



Puductor 2

Disinfection Robot

About Puductor2

Company Overview

Product

References



About Pudu · Company Profile



- National high-tech enterprise
- More than 600 patents, over 60% of which are patents for invention
- R&D staff accounts for over 50% of the total staff
- Products are sold to more than 60 countries and regions around the world
- Hundreds of after-sales service centers across the globe

BrewVend and Pudu robotics partnered in GCC & MEA to provide unprecedented delivery experience, sales & services in the region. Pudu Robotics is a world-leading tech-focused enterprise dedicated to the design, R&D, production of commercial service robots on a mission to use robots to improve the efficiency of human production and living. Pudu robots are widely applied in restaurant, coffee shop, hospital, school, office building, shopping mall, hotel, factory and has a global presence.

Founded in 2016 and headquartered in Shenzhen, Pudu Robotics is a national high-tech enterprise dedicated to the design, R&D, production and sales of commercial service robots. The company has set up R&D centers in Shenzhen and Chengdu, and hundreds of after-sales service centers across the globe.

Powered by the core technologies of positioning and navigation, motion control, multiple-robot dispatching, obstacle detection and avoidance, NVH, intelligent interaction and automated simulation testing, Pudu Robotics has developed more than 600 patents and top-notch delivery robots, disinfection robots as well as delivery & reception robot with an Ad display. As a world-leading provider of commercial service robots, Pudu Robotics has sold tens of thousands of robots to more than 60 countries and regions around the world. The robots are widely used in restaurants, hospitals, schools, office buildings, government halls, subway stations, waiting rooms, etc.



Pudu Robotics
Product

Situations

Contactless operation, safety means everything

COVID-19 has changed our way of living. Contactless operations will be crucial for the foreseeable future. Pudu Robotics provides multiple solutions to battle the negative impact from the pandemic. With true noncontact functions, Puductor 2 minimizes the risk of cross infection and improves sanitary condition for indoor environments.





Ultrasonic Dry Mist Disinfection

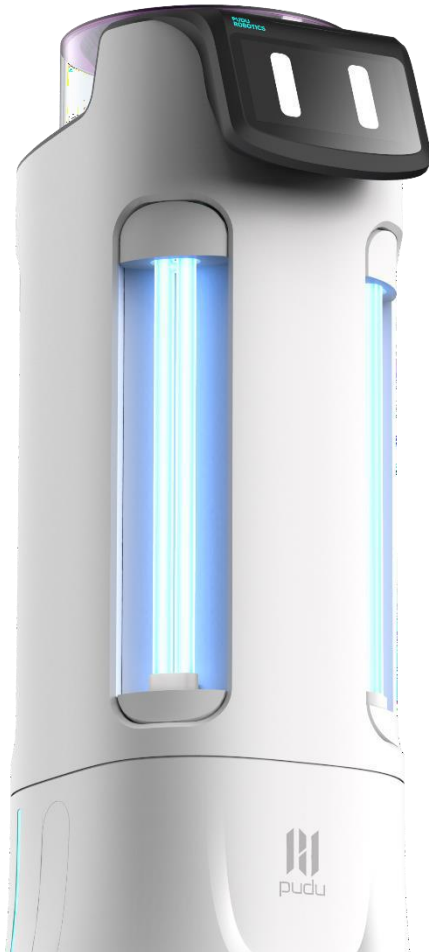
Ultrasonic Dry Mist Disinfection

- Dry mist disinfection, highly effective against the COVID-19.
- 4 spray nozzles for an atomization rate of up to 2L/h, capable of holding up to 15L of disinfectant solution.
- 10 μ m dry disinfectant particles ensuring full contact with microorganisms.

Adjustable Atomization Rate

- 4 mist output
- Lower rate for dry-mist concentration retention in a semi-open scenario. Higher rate for faster targeted dry-mist concentration.





Ultraviolet C Disinfection

- 360° sterilization.
- 4 x 36w ozone-free UV lamp equipped, achieving an industry leading ultraviolet illumination of $188\mu\text{W}/\text{cm}^2$ * in 1 meter.
- The UV-C lamp is highly effective against most types of bacteria and viruses, securing a 99.99% disinfection rate.

Safety Measures

- Intelligent UV-C Lamp Protector : Enclosed cabin with motorized interlocking mechanism, providing protection to the lamp while not operating.

*At a temperature of 24.6°C and a humidity of 57%.



Motion Sensor

- Omnidirectional millimeter wave radar
- Puductor2 will automatically detect the human movement within 3.5 meters.
- Puductor 2 will recheck the surrounding situation for the duration of 30 seconds once the sensor was operating.



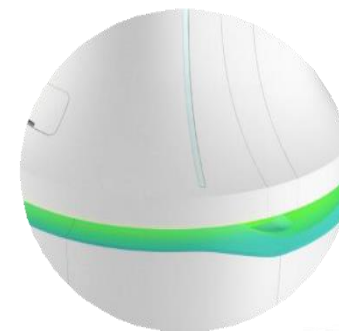


Long Battery Life

- Max 6 hour disinfection time : The total battery capacity can support the disinfection of 12-15 rooms (20m²/room).
- Automatic Recharging : Puductor 2 is equipped with a docking station. To make sure that the robot is fully charged and ready for the next task, time saving as it requires no involvement from your staff.

Boil-dry Protection and Low-level Warning

- Liquid level safety detector in the ultrasonic chamber, the ultrasonic frequency terminates automatically when the liquid level is lower than the safety level.
- Real-time liquid level protector in the solution tank, reminding user to replenish solution when the liquid level is low.

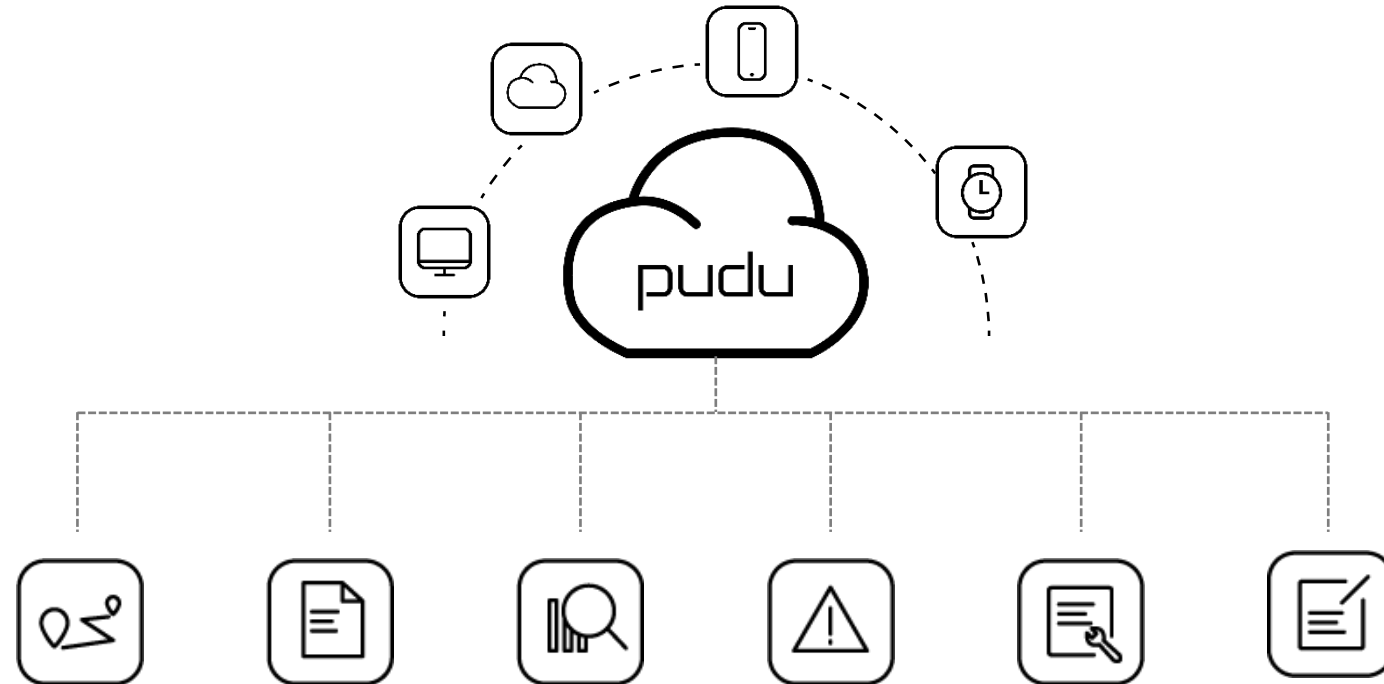




Management Platform

IoT Management

- Remote Access: remote terminal control of robot operation, task management, and work report printing.
- Automatic Work Report Generation: work reports generated automatically, check disinfection status of target areas.



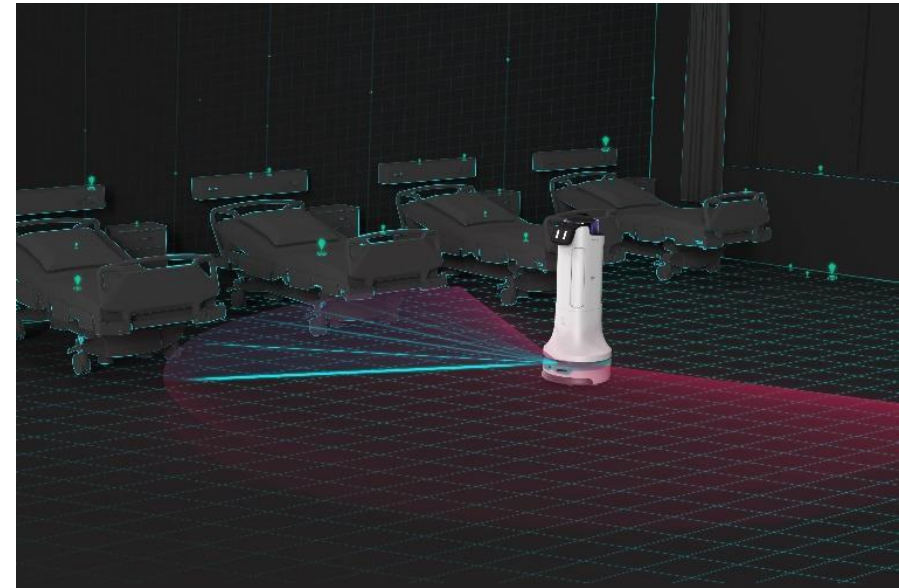


Laser SLAM Self-Driving Solution

- Able to move freely in a 10,000m² space
- Detection range up to 40m
- Real-time positioning error less than 10cm

3D Obstacle Avoidance Technology

- INTEL® REALSENSE™ RGBD camera
- Powerful 3D perception
- Accurately detect obstacles, stopping within a reaction time of 0.5 seconds





Specifications



Machine Dimension	544x538x1290mm
Machine Weight	60kg
Battery Capacity	51.2Ah
Reservoir Capacity	15L
Irradiation Intensity at one meter distance	188 $\mu\text{W}/\text{cm}^2$, UV-C(254nm)
Effective Disinfection distance	3 meters
Disinfection Time	Max 6H (Automatic Recharging)
Cruise Speed	0.1-1.2m/s Adjustable
Disinfectant Solution	Hydrogen Peroxide(H_2O_2) Chlorine Dioxide (ClO_2) Hypochlorous Acid(HClO),etc.
Average Power Output	150W
Working Voltage	24V
Motion Sensor	Yes
UV-C Lamp Protector	Yes
Solution Inlet& Outlet	Yes
Max Climbing Angle	5°



Usage Scenarios

- Pudu Robotics independently researches and develops its own robot positioning and navigating technology and disinfection modules. Puductor 2 can be applied in different environments such as hospitals, government halls, schools, and office buildings.



Hospital



School



Hall



Hotel



Internet Bar



Canteen



Shopping Mall



Karaoke



Enhanced patient safety with UV-C and dry mist disinfection

Cross infection in hospitals is a serious topic in the healthcare sector. Millions of patients are exposed to risk of infections during hospitalization each year and thousands of patients lose their lives. Puductor2 is the right choice of hospital robot to solve the above problems.

Safe learning environment and campuses

Protects both young students and college campuses from the risk of cross infections. Creating a healthy and safe environment for learning.





Efficient government operations under COVID-19

Puductor 2 helps protect both government agency workers and citizens from the risk of infection and any other potential bacterial diseases.

Stay safe during travel

The Puductor 2 can disinfect large areas such as airports and other transportation hubs. Keep travelers safe by having a clean environment during transit.





Safe accommodation environment

Puductor 2 is a reliable hotel robot. With both UV light and dry mist disinfection modes, it ensures a safe and virus free environment in hotel.

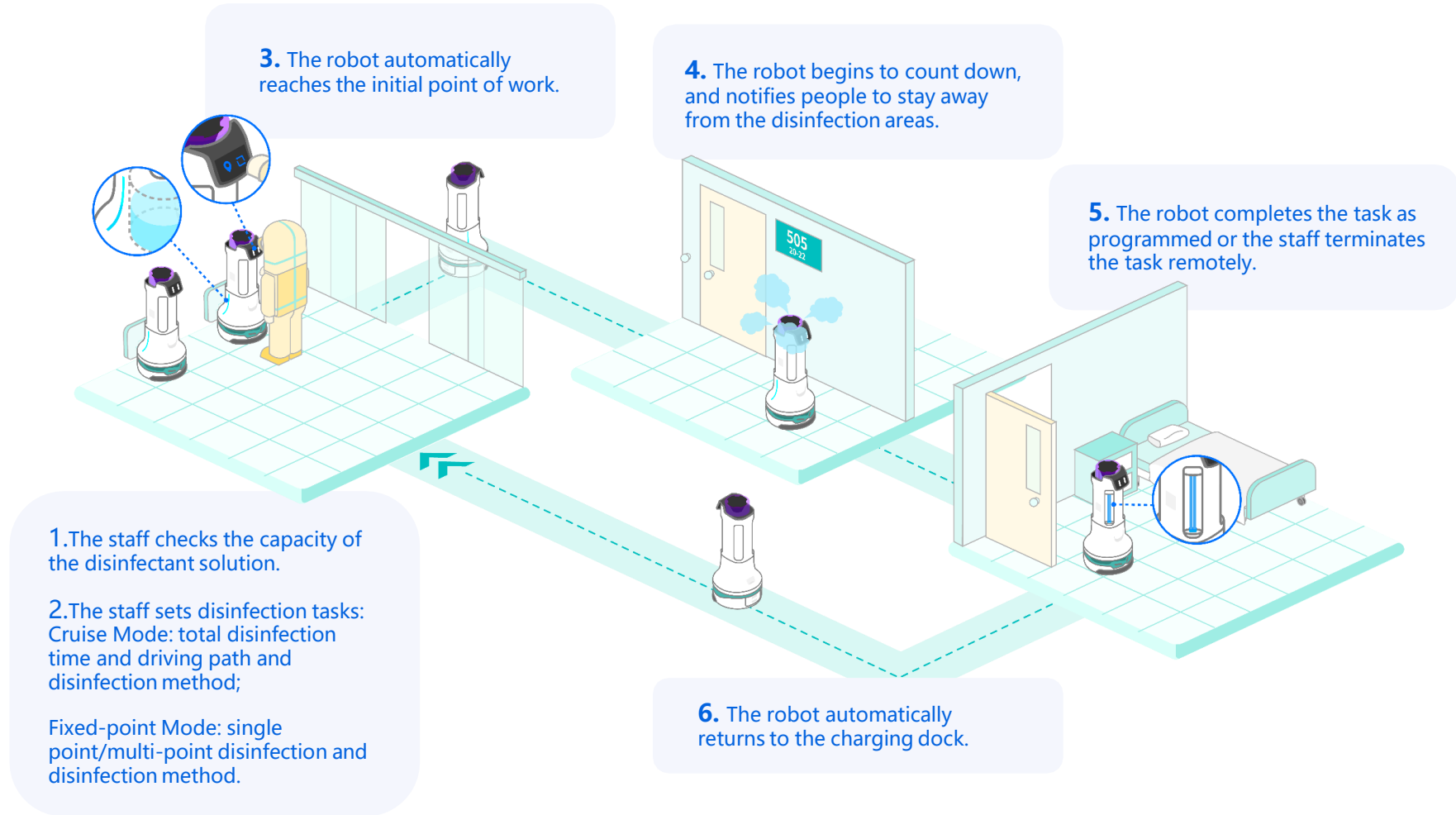
Protect employees and your business

Protect your employees and office perimeters in order to keep business in operation.





Workflow-Automatic Mode





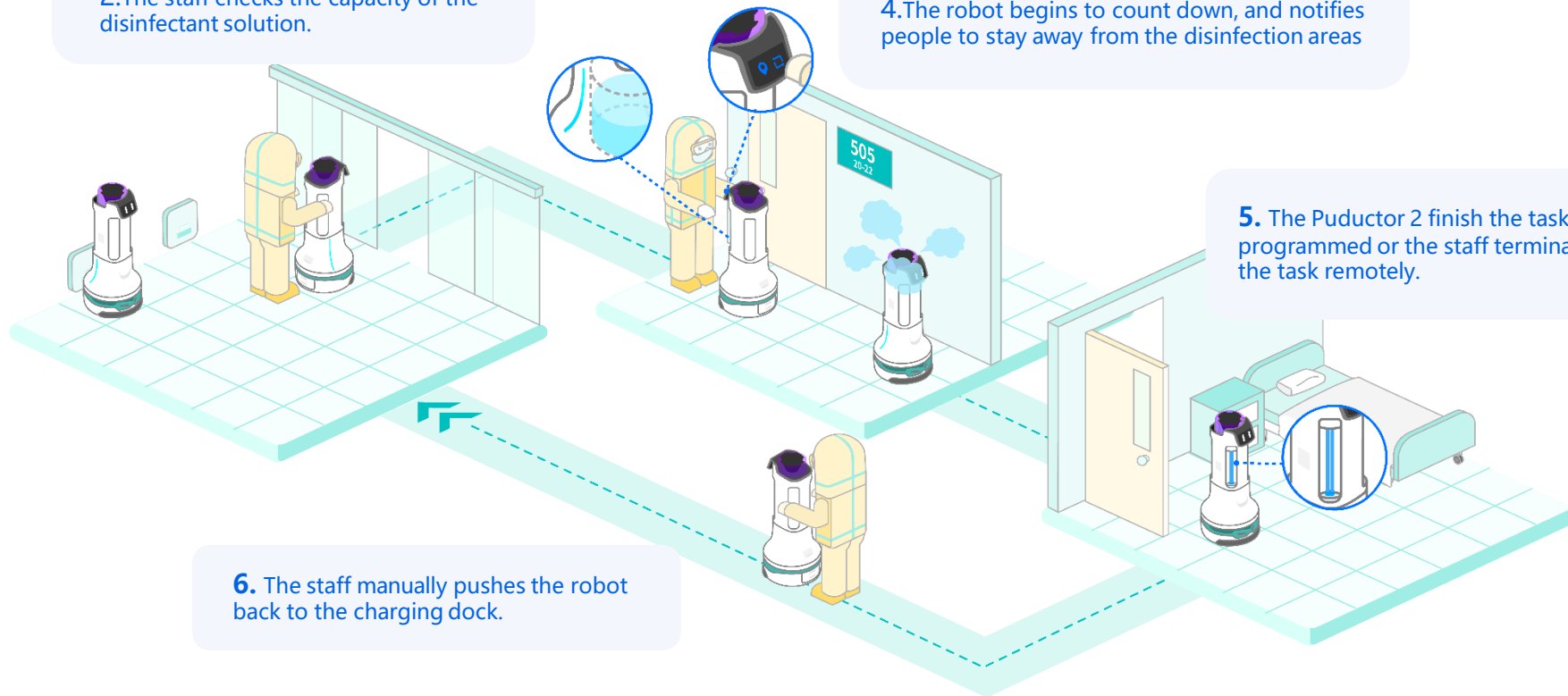
Workflow-Manual Mode

1. The staff manually pushes the robot to the disinfection point.
2. The staff checks the capacity of the disinfectant solution.

3. The staff sets disinfection tasks (total disinfection time, disinfection method)
4. The robot begins to count down, and notifies people to stay away from the disinfection areas

5. The Puductor 2 finish the task as programmed or the staff terminates the task remotely.

6. The staff manually pushes the robot back to the charging dock.





Friendly, Convenient, and Professional

Effective After Sales Service

Remote technical support offered up to 12 hours a day, 7 days a week.
IoT services: Solve over 90% technical issues online

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