FEATURES
Highlights

High-Performance RISC-like CPU
• Only 35 single word instructions to learn
• All single cycle instructions (200 ns) except for program branches which are two-cycle
• Operating speed:
  - DC to 20 MHz clock input
  - DC to 200 ns instruction cycle
• 2048 x 14 on-chip EPROM program memory
• 128 x 8 general purpose registers (SRAM)
• Interrupt capability
• Eight levels deep hardware stack
• Direct, indirect and relative addressing modes

Peripheral Features
• 22 I/O pins with individual direction control
• High current sink/source for direct LED drive
• One pin that can be configured as capture input, PWM output, or compare output
  - 16-bit Capture, max resolution 12.5 ns (typ)
  - 16-bit Compare, max resolution 200 ns
  - 1 to 10-bit PWM resolution. Maximum PWM frequency @ 8-bit resolution = 80 kHz
  - 10-bit resolution = 20 kHz
• 8-bit A/D converter with five input channels
  - 16 μs conversion time/channel
• TMR1: 16-bit timer/counter (time-base for capture/compare). TMR1 can be incremented during sleep via external crystal/clock (for real-time clock)
• TMR2: 8-bit timer/counter with 8-bit period register (time-base for PWM), prescaler and postscaler
• TMR0: 8-bit timer/counter with 8-bit programmable prescaler
• Synchronous Serial Port (SSP) with SPI and I$^2$C$^\text{TM}$ interface

Special Microcontroller Features
• Power-on Reset (POR)
• Power-up Timer (PWRT) and Oscillator Start-up Timer (OST)
• Brown-out protection

I$^2$C is a trademark of Philips Corporation.

PACKAGING TYPES

PIC16C72

Program Memory: 2048
Data Memory: 128
I/O: 22
A/D Channel: 5
PWM: Yes

High-Power EPROM-Based 8-Bit Microcontroller Product Brief

PIC16C72

28-Pin EPROM-Based 8-Bit Microcontroller Product Brief

PACKAGING TYPES

PDIP, SOIC, Windowed CERDIP

PIC16C72

SSOP

PIC16C72

• Watchdog Timer (WDT) with its own on-chip RC oscillator for reliable operation
• Programmable code-protection
• Power saving SLEEP mode
• Selectable oscillator options
• Serial in-system programming (via two pins)

CMOS Technology
• Low-power, high-speed CMOS EPROM technology
• Fully static design
• Wide-operating voltage range (3.0 V to 6.0 V)
• Commercial, Industrial and Automotive Temperature Ranges
• Low-power consumption
  - <2.0 mA @ 5.0 V, 4 MHz
  - 15 μA typical @ 3.0 V, 32 kHz
  - <1.0 μA typical standby current @ 3.0 V