

Fourier GR-2

New Milestone of Humanoid Robotics



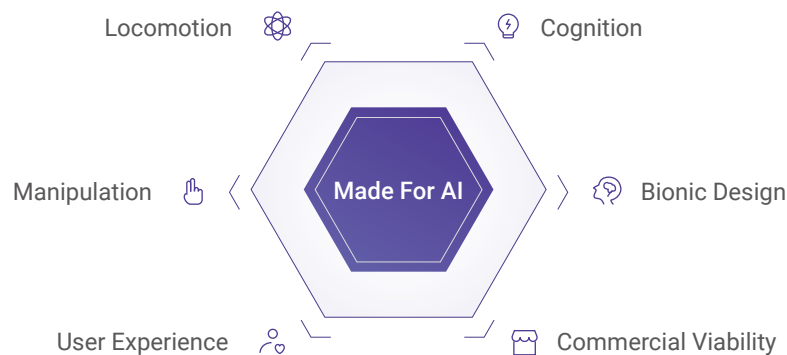
A New Milestone of GRx Humanoid Robot Series

- Driven by the idea of "developing the most accessible embodied agent for AI", Fourier GR-2 showcases remarkable upgrades across hardware, design, software, and commercial applications.
- More Agile, More Powerful, More Open.



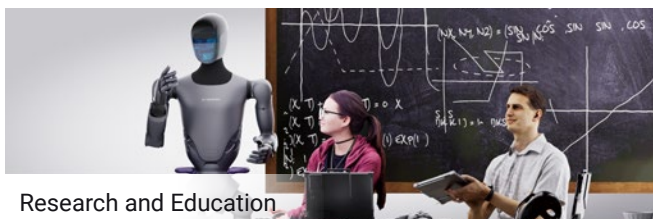
Six Core Values of GRx Series

Guided by our philosophy of "Made for AI", Fourier has crafted six core values for GRx Series, refining the robot into its most ideal and capable form. We are committed to the mission of empowering every developer and AI user with cutting-edge, full-stack robotics technology.



Practical Solutions for Real-World Applications

Fueled by first-hand data and direct customer feedback, our R&D team is constantly pushing the limits of what's possible in humanoid robotics. Partnering with industry leaders, Fourier's GRx robots provide groundbreaking solutions across diverse sectors, including academic research, reception services, manufacturing, and rehabilitation.



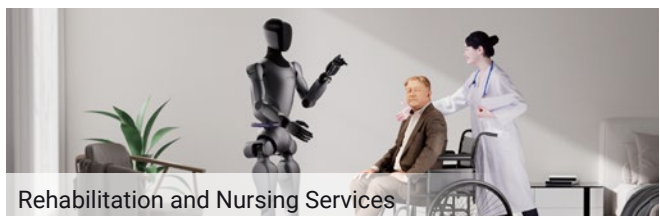
Research and Education



Manufacturing



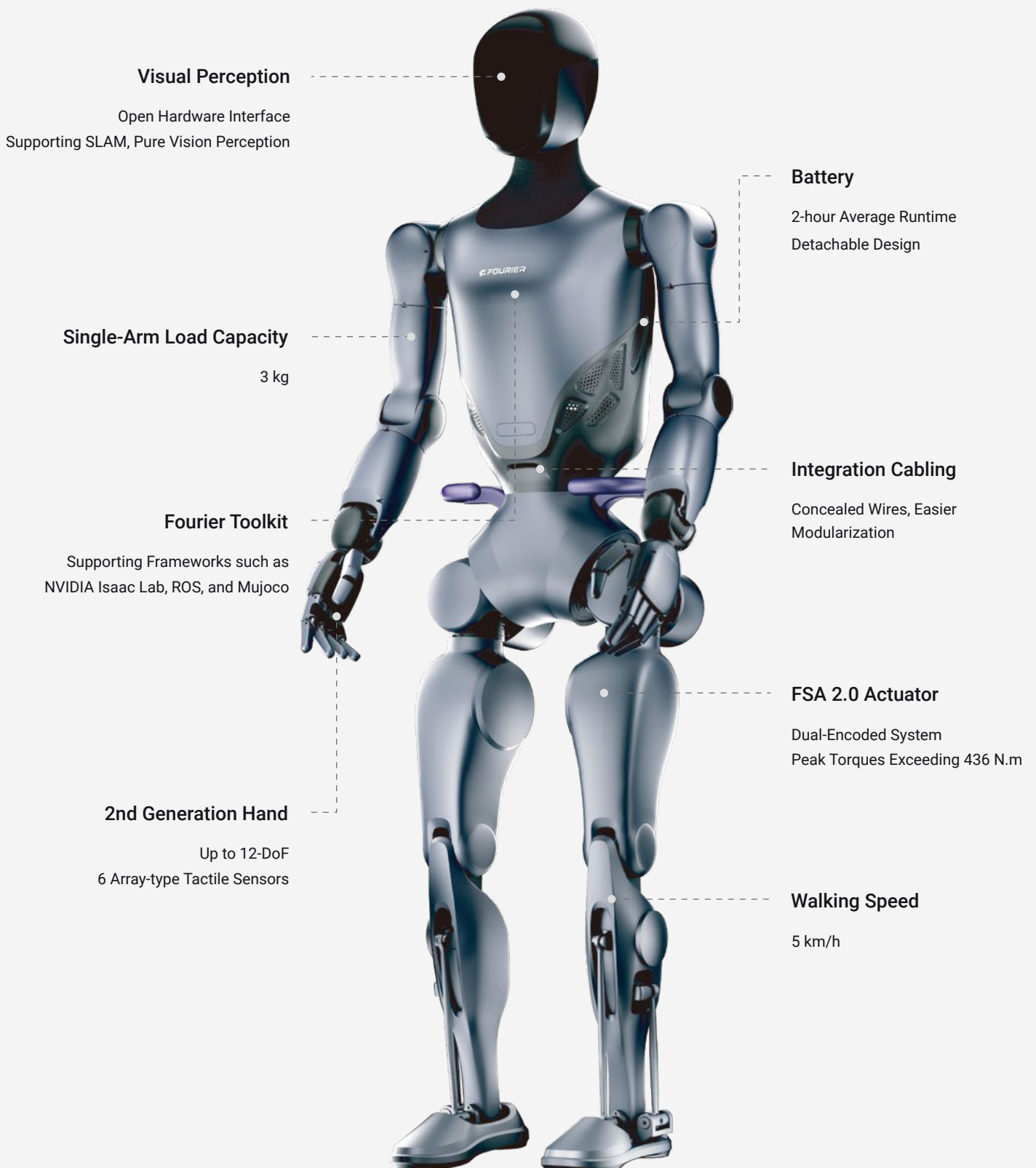
Reception Services



Rehabilitation and Nursing Services

Fourier GR-2

With up to 53 degrees of freedom in its versatile body structure, GR-2 can simulate a wide range of human movements, including torso rotation, grasping, walking, and getting up from the ground.



Innovative, Reliable, Accessible

Innovation drives us at Fourier. We push the boundaries of agility, precision, and perception by prioritizing reliable solutions over complexity.

12-Degree-of-Freedom Dexterous Hands: Precision in Motion

Equipped with six array-type tactile sensors, GR-2 can sense force, identify object shapes and materials, and adjust its grip in real time for optimal manipulation in dynamic settings.



12-DoF Hands



6 Array-type Tactile Sensors



FSA 2.0 Actuator: Powering Dynamic Mobility

With peak torques exceeding 380 N.m, FSA 2.0 boosts GR-2's agility and dynamic capabilities. The dual-encoder system doubles control accuracy, ensuring precise movements even in high-pressure environments.

Fourier Toolkit: Optimized Tools for Innovative Development

Fourier prioritizes developer's experience. The upgraded software development kit allows developers to have easy access to a robust suite of pre-optimized modules through intuitive APIs.

The platform supports frameworks such as NVIDIA Isaac Lab, ROS, and Mujoco.



Technical Specifications

Mechanical Spec.	Height, Length, and Width	1750 mm x 552 mm x 275 mm		Arm Reach	1520 mm
	Arm Reach Including Dexterous Hand	Up to 1920 mm (12-DoF Dexterous Hand Version)		Lower-Limb	465 mm + 378 mm
	Weight	≈ 63 kg		Material	Aluminium Alloy + Engineering Plastic
Electronic Spec.	Supply Voltage	39.6 V		Power Output	≈ 930 W
Performance	Max. Speed	5 km/h		Single-Handed Payload	≈ 3 kg
	Standard Computing Power	14-Core High Performance CPU			
	High-Performance Computing Power Module (Optional)	Plus 275 Tops Computing Unit			
Joint Spec.	# of Actuators	Up to 53 (12-DoF Dexterous Hand Version)			
	Degrees of Freedom	Head	2	Single Leg	6
		Waist	1	Single Arm	7
		Basic Dexterous Hand	6	Enhanced Dexterous Hand (Optional)	12
	Joint Motion Range	Waist Z-axis Joint	±150°	Knee Joint	-5° to 135°
		Hip Joint	Hip Joint: Pitch ±150°, Roll -34° to 90°, Yaw -40° to 90°		
	Max. Torque	436 N.m		Bi-Encoder	23-bit/23-bit (Leg) 24-bit/24-bit (Arm)
	Communication Protocol	Ethernet			
Battery	Battery Capacity	≈ 950 Wh		Battery Type	Lithium-Ion Battery
	Total Weight	≤ 9 kg		Nominal Voltage	39.6 V
	Charging Voltage Limit	46.2 V		Life Cycle	≥ 500 (80% DOD)
	Average Runtime	≈ 2 h		Charging Time	≈ 2 h
	Adapter Input Parameters	90~260 VAC, 50/60 Hz		Adapter Output Parameters	46 V, 13A MAX
Central Processing Unit	Operating System	Ubuntu 20.04		Processor	Intel® Core™ i7 (14-Core)
	I/O Ports	Type-C, USB3.0			
Interaction Capabilities	Teleoperation	Real-time Remote Control Systems (Pico/VisionPro)			
	Voice Interaction	Supports echo elimination and other interaction functions.			
Sensor Spec.	Camera	Stereo Camera			
	IMU Sensor	6-axis IMU (3-axis Acceleration & 3-axis Gyroscope)			



Leverage full-stack robotics technology to enrich people's life.

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