



The MUZE Family of Z8 Microcontrollers— Z86E14X Series

PB004001-0800

MAXIMUM MEMORY WITH UART AND ZILOG EXPANDABLE EPROM

PRODUCT BLOCK DIAGRAM

4 KB to 64 KB EPROM	
Z8 CPU	236 Bytes RAM
ICSP Programmable	
Full-Duplex UART	
Analog Comparators	WDT
32 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
- 32 Input/Output Lines (Z86E142/Z86E143/
Z86E144/Z86E145/Z86E146)
- 3.0 VDC to 5.5 VDC Operation
- 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 Prescale
- Watch-Dog Timer (WDT)/Power-On Reset
(POR)
- Clock-Free Watch-Dog Timer (WDT) Reset

- Vectored, Prioritized Interrupts with Program-
mable 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 Microcontroller—Z86E14X Series is available 40- and 44-pin packages.

APPLICATIONS AND SUPPORT TOOLS

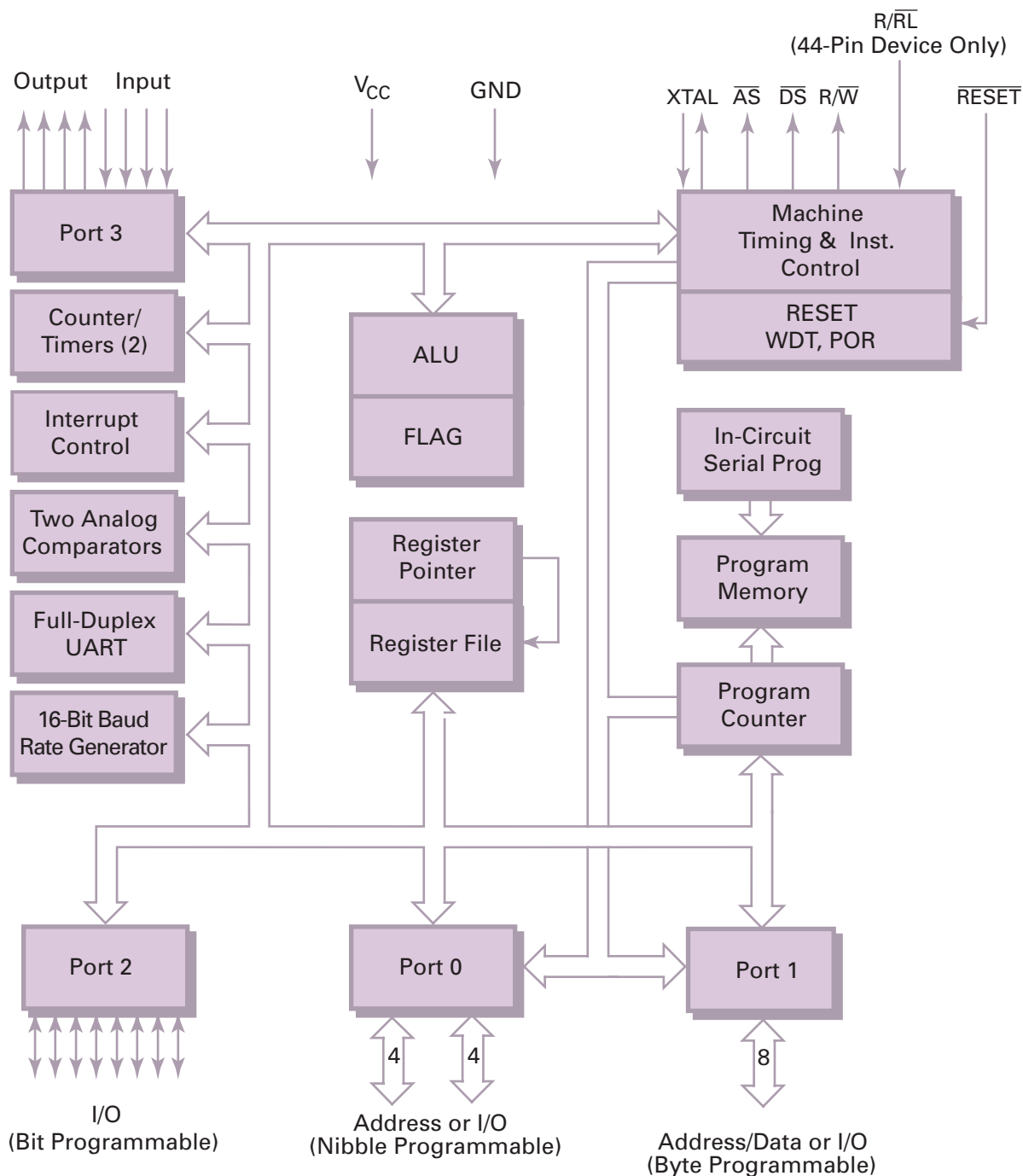
The following development tools are available for the programming and debug of this device:

- Z86C3600ZEM Emulator
- ZLGICSP0100ZPR Low-Cost ICSP Programmer
- Programming Adapters:
 - ZICSP000400ZDP (40-pin DIP)
 - ZICSP000600ZDF (44-pin QFP)

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

BLOCK DIAGRAM



PIN CONFIGURATIONS

FIGURE 1. 40-PIN DIP CONFIGURATION

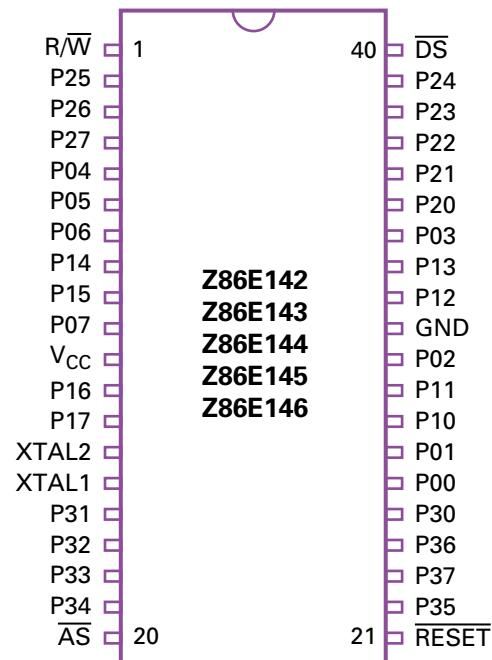
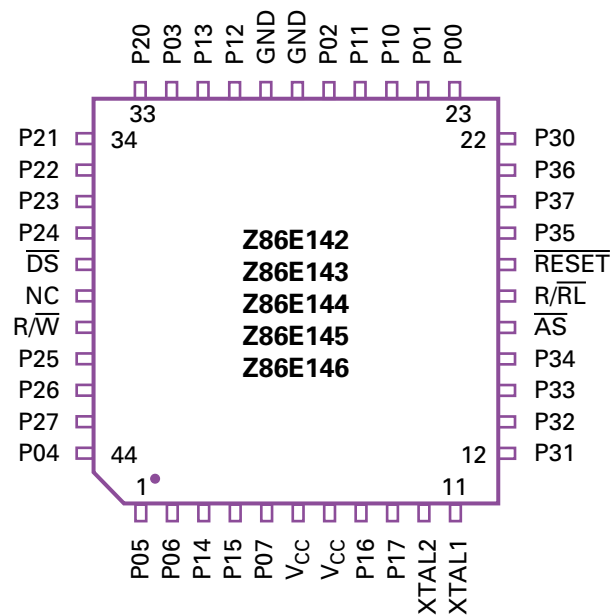


FIGURE 2. 44-PIN QFP PIN CONFIGURATION





RELATED PRODUCTS

Z8 microcontroller(s) of interest are:

Z86C46	Masked ROM part
Z86C45	Masked ROM part
Z86C44	Masked ROM part

ORDERING INFORMATION

Size	Pin Count	Package	PSI*
64 KB	40	DIP	Z86E146PZ016SC
	44	QFP	Z86E146FZ016SC
32 KB	40	DIP	Z86E145PZ016SC
	44	QFP	Z86E145FZ016SC
16 KB	40	DIP	Z86E144PZ016SC
	44	QFP	Z86E144FZ016SC
8 KB	40	DIP	Z86E143PZ016SC
	44	QFP	Z86E143FZ016SC
4 KB	40	DIP	Z86E142PZ016SC
	44	QFP	Z86E142FZ016SC

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 40-pin DIP operating at 64 KB in the extended temperature range is Z86E146PZ016EC.