



# 80C51 8-Bit Microcontroller Family

## P87C51X2BA

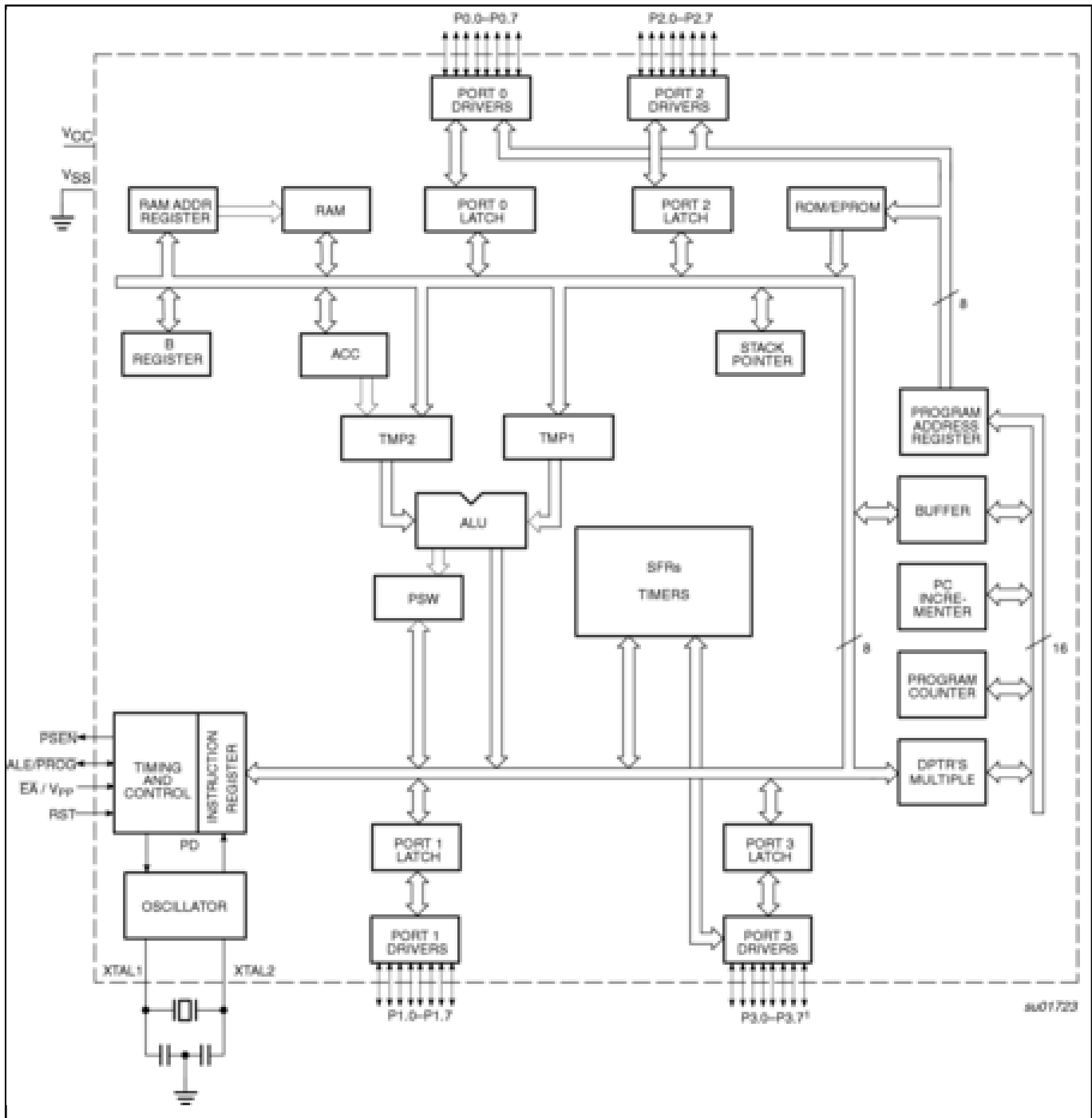
Last Updated: Mar 8, 2023

The Philips microcontrollers described in this data sheet are high-performance static 80C51 designs incorporating Philips' high-density CMOS technology with operation from 2.7 V to 5.5 V. They support both 6-clock and 12-clock operation.

The P8xC31X2/51X2 and P8xC32X2/52X2/54X2/58X2 contain 128 byte RAM and 256 byte RAM respectively, 32 I/O lines, three 16-bit counter/timers, a six-source, four-priority level nested interrupt structure, a serial I/O port for either multi-processor communications, I/O expansion or full duplex UART, and on-chip oscillator and clock circuits.

In addition, the devices are low power static designs which offer a wide range of operating frequencies down to zero. Two software selectable modes of power reduction ? idle mode and power-down mode ? are available. The idle mode freezes the CPU while allowing the RAM, timers, serial port, and interrupt system to continue functioning. The power-down mode saves the RAM contents but freezes the oscillator, causing all other chip functions to be inoperative. Since the design is static, the clock can be stopped without loss of user data. Then the execution can be resumed from the point the clock was stopped.

## Block diagram: P80C32X2BA, P80C32X2BBD, P80C32X2FA Block Diagram



View additional information for [80C51 8-Bit Microcontroller Family](#).

Note: The information on this document is subject to change without notice.

**[www.nxp.com](http://www.nxp.com)**

NXP and the NXP logo are trademarks of NXP B.V. All other product or service names are the property of their respective owners. The related technology may be protected by any or all of patents, copyrights, designs and trade secrets. All rights reserved. © 2024 NXP B.V.