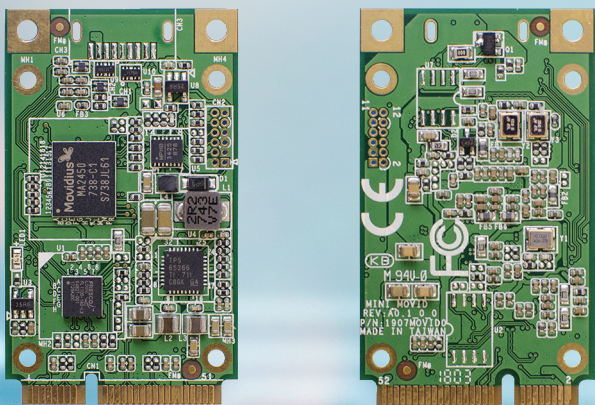




AI
CORE

specification

bridge
the gap



AI CORE

The first embedded ultra-compact Artificial Intelligence processing card for on the edge computing

AI Core is a mini-PCI Express module that enables Artificial Intelligence on the Edge.

Thanks to its form factor it can seamless integrated in most of the industrial computing edge devices.

It is powered by low power high performance Intel Movidius Myriad 2 2450 VPU with 512MD DDR that can be found in millions of smart security cameras, gesture controlled drones, industrial machine vision equipment, and more.

AI Core enables rapid prototyping, validation and field deployment of Deep Neural Network (DNN) inference applications at the edge. Its low-power VPU architecture enables an entirely new segment of AI applications that are not reliant on a connection to the cloud.

AI Core combined with Intel Movidius Neural Compute SDK allows deep learning developers to profile, tune, and deploy Convolutional Neural Network (CNN) on low-power applications requiring real-time inferencing.

UP AI Core - Specifications



SOC
Intel Movidius Myriad 2 2450



Supported Frameworks
TensorFlow, Caffe



Form factor
Mini-PCI-Express



Dimensions
xxx x xxx mm



Minimum system requirements
x86_64 computer running Ubuntu 16.04
Available mPCI-E slot
1GB RAM
4GB free storage space

An ultra-low power design

For mobile and connected devices where battery life is critical, Myriad 2 provides a way to combine advanced vision applications in a low power profile. Intel's Movidius™ Myriad™ 2 VPU delivers vision capabilities to classes of devices previously unable to perform such demanding vision tasks.

Unique design for vision and AI workloads

Featuring 12 VLIW programmable SHAVE cores, dedicated vision accelerators and 2 CPUs, all connected by an intelligent memory fabric, Intel's Movidius™ Myriad™ 2 VPU is a fully functional vision SoC designed for high performance at ultra-low power. The highly parallel design and optimizations for sparse data structures make Myriad VPUs well suited to deep neural network applications and other modern vision workloads.

12 programmable SHAVE cores

The flexibility for developers to implement differentiated and proprietary applications is fundamental to Intel® Movidius™ Myriad™ 2 VPUs. Our optimized software libraries give device manufacturers the ability to run custom and proprietary operations on the 12 high performance SHAVE cores.

A small-area footprint

To conserve space inside mobile, wearable, and embedded devices, Intel's Movidius™ Myriad™ 2 was designed with a very small footprint that can easily be integrated into existing products.

Additional Chip Details

The Intel® Movidius™ Myriad™ 2 VPU architecture comprises a complete set of interfaces, a set of enhanced imaging/vision accelerators, a group of 12 specialized vector VLIW processors called SHAVes, and an intelligent memory fabric that pulls together the heterogeneous resources to enable power efficient processing.