


PRODUCTS
C505C Microcontroller with Complete CAN Capability

The C505C enhances the C500 family of 8-bit Microcontrollers by a new member which provides full CAN version 2.0 B integrated on-chip. The C505C meets the current requirements for increasingly small controllers with high performance, optimized EMC behavior and fast communication between decentralized sensors, actuators and the host. The device provides 16 Kbyte of ROM, 512 Bytes of RAM, CAN version 2.0 B, an asynchronous/synchronous serial interface and a highly accurate 8-bit ADC with a 6.6 & s conversion time integrated on the chip. A 300 ns instruction execution time at 20 MHz together with eight 16-bit data pointers ensures maximum performance even during external data fetches. Typical applications for the C505C are networked industrial control and car body such as intelligent sensors.

▶ C505x -- C505

8-bit Microcontroller with Complete CAN Capability

Related Solutions/Applications
Features:

- 16/32 kB ROM/ROMLESS or 32kB OTP
- 1 kB On.Chip XRAM
- 256B RAM
- CPU clock speed 20 MHz
- 8-Bit USART
- 3x 16-Bit Timer
- 12 Interrupt vectors with 4 levels
- Full CAN (2.0B active)
- 8 Channel 10-bit ADC (C505(C)A)
- Enhanced Fail Safe Mechanism
- 5V
- 44 Pin MQFP Package
- Full Automotive Temperature Range: -40°C to +125°C
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Typelist (for details see [Parameterlist](#))

| Product Type | Attachment | Description | Order Code |
|--------------------------|---------------------------|--|---------------|
| C505C | Datasheet | General Description: The C505C enhances the C500 family of 8-bit Microcontrollers by a new member which provides full CAN version 2.0 B integrated on-chip. The C505C meets the current requirements for increasingly small controllers with high performance, | |
| C505A ROM Types | N/A | - | |
| SAB-C505A-4RM | N/A | 8-Bit CMOS microcontroller with mask-programmable ROM (20MHz) | Q 67127-D* |
| SAK-C505A-4RM | N/A | 8-Bit CMOS microcontroller with mask-programmable ROM (20MHz) | Q 67127-D* |
| C505CA ROM/ROMless Types | N/A | - | |
| SAB-C505CA-LM | N/A | 8-Bit CMOS microcontroller for external memory, with CAN (20MHz) | Q 67127-C2279 |
| SAF-C505CA-LM | N/A | 8-Bit CMOS microcontroller for external memory, with CAN (20MHz) | Q 67127-C2277 |
| SAK-C505CA-LM | N/A | 8-Bit CMOS microcontroller for external memory, with CAN (16MHz) | Q 67127-C2278 |
| SAB-C505CA-2RM | N/A | 8-Bit CMOS microcontroller with mask-programmable ROM, with CAN (20MHz) | Q 67127-D* |
| SAK-C505CA-2RM | N/A | 8-Bit CMOS microcontroller with mask-programmable ROM, with CAN (20MHz) | Q 67127-D* |
| SAB-C505CA-4RM | N/A | 8-Bit CMOS microcontroller with mask-programmable ROM, with CAN (20MHz) | Q 67127-D* |
| SAF-C505CA-4RM | N/A | 8-Bit CMOS microcontroller with mask-programmable ROM, with CAN (20MHz) | Q 67127-D* |
| SAK-C505CA-4RM | N/A | 8-Bit CMOS microcontroller with mask-programmable ROM, with CAN (16MHz) | Q 67127-D* |

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|-----------------|-----|---|---------------|
| SAA-C505CA-4RC | N/A | High temperature 8-Bit CMOS microcontroller (T=150°C) with mask-programmable ROM, bare die, with CAN, (20 MHz) | |
| C505x OTP Types | N/A | - | |
| SAB-C505A-4EM | N/A | 8-Bit CMOS microcontroller with OTP memory (20MHz) | Q 67127-C2060 |
| SAF-C505A-4EM | N/A | 8-Bit CMOS microcontroller with OTP memory (20MHz) | Q 67121-C2061 |
| SAB-C505CA-4EM | N/A | 8-Bit CMOS microcontroller with OTP memory, with CAN (20MHz) | Q 67127-C1082 |
| SAF-C505CA-4EM | N/A | 8-Bit CMOS microcontroller with OTP memory, with CAN (20MHz) | Q 67127-C2058 |
| SAK-C505CA-4EM | N/A | 8-Bit CMOS microcontroller with OTP memory, with CAN (16MHz) | Q 67127C-2059 |

Additional Documentation and Information:

| Datasheet | | |
|--|------------------|---------|
| Description | Date/State | Size |
| C505/C505C/C505A/C505CA (C505DB.pdf) | 09.2001 | 1.2 MB |
| C505CA - 4RC (C505CA-4RC.pdf) | 05.05.2001 | 322 kB |
| C505L - Datasheet (c505l_ds_0699.pdf) | 06.99 OK | 450 kB |
| User's Manual | | |
| Description | Date/State | Size |
| C505C Users Manual (m505c.pdf) | 08.97 OK | 1.86 MB |
| C505A , C505CA Users Manual (m505ca.pdf) | 09.97 OK | 640 kB |
| Product Brief | | |
| Description | Date/State | Size |
| C505L - Product Overview (p505l.pdf) | 11.98 | 30 kB |
| Product Brief C505(C)A (ProdBrief505CA.PDF) | 02/01 | 2.16 MB |
| Product Family Overview | | |
| Description | Date/State | Size |
| C505 overview (C505roadmapoffi.pdf) | 12.00 | 482 kB |
| Application Notes | | |
| Description | Date/State | Size |
| LCD Control Using the C505L 1 (ap082902.pdf) | 05.99 Rel.02 | 29 kB |
| LCD Control Using the C505L 2 (ap082902.exe) | 05.99 Rel.02 | 114 kB |
| C505CA-4E BA 15 (c505ca-4e_ba_15.pdf) | 08.2001 | 28.6 kB |
| Training | | |
| Description | Date/State | Size |
| HOT505CA_1.pdf (HOT505CA_1.pdf) | 03.03.2001 | 1.44 MB |
| HOT Training for the Infineon Microcontrollers (hot.pdf) | 06-2000 | 37 kB |
| Errata Sheet | | |
| Description | Date/State | Size |
| C505,C505C AB Step (aa11_2.pdf) | 07.98 Rel. 1.0 | 9 Byte |
| C505(C)A-4R BA (ES-BA) Step (BA15.pdf) | 07/00 | 26.4 kB |

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|---|------------------|---------|
| C515C-L/RM-AA (c515c-l-8r_aa_13.pdf) | 14.08.2001 | 29.5 kB |
| C505CA-2RM,4RM,LM, 4RC (BB101.pdf) | 04.2001 | 23.3 kB |
| C505(C)A-4EM (c505ca-4e_ba_15.pdf) | 04.07.2001 | 32 kB |
| C505L ES-BB (esbb.pdf) | 12.98 Rel. 1.0 | 11 Byte |
| C505L-4EM CA-Step (c505l-4e_ca_14.pdf) | 07/2001 | 29.8 kB |