MOTOROLA

Product Preview

MCU with DTMF/melody generator

The MC68HC05F6 microcomputer unit (MCU) is a member of the MC68HC05 family. This 8-bit MCU, which contains an on-chip oscillator, CPU, RAM, ROM, I/O, timer system, Serial Peripheral Interface (SPI) and DTMF/Melody Generator (DMG), is designed specifically for telephone controller applications.

Hardware features:

- HCMOS technology
- 8-bit architecture
- Power saving Stop and Wait modes
- Fully static operation
- 2.2–6V operating supply voltage
- 288 bytes on-chip RAM and 32 bytes Stack
- 4608 bytes on-chip ROM
- 240 bytes self-check ROM
- On-chip DTMF/Melody generator
- 6 Keyboard interrupt lines
- 26 bidirectional I/O plus 4 fixed input lines
- On-chip oscillator for 3.579 MHz crystal
- Serial peripheral interface system.
- 16-bit Programmable Timer with Input Capture and Output Compare
- 4 selectable Bus Frequencies and 2 selectable Timer Frequencies
- 8 high current output pins (10mA) for LED direct drive
- 42-pin SDIL.

Software features

- Similar to MC6800
- 8 X 8 Unsigned Multiply instruction
- True bit manipulation
- Addressing mode with Index Addressing for Tables
- Efficient instruction set
- Memory mapped I/O
- Two power-saving Standby modes (Stop and Wait)
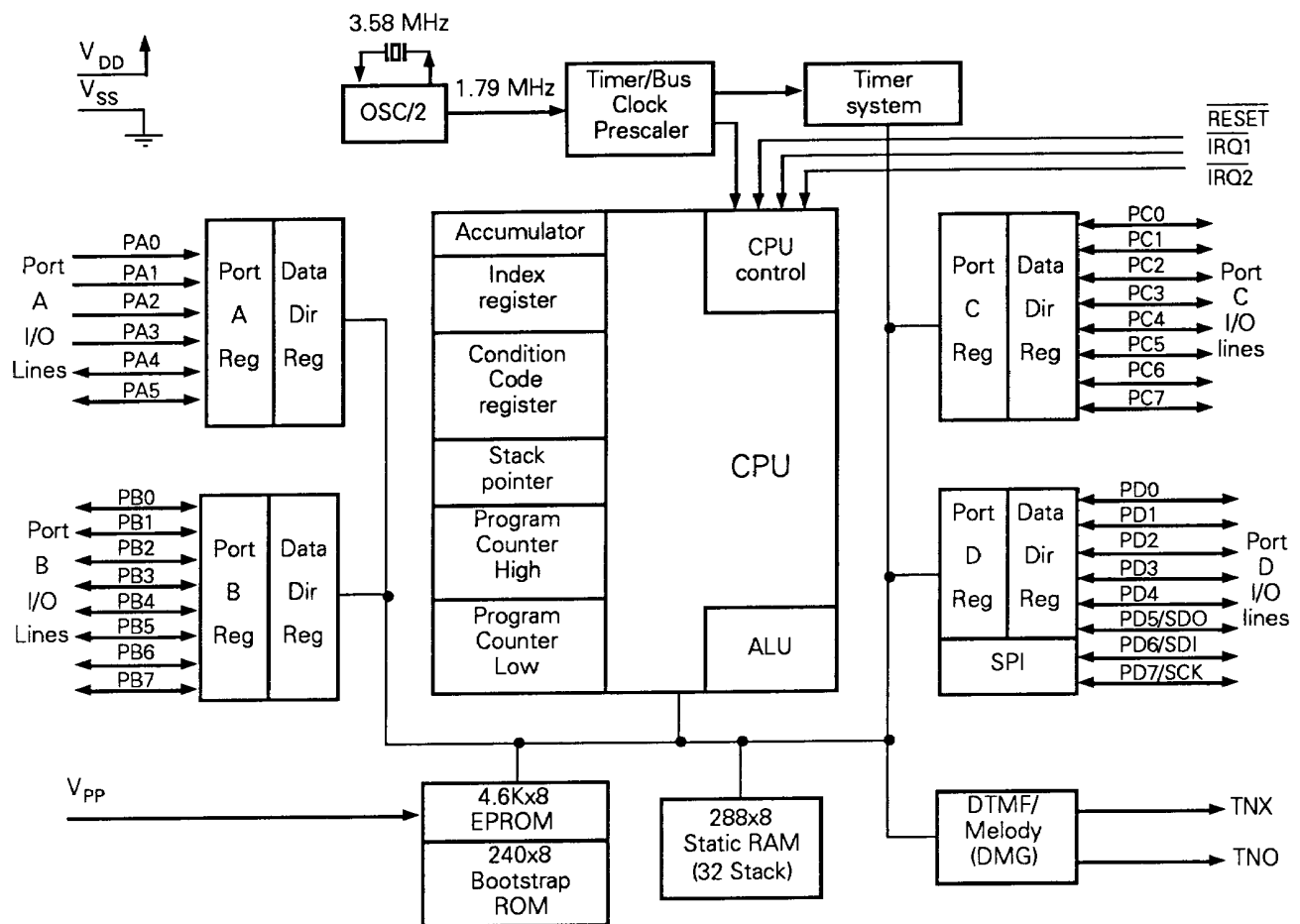- Upward software compatible with the MC146805 CMOS Family.
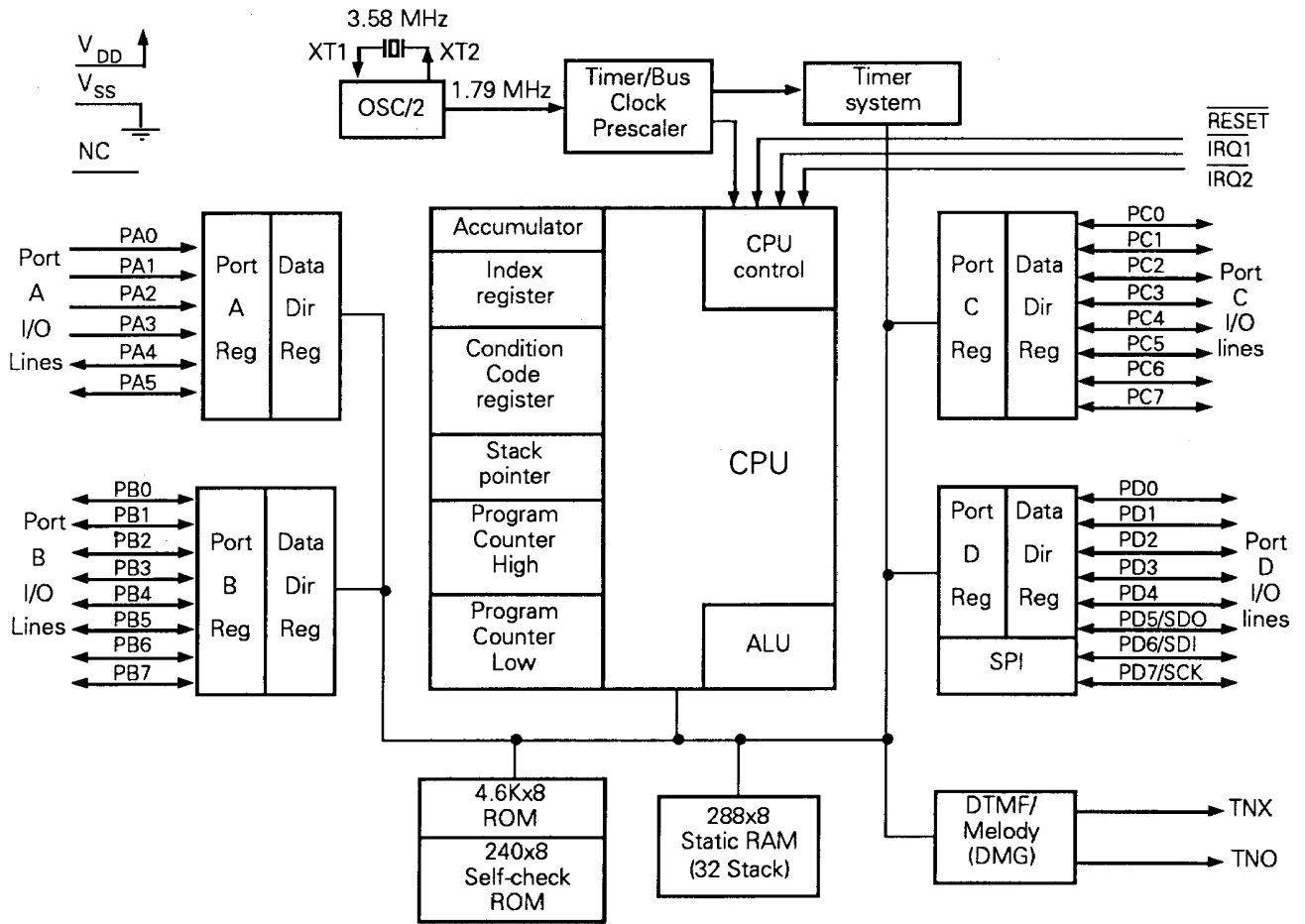
MC68HC05F6 Microcomputer Block Diagram

EPROM version MC68HC705F6

The MC68HC705F6 microcomputer unit (MCU) is similar to the MC68HC05F6 MCU device with the exception of the ultraviolet (UV) light EPROM features.

The features of the MC68HC705F6 are as follows:

- Emulation of MC68HC05F6
- 4608 bytes of user EPROM (replaces 4608 bytes of user ROM on MC68HC05F6)
- 16 bytes of user Vector EPROM (replaces 16 bytes of user Vector ROM)
- 240 bytes of Bootstrap ROM (replaces 240 bytes of self-check ROM)
- On-chip Bootstrap firmware for programming use.

MC68HC705F6 Microcomputer Block Diagram