

C515A Microcontroller for Standard Applications

The Siemens C515A improves the well known microcontroller family SAB 80C515A and SAB 80C515 in terms of performance and technology without losing compatibility to the standard product.

The optimized C500-Kernel with an Instruction cycle of 500ns (external clock rate of 24Mhz), features standard peripherals like 10-Bit A/D Converter, 4 Capture/Compare channels and other multipurpose peripherals.

Enhanced functionality in terms of getting overall Power consumption and EMC down, like ALE switchoff, Wakeup from Power-Down via Interrupt and other up-to-date improvements are integrated in an optimized microcontroller solution.

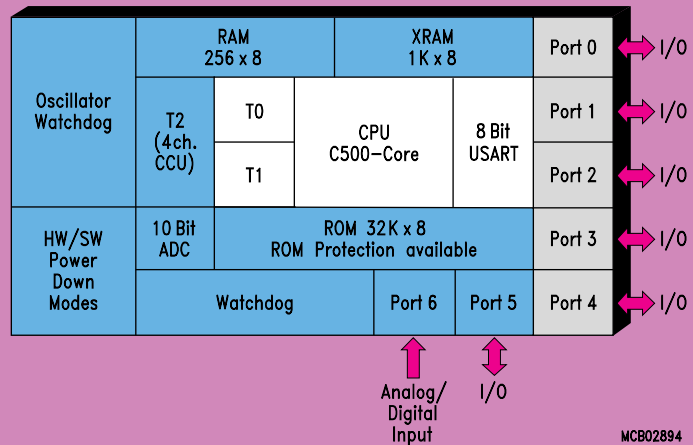
The C515A fits into most of today's applications and is a good solution to realize control in the Consumer and Industrial market.



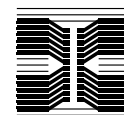
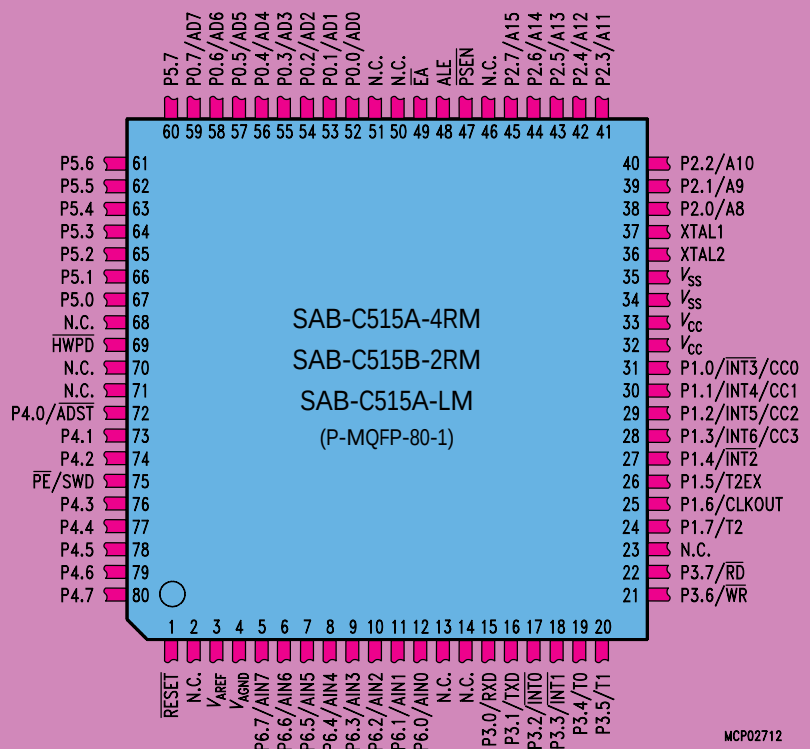
- Enhanced 8-Bit C500-CPU – Fully Software/Toolset Compatible to Standard 80C51/80C52 Microcontrollers
- Fully Upward Compatible with SAB 80C515A and other 80C515-Derivatives
- 500 ns Instruction Cycle Time at 24 MHz external Clock
- 12 Interrupt Vectors with 4 Priority Levels selectable
- 256 Byte On-Chip Internal RAM (IRAM)
- 1K Byte On-Chip Extended RAM (XRAM)
- Supports external Address Range up to 64K Byte Program Memory
- 32K Byte On-Chip ROM. ROM-Protection available
- Three 16-Bit Timer/Counters.
- 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 Mode and Programmable Baudrate Generator
- 4 Channel Capture / Compare Unit for PWM Generation with 16-Bit Compare Timer
- 48 Multifunctional Input/Output Pins
- Enhanced Fail Safe Mechanismus with Programmable Watchdog Timer and Oscillator Watchdog
- Fast Power-On Reset
- Extended Power Saving Modes
- Selectable Slowdown mode for normal and idle mode.
- Wake-up from Software Power-Down Mode via Interrupt at Pin INT 0.
- Latest EMC-Improvements and an ALE switchoff at internal program execution.
- 80-Pin P-MQFP Package – Pin-Compatible to SAB 80C535-M, SAB 80C515-M, C515-1RM and C515C-8RM
- Temperature ranges:

Standard	0°C to	70°C
Extended	-40°C to	+85°C
	-40°C to	+110°C

C515A Block Diagram



C515A Pin Configuration



Global PartnerChip
for Systems on Silicon