

PUDU ROBOTICS

Industry Solution

Hotel



/ Global Leading Robotics Company /

CONTENT

01 | Industry Overview 04 | Product Family Matrix

02 | Scenario Solutions 05 | PUDU Introduction

03 | Successful Cases



01 Industry Overview

Global hotel continues to recover while occupancy rates continue to lag

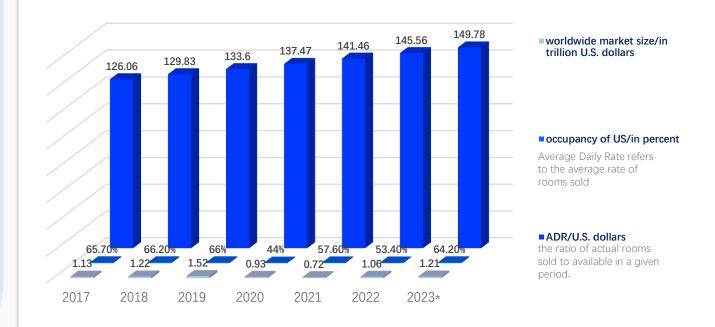
The hotel industry

The business of providing lodging and accommodation services to travelers and tourists. The hotel industry includes various types of lodging establishments, such as hotels, resorts, motels, inns, and bed and breakfasts.

From 2019, Global hotel performance continues to recover; Adrs continue to drive global earnings, while occupancy rates continue to lag.

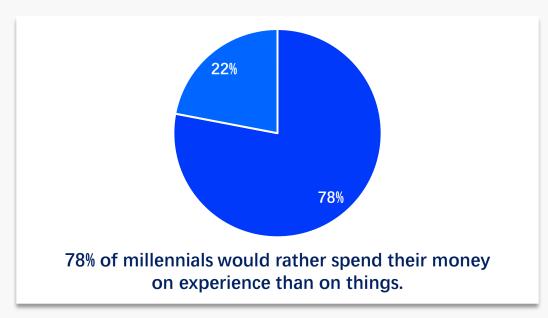


From 2013 to 2022, with a forecast for 2023



Data sources: STR

What's influence hotel occupancy?



Optimizing hotel service experience Improve hotel occupancy

Experiential reception service Experiential room service Experiential catering service Experiential facility service

Room
QualityPriceRoom
ServiceLocationCatering
ServiceFacility
ServiceReception
ServiceComponent of hotel customer satisfaction



Scenario Solutions

02

- Scenario scheme 1: Hotel reception service
- Scenario scheme 2: Hotel room service
- Scenario scheme 3: Hotel catering service
- Scenario scheme 4: Hotel cleaning service

4 major service scenarios of hotel, PUDU got it !



Video URL: https://drive.google.com/file/d/1ltR475qElXkToKU7s1lqXO_nVZGT_G1S/view?usp=sharing

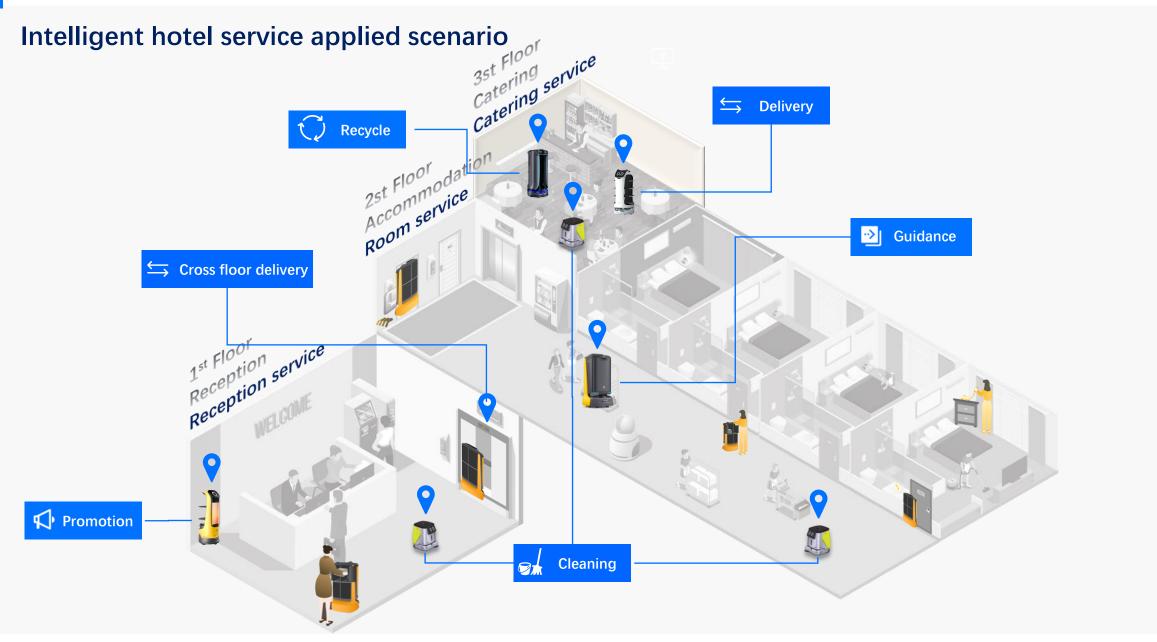


Hotel room service





R



Scenario scheme 1: Hotel reception service



Show daily promotion

New and Innovative Marketing Methods

The large mobile advertising screen provides a broader, more frequent, eye-catching, and precise marketing method for hotel, allowing the hotel's brand, promotional activities, special price room, etc., to reach more customers and further improve the conversion rate of marketing campaigns.

Ketty 18.5" Ads screen, variety promotion

Promotion more accuracy

- Utilizing intelligent LCD screens to attract customers from all angles

	9	
•	Large advertising screens	better fitting the customer's
	perspective	

- Combining with speakers to significantly attract family-style customers
- Supporting multiple scenarios, allowing for customizable media size and content
- Supporting various types of media, such as audio, video, images, and links

Weight	38KG
Charging time	4.5H (support self-charging)
Battery life	> 8H
Speed	0.5-1.2m/s

PUDU2 32" Capacitive touch advertising screen

The interaction is diversified



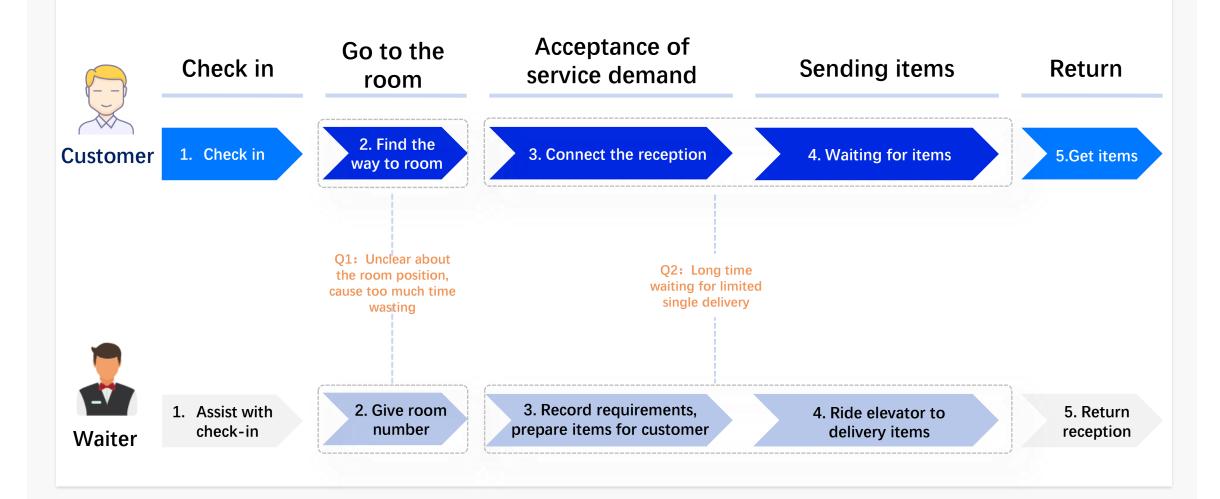
- Seamlessly integrated mobile robots with advertising screens
- Display a variety of videos and showcase promotional content in real time.
- Indoor mobile advertising machine can bring message directly to target audience
- Product promotion, brand promotion, and marketing display, easily achieve marketing objectives

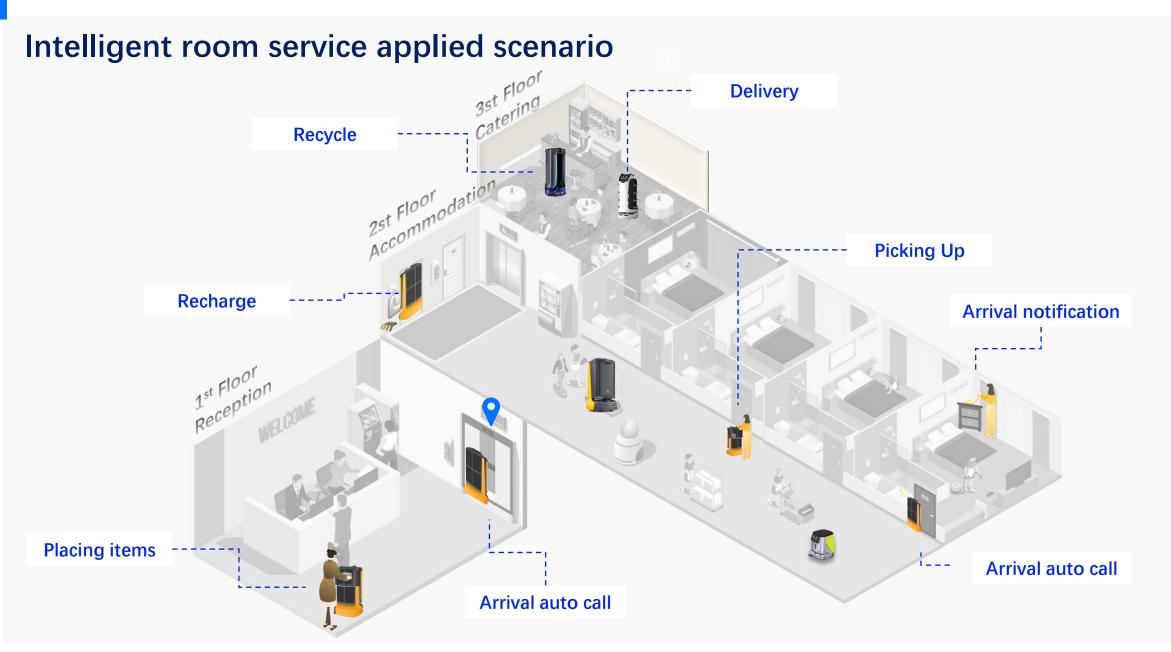
Weight	39KG (PUDU2) +13KG (AD Screen)	
Charging time	8H	
DPI	1920*1080	
AD Screen power supply	Via robot charging port	

Mobility promotion establish technology image



Scenario scheme 2: Hotel room service





Intelligent room service applied scenario

O1 Closed encryption hatch

Full of science and technology, the distribution process is safe and worry, and the distribution of goods is safe and assured

02 Automatic recharge

Supports automatic recharge without manual assistant, worriless and efficiency, 7x24H unstop working

03 Cross-floor distribution

Through the connection with the elevator, access control, gate machine, to achieve cross-layer cross-domain distribution

FlashBot

Quick task responder

- Single multitasking
- Multi-iot approach
- Pass by 75CM guest corridors



Senior ambience maker

- Customized projection
- Connected Aromatherapy, atomizer, mobile atmosphere accentuated



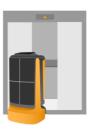




The new mode to find your room quickly



Chose your destination on FlashBot screen, FlashBot will lead customer the fastest way.



FlashBot can call the elevator before, so customer don't have to wait for elevator for a long time.



When FlashBot arrived at the destination room, FlashBot will announced arrival notifications by voice.



Video URL: https://drive.google.com/file/d/1Jxx6A8zf0nRRTfvCxhsJ9pgqqfC0HXwV/view?usp=sharing

Intelligent room service Process



IoT Technology

See FlashBot's Superpower

The IoT technology allows operating instructions to be transmitted between FlashBot and other devices in the building via a cloud-based network connection. This enables FlashBot to take elevators automatically for delivery across floors.

Move across the floors: Auto ride a elevator

 $\boldsymbol{3}$ types to connect elevator

Hardware transformation

Upgrade the elevator and install the PUDU elevator control module .

Elevator control Cloud

Elevator manufacturers provide API interface, PUDU development elevator control logic.

Open API

PUDU provide API interface, Elevator manufacturers development robot control logic.



Video URL: <u>https://drive.google.com/file/d/1EnjOtx2naATnZIGBgry_t8EHLUp_FvBe/view?usp=share_link</u>

Intelligent notifications

Fixed point arrival, scheduled call



Telephone notifications

After the robot arrives at the target point, it will notify the robot of the arrival information by phone or SMS with the mobile phone number entered during delivery.



APP Real-time notification

Guests can place orders through the APP. when the robot arrived before the door, robot send task finished message to APP through the Internet. APP will remind guest its arrival.



Landline notification of arrival

A controller is installed in the hotel telephone system, and when the robot arrives at the target point, it will call the phone in the hotel room to announce its arrival



/ideo URL: ittps://drive.google.com/file/d/1JQdHLqa0DzdcM0khlHTM1RjNLEquMTkF/view?usp=sharing

Making a phone call

https://drive.google.com/file/d/1LRf9HIHEO0MpFyZZJpoila3j3_WZi64p/view?usp=share_link____

Rebuilt the delivery mode

Modular Adjustable Compartment, Bigger Than Bigger



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



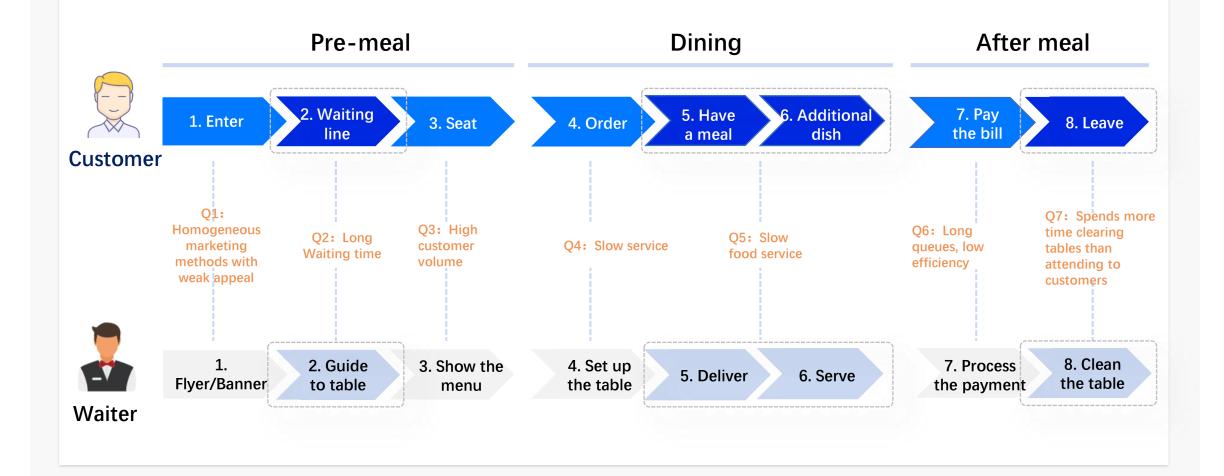
UV Sterile Compartment



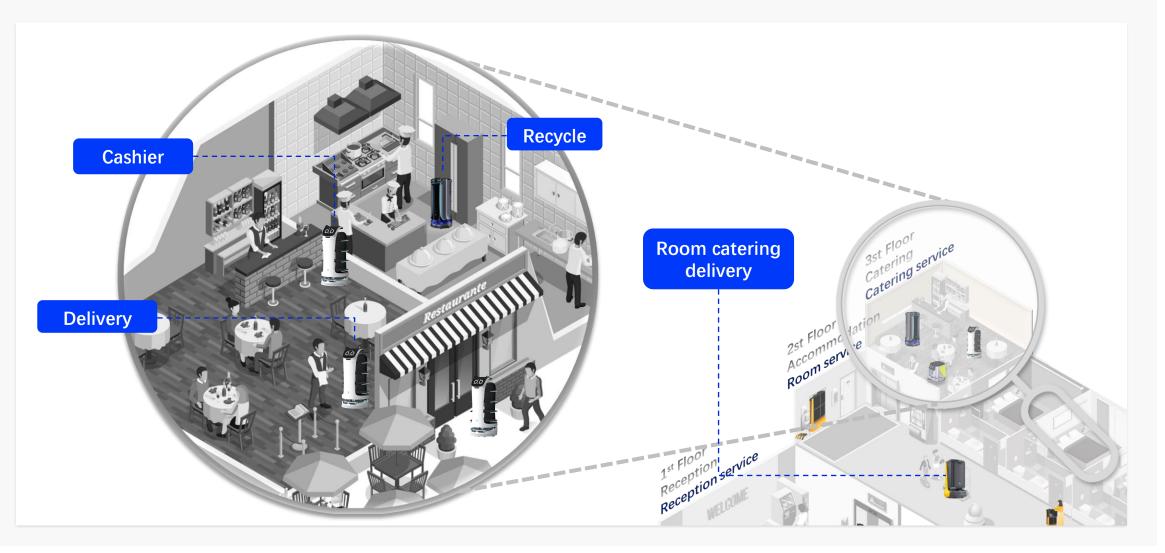
The compartment features a UV germicidal lamp that offers a sterilization rate of up to 99.9%, delivering greater peace of mind.UV can be turned off.



Scenario scheme 3: Hotel catering service

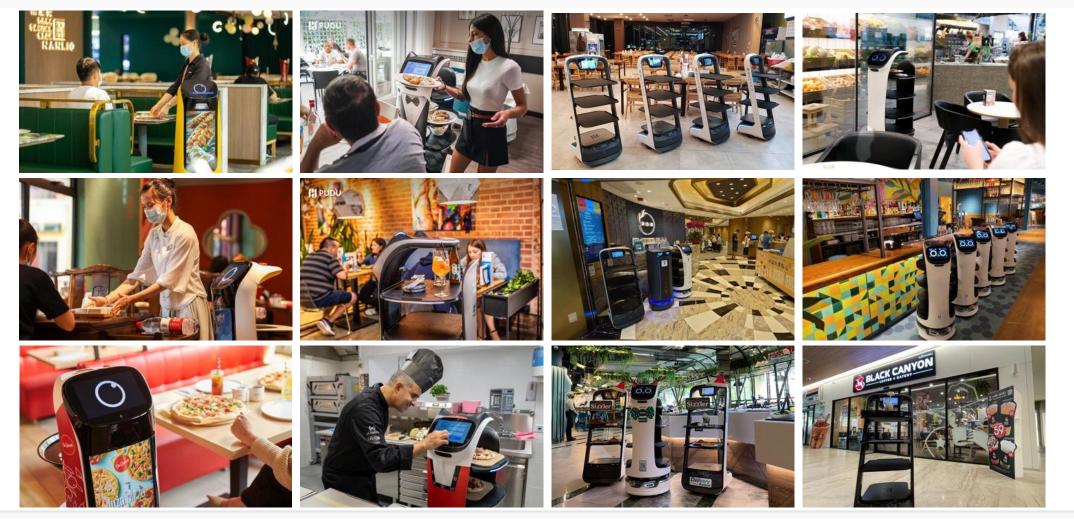


Scenario scheme 3: Hotel catering service

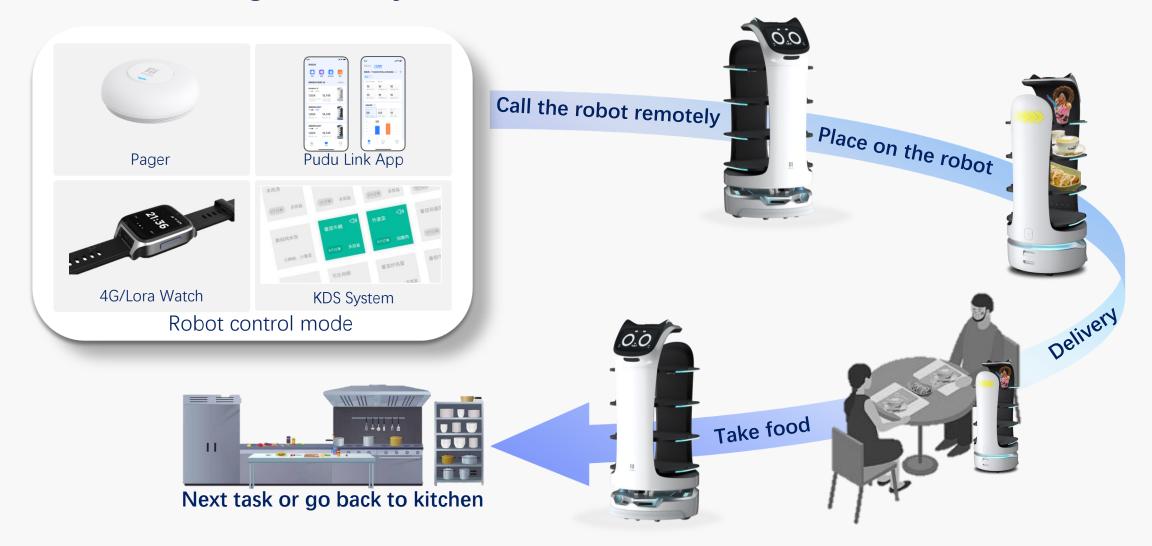


Hotel catering delivery scheme

Human-Robot Collaboration: Driving Quality and Efficiency in Service



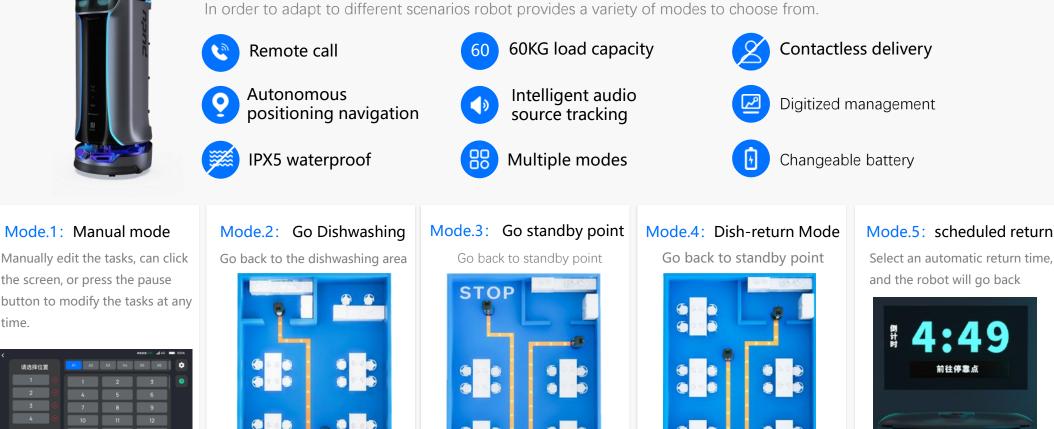
Hotel catering delivery scheme



Hotel catering recycle scheme

Multi-functional: 5 Modes Switchable with One Click





Manually edit the tasks, can click the screen, or press the pause button to modify the tasks at any time.



Hotel room catering delivery scheme



Cross-floor catering delivery

7*24h room catering service Eat whenever you want

The modular body of FlashBot enables all kinds of meals to be classified and stored, and meals can be delivered to customers at the fastest speed through communication with turnstile, gate, elevator, telephone, and various IoT devices.

Enjoy the freshest food in your room

Scenario scheme 4: Hotel cleaning service

Hotel public floor area cleaning schedule

Location	Entrance & Lobby	Elevators & Staircases	Guest corridors	Dining area	Office area & Guest room
Job duties	Carpeted should be vacuum to remove dust & grits; Hard floor should be mopped.	Clean the dust at the skirting; Carpeted should be vacuum to remove dust & grits; Hard flooring should be suctioned cleaned and then damp mopped.	Many hotel's corridors are fully carpeted. Carpets should be vacuum and shampooed;	Sweep and mop the floor before event. If the area is carpets should be vacuumed.	Sweep and mop the floor. If the area is carpets should be vacuumed.
Frequency	Carpet: once a day; Hard floor: every 2 hours	Skirting dust: Weekly cleaning; Carpets & Hard floor staircase: Daily cleaning	Skirting dust: Weekly cleaning; Carpets & Hard floor staircase: Daily cleaning	Sweep: Twice a day; Mop: 6 times a day	Sweep & Mop: Once a day; Vacuuming: Once a day



Two types of cleaning robot, Full scene coverage





No manual intervention worry-free and labor-saving

Accessories such as side brush, roller brush, squeegee, and mopping sweeper can be loaded and unloaded











Light Strips Detection The LED light strips highlight stains hidden in dark areas like wall corners and spaces under the table.

Vacuuming & Brushing & Watering 3 in 1 Suitable for narrow ground

- Hard floor (such as tile, pvc floor, etc.)
- Hard floor (e.g. marble floor)



effortless.

cleaning.

PUDU SH1

350rpm Brush Speed 22kg Brush Pressure Accelerates the elimination of tough stains, leaving the floor sparkling

Power-assist System

Easily Transport to

multiple locations

Its exceptional maneuverability and

portability make it ideal for mobility

The self-propelled design drives the SH1 forward, making floor cleaning



12000pa Strong Suction Power

Avoiding secondary pollution and delivering a great cleaning result.

Single-handed Control



The SH1 can be easily controlled with one or both hand, providing ergonomics and a light weight feel to your arms during use.



Quick disassembly Easy maintenance

Solution & recovery water tank, battery, brushes, squeegee



Fit Corners Perfectly

It can clean the tight path of 44cm width and a low space of less than 10cm height



7*24h Automate cleaning tasks Man-robot cooperation , More efficiency

 4: 00-5: 00 Entrance & Lobby ✓ Sweeping ✓ Vacuuming carpets ✓ Mopping hard floor 	 5: 00-7: 00 Guest corridors ✓ Sweeping ✓ Vacuuming carpets ✓ Mopping hard floor 	 7: 00-9: 00 Lobby ✓ Sweeping ✓ Mopping hard floor ✓ Circle operation 	9: 00-13: 00 Auto-charge & Add water automatically	 13: 00 & 19: 00 Repeat morning clean task ✓ Sweeping ✓ Mopping hard floor
		7: 00-9: 00 Elevator & Staircases ✓ Scrubbing hard floor	10: 00-14: 00 Dining area ✓ Scrubbing hard floor	<pre>16: 00-21: 00 Dining area ✓ Scrubbing hard floor</pre>
	I	7: 00-9: 00 Office area ✓ Scrubbing hard floor	9: 00-14: 00 Guest room ✓ Scrubbing hard floor	16: 00-18: 00Office area✓ Scrubbing hard floor

Cleaning : Automated crossing-floors cleaning



An intelligent IoT system makes it easy to connect **elevators**, **turnstiles**, **entrance guards**, **etc.**, enabling automatic elevator and entrance guard access, auto-calling of elevators, crossing-floors cleaning and autonomous return trips.

Solve crossing-floors cleaning issues, combine with charge station and work station, Realize 24H fully unmanned operation, and greatly improve the utilization rate of robots in hotel scenes, maximize the efficiency of cleaning robots.

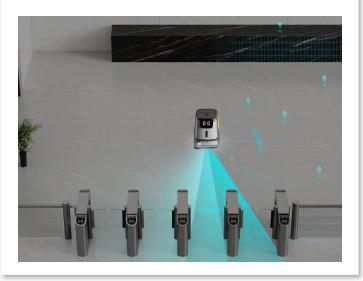
Elevator



Entrance guard



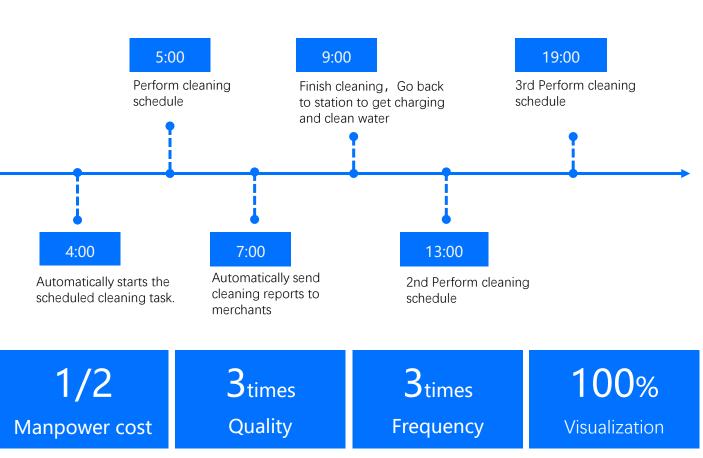
Turnstile



Cleaning : 7*24 hours task schedule , fully automatic



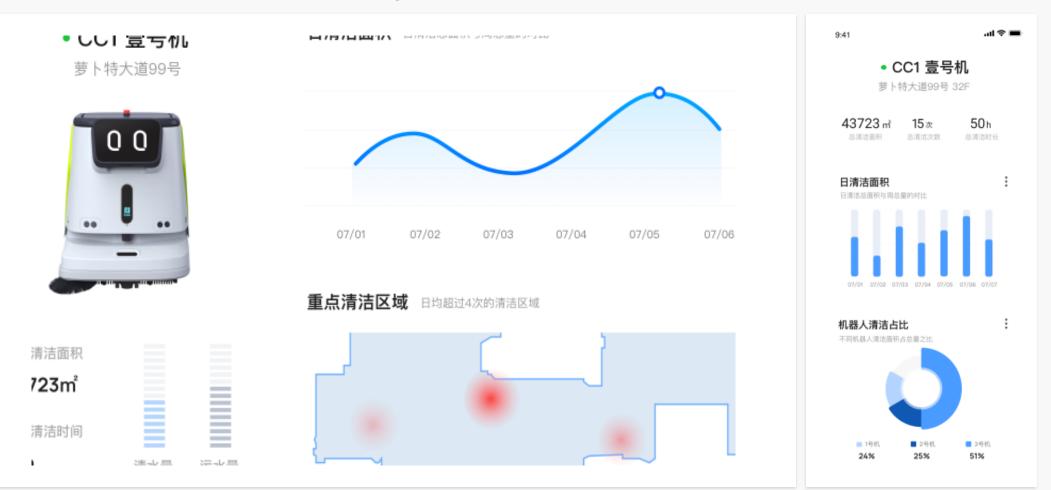
- Save manpower、time、money
- One machine, multiple cleaning modes, suitable for multiple scenarios.
- 24-hour operation, fully automatic
- Simple, user-friendly, reliable, and stable
- O Check the machine status at any time
- Presentation of cleaning reports



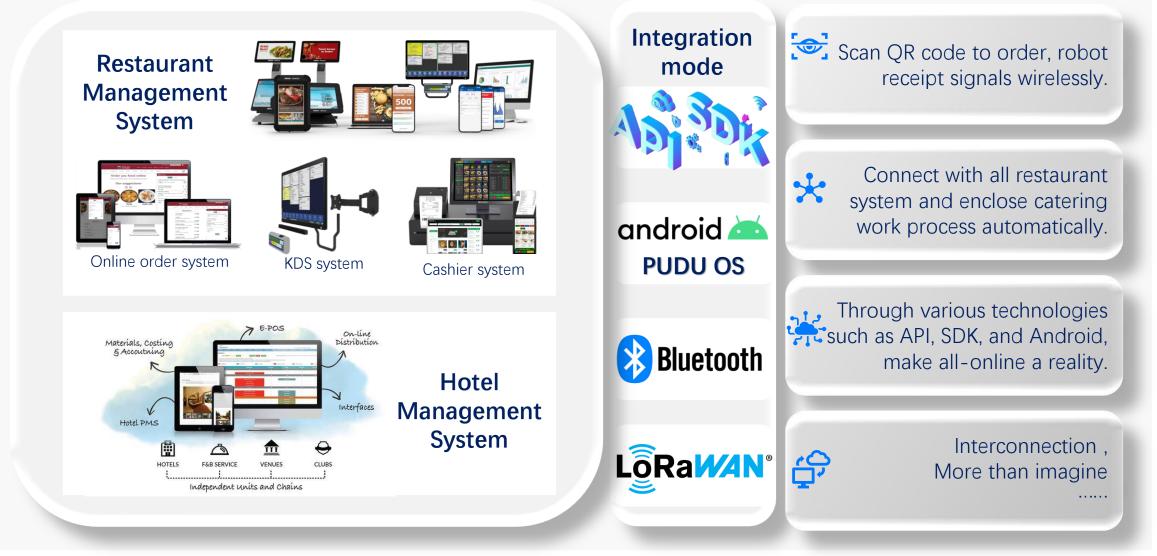
one day of CC1

Cleaning : Automated crossing-floors cleaning

Digital Platform Real-time synchronization of cleaning data, display of cleaning duration, area, etc., self-generated cleaning reports, and clear cleaning results



Other scenarios: IoT





03 Successful Cases

- Successful case : Junyi Hotel
- Successful case : O3 Restaurant & Bar

Value Summary



Increase sales revenue

Robots can broadcast hotel services and promotion products to guests precisely, increasing sales and customer satisfaction.



Respond quickly to customer needs

Customer proposed room service requirements , such as : things delivery and foods delivery. Robot always be the 1st came to you.



Improve customer dining satisfaction

Reduce direct contact with customers during meal delivery, and lower the risk of bacterial transmission.



Decrease cleaning workload

Robots help cleaners free themselves from tedious, repetitive cleaning work and let the manpower to where it is really needed.

Optimize work content configuration

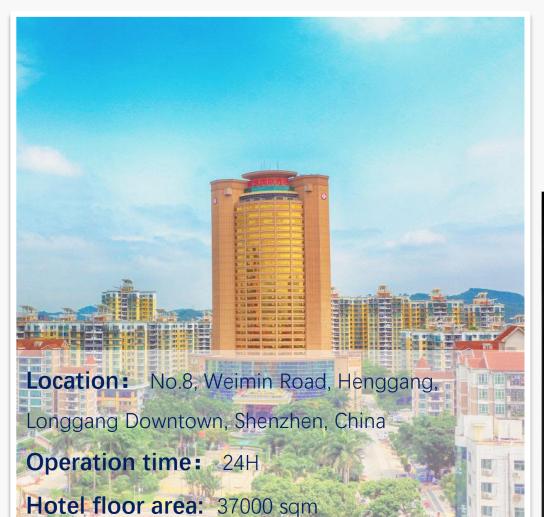
Man-machine collaboration, the tedious, repetitive, low-skill work to be completed by robots, optimize the staffing of each position, effectively save labor costs.

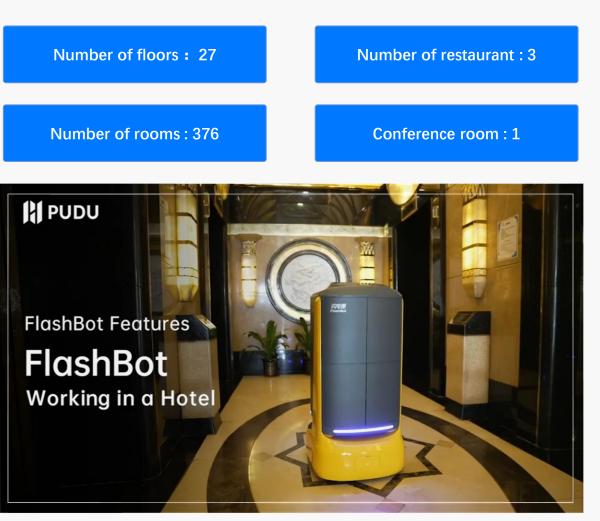


Enhance the core competitiveness of differentiation

Digital management, remote real-time monitoring. Different from traditional hotel services to form brand differentiation.

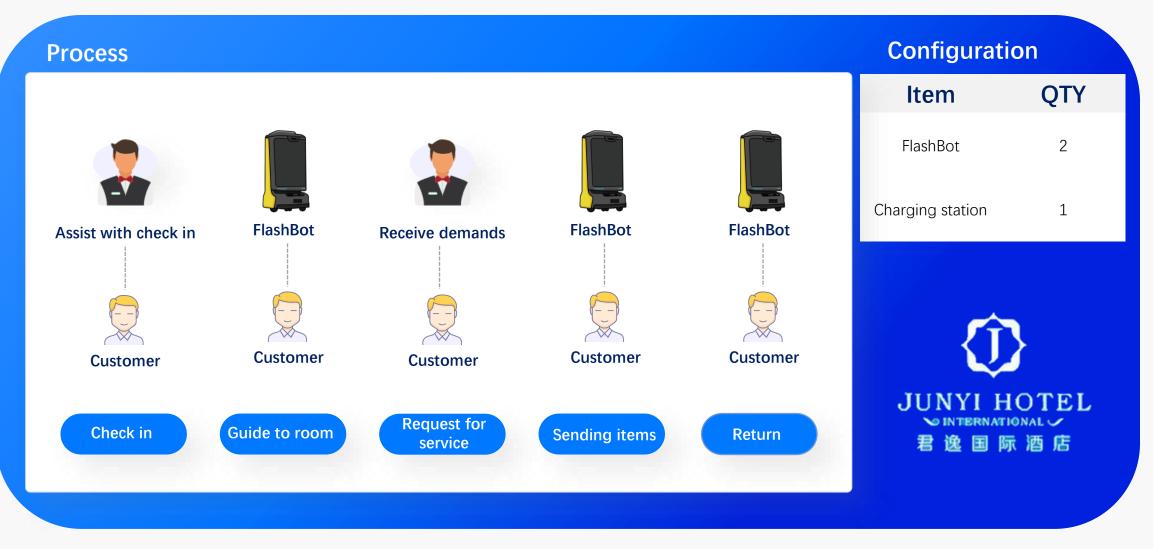
Successful case : Junyi Hotel





Video URL: https://drive.google.com/file/d/1R7JamspbnnFgqLYmLaWUDxQFjifB5BJr/view?usp=sharing

Successful case: Junyi Hotel

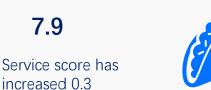


Successful case : Junyi Hotel

7.9

After using the FlashBot, the hotel's rating on a website increased significantly





10.0 food score has increased 0.5





Cleanliness score has increased 0.6

8.5

Improved brand image

Hotels using FlashBot can present a modern and intelligent image, enhancing brand image and attractiveness.

Improved management

efficiency

FlashBot assist hotels in collecting & analyzing customer data, improving management efficiency and decision-making ability...

Increased customer consumption experience FlashBot can provide personalized service and information to guests, making them feel more cared for. It could increase online website rating constantly.

Successful case : O3 Restaurant & Bar



Location: Warsaw, Poland

Acreage: The total area is close to

1000㎡, dining area & bar area totaling about 500㎡

Staff Qty:

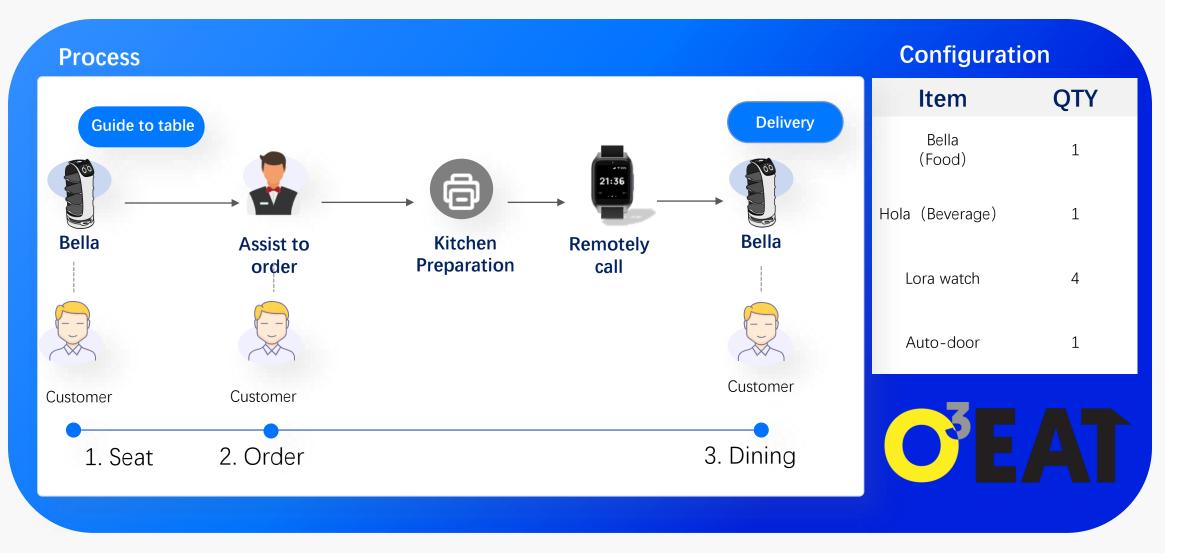
Dining area: reception staff about 4-8



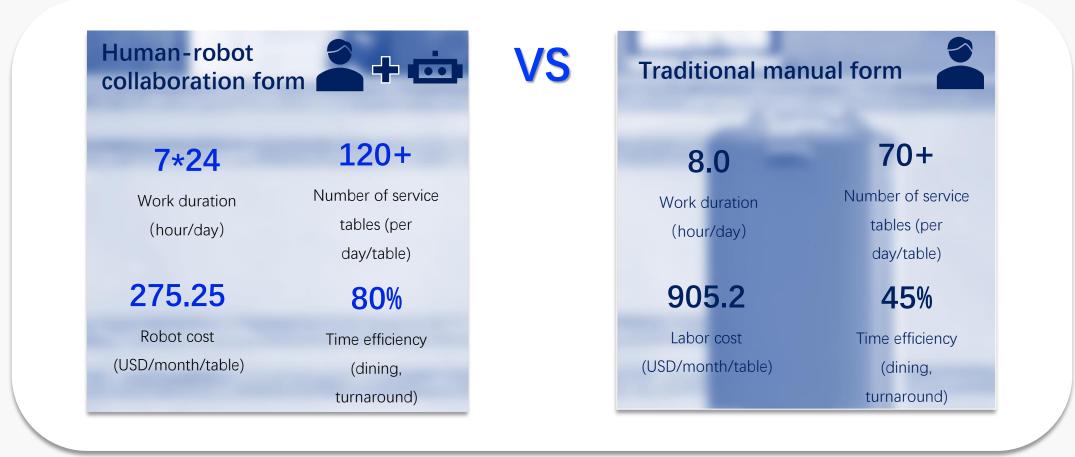


Video URL: <u>https://www.youtube.com/watch?v=KZ644p7VAg8</u>

Successful case : O3 Restaurant & Bar



Successful case : O3 Restaurant & Bar



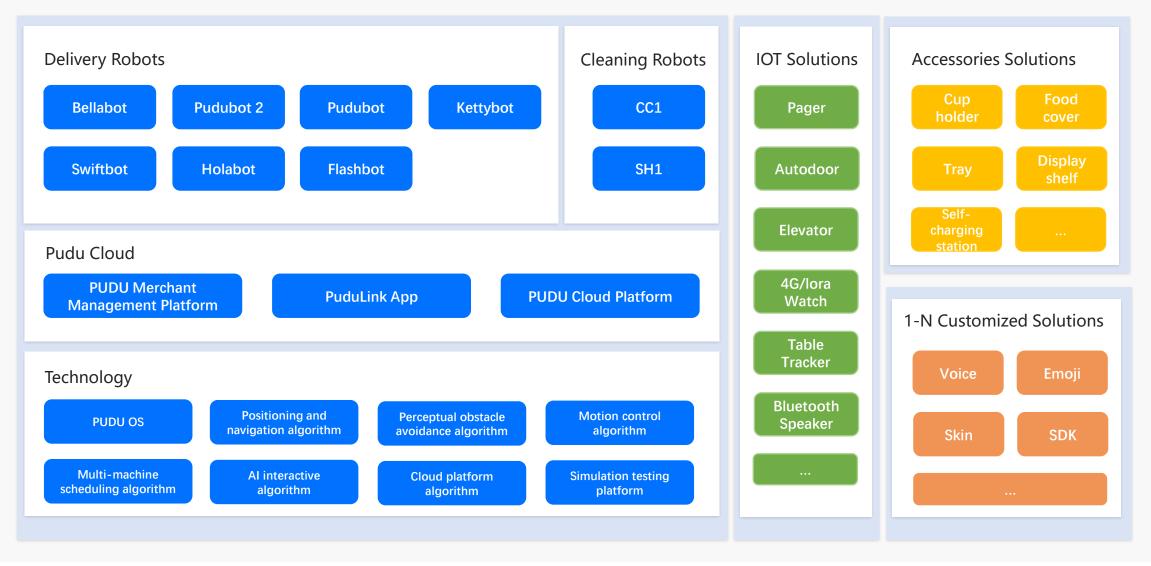


04 Product Family Matrix

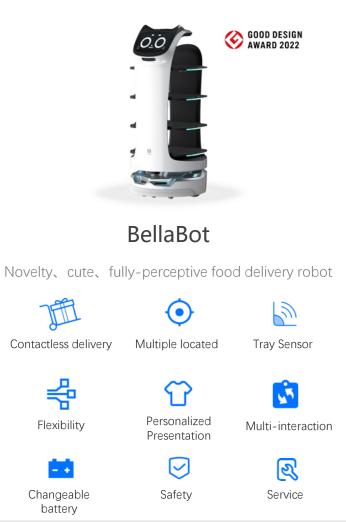
Creating truly useful robot to improve human productivity and quality of life



Product Family



Delivery Robots





PuduBot2

Latest, high-performance, extendable, adaptable, intelligent delivery robot for multiple scenarios



* <

Direct mode





Cruise mode

Delivery mode Shipping mode

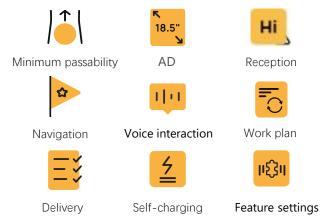


Dish-recycle mode Birthday mode



KettyBot

With Ad screen, serving as both a delivery and receptionist



Delivery Robots

SwiftBot



Delivery Robot for Smooth Peak Hour Operations, Redefining Social Interaction between Humans and Robots







Projection



Foot-activated Door Projection

HolaBot

Multiple Delivery Scenarios





First Delivery Robot with Remote Call Notification Function for

Dish-recycle

medical waste recycle



reddot award best of the best Classic Intelligent Food Delivery Robot, Pioneering the



Scheduling

3D avoidance

Independent Suspension

Ultra-long Endurance

-0 Optimal Path Planning

 \cdot Sun-resistant

FlashBot

Full-Scenario Delivery for Hotels, Offices, Apartments, and **Residential Buildings**







Independent cabin door

Customized disinfection time













Arrival notification

Cleaning Robots



reddot winner 2023

PUDU CC1

All-Purpose Cleaning Monster: Four-in-One Scrubbing, Sweeping, Mopping, Vacuuming

A machine that integrates sweeping, mopping, vacuuming, and dusting, easily meeting all cleaning needs with just one device

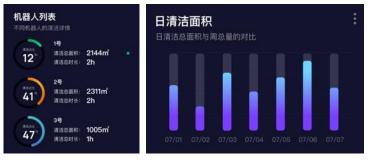




PUDU SH1

Professional Mini Digital Floor Scrubber: A More Professional and Thorough Cleaning Solution

The compact and flexible design allows for easy transition between tasks on multiple floors and surfaces



PUDU Cloud

	Statute or B Read of	Polyman or B arrest we	Antibalian an B antibal car	Concenter de O minima con
				Санала (ланала) • такасанана • такасанананананананананананананананананан
	1.174			

PUDU Cloud Platform

For distributors

Management platform for managing business opportunities, clues, sub-distributors, merchant customers, and selling robots.

PC – Web

- 1) Singapore Group: https://css.pudutech.com
- 2) Germany Group: https://csg.pudutech.com
- 3) China Group: https://cs-internal.pudutech.com

PUDU Merchant Management Platform

For end-store

A platform for robot configuration, remotely controlling, managing stores and viewing robot operation data.

PC – Web

- 1) Singapore Group: https://businesss.pudutech.com
- 2) Germany Group: https://businessg.pudutech.com
- 3) China Group: https://business.pudutech.com

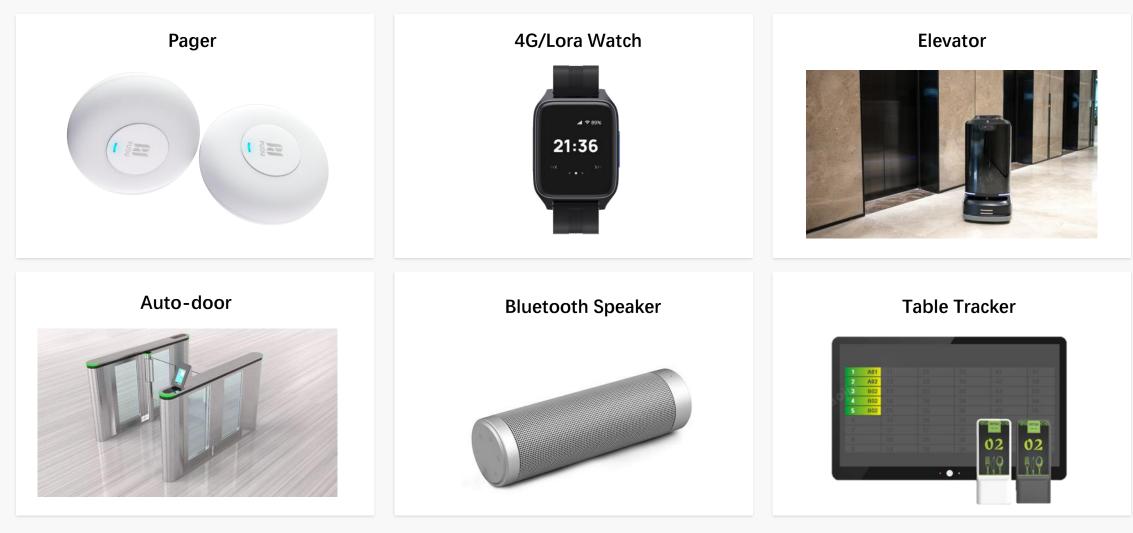




PuduLink App 【iOS】

PuduLink App 【Android】

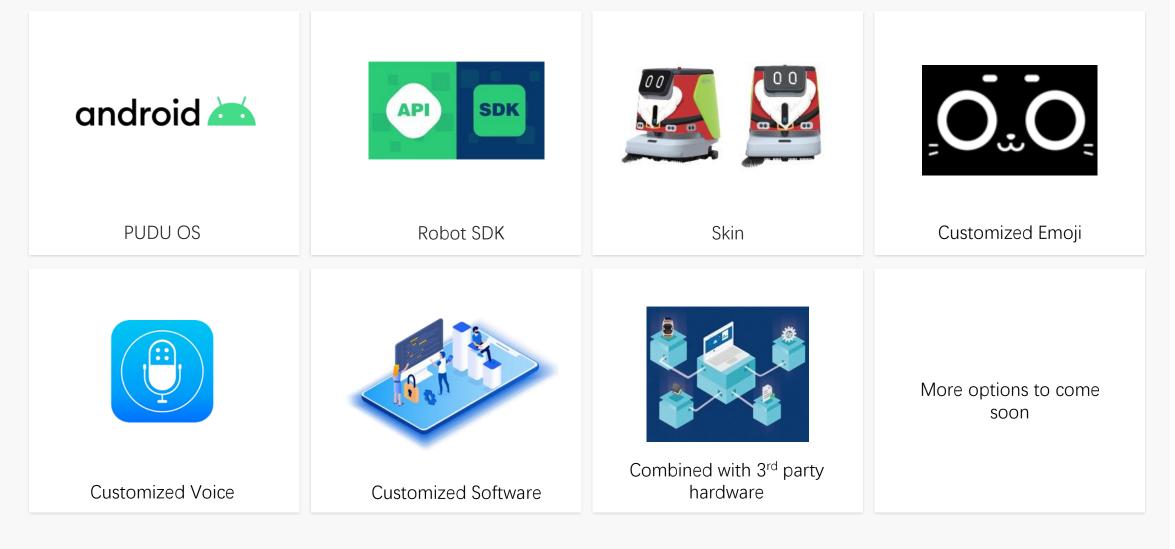
IOT Solutions



Accessories Solutions



1-N Customized Solutions





05 PUDU Introduction

PUDU Introduction

Pudu Robotics

In 2016, Pudu Technology was founded in Shenzhen as a national high-tech enterprise that specializes in research, design, production, and sales of commercial service robots. After seven years of development, Pudu Technology has established hundreds of service points worldwide, with business in over 60 countries and regions, delivering more than 56,000 units. It has become a leader in the field of commercial service robots globally. In the age of intelligence, Pudu Technology will continue to uphold the "inventor's spirit" and solidify its technology, refine its products, create truly useful robot products, and enhance the efficiency of human production and life.

* Relevant statistics as of December 2022

Mission

Use robots to improve the efficiency of human production and living

Vision

To become the world's strongest commercial service robot company

-``

BE INVENTIVE BE CUSTOMER CENTRIC

THINGKING IN THE LIGHT OF FIRST PRINCIPLES BE ENTERPRISING & ACCOUNTABLE

PURSUING FOR MOVING FAST

THE ULTIMATE

BE OPEN-UP



EMBRACING CHANGE

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.

* Relevant statistics as of December 2022



Scale Advantage

Total Sales Quantity

56,000+

56,000+ * units have been sold worldwide

Market Share in All Scenarios

TOP1

The market share in the full range of commercial service robots is No.1

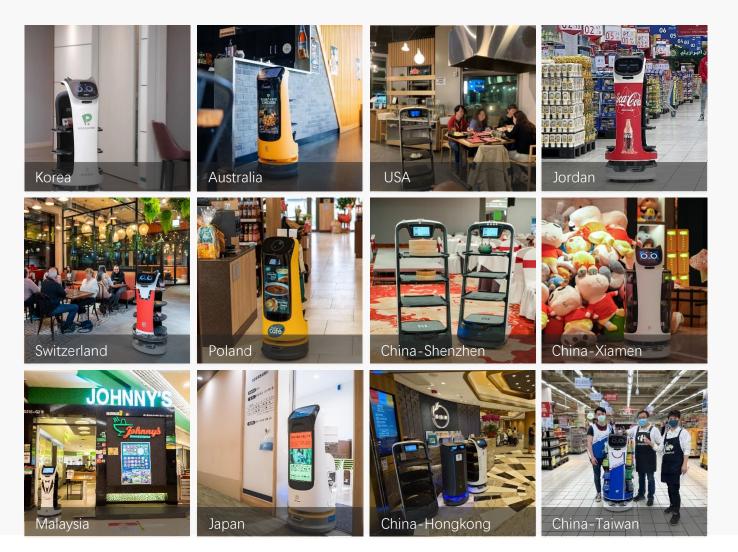
Market Share of the Overseas Catering Industry

>**80%**

Overseas catering industry's market share > 80%

* Relevant statistics as of December 2022

The world largest commercial service robot manufacturer



PUDU

Horner and Certification

Certificate & Patent

All of existing products have passed the multi-certification that match the targeting markets.

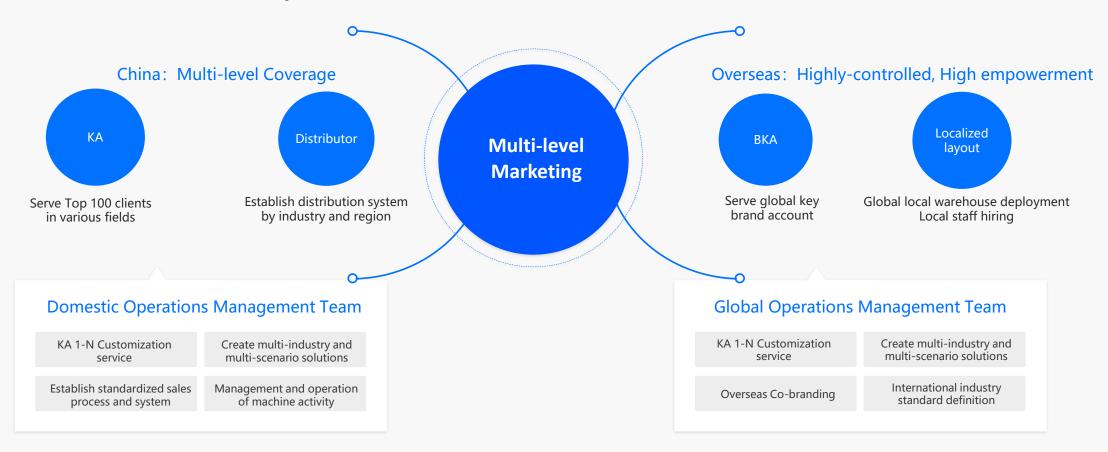
Pudu Robotics has applied for about 1300* core patents, of which invention patents are over 60%, involving positioning, navigation, motion control, human-computer interaction, robotics arm, servo motor, computer vision, cloud platform and other technical fields.



R

Operation Advantage

Global Multi-level Sales System



Operation Advantage

Offline Service:

- 1 Year Free Warranty
- 7 × 24 Hours Service
- Local Service & Support

PUDU CARE									
Timely		Professional		Satisfying					
Global service network in 30+ countries	Exclusive technical expert and local support for customers		Remote and onsite service, free tech training and certification for PUDU robot		Warranty guarantee and value-added service				

Pudu Robotics has a thorough after-sales support system and humanized after-sales policy as well, whenever it is needed, we are going all out to offer service and reach your satisfaction.



Thank you!

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 Road, Nanshan District, Shenzhen, China 518300