ZiLOG

eZ80™ Webserver

ZiLOG introduces the next generation

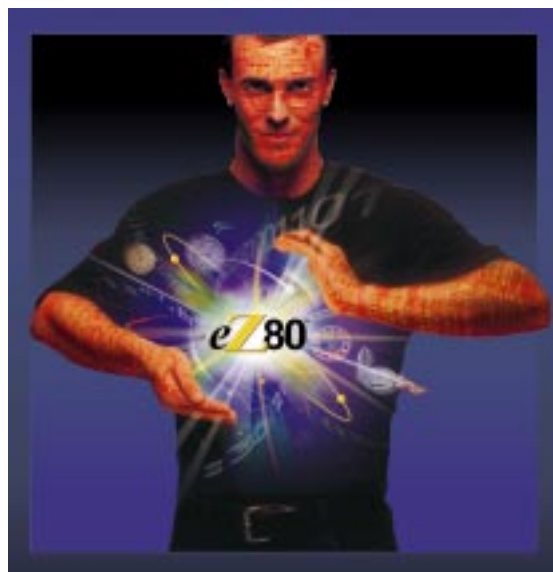**A new Z80 for the Internet generation of products**

Just as the Z80 revolutionized the semiconductor industry, the next generation eZ80 is revolutionizing the way that communications are happening today. This elegant system-on-a-chip can serve web pages over a TCP/IP network, allowing easy system monitoring and control, effortless processor code updates, and system compatibility. This solution enables any browser with access to your network the ability to control and monitor a network application.

Who says you need a 16- or 32-bit processor?

The super-fast Z80 rivals the performance of many 16- and 32-bit architectures. The eZ80 executes Z80 code four times faster at the same clock speed of traditional Z80s and can operate up to 50 MHz. Unlike most 8-bit microprocessors, which can only address 64 KBytes, the eZ80 can address 16 MBytes without a Memory Management Unit (MMU). Designed with over 25 years of experience with the Z80, this Internet processor has been specifically designed for web-based applications.

Offering a complete embedded software package

The eZ80 features a complete software package featuring more than just a TCP/IP stack that enables the transmission and reception of HTML form data and the dynamic generation of web pages. The full stack includes IPv4, TCP, UDP, ARP, RARP, IGMP, ICMP, PPP, IP, SLIP, HTTP 1.1, DHCP, SMTP, TFTP, SNMP, and Telnet protocols. The optimized stack includes the following protocols: IPv4, TCP, UDP, ARP, RARP, ICMP, PPP, HTTP 1.1, and DHCP. This solution also includes Ethernet and serial device drivers and implements all of the relevant and latest approved RFCs.

Perfect for Internet-based applications

Applications for the eZ80 are broad. It is especially suited for embedded Internet appliances that require fast time-to-market, low-system cost, and Internet connectivity to household/commercial LANs and WANs. It also serves the needs of the industrial control, office automation, and Web management markets as well as modem controller, high-performance electronic games, and personal digital assistant (PDA) applications.
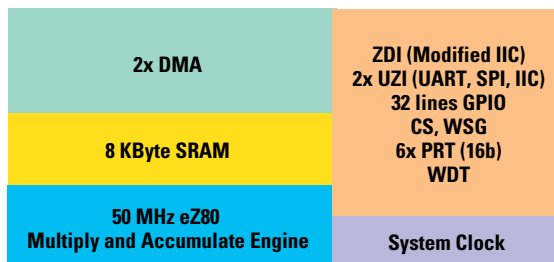
eZ80 Webserver

eZ80190 Silicon Features

- 50 MHz processor
- Multiply and accumulate engine
- 16 MByte linear addressing
- 3.3V operation
- 2 DMA channels
- Universal ZiLOG Interface (selectable UART, IIC, SPI)
- 6 PRTs with prescalers
- 8kB SRAM
- 32-bit GPIO with interrupt support
- On-chip oscillator
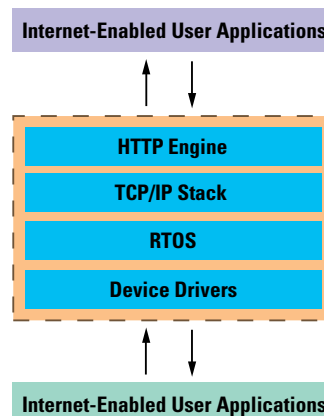- Optimized pipeline architecture

eZ80190 Software Features

- Full protocol support:

IP	RACP	DHCP/BOOTP	SNMP
TCP	ICMP	IGMP	Telnet
UDP	PPP	SLIP	
ARP	HTTP 1.1	SMTP	

- Configurable utility
- HTML to C conversion utility
- Ethernet drivers
- C-compiler
- RTOS
- Ethernet reference design

eZ80190 Block Diagram

| 2x DMA | ZDI (Modified IIC)
2x UZI (UART, SPI, IIC)
32 lines GPIO
CS, WSG
6x PRT (16b)
WDT |
| 8 KByte SRAM | |
| 50 MHz eZ80
Multiply and Accumulate Engine | System Clock |

eZ80190 Protocol Stack Diagram

Internet-Enabled User Applications

- HTTP Engine
- TCP/IP Stack
- RTOS
- Device Drivers

Internet-Enabled User Applications

Ordering Information

Item	Part Number	Description
eZ80 Webserver	EZ80190AZ050SC	100 VQFP, 50 MHz, standard temperature
	EZ80190AZ050EC	100 VQFP, 50 MHz, extended temperature
Evaluation Kit	EZ801900100ZCO	Evaluation board with support documentation
ZPAK	ZDI23200ZPK	Emulation support
C-Compiler	EZ80ZDS0100ZCC	C-compiler for C-source level debugging
Developer's Kit	EZ801900200ZCO	Complete kit with C-compiler, evaluation kit, and ZPAK

For additional support documentation: www.zilog.com/eZ80