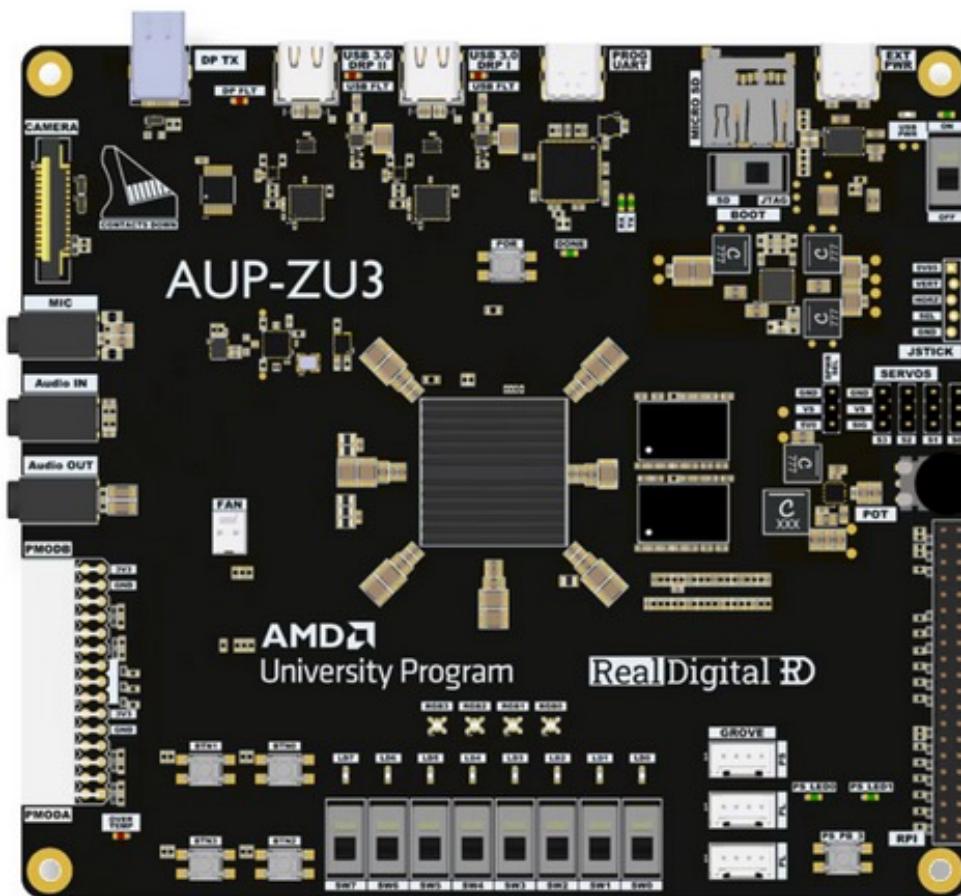


# AMD Zynq UltraScale MPSoC for Embedded Systems Design



<https://www.amd.com/en/corporate/university-program/aup-boards/realdigital-aup-zu3.html>



Computer System Design Lab

*Boards courtesy of AMD University Program*

# UltraScale+ FPGA



## Zynq™ UltraScale+™ XCZU3EG-2SFVC784E Features

- 64-bit Quadcore Arm Cortex-A53 Processors
- Dualcore ARM Cortex-R5 Real-Time Processors
- Arm Mali™-400MP Graphics Processor
- Separate 32 KB L1 caches for instruction and data
- Two-stage (hypervisor and guest stages) memory management unit (MMU)
- 1 MB L2 cache in CCI coherency domain.
- Accelerator coherency port (ACP).
- 128-bit AXI coherency extension (ACE) master interface to CCI
- 256 KB On-Chip Memory
- 2x UART, 2x CAN 2.0B, 2x I2C, 2x SPI, 4x 32b GPIO
- 2x USB 2.0 (OTG), 2x Tri-mode Gigabit Ethernet, 2x SD/SDIO on-chip peripherals
- 71K CLB LUTs
- 7.6 Mb Block RAM
- 360 DSP Slices
- Three clock management tiles, each with phase-locked loop (PLL)
- Internal clock speeds exceeding 450MHz
- 2x 12 bit, 1 MSPS On-chip analog-to-digital converter (XADC)



<https://www.amd.com/en/corporate/university-program/aup-boards/realdigital-aup-zu3.html>

The screenshot shows a web browser window with the URL <https://www.amd.com/en/corporate/university-program/aup-boards/realdigital-aup-zu3.html> in the address bar. The page content includes two main sections: 'Vivado Design Suite' and 'Vitis Unified Platform'. Each section features a product image, a brief description, and a 'Download' link.

**Vivado Design Suite**  
Vivado™ ML is the AMD software suite for HDL and system-level design. Vivado includes a HDL simulator, IP Integrator for system-level integration, and tools for synthesis, implementation, bitstream generation and programming of AMD platforms.  
Vivado Standard edition is a device limited version of the full Vivado enterprise edition and is free-of-charge and does not require a separate license. Licenses for the Vivado Enterprise edition which includes support for all AMD devices are available to universities from the [AUP donation program](#).  
You can select the free Vivado standard edition or the full Enterprise edition when you run the installer.  
[Download Vivado Installer >](#)

**Vitis Unified Platform**  
Vitis™ is the AMD design software for targeting Alveo acceleration cards. It also includes software development tools for AMD embedded devices including the Zynq families. Vitis includes Vitis HLS, a C-based High-Level-Synthesis design tool that can be used standalone or from within Vitis for creating hardware accelerated kernel. Vitis is free of charge and does not require a separate license.  
[Download Vitis Installer >](#)



# Sign up for University Program and Support

## Support & Resources

### Documentation & Designs

Visit the RealDigital webpage for product support & resources

[Documentation](#) 

### Enroll in the AMD University Program

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### PYNQ Community Support Forum

Visit the online PYNQ community support forum to share ideas.

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