



## Vision

Empower academics with AMD technology to enhance teaching and learning experiences and advance state-of-the-art research.



## **What We Offer**



Research Programs



Donation Program



Teaching Resources



**Training** 



Academic Solutions



**Support** 

## **Academic and Research Community**



#### **Students**

Affordable access to AMD products

Build industry relevant skills and knowledge with AMD products



#### **Educators**

University resources and support

Deliver best-in-class teaching with AMD educational resources and support





# ENABLING NOVEL RESEARCH IN HETEROGENEOUS COMPUTE ACCELERATION FOR HPC

AMD THACC

Heterogeneous Accelerated Compute Clusters

HACCS: Heterogeneous Accelerated Compute Clusters Focus on Systems Research

Remote access to AMD Acceleration hardware

HACC user group meetings

Access to AMD researchers

Collaboration opportunities















www.amd-haccs.io





## **HACC Adaptive Computing Hardware**



- HACC hardware consists of:
  - Compute and Alveo™ nodes (initially U250 and U280 with HBM)
  - Latest heterogeneous nodes (SMC 4124GS) include:
    - EPYC™ 3rd generation CPUs
    - AMD Instinct™ MI210 GPUs
    - Alveo U55C FPGA with HBM
    - VCK5000 ACAP/Versal with AIEs
    - Run-time via AMD ROCm™, XRT
    - SW development via HIP, Vitis, frameworks
  - 100G and 200G network









- Community hub for researchers
  - Support from in-house AMD research groups
  - Reproducible results & experiments



# ACCELERATING SCIENCE IN THE PUBLIC INTEREST

AMD Al & HPC Cluster | Compute Cluster

AI & High Performance

## **AMD AI & HPC Cluster**

Slurm cluster comprised of AMD EPYC CPUs and AMD Instinct GPUs (MI210, MI250, MI300X, MI325X) connected with a high-speed GPU-aware interconnect.

- ROCm platform for running Al & HPC workloads on Instinct
  - Heterogeneous-Computing Interface for Portability (HIP)
    - Familiar CUDA-like syntax (e.g., hipMalloc, hipMemcpy) to develop portable source code for AMD and NVIDIA accelerators
    - hipify tools for automatic translation from CUDA to HIP
  - Profiling/debugging tools, GPU-accelerated libraries, etc.
- Parallel file system for IO and persistent storage
- ROCm-enabled PyTorch
  - Runs out of the box on ROCm with no code changes





## Need access to more compute nodes or latest generation GPUs?

Node-hour allocations available to academic researchers and educators

- PIs must be academic faculty or postdocs
- Application-level work (e.g., no sudo)

#### Submit Proposal Here



https://www.amd.com/en/forms/registration/amd-hpcfund-research-accelerator.html

## **AMD Developer Cloud**



#### **Test Drive AMD Instinct GPUs Instantly**

Access high-performance AMD Instinct™ MI300X GPUs through the AMD Developer Cloud — the ideal platform for developers and open-source contributors building and optimizing AI, machine learning, and HPC workloads on AMD hardware.

Sign Up 🖸

#### **Features**



#### **Access to Powerful Computing Resources**

Provides easy access to AMD GPUs enabling developers to run computationally intensive tasks without investing in dedicated hardware right away.



#### Pre-Installed Docker Containers and Flexibility

Docker containers preloaded with popular AI software, minimizing setup time, while giving developers the flexibility to customize code to fit their specific needs.



#### Zero Setup with Cloud-Based Convenience

A Jupyter Notebook environment running inside containers available upon VM launch, with no need for local setup—developers can easily write and run Python code right in the browser.



Apply now





AMDIR

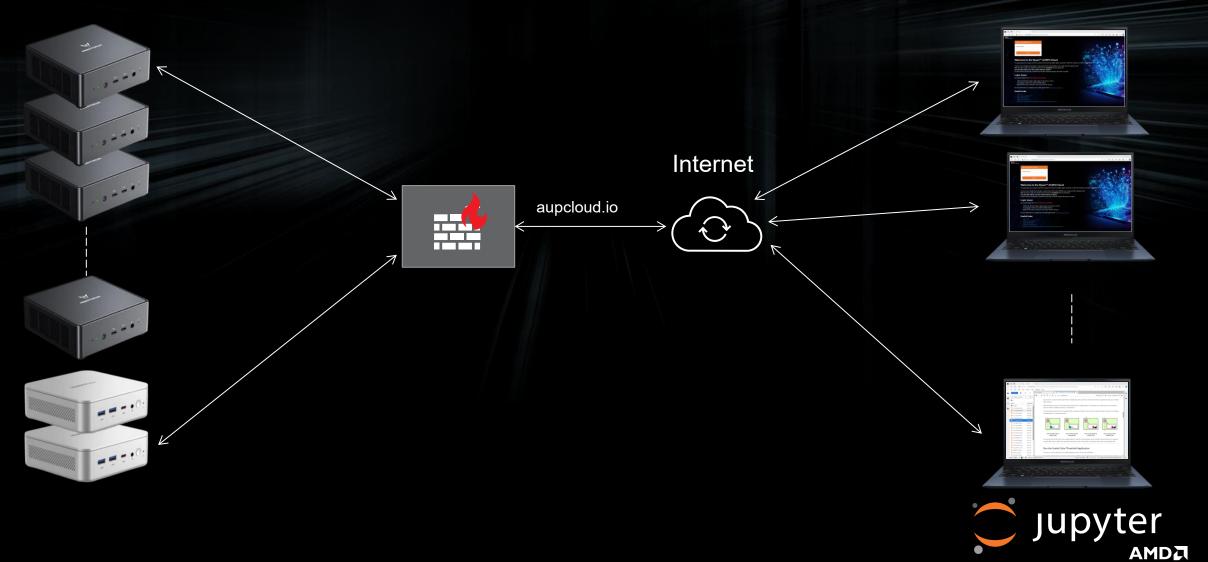


# Providing the Next Level of NPU, CPU, and GPU Architectures for Next-Gen Al PC Experiences

Next-Gen GPU AMDA RDNA 3.5 3rd Generation **Next-Gen CPU** AMD Ryzen™ Al Best in class Al platform **Next-Gen NPU** XDNA 2



## **Enabling AI PC Remotely**

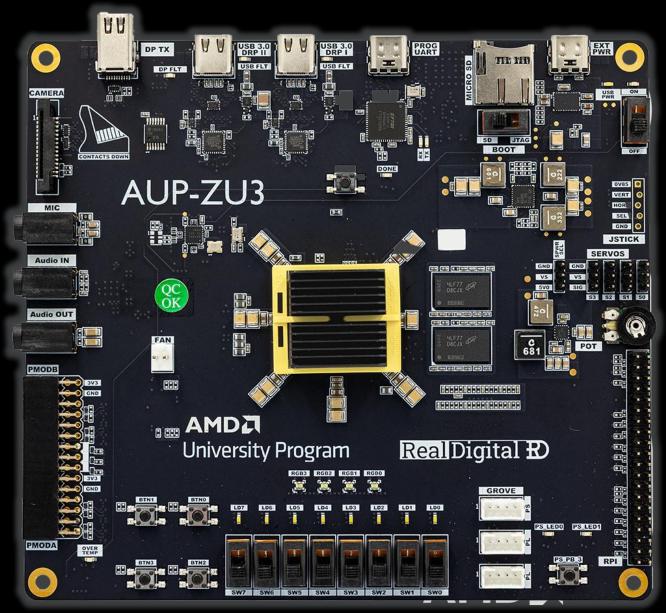


together we advance\_

## **AUP-ZU3**

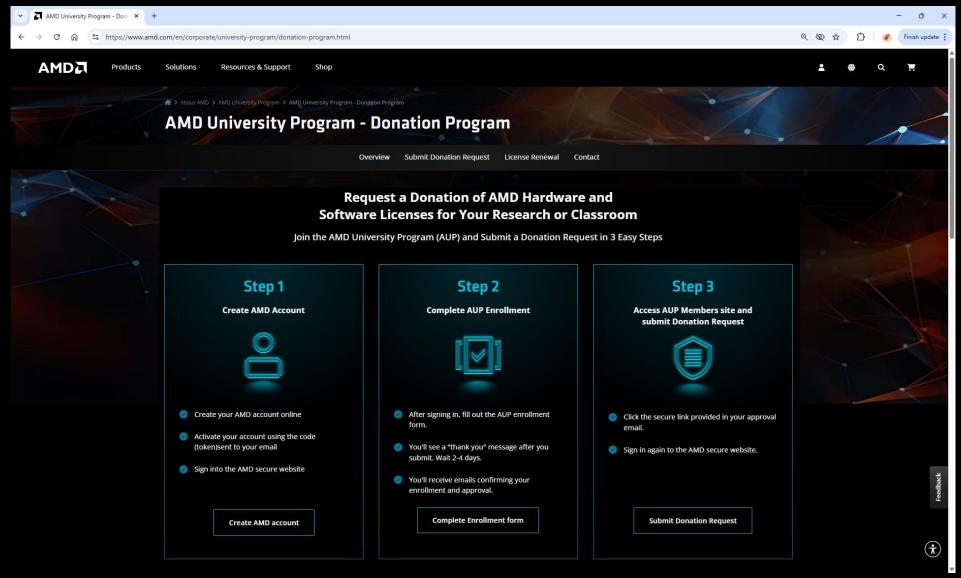


PYNQ



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## Request a donation: www.amd.com/aup





## **AMD Partners**

## **University Program**

Leads interaction with university community

Coordinates collaborations across AMD partners

Facilitates research opportunities



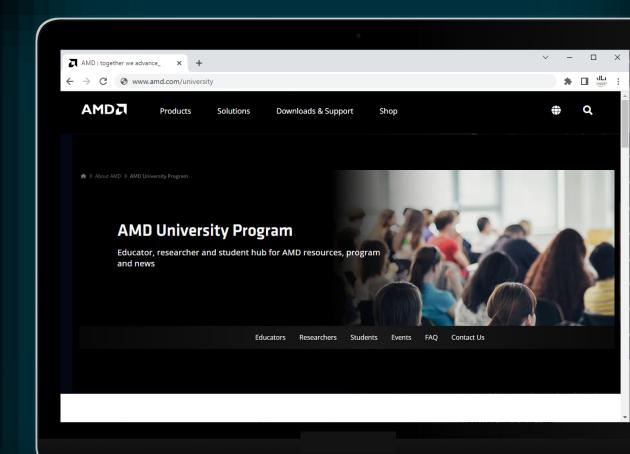
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- Submit a donation request
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