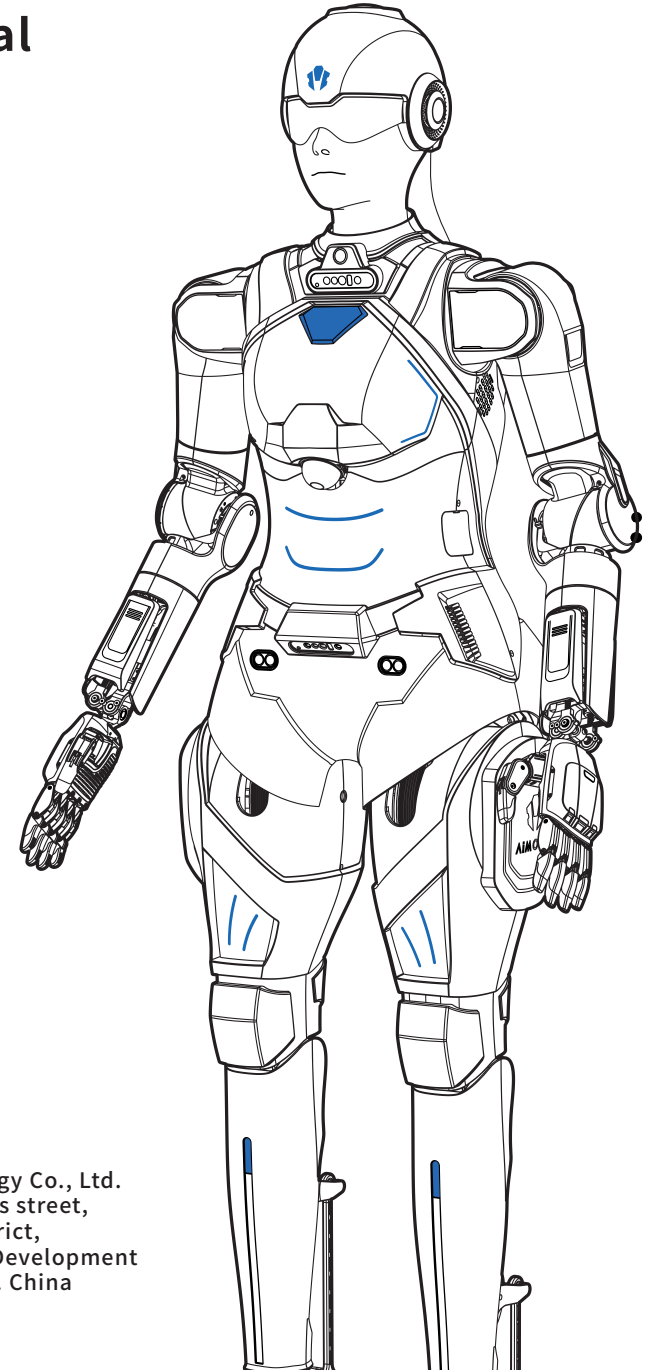




AiMOGA Mornine M1

Original instruction

Product Manual



Manufacturer: Moga Technology Co., Ltd.
Address: 6-201 Room, business street,
Huashan Road, Longshan district,
Economic and Technological Development
Area, Wuhu 241000 Anhui, P.R. China

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1. Special Notes

1. Special Notes

Before using this product, please carefully read the AiMOGA Mornine M1 Product Manual (hereinafter referred to as “this manual”) and operate this product according to the content of this manual. The company shall not be held liable for any property loss or personal injury caused by operating this product in violation of this manual. As the AiMOGA Mornine M1 product (hereinafter referred to as “this product”) is composed of numerous parts, it is only for use by individuals aged 14 and above. Do not allow children and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge to use this product. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children. To extend the service life of this product, please do not use it in high-temperature, high-pressure, high-humidity environments, or in rainy conditions. This manual has attempted to include all product features and usage instructions at the time of printing. However, due to continuous functional improvements, design changes, and other reasons, there may still be discrepancies with the actual product purchased by the user. If there are deviations in color, appearance, etc., between this manual and the actual product, the actual product shall prevail. Additionally, the AiMOGA Mornine M1 product is not a network product, but it can achieve anti-DOS attack capabilities through connection to a home router and related router configurations. This product needs to be used in a closed, unmanned environment. Before use, it must be blocked by external obstacles. During operation, maintain a distance of 2m between this product and obstacles.

2. Product Introduction

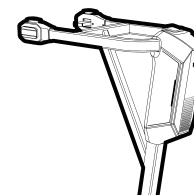
AiMOGA Mornine M1 is a bipedal humanoid robot, possessing multi-modal environmental perception, autonomous walking planning, dexterous hand manipulation, and large model-based professional domain questioning capabilities. It can be used in scenarios such as automotive sales consultation, shopping mall guidance, and entertainment performances. “Morn” signifies “dawn, daybreak,” symbolizing that AiMOGA Mornine is a new-era robot rising like the morning sun, illuminating life with a fresh outlook and infinite innovation, bringing unlimited hope.

Note: This robot is to be used in a closed, unmanned environment. Before use, it must be blocked by external obstacles. During operation, maintain a distance of 2m between the robot and obstacles.

3. Package Contents



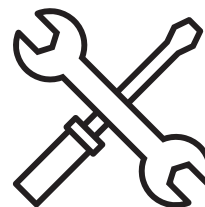
1. Robot Body



2. Standby Station



3. User Manual



4. Unboxing Tool



5. Emergency stop Controller

4. Product Structure and Detailed Parameters

4.1 Parts Layout

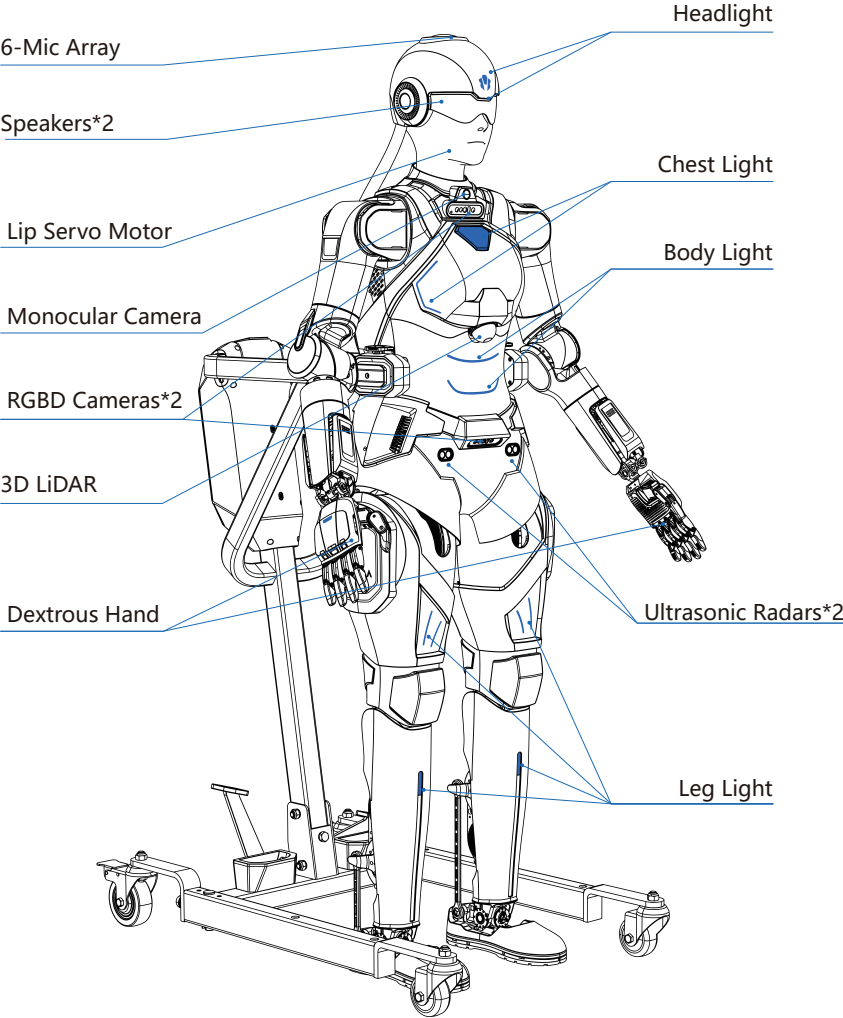
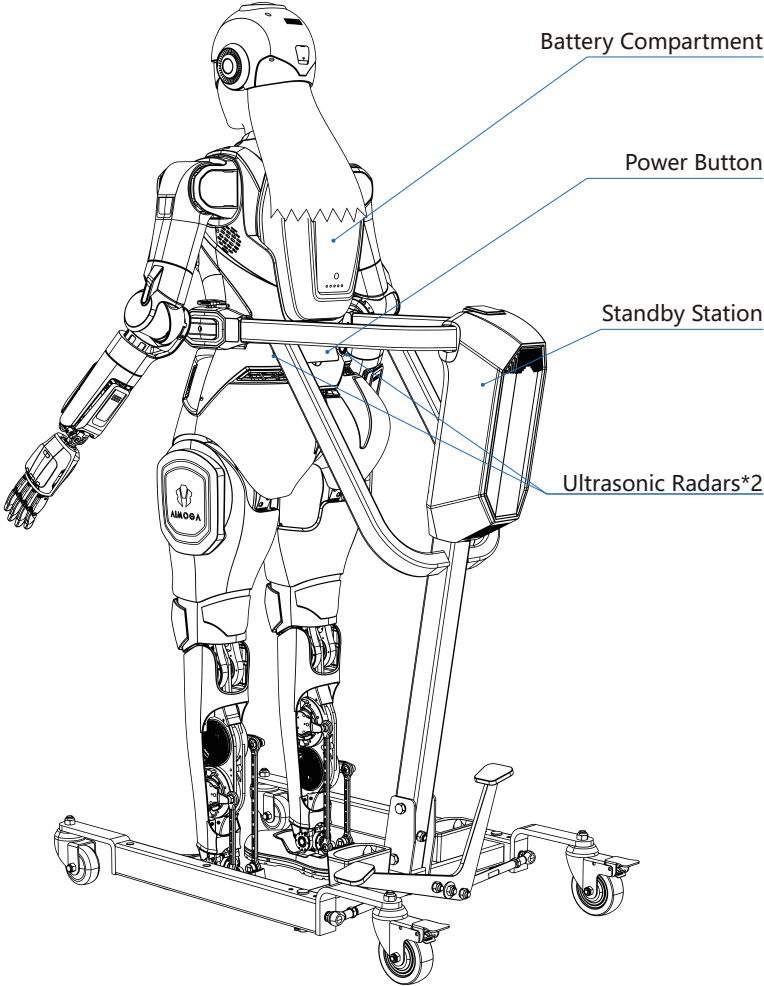


Figure 1 Part Layout



4.2 Product Parameters

4.2.1 Basic Information

Parameter Name	Parameter Value
Height	168cm
Weight	70kg
Body Degrees of Freedom	40 DoF
Dexterous Hand Degrees of Freedom	11 DoF per hand (6 active DoF)
Maximum Walking Speed	1m/s
Arm End Load	Max. 1.5kg
Main Material	Aluminum Alloy + Engineering Plastic + Bionic Silicone

4.2.2 Core Processor

Core Processor Name	Parameter Value
Orin NX	16GB RAM 100 TOPS
X86 i5-1350P	4.7GHZ

4.2.3 Battery Parameters

Parameter Name	Parameter Value
model	ZY4815D
nominal voltage	46.8V
rated capacity	14.4Ah
rated energy	673.92Wh
charging time	2.0h
endurance	2.0h
Maximum charging current	15A
Type	Nickel-Cobalt-Manganese

4.2.4 Charger Parameters

Parameter Name	Parameter Value
Model	UY600L-W546080
Output	54.6V~8A

4.2.5 Sensors

Part Number	Name	Function	Parameters	Purpose
B32000011AA	Silicon Microphone Array Board	Collect user's spoken voice	Dimensions: 68.5*78mm Communication Method: USB2.0 Microphone Sensitivity: -33~31dB Signal-to-Noise Ratio: 65dB Input Sound Level: 128dB Wake-up Distance: 35m Sound Source Localization: 360° Pickup Beam: 6 beams Microphone Type: Analog Silicon Microphone	Enables voice interaction between the robot and the user through acoustic algorithms.
B35000014AA	Wide-angle Camera	Collect user facial feature information	Dimensions: 33*16*20.3mm Lens 17mm Communication Method: USB2.0 Pixels: 2 million Depth FOV: H110° V76° Resolution: 19201080	Identifies who is standing in front of the robot using facial recognition technology, then greets and interacts accordingly.
B35000022AA	Stereo Camera (Neck Recognition)	Collect special information about objects in the robot's chest area	Dimensions: 90*25*25mm Interface: Type-C Communication Method: USB3.0 Working Distance: 0.3-3m Depth FOV: H87° V58° Resolution: 1280720@30fps	Identifies objects placed on the chest or tabletop using object recognition technology, enabling actions such as pouring water.
B35000003AA	Touch Line	Touch sensing	Dimensions: 25250.05mm Material: Copper Foil	Detects human contact through capacitance detection.
B35000009AA	Stereo Camera (Hip Blind Spot Compensation)	Collect special information about objects in the foot area	Dimensions: 89.82*25.10*25.10mm Interface: Type-C Communication Method: USB2.0 Working Distance: 0.2-3m Power Consumption: 7W max Depth FOV: H90° V60° Resolution: 640400@5/10/15fps	Identifies obstacles in front of the robot's feet, enabling navigation and obstacle avoidance through navigation algorithms.

Part Number	Name	Function	Parameters	Purpose
B35000008AA	LiDAR	Mapping, navigation, obstacle avoidance	Dimensions: 65*65*60mm Laser Wavelength: 905nm Range: 40m@10% reflectivity 905nm: H360° V59° Power: 6.5W Point Cloud Output: 200,000 points/second Class 1 Laser	Enables the robot to walk autonomously through navigation algorithms.
B35000010AA	Ultrasonic radar	obstacle detection	Communication method: RS485 Measurement distance: 3.5m Blind spot distance ≤ 1cm Measurement accuracy: 1+(S * 0.5%) cm Baud rate: 115200bps	Using Ultrasonic radar for walking and obstacle detection

4.2.6 Emergency Stop Controll

Parameter Name	Parameter Value
Charging Voltage and Current	5V 2A
Charging Port Type	Type-c
Battery Type	18650

4.3 Safety Instructions

To avoid illegal acts, potential losses, and injuries, please ensure compliance with the following:

- (1) Using this product at night is more dangerous than during the day, as it can be difficult for others to notice, potentially leading to hazards. It is recommended not to use this product in extremely dark environments.
- (2) When using this product, have sufficient safety awareness (this product is not allowed for use on public roads), and be prepared to respond to the following situations at all times: ① someone approaching suddenly; ② children or pets playing nearby;
- (3) Before use, you should ensure that you have a sufficient understanding and read this instruction of this product. Do not allow individuals unfamiliar with its operation to use it.
- (4) As cables, small parts, and movable mechanical joints may pose a danger to children, it is imperative to keep children away from this product. Children under 14 years old are prohibited from using this product alone without supervision.
- (5) Disassembly, modification, or addition of components to this product is prohibited. Non-official components may not be compatible with the software, leading to loss of motion control and rendering the product unusable.

(6) It is prohibited to use this product to collide with buildings, people, or animals. It is prohibited to use this product to carry, drag, or launch any dangerous objects.

(7) It is prohibited to operate this product under the influence of alcohol, drugs, medication-induced sedation, dizziness, fatigue, nausea, or any other state of poor physical or mental condition.

(8) If this product is involved in an accident (e.g., collision, fall) or exhibits abnormal operating status (e.g., unstable standing or uncontrolled movement), it must be stopped immediately by emergency stop controller. The product must not be used again until after-sales service personnel have completed repairs.

(9) It is prohibited to use this product on public roads to avoid affecting other pedestrians and vehicle traffic.

(10) Do not use this product as a cargo transport tool. Misuse would make this product in a hazard situation.

(11) Exercise caution when using this product in crowded places (this machine is to be used in a closed, unmanned environment. Before use, it must be blocked by external obstacles. During operation, maintain a distance of 2m between the robot and obstacles).

(12) Make sure the robot is power off before act the operation of adjustment, maintenance, repairing, charging and like these actions. Product noise emission values $L_{pA} \leq 70$ dB(A) in standby or standing status.

(13) This product is indoor use only.

5. Usage Instructions

Please read this manual carefully and familiarize yourself with the product's functions and operating methods before using this product. This product is relatively complex. All parts and accessories must be correctly installed and used according to this manual. Improper installation or use may cause damage to this product or other property loss, and even cause serious injury to yourself or others. This product should not be used by individuals with physical, sensory, intellectual, or emotional impairments, or by individuals without relevant experience and knowledge (including children). Children are prohibited from operating this product or using it as a toy. Close supervision is required when using this product near children. Children are prohibited from cleaning or maintaining this product without supervision.

5.1 Charging Instructions

To prevent fire or explosion, check the battery for damage before use. Do not use this product if the battery is damaged. The recommended battery charging temperature is 0° C to 40 ° C. Charging outside this temperature range may cause battery damage. When charging, please do so in a dry, cool location away from heat sources, ensuring good ventilation and no debris or flammable/explosive materials nearby. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

5.2 Battery Charging Before Power On

Note: If charging the battery directly, you must first ensure the robot is powered off before approaching it, and the robot must be supported by the standby station before charging. There are two charging methods: 1) Charging the battery separately: Remove the robot battery, then insert the trapezoidal plug of the robot standby station charger into the upper right position on the back of the battery. Then plug the charger into an AC100-240V 4A 50/60Hz power outlet to charge. 2) Charging the battery while connected to the robot body: Insert the trapezoidal plug of the robot standby station charger into the trapezoidal interface next to the robot's waist power switch. Then plug the charger into an AC100-240V 4A 50/60Hz power outlet to charge. Note: When all indicator lights on the robot battery are solid (not blinking), the battery is fully charged. At this point, you need to unplug the trapezoidal charging plug and coil up the charging cable. A short press of the power button for 1 second will check the current battery level. If only 1 indicator light on the battery is illuminated, the battery is low and needs charging.

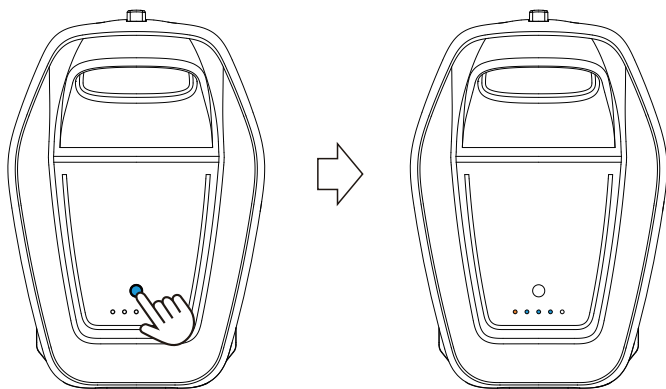


Figure 2 Battery Level Check

5.3 Power On/Off

First, ensure that there are no idle personnel or other objects around the robot and that the robot is stable on the standby station. Then, remove the robot's feet from the footrests of the standby station. Next, insert the battery into the slot on the robot's back. Look at the middle lower part of the robot's back, lift the cover, and press the power button. The indicator lights on the robot's upper body will illuminate.

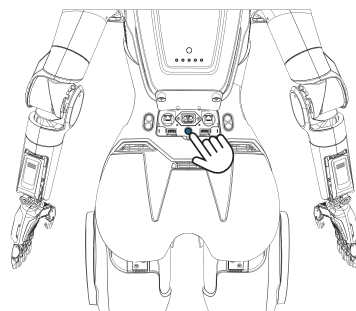


Figure 3 Power On Button

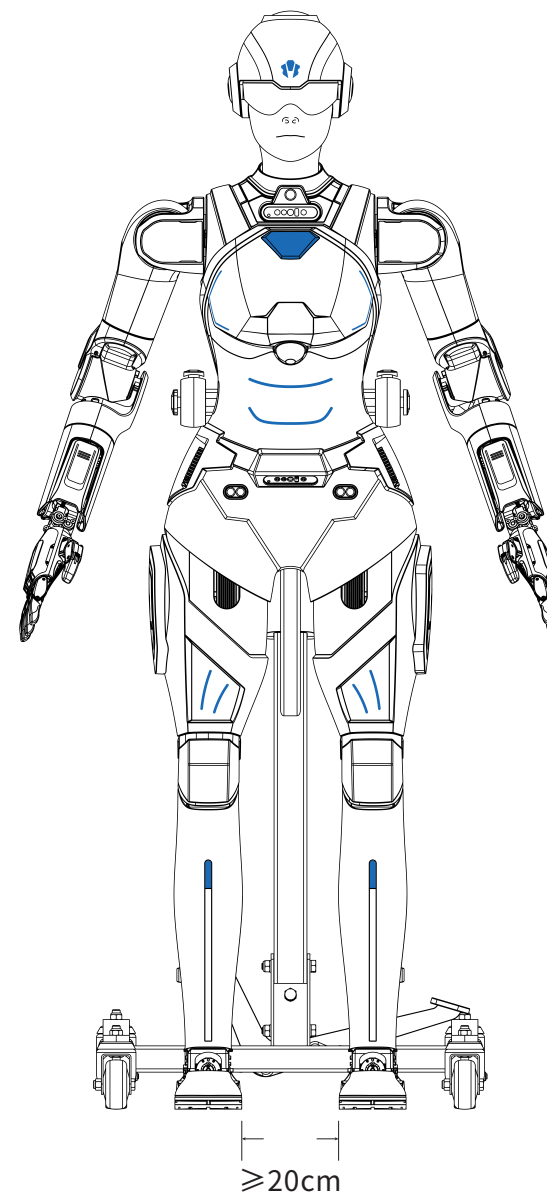


Figure 4 Ready Stance

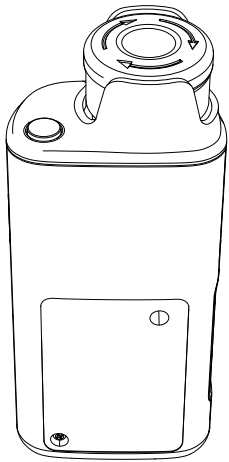


Figure 5 Emergency Stop Controller

Note: The emergency stop remote control has been paired before leaving the factory and is ready to use right out of the box. By default, the remote control is in the released state, and the motor is normally powered. **In case of an emergency, simply press the button to cut off the motor power, and the robot's legs will become limp and fall to the ground.** After the issue is resolved, rotate the button to restore the released state, and the motor will be re-energized. The signal light shows green for normal status and red for abnormal status. When fully charged, four battery indicator lights will be displayed. If you want to turn off the robot, please ensure

that the robot is in the enhanced position control mode and is supported by a standby station. Press the power button again, wait for about 1 second until all the robot's indicator lights go out and the robot becomes limp. At this point, the robot is in the off state. Before turning on the machine, please ensure that the product is kept at a distance of about 1 meter from surrounding objects, with a distance of 20 cm between the two feet, and the soles of the feet are parallel to the ground.

5.4 Remote Control App Introduction

Note: When using the remote control app, please ensure the robot is operated within line of sight and within a restricted area. If it goes out of sight, the remote connection will be lost and may lead to serious mechanical risks.

5.4.1 Download App and Connect to Robot

Scan the QR code on the nameplate at the bottom of the robot's back to download the remote control app.



Figure 6 QR Code

Install and open the app. First, select the robot's hotspot (usually starting with "MOGA") to connect.



Figure 7 Connect to Robot Body Wi-Fi

Enter the SN code (or scan to obtain it) based on the information displayed on the nameplate on the robot's back. Click "Next" after successful connection.

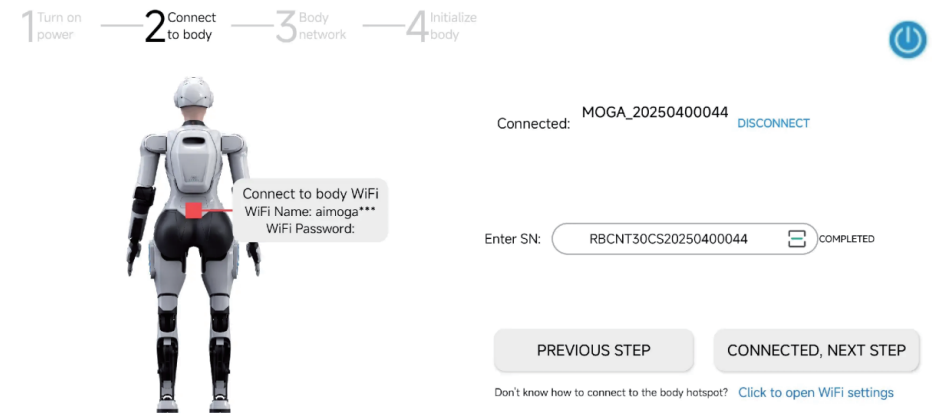


Figure 8 App Connecting to Robot Wi-Fi

You can choose "Online Mode" or "Offline Mode." To select "Online Mode," you need to connect to the Internet, then enter the password and click "Connect." After successful connection, click "Next" to enter "Online Mode" and control the robot. If you choose "Offline Mode," you can control the robot offline.

When the robot connects to the network, we will collect your router WiFi information for network configuration of the device. This information may involve your sensitive information.

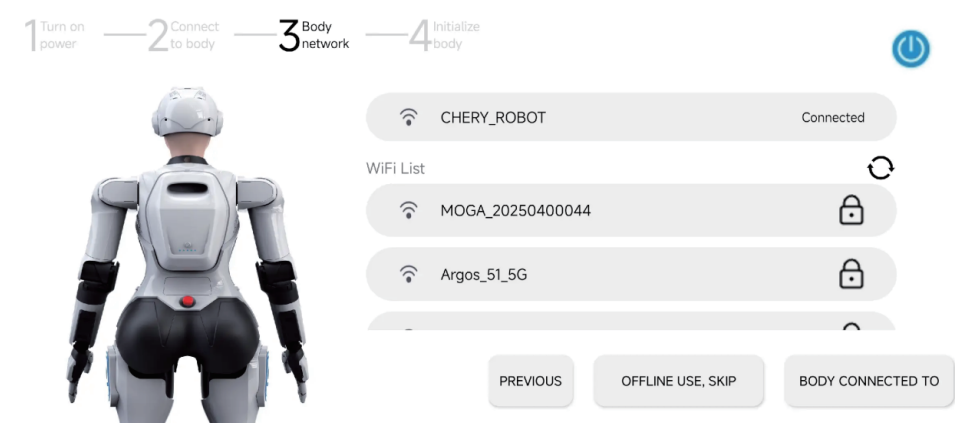


Figure 9 Robot Connecting to Internet

5.4.2 Posture Switching

After the robot is powered on and connected to the app, click "Open Joystick" at the top of the app interface. Click the "Position Control Switch Button" in the red box in Figure 10 to ensure the robot is currently in enhanced position control state.

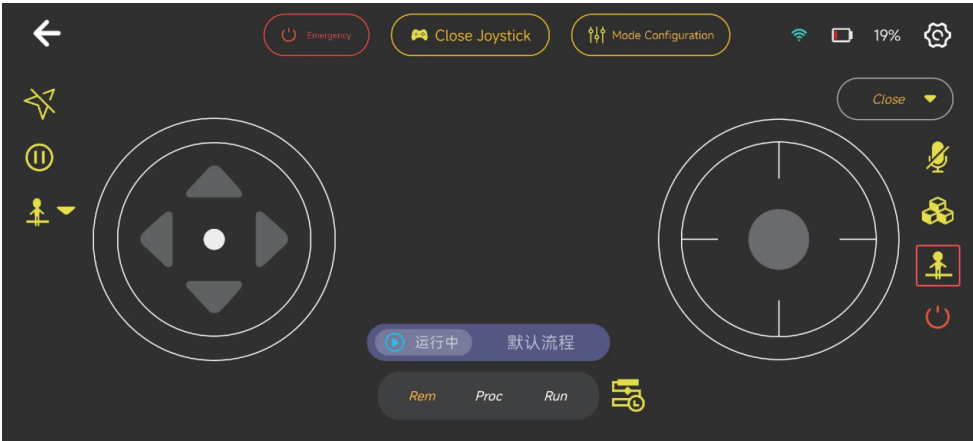


Figure 10 Position Control Button

Next, click the "Walking Posture Switch Button" in the red box on the left side of Figure 11 to switch to the enhanced walking state. At this time, the robot body will give a voice prompt accompanied by slight movement of its upper limbs. Then, you can remove the latches on both sides of the standby station and move the standby station away. Click the red button in the bottom right corner, and the robot will enter PASSIVE mode. In this mode, the robot's legs will go limp. Note: This state can only be switched to when the robot is supported by the standby station; otherwise, the robot will fall.

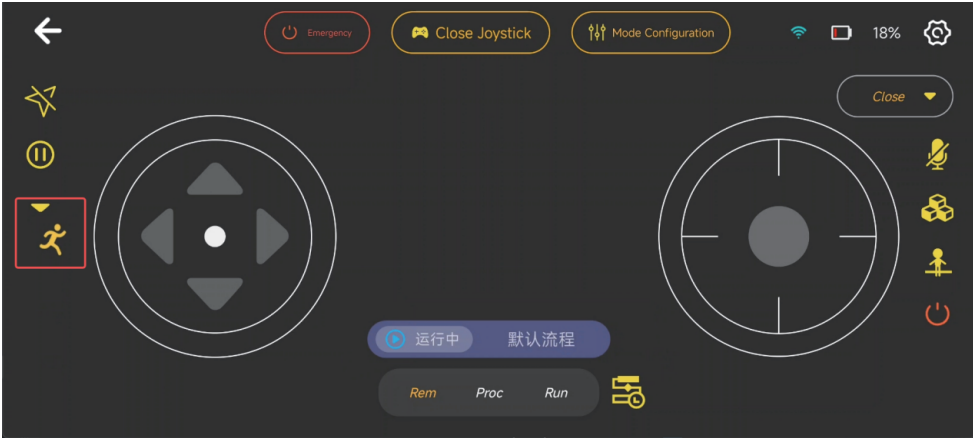


Figure 11 Walking Button

5.4.3 Remote Control Walking

The left joystick controls the robot's forward/backward movement and left/right strafing. The right joystick controls the robot's turning movement. Click "Close Joystick," and the joysticks on both ends of the controller will not be displayed.

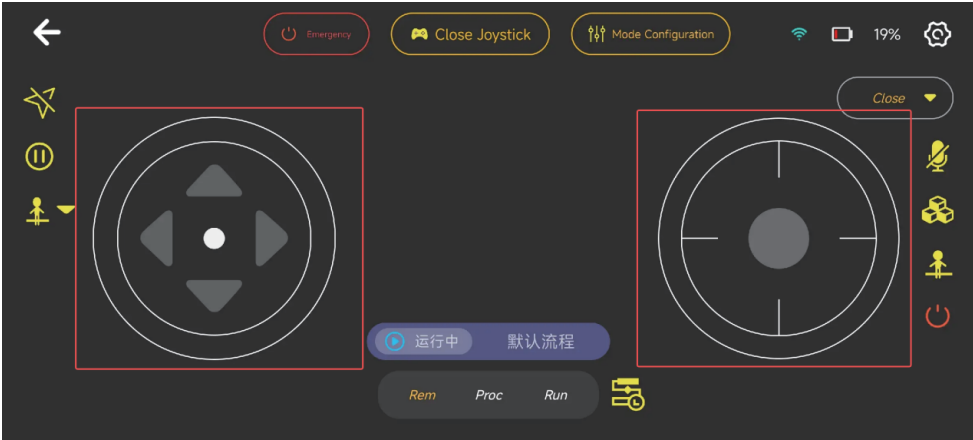


Figure 12 Virtual Joysticks

5.4.4 Using the Capability Library

Ensure the robot is in enhanced walking mode, then click the "Capability Library" button (red box in Figure 13). Users can select different independent actions and speech capsules based on the scenario (Figures 14 and 15). Capsules support manual dragging and sorting within categories. Click "Stop Action," and the robot will return to its original position from the current action position. The return keys on both sides correspond to left and right head turning.

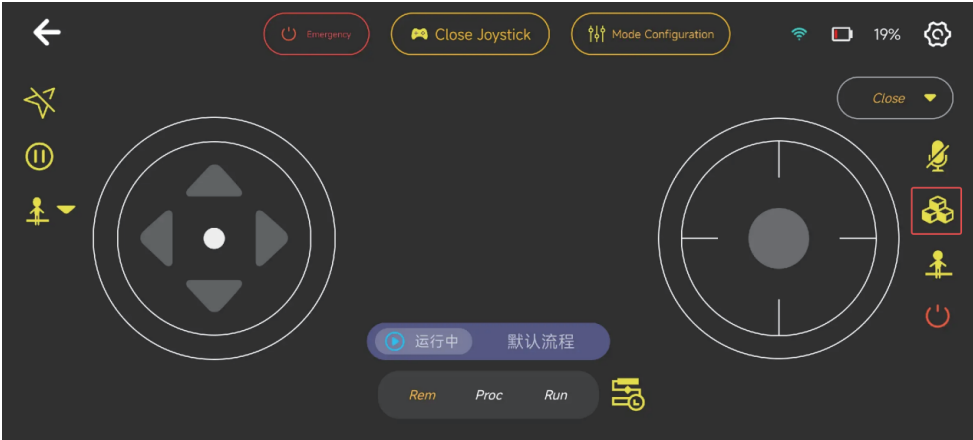


Figure 13 Capability Library Button

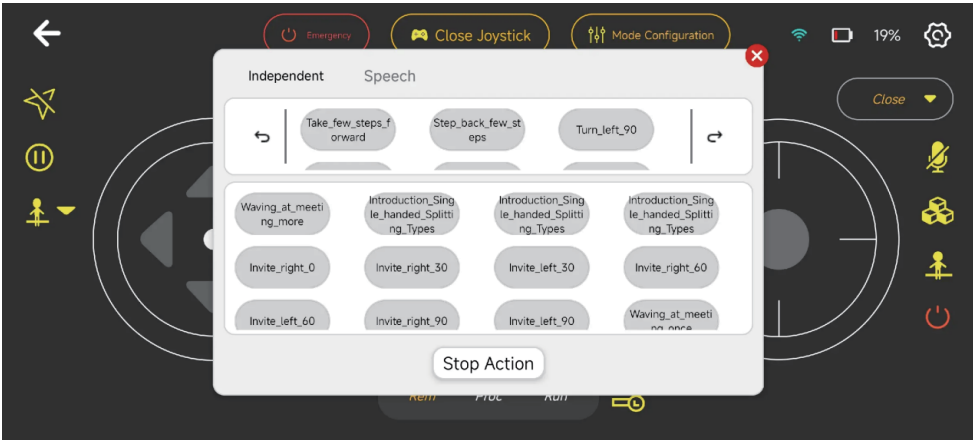


Figure 14 Independent Actions

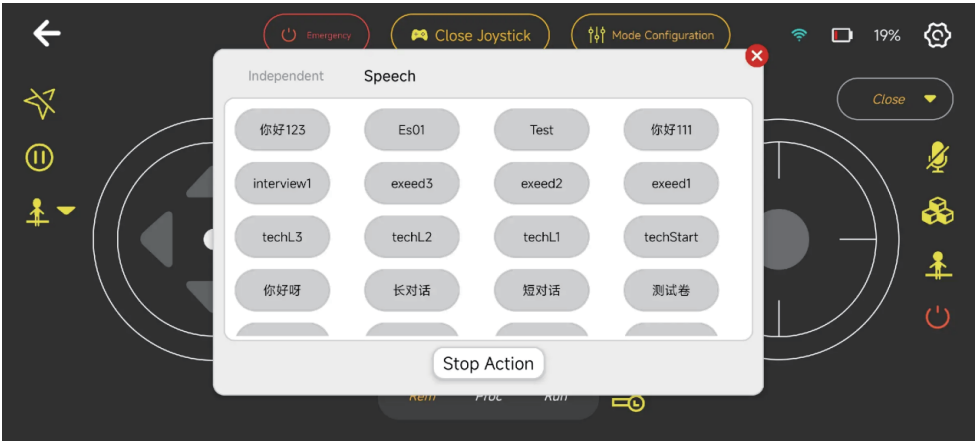


Figure 15 Speech

5.4.5 Activate Map (For creating new maps and editing maps, please refer to the app settings chapter)

Map activation requirements: Ensure the robot is stable in position to prevent mechanical risks such as foot pressure or falling; maintain a 2m distance between the robot and surrounding obstacles; there should be no stairs or significant elevation changes within the range; remotely control the robot to the original point where the map was built. In the app's "Settings" -> "Map Library," click the "Activate Map" button. After successful activation, it will be displayed as follows (Figure 16).

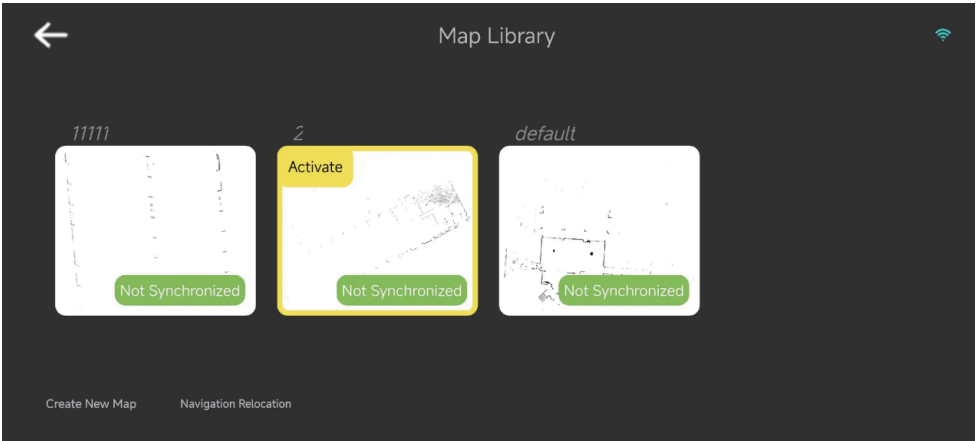


Figure 16 Map Activation Successful

If map activation fails, it needs to be reactivated. (Navigation Relocalization: When the robot's position on the map does not match its actual position, relocalization can be performed to correct the navigation positioning.)

5.4.6 Using Flows (For flow download, please refer to the app settings chapter; for flow editing, please refer to the cloud platform related chapters)

"Flow" Introduction: The robot can perform autonomous dialogue, navigation, and other functions according to the selected flow. Flows must be built on the cloud platform webpage. For specific instructions on how to build them, please refer to the subsequent cloud platform chapter. After completion, download them to the APP in "Configuration" - "Intelligent Flow Download."

Running a flow: Click "Flow Library" to display the flow list. Select the desired flow from the list and toggle the button to the right to activate the flow.

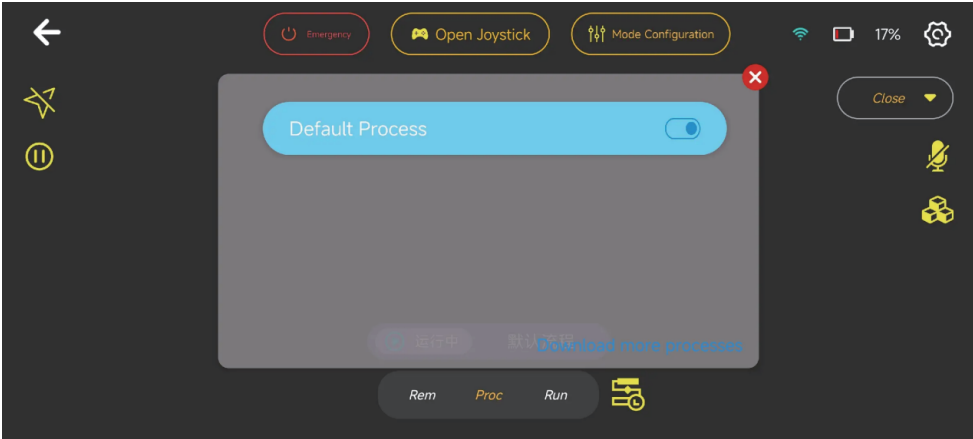


Figure 17 Running Flow Interface

5.4.7 Using Routes (For how to configure routes, please refer to the app settings chapter)

The "Run Route" function allows the robot to execute pre-defined walking routes after mapping is complete and the map is activated. Obstacle calibration and setting destination points can be done within the walking route (in Settings -> Route Management). In this interface, the robot executes fixed navigation trajectories and broadcasts content based on the selected route.

After successful map activation, ensure the robot is in enhanced walking state, click "Run Route," select the desired route, and click "Start Running." During route execution, you can click "Pause." After clicking, the robot will stop executing the route. Clicking "Continue Route" will execute the remaining route points. Clicking "Stop" will end the robot's route task and return to the control page. You can also open the joystick and remotely control the robot while it is following the route. After remote control, the robot will continue to execute the route.

Note: Route execution requires prior map activation. The initial point of the route can be determined as needed. After starting to run the route, the robot will walk from its current placement to the first designated point.

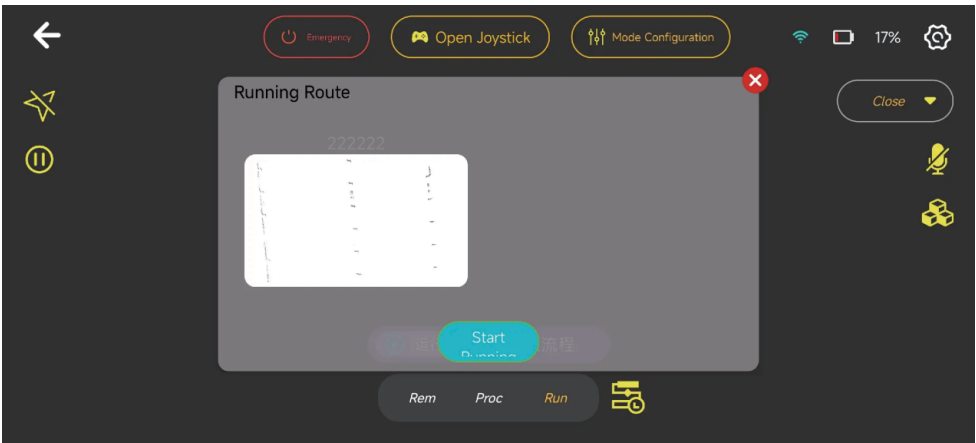


Figure 18 Start Route Interface

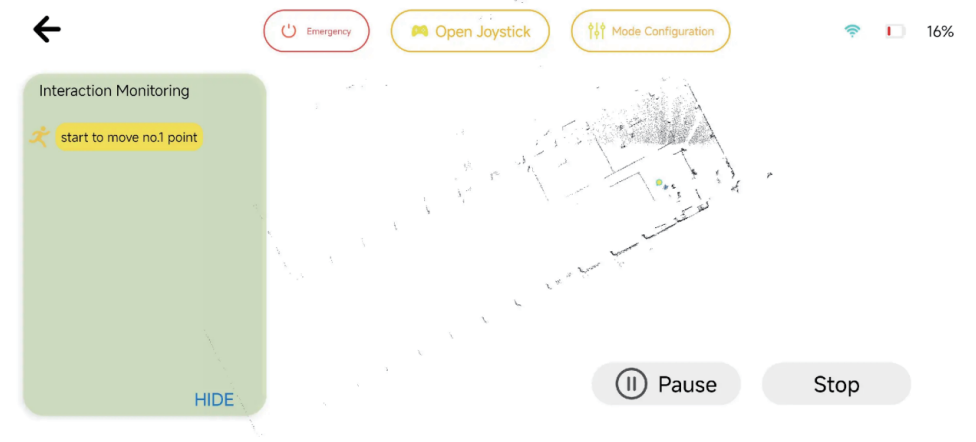


Figure 19 Route Running Interface

5.4.8 Mode Configuration

In the mode configuration interface, you can adjust the robot's speed, angular velocity, pure voice mode/autonomous action mode, and volume.

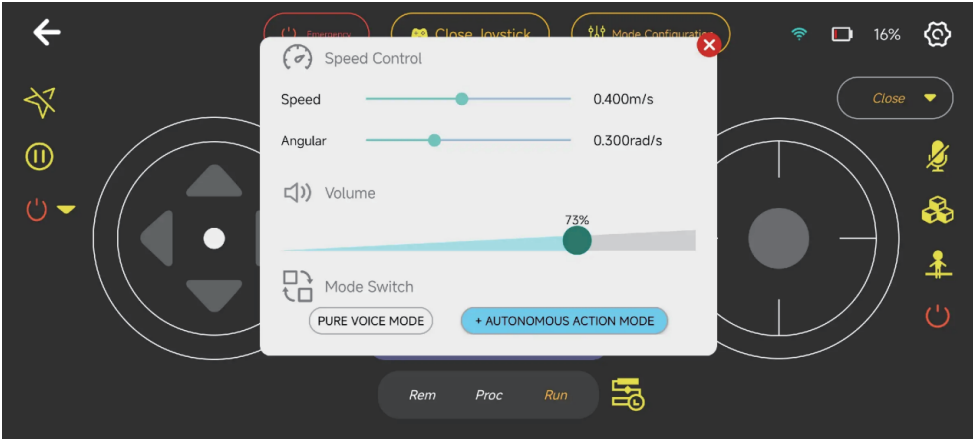


Figure 20 Mode Configuration Interface

Note: In pure voice mode, the robot only outputs spoken dialogue and no actions. In autonomous action mode, both parts can be output together.

5.4.9 Emergency Stop Function

In case of improper remote control operation or other sudden abnormal issues, click "Emergency Stop" (red box in Figure 21). The robot will shut down all tasks, including flows, navigation, brain, and action execution, and simultaneously mute the microphone. The upper limbs will freeze. (Note: The current emergency stop function is activated by clicking a button within the app, which has a different effect than the emergency stop controller.)

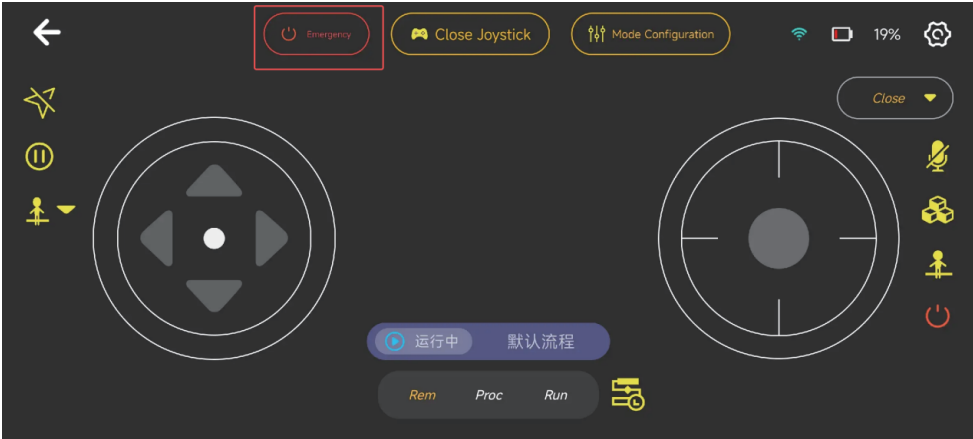


Figure 21 Emergency Stop

5.4.10 Interruption Function

Clicking the "Interrupt" button (red box in Figure 22) will stop the current broadcast, stop ASR, return upper limbs to home position, and return lower limbs to home position. After clicking "Continue," the microphone will open, and dialogue can resume.

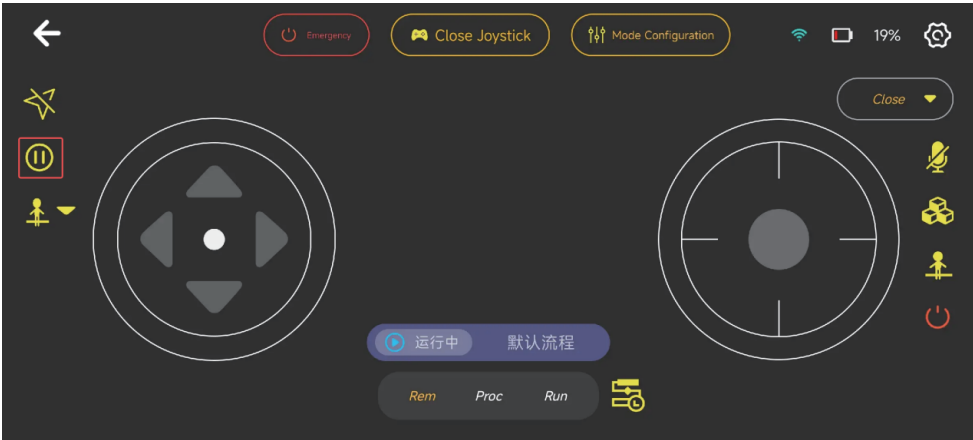


Figure 22 Interrupt

Clicking the "Interrupt Navigation Task" button (red box in Figure 23) will interrupt the robot's ongoing navigation task.

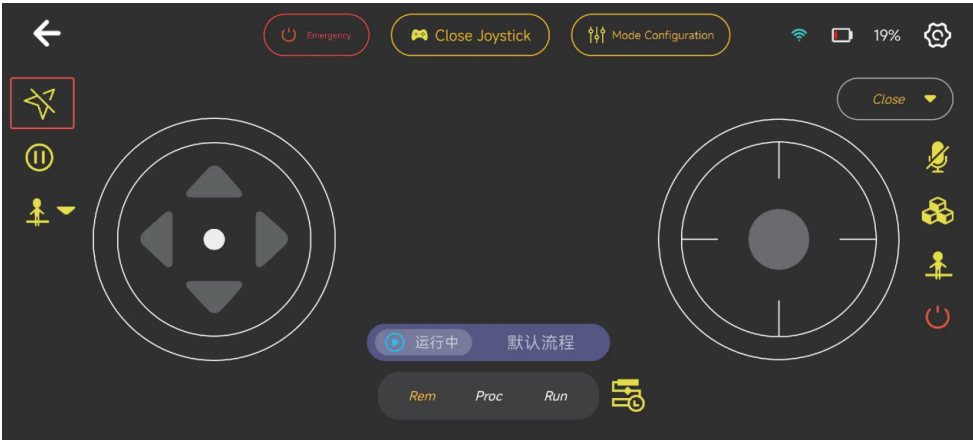


Figure 23 Interrupt Navigation Task Button

5.4.11 Turn Live On/Off

Controls turning on/off video and 2D map. Data collected by the camera is only used for transmission and display and will not be stored.

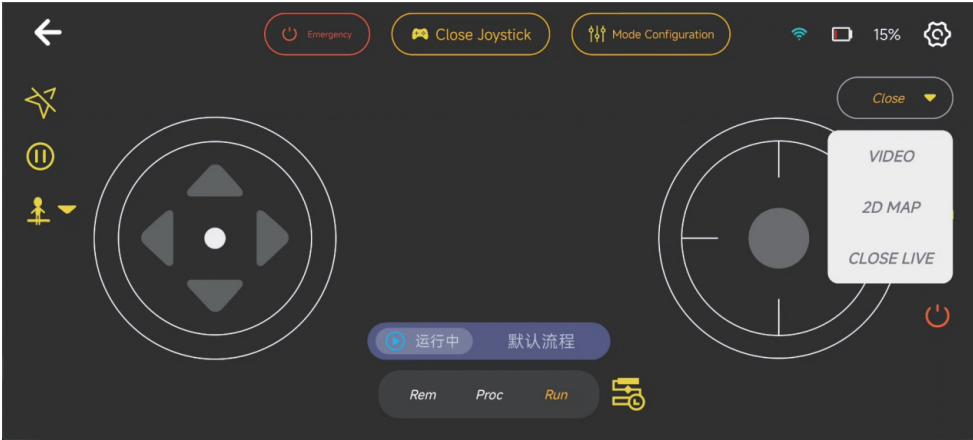


Figure 24 Live

5.4.12 Turn Microphone On/Off

Click the first microphone button in Figure 25 to turn off the robot's audio input. Click again to turn it on. When using the voice control function, we will collect and process your voice information. This data will be encrypted and processed with relevant protective measures before being transmitted or stored in the device's secure storage area.

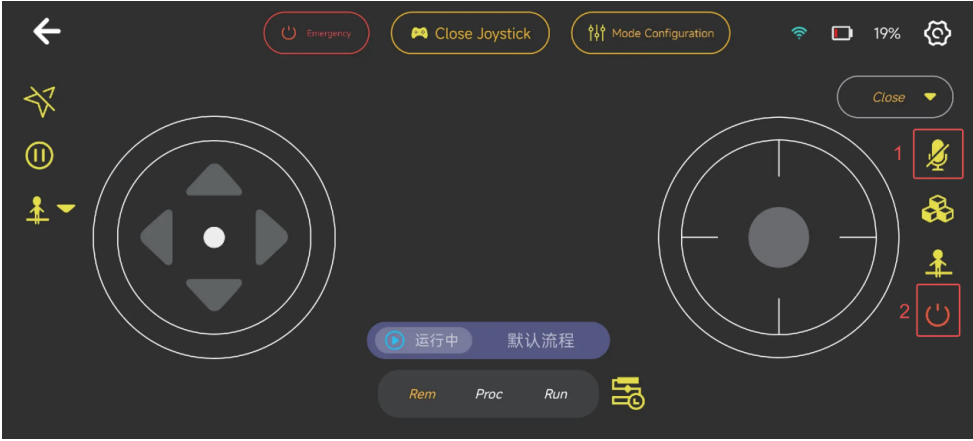


Figure 25 Microphone Switch

5.4.13 App Settings

1) Map Library:
New map requirements: Ensure the machine is stable in position to prevent mechanical risks such as foot pressure or falling; maintain a 2m distance between the machine and external obstacles, with no stairs or elevation changes within the range; ensure the robot is supported by a stand.
Remotely control the robot to a specific location (this location will later serve as the map origin/starting point). Open "New Map" in the app: Click "Configuration" -> "Map Library," then click the "New Map" button. Remotely control the robot to walk and build the map. After mapping is complete, use the eraser to clear special shadows on the map based on the mapping results. You can also add obstacle walls or enclosed fences based on area requirements. After completion, click "Save Map" to finish editing the map.



Figure 26 Mapping Interface

Edit Map: In the editing interface, you can add points, add obstacle walls, add enclosed fences, and use the eraser. After adding a point, you can enter the point name, such as "Chery 4S Store Tiggo 7 Model Display Point." In the map editing page, you can click "Save Markings" or "Clear Markings" at the bottom. If you need to undo a point position after it's added, you can click the button with the arrow pointing to the left. (Note: The points edited here are for the large model's flows and are different from the points in routes.)



Figure 27 Edit Map

2) Route Management:

Click "Configuration" -> "Route Management" -> "New Route." In the new route interface, the left side has zoom in, center, outline, single-finger drag, and two-finger zoom in/out. The bottom of the interface has icons for adding, deleting, undoing, redoing, and saving points.

Select Map: Select the activated map from the map library list. The map can be zoomed in/out for easy viewing.

Add Point: Click "+ Point," set the point name, point action, and speech task. After clicking "Confirm," the route point sequence will auto-increment, and the prominent long bar indicates the point direction.

Select: Single-click to select a point. The border turns blue-green when selected.

Delete: Click "Delete" to delete points. If no point is selected, points will be deleted in descending order by sequence number; if a point is selected, that point will be deleted first, followed by sequential deletion. If a point is deleted, the remaining points will be reordered, and subsequent ones will automatically shift down to fill the gap.

Edit Point: An already generated point can be long-pressed for editing. The edit point box includes name editing, autonomous actions or speech, and settings for time and action speech. There is one action button and one speech button. T in the edit point pop-up: Indicates how many seconds after reaching the point the action should start.

Undo: Undo added or deleted points and save the undone points.

Redo: Restore points that were undone (deleted or added).

Save: After clicking "Save," a "Please enter route name" box pops up. Enter the route name and save. Validation during saving: At least one point must exist.

3) Local Face Registration:

In "Configuration," click "Local Face Registration" to enter the registration interface. Click "New Face" and then import a photo or take a picture. Enter the corresponding face name, fill in the description, and select the priority. After filling in, click "Save" to save the face information. Click on the corresponding face photo to edit or delete the face information.

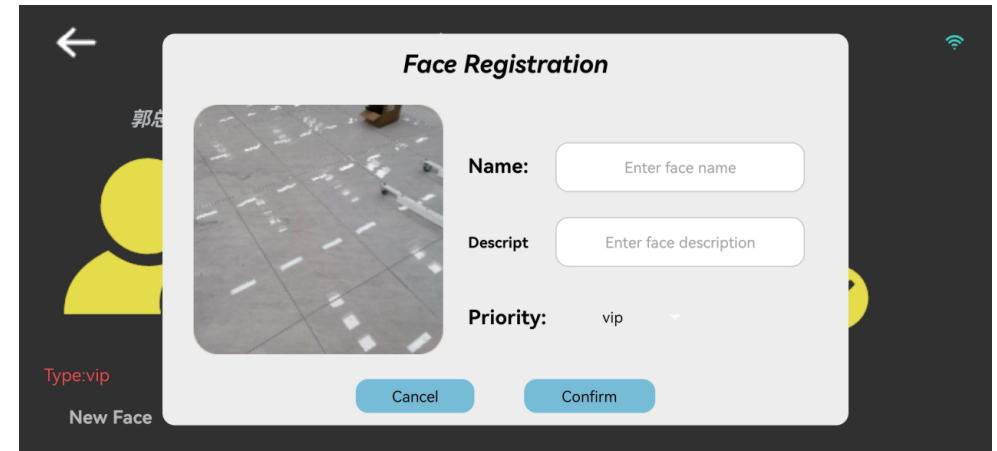


Figure 28 Face Registration Interface

4) Local Speech Management:

In "Configuration," click "Speech Management" to enter the local speech management interface. Click "New Speech," enter the speech title and broadcast body, then click "Generate Speech" to complete speech generation. Click the ellipsis icon in the upper right corner of the corresponding speech to edit, copy, play on robot, download audio, or delete the speech.

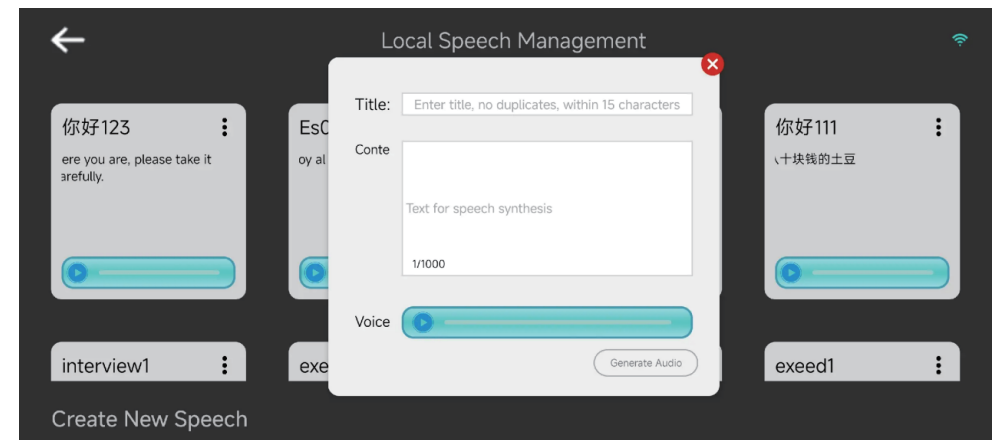


Figure 29 New Speech

5) Intelligent Flow Download:

In "Settings," click "Intelligent Flow Download" to view downloaded, not downloaded, and all flows. You can delete or download corresponding flows. Note: Only flows downloaded here can be used in the "Run Flow" interface. In "Flow Management," you can search for

corresponding flows by keywords. (Flows are edited and generated on the cloud platform)

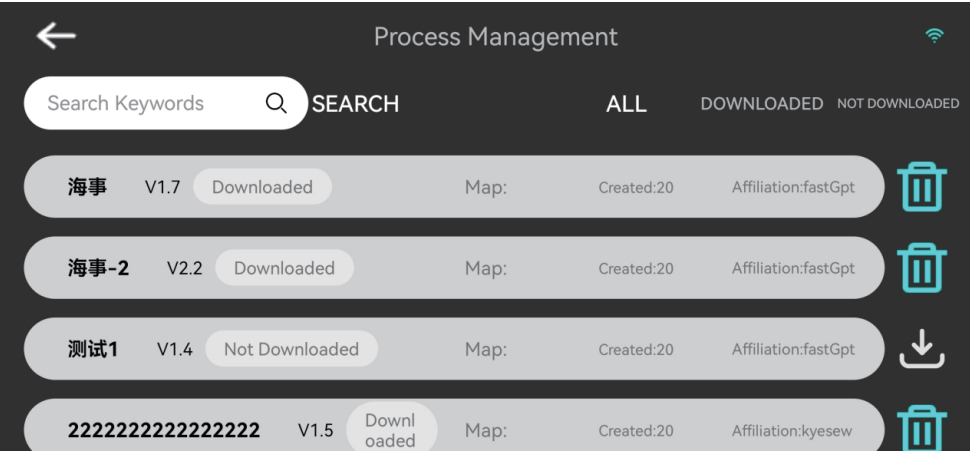


Figure 30 Flow Management Interface

6) Language:
In "Settings," click "Language" to switch between different languages. After successfully switching languages, the robot will announce the successful switch in the newly selected language.

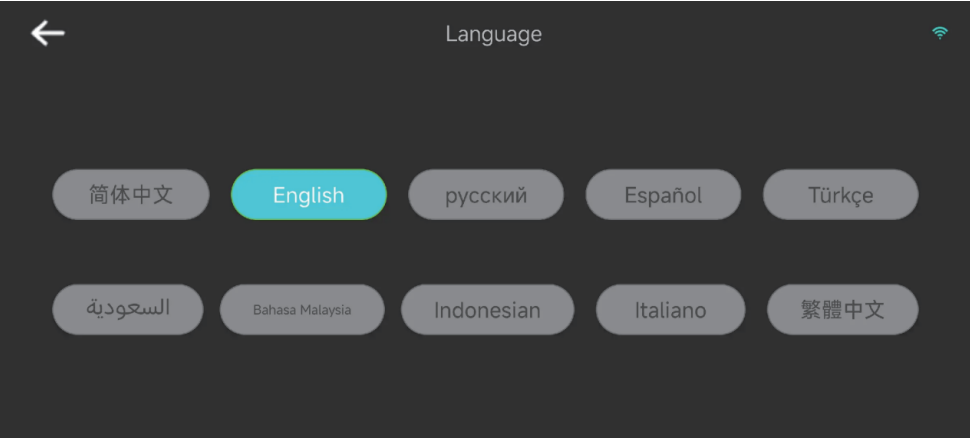


Figure 31 Language Interface

7) Body WiFi Settings:
In "Settings," click "Body WiFi Settings" to view the current Internet network status connected to the robot body.
(Note: If the required WiFi is not found in the list, you can refresh the list using the refresh button.)

8) About: You can view the software version numbers of the app, robot central control, and robot brain. You can view and revoke the user agreement and privacy policy. You can view and modify the use of system permissions. You can view robot manufacturer information.

5.5 Cloud Platform Introduction

Cloud Platform Address: <https://www.aimoga-robot.com/>

5.5.1 User Registration and Login

1) User Registration:
On the user login interface, click the "Register New Account" link, and follow the prompts to enter your email, nickname, password, etc. After confirming all information is correct, click the blue "Register New Account" button to submit the registration application. If you already have an account, you can click the "Back to Login" button to switch back to the user login interface. You can select Chinese or English interface in the upper right corner of the interface.

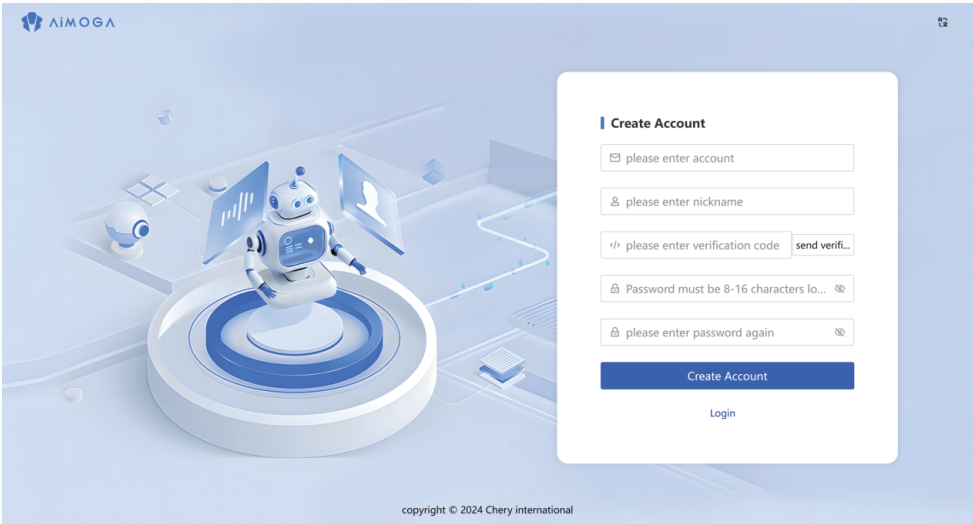


Figure 32 User Registration

2) User Login:
Enter your email account and password as required, then click the blue "Login" button to complete the login. If you forget your password, click the "Retrieve Password via Email" button to enter the user password retrieval interface.

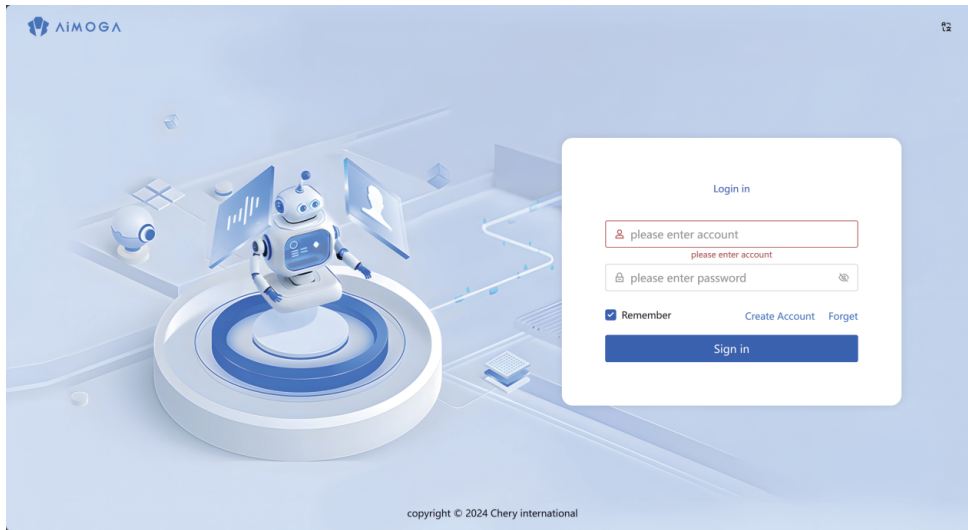


Figure 33 User Login

3) User Password Retrieval:

Enter the email address for which you need to retrieve the password, then enter the received verification code, and finally set a new password. Click the "Confirm" button to reset the password. You can then return to the login interface and log in again.

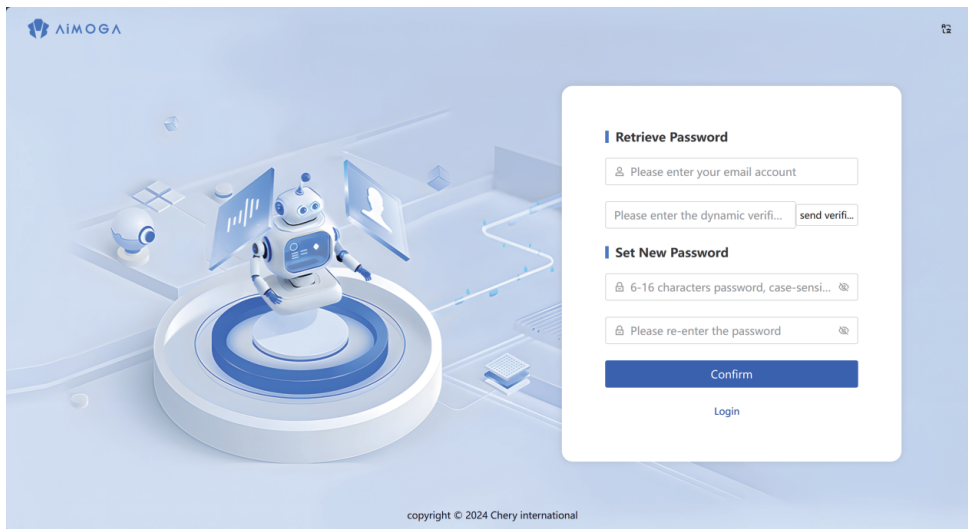


Figure 34 Retrieve Password

5.5.2 Personal Information Settings

1) Change Avatar:

After logging into the robot cloud platform, click your personal account in the upper right corner, then click "User Settings" -> "Change Avatar."

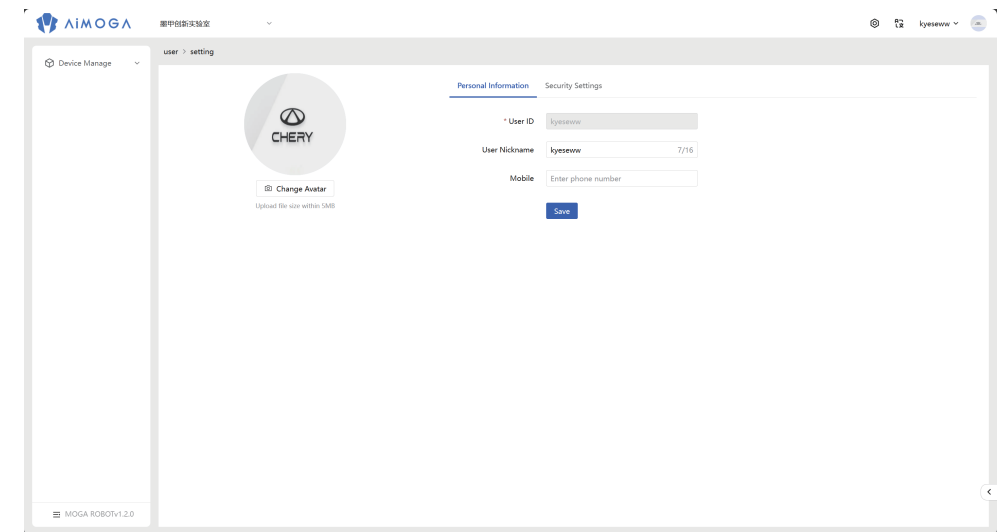


Figure 35 Change Avatar

2) Change Password:

Click "Security Settings" -> "Edit," enter your current password, then enter your new password, reconfirm the new password, and click "Save" to change the password.

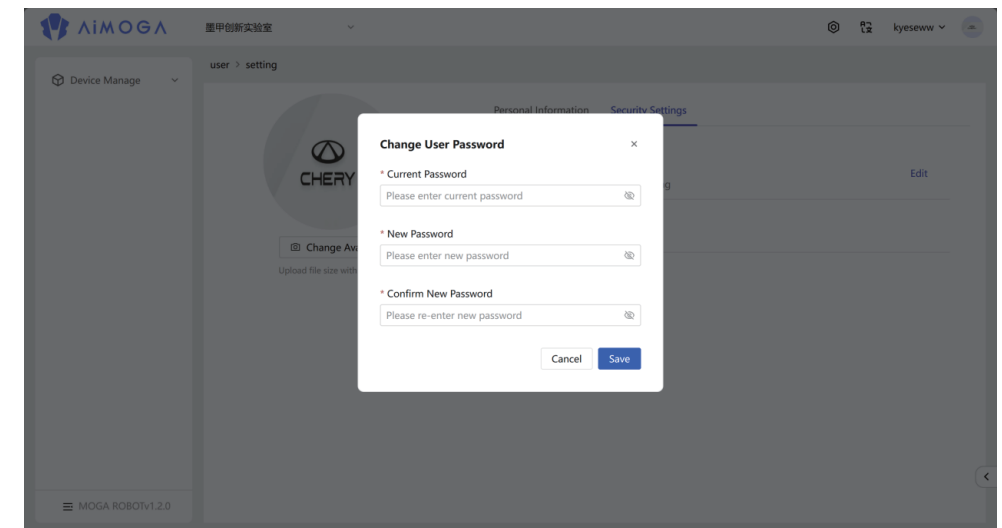


Figure 36 Change Password

5.5.3 Tenants, Accounts, and Robots

1) Create, Delete, Edit Tenants:

In the tenant management interface, you can view and manage existing tenants. Click "Add Tenant," enter the tenant name, upload an image, and click "Save" to create a tenant. Click the "..." icon in the lower right corner of the tenant to select "Delete Tenant" or "Edit Tenant." One user can create multiple tenants, and one tenant can add multiple robot bodies.

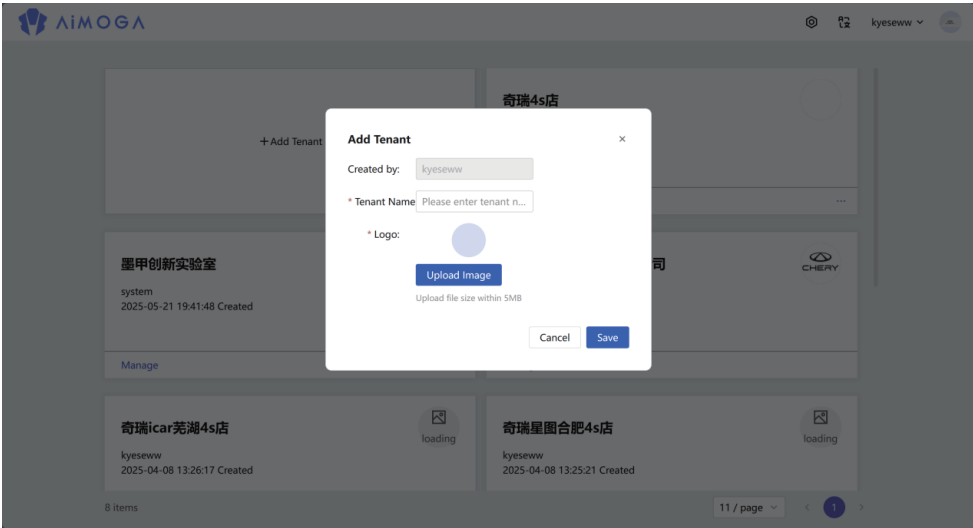


Figure 37 Add Tenant Interface

2) Robot Management:

This interface allows you to view the status of different robots under the current tenant. (Robot refers to the robot body.) In the robot management interface, you can edit, delete, and configure different robots. You can also view the online status of different robot bodies, including device name, device ID, device SN, WiFi name, WiFi password, IP address, and firmware version information.

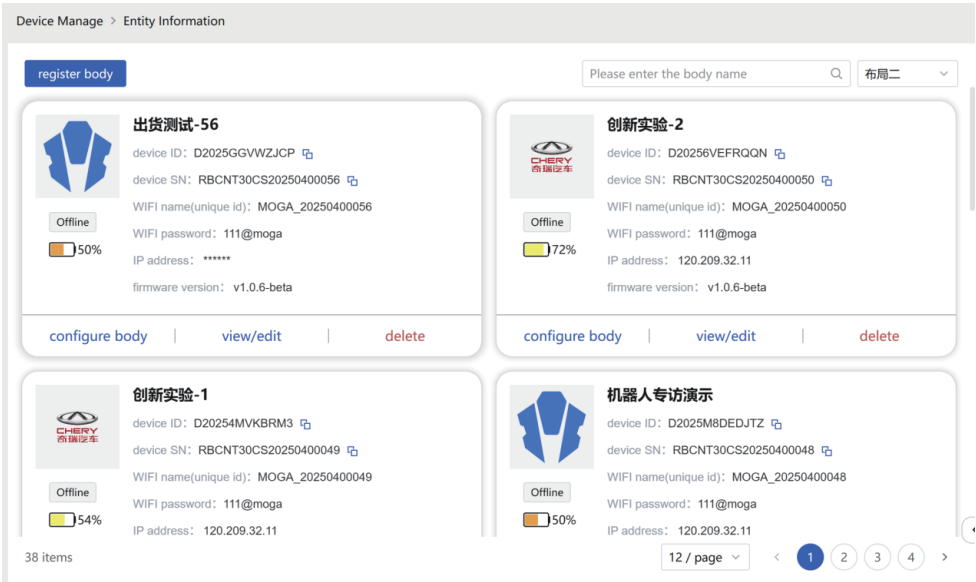


Figure 38 Robot Management Interface

3)Member Management:

On the "Robot Management" page, click the "Member Management" button. The page will jump to the "Member Management" interface, where you can view the tenant's members and administrators, and also add new administrators and members. Note: Only administrators can edit, delete, and add members.

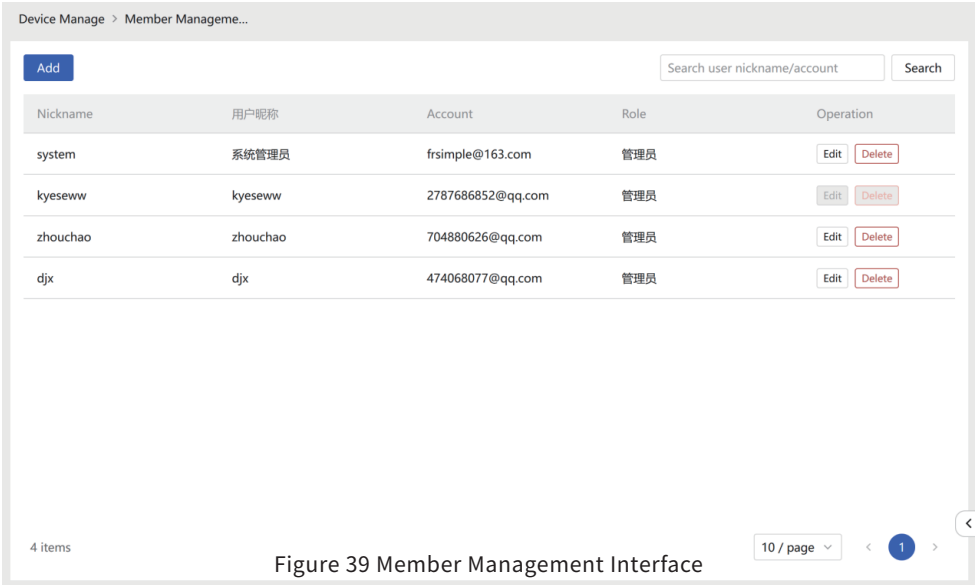


Figure 39 Member Management Interface

On the "Robot Management" interface, click "Register Robot" and enter the information as required. (Note: The device serial number is on the label under the flip cover of the power button on the back of the corresponding robot.)

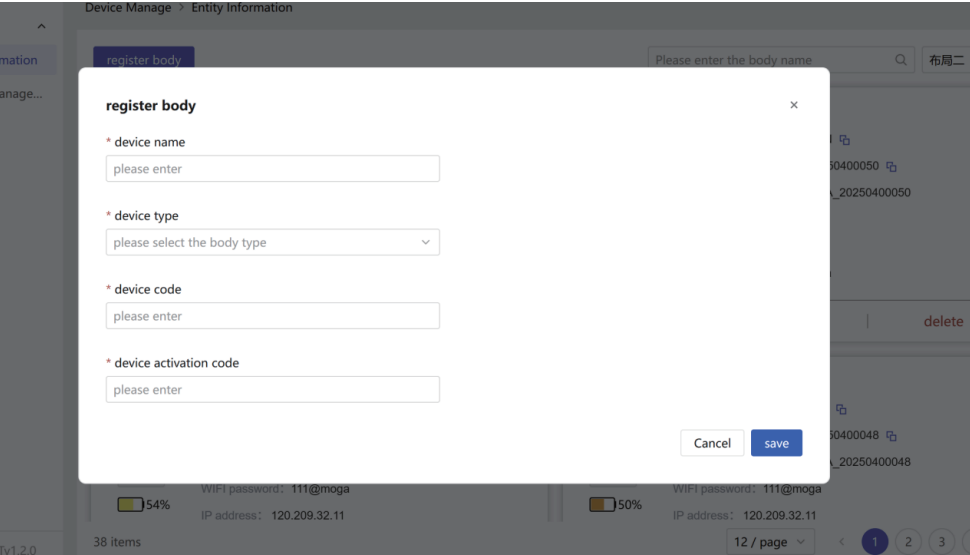


Figure 40 Register Robot Interface

4) Robot Configuration

On the "Robot Management" interface, select the corresponding robot and click "Configure Robot" to begin configuration.

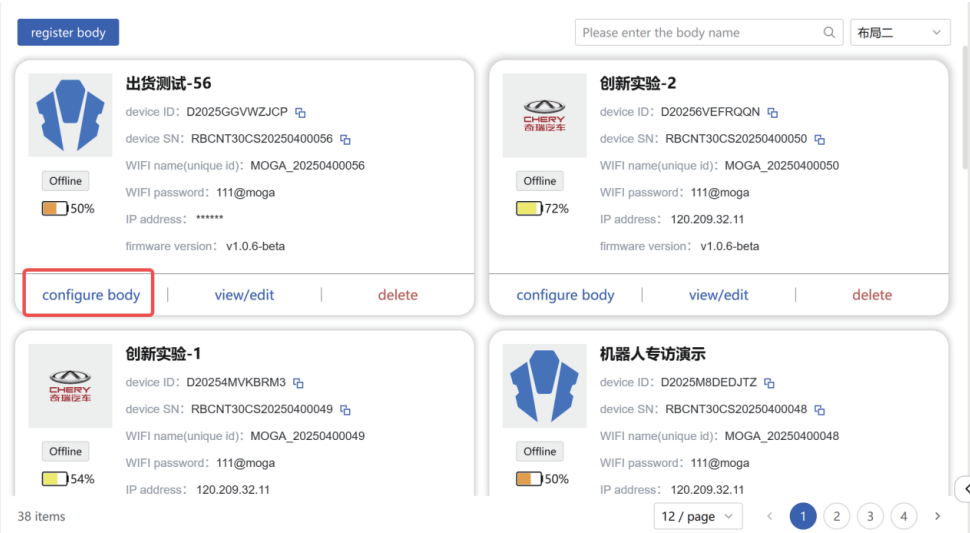


Figure 41 Configure Robot

1. Basic Configuration/Attribute Configuration:
Click "Basic Configuration" -> "Attribute Configuration" to view and edit the robot's name, type, image, recognition and synthesis voice, and robot capabilities for remarks.

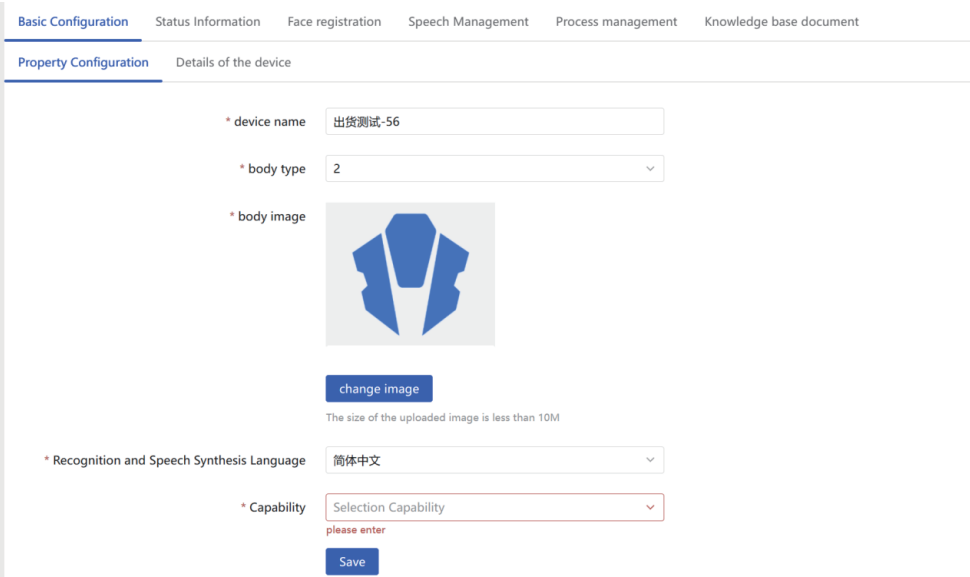


Figure 42 Robot Configuration Interface

2. Basic Configuration/Robot Information Details:
Click "Basic Configuration" -> "Robot Information Details" to view some basic information about the robot.

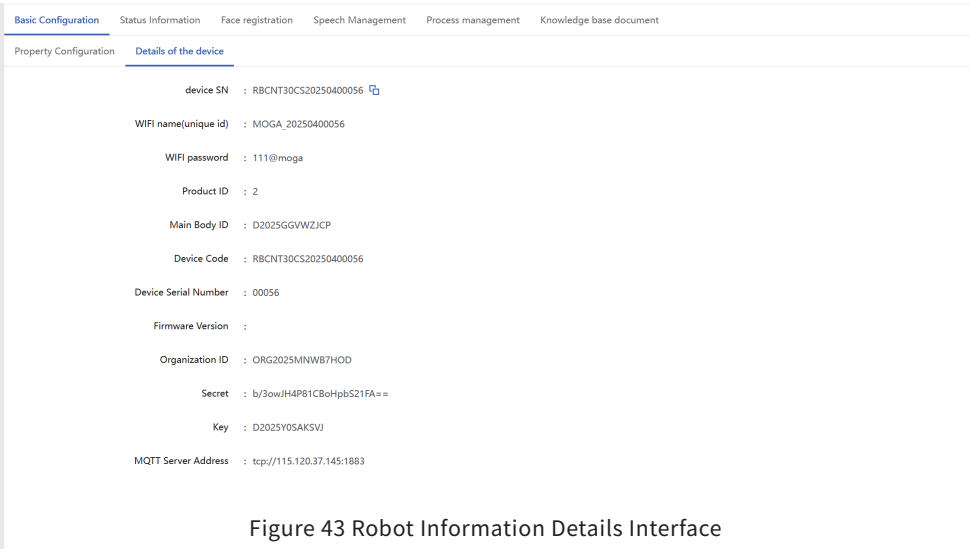


Figure 43 Robot Information Details Interface

3. Status Information:

In the robot configuration interface, select "Status Information" to view the robot's status information.

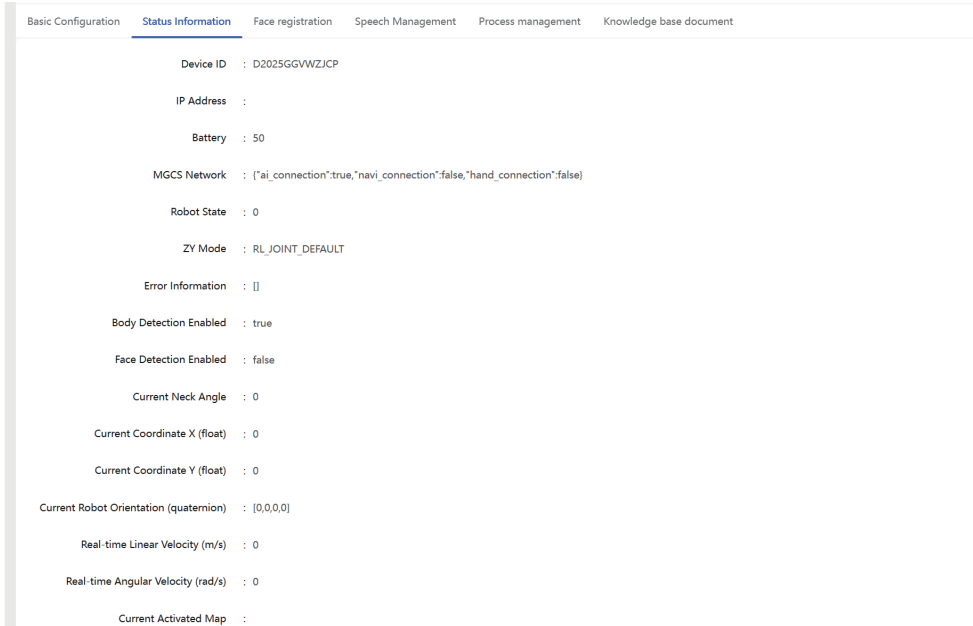


Figure 44 Status Information Interface

4. Face Registration:

In the robot configuration interface, click "Face Registration" to view already registered face information. (Note: Face information registered on the app can be displayed on the cloud platform, but cannot be edited on the cloud platform.) Face information cannot be registered on the cloud platform.

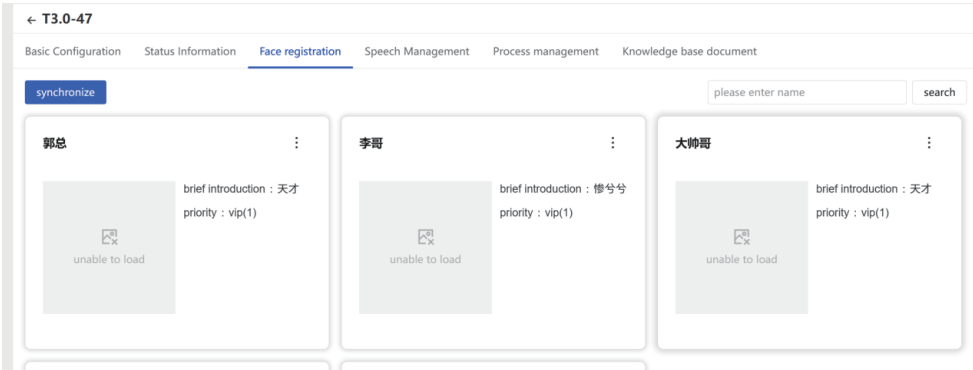


Figure 45 Face Registration Interface

5. Speech Management:

Click "Speech Management" to enter the management interface. You can import robot learning speech by creating new knowledge or knowledge packs (documents), and perform deletion and export operations for speech knowledge packs on this page. When "Flow Management," you can reference the speech configured here.

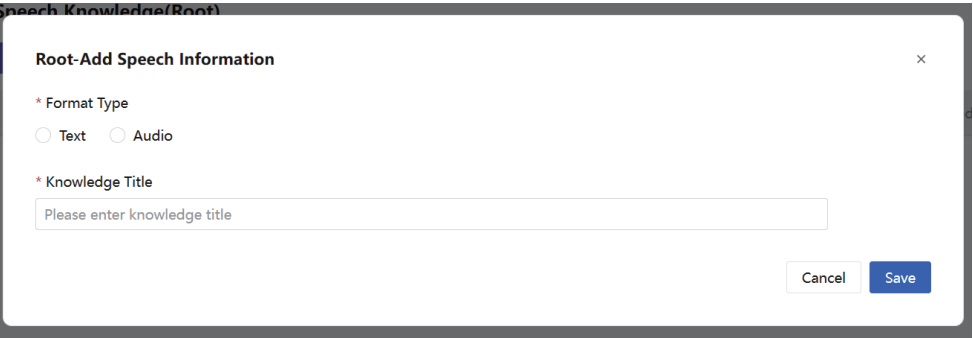


Figure 46 New Speech Interface

6. Flow Management:

In the robot's configuration interface, click "Flow Management" to start creating and editing flows. Click "Add New," enter the flow name, add remarks, and click "Save" to jump to the flow editing page.

This function is used to configure the interactive flows within the robot's operating process, which can be synchronized to the APP for download and use. Click "Cloud Platform Flows" -> "Add New," enter the flow name and remarks, then click "Save" to enter flow editing. Basic flow: Starting from the flow entry condition, you can drag and connect intents, knowledge bases, large language models, etc. You can also add HTTP requests after intent branches based on user needs, connect them to code termination, or directly connect intent branches to fixed action content broadcast nodes. Fixed action broadcast nodes can also be directly called after other output results. Write flows according to the above requirements to enable the robot to interact and respond to user inquiries.

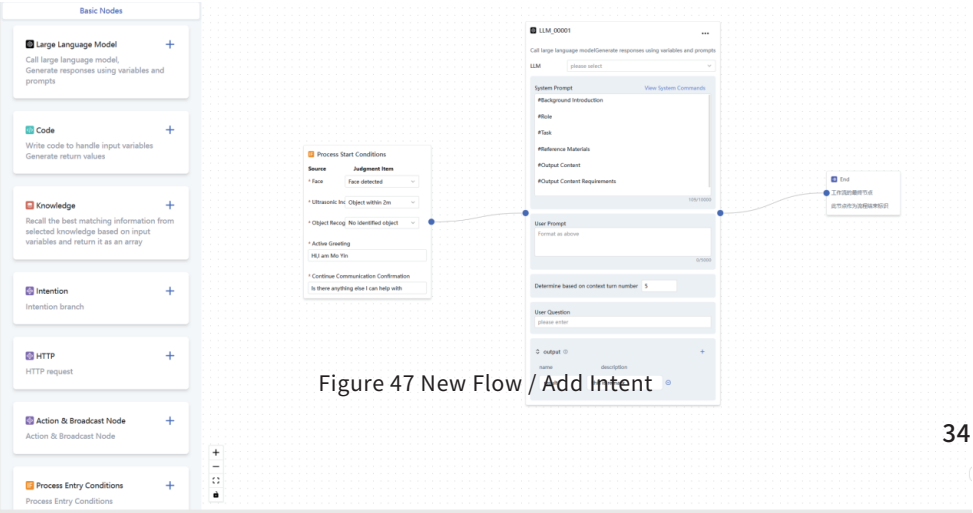


Figure 47 New Flow / Add Intent

Drag in an intent branch. Connect the flow start condition to the intent branch. From top to bottom, first select the model to use, then add a background introduction for the robot's application scenario, set the judgment context turns (0-10), and add intent branches (such as, but not limited to, greetings, model introductions, small talk, etc.).

HTTP Request: Connect intent to HTTP request, enter the request website.

Code Writing: Connect to HTTP request, write code to adjust the desired output content.

Knowledge Base Section: Drag in the knowledge base, connect intent branch information to the knowledge base, click to add previously written speech information as the robot's knowledge base, select the reference limit and minimum similarity, and enter input/output names.

Drag in the Large Language Model Section: Connect the knowledge base to the LLM, enter the corresponding Prompt, and the robot will respond according to the instructions.

Fixed Speech: After connecting an intent branch, you can enter the robot's response content and insert fixed speech; you can also add fixed speech after other LLM results and directly select to insert system variables to call the result.

7. Knowledge Base Documents:

The knowledge base directory supports creation, deletion, editing, and reordering. After creating a new directory, you can add knowledge base documents under it. You can view and download system-segmented knowledge base files.

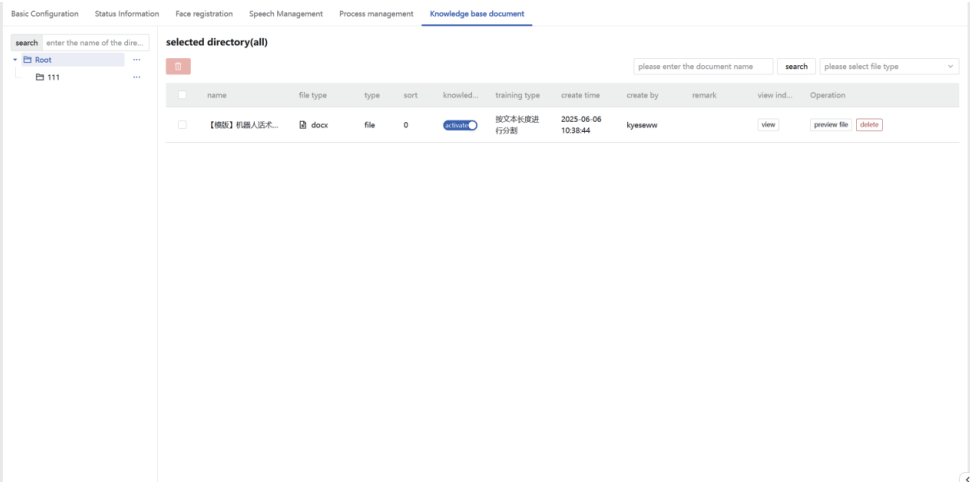


Figure 48 Knowledge Base

5.6 Indicator Light Reminders

Type	Definition
Upper Limbs Power On	Indicator lights above the waist illuminate blue
Lower Limbs Power On	Indicator lights in the lower limbs illuminate blue
Battery Below 25%	Chest indicator light: Red light flashes slowly
Remote Control App Disconnected	Head AiMOGA logo light: Solid red
Robot Enters Emergency Stop State	Head AiMOGA logo light: Red flashes rapidly
Any Machine Fault	Head AiMOGA logo light: Solid yellow
No Network Connection	Ear light: Red flashes slowly

5.7 Robot Action Library

5.7.1 Motion Capture Upper Limb Actions

The following actions can be triggered by the remote control app or configured through flows in the large model. After configuration and enabling the flow, you can say to the robot: "Let's take a photo," and the robot will perform the corresponding action.

No.	Chinese Name	code	Short Code
1	Hand Gesture while Speaking - Palms Up - Fast Version	Gestures_while_- speech_spread_hands_fast	GSS
2	Hand Gesture while Speaking - Hand Circling - Fast Version	Gestures_while_- speech_roll_hands_fast	GSR
3	Hand Gesture while Speaking - Self-Introduction - Fast Version	Gestures_while_speech_intro- duce_myself_fast	GSIM
4	Raise Hand to Invite - Right Side - Straight Ahead	Invite_right_0	IR0
5	Raise Hand to Invite - Right Side - 30°	Invite_right_30	IR30
6	Raise Hand to Invite - Left Side - 30°	Invite_left_30	IL30

No.	Chinese Name	code	Short Code
7	Raise Hand to Invite - Right Side - 30°	Invite_right_60	IR60
8	Raise Hand to Invite - Left Side - 30°	Invite_left_60	IL60
9	Raise Hand to Invite - Right Side - 30°	Invite_right_90	IR90
10	Raise Hand to Invite - Left Side - 30°	Invite_left_90	IL90
11	Raise Hand to Invite - Right Side Near - Straight Ahead	Invite_right_near_0	IRN0
12	Single Hand Wave	Waving_at_meeting_once	WO
13	Multiple Hand Waves	Waving_at_meeting_more	WM
14	Fist Bump	Fist_bump	FB
15	Single Hand Categorized Introduction (Fruit Cutting Version)	Introduction_Single_handed_Splitting_Types	IST
16	Two-Hand Calm Action (Hands shaking up and down)	Calm_down_both_hands	CDBH
17	No Approaching	No_Approaching	NA
18	Photo V-sign	Group_photo_Bye	GB
19	Extended Photo V-sign	Group_photo_Bye_longer	GBL
20	Handshake Medium Height (Shaking up and down) Pause	Shaking_hands_pause_medium	SH
21	Single Hand Fist Raise	Power_fist_up	OPFU
22	Two Hands Fist Raise	Double_power_fist_up	DPFU
23	Single Thumbs Up	Thumbs_up	OTU
24	Two Thumbs Up	Double_Thumbs_up	DTU
25	Single Hand Summon	One_handed_summoning	OHS
26	Two Hands Summon	Double_handed_summoning	DHS

No.	Chinese Name	code	Short Code
27	Single Hand Mimicking Phone Call by Ear	Earring_phone_call	EPC
28	Stretching	Stretch	STR
29	Arm Wave Display	Wave_swing_arm	WSA
30	Head Rotation Coordinated with Two Hands for Photo	Taking_photos_with_hands	TPWH
31	Music Conductor	Musical_director	MD
32	Virtual Driving	Virtual_driving	VD
33	Simulated Gear Shifting	Simulate_gear_shifting	SGS
34	Good Luck Transfer	Good_luck_transmission	GLT
35	Single Hand Gently Fanning Face to Dissipate Heat	One_handed_fan	OHF
36	Two Hands Gently Fanning Face to Dissipate Heat	Double_handed_fan	DHF
37	Single Hand Circling in Front of Chest and Pointing	Circle_Click	CC
38	Single Index Finger Pointing to Sky	One_handed_finger_on_the_sky	OHFS
39	Simulated Flying	Simulated_Flight	SF
40	Simulated Boxing	Simulate_Boxing	SB
41	Taking Notes	Note_Taking	NT
42	Speech Gesture	Speech_gestures	SG
43	Drawing a Semicircle	Draw_a_semicircle	DS
44	Beckoning Cat	Lucky_Cat	LC
45	Curious	Seeking	SK
46	Listening	Focused_listening	FL
47	Binoculars	Virtual_telescope	VT
48	Amplified Shout	Loudspeake_shouting	LS
49	Torso Rotation	Turn_one's_waist	TW

No.	Chinese Name	code	Short Code
50	Single Hand Blocking Light from Eyes	Block_light	BL
51	Cupped Hand Salute	Greeting_Salute	GS
52	Wake Up	Waking_up	WU
53	Dacne11	DacneA	DacA
54	C	DacneB	DacB
55	D	DacneC	DacC



Figure 49 Voice-Triggered Actions Configured in Large Model

5.7.2 Non-Motion Capture Actions

The following actions can be triggered by the remote control app or configured through flows in the large model. After configuration, you can say to the robot: "Take a few steps forward." The robot will perform the corresponding action.

Attention! Before issuing action commands involving robot movement, you must ensure the safety of the surrounding environment!

No.	Chinese Name	code	Short Code
1	Walk a few steps forward	Take_few_steps_forward	TFSF
2	Walk a few steps backward	Step_back_few_steps	SBFS
3	Turn left 90°	Turn_left_90	TL90
4	Turn right 90°	Turn_right_90	TR90

No.	Chinese Name	code	Short Code
5	Head turn left 20°	Head_turn_left_20	HTL20
6	Head straight	Head_straight	HS
7	Head turn right 20°	Head_turn_right_20	HTR20
8	Head turn left 45°	Head_turn_left_45	HTL45
9	Head turn right 45°	Head_turn_right_45	HTR45
10	Stop walking	Stop_walking	STOPW
11	Head turn left X°	Head_turn_left_X_max_45	HTLX
12	Head turn right X°	Head_turn_right_X_max_45	HTRX
13	Stop current action/task	Stop_current_action/task	STOPCAT

6. Precautions

6.1 Environmental Requirements

- (1) Due to the significant kinetic energy generated when this product moves, it should only be used indoors. Please ensure no one or other objects are within a 2-meter radius of the robot's center point.
- (2) The main skeleton of this product is made of metal, which is relatively hard and prone to scratching hard surfaces (glass, stone, floor, etc.) and surrounding environmental objects. Whether before, during, or after use, please observe the surrounding environment carefully to avoid unnecessary injury to yourself or surrounding objects, people, and small animals.
- (3) When using indoors, please choose a surface covered with protective materials such as rubber mats or carpets.
- (4) It is not recommended to use this product on uneven surfaces, steep slopes, muddy ground, loose materials, gravel roads, slippery surfaces, ice, puddles, complex grass, etc., as it may cause danger and damage the robot.
- (5) This product is not waterproof. Do not use it outdoors. Do not immerse the body in water. Do not use strong water jets or high-pressure hoses to clean the body. Avoid water entering the charging port or lithium battery, otherwise there is a risk of fire or explosion.
- (6) Do not power on this product after it has been exposed to rain or submerged in water, as this may cause permanent damage. If this occurs, please contact after-sales service personnel immediately.
- (7) Please do not use this product in environments with poor communication signals or strong electromagnetic interference. Building walls, rocks, and trees can all interfere with sensors and communication signals, so please use this product in open, clear areas.
- (8) Using this product near strong electromagnetic interference sources may affect its control. Electromagnetic interference sources include, but are not limited to: numerous

Wi-Fi hotspots, numerous routers, high-voltage lines, high-voltage substations, mobile phone base stations, and television broadcasting signal towers.

(9) Do not place this product in fire or heaters. Do not use or place this product near heat sources, such as direct sunlight or inside a hot car, near fire, or next to a heating furnace, as this may cause battery overheating, fire, functional failure, or reduced lifespan.

(10) When remotely controlling or voice-triggering the robot to walk and perform actions, please confirm that there are no obstacles (such as people, pets, objects, etc.) within a 2m diameter of the robot, and confirm that the space where the robot is located can withstand certain heavy object pressure and considerable noise. When performing remote control and voice-triggered robot walking and actions, it is recommended to use it within an isolation fence. Try to avoid using remote control and voice-triggered robot walking and actions when the battery level is below 25%.

6.2 Usage Instructions

(1) Please check and ensure that all joints of this product are free from foreign objects affecting them, that the wire harnesses are undamaged, and that the joints and appearance are normal and without damage.

(2) Please check and ensure that the surfaces of the neck and waist cameras are clean. When using, avoid scratching the lens with hard objects. If the camera surface is dirty, wipe it clean immediately with a dry, soft cloth.

(3) When placing this product, ensure the robot is in a suspended state on the standby station.

(4) Do not allow this product to walk on sharp or excessively bumpy surfaces. Do not drag this product on the ground, as it may cause damage to the bottom of the body or the foot soles.

(5) When using, keep it within line of sight, maintain a sufficient safe distance, and keep away from obstacles, crowds, and any other objects that could be damaged by collision.

(6) This product supports walking on slopes up to a maximum of 5 degrees. However, we strongly recommend using it on flat ground. Do not attempt risky operations when encountering steep slopes, uneven ground, or other dangerous terrain.

(7) When using the robot with a battery level below 25%, this product may not have enough power to perform actions. Please stop using it as soon as possible and recharge it before further use to avoid dangerous situations.

(8) Do not insert your hands into the gaps or crevices between the joints of this product to avoid pinching or bumping.

(9) During use or shortly after stopping use, avoid body parts touching the moving parts of this product to prevent pinching or bumping injuries.

(10) During use or shortly after stopping use, avoid body parts touching the metal surfaces of the joint motors to prevent burns.

(11) Do not use this product continuously for long periods, as this may lead to motor overheating. After prolonged use, it should be stopped for a period before resuming use.

(12) Never use charging equipment that does not meet specifications to charge this product. (Note: Only charger model UY600L-W546080 can be used for charging.)

(13) After use, be sure to power off immediately.

(14) When using the battery, ensure there are no foreign objects at the connection point between the body and the battery. (Note: Only batteries of model ZY4815D can be used. Using other battery models may result in no power supply and pose significant risks.)

6.3 Battery and Charging

(1) Disassembly of the battery is prohibited.

(2) It is prohibited to draw out battery terminals by any means for use.

(3) It is prohibited to clean the battery or power adapter with alcohol or other flammable agents.

(4) If battery leakage occurs and electrolyte gets into the eyes, do not rub. Immediately rinse eyes with clean water and seek medical attention.

(5) If this product emits an unusual smell, smokes, deforms, or exhibits any abnormalities during charging, immediately unplug the power adapter.

(6) The power adapter may become hot during charging; do not touch it for extended periods to avoid burns.

(7) Do not use damaged batteries or power adapters.

(8) Use only official power adapters. Do not use non-official power adapters, as this may lead to lithium battery leakage, heating, fire, or explosion.

(9) Do not charge the battery for more than 24 hours; overcharging will shorten battery life.

(10) Do not place this product in fire or heaters. Do not use or place this product near heat sources, such as direct sunlight or inside a hot car, near fire, or next to a heating furnace, as this may cause battery overheating, fire, functional failure, or reduced lifespan.

6.4 Maintenance and Transportation

(1) Please inspect the external condition of all parts of this product to ensure they are in good order and have not been damaged by external impact. If in doubt, please contact after-sales service personnel.

(2) Before cleaning and maintenance, please ensure the device is off and the power button on the robot's back is also turned off.

(3) Regularly clean dust from the surfaces of the product's camera, sensors, and other components.

(4) Regularly vacuum dust from inside the heat dissipation vents.

(5) Unused robots and standby stations should be stored in a cool, dry place. Do not place them in direct sunlight or humid environments, and ensure they are on a stable surface.

(6) When storing, place this product in a dry, cool environment, away from direct sunlight, fire sources, and strong electromagnetic fields. For storage exceeding three months, the recommended storage temperature range is 20°C to 25°C.

(7) The theoretical storage temperature is -20 ° C to 60 ° C. Never store this product in an environment where the room temperature exceeds 60°C or falls below -20°C.

(8) Long-term idleness of this product will affect its battery performance. Furthermore, deep discharge of the battery will permanently render it unusable.

(9) The battery will automatically stop charging when full. It is recommended to disconnect

it after it is fully charged.

(10) During storage, the battery level of this product should be checked regularly. If the battery level falls below 20%, the battery should be recharged. It is recommended to cycle the battery (charge and discharge) at least once every 3 months to maintain battery activity.

(11) After powering on, do not lift or carry this product. If transportation is required, handle it after powering off.

(12) When transporting, please handle with care.

6.5 Legal Regulations

(1) It is prohibited to use this product for any illegal or inappropriate activities (including but not limited to espionage, military operations, and illegal investigation work).

(2) It is prohibited to use this product to infringe upon the rights of others.

(3) It is prohibited to use this product for any activity that infringes upon the privacy of others. When using this product for filming, respect others' privacy rights. It is prohibited to use this product for any surveillance activities, including but not limited to surveillance of individuals, groups, activities, performances, exhibitions, or buildings.

(4) It is prohibited to control this product near or enter sensitive building facilities, including but not limited to border lines, power stations, substations, prisons, main traffic arteries, railway and highway transportation hubs, government buildings, and military base facilities.

(5) Users have an obligation to be aware of and comply with the laws and regulations of their local area. If the laws and regulations of the user's region have other relevant provisions for the use of robots, cameras, and other electronic products, users must use this product in accordance with those provisions.

7. Frequently Asked Questions

Issue	Solution
WiFi connection failed	Incorrect password: Enter the correct password as prompted on the APP interface.
	Incorrect network name: Ensure the currently entered network name matches the router configuration.
What if I use voice commands but get no response?	Please use voice control in a quiet environment.
Why does the device suddenly fall during operation?	In abnormal situations such as motor overload, overheating, or other conditions that could cause damage to this product, the motion controller will automatically enter protection mode and stop movement to protect the product from damage. It is recommended to first check if the product has been affected by external force or objects. After ensuring it is in good condition, re-hang the product on the standby station, restart the device, and then use it again. If you cannot confirm whether the product can continue to be used, please contact after-sales
What causes the product not to power on?	service personnel. First, ensure the battery is charged. Or try replacing the battery. If the issue cannot be resolved, please contact after-sales service personnel.
Unable to execute flows or routes	Confirm that the map is activated and the network is connected. If it still cannot be used, please contact after-sales service personnel.

8. Product Warranty Information

8.1 Warranty Period

Part Name	Total Usage Time for Warranty	Warranty Period
Whole Machine	3100h	One year

Note: The warranty mileage and the total warranty years of the whole machine, whichever comes first, shall prevail.

8.2 Warranty Coverage

After purchasing this product, the warranty effective date begins from the date you sign for the goods. Please be sure to keep your warranty card. Products or components that meet the warranty period and warranty content will receive free after-sales service. If the product you purchased is out of warranty, you can still obtain our assistance by purchasing additional services.

Depending on the specific situation, we will provide corresponding repairs or component replacements for the product you purchased.

Type	Warranty Content	Warranty Period
Robot Body	Body and Components	1 year
Main Components	Motors	1 year
Accessories	Battery, Standby Station (including power adapter)	1 year

8.3 Non-Warranty Clauses

- ① Damage caused by human factors or quality issues not inherent to the product itself.
- ② Unauthorized modification, disassembly, opening of the casing, etc.
- ③ Damage caused by incorrect installation, use, or operation not in accordance with the instructions in the manual.
- ④ Damage caused by use exceeding the safe load capacity.
- ⑤ Damage caused by the self-installation of third-party products.
- ⑥ Malfunctions or damages caused by force majeure.

Tip: Consumable parts such as the casing and paw pads, as well as accessories like the transport box, are not covered by the warranty. If needed, please consult after-sales support.

9. After-Sales Service & Technical Support

Technical Support Email: support@aimoga-robot.com

Warranty Card

User Name		Contact Number	
Purchase Date		Model	

Repair Record

Repair Request Date	Fault and Inspection Details Record	Repair Date	Repair Technician

11. APP Download Address

<https://download.aimoga-robot.com/app/robot>

12. WEEE Symbol and Explanation

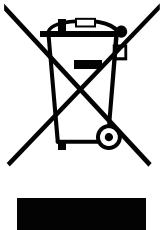


Figure 50 WEEE

The symbol with the crossed-out wheeled bin means that electrical and electronic equipment must not be disposed of with household waste. Consumers are legally obliged to collect electrical and electronic equipment separately from unsorted municipal waste at the end of their useful life. In this way, an environmentally friendly and resource-saving recycling is ensured. Batteries and accumulators that are not firmly enclosed by the electrical or electronic device and can be removed without being destroyed must be separated from the device before it is handed over to a collection point and taken to a designated disposal facility. The same applies to lamps that can be removed from the device without destroying them. Owners of electrical and electronic devices from private households can hand them in at

the collection points of the public waste disposal authorities or at the collection points set up by the manufacturers or distributors within the meaning of the ElektroG. The disposal of old devices is free of charge. Dealers with a sales area of at least 400m² are obliged to take back electrical and electronic equipment. The same applies to grocers with a total sales area of at least 800 m², provided they offer electrical and electronic equipment permanently or at least several times a year. Distance sellers with a storage area of at least 400 m² for electrical and electronic equipment or a total storage area of at least 800 m² are also obliged to take them back. In general, distributors are obliged to ensure that old devices are taken back free of charge by providing suitable return options within a reasonable distance. Consumers have the option of handing in an old device free of charge to a distributor who is obliged to take it back if they purchase a new device of the same value with essentially the same function. This possibility also exists for deliveries to a private household. In distance selling, the possibility of free collection when purchasing a new device is limited to heat exchangers, display devices and large devices that have at least one outer edge with a length of more than 50 cm. The distributor must ask the consumer when concluding the purchase contract whether they intend to return the goods. Apart from that, consumers can hand in up to three old devices of a device type to a distributor's collection point free of charge, without this being linked to the purchase of a new device. However, the edge lengths of the respective devices must not exceed 25 cm.

Batteries and rechargeable batteries must not be disposed of with household waste. Consumers are legally obliged to collect batteries and accumulators separately. Batteries and accumulators can be handed in free of charge at a collection point in your municipality/district or in shops so that they can be disposed of in an environmentally friendly manner and valuable raw materials can be recovered. Improper disposal can result in toxic substances being released into the environment, which can have harmful effects on people, animals and plants. Batteries and accumulators contained in electrical devices must be disposed of separately from them if possible. Dispose of batteries and accumulators only when they are discharged. Whenever possible, use rechargeable batteries instead of disposable batteries. Before disposing of batteries and accumulators containing lithium, tape off the poles to prevent an external short circuit. A short circuit can result in a fire or explosion.

Batteries with an increased pollutant content are also marked with the following symbols:
Cd = cadmium, Hg = mercury, Pb = lead

13. Slope limitation

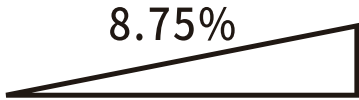


Figure 51 Slope limitation

This product is limited to use within a 5 ° slope. (equal to 8.75% on product label)

14. CE compliance declaration

Machinery Directive (2006/42/EC)
RED Directive (2014/53/EU)
RoHS Directive (2011/65/EU)
WEEE Directive (2012/19/EU)

15. RED statement

Frequency Range(RF):
Wi-Fi(2.4G): 2400-2483.5 MHz (TX/RX);

Wi-Fi (5G):
Band 1: 5150-5250 MHz(TX/RX);
Band 4: 5725-5850 MHz (TX/RX);

Lora:
868-868.6MHz
863-865MHz

2.4GWi-Fi:<20dBm(max.e.i.r.p)
5.1GWi-Fi:<23dBm(max.e.i.r.p)
5.8GWi-Fi:<14dBm(max.e.i.r.p)

868-868.6MHz:<14dBm(max.e.r.p)
863-865MHz:<14dBm(max.e.r.p)

Radiation Exposure Statement: This equipment complies with radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

Restrictions in the 5GHz band:
According to 10(10) of Directive 2014/53/EU, the packaging shows that this radio equipment will be subject to some restrictions when placed on the market in Belgium (BE), Bulgaria (BG), Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Ireland (IE), Greece (EL), Spain (ES), France (FR), Croatia (HR), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (LU), Hungary (HU), Malta (MT), Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI), Slovakia (SK), Finland (FI), Sweden (SE), Norway (NO), the United Kingdom in respect of Northern Ireland (UK(NI)) ,Iceland (IS), Liechtenstein (LI), Switzerland (CH) and Turkiye (TR).

The WLAN function for this device is restricted to indoor or vehicle use only in the 5.15 to 5.250 GHz frequency range.