intel partner
Titanium
IoT Solutions

AAEON

AAEON AND INTEL

Empowering AI Innovation at the Edge

AAEON is a Titanium member of the Intel® Internet of Things Solutions Alliance.

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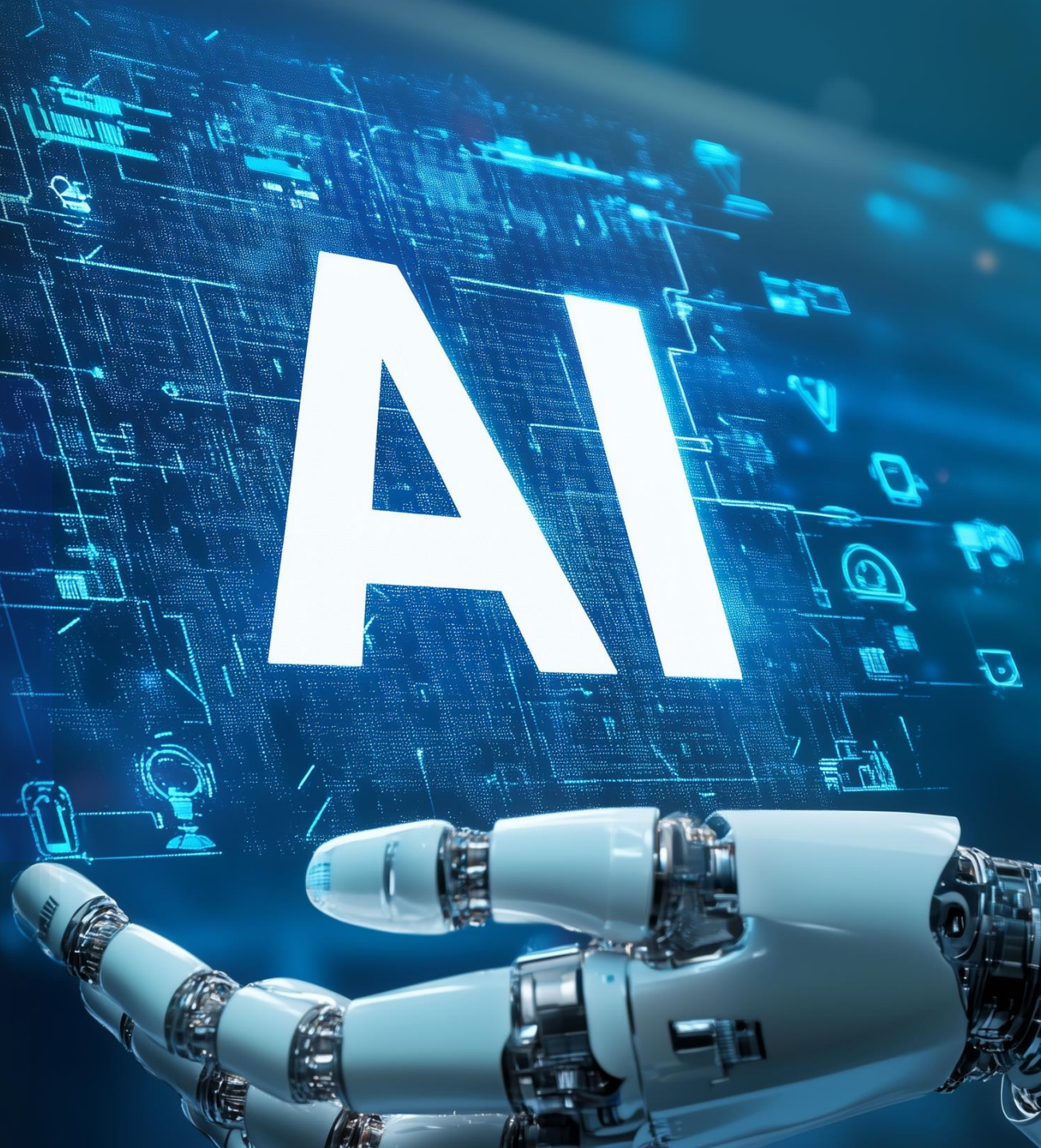
01 AAEON X INTEL PARTNERSHIP



Introduction to
AAEON x Intel Partnership

AAEON x intel

intel partner Titanium IoT Solutions

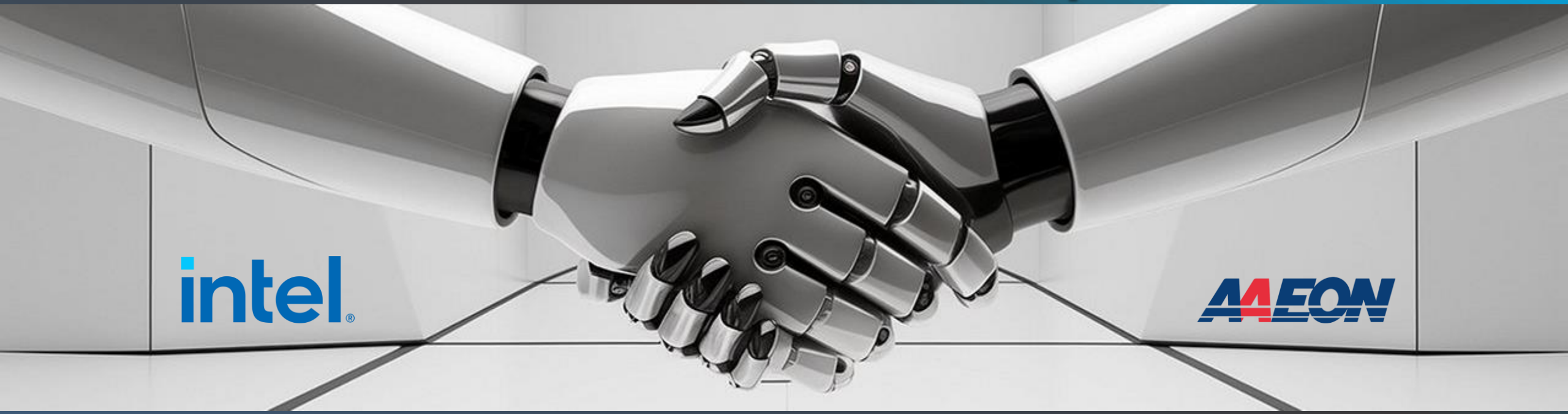
AAEON & Intel Technology Leadership

- Titanium member, advancing Intel embedded tech adoption
- Developing edge AI platforms for diverse markets
- Amplifying the impact of Intel’s advanced AI technologies

AI Innovation Partner

- Expertise in Intel's development tools and AI integration
- Supporting next-gen processors and graphics
- Helping customers leverage immersive AI features

AAEON x Intel Partnership



Collaborative Innovation

Work together to develop a cohesive, streamlined product roadmap of boards and systems equipped with the newest Intel architecture and support for the latest Intel development tools, expediting time to market

Broaden AI Adoption

Leverage new advancements in Intel processor architecture and GPU platforms to provide versatile options for AI integration, from efficient entry-level solutions to heavy inferencing projects

Strategic Planning

Engage in strategic marketing initiatives to showcase the benefits and features of AAEON x Intel products, encouraging the adoption of AAEON solutions powered by Intel AI technology across targeted vertical markets and regions

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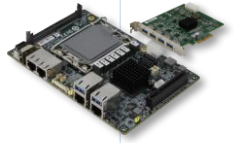
AAEON X INTEL AI PRODUCT PORTFOLIO

AAEON x Intel AI Product Portfolio

TOPS			MODELS					
Heavy AI	GAR-A750E	+	MAX-Q670A	ATX-Q670A	MIX-Q670A1	MIX-H610A1	BOXER-6843-ADS	MAXER-2100
Medium AI	MXM-ACMA	+	MXM-ACMA-PUC	 EPIC-RPS9 + PER-T686	EPIC-TGH7 + PER-T686			
Light AI	Intel Core Ultra	+	UP Xtreme i14	UP Xtreme i14 Edge	PICO-MTU4	GENE-MTH6	BOXER-6647-MTH	

intel CORE ULTRA

Intel® Core™ Ultra SoC

Light AI (~50 TOPS)

Hybrid Core Architecture for efficient AI inference

Intel® Core™ Ultra processors combine CPU, GPU, and NPU into a single platform, enabling the high parallel graphics throughput

AI Acceleration via Integrated Xe Cores

Integrated Intel® Arc™ Graphics offer a 2.3 GHz render clock frequency with Intel® AI Boost, 8 Xe-cores, and Ray Tracing

AI Software Framework Support

AI acceleration support for frameworks like OpenVINO™, WindowsML, ONNX RT, and DirectML

Medium AI (50 ~ 200 TOPS)

Intel® Arc™ A370M Graphics

8-bit INT Acceleration (INT8)

Reduced bit width for faster model processing while maintaining accuracy

VNNI and DP4a

Optimized compute resource allocation for efficient AI task handling

128 Intel® Xe Matrix Extensions (Intel® XMX) Engines

Accelerated neural network training, inferencing, and real-time AI model task execution

Intel® Arc™ A750 Graphics

Heavy AI (200+ TOPS)

28 Xe-cores and 448 Intel® Xe Matrix Extensions (XMX) engines

Built for heavy-duty AI inference and machine learning tasks

28 Ray Tracing Units

Real-time ray tracing for high-fidelity visual graphics tasks

Multi-Format Codec and Media Processing

H.264, H.265 (HEVC), AV1, and VP9 hardware encode/decode support

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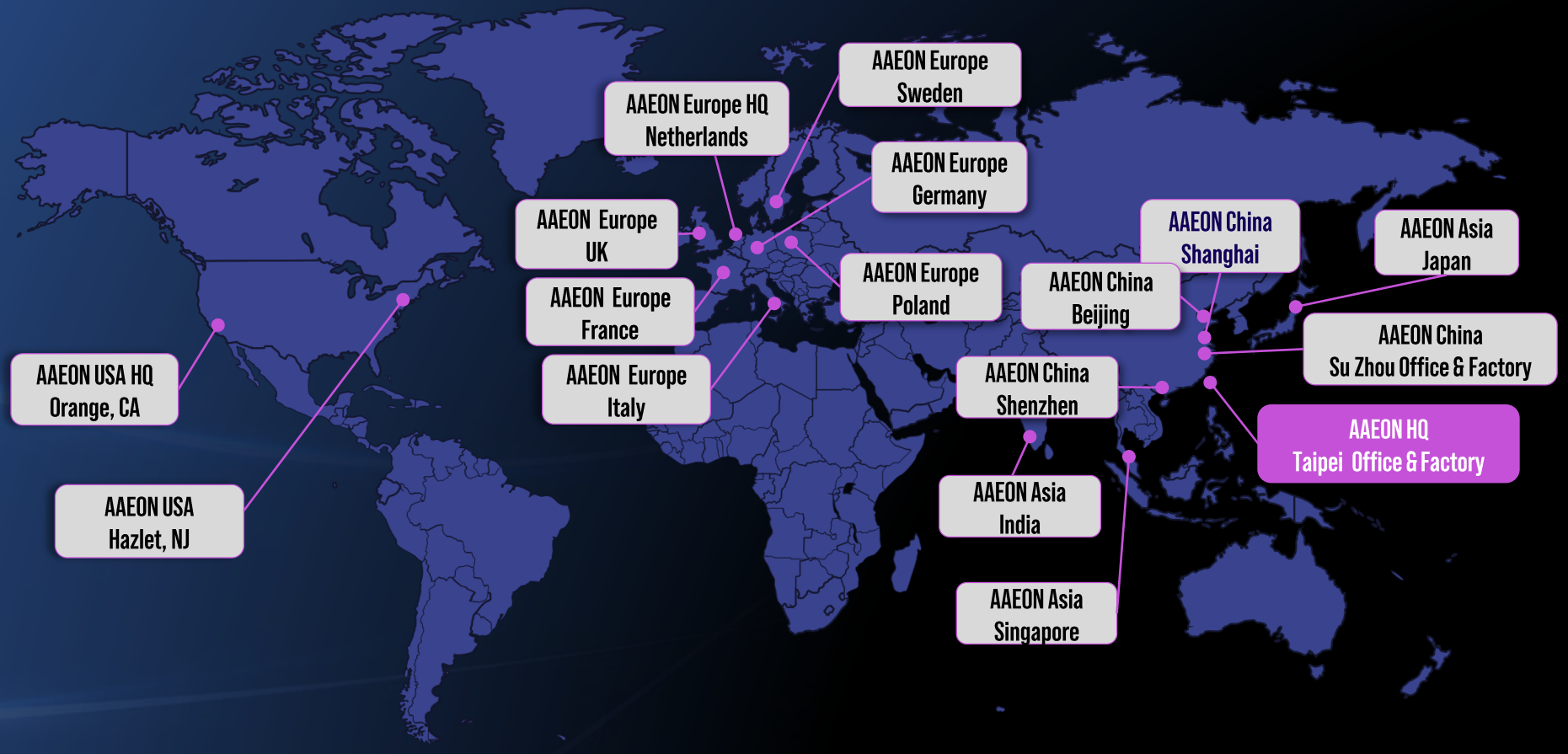
WHY CHOOSE AAEON FOR YOUR AI SOLUTION?

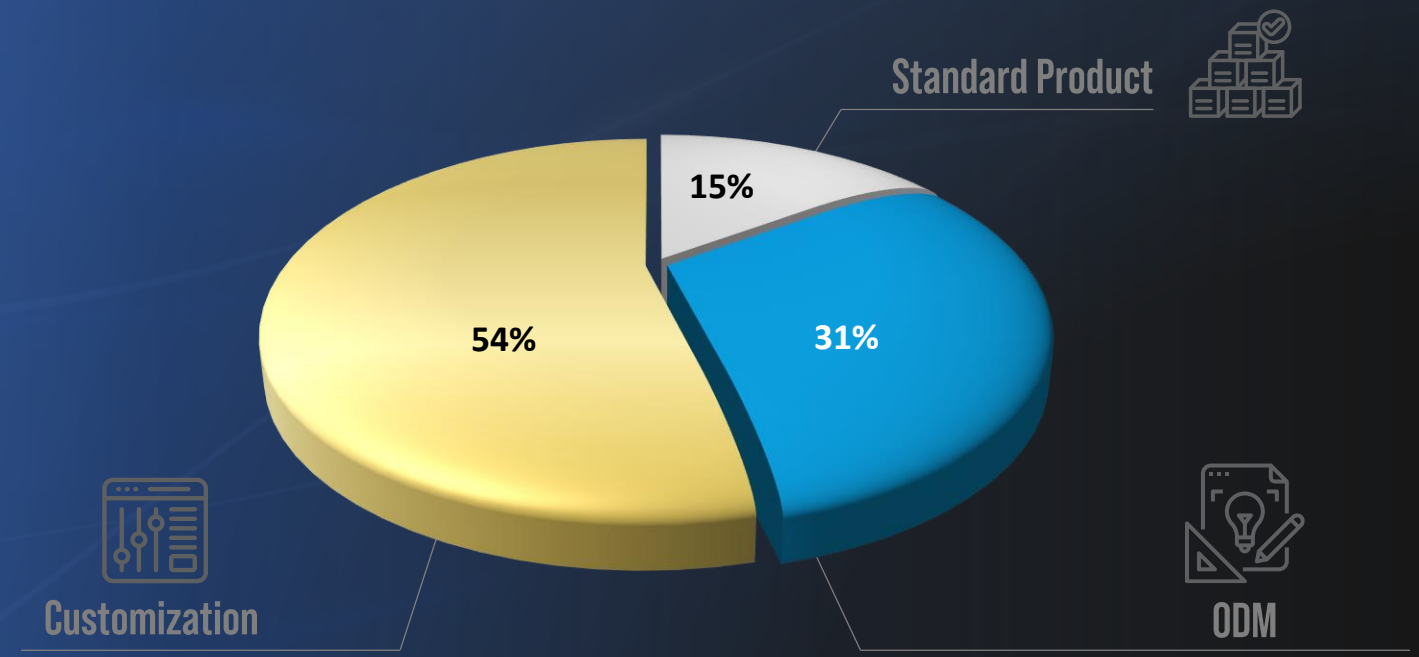
Global Presence



- AAEON serves global industries.
- Provides pre-sales insight and local support
- Customer-centric with strong market understanding.
- Tailors solutions to individual needs.

Agile & Customizable Production

- Custom solutions for specific projects.
- Modular design for easy GPU integration.
- Excellence-driven approach.
- Low MOQ for custom and ODM solutions.



World-class Product Reliability

30 Years of Experience

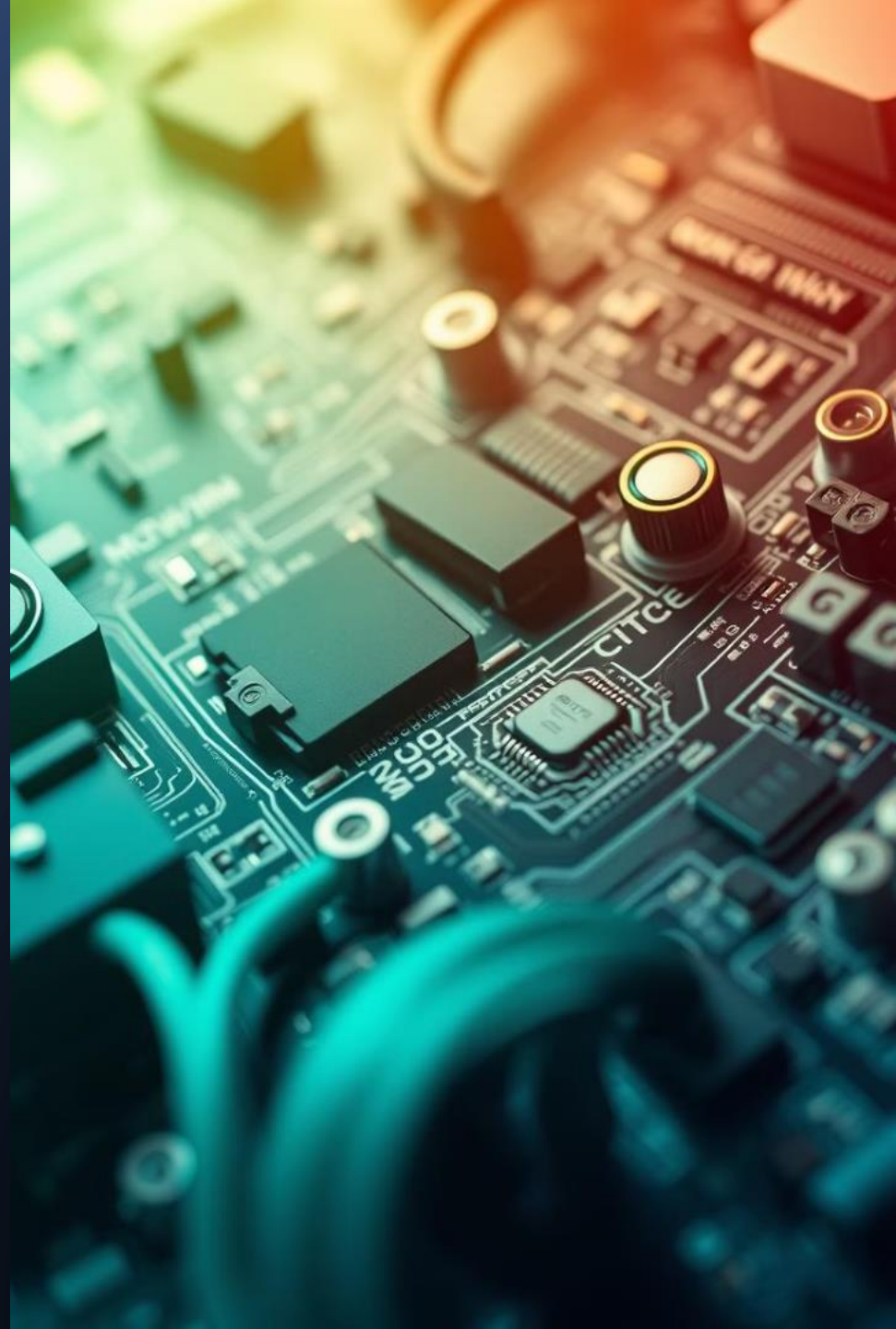
With over 30 years of experience, AAEON has mastered the art of producing high quality, long-lasting products.

Software & Hardware Support

AAEON products serve as the ideal platforms for development using the latest tools from the full Intel ecosystem, helping customers more easily bring solutions to market.

Robust Product Validation

AAEON upholds a stringent AI-assisted product quality assurance process to ensure its products are mechanically robust and built for longevity.



One-stop Shop

MANUFACTURING/LOGISTICS CENTERS

Taipei | **Space:** 6,119 m^2

Diverse Portfolio

AAEON maintains a diverse portfolio of products, ranging from 2.5” PICO-ITX single-boards to server-grade systems.

Sustainable Supply Chain

Through a combination of innovative design and a sustainable supply chain, AAEON is consistently able to evolve its product lines as new technologies enter the market.

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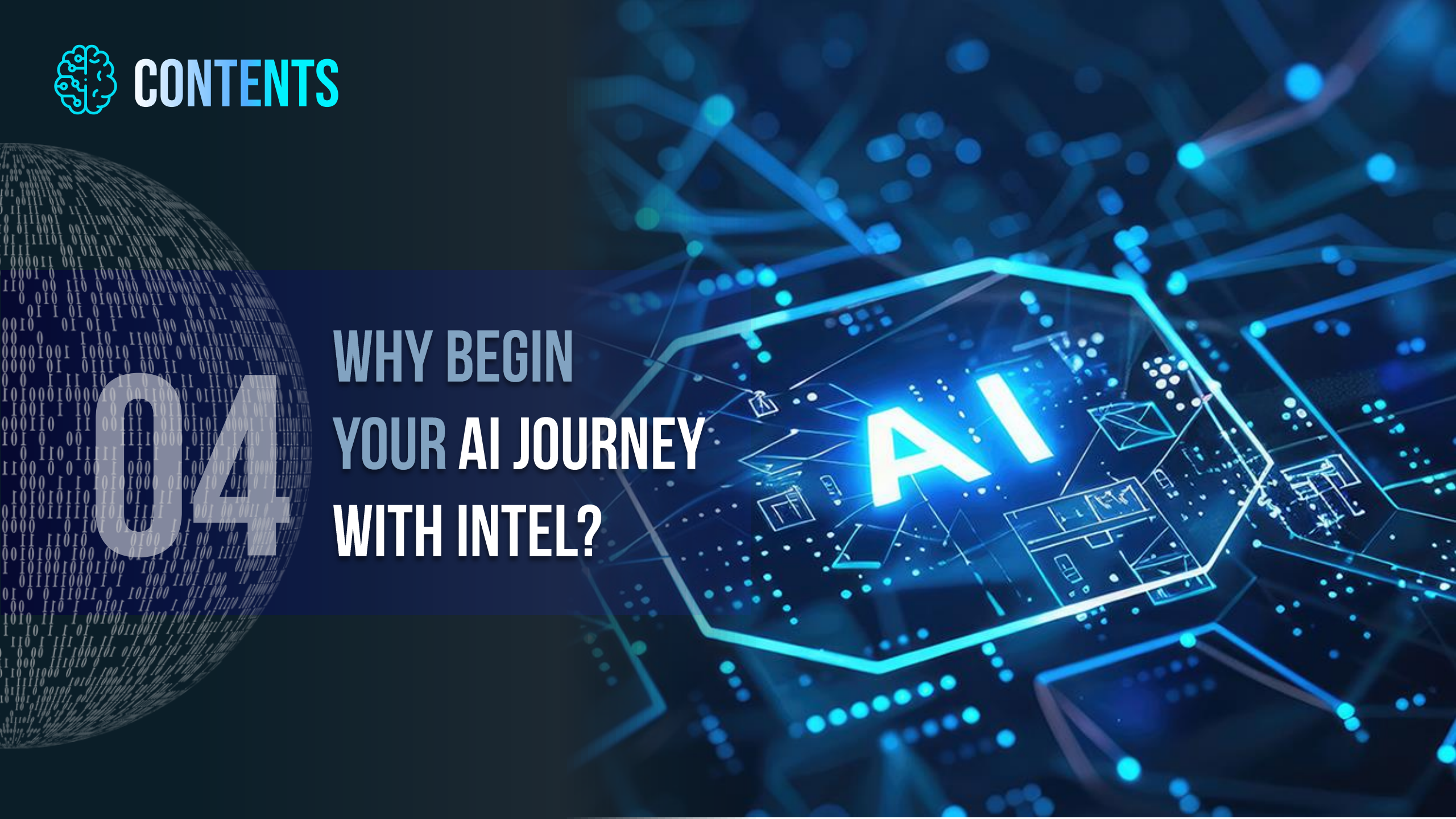
WHY BEGIN YOUR AI JOURNEY WITH INTEL?

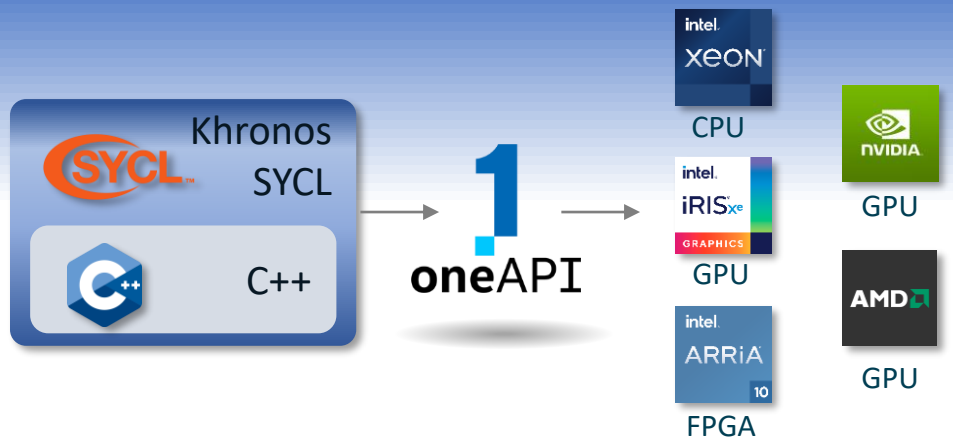


Intel® Development Tools

Build faster. Deploy Universally

oneAPI

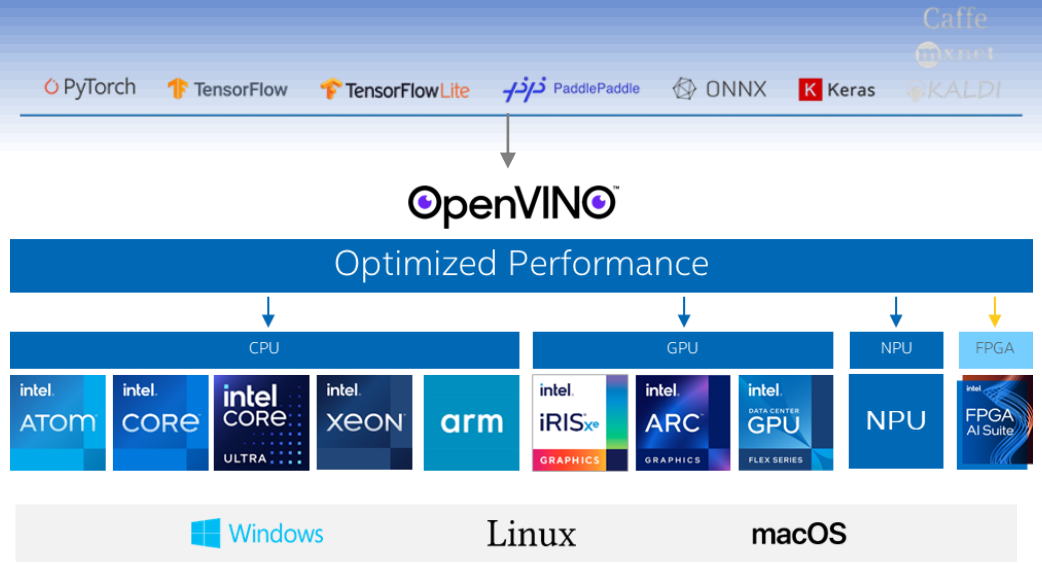
- Development tools (C++, Fortran, SYCL)
- Tools/APIs for programming, profiling & debugging.
- CUDA to DPC++ Converter



Accelerate AI Inference

OpenVINO™

- High-efficiency and scalable DL inference engine library
- xPU compatible, multi-platform support



Write Once, Deploy Anywhere

Open & Easy

- Effortlessly convert and optimize models for diverse hardware
- Seamless compatibility with mainstream toolkits

Secure & Responsible

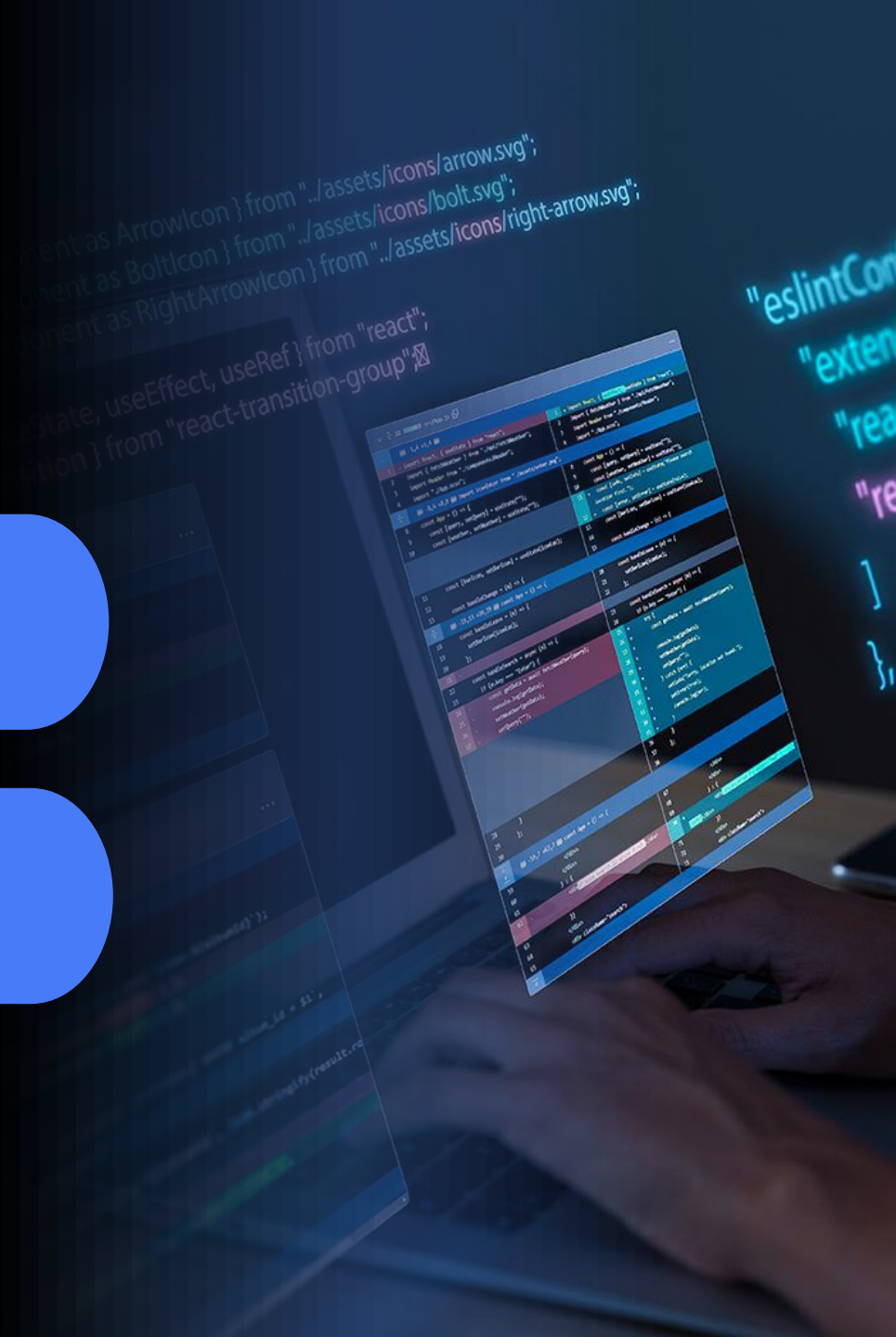
- Secure API access for various models
- Continuously improving methods for responsible AI

Scalable & Reliable

- Cross-platform support for Intel CPUs, GPUs, NPUs
- Adaptable to meet current and future needs

Accessible

- Maximize hardware to efficiently run AI workloads anywhere



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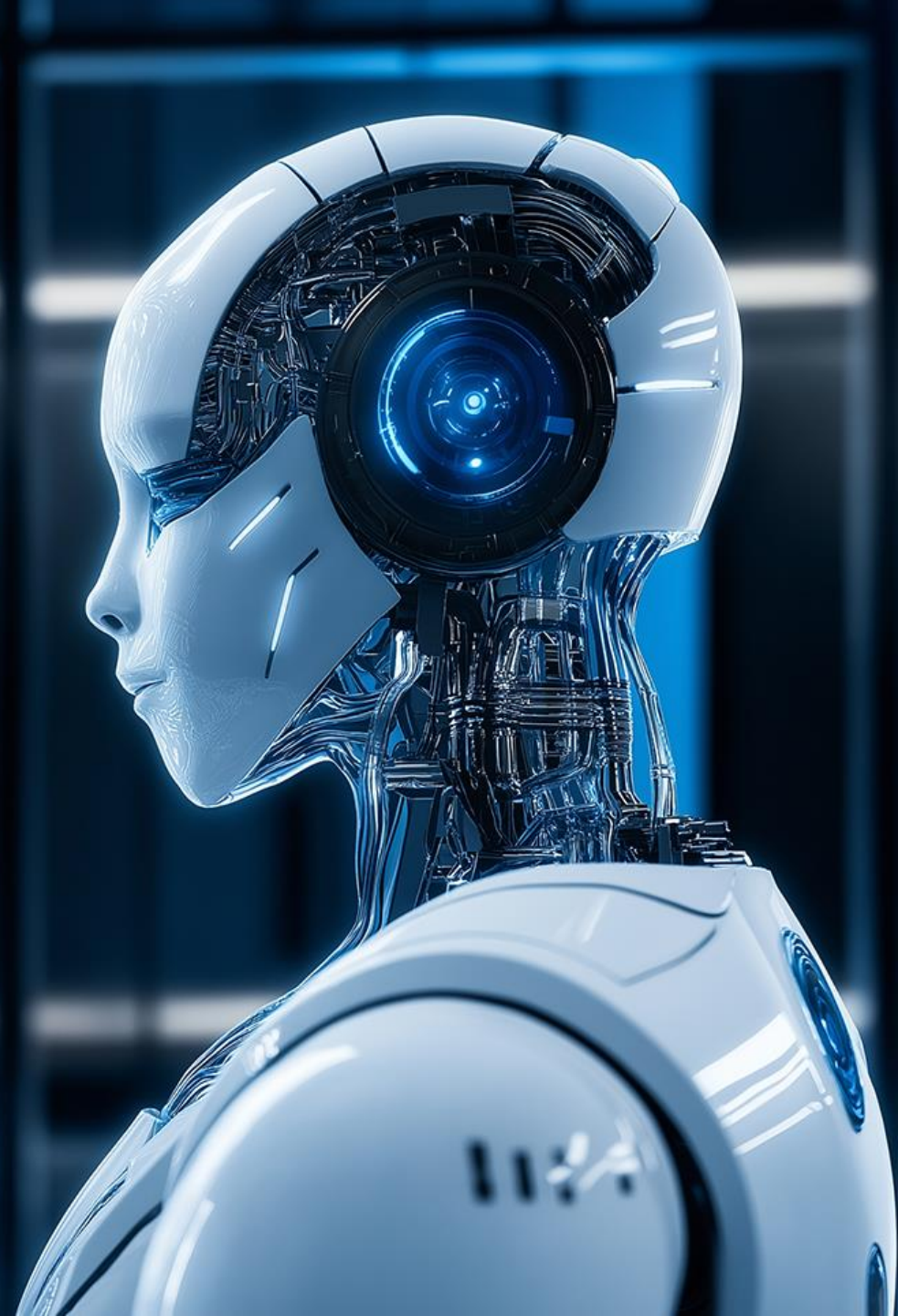
AAEON X INTEL
AI SOLUTIONS



Versatile Use Cases Across Industries

Retail

Customer behavior analytics and inventory management using computer vision.

Healthcare

Real-time diagnostics and personalized treatment planning with AI-assisted imaging.

Smart Cities

Traffic optimization and public safety monitoring through sensor data analysis.

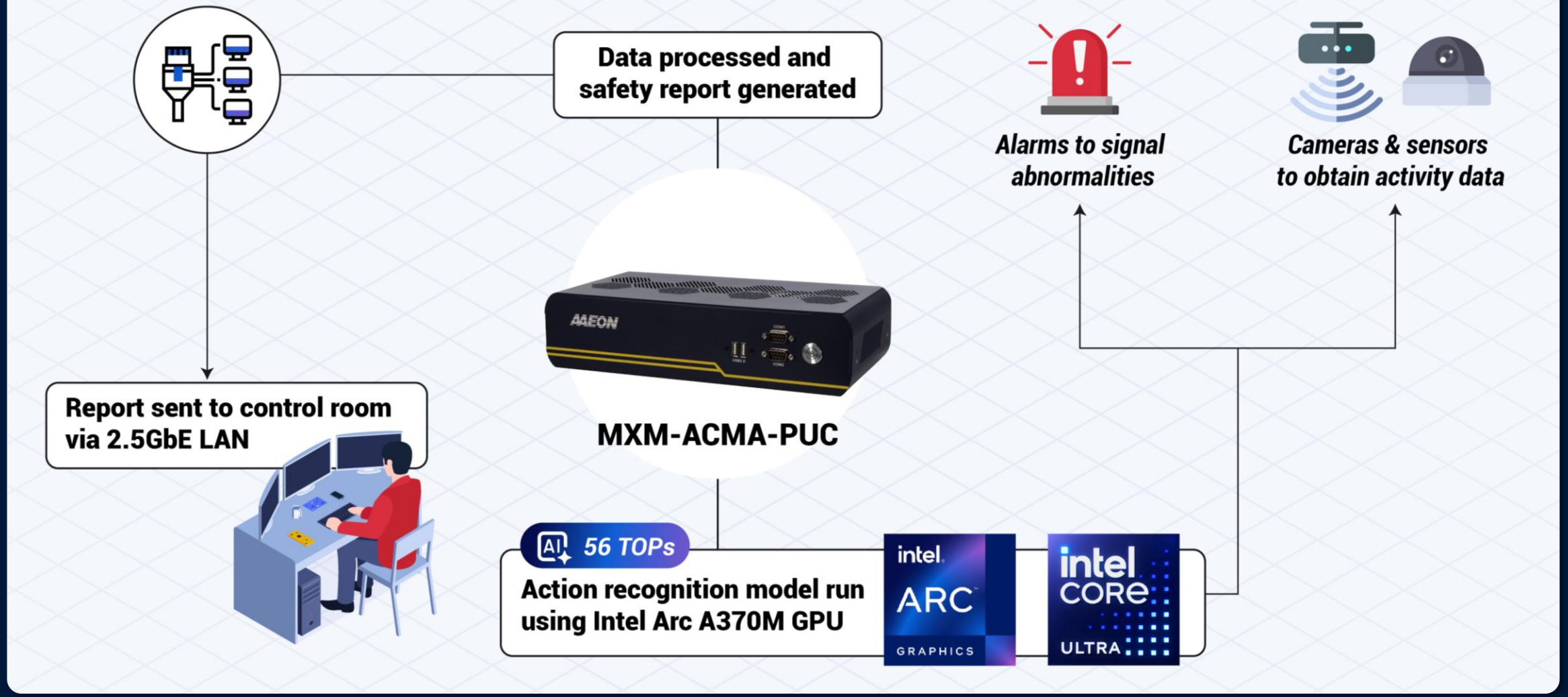
Industrial Safety Monitoring

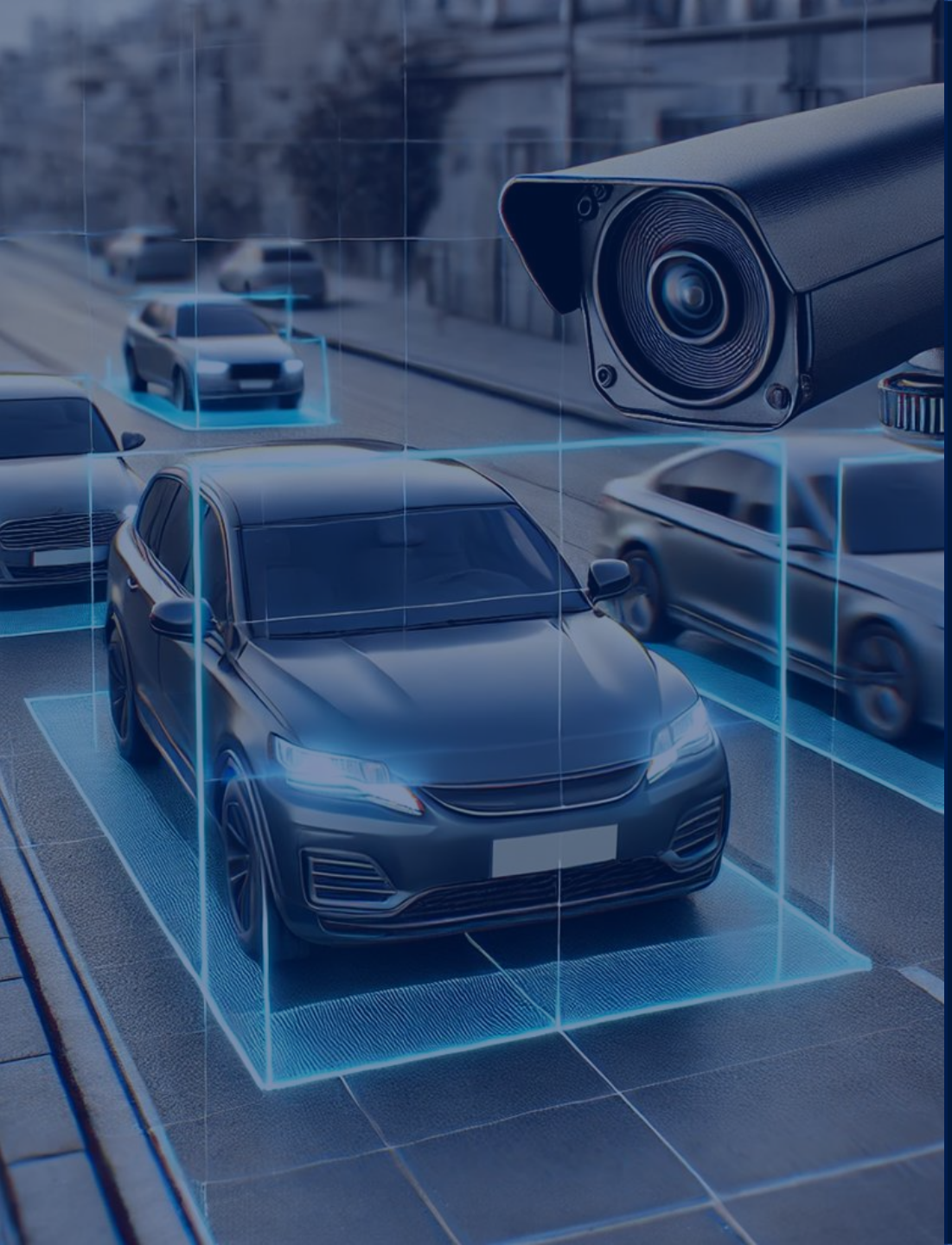
Combining the hardware of an EPIC system and the graphics capability of the MXM-ACMA with an integrated Intel® Arc™ A370M GPU, the MXM-ACMA-PUC can be deployed in industrial monitoring applications to enhance safety and operational efficiency.

MXM-ACMA-PUC

Application Architecture

for Industrial Safety Monitoring





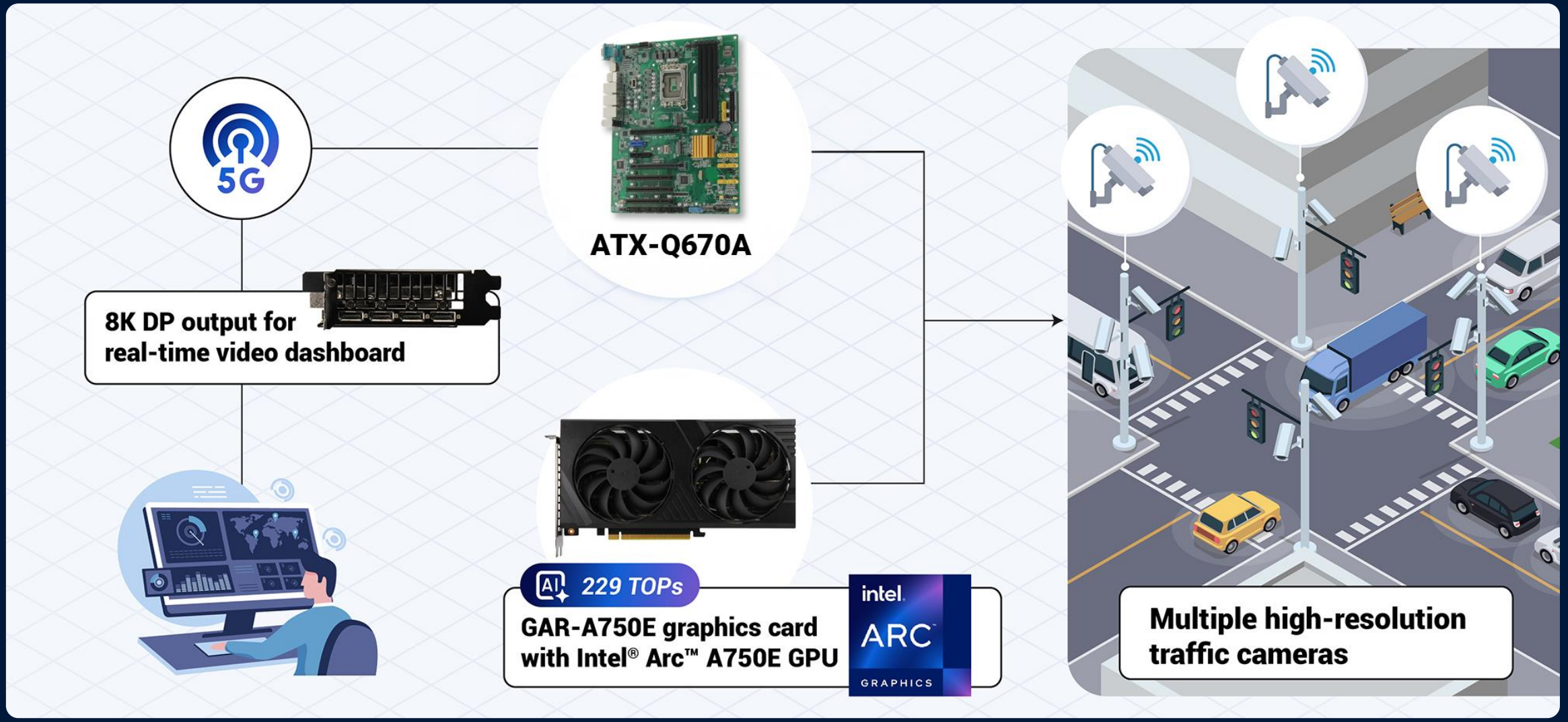
Smart City

Combining the ATX-Q670A industrial motherboard and AAEON's GAR-A750E graphics card can enhance real-time traffic monitoring and management in a smart city environment. The motherboard can host multiple high-resolution cameras, while the card's Intel® Arc™ A750E GPU architecture is able to analyze and manage traffic flow, detect violations, and provide actionable insights to city traffic management centers.

ATX-Q670A + GAR-A750E

Application Architecture

for Smart City



Autonomous Mobile Robots (AMR)

Equipped with the disaggregated, multi-tile die architecture of the Intel® Core™ Ultra platform, an all in one 40-pin header offering GPIO, UART, I2C, SPI, and time synchronization pins, and detailed image acquisition though MIPI camera support, the UP Xtreme i14 can be seamlessly deployed in AMR applications across fields such as healthcare, retail, manufacturing, and hospitality.

UP Xtreme i14

Application Architecture

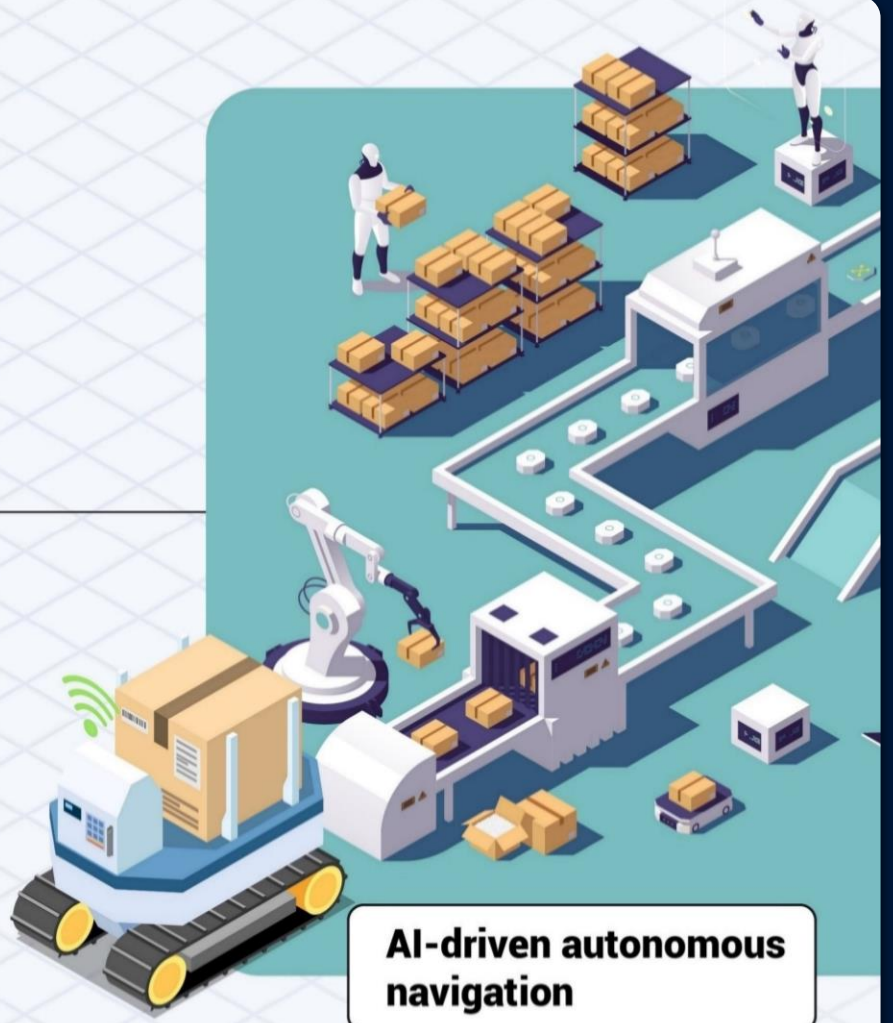
for Autonomous Mobile Robots

UP Xtreme i14

Cameras

Collision avoidance sensors

Motor control



AI-driven autonomous navigation

AAEON AI

Website: www.aaeon.com

If you have any questions, please fill out this form, and we will assign a colleague responsible for your area to contact you.

Focus • Agility • Competitiveness