



Nx Witness & Hikvision

**Temperature Screening Thermographic
Camera Integration Solution**

Overview

This paper is intended to introduce the integration configuration between Hikvision temperature screening thermographic camera and Nx Witness.

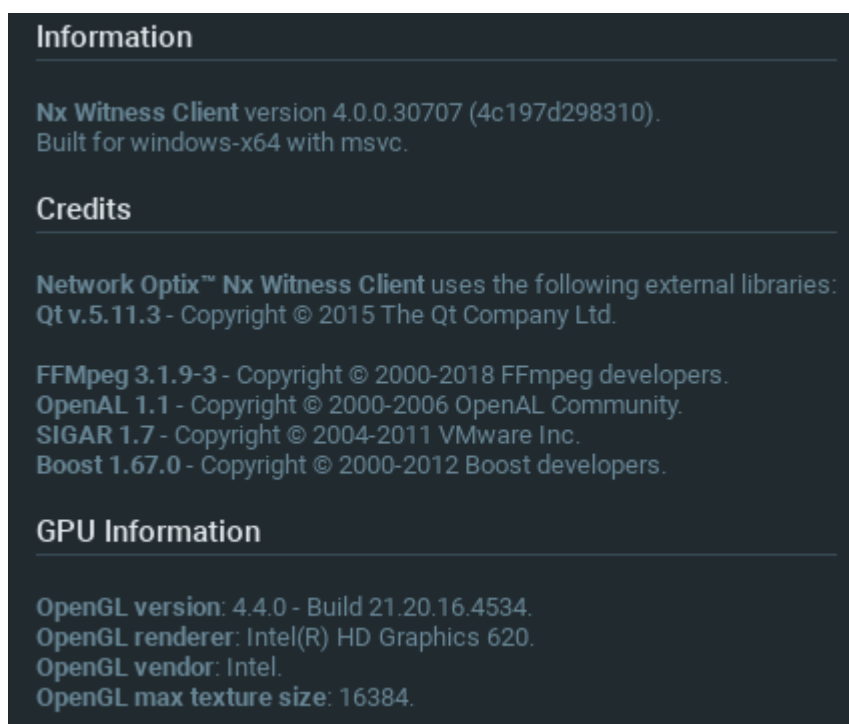
Supported Features

Live view	Playback	Face Capture alarm	Abnormal Temperature Alarm	Motion Alarm
√	√	√	√	√

1. Test environment

- **Nx Witness Client version**

4.0.0.30707 built for windows –x64 with msvc.



- **Hikvision temperature screening thermographic camera**

		Model list	Firmware version
Fixed Short-range Thermal Screening	Economical Thermal Products	DS-2TD2617B-3/PA DS-2TD2617B-3/PA DS-2TD2617B-6/PA DS-2TD1217B-3/PA DS-2TD1217B-6/PA	Customized V5.5.26_200701
Fixed Long-range Thermal Screening	High-End Thermal Products	DS-2TD2637B-10/P DS-2TD2636B-13/P DS-2TD2636B-15/P	



DS-2TD2617B



DS-2TD1217B



DS-2TD2636B/DS-2TD2637B

Temperature measurement range: 30-45°C

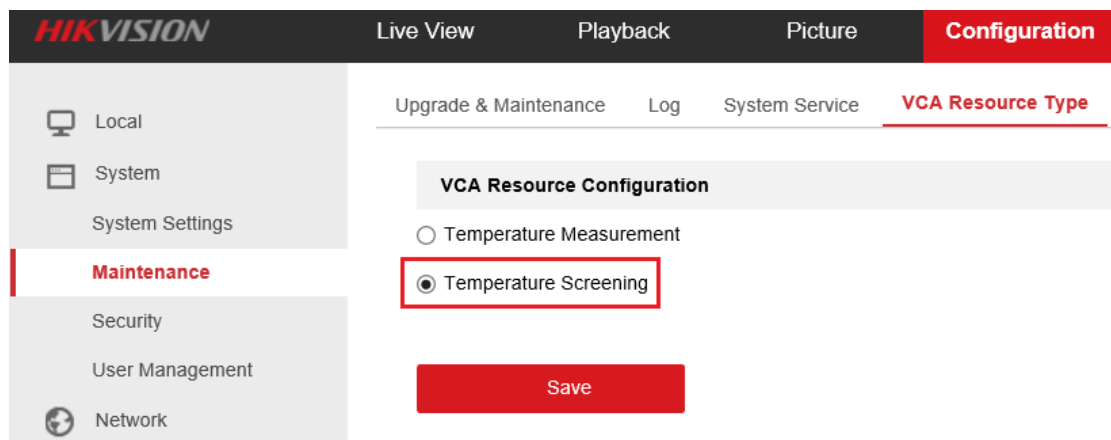
Working temperature: 10-35°C

Accuracy: ±0.5°C

2. Configuration Guide

2.1 Camera Configuration

2.1.1 Select Temperature Screening as VCA Resource Type.



2.1.2 Go to Local Configuration interface, enable and save the following settings:

HIKVISION Live View Playback Picture **Configuration**

Local

- System
- Network
- Video/Audio
- Image
- Event
- Storage
- Body Thermometry

Live View Parameters

Protocol	<input checked="" type="radio"/> TCP	<input type="radio"/> UDP	<input type="radio"/> MULTICAST	<input type="radio"/> HTTP
Play Performance	<input type="radio"/> Shortest Delay	<input checked="" type="radio"/> Balanced	<input type="radio"/> Fluent	
Rules	<input checked="" type="radio"/> Enable	<input type="radio"/> Disable		
Auto Start Live View	<input type="radio"/> Yes	<input checked="" type="radio"/> No		
Image Format	<input checked="" type="radio"/> JPEG	<input type="radio"/> BMP		
Display Rules Info. on Ca...	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Display Temperature Info.	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Display Temperature Info...	<input checked="" type="radio"/> Yes	<input type="radio"/> No		

2.1.3 Go to Body Thermography Basic Settings. Configure and save the following settings:

HIKVISION Live View Playback Picture **Configuration**

Local

- System
- Network
- Video/Audio
- Image
- Event
- Storage
- Body Thermometry**

Basic Settings Body Thermometry Configuration Linkage Method

Channel No.	Camera 02
<input checked="" type="checkbox"/> Enable Temperature Measurement	
<input type="checkbox"/> Enable Color-Temperature	
<input checked="" type="checkbox"/> Display Temperature Info. on Stream	
<input type="checkbox"/> Add Original Data on Capture	
<input type="checkbox"/> Add Original Data on Stream	
Data Refresh Interval	3 s
Unit	Degree Celsius(°C)
Temperature Range	30.0~45.0
Version	V2.0.7build20200210

Target Thermometry Parameters

Emissivity	0.98
Distance	1.0 m

Save

2.1.4 Configure Camera01 (Optical) Settings.

The screenshot shows the Hikvision web interface for configuring Camera 01 (Optical) settings. The interface is divided into several sections:

- Basic Settings:** Channel No. is set to Camera 01. The following options are checked:
 - Enable Face Detection
 - Display Temperature
 - Upload Captured Face Image
 - Display Face Temperature Position
- Configuration:** Targeting is selected.
- Face Detection Parameters:**
 - Min. Pupil Distance: 40
 - Max. Pupil Distance: 312
 - Generation Speed: 5
 - Sensitivity: 5
 - Alarm When Temperature: 37.5 °C
 - Pre-Alarm Temperature: 37 °C
- Video Feed:** Shows a person in a blue uniform with a green face detection box and a red 'IPD Max' label. Below the feed are buttons for 'Draw Area', 'Max. Pupil...', 'Min. Pupil Di...', and 'Clear All'. A 'Save' button is also present.

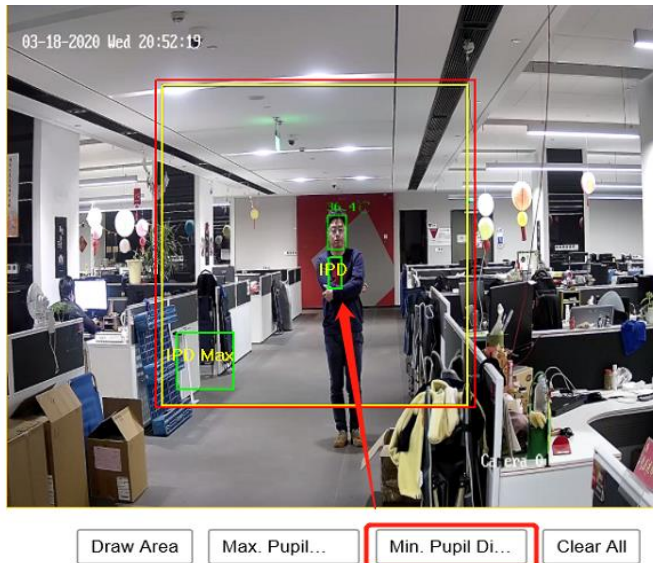
Check **Enable Face Detection** and **Display Temperature**.

Set **Alarm Temp.** and **Pre-alarm Temp.**

Press **Draw Area** to adjust face detection region.

Click **Max. Pupil Distance** and **Min. Pupil Distance** to draw width filter frame, Max and Min distance refer to camera detection distance.

The screenshot shows the video feed with a red box around the person's face. A red arrow points to the 'Max. Pupil...' button, which is highlighted with a red box. The 'Draw Area' button is also visible.

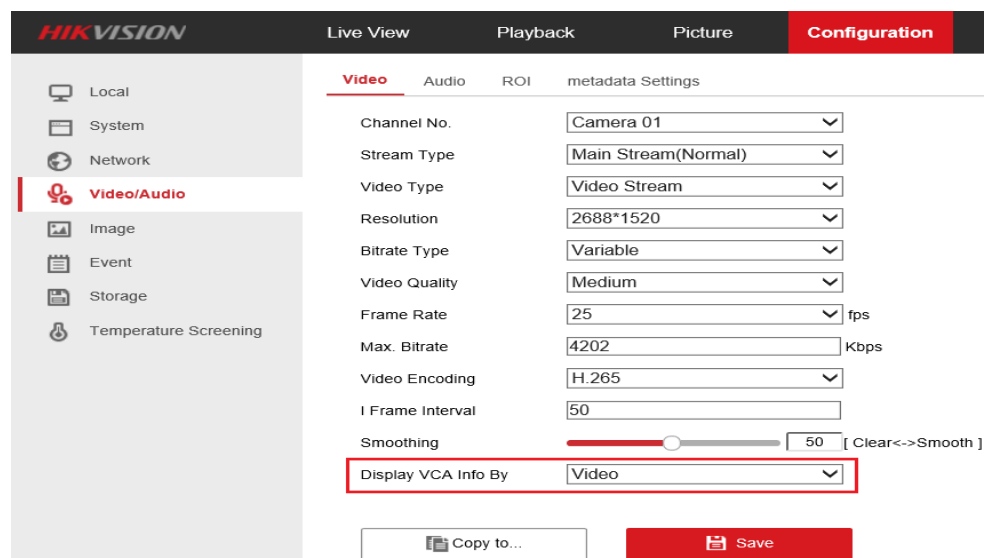


2.1.5 Configure Camera 02 (Thermal) Settings.

Uncheck **Enable Blackbody Correction** If no blackbody is used.

Check **Enable** of **Body Temperature Compensation** and keep parameters as default.

2.1.6 Make sure to choose 'Display VCA Info By Video'. (default Configuration)



2.1.7 Create the Nx 'HTTP Generic Event' in order to upload the temperature alarm to Nx Witness

The screenshot shows the Hikvision Configuration interface. The 'Configuration' tab is active, and the 'HTTP NxWitness' sub-tab is selected. The 'Advanced Settings' section is expanded. The following fields are highlighted with red boxes and annotated with red text:

- User Name:** admin (Annotated: **Input the account info of Nx Witness**)
- Password:** [Redacted] (Annotated: **Input the account info of Nx Witness**)
- Confirm:** [Redacted] (Annotated: **Input the account info of Nx Witness**)
- Server Address:** 10.9.96.46 (Annotated: **Input the Server Address and Port of Nx Witness**)
- Port:** 7001 (Annotated: **Input the Server Address and Port of Nx Witness**)
- Temperature Alarm URL:** /api/createEvent?source=Abnorm (Annotated: **Input the URL**)
- Face Capture Event URL:** /api/createEvent?source=Face% (Annotated: **Input the URL**)

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

Temperature Alarm URL:

/api/createEvent?source=Abnormal%20Temperature&caption=Main%20Entry%20Thermal&description=

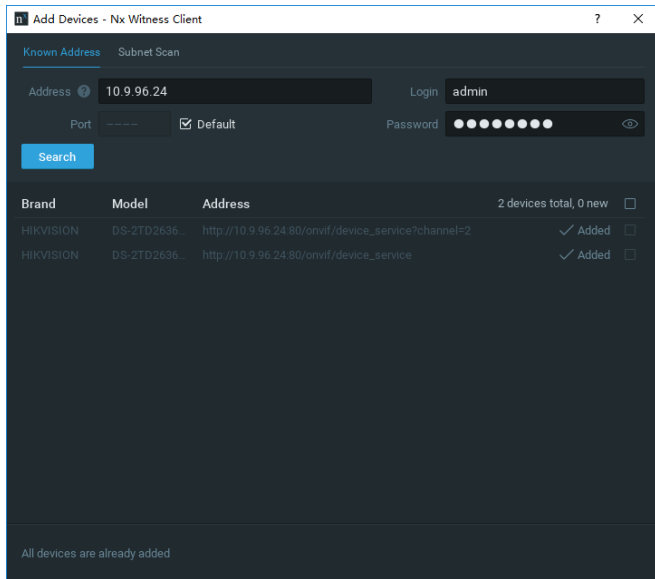
Face Capture Event URL:

/api/createEvent?source=Face%20Capture&caption=Main%20Entry%20Thermal&description=

2.2 Nx Witness Configuration

2.2.1 Add the camera

Login Nx Witness, Enter Cameras Settings->Edit Credentials to input the correct authentication info to add auto detected thermal cameras or manually add cameras.



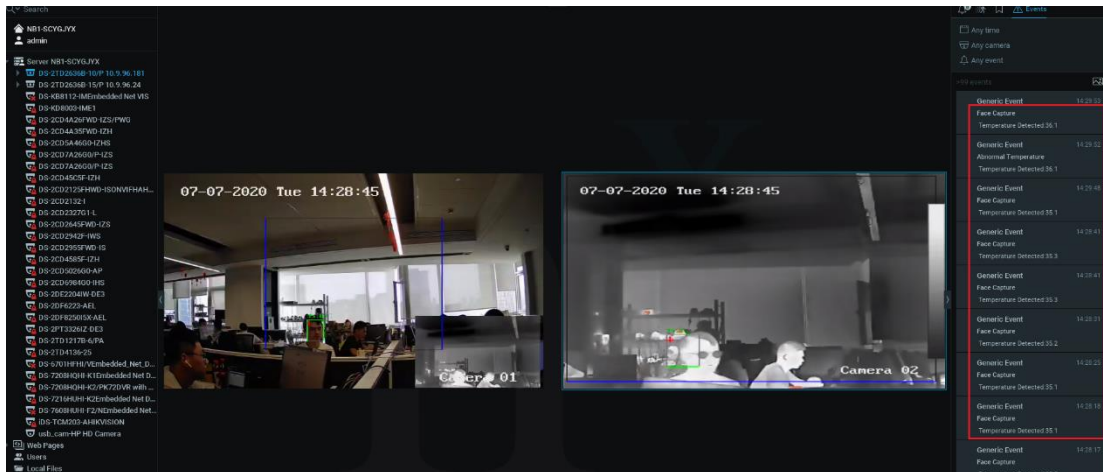
2.2.2 Preview the camera and receive events

- **Live view**

Then double click the channel to preview. Click recording bar to enter Playback. Face temperature info and the intelligent box overlay on video stream directly.

- **Face Capture alarm**

As Nx 'HTTP Generic Event' are created and configured in camera, when face is detected, Nx will receive the 'Face Capture' alarm from camera.



- **Abnormal Temperature Alarm**

Similarly, when the temperature exceeds the preset value, Nx will receive 'Abnormal Temperature' alarm.

