

# Advantech Industrial Edge AI Platforms

Powerful and flexible edge AI solutions with industrial I/O supporting NVIDIA Jetson and remote management

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*Enabling an Intelligent Planet*



[www.advantech.com](http://www.advantech.com)

# Advantech Industrial Edge AI Platforms

Artificial intelligence (AI) is becoming increasingly prevalent across a range of IoT applications, especially at the Edge.

With 30 years of expertise in IPC design, Advantech MIC-Jetson series is the best AI platform at the edge. Advantech MIC-Jetson series offers superior performance per watt for the full embedded NVIDIA Jetsons lineup. Its features strict validation to ensure thermal, mechanical, and electrical compatibility, plus industrial-grade anti-vibration, high temperature operation capabilities, I/O support, and a compact, industrial design.

Highly integrated systems allow AI application developers to rapidly create unique AI solutions for smart city, automation manufacturing, medical imaging, management, and retail applications.



## Full NVIDIA Jetson Product Portfolio

Powered by NVIDIA Jetson technology, our AI edge solutions deliver GPU performance in a compact, embedded footprint with lifecycle extension

### Jetson Nano

5-10W 472 GFLOPs  
45mm x 70mm



### Jetson TX2 NX

7.5-15W 1.33 TFLOPs  
45 mm x 70 mm



### Jetson Xavier NX

10-20W 21 TOPs  
45mm x 70mm



### Jetson AGX Xavier

10-40W 30-32 TOPs  
100mm x 87mm



### Jetson AGX Orin

15-60W 270-275 TOPs  
100mm x 87mm



## Remote Management

Numerous Edge AI platforms are deployed in different locations, bringing challenges to collective device management. Advantech provides a remote management platform to deal with provision, OTA updates, and remote monitoring while saving on operations costs and enabling mass deployment.

## Consolidation for Industrial Deployment

	Advantech	
Complete System Support	Yes	HW support: building systems from carrier board to chassis SW support: From board support package (BSP) to applications deployment
Comprehensive R&D Resources	Yes	HW design R&D team In-house SW R&D team for BSP
Longevity	5-7 years	Low total cost of ownership: including system certification cost and RMA service preparation
Revision Control	Yes	Reduce product validation during product lifecycle Avoid compatibility issues resulting from engineering changes
Worldwide Support, Logistic & RMA Service	Yes	14 repair centers and 4 logistic centers
Customization for Different Needs	Yes	Configuration-to-Order and Designed-to-Order services

# Edge AI Systems *Designed for Critical Environments*

Compact fanless design endures wide operating temperature range

## Industrial I/O Support

Advantech provides flexible and modularized support for requirements in different vertical applications. Customers are able to do simple customization without changing system.



## Applications

### Automatic AI AOI

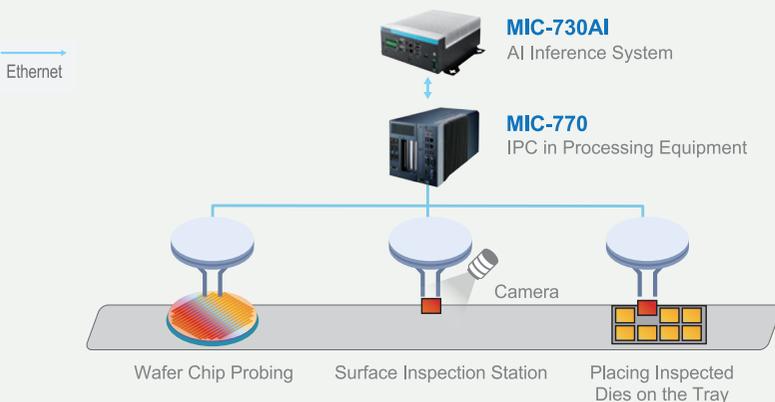
#### Die Inspection for chip probing

Die surface were traditionally inspected by human eyes under a microscope. To increase inspection efficiency and accuracy, AI is deployed in die processing equipment for surface defect inspection. MIC-770 controls the chip probe and camera. After image processing, MIC-770 passes the image to MIC-730AI, where a trained AI model quickly provides image inference results for each die to MIC-770.

The qualified dies can proceed to the die tray for IC packaging and final test(FT) processes.

### Features

MIC-730AI's high-performance, fanless design and scalability enables flexible equipment configuration.



### AI in Safety and Security

#### AI Empowered Indoor & Outdoor Facility Safety

Visual AI increases the visibility of on-site workers and equipment to improve responsiveness to potentially dangerous situations — such as an employee carelessly approaching moving machinery. This real-time AI-driven NVR system, MIC-730IVA, can improve worksite safety can incorporate both existing security cameras and newly installed

**MIC-730IVA**  
8 Channel AI Video System

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

10 - 20 streams



# Edge AI NVR 8-Channel Camera Support

Supports 8 PoE (Power-over-Ethernet) for IP cameras



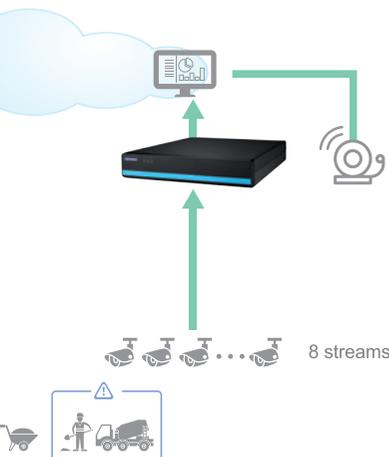
# Ruggedized AI System IP67 Rated, Waterproof Design

Supports 4 x IEEE 802.3af compliant PoE, lockable I/O and 6 x GMSL video interface (optional)

high-resolution cameras into a single smart security system with AI software.

## Features

MIC-730IVA enables the simultaneous reliable processing of at least eight camera streams directly.



## AI in Transportation

### Improving Wait Time at Major Intersections

AI smart traffic signal control system can change specific traffic lights according to traffic flow—it gives traffic on side roads enough time to pass while increasing arterial road green light time when side roads are empty.

It enhances traffic flows for arterial roads during the day, while reducing waiting times at red lights at night. The average wait time has

decreased 15~78%. Night wait times at red lights on arterial roads decreased by 35%.

## Features

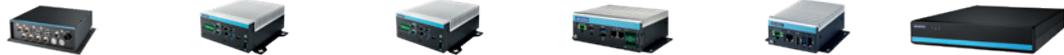
MIC-710AIX's low power consumption, fanless design, and wide-operating temperature are well suited for the roadside.

### MIC-710AIX

AI Inference System Based on NVIDIA Jetson Xavier NX



## Selection Guide



Model Name		MIC-715	MIC-733-AO (Preliminary)	MIC-730AI	MIC-710AIX MIC-710AIT MIC-710AI	MIC-710AILX MIC-710AILT MIC-710AIL	MIC-730IVA MIC-710IVX MIC-710IVA
NVIDIA® Platform		NVIDIA® Xavier NX™	NVIDIA® Jetson™ AGX Orin	NVIDIA® Jetson™ AGX Xavier	NVIDIA® Xavier NX™ / NVIDIA® Jetson™ TX2 NX/ NVIDIA® Jetson Nano™		NVIDIA® Jetson™ AGX Xavier / NVIDIA® Xavier NX™ / NVIDIA® Jetson Nano™
AI Performance		21 TOPs	200 TOPs	32 TOPs	21 TOPs/ 1.33 TFLOPs/ 472 GFLOPs		32 TOPs/ 21 TOPs/ 472 GFLOPs
Form Factor		Fanless	Fanless	Fanless	Fanless	Fanless	Fan-based
I/O / Expansion	LAN	2 x M12 X-coded, 8-pin female	4x RJ-45 (GigE)	2x RJ-45	2x RJ-45	1x RJ-45	1x RJ-45
	PoE	4 x M12 X-coded, 8-pin female	-	-	-	-	8x PoE (15.4W/ch)
	HDMI	1 x HDMI	1 x HDMI	1 x HDMI	1 x HDMI	1 x HDMI	1 x HDMI
	USB	External: 2 x USB 3.0 Internal: 1 x MicroUSB	External: 2x USB2.0 4x USB3.0 Internal 1x USB2.0	External: 2x USB2.0 2x USB3.0 Internal 1x USB2.0	External: 1 x USB2.0 1 x USB3.0 Internal 1 x USB2.0	External: 1 x USB2.0 1 x USB3.0 Internal 1 x USB2.0	External: 2x USB 3.0 / 1x USB 2.0 1x USB 3.0 / 1x USB 2.0 1x USB 3.0 Internal 1 x USB2.0
	DI/DO	-	16 bit (8In/8Out)	16 bit (8In/8Out)	8 bit (4In/4Out)	-	8 bit (4In/4Out)
	Button	Recovery, reset (Internal)	Power Buttons (External) Recovery, Reset (Internal)	Power Buttons (External) Recovery, Reset (Internal)	Recovery, Reset (Internal)	Recovery, Reset	Power Switch
	COM	2 x CAN (Interface: M12 A-coded, 5-pin male)	2x RS-232/422/485 (Internal)	2x RS-232/422/485	1x RS-232/422/485	-	1x RS-485 2x RS-232/422/485 (730IVA)
	SD Card	1 x Micro SD (Optional)	1 x Micro SD (Optional)	-	1 x Micro SD (Optional)	1 x Micro SD (Optional)	-
	SIM Holder	1x Nano SIM	1x Nano SIM	1x Nano SIM	(by request)	-	-
	MiniPCle	2 x MiniPCle (PClex1)	2x MiniPCle	1x MiniPCle (PClex1)	1x MiniPCle (PClex1)	1x MiniPCle (PClex1)	-
	M.2 (PCle)	1 x M.2 3052 1 x M.2 2280	1x M.2 2280 (NVMe) 1x M.2 3052	1x M.2 (NVMe PClex2)	-	1x M.2 2280 (M-key, PCle x1)	-
	MIPI (Optional)	-	Yes	-	-	1x MIPI 15pin 1x MIPI 36pin	-
iModule	-	Yes	MIC-75M20-00C1 MIC-75M10-00A1	-	-	-	
Storage	Storage	1x M.2 2280 (M-key, PCle)	-	1 x 2.5" HDD/SSD	1x M.2(SATA)	-	2x 3.5" HDD (internal)
Misc.		-	1x TPM 1x PCle x8 slot	-	-	-	-
Power	Power Supply	12-24V DC In	Adaptor 100-240V 150W 19V (TERMINAL BLOCK)*	Adaptor 100-240V 150W 19V (TERMINAL BLOCK)*	Adaptor 100-240V 65W 19V (TERMINAL BLOCK)*	Adaptor 100-240V 65W 19V (TERMINAL BLOCK)*	AC100-240V 250W ATX
Dimension	HxWxD	275 x 220 x 80 (mm)	192 x 230 x 87 (mm)	192 x 230 x 87 (mm)	147 x 118 x 52 (mm)	85 x 118 x 45 (mm)	57 x 300 x 330 (mm)

### Work with Advantech

**For Domain-Focused SI** We offer :  Customized System Design  Linux/BSP Customization  EMC/Safety Certificate

**For Distributors** We offer :  Full Portfolio of Jetson System  Promotion Marketing Program  Jetson BSP

**For ISV** We offer :  Co-Marketing for Vertical Applications  System + AI Application Certification  Global Service Support

## Regional Service & Customization Centers

<b>China</b>	Kunshan 86-512-5777-5666	<b>Taiwan</b>	Taipei 886-2-2792-7818	<b>Netherlands</b>	Eindhoven 31-40-267-7000	<b>Poland</b>	Warsaw 00800-2426-8080	<b>USA</b>	Milpitas, CA 1-408-519-3898
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## Worldwide Offices

### Asia Pacific

<b>Taiwan</b>	
Toll Free	0800-777-111
Taipei & IoT Campus	886-2-2792-7818
Taichung	886-4-2372-5058
Kaohsiung	886-7-392-3600

<b>China</b>	
Toll Free	800-810-0345
Beijing	86-10-6298-4346
Shanghai	86-21-3632-1616
Shenzhen	86-755-8212-4222
Chengdu	86-28-8545-0198
Hong Kong	852-2720-5118

### Asia Pacific

<b>Japan</b>	
Toll Free	0800-500-1055
Tokyo	81-3-6802-1021
Osaka	81-6-6267-1887
Nagoya	81-0800-500-1055
Nogata	81-949-22-2890

<b>Korea</b>	
Toll Free	080-363-9494/5
Seoul	82-2-3660-9255

<b>Singapore</b>	
Singapore	65-6442-1000

<b>Malaysia</b>	
Kuala Lumpur	60-3-7725-4188
Penang	60-4-537-9188

<b>Thailand</b>	
Bangkok	66-02-2488306-9

<b>Vietnam</b>	
Hanoi	84-24-3399-1155

<b>Indonesia</b>	
Jakarta	62-21-751-1939

<b>Australia</b>	
Toll Free	1300-308-531
Melbourne	61-3-9797-0100

<b>India</b>	
Bangalore	91-94-4839-7300
Pune	91-94-2260-2349

### Europe

<b>Netherlands</b>	
Eindhoven	31-40-267-7000
Breda	31-76-523-3100

<b>Germany</b>	
Toll Free	00800-2426-8080/81
Munich	49-89-12599-0
Düsseldorf	49-2103-97-855-0

<b>France</b>	
Paris	33-1-4119-4666

<b>Italy</b>	
Milan	39-02-9544-961

<b>UK</b>	
Newcastle	44-0-191-262-4844
London	44-0-870-493-1433

<b>Spain</b>	
Madrid	34-91-668-86-76

<b>Sweden</b>	
Stockholm	46-0-864-60-500

<b>Poland</b>	
Warsaw	48-22-31-51-100

<b>Russia</b>	
Moscow	8-800-555-01-50
St. Petersburg	7-812-332-5727
	7-921-575-1359

<b>Czech Republic</b>	
Ústí nad Orlicí	420-465-524-421

<b>Ireland</b>	
Galway	353-91-792444

### Americas

<b>North America</b>	
Toll Free	1-888-576-9668
Cincinnati	1-513-742-8895
Milpitas	1-408-519-3898
Irvine	1-949-420-2500
Ottawa	1-815-433-5100

<b>Brazil</b>	
Toll Free	0800-770-5355
São Paulo	55-11-5592-5367

<b>Mexico</b>	
Toll Free	1-800-467-2415
Mexico City	52-55-6275-2727

### Middle East and Africa

Israel	072-2410527
Turkey	90-212-222-0422

View More



More application cases online

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