



The MUZE Family of Z8 Microcontrollers—Z86E12X Series

PB003801-0800

MAXIMUM MEMORY WITH UART AND ZILOG EXPANDABLE EPROM

PRODUCT BLOCK DIAGRAM

4 KB to 64 KB EPROM	
Z8 CPU	237 Bytes RAM
ICSP Programmable	
Full-Duplex UART	
Analog Comparators	WDT
16 I/O	Two 8-Bit Timers

FEATURES

- Family with 4 KB to 64 KB OTP Memory
- In-Circuit Serial Programmable
- Full-Duplex UART (ASCII)
 - Dedicated 16-Bit Baud Rate Generator
- 3.0 VDC to 5.5 VDC Operation
- 16 Input/Output Lines (Z86E122/Z86E123/Z86E124/Z86E125/Z86E126)
- Operating Temperature Ranges:
 - Standard: 0°C to 70°C
 - Extended: -40°C to 105°C
- 2 Analog Comparators
- 2 Programmable 8-Bit Counter/Timers, each with 6-Bit Prescaler
- Watch-Dog Timer (WDT)/Power-On Reset (POR)

- Clock-Free Watch-Dog Timer (WDT) Reset
- Vectored, Prioritized Interrupts with Programmable Polarity
- On-Chip Oscillator that accepts a Crystal, Ceramic Resonator, LC, RC, or External Clock
- Optional 32-kHz Oscillator
- RAM and EPROM Protect

GENERAL DESCRIPTION

The Z8 MUZE is a highly-integrated general-purpose microcontroller, featuring 4 KB to 64 KB OTP memory that is In-Circuit Serial Programmable (ICSP), allowing the end user to make field upgrades. Also featured is a full-duplex hardware UART. The MUZE Family of Z8 Microcontrollers—Z86E12X Series is available in 20-pin packages.

APPLICATIONS AND SUPPORT TOOLS

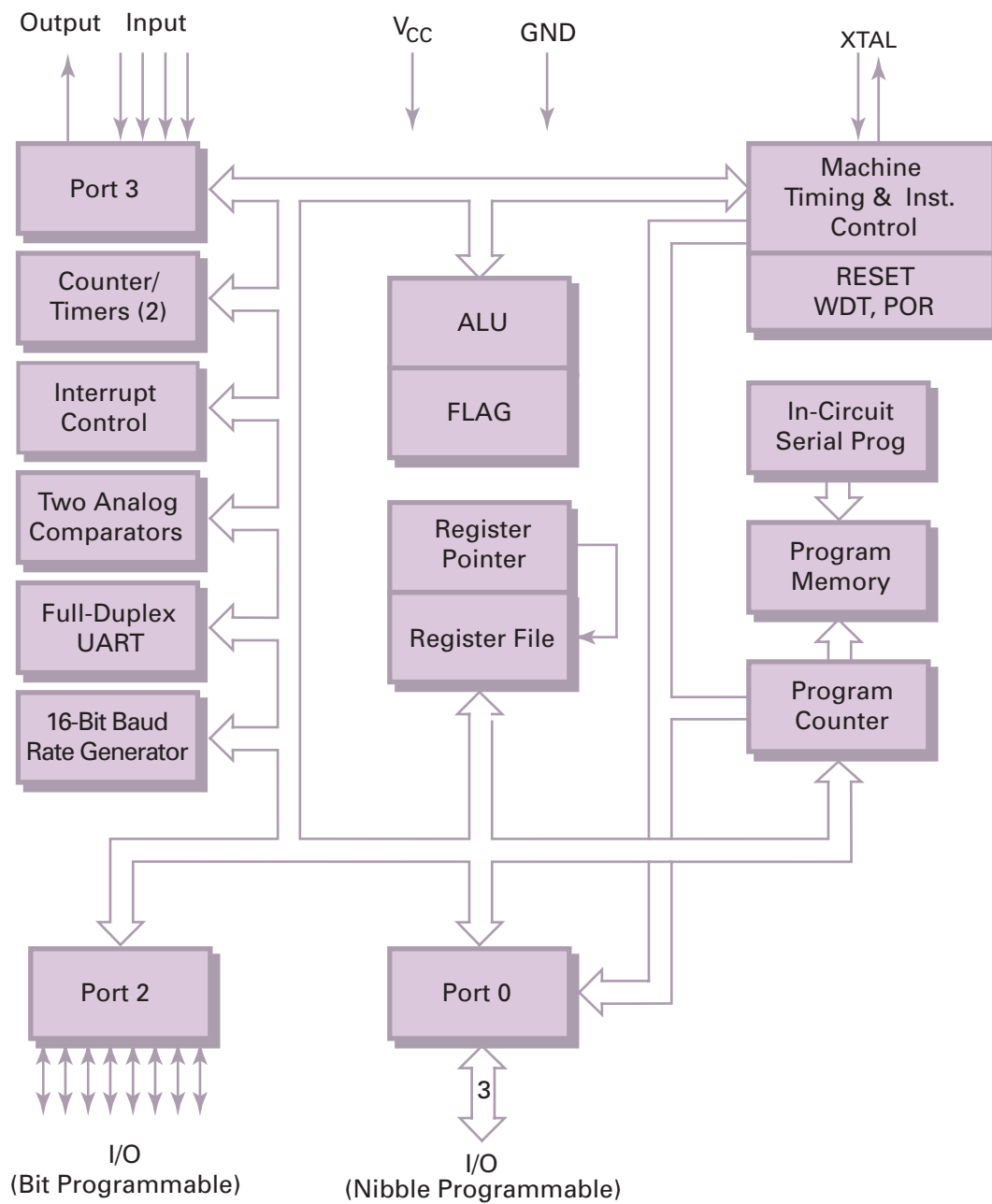
The following development tools are available for the programming and debug of this device:

- Z86C3600ZEM Emulator
- ZLGICSP0100ZPR Low-Cost ICSP Programmer
- Programming Adapter:
 - ZICSP000C00ZDP (20-pin DIP)

ELECTRICAL FEATURES SUMMARY

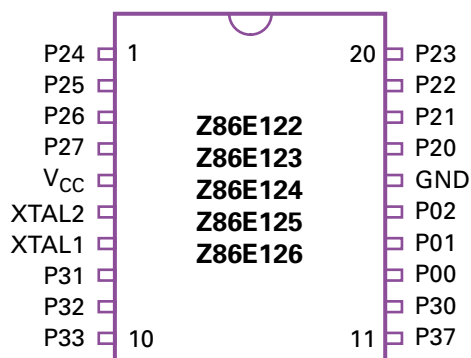
- 3.0 VDC to 5.5 VDC Operating Range
- 25 mA Maximum Supply Current
- 137 mW Total Power Dissipation
- 2 μ A typical STOP Mode Current @ 5V

BLOCK DIAGRAM



PIN CONFIGURATIONS

FIGURE 1. 20-PIN DIP/SOIC PIN CONFIGURATION



ORDERING INFORMATION

Size	Pin Count	Package	PSI*
64 KB	20	DIP	Z86E126PZ016SC
32 KB	20	DIP	Z86E125PZ016SC
16 KB	20	DIP	Z86E124PZ016SC
8 KB	20	DIP	Z86E123PZ016SC
4 KB	20	DIP	Z86E122PZ016SC

NOTE: *Product Specification Index: the Standard temperature range is 0°C to 70°C. For parts that operate in the Extended temperature range of -40°C to 105°C, substitute the letter *E* for the letter *S*. For example, the PSI number for a 20-pin DIP operating at 64 KB in the extended temperature range is Z86E126PZ016EC.