

# AI intelligent temperature measurement robot

## SDM70-R

### Product Features

Medical-grade thermal imaging

Multi-person non-contact temperature measurement

VIP voice welcome

face recognition security

Low-level accurate monitoring

High-definition advertising information

Fast mobile deployment

Cloud management records



Used for long-distance human body temperature detection 1.5m~5m

Camera + embedded motherboard + black body integrated structure

Built-in black body, automatic correction, no fear of the influence of environmental temperature changes on thermal imaging

Accurate forehead temperature algorithm measurement, filtering the effect of high temperature background

Easily connect to the cloud for data analysis

Nano atomization disinfection

4A Intelligent System

5G Internet of Things

365 Days × 24H

AI human-computer interaction

Safe and efficient operation

### Artificial intelligence temperature measurement and detection system

The system is equipped with automatic face recognition and capture, and can detect the thermal temperature of the forehead in milliseconds. The thermal temperature measurement accuracy is  $0.2\text{ }^{\circ}\text{C}$ . At the same time, SDM70-R has an automatic temperature algorithm based on artificial intelligence technology, without on-site manual intervention. , Can accurately identify and count the number of people passing by, and quickly analyze and display the temperature of individual personnel.

It can monitor a large range of people at the same time. At the same time, it supports temperature measurement of up to 20 people, with millisecond-level

response, and quickly finds the higher body temperature in the crowd, marks them in red, and transmits them to the management platform in real time.

#### **Ultrasonic nanometer atomized disinfectant, with good dispersibility and wide coverage**

The robot has a built-in 15L large-capacity disinfectant tank, uses environmentally friendly food-grade pure hypochlorous acid (HClO) disinfectant through ultrasonic nano-level atomization, 3L/H fog volume, far exceeding the atomization level of the same level robot, silent fan blowing with large air volume, Mobile spraying, diffuse coverage of the whole space, thorough sterilization and disinfection.

#### **4A intelligent system: automatic navigation, automatic obstacle avoidance, automatic fluid replenishment, automatic charging**

The robot intelligent chassis has a completely autonomous mapping capability. During the movement, it uses the point cloud data of the SLAM lidar and the depth image information of the depth camera, plus the ultrasonic scanning obstacle avoidance module, to complete the perception of the environment and establish centimeter-level precise positioning, To realize automatic navigation and obstacle avoidance.

Through the liquid level sensing device, the disinfectant will automatically return to the "disinfectant intelligent all-in-one machine" for replenishment when the amount of disinfectant is lower than the set amount, and then navigate to the return point again to continue the unfinished disinfection procedure after filling up.

The robot is equipped with a low-power protection program, and when the power is less than 30%, it will automatically return to the charging station to replenish the power.

#### **5G/WIFI wireless Internet of Things, real-time transmission, sending alerts**

The robot has a built-in 4G/5G/WIFI module, which is remotely controlled through account passwords, encrypted real-time transmission of monitoring and feedback operating data, and those with abnormal body temperature will send warning messages to the preset management center.

#### **365 days × 24H all-around anti-epidemic and disinfection guard**

Achieve 365 days × 24 hours uninterrupted temperature measurement and disinfection planning, fixed posts and large-scale mobile thermal imaging scanning temperature measurement, epidemic prevention and screening in fixed positions and preset spaces during the day, and voice service guidance can be carried out, and the preset program path is automatically coordinated at night The automatic rehydration charging function performs 360° no dead-angle atomization spray disinfection, which solves the disadvantages of artificial fatigue and inadequacy.

#### **AI intelligent human-computer interaction, auxiliary services**

Combined with big data cloud computing, the iFLYTEK AI intelligent voice interaction system is adopted to realize auxiliary functions such as man-machine dialogue and communication, consulting services, information inquiry, reception and welcoming.

### Safe and efficient operation

It has functions such as automatic obstacle avoidance, voice warning reminder, and emergency button deactivation. The separation of man and machine reduces personnel contact and effectively reduces the risk of infection. Ultra-dry atomized disinfectant, there is no residue in the disinfection process, and the disinfectant is safe to contact with the body surface. The low-voltage design of the whole machine meets the requirements of relevant safety inspection centers.

<b>Product parameter</b>	
<b>Whole machine structure</b>	
length	525mm
width	525mm
high	1400mm
Universal wheel	3.9in
Driving wheel	85in Rubber wheel
Turning radius	NO
material	Steel
weight	40kg
Optimal weight	30kg
Maximum load	70kg
Sports mode (optional)	Push mode or independent automatic walking mode
<b>Sensor</b>	
Obstacle Avoidance Sensor	Ultrasonic module*5
IMU	Onboard: with MEMS gyroscope, 3-axis accelerometer
Lidar	EAI G4*2
<b>Visible Camera</b>	
Resolution	1920*1080(2 M>illion Pixels)
Imaging Device	1/2.7inch CMOS
Minimum Illuminance0.01	Lu (Color Mode) , 0.001Lux(Black and White Mode)
Signal to Noise Ratio	>56dB
Resolution	1920*1080(2 M>illion Pixels)
<b>Temperature Measurement</b>	

Detector type	Uncooled infrared array sensor
Resolution	160X120(384*288)
Pixel Pitch	17μm
NETD	≤60mk (F/1,300K, 50Hz)
Frame Rate	15 Hz
Temperature Measurement Data Output	Full Range Temperature Output
People Per Second	200 people in one minute
Detector Type	Uncoiled Infrared Array Sensor
Resolution	160X120(384*288)
DC	5.5V 3A
<b>Black body</b>	
Effective radiation area	20mm*30mm
Effective emissivity	0.96 ±0.02
temperature range	(Ambient temperature+5°C)~(50°C)
Temperature resolution	0.01°C
Temperature stability	>±0.1°C/60min
Heating time	<2 minute
<b>Battery and endurance</b>	
Battery Type	Power lithium battery
battery capacity	30Ah/24V
Charging time	4.5Hour
Charging voltage	29.4V
Current	10A
Protective function	Support over current, over discharge, short circuit protection
Standby power consumption	<25W
No load battery life	10Hour
<b>Charging pile</b>	
Automatic recharge	suppor
Direct charge	suppor
<b>Motor</b>	
Motor type	Brushless DC Hub Motor
Nominal power	250w
Encoder resolution	4096

working environment	
Charging temperature	0~45°C
Discharge temperature	-10~60°C
Working humidity	30%~70%
interface	
power supply	14V、12V
Hardware interface	LAN、USB
SDK	SDK
disinfect	
Disinfection method	Various disinfectant aerosol and ultraviolet and plasmon
Degree of disinfection	Kill bacteria and viruses>99.99%
Disinfection is optional	Timed, fixed point, quantitative disinfection
Disinfection efficiency	1000m <sup>3</sup> disinfection can be completed in 15 minutes at the fastest
Spray particle size	≤10μm
Spray rate	2L/h-5L/h
Disinfection level	Efficient disinfection, up to 6-log level
Liquid volume	15L
Solution filling	
Auto-fill	suppor
Automatic solution generation	suppor
Sports performance	
Maximum movement speed	1.0m/s
Maximum obstacle height	20mm
Maximum ridge width	40mm
Maximum climbing angle	10°
Mapping performance	
Map resolution	2-8cm
Maximum construction area	5000 m <sup>2</sup>

communication method	
communication method	WiFi+4/5G