Intel® Movidius™ Neural Compute Stick
PRODUCT CHANGE NOTIFICATION

Intel will discontinue the Intel® Movidius™ Neural Compute Stick (MM# 962297).

Please contact your Intel Field Sales Representative with any questions, requests or concerns.

<table>
<thead>
<tr>
<th>Key Milestones</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Discontinuance Program Support Begins</td>
<td>April 30, 2019</td>
</tr>
<tr>
<td>Last Product Discontinuance Order Date</td>
<td>October 30, 2019</td>
</tr>
<tr>
<td>Last Product Discontinuance Shipment Date</td>
<td>April 30, 2020</td>
</tr>
<tr>
<td>Technical Support Ends</td>
<td>April 30, 2021</td>
</tr>
<tr>
<td>Warranty Support Ends</td>
<td>April 30th, 2022</td>
</tr>
</tbody>
</table>
THE ORIGINAL INTEL® MOVIDIUS™ NEURAL COMPUTE STICK
UNLOCKED DEEP LEARNING OPPORTUNITIES

- Miniature deep learning development kit
- In a USB stick form-factor
- To prototype, tune, validate and deploy Deep neural networks
- Features the same Movidius vision processing unit (VPU) used in drones, surveillance cameras, VR headsets, and other low-power intelligent and autonomous products
Increasing need for AI at the edge requires exceptional performance per watt, hardware processing versatility and streamlined developer experience.

Now with enhanced hardware processing capabilities, the next generation Intel® Neural Compute Stick 2 brings up to 8x\(^1\) performance gain on deep neural network inference.

Intel® Distribution of OpenVINO™ toolkit extends workloads across different hardware and maximizes performance.

45% of data will be stored, analyzed, and acted on at the edge by 2019\(^1\)

43% share of AI tasks taking place on edge devices (vs. cloud) in 2023\(^2\)

15X growth in devices with edge AI capabilities by 2023\(^2\)
Enhanced hardware processing capabilities vs. the original Intel® Movidius™ Neural Compute Stick; take advantage of 16 cores instead of the original 12, plus a neural compute engine—a dedicated deep neural network accelerator.

The new SDK, Intel® Distribution of OpenVINO™ toolkit, streamlines the development experience.

IEI TANK AIoT Development Kit
Pre-installed with the Intel® Distribution of OpenVINO™ toolkit with great flexibility for hardware expansion on Intel® Arria™ 10 FPGA

AAEON UP Squared AI Vision Developer Kit
Pre-installed with the Intel® Distribution of OpenVINO™ toolkit with great flexibility for hardware expansion on Intel® Movidius™ Myriad™ X VPU

Intel® Arria™ 10 FPGA plug-in
High compute efficiency, low power and form factor constraints (e.g., cameras), and excellent performance/W/$, for well-defined workloads

Intel® Movidius™ Myriad™ X VPU plug-in
TOPS performance required on a single chip, support compute intensive networks (VGG*, ResNet* 101), and ensure continual performance optimization

1 CONTINUE PROTOTYPING
2 PRODUCTIZE
3 INCREASE PERFORMANCE

Buy Now

Explore Products

Intel® Neural Compute Stick 2
HIGH PERFORMANCE & LOW POWER FOR AI INFERENCE
INTEL® NEURAL COMPUTE STICK 2

Boost productivity
Simplify prototyping
Discover efficiencies

UP TO 8X¹ HIGHER PERFORMANCE
On deep neural networks compared to Intel® Movidius™ Neural Compute Stick

MORE CORES. MORE AI INFERENCE.
✓ Start quickly with plug-and-play simplicity
✓ Develop on common frameworks and out-of-box sample applications
✓ Prototype on any platform with a USB port
✓ Operate without cloud compute dependence

Order now for $99 MSRP*: Where to buy

*MSRP is not a guarantee of final retail price. MSRP may be changed in the future based upon economic conditions.
**Specifications**

<table>
<thead>
<tr>
<th>Vision Processing Unit (VPU)</th>
<th>Intel® Movidius™ Neural Compute Stick</th>
<th>Intel® Neural Compute Stick 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Intel® Movidius™ Myriad™ 2 VPU</td>
<td>The Intel® Movidius™ Myriad™ X VPU</td>
<td></td>
</tr>
<tr>
<td>Software development kit</td>
<td>The Intel® Movidius™ Neural Compute SDK</td>
<td>The Intel® Distribution of OpenVINO™ toolkit</td>
</tr>
<tr>
<td>OS support</td>
<td>Ubuntu* 16.04, Raspberry Pi* 3 Model B running Stretch desktop or Ubuntu 16.04 Virtual Box instance</td>
<td>Ubuntu* 16.04.3 LTS (64 bit), Windows 10 (64 bit), or CentOS 7.4 (64 bit)</td>
</tr>
<tr>
<td>Supported framework</td>
<td>TensorFlow* and Caffe*</td>
<td>TensorFlow* and Caffe*</td>
</tr>
<tr>
<td>Connectivity</td>
<td>USB 3.0 Type-A</td>
<td>USB 3.0 Type-A</td>
</tr>
<tr>
<td>USB stick dimensions (mm)</td>
<td>72.5mm X 27mm X 14mm</td>
<td>72.5mm X 27mm X 14mm</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>0° - 40° C</td>
<td>0° - 40° C</td>
</tr>
<tr>
<td>Material Master Number</td>
<td>962297</td>
<td>964486</td>
</tr>
<tr>
<td>MSRP</td>
<td>$79 USD*</td>
<td>$99 USD*</td>
</tr>
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</table>

*MSRP is not a guarantee of final retail price. MSRP may be changed in the future based upon economic conditions.
INTEL® DISTRIBUTION OF OPENVINO™ TOOLKIT
ENABLES WIDE DEPLOYMENT OF DEEP LEARNING ALGORITHMS

DEEP LEARNING

- Intel® Neural Compute Stick 2
- INTEL® DISTRIBUTION OF OPENVINO™ TOOLKIT

COMPUTER VISION

- OpenCV
- OpenCL
- CV Library (Kernel & Graphic APIs)

- DEEP LEARNING
- COMPUTER VISION
- CV Library
- Model Optimizer
- Inference Engine

AGNOSTIC, COMPLEMENTARY TO MAJOR FRAMEWORKS | CROSS-PLATFORM FLEXIBILITY | HIGH PERFORMANCE, HIGH EFFICIENCY

- >100 Networks Supported
- CV Algorithms
- TensorFlow
- ONNX

BREADTH OF VISION PRODUCT PORTFOLIO,

INTRODUCING...

Free Download ➤ software.intel.com/openvino-toolkit | Open Source version ➤ 01.org/openvinotoolkit
Transition Guide to Intel® Distribution of OpenVINO™ toolkit
VISION ACCELERATOR KITS

UP Squared AI Vision
Development Kit

- UP Squared Board (Intel Atom x7-E3950)
- AI Core- Myriad X mini PCIe
- USB camera
- Intel® Distribution of OpenVINO™ toolkit
- Ubuntu 16.04 Desktop w/ 4.14 kernel
- Intel® System Studio
- Arduino Create*

http://www.up-board.org/upkits/up-squared-ai-vision-kit/

IEI Tank AIoT
Developer Kit

- IEI TANK 870-Q170
  (6th/7th Gen Intel® Core™ processor)
- Intel® Distribution of OpenVINO™ toolkit
- Intel® Media SDK
- Ubuntu Desktop 16.04 Desktop LTS
- Intel® System Studio


Article on Intel Developer Zone: https://software.intel.com/en-us/kits-to-accelerate-your-computer-vision-deployments
Intel® Vision Accelerator Design Products

**HOST IA PLATFORMS:**
APPLICATION PROCESSING, MEDIA, “FREE” CV/DL

Use the Intel® Media SDK to achieve en/de/trans-code performance
Maximize CV/DL performance on the host platform with the Open Visual Inference & Neural Network Optimization (OpenVINO™) toolkit

**INTEL® MOVIDIUS™ VPUS**

**OVERVIEW**
Intel Movidius VPUs offer high performance per watt per dollar. Easily add AI-based visual intelligence by plugging in one or more cards.

**VALUE PROP**
Intel Movidius VPUs enable deep neural network inferencing workloads with high compute efficiency, low power and form factor constraints (e.g., cameras), and excellent performance/W/$, for well-defined workloads.

**KEY USE CASES**
Intel Movidius VPUs work well with networks that have:
- A small memory footprint (less than 250 MParameters)
- Lower performance requirements (<3 GMACs)
- FP16 precision
- Accelerator Power Budget: 2-25W
- # of streams: 1-16

**INTEL® ARRIA® 10 FPGAS**

**OVERVIEW**
Intel Arria 10 FPGAs offer exceptional performance, flexibility, and scalability for NVRs, edge deep learning inference appliances, and on-premise servers or cloud.

**VALUE PROP**
Intel Arria 10 FPGAs achieve TOPS performance required on a single chip, support compute intensive networks (VGG*, ResNet* 101), and ensure continual performance optimization by taking advantage of quarterly bitstream updates from Intel to reduce the need to upgrade hardware.

**KEY USE CASES**
The Intel Arria 10 FPGAs work well with networks that have:
- Larger memory footprint (more than 250 MParameters)
- Larger performance requirements (>3 GMACs)
- FP16/11/9 precision
- Accelerator Power Budget: <50W
- # of streams: 3-15
<table>
<thead>
<tr>
<th>Equipment Maker</th>
<th>Product Name</th>
<th>Form Factor</th>
<th>Platform</th>
<th>Board Dimensions</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAEON Technology Inc.</td>
<td>AI Core X</td>
<td>mPCIe</td>
<td>1x Intel® Movidius™ Myriad™ X 2485 VPU</td>
<td>51 x 30 mm</td>
<td>Now</td>
</tr>
<tr>
<td></td>
<td>AI Core XM 2280</td>
<td>M.2 2280 B+M key</td>
<td>2x Intel® Movidius™ Myriad™ X 2485 VPUs</td>
<td>22 x 80 mm</td>
<td>Now</td>
</tr>
<tr>
<td></td>
<td>AI Vision Plus X</td>
<td>custom</td>
<td>3x Intel® Movidius™ Myriad™ X 2485 VPUs</td>
<td>90 x 56.5 mm</td>
<td>Q2'19</td>
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<tr>
<td>ADLINK</td>
<td>EDL-mPCIe-MA2485</td>
<td>mPCIe</td>
<td>2x Intel® Movidius™ Myriad™ X 2485 VPUs</td>
<td>30 x 50 mm</td>
<td>Q2'19</td>
</tr>
<tr>
<td></td>
<td>VEGA-320</td>
<td>M.2 2230 B+M key</td>
<td>1x Intel® Movidius™ Myriad™ X 2485 VPU</td>
<td>22 x 30 mm</td>
<td>Now</td>
</tr>
<tr>
<td></td>
<td>VEGA-330</td>
<td>mPCIe</td>
<td>2x Intel® Movidius™ Myriad™ X 2485 VPUs</td>
<td>22 x 30 mm</td>
<td>Now</td>
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<tr>
<td>IEI Integration Corp.</td>
<td>Mustang-V100-MX8-R10</td>
<td>PCIe x4</td>
<td>8x Intel® Movidius™ Myriad™ X 2485 VPUs</td>
<td>169.54 x 56.16 mm</td>
<td>Now</td>
</tr>
<tr>
<td></td>
<td>Mustang-F100-A10-R10</td>
<td>PCIe x8</td>
<td>1x Intel® Arria® 10 FPGA 1150 GX</td>
<td>169.54 x 58.40 mm</td>
<td>Now</td>
</tr>
<tr>
<td>Nexcom</td>
<td>AIBooster-8X</td>
<td>PCIe x4</td>
<td>8x Intel® Movidius™ Myriad™ X 2485 VPUs</td>
<td>169.54 x 58.40 mm</td>
<td>Q2'19</td>
</tr>
<tr>
<td>Shenzhen Uzel Information Technology Co., Ltd.</td>
<td>HDDL-L</td>
<td>mPCIe</td>
<td>2x Intel® Movidius™ Myriad™ X 2485 VPUs</td>
<td>28.00*50.90 mm</td>
<td>Now</td>
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<tr>
<td></td>
<td>HDDL-R</td>
<td>PCIe x4</td>
<td>8x Intel® Movidius™ Myriad™ X 2485 VPUs</td>
<td>66.90*157.00 mm</td>
<td>Now</td>
</tr>
<tr>
<td></td>
<td>HDDL-S</td>
<td>Mother board</td>
<td>24x Intel® Movidius™ Myriad™ X 2485 VPUs and 1 Intel Core i3</td>
<td>135.00*445.00 mm</td>
<td>Q2'19</td>
</tr>
</tbody>
</table>
RESOURCES

- Intel® Neural Compute Stick 2 website
- Intel® Neural Compute Stick 2 tutorials
- Where to purchase the Intel® Neural Compute Stick 2
- Intel® Neural Compute Stick 2 Get Started page
- Intel® Distribution of OpenVINO™ toolkit homepage
- Intel® Distribution of OpenVINO™ toolkit Pre-trained Models
- Reference Implementations
Legal Disclaimer & Optimization Notice

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Notice revision #20110804