

## PIC Microcontrollers

Order code	Manufacturer code	Description
73-2204	n/a	PIC12C671-04/P MICROCONTROLLER
73-2206	n/a	PIC12C671JW MICROCONTROLLER
73-2208	n/a	PIC12C672-04/P MICRO ***SEE 73-3374***
73-2210	n/a	PIC12C672JW MICROCONTROLLER

PIC Microcontrollers	Page 1 of 4
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

## PIC12C67X 8Bit CMOS Microcontrollers

A new range of 8 pin DIP or SOIC OTP microcontrollers suited to the user seeking a general purpose device without the added cost of unnecessary peripherals and the associated large pin counts. They have between 512 and 2048 words of program memory and between 25 and 128 bytes of user RAM.

- 6 I/O pins with on chip oscillator
- 33/35 word instructions
- 1µ sec instruction cycle (@ 4MHz)
- 8-bit timer/counter with prescaler, watchdog timer
- 12C6XX offers an 8-bit ADC
- All 12CXXX parts allow In-Circuit Serial Programming.

Device	Max Freq. MHz	PROM bytes	RAM memory bytes	I/O lines	Other features	Package
PIC12C671-04/P	4MHz	1024b OTP	128	6	8 bit ADC	8 DIL
PIC12C671JW	10MHz	1024b EPROM	128	6	8 bit ADC	8 DIL
PIC12C672-04/P	4MHz	2048b OTP	128	6	8 bit ADC	8 DIL
PIC12C672JW	10MHZ	2048b EPROM	128	6	8 bit ADC	8 DIL

\* Full Technical Information for the PIC range is available on the Microchip CD-ROM \*

## 8-Pin, 8-Bit CMOS Microcontroller with A/D Converter

### Devices included in this Data Sheet:

PIC12C671 and PIC12C672 are 8-bit microcontrollers with 8-bit A/D Converter packaged in 8-lead packages. They are based on the 14-bit PIC16/17 architecture.

### High-Performance RISC CPU:

- Only 35 single word instructions to learn
- All instructions are single cycle (1  $\mu$ s) except for program branches which are two-cycle
- Operating speed: DC - 10 MHz clock input  
DC - 1  $\mu$ s instruction cycle

Device	EPROM	RAM
PIC12C671	1024 x 14	128 x 8
PIC12C672	2048 x 14	128 x 8

- 14-bit wide instructions
- 8-bit wide data path
- Interrupt capability
- Special function hardware registers
- Eight-level deep hardware stack
- Direct, indirect and relative addressing modes for data and instructions
- Internal 4 MHz oscillator with programmable calibration
- Selectable clockout
- In-circuit serial programming
- 4-channel 8-bit analog-to-digital converter

### Peripheral Features:

- 8-bit real time clock/counter (TMR0) with 8-bit programmable prescaler
- Power-On Reset (POR)
- Power-up Timer (PWRT) and Oscillator Start-up Timer (OSC)
- Watchdog Timer (WDT) with its own on-chip RC oscillator for reliable operation
- Programmable code-protection
- Power saving SLEEP mode
- Interrupt on pin change (GP0, GP1, GP3)
- Internal pull-ups on I/O pins (GP0, GP1, GP3)

### Selectable oscillator options:

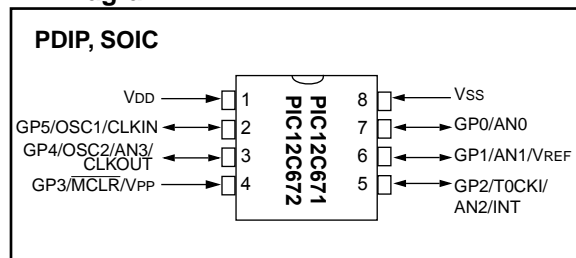
- INTRC: Precision internal 4 MHz oscillator
- EXTRC: External low-cost RC oscillator
- XT: Standard crystal/resonator
- HS: High speed crystal/resonator
- LP: Power saving, low frequency crystal

### Internal pull-up on MCLR pin

### CMOS Technology:

- Low power, high speed CMOS EPROM technology
- Fully static design
- Wide operating voltage range:
  - Commercial: 2.5V to 5.5V
  - Industrial: 2.5V to 5.5V
  - Extended: 4.5V to 5.5V
- Low power consumption
  - < 2 mA @ 5V, 4 MHz
  - 15  $\mu$ A typical @ 3V, 32 KHz
  - < 1  $\mu$ A typical standby current

### Pin Diagram



## PIC12C67X PRODUCT IDENTIFICATION SYSTEM

PART NO.	-XX	X	/XX	XXX			Examples
					<b>Pattern:</b>	Special Requirements	a) PIC12C671-04/P Commercial Temp., PDIP Package, 4 MHz, normal VDD limits
					<b>Package:</b>	SM = 208 mil SOIC P = 300 mil PDIP JW = 300 mil Windowed Ceramic Side Brazed	b) PIC12C671-04I/SM Industrial Temp., SOIC package, 4 MHz, normal VDD limits
					<b>Temperature Range:</b>	- = 0°C to +70°C I = -40°C to +85°C E = -40°C to +125°C	c) PIC12C671-04I/P Industrial Temp., PDIP package, 4 MHz, normal VDD limits
					<b>Frequency Range:</b>	04 = 4 MHz 10 = 10 MHz	
					<b>Device</b>	PIC12C671 PIC12C672 PIC12C671T (Tape & reel for SOIC only) PIC12C672T (Tape & reel for SOIC only) PIC12LC671 PIC12LC672 PIC12LC671T (Tape & reel for SOIC only) PIC12LC672T (Tape & reel for SOIC only)	

Please contact your local sales office for exact ordering procedures.

### Sales and Support

Products supported by a preliminary Data Sheet may possibly have an errata sheet describing minor operational differences and recommended workarounds. To determine if an errata sheet exists for a particular device, please contact one of the following:

1. Your local Microchip sales office (see below)
2. The Microchip Corporate Literature Center U.S. FAX: (602) 786-7277
3. The Microchip's Bulletin Board, via your local CompuServe number (CompuServe membership NOT required).

Please specify which device, revision of silicon and Data Sheet (include Literature #) you are using.

For latest version information and upgrade kits for Microchip Development Tools, please call 1-800-755-2345 or 1-602-786-7302.