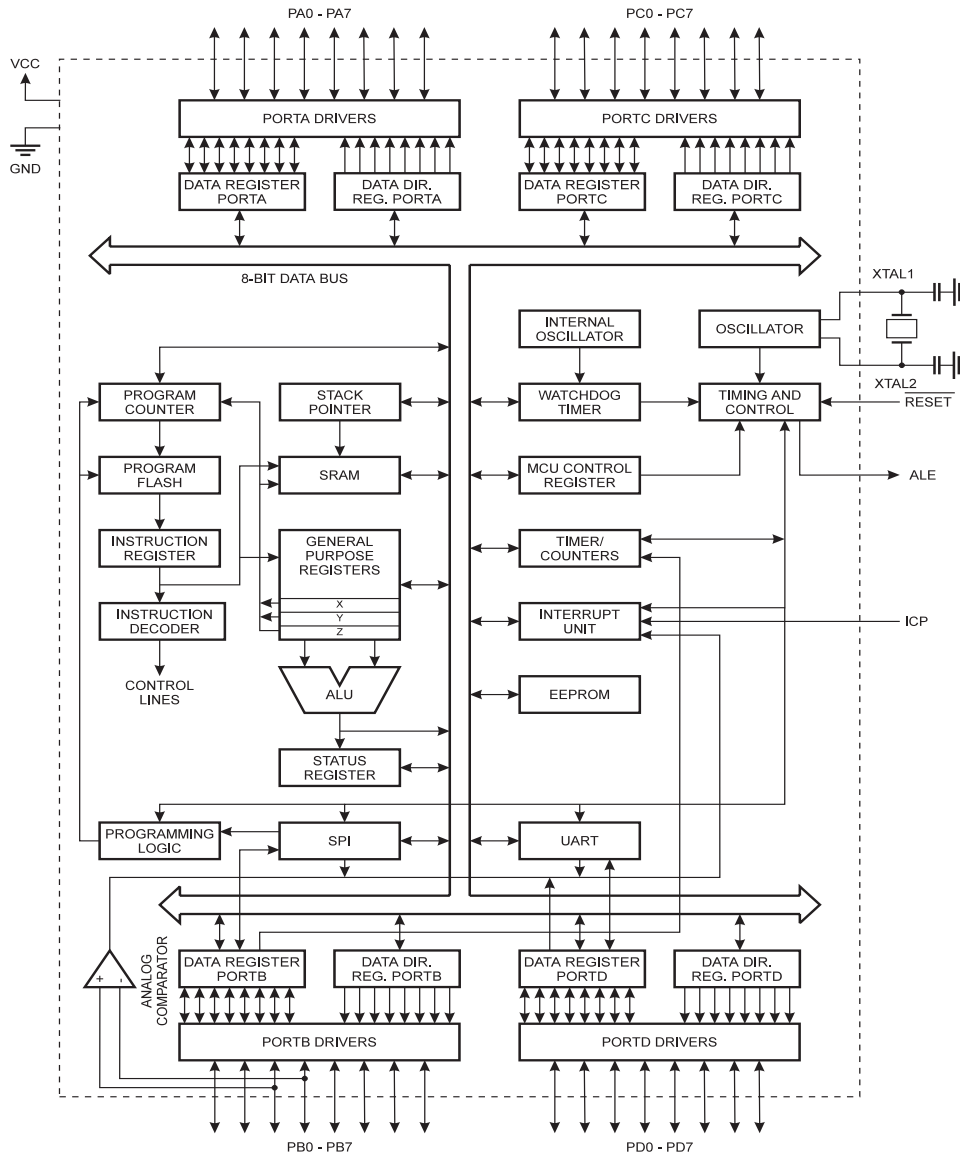


# Block Diagram

Figure 1. The AT90S4414 Block Diagram



The AT90S4414 provides the following features: 4K bytes of In-System Programmable Flash, 256 bytes EEPROM, 256 bytes SRAM, 32 general purpose I/O lines, 32 general purpose working registers, flexible timer/counters with compare modes, internal and external interrupts, a programmable serial UART, programmable Watchdog Timer with internal oscillator, an SPI serial port and two software selectable power saving modes. The Idle Mode stops the CPU while allowing the SRAM, timer/counters, SPI port and interrupt system to continue functioning. The power down mode saves the register contents but freezes the oscillator, disabling all other chip functions until the next interrupt or hardware reset.

The device is manufactured using Atmel's high density non-volatile memory technology. The on-chip In-System Programmable Flash allows the program memory to be reprogrammed in-system through an SPI serial interface or by a conventional nonvolatile memory programmer. By combining an enhanced RISC 8-bit CPU with In-System Programmable Flash on a monolithic chip, the Atmel AT90S4414 is a powerful microcontroller that provides a highly flexible and cost effective solution to many embedded control applications.

The AT90S4414 AVR is supported with a full suite of program and system development tools including: C compilers, macro assemblers, program debugger/simulators, in-circuit emulators, and evaluation kits.