



# Nemtek Electric Fence Integration White Paper



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# 1. Introduction

This document indicates the features/abilities of a Nemtek Electric Fence system when integrated with CathexisVision. Functionally, this integration includes the triggering of standard CathexisVision system events, based on information received from the device.

For instructions on installation or configuration of the integration, please see the *Nemtek Electric Fence Integration App-note*, available on the Cathexis website, and/or the *CathexisVision Setup Manual*.

For information regarding the regular operation of a Nemtek device, please consult the manufacturer’s documentation.

## 1.1 Integration Purpose

Nemtek is an electric fence system which monitors the site perimeter for incidents of tampering. Nemtek provides fence solutions for residential, commercial, or agricultural property, and can also be used to protect horses, pets, or game.

CathexisVision stores data about Nemtek fence events, together with associated video footage. Nemtek fences can be used to trigger standard CathexisVision system actions, and can also be controlled by CathexisVision.

## 1.2 Requirements

### 1.2.1 General Requirements

- CathexisVision 2016.4, 2017.2, and 2018.2 and later.

### 1.2.2 CathexisVision License Requirements

| License No       | License Name                         | Description   |
|------------------|--------------------------------------|---|
| <b>CNEF-1001</b> | Nemtek Electric Fence Object license | These licenses apply to the energizers and/or I/O cards in an electric fence control system. The <b>CNEF-1001</b> will license a single energizer, or I/O card                                      |
| <b>CNEF-2000</b> | Nemtek Electric Fence Device license | This license is the “base” license to integrate with electric fence system. It is applied to the server to which the fence is connected. It will allow for the connection of a single fence system. |
| <b>CNEF-3000</b> | Nemtek Electric Fence Bundle license | This license includes the <b>CNEF-2000</b> electric fence device license, and also provides support for unlimited <b>CNEF-1001</b> object licenses.   |

**Note:** In this integration, individual site devices will require a license for each device. Linked devices will only require a single device license.



### 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 objects.

#### A NOTE ON CAMERA CHANNELS

The CathexisVision software packages have **limits on camera channels**. A multi-sensor 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. Even when a camera or device only uses a single IP license, the camera channel limit will still apply.

### 1.4 Integration Hardware

| Hardware  | Objects   | Object License                  | Messages | Metadatabase | Overlay |
|---|-----------|---------------------------------|----------|--------------|---------|
|  | FG7       | No                              | N/A      | N/A          | N/A     |
|  | Energizer | CNEF-1001                       | Yes      | Yes          | No      |
|   | Zone x2   | Checks if Energizer is licensed | Yes      | Yes          | Yes     |
|   | Input x8  | Checks if Energizer is licensed | Yes      | Yes          | Yes     |
|  | IOCard    | CNEF-1001                       | Yes      | Yes          | No      |
|   | Input x6  | Checks if I/O Card is licensed  | Yes      | Yes          | Yes     |
|   | Output x5 | Checks if I/O Card is licensed  | Yes      | Yes          | Yes     |

## 2. Features and Abilities

This section indicates the features/abilities of Nemtek electric fences when integrated with CathesisVision.

### 2.1 General Device Features

- CathesisVision receives event messages from the Nemtek device.
- **Energizer, Input, Output** and **Zone** event messages can be used to trigger a CathesisVision system event.

### 2.2 Device Objects

Device objects populate automatically once communication is established. As the panel supports many expansion modules, the objects displayed in CathesisVision will vary depending on the objects that are configured on the panel.

| Object Type                | Abilities  |
|----------------------------|--|
| <p><b>General</b></p>      | <ul style="list-style-type: none"> <li>• Objects are automatically created as soon as communication between the CathesisVision unit and device is established.</li> <li>• Objects may be linked to cameras to associate device events with video footage.</li> </ul>   |
| <p><b>Object Types</b></p> | <ul style="list-style-type: none"> <li>• Energizer.</li> <li>• FG7.</li> <li>• IOCard.</li> <li>• Input.</li> <li>• Output.</li> <li>• Zone.</li> <li>• Communication Channel objects.</li> </ul> <p>Selecting any of these objects types will populate the configuration section with the object type properties.</p> |
| <p><b>Overlays</b></p>     | <ul style="list-style-type: none"> <li>• Zone.</li> <li>• Input.</li> <li>• Output.</li> </ul>   |
| <p><b>Commands</b></p>     | <ul style="list-style-type: none"> <li>• Energizer.</li> <li>• Output.</li> <li>• Zone .</li> </ul> <p>These objects can be commanded as an action of a CathesisVision system event.</p>   |

## 2.3 Device Events

| Event Element                       | Features/Abilities   |
|-------------------------------------|--|
| <b>General</b>                      | <ul style="list-style-type: none"> <li>• Events triggered on the device are sent to CathexisVision.</li> <li>• These device event messages can be used to trigger system events.</li> </ul>  |
| <b>Device Event Types</b>           | <ul style="list-style-type: none"> <li>• Energizer</li> <li>• Output</li> <li>• Input</li> <li>• Zone</li> </ul>   |
| <b>CathexisVision System Events</b> | <ul style="list-style-type: none"> <li>• Events generated by the device are reflected in CathexisVision and can be used to create CathexisVision system events.</li> <li>• Some objects may be controlled as a result of a CathexisVision system event:               <ul style="list-style-type: none"> <li>• Output:                   <ul style="list-style-type: none"> <li>○ Set.</li> </ul> </li> <li>• Zone:                   <ul style="list-style-type: none"> <li>○ Low voltage.</li> <li>○ On.</li> </ul> </li> <li>• Energizer:                   <ul style="list-style-type: none"> <li>○ Clear alarms.</li> </ul> </li> </ul> </li> </ul> |

## 2.4 Metadatabase

A unique metadatabase is created on the CathexisVision server for this integration. It is fully searchable, with configurable filters based on device event information (as above), and time stamping. The filtered event/s, and the associated video, will then be available for review in a new window from which an archive can be created and exported.

| Database Element    | Features/Abilities  |
|---------------------|---|
| <b>General</b>      | <ul style="list-style-type: none"> <li>• All device events are databased.</li> <li>• Database entries include the footage from cameras linked to device objects.</li> <li>• Multiple cameras may be linked to multiple objects.</li> <li>• Device event metadata is displayed where applicable.</li> <li>• Databased device events may be viewed in the embedded video player, which includes the usual CathexisVision video review tools.</li> </ul> |
| <b>View Options</b> | <ul style="list-style-type: none"> <li>• All.</li> <li>• Energizer.</li> <li>• Zone.</li> </ul>   |



|                     |   |
|---------------------|---|
|                     | <ul style="list-style-type: none"> <li>• Input.</li> <li>• Output.</li> </ul>   |
| <b>Sort Options</b> | <ul style="list-style-type: none"> <li>• Time.</li> </ul>   |
| <b>Easy Search</b>  | <ul style="list-style-type: none"> <li>• Object ID.</li> <li>• Object Name.</li> <li>• Notification.</li> </ul>   |
| <b>Filter</b>       | <ul style="list-style-type: none"> <li>• Time.</li> <li>• Event type.</li> <li>• Object ID.</li> <li>• Object Name.</li> <li>• Notification.</li> </ul> |
| <b>Export</b>       | Database entries may be exported in CSV and PDF format.   |

## 2.5 Maps

The CathesisVision GUI provides for configurable site maps that feature multi-layered, hierarchical, interactive interfaces providing representation and control of a site and its resources.

| Map Element                | Features/Abilities  |
|----------------------------|---|
| <b>General</b>             | Device objects can be embedded in a site map, which offers multiple action options when messages are received from the device, the device triggers an event, and/or the user manually initiates a map action.   |
| <b>Map Action Triggers</b> | <ul style="list-style-type: none"> <li>• All device objects may be set to trigger a map action if the user left-clicks on map.</li> <li>• Some device objects may be set to trigger a map action if a state change message is received from the device.</li> <li>• All device objects may be set to perform a map action if <i>any</i> event occurs on the device.</li> <li>• Device objects, which can be configured to trigger CathesisVision events, may also be set to perform a map action when specific CathesisVision events are triggered.</li> </ul> |
| <b>Map Actions Options</b> | When triggered (see above), objects may perform the following map actions (where applicable): <ul style="list-style-type: none"> <li>• Connect to a site.</li> <li>• Perform an animation.</li> <li>• Go to a camera preset.</li> <li>• Load a map.</li> <li>• Set a PTZ relay output.</li> <li>• Show a popup menu.</li> <li>• Set a relay output.</li> <li>• Show an HTML block.</li> <li>• Show a block of text.</li> <li>• Show a device popup menu.</li> </ul>   |



## 3. Conclusion

This document was designed to deal specifically with this integration. For further information about the CathesisVision software, consult the main manual (<http://cathesisvideo.com/>).

For support, email [support@cat.co.za](mailto:support@cat.co.za).

### USEFUL LINKS

To view **tutorial videos** on CathesisVision setup, visit <https://cathesisvideo.com/resources/videos>

Find answers to Cathesis **Frequently Asked Questions**: <https://cathesis.crisp.help/en/?1557129162258>

