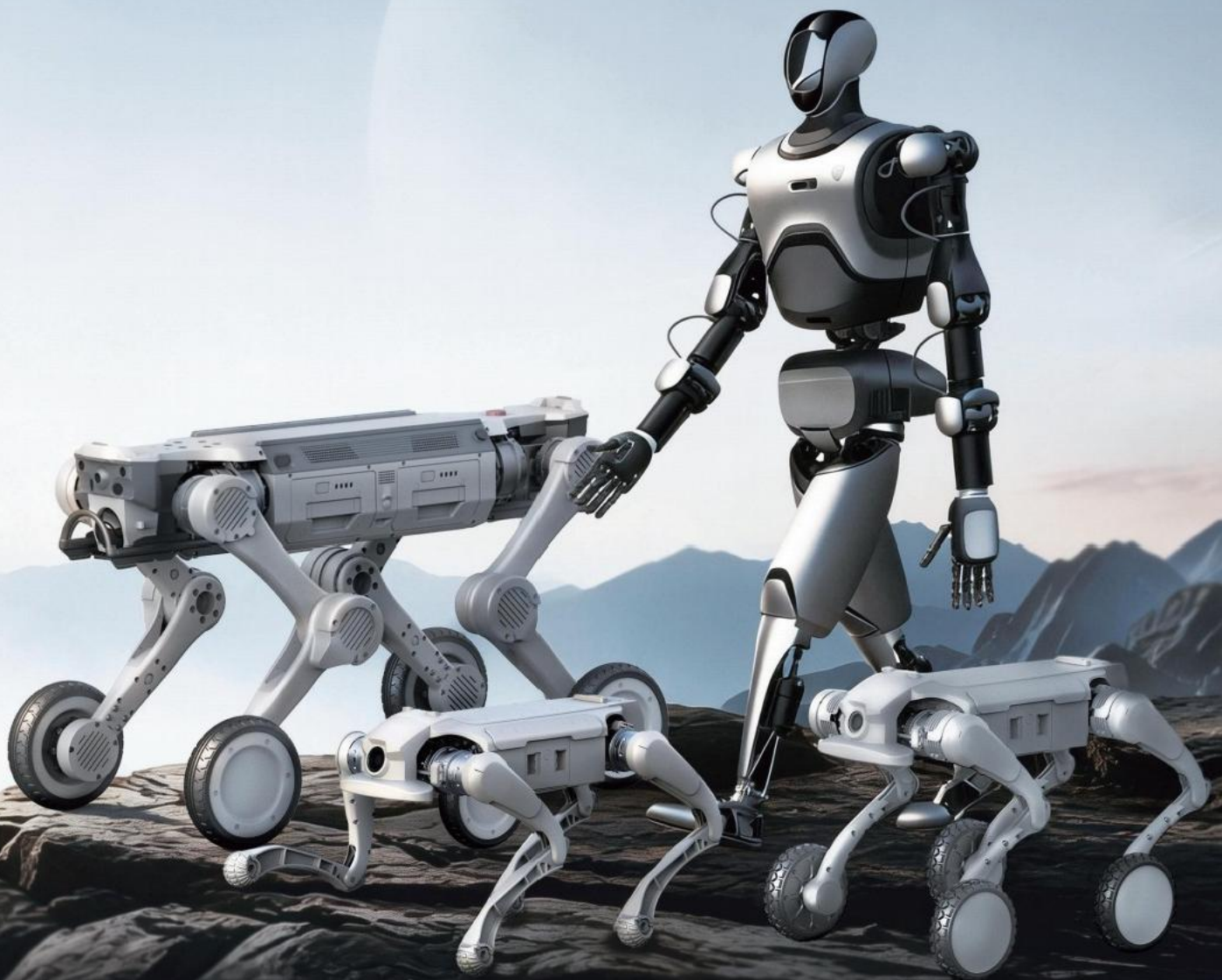


GCNISOM Δ I

Intelligence Beyond Boundaries



www.genisomai.com

Industry-Leading Embodied Intelligence Technology Provider

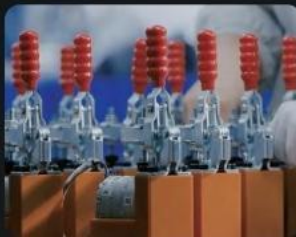
About Us

Founded in 2023, GENISOM AI is a full-stack technology provider in embodied intelligence. Our product portfolio includes quadruped robots, humanoid robots, and high-power-density joint modules, supported by scalable mass production. We lead internationally in reinforcement learning, motion control algorithms, and VLN large models, enabling flexible secondary development and multi-scenario applications.

With nearly 300 employees (70% R&D, 60%+ with master's degrees or higher) and focused investment in motion control, transmission, motors, joints, and scenario intelligence, GENISOM AI maintains fast development cycles and strong product iteration capabilities.

Mass Production Capability

GENISOM AI operates a factory in Suzhou, China, with in-house development and manufacturing from joint modules to complete robotic systems. Backed by an experienced production team and automated assembly lines, we deliver scalable mass production under certified quality systems including ISO 9001, ISO 45001, and ISO 14001.



Awards & Recognition

1st Place

IROS 2025 Quadruped Robot Challenge (QRC)
Platform robot for University of Manchester

Committee Member

MIT Humanoid Robotics & Embodied
Intelligence Standardization Committee

Committee Member

Testing and Certification Alliance for Robot

New Product Launch Award

World Robot Conference (WRC) 2025

Top 50 Rising Stars

LeadeRobot 2025 Embodied Intelligence

China Robotics Industry
Influential Figure

LeadeRobot 2025

Special-Purpose Robot
Application Award

LeadeRobot 2025

Embodied Intelligence
Innovative Scenario Award

2nd Zhongguancun Embodied Intelligence
Robot Application Competition (2025)

Pioneer Enterprise Award

YanZhi Robotics 2025 Embodied Intelligence



World's First Ultra-Compact Industrial-Grade Quadruped Robot

GENISOM L1

Performance Beyond Size



All-Terrain
Mastery



All-Round
Protection



All-Weather
Ready



All-Platform
Expandable

Key Features

Max Speed

3.7m/s

Max Payload

8kg

Max Step Height

16cm

Max Climb Angle

40°

Evolving Intelligence for Every Terrain

Built in AI reinforcement learning for seamless control and intelligent decisions anywhere.



Peak Torque

48N·m

Up to 60%Boost in Joint Power

Self-developed high power modules deliver stronger, calibration-free motion.



Protection Rating

IP54

Operating Temperature

0~40℃

A-Weather Ready

360°protected body, designed for harsh outdoor conditions.



A-Driven Perception & Tracking

HD monocular vision for intelligent target detection.

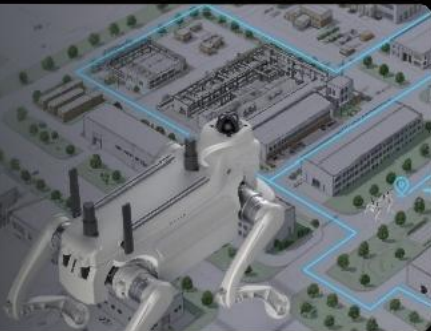


Computing Power

100TOPS

Smarter Navigation &Deployment

Perception, mapping, and planning: all in one intelligent suite.



Empowering Research & Industry

7 interfaces and full SDK for effortless development.



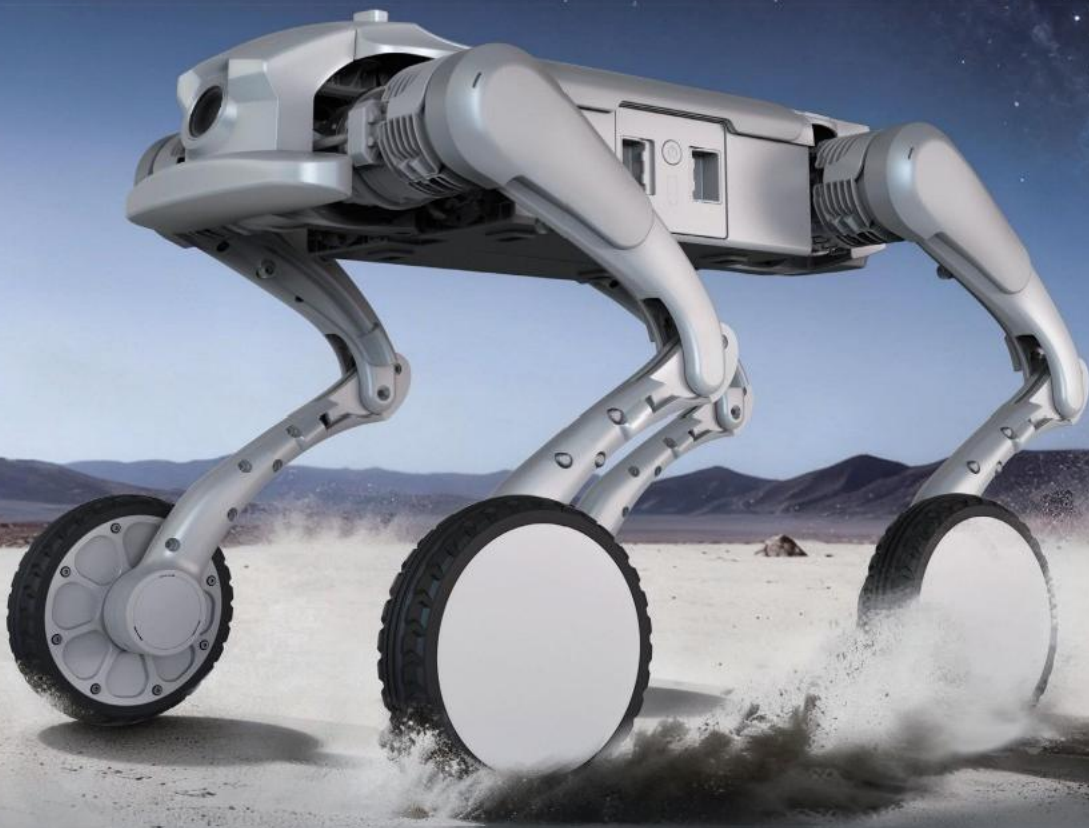
Technical Parameters

Standing Dimensions (L×W×H)	630mm×360mm×415mm	Max Speed	3.7m/s
Lying Dimensions (L×W×H)	670mm×425mm×145mm	Max Climbable Step Height	16cm
Weight (with battery)	15kg	Slope Capability	30° (Standard), 40° (Max)
Voltage	43.2V	Operating Temperature	0℃~40℃
Endurance Time	1-2h	Ingress Protection	IP54
Max Range	6km	Interfaces	Ethernet, USB, SBUS, UART, Power
Max Payload	8kg (limit-10kg)		

World's First Ultra-Compact Industrial-Grade Wheeled Quadruped Robot

GENISOM L1-W

Where Speed Meets **Endurance**



All-Terrain
Mobility



All-Round
Protection



All-Weather
Ready



All-Platform
Expandable

Key Features

Max Speed

5.5m/s

Max Climb Height

60cm

Max Step Height

16cm

Max Climb Angle

40°

Dynamic Motion Across Any Terrain

Built-in All reinforcement learning for seamless control and performance over every obstacle.

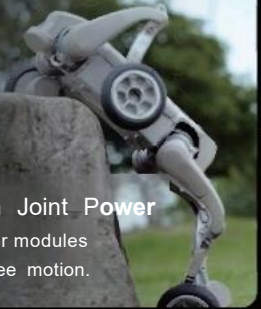


Peak Torque

48N·m

Up to 60%Boost in Joint Power

Self-developed high-power modules deliver swift, calibration-free motion.



Max Payload Limit

12kg

Stronger Endurance, Higher Payload

Up to 50% increase in range, supporting long-duration autonomous operations.



Much Quieter Operation

Low-noise wheeled design, seamlessly blends into any environment.



Protection Rating

IP54

Operating Temperature

0~40°C

All-Weather Ready

360° protected body, designed for harsh outdoor conditions.



Empowering Research & Industry

7 interfaces and full SDK for effortless development.



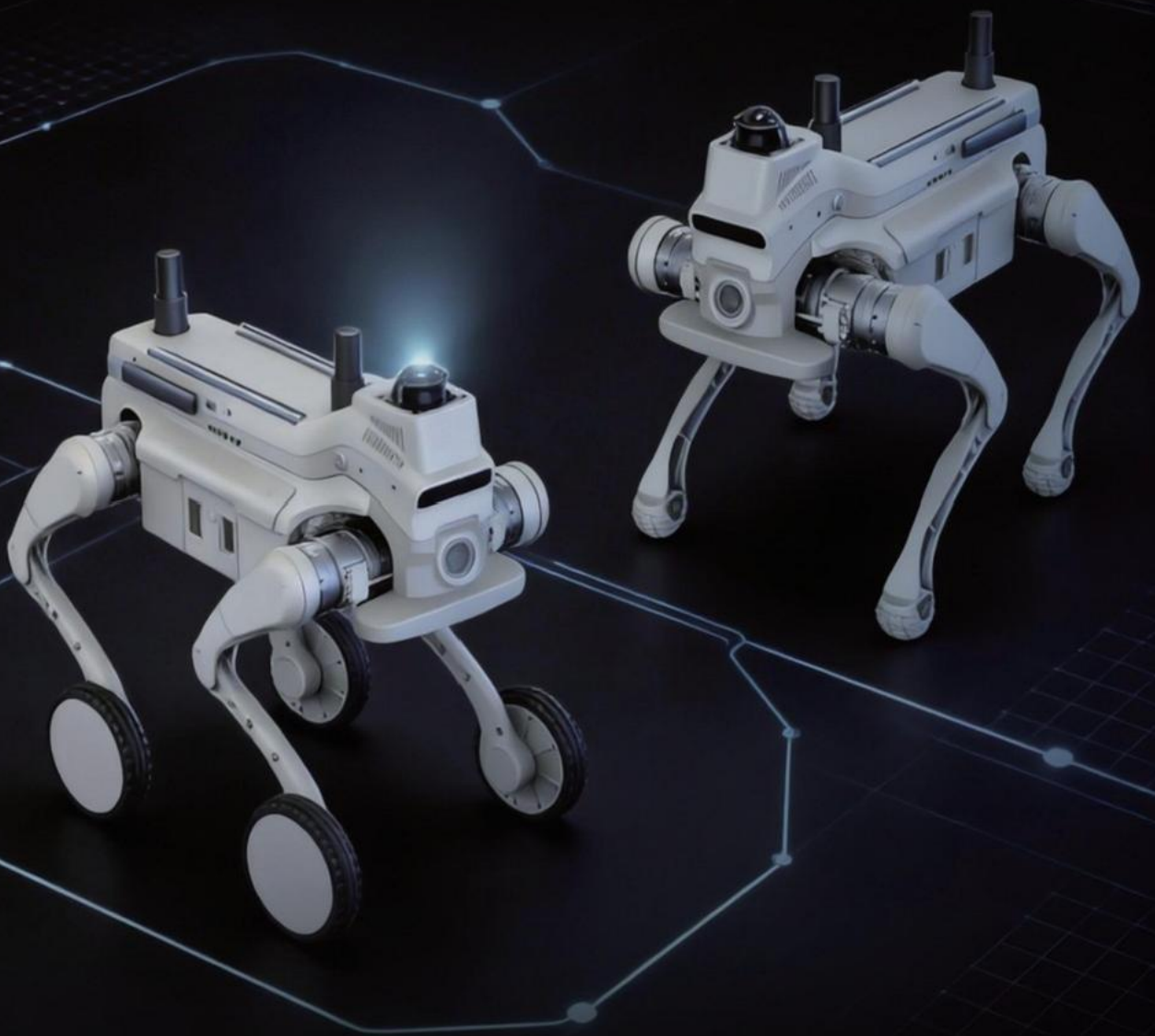
Technical Parameters

Standing Dimensions (L×W×H)	630mm×430mm×485mm	Max Speed	3.7m/s (limit-5.5m/s)
Lying Dimensions (L×W×H)	690mm×540mm×165mm	Max Climbable Step Height	16cm
Weight (with battery)	22kg	Slope Capability	30° (Standard), 40° (Max)
Voltage	43.2V	Max Obstacle Height	60 cm
Endurance Time	1-2h	Operating Temperature	0°C~40° °C
Max Range	9km	Ingress Protection	IP54
Max Payload	10kg (limit~12kg)	Interfaces	Ethernet, USB, SBUS, UART, Power

Upgraded Version with High-Power Fusion Perception

GENISOM L1 EDU

Seamless Navigation. **Any Terrain.**



Hardware Configuration

RTK Antenna

High-Precision Sensing,Strong Signal

GNSS Positioning Module

High-precision GNSS for enhanced global localization and navigation.

Livox Mid-360 LiDAR

For high-precision spatial perception.

5G Communication Module

Enabling low-latency remote control and data transmission.

Jetson Orin NX 16GB Compute Module

100 TOPS AI performance with real-time multi-sensor fusion.

Aviation-Grade Expansion Port

Gigabit Ethernet ×2

SBUS+RS485

USB 3.0 Type-C(Orin NX)

USB 3.0 Type-C(3588)

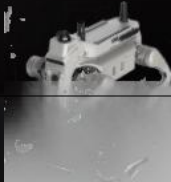
DC Power Output:24V

SIM Card Slot

RealSense Depth Camera

For enhanced environmental perception.

Technical Parameters



		GENISOM L1 EDU	GENISOM L1-W EDU
Mechanical Parameters	Weight (with battery)	17 kg	24kg
	Size (Standing)	630mm×360mm×525mm	630mm×430mm×585mm
	Size (Lying Prone)	670mm×425mm×255mm	690mm×540mm×165mm
Mobility Performance	Load Capacity	5 kg	
	Degrees of Freedom(DOF)	12	
	Max Joint Torque	48 N.m	
	Max Speed	3.7 m/s	
	Operating Time	0.5-1.5 h	
	Max Range	4.5 km	
	Climbing Angle	30° (Standard), 40° ¹ (Max)	
Main Specifications	Main Controller &Computing Power	Jetson Orin NX 16G 100TOPS computing power	
	LiDAR	Mid 360	
	Depth Camera	Intel Realsense	
	GNSS Module	GNSS	
	Communication Module	5G	
Others	Autonomous Navigation	Standard:RoamerX Lite Optional:RoamerX Pro Platform	
	Ingress Protection Rating	IP54	
	Secondary Development	Supported	

¹A I parameters are validated in a laboratory environment.Specifications are subject to change and the final product datasheet shallprevail.

Industry's first lightweight, high-payload, fully protected quadruped robot

GENISOM M1

Forge Ahead Beyond Limits



Best-in-Class
Payload Capacity



Best-in- Class
Protection



Best in-Class
Endurance



Best-in- Class
Expandability

Key Features



Next-Gen Power Beast
World's First 1:1 Load-to-Weight Ratio
Limitless potential for development.



Mission Non-Stop
Dual hot-swappable batteries with autonomous recharge support.



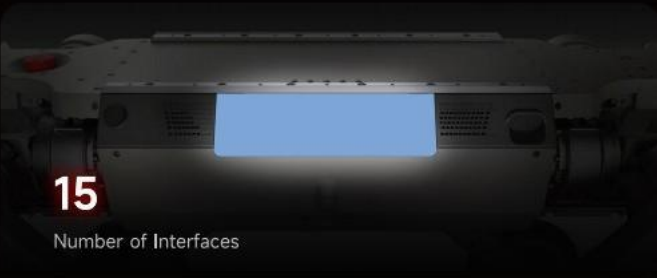
Conquering Any Environment
Top-tier protection with 360° perception, engineered for industry.



Wheeled-Leg Switchable
Adapt to changing terrains & scenarios.



Ultra-Flexible Joints
Higher agility & adaptable posture for sprinting, climbing, or leaping.



Effortless Second Development
Open communication, power, and control interfaces for versatile modules.

Technical Parameters

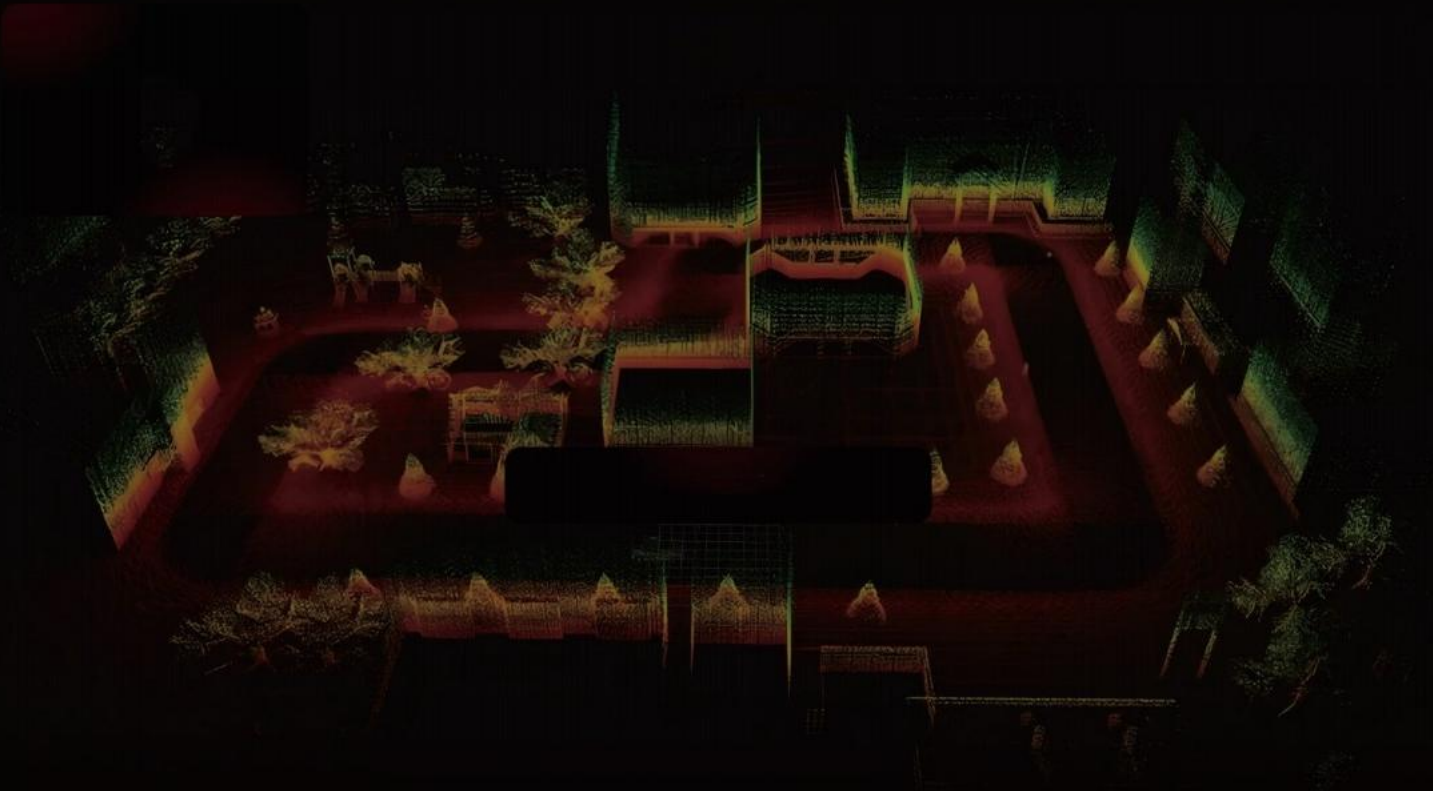
Standing Dimensions (L×W×H)	930mm×480mm×585mm	Slope Capability	45°
Lying Dimensions (L×W×H)	930mm×630mm×200mm	Wheel/Leg Switching	Supported
Weight (with battery)	30kg (legged), 41kg (wheeled)	Operating Temperature	-20C-55°C
Battery Capacity	54V, 9.35Ah*2, hot swapping & quick-release	Ingress Protection	IP67
Endurance Time	5h (no load), 3.5 h (full load)	Intelligent Following	UWB Tracking; LiDAR-Visual Tracking
Max Range	29km (no load), 18km (full load)	Autonomous Navigation	Optional: RoamerX Pro Platform
Continuous Payload	30kg	3D Surround-View Perception	Supported
Max Speed	6m/s (limit ~8m/s)	Communication Interface	Gigabit Ethernet, USB, Serial Port
Max Obstacle Height	80cm	Power Interface	5V/12/24V 148V, 480W
Max Climbable Step Height	25cm		

Self-developed 3D Autonomous Navigation System

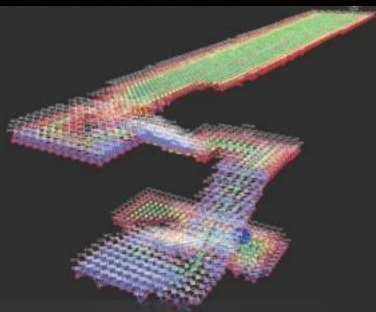
RoamerX Platform Professional

Perfect for Genisom Quadruped Robots

Powered by multi-sensor fusion (LiDAR, vision, IMU, RTK), the system enables precise 3D perception and autonomous navigation with ≤ 20 cm positioning accuracy and $\pm 5^\circ$ orientation accuracy, ensuring reliable operation in narrow and multi-floor environments.



Product Advantages



3D Spatial Navigation°

Advanced 3D mapping and path planning enable robots to move seamlessly across multi-floor and indoor-outdoor environments, with real-time obstacle avoidance and accurate mapping.

°Available via future OTA update.



Intelligent APP Control

Configure single-point or multi-point inspection tasks, manage multiple maps and routes, and monitor robot status and trajectories in real time.

End-to-End Autonomous Inspection



From mapping and localization to path planning, obstacle avoidance, and auto-charging, the platform enables a complete fully autonomous inspection workflow.

Flexible System Expansion



Standardized hardware and software interfaces support additional modules for diverse applications.

Industry Applications



Business Parks

Multi-floor inspection with higher coverage.



Urban Management

Integrated response with security systems.



Last-mile Delivery

Achieve efficient, precise unmanned delivery.



Energy & Power

Safe inspection in remote and hazardous environments.



Industrial Workshops

Reliable 24/7 inspection in narrow spaces.



Oil & Chemical

Automated inspection with early risk detection.

Heavy-Duty Humanoid Robot

The heavy-duty humanoid robot is purpose-built for industrial-level tasks. Equipped with key technologies such as multimodal perception, AI large models, reinforcement learning motion control, and high-performance actuators, it offers outstanding capabilities including high payload capacity, stable motion, versatile intelligence, and reliable safety.

It is ideal for automating repetitive, fatiguing, or hazardous operations like object recognition, handling, sorting, and stacking in factories, logistics hubs, and warehouses—effectively addressing labor shortages, enhancing productivity, and reducing overall operating costs.

Detailed Specifications

Height	175cm
Weight	85kg
Degrees of Freedom	67
Battery Life	2h
Max Walking Speed	1m/s
Single-Hand Payload	5kg
Slope Walking Capability	>45°
Single-Arm Payload	30kg
Dual-Arm Payload	40kg
Sensor Configuration	1 × LiDAR, 3 × Depth Cameras
External Interfaces	4×Ethernet Ports, 4×USB 3.0 Ports



Product Advantages

Superior Mobility

Reinforcement learning-driven motion control and human-like gaits enable seamless navigation in industrial, logistical, and outdoor environments.

High Payload Capacity

High-performance joints deliver single-arm payloads of 30kg and dual-arm payloads of 40kg, matching adult male strength for industrial tasks.

Exceptional Coordination

Real-time adjustments of arms, posture, and center of gravity ensure optimal performance across diverse applications.

Advanced Perception & Execution

Multimodal sensing and an AI brain enable autonomous navigation, object recognition, environment understanding, and task execution.

GENISOM CHAMP **SERIES** JOINT MODULE

Powering Robots with Strength and Efficiency



GENISOM CHAMP POWER UNIT SERIES

Powering Robots with Strength and Efficiency

Hero Products

CHAMP P65 Joint Module



- © Industry-leading 48N·m Peak Torque
- Ultra-Light 520g Design
- IP54-Rated Dust & Water Protection
- AI-in-One Compact Integration

CHAMP P85MAX-S Joint Module



- © Exceptional 180N·m Peak Torque
- Lightweight Powerhouse
- IP67-Rated AI-round Durability
- C Flexible Mounting Options

	High Power-Density Joint Module				High-Protection Wheel Hub Motor	
Model	P55	P65	P65MAX-S	P85MAX-S	W150-S	W190-S
Outer Diameter (mm)	57	65	65	86	160	192
Height (mm)	53	61.8	64.3	66.9	58	83
Gearbox Type	Planetary	Planetary	Planetary	Planetary	/	Planetary
Rated Power (W)	78.5	330	330	706	495	706
Rated Torque (Nm)	6.5	11.5	21.3	43	3.5	8.7
Peak Torque (Nm)	21	48	75	180	11	28.68
Weight (g)	332	520	612	1010	1180 (Tires included)	1340 (Tires included)
Backlash (arcmin)	≤20	≤20	≤25	≤20	/	≤20
Operating Voltage (Typ.)	24~48 (24) V	24~60 (48) V	24~60 (48) V	24~72 (60) V	24~72 (48) V	24~72 (60) V
Encoder Type	Dual Encoder	Dual Encoder	Dual Encoder	Dual Encoder	Single Encoder	Single Encoder
IP Rating	IP54	IP54	IP67	IP67	IP67	IP67
Operating Temp. (C)	-20~55	-20~55	-20~55	-20~55	-20~55	-20~55
Communication	CANFD	CANFD	CANFD	CANFD	CANFD	CANFD

All parameters are validated in a laboratory environment. Specifications are subject to change and the final product datasheet shall prevail.

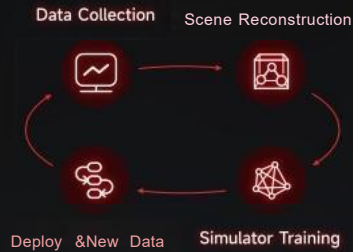
Key Technologies

Data Engine

Physics-interaction data flywheel

Real-World Feedback & Evolution(Real)

Long-tail data collected from robots in unstructured environments is fed back into simulation through scene reconstruction. Billions of RL iterations in simulations ensure out-of-the-box robustness.



Physical-Level Simulation (Sim)

Powered by the open-source MATRiX simulation platform, enabling high-fidelity modeling of rigid-body dynamics, friction, and contact behaviors, ensuring strong consistency between simulation and the physical world.

MATRiX Open Simulation Platform

A one-stop simulation and training platform purpose-built for embodied intelligence. MATRiX bridges physical dynamics and high-fidelity perception, significantly reducing hardware trial-and-error costs and accelerating the path from simulation to real deployment—from months to tens of hours.



Large-scale high-quality scene assets

Flexible scenario customization



Multi-sensor integration

Seamless R&D pipeline integration



3D Gaussian Splatting

Enhanced Sim²Real consistency

Multi-Agent Frontier

Ultra-large-scale heterogeneous multi-agent coordination



Robot Formation Control

Precise coordination of dozens of robots beyond communication and compute constraints.



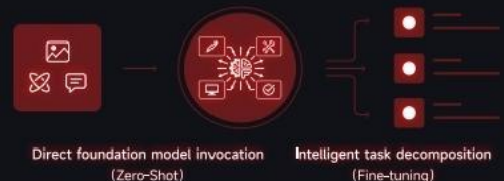
Heterogeneous Collaboration

Seamless coordination across air-ground systems and operations

Physical AI

Differentiable physics-based world models

No retraining needed. Robots perceive 3D space in unknown environments and break down complex commands into standard actions via custom skills.



Open Source Community

Serving developers worldwide, GENISOM AI opens MATRiX, Roamerx, and VLN code with ROS2 interfaces, enabling academic research and secondary development.

github.com/zsibot

Industry Applications

GENISOM AI delivers an open robotics platform designed for scalable customization.

Powered by our AI+N strategy, we combine AI intelligence with robotic systems to enable diverse industries, complex scenarios, and ecosystem partners—advancing the future of human-robot collaboration.



Join Us to Shape the Future of Embodied Intelligence

Through close collaboration with top universities and industry leaders, we continue to expand our ecosystem—working together to bring embodied intelligence into **real-world** applications and industry transformation.

Industry-Leading Embodied Intelligence Technology Provider