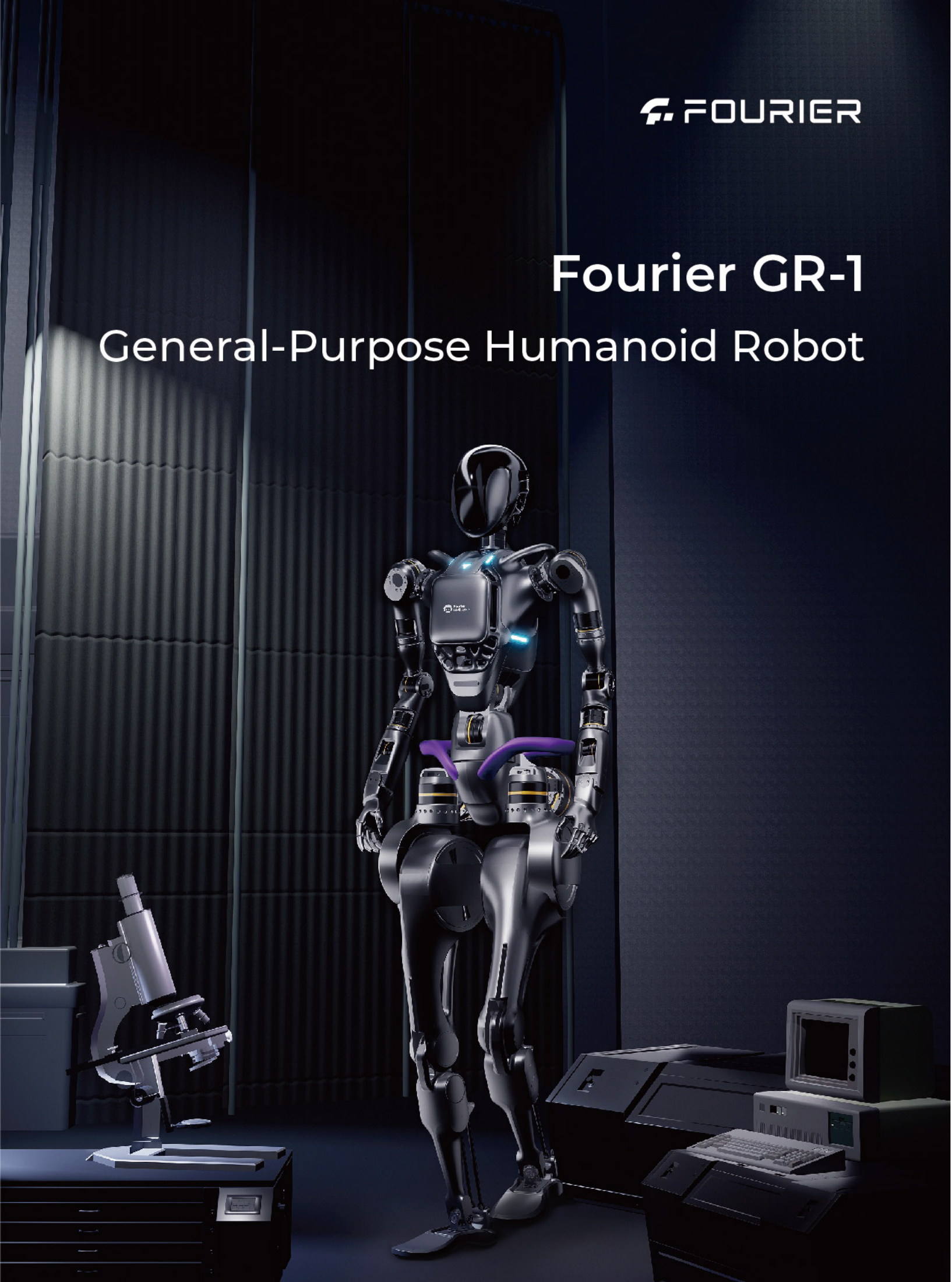
FOURIER

Fourier GR-1

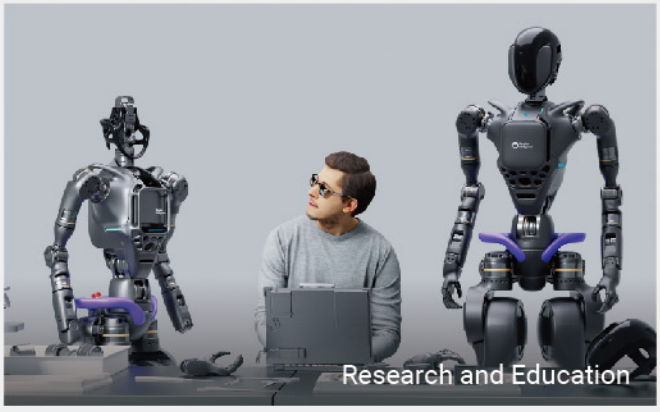
General-Purpose Humanoid Robot

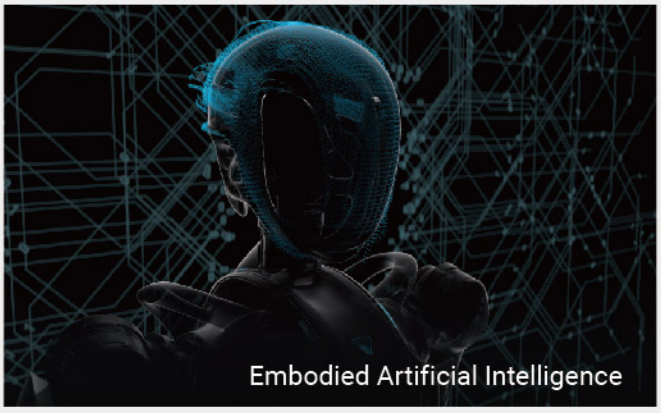


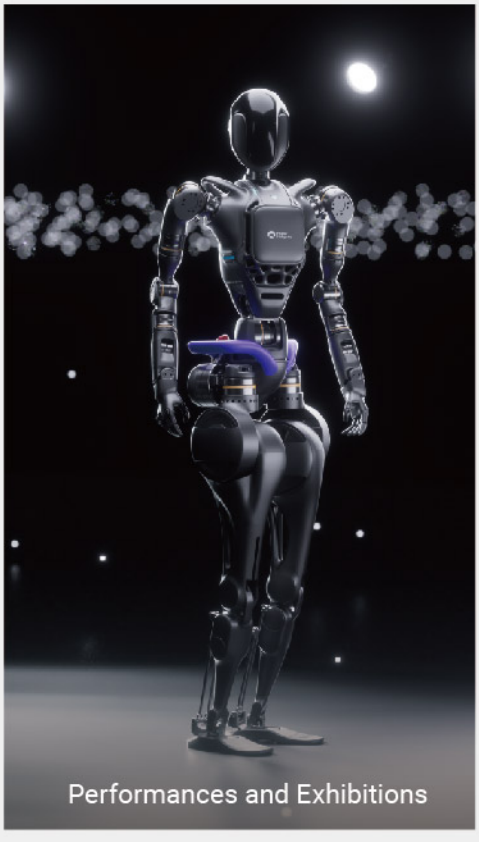
FOURIER GR-1

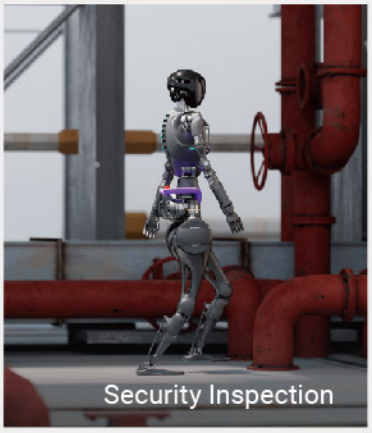
The Fourier GR-1 breaks new ground in humanoid robotics for practical applications. With a versatile body structure and advanced motion control, it replicates human-like degrees of freedom. Boasting a peak torque of 230 N.m, GR-1 navigates obstacles and diverse terrains with unmatched agility and precision.

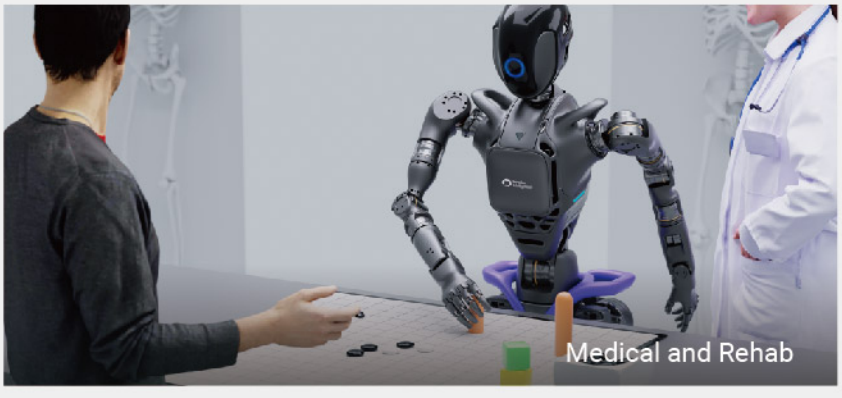
Application Scenarios











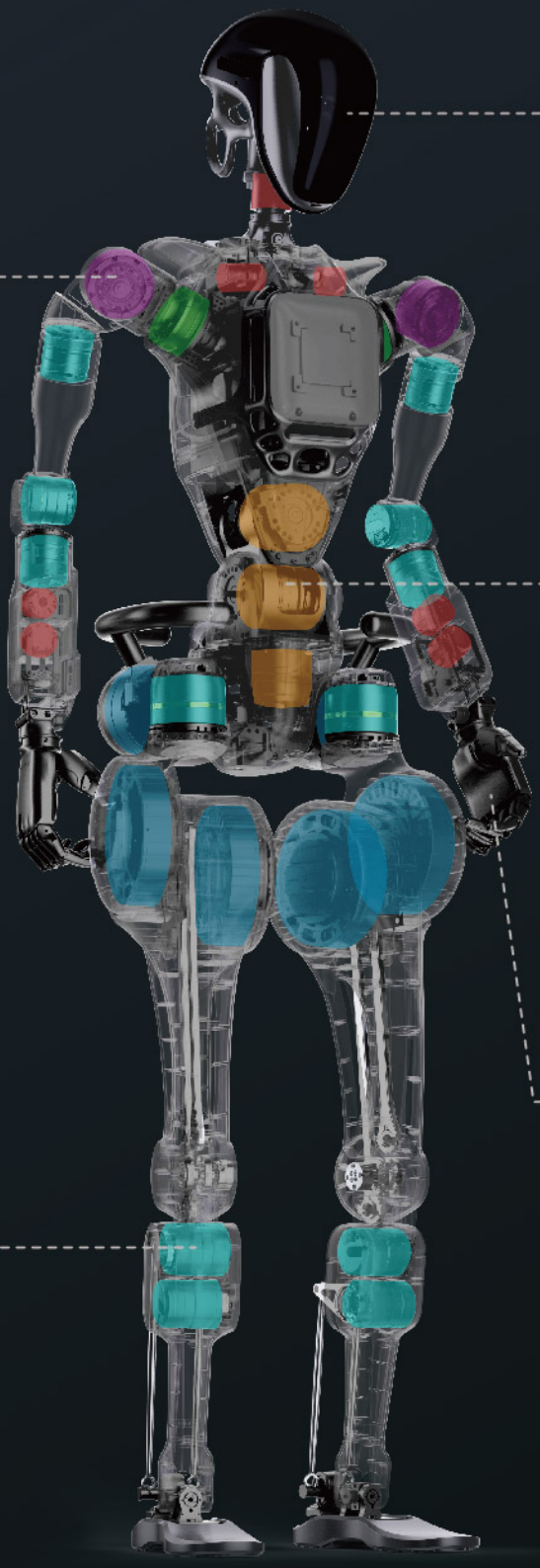
Physical Dexterity

Fourier's Smart Actuator (FSA) integrates the motor, driver, reducer, and encoder into a single module, providing GR-1 with powerful and flexible mobility for dynamic and precise movements.

7*2

Arm DOFs

7 degrees of freedom design, end-effector capable of reaching any position and angle in three-dimensional space.



3

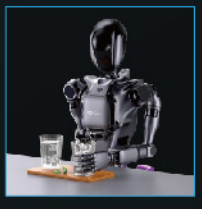
Head DOFs

Head movement includes pitch, roll, and rotation for flexible perception and interaction.

3

Waist DOFs

Designed for performing tasks and enables 360-degree observation without movement.



6*2

Hand DOFs

Human-like hand design for versatile grasping.

6*2

Leg DOFs

An intricate ankle design to adapt and traverse on various terrains.

Technical Specifications

Product Model	GR-1L	GR-1	GR-1L Pro	GR-1 Pro

Mechanical Specifications

Standing Size	1650X515X320mm	1650X515X320mm	1650X515X320mm	1650X515X320mm
Arm Span	1665mm	1680mm	1665mm	1680mm
Weight	≈55kg	≈55kg	≈60kg	≈60kg
Material	Aluminium alloy + Engineering plastic	Aluminium alloy + Engineering plastic	Aluminium alloy + Engineering plastic	Aluminium alloy + Engineering plastic

Electronic Parameters

Supply Voltage	46.2V	46.2V	46.2V	46.2V
Maximum Power	≈550W	≈550W	≈550W	≈550W

Performance Parameters

Speed	5km/h	5km/h	5km/h	5km/h
Single-handed Payload	3kg	3kg	3kg	3kg
Processing Power	i7-13700h 6P+8E 20thread 1.6/5.0GHz	i7-13700h 6P+8E 20thread 1.6/5.0GHz	i7-13700h 6P+8E 20thread 1.6/5.0GHz	i7-13700h 6P+8E 20thread 1.6/5.0GHz

Joint Parameters

Max Torque	230N.m	230N.m	230N.m	230N.m
Total Actuators	34	44	34	44
End-point Execution	Gripper	Dexterous Hand	Gripper	Dexterous Hand
Waist Flexibility	3	3	3	3
Head Flexibility	3	3	3	3
Ankle Flexibility	2	2	2	2

Product Model	GR-1L	GR-1	GR-1L Pro	GR-1 Pro

Sensor Parameters

Depth Camera	Realsense	Realsense	Realsense	Realsense
IMU	●	●	●	●
Ring Microphone	—	—	●	●

Features

Motion Mode	Static Standing Gait Motion Stationary Movement End Effector Gripping	Static Standing Gait Motion Stationary Movement End Effector Gripping	Static Standing Gait Motion Stationary Movement End Effector Gripping	Static Standing Gait Motion Stationary Movement End Effector Gripping
Protective Casing	Skeleton Casing	Skeleton Casing	Enclosed Casing	Enclosed Casing
Waist Safety Handle	—	—	●	●
One-Click Start	—	—	●	●
Control Terminal	Touchscreen Remote Controller	Touchscreen Remote Controller	Touchscreen Remote Controller	Touchscreen Remote Controller
Voice Control	—	—	●	●
Cluster Control	—	—	●	●
Curved Screen	—	—	●	●
WiFi	●	●	●	●
Bluetooth	●	●	●	●
Secondary Development	●	●	●	●

Battery Life

Battery Capacity	460Wh	460Wh	460Wh	460Wh
Charging	46V 2A	46V 2A	46V 2A	46V 2A

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