



C504

Your Best Choice for AC/DC Motor Control

The C504 extends the midrange of the C500 family of 8-Bit-microcontrollers.

Its enhanced functionality and performance as well as a re-programmable version provides highest integration to the customer at the best overall system cost.

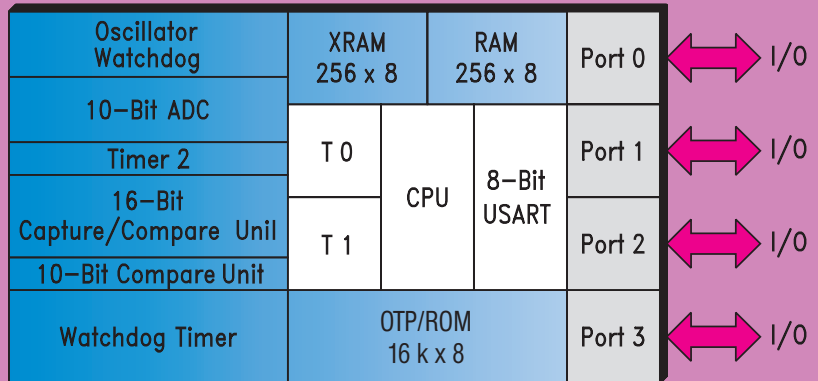
The powerful 6-Channel Capture/Compare Unit allows to use the C504 in dedicated AC/DC Motor Control Applications. Noise generation, RFI behaviour and power consumption is minimized by 10-Bit/20 KHz PWM Signals and a programmable deadtime. An external trap signal for quick output switch-off provides a high level of system security.

- Enhanced 8 Bit C500-CPU – Fully Software/Toolset Compatible to Standard 80C51/80C52 Microcontrollers
- 300 ns Instruction Cycle Time at 40 MHz Clock Frequency
- 12 Interrupt Vectors with 2 Priority Levels selectable
- 16K Byte On-Chip ROM/OTP. ROM protection available
- 256 Byte On-Chip Internal RAM (IRAM)
- 256 Byte On-Chip Extended RAM (XRAM)
- Supports external Address Range up to 64K Byte Program and Data Memory
- Three 16-bit Timer/Counters
- 3/6 Channel 16-Bit Capture/Compare Unit dedicated for AC/DC Motor Control Applications
- 1 Channel 10-Bit Compare Unit
- 8-Channel 10-Bit A/D Converter. A/D Converter Inputs can be used as Digital Input/Output
- Full Duplex Serial Interface with Asynchronous and Synchronous Modes and Programmable Baudrate Generator
- 32 Multifunctional Input/Output Pins
- Extended Power Saving Modes with Wake-up from Power-Down via External Interrupt.
- Enhanced Fail Safe Mechanisms with Programmable Watchdog Timer and Oscillator Watchdog
- Fast Power-On Reset
- P-MQFP-44 – Pin-Compatible to C501, and C511/C513-Family
- Temperature ranges:

Standard	0°C to 70°C
Extended	-40°C to +85°C
	-40°C to +125°C (maximum 24 MHz)

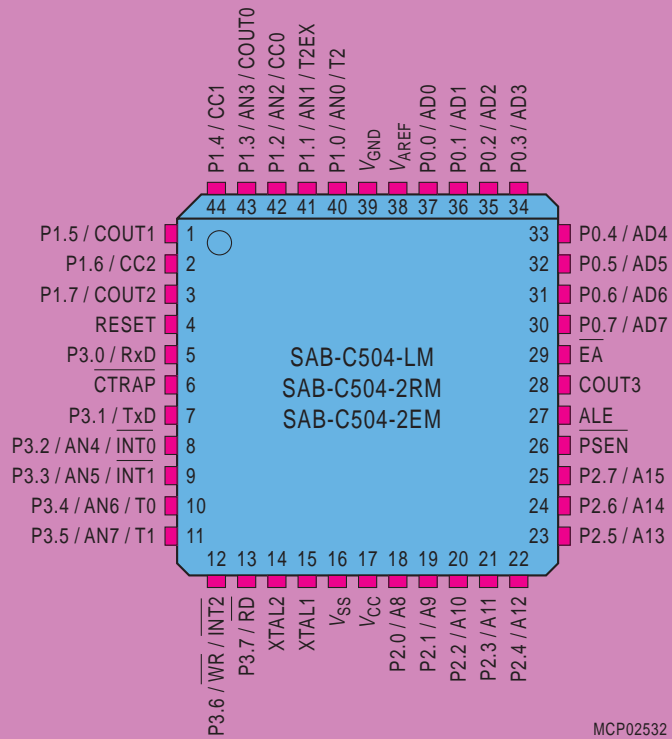
Starter Kits are also available and can be ordered by referencing the following number: B158-H7007-X-X-7600

C504 Block Diagram



MCA02503

C504 Pin Configuration



MCP02532