

Specifications

Product Name: J30 Cleaning Robot

Model No.: J30,J30S

Version Control

Version No.	Date	Publisher	Revised Entries	Change Type
				A-M-D
V1.0	4/18/2024	Liu Yazhong	Created Documents	A

A-addition、M-modify、D-delete

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1.Product Description

Discover the J30 Cleaning Robot (J30S), designed around the innovative "Clean+" concept, which revolutionizes cleaning services for compact and intricate spaces. This versatile robot is perfect for settings that feature narrow corridors, areas of human-robot interaction, and diverse environmental conditions such as convenience stores and supermarkets (Category C/D), office buildings (including public office zones, break rooms, reception areas, and lounges), apartments, hotels (lobbies, dining areas, lounges, hallways), and gaming arcades. It offers a reliable solution for everyday cleaning challenges.

The J30 features an integrated system for sweeping, vacuuming, and mopping. It employs dual side brushes to gather debris, powerful suction for thorough vacuuming, a gentle roller brush for floor mopping, and an efficient water recovery system to handle the toughest cleaning tasks effortlessly. With its 360-degree laser radar and several other advanced sensors, the robot skillfully avoids obstacles, ensuring safe operation in spaces shared with humans. Integrated with a user-friendly smart app and cloud platform, the J30 offers extensive cleaning options, such as all-area cleaning, targeted spot cleaning, programmable cleaning schedules, virtual walls to restrict access, designated no-go zones, and detailed cleaning reports. In addition to its cleaning functions, the J30 can also support marketing efforts by displaying advertisements, showcasing products, and promoting sales directly through its app, making it a valuable tool for businesses looking to enhance operational efficiency.

2.Product Appearance



3.Specification Parameters

Basic Parameters	Product Name	J30 Cleaning Robot
	Product Model	J30,J30S
	Release to Market Date	03/2023
	Product Positioning	Small Indoor Commercial Cleaning Robot
Appearance Parameters	Robot Dimensions	39(L)*39(W)*110(H)cm
	Charging Station Dimensions	23(L)*10.6(W)*38(H)cm
	Total Weight	27.5kg±1kg
	Charging Station Weight	1.6kg±0.5kg
Load	Top Shelf of a Display Stand	< 7.5kg;
	Bottom Shelf of a Display Stand	< 15kg;
Function Description	Cleaning Methods	sweeping, suction and mopping
	Cleaning Route	Bow Shaped Plan
	Navigation Method	360° Lidar, SLAM Navigation
	Obstacle Avoidance Method	Sensor + Infrared Sensor + Single-line Lidar + Ultrasonic
	Promotion Method	1. Display commodities in display stand; 2. Broadcast promotional advertising on tablet; 3. Fixed-route roving robot demonstrations;
	Drop Detection	Infrared Drop Detection
	Tank Water Level Detection	Both clean water and waste tanks are supported
	On-line Water Tank Detection	Supports
	On-line Dustbin Detection	Supports
	Auto Recharge	Supports
	Voice Broadcast	Chinese, Japanese, English, Korean
	Emergency Stop	Supports
	Pause	The top pause button on the display stand supports pausing tasks when pressed down and resuming tasks when pressed up.
Performance Parameters	Dustbin Volume	1L
	Clean Water Tank Volume	4.8L
	Waste Water Tank Volume	4.8L
	Maximum Mapping Area Per Sheet	600m²
	One-time Sweeping Area (max)	400m²
	One-time Mopping Area (max)	200m²
	Suction Value	1. Standard: 2KPa; 2. Intense: 4KPa;
	Cleaning Duration	120min-180min
	Clean Water Tank Duration	3-5d
	Promotion Duration	360min-420min
	Charging Time	240min
	Obstacle Clearance Height	10mm
	Seam Crossing Width	20mm
	Slope-climbing Angle	5°
	Edge Distance	5-15cm
	Movement Speed	0.3m/s
	Minimum Passing Width	60-70cm
	Operating Noise	1. Standard: ≤65dB; 2. Intense: ≤75dB
Power Description	Battery Type	Litium iron phosphate chip, 19.2V, 15Ah
	Charging Voltage	DC 21.9V

	Charging Current	4A
	Power Adapter Rated Input	AC 100-240~50/60Hz 0.6A
	Power Adapter Rated Output	DC 21.9V 4A
Protection grade	IP Rating	IP24
	Fire Rating	V-2
Lifetime	Design Lifespan	5 years
Environmental Parameters	Storage Humidity	5%-95%
	Storage Temperature	-20°C-60°C
	Operating Humidity	5%-95%
	Operating Temperature	0°C-40°C
Tablet	Product Dimensions	242mm(L)×160mm(W)×8.4mm(H)
	Display Screen	10.1 Inch 1920×1200 IPS Screen
	Touch Screen	Multi Touch
	Loudspeaker	In-built Dual Track Speaker
	Wi-Fi	802.11 b/g/n
	Internet	4G

4.Detailed Overview of Features

4.1 Mapping

Users can direct the robot through the app to map indoor environments that require floor cleaning. During this process, the robot collects data on the physical characteristics of the environment. Using its built-in data processing algorithms, it then generates and stores a floor plan in the app.

For future cleaning tasks within these environments, the robot will utilize the information marked on these maps to perform its duties accurately and efficiently.

4.2 Sweeping and Vacuuming

To remove small debris such as dust and paper scraps, users can activate the sweeping and vacuuming mode through the app. In this mode, the robot's dual side brushes sweep up debris, which its powerful suction system then efficiently vacuums into the dustbin.

4.3 Mopping Function

For cleaning stains such as coffee, milk, or soda spills, users can set the robot to mopping mode via the app. The robot employs a soft roller brush, maintained moist by a water spray system. To ensure optimal cleaning, the robot features an innovative system that recycles used water into a designated wastewater tank, preventing any residue from compromising the cleaning results. Users can easily empty this tank as needed by following the water level indicator on the app's homepage.

4.4 Sweep, Vacuum, and Mop Mode

For a thorough cleaning of both debris and stains (like coffee, milk, or soda spills), users can select a combined sweep, vacuum, and mop mode through the app. In this mode, the robot first gathers solid waste with its brushes, vacuums it up into the dustbin through its vacuum system, and then uses the roller brush to mop away stains, and automatically recycles the dirty water.

4.5 Targeted Cleaning Options

After mapping, users can select specific areas for cleaning on the app by editing the map and setting the desired cleaning mode for these areas. The robot will clean the designated area according to the specified mode.

4.6 Manual Target Area Cleaning

After the mapping is finished, users can clean a specific location by marking it on the app's map and selecting the appropriate cleaning mode for that spot. Once the task is initiated, the robot moves to the marked location and automatically plans a cleaning area of 78cm x 78cm. It then cleans the area according to the chosen mode.

4.7 Resume Cleaning Function

If the robot's power management system detects a low battery during a cleaning operation, it will immediately pause its task and return to the charging station to recharge. After charging is complete, the robot automatically resumes cleaning from the point where it was interrupted, continuing the task without missing a spot.

4.8 Self-Cleaning Roller Brush

Once it has completed sweeping, vacuuming, or mopping tasks, the robot automatically returns to the charging station where it cleans its soft roller brush. The brush is cleaned by spraying water and spinning rapidly to remove debris, and the dirty water is recycled into the wastewater tank.

4.9 Automatic Recharge

The robot is programmed to automatically return to the charging station when low battery levels are detected, regardless of whether it is in standby or active mode. This ensures the robot is always charged and ready for tasks.

4.10 Promotional Patrol Function

Users can set promotional paths via the app by designating specific stopping points and durations. These points are connected in a sequence to define the robot's promotional route. During promotional tasks, the robot will follow this predetermined route, pausing at each location as scheduled.

4.11 Map Editing Function

Users can edit the maps collected by the robot through the app, which allows for the following modifications: setting/deleting virtual walls, and setting/deleting no-go zones.

①Setting/Deleting Virtual Walls: Areas designated as virtual walls will be recognized by the robot as actual barriers, which it will then avoid during its operations. Removing a virtual wall allows the robot to pass through that area as normal.

②Setting/Deleting No-Go Zones: Areas marked as no-go zones will be off-limits to the robot while performing tasks. Deleting a no-go zone will permit the robot to enter and perform tasks in that area again.

4.12 Scheduled Cleaning Tasks

Users can program the robot for specific tasks, defining start and end times, cleaning modes, intensity, and targeted areas on the map, which the robot automatically follows according to schedule.

4.13 Remote Control

Users can remotely control the robot's movements (forward, backward, left turn, right turn) via the "Manual Control" feature on the app.

4.14 Task Report

Users can access detailed reports on completed tasks via the app, which include the task name, start and end times, duration, cleaning mode, intensity, and coverage achieved.

4.15 OTA Update

In the app's "Settings," users can view their device's current software and hardware version information and check for updates. This feature allows users to upgrade their robot's software to the latest version to ensure optimal performance.

4.16 Voice Package

Within the app's "Settings" section, users can select the displayed language for text and the language for the robot's voice prompts.

4.17 Sound Volume

Users can set the volume level (from 0 to 100) via the "Settings" function in the app.

4.18 Automatic Time Sync

Upon activation, the robot connects to the network and synchronizes its internal clock with the network time, adjusting to local time zones automatically.

4.19 Repositioning

If the robot loses its navigation positioning, users can guide it back to its mapping start point through the "More" function in the app. By remotely controlling the robot to match the orientation used during the initial mapping, this feature assists the robot in regaining its navigation capabilities.

4.20 WiFi and 4G networks

Install a 4G network card on the robot, obtain network permissions, and then find the name of the robot's WiFi, such as robot_XXX. Connect the tablet device or phone to the robot's WiFi to use the robot's WiFi and access the robot's 4G network.

4.21 Antenna information

Manufacturer: Chengdu Ebyte Electronic Technology Co.,Ltd.

Address: Building B2, Mould Industrial Park, 199# Xi-Qu Ave, West High-tech Zone, Chengdu, 611731, Sichuan, China

Antenna gain: 2dBi Antenna type: Internal antenna, FPC Antenna Model: TX2400-FPC3-5015

4.22 Warning

1. This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

2. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help.

3. The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

4. Install and operate radiators at least 20 cm away from the human body in compliance with the FCC's radiation exposure limits for uncontrolled environments