

Suprema Thermal Camera

SETUP GUIDE

Version 1.02

English

EN 107.00.TCM10-FS2 V1.02A

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Safety instructions

Observe the following instructions to use the product safely and prevent any risk of injury or property damage.

Warning

Noncompliance of instructions could lead to serious injury or death.

Installation

Do not install the product in a place with direct sunlight, moisture, dust, or soot.

- A fire or electric shock may occur.

Do not install the product in a place with heat from an electric heater.

- A fire or electric shock may occur due to overheating.

Install the product in a dry place.

- Otherwise, a product damage or electric shock may occur due to moisture.

Install the product in a place with no electromagnetic interference.

- Otherwise, a product damage or electric shock may occur.

The user should not install or repair the product independently.

- A fire, electric shock, or personal injury may occur.
- If the product has been damaged due to independent installation or repair of the product by the user, free A/S service will not be provided.

Operation

Do not allow liquids such as water, beverages, or chemicals get into the product.

- A fire, electric shock, or product damage may occur.

Caution

Noncompliance of instructions could lead to minor injury or product damage.

Installation

Do not install the power supply cable in a place where people pass by.

- Product damage or physical injury may occur.

Do not install the product near a highly magnetic object such as a magnet, TV, (especially CRT) monitor, or speaker.

- A product failure may occur.

Operation

Do not drop the product or apply an impact to the product.

- A product failure may occur.

Manage the password with care not to disclose it to others and change the password periodically.

- Otherwise, illegal intrusion may occur.

Do not press the buttons on the product forcibly or using a sharp tool.

- A product failure may occur.

When cleaning the product, wipe the product with a soft and dry cloth and no water, benzene or alcohol.

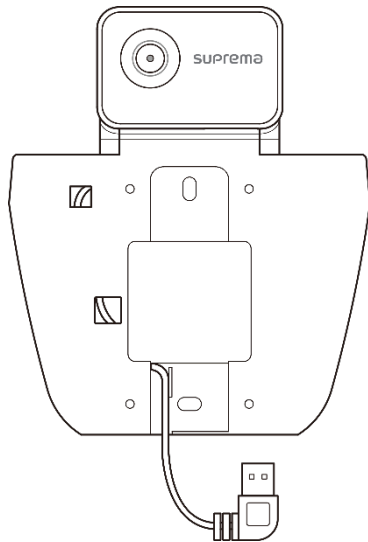
- Otherwise, a product failure may occur.

Introduction

Suprema Thermal Camera with FaceStation 2 measures skin temperature of users passing the access point and limit the access of users with higher temperature than preset threshold. FaceStation 2 sets the region for temperature measurement from where Suprema Thermal Camera detects the highest value point.

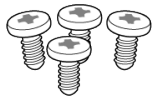
This document describes how to install the FaceStation 2 and Suprema Thermal Camera in combination.

Components

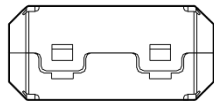


Suprema Thermal Camera

- Suprema Thermal Camera Module
- USB Cable
- Bracket



Bracket Fixing Screw x4



Ferrite Core



PVC Anchor x2



Fixing Screw x2

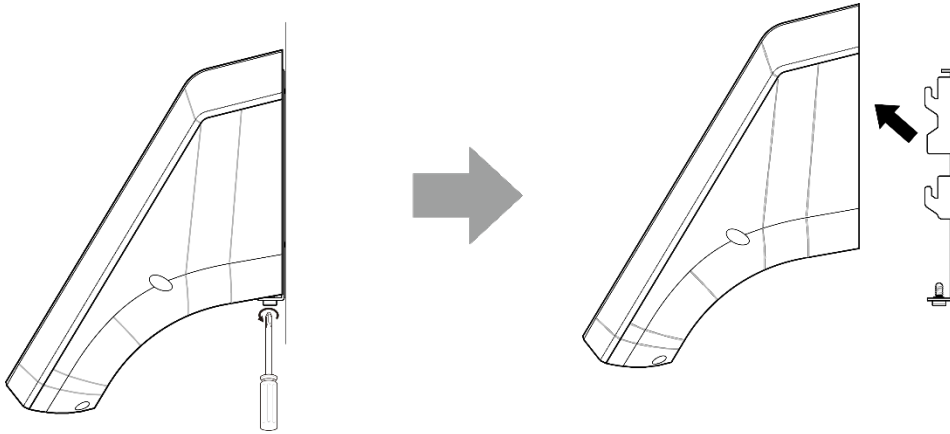
NOTE

- FaceStation 2 is sold separately. For more details, visit the Suprema website (www.supremainc.com) and refer to the user manual.

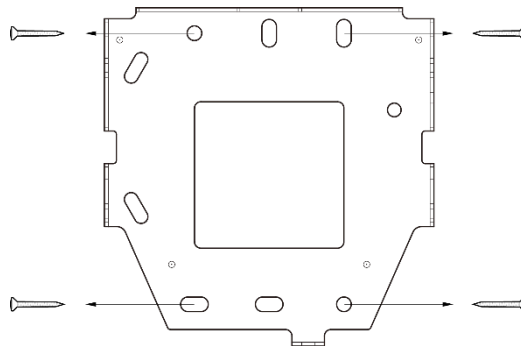
Installation

Installing Suprema Thermal Camera on a previously installed FaceStation 2

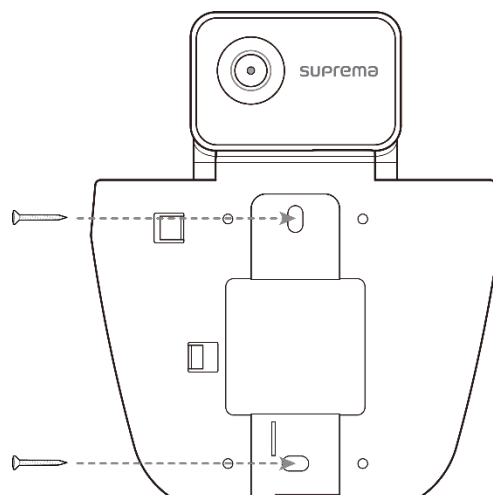
- 1 Loosen the bracket fixing screw to separate the FaceStation 2 and the bracket.



- 2 Loosen the fixing screws to separate the bracket from the wall.



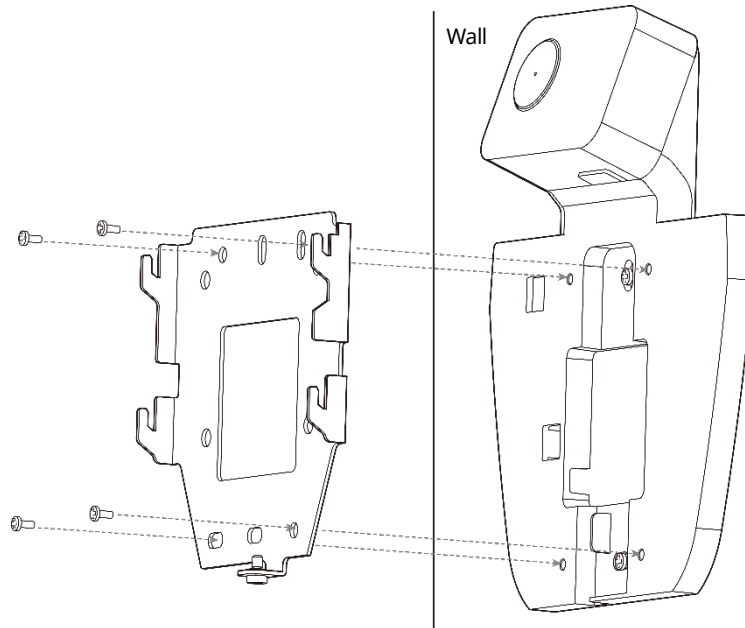
- 3 Fix the thermal camera module bracket firmly using fixing screws to the position where FaceStation 2 will be installed.



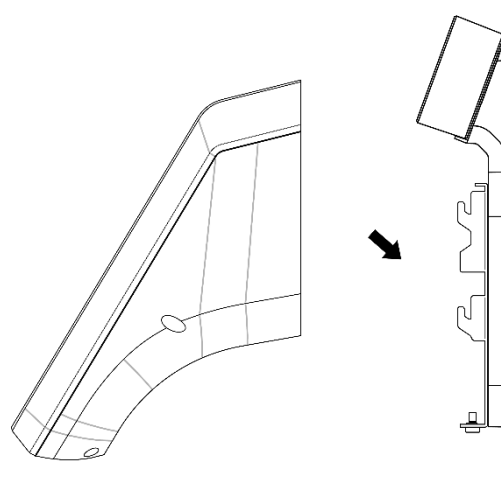
NOTE

- If installing FaceStation 2 on a concrete wall, drill holes, insert PVC anchors, and fix them with fixing screws.
- Install Suprema Thermal Camera in a stable ambient temperature environment that is not subject to bright lights in the camera's field of view. Suprema Thermal Camera may detect objects other than the intended subject if they are in the field of view of the camera, so the presence of other objects especially with elevated temperatures should be avoided.
- The device may be affected by the surrounding environment, such as sunlight, wind, or ambient temperature fluctuations. This may cause variations between the temperature measured by the device and actual skin temperature of the user.
- Warm up Suprema Thermal Camera for more than 90 minutes after turning it on for self-calibration.

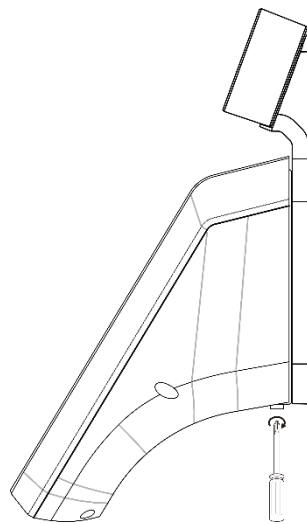
- 4** Fasten the thermal camera module bracket with the FaceStation 2 bracket by using bracket fixing screws contained in the package.



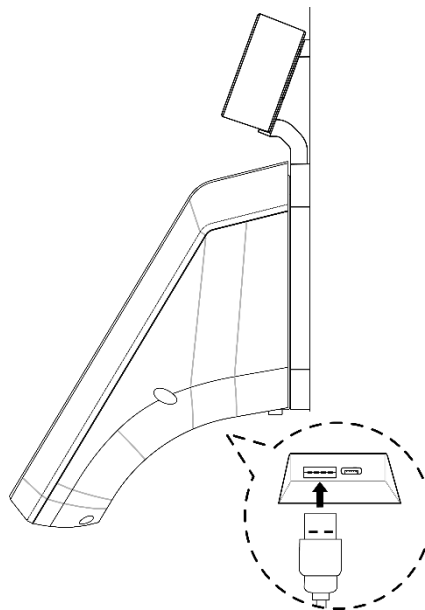
- 5** Install FaceStation 2 onto the fixed bracket.



- 6 Connect FaceStation 2 to the bracket by rotating the product fixing screw of FaceStation 2.



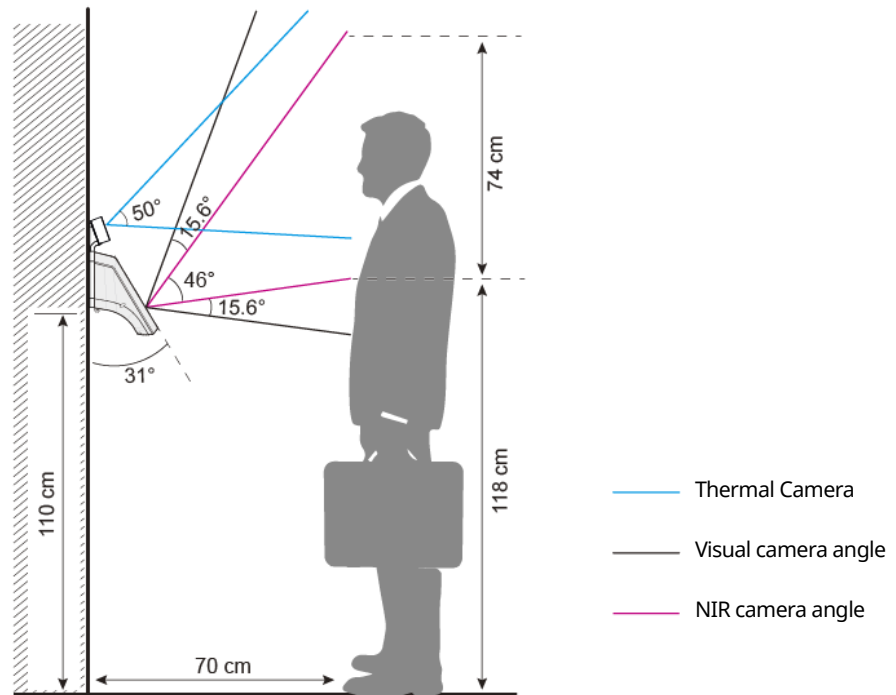
- 7 Connect the USB cable of the module to the connector of FaceStation 2.

**NOTE**

- To reduce the conducted noise emitted from the USB cable of the thermal camera, install a ferrite core close to the thermal camera connector of the USB cable.

Installing Suprema Thermal Camera on a new FaceStation 2

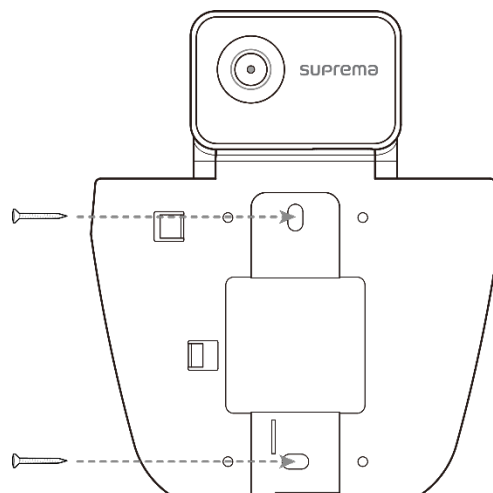
- 1 Determine the correct position to install the product using the provided drilling template.



NOTE

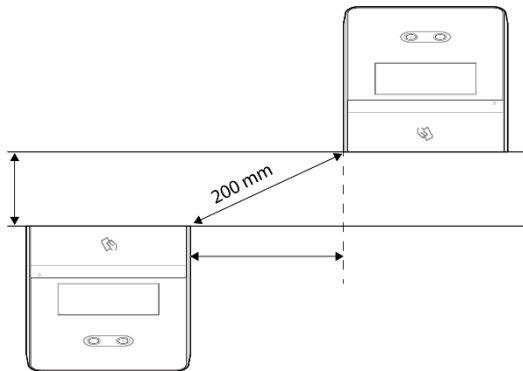
- The optimal height for installing device is 110 cm.
- Install the device where it does not reach the direct sunlight.
- Adjust the installation position so that the face is not exposed to direct sunlight when a user tries to authenticate.
- Install Suprema Thermal Camera in a stable ambient temperature environment that is not subject to bright lights in the camera's field of view. Suprema Thermal Camera may detect objects other than the intended subject if they are in the field of view of the camera, so the presence of other objects especially with elevated temperatures should be avoided.
- The device may be affected by the surrounding environment, such as sunlight, wind, or ambient temperature fluctuations. This may cause variations between the temperature measured by the device and actual skin temperature of the user.
- Warm up Suprema Thermal Camera for more than 90 minutes after turning it on for self-calibration.

- 2 Fix the thermal camera module bracket firmly using fixing screws to the position where FaceStation 2 will be installed.

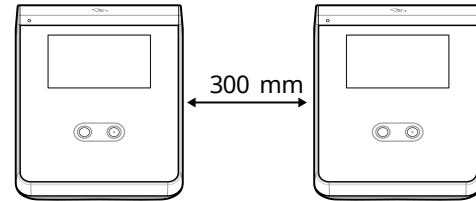


NOTE

- If installing FaceStation 2 on a concrete wall, drill holes, insert PVC anchors, and fix them with fixing screws.
- To avoid RF interference, a minimum separation distance must be maintained.

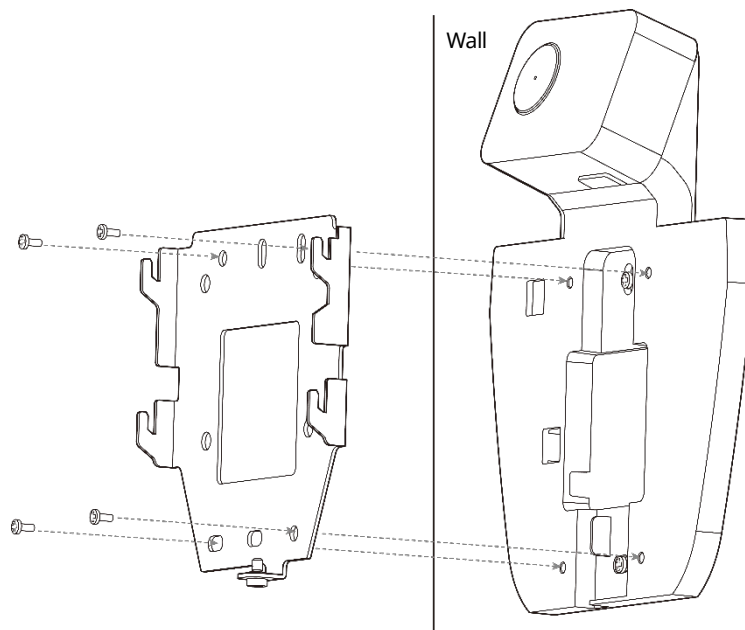


Wall

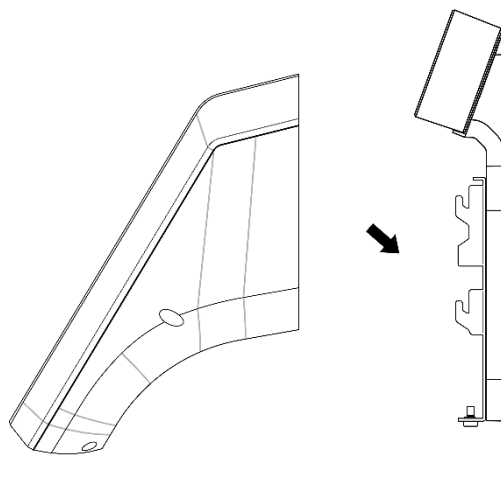


Wall thickness	Distance
100 mm	283 mm
120 mm	275 mm
150 mm	260 mm

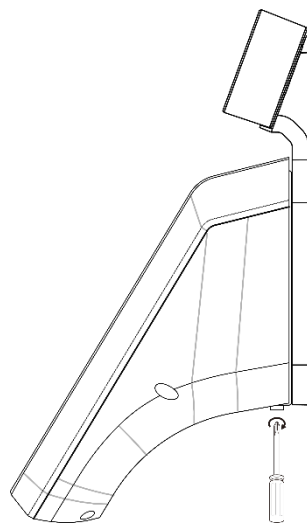
- 3** Fasten the thermal camera module bracket with the FaceStation 2 bracket by using bracket fixing screws contained in the package.



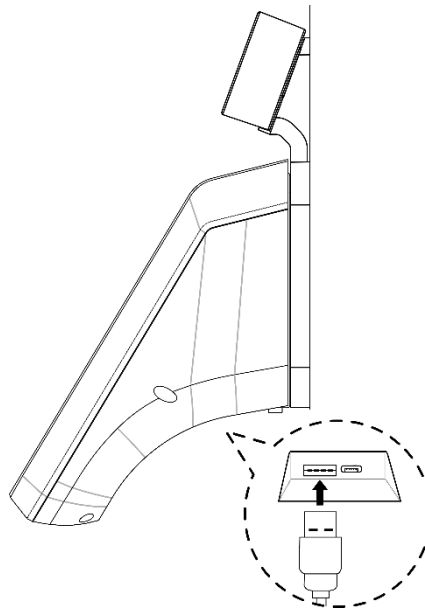
- 4** Install FaceStation 2 onto the fixed bracket.



- 5** Connect FaceStation 2 to the bracket by rotating the product fixing screw of FaceStation 2.



- 6 Connect the USB cable of the module to the connector of FaceStation 2.

**NOTE**


- To reduce the conducted noise emitted from the USB cable of the thermal camera, install a ferrite core close to the thermal camera connector of the USB cable.
- To learn how to wire the FaceStation 2, visit the Suprema website (www.supremainc.com) and refer to the installation manual.
- For more information, contact the Suprema technical support team (support.supremainc.com).

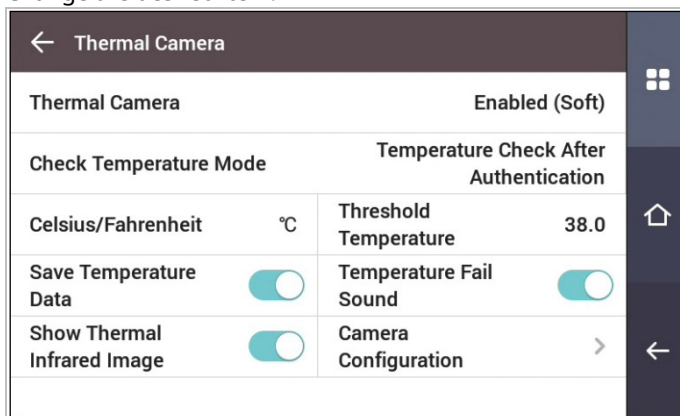
Settings

You can set up Suprema Thermal Camera in Device menu of FaceStation 2.

NOTE

- Suprema Thermal Camera can be used with FaceStation 2 firmware 1.3.2 or above.

- 1 Press  and authenticate with the Admin level credential.
- 2 Press **DEVICE > Thermal Camera**.
- 3 Change the desired item.



- **Thermal Camera:** Set the thermal camera options. If you select **Enabled (Hard)**, it refuses authentication of users with elevated temperature than the preset threshold and saves event logs. If you select **Enabled (Soft)**, users with elevated temperature than the preset threshold can authenticate but event logs still be saved.
- **Check Temperature Mode:** Set the **Check Temperature Mode** depending on the usage when **Mask Detection** or **Thermal Camera** is activated.
 - **Temperature Check After Authentication:** Measure the skin temperature after a successful authentication.
 - **Temperature Check Before Authentication:** Authenticate only when the user is within the range of the preset temperature threshold. When this mode is activated, it does not attempt to authenticate user's identity if their temperature has been detected to be above the threshold.
 - **Check Temperature Only:** Detect skin temperature without authentication. This mode allows users within the range of the preset threshold to access without checking their identity or access rights.
- **Celsius/Fahrenheit:** Change the unit of temperature.
- **Threshold Temperature:** Set the threshold temperature to limit the access. Users with detected temperature over the threshold will be denied access.
- **Save Temperature Data:** Save temperature data. When this mode is enabled, it saves both authentication and temperature logs. When this mode is disabled, it only saves authentication logs.
- **Temperature Fail Sound:** Set the alerts to trigger when the skin temperature is higher than the preset threshold.
- **Show Thermal Infrared Image:** Display infrared imaging on the screen of FaceStation 2.
- **Camera Configuration:** Configure the Suprema Thermal Camera settings for accurate measurement.

NOTE

- It is recommended to maintain the default values of the camera configuration settings for the best performance. The default values of each option are as follows:
 - **Distance(cm):** 100
 - **Emission Rate:** 0.98
 - **ROI X(%):** 47
 - **ROI Y(%):** 45
 - **ROI Width(%):** 15
 - **ROI Height(%):** 10

- **Distance(cm):** Set up the distance between the user and device.
- **Emission Rate:** Set up the emissivity to precisely measure the temperature of the user.
- **ROI X(%), ROI Y(%), ROI Width(%), ROI Height(%):** If there are lights in the device field of view they may be

detected instead of the desired subject. Set the temperature measurement area by adjusting the size and position of ROI (Region of Interest).

- **Skin Temperature Compensation:** You can set the thermal camera to adjust its temperature value automatically measuring the ambient conditions.
- **Skin Temperature Correction:** You can set the thermal camera to compensate for variations in caused by the ambient environment that consistently affect temperature measurement. For example, if the environment is causing temperature to be measured at 0.1°C higher, set the temperature correction to -0.1.

Product specifications*

Category	Feature	Specification
Thermal Module	Max. Resolution	120 × 160
	NETD (Noise Equivalent Temperature Difference)	≤ 50 mK (@25°C, F# = 1.0)
	Field of View	37.2° × 50° (H × V)
Temperature Measurement	Temperature Range	1°C to 45°C (33.8°F to 113°F)
	Temperature Accuracy	± 0.5°C (0.9°F)* / ±0.3°C (0.5°F)**
	Temperature Distance	Adjustable, 40 cm–80 cm (15.7" to 31.5")
General	Dimension (W x H x D)	<ul style="list-style-type: none"> Camera: 77 mm x 46 mm x 22.2 mm (3.03" x 1.81" x 0.87") Camera with bracket: 139.84 mm x 163.8 mm x 22.8 mm (5.51" x 6.45" x 0.90")
	Interface	USB
	Operating Temperature	0°C to 50°C (32°F to 122°F)
	Storage Temperature	-40°C to 60°C (-40°F to 140°F)
	Operating Humidity	5% to 85%

* This document only provides the specifications of Suprema Thermal Camera. To check the specification of FaceStation 2, refer to the user manual.

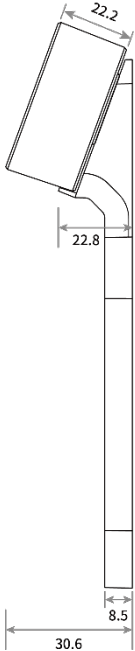
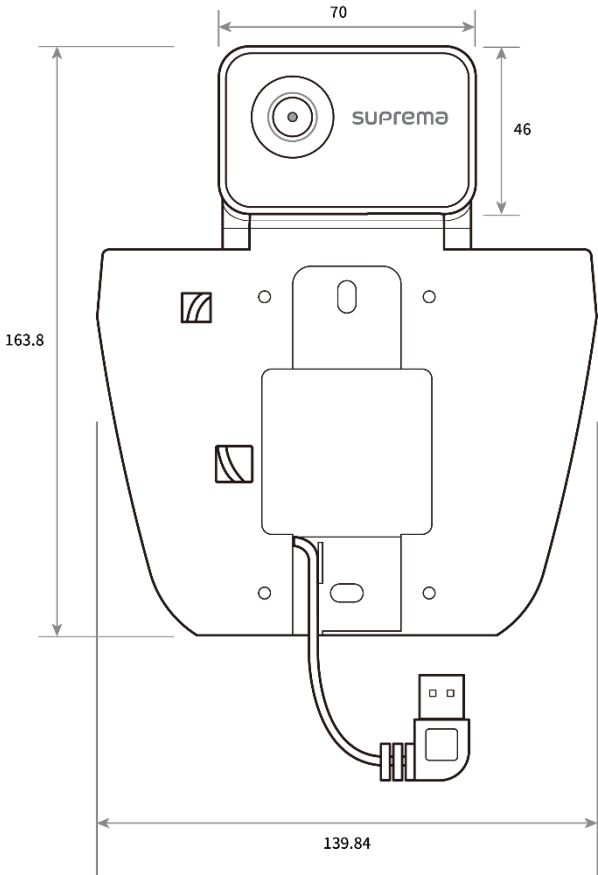
* This accuracy rate is possible only when you use the device under the following conditions:

- 1) Warm up Suprema Thermal Camera for more than 90 minutes after turning it on for self-calibration.
- 2) Operate the device within the recommended ambient temperature range (10°C to 35°C or 50°F to 95°F).

** According to KOLAS (Korea Laboratory Accreditation Scheme) calibration certificate

Dimensions

(Unit: mm)



Appendices

Disclaimers

- The information in this manual is provided with regard to Suprema products.
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- Suprema products are not used to diagnose any medical conditions. Suprema thermal cameras can identify individuals with skin temperature higher than a preset figure but should not be solely or primarily relied upon to diagnose or exclude a diagnosis of COVID-19, or any other disease. Only a licensed medical professional can determine if a person with elevated skin temperature is symptomatic of a specific medical condition.
- If you wish to obtain the newest specifications before ordering the product, contact Suprema through a Sales Representative or local distributor of Suprema.

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