

HikVision DS-2TD2637B-10/P Thermal Camera Integration App-note



Contents

1. Introduction	3
1.1 Model and Firmware	3
1.2 Requirements	3
1.3 Integration Components	4
2. Device Addition and Configuration	5
2.1 HikVision Web Interface Setup	5
2.2 Add a Camera in CathexisVision6	ô
2.3 Cathexis Camera Setup	3
3. Events	Э
3.1 Creating an Event	Э
3.2 Triggers	C
3.3 Actions	1
4. Conclusion	3

While Cathexis has made every effort to ensure the accuracy of this document, there is no guarantee of accuracy, neither explicit nor implied. Specifications are subject to change without notice. The integration hardware and firmware used are current at the time of the integration development and newer versions of such may not be compatible with the integration.





1. Introduction

This document details the integration of the HikVision Thermal Camera with CathexisVision software. Functionally, this integration will entail the triggering of standard CathexisVision Events, based on the triggers from the HikVision Thermal Camera. Cathexis receives temperature trigger messages from the camera, and those trigger messages can be used to set up custom and pre-defined events with the following actions:

Custom Events:

- Sound Camera Alarms
- Display Message for a certain time
- Display pop-up for a certain time

Pre-defined Events:

- Call Base-station
- Record a camera
- Play Audio
- Send Email
- Controlling a device input and other integration devices

1.1 Model and Firmware

The following camera models and firmware were used to test this integration:

Model	Firmware
DS-2TD2637B-10/P	V5.5.26

1.2 Requirements

- CathexisVision 2020.4 and later
- Win 10-64bit and later, Win Server 2008 R2 and later.
- Minimum 4 GB of RAM required.

Note: For information regarding the regular operation of a HikVision Thermal Camera, please consult the relevant HikVision documentation.

In this integration, individual devices will require a license for each device.

A NOTE ON CAMERA CHANNELS

The CathexisVision software packages have **limits on camera channels**. A multi-head camera is physically a single device (camera) but it requires a camera channel for each one of the internal cameras. The same applies to an encoder: a 16-channel encoder will account for 16 camera channels on the CathexisVision software, even though it is a single device.



1.3 Integration Components

All CathexisVision integrations have two component levels: Device and Object.

- **Device** The device is CathexisVision software's interface, which handles all the interaction between CathexisVision and the integrated hardware. When an integration is added to the CathexisVision system, a device is added. The messages received from the device are called Device Events.
- **Objects** Objects are the individual pieces of hardware that comprise the integration. There may be multiple "object types" under the objects group. For example, the main controller and door nodes, of an access control system, are both objects. They are different types of object.

USEFUL LINKS

To view tutorial videos on CathexisVision setup, visit <u>https://cathexisvideo.com/resources/videos</u>

Find answers to Cathexis Frequently Asked Questions: https://cathexis.crisp.help/en/?1557129162258



2. Device Addition and Configuration

This section will detail the procedure for setting up the two systems to effectively communicate with each other.

2.1 HikVision Web Interface Setup

- 1. Log in to the HikVision camera web interface with the user's credentials. Go to the Configuration Tab.
- Go to the Temperature Screening menu found on the left-hand side, then Basic Settings. Ensure Enable Temperature Measurement is ticked.

	Local	Basic Settings	Temperature Screening Configuration	Linkage Method
Ē	System	Channel No.	Camera 01	\checkmark
Ð	Network	Enable Tempe	rature Measurement	
<u>.</u> 0.	Video/Audio	Enable Color-T	Femperature	
1	Image	🖌 Display Tempe	erature Info. on Stream	
圁	Event	Add Original D	ata on Capture	
6	Storage	Add Original D	ata on Stream	
6	Temperature Screening	Data Refresh Inter	rval 3	✓ s
	Basic Settings	Unit	Degree Celsius(°C)	∨
	Face Capture	Temperature Rang	ge 30.0~45.0	~
		version	vz.0.obulidz0200429	
		Target Thermo	ographic Parameters	
		Emissivity	0.98	
		Distance Mode	Self-Adaption	~
		Distance	6	m
		E s	Save	

Note: in order for Cathexis to receive the temperature triggers, they must be enabled in HikVision Camera Web interface.

3. Navigate to the next tab, **Temperature Screening Configuration**. To configure the minimum temperature to trigger on, set the temperature to trigger on /Alarm when the Temperature is Above/.



Basic Settings	Temperature	e Screening Configuration	Linkage Method
Channel No.		Camera 01	~
Enable Fac	e Detection		
Display Ter	nperature		
🗌 Upload Cap	ptured Face Im	age	
Display Fac	ce Temperature	e Position	
			Opera
10-01-2020 Thu	. 11:16:03	Can	era 01
Drav	/ Area Ma	x. Pupil Min. Pupil Di	. Clear All
Configuratio	n	Targeting	\checkmark
Face Detect	tion Paramete	rs	
Min. Pupil D	istance	40	
Max. Pupil D	Distance	151	
Generation	Speed	0	5
Sensitivity			5
Alarm When	Temperatur	37.5	°C 📀
Pre-Alarm T	emperature	37	°C 🕗
B	Save		

Figure A: Thermal Temperature Monitoring Rules

2.2 Add a Camera in CathexisVision

1. To add a camera in CathexisVision, go to Site / Open tab / Setup.





2. Go to Server / Server name / Cameras.



- 3. Click **New** to add a new camera.
- 4. Choose the driver as HikVision V2 and enter connection details.

💿 New carr	nera	
Camera conr	nection	
Specify the	e connection details for the camera	
Add nev	v camera	
O Add nev	v video input to existing camera	
Driver	HikVision V2 $$	
IP address	92.168.7 .101	Scan
Video input	1	
Port	Default 🜩	
Login	admin	
Password	•••••	

5. If successful, give the camera a descriptive name, then click Next.

New camera
General settings
Configure general camera settings
Camera name

6. Configure the camera as per the site specification, then click OK to save when done.



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2.3 Cathexis Camera Setup

1. Go to Site tab, Open tab then Setup.

Open tab Open tab Close site's tabs Change password Setup	ite Video wall Tools Settings	Help	
Close site's tabs 🔄 Databases	🖥 Open tab	🕨 🥃 Cameras	
Change password 😵 Setup	👌 Close site's tabs	🚟 Databases	
	Change password	🛠 Setup	

2. Click the **server icon**, **choose the server** that has the HikVision thermal camera, then choose **cameras** tab.

File Edi	t View Site Tools Settings Help						
🛞 SiteN	ame 🗵 🖃 SiteName 🗵 🗮	SiteName					
	Servers	BHE	KO-A1 - (Cameras			
	MASTER)		Camera	Address	Driver	Model	Firmware
	Cameras Contractor Co		HikThermal	192.168.7.101	HikVision V2	DS-2TD2637B-10/P	V5.5.26

3. Double-click on the HikVision camera to go to camera edit menu, and go to the **I/O** tab.

Camera settings

Edit HikThermal

Settings

General Connection Video feeds I/O

Inputs
Name State Enabled

4. Go to Triggers, then click **New** to configure new trigger.

Trigger	s				
Nam	e State	Enabled	Message		Disable
1 Temp) 🥥Clear	V			Edit
	Jgei				New
Edit tri	gger				Delete
Name	Temp				
Message	STARTTEM	PERATURE		~	
Latch time	5000ms			-	
		OK	Ca	ncel	

- 5. Give it a descriptive name, and choose message as STARTTEMPERATURE.
- 6. Click OK to save the new trigger and OK to save and exit the camera edit menu.





3. Events

A CathexisVision event has a trigger, which causes an action. Set integrated devices to act as triggers, or as actions. This document will detail the HikVision Thermal Camera integration specific aspects of Events. There is a comprehensive guide to CathexisVision Events in the main setup manual. Most of the data that CathexisVision receives from a device is presented in the Events interface. This is done in order to give the user a full range of options. As a result, some of the options presented in the interface may be *impractical* as an event trigger, or action.

3.1 Creating an Event

3.1.1 Setting up CathexisVision Pre-defined Events

- 1. To configure events, go to Server settings, then Events tab.
- 2. Click New.
- 3. Give the event a descriptive name and priority level.



3.1.2 Setting up CathexisVision Custom Events

1. To set up Custom Events, go to Site, then choose Custom event notifications.





2. Leave Site tab as default.



3. Move to Events tab, select the event name and then choose Use custom settings.



4. Choose the notification and adjust the duration as per the specifications. Then click OK to save.

3.2 Triggers

A trigger is the user-defined input that notifies the event to start. The trigger causes the subsequent action (which the user will also define).

General Triggers Actions F	lesources		
Use <u>standard triggers</u> to trigger the e	vent		
Perform actions while any of the follow	ving are true		
💿 New tr — 🗆 🗆	×	6	New
Trigger	<pre>econds)</pre>		Edit
New trigger			Delete
Trigger while 🕑 Temp 🗸 🖄	<u>vah</u>		
Hold time 15sec 主 😨			
Schedule 💻 Always 🗸			
	_		
Cancel			



- Move to the **Trigger tab** and click **New** to set a new trigger.
- Choose a trigger to use.
- Make sure it is triggered while "triggername" is true, or else conditions will be inverted.
- Then click **OK**.

3.3 Actions

Once the triggers that are going to initiate the event are defined, define some Actions.

- Move to the Actions tab
- Click New to choose new action/s
- Define action/s rule and click OK to save.

1	New
5	Record camera
۲	Control virtual input
5	Control N2
5	Control N2
2	Call base-station
Ø	Send email
	Play audio clip

3.3.1 Actions (pre-defined events)

- Note two actions: Call base-station and record camera.
- With base-station, review the recorded footage and clear the alarm.



Figure B: Showing Alarm triggered by High Temperature.





Figure C: Recorded footage on the database.

3.3.2 Actions (custom events)

There are two actions: Display message and Display popup:



Figure D: Display message action for custom events.



Figure E: Display popup action for custom events.



4. Conclusion

This app-note was designed to deal specifically with this integration. For further information about the CathexisVision software, consult the main manual (<u>http://cathexisvideo.com/</u>). For support, email <u>support@cat.co.za</u>.