



FlashBot

Building Delivery Robot



About FlashBot

Product Overview

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About Pudu



FlashBot

Building Delivery Robot

FlashBot is Pudu's latest building delivery robot that can take the elevator to provide safe and reliable room delivery. Powered by cutting-edge technologies, FlashBot takes intelligent delivery to the next level, enabling digital management and services of hotels and office buildings.





Product Overview · FlashBot



Machine dimention	539*515*1050mm
Machine weight	50kg
Payload	15kg/layer , Max30kg
Machine material	ABS/Aviation-grade aluminum alloy
Compartment space	2-4 compartments (Adjustable)
	219*410*286mm (Single)
	438*410*286mm (Double)
Charging time	4.5H
Battery life	10H
Charging mode	Auto-charging
Cruise speed	0.5~1.5m/s (Adjustable)



Product Overview · FlashBot

RGBD Depth Camera

Ultra-Sensitive E-Skin

Lidar

2*RGBD Cameras

Charging Contact



Screen

Gull Wing Door

Indicator light

Six-wheel Independent Suspension





Product Overview · FlashBot



Auto Building Delivery Service

Automatic, contactless delivery of customer-ordered items and takeaways across floors offers greater peace of mind.



Greeting and Escorting

Check-in guidance is provided based on optimal path planning and voice announcements.



Product Overview · FlashBot



Auto Elevator Taking

Powered by IoT technology, FlashBot calls and takes the elevator automatically for delivery across floors.



Auto Charging

FlashBot charges itself automatically when its battery is running out to serve you in the best way 24*7.



Product Overview · FlashBot



AI Voice Interaction

Smart robot control is possible with a variety of voice commands. Operation is now easier than ever.



Arrival Notification

FlashBot provides arrival notifications by phone calls and sends a pickup code for customers to pick up the deliveries.



One Tap Call

FlashBot is at your service with a single tap.



Product Overview · Operation Process

Staff



Taking order



Calling robot



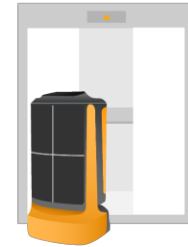
Placing items



Robot



Sending arrival notification

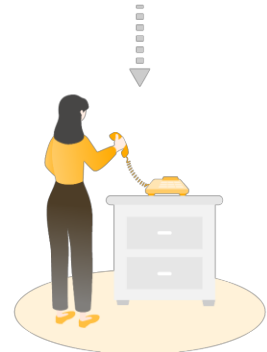


Auto elevator taking



Auto delivery

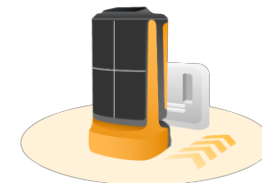
Customer



Receiving code



Picking up



Returning

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FlashBot · Building Delivery Expert

- A smart robot that can take the elevator safely with other passengers
- IoT technology



- Safe and efficient
- Advanced digital management



What makes FlashBot a building delivery expert?

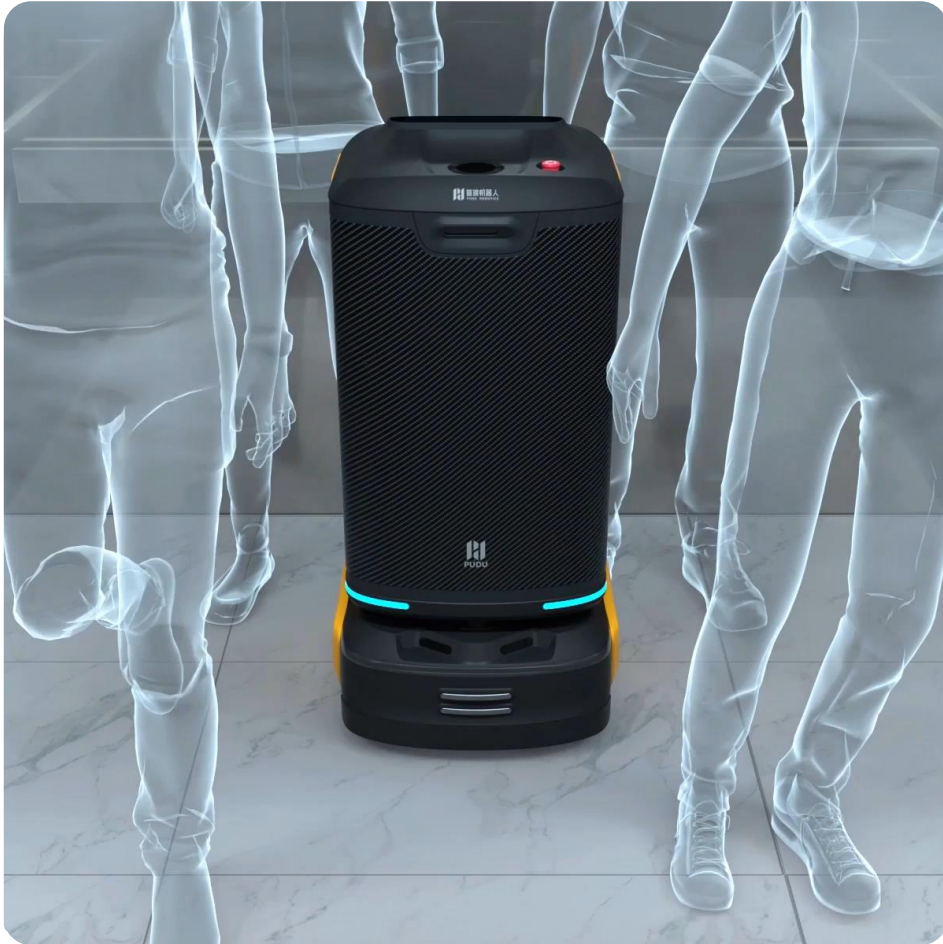


Ultra-Sensitive E-Skin

- 89 exclusive patented technologies
- Allows FlashBot to sensitively detect the surroundings and take the elevator safely and orderly with other passengers.



Product Advantages · Ultra-Sensitive E-Skin



Reliable, Friendly and Nimble

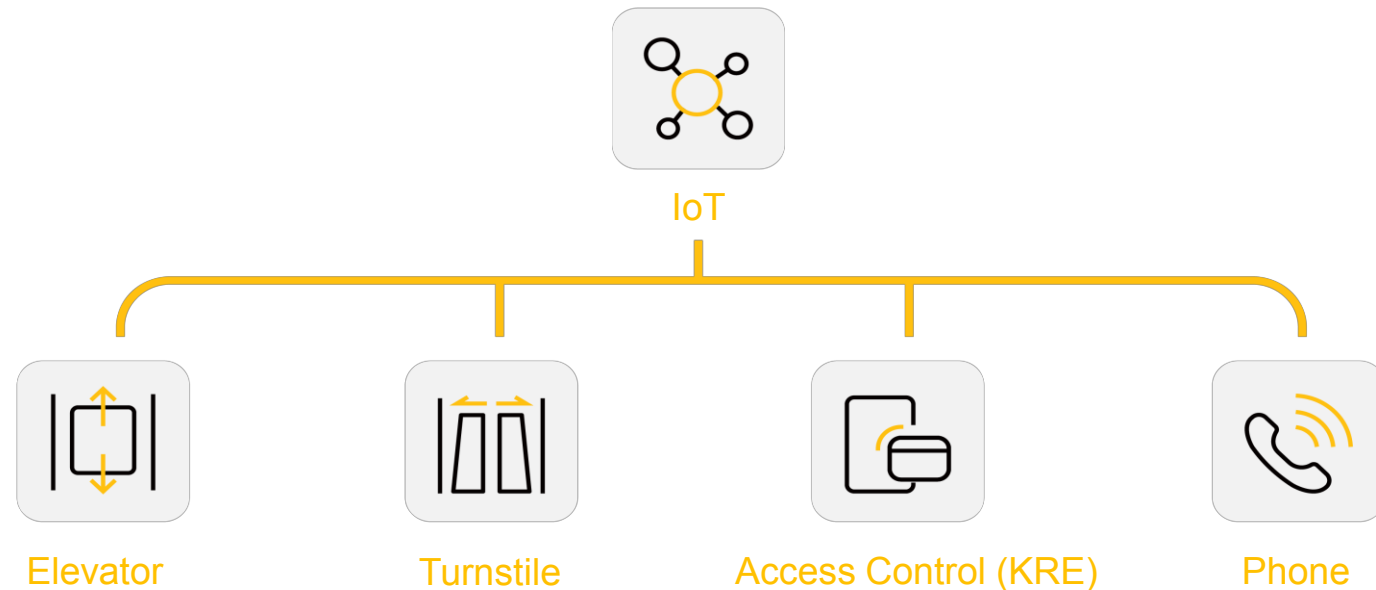
Easily take the elevator with other passengers

With the cutting-edge skin sensor, FlashBot can detect the surroundings when using the elevator, make judgments intelligently, and take the elevator safely and orderly with other passengers during busy times.

- ✓ Sensitive perception
- ✓ Intelligent judgment
- ✓ Flexibility enter the elevator
- ✓ Harmonious coexistence with people in the elevator



What makes FlashBot a building delivery expert?



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 control the turnstiles and access control systems and take elevators automatically for delivery across floors.



What makes FlashBot a building delivery expert?



FlashBot taking an elevator



FlashBot passing the turnstile



FlashBot sending an arrival notification

Thanks to the IoT technology, FlashBot can send operating instructions to other devices in the building via a cloud-based network connection. This means FlashBot can call and take the elevator automatically without manual intervention, and remind customers of the pickup by sending a message with the pickup code or by calling the customer. With autonomous positioning and navigation, cross-floor delivery is now easier than ever.



Product Advantages · IoT Technology

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

3D Obstacle Avoidance



3 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 Advantages · Safe and Efficient



Modular Adjustable Compartment

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.



Product Advantages · Safe and Efficient



Laser Positioning and Navigation Tech.

FlashBot adopts Laser SLAM which supports unlimited heights and does not require location code stickers. It supports multiple starting points and simple to deploy.

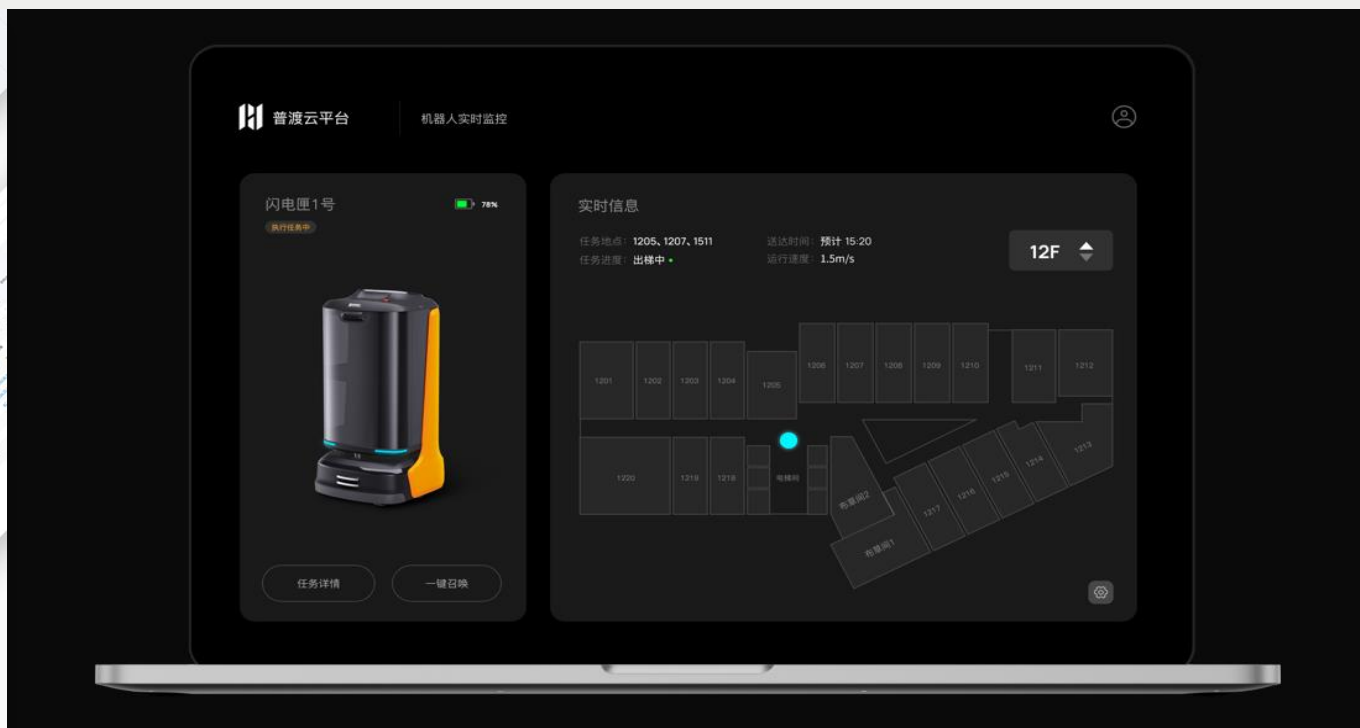
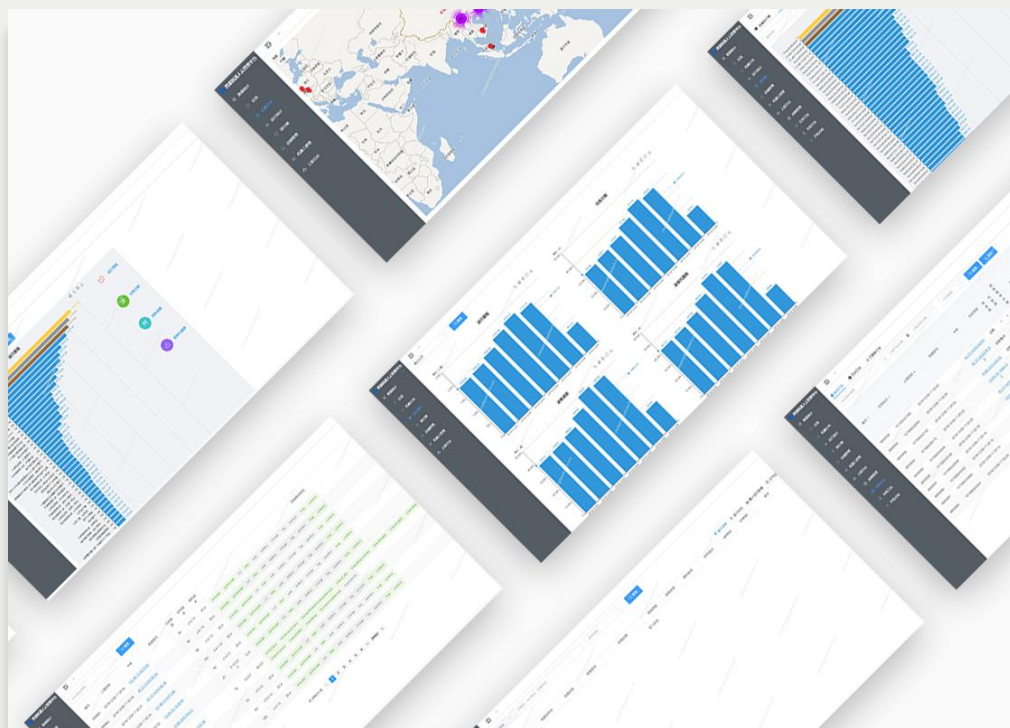


Multiple Robot Cooperation

Powerful ad hoc network allows FlashBot to adapt flexibly to dynamic environments and schedule more than 20 robots to work together.

Digital Hotel Transformation

PUDU CLOUD platform uploads the operating status and data of each robot in store 24*7, collects business data in real-time, generates data reports automatically, monitors the operation of robots, and upgrades the robot software remotely, driving the digital transformation of hotels.



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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.



Staff



Reduced Workload and Pressure

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



Improve Job Satisfaction

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



Customer

Efficient, Private, and Contactless Building Delivery Services

The contactless delivery made possible by FlashBot provides greater peace of mind in the post-COVID-19 era.



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About Pudu · Company Profile



- National high-tech enterprise
- More than 600 patents, over 60% of which are patents for invention
- R&D staff accounts for over 50% of the total staff
- Products are sold to more than 60 countries and regions around the world
- Hundreds of after-sales service centers across the globe

Founded in 2016 and headquartered in Shenzhen, Pudu Robotics is a national high-tech enterprise dedicated to the design, R&D, production and sales of commercial service robots. The company has set up R&D centers in Shenzhen and Chengdu, and hundreds of after-sales service centers across the globe.

Powered by the core technologies of positioning and navigation, motion control, multiple-robot dispatching, obstacle detection and avoidance, NVH, intelligent interaction and automated simulation testing, Pudu Robotics has developed more than 600 patents and top-notch delivery robots, disinfection robots as well as delivery & reception robot with an Ad display. As a world-leading provider of commercial service robots, Pudu Robotics has sold tens of thousands of robots to more than 60 countries and regions around the world. The robots are widely used in restaurants, hospitals, schools, office buildings, government halls, subway stations, waiting rooms, etc.



About Pudu · Core Technologies



PUDU SCHEDULER

- Powerful ad hoc network
- Easy scheduling of up to 100 robots in the same working environment
- Flexibly adapted to dynamic environments
- From subway-level scheduling to road-level scheduling



PUDU MIR

PUDU MIR is the world's first robot development platform designed to improve the efficiency in robot development.

More features can be unlocked through remote OTA software update.



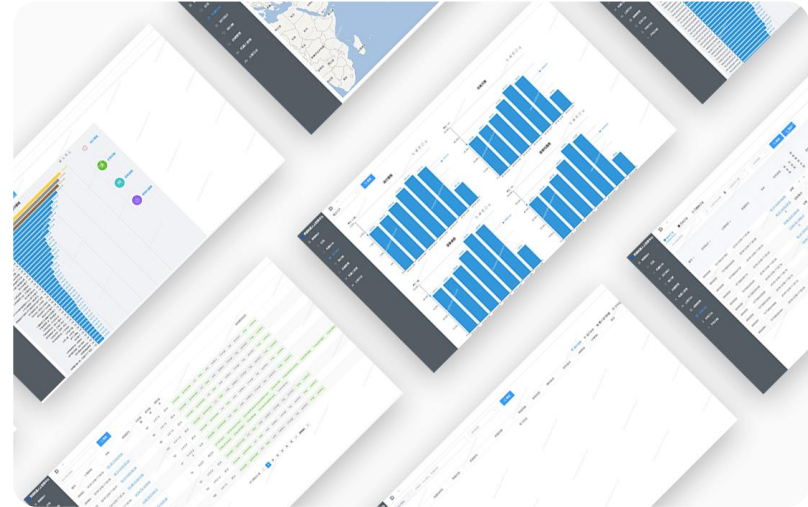
About Pudu · Core Technologies



PUDU SLAM

PUDU SLAM is a new SLAM solution that integrates Lidar, Camera, RGBD, IMU, Encoder and other sensors.

The high positioning accuracy (10cm) allows the robot to effectively recognize and avoid 3D obstacles.



PUDU CLOUD

- Cloud-based intelligent service platform
- Scenario data collection platform
- Automated operation and maintenance platform
- Business management platform

The delivery data of each robot is uploaded in real-time, enabling data-driven management of the restaurant.



About Pudu · Safety Certifications

BellaBot robot has received KC certification from Korea, CE certification from the EU, FCC certification from USA, RCM certification from Australia, and NCC certification from Taiwan, China

IMDA certification from Singapore, MIC/TELEC certification from Japan, CR (China robot certification) and many other certifications both domestically and abroad to ensure the safety and compliance of our robots.



**INFOCOMM
MEDIA
DEVELOPMENT
AUTHORITY**

