



# Z86C5000ZEM

## ICEBOX™ Z8® FAMILY IN-CIRCUIT EMULATOR-C50

### FEATURES

#### ■ Supported Products

Packages	Emulation	OTP Programming
18-Pin PDIP	Z86C03/06/16	Z86E02/03 <sup>1</sup> /04/06 <sup>1</sup> /08
18-Pin SOIC	N/A	Z86E02/03/04/06/08 <sup>2</sup>
28-Pin PDIP	Z86C30/31/32/33/34/233 Z86E33/733/E34	Z86E30/31 Z86E33/733/E34 <sup>7</sup>
28-Pin PLCC	Z86C30/31/32/33/34/233 <sup>3</sup> Z86E33/733/E34 <sup>3</sup>	Z86E30/31 <sup>3</sup> Z86E33/733/E34 <sup>8</sup>
28-Pin SOIC	N/A	Z86E30/31 <sup>3</sup> Z86E33/733/E34 <sup>9</sup>
40-Pin PDIP	Z86C40/C43/243 Z86E43/743/E44	Z86E40 Z86E43/743/E44 <sup>10</sup>
44-Pin PLCC	Z86C40/C43/243 <sup>6</sup> Z86E43/743/E44 <sup>6</sup>	Z86E40 <sup>4</sup> Z86E43/743/E44 <sup>11</sup>
44-Pin QFP	N/A	Z86E40 <sup>5</sup> Z86E43/743/E44 <sup>12</sup>

#### Notes:

1. E03/06: With optional, separately purchased adapter (Z86E0601ZDP) from Zilog.
2. With optional, separately purchased adapter (Z86E0700ZDP) from Zilog.
3. With optional, separately purchased accessory kit (Z86C3000ZAC) from Zilog.
4. With optional, separately purchased adapter (Z86E4001ZDV) from Zilog.
5. With optional, separately purchased adapter (Z86E4001ZDF) from Zilog.
6. With optional, separately purchased adapter (Z86C4000ZDV) from Zilog.
7. With optional, separately purchased adapter (Z86E3400ZDP) from Zilog.
8. With optional, separately purchased adapter (Z86E3400ZDV) from Zilog.
9. With optional, separately purchased adapter (Z86E3400ZDS) from Zilog.
10. With optional, separately purchased adapter (Z86E4400ZDP) from Zilog.
11. With optional, separately purchased adapter (Z86E4400ZDV) from Zilog.
12. With optional, separately purchased adapter (Z86E4400ZDF) from Zilog.

- In-Circuit Program Debug Emulation
- Real-Time Emulation
- Z8 GUI Emulator Software
- Window-Based User Interface
- On-Line Help
- One-Time Programmable (OTP) Support
- Selectable Baud Rates – 9600 to 57.6 KB
- Bisync Error-Correcting Communications Protocol

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## GENERAL DESCRIPTION

Zilog's in-circuit emulators are interactive, Window-oriented development tools, providing a real-time environment for emulation and debugging.

The Z8 C50 emulator (Z86C5000ZEM) is a member of Zilog's ICEBOX product family of in-circuit emulators providing support for the Consumer Controller Processor (CCP™) microcontrollers. The emulator provides essential timing and I/O circuitry to simplify user emulation of the prototype hardware and software product.

The Z8 C50 emulator provides users with a hardware platform to develop and debug software in a real-time environment. In contrast, software simulators provide significantly slower operation, making them less practical for code development.

The Z8 C50 emulator can be connected to a serial port (COM1, COM2, COM3, and COM4) of the host computer and uses Graphical User Interface (GUI) software.

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## SPECIFICATIONS

### Operating Conditions

Operating Temperature:	20°C ±10°C
Supply Voltage:	+4.75 VDC to 5.25VDC (+5.0 VDC typical)
Minimum Emulation Speed:	1 MHz internal SCLK
Maximum Emulation Speed:	10 MHz internal SCLK 20 MHz external Crystal (shipped with 12MHz crystal)
Maximum Emulation Memory:	32K
Maximum Hardware Breakpoints:	32K
Emulation Processor:	Z86C5020GSE
Programming Sockets:	40 PDIP, 28PDIP and 18PDIP
Operating Humidity:	10-90% RH (non-condensing)

Zero Insertion Force (ZIF) sockets.

### Power Requirements

+5.0 VDC @ 1A Minimum (typical)

### Dimensions

Width:	6.25 in. (15.8 cm)
Length:	9.50 in. (24.1 cm)
Height:	2.50 in. (6.35 cm)

### Serial Interface

RS-232C @ 9600, 19200 (default), 28800, or 57600 Baud

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## HOST COMPUTER

### Minimum Requirements

- IBM PC (or 100-percent compatible) 386-Based Machine
- 33 MHz
- 4 MB RAM
- VGA Video Adapter
- Hard Disk Drive (1 MB free space)
- 3.5-inch, High-Density (HD) Floppy Disk Drive
- RS-232C COM Port
- Mouse or Pointing Device

- Microsoft Windows 3.1

The following changes to the Minimum Requirements are recommended for increased performance:

- 486- or Pentium-Based Machine
- 66 MHz (or faster)
- 8 MB of RAM (or more)
- SVGA Video Adapter
- Color Monitor
- Printer

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## KIT CONTENTS

### Z86C50 Emulator

#### Cables

- Power Cable with Banana Plugs
- DB25 RS-232C Cable
- 40-Pin Dip Emulation Cable
- 28-Pin Dip Emulation Cable
- 18-Pin Dip Emulation Cable

#### Devices

- One Z86E3012PSC (28-Pin DIP OTP)
- One Z86E4012PSC (40-Pin DIP OTP)

#### Miscellaneous

- 20-Pin Jumper Block
- 2-Two Position Shunt Jumpers

#### Host Software

- Z8 GUI Emulator S/W Diskette
- ZASM Cross-Assembler/MOJB Object File Utilities

**Note:** Cross-Assembler and C Compiler are sold separately from Production Languages Corp. and other third-party development tool companies:

Production Languages Corp. (817) 599-8363

E-mail: info @plcorp.com

Internet: www.plcorp.com

Refer to the Zilog Internet site ([www.zilog.com](http://www.zilog.com)) for more information on third-party support.

### Documentation

- Z86C50 Emulator User's Manual
- Z8 Cross-Assembler User's Guide
- Universal Object File Utilities(MOJB) User's Guide
- Registration Card
- Product Information

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