

# M.2 AI Edge accelerator module



The Axelera M.2 AI Edge accelerator module is a highly integrated accelerator solution targeting computer vision inference applications.

## Key Features:



Powered by a single Metis AIPU – capable of running multiple 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.



Module is offered ready for integration; delivers lowest TCO for edge deployments.



Highest accuracy, lowest latency edge inferencing solution.

## Uses Cases:



### Security

Handle multiple HD video streams, deliver complex object detection and tracking applications for smart cameras and embedded NVRs.



### Industry 4.0

Deliver unprecedented levels of performance for machine vision, robotics, and safety applications in a power-constraint environment.



### 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, Agriculture, Drones/UAV, Logistic/AGV, Transportation.

## Technical Specifications:

**Form Factor:** M.2 2280M

**Processor:** 1x Axelera Metis AIPU

**AI-Cores:** 4 digital in-memory compute cores

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

**Dedicated RAM:** 512MB

**System interface:** 4-lane PCIe Gen3 interface

**Thermal solution:** Passive (when integrated)

**Dimensions:** Length: 80mm; Width: 22mm; Height: 0.8mm

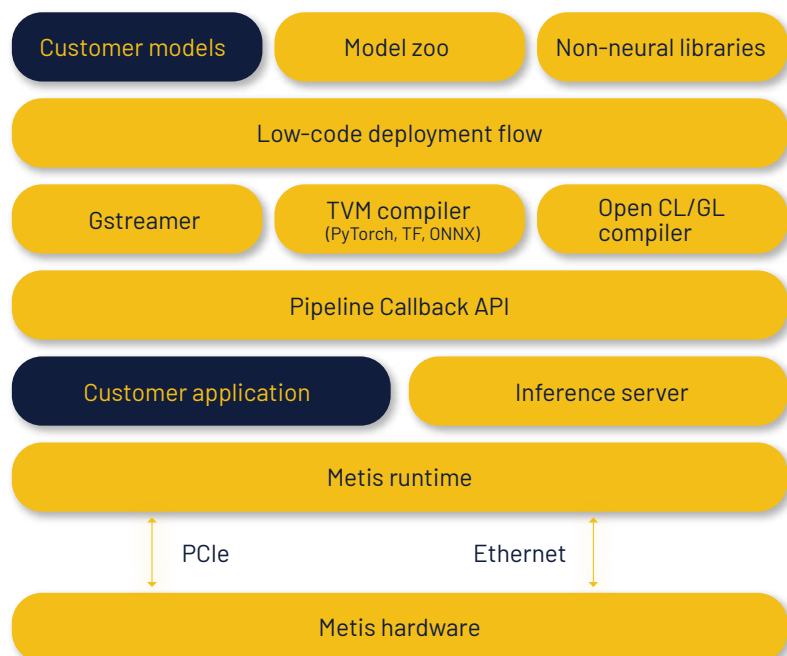
**Operating System:** Ubuntu 20.04/22.04; Yocto

**Operating Temperature Range:** -40 to +85°C

# VOYAGER<sup>™</sup> SDK

The Voyager<sup>™</sup> SDK unlocks the full potential of Axelera M.2 module creating a seamlessly integrated platform.

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



### Ordering information:

To order the M.2 AI Edge Accelerator Module, please visit: [www.axelera.ai/order-product](http://www.axelera.ai/order-product)

Part Number: AXE-METM2-00A000

Description: AIPU M.2 Edge accelerator module

Get in touch!

