

PIC Microcontrollers

Order code	Manufacturer code	Description
73-2652	n/a	PIC16F872-I/SP

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The enclosed information is believed to be correct, Information may change 'without notice' due to product improvement. Users should ensure that the product is suitable for their use. E. & O. E.	Revision A 04/07/2003



PIC16F872

28-Pin, 8-Bit CMOS FLASH Microcontroller with 10-bit A/D

High Performance RISC CPU:

- Only 35 single word instructions to learn
- All single cycle instructions except for program branches, which are two-cycle
- Operating speed: DC - 20 MHz clock input
DC - 200 ns instruction cycle
- 2K x 14 words of FLASH Program Memory
- 128 bytes of Data Memory (RAM)
- 64 bytes of EEPROM Data Memory
- Pinout compatible to the PIC16C72A
- Interrupt capability (up to 10 sources)
- Eight level deep hardware stack
- Direct, Indirect and Relative Addressing modes

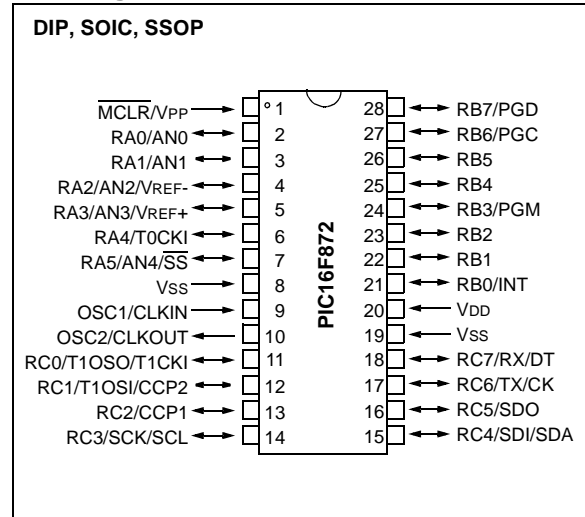
Peripheral Features:

- High Sink/Source Current: 25 mA
- Timer0: 8-bit timer/counter with 8-bit prescaler
- Timer1: 16-bit timer/counter with prescaler, can be incremented during SLEEP via external crystal/clock
- Timer2: 8-bit timer/counter with 8-bit period register, prescaler and postscaler
- One Capture, Compare, PWM module
 - Capture is 16-bit, max. resolution is 12.5 ns
 - Compare is 16-bit, max. resolution is 200 ns
 - PWM max. resolution is 10-bit
- 10-bit, 5-channel Analog-to-Digital converter (A/D)
- Synchronous Serial Port (SSP) with SPI™ (Master mode) and I²C™ (Master/Slave)
- Brown-out detection circuitry for Brown-out Reset (BOR)

CMOS Technology:

- Low power, high speed CMOS FLASH/EEPROM technology
- Wide operating voltage range: 2.0V to 5.5V
- Fully static design
- Commercial, Industrial and Extended temperature ranges
- Low power consumption:
 - < 2 mA typical @ 5V, 4 MHz
 - 20 µA typical @ 3V, 32 kHz
 - < 1 µA typical standby current

Pin Diagram



Special Microcontroller Features:

- Power-on Reset (POR), Power-up Timer (PWRT) and Oscillator Start-up Timer (OST)
- Watchdog Timer (WDT) with its own on-chip RC oscillator for reliable operation
- Programmable code protection
- Power saving SLEEP mode
- Selectable oscillator options
- In-Circuit Serial Programming™ (ICSP™) via two pins
- Single 5V In-Circuit Serial Programming capability
- In-Circuit Debugging via two pins
- Processor read/write access to program memory