PUDU

roboplanet

PUDU MT1 Max

AI-powered 3D Perception Robotic Sweeper



CONTENT

Product Overview

Product Features

Product Value

About PUDU

PUDU MT 1 Max

AI-powered 3D Perception Robotic Sweeper

Building on MT1, MT1 Max is enhanced for semi-outdoor environments such as residential courtyards and for areas with high-speed dynamic obstacles like parking garages. It features stronger perception with 3D LiDAR, greater computing power with dual SoCs, and improved obstacle-crossing capability. With optimized environmental adaptability and a fully automated workflow, it delivers a safer and more efficient cleaning experience for users.



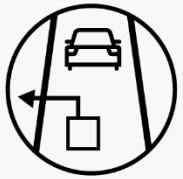
Key Features



3D Perception Integration



Magic Cleaning



Smart Obstacle Avoidance Upgrade



Empty the Facility of Any Dirt & Trash



24/7 Continuous Operation



AI Adaptive Cleaning



Covers Up to 100,000㎡



Intelligent Active Interaction

Product Introduction





Product Specifications

Robot Dimensions(L×W×H)	840 × 600 × 675mm (33*23.6*26.6 in)
Robot Weight	85 kg (187.39 lbs)
Cleaning Capabilities	Sweeping
Cleaning Performance	Cover Cleaning Max. 2200㎡/h (23680.6 ft²/h) Spot Cleaning Max. 7000㎡/h (75,347 ft²/h)
Charging Time	< 3.5 h
Run-time	5-10 h，Standard Mode 8 h
Battery Capacity	60 Ah
Cruise Speed	0.2 m/s ~ 1.2 m/s (0.66 ft/s–3.94 ft/s)（adjustable）
Cleaning Width	70 cm (27.6 in)（with side brush）
Navigation	VSLAM + Marker + 3D LiDAR SLAM
Waste Container Capacity	35 L (9.25 US gal)



CONTENT

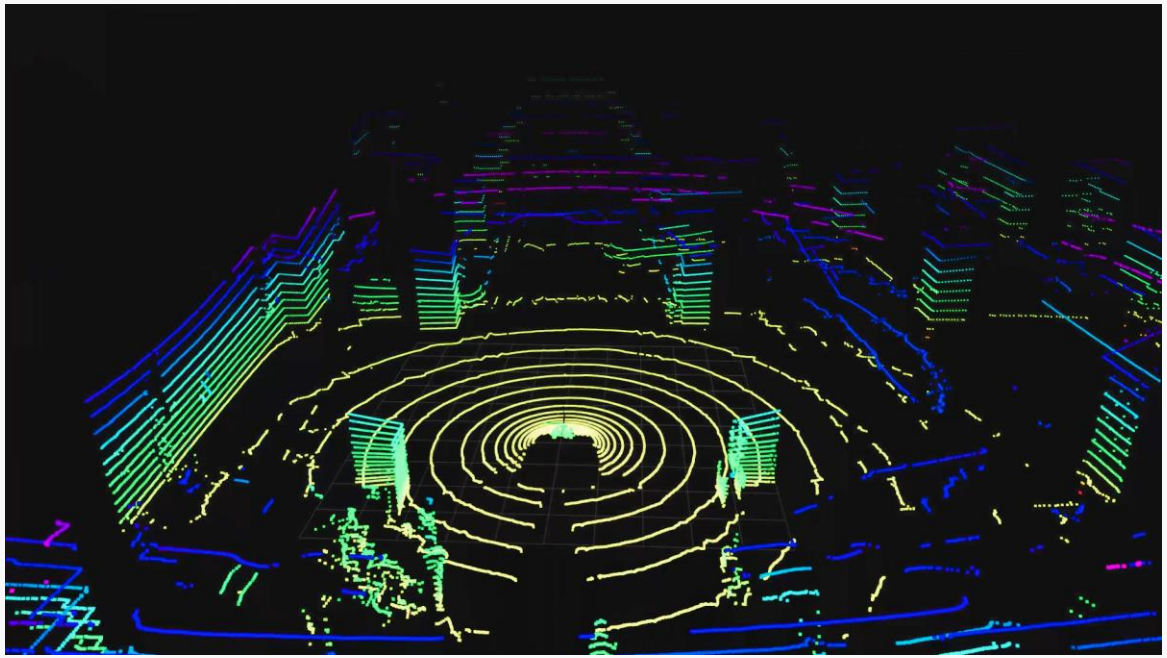
Product Overview

Product Features

Product Value

About PUDU

3D Perception Enhancement



MT1 Max uses 3D LiDAR and multi-sensor fusion to accurately perceive and understand complex environments.

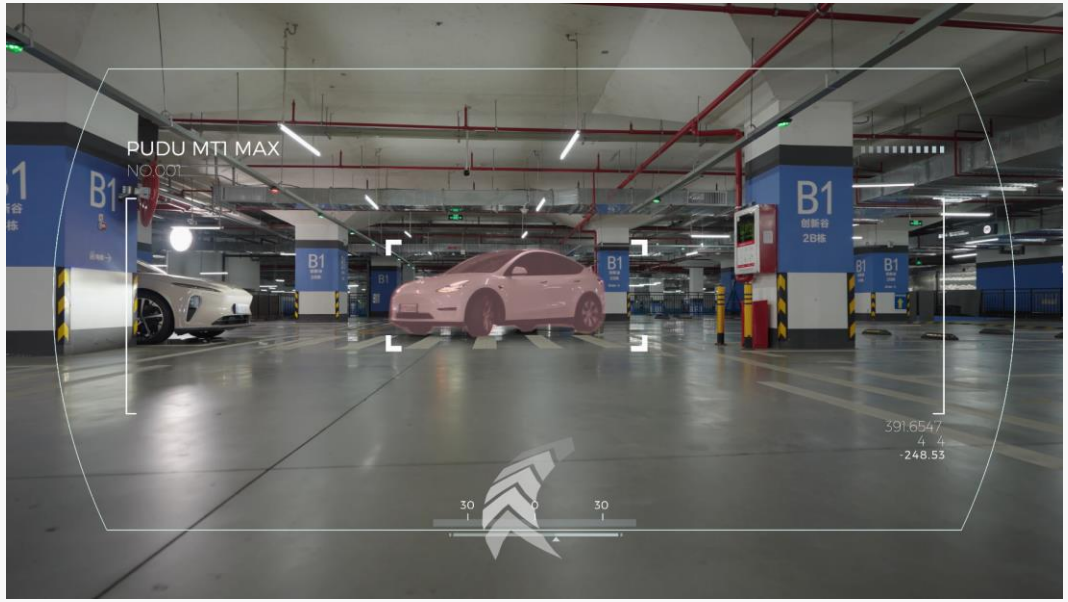
It delivers precise mapping and stable navigation in settings ranging from ultra-high ceilings and glass rooftops to semi-outdoor spaces and low-light conditions.

Even in heavy dust, sandstorms, or fog, it maintains accuracy, responding swiftly to vehicles and adjusting seamlessly to changing surroundings.

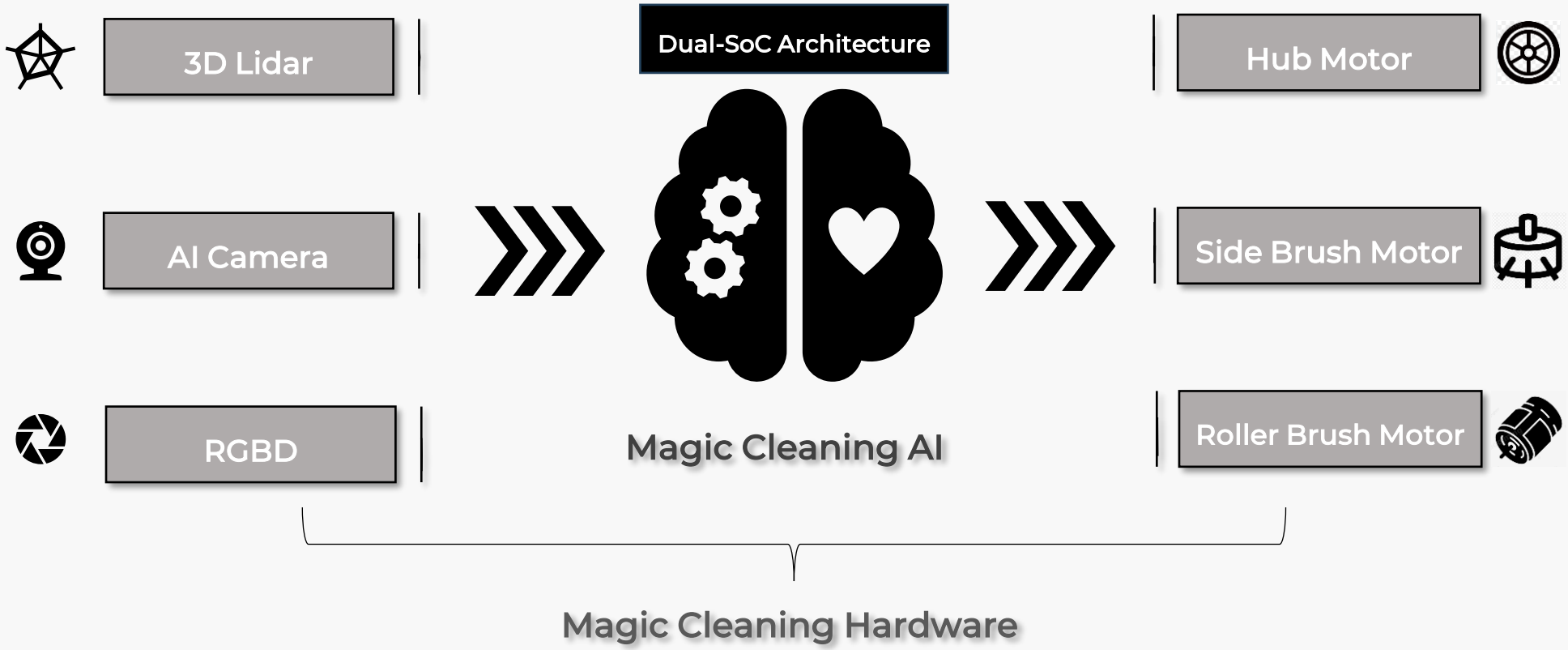
Smart Obstacle Avoidance Upgrade

MT1 Max features a fully upgraded obstacle avoidance system with 3D LiDAR, enabling smarter dynamic avoidance and differentiated strategies:

- MT1 Max can stop to let vehicles pass, pause at lane entrances, or edge aside while keeping the route clear and traffic undisturbed.
- Detects sudden movement from people or animals, responding instantly to ensure safety.



Magic Cleaning



Magic Cleaning



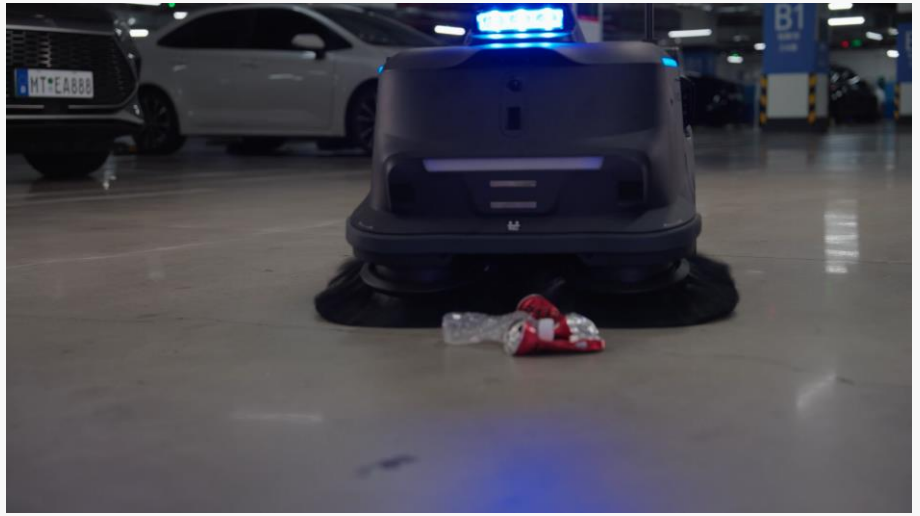
Featuring a dual-chip architecture, MT1 Max doubles computing power to enable more precise AI recognition and faster processing, while built-in redundancy ensures stable operation.

Hardware-software integration allows sensors, hub motors, side brushes, and main brush to work in harmony, powering AI adaptive cleaning, AI trash recognition, and AI spot cleaning.

Magic Cleaning



AI Adaptive Cleaning Strategy



Cleaning mode adaptation

Automatically lowers brush settings for light debris to prevent scattering, and increases pressure for heavier waste to ensure complete removal.

Cleaning posture adaptation

Automatically adjusts body alignment when debris is detected, positioning it between the side brushes for thorough pickup without omissions.

Magic Cleaning



AI Trash Recognition

Equipped with an AI camera, PUDU MT1 Max accurately identifies different types of waste in real time, continuously improving through deep learning and database updates.

AI Spot Cleaning

Targeted & Precise：the PUDU MT1 Max combines an ultra-wide scanning view with routine patrols to detect waste accurately and remove it efficiently, delivering smarter and more convenient cleaning.

Empty the Facility of Any Dirt & Trash

70 cm
Cleaning Width

0 cm
Edge Cleaning

35 L
Trash-bin Capacity

MT1 Max removes everything from cigarette butts and paper scraps to large bottles in a single sweep.



Automatic Filter Cleaning



Before



After

An internal vibration system keeps filters clear in real time, preserving suction and filtration efficiency while extending component life. The process is fully automatic, eliminating manual upkeep and reducing maintenance frequency.

Intelligent Active Interaction

MT1 Max features multi-dimensional safety upgrades. Combining structural protection with intelligent responses, along with audible and visual alerts, slope climbing and obstacle overcoming, and proactive rain avoidance, **it actively senses and intelligently responds to its environment.**

- Equipped with **a 1.2-meter high warning light and a safety projection light**, combined with audible and visual alarms, MT1 Max enhances visibility for pedestrians and vehicles, proactively preventing potential risks.
- Crosses 5 cm speed bumps
- Climbs slopes up to 8°





Intelligent Active Interaction



- Full **IP54** sealing defends against dust ingress and water spray for consistent reliability.
- Automatically **detects water drops*** and triggers a protective avoidance mode, **guiding the robot to safe zones** while reducing electrical risks.
- Operating Temperature: -10 ~ 45 ˚C, with temperature sensor

*Do not perform cleaning tasks in extreme weather.

Design for Big Venues

100,000m² (1.08 million ft²)

Professional dry cleaning for spaces larger than 100,000㎡.



User-friendly Design



Manual Operation Supported

The retractable handle allows staff to manually move the robot between cleaning areas as needed.

24/7 Continuous Operation

Extended Run-time，Always-on Performance

With a large battery, fast-charging system, and automatic charging station, the MT1 Vac supports 24/7 operation—ready anytime for high-frequency cleaning needs.



IOT Capabilities

IoT Integration

Connects with IoT infrastructure like elevators and access gates for multi-floor operation. Supports remote monitoring via phone or PC, offers real-time updates, cleaning reports, and overflow alerts for efficient management.



PUDU Link (App)



Elevator Control Module



E-gate Control Module



CONTENT

Product Overview

Product Features

Product Value

About PUDU



Parking Garage



Factory Aisle



Residential Courtyard



Campus



Shopping Complex



Shopping Complex Surroundings



Supermarket



Office Building



Airport / Transportation



Resort



Sports Venue



Event Venue



Urban Square



Sidewalk



Park Trail



Waterfront Parking Lot



Supermarket Parking Lot



Community Courtyard



Office Building Parking Lot



Train Station Square



Industrial Park Parking Lot



Park Square



Street-side Sidewalk



Residential Parking Lot

Product Value

A Systematic Cleaning Solution for Large Spaces

The MT1 Max, built on powerful sweeping capabilities and a large-capacity dustbin, combined with an AI recognition system, supports long-duration, low-interruption operations. It reshapes traditional large-scale cleaning methods and helps customers establish a standardized, scalable cleaning workflow.





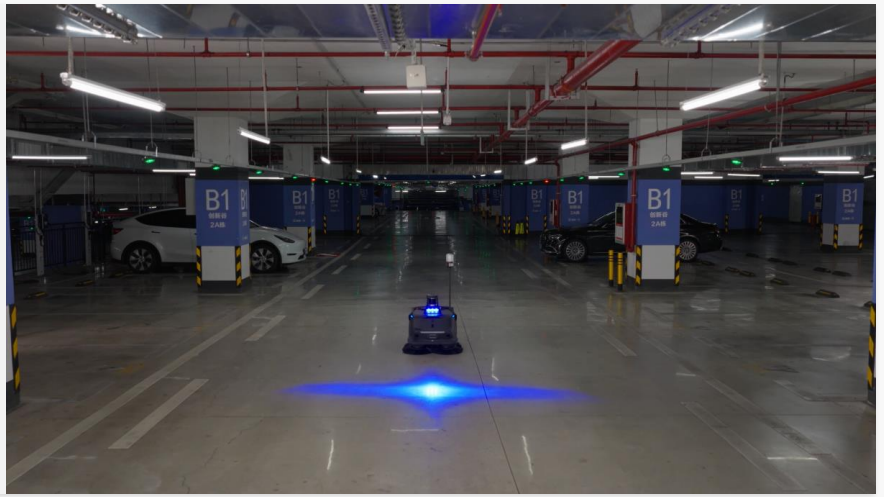
Measurable and Repeatable Cleaning Efficiency

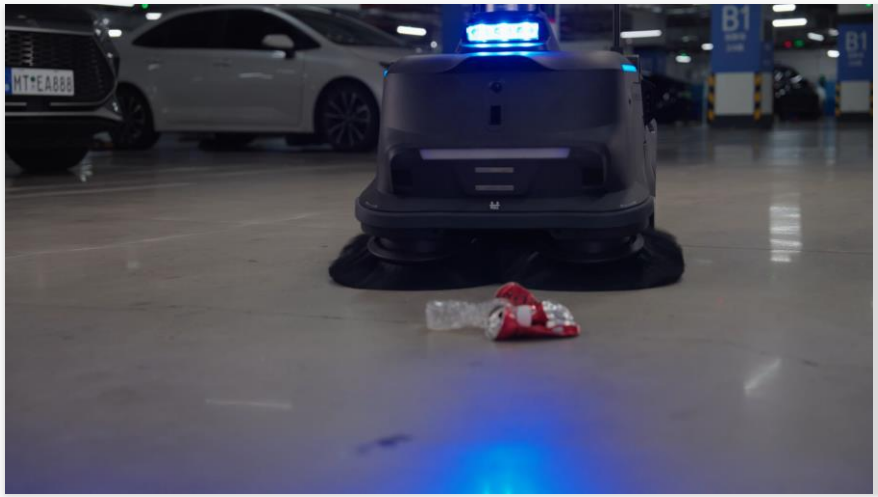
The MT1 Max leverages intelligent sensing, dynamic path optimization, and full-scenario autonomous operation to multiply the efficiency of traditional cleaning methods. It reduces reliance on manual labor, shortens cleaning cycles, and directly lowers cleaning costs per unit area while optimizing operational workflows.

Product Value

Reliable Operation in Complex Environments

With 3D LiDAR and VSLAM fusion positioning, combined with omnidirectional environmental perception, the MT1 Max achieves high dynamic adaptability. It can operate continuously and stably even in low-light conditions, semi-outdoor spaces, high-traffic areas, and rapidly changing environments, providing strong support for unattended operation models.





Free Up Labor for Higher-Value Tasks

With 24-hour continuous operation and an ultra-simple maintenance design, the device can independently handle routine repetitive tasks, freeing up human resources for higher-value work and effectively enhancing the organizational efficiency and role alignment of cleaning teams.

CONTENT

Product Overview

Product Features

Product Value

About PUDU

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 three product lines: service delivery robots, commercial cleaning robots, and industrial delivery 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 June 2025

Global Footprint



80+ Countries and Regions Covered

1,000+ Cities Covered

700+ Global Distributors

800+ Total Employees

* Relevant statistics as of June 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



Residential and Office Buildings



Education



Entertainment & Sport



Transportation and Related Service



Public Service

PUDU

roboplanet

Thank you!



+86 755-86952935

Global_sales@pudutech.com

11/F, Building 2A, Shenzhen International Inno Valley Phase 1, Dashi 1st Road, Nanshan District, Shenzhen, China 518300