

T89C51CC02

LOW PIN COUNT 8-BIT FLASH MCU WITH CAN

The T89C51CC02 is a cost-effective CAN Flash MCU for automotive and industrial applications.



Key Features

- 80C51 X2 core architecture
- Full CAN controller (2.0A/2.0B)
- Four programmable message objects
- 16-Kbyte User Flash Memory
- 2-Kbyte Boot Flash Memory
- 2-Kbyte EEPROM
- ISP (In-system Programming via CAN and UART)
- 8-channel 10-bit ADC
- Low pin count packages

Applications

- Embedded Industrial Control
- Building Automation
- Automotive/Transportation
- Remote Control
- Robotic
- Medical
- Agriculture

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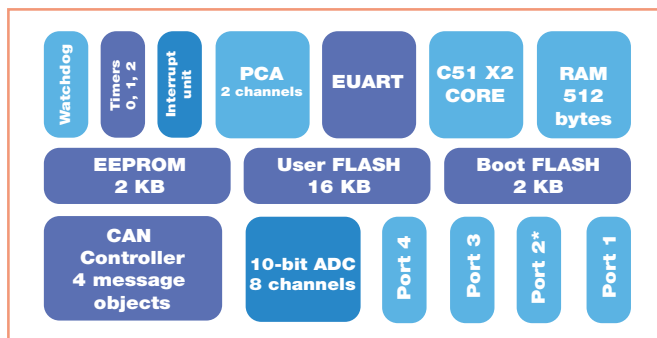
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Part of the CANary™ Family of microcontrollers for CAN multiplexing, the T89C51CC02 is a fully-software-compatible device, assembled in low pin count packages.

The on-chip CAN controller features 4 independent fully programmable message objects and is compliant with CAN standard rev 2.0A and 2.0B. Advanced peripherals such as 2-channel 16-bit PCA and 8-channel 10-bit A/D converter complete the enhanced 80C51 feature set. With 16-Kbyte Flash program memory, 2-Kbyte Flash boot memory and 2-Kbyte EEPROM, the T89C51CC02 offers a flexible In-system Programming (ISP) capability through UART or CAN bus.



* 2-bit wide in 28-pin package

Product features

- 80C51 X2 core architecture:
 - 512 bytes of on-chip RAM
 - 16 Kbytes of on-chip Flash Memory
 - 2 Kbytes of on-chip Flash for Bootloader
 - 2 Kbytes of on-chip EEPROM
 - 14-source 4-level interrupt
 - Three 16-bit timer/counter
 - Full duplex UART 80C51 compatible
 - Maximum crystal frequency 40 MHz, 20 MHz in X2 mode
 - Four ports: 2 x 8 bits and 2 x 2 bits
 - Two-channel 16-bit PCA
 - Double Data Pointer
 - 21-bit watchdog timer (including 7 programmable bits)
 - 10-bit ADC (Analog to Digital Converter) with 8 multiplexed inputs
- Full CAN controller :
 - Fully compliant with CAN standard rev 2.0 A and 2.0 B (programmable on the fly)
 - 4 independent message objects:
 - All features programmable on the fly
 - Individual tag and mask filters up to 29-bit identifier
 - Up to 32-byte data reception buffer length
 - Supports:
 - Time Triggered Communication
 - Autobaud and Listening mode
 - Programmable automatic reply mode
 - 1 Mbit/s maximum transfer rate at 8 MHz
 - Readable error counters
 - Time Stamping and Network synchronization
 - Data, Remote, Error and overload frame handling.

Available versions

Supply voltage: 5V \pm 10%
3V -10, +20% (Metal option*)

Maximum clock frequency:
40 MHz @ 5V
X2 mode: 20 MHz @ 5V (40MHz equivalent)
24 MHz @ 3V*
X2 mode: 12 MHz @ 3V*(24MHz equivalent)

*check for availability

Temperature range: -40° C to +85° C
(Industrial)

Packages: SOIC24*, SOIC28,
PLCC28, TSSOP28*



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Development tools

All T89C51CC01 tools are usable with the T89C51CC02.

Compilers from Keil, Raisonance, Tasking, IAR.

Simulators from Keil.

In-circuit emulators from Hitex, Signum, Ceibo.

Flash device programmers from Elneq, ICE

Technology, Advantech, BP Microsystems, Data I/O, Hi-Lo etc. A complete list and details are available on our web site.

In-system Programming from Equinox (software and hardware), from Atmel: FLIP software.

Demo-kit from Atmel.