

# HOT WHEEL REEMAN ROBOT CHASSIS

## **WBOT11B**

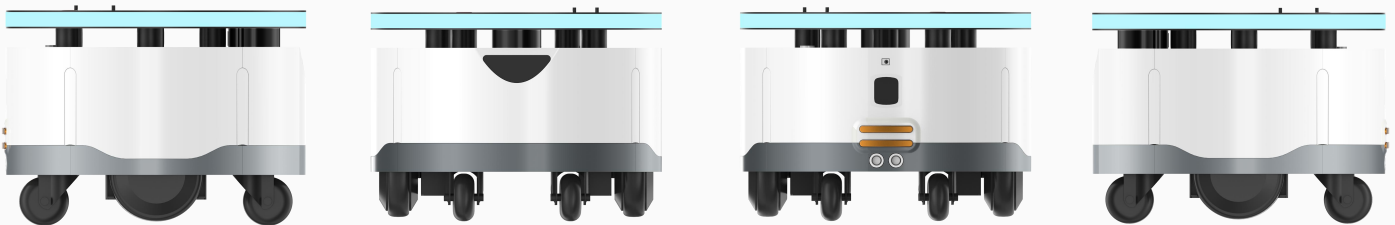
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### **Product manual**



# Product introduction

The robot chassis has multiple functions such as visual positioning, indoor navigation, and intelligent obstacle avoidance. It is mainly composed of core hardware such as lidar sensors, depth cameras, anti-drop sensors, and modular positioning and navigation systems. There are more laser SLAM and V-SLAMThe sensor fusion algorithm can plan the robot walking route more flexibly.



- Autonomous planning of navigation paths, no external factors interfere
- Visual virtual wall editing, control the robot's range of activities
- Centimeter-level indoor map construction to improve robot navigation efficiency
- Fast obstacle avoidance in 0.5 seconds, intelligent and safe
- Large carrying capacity of more than 100 kg
- Global unique remote and convenient deployment capabilities
- Elevator control system IOT, autonomous ride on elevator (optional)
- Autonomous charging, worry-free battery life
- Fully open platform, customize and upgrade according to actual needs

# Product function

## Large carrying capacity

100 kilograms of oversized cargo, Stable without deformation

## Intelligent obstacle avoidance in seconds

Lidar SLAM positioning and navigation Obstacle avoidance is more flexible



## Original remote deployment capability

Remote automated deployment, Convenient and efficient

## Automatic return to charging

Battery is below minimum automatically return to the charging station to charge

## Take the elevator autonomously (Scalable)

Can be linked with the elevator control system, Work across floors, more worry-free

超大载重

Custom calibration position

Take the elevator autonomously (optional)

Multi-mode indoor driverless technology

Centimeter-level precise positioning

Large load

Intelligent obstacle avoidance in seconds

Remote navigation deployment

Automatic return to charging

# Scope of application

The open software and hardware platform of the robot chassis provides application development and full open source SDK access code, which is convenient for users Development, support remote map building and remote deployment, code debugging can be performed locally, and the code can be deployed to the cloud. Modular design, lower R&D costs, stable and reliable, cost-effective, and support customized services. Suitable for restaurants, Delivery of items in hospitals, ktv, hotels, etc.



**Restaurant catering delivery**



**Hospital item delivery**

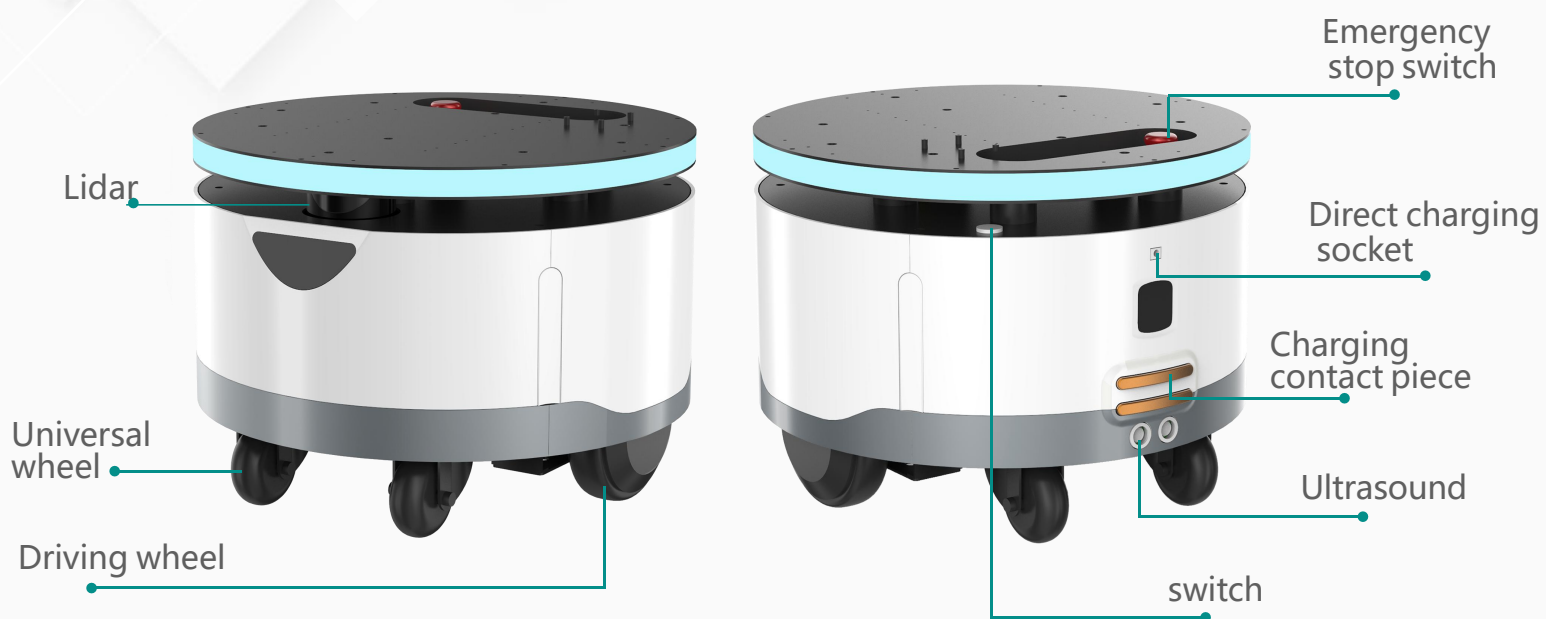


**KTV item delivery**



**Hotel item delivery**

# Structural components



Product number: WBOT11B	Life time: 6 hours
Cruising speed: 0.1~1m/s	Charging time: 4 hours
Battery capacity: 37V20A·H	Rated power: 70W
Universal wheel size: 3 inches	Product weight: 28KG
Machine size: 450(L)*450(W)*317(H)MM	Bearing weight: 60KG

# System parameters

Operating system, processor, memory characteristics	
Product number	WBOT11B
operating system	android (5.1)
Bearing weight	60KG
Processor type	RK3128 (Quad-core Cortex-A7, frequency up to 1.2GHz)
Built-in clock	RTC
RAM LPDDR3	1G
Built-in NAND FLASH	8GB
USB debugging port	Micro USB 2.0 interface
Power button	One-key boot
Emergency stop button	Emergency stop button
Display screen	7 inches, IPS screen (16:9)
Resolution	1024X600
External I/O port	1↑ USB 2.0 (MICROUSB) , RJ45 network port
Speaker	4Ω/3W mono speaker
Wireless technology AP6255	Support dual frequency 2.4&5G WIFI 802.11b/g/n Wireless local area network, 11ac 5.15GHz-5.825GHz



# Accessory parameters

## ROS NAVIGATION SPECIFICATIONS, MACHINE SPECIFICATIONS, POWER SYSTEM

operating system	LINUX
Processor type	Computer motherboard I5 ITX-H45-I526LVER: 1.1A (4300U) with dual network ports
hard disk	32G
RAM	4G
motor driven	5.5 inch hub motor
Gyro	9-axis high-precision attitude sensor
Single-line lidar	Laser wavelength 905 nm working area 270 degrees
4G router to 2.4GWIFI	4GCPE-M6 / 2.4g WIFI / Netcom 4g
512AN_HMW Module Intel's WIFI	Support dual frequency 2.4&5G WIFI&BT4.1 802.11b/g/n Wireless LAN, 11ac 5.15GHz-5.825GHz
type of battery	Battery pack 10S16P capacity 10400 mAh/37V (standard configuration) Battery pack 10S16P capacity 10400 mAh/37V (standard configuration)
Battery life	6 hours
Power Adapter	Input: AC100-240V.50-60HZ Output: DC42V 3A
Charging pile parameters	Output rated voltage: 42VDC, output rated current: 3A Overcurrent protection, intelligent power off
product weight	80kg
Overall size (mm)	450mm(L)×450mm(W)×317mm(H)

# Operation instructions



Display interface

STEP1: Open "Settings"- "WLAN" on the Android screen to connect to Wi-Fi

Step 2: Build a map and establish a robot working environment

Step 3: Edit the virtual wall to limit the robot's active area

Step 4: Positioning QR code deployment, assisting machine positioning

Step 5: Calibration location, the calibration location must be at least 50 cm away from surrounding obstacles and virtual walls

Step 6: If there is no delivery task for a long time, you can click "Charge" and the machine will automatically return to charge



# Precautions

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**01**

The display screen, laser navigation, can not be wiped with a wet towel to avoid water!

**02**

Do not block the laser with objects

**03**

The emergency stop switch can only be rotated to the right, do not rotate to the left

**04**

Can not travel on the ground with high friction: thicker, softer carpet

**05**

After the product is packaged, it is packed, the equipment is upright, and it is not allowed to stand upside down. Suitable for land, air, sea and other transportation conditions

**Contact us**

**Thanks for  
attention**



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