PIC16C923

64/68-Pin 8-Bit OTP Microcontroller with LCD Drivers Product Brief

<table>
<thead>
<tr>
<th>Device</th>
<th>Program Memory</th>
<th>Data Memory</th>
<th>Pins</th>
<th>LCD Drivers</th>
<th>A/D</th>
<th>PWM</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIC16C924*</td>
<td>4K x 14</td>
<td>176 x 8</td>
<td>64/68</td>
<td>32 seg, 4 com</td>
<td>5 ch; 8 bits</td>
<td>Yes</td>
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Flexible LCD Interface
- Programmable LCD timing module
- Multiple LCD timing sources available
- Can drive LCD panel while in Sleep mode
- Static, 1/2, 1/3, 1/4 multiplex
- I/O buffers can drive 1/1 and 1/3 bias
- 16 bytes of dedicated LCD RAM
- Up to 32 segments, up to four commons

High Performance RISC CPU Features
- Operating speed:
  - DC - 8 MHz clock input
  - DC - 500 ns instruction cycle
- 4K x 14 on-chip EPROM program memory
- 176 x 8 general purpose registers (SRAM)
- 60 special function hardware registers
- Eight levels deep hardware stack
- Interrupt capability

Peripheral Features
- 25 I/O pins with individual direction control
- 25-27 input-only pins
- One pin that can be configured as capture input, PWM output, or compare output
- Capture is 16-bit, max resolution 31.25ns
- Compare is 16-bit, max resolution 500ns
- PWM resolution is 1- to 10-bit. Maximum PWM frequency at 8-bit resolution = 32 kHz, 10-bit resolution = 1 kHz
- TMR0: 8-bit timer/counter with 8-bit programmable prescaler
- TMR1: 16-bit timer/counter (time-base for capture/compare) that can be incremented during sleep
- TMR2: 8-bit timer/counter with 8-bit period register, prescaler and postscaler
- Synchronous Serial Port (SSP) with SPI and i²C

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
- 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 and Industrial Temperature Ranges
- Low-power consumption:
  - <2.0 mA typical @ 5.5 V, 4 MHz
  - 45 µA typical @ 4.0 V, 32 kHz
  - <1.0 µA typical standby current @ 4.0 V
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