



**Z i L O G**

**eZ80L925048MOD**

## **eZ80L92 Module Product Brief**

PB009604-0303

### **Module Block Diagram**

eZ80L92 MPU		
1 MB Flash	512KB SRAM	2 UARTs 1x SPI 1x I <sup>2</sup> C
6 PRT, WDT	10BaseT Ethernet + RJ-45 Connector	IrDA Transceiver (SIR)
GPIO, JTAG		
Real-Time Clock		
System Interface Connectors		

### **General Description**

The eZ80L92 Module is a compact, high-performance Ethernet module specially designed for rapid development and deployment of embedded systems requiring control and Internet/Intranet connectivity.

This low-cost, expandable module is powered by ZiLOG's latest power-efficient, optimized pipeline architecture eZ80L92 microprocessor with integrated IrDA capabilities and rich on-chip peripherals.

Combined with a 10Mbps 802.3 Ethernet controller, memories, and ZiLOG's industry-leading IrDA transceiver, this module is ideal for wireless IrDA connectivity, industrial control, communication, security, automation, and embedded networking applications.

For rapid development, this module can interface to the eZ80<sup>®</sup> Development Platform, which provides a complete user debug environment with power, breadboard area, and serial connectors such as RS-

232 and JTAG. For deployment, this compact module interfaces to a user system via its system interface connectors. An RJ-45 Ethernet connector is provided on the module.

System designers with aggressive time-to-market requirements can take comfort in the fact that this tested module, together with available ZiLOG TCP/IP Internet connectivity software and OS, will facilitate quick product launch and low ownership cost.

### **Features**

#### **eZ80L92 Module**

- 48MHz eZ80L92 microprocessor
- 1 MB, 70ns Flash memory, hardware Write-Protect pin available to user
- 512KB, 35ns high-speed SRAM
- 10BaseT 802.3 Ethernet controller with integrated PHY and 8KB SRAM for Tx/Rx FIFOs
- IrDA SIR transceiver (115Kbps) with power-down control
- 2x 50-pin system expansion interface with full MPU bus/control signals as well as power, peripherals, and user I/Os
- One RJ-45 Ethernet connector
- One LED indicating network link status
- ZiLOG's Internet connectivity software supports over-the-network firmware updates or network configuration
- Module size (including connectors):  
2.5" L x 2.5" W x 0.6" H  
(63.5mm x 63.5mm x 15.2mm)
- Standard operating temperature: 0°C to +70°C
- Power supply: 3.3V @ 125mA



### eZ80L92 Microprocessor

- Power management features including SLEEP/HALT modes and peripheral power-down controls
- 2 UARTs, 1x SPI, 1x I<sup>2</sup>C, each with independent baud rate generators
- IrDA compatible Infrared Encoder/Decoder
- New DMA-like eZ80<sup>®</sup> instructions
- Glueless external memory interface with 4 Chip Selects, independent WAIT state generators, and external WAIT input pin; supports Z80, Intel, and Motorola bus-compatible peripherals.
- Interrupt controller supports internal and external maskable interrupts as well as a nonmaskable interrupt input
- Real-time clock with on-chip 32KHz oscillator, selectable 50/60 Hz input, and separate V<sub>DD</sub> pin for battery backup
- Six 16-bit Counter/Timers with prescalers and direct input/output drive capability
- Watch-Dog Timer
- 24 General-Purpose I/O pins
- JTAG Debug Interface, also supports ZiLOG Debug Interface (ZDI)
- 100-pin LQFP package
- 3.0–3.6V supply voltage with 5V tolerant inputs

### TCP/IP Software

ZiLOG's royalty-free TCP/IP Internet software suite is an integrated, preemptive multitasking OS and TCP/IP protocol stack that meets all of the relevant RFCs. It is optimized for embedded systems and is implemented as an extension to the ZiLOG C-Compiler's runtime library. Supported protocols and network features are:

- TCP, UDP, IP, ARP, RARP, ICMP, IGMP, PPP
- FTP, SMTP, HTTP, TELNET, DNS

- TFTP, SNMP, DHCP/BOOTP, TIMEP
- In-system configuration or updates of network parameters, web pages, and module firmware

A set of well-documented OS and network service APIs allow system developers to quickly take advantage of the ZiLOG TCP/IP software suite while remaining focused on the main application. Final binary output from the compiler/linker is the complete user application with networking capabilities across the Internet or any Intranet.

### eZ80L92 Development Kit

The eZ80L92 Module is available as a stand-alone device and in volume quantities for customer production runs. To help expedite customer evaluation and product development, the low-cost eZ80L92 Development Kit includes the following:

- eZ80<sup>®</sup> Development Platform with breadboard area and system expansion headers
- eZ80L92 Module
- Low-cost ZPAKII debug interface tool
- 4-port 10BaseT Ethernet hub
- Two power supply adapters
- Serial RS232 and ZDI cables
- CDROM:
  - C-Compiler and ZiLOG Developer Studio (ZDS) IDE including assembler, linker, debugger, and simulator
- User manuals for:
  - eZ80L92 Module
  - eZ80<sup>®</sup> Development Platform
  - ZPAKII debugger/emulator
  - TCP/IP Internet software suite
  - C-Compiler, ZDS II

The Metro IPWorks™ TCP/IP software stack is available via download from [zillog.com](http://zillog.com).



## Related Products

Other eZ80<sup>®</sup> Development Modules include:

---

eZ80190 Module	50MHz eZ80190 MPU, 1MB Flash, 512KB SRAM, 40-Bit MACC, 2 UARTs, 6 PRT, WDT, GPIO, ZDI, Real-Time Clock, 10BaseT, DMA
----------------	--

---

## Ordering Information

---

PSI	Part	Description
eZ80L925048MOD	eZ80L92 Module	48MHz eZ80L92 MPU, 512KB SRAM
eZ80L920210ZCO	eZ80L92 Development Kit	Complete eZ80 <sup>®</sup> Development Kit

---



This publication is subject to replacement by a later edition. To determine whether a later edition exists, or to request copies of publications, contact:

**ZiLOG Worldwide Headquarters**

532 Race Street  
San Jose, CA 95126  
Telephone: 408.558.8500  
Fax: 408.558.8300  
[www.ZiLOG.com](http://www.ZiLOG.com)

**Document Disclaimer**

ZiLOG is a registered trademark of ZiLOG Inc. in the United States and in other countries. All other products and/or service names mentioned herein may be trademarks of the companies with which they are associated.

©2003 by ZiLOG, Inc. All rights reserved. Information in this publication concerning the devices, applications, or technology described is intended to suggest possible uses and may be superseded. ZiLOG, INC. DOES NOT ASSUME LIABILITY FOR OR PROVIDE A REPRESENTATION OF ACCURACY OF THE INFORMATION, DEVICES, OR TECHNOLOGY DESCRIBED IN THIS DOCUMENT. ZiLOG ALSO DOES NOT ASSUME LIABILITY FOR INTELLECTUAL PROPERTY INFRINGEMENT RELATED IN ANY MANNER TO USE OF INFORMATION, DEVICES, OR TECHNOLOGY DESCRIBED HEREIN OR OTHERWISE. Devices sold by ZiLOG, Inc. are covered by warranty and limitation of liability provisions appearing in the ZiLOG, Inc. Terms and Conditions of Sale. ZiLOG, Inc. makes no warranty of merchantability or fitness for any purpose Except with the express written approval of ZiLOG, use of information, devices, or technology as critical components of life support systems is not authorized. No licenses are conveyed, implicitly or otherwise, by this document under any intellectual property rights.