Edge AI Computing Accelerates Robotics

Perception
- 2D/3D Camera
- LiDAR
- Touch Sensor
- IMU

Edge AI — Decision Making Edge AI Computing
- LLM
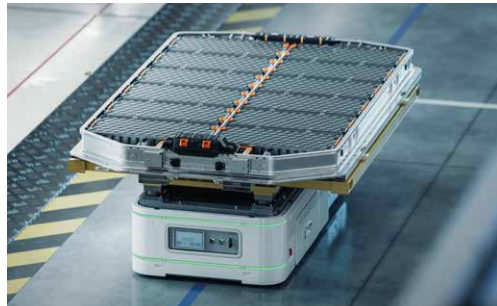- VLM
- Digital Twins
- SLAM
- Navigation
- ROS

Motion Control
- Motors
- Actuators
- Real-time Control

Robotics in Action: Success Stories

Autonomous Mobile Robots

Autonomous mobile robots (AMRs) powered by iEP-7020E series operate in factory environments with advanced navigation and obstacle avoidance capabilities, enabling automated material transport. These systems significantly enhance operational efficiency while reducing manual labor.

Delivery Robots

Outdoor smart delivery robots use multi-angle vision and GPU-based image processing to enhance real-time path planning and object recognition. This ensures reliable last-mile delivery in complex urban environments.

Companion Robots

Interactive pet-like companion robots integrate visual and audio processing with facial recognition and speech interaction, powered by our motherboards. Supporting autonomous control and communication, they deliver a more engaging and intuitive human-robot experience in home environments.

ASRock Industrial's Comprehensive Edge AI Platforms for Modern Robotics

		AI computing enables robotic training and centralized control	Industrial robust platform for real-time robotic AI	Compact, high-performance computing for robotic	
CPU	**GPU**	**Edge AI System**	**Edge AI Controller**	**Embedded Computing System**	**Embedded Motherboard**
intel XEON	4 GPU	iEPF-11000S Series			EATX
intel CORE ULTRA / intel CORE	2 GPU	iEPF-10000S Series			ATX
	1 GPU	iEPF-9000S Series			
intel CORE ULTRA	Embedded GPU	iEP-9000E Series	iEP-7000E Series	NUC BOX Series / NUCS BOX Series / iBOX Series	NUC / SBC
intel ATOM			iEP-5000G Series	NUC BOX Series / iBOX Series	NUC / SBC / Pico-ITX
NVIDIA AGX Orin	Embedded GPU		Dev Kit		
NVIDIA Orin NX/ Nano			iEP-6020E Series / iEP-6010E Series / Dev Kit		
AMD RYZEN AI	Embedded GPU			4X4 BOX Series / iBOX Series	4X4