SIEMENS

C501
Enter the world of Siemens
8-Bit microcontrollers
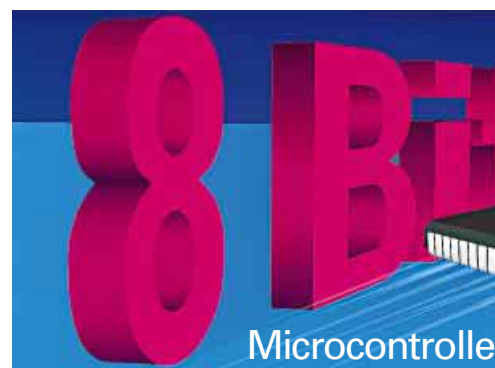
Microcontrolle

The C501 is the perfect replacement to the 80C52 standard microcontroller.

It is available as a ROMLess, ROM and OTP Version.

This low cost microcontroller is maintaining all architectural and operational characteristics of the 80C52 and can be found in all segments like automotive, industrial, consumer, telecom and datacom segments.
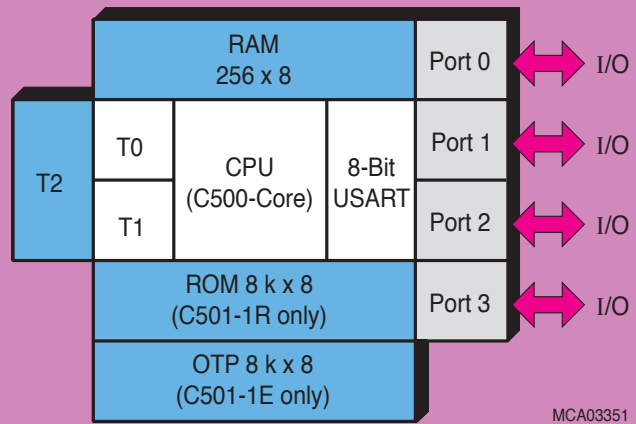
The Siemens C500 family of 8-Bit microcontrollers is based on the C500 Core.

This core shows a higher performance than the standard 8051 core while all derivatives are fully compatible in architecture and software.
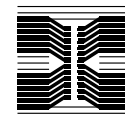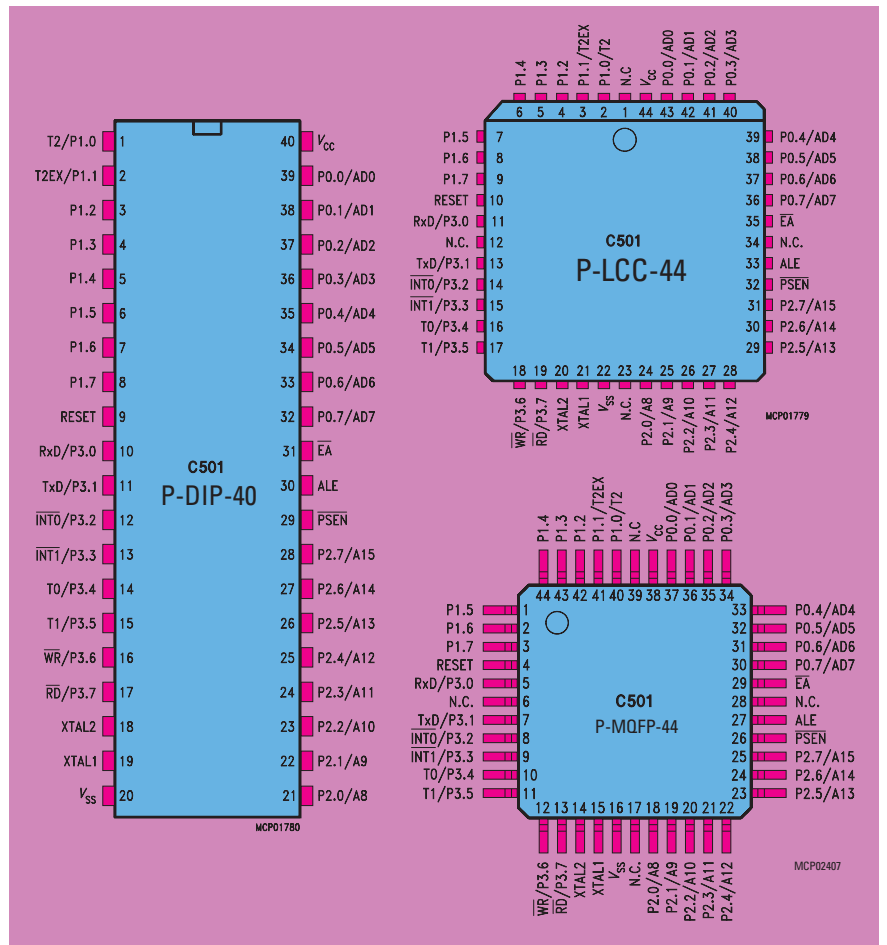
- Enhanced 8-Bit C500-CPU – Fully Software/Toolset Compatible to Standard 80C51/80C52 Microcontrollers
- 300 ns Instruction Cycle Time at 40 MHz oscillator frequency
- Six Interrupt Vectors with two Priority Levels
- 8 KByte On-Chip ROM (C501-1R only). ROM-Protection available.
- 8k On-Chip OTP (C501-1E only). Quick pulse programming algorithm 2-Level program memory lock
- Siemens approved Programmer vendors:
  ertec
  SMS
  HL_LO Systems
  Data I/0
  System General
  BP Microsystems

- 256 Byte On-Chip Internal RAM
- Supports external Address Range up to 64 Kbyte Program and Data Memory.
- Full Duplex Serial Interface with Asynchronous and Synchronous Modes.
- Three 16-Bit Timer/Counters (Timer 2 with UP/Down-Count Feature).
- Power Saving Modes
- 32 Multifunctional Input/Output Pins
- P-DIP-40, P-LCC-44 and P-MQFP-44 packages
- P-LCC-44 compatible to C502 and C511/C513-Family
- P-MQFP-44 compatible to C504
- Temperature ranges:
  Standard 0°C to 70°C
  Extended -40°C to $+85^{\circ}$C

C501
Block Diagram

MCA03351

C501
Pin Configuration