3212-2000

Thermometric System

Quick Start Guide

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Rev A

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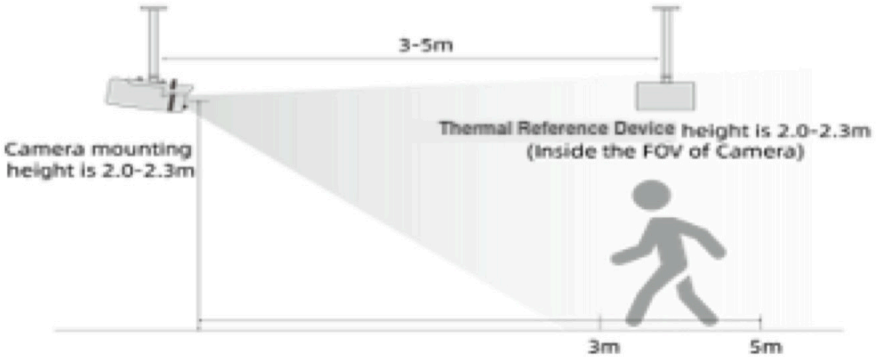
Physical Installation Guidelines

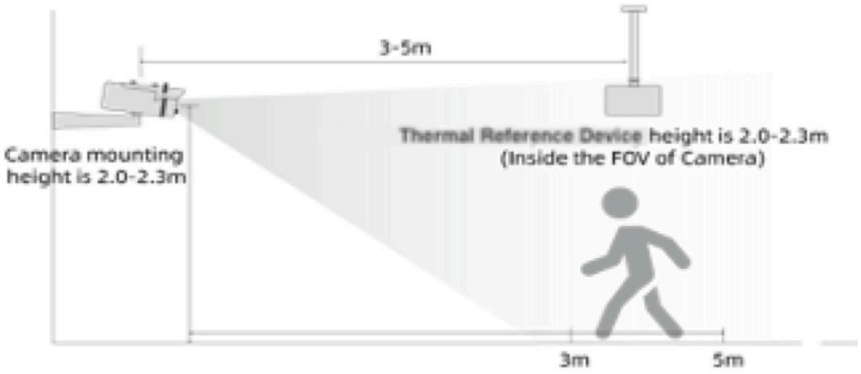
Ceiling mounted configuration

Position the camera at a height of 6.5–7.5 feet from the ground. Place the Thermal Calibration Reference Device 10–16 feet in front of the thermographic camera, and at the same height, as illustrated below. Make sure the Thermal Calibration Reference Device is inside the camera's field of view.



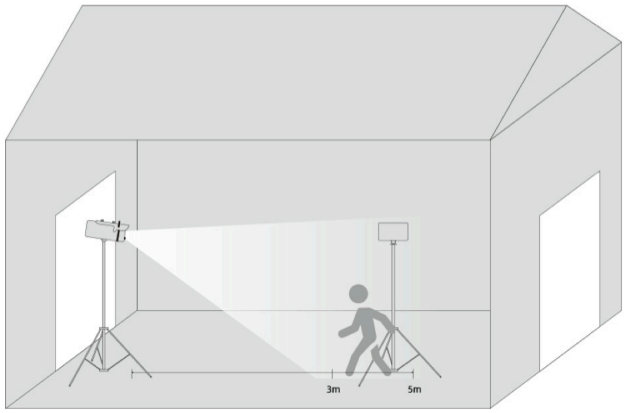
Wall Mounted configuration

When mounting the camera on a wall, use the same height and distance as the ceiling mounted configuration. See illustration below.



Outdoor Mounted configuration

If using the camera in an outdoor setting, provide an enclosed area (tent) to ensure accuracy as illustrated below.



Physical Installation Considerations

1. For accurate temperature measurement (± 0.3ºC / 0.5ºF Degrees / Medical grade accuracy) install the camera in areas without strong air flow. Place the camera away from objects that produce airflow or high ambient temperature. Do not install the camera opposite an exterior door, air conditioner, or in a position allowing the sun to shine directly onto the camera.
   To ensure accuracy, install the camera indoors or in a stable temperature-controlled environment. If you install the thermographic system in an open-air environment, temperature readings may differ from actual temperatures, requiring a software adjustment to compensate.
2. If installed outdoors, provide a tent or an enclosed environment to ensure accuracy.
3. It is necessary to perform temperature measurements within a standardized distance, otherwise temperature readings will deviate. The best horizontal distance from the camera to a person's face is 13 feet (4m), with an acceptable range of 10–16 feet (3–4.8m).

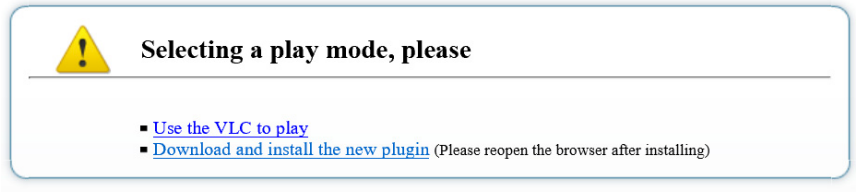
4. The Thermal Calibration Reference Device should be installed in the camera's field of view, ideally at the same height. The best horizontal distance from the camera to the Thermal Calibration Reference Device is 13 feet (4 meters) with an acceptable range of 10–16 feet (3–4.8m).
5. The camera should be installed at a height of 6.5–7.5 feet (2.0–2.3m), with an angle less than 25° horizontally to the faces of people in the scene.
6. Installing the camera straight relative to a human face will yield the best results. (Verify the side face angle is less than 35° on either side from the intended target).

Configure the Camera

Access the camera using an HTML5 web browser, such as Google® Chrome®, or Microsoft® Internet Explorer® (IE). When using IE the camera requires ActiveX® controls to display the video. The camera's default IP address is 192.168.0.121; the default username and password are both **admin**.

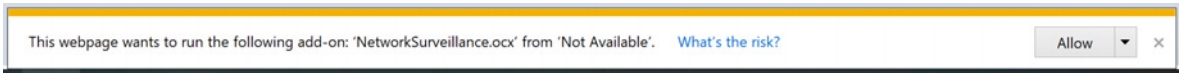
1. Connect your camera to your LAN or a standalone network. Your computer should be on the same network.
2. Power on the camera. The camera can be powered via a PoE 802.3af enabled network switch (requires 10W) or the supplied 12VDC power supply. It may take several minutes for the camera to start up.
3. Open your web browser and go to 192.168.0.121.
4. Enter **admin** for both the username and password. You should change the default password after you log in.

5. If using IE, select **Download and install the new plugin**.



a) Click **Run** to install the plugin. Close your browser while the plugin installs.

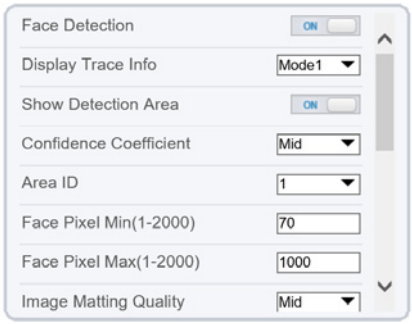
b) Open Internet Explorer again and go to 192.168.0.121. Select **Allow** to enable the plugin.



6. Log in using **admin** for both the username and password.

Configure Temperature Ranges

Aside from the settings listed below, we suggest keeping all other settings as their defaults.

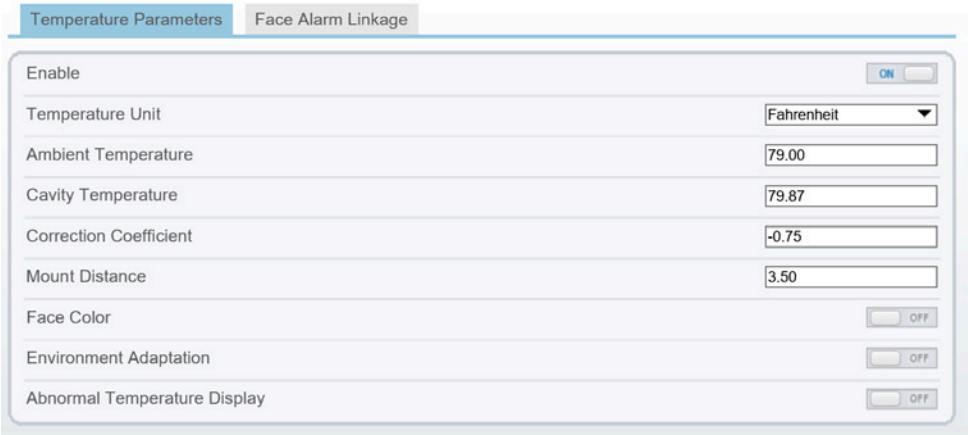


1. Go to the **Configuration** Tab.

2. Select **Human Thermometer » Parameter Configure**.

3. Enable **Face Detection**.

4. Go to the **Temperature Parameters** tab.



5. Set **Enable** to *On* to activate temperature measurement.

6. Set **Temperature Unit** to *Celsius* or *Fahrenheit* reflecting the units of measure that you use.

7. Set the **Ambient Temperature** for the area containing your camera.

NOTE: Cavity Temperature displays the internal operating temperature of the camera.

8. Set the **Correction Coefficient**. This is a final adjustment above or below the display temperature.

9. Set the **Mount Distance** in feet or meters. This is the horizontal distance from the camera to the detection area. In general, this is the distance to the Thermal Calibration Reference Device unit.

10. Set **Face Color** to display a color pallet showing the hot regions of your targets' faces.

11. Set **Environment Adaptation** to *On* if your camera is outside. Otherwise, leave it set to *Off*.

12. Set **Abnormal Temperature Display** to hide temperature readings that are outside your operating parameters.

Set up Detection Zones

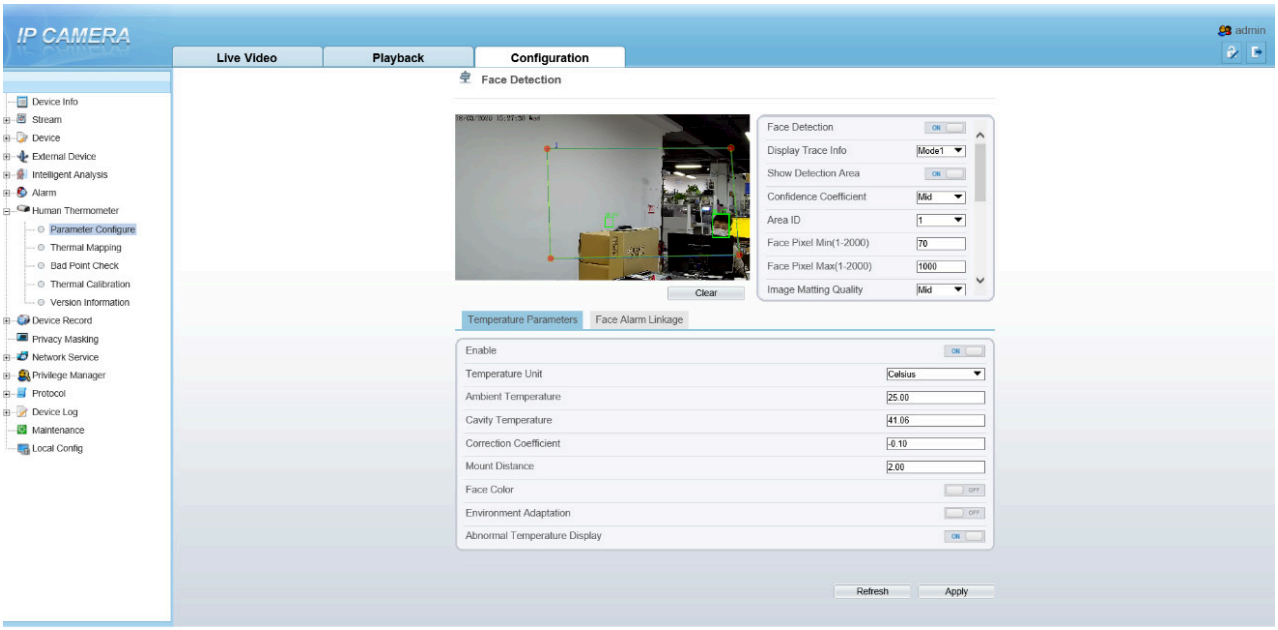
A detection zone is 4-corner polygonal area where you want to detect temperatures — typically where faces appear in your scene. In many cases, a single zone can cover the entire scene, but you create up to 8 detection zones.

1. Go to the **Configuration** Tab and select **Human Thermometer » Parameter Configure**.

2. In the camera image, click four corners outlining the area where faces will appear in your scene; after you select the last point, click the first point again to finish drawing the zone.

3. Repeat the above steps to draw more zones.

4. Click **Apply** to save your settings.



Thermal Mapping

From here, you can map the thermal image with the visible image, ensuring the accuracy of temperature measurements within your detection zones.

Within each detection zone, you will select three reference points. We suggest choosing three points that are far away from each other, so the “triangle” connecting the three points you selected covers 70% of the total image. Test that the defined area can correctly surround the faces in the scene. If it can’t, adjust the three reference points.

1. Click the **Configuration** Tab and select **Human Thermometer » Thermal Mapping**.

2. Adjust zoom and focus so that the visual image is clear and identify out three points that you can clearly see in the thermal image — see the example below.

3. Select the **ID** of a detection zone that you created earlier (1-8).

4. Set the **Scene Depth**. This is the distance from the camera to the detection area in meters.

5. Select **Mapping Point** that you want to set. Set points in order — one, two, three.

6. Click a point inside the zone in the visible scene.

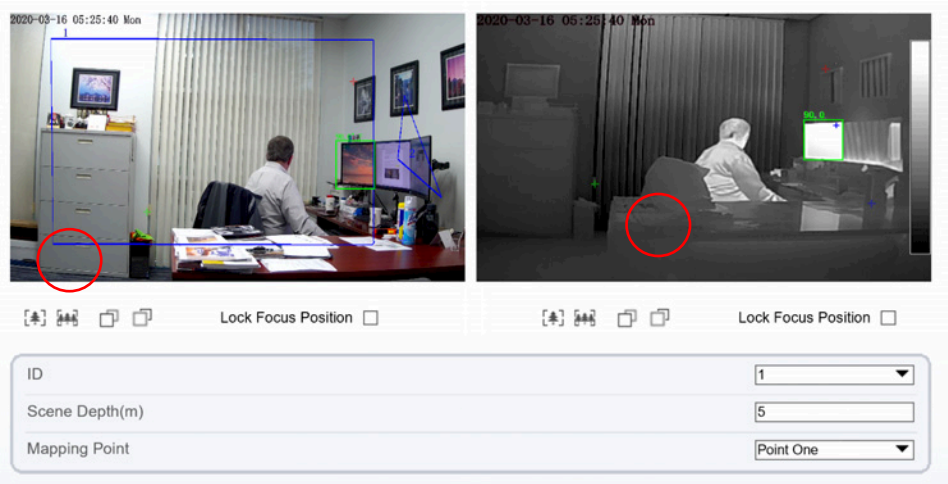
7. Click the corresponding point inside the zone in the thermal scene.

8. Repeat this process for the remaining two Mapping Points.

9. Repeat steps 3-8 to map other detection zones (ID).

10. Click **Apply** to save your settings.

In the following illustration you can see Zone 1 — the area of detection (blue line rectangle) and the three points on each camera view.



Thermal Calibration

The Thermal Calibration Reference Device needs to be powered on for at least 20 minutes, so that it can reach a stable before you calibrate the camera.

1. Go to the **Thermal Calibration** tab.

2. Click **Enable** so that it is *On*.

3. If you turn on **Display Area Info**, the Thermal Calibration Reference Device is shown in a rectangle with its current temperature on thermal image.

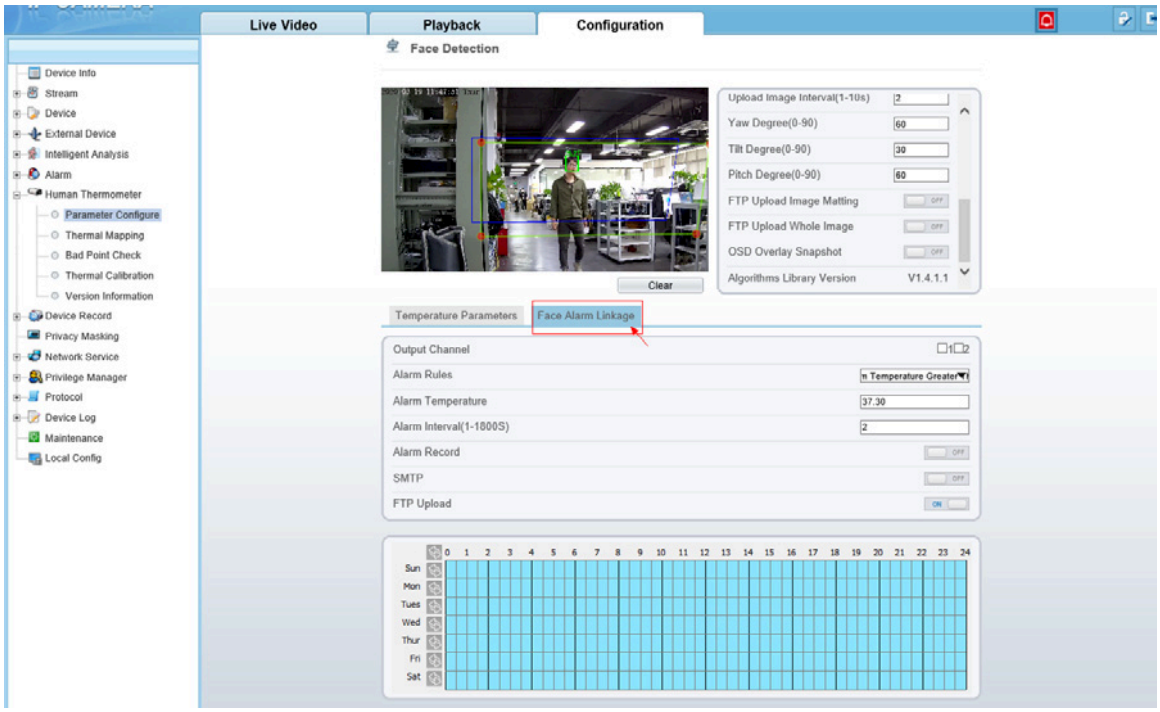
4. Enter the **Distance** to the Thermal Calibration Reference Device and the **Temperature** of the unit.

5. In the thermal image, draw an area covering the Thermal Calibration Reference Device. Click the four corners, outlining the Thermal Calibration Reference Device. After you select the last point, click the first point again to finish drawing the zone.

6. Click **Apply**.

Set a Temperature Alarm Trigger

Set a temperature alarm trigger to set a physical alarm, send a notification, and upload snapshots to your FTP server when the camera detects a temperature over the allowed threshold.



1. Go to **Human Thermometer »Parameter Configure** and click **Configuration.**

2. Click **Face Alarm Linkage** and define a trigger**.**

3. Set the **Alarm Temperature**. Temperatures above this threshold will result in an alarm.

4. Set the days and times when you want to detect temperature alarms.

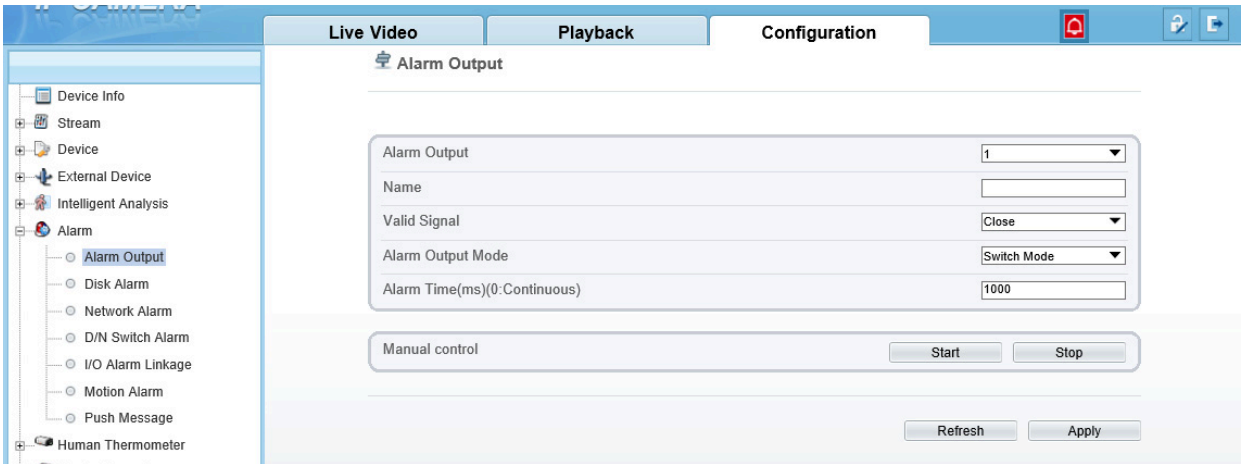
5. Enable your alarm's outputs:

    a) **SMTP** sends an email notification. Click **Network Source » SMTP** to configure your SMTP server and recipient email.

b) **FTP Upload** upload a snapshot to your FTP server. Click **Network Source » FTP** to configure your server.

c) **Alarm Record**: Record video to an SD card (Optional) when the camera detects a target over the temperature threshold. You cannot insert an SD card; your camera must have been ordered with it already installed. Before enabling this feature, be sure the record directory has been configured correctly (see below) and you have an SD card insert correctly inside the camera.

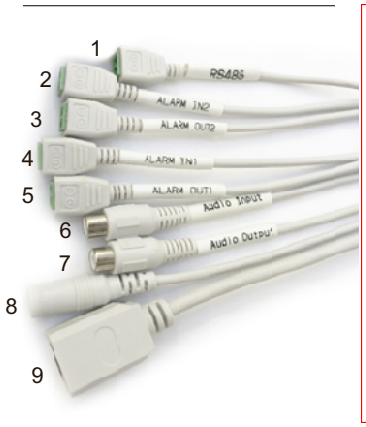
d) Set the **Output Channel**. The camera has two alarm outputs for connecting a strobe light or a sounder (purchased separately). If the camera detects a high temperature, the camera sends a high-level signal or pulse signal through the alarm out port. You must Connect a Physical Alarm before you can select output channels.

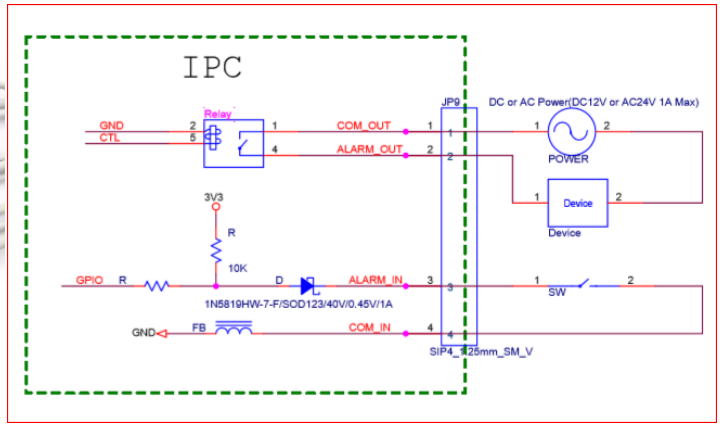


Connect a Physical Alarm

You can connect an Alarm Bell, Sounder, or a strobe light as a visual indication of the alarm trigger. The camera has several pigtails as illustrated below.

Locate Pigtail **Alarm Out 1** and wire it as illustrated. The alarm relay contact is rated 1 Amp Max.

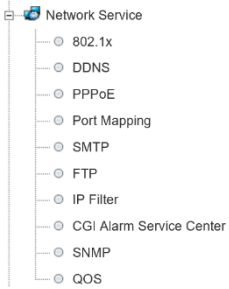




Set up an FTP Snapshot Location

You can set up an FTP server to store snapshots. The following instructions assume that you have already set up your FTP server.

1. Select **Network Service » FTP**.



2. Enable **FTP Upload**.

3. Enter your **FTP Address**, **Port**, account information, and the **Path** where you want to store snapshots on your FTP server.

4. Click **Apply**.

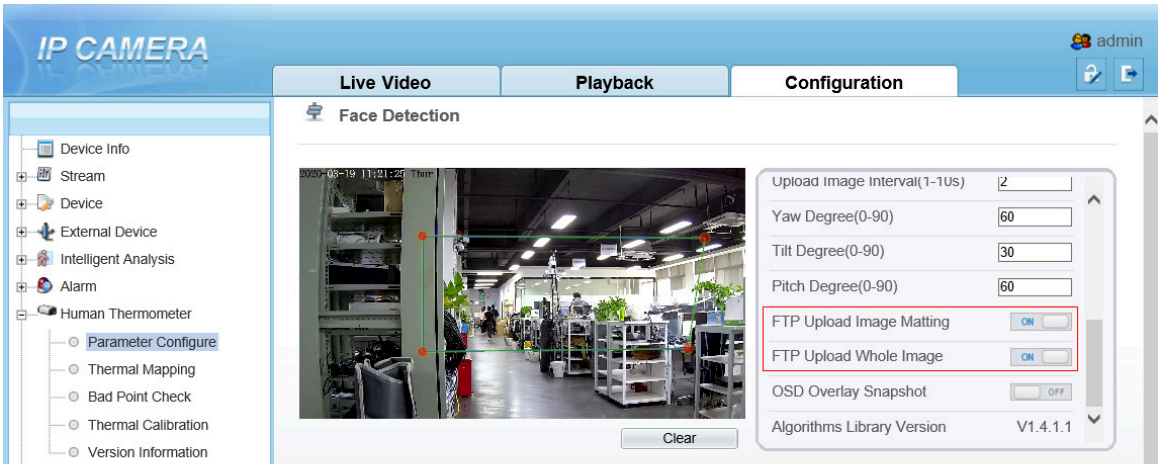
5. Go to the **Configuration** tab, select **Human Thermometer » Parameter Configure**.

6. Set **Snapshot Mode** to *Timing*.

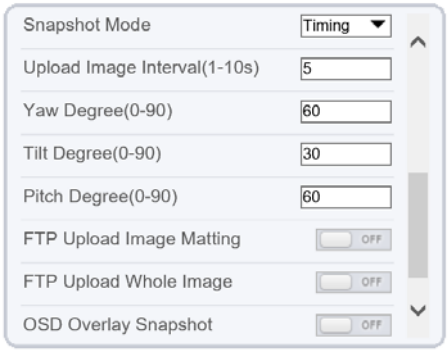
7. Set **Upload Image Interval** to 5 (seconds).

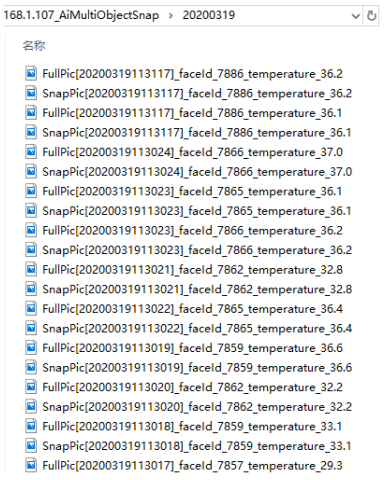
8. Enable the **FTP Upload** settings for the types of images that you want to back up to your FTP server.

    - **FTP Upload Image Matting**: upload only the face picture cut out from the full image.
    - **FTP Upload Whole Image**: upload the full image.
    - **OSD Overlay Snapshot**: Snapshots with the temperature info.



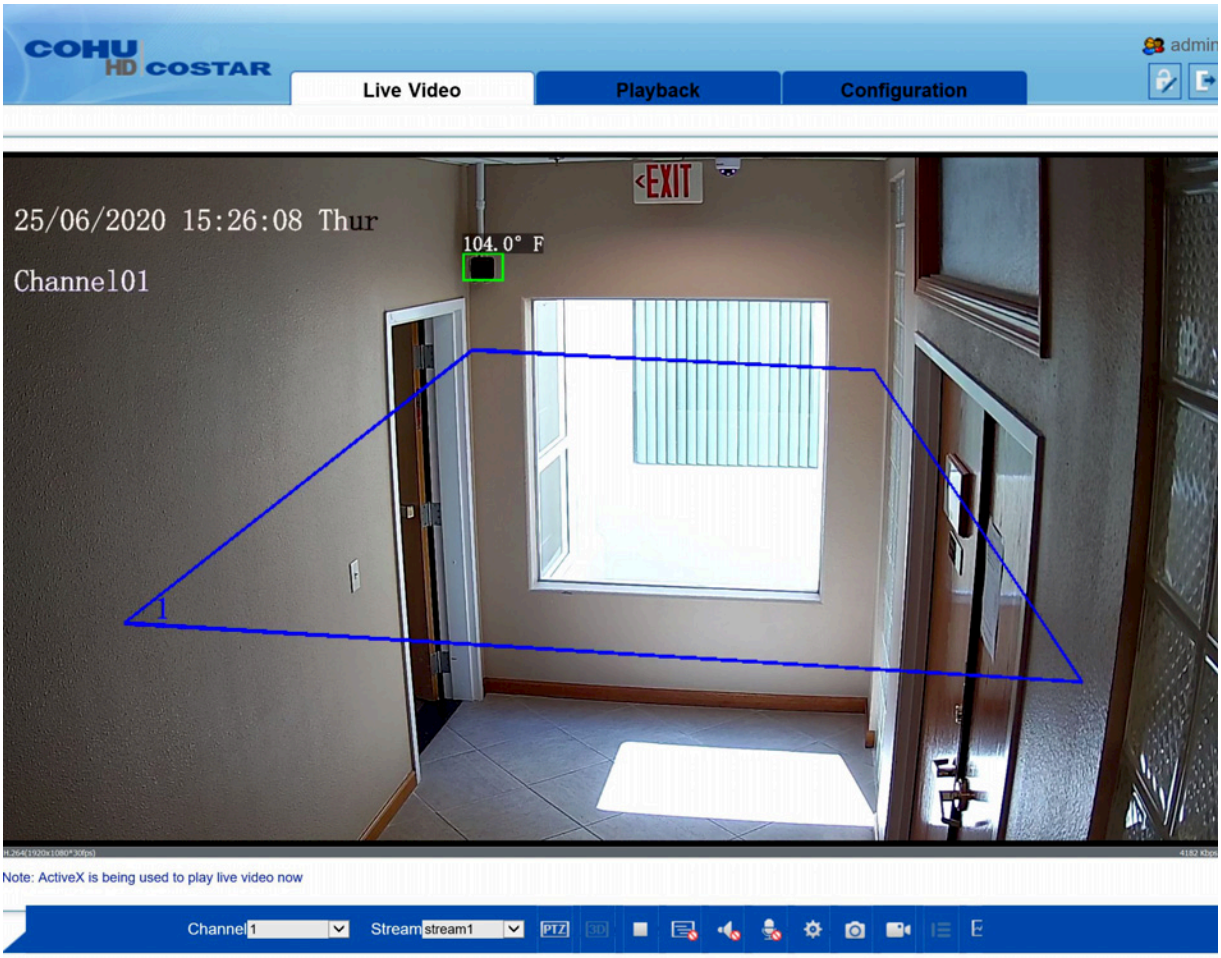
You can find the snapshots in the FTP server path, named by face ID and temperature.





View Live Video

Click the **Live Video** tab to view video with detection areas. The camera detects human targets and surrounds faces with a green rectangle showing the temperature. The rectangle becomes red when the camera indicates a high temperature and triggers an alarm.



For additional information or more advanced setting please consult the Thermometric camera User Guide. Should you have any questions or require additional support please contact our technical support team at (858) 391-1800 during normal hours of operation Mon–Fri 8:00 am–5:00 pm CST. After hours you can leave a message and one of our support specialists will return your call. You can also email us at: support@cohuhd.com.

Note: The information contained in this user guide is subject to change without notice.

For more information please visit us at:

www.CohuHD.com