

ADVANTECH

Edge AI eBook

- ✓ Edge AI Roadmap
- ✓ Star Products
- ✓ Application Cases



Elite
Partner

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ADVANTECH

Enabling an Intelligent Planet

Est. **1983**

Headquarters: Taipei, Taiwan

INDUSTRIES SERVED

Industry 4.0, Industrial IoT,
Embedded Computing,
Medical, Retail, Logistics



\$10.61B MARKET
CAP (USD)
(Feb., 2024)



HONORS & AWARDS

- No.5 in Best Taiwan Global Brands
- No.17 in Top 50 Global Automation Vendors
- No.9 in Top 100 Industrial IoT Companies
- Red Dot Product Design Award
- iF Product Design Award

Interbrand

CONTROL

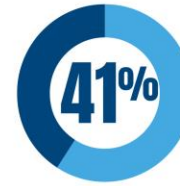


WORLD'S LARGEST IPC COMPANY

Advantech IPC WW Market Share

● Advantech ● Other IPC Companies

Source: OMDIA – Market Share estimates for
Industrial PCs: World, 2022 Edition



\$2.07B 2023
REVENUE
(USD)

KEY ECO-SYSTEM PARTNERS

intel

Microsoft



Micron

AMD

Canonical
Ubuntu

TEXAS
INSTRUMENTS

arm

NXP

Qualcomm

MEDIATEK

and more...

QUALITY SYSTEMS IN PLACE

- ISO9001
- ISO14001
- ISO13485
- ISO17025
- ISO27001
- ISO45001
- TL9000
- ISO50001
- RoHS
- WEEE
- SONY GP
- REACH

1.8 MILLION+ sq. ft.

MANUFACTURING PLANTS

Linkou, Taiwan



- 9 SMT lines, 16 system lines
- Engineering sample services
- Complex product lines
- Flexible & quick production

Kunshan, China



- 12 SMT lines, 13 system lines,
6 chassis lines
- Chassis design & production
- Mature product lines
- Cost-effective production



Nogata, Japan

- 4 SMT lines, 1 system line
- Japan design center, CTOS
service, logistics center,
repair center

WORLDWIDE OFFICES



Manufacturing 3
On-site service 4
Design centers 11
CTOS centers 16
Repair centers 17
Logistics centers 20

More than 90 offices globally!

8800+
EMPLOYEES



IIoT Industrial Edge AI Systems

Accelerating AI Deployment from Edge to Cloud



AI Peripherals Integration for Flexibility

- 2D/3D Camera
- Thermal Camera
- Lidar & IMU
- Wireless



AI Integrated Solution Package for Fast Deployment

- NVIDIA Metropolis
- NVIDIA Isaac ROS2
- NVIDIA AI Enterprise
- NVIDIA Holoscan
- NVIDIA NIM



AI Ecosystem for Various Industries

- Transportation
- Safety & Security
- Manufacturing
- AMR/AGV
- Medical Imaging



Large-Scale AI Deployment Support

- Remote Management
- Information Security

AMD intel. NVIDIA.

✓ x86

✓ GPU

✓ NPU



Industrial Edge AI System

MIC, UNO & IPC



Industrial Edge AI Server

SKY, HPC



Edge AI Superchip Server (MGX)

SKY-622G4



Edge AI SKY Rack

TOPS

AI Recognition 150

High Precision AI 500

Industrial Vision Language Model (VLM) 1000

AI Micro-Cloud Service 2000+

NVIDIA. Qualcomm

✓ Arm

✓ GPU

✓ NPU



Industrial AI Camera

ICAM



Industrial Edge AI System

MIC-AI



Industrial Edge AI Server

MIC-IGX Orin

ADVANTECH

IIoT Edge AI Ecosystems

Accelerating AI Deployment with Eco-Partners from Edge to Cloud



Smart Manufacturing



Smart Transportation



Safety & Security



Robotics



Medical AI



Media & Broadcasting

AI Silicon
Partners



AI Sensing
Partners



Smart Manufacturing



Smart City & Transportation



Robotics & GenAI



AI Deployment



Advantech x86-based Edge AI Computer and Server Roadmap

Advantech Edge AI Computer and Edge AI Server are x86-based, Windows-based and are able to insert GPU with power consumption typically 100W+

MXM	<div>MXM Type A</div> 	<div>UNO-148 V2</div> <div>13th Gen Intel® Core™ Processor</div> <div>x1</div> 	<div>ITA-580G</div> <div>Edge AI System for Rolling Stock</div> <div>x1</div> 	<div>ITA-520G</div> <div>Edge AI System for Rolling Stock</div> <div>x1</div> 	<div>ITA-460G</div> <div>In-Vehicle Edge AI System</div> <div>x1</div> 
	<div>MXM Type B+</div> 	<div>MIC-770 V3 + MIC-75GF10</div> <div>• 14th/13th/12th Gen Intel® Core™ Processors</div> <div>• Fanless Design</div> <div>x1</div> 			
PCIe	<div>RTX Small Form Factor GPU</div> 	<div>MIC-770 V3 + MIC-75M20</div> <div>• 14th/13th/12th Gen Intel® Core™ Processors</div> <div>• Supports 2-slot Expansion</div> <div>x1</div> 	<div>IPC-220/240</div> <div>• 14th/13th/12th Gen Intel® Core™ Processors</div> <div>• Supports 2/4 PCIe/PCI slots</div> <div>x1</div> 		
	<div>RTX Full Height</div> 	<div>MIC-770 V3+MIC-75G20/G30</div> <div>• 14th/13th/12th Gen Intel® Core™ Processors</div> <div>• Modular Design</div> <div>x1/2</div> 	<div>ACP-4340</div> <div>• 14th/13th/12th Gen Intel® Core™ Processors</div> <div>• 4U Rackmount System</div> <div>x1</div> 	<div>IPC-730</div> <div>• 14th/13th/12th Gen Intel® Core™ Processors</div> <div>• Wall-Mount System</div> <div>x1</div> 	
		<div>HPC-6240</div> <div>• 5th/4th Intel® Xeon® Scalable Processors</div> <div>• 2U Edge AI Server</div> <div>x4</div> 	<div>HPC-7420</div> <div>• 5th/4th Intel® Xeon® Scalable Processors</div> <div>• 4U Edge AI Server</div> <div>x5</div> 	<div>SKY-602E3</div> <div>• AMD® EPYC™ Embedded 9004 Series Server Processors</div> <div>• Mini Tower Edge AI Server</div> <div>x4</div> 	

● RTX GPU cards


Advantech Arm-based Edge AI System Roadmap

Advantech edge AI system based on NVIDIA Jetson, which is Arm-based, Linux-base, and it's power consumption under 100w

Orin	<div>AGX Orin (32GB/64GB)</div> <div></div>	<div></div> <div>MIC-732-AO AMR AI System</div>	<div></div> <div>MIC-733-AO GenAI Edge System</div>	<div></div> <div>ITA-560AGX Edge AI System for Rolling Stock</div>	<div></div> <div>MIC-332 3U CPCI-S Edge AI System</div>
	<div>Orin NX/Nano (4/8/16GB)</div> <div></div>	<div></div> <div>MIC-711-OX/ON Edge AI Inference System</div>	<div></div> <div>MIC-713-OX/ON Edge AI Inference System</div>	<div></div> <div>MIC-715-OX In-Vehicle Edge AI Inference System</div>	<div></div> <div>ITA-560NX/Nano Edge AI System for Rolling Stock</div>
Xavier	<div>Xavier NX/Nano</div> <div></div>	<div></div> <div>MIC-710AIL Series Edge AI Inference System</div>	<div></div> <div>MIC-710AI Series Edge AI Inference System</div>		
	<div>AGX Xavier</div> <div></div>	<div></div> <div>MIC-730AI Edge AI Inference System</div>			

Advantech Arm-based Edge AI Camera Roadmap

The ICAM-500 series places an NVIDIA Orin/Xavier NX AI computing module inside a compact industrial camera system. This combines image acquisition and AI inference functionality within the same system while reducing the latency caused by the distance between IP cameras, cloud servers, and AI inference systems.

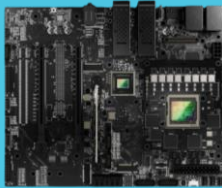
Orin	<div>Orin NX</div> <div></div>	<div></div> <div><div>ICAM-540-3CN</div><div>C-mount AI camera with flexibility for different lenses and lighting</div></div>	<div></div> <div><div>ICAM-540-30W</div><div>High-end all-in-one S-mount AI camera</div></div>
Xavier	<div>Xavier NX</div> <div></div>	<div></div> <div><div>ICAM-520-10W</div><div>All-in-one AI camera</div></div>	

Advantech **Arm-based** IGX Orin Series Edge AI Server Roadmap

NVIDIA IGX Orin is a high-performance AI platform with industrial-grade hardware, enterprise software, and long-life support. Specifically designed for industrial and medical environments, IGX offers industry-leading AI performance, security, and functional safety, with a 10-year lifecycle and support.

IGX

IGX-700



MIC-735I-IO
Industrial Edge AI Server



MIC-735E-IO
Enterprise Edge AI Server











MIC-735M-IO
Medical Edge AI Server

Advantech Arm-based Edge AI Developer Kit Roadmap

The *AI developer kits* offer comprehensive integration capabilities with sufficient functions to meet essential implementation needs. They feature basic interfaces and functions that support generic sensors, providing flexibility in various applications. Additionally, the kits are equipped with full NVIDIA SDK and API support to facilitate development. Designed with a small form factor, these kits are ideal for deployment in space-limited environments.

The *AI solution kits* provide comprehensive integration with Jetson SoM pin-outs, enabling high customization and meeting diverse implementation needs. They include multiple interfaces and functions to support various sensors, with PCIE installation options for enhanced versatility. The kits are fully compatible with NVIDIA SDK and API, ensuring robust development capabilities. Additionally, they offer complete integration for seamless deployment across different environments.

Orin	<div>AGX Orin (32GB/64GB)</div> <div></div>	<div></div> <div>MIC-732D-AO AGX Orin AI Developer Kit</div>	
	<div>Orin NX/Nano (4/8/16GB)</div> <div></div>	<div></div> <div>MIC-711D-OX/ON Edge AI Developer Kit</div>	<div></div> <div>MIC-713S-OX/ON Edge AI <i>Solution Kit</i></div>
Xavier	<div>Xavier NX/Nano</div> <div></div>	<div></div> <div>MIC-710AIL-DVA NVIDIA Jetson Xavier Nano AI developer kit</div>	<div></div> <div>MIC-710AILX-DVA NVIDIA Jetson Xavier NX AI developer kit</div>

ICAM-500 Series

Integrated Industrial AI Camera Equipped with An NVIDIA Jetson Orin NX/Xavier NX



Acceleration of cloud-to-edge vision AI applications

The ICAM-500 series places an NVIDIA Orin/Xavier NX AI computing module inside a compact industrial camera system. This combines image acquisition and AI inference functionality within the same system while reducing the latency caused by the distance between IP cameras, cloud servers, and AI inference systems.

An all-in-one solution

The ICAM-500 series provides integrated industrial AI cameras equipped with programmable variable-focus lenses, LED illumination, and SONY industrial-grade image sensors. These features reduce the effort required for installation and maintenance.

Applications

Manufacturing Inspection



AI/ AOI



Optical Character Recognition



Ordering Information

Part Number	NVIDIA Module	Sensor	Var. focal length
ICAM-540-3CN	NVIDIA® Jetson Orin™ NX	8MP@30fps	C-mount
ICAM-540-30W	NVIDIA® Jetson Orin™ NX	8MP@30fps	12mm
ICAM-540-31W	NVIDIA® Jetson Orin™ NX	8MP@30fps	4.4mm
ICAM-520-10W	NVIDIA® Jetson Xavier™ NX	1.6MP@60fps	12mm
ICAM-520-12W	NVIDIA® Jetson Xavier™ NX	1.6MP@60fps	16mm

MIC-732-A0

Compact Fanless Edge AI AMR Systems

NVIDIA Nova Orin



NVIDIA Nova Orin integrates all AMR-components

NVIDIA Nova Orin integrates all AMR-oriented components into a single system, including the NVIDIA Jetson AGX Orin, 2x 2D LiDARs, 1x 3D LiDAR, 4x fisheye cameras, 4x stereo cameras, controllers, and communication.

Simple Deployment with AMR-oriented Camera and Sensors

Equipped with 8 GMSL FAKRA connector, cameras, the system enables robots to achieve 360-degree vision, crucial for real-time situational awareness and decision-making.

Applications

AMR



Warehouse/Logistics



Flexible support for various I/O configurations

With a modular design and various I/O options, including 10G LAN, CANBus, IMU, and wireless connectivity such as Wi-Fi, 4G/LTE, and 5G, the MIC-732-A0 offers enhanced scalability and flexibility.

Support NVIDIA ISAAC Robotics Platforms

Beyond hardware integration, the NVIDIA Isaac robotics platform supports. With NVIDIA Nova Orin, developers only need to use one platform to build AMR solutions.

Ordering Information

Part Number	NVIDIA Module	Memory	eMMC
MIC-732-AO5A1	NVIDIA® Jetson AGX Orin™	32GB	64GB
MIC-732-AO6A1	NVIDIA® Jetson AGX Orin™	64GB	64GB

MIC-733-A0

Compact Fanless Edge GenAI Systems

NVIDIA® Jetson AGX Orin™



High AI Performance and Low Power Consumption

Deliver up to 275 TOPS of AI computing for multiple concurrent AI inference pipelines with power configurable between 15W and 60W.

Flexible for Deployment with Multiple I/O and Expansion Support

Flexible expansion with PoE, USB3.2, GMLS2 for different video input plus high-speed interface support for multiple sensors .

Edge GenAI System with Compact Design at the Edge

Compact and fanless design with flexible integration for industrial AI usage at the edge.

NVIDIA Software Support and Remote Management

Supporting NVIDIA scalable software, modern AI stack, flexible microservices, SDKs, and APIs. Allxon 7/24 remote management support on OTA, OOB, is also provided.

Applications

Traffic Monitoring



Machine Vision / AOI



Warehouse/Logistics



Ordering Information

Part Number	NVIDIA Module	Memory	eMMC
MIC-733-AO5A1	NVIDIA® Jetson AGX Orin™	32GB	64GB
MIC-733-AO6A1	NVIDIA® Jetson AGX Orin™	64GB	64GB

ITA-560 AGX Orin

Generative Edge AI System for Railway Applications

▶ NVIDIA® Jetson AGX Orin™



AI Inference System in Rolling Stock Applications

With the NVIDIA Jetson edge AI platform, real-time autonomous decision and diagnostic monitoring is made possible for autonomous driving, intelligent monitoring, and object and pattern recognition solutions.

High Performance

The Jetson AGX Orin modules deliver up to 275 TOPS of AI performance.

Applications

Advanced Driver Assistance System



Pantograph Inspection



Track Obstacle Intrusion Inspection



Easy AI Development with Ubuntu and NVIDIA JetPack

Supports the NVIDIA JetPack™ 5.X software development kit with the Ubuntu 20.04 Linux operating system, with updated packages of CUDA 11.4, TensorRT 8.4.1 and cuDNN 8.4.1 for deep learning, machine vision, and GPU-accelerated computing.

Robust I/O Interface

The system features one CAN, one COM, two USB, digital I/O, one HDMI, and three Ethernet interfaces in default configurations.

Ordering Information

Part Number	NVIDIA Module	Memory	NVMe
ITA-560AGX-LOA1	NVIDIA® Jetson AGX Orin™	32GB	24V _{DC}
ITA-560AGX-LOA2	NVIDIA® Jetson AGX Orin™	64GB	24V _{DC}



MIC-332

3U CPCI-S AI System powered by AGX Orin™

NVIDIA® Jetson AGX Orin™

Enhanced AI Capabilities

- Quick and easy building with dual or three Orin AGX modules in one 3U/4U enclosure by internal GbE and 10GbE signal connections routed in the backplane.
- 1* PCIe3.0 x8 reserved to achieve add-on cards, offer up for add-on cards, offering up to 4 x NVMe M.2 sockets for big data storage.
- GbE and GMSL ports optional to configure various industrial cameras.

Open PICMG and Railway Standard Compliance

Design to meet CPCI-Serial standard: EN50155, EN50121-4

Applications

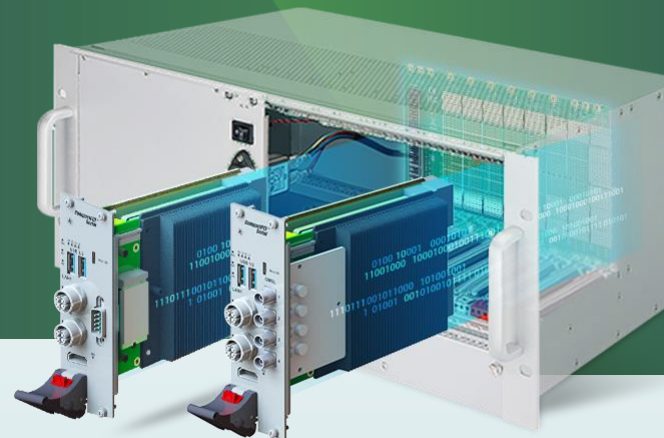
Railway
Transportation



Healthcare



Smart
Manufacturing



MTTR < 30mins

Hot-swap module design for easier maintenance in less than 30mins, for mission-critical applications like rolling stock, IEM, and healthcare.

System Configuration

MIC-300A Series

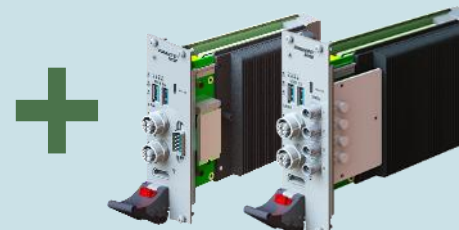
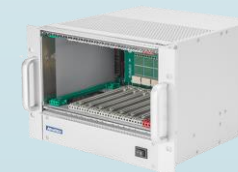
MIC-300A-S1S1



MIC-300A-S1S3



MIC-300A-S1S4



MIC-332

NVIDIA® Jetson AGX Orin™

- (32GB) MIC-332-AOC32
- (64GB) MIC-332-AOC64
- (32GB) MIC-332-AOG32

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TREK-60N

Rugged Dual-System AI System

NVIDIA® Jetson™



Dual System Computing Capability

Two strong computing systems in one box: NVIDIA Jetson Orin provides 70 TOPS of AI performance, while Intel Core enabling multi-task computing capability

Ruggedized Design for Reliability in Harsh Environments

5M3 & MIL-STD-801G shock/vibration, -20~60 °C fanless design without airflow, IP65 protection (with IP kit), CANbus, ISO 7637-2, E-mark and 12/24V car power design.

Applications

Harsh Environments



Heavy Duty Machines



Bus & Roadside



Scalable system for easy integration

Modular design and rich I/Os like COM, isolated DIO, USB, 2 GbE, 4 PoE parts enables easy customization and configuration.

Simplified system with thorough solution in ONE system

Designed to support demanding tasks in harsh environments, TREK-60N operates like a multi-box system to offer car power design, Intel-powered computing, NVIDIA-powered computing, a PoE switch, and more.

Ordering Information

Part Number	Intel Platform & NVIDIA Module	Memory	NVMe
TREK-60N-M2NNOE	Intel X5-E3940 + NVIDIA Jetson Orin NX 8GB	8/64GB	128GB

UNO-148 V2

*Compact DIN-rail IPC with 13th Gen Intel® Core™ CPU,
supporting NVIDIA Quadro® 35W MXM GPU*



NVIDIA RTX® MXM



Learn More



High Computing Power for Real-Time Processing

Leveraging 13th Gen Intel® Core™ CPU with TSN/TCC technology to ensure synchronized, low latency communication, achieving real-time image processing in a compact form factor.

Robust Industrial-Grade Design

Cableless design and industrial-grade isolated I/O for ruggedized applications.

Applications

AGV / AMR



Equipment
/ Machinery



Factory
/ Process Automation



Flexible Expansion for Enhanced Functionality

Complete M.2 interface for NVME storage and wireless expansion, yet providing comprehensive expansion options for integrating additional I/O and functionality.

Boost Edge AI Implementation

Supports 35W MXM GPU card with over 5-year longevity extended product life support.

System Configuration



MXM Carrier Stack

UNO-MXM-CB01



**NVIDIA RTX®
MXM 3.1 Type A**

- SKY-MXM-A2000-8SDA
- SKY-MXM-A1000-4SDA
- SKY-MXM-A500-4HSA

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MIC-770 V3 + MIC-75GF10

Fanless Edge AI inference system with 12th/13th/14th Gen Intel® Core™ CPU, supporting NVIDIA RTX® MXM GPU



NVIDIA RTX® MXM



Compact & Fanless Design

Compact size (190 x 230 x 192 mm) and whole system fanless design for space-limited, harsh environments.

Expandable I/O Design Suitable for Diverse Applications

The PCIe Gen3 x4 expansion slot can be used for sensing, I/O, communication, graphics, video capture, and frame grabber cards.

Applications

AGV / AMR



Equipment / Machinery



Machine Vision / AOI



Deliver AI Inference & Compute Acceleration with MXM GPU

We collaborate with NVIDIA to provide embedded GPU solutions with over 5-year longevity. They are compatible with up to 80W NVIDIA RTX® MXM 3.1 Type A/B form factor GPUs, supporting up to 2,560 Cuda cores, 8.25 TFLOPS.

System Configuration



MIC-770V3W-00A1



NVIDIA RTX® MXM 3.1 Type A

- SKY-MXM-2000A-8SDA
- SKY-MXM-A2000-8SDA
- SKY-MXM-A1000-4SDA
- SKY-MXM-A500-4SHA
- SKY-MXM-T1000-4HDB



Expansion Module

MIC-75GF10-00A1



NVIDIA RTX® MXM 3.1 Type B

- SKY-MXM-R3000-6SDA

ADVANTECH

ITA-460G

Pioneering rugged AI solutions for vehicles with Intel® Core™ processors and NVIDIA Quadro MXM GPUs; E-Mark compliant



NVIDIA RTX® MXM



Learn More



Rugged Mechanical Construction with Ultimate Performance

Engineered for high-end automotive systems, it offers robust reliability with an IP-65 waterproof and dustproof design to withstand the toughest conditions.

Integration & Compliance

Compliant with ISO 7637-2 and E-Mark standards, it facilitates seamless integration with vehicle systems and offers scalable expansion for MXM GPU and I/O.

Applications

Automotive



Construction & Mining



Farming Machine



Optimized for AI Processing

Featuring NVIDIA MXM GPU and supporting up to 16GB memory, it enables efficient AI processing for advanced vehicle functions like autonomous driving and intelligent surveillance.

Versatile Connectivity

With support for 3 x Mini PCIe expansion sockets, it offers flexibility in integrating various communication interfaces and peripherals, enhancing the vehicle system's connectivity and functionality.

System Configuration

ITA-460G-L0A1



**NVIDIA RTX®
MXM 3.1 Type A**

- SKY-MXM-A2000-8SDA
- SKY-MXM-A500-4SHA

MIC-770 V3 + MIC-75M20

Modular IPC with 2-slot expansion i-Module to support up to 80W NVIDIA RTX® GPU card

NVIDIA RTX® PCIe



Learn More



NVIDIA
RTX

Robust AI Computing

Modular and rugged design tailored for edge AI computing. Supporting built-in AI-driven applications across various vertical markets

Supports AI Acceleration GPU cards

Compatible with up to 80W NVIDIA RTX® GPU, boasting impressive GPU performance of up to 7,680 CUDA cores and 30.3 TFLOPS.

Applications

Logistics



Equipment / Machinery



Machine Vision / AOI



Comprehensive I/O Expansion

PCIe x16/PCIe x4 or 2 x PCIe x8 configurations make them ideal for industrial AI applications at the edge.

System Configuration



MIC-770V3W-00A1



NVIDIA® Data Center

- SKY-TESL-A2-16P
- SKY-TESL-T4-16P
- SKY-TESL-L4-24P



Expansion Module

- MIC-75M20-00C1
- MIC-75M20-01A2



NVIDIA RTX®

- SKY-QUAD-4000SA-20
- SKY-QUAD-A2000- 12B
- SKY-QUAD-T1000-8-B
- SKY-QUAD-T400-4-B

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IPC-220/240 *Compact GPU IPC*

Advantech IPC-220/240 supports entry-level PCIe graphics cards (<75W) for lightweight industrial applications

NVIDIA RTX® PCIe



Learn More



Compact Design for Space-Limited Applications

Tailored for in-cabinet installations, its compact size allows easy placement in tight spaces while supporting full-height, half-length expansion cards. This offers AI developers flexibility to deploy the IPC across a variety of applications without compromising on space.

Application-Oriented with Rich I/O and Customization

With flexible chassis and motherboard configurations, this IPC adapts to specific requirements, reducing time to market. The plentiful I/O at the front simplifies cabling and maintenance, enhancing user accessibility and efficiency in AI deployments.

Applications

Manufacturing
Inspection



Object counting /
Dimension Measurements



Optical Character
Recognition



Enhanced Performance

Achieving high performance with desktop socket-type CPUs, enhancing the overall efficiency and accuracy of image processing and inspection applications.

System Configuration

IPC-220-20A1



IPC-240-20A1



CPU Board

- PCE-2033/2133

NVIDIA RTX® (Support <75W PSU)

- SKY-QUAD-4000SA-20
- SKY-QUAD-2000A-16
- SKY-QUAD-A2000-12B
- SKY-QUAD-A1000-8
- SKY-QUAD-A400-4



ADVANTECH

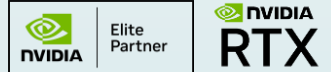
IPC-730

Wall-mount IPC supports ATX/uATX motherboard & high-end flagship GPU for ultimate performance in demanding industrial applications

▶ NVIDIA RTX® PCIe



Learn More



Hybrid CPU/GPU High-Performance Computing

Supports the latest Intel solution and high-end flagship graphic cards. It provides flexibility to adopt different CPUs/GPUs based on specific needs, ensuring optimized hybrid CPU/GPU computing performance.

Reliable ATX 3.0 High Wattage Power Supply

Features a high-wattage ATX 3.0 power supply (850W & 1200W) to ensure stability and withstand peak current of CPUs and GPUs, delivering ultimate hybrid CPU/GPU computing performance.

Applications

Manufacturing
inspection



AI/AOI



Intelligent Video
Analytics



Optimized Mechanical Design for GPU Applications

Enlarged expansion card space accommodates oversized high-end flagship GPUs. There are two powerful system fans at the rear side and two optional auxiliary system fans in the front to provide excellent heat dissipation.

Rich I/O Connectivity

Rich I/O capabilities facilitate edge system integration, while the single-side I/O design simplifies cabling and maintenance, ideal for in-cabinet applications.

Suggested Motherboard

AIMB-788E



ASMB-788



ASMB-831



NVIDIA RTX®
(Support > 300W PSU)

• SKY-QUAD-6000A-48

ADI-ANTECH

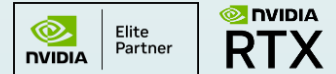
ACP-4340

4U Rackmount GPU IPC supports ATX/uATX motherboard or SHB/SBC with up to 14 expansion slots

▶ NVIDIA RTX® PCIe



Learn More



Flexible Configuration for Diverse Application Needs

Comprehensive motherboard/SHB product selections within a 4U standard size, paired with versatile industrial PSU options, including high-wattage PSU, DC PSU, and redundant PSU options, optimizing computing workloads.

Robust Performance & Expandability

Supports high-performance edge computing with full-height, full-length expansion cards and up to 14 expansion slots, ideal for system integration.

Applications

Manufacturing Inspection



AI/ AOI



Industrial Imaging



Convenient Maintenance & Security

Features 4 x 3.5" swappable HDD trays, an easy-to-maintain system fan design, and a lockable front door for access authorization management.

Suggested Motherboard

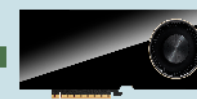
AIMB-788E



ASMB-817



ASMB-830



NVIDIA RTX®
(Supports > 300W PSU)

• SKY-QUAD-6000A-48

ADANTECH

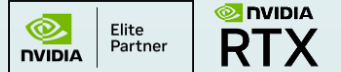
HPC-7420

4U 18" short-depth Edge accelerator server with dual 5th/4th Gen Intel® Xeon® scalable processors

NVIDIA RTX® PCIe



Learn More



Outstanding Performance

Equipped with dual 5th/4th Gen Intel® Xeon® Scalable processors or AMD® EPYC™ Embedded 9004 Series Server processors.

Short-Depth Design

4U 18" short-depth design, 450mm, rear-accessible system fan without opening the top cover for easy maintenance

High-Density GPU Cards

Up to 11 FHFL expansion slots.

Remote Management

IPMI function supports remote access to multiple users at different locations for networking.

Applications

AGV / AMR



Machine Vision / AOI



Video Security



Suggested Motherboard

ASMB-977



ASMB-817



ASMB-831



NVIDIA RTX®

• SKY-QUAD-6000A-48

ADVANTECH

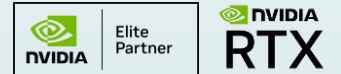
SKY-602E3

Compact-size mini tower GPU server AMD® EPYC™ with embedded 8004 series processor

NVIDIA RTX® PCIe



Learn More



Outstanding Performance

Equipped with AMD EPYC™ 8004 Series processors.

High-Density GPU Cards

Supports 4 x PCIe x16 double-deck FH/10.5" cards or 2 x PCIe x16 double deck FH/10.5" cards + 4 x PCIe x8 single deck FH/10.5" cards.

Installation Flexibility

Table-mounted for easy access, wall-mounted to save space, or use two units that can fit within a 4U rack space.

Remote Management

IPMI function supports remote access to multiple users at different locations for networking.

Applications

3D Rendering



Video Processing



AI Inference



System Configuration

NVIDIA® Data Center

- SKY-TESL-L4-24P



NVIDIA RTX®

- SKY-QUAD-6000A-48



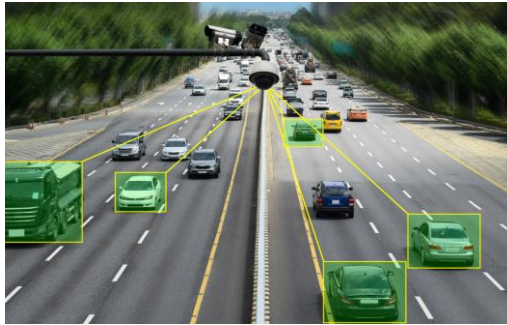
ADVANTECH

Advantech Edge AI Platforms

Application Cases



Factory Automation



Transportation



AMR & Cobot



In-vehicle & AGV



Safety & Security



Energy & Environment



Smart Agriculture



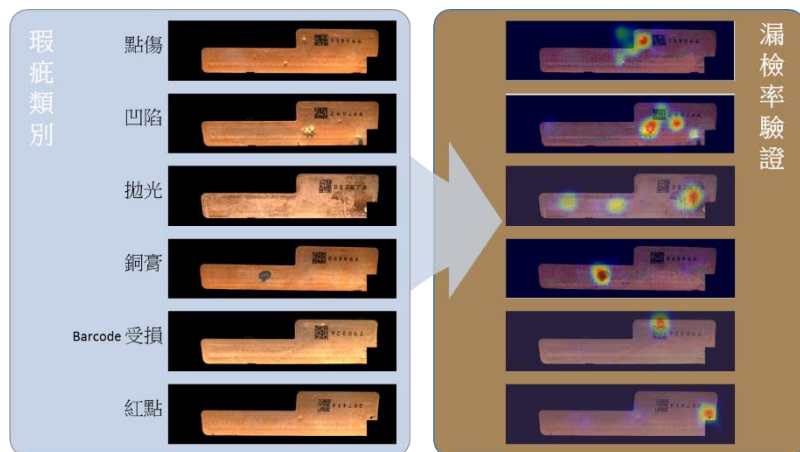
Smart Healthcare

Multiple-model AI Inspection for Heat Sink

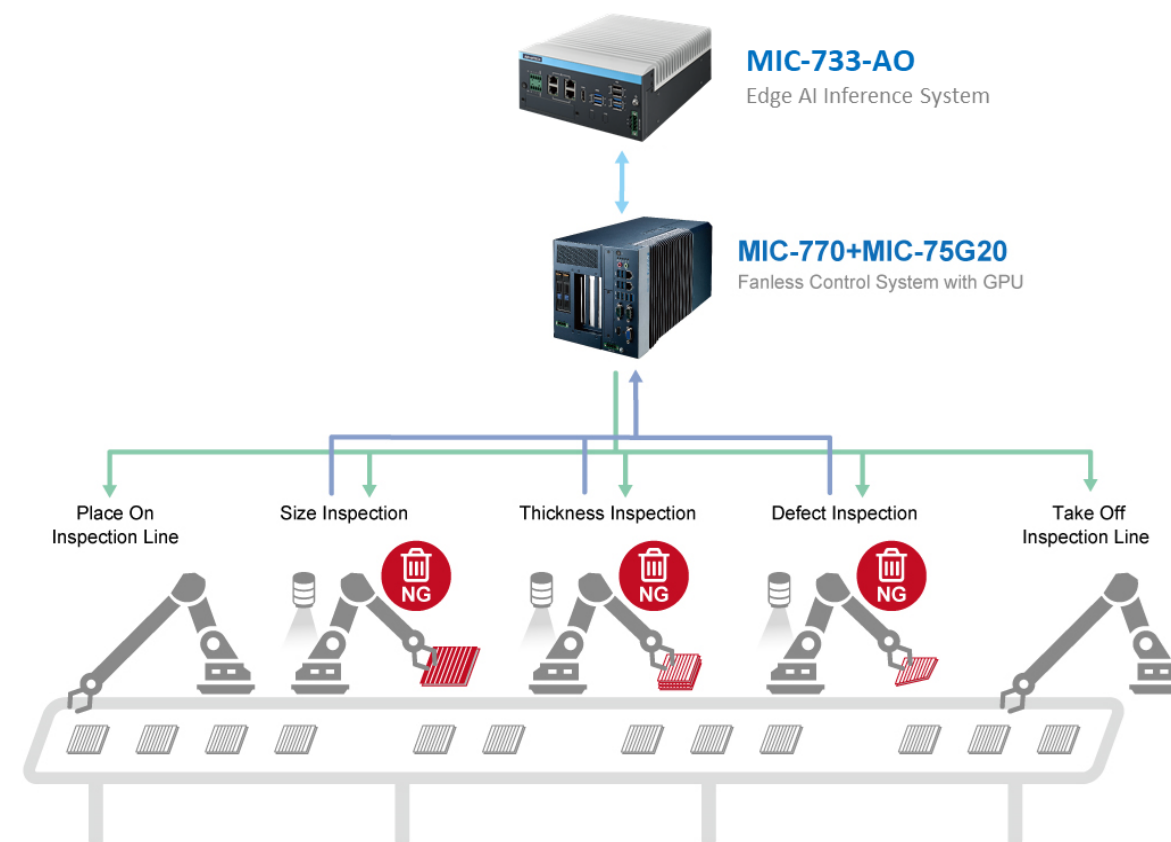


Location: China

- By integrating these AI features, the heat sink factory achieved a significant improvement in inspection accuracy—from an expected 90% to 97%—and reduced inspection time per unit from 30 seconds to 4 seconds.
- This advancement not only lowered labor costs but also enhanced overall inspection efficiency.



Advantech and Spingence deployed an AI-powered inspection system in a heat sink factory, combining rule-based machine vision with AI visual identification. Using AI defect inspection tools (SmaAI) and a modular platform (SmaSEQ), the system efficiently detects defects like crushes and scratches, reducing inspection time from 30 to 4 seconds and increasing accuracy to 97%. Advantech's MIC-770 and MIC-730AI with NVIDIA Jetson® Xavier ensure scalability and stability. The distributed architecture allows easy expansion, enabling future growth while cutting labor costs and improving efficiency.



Advanced 3D Metrology for Car Body Construction



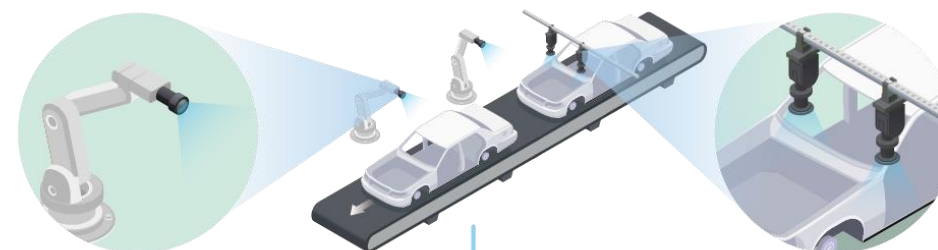
- Automated Inference: AI enables real-time decision-making in metrology, reducing manual errors and boosting operational efficiency in automotive manufacturing processes
- Accuracy and Speed: AI-powered image processing in 3D metrology enhances measurement precision and accelerates data analysis.



Advantech's solution using the edge accelerator server and NVIDIA A6000 GPUs optimizes 3D metrology for car body construction. The system provides high-speed, precise measurements with AI-enhanced image processing, significantly improving the efficiency of automotive manufacturing processes. The solution integrates multiple expansion slots, RAID cards, and AI inference to ensure accurate data capture and protection, addressing the industry's growing demand for quality and precision in metrology.

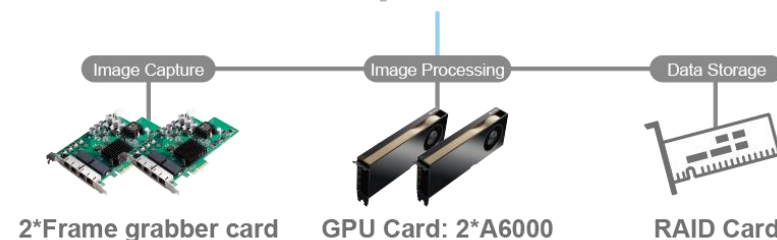


System Diagram



HPC-6240+ASMB-622

2U Edge Accelerator Server

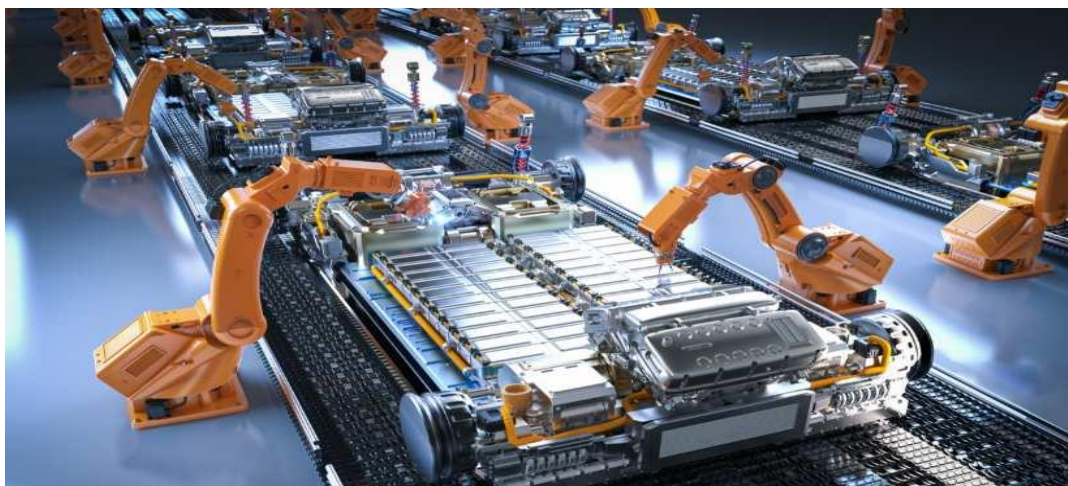


AI-enabled AOI system for Secondary Battery Manufacturing



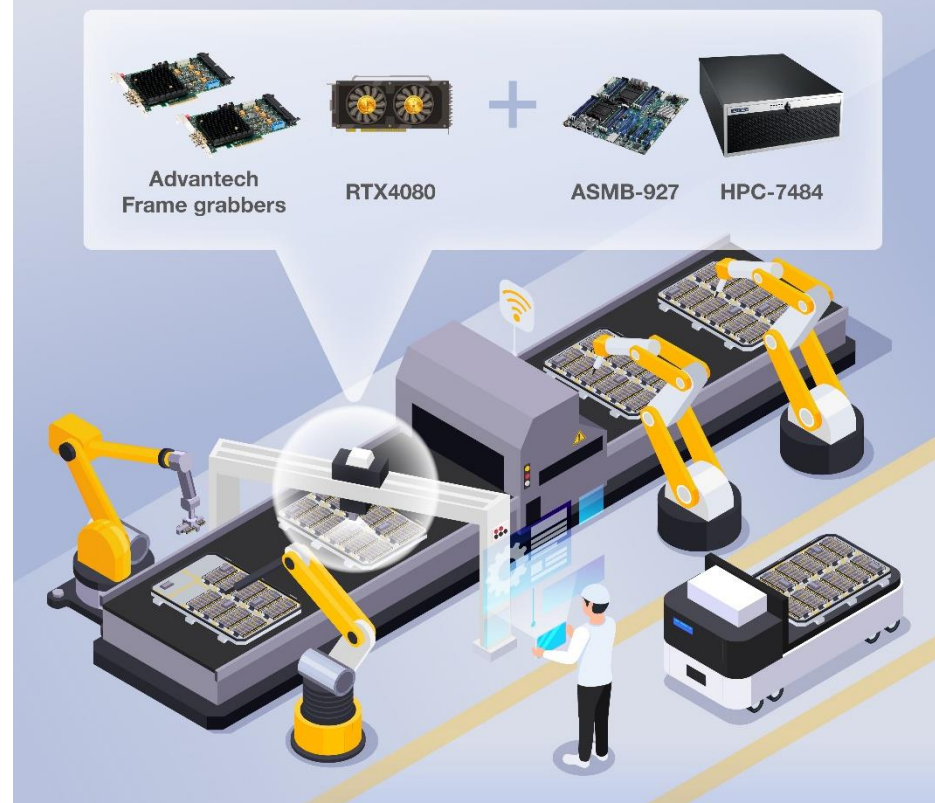
Location: South Korea

- Precision Inspection: AI enhances AOI by improving accuracy in detecting defects in high-resolution images, critical for maintaining the quality of secondary batteries.
- Faster Throughput: AI-driven inspection systems allow for high-speed image processing, significantly increasing inspection efficiency and reducing time delays in production lines.



Advantech's AI-based AOI solution supports secondary battery manufacturers by providing high-speed, precise vision inspection. Utilizing the HPC-7484 4U server with Intel Xeon processors and RTX4080 GPUs, the system ensures efficient, accurate defect detection, streamlining the production process while maintaining product quality.

System Diagram



Factory Automation

Zero-Defect Inspection Speeds Up Electronics Manufacturing Process

Learn More



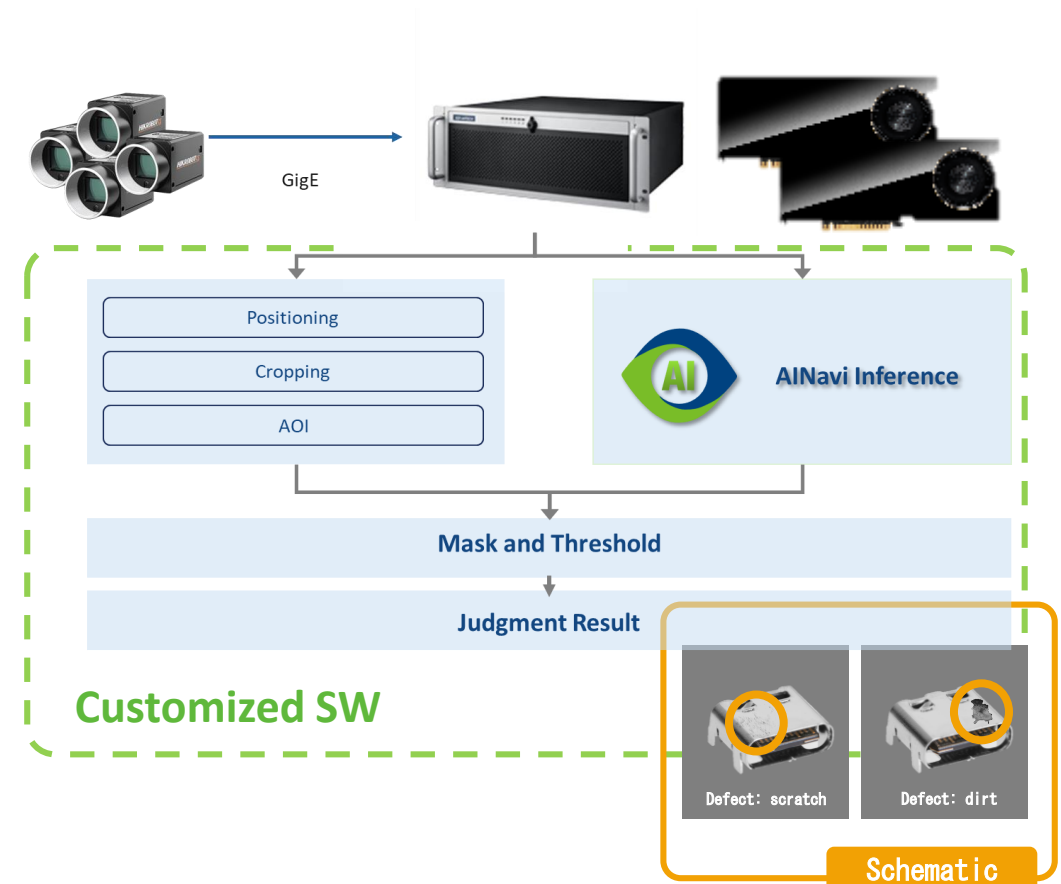
Location: China

- Increased Efficiency: AI automates high-speed inspections, significantly reducing manual labor and eliminating human error, ensuring faster and more accurate results.
- Real-Time Insights: AI-driven multi-model inference provides immediate feedback and analysis, allowing for instant adjustments and optimization during production without delays.



This project addressed rapid product iteration and strict testing standards. Using industrial cameras, IPC ACP-4340, and the RTX 6000 Ada GPU, it enabled high-speed, 100% automated inspection with zero delay. The system featured custom image pre-processing and adjustments tailored to inspection needs, recognized by an international brand.

System Diagram



Artificial Intelligence-Based Defect Inspection for Glass Manufacturing

Learn More

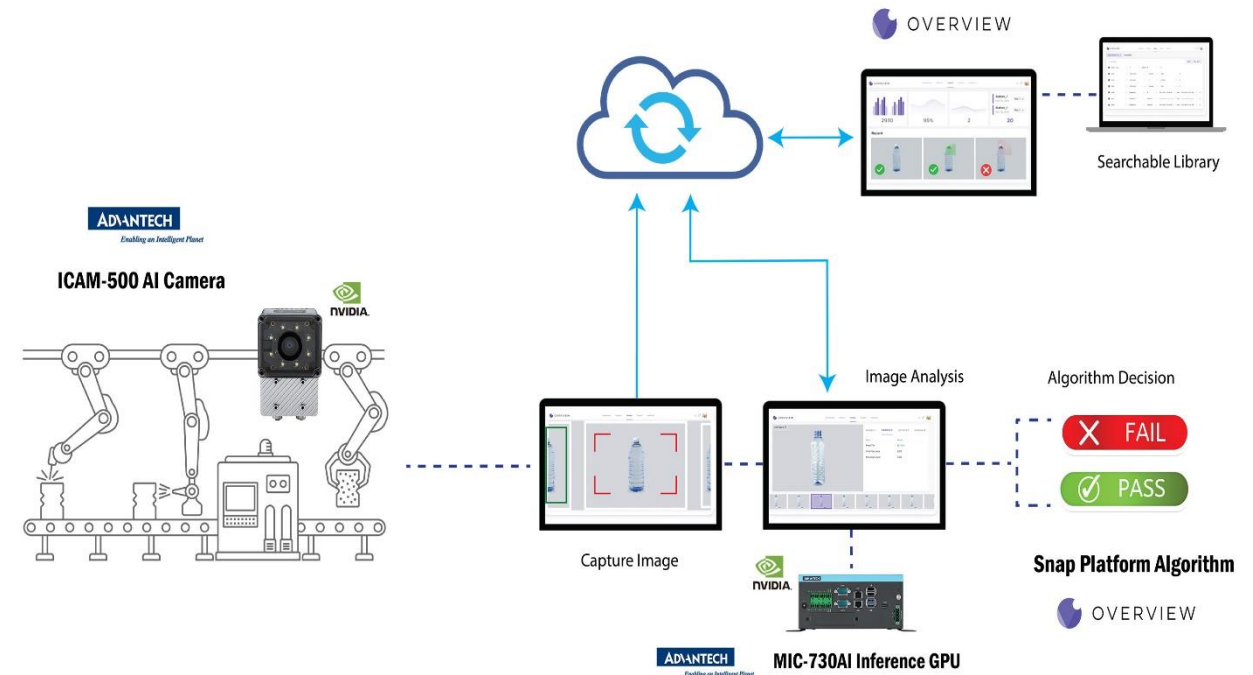


Location: USA

- AI-based systems improve the precision of defect detection by leveraging deep-learning computer vision algorithms. This reduces false positives and ensures only defective items are flagged, leading to higher product quality.
- Greater Efficiency: AI accelerates inspections, cutting costs and boosting production efficiency.



The article explores how AI enhances defect inspection through deep-learning algorithms and AI-integrated cameras like Advantech's ICAM-520. These technologies improve accuracy by detecting defects with precision and maintaining traceable visual records for better quality control. AI-powered solutions also increase efficiency by automating inspection tasks, reducing manual labor, and optimizing production workflows. This combination of advanced hardware and intelligent software revolutionizes traditional inspection processes, ensuring higher quality and productivity in industrial manufacturing.



Improving Wait Time at Major Intersections

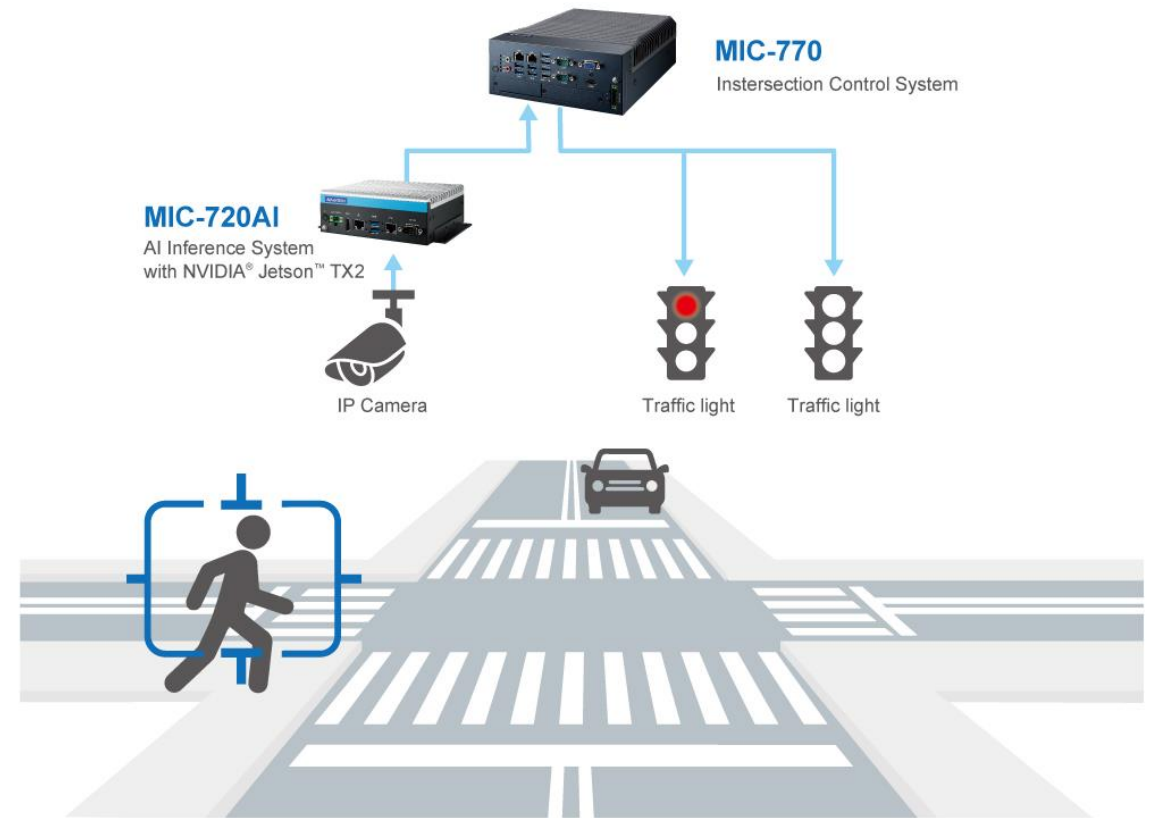


Location: Taiwan

- **Reduced Wait Times:** AI-powered systems dynamically adjust traffic signals based on real-time conditions, minimizing unnecessary delays and enhancing traffic flow.
- **Decreased Fuel Consumption:** By optimizing traffic light timings, AI reduces idle times at intersections, leading to lower fuel usage and emissions.



The article highlights how AI-powered image detection systems improve traffic management at major intersections. By automatically recognizing pedestrians and vehicles, these systems dynamically adjust traffic signals in real-time, reducing wait times and enhancing traffic flow. The technology also minimizes fuel consumption and emissions by optimizing idle times at intersections. Leveraging AI's capabilities, the solution provides a smarter, more sustainable approach to managing urban traffic while improving efficiency and reducing environmental impact.



Integrated HIL System Enhances and Streamlines GNSS Receiver Testing

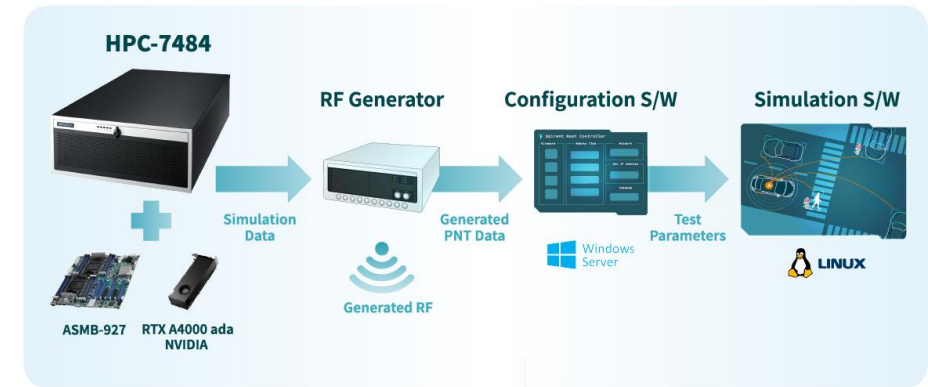


Location: Europe

- Real-time Testing: AI enhances hardware-in-the-loop (HIL) systems, allowing real-time simulation for GNSS receiver testing, improving accuracy in positioning and navigation applications.
- Enhanced Visualization: AI-powered 3D graphics provide high-fidelity visual simulations, helping engineers better understand and test complex scenarios with greater precision.



Advantech's integrated HIL system streamlines GNSS receiver testing for precision positioning, navigation, and timing (PNT) systems. With Intel® Xeon® processors and NVIDIA RTX 4000 Ada GPU, the solution delivers high computing power and real-time simulation capabilities, ensuring accurate testing and validation of GNSS receivers in automotive and aerospace industries.



AI-Based Pantograph-Catenary Monitoring System Enables Automated Railway Inspections

Learn More



Location: China

- Real-time Monitoring: AI enables precise and real-time pantograph and catenary monitoring, reducing downtime and ensuring consistent railway operation by quickly identifying potential issues.
- Predictive Maintenance: AI enhances image processing and data analysis to predict failures, allowing for proactive maintenance and improved safety in high-speed railway systems.

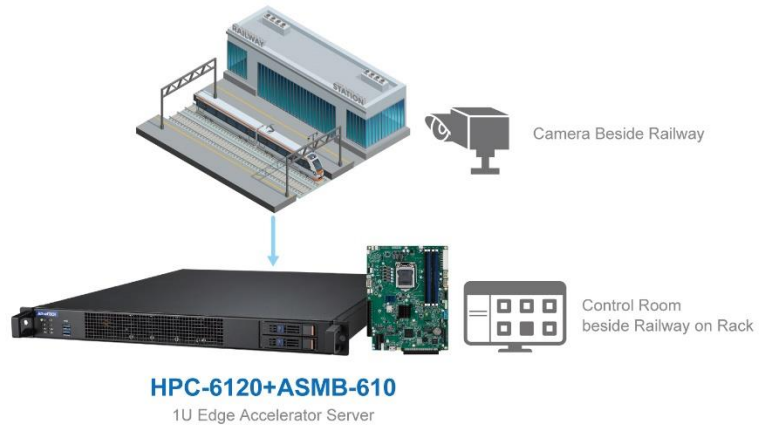


Advantech's AI-based pantograph-catenary monitoring system automates railway inspections by leveraging high-speed image processing and real-time data analysis. Using NVIDIA A2 GPUs and the HPC-6120 server, the system ensures precise monitoring, enabling predictive maintenance for reliable railway operations.

Ethernet

System Diagram

Pantograph Video Checking Device (CPVM)



HPC-6120+ASMB-610
1U Edge Accelerator Server

GPU Card: 2*A2

RAID Card

Transportation

Rolling Stock Solutions Helps Reduce Terror Attacks

- AI surveillance detects abnormal behavior and potential threats in real time with over 99% accuracy, enhancing passenger safety in trains.
- Instant alerts for incidents like attacks, fires, or falls are sent to drivers and control centers, enabling swift response and assistance.

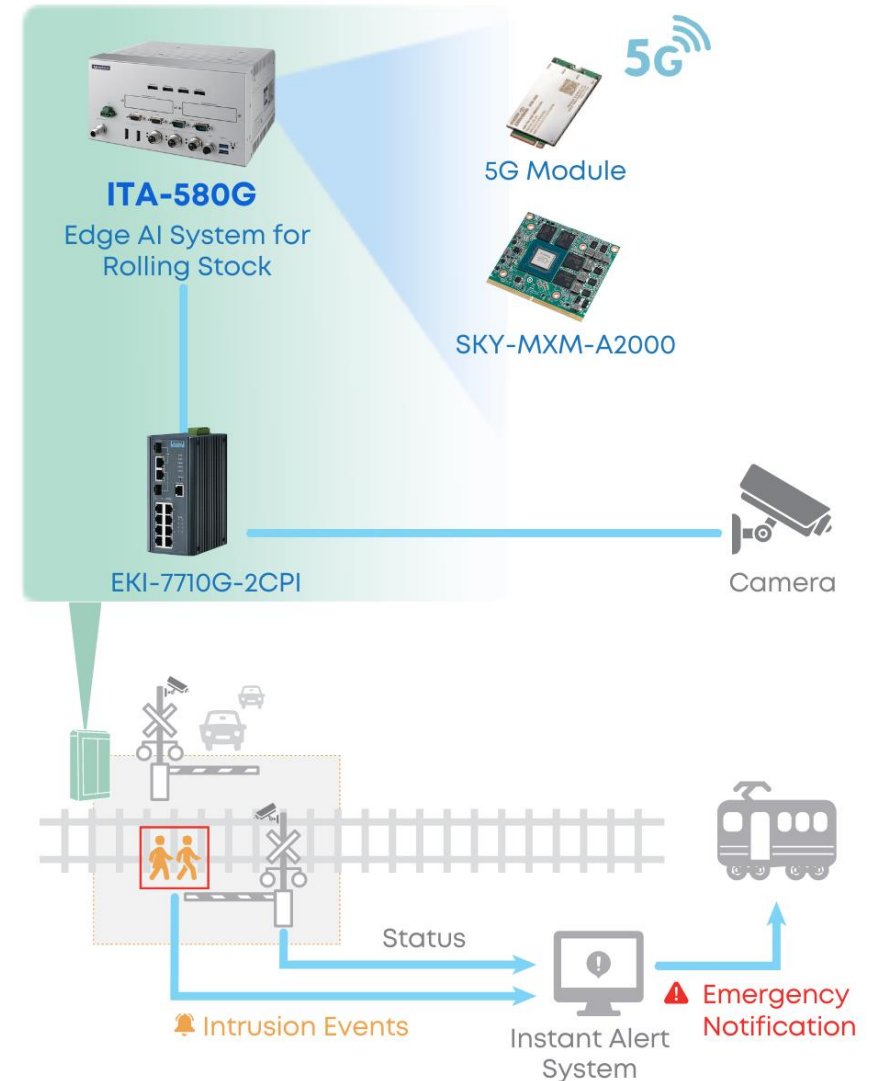


Advantech's total solution AI system for active monitoring and prediction co-developed by the Japan Railway Company delivered exceptional recognition accuracy and performed flawlessly. The fanless rolling stock-grade computers, high-speed computing GPU modules, and network switches, monitored, scanned, and quickly identifies images with potential red flag incidents, allowing onboard train staff to quickly react to incidents and accidents in real time to assure passenger safety.

Learn More



Location: Japan



Transportation

Robust Edge AI Safety Guards Railway Crossings

Learn More

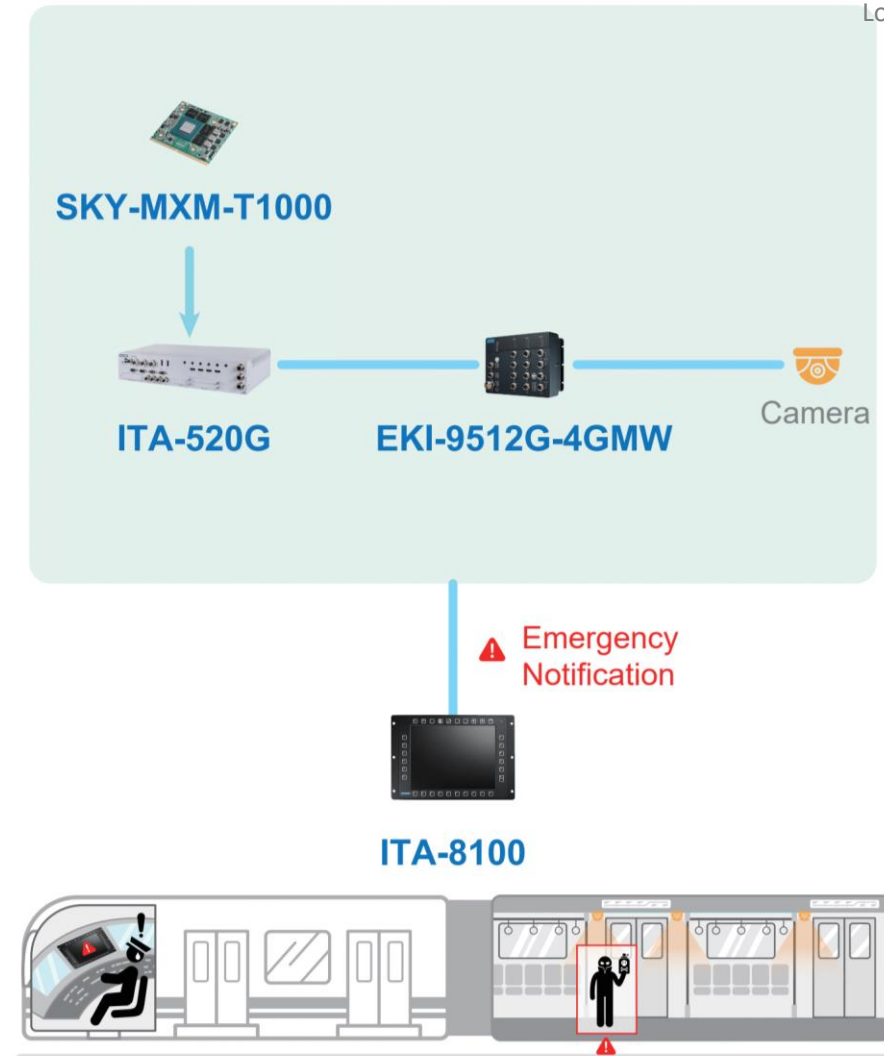


- AI systems ensure 99.9% accurate, real-time monitoring of railway crossings, significantly enhancing safety.
- The fast alert system, delivering warnings in under 2 seconds, prevents fatalities and injuries.



In Taiwan, there are over 400 railway crossings on roads, unfortunately, hundreds of crossing accidents occur annually, resulting in numerous fatalities and injuries. Railway barriers are not automatically closed by default, and if they fail to fully close when required, they can lead to unintentional delays and accidents. Relying solely on manpower cannot ensure safety at level crossings. Therefore, railway companies have adopted AI solutions to address geographic and weather conditions, as well as driver blind spots to enhance safety.

Location: Asia



AMR & Cobot

Industrial AI and Robotics Controller System in Waste Recycle Industry

Learn More

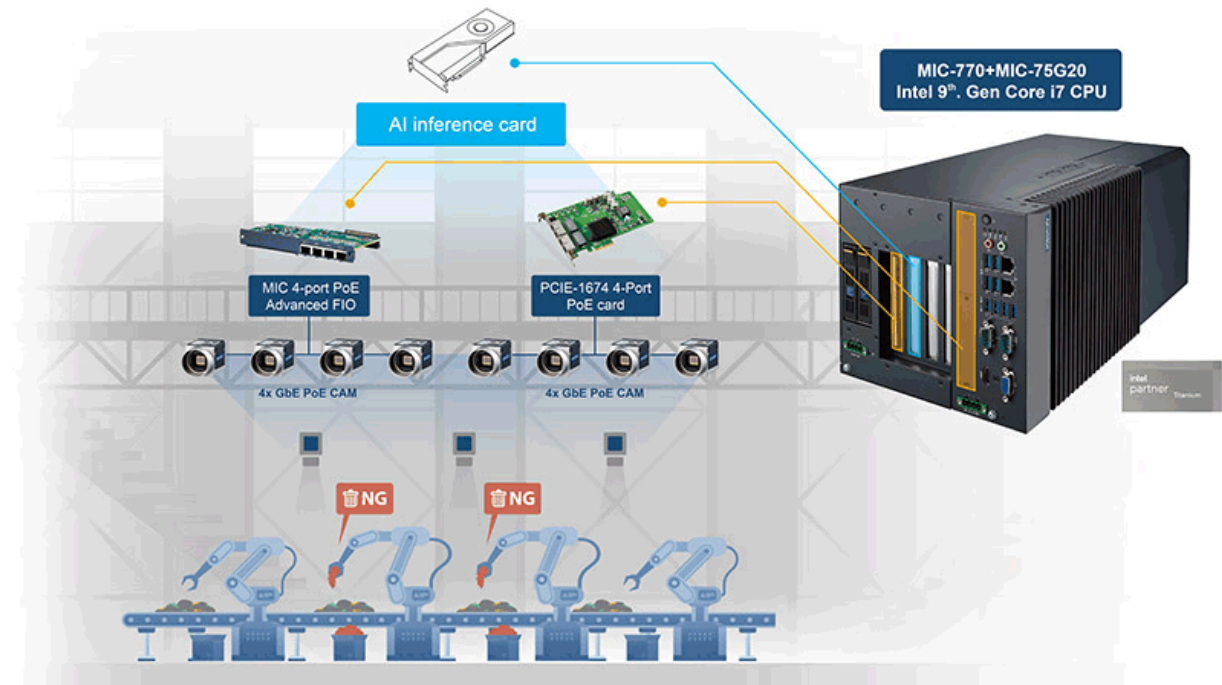


Location: USA

- Enhanced Efficiency and Accuracy: AI systems can identify and sort recyclable materials like glass, plastic, and metals with high precision, processing over 80 items per minute.
- Operational Reliability in Harsh Environments: Industrial-grade AI solutions are designed to function effectively in challenging conditions, ensuring consistent performance in waste recycling facilities.



The article discusses the adoption of AI and robotics controllers in the waste recycling industry to enhance efficiency and accuracy. AI-powered systems identify and sort recyclable materials such as glass, plastics, and metals at a rate exceeding 80 items per minute, significantly improving processing speed. Designed for harsh environments, these industrial-grade solutions ensure reliable operations in demanding conditions. By integrating advanced AI and robotics, the waste recycling industry achieves higher productivity and sustainability, optimizing material recovery while reducing environmental impact.



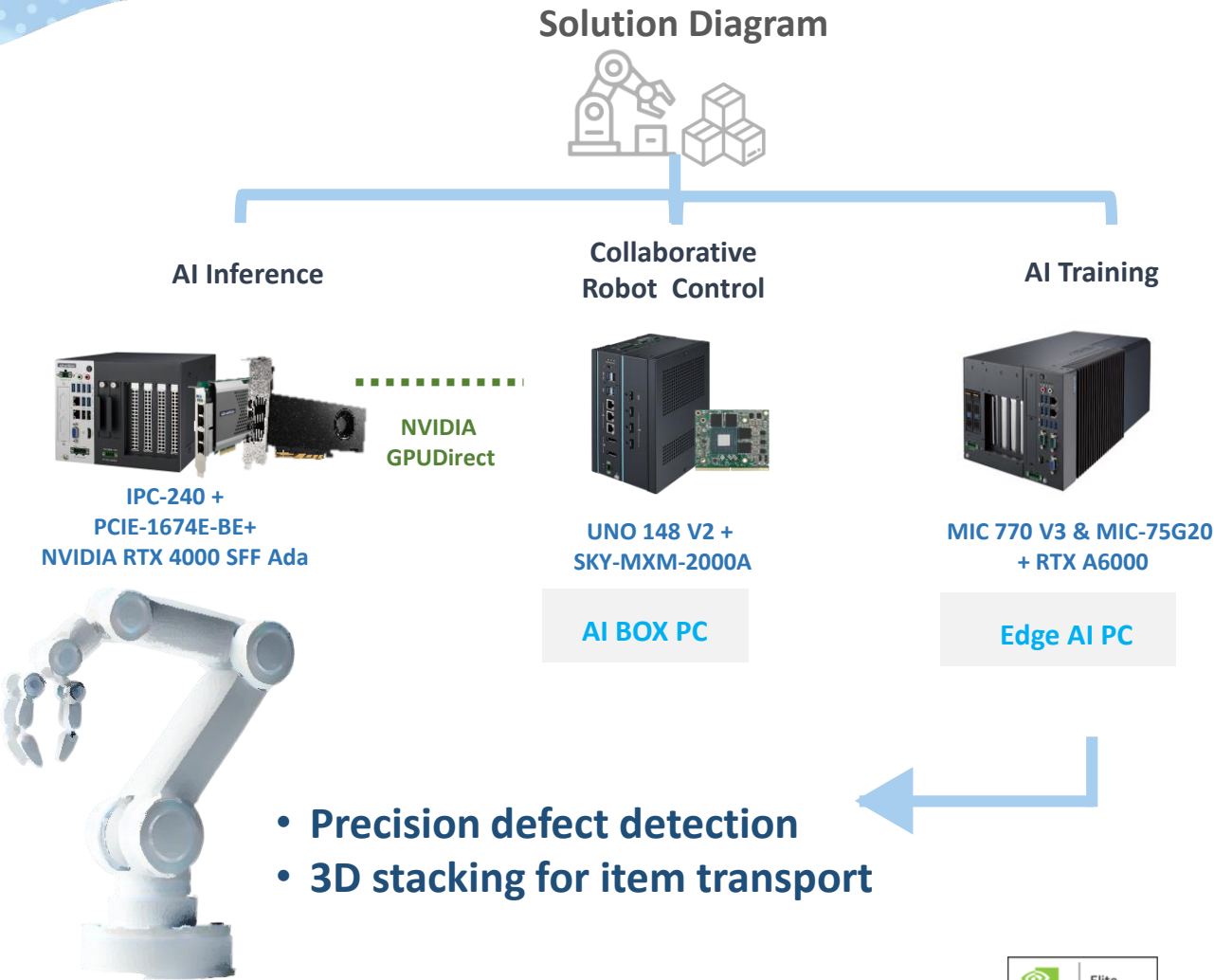
Collaborative Robot with AI-Powered for 3D Stacking and Precision Detection



- The integration of NVIDIA GPUs with advanced IPCs delivers exceptional precision and speed in image processing, ensuring accurate and efficient handling of industrial tasks.
- Real-Time Processing : The system processes visual data in real-time, enabling collaborative robot control to make swift decisions and adapt effectively to changing conditions.



As production lines require greater accuracy in transporting and stacking goods, collaborative robots equipped with AI-powered machine vision are essential for precise positioning calculations. Additionally, these robots can perform precision monitoring functions, such as detecting surface defects and other flaws. Advantech's industrial edge AI solution provides customers with real-time vision processing, enabling precise collaborative robot control and AI training.



AMR & Cobot

Smart AMR Disinfection Covers Duties of 4 Staff Members of Hospital Night Shift

Learn More

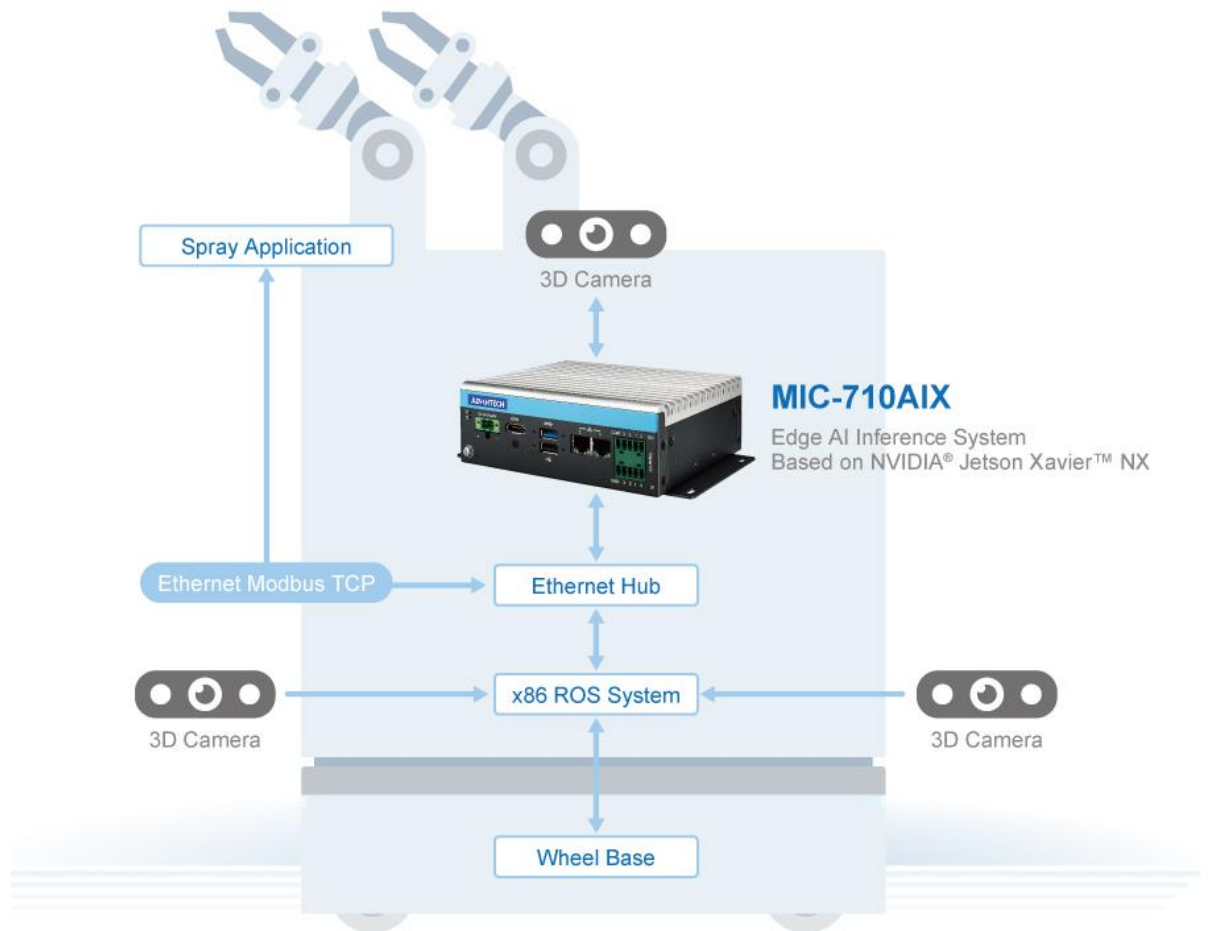


Location: Taiwan

- **Enhanced Data Security:** Processing sensitive information locally reduces the risk of data exposure or attacks during transmission to cloud servers, ensuring critical data remains within the device.
- **Reduced Latency:** Local data processing eliminates the need to send data to remote cloud servers, enabling real-time decision-making and responsiveness, which is crucial for applications like autonomous vehicles and industrial automation.



AI-powered Autonomous Mobile Robot (AMR) for disinfection is transforming hospital night shifts. The AI-driven C-Rob AMR autonomously navigates and disinfects hospital environments, performing the duties of 4–6 staff members per night. This innovation addresses labor shortages, enhances disinfection efficiency, and ensures consistent cleaning quality. By using AI to optimize disinfection strategies and adapt to different hospital zones, the AMR reduces infection risks while maintaining high hygiene standards. The solution exemplifies how AI and robotics can improve healthcare operations and alleviate staff workloads.



In-vehicle & AGV

Onboard Solutions for Construction Machinery

Learn More

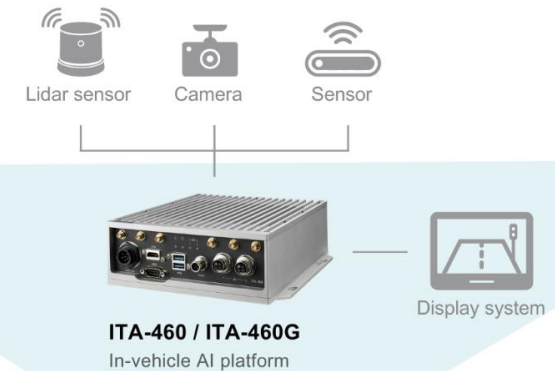


Location: China

- **Automated Precision:** AI in ITA-460 adjusts the pump truck's boom and support legs in real-time, reducing manual intervention and improving accuracy and safety.
- **Fault Prediction & Safety:** ITA-460 uses AI to predict component faults with 85% accuracy and monitor human-machine proximity, issuing alerts to prevent accidents.



Advantech's ITA-460 intelligent onboard AI unit revolutionizes the construction machinery industry by facilitating the transition from traditional methods to smart technologies. Utilizing advanced capabilities such as 5G connectivity and real-time data analysis, the ITA-460 enhances the efficiency and safety of concrete pump trucks. It automates hazardous operations, reducing the need for manual intervention while analyzing video data for decision-making. With features like real-time fault diagnosis and safety monitoring, the ITA-460 significantly minimizes errors and protects personnel on-site. These innovations represent a crucial step towards achieving a more intelligent and digitally transformed construction sector.



Positioning



Object identification



Route navigation
and planning



Vehicle autonomy



V2X

In-vehicle & AGV

AI-Enabled Safe Driving Environment for Logistics Fleets

Learn More



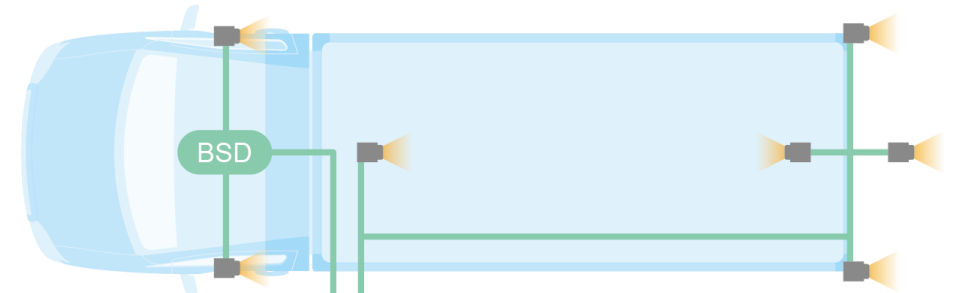
Location: Taiwan

- Enhanced Driver Monitoring: AI systems enable close supervision of drivers, improving safety and providing valuable data for liability assessments after accidents.
- Efficient Application Development: Advantech's iDoor technology allows system integrators to swiftly create applications using modular appliances, streamlining the development process..

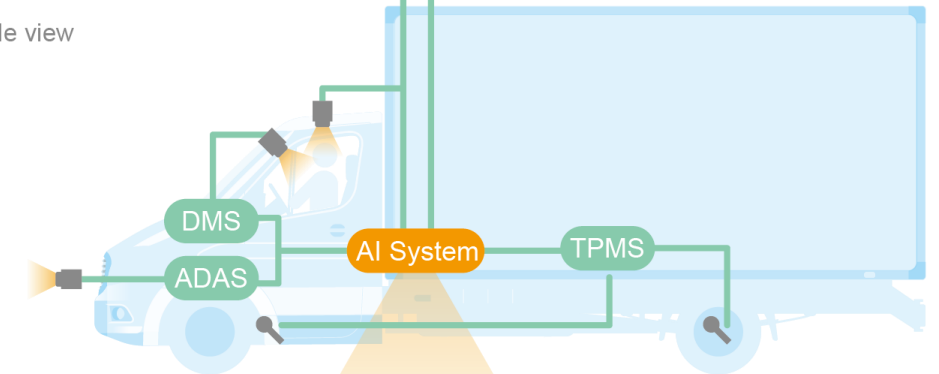


The implementation of AI technologies to enhance safety and efficiency in logistics fleets. By integrating driver monitoring systems and AI-powered cameras, fleet operators can identify risky behaviors, prevent accidents, and provide data for liability management. Advantech's solutions, including iDoor technology and modular systems, enable rapid application development for tailored fleet safety programs. These advancements improve driver behavior monitoring, enhance road safety, and streamline operational efficiency, making logistics fleets safer and more reliable while reducing accident-related costs and liability risks.

Top view



Side view



MIC-710AIL

Fanless and Ultra-compact
AI Inference System Based
on NVIDIA® Jetson Nano™



DVP-7036HE

4 Channel 1080P30 TVI /
CVI / AHD / CVBS Capture



In-vehicle & AGV

High-Performance Platform Enables Autonomous Vehicle Environment Sensing

Learn More

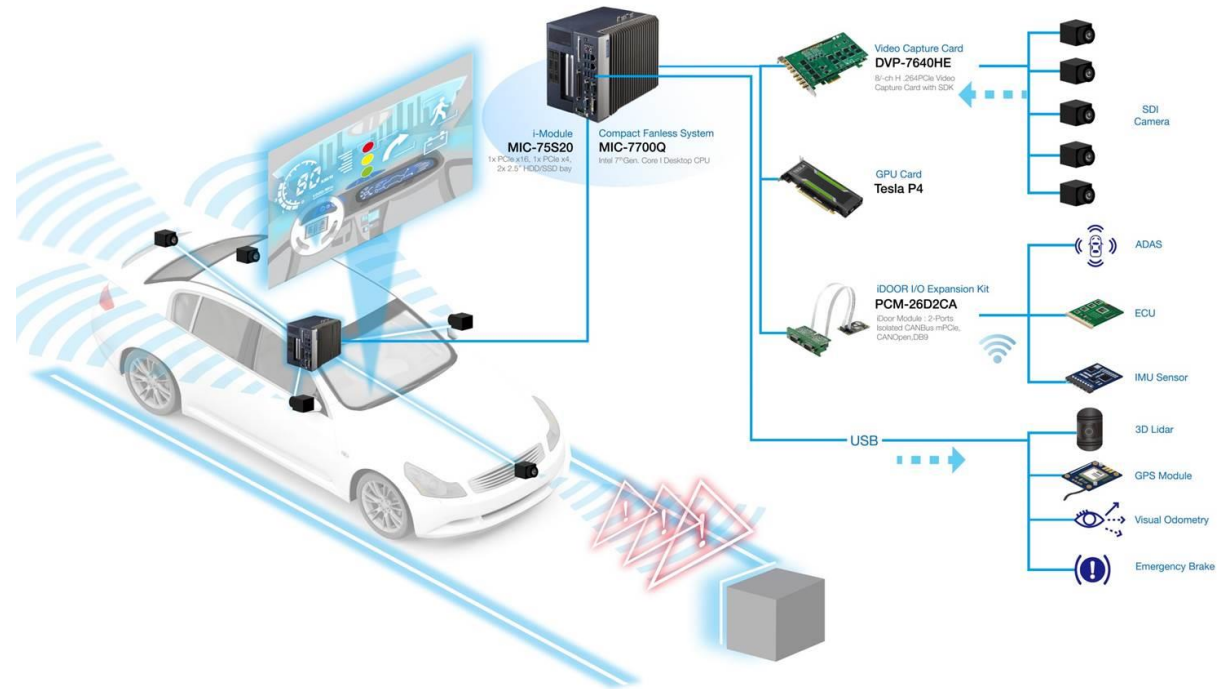


Location: China

- Accurate Real-Time Sensing: The MIC-7700Q processes data from cameras and sensors, ensuring precise environment detection for autonomous vehicles
- Modular Flexibility: Its design supports expansion with LiDAR, GPS, and CAN bus interfaces, enabling seamless system integration and adaptability.



Advantech's MIC-7700Q system enhances autonomous vehicle capabilities. Equipped with an Intel® Core™ i processor and high-performance GPU, the system efficiently processes data from cameras and sensors for precise real-time environment sensing. Its modular design supports flexible expansion, integrating technologies like LiDAR, GPS, and CAN bus interfaces, enabling seamless adaptability to evolving autonomous driving needs. The MIC-7700Q provides a reliable, scalable solution for autonomous vehicles, ensuring robust performance in navigation, object detection, and system integration for safer and smarter transportation.



Safety & Security

AI Empowered Indoor & Outdoor Facility Safety

Learn More



Location: USA

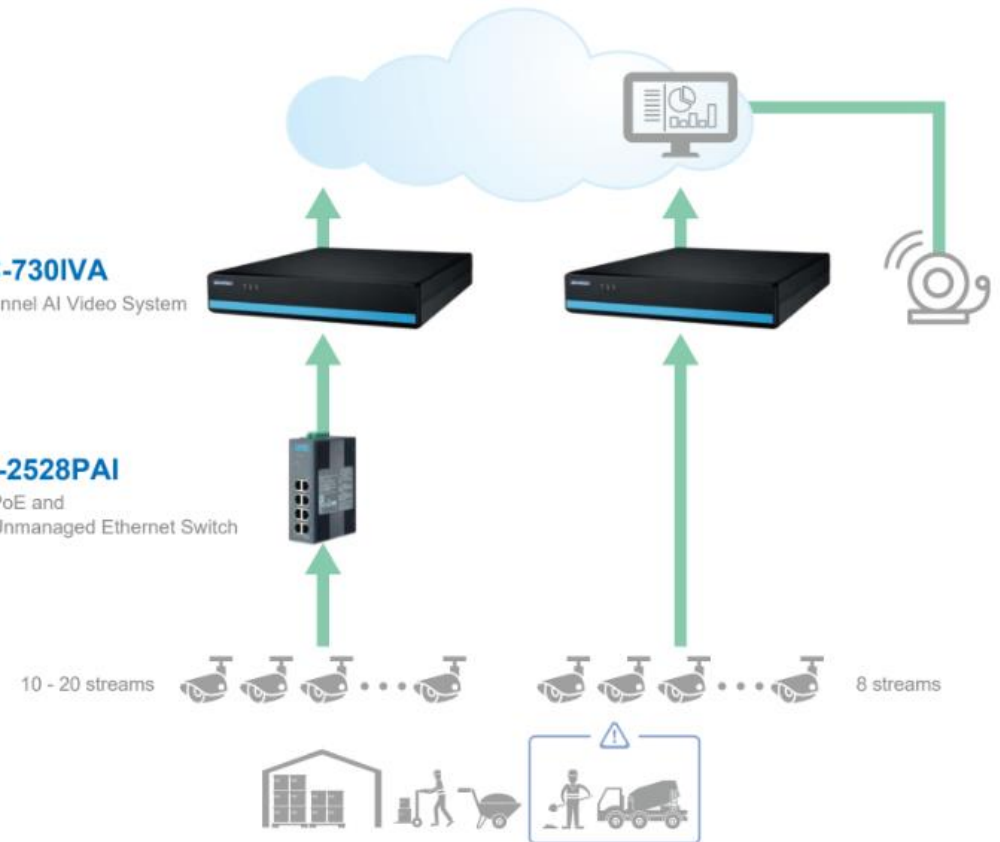
- **Reduction in Worker Injuries:** AI solutions, such as motion and infrared detection systems, can monitor areas near machinery to prevent accidents, thereby decreasing the incidence of worker injuries in environments like logistics centers, warehouses, and construction sites.
- **Real-Time Hazard Detection:** AI-driven surveillance systems provide continuous monitoring and immediate alerts for potential hazards, enabling prompt intervention.



AI enhances facility safety in both indoor and outdoor environments. AI-powered systems use motion and infrared detection to monitor areas near machinery, reducing worker injuries in high-risk environments like warehouses and construction sites. Real-time hazard detection capabilities enable continuous monitoring and immediate alerts, ensuring prompt intervention to prevent accidents. By integrating advanced AI technologies, facilities can improve safety standards, protect workers, and maintain operational efficiency, demonstrating how intelligent solutions are transforming workplace safety.

MIC-730IVA
8 Channel AI Video System

EKI-2528PAI
4FE PoE and
4FE Unmanaged Ethernet Switch



Safety & Security

Making Travel Safe and Stress-free with A Smart Anonymization System

Learn More

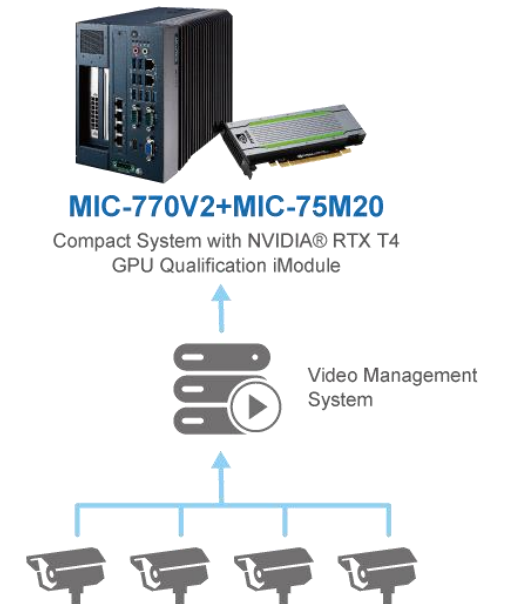


Location: Europe

- **Enhanced Security:** AI-powered surveillance enables real-time monitoring and rapid identification of potential threats, improving overall safety in public spaces.
- **Privacy Protection:** Advanced anonymization techniques ensure individual privacy by obscuring personal identifiers, balancing security needs with privacy concerns.



AI-powered smart anonymization surveillance to enhance public safety while protecting privacy. These systems provide real-time monitoring in transportation hubs, identifying potential threats swiftly to ensure safe and stress-free travel experiences. By employing advanced anonymization techniques, personal identifiers are obscured, balancing security measures with privacy concerns. Advantech's innovative surveillance solutions demonstrate how AI can create safer public environments, combining advanced technology with ethical considerations to improve safety and maintain individual privacy in busy, high-traffic areas.



AI Predict Maintenance for Energy

Learn More

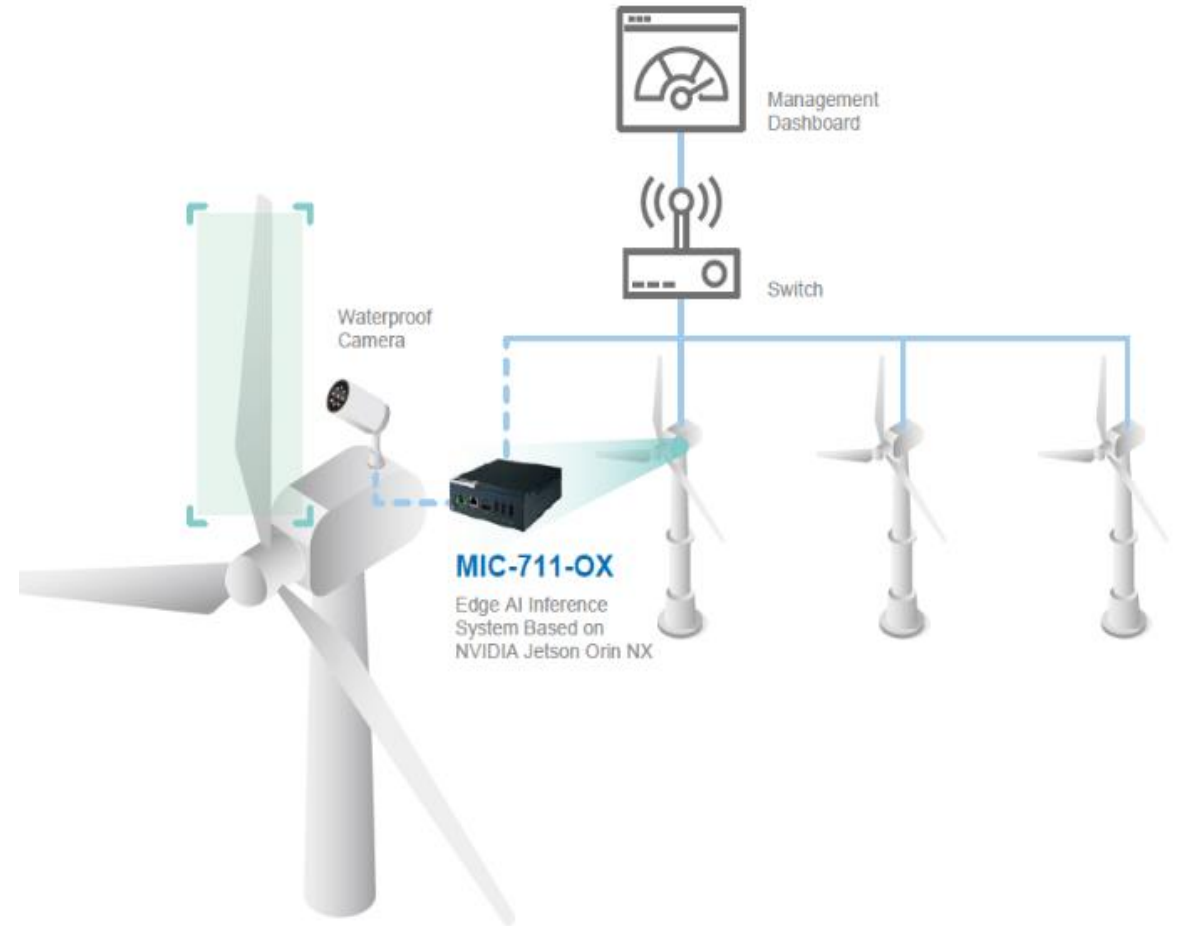


Location: China

- Utilizes AI image monitoring to provide real-time images of various parts of the blades through camera installation.
- Image data is inputted in real-time into the AI system, which issues rapid alarms for issues like ice accretion, cracks, and fractures.



Chinese wind turbine equipment manufacturers have developed highly accurate AI models. The precision of ice accretion detection is over 95%, crack detection accuracy exceeds 95%, and lightning strike recognition accuracy surpasses 80%. Once an issue is detected, the AI inference system immediately issues a warning for prompt maintenance. The AI visual inspection system is compact, allowing customers to directly install it in existing wind power equipment to optimize wind turbine efficiency without the substantial costs deriving from purchase of new large-scale equipment.



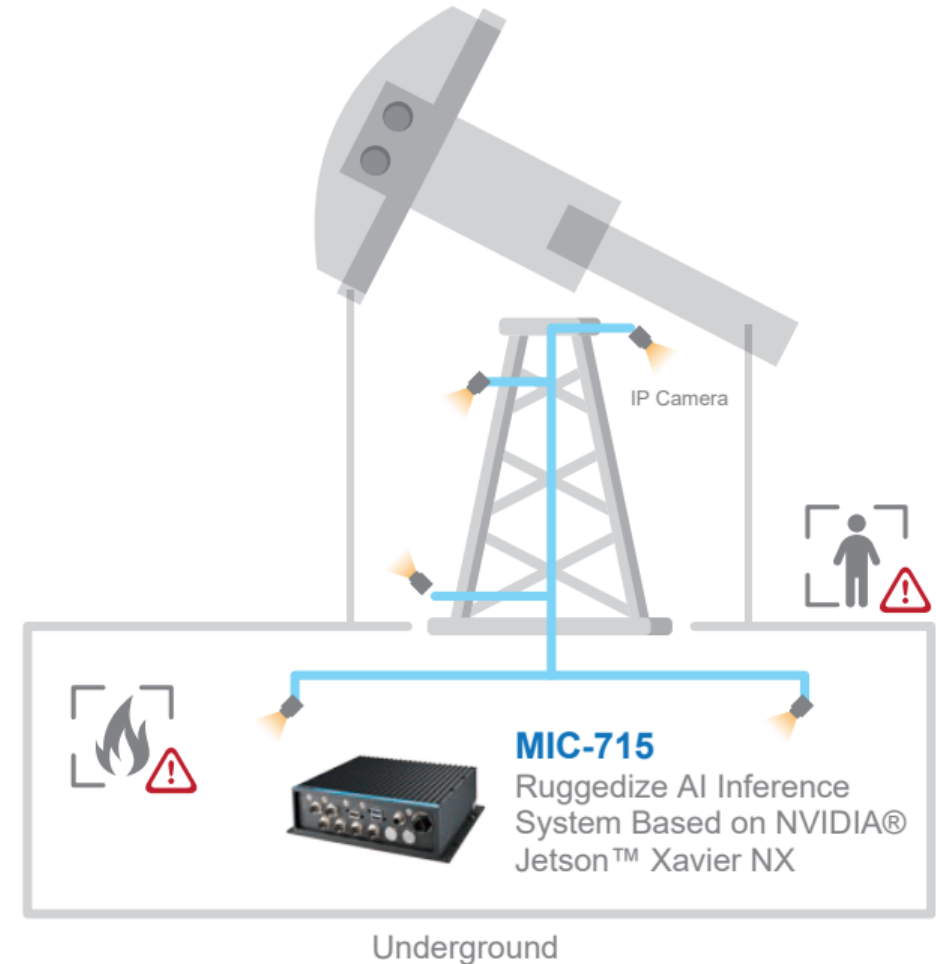
AI Empowered Security and Safety for Oil Drilling

Location: Australia

- Real-Time Hazard Detection: AI can identify dangerous behaviors and situations instantly, enabling preventive measures to avoid accidents and ensure workplace safety.
- Reduced Worker Exposure to Danger: AI can automate high-risk tasks, minimizing the need for human involvement in hazardous environments and lowering the risk of injury.



According to the law, employees are entitled to work in a safe workplace and under conditions that do not pose a risk of serious harm, regardless of location. However, working on an oil rig remains one of the most dangerous jobs. By implementing AI inspection in oil drilling, AI can detect dangerous behaviors and situations in real-time, helping to prevent accidents. Additionally, certain security tasks on-site can be automated with AI, significantly reducing workers' exposure to hazardous conditions.



Smart Agriculture

Maximizing the Efficiency of Agricultural Robots

Learn More

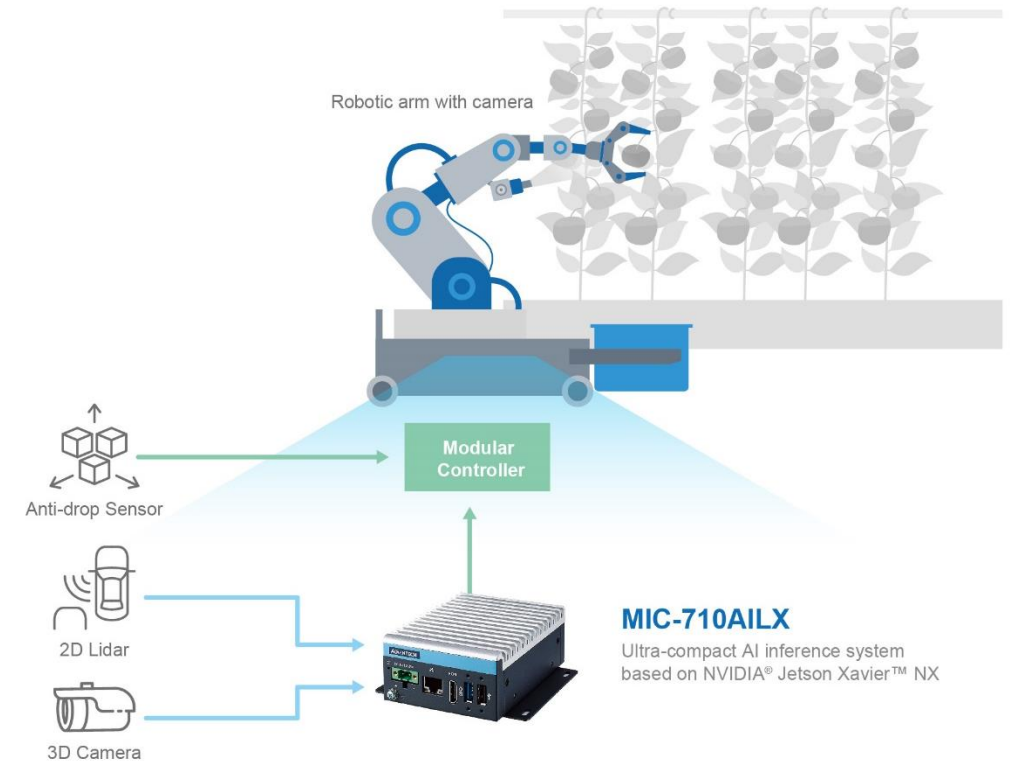


Location: Japan

- **Enhanced Harvesting Efficiency:** AI-powered robots equipped with advanced vision systems can accurately identify and harvest ripe fruits, increasing productivity and reducing labor costs.
- **Addressing Labor Shortages:** With an aging rural population and declining workforce, AI-driven robots provide a sustainable solution to maintain and boost agricultural output.



AI and robotics technologies are transforming agriculture by improving efficiency and addressing labor shortages. It highlights the use of AI-powered harvesting robots that can identify and pick ripe fruits with precision, thereby increasing productivity and reducing reliance on manual labor. The integration of AI in agricultural practices offers a sustainable solution to the challenges posed by an aging rural workforce, ensuring consistent and enhanced agricultural output.



An AI Powered Fruit Prediction System for Optimal Harvest Management



Location: Argentina

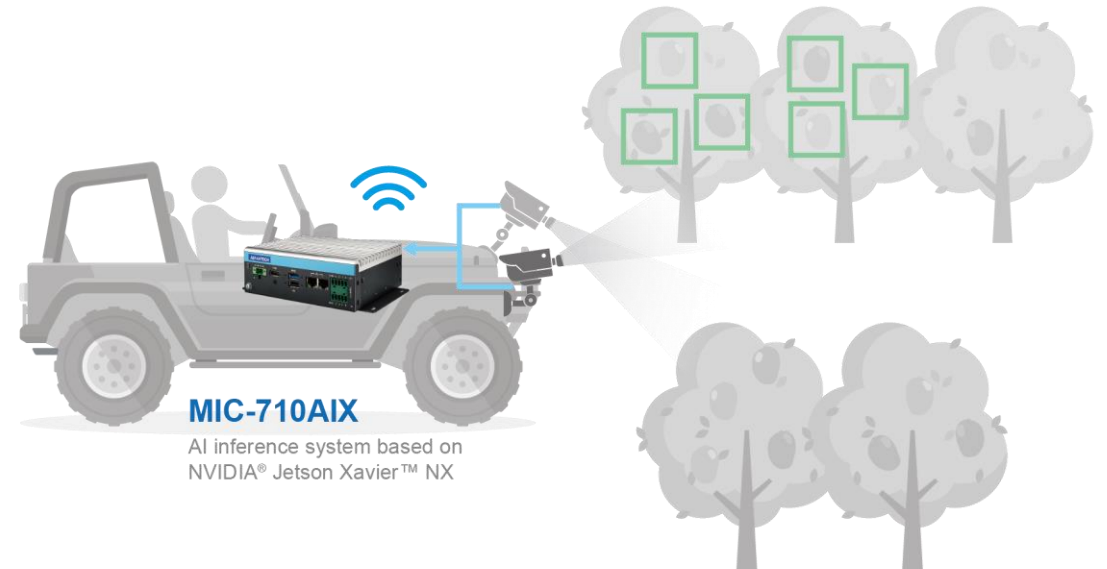
- **Accurate Yield Estimation:** AI systems utilize hyperspectral imaging and deep learning algorithms to precisely detect and count fruit, enabling farmers to make informed decisions about harvesting and marketing strategies.
- **Optimized Resource Management:** By providing reliable yield forecasts, AI helps farmers plan resource allocation effectively, leading to increased productivity and profitability.



AI-powered fruit prediction system designed for optimal harvest management in lemon farming. This system employs hyperspectral imaging and deep learning algorithms to accurately estimate fruit yields, allowing farmers to optimize operational, logistical, and commercial decisions. By integrating AI into yield estimation processes, the system enhances productivity, streamlines supply chain management, and supports sustainable economic growth in agriculture.

SKY-640V2

4U rackmount GPU server
up to 8 GPUs



MIC-710AIX

AI inference system based on
NVIDIA® Jetson Xavier™ NX

A New Era in Shrimp Farming: AI-Powered Monitoring and Control

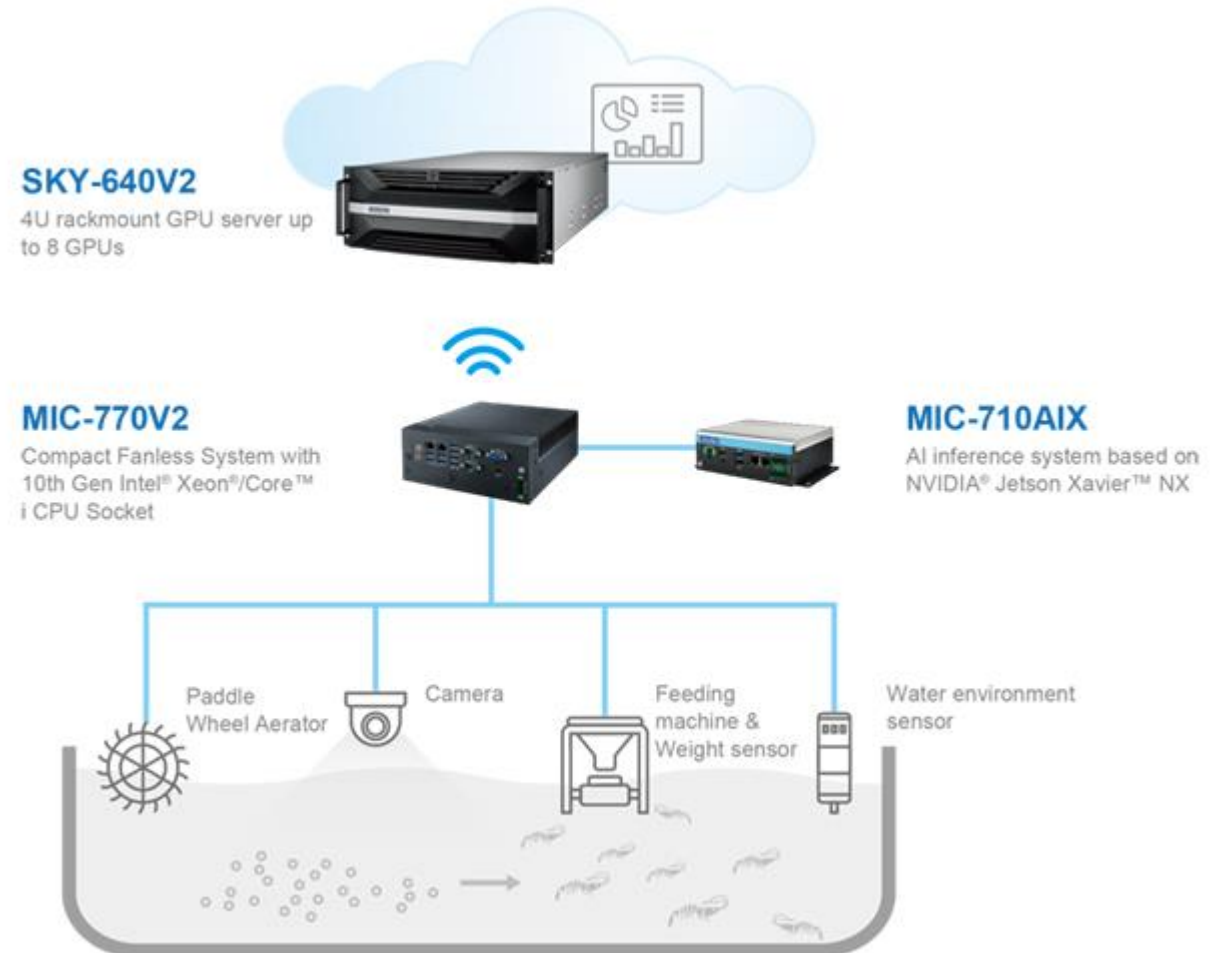


Location: Vietnam

- Optimized Feeding: AI monitors shrimp behavior to adjust feeding, improving feed efficiency and reducing waste.
- Sustainable Farming: AI minimizes waste and maintains water quality, promoting environmentally friendly practices.



AI-powered monitoring and control systems in shrimp farming. These systems utilize real-time data from various sensors to optimize feeding protocols and maintain optimal water conditions. By leveraging AI, farmers can reduce waste, improve feed conversion ratios, and enhance shrimp health, leading to increased production efficiency and sustainability. The adoption of AI technology addresses traditional challenges in shrimp farming, paving the way for more sustainable and profitable operations.



AI-Based Detection System for Livestock Health Management



Location: Australia

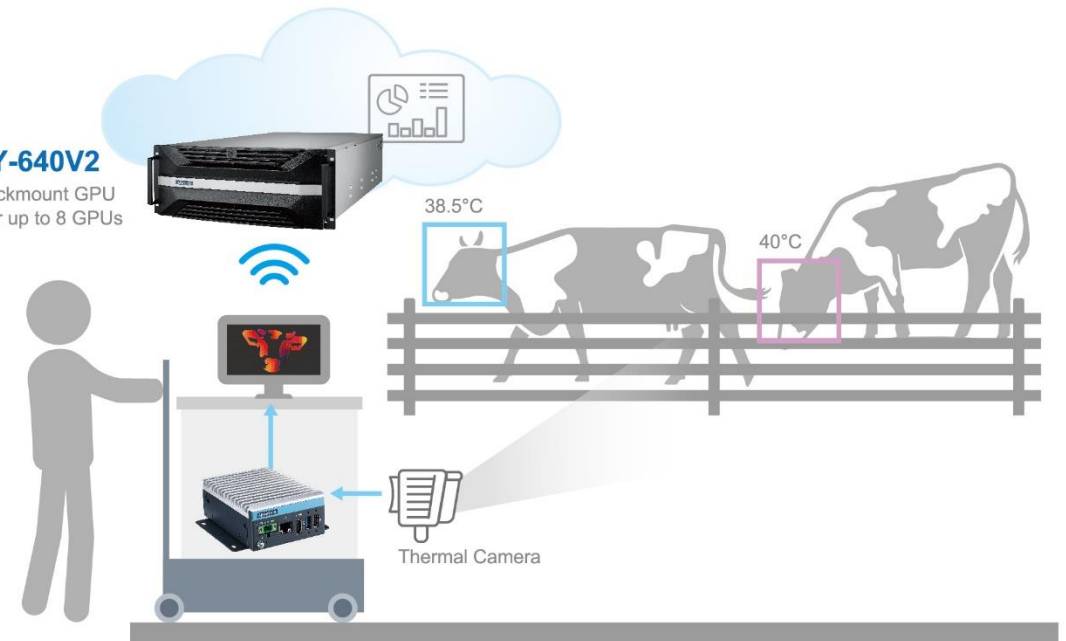
- **Early Disease Detection:** AI systems utilize infrared vision to monitor each cow's body temperature, enabling the prompt identification of illnesses and preventing disease spread.
- **Enhanced Operational Efficiency:** The AI-based system provides daily animal health reports and access to specialists, streamlining health management processes and improving overall farm productivity.



An AI-based early detection system for livestock health management in dairy production. This system employs AI and infrared vision to monitor cows' body temperatures, facilitating early disease detection and prevention. It offers daily health reports and specialist access, enhancing operational efficiency. The solution is easy to deploy and has the potential to expand into areas like growth monitoring and environmental condition assessment, significantly improving livestock health and farm productivity.

SKY-640V2

4U rackmount GPU server up to 8 GPUs



MIC-710AILX

Ultra-compact AI inference system based on NVIDIA® Jetson Xavier™ NX

Smart Healthcare

Endoscopy Surgical Systems with AI-Driven Real-Time Detection

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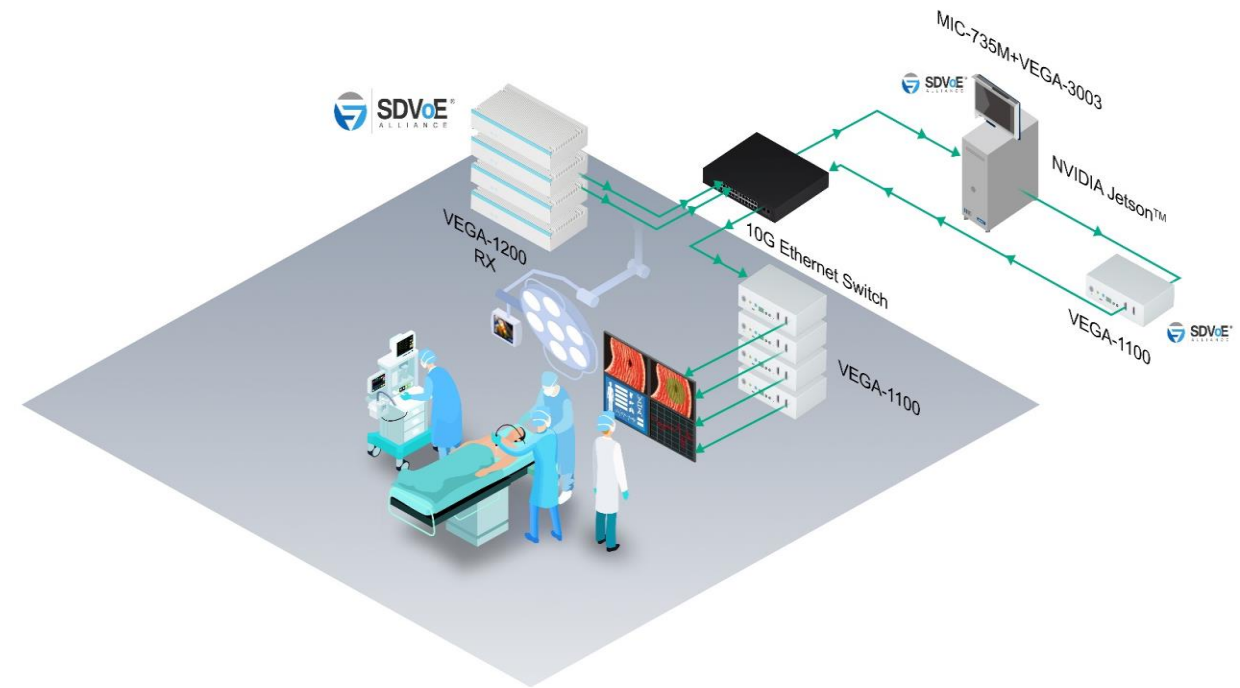


Location: Taiwan

- Real-Time Detection: AI-powered systems like the MIC-735M-IO with NVIDIA IGX™ enable real-time anomaly detection during endoscopic procedures, enhancing surgical precision.
- Low-Latency Video Transmission: The VEGA series ensures ultra-low-latency video over IP, providing high-quality, seamless visuals for accurate surgical navigation.



Advantech revolutionizes endoscopy surgical systems with AI-driven real-time detection. Powered by the MIC-735M-IO with NVIDIA IGX™ and Holoscan AI software, the solution enables real-time anomaly detection during procedures, enhancing surgical precision. The VEGA series ensures ultra-low-latency video over IP transmission, providing seamless, high-quality visuals critical for accurate surgical navigation. By integrating AI and advanced video technology, Advantech's solutions improve surgical efficiency, support precise decision-making, and enhance overall patient outcomes, setting a new standard for modern operating rooms.



Smart Healthcare

Surgical Robotic Assisted Bronchoscopy Platform

Learn More



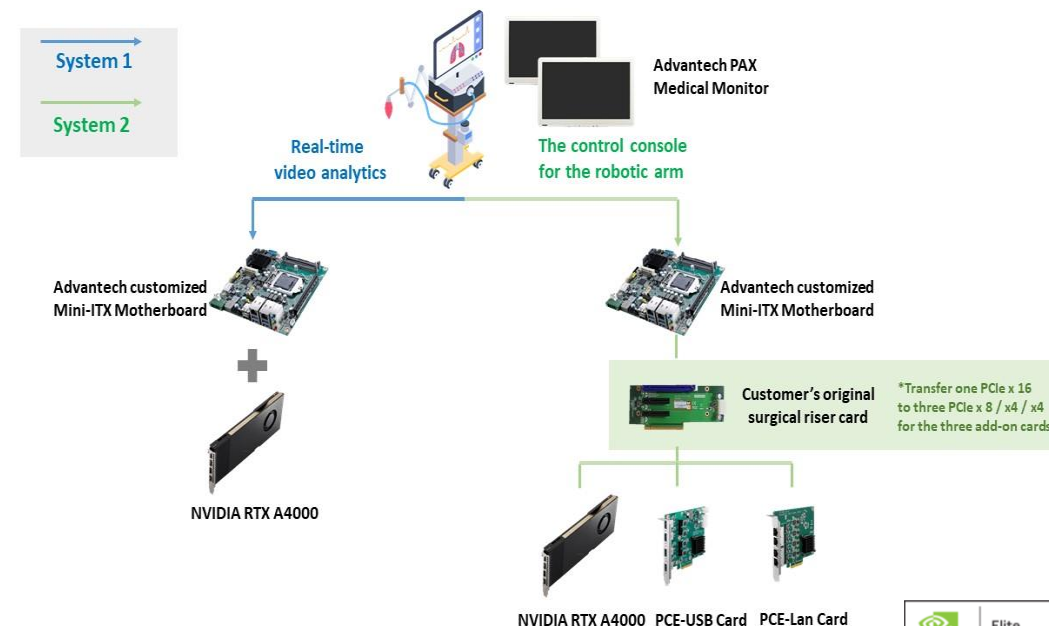
Location: UK

- Ensuring stable operation of two high-performance computing systems in a single OR kart system.
- The advantage of the GPU making it suitable for real-time image processing in confined spaces.



Lung cancer is the leading cause of death in the United States and the five-year survival rate for lung cancer is only 23%, largely attributed to challenges in accurate detection, analysis, and surgical intervention.

Advantech's premium service solution assists customers in testing their riser cards to ensure compatibility with low-power, high-performance GPU cards, RTX A4000, ultimately enhancing surgical efficiency and improve surgical precision.



Worldwide Offices

Regional Service and Customization Centers

China	Kunshan 86-512-5777-5666	Taiwan	Taipei 886-2-7732-3399	Netherlands	Eindhoven 31-40-267-7000	Poland	Warsaw 00800-2426-8080	USA	Milpitas, CA 1-408-519-3800
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