Technical Documentation: HIKvision license
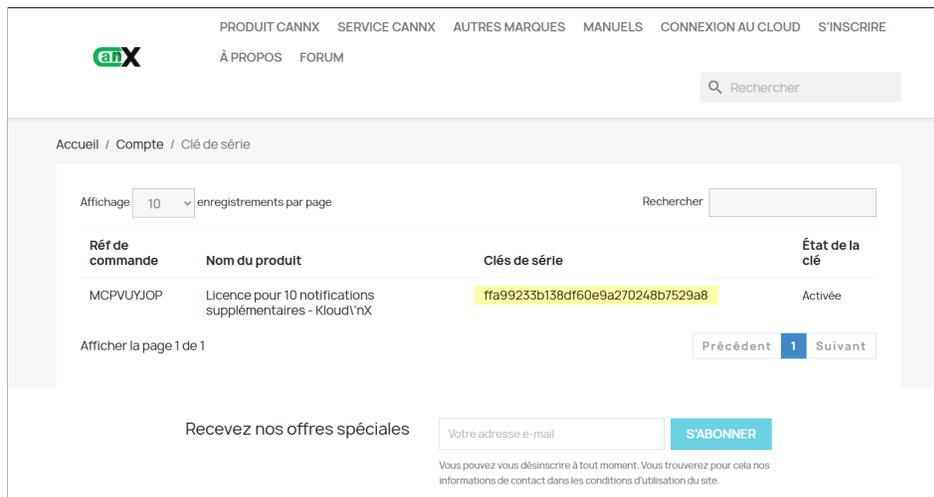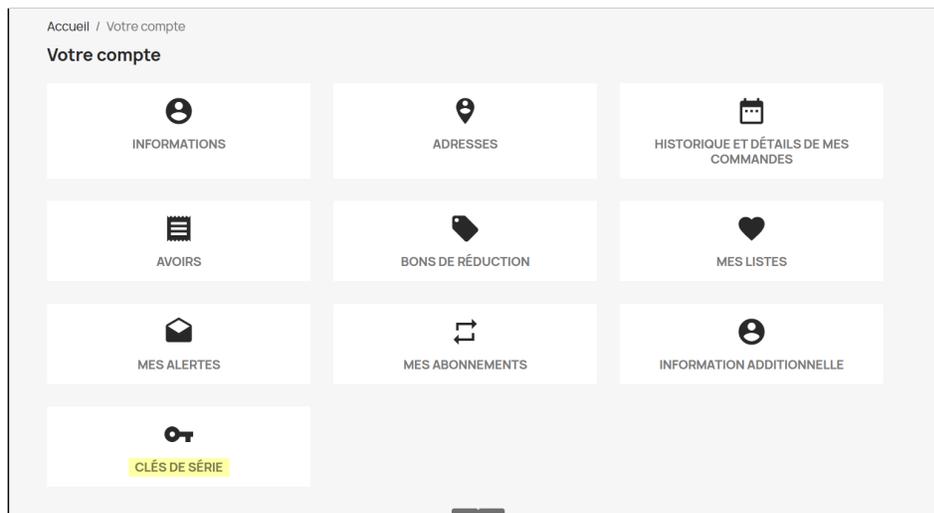
Contents

1 License HIKvision

Link'nX is capable of interacting with HIKvision equipment. By registering a HIKvision camera beforehand, it is possible to send and receive events such as the activation of a privacy mask, or the detection of movement in a predefined area. This section will discuss in detail what can be done/created by interacting with a HIKvision device.

1.1 Add a license to the Link'nX gateway

Licences can be added to your project to enhance the functionality of your Link'nX gateways.

To add a licence, go to Can'nX, then click on the **"Add an extension"** button in the options of the project containing the Link'nX. Then enter the key in the field and confirm.

To retrieve your key after a purchase, you need to go to the www.can-nx.shop site, to your account. A "Serial key" button allows you to display the list of keys you have purchased.

1.2   Prior configuration of the HIKvision device

In Link'nX operation, events are retrieved by receiving an HTTP request sent from the HIKvision camera. The camera needs to know when and how to communicate with the Link'nX gateway.

To do this, access the HIKvision camera interface by entering its IP address in the browser URL, then connect.

1.2.1   Configure the link HIKvision ⟶ Link'nX

This step enables the HIKvision camera to send events (facial recognition, motion detection, entry into an area, etc.) to Link'nX.
In settings, you'll find the page where you can configure the HTTP data transmission parameters, as shown below.
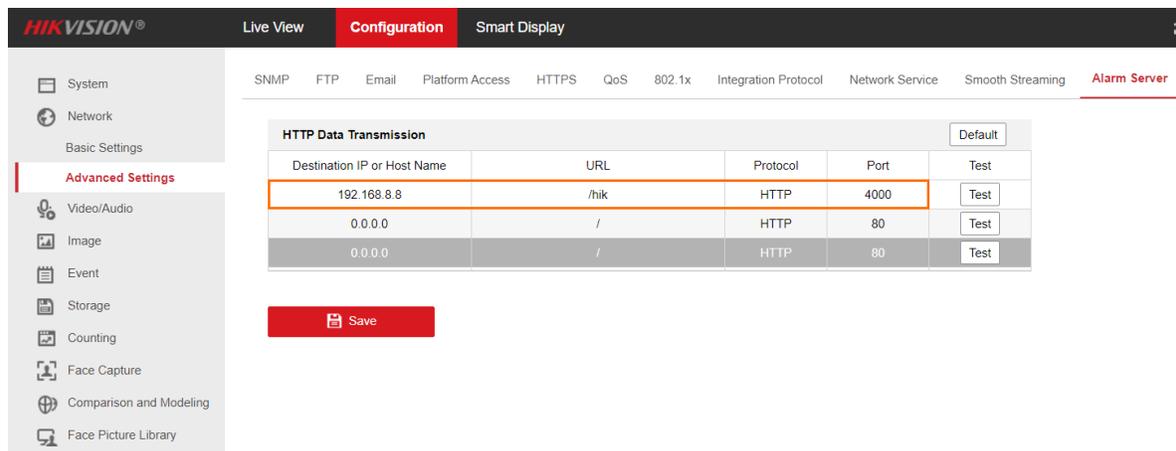

Figure 1: Transferring information about Link'nX to the HIKvision camera

- Set the IP address of your Link'nX

- Specify the url as : "/hik"

- Choose the "HTTP" protocol

- Set the port to "4000"

Notes : Depending on your camera model, the path to access the configuration interface may be different.

⚠ **We strongly recommend that you use a fixed IP address for your camera and Link'nX. In the event of a power cut, for example, the devices will not change IP address and the configuration will remain functional.**

1.2.2   Activate "Notify Surveillance Center"

The HIkvision camera will only send information about an event that has just occurred if a certain option is activated. This "Notify Surveillance Center" option is mandatory and is generally found in the list of events supported by the camera. For each event, go to the "Linkage method" tab and tick the "Notify Surveillance center" box.

For facial recognition, this option can be found in a different page from other events.
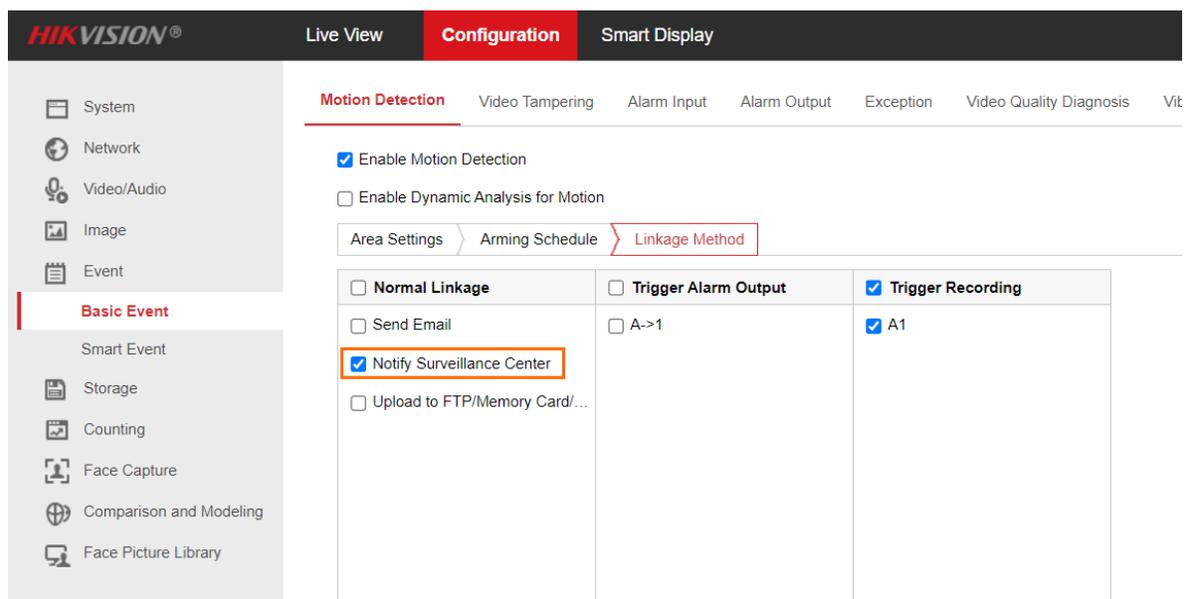
Figure 2: Enable events to be sent to the surveillance center (Link'nX)

1.3 HIKvision device declaration

The declaration of a HIK device is made on the page dedicated to HIK. To access this page, the user must open the navigation menu and click on the Hikvision option, which is slightly detached from the main Link'nX group.
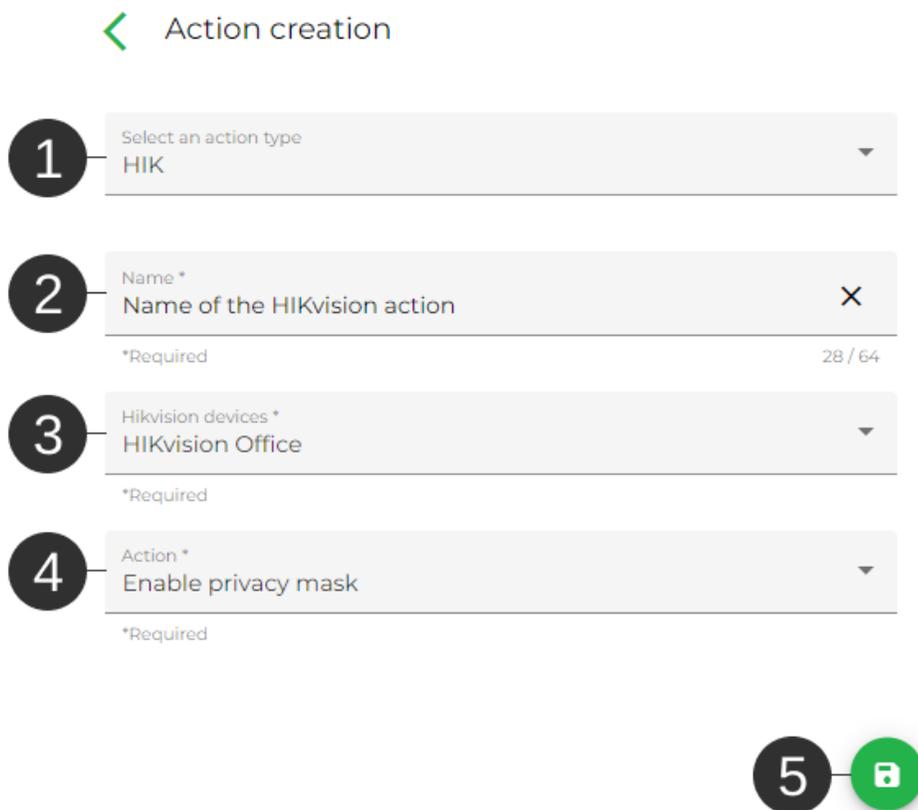
Figure 3: Declaration form for HIKvision equipment

1. HIKvision device name.

2. IP address of the HIKvision camera.

3. Authentication fields enabling Link'nX to send commands to the HIKvision camera.

4. Save - Register the HIKvision device.

1.4 Creation of a HIKvision action

Figure 4: HIKvision action form

1. Type of action (Select HIK for a HIK action).

2. Name of action.

3. HIK device on which the user wants to interact (send commands).

4. Action to be taken. The user chooses the action from the list (Activate privacy mask, deactivate mask).

5. Save - Register the HIK action.

1.5 Creation of a HIKvision trigger

Figure 5: HIKvision trigger form

1. Trigger type (Select HIK for a HIK trigger).

2. Trigger name.

3. HIK device on which the user wishes to interact (retrieve events).

4. HIK event to be monitored by Link'nX. If the selected event occurs in the HIK (e.g. facial recognition), the trigger will be activated. The list of available events is detailed in the Appendix.

5. Optional parameter(s) for the selected event (4). These parameters act as conditions to be met before the trigger is activated.
   If no parameter is specified, the trigger will be activated each time the selected event is received (4).
   If one or more parameters are specified, the event will have to validate all of them for the trigger

to be effective (e.g. The recognised face corresponds to the individual named "X" in the database and the similarity must exceed **%). The list of available events and their parameters is detailed in Annexes.

6. Save - Register the HIK trigger.

2 Annexes

2.1 HIKvision actions

Activate privacy mask
Activates the privacy mask for the selected camera. The privacy mask must have been set up in the camera configuration interface.

Parameter name	Expected value	Description
-	-	-

Disable privacy mask
Deactivates the privacy mask for the selected camera.

Parameter name	Expected value	Description
-	-	-

2.2 HIKvision events

Intrusion detection
Signals the detection of people and vehicles entering a predefined virtual region.

Parameter name	Expected value	Description
Region ID/number	Whole number	Code/Identifier corresponding to the number of the region that carried out the detection
Type of target to be detected	[Human] [Vehicle]	Specify the type of target to be detected, which can be a human or a vehicle. If you leave this field empty, any type of target will be accepted.

Motion detection
Signals the detection of movement in a predefined virtual region.

Parameter name	Expected value	Description
-	-	-

Line crossing detectionClick to apply
Signals the detection of people and vehicles crossing a predefined virtual line.

Parameter name	Expected value	Description
Region ID/number	Whole number	Code/Identifier corresponding to the number of the region where the line was crossed.
Type of target to be detected	[Human] [Vehicle]	Specify the type of target to be detected, which can be a human or a vehicle. If you leave this field empty, any type of target will be accepted.

Region entrance detection

Signals the detection of people and vehicles entering a predefined virtual region from the outside

Parameter name	Expected value	Description
Region ID/number	Whole number	Code/Identifier corresponding to the number of the region to be entered
Type of target to be detected	[Human] [Vehicle]	Specify the type of target to be detected, which can be a human or a vehicle. If you leave this field empty, any type of target will be accepted.

exiting detection

Signals the detection of people and vehicles leaving a predefined virtual region, from inside the area.

Parameter name	Expected value	Description
Region ID/number	Whole number	Code/Identifier corresponding to the number of the region to be left
Type of target to be detected	[Human] [Vehicle]	Specify the type of target to be detected, which can be a human or a vehicle. If you leave this field empty, any type of target will be accepted.

Automatic number-plate recognition alarm

Signals the detection of a number plate

Parameter name	Expected value	Description
License plate number	Character string	Number of the plate to be detected
Accessibility rule	[Human] [Vehicle]	Choose whether the vehicle detected should be whitelisted or blacklisted. If you leave this field empty, this rule will be ignored.
Movement direction of the vehicle from the camera	[Vehicle is incoming] [Vehicule is outgoing]	Direction of vehicle movement relative to the camera. Can be used to ensure that the gate opens when a vehicle approaches, and closes when a vehicle drives away.

Facial recognition

Signals detection of a face

Parameter name	Expected value	Description
Name	Character string	Enter the name of the person to be detected. The name must be the same as the one configured in the camera settings
Minimum recognition rate	Slider (0-100%)	Specify the minimum rate of similarity/recognition of the detected face. A recommended recognition rate would be from 60 to 90 A rate that is too low may accept unknown individuals, while a rate that is too high may not accept an individual because of inaccuracies.