PUDU

PUDU MT1 Vac

AI-powered Robotic Sweeper & Vacuum

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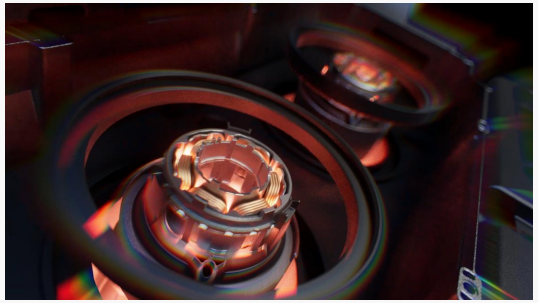
About PUDU

PUDU MT 1 Vac

AI-powered Robotic Sweeper & Vacuum

Through years of market experience with the CC1 series and MT1, we've identified a strong demand among customers for automated cleaning robots with large capacity and high-efficiency vacuuming. Yet this segment remains noticeably underserved in the current market. The MT1 Vac was created to fill this gap — purpose-built for vacuuming scenarios, it delivers upgraded suction performance to meet more advanced dry cleaning needs.

Key Features



Powerful Suction

High Efficiency

Extended Run-time

AI-driven Adaptive Cleaning

Quick-Release Dust Mop Module

Hand-vacuum Extension

Product Introduction

Product Specifications

Robot Dimensions(L×W×H)	840mm × 600mm × 490mm (33.1 in*23.6 in*19.3 in)
Robot Weight	75 kg (165.35 lbs)
Cleaning Performance	Max. 1400 ㎡/h (15,069.47 ft²/h)
Cleaning Capabilities	Sweeping, Vacuuming, Dust Mopping
Charging Time	< 3.5 h
Run-time	3-6.5 h Standard sweep & vacuum mode for hard floors: 4h
Cruise Speed	0.2 m/s ~ 1.2 m/s (0.66 ft/s–3.94 ft/s)（adjustable）
Air Filtration Level	H11 (optional H13)
Max. Vacuuming Width	55 cm (21.7 in)
Max. Cleaning Width	70 cm (27.6 in)（with side brush）
Navigation	VSLAM + Marker + LiDAR SLAM
Path Clearance	Minimum width: 75 cm (29.53 in), Minimum height: 52 cm(20.47 in)
Dust Bag Capacity	14 L (7 L*2) [0.494 ft³ (0.247 ft³*2)]
Trashbin Capacity	6 L (0.21 ft³)

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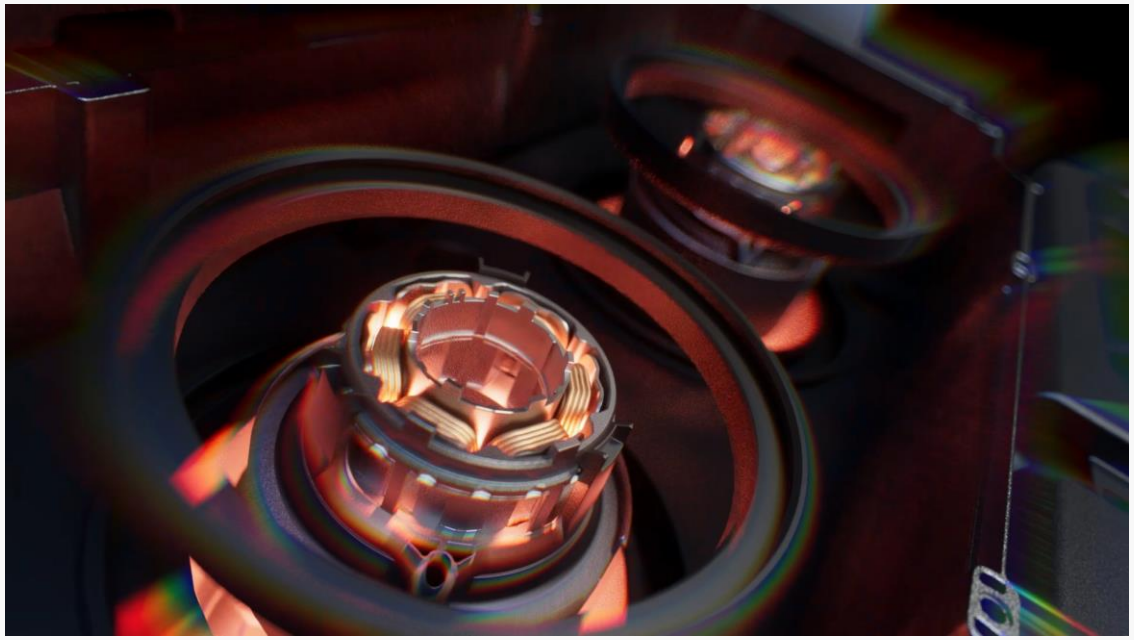
Powerful Vacuum Performance



Double Efficiency, Dust-Free Cleaning

Dual-fan deep vacuuming: Equipped with a new dual independent air duct system, **boosting suction efficiency by 200%**. Strong suction suppresses dust from spreading, allowing for effective handling of various complex floor conditions.

Powerful Suction for Deep Cleaning

Strong vacuum power easily removes embedded dirt and stubborn debris.

Powerful Vacuum Performance

Wide Cleaning Coverage

55 cm extra-wide suction path:

Compared with most traditional commercial vacuum cleaners, **each pass covers twice the area**, greatly reducing cleaning time and improving efficiency.

Powerful Vacuum Performance

Dust and Waste Separation, Long-Lasting Cleaning

6L trash bin + **14L** dust bags:

- The large-capacity system handles large-area cleaning in a single run, significantly reducing the need for frequent emptying.
- In a typical 1,000 m^2 hotel carpet scenario, it can run for up to 10 days without needing to be emptied.

Powerful Vacuum Performance

Ultra-fine Air Filtration

The HEPA-grade filtration system captures over 98% of particles as small as 0.3 μm, helping maintain clean air throughout the cleaning process. For higher filtration needs, an optional HEPA 13 filter is available, offering up to 99.97% efficiency.

Hand-vacuum Extension

Multi-Surface Cleaning, Full Coverage

- Hand-vacuum extension allows cleaning of sofa sides, walls, and glass surfaces.
- Flexible reach for edges, high surfaces, and soft furnishings—areas that regular robots struggle to access—for full-space cleaning.

Sweeping, Vacuuming, and Dust Mopping

3-in-1 Cleaning

Combines vacuuming, sweeping, and dust mopping in one device.

The mopping module can be easily detached, allowing flexible use based on different cleaning needs—making operations simpler and more efficient.

Supported cleaning modes:

- Standard sweep & vacuum
- Low-noise sweep & vacuum
- Standard vacuum
- Low-noise vacuum
- Quiet dust mopping
- Vertical Cleaning
- Manual Cleaning

Vacuuming

Sweeping

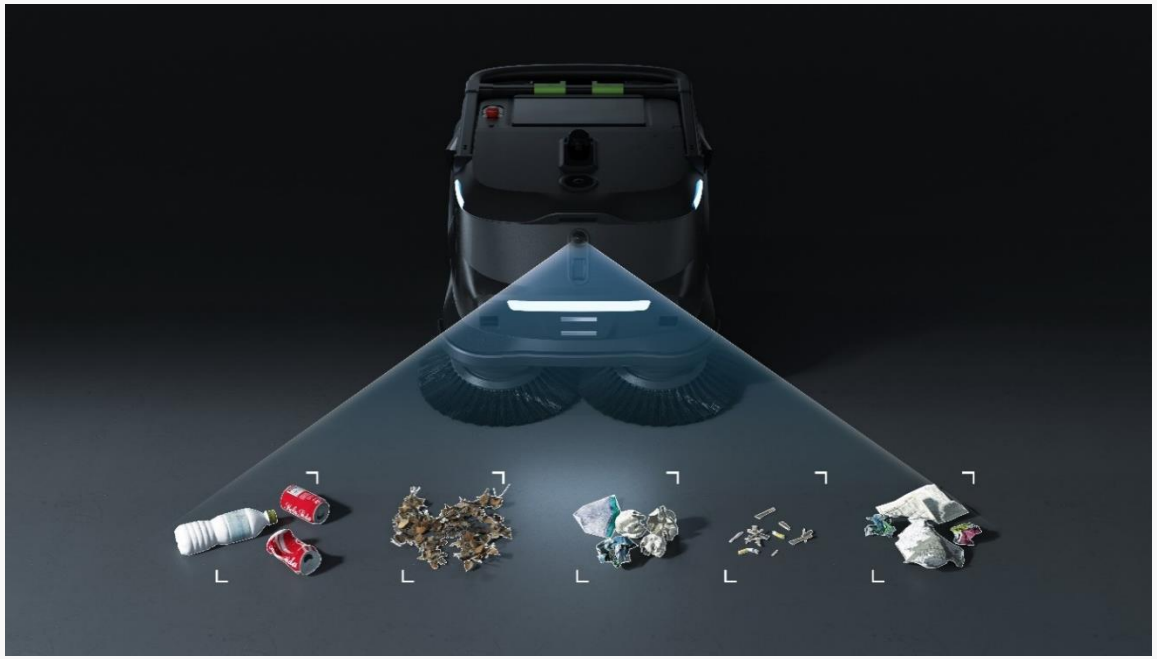
Dust Mopping

AI-driven Adaptive Cleaning

For Both Carpet and Hard Floors

AI-powered floors recognition identifies carpet and hard floors in real time, adjusting suction and brush speed automatically. It protects delicate surfaces while delivering efficient, powerful cleaning.

AI Visual Trash Recognition



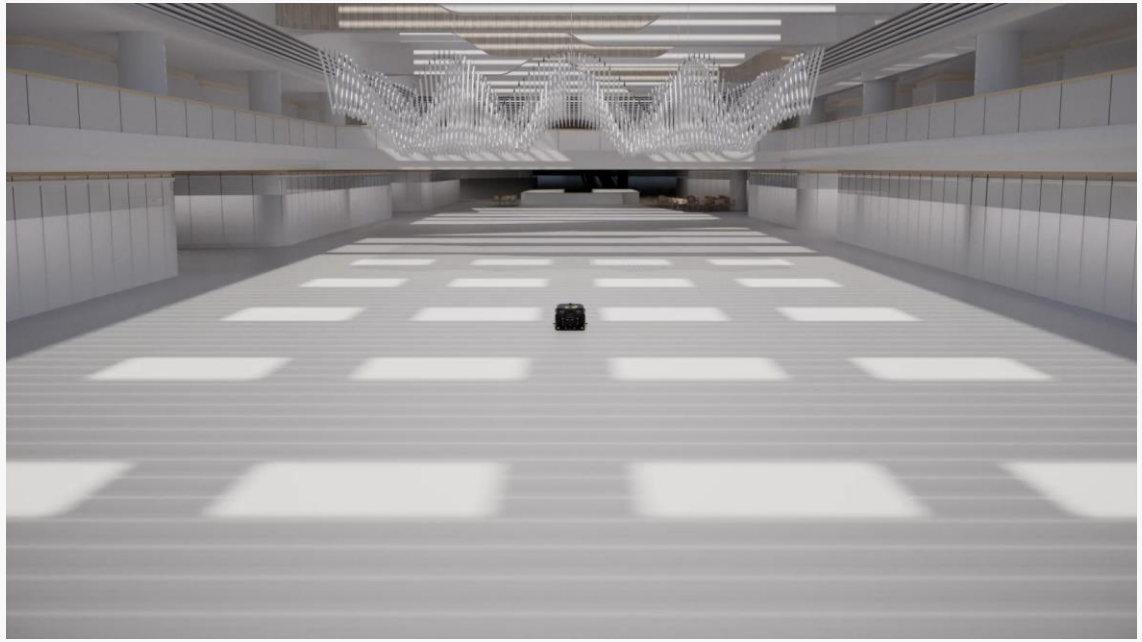
Smart Spot Cleaning

AI vision-based detection and smart path planning: With a wide field of view, the MT1 Vac can scan large areas, detect trash during inspection, and clean it on the spot—making cleaning smarter and more convenient.

Adapts Quickly to Dynamic Environments

With integrated **LiDAR SLAM and VSLAM** positioning, the system offers strong **environmental perception and path planning**.

The MT1 Vac adapts to frequent foot traffic and shifting obstacles while maintaining accurate mapping and stable navigation. It ensures uninterrupted, efficient cleaning—delivering truly autonomous performance in dynamic settings.



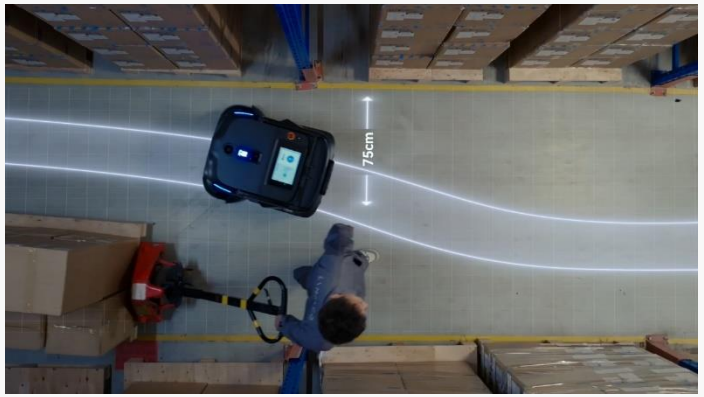
Superior Mobility

Low-clearance Operation (52 cm)

Easily slides under racks and sofas to clean hard-to-reach spots and corners.

Edge-to-Edge Cleaning

Powered by high-precision sensors and dynamic algorithms, it maintains close alignment with walls and pillars to ensure thorough, edge-to-edge cleaning with no missed spots.



75 cm Path Clearance & Smart Obstacle Avoidance

Easily navigates narrow aisles. Combines real-time obstacle recognition with smart rerouting to handle complex layouts safely.

User-friendly Design

Easy Maintenance, Tool-Free Swaps

Modular components are designed for fast replacement. Dust mop, dustbin, trash bin, roller brush, and side brushes can be swapped in seconds without tools—cutting maintenance time and cost.

The mopping module can be easily detached, allowing flexible use based on different cleaning needs—making operations simpler and more efficient.

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

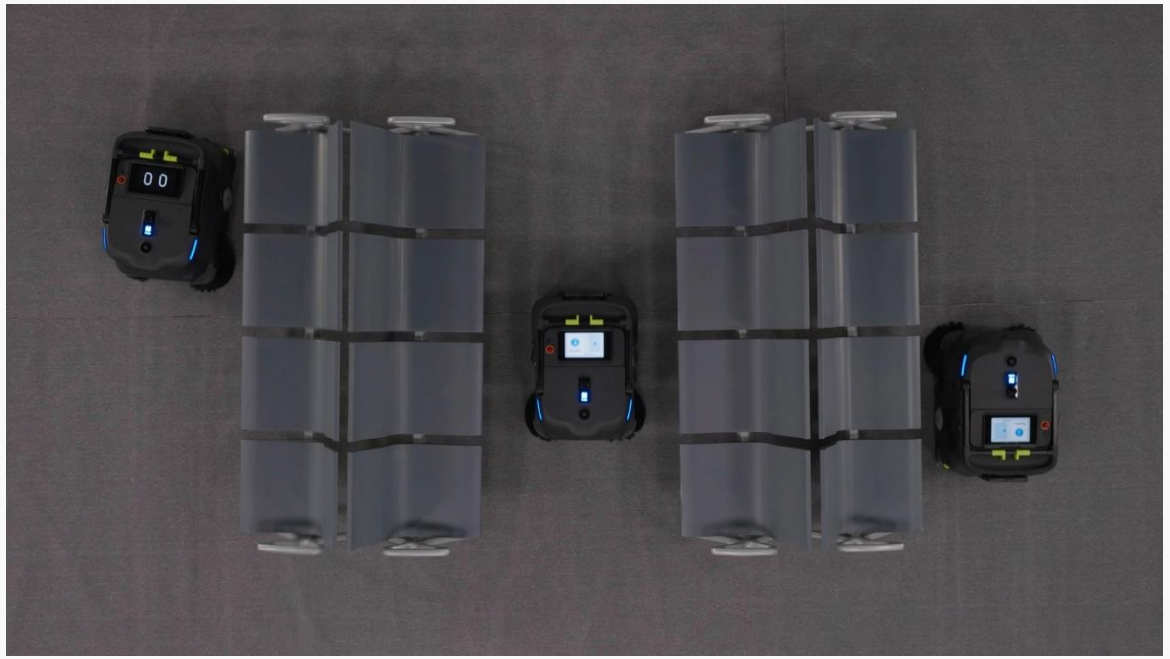
Extended Run-time，Always-on Performance

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

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Hotel

Shopping Mall

Airport

Metro Station

Dust-free Workshop

Casino

Office Building

Cinema

Hospital

Exhibition Center

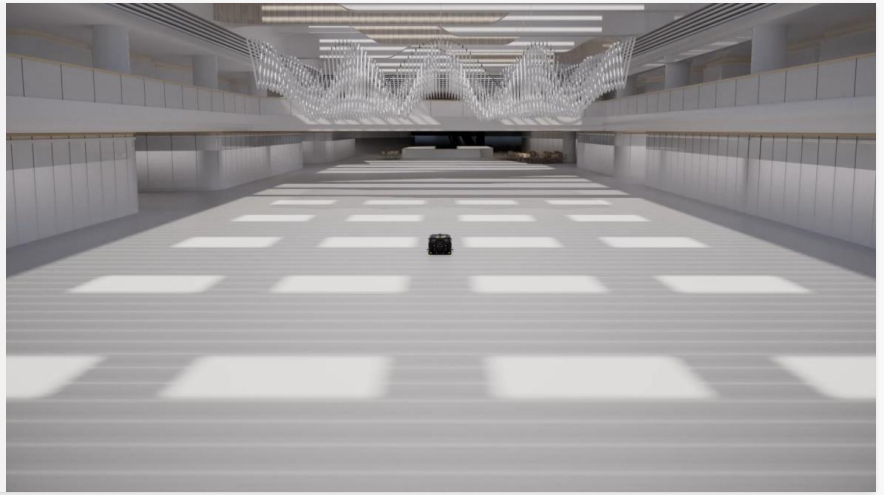
Nursing Home

School

Product Value

A Systematic Cleaning Solution for Large Spaces

MT1 Vac's powerful suction and large-capacity design support long, low-interruption cleaning cycles. It redefines traditional cleaning for large areas and helps build scalable, standardized cleaning operations.



Measurable and Repeatable Cleaning Efficiency

With a 55 cm cleaning width, dual-fan suction, and smart path planning, MT1 Vac significantly boosts efficiency, reduces reliance on labor, and shortens cleaning cycles—directly lowering cleaning cost per square meter and improving operational structure.

Product Value

Reliable Operation in Complex Environments

With laser + VSLAM navigation and all-around perception, MT1 Vac adapts to dynamic environments. Even in crowded or fast-changing areas, it maintains steady performance, supporting fully unattended cleaning operations.

Free Up Labor for Higher-Value Tasks

Its 24-hour runtime and low-maintenance design allow the robot to handle routine tasks independently, letting cleaning staff focus on more valuable work and improving overall team effectiveness.

Product Value

From “Clean Enough” to “Consistently Clean”

With AI-powered visual detection and automatic spot cleaning, the robot not only detects dirt but actively handles it, enabling full-cycle management of cleaning quality—something hard to achieve with manual methods.

One Machine, Many Scenarios

With its ability to adapt to different floor types, trash types, and layouts, MT1 Vac fits a wide range of environments—from shopping malls to hospitals, exhibition halls to transit hubs—helping businesses reduce the need for multiple machines and simplifying both management and procurement.

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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

Thank you!

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