

 PUDU

**FlashBot** New  
Building Delivery Expert





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Product Overview

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# FlashBot New

## Building Delivery Robot

FlashBot New is a versatile building delivery robot capable of operating in semi-outdoor environments. It is designed to utilize the elevator with unprecedented mobility, allowing you to automate delivery tasks safely, accurately, and frequently. It can navigate around people in hotels and office buildings without human intervention, which takes a great step in intelligent delivery.





## Product Overview · FlashBot New



Cloud & Hardware Solutions for Elevator Control



VSLAM+ Semi-outdoor Delivery



Multiple Compartment Access Verifications



Rapid Multi-floor Deployment



Full-Scope IoT Integration



Modular Adjustable Compartments



## Product Overview · FlashBot New





## Product Overview · FlashBot New

**Staff**



Taking order



Calling robot



Placing items

**Robot**



Sending arrival notification



Auto elevator taking



Auto delivery

**Customer**



Receiving code



Picking up



Returning



## Product Overview · FlashBot New



Machine dimension	21.18*21.02*41.42 in   538mm*534mm*1052mm
Machine weight	132.28 lbs   60kg
Payload	22.05 lbs/layer   10kg/layer
Machine material	ABS/Aviation-grade aluminum alloy
Compartment space	2-4 compartments (Adjustable) 7.36*16.14*11.02 in   187mm*410mm*280mm (Single) 14.96*16.14*11.02 in   380mm*410mm*280mm (Double)
Charging time	4H
Run-time	9H
Navigation method	VSLAM + Marker + Lidar SLAM
Cruise speed	1.64ft/s~3.94ft/s   0.5~1.2m/s (Adjustable)



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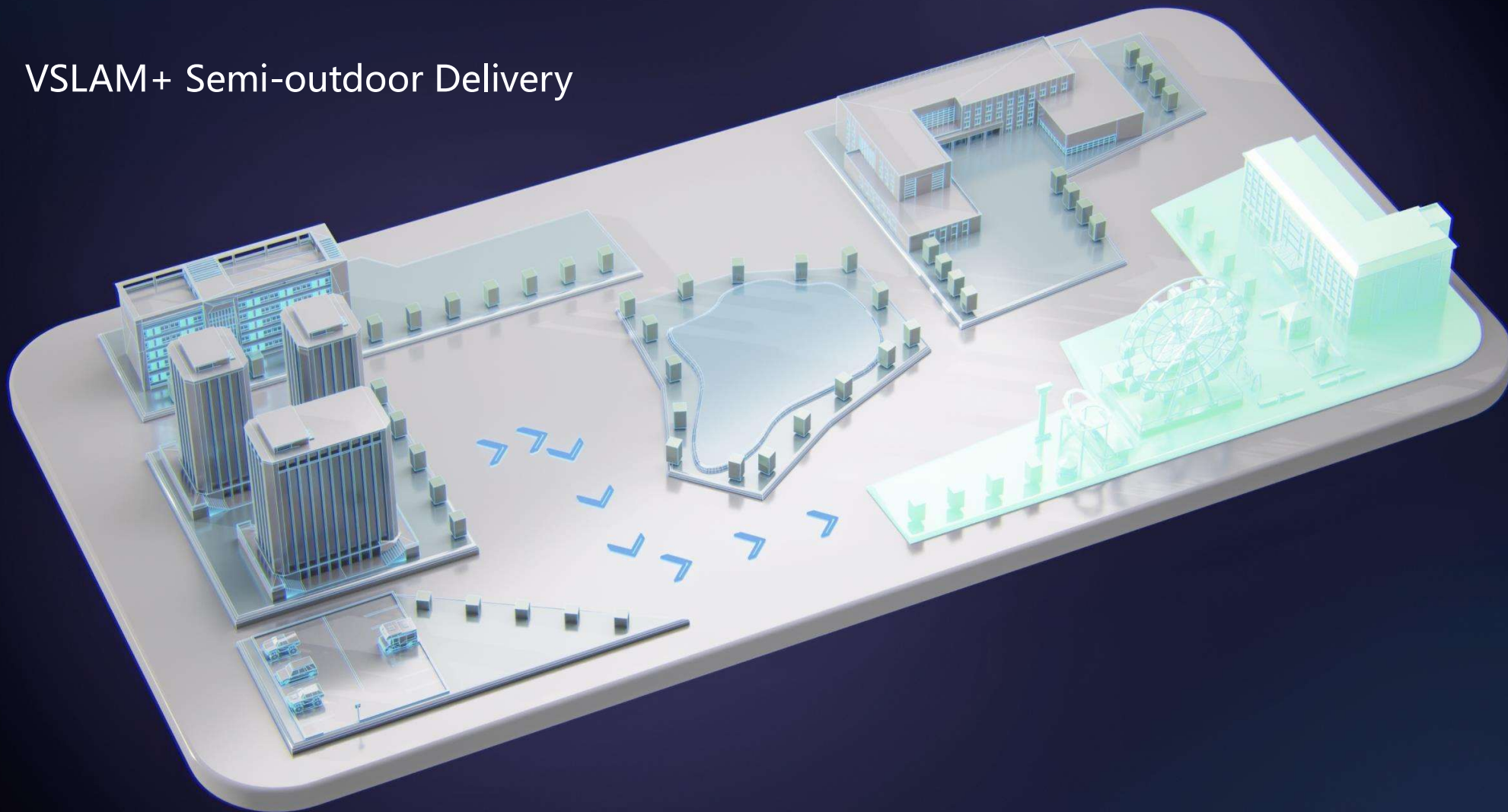
## Product Advantages · Building Delivery Expert

# FlashBot New · Building Delivery Expert



- V-SLAM+ semi-outdoor delivery
- IoT technology
- Safe and efficient
- Advanced digital management

# VSLAM+ Semi-outdoor Delivery





## Product Features · Semi-outdoor Delivery

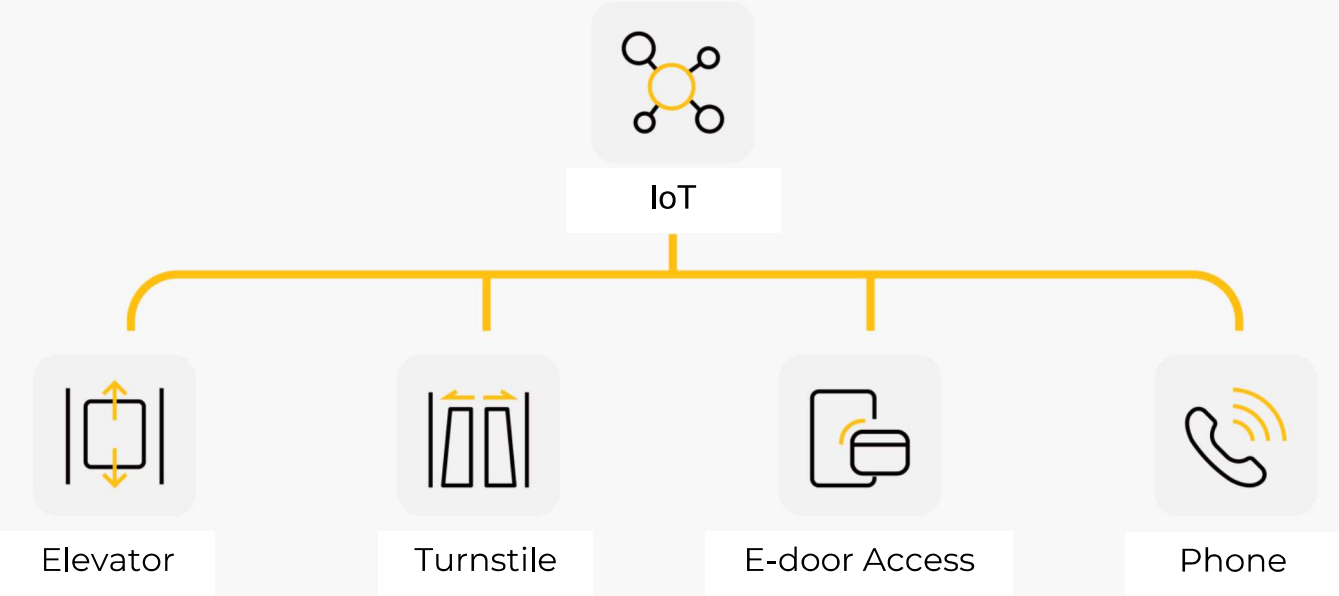


### VSLAM+ Semi-outdoor Delivery

PUDU VSLAM+ navigation system is engineered specifically for semi-outdoor hotel environments. Unlike traditional delivery robots, the new FlashBot excels not only in handling indoor room service but also seamlessly navigates complex semi-open areas such as garden corridors, fitness zones, and poolside areas, delivering exceptional human-robot interaction.

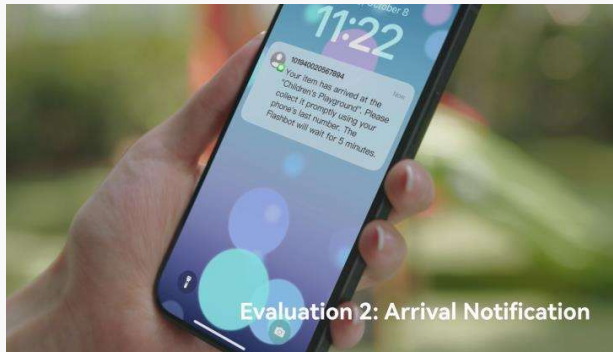


# Product Features · IoT Technology





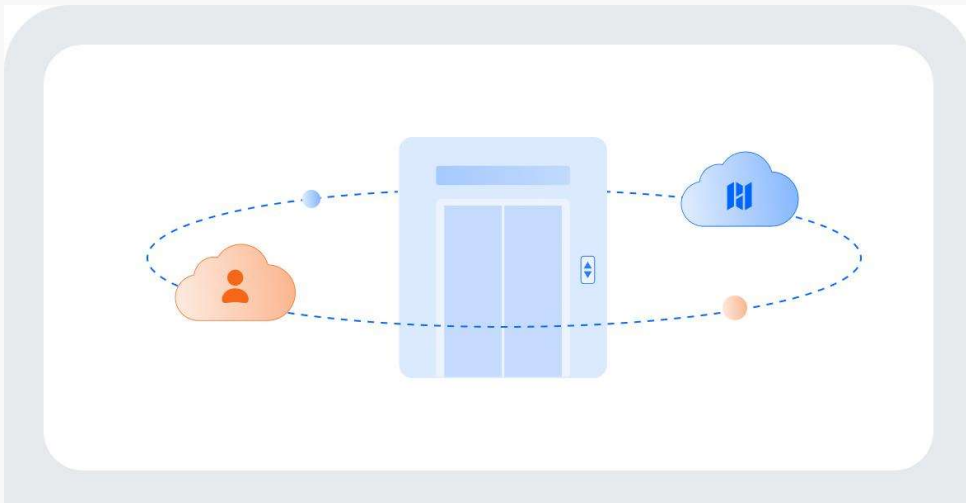
## Product Features · IoT Technology



Leveraging IoT connectivity, the new FlashBot seamlessly communicates with various terminal devices within the building, enabling automatic calls, turnstile access, and elevator usage without the need for manual intervention. Experience hands-free convenience and enhanced delivery efficiency.

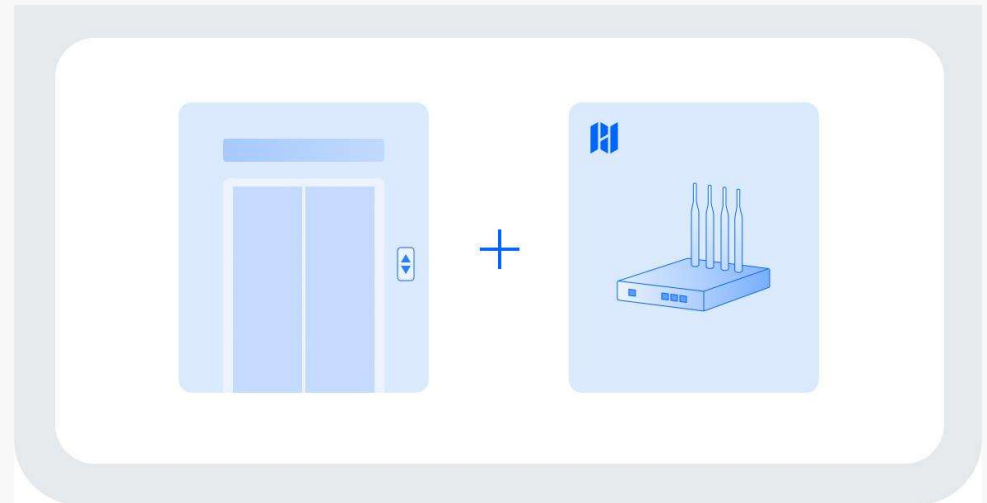


## Product Features · Cloud & Hardware Solutions for Elevator Control



### Cloud Elevator Control Solution

The Cloud Elevator Control Solution requires no elevator modifications for easy deployment and is fully compatible with leading brands like KONE and OTIS.

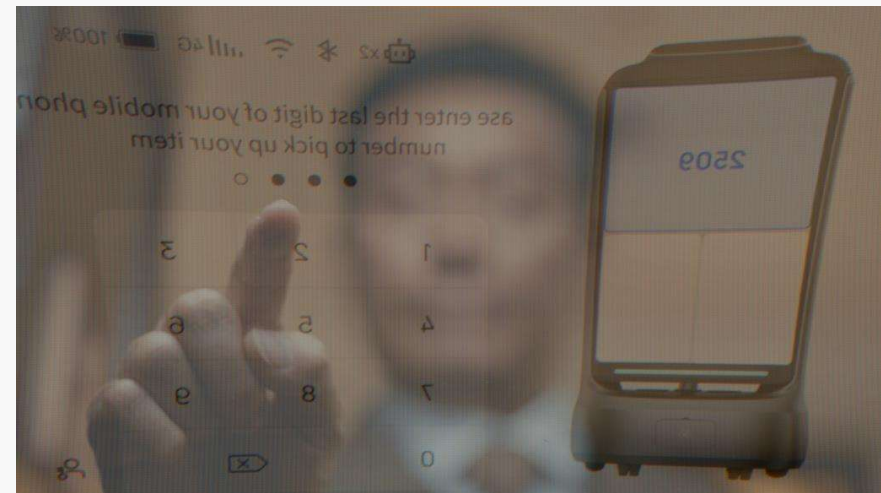


### Hardware Elevator Control Solution

Pudu's self-developed Hardware Elevator Control Solution adapts flexibly to various building environments, providing you with an efficient and seamless elevator management experience that enhances operational efficiency.



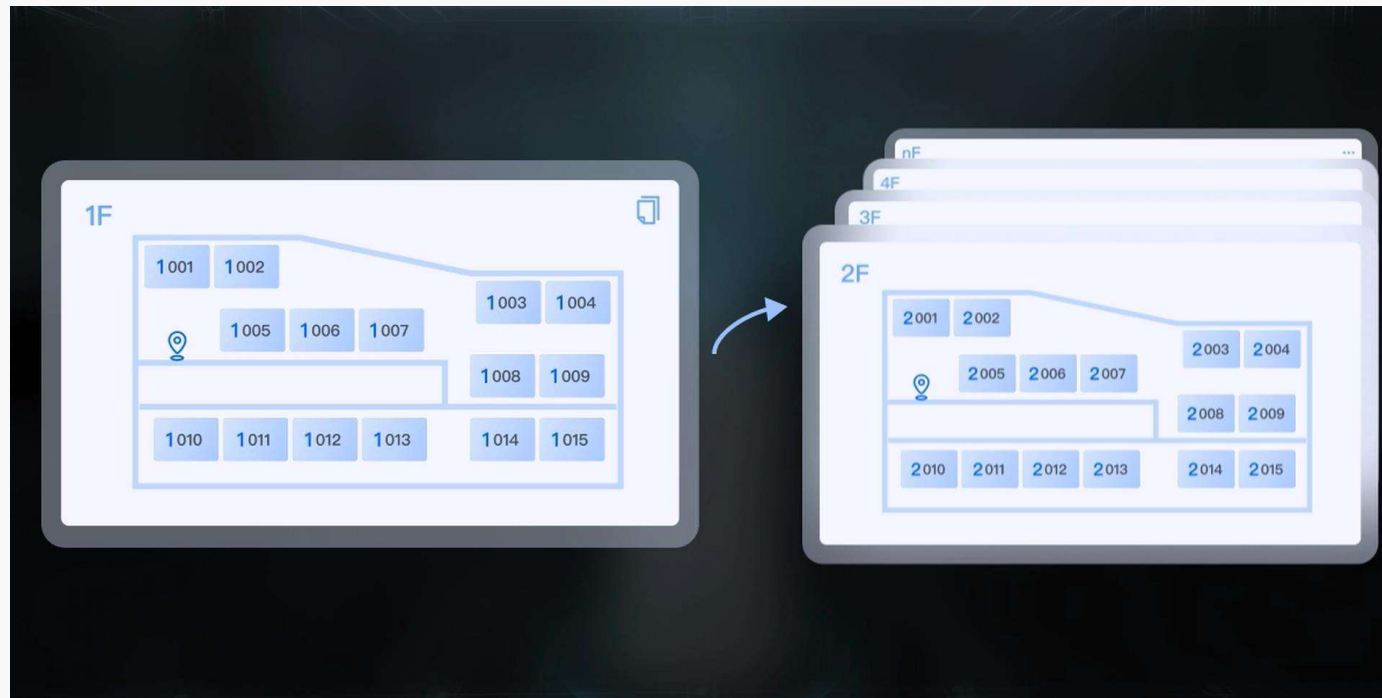
## Product Features · Multiple Compartment Access Verifications



Supports password verification, phone number verification, and NFC sensing for compartment access, ensuring secure and worry-free item management from storage to retrieval.



## Product Features · Rapid Multi-floor Deployment



Supports rapid multi-floor map replication, enabling quick mapping and enhancing deployment efficiency and ease of operation.





## Product Advantages · Modular Adjustable Compartment

2 Compartments



3 Compartments



4 Compartments



The multi-functional compartment maximizes space utilization, enabling FlashBot New to perform multiple tasks with a single tap.



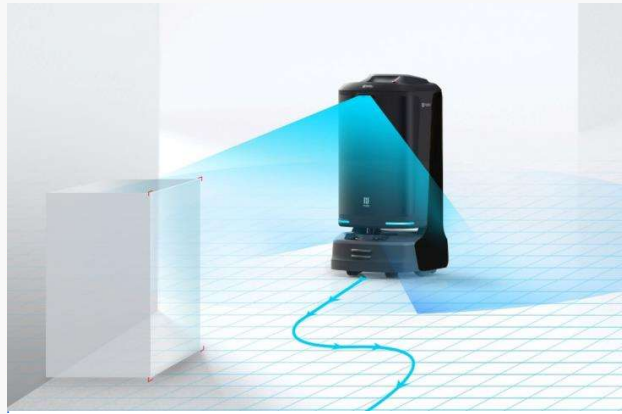
## Product Features



### Upgraded Auto-Level Suspension

The newly upgraded auto-level 6-wheel independent linkage suspension can adjust the damping based on different floor conditions, so that the robot can always remain in the optimal stable state.

Surmount obstacles of 2cm high and gaps of 3.5cm wide, offering 50% higher operating stability.



### 3D Obstacle Avoidance

2 RGBD cameras & customized lidar empower FlashBot with sensitive perception to detect obstacles as low as 3 cm and suspended obstacles at a height of 70 cm from the floor, making it ideal for dynamic environments with many obstacles.



### 70 CM Superior Passability

With a minimum clearance of 70 cm, FlashBot can navigate through the passages in 99.9% of building scenarios.



## Product Features



Compartment Ventilation

### Compartment Ventilation System

Continuous compartment fan ventilation eliminates odors and bacteria.



Multiple Robot Cooperation

### Muti-robot Scheduling System

Optimized task allocation ensures efficient multi-robot collaboration and intelligent avoidance in crowded environments, reducing waiting times for end customers.



### Auto Power Charging

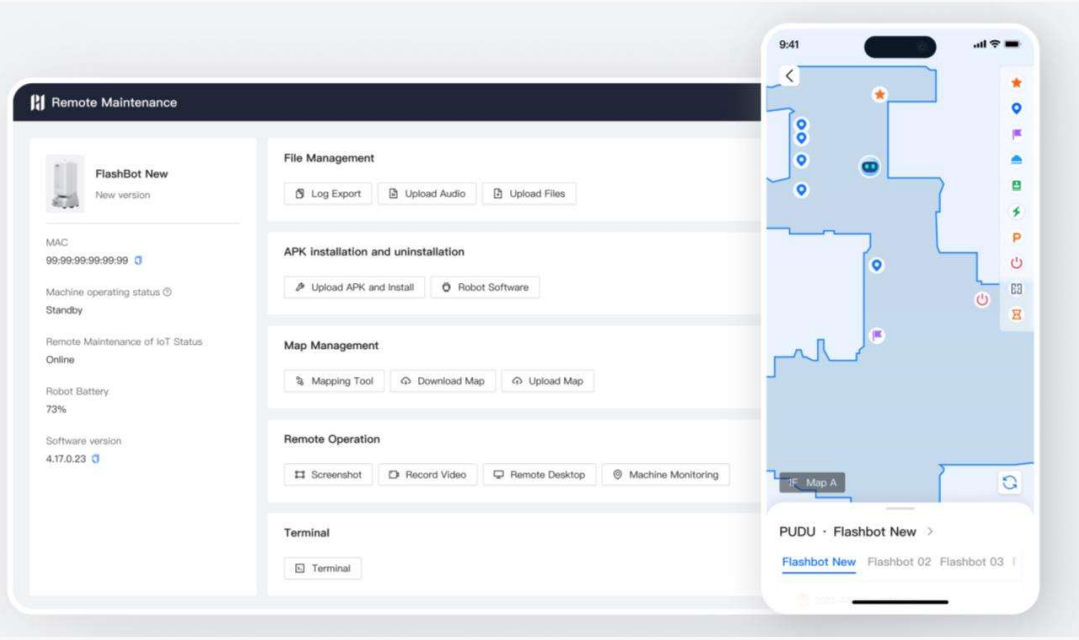
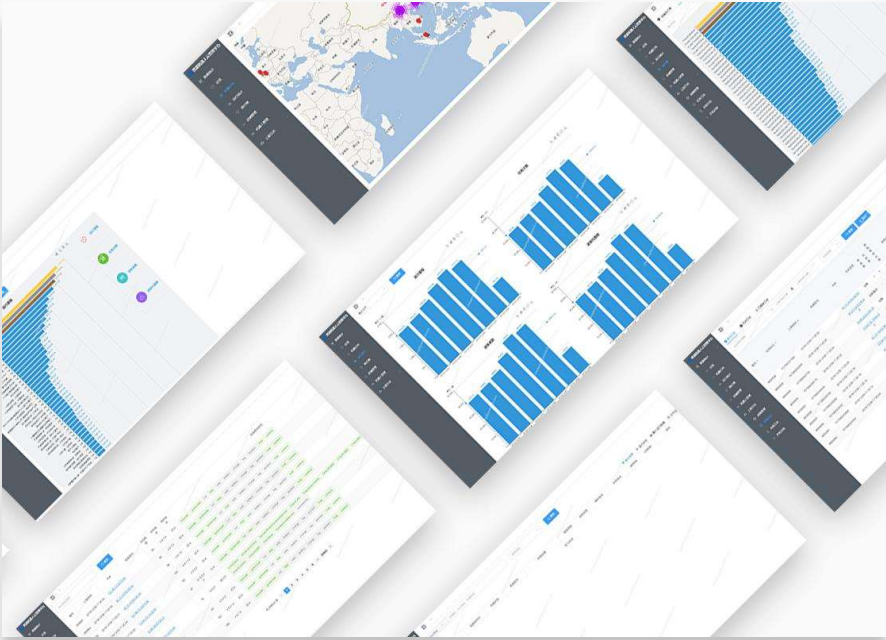
Seamless recharging in multiple scenarios for safety and convenience. Heads to the charging station when battery is low to stay ready for action.



# Product Features · Digital Management Transformation

## PUDU Management Plattform

Users can utilize the Pudu Link and remote operations platform to monitor the robot's location and status in real-time. Remote deployment and maintenance are convenient and straightforward, providing clear visibility and control over operational data.





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## Product Values · Manager

# Manager

### Optimized Staffing and Reduced Costs



- Robot-human collaboration frees the staff from the repetitive and tedious work, optimizing the staffing for each position and bringing significant cost savings.

### Enhanced Competitiveness with Differentiation



- Digital management and remote real-time monitoring allow for optimized accommodation services.
- Innovative services differentiate the brand from traditional hotels.
- The new OTA encourages customers to promote the hotel, which helps attract more potential customers.

### Improved Accommodation Service Quality



- 24\*7 contactless delivery and quick response to customer needs at any time create an excellent and safe customer experience.
- FlashBot frees the staff from the repetitive and tedious work, allowing them to focus more of their time and efforts on serving customers better.

### Supplies Allocation Adapted to Customer Needs



- The allocation of supplies can be optimized based on the automatically generated report of supplies delivered. This helps prevent waste and enables a cost-effective solution.



## Product Values · Staff

### Staff



#### Reduced Workload and Pressure

- Repetitive and tedious work ↓
- Night shift requirements ↓
- Workload and pressure ↓



#### Improve Satisfaction

- A happier team translates to an elevated customer experience.
- High-quality service improves customer satisfaction.
- Reduction in customer complaints, thus enhances employee engagement.



#### Redefined Employee Values

- Staff feels valued when they are relieved from repetitive and strenuous tasks. Customers can be served in the best way possible.
- Staff can gain recognition from customers and their managers for their excellent performance, thus improving job satisfaction.



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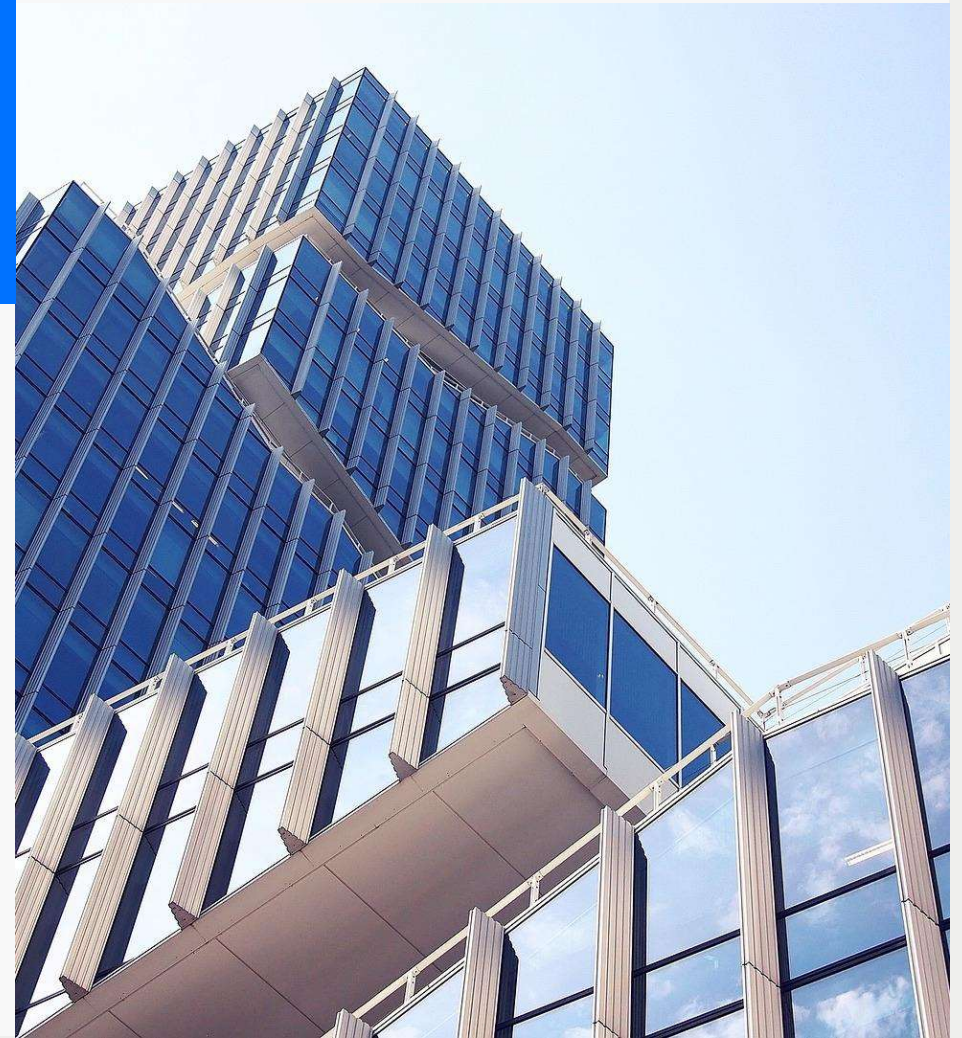




# Pudu Robotics

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 Robotics holds over a thousand authorized patents worldwide, encompassing a wide range of core technologies. The company's robots have been widely adopted in various industries, including dining, retail, hospitality, healthcare, entertainment, education and manufacturing. To date, Pudu Robotics has successfully shipped over 80,000 units to a variety of markets, with a presence in more than 60 countries and regions worldwide.

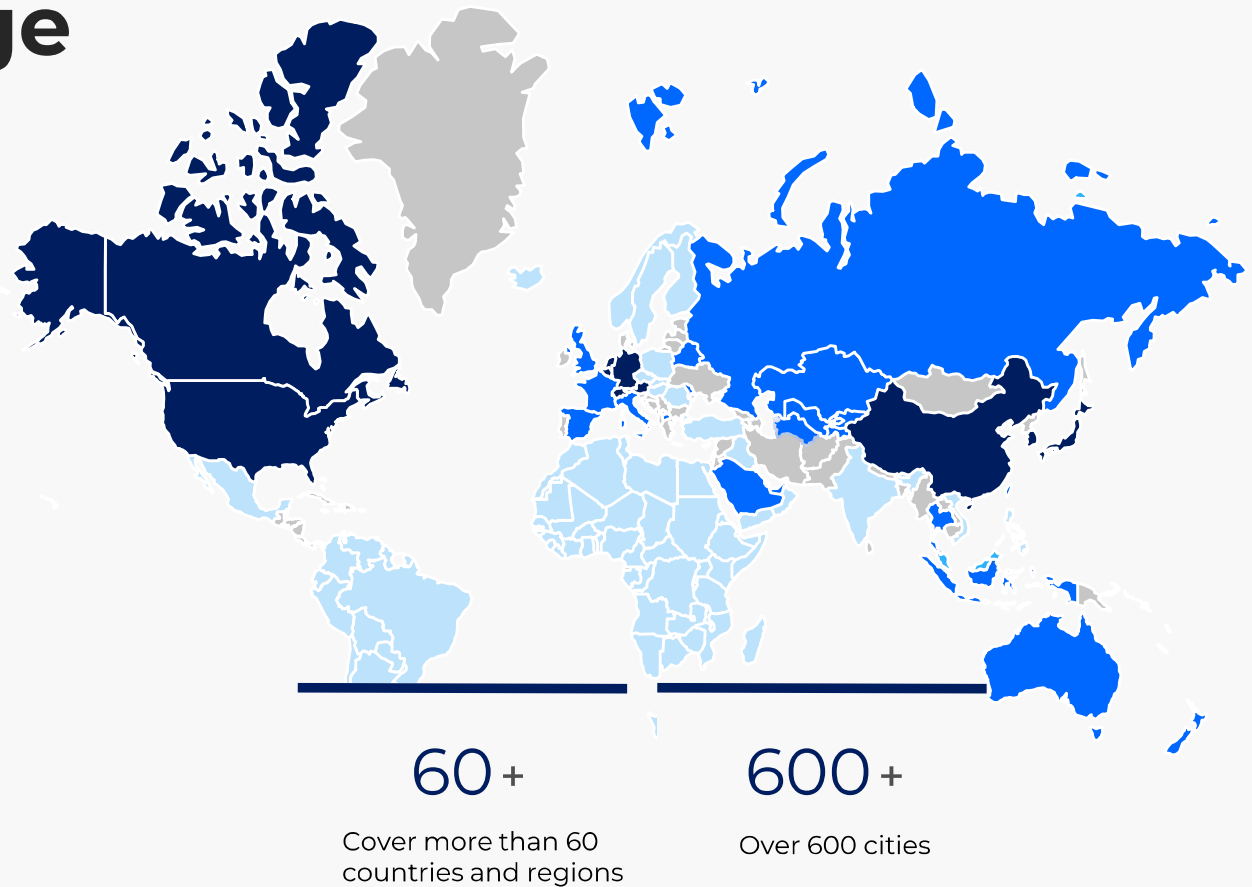




# Scale Advantage

## Globalization

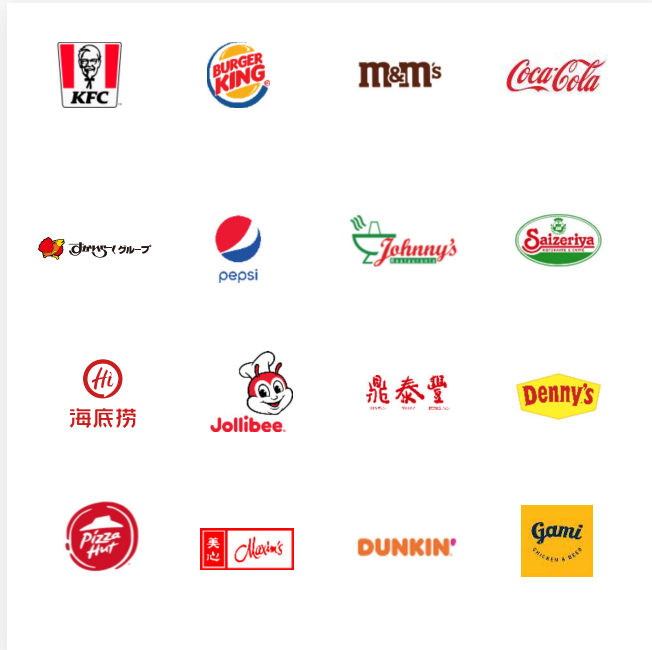
Pudu Robotics has established a business presence in North America, Europe, East Asia, Asia-Pacific, the Middle East and Latin America. The products have been exported to more than 60 countries and regions around the world, covering more than 600 cities worldwide. Pudu Robotics has established a trustworthy international brand image and become one of the representative enterprises of China's "intelligent" manufacturing abroad.



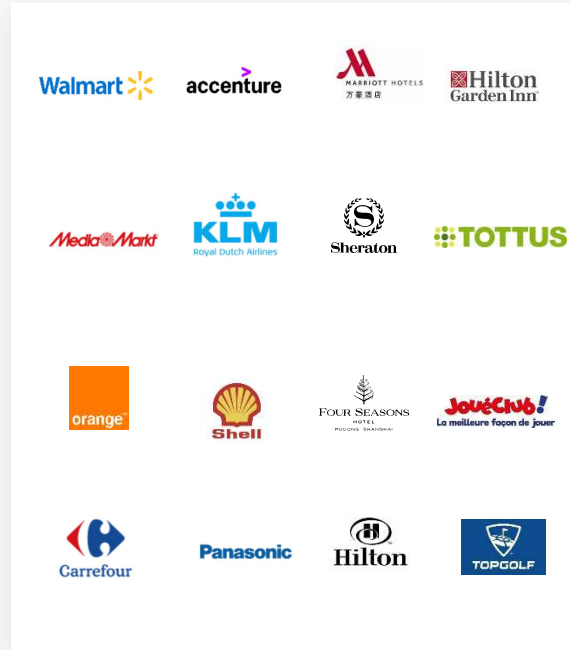


# Cooperation

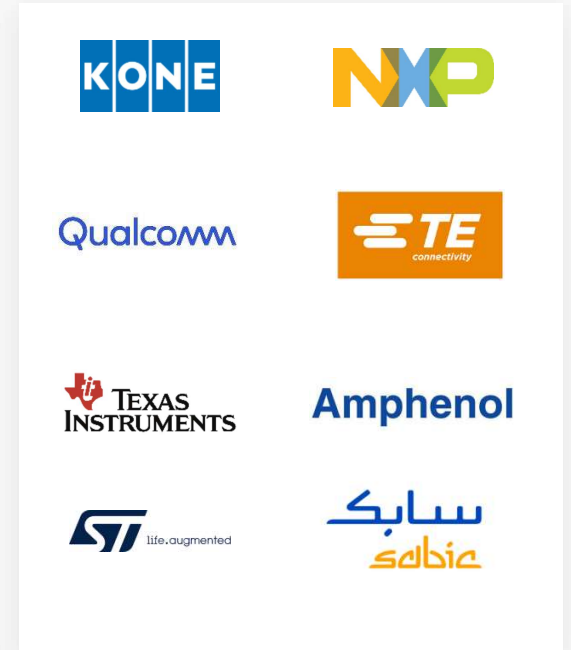
30% The market share of Top 100 restaurant clients      40,000+ Deployed Store



Catering Partners



Non-Catering Partners



Software and Hardware Partners



# Media Coverage

**Robot waiter helps ease staff shortages in busy Northland restaurant**

Denise Piper • 14:32, Jun 14, 2022



Vikas Sharma, owner of Green's Thai Cuisine in Pahlia, explains how the BellaBot is used in the restaurant to take pressure off busy staff.

Wait staff run off their feet this summer due to worker shortages are getting an extra hand of the non-human kind.

A robotic waiter, BellaBot, is helping by delivering meals from the kitchen to tables, then turning dirty dishes back to the kitchen.

At Pahlia restaurant Green's Thai Cuisine, the BellaBot means wait staff can spend an average of 11 to 12 minutes longer at each table, owner Vikas Sharma said.

This added an extra strain on the already short waiting staff, according to owners Paolo Hu and Peter Wu, who said the BellaBots had already proved popular with diners.

The guide price for the friendly-faced robots is \$20,000 (£14,500), which is less than the cost of employing a waiter at minimum wage for 40 hours per week.

Quirky footage shows Bella, who features a wide-eyed feline face, sweeping across the restaurant floor dishing out delicacies to delighted customers.



Restaurant forced to use robot waiters to tackle staff shortages

**CGTN**

Could robots fill the UK's service industry staff shortages?

Published: 02:23, 18 Nov 2021

CGTN

AP Pudu Robotics' New Afra CI Cleaning ... CES 2022

Pudu Robotics, the global leader in commercial service robots, has embraced the rich potential provided with its new Afra CI cleaning robot, which marks its global debut on the coast of CES 2022. The first international appearance of Afra CI marks Pudu Robotics' official entry into the commercial cleaning robot market, as it works on multiple applications of digital technology in hygiene and sanitation services.

**RESTAURANTS + BARS**

**Madison Heights restaurant uses a robot to deliver food to tables**

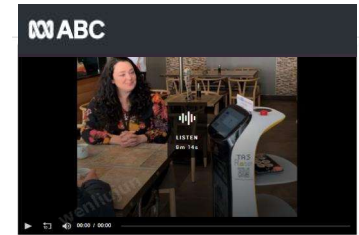
Melody Baetens  
The Detroit News

Published 12:51 p.m. ET Aug. 16, 2021 | Updated 9:28 a.m. ET Aug. 18, 2021

View Comments

A Chinese noodle restaurant in Madison Heights may be the first in the area to employ the BellaBot, a robotic cart with a digital cartoon cat face that rolls food from the kitchen to the customers' tables.

Noodle Topia on John R is known for its house-made, hand-pulled noodle dishes, dumplings and Chinese tea drinks. The casual eatery has gained some non-human assistance in the form of BellaBot, which has four trays for carrying food (no arms) and has a precise



**First robot waiter in Tasmania glides into service**

On Your Afternoon with Helen Sheehy

Share

Download +231 KB

There are definitely echoes of The Jetsons as one Japanese restaurant in Hobart's state's first robot waiter glides from the kitchen to each table, serving meals from a tray on its back.

Harry He is a software engineer who loves new technology, and when he first came across the robot waiter online (this model is called Kevy), he saw it as a great connective service solution for Tasmania. Harry formed Tas Robots, and suggested his friend Tony, who runs Kirakira Japanese, might like to add one to his floor staff. Press play for lunch with a side of the latest technology.

