

ISS Collaborates with Intel® to Build Traffic Management and Safety Solutions Leveraging AI at the Edge

Collaboration Sets New Reliability, Accuracy, and Operational Agility Standards.



“The Intel Core Ultra processor is a true game-changer poised to redefine the benchmarks in the realm of intelligent transportation systems.”

Aluisio Figueiredo, CEO
Intelligent Security Systems

ISS urban safety and security customer use cases

- Smart Cities
- Road Infrastructure
- Rail & Marine Infrastructure
- Law Enforcement
- Parking Facilities
- Corporate Business Parks
- Shopping Centers

Executive Summary

Urban landscapes are increasingly becoming complex, driving the need for transformative technologies like edge computing and AI. These innovative technologies are changing the city’s development, enhancing public safety, and improving transportation.

ISS challenges

ISS is a pioneer and leading video intelligence and data awareness solutions developer. ISS was looking to build future solutions to provide customers with better situational awareness and actionable insights cost-effectively. With their industry leading analytics, they were looking for a high performant, power efficient and agile edge platform that can optimize the number of cameras deployed on a single device. Keeping this in mind, the company harnessed the AI Suite for Visual Analytics to propel its edge-centric AI solution.

Solution description

ISS and Intel collaboration brings to market an industry-leading solution, setting new standards for reliability, security, and accuracy for license plate recognition (LPR) solutions. The ISS solution powered by AI Suite for Visual Analytics resulted in a highly accurate set of edge video analytics capabilities. The solution operates in diverse weather conditions, supports multiple customer transportation use cases, and offers robust integration with third-party systems.

The collaboration focuses on ISS’s two flagship offerings, SecurOS® Auto and SecurOS® Tracking Kit, which include, Intel® Core™ Ultra 7 Processor and the Built-in Intel® Arc™ GPU. ISS and Intel collaborated on an advanced video intelligence suite capable of managing multiple edge video camera and detector data streams simultaneously. This flexible system integrates with existing video management systems and comprehensively improves situational awareness with better data processing efficiencies, actionable security insights, and AI innovation at the edge. This collaboration will help in transforming intelligent transportation solutions with AI Suite for Visual Analytics.

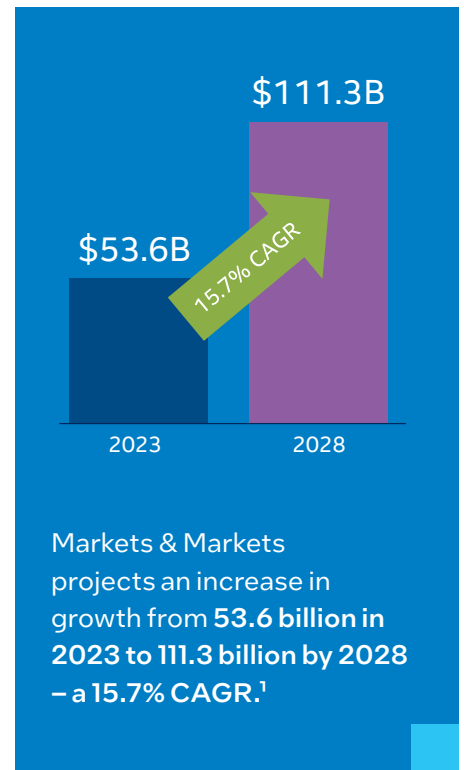


Figure 1 – Urban Safety and Security Edge AI Customer Use Cases

AI Suite for Visual Analytics includes pre-qualified and pre-validated hardware, bringing powerful and scalable compute for flexible performance and enhanced AI accessibility across Intel® CPUs, GPUs (integrated and discrete), and NPUs through modular and scalable architecture. This enables ISS to cover all aspects of Edge AI development, from concept to deployment, including hardware selection, software integration, and optimization strategies.

ISS and Intel demonstrate the power of combined AI innovation

At its core, the ISS SecurOS® Platform leverages native AI video analytics modules. One of the modules included in the new solution - SecurOS® Tracking Kit, detects up to 10 different behaviors per camera, including intrusion, object left behind, object removed, loitering, running, smoke, crowds, dwell time, wrong direction, and object counting (people, vehicles, and animals). This enables security personnel to process, understand, and respond to security events quickly.

"... We are seeing an impressive 75% and 100% boost in video analytic workload capacity for our flagship SecurOS® Auto and SecurOS® Tracking Kit applications compared to the 11th Gen Intel Core processor, thanks in part to the significant improvements in the built-in Intel Arc GPU, it equips us to deliver a new, more powerful generation of AI analytics."

Aluisio Figueiredo
CEO, Intelligent Security Systems

Intel innovations working in tandem with the ISS SecurOS® Tracking Kit, a video analytics module, streamlines operator efficiencies and is camera agnostic. Customers no longer need constant monitoring of controlled areas. These improvements result in better event processing at multiple locations. SecurOS® also uses advanced deep learning and template-based algorithms to provide better recognition accuracy for LPR scenarios. Using Intel processors, the solution now supports accurate recognition for license plates from different countries, efficient routine and high-volume operations, high and low-speed options, and better support for multiple lanes of traffic and camera scenarios. ISS and AI Suite for Visual Analytics can deliver a powerful AI solution to increase safety, security, and situational awareness.

AI Suite for Visual Analytics powers innovation and, combined with ISS solutions, accelerates edge deployments and significantly boosts video analytic workload capacity. This helps the end customer with post-event investigation capabilities, improved LPR accuracy in diverse conditions, versatile application support, fewer false positives and missed security camera events – all of which improve trust with installed systems.

AI Suite for Visual Analytics

AI Suite for Visual Analytics includes prequalified partner hardware, software toolkit, application framework, and a market ready ecosystem to easily design, develop, and scale solutions. AI Suite for Visual Analytics and software toolkit are AI and deep learning inference ready. The package can be used across domains to run video processing and AI inferencing on a single platform. It works with industry-leading AI models and common video analytics workloads while leveraging hardware-driven security to protect systems and data. This foundation helps solution providers and customers quickly deploy AI for use cases in smart cities and transportation.

- **Optimized performance:** Accelerates inference and hardware utilization to help build performant and efficient AI applications.
- **Modular, Scalable, and Cost-effective:** Minimizes investment needed to adopt AI at the edge by gaining access to pre-validated software and benchmarked hardware.
- **Streamlined deployment:** Saves time and maximizes productivity by streamlining AI development and deployment.
- **Versatile:** Can be applied for different requirements and use cases to meet current and future needs.

AI Suite for Visual Analytics operates as a stand-alone device connected to video sources such as IP cameras or network video recorders (NVRs) to enable edge video analytics in real-time, or it can be connected to the network and serve as a discrete AI service on the network to run offline deep learning analytics on-demand.

The core architecture of AI Suite for Visual Analytics uses a collection of containers centralized around the Video Analytics (VA) Base Library for efficient processing. Enhanced processing is achieved by Intel ingredients such as OpenVINO™ Toolkit, Intel® DL Streamer, which are backed by Intel®'s oneAPI Deep Neural Network Library (oneDNN), while media processing acceleration is enabled using Intel® Graphics Media Accelerator Driver and the open-source Video Acceleration API (VA-API).

ABOUT ISS

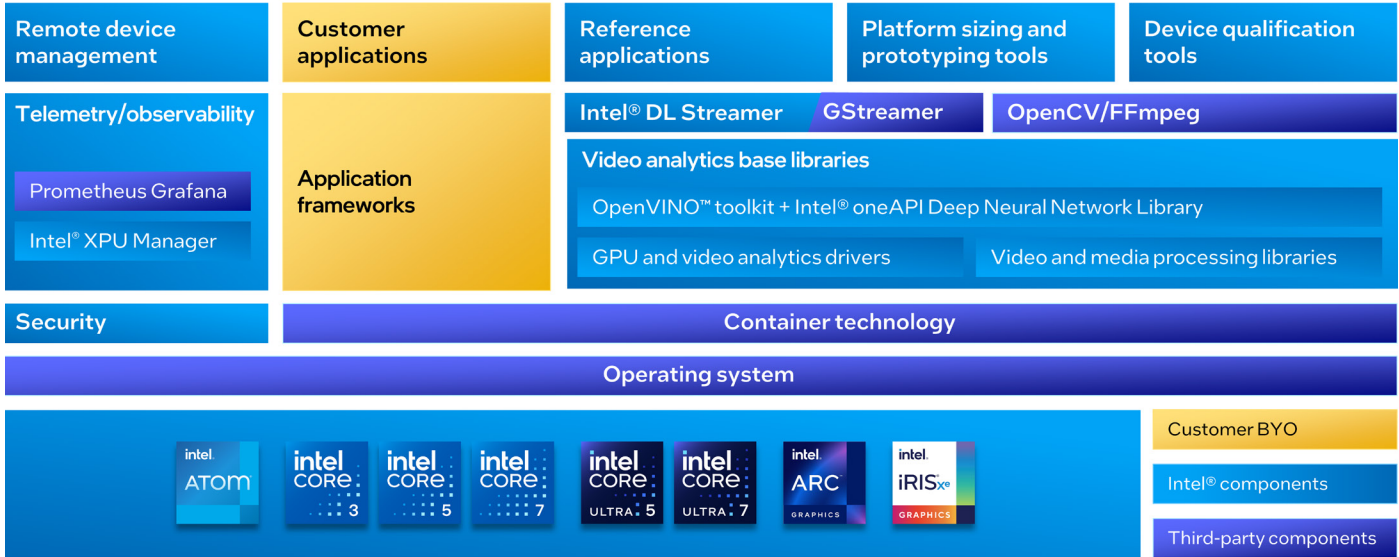
ISS is a pioneer in AI-driven video analytics. The company has 18 global offices and solutions deployed in over 50 countries on six continents, supporting cities, transportation, healthcare, critical infrastructure, retail, and more. The ISS SecurOS video intelligence platform securely connects to over 3 million cameras worldwide.



<https://issivs.com/>

AI Suite for Visual Analytics software toolkit

General compute + media + AI capability to meet diverse use-case requirements



Get started with AI Suite for Visual Analytics at <https://networkbuilders.intel.com/>



Performance varies by use, configuration and other factors. Learn more on the [Performance Index site](#).
 Performance results are based on testing as of dates shown in configurations and may not reflect all publicly available updates. No product or component can be absolutely secure. Intel does not control or audit third-party data. You should consult other sources to evaluate accuracy.
 Your costs and results may vary.

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