



Flashbot Max Robot User Guide

Version: V1.0

Model: FBBDR2

Shenzhen Pudu Technology Co., Ltd



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First release

Foreword

objective

This manual introduces the functions, technical specifications, and detailed operation methods of the Flashbot Max robot, so that users can easily understand and use the Flashbot Max robot.

Readers

This manual is suitable for:

- client
- Sales Engineer
- Installation and commissioning engineer
- Technical Support Engineer

Revision history

Time	Revision history
2025/03/06	First release

Symbolic conventions

The following symbols may appear in this manual, and they have the following meanings.

symbol	illustrate
 dangerous	Indicates a high potential hazard that, if not avoided, could result in death or serious injury to a person
 warn	Indicates that there is a moderate or low potential hazard, which, if not avoided, may lead to minor injuries to personnel, destruction of robots, etc
 note	Indicates that there is a potential risk that, if ignored, could lead to bot corruption, data loss, or unpredictable results
 illustrate	The indication is additional information to the main text, which emphasizes and complements the main text

Table of Contents

1. Safety precautions

1.1 Instructions for Electricity Use

- Please be sure to use the original rechargeable battery and charging equipment, and it is strictly forbidden to use non-original chargers to charge the robot. If you find that the charger is damaged, please replace the charger in time.
- When the remaining power of the robot is less than 20%, please charge it in time. Prolonged low-battery operation will shorten battery life.
- Make sure that the power supply voltage is in line with the voltage stated on the charger, otherwise it may cause damage to the charger.
- After the charging is completed, please disconnect the power supply in time, and do not charge the robot for a long time when it is fully charged.
- Do not expose the battery to high temperatures or around heat-generating equipment, such as sunlight, heaters, microwave ovens, ovens, or water heaters. Overheating of the battery may cause an explosion.
- Please dispose of the battery according to local regulations, and do not dispose of the battery as household waste. Improper disposal of the battery may result in the battery exploding.
- Do not drop or use foreign objects to collide with the battery and charger to avoid damage to the battery and charger.
- Do not use batteries that have been damaged.
- Please designate a dedicated person to charge the machine, do not charge the robot unattended or charge the battery alone.
- When charging, be sure to snap the buckle of the charging port to avoid the temperature of the charging port being too high, resulting in burns or damage to the device.

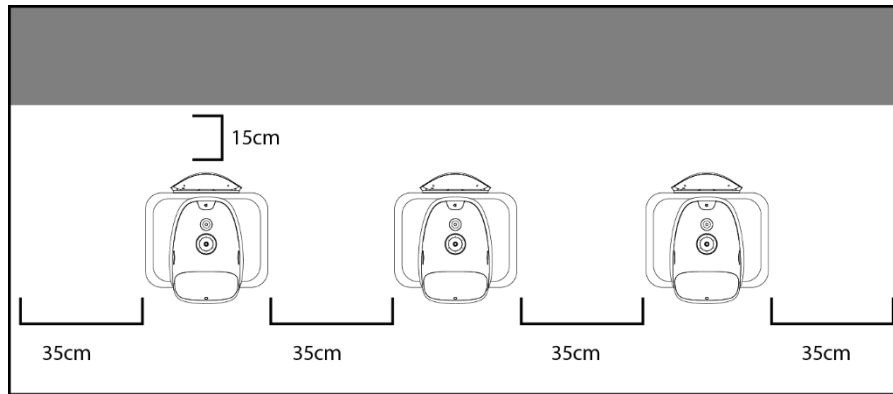
1.2 Precautions

- During the movement of the robot, do not block the camera on the top of the robot to avoid abnormal walking of the robot. If this happens, pause the current task and push the robot to the correct route before resuming the current task.
- It is forbidden to clean and maintain the robot when it is turned on and running.
- It is forbidden to place open flame stoves and flammable and explosive materials on the robot tray.
- Do not pick up and place dishes during robot movement, so as to avoid food loss and personal injury caused by accidental collision.
- Please ensure that there are no scattered power cords on the ground and no sharp objects (such as decoration waste, glass, iron nails, etc.) to avoid damage to the robot when the robot is moving.
- It is forbidden to play in front of the robot when it is moving, so as not to cause unnecessary injury.

- Do not push or carry the robot during the movement of the robot, so as to avoid abnormal walking of the robot.
- Without professional training, personnel are not allowed to disassemble and repair the robot without authorization. If the robot fails, please contact the technical support engineer of Shenzhen Pudu Technology Co., Ltd. in time.
- When handling the robot, it must not exceed the maximum weight allowed by local laws or regulations to be carried by a single person. During the handling process, please always keep the robot in an upright position, and it is strictly forbidden to carry out handling operations by lifting pallets or boxes.
- If you encounter an emergency during the robot movement, press the emergency stop switch located at the top to stop the robot movement.
- When the robot is driving, if the collision sensor is hit, the robot will stop moving and pause the task. In this case, you can resume the task according to the instructions on the interface.
- Do not spill any liquid inside the robot to avoid damage to the robot.
- The robot supports automatic obstacle avoidance, and it is strictly forbidden to suddenly block the robot during the high-speed driving of the robot to avoid safety accidents.
- Do not subject the robot to strong shocks or vibrations to avoid damaging the robot.
- Do not use harsh chemicals, detergents, or strong detergents to clean the robot. Please use a clean, dry cloth to wipe the robot.

1.3 Environmental Notices

- Do not use the robot or charge the robot in dangerous scenarios such as high temperature and high pressure or flammable and explosive to avoid personal injury or damage to the equipment.
- The robot is limited to use in a flat indoor environment (smooth ground, slope less than 5° , ground protrusion no higher than 1cm).
- Do not use the robot in a damp environment with any liquid or sticky material on the ground to avoid damage to the robot.
- Do not use the robot in a place where the use of wireless devices is prohibited, as it may interfere with other electronic devices or cause other hazards.
- The minimum traffic width of a single robot must be greater than 0.65m. When two robots are driving in opposite directions, it is recommended that the width is greater than 1.6m, otherwise they will avoid driving. The standard entrance of the kitchen is recommended to be greater than 1.2m, otherwise it may cause a certain amount of man-machine congestion.
- When the standby point robots are placed side by side, there needs to be a 35cm space between the two robots, a 15cm gap from the back wall, and a distance of 35cm from the side wall.



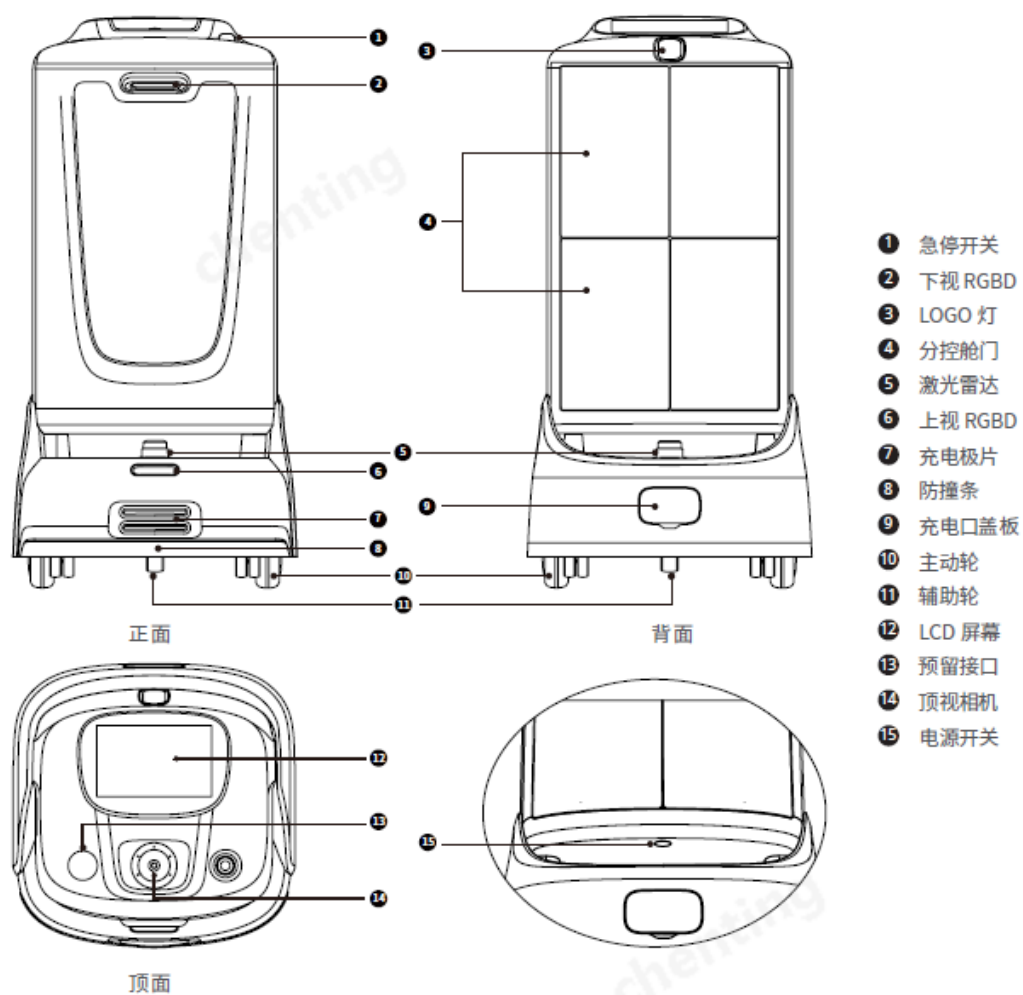
- If there are pure black (such as baseboards), mirrors, and fully transparent (such as floor-to-ceiling glass windows) within 16cm~22cm from the ground, it may interfere with the radar reflection of the robot and cause the robot to walk abnormally.
- The maximum climbing angle of the robot is 8° . Do not pause the robot during the uphill period to prevent the robot from slipping back and causing the loss of dishes.
- When using visual navigation, make sure that there are no lighting fixtures or other strong light sources within 30 cm of the positioning sticker.
- Do not dispose of the robot and its accessories as ordinary household waste. Please comply with local laws and regulations regarding the disposal of this robot and its accessories, and support recycling actions.

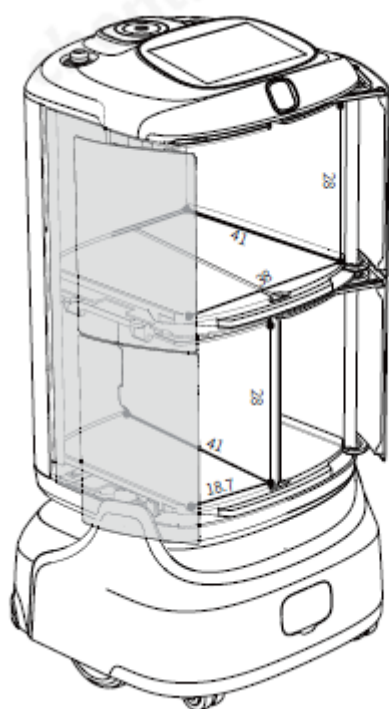
2. Product composition:

2.1 Packing list

Product list	Shipment configuration
Machine	Standard
charger	Standard
Charging cable	Standard
User Manual	Standard
Certificate	Standard
Charging piles	Matching
Phone System	Matching
Elevator IoT system	Matching

2.2 Appearance parts and introduction



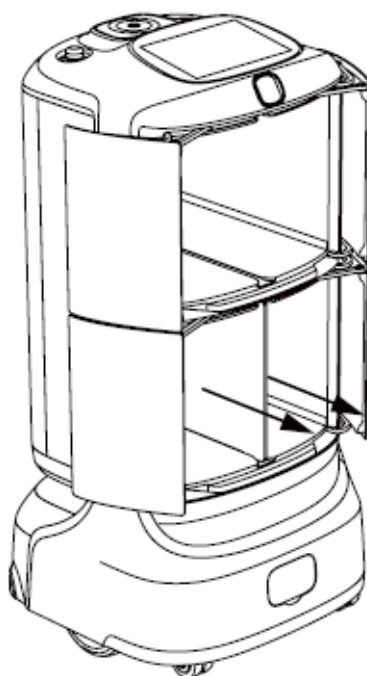


单舱体积：
18.7×41×28 cm

双舱体积：
38×41×28 cm

注意：⚠
舱体中间竖向隔板可拆除。

挡板拆除方式：



2.3 Technical Specifications

Product model	FBBDR2
Load capacity	20kg (10kg per layer))
Number of hatches	Standard 2-4 cabin adjustable
Loading area dimensions	Single bin (width × depth × height): 18.7×41×28cm Double compartment (W×D×H): 38×41×28cm
Charger input	AC 100 V~240 V, 50/60 Hz
Charger output	29.4 V, 3.5 A
Charging time	Charging pile 4h / charger 3.5h (0~100%)
Battery life	9 a.m.
Locate the navigation mode	Pudhu Vslam + Then Slam
Screen specifications	10.1 inch LCD screen
Maximum operating speed	1.2 m/s
The material of the whole machine	High quality factory plastic + aviation aluminum alloy
Minimum pass width	70 cm
Maximum obstacle crossing height	2 cm
Maximum seam width	3.5cm
Maximum climbing angle	8th
Battery capacity	10Ah
Acoustic power	10 W stereo
Working environment	Temperature: 0 ° C~40 ° C Humidity: ≤85% RH
Storage	Temperature: -20 ° C~65 ° C

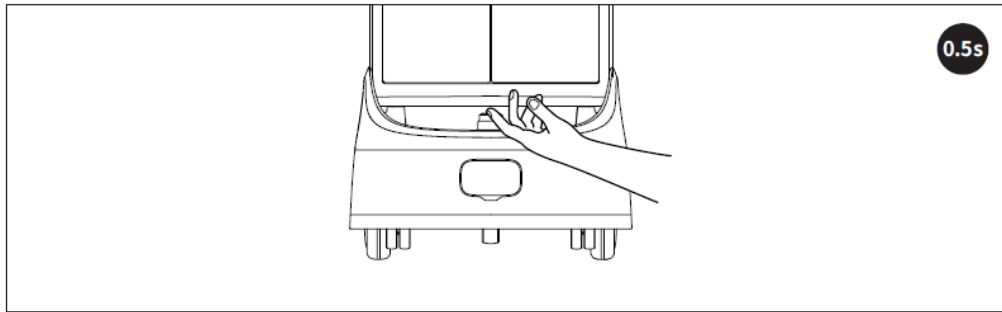
environment	Humidity: $\leq 85\%$ RH
Working altitude	< 2000 m
Pavement requirements	Indoor environment, flat and smooth floor
Ingress protection	IP20

3. Product Usage

3.1 Quick Start

3.1.1 Boot

Push the robot to the boot anchor point→ press the on/off button for 0.5 seconds, and the screen will light up.



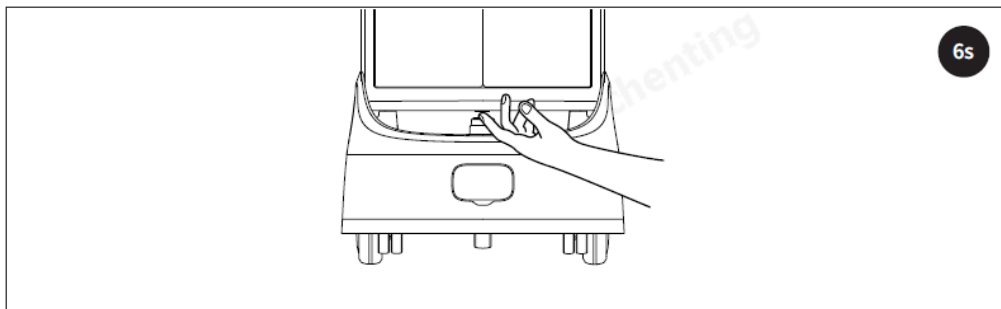
Boot Anchor:

Support multi-boot point boot.

The charging pile can be set as the power on point.

3.1.2 Shutdown

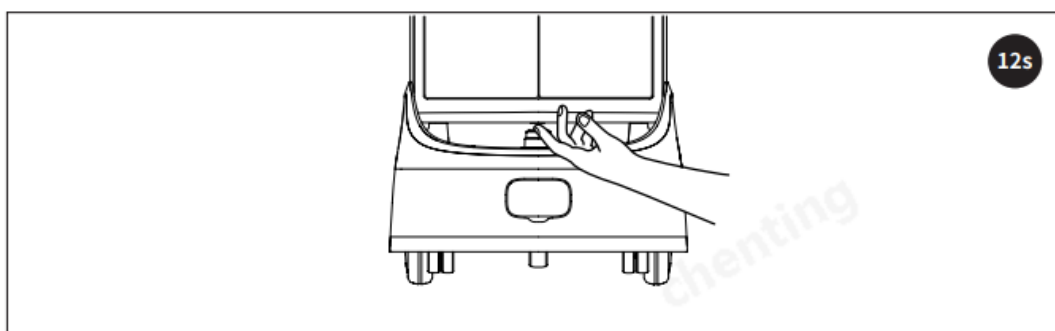
Press and hold the power on and off button for 6 seconds, click the "Power Off" button on the screen, the screen will go off, and the robot will turn off.





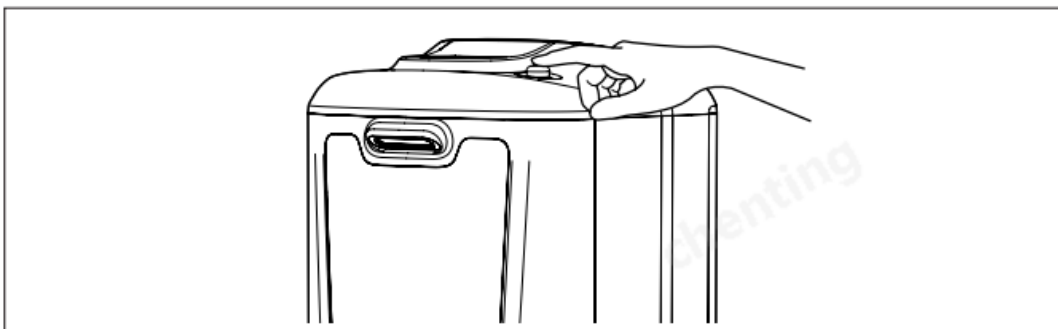
3.1.3 Force shutdown

The machine is powered off by pressing and holding the power on and off button for 12s.



3.1.4 Time out

During the operation of the robot, press the emergency stop switch, and the robot movement is suspended.



In the suspended state, you need to enter the correct administrator password before you can modify the task.



The robot cannot enter the pause state while waiting for the elevator and taking the elevator.

3.2 Mission Scenarios

3.2.1 Function Description

In order to adapt to different business scenarios, the robot provides a variety of mode options, such as delivery mode, lead mode, cruise mode, etc., which users can choose according to the actual situation.



mode	function	illustrate
Fulfillment	The robot can deliver items to multiple target points at a time. Place items at different delivery	Automatically complete the distribution of items, reduce unnecessary repetitive work of

mode	function	illustrate
model	target points in different cabins, and then enter the corresponding destination, the robot can independently plan the path, deliver the items across floors to the designated location, and automatically return to the stop after the delivery is completed.	staff, and pay more attention to completing complex work, such as hotel six-small delivery, building distribution, etc.
Leader mode	The robot can lead guests to their seats. Automatically return to the door meeting point after the arrival is completed.	Lead customers into the store to increase customer flow and store entry rate.
Cruise mode	The robot can carry self-service drinks, desserts, snacks or napkins, cycle along the path set by the waiter, and invite customers to pick up or taste through voice.	Carry items to patrol the designated routes, and customers can take them when they need them, so as to alleviate the shortage of manpower.

illustrate

In order to ensure the smooth and safe operation of the robot, it is recommended that the delivery speed be set below 0.9m/s and the cruising speed should be set to 0.2m/s to 0.6m/s.

3.2.2 Distribution mode

The delivery mode is to deliver the item to a specified location.

Step 1 On the home page of the robot, select "Delivery" to enter the main interface of the delivery mode.



The shortcut keys on the shipping mode interface are described below.

button	illustrate
	For details such as task scenarios, voice/music, pickup notifications, and speeds, see the following table for details.
	View the last task.
	Set the room number input method You can select by floor or manually enter the room number

The shipping settings screen is shown in the following figure, and the details are shown in the following table.

返回
配送设置

任务场景设置

距离优先
智能寻找最短路线，可能会和人为选择地点的顺序不一样，但会提高配送效率

顺序优先
按照人为选择的地点顺序进行配送

抵达后自动完成时间(1~600s)
20

当机器人到达目的地时，若没有操作机器人，将在设定的时间之后离开

语音/音乐

任务途中播放

机器人任务途中可以播放语音或音乐，选择需要播放的内容

合成语音
场景语音包 ✓
音乐

收起 ^

循环播放
循环间隔 10s

试听

抵达目的地时播放

机器人抵达时可以播放语音或音乐，选择需要播放的内容

合成语音 ✓
音乐

电话系统

取物通知

抵达目的地后机器人将拨打电话或发送短信通知顾客

配送速度 m/s

0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2



Shipping settings	illustrate
Mission scene settings	Set the delivery order of the tasks - Distance priority, the machine automatically plans the shortest route for delivery - Priority: Deliveries are made in an order chosen by humans
Automatically complete the time upon arrival	After the robot arrives at its destination, if it does not operate the robot, it will leave after the set time and move on to the next task
The task is completed and the location is returned	After the robot completes the delivery task, it will return to the set location
Voice/Music	- Play in the middle of the mission If it is turned on, the selected voice/music will be played during the delivery process. If you don't have music, you can scan the QR code to import music in the Settings > Music Library interface. - Play on arrival If turned on, the selected voice/music will play when the delivery arrives. If you don't have music, you can scan the QR code to import music in the Settings > Music Library interface. - Tray voice If turned on, you can quickly select the custom voice you need for different pallets before each delivery.
Shipping speed	Set the running speed of the robot in delivery mode, support 0.2-1.2m/s speed setting, the default speed is 0.7m/s.

Step 2 Place the item in the corresponding pod. And select the destination on the right side (you can switch the floor to select the point). The corresponding tray displays the name of the destination to be displayed. Click Close the door and go. The robot will go to the corresponding destination.

Step 3 After arriving at the destination, the robot will give voice prompts and notify the guests, and the customers will open the hatch to pick up the food according to the screen and voice prompts.



Step 4 After the operator takes out the item, or manually clicks "Finish", the robot starts to perform the next task. If the robot has completed all tasks, it will return to the order.

- If you need to edit tasks, complete them early, cancel all tasks, or return home during the delivery process, you can pause the robot by pressing the machine's emergency stop. If there is no action during the countdown time, the bot will continue to run.
- If "Auto-Finish Time on Arrival" is turned on in the settings, the "Auto-Completion Time on Arrival" item that has not been picked up after the delivery reaches the destination point will not automatically detect the completion of the task or click "Finish", and the robot will automatically complete the task and move on to the next task.
- If password and security are enabled in the settings, authentication is required for opening the door to pick up objects.

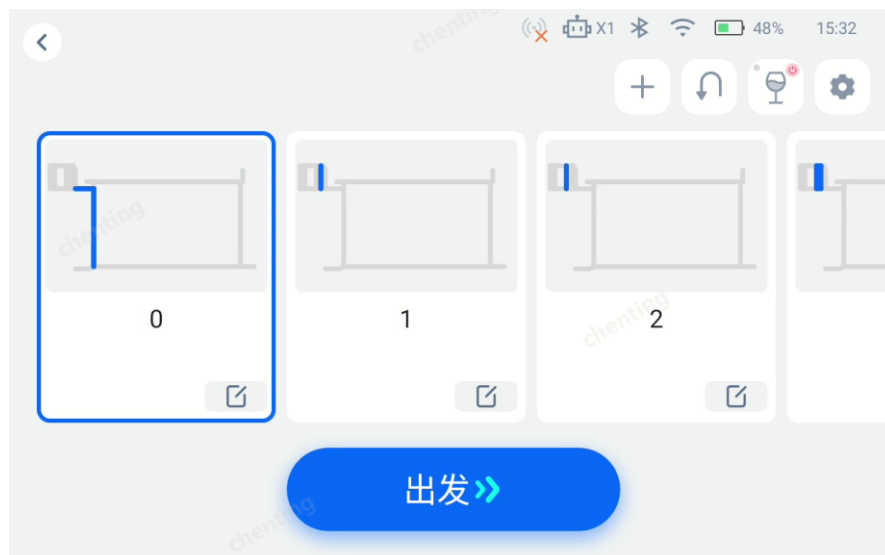


3.2.3 Cruise mode

Cruise mode is to cruise and walk in a specific environment, covering a large area.

步骤 1 On the home page of the robot, select "Cruise" to enter the main interface of cruise mode.

The cruise mode interface is shown below. If a cruise route is created during mapping, the cruise mode screen displays the cruise route. As shown in the figure below, the blue path in the map is the cruising route.

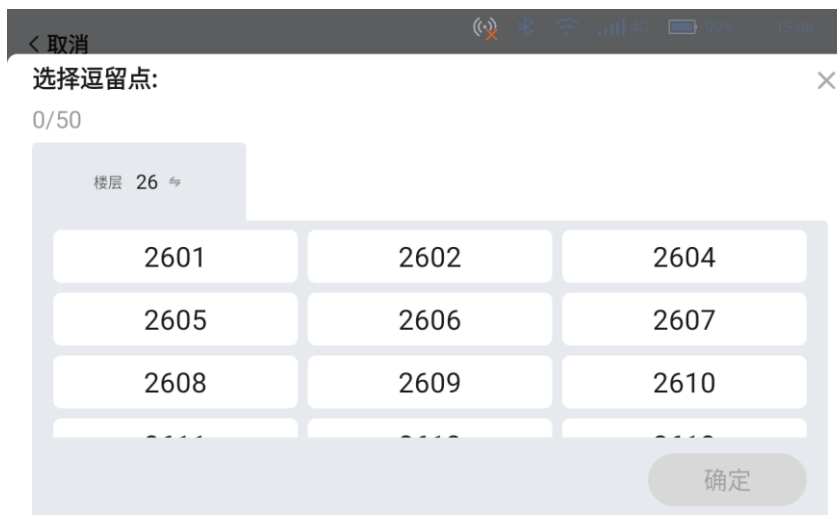


The shortcut keys on the cruise mode interface are described below.

button	illustrate
+	Add custom cruise routes to achieve fixed-point cruises.
↶	Quick home, where the machine returns to the selected stop
⚙️	For details such as setting task scenes, voice/music, and speed, see the following table for details.

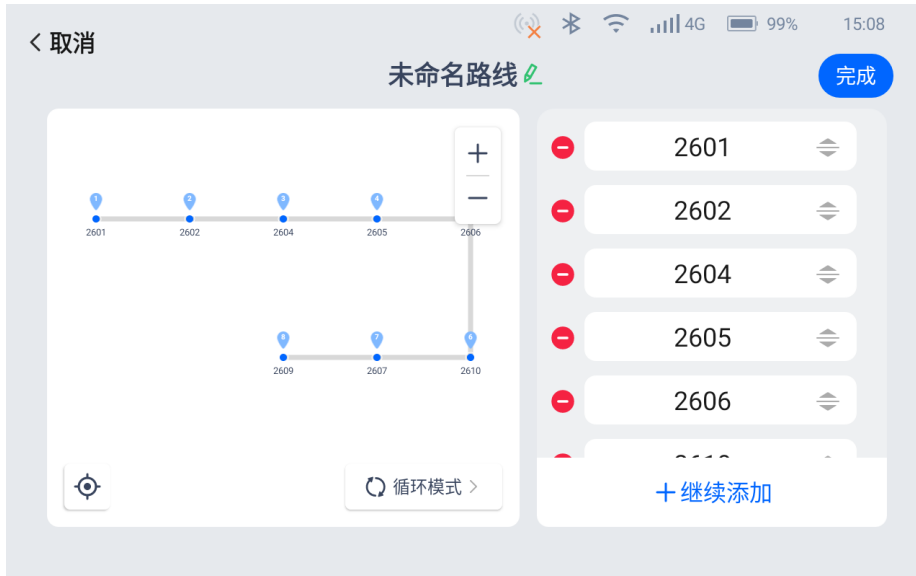
The custom cruise route operation is shown below.

Click to enter the interface of selecting a cruise point.



Please select at least two cruise points. A maximum of 50 cruise points can be selected, and the same cruise point can be selected multiple times, but the same cruise point cannot be selected consecutively.

步骤 2 On the Select Cruise Point page, select the point to be cruised and click Next. Enter the custom cruise route interface.



This screen allows you to rename the route, continue to add cruise points, and select the route mode.

There are three types of route modes: loop mode, loop stay mode, and number of cruises

Loop mode: The robot loops this route indefinitely

Cruise according to duration: The robot continues the task for the duration set by the installation, and it will automatically end when the time comes

Number of cycles: The cruise route ends after the specified number of cycles are completed



步骤 3 Rename the cruise route on the Customize Cruise Route page and click Save. A custom cruise route is generated.

Users can view the list of cruise points, adjust the order of cruise points,

or delete the current cruise route on the custom cruise route interface.

The cruise setting screen is shown in the figure below, and the details are shown in the following table.





Cruise settings	illustrate
Mission scene settings	Upon arrival at the point of stay - Keep staying: The machine stays at the dwell point until the human click ends - No stop: Do not stop when passing through the stopover point - Stay time: Arrive at the point of stay and stay for a specified period of time before continuing the cruise
Customize the dot dwell screen text display	Set the text that will be displayed on the screen during the cruise stay, which can be scrolled.
The cruise is completed and returns to the position	After the robot completes the cruising mission, it will return to the set location
Voice/Music	- Play in the middle of the mission If on, the selected voice/music will play during the cruise. If you don't have music, you can scan the QR code to import music in the Settings > Music Library interface. - Play on arrival If on, the selected voice/music will be played when the cruise arrives at the stopover. If you don't have music, you can scan the QR code to import music in the Settings > Music Library interface.
Cruising speed	Set the running speed of the robot in cruise mode, support 0.2-1.2m/s speed setting, the default speed is 0.7m/s.

步骤 4 Place desserts, snacks, or items on a tray. Select the cruise route you want to use and click "Go".

The robot began to run in a loop following a cruising route.

- When you need to pick up food, click the robot screen or lightning button to pause the robot and pick up the food. If there is no action during the pause time (cruise pause auto-resume time), the robot continues to run.
- To stop cruising, click the screen or lightning button, and then click "Cancel Cruising" to exit cruise mode.

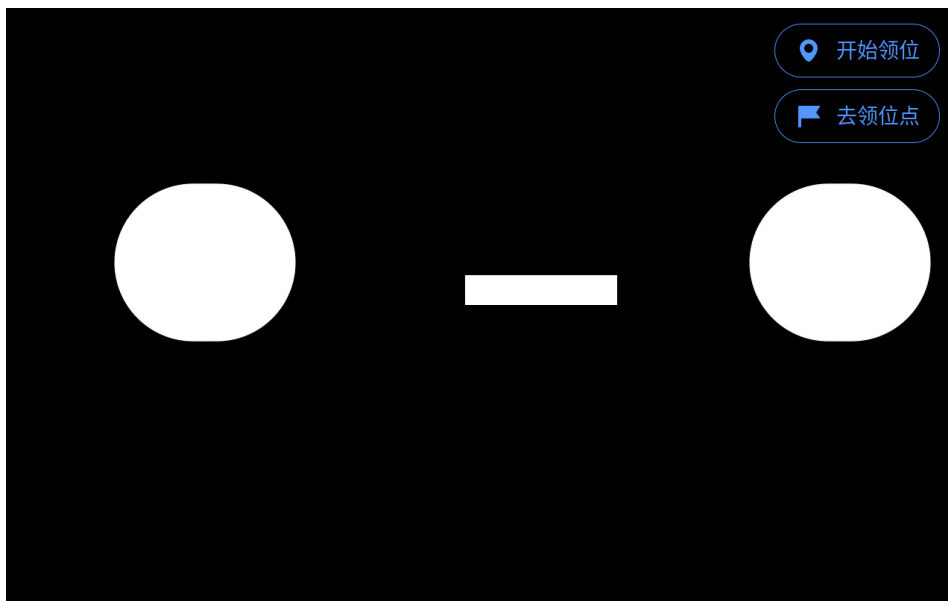
3.2.4 Leader mode

In the lead mode, the robot acts as a receptionist, which can greet guests at the door of the restaurant and lead them to the designated location.

步骤 1 Click "Leader Mode" at the door.

步骤 2 Select the target table number and click "Start Picking".

The robot will then lead the guest to the target table number.





The shortcut keys on the lead mode interface are described as follows.

button	illustrate
Go to the pick-up point	Click the button to go straight to the door.
Solicit customers	Click the button to enter the door greeting interface, where you can interact with the robot. Touch the robot's head or ears, and the robot will show a cute expression and feedback through voice.
	For details such as setting the arrival voice and the music to be played during the pick-up process, please refer to the following table for details.

The lead setting interface is shown in the figure below, and the details are shown in the following table.





Collar settings	illustrate
Automatically complete the time upon arrival	After the robot arrives at its destination, if it does not operate the robot, it will leave after the set time and move on to the next task
Pick up the spot	After the robot completes the task of taking the position, it will return to the set location
Voice/Music	- Play in the middle of the mission If it is enabled, the selected voice/music will be played during the pick-up process. If you don't have music, you can scan the QR code to import music in the Settings > Music Library interface. - Play on arrival If enabled, the selected voice/music will be played when the leader reaches the target point. If you don't have music, you can scan the QR code to import music in the Settings > Music Library interface.
Collar speed	Set the running speed of the robot in the lead mode, support 0.2-1.2m/s speed setting, the default speed is 0.7m/s.

步骤 3 Once you reach the target table number, click on the "Done" or lightning bolt button.
The robot returns to the door.

If you do not click "Finish" within the "Arrival Auto Completion Time" after reaching the target point, the robot will automatically complete the task and return to the door pick-up point.

If you need to cancel the task or return to the door pick-up point during the pick-up process, you can click the robot screen or the head lightning button to pause. If there is no operation within 10 seconds, the robot will continue to run.

3.3 Settings

There is a "settings" entrance at the bottom right of the home page of the robot, and you can enter the general setting interface of the machine after clicking, and the operation configuration of

the machine can be set in the setting interface.

Set up	illustrate
general	Set machine language, time zone, wireless LAN, 4G network, Bluetooth, theme, screen brightness, music volume, voice volume, button volume and advertising screen volume, etc.
Robot features	Carry out robot module settings, function settings, interaction settings, etc.
Map settings	The management module of the robot running map can switch and edit the map of the robot operation. (A password is required to enter the map edit, if necessary, you can contact the technical support engineer.))
Music Library	Music can be imported and managed within the machine. Up to 20 pieces of music can be imported into the machine.
Passwords & Security	Password management and motor lock can be set. The interface can be accessed through the password control bot The business permissions of the robot are adjusted, and the password can be changed by customization. (For the administrator password, contact the technical support engineer.))
System upgrades	You can view the current version and check whether the current version is the latest version. If you don't have the latest version, you can download the latest version to upgrade. Before upgrading, please ensure that the power of the robot is above 20%, otherwise the upgrade may fail.
About this unit	Display the manufacturer's service information, such as official website information, robot operation guide, etc., as well as robot SN, Mac, and other related information.
debugging	Adjust robot parameters for use by technical support engineers only. The company does not assume any responsibility for accidents caused by unauthorized operation.

3.3.1 General

- (1) Machine language and time zone can be selected
- (2) Wireless LAN and Bluetooth can be set up for the machine
- (3) The SIM card can be activated for the machine and the mobile network can be configured

Machines that do not have a network connection cannot be updated. If the mobile network and Wi-Fi are turned on at the same time, Wi-Fi is used first. If the robot detects a weak Wi-Fi signal, it

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will automatically switch to the mobile network.

- (4) Switchable machine theme, support for light and dark modes
- (5) Machine sleep time setting
- (6) The brightness of the operation screen can be adjusted, and the volume of music, voice, buttons, and advertising screen can be adjusted; Both brightness and volume support 0-100% adjustment



3.3.2 Robot Functions

Carry out robot module settings, function settings, interaction settings, and advanced settings.



3.3.2.1 Module settings

Detailed settings for each mode, including voice, music, scene configuration, and more. Once inside, there is a detailed description of each mode and the status of activation. (Modes that are not enabled will not be displayed on the homepage)

At the same time, it supports the selection of boot auto-start module, which is the home page by default, and other enabled modules can be set as boot auto-start.



3.3.2.2 Function settings

3.3.2.2.1 Call function

Enable calling, the bot can respond to calls from remote devices, and when the call is successful, the bot automatically goes to the destination.

(1) Call Type:

Support Pudulink call button call, local microservice, open platform and multiple call methods; For specific deployment methods, please contact the technical support engineer.



(2) Call scene settings

Set the content	illustrate
Waiting on a call (1~180s)	When the bot is called, it will go to the call point after the countdown ends, during which time the call can be canceled. The default wait is 10s, and the setting is 1-180s.
Call Arrival Waiting (10-600s)	When the robot arrives at the call point, if the robot is not operated, it will return to home after the set time. The default waiting time is 10s, and the setting of 10-600s is supported.
The task is completed and the location is returned	When the robot arrives at the call point and is not operating, the robot will return to the set location. By default, it stops in place, and can manually select the elements of returning to the food service, leading point, and recycling point.
Callable status	Support door pick-up point callable and cruise callable, the robot can be called even in the middle of the above tasks.



(3) Voice/Music

(1) Play during the task: If enabled, the selected voice/music will be played during the call. If you don't have music, you can scan the QR code to import music in the Settings > Music Library interface.

(2) Play on arrival: If on, the selected voice/music will play when the call arrives. If you don't have music, you can scan the QR code to import music in the Settings > Music Library interface.



3.3.2.2.2 Charging settings

(1) Automatic recharge: When the robot meets the recharge conditions, it will automatically return to the charging pile for charging after completing the task

Low battery threshold (5%~50%): After the robot is lower than the set power, it will automatically return to the charging point. Support 5%~50% setting.

Call when performing charging tasks: When the power is greater than the safe value, the robot can be called on the way to the charging pile and when charging at the pile.

Auto-recharge period: You can customize the auto-recharge period

(2) Charging pile setting

Support the selection of charging stations and automatic return to home stops when the battery is low.

(3) Return to the position after charging is completed

After the charging is complete, the robot can be selected to return to the position

(4) It can be recharged during cruising

After it is turned on, if the power level is lower than the threshold during the cruising task, the robot will return to the charging pile for charging.



3.3.2.2.3 Return to home settings

(1) Play voice/music during the mission

If enabled, the selected voice/music will be played during the return process. If you don't have music, you can scan the QR code to import music in the Settings > Music Library interface.

(2) Return speed m/s

Set the running speed under the robot return home, support 0.2-1.2m/s speed setting, the default speed is 0.7m/s.



3.3.2.2.4 Cabin setup

- (1) Hatch control: Support multi-hatch setup
- (2) Distribution mode - door opening mode; Default single open; Can be customized to open wide
- (3) Maximum door opening time: after placing the item (1~3600s), after taking out the item (1~3600s); That is, the machine will automatically close the door after the set time is over, and you need to select the cabin body in the interface again to trigger the reopening of the hatch.
- (4) Support cabin odor dispersion: The robot will automatically start deodorizing on the way back from completing the task





3.3.2.2.5 Destination display and input

(1) The number of destination columns

The number of destination columns can be selected from 2 columns, 3 columns, 4 columns, and 5 columns, and the default number is 3 columns.

(2) Destination group filtering

Destination groups can be displayed and hidden, and the corresponding groups will no longer be displayed after being disabled.



3.3.2.2.6 Run Settings

(1) Run the settings

(1) Pause auto-recovery time (5-600s)

After the robot is paused, if the robot is not operated, the task will resume after the set time.

Support 5-600s time setting, default is 10s.

(2) Re-route when blocked

Set the content	illustrate
Time to re-plan the route (10-600s)	After the robot encounters a blockage, it will start to plan a new running path after staying for N seconds, N supports setting 10-600s, and the default is 30s.
Blocking path lock time (30-600s)	After the robot encounters a blockage, it locks this path within N seconds, that is, re-planning no longer plans to take this route within N seconds, N supports 30-600s, and the default is 180s.

(2) Scheduling mode

Set the content	illustrate
Wait mode	When there are robots near the starting point, other robots will not fill in to serve the meal
Quick mode	When there are multiple robots, the robots will dispatch their own fills to serve meals

3.3.2.3 Interaction settings

3.3.2.3.1 Emoji animation

(1) Emoji display settings

By default, emojis are displayed during operation, and when this function is disabled, the destination is displayed during operation.



3.3.2.3.3 Voice interaction

(1) The timbre of the synthesized voice

Support to select voice timbre, Chinese support 5 pronounciators to choose.

(2) Scene voice package selection

At present, only Chinese and English support the default scene voice, if the default voice package in the system cannot meet the user's needs or other languages need to set the scene voice package, the user can go to the cloud platform to customize, please contact the technical support

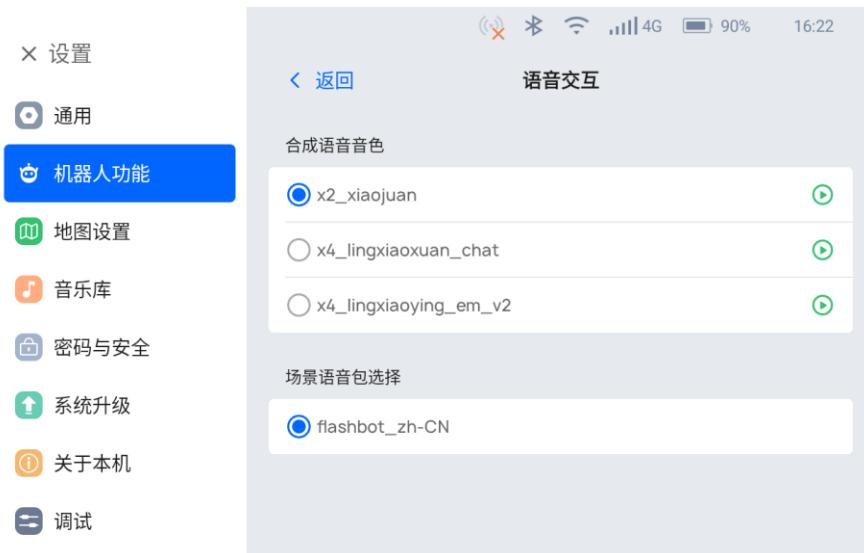
engineer for specific operations. If you need to replace a customized voice pack, perform the following steps:

Step 1 View the supported voice packs and download them.

Step 2: Select the downloaded voice pack to replace it.

Corresponds to the downloaded voice package, and if the cloud platform is updated, the corresponding voice broadcast can be updated

If you want to delete a voice packet, press and hold the corresponding voice packet to delete it.



3.3.2.3.5 Advanced Settings

The advanced settings are used to adjust the advanced configuration of the robot, which requires a password to enter, and if necessary, you can contact the technical support engineer.

Set the content	illustrate
Phone System settings	Support phone box debugging
The number of times the call times out and retry	You can set the number of times the call times out and retry
Network switch settings	When turned on, the robot will try to switch to the saved WIFI when the 4G signal is poor
Anti-pinch hand setting	The level of anti-pinch hand can be set, and the higher the level, the more sensitive the anti-pinch hand sensing is
Middleware services	Jump middleware is supported
Configuration and resource replication tools	Replication of native configurations and resource sources to other Robots, as well as transfer of configurations and resources from other Robots.
Initialization of the bot	Factory reset of the robot is supported

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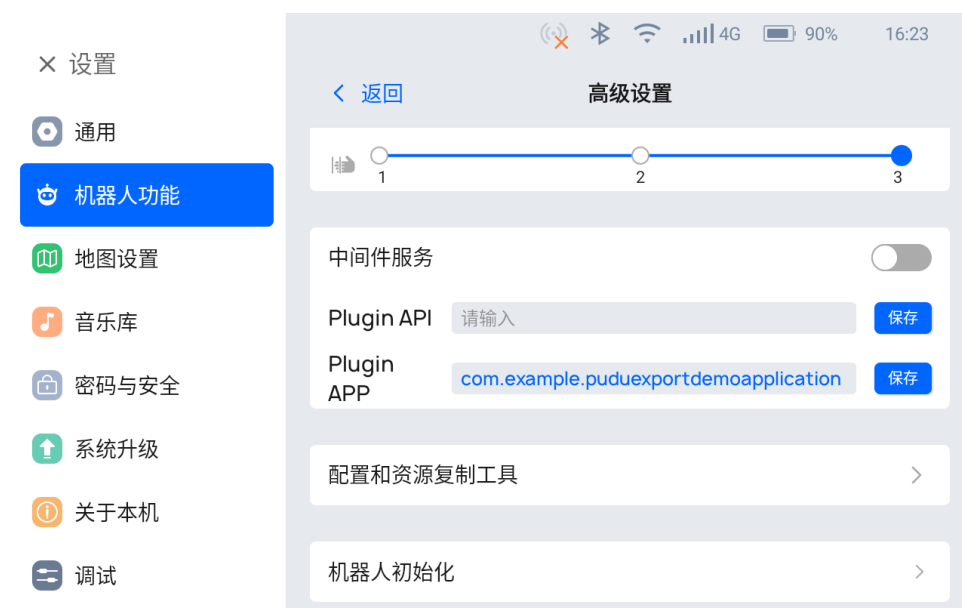
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3.3.3 Map settings

The robot can support the setting of multiple maps, which can be used when the usage scene changes or the scene route changes. By switching maps, the robot automatically synchronizes arrival point information, stops, other configurations, and element information in the map. Users can select a map based on the actual scene.

Click "Edit Map" to jump to the interface of the robot map management software, and perform operations such as map creation and map editing.



3.3.4 Music Library

In the music library module, after the user connects the robot to the same Wi-Fi as the mobile phone, he or she imports music for the robot by scanning the QR code of the "Music Import" module. Imported music is displayed in the "All Music List", and up to 20 pieces of music are stored in the bot.

- Supported music file formats: MP3, WAV, FLAC, AAC, PCM, WMA, APE.
- You can listen to the music by clicking the "" button on the right side of the music entry;
- Long press the song to pop up the "Delete" button, and click it to delete the music.



3.3.5 Passwords and Security

3.3.5.1 Password Management

You can control the permissions of the robot to enter the interface and adjust the robot business through the password.

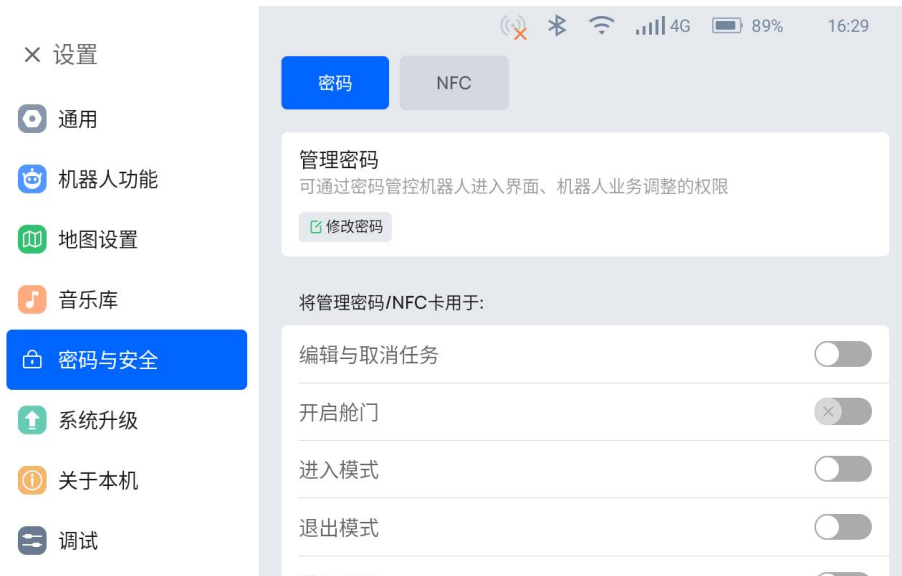
(1) Set a password for the first time

You need to enter it twice in a row, and if the two entries are consistent, it will remind you that "the management password has been set"

The password can be set for canceling a mission, opening the hatch, entering/exiting mode, and entering the settings.

(2) Change your password

If you forget the original password, you need to enter the administrator password, and contact the technical support engineer for the administrator password.



3.3.5.2 NFC Configuration

(1) Administrator NFC card

The administrator NFC card has the highest authority on the machine, which can change the task status and open the door to pick up objects.

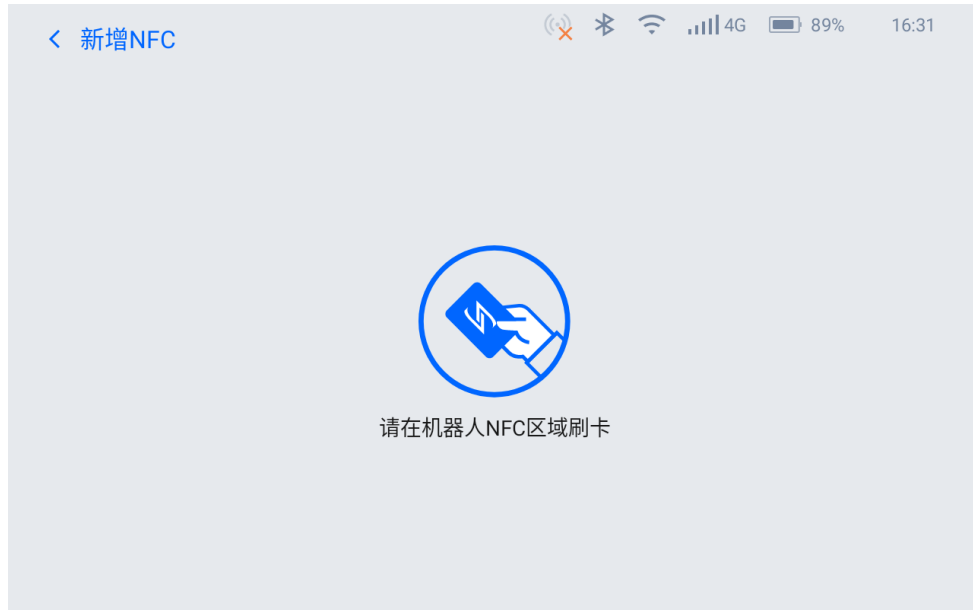
(2) Universal NFC card

When the delivery arrives, use the NFC card to touch the NFC logo on the fuselage to open the cabin door. In addition, you can set the authentication effective point.

(3) NFC card entry

Click "Enter", touch the NFC logo of the fuselage with the NFC card to enter, and you can enter the name ID to the NFC card.





3.3.6 System Upgrade

When the robot is networked, it can check whether there is a version update. If there is a new version of the robot software, there will be a new version of the content display to remind the update.

After clicking "Upgrade Now", the robot will download the installation package, and there will be a download percentage prompt at this time, and the machine will automatically restart after the installation package is downloaded.

note

When upgrading the version, make sure that the battery level of the robot is higher than 20%.

Do not manually turn off the bot during a version upgrade.



3.3.7 About the Machine

The interface displays information such as service guides, manufacturer service hotlines, names, and machine SNs and Macs.



3.3.8 Debugging

The debugging interface is used by the technical support engineer to debug the machine, please do not operate the debugging interface without permission.

4 Troubleshooting

4.1 Failure during operation

Fault phenomenon

The following faults are reported during the operation of the robot:

- The motor parameters are abnormal
- Abnormal sensor parameters
- The sensor connection is abnormal
- The motor is rotating abnormally

Solution

Step 1 Click OK or Try to continue as prompted to check whether the bot can continue to run.

Step 2 If recovery is not possible, restart the robot and re-enter the task to run.

Step 3 If the problem persists after restarting, contact the technical support engineer in time.

4.2 Positioning failed

Fault phenomenon

Robot Lost Positioning:



The robot page prompts "push the robot directly below the positioning mark, and after the mark is recognized, the robot will automatically recover."

Possible causes

- The robot did not recognize a positioning feature.
- The map selected by the bot does not match the actual map.

Solution

Step 1 If the current map of the robot is inconsistent with the actual scene, click Map Select and select the map corresponding to the current site.

Step 2 Check whether the robot stays right below the boot point. If it deviates far, push the robot directly below the boot point. If the positioning is still not successful, restart the robot and adjust the robot orientation.

Step 3 Check whether the robot vision sensor is blocked by foreign objects, such as oil stains, foreign objects, etc., and clean them.

4.3 The robot cannot be charged

Fault phenomenon

The robot cannot be charged.

Solution

- Check if the charger indicator is on. If not, it may be that the charger is damaged and cannot be charged, please contact the technical support engineer in time.

4.4 The robot cannot be turned on

Fault phenomenon

The robot won't turn on.

Solution

- If the robot is low on battery, please charge the robot.
- If it still won't turn on, contact a technical support engineer.

4.5 The robot does not walk smoothly**Fault phenomenon**

The robot does not walk smoothly or pauses.

Solution

- Check if there are any obstacles blocking the robot in front of the robot.
- Check whether the robot's depth vision sensor has oil stains, soup stains and other contamination.
- Check whether the width of the road through the robot meets the minimum travel distance of the robot (70cm).
- Check whether there are mirrors, metal reflective surfaces and other objects that affect the operation of the robot on both sides of the robot's running road. If so, please put a frosted sticker at 16cm~20cm above the ground.

5. Maintenance & Maintenance

5.1 Parts maintenance

Maintenance parts	Robot status	Check the cycle	Maintenance Methods
Drive wheels and training wheels	Shutdown	week	Remove tangled hairs and stuck foreign bodies
Capsule	Shutdown	week	Use a clean cloth to wipe the surface.
Vision sensors, depth vision sensors, and lidar	Shutdown	week	Please use a clean cloth or lens cleaning supplies to clean it. In case of sudden fouling, please be sure to deal with it in time to avoid blocking the sensor and causing abnormal operation of the robot.
fuselage	Shutdown	One month	Use a clean cloth to wipe the surface.

5.2 Cleaning method



warn

Do not use water or other liquids to clean the robot, and always ensure that the robot is kept dry.

Step 1 Press and hold the power switch for 3 seconds, click the "Power Off" button on the interface, and make sure the robot is turned off.

Step 2 Use a clean cloth to wipe the surface of the robot.

Step 3 Use a clean cloth to wipe the tray, drive wheels and auxiliary wheels.



- If the drive or training wheels become entangled or adhered to debris, the robot needs to be cleaned up after being placed on its side. Please keep the floor clean and tidy when lying on your side (bedding can be used) to avoid scratches on the robot shell.
- If there is oil on the tray mat, you can take out the tray mat and wash it separately, and then put it in the tray after drying.

Step 4 Use a clean cloth or a special lens cleaning product to clean the vision sensor, depth vision sensor, and lidar.



If you encounter sudden fouling, you must deal with it in time to avoid blocking the sensor and causing the robot to run abnormally.

After-sales policy

Shenzhen Pudu Technology Co., Ltd. promises to meet the following conditions, from the date of product activation, within the effective warranty period of the product (the warranty period of different parts of the product may be different), will provide free product warranty service, and customers do not need to pay after-sales service fees. If the warranty period is exceeded or it is not a free product warranty service, a certain fee will be charged according to the normal price. Please contact the official website after-sales service hotline for product maintenance.

-If the following conditions are met, Pudu Technology will provide a warranty:

- a. within the warranty period of the product;
- b. Under normal use conditions, there are non-man-made quality problems;
- c. No unauthorized disassembly, maintenance, no water ingress, no foreign objects, no collision, no falling, etc.;
- d. The serial number, factory label and other labels of the product are not torn or altered;
- e. Provide valid proof of purchase, receipts and tracking numbers.
- f. Damaged spare parts replaced during the warranty period are the property of Purdue Technology.

-In the event of any of the following circumstances, Purdue Technology will charge for maintenance according to the warranty:

- a. The product is out of warranty;
- b. The serial number, factory label and other markings of the product are torn or altered and cannot be recognized;
- c. Collision, burning, and quality problems caused by foreign bodies (water, oil, sand, etc.) caused by non-product quality problems;
- d. Damage caused by unauthorized modification, dismantling, shelling, maintenance, etc., which is not officially guided;
- e. Damage caused by improper installation, use, charging, and storage not in accordance with the product manual and installation instruction manual;
- f. Product damage caused by the use of the delivery robot in excess of the safe load weight;
- g. Failure of accessories or parts other than the primary warranty parts;
- h. Failure and damage caused by force majeure factors (such as earthquake, fire, war, etc.);

After-sales service consultation:

If you have any questions, please contact Purdue Technology Headquarters:

After-sales official email:
techservice@pudutech.comtechservice@pudutech.com
After-sales official hotline: 400-0826-660