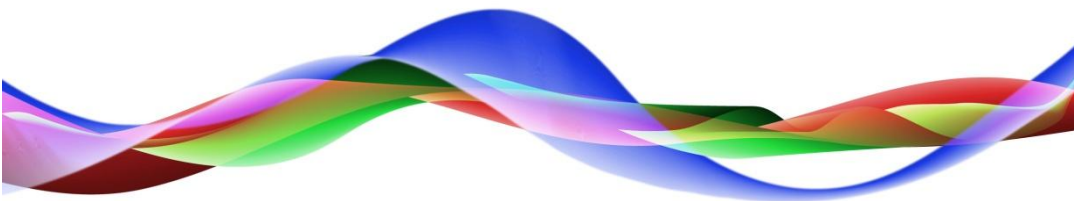


16 Modules

vsmStudio

Manual



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To open and close the module menu, left-click the symbol in the main menu indicated in the screenshot above.



Creating a new module

Right-click into the empty module view to create a new module.

1 Alarm

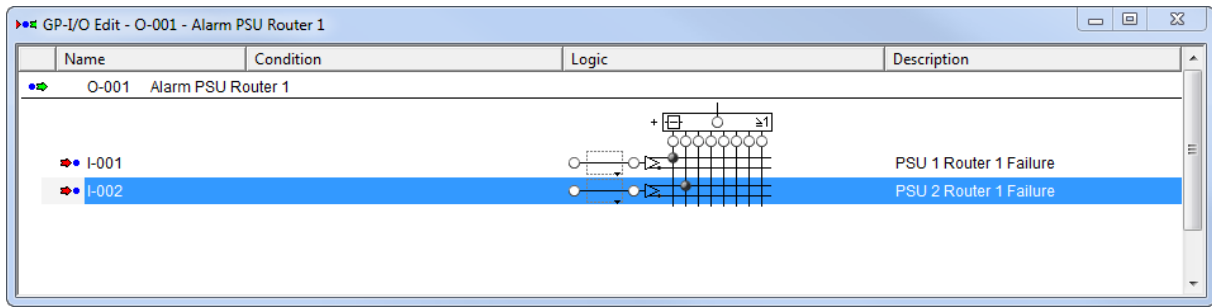
1.1 Alarm Management

The VSM control system provides integrated alarm management which enables the evaluation of alarm messages from connected foreign devices through SNMP, proprietary protocols, or GPIs using the GP-I/O logic. With virtual GPOs, the parameters can be evaluated and displayed, administrated, and edited on the graphic user interface.

1.2 Alarm GPO

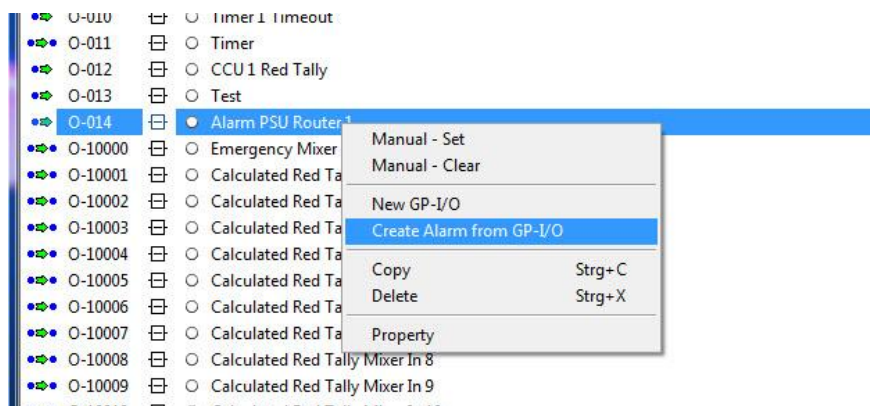
To create an alarm, a virtual GPO has to be set up first. To do so, open the GP-I/O configuration interface and set up a new GPO (see chapter 15.2 New GP-I/O).

In the simplest case, this GPO can be activated due to the failure of a power supply or a similar event. To this end, a GPI has to be set from the terminal device for every power supply. This GPI indicates that the power supply is defective. This kind of GPI can be linked to the alarm GPO by dragging and dropping it into the GPO. From now on, the set-up GPO will become active as soon as a GPI signals the failure of a power supply.



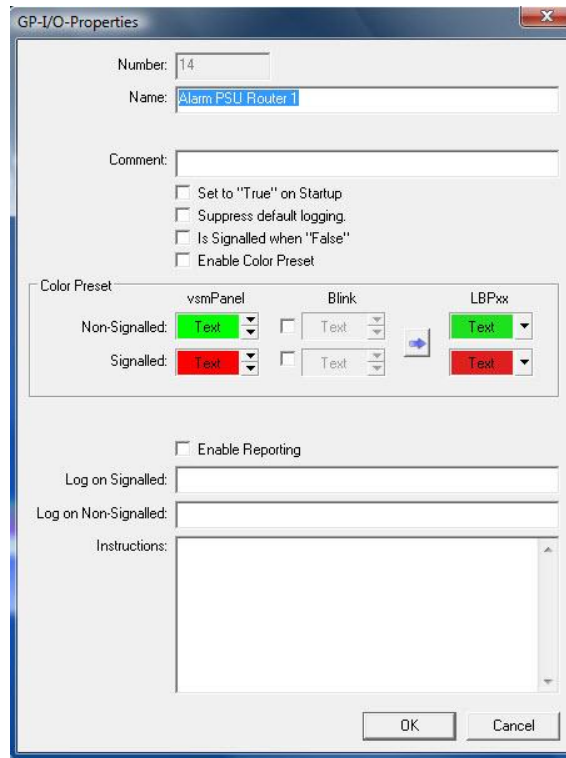
GPO logic

After the corresponding logic has been created for the alarm, this GPO can be transferred into the alarm module. To do so, right-click onto the GPO and select the option *Create Alarm from GP-I/O*.



Create alarm from GP-I/O

If the corresponding log information is to be created in the *vsmStudio.log*, the GPO properties can be adjusted and relevant textual information added. Right-click onto the GPO and select *Property* to access the required input window.



The image shows a Windows-style dialog box titled "GP-I/O-Properties". It contains several input fields and checkboxes. At the top, there is a "Number" field with the value "14" and a "Name" field with the text "Alarm PSU Router 1". Below these is a "Comment" field. A group of four checkboxes follows: "Set to 'True' on Startup", "Suppress default logging.", "Is Signalled when 'False'", and "Enable Color Preset". The "Color Preset" section is expanded, showing a table with columns "vsmPanel", "Blink", and "LBPxx". The "Non-Signalled" row has a green "Text" dropdown, an unchecked checkbox, a "Text" dropdown, and a green "Text" dropdown. The "Signalled" row has a red "Text" dropdown, an unchecked checkbox, a "Text" dropdown, and a red "Text" dropdown. Below this is an "Enable Reporting" checkbox. There are two text input fields for "Log on Signalled:" and "Log on Non-Signalled:". A large text area for "Instructions:" is at the bottom. "OK" and "Cancel" buttons are at the bottom right.

GPO properties

Logging of GP-I/Os is activated in the GP-I/O management of the VSM control system by default. The GP-I/O is therefore recorded in the logfile (see chapter 2.3.3 Folder LogFiles). To deactivate this function, select the option *Suppress default logging*.

If the logic is *Set*, the attribute *Is Signalled when "False"* activates the alarm, allowing an easy, inverted evaluation. The attribute *Enable Color Preset* activates that underlying colour theme and the corresponding coloured displays on vsmPanels and hardware control panels. *Enable Reporting* enables the integration of alarm evaluation and alarm display in the event scheduler. Active alarms are then shown in the scheduler bar.

The fields *Log on Signalled* and *Log on Non-Signalled* provide space to enter customer-specific, textual information that will be shown in the log file and the scheduler bar. Instruction or measures for the event of an alarm can be included in the field *Instructions*.

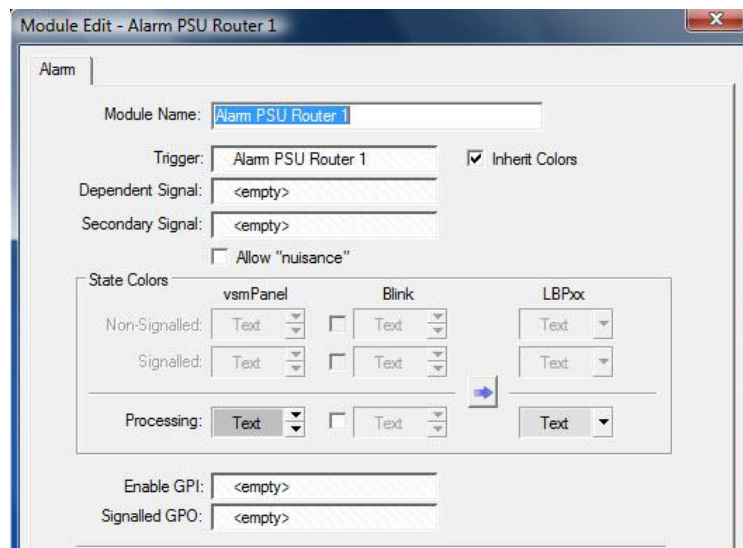
Further information concerning the alarm configuration can be entered in the alarm module.

1.3 Alarm Module



Alarm module

Since an alarm has already been created from the previously set-up GPO, it is already shown in the module list under *Alarm*. Further adjustments can be made by double-clicking on the alarm.



Alarm settings

The module name is taken from the GPO name and can be changed if required. The GPO from which the alarm was created also serves as *Trigger*. If necessary, it can be exchanged with another GPO from the GP-I/O list (see chapter 15.1 Editing the GP-I/O List) using drag and drop.

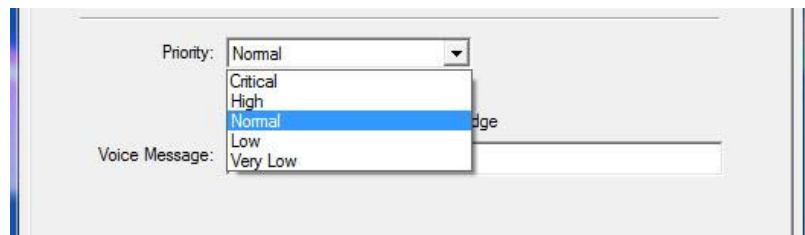
The *Dependent Signal* is the signal corresponding to the alarm. Here, it is, for example, possible to evaluate a silence, an audio target or audio source and to deposit the corresponding source or target there. This information is included in the alarm page item of the vsmPanel. The *Secondary Signal* would then be the signal to the right of dependent signal.

The attribute *Inherit Colors* is checked by default. It prompts the adoption of colours from the GPO. If the attribute is not checked, the colours can be defined independently of the GPO colour.

Checking the attribute *Allow "nuisance"* will result in the suppression of alarm messages. This is useful, for example, if a malfunction of a terminal device repeatedly generates alarm

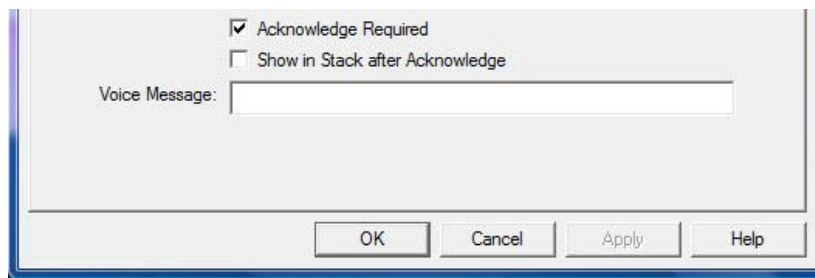
messages. If this option is activated, the alarm panel offers the possibility to set this alarm to *Nuisance* and therefore suppress recurring alarm messages.

With *Enable GPI*, this alarm can only be evaluated once the corresponding GPI has been set. To define a GPI to that end, drag and drop the relevant GPI into this field. With the attribute *Signalled GPO*, the alarm can be linked with a GPO. This GPO can, for example, be a physically available contact that causes a warning (a siren, a flashing light, etc).



Setting alarm priority

To weight individual alarms differently, their priority can be defined. The alarms are displayed in the corresponding tabs in the alarm management window.

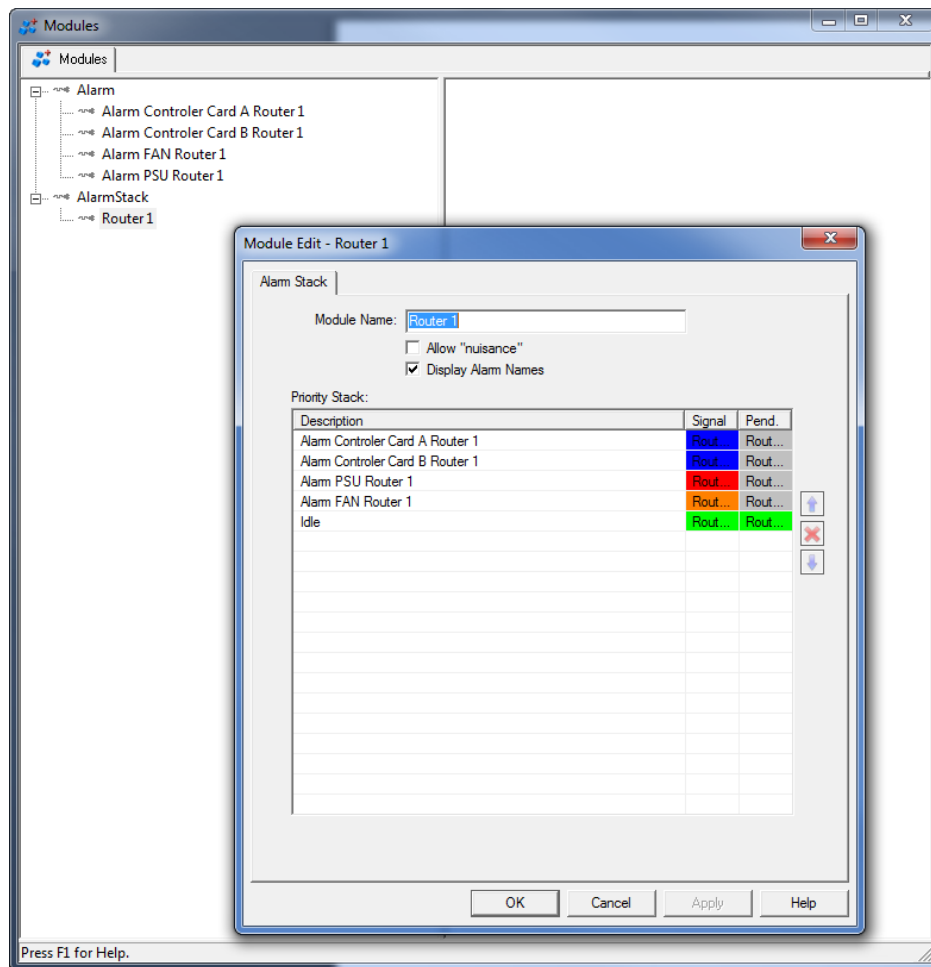


Other alarm settings

If the attribute *Acknowledge Required* is checked, each active, set alarm must be confirmed even if it is no longer active. This ensures the recognition of errors occurring on short-notice. The attribute *Show in Stack after Acknowledge* shows this alarm in the *AlarmStack* (see chapter 6.2 AlarmStack) even after the confirmation.

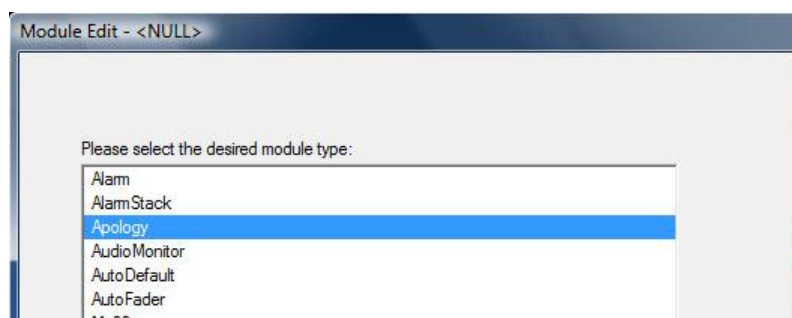
The field *Voice Message* offers space to enter a text that will be played as text-to-speech on the local work station in the event of an active alarm.

sort the alarms according to their priority, where the alarm on the top has the highest priority. An arbitrary colour that can be edited for each individual alarm as described above can be chosen for each individual alarm within the AlarmStack.



AlarmStack set-up

3 Apology



Apology module set-up

An *Apology* module allows, for example, the configuration of a backup/apology solution for a silence detect on a server. In this event, the module automatically switches to a redundant server or another source.

Module Edit - Silence Backup Server 1

Apology

Module Name:

Left: * Right:

Target:

Source 1 (Primary)

Signal:

Silence GPI:

Response Time: ms ☒ Allow Mono ☐ Recover on Source Change

Source 2 (Secondary)

Signal:

Silence GPI:

Response Time: ms ☒ Allow Mono

Source 3

☒ Apology ☐ Backup

Signal:

Silence GPI:

Response Time: ms ☒ Allow Mono

☒ Recover from Mono after ms ☒ Allow Cross Source Recovery from Mono

☒ Recover from Apology after ms ☐ Detect Suspension for ms

All Silence GPO: Manual Apology GPI:

Disable GPI:

*) To enable the right channel the left channel must be populated first.

OK Cancel Apply Help

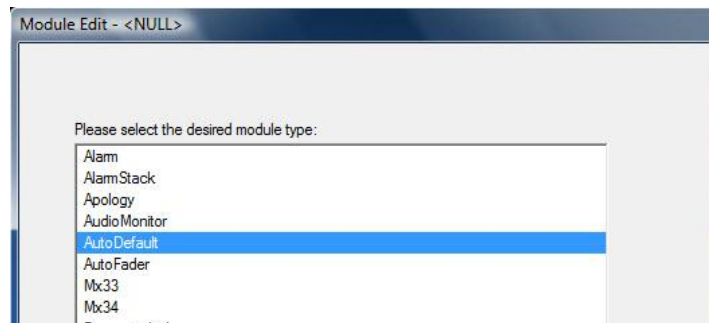
Apology settings

Enter a name for the new Apology module in the field after *Module Name* – *Silence Backup Server 1* in the example above. Drag and drop the signal path that the Apology module refers to, for example *Virtual Server 1 left* for *Left* and *Virtual Server 1 right* for *Right*: from the signal path list (see chapter 5.1) or the master matrix (see chapter 6) into the field beside *Target*. These signal are monitored, and the *Apology* module will become active in the event of a silence detect.

The source signals are placed in the fields *Signal* under *Source 1*, *2* and *3*, for example *Server 1 a to c left* and *right*. GPIs from the GPI list that were created specifically for silence detection (see chapter 15.2 New GP-I/O) are placed in the fields following *Silence GPI*.

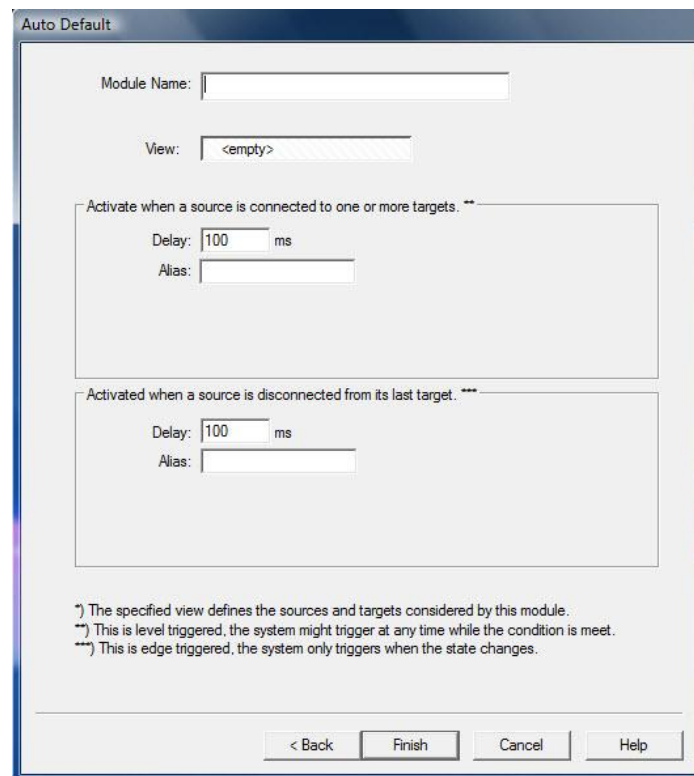
If silence is recognized on the signals entered as target, the module will automatically switch to the *Source 1 (Primary)*. A duration can be entered in a response timer for this purpose. The checkmark after *Allow Mono* enables or prohibits a mono connection. Under *Source 3*, it is possible to define whether the module should serve as apology or as backup.

4 AutoDefault



AutoDefault module

Using an AutoDefault module, it is possible to trigger a meta gadget component (see chapter 11.2 Objects in Meta Gadget Containers) depending on whether a source is connected to a pre-defined target or not.



AutoDefault module set-up

Enter a name for the new module after *Module Name*. Drag and drop a view (see chapter 7) that contains exactly the signal paths that this module refers to from the views list into the field after *View*.

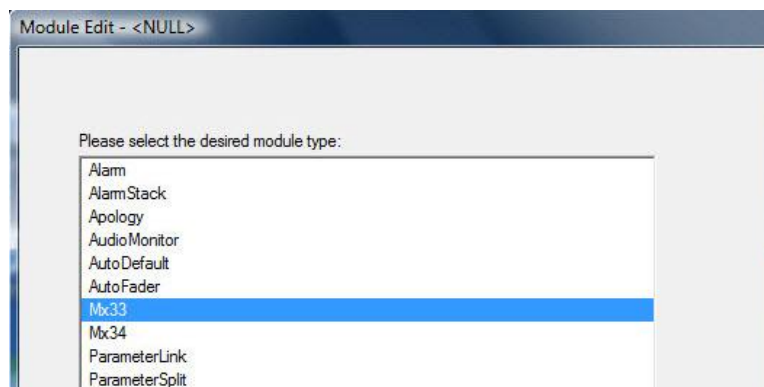
In the field *Delay*, a duration can be entered in milliseconds, after which the linked meta gadget component is activated if the source is connected to one or more pre-defined targets, or if the connection to the last source is reverted.

The first scenario, shown in the module window above, is called *Level Triggered*. Thereby, the meta gadget component is activated in the selected view for every crosspoint change. The second scenario, called *Edge Triggered*, activates the entered meta gadget component if the source is not connected to a target. The module therefore checks the connection in the selected view and activates the meta gadget component as soon as there is no more connection or after the time entered under *Delay* has passed.

Enter the meta gadget component that is to be activated under *Alias*. These could be GP-I/Os (see chapter 15), storage discs or gadget parameters (see chapter 10).

5 Mx33

Mx33 is a module with which a dynamic tie-line assignment (see chapter 5.5 Tie-Lines) with respect to a defined switch is made possible. This module is mainly used with intercom system applications.



A switch, monitored by the module, is defined as trigger for all following switches. The signals triggering these switches are set-up in a separate view (see chapter 7). This view is then dragged and dropped from the views list into the field *Monitored*.

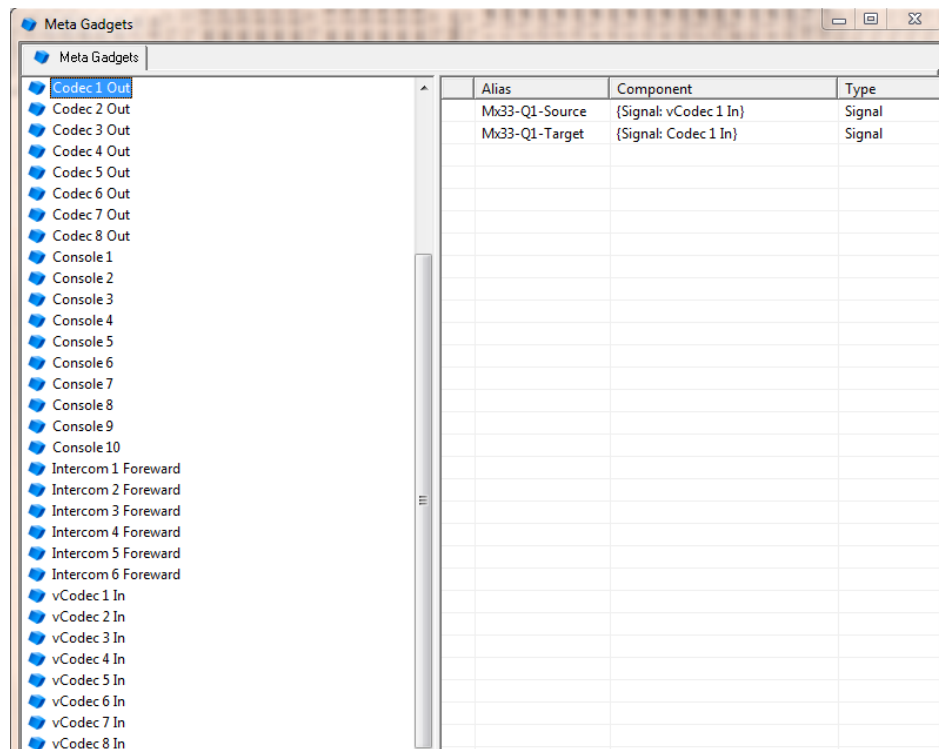
Mx33 module set-up

Enter a name for the module in the field after *Module Name*. The targets (dynamic tie-lines, see chapter 5.5 Tie-Lines) whose outputs are, for example, forwarded to an intercom system, are placed in a separate view. Place the view with these signal paths in the field *Resources*. In addition, a unique prefix, for example Mx33, must be defined that will be needed later during the definition of meta gadgets (see chapter 11). Moreover, a virtual loop-through device is needed to tap the input (target) of the triggering source.

The signals used in the two views as well as the loop-through device must be deposited in the meta gadgets and defined there as follows:

- Signals from the view *Monitored* – definition in meta gadgets:
 - Sources: virtual output (source) of the triggering source, physical input (target) of the triggering source
 - Targets: Source (output) connected to the monitoring target.
- Signals from the view *Resources* – definition in meta gadgets:
 - Targets: includes the target that is forwarded to the intercom system for recording
 - Source that is lead back into the control system from the intercom system with signal and voice (mix).
- The virtual loop-through device includes the physical target linked to it.

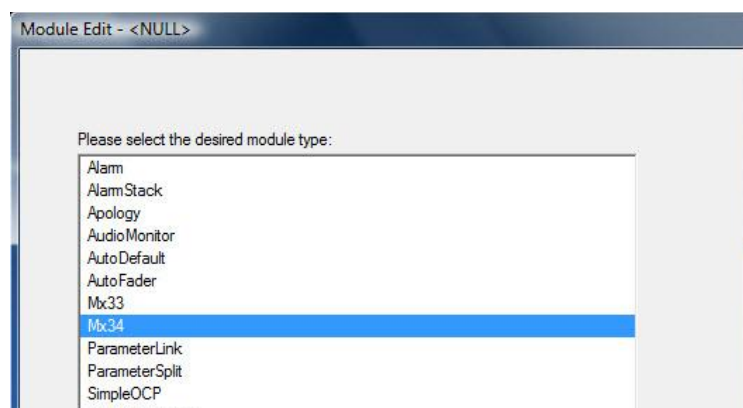
The *Alias* of the signals in the meta gadgets must be defined as follows (see chapter 11.2 Objects in Meta Gadget Containers): *{Prefix from Module Definition}-Q{0-2}-{“Source” or “Target”}*, for example: *Mx-Q1-Source*.



Meta gadgets for Mx33 module

6 Mx34

Using the module Mx34 in connection with the module Mx33 (see chapter 16.5), the button assignment on the intercom level can be carried out. Buttons are then individually monitored, and functions, such as talk, listen, etc., are assigned.



Selection of module Mx34

The module Mx34 can be selected in the module overview. Just as for the module Mx33, a unique *Prefix* must be defined.

Mx33

Module Name:

Prefix:

Monitored:

Resources:

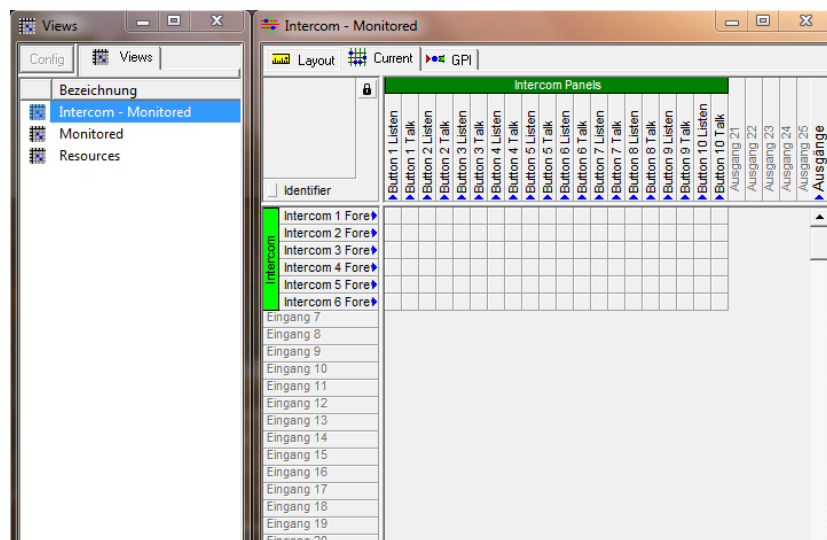
Module Disable:

*) The specified view defines the sources and targets considered by this module.

< Back Finish Cancel Help

Module Mx34 settings

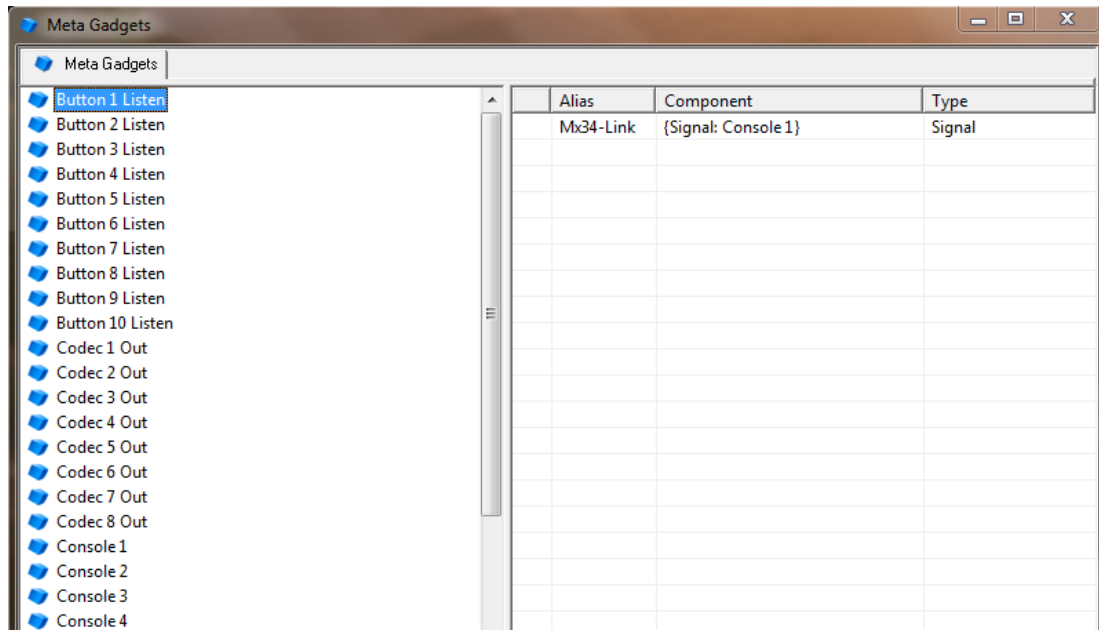
This module also requires a view (see chapter 7) that is then placed into the field *Monitored* containing the tie-line outputs form an audio router (source) and the talk targets or listen targets from the intercom level.



Intercom monitored view

Contrary to module Mx33, the view *Resources* is irrelevant for module Mx34. *Button Listen* have to be pre-defined in the meta gadgets (see chapter 11) and labelled with the names from the prefix link and the corresponding target from the output switch. For example: The source connected to *Target 1* in the initial switch is to be controlled via *Button 1* on the

intercom system. It must therefore be labelled *Mx34-Link* (Assignment *Source 1* in *Button 1* lists).



Button listen configuration in meta gadgets

7 Addition Information for Mx33 and Mx34

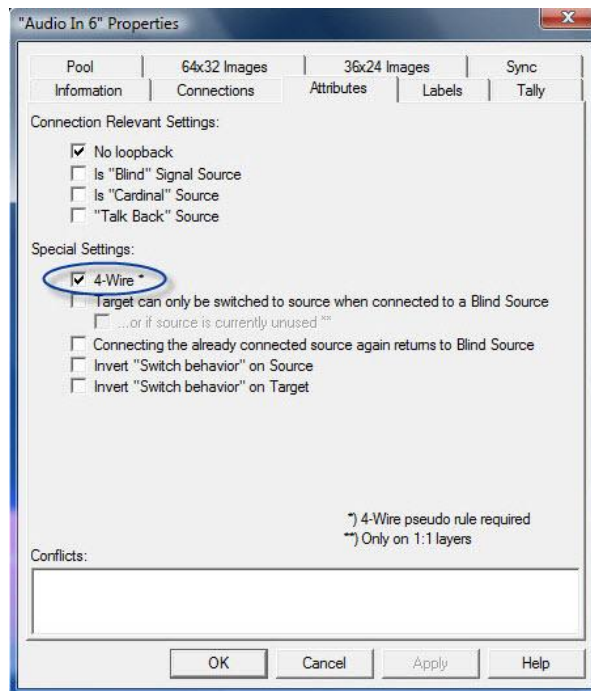
In addition to the settings explained under 16.5 and 16.6, the following must be considered configured for the two modules Mx33 and Mx34:

- As usual, pseudo devices (see chapter 12) have to be set for the RX and TX connections.

Direction	Nr	Auslöser	Abhängig von	Fictive	Video	Key	Audio 1	Audio 2	Audio 3	Audio 4	Audio 5
Source	1	Codec 1 Out							vCodec 1 In		
Source	2	Codec 2 Out							vCodec 2 In		
Source	3	Codec 3 Out							vCodec 3 In		
Source	4	Codec 4 Out							vCodec 4 In		
Source	5	Codec 5 Out							vCodec 5 In		
Source	6	Codec 6 Out							vCodec 6 In		
Source	7	Codec 7 Out							vCodec 7 In		
Source	8	Codec 8 Out							vCodec 8 In		
Target	10	Console 1							Console 1 Out		
Target	11	Console 2							Console 2 Out		
Target	12	Console 3							Console 3 Out		
Target	13	Console 4							Console 4 Out		
Target	14	Console 5							Console 5 Out		
Target	15	Console 6							Console 6 Out		
Target	16	Console 7							Console 7 Out		
Target	17	Console 8							Console 8 Out		
Target	18	Console 9							Console 9 Out		
Target	19	Console 10							Console 10 Out		
Source	20	Blind							Blind Return		

Pseudo device configuration for Mx33 and Mx34

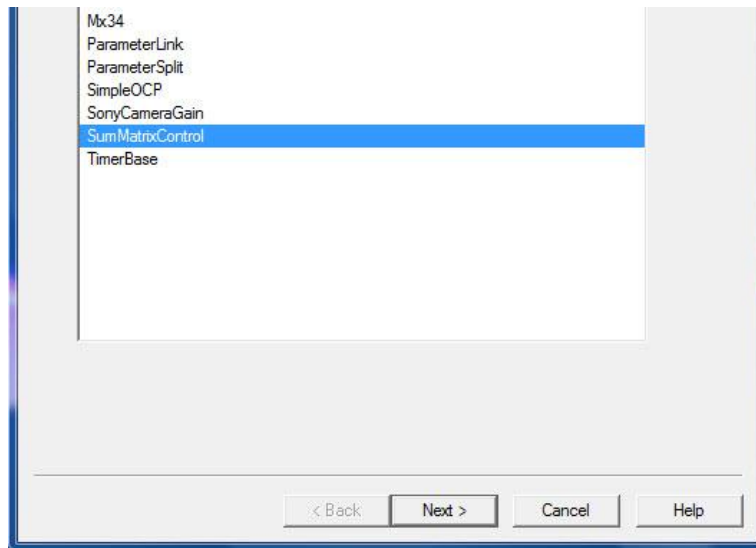
- Triggering targets must (for prioritization) be defined as 4-Wire in the signal path attributes (see chapter 5.2.4 Signal Path Attributes).



Attribute 4-Wire

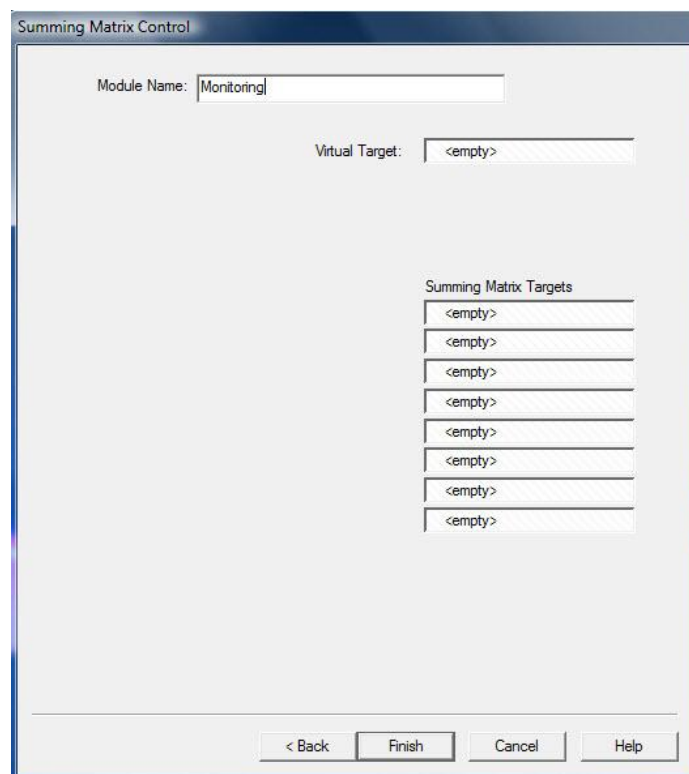
- For 4-Wire switches, the sources of the return path can be set to blind as well. To do so, use a (virtual) target that is defined as blind-source (see chapter 5.2.4 Signal Path Attributes).
- The first triggering starts the preset connection; the second triggering merely makes the function *Talk* available.

8 SumMatrixControl



Selection of SumMatrixControl module

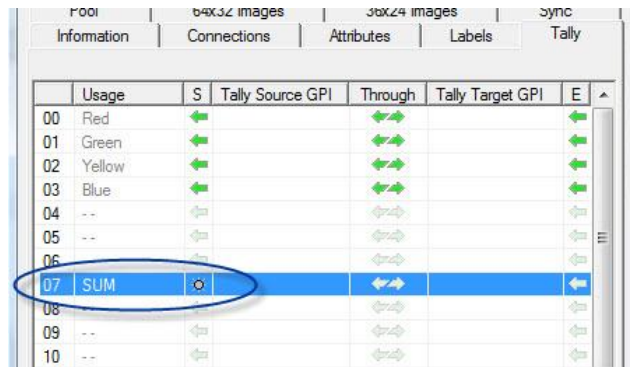
The *SumMatrixControl* module is a module that can be used for summing monitoring applications.



Summing Matrix Control-Modul

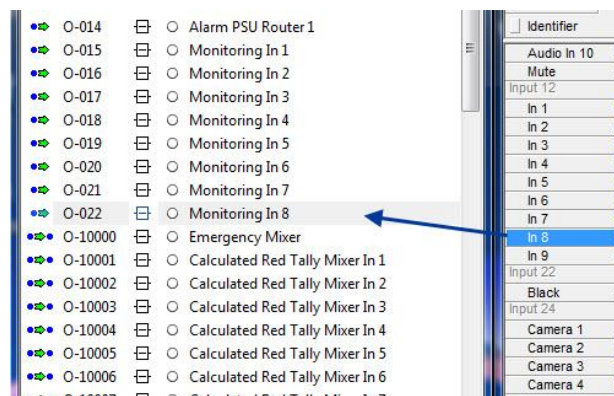
To do so, enter a name under *Module Name*. Drag a signal path that was set-up as a summing virtual signal (see chapter 5.2 New Signal Path) into the field following *Virtual Target*. The signals to be summed and monitored are placed in the eight fields under *Summing Matrix Targets*. Prior to this step, each of these signals must be configured as

“summing” tally: to do so, go the tab *Tally* under signal path properties (see chapter 5.2.6 Tally) and add a new tally named, for example, *SUM* to each signal path that should be summed.



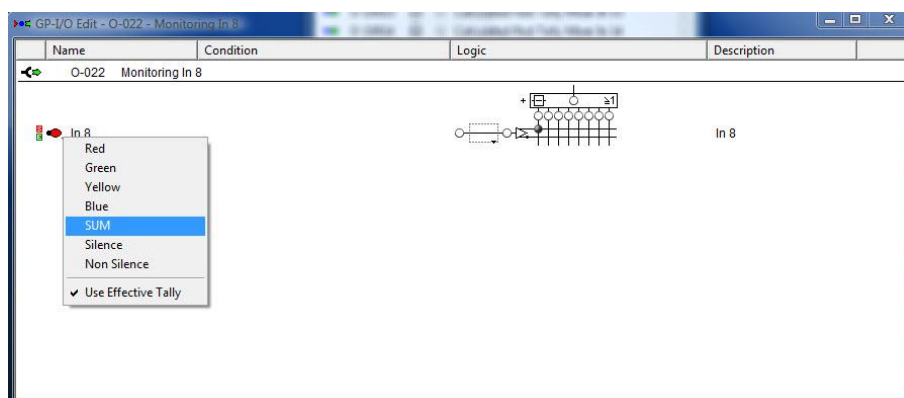
Configuring tally

Moreover, a GPO must be created for each monitoring signal (see chapter 15.2 New GP-I/O).



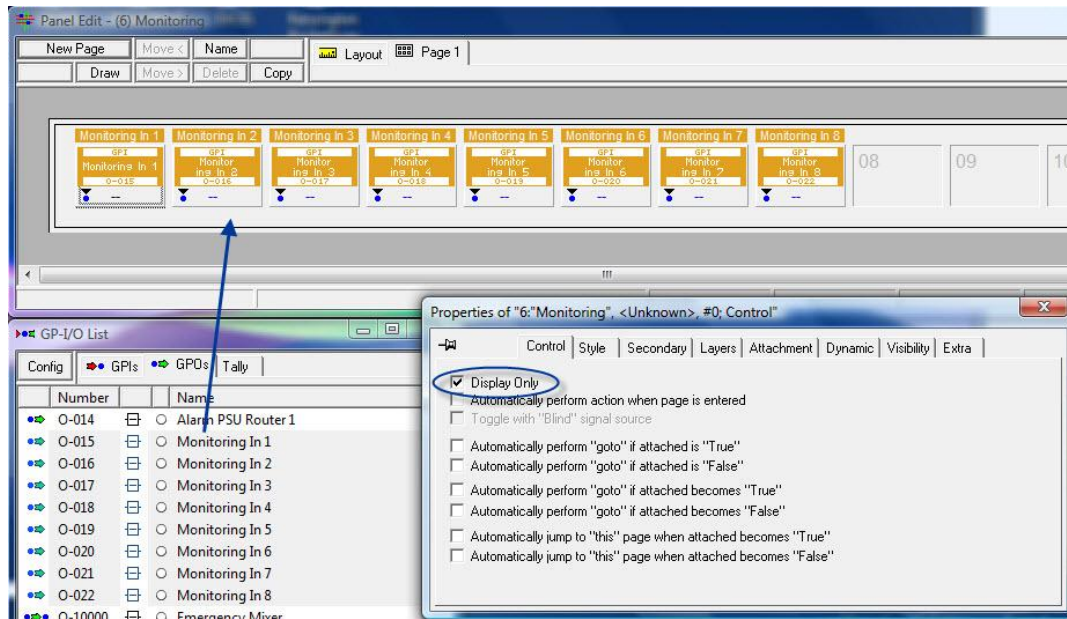
Linking monitoring signals with GPOs

Next, drag the signals into the GPOs and activate the tally created for them earlier.



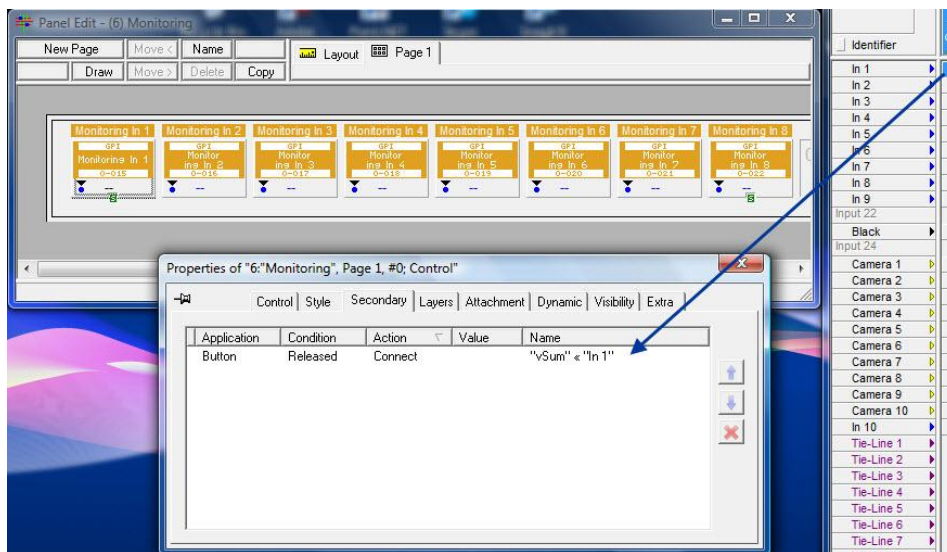
Activating SUM tally

The GPOs are then placed onto a control panel as *Display Only* buttons.



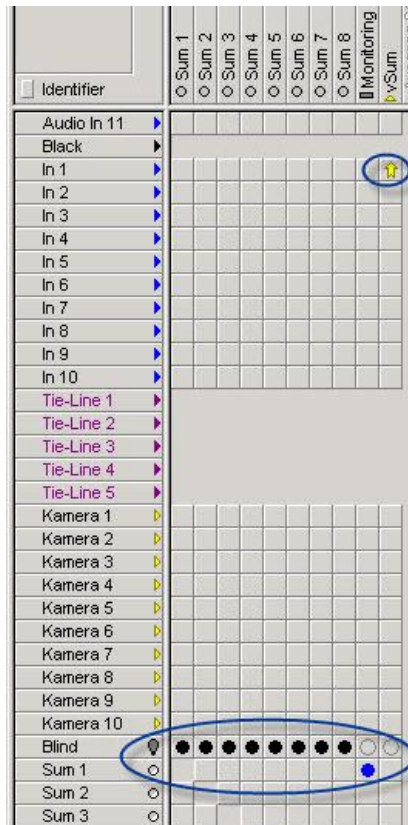
Control panel configuration

Next, place the crosspoints from the monitoring signals and *vSum* from the GPI view of the master matrix (see chapter 6.3 GPI View) on buttons as *Secondary* function (the crosspoint *In 1 > vSum* onto *Monitoring In 1*, the crosspoint *In 2 < vSum* on *Monitoring In 2*, etc.).



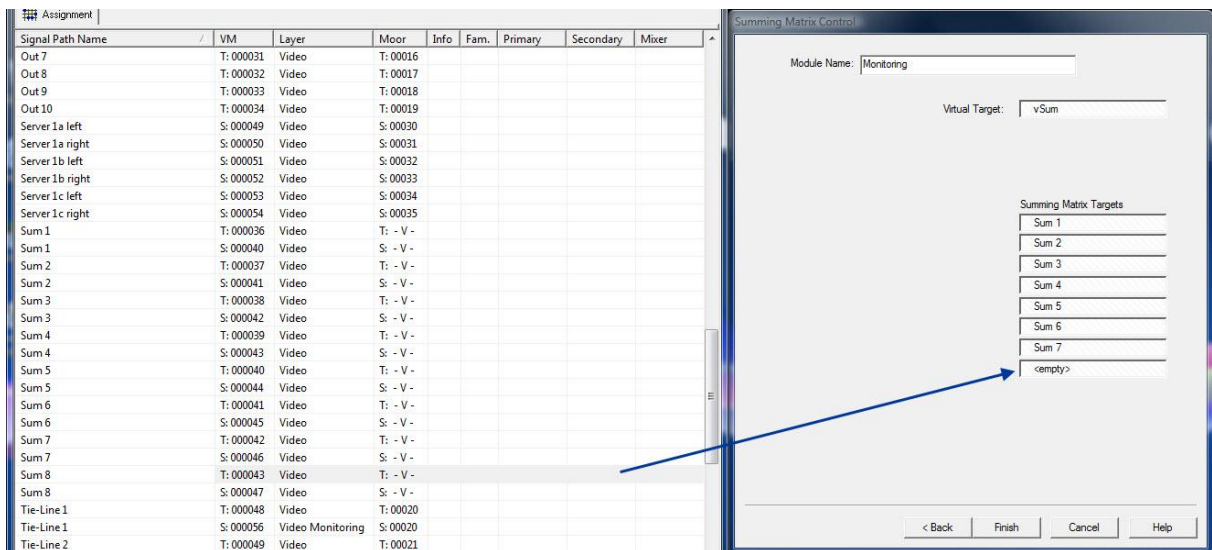
Dragging crosspoints onto buttons

The crosspoints must then be set as shown in the screenshot below:



Crosspoint configuration

Finally, the virtual sum target and the individual targets are placed in the fields *Virtual Target* and *Summing Matrix Targets*.



Placing targets into the SumMatrixControl module

The signal paths *In 1* to *In 10* can now be monitored (eight at the same time).



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