PUDU

PUDU T300 Series

INDUSTRIAL DELIVERY ROBOTS

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About PUDU

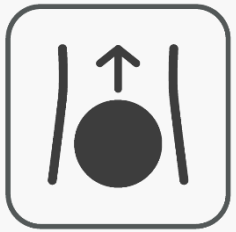
PUDU T300 Series

Industrial Delivery Robots

The PUDU T300 Series includes the Standard, Lifting, Conveyor, Tray, and Towing versions, forming a versatile lineup of transport robots designed for material handling in industrial settings and heavy-load delivery in commercial environments. Built around a high-load chassis, the series features an open architecture and an onboard touchscreen for easy operation. With a maximum payload of up to 300kg, the robots also support essential IoT capabilities such as elevator control, e-gate passing, and paging function. The series offers extensive software and hardware interfaces, enabling seamless system integration and hardware expansion.

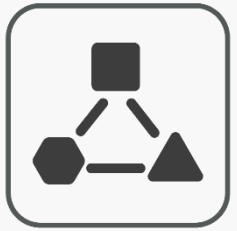
Standard Version

Key Features



Superior Mobility

Max. 300kg(661.39 lbs) Load Capacity



Multi-modal Interaction

7/24 Non-stop Operation

Diversified Application Series

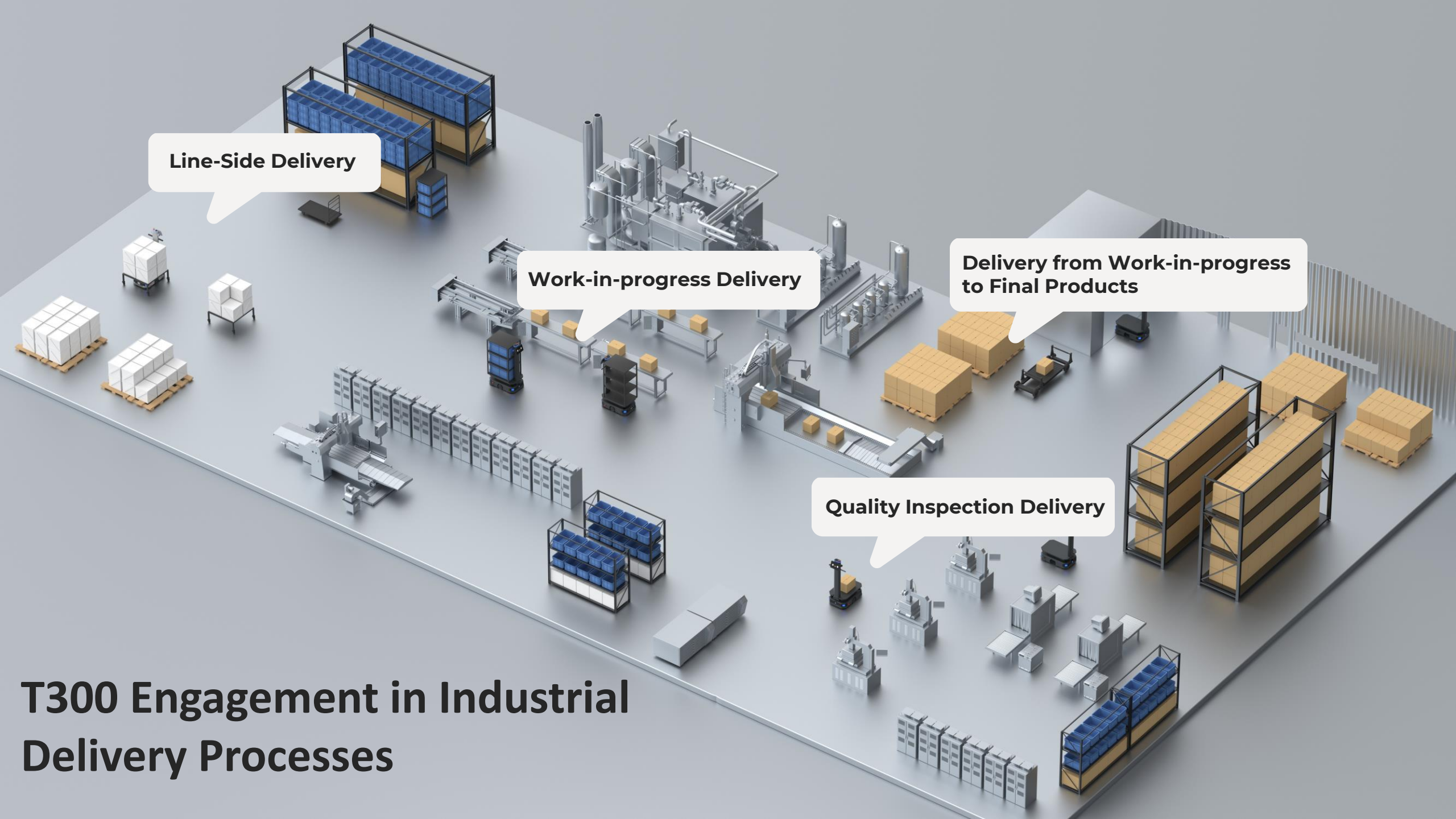
Flexible VSLAM+ Positioning

360° Omni-Sense Safety

ISO 3691-4 Standard

Product Introduction

PUDU T300 Standard Version



T300 Engagement in Industrial Delivery Processes

Product Specifications

Category	T300 Standard	T300 Tray	T300 Lifting	T300 Towing
Machine Weight	65kg 143.30lbs	103kg 227.08lbs	81kg 178.57lbs	90kg 198.42lbs
Loading Capacity	300kg 661.39lbs	300kg 661.39lbs	300kg 661.39lbs	400kg 881.85lbs (200kg/440.92lbs Counterweight)
Max. Speed	1.2m/s 3.94ft/s	1.2m/s 3.94ft/s	1.2m/s 3.94ft/s	0.8m/s 2.62ft/s
Path Clearance	≥60cm ≥23.62in	≥60cm ≥23.62in	Determined by load size	Determined by load size
Threshold Overcoming Height	20mm 0.79in	20mm 0.79in	20mm 0.79in	5mm 0.20in
Groove Crossing Width	35mm(1.38 in)			
Run-time (No Load)	12h			
Run-time (Full Load)	8h	8h	8h	6h
Dimensions	835mm * 500mm * 1350mm / 32.87in × 19.69in × 53.15in			
Charging Time	2h (0% to 90%)			
Navigation Methods	VSLAM & Lidar SLAM			

Product Specifications

T300 Conveyor	Category	Single Layer Version	Double Layer Version
Basic Parameters	Dimensions(L*W*H)	Front/Rear：32.9×26.2×53.1 in (835*665*1350 mm) Left/Right：32.9×25.6×53.1 in (835*650*1350 mm)	
	Machine Weight	265 lbs (120 kg)	397 lbs (180 kg)
	Path Clearance	29.5 in (75 cm)	
	Max. Speed	3.9 ft/s (1.2 m/s)	
	Docking Accuracy	±0.4 in (±10 mm), ±1°	
	Run-time(No load)	12 h	10 h
	Run-time(Full Load)	10 h	8 h
	Charging Time	2 h (0-90%)	
Conveyor Parameters	Number of Layer	1	2
	Rated Load per Layer	176 lbs/layer, 80 kg/layer	
	Conveyor Depth	25.6 in (650 mm)	
	Conveyor Width	4.7–21.3 in (120-540 mm) adjustable	
	Conveyor Height	Ground clearance ≥ 12 in (305mm)	

Versatile Application Series

Expand Your Capabilities with PUDU T300 Series

The diversified application series significantly enhances the robot's adaptability and versatility, thereby increasing operational efficiency and simplifying procedures, ensuring a more efficient, smooth, and seamless delivery process.

PUDU T300 Conveyor

PUDU T300 Tray

PUDU T300 Lifting

PUDU T300 Towing

Versatile Application Series

Features	Conveyor lines connection	Multi-level carrying space	Fully automated delivery and loading/unloading	Flexible integration with existing carriers
Scenarios	Auto goods loading and unloading	Multi-site small or medium material transport	Multi-site small or medium material transport	Materials need to be transported using existing wheeled carriers

Versatile Application Series PUDU T300 Conveyor

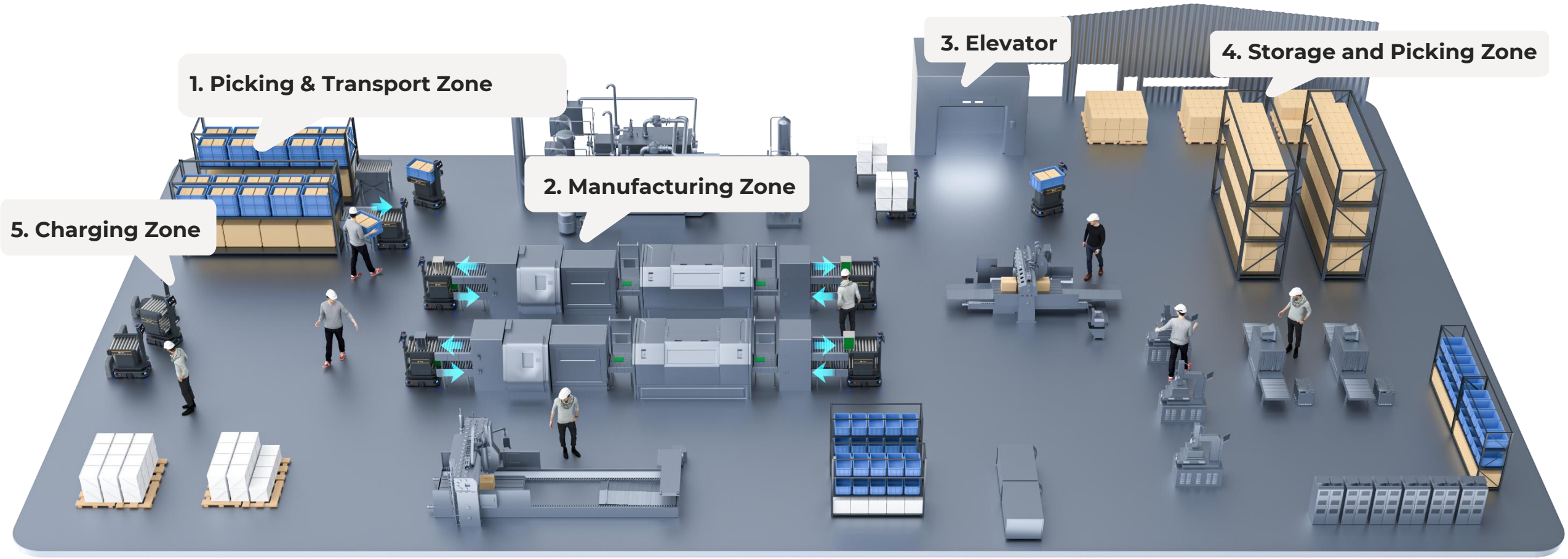
PUDU T300 Conveyor

Product Briefing:
The T300 Conveyor is equipped with a self-powered roller system, enabling seamless integration with automated conveyor lines and other material handling equipment. It facilitates efficient material transfer and transportation between different stations.

Features:
- Adjustable Dimensions for High Adaptability.
- Precise & High-Efficiency Material Handling.
- Flexible & Multi-Functional Applications:
Supports "Human-to-Line," "Line-to-Line," and "Line-to-Human" material transfer solutions.
Compatible with manual/automated loading and unloading.
- IoT-Enabled Connectivity:
Integrated PLC communication for automated material pickup/delivery notifications.

Versatile Application Series

PUDU T300 Conveyor



Versatile Application Series PUDU T300 Tray

PUDU T300 Tray

Product Features:

■ Multi-layer Design:
The PUDU T300(tray version) features a multi-layer adjustable structure that optimizes its load capacity. It facilitates the organized loading of various items, making it perfect for multi-location deliveries and significantly boosting delivery efficiency for each trip.

■ Flexible Adjustment:
Its modular design enables tool-free installation and disassembly, meeting the need for rapid scenario switching. It allows for quick height adjustments to accommodate items of different sizes.

■ Industrial-grade Durability:
Constructed with high-strength metal materials and textured surfaces, each layer can bear up to 100kg. The tray's edge barrier structure ensures stable and secure transportation of items, even at high speeds or on bumpy roads.

Specifications:

Maximum load capacity per layer: 100 kg (220 lbs)

Total maximum load capacity: 300 kg (661 lbs) (including the tray)

Load space dimensions: 620 mm × 500 mm (24.4 in × 19.7 in)

Layer height (from bottom to top): 300 mm (11.8 in) / 400 mm (15.7 in) / 400 mm (15.7 in)
(The height of the top layer is the distance from the top tray to the top of the machine.)
(Adjustable in 50 mm, or 2 in)

Versatile Application Series PUDU T300 Lifting

PUDU T300 Lifting

Product Features:

■ High-Capacity, Efficient Transport

Designed with a durable metal frame to expand loading space, supporting a maximum payload of over 300 kg for centralized, high-efficiency delivery.

The structure enables full-process automation—automatic recognition, docking, and lifting—greatly boosting labor efficiency.

■ Flexible and User-Friendly

Equipped with lockable omnidirectional caster wheels for easy lateral movement and smooth cargo handling. Once locked, the wheels prevent accidental shifting during transport.

Specifications:

Rack Dimensions (LWH): 900mm x 660mm x 308mm (35.4 in x 26.0 in x 12.1 in)
Rack base height from the ground: 275mm (10.8 in)

Load surface dimensions (L*W): 820mm x 610mm (32.3 in x 24.0 in)

Rack leg dimensions (L*W): 30mm x 30mm (1.2 in x 1.2 in)

Rack Weight: 15.7kg (34.6 lbs)

Versatile Application Series PUDU T300 Towing

The cage trolley is for demonstration and is not included in the T300 towing version.

PUDU T300 Towing

Product Features:

■ Smart Towing & Auto Unhooking:
Navigates and tows items autonomously, ensuring a smooth and safe process. It automatically unhooks upon arrival, enabling fully unmanned, efficient operations.

■ Deploy-and-Use Design:
Works with existing customer trailers—no modifications needed. Quickly adapts to various carriers to meet diverse transportation needs.

■ Rapid Task Switching:
Once unhooked, the robot instantly switches to new tasks, boosting overall efficiency.

Specifications:

Hooking/Unhooking Method: manual hooking, automatic unhooking

Main dimensions (LWH): approx. 265 mm (10.4 in) × 190 mm (7.5 in) × 175 mm (6.9 in)

Maximum towing weight: 400 kg (882 lbs) (with a 200 kg (441 lbs) counterweight on epoxy flooring)

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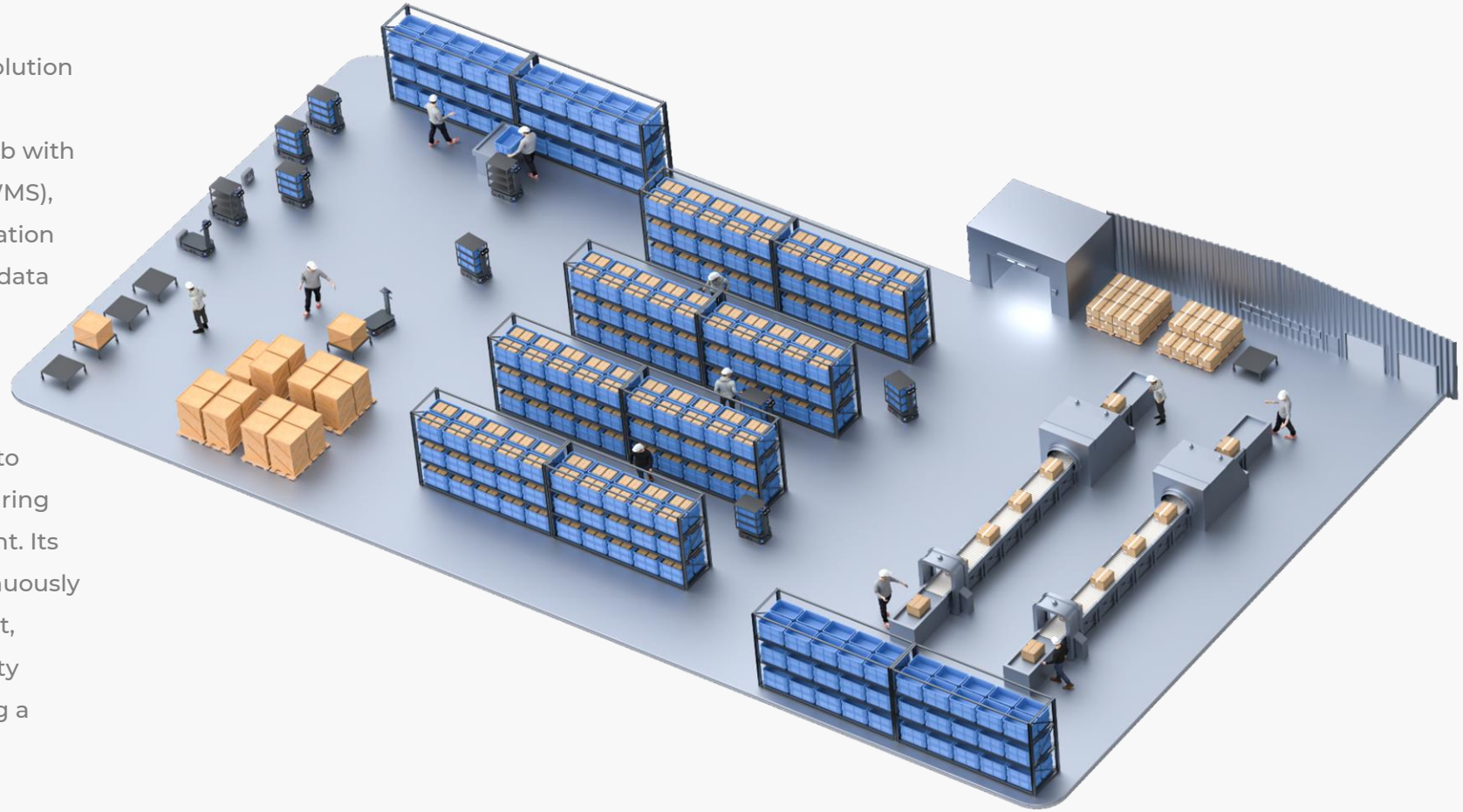
About PUDU

Order-to-Person Solution

- The PUDU T300 intelligent warehouse solution achieves a deeply integrated system by combining a cloud-based computing hub with the Warehouse Management System (WMS), establishing an automated picking operation framework that enables real-time order data processing and coordinated multi-robot scheduling.
- This solution adopts a non-intrusive deployment model, allowing it to adapt to diverse warehouse layouts without requiring modifications to the existing environment. Its dynamic path planning algorithm continuously calculates the optimal route for the robot, enabling a daily order processing capacity increase of up to 2–3 times and achieving a picking accuracy of up to 99.95%.



①Order Wave Generation ②Task Acquisition ③Intelligent Picking ④Automatic Transport ⑤Order Verification

Order-to-Person Solution

200%

Increased UPH

Smart scheduling algorithms significantly boost processing efficiency per unit time.

99.95%

Picking Accuracy

The system ensures highly precise picking operations.

1-2 Years

ROI Period

Substantially reduces operational costs and delivers a fast return on investment.

< 1 Week

Rapid Deployment

Flexible setup with no need for warehouse modifications.

Intelligent

Multi-Robot Collaboration

Cloud-based computing enables seamless coordination across multiple robots.

Seamless

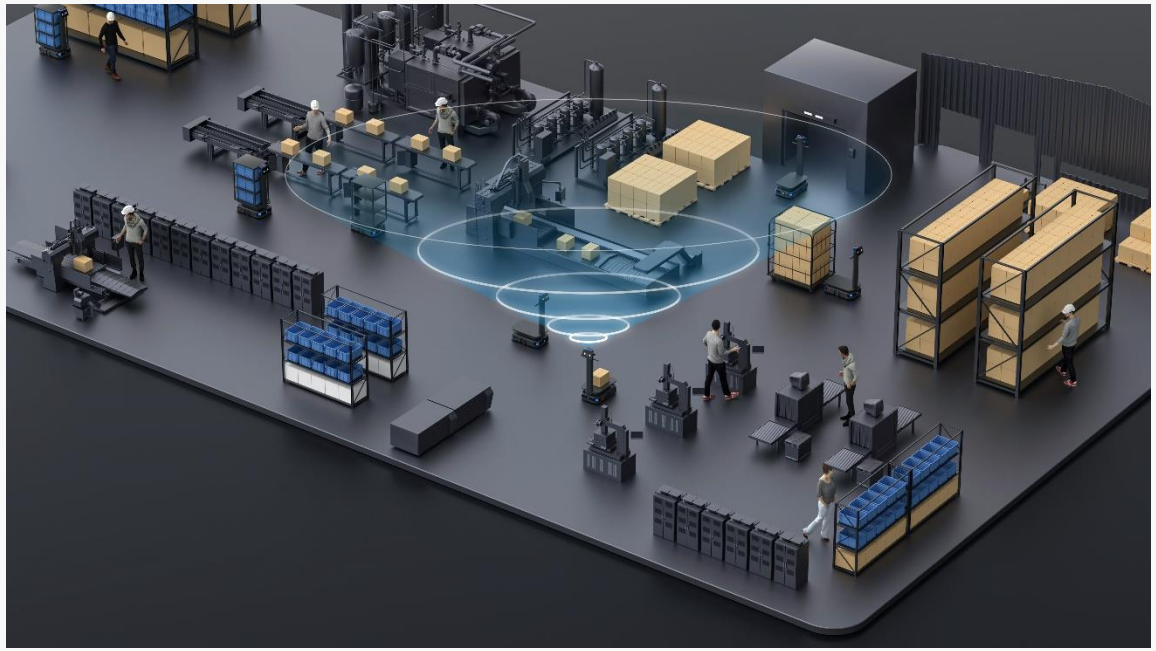
System Integration

Deep integration with WMS for real-time data synchronization.

VSLAM+ for Rapid Deployment Across Vast Venues

Precision Meets Presence

- The T300 series utilizes the Pudu's original **VSLAM+ technology** and is classified as an AMR. Unlike traditional AGVs, it does not depend on preset physical path markers but rather navigates freely using an advanced visual positioning system. This allows the PUDU T300 to **quickly adapt to changes in production layouts without the need for time-consuming reconfiguration or facility remodeling**.
- Operation even in high ceiling environment up to **30 meters**
- Extra large scene mapping for up to **200,000㎡**
- Deployment time is reduced by **70%** compared to traditional AGVs, while the use of a built-in mapping tool boosts mapping efficiency by an additional **30%**.



360° Omni-Sense Safety

- The T300 series sets a high standard in safety, **meeting the stringent ISO 3691-4** guidelines for industrial vehicles. Its advanced safety features ensure reliable operation within the ever-changing landscape of factory settings.
- At the heart of its safety suite are cutting-edge LiDAR sensors, which provide a 360-degree scan of the robot's surroundings to detect objects and navigate with precision. Depth cameras offer an additional layer of spatial awareness, allowing the T300 series to accurately measure distances and effectively avoid collisions.

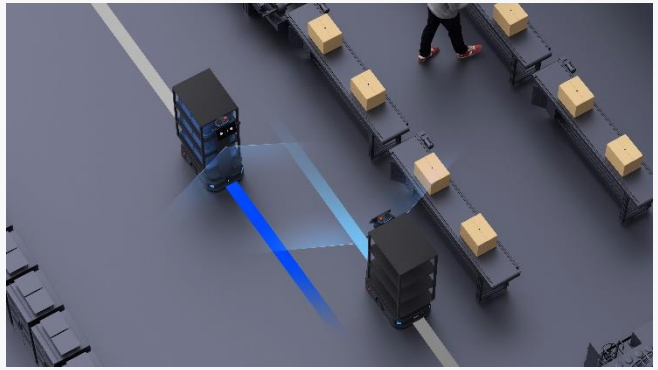
Multi-Robot Collaboration

PUDU Scheduler System

- Powerful self-organized network
- Dispatch up to 20 robots in one environment
- Realtime environmental perception
- Automatically detour for traffic congestion
- Adapt to complex and dynamic scenarios
- Allow painless collaboration among robots

The white version of the PUDU T300 is not available for sale yet.

Auto & Semi-auto Delivery Modes

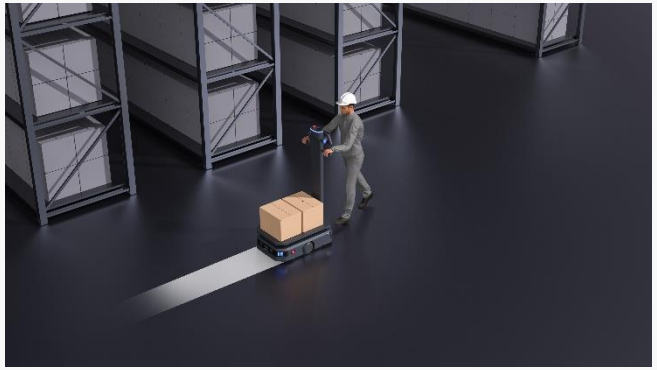


Auto-delivery Mode

The T300 series is capable of autonomous navigation and can deliver goods to any designated destination. Additionally, you can swiftly adjust the maps to accommodate changes in the production line.

Follow Mode

The T300 series employs visual recognition technology to facilitate an orderly queuing and following mechanism among multiple robots, a system primarily used for material preparation and the transportation of assorted goods.



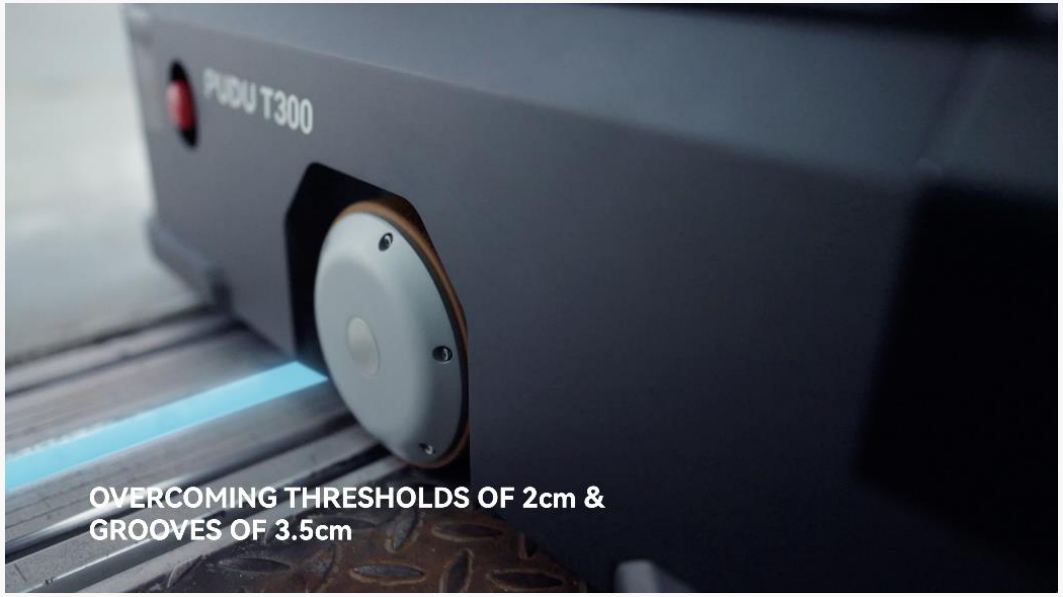
Power-assist Mode

When manual intervention is required for specific tasks or map generation, the T300 series is equipped with an electric power-assist system to facilitate hand-pushing operations, thereby enhancing delivery efficiency and convenience.

Exceptional Adaptability to Different Sites

Exceptional mobility to navigate various obstacles

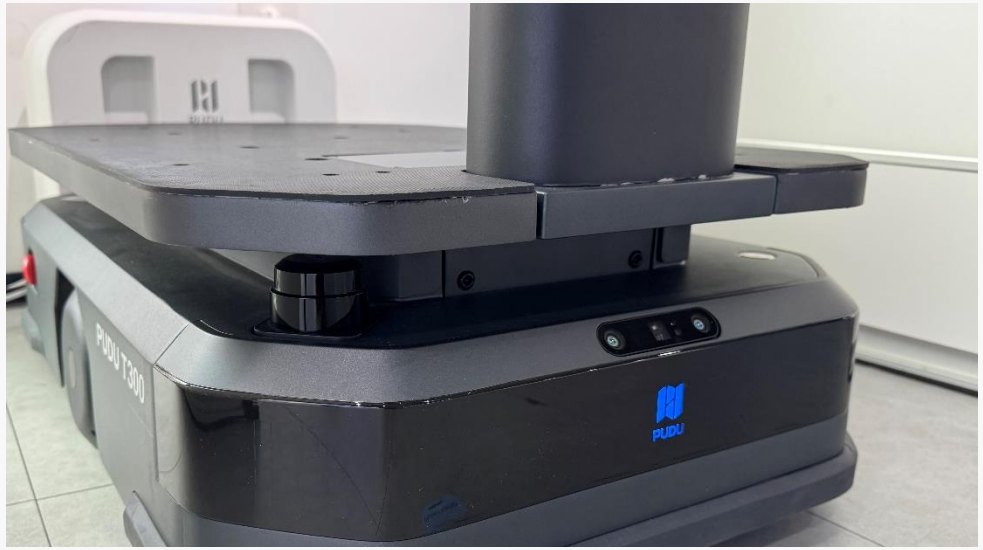
Boasting an exceptional 60cm(3.62 in)(Except for the lifting version) path clearance, the T300 series ensures agile maneuverability in narrow human-robot cohabited spaces, effortlessly overcoming 20mm(0.79 in) thresholds and 35mm(1.38 in) grooves. It facilitates precise material transport between production lines and is designed to meet elevator control requirements.



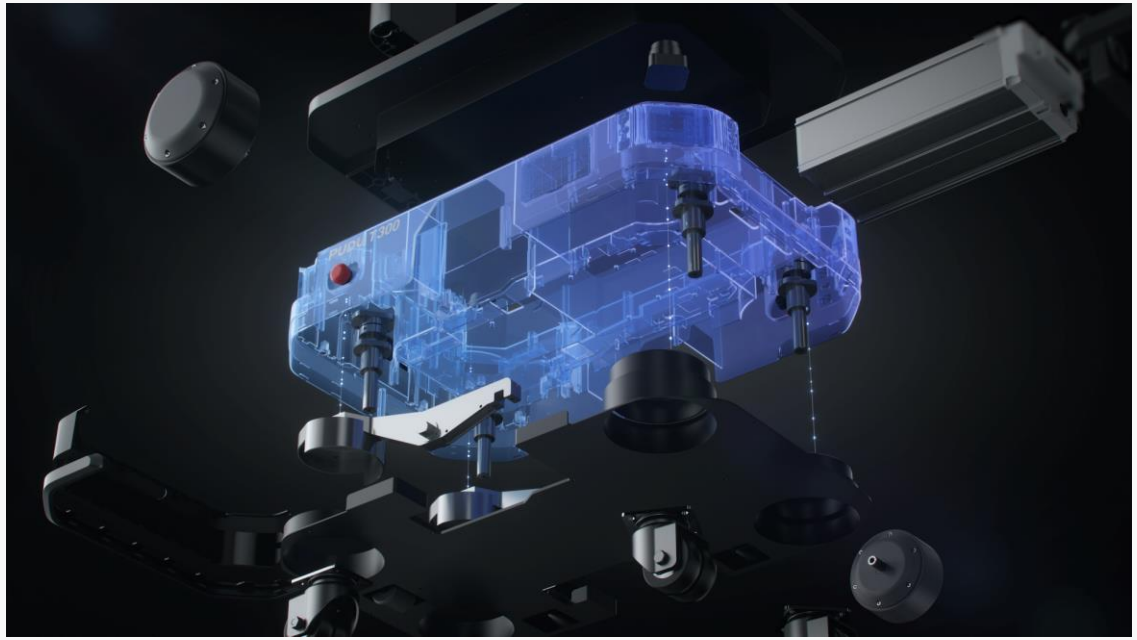
Round-the-clock Operation

24/7 Non-stop Operations

- **8 hours of continuous work, 2 hours for rapid charging**
- The T300 series offers a max. 8-hour battery life and equipped with three charging options—wired Charging, auto Recharging, fast battery swapping—to ensure uninterrupted operation and meet round-the-clock operational demands.



Stabilized Delivery

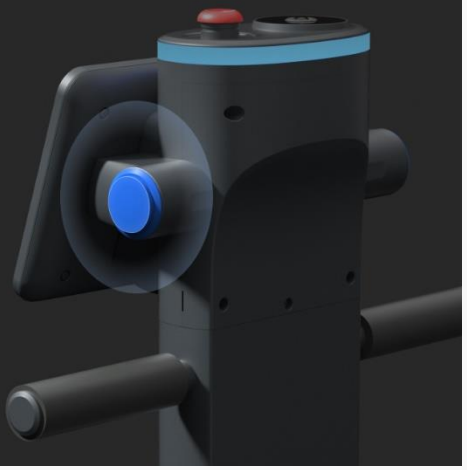


- The newly **upgraded vehicle-grade chassis** and motion control algorithms **enhance delivery stability**, making it suitable for delivering various materials in diverse scenarios.

- Enhanced with **shock-absorbing technology**, our upgraded automobile-level adaptive suspension significantly improves the stability of T300 series.

Multimodal Interaction

Press-to-go Button



Traffic Signal Lights

Audible Alerts

High-brightness Operation Indicator

IOT Capabilities

Equipped with expansive IoT capabilities, PUDU T300 supports elevator control, e-gate access, and various other smart connectivity solutions. Featuring multiple remote calling functions such as pagers and app-based calling. Additionally, it offers software API interfaces for seamless system integration. Outfitted with external power supply ports and USB outlets for convenient hardware device integration.

Peripheral Interface

PUDU Link (App)

Pager

Elevator Control Module

E-gate Control Module

Bluetooth Speaker

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Product Value

Enhanced Efficiency

The T300 series increases operational throughput by autonomously navigating through industrial environments, reducing delivery times and increasing productivity.

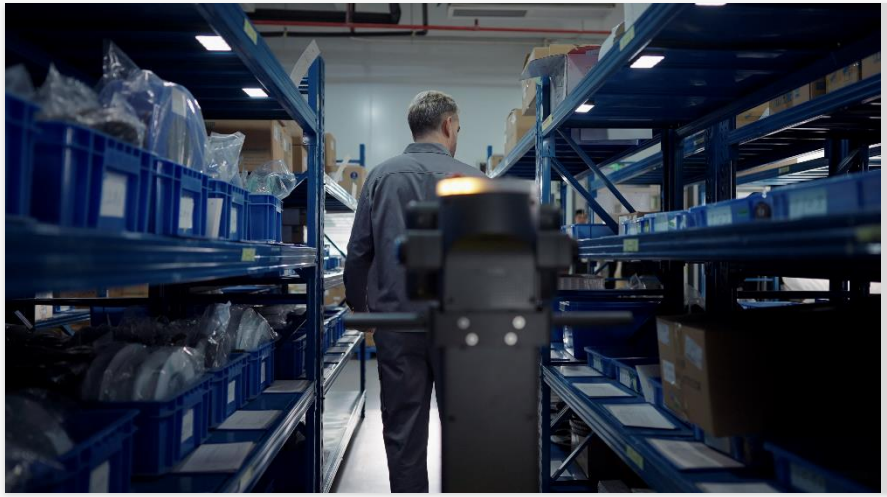
Improved Safety

With advanced sensors and safety features, the T300 series minimizes the risk of accidents in the workplace by detecting and avoiding obstacles, ensuring safer interactions between machines and human workers.

Product Value

For Customization

The T300 series can be customized with different attachments or software configurations to meet specific industrial needs, ensuring it can adapt to various tasks and environments without requiring multiple separate machines.



For Sustainability

The T300 series is engineered for optimal energy use, featuring advanced lithium-ion battery technology and energy management systems that ensure longer operation times while consuming less power, thus decreasing overall energy costs and environmental impact.

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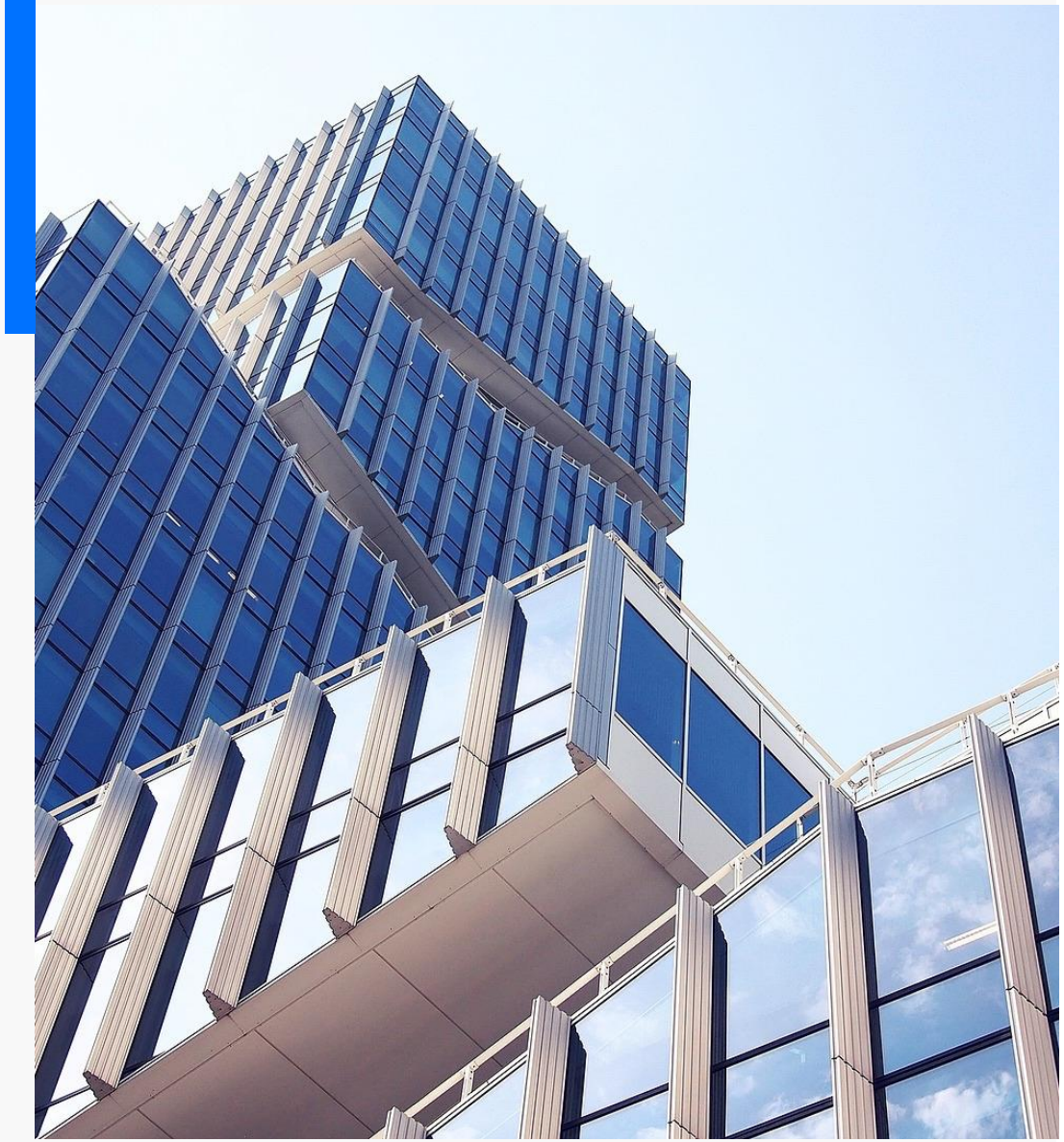
About PUDU

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.

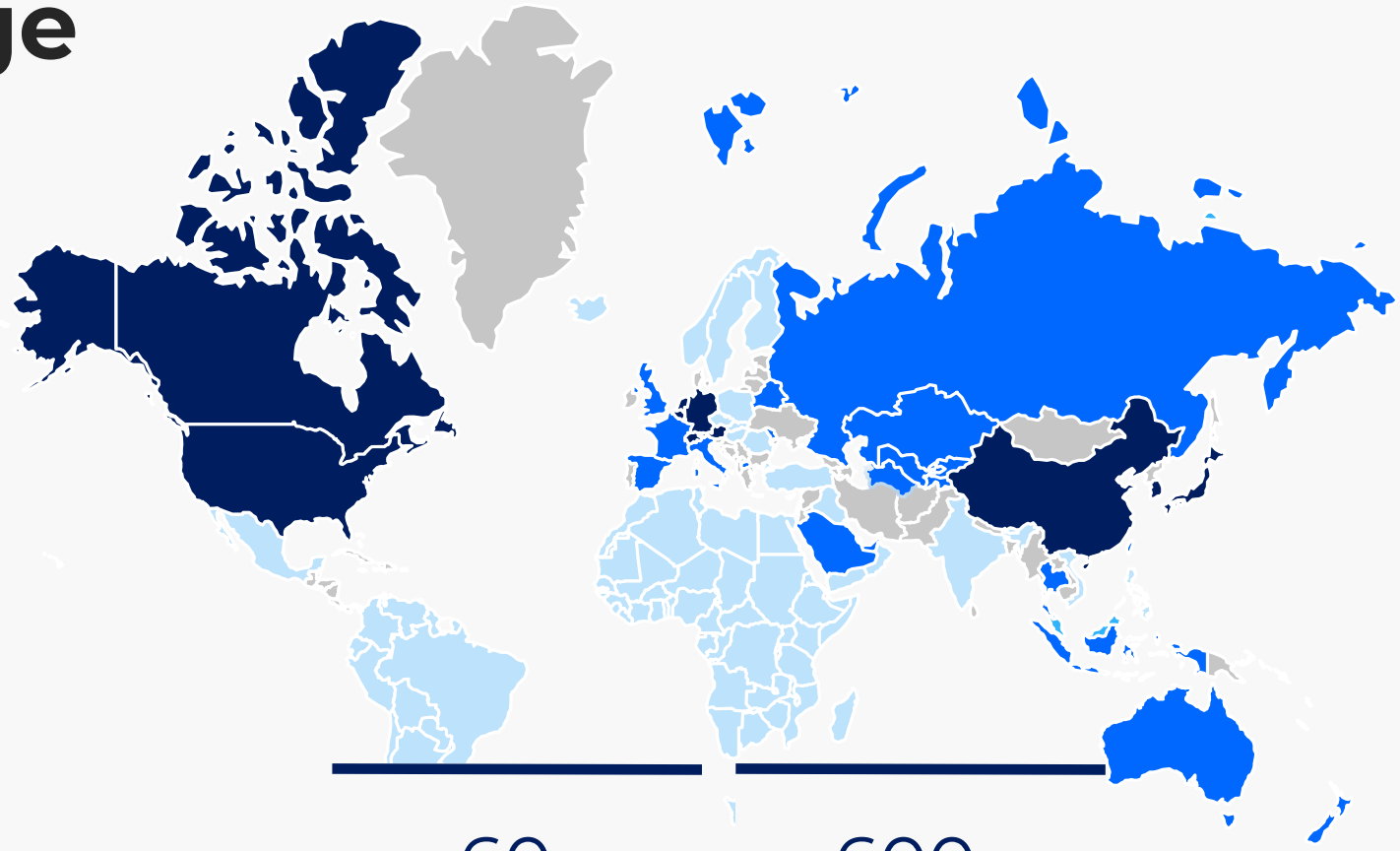
With a focus on R&D, manufacturing, and sales of service robots, Pudu Robotics holds nearly a thousand authorized patents worldwide, encompassing a wide range of core technologies. The company's robots have been widely adopted in various industries, including dining, retail, hospitality, healthcare, entertainment, education and manufacturing. To date, Pudu Robotics has successfully shipped over 90,000 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.



60 +

Cover more than 60 countries and regions

600 +

Over 600 cities

Cooperation

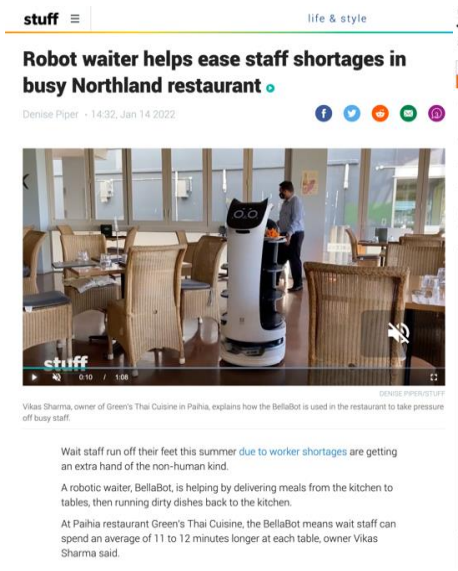
80% **The market share of Top 100 restaurant clients** **40,000+** Deployed Store

Catering Partners

Non-Catering Partners

Software and Hardware Partners

Media Coverage


stuff

life & style

Robot waiter helps ease staff shortages in busy Northland restaurant

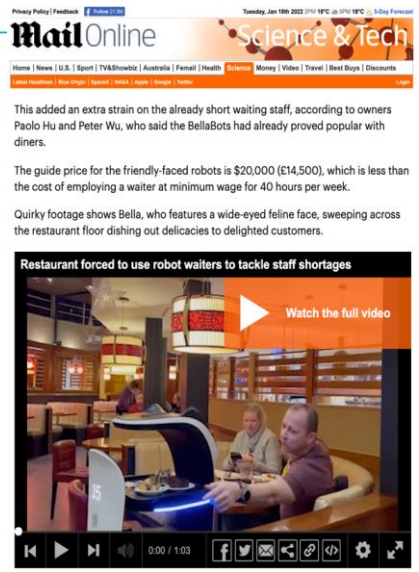
Denise Piper · 14:32, Jan 14 2022

Vikas Sharma, owner of Green's Thai Cuisine in Paihia, 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 running dirty dishes back to the kitchen.

At Paihia 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.


Mail Online

Science & Tech

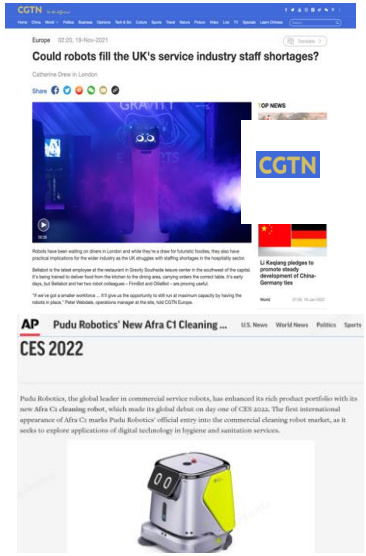
This added an extra strain on the already short waiting staff, according to owners Paolo Hu and Peter Wu, who said the BellaBots had already proved popular with diners.

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

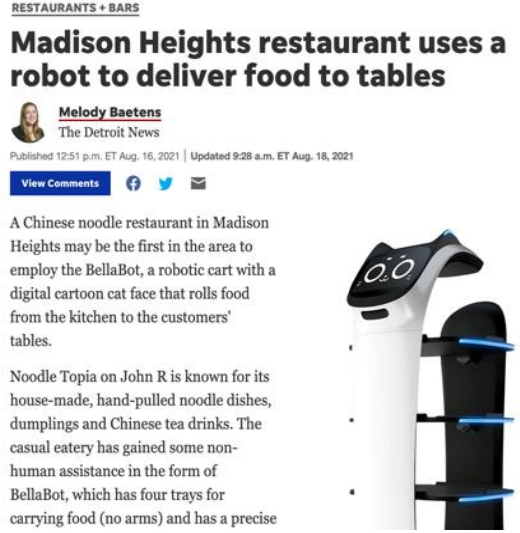
Watch the full video


CGTN

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

AP Pudu Robotics' New Afra C1 Cleaning ...

CES 2022


RESTAURANTS + BARS

Madison Heights restaurant uses a robot to deliver food to tables

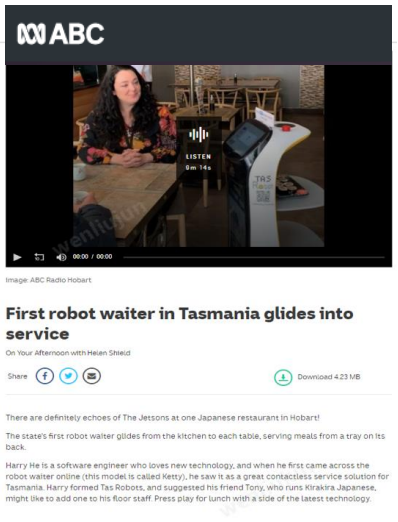
Melody Baetens
The Detroit News

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


ABC

First robot waiter in Tasmania glides into service

On Your Afternoon with Helen Shield

There are definitely echoes of The Jetsons at one Japanese restaurant in Hobart!

The 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 Ketty), he saw it as a great contactless 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.

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