



Flex Logix X1M AI Accelerator



Real-time High-Res Vision requires high bandwidth support for complex deep learning models operating with small batch sizes in real time. InferX X1M is designed to solve these problems.

The InferX™ X1M Edge Inference Accelerator is optimized for the processing of real-time high-res vision workloads at the edge.

High accuracy AI vision models are characterized by deep networks with over a hundred layers, dozens of parallel channels in each layer and multiple operator types. The X1M is ideally suited for processing these workloads in a low power and compact M.2 form factor.

The X1 dynamic tensor processor array offers ASIC speed and efficiency while providing model flexibility, through the use of reconfigurable datapath & control logic technology. This allows the X1M to quickly adopt and deploy new edge inference model technologies via field updates, thus future-proofing designs.

FEATURES AND BENEFITS

- Supports complex object detection models including Yolov3, Yolov4, Yolov5
- Small M.2 form-factor fits in compact spaces with low power applications
- Comparable performance to high power GPU solutions on a range of important object detection models
- Real time vision processing
- Dynamic architecture future-proofs designs



Target Markets

Focused on solving challenging machine vision problems in industrial, smart city, manufacturing, transportation, healthcare, agriculture and other markets. The X1 is designed to run complex AI models with high throughput and accuracy and without the complexity of GPU programming.

PRODUCT FEATURES

Architecture

Flexlogix InferX X1
 4K MAC cores
 8 MB SRAM
 4Gb 2667 MT/s LPDDR4X DRAM

Host Bus Interface

Protocol
 PCI Express Gen 3/4 x2
 Compliance
 PCIe M.2 Spec Rev4.0 V1.0

Power Specification

Typical Power @ 400MHz: 5W
 TDP Power @ 400 MHz: 8.25W

Physical Specifications

Form-factor:
 M.2 Type 2280 Socket 2, Key B+M
 22 mm x 80 mm
 With included heat sink the vertical dimension is 17 mm

Environmental and Equipment Specifications

Temperature:
 Operating: 0 C to 50 C (32 F to 131 F)
 Storage: -20 C to 70 C (-4 F to 158 F)
 Humidity:
 Relative (noncondensing): 10% to 90%
 Storage: 5% to 95%

To learn more please contact us: info@flex-logix.com or visit www.flex-logix.com

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