

# MOCS5200

Versatile single board computer



As fast computing system the **MOCS5200** is bound for demanding applications, requiring high computational power altogether with leading edge realtime reactivity. A 400 MHz PowerPC MPC5200 with integrated FPU, originally designed by the processor manufacturer for use in automotive multimedia systems, is the heart of the **MOCS5200** and delivers upto 700 MIPS.

## MOCS5200

Main features of the board are:

- 128 MB DDR-RAM as well as 32 MB Flash
- high computing power (700 MIPS, FPU)
- Ethernet 10/100 Mbit, RS-232 and galv. isolated CAN
- low voltage, wide range supply 4,5 ... 30 V<sub>DC</sub>
- realtime clock with battery backup
- EEPROM for storage of configuration data
- peripheral bus width 8/16 bit, synchronous and asynchronous operating modes
- ADD-On-interface (ATA, SPI, USB Host, 5x async. serial)

## Versatile

---

## Base board

The base board of the **MOCS5200** is usable as stand-alone controller. A RS-232 interface supports local operating, a 10/100 Mbit RJ45-Port dient zur Vernetzung and a galvanically isolated CAN-Bus connects process-IO.

The **MOCS5200** is available as plug-in board for 19"-cases and in different housings for use as stand-alone device.

## Extension bus

As extension interface, the **MOCS5200** uses a 64p VG-connector. with a parallel bus system. Data bus width (8/16 Bit) and access mode (synchronous/asynchronous) are user selectable.

For direct connection of serial peripherals, a SPI (max. 10 MHz) with select lines for upto 8 participants is available on the extension bus.

Interrupt inputs as well as programmable port pins complete the bus and provide for an easy and versatile adaption of the **MOCS5200** to special requirements.

## Serial interfaces

By an Add-On interface, the **MOCS5200** provides upto 5 more serial 5-wire interfaces. 2 of these interfaces can be configured to provide an USB hostinterface instead. Line physics is user selectable, driver for RS-232 as well as RS-485 are fitted on the Add-Ons.

## CAN-Bus

The **MOCS5200** supports baudrates from 50 kB upto 1 MB. The base board provides a galvanically isolated CAN-Bus, a not isolated CAN-Bus is routed via the Add-On interface. The CAN-interfaces are using 4p Mini-Combicon-connector.

## (Mass-) memory

The base board is fitted with 128 MB DDR-Ram and 32 MB Flash. Mass memory can optionally be added by an ATA interface (also usable for CF cards) or an USB hostinterfaces with support for memory sticks

## Size and supply

The base board of the **MOCS5200** comes as 100x160mm euro-board with a 3 HE, 4 TE front panel. Depending on the Add-On used, the width can rise upto 16TE.

The board requires a supply of 4,5...30 V<sub>DC</sub>

## Add-Ons

Add-Ons are available in these configurations::

-U 1x USB-Host, 1x CAN, 2x RS-232/RS-485, 1xCF/ATA

-S 4x RS-232/RS-485, 1x CAN, 1x CF/ATA

## Programming

The **MOCS5200** is based on the MPC5200 microcontroller from Freescale. The realtime operating system RTOS-UH is in th standard scope of supply. Crest-C, PEARL und IEC 61131-3 are available as programming languages.