



**Fathom**



NEURAL COMPUTE STICK

- PRESENTATION -

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## Announcement



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## Announcement

**Movidius** is unveiling its **Fathom Neural Compute Stick**  
- the world's first ultra-low power Deep Learning Accelerator.

### WHAT?

The Fathom Neural Compute Stick is a deep learning acceleration module powered by the **Myriad 2 VPU**, the preferred platform by **leading neural network expert companies**.

### WHO?

Targeted at **Deep Learning Product developers and researchers** using Caffe or TensorFlow based networks, the Fathom Neural Compute Stick behaves as a deep learning accelerator for otherwise “dumb” systems, offering **20-30X performance improvements** in neural compute. As a standalone device, it will offer quick and easy prototyping during the development stage for companies rapidly prototyping neural networks.

### HOW?

The Fathom Neural Compute Stick accepts **networks defined in Caffe or TensorFlow** and their accompanying dataset; it then uses the **Movidius Fathom Tool** to prepare and execute the CNN on Myriad 2. The Neural Compute Stick then runs the network natively within a tiny power budget of just 1.2W.

### POWER

Myriad 2 **peak performance** on CNNs ranges from **80 GFLOPs to 150 GFLOPs**, depending on network complexity and precision. Running on the Myriad 2 ultra-low power processor, results are delivered **at less than 1.2 Watts of Power**.



# FATHOM NEURAL COMPUTE STICK

## Discrete Deep Learning Acceleration





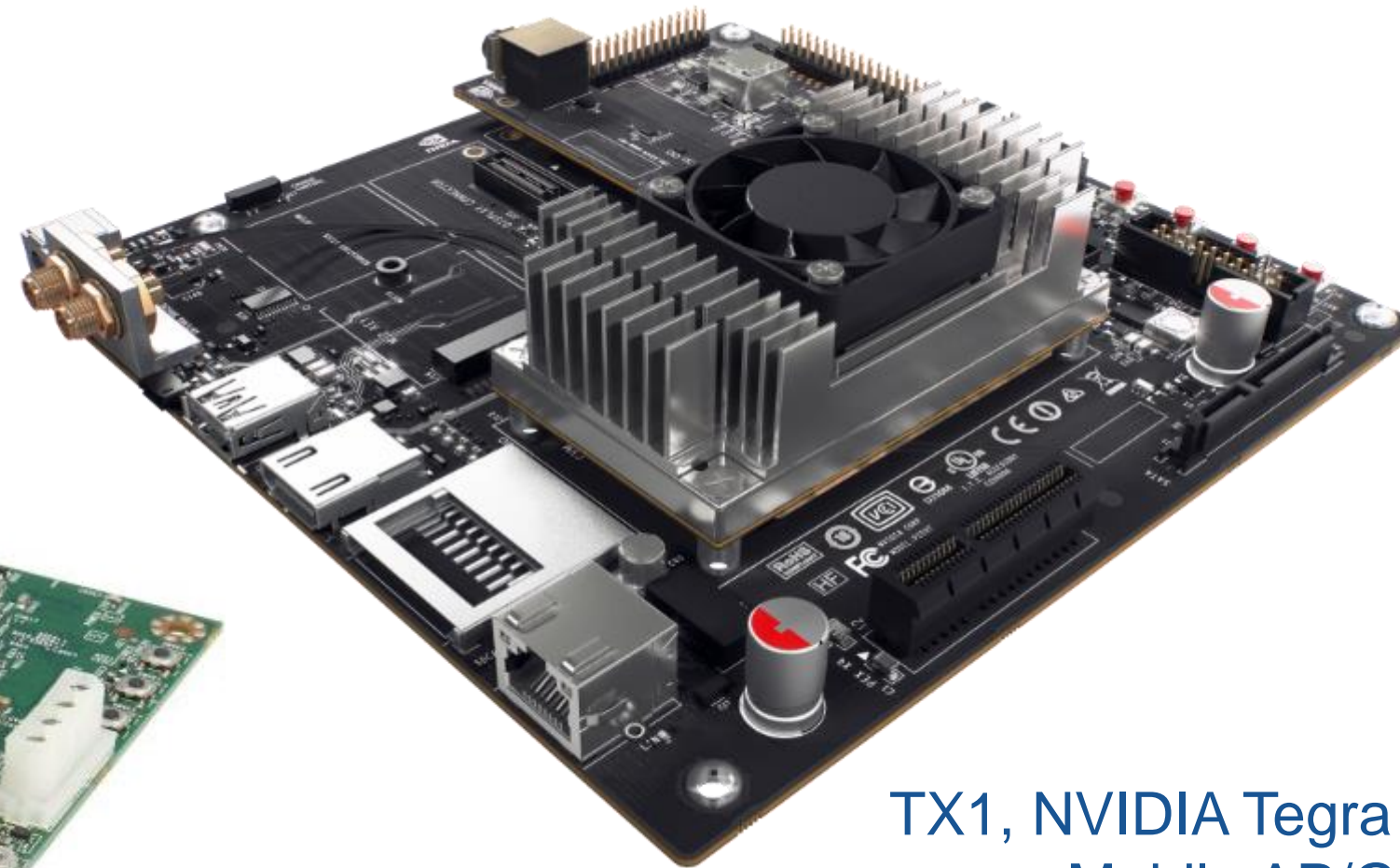
# FATHOM NEURAL COMPUTE STICK

## Deep Learning's Newest Form Factor

TX1, NVIDIA Tegra K1  
Mobile AP/GPU



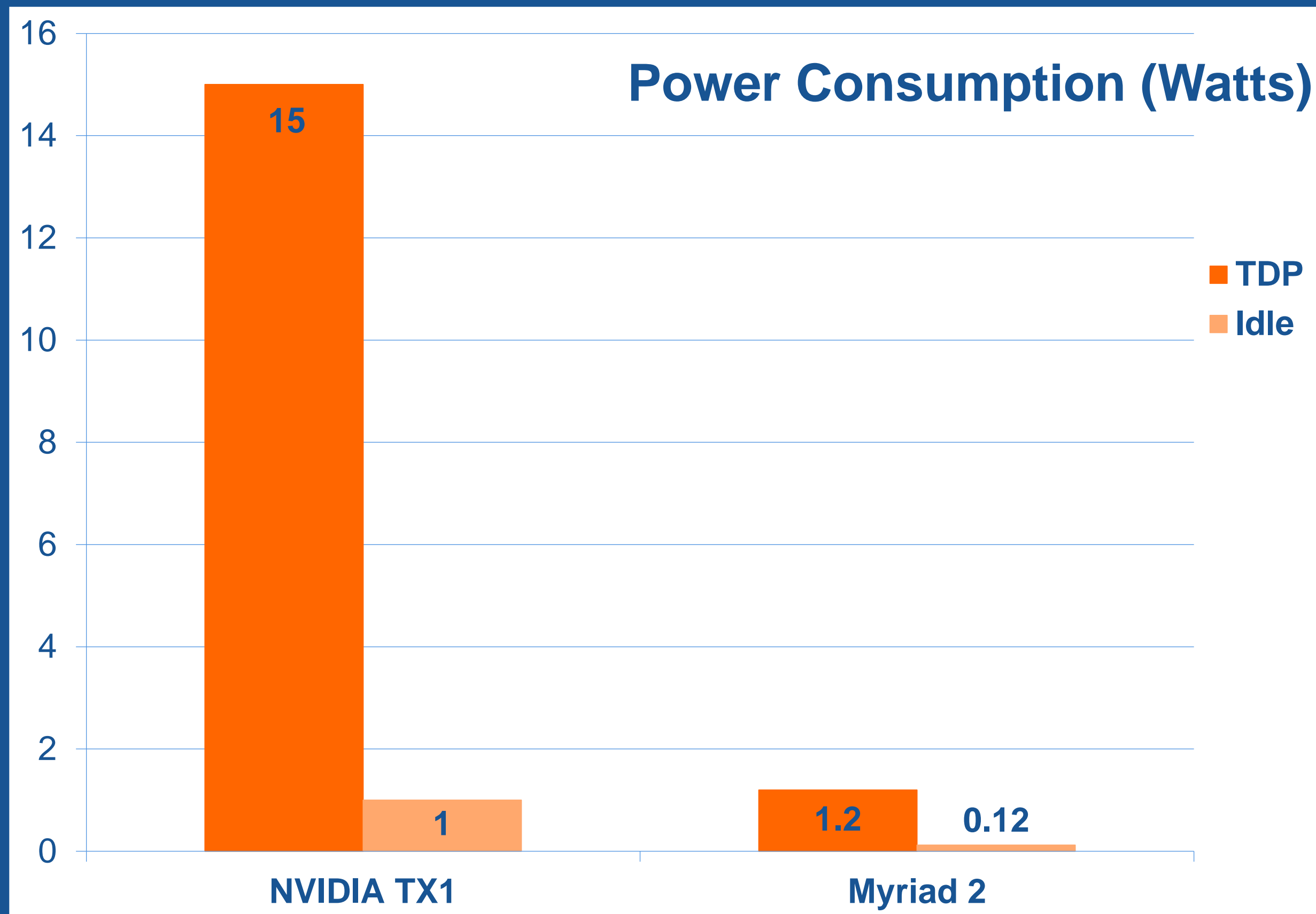
TX1, NVIDIA Tegra X1  
Mobile AP/GPU



High throughput embedded inference platforms available today

# FATHOM NEURAL COMPUTE STICK

## Power Matters



SOURCE:  
<https://devblogs.nvidia.com/parallelforall/nvidia-jetson-tx1-supercomputer-on-module-drives-next-wave-of-autonomous-machines/>

# FATHOM

## Our Framework For Deep Neural Networks

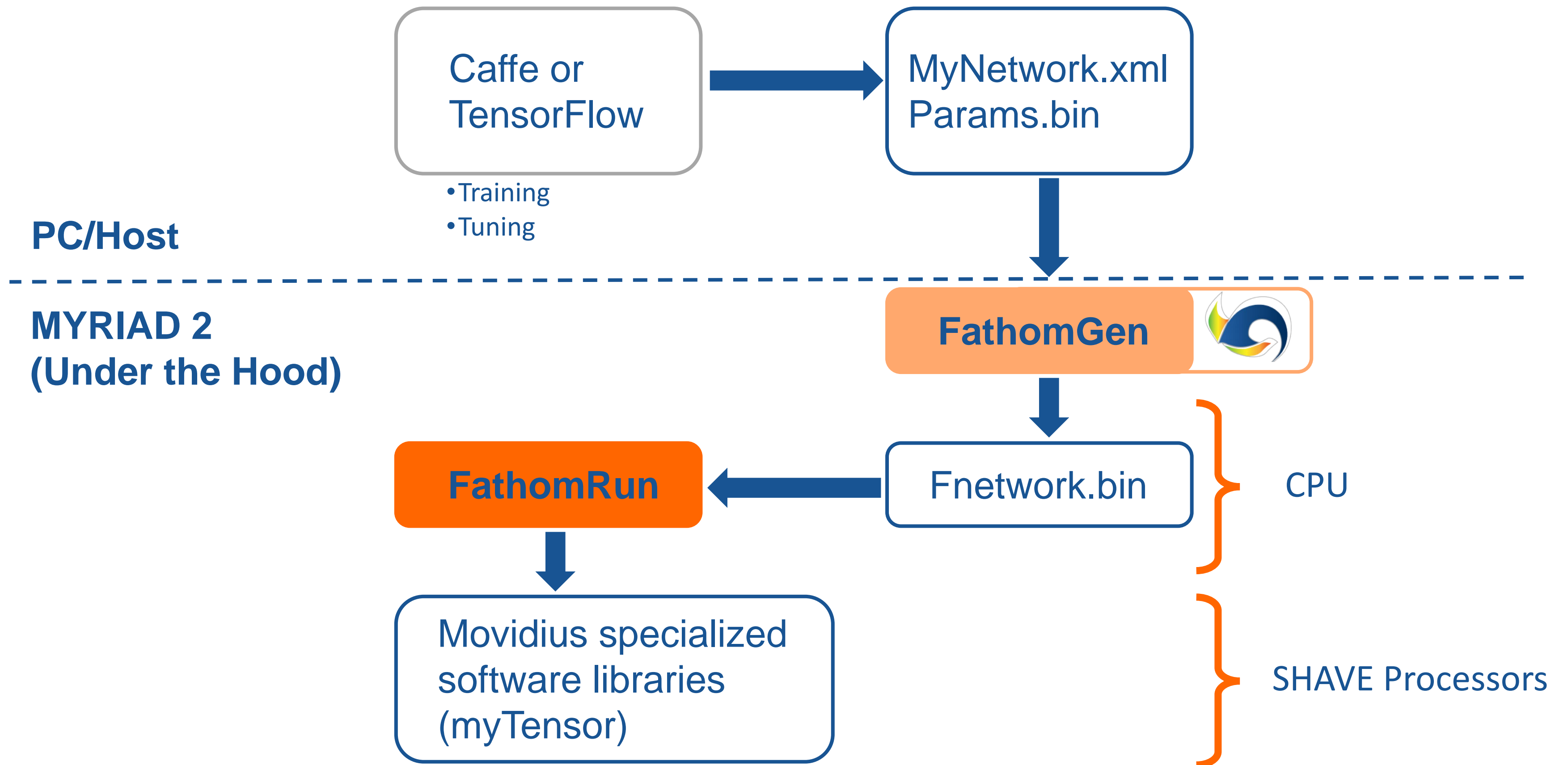


Movidius has built a **framework for implementing CNNs** of various configurations at **ultra-low power**.

# MOVIDIUS FATHOM FRAMEWORK FOR DNNs

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## Under The Hood







Movidius 

**THANK YOU  
FOR YOUR ATTENTION**