

SENA RD ONE

Commercial cleaning robot
all-in-one InstantClean



Maximize your cleaning potential

CLEANFUSION

SENA RD-ONE self-developed digital-twin simulation platform enables an all-round analysis of multiple cleaning processes to generate valuable insights for technological enhancements of smart cleaning tools.

Automated/manual simulations provides better evaluation of new cleaning strategies and motion control planning.

Verification of effectiveness of cleaning tools in different simulated scenarios made available through the digital-twin platform.

FLEXIBLE

REAL

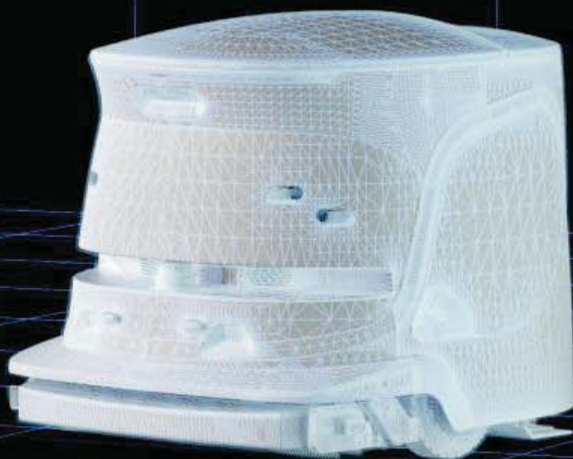
CLEANFUSION

ACCELERATE

OPTIMIZE

Constantly achieve new technological breakthroughs using high-precision simulation of physical objects.

Provide optimal AI cleaning solutions with the use of CleanFusion and SENAR D-ONE proprietary garbage detection algorithm.



OUR COMPETITIVE ADVANTAGES



The most efficient Robot on the market

Sweeps, vacuums, mops, disinfects and purifies the air.



Only robot on the market with automatic cleaning changes

Switches from one cleaning mode to another without the need to replace components and without human intervention.



Largest water tank on the market

22L capacity compared to 9-15 L of its competitors, which means significant time savings



The most silent robot

Reaching 55dB in sweeping and mopping mode and only 45dB in dusting mode (Japanese technology).



Fastest robot on the market

Scrubbing capacity 1200 m² /h
Sweeping capacity 1500 m² /h



Robot with the widest cleaning width on the market

It is the widest of both scrubbing and sweeping brushes.



Purifies the air

Purify air with ozone purification system



Maximum UV disinfection

Disinfection with ultraviolet lamp (optional)

6 in 1



Sweep



Vacuum



Scrub



Disinfect



Mop



Self-cleaning



PRODUCT FEATURES



ALL-in-ONE

Sweep, scrub, vacuum, dust-mop, disinfect and self-clean all in one



Obstacle Avoidance

More than 15 high-precision sensors ensure a safe work environment



Ultra-Quiet Cleaning

Noise level as low as 55dB@1m even on full capacity cleaning mode



Flexible

Gradability: 8°
Min. Passable Width: 700mm



Efficient

Roller Brush Width: 520mm
Mop Pad Width: 540mm \ 580mm(optional)
Cleaning Efficiency: 1197-1368m²/h



One-Click Deployment

Built-in application enables easy deployment and quick activation of cleaning tasks



Easy Maintenance

Integrated piping design reduces blockages
Modular cleaning tools



Digital Management

OTA updates
Cleaning reports available



AIoT

Automatic elevators & gates entering & exiting

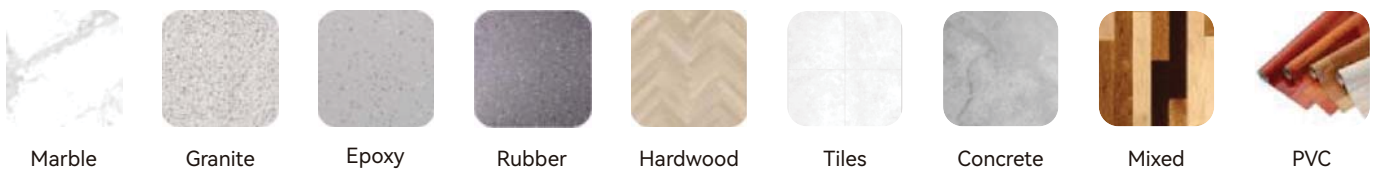







CLEANING MODE

SENA RD-ONE is equipped with different cleaning modes that users can choose from depending on their cleaning needs. Users can assign different cleaning modes for various work zones.

Modes	Nylon Roller Brush	Water Pump	Microfiber Roller Brush	Vacuum	Mop Pad	Scenarios
Scrub	✓	✓	✓	✓	✓	Standard cleaning for most types of flooring. Best cleaning results.
Power Scrub	✓	✓	✓	✓	✓	Suitable for cleaning heavily soiled hard floors.
Dust Mop	✗	✗	✗	✗	✓	Delicate polished floors, marble floors, noise control required.
Sweep & Vacuum	✓	✗	✓	✓	✗	Applicable for low pile carpet.
ECO Vacuum	✓	✗	✓	✓	✗	Ideal for quietly operating and cleaning heavily dusted hard floors.
Sweep, Vacuum & Mop	✓	✗	✓	✓	✓	Dust, dirt and debris removing without water.
Customized	✓	✓	✓	✓	✓	Cleaning tools can be configured differently to meet various cleaning demands.



- 
Microfiber Roller Brush Suitable for all types of hard floorings.
- 
Spiral Nylon Roller Brush Recommended for wooden and natural stone floors, including hardwood, mixed floors, and marble. It helps protect the floors while effectively cleaning them.
- 
Extra Soft & Dense Nylon Roller Brush Recommended for cleaning hard surfaces such as ceramic tiles and concrete, and is effective in removing stubborn stains from the surface.
- Custom Roller Brush We provide customization service for special flooring types to take better care of your floor.



Ultra-Quiet Cleaning

Featuring Japanese ultra silent materials and a self-developed multi-stage noise reduction design, SENA RD-ONE operates at a noise level as low as 55dB@1m even on full capacity cleaning mode. The overall machine noise is lower than the industry standard by 20-30dB.

EASY MAINTENANCE

Waste Water Tank

Strainer
Nano colloidal silver* prevents unpleasant odors

Clean Water Tank

Ozone generator* constantly disinfects cleaning water to avoid secondary pollution on the floor

Low-curvature Pipe Design

Allows for easy maintenance & fast removal of blockages

Integrated Piping Design

Streamlines the flow of liquids, minimizing the chances of blockages that can cause system malfunctions and downtime

*Optional upgrades



AI CLEANING

SENA-RD ONE is equipped with 15 different sensors to ensure a 360° safe work environment

Stereo Camera

Garbage detection
Cliffs/steps detection

Ultrasonic Sensors

Smart obstacle avoidance

LiDAR Sensor

Up to 10,000m² map constructing capacity
Auto positioning and real-time map updating

Line Lasers

10cm distance to the wall and corner to maximize cleaning area



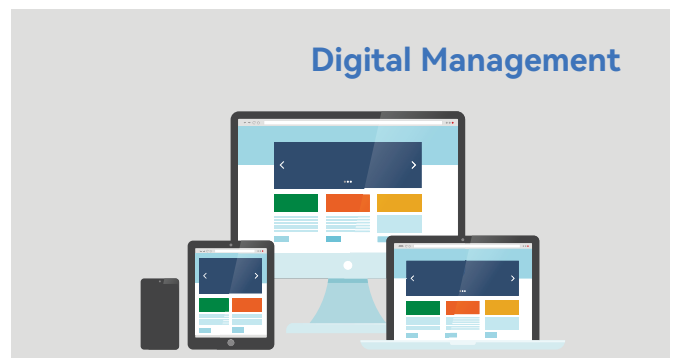
Real-time intelligent path planning & smart obstacle avoidance



SENA-RD ONE is building an identification library and classifier model for garbage commonly seen in commercial areas.



Automatic elevators & gates entering & exiting.
Automatically returns to charging station upon completion of tasks.



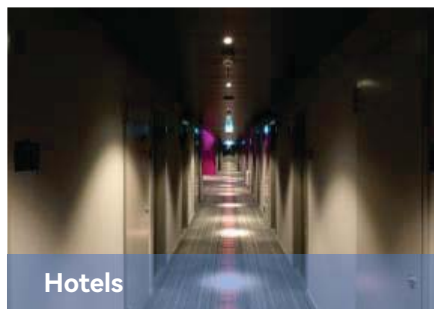
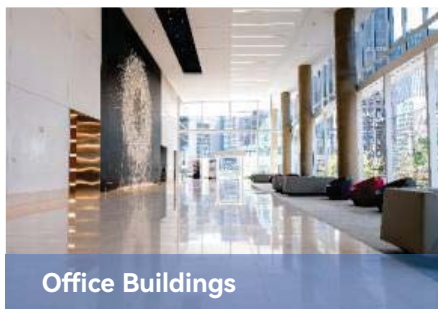
Remote deployment, cloud-based maintenance,
OTA updates and data reporting.

SPECIFICATIONS

ITEMS	
Clear Water Tank Capacity	22L
Waste Water Tank Capacity	15L
Cleaning Efficiency ^[1]	Scrub:1197m ² /h / Power Scrub:1197m ² /h Sweep&Vaccum:1368m ² /h / ECO Vaccum:1368m ² /h Dust Mop:1368m ² /h / Sweep,Vaccum&Mop:1368m ² /h
Cleaning Path	Zigzag
Gradeability	Maximum uphill angle: 6° / Maximum operating slope: 8°
Min. Passable Width ^[1]	700mm
Braking Distance at Full Speed	30mm
Charging Cycle	<4h
Battery Life	Scrub:4.5h / Power Scrub:3.5h Sweep&Vaccum:4.5h / Sweep,Vaccum&Mop:4.5h ECO Vaccum:19.5h / Dust Mop:28h
Noise Control	Scrub:55dB / Dust Mop:42dB
Screen Size	10.1 inch
Weight	70KG
Size (length*width*height)	650mm*580mm*550mm
Cleaning Modes	Scrub /Power Scrub/ Sweep&Vaccum / Sweep,Vaccum&Mop / ECO Vaccum/Dust Mop

[1]Subject to different cleaning modes.

APPLICATIONS





Robotics
by Paythunder
Group