

New generation

# Hotel Multi-functional Service Robot - UP

Modular Utility Robot-UP



# About Us

As an innovative technology company focusing on the application and technology research and development of commercial robot products, Yunji Technology, with years of accumulation in **indoor positioning and navigation, robot movement, big data** and other aspects, specializes in the productization and commercial operation of intelligent robots. **The company has successively completed multiple robot iterations and prototype research and development of the third generation robots, with the products being mainly applied in hotels, buildings, government halls, communities and other scenarios to provide delivery, guidance, explanation, residential solutions** and other services.

Since the establishment in 2014 till now, the company has applied for more than 2,000 intellectual properties, including more than 1,000 patent applications (invention patents account for more than 60% of the total applications). Its innovation index available in qcc.com is up to 711.78T. **It has successively won awards such as "SRDI Technologically Advanced Little Giant Enterprise" from Ministry of Industry and Information Technology and Beijing Municipality, "Top 100 Enterprises in Science and Technology Innovation in Beijing, "Wu Wenjun Artificial Intelligence Technology Invention Award", and it takes the lead within the industry in terms of innovation ability and the number of patents obtained.**

Our strategic partners cover the world's well-known hardware enterprises, Internet giants, Huawei, INTEL and other world's top 100 enterprises, serving more than **20,000 hotels/customers**, including 2022 Beijing Winter Olympic Games, National Convention Center, Jinmao Mansion, Lenovo Future Center, Marriott, Hilton, InterContinental, Accor, Hyatt, Wyndham, Ascott, Jinjiang, Home Inn, Huazhu, Adour, New Century, as well as more than **100 million** people. We have our international customers distributed in more than 40 countries and regions such as **Europe, America, South Korea, Japan, Thailand**, and we have been praised by hotel guests from all over the world.





Our hotel service robot with the largest market share in the world

We are far ahead in the industry for the total number of people serviced

**500 million+** people  
Cumulative number  
of people served

The average number of  
daily tasks for our robots is  
more than **500,000**

Our robots are  
employed in **more  
than 20,000** hotels

# Covering more than 30,000 hotels under more than 150 hotel brands worldwide

More than 110 overseas hotel brands settle in China

More than 40 countries/regions all over the world



Among more than 150 brands under the Top 8 hotel groups in China

We partner with more than 90 brands





Become Accor Group's (global Top 5 groups) contracted supplier

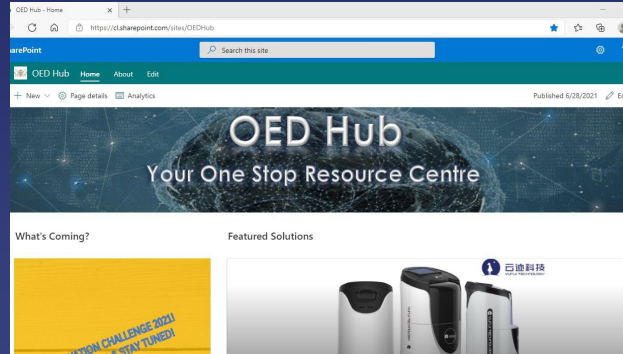


Obtain IT certification of Marriott Group

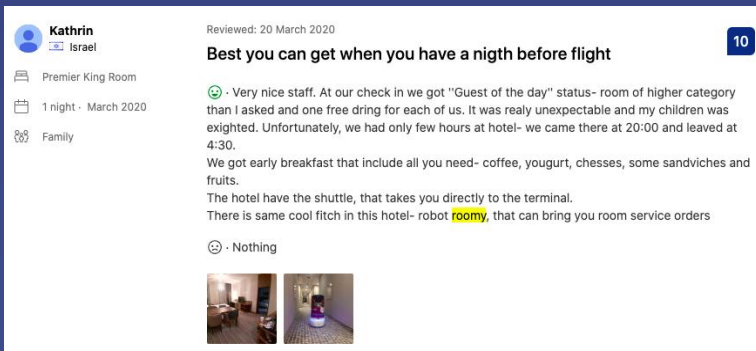
More than 40 countries/regions around the world



Make its appearance in the official website of the Louvre Group in France



Settle in Ascott Singapore Global Procurement Center



Receive good reviews from guests on international OTA platform



Featured in Japanese and Korean media reports



U.S.



Netherlands



Canada



Saudi Arabia



Japan



Thailand



South Korea



Singapore



Australia



Bulgaria



Bangladesh



France

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# Enjoy great prestige abroad

## **International reputations**

**In October 2019, the company was invited by Huawei to attend the BMMF Conference in Zurich, Switzerland**

**In May 2020, the company was certified by Intel MRS(Market Ready Solution) and carried out cooperation with its global partners**

**In September 2020, the company was invited to attend the "ASIA BUSINESS INSIGHT" conference in Germany as the only technology company in Asia**

**In August 2020, the company was listed in "TOP 50 Enterprises of Leading Consumption in China" issued by KPMG**

**In November 2020, the company was listed in Top 50 Smart Companies by the MIT Technology Review**

**In January 2022, the company was awarded the "Excellent Partner of the World Robot Conference"**

**In November 2022, the company won the first prize of "2022 Science and Technology Progress Award granted by China Society of Image and Graphics"**

## **Global grand event**

**In January 2020, the company supported Beijing Huoshenshan Shelter Hospital in disinfection and delivery**

**In February 2022, the company provided intelligent robots for the 2022 Beijing Winter Olympic and Paralympic Games for reception, guidance and delivery services**

**In February 2022, the company provided intelligent robots for Beijing Main Media Center (Phase II of National Convention Center) for guidance, delivery and waste removal services**

# Leading technology and stable operation

## The overall success rate of tasks is 99.999%



### Automatic warehouse replacement

The robot is able to automatically replace the upper warehouse according to the task scheduling



### Automatic recharging

The robot automatically returns to the charging pile to get charged and wait for the next task after each task is completed



### Autonomous elevator ride

The robot is compatible with elevators in different brands and models to realize vertical traffic within a building



### Automatic phone dialing

The robot automatically makes a phone call to the room to inform the guest after arriving at the room door



### Flexible obstacle avoidance

The robot is equipped with multiple sensors to perceive its surroundings and avoid pedestrians flexibly



### Intelligent mapping

The robot is employed with Slam algorithm for three-dimensional autonomous positioning and mapping



### Intelligent Internet of Things

The robot is able to realize intelligent IoT of gate/safety gate and other devices



### Cloud service

The robot supports cloud platform dispatching management, remote upgrading, diagnosis and monitoring



# The robot is competent for errands and delivery, saving manpower resources for hotels



## Reduce employee turnover rate

Enable employees to release their pressure, so that their vocational happiness can be fulfilled



## Competent for autonomous delivery to liberate manpower

Autonomous obstacle avoidance/elevator riding/making a phone call/interconnecting the front warehouse



## Provide relevant working data

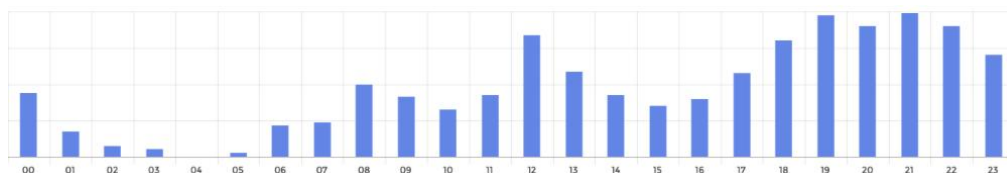
The robot retains working data to guide/optimize the operational scheduling structure



## Provide standardized services

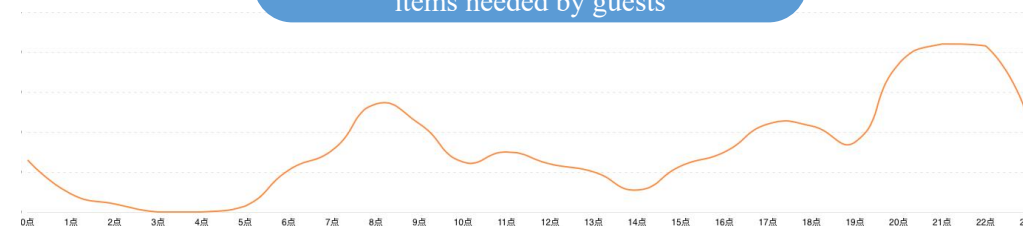
The robot is available to provide 7X24-hour continuous services without negative emotions and complaints

Time distribution of takeaway delivery by the robot



Monthly manpower release of approximately **263 hours** (data from a 350-room hotel)

Time distribution of robots delivering items needed by guests



Monthly manpower release of approximately **102.5 hours** (data from a 350-room hotel)

# What other tasks can be assigned to a robot to complete in a hotel?



# Reconstruction of structure enables the robot to use "tools"

The robot is equipped with an universal chassis and upper warehouses with different functions, so that there is no need to purchase multiple robots at high prices

- Better cost performance:  $1+1 < 2$
- Higher usage rate:  $1+1 > 2$



# Reconstruction of time makes the robot generate greater value



# New generation multi-functional service robot UP

Split design | Modular upper warehouse | Automatic warehouse replacement | Multi-functions in one machine | Saturation operation by shift in different time periods



Smart robot service corps

# UP - delivery

Improved delivery efficiency brings an upgraded experience

## Upper and lower dual warehouse design

With double warehouses in large capacity, the robot is able to switch model between 1 grid and 2 grids for item delivery

## 350° laser view

With the 350° ultra-large wide angle vision slam algorithm is utilized to perceive different surroundings

## Camera inside the warehouse

Check whether there are high-risk items in the warehouse and assist hotels to record robot delivery records



## Young and interactive robot interface

More in line with young people's usage habits

## Body shell made of ABS material

Anti-fouling and anti-collision, simple and elegant

## Split mobile robot platform

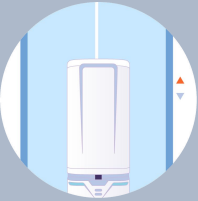
With an independent power source, the robot is able to pass slopes with a gradient of 12°

# Takeaway relay delivery by the robot more completely liberates manpower

If a robot in the hotel cannot meet the daily delivery needs, it can be equipped with a UP backup warehouse for delivery, eliminating the need to purchase another robot at a high price



Placing takeaway by the deliveryman



Delivery by the robot



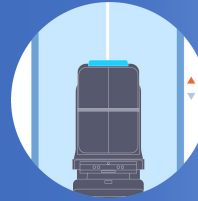
During rush hours takeaways are piled up at the front desk



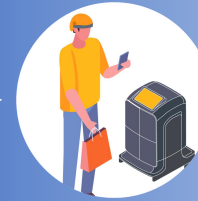
and the waiter manually sends the task to the robot



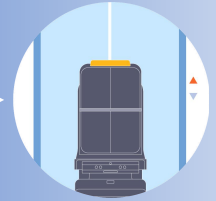
Placing takeaway by the deliveryman



Delivery by the robot



During rush hours Takeaways are automatically placed in the spare warehouse



Robots carry out relay delivery



Hotel guests are dissatisfied with long waiting times for takeaways



The attendants are interrupted when they are at work during rush hours



takeaways are piled up at the front desk and affect the eye-pleasing appearance of the hotel



Realize improved efficiency in delivery at a low cost



The attendants do not need to focus on the takeaways, and they will not be interrupted while at work



Ensuring the cleanliness and beauty of the reception desk

# An intelligent robot that can sing and send blessings

The hotel can customize exclusive blessing words, so that the robot will send words to the guests when they pick up the goods.  
With built-in music, the robot is able to send unexpected surprises to guests during important festivals.

17653718867303

41.60

心\*\*\*\*0 / 8201

已支付

位置: 秋果酒店(成都宽窄巷子店),  
8201

商品: 酒鬼花生70g \* 1gemez  
enaak小鸡干脆面30g \* 1乐事薯片  
40g \* 1百威啤酒罐装330ml \* 1

备注: 请帮忙说一句: 一切都会好起来的! 谢谢

订单发货通知

3月16日

您有一笔订单已经发货, 发货人:  
Hero406427

订单编号: 14728998309728

下单时间: 2019-03-16 21:39

订单金额: 38.00

商品信息: 【网红同款】宁宁同款书包 \* 1;

位置: 6002

备注: 请播放: 送给九月小朋友

In-depth customer insights to realize their "wish list"



# UP - Cleaning

A cleaning robot specially designed for the hotel environment



With dust absorption/wet pushing/cleaning function in one machine



Automatic switching of cleaning modes for different floor materials



Maneuverable and flexible and works smoothly in small spaces



Professional carpet cleaning design



Automatically generate the cleaning work order after identifying the dirt



Automatically inform the attendants once identifying bulky wastes



Identification of valuables to prevent accidental inhalation



The mini program simplifies operation and automatically generates cleaning reports



## Difficulties for hotel environment cleaning



The space is narrow and closed  
Heavy workload for cleaning against the wall



The carpet covers about 80% of the total area  
Carpets have high resistance and are prone to hair loss



Major stains on carpets include  
debris, hair, and dust accumulated in fluff

## Pain spots for hotel cleaning management



Labor cost increases year by year  
High training cost



Difficulty in recruiting housekeeping staff  
Serious employee turnover



Difficult to monitor work effectiveness  
and duration  
Difficulty to guarantee the cleaning effect

# Specially designed for hotel carpet cleaning

## Disc-type sparse edge brush

Fit the edge to the maximum to clean the corners

## H12 HEPA air filtration

Avoid secondary air pollution

## 50000rpm high-speed brushless motor

Greater air pressure and stronger suction

## Carpet slapping by high-speed nylon rolling brush

Deep cleaning of sediments

## Yunji's patented anti-winding roller brush shaft design

Effectively avoids hair entanglement

## Work at low noise of less than 65 dB

Silent operation in public areas at night



# Powerful deep learning ability of scenarios and algorithm technology

## Smart cleaning is more suitable for hotel environment

The convolutional neural network algorithm based on deep learning is used to build a visual model that can detect all kinds of garbage, which is quantified into the robot through high-X compression distillation, so that the robot can recognize and understand the information in the environment



### Automatically inform an attendant to clean up the bulky items

The robot can actively identify bulky garbage/items (with a size of more than 2.5CM) along the way, and take photos to notify the administrator (Housekeeping Department/housekeeping staff) to clean up/dispose of them in time.



### Automatically generate cleaning task for small wastes

The robot is able to discover fine debris on the way to deliver goods, create its own cleaning task and perform cleaning independently.



### Send a report of missing valuables

The robot can generate a missing report in case of identifying valuables, so that the mini program will pop up and give a reminder for item pick up and storage.

# Visible daily cleaning effect/results



Real shot of the dirt inside the dust box every day after being cleaned by a robot in a hotel in Beijing



The hotel robot cleaned the dust for a week and filled a 5-liter dust bag

# Feedback from hotel staff and guests

**Mr. Jia, Director of Hotel Rooms:**

"It does look very clean, and the guests feel comfortable looking at it."

**Housekeeping staff:**

"The robot is really helpful, and we don't have to clean the hallways anymore"



# UP- open delivery

96L large capacity | open design | flexible delivery | economical and practical

## Delivery of large items

Bottled water, whole box of drinks, printing paper, multiple parcels, printing materials and other large supplies



## Luggage delivery + guidance

20-inch boarding box





## Critical delivery parameters

<b>Functions:</b>	Delivery, connection with containers, guidance and parades, greeting and reception
<b>Dimensions:</b>	Length 535* Width 450* height 1050mm
<b>Dimensions inside the warehouse</b>	Length 310* Width 310* Height 240mm/ warehouse (double-warehouse design)
<b>Capacity:</b>	Upper warehouse 23L Lower warehouse 23L
<b>Load:</b>	Upper warehouse 10kg Lower warehouse 10kg
<b>Chassis lifting capacity:</b>	80kg
<b>Running speed:</b>	0.4-1.4m/s
<b>Narrowest passing distance:</b>	55cm
<b>Endurance ability:</b>	Chassis 12h (hard floor) Upper warehouse for delivery 15h
<b>Gradeability</b>	12° (the upper warehouse and lower warehouse could bear a load of 10kg respectively)



## Critical parameters of open delivery

Functions:	Delivery and guidance
Dimensions:	Length 540* width 450* height 800mm
Dimensions inside the warehouse	Length 383* Width 334* height 350mm
Capacity	44L
Maximum load	40kg
Running speed:	0.4-1.4m/s
Narrowest passing distance:	55CM
Endurance ability:	12H
Gradeability	12°



## Critical cleaning parameters

Cleaning capacity	Cleaning items	Carpet: Vacuuming + cleaning Floor: Cleaning + vacuuming + dust pushing (dry/wet)
	Cleaning accessories	Edge brush, rolling brush, trash box, Collection bag, mop
	Maximum cleaning efficiency	300~500m <sup>2</sup> /h
	Maximum continuous cleaning speed	1000m <sup>2</sup> (3h)
	Cleaning width	380mm
	Minimum passing width	60cm
	Edge cleaning ability	0 distance cleaning along the edge
	Passing slopes/over the ridge/over the gap	8°/15mm/30mm
Specification parameters	Product dimensions	700(L)*450(W)*730(H)mm <sup>3</sup>
	Volume of clear water tank	5L
	Volume of collection bag	Greater than 5.5L (available to be used for about 3-7 days)
	Dust box capacity	0.25L
	Noise	Less than 65 dB (The noise is less than 68 dB when the robot is in full-power ultra-powerful mode)
Charging time	Charging time	<4.5 h
	Battery life	Sweeping and vacuuming for 4 hours, dust pushing for 6 hours, and wet mopping for 2 hours
	Rated voltage	24V

# THANKS



云迹科技  
YUNJI TECHNOLOGY