

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.



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.





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

	1							
Mechanical Spec.	Height, Length, and Width	1750 mm x 552 mm x 275 mm		Arm R	Arm Reach		1520 mm	
	Arm Reach Including Dexterous Hand	Up to 1920 mm (12-DoF Dexterous Hand Versi		n) Lower	Lower-Limb		465 mm + 378 mm	
	Weight	≈ 63 kg		Mater	Material		Aluminium Alloy + Engineering Plastic	
Electronic Spec.	Supply Voltage	39.6 V		Power	Power Output		≈ 930 W	
Performance	Max. Speed	5 km/h		Single	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 ±1		50°, 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 E		Battery Ty	attery Type		ithium-lon Battery	
	Total Weight	≤ 9 kg		Nominal V	Nominal Voltage 3		9.6 V	
	Charging Voltage Limit	46.2 V L		Life Cycle	ife Cycle ≥		500 (80% DOD)	
	Average Runtime	≈ 2 h		Charging ⁻	harging Time		² 2 h	
	Adapter Input Parameters	90~260 VAC, 50/60 Hz		Adapter O Parameter	dapter Output Parameters		6 V, 13A MAX	
Central Processing Unit	Operating System	Ubuntu 20.04		Processor	Processor In		tel® 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)						

🗲 FOURIER

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

/ Business Development / generalrobot@fftai.com / Telephone / (+86) 400 800 7671