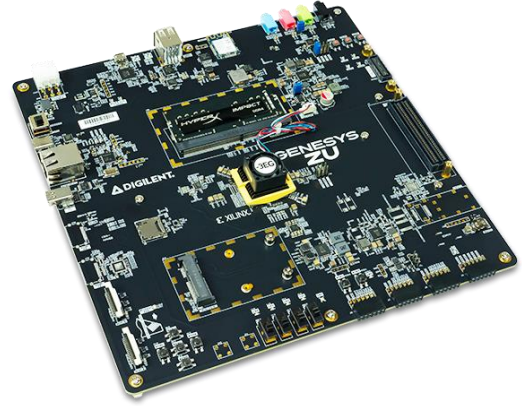| NEW PRODUCT	DIGILENT® A National Instruments Company	Release Year 2019	Released Quarter Q4
Digilent Part Number 410-383-3EG		Category FPGA	

OVERVIEW

Product Name: Genesys ZU-3EG: Zynq Ultrascale+ MPSoC Development Board

Product Subtitle: A powerful Zynq UltraScale+ 3EG MPSoC development board loaded with peripherals and a wide hardware ecosystem of add-on modules

Product Description: The Genesys ZU-3EG is a standalone board designed with optimized specs, multimedia and network connectivity interfaces, with a robust documentation library to quickly get you started on AI, research, aerospace/defense, cloud computing, and embedded vision applications.

The Xilinx Zynq UltraScale+ MPSoC at the heart of the Genesys ZU-3EG offers heterogenous computing with its ARM A-53 APU and ARM Mali-400 MP2 GPU to go along with a substantial memory interface. A full-featured Type-C connector with USB 3.0 & USB 2.0, Dual-Role-Data and Dual-Role-Power, and integrated gigabit transceivers bringing support for DDR4, USB Type-C 3.1, PCIe, SATA, and DisplayPort surround the chip. The Genesys ZU-3EG supports multiple camera inputs, onboard audio codec, 4K video, and WiFi and 1G Ethernet in a Linux-based platform, rounding out a truly unique and all-encompassing development kit that excels in 5G, cellular radio (WWAN), SSD, wireless radio infrastructure, and video applications like surveillance, streaming, and encoding.

The Genesys ZU-3EG contains Digilent Pmod and high-speed SYZYGY-compatible Zmod ports to allow for flexible expansion and access to high speed, high bandwidth I/O for software defined radio, ultrasound, and a wide variety of other user-defined data acquisition or signal processing systems.

Key Search Terms: Zynq Ultrascale+, XCZU3EG-1SFVC784E, AI, embedded vision,4K video, 5G, wireless, WiFi, Ethernet, cellular, Machine learning, ARM, Cortex	**Video Link:** N/A

Datasheet: https://reference.digilentinc.com/reference/pmod/pmoddpg1/reference-manual

Demo / Project Links:
- Installing Vivado, Xilinx SDK, and Digilent Board Files
    - Note: When installing Vivado, make sure to include support for Zynq Ultrascale+ parts.
    - Note: Digilent projects for the Genesys ZU are currently only supported in Vivado 2019.1.
- Getting Started with Vivado IP Integrator
    - Note: This guide was originally written for non-Ultrascale Zynq boards and boards using Microblaze. The flow for Ultrascale Zynq is largely the same as non-Ultrascale Zynq. The "Zynq Ultrascale+ MPSoC" IP core should be used in place of the "ZYNQ7 Processing System"
- Genesys ZU Out-of-Box Vivado Project
- Genesys ZU Out-of-Box Petalinux Project

NEW PRODUCT	![Digilent] DIGILENT® *A National Instruments Company*	*Release Year* 2019	*Released Quarter* Q4
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Features

- XCZU3EG-1SFVC784E (with heat sink and fan)
  - Quad-core ARM® Cortex-A53 Application Processing Unit
  - Dual-core ARM® Cortex-R5 Real-Time Processing Unit
  - Mali-400 MP2 graphics processing unit
  - 154K logic cells
- Memory:
  - 4 GiB DDR4 SODIMM module
  - ISSI 256 MB SNOR Flash
  - MicroSD Card Slot
- Peripheral connectivity:
  - USB Type-C 3.1 Gen1 Dual-Role Device
  - MiniPCIe / mSATA dual slot
  - USB 2.0 Host
- Network connectivity:
  - 2.4 GHz on-board WiFi
  - 1G w/IEEE 1588 Ethernet
  - SIM card slot
  - WLAN/WWAN/LoRa: option - MiniPCIe
- Multimedia:
  - 1.2a Dual-Lane Display Port
  - 2x Pcam Dual-Lane
  - Audio Codec
- Expansion:
  - 1x FMC expansion connector
  - 1x SYZYGY port
  - 4x Pmod ports
- GPIO: LED, Buttons, Switches
- Kits include
  - Power Supply, Desktop, 12V, 8A, w/PCIE Connector
  - IEC cable, US, 1.2 meter
  - IEC cable, EU, 1.2 meter
  - USB A TO MICRO B CABLE
  - Cable, USB, A to Type C, 15CM
  - JTAG HS1
  - Voucher for the Xilinx MIPI CSI-2 IP cores

Product Image

Image Links:

- https://drive.google.com/open?id=1oD-Gr3UJ2UBiTa7EuLcRv9t-nTndczq6 (Oblique)
- https://drive.google.com/open?id=12isipAvuLBOM6qhT4tA5dJBs8lwI3Goj (Top)
- https://drive.google.com/open?id=1lmCZeTtmt2EnMeP7kHCl9NbHJK8gpN1A (Bottom)

3 Target Applications

- Machine Vision
- Medical Endoscopy
- Sensor Processing & Fusion

Related Products

- Zmod ADC 1410 (410-396)
- Zmod DAC 1411 (410-397)
- PCAM 5C (410-358)
- All Pmods