167.7mm

68.9mm

Overview

The Mythic MP10304 Quad-AMP PCIe card enables high-performance, power-efficient AI inference for edge devices and servers. The half-height, half-length (HHHL) PCIe card simplifies the integration effort into different embedded systems where space is a constraint. The MP10304 features four M1076 Mythic Analog Matrix Processors (AMPs), delivering up to 100 TOPs of AI performance and supporting up to 320 million weights for complex AI workloads at less than 25W of power. At the heart of the Mythic AMP™ is the Mythic Analog Compute Engine (Mythic ACE™), the breakthrough analog compute-in-memory technology that enables GPU-level performance with significantly lower power.

Large DNN models can be deployed on the MP10304 PCIe card using the combined AI compute of the four M1076 AMPs for high-definition camera applications that need to detect smaller objects with minimal or no downscaling, for example in commercial drones and physical security. The MP10304 can also run a variety of smaller DNN models for applications that process and analyze independent video streams concurrently from multiple cameras, such as network video recorders (NVRs).

Features

o Four M1076 Mythic AMPs
o Support for up to 320 million weights on-chip
o AI compute performance of up to 100 TOPs
o On-chip storage of model parameters
o No external DRAM required
o 4-lane PCIe 3.0 for up to 3.9GB/s bandwidth
o Support for industry standard AI frameworks
o Pre-qualified networks including object detection, classification, pose estimation, depth estimation and image segmentation networks
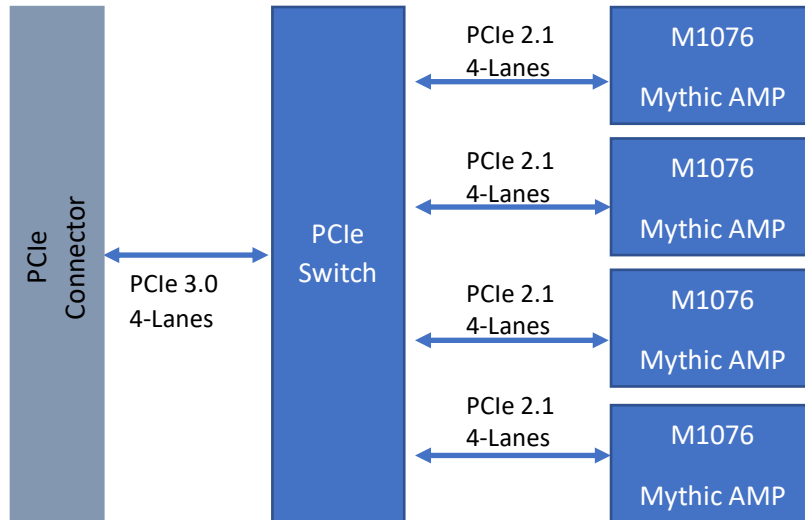o OS Support: Ubuntu, NVIDIA L4T, and Windows (future release)

Target Applications

o Video Surveillance
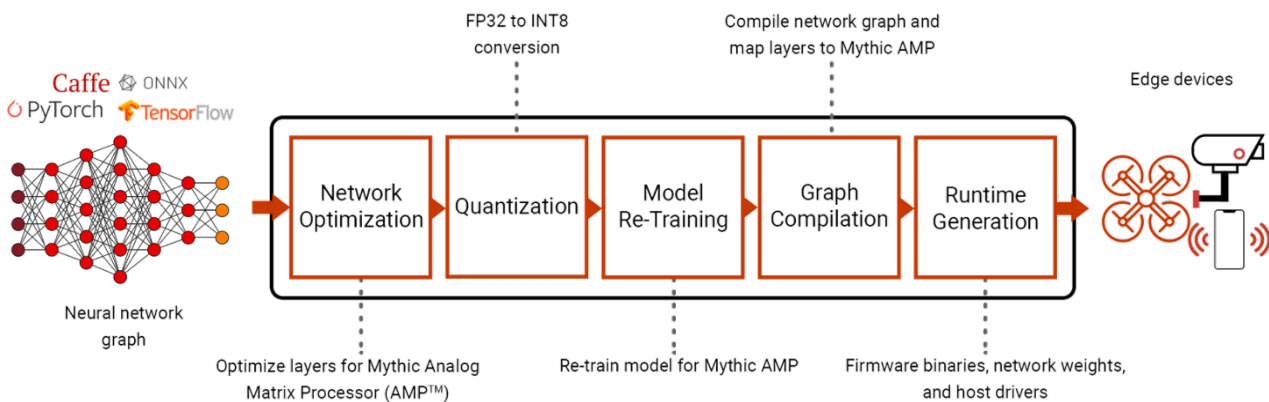o Industrial Machine Vision
o UAV/Drones
o AR/VR
o Edge Servers

Physical Specification

o Dimensions: 167.7mm x 68.9mm
o Operating Temperature: 0°C – 85°C
o Typical Power Consumption: <25W

Block Diagram

AI Software Workflow

Ordering information

Part Number	Description
MP10304	PCIe Card with four Mythic M1076 Analog Matrix Processors

About Mythic

Mythic has developed a unified hardware and software platform featuring its unique Mythic Analog Compute Engine (Mythic ACE™) to deliver revolutionary power, cost, and performance that shatters digital barriers preventing AI innovation at the edge. The Mythic Analog Matrix Processor (Mythic AMP™) makes it much easier and more affordable to deploy powerful AI solutions, from the data center to the edge device. The company has raised over $165.2 million to-date and has offices in Redwood City, CA and Austin, TX.

www.mythic-ai.com