



INTEL EDGE AI PORTFOLIO E-BOOKLET

Introducing a portfolio of Intel® Edge AI Portfolio, including Intel Edge AI Products, Intel Developer Tools, Intel-Based Developer Ready Hardware, and Intel Edge AI Partner Enablement Programs

2020 January Release

Intel Robust Offerings For The Edge



VISION



RETAIL



INDUSTRIAL



ROBOTICS



NETWORK



**DEEP LEARNING
ACCELERATION**



**5G NETWORK
TRANSFORMATION**



**MEDIA EXPERIENCE
EVOLUTION**



**EDGE & CLOUD
ORCHESTRATION**



**MULTI-CLOUD
CAPABILITY**



**HARDWARE SCALABILITY &
BUILT-IN EDGE FEATURE**



**USE CASE SPECIFIC
DEVELOPER KITS**



**READY-TO SCALE
REPEATABLE SOLUTIONS**

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Legal Notices and Disclaimers

An aerial photograph of a dense urban skyline. In the foreground, a prominent building features a large, octagonal glass atrium with a white structural grid. To its left is a tall, dark glass skyscraper. In the background, another tall building with a flat roof and rooftop equipment is visible. The scene is captured in a cinematic, slightly desaturated style with a dark color palette.

INTRODUCTION

Intro to AI
Intel Edge AI Portfolio Overview

Intro to AI

Artificial intelligence (**AI**) is an area of computer science that emphasizes the creation of intelligent machines that work, react, and learn like humans.

What is AI?

Supervised learning



- ✓ Regression
- ✓ Classification
- ✓ Clustering
- ✓ Decision trees
- ✓ Data generation
- ✓ Image processing
- ✓ Natural language processing
- ✓ Recommender systems
- ✓ Adversarial networks

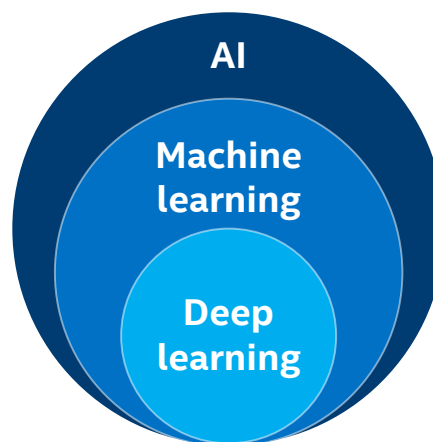
Unsupervised learning



Semi-supervised learning



Reinforcement learning



**NO
“ONE-SIZE-FITS-ALL”
APPROACH TO AI**

Where does Intel® Distribution of OpenVINO™ toolkit fit in?



AI ML/DL model
optimizing toolkit



AI ML/DL model
runtime engine



Sample pre-trained DL
models and demos

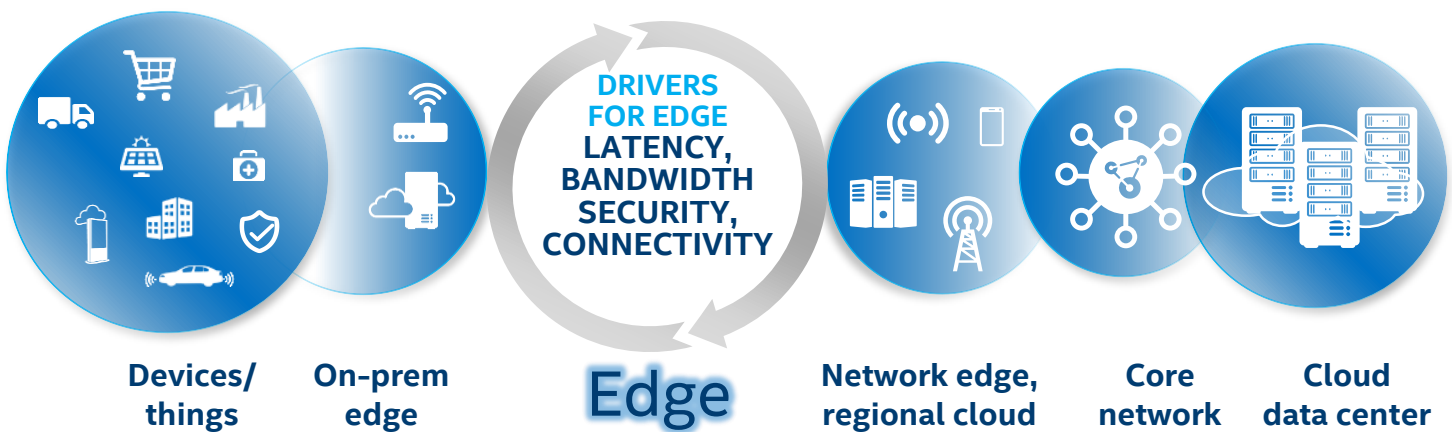
Computer vision - Reasoning - Audio and natural language - Processing

For more information, visit: <https://intel.ai>

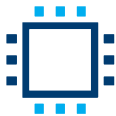
Intel Edge AI Portfolio Overview

Deploy AI in production across industries: The Intel AI Edge Portfolio is powered by the Intel® Distribution of OpenVINO™ toolkit, and includes the most robust hardware and software choices required to meet the various performance, power, and price requirements of any industry use case.

Edge compute is the bridge between devices and cloud



Three key pillars of the Intel Edge AI Portfolio



Intel Edge AI Products

Unparalleled range of compute, networking, memory, and storage products (CPU, CPU with Integrated Graphics, VPU, FPGA, Wi-Fi, 5G, Memory, and SSDs)



Intel Edge AI Developer Tools

Comprehensive developer tools and kits to optimize applications and deploy into today's IoT solutions with AI-ready systems



Intel Edge AI Ecosystem

As one of the world's most trusted ecosystems, the Intel® IoT Solutions Alliance accelerates the design and deployment of intelligent devices and analytics

For more information, visit:

<https://www.intel.com/content/www/us/en/internet-of-things/overview.html>

A man with dark curly hair, a beard, and glasses is looking intently at a small electronic device he is holding in his hands. He is wearing a grey t-shirt and a blue lanyard. The background is a dimly lit server room with vertical server racks and a warm, yellowish light source on the right side, creating a bokeh effect.

INTEL EDGE AI PRODUCTS

Intel Edge AI Ready Compute Products
Intel Network Products & Technologies
Intel® Optane™ Technology
Intel® Solid State Drive Products

Intel Edge AI Ready Compute Products

The most scalable range of AI powered Compute + Accelerators powered by the Intel® Distribution of OpenVINO™ toolkit for real world edge workloads.

AI Compute and Accelerators Portfolio Key benefits

COMPUTE



- ✓ ML/DL acceleration with Intel® Deep Learning Boost and Intel® AVX-512
- ✓ Greater memory capacity supporting Intel® Optane™ DC persistent memory
- ✓ Continuous support for 48 lanes of PCIe3.0, and data integrity/RAS capabilities (ECC)



- ✓ Built-in Intel® Iris® Plus Graphics for GPU based AI Acceleration
- ✓ Smooth 4K content streaming on multiple displays
- ✓ Intel® vPro™ technology features for hardware-enhanced security and remote manageability
- ✓ Supports comprehensive I/O with support for up to 24 lanes of PCIe3.0



- ✓ CPU and Integrated graphics performance for low power consumption devices
- ✓ Competitive video acceleration and playback with media encoding & decoding
- ✓ Fortified for rugged, extended temperature environments

ACCELERATORS



- ✓ Core and I/O programmability enables flexibility for deep learning and OpenCL acceleration with evolvable performance and features future proofing designs
- ✓ Distributed, fine-grain DSP, memory and logic with reduced data movement enables power efficiency and deterministic low latency



- ✓ Power efficient image processing with high throughput memory fabric
- ✓ Dedicated neural compute engine for deep neural network inferences
- ✓ Camera ready image processing with 4K ISP pipeline for up to 8 HD sensors

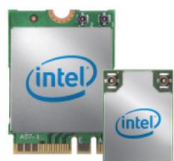
For more information, visit:

<https://www.intel.com/content/www/us/en/internet-of-things/overview.html>

Intel Network Products & Technologies

Get advanced performance from the core of the data center to the network edge with industry-leading products and intelligent, programmable, and scalable software-defined infrastructure.

Explore the networking products and technologies portfolio



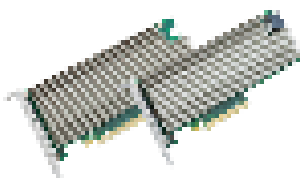
Intel® Wireless-AC Products

- ✓ Highly-integrated system platforms, power-saving, and next-level Wi-Fi capabilities to optimize every Wi-Fi experience



Intel® Ethernet Products

- ✓ Intel® Ethernet Network Adapters, Controllers, and Accessories enable agility from the edge to the data center to deliver efficient, cost-effective services



Intel® Quick Assist Technology

- ✓ Provides a software-enabled foundation for security, authentication, and compression



Intel® Silicon Photonics Optical Transceivers

- ✓ Eliminate networking bottlenecks that result in stranded compute capacity and gain faster data transfer over longer distances to the network edge

For more information, visit:

<https://www.intel.com/content/www/us/en/products/network-io/ethernet.html>

- **Intel® Wireless-AC Products** - [intel.com/content/www/us/en/products/wireless/wireless-products.html](https://www.intel.com/content/www/us/en/products/wireless/wireless-products.html)
- **Intel® Ethernet Products** - [intel.com/content/www/us/en/products/network-io/ethernet.html](https://www.intel.com/content/www/us/en/products/network-io/ethernet.html)
- **Intel® Quick Assist Technology** [intel.com/content/www/us/en/architecture-and-technology/intel-quick-assist-technology-overview.html](https://www.intel.com/content/www/us/en/architecture-and-technology/intel-quick-assist-technology-overview.html)
- **Intel® Silicon Photonics Optical Transceivers** - [intel.com/content/www/us/en/products/network-io/high-performance-fabrics/silicon-photonics.html](https://www.intel.com/content/www/us/en/products/network-io/high-performance-fabrics/silicon-photonics.html)

Intel® Optane™ Technology

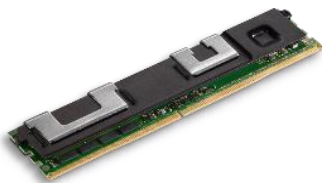
A revolutionary memory and storage technology to deliver unparalleled performance and new computing possibilities across a breadth of markets.

Intel® Optane™ Memory and Intel® Optane™ DC Persistent Memory



Intel® Optane™ Memory

- ✓ Acceleration and responsiveness helps device work, analyze, and respond faster
- ✓ Accelerate HDD or SATA-based SSD IoT device platforms, to affordably get both capacity and responsiveness



Intel® Optane™ DC Persistent Memory

- ✓ Disrupting the traditional memory-storage hierarchy with a new tier to fill the memory-storage gap, providing greater overall performance, efficiency, and affordability
- ✓ Higher system performance with larger memory, and much higher endurance than NAND SSDs for write-intensive workloads

For more information, visit:

www.intel.com/content/www/us/en/architecture-and-technology/intel-optane-technology.html

Intel® Solid State Drive Products

Eliminate bottlenecks and take edge devices to a new level of responsiveness and reliability with Intel® SSD solutions for the edge devices and datacenters. Intel® SSDs deliver high performance, extreme stability, and power efficiency, and Intel® SSDs for the data center are optimized for performance, reliability, and endurance.

High performance

Future-proof enterprise infrastructure with extraordinary performance and reliability



- ✓ Unparalleled range of compute, networking, memory, and storage products (CPU, CPU w/ integrated graphics, VPU, FPGA, Wi-Fi, 5G, memory, and SSDs)
- ✓ Comprehensive developer tools and kits to optimize applications and deploy with IoT-ready systems

Mainstream performance

Get lightweight power efficiency and performance optimized for client devices



- ✓ Unparalleled range of compute, networking, memory, and storage products (CPU, CPU w/ integrated graphics, VPU, FPGA, Wi-Fi, 5G, memory, and SSDs)
- ✓ Comprehensive developer tools and kits to optimize applications and deploy with IoT-ready systems

For more information, visit:

www.intel.com/content/www/us/en/products/memory-storage/solid-state-drives.html

A woman with dark hair is shown in profile, looking upwards and to the left. She is wearing a light-colored top with a blue lanyard around her neck. The background is a server room with rows of server racks and glowing lights, creating a high-tech, futuristic atmosphere.

INTEL EDGE AI DEVELOPER TOOLS

Intel Edge AI Developer
Tools Journey

Intel® Distribution of
OpenVINO™ toolkit

Intel® DevCloud for the Edge

Intel® Media SDK

Intel® System Studio

Intel® Distribution for Python

OpenNESS

Vertical Reference
Architectures

- Converged Edge
Reference Architecture
- Edge Insights Software
- Open Retail Initiative

Udacity IoT Edge for AI
Developers Nano-Degree
Platform

Intel Edge AI Developer Tools Journey

A common, seamless, and cross-platform developer experience and software enablement offer value at every stage of the journey for Edge AI solution developments.

Problems solved



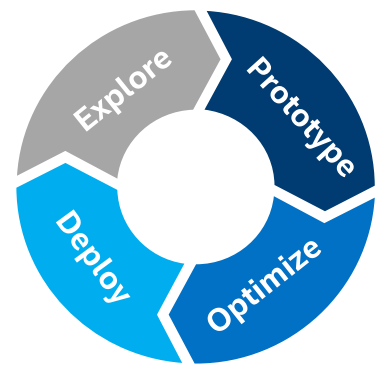
Unlock the full potential of Intel hardware with Intel's optimized software



Build a strong foundation with a range of SW tools and SDKs offered by Intel



Leverage the software offerings for key technologies (deep learning, real time) to propel innovation



Application of key benefits in stages of development journey

Experience AI app development with Intel® Distribution of OpenVINO™ toolkit on the full portfolio of edge AI hardware in a cloud-based environment



**Intel® DevCloud
for the Edge**

	EXPLORE	PROTOTYPE	OPTIMIZE	DEPLOY
✓ AI acceleration and image processing	Intel® Distribution of OpenVINO™ toolkit + Intel® Media SDK			
✓ Build analyze & debug AI apps		Intel® System Studio		
✓ Increase ML/DL app performance		Intel® Distribution for Python		
✓ Scale edge to cloud network infrastructure			OpenNESS	
✓ Deploy a consolidated AI and network enabled architecture				Ref Archs.

Develop multiplatform AI-at-the-edge solutions here:

software.intel.com/en-us/iot/home



Intel® Distribution of OpenVINO™ Toolkit

The Intel® Distribution of OpenVINO™ toolkit is a free software kit that helps developers and data scientists speed up deep learning workloads and streamline deployments from the network edge to the cloud.

Key benefits with today's version of the tool

- ✓ Enables deep learning inference from the network edge to the cloud
- ✓ Supports heterogeneous execution across Intel® Architecture and accelerators—CPU, integrated GPU, Intel® Neural Compute Stick 2, VPU, and FPGA—using a common API
- ✓ Reduces time to market via a library of functions and preoptimized models
- ✓ Includes optimized calls for computer vision libraries, such as OpenCV and OpenVX

The latest 2019 R3 release of the Intel® Distribution of OpenVINO™ toolkit features

Deep learning workbench: Now integrated with the Model Optimizer and Inference Engine, this profiler tool provides visualization of key performance metrics, such as latency, throughput, and performance counters for neural network topologies and its layers. It includes easy configuration for inference experiments, including int8 calibration, accuracy check, and automatic detection of optimal performance settings

Network loading optimizations: Optimizations added to reduce network loading times for faster performance, especially useful when shape size changes between inferences

Deployment scripts: Introducing a new tool to help generate a deployment package with customer application and Inference Engine runtime on target device, which allows developers to fine-tune networks with minimal modifications

Added models: 40+ pre-trained and optimized models included in Open Model Zoo, including super resolution, instance segmentation, and image retrieval

And more: Read more on the release notes at software.intel.com/en-us/articles/OpenVINO-RelNotes

Develop multiplatform AI and deep learning applications and solutions here:
software.intel.com/opencvino-toolkit



Intel® DevCloud for the Edge

Intel® DevCloud for the Edge is a new, specialized prototyping tool for experienced AI developers. Develop computer vision applications using the Intel® DevCloud, which includes a pre-installed and preconfigured version of the Intel® Distribution of OpenVINO™ toolkit. Access reference implementations and pretrained models to help explore real-world workloads and hardware acceleration solutions.

Key benefits with today's version of the tool

- ✓ Easily evaluate Intel's heterogeneous edge compute processors (CPU, CPU w/ Integrated Graphics, VPU, and FPGA)
- ✓ Learn to develop vision inference solutions with the Intel® Distribution of OpenVINO™ toolkit
- ✓ Get started with complete examples or modify and upload your own models/workloads
- ✓ Evaluate and compare various IoT Developer Kit offerings, software stacks, and edge stacks
- ✓ Get started immediately without waiting to buy edge hardware
- ✓ Finetune your vision models/algorithms with the Intel® Distribution of OpenVINO™ toolkit

Explore the tool at:

devcloud.intel.com/edge

Sign up today at:

software.intel.com/en-us/devcloud/edge/sign-up



Intel® Media SDK

Develop awe-inspiring video applications with state-of-the-art libraries, tools, and samples accessible via a comprehensive API for video processing. Intel® Media SDK enables hardware acceleration for fast video transcoding, image processing, and media workflows.

Key benefits with today's version of the SDK

- ✓ Accelerate rich media performance: Speed up video playback, encoding, processing, and media formatting conversion
- ✓ Achieve real-time 4K video communication at 60 FPS HEVC decode and encode
- ✓ Cut product time to market. Prototype, optimize, and productize your media pipelines with a comprehensive, convenient API
- ✓ Speed up transition to new codecs: Use efficient codecs with hardware acceleration to increase speed, compression, and quality across AVC, HEVC, and MPEG-2
- ✓ Debug and customize your products quickly: Find and solve application bugs, port applications to new operating systems, and add new features using source code for open source Linux
- ✓ Deliver fast, high-quality, real-time video transcoding in:
 - Broadcasting
 - Over-the-top (OTT) delivery
 - Live video and video-on-demand (VOD)
 - Cloud gaming and remote desktop solutions
- ✓ Access hardware-accelerated video codecs and programmable graphics on the latest Intel® processors

For more information, visit:
software.intel.com/en-us/media-sdk



Intel® System Studio

Intel® System Studio is an all-in-one, cross-platform tool suite, purpose-built to simplify system bring-up and improve system and IoT device application performance on Intel® platforms.

Key benefits of Intel® System Studio

- ✓ **Accelerate system bring up and IoT application development:** Ready-to-use, domain-specific routines and system-wide visual performance analysis quickly identify issues and reduce optimization time
- ✓ **Boost performance and power efficiency:** Platform-tuned libraries and compilers help optimize software on Intel® Architecture. Actionable data uncovers power issues
- ✓ **Strengthen system reliability:** In-depth debugging, tracing, and analyzing capabilities identify elusive issues and deliver deep platform insights

Get the capabilities right for you

- ✓ **Build:** Every edition of Intel® System Studio includes foundational tools that help you implement efficient, elegant code, optimizing system and IoT device applications from the start
- ✓ **Analyze:** Gain robust tools that help you pinpoint code optimization opportunities to take advantage of Intel's powerful processors
- ✓ **Debug:** Find out more about the Intel® System Studio's powerful tools to help ensure system and application stability, performance, and market success

For more information, visit software.intel.com/en-us/system-studio

Sign up to use the tool here: software.intel.com/en-us/system-studio/choose-download



Intel® Distribution for Python

Supercharge Python applications and speed up core computational packages with the performance-oriented Intel® Distribution for Python

Key benefits of Intel® Distribution for Python

- ✓ **Achieve faster Python application performance**—right out of the box—with minimal or no changes to your code
- ✓ **Accelerate NumPy, SciPy, and scikit-learn** with integrated Intel® Performance Libraries such as Intel® Math Kernel Library and Intel® Data Analytics Acceleration Library
- ✓ **Access the latest vectorization and multithreading instructions**, Numba and Cython, composable parallelism with Intel® Threading Building Blocks, and more

Who should use the Intel® Distribution for Python?

- ✓ **Machine learning developers, data scientists, and analysts:** Easily implement performance-packed, production-ready scikit-learn algorithms
- ✓ **Numerical and scientific computing developers:** Accelerate and scale the compute-intensive Python packages NumPy, SciPy, and mpi4py
- ✓ **High-performance computing (HPC) developers:** Unlock the power of modern hardware to accelerate your Python applications

For more information, visit:

software.intel.com/en-us/distribution-for-python

Open Visual Cloud

Open Visual Cloud is a set of open source SW stacks and pipelines built with optimized ingredients across four core building blocks (encode, decode, inference, and render) to deliver visual cloud services for media, inferencing, gaming and graphics. Open Visual Cloud allows developers to create and deliver an enhanced visual experience for end users.

Key benefits of Open Visual Cloud



Rapid development

Reduced time-to-market with reference pipelines across multiple Visual Cloud services



Optimized experience

Optimized media, AI, and graphics ingredients across Intel's portfolio (CPU and accelerator)



Ready-to-use package

Pre-configured SW stacks integrated with FFMPEG and gstreamer to get started in minutes

Visual Cloud Services and Open Visual Cloud components

Visual Cloud Services enabled by Open Visual Cloud

- ✓ Media processing and delivery
- ✓ Media analytics
- ✓ Immersive media
- ✓ Cloud gaming
- ✓ Cloud graphics

Reference Pipelines

- ✓ CDN transcode
- ✓ Video Conferencing
- ✓ Smart City
- ✓ AD insertion
- ✓ And more

For more information, visit 01.org/openvisualcloud

Open Network Edge Services Software (OpenNESS)



OpenNESS is an Open Source software toolkit that helps abstract network complexity to simplify network application development/deployment the edge. Based on a microservices architecture and purpose built APIs, OpenNESS supports service deployment across diverse platform and access technologies with seamless interoperability with Intel's hardware and software platforms

Key benefits of OpenNESS

- ✓ **Simplifies** the complexity of the network for cloud developers
- ✓ **Allows secure on-boarding and management** of applications
- ✓ **Enables innovative functionalities** such as access termination, traffic steering, multitenancy for services, service registry, service authentication, telemetry, application toolkits, appliance discovery and control, and includes a web-based GUI for easy application onboarding
- ✓ **Streamlines development** by using consistent and standardized APIs (such as 3GPP, ETSI-MEC)

Who should use the OpenNESS

- ✓ **Application software developers:** Those who work as application providers (vision analytics, CDN, industrial, transportation, retail, OTT applications) can port existing applications running in the cloud to the network/on-premise edge
- ✓ **Edge platform developers:** Platform providers (independent software vendors, operating system vendors, original equipment and telecom equipment manufacturers, and cloud service providers) can build platform software for network/on-premise edge
- ✓ **Edge service developers:** Those working at enterprises, communication services providers or system integrators can build and deploy e2e edge services in a lab or field trial, or perform benchmarking/sizing for RFPs

For more information, visit:
openness.org/

Converged Edge Reference Architecture for On-Premise (CERA)

The key to scaling the edge to cloud wireless infrastructure network transformation is a unified compute platform that converges private wireless network with IoT

Key benefits of CERA



Realize edge value quickly

Deploy new edge services at reduced time-to-market/revenue through a simplified, secure architecture



Expand services

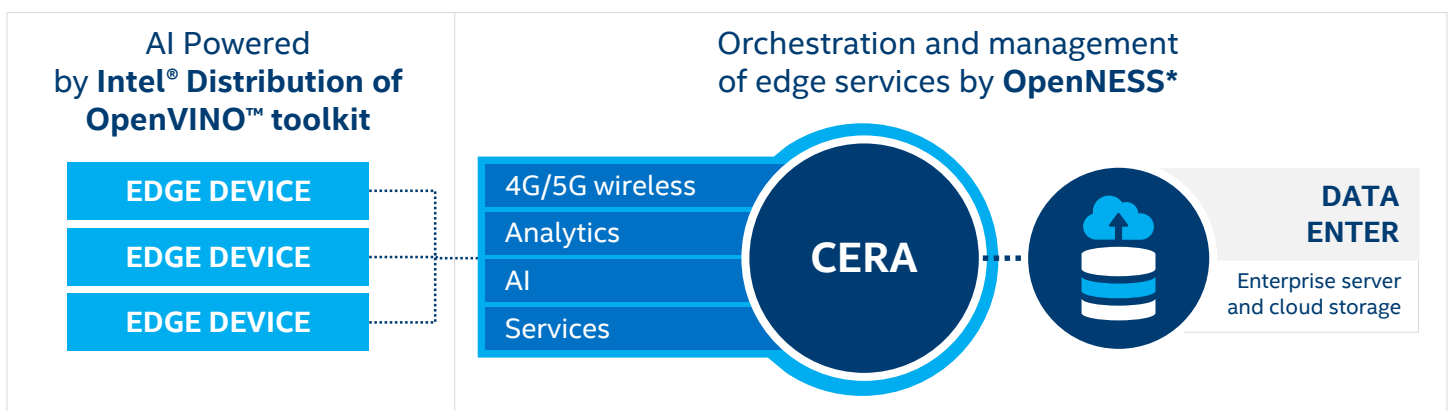
Unlock new possibilities and business opportunities within retail, industrial, and transportation



Scale confidently

Scale solutions on a unified platform designed to operate both indoors and out

How CERA works



CERA consolidates workloads at the edge while densifying wireless networks

For more information, visit:

builders.intel.com/docs/networkbuilders/converged-edge-reference-architecture-cera-for-on-premise-outdoor.pdf

Intel Edge Insights Software (EIS)

A production-quality software stack designed to enable secure ingestion, processing, storage, orchestration and management of data, and near real-time event-driven control across a diverse set of operating systems (OS) and industrial protocols.

Intel EIS use cases



Defect detection

Package, part, or surface defects detection using AI and vision technology



Predictive analytics

Predicting future outcomes based on historical data to lower costs



Manufacturing productivity

Identifying opportunities & processes to improve on efficiency and safety

What Intel EIS provides

- ✓ Modular message/data bus for machine, video, and audio¹ workloads
- ✓ Containerized ingredients for image processing, storage, and analytics
- ✓ Support for industrial optimized inference and training at the edge
- ✓ Support for various operating systems (e.g. Linux*, AliOS*, etc.)
- ✓ Connectors for easy usage of Intel® Media Software Development Kit (Intel® Media SDK), Intel® Distribution of OpenVINO™ toolkit, and Intel® Math Kernel Library (Intel® MKL)
- ✓ Optimized for Intel's CPU, GPU, FPGA, and VPU portfolio with hardware ranging from gateways, industrial PCs (IPCs), to Edge Servers

1. Targeted for a future Industrial Edge Insights software release

For more information, visit:

intel.com/content/www/us/en/manufacturing/manufacturing-industrial-overview.html

Open Retail Initiative (ORI)

A retail-focused open source initiative featuring Intel, top technology companies and industry thought leaders in a technology collaboration leveraging open source projects, along side vendor proprietary solutions to deliver recipes and ingredients that address industry problems.

ORI solves problems around...



Integration

Environmental complexity due to lack of interoperability



Simplification

Lack of unified standards impeding digital transformation efforts



Innovation


Data-rich solutions leveraging AI, computer vision and IoT for retail

ORI provides what retailers want

- ✓ RFID real time inventory management
- ✓ Algorithmic merchandise optimization
- ✓ Computer vision based vending
- ✓ Personalized product content
- ✓ Interactive kiosk w/CV sentiment analysis
- ✓ Mobile checkout/self checkout, voice-enabled ordering and mobile payment
- ✓ Store traffic analysis
- ✓ Loss prevention video analytics
- ✓ Workforce analytics

For more information, visit:

intel.com/content/www/us/en/retail/open-retail-initiative-article.html



Udacity IoT Edge for AI Developers Nano-Degree Platform

Intel and Udacity are offering a nanodegree certification program focused on AI for edge compute devices. This program has two stages but applications for participation must be received by December 10.

Stage 1: Edge AI fundamentals with Intel® Distribution of OpenVINO™ toolkit challenge course

December 15 - February 1, a foundational Intel® Distribution of OpenVINO™ toolkit professional course including:

- ✓ Understanding the basics of AI at the edge
- ✓ Leveraging pre-trained models for computer vision inferencing
- ✓ Converting pre-trained models in intermediate representations including customer layers
- ✓ Inferring deep learning models through the toolkit's Inference Engine
- ✓ Deploying an app to the edge
- ✓ Analyzing basic performance measures of the deployed app
- ✓ Assessing use cases of the app and understand end user needs

Stage 2: Nano-degree program

Beginning March 1, scholarship recipients and paid participants will spend three months building edge AI projects in the areas of retail, industrial, and more. Key features of the program include:

- ✓ Industry recognized, specialized training to create AI-enabled edge projects ready for market faster and with higher performance and accuracy
- ✓ Deep-dive expertise from Intel and industry experts
- ✓ Hands-on, project-based learning going beyond concept to application
- ✓ Personalized mentorship during the project to ensure expertise

Learn more about the Intel® IoT Edge AI Scholarship and Nanodegree at:
udacity.com/intel-edge-ai-scholarship



INTEL[®] - BASED DEVELOPER-READY HARDWARE

Foundation Kits
Equipment Maker Provider Vision Accelerator
Design Products



DEVELOPER-READY HARDWARE FOUNDATION KITS

Intel® Neural Compute Stick 2

The Intel® Neural Compute Stick 2 (NCS2) is a low-cost prototyping device that many partners have used to get started their AI solution development. Combined with the Intel® Distribution of OpenVINO™ toolkit and the Intel® AI: In Production ecosystem, empowers developers to quickly and affordably bring deep learning inference to laptops, IoT and edge devices.

Key benefits

- ✓ **Exceptional performance per watt per dollar:** With incredible compute at an affordable price, you can innovate with fewer limits
- ✓ **Plug-and-play edge AI inferencing:** Develop the way you want, and choose from your preferred frameworks, networks, operating systems, and platform
- ✓ **Streamlined path to production:** Get a working prototype faster and scale into production with the write once, deploy anywhere capability of the Intel® Distribution of OpenVINO™ toolkit paired with the richest AI at the edge ecosystem of Intel® AI: In Production partners
- ✓ **Get started quickly with NCS2 bundles:** Prototype with low-cost edge devices, build cutting edge-AI and machine learning into PC applications, and use depth sensing cameras for plug-and-play edge inferencing
- ✓ **Discover ready-made code with NCAppZoo:** A repository where developers can find pre-built code to get proofs of concept up and running and share developments with other community members



Prototype AI at the Edge here: intel.com/ncs

Visit NCAppZoo here: github.com/movidius/ncappzoo

UP Squared AI Vision X Developer Kit

Implement computer vision solutions and run deep learning inference using the CPU, GPU, or an optional VPU.



Preinstalled computer vision software

Use the Intel® Distribution of OpenVINO™ toolkit for hardware acceleration of deep learning inference for computer vision applications



Hardware acceleration

Harness the performance of Intel®-based accelerators for deep learning inference with the CPU and GPU included in this kit or with an optional VPU



Reduced time to field trial

Leverage the included production-ready system with mountable aluminum chassis and camera (deployable as-is with an operating temperature range of 0°C to 40°C)

Key components

Hardware

- UP Squared board with quad core Intel Atom® X7-E3950 processor
- Optional AI Core X Mini PCIe* card with the Intel® Movidius™ Myriad™ X VPU
- USB camera

Preinstalled Software

- Intel® Distribution of OpenVINO™ toolkit
- Intel® System Studio 2019 Ultimate Edition
- Intel® Media SDK
- Drivers for Intel® VTune™ Amplifier, Intel® Energy Profiler, Intel® Graphics Performance Analyzers
- Ubuntu® 16.04 desktop



Key applications

- Face detection and analysis
- Retail audience analytics
- Pedestrian detection and analysis
- Traffic monitoring and license plate recognition
- Brand recognition and inventory management (video)
- Personal protective equipment analysis (video)
- ...and more

LEARN MORE

Visit the UP Squared AI Vision X Developer Kit page on Intel.com to view documentation, tutorials, and how to order:

software.intel.com/en-us/iot/hardware/up-squared-ai-vision-dev-kit

Access support provided by the UP community:

up-community.org/



IEI Tank AIoT Developer Kit

Experience the performance of Intel Xeon® processors, Intel® accelerators, pre-installed visions software and tools, and more.



Optimal performance & reliability

The Intel® Xeon® E3-1268LV5 processor provides 1.4x performance over the previous generation
Server chipset provides data integrity and reliability with error-correcting code memory support



Preinstalled software stack

Exploit hardware performance using pretrained models and training extensions found in the Intel® Distribution of OpenVINO™ toolkit
Intel® Media SDK enables encoding and decoding of video formats



Rapid development & deployment

Reduce time to market and simplify software development using preloaded tools such as Intel® System Studio and Arduino Create

Key components

Hardware

- IEI TANK AIoT Developer Kit E3
- 120 V power cable
- Intel® Vision Accelerator Design products (optional)

Preinstalled Software

- Intel® Distribution of OpenVINO™ toolkit
- Intel® Media SDK
- Ubuntu® 16.04 desktop LTS
- Intel System Studio 2019 Ultimate Edition



Key applications

- Industrialized solutions
- Intelligence at the network edge using on-premise servers
- Applications that require vision accelerators
- Managing and running multiple IoT vision systems
- Running multiple hypervisors for IoT solutions
- Monitor industrial, retail, factory, and other work-spaces using computer vision and visual dashboards as well as ingesting and measuring data

LEARN MORE

Visit the IEI Tank AIoT Developer Kit page on Intel.com to view documentation, tutorials, and how to order:

software.intel.com/en-us/iot/hardware/iei-tank-dev-kit-xeon

Used with hardware that does not include Intel Vision Accelerator Design products



JWIPC iFactory Developer Kit (PRC only)

Experience the performance of Intel® Core™ processors and Intel® HD Graphics acceleration. Deploy industrial-grade hardware and software in factories, warehouses, and manufacturing environments.



Performance

Get the performance you need to analyze multiple HD video streams and large amounts of sensor data with Intel Core processors and Intel HD Graphics



Preinstalled software stack

Get the most out of your hardware performance with the Intel® Distribution of OpenVINO™ toolkit, Intel® Media SDK, Intel® System Studio, and libraries—all preinstalled with samples



Rapid development & deployment

Speed up time to market with a preloaded operating system, software, computer vision models, samples, and development tools, such as Intel® System Studio

Key components

Hardware

- JWIPC iFactory developer kit
- 6th or 7th generation Intel Core i5 or i7 processors
- Digital Visual Interface Display

Preinstalled Software

- Intel® Distribution of OpenVINO™ toolkit
- Intel® Media SDK
- Intel System Studio 2019 Ultimate Edition
- Ubuntu* 16.04 desktop LTS



Key applications

- Face detection and analysis
- Retail audience analytics
- Pedestrian detection and analysis
- Traffic monitoring and license plate recognition

LEARN MORE

Visit the JWIPC iFactory Developer Kit page on Intel.com to view documentation, tutorials, and how to order:
software.intel.com/en-us/iot/hardware/jwipc-ifactory-dev-kit



JWIPC iShow Developer Kit (PRC only)

Take advantage of a pre-validated hardware system and OS with preinstalled developer tools, runtimes, and SDKs, allowing rapid deployment plus accelerated and balanced workloads.



Preinstalled computer vision software

Use the Intel® Distribution of OpenVINO™ toolkit for hardware acceleration of deep learning inference for computer vision applications



Hardware acceleration

Harness the performance of Intel®-based accelerators for deep learning inference with the CPU and GPU included in this kit or with an optional VPU such as Intel® Neural Compute Stick 2



Rapid development & deployment

Simplify your software development, optimize your application for Intel® platforms, and get your product to market faster

Key components

Hardware

- JWIPC iShow Developer Kit
- 12 V, 3 A DC in

Preinstalled Software

- Intel® Distribution of OpenVINO™ toolkit
- Intel® Media SDK
- Ubuntu* 16.04 desktop LTS



Key applications

- Computer vision applications that run across all Intel® Vision Products
- Media encoding and decoding
- Deep learning applications across Intel®-based silicon products

LEARN MORE

Visit the JWIPC iShow Developer Kit page on Intel.com to view documentation, tutorials, and how to order:

software.intel.com/en-us/iot/hardware/jwipc-ishow-dev-kit



Uzel Bluzer Developer Kit (PRC only)

Experience the performance of hardware accelerators and Intel® Core™ processors.



Performance

Get the performance you need to analyze multiple high-definition (HD) video streams and large amounts of sensor data with an Intel® Core i5 or Intel® Core i7 processor and Intel HD Graphics



Preinstalled software stack

Get the most out of your hardware performance with the Intel® Distribution of OpenVINO™ toolkit, Intel® Media SDK, and libraries—all preinstalled with samples



Use cases

Simplify your software development, optimize your application for Intel® platforms, and get your product to market faster with preloaded tools on a pre-validated operating system

Key components

Hardware

- Uzel Bluzer Developer Kit
- 120 W – 150 W power adapter
- Intel Vision Accelerator Design products (optional)

Preinstalled software

- Intel® Distribution of OpenVINO™ toolkit
- Intel® Media SDK
- Ubuntu® 16.04 desktop LTS
- Intel® System Studio 2019 Ultimate Edition



Key applications

- **Computer vision applications** that run across all Intel® Vision products, media encoding and decoding, deep learning applications across Intel®-based silicon products
- **Independent workloads** for computer vision and time-series data analysis in virtual machines using a Kernel-based Virtual Machine (KVM)
- **Tracking the activity of workers** who are near heavy machinery and develop safety solutions using computer vision technologies
- **Sending notifications** when an employee appears to be distracted while operating machinery

LEARN MORE

Visit the Uzel Bluzer Developer Kit page on Intel.com to view documentation, tutorials, and how to order:

software.intel.com/en-us/iot/hardware/uzel-bluzer-dev-kit

For support from Uzel, visit: uzelinfo.com/en/prod.php?id=93



A close-up, low-angle shot of a server rack. The server units are densely packed, and their front panels are illuminated by a series of bright blue LEDs arranged in vertical columns. On the right side of the rack, several yellow status lights are visible, some of which are glowing. The overall lighting is dark, with the primary light sources being the server's LEDs and status lights. The perspective creates a sense of depth and scale.

**INTEL® - BASED
DEVELOPER-READY HARDWARE
EQUIPMENT MAKER PROVIDER VISION
ACCELERATOR DESIGN PRODUCTS**






AAEON Vision Accelerator Design Products



AAEON Technology Inc. is a leading manufacturer of advanced industrial and embedded computing platforms, providing integrated solutions, hardware and services worldwide.

AI Core X, part of the UP family from AAEON, is powered by Intel® Movidius™ Myriad™ X and built on the mPCIe form factor. AI Core X is compact and designed to work in a wide range of applications.

AAEON also offers a wide range of compact embedded boards which the AI Core X can easily be added to power machine vision and computer learning.

		
1 x Intel® Movidius™ Myriad™ X VPU: AAEON UP AI Core X	2 x Intel® Movidius™ Myriad™ X VPU: AAEON UP AI Core XM	4 x Intel® Movidius™ Myriad™ X VPU: AAEON UP AI Core XP4
		
8 x Intel® Movidius™ Myriad™ X VPU: AAEON UP AI Core XP8	Customized card based on Intel® Movidius™ Myriad™ X VPU: AAEON UP AI Vision Plus X	

Features

- Intel® Movidius™ Myriad™ X VPU
- Intel® Vision Accelerator Design SW SDK
- Supported frameworks: TensorFlow, Caffe, MXNET
- Ubuntu 16.04, Windows® 10

LEARN MORE

Visit the following page to learn how AAEON and Intel have developed a wide range of AI solutions powered by Intel® Movidius™ Myriad™ X: aaeon.com/en/ai/ai-solutions-powered-by-intel-myriad-x

For more information, please visit www.up-board.org, UP Community up-community.org/, UP Shop up-shop.org/, or contact AAEON directly at aaeon.com/en/contacts/form/



ADLINK Vision Accelerator Design Products



ADLINK offers certified solutions for highly regulated markets. Their rugged specifications are ideal for meeting the extended lifecycle requirements of industrial applications, and their standards-based designs ensure system compatibility and solution scalability.

The EDL-mPCIe-MA2485 PCIe mini-card series features Intel® Movidius™ Myriad™ X VPUs, providing an easy and flexible solution for computer vision and deep learning acceleration. EDL-mPCIe-MA2485 PCIe mini-cards are able to solve complex AI hardware design challenges and can integrate of vision-based accelerators and inference engines for deep learning at the edge.



Accelerator cards with 1 or 2 x Intel® Movidius™ Myriad™ X VPU:
ADLINK EDL-mPCIe-MA2485

Features

- PCIe mini-card form factor
- 1x/2x Intel® Movidius™ Myriad™ X VPU MA2485 with on-chip memory
- Support for Intel® Distribution of OpenVINO™ toolkit
- Operating temperature 0°C to 60°C with thermal solution

LEARN MORE

Visit the ADLINK EDL-mPCIe-MA2485 page to learn more about the offering, its key features, and how to order:
adlinktech.com/Products/Deep_Learning_Accelerator_Platform_and_Server/Deep_Learning_Accelerator/EDL-mPCIe-MA2485?Lang=ent



ADVANTECH Vision Accelerator Design Products

ADVANTECH

Enabling an Intelligent Planet

Advantech is a leading provider of embedded applications, providing products and solutions across industries.

The ADVANTECH VEGA series is a low-power consumption, ultra compact card powered by Intel® Movidius™ Myriad™ X VPU. It enables hardware acceleration for common deep neural networks, is scalable for multi video streams edge inference, and delivers 10 times performance compared to previous generation with full support for the Intel® Distribution of OpenVINO™ toolkit.



**1 x Intel® Movidius™
Myriad™ X VPU:**
ADVANTECH VEGA-320



**2 x Intel® Movidius™
Myriad™ X VPU:**
ADVANTECH VEGA-330



**8 x Intel® Movidius™
Myriad™ X VPU:**
ADVANTECH VEGA-340

Features

Intel® Distribution of OpenVINO™ toolkit

- Model Optimizer, inference engine
- Supports frameworks like TensorFlow, Caffe, MXNet, ONNX

Deployment wizard

- AI Model Launcher, Deployment Reference, CPU/VPU Monitoring

Pre-trained models

- Facial detection, pedestrian tracking, human pose estimation

Third party AI SDK

- Vehicle detection
- License plate recognition
- Optical inspection

LEARN MORE

Visit the Advantech VEGA Series page to learn more about the offering, its key features, and how to order:

https://www.advantech.com/products/edge-ai-acceleration-modules/sub_3d060f1e-e73e-460d-b38c-c69f76312c91



HPE Vision Accelerator Design Products



From the edge to cloud, HP Enterprise powers enterprises with proven, industry-leading IT infrastructure solutions, products and services. The HPE Edgeline VPU Module with Intel® Movidius™ Myriad™ X VPU seamlessly integrates vision processing unit computing with HPE Edgeline. VPU technology delivers high performance, high density, and high-power efficiency for deep neural networking running imaging and video inference applications. high-density and high efficiency for vision analytics in edge computing environments.



4x Intel® Movidius™ Myriad™ X VPU:
Hewlett Packard enterprise Edgeline Intel® Movidius™
Myriad™ X VPU Module

Features

- PCIe mini-card form factor (30 x 50 mm)
- 1x/2x Intel® Movidius™ Myriad™ X VPU MA2485 with on-chip memory
- Support for Intel® Distribution of OpenVINO™ toolkit
- Operating Temperature -20°C to 70°C

LEARN MORE

Visit the HPE Edgeline Intel® Movidius™ Myriad™ X VPU Module page to learn more about the offering, its key features, and how to order: hpe.com/ca/en/product-catalog/servers/accelerators/pip.hpe-edgeline-vpu-module-with-myriad-x.1011181572.html



IEI Vision Accelerator Design Products



IEI Integration Corp. is developing and perfecting solutions for AI, machine vision, smart factory, smart retail, surveillance, medical diagnostics and other use cases and applications.

The IEI Mustang Series is a compact size card series that features low power consumption through Intel® Movidius™ Myriad™ X VPUs or Intel® Arria® FPGAs, as well as Intel® Distribution of OpenVINO™ toolkit.



1 x Intel® Movidius™ Myriad™ X VPU: IEI Mustang-M2AE-MX1-R10

2 x Intel® Movidius™ Myriad™ X VPU: IEI Mustang-M2BM-MX2-R10,

4 x Intel® Movidius™ Myriad™ X VPU: IEI Mustang-V100-MX4-R10



8 x Intel® Movidius™ Myriad™ X VPU: Mustang-V100-MX8-R11

1 x Intel® Arria® 10 FPGA: Mustang-F100-A10-R10

Features

- Operating systems: Ubuntu 16.04.3 LTS 64bit, CentOS 7.4 64bit, Windows® 10 64bit
- Currently supports topologies like AlexNet, GoogleNetV1/V2, MobileNet, MTCNN, Squeezenet1.0/1.1, Tiny Yolo V1 & V2, yolo V2, ResNet-18/50/101.*
- Intel® Distribution of OpenVINO™ toolkit structure which allows trained data such as Caffe, TensorFlow, MXNet, and ONNX to execute on it after convert to optimized IR

LEARN MORE

Visit the IEI Mustang Series page to learn more about the offering, its key features, and how to order: ieiworld.com/ai-ready-solution/en/

*For more topologies, model and framework layer support information, please refer to the Intel® Distribution of OpenVINO™ toolkit official website: software.intel.com/en-us/openvino-toolkit



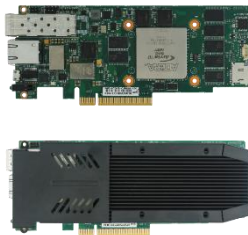
JWIPC Vision Accelerator Design Products



JWIPC provides products to industries such as OPS, digital signage, point of sales, industrial PC in IoT, AIO, Mini-PC, and network security among others. JWIPC provides end-to-end hardware solutions to OEMs, Sis, and ISVs all over the world. JWIPC's accelerators enable facial recognition, vehicle detection, behavior analysis, and optical character recognition.



**2 x Intel® Movidius™
Myriad™ X VPU**
JWIPC Intel® Movidius™
Myriad™ X



1 x Intel® Arria® 10 FPGA :
JWIPC DLAC660SX

Movidius Design Products

- Ultra-low power design
- Unique design for vision and AI workloads
- Intelligent memory fabric that pulls together heterogeneous resources to enable power-efficient processing
- Small footprint that can easily be integrated into existing products

Intel® FPGA Design Products

- Rack-mount chassis
- UART interface for micro USB package
- Passive heatsink (optional)

LEARN MORE

Visit the JWIPC product page to learn more about its AI products:
jwipc.net/content.asp?pid=115



NEXCOM/NexCOBOT Vision Accelerator Design Products



NEXCOM is a trustworthy partner for building intelligent solutions for customers in automation, security, IoT, mobile computing, and network solutions. The AIBooster series provides high performance through deep neural network inference for fast, accurate video analytics.



1 x Intel® Movidius™ Myriad™ X VPU:
NEXCOBOT AIBooster-L1



2 x Intel® Movidius™ Myriad™ X VPU:
NEXCOBOT AIBooster-L2



8 x Intel® Movidius™ Myriad™ X VPU:
Nexcom AIBooster-X8



8 x Intel® Movidius™ Myriad™ X VPU:
Nexcom AIBooster-X8-MXM

Features

Single/dual Intel® Movidius™ Myriad™ X MA2485 VPU with up to 1 TOPS per VPU

- On-chip accelerators 20+ image/vision processing accelerator, Neural compute engine (DNN accelerator)
- Neural network capability neural compute engine

Supports Intel® Distribution of OpenVINO™ toolkit

LEARN MORE

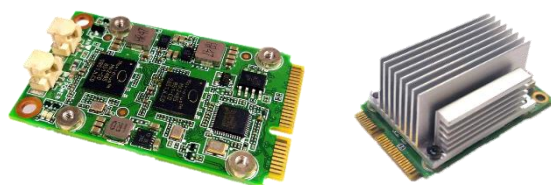
Visit the NEXCOM product page to learn more about its AI products:
nexcom.com/Products/mobile-computing-solutions/ai-edge-telematics-solution/ai-edge-accelerator



tinyGO Vision Accelerator Design Products



A leading provider of intelligent hardware solutions, tinyGO is committed to innovation in AI practices such as deep machine learning, natural language, and image processing. The tinyGO HDDL-L and -R series offers intelligent image acceleration processing boards to accelerate intelligence in a cost-effective way.



2 x Intel® Movidius™ Myriad™ X VPU:
TinyGo G51C



8 x Intel® Movidius™ Myriad™ X VPU:
tinyGo H8C

Features

- 1T-8T computing power
- Built-in tinyGO software, easy to debug and install
- These products can be used in many fields such as facial recognition/face detection, ADAS, and industrial inspection

LEARN MORE

Visit the tinyGO HDDL-L series product page for product information and technical data:

tinygo.com/index.php?c=article&id=37

Visit the tinyGO HDDL-R series product page for product information and technical data:

tinygo.com/index.php?c=article&id=36



Uzel Vision Accelerator Design Products



Uzel Information Technology Co., Ltd. is an industry intelligence solutions and services provider, offering comprehensive hardware and software solutions. Uzel is committed to providing customers with high quality, high value-added products and services that shorten product launch cycles and reduce the total cost of ownership for customers' products. The Uzel UI and US series of AI products can be used in AI industries such as factory automation, machine vision, and deep learning.



**1 x intel® Movidius™
Myriad™ X VPU:**
Uzel UI-AL2



**2 x intel® Movidius™
Myriad™ X VPU:**
Uzel UI-AR8



**Customized card based
on Intel® Movidius™
Myriad™ X VPU:**
Uzel UI-S2360

Features

1. Support 8-120* Intel® Movidius™ MA2485 VPU
2. Standard PCIE X4 interface
3. Fanless design
4. Support more than 9 computing algorithms networks
5. Dynamic equilibrium design for computation

LEARN MORE


Visit the Uzel product page to learn more about its AI products: uzelinfo.com/en/pro.php





INTEL EDGE AI PARTNERS

Intel Partner Enablement Programs
Intel® ISA Video Specialists



INTEL EDGE AI PARTNERS

INTEL PARTNER ENABLEMENT PROGRAMS

Intel® IoT Market Ready Solutions

Intel® IoT RFP Ready Kits

Intel® AI: In Production

Intel® IoT Solutions Alliance (ISA)

Intel® ISA Video Specialists

Intel® IoT Market Ready Solutions



Intel® IoT Market Ready Solutions (MRS) are scalable, repeatable, end-to-end solutions that are currently available in the market. Through the Intel® MRS program, Intel is verifying that these solutions deliver innovative business transformation by leveraging actionable insights.

Key partner benefits



Program Mark



Sales Kits



Solutions Directory



Channel Acceleration



Sales Support



Content Marketing



Co-Mktg Funds



Event Marketing



Industry Campaigns

To qualify, a solution must:

- ✓ Include all edge-to-cloud components
- ✓ Provide a “one-stop shop” experience with order, installation, and support all provided from a single source
- ✓ Be commercially deployed in the market today
- ✓ Demonstrate measurable business value

Learn more: intel.com/content/www/us/en/internet-of-things/market-ready-solutions/overview.html

Intel® IoT RFP Ready Kits



Intel® IoT RFP Ready Kits (RRK) are commercially-hardened, ready-for-customer solution kits built for scale into customer deployments. Each kit is available for purchase today and features commercial grade components, customizable APIs, a verified distribution, pricing model, and support.

Key benefits



Program
Mark



Sales
Kits



Solutions
Directory



Channel
Acceleration



Sales
Support



Content
Marketing



Co-Mktg
Funds



Event
Marketing



Opportunity
to be on IDZ

To qualify, a kit must:

- ✓ Solve commercial IoT use-case targeted to a vertical
- ✓ Be commercially available
- ✓ Be bundled with required hardware, software and support
- ✓ Be orderable and have a defined pricing model (comes with an ordering guide)

Learn more: intel.com/rfpkits

Intel® AI: In Production

Intel® AI: In Production is an ecosystem focused on reducing complexities, promoting partner offerings, and increasing collaboration between Intel's partners for AI at the edge.



Key benefits for Intel® AI: In Production partners



Grow AI expertise and connections



Accelerate solution development



Amplify go-to-market initiatives

Join the ecosystem:

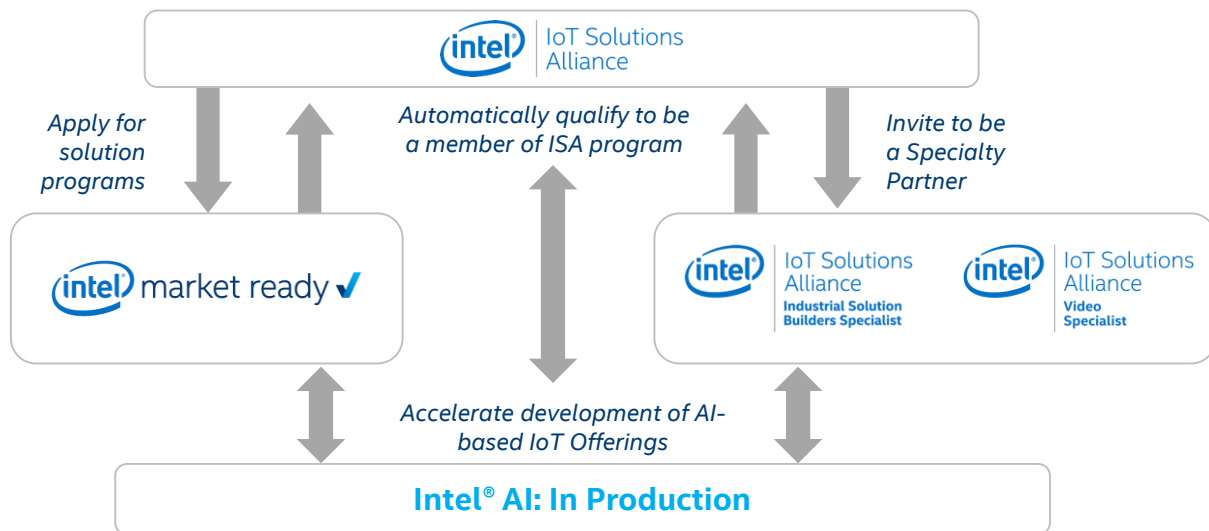
- ✓ Develop AI solutions at the edge leveraging Intel® Vision Products: intel.com/content/www/us/en/internet-of-things/ai-in-production/develop.html
- ✓ Apply to become an Intel® AI: In Production partner: intel.com/ai-in-production
- ✓ Intel reviews your membership application
- ✓ Unlock your opportunities to scale with Intel and its dynamic ecosystem, once approved: intel.com/content/www/us/en/internet-of-things/ai-in-production/scale.html

Learn more: intel.com/ai-in-production

Intel® IoT Solutions Alliance

The **Intel® IoT Solutions Alliance** helps members accelerate revenue growth with a world-class, solution-centered ecosystem program that bridges the gaps for member IoT solutions and offers multiple ways to scale

Many opportunities for partner GTM value creation with Intel in IoT



Key benefits

- ✓ Promote products and company
- ✓ Tiered benefits based on membership level

Qualifications

- ✓ Roles: ODM, OEM, ISV, CSP, aggregator, solution integrator
- ✓ Hardware: Intel revenue, roadmap alignment
- ✓ Solutions/software: Qualify for an Intel® iMRS or Intel® IoT RFP Ready Kit

Learn more: intel.com/content/www/us/en/partner/solutions-alliance/program-overview.html

Intel® ISA Video Specialist



IoT Solutions
Alliance
Video
Specialist

These select partners help grow market share, accelerate revenue, and scale joint solutions through customized sales and marketing opportunities.

As an Intel® Technology Provider, selected ISA Video Specialists...



Gain access to Intel training and resources ensuring that enterprise customers receive up-to-date insights on the latest Intel technologies and IoT Video solutions



Collaborate with Intel AI experts to deliver the right configuration tailored to enterprise customer needs



Leverage world-class Intel test tools allowing specialists to reduce R&D costs, ensure high quality, and offer enterprise customers the lowest total cost of ownership



Receive co-marketing opportunities with Intel such as intel-assisted case studies and white papers that can provide high visibility for enterprise customers

Learn more about the Intel® IoT Solutions Alliance:

<https://www.intel.com/content/www/us/en/partner/solutions-alliance/program-overview.html>



INTEL EDGE AI PARTNERS
INTEL® ISA VIDEO SPECIALISTS

Agent Video Intelligence (Agent Vi)

Agent Vi is a long-standing, experienced video analytics company, the first to bring a commercial AI-driven solution to the market. They sell innoVi™, a centrally managed video analytics service for small to large installations, including for distributed and remote sites.

Their verticals include: smart & safe cities, critical infrastructure, central monitoring/guard displacement, transportation, education, enterprise & industry, and more. They currently operate in North America, Central and Latin America, Europe & Middle East, and APAC.

Their core competencies include...

- ✓ 16 years experience in delivering cutting-edge video analytics solutions to the market, with excellent pre-sales and design, and post-installation support services
- ✓ Open architecture from innoVI™ enables transformation of any camera into a smart video device, via the Intel-driven innoVi Edge appliance
- ✓ Central management from innoVI allows full control of distributed or federated sites

Additional information

- ✓ Find detailed information on the innoVI solution on the [Agent Vi website](#) or [Intel Solution Marketplace Posting](#)
- ✓ Find more info on Agent Vi on the [AIIP website](#) or [ISA Video Specialist Marketplace Posting](#)
- ✓ Visit the approved MRS innoVi product page on the [Intel Solutions Marketplace](#)

AnyVision

AnyVision is a leader in video analytics based on AI: Facial, body, and object recognition. Their company vision is to make AI accessible to the world. AnyVision currently has the following solutions available:

- **Better Tomorrow** - Tactical surveillance system
- **SesaMe** - An onboarding & authentication mobile SDK offering frictionless facial recognition and liveness detection on any smartphone
- **Insights** - Generate powerful insights about customers using visual video analytics
- **Abraxas** - An intelligent access control solution, based on the most advanced facial recognition technology

Their main focus areas are casinos, banking, retailers, and stadiums. They currently operate Worldwide (excluding PRC).

Their core competencies include...

- ✓ AI that works in the real world
- ✓ Agnostic to the infrastructure (cameras, servers etc.)
- ✓ Lightweight and effective Neural Nets deployed on servers as well as edge devices and low power chips

Additional information

- ✓ Find detailed information on AnyVision solutions on the [AnyVision website](#)
- ✓ Find more info on AnyVision on the [AIIP website](#) or [ISA Video Specialist Marketplace Posting](#)

AxxonSoft

AxxonSoft is a leading developer of video management and physical security information management software. Since 2003, AxxonSoft has been creating disruptive technologies that push the safety & security industry forward.

They currently have the following solutions available:

- **Axxon Next:** Open-platform enterprise video management software solution
- **Axxon Intellect:** Advanced physical security information management software platform

AxxonSoft targets organizations in retail, banking, education, traffic, oil & gas, homeland security, and other verticals. They operate worldwide.

Their core competencies include...

- ✓ AxxonSoft's unique strengths are Smart Forensic Search in recorded video, TimeCompressor video synopsis technology, and customizable video analytics powered by AI
- ✓ To meet the needs of a particular facility, AxxonSoft AI learns to perform customer-specific tasks from video material obtained onsite

Additional information

- ✓ Find detailed information on AxxonSoft solutions on the [AxxonSoft website](#)
- ✓ Find more info on AxxonSoft on the [AIIP website](#) or [ISA Video Specialist Marketplace Posting](#)
- ✓ Visit the approved Intel® iMRS Axxon Next solution page on the [Intel Solution Marketplace](#)

BCDVideo

BCDVideo works with top security integrators to implement video surveillance solutions certified by leading video management software companies and digital camera manufacturers.

BCDVideo currently have the following available solutions:

- Video recording appliances
- Video data storage
- GPU analytics servers
- Hyperconverged infrastructure for video surveillance
- Networking switches
- Client viewing stations
- Access control
- Uninterruptible power systems

BCDVideo's global footprint includes more than 86,000 installations in over 74 countries and all vertical markets.

Their core competencies include...

- ✓ Guaranteed solutions, white glove customer service, award-winning technical support, industry-leading and cutting-edge IP video surveillance solutions, quick delivery times, and the long-term support
- ✓ Key OEM partnerships, extensive on-site inventory, supply chain management, solutions that are engineered and optimized for video, certified and validated VMS performance, guaranteed bandwidth, and video data storage calculations

Additional information

- ✓ Find detailed information on the large spectrum of available solutions on the [BCDVideo website](#)
- ✓ Visit the BCDVideo LinkedIn company profile: [linkedin.com/company/bcdvideo/](https://www.linkedin.com/company/bcdvideo/)
- ✓ Find more info on BCDVideo on the [AIIP website](#) or [ISA Video Specialist Marketplace Posting](#)

Dell Technologies

Dell Technologies is a combination of seven technology leaders with the common goal of ensuring their customers keep pace with digital innovation to accelerate their success. As a hybrid of digital experts, Dell delivers real results for customers across a spectrum of industries.

Dell currently has the following available solutions:

- **For small deployments:** Dell PowerEdge™ R Series Servers R740xd, R640, R540, R440
- **Medium:** Dell PowerEdge™ R Series Servers R740xd, R640, R540, R440
- **Large:** Dell PowerEdge™ R Series Servers R740xd, R640, R540, R440

Their core competencies include...

- ✓ Bringing solutions to market from the most comprehensive portfolio of technology solutions from edge to core to cloud
- ✓ Providing solutions that feature industry leading servers, storage and converged infrastructure
- ✓ Developing validated safety and security building blocks for computer vision, video surveillance and digital evidence

Additional information

- ✓ Find detailed information on the benefits of building with Dell Technology visit the [Dell EMC website](#).
- ✓ See how Dell Technology is protecting what matters to make the world safer on their [Surveillance and security website](#).
- ✓ Learn how Dell Technology is building foundations for the urban future on their [digital cities website](#):
- ✓ Find more info on Dell Technologies on the [AIIP website](#) or [ISA Video Specialist Marketplace Posting](#)

Genetec Inc.

Genetec Inc. is an innovative technology company with a broad solutions portfolio that encompasses security, intelligence, and operations. Genetec delivers solutions worldwide, serving customers in 149 countries in the following industries: airports, cities, critical infrastructure, education, financial institutions, gaming, healthcare, parking enforcement, public safety, retail, sports and entertainment, and trains and transit.

The company's flagship product, **Genetec Security Center**, is an open-architecture platform that unifies IP-based video surveillance, access control, automatic license plate recognition (ALPR), communications, and analytics. Genetec also develops cloud-based solutions and services designed to improve security and contribute new levels of operational intelligence for governments, enterprises, transportation, and communities.

Their core competencies include...

- ✓ Delivering quality products and support to customers and partners
- ✓ Innovating with cutting-edge information technology
- ✓ Providing adaptable solutions for various business needs
- ✓ Collaborating to ensure a full high performing solution

Additional information

- ✓ Find detailed information on Genetec Inc's solutions on the [Genetec Inc website](#); view all Genetec products at [products](#).
- ✓ Find more info on Genetec on the [AIIP website](#) or [ISA Video Specialist Marketplace Posting](#)

GeoVision, Inc.

GeoVision offers video surveillance solutions with AI and IoT capabilities in smart city, smart building, energy, retail, healthcare, education, and industrial verticals. GeoVision serves customers in 110 countries worldwide, shipping 350,000 video management software channels annually through sub-distributors and IoT system integrators. The company has locations in AMER, EMEA, Asia, Japan, and China. For the last 20 years, **GeoVision's DSS platform and AI analytics** have been developed and optimized on Intel® Architecture.

Their core competencies include...

- ✓ End-to-end in-house design video management software and IP cameras covering all inquiries from edge to server
- ✓ Built-in video analytics performs different tasks included, but not limited to, face detection, tampering alarm, unattended object detection, missing object detection, smart search, people counting, and crowd detection
- ✓ Open SDK/API for easy cross-platform integration

Additional information

- ✓ Find detailed information on GeoVision solution can be found on the [GeoVision website](#)
- ✓ Visit the approved GeoVision MRS solution page on the [Intel Solutions Marketplace Posting](#)
- ✓ Find more info on GeoVision Inc. on the [AIIP website](#) or [ISA Video Specialist Marketplace Posting](#)

Gorilla Technology

Gorilla Technology is a leader in video intelligence, network intelligence, and IoT technology. It develops a wide range of video-centric and content management solutions for smart cities, smart retail, enterprise security, and smart media. Gorilla Technology provides a complete “Security Convergence Platform” to government institutions, telecom companies, and private enterprises with network surveillance and cybersecurity.

Their core competencies include...

- ✓ Scalable, comprehensive, and flexible video analytics & recorder, from all-in-one machines or gateway hubs to large server scenarios
- ✓ Fully-optimized by the Intel® Distribution of OpenVINO™ toolkit to run faster and cheaper on Intel CPUs/VPUs—no GPU required
- ✓ Gorilla’s open architecture and API interface ensures quick integration with 3rd party network video recorders/video management software, access control, IoT platforms, and camera systems
- ✓ Ability to deliver real-time analytics on a single dashboard—customers can protect their businesses with event-based solutions that effectively search and track people, vehicles, and objects, detect suspicious events, and prevent loss

Additional information

- ✓ Find detailed information on Gorilla Technology solutions on the [Gorilla website](#).
- ✓ Visit the approved Gorilla Intelligent Video Analytics Recorder (IVAR) MRS page on the [Intel Solutions Marketplace Posting](#)
- ✓ Visit the approved Gorilla In-Store Analytics RRK page on the [Intel Solutions Marketplace Posting](#)
- ✓ Find more info on Gorilla Technology on the [AIIP website](#) or [ISA Video Specialist Marketplace Posting](#)

Hanwha Techwin

Hanwha Techwin has a full lineup of video surveillance products, from cameras and storage devices to integrated control and intelligent video analysis software, that uses top-tier optical design, manufacturing, and image-processing technologies. Each solution has world-class total security and is tailored to the varying needs of the customers.

Hanwha Techwin provides video security solutions for retail, smart cities, banks, and schools.

Their core competencies include...

- ✓ Living by the five values of business ethics, good product range, best quality, cyber security, and affordable price
- ✓ Building strong partnerships, sustaining win-win growth in the industry
- ✓ Offering well-classified product range runs from entry-level to the high-end market
- ✓ Committing to combat cybersecurity threats to ensure safety
- ✓ Delivering the best quality, high-performance products at affordable prices for the valued customers by repetitive quality assurance tests

Additional information

- ✓ Find detailed information about Hanwha Techwin solutions on the Hanwha Techwin website: hanwhatechwin.com/
- ✓ Access the Hanwha security channel partner program: step.hanwha-security.com/kor_EN/Default.aspx

Honeywell Commercial Security

Honeywell offers the **MAXPRO® VMS suite** which is ideal for high traffic, sensitive environments including enterprise campuses, pharmaceutical companies, and banking and financial institutions. The MAXPRO® network video recorder is the Intel® processor-based hardware component used for all video footage and data processing.

Their core competencies include...

- ✓ Honeywell creates products, software and technologies found in more than 10 million buildings worldwide. Commercial building owners and occupants use Honeywell technologies to ensure their facilities are safe, energy-efficient, sustainable, and productive.
- ✓ Honeywell MAXPRO and facial recognition are among a suite of vision security solutions alongside Xtralis LoiterTrace™, an image analysis tool that identifies and tracks suspicious activity, and Xtralis IntrusionTrace™, a video analytics program for real-time intrusion detection.

Additional information

- ✓ Find detailed information on the MAXPRO VMS suite on the [Honeywell Commercial Security website](#).
- ✓ Visit the approved Honeywell MAXPRO NVR RRK page on the [Intel Solutions Marketplace Posting](#)
- ✓ Find more info on Honeywell on the [AIIP website](#) or [ISA Video Specialist Marketplace Posting](#)

Intelligent Security Systems (ISS)

ISS is a US business with over 22 years experience in video analytics and video management. ISS provides a comprehensive line of digital security and surveillance video solutions which are on the forefront of on-demand security, allowing for centralized command and control of entire enterprise security networks.

ISS's available solutions include:

- Video management software platforms
- City surveillance solutions
- Traffic violation solutions
- Facial recognition solutions
- License plate recognition solutions
- Port and cargo logistics solutions

Their core competencies include...

- ✓ Developing and owning analytics as both a video management software and analytics-focused company
- ✓ Integrating with all the major players in the industry with SecurOS, an open platform enterprise-level software—no need for 3rd parties when adding analytics to any solution
- ✓ Supporting large deployments through a robust engine, and true enterprise solutions

Additional information

- ✓ Find detailed information on Intelligent Security Systems solutions on the [Intelligent Security Systems website](#)
- ✓ Visit the approved SecurOS™ Velox MRS page on the [Intel Solutions Marketplace Posting](#)
- ✓ Find more info on Intelligent Security Systems (ISS) on the [AIIP website](#) or [ISA Video Specialist Marketplace Posting](#)



IoT Solutions
Alliance

KEDACOM

KEDACOM is a leading provider of video products and is committed to helping public and corporate customers improve communication and management efficiencies through video conference, video surveillance, and various video solutions.

KEDACOM's available solutions include:

- **Intelligent Transportation System** – Through an onboard algorithm the solution provides full-system coverage of a city. This system reads license plates, recognizes color, shapes, and brands of different cars
- **Safe City** – Using multi-dimensional facial recognition and car identification this product provides suspect information for criminal investigations and accurate vehiclepositioning support

Their core competencies include...

- ✓ Developing versatile solutions that can be widely incorporated into different sectors for a variety of customers
- ✓ Providing comprehensive and advanced technical advantages through video conference, surveillance, and application solutions to their clients and customers
- ✓ Combining video conference and surveillance together to create customer benefits in unique ways

Additional information

- ✓ Find detailed information on KEDACOM solutions on the [KEDACOM website](#)
- ✓ Find more info on KEDACOM on the [AIP website](#) or [ISA Video Specialist Marketplace Posting](#)

Milestone

Milestone Systems designs, develops and produces world-class IP-based video management solutions that help the world see how to ensure safety, protect assets, and increase business efficiency. Milestone enables an open platform community that drives network technology collaboration and innovation. It scales the capabilities of its video management software, **Milestone XProtect®**, by incorporating video analytics, building management and access control software from third parties. The focus verticals for Milestone are transportation, retail, smart city, education & healthcare. Milestone's available solutions include:

- The award-winning, XProtect® video management software is proven in 150,000 installations worldwide and supports +8,000 cameras and devices
- Milestone® Xprotect® add-ons such as LPR, retail, screen recorder, smart wall, access, transact
- Verified third-party compatible applications and hardware via Milestone Marketplace

Their core competencies include...

- ✓ Open and scalable platform
- ✓ Deep security expertise
- ✓ Thousands channel and technology partners that drive innovation, sales, and installations worldwide

Additional information

- ✓ Learn more about XProtect® video management software on the [Milestone website](#)
- ✓ Find more info on Milestone Systems on the [AIIP website](#) or [ISA Video Specialist Marketplace Posting](#)



Seneca

The **Seneca** brand provides physical security, digital signage, computing, and custom engineering solutions. They build efficient and environmentally-designed large-format video players and wall controllers based on secure and reliable network video recorders and security management hardware. Headquartered in Melville, New York, Arrow is one of the world's largest distributors of electronic components and compute products.

Seneca Navori is a content management and distribution tool allowing customers to standardize or customize their content anytime and anywhere. With a user-friendly interface and multi-use cloud-based platform real-time decision making can be made helping to enrich the customer experience with personalized content and target messaging.

Their core competencies include...

- ✓ Simplifying and sustaining technology lifecycle with Senecas suite of services
- ✓ Turning possibility into reality with purpose-built products for next-gen technology
- ✓ Adapting products and services for industry-specific solutions that transform the norm

Additional information

- ✓ Find detailed information on Seneca's available technology and solutions on the [Seneca Website](#)
- ✓ Find more info on Arrow on the [ISA Video Specialist Marketplace Posting](#)

Uniview

Uniview is a leader in the IP video surveillance market. Now the third largest player in the video surveillance market in China, Uniview has 13 years of IP video surveillance experience and a product line consisting of IP cameras, NVR, Encoder, Decoder, Storage, Client Software and app. Uniview aims to build a safer world by providing professional, reliable, and cutting-edge products and services.

Uniview's Smart City solution is a comprehensive end-to-end solution that solves the challenges of everyday city security by providing an advanced city surveillance system that ensure public safety and makes cities more intelligent.

Their core competencies include...

- ✓ Expertise in IP Video surveillance
- ✓ Innovation embedded in all its practices
- ✓ Guaranteed quality in whole hardware development process and product lifetime

Additional information

- ✓ Find detailed information about Uniview's technology on the [Uniview website](#)
- ✓ Find more info on Uniview on the [AIIP website](#) or [ISA Video Specialist Marketplace Posting](#)

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