



MOTOROLA

Product Preview

8-BIT HCMOS MICROCOMPUTER UNITS

The MC68HC04P2 and MC68HC04P3 HCMOS microcomputer units (MCUs) are members of the M68HC04 Family of very low-cost single-chip microcomputers. These 8-bit microcomputers contain a CPU, on-chip CLOCK, ROM, RAM, I/O, and TIMER. They are designed for the user who needs an economical microcomputer with the proven capabilities of the M6800-based instruction set. The following are some of the hardware and software highlights of the MC68HC04P2 and MC68HC04P3 microcomputers.

HARDWARE FEATURES

- Low Power HCMOS
- Power Saving Stop and Wait Modes
- 8-Bit Architecture
- MC68HC04P2 and MC68HC04P3 are Pin Compatible With the MC6804P2
- RAM: MC68HC04P2 — 32 Bytes
MC68HC04P3 — 128 Bytes
- Memory Mapped I/O
- User ROM: MC68HC04P2 — 1024 Bytes
MC68HC04P3 — 2048 Bytes
- 72 Bytes of ROM for Look-Up Tables
- 20 TTL/CMOS Compatible Bidirectional I/O Lines (Eight Lines are LED Compatible)
- On-Chip Clock Generator
- Self-Check Mode
- Master Reset
- Complete Development System Support on EXORciser
- Software Programmable Timer Prescaler
- 5 Volt Single Supply

SOFTWARE FEATURES

- Similar to M6800 Family
- Byte Efficient Instruction Set
- Easy to Program
- True Bit Manipulation
- Bit Test and Branch Instruction
- Versatile Interrupt Handling
- Versatile Indirect Registers
- Conditional Branches
- Single Instruction Memory Examine/Change
- Timer Pin is Software Programmable as Clock Input or Timer Input
- 10 Powerful Addressing Modes

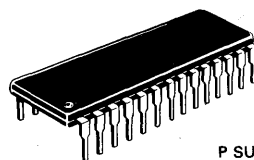
USER SELECTABLE OPTIONS

- 20 Bidirectional I/O Lines with TTL or TTL/CMOS Interface Option
- Crystal or Low-Cost Resistor Oscillator Option
- Vectored Interrupts: Timer, Software, and External
- Mask Selectable Edge- or Level-Sensitive Interrupt Pin

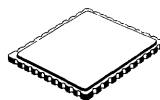
MC68HC04P2 MC68HC04P3

HCMOS
(HIGH-DENSITY CMOS
SILICON-GATE)

**8-BIT HCMOS
MICROCOMPUTERS**

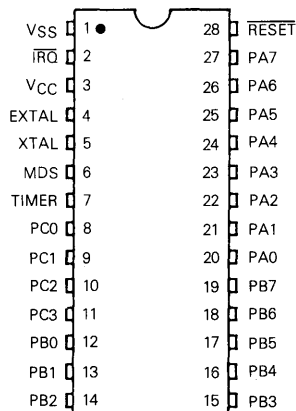


P SUFFIX
PLASTIC PACKAGE
CASE 710



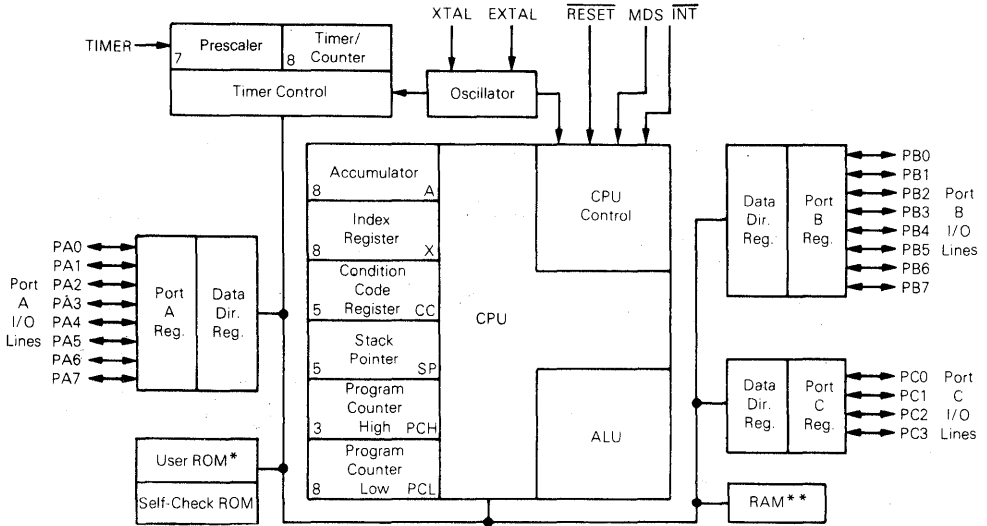
Z SUFFIX
CHIP CARRIER
CASE 761

PIN ASSIGNMENT



MC68HC04P2, MC68HC04P3

BLOCK DIAGRAM



*User ROM area: MC68HC04P2 = 1024×8 — MC68HC04P3 = 2048×8

**RAM area: MC68HC04P2 = 32×8 — MC68HC04P3 = 128×8

PROGRAMMING MODEL

