E-Guardian S409

Mask & Fever Detection Solution

Quick Installation Guide

FC

CE

Draft Version

Federal Communications Commission (FCC) Statement

15.21
You are cautioned that changes or modifications not expressly approved by the
part responsible for compliance could void the user's authority to operate the
equipment.

15.105(b)
This equipment has been tested and found to comply with the limits for a Class
B digital device, pursuant to part 15 of the FCC rules. These limits are designed
to provide reasonable protection against harmful interference in a residential
installation. This equipment generates, uses and can radiate radio frequency
energy and, if not installed and used in accordance with the instructions,
may cause harmful interference to radio communications. However, there is
no guarantee that interference will not occur in a particular installation. If this
equipment does cause harmful interference to radio or television reception, which
can be determined by turning the equipment off and on, the user is encouraged to
try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that
  to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules.Operation is subject to the
following two conditions:
1) this device may not cause harmful interference and
2) this device must accept any interference received, including interference that
may cause undesired operation of the device.

RF exposure warning
This equipment must be installed and operated in accordance with provided instructions
and the antenna(s) used for this transmitter must be installed to provide a separation
distance of at least 20 cm from all persons and must not be co-located or operating
In conjunction with any other antenna or transmitter.

End-users and installers must be provide with antenna installation instructions
and transmitter operating conditions for satisfying RF exposure compliance.

System Overview

The S409 mask and fever screening detection solution is designed for fast preliminary detection of potential fever symptoms. The S409 comprises of the following main components:

- Thermal camera: An infrared thermography camera to detect potential fever. A temperature of >37.5°C is defined as potential fever with S409.

- Calibrator: To calibrate the thermography camera to enhance the accuracy.

Calibrator

Thermal camera

Power button

Speaker
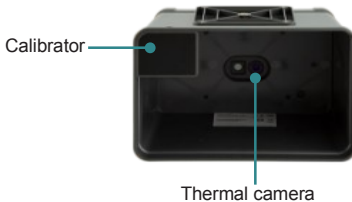
How the S409 Works

AI-Powered Human Recognition

The S409 is an AI-powered solution so it is able to recognize a human from the thermal image and thus measuring the forehead temperature and mask. An individual wearing a mask can still be detected.
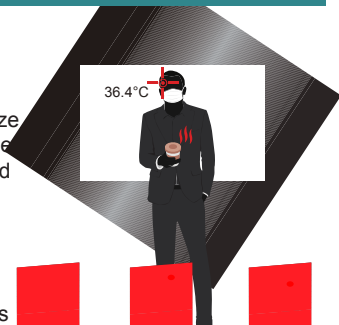
Real-time On-Screen Display

The S409 continuously measures the temperature and mask of people passing through the S409. Detection results are displayed real-time on the screen.

Audio Alert on Potential Fever

When potential fever is detected, the S409 sends an audio alert for further examinations.

Installation Options

Designed for flexible installation, the S409 comes with an all-in-one installation kit to support various installations.

A. VESA Mount

S409 can be installed on the VESA kit for the vehicle application.

Optional
VESA mount kit

B. Tripod Mount

S409 can be installed on the tripod with an universal 1/4" threaded tripod socket for installation on a tripod.

Optional
tripod

Package Contents

* S409 (including power cord and S409.)

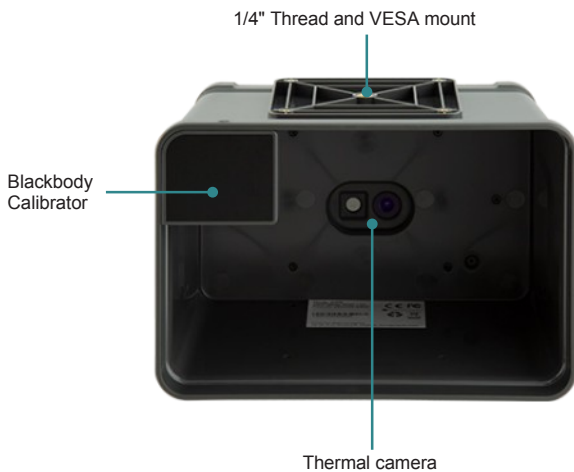|	
	• Type-U power cord for vehicle (Please note that this is for vehicle version)
	• M8 to DC power cord for indoor (Please note that this is for indoor version)

Getting Started

Before installation, please get yourself familiar with the components of the S409.
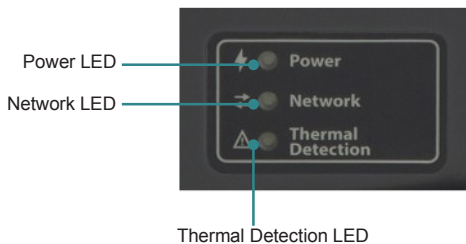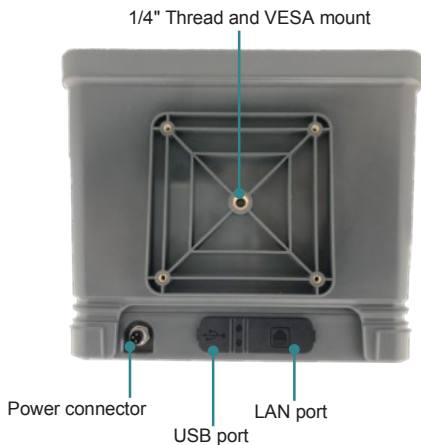
Front View

1/4" Thread and VESA mount

Blackbody Calibrator

Thermal camera

Rear View

LED Indicator Status

Power LED

Network LED

Thermal Detection LED

Getting Started

Bottom View

1/4" Thread and VESA mount

Power connector

USB port

LAN port

Side View

SIM Card and
Memory Card slots
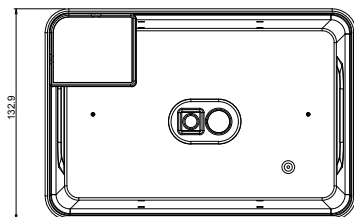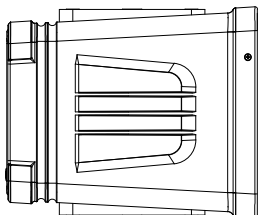
Dimension
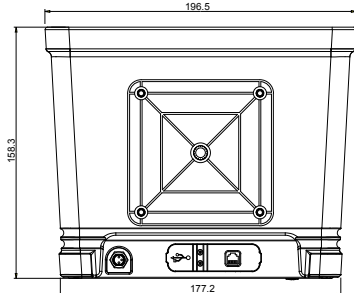
Installation Advice

Before proceeding to install the S409, please follow the guidelines below to get the optimal performance of the system:

- Install the S409 indoor with ambient temperature of 15~30°C.

- For the person to be detected, it's suggested to stand at a distance of 1M~1.5M to the S409.

- To avoid detection interference, prevent other heating source such as fluorescent or lamp from being constantly displayed in the S409's field of view.

- Avoid any covering on the forehead such as hair or hat to ensure the measurement.
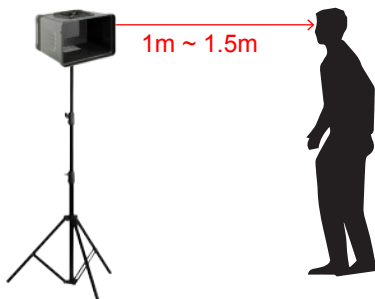
vvv

Installation Advice

- The S409 is capable of detecting multiple human temperatures. However, avoid overlaps between people to ensure the measurement. For optimal performance, it's suggested that you allow only one person at a time in the field of view at a time.

Optional tripod
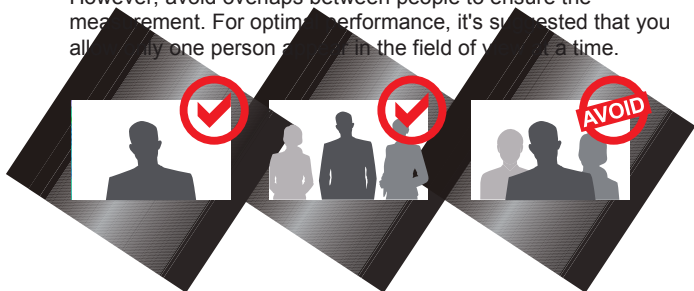
Installations

Installing the S409 – Vehicle

Please follow the steps as below to install the S409 in vehicle:

1. Locate the VESA hole in the bottom of the S409 mounting plate, and install 4 M3*L9 screws on the S409.

2. Tighten 4 M6*30 screws for two pairs of pipe clamps. The lower pipe clamp is about 125cm away from the car floor, and the distance between the two pipe clamps is about 10cm.

3. Tighten 2 M6*10 screws for racket/device on the pipe to secure the position.

4. Adjust the angle of S409 to 15 degrees to screen passengers in the vehicle. Then tighten the screws in the picture as left.

Cautions:

- DO NOT expose the S409 to direct sunshine, water, oil, dust or corrosive gas.

Installations

Mounting the S409 – Tripod Mount

1. Locate the threaded hole in the bottom of the S409 mounting plate.

2. Mount your tripod head to S409 plate. Tighten the screw-head from the bottom of the tripod head to secure the assembly. Then mount it to your tripod.

3. Adjust the angle and the height of the tripod to ensure the S409 and person to be detected are in the camera's field of view.

4. Connect the power cord of the provided power adapter to the power connector on S409. Then plug the power adapter into a power outlet. (use a coordinate plug adapter for your territory) The power of S409 will startup automatically.

(Please note that S409 will cause auto shut down after 10 seconds by itself if the power is unplugged.)

Cautions:

- DO NOT expose the S409 to direct sunshine, water, oil, dust or corrosive gas.
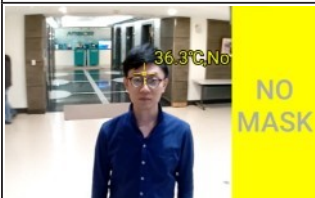
Installations

Power Connection

1. The S409 come with a Type-U (or M8 to DC) power cord for power source.

2. Attach the correct plug according to your location to the power adapter. Then plug the power adapter into a standard AC power outlet.

3. When power is applied, the S409 will power on automatically.

   Then the S409 will launch the Fever and Mask Detection APP automatically upon startup.

Using S409

When a person's temperature is detected under 37.5°C, "PASS" will be displayed; otherwise, "OUT OF TEMP" will be displayed and a sound alert will be sent. If the person did not wear the mask, the screen would show "NO MASK" and a sound alert will be sent.

|	
	When S409 detects the mask and the temperature is under 37.5, the monitor will show a green "PASS" sign.
	If the temperature is over 37.5, the monitor will show a red "OUT of TEMP" sign.
	If S409 does not detect the mask, it will show a yellow "NO MASK" sign.

Adjust the Volume

If usrs need to adjust the volume of the audio, follow the insutreuction as below:

- Slide down the menu

Adjust the Volume

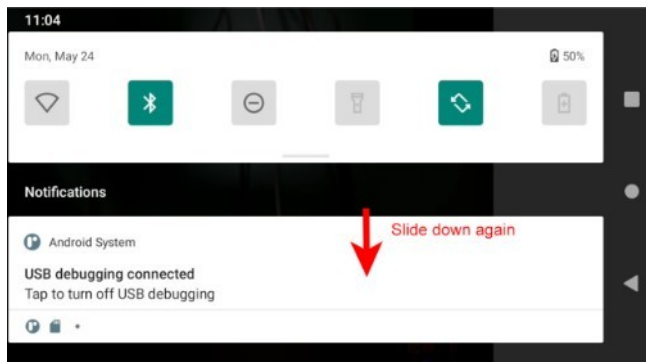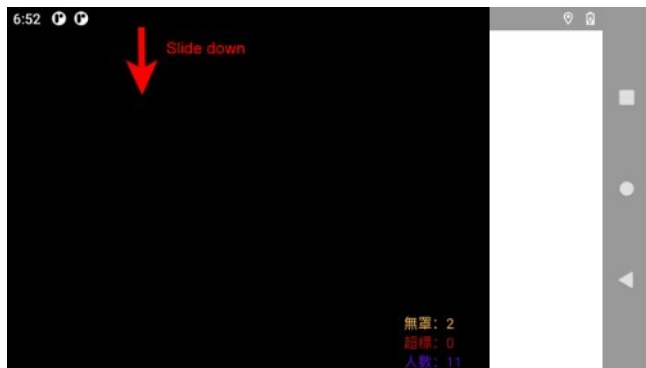Tap the setting icon
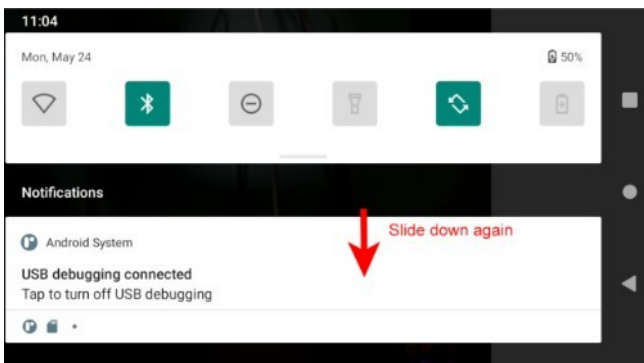
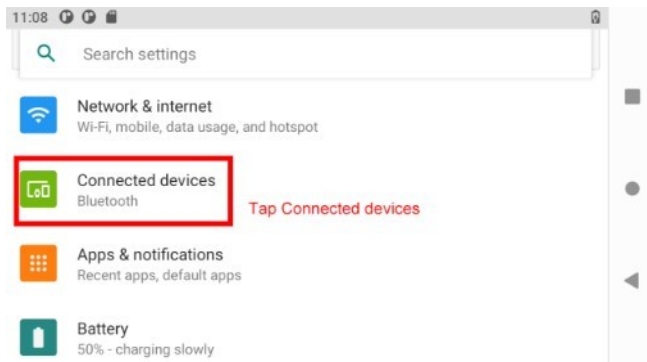Enter the "Sound" page
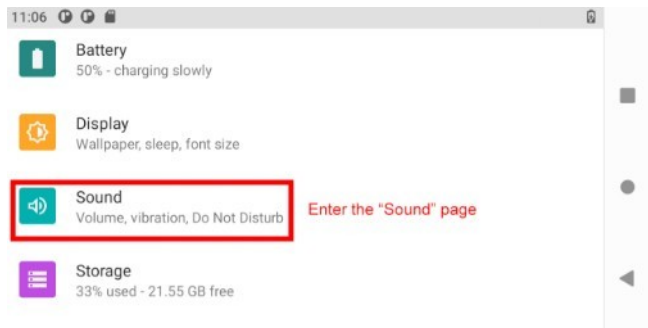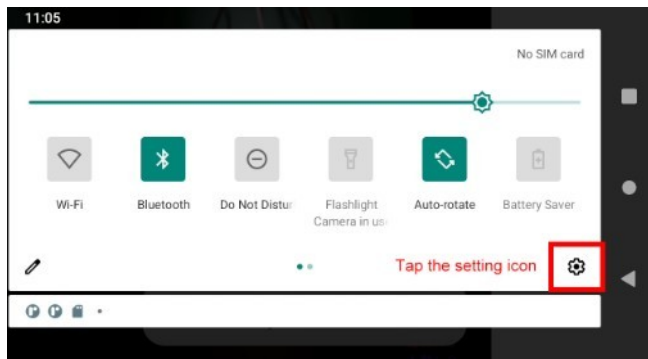
Adjust the Volume

Screen Mirroring

Wireless screen Mirroring is available for the S409. It's a suitable in-vehicle environment.

Please follow the instruction for the screen mirroring.

Screen Mirroring

Tap the setting icon

Tap Connected devices

Screen Mirroring

Tap Connection preferences

Tap Cast
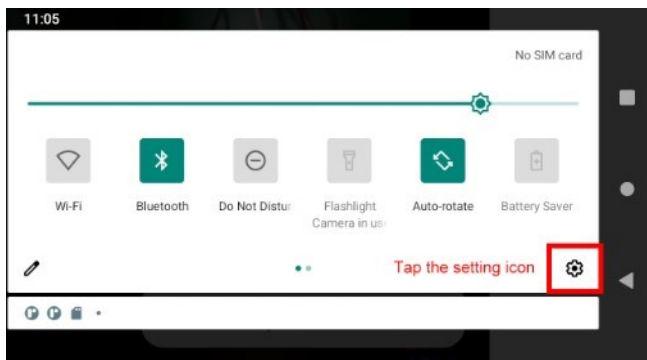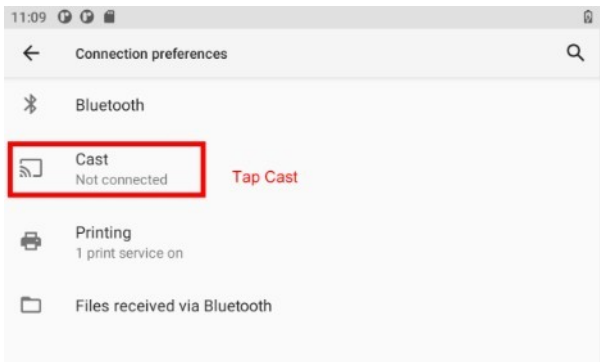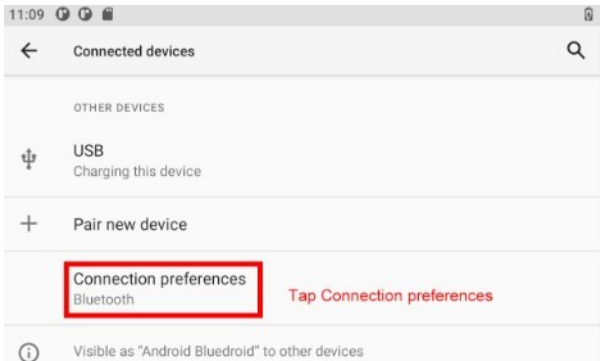
Then choose your devices. The screen on the S409 can be mirrored on your display device.

> (Please note that screen mirroring may not be supported depending on your model or brand of display devices.)

Specifications

Specifications Highlight	
Measuring Distance	1M ~1.5M
Accuracy	±0.5ºC
System Power	12V/24V, 3A
Touch Screen	5" Capacitive touch screen
Control	Power button
O.S	Android 11.0
Thermal Imaging	Lepton 2.5
Array Format	80 x 60
Calibration	Blackbody, ±0.3ºC
Dimension	196.36 x 132.86 x 157.61 mm (W x H x D)
Weight	920g
Working Temp.	15 ~ 30 °C
Storage Temp.	-10 ~ 50 °C

Q & A

	Q	A
1.	Q: What will the device do when subjects not in masks	A: When users are not in mask and have fever simultaneously, the device will say "Abnormal temperature".
2.	Q: Can the device scan a QR code?.	A:The QRCode scanning function is not built in the S409.
3.	Q: Can one device detect more than two people at the same time in a large field site.	A: It is recommended to set up a single gateway to detect one person at a time when developing S409. S409 can detect up to four people on a single screen at the same time.
4.	Q: What if the alarm sounds all the time and it is a misjudgment?	A: Please confirm if there is any round hot spot near to the subjects, and remove it..
5.	Q: What if the temperature of subjects is higher than the standard? Shall they be prohibited from entering?	A: When potential fever is detected, the S409 sends an audio alert. We suggest you use the medical temperature scanner for further examinations.
6.	Q: How far does the machine measure body temperature?	A: We recommended distance is about 1~1.5M. .
7.	Q: The temperature can not be detected by s409 when it starts up.	A: Please note that when S409 connects to the power, the temperature of the calibrator is not warm at first. Wait for about 5 - 6 minutes for the calibration furnace to reach the target calibration temperature.