

CAN Interface (MCMCAN)

40.1 Feature List

The following are the features of the MCMCAN module

- ISO 11898-1, -4
- CAN FD with up to 64 data bytes supported
- TTCAN protocol level 1 and level 2 completely in hardware
- Event synchronized time-triggered communication supported
- CAN Error Logging
- AUTOSAR optimized
- SAE J1939 optimized
- Improved acceptance filtering
- Two configurable Receive FIFOs
- Separate signalling on reception of High Priority Messages
- Up to 4 CAN nodes
- Direct Message RAM access for Host CPU
- Multiple M_CANs share the same Message RAM
- Programmable loop-back test mode
- Maskable module interrupts
- 8/16/32-bit Generic Slave Interface for connection customer-specific Host CPUs

Features offered by each M_CAN node:

- Two configurable Receive FIFOs
- Separate signaling on reception of High Priority Messages
- Up to 64 dedicated Receive Buffers
- Up to 32 dedicated Transmit Buffers
- Configurable Transmit FIFO
- Configurable Transmit Queue
- Configurable Transmit Event FIFO

40.1.1 Delta to AURIX

MCMCAN is the new CAN interface, in which the user interface to the module is different than the previous MultiCAN+ CAN interface. The following are the notable changes:

- Message Objects are replaced by configurable Message RAM
- Supports Debug on CAN

40.2 Overview

An overview of an MCMCAN module is shown in [Figure 579](#). The MCMCAN supports the following variants of CAN communication protocols.

- Classical CAN and CAN FD according to ISO 11898-1
- Time Triggered CAN according to ISO 11898-4

The MCMCAN consists of Bosch M_CAN as CAN nodes and a wrapper around the M_CAN called as the user interface. M_CAN provides the following functionality:

- CAN protocol Controller
- Receive and transmit time stamp generation