Z86C3600ZEM

ICEBOX Family In-Circuit Emulator

PB006004-0903   **Product Brief**

Supported Devices

Table 1   Z86C5020GSE ICE Chip (Z86C3500ZEM)

Packages	Emulation	Accessories
20 PDIP	Z86E122–E125	ZiLOG Part Number Z86E1260100ZAC
20 SOIC	Z86E122–E125	ZiLOG Part Number Z86E1260100ZAC; conversion adapter from emulation technology (AS-DIP-02-SO03-1)
28 PDIP	Z86C34–C35 Z86E132–E135	28 PDIP emulation pod
28 SOIC	Z86C34–C35 Z86E132–E135	28 PDIP emulation pod and a DIP-to-SOIC conversion adapter from emulation technology (AS-DIP-6-028-S003-1 or AS-DIP-6-028-S003-2)
28 PLCC	Z86C34–C35 Z86E132–E135	28 PLCC emulation pod
40 PDIP	Z86C44–C45 Z86E142–E145	40 PDIP emulation pod
44 PLCC	Z86C44–C45	44 PLCC emulation pod
44 QFP	N/A	N/A

Notes: The Z86C3600ZEM becomes the Z86C3500ZEM when you use a Z86C50 ICE chip.
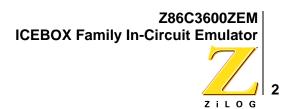
The MuZe family does not support PLCC.

Table 2   Z86C5120GSE ICE Chip (Z86C3600ZEM)

Packages	Emulation	Accessories
20 PDIP	Z86E126	ZiLOG Part Number Z86E1260100ZAC
20 SOIC	Z86E126	ZiLOG Part Number Z86E1260100ZAC; conversion adapter from emulation technology (AS-DIP-02-SO03-1)
28 PDIP	Z86C36/MuZe/ Z86E136	28 PDIP emulation pod
28 SOIC	Z86C36/MuZe/ Z86E136	28 PDIP emulation pod and a DIP-to-SOIC conversion adapter from emulation technology (AS-DIP-6-028-S003-1 or AS-DIP-6-028-S003-2)
28 PLCC	Z86C36/MuZe/ Z86E136	28 PLCC emulation pod
40 PDIP	Z86C46/E146	40 PDIP emulation pod
44 PLCC	Z86C46	44 PLCC emulation pod
44 QFP	N/A	N/A

Note: The MuZe family does not support PLCC.

Features

- In-Circuit Program Debug Emulation
- Real-Time Emulation
- Source-Level Debugging with ZiLOG Macro Cross Assembler (ZMASM) and ZiLOG Developer Studio (ZDS)
- Windows-Based Graphical User Interface
- On-Line Help
- One-Time Programmable (OTP) Support
- Selectable Baud Rates—9600 to 57.6 K Baud

General Description

ZiLOG's ICEBOX™ in-circuit emulators are interactive, Windows-oriented development tools providing a real-time environment for developing and debugging software. The ICEBOX™ provides a hardware platform that is a significant improvement compared to software simulators, which are slower in operation and less practical than emulators for code development.

The Z86C36 Emulator, which supports the Z8 family of UART controllers, provides essential timing and I/O circuitry to simplify user emulation of the prototype hardware and software product.

The Z86C36 Emulator can be connected to a serial port (COM1, COM2, COM3, or COM4) of the host computer. Interaction between the host computer and the emulator is initiated using the Graphical User Interface (GUI) software.

Specifications

Table 3   Operating Conditions

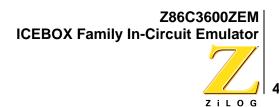|	
Operating Temperature:	20 °C ± 10 °C
Supply Voltage:	+5 VDC ± 5%
Operating Humidity:	10%–90% RH (noncondensing)
Emulation Speed:	16.384 MHz
Maximum Emulation Memory:	64 KB
Maximum Breakpoints	256
Emulation Processor:	Z86C5120GSE ICE Chip or Z86C5020GSE ICE Chip
Programming Socket:	None
Power Requirements	+5 VDC @ 3.0 A (maximum); 2.5 A is typical
Dimensions	
Width:	6.25 in. (15.8 cm)
Length:	9.5 in. (24.1 cm)
Height:	2.5 in. (6.35 cm)
Serial Interface	RS-232C @ 9600, 19200 (default), 28000, or 57600 Baud

Host Computer

Minimum Requirements

- IBM PC (or 100-percent compatible) Pentium-based machine
  - 75 MHz
  - 16 MB RAM
  - Hard Disk Drive with 12 MB Free Space
  - VGA Video Adapter
  - CD-ROM Drive
  - RS-232C COM Port
  - Microsoft Windows 95/98/NT
  - Mouse or Pointing Device
- The following enhancements to the Minimum Requirements are recommended:
  - 166 MHz (or faster)
  - SVGA Video Adapter

Kit Contents

The ICEBOX Kit contains one of each of the following items:

Hardware	Z86C36 ICEBOX
	Z86C5020GSE ICE Chip
Cables/Pods	Power Cable with Banana Plugs
	DB25 RS-232C Serial Cable
	40-pin PDIP Emulation Pod with ZiLOG Cable
	44-pin PLCC Emulation Pod
	28-pin PDIP Emulation Pod
	28-pin PLCC Emulation Pod
Host Software	ZiLOG Developer Studio (ZDS) Installation CD-ROM
Documentation	Z86C36/MuZE ICEBOX User Manual
	ZiLOG Developer Studio User Manual (contained in the ZDS Installation CD-ROM)
	ZDS Online Help

Note: Cross-Assembler and C Compiler are sold separately from third-party development tool companies.
Refer to the ZiLOG website at www.zilog.com for more information on third-party support.

Additional Items Not Supplied

The following items are required, but are not currently supplied in the ICEBOX Kit:

- A source of power (+5 VDC typical) for the ICEBOX. This can be a laboratory power supply with current rating of at least 2.5 Amperes.

Optional Recommended Items

The following items are recommended:

- Your target design should be a wire-wrapped or printed circuit prototype that includes a socket for the target device that the ICEBOX cable/pod plugs into.

- C-Compiler

Note: Contact a ZiLOG Sales Office or Distributor to order a copy of the Z8 C-Compiler. Refer to our website for a representative near you: http://www.zilog.com/sales/.

- Oscilloscope

Precaution

Please see ZDSPNL.TXT in the installation directory of the ZDS installation CD-ROM for the latest information about hardware updates to the Z86C36 product.

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