

HIKMICRO Fixed Camera

V5.5.356

Release Notes

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Please use this Manual with the guidance and assistance of professionals trained in supporting the Product.

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Chapter 1 **Product and Version Information**

Version information

Item	Description
Firmware Version	V5.5.356 build 260807
Measurement Algorithm Version	V2.2.1 build 20251230
Web Component Version	V5.0.114_R0108 build 20260416

More information

- Focus Free Box Camera
  Involved Models : QF610, QF310,QF210

- High Frame Rate R&D Box Camera
  Involved Models : QD610

- R&D Box Camera
  Involved Models : HM-TD2C68E-25/Q

- Heat Resistant Bullet Camera
  Involved Models (Non-High-Temp. Measurement): HF310, HF610

Versions V5.5.356 and later do not support **rolling back** to versions prior to V5.5.356.

Welcome to visit HIKMICRO official website for more information about HIKMICRO industrial products. https://www.hikmicrotech.com/en/industrial-products/

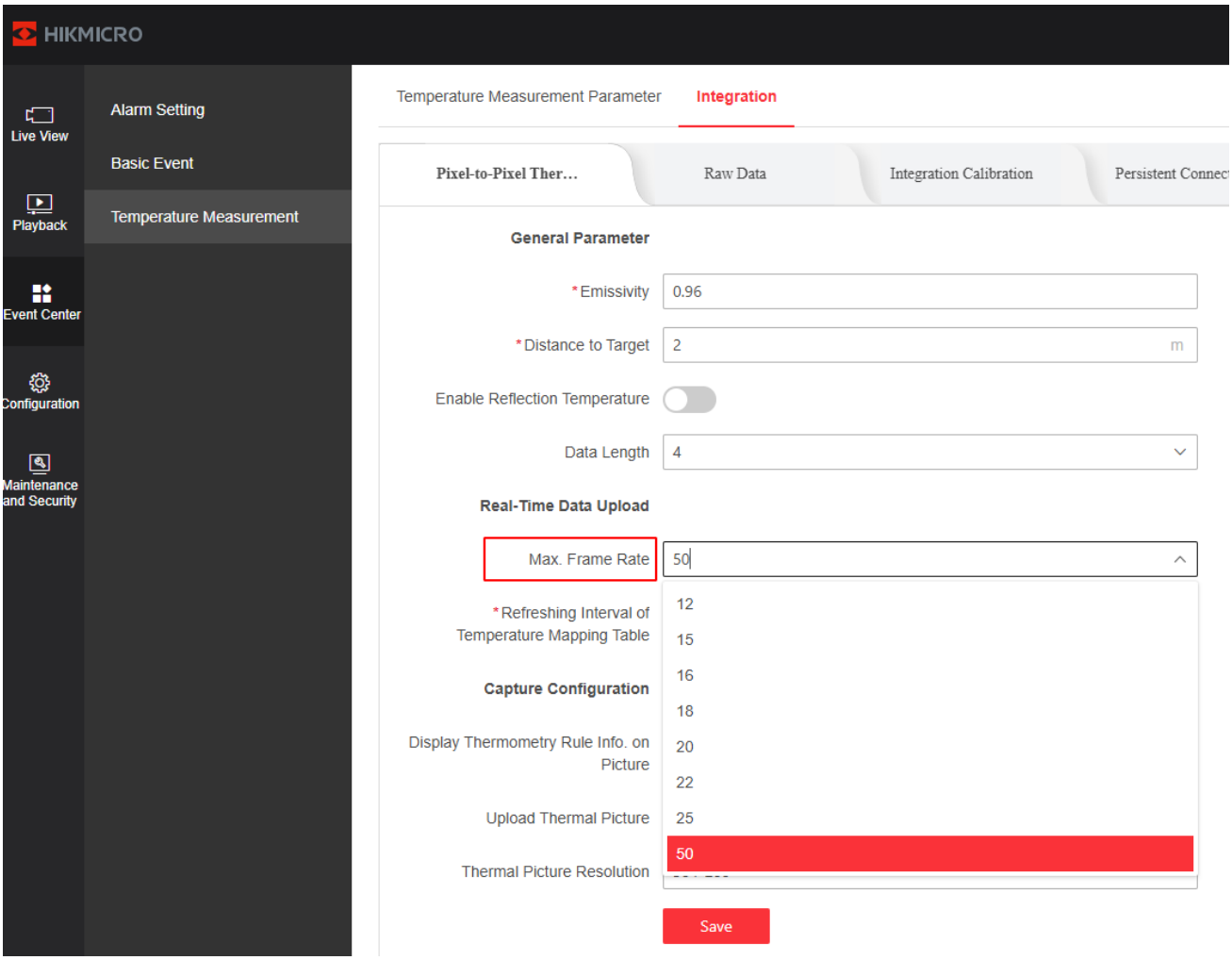
Chapter 2 **New Features**

2.1 **Rapid Startup**

Devices can now boot up in approximately 15 seconds. The IP address will be quickly detected, allowing you to log into the web interface immediately to stream images and measure temperatures without delay.

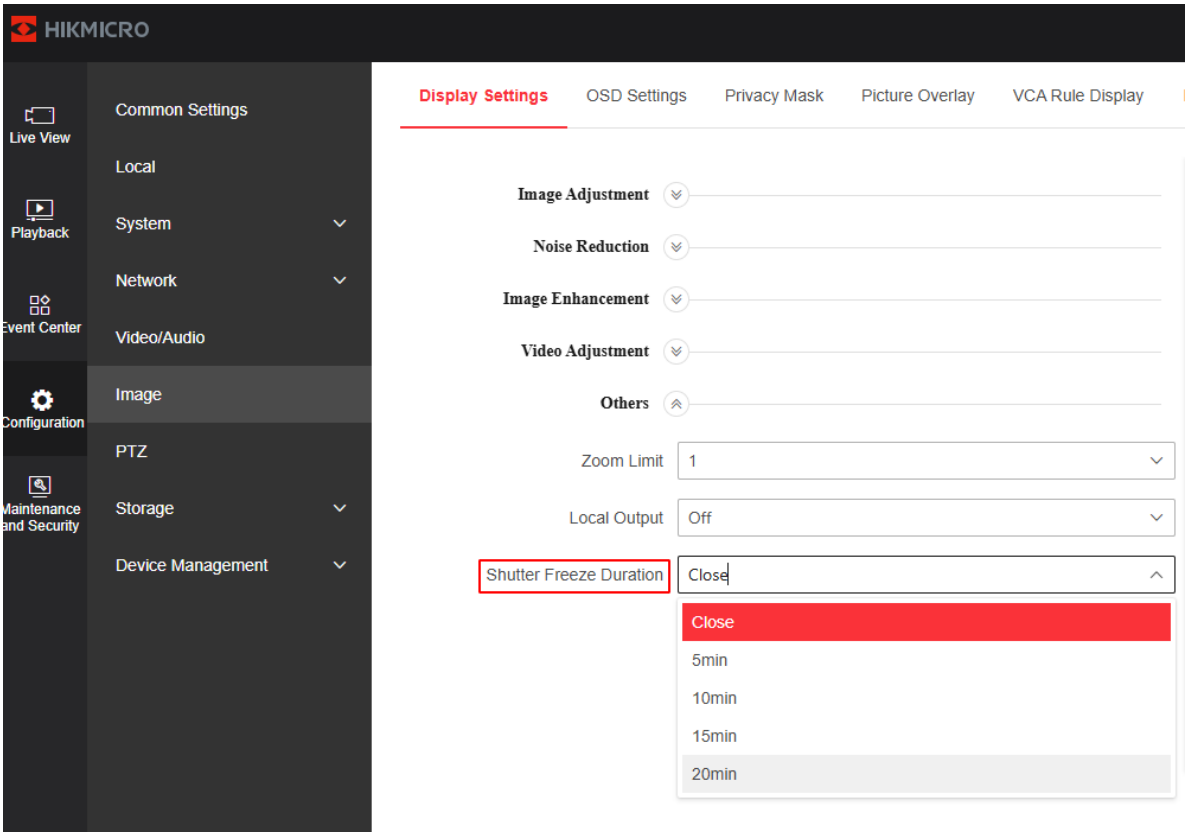
2.2 **Fast Temperature Measurement**

Increases the frame rate of temperature measurement to **50 fps** to meet the needs of temperature measurement for moving objects in pipeline inspection scenarios.

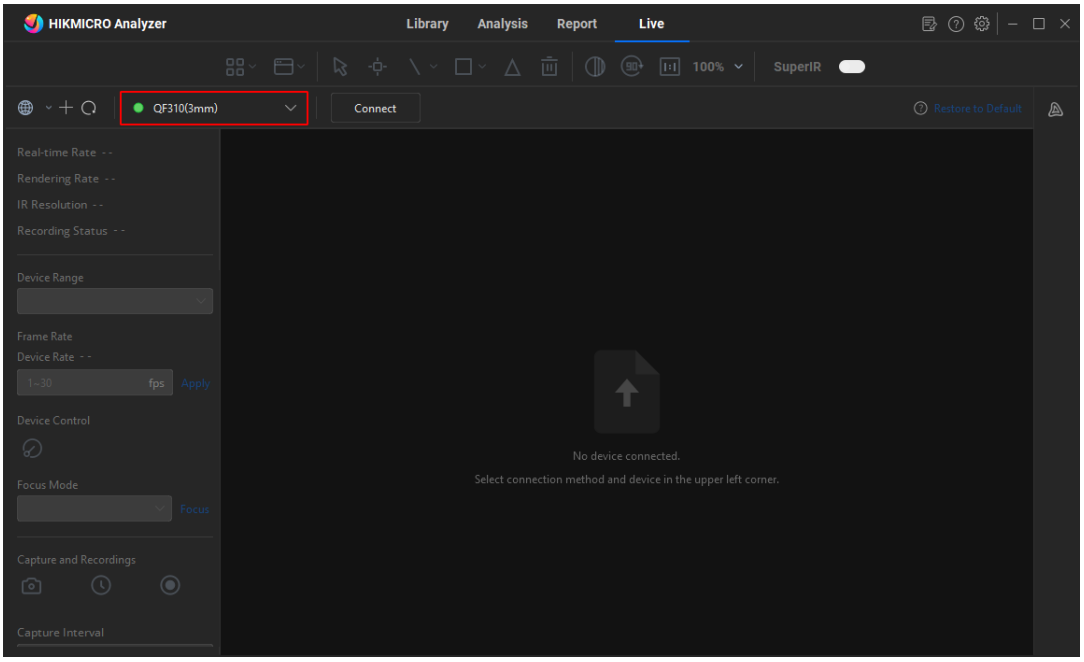


2.3 **Shutter Freeze Duration**

Devices can now boot up in approximately 15 seconds. The IP address will be quickly detected, allowing you to log into the web interface immediately to stream images and measure temperatures without delay.



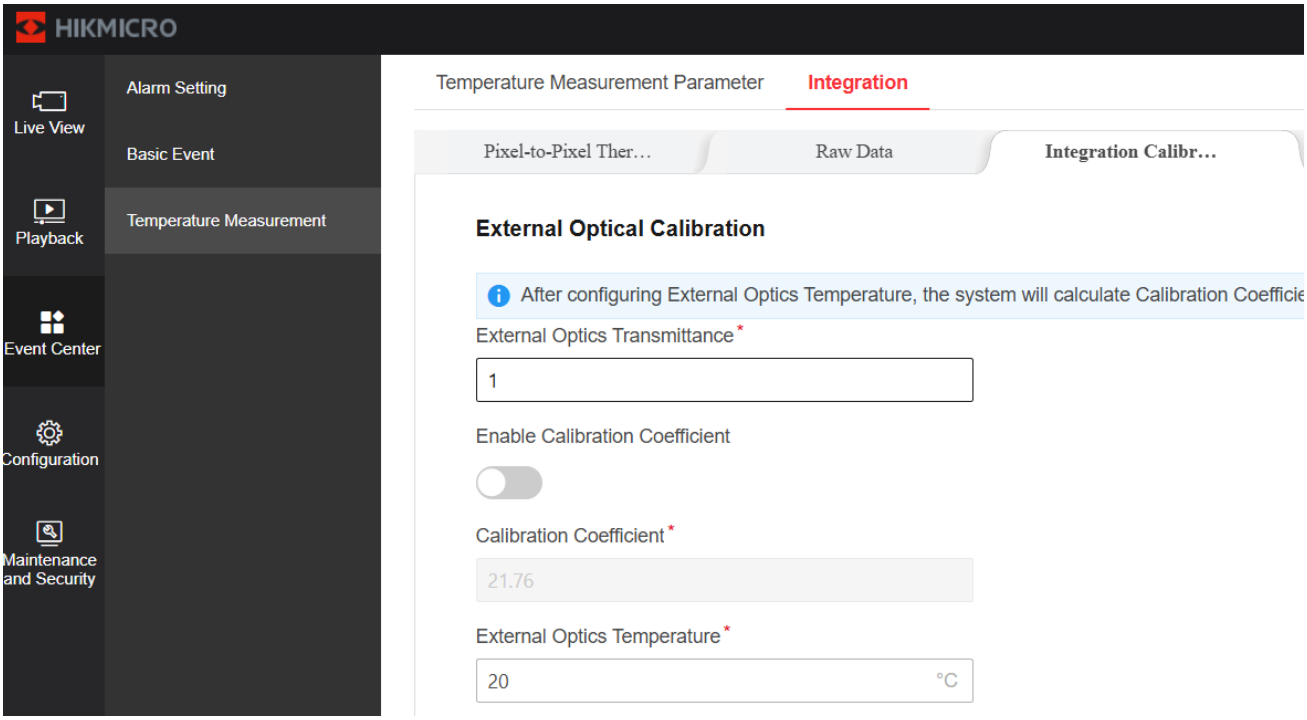
2.4 **Support Analyzer**



2.5 **External optical calibration optimization**

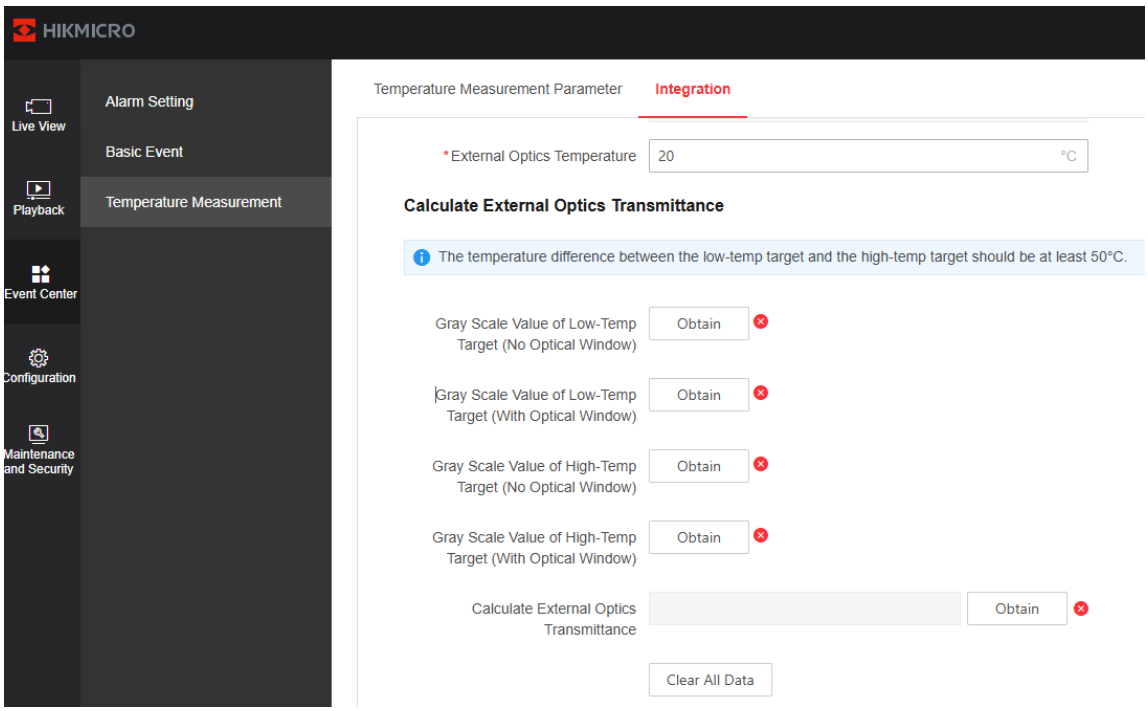
When a user configures an external optical temperature without enabling calibration coefficients, the device automatically calculates the calibration coefficients based on the cavity temperature minus the ambient temperature, and then applies these calculated coefficients to the device.

Users can refresh the web page to retrieve the calculated calibration coefficients and configure this parameter in other devices of the same model.



2.6 Supports external optical transmittance calculation

Users can use tools to calculate the actual external optical transmittance after the device integrates the optical window.



Operating Steps:

Step 1: Low-Temp Calibration (No Window)

1. Place a blackbody in front of the lens and set it to low temperature.
2. On the integration page, drag the black circle to the center of the blackbody.
3. Click "Get Low-Temp Gray Value (No Window)".
4. A green checkmark will appear when done.

Step 2: Low-Temp Calibration (With Window)

1. Place the optical window in front of the lens.
2. Click "Get Low-Temp Gray Value (With Window)".
3. A green checkmark will appear when done.

Step 3: High-Temp Calibration (No Window)

1. Set the blackbody to high temperature.
2. Click "Get High-Temp Gray Value (No Window)".
3. A green checkmark will appear when done.

Step 4: High-Temp Calibration (With Window)

1. Place the optical window in front of the lens.
2. Click "Get High-Temp Gray Value (With Window)".
3. A green checkmark will appear when done.

Step 5: Calculate Transmittance

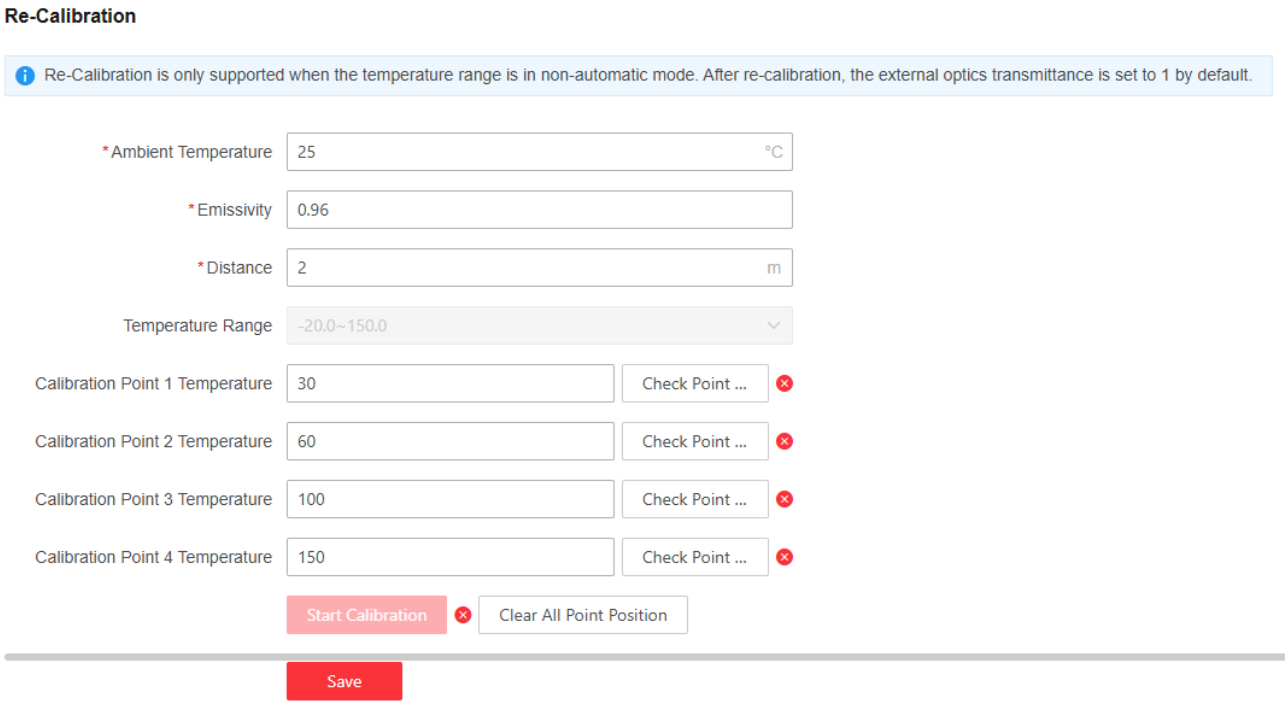
1. Ensure all 4 previous steps show green checkmarks.
2. Click "Get External Optical Transmittance".
3. The calculated value will appear in the greyed-out box, and a green checkmark will show.

2.7 Secondary calibration

Step 1: Preparation and Parameter Configuration

Place the blackbody in front of the device lens.

Configure the relevant parameters on the web page: target distance, ambient temperature, emissivity, and calibration point temperature (default values are recommended).



Step 2: Configure Calibration Point Coordinates One by One

In the web-based calibration preview interface, move and find the position of the blackbody that meets the "calibration point temperature value".

Align the black circle on the interface with that temperature area.

Click the "Coordinate Configuration" button for the corresponding calibration point.

View operation feedback:

✅ Green checkmark: Indicates successful configuration of the point.

❌ Red cross: Indicates configuration failure; readjust the position and configure again.

Note: Repeat the above steps until all 4 temperature points have completed coordinate configuration.

Step 3: Perform Calibration

After confirming that all 4 temperature points have been successfully configured, click the "Start Calibration" button to complete the secondary calibration for this setting.

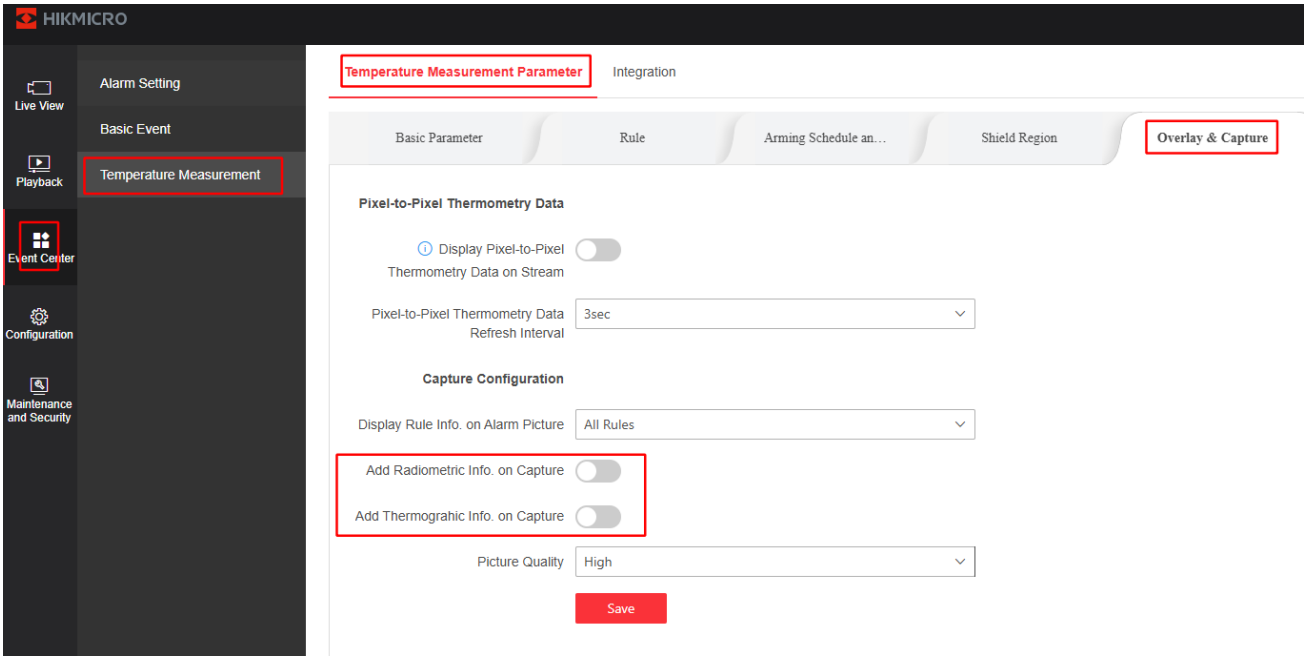
View final operation feedback:

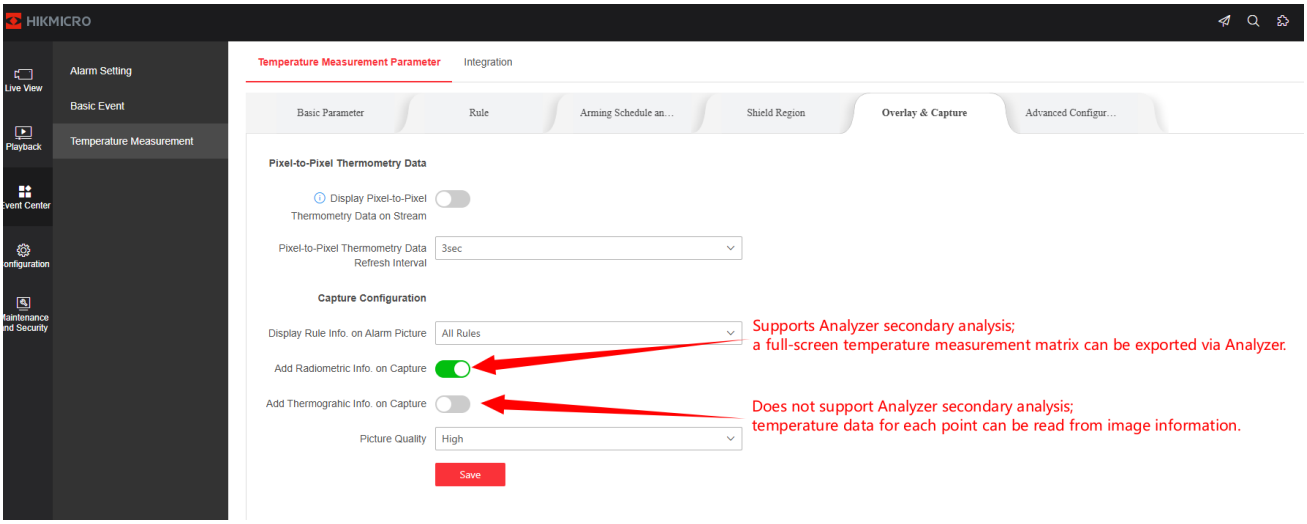
✓ Green checkmark: Indicates successful calibration for this setting.

✗ A red cross indicates calibration failure; please check and try again.

2.8 **Capture with radiometric information**

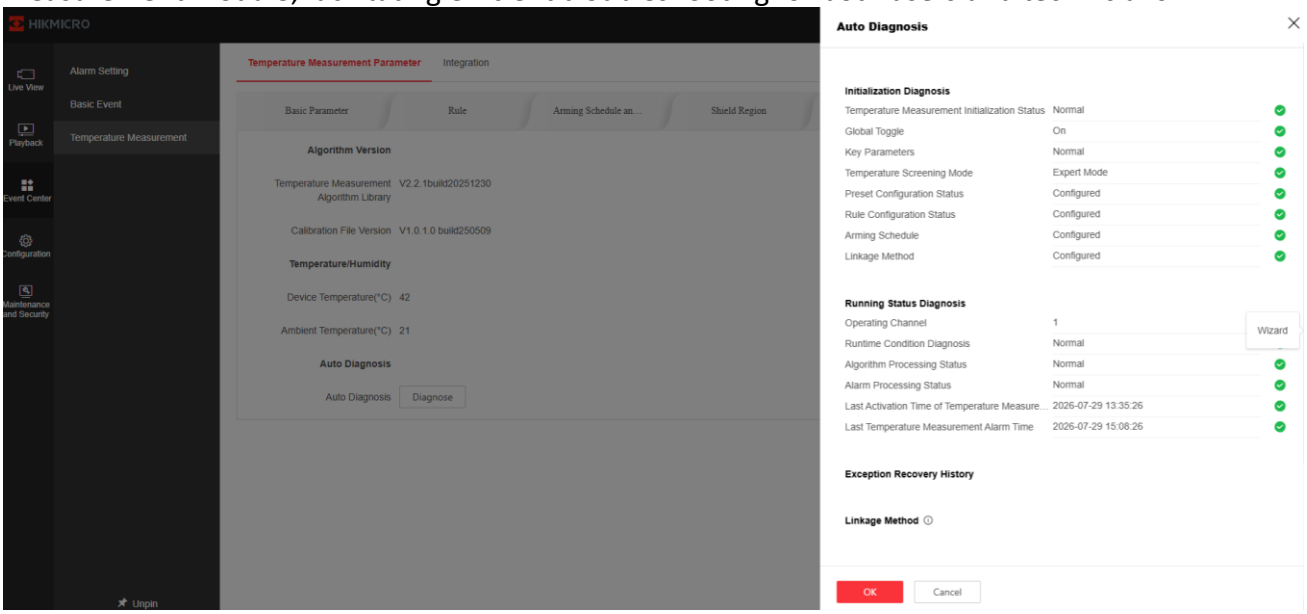
It supports capturing images linked to alarm inputs and images linked to temperature measurement alarms, which carry radiometric information and can be imported into Analyzer software for offline secondary temperature measurement analysis.



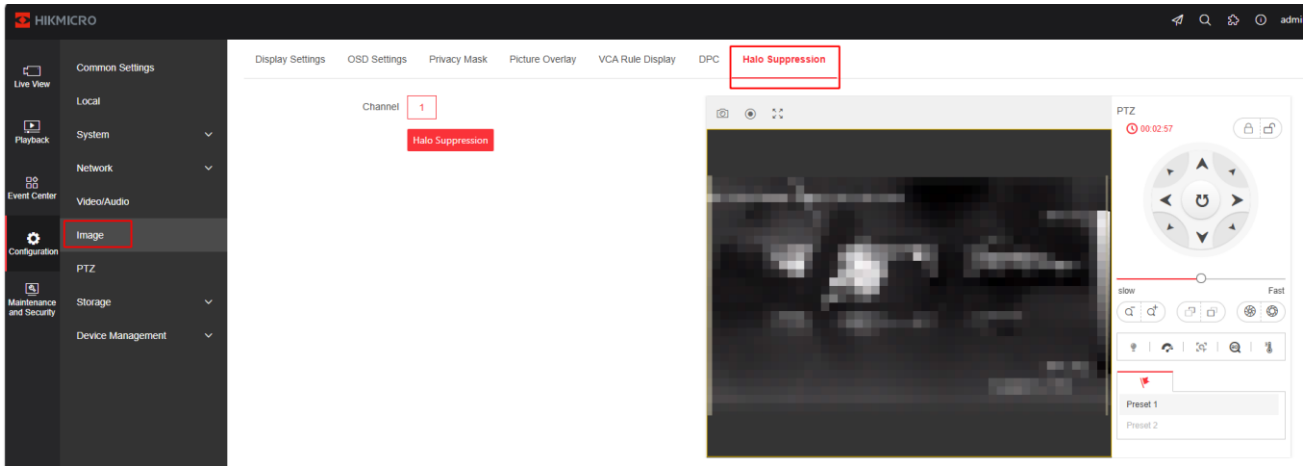


2.9 **Self-diagnostic**

The system conducts automated self-diagnosis on the core functions of the temperature measurement module, facilitating efficient troubleshooting for both users and technicians.



2.10 **Halo Suppression**



Tips :

① Before removing the halo, ensure the machine is fully warmed up; allow it to run for **at least one hour.**

② Removing the halo is time-consuming. Aim the lens at a **low-emissivity**, **room-temperature**, **uniform surface** and keep the machine stationary until the operation is successful. Otherwise, image quality will be affected.

Chapter 3 **Optimization**

3.1 Frame rate optimization

Performance has been optimized so that the video frame rate of the camera connected to the Analyzer software via UVC can meet the frame rate of the camera module. The current maximum frame rate of the camera module is **50 frames per second**.

3.2 Bug fixed



HIKMICRO

See the World in a New Way