

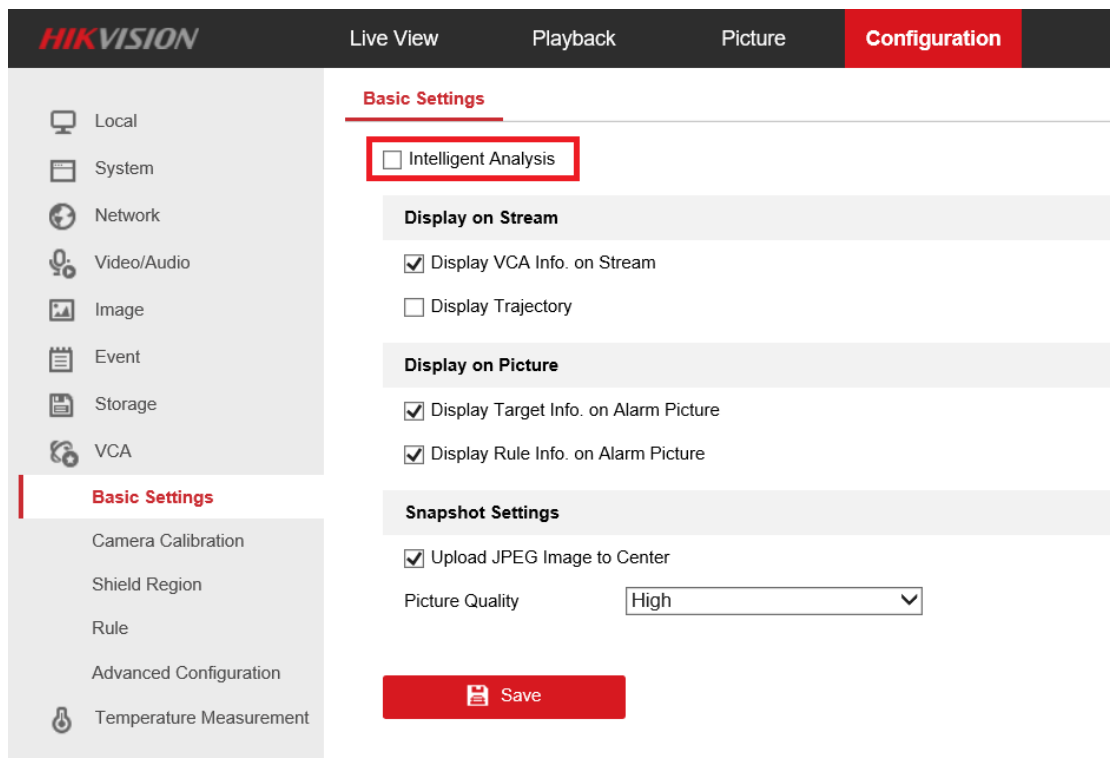
# How to configure temperature measurement for thermal camera

## Preparation

1. login the device via web browser
2. Enter **Configuration>System>Maintenance>VCA Resource Type**  
Select **Temperature Measurement + Behavior Analysis** as VCA Resource Configuration.

### Note:

For PTZ cameras, temperature measurement is incompatible with VCA function and the priority of VCA is the higher one, so please remember to disable **intelligent analysis** before using temperature measurement, or it will not get into effect.



The screenshot shows the Hikvision web interface with the 'Configuration' tab selected. The left sidebar contains a menu with 'Basic Settings' highlighted. The main content area is titled 'Basic Settings' and contains the following options:

- Intelligent Analysis (highlighted with a red box)
- Display on Stream**
  - Display VCA Info. on Stream
  - Display Trajectory
- Display on Picture**
  - Display Target Info. on Alarm Picture
  - Display Rule Info. on Alarm Picture
- Snapshot Settings**
  - Upload JPEG Image to Center
  - Picture Quality: High (dropdown menu)

A red 'Save' button is located at the bottom of the configuration area.

### Steps:

1. Enter **Local**, then enable **Display Temperature Info** and **Display Temperature Info. on Capture**.

The screenshot shows the Hikvision Configuration interface. The top navigation bar includes 'Live View', 'Playback', 'Picture', and 'Configuration'. The left sidebar lists various system settings, with 'Temperature Measurement' selected. The main content area is titled 'Live View Parameters' and contains several sections:

- Live View Parameters:** Includes radio buttons for Protocol (TCP, UDP, MULTICAST, HTTP), Play Performance (Shortest Delay, Balanced, Fluent), Rules (Enable, Disable), Auto Start Live View (Yes, No), and Image Format (JPEG, BMP).
- Record File Settings:** Includes Record File Size (256M, 512M, 1G) and fields for Save record files to and Save downloaded files to.
- Picture and Clip Settings:** Includes fields for Save snapshots in live vi..., Save snapshots when pla..., and Save clips to.

Two options under 'Live View Parameters' are highlighted with a red box: 'Display Temperature Info.' (Yes/No) and 'Display Temperature Info...' (Yes/No).

A red 'Save' button is located at the bottom of the configuration area.

The two local options will only be effective on your own laptop, others will not be influenced after you disabling it.

2. Enter **Temperature Measurement**, and select **Enable Temperature Measurement**, **Enable Color-Temperature** and **Display Temperature Info on Stream**.

The screenshot shows the Hikvision Configuration interface for 'Temperature Measurement'. The top navigation bar includes 'Live View', 'Playback', 'Picture', and 'Configuration'. The left sidebar lists various system settings, with 'Temperature Measurement' selected. The main content area is titled 'Basic Settings' and contains the following configuration options:

- Channel No.:** Camera 02
- Enable Temperature Measurement:**
- Enable Color-Temperature:**
- Display Temperature Info. on Stream:**
- Add Original Data on Capture:**
- Add Original Data on Stream:**
- Data Refresh Interval:** 3 s
- Unit:** Degree Celsius(°C)
- Temperature Range:** -20.0~150.0
- Version:** V1.1.5build20180117

Below the 'Basic Settings' section is the 'Manual Temperature Me...' section, which includes:

- Emissivity:** 0.98
- Distance:** 20 m

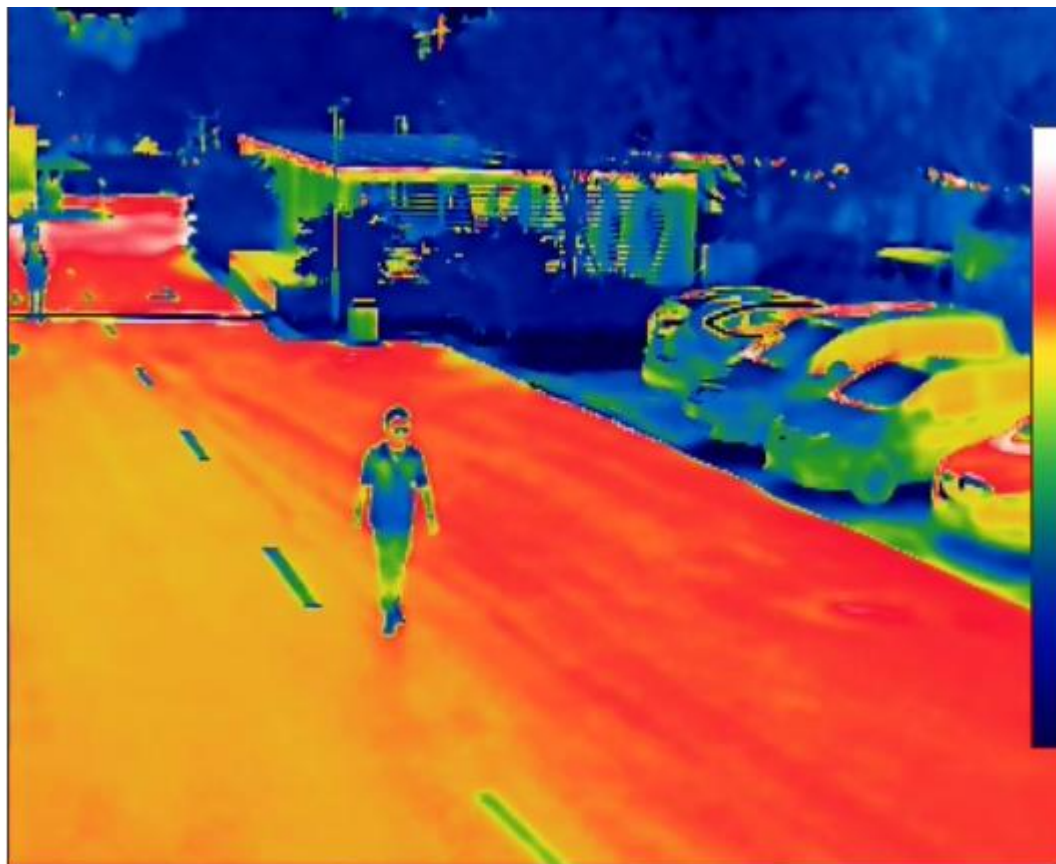
A red 'Save' button is located at the bottom of the configuration area.

**Enable Temperature Measurement:** The main switch of temperature measurement function, must

be ticked, or the other configuration are all invalid.

**Enable Color-Temperature:** Show a colorful bar on the right side of thermal channel which can indicate the color of different temperature range. It will show different color in 15 different palettes.

The screenshot shows the Hikvision web interface in the 'Configuration' tab. Under 'Display Settings', 'Camera 02' is selected. The 'Image Enhancement' section is expanded, and the 'Palettes' dropdown menu is open. The menu lists 15 options: White Hot, Black Hot, Fusion 1 (highlighted), Rainbow, Fusion 2, Ironbow 1, Ironbow 2, Speia, Color 1, Color 2, Ice Fire, Rain, Red Hot, Green Hot, and Dark Blue. A 'Default' button is located at the bottom of the menu. A thermal image of a street scene is visible in the background of the settings panel.



**Dark Blue**



### Block Hot

**Display Temperature Info. on Steam:** The temperature info will be overlaid into the stream after ticking it, but the camera can also alarm if it's ticked.

### 3. Then go to **Advanced Settings**

Select the **Configuration** as Normal or Expert.

#### ● **Normal Mode:**

Fill in Emissivity (0.96 as default) and Distance (The straight-line distance between the target and the device), and it will display the highest temperature and lowest temperature.

The screenshot displays the Hikvision web interface for configuring temperature measurement. The 'Configuration' tab is active, showing 'Advanced Settings' for 'Camera 02'. The configuration is set to 'Normal'. The device temperature is currently 39°C. A live thermal video feed shows a building facade with a red box highlighting a target area, displaying a temperature of 24.1°C. The interface also includes a 'Save' button and various settings for thresholds and outputs.

**Note:**

1. *Filtering Time: This parameter is used to provide triggering from some object with a high-temperature but only appears for a short time. The chosen range is 0~200s.*
  2. *Alarm output: The pre-alarm and alarm could choose independent alarm out from the version 5.5.0Build180411(bullet cameras)/5.5.2Build180528(PTZ cameras)*
- **Expert Mode:**(bullet cameras differ from device with PTZ)

**Bullet camera:**

Customize the rule name and fill in the distance, then select point, line or area as rule type and draw the figure.

The screenshot shows the 'Advanced Settings' tab for a camera. At the top, there are tabs for 'Basic Settings', 'Advanced Settings', and 'Linkage Method'. Under 'Advanced Settings', 'Channel No.' is set to 'Camera 02' and 'Configuration' is set to 'Expert'. Below this, 'Device Temperature(°C): 25' is displayed. A video feed shows a night scene with a red temperature measurement line and area. To the right of the video is a PTZ control panel with various navigation buttons and a preset list. Below the video is a 'Clear All' button and a label 'Area's Temperature Comparison'. At the bottom is a table with columns: Enable, ID, Name, Type, Emissivity, Distance(...), Reflective Temp..., and Alarm Rule.

| Enable                              | ID | Name   | Type  | Emissivity | Distance(...) | Reflective Temp...          | Alarm Rule                          |
|-------------------------------------|----|--------|-------|------------|---------------|-----------------------------|-------------------------------------|
| <input checked="" type="checkbox"/> | 1  | Area1  | Area  | 0.96       | 30            | <input type="checkbox"/> 20 | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | 2  | Point1 | Point | 0.96       | 30            | <input type="checkbox"/> 20 | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | 3  | Line1  | Line  | 0.96       | 30            | <input type="checkbox"/> 20 | <input checked="" type="checkbox"/> |
| <input type="checkbox"/>            | 4  |        | Point | 0.96       | 30            | <input type="checkbox"/> 20 | <input checked="" type="checkbox"/> |

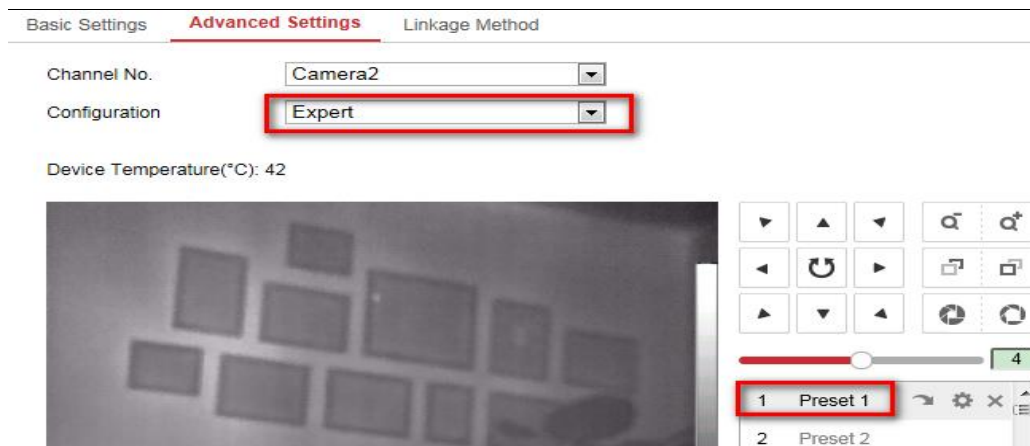
**Note:**

1. *Each scene supports 10 points, 10 frames and 1 line.*
2. *The Reflective Temperature is not often used, it only take effect when the heat of another object interfere the temperature of the target. Enter the temperature of the interference object, the result of the target will be more accurate.*

**Camera with PTZ:**

Because thermal cameras with PTZ support multiple-scenes temperature measurement. So we must create a preset before measuring.

Adjust the image to the scene for temperature measurement with the PTZ control panel. Save current scene as certain preset



**Note:**

1. 300 presets can be created totally.
2. Each preset supports 10 points, 10 frames and 1 line.
3. For PTZ cameras, temperature measurement will not become effective if the presets are not set.

**Alarm Rule Configuration:**

Set the alarm rule: Select a temperature measurement rule from the rule list and configure the parameters.

| Enable                              | ID | Name | Type   | Emissivity | Distance(...) | Reflective Temp... | Alarm Rule                          |
|-------------------------------------|----|------|--------|------------|---------------|--------------------|-------------------------------------|
| <input checked="" type="checkbox"/> | 1  | R1   | Region | 0.96       | 4             | 20                 | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | 2  | R2   | Region | 0.96       | 6             | 20                 | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | 3  | P1   | Point  | 0.96       | 3             | 20                 | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | 4  | L1   | Line   | 0.96       | 5             | 20                 | <input checked="" type="checkbox"/> |

**Alarm Rule**
✕

Alarm Rule:

Alarm Temperature:  °C

Pre-Alarm Temperature:  °C

Tolerance Temperature:  °C

**Area's Temperature Comparison:**

Compare the two area rule in different ways, including Max.Temperature, Min.Temperature, Average.Temperature and Temperature.Difference.

For example, in the following picture, if the Max temperature of Area 1 is 10 degree higher than the Max temperature of Area 2, the Alarm output 1 will take effect.

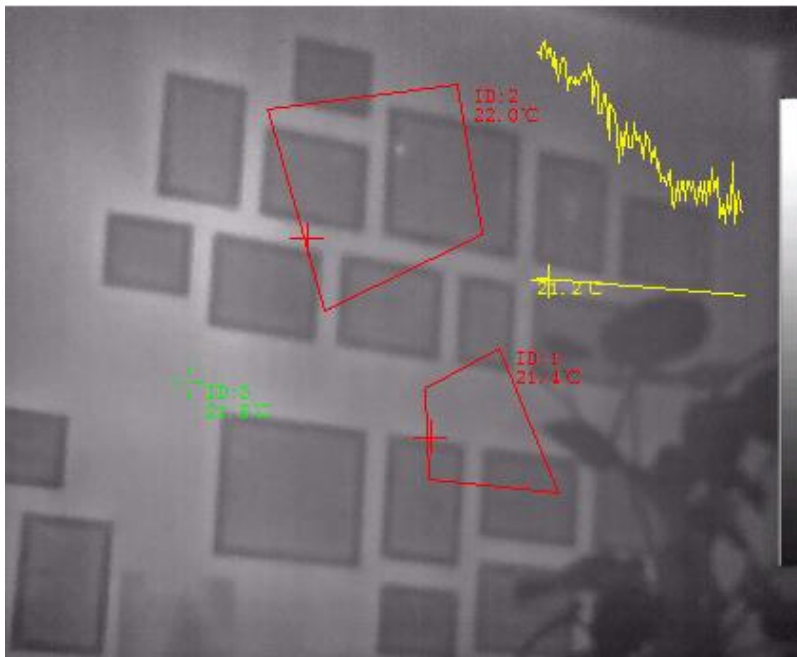
**Area's Temperature Comparison** ✕

|                          |         |     |         |              |    |              |  |                               |
|--------------------------|---------|-----|---------|--------------|----|--------------|--|-------------------------------|
| <input type="checkbox"/> | 1 Area1 | and | 4 Area2 | Above (Max.) | 10 | Alarm Output | <input checked="" type="checkbox"/> A->1 | <input type="checkbox"/> A->2 |
| <input type="checkbox"/> | 1 Area1 | and | 1 Area1 | Above (Max.) | 0  | Alarm Output | <input type="checkbox"/> A->1            | <input type="checkbox"/> A->2 |
| <input type="checkbox"/> | 1 Area1 | and | 1 Area1 | Above (Max.) | 0  | Alarm Output | <input type="checkbox"/> A->1            | <input type="checkbox"/> A->2 |
| <input type="checkbox"/> | 1 Area1 | and | 1 Area1 | Above (Max.) | 0  | Alarm Output | <input type="checkbox"/> A->1            | <input type="checkbox"/> A->2 |

**Temperature Display:**

**1.Camera with PTZ**

Call the preset and wait for 5 seconds, the result of temperature measurement will be shown as the picture below.



**2.Bullet Camera**

Show the result of temperature instantly in live view.





**One Special Function relevant to Temperature Measurement**

**Temperature Highlight:**

**(only Bullet Camera or V2 PTZ Camera support it)**

The portion with selected temperature can be highlighted with any color. Three different temperature intervals could be chosen.

**Note:**

The color information will be embossed on the video stream directly and can't be removed, it will affect the quality of image, so please consider it carefully when using it.

The screenshot shows the Hikvision web interface. The top navigation bar includes 'Live View', 'Playback', 'Picture', and 'Configuration'. The 'Configuration' menu is open, and 'Temperature Measurement' is selected. The 'Display Settings' tab is active, showing a live view of a room with temperature highlights. The 'Image Enhancement' section is expanded, showing 'Above (be colored)' at 35°C (red), 'Between (be colored)' with a range of 30°C to 35°C (orange), and 'Below (be colored)' at 22°C (green). The 'DDE' and 'DDE Level' settings are also visible.



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