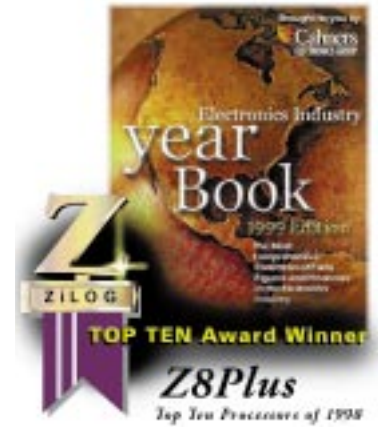


## Experience Award-Winning 8-Bit Z8 Performance with ZiLOG's Enhanced Z8Plus Microcontroller Core

*"ZiLOG continues to improve the long-lived Z8 products with the introduction of the Z8Plus core with enhancements such as reduced system-clock division and fixed-instruction cycle time that improves performance over its predecessor by nearly 50%, depending on instruction mix."*

*Source: Cahners Electronics 1998 Industry Year Book*



### Low-Risk Implementation with Enhanced Performance

Voted as one of the top 10 processors of the year by Cahners Electronics Group, the Z8Plus incorporates the same state-of-the-art Z8 register-to-register architecture preferred by engineers worldwide. Avoid the design learning curve, and take full advantage of a more robust feature set that improves performance by almost 50%, and get your product to market faster.

### A Cost-Effective Solution

The Z8Plus offers increased functionality, significantly higher performance, lower power requirements, and greater cost savings over other 8-bit microcontrollers. This enhanced core is being designed into a broad family of products that will offer greater performance, speed, and stronger immunity to noise and electrical interference (EMI/ESD).

### Easily Adaptable to Fit Your Design Needs

The advanced core technology of the Z8Plus offers state-of-the-art flexibility and freedom for any designer in search of an 8-bit solution. The new Z8Plus core is very easy to use, even for designers who have never used a microcontroller before. The powerful, yet simple, architecture of the Z8Plus offers today's microcontroller users everything they need to maximize their designs.

### Microcontroller Core Features

- Register-to-Register Architecture
- All Instructions Execute in One Instruction Cycle
- On-Chip OTP EPROM Memory
  - 0.5K to 1K byte
- General-Purpose Registers (SRAM)
  - 32 to 64 bytes
- Six Vectored Hardware Interrupts
- Operating Speed:
  - DC-10 MHz
- Six Addressing Modes: R, IR, X, D, RA, & IM
- Low Power Consumption

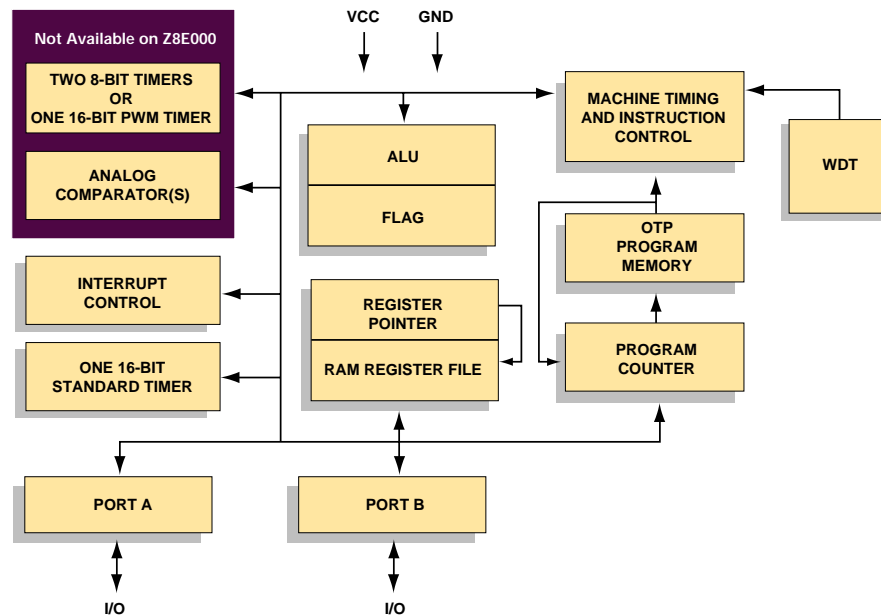
### Peripheral-Related Features

- One 16-bit Timer
- Two 8-bit Standard Timers
- One 8-bit I/O Port (Port A)
  - Each Bit Programmable as Push-Pull or Open-Drain
- One 6-bit I/O Port (Port B)
  - Includes Special Functionality
- 16-bit Programmable Watch-Dog Timer (WDT)
- 13-14 Total Input/Output Pins
- 2 Power Reduction Modes (STOP/HALT)
- EPROM Protect
- Available in 18-Pin DIP, SOIC, and 20-Pin SSOP Packages



# Z8Plus Family of Microcontrollers

## Functional Block Diagram



Device	Z8E000	Z8E001	Z8PE002	Z8PE003
OTP (Bytes)	512	1000	512	1000
RAM (Bytes)	32	64	64	64
Speed (MHz)	10	10	10	10
I/O Pins	13	13	14	14
OSC	XTAL	XTAL, LC	XTAL, LC, RC	XTAL, LC, RC
VBO	No	No	Yes	Yes
8-bit Timers	0	2	2	2
16-bit Timers	1	1	1	1
WDT	1	1	1	1
Operating Range <i>Standard</i>	3.5V-5.5V@ 0°C to +70°C	3.5V-5.5V@ 0°C to +70°C	3.0V-5.5V@ 0°C to +70°C	3.0V-5.5V@ 0°C to +70°C
<i>Extended</i>	4.5-5.5V@ -40°C to +105°C	4.5-5.5V@ -40°C to +105°C	4.5-5.5V@ -40°C to +105°C	4.5-5.5V@ -40°C to +105°C

### Development Tools

#### Hardware

In-Circuit Emulators Z8ICE001ZEM  
SOIC to DIP Adapter Z86E0700ZDP  
SSOP to DIP Adapter Z8PE0010ZDH

#### Software

ZiLOG Developer Studio (ZDS)

### Additional On-Line Documentation

Z8Plus User Manual  
Z8ICE001ZEM User Manual  
Z8E000 Product Specification  
Z8E001 Product Specification  
Z8PE002 Product Specification  
Z8PE003 Product Specification

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FLY-Z8PE0003

