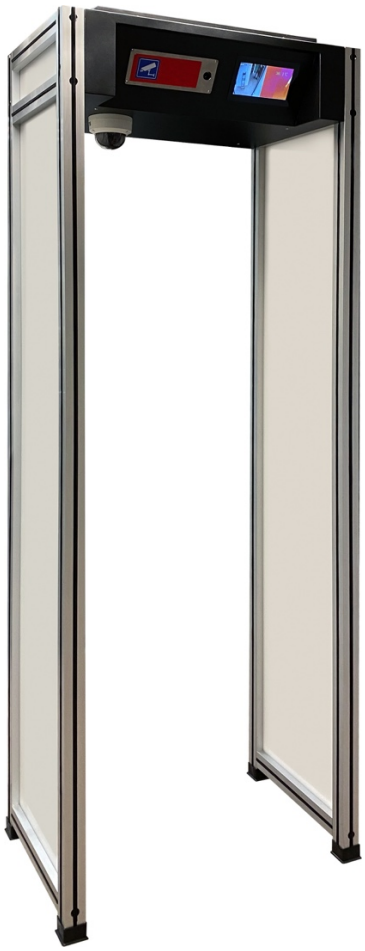
ThermoGuard

User Manual



Contents

Precautions

The following precautions aim at instructing user to use the device safely and properly. Please read the following instructions and make sure you understand them thoroughly before you use the device.

1) Our product is only suitable for indoor-use. If it is installed in semi-outdoor area, always keep rain water away from the device.
2) High humidity and high temperature environment should be avoided.
3) Non-professionals shall not dissemble the device or change any setting.
4) To ensure the thermal imaging system is ready, a minimum of 10 minutes is required for the thermal camera to prepare itself.
5) Install the device on flat and smooth floor. Avoid any unnecessary contact or crash between users and the door.
6) To prevent damaging the screen, do not use anything sharp to touch the screen or pressing too hard on it.

Introduction

ThermoGuard is a thermal imaging thermometry door specifically designed to prevent large scale virus spread in high traffic public areas like ports, airports, prisons, detention centres, piers, train stations, hospitals, schools, sport centres, hotels, casinos and factories. It measures people's body temperature when they walk through the door.

Our product uses window 7 as operating system, and it is implemented with a self-developed thermal imaging system. Peripherals such as external monitor, mouse, keyboard, LAN card can be connected to the device through USB port. It fits the needs of different use cases and makes configuration more convenient.

Our product uses thermal imaging technique to increase temperature detection accuracy. Once the system is on, the built-in thermal camera scans temperature continuously to detect if anyone passing through the door has a fever. The default setting threshold is 37.3℃, The measurement error is ± 0.5℃, and its accuracy is ± 0.02℃. If anybody passing through the door has a body temperature higher than 37.3℃, the alarm will ring and the camera will take a snapshot of the person who has a fever. The temperature on the screen shows the temperature of the previous person who pass through the door, the value will renew when movement is detected. The whole temperature detection process does not require direct contact between user and the door. It helps reduce staffs' workload and lower their chance to be exposed to the virus if there is any virus carrier.

Surrounding environments and body movement may cause some variations to body temperature, therefore the detected temperature showing on the screen may slightly fluctuate from time to time.

Product Advantages

Safety to use

Non-contact detection, adaptive to various environment

Effective Scanning

Scanning is done within a milli-second

No Leakage

The thermal camera is able to scan everyone who pass through the door

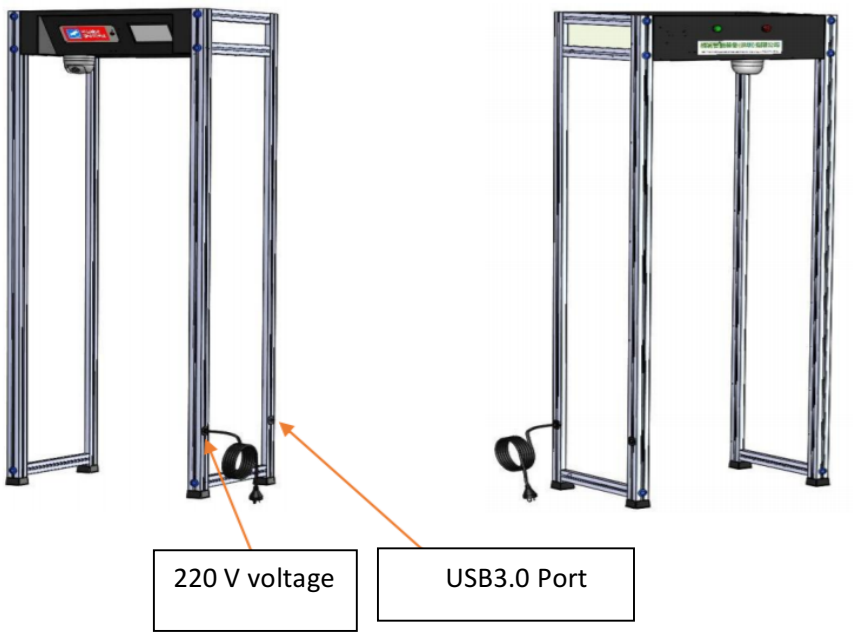
Other advantages

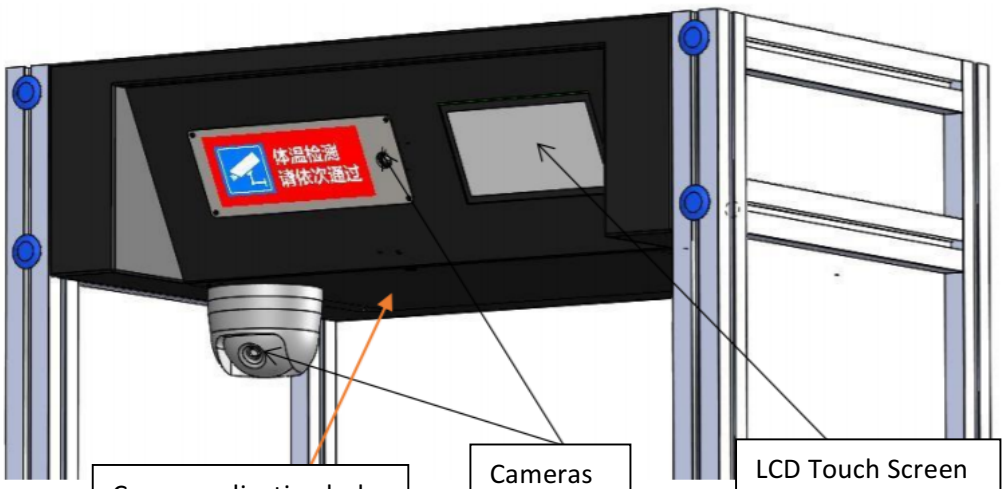
1) Non-contact temperature detection
2) High accuracy
3) Effective scanning
4) Loud and clear Alarm
5) Recording suspicious cases

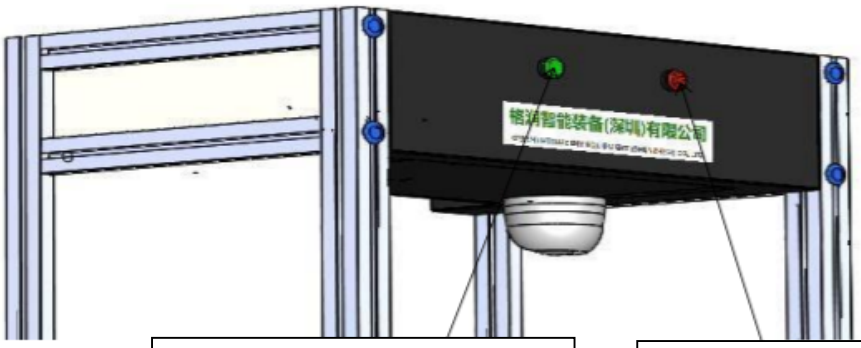
Product Features

1) Our product can be used in crowded area
2) Nice-looking appearance and Stable door structure
3) Scanning body temperature non-stop, alarm rings if temperature exceeds 37.3℃
4) Screen capture of suspicious cases with high successful rate. The records will remain in the computer
5) Window 7 dual core operating system is used, high RAM, quick response.
6) 7 inches LCD touch screen showing real time temperature
7) Support external monitor, mouse, keyboard, USB port, and network

How Does Our Product Look Like




体温检测
请依次通过
Camera adjusting hole
Cameras
LCD Touch Screen

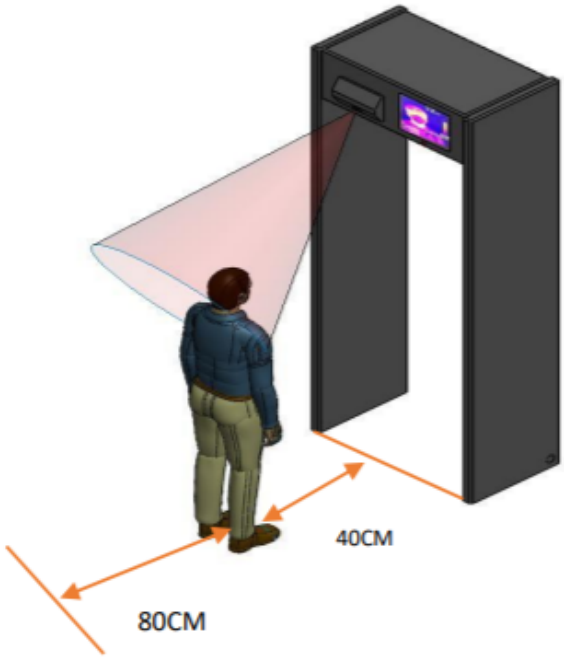

Green LED (light up when temperature< threshold)
Red LED (light up when temperature> threshold)

Specifications

Name	Parameter
Operating System	Windows7/ Dual Core
ROM	128G
RAM	4G
Camera Resolution	4 million pixels
Thermal Camera Resolution	160*120
Temperature Range	0℃ -45℃
Alarm type	Built-in alarm
Temperature Threshold	37.3 (default)
Power supply	220V/60Hz
Alarm Loudness	>85dB
Input Power	75W
Screen	7-inch LCD touch screen, resolution: 1024*600
Detection rate	>30 head per min
Weight	53kg
Dimensions	2200mm(H)*800mm(W)*500mm(D)
External output screen	Support VGA
Camera recording	Support camera recording
Network	Support 4G, 5G, WIFI and Ethernet
Other external devices	Support mouse, keyboard and USB
Working Environment	Indoor with low humidity

How to Use the Door Properly

1) Place the door in dry indoor place
2) Connect the device with 220V Power supply. The device will start and screen will turn on automatically.
3) Wait for 10 mins for the thermal camera to get itself ready.
4) Slowly walk pass the door. Keep 80 cm distance. Stop 40 cm in front of the door and wait for 0.5 second to get the best result.



5) If the person passing through the door has body temperature> 37.3 (default value), the alarm will ring and the device will save the photo automatically.
6) The detected temperature may fluctuate slightly due to the surrounding. If the temperature fluctuates a lot from time to time, calibration is needed.
7) Our product support USB 3.0 Port, VGA port. The USB 3.0 port is next to the power supply. It supports VGA port and USB hub and other peripherals.

Connect to External Devices

Please note that we do not provide the following devices.

1) USB 3.0 hub (driver setup needed)
   a) USB 3.0 hub can be used to connect to external peripherals such as mouse, keyboard, USB and Lan Card
   b) 100M Ethernet port can be used to provide internet service

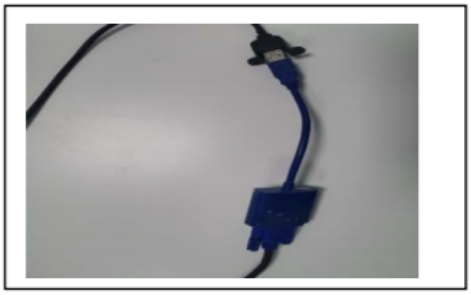
2) Wireless LAN card
   a) USB 3.0 port support both wired and wireless Lan Card
   b) Touch/ Click the network logo appeared at the bottom right corner to connect to internet
   c) Wireless Lan Card, or data card can be used

Connect to external monitor

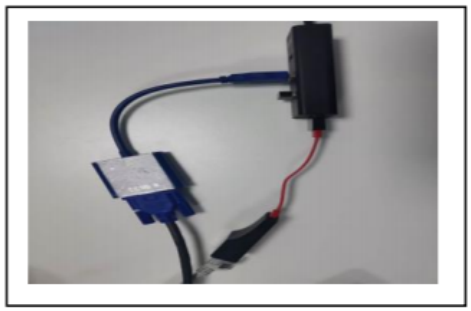
1) VGA Adapter, VGA cable, USB hub, Ethernet port are needed
2) Wire up the device (refer to picture 2).
3) If the external monitor is successfully connected to the device, (refer to Picture A). If it fails to connect to the device, check the connection and check if installation driver is needed.
4) Right Click (Refer to Picture B). and choose 'display setting'. Choose Duplicate desktop on 1 and 2 (Refer to Picture C) and make it as the main screen (Refer to Picture D)
5) Adjust the monitor resolution if fail.

If installation of driver is needed,

1) Dissemble the top of the door
2) Connect the VGA Adapter to the 15pin-port
3) Install the driver using USB drive or through internet
4) Upon completion, reassemble the door



Connection Method 1



Connection Method 2

Picture A

Picture B

Picture C

Picture D

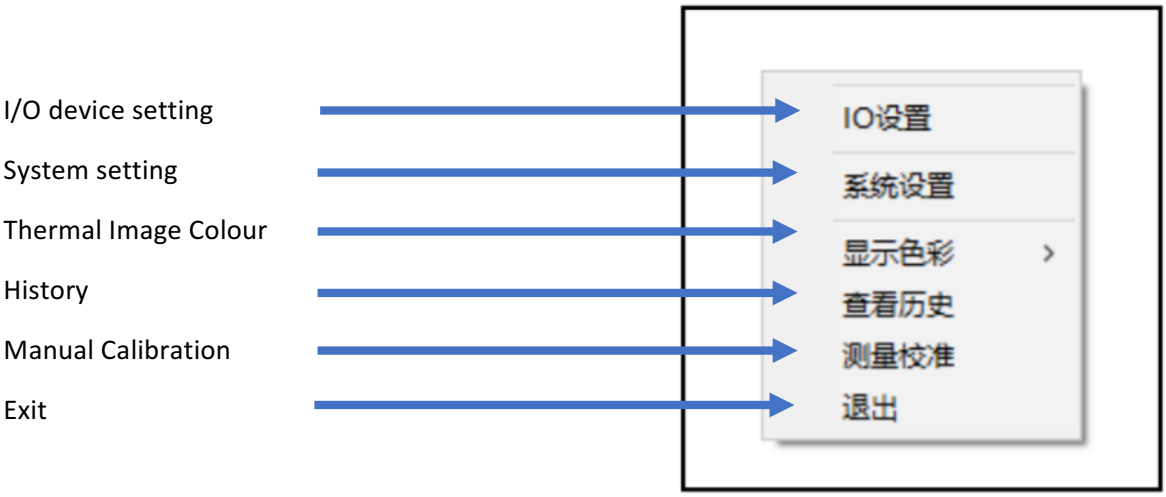
Picture 3

Picture 4

Setting Configuration

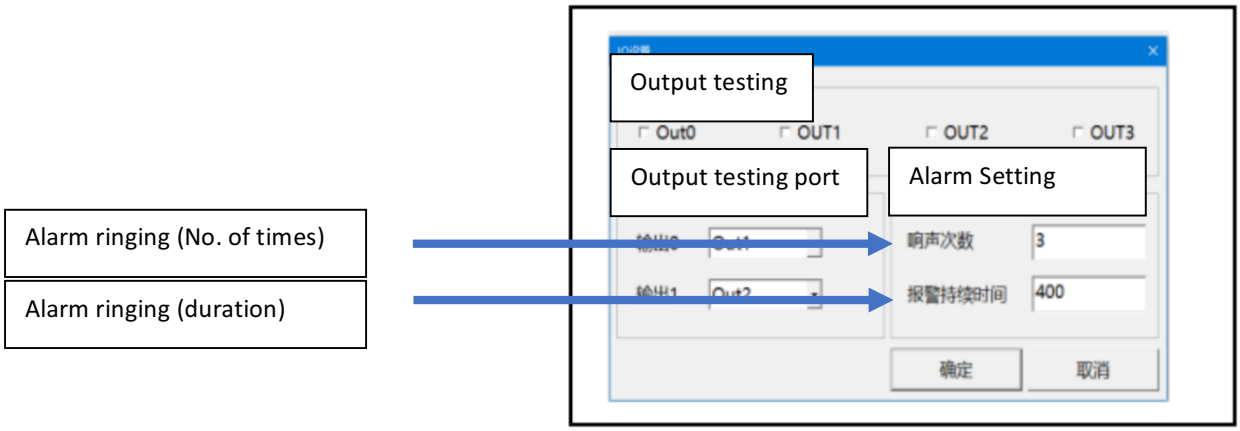
Start the Software

a) Touch the LCD screen twice or click the mouse to enter the system
b) Wait for 5 seconds to enter the system. Press the LCD screen for 3 seconds or right click mouse to see the software configuration list.



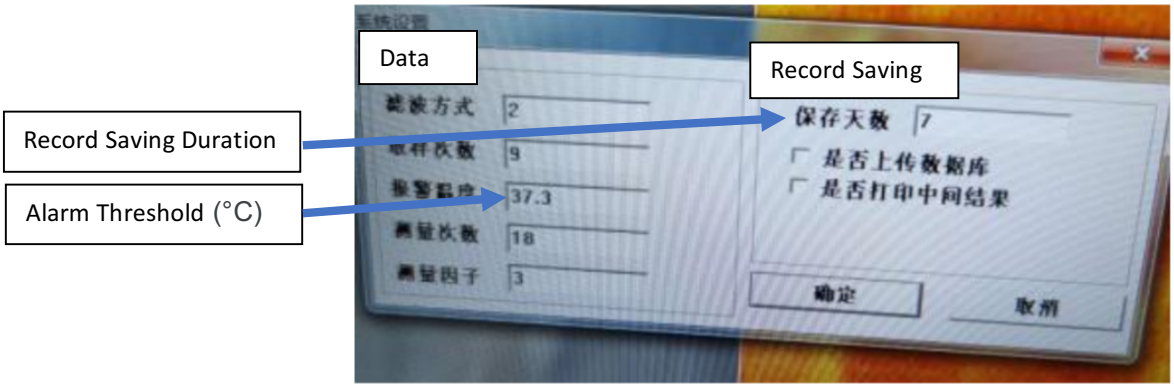
I/O Device Setting

a) Touch or click I/O device
b) In I/O device setting, user can change the parameter under 'Alarm Setting' Change of other setting is forbidden.



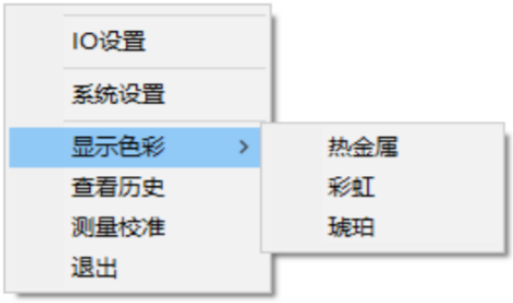
System Setting

a) Touch or click I/O System Setting
The following parameters can be changed: Alarm Threshold and Record Saving Duration (Days).
Change of other setting is forbidden.



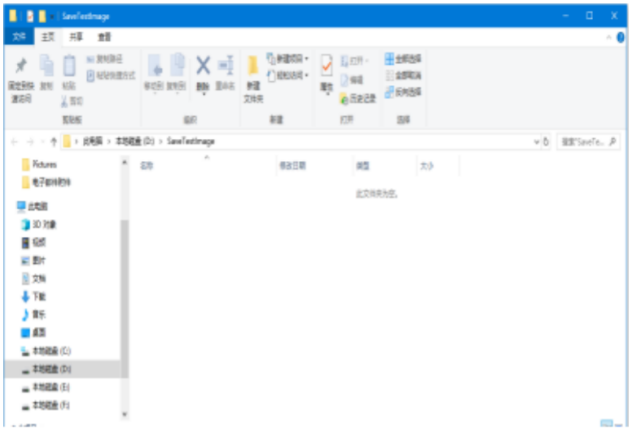
Thermal Image Colour

a) Touch or click I/O Thermal Image Colour Palette
b) The First Option is set as the default colour palette.



History

a) Touch or click I/O History
b) Once clicking 'History', it will redirect you to D drive, where record is saved.
c) Each time when the device detects a Fever person (body temperature > threshold), The Camera will take a snapshot and Automatically save the photo in D drive.



Manual Calibration

To Obtain data,

1) Compare the detected temperature between the device and a thermometer for at least 3 times. Take the average of the difference.
2) Put the difference on the white space on the right of ‘b’, then click ‘Write’.
3) Press ‘X’ on the upper right corner to exit.