



Pudu Robotics Unveils PUDU BG1 Series: Defining the AI-Native Era of Large-Scale Cleaning

Descrizione

COMUNICATO STAMPA • CONTENUTO PROMOZIONALE

SHENZHEN, China, March 25, 2026 /PRNewswire/ • Pudu Robotics, a global intelligent robotics leader, today announced the launch of the PUDU BG1 Series, the world's first AI-native large scrubber-dryer robots. Representing a strategic leap in Pudu's cleaning portfolio, the BG1 series fundamentally redefines the underlying logic of commercial robotics. By transitioning from traditional automation to a truly AI-native architecture, the BG1 series provides comprehensive, intelligent floor care for expansive environments, including retail complexes, warehouses, industrial plants, and transportation hubs.

The introduction of the BG1 series completes Pudu's cleaning portfolio. By joining the PUDU CC1 series and PUDU MT1 series, the BG1 series enable Pudu to deliver a one-stop, full-scenario autonomous solution across ten core industries worldwide.

AI-Native Intelligence: From Passive Execution to Proactive Decision-Making

The core of the BG1 series is its AI-native architecture. Unlike traditional automated cleaning robots that follow pre-set commands in a mode of passive execution, the BG1 series was designed from the ground up to integrate AI throughout the entire cycle of perception, decision-making, and execution.

This intelligence is powered by a high-compute platform featuring a dual-chip architecture combined with an AI-enhanced processing unit. This hardware foundation allows the robot to break through the computational bottlenecks of traditional equipment, enabling millisecond-level responses for environmental recognition, mess assessment, and operational adjustments based on massive data streams from its fused 3D perception system.

AI Magic Cleaning: The Intelligent Operational Brain

Serving as the “brain” of the BG1 series, the AI Magic Cleaning system transitions the robot from a scheduled tool to a mode of proactive operation. This central intelligence coordinates three core capabilities:

Utilizing an ultra-wide FOV and AI vision, the BG1 series detects and targets messes in real-time. This “see-and-clean” approach ensures high-traffic environments remain pristine without waiting for a full scheduled cycle.

Equipped with dual 7L independent agent tanks and milliliter-level precision, BG1 series automatically adjusts chemical ratios based on dirt type and severity. This eliminates manual dosing errors and significantly reduces long-term consumable costs.

The system provides real-time dry and wet mess detection. Upon detecting wet spills, the BG1 series instantly retracts sweeping modules to prevent spreading. For stubborn stains, it automatically boosts brush pressure to ensure a spotless, single-pass clean.

Industry-First: Extendable Edge Cleaning

In a commercial cleaning first, the BG1 series features an extendable scrubbing brush. This AI-integrated adaptive mechanism allows the brush to clean flush against walls and shelving, eliminating the “blind zone” common in traditional large scrubbing robots and drastically reducing the need for manual follow-up cleaning.

Sweep-and-Scrub Integration for Dual Efficiency

The BG1 series introduces an integrated sweeper-scrubber system that fundamentally enhances cleaning efficiency. The front sweeping module collects dry debris such as dust and paper, while the rear scrubbing module performs deep cleaning. This enables simultaneous dry and wet cleaning in a single pass, eliminating redundant operations.

Advanced 3D Perception for Complex Environments

Driven by a fusion of 3D VSLAM and LiDAR, the BG1 series ensures high-precision mapping and dynamic obstacle avoidance. It maintains stable positioning even in challenging conditions, such as high-ceiling facilities, low-light environments, or areas with high signal interference.

One-Minute Maintenance: Maximizing Operational Efficiency

To minimize operational downtime, the BG1 series features automatic disc-brush attachment, eliminating the need for manual positioning and setup. Coupled with a user-friendly, tool-free design for all critical consumables, routine maintenance—including brush and squeegee replacement—can be completed in under one minute without specialized technical expertise.

Enhanced Human-Machine Interaction

The BG1 series introduces an innovative stowable Ride-on mode, significantly improving deployment efficiency in expansive facilities. Operators can quickly transition to manual riding for rapid relocation, high-speed initial mapping, or emergency intervention. Safety is managed via an integrated audio-visual alert system that uses dynamic lighting and sound cues to communicate intent to pedestrians, ensuring

safe human-robot collaboration in public spaces.

Unmanned 24/7 Operational Loop

Supported by an all-in-one working station, the BG1 series achieves fully autonomous cycles of water exchange, charging, and self-cleaning. This closed-loop system ensures the device is on standby 24/7, providing a truly unmanned solution for high-intensity cleaning requirements.

Global Presence

The PUDU BG1 Series debuts globally this April at MODEX 2026 (Atlanta, Hall A, Booth A5527) and InterClean Amsterdam (Hall 7, Booth 320). Join us to explore our AI-native cleaning matrix and a full suite of autonomous solutions designed for the future of smart cleaning.

The development of the BG1 series is built upon Pudu Robotics's 22 years of expertise in AI algorithms, robotics control, and environmental perception. It is further refined by millions of hours of real-world operational data accumulated from the compact PUDU CC1 series and mid-sized PUDU MT1 series worldwide. The BG1 series does more than fill a gap in the large-scale segment; it represents a generational upgrade in the brand's core cleaning technology.

For more information, please visit: <https://www.pudurobotics.com/en/products/pudu-bg1-series>

About 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.

Photo

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