PUDU

PUDU CLEAN

LEANPRODUCTS

Lean manufacturing www.LeanProducts.eu

PUDU Commercial Cleaning Robots

Product Brochure

Greater Efficiency, Less Burden,
Driven by Value.

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Pudu Robotics

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PUDU CLEAN

Ensuring thorough and consistent cleanliness with intelligent automation and transparent performance results.

Leading with technology, powered by innovation, shaping the future of commercial cleaning robots.

Technology Leader
in global commercial cleaning

8 Key Technological Advantagest:

AI Magic Cleaning
Cleans where it's dirty, auto-adjusting for different debris.

Lidar + 3D VSLAM
Ensures stable localization and path planning in complex environments.

Full Environmental Awareness
Safe operation in high-risk areas like parking lots and outdoors.

Sweeping & Scrubbing in One Pass
Handles dry and wet cleaning without manual pre-sweeping.

Extendable Flexiarm
Industry-first, ensures edge-to-edge cleaning with no missed spots.

Dual-Action Cleaning
Cleans twice(sweeping & scrubbing intergration) in a single pass for a spotless result.

Fully Automatic & Self CLeaning
Reduces manual maintenance and keeps the robot ready at all times.

One-Click Start
Multi-modal interaction enables instant operation anytime, anywhere.

All Scenarios Cultivator
in global commercial cleaning

Top 1 Shipment Volume

Top 1 Country Coverage

Top 1 Industry Coverage

Beyond retail, hospitality, and real estate & property services, we also maintain a strong presence in high-barrier sectors like healthcare and education.

Leading in global shipments, present in many countries and industries, PUDU commercial solutions extend beyond traditional scenarios into high-barrier sectors like healthcare and education, setting a new benchmark for intelligent service terminals.

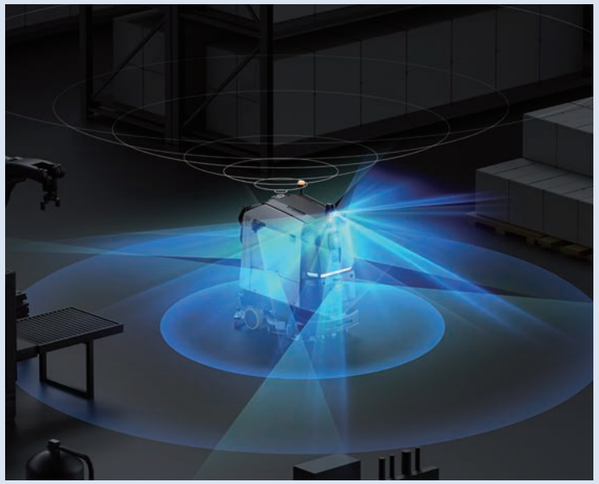
Global Commercial Cleaning – Ecosystem Builder

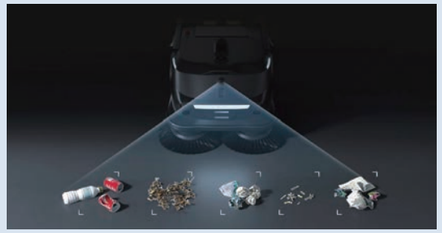
From small retail stores to major transit hubs, across indoor and outdoor environments, PUDU robot delivers precise and consistent performance. Supporting both dry and wet applications, and backed by a broad product lineup, they provide tailored solutions for diverse operational needs.

Pudu Robotics: Defining the Era of AI-Native Cleaning.

Precisely executed "Hardware Degrees of Freedom" × **Ever-evolving "AI Degrees of Freedom "**

AI-Native Cleaning Skills	=	Hardware Degrees of Freedom	×	AI Degrees of Freedom
AI Cleaning Mechanism Adaptive		Front (Strong) Sweep, Rear Scrub		Trash/Stain Recognition Capability
AI Adaptive Cleaning Agent Mixing		Disc Brush Independent Lifting & Control		Cleaning Effect Detection Capability
AI Spot Cleaning		Roller Brush Independent Lifting & Control		3D VSLAM
Stain Heatmap		Disc Brush Extendable Edge Cleaning		Automatic Edge-Cleaning
Cleaning Effect Map		Dual Cleaning Agent Real-time Automatic Mixing		Vehicle Recognition and Perception
Summon Cleaning		Front and Rear AI Cameras & VSLAM Cameras		.....
Guided Cleaning				
Ultra Spot Cleaning				
.....				

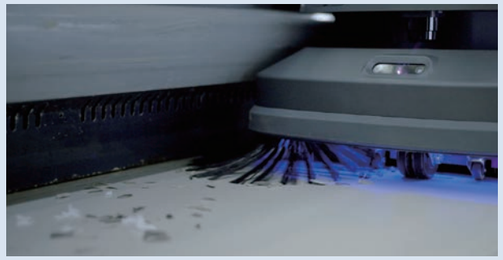




Empower productivity with commercial cleaning robot, freeing people to focus on what truly matters.

Ready at All Times

PUDU cleaning robots reduce the burden of recruitment, complex shift scheduling, rising night labor costs, and inconsistent execution. Operating 24/7 with standardized workflows, they deliver stable, repeatable cleaning performance.



Consistent High Cleaning Performance

Powered by AI-driven navigation and pre-configured maps, the PUDU robot automatically plans efficient routes to ensure full coverage—from corners and corridors to large open areas. Each square meter is cleaned to a defined standard, reducing missed spots and inconsistent cleaning.

Every Clean, Fully Traceable

Cleaning progress is monitored in real time, with routes automatically recorded and reports generated instantly. Tasks are traceable, results are verifiable, and performance is measurable—providing clear operational transparency.

Empowering ESG for a Sustainable Future

PUDU robots boost operational efficiency while enhancing a modern brand image. With energy-efficient performance and digital management, they support sustainability goals and ESG initiatives. Features like mobile advertising and system integration further extend their commercial value beyond cleaning.

Select the most suitable cleaning robot

Scrubbing

PUDU BG1 Pro

World's first AI-native Large Scrubber-Dryer Robot Pro

Ideal for Parking lots and other large-area deep cleaning

PUDU BG1

World's first AI-native large scrubber-dryer robot

Ideal for 2500~10000+m² cleaning area, stubborn stain removal

PUDU CC1 Pro

World's first AI scrubbing robot

Ideal for 500–2,000m² indoor areas, effortlessly removes stubborn floor stains.

PUDU CC1

4-in-1 cleaning robot

Ideal for 500–1,500m² indoor areas, effortlessly handles daily floor cleaning.

PUDU SH1

Small multifunctional scrubber dryer

Ideal for small, high-traffic indoor areas such as restaurants and restrooms.

Sweeping

PUDU MT1

world's first AI sweeping robot

Ideal for 500–25,000m² indoor areas, effortlessly handles all types of bulky debris.

PUDU MT1 Max

AI sweeping robot for complex scenarios

Ideal for 500–25,000m² garages, outdoor areas, and other complex spaces, effortlessly handles bulky debris.

Carpet Vacuuming

PUDU CC1

4-in-1 cleaning robot

Ideal for 500–1,500m² indoor areas, effortlessly handles daily floor cleaning.

PUDU MT1 Vac

AI dry-cleaning robot for large-scale spaces

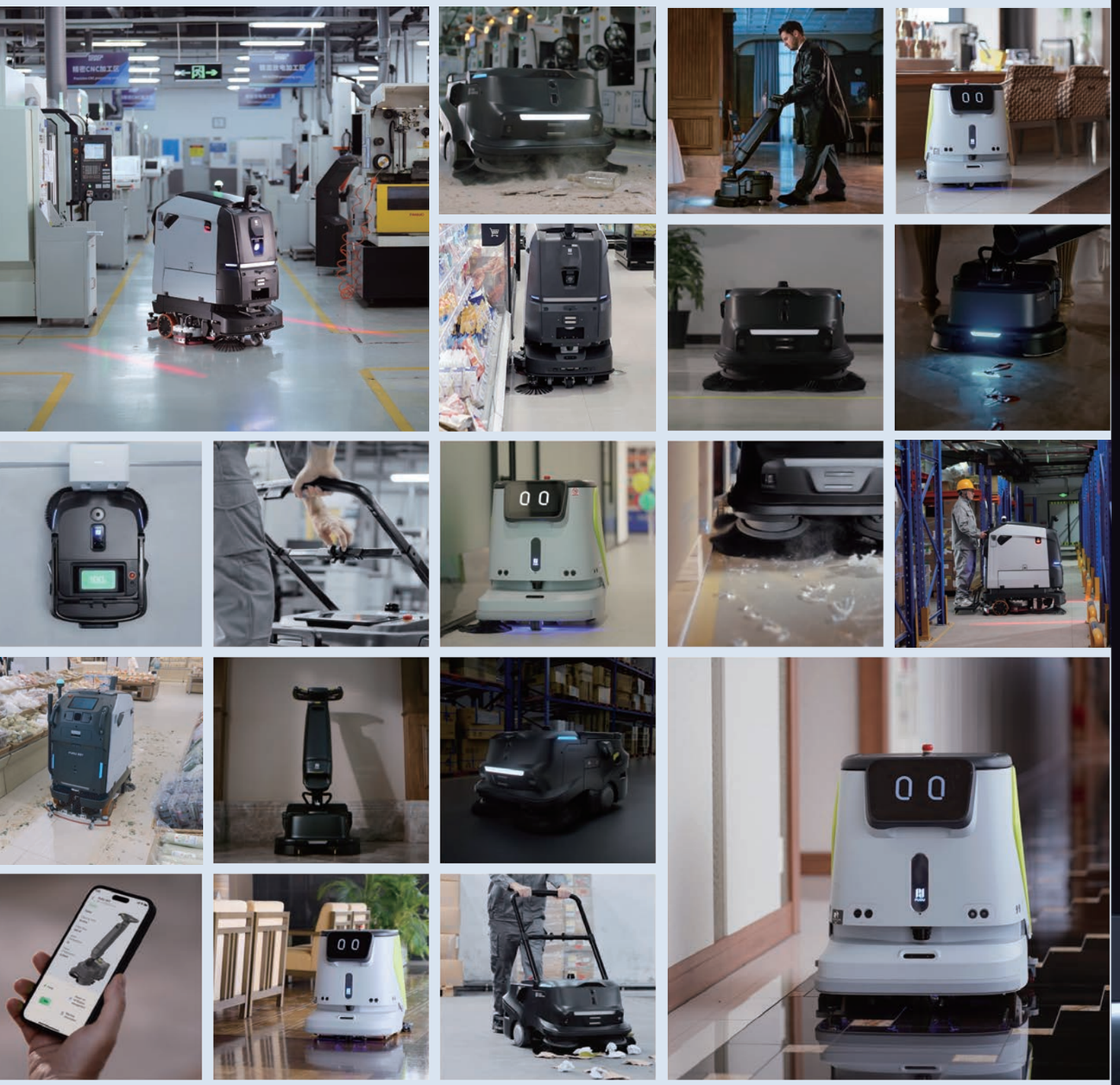
Ideal for 500–2000m² carpeted areas, effortlessly handles daily vacuuming.

Hard-floor/Vacuuming & Dust-mopping

PUDU MT1 Vac

AI dry-cleaning robot for large-scale spaces

Ideal for 500–2000m² carpeted areas, effortlessly handles daily vacuuming.



PUDU BG1 Series

AI-Native Large Scrubber-Dryer Robot

- One-Pass Sweep & Scrub
- Extendable Edge Cleaning
- Instant, User-friendly Maintenance
- AI Magic Cleaning
- 3D Perception Enhancement
- 24/7 Continuous Operation

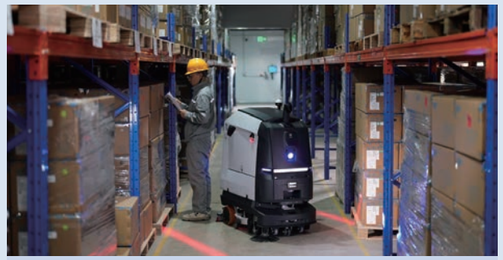
Features

Extendable Edge Cleaning

The scrubbing brush can physically extend to reach walls and shelving edges, thoroughly removing dust and dirt along edges, improving coverage, and minimizing manual touch-ups.

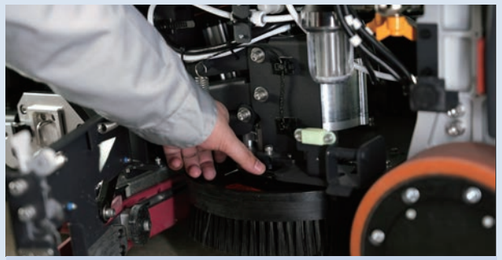
One-Pass Sweep& Scrub

Combine sweeping and deep scrubbing into one efficient workflow. Featuring smart dosing, superior down pressure, and an ultra-wide path clearance to cover more ground in less time.



3D Perception Enhancement

The BG1 Series maps accurately and dodges obstacles in real time. It ensures reliable, efficient cleaning - even in dark, high-ceiling, or high-interference environments.



Instant, User-friendly Maintenance

The PUDU BG1 Series features automatic disc-brush attachment, eliminating manual positioning and setup. Coupled with a user-friendly snap-on design for all critical consumables, routine maintenance can be completed in under 1 minute.

24/7 Continuous Operation

The all-in-one station automates refilling, drainage and charging, ensuring 24/7 mission-readiness.

Human-Robot Interaction

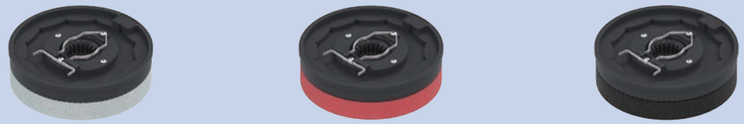
Ride-on Mode: Deploy the platform for instant manual control. It accelerates site mapping and long-distance transitions, ensuring rapid response to unforeseen situations beyond autonomous operation.

BG1 Series Accessories

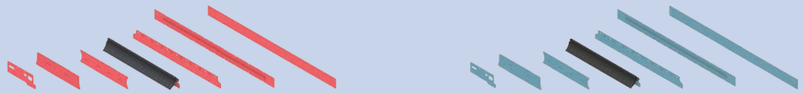
Consumables

Scrubbing Disc Brush

Scouring Pad



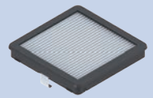
Rubber Blade



Side Brush

Roller Brush

Fan Filter



Trashbin

PUDU CC1

reddot winner 2023

Intelligent Commercial Cleaning Robot

- 4-in-1 Versatile Cleaning
- Auto Power Charging & Auto Water Addition and Drainage
- Diversified Brushes
- Mobile Water Tank No Plumbing Modification
- Dynamic Space Perception
- Self-cleaning & Maintenance

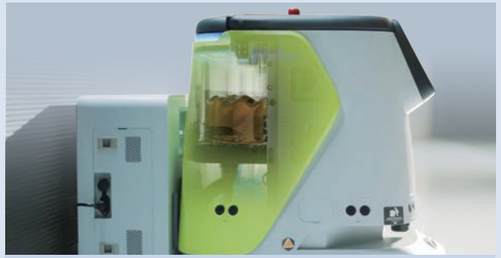
Features

4-in-1 Versatile Cleaning

Sweeping, scrubbing, vacuuming, and dust mopping functions in one.

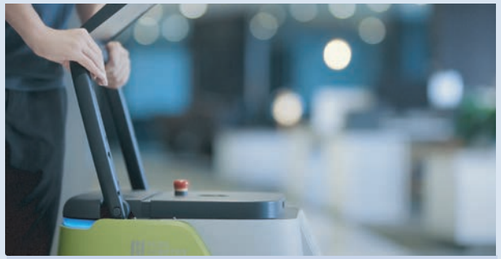
Dual Scrubbing Brushes

Superior cleaning performance with dual scrubbing brushes.



24/7 Continuous Operation

24/7 continuous operation enabled by self-cleaning and maintenance systems, including automated docking stations, self-cleaning modules, and mobile water tank.

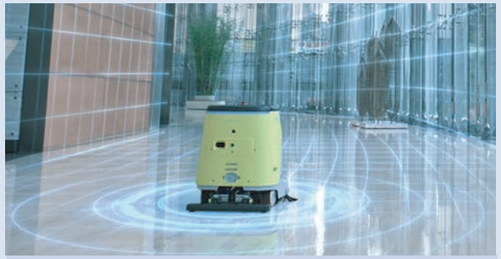


Manual Mode + PUDU Link

Effortless control via an extendable steering handle and real-time mobile management.

Measurable Cleaning

Cleaning results are clearly visible in the automatically generated reports.



Dynamic Space Perception

Ideal for environments that frequently change, with the ability to perform real-time route

planning and intelligent touch-ups based on the current surroundings.

PUDU CC1 Pro

Ultimate AI Cleaning Robot

- AI Magic Cleaning
- AI Adaptive Cleaning
- AI Spot Cleaning
- Real-Time Cleaning Performance Feedback
- AI Fusion Perception
- IEC 63327 Certification

Features

Powered by the Magic Cleaning AI System

Deep integration of hardware and software. Sensors, hub motors, side brushes, and roller brushes work in sync to enable: AI adaptive cleaning, AI trash detection, guided cleaning and AI spot cleaning.

AI Adaptive Cleaning

Automatically adjusts cleaning modes based on conditions. Ensures thorough removal of stubborn stains.

AI Spot Scrubbing, 3× Efficiency

Detects common wet stains in real time, such as coffee and spills, and dynamically plans the optimal cleaning path.

Cleaning Heatmaps & Measurable Cleaning

Debris Detection Heatmap: Reveals where debris accumulates, helping optimize cleaning deployment.Cleaning Performance Heatmap: Marks areas with persistent stains after multiple passes,enabling targeted follow-up and manual intervention.

Autonomous Cleaning Strategy & Smart Re-cleaning

Instant Response: replans routes within 1 second. No idle waiting - cleaning continues without interruption.Smart Re-cleaning: automatically returns to missed areas after obstacles are cleared,ensuring full coverage.

Guided Cleaning for Efficient Human-Robot Collaboration

3 Steps to Handle Stubborn Stains:
Detection: generates real-time heatmaps to locate residual dirt
Reporting: records missed areas with precise location data
Closed-Loop Execution: guides staff directly to target spots for efficient resolution

CC1 Series Accessories

Docking Station/Self-Cleaning

Docking Station

Supports automatic charging, water supply and drainage, and detergent addition.

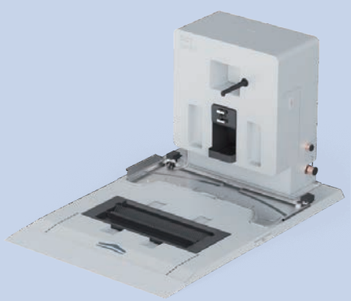
PUDU Mobile Water Station

Portable "Water Charging Bank"

No modifications to the plumbing are necessary.

Intelligent monitoring with timely water change alerts.

User-Friendly "Trolley Case" Design

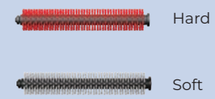


PUDU Self-Cleaning Docking Station

Supports automatic self-cleaning, charging, water supply and drainage, and detergent addition.

CC1 Series Accessories

Consumables



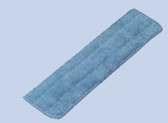
Scrubbing Brush

Sweeping & Scrubbing Brush

Sweeping Brush

Side Brush

Side Brush(longer version)



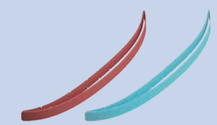
Dust Mopping Cloth

Squeegee

Carpet Vacuuming Modular

Dust Mopping Modular

Scrubbing Bursh



Scrubbing Squeegee Rubber Strips

Dust Mopping Rubber Strips

Customized

Ad Screen

Warming Lamp

IOT：Lift Control/E-door

Customized Skin

PUDU MT1

AI Powered Robotic Sweeper

- No Debris Too Big or Small
- AI Trash Recognition
- AI Spot Cleaning
- 24/7 Continuous Operation
- Rapid Adaptation to Changing Environments
- User-Friendly Design

Features

No Debris Too Big or Small

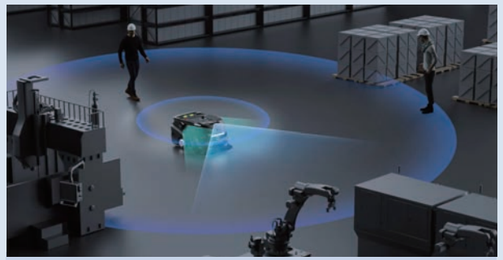
The dual-disc brushes easily handle larger debris like leaves and bottles, while efficiently sweeping up fine dust and dirt to ensure no small particles are left behind.

AI Magic Cleaning

Hardware-software integration synchronizing sensors, hub motors, side brush motors, and roller brush motors to enable AI adaptive cleaning, AI trash recognition, and AI spot cleaning.

3D VSLAM

Equipped with a 3D perception system, PUDU MT1 maps environments accurately, detects obstacles in real time, and navigates efficiently even in high ceilings, nighttime, or heavy interference, ensuring reliable performance in complex cleaning tasks.



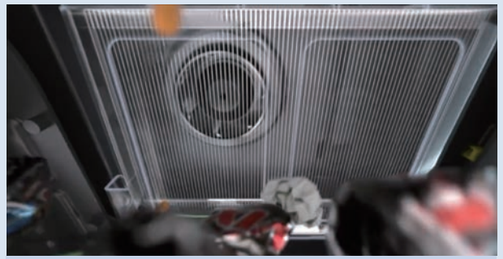
Omnidirectional Perception

With three-dimensional depth perception and multi-sensor fusion for navigation and obstacle avoidance, the MT1 navigates complex spaces with ease.

AI Spot Cleaning

5x Efficiency Increase

Targeted and Precise: the PUDU MT1 features an ultra-wide scanning field of view, effortlessly covering large areas. During the routine patrols, it accurately detects and efficiently cleans up waste, making cleaning smarter and more convenient.



Active Dust Control

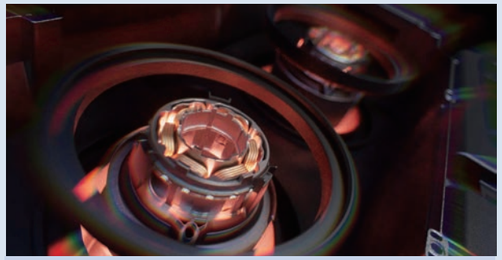
Utilizes high-flow negative pressure ventilation and an efficient filter to trap particles in the debris box, effectively preventing secondary pollution.

PUDU MT1 Vac

AI-powered Robotic Sweeper & Vacuum

- Powerful Suction
- High Efficiency
- Extended Run-time
- AI-driven Adaptive Cleaning
- Quick-Release Dust Mop Module
- Hand-vacuum Extension

Features



Double Efficiency

Dual-fan deep vacuuming: Equipped with a new dual independent air duct system, boosting suction efficiency by 200%.

For Both Carpet and Hard Floors

AI-powered floors recognition identifies carpet and hard floors in real time, automatically adjusting suction and brush speed to protect delicate surfaces.

24/7 Continuous Operation

With a large battery, fast-charging system, and charging station, the MT1 Vac supports 24/7 operation.

Easy Maintenance,Tool-Free Swaps

Quick-release modular design allows tool-free replacement of most cleaning components in seconds. The dust mop can be removed and deployed flexibly to suit different cleaning needs.

Dust and Waste Separation

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.

Hand-vacuum Extension

Hand-vacuum extension allows cleaning of sofa sides, walls, and glass surfaces. Flexible reach for edges, high surfaces, and soft furnishings.

PUDU MT1 Max

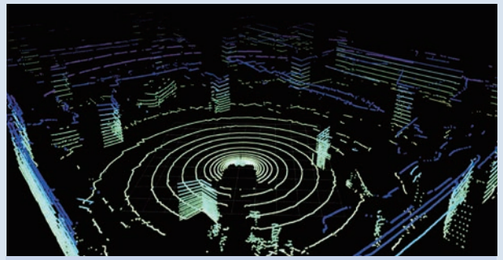
AI-powered 3D Perception Robotic Sweeper

- 3D Perception Integration
- Magic Cleaning
- Intelligent Active Interaction
- Empty the Facility of Any Dirt & Trash
- 24/7 Continuous Operation
- AI Adaptive Cleaning
- Covers Up to 100,000㎡
- Smart Obstacle Avoidance Upgrade

Features

Intelligent Active Interaction

With both structural protection and smart response systems, the MT1 Max can actively perceive and adapt to its surroundings.



3D Perception Enhancement

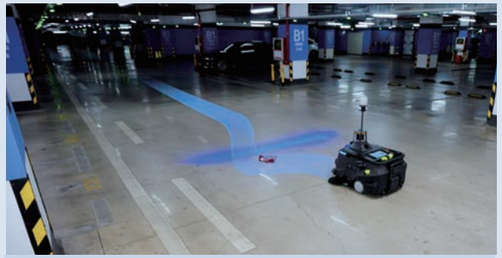
Equipped with a 3D perception system (3D LiDAR + multi-sensor fusion), MT1 Max maps environments accurately, detects obstacles in real time, and navigates efficiently even in high ceilings, nighttime, or heavy interference, ensuring reliable performance in complex cleaning tasks.

No Debris Too Big or Small

Empty the facility of any dirt & trash

Magic Cleaning

MT1 Max's dual-chip design with hardware–software synergy powers adaptive cleaning, trash recognition, spot cleaning, and more.



AI Adaptive Cleaning Strategy

Adaptive cleaning slows brushes rotation for light debris to prevent scattering, speeds them up for heavier waste, and adjusts body angle to guide debris into the dual-brush gap for effective pickup.

Smart Obstacle Avoidance

MT1 Max features multiple avoidance strategies, proactively yielding to vehicles.

Pedestrian and Animal Avoidance: Quickly reacts to sudden “pop-out” movements.

MT1 Series Accessories

Charging Station

Charging Station

Consumables/Accessories

Sweeping Side Brush

Sweeping Roller Brush

Rubber Roller Brush
（Easy-clean Design）

Detachable Roller Brush

High-efficiency Filter (H11/H13)

Forkift Safety Light

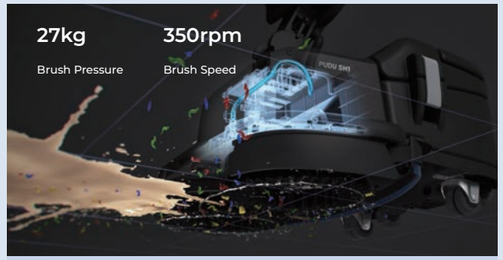
Elevated Warning Lights

PUDU SH1

Smart Upright Scrubber Dryer

- Expert in Tough Stain Removal
- Air-liquid-debris Separation
- Multi-dimensional Cleaning
- Measurable Cleaning
- Real-time Components Monitoring

Features



Leave no mess behind

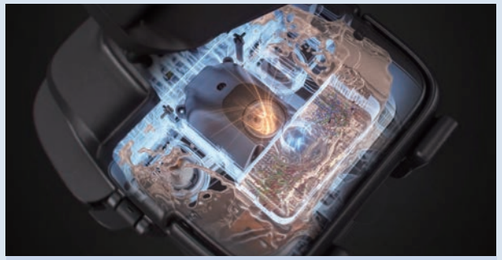
Compared to a conventional mop, SH1 saves 80% on water and cleaning agent usage and reduces cleaning time by 70%.

Touch Screen Interface

Featuring a 4.2-inch touch screen, enhanced with visual and audio cues for an innovative interactive experience.

Multidimensional Cleaning

Equipped with innovative accessories, the PUDU SH1 excels at cleaning vertical surfaces, effectively removing grime from glass display cases, tiled walls, mirrors, and windows with ease and precision.



Air-Liquid-Debris Separation

The PUDU SH1 features a first-to-market wastewater

tank with an air-solid-liquid separation system,

effortlessly separating gases, liquids, and solid particles, facilitating a smooth disposal process for both wet and dry refuse, and eliminating the risk of drain blockages.

Multi-dimensional Cleaning

Equipped with innovative accessories, the PUDU SH1 excels at cleaning vertical surfaces, effectively removing grime from glass display cases, tiled walls, mirrors, and windows with ease and precision.

PUDU Cleaning Report

Receive post-cleaning notifications that offer insights into your cleaning session. You'll get detailed reports on the duration of cleaning, water usage, and the area cleaned, giving you a comprehensive overview of your cleaning performance after the job is done.

SH1 Series Accessories

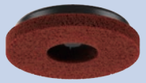
Scrubbing Disc Brush

Hard

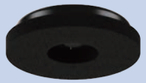
Standard

Soft

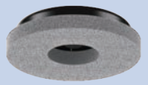
Scouring Pad



Hard

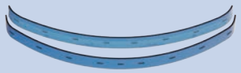


Standard

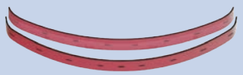


Soft

Rubber Blade



Blue Rubber Blade



Red Rubber Blade

Vertical Cleaing

Cleaning Suit

Product Specifications Overview

Product Name	CC1	CC1 Pro	MT1	MT1 Vac	MT1 Max	BG1 Pro	BG1	SH1
Machine Dimensions	629×552×695 mm		840×600×490mm		840×600×675mm	1195×760×1303mm		490×530×1200mm
Machine Weight	75kg		74kg	73kg	81kg	Approx. 344kg		27kg
Navigation Mode	Laser + VSLAM + Marker		Laser + VSLAM + Marker		3D Laser + 3D VSLAM Fusion	3D Laser + 3D VSLAM Fusion	Laser + 3D VSLAM Fusion	N/A
AI Cleaning	Not Supported	AI Magic Cleaning, AI Spot Cleaning, AI Adaptive, AI Smart Refill, AI Heat Map, Guided Cleaning	AI Magic Cleaning, AI Spot Cleaning, AI Adaptive, AI Smart Refill, AI Heat Map, Guided Cleaning			AI Magic Cleaning, AI Spot Cleaning, AI Adaptive, AI Smart Refill, AI Heat Map, Guided Cleaning		N/A
Sensors	Lidar, VSLAM Cam ×1, RGBD ×2, RGB ×2, Line Laser ×3		Lidar, VSLAM Cam ×1, RGBD ×3, RGB ×2, Line Laser ×2		3D Lidar, VSLAM Cam ×1, RGBD ×3, RGB ×2, Line Laser ×2	3D Lidar, VSLAM Cam, RGBD, RGB, Line Laser	Lidar, VSLAM Cam, RGBD, RGB, Line Laser	N/A
Cleaning Methods	Scrub, Sweep, Vacuum, Dust-mop		Sweep, Vacuum, Dust-mop			Sweep, Scrub, Dust-mop, Polish		Scrub
Cleaning Efficiency	700–1000m²/h	Covered Cleaning: 700–1000m²/h; Spot Cleaning: 1500–3000m²/h	Covered Cleaning : 1800m²/h; Spot Cleaning : 6000m²/h	Covered Cleaning (Vacuum): 1400m²/h; Spot Cleaning (Sweep): 1800m²/h	Covered Cleaning : 2200m²/h; Spot Cleaning : 7000m²/h	Covered Cleaning Mode: 2000m²/h; Spot Cleaning Mode: 6000m²/h		1100–1600m²/h
Cleaning Width	50cm		70cm			55cm		49cm
Water Tank Capacity	Clean water 15L / Dirty water 15L		N/A			Clean water 75L / Dirty water 60L		Clean water 4L / Dirty water 4L
Dustbin Capacity	0.45L		35L	8L	35L	5L		N/A
Dust Bag Capacity	2.5L		35L (Shared with Trashbin)	14L	35L (Shared with Trashbin)	5L (Shared with Trashbin)		N/A
Battery Life	5-9h		4-8h	3-6.5h	6.5-10h	7.5h		70-100min
Maximum Obstacle Height	20mm		20mm		50mm (Speed bump)	70mm (Speed bump)	25mm	N/A
Min. Path Clearance	70cm		75cm			85cm		N/A
Charging Time	< 3.5h		Approx. 3h	< 3.5h		Approx. 3h		2.5h

PUDU ROBOTICS

Pudu Robotics, a **global leader in the commercial service robotics sector**, is dedicated to empowering easier work and better lives through AI and robotics, with a vision of building a global intelligent robotics infrastructure that serves 10 billion people worldwide.

Built on three core technologies—**mobility, manipulation, and AI**—Pudu Robotics has pioneered an industry-first "**One Brain, Multiple Embodiments**" architecture, establishing a comprehensive product portfolio that includes **specialized, semi-humanoid, and humanoid robots**.

Currently, Pudu offers four major product lines: **service delivery, commercial cleaning, industrial delivery and general embodied AI**. Its solutions are widely deployed across industries such as **retail, hospitality, manufacturing and industrial facilities, food and beverage, real estate and property services, healthcare, entertainment and sport, education, and public services.**

To date, Pudu Robotics has **shipped over 120,000 units** globally, with a presence in **more than 80 countries and regions.**

Global Leader in Commercial Service Robotics

TOP 1
Global Market Share *

120,000+
Shipped Globally

700+
Global Distributors

80+
Countries and Regions Covered

1000+
Cities Covered

40,000+
End Customers

* Source: Market Research on Global Commercial Service Robotics (2023) by Frost & Sullivan

Global Patents and Trademarks

Pudu Robotics holds **1,842 global patents,** including pending applications. Additionally, we have **1,353 global trademark** registrations spanning **over 50 countries and regions.**

Global Certifications

* Relevant statistics as of March 2026