


8-Bit Microcontrollers

C500 Family

C500 - Architecture

The members of our C500 microcontroller family are basically fully compatible in architecture and software to the standard 8051 microcontroller family. Especially, they are functionally upward compatible to the SAB 80C52/80C32 microcontroller. While maintaining all architectural and operational characteristics of the SAB 80C52/80C32, the C500 microcontrollers differ in number and complexity of their peripheral units which have been adapted to the specific application areas. The goal of this "Architecture and Instruction Set Manual" is to summarize the basic architecture and functional characteristics of all members of the C500 microcontroller family. This includes the description of the architecture and the description of the complete instruction set. Detailed information about the different versions of the C500 microcontrollers are given in the specific User's Manuals.

- ▶ [C501](#)
8-Bit microcontrollers
- ▶ [C535](#)
SAB 80C535: ROM-less version, identical to the SAB 80C515
- ▶ [C541U](#)
8-bit microcontroller with USB
- ▶ [C537](#)
8-Bit CMOS Single-Chip Microcontroller
- ▶ [C515C](#)
8 Bit Microcontroller with On-Chip Full-CAN Module
- ▶ [C504](#)
8-Bit-microcontrollers
- ▶ [C505x -- C505](#)
8-bit Microcontroller with Complete CAN Capability
- ▶ [C508](#)
8-bit microcontroller
- ▶ [C509](#)
8-bit microcontroller
- ▶ [C513AO](#)
8-bit microcontroller
- ▶ [C515A](#)
8-bit microcontroller
- ▶ [C517A](#)
8-bit microcontroller
- ▶ [C515](#)
8-Bit-microcontroller

Additional Documentation and Information:**User's Manual**

Description	Date/State	Size
C500 Architecture and Instruction Set (c500_um_0700.pdf)	07/2000	969 kB

Product Family Overview

Description	Date/State	Size
C500 Overview (family_c500_pb.pdf)	05.00 OK	336 kB

Application Notes

Description	Date/State	Size
EMC Design Guideline for Microcontroller Board Layout (ap242602_EMC_DesignGuideline.pdf)	2001-04 2.0	826 kB
EMC Design Guideline 2 for Microcontroller Board Layout (emcguideline1_0.pdf)	07-1999 1.0	298 kB
EMC Design Guideline 3 for Microcontroller Board Layout (ap242101.pdf)	07-1999 1.0	298 kB
EMC by Simulation (ap242101.pdf)	04-1997	288 kB
Crystal Oscillator of the C500 and C166 Microcontroller Families (ap242005.pdf)	07.99 Rel. 05	655 kB

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ADIS51 - Disassembler with One-Line Assembler for the 8051 and C500 8-Bit Microcontroller Family 1 (ap082701.pdf)	10.97 Rel.01	225 kB
Ceramic Resonator Oscillators and the C500 and C166 Microcontroller Families (ap242401.pdf)	04.99 Rel. 01	738 kB
C5xx , 80C5xx In-System FLASH Programming (ap082101.pdf)	08.96 Rel.01	90 kB
Program Memory Expansion by using the Bankswitching Capability of the C5xx,80C5xx Family (ap082401.pdf)	05.97 Rel.01	138 kB
Analog Aspects of Analog / Digital Converters (ap242801_ADC_AnalogAspects.pdf)	2001-05 / V1.0	764 kB
Development Tools		
Description	Date/State	Size
SK-C500 Starter Kit: Overview (stkit8b.pdf)	06.00	43 kB
Training		
Description	Date/State	Size
HOT Training for the Infineon Microcontrollers (hot.pdf)	06-2000	37 kB
Package		
Description	Date/State	Size
Package Information 1 (package.pdf)	05.00 OK	1.17 MB