

zilog[®] Z8Plus™ Microcontrollers

Employing the experience gained from the industry-standard Z80 and Z8 cores, the Z8Plus offers increased functionality, significantly higher performance, lower power requirements, and greater cost savings over other 8-bit microcontrollers. The Z8Plus is designed to be easy to use, even for designers who have never used a microcontroller before.

With single-cycle execution, powerful I/O capabilities and register-to-register architecture, the Z8Plus offers state-of-the-art flexibility and freedom for any designer in search of a low-cost solution for a variety of microcontroller applications.

The Z8Plus core offers several significant advantages compared to the current Z8 core. Foremost is performance improvement due to a reduced system clock division and a fixed instruction cycle time. The improvement is nearly 50%, depending upon instruction mix. For example, a Z8Plus-based part at 10MHz has performance comparable to a 16MHz part in production today. This, along with significant design improvements, leads to lower power and lower noise operation.

The Z8PE002 and Z8PE003 microcontrollers are the newest members of the popular Z8E001 Z8 Plus 8-bit microcontroller family. New features include voltage brown-out protection and power-on reset. Additionally, the "RESET" pin has been replaced with a general purpose I/O pin and oscillator circuitry to support RC configurations. These new parts are targeted at customers who require a powerful, yet small OTP microcontroller for use in general purpose applications.

EMULATOR/PROGRAMMER

FEATURES: • In-Circuit Program Debug Emulation • Real-Time Emulation • ZDS Emulator Software • Window-Based User Interface • On-Line Help • One-Time Programmable (OTP) Support • Selectable Baud Rates: 9600 to 57.6 Kbps • Bistync Error-Correcting Communications Protocol

SPECIFICATIONS: OPERATING TEMPERATURE: 20°C ± 10°C
POWER REQUIREMENT: +9.0 VDC @ 0.5A Minimum (Typical).

DIMENSIONS: • Width: 6.75 in. (17.15 cm) • Length: 7.50 in. (19.05 cm) • Height: 0.90 in. (2.30 cm) **SERIAL INTERFACE:** RS-232C @ 9600, 19200 (default), 28800, or 57600 Baud

HOST COMPUTER: Minimum Requirements: IBM PC (or 100% Compatible) 386-Based Machine: • 33 MHz • 4 MB RAM • VGA Video Adapter • Hard Disk Drive (2.5 MB Free Space) • 3.5-inch, High-Density (HD) Floppy Disk Drive • RS-232C Com Port • Mouse or Pointing Device • Microsoft Windows 3.1

KIT CONTENTS (One of Each): Z8M001 Emulator Board; • **Cable/Pods:** 18-Pin Emulation Pod Cable; 9-Pin M-F Serial Cable (6 ft.) • **Host Software:** Z8 Graphical User Interface (GUI); Zilog Macro Cross Assembler (ZMASM)/Zilog Developer Studio (ZDS) • **Documentation:** Zilog 1999 Technical Library CD ROM, which contains Z8 device data sheets, user manuals, application notes; Z8M001 Emulator User's Manual



Memory Size		I/O Lines	Oscillator Type External	Frequency Range Min/Max	Supply Voltage Range	Operating Temp. (°C)	Package	Required Emulator Tools	Required OTP Programming Tools	Digi-Key Part No.	Price Each			ZiLOG Part No.
Eprom	Ram										1	25	100	
512	32	13	XTAL/LC	DC - 10MHz	3.5 - 5.5	0 - 70	18-DIP	D	D	269-1117-ND	1.80	1.35	1.00	Z8E00010PSC
										269-3984-ND◆	1.80	1.35	1.00	Z8E00010PSG
1K	64	13	XTAL/LC	DC - 10MHz	3.5 - 5.5	0 - 70	18-DIP	D	D	269-1121-ND	2.28	1.71	1.26	Z8E00110PSC
							18-DIP	D	D	269-3986-ND◆	2.28	1.71	1.26	Z8E00110PSG
							18-SOIC	*	D, 2	269-1123-ND	2.28	1.71	1.26	Z8E00110SSC
							18-SOIC	*	D, 2	269-3987-ND◆	2.28	1.71	1.26	Z8E00110SSG
				4.5 - 5.5	-40 - 105	18-DIP	D	D	269-3985-ND◆	2.49	1.87	1.39	Z8E00110PEG	
Z8PE002 / Z8PE003 Series														
512	64	14	XTAL/LC	DC - 10MHz	3.0 - 5.5	0 - 70	18-DIP	D	D	269-4290-ND◆	1.92	1.44	1.07	Z8PE002PZ010SG
							20-SSOP	*	D, 17	269-1132-ND	2.10	1.58	1.16	Z8PE002HZ010SC
							20-SSOP	*	D, 17	269-4289-ND◆	2.10	1.58	1.16	Z8PE002HZ010SG
							20-SSOP	*	D, 17	269-1135-ND	2.28	1.71	1.27	Z8PE002HZ010EC
				4.5 - 5.5	-40 - 105	20-SSOP	*	D, 17	269-4288-ND◆	2.28	1.71	1.27	Z8PE002HZ010EG	
1K	64	14	XTAL/LC	DC - 10MHz	3.0 - 5.5	0 - 70	18-DIP	D	D	269-1136-ND	2.67	2.01	1.49	Z8PE003PZ010SC
							18-DIP	D	D	269-4293-ND◆	2.67	2.01	1.49	Z8PE003PZ010SG
							18-SOIC	*	D, 2	269-1137-ND	2.67	2.01	1.49	Z8PE003SZ010SC
							18-SOIC	*	D, 2	269-4295-ND◆	2.67	2.01	1.49	Z8PE003SZ010SG
							20-SSOP	*	D, 17	269-1138-ND	2.82	2.12	1.57	Z8PE003HZ010SC
							20-SSOP	*	D, 17	269-4291-ND◆	2.82	2.12	1.57	Z8PE003HZ010SG
				4.5 - 5.5	-40 - 105	18-SOIC	*	D, 2	269-1140-ND	2.94	2.21	1.63	Z8PE003SZ010EC	
						18-SOIC	*	D, 2	269-4294-ND◆	2.94	2.21	1.63	Z8PE003SZ010EG	

Key	Description	Digi-Key Part No.	Price Each	ZiLOG Part No.
Emulator / Programmer †				
D	Z8 Plus Emulator/Programmer (Power supply sold separately T405-P5P-ND recommended)	269-2033-ND	161.33	Z8ICE001ZEM

◆ **RoHS Compliant** * ZiLOG's emulators support this part, but the in-circuit target cable is configured for DIP only. For designs that require a surface mount package, accommodations will have to be made to use the emulator for in-circuit DIP emulation. † For OTP programming adapters, please refer to Z8 Series.

Turnkey Universal Remote Control Kit

The Crimzon RC Bullet™ Reference Design Kits are ideally suited for Universal Remote Control applications. These kits feature both learning and non-learning models with both three-in-one (Cable/Satellite, DVD/VCR, and TV) and six-in-one feature sets (Cable, Satellite, Audio, TV, DVD/VCR) for the North American and European marketplaces. Built on the Z8-based ZLx16300 and ZLx32300 IR MCU, and competitively priced, the kits give you everything needed to start manufacturing branded universal remote controls today.

269-3380-ND	USA, 3-Function, Non-Learning.....	\$129.00
269-3381-ND	European, 3-Function, Non-Learning.....	\$129.00
269-3382-ND	USA, 6-Function, Non-Learning.....	\$129.00
269-3383-ND	European, 6-Function, Non-Learning.....	\$129.00
269-3384-ND	USA, 6-Function, Learning.....	\$159.00
269-4665-ND◆	USA, 6-Function, Learning.....	\$160.00
269-3385-ND	European, 6-Function, Learning.....	\$159.00

◆ **RoHS Compliant**

Thermostat Application Module Kit

Thermostat Application Module provides a flexible platform for training and experimentation on a number of microcontroller and microprocessor devices. The module contains no processor. It is designed to attach to the eZ80 development platforms, which contain both the processors and the control programs that make the development function.

Features:

- Simple bit-I/O (LEDs, switches, lamp, and fan)
- Alphanumeric LCD display via the GPIO interface
- Temperature sensor via the PC interface
- EEPROM data storage via the PC interface
- Flash program storage for eZ80 family devices

269-3198-ND\$85.00

Z86L99 with IR Solutions

In-circuit emulators are interactive, Windows-oriented development tools, providing a real-time environment for emulation and debugging. Provides essential timing and I/O circuitry to simplify user emulation of prototype hardware and software products.

Features: • Supports up to 32K of ROM • Varies the operating voltage from 3.0-4.0V • Supports incircuit emulation on target systems that operate at 3.0-4.0V • Powers the In-Circuit Emulator (ICE) chip from either the emulator or target board • Supports IR devices that operate at up to 8MHz • Emulates 28-pin DIP and 40-pin DIP • Provides OTP programming for 28-pin DIP and SOIC packages, 40-pin PDIP, 48-pin SSOP • Multi-tasks with other Windows applications while Zilog Developer Studio (ZDS) is running

269-3241-ND	Z86L99 In-Circuit Emulator.....	\$850.00
269-3238-ND	Z86D990; 48-SSOP.....	\$15.42
269-3943-ND◆	Z86D990; 48-SSOP.....	\$15.42
269-3239-ND	Z86D990; 40-DIP.....	\$14.61
269-3944-ND◆	Z86D990; 40-DIP.....	\$14.61

◆ **RoHS Compliant**

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