

A black and silver 7-DoF humanoid robotic arm, labeled 'NERO', is shown in a dynamic pose. The arm has a sleek, modern design with a white section near the top joint. The word 'NERO' is printed in black on the silver section. The arm is positioned diagonally across the frame, with the hand at the bottom right. The background is a light gray gradient.

ROS2™

GAZEBO

python™

NERO

7-DoF
Humanoid
Robotic Arm

Lightweight

Research

Flexible

NERO 7-DoF Robotic Arm

Engineered for Embodied AI and Humanoid Robotics, NERO's fully open architecture features a lightweight design with 7-DoF. Flexible solution for rapid, easy deployment for academy and R&D labs.

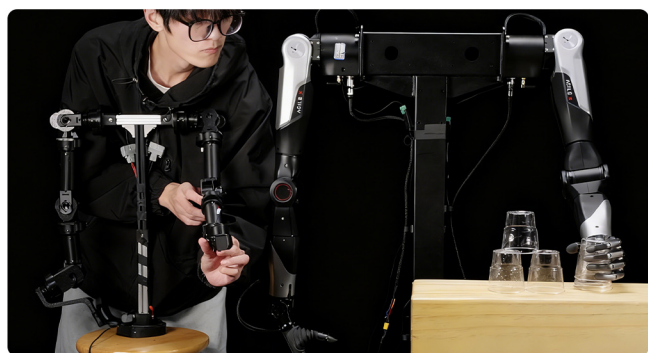
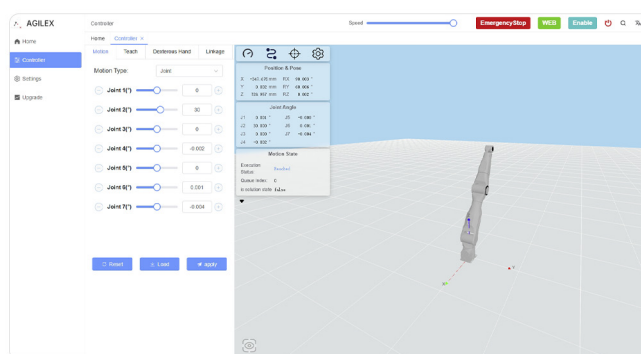


Performance & Precision

NERO features a 7-DOF humanoid structure, engineered for exceptional spatial reach and dexterity. Utilizing self-developed motors, the **4.8kg lightweight** body stably supports a **3 kg payload**, paired with ± 0.1 mm repeatability.

Full-Stack & Flexible Deployment

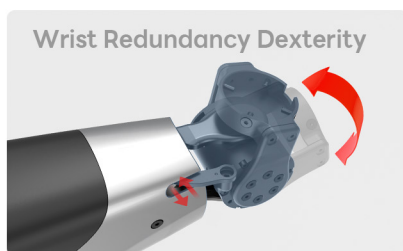
Full-stack control via **CAN/HTTP/TCP**, plus intuitive modes: **Drag-and-Teach, Offline Trajectory, API**. Seamlessly compatible with **Python SDK & ROS1/ROS2**, and easily integrates with AgileX mobile chassis for a complete Embodied Platform.



Innovation Platform

NERO accelerates research across key domains: **Embodied AI, Humanoid Robots, Imitation/Reinforcement Learning** and **precision interaction**. It enables end-to-end capability validation from perception and cognition to action execution.

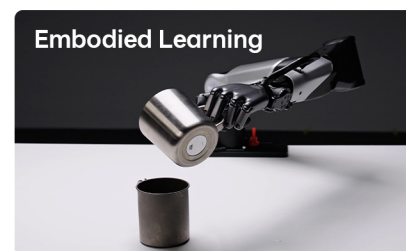
KEY ADVANTAGE



7-DoF achieves dexterous & human-like wrist performance



Modular interface compatible with grippers, dexterous hands, etc.



Delivers high-quality physical interaction datasets

NERO

7-DoF Humanoid Robotic Arm

Humanoid Dynamic Manipulation
Embodied Platform

7DoF

Degrees of Freedom

3kg

Payload

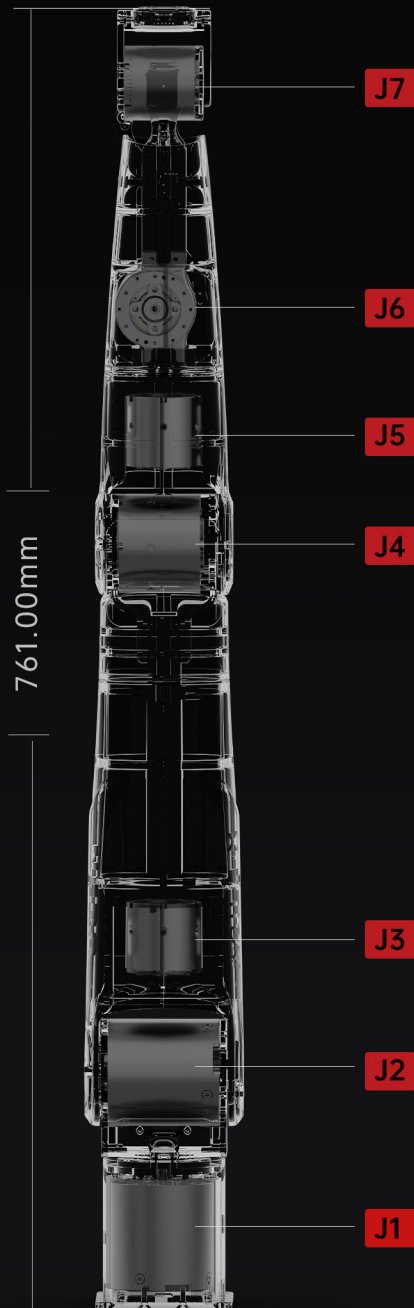
±0.1mm

Repeatability

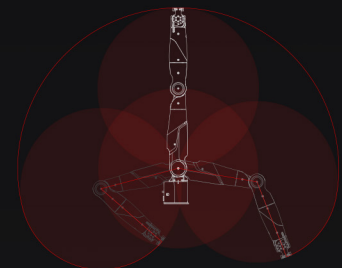


 **AGILE·X**
Robotics

NERO Parameter Configuration



DoF	7	Repeatability	±0.1mm
Payload	3kg	Reach	580mm
Weight	4.8kg	Input Voltage	DC24V
Consumption	Max≤150W; Average≤60W		
Material	Aluminum& Plastic Housing		
Controller	Intergrated		
Communication	CAN/ HTTP/ TCP		
Control Method	Drag Teaching/ Offline Trajectory/ API/ PC		
External Interface	Power*1/ CAN*1/ EtherCAT *1		
Base Installation Dimensions	70mm*70mm*M5*4		
Operating Environment	Temperature: 0-50°C; Humidity: 25%-85%; Non-Condensing		
Noise	<60dB		
Installation	Table/Side/Upside Down Mounting		
Joint Maximum Speed	J1:180°/s J2:180°/s J3:180°/s J4:225°/s J5:225°/s J6:225°/s J7:225°/s		
Joint Motion Range	J1:-157°~157° J2:-15°~190° J3:-160°~160° J4:-60°~125° J5:-160°~160° J6:-43°~58° J7:-90°~90°		



The parameter configuration information shown on this page is for reference only, and is subject to actual product delivery.

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