Eclypse Z7 Development Board

410-393

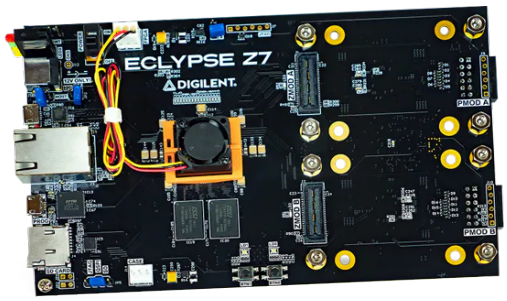
Product Overview

08-16-2022

For the most up-to-date information, visit www.mouser.com or the supplier's website.

Description

Digilent Eclypse Z7 Development Board is a powerful prototyping platform featuring the Xilinx Zynq®-7000 All Programmable System-on-Chip (APSoC). This board is a perfect platform for research and rapid prototyping of test and measurement applications, software-defined radio, ultrasound, and other medical devices. The Eclypse Z7 includes two Zmod SYZYGY™ interface ports, enabling high-speed modular systems.



The software supports a variety of common programming languages, including Python and C/C++. Digilent offers fully open and customizable hardware designs, Linux images, and Linux software applications.

Features

- Zynq-7000 APSoC (XC7Z020-1CLG484C):
  - 667MHz dual-core Cortex-A9 processor
  - DDR3L memory controller with 8 DMA channels and 4 high-performance AXI3 slave ports
  - 1G Ethernet, USB 2.0, SDIO high-bandwidth peripheral controllers
  - SPI, UART, CAN, I^2C low-bandwidth peripheral controllers
  - Programmable from JTAG, quad-SPI flash, and microSD card
  - Programmable logic equivalent to Artix-7 FPGA
- Memory:
  - 1GB DDR3L with 32-bit bus @ 1066MT/s
  - 16MB quad-SPI flash with factory programmed 128-bit random number and 48-bit globally unique EUI-48/64™ compatible identifier
  - MicroSD card slot
- USB and Ethernet:
  - Gigabit Ethernet PHY
  - USB-JTAG programming circuitry
  - USB-UART bridge
  - USB micro-AB port with USB 2.0 PHY with host/device/OTG capabilities

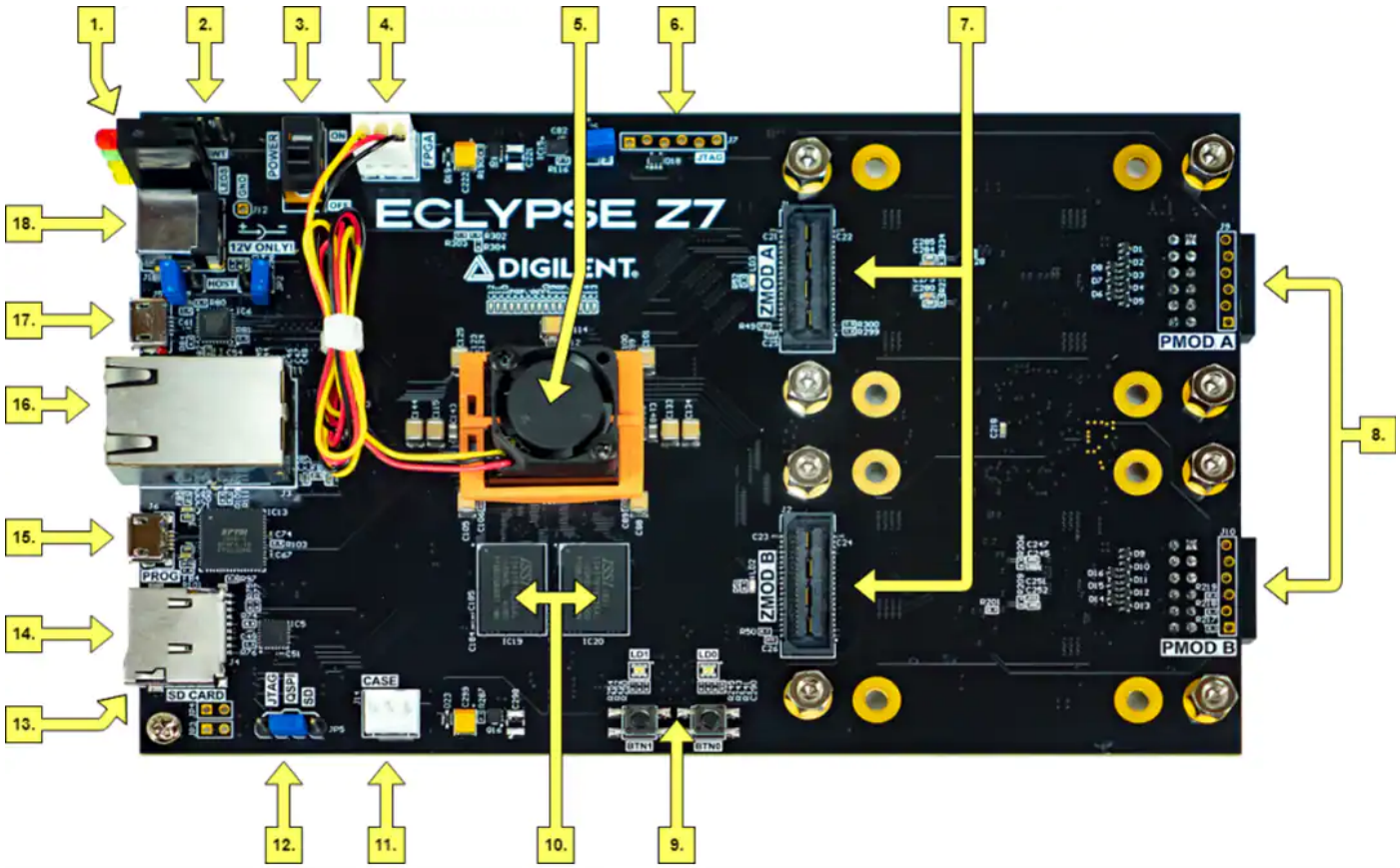
Features

- Zmod ports:
  - 2 ports following the SYZYGY standard interface specification
  - Compatible with a variety of SYZYGY pods, allowing for a wide variety of applications
  - Dedicated differential clocks for input and output
  - 8 differential I/Os per port
  - 16 single-ended I/Os per port
  - DNA interfaces connected to platform MCU allowing for various auto-negotiated power supply configurations
- Pmod ports:
  - 2 twelve-pin ports for a total of 16 FPGA-connected I/Os
  - High-speed voltage translation and protection circuitry
- User GPIO:
  - 2 push-buttons
  - 2 RGB LEDs
- Power:
  - Powered from external 12V 5A supply
  - Platform MCU for configuration of adjustable power supplies and temperature management
- 99mm x 160mm board dimensions

Applications

- Instrumentations
- RF communications
- Software-defined radio

Board Overview



Callout #	Description	Callout #	Description	Callout #	Description
1	Board Indicator LEDs (LD4)	7	SYZYGY Ports	13	Reset Buttons (underside of board)
2	Header for Case Power Switch	8	Pmod Ports	14	microSD Card Slot
3	Power Switch	9	User Buttons and LEDs	15	USB JTAG/UART Port
4	FPGA Fan Header	10	DDR3L Memory	16	Ethernet Port
5	Zynq-7000 SoC and FPGA Fan	11	Case Fan Header	17	USB AB Host/Device/OTG Port
6	External JTAG Port	12	Programming Mode Select Jumper	18	Power Supply Connector

Mouser Part Number

View Part

To learn more, visit https://www.mouser.com/new/digilent/digilent-eclypseZ7-dev-board/