



C513AO Your Solution for a Low Cost/ Low Power Design

The C513AO is a low cost member of our C500 family of 8-bit microcontrollers which is compatible to the 80C51/C52 standard architecture. A wide range of tools such as HLL-compilers, debuggers and emulators are available. Among other segments the low power design makes the C513AO ideal for telecom and consumer applications as well as automotive or industrial solutions.

▶ C513AO

8-bit microcontroller

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Features:

- Enhanced 8-bit C500 CPU - fully software/toolset compatible to standard 80C51/80C52 microcontrollers
- 750ns instruction cycle time at 16MHz oscillator frequency
- 256 byte on-chip RAM, 256 byte on-chip extended RAM (XRAM)
- Up to 16K byte On-chip ROM/OTP. ROM protection available
- Supports external address range of up to 64K byte of program and data memory
- Seven interrupt vectors with two selectable priority levels
- Three 16-bit timers/counters
- Enhanced fail safe mechanisms with programmable watchdog timer and oscillator watchdog
- Full duplex serial interface (USART)
- Synchronous Serial Channel (SSC) - SPI Compatible, can also be used as a second USART
- EMC optimised
- Fast Power On Reset
- Power Saving Modes: Slow down mode, Idle mode, external interrupt wakeup capability
- Available in P-LCC-44 package
- On-chip Emulation Support logic (Enhanced Hooks Emulation Technology (TM))

Typelist (for details see [Parameterlist](#))

Product Type	Attachment	Description	Order Code
SAB-C513AO-LN	Datasheet	8-Bit CMOS microcontroller ROMless, 16MHz, 0/70 degC ambient temperature	Q67121-C2171
SAF-C513AO-LN	Datasheet	8-Bit CMOS microcontroller ROM-less, 16MHz, -40/85 degC ambient temperature	Q67121-C2251
SAB-C513AO-2EN	Datasheet	8-Bit CMOS microcontroller with 16-Kbytes OTP (EPROM), 16MHz, 0/70 degC ambient temperature	Q67121-C2162
SAF-C513AO-2EN	Datasheet	8-Bit CMOS microcontroller with 16-Kbytes OTP (EPROM), 16MHz, -40/85 degC ambient temperature	Q67121-C2158
SAB-C513AO-2RN	Datasheet	8-Bit CMOS microcontroller with 16-Kbytes mask-programmable ROM, 16MHz, 0/70 degC ambient temperature	Q67120-Dxxxx
SAF-C513AO-2RN	Datasheet	8-Bit CMOS microcontroller with 16-Kbytes mask-programmable ROM, 16MHz, -40/85 degC ambient temperature	Q67120-Dxxxx

Additional Documentation and Information:

User's Manual

Description	Date/State	Size
C513AO Users Manual (m513ao.pdf)	05.99 OK	1.23 MB

Product Family Overview

Description	Date/State	Size
C513AO - Product Overview (p513.pdf)	05.99 OK	27 kB

Application Notes

Description	Date/State	Size
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Training		
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