Speedy Courier Product Brief

Autonomous delivery robot for hospitality and retail sectors

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HoReCa 4.0 by SAHA

Product Overview

- ***Fully Autonomous Operation*** Navigate in complex environments and complete assigned tasks without requiring human intervention.
- ***Advanced Precision Navigation*** Powered by SAHA Simultaneous Localization and Mapping technology, our robots possess advanced spatial awareness.
- ***Autonomous Charging*** Our robots autonomously navigate to charging stations when the battery is low, ensuring they're always ready to serve.
- ***Battery Life*** All-Day Operation with an extended battery life, our robots can operate continuously, minimizing downtime and maximizing productivity.
- ***360° Wide LiDAR Scan*** Speedy Robots scan and map their surroundings with unparalleled accuracy, enabling safe and reliable operation in dynamic environments.
- ***Suspension System*** Designed with advanced suspension systems, our robots glide effortlessly over various surfaces, ensuring smooth and stable navigation.
- ***Fleet and Traffic Management*** Efficient coordination of multiple robots ensures seamless collaboration and optimized performance.
- ***Up to 4 separate compartments with customizability*** featuring obstruction detection and active locking mechanism. Lids resist forced opening when closed, ensuring secure delivery and tamper resistance.
- ***Vertical Mobility*** Supports elevator communication for autonomous multi-floor navigation and delivery tasks.
- ***SAHA Remote Monitor*** Analytics at Your Fingertips. You can easily oversee your robot's actions, analytics, and effectiveness from any location, ensuring you maintain peace of mind.

General Specifications

Dimensions	525 x 525 x 1140 mm
Weight	60 Kg
Cruise Speed	0,6 - 1,1 m/s
Slope Angle	≤5°
Tray Count	2
Endurance	7 - 11 hours
Languages	Turkish, English, Spanish, German, French, Arabic

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Hardware

Materials	Composite and aluminum alloy
Sensors	2D Lidar, Stereo Vision Sensor, IMU
Sensor Coverage	Lidar detection range: 360°, <=30 m Stereo Vision range: 87°(H) × 58°(V) <=4 m
Positioning Method	Sensor Fusion with Lidar, Wheel Odometry and IMU
Wireless	Wi-Fi: 2.4 GHz Lora 868 Mhz or 900 Mhz (According to regulations)
Lid System	4× DC Gear Motors

Power

Battery Type	LiFePO4 (Lithium iron phosphate)
Battery Capacity	30 Ah
Dismountable Battery	No
Charging Input	100-240V AC, 50/60Hz
Charging Time	2h 20m

Environment

Maximum Coverage Area	160.000 m² (400 m x 400 m)
Operating Temperature and Humidity	0 - 40°C, RH: 20% - 80%
Operating Environment	Indoor environment, flat ground

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Compatible Accessories

Speedy Courier can be seamlessly integrated with a wide range of complementary systems and components to enhance its functionality and user experience:

- **IoT Controller Board:** Enables integration with turnstiles, automatic doors, and elevator systems for seamless access control in complex environments.
- **UWB Based Indoor Localization System:** Provides precise indoor positioning by detecting customer locations in dynamic seating areas such as food courts, ensuring accurate delivery to any table.
- **QR Menu Integration:** Allows customers to scan QR codes for placing orders, which the robot can then autonomously deliver.
- **POS System Integration:** Synchronizes with Point-of-Sale systems to streamline order processing, real-time status tracking, and payment coordination.
- **AI-Powered Assistant HeyHolo:** Elevates the dining experience with a voice-interactive holographic avatar that intelligently manages order workflows, supports upselling, and delivers a cutting-edge, contactless customer journey.

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