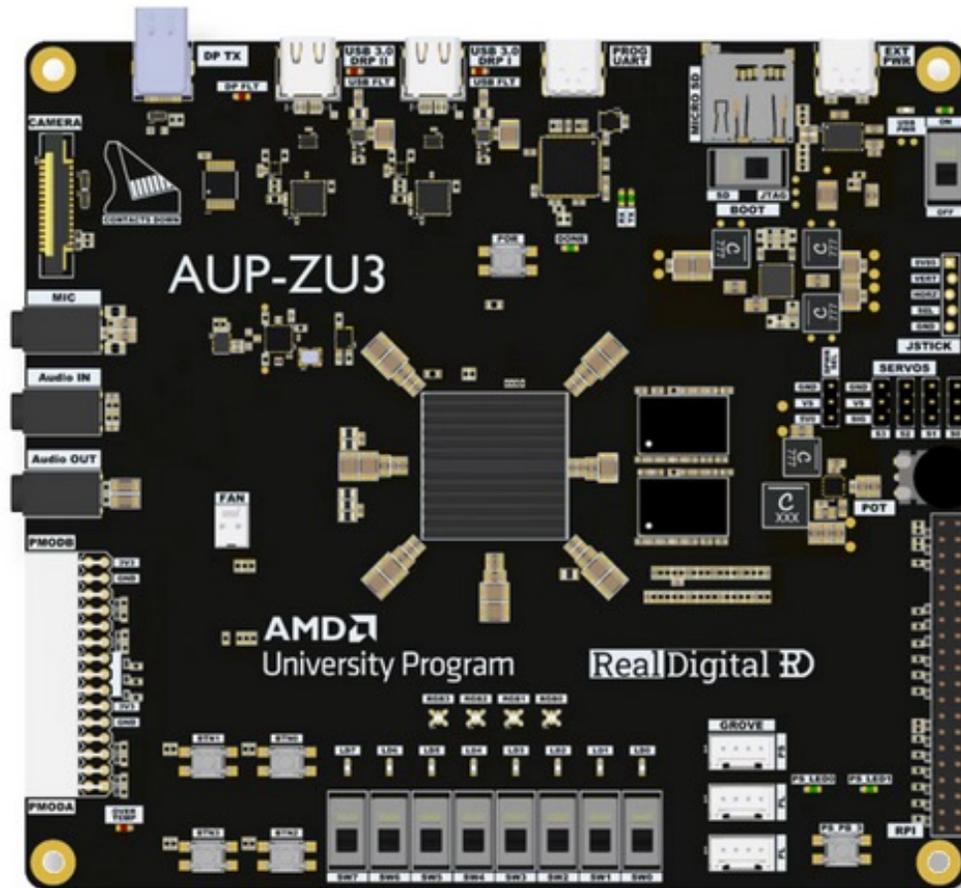


# AMD Zynq UltraScale MPSoC for Embedded Systems Design



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



# UltraScale+ FPGA

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## 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)



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Overview Specifications Hardware Tools & IP Support & Resources

**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

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## Support & Resources

### Documentation & Designs

Visit the RealDigital webpage for product support & resources

[Documentation](#) 

### Enroll in the AMD University Program

The AMD University Program strives to empower academics with AMD technology to enhance teaching and learning experiences and advance state-of-the-art research.

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