to 2 MBd), ±80 V fault protected ■ TJA 1055 fault-tolerant low-speed transceiver supporting transmission rates up to 125 kBd ■ SN75176 modified RS485 transceiver supporting baud rates up to 500 kBaud ■ Bus termination resistors (software selectable) ■ 8 bidirectional I/O lines at customization module connectors
	Further details	■ Full-CAN controller (BOSCH CC770) ■ Programmable controller clock
Host interface		■ One 8- or 16-bit ISA slot (power supply only)
Physical characteristics	Physical size	■ 340 x 125 x 15 mm (13.4 x 4.9 x 0.6 in.)
	Ambient temperature	■ 0 … 70 °C (32 … 158 °F)
	Power supply (without piggyback modules)	■ +5 V ±5%, 1.2 A ■ +12 V ±5% 20 mA

Order Information

Product	Order Number
DS4302 CAN Interface Board	■ DS4302

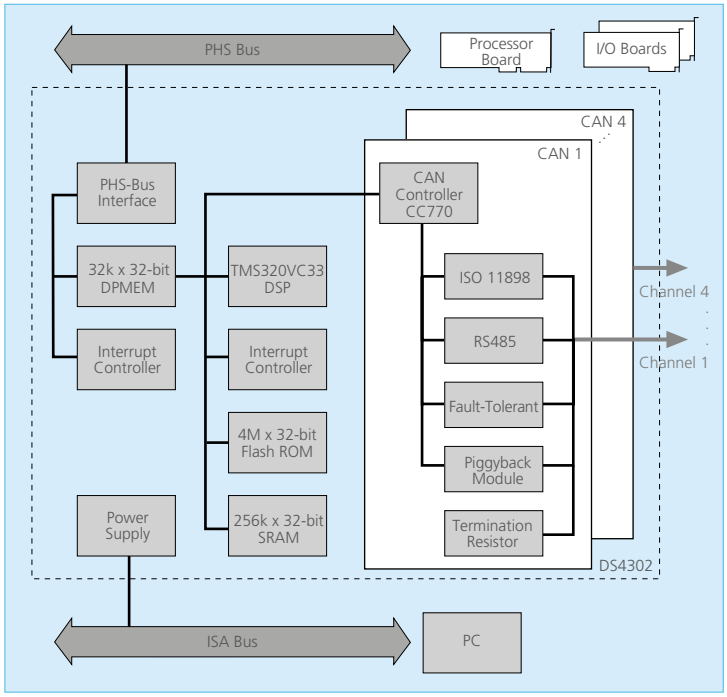
Relevant Software

Software		Order Number
Required	■ Real-Time Interface (RTI), (p. 56)	■ RTI
Optional	■ RTI CAN Blockset (p. 64)	■ RTICAN_BS
	■ RTI CAN MultiMessage Blockset (p. 67)	■ RTICANMM_BS

For connection of dSPACE's modular hardware to a CAN FD bus system, see p. 436.

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Block Diagram



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