

Thermal Network Bullet Camera & Turret Camera

V5.5.348 build 260324

Release Notes

(2026-04-02)

1) Basic Information

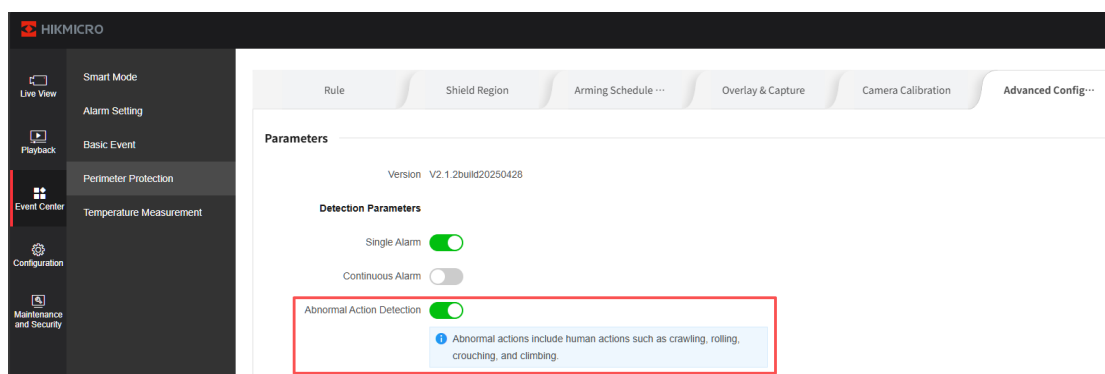
Firmware Version	V5.5.348 build 260324
Encoding Version	V7.3 build 260316
Web Component	web_version = " V5.0.111_R0108 build 20260313"; plugin_version: 4.0.2601.2

2) New & Optimized Features

2.1 Perimeter Protection related:

1) Support Abnormal Action Detection function.

Allow the camera to detect special poses such as crawling, crouching, climbing walls, bending over, and swinging arms.



When enabling Abnormal Action Detection, a pop-up window will appear on the web interface asking, “After enabling this function, Filter Level of Self-Learning Calibration will be set to Off. Continue?” (Only disables the height filter for self-learning calibration, **does not** affect the calibration results.)



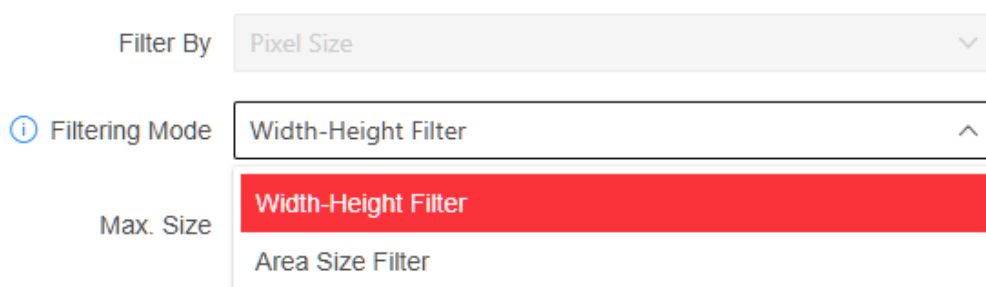
After enabling this function, Filter Level of Self-Learning Calibration will be set to Off. Continue?

OK

Cancel

2) Supports configuration of filtering modes for perimeter protection.

With options for Width-Height Filtering and Area Size Filtering.



Width-Height Filtering: If $\text{target width}(W) \leq \text{min-Width}$ or target

$\text{height}(H) \leq \text{min-Height}$ or $\text{target width}(W) \geq \text{max-Width}$ or $\text{target height}(H) \geq \text{max-Height}$, then the target will be filtered.

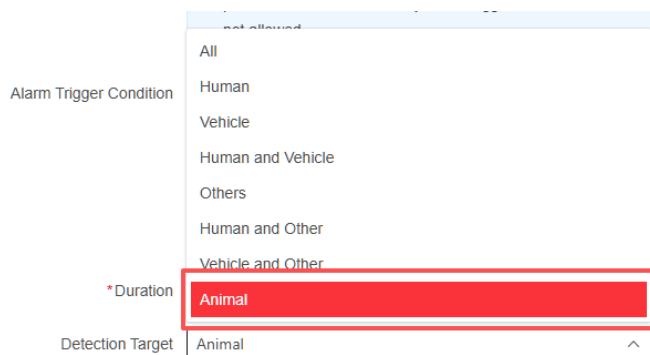
Area Size Filtering: If $\text{target size}(H*W) \leq \text{min-Size}$ or $\text{target size}(H*W) \geq \text{max-Size}$, then the target will be filtered.

The original filtering method was based on width and height, but some targets do not meet the requirements of this method—such as cows, sheep. By adding area filtering, targets that do not meet the requirements can be directly filtered out based on their area.

3) **Support Self-Learning Calibration on Bi-Spectrum Camera with resolution 640*512** (HM-TD2668/G1/T3Y & HM-TD2668/G0/T1Y).

4) **Supported animal detection types.**

Perimeter protection now includes animals as a new target type, enabling detection of cats, dogs, cows, sheep, rabbits, birds, and more.



When enabling Animal Detection, a pop-up window will appear on the web interface asking, “After enabling this function, Filter Level of Self-Learning Calibration will be set to Off. Continue?” (Only disables the height filter for self-learning calibration, **does not** affect the calibration results.)



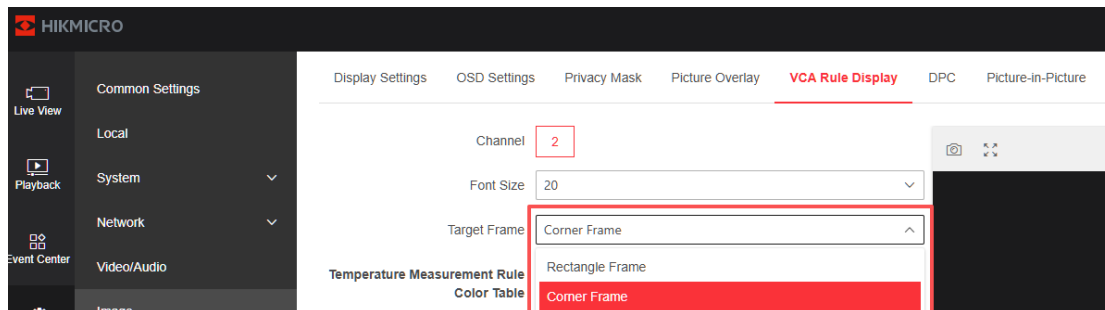
After enabling this function, Filter Level of Self-Learning Calibration will be set to Off. Continue?

OK

Cancel

5) Support for target box display configuration.

On the VCA Rule Display page, target box types can be configured, including Corner Frame and Rectangle Frame.

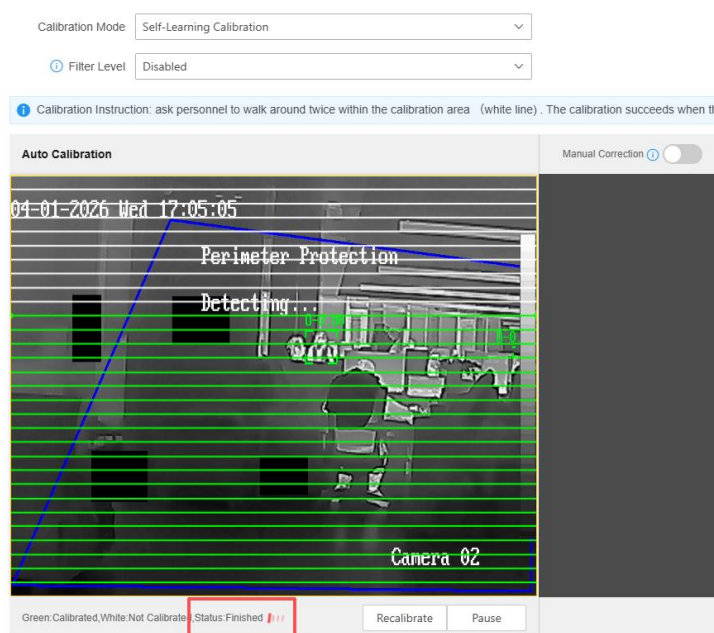


The comparison is as follows:



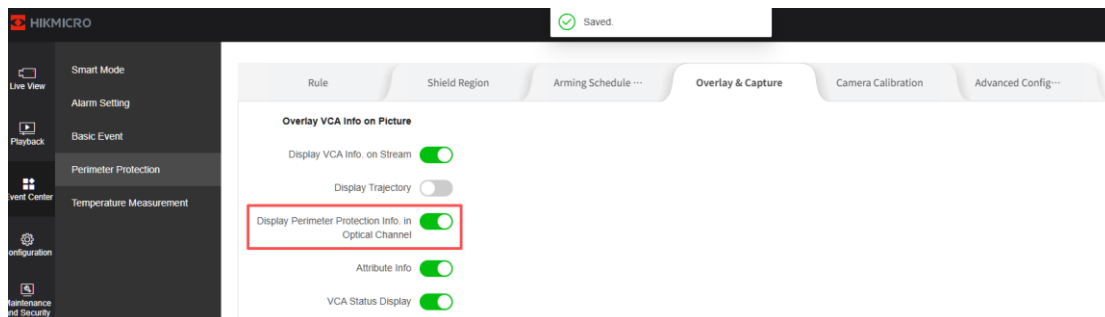
6) Support display of Self-Learning Calibration status.

Add a calibration status indicator to the self-learning calibration status bar to display “In Progress” or “Finished.”



7) **Support display VCA information on Optical channel.**

Supports displaying Perimeter VCA information (rule box, target box, trajectory, rule name, and attribute information) in the Optical channel.



Once enabled, the following message will appear: “After enabling Display Perimeter Protection Info. In Optical Channel, Digital zoom and Mirror will be turned off, and the device will switch to standard ratio. Continue?”

 After enabling Display Perimeter Protection Info. in Optical Channel, Digital Zoom and Mirror will be turned off, and device will switch to standard zoom ratio. Continue?

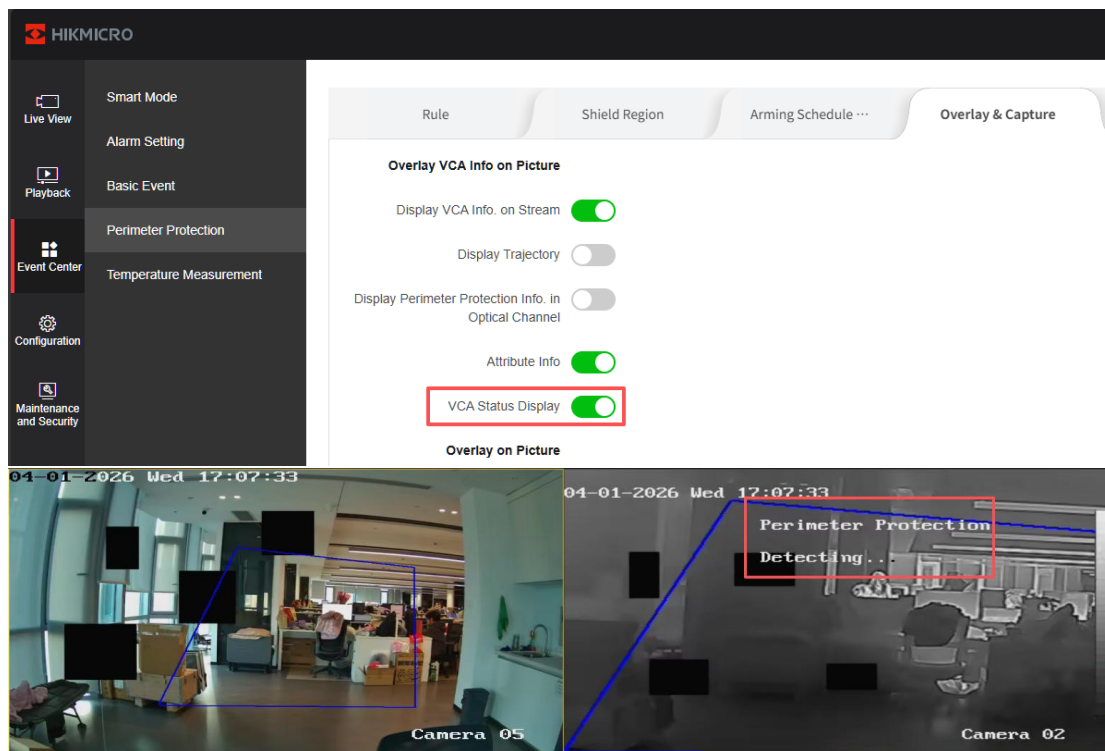


The result after enabling it is shown below:

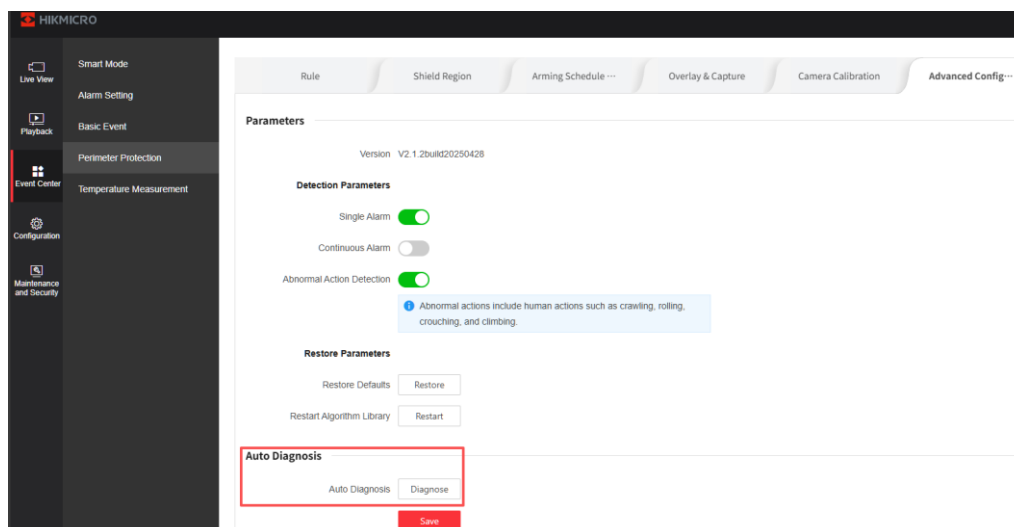


8) **Supports display of perimeter protection status.**

Add a “VCA Status Display” in Overlay & Capture page to show the current perimeter protection status. The displayed statuses include: Perimeter Protection Detecting, Perimeter Protection activation failed.



9) Supports perimeter Auto Diagnosis



Auto-diagnostics can record information on the system's operational status. This includes Initialization Diagnosis, Key Settings Diagnosis, Running Status Diagnosis, and Exception Recovery History. A **green checkmark (✓)** indicates normal operation; otherwise, a **red cross (✗)** is displayed.

Auto Diagnosis

×

Initialization Diagnosis

Perimeter Protection Initialization...	Normal	✓
--	--------	---

Key Settings Diagnosis

Global Toggle	On	✓
Key Parameters	Normal	✓
Arming Schedule	Configured	✓
Linkage Method	Configured	✓

Running Status Diagnosis

Operating Channel	2	✓
Perimeter Algorithm Processing ...	Normal	✓
Alarm Processing Status	Normal	✓
Self-Learning Calibration Status	Not Calibrated	✗
Last Activation Time of Perimeter ...	2026-04-01 15:37:18	✓
Last Perimeter Alarm Time	2026-04-01 15:42:47	✓

Exception Recovery History

Linkage Method ⓘ

HTTP Order

☐ Select All

☐ H1
 ☐ H2
 ☐ H3
 ☐ H4
 ☐ H5
 ☐ H6
 ☐ H7
 ☐ H8

☐ H9
 ☐ H10

If the initialization or activation of the perimeter fails, the camera will proceed to the following step to attempt to recover its function:

- Try restarting the perimeter module.

If the attempt fails more than three times, the HTTP Order linkage is triggered automatically (configuration required).

The OSD displays “Perimeter protection activation failed...”.

And the device reboots.
- If the perimeter remains abnormal after the reboot, the system will not reboot again or trigger the HTTP Order.

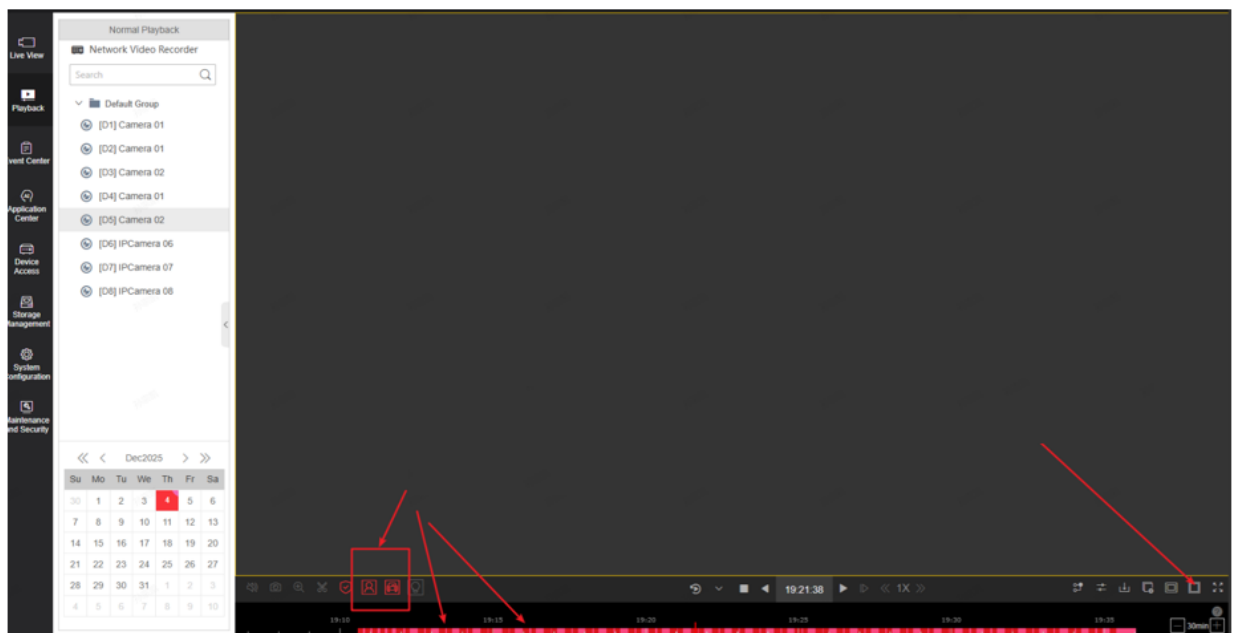
Only the OSD will display “Perimeter protection activation failed...”
- If the perimeter system has previously experienced a startup failure and has been restored to normal operation through actions such as restarting the device or updating the firmware.

If a perimeter anomaly occurs again, repeat steps **a** and **b**.

When diagnostic file is exported, diagnostic information of the perimeter module is also exported.

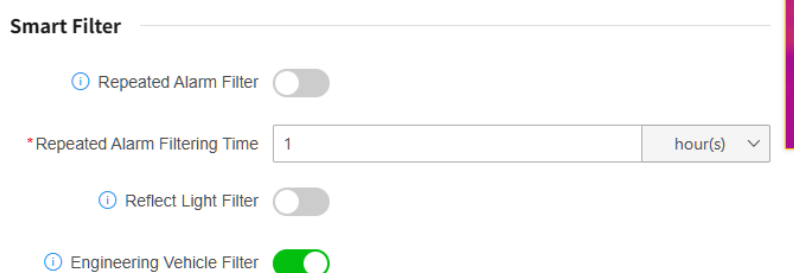
```
[03-30 14:06:39.115][src/vca_log.c 70][vca_refresh_status]vca_refresh_status run
[03-30 14:06:39.116][src/vca_log.c 228][vca_refresh_status]vca_refresh_status exit
{
  "initCheck": {
    "perimeterDetectionStatus": "normal"
  },
  "configCheck": {
    "enableStatus": "on",
    "coreParamStatus": "normal",
    "defenseTimeStatus": "configured",
    "linkageModeStatus": "configured"
  },
  "runtimeCheck": {
    "operationChannel": "1",
    "perimeterAlgorithmProcessingStatus": "normal",
    "alarmProcessingStatus": "normal",
    "selfLearningCalibrationStatus": "notCalibrated",
    "lastPerimeterAlgorithmStartTime": "2026-03-30T05:48:10Z",
    "lastPerimeterAlgorithmStopTime": "2026-03-30T05:48:09Z",
    "lastPerimeterAlarmTime": "2026-03-30T06:06:36Z"
  },
  "exceptionRecovery": {
  }
}
```

10) Supports NVR for marking clips containing people and vehicles.



2.2 Temperature Measurement related:

1) Change “Forklift Filter” to “Engineering Vehicle Filter”.

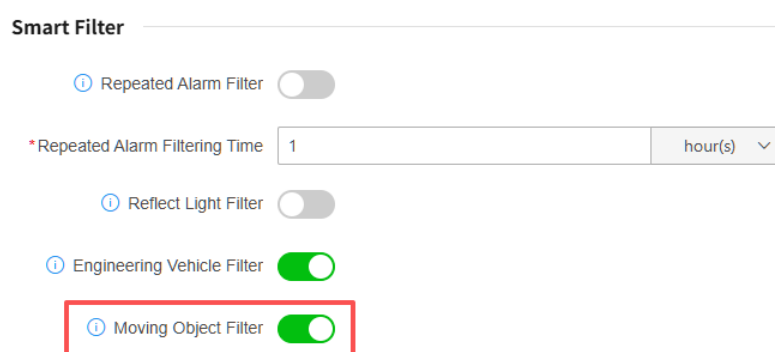


2) Apply the new engineering vehicle filtering model.

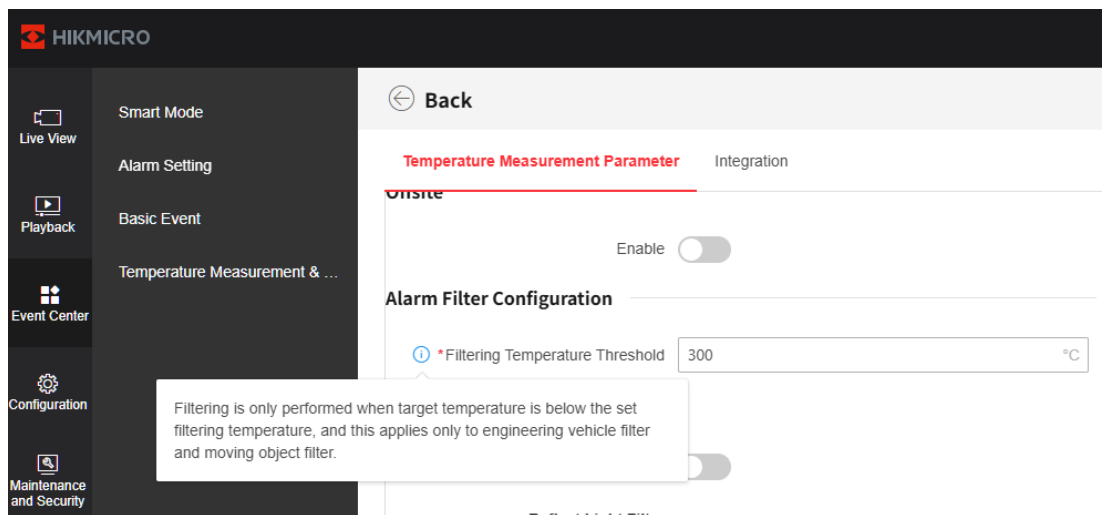
The current forklift filter has been updated to an engineering vehicle filter, and a new optical engineering vehicle filter model has been implemented for Bi-Spectrum devices to improve engineering vehicle detection. Compared to traditional thermal imaging forklift filters, optical recognition offers higher forklift detection capability and accuracy.

3) Temperature measurement supports moving object filtering.

Adding moving object filtering.



*Moving object filtering also performs with Filtering Temperature Threshold; moving objects exceeding the “Filtering Temperature Threshold” will not be filtered out.



4) The default filter time for temperature measurement is 1 second.

The default filtering time of temperature Pre-Alarm and Alarm is now becoming 1s.

Alarm Parameters
×

Alarm Rule

Above (Max. Temperature) ▼

Tolerance Temperature * ⓘ

3 °C

Pre-Alarm Parameters

Pre-Alarm Temperature *

80 °C

Pre-Alarm Filtering Time *

1 sec

Pre-Alarm Output

☐ A->1 ☐ A->2

Alarm Parameters

Alarm Temperature *

100 °C

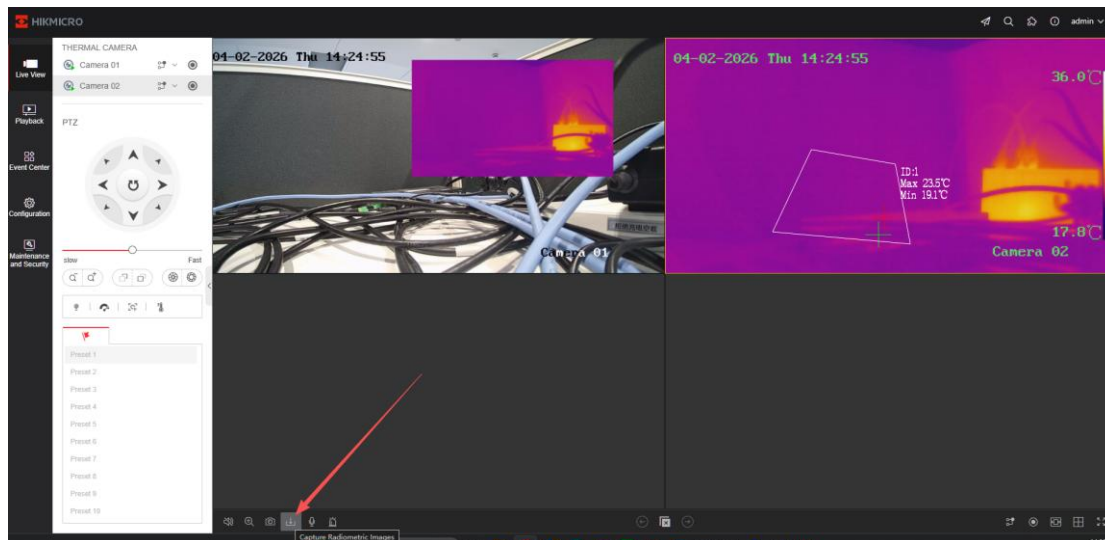
Alarm Filtering Time *

1 sec

Alarm Output

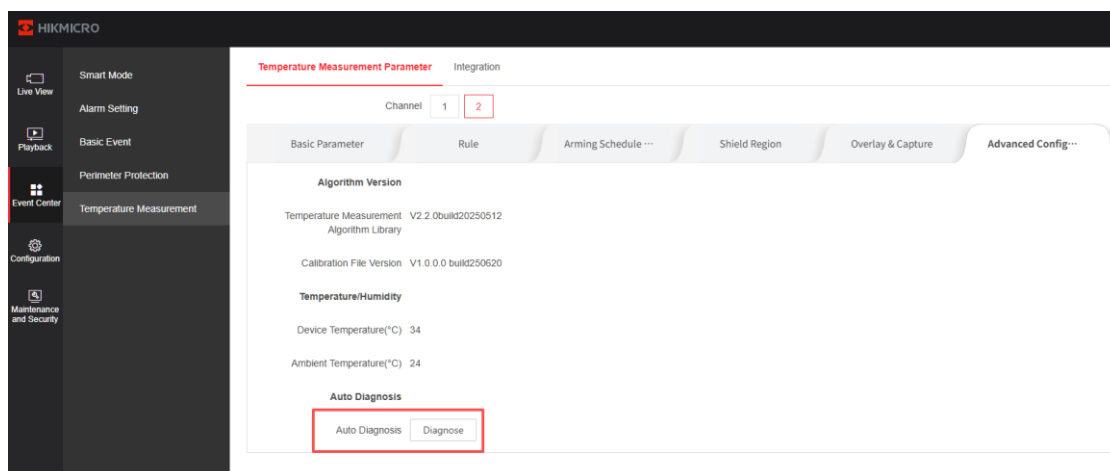
☐ A->1 ☐ A->2

5) **Support Capture Radiometric images for /G0/T1X T-models (ex. HM-TD2638T-4/G0/T1Y).**



6) **Temperature measurement supports Auto Diagnostics**

In the advanced configuration interface of the Temperature Measurement. Add an auto diagnostic feature.



This includes Initialization Diagnosis, Key Settings Diagnosis, Running Status Diagnosis, and Exception Recovery History. A **green checkmark (✓)** indicates normal operation; otherwise, a **red cross (✕)** is displayed.

Auto Diagnosis

×

Initialization Diagnosis

Temperature Measurement Initialization Status	Normal	✓
Global Toggle	On	✓
Key Parameters	Normal	✓
Temperature Screening Mode	Expert Mode	✓
Rule Configuration Status	Configured	✓
Arming Schedule	Configured	✓
Linkage Method	Configured	✓

Running Status Diagnosis

Operating Channel	2	✓
Algorithm Processing Status	Normal	✓
Alarm Processing Status	Normal	✓
Last Activation Time of Temperature Measure...	2026-04-01 17:49:50	✓
Last Deactivation Time of Temperature Measu...	2026-04-01 17:29:05	✓

Exception Recovery History

Linkage Method ⓘ

HTTP Order

☐ Select All

☐ H1
 ☐ H2
 ☐ H3
 ☐ H4
 ☐ H5
 ☐ H6
 ☐ H7
 ☐ H8
 ☐ H9
 ☐ H10

OK

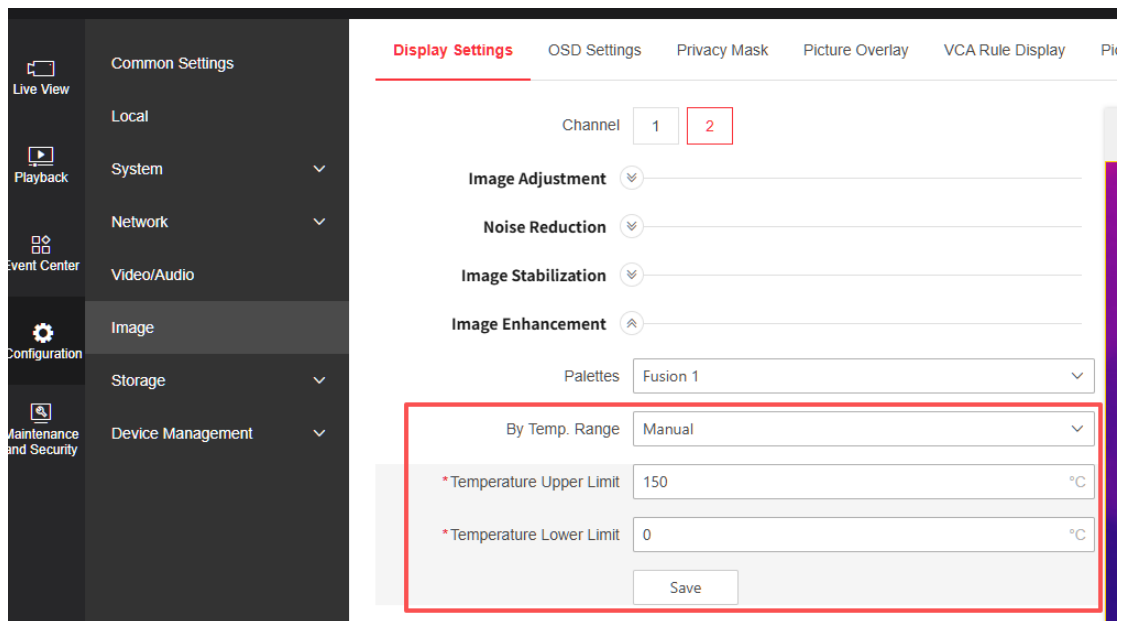
Cancel

If the initialization or activation of the temperature fails, the camera will proceed to the following step to attempt to recover its function:

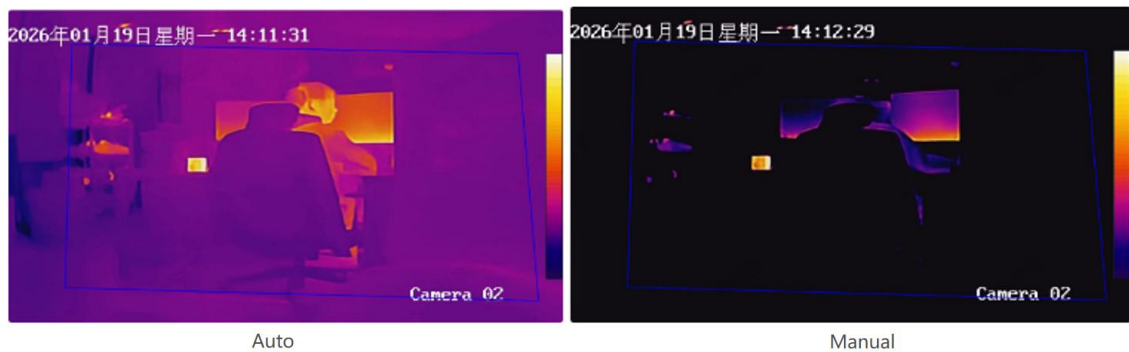
- d. Try restarting the temperature module.
- If the attempt fails more than three times, the HTTP Order linkage is triggered automatically (configuration required).
- e. If the perimeter remains abnormal after the reboot, the system will not reboot again or trigger the HTTP Order.
- f. If the temperature system has previously experienced a startup failure and has been restored to normal operation through actions such as restarting the device or updating the firmware.
- If a temperature anomaly occurs again, repeat steps **a** and **b**.

7) **The T-model supports palettes temperature range configurable.**

For T-model Thermography Camera, the temperature range mode is configurable when in -20-150 °C. It supports automatic, manual, and auto-adaptive modes.

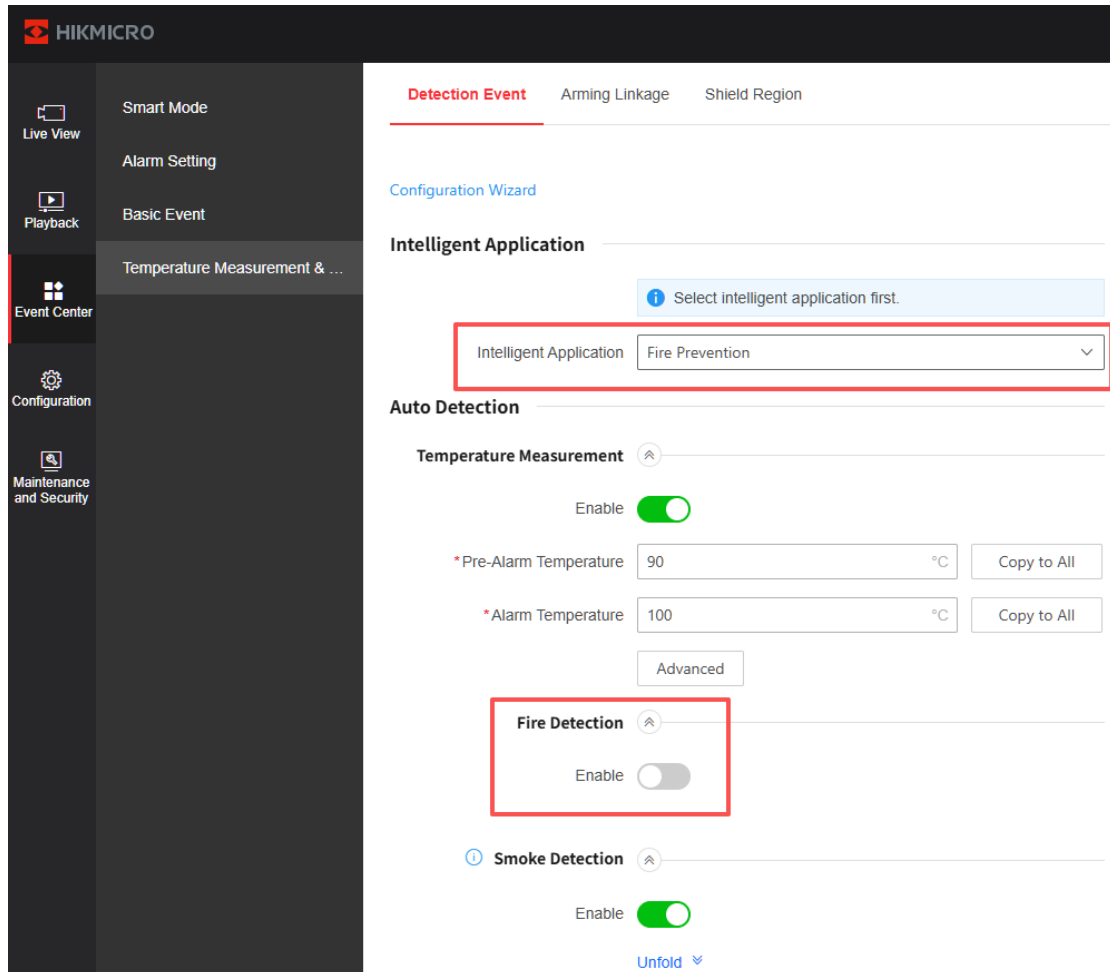


When choosing manual mode. The temperature range can be adjusted manually to highlight the ROI.

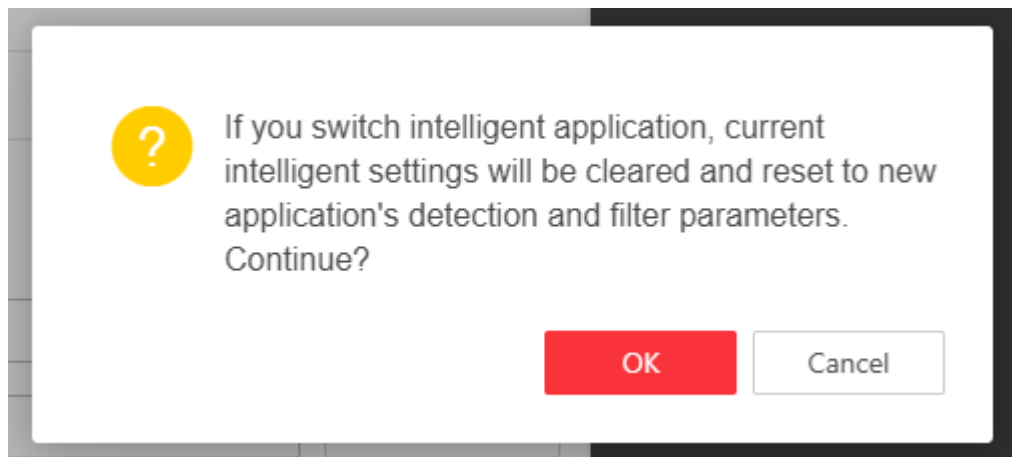


2.3 Fire prevention related:

- 1) When the intelligent application is set to fire prevention mode. Fire detection function will be disabled by default, only temperature measurement and smoke detection function are enabled.



- 2) When switching between different Intelligent Applications, both Intelligent Functions and Intelligent Filters will now revert to their default settings, the web page displays the following message: “If you switch intelligent application, current intelligent settings will be cleared and reset to new application’s detection and filter parameters. Continue?”



3) Different Intelligent mode's default settings is below:

- **Fire Prevention mode:**
 - Temperature Measurement **Enable**
 - Fire Detection Disable
 - Smoke Detection **Enable**
 - Smoking Detection Disable
 - Repeated Alarm Filter **Enable**
 - Reflect Light Filter **Enable**
 - Engineering Vehicle Filter **Enable**
 - Moving Object Filter **Enable**
 - Smoking Filter Disable
 - Sky Filter Disable
- **Temperature Measurement mode:**
 - Temperature Measurement **Enable**
 - Fire Detection Disable
 - Smoke Detection Disable
 - Smoking Detection Disable
 - Repeated Alarm Filter **Enable**
 - Reflect Light Filter **Enable**
 - Engineering Vehicle Filter Disable
 - Moving Object Filter Disable

Smoking Filter Disable

Sky Filter Disable

- **Smoking Detection**

Temperature Measurement Disable

Fire Detection Disable

Smoke Detection Disable

Smoking Detection **Enable**

Repeated Alarm Filter Disable

Reflect Light Filter Disable

Engineering Vehicle Filter Disable

Moving Object Filter Disable

Smoking Filter Disable

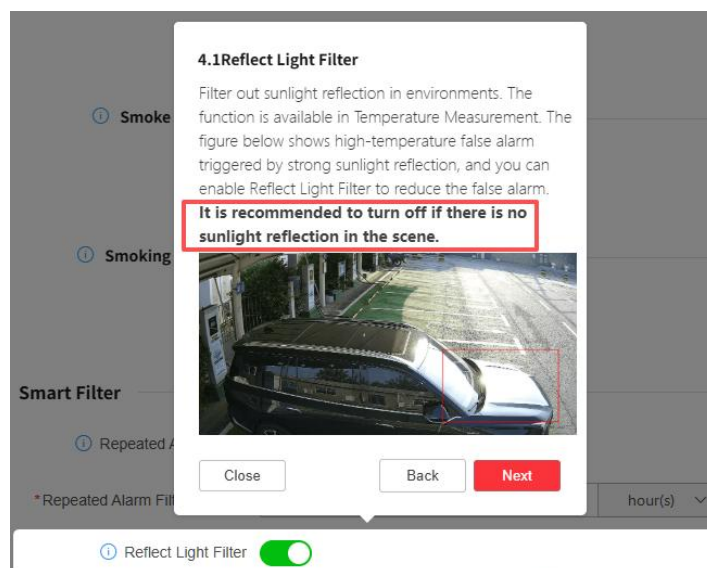
Sky Filter Disable

- **Others**

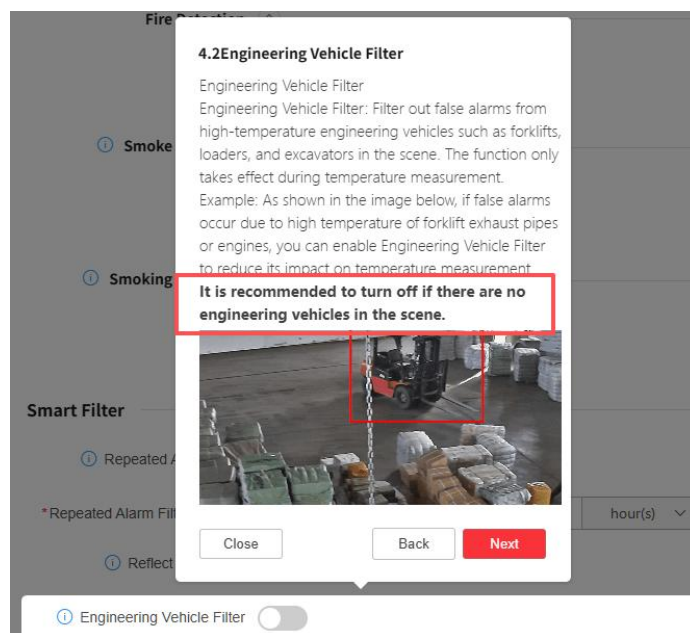
ALL functions are **Disable** by default.

4) **Revise the wizard for fire prevention configurations.** For specific smart filtering, add the following explanation:

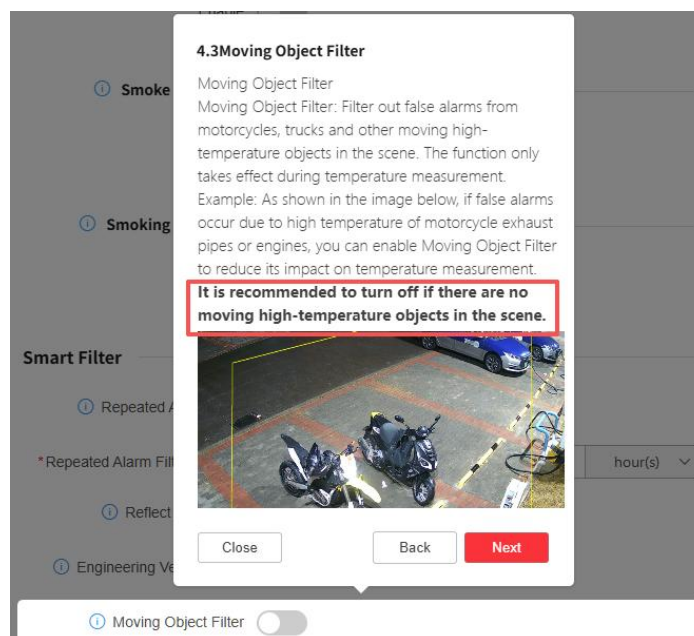
- Reflect Light Filter: It is recommended to turn off if there is no sunlight reflection in the scene.



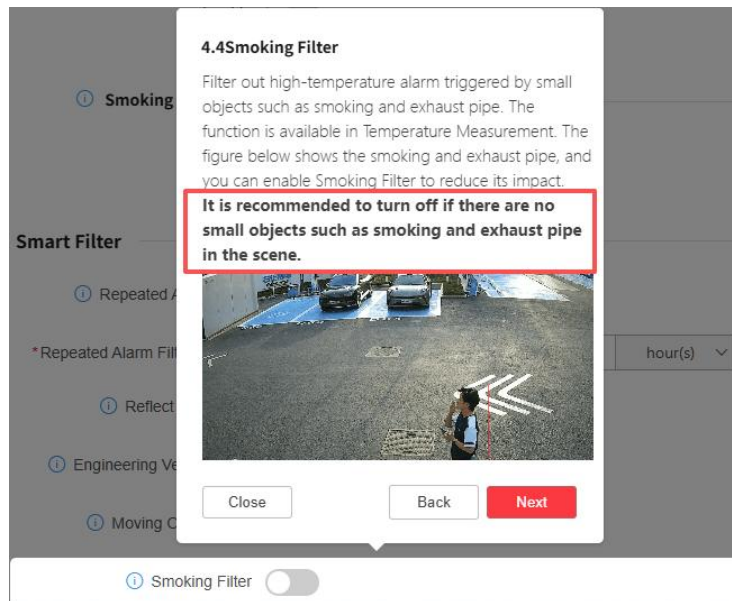
- Engineering Vehicle Filter: It is recommended to turn off if there is no engineering vehicle in the scene.



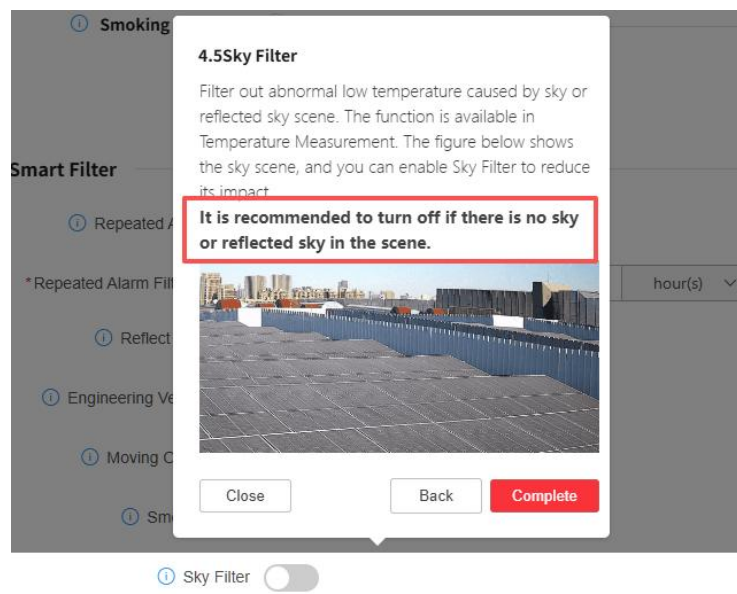
- Moving Object Filter: It is recommended to turn off if there is no moving object in the scene.



- Smoking Filter: It is recommended to turn off if there are no small objects such as smoking and exhaust pipe in the scene.



- Sky filter: It is recommended to turn off if there is no sky or reflected sky in the scene.



2.4 Fire and smoke detection related:

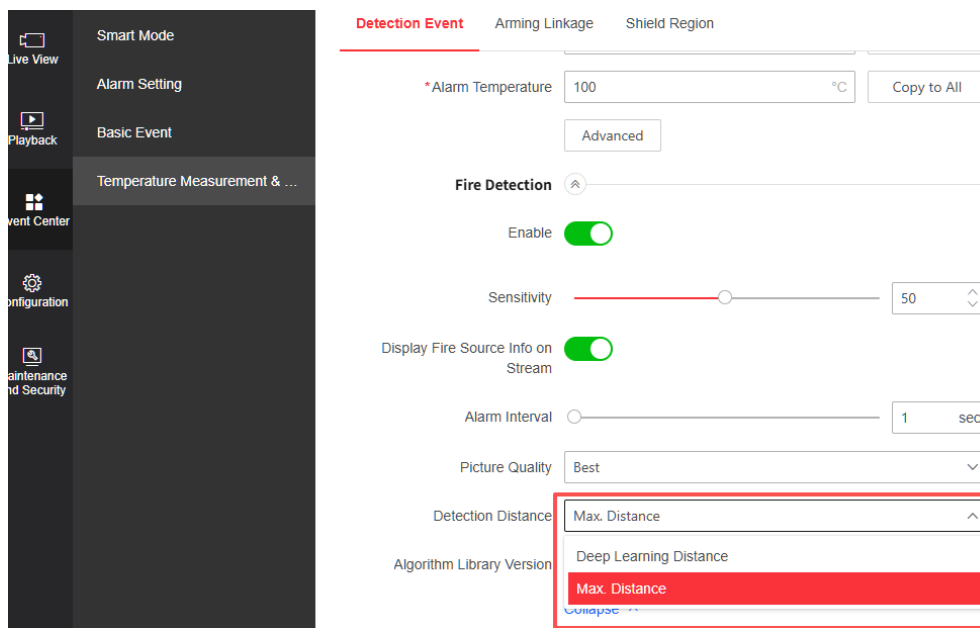
1) Import the Smoke Large Model

For GUANLAN Large Scale model Camera (G1/T3), implement a large-scale smoke classification model to reduce false smoke detection alarms.

2) Add Deep Learning Fire Detection Algorithm

Support Deep Learning Fire Detection Algorithm, with fewer false alarms, but the detection range is limited. Support for switching between deep

learning mode and max distance mode.



3) Add a black smoke Detection

Add a black smoke model to improve black smoke detection performance.

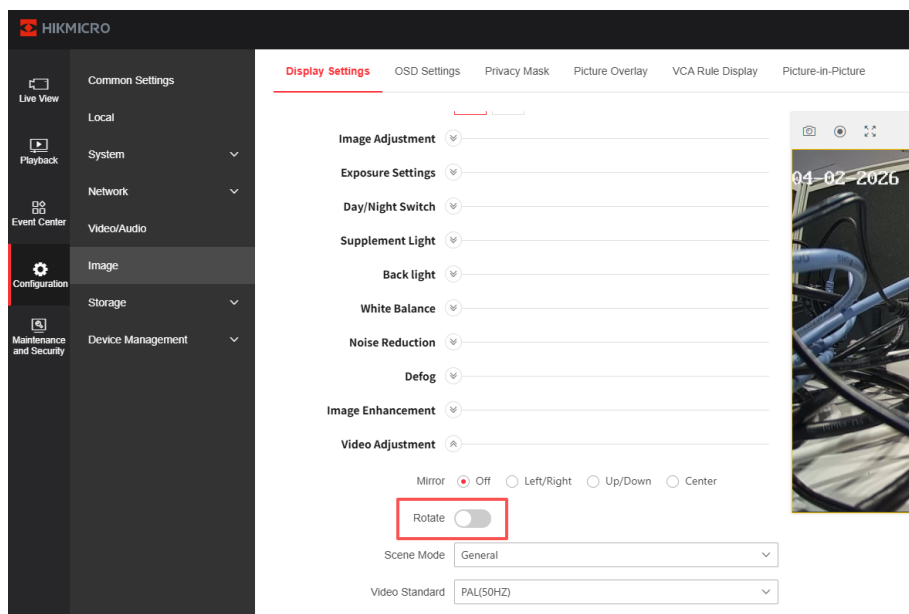
2.5 Image related:

1) Supports 14-bit super-scene.

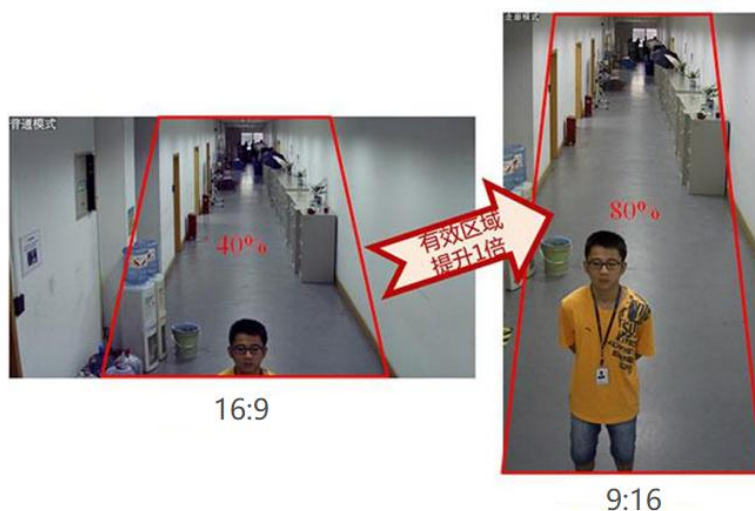
HM-TD1228(T)/G1/T3A models and HM-TD2628(T)/G1/T3A models is now supporting 14-bit super-scene.



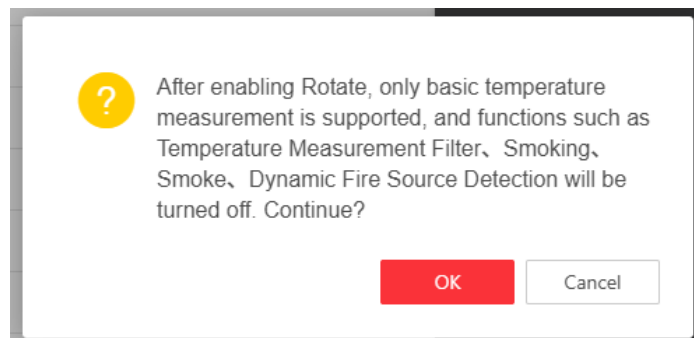
2) Supports image rotation



The image can rotate 90 degrees clockwise, allowing for greater depth and a video corridor effect.

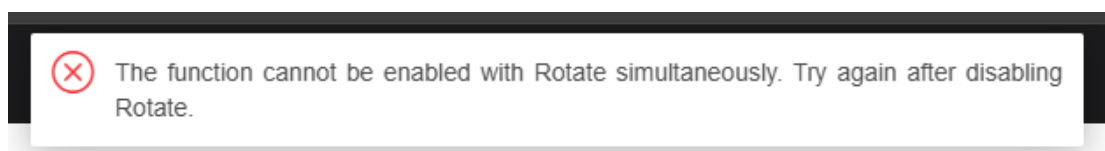


Enable rotation, a prompt will appear: “After enabling Rotate, only basic temperature measurement is supported, and functions such as Temperature Measurement Filter, Smoking, Smoke, Dynamic Fire Source Detection will be turned off. Continue?”



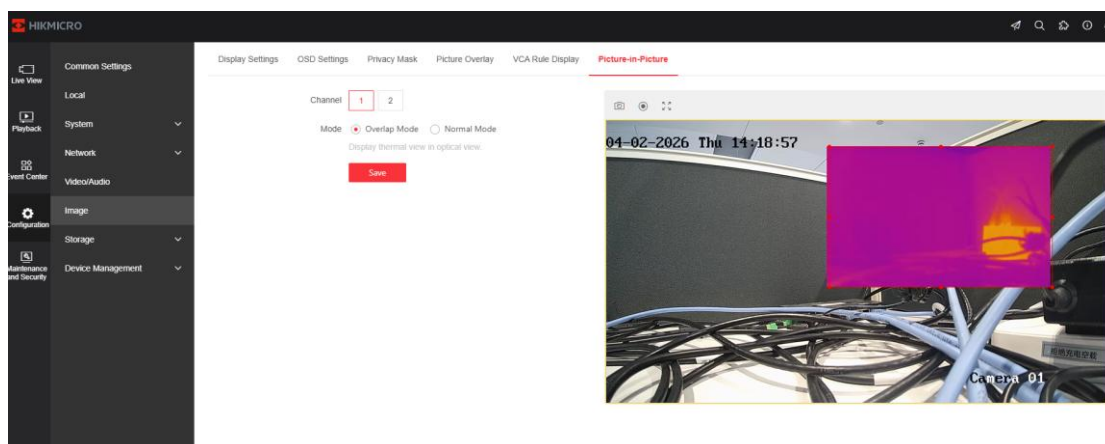
Rotating does not affect the basic temperature measurement function, but all other smart features will be automatically disabled.

If rotation is already enabled and you then try to activate a mutually exclusive feature—such as perimeter protection—a pop-up window will appear:” The function cannot be enabled with Rotate simultaneously. Try again after disabling Rotate.”



- 3) **Electronic Image Stabilization (EIS) and Area Adaption enhancement are mutually exclusive.**
- 4) **Support adjusting Overlap position and size.**

The Overlap mode in Picture-in-Picture page is now configurable with its size and position.



2.6 Others

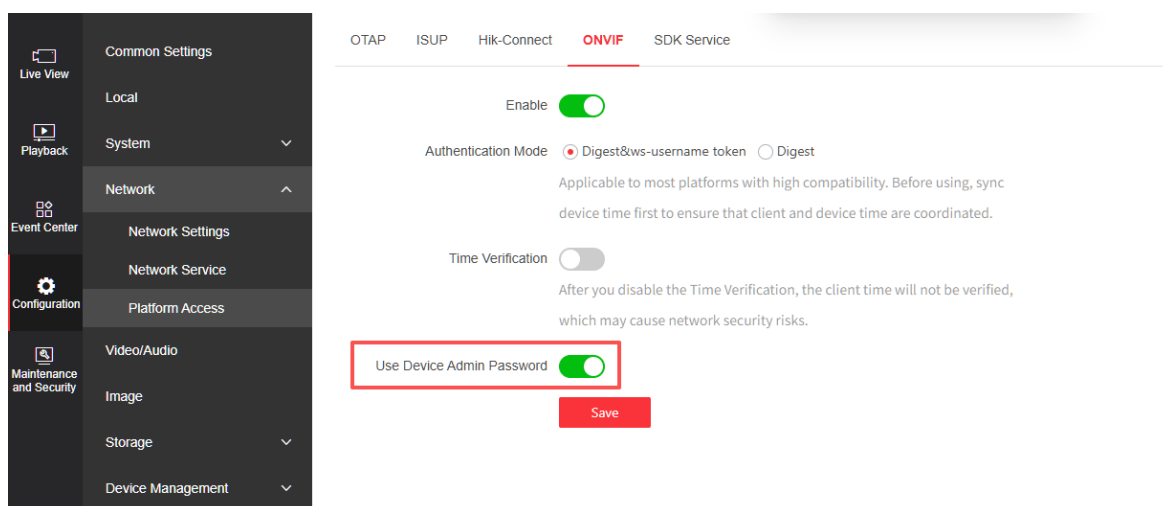
1) Optimization of Input/Output Port orders for Third-Party Alarm Modules

Previously: The IO numbers for third-party alarm modules started at 16. When integrating with an NVR, the NVR was unable to correctly handle such non-sequential IO numbers.

Now: The IO numbers for third-party alarm modules can start at the device's actual number plus 1, ensuring the continuity of the IO numbers.

2) ONVIF includes an administrator account by default

ONVIF includes a default administrator account with the username "admin" and the default device password.



3) Cloud upload time optimization.

The upload time for initial alarm events in cloud storage has been optimized to less than 3 seconds. Before is more than 5 seconds.

4) Optimization of the Modbus Alarm Protocol

Optimize the Modbus communication protocol, including:

- Add preset point ID information to the temperature alarm protocol so that users can identify the corresponding location. Applies to both master and slave modes.
- Supports configuring and reading the enable status of each perimeter

rule individually.

- Supports reading the alarm status of each perimeter rule.
- Supports retrieving the alarm target type for each perimeter rule (0 = No Alarm, 1 = Human, 2 = Vehicle, 3 = Animal, 255 = Other)
- Supports reading the alarm input status (0 = all off, 1 = Input1 on, 2 = Input2 on); *does not support third-party alarm modules.
- Supports reading and configuring the alarm output status (0x0000 = all outputs off; 0x0001 = output 1 on, output 2 off; 0x0002 = output 2 on, output 1 off; 0x0003 = outputs 1 and 2 on).
- Support the device reboot command.

5) Optimization of Supplementary Lighting and Alarm Light Logic

The logic for supplementary lighting and alarm flashing has been optimized.

Now, in Day Mode, the lights are controlled by the alarm system, while in Night Mode, white light /Smart supplementary takes priority.

3) Models included

HM-TD2638-4/G0/T1Y	HM-TD2638-8/G0/T1Y	HM-TD2638-10/G0/T1Y	HM-TD2638-15/G0/T1Y
HM-TD2638-25/G0/T1Y	HM-TD2638-35/G0/T1Y	DS-2TD2638-4/G0/T1Y	DS-2TD2638-8/G0/T1Y
DS-2TD2638-10/G0/T1Y	DS-2TD2638-15/G0/T1Y	DS-2TD2638-25/G0/T1Y	DS-2TD2638-35/G0/T1Y
HM-TD2638T-4/G0/T1Y	HM-TD2638T-8/G0/T1Y	HM-TD2638T-10/G0/T1Y	HM-TD2138-10/G0/T1Y(lite)
HM-TD2138-15/G0/T1Y(lite)	HM-TD2138-25/G0/T1Y(lite)	HM-TD2138-35/G0/T1Y(lite)	HM-TD2668-10/G0/T1Y
HM-TD2668-15/G0/T1Y	HM-TD2668-25/G0/T1Y	HM-TD2668-35/G0/T1Y	DS-2TD2668-10/G0/T1Y
DS-2TD2668-15/G0/T1Y	DS-2TD2668-25/G0/T1Y	DS-2TD2668-35/G0/T1Y	HM-TD2668-10/G0/T1Y(lite)
HM-TD2668-15/G0/T1Y(lite)	HM-TD2668-25/G0/T1Y(lite)	HM-TD2668-35/G0/T1Y(lite)	HM-TD2168-5/G0/T1Y
HM-TD2168T-5/G0/T1Y	HM-TD2668T-10/G0/T1Y	DS-2TD2568T-50/G0/T1Y	DS-2TD2568T-15/G0/T1Y
HM-TD2568T-5/G0/T1Y	HM-TD2568T-15/G0/T1Y	HM-TD2618-3/G0/T1A	HM-TD2618-7/G0/T1A
HM-TD2618-10/G0/T1A	HM-TD1218-2/G0/T1A	HM-TD1218-3/G0/T1A	HM-TD1218-7/G0/T1A
HM-TD2628-3/G0/T1A	HM-TD2628-7/G0/T1A	HM-TD2628-10/G0/T1A	DS-2TD2628-10/G0/T1A

HM-TD1228-2/G0/T1A	HM-TD1228-3/G0/T1A	HM-TD1228-7/G0/T1A	HM-TD2628T-3/G0/T1A
HM-TD2628T-7/G0/T1A	HM-TD2628T-10/G0/T1A	HM-TD1228T-2/G0/T1A	HM-TD1228T-3/G0/T1A
HM-TD1228T-7/G0/T1A	HM-TD2638-4/G1/T3Y	HM-TD2638-8/G1/T3Y	HM-TD2638-10/G1/T3Y
HM-TD2638-15/G1/T3Y	HM-TD2638-25/G1/T3Y	HM-TD2638-35/G1/T3Y	DS-2TD2638-4/G1/T3Y
DS-2TD2638-8/G1/T3Y	DS-2TD2638-10/G1/T3Y	DS-2TD2638-15/G1/T3Y	DS-2TD2638-25/G1/T3Y
DS-2TD2638-35/G1/T3Y	HM-TD2638T-4/G1/T3Y	HM-TD2638T-8/G1/T3Y	HM-TD2638T-10/G1/T3Y
HM-TD2668-10/G1/T3Y	HM-TD2668-15/G1/T3Y	HM-TD2668-25/G1/T3Y	HM-TD2668-35/G1/T3Y
DS-2TD2668-10/G1/T3Y	DS-2TD2668-15/G1/T3Y	DS-2TD2668-25/G1/T3Y	DS-2TD2668-35/G1/T3Y
HM-TD2168-5/G1/T3Y	HM-TD2168T-5/G1/T3Y	HM-TD2668T-10/G1/T3Y	HM-TD2628-3/G1/T3A
HM-TD2628-7/G1/T3A	HM-TD2628-10/G1/T3A	HM-TD1228-2/G1/T3A(	HM-TD1228-3/G1/T3A(
HM-TD1228-7/G1/T3A(	HM-TD2628T-3/G1/T3A	HM-TD2628T-7/G1/T3A	HM-TD2628T-10/G1/T3A
HM-TD1228T-2/G1/T3A	HM-TD1228T-3/G1/T3A	HM-TD1228T-7/G1/T3A	