

IEI x NVIDIA AI Product Overview



Source: <https://www.nvidia.com/en-us/>

ISV Application	Object Detection ALPR Video Search Face Recognition Heat Mapping
Ecosystem	Sensors AI/System Software Design Services
Accelerated Modules	Medical AI Inference Artificial Intelligence Computer Vision Accelerated Computing
IEI Products	TANK-500AI TANK-510AI HTB-300 HTB-200
SDK/OS	IEI BSP, Linux® Windows®10, Linux®
AI Accelerator	Jetson Nano™ Jetson Xavier™ NX Jetson AGX Xavier™ Tesla T4

» Initiate Your Own AI Journey with IEI Solutions

Image Classification
AlexNet, VGG16, GoogleNet, ResNet, MobileNet, etc.

Object Detection
SSD, Yolo v1/v2/v3, R-FCN, RCNN, Faster RCNN, etc.

Image Segmentation
SegNet, U-Net, FCN, DeepLab v1/v2, etc.

Face Detection / Recognition
MTCNN, DeepFace, Facenet, etc.

Video Classification
RNN, LSTM, etc.

Speech Recognition
DeepVoice, WaveNet, etc.

Frameworks
(Caffe, Caffe2, CNTK, MXNet, Neon, PyTorch, TensorFlow...)

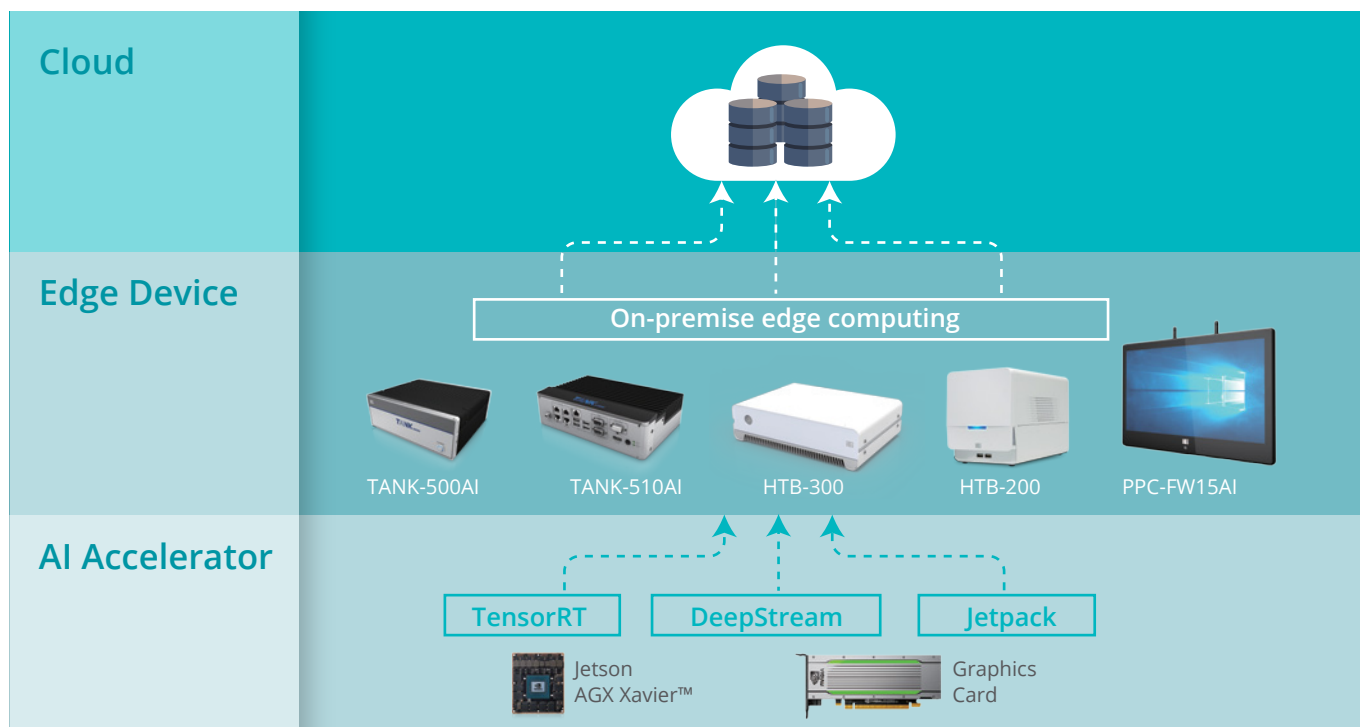
Training Platform
· cuDNN
· cuML

Inference Platform
· TensorRT
· TRTIS

OS

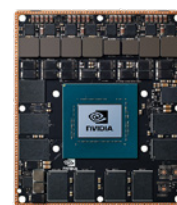
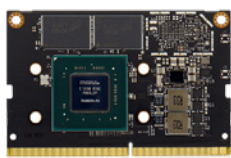
www.ieiworld.com

» IEI AI Edge Computing - Faster and Less Power



» Embedded AI and Edge Computing Solutions from NVIDIA

Top-to-bottom Embedded AI Computer Lineup



Item	Jetson Nano™	Jetson Xavier™ NX	Jetson AGX Xavier™
GPU	128-core Maxwell 0.5 TFLOPs (FP16)	384-core Volta 21 TOPs (INT8)	512-core Volta + NVDLA 32 TOPs (INT8)
CPU	4-core ARM A57	6-core Carmel ARM CPU (3x) 2MB L2 + 4MB L3	8-core Carmel ARM CPU (4x) 2MB L2 + 4MB L3
Memory	4 GB 64-bit LPDDR4 25.6 GB/s	8 GB 128-bit LPDDR4x 51.2 GB/s	Up to 32GB 256-bit LPDDR4x 137 GB/s
Storage	16 GB eMMC	16 GB eMMC	32 GB eMMC
Encode	4K @ 30 (H.265)	2x 4K @ 30 (H.265)	4x 4K @ 60 (H.265)
Decode	4K @ 60 (H.265)	2x 4K @ 60 (H.265)	6x 4K @ 60 (H.265)
Camera	12 (3x4 or 4x2) MIPI CSI-2 D-PHY 1.1 lanes (18Gbps)	12-lane (3x4 or 6x2) MIPI CSI-2 D-PHY 1.2 (30 Gbps)	16-lane MIPI CSI-2 8-lanes SLVS-EC D-PHY (40 Gbps) C-PHY (59 Gbps)
Mechanical	69.6mm x 45mm 260-pin edge connector	69.6mm x 45mm 260-pin edge connector	100mm x 87mm 699-pin connector
Software	JetPack SDK – Unified software release across all Jetson products		

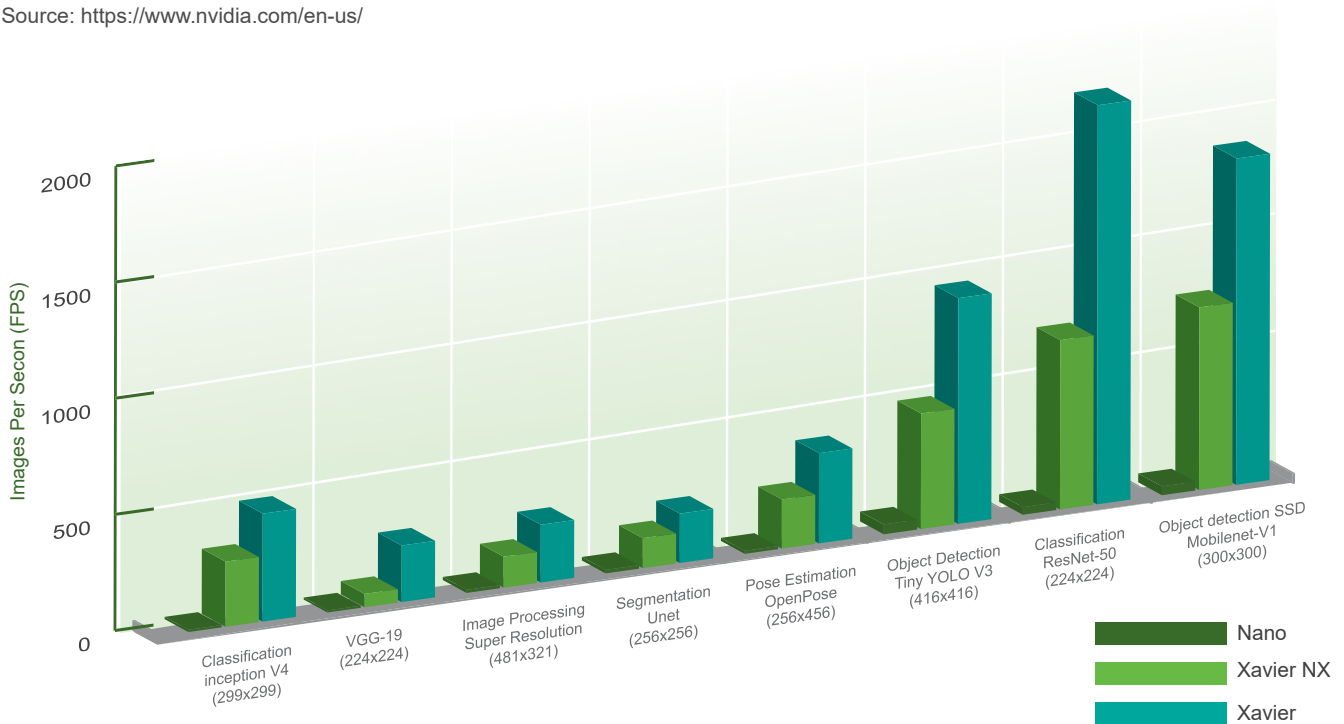
» NVIDIA TensorRT - High-Performance Deep Learning Inference



» Deep Learning Inference Performance

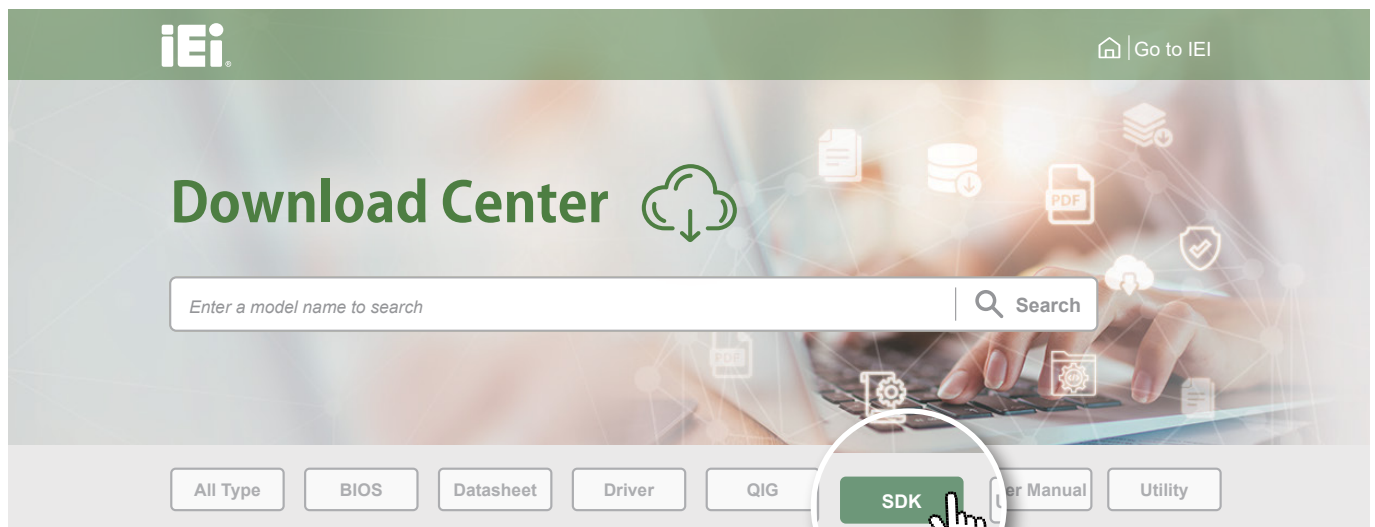
IEI's AI edge systems are designed as a total solution for various applications and improving the performance and flexibility of medical imaging and industrial AI inference. With IEI's AI edge systems, our SI customers not only can design their deep learning software on the systems but also can market the system as a complete solution. This approach can simplify the workflow and processes of the system integration when launching the customized deep learning solution into the market.

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» IEI Board Support Package (BSP) Service

We offer BSP services for our products. Our customers could easily download the utilities and software they need from our website.



<https://download.ieiworld.com/>