



# ***PUDU MT1 Vac***

AI-powered Robotic Sweeper & Vacuum





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# PUDU MT 1 Vac

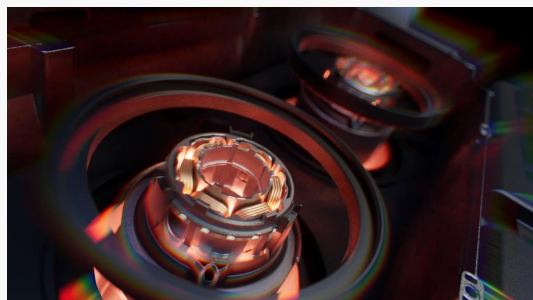
## AI-powered Robotic Sweeper & Vacuum

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 m³/h (15,069.47 ft³/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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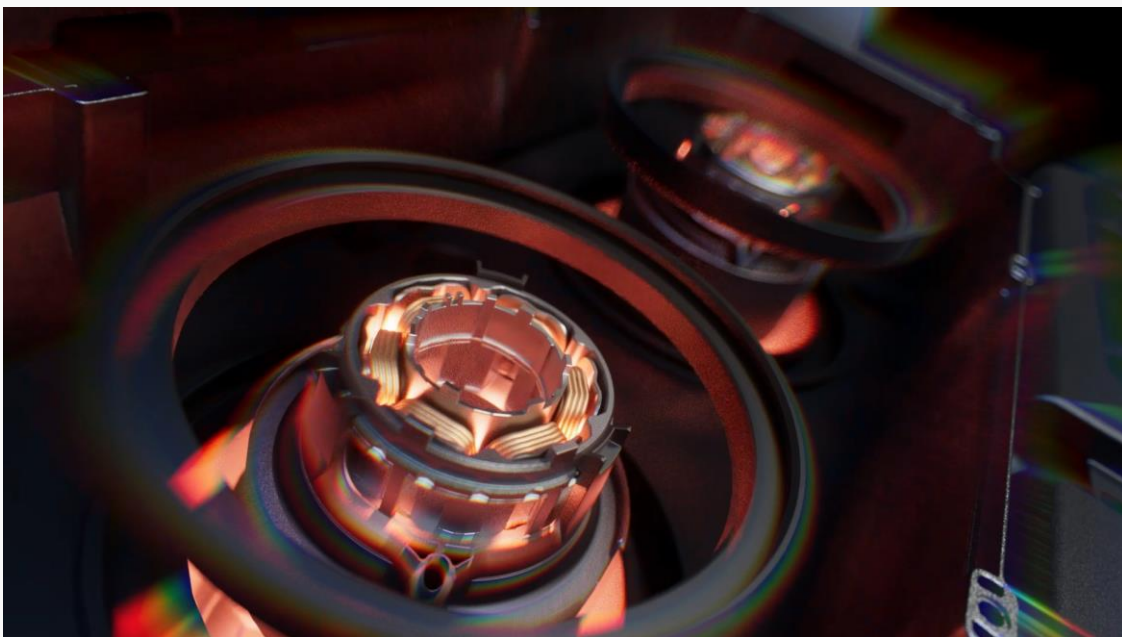
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# Powerful Vacuum Performance



## 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<sup>2</sup> 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  $0.3\text{ }\mu\text{m}$ , 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

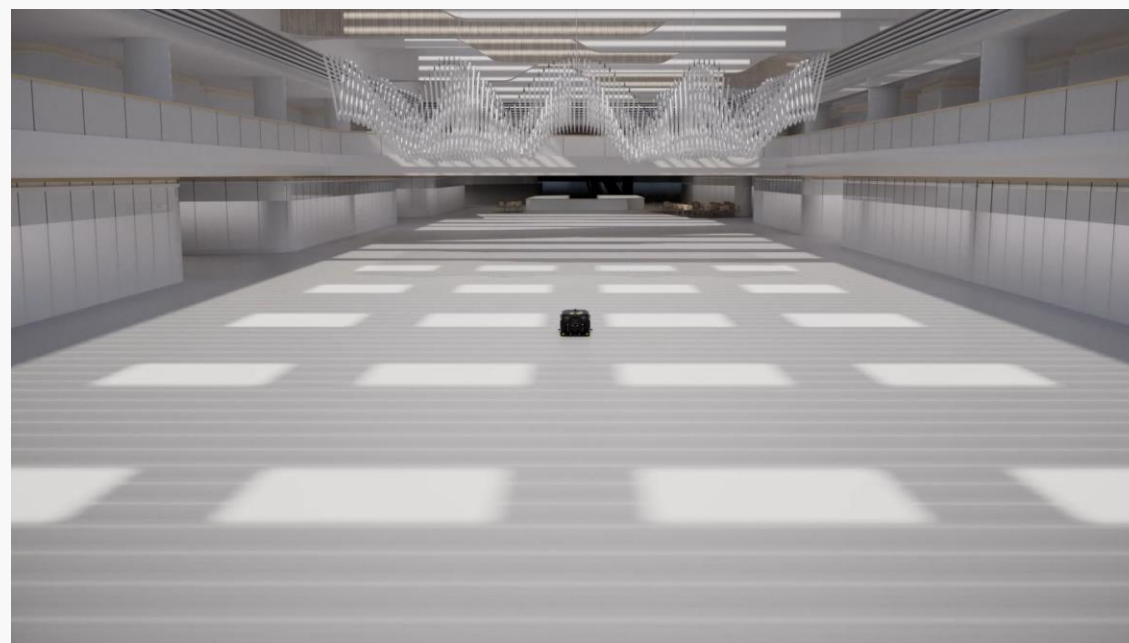
AI vision-based detection and smart path planning: With a wide field of view, the MT1 Vac can scan large areas, detect trash during inspection, and clean it on the spot—making cleaning smarter and more convenient.



# 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.



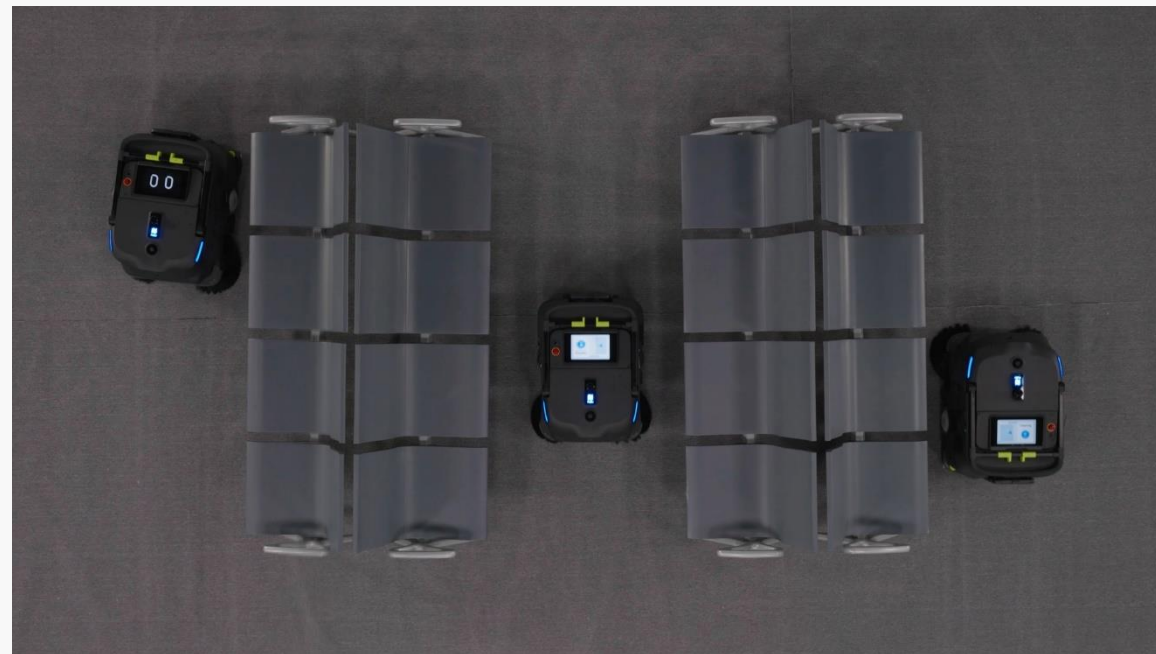
PUDU Link (App)



Elevator Control Module



E-gate Control Module





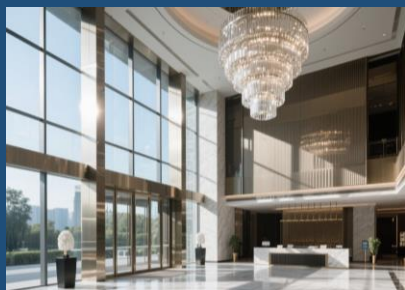
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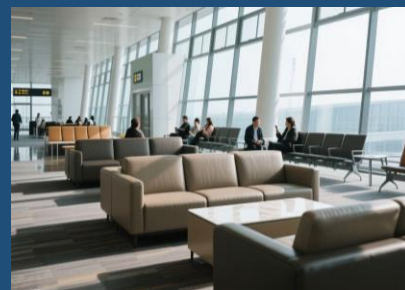
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Hotel



Shopping Mall



Airport



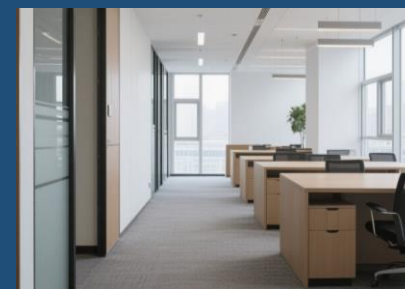
Metro Station



Dust-free Workshop



Casino



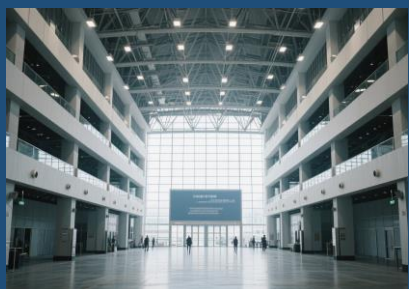
Office Building



Cinema



Hospital



Exhibition Center



Nursing Home



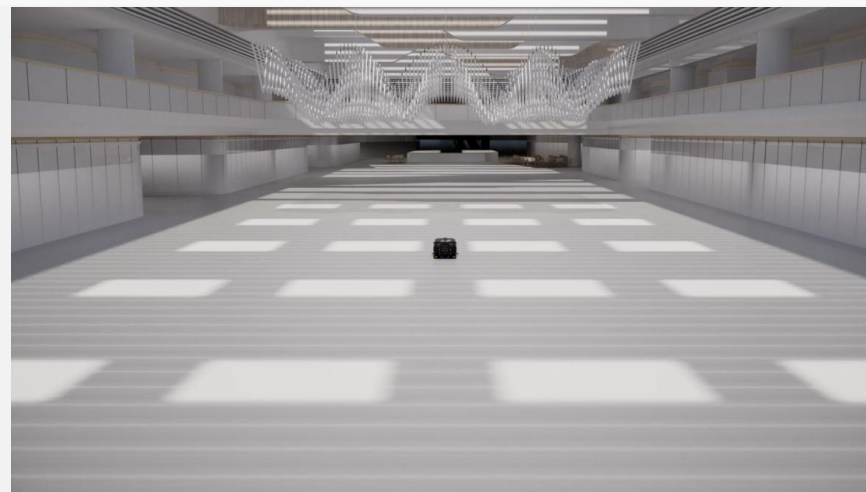
School



# Product Value

## A Systematic Cleaning Solution for Large Spaces

MTI 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, MTI 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, MTI 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 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.



# 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.

 reddot award best of the best	 reddot winner 2025	 INTERNATIONAL DESIGN EXCELLENCE AWARDS	 DESIGN AWARD 2025	 GOOD DESIGN AWARD 2022	 FAST COMPANY INNOVATION BY DESIGN 2024
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
 WIPO Global Awards Finalists	 CES	 IFEX Innovation Awards 2022	 Horeca Professional Expo HOSPITALITY INNOVATION PLANET	 COMMERCIAL KITCHEN INNOVATION CHALLENGE GOLD WINNER 2022	 THE IFSA'S THE HIGH FOODSERVICE SUPPLIER AWARDS BEST FOODSERVICE TECHNOLOGY PRODUCT - FRONT OF HOUSE 2023
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



## 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



# Thank you!



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