



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 ² 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[®] 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 I²C, each with independent baud rate generators
- IrDA compatible Infrared Encoder/Decoder
- New DMA-like eZ80[®] 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_{DD} 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[®] 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[®] 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.



Related Products

Other eZ80[®] 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
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Ordering Information

PSI	Part	Description
eZ80L925048MOD	eZ80L92 Module	48MHz eZ80L92 MPU, 512KB SRAM
eZ80L920210ZCO	eZ80L92 Development Kit	Complete eZ80 [®] Development Kit



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