

PCIe AI Edge accelerator card



The Axelera PCIe AI Edge accelerator card is a high-performance accelerator targeting computer vision inference applications.

Key Features:



Delivers up to 214 TOPS of compute – capable of running tens of HD camera streams.



Best-in-class energy efficiency of 15 TOPS/W – delivering server-class performance within embedded power budgets.



High performance quantization tools deliver FP32 accuracy in an INT8 footprint – lowering system cost.



Zero cost integration with PCIe form factor. Delivers lowest TCO for edge deployments.



Highest accuracy, lowest latency edge inferencing solution

Uses Cases:



Security

Enable scalable performance from tens to hundreds of HD video streams, deliver complex object detection, face/plate recognition and tracking applications.



Industry 4.0

Deliver scalable levels of performance for machine vision, robotics, and safety applications.



Smart retail

Enable frictionless shopping experience using in-store computer vision for loss prevention, shelf analytics, AI-based POS, and fully autonomous stores powered by just walk out technology.



Others

Healthcare, Logistic, Defense, Media and Broadcasting.

The Voyager™ SDK unlocks the full potential of the Axelera PCIe AI Edge accelerator card creating a seamlessly integrated platform.

- ✓ State-of-the-art model zoo: image classification; object detection, segmentation, keypoint detection, face recognition
- ✓ Import models from Pytorch, TensorFlow and ONNX
- ✓ Ubuntu/Yocto OS support
- ✓ Library support for image processing: scaling; cropping; normalization; format conversion; non-maximal suppression (NMS)
- ✓ TVM compiler includes: graph optimization and post-training quantization tools.
- ✓ x86/ARM host support

Technical Specifications:

Form Factor: PCIe full height, half length, single slot

Processor: 1 x Axelera Metis AIPU

AI-Cores: 4 digital in-memory compute cores

On-chip SRAM: 16MB L1; 32MB L2

Dedicated RAM: 1GB

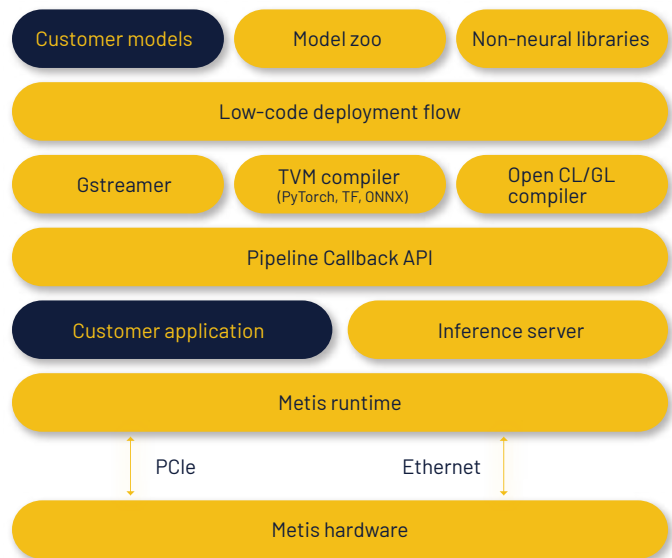
Compute: Up to 214 TOPS of INT8 compute

System interface: Single 4-lane PCIe Gen3 interface

Thermal solution: Active

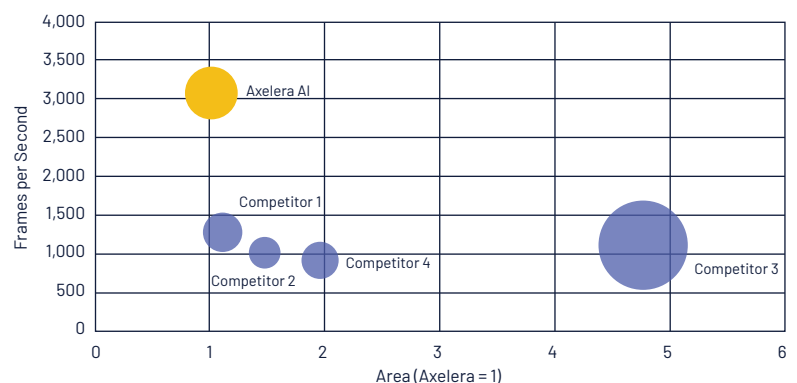
Operating Temperature Range: -40 to +85°C

Operating System: Ubuntu 20.04/22.04; Yocto



Performance:

The PCIe AI Edge accelerator card delivers exceptional performance. The plot below shows ResNet-50 performance per area and power consumption.



Ordering information:

To order the PCIe AI Edge accelerator card, please visit: www.axelera.ai/order-product

Get in touch!

