

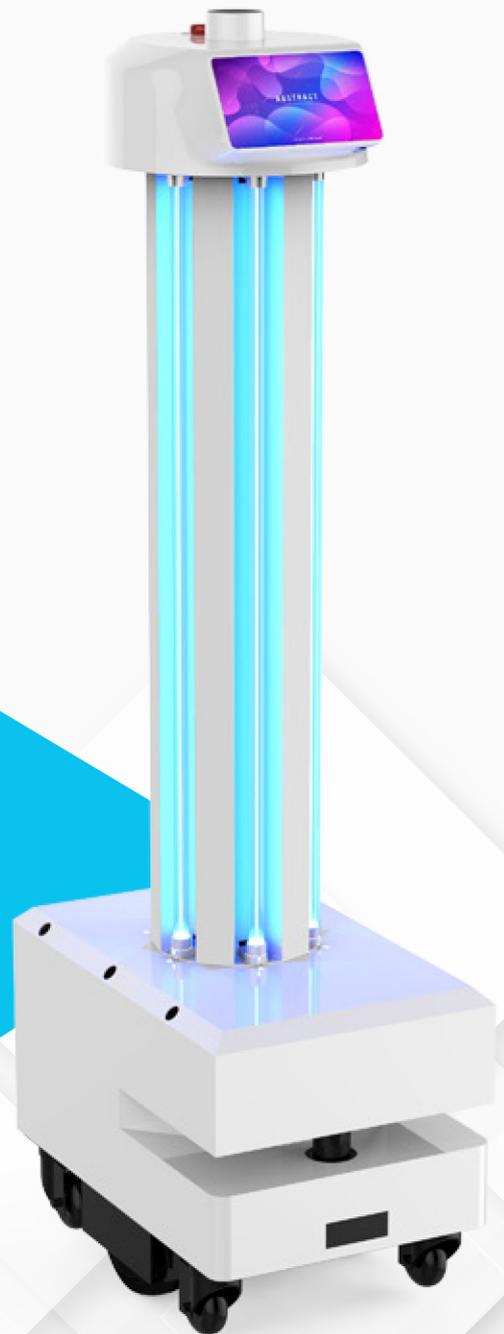


**MEET THE FUTURE  
OF STERILIZATION  
AND  
SANITIZATION**

**by ZEND Health**

# UVC STERILIZING ROBOT

KRUZR 1



# CONTENTS

Product introduction

Product function

Product structure

Scope of application

System parameters

Accessory parameters

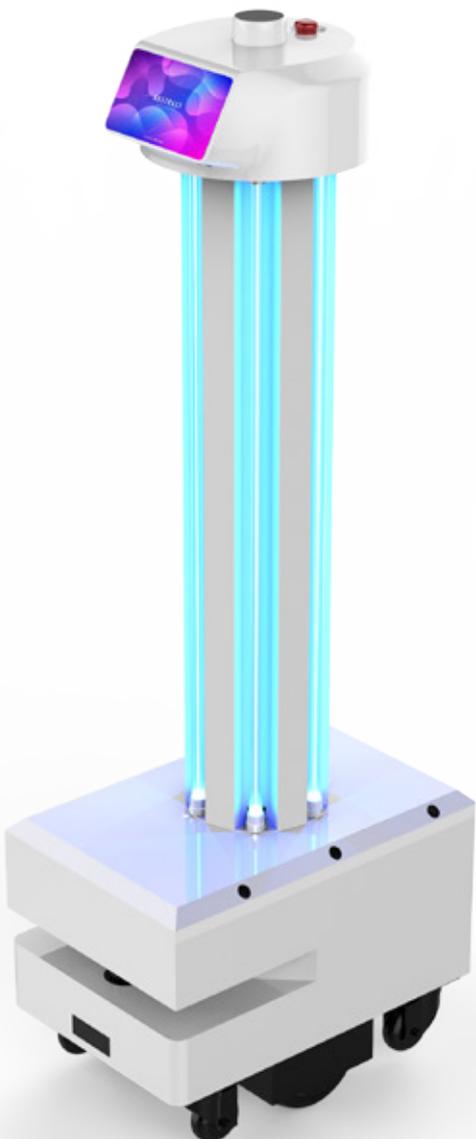
Certified product

Instructions

Precautions

# Product introduction

The ultraviolet disinfection robot uses Philips UV-C ultraviolet light source, and the forking activity rate of new coronavirus (covid-2019) is more than 99.9999%. It has significant advantages of high efficiency, broad spectrum, thoroughness, no drug resistance and no secondary pollution. It is a kind of efficient and environmental protection disinfection product



- Indoor self moving multipoint UV disinfection
- Independent cloud service platform, remote navigation deployment,saving time and effort
- Timing disinfection function, automatic execution of disinfection tasks
- Integration of laser slam and v-slam, accurate map construction and positioning
- Low power automatic charging, unmanned operation
- 0.5 seconds intelligent obstacle avoidance, indoor route planning
- Six 90cm Philips UV-C lamps
- 8000 hours long service life
- UV irradiation with short wave 254nm sterilizing lamp can effectively disinfect and sterilize
- It has high efficiency, broad spectrum, thoroughness, no drug resistance and no secondary pollution
- Ultraviolet disinfection meets the national standard GB 19258-2012 ultraviolet disinfection lamp

# Product function

## Timed disinfection

Set disinfection time and target points in advance, and automatically perform disinfection tasks

## Custom disinfection route

Autonomous planning of disinfection routes. Disinfect the whole process or only the target point. Sterilization stay time setting

## Automatic return to charging

The battery is below the minimum value, Automatically return to the charging station to charge

## PHILIPS UVC light source

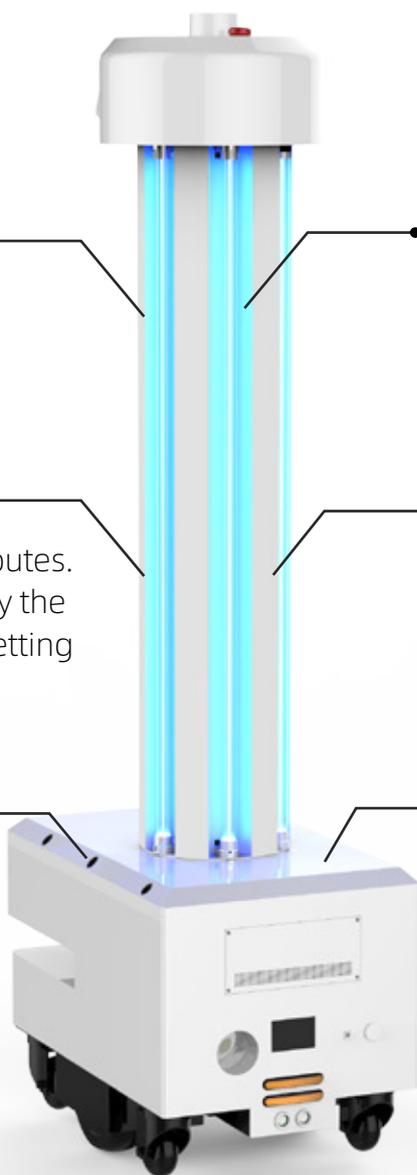
6 PCS PHILIPS UVC lamp, High intensity UVC disinfection

## Efficient sterilization

Illumination power: 180W  
Wavelength: 254nm ultraviolet shortwave  
Virus inactivation rate 99.9999%

## Remote navigation deployment

Original cloud platform remote map construction Time-saving and efficient



UVC shortwave radiation disinfection

PHILIPS UV-C light source

Mobile multi-point disinfection

Lamp life is 8000 hours

Custom disinfection route

Second-level obstacle avoidance

Remote navigation deployment

Automatic return to charging

# Scope of application

The UVC sterilizing robot adopts PHILIPS UV-C UV light source, which has fast disinfection speed and high intensity, UV lamp power 180W, 360° ultra-efficient sterilization, customized disinfection route and speed, intelligent remote control. Applicable to hospitals, banks, schools, restaurants, hotels, factories, office buildings, government agencies, subway cars and other fields.



CORPORATE BUILDINGS



MEDICAL: HOSPITALS, MEDICAL OFFICES

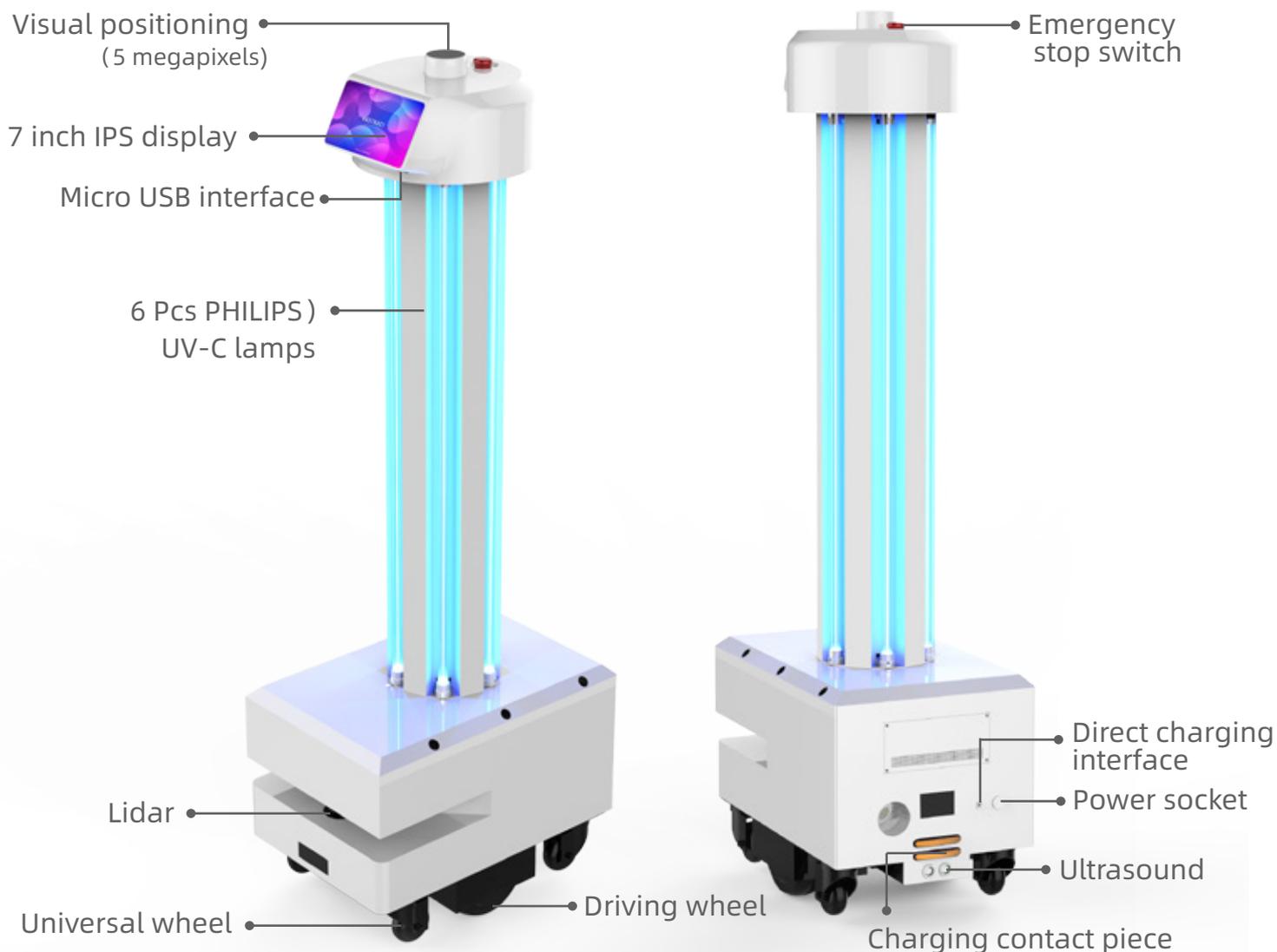


HOSPITALITY: Hotels, Restaurants, Retail



TRANSIT

# Product structure



Lamp Model: Signify (PHILIPS TUV T8)	Battery life: 2.5~3h
Total lamp power: 180W	Screen size: 7 inches
Lamp length: 90cm	Support language: Chinese, English
UV output: 12W*6=72W UVC	Product weight: 52KG
Type of battery: 10S16P 20800 mAh/37V	Product Size: 540mm*360mm*1462mm

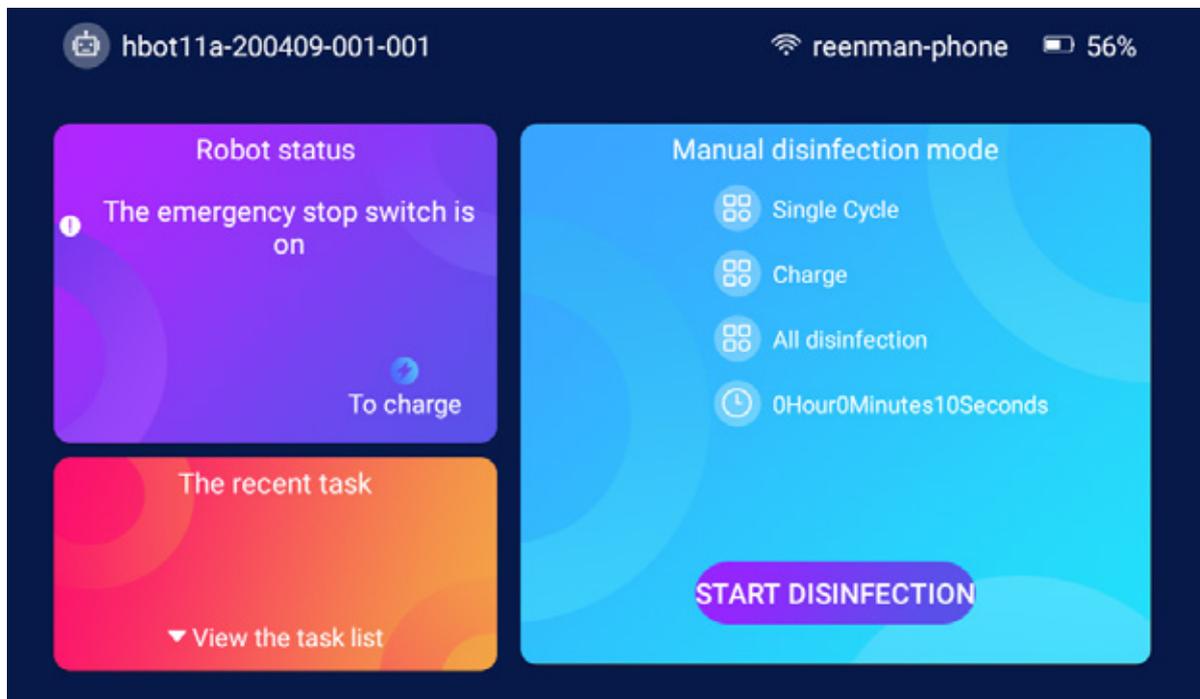
# System parameters

Operating system, processor, memory characteristics	
Product number	KRUZR 1
operating system	android (5.1)
language support	Chinese 、 English
Processor type	RK3128 (Quad-core Cortex-A7, frequency up to 1.2GHz)
Built-in clock	RTC
RAM LPDDR3	1G
Built-in NAND FLASH	8GB
USB debugging port	Micro USB 2.0 interface
Power button	One-key boot
Emergency stop button	Emergency stop button
Display screen	7 inches, IPS screen (16:9)
Resolution	1024X600
External I/O port	1个 USB 2.0 (MICROUSB) , RJ45 network port
Speaker	4Ω/3W mono speaker
Wireless technology AP6255	Support dual frequency 2.4&5G WIFI 802.11b/g/n Wireless local area network, 11ac 5.15GHz-5.825GHz

# Accessory parameters

ROS navigation specifications、Lamp specifications、Power system	
Operating system	LINUX
Processor type	Motherboard I5 ITX-H45-I526LVER:1.1A(4300U)
Hard disk	32G High-speed solid state drive
Motor driven	5.5 inch hub motor
Gyro	9-axis high-precision attitude sensor
Single-line lidar	Wavelength 905 nm, working area 270 degrees
4G router to 2.4GWIFI	4GCPE-M6 (Optional)
512AN_HMW Module Intel WIFI	Support dual-band 2.4&5G WIFI&BT4.1 802.11 b/g/n, wireless LAN, 11ac 5.15GHz-5.825GHz
Lamp specifications	PHILIPS TUV T8
Lidar	20m
Total lamp power	180W
Number of tubes	6 Pcs
Length of UV lamp	90cm
type of battery	10S16P Capacity 20800 mAh/37V
Battery life	2.5h~3h
Power Adapter	Enter: AC100-240V.50-60HZ Out: DC42V 3A
Charging method	Automatic recharge, DC direct charge
Charging pile parameters	Output voltage: 42VDC, Output current: 3A
	Overcurrent protection, intelligent power off
Product weight	52kg
Overall size	540mm*360mm*1462mm

# Operation instructions



Software operation interface

Step 1: Log in to the robot management background on the computer's web end to calibrate the disinfection position

Step 2: Select the disinfection software to start up, low battery automatic charging parameter settings

Step 3: Create a disinfection task, choose manual or scheduled disinfection modes

Step 4: Set the disinfection time regularly, disinfect the whole process or the target point

Step 5: Click to start disinfection, and create disinfection task automatically

Step 6: Log in to the computer web terminal to view the running status of the disinfection robot in real time

# Precautions

01

When using UVC sterilizing robots, people and animals should stay away from the ultraviolet radiation area. Do not look directly at the ultraviolet light source.

02

The best disinfection temperature is  $-15\sim 45^{\circ}\text{C}$ , the humidity is less than 80%, and the temperature is too high or too low will affect the sterilization effect.

03

During the use of the UV lamp, the radiation intensity gradually decreases. The UV radiation flux should be measured regularly, and it is recommended to replace it after 8000 hours.

04

When using the ultraviolet disinfection robot for disinfection, keep the lamp tube clean, and clean the surface of the lamp tube in time when the power is off.

05

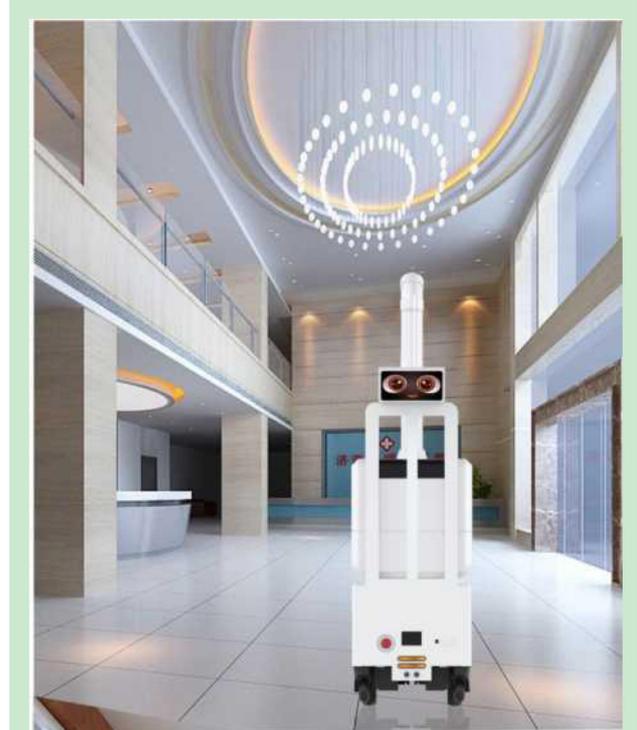
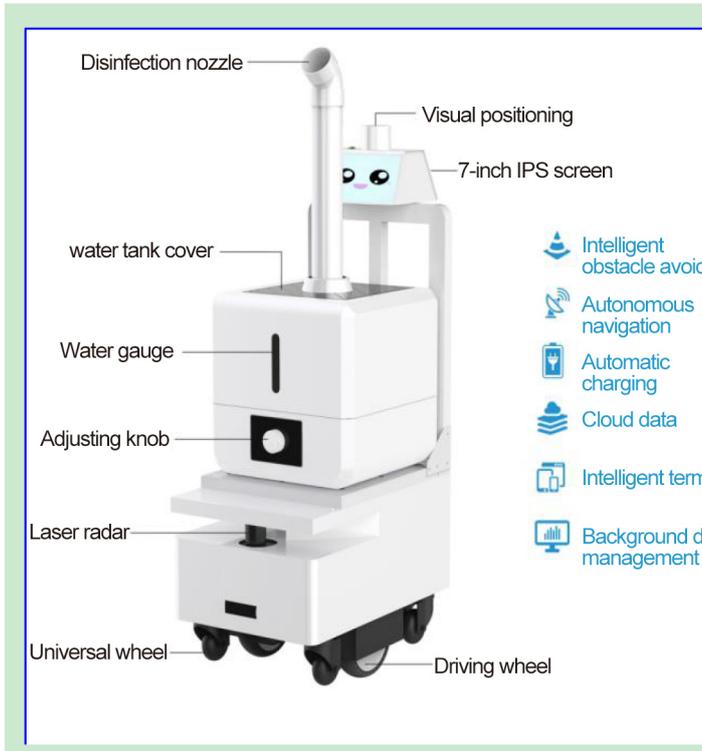
After using the ultraviolet disinfection robot to disinfect, it is recommended to ventilate the room for more than 30 minutes.

# SMART STERILIZING SPRAY ROBOT

KRUZR 2



# SMART STERILIZING SPRAY ROBOT



## Independent planning path

Custom disinfection path, covering an area of 25000m



## Reduce cost, increase efficiency and improve work efficiency

Reduce labor cost and improve disinfection efficiency



## Automatic return charging

When the power is lower than the preset value, it will return to charge automatically



## Customized product deployment

The product design can be customized according to the actual needs



Hospital hall

Community clinic

Station waiting

School classrooms

## Product functions and parameters



### Product characteristics

#### Independent path planning

Custom setting disinfection route

#### Super endurance

The whole machine can last for 3 ~ 4 hours

#### Automatic return charging

If the battery is too low, it will return to charge automatically

#### Multi mode indoor unmanned driving technology

V-slam + laser slam flexible combination, stable operation

#### Global original remote and convenient deployment capability

Remote automatic deployment, convenient and efficient

#### Self access elevator (optional)

It can be linked with the elevator control system, cross floor work, more worry free

### Intelligent indoor disinfection    One stop service

- The robot has higher disinfection efficiency and safer disinfection method
- Accession Reduce the cost of manual use, improve the efficiency of disinfection, complete a variety of disinfection tasks in a shorter time, and ensure disinfection services
- Installation and deployment is simple, convenient, user-friendly operation, one key start disinfection task, no too many cumbersome procedures, more worry free
- Supported disinfectants: sodium hypochlorite, hydrogen peroxide, peracetic acid, etc., with strong disinfection properties, more thorough disinfection and safer use



Moving mode:	Independent path planning (covering an area of 25000 cranes)
Moving speed:	0.2 ~ 0.8m/s (recommended operating speed is 0.4m / s)
Disinfection efficiency:	Disinfect 1000m <sup>3</sup> in 15 minutes
working hours:	3-4 hours at full power (self charging, unlimited endurance)
Spray particle size:	2~5µm
Spray rate:	800~3000mL/h
Applicable media:	Hypochlorite, sodium hypochlorite, hydrogen peroxide, peracetic acid
Disinfection level:	Effective disinfection, up to 6-log level
Volume of water tank:	16L



# **CONTACT**

**IKE CHARLES**  
**IKE@ZENDGLOBAL.COM**

**(301)841.0012**