Selection Guide

Model Name		MIC-710AI	MIC-710AIX	MIC-720AI	MIC-730AI	MIC-710IVA	MIC-710IVX	MIC-730IVA
Form Factor		Fanless	Fanless	Fanless	Fanless	Fan Base	Fanless	Fan Base
NVIDIA® Platform		NVIDIA Jetson Nano	NVIDIA Jetson Xavier NX	NVIDIA Jetson TX2	NVIDIA Jetson AGX Xavier	NVIDIA Jetson Nano	NVIDIA Jetson Xavier NX	NVIDIA Jetson AGX Xavier
Processor System	CPU	Quad Core ARM Cortex A57 (Max. Operating Frequency: 1.43GHz)	Carmel Dual-Core Processor (Max. Operating Frequency: 1.9GHz)	Dual Core Denver2.0 + Quad Core ARM Cortex A57	8-Core ARM v8.2 64-bit CPU, 8MB L2 + 4MB L3	Quad Core ARM Cortex A57 (Max. Operating Frequency: 1.43GHz)	Carmel Dual-Core Processor (Max. Operating Frequency: 1.9GHz)	8-Core ARM v8.2 64-bit CPU, 8MB L2 + 4MB L3
	CUDA Cores	128 Maxwell CUDA Cores	384 NVIDIA CUDA cores 48 Tensor cores	256 Pascal CUDA Cores	512 Volta CUDA cores and 64 Tensor cores	128 Maxwell CUDA Cores	384 NVIDIA CUDA cores 48 Tensor cores	512 Volta CUDA cores and 64 Tensor cores
	Memory	8GB 64-bit LPDDR4	8GB 128-bit LPDDR4 1600Hz	8GB 128-bit LPDDR4	32GB 256-bit LPDDR4	4GB 128-bit LPDDR4	8GB 128-bit LPDDR4 1600Hz	32GB 256-bit LPDDR4
	Flash	16GB eMMC	16 GB eMMC 5.1 Flash Storage	32GB eMMC	32GB eMMC	16GB eMMC	16 GB eMMC 5.1 Flash Storage	32GB eMMC
I/O / Expansion	LAN	2 x RJ-45	2 x RJ-45	1 x RJ-45	2 x RJ-45	1 x RJ-45	1 x RJ-45	1 x RJ-45
	PoE	-	-	1 x PoE	-	8 x PoE (15.4w/ch)	8 x PoE (15.4w/ch)	8 x PoE (15.4w/ch)
	HDMI	1 x HDMI	1 x HDMI	1 x HDMI	1 x HDMI	1 x HDMI	1 x HDMI	1 x HDMI
	USB	External: 1 x USB 2.0 1 x USB 3.0 Internal: 1 x USB 2.0	External 1xUSB2.0 1xUSB3.0 Internal 1xUSB2.0 1xMicroUSB	External: 2 x USB 3.0 Internal: 1 x USB 2.0	External: 2 x USB 2.0 2 x USB 3.0 Internal: 1 x USB 2.0	External: 1 x USB 2.0 1 x USB 3.0 Internal: 1 x USB 2.0	External: 1 x USB 2.0 1 x USB 3.0 Internal: 1 x USB 2.0	External: 2 x USB 3.0 Internal: 1 x USB 2.0
	DI/DO	8 bit (4In/4Out)	8 bit (4In/4Out)	8 bit (4In/4Out)	16 bit (8In/8Out)	8 bit (4In/4Out)	8 bit (4In/4Out)	8 bit (4In/4Out)
	Button	Recovery, Reset (Internal)	Recovery, Reset (Internal)	Power Buttons (External) Recovery, Reset (Internal)	Power Buttons (External) Recovery, Reset (Internal)	Power Switch (External) Recovery , Reset (Internal)	Power Switch (External) Recovery , Reset (Internal)	Power Switch (External) Recovery , Reset (Internal)
	COM	1 x RS-232/422/485	1x RS232/422/485	-	2 x RS-232/422/485	1 x RS-485	1 x RS-485	2 x RS-232/422/485
	SD Card	1 x Micro SD	1 x Micro SD	-	-	-	-	-
	SIM Card	-	-	-	1 x Nano SIM	-	-	-
	MiniPCIe	1 x MiniPCIe (PCIex1)	1 x MiniPCIe (PCIex1)	-	1 x MiniPCIe (PCIex1)	-	-	-
	iDoor	-	-	-	-	-	-	-
	PCIe iModule	-	-	-	MIC-75M20-00B1	-	-	-
Storage	Storage	1 x M.2 (SATA)	1 x M.2 (SATA)	1 x mSATA	1 x 2.5" HDD/SSD 1 x M.2 (NVME PCIex2)	2 x 3.5" HDD (internal)	2 x 3.5" HDD (internal)	2 x 3.5" HDD (internal)
Power	Power Supply	19-24V DC In	19-24V DC In	Adaptor 100-240V 65W 19V(TERMINAL BLOCK)	Adaptor 100-240V 150W 19V(TERMINAL BLOCK)	AC100-240V 250W ATX	AC100-240V 250W ATX	AC100-240V 250W ATX
Dimension	HxWxD (mm)	147 x 118 x 52 (mm)	147 x 118 x 52 (mm)	147 x 118 x 52 (mm)	192 x 230 x 87 (mm)	57 x 300 x 330 (mm)	57 x 300 x 330 (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

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Stockholm	46-0-864-60-500

Poland

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	7-921-575-1359

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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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NVIDIA

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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 NVIIDA 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
5-10W0.5 TFLOPS (FP16)
45mm x 70mm

Jetson TX2
7-15W1.3 TFLOPS (FP16)
50mm x 87mm

Jetson Xavier NX
10 - 15W 6 TFLOPS (FP16)
45mm x 70mm

Jetson Xavier
10-30W10 TFLOPS (FP16) | 32 TOPS (INT8) 100mm x 87mm

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.

Industrial Fieldbus

Wireless Communication

Frame Grabber SDI/HDMI/VGA

Camera Link

Control I/O

Smart I/O

i-Module

Edge AI NVR *8-Channel Camera Support*

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

View More

More application cases online

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 Sytem 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 lifecycleAvoid 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

Applications

Automatic AI IOT

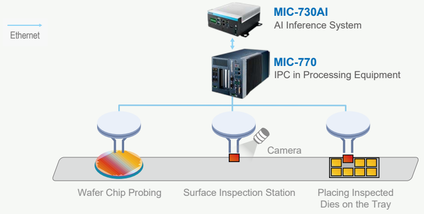
Die Inspection for chip probing

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 Smart Factory

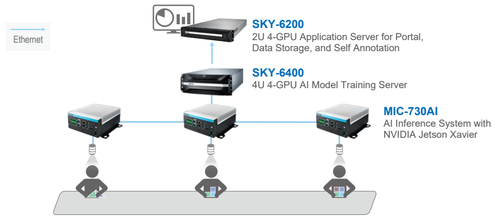
Printer line balance optimization

AI is deployed in a printer assembly lines, transferring labor behavior into quantitative data. This data helps improve line balance and increase UPH (unit per hour) output. Cameras and MIC-730AI are carefully set in each workstation. MIC-730AI detects the scene in ROI (region of interest), and realtime inferences with trained model are inside.

Inference results are passed to the application server for quantitative analysis and training server models are updated accordingly.

Features

MIC-730AI high-performance, fanless design and large memory capacity enables real-time video analysis.



AI in Transportation

Self-adaptive traffic signal control system

Traditional traffic detection methods like microwave radar are costly and lack the necessary recording detail. By using AI, essential traffic metadata can be collected and integrated into a carefully designed dataflow for further analysis.

MIC-720AI, adopted at roadside, grabs video streams from IP cameras through PoE and sends the analysis and inference results back to the server. The control server manages all the traffic lights automatically based on inference results.

Features

MIC-720AI's low power consumption, fanless design, and wide-operating temperature are well suited for the roadside.