

16-bit microcontroller with on-chip CAN

XA-C3

DESCRIPTION

The XA-C3 device is a member of Philips' 80C51 XA (eXtended Architecture) family of high performance 16-bit single-chip microcontrollers, and is intended for industrial control applications.

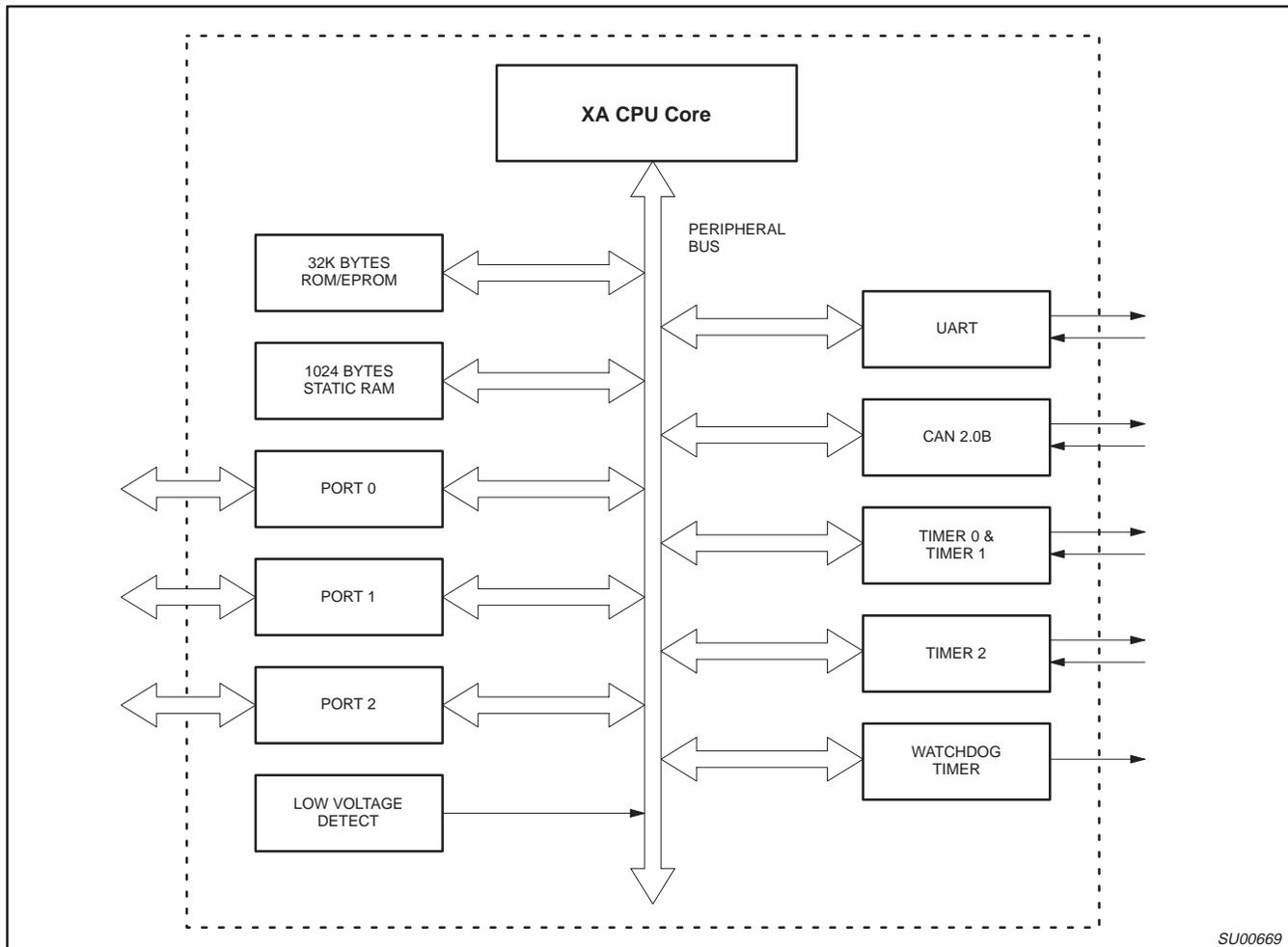
The XA-C3 device supports the full Controller Area Network (CAN) 2.0B. It supports both 11-bit and 29-bit identifiers (ID) at up to 1Mbit/s data rate. It is further optimized for DeviceNet™ applications.

The performance of the XA architecture supports the comprehensive bit-oriented operations of the 80C51 while incorporating support for multi-tasking operating systems and high-level languages such as C. The speed of the XA architecture, at 10 to 100 times that of the 80C51, gives designers an easy path to truly high performance embedded control, while maintaining great flexibility to adapt software to specific requirements.

Specific Features of the XA-C3

- 2.7V to 5.5V operation
- 32K bytes of on-chip EPROM/ROM program memory
- 1024 bytes of on-chip data RAM
- CAN block supporting full CAN2.0B, with 11-/29-bit ID and up to 1Mbit/s
- Three standard counter/timers with enhanced features (equivalent to 80C51 T0, T1, and T2) with outputs
- Watchdog timer with output
- 1 UART
- Low voltage detect
- Three 8-bit I/O ports with 4 programmable output configurations
- EPROM/OTP versions can be programmed in circuit
- 25MHz operating frequency at 4.5 – 5.5V V_{CC} over commercial operating conditions; 16MHz at 2.7V – 3.6V V_{CC}
- 40-pin DIP, 44-pin PLCC, and 44-pin QFP packages

BLOCK DIAGRAM



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