



### C508 Your Solution for Flexible Motor Control Applications

The C508 enhances the C500 family with a new 8-bit microcontroller with advanced drive control capabilities. The C508 is a performance upgrade to the well-known microcontroller C504. The C508 is well positioned for all kinds of mid-range industrial and consumer drive applications.

#### ▶ C508

8-bit microcontroller

#### [Related Solutions/Applications](#)

#### Features:

- Enhanced 8-bit C500 CPU - Fully software/tool set compatible to standard 80C51/80C52 microcontrollers
- Oscillator with fixed PLL (factor x2)
- 32 KByte on-chip OTP/ROM
- 256 Byte on-chip internal RAM (IRAM)
- 1 KByte on-chip extended RAM (XRAM)
- Enhanced 3/6 channel 16-bit Capture/Compare Unit dedicated for AC/DC motor control applications
- 8 channel 10-bit A/D converter
- Full duplex serial interface with asynchronous and synchronous modes (USART) with dedicated programmable baudrate generator
- 40 multifunctional input/output pins, 8 input pins, 2 ports with 10mA sinking current (total max. 100mA)
- Extended power saving modes with wake-up from power-down via external interrupts
- Enhanced fail safe mechanisms with programmable watchdog timer and oscillator watchdog
- P-MQFP-64 and P-SDIP-64 packages

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

Product Type	Attachment	Description	Order Code
SAB-C508-4EM	<a href="#">Datasheet</a>	32-KByte OTP, 0/70 degC	Q67121-C2135
SAF-C508-4EM	<a href="#">Datasheet</a>	32-KBytes OTP, -40/85 degC	Q67121-C2189
SAF-C508-4RM	<a href="#">Datasheet</a>	32-KBytes ROM, -40/85 degC	Q67127-D1518

#### Additional Documentation and Information:

##### User's Manual

Description	Date/State	Size
C508 - Users Manual (c508_um_0501.pdf)	5.01   OK	2.61 MB

##### Application Notes

Description	Date/State	Size
<a href="#">Space Vector Modulation and Overmodulation with an 8-bit Microcontroller 2</a> (ap083601.pdf)	06.99   Rel. 01	176 kB
<a href="#">Generating sinusoidal 3-Phase-Currents for Induction Machines with the C504/C508</a> (ap082211.pdf)	10.99   Rel. 11	635 kB

##### Errata Sheet

Description	Date/State	Size
<a href="#">C508-4E ES-AA, AA</a> (c508-4e_aa_18.pdf)	07.01   Rel. 1.8	28.4 kB
<a href="#">C508-4R ES-AA,AA</a> (C508_4R_erratasheet_1.3.pdf)	06.01   Rel.1.3	24.8 kB

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