

## C501

### Enter the world of Siemens 8-Bit microcontrollers

**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.**

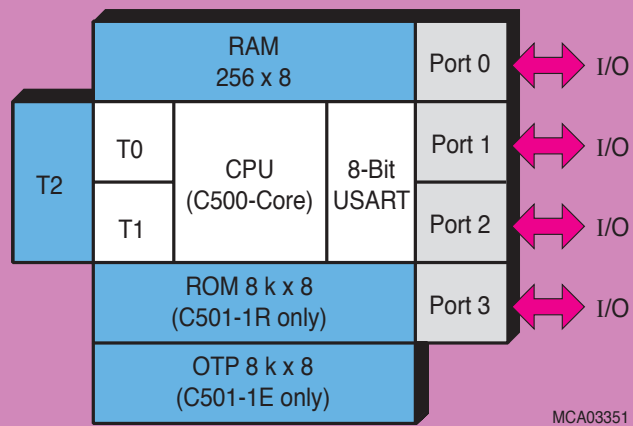
**The Siemens C500 family of 8-Bit microcontrollers is based on the C500 Core.**

**This core shows a higher performance than the standard 8051 core while all derivatives are fully compatible in architecture and software.**

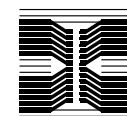
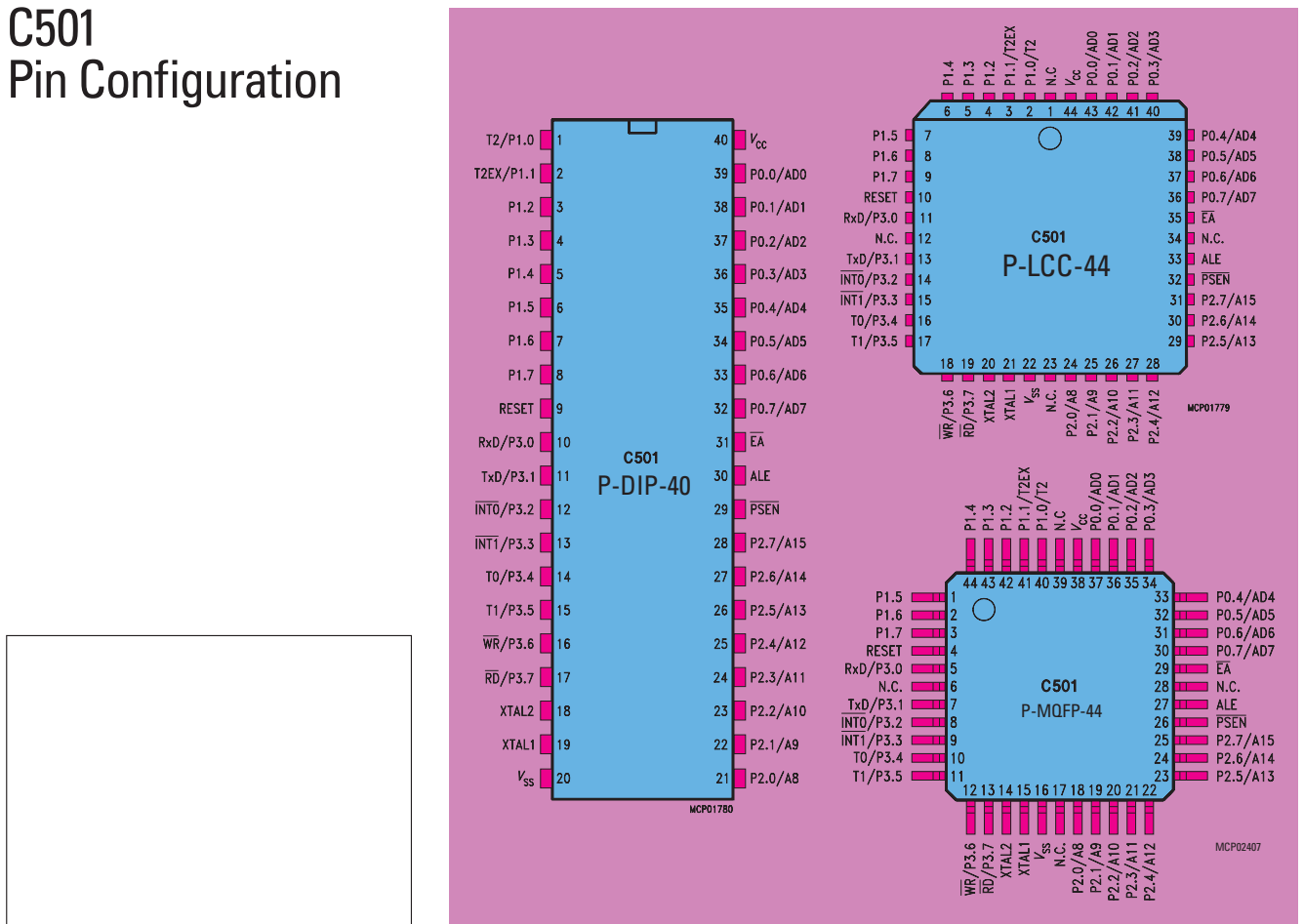


- Enhanced 8-Bit C500-CPU – Fully Software/Toolset Compatible to Standard 80C51/80C52 Microcontrollers
- 300 ns Instruction Cycle Time at 40 MHz oscillator frequency
- Six Interrupt Vectors with two Priority Levels
- 8 KByte On-Chip ROM (C501-1R only). ROM-Protection available.
- 8k On-Chip OTP (C501-1E only). Quick pulse programming algorithm
- 2-Level program memory lock
- Siemens approved Programmer vendors:
  - ertec
  - SMS
  - HL\_LO Systems
  - Data I/O
  - 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°C

# C501 Block Diagram



# C501 Pin Configuration



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