



ZLP32300 OTP MCU Family

Product Brief

PB012011-0208



Product Block Diagram

Watchdog Timer	Up to 32 KB OTP	Power-on Reset
T8 Timer Capture & Transmit	Z8® Core	Two Comparators
T16 Timer Capture & Transmit	Low-Battery Voltage Detection	
237 B RAM	High-Battery Voltage Detection	
Port 0 8 I/O	Port 1 8 I/O	Port 2 8 I/O
		Port 3 8 I/O

Features

Key features of Zilog's ZLP32300 OTP MCU include:

- 2.0–3.6 V operation
- Low-power consumption—6 mW (typical)
- Three standby modes:
 - STOP—2 μ A (typical)
 - HALT—0.8 mA (typical)
 - Low-voltage reset
- Special architecture to automate generation and reception of complex pulses or signals:
 - One programmable 8-bit counter/timer with two capture registers and two load registers

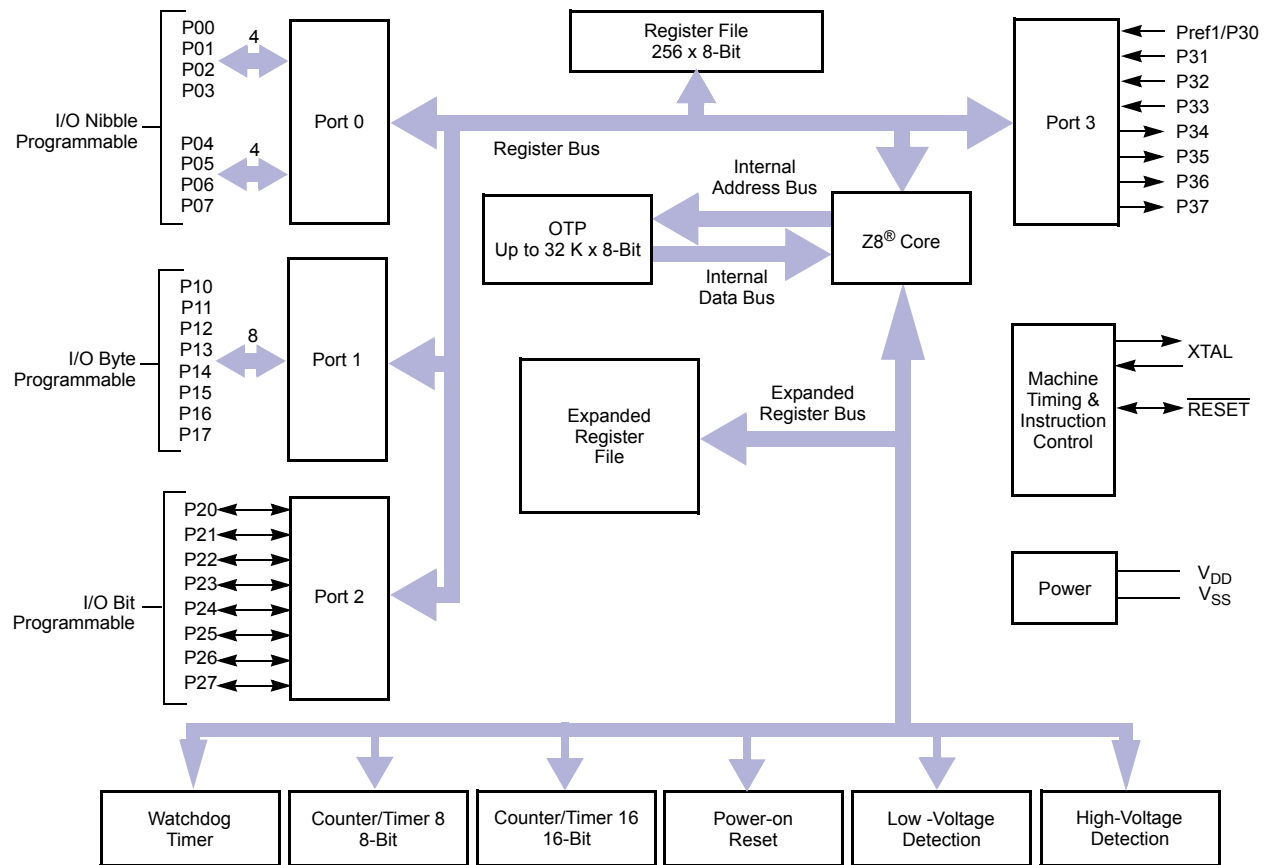
- One programmable 16-bit counter/timer with one capture register and two reload registers
- Programmable input glitch filter for pulse reception
- Six priority interrupts:
 - Three external
 - Two assigned to counter/timers
 - One low-voltage detection interrupt
- Low-voltage and high-voltage detection flags
- Programmable Watchdog Timer (WDT)
- Power-on reset (POR) circuits
- Two independent comparators with programmable interrupt polarity
- Programmable EPROM options:
 - Port 0: 0–3 pull-up transistors
 - Port 0: 4–7 pull-up transistors
 - Port 1: 0–3 pull-up transistors
 - Port 1: 4–7 pull-up transistors
 - Port 2: 0–7 pull-up transistors
 - EPROM protection
 - WDT enabled at POR

General Description

The ZLP32300 MCU is an OTP-based member of the Crimzon MCU family of infrared microcontrollers. With 237 B of general-purpose RAM and up to 32 KB of OTP, 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. Compatible with ZLR16300 and ZLR32300 mask ROM families.

Block Diagram

Figure 1 displays the ZLP32300 OTP MCU functional block diagram.



Note: Refer to the specific package for available pins.

Figure 1. ZLP32300 OTP MCU Functional Block Diagram

Pin-Outs

Figure 2 displays the pins for the 20-pin ZLP32300 OTP MCU.

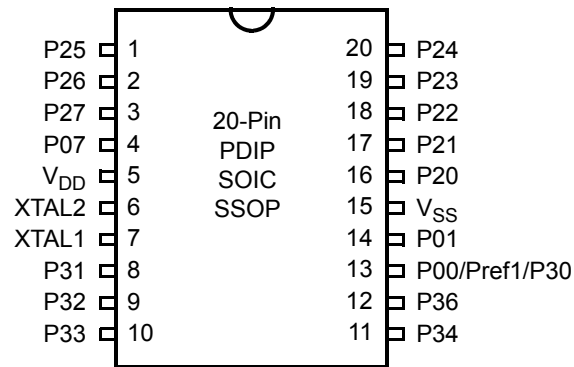


Figure 2. 20-Pin DIP/SOIC/SSOP Pin Assignment

Figure 3 displays the pins for the 28-pin ZLP32300 OTP MCU.

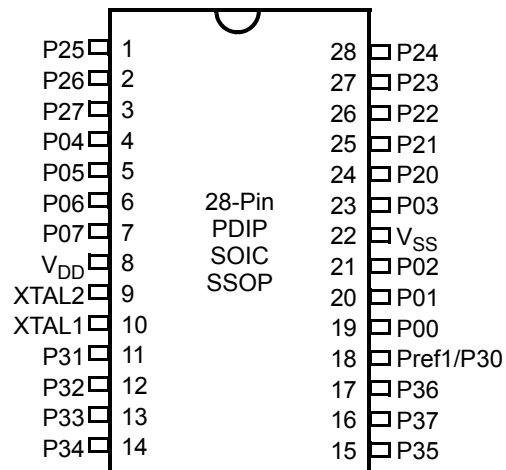


Figure 3. 28-Pin DIP/SOIC/SSOP Pin Assignment

Figure 4 displays the 40-pin version of the ZLP32300 OTP MCU.

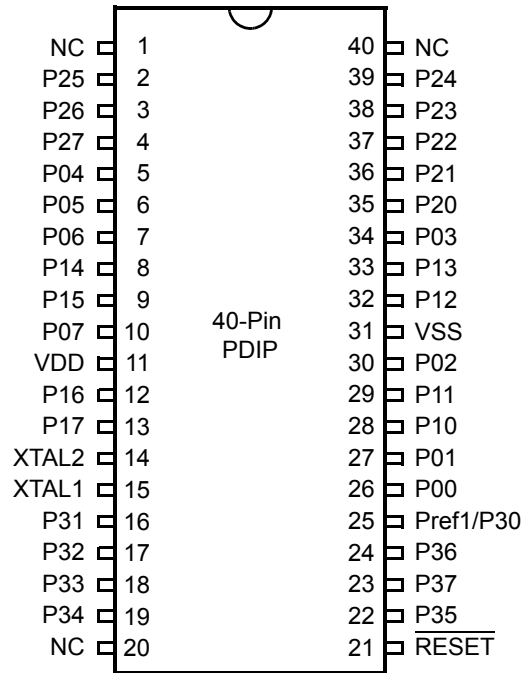


Figure 4. 40-Pin PDIP Pin Assignment

Figure 5 displays the 48-pin version of the ZLP32300 OTP MCU.

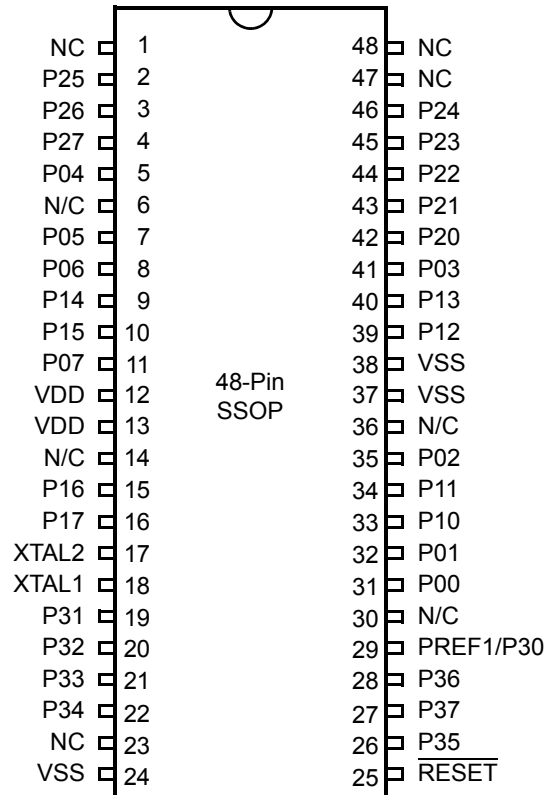


Figure 5. 48-Pin SSOP Assignment

Ordering Information

You can order ZLP32300 OTP MCU products from Zilog®, using the part numbers provided in the table below. For more information on ordering, please consult your local Zilog sales office. The Zilog website (www.zilog.com) lists all regional offices, as well as additional ZLP32300 OTP MCU Series product information.

Part Number	Description	Part Number	Description
ZLP32300H4832	48-pin SSOP 32 K OTP	ZLP32300H4808	48-pin SSOP 8 K OTP
ZLP32300P4032	40-pin PDIP 32 K OTP	ZLP32300P4008	40-pin PDIP 8 K OTP
ZLP32300H2832	28-pin SSOP 32 K OTP	ZLP32300H2808	28-pin SSOP 8 K OTP
ZLP32300P2832	28-pin PDIP 32 K OTP	ZLP32300P2808	28-pin PDIP 8 K OTP
ZLP32300S2832	28-pin SOIC 32 K OTP	ZLP32300S2808	28-pin SOIC 8 K OTP
ZLP32300H2032	20-pin SSOP 32 K OTP	ZLP32300H2008	20-pin SSOP 8 K OTP
ZLP32300P2032	20-pin PDIP 32 K OTP	ZLP32300P2008	20-pin PDIP 8 K OTP
ZLP32300S2032	20-pin SOIC 32 K OTP	ZLP32300S2008	20-pin SOIC 8 K OTP
ZLP32300H4816	48-pin SSOP 16 K OTP	ZLP323ICE01ZAC* 40-PDIP/48-SSOP Accessory Kit	
ZLP32300P4016	40-pin PDIP 16 K OTP		
ZLP32300H2816	28-pin SSOP 16 K OTP		
ZLP32300P2816	28-pin PDIP 16 K OTP	Note: *This kit has been replaced by an improved version, ZCRMZNICE02ZACG.	
ZLP32300S2816	28-pin SOIC 16 K OTP		
ZLP32300H2016	20-pin SSOP 16 K OTP		
ZLP32300P2016	20-pin PDIP 16 K OTP		
ZLP32300S2016	20-pin SOIC 16 K OTP		

Development Tools

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



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ZiLOG:

<u>ZLP32300H2808C</u>	<u>ZLP32300S2008C</u>	<u>ZLP32300H4832C</u>	<u>ZLP32300H2032C</u>	<u>ZLP32300S2832C</u>	<u>ZLP32300P4016C</u>
<u>ZLP32300S2816C</u>	<u>ZLP32300P2832C</u>	<u>ZLP32300H2016C</u>	<u>ZLP32300S2808C</u>	<u>ZLP32300S2032C</u>	<u>ZLP32300H4808C</u>
<u>ZLP32300H2816C</u>	<u>ZLP32300H2832C</u>	<u>ZLP32300S2016C</u>	<u>ZLP32300P2808C</u>	<u>ZLP32300H4816C</u>	<u>ZLP32300P2816C</u>
<u>ZLP32300H2008C</u>	<u>ZLP32300P4008C</u>	<u>ZLP32300P4032C</u>	<u>ZLP32300P2032C</u>	<u>ZLP32300P2008C</u>	<u>ZLP32300P2016C</u>
<u>ZLP32300H2832G</u>	<u>ZLP32300H2816G</u>	<u>ZLP32300H2808G</u>	<u>ZLP32300H4816G</u>	<u>ZLP32300P2816G</u>	<u>ZLP32300S2008G</u>
<u>ZLP32300P2832G</u>	<u>ZLP32300H4832G</u>	<u>ZLP32300S2032G</u>	<u>ZLP32300P2808G</u>	<u>ZLP32300H4808G</u>	<u>ZLP32300S2016G</u>
<u>ZLP32300P4032G</u>	<u>ZLP32300S2816G</u>	<u>ZLP32300S2832G</u>	<u>ZLP32300P4016G</u>	<u>ZLP32300H2008G</u>	<u>ZLP32300H2016G</u>
<u>ZLP32300S2808G</u>	<u>ZLP32300P4008G</u>	<u>ZLP32300H2032G</u>	<u>ZLP32300P2008G</u>	<u>ZLP32300P2032G</u>	<u>ZLP32300P2016G</u>