Crimzon® Infrared Microcontrollers

ZLR16300 ROM MCU Family

Product Brief

PB012110-0208

Overview

Zilog's ZLR16300 is a ROM-based member of the Crimzon® MCU family of infrared microcontrollers. With 1 KB to 16 KB of program memory and 237 bytes of general-purpose RAM, Zilog's CMOS microcontrollers offer fast executing, efficient use of memory, sophisticated interrupts, input/output bit manipulation capabilities, automated pulse generation/reception, and internal pull-up transistors. This family of devices is compatible with Zilog's ZLP32300 OTP devices.

Product Block Diagram

<table>
<tr><td>Watchdog Timer</td><td>Up to 16 KB ROM</td><td>Power-On Reset</td></tr>
<tr><td>T8 Timer Capture & Transmit</td><td>Z8® Core</td><td>2 Compar-ators</td></tr>
<tr><td>T16 Timer Capture & Transmit</td><td colspan="2">Low Battery Voltage Detection</td></tr>
<tr><td>237 Byte RAM</td><td colspan="2">High Battery Voltage Detection</td></tr>
<tr><td>Port 0 8 I/O</td><td>Port 2 8 I/O</td><td>Port 3 8 I/O</td></tr>
</table>

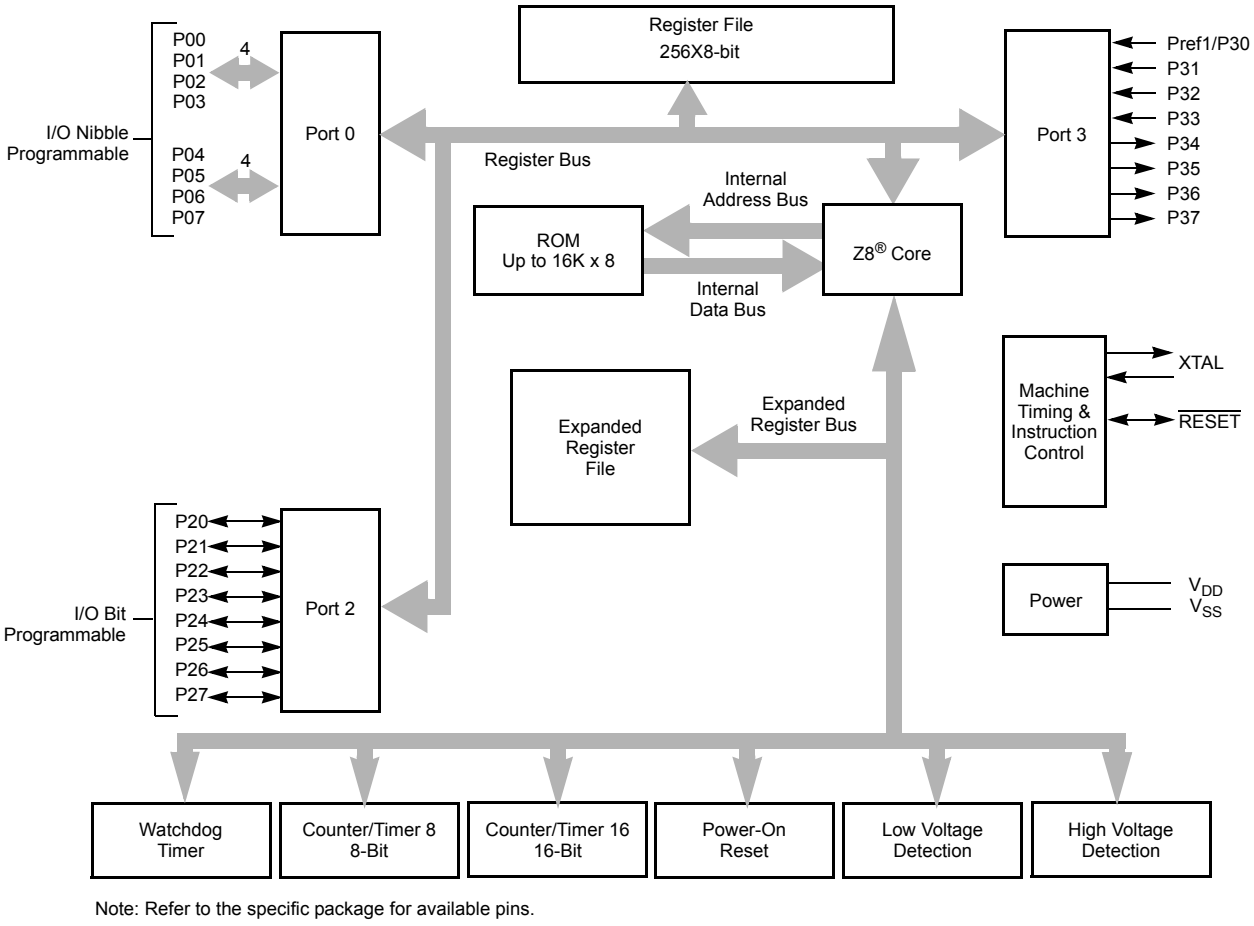
Features

ZLR16300 features include:

- 2.0–3.6 V operation
- Low power consumption–5 mW (typical)
- Three standby modes
  - STOP—1.3 µA (typical)
  - HALT—0.5 mA (typical)
  - Low voltage
- Special architecture to automate both generation and reception of complex pulses or signals:
  - One programmable 8-bit counter/timer with two capture registers and two load registers
  - One programmable 16-bit counter/timer with one 16-bit capture register pair and one 16-bit load register pair
  - Programmable input glitch filter for pulse reception
- Six priority interrupts
  - Three external
  - Two assigned to counter/timers
  - One low-voltage detection interrupt
- High and Low voltage detection flags
- Programmable Watchdog Timer (WDT)
- Power-On Reset (POR) circuits
- Two independent comparators with programmable interrupt polarity
- Mask selectable pull-up transistors on ports 0, 2, and 3
- Programmable mask options
  - Port 0: 0–3 pull-ups
  - Port 0: 4–7 pull-ups
  - Port 2: 0–7 pull-ups
  - Port 3: 0–3 pull-ups
  - WDT enabled at POR

Architecture

Figure 1 displays the ZLR16300 architecture.



Note: Refer to the specific package for available pins.

Figure 1. Architectural Diagram

Ordering Information

Order the required debug tools from Zilog using the following part details. For more information on ordering, please consult your local Zilog sales offices. The Zilog website (www.zilog.com) lists all the regional offices and provides additional product information.

Part Number	Description
ZLR16300H2816G	28-pin SSOP 16 KB ROM
ZLR16300P2816G	28-pin PDIP 16 KB ROM
ZLR16300S2816G	28-pin SOIC 16 KB ROM
ZLR16300H2016G	20-pin SSOP 16 KB ROM
ZLR16300P2016G	20-pin PDIP 16 KB ROM
ZLR16300S2016G	20-pin SOIC 16 KB ROM
ZLR16300H2808G	28-pin SSOP 8 KB ROM
ZLR16300P2808G	28-pin PDIP 8 KB ROM
ZLR16300S2808G	28-pin SOIC 8 KB ROM
ZLR16300H2008G	20-pin SSOP 8 KB ROM
ZLR16300P2008G	20-pin PDIP 8 KB ROM
ZLR16300S2008G	20-pin SOIC 8 KB ROM
ZLR16300H2804G	28-pin SSOP 4 KB ROM
ZLR16300P2804G	28-pin PDIP 4 KB ROM
ZLR16300S2804G	28-pin SOIC 4 KB ROM
ZLR16300H2004G	20-pin SSOP 4 KB ROM
ZLR16300P2004G	20-pin PDIP 4 KB ROM
ZLR16300S2004G	20-pin SOIC 4 KB ROM
ZLR16300H2802G	28-pin SSOP 2 KB ROM
ZLR16300P2802G	28-pin PDIP 2 KB ROM
ZLR16300S2802G	28-pin SOIC 2 KB ROM
ZLR16300H2002G	20-pin SSOP 2 KB ROM
ZLR16300P2002G	20-pin PDIP 2 KB ROM
ZLR16300S2002G	20-pin SOIC 2 KB ROM
ZLR16300H2801G	28-pin SSOP 1 KB ROM
ZLR16300P2801G	28-pin PDIP 1 KB ROM
ZLR16300S2801G	28-pin SOIC 1 KB ROM
ZLR16300H2001G	20-pin SSOP 1 KB ROM
ZLR16300P2001G	20-pin PDIP 1 KB ROM
ZLR16300S2001G	20-pin SOIC 1 KB ROM

Development Kit Part Numbers	
ZLP128ICE01ZEMG*	In-Circuit Emulator
Note: *This kit has been replaced by an improved version, ZCRMZNICE01ZEMG.	
ZCRMZNICE01ZEMG	Crimzon In-Circuit Emulator
ZCRMZNICE01ZACG	20-Pin Accessory Kit
ZCRMZNICE02ZACG	40/48-Pin Accessory Kit
ZCRMZN00100KITG	Crimzon IR Development Kit

Warning: DO NOT USE IN LIFE SUPPORT

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As used herein

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