



Cathexis EIO3148 Counter Integration

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1 Introduction

This document will detail the integration of the Cathexis EIO3148 Counter device with CathexisVision. Functionally this integration entails counting the number of times an EIO device's input state reads high or low (clear or set), and the triggering of standard CathexisVision Events, based on the triggers from the EIO device.

a. System Requirements

-) CathexisVision 2016 Service Pack 2 and later.
-) An existing Cathexis EIO3148 Device.

Notes:

1. If you need information regarding the regular operation of the EIO device, please consult the relevant documentation, or contact Support.

b. License requirements

The Cathexis EIO3148 Counter integration license requirements are as follows:

License	License Name	Description
CEIC-1001	EIO counter license.	This is required per counter.
CEIC-2000	EIO counter device.	This is required per device.
CEIC-3000	EIO counter bundle.	This includes licensing for both the device and 8 counters associated with that device. Note: The bundle license can only be applied to one device and its associated counters.

c. Integration Components

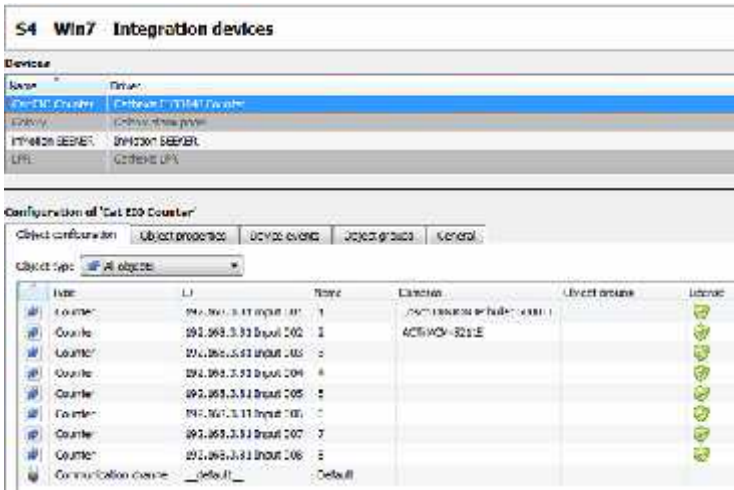
All CathexisVision integrations have two component levels: **Device** and **Object**.

Device The device is the CathexisVision software interface, which handles all the interaction between CathexisVision and the integrated hardware. When you add an integration to the CathexisVision system, you add a device. The messages received from the device are called Device Events.

Objects Objects are the individual pieces of hardware that comprise the integration. You may have 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.

2 Device Addition and Configuration

a. The Integrations Panel



You will notice two sections in the Integration Panel:

The **Devices** list will list the integration devices that are attached to your server.

The **Configuration** section enables you to edit/review, the device which you have selected in the **Devices** section.

Device Addition

1. In the **Devices** list, click .
2. Select the **Cathexis EIO3148 Counter** driver from the list.

Device Configuration



Give your device a descriptive **Name**.

Connection

This is where you will configure the channels to EIO inputs.

Note: Only 8 input channels per EIO may be added.

Settings

Here you will define the settings for your EIO counter.

Timeout between events: Define how many seconds should pass between input triggers (events/counts) before the counter is reset to 0.

In this example, a timeout will reset the counter to 0 if a new input is not triggered 120 seconds after the last input trigger.

Overlay display time:

Define how many seconds the overlay should be displayed for after the last trigger of the timeout.

In this example, the overlay will be displayed for 120 seconds after the last input trigger. It will fade from the screen unless another input is triggered before that time.

Increment Count

You may set the count to increment when the input is triggered to **Set** (low), or **Cleared** (high), or both.

) Add a New Channel

To add a new channel, click  in the **Connection** section, above.

Note: You may add up to 8 channels per EIO.



Give your channel a descriptive **Name**.

Enter the **IP address** of the EIO device.

Number the input of this channel (1-8).

Enter the **default Login/Password details:**

admin

admin

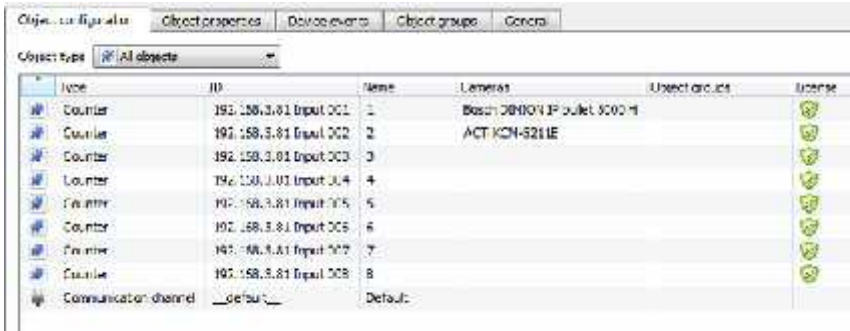
Click **OK**.

Once added, the device will appear in the **Devices** list. You may now select the device and continue to the **Configuration Section**, on the next page.

b. Configuration Section (Tabs)

The configuration section is divided up into a number of tabs. These tabs are: **Object configuration**, **Object properties**, **Device events**, **Groups**, and **General**.

Object Configuration Tab



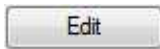
The object configuration tab is the tab where you may view all the individual objects that comprise the integration. The EIO Counter device has only the **Counter** and **Communication channel** options.



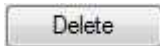
) Object Configuration Buttons



You may add a new object by clicking on New.

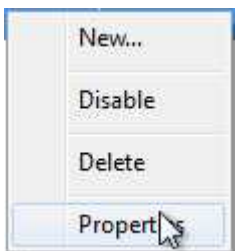


Will open up an existing object for edition.



Is used to delete an existing object from the CathexisVision configuration.

) Object Configuration Right-click Options



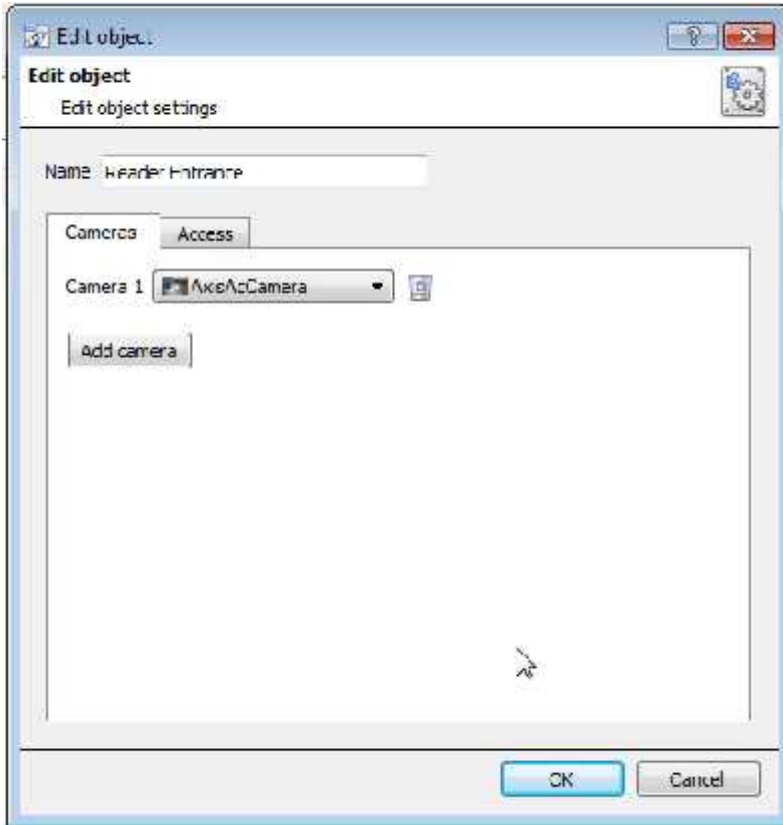
New will open up the dialogue to add a new object.

Disable/Enable allows you to manually enable/disable individual objects.


Delete will permanently remove this object from the list.

Properties will open up the object properties. You may edit the object from here. (Specifically you will be able to assign cameras to this object, as well as define user access levels for it.)

Properties: Cameras



Adding a camera to an object will mean that, whenever there is an event on that object, the recording from that camera will be related to the time and date of the object event, in the Integration database. To add a camera, click on **Add Camera**.

To delete a camera, click on 

Note: While you can add multiple cameras here, only the first camera added with the object will be linked in the integration database.

Note: If you do not have *continuous recording* set up, on associated cameras, you will run the risk of device objects triggering while the cameras are not recording. To only record cameras, when an object triggers, you will need to set up **Events** that trigger a recording, when one of these objects is activated.

Properties: Access



Access allows you to protect sensitive objects, by only allowing certain user levels access to them.

Under **View** you will be able to set the access levels.

Note: If you have *Use default access rights* checked, you must make sure that those default rights have been correctly defined. Click on **Configure default access** to do this.

Objects Properties Tab

Name	Counter	Unit	Input Reading	Count	Start Time	Last Count Time	Licensed
1	Communication channel		Set	0			✔
2	192.168.3.81	2	Set	0			✔
3	192.168.3.81	3	Set	0			✔
4	192.168.3.81	4	Set	0			✔
5	192.168.3.81	5	Set	0			✔
6	192.168.3.81	6	Set	0			✔
7	192.168.3.81	7	Set	0			✔
8	192.168.3.81	8	Set	0			✔

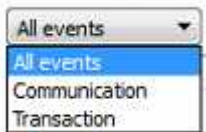
The Object properties tab allows you to view the objects, sorted by type. In the case of the EIO Counter device you will have the options of viewing by **Counter** and **Communication channel**.

Device Events Tab

Event type	Start Time	End Time	Count	Unit	Input Reading
Transaction	2016-05-20 12:58:17.653	2016-05-20 12:58:18.056	2	2	192.168.3.81 Input 002
Transaction	2016-05-20 12:58:11.671	2016-05-20 12:58:16.150	1	3	192.168.3.81 Input 001

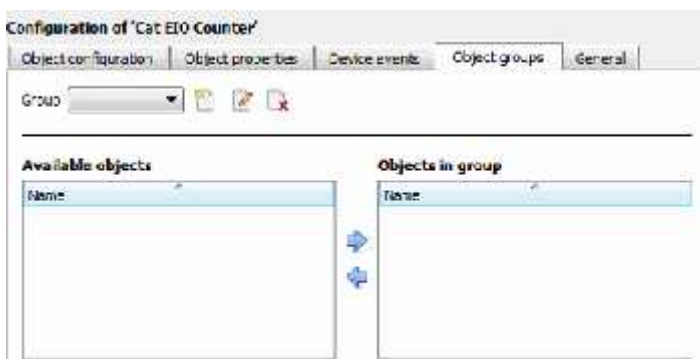
This will list all events sent from this device. It is an excellent way for installers to see that the integration is functioning, and to monitor the events happening on site.

You view events by their event type. The EIO Counter has two event types:



Communication refers to communication between the EIO counter and CathexisVision. **Transaction** refers to the input counts for a device.

Groups Tab



You can create groups of the same type of object.

Tip: This is very useful when setting up Events, because events can be triggered by an object group. (E.G. a group will trigger, if any of the devices in that group is triggered.)

Create a Group

To create/edit an Premier group click on / . (**Note:** Once a group has been created, you may not edit the object type of the group.)

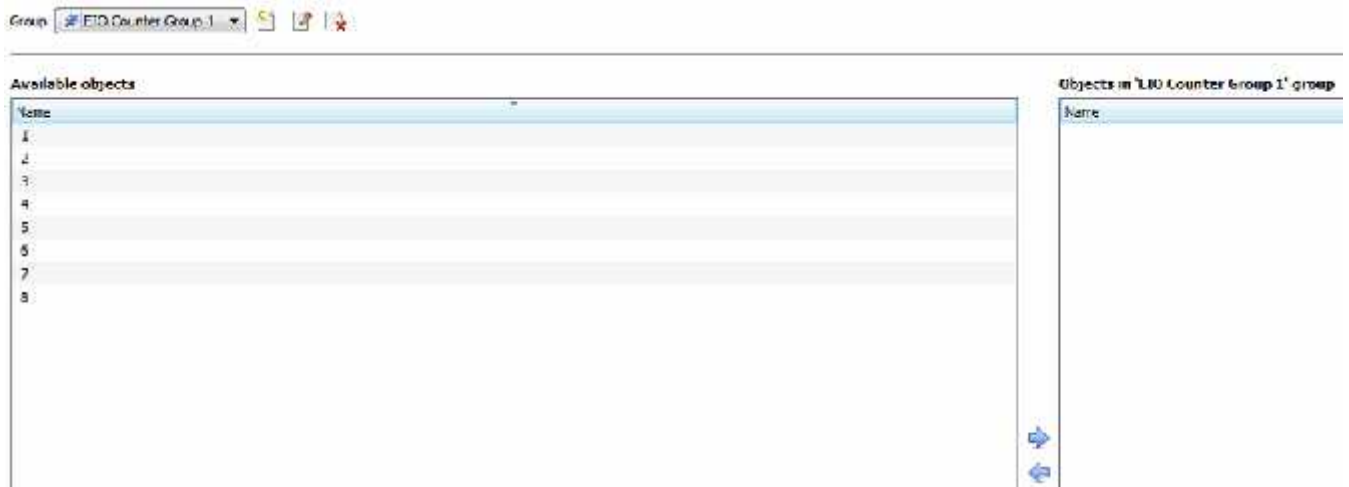


Give the group a descriptive **Group name**.

Click on the drop-down menu to select the **Object type** that you would like to group.

Click **OK** when finished.

You will then see a list of Available Objects. To add/remove these objects to the group select them (you may select multiple at a time), and click on ➡/⬅.



General tab



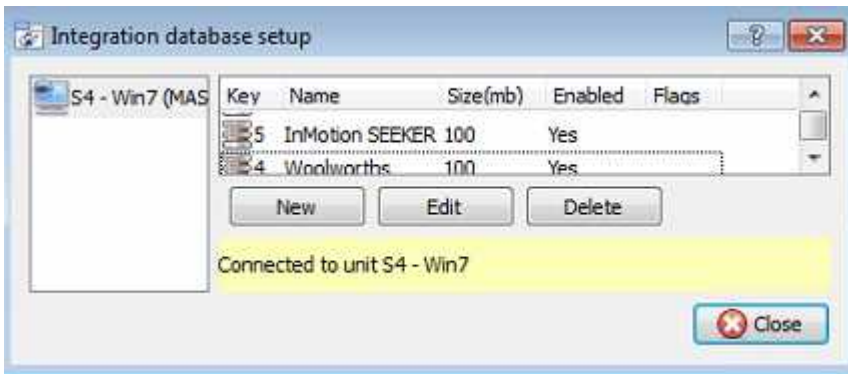
Currently the general tab deals with the **Integration database**. Here you will be able to select an existing database, or you will be able to configure a new database for your integration.

Important Note: Each integrated device needs to be attached to an Integration database. Without setting up/adding a database here your integration will not function properly within the CathexisVision system.

) Configure a new database

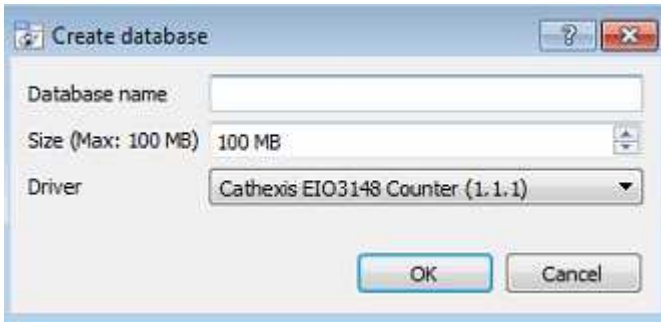


If there is no database created yet, clicking on this button will take you to the integration database setup.



Select the unit on the left that you wish to add the database to.

Click **New**.



Define your **Database name**.


Set the **size of your database**. The maximum is 100MB.

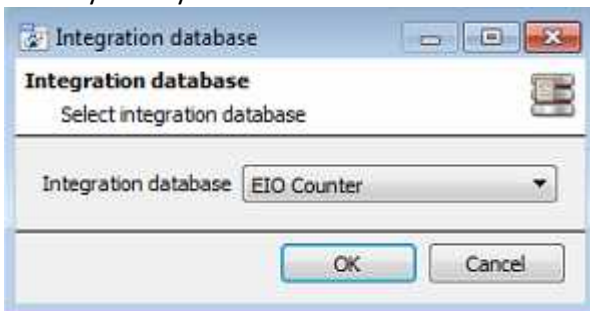
Select the **Cathexis EIO3148 Counter** driver from the driver list.

Click **OK**.

Once added, your database will appear in the list of selectable databases.

) Select the Integration Database

Once a database has been created, click the  icon. This will bring up the Integration database window, where you may select the desired database.

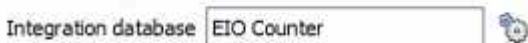


Select your database from the dropdown menu.

Note: Only databases which relate to the device you are adding should appear in this list.

Click **OK** when finished.

Your database is now selected as the Integration database for this device.



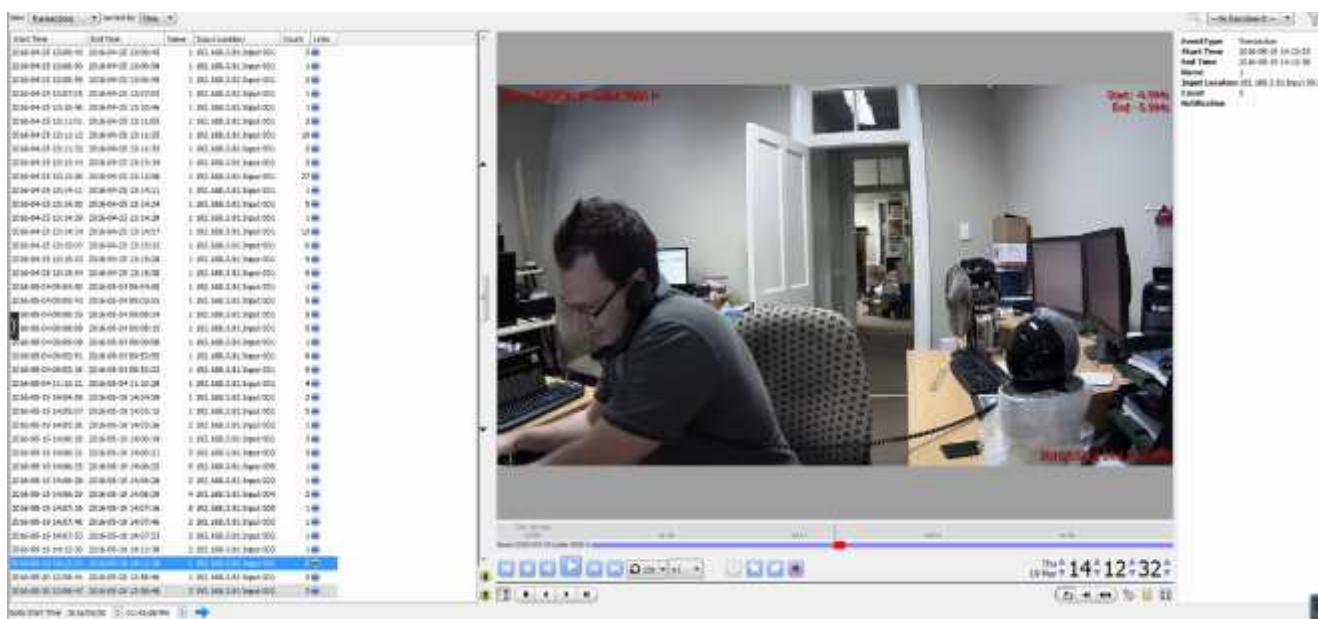
3 Database

a. Introduction

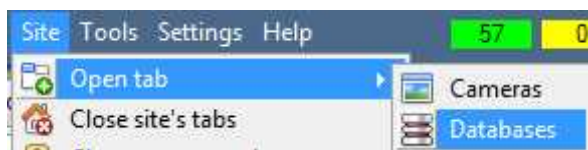
The database tab will allow you to navigate the databased entries, for each individual database. In the database tab each database is presented as a table. It has built in filters, and the ability to navigate by timestamp. If a database entry has an associated recording you will also be able to launch this recording, from within the database tab.

Most integrations will have a different database presentation, and unique filters, due to the different parameters sent to CathexisVision by the integrated device.

This is an example of some of the layout. With the database entries in the left panel, the associated video review panel in the middle, and meta-data information in the panel on the right.

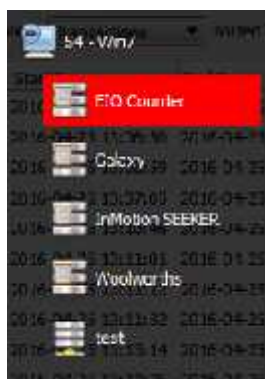


b. Navigate to the Database



You may view the information stored in the Integration database, by following the path you see to the left.

This will take you to the Database Tab.



From 2016.2 onwards, when the database tab opens you will have to select the relevant integration database from the database panel that opens on the left hand side. The databases are ordered under the NVRs that they are attached to. To open and close this list click on the arrow in the centre of the list:











Pre 2016.2 databases will have a permanently visible tree of databases.

c. Database Interface



<p>① View</p>	<p>You may change the way that your database is presented. Some integration databases have multiple view options. The Premier database has All, Zone and General options.</p>
<p>② Sorted By</p>	<p>You may sort the Events based on the following parameters: System Time, and Device Time.</p>
<p>③ Easy Search</p>	<p>The easy search option allows you to quickly search the database within one of the following options: Zone, ID, Partition, Event, and Group.</p>
<p>④ Filter </p>	<p>Filter offers a more advanced manner of sorting information in the Integration Database table.</p> <p>Once you have the filters dialogue open you will have the following options:</p> <ol style="list-style-type: none"> To enable filters check this box: <input checked="" type="checkbox"/> Enable filters To add a new filter click on . The filter icon  will change to  when filters are active. To delete an added filter click on . <p>The options in this integration are System Time, Device Time, Zone ID, Partition, Event and Group.</p> <p>Note:</p> <ol style="list-style-type: none"> You may run multiple filters simultaneously. And you may even filter using the same parameter more than once. To change a filter click on the blue hyperlinked text. (For example, click on Timestamp to change the filter from Timestamp, to any of the other available options.)
<p>⑤ Go to Time</p>	<p>This will allow you to go to a specific point in time, down to the second. To navigate to a timestamp set the time using the time and date boxes, and then click on the  icon.</p>

4 Events

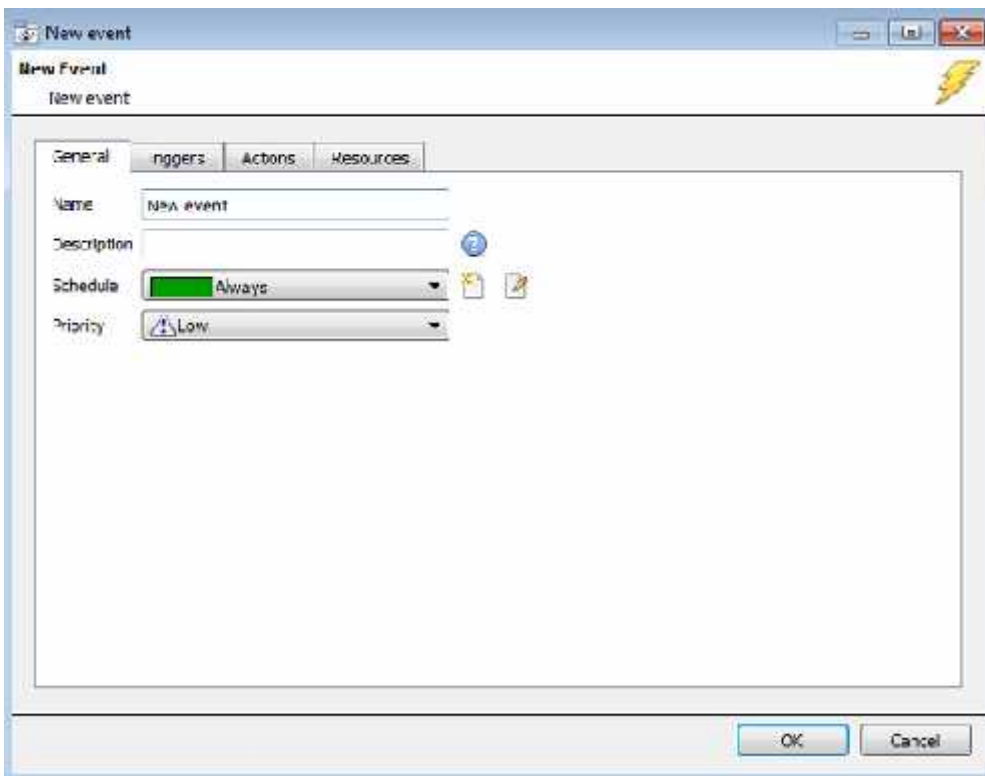
a. Introduction

A CathexisVision Event has a trigger, which causes an action. You may set integrated devices to act at triggers, or as actions. This document will detail the Texecom Premier 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* for being used as an event trigger, or action.

Event Window

Events in CathexisVision are setup via the Event Window. This has 4 tabs. In the **General Tab** an event is given a name, description, schedule and priority. In the **Triggers Tab** the trigger/s for the event is defined. In the **Actions Tab** the action/s which the event takes is defined. In the **Resources Tab** the various site resources which can be used as part of an event are defined.



b. Creating an Event

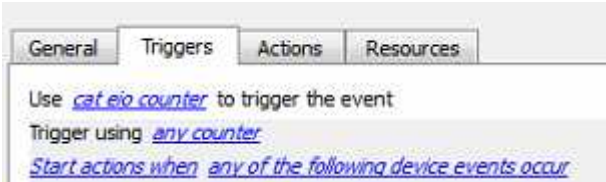
To create an event using the Premier device, enter the Events management area:



Once in Events management click on . This will open up the New Event window.

) *While/When and Any/All*

When triggering on an object you will have the option to trigger **while/when** a trigger is active. You will also be able to select multiple triggers, and define whether **all/any** of the triggers need to be active to start an event.

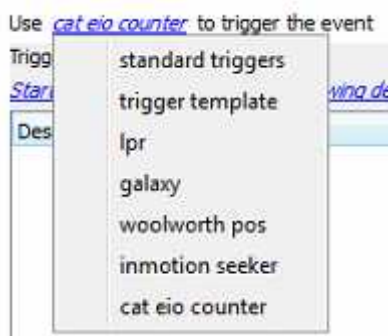


As usual, to change these settings click on the related, blue, hyperlinks.

c. Triggers

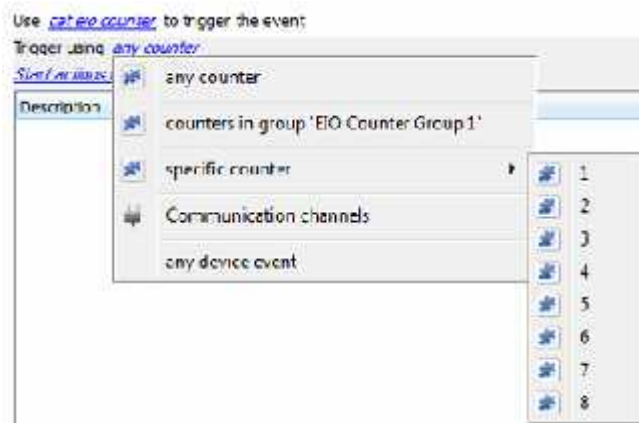
A trigger is the user defined input that tells the event to start. The trigger causes the subsequent action (which the user will also define).

Set your device as the trigger



If you are creating a new event, the trigger type will default to: Use [standard triggers](#). To define which device you want to trigger the event, click on the hyperlink after “use”. To set it as the Premier device, click on the hyperlink, and select the relevant device name from the dropdown menu.

Trigger Types (Trigger Using)



It is useful to think of this as a **master trigger type**.


Any counter will trigger when any of these counters sends the selected trigger.

Counters in group... If you have set up a group it will appear in this list.

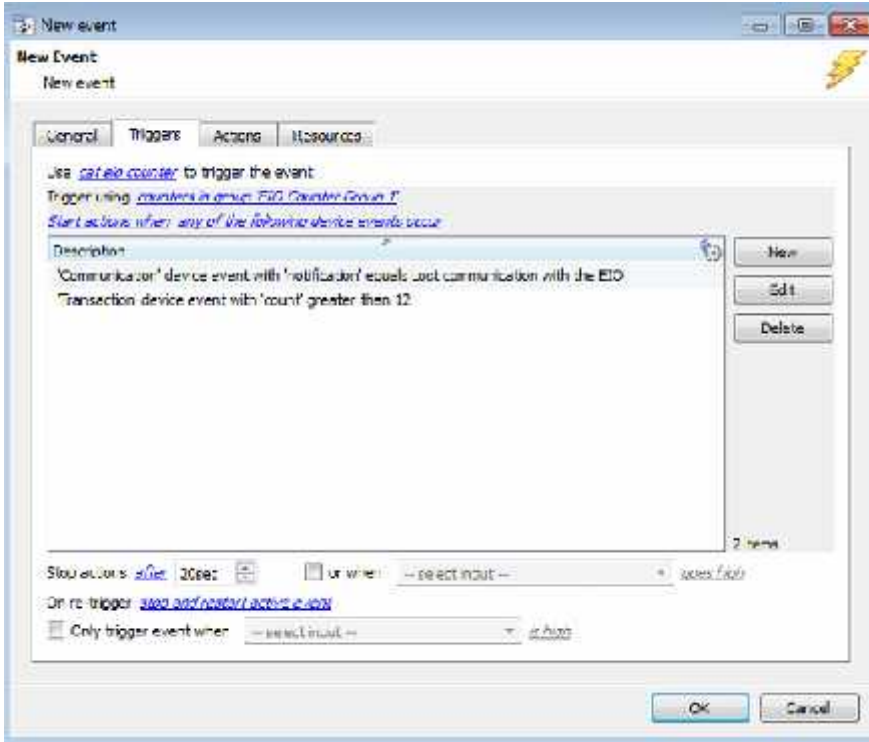
Specific counter will trigger on an event from the specific counter selected.

Communication channels will trigger only on the Communication channels.

Any device event will trigger on any event that occurs on the device. Within the “any device event” setup you may set “device event rules” which will constrain which device events will trigger the event.

Note for group triggers: If you want this event to be databased under the name of a specific object, and not the name of the triggering group, you will need to modify the Description field in the **General tab** of the Event setup. Click on the  to see a list of available descriptions.

Define Your Trigger




Select your device to trigger the event.

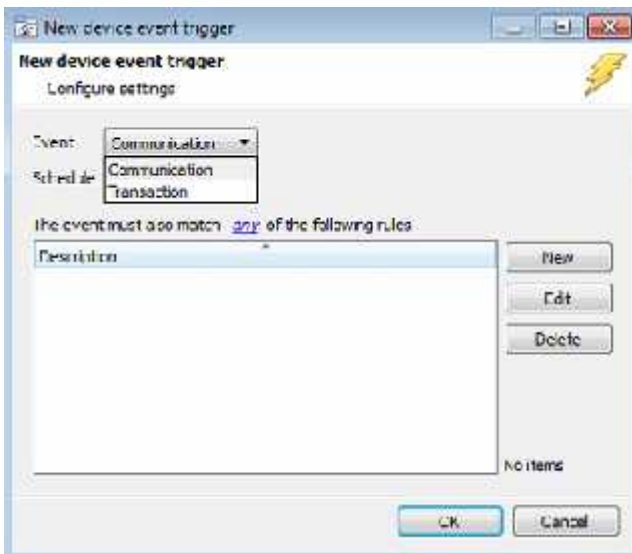
Select the objects associated with the device which will trigger an event.

Click the blue hyperlinks to define under which conditions objects will trigger an event.

To add a new trigger, click **New**.

Note: You may add multiple triggers types and triggers which will trigger this event. However, different trigger types must be added individually.

After selecting a master trigger type, you will need to add a trigger to the event. Click on  in the Triggers tab. This will bring up the dialogue box you see below, for the various trigger types:



Select your event type from the list.

Note: Communication refers to the communication between CathexisVision and the EIO Counter.

Transaction refers to the count on the input state changes.

To add both communication and transaction event triggers, you must add them individually.

Click **New** to add a new rule for the device event rule.

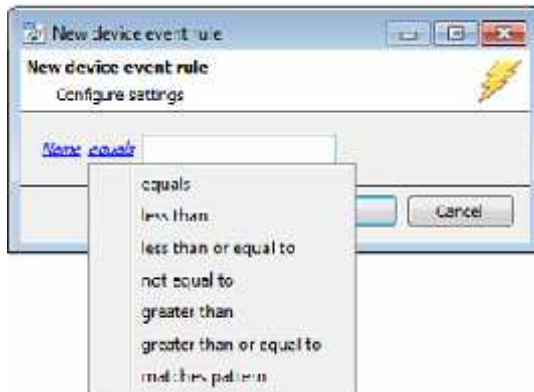
Choose if *any*, or *all* constraints need to be fulfilled to set off a trigger.

To change the constraint, click on the first hyperlink, this will bring up the full list of available rules. Below is an example of the device event rules which pertain to both communication and transaction event triggers.


Communication Device Event Rule

For communication triggers, you are able to define rules pertaining to the object Name, Notifications received from the device, and the Input Location.

Name



Enter the name of the object, and define the name state which will trigger an event.

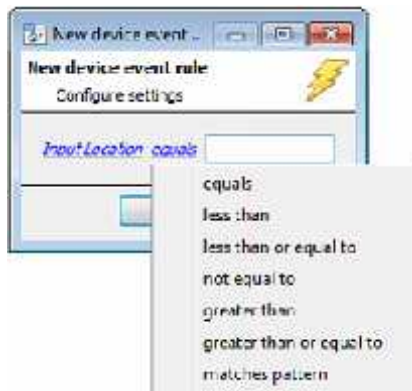
Note: If selecting **matches pattern**, you will be able to select the  icon for help.

Notification




Select either a loss or establishment of communication as a notification.

Input location



Enter the **Input location** of the object, and define the name state which will trigger an event.

You may find the **Input Location** in the Device Events tab of the Configure Integration device section. It is the IP address of the EIO and the input number.

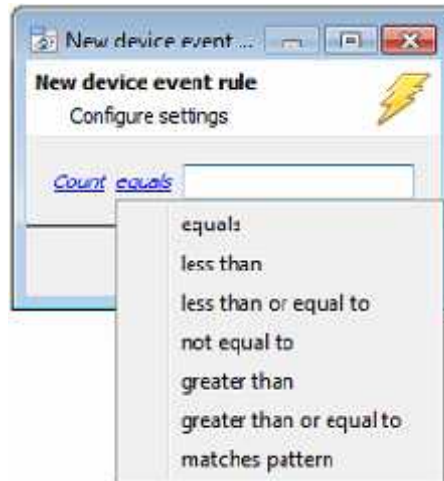
Note: If selecting **matches pattern**, you will be able to select the  icon for help.

Transaction Device Event Rule

For transaction triggers, you are able to define rules pertaining to the object Name, Counts received from the device, and the Input Location.

The Name and Input Location rule settings are identical to those of Communication triggers; please see above for information on these. This section will deal with the Transaction Count event rules.

Count



Here, you may define a rule based on an input count.

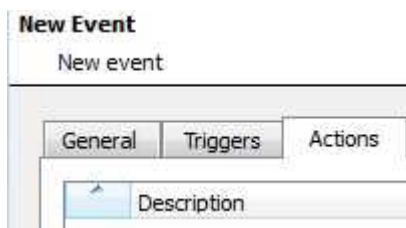
Select the constraint from the dropdown menu and enter the count number it refers to.

Note: If selecting **matches pattern**, you will be able to select

the  icon for help.

Note: When all available options are known to CathexisVision you will see a drop-down menu. When these variables are not pre-defined you will need to fill them in yourself.

d. Actions



Once you have defined the triggers that are going to initiate your event, you will need to define some Actions.

New Action



To create a new Event Action click on .

Note: With many integrations there will be the option to control the integrated device, as one of the actions.

It is **not possible** to control this integration as one of the actions, even though it is presented as one of the options.

5 Conclusion

Please remember that this appnote was designed to deal specifically with this integration. For further information about the CathexisVision software please consult the main manual (<http://cathexisvideo.com/>).

For support please contact support@cat.co.za