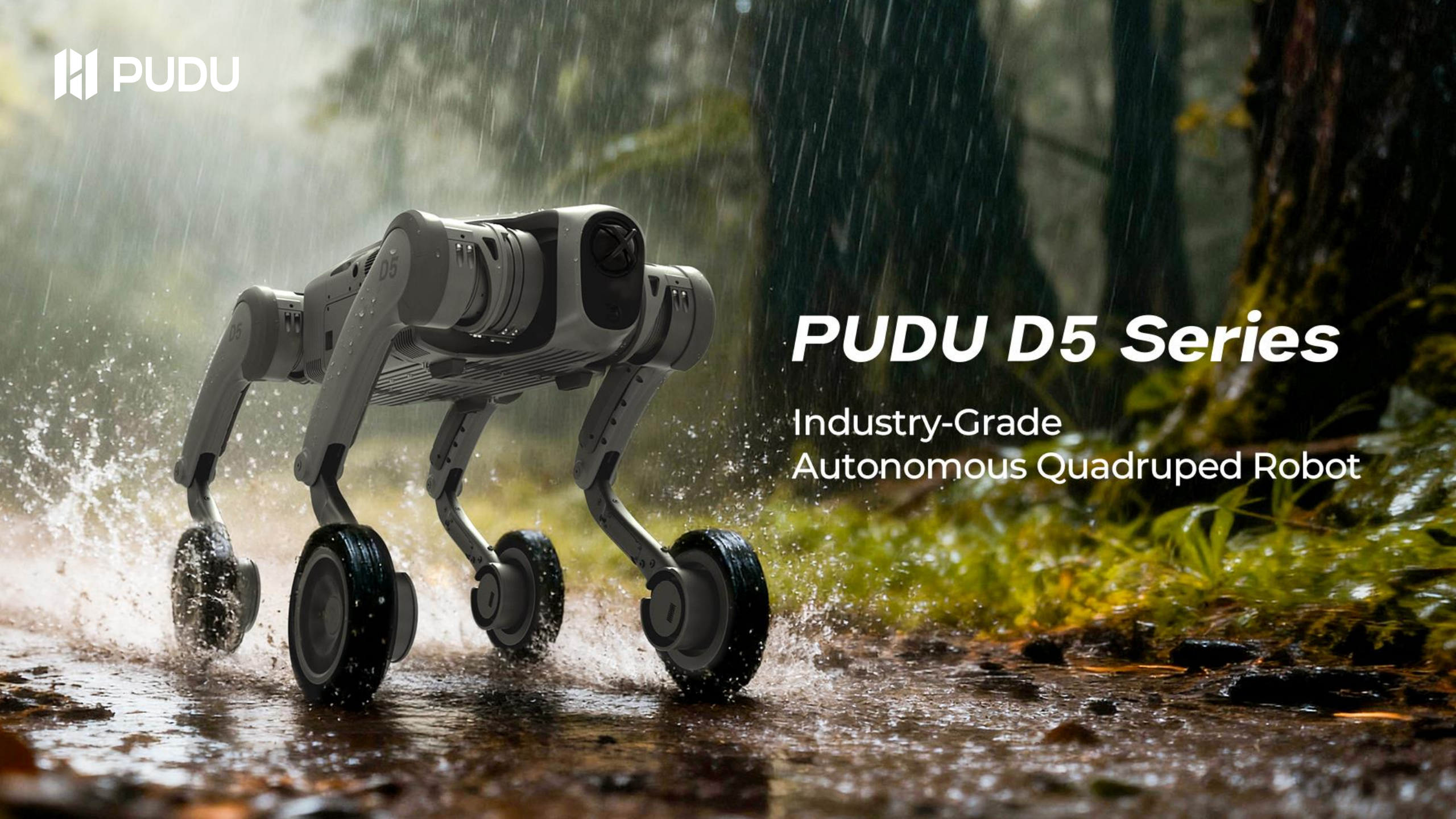

PUDU
PUDU D5 Series
Industry-Grade
Autonomous Quadruped Robot

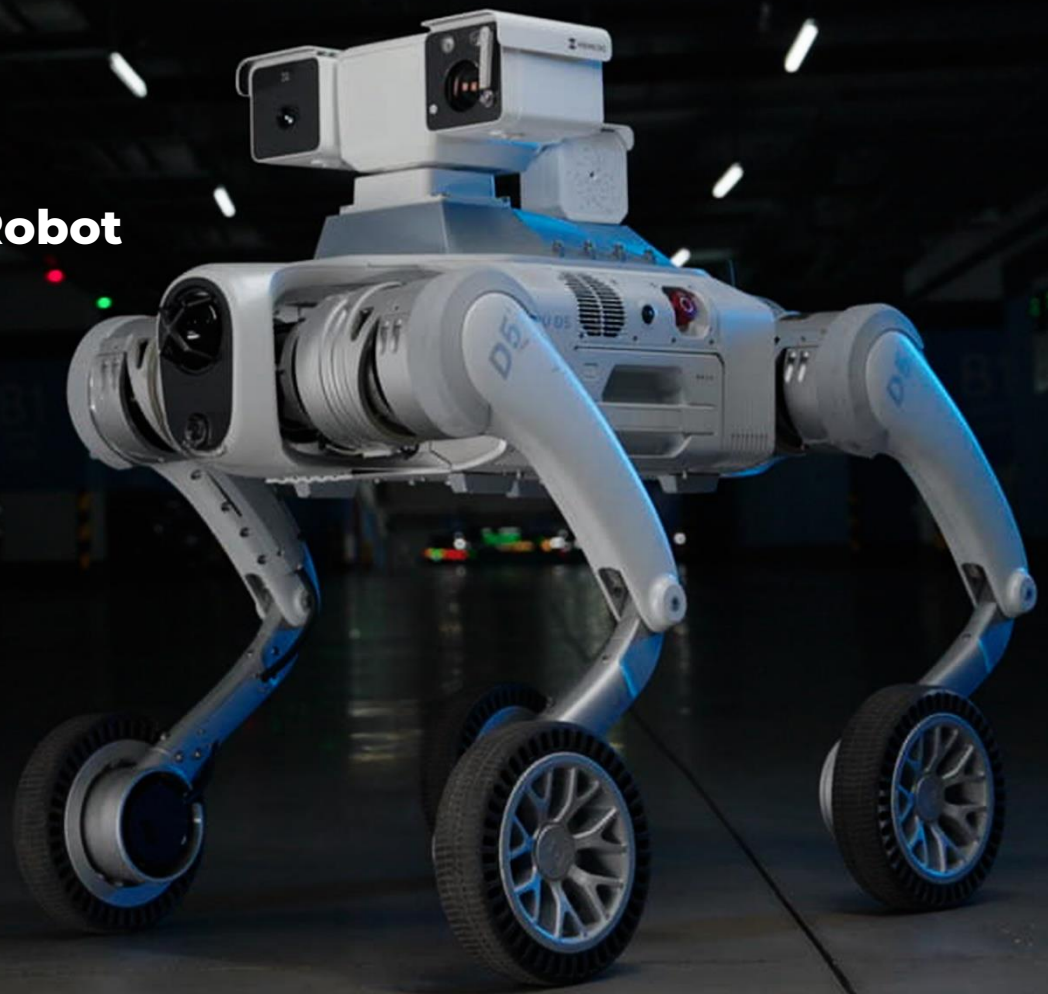
CONTENT

PUDU D5 Series

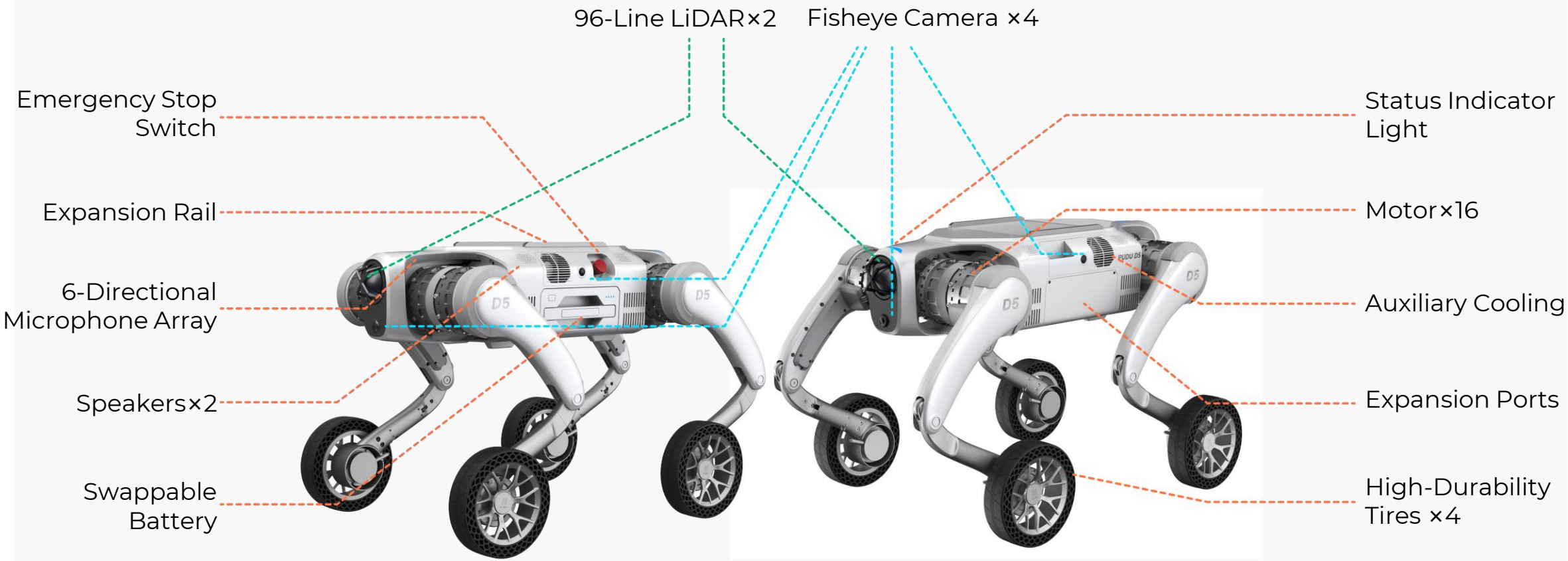
Industry-Grade Autonomous Quadruped Robot

PUDU D5 Series are Industry-grade Autonomous Quadruped Robots developed by Pudu X-Lab, designed for autonomous operations in complex and challenging environments.

Powered by high-performance computing and multi-modal perception, it combines robust all-terrain mobility with IP67 protection, enabling it to traverse seamlessly between cities and wild terrains for inspection, delivery and exploration tasks — redefining the limits of autonomous mobility.



Product Appearance



Product Highlights

Autonomous Navigation with 360° Perception

Powered by high-performance edge computing, D5 integrates LiDAR and visual perception for centimeter-level 3D mapping and dynamic obstacle avoidance, ensuring seamless operation in complex environments.

All-Terrain Mobility for Complex Environments

High-torque motors combined with dynamic posture control algorithms enable D5 to confidently navigate obstacles, climb slopes, and traverse steps across diverse indoor and outdoor terrains.

All-Weather Durability and Extreme Resilience

Cold-start capability at –10°C and stable operation across –20°C to 55°C temperature range. IP67-rated protection ensures reliable all-weather performance in rain, wind, and dust.

Natural Interaction with Gesture and Voice Control

Multi-modal interaction via voice, gesture, and remote control. Precise human motion recognition and real-time autonomous following deliver an intelligent companion experience that truly "understands and follows you."

Two Mobility Modes for Any Terrain

Point-Foot Version:
Precision for Complex, Unstructured Terrain

Navigates **irregular ground with accurate foot placement**, moving confidently through forests, slopes, ladders, walkways, and pipe corridors where wheeled robots are restricted.

Supports **stair climbing, gap crossing, and high-difference obstacles**, maintaining stability and control across challenging environments.

Wheeled-Foot Version:
High-Speed Performance in Structured Spaces

Optimized for **smooth, efficient movement on indoor floors and other flat surfaces**.

Enables **long-duration cruising, agile maneuvering, and stable camera-follow operation with low power consumption**—ideal for wide-area missions and continuous interaction scenarios.

* Point-foot and wheeled-foot are modular accessories, sold separately.

Product Introduction - Accessories

Charging Station: 24/7 Unattended Operation

- Automatic charging and extra battery charging enable continuous inspection and delivery
- Spare batteries ensure uninterrupted operation for outdoor or event use

Delivery Box: Versatile Delivery Solution

- Carries up to 30 kg, fits items up to 50 × 29 × 40 cm
- Adjustable straps for secure transport across diverse delivery tasks

Dual-Spectrum Inspection Gimbal: Precise Detection, Smart Diagnostics

- Infrared + optical imaging for temperature monitoring and equipment anomaly detection
- Acoustic imaging detects cracks, leaks, and electrical irregularities
- Integrates with inspection platform for real-time equipment and facility health monitoring

* Accessories are optional and sold separately.

Product Specifications

	PUDU D5	PUDU D5-W
Standing Dimensions	900*543*572mm	900*543*572mm
Weight (with Battery)	61kg	62kg
Computing Platform	Nvidia Jetson Orin AGX 64G + RK3588	
Perception Sensors	Dual 3D LiDAR + Four Fisheye Cameras	
Maximum Joint Torque	165 Nm (121.7 lb·ft)	
Battery Capacity	1000 Wh	
Operating Time	2 ~ 2.5 h	2 ~ 3 h
Continuous Walking Payload	20–30 kg (44–66 lbs)	
Maximum Step Height	30 cm (11.8 in)	25 cm (9.84 in)
Climbing Capability	Up to 80 cm (Up to 31.5 in)	
Slope Capability	25° ascent, 45° descent	30° ascent, 45° descent
Operating Temperature	–20°C to 55°C (–4°F to 131°F)	
Cold-Start Capability	Below –10°C (Below 14°F)	
Ingress Protection	IP67	
Autonomous Navigation	Supported	
Internet Connection	4G+WIFI6+BT	
Voice Interaction	Supported	
Autonomous Following	Supported	

* All performance data are based on lab testing. Actual results may vary by environment.

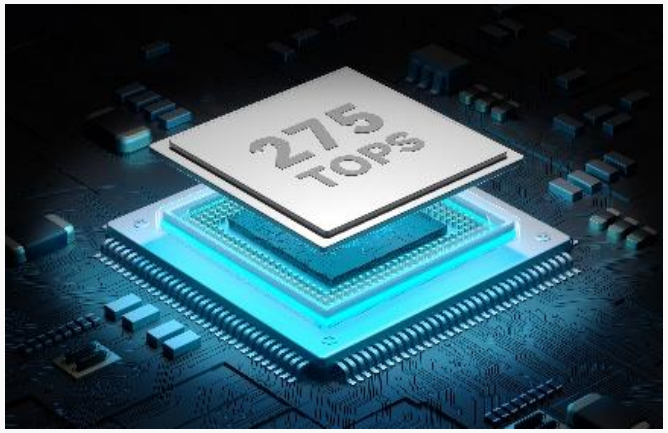
CONTENT

Autonomous Navigation with 360° Perception

1

High-Performance Dual-Chip Architecture for Real-Time Intelligence

Powered by automotive-grade NVIDIA Orin and RK3588 dual processors delivering 275 TOPS total computing power. Enables parallel processing of navigation, obstacle avoidance, and object recognition. Supports on-device large language models for intelligent real-time decision-making and response.



Autonomous Navigation with 360° Perception

2

Dual 96-Line LiDAR* for Centimeter-Level Precision

Front and rear 96-line LiDAR generates high-density 3D point clouds for centimeter-level position and environmental mapping. Delivers reliable high-precision mapping and obstacle avoidance even in tunnels, parking lots, or multi-level industrial sites.

* PUDU D5 Series is shipped with dual high-precision 96-line LiDAR as the standard configuration. For specialized applications requiring enhanced perception, a dual 192-line LiDAR upgrade is available upon request.

Autonomous Navigation with 360° Perception

3

360° Visual Fusion Perception for Safe Navigation

Four fisheye cameras provide full 360° panoramic coverage, enabling dynamic obstacle detection and avoidance. Ensures safe and smooth navigation in narrow spaces and crowded areas.

Autonomous Navigation with 360° Perception

4

Million-Square-Meter Navigation Capability

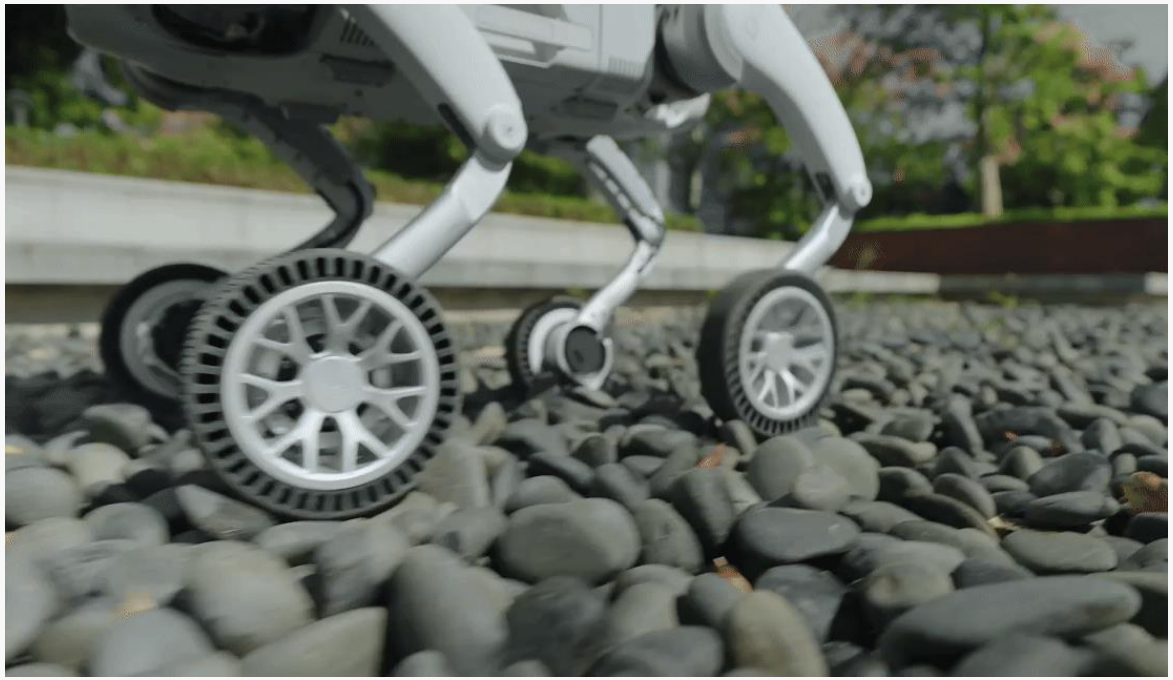
Capable of mapping and navigating facilities up to one million square meters, the D5 handles complete autonomous workflows including departure, inspection, obstacle handling, and return-to-charge. Single-charge range extends to 14 kilometers, making it suitable for airports, metro systems, and industrial campuses.

All-Terrain Mobility for Complex Environments

1

Wheel-Leg Hybrid Drive for High-Speed All-Terrain Mobility

Innovative wheel-leg hybrid system reaches speeds up to 5 m/s — 400% faster than traditional robots. Effortlessly handles stairs, slopes, gravel, and complex terrains for superior task efficiency.



All-Terrain Mobility for Complex Environments

2 Bionic Obstacle Navigation for Complex Environments

Bionic design with reinforcement learning algorithms enables climbing 30° slopes and crossing 25cm steps. Real-time gait adjustment ensures stability on stairs, uneven ground, and unstructured terrain.

All-Terrain Mobility for Complex Environments

3

30kg Stable Payload for Efficient Transport

High-strength alloy frame and closed-loop torque control maintain stable movement with 30kg loads. Safely transports equipment, materials, and packages to meet demanding industrial logistics needs with enhanced efficiency and reliability.

All-Weather Durability and Extreme Resilience

IP67 Protection for All-Weather Reliability

IP67-rated with fully sealed motors, batteries, and sensors. Delivers exceptional dust and water resistance for stable operation in rain, mud, and dusty conditions. Ensures all-weather reliability with minimal downtime and maintenance.

Wide Temperature Range for Extreme Climates

Industry-first –10°C cold-start capability with operational range from –20°C to 55°C. Operates reliably across seasons and extreme climates worldwide, expanding all-weather deployment possibilities.

Intuitive Interaction & Smart Follow

AI Gesture Recognition for Hands-Free Control

Advanced vision and motion recognition accurately identifies gesture commands (start, stop, stand, follow, etc.). Enables intuitive operation without a remote for efficient, hands-free task execution.

AI Voice Interaction for Natural Communication

An 6-mic array combined with AI noise reduction and sound-source localization ensures reliable voice command recognition, even in noisy factories or outdoor environments. Delivers seamless human-robot interaction.

Intelligent Visual Following for Safe Collaboration

Vision and depth perception algorithms with dynamic obstacle avoidance and path prediction enable smart route adjustment in crowded or confined spaces for stable, safe autonomous following.

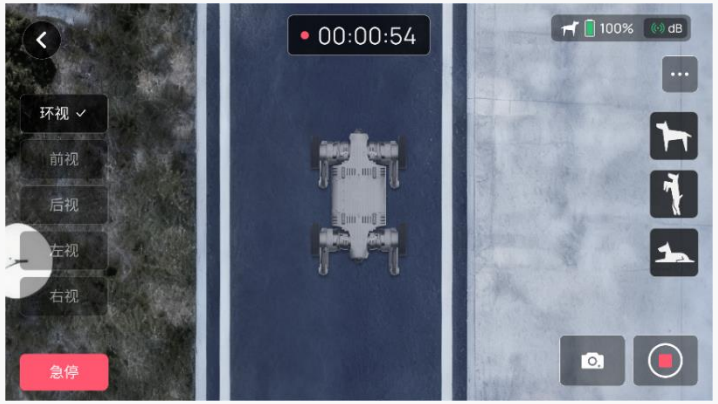
Remote Vision & Control, Always in Command

RCOS Remote Control System:

Monitor real-time operating status and issue commands instantly.

Video Feed:

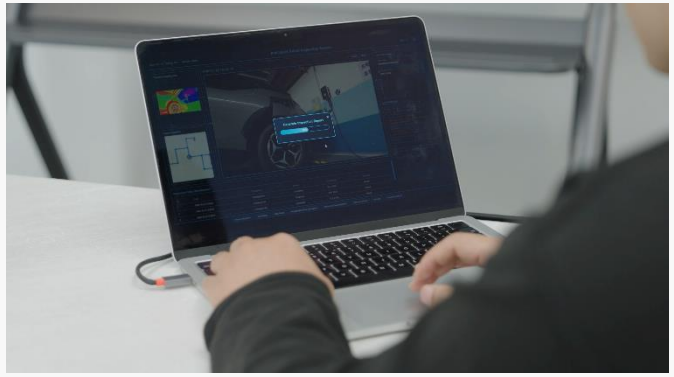
Live panoramic views from cameras give you full visibility of the on-site environment.



CONTENT

Autonomous Inspection

- Designed for campuses, factories, power stations, and logistics hubs that require routine patrols. D5 can be equipped with HD imaging, thermal sensing, and environmental detectors to handle security patrols and equipment monitoring.
- With powerful edge computing and deep-learning analytics, it offers fast anomaly alerts, real-time remote visibility, and reliable data records — helping operators improve coverage, accuracy, and operational safety.



Autonomous Delivery

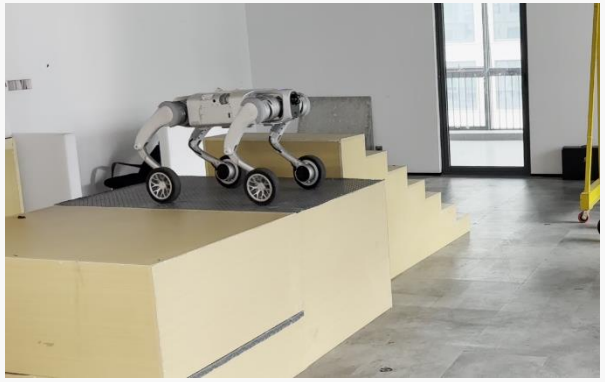
- Perfect for large facilities where materials need to move efficiently — communities, factories, warehouses, construction sites, and industrial campuses. D5 handles slopes, wet floors, and rough terrain without breaking stride.
- Smart routing and flexible scheduling keep supplies flowing reliably, cutting down delays and boosting productivity across operations.

Entertainment & Events

- Perfect for parks, malls, exhibitions, and brand events that need engaging, tech-driven experiences. D5 can perform interactive tours, distribute materials, execute stunt-like movements, or support themed interactions.
- Its high agility and customizable design help attract visitors, enhance atmosphere, and elevate the event's technological appeal.

Education & Research

- Suitable for research labs, universities, and engineering centers exploring advanced robotics. D5 supports high-performance computing, a wide range of sensors, and open APIs, making it ideal for testing navigation, perception, and control algorithms.
- Its stable and scalable platform enables rapid prototyping, outdoor experimentation, and hands-on teaching — helping accelerate research and innovation.

CONTENT

About US

Pudu Robotics, a global leader in the service robotics sector, is dedicated to enhancing human productivity and living standards through innovative robot technology.

With a focus on R&D, manufacturing, and sales of service robots, PUDU emphasizes three core technologies: mobility, manipulation, and artificial intelligence. PUDU has taken the lead in establishing a comprehensive range of specialized, semi-humanoid, and humanoid robotic products in the industry.

Currently, PUDU offers four product lines: service delivery robots, commercial cleaning robots, industrial delivery robots and embodied intelligent robots, which are deployed across ten major industries, including food and beverage, retail, hospitality, healthcare, entertainment and sports, industrial facilities, education, and more. To date, Pudu Robotics has successfully shipped over 100,000 units to a variety of markets, with a presence in more than 1,000 cities across 80+ countries and regions worldwide.

* Relevant statistics as of Sep 2025

Global Footprint

80+ Countries and Regions Covered

1,000+ Cities Covered

700+ Global Distributors

800+ Total Employees

* Relevant statistics as of Sep 2025

Honor and Awards

Pudu Robotics has gained recognition from organizations and institutions across various industries.

Red Dot Award: “Best of the Best”	Red Dot Award: Product Design 2023 & 2025	International Design Excellence Awards	iF DESIGN AWARD 2023 & 2025	Good Design Award	Fast Company Innovation by Design Awards
Named among the top 25 for the WIPO Global Awards	CES Innovation Awards	IFEX Innovation Awards	Horeca New Business Models Awards	Winner of Commercial Kitchen Innovation Challenge	IFSA Awards

Application Industries

Revolutionizing Ten Major Industries with Smart Robotic Solutions

Food & Beverage

Hospitality

Retail

Industrial Facility

Health Care

Real Estate & Property Services

Education

Entertainment & Sport

Transportation and Related Service

Public Service

PUDU

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