Heavy-load Delivery Robot

S100

Key Features

➢ *Multi-Modal SLAM: Utilizing multiple sensors and modules, including dual LiDAR, tri-stereo vision, and image modules, to enhance localization accuracy.*

➢ *360° Obstacle Detection and Avoidance: Capable of accurately identifying and avoiding low-lying and suspended obstacles, ensuring safe movement of the robot.*

➢ *Human-Robot Coexistence: Providing ultimate safety assurance in environments where humans and robots coexist, ensuring secure interaction between humans and machines.*

➢ *IoT Connection with Essential Facilities: Support lift taking , passing through automatic doors, and support the integration of complete call systems.*

➢ *7*24H Working：15-second battery swap for uninterrupted 24/7 delivery，supports auto, manual charging and battery swap for diverse operational needs.*

➢ *Stability and Maneuverability: The machine exhibits exceptional stability and maneuverability, adapting to various complex terrain environments to ensure smooth motion.*

Specifications

Performance

Robot Dimension	925mm*620mm*1282 mm
Load Capacity	120kg
Minimum Passage Width	900mm（without rotation）；1200mm(able to turn around)
Standard Passage Width	1200mm
Maximum Compatible Shelf Size	913mm*616mm*800 mm
Standard Shelf Size	865mm*600mm*800 mm
Max Moving Speed	1m/s
Battery Life	8h
Charging Time	2.5h (0-100%)
Robotic Travel Direction	Unidirectional Travel
Rotation Capability	360° rotation in place
Multi-robot Collaboration	10 robots
Slope Angle	≤ 5°
Docking Accuracy	±10cm，±10°（±2-3cm for special point）
Gap Crossing Ability	≤35mm
Obstacle Crossing Ability	≤10mm
Chassis Ground Clearance	≤25mm (safe for normal footwear)

Environment

Operating Temperature and Humidity	0 - 50℃, RH：5％~95%
Operating Environment	Indoor environment, flat ground, no dust
Storage Temperature	0-55℃
Noise	<60dB

Battery and Charging

Battery Type	Ternary lithium battery
Battery Capacity	DC48V12Ah
Battery Dismountable	Yes
Charging Mode	Automatic charging with charging pile, manual charging by recharger and battery Swap
Charging Input	100-240V~,3.5A(MAX.)50/60Hz
Charging Output	54.6V,5A
Charging Pile Dimension（W*D*H）	220mm*146mm*305mm

Hardware

Machine Material	ABS & aluminum alloy
Robot Weight	90.6 KG
Positioning Method	Laser & Label Positioning
Sensing Techniques	Lidar, Image module, Stereo vision, Collision sensor, IMU
Emergency Stop Button	Front, Side, Rear
Network	Wi-Fi/4G
Touch Screen	10.1inch(1280*800)
Interactive Ability	Light/Touch/Voice Prompt
WIFI	802.11b/g/n transmission
WIFI Frequency	2.4-2.484GHZ
LoRa Frequency	850.125MHz~930.125MHz

System and Function

System	Linux(Control) & Android(Interaction)
App Language	Chinese，English，Japanese，Korean，Thai
App Functions	Direct delivery, Multi-point delivery, Cycle Mode
Voice Reminder	Different voice prompt in different working mode and general operation.

Official Standard and Optional Parts

Package Main Contents	Robot*1, Battery Recharger*1, Charging Pile, Product Manual*1
Optional Part	Calling System，Shelf, TBD

Package Content

Battery Recharger*1
*The actual recharger may be different.

Product Manual*1

Charging Pile*1

Optional Parts

Call Button

Control Center

Shelf