



PUDU CC1 Series

SC5.23.27.2604272214

Introduction



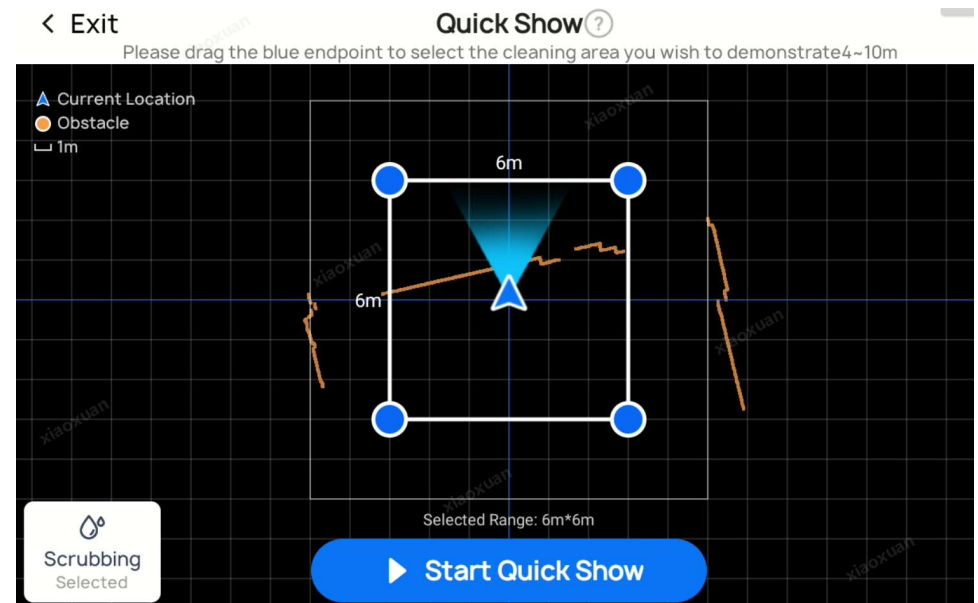
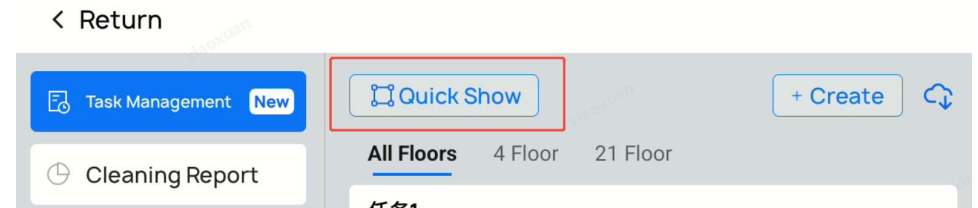
PUDU CC1 SC5.23.27.2604272214

Release Note:

Type	No.	Description	Page
New Feature	1	[New Feature] Quick Show - Quick Demonstration Mode: No mapping is required; the robot can immediately begin cleaning by setting the cleaning range, quickly demonstrating its cleaning capabilities.	3
	2	[New Feature] Automatic Edge Cleaning V1.0 & Edge Cleaning Speed Optimization: Supports automatic edge-keeping path generation based on the map, enabling the robot to perform zero-edge-keeping cleaning automatically, no teaching path needed. It also improves the robot's cleaning speed during edge-keeping and allows for individual setting of the edge-keeping speed.	4
	3	[New Feature] Quick On-site Test: After mapping is complete, quick run tests are supported on the current map. The robot will quickly move along the edges of all obstacles on the map, running the entire map to verify if there are any areas prone to congestion or other risks. During rapid testing, you can directly edit the map, add virtual walls or restricted areas, and continue testing after editing.	5
	4	[New Feature] Alternating Passage Zone V2.0: The new configuration option for the congestion clearance strategy in the alternating passage zone allows you to specify that when a robot encounters a congestion in the alternating passage zone that exceeds a specified time, it should first go to the parking area and wait for a period of time, regardless of what the obstacle is, in order to make way for AGVs, forklifts or other mobile devices that cannot communicate and avoid congestion.	6
	5	[New Feature] Cleaning Report Added Task Information Recording: The cleaning report now includes time records for key task nodes, including task pause, task resumption, skipping cleaning areas, and returning to charging/watering. This provides a more accurate understanding of the robot's behavior and time consumption during tasks.	7
	6	[New Feature] Robot Strict Maintenance Mode: A strict maintenance mode has been added, which is off by default. When enabled, the robot cannot automatically start a task after working continuously for a period of time and being prompted to perform cleaning and maintenance. The task can only start normally after the self-cleaning process is completed or manual confirmation that cleaning and maintenance have been completed.	8
	7	[New Feature] Customizable obstacle avoidance voice: Supports customizing the voice content played by the robot when avoiding obstacles;	9
	8	[Experience Optimization] Added Supported Languages: Latvian, Estonian, Greek;	10
	9	[Experience Optimization] Maintenance Point Optimization: Even if no maintenance point is set, the robot will attempt to travel to the waypoint or workstation to avoid blocking the way.	10
	10	[Experience Optimization] Self-cleaning workstation heating water tank optimization: The heating and heat preservation logic of the water tank has been optimized.	10
	11	[Experience Optimization] Japanese text optimization	10
	12	[BUG Fix] Resolved an issue of water overflow in a few cases with the self-cleaning workstation	10

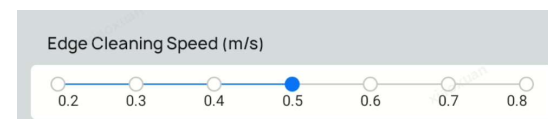
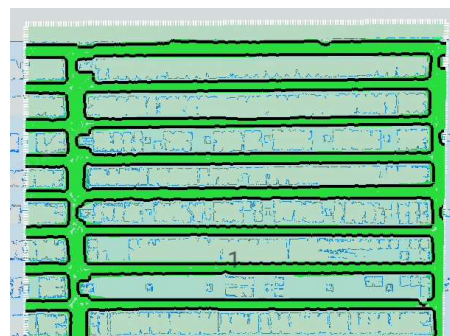
1. Quick Show – Quick Demonstration Mode

Function description	No mapping is required; the robot can immediately begin cleaning by setting the cleaning range, quickly demonstrating its cleaning capabilities.
User value	<p>When demonstrating a robot's functionality to a new customer for the first time, a series of operations are typically required, including map creation, editing, saving, and task creation, before the robot can begin cleaning and demonstrating its capabilities—a very cumbersome process.</p> <p>With the Quick Show feature, the robot can perform a rapid demonstration even without a map. Simply select the area to be cleaned and the cleaning mode, and the demonstration can begin immediately. The robot will automatically plan a temporary area to clean, detecting and avoiding obstacles during the process. This skips the tedious steps of map creation and task editing, allowing for a quick demonstration of the robot's cleaning functions.</p> <p>Furthermore, if you need the robot to temporarily clean an area, you can also skip adding a cleaning area and creating a task, using Quick Show to quickly start a temporary cleaning task.</p>
Applicable scenarios	<p>① When visiting a client for the first time, the robot's functions can be quickly demonstrated without creating a map;</p> <p>② When a robot is needed to temporarily clean an area, cleaning can be started quickly using Quick without editing a map or creating a new task;</p>
Note	<p>1. In Quick Show mode, the selectable cleaning area is a rectangle with sides ranging from 4 to 10 meters;</p> <p>2. Quick Show mode only supports loop-shaped cleaning paths;</p> <p>3. Choose an open area whenever possible, and ensure the edges of the cleaning area are parallel to the surrounding walls for the best demonstration effect;</p>



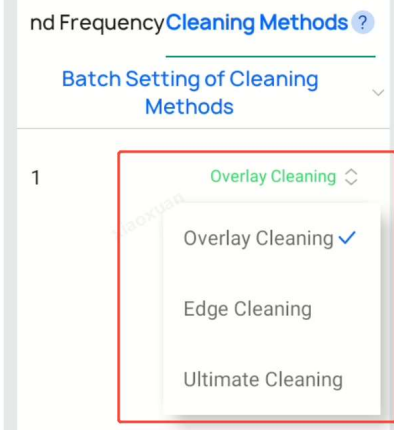
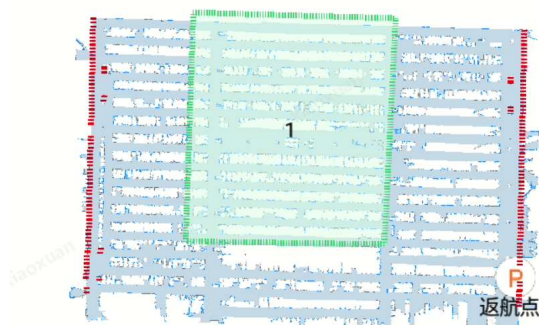
2. Automatic Edge Cleaning V1.0 & Edge Cleaning Speed Optimization

Function description	Supports automatic edge-keeping path generation based on the map, enabling the robot to perform zero-edge-keeping cleaning automatically, no teaching path needed. It also improves the robot's cleaning speed during edge-keeping and allows for individual setting of the edge-keeping speed.
User value	<p>Automatic Edge-Following Cleaning V1.0 automatically generates edge-following cleaning paths within a cleaning area based on map and obstacle edges when adding a cleaning zone, eliminating the need for manual path addition via teaching. As long as an automatically generated edge-following path exists within the cleaning area, the cleaning mode for that area can be adjusted in the task editor:</p> <p>Coverage Cleaning – The robot performs regular coverage cleaning within the area; Edge-Following Cleaning – The robot performs only edge-following cleaning within the area based on the automatic edge-following path; Ultimate Cleaning – The robot performs edge-following and coverage cleaning sequentially within the area;</p> <p>Additionally, to improve edge-following cleaning efficiency, the edge-following cleaning speed can now be set independently: 0.2~0.8 m/s.</p>
Applicable scenarios	All scenarios requiring zero-edge cleaning, including wall edges, supermarket shelves, etc.
Note	<ol style="list-style-type: none"> Automatic edge paths are automatically generated within a cleaning area when it is added, displayed as black lines. To generate automatic edge paths for an existing map, you need to enter the map editing interface, click the corresponding cleaning area, and save it again (no need to change the range or path type). If an incorrect automatic edge path is generated due to temporary obstacles, it can be deleted by selecting it in the map editing interface. In the task editing interface, when the cleaning mode of the cleaning area is set to "Extreme Cleaning" or "Edge Cleaning Only," the robot will clean along the automatic edge-following path. Edge cleaning paths can still be added manually using the teach pendant method. The edge cleaning speed can be adjusted separately in the settings and tasks.



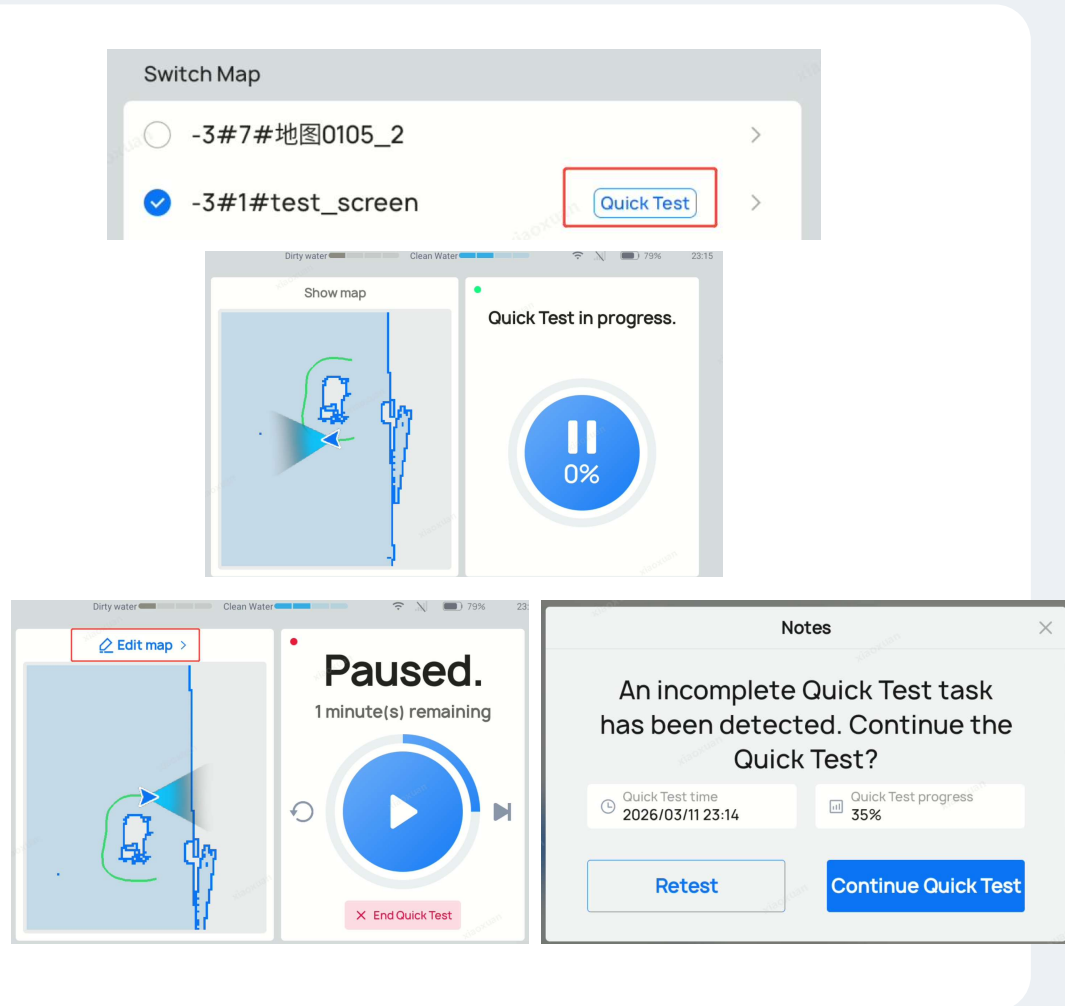
Select cleaning range、cleaning times and order

Confirm



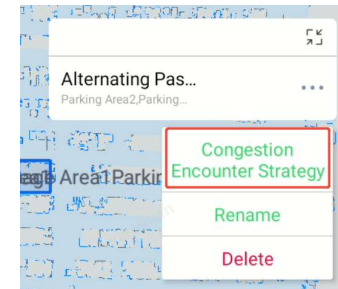
3. Quick On-site Test

Function description	After mapping is complete, quick run tests are supported on the current map. The robot will quickly move along the edges of all obstacles on the map, running the entire map to verify if there are any areas prone to congestion or other risks. During rapid testing, you can directly edit the map, add virtual walls or restricted areas, and continue testing after editing.
User value	<p>After completing map creation, editing, and task creation within a scene, the robot typically performs a full-area cleaning test to verify for potential congestion or risky areas. However, this method is time-consuming and inconvenient as it doesn't allow for real-time map editing during the test.</p> <p>The Quick On-site Test function automatically generates test tasks, running only along the automatic edge-fitting path within the cleaning area—the edges of the map and obstacles—to quickly identify potentially congested or risky areas. If a path blockage, collision, or other abnormal event occurs during the Quick On-site Test, movement is immediately paused, prompting the robot to edit the map for that area to mitigate the risk.</p> <p>The Quick On-site Test can be paused at any time to access the map editing interface and add restricted areas, virtual walls, or fall-prone zones. After adding these, the test can resume. The robot automatically determines which areas of the map have been edited, updates the test plan, and continues completing the test.</p> <p>The Quick On-site Test also supports exiting and resuming; clicking on the Quick On-site Test will automatically remind you of any unfinished test tasks.</p>
Applicable scenarios	In medium to large-scale scenarios, after the robot is deployed, it needs to undergo testing.
Note	<ol style="list-style-type: none"> 1. During Quick On-site Test, a person needs to follow behind to promptly edit the map and resume testing if the robot encounters blockages or collision risks. 2. Quick On-site Test is based on an automatically edge cleaning path generated within the cleaning area. Therefore, if an edited map is needed to use the rapid testing function, it's necessary to enter the map editing interface, click on the corresponding cleaning area, and save it again to generate the automatically edge path. 3. The Quick On-site Test path uses the automatically edge cleaning path as the smallest unit. You can select "Skip Current Path" or "Restart Current Path" in the pause interface. 4. The robot's movement speed during quick test can be adjusted by setting the robot's edge cleaning speed;



4. Alternating Passage Zone V2.0

Function description	The new configuration option for the congestion clearance strategy in the alternating passage zone allows you to specify that when a robot encounters a congestion in the alternating passage zone that exceeds a specified time, it should first go to the parking area and wait for a period of time, regardless of what the obstacle is, in order to make way for AGVs, forklifts or other mobile devices that cannot communicate and avoid congestion.
User value	<p>A "congestion avoidance strategy" can now be configured for alternating passage zones. This configuration specifies that when a robot encounters an unexplained congestion within the alternating passage zone, regardless of the obstacle's nature, it must wait in a designated stopping area for a certain period to allow the unexplained obstacle to pass.</p> <p>Unexplained obstacles typically include robots from other brands, AGVs, trolleys, forklifts, and any moving objects other than PUDU robots. With this strategy, the robot can automatically avoid other brands of robots and moving objects in narrow passages, even without communication or a global scheduling system, thus preventing congestion and improving efficiency.</p>
Applicable scenarios	In factories, supermarkets, hotels, and other settings where multiple brands and models of robots operate, blockages can easily occur in narrow passageways.
Note	<ol style="list-style-type: none"> 1. Alternating Passage Zone 2.0 still supports short-range communication within the PUDU robot for faster scheduling strategies. 2. The congestion-encounter strategy is a fixed avoidance action the robot takes in response to a "congestion," but the type of obstacle cannot be identified. Therefore, adjustments need to be made based on the speed of other robots or moving objects and the length of the passage. It is also recommended to adjust the avoidance strategies of other robots or AGVs in the area to achieve the best results.



Congestion Encounter Strategy Save

Applicable to scenarios where the robot encounters forklifts, AGVs, or other objects that cannot communicate in narrow passages. The robot will sequentially execute the passage strategy of waiting near the passage -> waiting in the docking zone -> retrying.

Waiting Time Near Passage ?

10s 20s 30s 40s 50s

10 s

Waiting Time at Docking Area ?

30s 60s 90s 120s 150s 180s

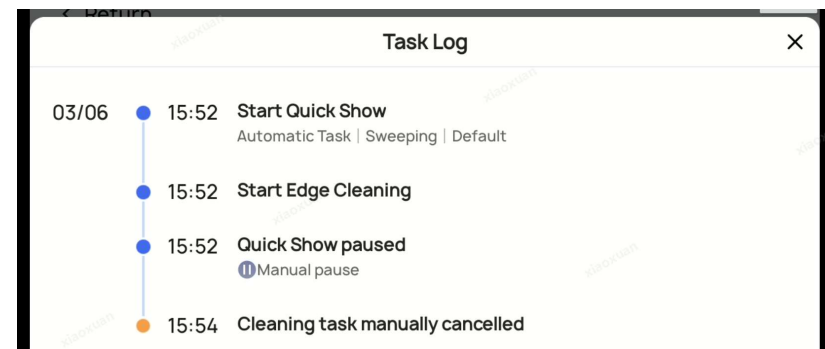
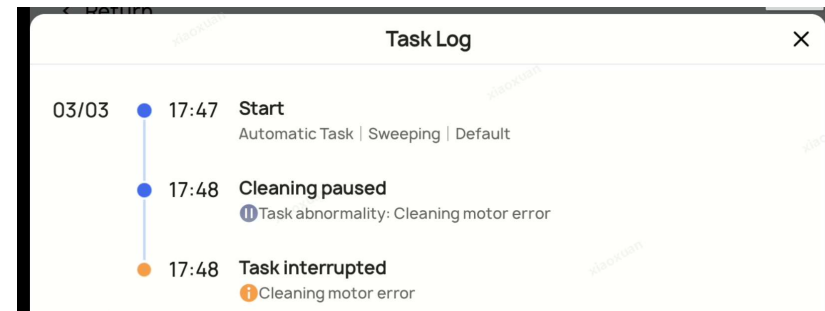
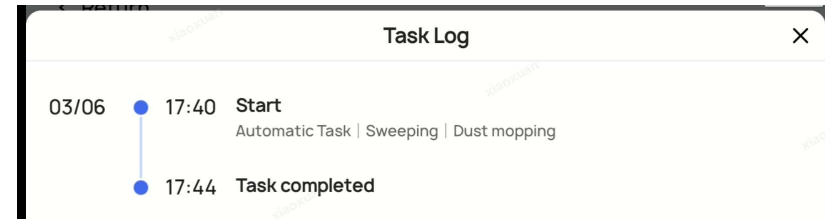
60 s

Number of Attempts ?

If the passage remains congested, the robot will wait and retry to avoid infinite loops. 2 times ↕

5. Cleaning Report Added Task Information Recording

Function description	The cleaning report now includes time records for key task nodes, including task pause, task resumption, skipping cleaning areas, and returning to charging/watering. This provides a more accurate understanding of the robot's behavior and time consumption during tasks.
User value	<p>A new task recording function has been added to the task report. It records the task process in detail, categorized by time and key event nodes within the task. This facilitates a more accurate understanding of the robot's behavior and time consumption during the task.</p> <p>Key event nodes that will be recorded include: task start, task pause and reason for pause, task resumption, task interruption and reason, task cancellation and reason, task completion, robot return and reason, return to charging station, return to rehydration station, skipped cleaning areas and reason for skipping, etc.—any event that would cause the robot to pause cleaning. Therefore, there is no longer a need to consult the robot log to find out why the robot takes too long or cleans an abnormally large area in certain cleaning tasks.</p>
Applicable scenarios	Scenarios with large areas and numerous temporary obstacles. Also, scenarios where the robot's cleaning behavior and efficiency are of primary concern.
Note	1. The time recorded in the task log is based on the robot's own time.



6. Robot Strict Maintenance Mode

Function description	A strict maintenance mode has been added, which is off by default. When enabled, the robot cannot automatically start a task after working continuously for a period of time and being prompted to perform cleaning and maintenance. The task can only start normally after the self-cleaning process is completed or manual confirmation that cleaning and maintenance have been completed.
User value	<p>A strict maintenance mode for the robot has been added to Advanced Settings – Quick Settings, and is off by default.</p> <p>In the off state: When the robot has been working for a long time without maintenance (including robot maintenance reminders, brush cleaning reminders, and self-cleaning workstation reminders), the robot will be reminded for maintenance, but cleaning tasks can still start automatically. For example, scheduled tasks will still start normally.</p> <p>In the on state: When the robot has been working for a long time without maintenance, the robot will be reminded for maintenance, but cleaning tasks cannot start automatically; for example, scheduled tasks will not start normally. Cleaning tasks can only continue to be executed when the robot is maintained as required, when brush cleaning or workstation self-cleaning is performed, or when the task is manually confirmed to be forced to start.</p> <p>Enabling this function can prevent the robot from performing cleaning tasks without cleaning maintenance, thus avoiding secondary contamination. However, it may also affect the normal execution of scheduled tasks.</p>
Applicable scenarios	Scenarios where robots require frequent maintenance, such as those involving medium to heavy pollution.
Note	<ol style="list-style-type: none"> This feature is disabled by default and will not affect the scheduled tasks of deployed robots after upgrading to the new version. If you have high maintenance requirements for the robot, please enable this feature as needed. Strict maintenance applies to three functions: "Reminder for Cumulative Cleaning Component Duration," "Roller Brush Box Self-Cleaning," and "Self-Cleaning Reminder." The robot cannot start its task automatically until any of these reminders reaches their reminder period and is reset. If "Filter Box/Dust Box In-Place Detection" is enabled on both the CC1 2025 and CC1 Pro, strict maintenance will check if the filter box/dust box has been removed and reinstalled when manually confirming "Maintained Robot." If not, strict maintenance will determine that the robot is not being maintained correctly and will continue to block the normal start of automatic tasks.

< Return

⚡ Quick Settings

⚙️ Cleaning Parameters

📍 Venue and Obstacles

🧠 Algorithm Parameters

accumulated time will automatically reset.

Robot Strict Maintenance Mode

Off: When the robot has been working for an extended period without maintenance, a maintenance reminder will be sent, but the cleaning task can still start automatically.

On: When the robot has been working for an extended period without maintenance, a maintenance reminder will be sent, and the cleaning task (including scheduled tasks) will not start automatically. The cleaning task can only continue when the robot is maintained as required, or when manually confirmed to force its execution.

Clean the brush chamber

Cleaning reminder cycle Reset ↻

Sweeping 80h >

Scrubbing 20h >

Start self-cleaning of the brush chamber

Cleaning record >

No record

Self-cleaning Docking Station

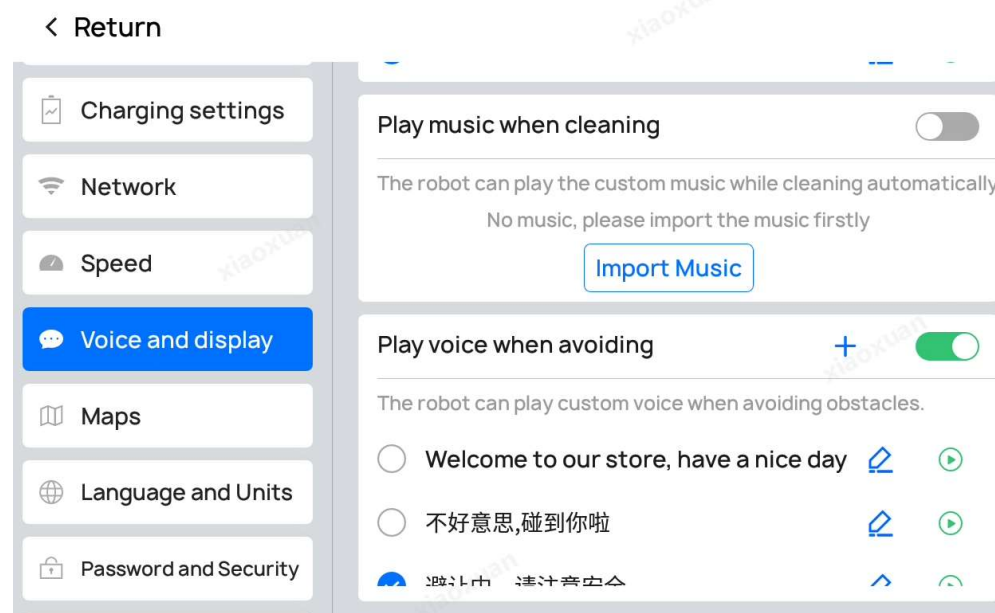
Self-cleaning reminder

Cleaning reminder cycle Reset ↻

Cleaning record >

7. Customizable obstacle avoidance voice commands

Function description	Supports customizable voice prompts for the robot when avoiding obstacles.
User value	When the robot encounters an obstacle and needs to avoid it, the default voice prompts are "Robot at work, please be careful" and "Avoiding obstacles, please be careful." Users can customize the robot's voice prompts in these situations to better suit the environment. Besides changing the wording to better suit local culture, it can also be changed to in-store promotions, business greetings, etc., allowing the robot to leverage its marketing value while avoiding pedestrians.
Applicable scenarios	Retail supermarkets, restaurants and other commercial venues with high foot traffic
Note	1. The voice prompts played during obstacle avoidance are different from those played during cleaning tasks. Both can be configured independently; please pay attention to the distinction. During cleaning, you can choose to play either a voice prompt or custom music.



Optimization

[Experience Optimization] Added Language Support	Latvian, Estonian, Greek;
[Experience Optimization] Maintenance Point Optimization:	Even if no maintenance point is set, the robot will attempt to travel to the waypoint or workstation to avoid blocking the way.
[Experience Optimization] Self-cleaning workstation heating water tank optimization	The heating and heat preservation logic of the water tank has been optimized.
[Experience Optimization]	Japanese text optimization
[BUG Fix]	Resolved an issue of water overflow in a few cases with the self-cleaning workstation



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