



The C515C is a derivative of the C500 family of 8-bit-microcontrollers with new peripherals. It combines the well known functionality of the standard 80C515A microcontroller with enhanced features.

The C515C features a SPI compatible interface and a CAN module which meets version 2.0B of the Controller Area Network specification.

The high peripheral performance and the CAN feature is ideal for automotive and industrial control applications.

Due to EMC/RFI enhancements and power consumption reduction this design excels especially for car radio applications.

KEY FEATURES

- Enhanced 8-bit C500-CPU – Fully Software/Toolset Compatible to Standard 80C51/80C52 Micro-controllers
- Upward Compatible with SAB 80C515 and SAB 80C515A
- 600 ns Instruction Cycle Time at 10 MHz CPU Clock without clock prescaler
- 15 Interrupt Vectors with four Priority Levels selectable
- 64 KByte On-Chip ROM ROM-Protection available
- 64 KByte On-Chip OTP memory
- 256 Byte On-Chip Internal RAM (IRAM)
- 2 KByte On-Chip Extended RAM (XRAM)
- Supports external Address Range up to 64 KByte Program and Data Memory
- Full CAN Module Version 2.0B active with 15 Message Objects and Basic-CAN Feature
- Synchronous Serial Interface (SSC) with full SPI Compatibility for Peripherals and E2PROMs
- 8 Datapointers with 16-bit for Indirect Addressing of Program and Data Memory
- Three 16-bit Timer/Counters
- 4 Channel Capture/Compare Unit for PWM Generation
- 8-Channel 10-bit A/D Converter. A/D Converter Inputs can be used as Digital Inputs
- Full Duplex Serial Interface with Asynchronous and Synchronous Modes and Programmable Baudrate Generator
- 49 Multifunctional Input/Output Pins
- Extended Power Saving Modes with Wake-Up from Software Power-Down via External Interrupt or incoming CAN message possible
- Extended Slow-Down Features
- Enhanced EMV/RFI Improvements with ALE switch off and latest design optimizations
- Enhanced Fail Safe Mechanisms with Programmable Watchdog Timer and Oscillator Watchdog
- Fast Power-On Reset
- 80-Pin P-MQFP Package – Pin-Compatible to SAB C515A
- Temperature ranges:
Standard 0°C to +70°C
Extended –40°C to +85°C

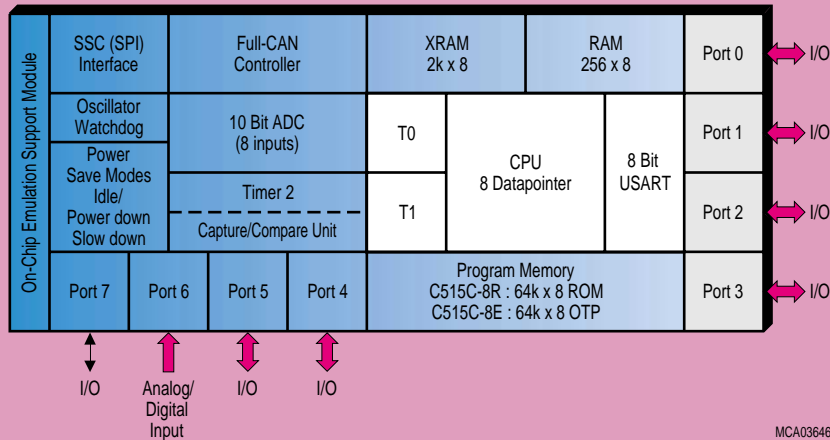
Controller Area Network (CAN): License of Robert Bosch GmbH

C515C

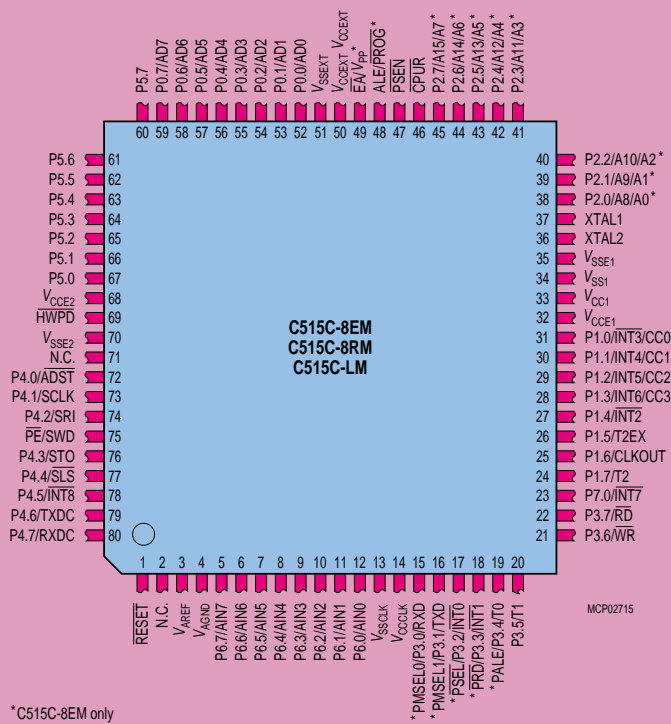
Multipurpose
Microcontroller with On-Chip
Full-CAN Module

www.infineon.com





C515C: BLOCK DIAGRAM



C515C: PIN CONFIGURATION

Published by
Infineon Technologies AG

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