

Disinfection Spray Robot

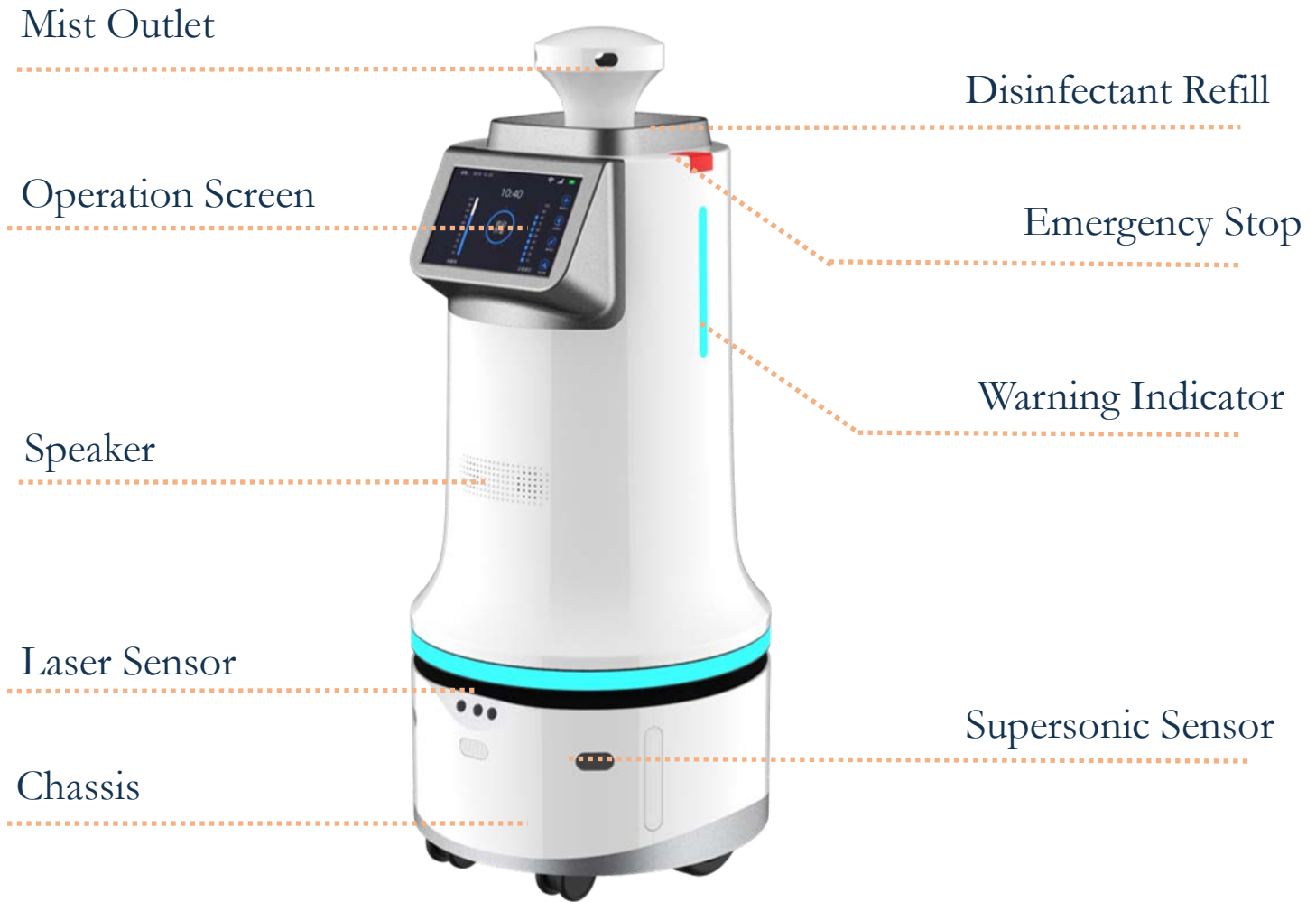


Introduction – Disinfection Spray Robot

Powered by an internal disinfection system, the disinfection spray robot can take over extensive floor and air disinfection at hospitals, offices, factories, schools and other public facilities. It operates on auto-pilot along preset routes to accurately and efficiently spray disinfectant through various work modes, shows work-in-process notifications, and automatically returns to base for recharging when running low on power.



General Description Figure



Specifications

Specifications

Operating System	Android 7.1 or newer
Dimensions	Height: 1170mm Diameter: 522mm
Net Weight	75KG
Liquid Capacity	10L;
Flow Rate	$\leq 1.2L/h$, particle size within $10\mu m$, 15min/1000m ²
Disinfect Method	Vaporized disinfectant mist
Display	10.1 inches, resolution 1280*800
Battery Capacity	24V 35Ah
Battery Life	6h
Notification System	Voice notification when liquid running low
Cleaning Method	Support manual drainage
Task Management	Support preset tasks for specific time frame
Navigation System	Laser
Obstacle Avoidance Sensor	Visual + Supersonic +Laser
Sensor Parameters	SICK laser: 10 meters RGBD depth camera: 0.7m – 0.8m Supersonic Distance Sensor: 0.25m – 2.5m



Specifications

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Obstacle Avoidance	Hurdle capacity: 10mm Climb ability: 5 degrees
Speed	0.8m/s, maximum speed 1.5m/s,. able to move at all directions (forward, backwards, left, right, and U-turn
Charging	Contact autonomous recharge, less than 4.5 hours till fully charged
Connectivity	WIFI/4G (customized 4G)
Motion Performance	Rotation radius : 0mm
Disinfectant	Hypochlorous Acid or hydrogen peroxide
Temperature (operation and storage)	Temperature (operation): 0° ~ 40° ; Humidity (operating): 5% ~ 85%, Storage Temperature: -10° ~ 60° (battery needs to be used up and recharged at least once a month under extreme temperature condition)

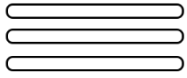
Disinfectant Solution Formula

1. Hypochlorous Acid (used with people in the room):
550mg/L hypochlorous acide solution, hypochlorous acide and water is ratio is 1:9,
55ppm
2. Hydrogen Peroxide Vapor (used with no one at present):
Prepare 3% concentration hydrogen peroxide solution, add water, hydrogen peroxide
solution and water ratio is 1:1, 15000ppm 20ml/m3



Functions

Main Functions



Vaporized
Disinfectant



Map
Management



Disinfection
Route Preset



Task Previews



Disinfection
Location
Management



Broadcast
Setting



Liquid Level
Notification



Autopilot to
elevators



Autonomous
Recharge



- Spray disinfection on floors and in the air
 - Return to charging base automatically
 - Autonomous navigation and avoid obstacles
- Autopilot for elevator access
 - Customized disinfection routes and time frame
 - Longer battery life (2 hours and above)

Disinfection at all directions along the route and leave no dead spots

Awards



Our disinfection robot has been awarded the Anti-epidemic Technology Product Award 2020, presented by Hong Kong Retail Technology Industry Association(RTIA). The smart VirusGuard serves to keep shopkeepers and shoppers safe from coronavirus infection without increasing workloads.

Applications



Hospitals



Campus



Hotels

Applications



Office Buildings



Factories



Shopping Malls

Cases



Elderly Home in Hong Kong

- ◆ Noise-free disinfection in public areas and each room
- ◆ Autonomous navigation through preset disinfection routes
- ◆ Anti-collision setting to avoid students and amenities



Guangzhou Friendship Hospital

- ◆ Noise-free disinfection in hallways and waiting areas
- ◆ Autonomous navigation through preset disinfection routes
- ◆ Taking over repetitive disinfection tasks with high efficiency and require zero supervision