

PUDU BG1 Series

AI-Native Large Scrubber-Dryer Robot





CONTENT

About BG1 Series

Key Features

Application Scenarios

About PUDU



Product Appearance





Product Appearance

Sensor

Audio-Visual
Warning System

Cleaning Mechanism

Others

Emergency Stop Button

Control Joystick

Storage Box

RGBD

Suction Pipe

AI Camera

Front Fill Light

LiDAR

Dual Cleaning Agent Boxes

Suction Pipe

Squeegee

3D VSLAM Camera

Power On/Off Button

Outline Light

Semi-automatic Water Inlet
(Supports Auto-stop When Full)

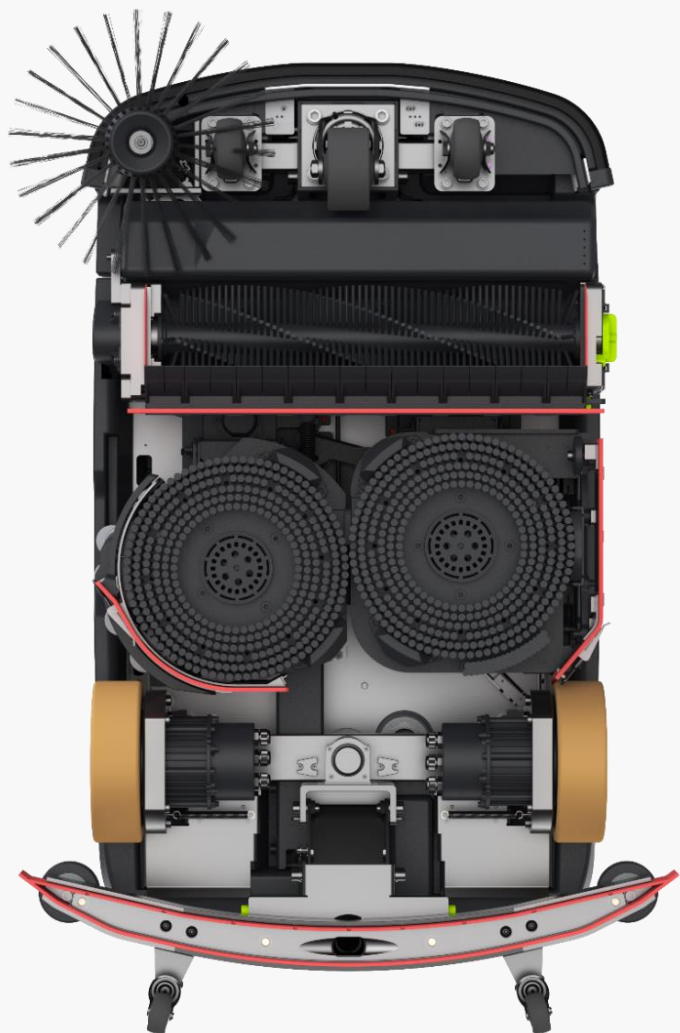
RGB Camera

Extended Disc Brush





Core Functions



**One-Pass
Sweep & Scrub**



**Extendable
Edge Cleaning**



**Instant, User-friendly
Maintenance**



AI Magic Cleaning



**3D Perception
Enhancement**



**24/7
Continuous Operation**

- **Scrubbing, Polishing, Sweeping, Dust Mopping**
- **Dual Cleaning Agent Automatic Real-time Mixing**
- **Ultra-long Run-time, Ultra-high Cleaning Efficiency**

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Product Specifications

	PUDU BG1	PUDU BG1 Pro
Total Machine Weight	approx. 344 kg (approx. 758 lbs)	
Overall Dimensions	1195x760 x 1303 mm (with squeegee) 1120x660 x 1303 mm (without squeegee) 47.0x29.9 x 51.3 in (with squeegee) 44.1x25.9 x 51.3 in (without squeegee)	
Battery Capacity	90Ah (48V platform, equivalent to 24V platform 180Ah)	
Run-time	Front sweep, rear scrub, up to 7.5h , Standard mode 5.5h+	
Charging Time	High voltage area (AC≥180V): about 3h Low voltage area (AC≤180V): about 4.5h * Adapter auto voltage recognition	
Cleaning Capability	Sweeper-scrubber integration, dust mopping (optional), polishing (optional) Supports Extendable Edge Cleaning, Dual Cleaning Agent Real-time Mixing	
Navigation Method	LiDAR + 3D VSLAM Fusion Positioning	3D LiDAR + 3D VSLAM Fusion Positioning



Product Specifications

	PUDU BG1	PUDU BG1 Pro
Min. Path Clearance	85 cm(33.5 in)	
Cleaning Width	550 mm / 708 mm (with side brushes) 21.65 in / 27.87 in (with side brushes)	
Cleaning Efficiency (Scrubbing)	Covered Cleaning Mode: Max. 2000 m²/h Spot Cleaning Mode: Max. 6000m²/h Covered Cleaning: Max. 21,528 ft²/h Spot Cleaning Mode: Max. 64,583.4 ft²/h	
Dust Box Capacity	5L 1.32 Gal (US)	
Water Tank Capacity	Clean Water Tank: 75 L Waste Water Tank: 60 L Clean Water Tank: 19.81 Gal (US) Waste Water Tank: 15.85 Gal (US)	
Cleaning Agent Box	Dual Cleaning Agent Box , total capacity approx. 7L	
Unattended Operation	Supported (requires optional docking station)	





CONTENT

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AI-Native Cleaning Robot?

Hardware Design → ~~AI-Power~~ → AI-Native

AI-Native Cleaning Robot

=

Precisely executed "Hardware Degrees of Freedom"

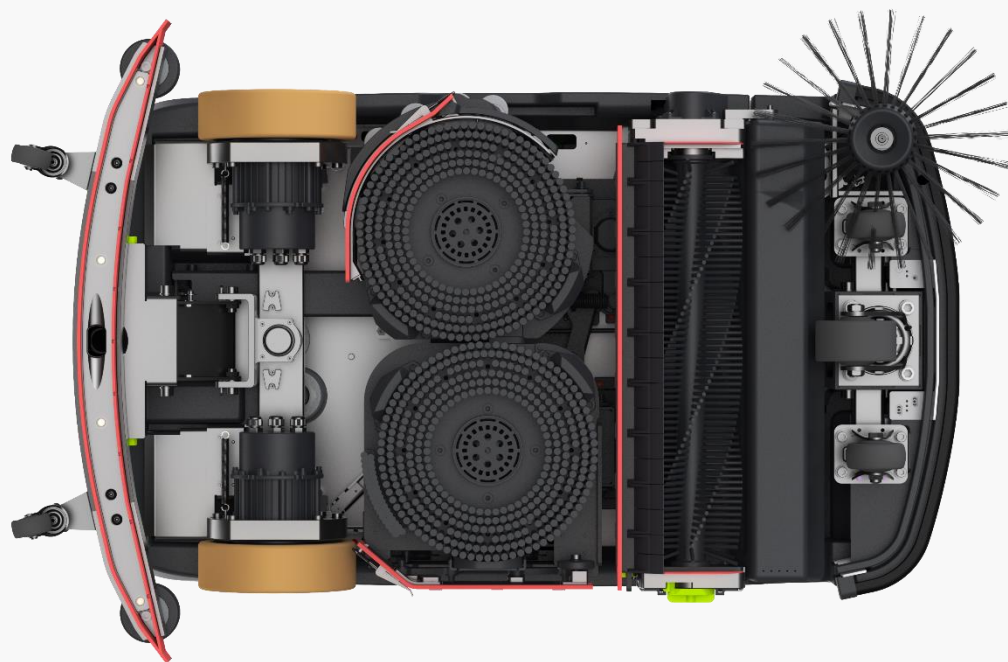
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Ever-evolving "AI Degrees of Freedom "



Front Sweep, Rear Scrub, Restructuring Cleaning Efficiency

One-Pass Sweep & Scrub

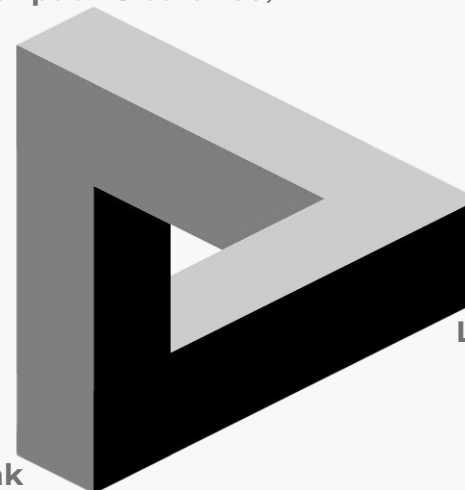


550mm scrubbing width, **708mm** sweeping width

75L/60L water capacity, **7L** cleaning agent capacity, **5L** dust box capacity

Advanced Architecture, Ultimate Efficiency

Compact Design
(for path Clearance)



Long Run-time

Huge Water Tank

48V electrical architecture, 90Ah equivalent to 24V platform **180Ah**

7.5h+ cleaning time (standard mode **5.5h+**), **2000m²/h** cleaning efficiency



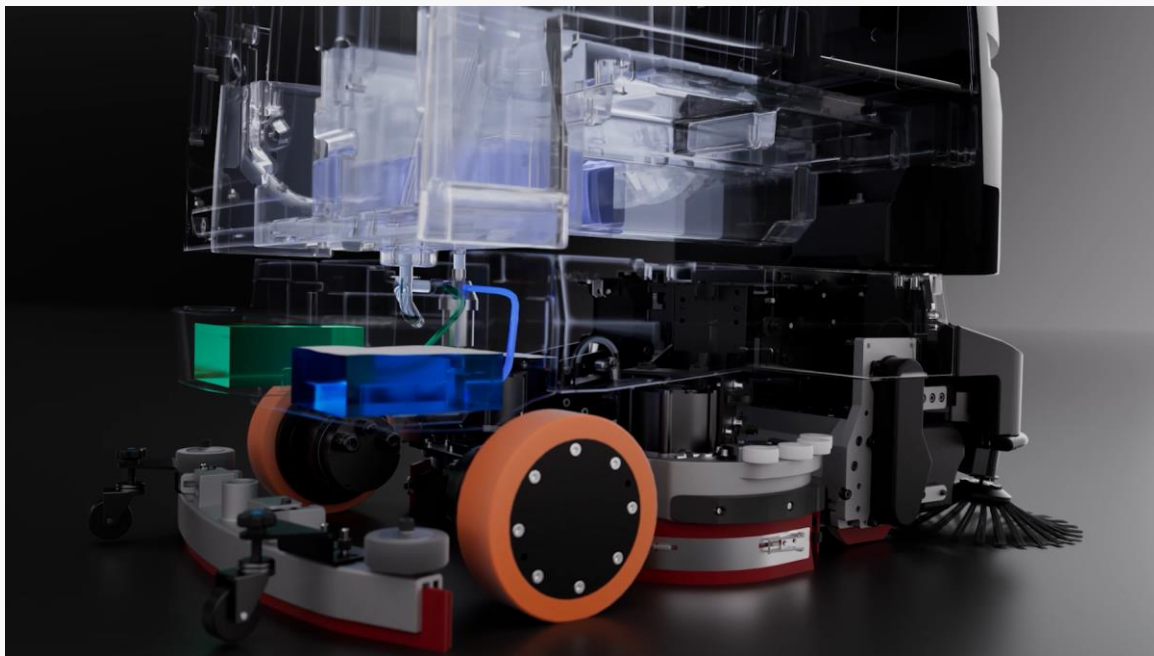
Extendable Edge Cleaning



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.



Dual Cleaning Agent Real-time Mixing



Dual agent tanks(**7L total**) with **milliliter-level accuracy**.

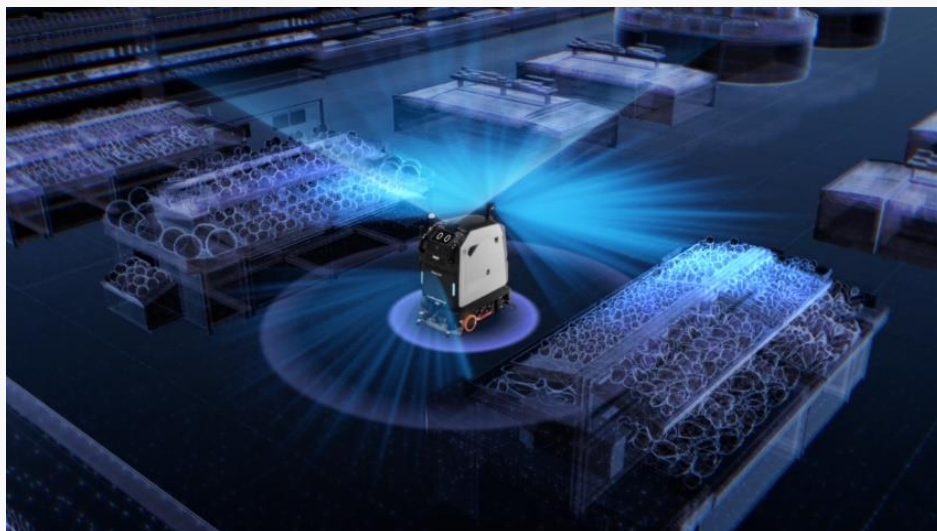
Automatic dosing eliminates inaccuracies from manual mixing.

Potential Agent Combinations:

1. Acidic Cleaner + Alkaline Cleaner
2. Cleaner + Disinfectant
3. Cleaner + Defoamer
4. Cleaner + Deodorizer
5. Cleaner + Polishing Conditioner

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Visual 3D Fusion



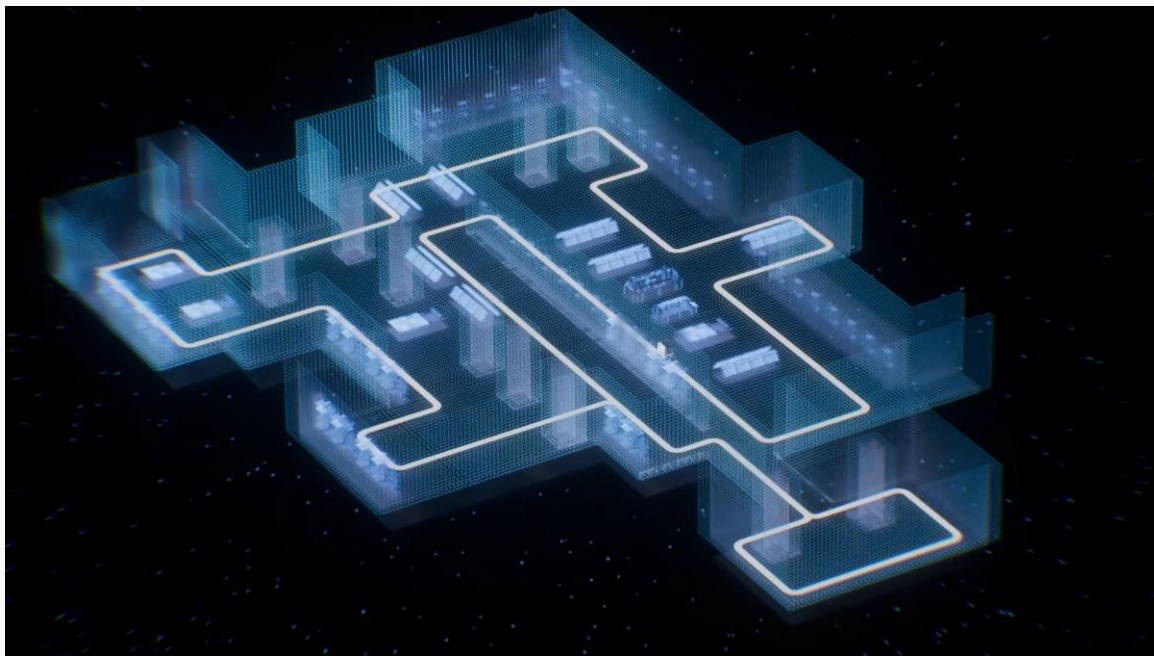
3D VSLAM + LiDAR + Multi-sensor Fusion



AI High Computing Power Platform
(Dual Chips + AI Enhanced Computing Unit)



Magic Cleaning – AI Spot Cleaning



Spot Cleaning Mode Cleaning Efficiency

6000m²/h

Powered by an ultra-wide FOV and AI vision, the PUDU BG1 series detects and targets messes in real-time. This "See-and-Clean" approach transforms operations from passive to proactive, ensuring pristine floors in high-traffic zones with split-second response times.

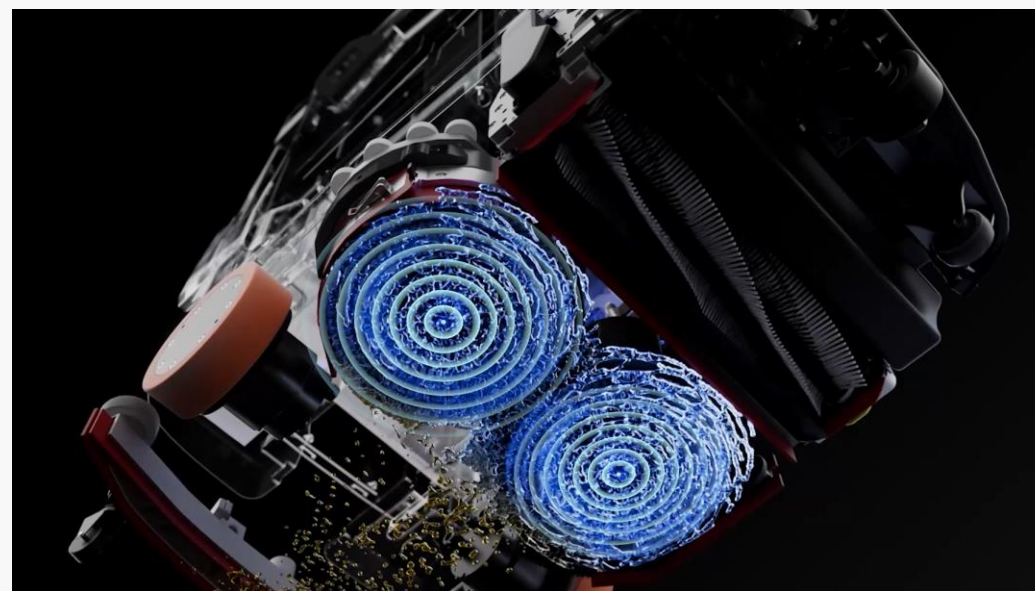


Magic Cleaning – AI Adaptation

Adaptive Cleaning Mechanism



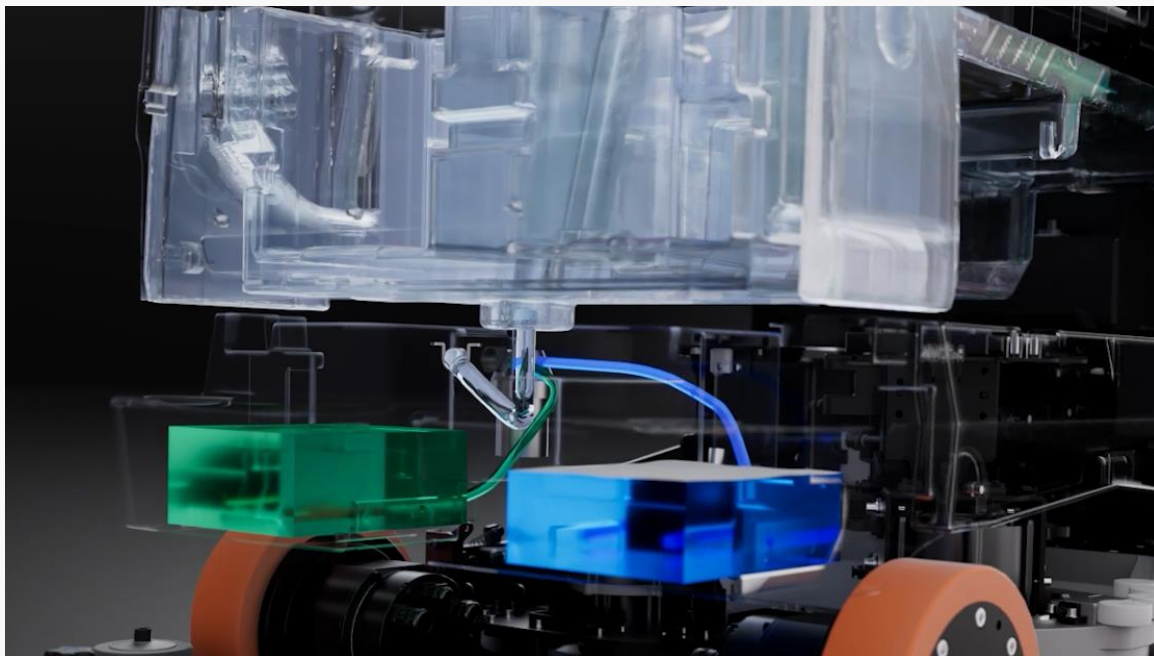
Upon detecting wet spills, it instantly retracts the sweeping modules(side brush, roller brush) to prevent secondary spreading.



For stubborn stains, it automatically boosts brush pressure & speed for a spotless, single-pass clean.



Magic Cleaning – AI Adaptation



Adaptive Cleaning Agents Mixing:

It automatically scales chemical intensity to match floor conditions, optimizing cleaning performance while reducing consumption.

Magic Cleaning – Summon Cleaning



Teamwork makes the clean work

- Smart Detection: Real-time stain recording.
- Seamless Handover: Automatic task dispatching between robots.
- Total Coverage: From sweeping large debris to scrubbing stains.

Magic Cleaning – Others

Stain Heat Map



Ultra Spot Cleaning



Generate the heat map based on the accumulation of garbage detected in each cleaning task.

Quickly clean areas with a higher probability of staining based on the historical data of the stain heat map.

Magic Cleaning – Others

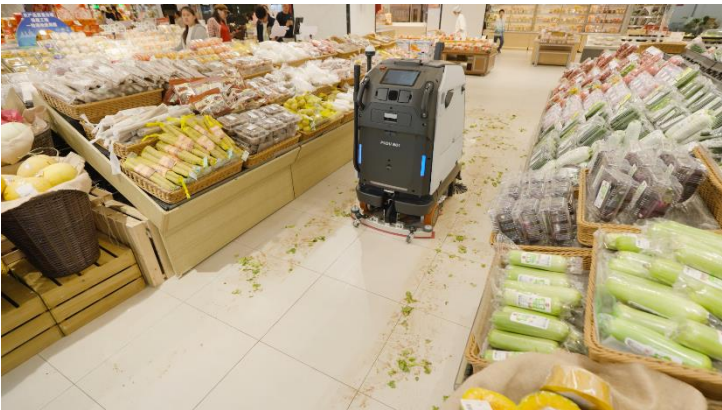
Cleaning Effect Map



Record stubborn stains such as adhesive marks and chewing gum that cannot be completely cleaned in each cleaning task.



Guided Cleaning



AI Smart Re-cleaning



How to understand AI-Native Cleaning Robot?



AI-Native Cleaning Skills = Precise Execution "**Hardware Freedom**" x Ever-evolving "**AI Versatility** "

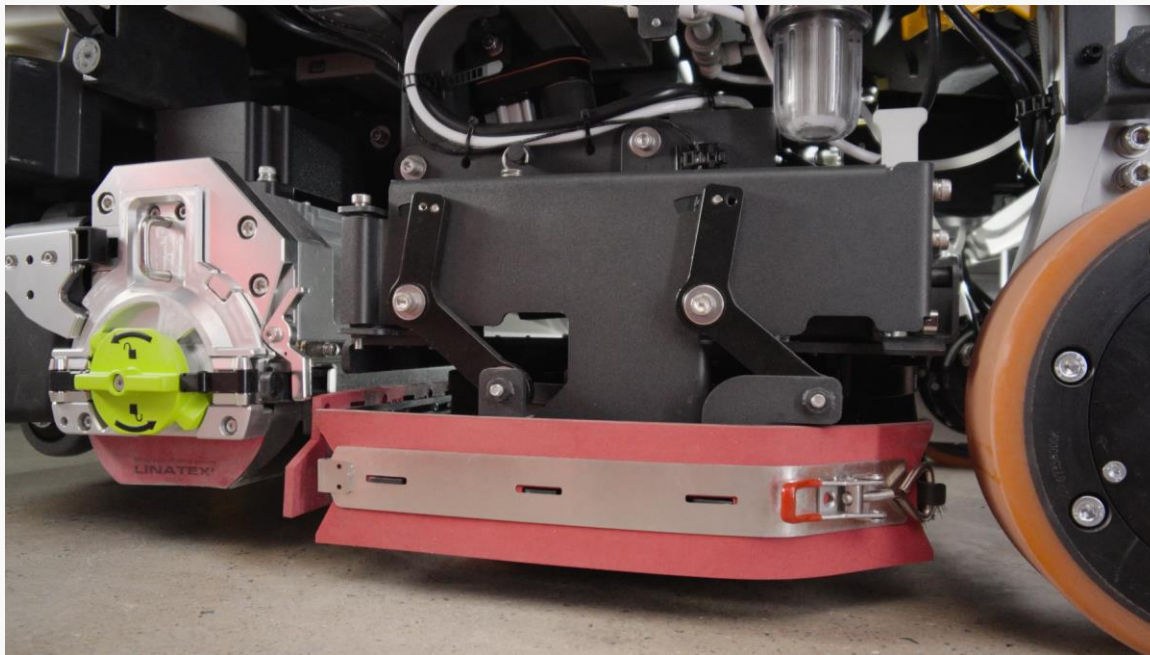
- AI Cleaning Mechanism Adaptive
- AI Adaptive Cleaning Agent Mixing
- AI Spot Cleaning
- Stain Heatmap
- Cleaning Effect Map
- Summon Cleaning
- Guided Cleaning
- Ultra Spot Cleaning
-

- Front (Strong) Sweep, Rear Scrub
- Disc Brush Independent Lifting & Control
- Roller Brush Independent Lifting & Control
- Disc Brush Extendable Edge Cleaning
- Dual Cleaning Agent Real-time Automatic Mixing
- Front and Rear AI Cameras & VSLAM Cameras

- Trash/Stain Recognition Capability
- Cleaning Effect Detection Capability
- 3D VSLAM
- Automatic Edge-Cleaning
- Vehicle Recognition and Perception
-



Quick and Convenient Maintenance



World's First

Cleaning robot with automatic disc brush installation, making it the world's first truly user-friendly cleaning robot for cleaning staff.



24H Fully Automatic Cleaning



The all-in-one station automates refilling, drainage, and charging, ensuring 24/7 mission-readiness. By closing the loop between task execution and maintenance, the system prevents residue buildup and odors, achieving a seamless, zero-intervention workflow.



Human-Machine Interaction



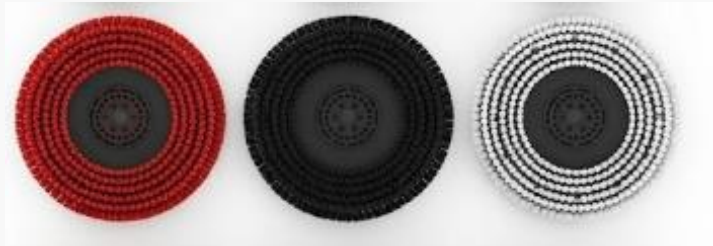
Audio-Visual Alarm System



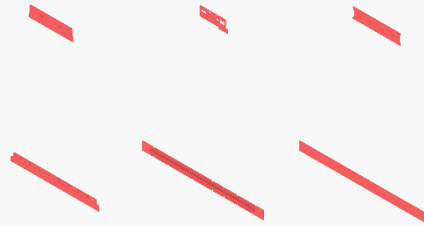
Ride-on Mode



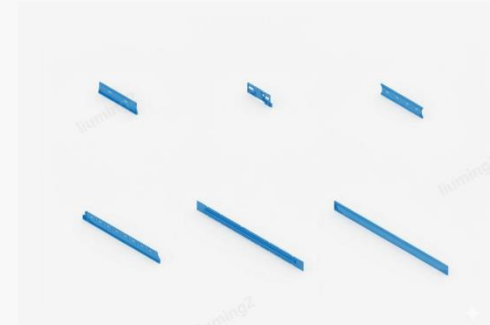
Core Consumables & Optional Accessories



Scrubbing Disc Brush



Rubber Blade



Rubber Blade
(Oil-resistant)



Scouring Pad

- Ride-on Kit
- Dust Mop Assembly
-



IoT



Elevator Control



Automatic door/gate



Pudulink App



World's first AI-Native Large Scrubber-Dryer Robot



**One-Pass
Sweep & Scrub**



**Extendable
Edge Cleaning**



**Instant, User-friendly
Maintenance**



AI Magic Cleaning



**3D Perception
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**24/7
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Retail Examples

L1: Retail

- Department stores and supermarkets
 - Warehouse supermarkets
 - DIY/home improvement supermarkets
 - Commercial complexes
- ● ● ● ● ●

Scenario segmentation

Fresh food area

Shelf area

Aisle



BG1 Task High-frequency scrubbing + edge cleaning

★ BG1 Fits Core Value:

- Anti-slip and instantly dry, wet and dry waste cleaned in one pass
- Edge cleaning, perfectly covers shelf edges

One-Pass Sweep & Scrub

Wet and dry waste cleaned in one go

55cm

Ultra-wide scrubbing width

External Edge Cleaning

Active external expansion

AI Adaptive Cleaning/Spot Cleaning

Cleaner, more efficient





Industrial Manufacturing Examples

● **L1: Industry**

- Food manufacturing
 - **Chemical manufacturing**
 - Beverage manufacturing
 - Chemical products manufacturing
- ● ● ● ● ●

● **Scenario segmentation**

Workshop area

Workshop aisle

Office area



BG1 Task Deep cleaning + edge and corner cleaning

★ **BG1 Fits Core Value:**

- **Oil stain cleaning:** dual disc brush powerful scrubbing, free detergent ratio, flexible switching
- **Floor protection:** One-Pass sweep & scrub, debris cleaning

One-Pass Sweep & Scrub
One pass, double clean

Dual Disc Brush
Ultimate stripping

Dual Cleaning Agent Tanks
High-precision real-time mixing

AI Adaptive Cleaning/Spot Cleaning
Cleaner, more efficient





Warehouse Logistics Examples

● L1: Logistics

○ Raw material warehousing

● FMCG warehousing

○ 3PL warehousing

○ Cold chain warehousing



● Scenario segmentation

Sorting area

Warehouse shelf area

Office area



BG1 Task Large-area cleaning operations

★ BG1 Fits Core Value:

- 24H cleaning: non-stop cleaning
- Efficient cleaning: timed cleaning with ease
- Floor protection: One-Pass sweep & scrub, debris cleaning

90Ah

Equivalent 24V platform 180Ah

75L/60L

Large clean/dirty water tanks

7.5h

Maximum run-time

One-Pass Sweep & Scrub

One pass, double clean





Parking Garage Examples

- L1: Real Estate & Property Services
 - Property & Facilities Management
 - Residential & office real estate
 - Cleaning Service

- Scenario segmentation
 - Lobby area
 - Basement area
 - Office area

BG1 Pro Task

Lane and parking space cleaning

- ★BG1 Pro Fits Core Value:
 - Clean and protection: dual disc brush, high pressure, powerful scrubbing
 - Safe, no collision: vehicle recognition
 - Large-area cleaning: large size, large capacity, and deep scrubbing

31Kg

Ultimate dirt stripping capability

One-Pass Sweep & Scrub

One pass, double clean

> 10000m²+

Maximum single operation area

Vehicle Avoidance

3D Lidar





BG1 Series Target Market

Retail

Core consumption scenarios, high traffic, high standard cleanliness



Warehouse Supermarkets



DIY/Home Improvement Supermarkets



Floral & Gardening Markets



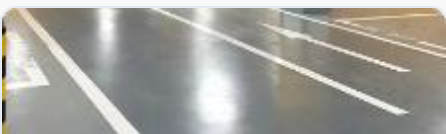
Department Stores & Supermarkets



Comprehensive Food Supermarkets



Shopping Centers



Underground Parking Garage



Electronics & Appliances Supermarkets



Stationery & Sports Goods Retail



Auto Repair Shop

Logistics

High-speed turnover scenarios, large area, fully automated operation



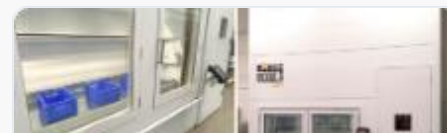
Raw Material Warehousing



FMCG Warehousing



Cold Chain Warehousing



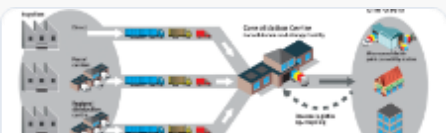
Electronics & Appliances Warehousing



3PL Warehousing



Constant Temperature & Humidity Warehousing



Consolidation Center



Distribution Center



Transit Center



BG1 Series Target Market:

Industry

Harsh working conditions and professional cleaning services

Food & Beverage Manufacturing

Computer & Electronics Manufacturing

Chemical Manufacturing

Plastic Product Manufacturing

Basic Pharmaceutical Manufacturing

Real Estate & Property Services

professional cleaning services

FM Companies

Cleaning Service Companies

Municipal Building

Transportation, Residential, Hospital, Hotel, and Public Services, etc.

Extensive scenario coverage, full area cleaning

Parking Lot

Expressway Service Area

Subway Station

Airport

Stadium

Aquarium

General Hospital

Resort

Museum

more industries...



Select the most suitable cleaning robot

Scrubbing



BG1 Pro: World's first AI-native Large Scrubber-Dryer Robot Pro
Best for: Parking lots and other large-area deep cleaning



BG1: World's first AI-native Large Scrubber-Dryer Robot
Best for: 2500~10000+ m^2 cleaning area, stubborn stain removal



CC1 Pro: World's first AI-native medium-sized floor Scrubbing robot
Best for: 500-2500 m^2 cleaning area, stubborn stain removal



CC1: World's first 4-in-1 medium-sized cleaning robot
Best for: 500-1500 m^2 cleaning area, light to moderate stain removal



SH1: Multifunctional compact floor scrubber with powerful cleaning capability
Best for: Small scenarios such as restaurants and restrooms

Sweeping



MTI: World's first AI-native sweeping robot
Best for: Suitable for 500-20000 m^2 ultra-large indoor areas, easily sweeps all types of large debris.



MTI Max: World's first AI-native complex scenario sweeping robot
Best for: 500-20000 m^2 parking lots, outdoor and other complex scenarios, easily sweeps all types of large debris.

Carpet Vacuuming



CC1: World's first 4-in-1 medium-sized cleaning robot
Best for: 500-2000 m^2 carpeted areas, easy daily carpet vacuuming



MTI Vac: World's first AI-native large-area dry cleaning robot
Best for: 500-15000 m^2 large carpeted areas, efficient and thorough vacuuming.

Hard Floor Dust mopping/ Vacuuming



MTI Vac: World's first AI-native large-area dry cleaning robot
Best for: 500-15000 m^2 indoor hard floors, easy dust mopping and vacuuming.



CONTENT

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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 mission to [serve 10 billion people worldwide](#).

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 120,000 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 Sep 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	 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
 Finalists WIPO Global Awards	 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

Application Industries

Revolutionizing Ten Major Industries with Smart Robotic Solutions



Food & Beverage



Hospitality



Retail


Warehousing & Logistics
& Industrial Facility


Health Care



Real Estate & Property Services



Education



Entertainment & Sport


Transportation and Related
Service


Public Service

A large, white and black autonomous mobile robot (AMR) is positioned in the center of a factory floor. The robot has a boxy, industrial design with a camera mounted on top. It is surrounded by various pieces of industrial machinery, including CNC machines and a yellow machine with a warning sign. The floor is marked with yellow lines, and there are red laser lines projected onto it. In the background, there are signs for '精密CNC加工区' (Precision CNC processing area) and '钣金机电加工区' (Sheet metal mechanical processing area).

Thank You

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